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## The Motor City – Stimulating Architecture

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# THE MOTOR CITY



# STIMULATING | ARCHITECTURE

JACOB LEVINE | ARCH 641 | GRADUATE THESIS STUDIO  
MASTER OF ARCHITECTURE SPRING 2015  
ROGER WILLIAMS UNIVERSITY  
SCHOOL OF ARCHITECTURE, ART, AND HISTPRIC PRESERVATION  
ANDREW COHEN - PROFESSOR

SUBMITTED IN FULFILLMENT OF THE REQUIREMENTS FOR THE MASTER OF ARCHITECTURE DEGREE:

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JACOB LEVINE MASTER OF ARCHITECTURE	DATE
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ANDREW COHEN THESIS ADVISOR	DATE
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JACOB LEVINE DEAN   SCHOOL OF ARCHITECTURE, ART, AND HISTORIC PRESERVATION	DATE
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## ABSTRACT

ICONIC ARCHITECTURE AROUND THE WORLD IS DEFINED BY THE IMPACT IT HAS ON THE PATRONS. THE GOAL OF THIS THESIS IS TO USE ARCHITECTURE TO CAPTURE THE FEELING OF MOTION AND MOVEMENT. MOTION IS INHERIT IN THE CONCEPT AND EXPLORATION OF THIS ARCHITYPE. THE PROGRAM FOR THE ARCHITECTURE IS A CAR MUSEUM IN DETROIT MICHIGAN. DETROIT IS ONE OF THE MOST HISTORIC CITIES IN AMERICA - AND THE LAST THIRTY YEARS HAVE BEEN ROUGH ON DETROIT. A MODERN POWERFUL WORK OF CONCEPTUAL ARCHITECTURE COULD CHANGE THE CITY OF DETROIT AND BEGIN TO BUILD A BRIGHTER FUTURE. THE CREATION OF DESTINATION ARCHITECTURE IS MOTIVATED BY THE PEOPLE OF OUR GENERATION. IF WE BUILD IT, THEY WILL COME.





IF GM HAD KEPT UP WITH TECHNOLOGY LIKE THE COMPUTER INDUSTRY



TRY HAS, WE WOULD ALL BE DRIVING \$25 CARS THAT GOT 1,000 MPG.

- BILL GATES



# INTRODUCTION



Photo by Daniel Song

*DESIGN, ART, AND ARCHITECTURE HAVE THE POWER TO RECTIFY; TO CHANGE;*





*BRING PEOPLE TOGETHER; CREATE FROM DESTRUCTION; TO INSPIRE*



IMAGE: ARCSpace.COM

HUMANS HAVE A CONNECTION TO THE CAR UNLIKE  
ANY OTHER PIECE OF MACHINERY; WE LOVE THEM;  
IDOLIZE THEM; BUILD SHRINES FOR THEM.

THE AUTOMOBILE IS A TIMELESS ART  
OF ARCHITECTURE THROUGH TIME AND SPACE

THE GOAL OF THIS THESIS IS TO DEVELOPE  
AND DEMONSTRATE AN  
ARCHITECTURE LANGUAGE OF MOTION

HOW CAN ARCHITECTURE CAPTURE MOVEMENT?

IT IS TEMPTING TO THINK THAT THIS WAVE OF WAVY BUILDINGS MERELY REFLECTS THE DOMINANT FASHION OF THE CURRENT AGE.

BUT A GROWING BODY OF RESEARCH SUGGESTS THAT A STRONG PREFERENCE FOR CURVY SHAPES MAY IN FACT BE HARD-WIRED INTO THE HUMAN BRAIN, AND NOT JUST A CREATION FOR OUR GENERATION.

PSYCHOLOGISTS HAVE BEEN TOYING WITH THE IDEA THAT WE RESPOND TO CURVES MORE POSITIVELY THAN SHARP LINES FOR AT LEAST A CENTURY. THE INSTINCT TO APPRECIATE CURVES MAY BE HARD-WIRED, BUT THAT DOES NOT MEAN ARCHITECTS WILL FOLLOW THE INSTINCT INDEFINITELY. FADS TEND TO FALL OUT OF FAVOR, ONLY TO RE-EMERGE AS “NEW” YEARS LATER.

“SEVERAL YEARS AGO, NORMAN FOSTER CONSTRUCTED AN ‘UNAPOLOGETICALLY SQUARE BUILD’ FOR HIS LONDON HEADQUARTERS. A FEW YEARS LATER HE BUILT A ‘WANTONLY CURVACEOUS’ RESIDENTIAL BUILDING RIGHT NEXT DOOR. THERE IS A CLEAR LESSON, ‘AT THIS HISTORIC MOMENT CURVES GET A HIGH APPROVAL RATING,’ FOSTER SAYS. ‘BUT, AS THE RULE OF TASTE SUGGESTS, THAT WILL CHANGE AGAIN SOON.’”

OUR BUILDINGS REPRESENT THE TIME AND CULTURE OF THOSE WHOM OCCUPY AND BUILD THEM.  
AN ATTRIBUTE TO THE GENERATIONS’ CURRENT ZEITGEIST.

AS MY GENERATION GROWS, WE SET THE TONE FOR WHAT IS “MODERN” IN ARCHITECTURE. WE ARE CURRENTLY INTO CURVES, DECONSTRUCTION, AND BAROQUE ARCHITECTURE. OUR BUILDINGS WANT TO REPRESENT OUR AGE OF EXCITEMENT, SPEED, AND TECHNOLOGY, CARVING 21ST CENTURY LIFE INTO ARCHITECTURE.





IMAGE: HISTORICDETROIT.ORG



HOW DOES THE FORM OF PEOPLE'S SURROUNDINGS AFFECT THEIR SPATIAL KNOWLEDGE?



WE ALL REQUIRE SPATIAL KNOWLEDGE OF OUR ENVIRONMENT. MANY PEOPLE SPEND THE BETTER PART OF THEIR DAY IN A BUILT ENVIRONMENT, AND THEREFORE, MUCH OF THEIR THOUGHT ABOUT SPACE IS DIRECTLY INTERTWINED WITH THE ARCHITECTURAL AND URBAN FORM OF THEIR SURROUNDINGS.

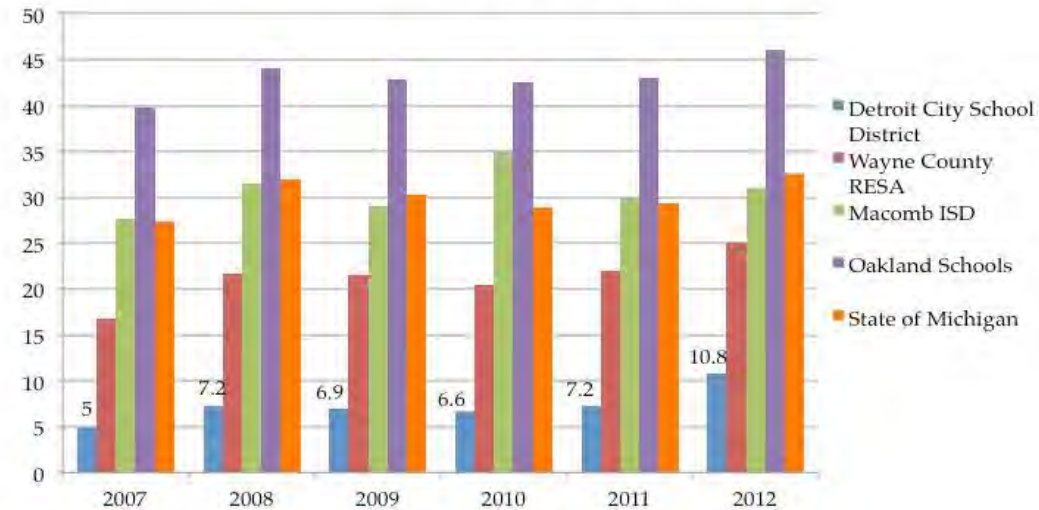




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IMAGE: THEMAINWIRE.COM

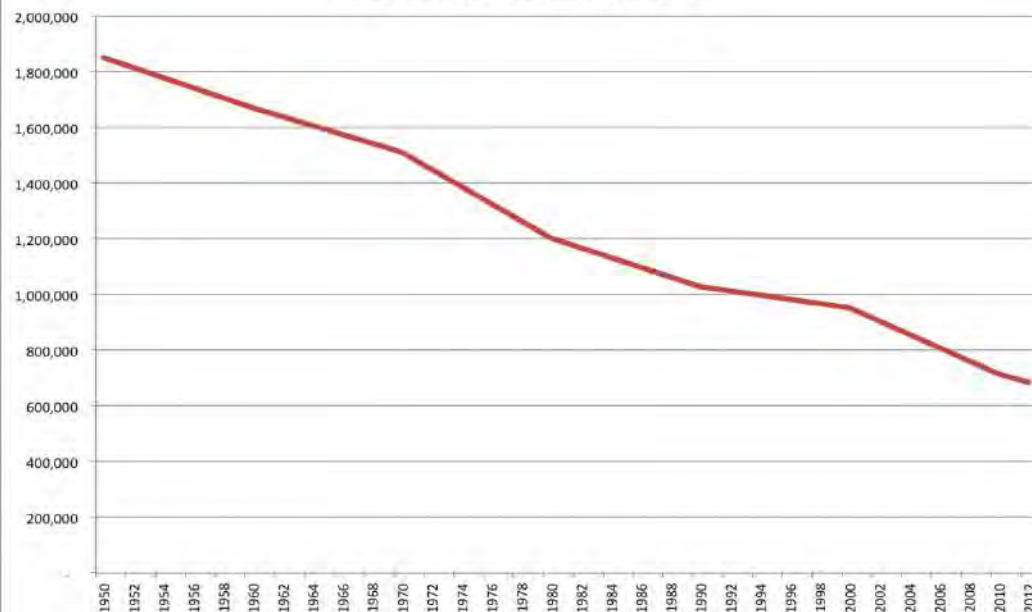
## MEAP eighth grade math results 2007-2012



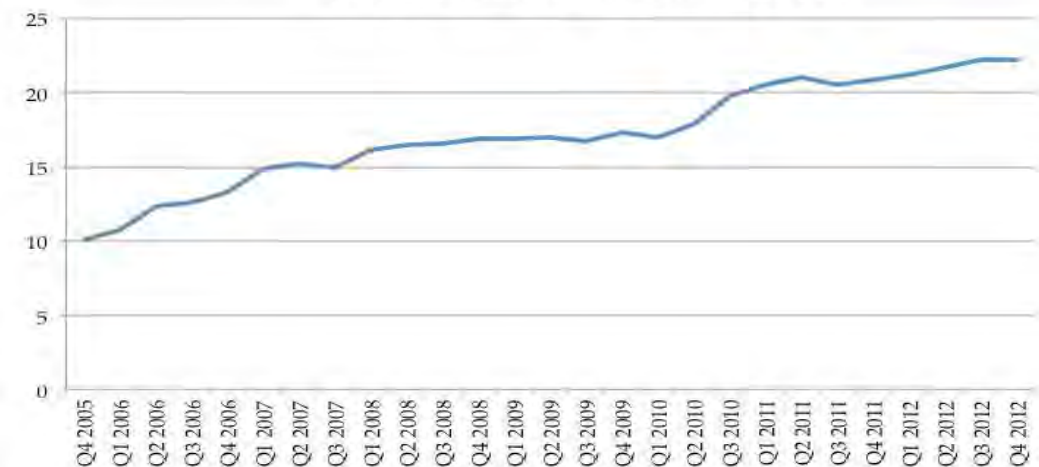
Source: Michigan Department of Education  
Mischooldata.org

Courtney Flynn, WSU/CUS

## Detroit Population, 1950-2012



## Percent of Detroit vacancies Dec. 2005-Dec. 2012



Source: U.S. Postal Service  
U.S. Department of Housing and Urban Development

Dr. David Martin, WSU/CUS

DETROIT IS A BLANK CANVAS...

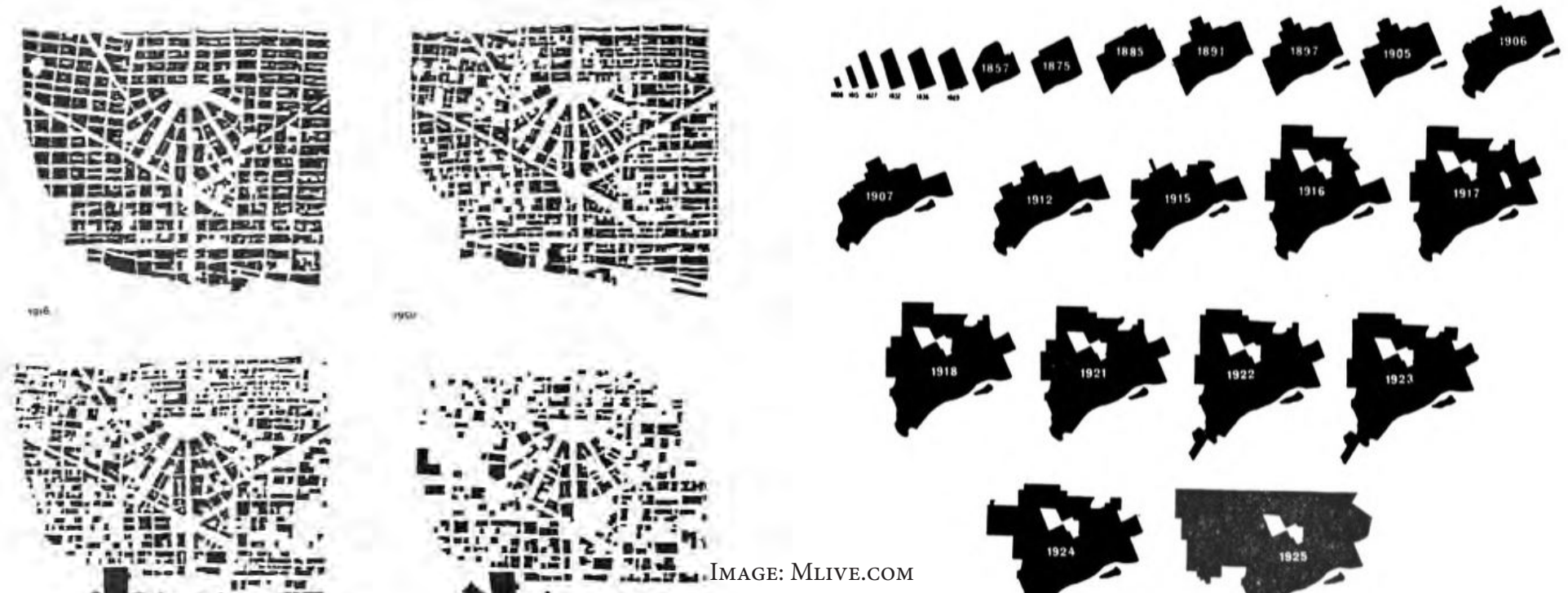
ONE OF THE OVERALL MISSIONS OF THIS THESIS IS TO USE ARCHITECTURE AS A VESSEL FOR MOVEMENT AND DEVELOPMENT. THIS PROJECT SHOULD SERVE THE PEOPLE AND GIVE IDEAS OF HOW TO AID THE CITY OF DETROIT. THE DESIGN WILL REPRESENT WHAT MODERNITY MEANS WITH RESPECT TO MOVEMENT AND MOTION. THE GOAL IS TO BRING INSPIRATION FROM ADMIRATION.

DETROIT CURRENTLY IS IN DESPERATE NEED FOR ARCHITECTURAL IMPROVEMENTS ON THE MICRO AND MACRO SCALES. A NEW MASTER PLAN IS DEVELOPING TO HELP TRANSFORM ONCE A BOOMING ECONOMIC METROPOLIS. ONCE HOME TO AMERICA'S "BIG THREE" - CHEVY, FORD, AND GM IN THE 20TH CENTURY; DETROIT, NOW IS LEFT WITH SHELL SPACE FROM THE FALLOUT OF THE AMERICAN MOTOR COMPANIES AND MANUFACTURING IN DETROIT.

THE MOTOR CITY IS READY TO BE TRANSFORMED INTO THE NEXT MODERN AFFORDABLE YOUNG CITY. STARTUPS AND NEW COMPANIES ARE MOVING TO THE AFFORDABLE INNER-CITY RING PROPERTIES. THIS IS GENERATING JOBS, MONEY, A STEADY ECONOMY, AND NEW ARCHITECTURAL DEVELOPMENTS. TOURISM WILL DRIVE UP REAL ESTATE; AND SOON WHAT IS NOW A VACANT DOWNTOWN; WILL YIELD HIGH RENTS AND MODERN ARCHITECTURE.

I FIRMLY BELIEVE ARCHITECTURE HAS THE POWER TO REFORM AND CHANGE CITIES AND PEOPLE. HOW A CITY FUNCTIONS INTERNALLY DETERMINES THE STATUS QUO OF THE POPULATION. DETROIT MICHIGAN NEEDS A MAKEOVER; IT'S AN OPPORTUNITY OF A LIFETIME FOR A YOUNG ARCHITECT, A BLANK CANVAS.

# CLIENT AND USERS



THE DIAGRAMS SHOW THE RAPID DECLINE OF DETROIT; IN JUST 50 YEARS THE CITY LOST ABOUT 2/3'S OF ITS POPULATION AND LEFT A MAJORITY OF THE CITY VACANT. THE DECLINE OF DETROIT IS UNPRECEDENTED IN THIS COUNTRY, SOMETHING THAT NEEDS TO BE ADDRESSED BY THE NATION AS A WHOLE, AND A GREAT OPPORTUNITY TO DEVELOP AN ARCHITECTURE OF MOVEMENT IN A PLACE DESPERATE FOR A BRIGHT FUTURE.

DETROIT BECAME THE LARGEST CITY IN U.S. HISTORY TO FILE FOR BANKRUPTCY, AS THE STATE-APPOINTED EMERGENCY MANAGER FILED FOR CHAPTER 9 PROTECTION. JUST 50 YEARS AGO, DETROIT WAS THE RICHEST CITY IN AMERICA AND THE BIRTHPLACE OF THE MIDDLE CLASS. IT IS IMPORTANT TO UNDERSTAND AND LEARN FROM THE PAST- I AM INTERESTED IN WHAT WENT WRONG AND HOW DO WE REBUILD IN A NEW DIRECTION. DETROIT IS A GREAT LOCATION FOR A DYNAMIC CAR MUSEUM - A FISHBOWL FOR WHAT A MAJOR ARCHITECTURAL DOWNTOWN PROJECT CAN DO FOR THE CITY WHILE ADDING AND IMPROVING THE OVERALL MASTER PLAN.

“AT THIS POINT THE CITY OF DETROIT OWES MONEY TO MORE THAN 100,000 CREDITORS. DETROIT IS FACING \$20 BILLION IN DEBT AND UNFUNDED LIABILITIES. THAT BREAKS DOWN, BY THE WAY, TO MORE THAN \$25,000 PER RESIDENT,” GLENN BECK - NUMBER ONE IN RADIO AND NATIVE TO DETROIT. “BACK IN 1960 THE CITY OF DETROIT ACTUALLY HAD THE HIGHEST PER CAPITA INCOME IN THE ENTIRE NATION. BY THE WAY, THESE FACTS ARE FROM ZERO HEDGE. THEY'RE UNBELIEVABLE.”

TO TRULY PUT THINGS IN PERSPECTIVE, IT IS IMPORTANT TO LOOK AT HOW STEADY A DECLINE THIS HAS BEEN FOR THE CITY. IN 1950, THERE WERE 296,000 MANUFACTURING JOBS IN DETROIT. TODAY, TODAY THERE ARE LESS THAN 27,000. BETWEEN DECEMBER 2000 AND DECEMBER 2000 AND DECEMBER 2010, 48% OF THE MANUFACTURING JOBS IN THE STATE OF MICHIGAN WERE LOST. AT THIS POINT THERE ARE APPROXIMATELY 78,000 ABANDONED HOMES IN THE CITY OF DETROIT. ABOUT ONE THIRD OF DETROIT'S 140 SQUARE MILES IS VACANT. LESS THAN HALF THE RESIDENTS IN DETROIT ARE OVER THE AGE OF 16 AND... 60% OF ALL CHILDREN IN THE CITY OF DETROIT ARE LIVING IN POVERTY. OVER THE LAST 60 YEARS, THE POPULATION OF DETROIT HAS FALLEN BY A STAGGERING 63% FROM 1.8 MILLION PEOPLE TO APPROXIMATELY 700,000.

(2)



# ARCHITECTURAL INTENTIONS

Before:



Before:



After:



After:



IMAGE: DETROITSOLUTIONS.

DETROIT WAS BUILT AROUND GM, CHEVY, AND FORD- BUT WITH TODAY'S OVERSEAS MANUFACTURING THE CITY  
CAN NO LONGER

RELY ON THE AUTOMOTIVE COMPANY'S CONSISTENT REVENUE. "THE CITY OF DETROIT IS NOW HEAVILY  
DEPENDENT ON TAX REVENUE THAT IT PULLS FROM THE CASINOS IN THE CITY. DETROIT IS BRINGING IN \$11  
MILLION A MONTH IN TAX REVENUE FROM THE CASINOS ALONE," GLENN BECK EXPLAINED ON HIS RADIO SHOW,  
"SECOND LARGEST STREAM COMES FROM PARKING ON SUNDAYS FOR NASCAR AND THE NFL."

PERHAPS UNSURPRISING, CRIME IS ALSO A MAJOR PROBLEM IN THE CITY. "THE SIZE OF THE POLICE FORCE IN  
DETROIT HAS BEEN CUT BY 40%," GLENN SAID. "WHEN YOU CALL THE POLICE NOW IN DETROIT, IT TAKES THEM  
AN AVERAGE OF 58 MINUTES TO RESPOND. DUE TO BUDGET CUTBACKS, MOST POLICE STATIONS IN DETROIT ARE  
NOW CLOSED TO THE PUBLIC 16 HOURS PER DAY. VIOLENT CRIME RATE IN DETROIT IS FIVE TIMES HIGHER THAN  
THE NATIONAL AVERAGE. THE MURDER RATE IN DETROIT IS 11 TIMES HIGHER THAN IT IS IN NEW YORK CITY.  
TODAY, POLICE SOLVE LESS THAN 10% OF THE CRIMES PERPETRATED IN DETROIT."

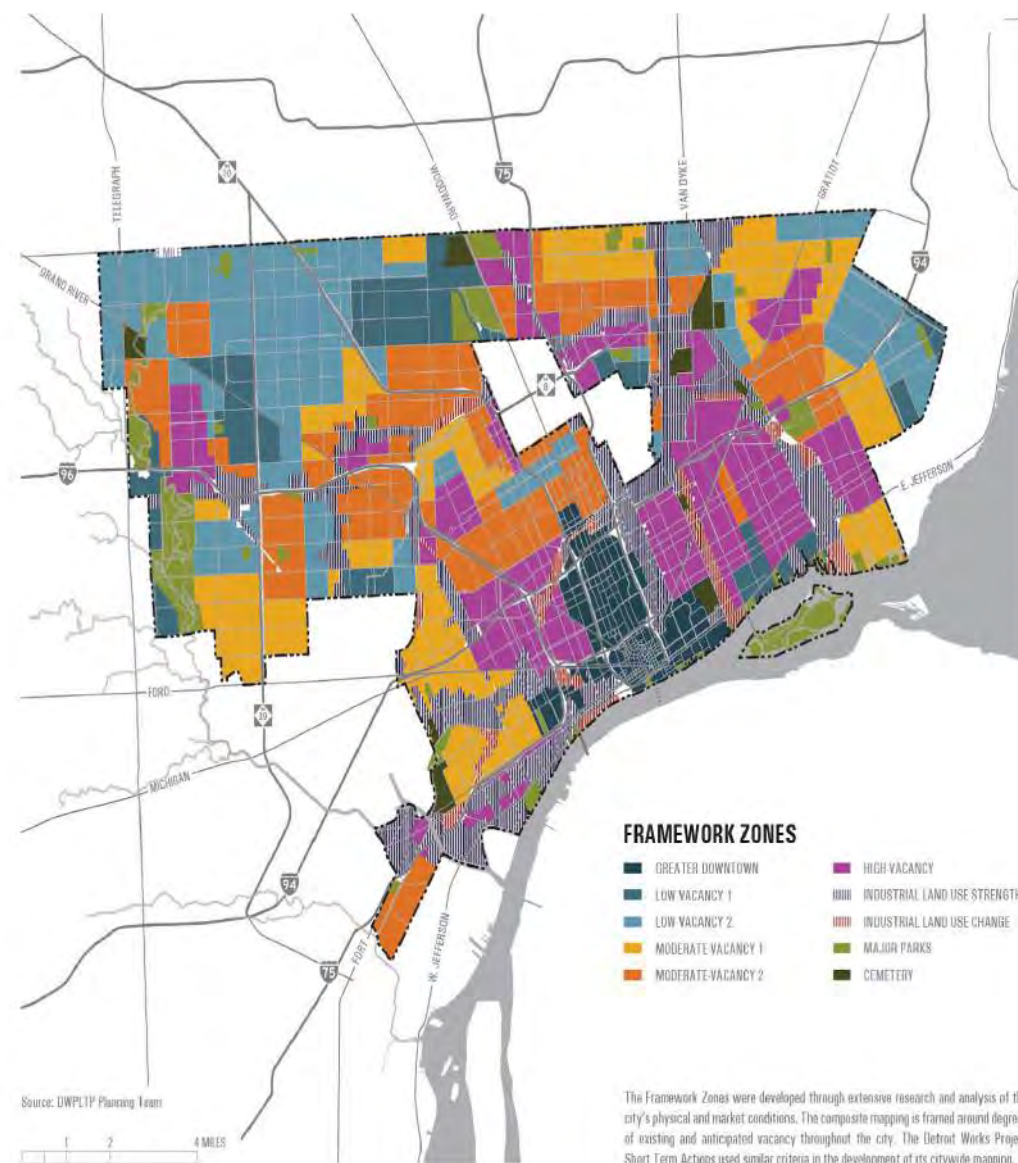
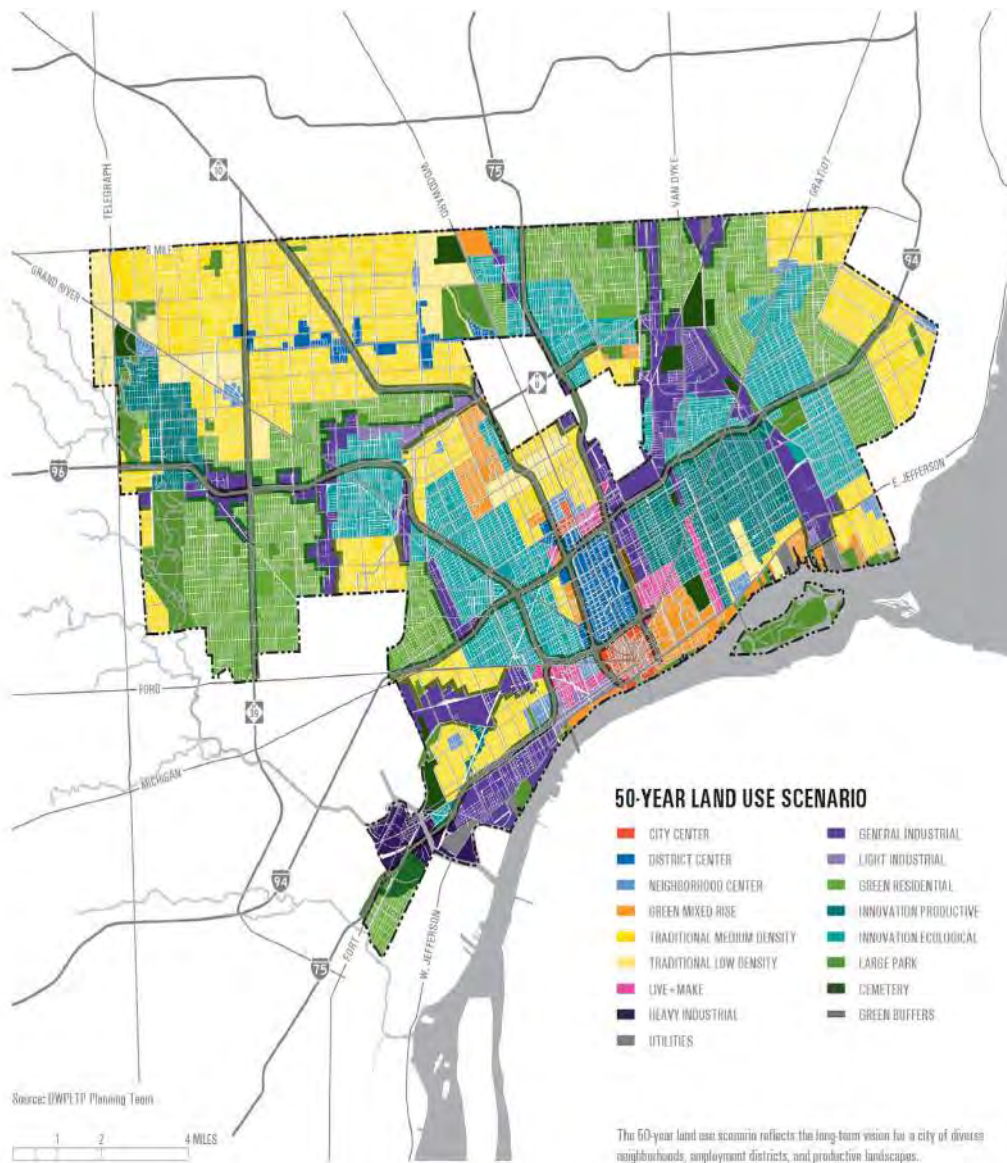
WHILE THESE NUMBERS MAY BE SHOCKING, THERE ARE OTHER MAJOR U.S. CITIES FACING A SIMILAR REALITY  
AND, IN TIME, A SIMILAR FATE, THUS IT IS IMPORTANT TO CAREFULLY REDEVELOP THESE CITIES FOR MODERN  
LIFE; THIS TAKES JOBS, TOURISM, MONEY, EDUCATION, AND OPPORTUNITY.

"NOW HERE'S THE THING ABOUT DETROIT THAT YOU HAVE TO UNDERSTAND. DETROIT JUST GOT THEIR FIRST,"  
GLENN SAID. IN TIME OTHER CITIES ARE GOING TO FALL, BUT WE ARE STARTING TO SEE REVITALIZATION SLOWLY  
IN CITIES LIKE CLEVELAND OR PITTSBURG - ONCE INDUSTRIAL POWERHOUSES, NOW BEING GENTRIFIED. WHILE  
OTHER PLACES LIKE HOLYOKE OR NEW BRITAIN ARE STRUGGLING TO FIND THEIR IDENTITY IN THE 21ST CEN-  
TURY POST MANUFACTURING.

(3)



# REGULATORY ENVIRONMENT SUMMARY REPORT



THE CURRENT LAND USE PLANS AND ZONING CODES IN DETROIT ARE ALL BEING MODIFIED. THERE ARE LIGHT ZONING LAWS IN THE DOWNTOWN AREA - AND MOST OF THE PLOTS OF LAND ARE ZONED FOR COMMERCIAL USE. A RING OF RESIDENTIAL MULTIFAMILY HOUSING DEVELOPMENTS SURROUNDS THE INNER CITY. DETROIT IS DESPERATE FOR ANYONE TO BUILD - THEY ARE NEARLY GIVING AWAY PROPERTY AND FORECLOSED HOUSES. NEW TECH COMPANIES HAVE BEEN AWARDED FREE RENT IN EXCHANGE FOR SHARES. MANY STARTUPS ARE MOVING FROM EXPENSIVE CHICAGO TO DETROIT. THIS THESIS WILL BE FOCUSING ON THE DEVELOPMENT OF THE DOWNTOWN AREA - ZONED FOR COMMERCIAL USAGE. THE PROJECT WILL TRY TO REVAMP THE DEAD SPACE IN THE CORE OF THE CITY. GRANTED - IT IS DIFFICULT ON PAPER TO "PROVE" THE IMPACTS OF AN UNBUILT PROJECT, THROUGH WELL DOCUMENTATION, THE IDEA CAN BE CLEAR. THE USE OF 3D MODELING; WE ARE ABLE TO CONCEPTUALIZE NEW DESIGNS FASTER AND MORE EFFICIENTLY, TESTING ON THE FLY WHAT IS POSSIBLE. ARCHITECTURE NEEDS TO BE DONE RHYTHMICALLY THROUGH EXPERIMENTATION AND SENSUAL OBSERVATIONS; THIS THESIS WAS A STUDY - AN EXPLORATION FROM START TO FINISH OF DEFINING MOVEMENT THROUGH SPACE. THE IDEA OF HAVING A BUILDING THAT IS EXPERIENCED AND NOT OBSERVED IS MY ULTIMATE GOAL; UNCONSCIOUSLY FOLLOWING THE BUILDINGS FOLDS, SPACES FLOWING INTO EACH OTHER EACH WITH ITS OWN MOMENT. DETROIT HAS A HISTORY OF OLD STRONG MASONRY BUILDINGS -MODERNITY BRINGS INTEREST AND THE CITY WOULD BENEFIT FROM A DYNAMIC BUILDING ROOTED IN MODERNITY AND MOVEMENT.

MODERN BUILDING ARE DONE WITH MODERN TOOLS. MY PROJECT WOULD NOT BE POSSIBLE WITHOUT THE COMPUTER TO AID MY CREATION. THE COMPUTER IS A CANVAS WITH MANY DIFFERENT TOOLS, EACH PROGRAM HAS ITS OWN RESPONSIBILITY TO CREATE A FINAL COHESIVE EXPLORATIVE PRODUCT; WE ARE ARTISTS EXPLORING A NEW MEDIUM IN THE FIELD OF ARCHITECTURE, COMPOSURES OF SPACE.

(4)



## 3 Main Climate Characteristics of Detroit Humid Subtropical Zone

Heat



The humid subtropical zone contains the warmest month average temperature above 22 °C (71.6 °F) with at least 4 months averaging above 10 °C (50 °F), b indicates warmest month averaging below 22 °C, but with at least 4 months averaging above 10°C, while c means 3 or fewer months with mean temperatures above 10 °C.

Rain



Precipitation is plentiful in the humid subtropical climate zone. Although most areas tend to have precipitation spread evenly throughout the year, a somewhat monsoon-like pattern is seen in parts of coastal zones which experience dry winters (by humid subtropical standards) and warm spring, followed immediately by a long, hot, rainy and humid summer.

Cold



Cold climates are characterized by winter temperatures cold enough to support a fixed period of snow cover each year, and relatively moderate precipitation occurring mostly in summer, although east coast areas may show an even distribution of precipitation. Regions containing a this climate exist in portions of the Northern Hemisphere continents, and also at higher elevations in other parts of the world.

### LEGEND



SUNNY DAYS



WINDY DAYS



FOGGY DAYS



CLOUDY DAYS



RAINY DAYS

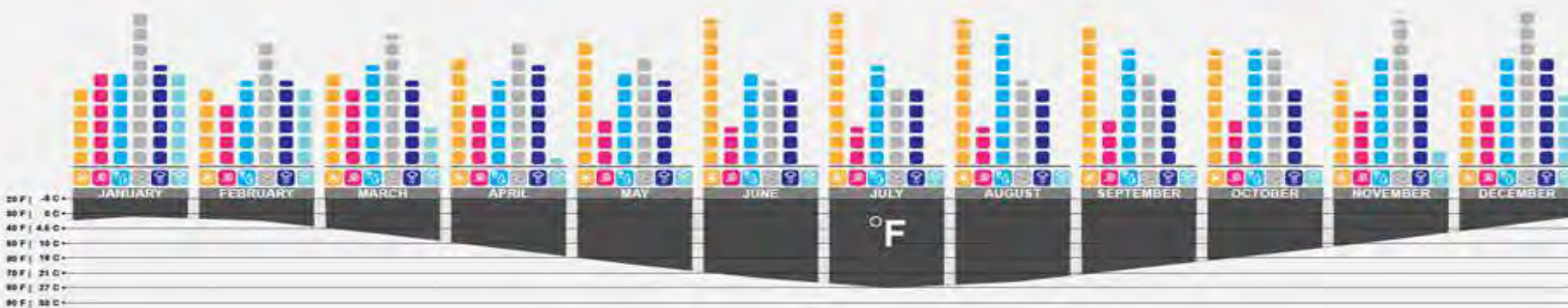


SNOW DAYS



= 2 DAYS

### CLIMATE DAYS



information: US National Climatic Data Center



THE WEATHER IN DETROIT IS NOT IDEAL FOR A MAJOR OUTDOOR PROJECT. THE CITY IS VERY COLD FOR ONE THIRD OF THE YEAR WITH HARSH WINDS COMING DOWN FROM CANADA. IT IS IMPORTANT TO UNDERSTAND WHAT THE SITE WEATHER WILL BE BEFORE DESIGNING. KNOWING SNOW IS EMANATE - THE ROOF AND MATERIAL CHOICES WILL HAVE TO DEFEND AGAINST A COLD YEARLY WINTER. PEOPLE FROM DETROIT AND THE MIDWEST IN GENERAL ARE USED TO WINDY COLD GRAY DAYS - BUT FOR TOURISM SAKE - THE ARCHITECTURE SHOULD PROVIDE A COMFORTABLE SHELTER WALKABLE AND OPEN TO THE PUBLIC IN THE MIDDLE OF THE CITY.

BECAUSE OF THE LACK OF TALL SKYSCRAPERS - UTILIZING SUNLIGHT WILL BE IMPORTANT - SKYLIGHTS AND DAY LIGHT WILL FLOOD THE SPACES TO ALLOW THE CARS TO BE SEEN IN NATURAL LIGHT. DURING THE SUMMERS THE OPEN GREEN SPACES WILL BE USED FOR OUTDOOR GALLERIES, PRESENTATIONS, AND PARTIES. OVERALL - THE WEATHER IS MANAGEABLE, WE ARE NOT IN A FLOOD ZONE AND SAFE FROM MAJOR NATURAL DISASTERS OR ANY MAJOR BUILDING CONSTRAINTS DUE TO LOCAL TYPICAL WEATHER CONDITIONS.

(5)

# PROGRAM OUTLINE



IMAGE: FREEP.COM



IMAGE: THETIMESREUNION.COM

THE OVERALL IDEA IS A CAR MUSEUM THAT HONORS THE HISTORY AND IMPORTANCE OF THE AMERICAN AUTOMOBILE. THE DESIGN WILL HAVE CERTAIN MODERNITY TO IT, BUT ROOTED WITH A STRONG CONCEPT OF MOVEMENT. I AM INTERESTED IN HOW PEOPLE RESPOND TO THEIR BUILT ENVIRONMENT- DOES THE AVERAGE PERSON ACTUALLY NOTICE THE ARCHITECTURE? DO THEY STARE WITH A BIT OF WONDER? HOW DOES THE MUSEUM AID THE OVERALL FUTURE GROWTH PLAN OF DETROIT. I UNDERSTAND THE POTENTIAL INFLUENCE WELL DEFINED ARCHITECTURE CAN HAVE ON ITS OCCUPANTS AND THE CITY. PEOPLE TRAVEL TO SEE AND EXPERIENCE ARCHITECTURE - BILBAO FOR EXAMPLE WAS REJUVENATED WITH ITS GUGGENHEIM BY GHERY.

HERE IN DETROIT - IT IS IMPORTANT TO PROVIDE SOMETHING STIMULATING AND MORE THAN JUST A ONETIME THING MUSEUM. RATHER - THE MUSEUM AND FACTORY WILL PROVE TO BE PROVOCATIVE AND SEDUCTIVE THE CARS TO ITS GUESTS. THE MUSEUMS FUNCTION IS TO DEMONSTRATE THE AUTOMOTIVE- A MACHINE FUSED AND DRIVEN BY MAN CREATED FOR TRANSPORTATION. THE BUILDING WILL GUIDE GUESTS UP THROUGH A PROGRESSION OF SPACES FILLED WITH CARS FROM DIFFERENT ERAS ALL MADE IN DETROIT. THERE SHOULD BE A GOOD MIX OF PROGRAM ALL HAPPENING UNDER ONE ROOF PROVIDING DIFFERENT EXPERIENCES THROUGHOUT THE BUILDING. ONE END OF THE BUILDING WILL HAVE A MODERN GARAGE USED TO FIX HISTORIC CARS, WHILE PROVIDING TRAINING FOR ENGINEERS LOOKING TO LEARN HOW TO RESTORE AND MAINTAIN CLASSIC CARS.

THIS IS SITE SPECIFIC ARCHITECTURE THAT WILL FUNCTION FOR THE PURPOSE OF A CAR COMPLEX; THE OUTSIDE SPACE WILL BE USED TO PROVIDE OUTDOOR CAR SHOWS AND EVENTS WHILE THE INSIDE CAN RUN ON NORMAL WORKING HOURS. HOWEVER, THE SPIRIT OF THE ARCHITECTURE WILL FLOW THROUGH THE MATERIALITY AND STRUCTURE, THE PROGRAM FILLS THE WALLS AND THE SPACE, BUT THE SOLE IS IN THE WALLS .

STRUCTURE AND FORM ARE SOMETHING THAT SHOULD NOT BE RESTRICTED BASED ON PROGRAM IN A PROJECT LIKE THIS. INSTEAD - THE PROVIDED SPACE FROM THE STRUCTURE SHOULD CATER THE PROGRAM WITHIN. YET, IN THE BEST MUSEUMS, THE ARCHITECTURE AND THE ART HAVE A BOND, IN THIS MUSEUM - HOW CARS ARE DISPLAYED IS VERY IMPORTANT WHEN DESIGNING THE SPACES THEMSELVES. GUESTS SHOULD HAVE THE OPPORTUNITY TO GET UP CLOSE AND WALK AROUND THE AUTOMOBILES, INTERACT WITH THE MORE DURABLE CARS WHILE CAREFULLY DISPLAYING THE MORE FRAGILE ART PIECES.

AGAIN, THE ARCHITECTURE AND BONES OF THE PROJECT NEED TO PROVIDE THE PERFECT CLIMATE. THE BUILDING ITSELF SHOULD REPRESENT THE MATERIALITY AND MECHANICS OF THE CAR. THE BUILDING WILL FIT THE PROGRAM AND PRODUCE A PIECE OF STIMULATION FOR ITS PATRONS, LIKE THE CAR ITSELF IT WILL ALWAYS BE A DIFFERENT RIDE.



# PRECEDENT ANALYSIS

IMAGE: FORGOTTENDETROIT.COM



IMAGE: DETROIT-

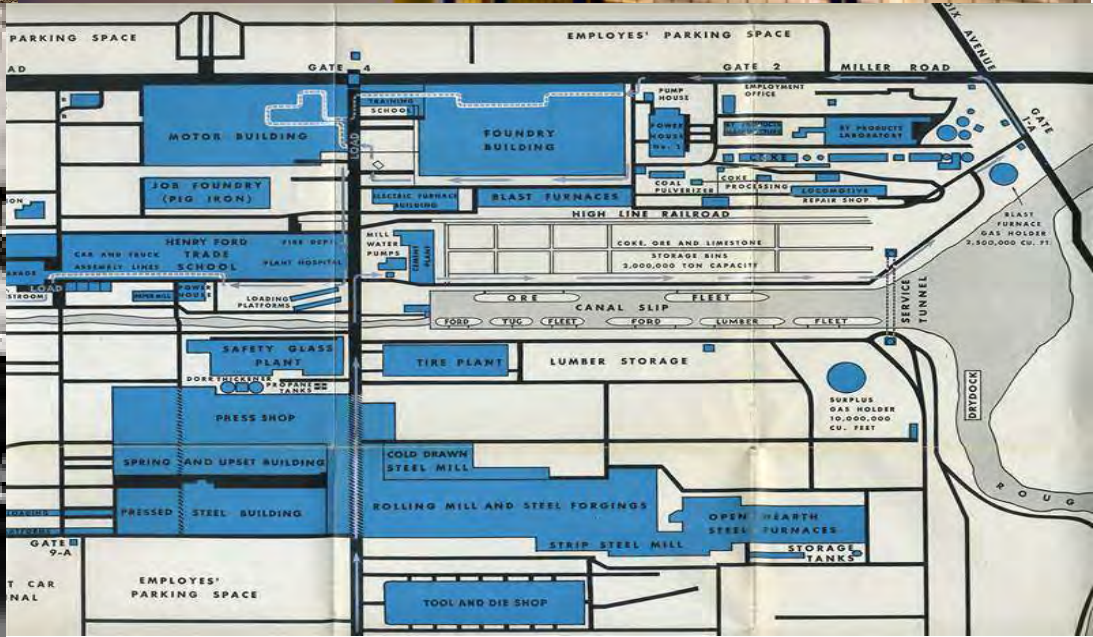


IMAGE: FORGOTTENDETROIT.COM

IMAGE: TIMESUNION.COM

CALLING ITSELF “AMERICA’S GREATEST MANUFACTURING EXPERIENCE,” THE FORD ROUGE FACTORY TOUR (SEVERAL MILES SOUTH OF DETROIT) ALLOWS VISITORS TO THE FINAL ASSEMBLY PROCESS OF FORD F-150S FROM AN ELEVATED WALKWAY. ALTHOUGH THE FACTORY DOESN’T GUARANTEE YOU’LL SEE ASSEMBLY IN ACTION, A TOUR OF THIS PLANT IS ONLY ONE PART OF THE FIVE-PART TOUR: YOU’LL ALSO GET TO TAKE A LOOK AT THE HISTORY OF THE ROUGE THROUGH HISTORIC VIDEO FOOTAGE AND GET A WALKING TOUR OF THE FACTORY’S “LIVING ROOF,” THE LARGEST IN THE WORLD, AT 454,000 SQUARE FEET, OR 10.4 ACRES. APPROXIMATELY 6,000 FORD EMPLOYEES STILL WORK AT THE “ROUGE,” AND THE 600-ACRE SITE REMAINS FORD MOTOR COMPANY’S LARGEST SINGLE INDUSTRIAL COMPLEX.

(6)



PRECEDENT ANALYSIS

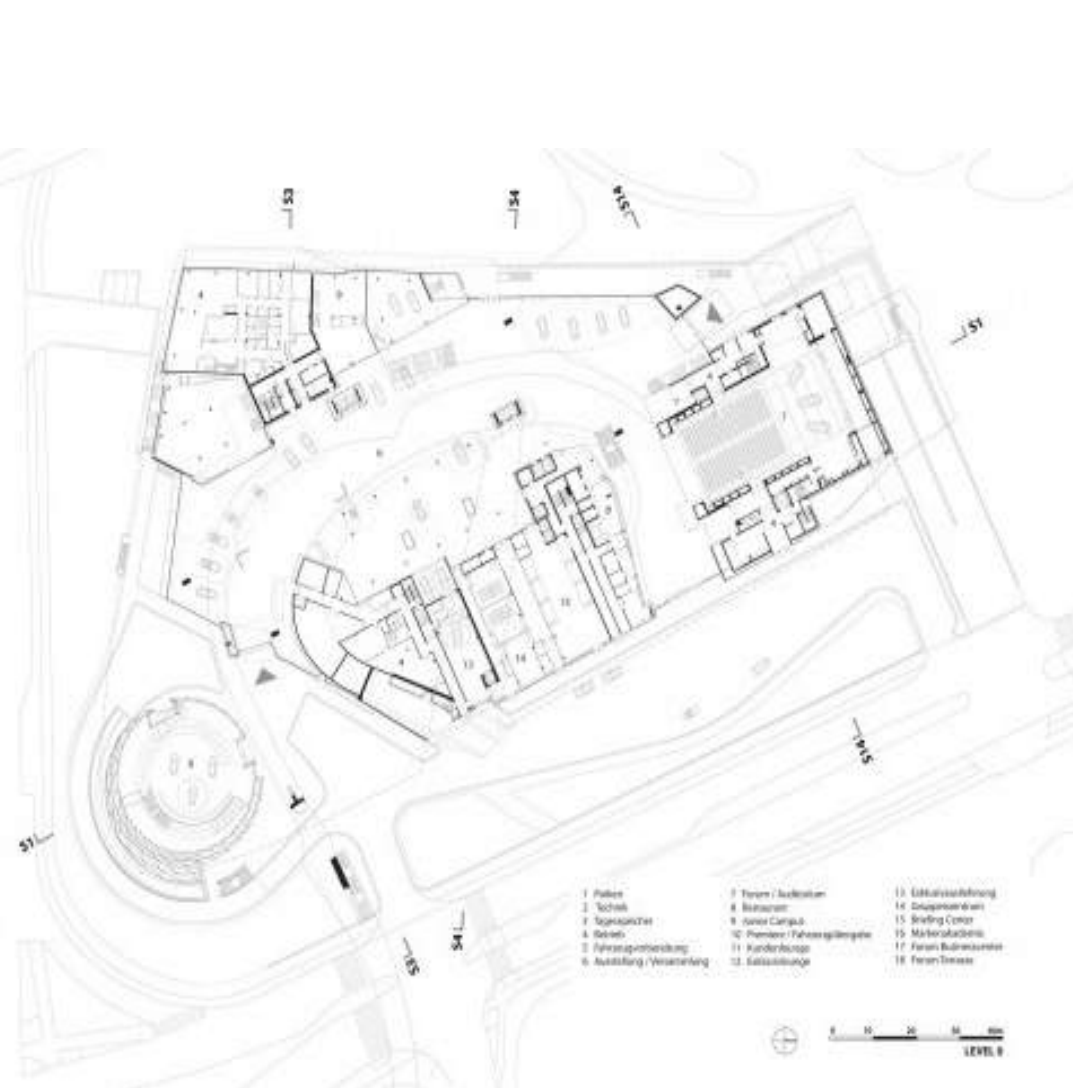


IMAGE: BMW-WELT.COM



IMAGE: BMW-WELT.COM

THE KEY TASK OF THE NEW BMW WELT IS TO DELIVER CARS – IN THE PREMIERE SECTION – WITH ALL CONCEPTS GEARED TOWARD ENHANCING THE EXPERIENCE OF DELIVERY. BECAUSE OF THE EXHAUST GASES THAT THIS TASK INVOLVES, SPECIAL CONSIDERATIONS AND CALCULATIONS HAD TO BE MADE IN TERMS OF THE VENTILATION PLAN, SINCE THE PREMIERE IS OPEN TO THE HALL – THE MAJOR SPACE IN THIS WORLD OF EXPERIENCE. BEYOND MERELY FINE-TUNING THE VOLUME OF AIR INTAKE AND OUTFLOW CURRENTS, IT WAS ALSO IMPORTANT TO EXTRACT THE EXHAUST FUMES DIRECTLY AND PUMP IN FRESH AIR. PLANNING HERE WAS BASED ON AN ASSUMED TURNOVER OF 40 CARS PER HOUR, OR 250 CARS PER DAY

THE DOUBLE CONE IS USED AS AN EXHIBITION SPACE AND FOR SPECIAL EVENTS. AIR IS BROUGHT IN BY MEANS OF A LOW-INDUCTION SYSTEM ALONG THE BASE OF THE FACADE AND STREAMS INTO THE ROOF THROUGH THE OPENING AT THE TOP OF THE CONE. FLOOR AIR CONDITIONING AND AIR CIRCULATION COOLERS IN THE WALL AND FLOOR AREAS ENSURE THE NECESSARY COMFORT LEVEL. IN THE IN-BETWEEN SEASONS, NATURAL VENTILATION VIA FACADE SHUTTERS IS USED. THE STRUCTURAL DESIGN OF BMW WELT REPRESENTS A SPECIAL CHALLENGE WHEN DETERMINING HOW TO CONDUCT SUPPLY LINES. BECAUSE OF THE VAST SUPPORT-FREE SPACE, WHICH IS BORNE BY ONLY 11 COLUMNS PLUS THE ELEVATOR SHAFTS, THE SUPPLY CROSS-SECTIONS FOR THE LOUNGE FLOORS AND THE TOWER HAD TO BE INTEGRATED INTO THE FEW SUPPORTING CORE CROSS-SECTIONS. THIS SITUATION NECESSITATED CLOSE COORDINATION AT A VERY EARLY PROJECT PHASE BETWEEN THOSE RESPONSIBLE FOR STRUCTURAL ENGINEERING, THE ROUTING OF FACILITY SERVICES AND BUILDING TECHNOLOGY.

(7)

# PRECEDENT ANALYSIS

IMAGE: AUTOMUSEUM.VW.DE



IMAGE: AUTOMUSEUM.VW.DE

IMAGE: AUTOMUSEUM.VW.DE



THE GLÄSERNE MANUFAKTUR — OR FACTORY MADE OF GLASS — WAS DESIGNED BY ARCHITECT GUNTER HENN AND OPENED IN 2002 IN DRESDEN, GERMANY. ALTHOUGH THE FACTORY IS OWNED AND OPERATED BY VOLKSWAGEN, IT'S PRIMARILY USED TO PRODUCE ONLY THREE CARS: THE PHAETON, THE TOUAREG, AND THE VOLKSWAGEN CC. THE FIRST STEP OF QUALITY ASSURANCE AT THE FACTORY IS AN AMUSING, THOUGH IMPRESSIVE ONE: EACH VEHICLE MUST DRIVE THROUGH A LIGHT TUNNEL 25 METERS IN LENGTH UNDER NEON LIGHTS TO DETERMINE IF ITS FIRST IMPRESSION IS SATISFACTORY. OTHER IMPRESSIVE FEATURES OF THE FACTORY INCLUDE ITS EXTENSIVE TOUR, WHICH ALLOWS VISITORS TO SEE THE BODY AND FRAMES OF CARS BEING JOINED TOGETHER; BIRD NOISES PLAYED THROUGH LOUDSPEAKERS AROUND THE BUILDING TO KEEP BIRDS AWAY FROM THE GLASS FAÇADE; AND SODIUM VAPOR LAMPS IN THE OUTDOOR AREA SO AS NOT TO AFFECT THE NEARBY BOTANICAL GARDENS.

THERE IS A HUGE CAR MUSEUM, SEVERAL PAVILIONS DEDICATED TO THE VARIOUS VW CARS, DRIVING COURSES FOR ADULTS AND KIDS, RESTAURANTS, A HOTEL, AND OF COURSE THE FACTORY ITSELF, WHICH YOU CAN TOUR. ANOTHER HIGHLIGHT: EMBARK ON A GLASS ELEVATOR WHICH TAKES YOU TO THE TOP OF THE 160 FEET HIGH GLASS CAR TOWER; THEY HOLD UP TO 800 CUSTOM-ORDERED CARS, WHICH ARE PICKED UP BY THEIR BUYERS FRESH FROM THE FACTORY.

(8)



# PRECEDENT ANALYSIS

IMAGE: SPEEDHUNTER.COM

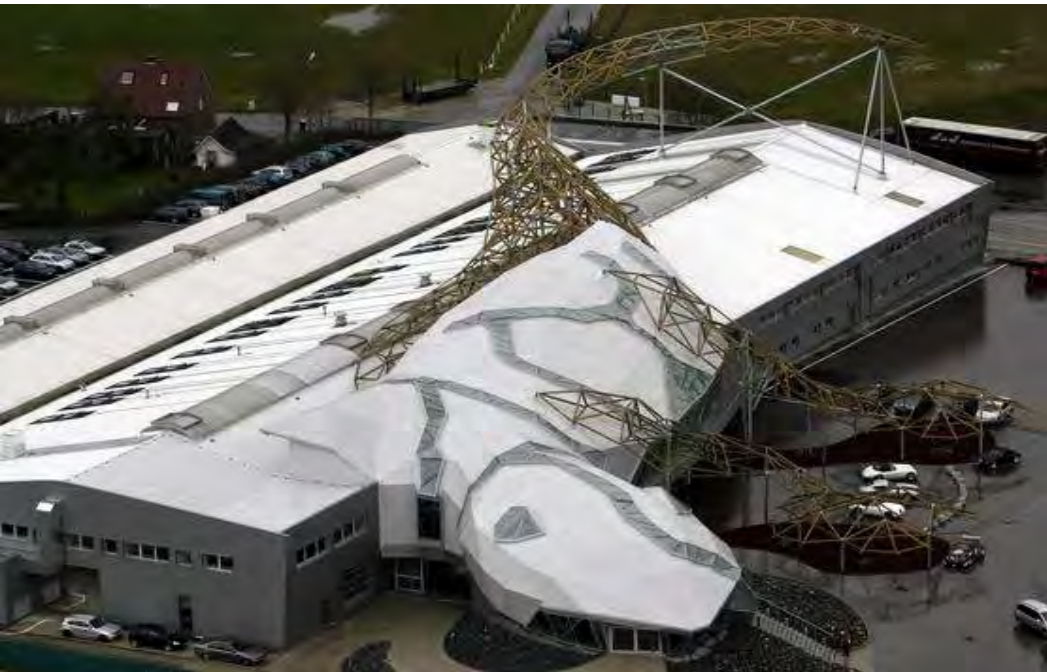


IMAGE:



IMAGE: SPEEDHUNTER.COM

IMAGE: SPEEDHUNTER.COM

FOUNDED IN 1985, WIESMANN IS A GERMAN AUTOMOBILE MANUFACTURER OF “PURISTIC SPORTS CARS.” BASED IN DÜLMEN, GERMANY, EVERY CAR THAT LEAVES THE WIESMANN FACTORY IS TOTALLY UNIQUE; AN EXPRESSION OF THE FUTURE OWNER’S LIFESTYLE AND PERSONALITY. ALTHOUGH EACH WIESMANN CAR IS WORKED ON FOR A TOTAL OF APPROXIMATELY 350 HOURS, A TOUR TAKES YOU THROUGH THE ENTIRE PRODUCTION PROCESS IN ONE HOUR. STOPS INCLUDE ELECTRONICS — WHERE ENTIRE CABLING IS DONE BY HAND — AND THE FACTORY’S OWN TANNERY. THE BEST PART? THE MANUFACTURING PLANT IS SHAPED LIKE A GECKO, AFTER THE COMPANY’S LOGO, BECAUSE “WIESMANN CARS STICK TO THE ROAD LIKE GECKOS STICK TO THE WALL.

(9)



# MERCEDES MUSEUM



IMAGE: MY PHOTO

WHILE WORKING ON MY THESIS; I TOOK A VISIT TO THE GERMAN CAR MUSEUM'S AND FACTORIES. I WAS EXPOSED TO THE PASSION AND LOVE THE GERMANS FELT FOR THEIR AUTOMOBILES. THESE ARE THE TEMPLES THEY HAVE CONSTRUCTED TO HONOR MERCEDES, BMW, AND PORCHE.

THE TRIP HELPED ESTABLISH A BENCH MARK FOR A DESIGN OF A CAR MUSEUM.



# PRECEDENT ANALYSIS

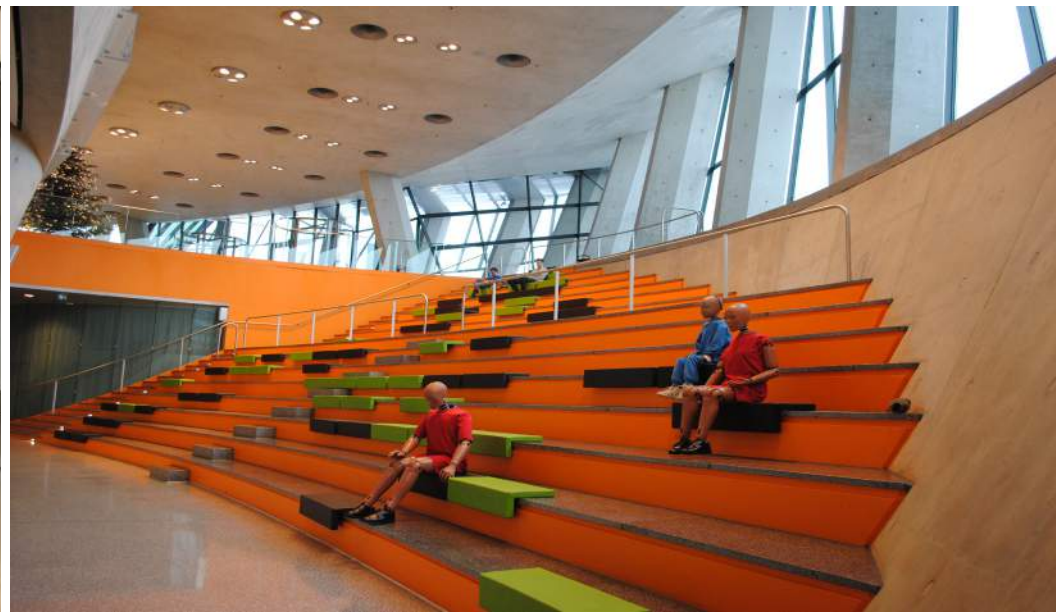


IMAGE: MY PHOTO

## PROGRAM OF MERCEDES MUSEUM

THE 35,000 SQM PROJECT DESIGNED BY UN STUDIO BETWEEN 2001-2006, INCLUDES ALSO A RESTAURANTS, STORES, OFFICES AND AN AUDITORIUM.

THE DESIGN IS BASED ON THE GEOMETRY OF A CLOVER, WITH THE SPACES CONNECTED BETWEEN TWO HELICAL ASCENDING RAMPS, AROUND A CENTRAL ATRIUM.

ACCORDING TO BEN VAN BERKEL, JOINT FOUNDER AND DIRECTOR OF UNSTUDIO “THE MERCEDES-BENZ MUSEUM SETS UP AN INTERFACE FOR A SERIES OF RADICAL SPATIAL PRINCIPLES IN ORDER TO CREATE A COMPLETELY NEW TYPOLOGY”.

AND BY THIS, HE REFERS TO HOW VISITORS EXPERIENCE THE MUSEUM: THEY DO NOT BEGIN THEIR VISIT TO THE EXHIBITION AT A CONVENTIONAL ENTRANCE AT THE BASE OF THE BUILDING. THEY ARE TRANSPORTED BY LIFT TO THE TOP FLOOR. HERE THEY HAVE THE CHOICE OF TWO TOURS, DURING WHICH THEY DESCEND THROUGH THE BUILDING. THE PATHS OF EACH TOUR MEET ON EACH FLOOR, ENABLING VISITORS TO SWITCH BETWEEN TOURS – THE COLLECTIONS TOUR AND LEGEND TOUR – SHOULD THEY WISH TO DO SO.

(10)



# Program Outline

IMAGE: AUTOWEEK.COM



IMAGE: AUTOWEEK.COM

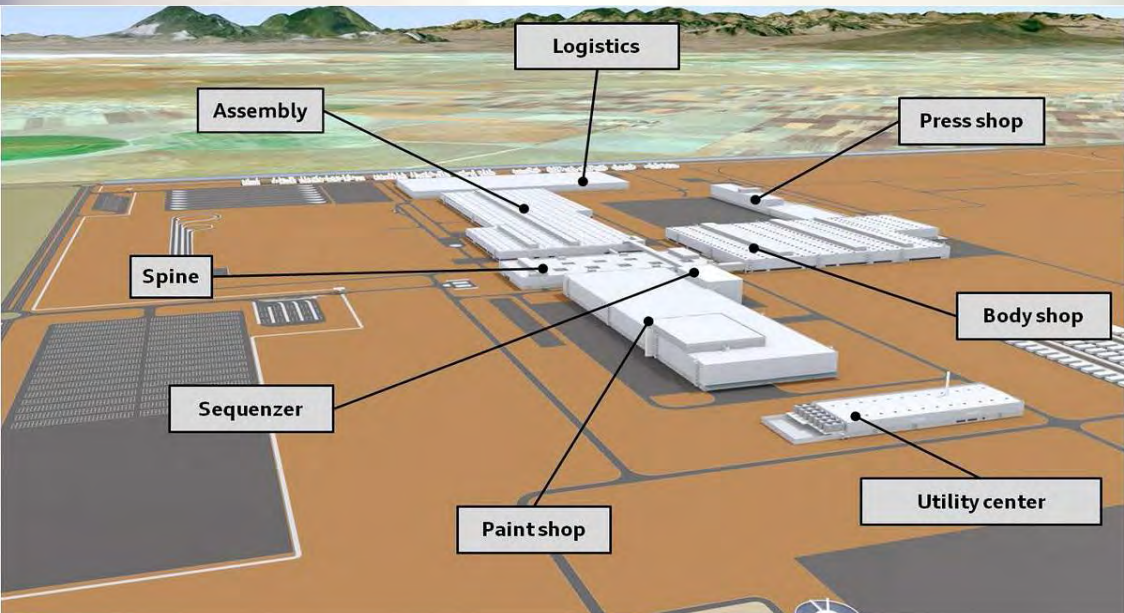


IMAGE: AUTOWEEK.COM

IMAGE: POPULARMECHANICS.COM



THE PROGRAM OF THE MUSEUM WILL FOLLOW THE IDEAS OF MY CONCEPT OF MOVEMENT. I DO NOT WANT A DESTINATION MUSEUM - RATHER ONE THAT PEOPLE MOVE FROM SPACE TO SPACE AND HAVE OPPORTUNITIES TO TAKE DIFFERENT ROUTES WHILE THE FLOOR PLANS PROVIDE SEVERAL WAYS BETWEEN LEVELS. THE CARS WILL BE ON DISPLAY IN A VARIETY OF ROOM SIZES - BUT THE GOAL IS MAKE THEM APART OF THE ROOM AND NOT JUST PLACED IN THE MIDDLE. CURVED WALLS WILL HUG THE CARS IN SMALLER MORE PRIVATE SPACES, WHILE LARGER MORE OPEN GALLERIES CAN SHOW THE EVOLUTION OF A PARTICULAR CAR ITSELF.

BESIDES THE SPRAWLING GALLERIES, THE MUSEUM WILL HAVE A THEATER FOR LECTURES, LARGE GATHERINGS, MOVIE SHOWINGS, AND PRESENTATIONS. THERE WILL BE MULTIMEDIA SPACES TO SHOW SHORT FILMS OR INTERACTIVE SIMULATORS TO GET BEHIND THE WHEEL. A KIDS CENTER FOR PARENTS WHO WANT THEIR YOUNGER KIDS TO HAVE THEIR OWN MORE CHILD ORIENTATED EXPERIENCE (GAMES, TOYS, MODEL CARS, LIGHT READINGS). LUNCH CAN BE HAD AT THE CAFE ADJACENT TO THE GIFT SHOP NEAR A LARGE CENTER POINT ENTRY. THE STUDY OF HOW THESE PROGRAM PIECES WILL FLOW TOGETHER IS CRUCIAL AND CANNOT BE ARBITRARILY PLACED. ONE KEY INGREDIENT TO THIS PROJECT IS THE AUTO BODY GARAGE WHICH WILL BE USED TO WORK ON HISTORIC AMERICAN ONE OF A KIND CAR. A PROTOTYPICAL MODERN DAY GARAGE WILL PROVIDE MECHANICS MORE THAN JUST FIXING CARS, BUT JOINED WITH THE MUSEUM, LESSONS AND CLASSES CAN BE PROVIDED ON THINGS SUCH AS; HOW TO MAINTAIN AND RESTORE CLASSIC CARS, DOWN TO PROPER PAINTING IN THE SPRAY ROOM. THE MUSEUM CAN MAKE MONEY THROUGH EDUCATION / INFO LESSONS, MECHANIC CLASSES, TICKET SALES, CAFE, GIFT SHOP, PUBLIC EVENTS, RENTALS, EVEN WEDDINGS, BUT THE OVERALL GOAL IS TO BRING PEOPLE TOGETHER TO LEARN THE HISTORY OF THE AUTOMOBILE IN DETROIT INSIDE A MODERN VESSEL.

THERE IS ONE ELEMENT TO THIS PROJECT THAT MAKES IT UNIQUE AND CHALLENGING, TO TRULY EXPRESS MOVEMENT AND TO PROPERLY CAPTURE THE SPIRIT OF THE AMERICAN CAR, THE MUSEUM WILL HAVE ITS OWN CAR TRACK.

(11)

## PROGRAM OUTLINE

IMAGE: VDTA.COM

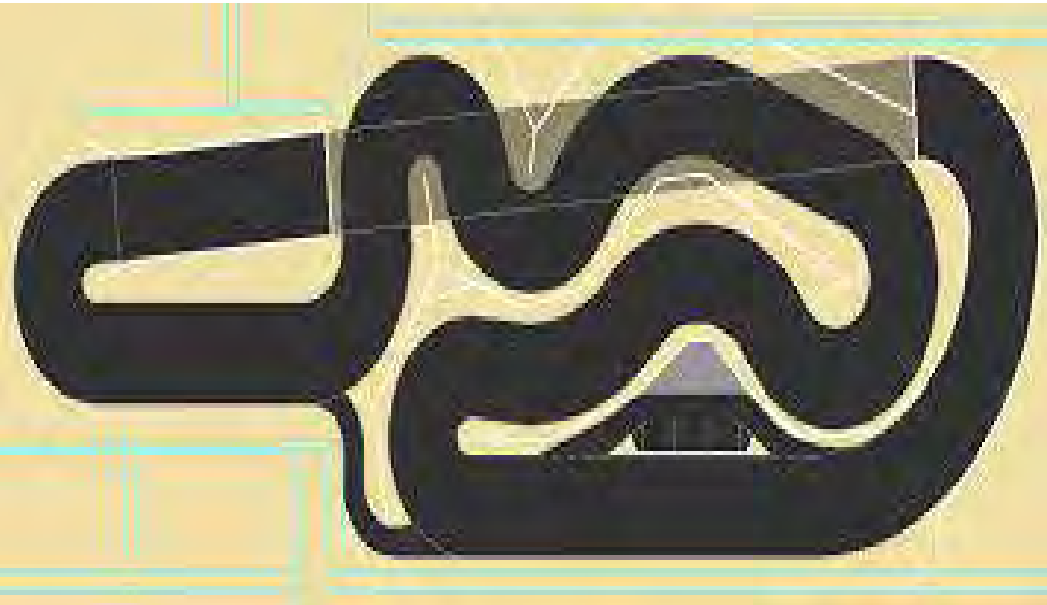


IMAGE: SLIDESHARE.COM

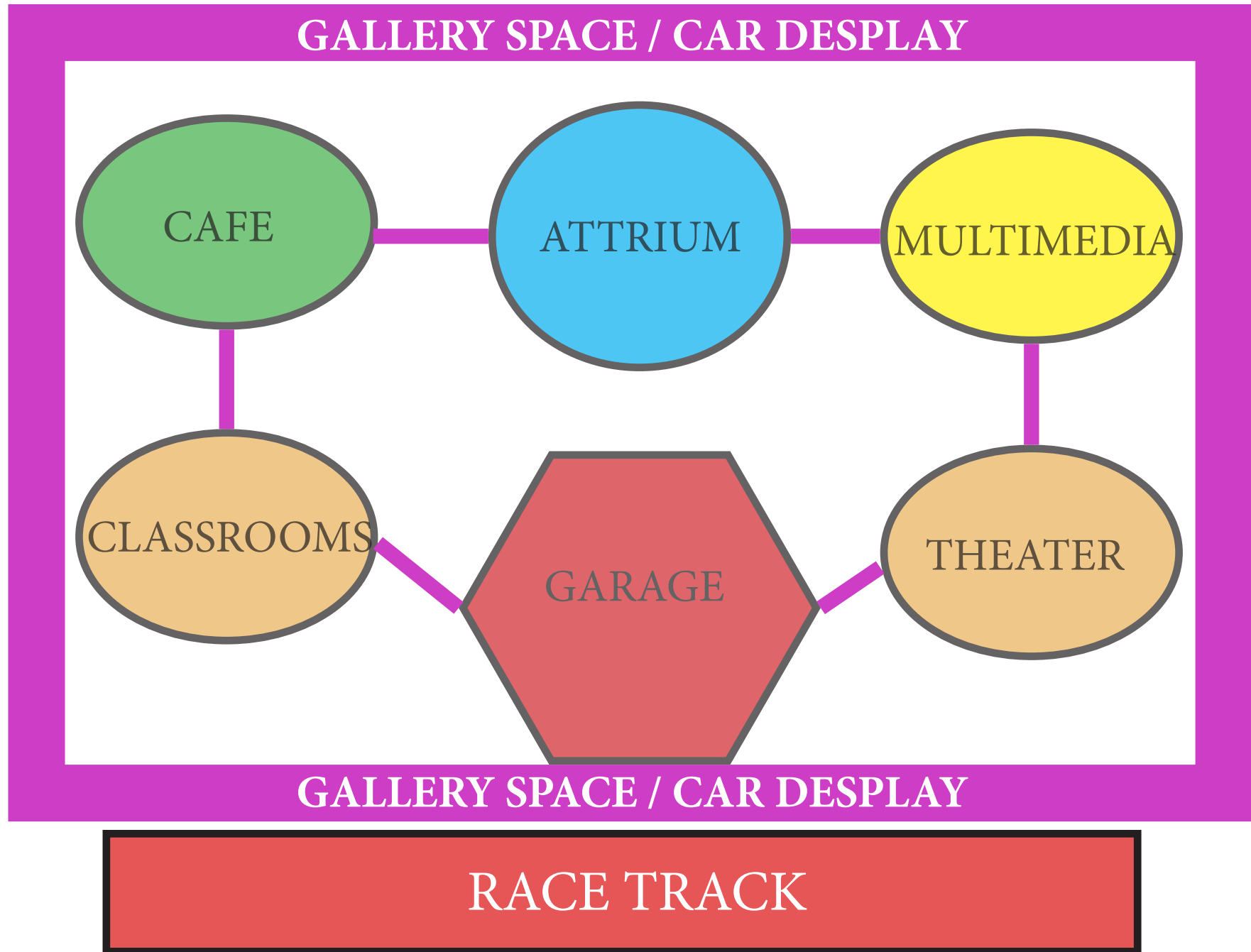


IMAGE: AUTODROMIOMOLA.COM

## RACE TRACK

TO GLORIFY THE AUTOMOBILE IN DETROIT; THE PROJECT WILL HAVE A FULL SCALE CAR TRACK INFUSED INTO THE ARCHITECTURE OF THE BUILDING. THE RACETRACK WILL SERVE TWO CARS AT A TIME, ALLOWING GUESTS TO EXPERIENCE SOME OF THE AMERICAS RAREST CARS. THESE CARS WILL BE MAINTAINED AND DISPLAYED ON SITE IN THE GARAGE. A CAR LIFT WILL TAKE THE TRACK CARS FROM GARAGE TO THE THIRD FLOOR TRACK. IT IS IMPORTANT TO UNDERSTAND HOW RACETRACK PLANNERS LAYOUT ASPHALT ALONG WITH PROPER PRECEDENTS WHICH FIT MY ARCHITECTURAL INTENSIONS OF MOVEMENT. THE SITE ITSELF WILL HELP DETERMINE THE OVERALL SHAPE OF THE TRACK.





THE MUSEUM SPACES SHOULD FLOW INTO EACH OTHER - SPACE ADJACENT SPACE - RATHER THAN USING HALLWAYS AND CORRIDORS WITH ROOMS. THE IDEA OF BEING ABLE TO CIRCULATE AROUND THE BUILDING WHILE SEEING AND HEARING THE RACETRACK CUT THROUGH THE BUILDING. USING A CORE IN THE MIDDLE FOR CIRCULATION AND ENTRY BETWEEN THREE FLOORS MAKES THE PLAN SPIRAL AROUND SIMILAR TO THE MERCEDES MUSEUM AND THE PORCHE MUSEUM IN GERMANY. BECAUSE OF THE GENERAL SIZE OF A CAR, PLENTY OF ROOM NEEDS TO BE ACCOUNTED FOR IN EACH GALLERY. SMALLER GALLERIES WILL MAKE THE CARS FEEL MORE INTIMATE, BUT THE MOST POWERFUL LARGE OPEN ROOMS WILL PROVIDE 360 DEGREE ACCESS TO DIFFERENT AMERICAN CARS. THE BUILDING NEEDS TO PROVIDE ACCESS FOR THE CARS TO MOVE FROM GARAGE TO GALLERIES TO TRACK. MEANING CAR LIFTS, AND WIDE DOORWAYS NEED TO BE DESIGNED FOR. THE OVERALL PLAN WILL NOT BE A LINEAR PATH BUT RATHER A PROGRESSION OF CURVED WALLS THAT LEAD FROM ROOM TO ROOM; CAPTURING THE CONCEPT OF MOVEMENT AND THE AUTOMOBILE.

	SF	Program
Entry	1000	
Restaurant	1000	
Gift Shop	2000	
Garage	2000	
Build Services	600	
Library	1000	
Archive	600	
Exhibition	2000	
Exhibition	5000	
Exhibition	5000	
Café	600	
Conference	600	
Lounge	800	
Kids Zone	800	
Auditorium	1500	
Class Room	800	
Cinema	1500	
Class Room	800	
Circulation Space	4000	
Gallery	1000	
Gallery	1000	
		Total Square Feet
		33600

Public Space	Expo Space	Extra	Retail	Technical	Services
Entry	Library	Conference	Restaurant	Garage	Build Services
Café	Archive	Kids Zone	Gift Shop	Class Room	RR
Lounge	Exhibition	Auditorium		Class Room	RR
Circulation Space	Exhibition	Cinema			RR
	Exhibition				RR
	Gallery				
	Gallery				



THE PROGRAM FOR THE MUSEUM HAS EVOLVED WITH THE DESIGN OF THE ENCLOSURE AND THE TRACK. THE PROGRAM HAS A VARIETY OF GALLERIES, MULTIMEDIA SPACES, AUDITORIUM, AND SO ON (SEE CHART), BUT IT'S HOW THESE PROGRAMS RELATE AND ARE ORGANIZED WHICH MAKE THE PROJECT A SUCCESS. IT IS KEY TO HAVE A GENERAL UNDERSTANDING OF THE SIZE OF EACH PROGRAM PIECE INCLUDING THE NECESSARY SERVICES SPACES FOR THE CAFE, GARAGE, MECHANICAL, CUSTODIAL, RESTROOMS, AND CIRCULATION SPACES.



SITE IDENTIFICATION



IMAGE: GOOGLE/MAPS.COM



WHEN LOOKING AT THE OVERALL PLAN OF CURRENT DETROIT; THERE ARE MANY LARGE VACANT AREAS THAT ONCE HAD EITHER A FACTORY OR PARTS WAREHOUSE. INITIALLY I WANTED TO TAKE ONE OF THE WATER FRONT PROPERTIES AND DEVELOP IT INTO A NICE PARK WITH A SLENDER SLEEK ICA IN BOSTON STYLE MUSEUM. YET THE GOAL OF MY PROJECT IS TO DEVELOPE THE CORE OF DETROIT AND BRING PEOPLE BACK INTO THE CITY, SO BUILDING ON VALUABLE WATERFRONT PROPERTIY CONTRADICTS MY DESIGN INTENTIONS.

I CHOSE THE SITE WITHE THE GREEN RING ON IT BECAUSE THE WATER FRONT PROPERTY IN A MASTER PLAN IS TOO VALUABLE FOR THE CAR MUSEUM WHICH IS NOT DIRECTLY RELATED TO THE WATER. RATHER, THE ICONIC MUSEUM CAN HELP RESHAPE THE VACANT LOTS WITHIN THE DOWNTOWN OF DETROIT FROM THE INSIDE OUT.



# SITE IDENTIFICATION

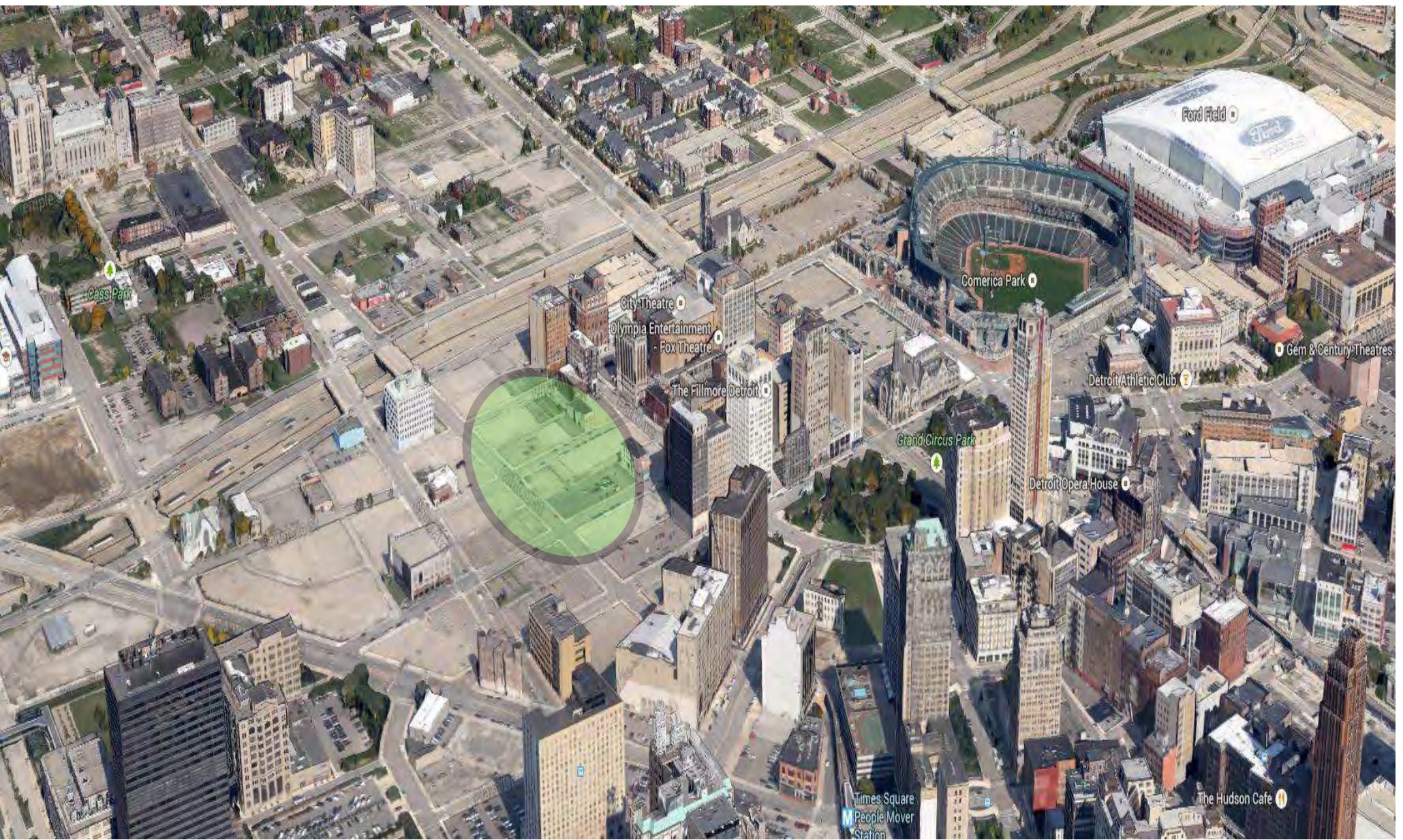


IMAGE: GOOGLE/MAPS.COM



AN INDUSTRIAL LANDSCAPE THAT CONSTRAINED THE CITY'S CORE. A UNIQUE ASPECT OF LAND USE IN DETROIT THAT'S OFTEN DISCUSSED BUT RARELY EXPLORED FULLY IS THE HUGE AMOUNT OF INDUSTRIAL AND MANUFACTURING LAND IN THE CITY. IT'S NOT SURPRISING, REALLY, SINCE THE CITY DID GIVE ITSELF OVER TO THE INDUSTRIAL GODS. DETROIT WAS NOT ONLY THE HOME OF THE AUTO INDUSTRY, BUT ALL THE SUPPLIERS THAT MADE ASSEMBLY THERE VIABLE – PRODUCING EVERYTHING FROM WINDSHIELDS TO EXHAUST PIPES. BOTH FORD FIELD AND TIGER STADIUM WERE RECENTLY BUILT ON THE GROUNDS OF A CRYSTLER PLANT. THE SITE WITH THE GREEN RING WAS ONCE HOME TO A BUICK BRAKE PAD PLANT AND WARE HOUSE, BUT HAS BEEN A VACANT PARKING LOT FOR THE LAST 30 YEARS. EVEN ON A BUSY GAME DAY, THERE IS AN ABUNDANCE OF PARKING FOR TIGER STADIUM AND FORD FIELD DIRECTLY ADJACENT TO THE PARKS, MEANING MY SITE IS CONSISTENTLY EMPTY AND SERVING NO PURPOSE.

“MOST CITIES ACROSS THE NATION, EVEN MOST OTHER RUST BELT CITIES, CONCENTRATED INDUSTRIAL LANDS IN CERTAIN DISTRICTS OR CORRIDORS, OFTEN IN JUST ONE PART OF A CITY. USUALLY THE INDUSTRIAL LANDS FOLLOWED WATERFRONTS OR RAIL CORRIDORS AND CONNECTED WITH DOWNTOWNS, AND OTHER PARTS OF THE CITY WERE SPARED THE NEGATIVE EXTERNALITIES OF INDUSTRIAL USE. BUT DETROIT CIRCA 1905 WAS FACED WITH A CRITICAL DECISION – HOW COULD THE CITY EXPAND ITS INDUSTRIAL LANDS TO CAPITALIZE ON ITS EMERGING ROLE AS THE AUTOMOBILE CAPITAL OF THE WORLD?”

- PETER SAUNDERS THE URBAN STATE OF MIND

TO SEE HOW THE SITE PLAN FOR THE MUSEUM BEST FUNCTIONS IN THE CURRENT AND POTENTIAL FUTURE DETROIT, IT IS IMPORTANT TO UNDERSTAND THE PRIMARY TRANSPORTATION SYSTEM AND HOW PEOPLE MANEUVER THROUGH THE CITY. THERE IS A CITY MONORAIL THAT RUNS A CIRCLED ROUTE MOSTLY USED BY TOURISTS HIGH ABOVE THE GROUND - PEOPLE ARE GIVEN A NICE PERSPECTIVE OF THE CITY. MOST OF THE 400,000 PEOPLE LIVING IN THE METRO CENTER USE TAXI CABS, HAVE CARS, OR WALK DUE TO THE HIGH DENSITY OF A SMALL DOWNTOWN. DETROIT HAS NO URBAN SPRAWL, AS SHOWN BEFORE, DETROIT IS SHRINKING AND WENT BANKRUPT IN 2013.

(12)

## EXISTING SITE BUILDINGS



IMAGE: GOOGLE/MAPS.COM



THE SITE IS EMPTY AND HAS A COLD WASTELAND FEEL TO IT. IT IS AMAZING HOW CLOSE TO THE DOWNTOWN THIS SITE IS AND YET VACANT FOR THIRTY YEARS. ON THIS SIDE OF THE CITY THERE ARE SEVERAL FULL CITY BLOCKS EMPTY, ONLY HOME TO A FEW CARS. THIS IS BECAUSE THERE IS NO REASON TO BE IN THIS PART OF TOWN, THERE IS NOTHING HERE - NO INDUSTRY, NO JOBS, NO RESTAURANTS, NO HOUSING COMPLEXES, NO SCHOOLS, NOTHING. DETROIT IS NOT LARGE ENOUGH FOR THIS MUCH PARKING, AND THUS IT IS A WASTE OF SPACE, BUT IN LIES THE OPPORTUNITY. FOR EXAMPLE, THE SEAPORT DISTRICT IN BOSTON NEAR ACROSS THE CHANNEL IN BOSTON WAS ONCE HOME TO CITY BLOCK SIZE PARKING LOTS FULL OF COMMUTERS HEADING INTO BOSTON. WITHIN FIVE YEARS, THE SEA OF CONCRETE HAS MANIFESTED INTO OFFICE BUILDINGS. PROPERTY THAT TWENTY YEARS AGO WAS WORTHLESS AND DEEMED UNDEVELOPABLE IS NOW ONE OF THE MOST DEVELOPED AND INVESTED PARTS OF BOSTON. THIS COULD BE TRUE HERE IN DETROIT. IF PEOPLE ARE GIVEN A REASON TO EXPAND THEY WILL, GOOD ARCHITECTURE AND CAREFUL SITE PLANNING WILL DETERMINE HOW PEOPLE INTERACT WITH THIS CURRENT DEAD ZONE IN THE CITY. BELOW ARE A LIST OF CITY GOALS PUT TOGETHER BY THE "BOARD OF CITIZENS" - A COLLECTIVE GROUP OF LIFE TIME POLITICALLY INCLINED RESIDENTS. IT IS IMPORTANT TO UNDERSTAND THEIR GOAL AND RESPECT THE OVERALL MASTERPLAN FOR THE CITY.

DETROITS 2020 ECONOMIC GROWTH PILLARS:

LOCAL ENTREPRENEURSHIP

EDUCATION AND MEDICAL

INDUSTRIAL, DIGITAL/CREATIVE

CREATE SEVEN EMPLOYMENT DISTRICTS:

DOWNTOWN (DIGITAL/CREATIVE)

MID-TOWN (EDUCATION, MEDICAL, DIGITAL/CREATIVE)

DEQUINDRE/EASTERN MARKET (INDUSTRIAL AND CREATIVE)

SOUTHWEST (INDUSTRIAL)

MOUNT ELLIOT (INDUSTRIAL)

MCNICHOLS (EDUCATION, MEDICAL AND CREATIVE)

CORKTOWN (INDUSTRIAL AND LOCAL ENTREPRENEURSHIP)

ENCOURAGE LOCAL ENTREPRENEURSHIP AND MINORITY BUSINESS OWNERSHIP

IMPROVE WORKFORCE SKILLS WITH IMPROVED EDUCATION

SYNCHRONIZE EDUCATION PROGRAMS WITH SKILLS DEMANDED BY EMPLOYERS

IMPROVED LAND REGULATIONS

LAND BANK COMMERCIAL/INDUSTRIAL PROPERTIES SO LARGER PARCELS CAN BE CREATED

SITE LOT



IMAGE: GOOGLE/MAPS.COM

THE SITE IS ZONED IN THE DOWNTOWN INLINE DIRECTLY WITH TIGERS BASEBALL STADIUM AND FORD FIELD THE GOAL OF THE PROJECT IS TO BRING PEOPLE THROUGH THE CITY AND INTO MY SITE, SO USING THE POPULARITY OF THE STADIUMS WILL HELP MARKET THE MUSEUM SO HAVING DIRECT ACCESS VISUALLY AND PHYSICALLY IS KEY. THE GOAL OVER ALL IS TO BRIDGE THE STADIUMS AND CREATE A NEW EPICENTER IN THE HEART OF DETROIT EXPANDING THE CITY BOUNDRIES AWAY FROM THE WATER AND OUT TOWARDS THE SUBURBS. THERE IS A MAJOR HIGHWAY THAT BLOCKS THE END OF MY SITE AND PROVIDES A NICE BARRIER WITH THE RIVER ON THE OTHERSDEFOR CONTAINED DEVELOPMENT AND NOT URBAN SPRAWL.

I AM SO DRAWN TO DETROIT BECAUSE OF ALL ITS POTENTIAL SPACE AND A HISTORY TIED TO THE AUTOMOBILE. DETROIT AS A CITY CAN BE SAVED WITH "GOOD ARCHITECTURE." ONE COULD ARGUE WHAT IS "GOOD ARCHITECTRE", BUT INTELLEAGENT DESIGN, ATTENTION TO DETAIL WHILE CAPTURING THE BIG PICTURE, AND A COHESION OF BUILDING AND SITE BREEDS "GOOD ARCHITECTURE". THE GOAL IS TO NOT JUST SOLVE THE PROBLEM OF ADDING TOE DETROITS IMPROVED FUTURE, BUT THIS IS AN EXPLORATION OF DYNAMIC ARCHITECTURE EMBODIED IN MOVEMENT WITH RESPECT TO THE AMERICAN AUTOMOBILE. THIS SITE PROVIDES THE PROPER STAGE FOR AN ARCHITECTURE THAT CAN HELP TRANSFORM A DEAD PART OF THE CITY WHILE BRINGING JOBS, TOURISM, AND OF COURSE CAPITAL; WHILE RAISING PROPERTY VALUE AROUND THE SUBURBS AND DIRECTLY AROUND THE MUSEUM ITSELF. BY CONNECTING TO THE STADIUMS, A BELT OF ATTRACTIONS PROVIDES STOREFRONT OPPERTUNITIES FOR RESTURANTS, SMALL BUSNISESS, STORES, OR EVEN GALLERIES.

THE EXCITING THING ABOUT DETROIT IS WHO IS MOVING THERE. CITIES TAKE FORM OF THEIR CURRENT "GUESTS". WITHOUT PEOPLE, CITIES WOULD BE INTERCHANGABLE, BUT WITH PEOPLE - CITIES HAVE IDENTITES. TAKE FOR EXAMPLE PORTLAND OREGON VS LITTLE ROCK ARKANSAS. IT IS NOT CLEAR WHAT DETROIT WANTS TO TRANSFORM INTO, BUT THIS PROJECT WILL HELP ANYONE LOOKING TO MOVE IN AND AID DETROIT. PERHAPS A YOUNG GENDERFIED AREA BLOSSOMS - OR IT BECOMES COMPANY HEADQUARTERS BECAUSE OF CHEAP REALISTATE AND GLASSED OUT BUILDINGS START GOING UP MATCHING CHICAGO. THE ROADS IN BETWEEN MY SITE WILL BE TREATED INDEPENDENTLY - THEY WILL BE INCORPORATED INTO THE DESIGN AND USED TO AID THE OVERALL CELL MASTERPLAN.



# SITE IDENTIFICATION

MERCEDES MUSEUM ON SITE



IMAGE: GOOGLE/MAPS.COM

PORCHE MUSEUM ON SITE



## MODERN CAR FACTORY

AN OPEN SPACE ATTACHED TO THE TECHNICAL SCHOOL. THIS IS AN ALL ENCOMPASSING FACTORY FOR ONLY THREE DIFFERENT MODEL CARS. IN BOTH CASES TOP OF THE LINE CARS WERE MADE AT THESE PLANTS INCLUDING THE PARTS. PARTS FOR CARS ARE MADE INDIVIDUALLY; ON SITE. BOTH FACTORIES WERE EXTREMELY CLEAN, WHITE WALLED WITH CLEAN CONCRETE POLISHED FLOORS, ROBOTIC ARMS ASSEMBLING CARS WHILE PARTS ARE ALL ORGANIZED IN STAGES ALL THROUGHOUT THE FACTORIES

## TECHNICAL SCHOOL

A TECHNICAL SCHOOL IS A LARGE COMPONENT TO THE MASTER PLAN IN THE URBAN CAMPUS. HERE STUDENTS CAN LEARN FROM DOING; EXPERIENCING WHAT IT MEANS TO WORK IN A MODERN FACTORY AND HOW A CAR IS ASSEMBLED STEP BY STEP. THE FACTORY WILL OFFER EMPLOYMENT TO “GRADUATES”. PEOPLE WHO HAVE A PASSION FOR THE AUTOMOTIVE DESIGN OR DEVELOPEMENT COULD FIND THEIR START HERE. THIS IS A VERY INTERESTING OPPORTUNITY IN GERMANY AS PEOPLE ARE BEYOND PASSIONATE FOR THEIR NATIVE AUTOMOBILES BUT RATHER TURN THEIR LOVE INTO A CAREER AND START RIGHT AFTER HIGHSCHOOL.

## MUSEUM

THE CORNERSTONE OF THE TOTAL EXPERIENCE IS DEFINED BY THE MUSEUM. THE WHOLE CAMPUS IS A SPECTICAL; AND SERVES AS A HAVEN FOR MOTOR ENTHUSIASTS, BUT THE MUSEUM IS TRULY SPECIAL. DESIGNED TO SHOW THE HISTORY OF THE AUTOMOTIVE INDUSTRY IN GERMANY AND HOW EACH BRAND CLAIMED THEY WERE THE ULTIMATE DRIVING MACHINE. THE MUSEUMS HOUSED CARS ONLY FOUND HERE, THEY WERE REBUILT IN THE ONSITE FACTORY AND PROUDLY DISPLAYED ON THE OPEN FLOOR. THE MUSEUMS BOTH SPRALED AND PROVIDED AN ARRAY OF VIEWING OPPORTUNITIES TO SEE THE ENTIRE SPACE LIKE AT EXETER LIBRARY BY LOUIS KAHN, A MAJOR ATRIUM SPACE PROVIDES A MOMENT OF REFLECTION AND AWE OF THE MAGNITUDE OF THE SPACE.

OVERALL - IT WAS VERY USEFUL TO HAVE THE OPPORTUNITY TO WALK THROUGH THESE MUSEUMS AND ACTUALLY EXPERIENCE HOW THEY FUNCTIONED AS WORKING GALLERIES FOR CARS. EACH HAD ITS PROS AND CONS; THE BIG TAKEAWAY WAS HOW THE SPIRAL AROUND AN ATRIUM HELPED ORGANIZE THE PLAN AND ENTRY SEQUENCE.



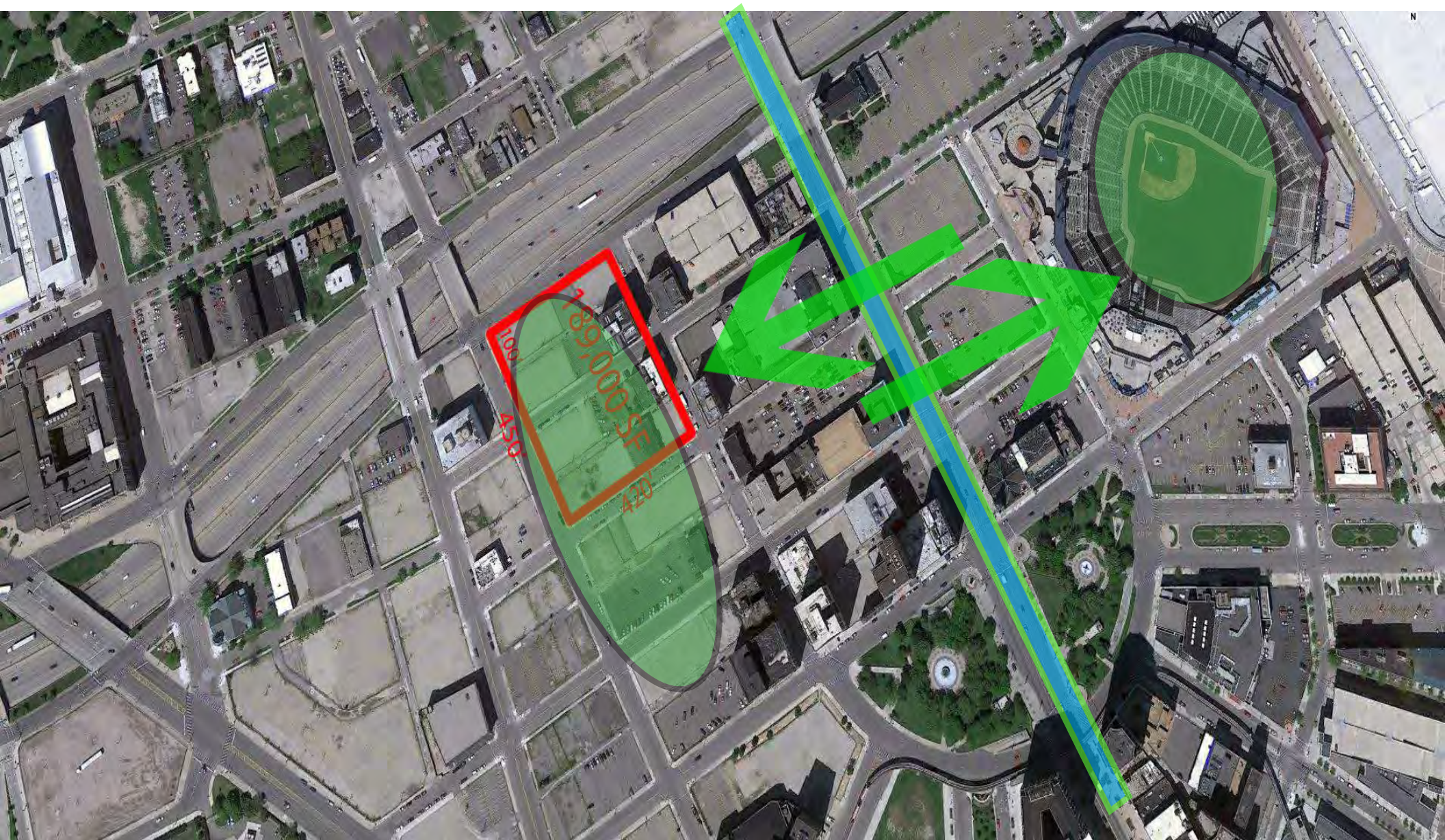
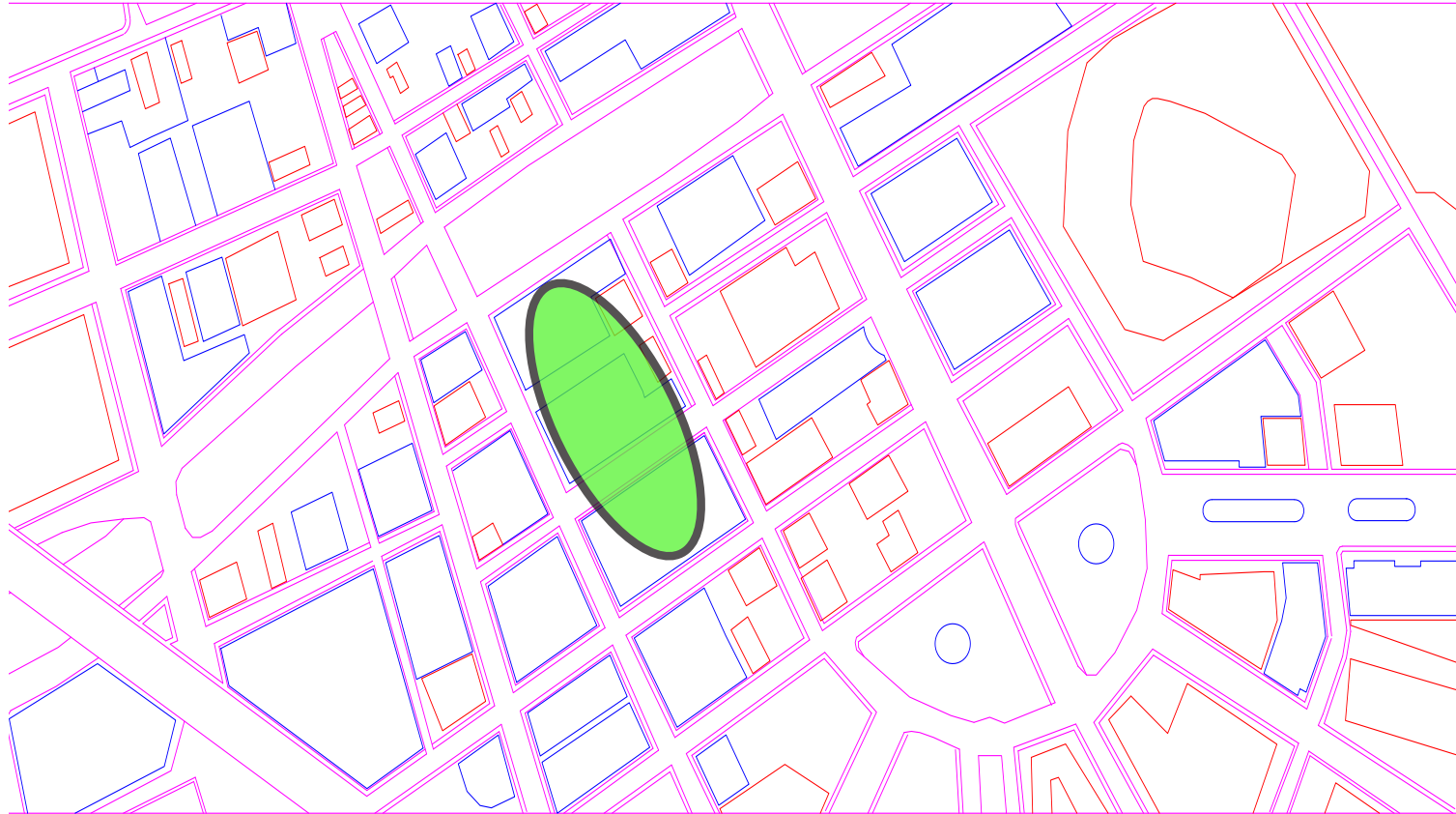


IMAGE: GOOGLE/MAPS.COM



BY CREATING THE LINK BETWEEN TIGER STADIUM AND THE MUSEUM THE MIDDLE GROUND, THE SPACE IN BETWEEN BOTH ATTRACTIONS SERVES A NEW PURPOSE WITH MORE FOOT TRAFFIC THAN EVER. THE LOWER PORTION OF THE SITE IS THE FINANCIAL DOWNTOWN WHICH HAS SLOWLY COME BACK ALIVE. THE BLUE LINE REPRESENTS THE ORIGINAL BOULEVARD DOWN MAIN STREET. BY CONNECTING TO THE STADIUMS, THE ORIGINAL CORRIDOR HAS LIFE AGAIN AND BEGINS TO HELP REFORM THE URBAN LAYOUT AS A WHOLE. AS A STORE OWNER, ONE WOULD ONLY WANT REAL-ESTATE AROUND PEOPLE, AROUND JOBS, AROUND THE MONEY. BY ADDING A NEW ATTRACTION OPEN 7 DAYS A WEEK ALL YEAR, BUSINESSES WILL BEGIN TO DEVELOP THE REMAINDER OF THE SITE STILL OPEN AROUND THE MUSEUM. MY GOAL WAS TO USE ONLY THE NECESSARY FOOTPRINT TO PROVE MY CONCEPT OF DYNAMIC STATIC ARCHITECTURE. BECAUSE THE SITE IS SO LARGE, THROUGHOUT MY EXPLORATION OF FORM AND FUNCTION, THE BUILDING CHANGED DRASTICALLY IN SIZE THROUGHOUT THE EXPERIMENT. THE PROJECT BEGAN SPREADING OUT AND TAKING OVER TOO MUCH PRIME UNTOUCHED LAND, HOWEVER IT WAS NECESSARY TO FIND OUT WHAT MY BOUNDARIES WERE WHEN DESIGNING IN NEARLY OPEN SPACE. THE HIGHWAY TO THE NORTH WAS THE BARRIER FOR THE PROJECT. IT WAS DISCUSSED AT ONE POINT CANTILEVERING OVER THE HIGHWAY BUT THE IDEA FUNCTIONALLY DID NOT CONFORM INTELLIGENTLY. THE DETAILING OF THE CITY BLOCKS THEMSELVES WILL PROVE IMPORTANT WHEN THINKING ABOUT ADDING GREEN SPACE AND PUBLIC USABLE AREAS. AS THE CITY IS BEING DEVELOPED IT IS KEY TO UNDERSTAND WHAT PARTS MAKE A CITY FUNCTION CLEANLY AND EFFICIENTLY, ADDING GREENERY AND PUBLIC LANDSCAPED AMENITIES PROVE TO AID THE COMMUNITY COMPARED TO A PARKING LOT.



## WEEK ONE

THE EXPLORATION OF CAPTURING MOTION IN ARCHITECTURE BECAME THE ULTIMATE GOAL. HOW TO SHOW MY INTENTIONS WAS THE BIGGEST CHALLENGE. TO EXPRESS A FEELING OF EXCITEMENT AND STEAMING WITH ENERGY; WHILE REMAINING A MUSEUM DEDICATED TO THE AUTOMOBILE WITH A INTERSECTING RACE TRACK IN THE HEART OF DETROIT. THIS EXPLORATION BEGAN WITH THE SITE PLAN AND DEFINING MY BOUNDARIES WHILE MAKING CONNECTIONS TO THE CITY WHILE PROMOTING FUTURE GROWTH...

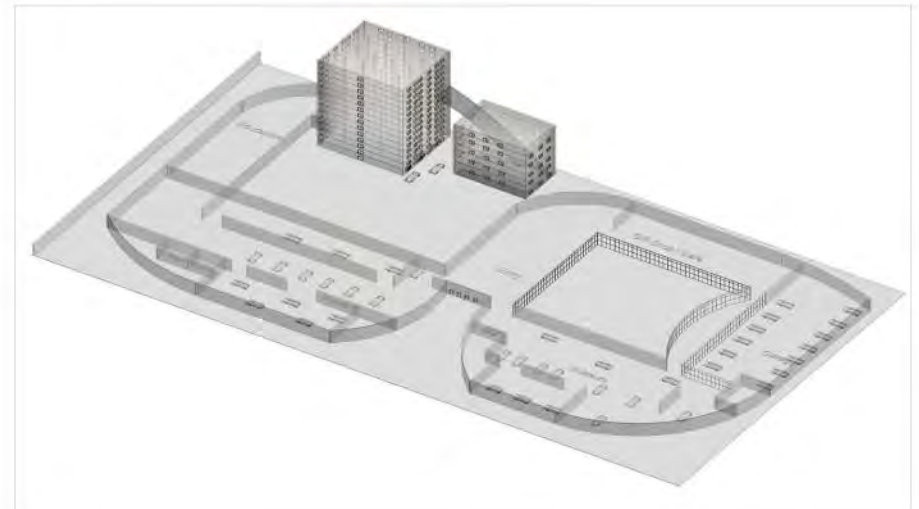
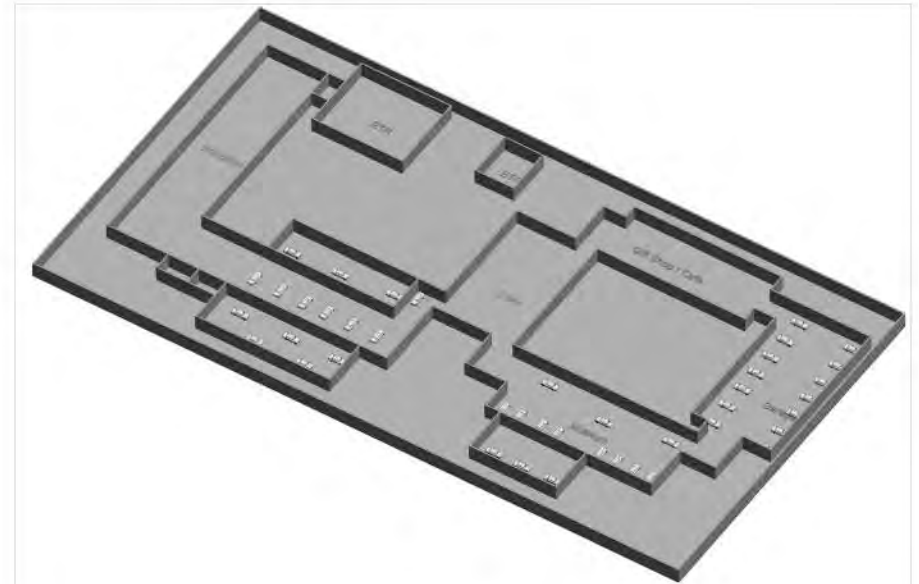
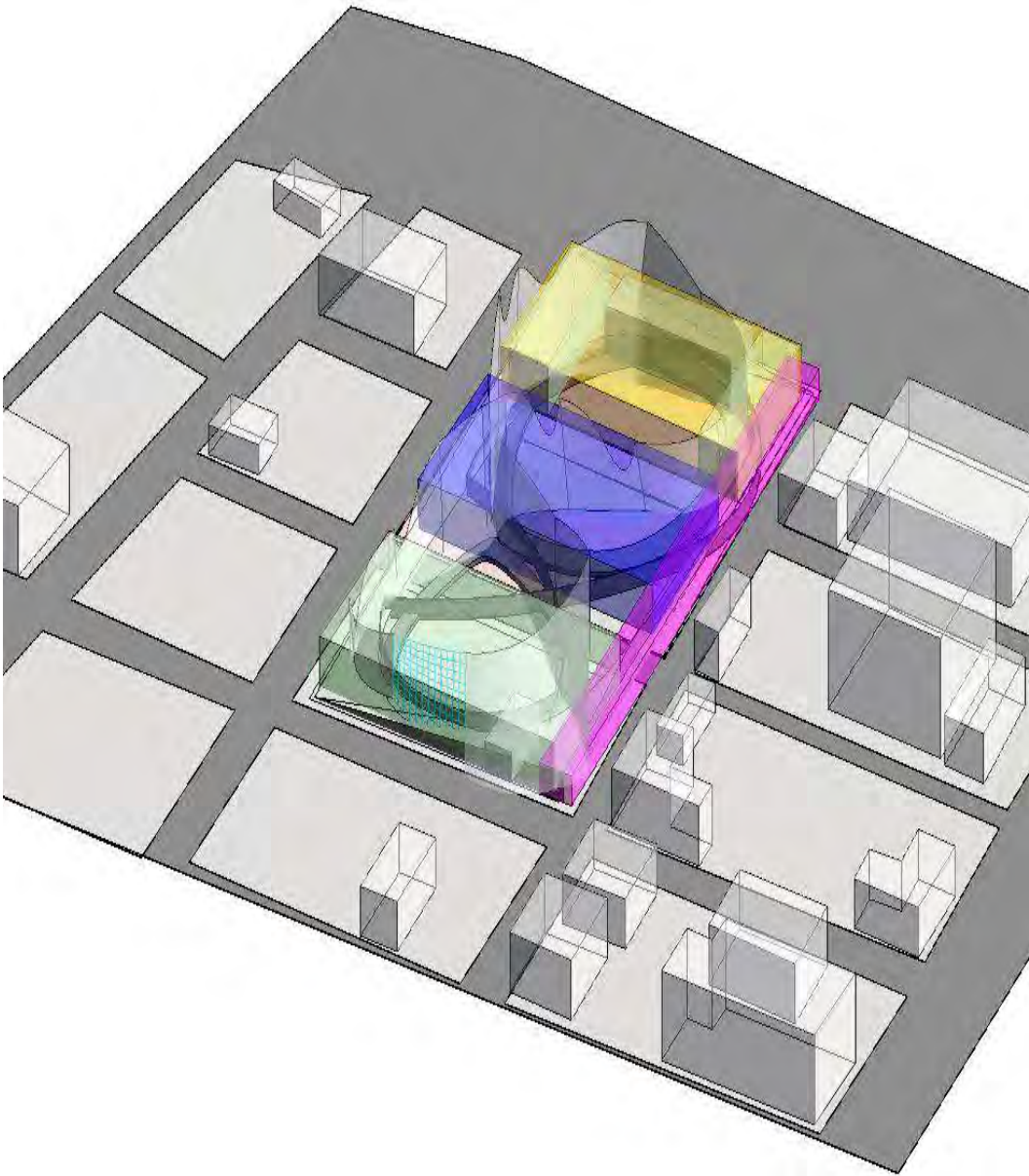


## WEEK TEN

THE FINAL PRODUCT CAPTURED MY CONCEPT AND IS A TUTORIAL FOR HOW TO TAKE ADVANTAGE OF THE ENTIRE SITE WHILE TRYING TO CREATE PROVOCATIVE ARCHITECTURE. THE MUSEUM TOOK A LIFE OF ITS OWN, BENDING AND WARPING OVER AND OVER AGAIN AT DIFFERENT ANGLES UNTIL THE FORM FOLLOWED THE FUNCTION. THE TRACK LAYOUT BECAME DEFINED BY PURE FUNCTION VS AESTHETIC. THIS WAS THE END OF MY RESEARCH, IT PROVED TO BE AN EXCITING CHALLENGE THAT PUSHED THE ENVELOPE. THE NEXT SEVERAL SLIDES SHOW MY PROCESS WHICH IS HOW I PROVE THE ARCHITECTURE DEVELOPED IS BREAD WITH DYNAMISM AND MOVEMENT. THE PROCESS IS THE PROJECT, IN TERMS THE FINAL OUTCOME IS A PRODUCT OF LESSONS LEARNED THE PROCESS ANSWERS THE REASON WHY.



# CONCEPTUAL DESIGN



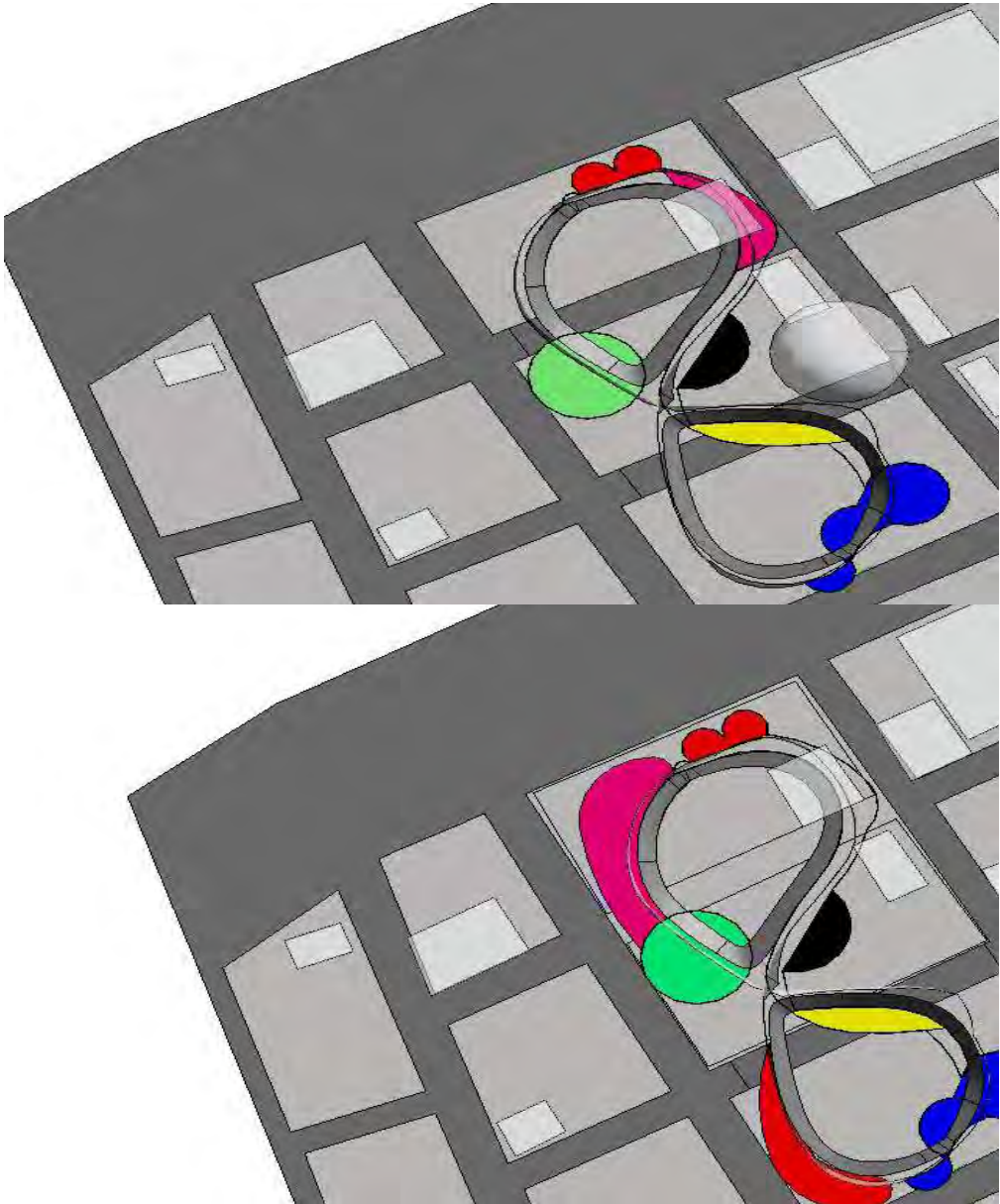
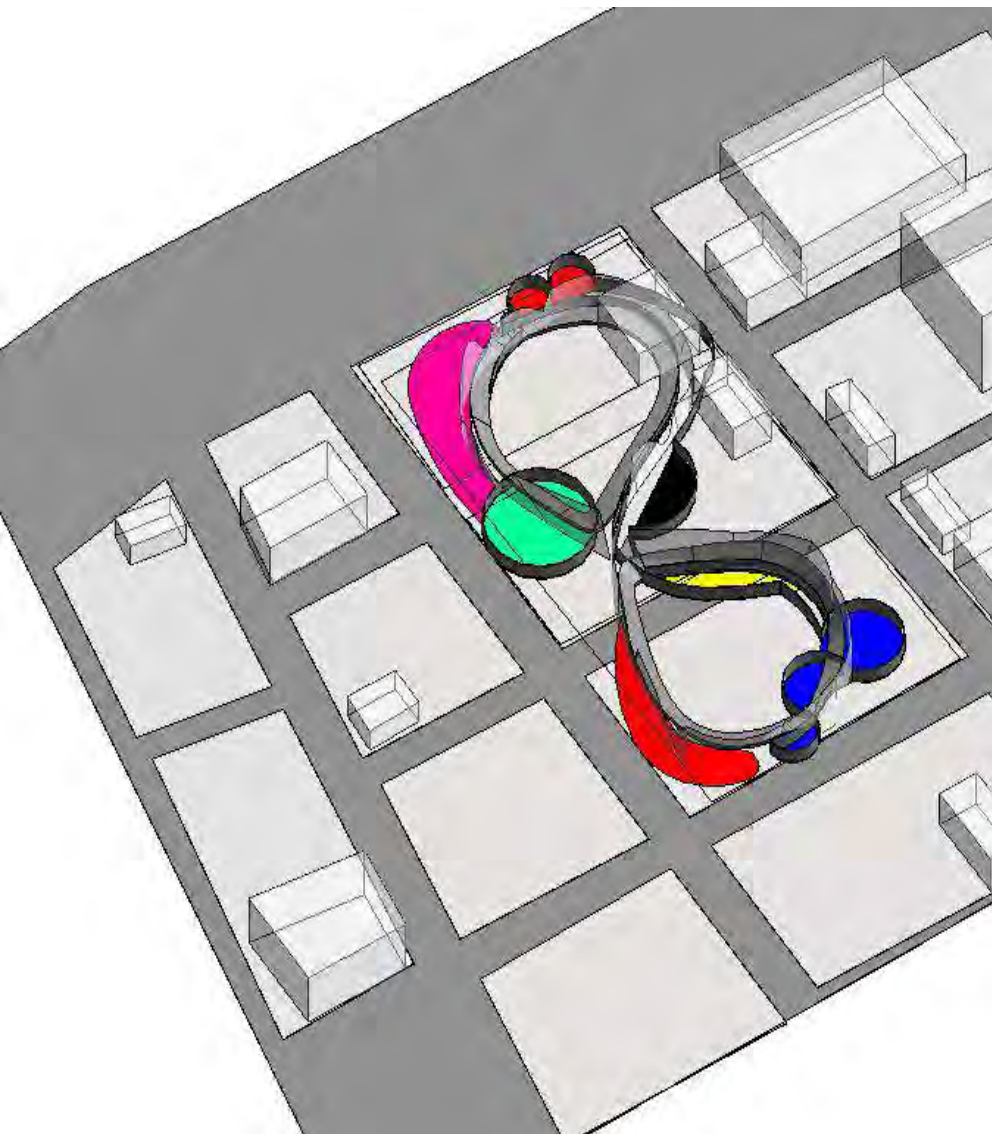
THE DIAGRAM ON THE FAR LEFT EXPLAINS HOW I BROKE DOWN THE SITE INTO A SERIES OF SPACES AND OVERLAID MY PROGRAM PIECES IN DIFFERENT ARRANGEMENTS UNTIL THE SPACES HAD A COHERENT RELATIONSHIP ADJACENT EACH OTHER. THE DESIGN CALLED FOR SEVERAL OPTIONS TO BE TESTED BEFORE A FINAL SCHEME WAS CHOSEN. SOME IDEAS WERE EXPRESSED FURTHER THAN OTHERS, BUT THE IDEA OF USING A CORE FOR CIRCULATION OR CELEBRATION WAS CARRIED OVER FROM SCHEME TO SCHEME.

THE INITIAL CONCEPT ALLOWED ME TO TRY TO THINK VOLUMETRICALLY RATHER THAN EXTRUDING PLANS. USING LEVEL CHANGES AND OVERLAPPING SPACES GAVE MY PROGRAM A MORE SPACIAL FEEL THAN ROOM COMPARTMENTALIZATION. I ALWAYS WANTED TO MOVE PEOPLE THROUGH THE MUSEUM USING ARCHITECTURE. I DID NOT WANT TO HERD CATTLE WITH SIGNAGE OR ALLOW COMPLETE FREEDOM; RATHER HAVE PEOPLE FOLLOW A PATH THAT WILL EXPLAIN THE MUSEUM AND VOCALIZE THE BUILDINGS CONCEPT.

CHANGING THE FORM OF THE BUILDING PROVIDED THE OPPORTUNITY TO STUDY THE RELATIONSHIP BETWEEN MY PROGRAMS SPACES. I LIKED THE IDEA OF THE FIGURE 8 STILL IN PLAN, IT WORKED WHILE NOW MY CORE INFIELD CAN BE FILLED WITH NECESSARY PROGRAM. SPACES WILL SPIRAL AROUND THE CORE FUNCTION AS OF MY BUILDING - MECHANICAL SPACES, PRIVATE SPACES, AND THE KITCHEN. THE GARAGE AND THEATER WILL ANCHOR THE BUILDING AT THE ENDS WHILE THE PROGRAM SPACES HAVE THE FREEDOM OF THE EXTERIOR AND LIGHT.



CONCEPTUAL DESIGN

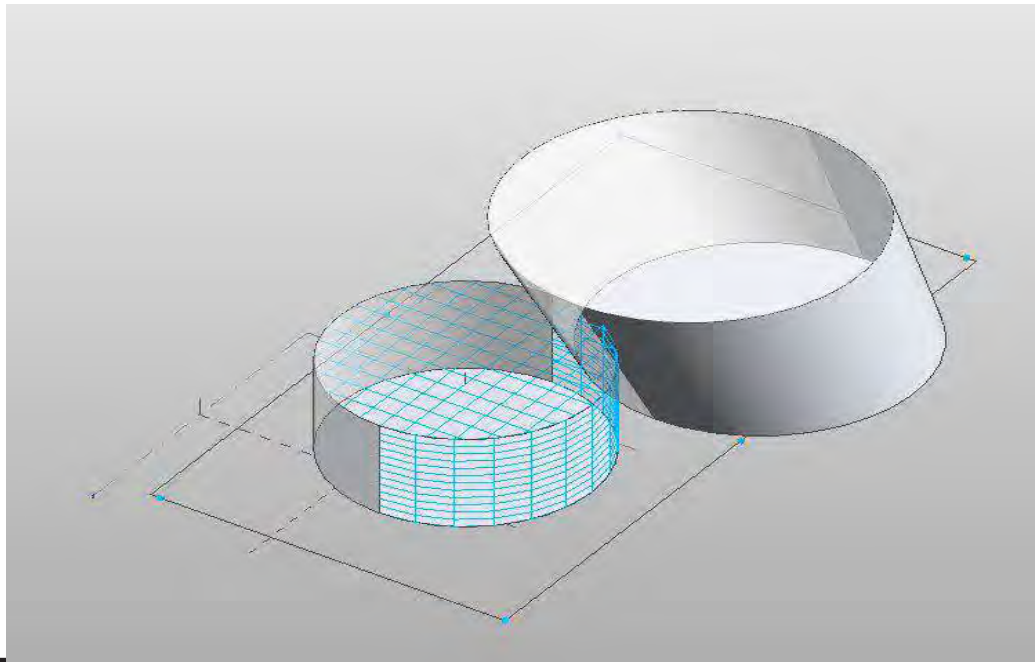
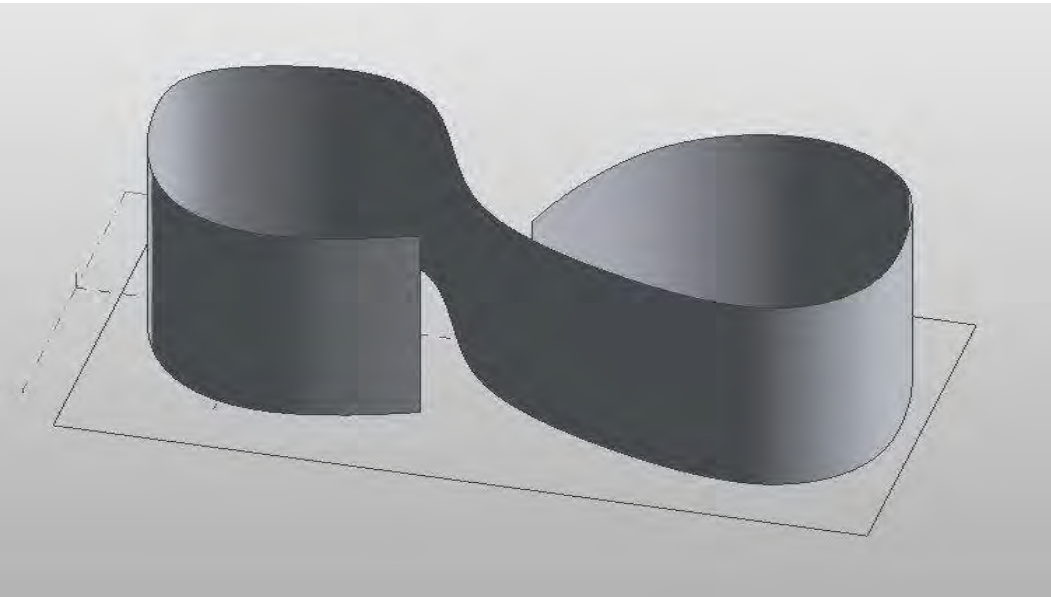
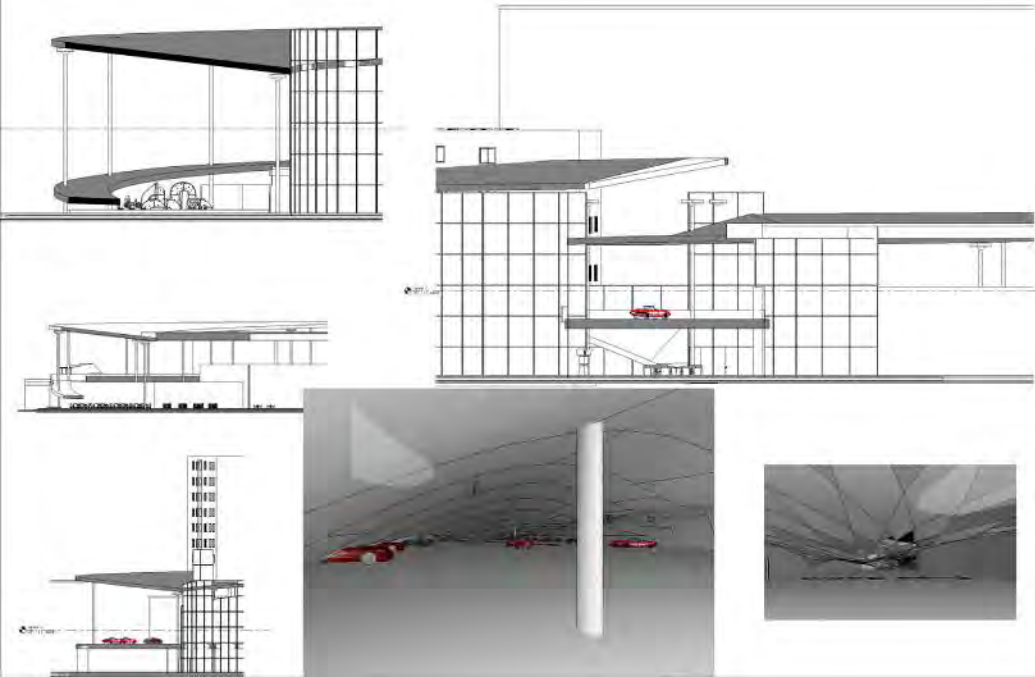
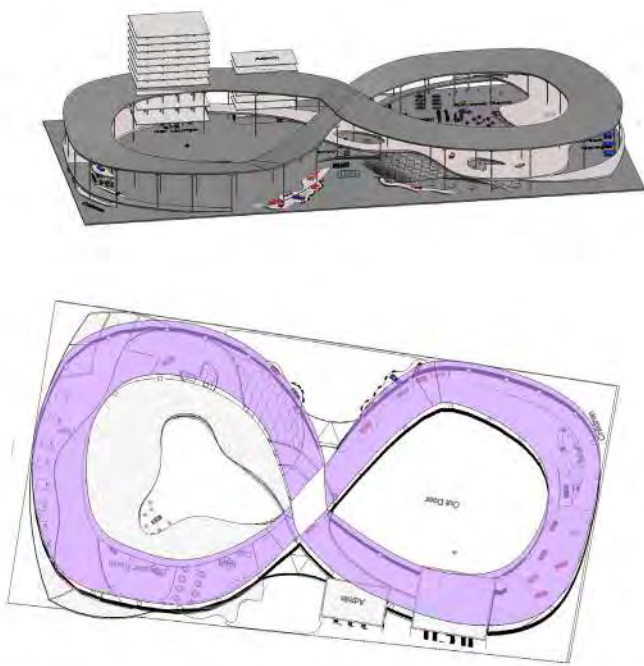




WORKING IN 3D ALLOWED ME TO BUILD AN OVER LAPPED FIGURE 8 TRACK THAT COULD CONFORM TO MY CUSTOM DIMENSIONS. USING THE FIGURE 8 AS MY LINE OF TRAVEL, I SPIRALED THE PROGRAM AROUND THE TRACK. AT THIS TIME, IT WAS IMPORTANT TO FIRST UNDERSTAND WHAT PROGRAM PIECES CORRELATE AND WHERE THEY SHOULD GO ON THE SITE. FOR EXAMPLE, THE GARAGE WHICH IS BLUE ON THE DIAGRAMS ON THE LEFT, NEEDED TO HAVE DIRECT ACCESS TO THE SIDE STREET WHILE CONNECTING TO THE MUSEUM. THIS SCHEME BEGAN TO TEST HOW TO RELATE THE TRACK TO THE PROGRAM BELOW. AT FIRST I STRIVED TO UNDERSTAND THE PROGRAM AND DEVELOP IN PLAN THE PROGRAMMATIC PIECES, BUT THE KEY COMPONENT OF THIS PROJECT AND OF THE THESIS WAS THE INTEGRATION OF THE RACETRACK WITH THE BUILDING TO STIMULATE AND BRING FORWARD THE CARS IN MOTION.

THE PROGRAM OF THE BUILDING DEVELOPS WITH THE TOTAL DESIGN OF THE SITE AND THE BUILDING. THE FINAL DESIGN USES MORE OF THE INFIELD - HOWEVER IT WAS IMPORTANT TO STUDY HOW PEOPLE CAN CIRCULATE THROUGH THE SITE AND HOW PROGRAM ELEMENTS SHOULD RELATE TO EACH OTHER WITHIN THE MUSEUM,. THE GREEN CIRCLES ON THE LEFT REPRESENT THE ENTRY - IT WAS CLEAR FROM THE BEGINNING - THAT THE ENTRY WANTS TO BE THE HEART OF THE BUILDING AND BRING PEOPLE INTO THE SITE.

CONCEPTUAL DESIGN



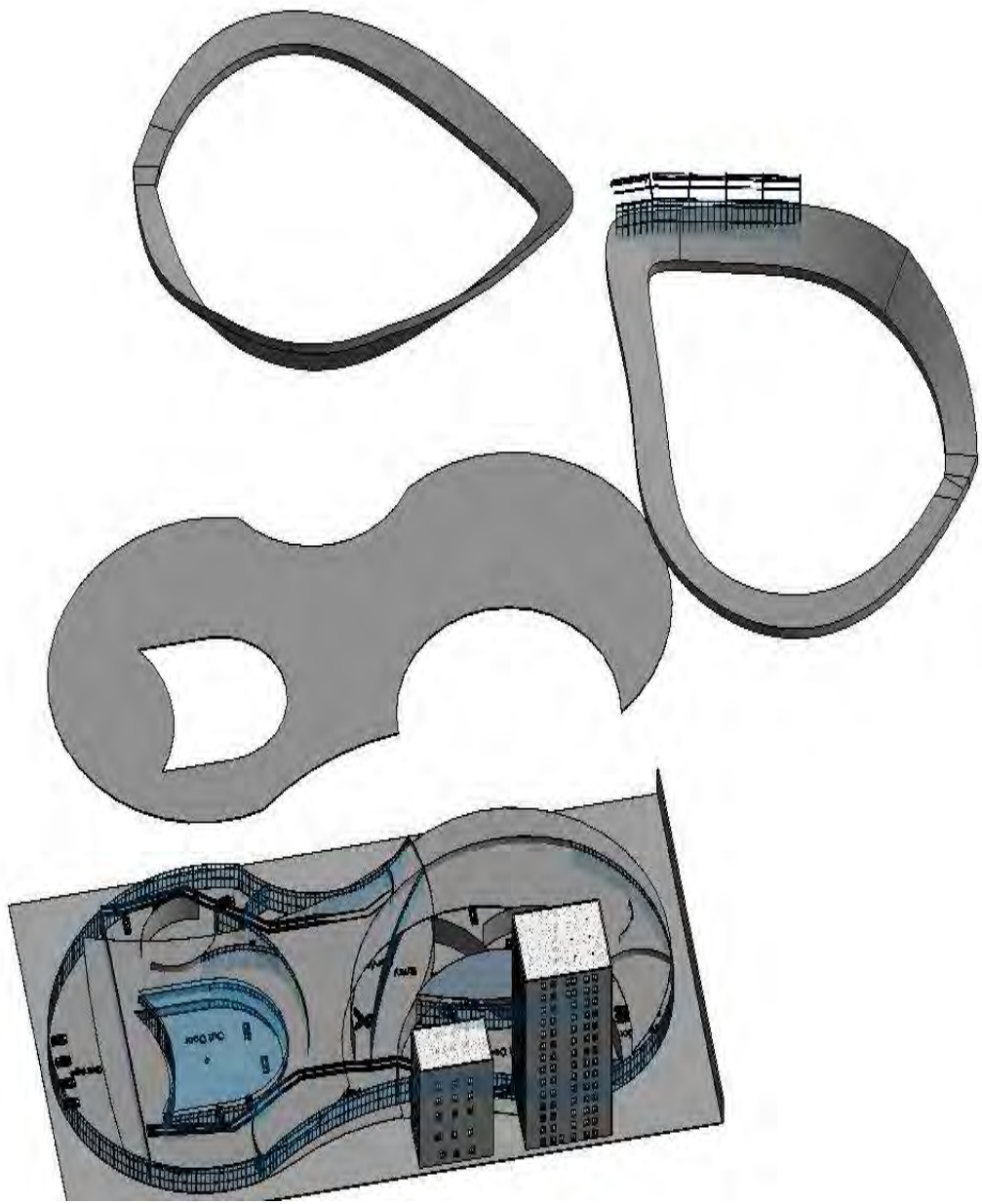
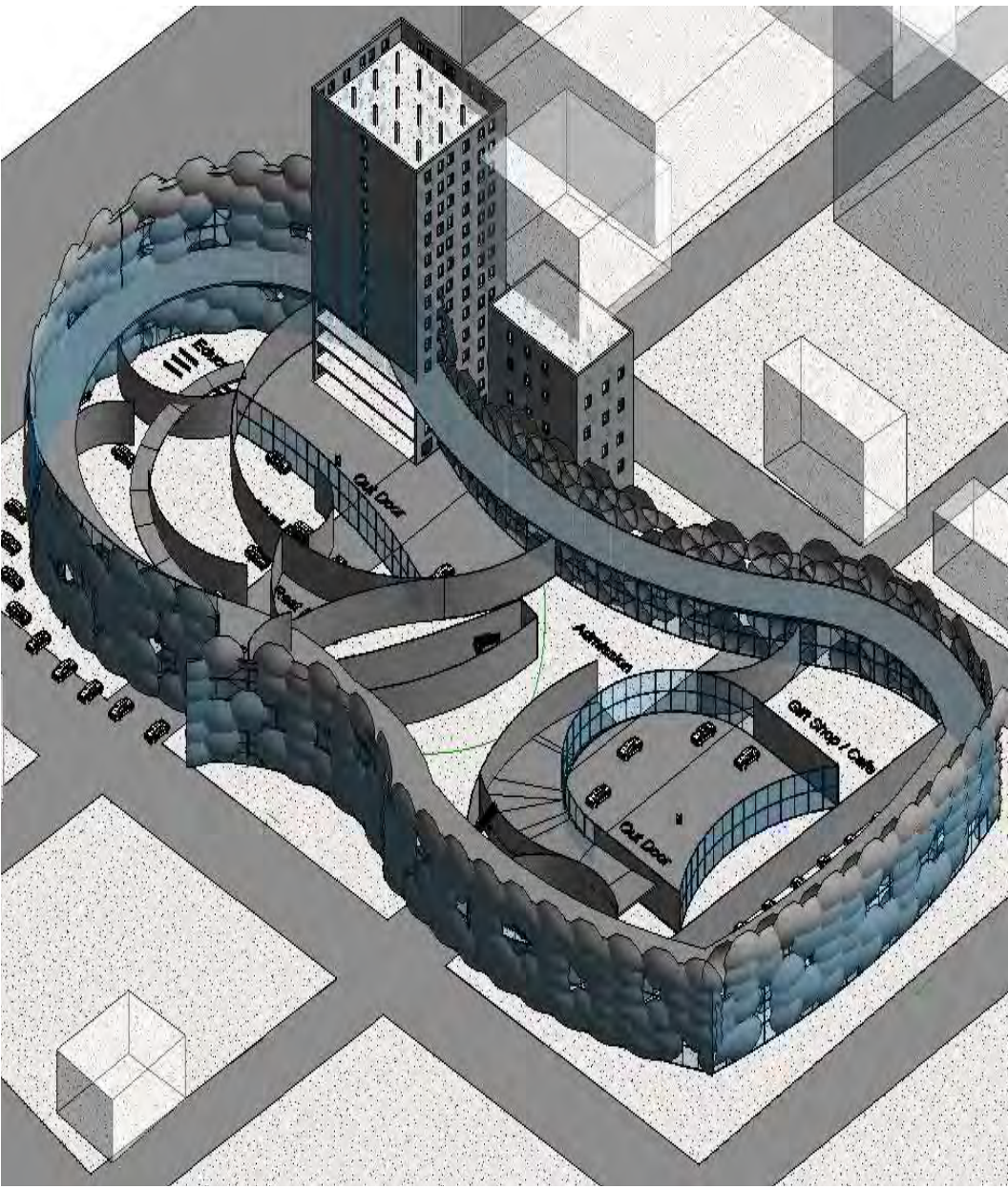
MY INTENTIONS WERE TO INTERTWINE THE TRACK AND THE MUSEUM BY USING THE ROOF OF THE MUSEUM AS THE TRACK ITSELF. CARS RUNNING ON THE ROOF WOULD GIVE PATRONS BELOW THE GLORY OF THE ENGINES GOING AROUND THE TRACK. I WAS TESTING HOW TO BRING THE TRACK INTO THE BUILDING TO GIVE THE TRACK A MOMENT OF ENCLOSURE AND INTRIGUE.

THE RACETRACK IS THE BACKBONE AND HEART OF THIS PROJECT. LOOKING AT ALL THE DIFFERENT POSSIBILITIES AND PRECEDENTS DREW MY FINAL FORM. I TESTED THE FIGURE 8, THE OVAL, AND A TIGHT TURNER. EACH HAS THEIR MOMENTS OF GREATNESS, THE OVAL TRACK GIVES THE ULTIMATE STRAIGHT AWAY, THE FIGURE 8 GIVES THE RUSH OF OVERLAP, WHILE THE S TURN TRACK GIVES THE DESIGNER MORE CONTROL OVER THE GUESTS SPEED. I TRIED TO TAKE ELEMENTS FROM ALL THE DIFFERENT TRACKS I TESTED AND UNDERSTAND WHAT WOULD WORK ON MY SITE. THE FINAL TRACK LAYOUT HAD A P LIKE SHAPE PROVIDING A STRAIGHT AWAY AND A SMOOTH CURVE.

USING SECTION BOXES AND 3D ASSEMBLIES - TESTING THE CONNECTION BETWEEN TRACK AND BUILDING BECAME A HARD EFFORT BUT EARNED GREAT RESULTS. AS REAL ROAD CONDITIONS, WIDTHS, TURN RADIUS, AND PROPER HEIGHT RESTRICTIONS BEGAN TAKING HOLD OF THE FIGURE 8, THE PROJECT BEGAN TO EXPAND FURTHER DOWN THE SITE, TAKING OVER THREE BLOCKS IN THE Y DIRECTION



CONCEPTUAL DESIGN



STIMULATING ARCHITECTURE  
USE AN ARCHITECTURE LANGUAGE THAT SEDUCES AND BREATHES ENERGY  
MECHANICALLY MODERN – LIKE A “CAR”

TO HONOR THE CAR AND THE MACHINERY BEHIND IT, I WANTED TO MAKE THE CARS ON THE TRACK PART OF THE MUSEUM ITSELF. WITH BURMING CURVES, THE CARS ON THE ROOF WOULD BE VISIBLE FROM INTERIOR GALLERIES, MAKING THE DRIVING EXPERIENCE AND EXPOSITION IN ITSELF.

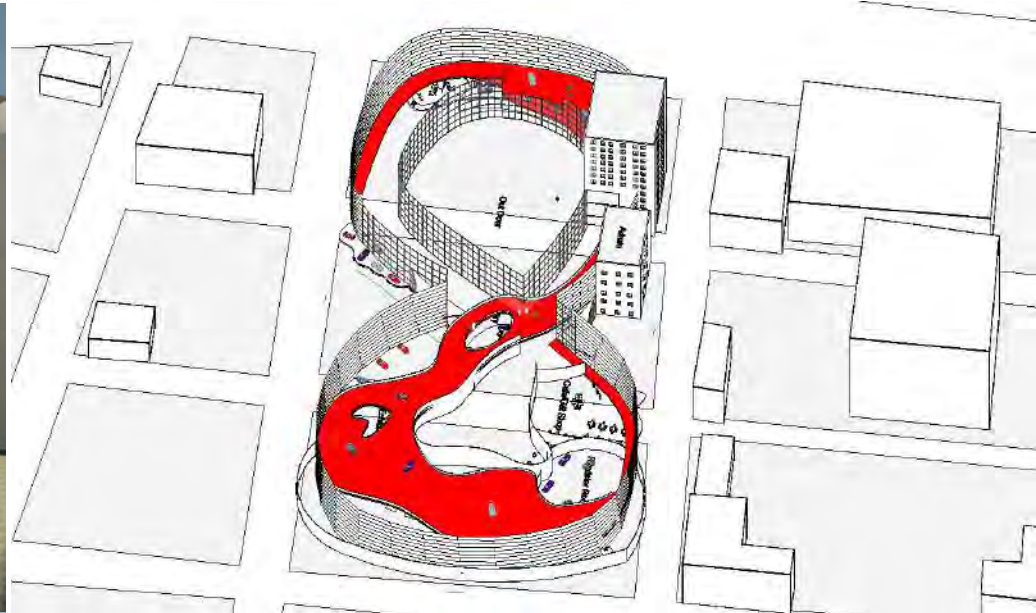
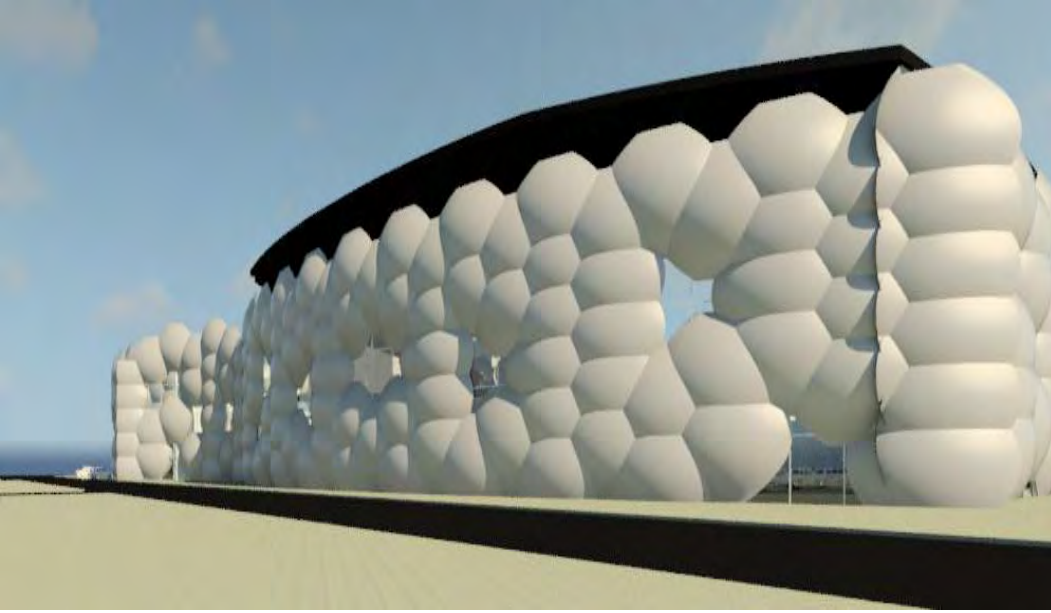
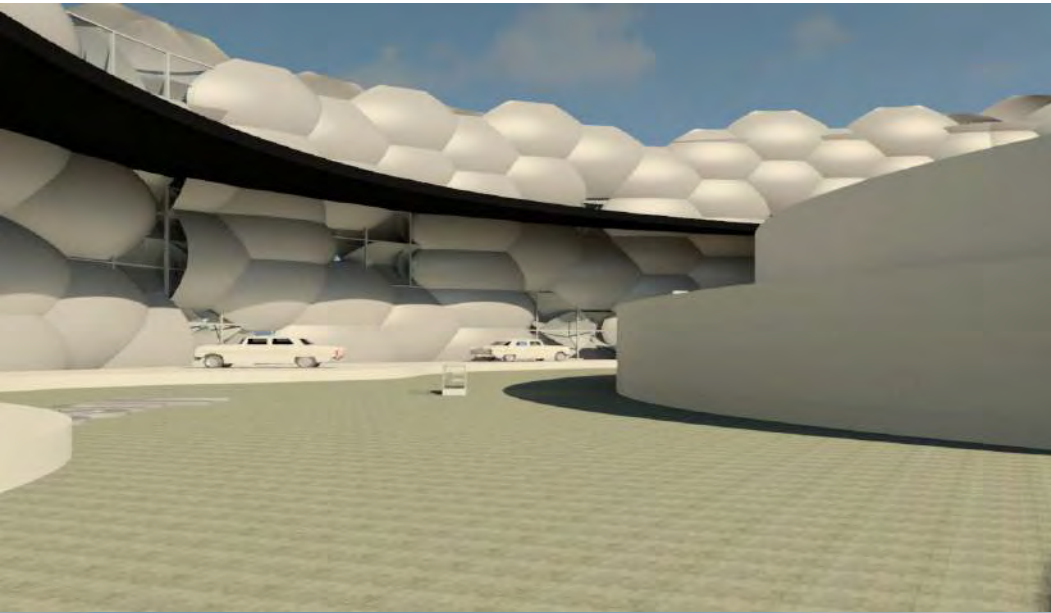
I WAS INSPIRED BY THE MERCEDES MUSEUM AND THEIR ABILITY TO USE RAMPS AS PROGRAM PIECES, SIMILAR TO THE FRANK LLOYD WRIGHT’S GUGGENHEIM. TO EMULATE AND POSTURIZE MOVEMENT, RAMPS WERE TESTED TO BRING GUESTS BETWEEN LEVELS WITH CARS LINING THE RAMPS AND VIEWS OUT INTO A COURTYARD DISPLAY.

THE COURTYARDS WERE SOMETHING ON PLAN SEEMED LOGICAL, BUT BEING DETROIT, HAVING DEDICATED SMALL COURTYARDS MIGHT BE UNDER-UTILIZED IN THE COLDER MONTHS. THIS SCHEME’S COURTYARDS TAKE UP A FAIR AMOUNT OF SQUARE FEET, SO THIS CALLED INTO QUESTION WHAT BELONGS ON SUCH VALUABLE REAL STATE WITHIN THE CONTEXT OF THE DESIGN.

THE TAKE AWAY FROM THIS SCHEME WAS HOW I CAN CUT THROUGH THE EXISTING BUILDING ON THE SUPER BLOCK. THE STRATEGY IS TO CUT OUT 4 FLOORS AND RUN THE CARS THROUGH THE BUILDING AND RECLADDING THE INWARD SIDE OF THE BUILDING WITH A MODERN CURTAINWALL SYSTEM. THE FLOORS WITH THE DEPRESSED SLAB FOR THE TRACK CAN BE USED AS VIEWING GALLERIES FOR THE TRACK, AS THE BUILDING AS A WHOLE IS TO BE REPURPOSED AS A HOTEL, IT IS CURRENTLY UNOCCUPIED FROM FLOORS THREE AND UP.



CONCEPTUAL DESIGN



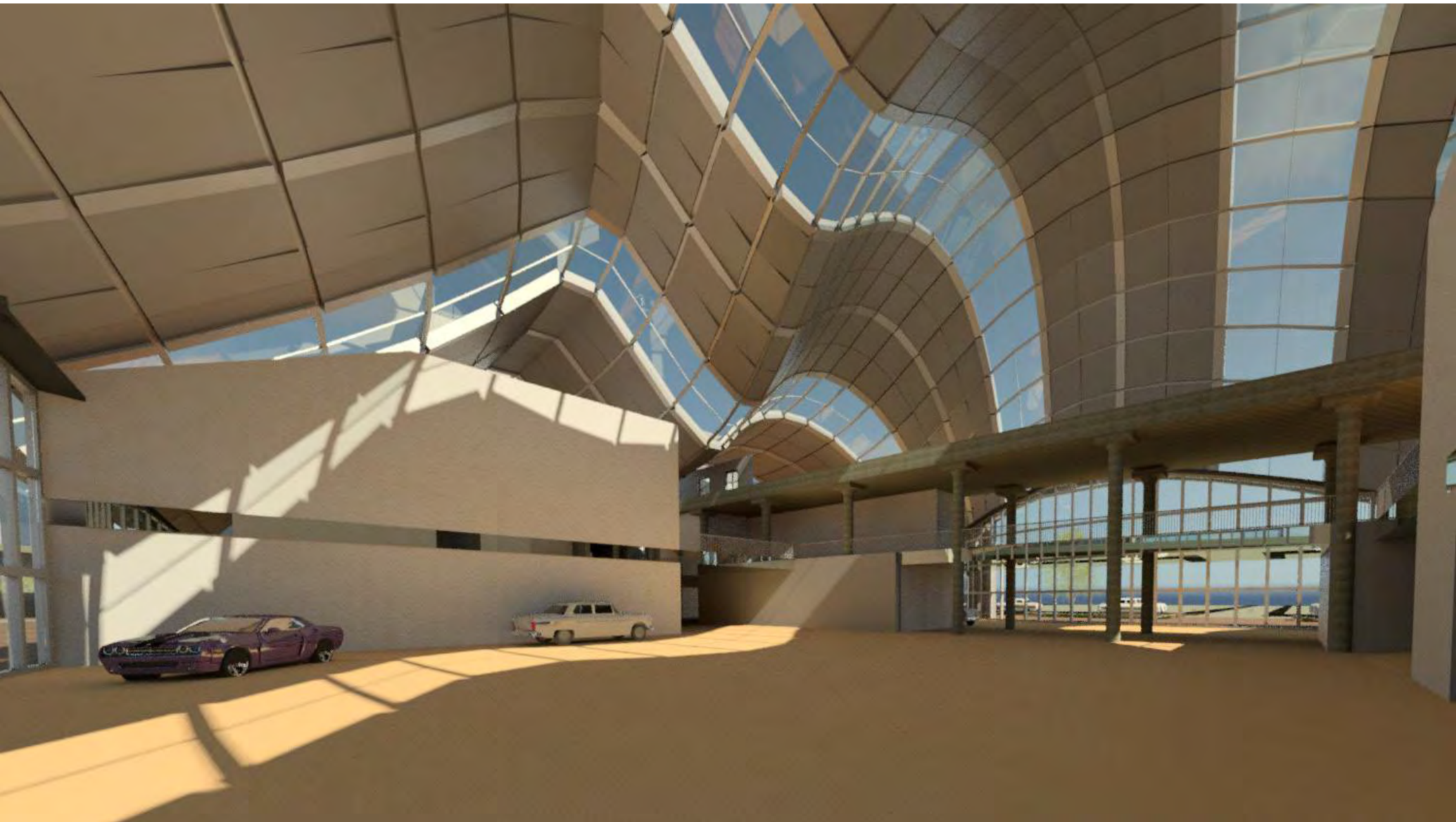


STIMULATION IS SOMETHING THAT CAN NOT BE NECESSARILY PROVED; BUT YOU KNOW IT WHEN YOU FEEL IT. WHY WE LOVE ARCHITECTURE IS BECAUSE THE WAY GREAT BUILDINGS MAKE YOU FEEL. THERE IS AN EMOTION TO THE MATERIALS; A SOUL IN BETWEEN WALLS. THE FORM I WANTED TO ACHIEVE WOULD HAVE STRONG CHARACTER. HATE IT OR LOVE IT; IT IS POWERFUL WHEN COMPARED TO THE REST OF WHAT IS LEFT FROM 20TH CENTURY DETROIT. IT SERVES AS A CHANGE IN TIMES BUT IT COULD NOT FEEL KITSCH; OR ADDITIVE; RATHER SIMPLE BUT POWERFUL.

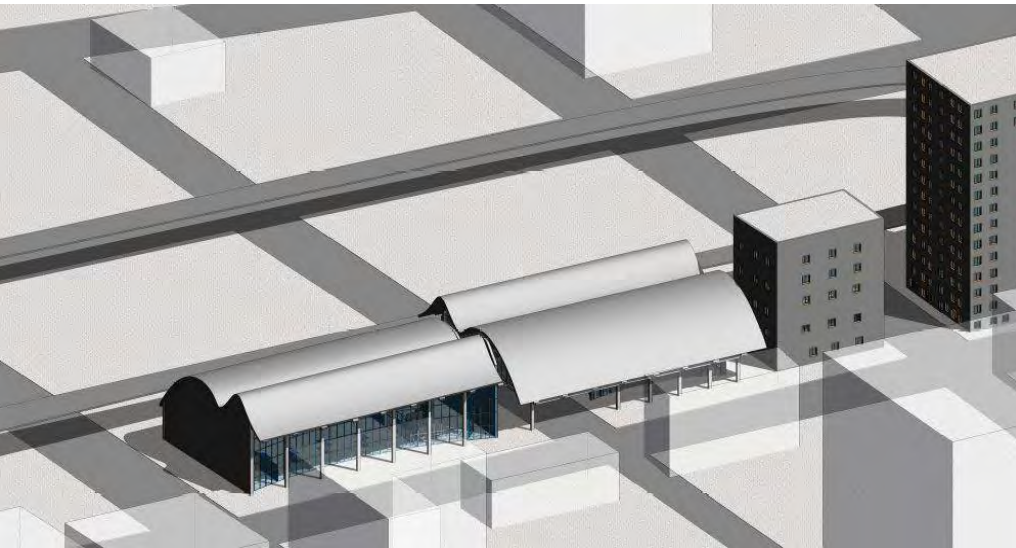
HAVING THE ABILITY TO QUICKLY MODEL DIFFERENT ROOM MOCK UPS AND BUILDING FORMS ALLOWED ME TO TEST DIFFERENT TEXTURES AND COMPOSITIONS. I WAS INTERESTED IN KEEPING THE ROOF RATHER OPEN TO LIGHT RATHER THAN USING LARGE PUNCH OUT WINDOWS. THE IDEA OF BUBBLES OR TIRES THAT COULD FORM ON THE INSIDE WAS DROPPED - I WAS MORE INTERESTED IN MAKING THE ARCHITECTURE THE AESTHETIC AND THE MAIN FEATURE - NOT THE TEXTURE OF THE WALLS. HOW PEOPLE CAN CROSS OVER EACH OTHER AND LOOK DOWN AND AROUND WHILE BEING LEAD THROUGH THE BUILDING WAS MY ULTIMATE GOAL.

MY SITE PROVIDED PLENTY OF ROOM TO STUDY HOW THE FIGURE 8 WILL SIT ON THE SITE. USING THE EXISTING ROAD PATTERNS GAVE ME CONSTRAINTS TO WORK IN. EACH BLOCK WAS ABOUT 400 FEET LONG BY 250 FEET WIDE; I TESTED HOW MANY BLOCKS WOULD BE NECESSARY TO ALLOW THE TRACK MAXIMUM FOOTAGE. CONNECTIONS TO THE HEART OF THE DOWNTOWN AND TIGER STADIUM GAVE MY BUILDING A CLEAR ENTRANCE POINT AND THE AREA WHERE THE TRACK WILL GO ABOVE ITSELF.

AS THE PROJECT PROGRESSED; THE IDEA OF HAVING A PERFECT TRACK, AND A PERFECT BUILDING BECAME NEARLY IMPOSSIBLE WITH THE FIGURE 8 CONCEPT. THE FLOOR PLANS WERE BEING COMPROMISED AS THE TRACK BECAME LARGER AND LARGER. AFTER ONE LAST ATTEMPT TO SHRINK THE TRACK AND MUSEUM BACK DOWN TO A HUMAN SCALE, THE IDEA OF DESIGNING A PERFECT TRACK AND A PERFECT MUSEUM LEAD ME TO SPLIT THE TRACK AND THE BUILDING. THIS ALLOWED ME TO STUDY THE FORM OF THE TRACK AND THE FORM OF MUSEUM WHILE FOLLOWING THE FUNCTION OF EACH PART OF THE MUSEUM.







THE FIGURE 8 SCHEME IN THEORY WAS AN IDEA WORTH TESTING, BUT IT BEGAN TO PROVIDE MORE PROBLEMS THAT CONFLICTED WITH THE CORE OF THE PROJECT. THE TRACK AND THE MUSEUM WERE BOTH BEING COMPROMISED AT EACH OTHERS STAKE IN REAL ESTATE.

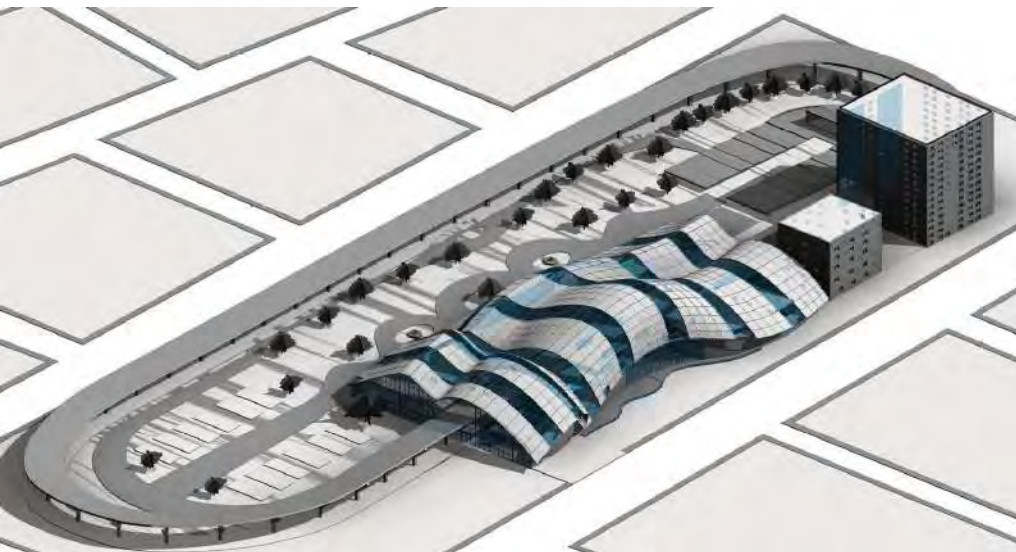
THE FORM OF THE TRACK HAD TO BE REEXAMINED. DETROIT IS FAMOUS FOR THEIR ABOVE GROUND MONORAIL THAT FLY'S THROUGH THE CITY. I PLAYED OFF THAT AND DECIDED TO TEST A REAL TRACK THAT WOULD PROVIDE A MORE COMFORTABLE AND ENJOYABLE RIDE FOR THE USERS.

NOW INSTEAD OF FOCUSING ON THE FUSION BETWEEN THE TRACK AND THE PROGRAM BELOW, EACH ELEMENT IS ALLOWED TO BREATHE AND TAKE LIFE ACCORDING TO THE NEEDS OF THE FUNCTION.

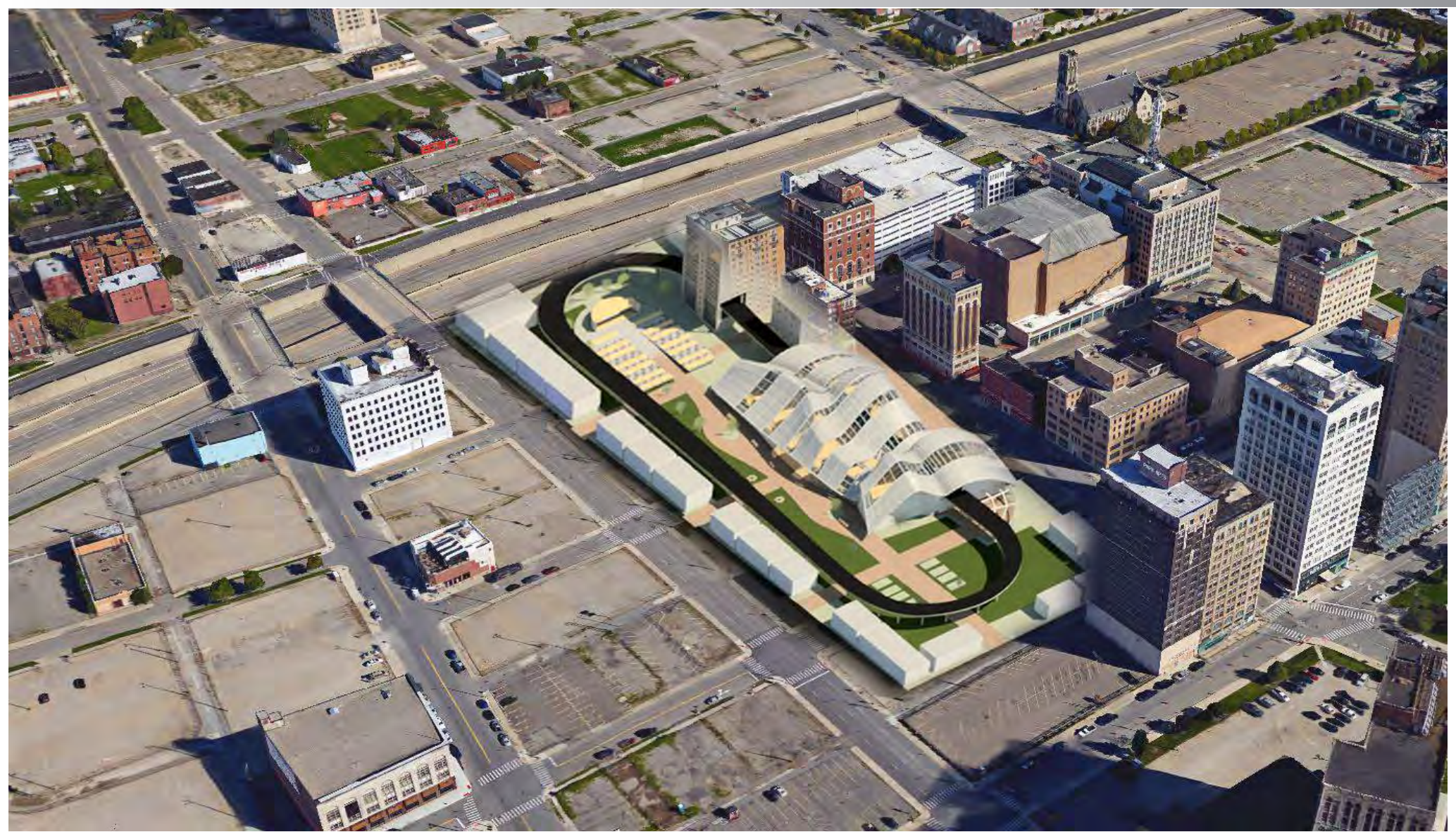
THE PROGRAM WOULD STILL TAKE PLACE AROUND THE TRACK BUT NOW THE TRACK WOULD INTERSECT THE BUILDING WITH PROGRAM PIECES BELOW AND AROUND. IN PLANNING, THE DIAGRAMS AND PROGRAM LAYOUT DID NOT CHANGE MUCH, INSTEAD EVERYTHING BECAME MORE COMPACT AND RELATED STRONGER; AS SPACES NOW CAN FLOW INTO EACH OTHER WITHOUT LONG WALKWAYS AND AWKWARD TURN AROUNDS.

TO ACHIEVE THE FORM OF THE BUILDING, I BROKE IT DOWN INTO PIECES AND BEGAN BENDING PLANES WHILE FORMING SPACES. I WANTED THE ROOF TO DEFINE THE SPACE BELOW AND CREATE A VOLUMETRIC FEELINGS RATHER THAN COMPARTMENTALIZED ROOM ENCLOSURES. THE ROAR OF THE CARS WOULD ECHO THROUGH THE BUILDING AND KEEP GUESTS ON THEIR TOES.

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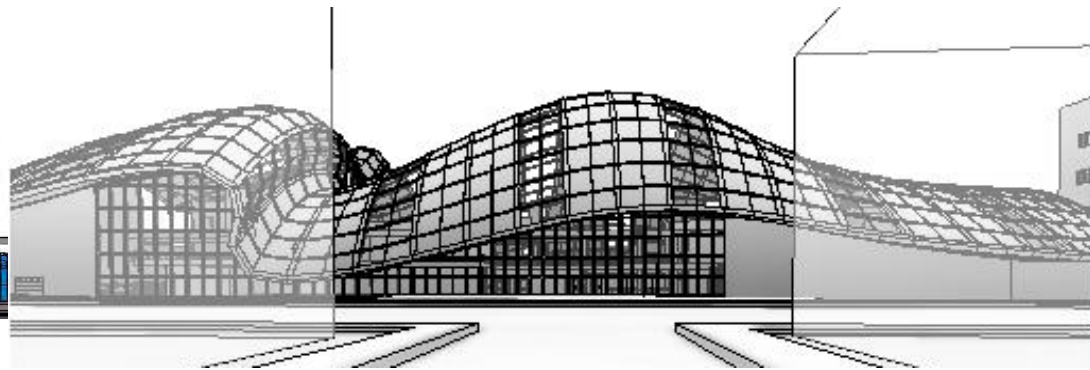
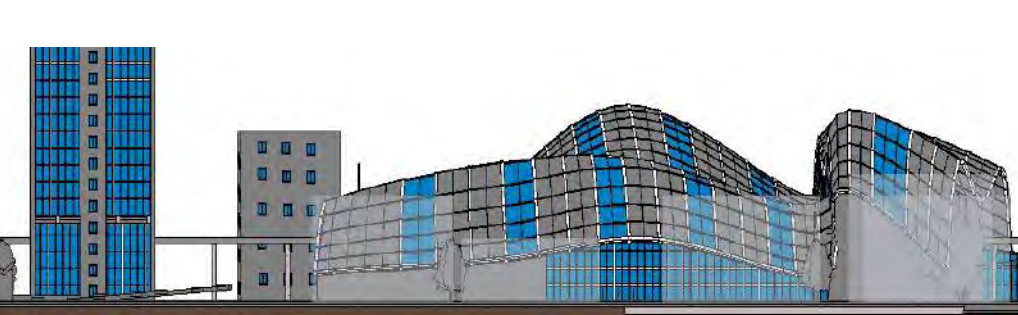
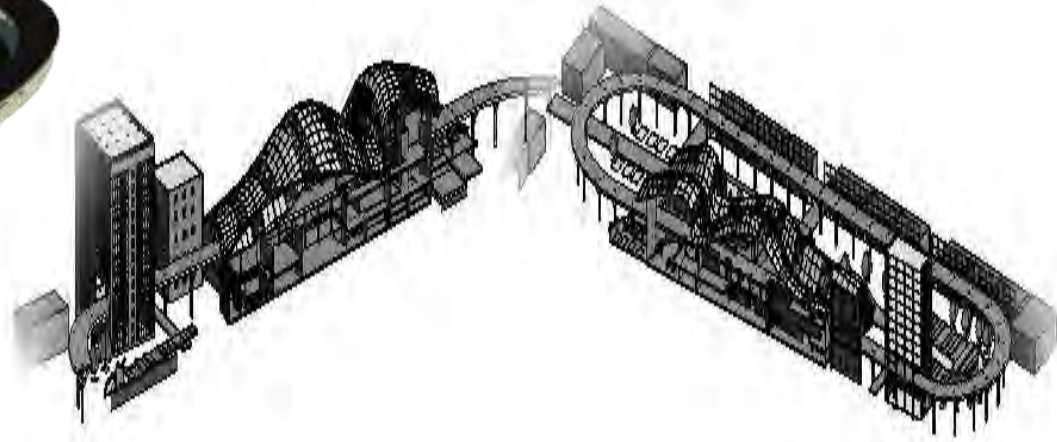




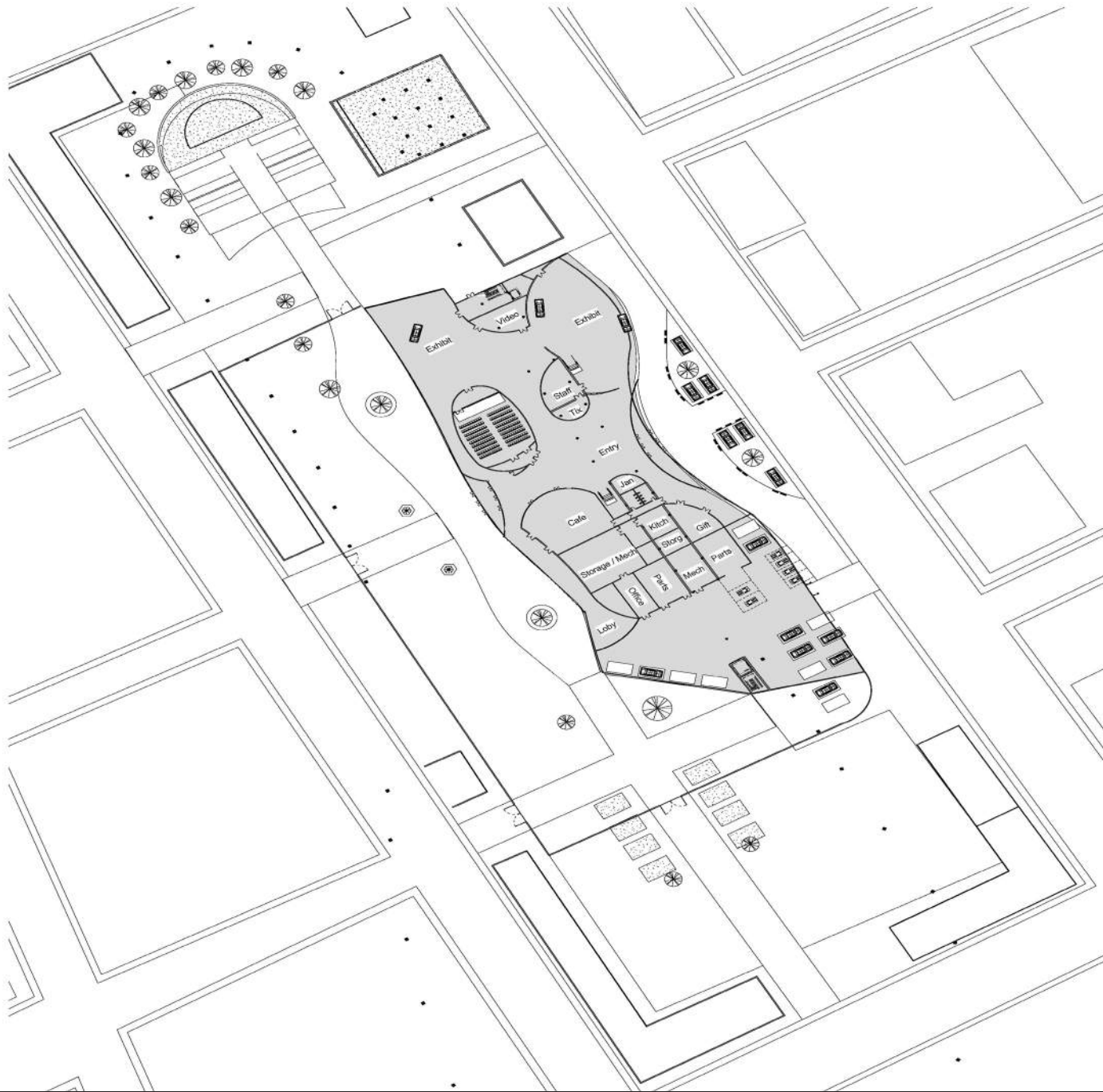


THE CONCEPT OF RUNNING THE TRACK THROUGH THE MUSEUM WAS SOMETHING I DID NOT WANT TO GIVE UP. THE IDEA OF A TRACK FLYING THROUGH THE CITY TO MIMIC THE ABOVE GROUND MONORAIL BEGAN TO SHAPE MY MASTER PLAN. SITE WISE, THE BUILDING AND TRACK WOULD ALLOW FOR A GREATER DEVELOPMENT AROUND THE BOUNDARIES OF THE SITE. WHILE THE INSIDE OF THE TRACK COULD PROVIDE MUCH NEEDED OUTDOOR COMMUNAL SPACE.

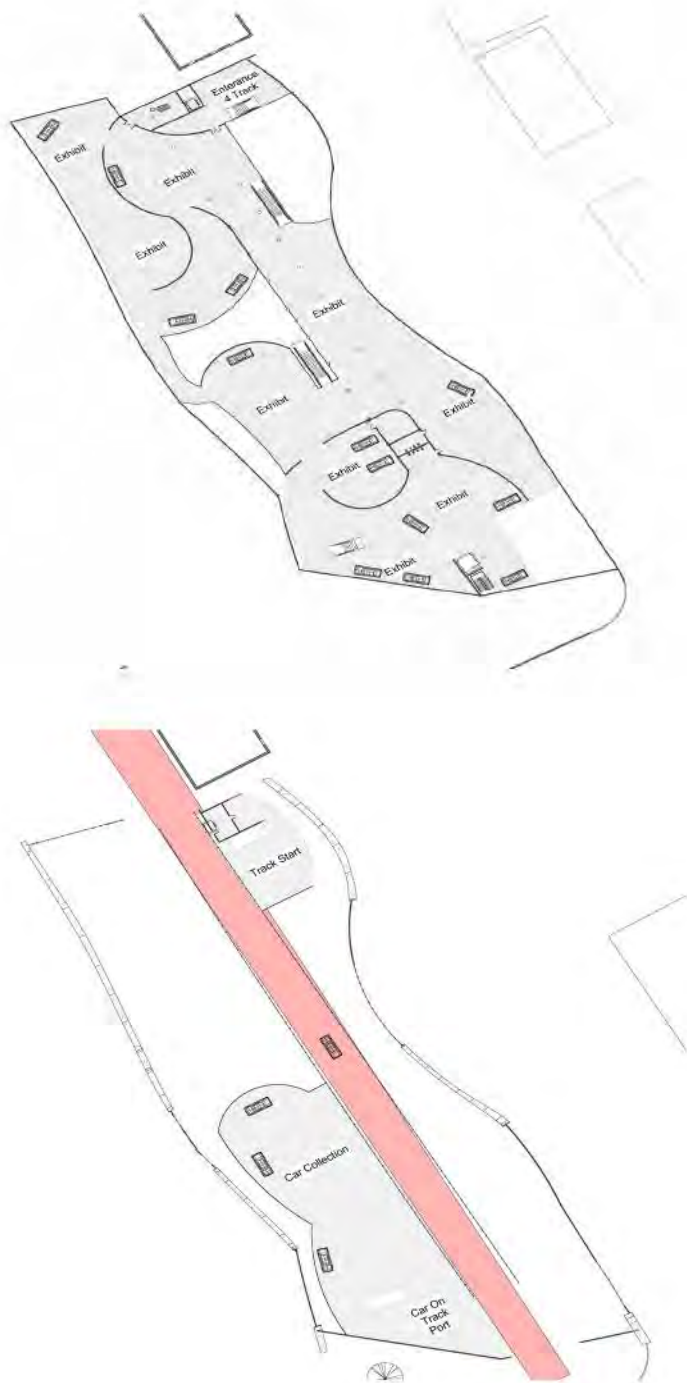




THE FORM OF THE BUILDING WAS DESIGNED AROUND THE IDEA OF ROLLING AND MOVEMENT. BENDING AND FOLDING ITSELF SIMILAR TO THE IDEA OF THE FIGURE 8 PROVIDED A REAL CHALLENGE WHEN COMPUTER MODELING. HAVING THE TRACK RUN THROUGH THE HEART OF THE BIM MODEL ALSO BECAME AN ISSUE; MY BIG QUESTION WAS HOW TO LINK THE TRACK WITH THE FORM OF BUILDING. THE FLOOR PLANS HAVE BEEN MASSAGED DOWN TO A MORE PERSONAL FEEL; BRINGING THE CARS AND EXHIBITS DOWN IN SCALE ALLOWS MORE CONTROLLER OVER HOW THE USERS CAN INTERACT WITH THE BUILDING ITSELF.







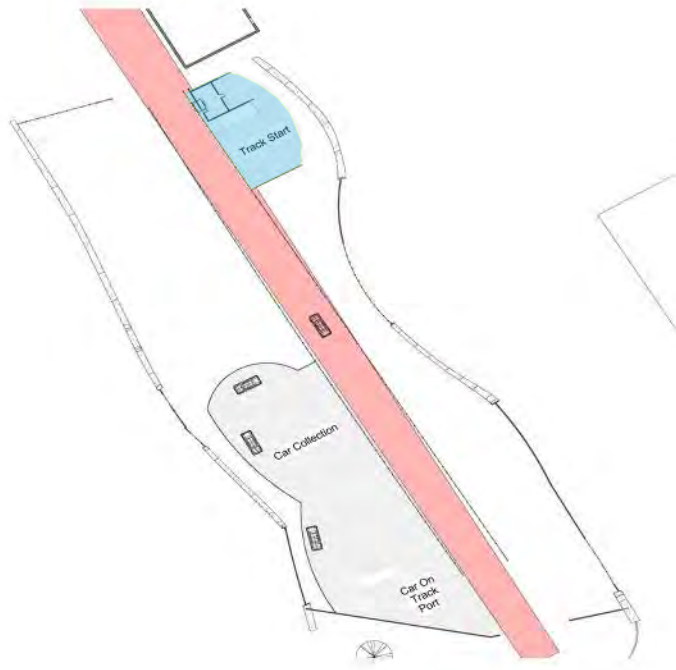
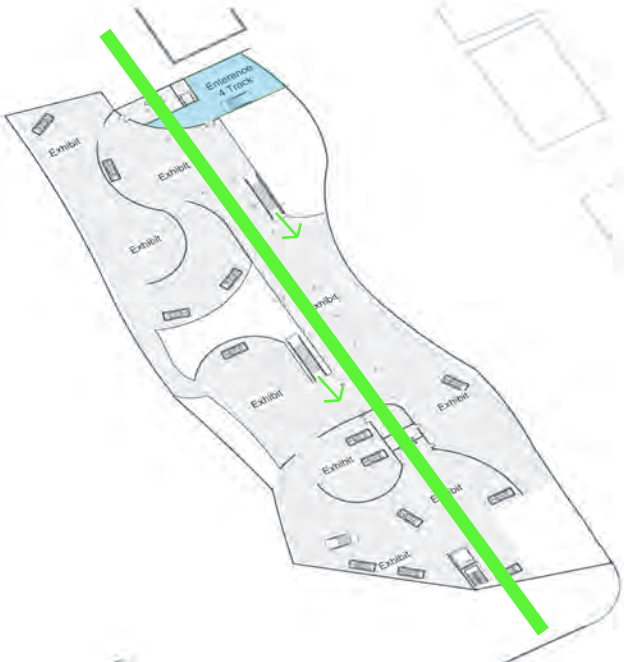
THE DESIGN OF THE PLAN TOOK MANY FORMS BEFORE FINALLY MATERIALIZING INTO THE DRAWINGS ON THE LEFT. THE MUSEUM IS BROKEN DOWN INTO THREE FLOORS - GROUND, FIRST, AND SECOND.

ON THE GROUND FLOOR - GUESTS CHECK INTO THE MUSEUM AND MANY OF THE MORE PUBLIC FUNCTIONS TAKE PLACE SUCH AS THE GARAGE, CAFE, AND AUDITORIUM. THE PLAN SPIRALS PEOPLE AROUND AND UP THE ESCALATORS TO THE SECOND FLOOR.

THE PORCHE MUSEUM IN STUTTGART USED ONE MAJOR ESCALATOR TO BRING PEOPLE FROM GRADE TO THE MUSEUM ON THE SECOND FLOOR. THERE IS THIS AMAZING MOMENT OF EXCITEMENT AND WONDER AS THE SLOW RISING ESCALATOR LEADS PEOPLE TO THE HEART OF THE BUILDING. IN THIS PROJECT, ONCE AT THE SECOND FLOOR GUESTS CAN LOOK DOWN INTO GALLERY SPACES FROM ABOVE WHILE MOVING ACROSS THE FLOOR PLANE SPACE TO SPACE.

THE TRACK CUTS THE BUILDING ON THE THIRD FLOOR. THE GARAGE SPACE HAS A CAR ELEVATOR TO SEND CARS FROM GRADE TO THE TRACK. PATRONS WILL ENTER THEIR TEST CAR FROM THE NORTH CORNER OF THE BUILDING. HAVING THE TRACK VISIBLE WHILE PEOPLE SWIRL AROUND AND UNDER IT, MAKES IT FEEL ESSENTIAL TO THE DESIGN RATHER THAN A SITE ELEMENT.

THE TRACK IS THE KEY INGREDIENT IN THE PROJECT, HOW THAT WORKS NEEDED TO BE WELL THOUGHT-OUT AND PROPERLY PROPORTIONAL TO THE MUSEUM AND SITE ITSELF. HOW THE BUILDING, TRACK, AND LANDSCAPE OCCUPY THE SUPER CELL IS VERY IMPORTANT WHEN THINKING OF THE PROJECT AS A TOTALITY AND NOT A KIT OF PARTS. INITIALLY A TRUE OVAL TRACK WAS STUDIED TO MINIMIZE THE OVERALL FOOTPRINT OF THE TRACK, THE FINAL RENDITION EXPANDED THE OVERALL DESIGN BUT IT WAS IMPORTANT TO START SIMPLE AND DEVELOP FROM A PURE GEOMETRY.



THE GENERAL PARTI OF THE BUILDING ADVANCED WITH THE OVERALL THEME OF THE PROJECT. THE GOAL OF THIS THESIS IS PROVE HOW MOTION AND KINETIC ENERGY CAN BE CAPTURED AND EXPERIENCED IN THE ARCHITECTURE. THE IDEA BEHIND THE PROGRAMMATIC LAYOUT IS CUTTING THE BUILDING WITH THE TRACK AND DEVELOPING THE RELATIONSHIP BETWEEN BUILDING AND TRACK.

THE DIAGRAMS ON THE LEFT REPRESENT THE POTENTIAL KEY VIEW FOR THE PROJECT. THE DESIGN TAKES ADVANTAGES OF THE FORM AND LAYOUT OF THE PROGRAM. IE - IN THE MERCEDES MUSEUM, THERE WERE MOMENTS IN THE BUILDING WHERE GUESTS CAN LOOK OUT TO THE CITY THROUGH THE BIG GLASS WINDOWS, OTHER MOMENTS BRING GUESTS TO A BIRDS EYE OF THE ENTIRE MUSEUM AND ATRIUM SPACE.

THE DETROIT LAYOUT FOLLOWS SIMILAR PRINCIPALS. THERE ARE MOMENTS WHERE PEOPLE CAN GET A TOTAL EXPOSURE MOMENT AND TAKE IN THE ENTIRE MUSEUM, BUT WALK AROUND THE WALL AND ONE FALLS INTO A MORE PRIVATE SECLUDED EXPERIENCE IN A SMALLER ROOM.

DESIGNING AROUND HOW CARS ARE VIEWED WAS ALWAYS IN MIND. CURVES ARE USED TO GIVE THE BUILDING A LESS SHARP FEELING AND MOVE PEOPLES FOCUS SMOOTHLY FROM CAR TO CAR. THE BUILDINGS ENVELOPE CREATES A CANOPY FEELING - LIKE A CIRCUS TENT HOSTING A CAR SHOW, GUESTS ARE ENCOURAGED TO WANDER AND EXPLORE THE BUILDING, FINDING THOSE MOMENTS OF WOW.





## REDEFINING THE CITY GRID AXIS

PRACTICING WITH DIFFERENT FORMS HELPED THE MODEL TAKE ITS SHAPE. THIS PROJECT STARTED WITH LOOKING AT TWO CIRCLES NEXT TO EACH OTHER AND HOW THAT CAN BE MANIPULATED INTO A BUILDING. THE FIGURE 8 IDEA WAS PREVALENT SINCE THE BEGINNING AND EVEN THOUGH THE FORM WAS NOT USED; THE STUDY OF MOVEMENT AND FORM MADE THE PROGRAM SPIRAL A SUCCESS. ON THE GROUND FLOOR, PATRONS CIRCULATE AROUND THE CORE MADE OF MORE PRIVATE SERVICE ROOMS.

IT WAS IMPORTANT THAT THE BUILDING HELPED REDEFINE THE STREET FRONT AND FILL A VISUAL GAP. YET, THE MUSEUM DOES NOT SERVE AS AN “END ZONE” LIKE FORD FIELD, RATHER AN ELEMENT OF THE CITY. TO HELP THE FLOW OF PEOPLE THROUGH THE SITE AND THE TRACK, GUESTS CAN ENTER FROM BOTH SIDES OF THE BUILDING. THE COURTYARD SIDE PROMOTES A LARGE LOBBY WITH VIEWS INTO THE GARAGE AND OUTDOORS WHERE PEOPLE WAIT OR GATHER.

THE GARAGE HAS ITS OWN ENTRY WHERE CARS CAN MOVE FREELY FROM INSIDE TO OUTSIDE STORAGE WITHOUT DISTURBING THE NATURAL FLOW OF THE MUSEUM. THE REST OF THE SITE IS TO BE USED AS MOSTLY PUBLIC SPACE FOR FUTURE DEVELOPMENTS AND POTENTIAL BACK DOOR LOCAL GARDENS. THE MUSEUM WILL UTILIZE THE PATIOS FOR CAR SHOWS UNDER THE TRACK DURING THE SUMMER MONTHS.

DETROIT CURRENTLY LACKS PURE PUBLIC ENTERTAINMENT OUTDOOR SPACE. FOR EXAMPLE THE HIGHLINE IN NEW YORK CITY HELPED GROW THAT AREA OF CHELSEA INTO ONE OF THE HIGHEST RENT AREAS IN MIDTOWN. EVEN SMALLER SCALE PROJECTS SUCH AS LAWN ON D BY SUSAKI ARCHITECTS IN BOSTON BRINGS PEOPLE INTO THE UP AND COMING SEAPORT. THIS WOULD BE A TRIBUTE TO THE HISTORY OF DETROIT AND HOW THE CITY WAS ONCE DEFINED AND BUILT BY THE AUTOMOTIVE, CAN NOW BRING PEOPLE BACK INTO A SOON UP AND COMING AREA.





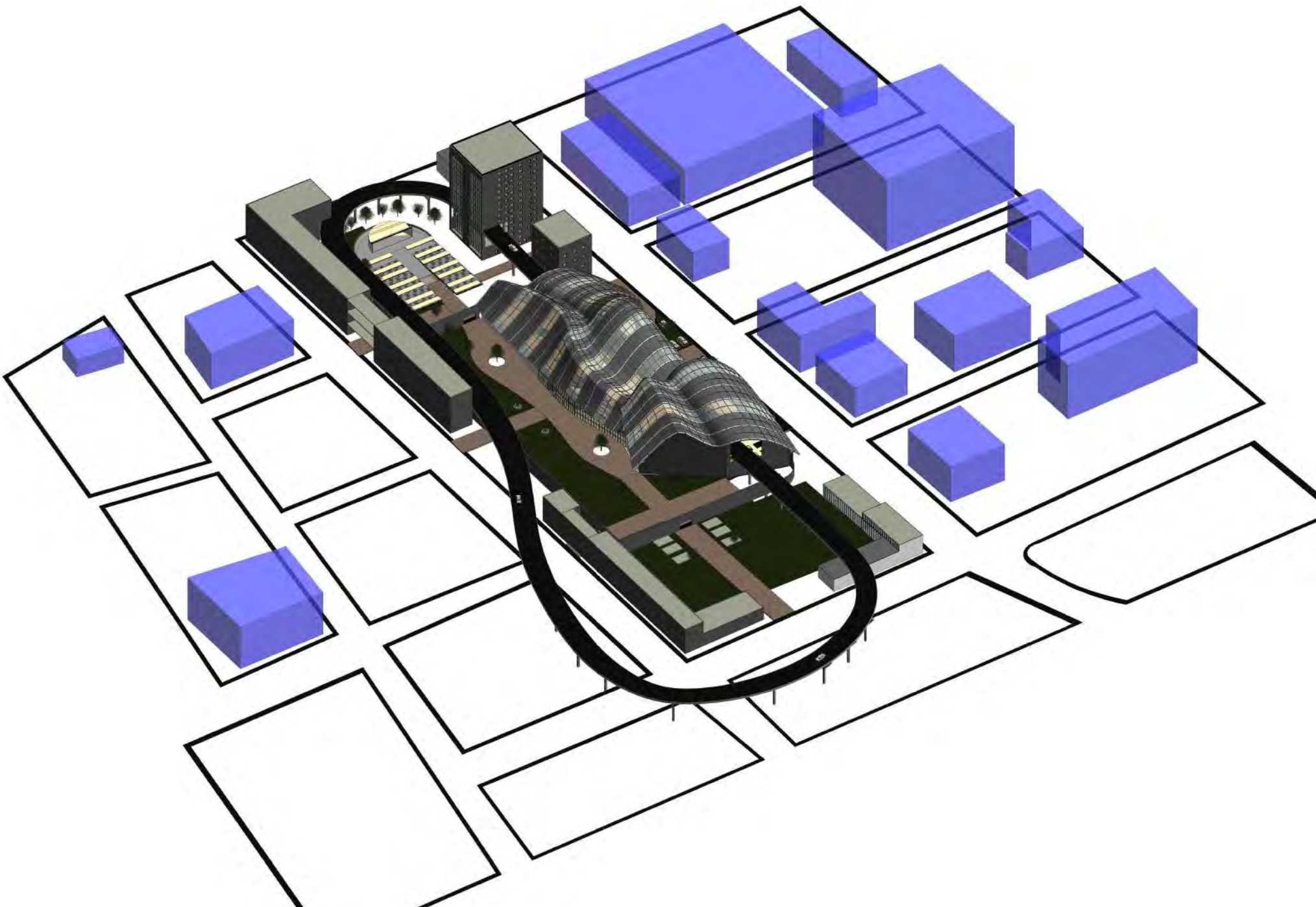


### THE GOALS:

CREATE A NEW REVIVED SECTION OF THE CITY  
CONNECT PEOPLE BACK TO THE ROOTS OF DETROIT  
CREATE LANDSCAPES THAT CONTRIBUTE TO THE OVERALL MASTER PLAN  
BUILD JOBS AND NEW ARCHITECTURAL OPPORTUNITIES  
CREATE AN OPEN SPACE SYSTEM FOR THE CITY  
(USE VACANT LAND AS OPPORTUNITY TO CREATE NEW URBAN FORMS. LINK NEW AND EXISTING  
OPEN SPACES)  
REDEFINE CORRIDORS AND COMPLETE STREETS  
(RESIZE UNDER-CAPACITY STREETS AND PROVIDE FOR MULTIPLE MODES OF TRANSIT)  
CREATE NATIONAL INTEREST; HELP REDEFINE MODERN DETROIT

HOW THE PROGRAM WILL FIT UNDER THIS CURTAIN IS KEY. THERE NEEDS TO BE A CONNECTION TO THE SITE. THE REASON WHY I WENT WITH THIS SCHEME WAS TO ALLOW THE SITE MORE GREEN SPACE AND FREEDOM. I ADDED BUILDINGS AROUND THE EDGE OF MY SITE TO SHOW POTENTIAL GROWTH ON MY SITE. THE BUILDINGS HERE WILL BECOME A DESTINATION IN THE CITY'S REVIVAL. AS THE CITY GROWS BACK - THIS WILL BE AN ICONIC MARK OF ITS UPCOMING.

THE INFELD WAS ESTABLISHED EARLIER IN THE DESIGN PHASE. I WANTED TO PROVIDE CIVIC FEATURES ALONG WITH OUTDOOR MUSEUM SPACE. I FIGURED THE UNDERNEATH TRACK SPACE CAN PROVIDE FOR WEEKEND CAR SHOWS. THE INFELD WILL HAVE AN AMPATHEATER FOR OUT DOOR SHOWS ALONG WITH AN OUTDOOR PATIO FOR THE CAFE AND PLENTY OF ROOM FOR CAR DISPLAYS. THE MUSEUM COULD BRING CARS IN AND OUT EASILY FROM THE STREET TO MUSEUM.





THE FINAL PRODUCT IS A COLLABORATION OF ALL THE IDEAS PRESENTED, WITH INSPIRATIONS OF MOVING PEOPLE THROUGH SPACE WITH ARCHITECTURE.

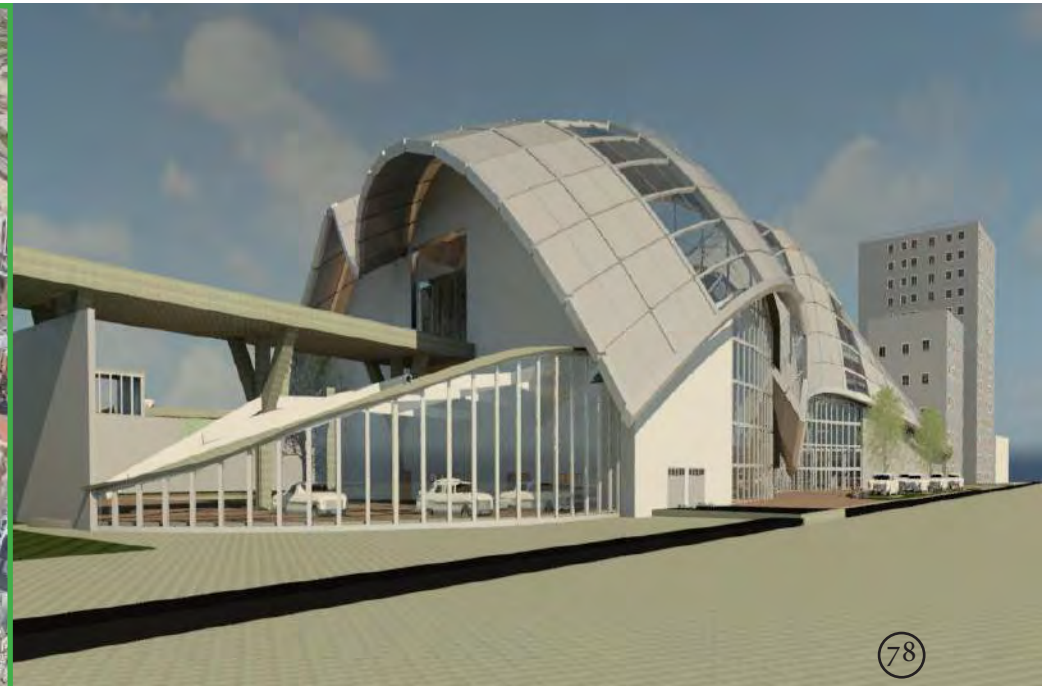
WORKING TO GLORIFY AND IDENTIFY THE THREE MAJOR PROGRAMMATIC ELEMENTS OF THE PROJECT THE MUSEUM, THE TRACK, AND GARAGE.

INSTEAD OF ATTEMPTING TO JAM ALL OF THIS UNDER ONE MASSIVE ROOF: THE FINAL DESIGN REPRESENTS CAREFUL INDIVIDUAL DESIGN OF EACH PROGRAMMATIC PIECE TO MAXIMIZE THE EXPERIENCE OF THE PRODUCT AS A WHOLE, NOTHING SACRIFICED.

THE SCALE OF THE PROJECT SHIFTED GRADUALLY INTO A SLEEKER AND DYNAMIC FORM FILLED WITH INTERCONNECTED VOLUMES SPIRALING AROUND THE TRACK.

THE MUSEUM IS ORGANIZED TO LEAD PEOPLE FROM ENTRY TO THE TOP: STARTING UP AN ESCALATOR THEY RISE TO A DARK ROOM WHERE GUESTS LEARN ABOUT THE BEGINNING STAGES OF THE CARS... NEXT THEY ARE LED BY LIGHT INTO THE LARGER OPEN SPACE: UP A RAMP TO THE TOP FLOOR WHERE THE MUSEUM HAS VIEWS TO THE GARAGE AND TRACK BELOW.

THE MUSEUMS FEATURED TRACK PROVIDES THE OPPORTUNITY TO TEST CARS SHOWN IN THE MUSEUM, GIVING THE PATRONS A ONCE AND A LIFE TIME EXPERIENCE WITH SOME OF AMERICAS MOST HISTORIC CARS, THE ENTIRE MUSEUM FOCUSES ON THE AMERICAN CAR AND IS DEVOTED TO PROMOTE THE GREATNESS IN SOME OF OUR BEST MACHINERY.

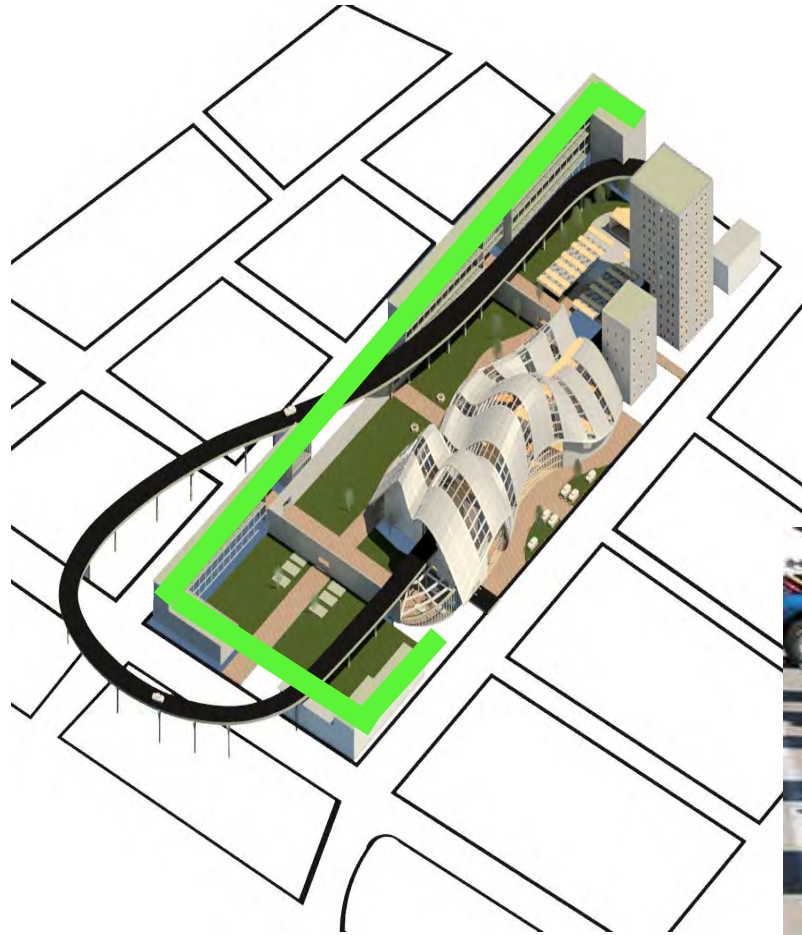




## DESIGN DEVELOPMENT



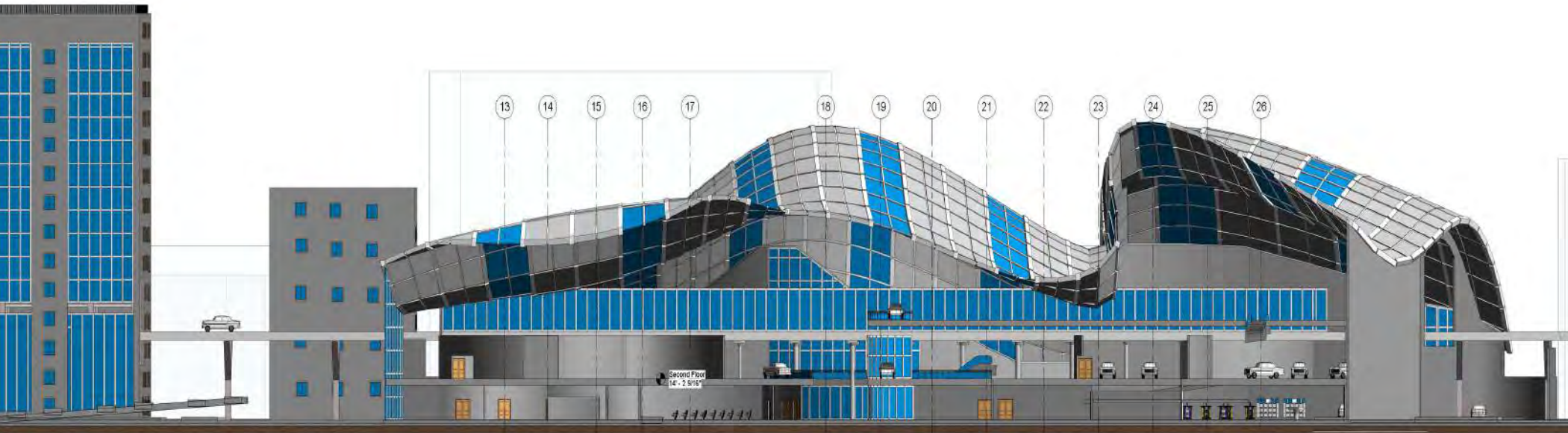




BY PROVIDING OPEN GREEN SPACE - PROTECTED BY THE TRACK WITH POTENTIAL STORE FRONT WITH MIXED USE DEVELOPMENTAL LAND. THE IDEA TO KEEP THIS AN OPEN SPACE IN THE LONG RUN WILL BENEFIT DETROIT. AS MORE REAL ESTATE TURNS TO ARCHITECTURE, OPEN GREEN SPACE BECOMES LESS AND LESS. THIS SPACE WILL BE USED FOR A VARIETY OF ACTIVITIES AND IS NOT DEDICATED MUSEUM SPACE.









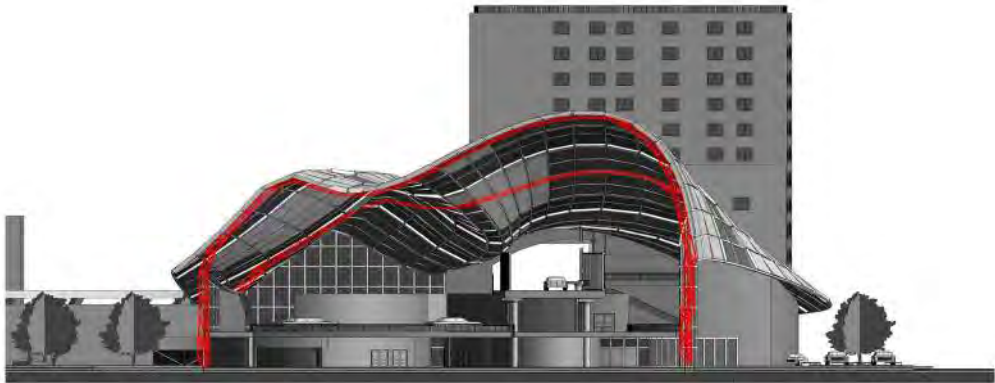
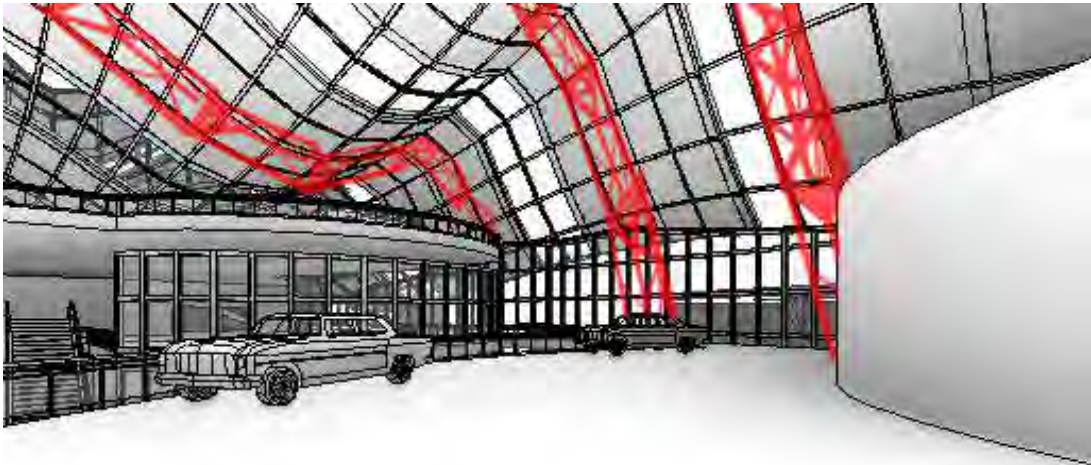
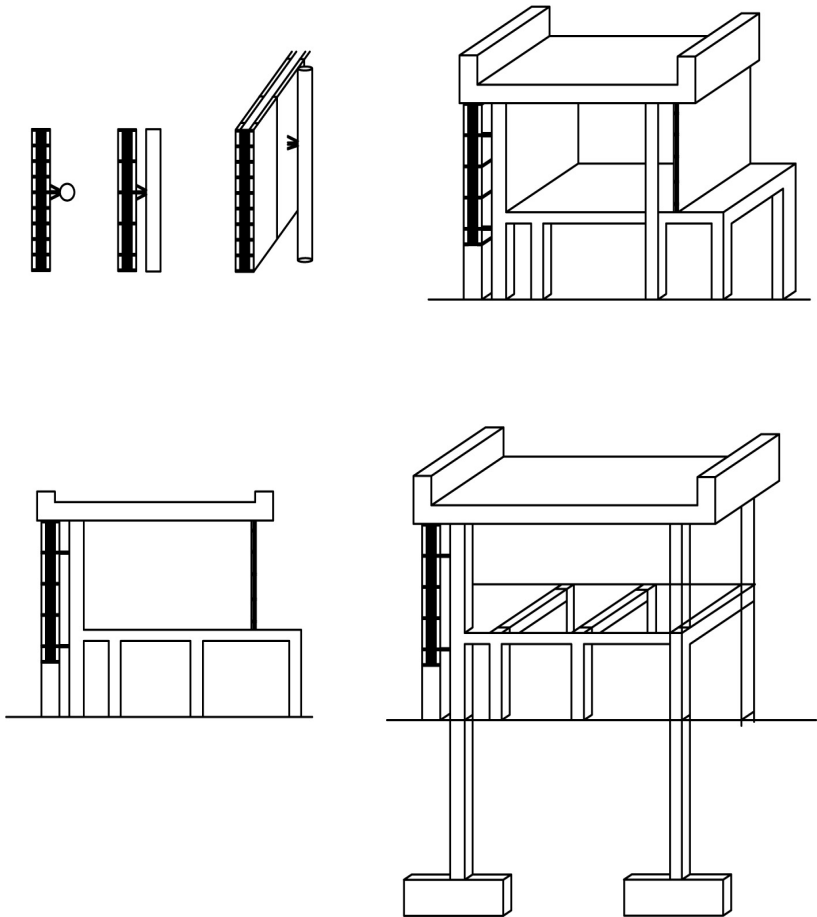
THE SECTIONAL QUALITY OF THE DESIGN HELPS FURTHER PROMOTE THE CONCEPT OF MOTION. ACTIVITIES ARE OVERLAPPING AND SPACE IS EXPERIENCED DEPENDING ON VIEW POINT. THE TRACK SPLITS THE BUILDING GIVING THE OPPORTUNITY TO HAVE A CORE OF SERVICE SPACE ON THE FIRST FLOOR WHILE HOSTING AN ATRIUM OVER LOOK SPACE UNDER THE TRACK ON THE SECOND FLOOR.

THE TRACK ITSELF NEEDS TO HAVE ITS OWN SHELL SPACE. THE TRACK IS SURROUNDED BY A TEMPERED GLASS BOX THAT IS ENTERED ON THE THIRD FLOOR BY GUESTS VIA ESCALATOR OR ELEVATOR. IT WAS IMPORTANT TO MAKE THE TRACK VISIBLE FROM THE ENTRY AND ALWAYS HAVE PRESENCE THROUGHOUT THE BUILDING. HEARING AND SEEING THE CARS ABOVE KEEPS ENERGY FLOWING WITHIN THE STRUCTURE.

LARGER GALLERIES ARE OPEN TO ABOVE TO PROVIDE A GRANDER STAGE FOR MORE CARS. MANY AUTOMOBILE MUSEUMS WILL USE LARGE ROOMS TO DISPLAY ENTIRE COLLECTIONS, FOR EXAMPLE A DEDICATED TO THE EVOLUTION OF THE CORVETTE - HOLDING OVER TEN CARS IN ONE SPACE OPEN AND VISIBLE FROM DIFFERENT SPOTS IN THE MUSEUM AT DIFFERENT LEVELS.

MATERIAL CHOICES INCLUDE MOSTLY CAR LIKE TEXTURES - METAL PANELS, GLASS, AND ALUMINUM. THE PAINT COLOR ON THE WALLS IS A NEUTRAL LIGHT GRAY, ALLOWING THE SPACE TO ILLUMINATE FROM THE SKYLIGHTS ABOVE. IT IS IMPORTANT THE WALLS FEEL MONOLITHIC AND SERVE AS A BACKDROP TO THE CARS. THE ROOF ITSELF HAS A PRESENCE YET FEELS LIGHT AS IT "SITS" ABOVE THE COLLECTION OF CARS. THE CURVES HELP DEFINE DIFFERENT SPACES, PARTS OF THE CEILING ARE LOWER FOR MORE INTIMATE EXPERIENCES WHILE OTHER PARTS OPEN UP TO EXPRESS THE MAGNITUDE OF THE SPACE.

THE FINAL PRODUCT WAS TRULY THE EVOLUTION OF MY INITIAL CONCEPT. THE PROJECT TOOK A LIFE OF ITS OWN AND BECAME ELEGANTLY SIMPLE. THE ROOF PROVIDES THE ATMOSPHERIC EXPRESSION MAKING THE ARCHITECTURE PREVALENT - WHILE SIMPLE WALLS ALLOW THE MUSEUM TO BECOME THE BUILDING'S SOUL.



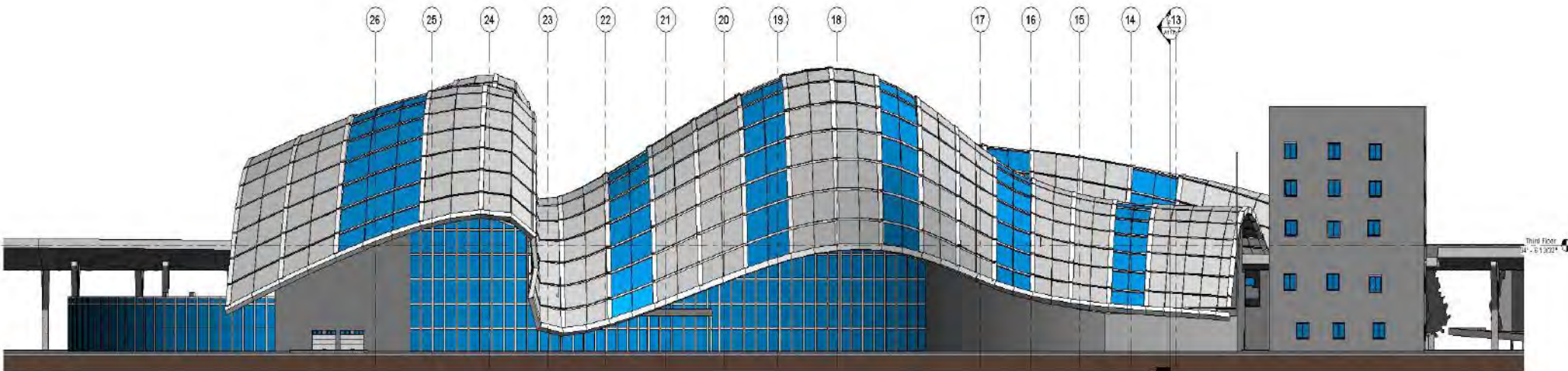
THE TRACK AND BUILDING CONNECTION BEGAN TO DRIVE THIS PROJECT. AT FIRST, THE TRACK WAS INTENDED TO BE ON THE ROOF OF THE MUSEUM AND THEY WOULD SHARE A FOOTPRINT, SHARING ONE STRUCTURAL FOOTPRINT. HOWEVER, AS THE DESIGN DEVELOPED, AND THE TRACK AND THE MUSEUM TOOK THEIR OWN IDENTITIES - EACH NEEDED ITS OWN STRUCTURAL SYSTEM.

HOW THE TRACK CAN BE SUPPORTED ALONG WITH THE STRUCTURE AND WALL SYSTEM OF THE BUILDING HAD TO BE WORKED OUT. BECAUSE OF HOW MUCH LAND IN PLAN THE TRACK TAKES UP, IT WAS IMPORTANT TO ELEVATE THE TRACK THIRTY FEET ABOVE GRADE USING A CAST IN PLACE COLUMN WITH A DEEP FOOTING. USING COLUMNS TO HOLD THE TRACK AND PREFABBED TRACK SECTIONS MADE FROM FLOOR PLATES ALLOWED THE FREEDOM OF SPACE BELOW THE TRACK.

THE MUSEUM ITSELF HAS A BASIC FLAT SLAB SUPPORTED WITH CONCRETE BEARING WALL WITH COLUMNS ON LONG SPANS. MAINLY BEING A SMALLER FOOTPRINT AND ONLY THREE FLOORS, THE SLABS CAN BE SUPPORTED BY THE WALLS BELOW. THE ROOF WOULD HAVE ITS OWN SUPPORT SYSTEM INDEPENDENT OF THE CONCRETE FLOOR SLABS. USING BASIC JOISTS TO SPAN FROM COLUMN TO COLUMN WILL KEEP THE STRUCTURE LIGHT AND SIMPLE; ALLOWING THE CARS TO TAKE CENTER STAGE SIMILAR TO THE BMW MUSEUM. TRUSSES WOULD BE USED TO CAPTURE THE LOAD FROM THE GLASS AND METAL ROOF. THE TRUSSES CARRY THE LOAD ALL THE WAY TO THE GROUND, AND ONLY NEED TO SUPPORT THE SELF WEIGHT AND SNOW LOAD OF THE ROOF.

THE ROOF IS MADE FROM TEN BY TWENTY ROOF PANELS THAT WHEN ARRANGED AT THE PROPER ANGLE NEXT TO THE ADJACENT PANEL - WILL CREATE THE FORM OF THE BENT ROOF. THE STRUCTURE BENDS AND CATCHES THE ROOF AT EVERY MULLION.





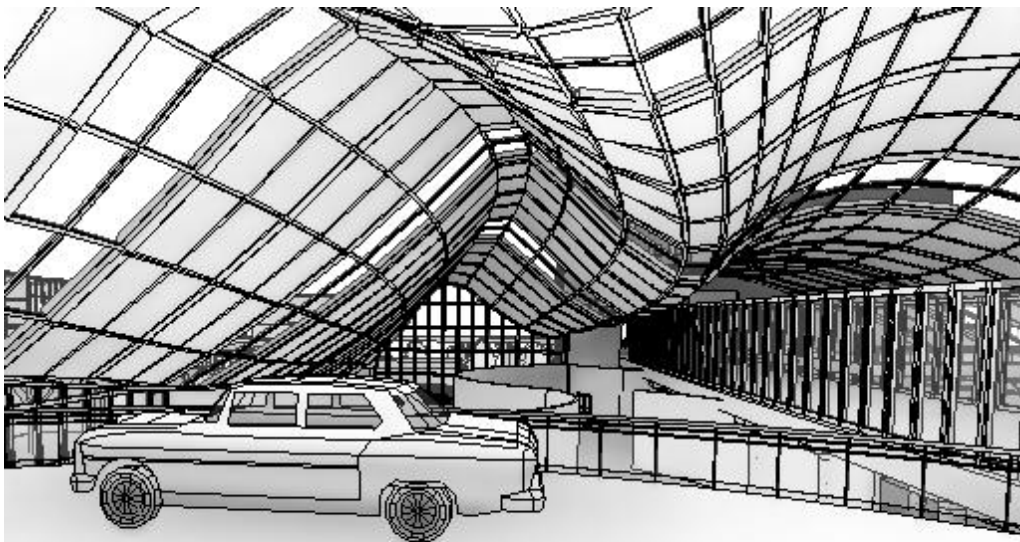
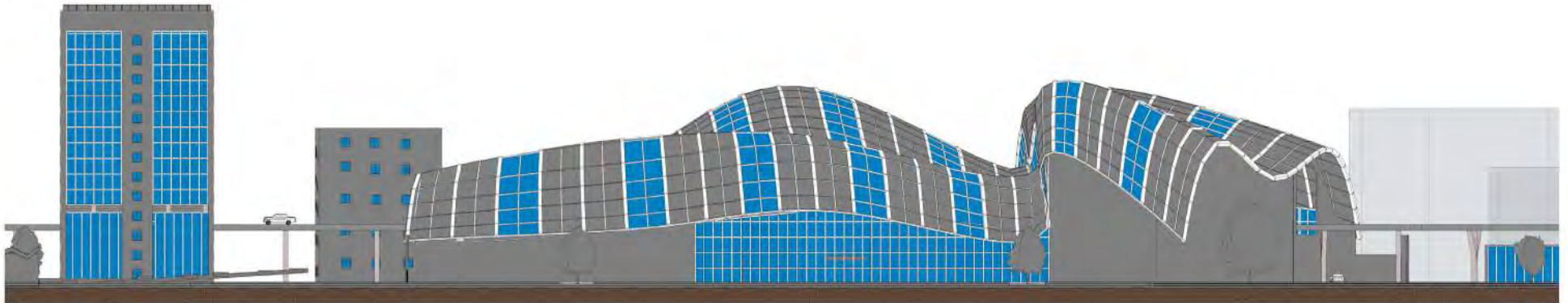
SOLVING THE NECESSARY FORM TOOK DIFFERENT ATTEMPTS - USING A GRID THE ROOF WOULD BE COMPOSED OF INDIVIDUAL PANELS THAT ARE HELD TOGETHER IN A PINNED FRAME. BECAUSE THE TRACK IS RUNNING THROUGH THE MIDDLE GAVE THE ROOF ITS FORM. THE MIDDLE HAD TO BE TALL ENOUGH TO HOLD THE TRACK WHILE THE SIDES COULD DRAG DOWN TO RESPOND TO THE SITE AND PROVIDE SHADE. THE IDEA OF A TENT OVER CARS WAS MY CONCEPT - LIKE THE OLD SCHOOL CAR SHOWS UNDER TENTS IN AMERICA. HOW THIS BUILDING “LOOKS” WAS VERY IMPORTANT AND HAD TO BE CLOSELY MONITORED THROUGHOUT THE PROCESS.

TURNING THE IMAGE ON THE LEFT - INTO THE IMAGES ON THE RIGHT BECAME A REAL CHALLENGE. THIS PROJECT REQUIRED TEDIOUS STUDY SECTIONS THROUGHOUT THE BUILDING. EACH RIB HAD TO BE CONSTRUCTED INDIVIDUALLY TO CREATE THE VOLUME AND CREATE A SMOOTH CURVE. THIS PROJECT PUSHED REVIT TO THE LIMITS OF WHAT IS POSSIBLE WHEN ROLLING MASS AND PLANES, YET THE GOAL OF MY THESIS IS TO CREATE A DYNAMIC WORK OF SITE DRIVEN ARCHITECTURE - THIS OFTEN INVOLVED TESTING HOW THE BUILDING FORM BEST REPRESENTS THAT.

TO MAKE THE TRACK ALONE REQUIRED PRECISE GRAPHING OF POINTS AT DIFFERENT LEVELS. USING CLASH CONTROL AND 3-D SECTION VIEWS ALLOWED THE PROCESS TO TEST WHAT ELEVATIONS AND CURVES WERE WORKING AND WHAT WAS NOT WORKING; THIS PROJECT WOULD NOT BE POSSIBLE USING 2D GRAPHICS ONLY. TO GET THE FULL EXPERIENCE OF THE DESIGN, THE THIRD DIMENSION IS NECESSARY TO UNDERSTAND THE SPACIAL QUALITY OF THE MUSEUM.



## DESIGN DEVELOPMENT





TO CONCLUDE, THE AMBITION OF THIS THESIS WAS TO PROVE AN ARCHITECTURE TYPOLOGY EMBRACED BY MOTION AND MOVEMENT. CAPTURING STATIC ENERGY IN A COMPOSITION OF MATERIALS. THE CHALLENGES BUILT AS THE PROJECT PROGRESSED. THE MUSEUM IS INTENDED TO HELP THE GROWTH OF DOWNTOWN DETROIT. THE SITE IS CURRENTLY A VACANT PARKING LOT ADJACENT MORE VACANT PARKING LOTS WITH A HANDFUL OF EMPTY MIDRISE. THE MUSEUM WOULD BRING PEOPLE INTO A NEW AREA WHICH WILL GROW THE NEED FOR MORE STORES, HOUSING, JOBS, AND PUBLIC TRANSPORTATION. THE DIRECT VISUAL LINK TO TIGER STADIUM SETS UP A DATUM JUST NORTH OF THE CENTRAL CORE OF DETROIT. THE CITY IS GROWING TOWARDS THE WATER, THIS EXPANDS THE BOARDERS CLOSER TO THE HIGHWAYS AND BRINGS THE SUBURBS OUT OF A DEAD ZONE.

THE FORM OF THE BUILDING AND THE PROGRAM WITHIN HAD A DIRECT CONNECTION TO THE HISTORY OF DETROIT AND THE AUTOMOBILE IN AMERICA. THE ROLLING ROOF REPRESENTS THE CAR IN MOTION AND THE CHANGE IN FORM OVER TIME TO A MORE ROUND CLEAN SHAPE FROM A BOXY BOAT. THE RACETRACK IS SOMETHING THAT CAN BE UNIQUE TO DETROIT. GRANTED IT IS NOT A SPEEDWAY - MEANING NOT INTENDED FOR ANY SORT OF TRUE RACING, RATHER AN ENJOYABLE LAP HIGH ABOVE THE GROUND IN A HISTORIC CAR. PEOPLE BELOW CAN START DEVELOPING THE CITY BLOCK FOLLOWING THE TRACK. IT COULD BE A NEW “PART” OF DETROIT, HELPING RESHAPE THE IDENTITY OF THE CITY.

WITHIN THE NEXT TWENTY YEARS - DETROIT WILL RESHAPE AND REIMAGE ITSELF AS SOMETHING NEW. THIS IS HAPPENING ALL OVER THE COUNTRY WITH THE SPREAD OF GENTRIFIED AREAS OF ONCE “BAD” PARTS OF CITIES. PLACES LIKE BROOKLYN, QUEENS, OAKLAND, SAN DIEGO, CLEVELAND, PITTSBURG, AND EVEN BOSTON HAVE TURNED OVER NEIGHBORHOODS TO A YOUNGER WORKING CLASS MOST IN THE TECHNOLOGY FIELD OF SOME SORT RANGING FROM ARCHITECTS TO DIGITAL ENGINEERS. THE MIDWEST PRODUCES ENOUGH TALENT TO FILL DETROIT WITH JOBS. CHICAGO IS ONE OF THE MOST POPULAR CITIES FOR PEOPLE RIGHT OUT OF COLLEGE IN THE MIDWEST, BUT WITH RAISING RATES IN REAL-ESTATE PEOPLE ARE LOOKING TO MOVE. FOR START UPS - DETROIT HAS BECOME A HOME FOR MANY RECENT GRADUATES FROM MID-WESTERN COLLEGES. THIS PROJECT SHOULD SERVE AS AN IDEA FOR THE ARCHITECTURE THAT CAN INSPIRE AND CREATE EMOTION. THE BUILDING IS BUILT WITH MOTION AND WILL BRING A NEW TYPE OF ARCHITECTURE TO FORM A NEW TYPE OF CITY. MORE GREEN SPACE - MORE PUBLIC ZONES - AND MORE MODERN MATERIALS WITH CLEANER MORE EFFICIENT BUILDINGS. THE WORLD WILL TAKE NOTICE LIKE BILBAO - AND WANT TO SEE WHAT DETROIT IS ABOUT.

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