I, Kirstin S. Farchaus, hereby submit this original work as part of the requirements for the degree of Master of Architecture in Architecture (Master of).

It is entitled:
Relief Airport: [Re] Incorporating Sense of Place and Wonder Into Airport Terminal Design

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Relief Airport
[Re] Incorporating Sense of Place and Wonder Into Airport Terminal Design

A thesis submitted to the Graduate School of the University of Cincinnati
in partial fulfillment of the requirements for the degree of

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by

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Abstract

Over the past four decades, airports have been reduced to uninspired, highly sterile and locally irrelevant people processing machines, which helped create the jaded, unengaged mentality of today’s air traveler. This thesis proposes a new small satellite passenger terminal as a study of experience in architecture, and investigates how design can rekindle the thrill of airports and flying. Its Boston location will relieve Logan International Airport of the majority of its small airline services, as well as its commuter, corporate and charter flights. The design approach is based in studies of place, perception, and phenomenology; revealing the unseen facets of airports in engaging ways; and creating a positive and memorable impact on its occupants. A heightened sense of interaction with, and awareness and perception of, one's body and environment foster the new positive experience of the passengers and the employees (as previously passive individuals) by engaging the body, its senses, and memories with the place that is the building and the site.

The terminal design is specific to Boston in its character, features spaces that are at the human scale, engaging and pleasing to the senses, soothing to the nerves and that exploit the fascinating simultaneous dualities of the airport as they continuously converge: that it is both transient and static, active and dormant, of the earth and the sky, and housing arrival and departure. Through the explorations of this thesis, the airport becomes a part of the journey, a place to explore, enjoy and spend time in without stress or aggravation, and is considered a prelude or a conclusion to the adventure and wonder of flight.
I have always enjoyed travelling, and am especially enthusiastic about flying. Having travelled to various parts of Europe and Australia, both with family and educational programs, I have flown periodically for most of my life. However, it was always the destinations that I was excited about, and truly had never given airports a second thought, as is the case with the vast majority of all travelers. After arriving at the University of Cincinnati, I was hired to intern at a firm in Melbourne, Australia. This opportunity was not only a departure point for my life in general, it also saw me spending significant amounts of time on airplanes and in various airports due to connections, customs, and baggage claims. Through spending such extensive time in airports both domestically and abroad, I came to the sad realization that were it not for signs, advertisements, and accents or languages of people I heard around me, I wouldn’t know what country I was in. The international airport in Sydney (SYD) was interchangeable with the one in Los Angeles (LAX)—both of them massive, impersonal and sterile. Not only was there no sense of place with regard to the physical location of the airport, I also came to understand exactly why everyone gave me pitying looks when I mentioned how many layovers I had or how long I spent en route. In my many layovers and delays, I became acutely aware of the fact that airport experiences are by far the worst part of any trip. Not only are they uncomfortable and unpleasant for all of a traveler’s senses, but it is nearly impossible to experience or even perceive anything but their blunt functionality. Airports squelch any intimation of excitement of an impending trip rather than building on it. They stick in our memories as negative, uncomfortable, dull, or frantic experiences instead of as the fascinating convergence points of thousands, even millions, of travelers.

From these realizations, I tried to remember all of the other airports I had recently been through, both domestic and international, and realized that they all were shockingly and undeniably interchangeable, and none provided any respite to the weary traveler. The destination airport should not be an identical copy of the origin airport, and the experience of air travel should not be uncomfortable and miserable, especially if one is traveling in the “cattle class” of economy, as most people are. Through sensory stimulant perception, our experiences become memories. Why then, when there is such ripe opportunity for positive experience at airports, can’t they live in our memories as vital places? An airport can become an oasis of travel, whether one flies very regularly or only once in a lifetime. Anxiety could potentially be quite low in an airport: one isn’t driving, one doesn’t have responsibilities outside of getting on the plane. So why are air passengers unable to just relax and enjoy the ride? Perhaps with a new type of airport, they could.
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Since the invention of the airplane and the first flight, commercial flying has increased in popularity exponentially. With that exponential growth in popularity came a necessity for airports to be more than the simple structures on the edge of airfields that they once were. Once international service was offered to the public, airports became international gateways that had to serve and process hundreds, then thousands and now millions of passengers a year. When the processing numbers were lower, architects could focus on form to create terminals that excited the public. Eero Saarinen was one of many who revolutionized the look of airport architecture with his TWA Terminal at JFK International Airport in 1962. When the numbers of passengers grew to massive proportions, airports had to focus more on how to process massive throngs in the most efficient way possible, which called for vast, open spaces often with multiple levels. Then, after 9/11, security took precedence over any other function of the airport, and efficiency combined with surveillance was the most important aspect of any airport's design. In order to accommodate this heightened security, combined with extensive and colossal open spaces, a common language for the architecture of terminals has developed, which has caused airports across the globe to be designed in similar manners, with an almost complete disregard for the human beings who pass through these superstructures.

This thesis will weave together several different strands of research to help address this situation, from sense of place (or lack thereof), the perception of the human body and its senses, the creation of memory, to globalization and the opportunities already hidden within airports today. These concepts will be brought together to show that when utilized and maximized in appropriate ways, a vital place that lives in the memories of visitors as a positive experience can indeed be born in the form of a new airport. With regard to the sense of place, Edward Relph, Christian Norberg-Schulz, and Marc Auge will be discussed, along with Liane LeFevre and Alex Tzonis through the lens of critical regionalism. Robert Sokolowski and Martin Heidegger will be referenced with regard to bodily perception and comprehension of surroundings. A discussion of the fascinating dichotomy of stillness to motion that occurs within airports will be delved into through the work of David Bissell and Gillian Fuller and discussed as an opportunity for engagement and deeper perception. This then leads into a study of airports and the qualities of air travel today, which will expose their inherently positive (albeit hidden) qualities which are foregrounded in the writings of Alain de Botton. Finally, a discussion of globalization's effects on all of these elements will be brought into focus through the musings of John Kasarda and Greg Lindsay. The overall goal, then, is to use these sources to come to understand how it is that architecture can stimulate our senses and memory by exploring, if not exploiting, the dichotomies that already exist within airports, and the traits that made travelling by air, at one time, a thrilling experience, to create a new wonderful standard for the traveling experience.
**Problem**

Over the past three decades, airports have been reduced to uninspired, highly sterile and locally irrelevant people processing machines. The consequence of this is the jaded, disengaged attitude of today’s air traveler. Because the basic purpose of an airport’s existence is as a means to process people, planes and goods in the most efficient manner possible, the desire to create a sense of arrival or departure, a first or last impression, has become almost extinct within airport officials and designers. There needs to be an understanding that creating a lasting impression and functionality are not mutually exclusive concepts and that these goals can work together to create a new generation of airports. In fact, an airport that leaves a lasting, positive impression on travellers will indeed become the airport of choice, as it is very rare for an airport experience to be positive, let alone trip-defining.

This problem set is relevant across a vast majority of airports, and can especially be seen at Boston’s General Edward Lawrence Logan International Airport. Logan is a prime example of placelessness in the extreme and the fact that it has been operating beyond its capacity for several years now contributes to the lack of comfort and personal space for passengers using it as a gateway. Not only is Logan overcrowded, but its user-friendliness, character and individuality have also fallen victim to the trends of bygone eras, necessity of extreme functionality and sheer scale of program. Beyond this, it is not at all relevant to Boston, or more importantly, its location and its specific site just outside of Boston. Logan International Airport is a prime candidate for an architectural intervention to re-establish a sense of place and arrival for the gateway to Boston, and a sense of wonder and engagement for the air travelers and airport employees.

![Figure 3_ The current state of airports around the world.](image)
A Brief History of Aviation and Terminal Design

The ancient Greeks told the story of Icarus’s ill-fated flight. Sheherezade told stories involving flying magic carpets. DC Comics creatives gave Superman the power of flight. Even today we tell each other “the sky’s the limit.” The thought of flying has always enticed humans and captured our imaginations. Through the 1800’s, men were experimenting with glider planes, but Wilbur and Orville Wright changed everything when they succeeded in completing the first powered flight in Kitty Hawk, North Carolina on December 17, 1903. From this point in history, aeronautics developed at a phenomenal rate. For example, the United States’ first commercial flight was just eleven years later in 1914 over Tampa Bay, Florida. The first international flight service began in August of 1919 in Europe, and a mere 10 years later in 1929, a rapidly growing Pan American Airways had upwards of 1200 employees and was operating out of 71 different airports. This is only a sampling of how quickly air travel developed at the beginning of its existence. Air travel, and consequently the airport as a building type, was and still is one of the most rapidly growing and evolving commodities of the past century, and it certainly isn’t showing any sign of slowing down.

By World War I, the utilization of airplanes helped not only to refine aviation technologies but made planes more important to the general public, as they were integral in the fighting and the ending of that war. After the war ended, bombers were refitted with upholstered chairs to accommodate up to an impressive 26 passengers, a previously unprecedented number to be flying in one plane at one time. The first “airports” were merely a collection of sheds dispersed around the perimeter of muddy airfields, but Europe set the precedent by introducing the concept of the air passenger terminal as a relatively comfortable building featuring specifically designated ticketing and waiting areas. Famous American pilot and aviation enthusiast Charles Lindbergh witnessed this new building type firsthand after making his first transcontinental flight in 1927, and saw that not only was flying growing very fashionable in Europe, but also that hundreds of thousands of Europeans had already flown. He came to realize that the United States was falling rapidly behind the times, and upon returning home set out to convince his home country of the value of investing in airport and airline development, as well as helping to fund the efforts himself. Charles Lindbergh’s enthusiasm (along with that of foresighted politicians and other famous pilots) for air travel and dedication to the necessary ground facilities to provide service for the planes, crews and passengers is largely responsible for the initial

4 Ibid., 13.
The late 1920s proved to be critical in the development of the aviation industry, with air travel being seen as simultaneously sexy and risky, and with huge draw for financial investors and corporations. An example of this early era is one of the first comprehensively planned airports: Ford Airport in Dearborn, Michigan. Here, efficiency was already beginning to play a major role in airport design. However, in these early airports, the efficiency was not so much for pure processing purposes as it was to show an intrigued, if doubtful, public that air travel was indeed safe and worth their time and money, in a time when several aircraft crashes were convincing them that air travel was dangerous. Nonetheless, by 1930 there were more than 60 passenger airlines operating in the U.S. alone, a number truly indicative of the boom of air travel that would continue to grow exponentially through the next century.

Through the 1920s and 1930s, airports and airplanes continued to be developed, and as technology increased, so did the comfort provided by terminals. Although, the decreasing number of fatalities associated with air travel didn’t hurt public opinion either. During this time, airports were designed largely in the Art Deco style, often with major rail terminals as precedents, and featured a clean and streamlined aesthetic developed from the look of the DC-3 propeller planes (the most popular planes used for passenger transport in this era). Air passengers during this era were still predominantly very wealthy individuals, and planes were slowly moving past being just ex-WWI bombers retrofitted with chairs, and in-flight service continued to improve with the addition of Stewardesses to the flight crew. One of the first breakthroughs of airport design came from Pan Am’s visionary founder and chief executive Juan Trippe, who realized the importance of the airport terminal as a building type and wanted the terminal to be more than simply a ticketing and waiting depot, but a preview of the adventure of flight. He and his architects Delano and Aldrich made this concept into a reality at Pan Am’s Miami Terminal. This terminal was sleekly designed on both the interior and exterior, with streamlined curves that reflected the aerodynamics of the planes it serviced. It also featured comfortable wicker furniture in the waiting lounges, which spoke to the beach location in Miami. Furthermore, it took into account people’s curiosity about flight: there were balconies for waiting passengers to watch the movements of the airplanes.

In the 1930s, President Roosevelt furthered the design of air terminals, as well as their position in our society, by implicating airports in the Work Projects Administration, or WPA. The federal government helped fund numerous airport expansions along with new terminals, with the most impressive federal funding being the $27 million dollars granted to New York mayor Fiorello LaGuardia for a new airport in Queens. All the while, air passenger numbers continued to climb, airplane technology continued to improve, and with the continued growth and dispersion of the population of the United States, travelling...
by air started to seem not only viable, but also the best choice for long distance journeys. This was further supported by politicians making highly publicized flights to various cities and their airports for campaigns, instead of the traditional (and slower) train campaigns. Speed and efficiency was starting to come into play, and airports had to keep up with this changing trend in the minds of the public and its authority figures. In 1939 the massive LaGuardia Airport proved to be another breakthrough in airport design history with its 558-acre site and four runways. The sheer size of the area that this airport covered was quite simply unprecedented at the time, and would set the bar for future large-scale airport development projects.

Following World War II, the popularity of air travel got another massive boost due largely to the fact that airplanes had again played a significant role in fighting and winning the war. The general public also tended to have more disposable income than in the past, which meant that many family vacations no longer consisted of long car rides to national parks, but thrilling flights to new, exciting locations. The steady growth of business during this time also meant that there was a huge increase of men flying for business purposes. Flying also started to appear more in movies than before, which brought it even closer to the public eye and heart. By 1946, 12.5 million American passengers had flown domestically, and ten years later an impressive 40 million had flown. The airports of the 1930s and early 1940s simply couldn’t keep up with the steadily climbing numbers of air travelers. Lowering costs, increased desire for mobility and increased international flights also helped popularize air travel through the fifties, and new building technologies began to allow architects to explore forms beyond the simple terminals of the past, and a necessity for a large number of gates further pushed the frontiers of airport design and capacity.

Baltimore’s Friendship Airport was one of the first to truly attempt to accommodate the ever-growing throngs of air passengers, with over an acre of internal floor area.

Probably the most defining era of airport design was the end of the 1950s and the early 1960s, an era commonly called the “jet age” as a result of the dramatic new development in airplane technology known as the jet. Jets not only helped shoot air travel to the foreground of public attention, but also inspired the aesthetic and culture of the entire era, with everything from furniture to vehicles aspiring to its sleek new look. The jet also was symbolic of all things modern, sexy, mysterious and fast. For the first time the concept of “jet-lag” entered the english lexicon, and the “jet set” referred to fabulously wealthy and trendy international travelers. Flying entered into pop culture more than it ever had before with books, movies and songs all dedicated to it. Sex was used more heavily in marketing, with airlines dressing their stewardesses in snappy uniforms and posing them on and around the sleek jets. The introduction of the concept of the mile-high club into popular culture meant that the sexiness of air travel went much further than airline marketing as well. However, all of this enthusiasm for flying, international intrigue and leaving your troubles behind waned by the mid 60s, as regular, smooth and now uneventful flights became commonplace. This affected airport architecture, and architects and designers looked to re-capture the amorous feelings towards flying with sexy and
aerodynamic forms to match the sleek look of the jets, a real departure for architecture in general from the past eras. “If movies weren’t sufficient, the jet terminals themselves would become environments of pure sensation and supply the missing narrative: a sense of movement, transition and excitement that flight itself no longer provided…the spirit of flight, inside and out.”

Eero Saarinen was among the biggest proponents of new exciting airports to reignite the enthusiasm for air travel. His TWA terminal at JFK airport featured swooping forms reminiscent of a bird’s wings, and the new terminal at Dulles Airport outside of Washington, DC captured the weightless feel of flying with its panoramic windows and massive, floating roof. These are the prime examples of jet age architecture at its finest. Another key example is the Pan Am terminal, also at JFK. Appropriately called the “WorldPort” as the home base for Pan Am’s international jaunts, it was designed by Ives, Turano & Gardner Associated Architects with Walter Prokosch of Tippets-Abbett-McCarthy-Stratton. Its roof structure resembled a sort of flying saucer in that it was a massive disc which allowed for a grand cantilever around the entire circumference of the passenger terminal. PanAm’s jets would park with their noses under the cantilever, and this simple engagement started to blur the line between the edge of the terminal and the airplane and a passenger’s adventure. This was a thrilling time for design, as architecture and engineering worked together to create marvels of the modern day. These buildings worked as they were intended to, and also acted as “three dimensional billboards” for airlines, advertising the excitement that could come with flying. Even people who weren’t flying were intrigued and came to airports to eat in their restaurants or just soak up the atmosphere.

The height of the jet age fueled the public’s desire to take to the skies. International and multi-location business made business travel much more commonplace, and air travel was accessible to almost anyone who wanted to fly. With the new exciting architecture as a fitting bridge for their upcoming journey into the clouds, the one thing that the architects didn’t account for was that the already vast numbers of fliers would continue to grow exponentially. By the end of 1968, 154 million airline tickets had been purchased in that year in the U.S. alone. With these passengers came unbelievable traffic and congestion at the small if beautiful terminals of the preceding decade. The jumbo jet was introduced in 1970 to accommodate these passenger numbers. Development of international businesses and hotel chains meant one could travel abroad without ever leaving the

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6 Ibid., 177.
7 Ibid., 202.
8 Ibid., 219.
comforts of home. Sadly this also helped lead to the sense of monotony across cities and nations and in their gateways, a feeling that continued to grow as the airport capacities continued to grow, and people were moved from one sealed container into another. This was the beginning of globalization: the beginning of the death of the romantic airports of the early 1960s.

Into the 1970s and 1980s airlines had to expand or relocate in order to accommodate unprecedented numbers of travelers, and security also had to be intensified from its almost non-existent state in the 1950s and 1960s because along with the rise of passenger numbers came a rise in the number of attacks on airplanes: bombings and hijackings. The passenger had previously been treated as royalty but was now being treated as a potential suspect until clearing security. Airport design was mimicking the tenseness of the times by being significantly less open both between interior spaces and from the exterior, and featuring a continued increase in efficiency. “The free standing terminal lost its architectural identity. The martini-modern aesthetic of the 1960s gave way to an ad hoc style of hyperextended breezeways.”9 By the late 1970s, among the other strife that was erupting around the world, corruption within the airlines led to the passing of the Airline Deregulation Act of 1978. The main effect of the Airline Deregulation Act on terminal design was that fares and routes were now up to the airlines. Airlines had to compete for routes and passengers, which meant that fares dropped creating a dramatic increase in passengers. This act was also responsible for the introduction of the airline hub, and therefore the layover. Both of these effects necessitated massive expansions to terminals across the country, and indeed the world, to compensate for these new unprecedented passenger numbers who were now spending much more time in terminals.10

Through these series of events, air travel had been completely reduced to a boring, unpleasant and completely apathetic experience. A prime example of this trend of airport architecture is the Midfield Complex at Hartsfield-Jackson Atlanta International Airport, opened in 1980, which features 7 massive parallel concourses, and is connected underground by a “people mover” tram.

Another wave of attempts at bringing back the grandness that had once belonged to the airport terminal was made in the 1990s, but by this point the sheer scale of airports made it increasingly difficult to create any sort of memorable experience, and the forms of the buildings were often reduced to literal imitations of the natural landscape around them (i.e. Denver International Airport in 1995 by Fentress Bradburn Architects). The challenge of creating a pleasant airport was exacerbated further with the awful events of September 11, 2001 and the ensuing plunge into the attempt at ultra secure terminals with the implementation of the Transportation Security Administration (TSA). All of these elements combine to further remove the passenger from an enjoyable airport and flying experience. Even today, passenger numbers continue to climb and security issues remain very real, which perpetuates the challenges of designing a user-friendly airport. However,

9 Ibid., 221.
some very large scale airports have successfully retained some degree of character, such as Norman Foster’s 2008 Beijing International Airport Terminal 3, which is an impressive 5km long, but somehow isn’t stale. The same goes for Madrid Barajas Airport by Richard Rogers Partnership with Estudio Lamela in 2006, which isn’t quite as large as Foster’s Beijing terminal, but is still of a grand scale.

What is the next step in airport architecture? Can the passenger be lured back into the airport, the travelling, and the flying experience? It is not a hopeless cause, and this thesis aims to explore ways to bring the humility, life and human scale back into what was previously a wonderful airport experience. It is the position of this thesis that as long as people need to fly, they should have an enhanced experience from curb to gate to prepare them for their departure into the sky, and to receive them graciously at their destination.
Since the beginning of man’s existence, we have wanted to take to the skies and fly high above the earth, defying gravity and all other mortal limitations. There was never a time mankind hasn’t dreamt about the amazing possibility of soaring through the air: ancient people wrote myths about it, artists depicted it, and authors have published great works of fiction about it. Even today, when one has dreams featuring flying, it is meant to symbolize freedom and grand perspective. The fantasies were finally actualized with the first powered flight in 1903. The technology of flight has come a very long way in the short time that it has been in existence, from that first flight where staying off the ground for a couple of minutes was counted as an epic success, to only just over a century later, when the double decked Airbus A380 can take us halfway around the world safely, and in relative comfort, in about 12 hours. Although the reality of flight has come so far in such a short time, today flying has become commonplace, unexciting, and doesn’t enthrall the senses or the imagination of the general public. The state of the word’s airports is largely to blame for this regrettable suppression of mankind’s love of the skies and the technologies that made reaching them attainable.

The goal of this thesis is to revive the wonder that once surrounded air travel by designing a new airport facility. I intend to explore the many fascinating dualities of the airport, among which is the intriguing fact that airports are at any given moment a host to both vibrant and often chaotic mobility as well as completely static life (a motionlessness that is also often quite hectic in its very essence). Beyond that, the fact that airports have become placeless, as Rem Koolhaas terms it, “junkspace”1 does not connect with the thrilling event that is thrusting down the runway at 170 miles per hour and ascending into the clouds. Koolhaas says that “[j]unkspace is what remains after modernization has run its course, or, more precisely, what coagulates while modernization is in progress, its fallout.” This is precisely the case for the modern airport terminal. However, although air travel has been reduced to being utterly mundane, it still contains that element of adventure, of taking your life into your hands when you surge down the runway. Also, many people are still afraid to fly, which is why I will also explore the soothing and calming effects that architecture can have on the body, which could be a perfect remedy for the otherwise hectic motionlessness.

More specifically, this thesis proposes a satellite terminal for Boston’s Logan International Airport. The “client” for whom this facility is designed is the city of Boston, as well as MassPort. The Massachusetts Port Authority, or MassPort, is not a state agency;

rather it is an independent public authority. MassPort is committed to “promoting economic growth and opportunity, enhancing the quality of life of New England residents and protecting the freedom to travel safely, securely, efficiently and cost-effectively.”

MassPort is the organization that operates seaports and airports in eastern and central Massachusetts, mainly the port of Boston, and consequently oversees the operation and development of Logan. On their website, they further state, “whether you are flying for business or pleasure, connecting with friends, family or clients… or simply commuting to work each morning, MassPort is here to serve you…to give you a safe, comfortable and convenient travel experience whatever your transportation needs.” In this sense, MassPort’s mission aligns directly with the aims of this thesis, albeit in a much more basic sense. The end client that MassPort is concerned with is their customer: the person who flies using one of their airports, the business that ships things via one of their terminals. They want to provide the best possible travelling experience because Logan has consistently been ranked as one of the worst airports in the nation for congestion and delays. This has negatively impacted its customers’ desire to fly through Logan, which in turn effects its profits. As the operating agent of New England’s main gateway, MassPort is concerned with the appearance and functionality of the entry point to their region. They are pressured heavily to push Logan to be the best version of itself so that it will reflect well on Boston as a major city of the world, and New England as a tourist destination and home.

MassPort positions itself differently from the Massachusetts Bay Transportation Authority (MBTA) or the Massachusetts Department of Transportation (MassDOT) because MassPort has much fewer but larger facilities that they oversee, and therefore must see to it that those facilities run extremely smoothly. Also, MassPort, as Port Authority, oversees the facilities through which people enter and exit Boston. This requires a critical effort of assuring that people's expectations of technology, building state and functionality are met, whereas MBTA is concerned mostly with transportation in and directly around the city of Boston. The MBTA runs the subway trains as well, where MassPort’s authority doesn’t extend onto the planes flying in and out of Boston, but ends at the jet bridge’s furthest reach, which makes the customer’s experience within their airport that much more important to them. Although the MBTA certainly is concerned with their T subway stops, they are more concerned with running an efficient and timely train service, and that is what their customers are most concerned with as well (not to mention that people spend significantly less time at T stops than they do at airports).

The other tiers of clients with whom this thesis is concerned have much different goals than MassPort. A commuter airline, such as Porter Airlines, is dedicated to giving first-rate service to its busy and often important clientele. Porter Airlines is a relatively new airline that is concerned with providing superior service with style and excellence, with a brand promise of “flying refined,” they “offer you convenience, speed, and seamless service

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in your short-haul air travel. The Porter travel experience is simple, hassle free and dignified, reflecting the days when flying was fun, exciting, and a part of the journey to look forward to.”⁴ This client also aligns wonderfully with this thesis’s goals, and is set apart from its competition by catering specifically to business and short haul fliers, serving only a select few airports, and is most concerned with providing the best possible flying experience, as opposed to making the most money (although profits will be a result of the airline’s increasing popularity because of their attention to service). Beyond these small airlines, this thesis is concerned with the well being of the employees of the airport and ground and air crews of the airlines and airport, as they directly impact the fliers’ experiences. Of course, the most important end clients are the passengers themselves. Today’s fliers are concerned with the environment, meeting the time requirements of their schedules, and saving money. Their interaction with the airport has fallen almost completely below their radar, and they are most concerned with the length of lines that they will have to endure before making it to their departure gates.

Aviation is a major part of not only Boston’s but also New England’s economy, with Logan alone pumping about $7 billion into the economy in the past year, and employing approximately 12,000 people.⁵ Logan is New England’s largest airport, and is currently the 20th largest airport in the United States with regard to passenger volume and ranked 19th in flight arrivals and departures.⁶ However, Logan is beyond its capacity, with no place to expand, and so it has had to delegate some of its air traffic to several other airports in the greater New England region, with the two main relief airports being Manchester-Boston Regional Airport, located 43.8 miles north of Boston in Manchester, NH, and Theodore Francis Green Airport in Warwick, Rhode Island, approximately 65 miles south of Boston. The Federal Aviation Administration’s (FAA) regional office for New England has opted to continue to delegate air traffic to prevent further congestion at Logan, thereby preventing more delays and consequently more customer dissatisfaction. However, this plan of action removes a hefty chunk of revenue from Boston, something that MassPort would naturally want to return to its jurisdiction. MassPort is ultimately concerned with sustaining (and improving) the economic well-being of Boston and consequently New England, providing the best possible customer service to its travelers and protecting the passengers’ ability to travel safely and cost-effectively.

Although Logan is not a hub for any major airlines, it is the hub for the regional airline Cape Air, and it is the busiest airport that doesn’t serve as a major hub. MassPort would be very inclined to build a relief satellite terminal for Logan located within the greater Boston Metropolitan area, and therefore much closer than any other supporting air service provider to downtown Boston. This new terminal would cater to commuter,

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local and regional flights, especially because Logan is considered a “non-connecting hub.”

Having the satellite slightly removed from the rest of the airport’s facilities would pose no issue, as 90% of Logan’s passengers are “final destination” passengers, in that they are ending their journey in Boston, not connecting to another flight. Also, as of 1999, 54% of Boston’s passengers were business travelers, so to relocate a sizeable amount of that traffic to this new terminal will vastly lighten the load on Logan, freeing it to become a much more efficient and customer service oriented airport, thereby bringing up its national rankings, which are currently surprisingly low.

There are many organizations that would have a stake in a new satellite airport for Boston’s Logan International, besides the people and city of Boston. The Massachusetts Department of Transportation, Aeronautics Division, the Federal Aviation Administration and its New England Regional office, and the Massachusetts Port Authority (MassPort) are among those that would be most involved in the planning process. This thesis focuses on MassPort as the client, as they are the most intimately involved with this terminal in the Boston area and its effects on Logan, the city of Boston, as well as other regional airports. However, reference to the FAA is needed because their regulations will certainly affect the site plan, and in reality they would have final say on the functional design of the airport and its runways. The end clients, of course, are the airlines, passengers, flight crews and airport employees utilizing the new terminal, as it is their experience that this thesis is aiming to improve.

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8 Ibid.
9 Ibid.
Boston’s Logan Airport has reached a crossroads wherein further physical expansion on the present site is not possible due to its location on a peninsula. However, the international, commuter, business, and other regional air travel demands on the airport continue to increase, as previously described. This thesis proposes development of a Relief Airport in Quincy, MA specifically designed to cater to short haul/business and commuter air travelers. The proposed site in Quincy is accessible by the MBTA mass transit system from Logan Airport and metro Boston, as well as highways I-93, which connects Quincy to Boston and points north, Rt. 3, the primary highway from Cape Cod south of Quincy, and Rt. 128, a beltway around metropolitan Boston.

Approvals for this project would need to be obtained from multiple interested parties: the city of Boston, MassPort, Middlesex County, the town of Quincy, Norfolk County, with additional approval needed from the FAA for the site plan and overall design of the new terminal. The only group that would be blatantly excluded from this proposed project would be the general commercially flying public concerned with making longer or international trips. Logan has a brand new international terminal, and is working on updating one of their domestic terminals. Removing the short haul and commuter fliers from the general fray of the centralized terminals will relieve pressure from the overcrowded terminals, and will serve to improve service to the other customers by extension. The positive outcome of this project would benefit not only the travelers flying in and out of the terminal, but could also positively impact the employees of the airlines and airport, and the image of Boston as a first rate city with top notch amenities.

In solving the problem of the common airport, the interaction with the architecture of the airport with the passengers will be the most critical element in the design process. This intersection has been proven to be successful through other phenomenologically-driven projects such as Peter Zumthor’s Therme Vals, or Tadao Ando’s Church of Light, both of whose character goes well beyond simply being a building to being a full sensory and bodily experience. However, these buildings are fundamentally and intrinsically different from the building type that is the airport. With these examples, people arrive expecting a sense of calm and quiet to experience rejuvenation. On the other hand, the majority of people who enter airports are expecting (and reliably have) a stressful experience. Can these people have their senses enticed and awakened, to re-enter a mentality of wonder regarding air travel, when all their previous experiences have pointed their memory in the exact opposite direction? Can this standard of experience be reversed when travelers walk...
into the building expecting only an affirmation of all of their past experiences, from long lines to rude employee interactions to uncomfortable seating and impersonal scaleless spaces?

The answer is not simple, which is why no great strides have been made with regard to improving the airport experience. It will take time, as well as strong design, for the negative expectations of stress, delays and disappointment to be replaced by feelings of wonder, excitement and positive anticipation. Many airlines, such as Virgin and Porter, have already realized the value of making these changes, and have designed the passenger experience to be fresh, trendy, comfortable and generally positive. In the end it is these airlines that will succeed, as they value their customers’ mental and bodily experience more; this thesis proposes it is the same way with airport architecture. The goal is to propose a completely new breed of airport by designing not only for function or for cultural relevance, but also for the full range of sensory experiences of the people using that building on a daily or once-in-a-lifetime basis.

This design project will yield a terminal specific to Boston in its overall character, feature spaces that are desirable to spend time in, please the senses, soothe the nerves, and exploit the fascinating simultaneous dualities of the airport, among which is the fact that the airport is both transient and static at any given moment. The end goal is to bring back the joy and excitement of air travel without all of the negative elements that we have come to regard as standards in our airport experiences. As the bridge between earth and sky, arrival and destination, and the singular convergence point of hundreds of thousands of lives, experiences, and itineraries, the airport should be anything but the dull, sterile place that it is today.
Theoretical Background
Among the most important topics for laying the theoretical basis of this thesis project is the notion of place and its counterpart non-place. A majority of airport designers around the globe have realized this important issue and attempted to incorporate some sense of place into their terminals. However, their responses are generally only superficial solutions. For example, in Charlotte, North Carolina, the lounge areas feature rocking chairs as a nod to the front porches and culture of the South. However, not only is this response not integrated in the architecture, but other airport designers noticed the success of the rocking chairs and now rocking chairs are found in terminals from Philadelphia to Boston, which meant that the chairs in Charlotte were then less meaningful. Artist Martha Rosler writes, “in the airport, as in a giant shopping mall or an immense natural history museum, an aerial schematic map tells you, ‘You are here.’” But really, where is “here”? This thesis argues that there is a way to indicate to weary travelers where they are in the world, as well as within the airport, in a much more inherent way. The sources discussed throughout this chapter will explain what it means to truly have a sense of place, or lack thereof, what characteristics are necessary for human beings to want to spend time in a “place,” and how designers can pull from this comprehension ways of designing spaces that become places to the people who occupy them.

The geographer Edward Relph’s *Place and Placelessness* is one of the foremost sources regarding the concept of place. At the beginning of his book, Relph says, “to be human is to live in a world that is filled with significant places: to be human is to have and to know your place.” What then, is place? To begin we must also first understand what space is, as space provides the context for place. Relph divides space into a few subcategories, among which are primitive, perceptual and existential or lived-space. Primitive space is the most basic context for our existence: that which we perceive to be above, below, left, right, or all around us. This also extends beyond our perception to our emotions and our memories, all of which have implications on the spaces around us, and conversely that spaces and places also have the power to impact our emotions and memories. Lastly, lived space has to do with our understanding of our perception of space as a member of a cultural group. Relph’s lived-space is culturally defined, and therefore while all members of a particular culture understand it, it may not be legible to a member of a different culture. Essentially, according to Relph, space is the area of our immediate experience, perception and existence. In this sense, it is what phenomenology generally calls the “lifeworld.” Edmund Husserl, a German philosopher generally considered to be the father of phenomenology, developed the term in his 1954 book *Crisis of European Sciences and*
Transcendental Phenomenology. Essentially, the lifeworld can be considered the background for our existence. It is everything that surrounds us, whether we are conscious of it or not; it is inexhaustible to attempt to comprehend.3

From this understanding of space we gain an understanding of place. “Those aspects of the lived-world that we distinguish as places are differentiated because they involve a concentration of our intentions, our attitudes, purposes and experience…” The essence of place lies in the largely unselfconscious intentionality that defines places as profound centres of human existence.”4 As a geographer, Relph argues that place and landscape are inextricably intertwined, with a place’s identity and character defined by its landscape. Public places are created through shared experiences, involvements and therefore meanings, and consequently stand out as focal points from their surroundings in the lifeworld. This also applies to individuals’ perceptions of place as the context for the experiences and events of our lives. Relph argues that beyond simply existing in a place, to have deep ties to that place is a basic human need. It helps an individual to have a grasp on one’s purpose in life, as places inherently have strong senses of identity and security. Each individual has their own account of a place, and depending on how a person experiences that place, from walking or driving along a street, their perception of that place will be unique to them. “Image of place” is a critical element to the identity of place for an individual as the “mental picture composed of the experiences, attitudes, memories and immediate sensations”5 associated with that place. Beyond individual understanding of place, there is also the collective image of a place that a group or culture has that will affect individual place images.

Other key components of place are what Relph, and Christian Norberg-Schulz before him, term “insideness” and “outsideness.” This is much more than simply being enclosed by a building. Being “inside” can also apply to being in a town or in a region. According to Relph, in order to fully experience the complete essence of place, one must belong to, and identify with, that place, and “the more profoundly inside you are the stronger is this identity with the place.”6 Relph further explains that when one is inside a place, they are truly surrounded by it and thereby become a part of it. Being inside is more than just realizing one’s physical location, it is a combination of the physical characteristics of the place, the meanings one derives from it and the activities one partakes in within that space. Essentially, by being inside a place, one is marked by the place, similarly to the way that we can physically or literally leave our marks on things (carving one’s name on a tree), although with regard to perception and not physicality.

The duality of insideness and outsideness of a place also brings to the forefront the important concept of the gateway, which can then be explored literally with the

5 Ibid., 56.
6 Ibid., 49.
airport serving as gateway, an inside to the outside of the flight, and then the destination. Relph makes the distinction regarding “incidental outsideness” which is when “places are experienced as little more than background or setting for activities, and are quite incidental to those activities.” This distinction captures the quintessence of today’s large airports, which are the most transient places, or non-places, with passengers and flight crews passing through them without giving them a second glance. Contrasting this condition is “empathetic insideness,” which “demands a willingness to be open to significances of a place, to feel it, to know and respect its symbols…really seeing into and appreciating the essential elements of its identity.” Relph’s empathetic outsideness describes the current state of airports and their occupants, whereas empathetic insideness is part of the goal of this thesis with regard to enlivening the engagement between the passengers and the terminal. Lastly, Relph discusses the importance of sense of place and authentic place making. Obtaining an authentic sense of place requires not only genuine awareness of the place, but also an awareness of self in the Heideggerian sense of Being in the lifeworld, which will be discussed shortly. The concept of authentic place also relies heavily on Norberg-Schulz’s concept of Genius Loci, whereby even outsiders can experience places in an intensely meaningful, direct and therefore personal way.

The opposites of authenticity and place are inauthenticity and placelessness. Relph discusses an inauthenticity of place as a quality that does not require inhabitants to comprehend or even really be aware of a place’s significance or identity beyond the simple fact that it exists. He then defines placelessness as “a weakening of the identity of places to the point where they not only look alike but feel alike and offer the same bland possibilities for experience.” He also mentions the concept of kitsch with regard to the non-places which have been “museumised.” This theme is certainly relevant to the airports of today, in their attempts to evoke a sense of place through thoughtless copying of either landscape or tourist attractions. Relph blames travel, tourism, mass culture and mass media for the phenomena of placelessness and inauthenticity. He goes on to state that the current globalizing trends are only serving to “uproot” humans more as they travel and do business all over the globe, and this trend will only continue to grow. However, at the end of his book he offers that there are still prospects for places in such a globalized world, and that placelessness must be “transcended” for the well being of the human psyche.

The current image and sense of place of airports in general is overwhelmingly homogeneous and negative. However, because airports can conjure such intense emotions and images, it seems that they should be categorized as places, albeit usually negative ones. Relph however terms them as being placeless as a result of their scale and lack of character. It is precisely for this reason that the placelessness of the airport seemed the perfect site for a contemporary argument for the reinstatement of experience and place. Whether placeless or simply a negative place, it is precisely this negative image and current understanding of

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7 Ibid., 52.
8 Ibid., 54.
9 Ibid., 90.
airports as non-places that this thesis is aiming to reverse. Airports can be understood as meaningful places that frame events of the lives of people who pass through them.

Marc Auge’s book *Non-Places: An Introduction to Supermodernity* is another interesting point of view on the way that today’s globalized culture is effecting the concept of place. Supermodernity, as used by Auge, is composed of the excesses of our world.\(^\text{10}\) One of these excesses is the overabundance of essentially scale-less space. For example, cities that are in reality several thousand miles apart, and would have in the past taken days or even months of journeying to reach one from the other, are today reduced to separation by mere hours on a plane. This brings us to another indicator of supermodernity’s non-place: the impressive acceleration of various modes of transportation over a relatively short amount of time. These rapid means of transportation have hubs, such as airports, which are consequently at the core of supermodernity and non-place. Auge also makes the argument that the supermodern world that we live in is not devoid of meaning, or does not contain less meaning than an era past, but that in the present day, humans tend to feel an intense need to give meaning to everything around us on a daily basis. We thrive on emphasizing the events that occur around us, and making them memorable. This is made possible by the mass of information that we have ready access to, and the complicated and multifaceted interdependence of what Auge calls the “world system.” This overabundance of events is directly related to the excess of time that we have, although we do not feel that we have. Is it possible to maintain this trend of eventizing? Can every event that we create actually be an event in that it has enough meaning imposed on it to truly make it memorable and effective when there is a sea of other ‘events’ happening around us? With the right architectural and spatial detailing, it can be possible to create an airport that acts as an introductory event to the event that is the journey and the main event that is the destination.

The third overabundance discussed by Auge is that of the individual. This is particularly interesting, as many authors and theorists argue that the real individual as an isolated and unique entity doesn’t actually exist. Many argue that every individual is a reflection of his or her experiences and surroundings, past and present. However, while this may be true, every person still wants to interpret the information they obtain for themselves and by themselves because they continue to believe themselves to be unique. So, although we are comprised of a collection of our experiences and exposures, we still demand the right to the concept of individuality, as futile as that may or may not be. “Absolute individuality is unthinkable...[it is] impossible to dissociate the question of collective identity from that of individual identity.”\(^\text{11}\) This concept ties into hermeneutics, the study of interpretation, in that we are always already interpreting everything around us. These interpretations inevitably are not our own, but a conglomerate of our often shared histories and experiences. While this may be true, everyone’s experiences are somewhat different even within a shared culture or a family. This extends into the convergence of itineraries at an airport, where everyone is experiencing what is essentially the same spatial sequencing, but perceives and

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\(^{11}\) Ibid., 16.
understands it somewhat differently. Each human being is still an individual with his or her own personal perception and understandings, even though all of the interpretations are comprised of similar information or input. Each traveler also brings their own confidences, anxieties or neuroses with them through their airport experience, and whether they are a first time flier or a frequent flier, each comes with preconceived notions of what an airport should or should not be. Robert Sokolowski, whose theories will be discussed in more depth in the “Memory and Perception” section of this chapter, puts forward the idea that “a remembered identity is still public, even though our individual slants on it may be private,” and goes on to argue that these “private aspects, with their interwoven resentments and delights, can bring an original illumination on the way things are.”

This simple fact of interpretation makes challenging those notions that much more difficult as a designer of spatial sequences and experiences.

Auge goes then to another level to remark that the individual in the non-place is disconnected from him/herself as a result of all of the constant contact and interactions with technology and other people. This means that the individual can exist in an environment of stimuli that is completely independent of the real, immediate physical setting. This concept is especially intriguing in the realm of airports, those nodes of supermodern non-place, the points at which the “individual” is most threatened. It is specifically after the security checkpoint that identity melts away, and many simply become passengers on their phones, tablets or computers, or who are reading books or magazines, pacing or people watching. Furthermore, travelers and airport employees alike are constantly bombarded by information through loudspeakers and lit up interior billboards. This thesis is concerned with reconnecting passengers to the realness of their surroundings: the physical and emotional qualities of the place, even when they are constantly connected to the rest of the world.

Much like Relph, Auge then discusses his thoughts that anthropology and place are inextricable, and a place is only a place if it has a strong identity (generally bestowed upon it by the community that resides there), a sense of relation to it (similarly bestowed), and has a strong sense of history or memory (to that community). Auge prescribes that places are for living, and are therefore “where individual itineraries can intersect and mingle.” He hypothesizes that what he calls supermodernity is responsible for creating non-places. Non-places are polar opposites to places as they are not historical, individual or relational, and tend to not integrate earlier places. Indeed, non-places often strip inhabitants of their identities completely, an effect that can be found in today’s airport terminals. People in one of these hubs are reduced to a collection of passengers moving through the airport. As soon as one checks in and passes through security, one no longer has a need for one’s identity until required to present a boarding pass to enplane, but at this point the passenger gains a new identity and becomes a number (seat 24F). However, anonymity does not have

to be a bad thing, particularly throughout the airport experience. Auge, along with Alain de Botton later in this document, argues that anonymity is part of the allure of the travel experience. Furthermore, in the non-place, the individual becomes a spectator who is not actually absorbed in the spectacle of life and space (or place) around them.\(^\text{14}\) This is opposed to the place as spectacle, which wholly engages the spectator, as with the example of the Grand Canyon, where one can’t help but be absorbed in one’s surroundings. Auge lumps the airport in with non-places because of its size and brutal functionality (no argument from this author), and mentions that “non-places are there to be passed through.”\(^\text{15}\) Yet, airports are also vital spaces that are alive with the emotion and commotion of the lives of their inhabitants, and are places with regard to the thousands of itineraries and therefore people that converge and then just as quickly diverge again, which are qualities that this thesis brings to the forefront of passengers’ awareness.

Kenneth Frampton is one of the foremost authors on critical regionalism. In his “Towards a Critical Regionalism,” he makes the case that architecture in general has lost its sense of place and that the responsibility is distributed between the “universal civilization” of our globalized world and its evolving technology. Architects are perpetuating non-place by simply reverting back to “nostalgic” styles or deriving a thoughtless aesthetic from contrived sources of inspiration. He mentions the issues that feed into placelessness and offers the beginnings of a set of solutions as a means to rectify the situation. For example, one must work with a site’s natural topographic qualities instead of bulldozing it flat to a clean slate (thereby clearing it of all of its physical history). Utilizing the natural quality of the light on the site is of vital importance— as the light on that site is unique to that specific geographic location and those same exact qualities can be found nowhere else. He also recommends using a particular “structural mode” to inspire a tectonic response, that is, a physical desire to interact with the building.

Frampton mentions Heidegger’s concept of boundary of place as a critical element in any culturally relevant design, and therefore impacting the “dwelling” and “being” that may take place at that location. Frampton also suggests that a direct correlation with the nature of the site can effectively keep the negative effects of globalization at bay. Essentially, critical regionalism boils down to simply paying close attention to, and then integrating the natural qualities of the site in the design, and ensuring that tactility (and therefore a close physical relationship to the materials and the site) is brought to the foreground in the building. Heidegger discusses his concept of “nearness” and how that nearness can be lost in his book *Being and Time*. According to Heidegger, nearness essentially occurs when one is really in tune with one’s surroundings and oneself, or dwelling.\(^\text{16}\) Frampton states that Heidegger’s concept of “loss of nearness” is imminent when the desire to touch the construction disappears, thereby reiterating the importance of tactility in architecture to the human occupant. It is a logical consideration to physically get involved with the building.

\(^\text{14}\) Ibid., 70.
\(^\text{15}\) Ibid., 83.
one is occupying, but how many times do people touch the building they’re in beyond the prescribed locations (i.e. door handles, light switches). Even with an interesting tactility, one must consider the scale of the human and create spaces specific to that scale or else there will be no interaction between the building and its inhabitant.

Liane Lefaivre and Alex Tzonis are another pair of vital critical regionalists, and they essentially reveal the same basic tenets to critical regionalism as Frampton in their effort *Critical Regionalism: Architecture and Identity in a Globalised World*. The authors define the term “critical regionalism” as “a regionalism evolved from an internal, self-directed criticism” as specified by Lewis Mumford, the original critical regionalist who was deeply concerned by the inevitable control of civilization by the machine. They also argue for the use of locally sourced materials, as well as featuring local forms, as these elements will intrinsically make the building more relevant to its location. Some examples of this argument that are mentioned by the authors are Fallingwater by Frank Lloyd Wright, the Kaufmann Desert House by Richard Neutra and the Saynatsalo Town Hall by Alvar Aalto. All of these pieces of architecture speak about their sites through their form as well as their materials. For example, Saynatsalo features verticality that speaks to the forests of the site and region, whereas the Desert House features long flat planes which accentuate and frame the view of the mountains in the distance. The material choice of warm colored stone on the exterior is an appropriate choice for the hot, arid region that the house is sited in, but the real high note of this house is that Neutra removed as many barriers as possible in between the exterior (site) and the interior. Through this method, the lines of inside/outside and site/intervention become blurred, allowing for a more intimate interaction with the natural qualities of the site. Conversely, Fallingwater seems to have been built up from the earth and stone of that particular site, and it might as well be a rock formation that already existed on the site, the way that it interacts with the water that flows through the site. Fallingwater’s fieldstone walls speak to the densely forested site which was left mostly natural (as opposed to highly manicured) by the designer and client.

The authors go on to reiterate Mumford’s original warning that simply copying an earlier style of architecture will lead to inauthenticity. Much like Relph, they also decry the kitsch that occurs when regionalism in architecture is inauthentic and obsessed only with the image, as is particular to the case of branding. Lefaivre and Tzonis acknowledge the benefits of technology, but assert that it is to be used carefully so as to avoid a product that feels inhuman. In the end, they recommend that in order to create a successful critically regionalist work of architecture, we should absorb the best of what technology can offer, and avoid mimicking the past while retaining the best of the contemporary local flavor.

The critical regionalist moral that can be gleaned from Lefaivre, Tzonis and Frampton is that designers need to be mindful of the location beyond the physical site and not become obsessed with international design trends that may not be appropriate to the given

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location. A designer must remain informed not only of what is happening internationally, but what each site’s history and physical qualities can bring to a building that can truly be dwelled in, beyond just being a piece of architecture to truly becoming a place. As has been discussed in the history of the building type, airports are notorious for succumbing to the world’s trends and therefore not being specific to their particular site. Implementing these suggestions will help to produce a new airport that is a place in all senses of the word as previously discussed, from anthropology to human engagement.

*Genius loci*, Latin for “spirit of place,” is a term that is used in contemporary architectural theory to discuss the character or essence of a place, and Christian Norberg-Schulz’s *Genius Loci: Towards a Phenomenology of Architecture* is the primary source on the topic. Norberg-Schulz begins by defining place in a slightly different way than the other authors previously discussed: “The place is the concrete manifestation of man’s dwelling, and his identity depends on his belonging to places.” 18 It should be mentioned that in the Heideggerian sense, when one is dwelling, one is fully engaged with, open to and aware of their surroundings, thereby finding meaning in existing in that space, which in turn makes it a place. Norberg-Schulz discusses place with regard to inside and outside and their relationship to each other through openings. The degree to which a place is open or closed is integral to its character, and windows are closely tied to the genius loci through light. No two places will have the exact same qualities of sunlight. He goes on to discuss the character of place through the concept that the character of a place is closely tied to its material construction and the articulation of its various components. Norberg-Schulz makes the compelling argument that “the existential purpose of …architecture is…to make a site become place, that is, to uncover the meanings potentially present in the given environment.” 19

He goes on to discuss the importance of Heidegger’s concept of dwelling, and the importance of belonging to a place, like Relph and Auge. According to Norberg-Schulz, the identity of a place is comprised of its location, its spatial configuration and again, its articulation. He then makes an interesting point regarding being lost, a regular occurrence in airports. He says that being lost cannot happen in a dwelling. At its core, a dwelling is based around a sense of security in that one feels safe enough in the place to completely open up to its qualities to dwell. A strong *image* (with the same meaning as was earlier discussed with Relph) of the place will prevent a person from getting lost. It is because of the overwhelming assault on the senses by advertisements, glowing signage, ambient music and loud announcements, among other stimuli, as well as the sheer scale and complexity, that travelers often become disoriented in airports. All of these distractions combine with the characteristics already mentioned to depreciate the sense of place in airports around the world today.

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19 Ibid.
Norberg-Schulz borrows from Heidegger’s “fourfold” to posit the union between earth and the sky. The sky is an entity of which we rarely take notice, but it has a massive impact on the atmosphere of a place (and the basis of the whole reason behind an airport: humans’ desire to fly high above the earth). Buildings, then, are much more than entities that have varying degrees of openness, but are bridges based on the ground that aim to punctuate the endlessness of the sky. He also discusses the natural force of water as very powerful, and ever-present in images of paradise and oasis. Water is patient but unyielding and can carve through solid rock, but when still and placid can soothe the senses. Another element critical both to place and airports that he makes mention of is time. He says that life is fundamentally in motion and has a rhythm that is intrinsic to it. These characteristics of place, which this thesis has amended to be ground, sky, and water are another critical convergence of this project’s site, which is located on a bay. Together with the convergence and divergence of people, the convergence and divergence of these site qualities provide great opportunity for the new type of terminal that is the goal of this project. Norberg-Schulz goes on to mention myriad of other characteristics and qualities that effect place, among which are thing, character, light, boundary, landscape or topography and order.

In life, we search for meaning in the places we occupy, and Norberg-Schulz is emphatic that “man’s most fundamental need is to experience his existence as meaningful,”20 which is yet another reason that non-places such as airports should strive to become places. If we are going to spend part of our lives in these places (currently non-places), then experiences in these places should be meaningful to us. It should live in our memories as a positive event, rather than being the most aggravating part of the journey. It is exactly because of the fact that a passenger will spend a significant amount of time in the airport that it should be a place that engages the traveler and awakens them to be more conscious of their surroundings. By giving a place a unique character and quality of space by taking into account the local circumstantial conditions, place can indeed be recovered from a state of placelessness.

Christian Norberg-Schulz authored another book in 1996 entitled Architecture: Presence, Language, Place. The author begins this more recent work with a synopsis of parts of his past Genius Loci, as it featured many themes that reappear throughout this book. With regard to “Presence” in the title, the author makes the point that life is not a “flow without structure”21 but, much like Auge argues, is comprised of several small events, all of which have distinct places associated with them. An analogy between life and travel is brought to the foreground which can also be taken literally and applied to the concept of the airport, in that the individual is perpetually “on the road” to a destination (an event), but what happens during the trip might be more critical than the destination. The concept of place exists along this journey, and acts as a point of departure and support for our existence. Because we dwell in places, whether inside or outside, life and place are a magnetic pair that are difficult to separate. Without place, life is less meaningful.

20 Ibid.
Memory is also critical in arrival and in orientation once within a place, and paths and goals in a spatial organization are required to prevent disorientation. “While the diversified moments of arrival, encounter, sojourn, rediscovery, agreement and clarification specify how life takes place, the aspects of memory, orientation and identification show that comprehension is a condition necessary for this to occur.”\(^\text{22}\) The concept of arrival at a place is elusive, and real arrival is only possible if the place has a unique identity. The arrival involves human expectations as the result of a journey from one place to another, and ends in an encounter with the characteristics and qualities of the destination. This implies a complex set of interactions, both physical and mental. For real arrival, there must be a penetration from exterior to interior, as well as recognition of the character of the location of arrival, and a realization of this arrival to a place. Arrival is expectation becoming manifest in reality. Norberg-Schulz makes the point that the identification by an individual of an environment requires both local character and the “corporeal sense,” or how we move

\(^\text{22}\) Ibid., 44.

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Figure 5.11_ Diagram by the author featuring 9 different airports that are visually and spatially interchangeable.
to engage or interact with our immediate environment. He concludes his book with the concept of “self-realization,” which “implies that the process of interaction, which reveals the life of place, is unstoppable. But the term also means that place must preserve its identity through change…then the art of place will become *the art of the experience of living.*” 23 This is a fascinating concept to consider, especially with a place (or non-place) as transient and ever evolving as an airport.

All of this discussion of the continuous trend towards loss of place in today’s world leads to the question whether it is ever truly possible to lose all sense of place around us. If BEING in space is existing and therefore place making, and if place is related to our history and our experiences and memories, and the importance that we as human beings put on these places, then as long as humans continue to exist, we will always make places. Places will always exist because we will continue to exist. The nature of how we exist is evolving constantly, and so, as places are relevant to us and our lives, places must evolve as well to remain relevant to our being. They also evolve simply because of the fact that they are understood differently by different people but through all the different understandings are still consistently understood as places. Just by virtue of continuing to exist, we will continue to put importance on places even if they are (or were) generally considered non-places. Because that importance has been given to those specific locations, it then makes them into places.

There are specific moments within an airport that would allow for an opportunity for passengers and employees to connect with their environment. Although there is a lot of idle time that is generally considered to be negative (waiting to check bags, at security and to get on the plane, for example), these are particularly ripe opportunities for the architecture to encourage people to relax, to take in their surroundings and really engage and connect with their experience, as they really have nothing else they could be doing during that time. Because of these inherent pauses in the flow of movement through the building, even the most rushed individual must slow and abide by the tempo of the experience. Thus, after taking into account the recommendations of the reputable sources discussed above, it is possible to consider a new type of airport that is evolving with us and will be considered a place instead of placeless.

23 Ibid., 356.
Perception at its most basic level comes from a combination of sensory input and then an understanding and interpretation of that input. Throughout his essay “The Origin of the Work of Art,” Heidegger methodically goes through different interpretations of the meaning of the work of art. He lands on the idea that the work of art is a work that works; it is a vehicle through which we better understand our existence and the lifeworld around us, both now in the present and through history. The work is not a mere thing, nor is it a piece of equipment, although it does work. The work works in order to reveal truth about our existence to us, and represents the quintessence of its subject and that subject’s world. Works can be pieces of art or architecture (although architecture is also a piece of equipment as it serves a functional purpose to help us live our lives). The work inspires logos, or discourse, which leads to alitheia, or the uncovered truth. It is through the work of art or architecture that we discover truths of things and Being that we wouldn’t necessarily see on our own. The work is hugely open to interpretation, but it still works to uncover the nature of things. The work of art shows not only the thing (its subject), but everything it embodies. Heidegger suggests that if the work is working, it allows us to dwell in the work, and reveals truths that science or logic could not.24

The main example that Heidegger shares with his audience in this essay is a painting by Van Gogh of a pair of peasant’s shoes. It is only through the painting that we can come to understand the essence of the shoes, through the artist’s attention to the wear in the leather, laces and soles. The point is that if we were to simply walk past these shoes, we wouldn’t think twice about them. It is because Van Gogh saw these shoes in a different way, and froze them in history on a canvas through his brush strokes that the audience can begin to see them in a new light as well (in their true light, as Heidegger would have his audience believe). The work makes us take pause, and consider the lives involved with this simple piece of equipment, how hard it was, how they enjoyed their spare time so much more because of their intense laboring in the fields. Through the painting, one sees that the shoes are not just a pair of shoes, but a means for a woman to complete her daily efforts.

Because architecture is also a work, the airport can work to reveal the truth about travel and flying. Two examples of architecture working to reveal a truth are the Jewish Museum in Berlin, Germany by Daniel Libeskind and the Therme Vals in Graubunden Canton, Switzerland by Peter Zumthor. Both of these works of architecture involve all of the senses in their use of light and material to lead the visitor to better understand their surroundings. The Jewish Museum, in its austerity, use of sharp angles and restriction of natural light’s

access to the interior spaces, inspires in visitors a sense of quiet, an uneasiness, a sense of something bigger, a sense of respect for the history and events to which the museum is dedicated to. To the contrary, Therme Vals is highly tactile with its variety of materials, which visitors interact with various body parts: their hands on the handrails as they move up and down stairs, and the stone floors as they walk barefoot through its spaces. The light, where it penetrates the ceiling, is warm and often acts as a guide through the spaces which are arranged enfilade. These two very different works provide their visitors with completely different sets of sensory experiences as a result of their architecture. Through their design, they convey their purpose, program and building type in a way that the visitor can viscerally understand through their bodies and their senses, beyond just knowing what type of building they are in.

As a piece of equipment, the architecture will obviously still have to be functional, but through the design of the spaces, the materials used, and by pursuing a new quality of place through tactility and multi-sensory stimulation, an airport can begin to make its inhabitants consider the space they are in as more than simply a series of necessary, annoying or invasive events before they get to their destination. It could help passengers to disconnect from the rest of the world to be introspective about their personal travelling experience. Only when this pause in the hustle and bustle of travel happens can one begin to comprehend the unique qualities of a particular day in a particular set of surroundings, and understand them as meaningful. It is at this point that the perception, interpretation and understanding of the place enters into the memory as an experience. It is also at this point of memory creation that this thesis will aim to go to work in that it will help inhabitants see the airport in a new light, and comprehend more fully the qualities and wonder that it has to offer.

Perception is a critical point of departure for this thesis. One understands the world around them through one's body and senses, which Maurice Merleau-Ponty posits also turns the understanding of the world inward to an understanding of oneself. Merleau-Ponty argues that active engagement in the surroundings is requisite in order to truly perceive the world around oneself; real perception cannot be a passive gesture. This thesis aims to engage the traveller so that they can truly perceive their surroundings, and achieve some sense of calm through that perception and engagement. Each person’s perception is unique to them, their body and senses, past experiences, emotional state, and other personal factors all effect how they perceive their surroundings. “Every external perception is immediately synonymous with a certain perception of my body, just as every perception of my body is made explicit in the language of external perception.” However, this individuality of perception does not mean that the general consensus of airport conditions cannot be improved; indeed, opening passengers to their airport experience is the way a new positive consensus can be reached.

26 Ibid., 35, 51, 89.
The perception of one’s surroundings is a main premise of *Phenomenology of the Human Person* by Robert Sokolowski, professor of philosophy at the Catholic University of America. In this book, the author discusses the concept of bodily absence versus presence, and mentions a fellow professor of philosophy at Loyola College in Maryland named Drew Leder’s “three ‘modes of disappearance’ in human corporeality.” The first is termed “focal disappearance,” which is when the body part that we are using to understand the world around us (i.e., eyes or hands) disappears to us as we focus on and perceive something. For example, we are not acutely aware of our eyes as we take in a visual stimulus. The second is “background disappearance,” which is the fact that while we are focused on understanding something outside of our body, the parts of our body that we are not engaging with this focus become invisible to us. For example, if we are touching something with one hand, we forget about our back or our feet, which are not directly involved in what we are doing. The third kind of absence is “depth disappearance,” which involves all of our inner organs that are indirectly involved in perception, but which we cannot correctly credit. For example, we taste the fine food we are eating, but once it is swallowed, although we are technically still involved with it, we are not aware of where it is exactly. It is through this point that the author discusses inside and outside, but with regard to perception and our bodies. Sokolowski argues that “whenever we experience something in the world, we also experience our own body.” So, to bring this concept together with the words of the authors previously discussed, in the perception of the place that we are inhabiting, there is the insideness and outsideness of the actual construction, the place and our perception. This thesis posits that by engaging the body and the senses with the architecture, one can have a more positively memorable experience while in that building.

To the contrary of bodily absence is bodily awareness or “presence.” When we are stressed, exhausted or deeply concerned about something (i.e., catching a flight), our bodies become very present to us. As we run to catch a flight that we are late for, we feel the heaviness of the bag on our shoulder, we become acutely conscious of the length of our legs and the shoes we have on our feet, we might break into a sweat thereby becoming aware of our body temperature, and we are aware of our fingers as they clutch our boarding passes. Then, once we are on that flight, the aches and the fatigue make us very conscious of the state of our bodies. However, it is also surprisingly easy to forget our physical bodies. Baseball has the 7th inning stretch because fans get so absorbed that they forget their bodies completely. Similarly, when embarking on a long journey on an airplane, the flight crew encourages us to stand and stretch, often offering sample exercises in a pamphlet or video. This is also not to mention the many forms of distraction airlines and airports try to foist on their passengers, from music to television to advertisements to reading materials. Even with all of these outside stimuli, however, Sokolowski makes the fascinating argument that we can never not be engaged with what we are doing. Even if we are forced to do something,

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29 Ibid., 195.

30 Ibid., 194.
the fact that our bodies are doing it means that we are engaged.\textsuperscript{31} When applied to airports, this means that even the points of the airport that are least pleasant still engage us. For example, at security, however much we might disagree with it, we do still put our things in the bins and walk through the sensors barefoot. One may not be completely mentally engaged, but one is certainly physically engaged. This thesis strives to engage travelers not only physically, but physically in a way that is conscious and sparked by curiosity, as well as mentally to really become aware of their surroundings beyond just going through the motions of getting to their gate. The goal will be for travelers to, as Heidegger or Norberg-Schulz would say, poetically dwell in this new airport as place.

Phenomenology, as developed by Husserl, Heidegger, and Merleau-Ponty, among others, is generally understood to be the study of phenomena. A phenomenon is essentially any occurrence that can be observed.\textsuperscript{32} This occurrence brings entities that were previously in the background to one’s attention. Much like bodily awareness and bodily absence as discussed by Sokolowski, phenomena can have a profound effect on one’s experience. This thesis, through careful use of light and material, aims to bring both the building and a traveler’s body to their immediate attention. By sitting on the rough brick facing of an alcove in a thick wall, a passenger will become immediately aware of more than their itinerary and their departure time. Through feeling the texture of that wall and their seat, they will suddenly be aware of their body or body part that was perhaps absent to them a moment ago, and also become more aware of the construction and qualities of the building that they are occupying. In this way, the architecture will work to engage the traveler with their current experience and surroundings, which will help them to dwell when they might have previously been completely preoccupied.

Sokolowski also discusses the notion of ambience and the different forces that continuously surround us and come together to construct our experiences, and how these

\textsuperscript{31} Ibid., 259.
elements directly feed into our memories. Personal perception is critical to the concept of memory, and memory in turn is critical to our understanding of place. The displacement of ourselves in imagination and memory plays an important role in our sense of personal identity. If my neural activities are reenacted, they bring back an earlier experiencing, including the bodily state I experienced at the time. They bring back an experiencer as well as an experience and a thing experienced. And that experiencer is not just someone or anyone, it is me again, and it could never be anyone else.\textsuperscript{33}

The author goes on to make the argument that we can never perceive everything around us, let alone everything about the thing we are focusing on perceiving. This concept harks back to Heidegger's infinite lifeworld and that it is so all-encompassing that we can never fully comprehend everything around us. There is simply too much information to absorb in all of the various layers of the lifeworld. Beyond the fact that we can't perceive, let alone understand (as a component of perception), everything around us, we will always put our own interpretation on our perception, which leaves much to be desired as we can never encompass every characteristic of what we are seeing or experiencing in our singular interpretation. One person can never fully describe all of the facets of the elements that surround them.

As previously discussed, there are many intriguing dichotomies at work in airports which can be captured to help create a better sense of place. \textit{Stillness in a Mobile World}, edited by David Bissell and Gillian Fuller, is a fascinating series of insights into the relationship of stillness to motion, and the different components that make up our understanding of these concepts. Airports are fundamentally both harshly still (the lines, delays and waiting while one is trying to go somewhere) and constantly in motion. Either the airport itself is in motion by continuously undergoing updates and construction, or it, in its very essence, houses motion. The reason an airport exists is to process people in and out of a location, so the perpetual motion of people passing through the gateway in either direction is inherent. Because this motion is the reason we go to airports, when we are forced to be still in these buildings (on layovers, delayed flights), it drives us to the brink of insanity. We are expecting nonstop mobility and movement, and instead we are left pacing like caged animals in the terminal by our gates, checking our watches every five minutes and impatiently tapping our toes because the sudden and imposed stillness is a shock to our systems. This is especially the case for people who are also mentally always on-the-go, as is the case in today's highly technological age and the state of constantly being plugged in. This disconnect between expectation and experience is another pivotal point in the airport, and with regard to air travel, is directly related to the dichotomy of stillness to motion.

As with any pair of opposites, stillness cannot exist without motion, and vice versa. The fascinating concept here is what happens when stillness and motion collide, when they

are forced to coexist together in one space: the airport. Beyond these characteristics simply coexisting, it could create an intriguing condition if, within the airport, a designer were to “induce stillness and breakdown where there was movement… and movement where there was too much stillness.”34 It seems that because stillness allows for introspection and reflection on experiences, this condition for human interaction with, and existence within, a space (or place) may be the key to giving passengers the opportunity and inspiration to really dwell in an airport. By truly utilizing this already ever-present dichotomy, passengers may be able to find a sense of peace in what is otherwise a generally stressful set of events and experiences. Furthermore, Bissell and Fuller bring up the term “immobilized,” which is often used to describe the condition of people stranded in airports due to weather inclemency or technological malfunction. Immobilization, rather than being a catalyst for extreme frustration, can be an opportunity for pause in a busy life, or can even be healing, as with a broken limb that is immobilized in a cast. For example, if there are quiet nodes located throughout the lounge and gate area to provide some sanctuary from the persistent multi-directional motion, a passenger might be able to find time for introspection, as well as to engage with the space around them. The same would be true of a small occupiable open air courtyard in the waiting area, where not only will one be able to engage with the building, but also with the natural qualities of the site, which may bring about a calming effect.

What are stillness and motion really? Stillness is really only still when compared to motion, and the pair are therefore relational. In today’s world, are human beings ever given the opportunity to be TRULY still? Given the predilections and tendencies towards globalization and technological advancements, it seems many people would struggle to actually take that opportunity. Although, perhaps it is because of the current hectic state of the world that more people are taking on yoga and meditation to try to turn inwards to find peace. Although everything around us is in motion, the state of stillness is still highly desired (even if we don’t know whether it is really possible), and “slowing down…is about giving a chance to the event, to the encounters which have you feeling and thinking.”35 This is one major aim of the design of this thesis: to provide opportunities and catalysts for engagement and pause in the most motion-oriented building type.

Motion is a constant in the lives of human beings today, which is why we must find the opportunities for stillness that come paired with that motion. The vehicles (in the case of this thesis, the planes) we ride in or on are moving, and physics tells us that because we are still in relation to that vehicle, a passenger will feel still, even when moving at 500 miles per hour. Looking out of a plane window, the world below, particularly at night with all of its glistening lights, looks oddly frozen as the plane moves over it. Furthermore with regard to physics, anything not in motion has a potential energy associated with its stillness, as in a compressed spring. Contrary to this, in a motionless structure, time is still slipping by, and so motion is still present. Even when lying down, our bodies are still pumping and working,

34 Ibid., 26.
35 Ibid., 27.
the earth is still rotating, and our minds may still be going at “a million miles an hour,” as the saying goes. Though we may feel completely at rest and in peace, motion is still happening in and around us. Rest is surely not something that can occur when we are meant to be in perpetual motion, en route to our destination, or to where our lives are taking us.

The authors bring up the potential that stillness is an emotional or mental construct only, which is fascinating with regard to this thesis. The design only needs to unlock the mind to provide the opportunity to find the stillness that already exists within us, providing an opportunity not unlike that presented by yoga. Essentially, the authors want their audience to understand that the dichotomy between motion and stillness is all about relativity. Although a passenger may be grounded at the airport, that passenger is still in the process of moving, in the process of covering a massive amount of distance. This is contrary to those who remain at home, who never left home, who may not feel “grounded” (or maybe they do), but the fact remains that they never left. The airport is certainly a very important part of the journey, and because it is home to the interesting duality of stillness to motion, it has the opportunity to spark within its passengers a sense of wonder, peace and stillness, even while engaged in the motion of the journey. The stillness that is a necessary part of the airport experience is an opportunity for travelers to engage in their surroundings, even when it seems that everything around them is in a perpetual motion.
Opportunities of the Airport

Alain de Botton explores the human experience that takes place within the airport in depth in two of his texts, *A Week at the Airport* and *The Art of Travel*. In both books, de Botton is concerned with the poetics of the airport, airplane, and traveling in general. In *A Week at the Airport*, the author and a photographer were given the opportunity to spend, as the title suggests, a week in Heathrow’s T5, observing its passengers, staff, events and operations. As such, he is able to provide thought-provoking insight into the essence of the airport that most individuals would never consider. He muses about the feeling of possibility that is exuded through the arrivals and departures boards and by the possibilities opened by one’s imagination in taking in the myriad locations being served by this airport.

One major point that de Botton discusses in *A Week* is the intense range of emotions that occurs against the seemingly dull background of the airport. One particularly tense interaction featured a late passenger and a check in clerk who informed him that he was too late to obtain a pass to board his plane, although the plane was still going to be sitting at the gate for another forty minutes. It is at this point that no matter how wonderfully designed the airport is, the frustration of dealing with the corporate policy of the airline will get the better of an enraged customer. This eventuality is why airlines are very concerned with the mental health of their employees, and also why the architecture of the airport should consider everyone who uses the spaces, not only the passengers. To complement the emotions of the intermittent disgruntled customer are the rest of the range of emotions, almost all of which can be found in either the departure or arrival zone of the airport.

Probably the most common emotion to be found in airports is anticipation. Anticipation may be for flying (be it for the first or one hundred and first time, there will always be at least a small surge of emotion regarding flying), for seeing someone at the other end of the flight, or for the qualities of the destination and being away from one’s normal day to day life. Emotions will be carried with passengers through security to the waiting lounge and indeed onto the plane, as well as through the destination airport. They also will envelop those who may not even be flying, but may be simply dropping someone off or reuniting with a loved one. In one particularly dramatic scene that de Botton observes, “what had seemed like passion from afar was revealed at closer range to be an unusual degree of devastation…again and again they looked into each other’s eyes and every time, as though made newly aware of the catastrophe about to befall them, they would begin weeping once more.”

overtakes the previous intensity of despondency. Conversely there are the people who had said their good-byes before even reaching the airport and so have already begun the process of becoming emotionally numbed. On the other end of the airport (and the emotional spectrum) is the arrivals lounge, where members of the public are waiting eagerly to greet their passenger.

Arrivals halls are equally as rich in terms of the range of emotions experienced by its inhabitants, from people disappointed that loved ones didn’t come to meet them to big reunion scenes of families or friends that have been separated for too long. However, the departures and arrivals areas physically never give any sort of inkling as to the intense scenes of humanity that they house. Often tucked back behind baggage claim, arrivals areas feature what appear to be leftover seats from the economy departure lounge. Areas like these that are so ripe with emotion and humanity should be physically representative of those qualities. This is another factor in making an airport into a place. It should be a place that embraces the range of humanity, and makes its inhabitants feel comfortable enough to fully experience that range if they are so inclined. This will be a juxtaposition to the current condition where the whole purpose of the space is to make inhabitants feel uncomfortable and take their emotions elsewhere, so that the airport can continue to process people.
This concept also feeds into the event of arrival. “There used to be time to arrive. Incremental geographical changes would ease the inner transitions: desert would gradually give way to shrub, savannah to grassland…”37 Today, there is no time to adjust or comprehend one’s surroundings. Passengers are sealed inside the entire time between entering their origin’s airport to when they finally exit through the doors of their destination airport. With air travel, not only is there no chance to adjust to geography, but also no chance to adjust to a time change (which is why passengers experience jet lag). The two senses of shock, both time and geographical, come hand in hand with air travel. One may be in Melbourne, Australia in the morning and arrive in Los Angeles 13 hours later, but one hour earlier than the departure that same day, which creates a true sensory shock. “Despite one’s exhaustion, one’s senses are fully awake, registering everything (the light, the signage, the floor polish, the skin tones, the metallic sounds, the advertisements) as sharply as if one were on drugs, or a newborn baby.”38 As illustrated above, the spaces designated for arrival (and that serve as the first impression of the destination) are often surprisingly soulless for the amount of soul that is bared there. De Botton also brings up how no matter how technologically advanced airplanes and airports get, there is still that unknown that is left to a greater power, and many people are still very nervous about flying. With regard to this thesis, these sets of observations have led to the understanding that there is no place within the airport for people to accept and deal with their emotions, in either the departure or arrival zones. And although there is no designated space for these pieces of human existence, it doesn’t mean that existence stops, even if one is less aware of their existence. Why then, is the architecture of the terminal not even slightly indicative of the intense range of humanity that is housed within it?

The return to the extreme functionality of the security line and international border patrols are elements of the airport that are potentially responsible for the quicker than usual emotional recovery. If one is weeping hopelessly just five minutes earlier, the stern looks and business-like personalities of the officials stationed in these sections are very sobering. “The security line was impressive as always, numbering at least a hundred people reconciled, though with varying degrees of acceptance, to the idea of not doing much else with the next twenty minutes of their lives.”39 For this time, passengers are doing nothing, just waiting. Perhaps fidgeting with boarding passes, waving to loved ones who may have walked their passenger into the airport, or checking the time repeatedly. The security personnel are trained to regard everyone as potentially guilty, and we tend to accept that projected guilt in varying degrees of intensity. Perhaps it is their serious demeanor, their directive to not interact with passengers beyond merely processing them, or perhaps it is that our innocence wants to leap out through our eyes as they pat passengers down and check carry-ons for bomb residues with a mysterious black baton. Some people accept that this is just what they are expected to do, and some are outraged by it. Either way, security tends to be consistently the worst part of the airport experience. The architecture of this

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37 Ibid., 92.
38 Ibid.
39 Ibid., 52.
space in any airport simply supports that uneasiness, with many featuring qualities such as lower ceilings through the security zone, plain white walls and vinyl floor tiles. Any sense of humanity has been completely removed from the security checkpoint zones.

The author also makes the interesting note that the airport is one of the few places that the separation of classes by wealth is still glaringly obvious. Unless one has that first class ticket in one's hand, a passenger never even catches a glimpse into the differing airport experiences, the vastly superior lounges and service. These lounges feature many things that the economy class only hear about in movies, and seem almost ridiculous when placed in airports: comfortable chairs, fireplaces, marble bathrooms, and complimentary caviar. It's hard to imagine these sorts of luxuries in the same building, in fact often right next to, the cramped, hard impersonal and uncomfortable lounges for the economy or “cattle class.” It almost like a country club with private restaurant and amenities surrounded by a slum. What is even more interesting is the fact that the people occupying these opulent spaces are not drenched in furs and diamonds, but look and dress similarly to the people out in the regular lounges.

Beyond these spaces that passengers never really understand they are missing, there are the spaces that they don't even consider are part of the airport. These are all of the support spaces where, for example, the meals for planes are produced, where the offices of the airlines are located. De Botton also discusses the different level of understanding that captains have regarding flying: that it is not by chance that a plane makes it to its destination. There are particular flight paths with particular names that cross and intersect much like roads on the ground do, something passengers never even consider. In nondescript locations around the world there are beacons that mark the point where a mile above it in the sky, two flight paths cross and in order to arrive at the correct destination, the captain may need to make a turn onto a new path. Much like the skies that are completely underestimated, travelers have absolutely no comprehension of all of the cogs that come together to make the finely tuned machine that is the airport and the flying experience. Even the path suitcases take from when they leave their owners' hands to when they make it onto the plane is often miles long, on an intricate conveyer system outfitted with the latest technology of luggage scanning and x-ray machines. With the thousands of pieces of luggage processed every minute in larger airports, it is almost incomprehensible that ANY luggage at all makes it to its intended destination.

Also, regarding the actual aircrafts, de Botton makes several thought-inducing points. How incredible that a hunk of metal as large as a 747 can not only, as de Botton points out, move several feet, but become airborne! "We reflected on the pleasure of seeing a 777 take off for New York and, over the Staines reservoir, retract its flaps and wheels, which it would not require again until its descent over the white clapboard houses of Long Beach, some 5,000 kilometers and six hours of sea and cloud away."40 Another fascinating point that de Botton makes is regarding the specific identity of each plane. The average passenger

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40 Ibid., 80.
sees each plane of approximately the same size as essentially interchangeable. But each plane is not only distinct in name, but also in its history, and this goes much deeper than the locations that it has traveled and into the range of ailments it has had since it first left the ground, and how planes are marked by the people who are transported by it, from gum to nail polish streaks. All of these elements that passengers are generally now unaware of are opportunities to bring back the wonder and amazement of flight. With passengers in a heightened sense of attentiveness, these generally hidden characteristics could start to be revealed in the new type of airport proposed by this thesis.

In his novel from 2002, *The Art of Travel*, de Botton introduces many of the same musings he later reiterates in 2009 during *A Week at the Airport*. However, *Art* is more geared towards travel in general rather than the specific happenings at an airport. He discusses the continuing romance of travel that involves the dream of escaping our daily trials and tribulations to get away and come back with a fresh head and heart. “The clouds usher in tranquility. Below us are enemies and colleagues, the sites of our terrors and griefs, all of them now infinitesimal, mere scratches on the earth. We may know this old lesson on perspective well enough, but rarely does it seem as true as when we are pressed against the cold plane window.”41 Also, when we take a trip, it allows for the potential for drastic internal reflection, a time when one is physically strapped in, and while there are distractions in the forms of reading, tv, music, or sleep, it is rare to not reflect on one’s life while looking out over the clouds to the bright blue sky. “Journeys are the midwives of thought. Few places are more conducive to internal conversations than moving planes.”42 This concept extends into this thesis as a means to help shift the perception of the airport to be seen as a part of the journey.

De Botton reiterates what earlier authors such as Norberg-Schulz have claimed that just as we can be affected by our surroundings, people’s perceptions and opinions, so we can be effected by nature (for example, water inspires calm, etc.). He then extends this concept beyond nature to include simply taking more careful notice of our everyday surroundings. “We overlook certain places because nothing has ever prompted us to conceive of them as being worthy of appreciation, or because some unfortunate but random association has turned us against them.”43 This statement can clearly relate to airports, as has been argued throughout this document, in that passengers see them only as functional spaces, and thus tend not to notice their character, if there is any. The general public has an unfortunate association with regard to airports, but it is hardly random. People have been trained from their first airport experience that airports can be very uncomfortable, and often yield blatantly negative experiences (i.e. lost bags). The huge spaces that have no respect for the scale of the human body, the massive groups of hard seating, the uninviting and often cold materials underfoot and overhead all combine to support these feelings in passengers. Time and again this lowered expectation of airport experience is drilled into the brains of passengers.

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42 Ibid., 54.
43 Ibid., 182.
passengers through a string of bland if not bad experiences. If there is a noticeably good experience, it is unexpected. This is particularly true of business travelers (especially people who are commuters via plane), who generally travel much more often than those who travel for pleasure.

Lastly, de Botton discusses the importance of reaching a new understanding of the surroundings that we find ourselves in on a daily basis. He elaborates on the writings of Xavier de Maistre, who took to exploring his bedroom instead of going on an international journey to better understand himself and his environment. In his essay, “Journey around my Bedroom,” de Maistre puts forth an interesting notion: that to be refreshed from travel is really more dependent on the mindset we enter into while travelling than actually physically travelling. This mindset is about finding wonder in the mundane and everyday. De Botton makes the claim that "on entering a new space, our sensitivity is directed towards a number of elements, which we gradually reduce in line with the function we find for the space. Of the four thousand things there might be to see and reflect on in a street, we end up being actively aware of only a few: the number of humans in our path, perhaps, the amount of traffic..." Often when one travels, especially for vacation, one has such high hopes that the trip, let alone the airport, can hardly live up to them. When picking a loved one up from the airport, one of the first questions is, “How was your flight?” and the response is generally, “Oh, it was fine.” This is a prime example of the expectation of the flight being uneventful, the airport serving its function, and a general apathy for the flight and airport experience. We already have such low expectations of our daily surroundings, indeed so low that we don’t notice them at all. Consequently, de Botton argues it is easy to be impressed by suddenly taking note or appreciating the things that are closest and most common to you through the eyes of a newcomer. This thesis aims to apply this concept of forging attentiveness to the design of an airport, as a building type that we are disillusioned by.

Globalization is one of the largest contributors to homogeneity in airport design across the world, and “this sameness blanketing the world...reassures and defeats the traveler.” Aerotropolis: The Way We’ll Live Next by John Kasarda and Greg Lindsay is a fascinating discussion about globalization and the trends of our western first world culture, throughout which airports are featured in a starring role. The authors make the argument that airports are the drivers behind successful cities, and that the more that global business takes over, the more a city is dependant on its fast connection to the rest of the country and/or world. Kasarda and Lindsay make the point that regardless of how much people dislike or detest airports, or how dysfunctional they are, the public still relies very heavily on them, if not for transportation then for trade. The majority of the time, people will only fly if something is too far to drive, or if there is not enough time to drive, as is exemplified in a conversation between someone who was flying for the first time and the authors. “I’ll never understand, and I’m a mechanic, how those suckers stay up there...I have to think..."
that something that goes up must sometimes go down..."46 But for people who fly on a
demi-daily or weekly basis, these thoughts never enter their minds. To them, the plane is
just a chartered car that doesn’t happen to be parked outside of their house or hotel in the
morning.

The authors delve into a discussion of this population who use the air to commute to
work on a daily or weekly basis (the intended passengers for this thesis), and the effects that
this has not only on them but also on airports. Because these members of society are always
flying, they are therefore also always in airports. “Layovers induced altered states as they
stretched for hours inside concrete sensory deprivation tanks, augmented by jet lag. Hubs
offered an environment to match [the condition of jet lag]: a limbo in which physics and
human experience no longer applied.”47 The traveler on the layover (or waiting for departure
or to be picked up upon arrival) is precisely what the authors say: a captive audience for the
shopping and advertising storm that is the terminal. All of these bright lights, billboards
and shops are the current attempt at achieving attentiveness or awareness from passengers.
However, this superficial awareness does not benefit the passenger’s experience at all, as
opposed to the deeper attentiveness that this thesis aims to spark in travelers. The airport
and airport hub have become a sort of powerful magnet and cannon at the same time. “But
if flight represents freedom, reinvention, and self-renewal—and barring all of that, escape—
then the terminal itself has evolved into something resembling a destination.”48 The authors
mention how, realistically, one would never need to leave an airport, as anything you could
NEED is available: restrooms, food, shelter. It is just that the majority of things we need to
live more than a base existence are not located in airports. This thesis is concerned with
creating a place that, while certainly not replacing a home, supports an engaged and fully
aware existence, along with a sense of serenity.

The main category of passengers that will be considered as the users of the
proposed airport are those who travel very regularly for business purposes aboard small
commuter or charter flights. This is a new generation of workers that the authors have
termed road warriors. "Humans always balanced mobility with domesticity, venturing farther
and farther from afield while picking up speed...road warriors...commute halfway across
the country for lunch and back in time for dinner. Never has man's relationship with place
been more numerous, fragile, and temporary...we are breeding a new race of nomads."49 The
authors provide a profile of these commuters, some being so intensely nomadic that they do
not actually have a house to return home to, albeit making vast sums of money. According
to the Kasarda and Lindsay, the road warrior tends to be single, middle aged and have a high
income. One particular example spends all of his nights in different hotels or in first class
cabins of airplanes. Another example is George Clooney’s character Ryan Bingham in the

46 John Kasarda and Greg Lindsay, Aerotropolis: The Way We’ll Live Next (New York: Farrar, Straus and Giroux,
2011), 90.
47 Ibid., 96.
48 Ibid., 97.
49 Ibid., 101.
movie *Up in the Air*, who does have an apartment, but it contains hardly any furniture as he is only there a couple of days out of the year.

The authors make a similar parallel as Alain de Botton, discussing airports and airplanes as a new variety of “gated communities” trying to outdo each other with their exclusivity. They discuss how the jet age once was the symbol of everything modern, but once we acclimated to the pace of this new world, the jet age ended and “adventure gave way to business and leisure, and finally to being a cog in the finely meshed gears of a global machine.” In the epilogue, Lindsay discusses a particular weekend day, where he started out in New York at his home in the morning and flew to Chicago to attend a Cubs game and meet up with his family, and then fly back home that night. “At thirty-thousand feet, the sky is clear, the weather perfect; sunlight suffuses the cabin with vitamin D. The flight to Chicago is as boring as any train or bus ride, as it should be — it’s mass transit.”

Just as all other forms of mass transit are evolving to fit the needs and demands of today’s population, so too will air travel.

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50 Ibid., 102. 51 Ibid., 412.

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Figure 5.32_Collage of boarding passes, baggage tags, bar codes and napkins from various flights
It can hardly be a coincidence that no language on earth has ever produced the expression “As pretty as an airport.” Airports are ugly. Some are very ugly. Some attain a degree of ugliness that can only be the result of a special effort. This ugliness arises because airports are full of people who are tired and cross... [Architects] have sought ...to make effortless the business of separating the traveler forever from his or her luggage or loved ones, to confuse the traveler with arrows that appear to point at the windows…and conceal the location of the departure gates.52

-Douglas Adams

The concept of flying from one place to another once provoked wonder and awe, and had a raw and adventurous magnetism, and even a sexual appeal to it. Air travel was seen as amazing, and the terminals at the departure and destination points were glittering gateways to the romance and adventure of the skies. Over time, the steady and significant growth in popularity of air travel, as well as changes in security requirements have resulted in a trend of airports designed as highly functioning people processing machines, with less and less regard to the site, the culture and history of the locale of the gateway, or the human beings who spend their time within its spaces and pass through its gates. Today we are completely jaded, and that appeal has all but completely vanished, with long security lines and people moving through terminals as unconsciously and mechanically as though controlled by the machines that are constantly monitoring them, a truth which is necessitated by the high efficiency of the airport.

This thesis undertakes bringing the attraction, appeal and wonder back into the experience of flying through exploring the faults of the terminal as it exists now and specifically how it can be improved. This thesis argues that the ARRIVAL should be a unique experience from the DEPARTURE, the thought of having to spend time in the gateway to a city while the plane is prepared or repaired should not be an aggravating concept for travelers, and the concept of flying 30,000 feet in the air at high speeds should arouse an emotion other than annoyance from passengers. A new airport, as the bridge between earth and sky, is the perfect opportunity to respond to the negativity surrounding air travel in today’s culture and show that a highly functional building can absolutely have a positive and memorable effect on its occupants.

As a direct response to today’s sterile and placeless airports, this thesis proposes a new small satellite passenger terminal as a study of experience in architecture. The terminal will be specific to Boston in its overall character, feature spaces that are desirable to spend time in, pleasing to the senses, and soothing to the nerves. Furthermore, by creating a more relevant, engaging and meaningful terminal, while simultaneously maximizing efficiency, the feeling of being in a “cattle class” that has become so prevalent with air travel and terminals for non–first class/business class passengers will be mitigated. Ideas advanced in this thesis offer ways to transform the stigma attached to air travel into a positive association and air travel itself into a sought after encounter.

The path from the sky through the terminal to the road, and vice versa is designed in this project. Key elements include the landside approach to the airport, the ticketing area of the airport, the waiting areas and lounges near the gates, and the airside approach. A special importance is placed on the security, lounge and waiting areas, as this is where travelers spend the majority of their airport experience, and it seems that these spaces are generally overlooked as a crucial part of the airport experience. Much more design attention is generally given to the ticketing hall, which is actually slowly becoming obsolete with the increasing popularity of self-ticketing/check-in and smart phones. These new technologies have made the interaction at the check-in counter a non-event. The circulation between these elements is also critical, as it is this movement that defines the airport and its functionality.

A focus is keeping the inside as open as possible, especially with regards to the ticketing areas and zones where clear circulation is required, which will integrate (not impose) the essence of the site into the spaces. Another goal is to design a building that has a character that projects itself outward in a very noticeable way. Also, this sense of character, place and a feeling of arrival continues through the physical entrances, be it gate or front door, and as one circulates through the spaces.

The airport is designed as a meaningful place for people to engage with their senses and their surroundings, and to reconsider the event that is the airport and the wonder that is air travel. Engagement, awareness and perception of the body, building and site come together to forge the experience of the passenger through the dichotomies inherent in airports: arrival and departure, earth and sky, inside and outside, stillness and motion. Through the lenses of place making, phenomenology of human body, perception, interpretation and memory, this project will demonstrate that if we could successfully achieve such a gateway, airport design and the act of travelling via airplane would be transformed into a much more interactive and enjoyable experience for all. The traveler’s, as well as the employee’s, experience and mentality will be greatly enhanced by the vital character of the place they inhabit and Boston will have a solution to the overcrowding of its Logan Airport. As such, the airport will be considered as part of the journey, as a prelude to the adventure of flight, and as a place to explore and enjoy in its own right.
Site Analysis
Physical features and experiential conditions

Situated in Quincy, Massachusetts, the site for the new commuter relief airport that this thesis proposes is just under 12 miles south of Boston and Logan International Airport. It is located just off of the red line of Boston’s rapid transit train and subway system, the T, and with easy access to I-93, a main artery through Boston. As such, potential passengers could easily reach the site via train, bus or car, with an emphasis placed on public transportation options, because Boston prides itself on having a very user-friendly and well-connected mass transit system.

This particular site features a rich history, particularly with relation to aviation. Before 1953, the site was known as Naval Air Station Squantum. Since then it has become Squantum Point Park, and one of the runways that once supported aircrafts returning to the ground has become a series of walking paths for people who live in the area. With stunning views of the Boston skyline over Old Harbor and Boston Harbor, and Quincy Bay towards a series of Island State Parks and eventually to the Atlantic Ocean, this site is an inspiring choice for a new small-scale airport for Boston. The gorgeous panoramic outlooks provide wonderful design opportunities to showcase those views to the visitors of the building. Not many airports have the luxury of having 180-degree views of the city that it supports. Consequently, this site provides unique opportunities for site specificity to be implicated in the design. Its views and amenities alone provide an appealing case for a new gateway into Boston to be built on this site.

The site is an irregular shape, but at it’s longest diagonal it is over 1.5 miles long, which allows for an adequate runway for the commuter jets that would be landing and taking off from this site. The perimeter of the site covers approximately 3.5 miles. The town line between the city of Boston and the town of Quincy runs up the Neponset River just to the west of this site, navigates around the point of the peninsula and out into the harbor. One of the main reasons for choosing this site, along with its proximity to both Boston and Logan Airport, is the fact that it has a long history of aviation associated with it. Although today the runways have been mostly demolished to make walking paths, the outline of where they were survives and allows for a clue as to how to support air traffic on this site once again.
Figure 6.2_Detailed topographical and geological site plan
The site, as the location of a past airport, is a prime example of the status quo that this thesis will challenge. It is essentially flat, which was necessary for the functional usage by airplanes, but simultaneously does not allow for any interaction with the ground. The only interaction a human being can have with the site is to stand on it and look out from it towards other significant or beautiful scenes. One is never nestled by the site, protected by landforms, and one certainly never interacts sectionally with it (for example by moving underground and emerging again), as in the majority of airports around the world. The most intriguing interaction that is possible with the earth on this site is at the northeast corner of the site where the runway/walking path terminates in a few concrete stairs. Visitors can climb down these stairs onto a sandy beach-like area (labeled as “mud” on the previous page) and walk around on that level which is approximately 6 feet below the plane of the rest of the site. This thesis aims to engage the traveler physically with the site in as many ways as possible before boarding their flight by folding the site so that it interacts with the building and the access road.

Outside of the park, the rest of the land of the old airport has been parceled off to developers of residential and commercial complexes. For the purpose of this thesis, imminent domain will be assumed over these subdivisions and return the airport site to its former size. The very large building shown is a massive warehouse complex, and several of the buildings close to the harbor are relevant to the marina, which will be incorporated into the final site plan to accommodate as many different types of approaches to the site as possible, including by boat.
The Land Use diagram at left describes the different elements that comprise the site, both natural and man-made. The site is almost completely surrounded by salt water sandy beach and is bordered to the east by a significant amount of salt water wetland. The next page of this document features a Coastal Barrier Resource map, which describes which areas within this salt water wetland are protected as a coastal barrier resource. The majority of what is marked as wetland is not considered coastal barrier resource, and in fact much of it falls under what was at one time the Naval Air Base. An interesting fact about the site is that the salt water sandy beaches are a popular location for local people to go clamming. This is not only proof of a great ecological scenario, but speaks to the New England region’s culture and history, and hints at a culinary favorite of the area. This can be worked into the airport, which could feature a restaurant that serves as an attraction featuring the freshest clam chowder in the Boston area.

The site is zoned as PUD (Planned Unit Development), BUS B (Business B), BUS C (Business C), RES B (Residence B) and OS (Open Space), where Business B refers to general business, Business C refers to central business, and Residence B refers to multifamily low density housing. However, this thesis assumes that as the site was once zoned appropriately for an airport, that returning it to that status will not be problematic, especially since the majority of residential development near (not on) the site is located a good distance away from the site boundary.
Squantum Point is located in the Northeastern Coastal Zone within the Boston Basin. The Northeastern Coastal Zone ecoregion encompasses most of New England’s southern areas. Its geological surface is composed of Cambridge argillite and Roxbury conglomerate rock. The soils of the Northeastern Coastal Zone tend to be nutrient deficient, which in the past made it difficult to farm, but still allow for the main types of forest within the ecoregion, the Appalachian oak forest and the northeastern pine forest, to flourish. The main rivers in this area are the Charles and the Neponset, with the latter flowing directly past the Squantum Point peninsula. The Boston Basin is characterized by having rolling low hills, as can be found directly around the site. The actual area of the site was once marshland at the mouth of the Neponset River. Today, essentially the entirety of the Boston Basin is urban and suburban land. However, parks are prevalent throughout the city of Boston and its metropolitan area, as can be seen with the repurposing of the Naval Air Base at Squantum Point partially into a park. With regard to vegetation, several varieties of scrubby or weed-like bushes are prone to grow naturally on this site. A few clusters of pine and oak trees, whose growth is consistent with the ecoregion and soil type of this particular area, as well as an abundance of wild grasses and vines can be seen around the manicured walking paths. There are also many marshlands (as the original natural landscape of the site suggests) in the vicinity, which support salt water marsh ecosystems from birds to fish to vegetation.
Shown above is a section cut east to west through the site. Because the site is so large, the scale of the section only serves to exacerbate the perception of its flatness. The buildings that currently exist on the site are all relatively low, ranging from 20 feet to about 50 or 60 feet tall. For the purpose of making them perceivable in the section, these heights have been considerably exaggerated. The layers of ghosted blocks in the background of the section show the layers of buildings behind those that are being cut through. As this section is a study in the extreme flatness of the existing natural site, it speaks to the long history of aeronautics, and the site’s extreme functionality as a military base. Although there are many excellent qualities to the site, none of them have ever been maximized before for the joy of its users or inhabitants.
Flight paths to and from the terminal are important to consider. Figure 6.10 on the previous page is a diagram showing the flight paths that were associated with Naval Air Station Squantum when it was operational, as well as the flight paths of nearby Logan International, which interact with the airspace over this site. Also shown are the flight paths/runway locations that could be proposed and that also coordinate with those flight paths to Logan. These flight paths coordinate with prevailing winds to allow for the best possible natural conditions for the take-off and landing of aircrafts. With careful coordination with Logan, as well as unidirectional runways oriented so as to not interfere with planes attempting to land at Logan, a functional relationship can be developed between all of these flight paths.

Lastly, there are myriad different ways to approach this site, as shown in the diagram at the bottom right of the previous page. This thesis makes the assumption that the majority of the business people flying in and out of the airport would be making their way to or from downtown Boston, although connection to all of the metropolitan areas is equally possible. The primary method of access is by motor vehicle, via I-93, Rt. 3, Rt. 128 and secondary roads. The T, Boston’s rapid transit train and subway system, also runs close to this site, and could be utilized by adding a new T stop off of the southeast corner of the site, or adding bus service from the existing T stop (this is one of the methods used to connect to Logan). The potential for a new stop to be added to the existing T line, or an added shuttle bus connection, creates maximum efficiency for passengers who opt to use the T to get to and from this airport. With the existing marina, the possibility for an approach to the site by water is also an important idea, and could significantly change the airport approach experience. At a minimum, it will continue to provide a scenic backdrop for passengers to look out over while waiting to get on their planes. Of course there is also the air approach, shown with dashed purple lines, which is intricately tied to the diagram of the flight paths and wind directions and velocities which will be discussed shortly.

The following pages illustrate views as one approaches the site by vehicle, and then various vistas available from different locations on the site. Notice the saltwater sandy beach pictured at bottom center, and the people in the background clamming as the sun begins to go down. This photo in particular seems quite idyllic, and suggests inspiration for how qualities of the “place,” its nature and its heritage, could participate in the new airport experience proposed by this thesis.
Figure 6.13_View Key for images on next two pages.
existing view on final approach

approach to site

approach to site

approach to site
Figure 6.18_  
5) existing retaining wall

Figure 6.19_  
4) views down runway

Figure 6.20_  
2) views down runway

Figure 6.21_  
1) view from site

Figure 6.22_  
3) view over shore to Boston

Figure 6.23_  
1) view from site
Because this thesis is concerned with improving the experience of the airport, the natural and climactic conditions of this site are critical to the design of the proposed terminal, and have a daily effect on its inhabitants throughout its lifespan. As the host of an airport, probably the most critical natural condition is the direction and velocity of the wind, as this will directly impact the runway directions and locations. The adjacent list of design suggestions was taken from Climate Consultant based at Logan Airport, so they are good considerations for this site. Some of the design suggestions that Climate Consultant produced have been highlighted at left as priorities throughout the design process. Among the most interesting is the concept of a steeply pitched roof at an airport, which could bring a regional quality and raw environmental functionality to the terminal, and be a unique feature among airports, which normally feature flat roofs. Also, a new concept for an airport could be incorporating “sunny, wind-protected outdoor spaces” into the waiting area of the terminal, a zone of the terminal building that is essentially hermetically sealed at all times. Similarly, optimizing sunlight in a design is more beneficial than simply providing passive lighting or heating, and can significantly improve the experience of a space. Furthermore, based on the wind information collected at Logan, shown at left, it is safe to deduce that the runway orientations will be quite similar at the site.
The wind wheels depicted on this page show the dominant directionality of the wind at different critical points of the year, with the top left wheel showing the yearly average. Beyond this, the wheels show the temperature and the relative humidity resulting from the wind. By taking the yearly average into account, one can see that the wind comes predominantly from the west, with the strongest winds blowing from the northwest and the southwest, which is also where the fastest winds tend to originate. This information will be applied to the runway layouts through the lens of the flight paths at Logan, as the runways will likely be angled the same ways and running essentially parallel.
When it comes to experience based design, light qualities through the use of both daylight and artificial light are critical. Therefore, understanding the amount of light that is available naturally on the site throughout the course of the year is invaluable, and will be applied throughout the design process to maximize its qualities. One particular location of focus for design informed by solar qualities is in the security zone, particularly when considering the screen systems that will be utilized. Also, these qualities would have to be considered in the design of the waiting lounges, which could greatly benefit from sunlight in aiding the goal of making these spaces more comfortable.
The site that would become the Naval Air Station Squantum was originally merely marshland at the mouth of the Neponset River. It became Harvard Aviation Field in 1910, and served as host to the Harvard-Boston Aero meets for the next several years, featuring such famed fliers as the Wright brothers. After this, Squantum peninsula functioned as a sea plane base for the Navy, while simultaneously being host to another airport called Dennison, located on the southern portion of the site. It became the Naval Air base in 1929 that featured turf runways beyond the sea plane base that it previously hosted. In the late 30's, more runways were added, and the Naval Air Station served as a training site for new pilots until the site was closed in 1953. This closure was due mainly to conflicting flight paths with Logan across the bay, but also to the fact that its runways were of insufficient length for landing the newer larger planes. The site is rich and layered with a long history of flying, which justifies the prospect of returning the site to its original built purpose.
The pictures below provide more historical insight into this site and how, over time, it morphed into the hybridized site that it exists in today, with only small remnants to remind people of what once went on at this location. On the following page, images from around Boston and New England provide a concept of cultural and environmental flavor. Bostonians are very proud of their city, and it would be remiss to completely neglect considering its context with relevance to a new airport sited in Quincy but serving the Boston metropolitan area within New England. Pictured are examples of some vernacular and historically significant streetscapes within Boston for consideration of their composition, textures, character and materiality. These streets are all beloved among Bostonians, but also among tourists visiting the city (including business people). The majority of the streets outside of the site but within close proximity to it are residential, featuring single family homes or small apartment buildings that are well tended, but very standard and perhaps lacking a specific comprehensive character.

Figure 6.31_1917 view of sea planes at Squantum

Figure 6.32_1926 view of hangar and planes at Squantum

Figure 6.34_Squantum Point site plan, circa 1954

Figure 6.33_Quincy and Squantum Point, 1927

Figure 6.35_Squantum Point, during runway construction
Figure 6.36. New England and Boston Regional+Historical Architecture Sampling

Figure 6.37. New England and Boston Regional+Historical Architecture Sampling

Figure 6.38. New England and Boston Regional+Historical Architecture Sampling
Initial Site Response Strategies

Because this site is so steeped in history, and has so much to offer with regard to views, amenities and access, there are several potentially successful building sites within the site overall. Possible site 1 would allow for the most panoramic views of the most varied surroundings. One could see to Boston, to the Harbor and out over marshes towards the Atlantic Ocean. It also has the closest proximity to the main access road to the site, but is located quite far from the T. It is located quite near to the marina, which could prove to be an interesting asset. Potential site 2 allows for views towards Boston but along and over the site, as well as views down the Neponset River (the least favorable site in terms of outlooks), but is located near both an access road to the site and to the T. Potential Site 3 is located right on the marina and would have the most stunning views toward Boston and Logan, but is furthest from access points. All of the sites are flat, and would allow for views of the runways themselves. A modified site 3 would be the most beneficial building sites allowing for the best possible experience to be derived from the natural qualities.

When considering the site, the convergence of the built and natural environments with the technological and human elements of the site provides great opportunity for design. It makes sense that these elements, beyond coexisting next to each other on a site, should really interact but without inhibiting each other's flow, which led me to the concept of weaving the different site factors together. Not only would this allow for a more involved personal experience while on the site, but it would prove to be memorable as an airport, an entity that is notoriously FLAT, in style, emotion, physical built character and site character, with no interaction between the various elements. This thesis will challenge this concept of the airport site, which could directly affect the other conventions of airport design that this thesis is addressing.
Below are a sampling of sectional diagrams of how to potentially involve or engage the site more directly with the experience of the traveller. The first diagram shows a conjecture that is first and foremost concerned with views around the site. It involves the layering of site “inhabitants,” but it doesn’t actually forge much more interaction that the standard airport today does. The second conjecture considers the possibility of merging ground with sky by allowing the jets to go under overhangs or through a tunnel, and this could potentially happen because of the small scale of the jets that will occupy the site. It also considers the concept of burying the building slightly so that a passenger’s experience of earth to sky is heightened by physically involving them with the ground. The third conjecture involves a high level of engagement with all of the site’s inhabitants, and could allow for the most intense sensory experience for travellers waiting to take off: feeling the distinctive thud of an arriving plane touching down, and although this is certainly unique, it doesn’t necessarily provide for elevated views of the city, unless it were to also include a “control tower” for the passengers to be able to occupy for viewing purposes.
Conclusion

Overall, this site provides a wonderful skeletal system to work with when creating a new small terminal with a focus on reawakening the wonder of air travel for the jaded passengers of today’s globalized world. Its proximity to both Boston and Logan Airport is a huge advantage, and the connectivity both through public transportation and vehicular access that this site has to offer is truly an asset for this thesis. Because it is situated on the water with no obstructions, the views it can provide for people on the site are unparalleled, and, if utilized to their full extent, can be invaluable in influencing the final design of this terminal. Also it is very helpful that the site has already been used as an airport, and so with a few adjustments, the site will be highly functional and appropriate.

The site is certainly not without its constraints, and it will be necessary to clearly delineate the assumptions being made in order to focus what this thesis is and is not concerned with. However, given all of the opportunities that this site provides, it will provide an excellent background (and, conversely, foreground) for the arguments of this thesis. The many lives of the land at Squantum Peninsula, along with all of its natural qualities, captures the imagination of its inhabitants, and as such is an excellent catalyst for a study of wonder through sky+ground, stillness+motion, here+there and how perception, experience, and memory can amplify these themes.

Figure 6.42_View to Boston over the old sea wall, a relic from the site’s past.
Experiential Inventory
This thesis will explore the level to which the passenger, or traveler, can engage with all aspects of the journey including the airport, particularly when they travel regularly. It is precisely the engagement, perception and awareness of the passenger that forges their experience in a space (place). Through provoking physical and sensory interactions between the body and the building, the perception of the space comes alive and creates a memory of the encounter. As a direct response to today’s sterile and placeless airports, this thesis proposes a new small satellite passenger terminal as a study of experience in architecture: create spaces that are desirable to spend time in, engage the senses and soothe the nerves, and explore the fascinating simultaneous dualities of the airport, among which that it is both transient and static at any given moment...thereby potentially (re)igniting the wonder of air travel.

Through this study, the following questions will be explored:

Can the airport really become a part of the journey, a place to explore, enjoy and spend time in without aggravation?

Can it be seen as an introduction, a prelude to the adventure of the flight? Or as a conclusion or epilogue?

Can such a functional building also foster a connection with its inhabitants?
Figure 7.1. Engagement with surroundings goes up upon entering the architecture of this project.

Figure 7.2. Anxieties are soothed upon entering the architecture of this project.

Figure 7.3. Image from internet connection at Indianapolis International Airport.

Connecting To Airport

One moment please while we connect you to the airport.
Analysis of Similar Spaces
Kutaisi Airport, Kutaisi, Georgia_UNStudio

List of Apparent Activities:

- Check in desk,
- restaurant,
- restrooms,
- airline offices,
- lounges,
- storage,
- accessible courtyard,
- 3 departure gates,
- luggagesorting/scanning,
- baggage claim,
- “meet + greet”

Landside: entry + exit = same door
Airside: departure/arrival = diff. door,
- customs,
- security check,
- security,
- back of house offices
- staff entry point
List of Apparent Activities:

Check in desk,
restaurant,
restrooms,
airline offices,
lounges,
storage,
14 gates,
luggage sorting,
baggage claim,
Landside: entry + exit= same door
back of house offices
An airport only exists for and because of the people who inhabit it. With passenger numbers as high as almost 54 million a year at some of the busiest airports in the world, it is clear that the diversity of travelers is one of the richest qualities of an airport. This quality is also what makes waiting in them more bearable: it allows for a passenger to have potentially hours of entertainment, simply from people watching. However, what is often not considered is the myriad workers who make the airport operational, from different ground crews (including but certainly not limited to mechanics, baggage monitors, refuelers, plane servicing and cleaning, food preparation, aircraft tow tractor drivers) at each of the airlines, to airport employees ranging from executives to janitors, to the flight crew who use the airports as their bases to the Transportation Security Administration (TSA) officers who help make airports safe. It is because airports are humming with the activities of various people living their lives that they become so fascinating, and it becomes disappointing that they visually exist as such sterile non-places.

Through this section of the document, a selection of various experiences within this new airport will be explored. It is these people’s experience of their entire journey, or day, that this thesis aims to improve and awaken.
Name: Cindy Holst
DOB: 9/14/1988
Birthplace: Houston, TX
SSN: xxx-xx-6213
Occupation: Flight Attendant
Work Address: 1 Victory Ave, Quincy, MA
Home Address: 25 Chestnut Street, Medford, MA
Family: Mother Gene (who’s currently living with Cindy along with her Father), Father Mulvin, brother Alain
Frequency of Travel:
Flies to and from Boston on average 3 trips a day for at most 4 days out of the week.
Likes/Dislikes/Spare Time:
Likes: Playing music with her brother on the trumpet / Dislikes: washing dishes and staying in one place for too long /
Spare time: Drives the car she recently bought around the region
Allergies:
None; gets sunburnt very easily
Emergency Contact: Her secret boyfriend Nate Crint, 617-846-4837
Cindy Holst wakes up slightly late with a jolt at 4:00 am, realizing that she has only 3 hours until her first scheduled flight departs. As a flight attendant, she does make it through security more easily than others, but she is still stressed to even consider missing her flight. She has always loved traveling, and so flying to and from various cities within the region from this new airport for up to 4 trips a day on busy days is something she finds thrilling. An older flight attendant that she often gets stuck working with complains incessantly about the repetitiveness of the job, but Cindy finds something soothing in the routine.

Cindy speeds slightly while she is driving to the airport, silently wishing with all of her might for no traffic. One bonus of having to wake up so early for work is that there is hardly ever any traffic to contend with, which is lucky for this habitual over-sleeper. She follows the easy to understand signs that are now familiar to the partially subterranean parking garage where there is a floor specifically designated for employees. She locks the car with an hour to go to takeoff and rushes toward the large glazed ramp that will take her up into the grand ticketing hall. She emerges from what feels like being underground in the parking garage to cross the breezeway into the “viewbox” entry point. She loves seeing the panoramic view of Boston in the early hours of the day before heading down a grand stair into the ticketing area. She thoroughly enjoys moving through all of the passengers who are coming and going, moving in so many different directions at so many different speeds. It is still very early in the morning, the traffic is slightly slower than it would be in the evening. She proceeds to a door next to the check in point for her airline. She is moving up again, to the airline offices above the ticketing hall to check in with her bosses and to see which flight crew she will be teamed with on which flights to which cities (her schedules often change based on other flight attendants’ schedules). After retrieving her assignments for the day, she proceeds to the other end of the offices to another door which will lead out to a gallery and an escalator back down. She goes through the crew line for security, which is always a speedy process, although she still goes through the regular security process when flying for pleasure, so she is still aware of the pain that that process can impose on travelers. Which is why she appreciates the polished wood floors and the lovely textures and play of light created by the rising sun coming through the delicate wooden screens around the security zone. As she’s slipping her shoes back on in a nook off to the side of the security lines, she looks through the patterned slots in the screen and sees her best friend Lucy who is also working that first flight. She waves at her friend and easily catches up to her on the other side of the screen.

They walk together past the off-white smooth undulating walls of the hallway with nooks and small alcoves cut into it of different sizes for families, individuals and small groups of people for small semi-secluded moments in the gate area. It is a short walk, because this airport only has 8 gates, and after passing 2 other gates, an occupiable glazed in central courtyard, and lounge areas they have reached their gate. Cindy turns briefly to look back at the way that the green roof folds down through a skylight before the courtyard to create a living wall as a preamble to the courtyard and a further reminder that nature is not something that is forgotten in this high-tech building. The women pass through 4 rows of comfortable arm chairs in what appears to just be an oversized modern living room, and they check in with the gate crew before walking down the entirely glazed jet bridge to the 20 passenger Beechcraft B1900 airplane that will be their office for the next 1.5 hours inclusive of flight time and service time pre and post flight. Porter Airlines prides itself on meeting their customers’ every comfort and service requirement, and this airport is a fitting new stop on Porter’s service routes.
Name: Selma Firestone
Birthplace: Cambridge, MA
SSN: xxx-xx-1239
Occupation: Student
(about to graduate with the Entrepreneur of the Year Award)
Work Address: Harvard Business School, 100 Western Ave, Boston MA
Home Address: 20 Hilliard Street, Cambridge MA
Frequency of Travel:
Flies at least every 4 months for her business she started, conferences that she speaks at, to visit family and friends, for job interviews.
Family: Father Michael, Mother Grace, Older Brother Peter and Younger Brother Howard
Likes/Dislikes/Spare Time:
Likes: Being in the garden, helping her younger brother with his homework, researching ancient horticulture techniques/
Dislikes: People who say stuff is too hard, getting up late, drinking non-organic coffee/
Spare time: Works in one of her community gardens
Allergies: Shellfish
Emergency Contact: Older Brother Peter, 614-458-3430
Selma Firestone is a college student who is returning home for winter break. She purchased her ticket 3 months in advance, partially in anticipation for the break, partially because her mother nags her and partially because she knows the prices will climb the closer to her departure date she gets. After purchasing her ticket, she doesn't much give the airport or airplanes another thought until the airline sends her an email a week before her departure reminding her of her trip, as if she would really forget! At this point of the semester she is counting down the days. She has already begun packing, which always makes her nervous: what if she forgets something critical that she'll need?

Selma leaves her house with 4 hours to spare, but still walks briskly to the T stop from her house, and stays on the red line all the way to the airport (“couldn't be easier,” she thinks to herself). She gets off the T on ground level at which point the signage for the airport in the station leads her down underground under the runway with occasional slanted skylights to keep her always connected to the sky even when she is thoroughly aware of being physically on (or under) the ground. The tunnel ramps up and then escalators and glass elevators offer to bring her up above ground level and up into an impressively lofty and light space. Here it is very easy to see where she needs to go to check in with her airline and check her 2 bags which she's been rolling around behind her. She doesn't mind because that sound that is so specific to a roller suitcase moving over the texture of the pavement means a journey is impending! Selma gets nervous about flying, but she has to admit the excitement she feels when she sees all of the other passengers and she wonders where they are headed. She also loves that she can see the captains and flight attendants moving around on an unenclosed cantilevered space above. Without the load of her baggage, she takes the time to move through the grand yet also surprisingly intimate space of the ticketing area to head to the restroom. Even these are designed with the traveler in mind, with ample space and clerestory translucent windows for natural light to penetrate. She then proceeds through the central lounge where she notices a fair amount of families and business groups interacting in the cafe on this cold afternoon. She is even more intrigued by the tree that is seemingly exploding through the center of the space, reaching up to the sky, and the observation deck that is up in the treetop which from the ground appears to be a smooth box affording great views of Boston to one direction and the fascinating activity on the tarmac in the other direction.

As someone who really likes to be at her gate good and early, Selma follows all of the visual cues leading her to security, which if it weren't for the officers in their unmistakable blue collared shirts, she wouldn't necessarily really know that she was being examined. She loves that she can step into a glowing tray with her shoes still on and be moved on a slow conveyer belt alongside her belongings on their separate conveyer belt in the "express" lane of the 2 lane security...something the TSA is trying out. Beside that, this security area feels very intimate because it is screened both on the entry side and the exit side, and has a much lower ceiling than the rest of the airport, which makes Selma feel more comfortable about the screening process. The fact that the delicate wooden screen still allows a good amount of natural light and doesn't fully obscure her from other passengers makes her feel still more comfortable as she recollects all of her belongings.

Selma then moves into the waiting departure lounge, where she sits comfortably in one of the nooks in the undulating and smooth off white wall and reads a book while alternatively people watching and looking out the windows to the planes coming and going. Finally it is her time to board, and she hands over her boarding pass while moving down the jet bridge and simultaneously getting one last look at Boston.
Name: Charles “Chuck” Flimt
DOB: 08/30/1977
Birthplace: Boston, MA
SSN: xxx-xx-2946
Occupation: Airport Employee at the Satellite Terminal in Quincy
Work Address: 1 Victory Rd. Quincy, MA
Home Address: 136 Main Street, Quincy, MA
Frequency of Travel:
Travels for family vacations once a year
Family: Wife Jill, daughter Maya, 2 cats Philbert and Samsonian
Likes/Dislikes/Spare Time:
Likes: fishing, building model airplanes, camping with his family
Dislikes: being sick, asparagus, bees
Spare time: plays in a band with other men from his neighborhood
Allergies:
None
Emergency Contact: Jill (603) 566-9283
Chuck has wanted to work with airplanes ever since he was a little boy, so waking up at 5am to head to his dream job is not any issue for him. He gets off of the bus on grade and goes down an escalator to the entrance to the heart of the airport. He clears the employee security checkpoint, passes by the room where all of the bags are sorted and scanned. Sometimes when he has a break he sits in the lounge opposite this fascinating room and just watches the bags moving, almost as if they know where they are going without the help of his teammates. He makes his way to an office with an angled view up to the tarmac, where he discusses with his boss and his teammates what his tasks will be for the day. Yesterday he was working the Aircraft Tow Tractor, but today he knows that his friend Mark won’t be in and he was scheduled to be in charge of signaling arriving and departing airplanes. While he loves doing anything on the tarmac, signalling to captains is his favorite job, because in his spare time Chuck has been taking flying lessons. He is assigned to signaling planes, and he whistles as he walks down a hall that is naturally lit from slots in the ceiling above, and has the massive baggage conveyers to its one side.

Chuck opens a door and the noise of the conveyers and jet engines explodes into the serene hallway as he goes into the partially subterranean pull through that the small baggage tractors use to load the commuter and charter planes. He walks up the pedestrian portion of the ramp to the tarmac to begin chatting with his team and sees if they need any help finishing to load the plane before he has to be in his position to signal the plane. The tractor pulls up and he helps his friend Katie load the bags onto the conveyer belt. They finish at about the same time as the rest of the ground crew finishes their tasks and Chuck has a quick radio chat with the captain to make sure they are ready, and then jogs back to his position. He knows people are watching him both from inside the plane and the terminal, but he doesn’t mind because he knows he’s helping the plane taxi safely. He waves the plane out and then jogs over to help the driver of the aircraft tow tractor disconnect the tractor from the plane, and gives the pilot a couple more waves with his aircraft marshalling wands and finally the standard signal to dispatch the aircraft, and the plane is off. He gets a chill because even though he is wearing hearing protection, the sound of jet engines starting to roar always gives him a mental thrill.

He heads back down the ramp to warm up in the comfortable break room that has excellent views up to the tarmac to wait for the next plane assigned to him to be boarded by its passengers before he heads out to signal that one out to a safe departure as well. Seven more hours of this and then he will return back to the ground level and catch the bus back home. However, he is already looking forward to repeating his routine again tomorrow.
Name: Brendaline Pilonol
DOB: 10/14/1980
Birthplace: New York, NY
SSN: xxx-xx-4373
Occupation: Online Business
Owner – Pamper Palace
Work Address: same as home
Home Address: 2521 Centre Street, West Roxbury, MA
Family: Husband Paul (away in Afghanistan), Son Pritchard, Mother Zara and Father Quin deceased
Frequency of Travel:
Travels for conferences and conventions, and to see her mother. On average flies once every month for a couple of days.
Likes/Dislikes/Spare Time:
Likes: Walking with Pritchard to the park, being a successful stay at home working mom, baking/ Dislikes: not hearing from her husband for more than a week, hearing her son cry when she can’t see him/ Spare time: playing the piano
Allergies:
None
Emergency Contact: Her next door neighbor Samantha Snarlum 614-739-1028
Mrs. Brendaline Pilonol prides herself on being a successful internet businesswoman and simultaneous stay at home mom to her young son, Pritchard. She has been out of town with her son for 2 days at a convention for internet entrepreneurs of New England in Bangor, Maine, and has just departed on the 20 minute flight back home to Boston. She is pleased that she could fly on one of the small commuter airlines that serve the new relief airport for Boston-Logan, because she gets a headache just thinking about having to fly in and out of that overcrowded chaotic place, especially when little Pritchard is in tow. Oh, the migraines!

The plane touches down uneventfully and taxis quickly enough, which Brendaline is thankful for because Pritchard is starting to be a bit squirmly in his seat. He never likes being told to sit still for more than a couple of minutes. The captain turns off the Fasten Seat Belt sign, and Brendal (as she likes to be called by her friends) picks Pritchard up and holds him on her hip while they deplane. She is relieved to see that his stroller has already been unloaded from the plane and is waiting for them in this lovely jet bridge. She pauses after buckling Pritchard into his stroller to look out the almost full height window over the tarmac to Boston's skyline and sighs because it's good to be home, even after just such a short trip.

She falls into line after the 12 other passengers deplane and moves up the jet bridge behind them into a surprisingly intimate waiting lounge. She notices that at this particular gate there are two levels of comfortable seating, one that is slightly raised to afford better views, and one that is lowered to be almost level with the tarmac. There is ample space to move around or to be still and slightly secluded, and the huge windows offer grand views. The soft light immediately relaxes her, and there are no harsh announcements over the loudspeaker here. Brendal appreciates the living wall, which she notes connects through to the roof. Through that same skylight that the living wall emerges through she notices the observation deck with restaurant up above. It is just below the control tower, also visible just through the next skylight. She finds herself intrigued with everything around her, and that her eye never stops moving, although not in a frenetic or exhausting way, but in an excited way. Pritchard makes a little noise and reaches for something he can make out through a wooden screen that is separating 2 of the lounges, and this brings Brendal back to reality as she continues to push him through the space. They pass several other unique waiting lounges, each furnished with lovely armchairs and with plenty of space for people to move around even with carryons strewn about the ground. She notices that even the floor feels different beneath her feet, and although it is smooth for Pritchard's stroller to move uninhibited, she still is made aware that it isn't the standard tiled floor that is in airports and hospitals around the world, and that the material changes between the main walking paths and the waiting lounges.

Brendal pushes Pritchard through a translucent threshold with an ample but interesting opening, and she realizes that she has just passed through the security checkpoint, and that the building itself is almost guiding her to the baggage claim, which is unlike any other she's ever had to be in. The space is ample, and she parks Pritchard in a comfortable alcove with the brake on his stroller and stretches a little, then sits down next to him in one of the armchairs to watch for their bag to come through onto the luggage turnstile, and she is fascinated with a long narrow window into the inner workings of the airport that she just noticed as she was sitting facing the turnstiles. The window is just at her seated eye height and through it she can see the most impressive conveyor system bringing her bags from what seems to be the depths of the airport. Finally they appear, and she and Pritchard collect it and then walk out the double doors to find their car in the garage across the way.
Name: Brendan Blake
DOB: 06/24/1962
Birthplace: Switzerland
SSN: xxx-xx-2020
Occupation: Director of Securities Analysis for McBride Blake Willis (MBW) Securities
Work Address: Level 21, McCormack Building, 1 Ashburton Place, Boston
Home Address:
10 Pinckney Place
Jamaica Plain, MA

Family: Divorced with 1 son, Michael, 1 brother Harold who occasionally stays over, both parents still alive—Paul and Ellen. Lives at home alone with his dog Buck (German Shepherd).

Frequency of Travel:
Travels on average 3 days out of every week to locations around the country, mostly around New England and New York

Likes/Dislikes/Spare Time:
Likes: Going for jogs with Buck, going fishing with Michael and Buck, watching old cowboy movies/Dislikes: Talking with his exwife’s new husband Ric, having Harold sleep on the couch, people trying to make him do spontaneous things/ Spare time: Works on his Porsche 356

Allergies:
None.

Emergency Contact: ex wife, Lana 202-465-0023
Mr. Brendan Blake had a prospective customer call him just this morning at about 9:45 about a high profile and highly time sensitive security system assessment in New York. As this opportunity could really bump his business this quarter, he told his associates to cross their fingers that their firm gets the job and had his assistant plan for him to be on the next flight down to the Big Apple. Brendan will be flying on a charter plane that he and his associates often hire to be able to go to their customers at the snap of a finger, and so he will be flying out of the new airport south of Boston. As someone who is “on the road” 3 days out of every week, he finds this new little airport quite refreshing, and finds it relaxing to wait for a flight in the lounge while preparing for the trip’s meetings.

For the whole ride, Mr. Blake is in the back seat of the hired car, finalizing his presentation to the client, and he doesn’t really comprehend the trip from the office to the airport at all. The driver pulls up to the departures door and Mr. Blake gets out of the car with only his briefcase in tow. His assistant had already checked him in and printed his boarding pass for him, so he strolled right through the well lit and lofty yet comfortable ticketing area to the security lines, where he was already beginning to form a relationship with the TSA officers. He has some time to spare, so he goes through the regular security line, as opposed to the express line and the line that is reserved for flight crew. The wood floors are highly polished and thin strips of carpet show where one is meant to stop for the stages of screening process. The space is well lit, but using natural light so as to be less harsh, and the textured walls cut down on the noisiness and the sterility of the security process. After his belongings come through the scanner, Mr. Blake scoops up his briefcase and shoes and sits down in a comfortable alcove off to the side to put himself back together.

Mr. Blake passes through the alternatively screened, transparent and translucent panels that differentiate the security area from the rest of the terminal, and heads towards Gate 5. The walls he walks along have different sorts of alcoves and niches for various purposes: resting a laptop, sitting down, sitting down with a small surface to work at. There are larger alcoves which are appropriate for small group meetings that might need to happen between associates before taking off. There are also smaller lounges equipped with comfortable furniture for travelers to sit if they don’t want to be out in the larger more public lounges. Mr. Blake chooses one of these smaller lounges across from his gate to sit and charge his computer and review product notes before his short 45 minute flight. He sinks into the seat, and settles into his reading, without the loud announcements on the loudspeaker interrupting his thoughts, just a gentle chiming at every quarter hour by the clock on the wall. The time goes very quickly, and it almost feels as though he is not even at an airport, until he looks up and realizes that his plane is boarding. He collects his things and walks calmly (because that is how he feels now) to the gate, where he hands his boarding pass to the person working the gate, and he walks down the slightly sloping glazed jet bridge until he suddenly finds himself on the plane.

He settles into his seat while the other passengers file onto the plane, and fastens his seat belt in preparation for the short flight that separates him from a successful meeting. He will be back home in Boston time for dinner, with his driver to pick him up at the arrivals door.
Figure 7.15. Timeline of activities in airports with corresponding anxiety levels for different hypothetical characters.
Preliminary Programmatic Assumptions

“Front of House” “Back of House”

Approach by car, bus, T, plane, boat
Runway + tarmac + taxiway/
Parking--garage/
T+bus stop
Harbor gateway
drop off zone
Check in
Check bag, boarding pass
bag is processed
Conveyor belt system for baggage
baggage security check
Airline offices
Employee lounge
Restrooms, food
Baggage sorting
support vehicle drive-thru
Hangar for mechanics (x1 at this scale)
Storage
Mechanical Space
Security Offices
Airport Offices
Pre-security time killing
Restrooms, food, light shopping
“See You Soon”/Separation point
Security
offices
(Non-denominational chapel
praying/convening)
(Family spaces-mother’s room)

Incoming baggage sorting system
Loading dock
Control Tower
Waiting for departure, working,
Restrooms, food, light shopping

Gates:
enplaning + deplaning
Arrival Security Checkpoint
Reunion/Meeting Point
Baggage Claim
lost baggage
Viewing/Observation platforms/decks
Gardens/Courtyards
General Circulation
Jet bridge-tentacle airplane/airport
physical attachment
pick up zone
Space Standards and Criteria:  
Deriving Spaces Through Research

An airport is an extremely complex machine that has been studied extensively, and is still not perfected. However, there are several standards that are helpful when trying to size various spaces. In general this thesis will aim to achieve the A “Level of Service” mentioned on page 252 of Airport Design and Operation, which allows for the greatest comfort and service. According to the authors of this book, the maximum walking distance given by the IATA (International Air Transport Association) is a total of 400 m to get from the vehicle the passenger arrived in to the plane, which is well within the scope of this proposed thesis. According to MassPort, Logan Airport served about 2.3 million domestic commuter and charter passengers in 2010. After subtracting the commuter passengers who caught connecting flights, the number comes down to just under 2 million final destination commuting and charter passengers per year, which is the number of passengers that will be relocated to the new proposed airport. This number is significant because it will help to size the spaces that compose the airport. According to Airport Systems: Planning, Design, and Management, a rule of thumb can be simplified down to dividing the annual traffic by 300 to get a peak daily design traffic (which for this airport gives a peak day design traffic of 6,000 passengers maximum).

For the highest level of Service Standard, according to Airport Design and Operation, in areas of waiting where people will be moving without bags, each passenger should be allotted 2.7 m², whereas in a baggage claim area, where bags come into play, each person should be allotted 2.0 m². With regard to check in areas, people who are lined up, potentially with bags should be allowed 1.8 m² each, and in security areas people are allotted about 1.4 m² each. In general, for small domestic and charter terminals the IATA recommends that each passenger have a gross floor area of 25-30 m². The authors of Design and Operation go on to state that 38% of the gross floor area will be used by airlines, 30% will be given to public circulation and 15% to airport official needs for administration.

As far as the design of the different components of the terminal, these rules are applied with additional conditions that the authors of Airport Design and Operation and Airport Terminals lay out. The ticketing area requires 4 m of space for queuing, with the check in area being potentially 20 m wide to allow for queues and circulation (this number is more appropriate for larger terminals). The authors pointed out that a manual sorting system aided by conveyer belts may be sufficient for a smaller airport, thereby forgoing the need to have a massive system of conveyer belts as they do in large international terminals. The authors of Airport Design also recommend corridor widths of up to 6 m, which allows for a loss of 1 m in any corridor due to the fact that passengers do not like to walk against the wall. This 1m cushion also allows for features such as water fountains and pay phones, which stick out from the wall. They mention that each station at the security zone requires 10-15 m² to allow for maximum flow through the station. The total area of retail, will be approximately 700m² based upon the number of passengers that this airport serves, with 60% of that space allotted to retail stores and the rest to food vendors. Gate areas require approximately 1.7m² per seat in the space, with executive lounges allowing even more space. For baggage claim, there would need to be 2 carousels, with 12 m in between each carousel (at 4m wide for the carousel). There are indeed many considerations to be taken into the design regarding space planning, but there are many authoritative texts to aid in this endeavor.

Deriving Spaces Through Precedents

Kutaisi Airport, Kutaisi, Georgia_UNStudio

Program Area Configurations

- check in: 3,400 sqft
- restaurant: 1,300 sqft
- restrooms: 500 sqft
- airline/airport offices: 3,700 sqft
  (inclusive of circulation)
- storage: 500 sqft
- central courtyard: 2,500 sqft
- 3 departure gates/lounge: 9,400 sqft
  (inclusive of 3 arrivals gates)
- luggage sorting/scanning: 1,300 sqft
- baggage claim: 3,800 sqft
- “meet + greet”: 3,000 sqft
- customs: 700 sqft
- security check: 1,920 sqft
- security offices: 1,800 sqft
- control tower: 3,200 sqft, 180 ft tall
- circulation: 5,980 sqft

TOTAL: 43,000 sqft
SITE TOTAL: 118,400 sqft

This building is a good starting point for programmatic analysis as it is very close to the size/scale of the airport that this thesis proposes. It does have some features that this thesis as a domestic terminal will not require, such as a customs checkpoint, but on the whole, it is a close approximation to what this thesis could produce spatially.
Deriving Spaces Through Iteration

For this particular study, the best size for the security area will be tested, with the offices nearby and its satellite, the security checkpoint. This will be very preliminary, because these spaces depend highly upon the spaces both before and after them in experiential sequence, and the spaces may actually overlap. In these diagrams, the orange circles show the allotted space per person.

The original assumption of 500 sqft overall security “zone” with two 130 sqft screening stations is very tight, and much too similar to the cramped and uncomfortable security zones in airports everywhere. The 80 sqft arrivals checkpoint appears much too ample, and the office area, at 90 sqft is also too small, and may require further subdivision.

The test of the 800 sqft overall security “zone” with two 130 sqft screening stations allows for collection of belongings and a moment of pause after being processed, as well as more ample space before the screening process. This makes for a less rushed atmosphere. The 20 sqft checkpoint is better suited to its function as more of a personal space outline for the TSA officer, and the office area, at 250 sqft is more appropriate for this airport’s requirements.
Preliminary Programmatic Spatial Summary

(Approach by car, bus, T, plane, boat
Runway + tarmac + taxiway/
Parking--garage/ T+bus stop)

- **drop off zone**: 90 ft long
- **Check in**: 1500 sqft
- **Airline offices (5 airlines)**: 200 sqft
- **Employee lounge**: 150 sqft
- **Baggage sorting**: 1500 sqft
  - Converyer belt system baggage security check arriving/departing
- **Storage** (dispersed): 1200 sqft
- **Security Offices**: 250 sqft
- **Airport Offices**: 500 sqft
- **Pre-security time killing**: 1000 sqft
  - Restrooms, food, light shopping
- **“See You Soon”/Separation point**: 100 sqft
- **Security**: 800 sqft
- **Loading dock**: 1000 sqft
- **Control Tower**: 2000 sqft
- **Waiting for departure,**
  - Restrooms, food, light shopping
- **Gates: (x 6)-bleeds into lounge area**
  - enplaning + deplaning
- **Departure Lounges**: 30000 sqft
- **Arrival SecurityCheckpoint**: 20 sqft
- **Reunion/Meeting Point**: 800 sqft
- **Baggage Claim**
  - lost baggage
  - 1200 sqft
  - 60 sqft
- **Viewing/Observation platforms/decks**: 500 sqft
- **Gardens/Courtyards**: 400 sqft
- **Jetbridge--tentacle airplane/airport**: 100 sqft
- **pick up zone**: 60 ft long
- **runway(x2)**
  - 1 mi long

**Total Building Designed Spaces**: 49,280 sqft

**Mechanical Space (15% total)**: 7,392 sqft

**General Circulation (30% total)**: 14,784 sqft

**parking**

**GRAND TOTAL**: 71,456 sqft
Organizational Relationships
Plan Adjacencies

Figure 7.20 Appropriate space adjacencies for an airport.
Horizontal/Vertical Adjacencies

Figure 7.21_How spaces could be distributed vertically as well as horizontally, considering adjacencies on previous page.

Experiential & Earth/Sky Adjacencies

Figure 7.22_People’s potential movement through the site, considering the site weaving and integration discussed in the previous chapter.

Figure 7.23_People’s potential movement through the site, considering the site weaving and integration discussed in the previous chapter.
Intended Qualitative Experiences

**Departure**
- BY CAR
  - Signage from highway
  - Wayfinding to terminal, parking, car rental return
- BY T
  - Signage on T map
  - Wayfinding to stop
- BY BUS
  - Signage on Bus
  - Wayfinding to stop

**Check-in**
- Bag check, boarding pass
  - light, airy, initial grab of senses

**Lounge**
- Restrooms, food, light shopping
  - last moment before saying goodbye, grand but option for intimate, light, stimulating

**Security**
- less invasive, less clinical & intimidating...
  - bring sense of understanding to the process, visibility/screening

**Lounge**
- Restrooms, food, light shopping
  - light, scaled to body, tactile, comfortable, pleasing to senses, personal, less harsh

**Gate**
- move away from LINES, visibility through to plane- feeling of openness

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**Arrival**
- **Land**
  - Deplane
    - brief initial introduction to airport
    - open views to tarmac, through airport
- **Gate-Lounge**
  - scale to expanding body, space for stretching, organizing belongings out of the way, optional moment to collect thoughts (option to stroll)
- **Security Checkpoint**
  - Visibility/screening
- **Meeting Point**
  - Light, airy, grand but also moments for intimacy, flow, tall, fitting for emotional range taking place here
  - (Baggage Claim) often unnecessary
  - office for lost luggage
    - not buried under building, light, clear wayfinding, indicative of continuing journey, no harsh lighting, visibility through to bags being sorted, comfortable seats for waiting, scale to body, space for stretching, visibility to meet/greet

**Exit**
- BY CAR
  - Wayfinding to rental car pickup, parking facility highway,
- BY T
  - Wayfinding to Stop
    - Clear wayfinding to destination
    - (Signage on T map)
- BY BUS
  - Wayfinding to Stop
    - (Signage on T map)

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**Employees**
- BY CAR
  - Signage from highway
  - Wayfinding to terminal, parking
- BY T
  - Signage on T map
  - Wayfinding to stop
- BY BUS
  - Signage on Bus
  - Wayfinding to stop

**Through main entry**
- connectivity to rest of activity, visibility

**Through door to employees-only part of building**
- still as open as main parts, pleasant to be in, not hidden in basement--light and airy

**Carrying out tasks**
- spaces conducive to those tasks

**Lounge, Restrooms, food**
- not your standard break room
  - scale of body, light, airy, not harsh

(Reverse at end of workday)
Room Data Sheets.
quantitative and qualitative needs

**Space Name:** Baggage Claim

**No. of Occupants (max):**
In flux, but up to 200 people passing through, with perhaps half waiting for bags

**Area:**
≈1200 sqft., inclusive of part of circulation

**Ceiling Height:**
14'-0"

**Activity Description:**
Passengers will pass through this space on their way out of the airport, and if they checked luggage they will reclaim it here on one of the turnstiles. There is some waiting involved.

**Adjacencies:** Offices, Meeting Point, Exit, Luggage Handling

**Proximities:** Security Checkpoint, Arrivals Lounge, Car rental desk, Cafe

**Features:**

**Fenestration:**
Large windows to exterior for daylighting, slot windows into baggage sorting system, Large sets of doors to exit through

**Floor Finish:**
A combination of textures, perhaps wood floors (non-tile), carpeting or woven mats by turnstiles

**Wall Finish:** Potential preformed concrete, Plaster or Cloth wall covering

**Ceiling Finish:**
Potential stretched fabric with lights above, Plaster/GWB

**Acoustical:**
The turnstiles will be slightly noisy when on, so the space will need acoustical treatments on the ceilings, and insulation in between where the passengers retrieve their bags and the conveyer systems behind the Baggage Claim's interior wall.

**Lighting:**
The space needs to be well lit, but not harsh, with almost a glowing quality emitting from the ceiling, supplemented by the soft non-direct sunlight from the exterior of the building

**Plumbing:**
N/A

**Temperature:**
Will need temperature regulation to keep it a constant comfortable temperature because of the large doors to the exterior in this space.

**Equipment:**
Will require 2 turnstiles, television monitors for flight information, A/V equipment, wayfinding

**Furnishings/Special Requirements:**
Will need to have comfortable chairs and ample space for people to move around and stretch, nooks for cell phone usage without disturbing other patrons, a smooth wooden desk for information for first time visitors.

**Socio-Cultural Character:**
This should be a soothing space, as baggage reclaim is also one of the higher stress points of the journey. This is the last experience the traveler has with the airport, and it needs to be architecturally treated as such.
Room Data Sheets.
quantitative and qualitative needs

**Space Name:** Ticketing Hall

**No. of Occupants (max):**
In flux, but up to 440 people passing through (on peak days at any given hour), with perhaps half stopping at service desks for bag check, check in, boarding pass.

**Area:**
≈1500 sqft., inclusive of part of circulation

**Ceiling Height:**
20’-0”

**Activity Description:**
Passengers will pass through this space on their way into the airport; this is where they may check in, check bags, print boarding passes, then moving on to pre-security lounge or straight to security.

**Adjacencies:** Offices, Pre-security Lounge, Entrance, Luggage Handling

**Proximities:** Security Checkpoint, Departure Lounge, Viewing Deck

**Features:**

**Fenestration:**
Large windows around the entire space with views to drop off, through to the tarmac, with large automatic doors as main entry point, skylights.

**Floor Finish:**
A combination of textures, perhaps mainly concrete, (non-tile), with either wood flooring, carpeting or woven mats at check-in points

**Wall Finish:** Predominantly glazed, maybe a feature wall or 2 that is potentially a living or green wall

**Ceiling Finish:**
Skylights, plaster NO SPACE FRAME STRUCTURE

**Acoustical:**
The ceiling, furniture and floors will need to have acoustical treatments because as a large space with a high level of human activity, sound will be amplified (keeping a peaceful environment requires the volume of ambient sounds to remain low)

**Lighting:**
This area needs to be well lit, but again, not harsh, perhaps some feature lights suspended from ceiling, supplemented by the soft non-direct sunlight from the exterior of the building

**Plumbing:**
N/A

**Temperature:**
Will need temperature regulation to keep it a constant comfortable temperature because of the large doors to the exterior in this space.

**Equipment:**
Scales, conveyer belt systems, amenities for airline self ticketing kiosks.

**Furnishings/Special Requirements:**
Highly tactile check in desks, perhaps a combination of materials allowing for different senses to be stimulated. Some comfortable furniture provided for waiting for check-in.

**Socio-Cultural Character:**
This is the first space that departing passengers encounter once inside the airport, and as such needs to have a powerful presence. Often ticketing halls are so vast one loses the scale of the human, but this one will have features playing to the scale of the individual and small groups of people. Must be highly functional, but read as pleasant and comfortable: a prime opportunity to explore the dichotomy of motion-stillness architecturally.
Room Data Sheets.
quantitative and qualitative needs

**Space Name:** Security Checkpoint-Departure

**No. of Occupants (max):**
In flux, but approx. 200 people passing through (on peak days at any given hour), with about 25 people actually occupying the space at any given time.

**Area:**
≈ 800 sqft., inclusive of part of circulation

**Ceiling Height:**
10'-0"

**Activity Description:**
This is a necessary stop for every passenger in the airport, as well as the crew, ground crew and airport employees working on the airside of the airport.

**Adjacencies:** Offices, Pre-security Lounge, Departure Lounge

**Proximities:** Security Checkpoint-arrivals, Check-in, Baggage handling and scanning, gates

**Features:**

**Fenestration:**
Translucent glass with wooden screens as feature elements.

**Floor Finish:**
A combination of textures, perhaps mainly concrete, (non-tile), with either wood flooring or woven mats at the point of the screening process where you take your shoes off

**Wall Finish:**
This area is not enclosed beyond series of screens and translucent panels, GWB on 2 short parallel walls

**Ceiling Finish:**
Potentially stretched fabric over lights

**Acoustical:**
This is one of the highest stress points, and sound reverberations will only add to that stress level. Acoustic treatment to floor, ceiling, 2 solid walls will be necessary to dampen the sounds of this space, from the scanning machinery to the shouts of mothers to their children to remain where they are.

**Lighting:**
This zone, much like the rest of the building, needs to be well lit, but not harsh, soft glow from ceiling, supplemented by the soft non-direct sunlight from the exterior of the building

**Plumbing:** N/A

**Temperature:**
This area should be kept at a constant, comfortable temperature. Lack of operable fenestration and exterior doors make this quality easily attained.

**Equipment:**
X-ray equipment, conveyor belt system, perhaps an express lane with short people moving system, stools and stainless steel podiums for TSA officials, wayfinding and signage about the process.

**Furnishings/Special Requirements:**
Contrary to the standard security area, having softer (or less harsh) materials as the chairs and tables in this space will amplify positive associations with it, or embrace the sterility of the process in the furniture, but not in the space's design.

**Socio-Cultural Character:**
This space has probably the most negative association of any space of the whole airport, with people associating security with invasion of their privacy. Supporting a feeling of safety that should come along with “security,” as well as maintaining the themes of the rest of the building through this often under-designed space: motion|stillness, tactility, sensory arousal.
Room Data Sheets.
quantitative and qualitative needs

**Space Name:** Departure Lounge

**No. of Occupants (max):**
In flux, but up to 440 people passing through (on peak days at any given hour)

**Area:**
\[\approx 30000\text{ sqft.},\text{ inclusive of part of circulation, subdivided smaller lounges (a majority of the “front of house” space of the airport).}\]

**Ceiling Height:**
20'-0" + at points; undulating, other points at human scale.

**Activity Description:**
This point of the airport is where people congregate after passing through security. Time-killing occurs here as people await their departures. Different people do various things here, some stroll back and forth, some pick a spot and sit for the duration of their wait, often reading or working on computers or talking on their cell phones, some shop and eat, and many more activities.

**Adjacencies:** Security, Security Checkpoint-Arrivals, Food/Shopping, Restrooms, Gates, Courtyard

**Proximities:** Baggage Handling, Check-in, Offices, Meeting point

**Features:**

**Fenestration:**
Large windows around the entire space with views through to the tarmac and the view of Boston, skylights.

**Floor Finish:**
A combination of textures, perhaps mainly concrete, (non-tile), with either wood flooring, carpeting at gates

**Wall Finish:** Predominantly glazed, potentially a living wall, rough plaster, lights inserted in walls

**Ceiling Finish:**
skylights, plaster, stretched cloth with backlighting, NO SPACE FRAME STRUCTURE

**Acoustical:** The ceiling, furniture and floors will need to have acoustical treatments because as a large space with a high level of human activity, sound will be amplified (keeping a peaceful environment requires the volume of ambient sounds to remain low)

**Lighting:** Soft lighting beyond the non-direct natural light coming in from the large windows, perhaps some feature lights suspended from ceiling

**Plumbing:** N/A

**Temperature:** Will need temperature regulation to keep it a constant comfortable temperature because the gates are located in this part of the building.

**Equipment:** Computers for gate crew, clocks, some televisions, sound proofed areas for phone conversations, loudspeaker/intercom technologies focused in specific areas.

**Furnishings/Special Requirements:**
Warm wood or sculpted plaster desks for gate crew with lighting details, ample comfortable chairs that are arranged both alone and in small groups, individual lamps to supplement light levels in alcoves, custom furnishings for nooks, light features, potentially different levels to connect better with sky and ground.

**Socio-Cultural Character:**
This is the last place that passengers will spend in this city before going to their destination (and the first impression that the arriving passengers have with the airport). As such, it needs to be impressive, easy to navigate, comfortable, not a sensory overload, and offering a connection to the planes that carry them miles above the earth’s surface. This is also another point to explore the dichotomies of airports: stillness|motion, earth|sky, arrival|departure.
Room Data Sheets.

quantitative and qualitative needs

**Space Name:** Meeting Point

**No. of Occupants (max):**

In flux, but up to 100 people passing through (on peak days at any given hour)

**Area:**

≈800 sq.ft., inclusive of part of circulation

**Ceiling Height:**

12'-0”

**Activity Description:**

An intimate space for passengers to reconnect with family or friends who may have come to pick them up from their flight, with a less intimate zone for drivers to pick up their clients’ charges.

**Adjacencies:**

Offices, Baggage Claim, Security Checkpoint-arrivals

**Proximities:**

Waiting(departure/arrival) Lounge, Restrooms, Luggage Handling

**Features:**

**Fenestration:**

Large windows frame views to drop off, through to the tarmac and to Boston

**Floor Finish:**

A combination of textures, perhaps mainly concrete, (non-tile), with either wood flooring in the more intimate zone

**Wall Finish:**

Potentially concrete or plaster with mounted light features

**Ceiling Finish:**

Plaster, stretched fabric with lights above

**Acoustical:**

The ceiling, furniture and floors will need to have acoustical treatments because as a space with a high level of human activity, sound will be amplified (keeping a peaceful environment requires the volume of ambient sounds to remain low)

**Lighting:**

Softly yet well lit, perhaps some feature lights suspended from ceiling, supplemented by the soft non-direct sunlight from the exterior of the building

**Plumbing:**

N/A

**Temperature:**

Will need temperature regulation to keep it a constant comfortable temperature because of the large doors to the exterior just beyond this space.

**Equipment:**

Wayfinding through to baggage claim and exits

**Furnishings/Special Requirements:**

Wooden ergonomic furniture for people who are waiting there for loved ones or clients; once they arrive, the tendency is to have a momentary connection and move on. Furnish so as to foster desire to relish the moment.

**Socio-Cultural Character:**

This is one of the most emotional spaces within the airport. With this in mind, it needs to be designed sensitively, allowing people to reconnect with their families and friends, without getting in the way of those who are being picked up by drivers or catching public transportation or a cab to a business meeting.
Precedent Studies
Precedent studies are always an important step in the design process. Through the precedents discussed and explored in this chapter, several spatial, qualitative and material features have emerged to help this thesis move forward with its theoretical design goals. The qualities discovered through these studies have also been applied in the diagram at right to explicate at which particular points of the airport spatial sequence they may be applied, and how that application would start to inform the quality of the airport experience as a departure from the status quo of airports today.

Figure 8.1_Timeline of specific events that occur as one moves through the airport, * denotes heightened emotional states is possible at these points of the sequence

Figure 8.2_Light tunnel

Figure 8.3_Dancers seemingly without gravity

Figure 8.4_Colorful umbrella installation

Figure 8.5_Interior brick

Figure 8.6_Commonwealth Ave, Boston
Figure 8.7. The qualities of the spaces that this project is proposing. Images taken from precedents in the following pages.
The Olympic Sculpture Park features varying degrees and directions of physical enclosure. These qualities are created by the earth of the site being sculpted to make different types of spaces. One is either cupped by the site in a valley, on top of the site, in a tunnel through/under the site, or partial enclosures (figures 8.13 and 14). This quality is a direct result of the intricate weaving of all of the different paths and users that require passage through the site.

This site’s challenge and strength comes from the fact that it has a large number of different sorts of users that must be able to flow through the site in separate ways. This project allows that uninhibited and uninterupted flow, but also forges an interaction between all of the modes of transportation (pedestrians, vehicular traffic and railroad) through the sectional design so that nothing is isolated. The result is that each interacts with the site in a unique way, whether it be along the edge of the site, through a tunnel under the middle of the site, or on criss-crossing paths across all of the other interactions. Weiss Manfredi deftly wove all of these users’s paths together in an effective and enticing way.

Similarly, airports have a lot of different sorts of movement that they need to accommodate. The method of weaving and integration of all of the spaces, and actually creating those spaces by weaving the site itself is executed so successfully in this project that it serves as a good example for how to handle these site complexities.
One of the main concerns of this thesis is how to make the building contextual and relevant to the site and the region in a tasteful and appropriate way. Calatrava’s Bodega Ysios is contextual in a stylized way without mimicking the landscape in a cheap manner. The roof structure and material speak to the mountains in the distance, while the cladding of the facades speaks to the vineyards that surround the building. However, it is done in a subtle, poetic and tasteful rather than obvious way. Even the interior ceiling-scape is reminiscent of the rolling hills and mountains that exist in the landscape. The manner in which the windows lean, or seem to pull out into the landscape, draws the eye and the visitor out into the scenery. The result is a building with spaces that are incredibly dynamic.

This thesis draws on the subtle yet powerful details of the roof structure and the effects of the glazing, which both act together as ties to the landscape and site.
The Inverted Warehouse/Townhouse exhibits fascinating combinations of texture and material to create an incredibly tactile set of spaces. The combination of steel, brick, glass and painted drywall makes for continuous visual stimulation that keeps the eye moving as one moves through the spaces. These materials wrap around the body while in the townhouse in that they clad the ceiling, floor as well as the walls. This gives occupants many different opportunities to experience this tactile quality in many different ways and via varying senses. The lights and furniture are also integrated with the building materials, creating a wholistic experience while occupying the townhouse’s spaces. The material selections and textures also tie into points where the human body would naturally interact with the built environment: the railings, window mullions, and the floor to name a few.

The central courtyard is a key element in this precedent, and brings light and air into a space that would normally not have ready access to those important elements. It is important to note that it is not simply a light shaft into the core of the building, but rather has entire panels of glass that slide open to invite occupants to go out into the weather, to look up and see the sky, and to catch breezes as they move past the building. This is juxtaposed to the sealed off condition of most interior apartments (as well as airports, which are generally sealed from the point one enters it until one exits the other end, with one end being the sealed tube to the airplane). The use of core-ten steel in the courtyard furthers this connection to nature in that with time, occupants can see the effects that weather has on the cladding of the space. Not only does this occupiable courtyard open up the space, but it also forges a connection between building and sky, a theme that is important in the design of this thesis project.
THEMATIC ideas
Kaufmann Desert House,
Richard Neutra
Palm Springs, California

The Kaufmann Desert House exerts several characteristics that are goals of this thesis. It is very much designed with the user in mind, that is, it is to the human scale. It is highly tactile, both with smooth and rough surfaces with which one can interact. Its architecture offers specific views out over the landscape, providing spaces for occupants to sit and enjoy the views. The architecture seems to extend out into those framed views to ensure that the view is framed effectively by materials that complement the colors and textures that make up the view itself. The understated style of the spaces ensure that the architecture acts as a support for the landscape, its intervention standing out from the site in a way that acts as an underline for the views, or an object that works with the landscape (as opposed to a solid piece that takes attention from the landscape), and the house features entire rooms that open up to the exterior, with planes that shoot into the distance, and seemingly point the viewer’s eyes to particular aspects of the landscape. Also, because this precedent is a private residence, the scale at which it was designed is very intimate to the individual or small groups of people, and yet does not feel closed in or limited in scope. The large windows and panels that can be opened or removed open the house into the landscape, blurring the line of site/intervention. The most fascinating quality that this house offers is that it is almost hard to tell where the interior of the space starts and where the landscape ends, thereby engaging the site in a completely new way.

That simple connection with the site and distant landscapes is a quality that this thesis will aim to integrate into several parts of the program. Bringing these qualities into the airport will help to make the spaces more comfortable and enjoyable to spend time in.
Much like several of the other projects in this chapter, the most exciting quality of this house is the manner in which it blurs the line of interior and exterior. Huge panels slide open to integrate the patio with the interior living room, and an overhang makes them appear essentially as one space. The qualities of the spaces of this house are very rich, with a warm variety of textures and materials inviting a visitor not only to sit and relax, but also to touch and experience the construction of the house. The introduction of skylights, water, living walls and gardens again blurs the interior and exterior division, and also gives an effect of serenity to the spaces. The parallel between the skylight and the pool creates an interesting dynamic between floor and ceiling (and their extensions) as well. In general, the smoothness of the textures used also help to add to the serenity of the house. Any patterns that emerge are a result of the sunlight and its shadows, which are inherently dynamic, but not in a chaotic way.

As airports tend to be high stress environments, capturing some of the qualities of the Itiquira House that make it so serene can help to create an airport that is an oasis of travel, much as this house is an oasis to its residents. Water has long been associated with calmness and serenity, and integrating a pond similar to what is shown at right will help to bring that sense of calm to the space. Integrating gardens and plants will also assist in creating the airport oasis.
THEMATIC ideas
Linear House, Patkau Architects
Salt Spring Island, Canada

In the Linear House, there is an intense connection between the interior and the exterior of the house and its site. Whole panels slide open to give the appearance of interior spaces that extend out into the landscape. Furthermore, when opened, the panels make frames for specific views out through the trees and the site. Much like the Kauffmann Desert House, this house blurs the line of inside and outside, which creates an enticing and phenomenal effect. The house is deeply integrated in the site and the landscape, and at every point of moving through the house, there is a new view to focus on, or a new blurred boundary to explore.

Also, this project features a broad range of materials that offer both visual and physical texture. The range of textures invites the occupant to touch different parts of the house: the cold concrete and stone, the warm smooth wood. Because these details inspire curiosity which then makes the house into a tactile experience, the time spent in the house is much more memorable as an experience, rather than just a shelter.

The main concepts that are being drawn from this precedent are the tactility and the connection to the site. These elements come together to make a space that is engaging for all of the senses at once, and makes being in those spaces a memorable experience. There is nothing sterile or harsh about this house, and that is a quality that this thesis will apply to its spaces.
Frame, perspective and folding are some of the key descriptors of the ICA in Boston. This contemporary piece of architecture engages the Boston skyline as well as Boston Harbor in a truly vibrant way, and consequently really connects its visitors to those elements. Not only does the ICA offer interior views to the harbor and skyline, but it also offers exterior spaces that fold down from the building to give people a place to enjoy the weather and watch the boats on the harbor for a bit. Few places around the harbor engage both the water that is such a prominent feature of Boston, as well as Boston itself. In fact, it seems as though the building’s form actually acts as a sort of frame or bracket for the scene of the skyline and harbor. This connection extends to the interior, where it seems that any space to which a visitor goes in the building has a focal point that is still concerned with these important pieces of the site and landscape. Through this connection, the ICA develops a very strong sense of place, and of belonging to Boston and Boston alone, even though it is clearly a contemporary building and may not feature the blatant colonial themes that are so stereotypically “New England” like the shingled siding or the 9x9 white windows.

This quality that the ICA invokes is a main goal of this thesis, as the site of the project is also on the harbor with views of the skyline of Boston, as well as the islands in the harbor and bay.
The way that the Benidorm Seafront boardwalk engages both the beach, ocean and the road is truly beautiful. Beyond just tying these often distinctly independent elements together, the boardwalk also makes spaces for pedestrians who are using it. It rises up and molds itself to shelter people who are strolling in its shade, or passing up through its stairways to the upper level. It takes on the appearance of having been corroded by the ocean, much as stone cliffs that jut into the ocean have been corroded by the continuous beating of the waves. The sinuous curves with which the boardwalk makes its protective cove helps the architecture to begin to transcend into sculpture. The fact that one can also interact with the architecture beyond just being sheltered by it on one side by means of the stairs and ramps that activate and connect the different levels makes it that much more of an exciting project. Furthermore, the materials used are highly tactile, and invite one to run one’s hands along the textured concrete or to walk barefoot on the wooden path under the shade of the boardwalk’s curves.

The coloration of the pavers on the top surface and inclusion of plantings help to make this boardwalk into a landmark. It is bright and exciting to walk along as it changes colors according to the location of the seafront, and also makes it highly recognizable from the air.

The simultaneous engagement of site factors and place/space making for individual users is a beautiful characteristic that this thesis will use as a goal. There are many different elements that converge at an airport, and finding such a beautiful design answer that responds to each of them is certainly a goal of this thesis project that can be inspired by the Benidorm Seafront.
The Skylight House by Chenchow Little is an exemplar of blurring the line from inside to outside by introducing an occupiable courtyard. This courtyard, which features grass and one focal tree, brings fresh life into the core of what was a typical rowhouse that would normally be very closed off from nature. The fact that the courtyard also features a staircase that goes from inside to outside further aids in the blurring of that boundary. Furthermore, the courtyard is not closed off from the interior, and is enclosed by large panels of glass that slide open to bring the living space out into the courtyard and vice versa. The amount of natural light that comes into this residence through that courtyard is also another point of warmth.

The Skylight House also features a series of large skylights that span the width of the house with large white interior louvres to help direct and diffuse the light. These skylights also connect the interior of the house to the sky, and essentially give the illusion of almost the entire ceiling of the upper floor being replaced by the sky itself. The combination of these main features make a series of spaces that are in reality quite small and with limited windows to the street and rear of the house, and none in the middle section seem quite comfortable, airy light and unique.

With regard to airports, opening up a lounge to a courtyard would help alleviate the stressful atmosphere that surrounds air travel for many people. Utilizing skylights can also help encourage travelers to pause and lounge and feel connected to the sky before they take off into it. Essentially, utilizing these elements can make a space that may not feel humane and comfortable into a place that is relaxing and enjoyable.
As one of the central concepts of this thesis is the idea of the site folding up and creating places and spaces within the terminal, these precedents show the dynamic capacity that green roofs can take on. They are opposed to the majority of green roof examples, which are mostly flat and one continuous piece. The roof that this thesis is proposing is comprised of several different pieces that are folded to make different qualities and sizes of spaces below them.

The Jean Moulin High School (pictured at the top and bottom) is a good example of how many adjacent pieces of green roof can meet one another, and what sorts of joints are possible at those points. Similarly, the picture second from the bottom illustrates an interesting point in the roof of the Vancouver Convention Center where the folded piece diverges from a flat piece, and how the space differential between the resulting layers is handled. The idea that a window can enclose the interior while the roof folds to make the space below also hints at the connection of the interior to the earth, even while the view out the window may be aimed up to the sky. The image directly below from Jean Moulin shows how that interaction of window and green roof would effect the experience of occupying that space.
Ephemeral, luminous qualities are the result of the translucence of the building skin at the Nelson-Atkins Museum. The translucence diffuses the light that comes into and goes out from the building, giving it a phenomenal glowing presence in the landscape from the exterior, and the interior a unique quality that is strangely disconnected from the exterior. Because the material inherently blurs and distorts the objects seen through it, it can be understood as a sort of filter for the experience the visitors have while in the building, and therefore their memory of the building. A particularly wonderful detail of this building is the way that Holl makes an entire space clad in translucent material, and then leaves one particular zone completely transparent for a moment of connection to the landscape. This duality of clear and unclear access to the exterior also adds a sense of security for people on either side of the material, and also adds intrigue and interest for what is happening on the opposite side.

This quality of security through translucence versus transparency is something that can be applied to the secure zones of the airport. The additional glowing quality that is created by this material is a characteristic that can help subtract from the current sterility of the security zones of airports, and make them a more visually interesting experience, both from the inside and the outside.
**Material ideas**

Peninsula House  
Sean Godsell  
Victoria, Australia

Great Bamboo Wall House  
Kengo Kuma  
Beijing, China

Screens obscure vision without completely closing the viewer off from the vista. They also give the occupant the feeling of a level of privacy that doesn’t exist when the barrier between inside and outside is simply transparent. Screened walls also introduce an intricacy through the play of light and shadow that result from its filtration of the sun. The screen also makes people on the inside of it feel more protected and more safe than they would standing behind a transparent material. There is also the opportunity to frame particular views by making the screen become less or more dense at specific points. The precedents on this page also introduce the idea of aperture, or pieces of the screen that can slide or open to create shading devices.

The effects that screen usage create for a space are perhaps more soothing and natural than the translucent material usage on the opposite page. There is still a visible connection to the landscape and exterior of the building, as well as what can be a beautiful effect of the play between light and shadow. Also, various patterns can start to be introduced, as opposed to simply vertical elements which may start to feel like bars of a cage. These patterns present the opportunity of creating a significant amount of visual interest. For this thesis project, screens would be implemented through the security zones of the airport, and would help to create a feeling of warmth and visual interest in a zone that generally is very sterile and unhospitable to all occupants.
The Farnborough Airport is a beautiful example of a highly technical and modern airport. It is a regional business airport only, with no regularly scheduled airline operations. It serves only charter and corporate jets, and also general aviation. While it is smooth, elegant and clean in a way that does not necessarily inspire physical engagement, it does have details that connect it with its surroundings. It features skylights in its main atrium, and the wall facing the tarmac leans out over it in a way that suggests motion and flight.

However, while it provides beautiful, sleek spaces and exterior form, it does not invite its passengers to linger or to engage with the building beyond the capacity that they are simply passing through. The building features a business suite with conference rooms, which are often used by the executives flying through the airport on their corporate or chartered jets. That is precisely the formal atmosphere that this airport provides: not one of warmth and lingering, but of walking in with purpose, conducting a business meeting, and then walking back out on the tarmac onto a plane and departing again. While this is not the goal of this thesis, the effectiveness with which the Farnborough Airport achieves that essence of chic, clean functionality is the lesson that can be gleaned from it as a precedent for this thesis project.
This airport is of a smaller scale than the one proposed in this thesis, but perhaps it is more appropriate to study than the major international gateways like London or New York. It speaks to its site context by referencing the medieval watch towers that are dispersed around the hills that surround the site with its tower that passengers can occupy to take in the scenery. However, it is not a taudry copy of it, but rather does its own interpretation of the historical elements.

It is refreshing to see a building speak to the history of its site and the context that surrounds it without losing sight of what it is: a contemporary construction. It also provides passengers who are waiting with an opportunity to get a different perspective on the town below by climbing up into the tower of the airport. A continuous band of glazing also links the interior to the exterior, and skylights in one of the lounge areas tie the building to the sky. It also is very much designed to the human scale, with seating for its occupants built into some of the spaces in the form of bleacher-like stair systems. In this case, one must engage physically with the building in order to take a seat as there are no loose chairs through the lounges. These built in seating areas also are pulled up and back into arms of the building that are almost entirely glazed, so that a waiting passenger is immersed in the scenery of the location. This sort of physical interaction with the building and forged relationship with the landscape is a theme that this thesis will take away from this particular precedent.
Eero Saarinen was one of the architects most responsible for the growing popularity and prominence of airport architecture, through his efforts at Dulles and at John F. Kennedy International airport with his famous TWA terminal. These buildings are icons of the jet age, and have not lost their appeal over the years. When the needs of the airport outgrew the space restrictions of the existing terminal, the officials at Dulles opted to make Saarinen's terminal into the ticketing hall, thereby making it the focal point of the new complex, and a space that everyone who uses that airport must pass through in one capacity or another.

The floating massive roof structure at Dulles is to this day one of the most beautiful airport structures in the world. The leaning windows act as a set of magnets and pull passengers from one face into the middle of the space and then out the other side, encouraging the natural flow of arrival and departure. The scale of the space makes one not want to linger in the main hall, but still inspires pause because of the stunning beauty of its scale and form. There is no desire to touch the building, as it is very clean and monolithic, and seems as though one huge piece of concrete had its core carved out with only the floating roof and smooth floor remaining. While it is not tactile, the clean and elegant sophistication of the form and visual stimuli combined with the technology of the structure combine to give one a sense of awe of being in that space, and a sense of wonder about aviation, the jet age and what it would have been like to fly through that terminal in the height of its popularity in the late 1960s. It is that level of poetry and mental engagement that this thesis is drawing from this precedent.
While other airlines claim to offer customer service, Porter Airlines has a true commitment to service and excellence that is visually present. There is an emphasis on the customer’s experience throughout the spaces that the airline has control over. “Our warm and effortless approach to hospitality, combined with our spotless service brings dignity and refinement back to flying.” The lounges are classless, but have the feeling of being first-class. They are located behind doors so that they are separated from the hustle of the rest of the terminal. It gives passengers the feeling of exclusivity without being overpriced or unattainable. The lounges feature free light snacks and drinks, as well as the more comfortable and highly designed waiting areas. Porter caters to small scale, short haul flights, which is what this thesis is proposing in terms of airports.

Virgin Airlines also has the flying experience perfected. It is very evident that everything revolves around the comfort of their customers. Even flying in economy, one is surrounded by stylish fittings and details, the user interface is beautiful and all of the flight attendants are happy and look fresh. Flying with Virgin it is easy to imagine what flying in the golden age of aviation would have been like.

It is the level of customer care and approach to flying that these airlines are taking that this thesis will work to capture in its airport.
Some qualities that this design project hopes to inspire through its spaces are that they are enticing, inspire curiosity, engage the body, eye and the mind. There are many images that inspire sublime feelings, and along the side are a few. This project would like to feature details that are intriguing and engaging because they are not found in most public places. If the spaces are designed to be comfortable and allow people to unwind a bit before their flight (or after their flight as they wait for their loved ones or their driver), having some details that excite and inspire the senses would really take the spaces to that next level of wonder. In general, it seems that the best way to create a sublime experience is by having some sort of unusual light installation. It can be very subtle, and doesn’t need to be bright or immediately eyecatching and certainly doesn’t need to be highly stimulating.

Even simply having a field of small lights acting as a sub-ceiling or wall feature, or having an entire surface that emits a gentle glow encourages engagement with the surrounding environment, beyond just passively existing in a space. Perhaps having such a fixture in the space can have a similar calming effect as star gazing or instill the same sense of wonder as when flying over a city and seeing the intricate patterns of lights that result from its liveliness.
The Metropolitan Museum of Art’s exhibit of Alexander McQueen’s work entitled “Savage Beauty” is a showcase of various collections from different seasons. McQueen’s work truly makes the imagination come alive, and the eyes never stop moving as they take in the various materials and facets that make his work so complicated and gorgeous. They embody a flow, and are a vibrant image of life. Each piece suggests a particular mood, and beyond that interacts with the body and its surroundings in a unique way. No two dresses move or flow the same way. With these pieces, there is a level of engagement with body, engagement outside of body, engagement with atmosphere around and surrounding (i.e. wind) that does not generally happen with clothing. His pieces are captivating, enticing and highly tactile, let alone eye-catching. The structure of each dress is also incredibly unique, and even if they all used the same material, the effects would be dramatically different because of the shapes of the outfits. The qualities of visual interest, structure, shape and texture are lessons to be learned from Alexander McQueen’s collection.
When attempting to completely redesign a building type with a generally negative association such as an airport, there are many potential starting points. After having distilled down what the major problems are at airports today, this thesis project went about responding to and remedying them one by one. It responds to the fact that airports today in general are not to the human scale, are not specific to their site or their location, support confusion and disorientation, do not give passengers places to rest or recover and rather consistently force people to continue moving by supporting bodily and mental discomfort, and disconnect passengers from their belongings and their loved ones as quickly as possible. Each of these problems presents its own set of design issues, which is why the design process for this thesis was highly iterative.

The design of this thesis project’s solution for the problems of today’s airports started with the simple fact that the airport must accommodate both arrival and departure. These are two distinct directions of movement through the building that function independently of each other. Each direction of movement features events that are unique to that direction, and that must occur for the airport to be fully functional. The airport is the convergence point of not only arrivals and departures, but also of hundreds of thousands of itineraries of very unique passengers every month. The design of the building accommodates this convergence and divergence of people and their movements, as well as the convergence of earth and sky, and also amplifies one of the most fascinating aspects of the airport: that it is both in perpetual motion and stillness, with people simultaneously moving quickly to catch flights and also waiting for often long periods of time in one location.

On the opposite pages are diagrams defining the region that the new terminal will serve, as well as the types of planes that will be running this service. The planes serving this airport are much smaller than the planes flying in and out of Logan, a fact which helps support a much more intimate scale and atmosphere.
Figure 9.4_Service region: Local service by small regional and privately (or corporately) owned airplanes

Figure 9.5_Passenger capacities and sizes of airplanes serving the new terminal
Figure 9.6_Initial space planning diagrams

Figure 9.7_Schematic design phase 1 plans
The design process to arrive at the final design of the airport took much exploration and experimentation. As seen on the opposite page, various adjacencies and plan configurations were explored. A theme that was constant through all of these explorations was the connection between the arrivals side and Boston, as well as the connection between the departures side and the runway. Those passengers arriving into the airport would want to have a visual connection with the city that they are about to enter, while the passengers about to depart from the airport are thinking about the journey ahead of them, and having views that focus on the runway and the activity of the planes helps them to connect to their impending journey. The initial design from schematic design featured these views of Boston and of the runways as events at the end of a procession through the building. By the second phase of schematic design, the building had rotated ninety degrees on the site, which allowed the views to be experienced throughout the entirety of the building, rather than just at specific points at either end. This concept and understanding of the importance of the views to the sense of place and engagement with the building and the site, as well as the entire airport experience carried through into the final design.

The approach that considers the inherent bidirectional quality of the airport reinforces the sense of place of this airport within its site as well as within the Boston metropolitan area. Many airports are completely disconnected from their sites, consisting just of objects dropped onto bulldozed and leveled sites. They are also disconnected from their cities, offering no views to the city except once the plane is ascending.
The timeline across this spread explores the different events that occur in the course of the departure and the arrival, and the implications of those events on the anxiety levels of passengers. Potential spaces and times for engagement and piquing curiosity are called out along the timeline of events to show where this thesis has the most opportunity to have an impact. It also shows the different qualities of space that this thesis has applied to its design after the precedent studies in the previous chapter. The main ideas from these precedents as applied to these spaces are framing views, blurring the line of inside and outside, creating privacy but maintaining a connection through the use of screens or mixing translucent and transparent materials, and utilizing highly tactile materials to their fullest capacity. All of the elements shown along this timeline were taken into careful consideration for the final design, and indeed each had a very strong impact on the character of the spaces within the final building.
the flight

pre-airport

arrival at airport

arrival at airport

deplane at gate

threshold

threshold

waiting lounges

gate area

security

security

baggage claim

threshold

threshold

bag reclaim

emotions

greeting

goodbye

gate

arrive

waiting

airport experiences

(time killing)

first time you're outside since your origin

still sealed in, but can see outside

pass tsa guard

remain seated until captain turns off seatbelt

(sign)

(WAIT)

(WAIT)

(WAIT)

(WAIT)

(WAIT)

(WAIT)

(WAIT)

stand

collect belongings

from overhead bin, under seat

car service waiting with sign [find family in arrivals hall]
call friend to ask where they are

head to parking garage to find car

shuttle to parking lot

catch cab

priority car rental waiting:
keys in ignition, trunk popped

collect bag(s)

restroom (report bag missing)

(WAIT)

(WAIT)

(WAIT)

(WAIT)

(WAIT)

(WAIT)

head to destination

+/- 20 min

bag reclaim

+/- 20 min

emotions

greeting | goodbye

*
One of the elements that is crucial to the design of this particular airport is the concept of the scale of the human body. The entire scale of the airport needed to be brought down to the scale of the human body. This simple act would immediately make the spaces more inhabitable and the passengers much more comfortable as they move through them or wait in them. Beyond simply bringing the overall ceiling heights down to a level that is able to be understood by the eye as one moves through the space, by creating niches in the many heavy load-bearing walls that this building has, the opportunity for travelers to pause and take a seat is presented beyond loose furniture. Furthermore, this allows the traveler to physically engage with the building. By creating various types of niches or benches out of the building materials of the walls and floors (brick and concrete), different textures can be explored by the passengers, and allow for different types of engagement between the human body and the building. This is also not limited to structural materials. The delicate screens that are used throughout the building to help further break down the large spaces and create more intimate settings also fold seamlessly into benches.

Another goal was to remedy the fact that airports today are for the most part completely sealed. One is outside only before entering the airport, and then is sealed inside either the airport or the airplane and then the next airport until exiting at the destination. Introducing occupiable courtyards not only speaks to Boston’s love of public gardens, but also to the need of the human body to be close to nature in one form or another. Being exposed to sunlight and fresh air often has positive effects on health and on the nerves, which is another reason that natural elements should be introduced to the airport, as travelling typically induces a lot of stress in passengers.

Furthermore, using a variety of highly tactile materials and utilizing soft or glowing light qualities can greatly improve the atmosphere and have positive effects on people’s moods and therefore decrease their level of stress. It can also increase their desire to want to engage with their surroundings, and might aid in the awakening of their senses if their curiosity is piqued. The sketches at left explore the spatial and atmospheric implications of introducing these various qualities and materials into the standard airport series of events.
Design Development

On the opposite page, the different view opportunities that are presented by the site are explored. In the top diagram, lines extend into Boston and Boston Harbor to specific views and landmarks. These extruded lines were the catalyst for the final design of the building as well as the site intervention, with the existing qualities of the site literally informing the design to reinforce a sense of place. In the bottom diagram, the general directionality of the different view opportunities was explored, and a form began to emerge.

Furthermore, the concept of arrival and departure from schematic design was further distilled for the final design. Not only are there specific events along the paths of arrival and departure within the airport, but every passenger also has their own path that they take through (or past) these events based on their own agenda. This is diagrammed in figure 9.15 below. For example, a passenger who arrives with plenty of time may need to pause at check in and then will be able to meander through the rest of the terminal, whereas a business traveler who has no bags to check and arrives with exactly the amount of time needed will bypass everything except security and the gate. The idea of different paths taken by different people is reminiscent of Boston Common, Boston's main public park, which has a very interesting pattern of paths that cut across it in different directions. Furthermore, the concept of visual connectivity to one's belongings provides intriguing possibilities. By making the baggage conveyer system partially visible to passengers, the feeling of being disconnected from the processes of the airport is alleviated, while simultaneously adding intrigue. The concept of paths, combined with the extruded lines of the views, as well as with the idea that connectivity and visibility do not have to be excluded from functionality helped lead to the final building concept.
Figure 9.18_Specific lines of sight to landmarks or locations

Figure 9.19_View opportunities of either long views or short views through built context
This design implements three different types of enclosure for different types of spaces and therefore experiences. A screen is used to give a feeling of privacy but also of simultaneous connection to the rest of the terminal. A heavy wall is juxtaposed with a transparent surface to reinforce the concept of the connection between the earth and the sky and gravity and flying that is inherent in airports. Lastly, because views are so important to this project and this site, transparent materials give a sense of complete connection to the site and beyond.

On the opposite page are the site plan and building plan. The building plan in particular features the extensions of the lines to the views and landmarks. The site intervention accommodates a three level parking structure, with the main characteristic being a direct response to the typically completely flat site design of most airports. Here, the site is designed to appear as though it is taking off, lifting up from along the runway to becoming the roof structure of the building as well as covering the parking garage. The site continues to fold to create different spaces both on the approach and as one moves through the building, with the courtyards that are an ever-present connection to the natural qualities of the site and the region. The only things that protrude through the plane of the folding earth are the “view box” above the terminal, which functions as a restaurant and lounge that is open to the public, and the control tower located to the south of the building. The idea is that the control tower, as a tall sculptural piece, is visibly in tension between the earth and sky, opening up at its base, constricting in the middle and then opening up again at the top where it is in the sky, as seen at right in figure 9.21.

In this design, the forces of the site literally form the building, and the idea is that these forces are so strong that the site itself becomes one large sculptural element, rising up for the earth to reach to the sky.
Figure 9.24_Site plan

Figure 9.25_Building Plan: Main level

Figure 9.26_Building Plan: Lower level

Figure 9.27_Building Plan: Office level
By examining the section, one can begin to understand the subtleties of the continuous folding of the green roof “site.” The roof is low in the corridors to again reinforce the human scale, but then angles up and out in each of the lounges. The final height of the ceiling varies from lounge to lounge, but across all the lounges, the heavy concrete roof structure tapers as it moves away from the building in a significant cantilever. This characteristic makes the building have a sleeker and more dynamic quality in section, again reinforcing the effect of the earth reaching up and out to meet the sky. The building almost appears to dissolve into the sky as its heavy structure diminishes to nothingness towards the end of the cantilever.

The cantilever is critical over the gate area, as this airport does not employ jet bridges as a means for passengers to board their planes. As a means to reinforce the connection with the site and location, and in keeping with the tradition of small airports around the world, passengers must walk out onto the tarmac to board their planes. However, with the significant cantilever that this airport offers, planes can pull up under the roof, which prevents the passengers from getting wet in inclement weather. Walking out to the plane in this open condition is much like walking from ones car to the front door under a porte cochere.
The convergence of earth and sky also occurs in the construction ethic of this building. Heavy materials were intentionally chosen to reinforce the feelings of gravity, heaviness and of being surrounded by the earth before taking off into the sky for the flight. This symbolism is supplemented by the green roof and ivy walls seen in the courtyard spaces, which give the impression of the earth folding down to create spaces for the travelers. The heaviness and gravity is further reinforced by the opportunities that are created for passengers to pause and sit in niches within the walls, or on solid concrete benches that extend out from the concrete base of the walls. At those moments of repose, one feels the texture of the clay that comprises the bricks or the smoothness of the concrete, and also their coolness upon meeting the human body. In the section above, the niche in the masonry wall is also a window seat, which allows that passenger a private view out over the bay and its islands.

This heaviness is juxtaposed by light screens and large windows opening up to views to complete the three different types of enclosure that were discussed previously. The delicate wooden screens comprised of thin pieces give a sense of enclosure, while allowing light to still pass through, and passengers to still feel connected to the activity of the rest of the terminal.
The materials shown above reflect the human sensitivities of this new terminal. The grass symbolizes the folding site, and the opportunities to be out in open air courtyards even after having gone through security. The brick wall speaks to the vernacular architecture of New England, and is one of the materials used to convey the heaviness of the construction and the gravity of the earth. Ivy alludes to Boston and to Harvard University in Cambridge, and will be found growing up the green walls of the courtyards. The second row begins with the wooden screens that are used to provide a sense of privacy for passengers waiting in the lounges without disconnecting these spaces from the rest of the terminal. The typical New England meeting hall with its colonial windows is referenced by the abstracted gridded windows of the lounges and gate areas. These grids are enlarged so that they do not distort the views outside, but not to a scale that they are not legible. Brushed painted steel makes an appearance as the material of the mullions in the “colonial” windows, as well as in parts of the check in counters, scales for baggage, and baggage carousels.

The third row features the repurposed wooden planks that will compose the floors of the lounges and of the gate area. This material choice adds a much more tactile character to those spaces, as opposed to the vinyl floor tiles that are typically found in airports around the globe. The polished concrete is the simple, beautiful and tactile material of the floors through the main corridors and at the base of the brick walls. The concrete also forms benches in some of the lounges and courtyards for passengers to stretch out on. There are also several walls that are simply gypsum wall board with a white painted finish. The fourth column of the materials palette shows different interior conditions that will appear throughout the terminal. The lounges will feature fields of small suspended lights to illuminate those spaces in a way that is unique to the way that lounges are typically lit. Similarly, long, muted directional lights are positioned down the hallways as a means of way-finding, as well as an enhancement of the atmospheric quality. The furniture in the lounges will be comfortable brown distressed leather arm chairs, with repurposed wooden coffee tables and end tables, to allude to the atmosphere and qualities of a comfortable living room as opposed to the inhumane airport terminals of today.
The next several pages document a sequential movement through the new terminal. On this page, the top image shows the approach to the airport. Here, one can see the way that the site folds up around the traveler as they get closer to the terminal, which creates a unique entry sequence that engages the earth as well as the sky. Furthermore, it encourages an engagement with and awareness of the site that wouldn’t happen if the site were completely flat or paved over as is the case with many airports today. The next image depicts the security checkpoint for departing passengers. In general, security is one of the least pleasant parts of the airport experience, and a goal of this thesis was to make it a more human experience. In the lower image, one can see that the zone has been visually opened by using light wooden screens and allowing natural light into the zone through translucent windows. Furthermore, materials that are much more tactile and pleasant to be around have been introduced to this part of the building, as opposed to the harsh and sterile materials that exist now throughout the security screening zone. The following image shows a zone of benches that are formed from both the brick walls and the screens that cover the windows. This area is specifically for putting oneself back together after having to empty one’s bags and pockets for the screening process. Simply prescribing a particular space for this function makes the security process much more humane, as opposed to the current situation in airports today, where one has to put their shoes on and re-pack their bag(s) while walking or balancing, and feeling rushed and as though one is in the way. Again, there is visual connection to the rest of the terminal, and natural light, but because it is a prescribed zone off to the side of the main path of traffic, it becomes a less frantic process.
The image on this page illustrates the corridor condition one encounters after passing through the security zone as one begins to move towards the lounges and gates. There is a natural progression that occurs and shows passengers where to go because of the soft lighting that has a directional quality from above, and the line of courtyards to the right of the corridor, as well as the screens and railings that create a permeable barrier into the lounges to the left of the corridor. With all of these qualities working together, the building acts as its own wayfinding system, and although there will have to be some signs, the lighting and directional qualities of these different elements come together to show travelers which way they should move to get to where they need to go.

From this point of view, one can read the line of courtyards, and see that they are transparent on three sides and feature one solid wall. This solid wall is where the green roof “folds” down to create the courtyard space. The wall is very thick with brick facing, and as a result of its thickness offers niches and the opportunity for a traveler to pause and take a seat there. The passenger can have a little bit of privacy by being sheltered by the brick niche around them, but also still have a connection to the outside by having a direct view into the occupiable courtyard opposite their position. The courtyards also allow natural light into the corridors, and because they are planted with native grasses and birch trees, they can create beautiful plays of shadow and light during the course of the day, as is seen in the image in the foreground at right.
Below is an example of a common lounge in this new terminal. The flooring is repurposed wooden planks, which are highly textural and warm, but also smooth enough not to hinder easy movement. The large window is a variation on the colonial windows from the old meeting houses, and a courtyard brings in natural light and offers passengers who are waiting the opportunity to go outside to enjoy the weather. In the courtyard are native grasses, shrubs and birch trees, all of which would be found along the shoreline of New England. A delicate wooden screen has been placed along one of the glazed walls. This way, natural light still filters into the waiting lounge, but the courtyard offers a little more privacy to the people opting to wait there than if it were enclosed only by glass.

The ceiling is adorned with a field of small pendant light fixtures, which make the ceiling seem more like an art installation that can create interest while also serving to illuminate the space. Passengers would be waiting in comfortable leather armchairs, with access to power for their computers and phones. Coffee tables made of repurposed wood allow passengers to put their feet up if they so desire. The scale of the space is much smaller than the typical waiting lounge in an airport, and therefore allows the passengers to feel much more comfortable, and not like a scaleless being in a vast hall. Also, the screens help with acoustics, keeping down the inherent noisiness of the corridor. Instead of featuring constant messages on loudspeakers, there are electronic message boards on the wall that display when certain flights are departing, with only periodic announcements coming over the intercom in soft tones. This further allows passengers to unwind and disengage themselves from the often stressful activity of travel, while simultaneously engaging with their surroundings. Each lounge truly has the accommodation of a first class lounge, but is for passengers of all classes.
The top image below illustrates the new gate area. As opposed to airports today, this is not where the bulk of the waiting time is spent. The lounges are where passengers pass the time as they wait for their plane to begin boarding. The gate area in this terminal is specifically for enplaning and deplaning. Comfortable chairs are located here as well for those who feel most comfortable waiting directly by their gate, but there are only a few to encourage passengers to move to one of the several lounges nearby or the restaurant or bar to pass the time as they wait. There is also access to a large courtyard from the gate area, for those who would like to be closer to nature before embarking on their flight.

The bottom two images show at left the procession along the arrivals side of the airport, with visibility into all of the courtyards acting as a guide for where to go. Furthermore, much like the corridor on the departures side, soft directional lighting is used here to help aid in a more natural wayfinding process. The bottom right image gives an impression of the atmosphere in one of the courtyards, with the ivy covered wall to the right acting as a connection between the ground of the courtyard and the green roof, reinforcing the idea of the site folding into the building to create natural spaces. Again, although these spaces could easily be very large, they are at the human scale, and featuring tactile materials and local influences to reinforce the sense of place and engagement with the building as well as the site.
The final moment within the terminal is shown below. One approaches the exit through the delicate wooden screened security zone. To the left is an area for reunions with loved ones that is out of the direct path of travel to the baggage claim and exit. This allows for reunions to happen more organically, without being run into or tripped over by people who are hurrying to catch a bus or get their car and get back into the city for a business meeting. The heavy brick wall makes a reappearance and here its niches provide a place for travelers to sit and wait for baggage or for loved ones to arrive. The large window offers views to Boston and the harbor, which helps the passengers acclimate to their new location, and giving them time to arrive mentally.

In this new terminal design, each event along both the path of arrival and departure was carefully considered in terms of what the needs of all of the people using that space could be. There is always a clear path from one end of the terminal to the other for those who arrive with exactly enough time to go through security and run to their gate (or who arrive and must run to make a meeting), but also many various spaces with different qualities for those who have time to sit and relax, or who must work on a presentation before departure, or who want to spend as much time with their loved ones as possible before moving on to the next event in the terminal. Through this careful examination of the people who will be using the terminal and their varying needs, a new type of terminal has emerged which accommodates them all and therefore makes the airport a much more comfortable and pleasant experience. Its ties to specific views of Boston and the harbor, as well as the use of native trees and grasses in the courtyards reaffirm its connection to its site, or its *Genius Loci*, and the use of warm, tactile materials and opportunities to physically engage with the building reawaken the senses and the wonder of flight.
The quality of airport terminals today has led people to become disenchanted with the idea of flying, in part due to the chaotic, depersonalized environment found in most airports. The cavernous spaces clad with glass and steel are anything but inviting for travelers, and succeed in their functional goal of being cold, transitory spaces that one wants to pass through as quickly as possible. Passengers have become completely removed not only from their immediate physical surroundings but also from the experience of traveling, of moving through the air at high speeds with only a thin metal membrane separating them from the harsh qualities of the earth's atmosphere at cruising altitude, and they take for granted the fact that they are experiencing a real feat of engineering.

Through the research of this thesis, an architectural solution for this set of disconcerting problems has emerged. A heightened sense of interaction with, and awareness and perception of, one's body and environment is promoted through design considerations of construction ethic, site intervention, materials (and their textures), lighting, and connectivity to the outdoors, site and landscape. These qualities of the terminal designed herein foster the new positive experience of the passenger and the employee (as previously passive individuals) by engaging the body and its senses with the place that is the building and the site. The terminal design is specific to Boston in its character, features spaces that are at the human scale, engaging and pleasing to the senses, soothing to the nerves and exploits the fascinating simultaneous dualities of the airport as they continuously converge: that it is both transient and static, active and dormant, of the earth and sky, and housing arrival and departure. Through the explorations of this thesis, the airport becomes a part of the journey, a place to explore, enjoy and spend time in without stress or aggravation, and is considered a prelude or a conclusion to the adventure and wonder of flight.
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Travel, Phenomenology, other theoretical topics


Sense of Place


**Precedents**


**Site**


