1. Research Problem

1.1 Working Title

“New Urbanist Intervention in Onehunga: A Transport Centre”

1.2 Summary

This research project is based around the future development of Onehunga, a suburb of Auckland. The New Urbanist development includes a detailed analysis of the suburb in relation to its transportation issues, residential/commercial and industrial layout, public buildings and amenities such as schools, parks and community buildings. The project works with both urban and architectural issues. It involves the detailed planning and allocation of functions for new/existing buildings and public space over the wider suburb. The main architectural entities to be designed include a new public transport centre with subsidiary apartment buildings and a main public square.

"The sum of human happiness increases because of New Urbanism" -Andres Duany

1.3 Rationale

1.3a) Introduction to New Urbanism

As an architecture student I have always chosen to participate in design studio projects with not only architectural but also community and urban design issues. During my third year of study I was introduced to a type of traditional urban design and architectural planning called “New Urbanism”. The ambitions and goals that New Urbanism based projects set to achieve are of particular interest to me.

---

1.3b) Why Onehunga?

The Auckland Regional Council (ARC) has identified Onehunga as an important centre within the Auckland area that has not reached its potential. The Auckland City Council suggest that “Onehunga is a strategically important centre with significant employment capacity, a sizable existing population, well developed social infrastructure, good connectivity and a sub-regional market catchment. Consistent with the Regional Growth Strategy and Regional Policy Statement, Onehunga has been identified as a principal centre for housing and employment intensification.”

My research project engages with the existing Regional and District Council based projects and developments and proposes design solutions that could help bring vitality to the Onehunga Community. Projects such as the “Reopen Onehunga Rail” project are currently underway. It aims to reconnect Onehunga to the existing Auckland rail network. There is a current trend in developing apartment buildings and small town houses in the Onehunga area. Further Council projects: The Restoration of Onehunga Bay Reserve and the development of State Highway 20 are also currently underway.

1.3c) Architectural Problems identified in the ‘Research Problem’

The main research problem the “New Urbanist Intervention in Onehunga: A Transport Centre” triggered a subset of architectural problems that my research and analysis has been based around during the year. These design and research problems relate to both urban design and architecture. They include:

1) How can New Urbanism design ideas benefit the suburb of Onehunga?
   How can these ideas be applied in my design brief?

2) How has the suburb of Onehunga developed over the past century? How do District and Regional authorities believe the suburb will change over the next decade?
   How can this information help assist me in making a positive contribution to the suburb of Onehunga?

3) What is a suitable and appropriate system of public transport for the area? How does this area sit inside the wider Auckland community in relation to existing public transport systems and its location?

---

This document is attached in Appendix: 7.4 Onehunga Railway Station and Future Development – Boffa Miskell. “The purpose of this document is to advise committee of work related to the preparation of a development framework for 109 – 111 Onehunga Mall, and other work streams.”
4) How can the population density of Onehunga be increased? What effect will this have on the town centre environment?³

1.3d) Aims/Objectives of the Project

The research problem proposes the application of New Urbanism to an Auckland environment. New Urbanist projects are seen across the United States and have proven to be successful for example, “Seaside” Florida master planned by Andreas Duany.⁴ However New Urbanism based design rarely appears in Auckland or New Zealand. This project tests the application of New Urbanist design techniques in an Auckland environment. It also engages with many architectural and urban design tasks including:

1) Developing architectural solutions for large urban environments characterized by existing heritage buildings and complex traffic patterns.
2) Designing a major building that makes a substantial intervention into a complex urban environment.
3) Planning a wider urban area in a way that incorporates ideas and planning methods used in New Urbanist design.
4) Resolving complex functional and spatial requirements.
5) Understanding and solving problems pertaining to the internal architectural composition of large spaces.

1.3e) Hypothesis for the Project

I believe the application of New Urbanist design and architecture can benefit the suburb of Onehunga. The project will investigate and test the applicability of New Urbanism design techniques to Onehunga and the wider Auckland community. Auckland suffers from an underdeveloped public transport system. Its development is vital for Auckland as the city continues to grow. The rail network will create stronger connections between Onehunga, the wider city and the central business district. The development of apartment buildings and higher density housing will ultimately benefit the Onehunga community centre. The area will have more urban life, become a safer place to live and help local businesses become more successful.

³ Refer to Appendix: 7.9 Auckland City Council, Maungakiekie Area Outcomes 2030 – Interim Draft. This document identifies the Onehunga Town Centre for mixed-use and apartment building development.
2. Review of Current State of Knowledge

2.1 New Urbanism

2.1a) What is New Urbanism?

New Urbanism is a rapidly developing and pragmatic approach to urban design that started in the 1980’s and was first seen in the United States. It is an approach that uses a ‘whatever works best’ attitude, using ideas from a wide range of design movements, architectural styles and technology’s without regard for its origins in the past or future. The movement was generated to reform many negative aspects of urban planning and suburban development that exist today such as: the destruction of neighborhoods, traffic congestion, social alienation and the deterioration of the public realm. New Urbanism also encourages the idea for alliances between the relevant professions of architects, planners, environmentalists, developers, politicians and engineers.

2.1b) New Urbanism Ideology

The movement looks at how to reform the design of the built environment by rethinking how urban spaces are composed, how they are inhabited and how they function. New Urbanism’s main objective is the reintroduction of the “lost-art” of place-making. This is to essentially re-structure how communities, towns and cities are composed and function. New Urbanism design strategies can be applied to ‘brownfield’ developments in existing communities and cities but also to ‘greenfield’ developments for new communities on undeveloped land. Andres Duany in Suburban Nation speaks of key ideals that the New Urbanism movement is focusing on. Duany refers to a premodern American town called Coral Gabels developed in the 1920’s. He suggests “the great planners of this era determined the form of their new cities by studying the best traditional towns and adjusting their organizational principles only as necessary to accommodate the automobile.”

‘Walkability’
New Urbanism is focused on creating pedestrian friendly environments. Providing the basic amenities that a person needs day to day reduces the dependence on the motor car. Pedestrian friendly streets help to encourage pedestrians to commute using public transport and on foot. Andreas Duany states in his text *Suburban Nation* “the neighborhood elementary school, should never be more than a fifteen minute walk from any home.”\(^6\) This suggests how Duany is focused on providing amenities that are accessible for pedestrians.

‘Mixed-Use Developments’
Providing a mixture of housing / retail / community buildings & shops / transportation in a community is an important goal for New Urbanist developments. The main objective for a New Urbanist community is that it becomes ‘self sufficient’. A person living inside the community can complete all of his/her day to day activities within the community without the need for travel. “Ideally, every neighborhood should be designed with an even balance of residents and jobs”.\(^7\) “When they can, people will relocate their home or business to be near their business or home”.\(^8\)

‘Connectivity’
Duany states that a community’s “relationship to its neighbors is important as well”.\(^9\) A community must do more than just provide mixed uses. A community must establish strong roading and public transport connections. A well planned and developed public transport system can enable people to commute without the need for the automobile, while well conceptualized roading patterns can help to reduce traffic congestion.

\(^7\) Ibid. at p.189.
\(^8\) Ibid. at p.190.
\(^9\) Ibid. at p.192.
‘Aesthetic Based Urban Design and Architecture’

“A good town plan is not enough to generate a desirable public realm; individual private buildings must also behave in a manner that contributes to pedestrian life.” Human scale development is a strong New Urbanism concept. The movement steps away from high-rise residential developments and focuses on densified low-rise developments that create a sense of place and community. Special placement of civic buildings and the formation of enclosed outdoor public spaces aid in creating aesthetically appealing and vibrant places.

‘Traditional Neighborhood Structure’

Communities that are ‘greenfield’ developments should have a discernable edge and centre. “A study of how the most valued historic neighborhoods differ from conventional sprawl un-covers the rules for a pedestrian friendly architecture”. They should contain a range of uses and densities within a ten minute walking distance. The importance of public places should help to shape the community with open public areas placed beside major civic buildings and community centres.

‘Transect Planning’

Transect Planning is a method of planning that New Urbanism heavily supports. It involves the strategic development of cities and communities so that the highest densities are in the centre and become progressively less dense towards the edge. The “transect” is an analytical system that conceptualizes elements which complement each other and work well together in each zone. “In general a transect is simply a cross section, a line traced across different ecological zones”. “As a planning tool, the ‘transect’ is a technique for creating a system of classification of human habitats based on a conceptual continuum from the most rural to the most urban conditions”. The transect system also denotes what building types are suitable in each area from the progression of inner city to rural extremities.

11 Ibid. at p.205.
12 Hass, Tigran. New Urbanism and Beyond, New York, USA: Rizzoli, 2008, p.293
13 Ibid. at p.293.
The Transect Diagram Illustrates:
- A discernable center and edge
- Public space at center
- Importance of quality public realm; public open space designed as civic art
- Contains a range of uses and densities within ten minute walk
- Transect planning: Highest densities at town center; progressively less dense towards the edge.

The transect is an analytical system that conceptualizes mutually reinforcing elements, creating a series of specific natural habitats and/or urban lifestyle settings.

‘Increased Densities’
Increasing densities in urban areas by providing more buildings, residences, shops and services in closer proximity can help to establish a vibrant and walkable community. The increased number of people in a neighborhood helps to make the environment safer through “self-policing”. The increased density also helps to make public transport services more viable and frequent. More civic buildings can be constructed and wider range of community shops can successfully exist with a larger community population.

‘Smart Transportation’
New Urbanism supports high-quality public transport systems that ultimately provide strong connections between cities, towns and neighborhoods, providing pedestrian-friendly design solutions that encourage greater use of pavements and roadways for walking, cycling and mobility scooters. The key objective is to reduce a person’s dependency of the automobile.
‘Sustainability’

Developments should have minimal environmental impacts on the surrounding geology. Eco-friendly technologies and materials should be used on developments where possible. The design decisions must respect and reflect the existing community and heritage. Local production of goods, materials and labor should be a strong priority for construction teams. Any development should promote walking and be pedestrian friendly, ‘more walking, less driving’.

2.1c) The Benefits of New Urbanism

“At it has been an uphill struggle, there are many successes worth celebrating in the fight against sprawl”.14 “Architects are creating pedestrian-friendly, transit orientated neighborhood plans. Traffic engineers are rewriting their once-destructive standards. Planners are throwing out their sprawl-generating land-use codes. Economists are identifying the real cost of suburban growth and recording the financial success of new traditionally designed neighborhoods. A new breed of developer is emerging, committed to building community, not just product”.15 I believe the positive results of New Urbanism developments are because of the movement’s ties with successful aspects of traditional urban planning. Aspects of New Urbanism can be incorporated during the design of various architectural and urban projects including, single buildings, groups of buildings, an urban block, neighborhood, networks of neighborhoods, towns, cities and regions. This characteristic is due to the movement’s objective to successfully integrate with existing developments and communities.

‘Residential’

New Urbanism communities provide residents with a higher quality of life. This is because of the way the community is shaped. People from all socioeconomic groups can afford to live in the same community so the creation of slums is minimized. The communities provide less traffic congestion and more pedestrian friendly environments that are in close proximity to daily amenities such as transport networks, shops, schools and recreational facilities. A community feeling is created as people get to know each other and because of the increased density the communities become safer giving children more freedom. Outdoor spaces such as parks and public squares will be used rather than stay derelict.

———

15 Ibid. at p.216.
‘Business’
The greater amount of foot traffic that exists in a New Urbanism community provides business owners with higher and more consistent sales numbers. The shops are more successful because of their location in close proximity to residences. The shops being a part of a pedestrian based environment omits the needs for parking lots in front of shop doors. Instead small numbers of parallel on-street parking is acceptable. The shops help provide residents of the community with food and services they require reducing the need for them to use vehicles and commute outside of the community.

2.1d) The Congress for the New Urbanism

The CNU (Congress for the New Urbanism) founded in 1994, was influenced by the ideas of Andres Duany and Elizabeth Plater-Zyberk. This organization promotes the development of walkable mixed-use communities. It was formed as a non profit organization to help stop the spread of urban sprawl caused by zoning laws and development trends that existed for much of the twentieth century. The CNU takes a proactive, multi-disciplinary approach to restoring our communities. The organization is made up of planners, developers, architects, engineers, public officials, investors, and community activists who play a part in creating and influencing our built environment. The CNU’s membership (consisting of architects and urban designers/planners) is continually growing every year. Its main objective is to discuss and implement New Urbanist design objectives around the world.

The possibility exists for New Zealand architects, urban designers and planners that believe in New Urbanism to join the CNU. This would enable these designers to receive constant updates about current and established New Urbanism projects and share design ideas with other members of the CNU. The Congress for the New Urbanism is slowly spreading information about the movement around the world.
2.1e) Influential Figures Of New Urbanism

**Léon Krier**
- 07/04/1946 – present day
- Architect, architectural theorist and urban planner.
- Has had a great influence on New Urbanism movement.
- Major architectural works include:
  - “Poundbury”, England
  - Contribution to “Seaside”, Florida
- His book “Architecture, Choice or Fate” is very popular

**Andres Duany & Elizabeth Plater Zyberk**
- Duany 07/09/1949 – present day
- Zyberk 20/12/1950 – present day
- Leaders in the New Urbanism movement
- Founded design firm ‘DPZ’ Duany Plater Zyberk in Miami Florida
- Major architectural works include:
  - “Seaside”, Florida
  - “Kentlands”, Maryland
- They have authored many texts. The most well known: "Suburban Nation: The Rise of Sprawl and the Decline of the American Dream” and “The New Civic Art”
2.1f) Architectural Precedents of New Urbanism based developments

‘Seaside Florida, USA’
- By DPZ (Andres Duany and Elizabeth Plater Zyberk
- Input from Léon Krier
- Seaside is an unincorporated master-planned community.
- It was founded by Robert Davis builder/developer in 1979.
- Seaside is very successful New Urbanism based development.

‘Poundbury, England’
- Master planned and developed by Léon Krier
- Labelled as an “Experimental Town” or “Urban Extension”
- Was designed in the late 1980’s and building commenced in 1993
- Poundbury was developed using New Urbanism principles. This was intended to reduce car dependency and encourage walking, cycling and public transport.
- There are no zoning rules in Poundbury. It is a highly mixed use development.
‘The Redevelopment of Stapleton International Airport, Denver’
- Stapleton International Airport was Denver, Colorado's primary airport from 1929 to 1995
- It has now been decommissioned, and redeveloped as a neighborhood.
- The former airport site is now being redeveloped by Forest City Enterprises as the largest new urbanism project in the United States.
- Construction began in 2001, and as of 2004, over a thousand homes have been built on the Stapleton site.
- Eventually, Stapleton is expected to be home to at least 30,000 residents.

‘Kentlands, Gaithersburg, Maryland’
- Kentlands was one of the first attempts to develop a community using Traditional Neighborhood Design planning techniques (the principles of New Urbanism)
- The development, begun in 1988, contains buildings from the original Kentlands farm, many varieties of residences including a "downtown" commercial district, open space including protected natural areas and pocket parks, and civic uses including schools, a church, and an art center.
- Designed by Andres Duany and Elizabeth Plater Zyberk of DPZ
2.2 Urban Design / Town Planning

2.2a) A definition of Town Planning and Urban Design

‘Town Planning’
Town planning is the integration of the disciplines of land use planning and transport planning, to explore a very wide range of aspects of the built and social environments of urbanized municipalities and communities.

‘Urban Design’
Urban design concerns the arrangement, appearance and functionality of towns and cities, and in particular the shaping and uses of safe public space. It has traditionally been regarded as a disciplinary subset of urban planning.

2.2b) Principles of Urban Design and Town Planning

‘Urban Design’
Urban Design theory is concerned with the design and management of public space, and the way public places are experienced and used. Public space includes urban features such as streets, plazas, parks and public infrastructure. Some aspects of privately owned spaces, such as building facades and gardens also contribute to public space and are therefore also considered as part of the urban fabric. The Urban Design aspect of my research project engaged with these principles:

- Urban structure – How a place is put together and how its parts relate to each other
- Urban typology, density and sustainability - spatial types and morphologies related to intensity of use, consumption of resources and production and maintenance of viable communities
- Accessibility – Providing for ease, safety and choice when moving to and through places
- Legibility and wayfinding – Helping people to find their way around and understand how a place works
- Animation – Designing places to stimulate public activity
- Function and fit – Shaping places to support their varied intended uses
- Complementary mixed uses – Locating activities to allow constructive interaction between them
- Character and meaning – Recognizing and valuing the differences between one place and another
• Order and incident – Balancing consistency and variety in the urban environment in the interests of appreciating both
• Continuity and change – Locating people in time and place, including respect for heritage and support for contemporary culture

'Town Planning'

Town planning as an organized profession has only existed for less than a century. It is concerned with the design and management of community and site issues such as layout, zoning and traffic. Town planning has been incorporated into the analysis and design phase of research project. This was because I needed to make informed decisions about many of the issues that town planning deals with. The Town Planning aspect of my project deals with these principal issues:

• Community Layout – Looking at how the area is laid out with regard to its community centre, public places (churches, parks, schools etc), shops and location within the wider Auckland area.
• Zoning – Analysing how the area has developed with it’s placement of residential, commercial and industrial buildings.
• Traffic – How the area sits in regard to existing roading infrastructure around the wider city. What are the main arterial roads in and out of the area. Traffic problems that are visible in the area.
• Sustainability – How the area can successfully be developed and what are the best / most economical design decisions.
• Transportation – How the public transport system currently operates in the area. How it plans to develop in the future.
• Growth – The areas historical current and planned development including residential commercial and industrial developments.
• Renewal – The restoration / development of public and private buildings or spaces to continue to be utilized.
2.2c) Influential Urban Designers / Town Planners

**Camillo Sitté**

- 17/04/1843 – 16/11/1903
- Austrian architect, painter, city planning theoretician.
- The work of Sitté is not merely just a criticism of architectural form but it is also an aesthetical criticism of urban and public space.
- This is evident in Sitté’s text: “City Planning According to Artistic Principles”
- Sitté is well known for his positive / negative space drawings.

**Sir Ebenezer Howard**

- 29/01/1850 – 01/05/1928
- Howard founded the Garden City movement in 1898. Many ideals in Howard's plan for the Garden City are present in today’s New Urbanism.
- Garden cities were intended to be planned, self-contained, communities surrounded by greenbelts, containing carefully balanced areas of residences, industry, and agriculture.
2.3 Medium Density Housing

2.3a) A Background of Medium Density Housing

Medium density housing is a term used in Australasia to describe residential developments that are at higher densities than standard low-density, or “broadhectare” suburban subdivisions, but not so high that they might be regarded as high density “high-rise” style housing. Medium density housing includes “low-rise” apartment buildings and attached or semi attached town houses. These dwellings maximise land usage and work well in mixed use building types with retail on ground level and dwellings above.

Medium density housing is not a new concept. Many traditional types of housing developed prior to car-based cities were at comparable densities, such as the terraced, row or courtyard housing found in many parts of the world. New Urbanism is a strong supporter of medium density housing. This is because the buildings required to achieve the level of density are pedestrian friendly. They are not highrise towers that overpower the aesthetics of a streetscape. Medium density housing can be achieved in mixed use buildings where retail takes place on the ground floor and residential apartments are on the upper level.

The design of medium density housing requires careful consideration of urban design and architectural issues, such as:

- Privacy – How individual dwellings are given privacy from the street and their neighbours
- Mixed Use – How the building(s) function to be both a residential development but also to serve the street with retail or community shop frontage
- Access – How residents / shop owners / public access the buildings(s)
- Security – Security measures are in place to keep the building and its individual spaces secure.
- Noise – Measures or rules need to be in place to limit noise transfer for residents
- Zoning – The placement of medium density housing should be in short walking distance to community shops such as a supermarket, doctor, pharmacy etc.
- Aesthetics – Public outdoor and park space should be provided for the residents in close proximity to the dwellings.
2.3b) How Medium Density Housing Relates to Onehunga

Medium density housing is already an aspect of the developing Onehunga community. Town house developments are seen on Princes St and Church St in a close proximity to the community centre. Existing low rise apartment buildings have recently been built on Onehunga Mall.

New Urbanism is a strong advocate of medium density housing. New Urbanism suggests medium density housing should be developed in and around community centres as it has a positive effect on community business and vitality. Placing apartment and town house development close to Onehunga’s community centre gives residents pedestrian access to shops, recreation spaces and public amenities such as the new Public Library.

Aesthetically, medium density housing can enhance the suburb. The designing of pedestrian friendly low-rise two to five-story buildings are not intimidating like the ten to twenty-story apartment buildings seen in Auckland’s CBD. Medium density housing forms part of an aesthetically pleasing façade that is at a pedestrian level. This is evident along Onehunga Mall where an existing apartment building blends with the existing streetscape.

Providing transportation systems that are easy to use, within short walk of residential developments and are frequent, will entice people to use them. The development of medium density housing around the town centre of Onehunga and in close proximity to the proposed train station will entice people to commute to work via this train network and make the proposed service a success.

2.4 Auckland City Council Documents

2.4a) The Auckland City Council

The Auckland City Council is the local government authority representing Auckland City, New Zealand. It is an elected body representing the residents of the city that controls the development of buildings, roading, public transportation, parks and reserves within the Auckland region. The Auckland City Council releases documents about proposed changes relating to roading / public transport and largescale developments. The Council also provides documents that include land information such as contours and services. I have analysed a number of Auckland City Council documents during the research and analysis phase of the project.16

---

16 Refer to appendices to review attached Auckland City Council documents.
2.4b) Auckland City Council – Draft Future Planning Framework, 12 March 2009

“The draft future planning framework paints a picture of how the Auckland isthmus could look in the future. It shows important elements of the historic urban landscape that need to be respected or protected, how land should be used, and how and where growth and development should occur.”

This text has been very helpful as it talks about many of the key issues that my research project is focusing on. The Auckland isthmus is broken down into 10 areas of development. These include:

1. Avondale / Blockhouse Bay  
2. Eastern Bays  
3. Eden / Albert  
4. Maungakiekie  
5. Mt. Roskill / Hillsborough  
6. Newmarket / Parnell  
7. Otahuhu  
8. Remuera / Meadowbank  
9. Tamaki  
10. Western Bays

Onehunga lies within the Maungakiekie area plan and has been researched in depth. By researching this area plan informed decisions can be made about the type of buildings/spaces/functions that particular sites in the Onehunga area are suitable for. Sustainability and renewal is an important factor of my research project. By reading the area plan judgements can be made about the longevity a proposed building might have on a particular site in the Onehunga area. There is a block of townhouses on Princes Street that may need to be removed when the rail service to Onehunga reopens. The fact that these buildings need to be removed illustrates the lack of forethought and planning of both the developer and Council. This puts both the developer and the Auckland City Council at fault. The developer assumed that the line would never be reopened and never bothered to check future Council plans yet the Council failed to thoroughly check consent documents. The townhouses are only two years old.

---

2.4c) Maungakiekie Development Within the – “Draft Future Planning Framework”

Maungakiekie, which includes Onehunga, Greenlane, Ellerslie and Penrose, has its own area plan which refers to all of the previous, existing, and future development plans for the area. The Maungakiekie area proposes a list of key outcomes between now and 2030. Some of these outcomes directly effect my research project. These include:

- **Developing Lively Centres**

  Onehunga in the area plan, is listed as a principal centre. The Maungakiekie area has a well-planned and managed development programme that is focused around introducing “activities that create employment and intensifies residential development around the principal, town and local centres, close to public transport, open spaces and community facilities.”

- **Green the City and Protect our Heritage**

  The development of Onehunga Bay Reserve is one of Onehunga’s largest recreational reserve projects. Onehunga Bay Reserve is in close proximity to the community centre. It is intended that community events and activities will take place at this reserve once the area is revitalised.

- **House our Growing Population**

  The central Onehunga area is the suitable area for “a mix of housing types (including apartments) as part of mixed use development.” “Felix Street and the area between the Onehunga Branch Rail Line and Church Street provide opportunities for people to live and work in the same building.”

---

18 Refer to Appendix: 7.9 Auckland City Council, Maungakiekie Area Outcomes 2030 – Interim Draft
20 Ibid. at p.71.
21 Ibid. at p.71.
• Connect Communities

Public transportation systems and technology will improve in the Maungakiekie area. The Auckland City Council will work along side the Auckland Regional Transport Authority and Ontrack to achieve this. The proposed developments include:

- A new high-quality train station at Onehunga Principal Centre.
- The Reopening of the Onehunga Branch Railway Line.
- The development of a rail connection to the Auckland City Airport and Avondale.
- The development of a park and ride system in Onehunga. Improvements to the bus network.
- Local linkages to the citywide cycle network and improvements to the State Highway 20 interchange at Onehunga.

Figure 2.30) The dormant Onehunga Branch Rail Line between Penrose Station and Onehunga
Figure 2.31) Maungakiekie Area Outcomes Map 2030
2.4d) Draft Future Planning Framework – Transport Choices

The Draft Future Planning Framework also includes a transportation choices strategy. This is based on a “vision of Auckland City that is attractive to residents, businesses, and visitors to live, work, study and get around in. Improved transport services between key business areas within the city, and to the port and airport will help keep Auckland city economically competitive. Better public transport, and roads that are more cyclist friendly, will connect centres. The council’s role is to work with the other transport agencies to improve the transport network.”

The Auckland City Council has outlined a short list of objectives for its transportation developments which include:

- An efficient transportation network providing sustainable travel choices.
- A safe and secure transport systems.
- Transport provision that enhances quality of life and reduces adverse impacts on the built and natural environment.
- Transport as a catalyst for economic growth.
- An integrated approach to transport planning, delivery and operation.

My research project has considered these objectives in the context of Onehunga. The design and planning choices I have made reflect these Council based goals.

---

2.5 Onehunga

2.5a) A General Background of Onehunga

Onehunga is a residential and light-industrial suburb of Auckland City. Onehunga has approximately 18,000 residents and almost 1000 commercial and industrial businesses. The suburb stretches south from Royal Oak to the north shore of the Manukau Harbour. Onehunga stretches east to the areas of Te Papapa and Penrose (highly industrial areas). To the west the suburb stretches to the residential area of Hillsborough.

2.2b) The history of Onehunga

The suburb of Onehunga has always been an important part of the wider Auckland community. Since early European settlers first started to develop the land in the second half of the nineteenth century the area has been continually developed. A brief timeline of important events has helped to summarize how the suburb has changed and developed since the first recorded land sale in 1844 through to the present day.

‘First Land Sale’
The first officially recorded land sale took place on 7 May 1844 when John Thomas Jackson purchased a large block of land of approximately 163 acres from Maori chiefs Wiremu Hopihone and Te Tinana. This was known as Waihihi.

‘The Land Wars 1860 – 1865’
Land Wars brought prosperity to Onehunga. With no access to the south by road, the port was the scene of concentrated and sustained activity. Many refugees were brought from down country. While the war lasted Onehunga prospered, but when the troops were withdrawn and the militia disbanded the boom days were over. A post war depression followed which created unemployment and hardship in the district.

‘Local Government 1842 – 1876’
In 1852, Auckland was one of six provincial councils to be established. By the mid 1850s, Pensioners and settlers formed a population of over 1,000 people. The Representation Act of 1860 detached Onehunga from Pensioner settlements and constituted it a distinct electoral district, firmly establishing its separate identity. George Maurice O'Rorke was the first to be elected to the House of Representatives for Onehunga.
‘Transport’
As the population increased, the omnibuses provided a passenger service from Auckland to Onehunga. Captain John Henry Hardington started the first regular public transport service in 1860 and by 1864 business had increased so much that the buses had to run hourly. With the advent of the railway in 1873, quicker and more comfortable passenger transport to Auckland reduced patronage of the buses.

‘Highway Board of the District of Onehunga 1868 – 1877’
A further step in local government was taken in 1862, when central government passed the Highways Act and the Auckland Provincial Council passed legislation to provide for the institution of Highway Boards in the province. The purpose of the Act was to facilitate the making and repairing of highways within the Province of Auckland.

‘The Borough of Onehunga 1877 – 1927’

- A proclamation was issued on 19 April 1877 in the name of the Governor, the Marquis of Normanby, proclaiming the town of Onehunga a borough under the Municipal Corporations Act, 1876.

- The opening of the North Island Main Trunk Railway in 1908 had a profound effect on the pattern of shipping in the Manukau. The efficiency of rail transport eroded the use of the harbour.

- The Onehunga Carnegie Free Library opened on 11 September 1912. A grant for most of the construction of the library was given from philanthropist and New York industrialist, Andrew Carnegie. Onehunga was possibly the first New Zealand village to have a free library. In August 1957 the word 'Free' was deleted from the name of the library and replaced with 'Public'.

‘The Borough of Onehunga 1928 – 1978’

- The Onehunga swimming pool opened in 1956.

- At midnight on 28 December 1956, the last tram left the Onehunga terminus.

- The Auckland City Council turned its attention to implementing another long term part of the District Town Planning Scheme presented in 1967. This was to convert a section of the main shopping street, Queen
Street, between Arthur and Princes Street into a pedestrian shopping mall; to provide alternative routes by means of a ring road system; and to expand off-street parking to meet the resultant demand. It hoped to create an attractive business and commercial centre that would bring prosperity and revitalize the centre of the town. The high density through traffic would be eliminated with its accompanying noise, pollution and danger to residents.

- In August 1972 a comprehensive plan was approved and in October the Council voted to change the name of Queen Street to 'Onehunga Mall'. This was the name selected from over 60 suggestions put forward by residents. To provide for car parking and for the construction and provision of facilities in the Mall, the local business community agreed to pay an additional rate over and above the normal commercial rate. The Onehunga Mall pedestrian shopping precinct was opened on 2 April 1973.

2.2c) Important and Historical Buildings

‘Notable buildings’

- Former Post Office, 1902 John Campbell Government Architect. Princes Street & Onehunga Mall. One of the earliest examples of the work of this prolific architect.

- Anglican Church of Saint Peter, on Onehunga Mall & Church Street. The Selwyn church built in 1848 has been relocated, the existing building dates from the 1980’s and incorporates a gothic revival tower from the 1930’s. The churchyard contains the graves of many of Onehunga's early settlers.

- The Carnegie Free Library on Princes Street opened in 1912. It was one of eighteen in New Zealand built with funds from the American philanthropist Andrew Carnegie. Its services were eventually absorbed into the public library system and the building has recently been renovated as a restaurant.

- Roman Catholic Church of the Assumption Church & Galway Streets 1889, Thomas Mahoney architect. Once standing in open countryside this is a handsome example of a masonry Gothic church. The cemetery contains the graves of many of Onehunga's early settlers.
• War Memorial Arch, Jellicoe Park, Quadrant Road & Grey Street. Opened in 1923 by the Governor General, Lord Jellicoe, Jellicoe Park is the site of Onehunga's Public Swimming Pools. Near the War Memorial Arch is located the John Park Memorial Fountain which is illuminated on special occasions.

• The former Onehunga Primary School 1901, now functioning as a community centre. This building has been recently restored and is situated on Selwyn Street.

• The former Onehunga Railway Station Building, relocated to 38 Alfred Street, headquarters of the Railway Enthusiasts Society Inc.

2.3d) The Chosen Site

In 2008 the Auckland Regional Council (ARC) purchased 109-111 Onehunga Mall for urban development purposes. The site extends to 8066 square metres and is located on the eastern side of Onehunga Mall. The Site is bounded by Princess Street to the north, Neilson Street to the south and the Onehunga branch line (OBL) to the east.

The Auckland Regional Transport Authority (ARTA) and ONTRACK are currently working extensively on the reopening of the Onehunga branch rail line (ROR). Currently the Auckland Regional Council has proposed that the Onehunga station will be located on the southern half of this site. The rail line should be finished around mid 2010.

I have chosen this site as the area of focus for my research project. This is because the site as suggested by the Auckland Regional Council is the suitable location for a Transport Centre and other developments that would help increase the vitality of Onehunga Mall. The Council has prepared a draft development framework of how the site could possibly be developed. The Council believes “the northern end could be redeveloped as a high quality, intensive form of development, which would support the commercial viability of the southern end of Onehunga Mall. Increased footfall and activity generated by the station will increase the attractiveness and commercial viability of that part of Onehunga.”

The research project will analyze the site and decisions made by the Auckland Regional Council and test and implement a new urbanism based design strategy for the same site.

3 Methodological Approach

3.1 Introduction

The Auckland Regional Council has planned for a new railway station and transport interchange in Onehunga. The old railway line is becoming active again in 2009. A temporary station will be set in place until the major building works go ahead. The council has purchased a site that has a close relationship with Onehunga Mall, Princes Street, Neilson Street and Galway Street. This became obvious as the suitable location for my New Urbanist project. The Onehunga Business Association has been involved with the development of Onehunga and has lobbied the Auckland Regional Council to ensure the development is beneficial to the area and to have positive effects on the main street and surrounding businesses. The Onehunga Business Association has put forward their vision statement to the Auckland Regional Council with the help of Unitec last year. The research project will result in a New Urbanist development that addresses the problems that the Auckland Regional Council and Onehunga Business Association have set out.

3.2 Project Brief

This brief describes the architectural spaces designed in the project. These spaces attempt to solve the architectural problems discussed in my research proposal. By setting design aims and objectives progress can be made with my research and design at a steady and efficient pace.

Project Goals

1. The successful application of New Urbanism design techniques to enhance the existing urban framework.
2. Establishing main axis networks across the site connecting Onehunga Mall, Onehunga Bay Reserve and Princes Street with the proposed site.
3. The successful design of a Transport Centre and its neighboring buildings, for example: apartments / hotel / restaurant.

---

24 The Unitec School of Architecture offered a full semester studio “Terminus” that developed proposals for the development of a transport interchange. Refer to appendices: 7.2 Terminus project brief & 7.3 New Zealand Herald article, “Students design Onehunga’s grand rail future” 04/11/2008
4. To plan and develop an outdoor public space that will be actively used by the transport centre and surrounding buildings.
5. To effectively communicate design ideas using both graphical and verbal mediums
6. To plan and develop buildings with planned and allocated floor areas and volumes.

Project Focal Areas

Focus A: Site and Traffic and Public Transport Analysis
A number of important arterial roads / highways and motorways exist in close proximity to my chosen site. Do these roadways have a positive or detrimental effect on Onehunga? How do people enter the township from other parts of Auckland? Do the surrounding feeder roads need adjustment or additions to better suit the township? Can the proposed modifications be completed without excessive land works or the destruction of a number of existing buildings? Various proposals should be conceptualized and developed.

Focus B: Analysis of Architectural Heritage
The community of Onehunga has the slogan “something old, something new” suggesting that it is proud of its architectural and historical diversity. Heritage architecture across the wider suburb of Onehunga should be noted and studied. The main street “Onehunga Mall” should be studied and its architectural elements be continued down into my design work.

Focus C: Council Master Plan Analysis
Council planning and future developments in the Onehunga area should be considered. The Auckland City Council has just released a document “Draft Future Planning Framework 2009” which shows Onehunga as an area to become heavily developed in the near future. How can my design solution help achieve the goals set by the Auckland City Council?

Focus D: Community Analysis
The immediate area in close walking distance to the site needs to be thoroughly researched to locate existing community / retail / hospitality buildings within the site. This will justify my reasoning and proposal for new buildings within my site. Researching the location of community buildings such as churches / community halls / libraries establishes how much of an existing community atmosphere Onehunga already has.
Focus E: Urban Planning
This part of the process looks at the placement of buildings within my site. The placement of new buildings and the integration of existing buildings can actively form public space such as an urban square. The relationship of the main street to the site, and axial relationships must be planned for at this time. Movement of people to and from the site is a vital aspect of the urban proposal.

Focus F: Detailed Design
1. Transport Centre
   - To be located on council proposed site.
   - To have an integrated connection of bus and rail system.
   - Have a strong connection with the proposed public space.
   - Have retail shops / offices integrated into the design.
   - Provide adequate shelter for bus and train terminals.
   - Be designed in accordance to New Zealand safety and design specifications.

2. Public Square
   - Be integrated with the design and function of the transport centre.
   - Have retail / hospitality businesses facing onto it.
   - Have a connection and relationship with the proposed RSA.
   - Have a relationship with Onehunga Mall.
   - Be placed in an inviting and friendly position for safe night time use.

3. Restaurant / Bar
   - The restaurant must be easily accessible from public square
   - Restaurant must be capable of seating 200 people in the dining area.
   - A small bar of should be accounted for and planned as a subsidiary space.
   - Seating should flow out onto the public square to help create a vibrant public space.
   - The restaurant must also incorporate a kitchen area, food store, beverage store, dishwashing area, small offices for managers.

4. Apartment Building
   - A mixed use apartment building that faces directly onto public square.
   - Retail and community shops at ground level.
   - Mixture of single, two and three bedroom apartments.
   - Aiming for 12 to 15 apartments per floor over two levels.
5. **RSA**
- Provide a new location for the removed RSA from existing site.
- Develop a new building which integrates with the public square for vibrancy and memorial.

**Building Function and Area Requirement Specifications**

**Public Space: Activities / Objectives / Aims**

1. To be used as a small market place one or two days per week. With small food and gift stalls, live music and restaurant and cafés overlooking it.

2. RSA Anzac and other memorials taking place in the square. Flagstaff alongside the memorial feature. Square will have a significant impact in signifying the importance of these memorials.

3. Christmas parades and other community gatherings can take place at the square, the idea of the square to become a landmark will make is easy for people to congregate and know where to go.

4. Hotel guests will utilize the square for dining and for its connection with the different transport options available.

5. The transport centre flows out onto the square. Bypassing people will make the square vibrant and a safer place to be.

6. Performance pavilion will provide enclosure to the space architecturally and also house live performances by musicians etc.

7. People will be drawn down the main street because of a visual connection with the space. The performance pavilion will also help draw people to the space from the main street.

8. Restaurants and cafes that face and flow directly out onto the public space. People will enjoy dining in the space throughout the day and night.

9. Business people, shoppers and commuting pedestrians will enjoy stopping in the space for a short while before progressing on to their daily tasks.

10. The space is a good way for people to congregate, could be used as a meeting point etc.

---

25 Refer to appendix: 7.1 Full Project Brief
4 Project Development

Focus A: Site and Traffic and Public Transport Analysis

General
The Auckland Regional Growth Strategy and Regional Policy Statement aim to encourage intensified mixed-use development in town centres and integrate with high quality passenger transport. Onehunga’s potential as a mixed-use town centre has led the Auckland Regional Council and Auckland City Council to identify it as a major town centre within the region for housing and employment intensification. This overview of Onehunga shares the same values as many New Urbanist developments. The idea of creating a densified and mixed-use town centre area key aspects of New Urbanism. The development of high quality public transport strategies are important features of New Urbanism and Transit Orientated Design.
Onehunga’s Industrial, Economic and Cultural Diversity

- Onehunga is a very mixed and diverse suburb.
- Onehunga forms apart of Auckland’s largest industrial area, housing many factories, warehouses, logistics and trades businesses.
- Onehunga also has a large residential population.
- Onehunga has most of the amenities that other well developed communities have in the Auckland area such as schools, churches, library etc.
- Residents of Onehunga are of very diverse ethnicities and cultural backgrounds.
- Residents are also from a wide variety of economic backgrounds.
- These statistics create very interesting problems with regard to housing, zoning and community development strategies.

Site

The Site is located between 109 and 111 Onehunga Mall. The site extends to 8066 square metres. The Site is bounded by Princes Street to the north, Onehunga Mall to the west, Neilson Street to the south and the Onehunga Branch Line (OBL) to the east.
**Site Images**

**‘109 –111 Onehunga mall Council owned Site’**

Figure 4.3) Site from Onehunga Mall

Figure 4.4) Site from the Onehunga Branch Line

Figure 4.5) Site from the Onehunga Branch Line

Figure 4.6) Site from Prices Street and Onehunga Mall intersection

**‘Notable Buildings with Relationship to Site’**

Figure 4.7) Former Post Office located at the Princes street and Onehunga Mall intersection

Figure 4.8) Carnegie Free Library located on Princes Street
‘Onehunga Branch Line’

Figure 4.9) Onehunga Branch Line and problematic town houses

Figure 4.10) Onehunga Branch Line and problematic town houses

Figure 4.11) Onehunga Branch Line and Site on right hand side

Figure 4.12) Onehunga Branch Line with Neilson Street Bridge and Site on right

‘Neilson Street Bridge’

Figure 4.13) Onehunga Branch Line and Neilson Street Bridge

Figure 4.14) Under Neilson Street Bridge
‘Intersection of Princes Street and Onehunga Mall’

Figure 4.15) Looking down Princes Street and in view of the Former Post Office

Figure 4.16) Looking down Princes Street with Site on right and Onehunga Mall façade.

Figure 4.17) Looking down Onehunga Mall with Site on left and RSA on right.

Figure 4.18) Looking down Princes Street in view of Carnegie Library and RSA

‘Onehunga Bay Reserve’

Figure 4.19) Onehunga Bay Reserve

Figure 4.20) Onehunga Bay Reserve
‘Onehunga Mall’

Figure 4.21) Onehunga Mall with Former Post Office in distance

Figure 4.22) Onehunga Mall

Figure 4.23) Onehunga Mall

Figure 4.24) Onehunga Mall

‘Possible Site for Car parking (park and ride) Building’

Figure 4.25) Site on lower Municipal Road

Figure 4.26) Site on lower Municipal Road
‘Old Warehouses / Trade Buildings on corner of Onehunga Mall / Neilson St. - Possible Roading Intervention’

Figure 4.27) Site on Waller Street

Figure 4.28) Site on Waller Street

Figure 4.29) Mechanic Shop on Neilson Street and Onehunga Mall

Figure 4.30) Old Service Station on Neilson Street

Figure 4.31) Fabrication warehouse on Onehunga Mall

Figure 4.32) Carpet warehouse on Onehunga Mall
The site topography is primarily flat. The land is currently leased by ONTRACK to store materials used in the construction of the Onehunga Branch Line. The site is owned by the Auckland Regional Council and plans are under way to facilitate urban development in conjunction with a rail station for Onehunga. The Council has an underlying goal to produce a high quality development that achieves a range of environmental, economic and social objectives.

The Transport Centre building will be located on the southern portion of the site. This is due to the existing curvature of the track not allowing a platform to be placed directly on this curve. Rather, the platform should run south of the site under the Neilson Street Bridge on the straight piece of the track. Placing the transport centre on the south side of the site also allows for the development of a high quality urban development and an attractive gateway/point of arrival to Onehunga for rail passengers.

**Existing Projects in Close Proximity to the Site**

‘The Onehunga Bay Reclamation’

---

Figure 4.33) Onehunga Bay Reclamation Project Map, illustrating proposed changes and development works in the area.
This project is aimed at reintroducing vibrancy to the currently run down and unused Bay area. The area was originally developed in the 1970’s into various parks and planted areas when the southwestern motorway was constructed, effectively severing Onehunga off from the Manukau Harbour. The area is aimed at providing a public space for sporting, outdoor recreation and performances/activities. In March 2009 the NZTA (New Zealand Traffic Authority) budgeted $18 million and the ACC (Auckland City Council) $10 million to the restoration of Onehunga Bay. The works will be done in conjunction with the development of State Highway 20. The proposed works include:

- The development of a new State Highway 20 pedestrian overpass
- A new footpath around the outside of the Onehunga Lagoon as part of the motorway enhancement plans agreed with Auckland City Council.
- Drainage and landscaping plans for the causeway area that will considerably increase the quality of stormwater entering the Manukau Harbour
- Increase the number and quality of trees between the motorway and the Onehunga Bay Reserve.

The site at 109-111 Onehunga Mall needs to establish a strong connection with the Onehunga Bay Reserve. Currently there is an entry point to the reserve at the end of Princes St which runs along the northern boundary of my site. I am proposing to provide a pedestrian connection and some kind of visual communication between the reserve and the entry point of my site.

‘The Transpower Lines Project’

This project is of significance to Onehunga as the lines need to be planned in an aesthetically friendly manner. The lines should work with the existing community and landscape. There are opportunities for the lines to become a part of the development project for Onehunga Bay Reserve. There are two distinct options for the lines. The first being a continuation with the overhead lines that are in place. Aesthetic decisions can be made that could help integrate the lines with the councils development plans in reducing the effect the lines have on the surrounding landscape. The second option involves the placement of underground lines which is feasible in working with the existing State Highway 20 developments and the Onehunga Bay Restoration.
This project has been the subject of significant debate and opposing opinions. It does not directly affect my site directly but it does however have a substantial effect on the surrounding community. I agree with the advocates pressuring for the placement of the lines underground. Des Hughes, a former senior government electricity official, stated: “Underground lines would prove their worth in the long run by being easier to maintain and less vulnerable to economic-crippling supply disruption.”

I believe the lines will have a detrimental effect on the Onehunga Bay reserve and also the foreshore at Onehunga. This will have an impact on the general Onehunga community that currently is in the process of renewal and densification.

Figure 4.34) The Transpower Lines Project in relation to the Onehunga Bay Reserve

Dearnaley, Mathew. *Pressure is on to bury power lines under roads*, New Zealand Herald. August 28th 2007
Traffic

A number of important infrastructure projects are planned for Onehunga to help improve its connectivity with the wider Auckland area and quality as a centre. These projects include the new rail line, the State Highway 20 extension and the restoration and re-connection with the foreshore. The proposed rail station development at the south end of Onehunga Mall will become a key transport hub as Princes Street develops into a mixed-use quarter connecting to the restored foreshore.

‘The Spatial Framework 2050 Transportation Choices Map 2009’

This document is valuable as it describes the transportation initiatives that are planned for Auckland City.27 The document plans for Onehunga to develop into a transport interchange. This interchange would provide a number of services including:

- A rail connection between Onehunga and Auckland’s CBD. This would allow residents of Onehunga to commute to the city and central Auckland suburbs via a frequent rail service.
- The rail extension to the western line at Avondale, connecting Onehunga with the west Auckland suburbs.
- The rail extension to the Auckland City Airport. This would allow Onehunga to become the ideal location for a hotel(s) for transit passengers. The rail service would easily allow passengers to get between the airport and the hotel. The rail connection would extend beyond the airport to the southbound line at Manukau City.
- A bus interchange that would allow rail and bus passengers to switch services from various parts of Auckland.
- A ferry route between Waiuku and Onehunga. This allows people from the Franklin district to commute to Onehunga.
- A “park and ride” system with a large car parking facility for commuters.
- A taxi depot that enabled commuters/tourists to travel to specialist destinations in conjunction with public transport.

27 This “Transport Choices” map indicates how the Auckland City Council perceives Onehunga as becoming a transport hub in the future.
The Spatial Framework 2050 Transportation Choices Map provides valuable information about the Auckland City Council’s future transportation objectives in and around Onehunga. I have identified key architectural and New Urbanism design issues that I must address in developing a scheme that compliments and supports these Council objectives. The issues include:

- Designing adequate parking space for park and ride commuters.
- Planning for the development of a transit hotel that accommodates transit passengers from Auckland City Airport.
- Providing an easy communication between bus and train services.
- Designing a transport centre that connects many of the different styles of public transport.
- Providing adequate circulation and outdoor public space for pedestrian traffic.
- Catering for a taxi stand in close proximity to the transport centre.
- Providing for bicycle parking.
- Providing a link between the ferry terminal and transport centre.
Figure 4.35) Auckland City Council Spatial Framework 2050 Transport Choices Map
‘Gloucester Park Interchange’

The new motorway connections have a vital connection with the Central Onehunga area. The roading changes are proposals and the traffic patterns are being monitored as to determine which strategy to implement. The roading conditions have had a significant impact on my project.

Gloucester Park Interchange plans on providing Onehunga with better connections to State Highway 20. Currently connections to State Highway 20 cause major delays for motorists in and around Onehunga Mall and Neilson Street. The NZTA plans to divert northbound motorists existing at Onehunga on a semi-new off ramp that circles around to Galway Street. This takes the traffic pressure away from “Onehunga Mall”. I agree with this traffic decision as it let’s commuting traffic bypass the town centre without making the community centre a difficult place to get to by motorcar. Neilson Street is used for southbound traffic exiting Sate Highway 20. This traffic flows onto a major arterial roadway. This enables a constant flow of traffic to disperse quickly from the motorway without causing congestion. This map also shows the locations of two pedestrian over bridges. One connecting pedestrians from the Onehunga Wharf and the other connecting Onehunga bay with the foreshore. I am confident that both are positive steps in creating a “walkable” community (a key aspect of New Urbanism).
Public Transport

'Reopen Onehunga Rail Project'

- In 2006 the Onehunga Enrichment Society campaigned hard to reopen the dormant branch railway line between Onehunga and Penrose once again to passenger services.
- Reopening the Onehunga line also serves as a “stepping stone” for a rail connection to the airport, and a possible link to Avondale.
- The line between Onehunga and Penrose is being re-laid at present.

'Auckland Train Network Changes'

The graph on the lower left illustrates rail usage in both Auckland and Wellington. It clearly shows through the number of passenger boarding’s that use of the rail network is increasing. Compared to just over two million boarding’s between 2000 and 2001 the number of boarding’s has increased by 300% to just over six and a half million boarding’s between 2007 and 2008. This information has proven that Auckland’s rail network is becoming a more widely used mode of public transport every anum.

The current Auckland train network consists of three rail services. All three services depart from Britomart station in the Auckland CBD. The western line branches out from Newmarket station and travels west terminating at Helensville. The other two lines are both southbound. Both services terminate at Pukekohe station. One of these services (considered the eastern line) branches and rejoins with the other southern line at Westfield. This existing rail network does not cater for:

- Northern suburbs of Auckland over the harbour bridge such as Albany
- Eastern and southeastern parts of Auckland such as Botany Downs
- Southwestern parts of Auckland such as Onehunga

The Reopen Onehunga Rail project aims to relay the tracks and have the dormant line operational by mid 2010. The line will have two intermediary stops at Mt Smart and Te Papapa before reaching the proposed transport interchange at Onehunga. The Onehunga line will break into the existing southern line at Penrose Station which is also undergoing works for a new platform.
The Reopen Onehunga Rail project is the first stage of the Auckland’s long term plan of extending the rail network to northern, eastern and southwestern parts of the city. By 2030 a full extension of the rail network should be completed. This involves:

- A northern line that extends through the northern suburbs terminating at Orewa
- An eastern line that reaches out to eastern suburbs such as Botany Downs before terminating at Manukau City.
- A southwestern line that connects the city with the Auckland City Airport and southwestern suburbs
- A small central section that caters for the Mt Eden catchment
- A connection from the Auckland City Airport to the western line via Onehunga

I believe that the development of this rail network is a critical task for the NZTA and Auckland Regional Council. By connecting more suburbs with the rail network will provide more opportunities for people to commute via rail. It will also increase the destinations a person using the rail network can venture to. Onehunga is planned to be established as a centre with a transport interchange allowing persons using public transport to change between services to get to their end destination. The “Auckland Rail System” map below illustrates how these services might be established. This map does not show the connection of the southwestern line with the western line between Onehunga and Avondale. This branch would service the suburbs of Hillsborough and Blockhouse Bay.

Figure 4.39) Auckland Region Train Network Diagram
Figure 4.40) Auckland Region Train Network Diagram proposed for 2030. Note: This does not include the Onehunga to Avondale connection between the Western and Southwestern lines.
‘Using Onehunga to Accommodate Transit Passengers from Auckland City Airport’

- Planning for the development of a Transit Hotel to accommodate stop-over airline passengers.
- This is made viable because of the proposed rail extension to Auckland Airport.
- Transit passengers can enjoy staying in a community environment with shops, restaurants and activities rather than the ‘no mans land’ environment that currently exists at the Airport hotels.
- The passengers will add to the vibrancy of the community and will utilize local retail and hospitality business.

Focus B: Analysis of Architectural Heritage

Material Study

‘Brick’

Brick veneer is seen on historical buildings built on Onehunga Mall around 1905. The brick is a locally made product and is often a dark orange/red colour. The image of this traditional façade shows the use of the brick. On modern buildings in Onehunga (particularly the new library) use a brick veneer of similar texture and colour to the traditional use of the material. This is aimed at establishing a relationship between the old and new architecture seen in Onehunga. Brick can be sourced locally.

Auckland Sales Office & Display Centre
P.O. Box 12 951
Penrose, Auckland
Free Phone: 0800 287 8725
Phone: 09 579 0166
Fax: 09 579 0165
Email: sales@australbricks.co.nz
‘Timber’
Timber weatherboards are traditionally seen on historical villas scattered around Onehunga. Timber is not so commonly seen in the street façade of Onehunga Mall. Modern residential projects in the Onehunga area still have ties with the traditional timber weatherboarding. However the timber is detailed in a different way with different jointing types and often a stain is used expressing the grain of the timber rather than the traditional white painted weatherboards of the historic Villas. The images on the right illustrate the difference between the traditional and modern use of timber weatherboards.

‘Painted Plaster/Concrete’
The use of painted concrete and plasterwork is seen on many of Onehunga’s notable and historical buildings. The Former Post Office and the Carnegie Free Library both use this style of façade. Today many buildings on Onehunga Mall have continued with the use of painted plaster/concrete. Buildings like the postmodern BNZ bank have continued with elements of traditional proportioning and detailing. This style of façade I want to flow into my design solution. This will play a role in reflecting Onehunga’s historical buildings and the streetscape of Onehunga Mall in my architecture.
‘Glazing’
Traditionally glazing has not been used by buildings as a decorative element. Glazing is obviously seen in Onehunga’s historical buildings, but is always housed in detailed window frames. This makes it a secondary element to the traditional façade. Onehunga’s modern buildings such as the new Public Library and the Onehunga Fire station use glazing as a facading material. Here the glazing is applied in large spans and is the dominant material of the façade. The buildings of my design solution will have traditional proportioning so glazing will be secondary to the façade in detail. The retail aspect of my design will require a certain amount of large span glazing to allow shop owners to advertise their goods and services and provide an active frontage.

‘Steel’
Steel and other metals are used as a structural and aesthetic material for many of Onehunga’s buildings. The new Public Library on Church Street illustrates how the material is used for large structural members and also as a detailed solar screen in front of a glass façade. The material is seen on the traditional buildings of the area with window frames and decorative detailing. The material has been chosen for the structural aspect of my design solution because of its strength, and light weight. These characteristics will make it easy to apply as the structural system of my design.
Onehunga Mall Façade Study

Onehunga Mall is the main shopping street of Onehunga. The street runs through my site at 109-111 Onehunga Mall. The street was originally named Queen Street and was changed to “Onehunga Mall” when the street was pedestrianised. The Onehunga Mall pedestrian shopping precinct was opened on 2 April 1973. It proved to be unsuccessful and was changed back to having traffic flow.

The street is approximately twelve metres wide and consists of single and two storey buildings. The buildings along Onehunga Mall all provide a continuous pedestrian weather overhang and overlook the street. The continuous façade provides a nice level of visual enclosure and I am proposing to provide the same level of enclosure/style of changing façade into my design solution. Covered walkways and overhangs must be continued through into my design solution.

The main axis of Onehunga Mall should be continued through into the public space adjacent to the Transport Centre. This provides a visual and axial connection with Onehunga Mall and my proposed development. Pedestrianising a small section of Onehunga Mall is an idea I plan on reintroducing. This is because I believe the street did not have the same level of vibrancy it will with the introduction of a Transport Centre.

Aesthetic elements of the street should flow down into my development at 109-111 Onehunga Mall. The building heights on Onehunga Mall should be reflected in my New Urbanis development. The materials such as brick veneer and painted plaster should be reflected by my scheme. The facades of the development should reflect the composition of historical facades on Onehunga Mall.

---

28 Refer to: Figure 4.52) Onehunga Proposed Area Outcomes 2030 Map. P.54.
Figure 4.51) Onehunga Mall Façade Study
Focus C: Council Master Plan Analysis

The community masterplan analysis was the first task that started to test how New Urbanism based design techniques could be applied to the suburb of Onehunga. From the masterplan it was established that the junction of Princes and Onehunga Mall would become the new central point of the community. This central point relates to how the transport centre site and Onehunga Mall intersect. This intersection will have the greatest amount of pedestrian traffic because of this relationship.

Green rings radiate from the red marker at the central point of the community. Each ring represents a five minute walking interval. I have established that the area inside the fifteen minute marker as being the prime area for mixed use development and residential densification.

This masterplan also shows the sites relationship with Onehunga Bay Reserve and Onehunga Mall. Onehunga Bay Reserve is around a 10 minute walk from the transport centre. An axis is clearly visible down Princess Street that should be reflected in my design solution. An axis is also clearly visible down Onehunga Mall and should be allowed to continue past the proposed site at 109-111 Onehunga Mall.

The masterplan also clearly illustrates how Onehunga has both a substantial residential and industrial area surrounding it. The blue and red filled blocks show the relationship of the town centre with the surrounding industrial and residential blocks. I have identified Church Street, Selwyn Street and Neilson Street as the main arterial roads in close proximity to the site. Future Rail and bus routes are also present on this map.
Figure 4.52) Onehunga Proposed Area Outcomes 2030 Map
Focus D: Community Analysis

General

The community analysis has looked at the chosen site of 109-111 Onehunga Mall and its relationship with the wider Onehunga area. This analysis has identified important community and historical buildings such as schools, churches and libraries inside the wider Onehunga community. Pedestrian shopping areas have been located. For example: Onehunga Mall. A relationship between Onehunga Bay Reserve and the 109-111 Onehunga Mall Site has been studied. Roading interventions are also an important aspect of my design solution and possible interventions have been noted that may help benefit the current traffic condition of Onehunga.

New Urbanism Based Developments of the Wider Community

Small changes to the existing community help to connect the site at 109-111 Onehunga Mall with the existing framework of Onehunga. These changes also establish how New Urbanism may be applied in Onehunga outside the architectural solution of my research project. The New Urbanist changes outlined below deal with roading, housing, urban design and architectural issues:

1. The detailed design of the transport centre and surrounding public space on the proposed site must provide a visual connection to the wider community. This is done with the use of axes to the entry point of each space from pedestrian walkways or main roads. Visual landmarks are introduced to give the site a visual motif. Building orientation should be proposed in such a way to reflect the wider community. Building size and height relationships with the existing community are important.

2. Providing a visual connection from the site to Onehunga Bay Reserve is an important objective. This can easily be done by using Princes Street as an axis marker. There should be a formal entry at Onehunga Bay across from Princes Street to signify this axis and secondly signifying it in my design solution.
3. The development within the site of 109-111 Onehunga Mall should provide a strong relationship with the transport centre and the proposed public space. New buildings proposed for the site should provide facades that will efficiently enclose the public space and also be in keeping with Onehunga’s existing architecture.

4. The densification of the urban area of Onehunga can be achieved with the development of apartment buildings or residential fit-outs of existing buildings. Both of these options can be done on Onehunga Mall and surrounding blocks in close proximity to transport centre.

5. Onehunga Mall has a general building height of two levels (approx seven or eight metres). Certain buildings along Onehunga Mall such as the Police Station are recessed from the existing street façade. Other buildings along Onehunga Mall are single storey. The addition and development of buildings of Onehunga Mall should be planned to strengthen the streets aesthetic quality and also provide a relationship with the transport centre development. The allocation of functions should also be changed to some of the buildings along Onehunga Mall.

6. Development of pedestrian walkways in and around the transport centre. The connection of the old and new Public Libraries in particular is a pedestrian walkway behind the main street that at present is “semi existing”

---

**Roading Changes in the Wider Community**

1. The main axis of Onehunga Mall must continue naturally past the site at 109-111. Any roading modifications should reflect this. The axis of Onehunga Mall should interact with the public space and buildings of the transport centre development.

2. Onehunga Mall is to become paved and speed limit restricted between Neilson Street and Arthur Street. This proposal will allow the road through Onehunga Mall to become pedestrian friendly and less of a thoroughfare. This roading surface should be continued into the public space of my research project.
3. Alternative routes for oncoming and exiting State Highway 20 traffic need to be planned for. These changes reflect the current traffic patterns and congestion problems.
   • At present the intersection of Onehunga Mall and Neilson St becomes congested. This is because State Highway 20 traffic exits onto Onehunga Mall. I agree with the NZTA’s plans to develop a new Galway Street off-ramp.
   • A southbound onramp to State Highway 20 at Selwyn Street would allow traffic to flow onto the motorway faster removing some of the congestion seen on Neilson Street.

**Onehunga Business Association Objectives**

The Onehunga Business Association objectives overlap with some of the New Urbanist developments I have referred to above. They have outlined:

1. The development of a rail/bus interchange including car parking.
2. Providing the new State Highway links at Selwyn Street and Galway Street as referred to above.
3. Developing a stronger east/west link between State Highway 1 and State Highway 20.
4. A ferry terminal development at Onehunga Wharf.
5. The reconditioning of the old Mangere Bridge.
6. The provision of a public walkway from Onehunga Mall to the Onehunga Harbour.

These ideas all relate to New Urbanism theory. The objectives all refer to aspects of walkability, transport orientated development and connectivity.
Figure 4.55) Onehunga Community and Roading Interventions Map
Focus E: Urban Planning

Initial

The urban planning and design stage of my research project involved shaping the area surrounding the site at 109-111 Onehunga Mall. This has helped with the integration of the transport centre with the surrounding community. The buildings in close proximity to Onehunga Mall have all individually been identified and analyzed as being successful or insufficient and therefore suitable places for future development. I have noted where future development sites are in relation to the project site. I have based my urban scheme on partially developing some of these “underused” sites. The allocation of function of individual buildings is a strong part of the urban proposal. I have looked at the functions of existing buildings in the community and plan on introducing buildings with specific purposes that are currently not seen in the area.

The map on the following page illustrates how building functions and shapes might start to be developed in and around the chosen site of 109-111 Onehunga Mall.
Figure 4.56) Onehunga Design Objectives Map
Space Planning

The next phase of the urban planning/design scheme was the use of positive and negative space planning. This has been done to decide how the major public space of the scheme and surrounding buildings relate to the existing community. Three conceptual schemes are shown below that illustrate the main axis of Onehunga Mall, the location of the public space and surrounding building functions.

These positive/negative space plans are an idea that architect/urban planner Camillo Sitté used in describing public spaces in his book *City Planning According to Artistic Principles*. They help a person understand the internal and external spaces of an area.

---

29 Sitte, Camillo. *City Planning According to Artistic Principles*, United Kingdom: Random House, 1964
Roading Changes

The “Urban Proposal Two” was chosen to develop further. It was made obvious that a certain part of Onehunga Mall would be “traffic free” rather a pedestrian space that overlapped onto the existing roadway. This pushed for the development of alternative roading routes to take traffic from Onehunga Mall before Neilson Street to Princes Street. The schemes on the following page outline how a new section of road is put between Princes Street and Neilson Street that would occupy the sites of current warehouses and poor quality industrial buildings. The schemes also illustrate how the public spaces may be formed inside the larger site layout.

The three developments to the left illustrate how a public space is formed on Onehunga Mall. The scheme on the left forms a public space without a roading intervention. This public space pedestrianises Onehunga Mall between Neilson Street and Princes Street. The second and third developments form a new road bypassing part of the existing Onehunga Mall. Note that the Onehunga Mall is used to form a large amount of public space in both of these schemes. The third scheme also denotes a connection to Onehunga Bay Reserve down Princess Street. These three schemes also show the rail platform being formed at the end of the tracks curve. This is because the carriages cannot physically open onto a platform situated on the curve.
The next three developments show a progression of the new roadway passing through Neilson Street and re intersecting Onehunga Mall in a nice flowing curve. The triangular shaped mass is proposed as a building that would become iconic to Onehunga as it is situated on such an exposed site. Onehunga Mall is again opened up with a visual axis through the pedestrian zone. The progression of development led to the final scheme on the right. It has been chosen due to how it fits in with the existing context of Onehunga. The project can be spilt into stages. This suggests that the entire proposal or parts of the proposal can be constructed with little need for change in the surrounding blocks.

**Allocation Of Functions**

Allocations of functions for the new/existing buildings around the area of development have been developed during the same timeframe that the urban plan was developed. The allocation of functions for building masses was done in such a way it met the space area requirements of my design brief. Below is a final urban site plan with the allocation of functions for individual spaces. The level of detail has increased in the final design stage of the project. The allocation of functions relate to New Urbanism objectives of creating a densified and mixed-use community. Apartments, retail, hospitality, and community shops help to achieve this objective.

---

30 Refer to Appendix: 7.1 Full Project Brief to review a detail description of the urban and architectural interventions this project is suggesting.
Project Stages

This final site plan can easily be divided into different stages for detailed design and construction. This was deliberately planned to allow full development to be implemented progressively and thus integrate with the urban community. The final design solution can be applied in parts yet still form relationships with the existing buildings surrounding the site. The design solution has been split into the following stages:

Stage One – Includes the transport centre and rail platform design.
Stage Two – Includes the transit hotel and retail/apartment buildings on Onehunga Mall.
Stage Three – Includes the Princes Street retail/apartment building, public square, restaurant.
Stage Four – Onehunga Mall pedestrian only area and roading development.
Stage Five – New buildings located around Onehunga Mall and new road.
Focus F: Detailed Design

Introduction

The detailed design has focused on developing “some” of the architectural spaces and buildings I have proposed in my urban solution. The urban proposal illustrates the functions for both new and existing buildings on the site. The main architectural entities to be designed in detail are in the proposed development Stages “One”, “Two” and “Three”. The other architectural entities illustrated in the urban scheme would be developed in the later development Stages of four, five and beyond. The buildings and spaces I have designed in detail include the Transport Centre & rail platform, Onehunga Mall retail/apartment building, Princes Street retail/apartment building and the main public square.

Influential Architectural Styles

New Urbanism is a design movement that is formulated on applying traditional design techniques. Onehunga is an Auckland suburb with a significant amount of architectural heritage. The buildings that are proposed reflect elements, proportions and materials seen on some of the traditional buildings and façades of Onehunga's existing buildings. Reflecting these elements provides an aesthetic relationship between the existing and the proposed. Onehunga's slogan “something old, something new” refers to Onehunga’s relationship with historical and very recent architecture.

Robert A. M Stern has been an influential architect because of his traditional style of architecture. Stern uses traditional proportions in his design work but maintains subtle ornamentation and continues features of existing buildings in his facades.

I have studied Stern’s recent work in the United States. The Nashville Public Library, Nashville, Tennessee, 2001, is an example of Stern’s application of traditional proportions in a new building. Seen below is the long front façade of the library, which is similar to how I propose to develop my transport centre entrance and retail/apartment façade along Onehunga Mall.

31 Robert A. M Stern. 23/05/1939 – today. His work is generally classified as postmodern. Stern focusses on a particular emphasis on context and the continuity of traditions. He has been involved in masterplanning, for example: Celebration, Florida USA.
The main entry point of Stern’s Nashville Library is bold, and clearly shows a pedestrian how to enter/exit the building. This is vital for my transport centre because of the number of people that will use it. The reasons why this entry point is successful is how it projects from the rest of the façade. The roof is detailed taller, openings are grand gestures and it is symmetrically shaped. Internally a glazed atrium covers the central circulation space/staircase helping to provide natural light and also give a grand gesture inside the building.

‘Stage One – Transport Centre and rail platform’

The “Reopen Onehunga Rail” project has aimed for a mid 2010 completion. This project strengthens the connection of Onehunga with the Auckland CBD and the wider Auckland area. It is also a stepping stone in the plan to develop a rail link to Auckland City Airport and, in the future to Avondale. The transport centre building and station platform have been planned so construction would take place at stage one of the project. The transport centre occupies part of the vacant site at 109-111 Onehunga Mall.

The Transport Centre has been designed so that it can fully function independently of the proposed surrounding developments and roading changes of development Stage four. A main axis exists through the building from the main entrance to the escalator and circulation space that takes passengers to platform level. The transport centre will provide ticketing offices, an information centre, convenience store, phone booths, toilets and rail network offices on the level above. A gallery is also planned for the building to provide a contrasting function and attract the passersby that use the transport centre daily.

The proposed building has two levels. A glazed atrium exists in the centre of the main space. A walkway on the second level overlooks this atrium space. The atrium space in an important feature of the building as it ensures the ongoing provision of good day-lighting to the building even after neighboring properties have been developed. A five meter ceiling height is used in this building to create a spacious feeling. The small development plans and sections illustrate how the building functions.
The transit hotel and retail/apartment buildings on Onehunga Mall also occupy the vacant site of 109-111 Onehunga Mall. These buildings make up the second stage of the project as they can be totally constructed and function adequately with access from Onehunga Mall whilst other works take place. The transit hotel has a direct access to the transport centre. It also serves as a location marker on Neilson Street as it is the tallest building of the site.

The detailed design work of stage two includes the retail and apartment building along Onehunga Mall. This building reflects but becomes secondary to the main entrance of the transport centre. This building opens onto Onehunga Mall and also onto a pedestrian lane which runs between the transport centre and public square. The building is designed using “mixed-use” development principles by having retail at ground level and apartments/office space on the other two. The ground level incorporates a covered walkway which connects with the transport centre.

The façade is designed using traditional proportions and materials seen in some of the historical buildings on Onehunga Mall. The main materials of the building are a red brick that is commonly seen on Onehunga Mall and a white stone for contrasting or detailed areas of the building. Glazing is housed in traditional style framing.

The apartments in this building are all west facing and have one bedroom. They are designed around a standardized plan that is replicated and mirrored. The apartments share an entrance hall with offices that are located on the eastern side of the building. Each apartment consists of a formal entry, kitchen, dining room, lounge, bedroom, toilet, bathroom and laundry. The apartments have been designed using traditional design principles. The apartments incorporate axes and symmetrically shaped and proportioned rooms.
The Princes Street building occupies the northern edge of the 109-111 Onehunga Mall site. The building is a “mixed-use” development with retail/community shops at ground level and apartments/offices above. The building is three storeys, with retail and community shops at ground level and apartments/offices above.

The apartments in this building are all north facing. They are kept private by occupying the upper levels of the building. A mixture of one and two bedroom apartments have been designed. The apartments are again based around a standardized plan that is replicated. The apartments along the northern façade of the building are all three bedroom. On the western façade slightly smaller two bedroom apartments have been placed. The apartments internally are made up of two levels, lower for living and upper for private space and bedrooms.

The rear of the building overlooks the main public space of the development. Offices facing south overlook this space. A covered walkway provides the circulation to the office space around the interconnected buildings.

The building façade is based on traditional urban design principles. I have chosen brick as it is widely used on the facades seen on Onehunga Mall. This is done to provide a connection between the existing and proposed structures. The height of the building is one level taller than the existing façade of Onehunga Mall. Being within one storey difference it still maintains a height relationship with the existing façade.
5 Critical appraisal

5.1 The Design Solution and its Theoretical Framework

The final design solution is the resolution of the problems and tasks outlined in the design brief. The solution reflects on both the New Urbanism based design principles on which I have founded my original research problem, and the Council objectives that are planned for the area. I have broken the solution down into “Stages” for anticipated construction over a lengthy time frame.

The solution includes a detailed analysis and development propositions for the suburb with regard to transportation issues, residential/commercial and industrial layout, public buildings and amenities such as schools/parks and community buildings. Onehunga’s current development intentions have enabled the project to engage with the Auckland City Council, New Zealand Traffic Authority and Onehunga Business Association.

The solution is based around the key objectives and principles of New Urbanism. This design movement has influenced me to make the urban design/planning and architectural decisions apparent in the project. The objectives behind New Urbanism are in agreement with the proposed Council plans to develop the area:

‘Walkability’
The design solution promotes walkability by proposing densified housing developments, community based amenities such as a supermarket, chemist etcetera all in close proximity. The development of a Transport Centre will promote the use of public transport systems over the automobile. The residential densification of the central area of Onehunga enables walking access to a range of community and daily living needs.

‘Mixed-Use Developments’
The buildings proposed on the site at 109-111 Onehunga Mall have multi purpose functions. The development of apartment buildings with retail, offices and community based shops was an important aspect of introducing mixed-use design principles. The densification of the town centre of Onehunga will make the area a very mixed use development as many amenities such as a chemist, butcher etcetera exist on Onehunga Mall.

‘Connectivity’
The development of the transport centre will provide a stronger incentive for residents to utilize public transport systems. The densification of the central area of Onehunga will bring
residents closer to the transport centre. The stronger entry and exit points proposed for State Highway 20 allow vehicle traffic a faster and more efficient way of traveling into and getting through the area of Onehunga.

‘Aesthetic Based Urban Design and Architecture’
The architectural and urban developments reflect the existing community of Onehunga. Developments incorporate visual features and motifs to add aesthetic value to the area of Onehunga. Keeping the development at a pedestrian scale (low-rise buildings) enables buildings to provide enclosure to public space but not overpower the streetscape. The introduction of public space creates an aesthetically attractive environment for pedestrians.

‘Traditional Neighborhood Structure’
The design solution has been produced using traditional urban planning and architectural design techniques. Strong axes exist in the solution—for example, along Onehunga Mall, and radiating from the transport centre down a pedestrian walkway. The public spaces have been formed using traditional proportions. The architectural façades reflect and incorporate traditional elements seen on existing buildings along Onehunga Mall. The proposed buildings have been designed using principles of traditional architectural planning.

‘Transect Planning’
The design solution identifies key design criteria listed for the area Onehunga is classed in by the transect map in which Onehunga is classified by the transect map. Onehunga lies in T4-Central urban zone and T5-Urban centre zone on the transect diagram provided earlier in the document. Onehunga is an urban centre in the wider community of Auckland. Plans for densified housing and mixed use development have been proposed. Connections via public transport systems with the urban core (the Auckland CBD) are under construction.

‘Increased Densities’
Both the Auckland City Council and the design solution plan for increasing densities in the community centre of Onehunga. The increased residential densities benefit the urban centre in many ways. The increased number of people in the urban area self-police the environment. The residents will utilize and help support community shops and recreational facilities. The residents are closer to public transport systems and the proposed transport centre.
‘Smart Transportation’
The design proposal has been planned in conjunction with the Council’s proposed transportation initiatives. The reintroduction of the Onehunga Branch Line and proposal for a transport interchange allows for a number of successful public transportation systems to service the area of Onehunga. The design solution integrates rail, bus and taxi services. A park and ride facility is also in place. The rail network also has a future objective of connecting to the Auckland City Airport and Avondale. This enables future possibilities for Onehunga to become a transport hub and serve as a stopover location for transit passengers from the airport. The proposed ferry link with Waiuku is another transportation initiative that helps connect Onehunga with other parts of the wider city.

‘Sustainability’
The design solution takes into consideration many of the future development plans for the area. The solution is proposed as a long term plan, which can be implemented in Stages. Proposed buildings have been designed using materials with a long life span. Materials have been sourced locally and contractors are local based companies. The development reflects the existing community and has a relationship with existing architecture.

5.2 Conclusion
I believe the application of New Urbanism based urban design and architecture will prove to be beneficial to the suburb of Onehunga. The project has investigated the application of New Urbanism design techniques to Onehunga and the Council based projects proposed for the area. New Urbanism ideals agree with many of the Auckland City Council’s ideas about the planning and development of the suburb. The rail connection to Onehunga will strengthen the suburb’s connection with the Auckland CBD and the wider city. The progression of the rail network to the Auckland City Airport and Avondale establish the future importance of Onehunga’s proposed transport interchange and also plans for developments such as transit hotels and retail. The proposed densification and mixed-use development of the Onehunga community are positive development strategies for the centre that agree with both New Urbanism theory and proposed Council objectives.

New Urbanism has been the catalyst for the successful development of many communities elsewhere. The introduction of New Urbanism in Onehunga may prove to be the starting point for the movement to spread throughout the Auckland region and to other towns and cities in New Zealand. It has integrated with existing community and Council-based
developments in Onehunga to encourage positive development
decisions for this “up-and-coming” area. The implementation of
New Urbanism in Onehunga will bring the town centre more
urban life and vitality, become a safer place to live and help
local businesses become more successful.
6 The Design Solution

(Please View Hard Copy or DVD)