

L
LINES OF
DISCOVERY

GRADUATE THESIS

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MASTER OF ARCHITECTURE

THESEIS COMMITTEE:

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AT THE BEGINNING OF EVERY DESIGN IS AN IDEA. THIS IDEA MAY ACT ONLY AS THE INITIAL SPARK OR IT CAN BECOME TENETS THROUGHOUT A PROJECT. THIS PROJECT'S DESIGN BEGAN WITH A DREAMLIKE VISION, WHICH THROUGH THE AID OF SUPPORTIVE ARCHITECTURAL DECISIONS, MADE ITSELF MANIFEST IN THE DESIGN. THE DESIGN PROCESS WAS SELF-GENERATIVE, ONE DECISION LEADING TO THE NEXT DISCOVERY. BY "LISTENING" TO THE PROJECT, THE COALESCENCE OF THE WHOLE STANDS STRONGER, STANDS UPON ITSELF.

THE PROJECT IS A MEMORIAL TOWER HONORING THE LOST LIVES OF THE ATTACKS ON SEPTEMBER 11, 2001. WATER AND LIGHT COMPOSE THE ACTIVE ELEMENTS STIMULATING HOPE AND RETROSPECTION. A GREAT PRISM OF WATER CROWNS THE TOWER GENERATING AMAZING LIGHTING CONDITIONS AND DEMARCATING TIME AS DROPLETS FALL FROM IT INTO A POOL AT THE GROUND LEVEL.

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MEMORIAL

REMEMBER AND HONOR THE THOUSANDS OF INNOCENT MEN, WOMEN, AND CHILDREN MURDERED BY TERRORISTS IN THE HORRIFIC ATTACKS OF FEBRUARY 26, 1993 AND SEPTEMBER 11, 2001.

RESPECT THIS PLACE MADE SACRED THROUGH TRAGIC LOSS.

RECOGNIZE THE ENDURANCE OF THOSE WHO SURVIVED, THE COURAGE OF THOSE WHO RISKED THEIR LIVES TO SAVE OTHERS, AND THE COMPASSION OF ALL WHO SUPPORTED US IN OUR DARKEST HOURS.

MAY THE LIVES REMEMBERED, THE DEEDS RECOGNIZED, AND THE SPIRIT REAWAKENED BE ETERNAL BEACONS, WHICH REAFFIRM RESPECT FOR LIFE, STRENGTHEN OUR RESOLVE TO PRESERVE FREEDOM, AND INSPIRE AN END TO HATRED, IGNORANCE AND INTOLERANCE.

MEMORIAL COMPETITION MISSION STATEMENT ²



THE REALIZATION OF FINDING ONESELF AT THE BOTTOM OF A WELL. COOL. HUMID. ECHOING. HELPLESS...

SO IT SEEMS, YET THERE IS GLISTENING LIGHT AT THE TOP... HOPE.

DROPS FALL INTO THE WATER.

THIS VISION GENERATED THE INITIAL ABSTRACTION.

THE MONUMENT ECHOES THE ORIGINAL TOWERS IN SCALE. BY FORMING THE ENTIRE TOWER AS AN OPEN ROOM THE VERTICAL EXPERIENCE OF A WELL IS RECREATED. THE UPWARD VIEW THROUGH THE TOWER IS NEARLY THE SAME AS LOOKING DOWN A WELL WITH THE SKY REFLECTED BACK IN THE WATER (BELOW). FROM THE SKYLIGHT AT THE TOP OF THE TOWER, WATER DROPLETS FALL INTO A REFLECTING POOL.

THE ORIGINAL FOOTPRINTS WERE OF THE UTMOST SIGNIFICANCE AND WERE NOT TO BE LOST. THEY WERE THEREFORE ASCRIBED THE ELEGANCE OF WATER, A COLLECTING POOL FOR THE DROPS FALLING FROM ABOVE. THE DROPS OF WATER WERE THOUGHT OF AS THE COLLECTIVE TEARS OF A NATION.

ON APPROACH, ONE CROSSES THE RIPPLING, CRYSTAL CLEAR POOL OF THE SOUTH TOWER FOOTPRINT ON A STONE PATH 1" ABOVE THE WATER'S SURFACE. BEHIND THE MONUMENT, LIBESKIND'S 200' SQUARE WATERFALL ACTS AS A BACKDROP AND AGITATES THE WATER'S SURFACE. THE NORTH TOWER FOOTPRINT BECOMES A STILL WATER GARDEN IN WHICH LOVED ONES OF THE DECEASED MAY SEEK SOLACE.

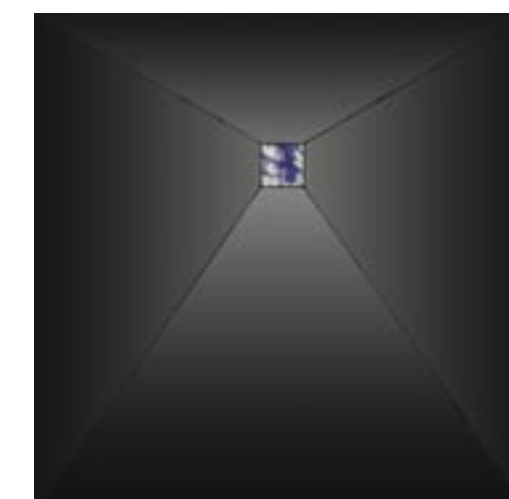
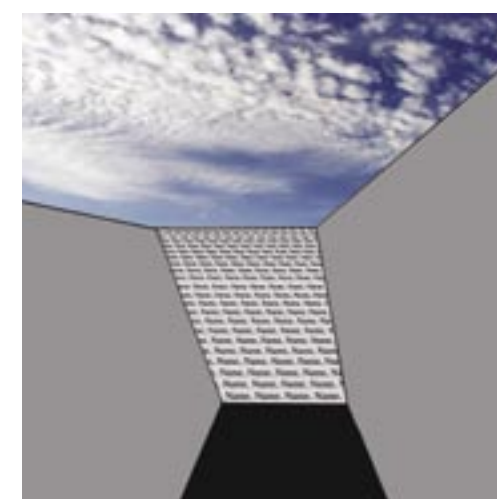
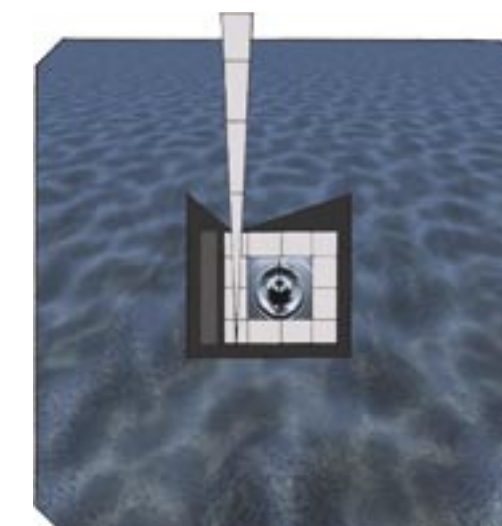
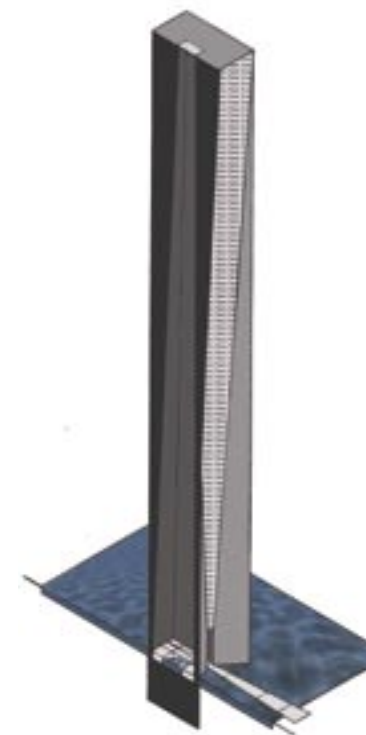
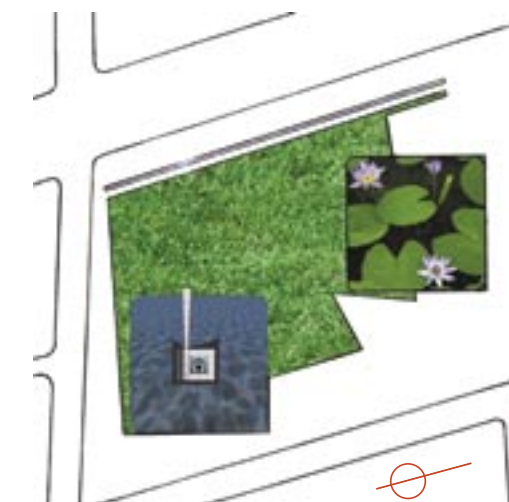
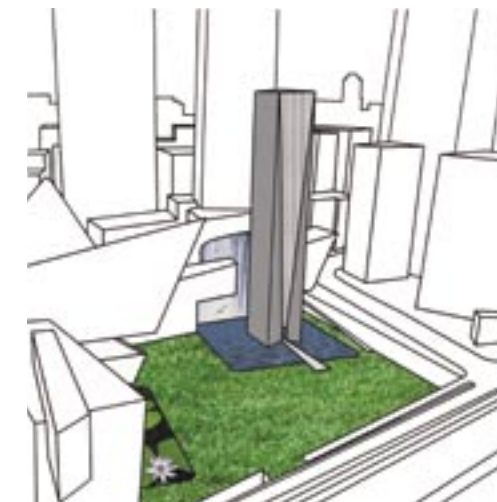
THE MAIN ROOM HAS TAPERED WALLS, ACTING AS A NEGATIVE OBELISK IN FORM, EXAGGERATING THE UPWARD PERSPECTIVE. THE TWO-DEGREE TAPER OF THESE WALLS WAS CONSTRICTED TO SUCH IN KEEPING WITH A MINIMUM THICKNESS OF THE WALL AND THE PROPORTIONAL HEIGHT OF THE ORIGINAL TOWERS. THIS TWO-DEGREE ANGLE BECOMES THE DESIGN BASIS FOR THE FINISHED FORM OF THE MEMORIAL, THE SITE, AND MANY OF THE DETAILS.

EACH PASSING MINUTE A DROPLET FALLS 450' SPLASHING INTO A REFLECTING POOL, ACTIVATING THE SURFACE, AND ECHOING IN SOUND AND MOVEMENT INTO A SOOTHING SERIES OF CONCENTRIC CIRCLES. AS A METRONOME DEMARCATES TIME SO THE MONUMENT MARKS THE HEALER OF ALL WOUNDS.

IN THIS EARLY VERSION, THE NAMES OF THOSE LOST IS WRITTEN IN RAISED STONE ON THE EAST FACADE, WHILE THE UNIDENTIFIED REMAINS OF INDIVIDUALS ARE CONTAINED WITHIN THE WALLS.



VIEW DOWN A WELL



COMPETITION BOARD

A Tower of stone, standing tall for freedom. It stands as an eternal beacon to the lives lost on the 11th of September, 2001 and the 26th of February, 1993. The tower is stone to honor the strength of character those people had and to represent the endurance with which New York will rebuild itself, and the people of this country will charge ahead.

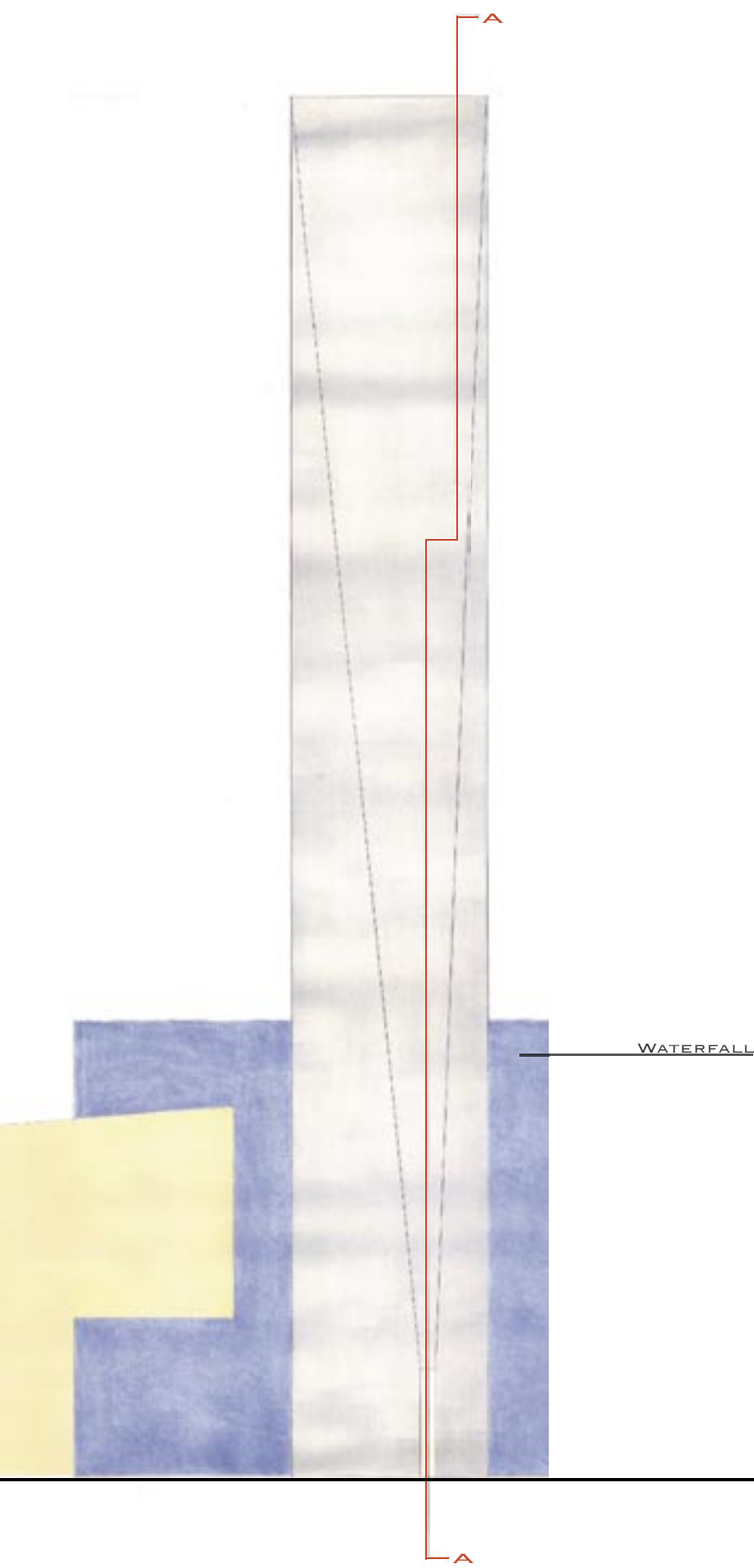
The footprints of the original towers are sacred areas, they cannot be walked upon, they are water. One pool represents the people who have been lost, and the other, the living who must continue onward. (5)

The pool of the living is a serene water garden where visitors can observe wildlife and reflect. This area is for listening to the sounds of life, of insects and birds, to smell flowers, and enjoy the beauty of nature. (3)

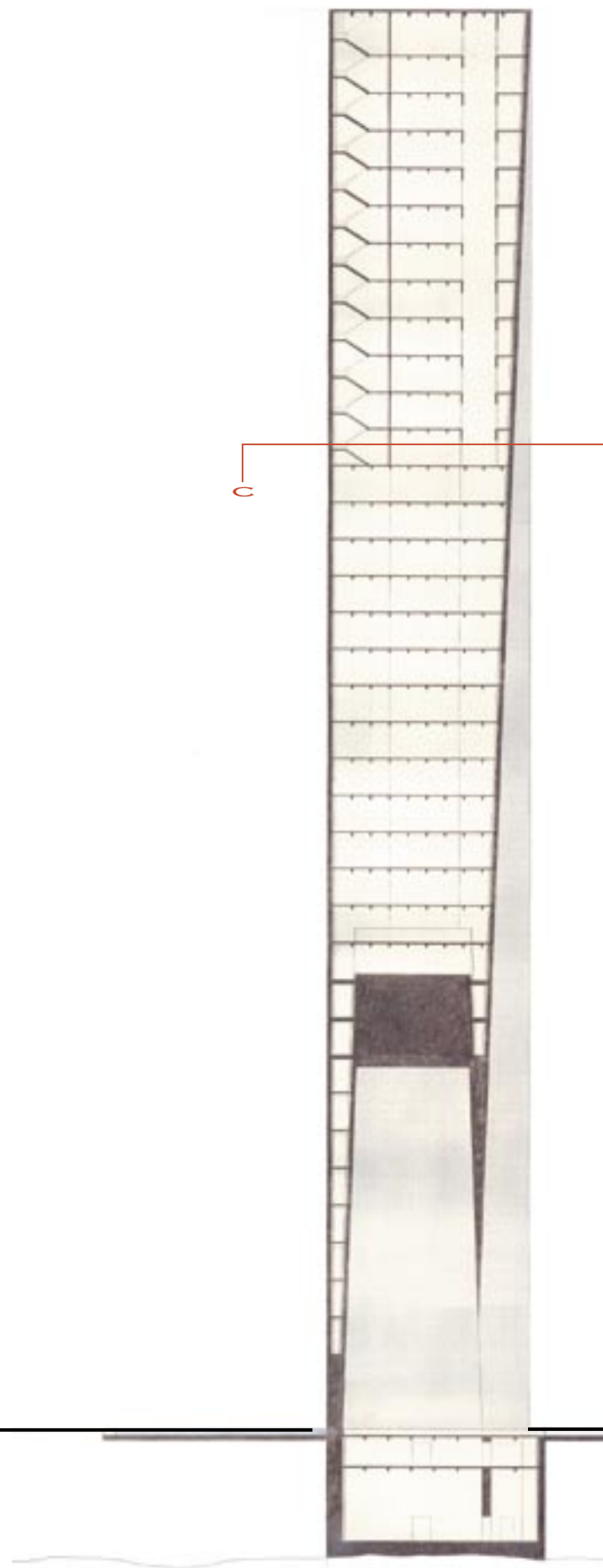
Within the pool of the lost, the monument stands. It rises 454 feet straight out of crystal clear water, with a 200 square foot waterfall behind it. Sunlight shimmers off the rippling water, and speckles the polished stone with light. There is a stone path sitting only 1/2 inch above the surface and leading through the pool, into the monument. Upon entry, the path narrows to a single point causing it to seem longer than it really is. Above the entry opening, leaning outward and rising into the sky are the names of all the lost lives from those two attacks. The names are written in raised stone letters, which create an incredible texture upon that surface, signifying it from the others. (1) At the edges of the entry opening, the stones come to a sharp angular edge, demarcating the line of entry into the monument. Entering through a 15 foot wall will seem heavy and massive, as the weight on ones heart when approaching this area.

Inside, the tower seems much taller, as it reaches up toward a patch of sky. The walls on the inside taper toward the skylight, and, as with the entry path, cause the judgement of distance to be increased. The stones of the path continue around the space leaving a square pool, of glass calm water, in the middle. The center of this pool is also the center of the South Tower's footprint. Once each minute, a single drop of water falls from the center of the skylight, 454 feet down, and into the center of the pool at your feet. The beautiful sound of that drop hitting the surface echoes through the stone tower, while the circular ripples roll toward the paving stones and between them. Light from the bottom of the pool sends caustic ripples up the walls. The sharp edges of the entry opening, in conjunction with the form of the entry wall cause the massive wall to resemble a thin plane, from the inside. This condition emphasizes the symbolic and surreal nature of the space. (2)

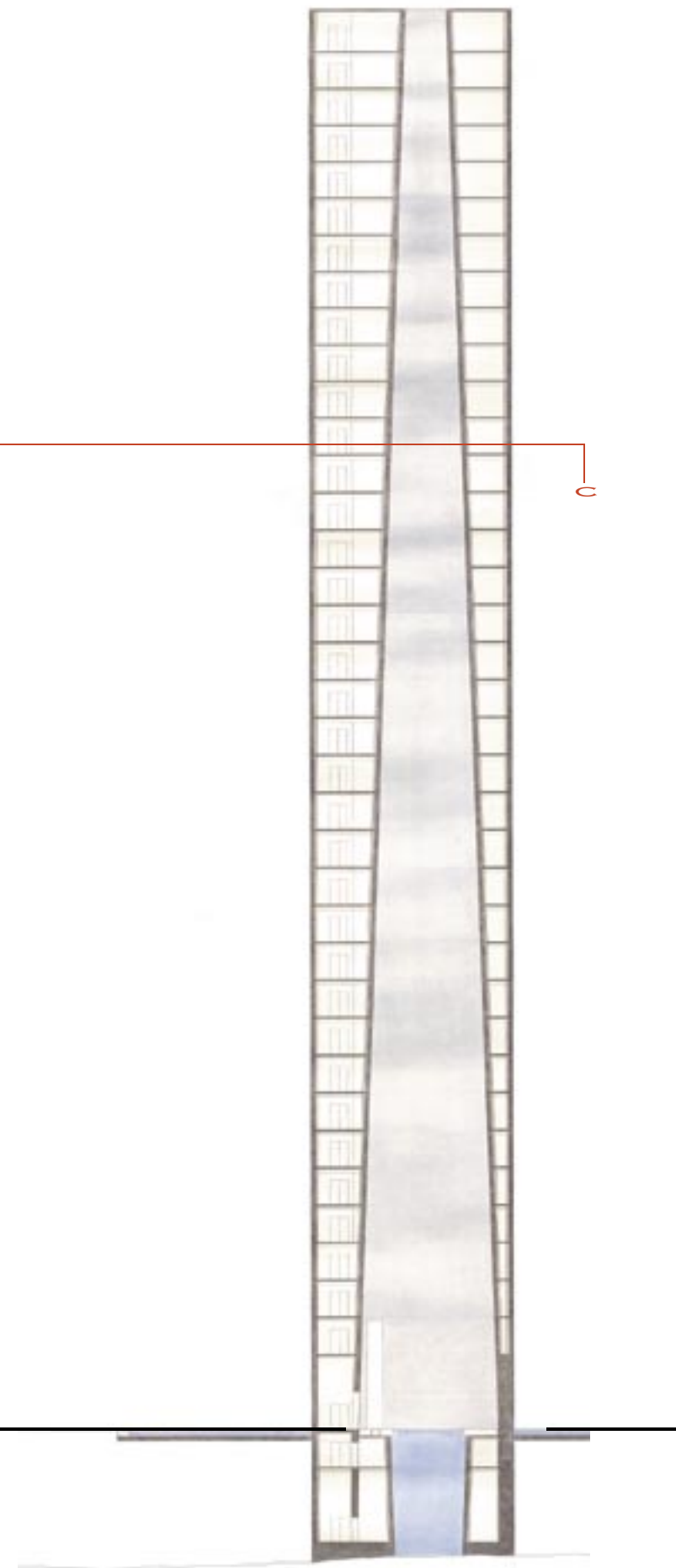
This space is a shrine to the innocent men, women, and children who lost their lives on those tragic days. It is place for contemplation, for remembrance, for Love. It is also a tomb, a burial ground, for within the walls lie the unidentified remains of the victims. (4)



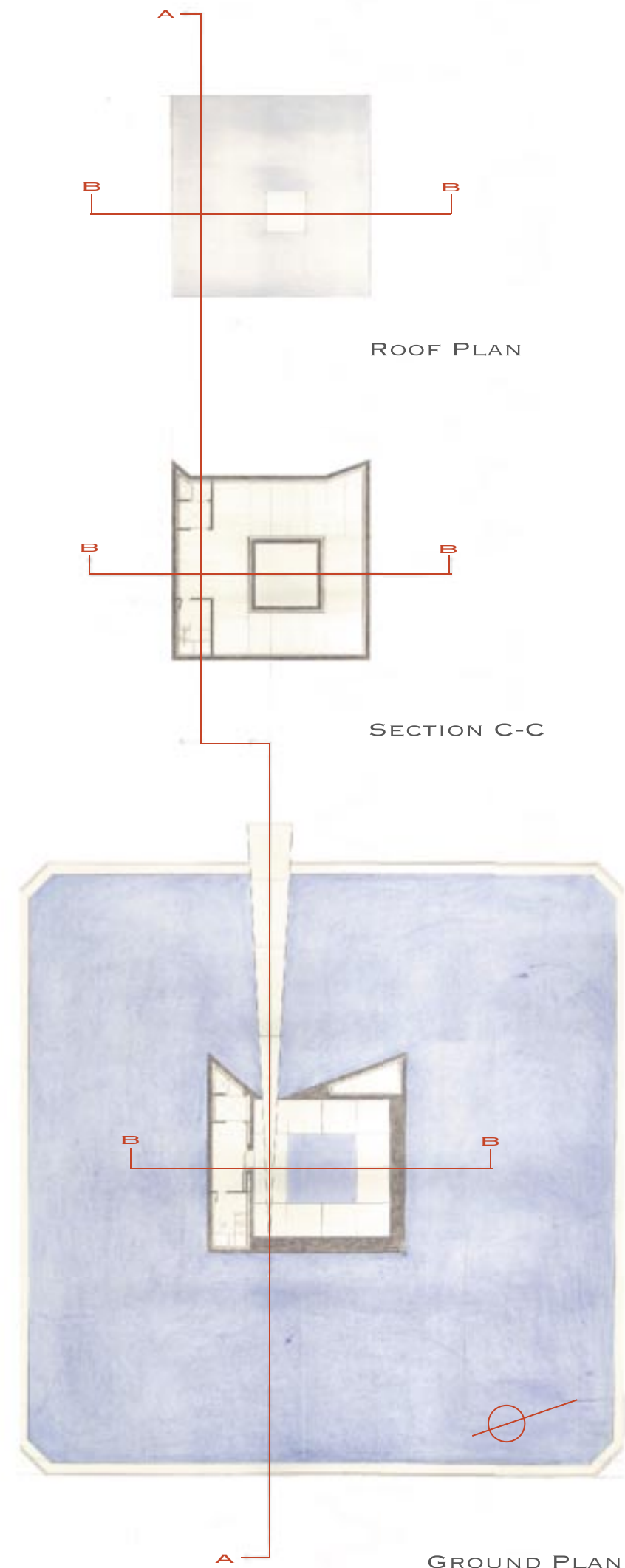
WEST ELEVATION



SECTION A-A



SECTION B-B



ROOF PLAN

SECTION C-C

GROUND PLAN

THE REFORMATION

THE MAIN ROOM, THE WATER DROPLET, AND THE REFLECTING POOL REMAINED. THE EXTERIOR FACADES, THE USE OF THE REMAINING SPACE, AND THE WATER SOURCE EVOLVED.

UTILIZING THE TWO-DEGREE TAPER OF THE MAIN ROOM'S WALLS, A NEW SUBTRACTION FROM THE TOWER WAS DEVISED, AND AN ACRYLIC TANK WAS SET WITHIN AND WITHOUT. THE TANK SYMBOLIZES THE "WEDGE" DRIVEN INTO OUR COUNTRY BY THE EVENTS OF 9/11. THIS "WEDGE" SPLIT OFF THE FACE OF THE TOWER EXPOSING ITSELF AND ALLOWING ENTRY WITHIN.

THE SUBTLETY OF THE TWO-DEGREE ANGLE OVER SUCH A TALL FACADE WAS SEDUCTIVE. ACCENTUATED BY THEIR PROXIMITY TO THE PLUMB LINES OF THE EXTERIOR WALLS, THE ANGLED LINES OF THE GLASS FACADE ARE CONTINUED BY THE TANK BEYOND THE TOWER AND INTO THE SKY (PP. 9 & 33-34)

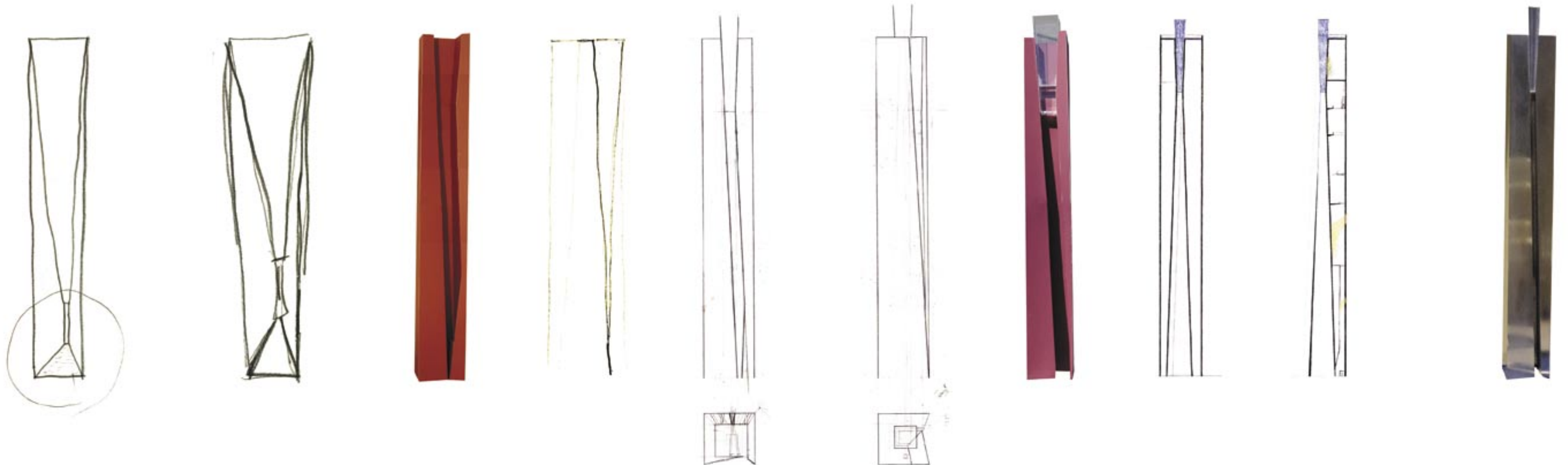
AT THIS POINT, THE PROJECT INFLUENCED ITS OWN DESIGN LEADING TO A BEAUTIFUL DISCOVERY. BY FORMALLY ADHERING TO THE TWO-DEGREE ANGLE, THE FORM OF THE WATER TANK CREATED A PRISM, PROJECTING SPECTRAL LIGHT AROUND THE SITE AND WITHIN THE MEMORIAL. THIS LIGHT REPRESENTS HOPE FOR THE FUTURE.

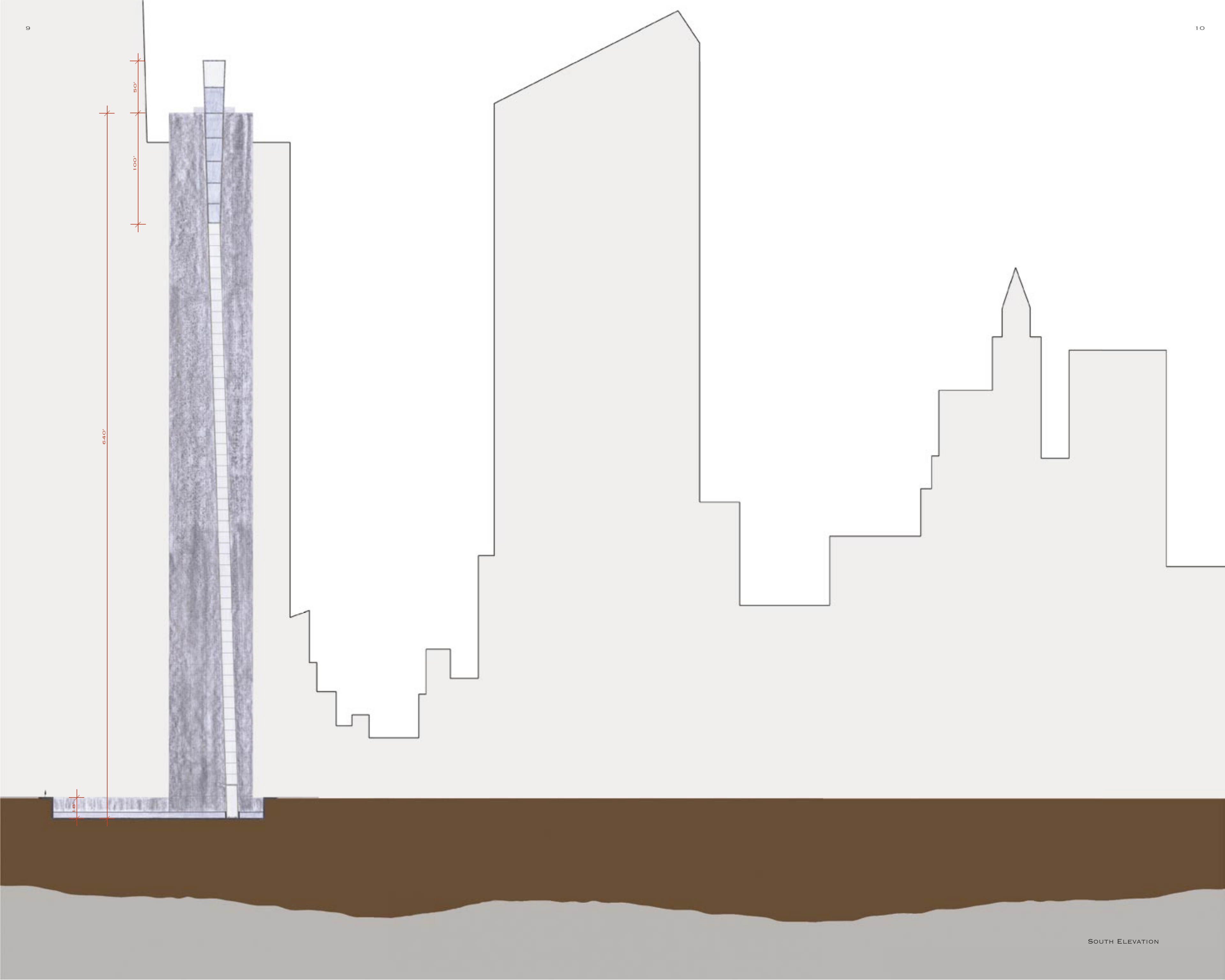
THE DROPLET FALLS INTO A REFLECTING POOL CREATED BY A DEPRESSION IN THE CAPSTONE OF A HUGE STONE COFFER. THE COFFER CONTAINS THE UNIDENTIFIED REMAINS OF VICTIMS. WATER IN THIS POOL OVERFLOWS AND WASHES DOWN THE COFFER THROUGH THE FIRST FLOOR AND ONTO BEDROCK.

THROUGH FORM AND MATERIAL THE MAIN ROOM, DENOTED AS THE "WELL OF TEARS," ENHANCES THE ECHO OF THE DROP. THIS SOUND, THIS ECHO IS CRITICAL TO THE EXPERIENCE OF THE SPACE; IT CREATES A RHYTHM. THE SENSES OF SIGHT AND SOUND ARE INCORPORATED TO STIMULATE MEMORY, OF THE PAST AND FOR THE FUTURE.

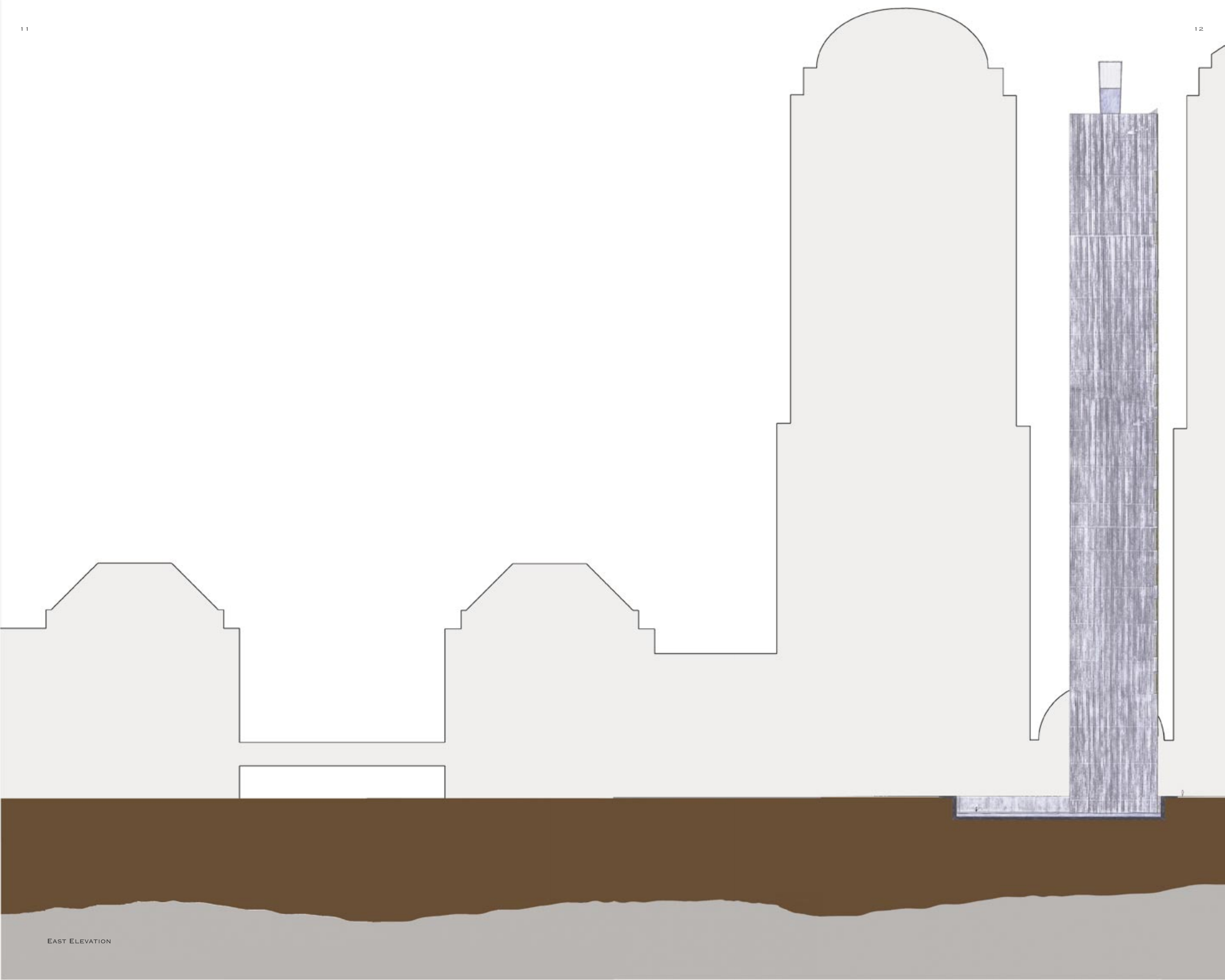
THE WALLS, THE STAIRS, THE FLOORS, AND THE TERRACES ARE ALL CAST-IN-PLACE REINFORCED CONCRETE. THE CONCRETE ACTS AS A SONIC REFLECTOR AMPLIFYING THE SOUNDS WITHIN. THE WATER TANK IS ACRYLIC WITH A STAINLESS STEEL FRAME, ALLOWING SUNLIGHT TO PASS THROUGH IT. ALL OTHER ITEMS ARE MADE OF LAMINATED GLASS WITH BRONZE CONNECTIONS.

THE FOLLOWING PAGES CONTAIN THE DRAWINGS OF THE TOWER. THE SITE PLAN AND SECTIONS FOLLOW THESE.

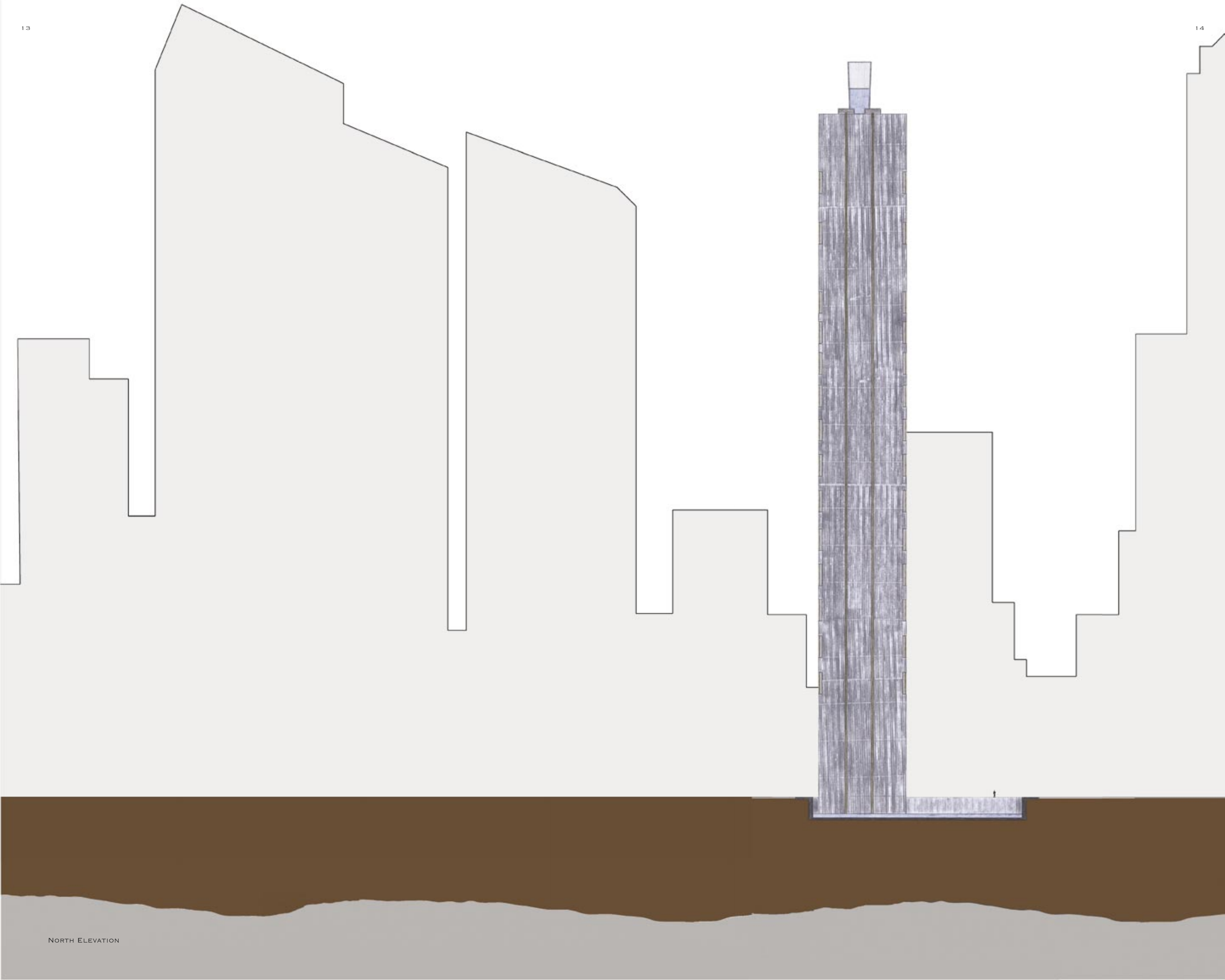




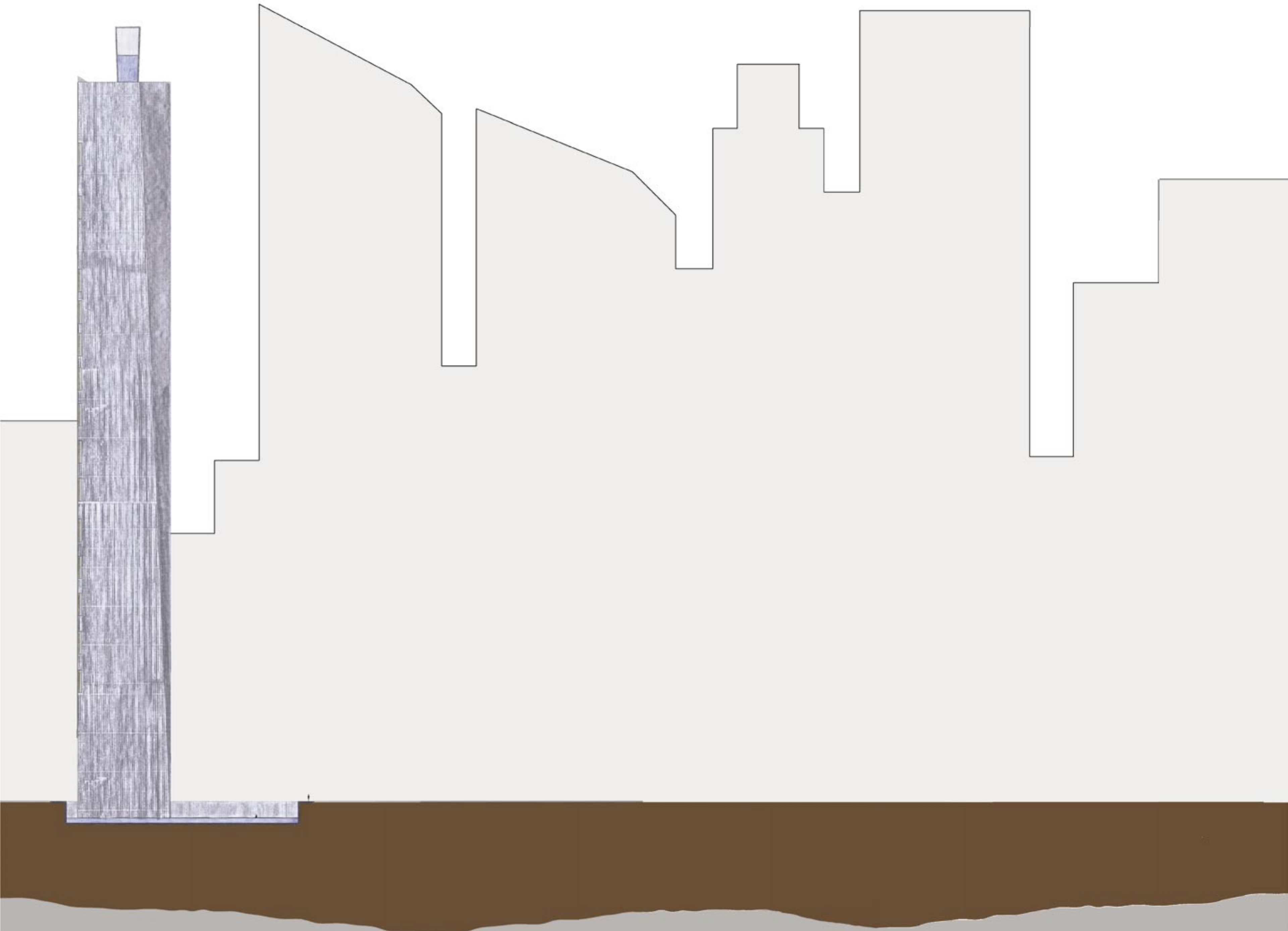
SOUTH ELEVATION

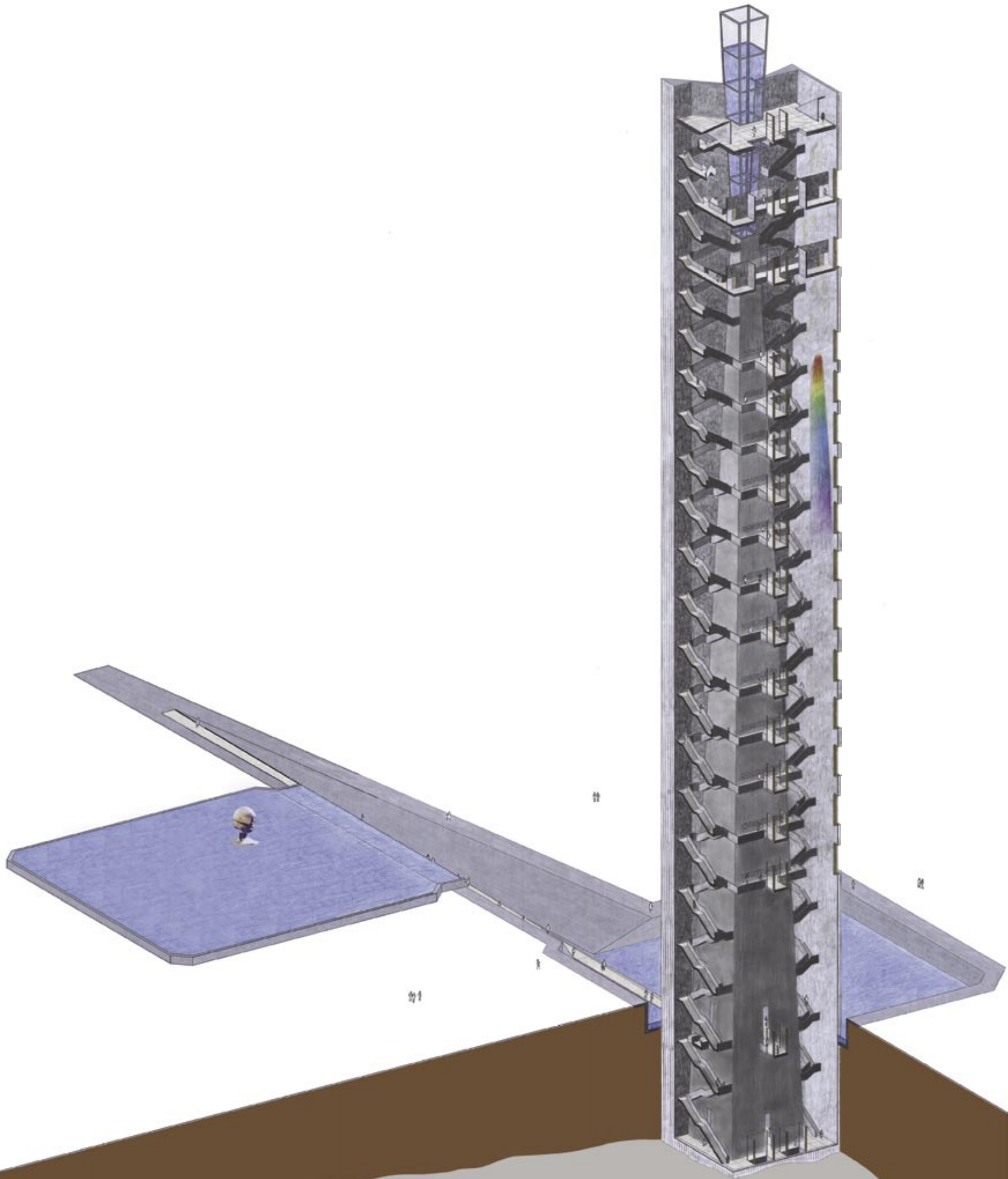


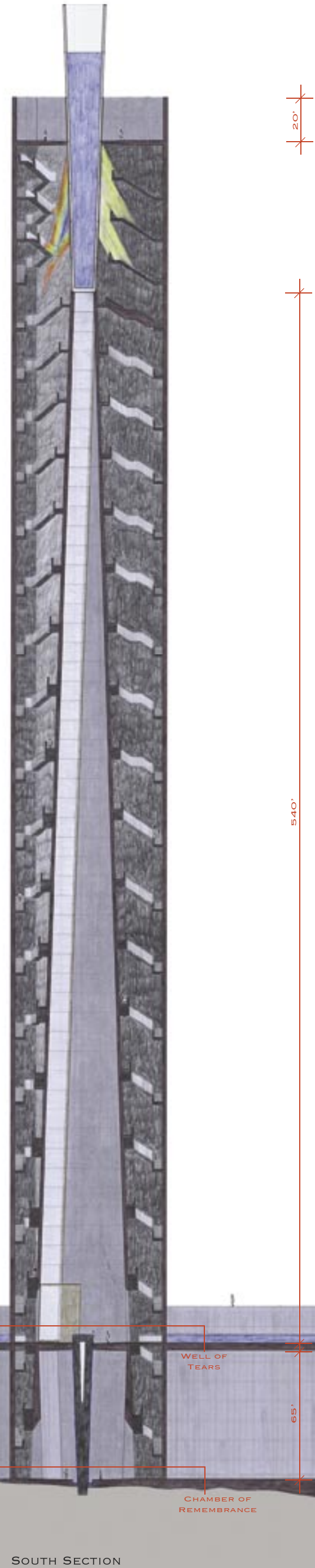
EAST ELEVATION



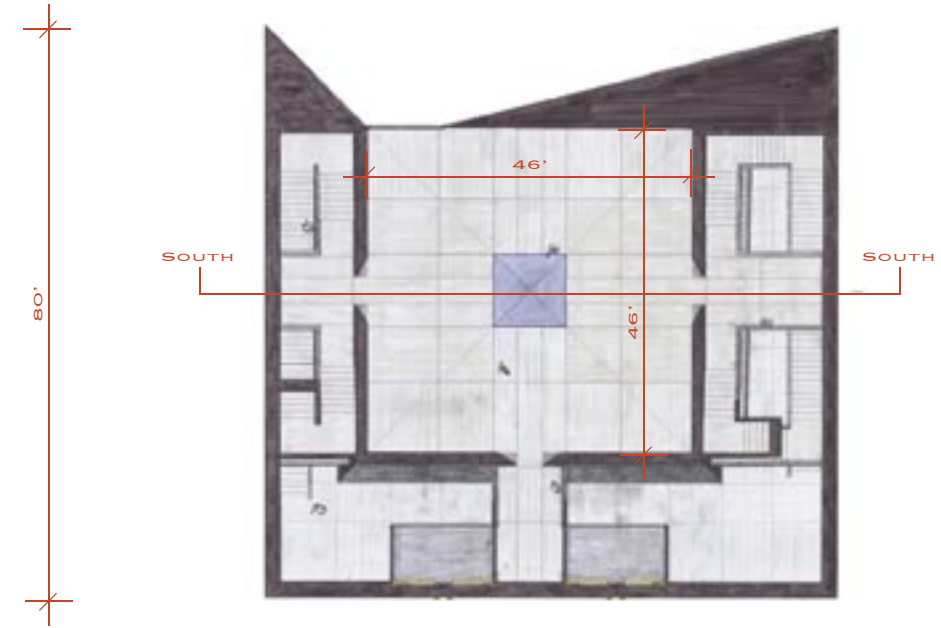
NORTH ELEVATION



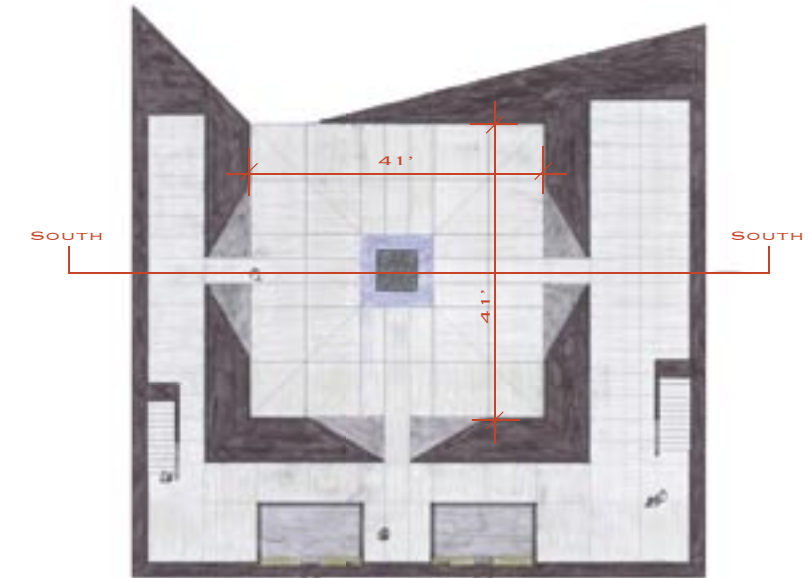




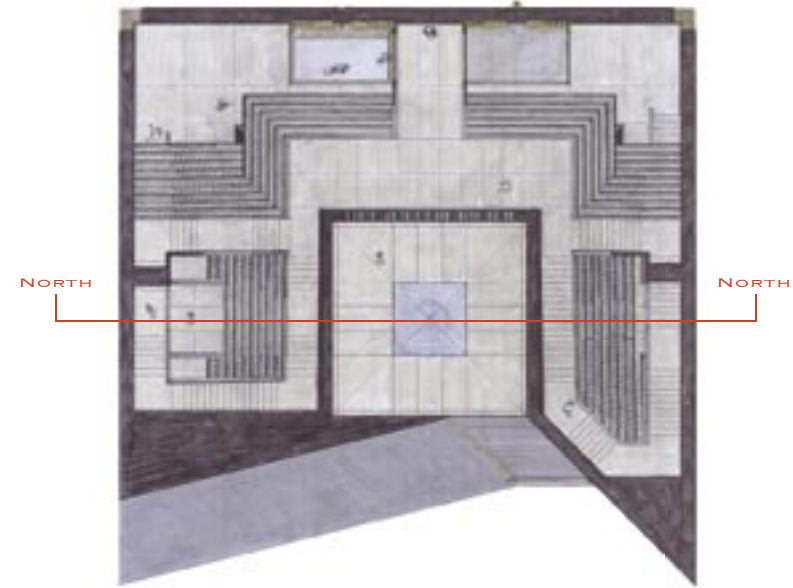
SOUTH SECTION



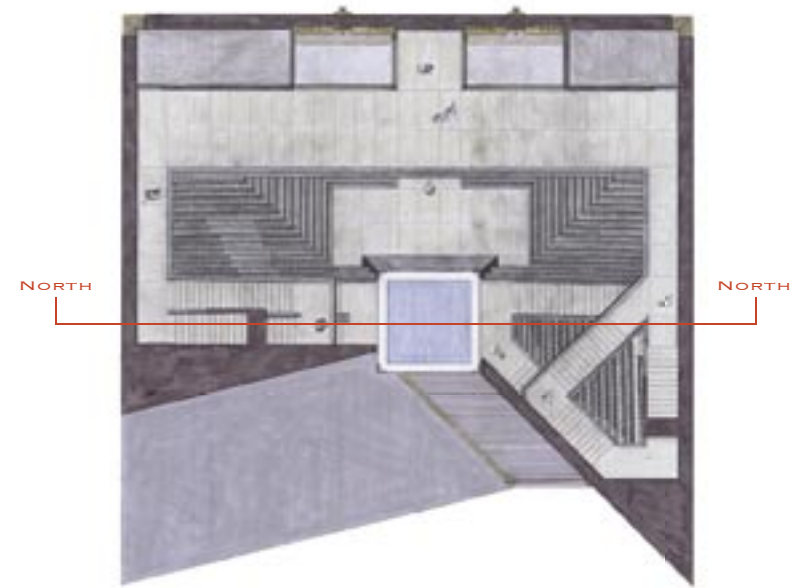
"WELL OF TEARS" PLAN



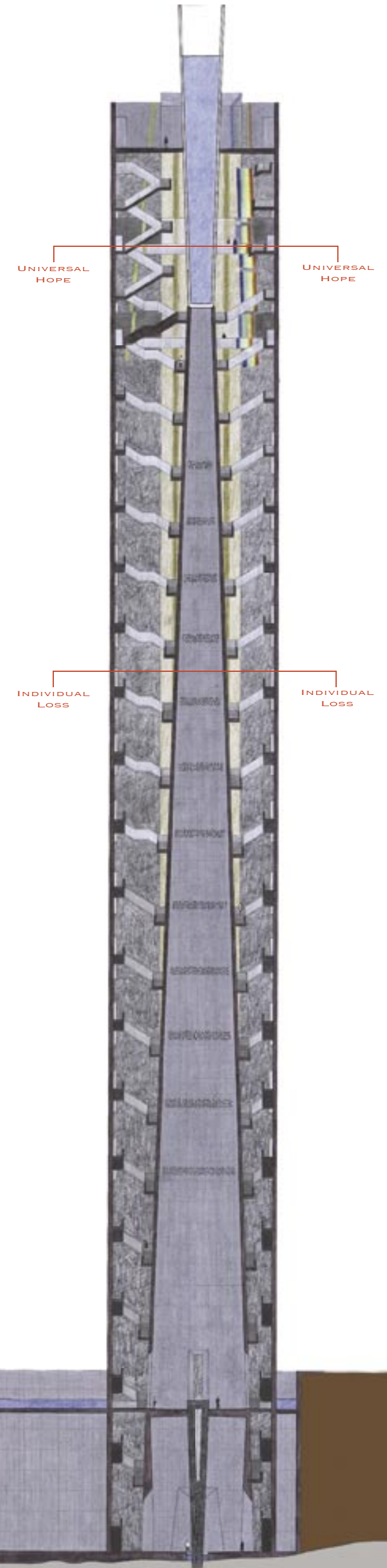
"CHAMBER OF REMEMBRANCE" PLAN



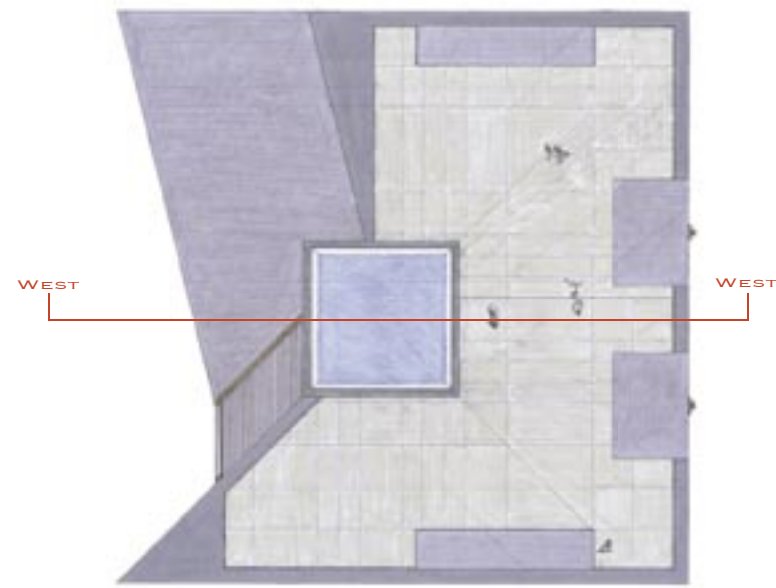
"INDIVIDUAL LOSS" TERRACE PLAN



"UNIVERSAL HOPE" TERRACE PLAN



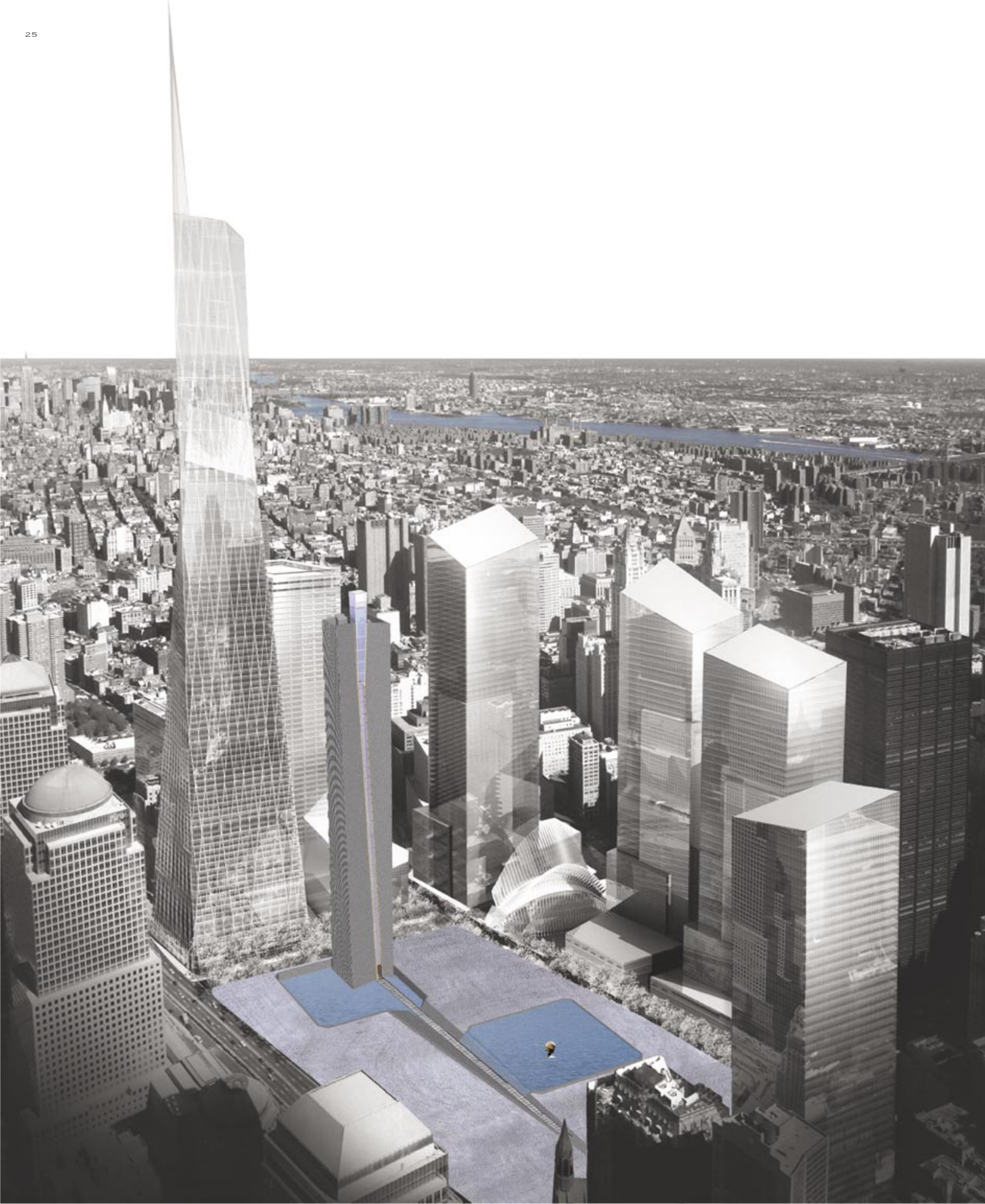
NORTH SECTION



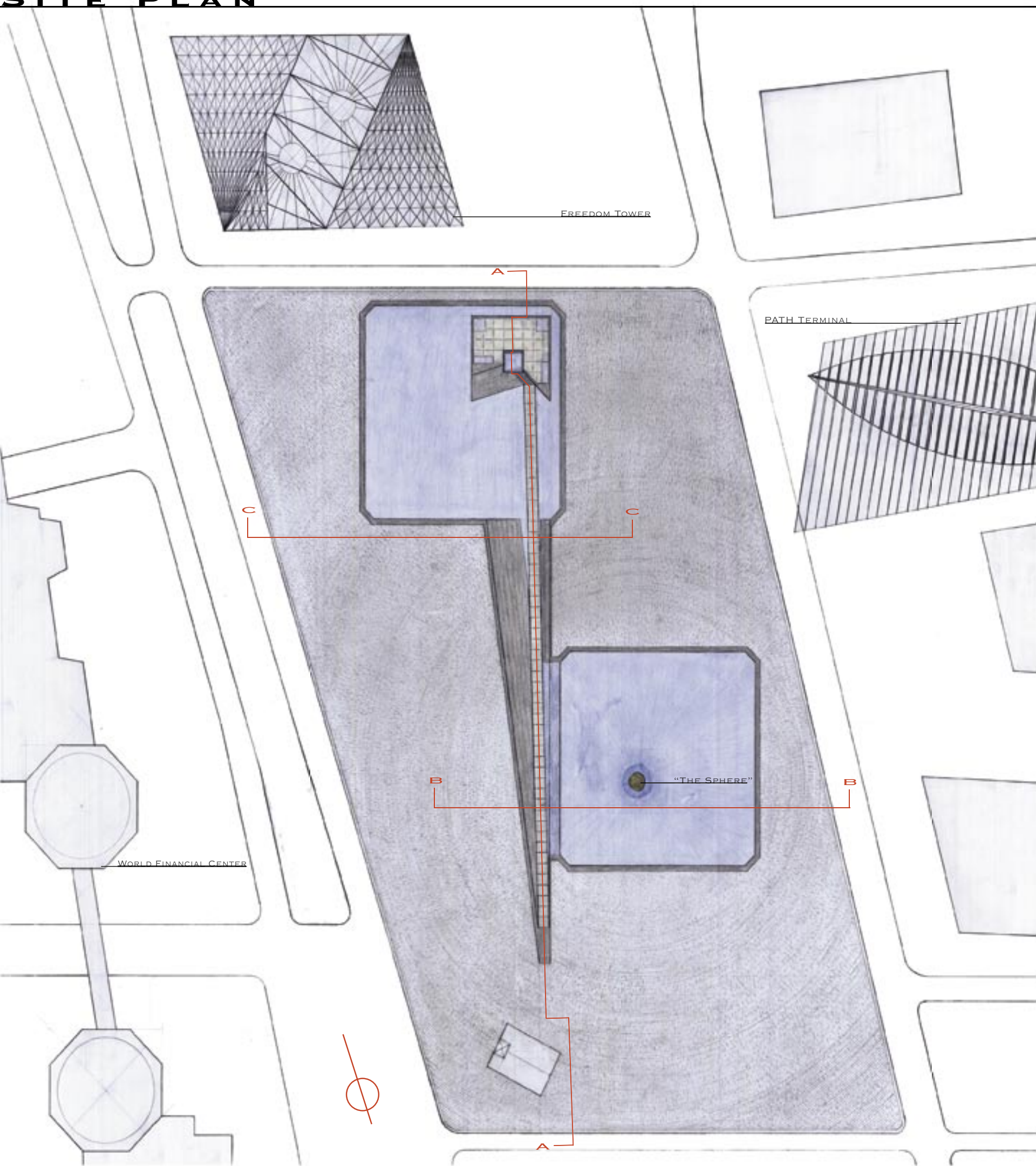
SKY TERRACE PLAN



WEST SECTION



SITE PLAN



SITE PLAN

THE ENTIRE SITE OF "GROUND ZERO" HAS BEEN RAISED ONE STEP ABOVE STREET LEVEL AND MADE INTO A PLAZA. THE FOOTPRINTS OF THE ORIGINAL TOWERS COMMAND THIS PLAZA. THROUGH THEIR TRANSFORMATION INTO WATER THEY ARE MADE SACRED. THE ACCENTUATION OF THESE FOOTPRINTS IS A VISUALLY IMPORTANT REMINDER, A REFLECTION OF OUR LOSS.

THE MEMORIAL TOWER IS PLACED IN THE NORTHEAST CORNER OF THE NORTH TOWER FOOTPRINT. THIS FOOTPRINT IS SUNKEN 18' BELOW GRADE WHILE THE SOUTH TOWER FOOTPRINT IS RAISED 18" ABOVE GRADE, ALLOWING THE SOUTH FOOTPRINT POOL TO FLOW INTO THE NORTH FOOTPRINT POOL. THE TRAVERTINE PATHWAY CONNECTING THE TWO IS 658' IN LENGTH. THE PATHWAY SITS IN A SUBTRACTION FROM THE SITE DERIVED IN THE SAME MANNER AS THAT OF THE TOWER. SYMBOLICALLY, THE PATHWAY IS ALSO A PART OF THE FISSURE LEFT BEHIND BY 9/11. THE SITE AND TOWER BOTH HAVE BEEN CLEAVED OPEN BY TRAGEDY ALLOWING ACCESS INTO THE EARTH, WATER, AND SKY.

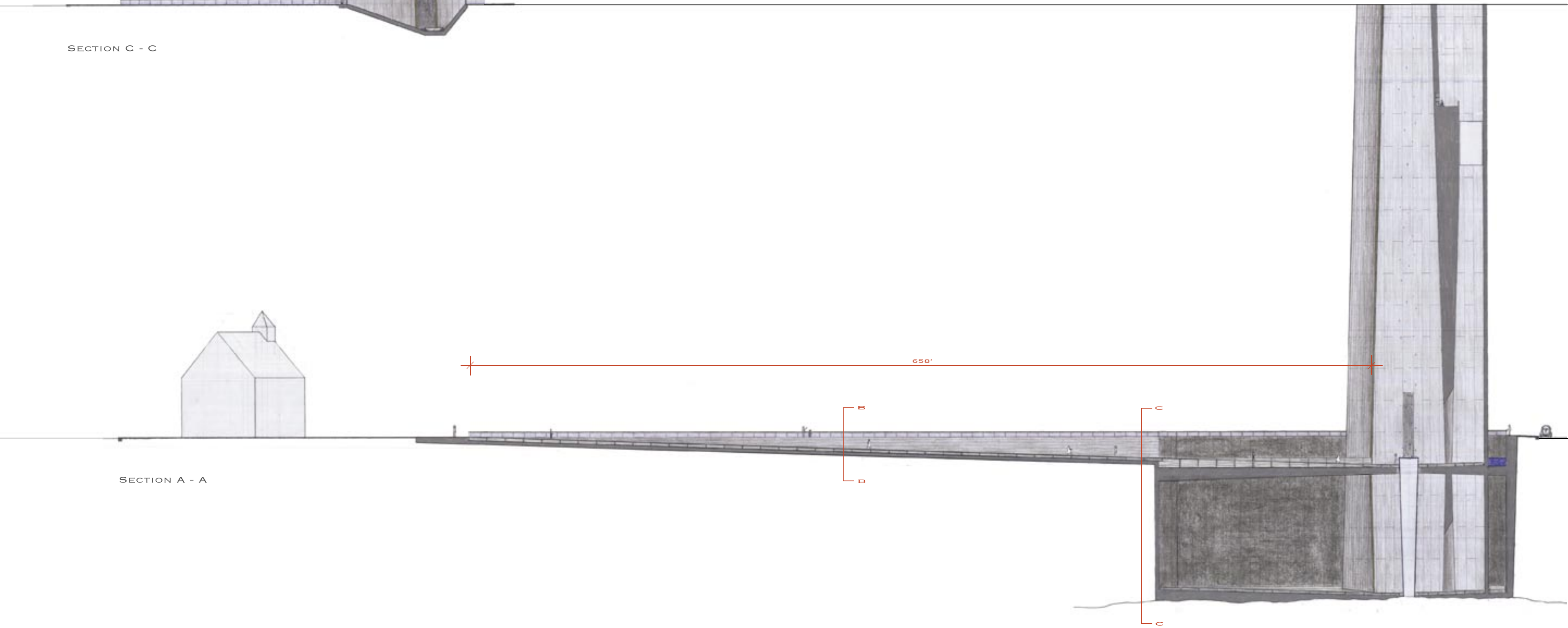
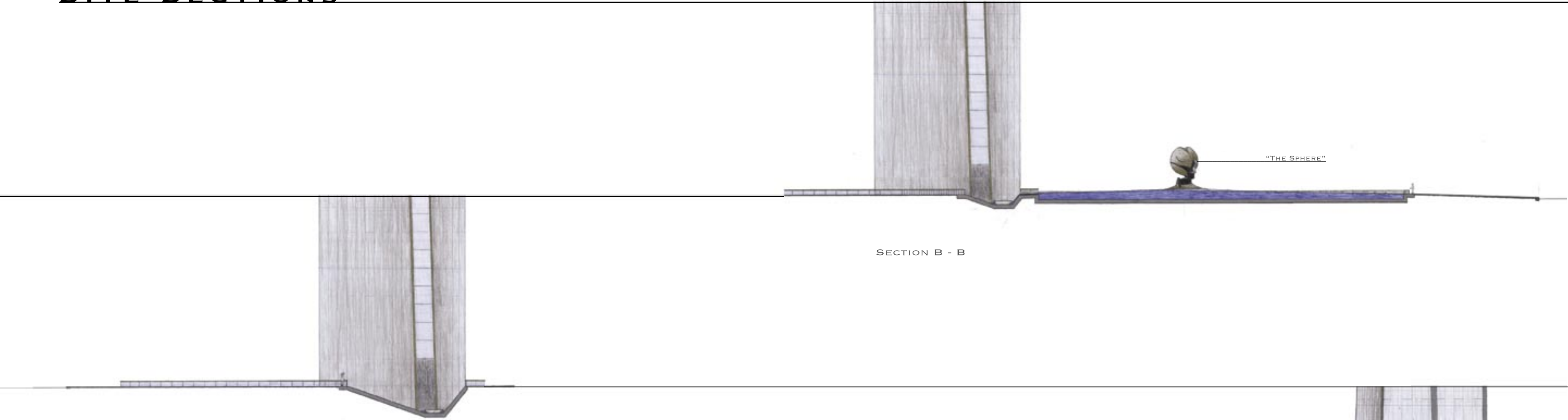
WITHIN THE SITE, THE SUBTLETY IN JUXTAPOSITION OF THE TWO-DEGREE ANGLE IS ACCENTUATED IN BOTH PLAN AND SECTION. IN PLAN, THE PATH IS JUXTAPOSED FROM THE GRID OF THE ORIGINAL TOWERS, WHILE IN SECTION IT DESCENDS FROM THE HORIZONTAL.

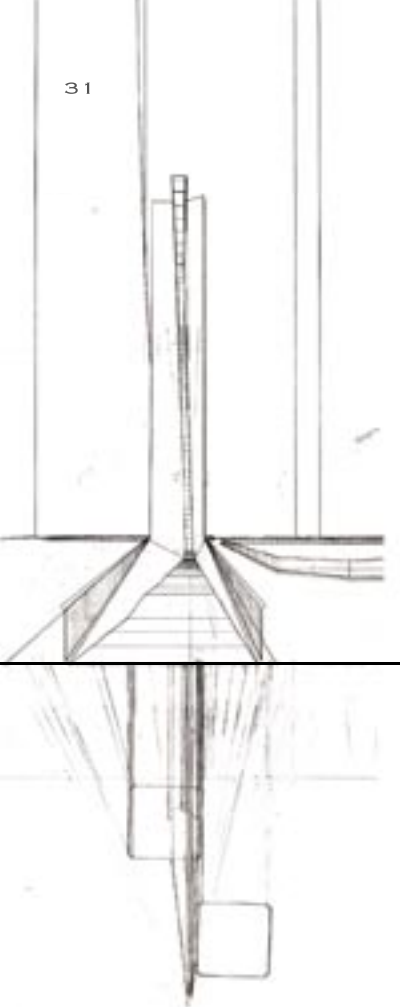
THE TWO-DEGREE ANGLE WAS INITIALLY CREATED TO INCREASE THE PERSPECTIVAL DISTANCE THROUGH THE "WELL OF TEARS" (P. 3). IN THE SITE, IT BOTH INCREASES AND DECREASES PERSPECTIVAL DISTANCES. AS VIEWERS APPROACH THE MEMORIAL, THE LINES OF THE SUBTRACTION SPREAD FURTHER APART SHORTENING THE PERCEIVED DISTANCE. UPON DEPARTURE, THE SITE LINES CONVERGE AT THE PATH'S BEGINNING LENGTHENING THE PERCEIVED DISTANCE.

THE INTERIM MEMORIAL FOR THE DISASTERS, A SCULPTURE DONE IN 1971 BY FRITZ KOENIG KNOWN AS "THE SPHERE," HAS BEEN RETURNED TO THE SITE AND PLACED IN THE SOUTH TOWER POOL. IT ACTS AS A RADIATING POINT FOR THE PLAZA'S GRANITE PAVERS. THIS GESTURE RECALLS THE ORIGINAL PLAZA, AS THE SCULPTURE ACTED AS THE RADIATING POINT FOR THE PAVERS THERE AS WELL. THIS SCULPTURE WEATHERED THE COLLAPSE OF BOTH TOWERS WITH ONLY MINOR DISFIGUREMENT AND THUS SPEAKS FOR HUMAN ENDURANCE.⁴ WATER BRIMS FROM THIS SCULPTURE INTO THE SOUTH FOOTPRINT POOL AND THEN OVERFLOWS INTO THE PATHWAY, LEADING VISITORS DOWN THE PATH TO THE MEMORIAL. THE PATH INCLINATION WAS SET AT TWO DEGREES. THIS SLOPE IS LESS THAN 1:20, AVOIDING THE NEED FOR LANDINGS AND HANDRAILS.

AS THE PATH ENTERS THE NORTH FOOTPRINT IT DESCENDS BELOW THE WATER'S SURFACE. THE SEA AND THE LAND ARE PARTED TO ALLOW ENTRANCE INTO THE MEMORIAL.

SITE SECTIONS



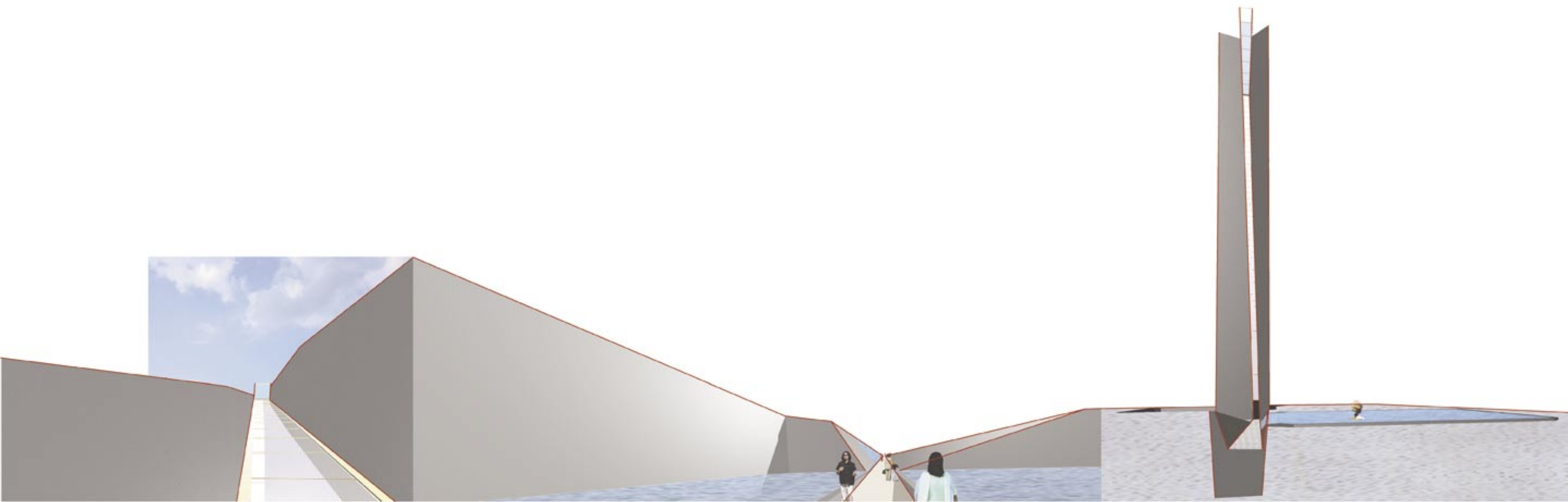


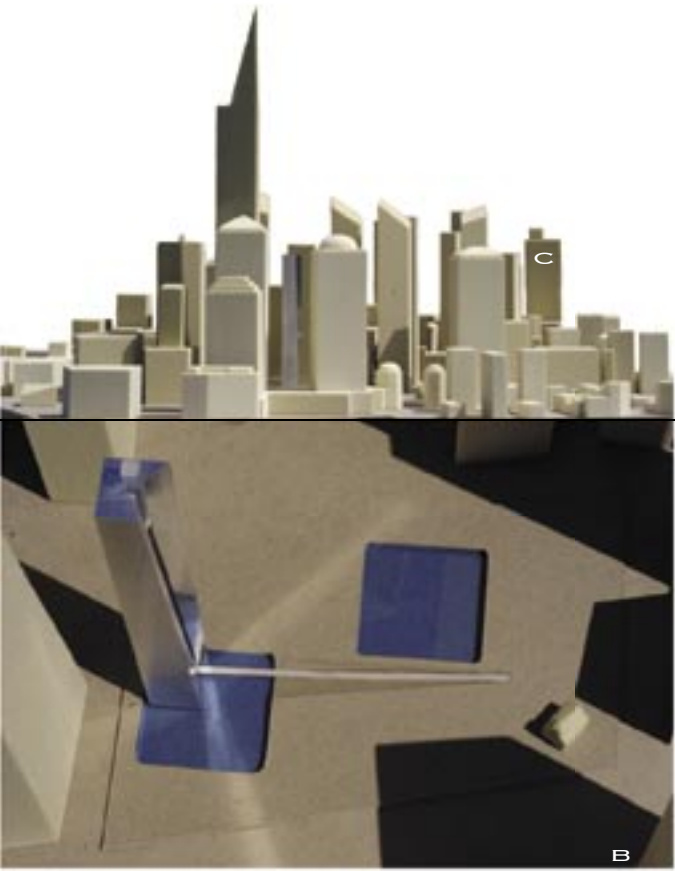
LINES

AS ONE LOOKS TOWARD THE MEMORIAL THEIR EYES FOLLOW THE LINE OF THE PATH STONES, AND THEN THE LINE OF THE GLASS FACADE TO THE WATER PRISM AT THE MEMORIAL'S TOP (DRAWING LEFT & RENDERING BELOW). THE TOTAL LENGTH OF THESE APPROACH LINES TO THE TOP OF THE TANK, IS ACTUALLY THE LINEAR HEIGHT OF THE ORIGINAL NORTH TOWER - 1,368.' THE EXTENT OF THIS LINE CREATES A LONGER MORE DRAMATIC ENTRANCE AND VISUALLY TAKES THE VISITOR FROM THE GROUND TO THEIR ULTIMATE DESTINATION, THE SKY.

THESE LONG STRAIGHT LINES OF THE FACADES AND THE SITE ARE MAINTAINED THROUGH ALL PHASES OF THE DESIGN. THEY EMPHASIZE THE LENGTH AND HEIGHT OF THE MEMORIAL AND SILENTLY RECALL THE HEIGHT OF THE ORIGINAL TOWERS. AS ONE LOOKS UP THE SOUTH FACADE THE LINES CONVERGE TO THE WATER PRISM AND THEN DIVERGE AS THEY REACH INTO THE SKY BEYOND THE MASS OF THE TOWER (BELOW LEFT).

THE PERSPECTIVAL DISTANCES PERCEIVED BY THE VIEWERS ARE EITHER INCREASED OR DECREASED THROUGH THE INTENTIONAL ANGLING OF THESE LINES TOWARD OR AWAY FROM ONE ANOTHER. THE VIEW TOWARD THE TOWER FROM THE BEGINNING OF THE PATH SEEMS AS THOUGH IT WERE A SHORTER DISTANCE THAN IT TRULY IS WHILE THE VIEW BACK UP THE PATH FROM THE TOWER SEEMS LONGER.

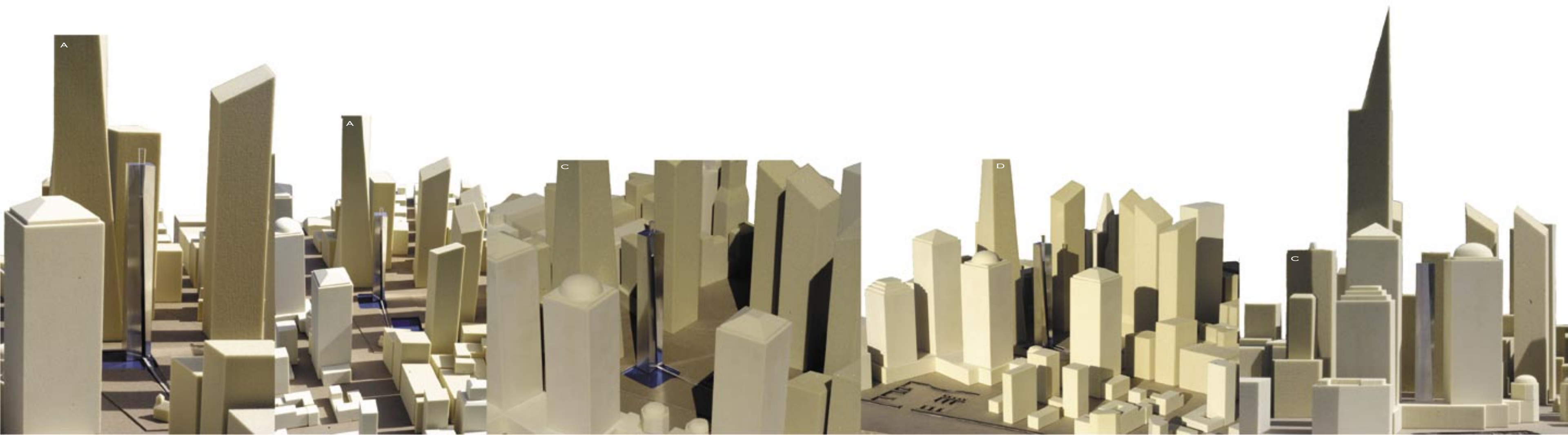


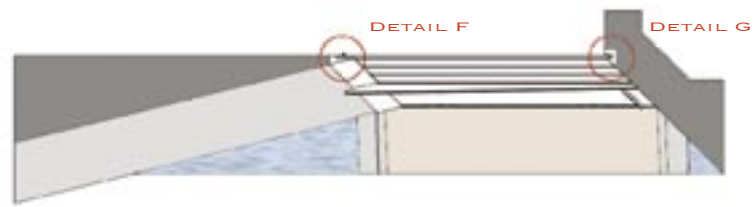


A 9:00 A.M.
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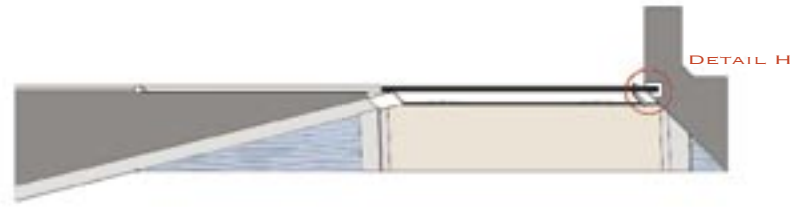
NOTE: PHOTOS TAKEN IN MARCH 2004

ONCE THE WATER TANK DISPLAYED ITS PRISMATIC CHARACTERISTICS, A QUESTION WAS POSED AS TO HOW MUCH SUNLIGHT IT WOULD RECEIVE IN LOWER MANHATTAN. TO TEST THIS, A SITE MODEL WAS CONSTRUCTED. THE MODEL SHOWED THAT INDEED THE WATER PRISM WOULD RECEIVE DIRECT SUNLIGHT FOR NEARLY THE ENTIRE DAY. THE MODEL ALSO GAVE A SENSE FOR THE MASSING OF SURROUNDING NEIGHBORHOODS AND BUILDINGS, PARTICULARLY THE WORLD FINANCIAL CENTER AND NEW WORLD TRADE CENTER COMPLEX. AT DIFFERENT SUN ANGLES THE TANK CAN BE BEAMING LIGHT, CASTING SPECTRUMS, OR LIGHTING SWATHS OF THE FINANCIAL DISTRICT INTO A DANCE OF LIGHT.

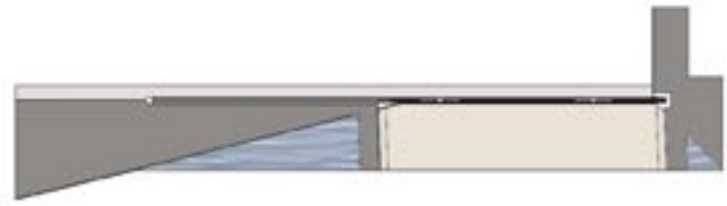




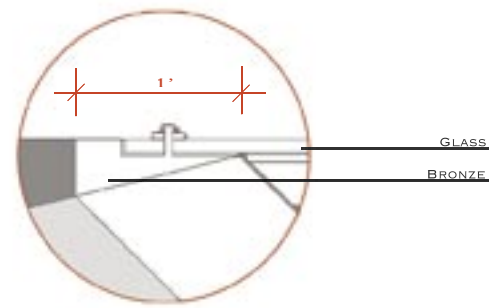
C-C



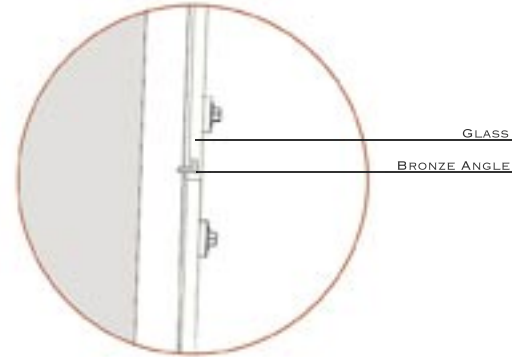
B-B



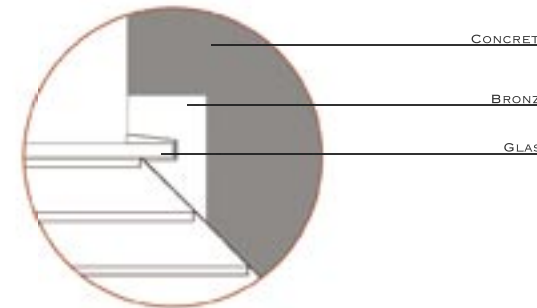
A-A



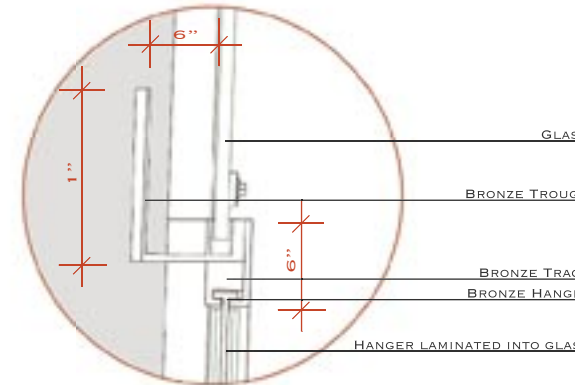
DETAIL F
WINDOW CONNECTION



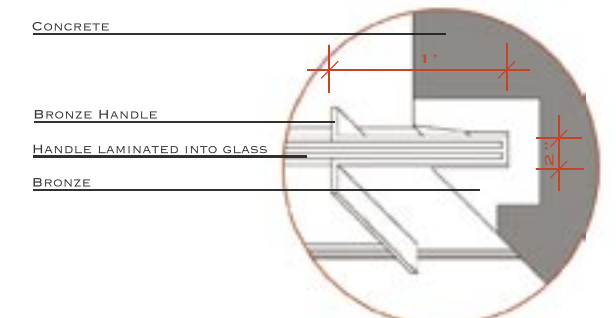
DETAIL I
WINDOW CONNECTION



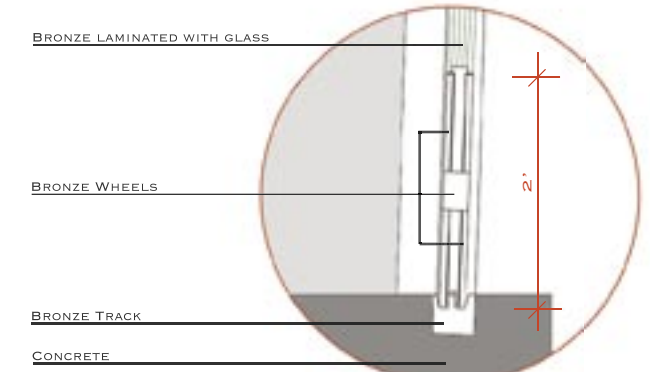
DETAIL G
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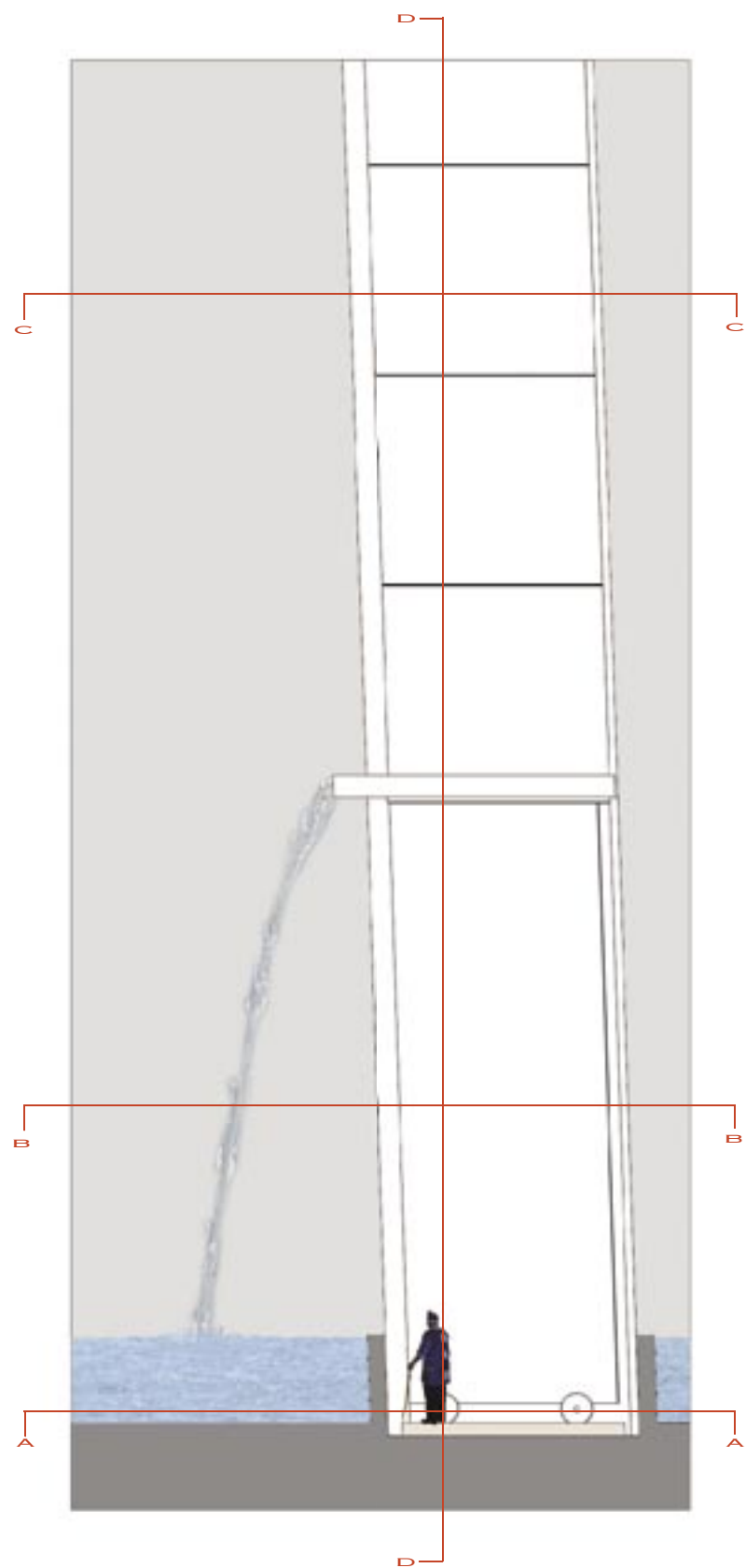
DETAIL J
TROUGH & DOOR HEAD



DETAIL H
DOOR HANDLE



DETAIL K
DOOR WHEEL & TRACK



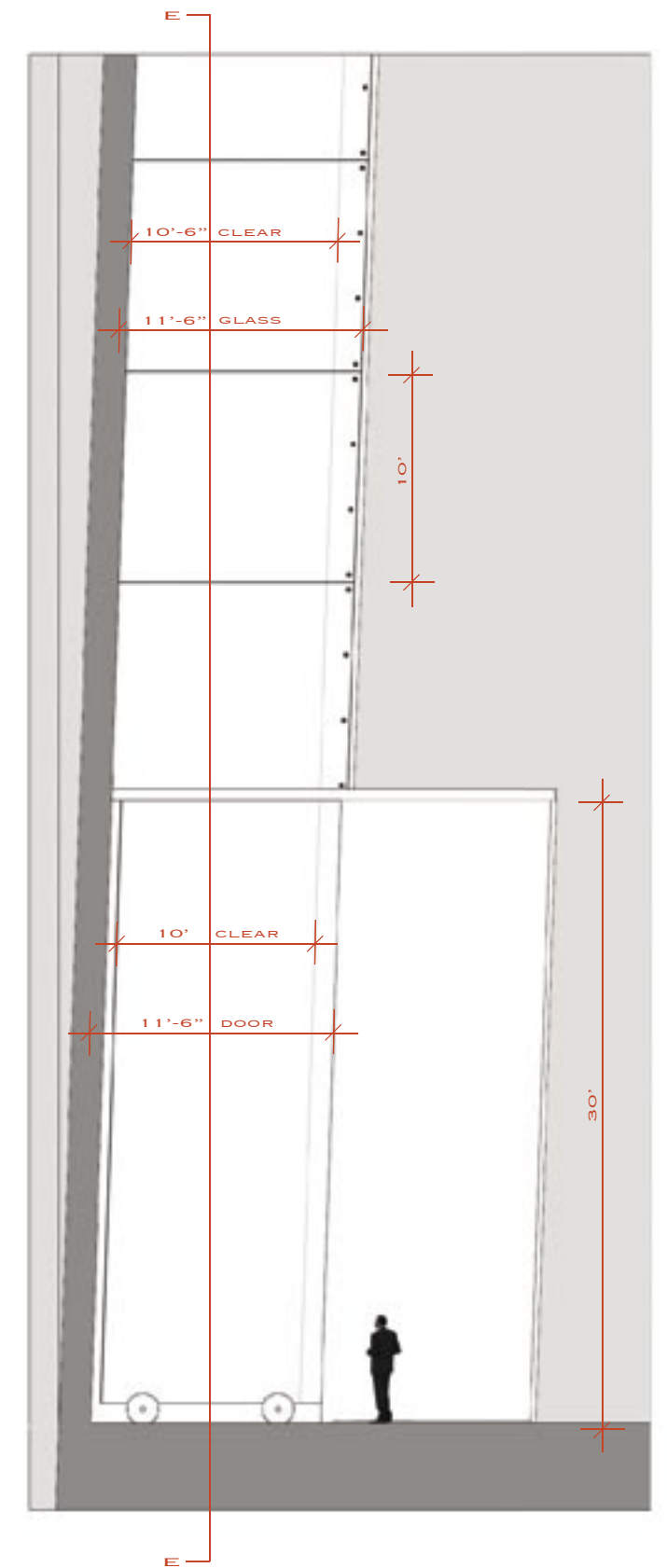
EXTERIOR ELEVATION



D-D



E-E



INTERIOR ELEVATION

WELL OF TEARS

AS A DROPLET OF WATER FALLS THROUGH THE AIR IT CARRIES KINETIC ENERGY WITH IT. AT THE MOMENT OF IMPACT INTO THE REFLECTING POOL, THIS ENERGY IS DISPERSED IN TWO BEAUTIFUL WAYS.

A SERIES OF CIRCULAR WAVES RADIATE, FROM THE POINT OF IMPACT, OVER THE SURFACE OF THE POOL.

A SOUND IS RELEASED THAT IS REMINISCENT OF THE FIRST DROPS OF RAIN ON A MOUNTAIN LAKE, THE ECHO IN CAVES WHEN WATER DRIPS FROM STALACTITES, OR IN A WELL AS IT TRICKLES TO THE BOTTOM.

THIS MOMENT, IN ITS PHYSICAL CLARITY, CAN AWAKEN ONE TO THE PRESENCE OF LIFE. THE RHYTHM AND SOUND OF THE WATER TEACH LESSONS IN TRANSIENCE AS EACH PASSING MINUTE IS MARKED BY ANOTHER DROP. IT IS AS IF THE MONUMENT WEEPS FOR THOSE WHO HAVE BEEN LOST.

THE ROOM THAT ENCASES THIS EVENT IS 540' TALL AND KNOWN AS THE "WELL OF TEARS." THE ROOM IS MEANT TO BE A HOME TO THE MEMORY OF THOSE LOST AND THE ECHO OF TIME. SUNLIGHT CASTS A LIVING STRIPE ONTO THE SMOOTH CONCRETE WALLS (B). THE WALLS HAVE A TWO-DEGREE TAPER EMPHASIZING THE HEIGHT OF THE SPACE. THERE ARE THREE PASSAGES LEADING OUT AND INTO THE ATRIUM. TWO OF THE DOORWAYS LEAD TO STAIRWELLS AND ONE TO THE ELEVATORS. BOTH OF WHICH CAN BE USED TO REACH THE OTHER SIXTEEN LEVELS OF THE MEMORIAL.

A SECTION SHOWN IN D
B PERSPECTIVE VIEW UP (AS SHOWN IN A)
C PERSPECTIVE THROUGH SOUTH WALL (AS SHOWN IN D)
D "WELL OF TEARS" PLAN
E CONCENTRIC RIPPLES OF A RAIN DROP



CHAMBER OF REMEMBRANCE

THE "CHAMBER OF REMEMBRANCE" IS A 65' TALL ROOM WITH 7' THICK WALLS. THIS ROOM IS DOMINATED BY AN INVERTED STONE OBELISK, WHICH ACTS AS A SEPULCHER FOR THE UNIDENTIFIED REMAINS OF VICTIMS. THE STONE, SEEMINGLY DRIVEN INTO THE EARTH SYMBOLIZES THE DEVASTATION AND HORROR OF THE 9/11 TRAGEDIES. THIS INVERTED OBELISK IS CENTERED WITHIN A LARGER HOLLOW OBELISK (WALLS OF THIS CHAMBER AND THE WELL OF TEARS, SEE FOLLOWING PAGES).

THE OBELISK FORM ORIGINATED AS A MONUMENT TO THE EGYPTIAN SUN GOD RA. THEY WERE DESIGNED TO REACH FOR THE SKY AND HAVE COME TO SYMBOLIZE THE STRENGTH, POWER, AND RESILIENCE OF MANKIND (AS IN OUR WASHINGTON MONUMENT). THE 9/11 MEMORIAL OBELISK IS OPEN SPACE AND IS CROWNED BY A PRISM OF LIGHT. IT REPRESENTS OUR INNER STRUGGLES AS WE REACH FOR A GREATER UNDERSTANDING.

THE SEPULCHER IS MADE OF TWO GRANITE STONES. ONE BEING A 70' TALL VESSEL, FUSED TO BEDROCK, AND THE OTHER ITS CAPSTONE. THE DEPRESSION IN THE TOP OF THE CAPSTONE CREATES THE REFLECTING POOL IN WHICH THE DROPS FALL IN THE WELL OF TEARS.

THE ROOM IS DARK. IT IS LIT BY NATURAL LIGHT SEEKING IT'S WAY THROUGH THE SEPULCHER'S OPENING IN THE FLOOR ABOVE AND SUPPLEMENTED BY SOFT IN-FLOOR LIGHTING. THE GOAL IS TO HAVE NATURAL LIGHT FROM ABOVE SHIMMER OFF THE OVERFLOWING WATER AS IT WASHES THE VESSEL BELOW.

IT IS TO BE A DARK PLACE, SURROUNDED BY THE WARMTH OF THE EARTH, WHERE MOTHER NATURE EMBRACES OUR SORROW.

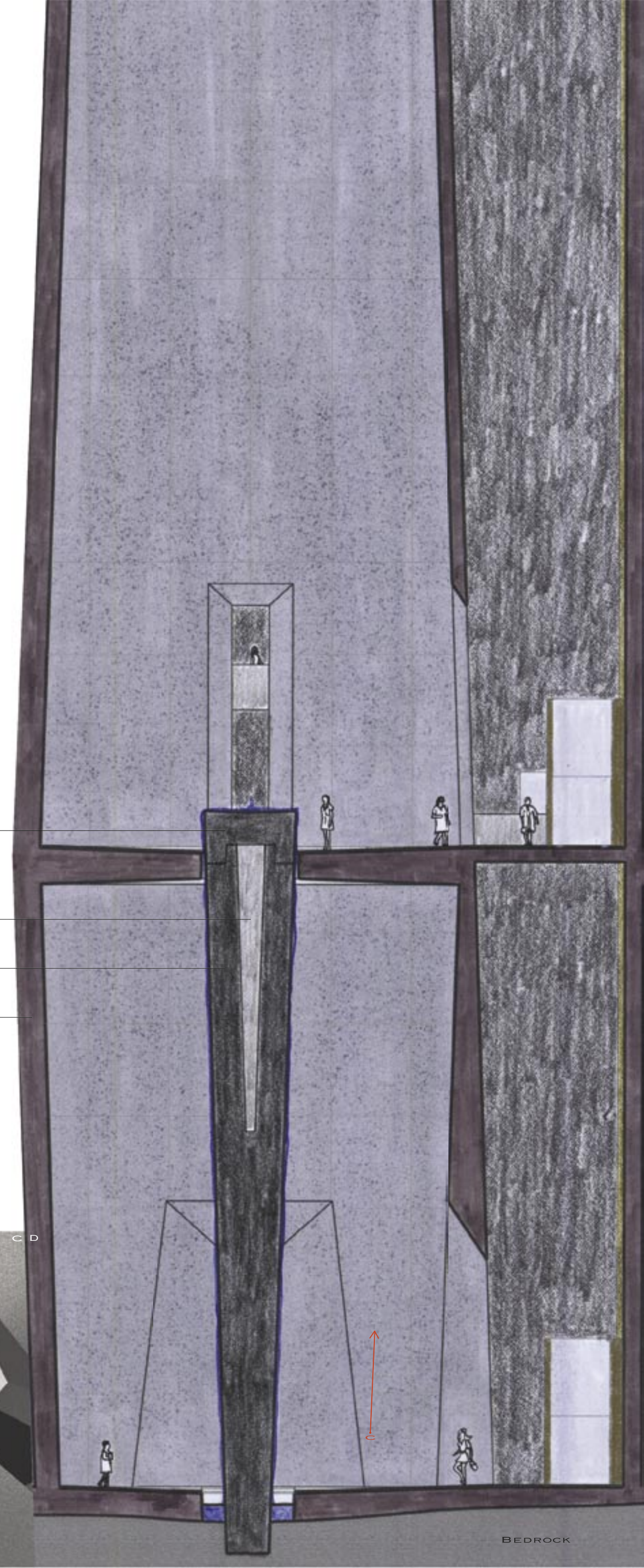
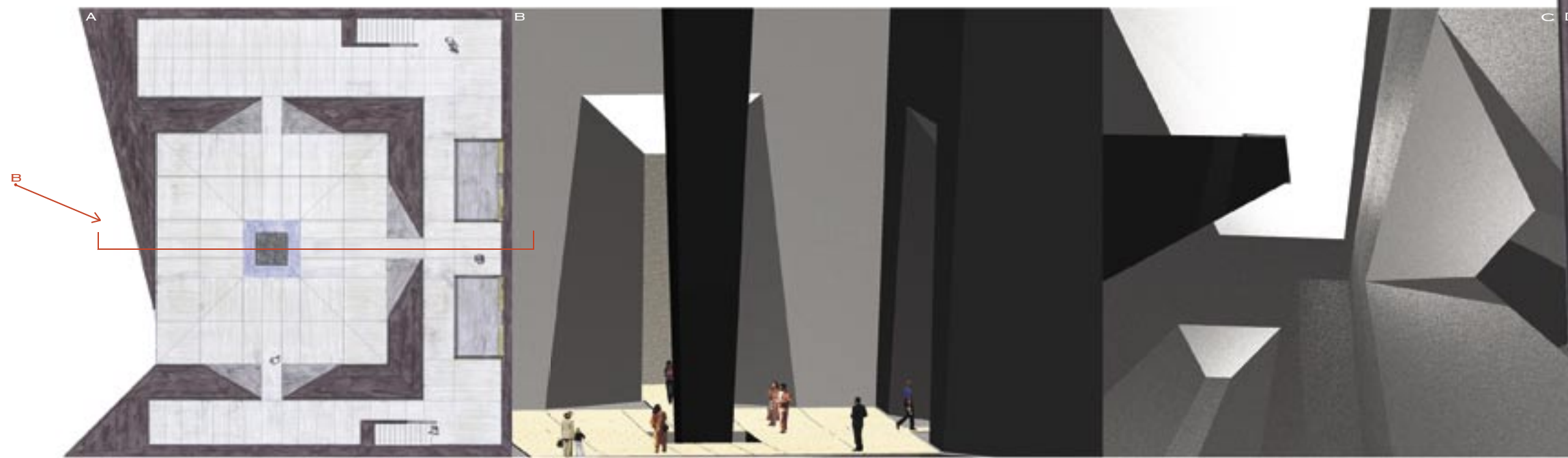
GRANITE CAPSTONE

UNIDENTIFIED REMAINS

GRANITE SEPULCHER

REINFORCED CONCRETE

A "CHAMBER OF REMEMBRANCE" PLAN
B PERSPECTIVE THROUGH SOUTH WALL (AS SHOWN IN A)
C PERSPECTIVE VIEW UP (AS SHOWN IN D)
D SECTION SHOWN IN A



MEMORIAL ATRIUM

THE ATRIUM IS THE SPACE SURROUNDING BOTH THE WELL OF TEARS AND CHAMBER OF REMEMBRANCE. IT CONSISTS OF FIFTEEN MEMORIAL TERRACES, AS WELL AS THE STAIRS AND ELEVATORS CONNECTING ALL LEVELS.

THERE ARE TWELVE TERRACES OF "INDIVIDUAL LOSS," SPACES WHERE FAMILIES AND LOVED ONES CAN REMEMBER THOSE LOST. THIS IS WHERE THE VICTIMS ARE REMEMBERED AND NAMED, THE NORTH WALL OF THE WELL OF TEARS BEING PENETRATED ONCE FOR EACH VICTIM. LIGHT WITHIN THE WELL OF TEARS FLOWS THROUGH THESE OPENINGS AND SPECKLES THE ATRIUM WITH POINTS OF LIGHT.

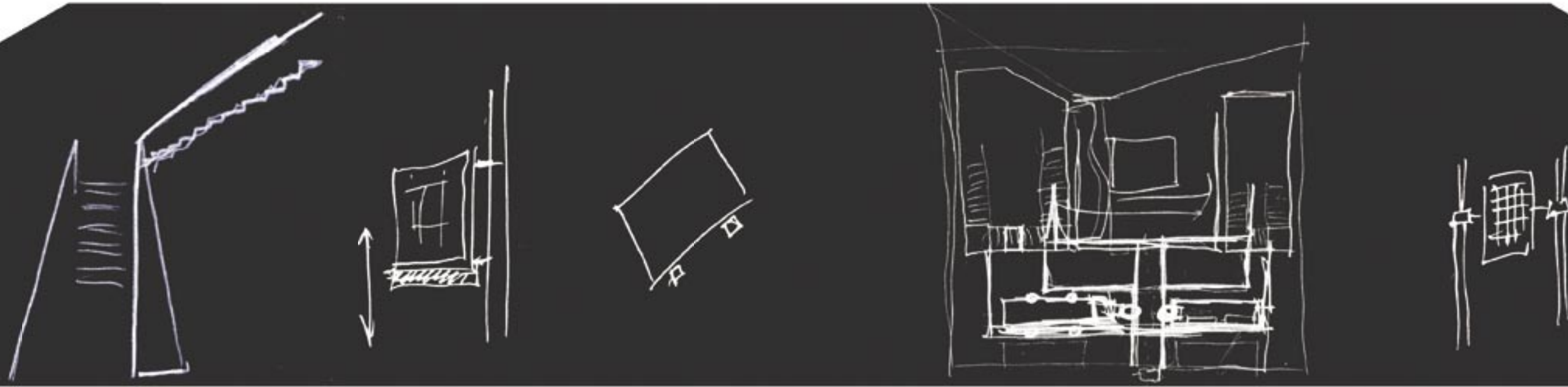
TWO UPPER TERRACES OFFER HOPE, UNIVERSAL AND ETERNAL. THESE LEVELS ARE ILLUMINATED BY LIGHT GLORIOUSLY TRANSFORMED BY THE WATER PRISM. THESE TERRACES SHOWCASE THE LIGHT AT THE TOP OF THE TOWER... OUR HOPE.

THE STAIRWELLS DEFER TO THE WALLS OF THE WELL OF TEARS AND THE EXTERIOR WALLS OF THE TOWER. THEY TAKE ON THE NEGATIVE FORM REMAINING BETWEEN THESE ELEMENTS. THIS SPACE CONTINUOUSLY EVOLVES AND CHANGES FORM AS ONE PROGRESSES THROUGH THE TOWER.

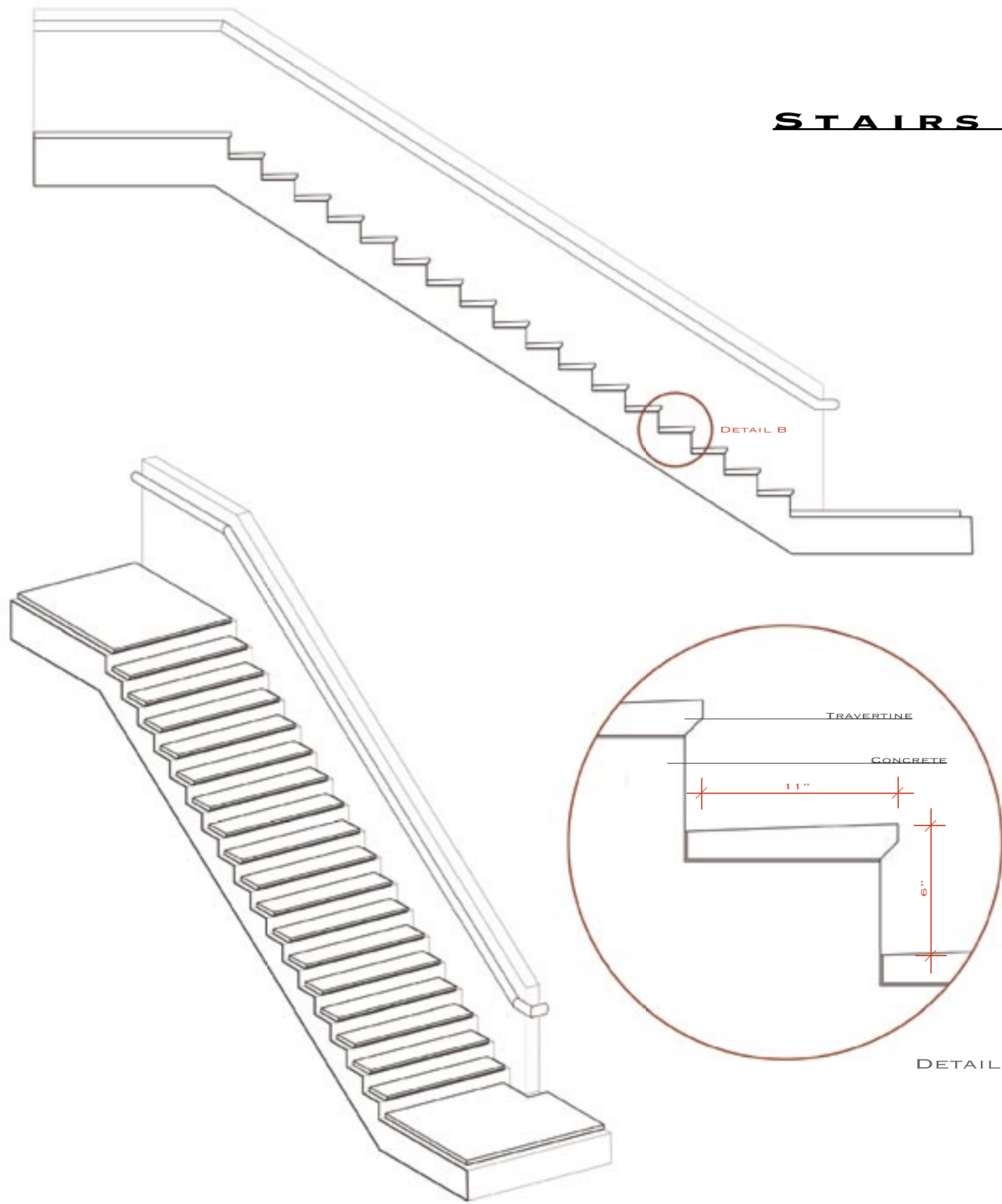
THE ELEVATOR NATURALLY EMPHASIZED THE VERTICAL NATURE OF THE MEMORIAL. OPENING THE TRANSPARENT CARS TO THE ATRIUM ENLIVEN IT THROUGH MOVEMENT AND CREATE THE OPPORTUNITY FOR AN EVOLVING VIEW.

THE LOWER LEVELS OF THE ATRIUM ARE MEANT TO BE DARK. EYES WILL ADAPT TO THIS DARKNESS AND AWAKE SLOWLY TO THE RISING INTENSITY OF LIGHT AS ONE MOVES UPWARD.

ISOMETRIES OF THE ATRIUM SPACE AND SKETCHES OF THE STAIRS AND ELEVATORS



STAIRS



THE STAIRS ARE OF SIGNIFICANT SYMBOLIC IMPORTANCE TO THE MEMORIAL. THE FIRE STAIRS OF THE ORIGINAL TOWERS ARE WHAT LED NEARLY ALL SURVIVORS TO SAFETY. THERE IS NO WAY OF KNOWING HOW MANY PEOPLE WERE IN THE FIRE STAIRS DURING THE COLLAPSE OF EACH TOWER, BUT IT IS SAFE TO SAY THE STAIRWELLS PROVED TO BE ONE OF THE MOST IMPORTANT FEATURES OF THESE BUILDINGS DURING THE ATTACK. FOR THIS REASON THE STAIRS OF THE MEMORIAL HAVE TO BE A SOLEMN PLACE OF REMEMBRANCE.

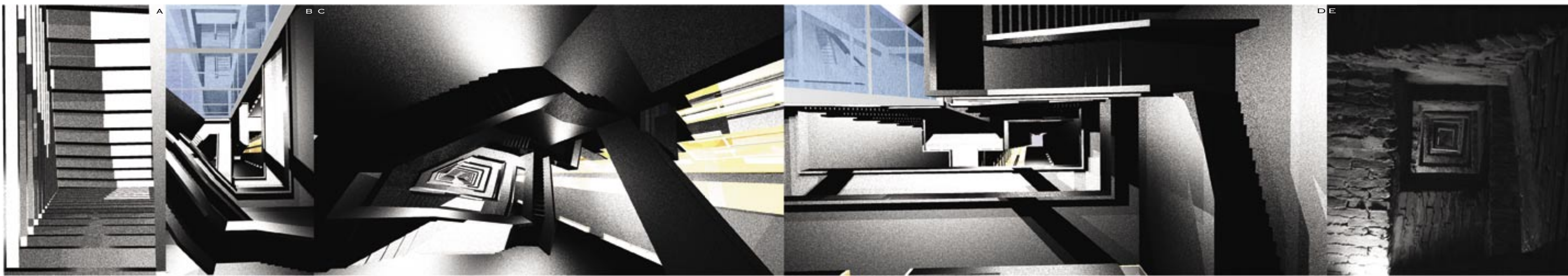
THE MEMORY OF BELL TOWER STAIRWELLS INSPIRED THE OPENNESS OF THE MEMORIAL STAIRWELLS (E). THIS OPENNESS ALSO ACCENTUATES THE HEIGHT AND VERTICALITY OF THE ATRIUM SPACE, FURTHER DRAWING ON THE PERSPECTIVAL LINES CREATED BY THE VIEWS UP AND DOWN.

THE STAIRWELLS THEMSELVES HAVE A GRADUALLY CHANGING FORM DUE TO THE TAPER OF THE WALLS. THEY ALSO ACT AS STRUCTURAL TIES BETWEEN THE INTERIOR AND THE EXTERIOR WALLS. THE STAIRS ARE MADE OF CAST-IN-PLACE CONCRETE AND UNITE WITH THE WALLS AND TERRACES. THE TREADS, LIKE THE FLOORS, ARE MADE OF TRAVERTINE AND CUT AS SHOWN IN THE DETAIL TO THE LEFT. THE TOP CUT ON THE TREAD IS THE SAME TWO-DEGREE ANGLE EXPRESSED IN SO MANY OTHER AREAS OF THE MONUMENT. THE TRAVERTINE TREADS STOP 3" SHY OF THE WALLS. THIS REVEAL VISUALLY EXPRESSES THE MONOLITHIC NATURE OF THE STAIRS AND WALLS. THE HANDRAIL IS 2" ROUND STOCK BRONZE.

BECAUSE THE ENTIRE STRUCTURE IS MADE FROM CONCRETE AND STONE, THERE IS NOTHING FLAMMABLE WITHIN THE TOWER. UNDER THESE CONDITIONS THE AESTHETIC DECISION WAS MADE TO LEAVE THE STAIRWELLS OPEN TO THE REST OF THE ATRIUM. AS VISITORS CONTINUE TOWARD THE TOP, THE STAIRS BECOME A CANVAS FOR THE BEAUTIFUL LIGHTING OF THE WATER PRISM.



- A PERSPECTIVE VIEW UP THE WEST STAIRWELL
- B PERSPECTIVE VIEW DOWN THE EAST SIDE FROM THE TERRACE OF "UNIVERSAL HOPE"
- C PERSPECTIVE VIEW DOWN THE EAST STAIRWELL
- D PERSPECTIVE VIEW DOWN THE WEST SIDE FROM THE TERRACE OF "UNIVERSAL HOPE"
- E VIEW UP A BELL TOWER STAIRWELL

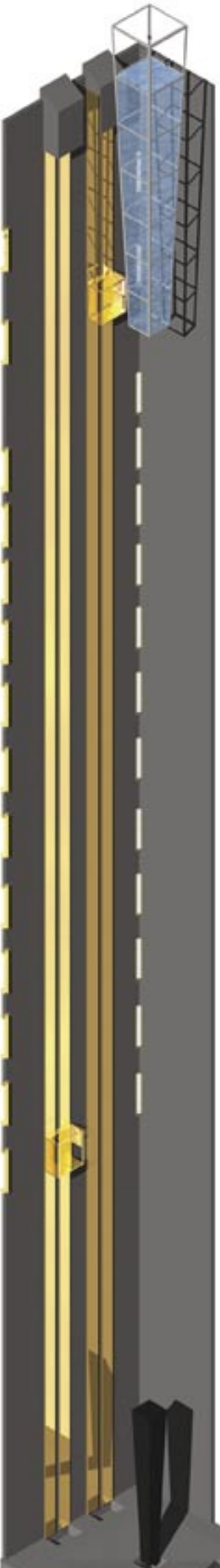


ELEVATOR SYSTEM

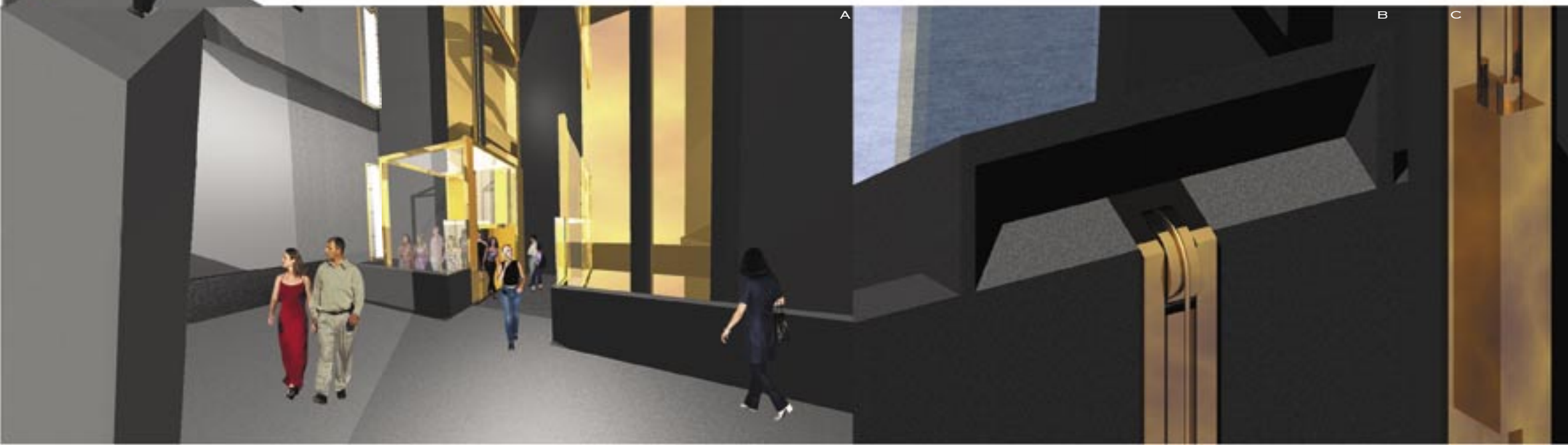
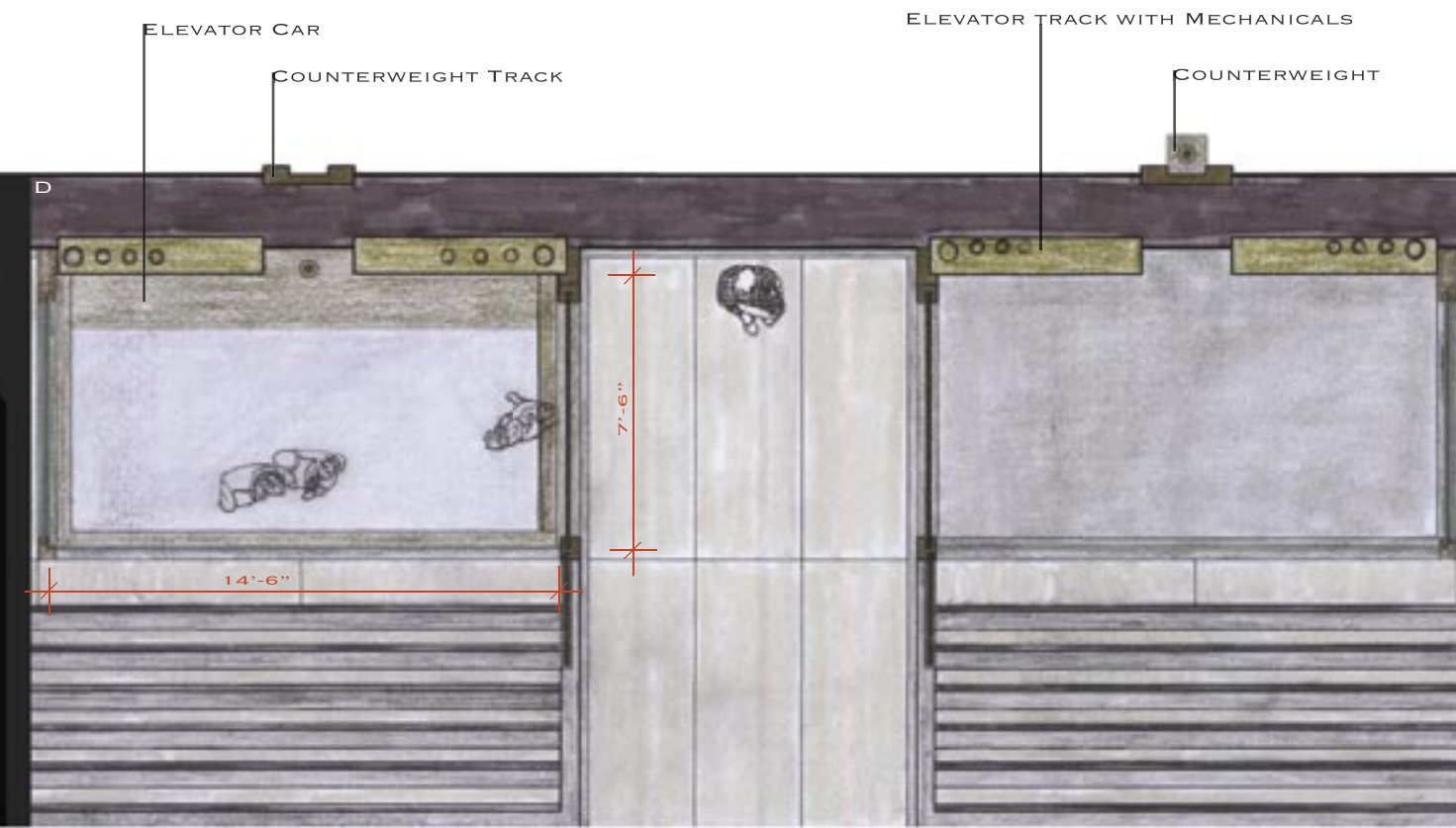
THE ELEVATORS ARE DESIGNED TO HELP ENHANCE THE VERTICAL EXPERIENCE WITHIN THE MEMORIAL. THEY TRAVEL ON A BRONZE TRACK ALONG THE INSIDE OF THE ATRIUM'S NORTH WALL. THE TRACK DOUBLES AS AN ENCASUREMENT FOR THE MECHANICALS. THERE IS NO FORCED AIR, ONLY WATER LINES FOR RADIANT HEAT AND THE TANK SUPPLY, AS WELL AS ELECTRICAL LINES. THE ELEVATOR COUNTERWEIGHTS TRAVEL IN A BRONZE TRACK ALONG THE NORTH FACADE OF THE TOWER. THIS ALLOWS FOR BOTH INCREASED SPACE INSIDE AND AN ACTIVE ELEMENT ON THE FACADE OF THE MEMORIAL. AS VIEWED FROM THE NORTH, THIS TELLING ELEMENT REVEALS LIFE AND ACTIVITY WITHIN.

THE ELEVATOR ITSELF IS A LARGE GLASS BOX WITH A BRONZE FRAME. EACH CAR IS 20' TALL AND HAS VERTICALLY LIFTING GLASS DOORS. THE CARS ARE TALL TO RETAIN THE FEELING OF LARGE SPACE, SO PREVALENT WITHIN THE TOWER. A TRUE VIEWING EXPERIENCE, THE ELEVATORS ARE MEANT TO PROVIDE ANOTHER WAY TO VIEW THE EVOLVING SPACE.

AS ONE TRAVELS UP THE ELEVATOR THEY WILL REALIZE THE GRADUAL CHANGE WITHIN THE SPACE OF THE ATRIUM. AS THE INTERIOR WALLS TAPER IN, THE STAIRWELLS BECOME WIDER. THE SPACE OPENS UP AS ONE APPROACHES THE WATER PRISM. THE DANCE OF LIGHT IS REVEALED.



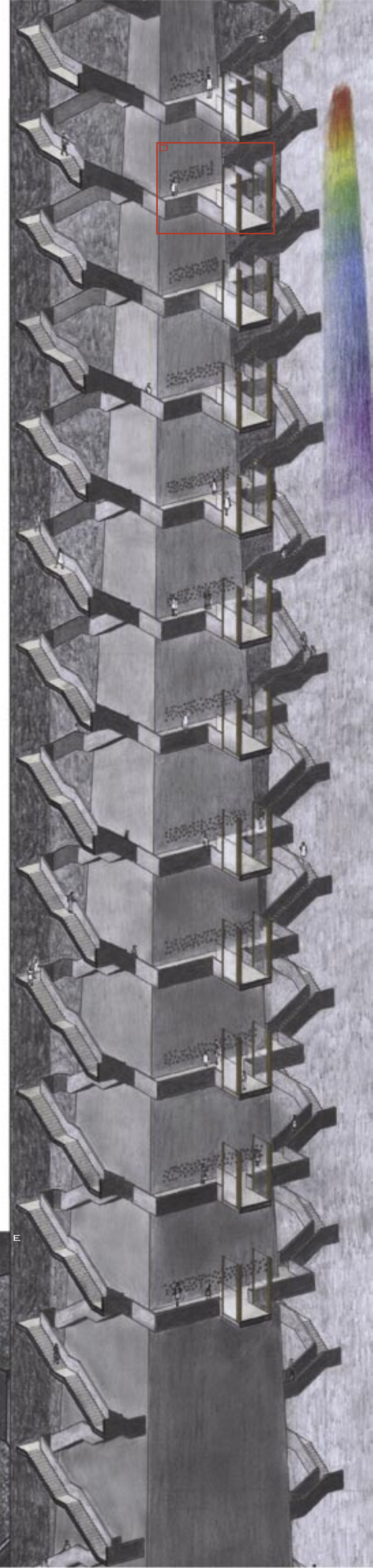
A PERSPECTIVE VIEW OF THE ELEVATORS FROM A TERRACE OF "INDIVIDUAL LOSS"
 B ELEVATOR CABLE PULLEY AT THE TOP OF THE NORTH WALL
 C COUNTERWEIGHT
 D PLAN DETAIL OF ELEVATORS



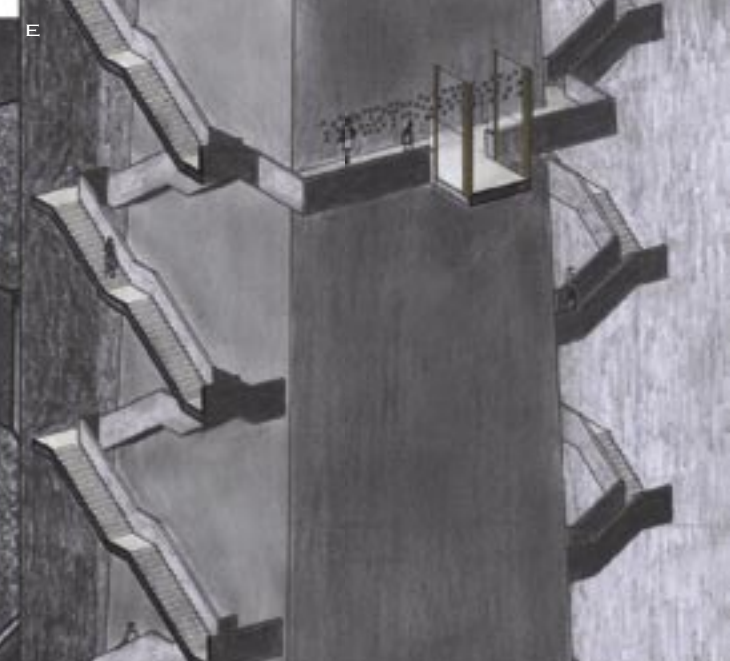
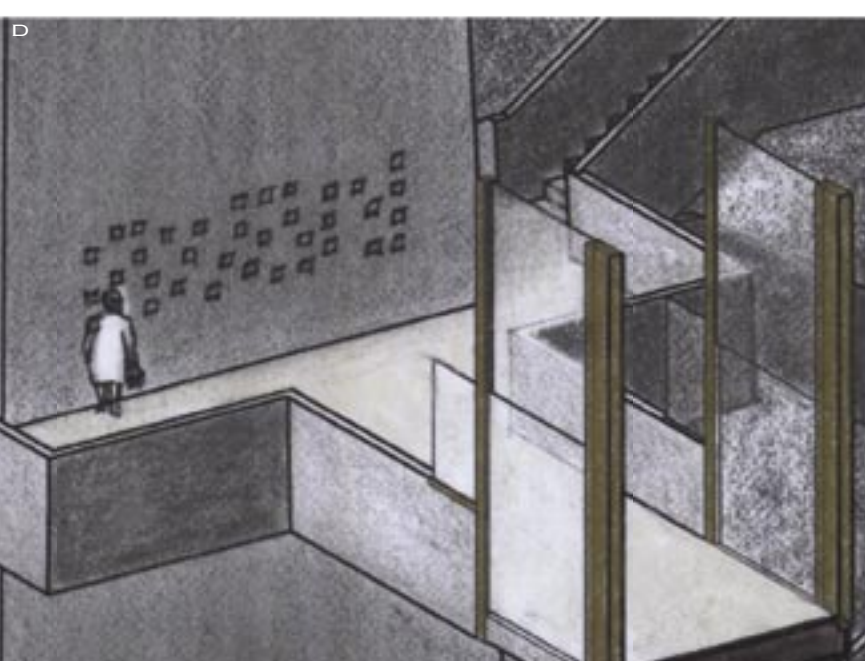
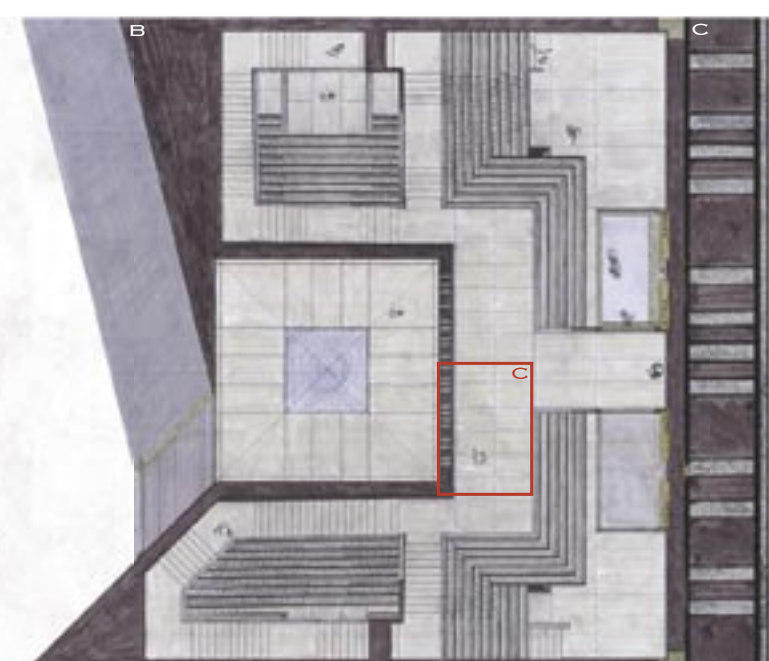
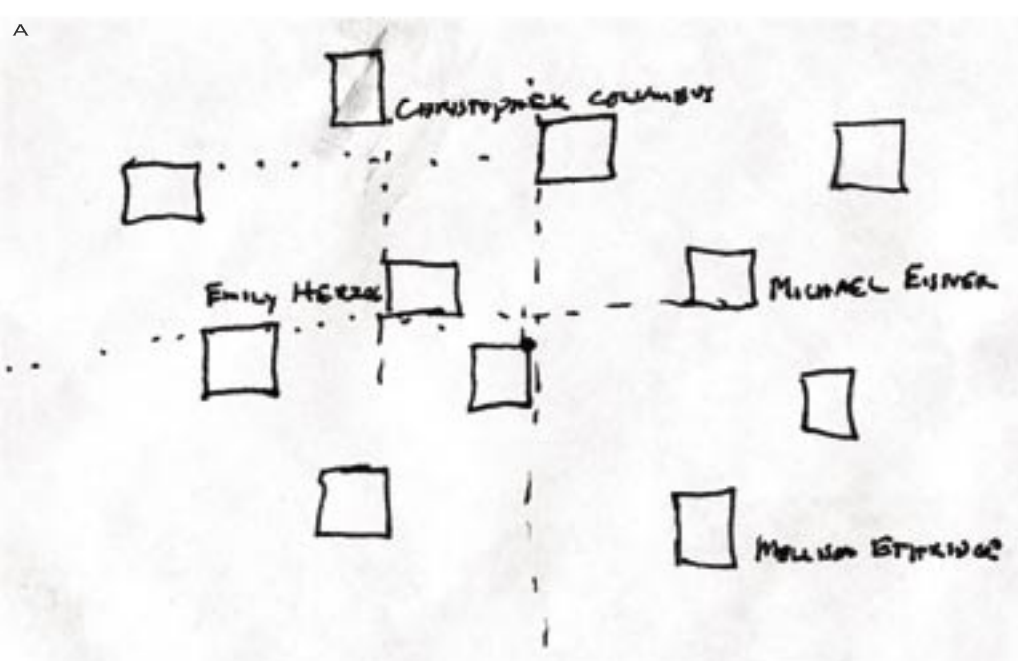
INDIVIDUAL LOSS

AS ONE TRAVELS UP THE TOWER, THERE ARE TWELVE TERRACES OF "INDIVIDUAL LOSS." THE TERRACES DECREASE IN SIZE PROPORTIONALLY AS THE INTERIOR WALLS TAPER INWARD (E). THERE ARE SMALL SQUARE HOLES AT EACH TERRACE, WHICH OPEN INTO THE WELL OF TEARS. EACH INDIVIDUAL WHO LOST THEIR LIFE IN THE DISASTERS IS ALLOTTED ONE LIGHT SOURCE WITH THEIR NAME ENGRAVED ALONGSIDE IT. THE TERRACES FUNCTION AS PERSONAL PLACES FOR FAMILIES AND FRIENDS TO COME AND REMEMBER THOSE LOST.

LIGHT ENTERING THE WELL OF TEARS, THROUGH THE GLASS FACADE, TRAVELS ALONG THE NORTH WALL THROUGHOUT THE DAY. AS THIS LIGHT SHINES ON THE NORTH WALL THE OPENINGS WILL GLOW AS LIGHT SOURCES INTO THE DARKER TERRACED AREAS WITHIN THE ATRIUM. AT NIGHT THE ATRIUM WILL BE LIT BRIGHTLY AND THE OPENINGS MAY APPEAR AS STARS ALONG THE NORTH WALL OF THE WELL OF TEARS TO PASSERS-BY.



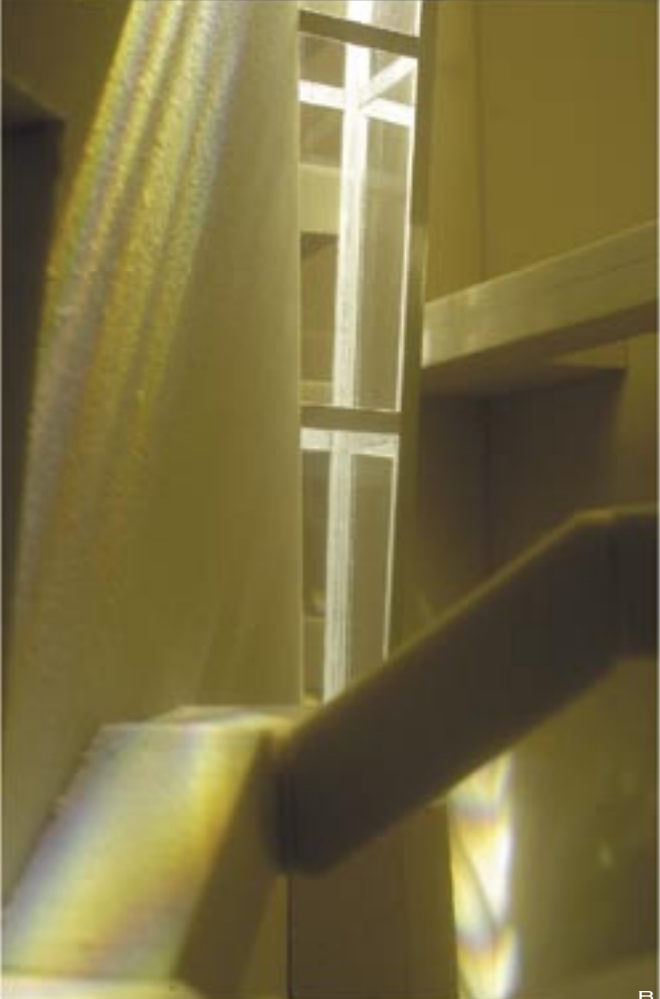
A SKETCH OF MEMORIAL OPENINGS
B "INDIVIDUAL LOSS" TERRACE PLAN
C DETAIL AS SHOWN IN B
D DETAIL AS SHOWN IN E
E NORTHEAST TRIMETRIC



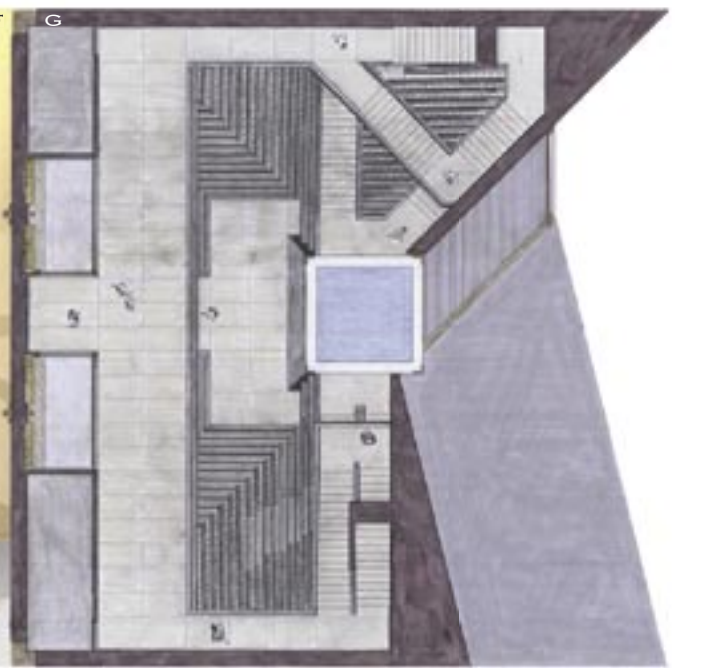
UNIVERSAL HOPE

THERE ARE TWO UPPER TERRACES FACING THE WATER PRISM. THESE TERRACES, LIKE THE ELEVATORS, ARE ATTACHED TO THE NORTH WALL OF THE ATRIUM. THEY ARE LARGER TERRACES AND ARE CONCEIVED AS PUBLIC AREAS.

WHITE LIGHT, PRISMATIC LIGHT, AND LIGHT PASSING THROUGH THE WATER'S SURFACE ARE THE THREE DIFFERENT TYPES OF LIGHT TRANSCRIBED THROUGH THE WATER TANK. THERE ARE CAUSTICS, AND SPECTRUMS, AND BEAMS OF WHITE LIGHT BOUNCING AROUND IN THIS SPACE. LIGHT TRAVELING THROUGH THE WATER TANK CONSTANTLY CHANGES THROUGHOUT THE DAY AND THROUGHOUT THE YEAR. THE SHEAR SCALE AND VARIETY OF THE LIGHTING CONDITIONS IS MESMERIZING. WATER ALSO ACTS AS A FILTER, DISTORTING VIEWS OF THE CITY AND THE OUTSIDE WORLD. THIS IS A PLACE MEANT TO ENHANCE INWARD REFLECTION, ABSTRACTING OUR WORLD, AND INSPIRING HOPE THROUGH AN EVER-CHANGING DANCE OF LIGHT.



A MODEL PHOTO
B MODEL PHOTO
C MODEL PHOTO
D NORTHEAST TRIMETRIC
E PERSPECTIVE VIEW
F PERSPECTIVE VIEW
G "UNIVERSAL HOPE" TERRACE PLAN

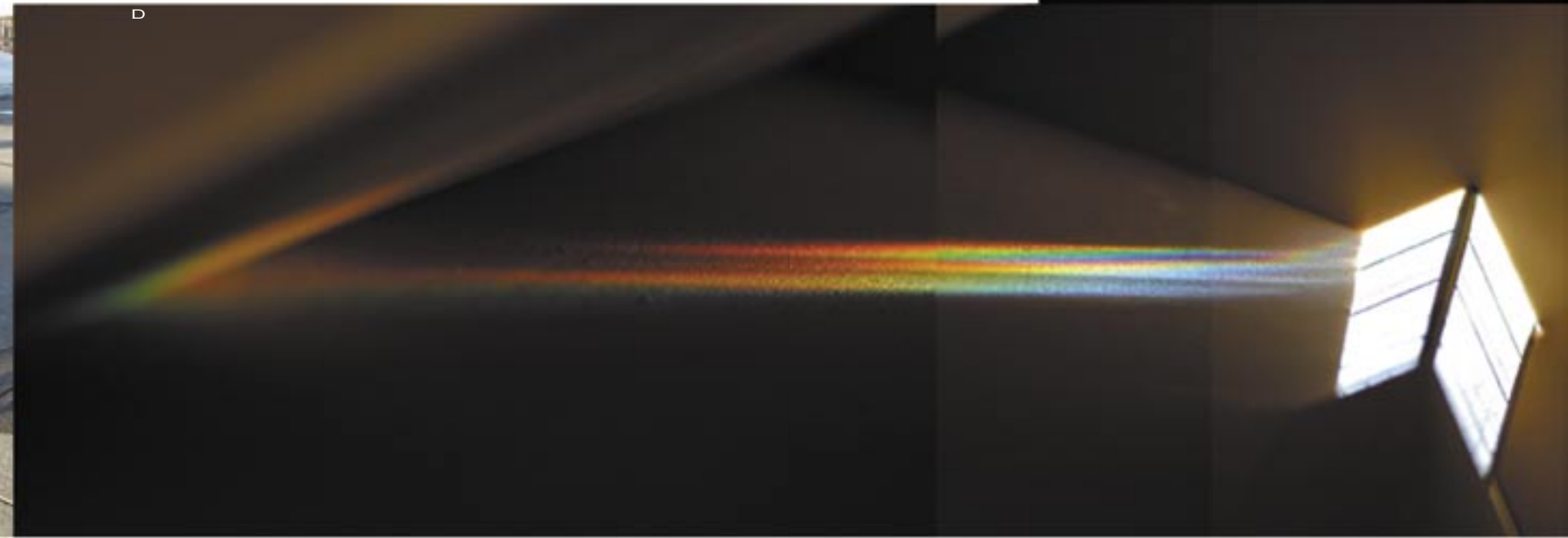
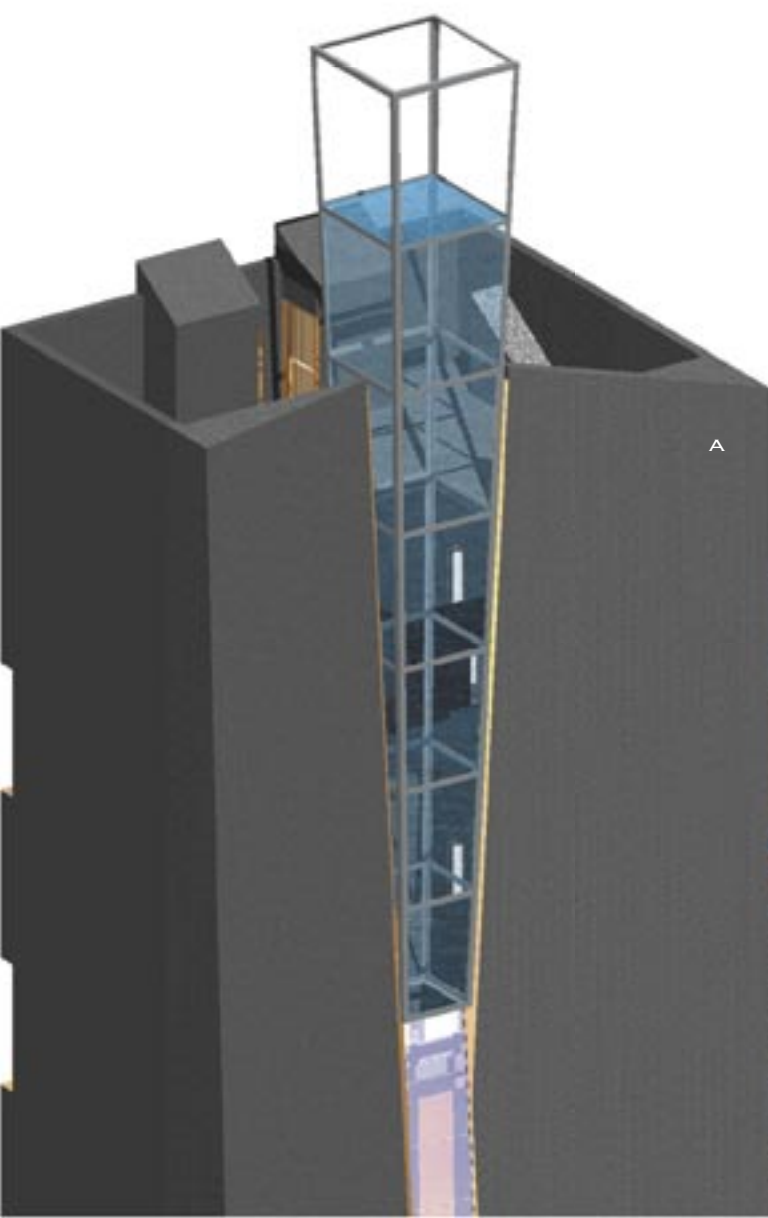


THE WATER PRISM

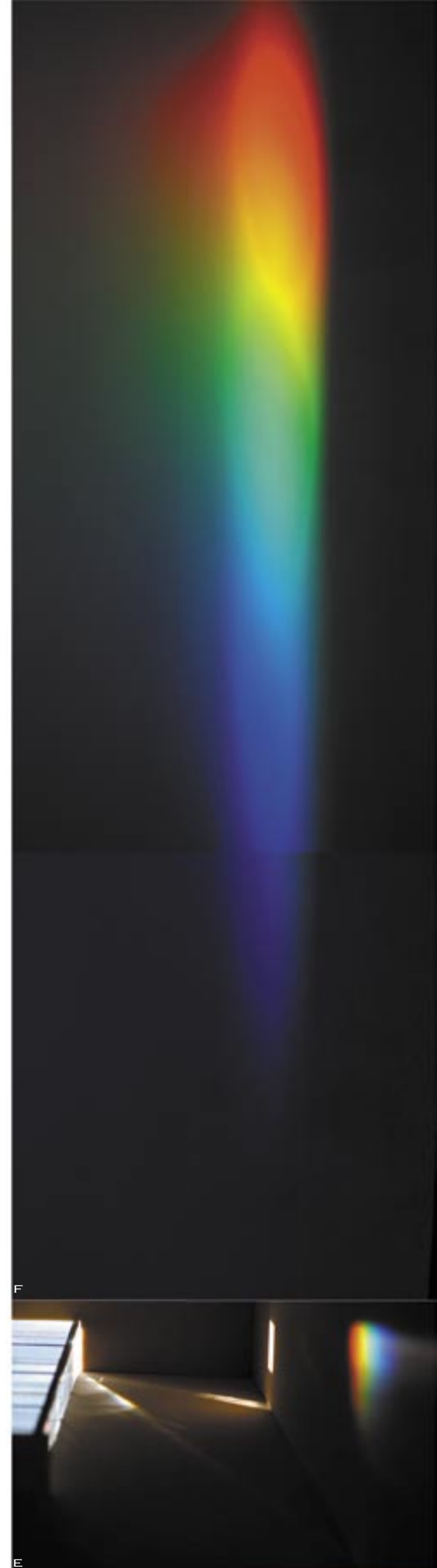
THE WATER TANK AT THE TOP OF THE TOWER IS THE SOURCE FOR THE DROPS IN THE WELL OF TEARS. SYMBOLICALLY, THE WATER TANK IS AN INTEGRAL PART OF THE FABRIC OF NEW YORK CITY, AND IT'S VERNACULAR. THE REGION IN NEW YORK KNOWN AS "SOHO" IS FAMOUS FOR IT'S ROOFSCAPES, WHICH INCLUDE AN ABUNDANCE OF WATER CISTERNS. THESE CISTERNS ARE AN INTERESTING PHENOMENON UNIQUE TO THIS REGION OF NEW YORK (B).

THE WATER TANK OF THE MEMORIAL IS A WEDGE-SHAPED ABSTRACTION OF THESE CISTERNS. THE STRUCTURE OF THE TANK, LIKE IT'S PROTOTYPES, INTENSIFIES AND IS REINFORCED AT THE BOTTOM, DUE TO INCREASED WATER PRESSURE (A,B). THE MEMORIAL'S TANK IS MADE OF PRE-CAST TUBULAR SECTIONS OF ACRYLIC, WHICH ARE THEN SITE-WELDED. THE SEAMS ARE HIDDEN AND THE TANK RIGIDIFIED BY A 12"X1" STOCK WELDED STAINLESS STEEL FRAME. GLASS TUBULAR PLUMBING IS CAST INTO THE ACRYLIC SECTIONS AND FUNCTIONS AS INVISIBLE WATERWAYS.

A DYNAMIC OF LIGHT WAS REVEALED UPON MODELING. EXPOSING THE MODELED WATER TANK TO SUNLIGHT REVEALED IT'S PRISMATIC CAPABILITIES (C). THE VARIOUS TYPES OF LIGHT TRANSMITTED THROUGH THE PRISM ENLIVEN THE MEMORIAL CONTRIBUTING FASCINATING AND EXCITING ELEMENTS. THE MODEL SHOWED CLEARLY THE INTENSITY OF PROJECTED LIGHT IN SHADOW. IT IS FOR THIS REASON THE ATRIUM OF THE TOWER IS DARKENED. AS THE EYES ADJUST TO DARKNESS, PRISMATIC LIGHT IS RENDERED MORE VISIBLE.



- A ISOMETRY OF THE MEMORIAL'S WATER TANK
- B A NEW YORK CITY CISTERN
- C PRISMATIC DISCOVERY WITH EARLY MODEL
- D PRISM STUDIES WITH LIGHTING MODEL
- E PRISM STUDIES WITH LIGHTING MODEL
- F PRISM STUDIES WITH LIGHTING MODEL



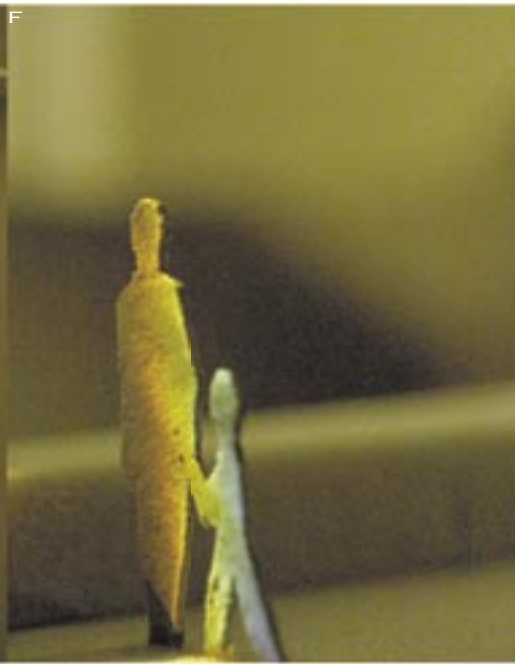
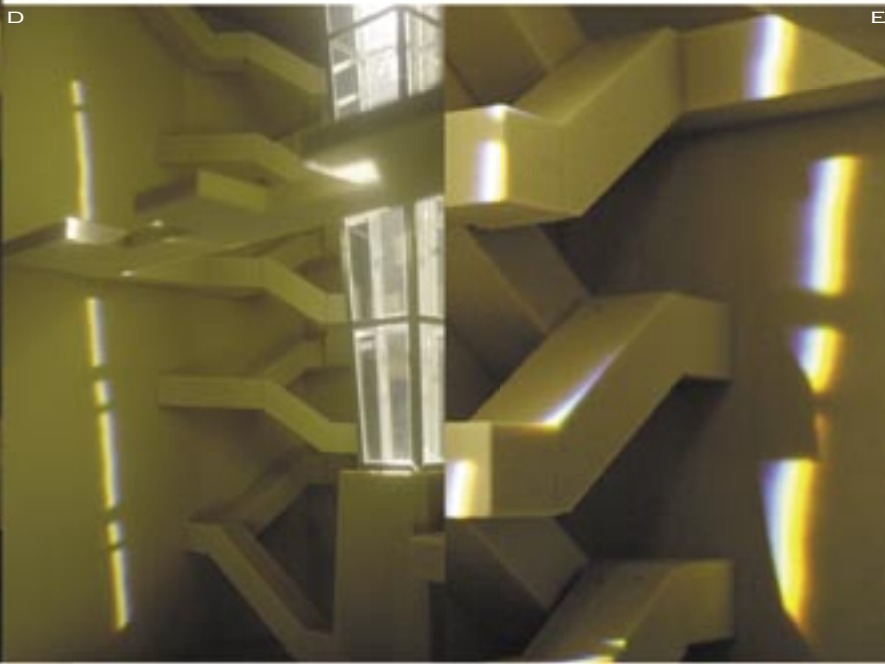
PRISMATIC LIGHT

SINCE THE WATER TANK IS A PRISM, SUNLIGHT IS CONSTANTLY ENTERING AND LEAVING THE TANK THROUGH NON-PARALLEL SURFACES AND CASTING HUGE SPECTRUMS OF LIGHT. THIS SPECTRAL LIGHT IS MEANT TO HELP THE MIND THINK BEYOND PHYSICAL REALITY AND TRANSCEND THE SORROW OF 9/11.

THE CHARACTERISTICS OF SPECTRAL LIGHT CAN BE SUBDIVIDED INTO THREE TYPES. THERE ARE THIN SPECTRUMS APPROXIMATELY THE LENGTH OF THE TANK, WHICH TRAVEL SLOWLY AROUND THE SANCTUARY AS THE SUN MOVES AROUND THE TOWER (D,E). THESE ARE CHASED BY "SHADOW" SPECTRUMS, CREATED BY REFLECTED REFRACTIONS WITHIN THE PRISM (C). SPECTRAL SHEEN CAN BE SEEN REFLECTING OFF THE ACRYLIC SURFACE OF THE TANK (B). ADDITIONAL PRISMATIC DISPLAYS ARE CREATED BY LIGHT TRAVELING THROUGH THE WATER'S RIPPLING SURFACE. THIS LIGHT IS CAUSTIC, DANCE-LIKE, AND UNPREDICTABLE IN NATURE.

"DYNAMIC PRISMS," WHILE BEING THE MOST ELUSIVE AND DIFFICULT TO PRESENT, PROVED TO BE THE MOST EXCITING DISCOVERY OF THIS PROJECT. SCALE AND THE NEED FOR EITHER LIVE VIEWING OR VIDEO REPRESENTATION MADE THEIR PRESENTATION MORE DIFFICULT. HOWEVER, THE POSSIBILITY OF CREATING A SPACE IN WHICH PEOPLE COULD BE WASHED IN RIPPLING PRISMATIC LIGHT SEEMED BOTH BEAUTIFUL AND HOPEFUL. CREATING AN EVENT THAT LEAVES THE VIEWER WITH A NEW MEMORY, ONE OF INTRIGUE, OF OVERCOMING SADNESS, OF TRANSCENDENCE IS A TRUE MEMORIAL.

A PEOPLE IN A PRISM
 B PRISMATIC SHEEN FROM THE WATER TANK
 C DYNAMIC "SHADOW" PRISM
 D THIN DIRECT PRISM
 E THIN DIRECT PRISM CAST ON THE WEST STAIRS
 F PEOPLE WASHED IN PRISMATIC LIGHT
 G DYNAMIC PRISMS BEAMING ONTO THE EAST STAIR
 H SMALL PRISM BEAMING INTO THE WEST STAIRWELL
 I THE ENTIRE SPACE LIT SPORADICALLY
 J PEOPLE VIEWING A PRISMATIC BEAM



WHITE LIGHT

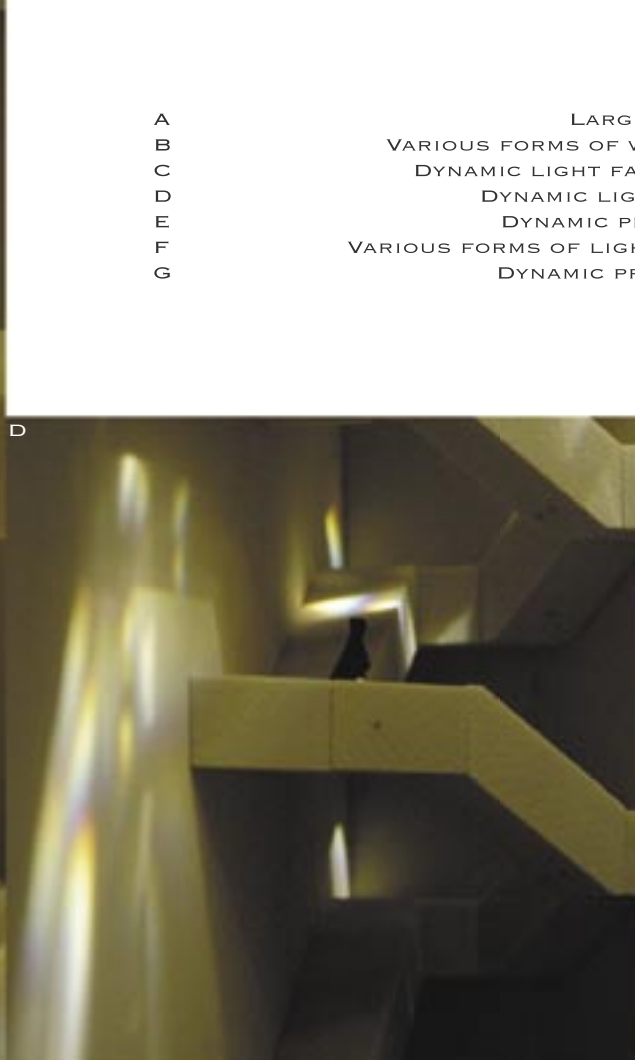
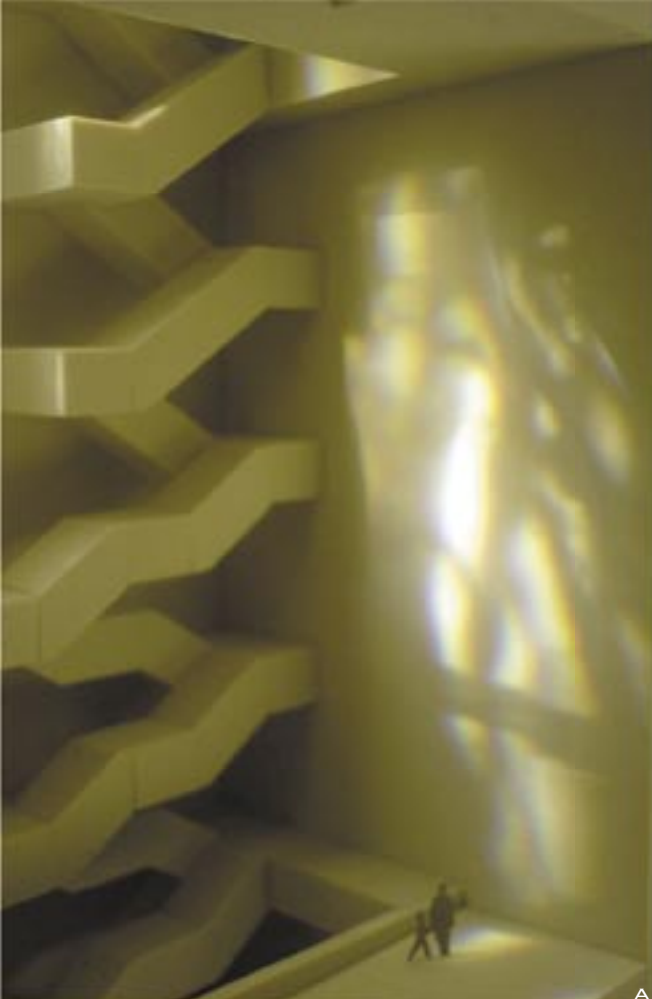
THERE ARE NUMEROUS DIFFERENT PROJECTIONS, REFLECTIONS, AND REFRACTIONS OF DIRECT WHITE SUNLIGHT. THEY CREATE GORGEOUS AND SENSUOUS LIGHT PATTERNS WITHIN THE ATRIUM. OFTEN THIS WHITE LIGHT MIXES WITH SPECTRAL LIGHT PATTERNS BATHING THE SPACE WITH A COLLAGE OF LIGHT.

IN MANY WAYS THE WHITE LIGHT DISPLAYED SEEMS MUCH LIKE ANY LIGHT THROUGH A WINDOW. THE SLOW PROGRESSION OF THIS LIGHT IS THE SAME AS ANY LIGHT TRAVELING THROUGH A WINDOW. THE DIFFERENCE IN THE LIGHT OF THIS PROJECT IS IN THE EXTRANEIOUS REFRACTIONS AND CAUSTICS, WHICH CAST THEMSELVES IN VARIOUS LOCATIONS CREATING SPECIAL MOMENTS IN TIME. THESE TYPES OF LIGHT ALSO TRAVEL SLOWLY, WITH THE SUN, BUT THEY LAST FOR SHORTER PERIODS OF TIME, CAN DISAPPEAR, AND REAPPEAR. THE DYNAMIC LIGHT IS TRULY SPECIAL BECAUSE IT MOVES CONSTANTLY, IN A WAVING MOTION, WHILE TRAVELING AROUND THE SPACE WITH THE SUN.

TYPOGRAPHICALLY THE VARIATIONS IN WHITE LIGHT WITHIN THE MEMORIAL ARE IDENTICAL TO THOSE OF SPECTRAL LIGHT (SEE IMAGES).

A BRIGHT THIN PROJECTION WITH "SHADOW"
 B PROJECTION WITH "SHADOW" AND TANK SHEEN
 C A REFLECTION AND REFRACTION MEETING
 D DYNAMIC WHITE LIGHT FLICKERING ONTO THE WEST STAIR
 E DYNAMIC WHITE LIGHT FLICKERING ONTO THE NORTH WALL
 F A REFRACTION AND IT'S REFLECTION
 G PEOPLE STANDING IN THE LIGHT
 H PEOPLE STANDING IN WHITE LIGHT WITH PRISMS IN FOREGROUND
 I THIN PROJECTION OF WHITE LIGHT
 J PEOPLE IN PRISMATIC LIGHT WITH WHITE PROJECTION BEHIND





DYNAMIC LIGHT

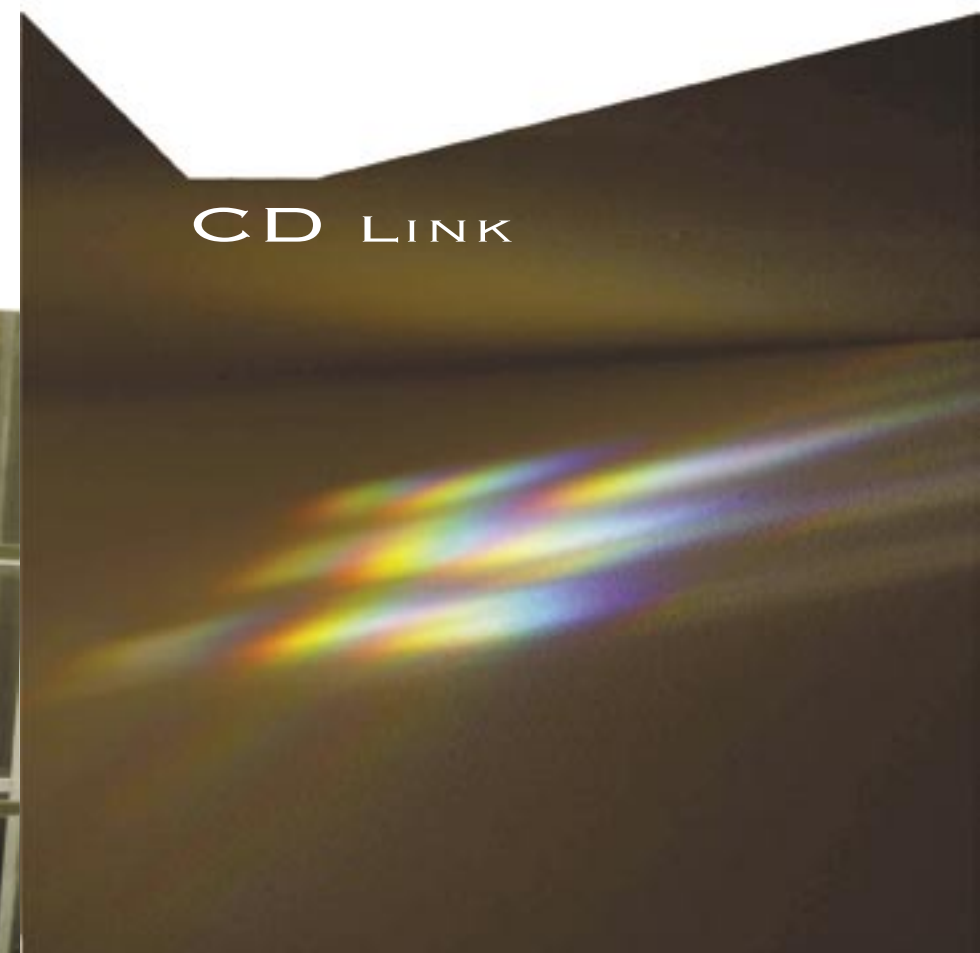
DYNAMIC LIGHT DANCES AND MOVES ABOUT BROUGHT TO LIFE BY THE WATER'S RIPPLING SURFACE. THE SLOW RHYTHMIC MOVEMENTS OF THE WATER'S SURFACE CALM THE SPIRIT AND RELAX THE MIND. THIS DYNAMIC LIGHT IS REVEALED IN BOTH WHITE AND PRISMATIC VARIATIONS, LEADING TO SOME AMAZINGLY BEAUTIFUL DISPLAYS.

THE DANCE-LIKE MOVEMENT OF THIS LIGHT IS DEPENDENT UPON THE AGITATION OF THE WATER'S SURFACE. TO ADDRESS THIS NEED FOR SURFACE AGITATION, THE TOWER HAS NO MASS DAMPER. THIS ALLOWS FOR MORE MOVEMENT AT THE TOP OF THE BUILDING, HELPING TO INTENSIFY THE DYNAMIC LIGHT WITHIN.

SCALE BECAME AN IMPORTANT ISSUE WHEN PRESENTING DYNAMIC LIGHT. THE MODEL USED FOR PHOTOGRAPHS AND VIDEO IS AT 1/4" SCALE, BUT THE WATER WITHIN THE TANK, OF COURSE, COULD NOT BE SCALED DOWN. THEREFORE, THE REPRESENTATIONS OF DYNAMIC LIGHT IN THE CD BELOW, AS WELL AS THE PHOTOGRAPHS SHOWN ARE NOT IN PROPER SCALE. IN TRUE SCALE THE RIPPLING WAVES OF THE WATER'S SURFACE WOULD BE SMALLER AND MORE PREVALENT THAN IN THE MODELED REPRESENTATIONS. THE VIDEO AND PHOTOGRAPHS, HOWEVER, LEAVE ONLY TIME AND SCALE TO THE IMAGINATION. THEY ARE A GOOD REPRESENTATION OF THE SITUATION TO BE EXPECTED WITHIN.

THE CD BELOW INCLUDES A QUICKTIME VIDEO OF SOME OF THE DISCUSSED LIGHTING CONDITIONS.

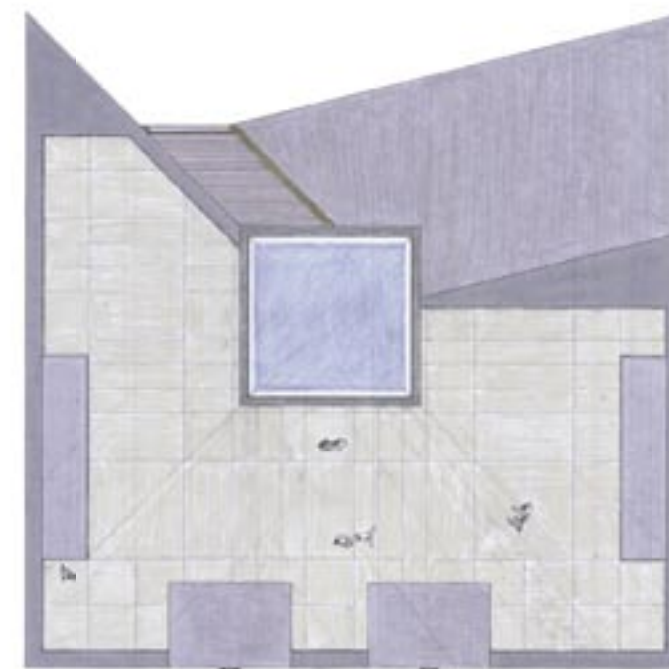
- A LARGE WAVES OF DYNAMIC LIGHT
- B VARIOUS FORMS OF WHITE AND DYNAMIC LIGHTS
- C DYNAMIC LIGHT FALLING ON THE EAST STAIRS
- D DYNAMIC LIGHT IN THE EAST STAIRWELL
- E DYNAMIC PRISMS ON THE NORTH WALL
- F VARIOUS FORMS OF LIGHT ON THE EAST STAIRWELL
- G DYNAMIC PRISM AND PRISMATIC SHEEN



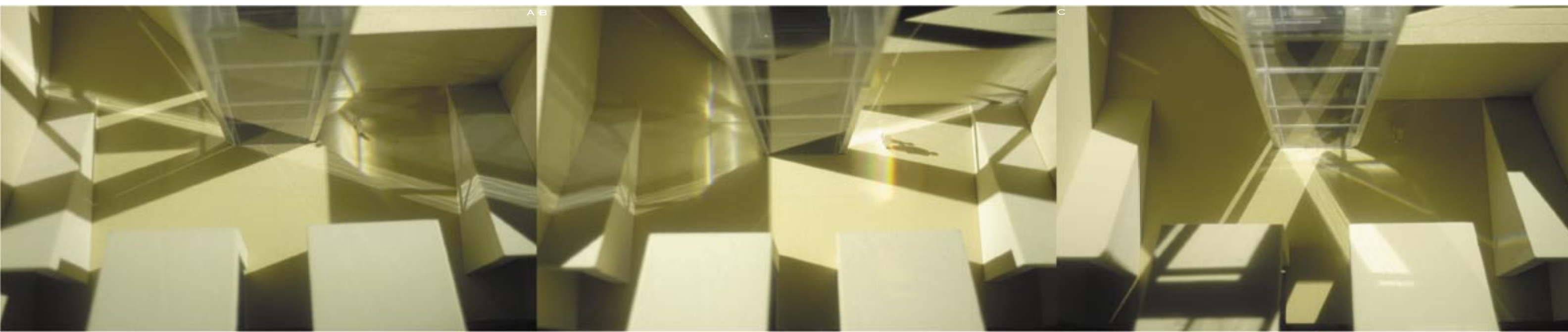
SKY TERRACE

THE SKY TERRACE OFFERS AN OPPORTUNITY TO BE OUTSIDE AND EXPERIENCE GROUND PATTERNS OF THE SAME LIGHTING CONDITIONS SEEN INSIDE (A-F). THERE ARE 20' HIGH WALLS AROUND THE PERIMETER OF THE ROOF IMPAIRING ALL VISIONS OF THE NEW YORK CITY SKYLINE AND CREATING AREAS OF SHADOW TO ENHANCE THE INTENSITY OF THE LIGHT. IT IS THE CLOUDS, THE WIND, THE SUNLIGHT, AND THE TEMPERATURES OF SKY THAT IS MEANT TO BE EXPERIENCED. THESE THINGS SIMULTANEOUSLY REPRESENT THE HEIGHT OF MANKIND'S ASPIRATIONS AND THE MOST ANCIENT OF ALL MYSTERIES.

THE SKY TERRACE IS A PLACE FOR INTROSPECTION, THE SPIRIT STILL PROTECTED FROM THE TRIVIALITIES OF EVERYDAY. TO VIEW THE CITY, ONE MUST LOOK THROUGH THE WATER TO A DISTORTION OF PHYSICAL REALITY. THE ONLY CLEAR VIEW IS UP TOWARD THE SKY, THE FUTURE, AND THE HEAVENS.



A PLAN VIEW OF THE ROOF TERRACE LIGHTING
B PLAN VIEW OF THE ROOF TERRACE LIGHTING
C PLAN VIEW OF THE ROOF TERRACE LIGHTING
D SKY TERRACE SPECTRUMS
E SHADOWS OF THE TANK FRAME CREATE DESIGNS WITH CAUSTICS
F SPECTRAL LIGHT AND TANK STRUCTURE SHADOW

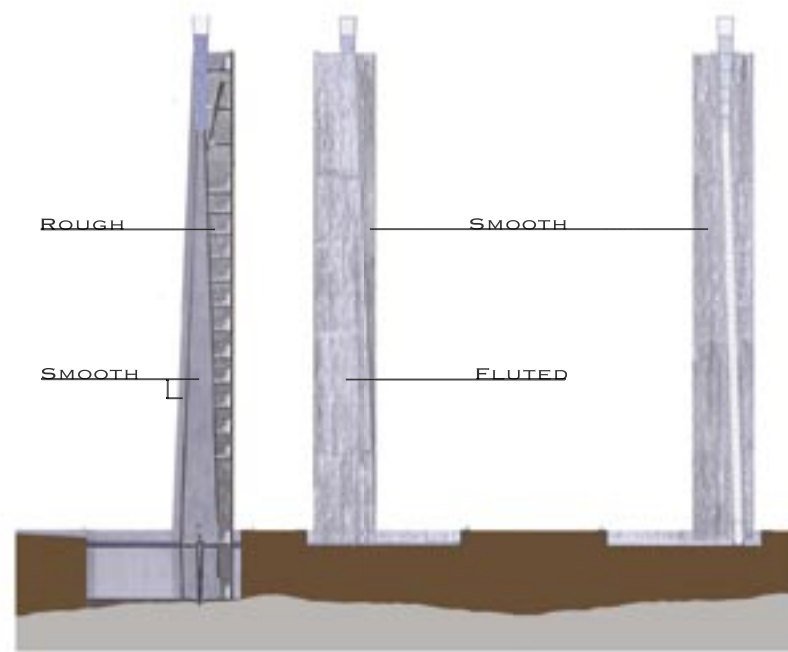




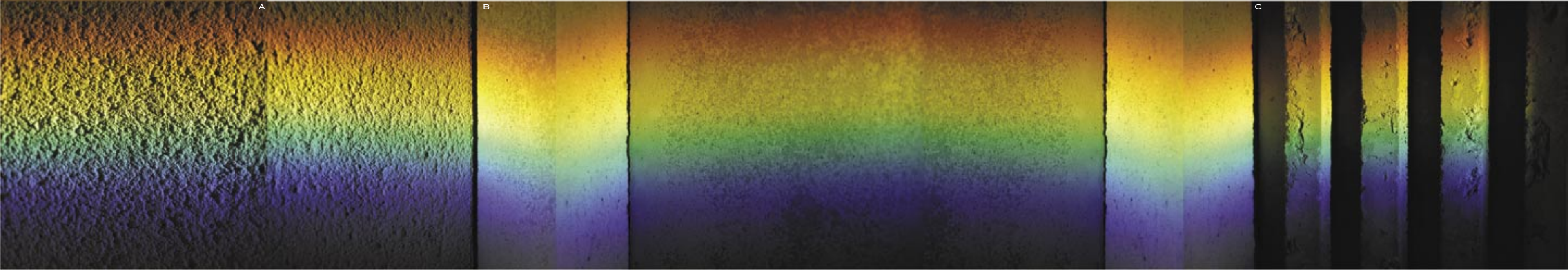
CONCRETE TEXTURES

THE TOWER IS CONSTRUCTED SOLELY OF REINFORCED CONCRETE. CONCRETE IS A PLASTIC MATERIAL ALLOWING IT TO TAKE ON ANY SHAPE INTO WHICH IT IS FORMED. THESE PLASTIC QUALITIES ALSO ALLOW IT TO TAKE ON DIFFERENT SURFACE TEXTURES, AS DETERMINED BY THE FORM'S SURFACE. THESE TEXTURES CAN IN TURN CREATE HIERARCHIES AMONG THE DESIGN ELEMENTS AND INFLUENCE THE VARIOUS LIGHTING CONDITIONS.

THE MEMORIAL TOWER'S PLUMB EXTERIOR WALLS ARE FLUTED TO RECALL ITS VISUAL CONNECTION TO THE ORIGINAL WORLD TRADE CENTER'S STEEL WINDBRACING (PHOTOS ON PP. 1,2). THE WATER PRISM IS CONCEIVED OF AS A WEDGE THAT SPLITS THE MEMORIAL REVEALING ITSELF AND OPENING THE SOUTH FACADE. THIS FACADE HAS A POLISHED CONCRETE SURFACE SYMBOLIZING THE CLEAVED AND CLEAN SPLIT BETWEEN THE BEFORE AND THE AFTER. THE INTERIOR WALLS OF THE WELL OF TEARS AND THE CHAMBER OF REMEMBRANCE ARE ALSO POLISHED, WHILE THE ATRIUM HAS A ROUGH SURFACE TO INTENSIFY THE COLOR OF THE LIGHTS THROUGH CONTRAST WITH SHADOW.



- A ROUGH SURFACES EXHIBIT A RANGE OF SHADOW CONTRAST
- B SMOOTH SURFACES CAN CREATE GLARE AND BECOME MUTED
- C FLUTED SURFACES EXHIBIT A STRIPED CONTRAST WITH SHADOW



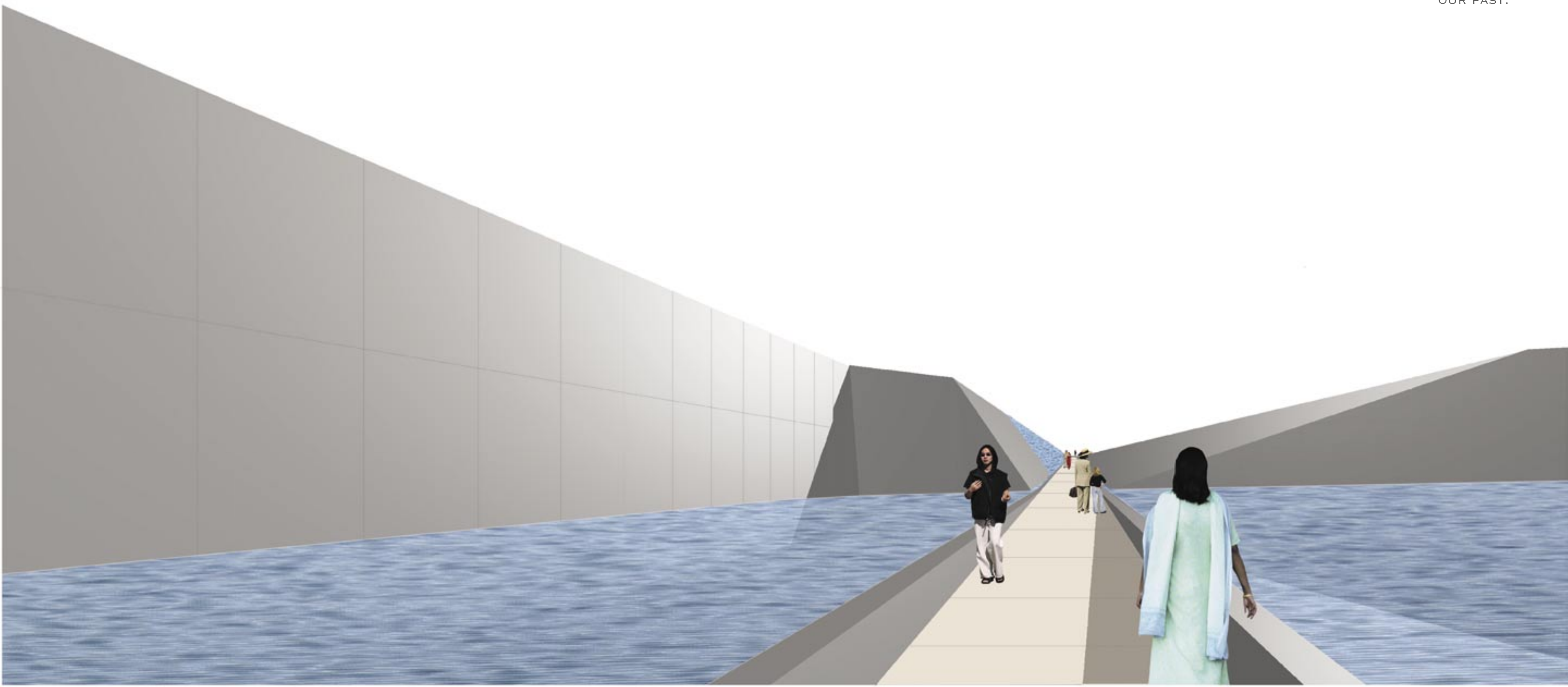
REFLECTIONS

THE LINES OF THIS PROJECT, THE LINES OF OTHER PROJECTS, THE LINES OF EDUCATION, AND THE LINES OF LIFE ALL LEAD TO DISCOVERIES. WE STRIVE TO COMPREHEND THESE DISCOVERIES AND THEN HOW WE CAME TO DISCOVER THEM. WHEN PROBLEMS AROSE IN THE DESIGN OF THIS PROJECT, THE PROJECT ITSELF INFORMED THE FINAL DECISIONS. THIS STRATEGY CREATED CONSISTENCY WITHIN THE DESIGN AND THUS A MORE SOLIDIFIED WHOLE.

LINES... THEY CAN LEAD TO ARTWORK, ARCHITECTURE, BUILDINGS, BOUNDARIES, AND WAR. IN THIS CASE THEY AROSE FROM TRAGEDY AND BLOSSOMED INTO A MEMORIAL OF HOPE.

THE TASK OF CREATING A MEMORIAL FOR SUCH AN EVENT IS PROFOUND. IT REQUIRES AN INSPIRED DESIGN WITH FINELY CRAFTED FORMS. AS ACTIVE INGREDIENTS, WATER AND LIGHT TRANSCEND MORE TEMPORAL MATERIALS, CONTRIBUTING THE ESSENTIALS OF LIFE THAT HARK BACK TO THE BEGINNING OF TIME. WE BORROW THESE MATERIALS.

OUR FUTURE LIES IN OUR COLLECTIVE IMAGINATION, OUR WILL TO ENVISION AND SCULPT A BRIGHTER FUTURE, A FUTURE MORE COMPASSIONATE THAN OUR PAST.



BIBLIOGRAPHY

- 1 POWER POINT PRESENTATION ON THE 9/11 TERRORIST ATTACKS.
WWW.STAYNEHOFF.NET/9-11.PPT
*NOTE: ALL PHOTOS FROM PP. 1 - 2 FROM THIS SOURCE.
- 2 MISSION STATEMENT FROM WORLD TRADE CENTER SITE
MEMORIAL COMPETITION. WWW.WTCSITEMEMORIAL.ORG/ABOUT_
GUIDELINES.HTML
- 3 BACKGROUND PHOTO ON PP. 25-26. HTTP://WWW.RENEWNYC.COM/
DEFAULT.ASP
- 4 FRITZ KOENIG'S "THE SPHERE." WWW.DIANEFARRISGALLERY.COM/
ARTIST/LEE/EX02/GERMAN.HTML

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