

Workshop Summaries

APPENDIX



Warrensville/Van Aken Transit-Oriented Development Plan

Final Report

April 28, 2008



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1.0 | First Workshop Summary

1.1 | Introduction

The first workshop for the Warrensville/Van Aken Transit-Oriented Development (TOD) Study was held between the 5th and 7th of December 2007. The primary purpose of this workshop was to gain a common understanding of the principles for the TOD study, the key opportunities and challenges for change and some initial framework plans that demonstrate options for change.

The workshop was organized with a series of sequential working sessions with the Core Project Team, Technical Advisory Committee, Community Advisory Committee, specific stakeholders groups, residents' associations, business representatives and other interested parties.

It included a well-attended public session in the evening of the 5th of December, and a wrap up public presentation to Council on the evening of the 6th of December.

Each of the working sessions, including the public session, began with a power point presentation that summarized some of the key findings from the initial orientation stage of the study.

This chapter summarizes the results of the public session held in the evening of December 5. Following the presentation, workshop participants were asked

to comment on the design principles (add new principles, revise the suggested principles) included in Section 1.3, describe the best characteristics of the study area (Section 1.4), to identify their preferred photograph that illustrated various streets, transit, urban open spaces, places to put cars, sidewalks, buildings (Section 1.5) and to list or diagram the key opportunities for the area (Section 1.6).

The second day of the workshop was intended for the team to prepare some very preliminary frameworks for discussion of options for change, based on the input received from the first day.





1.2 | Site

The site roughly encompasses the transit, commercial and office uses at the confluence of Warrensville Center Rd, Van Aken Blvd, Chagrin Blvd and Northfield Rd, and includes the retail “islands” delineated by Farnsleigh Rd’s curving path from Chagrin Blvd to Warrensville Rd as well as adjacent lands that may be a viable part of redevelopment.

The site is roughly contained within the red circle (opposite), and excludes, for the most part, existing single-detached houses.

The area is currently characterized by retail strip plazas, a row of street-related retail along the south side of Chagrin Blvd, the RTA Rapid Blue Line terminus station in

the boulevard of Van Aken Blvd, and various other uses, including institutional, office, and residential.



Complimentary Centers: Shaker Square, Shaker Town Center and Warrensville/Van Aken

The Warrensville/Van Aken area acts as a terminus to Van Aken Blvd, while also functioning as part of a trio of complimentary centers spanning the length of Van Aken: Shaker Square at the beginning, Shaker Town Center at roughly the mid-point, and Warrensville/Van Aken at the end.





Looking northwest along Van Aken Blvd



Looking north on Warrensville Center Rd



Looking southwest across Van Aken Blvd towards the Blue Line Station



Looking northwest along Farnsleigh Rd from near Chagrin Blvd



Looking north between Van Aken Blvd and Warrensville Center Rd



Looking northwest along Farnsleigh Rd from near Chagrin Blvd



1.3 | Principles for the Transit-Oriented Development

The following principles (derived from this Study's Terms of Reference, the Strategic Investment Plan (2000) and given identified in meetings in October 2007) are suggested as the starting point for the Study. At each one of the working sessions, participants were invited to add new principles or to revise the principles tabled for discussion:

1. authentic Town district.
2. a significant public realm, including beautiful tree-lined streets with wide sidewalks and civic space.
3. a vibrant, diverse and mixed use node, that will include higher density residential uses.
4. high quality development "made-in-Shaker Heights" solution.
5. accommodate a high volume of traffic, which may travel at slow speeds.
6. road pattern that is connected to adjacent areas.
7. balance all modes of transportation and will include the opportunity to expand transit in the very long term.
8. protect existing retailers, be realistic and flexible to accommodate market factors that may change over time.
9. protect adjacent stable residential neighborhoods.
10. transit station will be integrated in the district providing a hub of activity and an asset for associated development.





1.4 | Best Characteristics of the Area

Participants at the public workshop were asked to brainstorm as a table group to identify the best characteristics of the study area. After brainstorming, they were asked to choose their top 5 attributes of the study area. The facilitators grouped the responses around common themes as follows:

Buildings not too tall

Capitalize on the vertical space: parking, pedestrian friendly

New University Hospital building - 900 jobs

Educational hub branch campus learning center

Thornton Park

Proximity to Thornton Park

Thornton Park should be tied in

Transit

Transit/bus and rail

Good transportation

Transit piece already established but needs to be integrated

Traffic - ease of traffic circles

Rapid station with connection to other key points

Shuttle services around town center

Ample parking

Blue line

Transit already in place

Shopping

Local businesses (independent)

Retail base, cooperative/complimentary retail

Some good retail and services

Shopping destination

More entertainment /community arts

Potential for new shopping

Starbucks and fresh market

Retail/restaurants

Residential potentially supports development (retail)

Proximity of shops to each other, by street

Opportunity for new retail

Neighborhood

Good neighborhood connection

Connection to adjacent communities

Shaker Heights gateway

Quality of adjacent residential streets

Potential to create charm

Pedestrian friendly

Stable neighborhood

Location

Good central location

Prime location underutilized

Proximity of educational opportunities

Huge open space that can be developed

Parking lots/cars

Current ample parking

Support

Citizens and city behind development

Core group of loyal residents ready to support the project

1.5 | Visual Preference Survey Results

Streets



Transit



Urban Open Space



A selection of photos were organized around various components of the urban environment. Participants at the public workshop were invited to choose their favorite image. These images represent the image choices in each category that received the most yellow dots from the public at the workshop.

The public recording their visual preferences





Places to Put Cars

Crocker Park, Westlake, Cleveland



University of Houston



Sidewalk

Santa Barbara



Easton Town Center, Columbus



Shaker Square, Cleveland



Building

Front & Jarvis, Toronto



Shaker Boulevard, Cleveland



1.6 | Opportunities for the Area

Workshop participants were asked to work in their table group and brainstorm a list of opportunities for the study area. They were invited to diagram or map suggested changes. The team compiled all of the suggestions and organized them as follows according to topics:

Character

1. Retain Shaker architectural feel and lots of trees
2. Build quality
3. Center must be uniquely different from surrounding competitive & retail areas (Legacy Village, Cleveland Heights, Pavilion Mall) and must be created to be a different destination draw for others
4. Outside area-must have a European atmosphere

Retail/Business/Housing

5. Lane-based shopping
6. Move Post Office here
7. Hotel destination—8 floors; elegant
8. Galleries; art and other museum type
9. Cultural institutions
10. Entertainment/dining (dining local chains, no national chains)
11. Concerts, open air markets
12. Theater
13. Outdoor dining in city center, no traffic or cars nearby (i.e. not eating in a parking lot)
14. Hotel—connects Downtown and Shaker Heights gets revenue

15. Indoor recreation/entertainment/theatre/bowling
16. Public art
17. Gallery space (community art)
18. Landmark that can identify the “place”
19. Unique stores—community based
20. Neighborhood services
21. Vogue Theatre—re-use as cultural arts center
22. Mixed use-retail, office, residential
23. Concentrate retail areas to make them consumer-friendly
24. Increase revenue for city through jobs, sales, etc., and condos
25. Opportunity to make the area eco-friendly with heavy use of mass transit
26. Concentrate arts and entertainment in area
27. Encourage, build-on or add to mixed-use office retail medical, sport and recreation, housing, etc.
28. Utilize vertical space
29. Keep convenience & service retail
30. Add restaurants: independents, not chains
31. More interesting shopping
32. Add movie theatre
33. Add exercise facility
34. Commercial development between Northfield and Warrensville
35. Offer new residential units of all sizes (2-4 bedrooms)
36. Build outdoor cafes and plaza to encourage interaction and add focus

37. Mixed residential housing with small retail below, attractive area for high quality artists; create area that would be a draw for county recognized artists as well as nationally known artists

Transportation

38. Pedestrian-only lanes with shops (European-inspired)
39. Connection to Thornton Park
40. Shuttle
41. Heated sidewalks (reduce use of salts)
42. Elevated walkways over busy streets
43. Better between main streets and town center
44. Reduce automobiles at center
45. Pedestrian-only area
46. Grid of streets
47. Reduce intersection to Chagrin Boulevard and Warrensville Center Road
48. Community “Circulator” routes
49. Bike connections—-independent land (protected)
50. Safe pedestrian crossings @ Chagrin Boulevard/Warrensville Center Road
51. Medians @ 2 busy intersections to aid crossing
52. New roadways/Farnsleigh quarter circle design
53. Pedestrian access safety nightmare
54. Easily identifiable transport corridors and traffic route signs are poorly clarified or developed
55. Shorten traffic light signal change delays to accelerate traffic flow
56. The biggest challenge is traffic flow through from six busy streets



57. Close Van Aken Boulevard from Farnsleigh Road to Northfield Road to through access for cars turn into mixed-use retail, residential greenspace in triangle of Farnsleigh/Warrensville/Chagrin
58. Bus re-routed around rotary instead of intersection
59. Simplify access
60. Normal streets and blocks
61. Better visibility
62. Narrower streets
63. Easy way to get through
64. Re-route traffic so that through traffic does not limit access to area
65. Improve access from one area to another with covered walkways, shuttles buses, etc.
66. Make the area pedestrian-friendly
67. Improve access to stores on Chagrin Boulevard (Chandler & Rudd, etc.)
68. Traffic goes underground on Van Aken from Farnsleigh to Warrensville/Chagrin
69. No long lights
70. Pedestrian-only cobble stone streets; smaller pedestrian street-like European cities

Transit

71. Shuttle service (trolley)
72. "Straighten" RTA
73. Lower rail lines west of Farnsleigh through intersection with tunnel to Northfield median
74. New rapid station above ground w/mixed use

75. Multi-story transit depot bus/rail/parking—walking to Thornton walking to retail/entertainment on Warrensville Rd.
76. Extend the Van-Aken rapid line east to shopping/business areas along Chagrin Boulevard
77. Extend RTA to Thornton Park
78. Transit has to be relocated out of center by going underground or going overhead

Parking

79. Vertical hidden parking (removal of cars)
80. Utilize parking structures
81. Offer free parking for customers
82. Provide enough parking without blocking views and access to buildings or create new wastelands
83. Hidden garages eliminate parking lots along streets

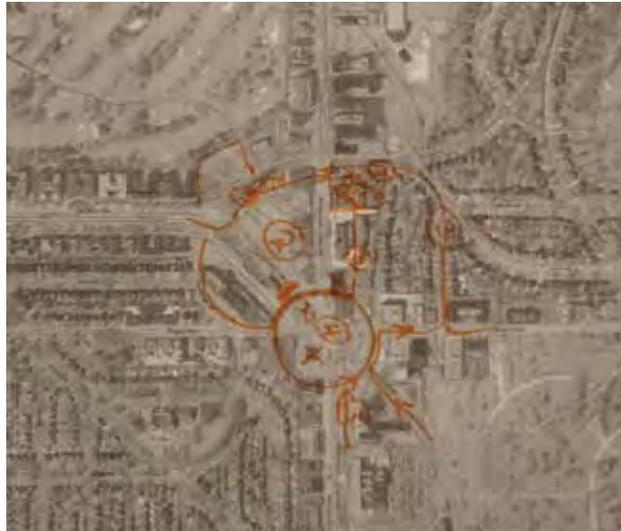
Green Space

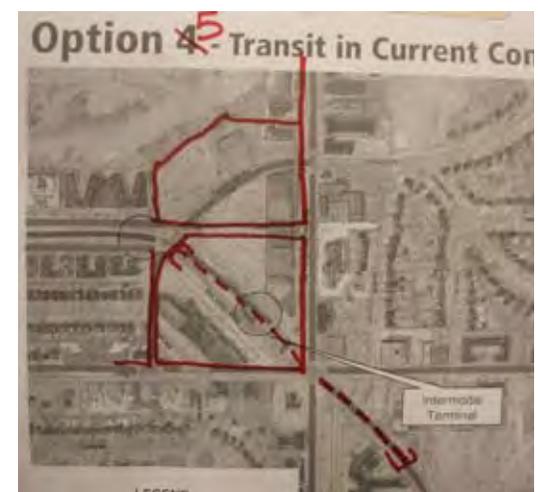
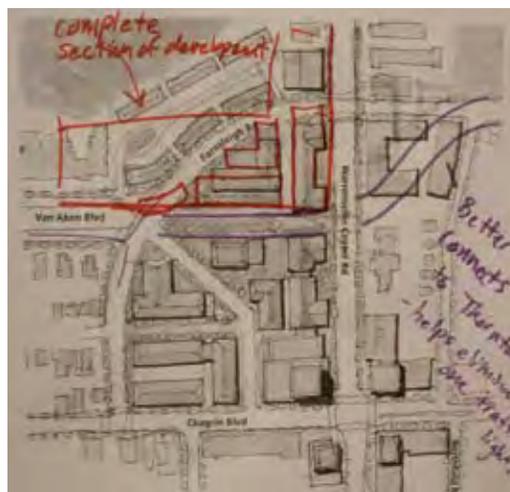
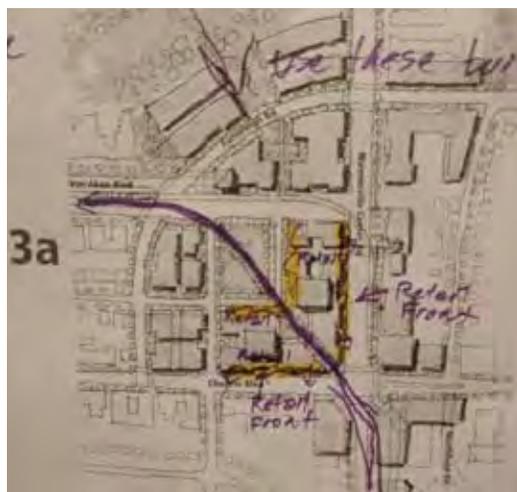
84. Green space
85. Park in the center (green space)
86. Inspired gardens (Eton Collection)
87. Not divided by streets (in city center)
88. Community events (in open space or designated area)
89. Add green space—parks, playground
90. Create more suburban open space/green space areas that are user-friendly
91. Add green space connected to other green areas of the city



1.7 | Diagrams of Opportunities

Some table groups at the public workshop prepared diagrams that illustrated opportunities for change. A sample of the diagrams are included on this page.





2.0 | Second Workshop Summary

2.1 | Introduction

The second public workshop session was held in the evening of the 23rd of January, 2008.

A series of four transit/road network options were presented to participants (see Section 2.2). These options were based on feedback from the first workshop and each included a demonstration plan showing how development under that scenario might work, and a simple computer massing model showed how that development might look in three dimensions.

The table groups were asked to review the options and write, draw and sketch comments, opinions, and alternatives, based on these options. Groups were also asked to indicate which option they preferred. Comments were organized through four categories: transit, roads, buildings and open space. The table group comments are presented in Section 2.3 organized by these categories and by table.

2.2 | Four Options as Presented

Option 1 - Transit on Diagonal



Option 2 - Transit on Warrensville





Option 3 - Transit on Warrensville/Van Aken Extension



Option 4 - Transit in Current Configuration



2.3 | Table Group Comments on Four Options

Transit	Roads	Buildings	Open Space
<ul style="list-style-type: none"> Concerns about RTA Station backing up to Helen Street; prefer location south of Chagrin, perhaps along Northfield Prefer diagonal path for RTA (1B) Possible stop at south end of plaza 	<ul style="list-style-type: none"> Question impact of Northfield connection to Chagrin Extend residential streets into development area Narrow streets with interesting buildings is appealing Explore one-way streets 	<ul style="list-style-type: none"> Design of 3B not open enough 	<ul style="list-style-type: none"> Open plaza with flowers; trees good Do not necessarily need green park or open space
<ul style="list-style-type: none"> Redirect rapid along Farnsleigh NE to Key Bank for new transit hub there –or– Put tracks under Warrensville/Chagrin corner with signature building 	<ul style="list-style-type: none"> Narrow city streets 	<ul style="list-style-type: none"> Gathering community place 	<ul style="list-style-type: none"> Performance space Open air field
<ul style="list-style-type: none"> Prefer route along existing route, then diagonally through Chagrin/Warrensville corner then down to Office Max Building (1B) 	<ul style="list-style-type: none"> Dead end Van Aken at Farnsleigh 	<ul style="list-style-type: none"> We like the idea of parking garage in center of retail buildings which allows for more open space We want double-wide sidewalks, allows room for outside cafes and good landscaping We liked 4 story building with setbacks on upper levels 	<ul style="list-style-type: none"> Important! with benches Will empty retail become more open space?
<ul style="list-style-type: none"> Provide access to Thornton Park Consider transit extension east across Warrensville Center and south along Helen Station access on east and west side of Warrensville with loading over Warrensville Center 	<ul style="list-style-type: none"> Like internal street grid within redeveloped area Make it feel like Pearl Street Mall in Boulder Prefer street grid like 3B 	<ul style="list-style-type: none"> Expand Thornton Park complex to add recreation/fitness center on SE corner of Farnsleigh and Warrensville Center Consider hotel like Hotel Boulderado in Boulder, CO Prefer building massing in 3A 	<ul style="list-style-type: none"> Open space component important Want walkability with transit and open space Interactive fountains



Transit

Roads

Buildings

Open Space

- | | | | |
|---|---|---|---|
| <ul style="list-style-type: none"> • <i>Diagonal transit option has balance (1B)</i> | <ul style="list-style-type: none"> • <i>Four point intersection</i> • <i>Option 2 is no (too many lights & roads)</i> • <i>Prefer Option 1</i> | <ul style="list-style-type: none"> • <i>Connection between two dominant buildings (1A)</i> • <i>Use topography to accommodate underground parking</i> | <ul style="list-style-type: none"> • <i>Water feature</i> • <i>3A with space in center</i> • <i>Well-designed paths with purpose</i> |
| <ul style="list-style-type: none"> • <i>Consider rapid terminal near Farnsleigh/Thornton</i> • <i>Build new underground or above-grade rail crossing of Van Aken/ Warrensville intersection</i> • <i>Transit at grade would be affected by large funerals</i> | <ul style="list-style-type: none"> • <i>Problem with large funeral traffic, especially weekends</i> • <i>Prefer Scheme 3C</i> | <ul style="list-style-type: none"> • <i>Do not build too much density</i> • <i>All apartment buildings should have short hallways</i> • <i>Prefer scheme 3C</i> | <ul style="list-style-type: none"> • <i>Stronger visual connection with Shaker Country Club</i> • <i>Prefer Scheme 3C</i> |
| <ul style="list-style-type: none"> • <i>Prepared a 5th option - transit on diagonal Van Aken extend through to Warrensville, two large development blocks</i> • <i>Consider an underground transit station with option to continue south at some future date</i> • <i>Look at proposal of elevating rapid over area provided it can be made visually appealing</i> • <i>This option, while more expensive, will meet all objectives</i> | <ul style="list-style-type: none"> • <i>Eliminate Farnsleigh from north side of Van Aken to Warrensville (eliminates light)</i> • <i>Continue Van Aken as two lane neighborhood road to Warrensville</i> | <ul style="list-style-type: none"> • <i>Limit height to four stories surrounded by lots of green</i> • <i>Typical Shaker influenced architecture</i> • <i>Think LEED</i> | <ul style="list-style-type: none"> • <i>Like civic public space</i> • <i>Green space, developable land for residential use adjacent to country club</i> • <i>Lots of flowers, plants, trees</i> • <i>Bike paths</i> |
| <ul style="list-style-type: none"> • <i>Transit stop placed in core of center</i> • <i>All in favor of diagonal transit line through center</i> • <i>Prefer 1B</i> | <ul style="list-style-type: none"> • <i>No vehicular traffic within center</i> • <i>Access to parking from peripheral roads</i> • <i>All in favor of removing Northfield from intersection</i> • <i>Imperative to extend/ incorporate pedestrian flow from local streets (i.e. Winslow)</i> | <ul style="list-style-type: none"> • <i>Peripheral building facades must be open and inviting</i> • <i>Facades must embrace Shaker Heights traditional style—not Toronto</i> • <i>Taller structure OK if stepped</i> | <ul style="list-style-type: none"> • <i>We love open space</i> |

Transit

- *Intermodal at Lakeside Buick*
- *Consider Northfield if you want to extend transit*
- *Consider angling transit hub up Farnsleigh to across Warrensville Center*

- *Prefer **Option 1***
- *Low floor trains*
- *Keep train on a diagonal*
- *Submerge rail tracks*

- *Transit terminal not wanted in front of Van Aken/Farnsleigh condos*
- *Like only one transit crossing in **1B**, but like the development chunks better in **3B***
- *We like **3A** with train going through diagonal greenspace like plan **1B***

Roads

- *35 mph on Chagrin and Van Aken*
- ***Option 2** is best*
- *Close Van Aken*

- *Four point intersection at Chagrin and Warrensville*
- *Pedestrian friendly*
- *Connectivity to neighborhoods*
- *Tree lined streets*

- *Alter Farnsleigh to minimize traffic signals on Warrensville*
- *Alter Farnsleigh to make a stronger connection with Thornton Park*
- *Reduce thru roads in the project*
- *Northfield should enter Warrensville as far from the project as possible*
- *Farnsleigh between Warrensville and Van Aken should have limited access*
- *Van Aken straight to Chagrin*
- *Think about a few pedestrian-only streets like Burlington and Aspen*

Buildings

- *Starbucks still accessible*
- *Parking garage partially open for safety; like Cedar Center, but better*
- *Parking integrated in architecture, hidden by mixed-use*
- *Prefer no meters*

- *Prefer **Option 3A** buildings*
- *No more than 8 stories, stepped back from 4-5 stories*
- *Branch campus of OSU or other university*
- *Other local oriented retail*
- *Lots of housing*

- *Include some street parking*
- *We do not want to have to go only into a parking garage to shop (bad example to avoid-Coventry parking garage)*
- *Parking should be free*

Open Space

- *Pedestrian connection to Thornton from intermodal*
- *Civic space*

- *Small and active*
- *Water, fountains, ducks, flowers*
- *Vertical greenery on building, ivy, boxes, pots*
- *Trees so people will walk down street*

- *We like the open green space in **3A***
- *We like **3B** with **3A** open space*



Transit

- Diagonal is best **(1B)**
- Plan for connections to Chagrin Highlands
- Plan for bus rapid transit on Warrensville Road and Chagrin
- Transit is an asset we should embrace and showcase
- Shuttle to Thornton safe for youth and elderly
- Express service to downtown

Roads

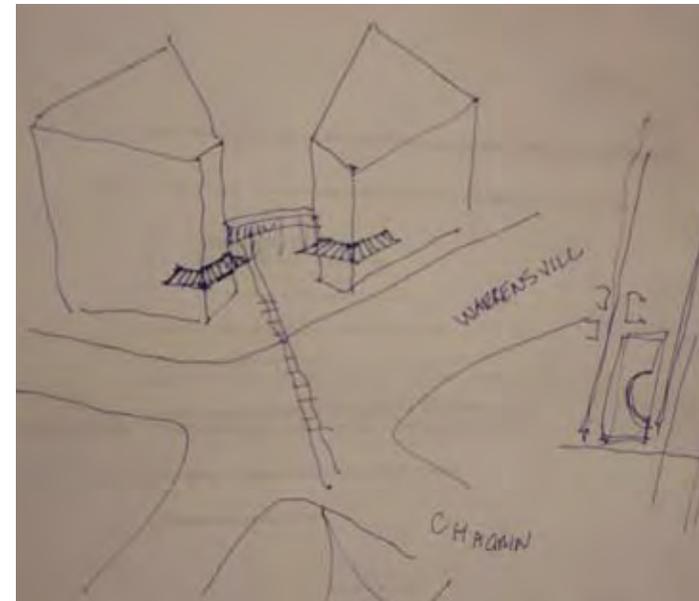
- Do best pedestrian crossings; buffer for pedestrians along busy streets
- Allow inviting access from neighborhoods; Lomond Blvd is main access for Sussex neighborhood
- Winslow also needs inviting access
- Walking to all areas is a must
- Create inviting access along Warrensville when walking south from South Woodland area
- Eliminate Farnsleigh bike lanes

Buildings

- Step back upper floors
- Smaller blocks
- Housing over retail; dense
- Get right mix of retail for car free convenience shopping
- Small business incubator
- What will happen to existing stores?
- Expand connection to Thornton

Open Space

- Combine with rail right of way like in **(1B)**
- Like idea of open civic space
- Thornton access important for kids
- Tree canopy
- Concerts







3.0 | Third Workshop Summary

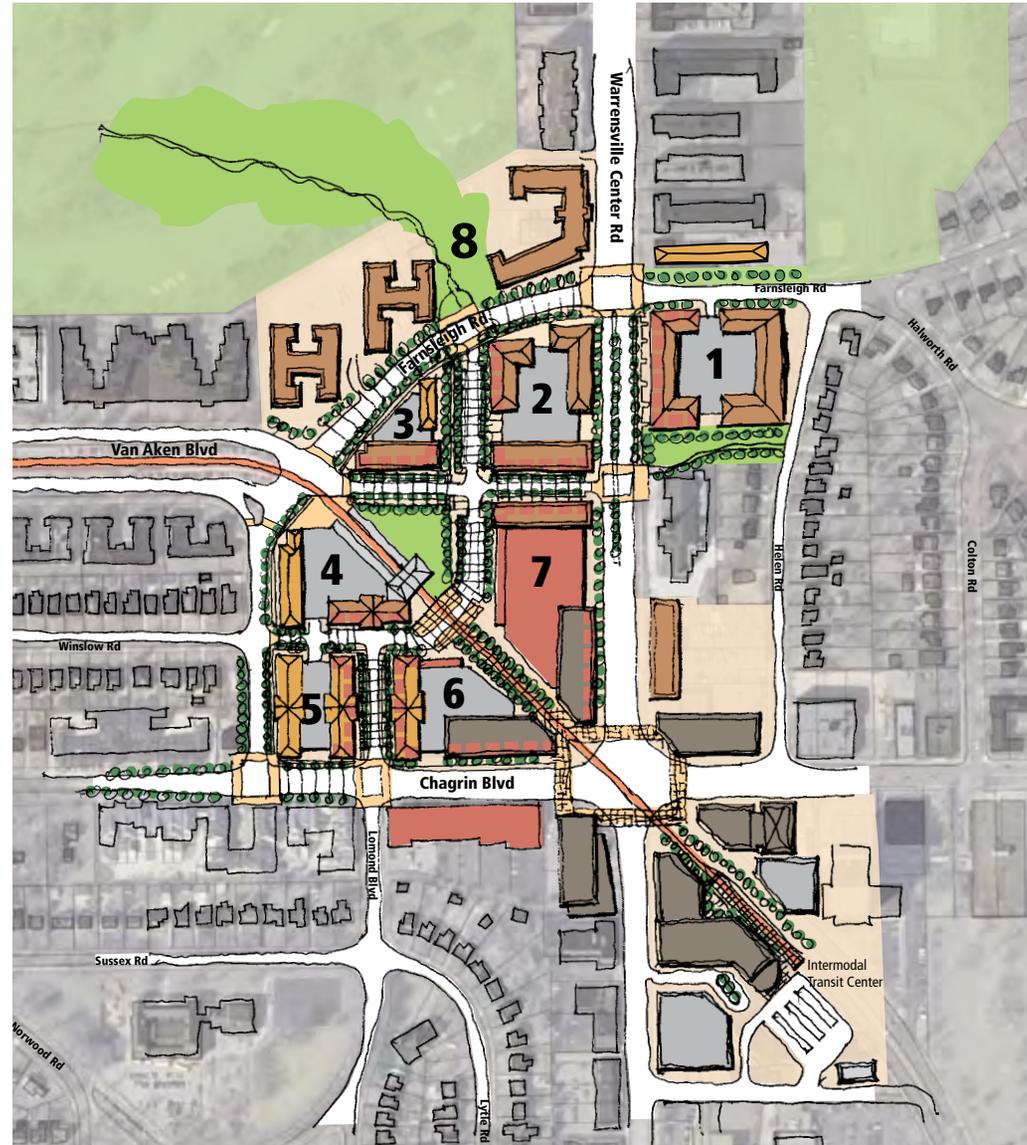
3.1 | Introduction

The third public workshop session was held in the evening of the 27th of February, 2008.

The public were presented the preferred plan as it had evolved based on comments, preferences and working sessions from the second workshop. The preferred plan as presented at the workshop is shown at right.

Table groups were asked to comment on large scale black and white copies of the preferred plan, drawing, sketching and writing their opinions and preferences and requested changes or issues to be addressed. These comments are presented in the following section (Section 3.2) organized by table.

In the final exercise, the table groups were asked to write a headline that might appear in the local paper in the future celebrating the opening of the new development at Warrensville/Van Aken Center - the headlines as presented by the groups are presented in Section 3.3.



The Preferred Plan as presented at the third workshop

3.2 | Table Group Comments on Preferred Plan

Each table group was asked to write notes and comments on a black and white copy of the preferred plan:

Table 1

4-way major street plan is good, waits are bad
 new roads sound good if they don't create more congestion
 northwest bound Northfield needs a way to get to Van Aken that avoids the neighborhood streets and Green Road
 need space for festivals
 wide sidewalks are good
 design guidelines for developers to have the different parts relate.
 Circulator to circle the area and accommodate apartments on Warrensville and Thornton Park
 Keep lots of options for stops on rapid until you see how they are used.
 Is there enough room to walk once you build all the new streets
 Will all of the parking garage block views and pedestrian traffic.
 We need ways to create a vibrant pedestrian community 24 hrs a day
 Traffic control in the neighborhood - remove some, leave some (on Norwood and Chagrin) be careful that new streets do not become cut throughs for main thoroughfares.

Table 2

Pedestrian friendliness is overly optimistic
 Four way better than current six
 Pedestrian crossing ability much better
 Current business cannot survive long term scale of development
 Requires high density of living and business, needs time to build up
 8 storey buildings are not in keeping with shaker atmosphere, with shaker character of space
 neighborhood traffic controls are a separate issue
 will pattern of streets really encourage walking.

Table 3

Need signal at Winslow and Farnsleigh
 Add open space and covered walkways
 Traffic in Suzzex

Table 4

Experiment with removing all traffic controls on a temporary - probation period- after the rework of Warrensville/Chagrin with ability to reinstate if necessary
 No speed bumps because of snow removal issues
 Bump outs on Avalon seem ineffective and unattractive
 Keep Norwood controls because people are tempted to cut off the angle.

Table 5

Get the place name right
 Extend Warrensville raised islands to/thru Chagrin intersection
 Back side/street facing architecture attractive and softened with greenscaping
 Tiered buildings
 Keep human scale, limit building height
 Synchronized traffic signals
 Green roofing/green building
 Unearth Doan Creek

Table 6

Pull traffic restrictions away, gradually after evaluation
 Visually designate traffic flow from Van Aken to Farnseigh
 Affordable parking: short term street parking. Special parking for transit use
 Don't ignore Chagrin - it's our front door
 Need something at north end of retail street- building, prk, etc.
 Flexibility to implement based on market demand - avoid empty buildings/office space

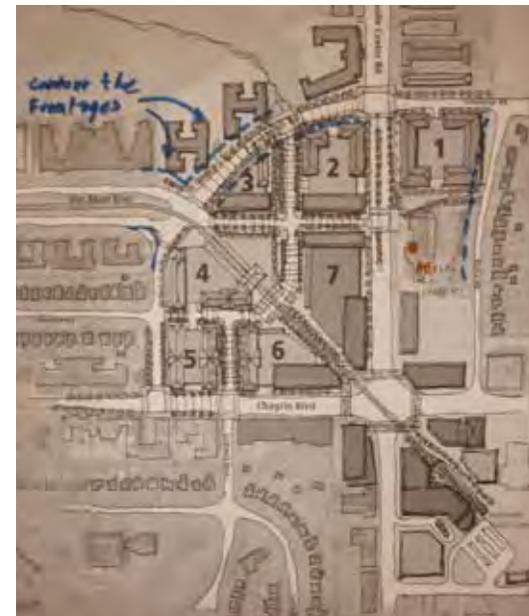
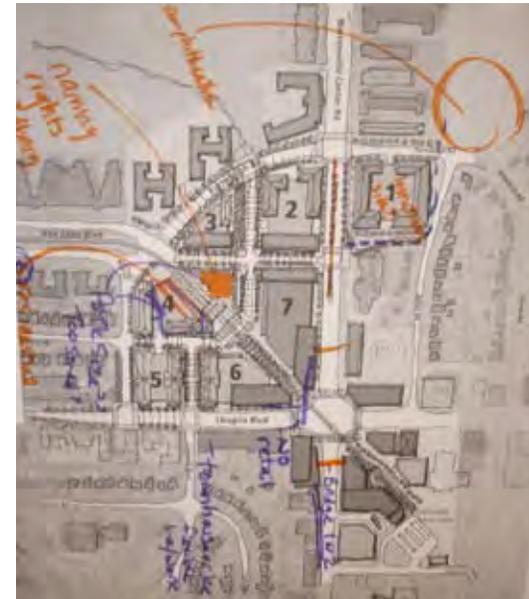


Table 7

- Like road pattern, concern with signal separation distance chagrin/farnsleigh and Chagrin/Lomond
- Make more public space than shown - add small pocket parks
- Include a recreation center, near Thornton Park
- Provide teen center
- Like transit, extend further south
- Concerns with pedestrian crossing at chagrin and Lomond and Farnsleigh intersections
- Provide pedestrian connection between intermodal facility/end of blue line and UH building
- Leave neighbourhood traffic controls as is and re evaluate after implementation, concern that travel time won't be reduced enough, trips won't be diverted.

Table 8

- Ease restrictions after road system proves itself
- Outdoor/indoor performance space not movie theater
- Playground
- Pay more attention to frontages
- Building footprints parallel to street
- Add taxi stands
- Add bike lanes, bike rack
- Car share facilities
- Wide sidewalks
- Commercial space should be along walkways to be window shopping friendly
- Need capacity for sidewalk cafes
- Hire someone from National complete streets coalition www.completestreets.org







3.3 | Headlines

Table groups were asked to write a headline that might appear in the local paper in 2015 celebrating the opening of the new development at Warrensville/Van Aken Center.

Shaker changes and LIKES IT!

At long last.....

New residents flood in

Fresh Market wilts.....

1500 new jobs attributed to new town center

You can now walk across Chagrin!

\$200m Shaker Center complete.

Van Aken opens! Bring your credit cards

Shaker "most livable" neighborhood in Cleveland

Model T.O.D to open to rave reviews!

Best of both worlds: easy access to everything

Back to the future

Vintage look at modern T.O.D draws crowds!

Shaker reborn!

What's old is new again in Shaker

Van Aken has it all

Shaker Square east forms to rave reviews

Proud community has more to be proud of

New Van Aken Center community friendly

Shaker unveils the county's newest sustainable community

Original residents of Van Aken plan petition for new wheel chair lanes on pedestrian streets

Vn Aken center opens multi purposed and family oriented

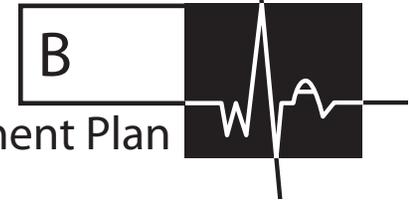
Shaker stops traffic and invites visitors.

Fifty percent of new Shaker Van Aken housing owners mixed with new retail space and public transportation

Shaker Sold Out! New retail housing, and office create dynamic multi purpose area for residents and merchants

New development reduces Shaker's real estate taxes by 20%

Plan Options Considered
APPENDIX
Warrensville/Van Aken Transit-Oriented Development Plan



Final Report

April 28, 2008

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- 4.0 Options Presented at the 2nd Workshop

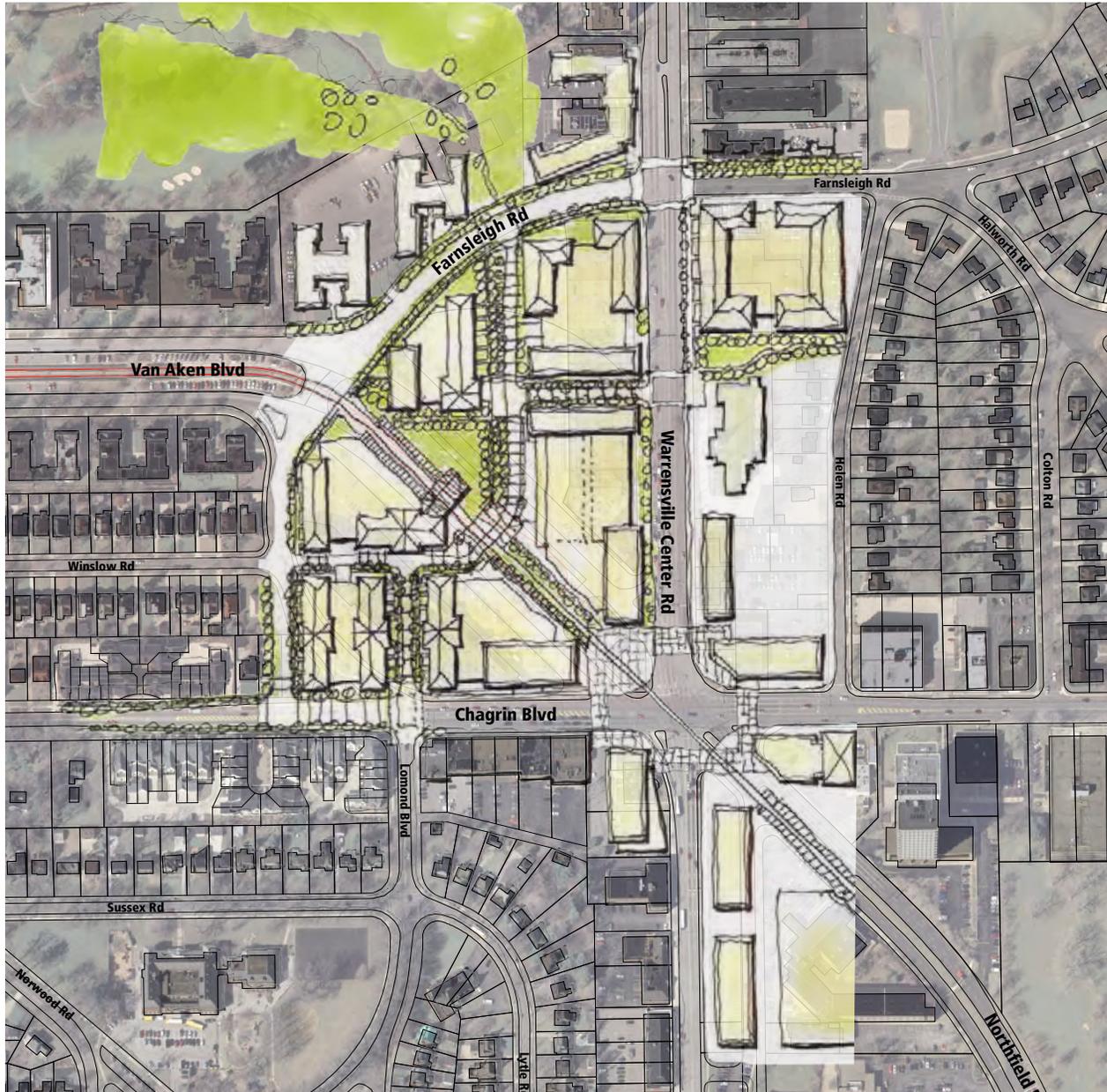


1.0 | Introduction

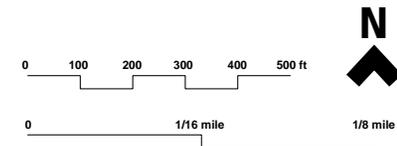
During the course of the three workshops a number of options were explored and analyzed in light of traffic capacity at the intersection, the potential to extend the transit line to the south and the impact of both traffic and transit on the urban design plans. Two alternatives were developed in detail for the full evaluation and are illustrated on the following pages and evaluated in the matrix which follows the illustrations. Both options have the following in common:

- the closing of Van Aken Boulevard and Northfield Road where they intersect with the major intersection;
- a central park as an open space focus;
- residential apartments north of Farnsleigh Road;
- parking in structures on each block;
- an open space link to the golf course to the north; and,
- a link to Thornton Park northeast of the site.

2.0 | Option 1 - Diagonal Transit

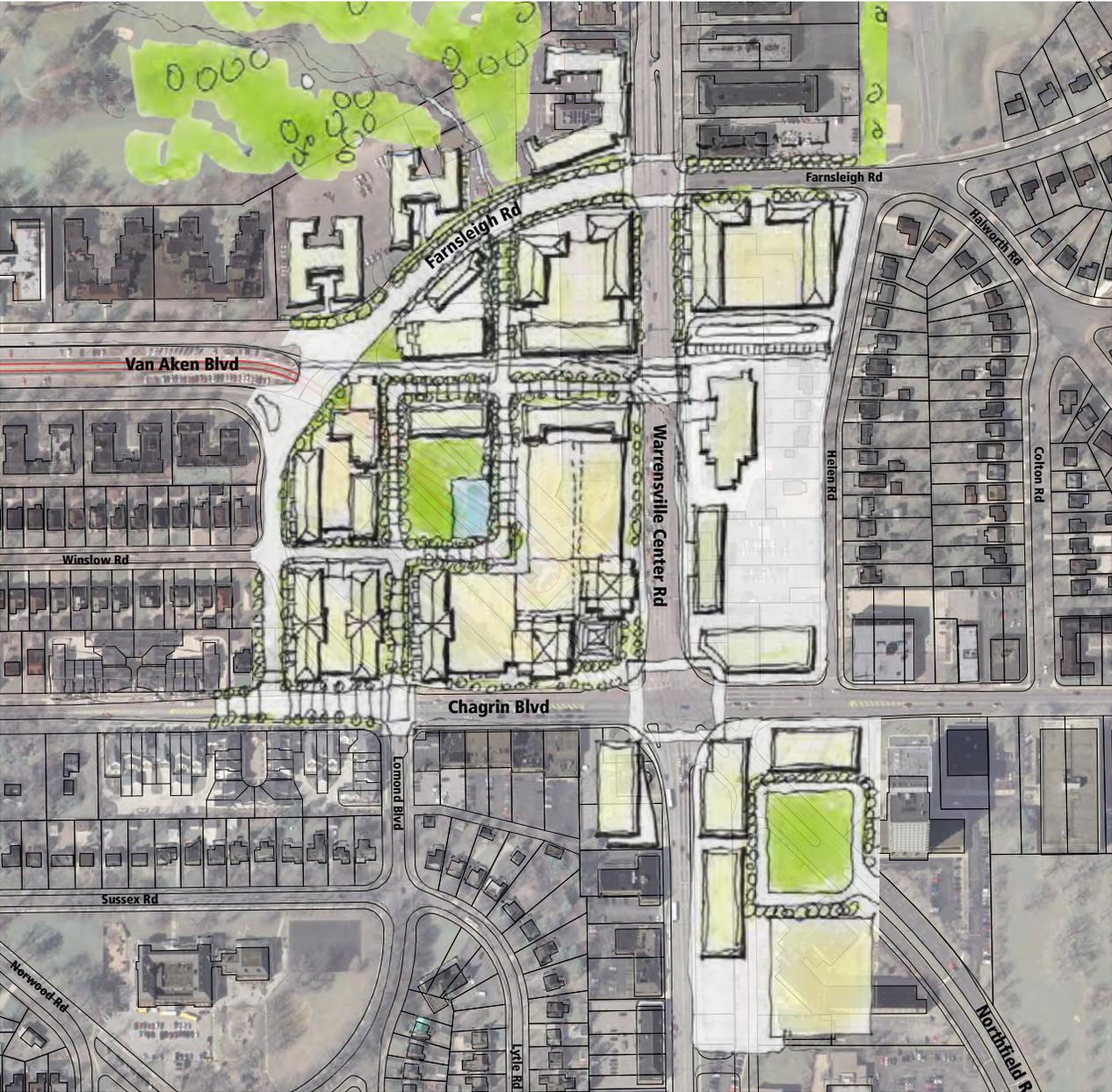


This option is based on leaving the existing transit alignment where it is today and extends the line diagonally across the Chagrin/Warrensville intersection to a new intermodal station in the Northfield right of way. The resulting plan generates local streets as an extension of those from the surrounding area including Lomond Blvd from the south and Winslow from the west. The focus of the development is a new triangular shaped central park surrounded with retail uses and mixed use residential buildings.



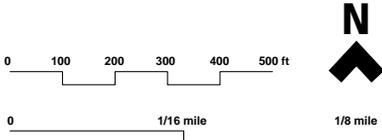


3.0 | Option 2 - Straight Transit



This option extends transit through the site on axis with Van Aken to intersect with Warrensville Road on the east. The new intermodal station is located on the east side of Warrensville Road, north of the church. The future extension of the transit line is south along Warrensville Road.

As in Option 1, local streets are extended into the site creating streets and blocks of a size that is in keeping with the existing community. The focus of this option is a larger park at the center of the development site. It is surrounded with facing retail and a mix of residential mixed-use buildings.



4.0 | Option Evaluation Matrix

CRITERIA	OPTION 1 diagonal transit	OPTION 2 straight transit
Traffic		
1. Enhanced traffic operations on adjacent roads (LOS at intersections)	Equal: LOS C/C	Equal: LOS C/C
2. Impact of Rail Line on cross road traffic	Best: interrupts traffic once	Rail extension will interrupt traffic a second time (at Chagrin)
Transit		
3. Efficiency of transit service	Best: location is central to existing bus lines, minimizing additional operating costs. The interface between rail and the routes is key to mobility measures.	Location north of Chagrin will require rerouting of several lines, perhaps requiring additional vehicles to maintain current level of service
4. Impact on existing transit infrastructure	Best: can utilize much of existing rail infrastructure; substation can remain in initial phases, as required.	All existing transit infrastructure must be relocated at a significant cost.
5. Maximization of transit ridership (existing and projected population and employment within 1/4 mile of station)	Best: connects into University Hospitals center and other major employment hubs south of Chagrin, as well as serving the development area	Does not enhance service to major employment areas. Does provide a closer connection to Thorton Park; however ridership impacts are not anticipated to be significant.
6. ITC - space and ability to meet program - this needs to be confirmed with final layouts.	Best: area allows for ITC to most closely meet programmed requirements for a terminal station. Feasible to have adjacent parking.	Very constrained site that does not allow for a full implementation of a terminal station program. Very limited opportunity for parking.
7. Ability to expand rail (FTA funding)	Best: the rail alignment is that which has been previously studied for a Blue Line extension. Will easily facilitate further extensions without any elimination of constructed infrastructure. More open area for other program expansion in the future.	Any rail extension will require the installation of hard to maintain curves in Warrensville - degrading traffic efficiency - and then a second crossing at Chagrin. Built infrastructure will be discarded. No area for any future expansion.
Environmental & Neighborhood Impacts (Transit)		
8. Transit impacts on neighborhoods. <i>The distance between the ITC and residences is important. ITC will add traffic, noise, and activity an almost a 24 hour basis.</i>	Best: not adjacent to residential neighborhoods	Site is adjacent to a residential neighborhood. Bus operations on some routes are 24 hours.
9. Cultural resources impacts	Best: Does not impact adjacent cemetery. Most built form within existing roadway or parking areas.	Plan currently does not impact church property and built form within former developed area for a car dealership. Future extension may have impacts on the church property and will require right-of-way acquisition along Warrensville Road.
10. Ecological impacts	Equal: None anticipated	Equal: None anticipated
Infrastructure		
11. Efficiency of extension of infrastructure	Best: no relocation of transit track and transit associated utilities required - all other road improvement and utility costs equal to option 2	Requires relocation of transit track and rerouting of all transit associated utilities - all other road improvement and utility costs equal to option 1



CRITERIA	OPTION 1 diagonal transit	OPTION 2 straight transit
Neighborhoods		
12. Integration with adjacent areas		
• Road - network provides connectivity into adjacent areas	Equal	Equal
• Pedestrian - enhanced connections are provided to adjacent areas, around and through site	Equal	Equal
• Open Space - local open spaces are connected into the new development	Equal	Equal
• Complimentary Built Form - built form is carefully massed to be complimentary to adjacent areas	Equal	Equal
13. Traffic Infiltration - infiltration is minimized to the extent possible while providing desired connectivity	Equal: minimal - there will be some traffic using Lomond / Sussex / Norwood / Scottsdale to avoid Chagrin	Equal: minimal - there will be some traffic using Lomond / Sussex / Norwood / Scottsdale to avoid Chagrin
14. Pedestrian accessibility and comfort (re: parks, streetscape character, pedestrian connections)	Equal	Equal
15. Impact on historic structures	Equal	Equal
Development Potential		
16. Development potential (yields, frontage, height, density, efficiency of blocks)	Blocks must take into account diagonal of rail line, affecting frontage and block efficiencies	Best: more orthogonal blocks are more efficient, and give more frontage
17. Ease of phasing and implementation (timing/duration)	Best: use of existing rail infrastructure allows easier phasing	Much of phasing will be contingent upon relocation of rail infrastructure
18. Developer response	Most preferred	???
Site Design		
19. Displacement of existing businesses	Equal	Equal
20. Public Spaces (contribution to urban structure, character of development)	Equal	Equal
21. Provision for parking	Equal	Equal
22. Retail orientation (relation to adjacent major streets, or to internal streets)	Equal	Equal
23. Relation of Transit Station to mixed use development	Best: a station is integrated into the mixed use development, intermodal station is adjacent to office uses and hospital	No station is located within the central development parcel
24. Quality of design opportunity	Equal	Equal
25. Pedestrian/bike environment	Equal	Equal
Cost		
26. Estimated capital cost of transit	Lowest: no track relocation required and the majority of ITC components within existing right-of-way or easily acquired property.	Transit track relocation and rerouting of all transit associated utilities onto currently private property. Future extension would require the acquisition of right-of-way along Warrensville Road.
27. Estimated capital cost of roads	Equal	Equal
28. Estimated capital cost of utility infrastructure	Equal	Equal
Funding		
29. Opportunity for funding (sources, timing)		
• Transit	Best: provides for an extension of rail into a high employment area; addition of transit parking would significantly enhance funding opportunities	The initial option would simply relocate, not expand, transit and without going into a major employment center, the likelihood for FTA funding is questionable.
• Roads	Equal	Equal

5.0 | Options Presented at the 2nd Workshop

Option 1 - Transit on Diagonal



Option 2 - Transit on Warrensville





Option 3 - Transit on Warrensville/Van Aken Extension



3a



3b

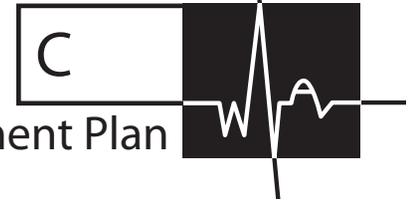


Option 4 - Transit in Current Configuration



City of Shaker Heights

Infrastructure
APPENDIX



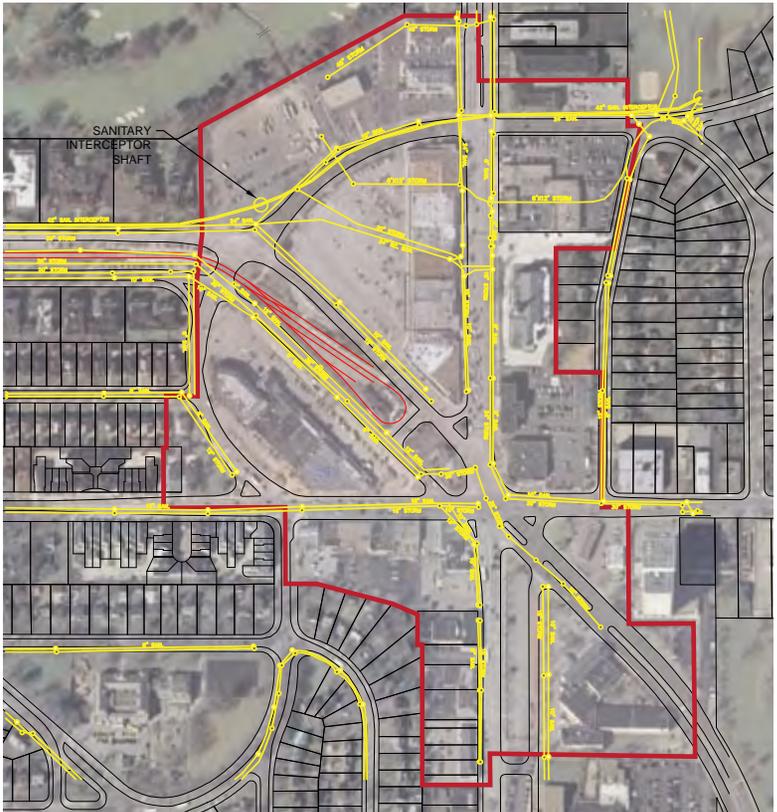
Warrensville/Van Aken Transit-Oriented Development Plan

Final Report

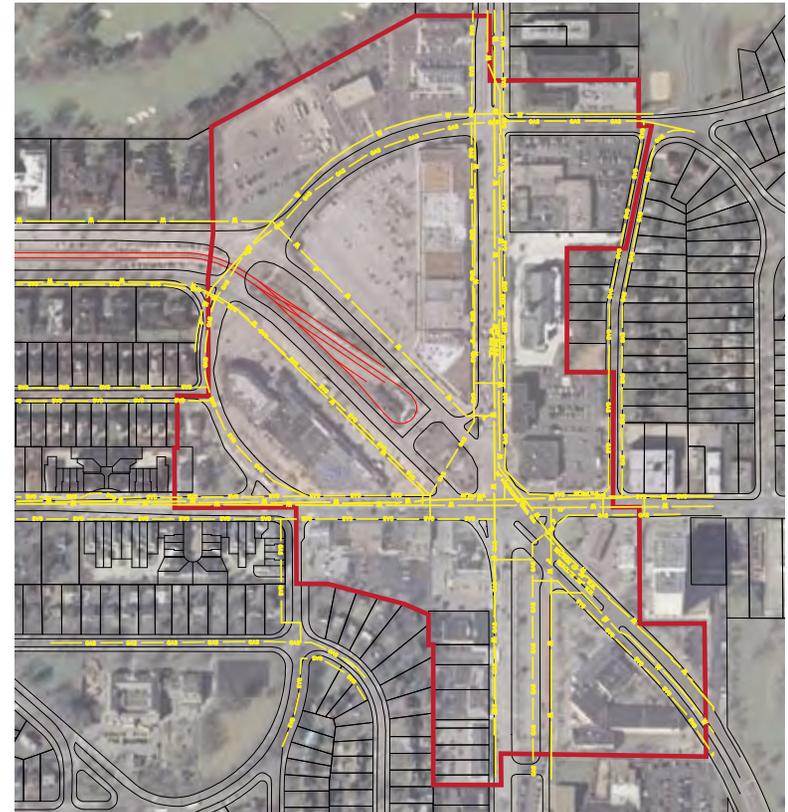
April 28, 2008

Contents

- 1.0 Introduction
- 2.0 Proposed Sewer Relocation & Development Plan
- 3.0 Proposed Natural Gas & Water Line Relocation & Development Plan
- 4.0 Proposed Electric & Fiber Optic Relocation & Development Plan
- 5.0 Utility Relocation Cost Estimate
- 6.0 Station Relocation Cost Estimate
- 7.0 Street Modification Cost Estimates
- 8.0 Internal Streets Cost Estimate



- Existing Sanitary Sewer
- Existing Storm Sewer



- ▽— Existing Water Line
- Existing Natural Gas Line



1.0 | Introduction

Infrastructure Existing Conditions

Within the Study Area, the approximate location of existing utilities is based on information provided by O.U.P.S., the Cuyahoga County Engineer's Office and the City of Shaker Heights. The approximate location of existing underground utilities includes: natural gas lines, sanitary sewer lines, storm sewer lines and water lines. The approximate location of existing overhead utilities includes: electric and fiber optic cables.

Infrastructure Utility Relocation

Utility construction to accommodate new development can be accomplished as the phasing of the development program is defined. Utility relocation to Farnsleigh Road from existing areas within the development site can be completed prior to redevelopment of the site and GCRTA facility improvements. Utility relocation and construction of new utilities within the development area is estimated to be \$3,100,000. Removal of existing utilities is estimated to be \$550,000. The total cost for relocation of existing utilities and construction of new utilities within the development area is \$3,650,000.

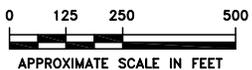
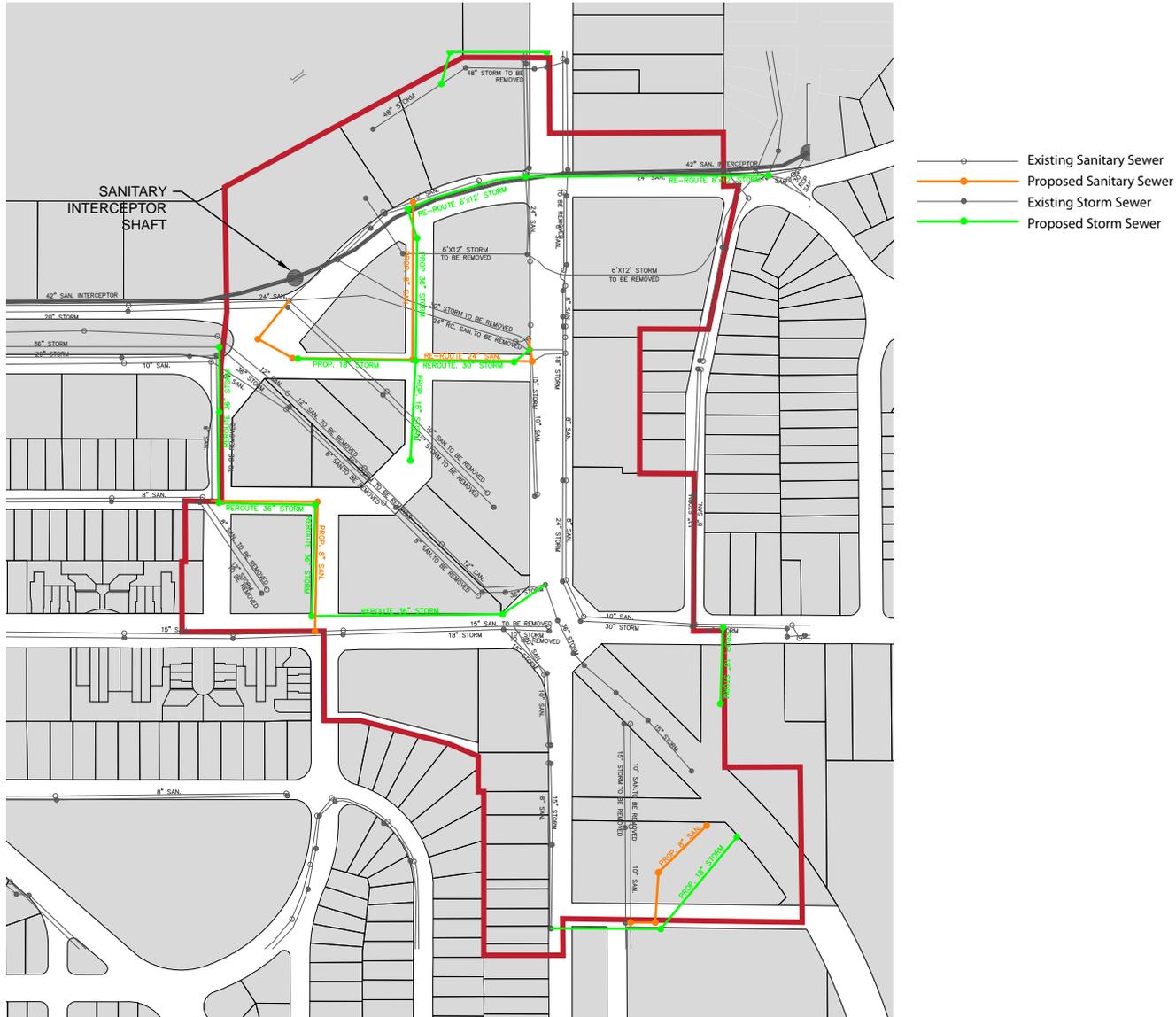
Existing and proposed utility locations are mapped in Sections 2.0 thru 4.0 of this Appendix.

The full cost estimate is included in Section 5.0 of this Appendix.



--- Existing Overhead Electric
--- Existing Fiber Optic Cable

2.0 | Proposed Sewer Relocation & Development Plan

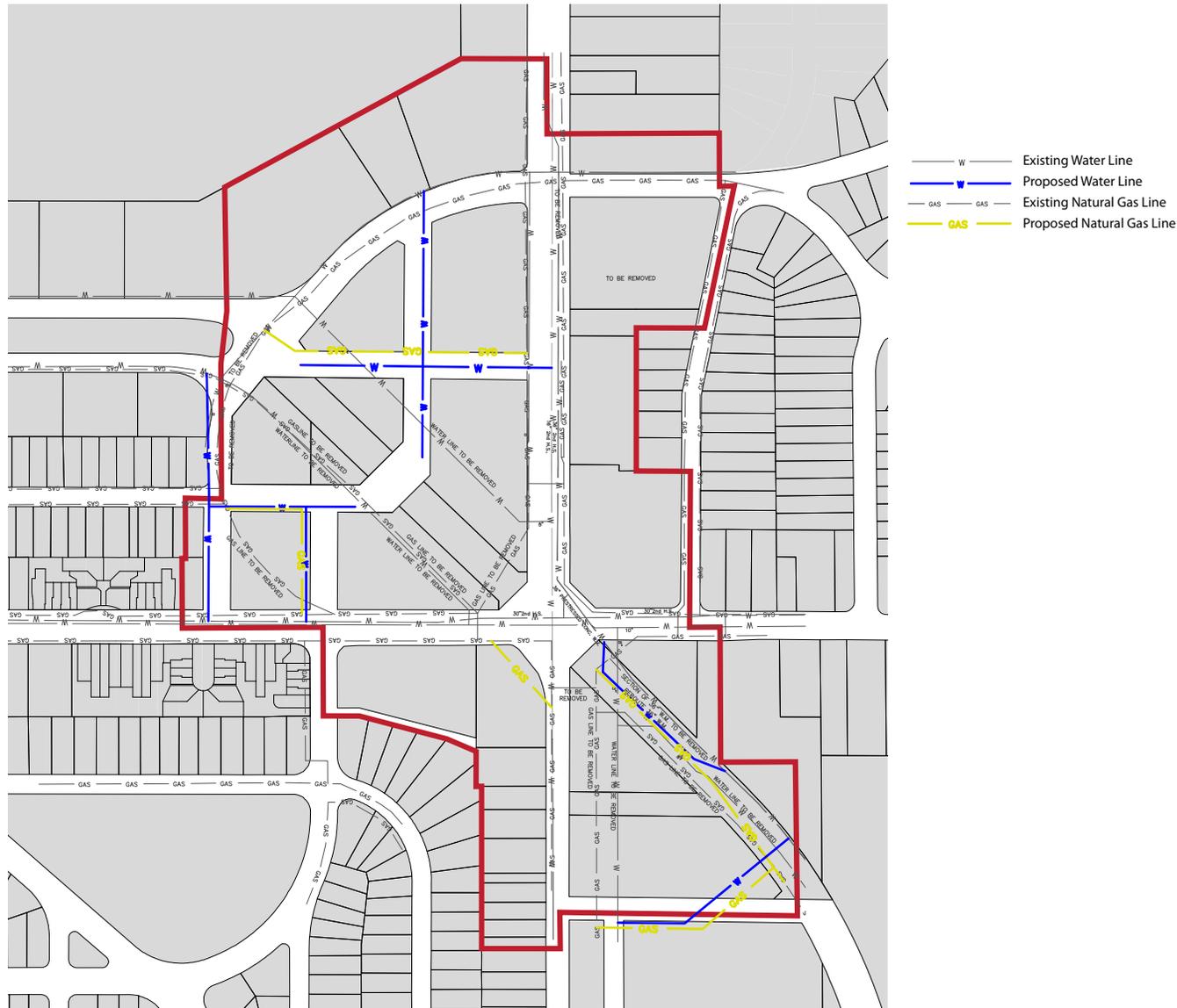


NOTES:

THE LOCATION OF ALL UTILITIES ARE BASED ON INFORMATION PROVIDED BY O.U.P.S. AND BY THE CITY OF SHAKER HEIGHTS AND SHOULD BE CONSIDERED APPROXIMATE.



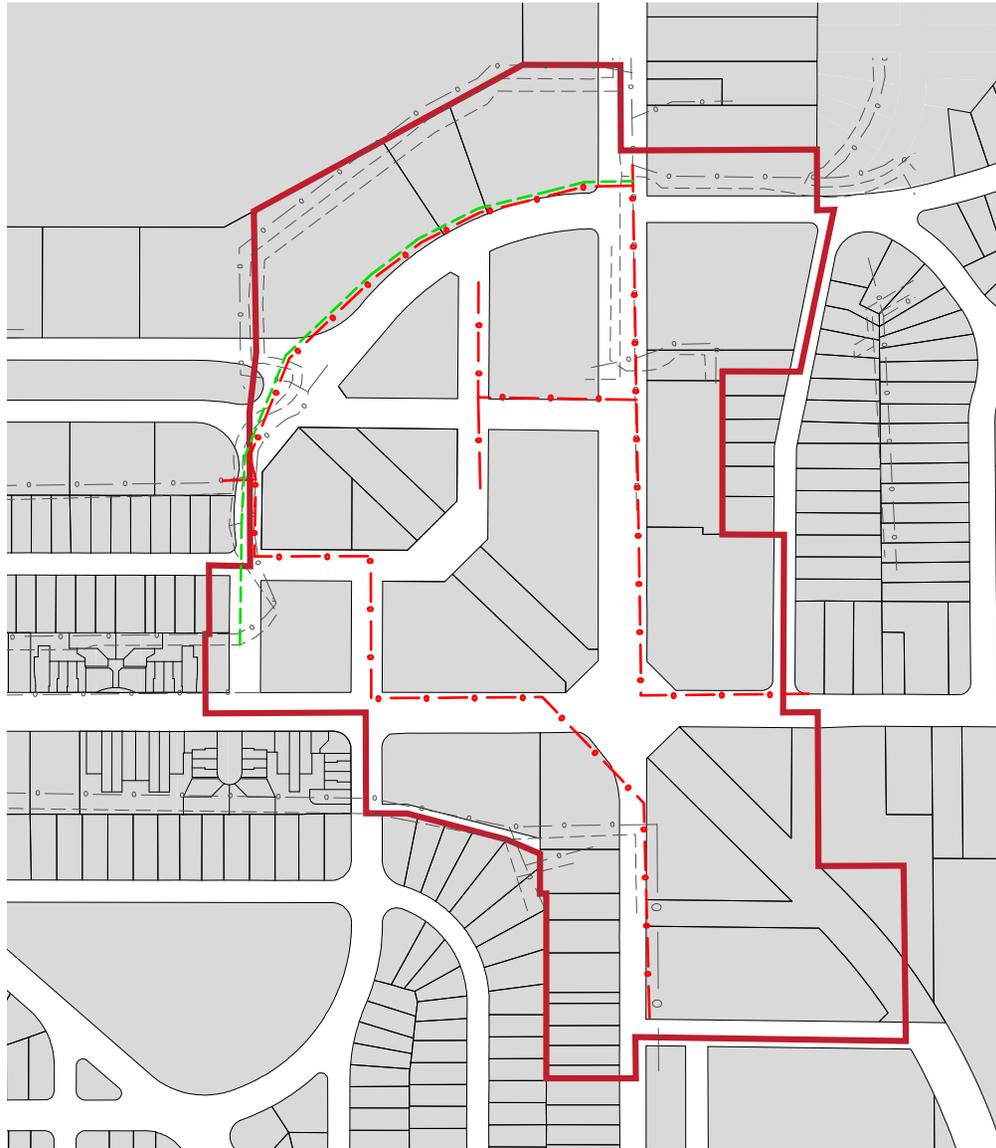
3.0 | Proposed Natural Gas & Water Line Relocation & Development Plan



NOTES:

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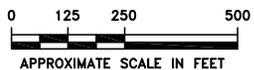
4.0 | Proposed Electric & Fiber Optic Relocation & Development Plan



- Existing Overhead Electric
- Proposed Underground Electric
- - - Existing Fiber Optic Cable
- - - Proposed Fiber Optic Cable

NOTE:

ALL EXISTING OVERHEAD ELECTRIC AND FIBER OPTIC CABLE WITHIN THE DEVELOPMENT AREA IS TO BE REMOVED. ALL ELECTRIC AND FIBER OPTIC CABLE WITHIN THE DEVELOPMENT AREA IS ASSUMED TO BE UNDERGROUND.



NOTES:

THE LOCATION OF ALL UTILITIES ARE BASED ON INFORMATION PROVIDED BY O.U.P.S. AND BY THE CITY OF SHAKER HEIGHTS AND SHOULD BE CONSIDERED APPROXIMATE.



5.0 | Utility Relocation Cost Estimate

ENGINEER'S ESTIMATE					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE (FIGURES)	EXTENSION
REMOVAL ITEMS					
1	6'X12' Stormwater Pipe	1,225	LIN. FT.	\$50.00	\$61,250.00
2	36-48" Stormwater Pipe	1,505	LIN. FT.	\$25.00	\$37,625.00
3	30" Stormwater Pipe	760	LIN. FT.	\$25.00	\$19,000.00
4	12"-15" Stormwater Pipe	1,600	LIN. FT.	\$15.00	\$24,000.00
5	24" Sanitary Pipe	590	LIN. FT.	\$25.00	\$14,750.00
6	12" Sanitary Pipe	985	LIN. FT.	\$15.00	\$14,775.00
7	10" Sanitary Pipe	1,405	LIN. FT.	\$15.00	\$21,075.00
8	8" Sanitary Pipe	670	LIN. FT.	\$15.00	\$10,050.00
9	8" Watermain	3,020	LIN. FT.	\$20.00	\$60,400.00
10	36" Watermain	445	LIN. FT.	\$150.00	\$66,750.00
11	Electric Lines	3,785	LIN. FT.	\$10.00	\$37,850.00
12	Gas Line	3,470	LIN. FT.	\$10.00	\$34,700.00
13	Fiber Optic Cable	2,500	LIN. FT.	\$10.00	\$25,000.00
SUBTOTAL REMOVAL ITEMS					\$427,225.00
20% Contingency					\$85,445.00
Subtotal					\$512,670.00
2010 Base Year - 5% annually (compound)					\$52,548.68
TOTAL REMOVAL ITEMS					\$565,218.68
CONSTRUCTION ITEMS					
14	6'X12' Stormwater Pipe	900	LIN. FT.	\$500.00	\$450,000.00
15	36-48" Stormwater Pipe	2,200	LIN. FT.	\$150.00	\$330,000.00
16	30" Stormwater Pipe	295	LIN. FT.	\$100.00	\$29,500.00
17	18" Stormwater Pipe	1,305	LIN. FT.	\$80.00	\$104,400.00
18	8" Sanitary Pipe	1,335	LIN. FT.	\$80.00	\$106,800.00
19	24" Sanitary Pipe	900	LIN. FT.	\$150.00	\$135,000.00
19	8" Watermain	3,085	LIN. FT.	\$80.00	\$246,800.00
20	36" Watermain	475	LIN. FT.	\$350.00	\$166,250.00
21	Electric Lines	5,495	LIN. FT.	\$100.00	\$549,500.00
22	Gas Line	2,565	LIN. FT.	\$50.00	\$128,250.00
23	Fiber Optic Cable	1,545	LIN. FT.	\$50.00	\$77,250.00
SUBTOTAL CONSTRUCTION ITEMS					\$2,323,750.00
20% Contingency					\$464,750.00
Subtotal					\$2,788,500.00
2010 Base Year - 5% annually (compound)					\$285,821.25
TOTAL CONSTRUCTION ITEMS					\$3,074,321.25
TOTAL PROJECT COSTS					\$3,639,539.93

NOTES:

THE LOCATION OF ALL UTILITIES ARE BASED ON INFORMATION PROVIDED BY O.U.P.S. AND BY THE CITY OF SHAKER HEIGHTS AND SHOULD BE CONSIDERED APPROXIMATE.

THIS COST ESTIMATE INCLUDES ALL KNOWN UTILITIES WITHIN THE PROJECT AREA.

PROPOSED UTILITY CONSTRUCTION COSTS INCLUDE BOTH THE ESTIMATED COSTS OF RE-ROUTING EXISTING UTILITIES AND ALSO PROVIDING CONCEPTUAL REQUIRED SITE UTILITIES FOR REDEVELOPMENT. REFER TO THE ATTACHED FIGURES.

* Estimates based on 2008 cost. Escalation is calculated at 5% per year.

6.0 | Station Relocation Cost Estimate

Shaker Heights TOD Study Station Relocation Costs

ITEM	UNIT	QTY	UNIT COST	COST
DEMOLITION OF EXISTING				
Farnsleigh Station	LS	1	\$ 50,000	\$ 50,000
Warrensville Station	LS	1	\$ 50,000	\$ 50,000
Substation	LS	1	\$ 80,000	\$ 80,000
Track	LF	1,500	\$ 100	\$ 150,000
Catenary	LF	1,500	\$ 50	\$ 75,000
Signals	LS	1	\$ 50,000	\$ 50,000
SUBTOTAL				\$ 455,000
NEW TRACK (EB = WB)	LF	1600	\$ 500	\$ 800,000
SUBTOTAL				\$ 800,000
REWORK EXISTING TRACK	LF	500	200	\$ 100,000
SUBTOTAL				\$ 100,000
CROSSINGS				
Warrensville Rd	LF	140	\$ 1,000	\$ 140,000
Farnsleigh Rd	LF	100	\$ 1,000	\$ 100,000
Main Street	LF	100	\$ 1,000	\$ 100,000
SUBTOTAL				\$ 340,000
SPECIAL TRACK				
Crossover	LF	2	\$ 750,000	\$ 1,500,000
Switch	LF	2	\$ 500,000	\$ 1,000,000
Side Track Storage	LF	500	\$ 300	\$ 150,000
SUBTOTAL				\$ 2,650,000
CATENARY/POWER	LF	2,100	\$ 1,000	\$ 2,100,000
SUBTOTAL				\$ 2,100,000
NEW SUBSTATION	EA	1	3,000,000	\$ 3,000,000
SUBTOTAL				\$ 3,000,000
SIGNALS				
Crossover Interlocks	EA	4	\$ 750,000	\$ 3,000,000
ICC Integration	LS	4	\$ 900,000	\$ 3,600,000
Preemption at Grade Crossings	EA	12	\$ 200,000	\$ 2,400,000
Block Signal for 5 Minute Headway	LS	1	\$ 2,500,000	\$ 2,500,000
SUBTOTAL				\$ 11,500,000
NEW TRANSIT STATION				
New Building	SF	2,000	\$ 400.00	\$ 800,000
Platform Canopy	SF	4,500	\$ 75.00	\$ 337,500
Steel Screen Wall	LF	200	\$ 150.00	\$ 30,000
Dumpster Enclosure	LS	1	\$ 15,000	\$ 15,000
Site Lighting	LS	1	\$ 25,000	\$ 25,000
Site Fencing	LS	1	\$ 25,000	\$ 25,000
Site Furnishings	LS	1	\$ 10,000	\$ 10,000
Landscape Allowance	LS	1	\$ 50,000	\$ 50,000
SUBTOTAL				\$ 1,292,500

ITEM	UNIT	QTY	UNIT COST	COST
NEW INTERMODEL TRANSIT CENTER				
Transit Platform Canopy Structure	SF	4,500	\$ 50	\$ 225,000
Bus Canopy(8 Buses)	SF	2500	\$ 75	\$ 187,500
Steel Screen Wall	LF	200	\$ 150.00	\$ 30,000
Bus Staging	SF	31,200	\$ 30	\$ 936,000
Passenger Parking	CAR	200	\$ 4,000	\$ 800,000
Site Lighting	LS	1	\$ 25,000	\$ 25,000
Site Fencing	LS	1	\$ 25,000	\$ 25,000
Site Furnishings	LS	1	\$ 10,000	\$ 10,000
Landscape Allowance	LS	1	\$ 50,000	\$ 50,000
SUBTOTAL				\$ 2,288,500
PROPERTY - R/W				BY OTHERS
SUBTOTAL CONSTRUCTION COSTS				\$ 24,526,000
DESIGN FEES	LS		12%	\$ 2,943,120
ADMINISTRATION	LS		10%	\$ 2,452,600
CONTINGENCY	LS		10%	\$ 2,452,600
SUBTOTAL PROJECT COSTS				\$ 32,374,320
2010 Base Year - 5% annually (compound)				5,103,002
Subtotal				\$ 37,477,322.19
UTILITY RELOCATIONS*	LS	1	3,639,540	\$ 3,639,540
SUBTOTAL				\$ 3,639,540
TOTAL PROJECT COSTS				\$ 41,116,862

*REFER TO ATTACHED UTILITY RELOCATION COST ESTIMATE AND FIGURES.

* Estimates based on 2007 cost. Escalation is calculated at 5% per year.

7.0 | Street Modification Cost Estimates

Shaker Heights TOD Study Phase 1 - Northfield Road Diversion to Warrensville

ENGINEER'S ESTIMATE				
ITEM	DESCRIPTION	QUANTITY	UNIT	EXTENSION
ROADWAY				
1	CLEARING AND GRUBBING	1		\$20,000.00
2	PAVEMENT REMOVED, ASPHALT	6,880	SQ YD	\$41,280.00
3	PIPE REMOVED, 24" AND UNDER	700	FT	\$6,300.00
4	REMOVAL MISC.:	1		\$40,000.00
5	EXCAVATION	4,448	CU YD	\$37,808.00
6	EMBANKMENT	1,112	CU YD	\$7,784.00
7	SUBGRADE COMPACTION	10,224	SQ YD	\$1,022.40
8	PROOF ROLLING	6	HOUR	\$150.00
9	MONUMENT ASSEMBLY	3	EACH	\$1,500.00
10	MONUMENT BOX ADJUSTED TO GRADE	3	EACH	\$660.00
11	4" CONCRETE WALK	11,680	SQ FT	\$46,720.00
12	CURB RAMP	8	EACH	\$2,200.00
SUBTOTAL				\$215,376.00
EROSION CONTROL				
13	SOIL ANALYSIS TEST	2	EACH	\$150.00
14	TOPSOIL	546	CU YD	\$7,098.00
15	SEEDING AND MULCHING	4,912	SQ YD	\$2,456.00
16	REPAIR SEEDING AND MULCHING	246	SQ YD	\$81.50
17	INTER-SEEDING	246	SQ YD	\$36.90
18	COMMERCIAL FERTILIZER	0.66	TON	\$330.00
19	LIME	1.01	ACRE	\$40.40
20	WATER	27	M GAL	\$27.00
21	MOWING	11	M SQ FT	\$11.00
22	STORM WATER POLLUTION PREVENTION PLAN	1		\$4,000.00
23	EROSION CONTROL	30,000	EACH	\$3,000.00
SUBTOTAL				\$44,210.80
DRAINAGE				
24	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	160	FT	\$18.00
25	6" CONDUIT, TYPE B	150	FT	\$2,250.00
26	6" CONDUIT, TYPE C	150	FT	\$1,800.00
27	12" CONDUIT, TYPE B	488	FT	\$20,496.00
28	12" CONDUIT, TYPE C	228	FT	\$6,840.00
29	15" CONDUIT, TYPE C	455	FT	\$14,560.00
30	18" CONDUIT, TYPE C	341	FT	\$9,207.00
31	24" CONDUIT, TYPE C	114	FT	\$4,560.00
32	CATCH BASIN, NO. 3	4	EACH	\$8,000.00
33	CATCH BASIN, NO. 3A	12	EACH	\$18,000.00
34	CATCH BASIN, NO. 2-B	2	EACH	\$1,000.00
35	MANHOLE, NO. 3	8	EACH	\$2,250.00
36	MANHOLE, NO. 3 WITH 108" BASE I.D. AND 12" WEIR	1	EACH	\$4,500.00
37	MANHOLE ADJUSTED TO GRADE	8	EACH	\$2,400.00
38	6" BASE PIPE UNDERDRAINS WITH FABRIC WRAP, AS PER PLAN	3,280	FT	\$11.00
39	MANUFACTURED WATER QUALITY STRUCTURE, TYPE 4	1	EACH	\$30,000.00
SUBTOTAL				\$181,573.00
PAVEMENT				
40	ASPHALT CONCRETE BASE, PG64-22	1,741	CU YD	\$139,280.00
41	AGGREGATE BASE, AS PER PLAN	1,669	CU YD	\$50,070.00
42	TACK COAT	672	GALLON	\$672.00
43	TACK COAT FOR INTERMEDIATE COURSE	359	GALLON	\$359.00
44	PRIME COAT	4,004	GALLON	\$4,004.00
45	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22	436	CU YD	\$39,240.00
46	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	311	CU YD	\$31,100.00
47	8" NON-REINFORCED CONCRETE PAVEMENT	214	SQ YD	\$8,560.00
48	CURB, TYPE 6	4,420	FT	\$61,880.00
SUBTOTAL				\$335,165.00

ENGINEER'S ESTIMATE				
ITEM	DESCRIPTION	QUANTITY	UNIT	EXTENSION
WATER WORKS				
49	6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, MECHANICAL JOINTS AND FITTINGS	140	FT	\$7,700.00
50	6" FIRE HYDRANT	7	EACH	\$15,400.00
51	FIRE HYDRANT REMOVED	7	EACH	\$1,400.00
52	VALVE BOX ADJUSTED TO GRADE	10	EACH	\$1,250.00
53	SERVICE BOX ADJUSTED TO GRADE	4	EACH	\$400.00
SUBTOTAL				\$26,150.00
SANITARY SEWER				
54	MANHOLE ADJUSTED TO GRADE	6	EACH	\$1,680.00
55	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN	2	EACH	\$2,600.00
SUBTOTAL				\$4,280.00
TRAFFIC CONTROL				
56	SIGNING, MISC.:	1		\$35,000.00
57	LANE LINE	0.19	MILE	\$95.00
58	CENTER LINE	0.21	MILE	\$105.00
59	CHANNELIZING LINE	865	FT	\$865.00
60	STOP LINE	235	FT	\$611.00
61	LANE ARROW	15	EACH	\$546.00
SUBTOTAL				\$37,222.00
TRAFFIC SIGNALS				
62	SIGNALIZATION, MISC.:	2	EACH	\$150,000.00
SUBTOTAL				\$300,000.00
LIGHTING				
63	LIGHT POLE, CONVENTIONAL	28	EACH	\$67,200.00
64	LIGHT POLE FOUNDATION	28	EACH	\$14,000.00
65	NO. 2 AWG 5000 VOLT DISTRIBUTION CABLE	10,320	FT	\$12,900.00
66	CONDUIT, 3", 725.04	3,440	FT	\$34,400.00
67	LUMINAIRE, CONVENTIONAL	28	EACH	\$7,000.00
68	TRENCH	3,440	FT	\$11,180.00
69	PULL BOX, 725.08, 24"	6	EACH	\$3,750.00
70	POWER SERVICE	2	EACH	\$6,000.00
71	SPECIAL - PLASTIC CAUTION TAPE	3,440	FT	\$860.00
SUBTOTAL				\$157,290.00
LANDSCAPING				
72	DECIDUOUS TREE, 2" CALIPER, AS PER PLAN	10	EACH	\$3,000.00
SUBTOTAL				\$3,000.00
MISCELLANEOUS				
73	MAINTAINING TRAFFIC	1		\$150,000.00
74	FIELD OFFICE, TYPE C	12	MONTH	\$30,000.00
75	CONSTRUCTION LAYOUT STAKES	1		\$30,000.00
76	MOBILIZATION	1		\$40,000.00
SUBTOTAL				\$250,000.00
Estimated Subtotal				
				\$1,554,287
Contingency (25-percent)		25%		\$388,567
Estimated Total				\$1,942,834
2010 Base Year - 5% annually (compound)		15.76%		\$306,191
PROBABLE CONSTRUCTION COST				\$2,249,024

NOTES:

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* Estimates based on 2007 cost. Escalation is calculated at 5% per year.

**Shaker Heights TOD Study
Phase 2 - Farnsleigh Road Realignment**

ITEM	DESCRIPTION	QUANTITY	UNIT	ENGINEER'S ESTIMATE	
				UNIT PRICE (FIGURES)	EXTENSION
ROADWAY					
1	CLEARING AND GRUBBING	1		\$20,000.00	\$20,000.00
2	PAVEMENT REMOVED, ASPHALT	7,484	SQ YD	\$6.00	\$44,904.00
3	PIPE REMOVED, 24" AND UNDER	1,000	FT	\$9.00	\$9,000.00
4	REMOVAL MISC.:	1		\$40,000.00	\$40,000.00
5	EXCAVATION	4,004	CU YD	\$8.50	\$34,034.00
6	EMBANKMENT	1,001	CU YD	\$7.00	\$7,007.00
7	SUBGRADE COMPACTION	9,810	SQ YD	\$1.00	\$9,810.00
8	PROOF ROLLING	5	HOUR	\$150.00	\$750.00
9	MONUMENT ASSEMBLY	4	EACH	\$2,000.00	\$8,000.00
10	MONUMENT BOX ADJUSTED TO GRADE	5	EACH	\$220.00	\$1,100.00
11	4" CONCRETE WALK	15,310	SQ FT	\$4.00	\$61,240.00
12	CURB RAMP	8	EACH	\$275.00	\$2,200.00
SUBTOTAL					\$232,045.00
EROSION CONTROL					
13	SOIL ANALYSIS TEST	2	EACH	\$75.00	\$150.00
14	TOPSOIL	808	CU YD	\$13.00	\$10,504.00
15	SEEDING AND MULCHING	7,277	SQ YD	\$0.50	\$3,638.50
16	REPAIR SEEDING AND MULCHING	364	SQ YD	\$0.25	\$91.00
17	INTER-SEEDING	364	SQ YD	\$0.15	\$54.60
18	COMMERCIAL FERTILIZER	0.98	TON	\$500.00	\$490.00
19	LIME	1.50	ACRE	\$40.00	\$60.00
20	WATER	40	M GAL	\$1.00	\$40.00
21	MOWING	16	M SQ FT	\$1.00	\$16.00
22	STORM WATER POLLUTION PREVENTION PLAN	1		\$4,000.00	\$4,000.00
23	EROSION CONTROL	45,000	EACH	\$1.00	\$45,000.00
SUBTOTAL					\$64,044.10
DRAINAGE					
24	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	160	FT	\$18.00	\$2,880.00
25	6" CONDUIT, TYPE B	250	FT	\$15.00	\$3,750.00
26	6" CONDUIT, TYPE C	250	FT	\$12.00	\$3,000.00
27	12" CONDUIT, TYPE B	526	FT	\$42.00	\$22,092.00
28	12" CONDUIT, TYPE C	245	FT	\$30.00	\$7,350.00
29	15" CONDUIT, TYPE C	490	FT	\$32.00	\$15,680.00
30	18" CONDUIT, TYPE C	368	FT	\$27.00	\$9,936.00
31	24" CONDUIT, TYPE C	123	FT	\$40.00	\$4,920.00
32	CATCH BASIN, NO. 3	4	EACH	\$2,000.00	\$8,000.00
33	CATCH BASIN, NO. 3A	12	EACH	\$1,500.00	\$18,000.00
34	CATCH BASIN, NO. 2-2B	4	EACH	\$1,000.00	\$4,000.00
35	MANHOLE, NO. 3	8	EACH	\$2,250.00	\$18,000.00
36	MANHOLE, NO. 3 WITH 108" BASE I.D. AND 12" WEIR	1	EACH	\$4,500.00	\$4,500.00
37	MANHOLE ADJUSTED TO GRADE	10	EACH	\$300.00	\$3,000.00
38	6" BASE PIPE UNDERDRAINS WITH FABRIC WRAP, AS PER PLAN	3,582	FT	\$11.00	\$39,402.00
39	MANUFACTURED WATER QUALITY STRUCTURE, TYPE 4	1	EACH	\$30,000.00	\$30,000.00
SUBTOTAL					\$194,510.00
PAVEMENT					
40	ASPHALT CONCRETE BASE, PG64-22	1,658	CU YD	\$80.00	\$132,640.00
41	AGGREGATE BASE, AS PER PLAN	1,502	CU YD	\$30.00	\$45,060.00
42	TACK COAT	640	GALLON	\$1.00	\$640.00
43	TACK COAT FOR INTERMEDIATE COURSE	341	GALLON	\$1.00	\$341.00
44	PRIME COAT	3,604	GALLON	\$1.00	\$3,604.00
45	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22	415	CU YD	\$90.00	\$37,350.00
46	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	296	CU YD	\$100.00	\$29,600.00
47	8" NON-REINFORCED CONCRETE PAVEMENT	800	SQ YD	\$40.00	\$32,000.00
48	CURB, TYPE 6	3,742	FT	\$14.00	\$52,388.00
SUBTOTAL					\$333,623.00

ITEM	DESCRIPTION	QUANTITY	UNIT	ENGINEER'S ESTIMATE	
				UNIT PRICE (FIGURES)	EXTENSION
WATER WORKS					
49	6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, MECHANICAL JOINTS AND FITTINGS	140	FT	\$55.00	\$7,700.00
50	6" FIRE HYDRANT	7	EACH	\$2,200.00	\$15,400.00
51	FIRE HYDRANT REMOVED	7	EACH	\$200.00	\$1,400.00
52	VALVE BOX ADJUSTED TO GRADE	16	EACH	\$125.00	\$2,000.00
53	SERVICE BOX ADJUSTED TO GRADE	12	EACH	\$100.00	\$1,200.00
SUBTOTAL					\$27,700.00
SANITARY SEWER					
54	MANHOLE ADJUSTED TO GRADE	10	EACH	\$280.00	\$2,800.00
55	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN	2	EACH	\$1,300.00	\$2,600.00
SUBTOTAL					\$5,400.00
TRAFFIC CONTROL					
56	SIGNING, MISC.:	1		\$35,000.00	\$35,000.00
57	LANE LINE	0.26	MILE	\$500.00	\$130.00
58	CENTER LINE	0.38	MILE	\$500.00	\$190.00
59	CHANNELIZING LINE	690	FT	\$1.00	\$690.00
60	STOP LINE	110	FT	\$2.60	\$286.00
61	LANE ARROW	16	EACH	\$36.40	\$582.40
SUBTOTAL					\$36,878.40
TRAFFIC SIGNALS					
62	SIGNALIZATION, MISC.:	2	EACH	\$150,000.00	\$300,000.00
SUBTOTAL					\$300,000.00
LIGHTING					
63	LIGHT POLE, CONVENTIONAL	30	EACH	\$2,400.00	\$72,000.00
64	LIGHT POLE FOUNDATION	30	EACH	\$500.00	\$15,000.00
65	NO. 2 AWG 5000 VOLT DISTRIBUTION CABLE	11,226	FT	\$1.25	\$14,032.50
66	CONDUIT, 3", 725.04	3,742	FT	\$10.00	\$37,420.00
67	LUMINAIRE, CONVENTIONAL	30	EACH	\$250.00	\$7,500.00
68	TRENCH	3,742	FT	\$3.25	\$12,161.50
69	PULL BOX, 725.08, 24"	7	EACH	\$625.00	\$4,375.00
70	POWER SERVICE	2	EACH	\$3,000.00	\$6,000.00
71	SPECIAL - PLASTIC CAUTION TAPE	3,742	FT	\$0.25	\$935.50
SUBTOTAL					\$169,424.50
MISCELLANEOUS					
72	MAINTAINING TRAFFIC	1		\$150,000.00	\$150,000.00
73	FIELD OFFICE, TYPE C	12	MONTH	\$2,500.00	\$30,000.00
74	CONSTRUCTION LAYOUT STAKES	1		\$30,000.00	\$30,000.00
75	MOBILIZATION	1		\$40,000.00	\$40,000.00
SUBTOTAL					\$250,000.00
Estimated Subtotal					\$1,613,625
Contingency (25-percent)				25%	\$403,406
Estimated Total					\$2,017,031
2010 Base Year - 5% annually (compound)				15.76%	\$317,884
PROBABLE CONSTRUCTION COST					\$2,334,915

NOTES:

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**Shaker Heights TOD Study
Phase 3 - A Closure of Van Aken and Northfield, and Related Intersection Improvements**

ENGINEER'S ESTIMATE					
ITEM	DESCRIPTION	QUANTITY	UNIT	UNIT PRICE (FIGURES)	EXTENSION
ROADWAY					
1	CLEARING AND GRUBBING	1		\$10,000.00	\$10,000.00
2	PAVEMENT REMOVED, ASPHALT	2,067	SQ YD	\$6.00	\$12,402.00
3	REMOVAL MISC.:	1		\$20,000.00	\$20,000.00
4	EXCAVATION	235	CU YD	\$8.50	\$1,997.50
5	EMBANKMENT	59	CU YD	\$7.00	\$413.00
6	SUBGRADE COMPACTION	529	SQ YD	\$1.00	\$529.00
7	PROOF ROLLING	1	HOUR	\$150.00	\$150.00
8	MONUMENT ASSEMBLY	2	EACH	\$500.00	\$1,000.00
9	MONUMENT BOX ADJUSTED TO GRADE	2	EACH	\$220.00	\$440.00
SUBTOTAL					\$46,931.50
EROSION CONTROL					
10	EROSION CONTROL	15,000	EACH	\$1.00	\$15,000.00
SUBTOTAL					\$15,000.00
DRAINAGE					
11	MANHOLE ADJUSTED TO GRADE	4	EACH	\$300.00	\$1,200.00
SUBTOTAL					\$1,200.00
PAVEMENT					
12	PAVEMENT PLANNING, ASPHALT CONCRETE	3782	SQ YD	\$1.00	\$3,782.00
13	ASPHALT CONCRETE BASE, PG64-22	736	CU YD	\$80.00	\$58,880.00
14	AGGREGATE BASE, AS PER PLAN	89	CU YD	\$30.00	\$2,670.00
15	TACK COAT	284	GALLON	\$1.00	\$284.00
16	TACK COAT FOR INTERMEDIATE COURSE	152	GALLON	\$1.00	\$152.00
17	PRIME COAT	212	GALLON	\$1.00	\$212.00
18	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22	184	CU YD	\$90.00	\$16,560.00
19	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	132	CU YD	\$100.00	\$13,200.00
20	CURB, TYPE 6	310	FT	\$14.00	\$4,340.00
SUBTOTAL					\$96,298.00
WATER WORKS					
21	VALVE BOX ADJUSTED TO GRADE	6	EACH	\$125.00	\$750.00
22	SERVICE BOX ADJUSTED TO GRADE	3	EACH	\$100.00	\$300.00
SUBTOTAL					\$1,050.00
SANITARY SEWER					
23	MANHOLE ADJUSTED TO GRADE	3	EACH	\$280.00	\$840.00
24	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN	1	EACH	\$1,300.00	\$1,300.00
SUBTOTAL					\$2,140.00
TRAFFIC CONTROL					
25	SIGNING, MISC.:	1		\$35,000.00	\$35,000.00
26	PAVEMENT MARKING, MISC.:	1	EACH	\$20,000.00	\$20,000.00
SUBTOTAL					\$55,000.00
TRAFFIC SIGNALS					
27	SIGNALIZATION, MISC.:	1	EACH	\$150,000.00	\$150,000.00
SUBTOTAL					\$150,000.00
MISCELLANEOUS					
28	MAINTAINING TRAFFIC	1		\$75,000.00	\$75,000.00
29	FIELD OFFICE, TYPE C	12	MONTH	\$2,500.00	\$30,000.00
30	CONSTRUCTION LAYOUT STAKES	1		\$15,000.00	\$15,000.00
31	MOBILIZATION	1		\$30,000.00	\$30,000.00
SUBTOTAL					\$150,000.00
Estimated Subtotal					\$517,620
Contingency (25-percent)					\$129,405
Estimated Total					\$647,024
2010 Base Year - 5% annually (compound)					\$101,971
PROBABLE CONSTRUCTION COST					\$748,995

NOTES:

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* Estimates based on 2007 cost. Escalation is calculated at 5% per year.

**Shaker Heights TOD Study
Phase 3 - B Northfield Realignment to Chagrin Blvd. (Bus Circulation Routes)**

ITEM	DESCRIPTION	QUANTITY	UNIT	ENGINEER'S ESTIMATE	
				UNIT PRICE (FIGURES)	EXTENSION
ROADWAY					
1	CLEARING AND GRUBBING	1		\$20,000.00	\$20,000.00
2	PAVEMENT REMOVED, ASPHALT	6,290	SQ YD	\$6.00	\$37,740.00
3	PIPE REMOVED, 24" AND UNDER	500	FT	\$9.00	\$4,500.00
4	REMOVAL MISC.:	1		\$40,000.00	\$40,000.00
5	EXCAVATION	2,104	CU YD	\$8.50	\$17,884.00
6	EMBANKMENT	526	CU YD	\$7.00	\$3,682.00
7	SUBGRADE COMPACTION	4,948	SQ YD	\$1.00	\$4,948.00
8	PROOF ROLLING	3	HOUR	\$150.00	\$450.00
9	MONUMENT ASSEMBLY	5	EACH	\$500.00	\$2,500.00
10	MONUMENT BOX ADJUSTED TO GRADE	2	EACH	\$220.00	\$440.00
11	4" CONCRETE WALK	4,590	SQ FT	\$4.00	\$18,360.00
12	CURB RAMP	4	EACH	\$275.00	\$1,100.00
SUBTOTAL				\$151,604.00	
EROSION CONTROL					
13	SOIL ANALYSIS TEST	2	EACH	\$75.00	\$150.00
14	TOPSOIL	377	CU YD	\$13.00	\$4,901.00
15	SEEDING AND MULCHING	3,389	SQ YD	\$0.50	\$1,694.50
16	REPAIR SEEDING AND MULCHING	170	SQ YD	\$0.25	\$42.50
17	INTER-SEEDING	170	SQ YD	\$0.15	\$25.50
18	COMMERCIAL FERTILIZER	0.46	TON	\$500.00	\$230.00
19	LIME	0.70	ACRE	\$40.00	\$28.00
20	WATER	19	M GAL	\$1.00	\$19.00
21	MOWING	8	M SQ FT	\$1.00	\$8.00
22	STORM WATER POLLUTION PREVENTION PLAN	1		\$4,000.00	\$4,000.00
23	EROSION CONTROL	25,000	EACH	\$1.00	\$25,000.00
SUBTOTAL				\$36,098.50	
DRAINAGE					
24	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS	80	FT	\$18.00	\$1,440.00
25	6" CONDUIT, TYPE B	150	FT	\$15.00	\$2,250.00
26	6" CONDUIT, TYPE C	150	FT	\$12.00	\$1,800.00
27	12" CONDUIT, TYPE B	320	FT	\$42.00	\$13,440.00
28	12" CONDUIT, TYPE C	123	FT	\$30.00	\$3,690.00
29	15" CONDUIT, TYPE C	245	FT	\$32.00	\$7,840.00
30	18" CONDUIT, TYPE C	184	FT	\$27.00	\$4,968.00
31	24" CONDUIT, TYPE C	62	FT	\$40.00	\$2,480.00
32	CATCH BASIN, NO. 3	2	EACH	\$2,000.00	\$4,000.00
33	CATCH BASIN, NO. 3A	6	EACH	\$1,500.00	\$9,000.00
34	CATCH BASIN, NO. 2-2B	3	EACH	\$1,000.00	\$3,000.00
35	MANHOLE, NO. 3	4	EACH	\$2,250.00	\$9,000.00
36	MANHOLE, NO. 3 WITH 108" BASE I.D. AND 12" WEIR	1	EACH	\$4,500.00	\$4,500.00
37	MANHOLE ADJUSTED TO GRADE	6	EACH	\$300.00	\$1,800.00
38	6" BASE PIPE UNDERDRAINS WITH FABRIC WRAP, AS PER PLAN	1,450	FT	\$11.00	\$15,950.00
39	MANUFACTURED WATER QUALITY STRUCTURE, TYPE 4	1	EACH	\$30,000.00	\$30,000.00
SUBTOTAL				\$115,158.00	
PAVEMENT					
40	ASPHALT CONCRETE BASE, PG64-22	549	CU YD	\$80.00	\$43,920.00
41	AGGREGATE BASE, AS PER PLAN	789	CU YD	\$30.00	\$23,670.00
42	TACK COAT	212	GALLON	\$1.00	\$212.00
43	TACK COAT FOR INTERMEDIATE COURSE	113	GALLON	\$1.00	\$113.00
44	PRIME COAT	1,894	GALLON	\$1.00	\$1,894.00
45	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22	138	CU YD	\$90.00	\$12,420.00
46	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22	98	CU YD	\$100.00	\$9,800.00
47	8" NON-REINFORCED CONCRETE PAVEMENT	214	SQ YD	\$40.00	\$8,560.00
48	CURB, TYPE 6	3,050	FT	\$14.00	\$42,700.00
SUBTOTAL				\$143,289.00	

ITEM	DESCRIPTION	QUANTITY	UNIT	ENGINEER'S ESTIMATE	
				UNIT PRICE (FIGURES)	EXTENSION
WATER WORKS					
49	6" WATER MAIN DUCTILE IRON PIPE ANSI CLASS 52, MECHANICAL JOINTS AND FITTINGS	60	FT	\$55.00	\$3,300.00
50	6" FIRE HYDRANT	3	EACH	\$2,200.00	\$6,600.00
51	FIRE HYDRANT REMOVED	3	EACH	\$200.00	\$600.00
52	VALVE BOX ADJUSTED TO GRADE	8	EACH	\$125.00	\$1,000.00
53	SERVICE BOX ADJUSTED TO GRADE	3	EACH	\$100.00	\$300.00
SUBTOTAL				\$11,800.00	
SANITARY SEWER					
54	MANHOLE ADJUSTED TO GRADE	5	EACH	\$280.00	\$1,400.00
55	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN	1	EACH	\$1,300.00	\$1,300.00
SUBTOTAL				\$2,700.00	
TRAFFIC CONTROL					
56	SIGNING, MISC.:	1		\$35,000.00	\$35,000.00
57	LANE LINE	0.08	MILE	\$500.00	\$40.00
58	STOP LINE	30	FT	\$2.60	\$78.00
SUBTOTAL				\$35,118.00	
LIGHTING					
59	LIGHT POLE, CONVENTIONAL	13	EACH	\$2,400.00	\$31,200.00
60	LIGHT POLE FOUNDATION	13	EACH	\$500.00	\$6,500.00
61	NO. 2 AWG 5000 VOLT DISTRIBUTION CABLE	4,590	FT	\$1.25	\$5,737.50
62	CONDUIT, 3", 725.04	1,530	FT	\$10.00	\$15,300.00
63	LUMINAIRE, CONVENTIONAL	13	EACH	\$250.00	\$3,250.00
64	TRENCH	1,530	FT	\$3.25	\$4,972.50
65	PULL BOX, 725.08, 24"	3	EACH	\$625.00	\$1,875.00
66	POWER SERVICE	2	EACH	\$3,000.00	\$6,000.00
67	SPECIAL - PLASTIC CAUTION TAPE	1,530	FT	\$0.25	\$382.50
SUBTOTAL				\$75,217.50	
LANDSCAPING					
68	DECIDUOUS TREE, 2" CALIPER, AS PER PLAN	16	EACH	\$300.00	\$4,800.00
SUBTOTAL				\$4,800.00	
MISCELLANEOUS					
69	MAINTAINING TRAFFIC	1		\$150,000.00	\$150,000.00
70	FIELD OFFICE, TYPE C	12	MONTH	\$2,500.00	\$30,000.00
71	CONSTRUCTION LAYOUT STAKES	1		\$30,000.00	\$30,000.00
72	MOBILIZATION	1		\$40,000.00	\$40,000.00
SUBTOTAL				\$250,000.00	
Estimated Subtotal				\$825,785	
Contingency (25-percent)			25%		\$206,446
Estimated Total					\$1,032,231
2010 Base Year - 5% annually (compound)			15.76%		\$162,680
PROBABLE CONSTRUCTION COST					\$1,194,911

NOTES:

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8.0 | Internal Streets Cost Estimate

The costs for the internal streets have been developed based on similar projects in the Cleveland area using unit numbers applied to the linear feet of roadway. The total length of road and road dimensions are based on the local street configuration indicated on the site plan on page 34, and the sections on pages 41 and 42. The costs include paving, sidewalks and landscaping within the right-of-way.

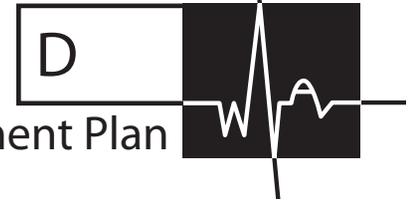
Internal streets have been costed based upon 2007 construction at a linear foot cost of \$500.00, and escalated to 2010 at 5% compounded annually. This include:

Lomond Blvd. Extension	300 ft.
Wnslow Rd. Extension	1,100 ft.
Van Aken Blvd. Extension	650 ft.
Total Linear Feet	2,050 ft.
Total Cost (\$500/lineal foot)	\$1,025,000
2010 Estimate Costs	\$1,186,566

City of Shaker Heights

Funding Sources

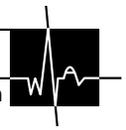
APPENDIX



Warrensville/Van Aken Transit-Oriented Development Plan

Final Report

April 28, 2008



Contents

1.0 Transportation Capital Improvement Program Matrix

2.0 Development Incentive Matrix

1.0 | Transportation Capital Improvement Program Matrix

Tool	Program Description/Eligibility	Jurisdiction	Potential Application for Implementing Transit Oriented Development	Application Process	Available Assistance	Likelihood of Assistance
Livable Communities Initiative (LCI) Program	<p>The broad objective of the LCI Program is to improve mobility and quality of services available to residents in neighborhoods through infrastructure improvements that provide greater access to public transit and improve pedestrian environments. LCI Program funds can be used for a variety of planning activities (technical studies, environmental assessments, plan and design development, etc.) and capital costs (property acquisition, infrastructure/equipment purchases, operational enhancements, physical site improvements related to public transit facilities and functions).</p> <p>Eligible recipients under the LCI Program include transit operators, local and state government entities, planning agencies and other public bodies with the authority to plan/construct transit projects. The program also encourages partnerships between public entities and non profit community organizations in the project planning and development process.</p>	FEDERAL	The LCI Program is a flexible program available to local and state government entities to fund a variety of planning and capital costs to support public transit projects. The City and the GCRTA should utilize LCI Program funds to support further planning efforts in the Warrensville/Van Aken district and finance future capital improvement costs in the station area.	<p>The Northeast Ohio Area-wide Coordinating Agency (NOACA) serves as a regional coordinator to help communities in Northeast Ohio obtain federal funding through its Transportation for Liveable Communities Initiative (TLCI). NOACA is available to help communities obtain planning grants from the federal government for transportation improvements planning projects and technical assistance.</p> <p>Program Contact: Michelle Johnson, NOACA TLCI Project Manager, tel: 216.241.2414, email: mjohnson@mpo.noaca.org</p>	The fiscal year 2008 funding is closed, but NOACA's Governing Board is slated to adopt the State Fiscal Year 2009 Overall work Program in May of 2008. Upon adoption (assuming funding is approved), NOACA will then make available information about the process and timetable for applications.	High - a regionally-focused program with funding for at least 13 projects per year (assuming max of \$75,000 per project and \$1 million total available funds).
Smart Growth Implementation Assistance (SGIA) Program	<p>The Smart Growth Implementation Assistance is a new program administered by the EPA's Development, Community and Environment Division (DCED). The program provides technical assistance to eligible entities (tribal, local, regional and state governments as well as non-profit entities that have demonstrated partnerships with a governmental entity) to incorporate smart growth techniques into their development(s). Technical assistance may include expert input into policy development/analysis, public participatory processes, plan development, visioning, etc.</p> <p>Eligible entities already included in description (public agencies); to be eligible for assistance, the assistance should relate to policy evaluation or public participation related to infill development or brownfields redevelopment. Other evaluation criteria include: the community should demonstrate understanding and commitment to smart growth, be facing a clear development-related challenge, have a clearly-defined project and clear role for the EPA team through which to assist, be able to show how the community could use the results of the EPA team's assistance to implement local changes, be able to form a diverse local team to work with EPA conduct most of the project work, have political support for the project, and demonstrate local commitment via the committed time and resources of local governments, businesses, and other partners.</p>	FEDERAL	The City and/or local nonprofit entities should consider applying for technical assistance under the Smart Growth Implementation Assistance program to support the development of new Transit Oriented Development policies and planning techniques. The EPA typically selects between 4 and 5 communities each year under the SGIA Program.	<p>EPA announces a new Request for Applications (RFA) about once a year, depending on budget constraints. This year's RFA closes on May 8, 2008 and is available at: www.epa.gov/dced/sgia.htm</p> <p>Program Contact: Kevin Nelson (nelson.kevin@epa.gov or 202-566-2835) of the US EPA Smart Growth Program</p>	The Smart Growth Implementation Assistance is not a funding program, but rather a technical assistance program through the provision of an EPA assistance team.	Low - only 4-5 communities are selected nationwide per year.
FTA Section 5309 Statutory Provisions	FTA allocates funding on an annual basis to all urbanized and rural areas to support the planning, operation and development of transportation systems and transportation infrastructure improvements that provide community linkages. The Section 5309 program functions as a discretionary fund, typically earmarked by Congress to fund specific bus and rail improvement projects.	FEDERAL	The City and the GCRTA should explore opportunities for funding under the Section 5309 program to support transit-related capital projects and improvements.	The level of assistance is calculated based on population and population density factors. The Northeast Ohio Area-wide Coordinating Agency (NOACA) receives funding from FTA and allocates to individual projects.	Program-wide Allocation (Total Funds): For FY 2009, FTA has requested \$6.2 billion for the urbanized area program and another \$583.1 million for the non-urbanized area program.	Low - highly competitive program based on discretionary funding and often involves congressional earmarks spearheaded by area politicians.
Transportation and Community System Preservation (TCSP) Program	The TCSP Pilot Program is administered by the SAFETEA-LU for projects that improve transportation system efficiency, reduce future need for costly public infrastructure, provide efficient access to jobs, facilitate development and reduce environmental impacts of transportation. Eligible recipients include Metropolitan Planning Organizations, state and local government entities and transit agencies. The program provides annual funding of \$61 million (2006-2009), with eligible recipients receiving between \$1.5 and \$2 million.	FEDERAL	The City and the GCRTA should explore funding opportunities under the TCSP program to support transit-related capital projects and improvements as well as the development of policies and plans related to transit efficiency.	Projects are funded on a discretionary basis, and congress must designate projects in order for local entities to then apply for funding. Applications are submitted and evaluated by a team comprised of representatives from the Federal Highway Administration (FHWA), Federal Transit Administration (FTA), U.S. Department of Transportation (DOT) Office of the Secretary, Federal Railroad Administration (FRA), Research and Special Programs Administration (RSPA), and the Environmental Protection Agency (EPA). The grant application deadline for FY2008 funding is March 31.	Section 1117 of the Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU, Public Law 109-203) authorized the TCSP Program through FY 2009. A total of \$270 million is authorized for this Program in FY's 2005-2009.	Low - like FTA Section 5309 funds, the program is based on discretionary funding and often involves congressional earmarks spearheaded by area politicians.
	The program is divided into a research component to fund the development of methodologies to meet with program's objectives and a grant component to fund project implementation (engineering, design and capital development).			Program Contact: Kenneth Petty, Office of Planning, tel: 202.366.6654, email: kenneth.petty@dot.gov	Possible Allocation Level for Warrensville/Van Aken: The allocation per project varies. In 2008, congress identified six projects for Ohio ranging from roughly \$200,000 to over \$800,000 per project.	



Tool	Program Description/Eligibility	Jurisdiction	Potential Application for Implementing Transit Oriented Development	Application Process	Available Assistance	Likelihood of Assistance
Congestion Mitigation and Air Quality (CMAQ) Improvement Program	<p>The CMAQ program, jointly administered by the FHWA and the Federal Transit Administration (FTA), was reauthorized in 2005 under the Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU). The SAFETEA-LU CMAQ program provides over \$8.6 billion dollars in funds to State DOTs, MPOs, and transit agencies to invest in projects that reduce criteria air pollutants regulated from transportation-related sources over a period of five years (2005-2009). Funding is available for areas that do not meet the National Ambient Air Quality Standards (nonattainment areas) as well as former nonattainment areas that are now in compliance (maintenance areas).</p> <p>The formula for distribution of funds, which considers an area's population by county and the severity of its ozone and carbon monoxide problems within the nonattainment or maintenance area, with greater weight given to areas that are both carbon monoxide and ozone nonattainment/maintenance areas, is continued.</p> <p>Funds are available for a variety of transit projects provided they reduce criteria air pollutants. Funding is allocated using a formula that measures an area's population and severity of ozone and carbon monoxide issues.</p>	FEDERAL	Given that Shaker Heights is in a nonattainment area, the City should utilize the CMAQ program to access flexible transit-related capital and operating funding.	<p>Local jurisdictions must apply for CMAQ funding through NOACA's transportation improvement program (TIP). NOACA solicits for CMAQ projects to be included in the Transportation Plan. NOACA recommends that project sponsors submit a Preliminary Project Information Form (available through the NOACA website) and meet with NOACA staff to discuss the project as an optional first time to get early feedback on the project's potential for funding. The project sponsor may then complete a full application and submit to NOACA staff for full review and potential approval.</p> <p>Program Contact: John Hosek, NOACA Planning and Programs Division Director, tel: 216.241.2414, email: jhosek@mpo.noaca.org</p>	<p>Program-wide Allocation (Total Funds): \$1.7 million annual authorization; \$1.8 for 2009 Possible Allocation Level for Warrensville/Van Aken: Since Shaker Heights is situated within the Cleveland ozone nonattainment area, projects that improve air quality (assuming nonattainment continues) should be eligible to apply for funding through NOACA. Requires 20 percent non-federal share.</p>	Medium - provides strong regional funding source (NOACA), but requires project to get incorporated in five-year transportation improvement plan.
Surface Transportation Program	<p>The STP provides flexible funding that may be used by state and local government entities for projects on any Federal-aid highway, including the NHS, bridge projects on any public road, transit capital projects, and intracity and intercity bus terminals and facilities. In nonattainment areas, STP funding may be used to support local downtown improvements including street reconstruction, sidewalk enhancements and other streetscape improvements.</p>	FEDERAL	While traditionally utilized for highway construction and improvement projects, STP funding may be allocated, albeit on a highly limited basis, to support local transit improvements. Further, the City should explore the potential use of STP funds to finance roadway improvements in the Warrensville/Van Aken district.	<p>NOACA is the local administrator of the program, and allocates funds through the transportation improvement program (TIP)</p> <p>NOACA recommends that project sponsors submit a Preliminary Project Information Form (available through the NOACA website) and meet with NOACA staff to discuss the project as an optional first time to get early feedback on the project's potential for funding. The project sponsor may then complete a full application and submit to NOACA staff for full review and potential approval.</p>	<p>Program-wide Allocation (Total Funds): \$6.5 billion in 2008, \$6.6 billion in 2009; current annual funding to NOACA for all STP projects ranges from \$17 million to \$27 million per the SFY 2008-2011 Transportation Improvement Program (TIP).</p> <p>Possible Allocation Level for Warrensville/Van Aken: Individual project allocations in the current TIP range from \$30,000 to nearly \$17 million.</p>	Medium - like CMAQ, provides strong regional funding source (NOACA), but requires project to get incorporated in five-year transportation improvement plan.
FTA New Starts	<p>FTA has funding for system starts such as new rail systems and BRT routes. The FTA New Starts is a competitive program. Under the New Starts there is also Small Starts and Very Small Starts which have fewer program requirements.</p> <p>Project must request less than \$75 million and have a total cost below \$250 million. Small Starts projects must also: be a fixed guideway for at least 50 percent of project length OR a new fixed guideway project OR a new corridor-based bus project with the following elements: 1) substantial transit stations; 2) traffic signal priority/pre-emption; 3) low-floor vehicles or level boarding; 4) branding of the proposed service and 5) 10 minute peak/15 minute off peak headways operating at least 14 hours per weekday.</p>	FEDERAL	GCRTA has used the New Starts program to fund 50% of ECTP. It is important to note that the New Starts process is long, involved and very competitive. The critical factors to being competitive are significant transit efficiency enhancements, ridership potential, and percentage of local match funds. It takes an average project 5-7 years to proceed through the New Starts pipeline, which requires an Alternatives Analysis followed by Preliminary Engineering / NEPA documentation. The Warrensville/Van Aken district would most likely qualify for the Small Starts program.	<p>Includes submitting a detailed cost estimate of the project, a detailed definition of the locally preferred alternative, documentation that over 3,000 existing transit riders will demonstrably benefit from the project, and a transit operating plan that shows how existing riders will benefit from the project. A simplified Alternatives Analysis is possible for Small Starts projects.</p> <p>Program Contact: Federal Transit Administration (Region V), 55 E Monroe Street, Suite 1415, Chicago, IL 60603-5704, tel: 312.353.2789</p>	<p>Program-wide Allocation (Total Funds): approximately \$1.5 billion annually for all fixed guideway projects across US (highly competitive program).</p> <p>Possible Allocation Level for Warrensville/Van Aken: under the Small Starts category, requests for funding must be for under \$75 million, and total project cost must be under \$250 million.</p>	Low - highly competitive federal program with limited dollars and many applicants. Project might make small starts component as a mini-extension.

Tool	Program Description/Eligibility	Jurisdiction	Potential Application for Implementing Transit Oriented Development	Application Process	Available Assistance	Likelihood of Assistance
State Capital Improvements Program (SCIP)	The Ohio Public Works Commission (OPWC) administers the State Capital Improvements Program, which sells bonds for capital infrastructure improvements. Local municipalities and regional water and sewer districts may apply for funding for road improvements among other infrastructure projects. A combination of grants and loans are available.	STATE	The City and the GCRTA should explore options to use SCIP funds to finance infrastructure improvements in the Warrensville/Van Aken district. It should be noted that projects that repair or replace existing infrastructure are given priority, as are projects that could not occur but for this funding. This should be kept in mind when considering requesting such funds for projects within the station area.	To apply for State Capital Improvement Program funds or Local Transportation Improvement Program funds the subdivision must apply to its District Public Works Integrating Committee (DPWIC). Each DPWIC evaluates and scores applications using a locally developed methodology based on criteria listed in Chapter 164 of the Ohio Revised Code. After evaluating and scoring the projects, the DPWIC creates a list of high priority projects that are submitted to the Ohio Public Works Commission. The Commission reviews the project selection and evaluation methodology used by the DPWIC to ensure fair and objective decision making. Then, each application is reviewed for completeness and project eligibility. After all requirements are met on the district level and the application is approved, a formal agreement is issued by the Ohio Public Works Commission to the individual subdivision. The Commission's staff maintains ongoing contact with local communities, providing technical assistance through the project's completion. Program Contact: Michael Miller, Legislative Liaison, Ohio Public Works Commission, 65 East State Street, Suite 312, Columbus, Ohio 43214, tel: 614.752.9343	Program-wide Allocation (Total Funds): State can issue up to \$120 million in bonds annually. Possible Allocation Level for Warrensville/Van Aken: average grant or loan is \$250,000; about 600 grants and 120 loans are issued each fiscal year.	High - with potential to issue up to \$120 million annually and \$250,000 per grant in Ohio, this statewide program provides relatively strong odds of funding.
Safety & Congestion Funds	Administered by ODOT (Ohio Department of Transportation), safety and congestion funds may be used for road improvements, street lighting, signalization, sidewalks/curbs, right of way purchase, utilities installation, bicycle/pedestrian facilities, enhancement projects, and a number of other activities. Funding is based on the prioritization of locations prone to high crash and congestion levels	STATE	Safety and Congestion Funds could be used to fund improvements in proximity to the transit stations. Projects that address areas with high crash rates and severe crash rates are given priority. Therefore, requests for these funds for station area improvements will need to demonstrate how projects would improve safety (in consideration of current accident rates and severity)	The program is based on ODOT's review of highly unsafe and congested areas; local project sponsors in these areas are encouraged to identify possible options for improvements to enhance safety and minimize congestion. District offices can then pay for improvements through annual budget or seek money in the Spring (April) and fall (October) via the Highway Safety Program administered by ODOT. Program Contact: Ron Chesla, District 12 Safety, tel: 216.581.2100 x 298	Program-wide Allocation (Total Funds): around \$65 million annually.	Medium - high level of state funding available, but hinges on local safety and congestion levels (depends on the severity of these issues in Warrensville-Van Aken relative to other areas in Ohio).
Ohio Public Transportation Program (OPTGP)	This program provides state operating, capital and planning assistance to providers of public transportation services. Eligibility is limited to Regional Transit Authorities, County Transit Boards, municipalities, or counties that own or operate public transportation systems and private nonprofit corporations that provide public transportation service under the Rural Transit Program in nonurbanized areas. Program funds may be used for any eligible operating, planning or capital project at the discretion of the individual systems. Maximum state participation is 50% of the non-federal share for net operating costs, 10% of total costs for planning projects and up to 80% of the non-federal share for capital projects (excluding preventive maintenance and ADA expenses). ODOT allocates OPTGP Funds among six categories: I. Rail/Bus Systems; II. Large Bus Systems; III. Mid-sized Bus Systems; IV. Intermediate Bus Systems; V. Small Bus Systems; VI. Non-urbanized Bus Systems. Once the categorical funding allocations have been determined, funds are sub-allocated to the individual systems within each category (excluding category VI) using a formula which incorporates system data and performance measures based on ridership, revenue service miles, revenue hours, costs, and farebox revenue.	STATE	OPTGP funds may be used to fund transit system improvements and operating expenses. Depending on available allocations, the City and the GCRTA could potential utilize OPTGP funds for station area improvements.	Existing grantees receive an annual allocation of OPTGP Formula Funds for which they apply for each year. Applications for urbanized areas are due approximately December 15 each year. A combined application can be submitted for capital, operating and planning. Program Contact: Michael Miller, State Program Coordinator, tel: 614.644.8436, email: Michael.Miller@dot.state.oh.us	Program-wide Allocation (Total Funds): program fund as approximately \$13 million annually	Medium - source of state funding, but possible allocation depends on various ridership factors in Shaker Heights (could be constrained by the system and performance data for Warrensville-Van Aken relative to other areas in Ohio).
State Infrastructure Bank (SIB) Loans	The Ohio State Infrastructure Bank (SIB) is a loan and bond financing program offered by ODOT, which provides direct loans to fund rail, transit, intermodal, and other transportation-related projects. Qualified borrowers include any public entity, such as political subdivisions, other state agencies, boards or commissions, regional transit boards and port authorities. Any highway or transit project eligible under the Federal Title XXIII Highway Act is eligible for SIB funding. Other projects including rail, aviation and other intermodal facilities may also be considered for SIB funding.	STATE	The SIB offers direct source of funding for transportation improvements and may be used by the City and the GCRTA to finance transportation-related improvements in the Warrensville/Van Aken district.	All projects must be approved by the Director of the Ohio Department of Transportation. Title XXIII projects must be listed in the State Transportation Improvement Plan (STIP). When seeking funding, the following eligibility criteria is use to evaluate the proposed project: ability of borrower to repay, management of project, working capital/operating funds, need/public benefit, collateral, and status of project in relation to construction startup. Program Contact: Melinda Lawrence, SIB Coordinator, tel: 614.644.7255, email: Melinda.Lawrence@dot.state.oh.us	The portfolio of the FY 2007 SIB had a total of 13 loans and 1 bond in the amount of \$17.8 million. Possible Allocation Level for Warrensville/Van Aken: loans through the SIB can range from \$100,000 to \$4 million; bonds from \$2 million to \$20 million	Medium - state level program with just over a dozen projects funded last year.



Tool	Program Description/Eligibility	Jurisdiction	Potential Application for Implementing Transit Oriented Development	Application Process	Available Assistance	Likelihood of Assistance
Port Authority Debt Service	<p>The Ohio Port Authority may issue revenue bonds to finance transportation and economic development related projects that are operated by borrowers (including government agencies).</p> <p>The Port of Cleveland's Infrastructure Financing Program allows cities, regional organizations, and developers obtain financing for key public infrastructure projects, including: public parking garages, streets, roads, underground utilities, street lights, landscaping, and sidewalks.</p>	STATE	Revenue funding through Ohio Port Authority issued bonds may be utilized to finance parking improvements in proximity to the transit stations.	<p>A detailed project application is required, which must include recent financial statements, project descriptions, etc. Minority business enterprise and female business enterprise participation in projects is preferred.</p> <p>Program Contact: Linda Highsmith-Poole, Director of Development Finance, Port of Cleveland, tel: 216.377.1336, email: linda.highsmith@portofcleveland.com</p>	Possible Allocation Level for Warrensville/Van Aken: recent projects in the Cleveland area have received \$5 million to \$20 million in financing.	High - strong funding levels for individual projects and a regional program.
Innovation Ohio Loan Fund Program	<p>The Ohio Department of Development provides financing for two-thirds of the cost of "acquisition, construction, renovation or improvement of facilities, and the acquisition and installation of equipment for innovative projects that create new products and services." Loan terms generally include prime interest rates plus 2 percent for 4 to 7 years.</p> <p>Eligible costs include the cost of acquisition, construction, renovation, expanding or improving project facilities and the acquisition and installation of equipment for innovation projects. Also, loan funds may assist with software development, and the cost of creating and protecting intellectual property including costs of securing a patent, trademark, trade secret, trade dress, copyright or other forms of intellectual property protection for an eligible innovation project.</p>	STATE	Funding provided through the Innovation Ohio Loan Fund Program may be used for green infrastructure improvements in proximity to the transit stations (either private or public improvements), such as rooftop solar panels that were installed at Jeffrey Place, a condominium project on a former industrial site in Columbus. The City should actively pursue funding under the Innovation Ohio Loan Fund Program to develop and implement innovative green infrastructure improvements in the Warrensville/Van Aken district.	<p>Application Process: 1) Upon receipt of the full IOF Loan Application, the ODOT will conduct a review of each application for compliance, financial feasibility, economic viability, the business plan, project plan, and technical feasibility. 2) The Application will be reviewed by an external evaluator using pre-established criteria. The external evaluator will review all applications received, and submit their reviews to the ODOT who will consider the scores in determining which applications to submit to the Development Financing Advisory Council (DFAC) for review. 3) If the DFAC recommends approval of the loan, it will be presented to the State Controlling Board for final approval. 4) After the Controlling Board approval, a commitment letter will be drafted. Upon execution of the letter and payment of the commitment fee by the applicant, the ODOT will proceed with the negotiation of the definitive loan agreements and related documents. 5) Upon completion and execution of the definitive loan agreements, the ODOT will close and fund the loan.</p> <p>Program Contact: Tracy Allen, Manager, Ohio Department of Development, Economic Development Division, Office of Financial Incentives, 77 S. High Street, 28th Floor, Columbus, OH 43215</p>	Possible Allocation Level for Warrensville/Van Aken: The Innovation Ohio Loan Fund can finance up to 75% of a projects' allowable costs to a maximum of \$3 million and a minimum of \$500,000.	Medium - high level of funding possible, but constrained by need to include an innovative feature (such as green/sustainable transit-oriented development elements).
Transportation Improvement Program	A Transportation Improvement Program is not a funding source, but a framework to implement regional transportation plans and disseminate funding from other sources to support transportation-related projects. The Northeast Ohio Areawide Coordinating Agency (NOACA) allocates funding for transportation improvements within the region such as roadway reconstruction, bicycle/pedestrian enhancements, and other projects through its Transportation Improvement Program (TIP). This funding comes from three Federal Highway Administration Programs: Surface Transportation Program (STP), Transportation Enhancement Activity (TEA), and Congestion Management/Air Quality.	REGIONAL	NOACA prioritizes funding allocation based on projects' adherence to NOACA's stated goals, all of which apply to lands in proximity to transit stations. The goals include: advancing regional economic competitiveness, enhancing the natural environment and conserving transportation energy, preserving and improving the efficiency and safety of transportation, establishing a multimodal transportation system, improving transportation mobility, expanding transportation capacity, fostering reinvestment in core areas, fostering government-private sector relationship, directly investments toward compact land use development, and improving quality of life.	Information on Transit Improvement Program funding allocations in Cuyahoga County is identified in NOACA's Transportation Improvement Program (TIP) SFYs 2008-2001	NOACA's Transportation Improvement Program is not a direct funding source.	N/A - a framework program that includes CMAQ and STP (see remarks related to those funding source).
GCRTA Capital Budget	The Greater Cleveland Regional Transit Authority (GCRTA) offers a range of potential funding tools within its capital budget, including funding for FTA rail modernization, earmarks, local capital funding, FTA bus fundina, and congestion mitigation (CMAQ) funds.	REGIONAL	The funding sources provided through the GCRTA's capital budget offer potential application to large capital improvement projects in proximity to transit stations.	The GCRTA Capital Budget is determined on an annual basis and is dependent on GCRTA revenues and funding allocations from a variety of federal, state and local programs.	It should be noted that at present, the GCRTA Capital Budget is constrained by the need to complete safety-required capital maintenance and FTA-mandated ADA upgrades.	Low - constrained by need to focus on safety, maintenance, and compliance with ADA.
Transportation Improvement District	A Transportation Improvement District (TID) provides a formal entity/structure to coordinate federal, state, and local resources in planning, financing, constructing, and operating transportation projects. The County or City can establish a TID to "acquire, construct, enlarge, improve, equip, sell, lease, lease-purchase, exchange, or otherwise dispose of property, structures, and other facilities" for transportation projects (per Sec. 5540 of the state code).	LOCAL	The establishment of a Transportation Improvement District offers a mechanism to undertake transportation-related activities (including financing, construction, maintenance, repair and operation of transportation improvements).	See descriptions under Congestion Mitigation and Air Quality (CMAQ) and Surface Transportation Program (STP) descriptions.		N/A - offers a formal entity to coordinate funding rather than serve as a funding source.

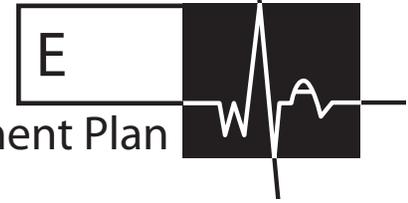


2.0 | Development Incentive Matrix

Tool	Description	Jurisdiction	Potential Application for Implementing Transit Oriented Development
Joint Development	GCRTA has an active joint development program, and has entered into public-private partnerships in many instances to promote transit-oriented development, enhance transit ridership, generate revenues for GCRTA for operation and maintenance of the transit system, and help local municipalities capture part of the added-value associated with transit-oriented development.	REGIONAL	GCRTA offers four types of joint development approaches that could be applied within the station area: 1) negotiated investments; 2) public improvement districts; 3) connector fees; and 4) air and land rights leasing. Opportunities to undertake public-private partnerships related to these various approaches should be considered to facilitate new development in the Warrensville/Van Aken district and in proximity to transit stations.
Location Efficient Mortgages	The Greater Cleveland Area Smart Commute Initiative, a jointly launched program between GCRTA and the Federal National Mortgage Association (Fannie Mae), is a regional location efficient mortgage program that offers an added incentive to homebuyers purchasing homes near transit. The Smart Commute program recognizes the transportation cost-savings afforded by transit, which allows individuals to qualify for a larger loan than if transportation costs were not factored into that individuals' risk assessment.	REGIONAL	Though not a direct financing and funding source to facilitate transit-oriented development, the marketing of location efficient mortgages to residents can generate excitement about future housing opportunities in the station area, and serve as to generate demand for new development. Location efficient mortgages, along with indirect incentives offered through the code of ordinances, should be marketed to developers, residential brokers, and the general public to raise awareness about the benefits of housing near transit. Information for homebuyers on the Smart Commute Initiative or other Fannie Mae affordable mortgage products is available from Fannie Mae's Consumer Resource district at 1.800.732.6643. The GCRTA and the City should work with local developers and brokers to promote the use of Location Efficient Mortgages.
Tax Increment Financing	Tax Increment Financing is a development tool designed to help finance eligible area improvements in designated redevelopment areas (TIF districts) by utilizing newtax revenues (the tax increment) generated by the development. The City can designate Tax Increment Financing Districts to finance public improvements in designated areas. The tax increment is based on real property values and effectively uses future tax gains to finance current improvements.	LOCAL	The City has expressed interest in using TIF to fund new public infrastructure in proximity to the transit stations to support private development (as evidenced in developer solicitation).
Tax Abatement Programs	Defined-term tax abatements for qualified projects are used by many jurisdictions as an incentive for development. This type of incentive reduces the near-term annual costs and thus increases net operating income. By providing this incentive, jurisdictions forego a short-term increase in tax revenue yet may achieve a project which may not otherwise be developed and thus realize the benefits resulting from the new development (i.e. new jobs, business license tax revenue, property tax revenue, meals tax revenue, multiplier effects of new jobs and residents).	LOCAL	Tax Abatement Programs are a good option for redevelopment projects, where the potential for near-term higher property taxes could serve as a disincentive to redevelopment. The City offers a residential tax abatement for new construction in Community Reinvestment Areas (CRAs). A very small portion of the City's designated CRA "A" is located within the station area. The City would have to expand this zone or create a new program to offer tax abatements within the station area. A new program may be desirable in that it could be tailored to offer incentives for new commercial development as well as residential development.
Disposition of Publicly Owned Properties	The City may offer City-owned land to developers through a developer solicitation process (e.g. requests for qualifications, requests for proposals, and requests for expressions of interest).	LOCAL	City-owned land within the station area could be offered to developers through a competitive bidding process for redevelopment purposes. The management of the City's inventory is tied to budgetary considerations, market conditions, public land supply and emerging development opportunities. Following an assessment of the above, the City should explore opportunities to dispense City-owned land within the station area or solicit private partners to jointly develop City-owned lands.
Code of Ordinances	The Code of Ordinances is the key planning regulatory tool implemented and updated by the City. The Code of Ordinances sets out enforceable Citywide planning and development regulations including built form requirements, parking standards, parkland and open space requirements as well as streetscaping and street tree regulations among others. While the Code does not function as a direct financing or funding mechanism, it does provide indirect incentives that can encourage private sector participation in advancing transit-oriented development. Incentives offered through the City's code of ordinances, such as density bonuses, expedited development review, reduced/waived development fees, and transfer of development rights may be used to indirectly support private sector action.	LOCAL	The Code of Ordinances provides many indirect incentives - including density bonuses, expedited development review, reduced/waived development fees and transfer of development rights - which could be codified and used as tools to encourage private sector action in the station area. The City should explore opportunities to modify/amend its Code of Ordinances to include policies that permit and facilitate Transit Oriented Development.

City of Shaker Heights

Streetscape
APPENDIX



Warrensville/Van Aken Transit-Oriented Development Plan

Final Report

April 28, 2008



Contents

1.0 Streets & Streetscape





1.0 | Streets & Streetscape

The quality of the streetscape and open space in the Warrensville/Van Aken district will contribute immeasurably to the quality of life in the urban environment. When designed well, they will attract new investment, provide an essential amenity to residents and workers and create a lasting impression of the new district.

The WVA Plan includes a major central open space that will form a focus for the retail district and the transit station.

The cross sections in this chapter illustrate the recommended treatment for streets in the district. The streetscape treatment is based on a general condition of a 15 ft+/- wide pedestrian zone that accommodates a clear, safe and well lit pedestrian route, space for amenities such as benches and waste receptacles, and street trees. The minimum sidewalk width should be 5 ft.

Street trees are essential to create appealing pedestrian focused environments. Trees should be planted in a wide and continuous soil trench to increase the soil volume. With irrigation and drainage, the life span of street trees will reduce the short-term costs of replacement. The cross sections illustrate a planting zone within which trees could be set in open planting pits covered with shrubs, ground covers and annuals to enhance the landscape appeal of the center. In areas where an open planting bed is used it should be limited in length to provide clear pedestrian access from

on-street parking. The planting area could be covered with grates in areas with high pedestrian traffic. On-street parking is proposed for all local streets to help calm traffic, to serve adjacent shops and services and to provide a barrier to moving traffic for pedestrians on sidewalk.

Streets have been designed to ODOT standards, which call for 12' travel lanes. However, the preferred lane widths are 11'-0".

Primary Roads

Chagrin Boulevard

- Chagrin Boulevard is a minor arterial road that widens to four lanes on the west approach to Warrensville Center Road through to the east;
- the road currently accommodates on street parking on the south side;
- two vehicle travel lanes in each direction with on-street, off-peak parking on both sides;
- a 20 ft wide pedestrian zone, some of which is located outside of the right-of-way;
- the pedestrian zone is comprised of an area for tree planting adjacent to the curb and a sidewalk adjacent to the street related buildings; and,
- the hard surface area of the pedestrian zone should be extended to the building façade and could accommodate tables and chairs, displays for shops.

Warrensville Center Road

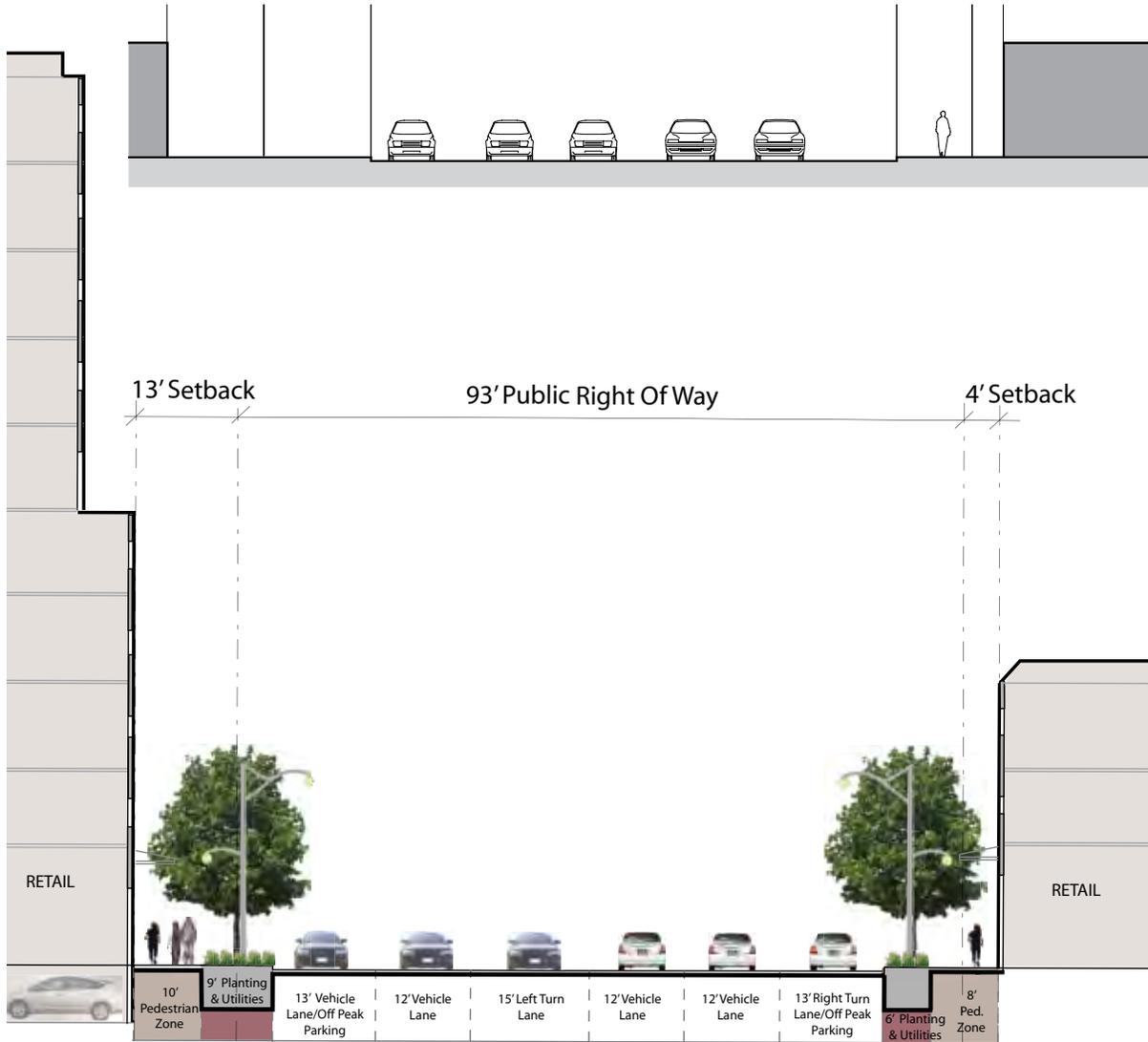
- a four-lane arterial road that widens near the intersection to include turning lanes;
- the roadway is reconfigured to include a median to help identify the district and to reduce the expanse of asphalt;
- two vehicle travel lanes in each direction with on-street off-peak parking; and,
- 17 ft wide pedestrian zone comprised of an area for tree planting adjacent to the curb and a sidewalk adjacent to the street related buildings.

Farnsleigh Road

- a four-lane, semi-circular, local street northwest of the Chagrin Boulevard/Warrensville Center Road intersection.

Tertiary Roads (Local Roads)

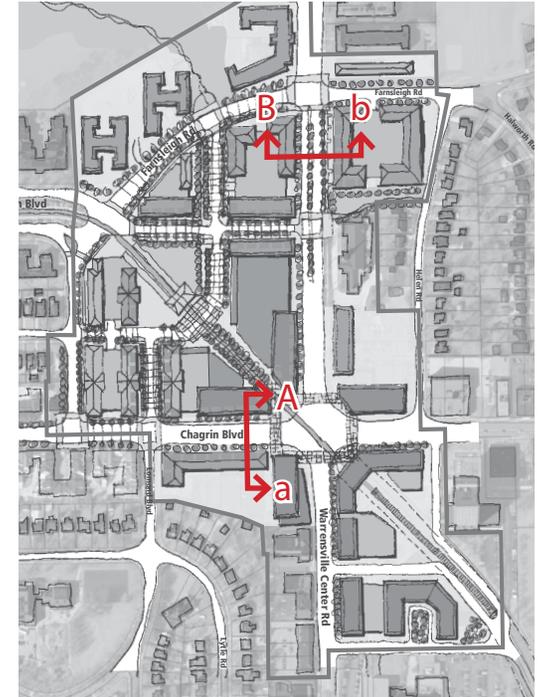
- 70 ft right-of-way with one vehicle travel lane in each direction and on-street parking on both sides.

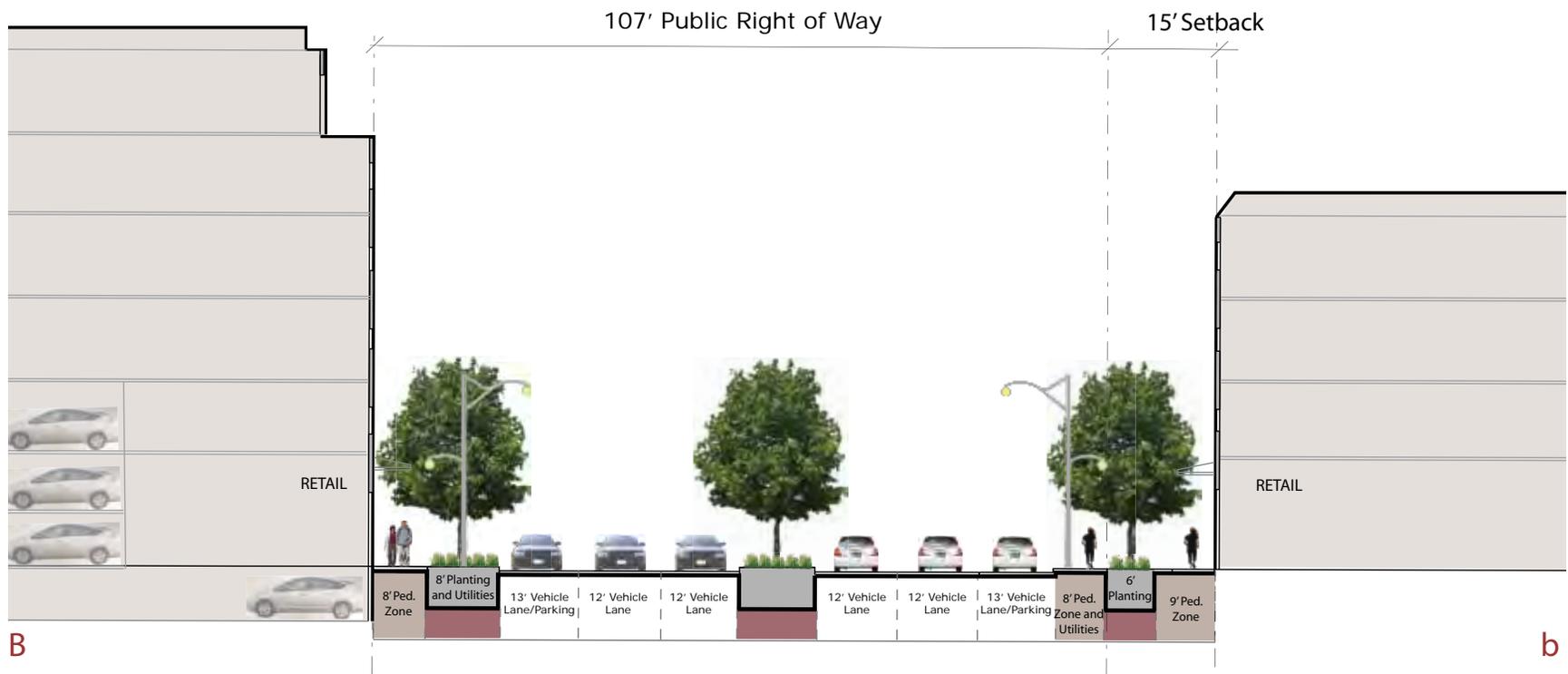
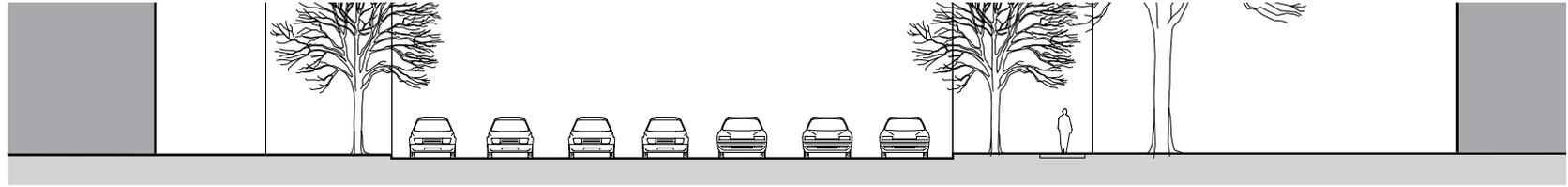


A

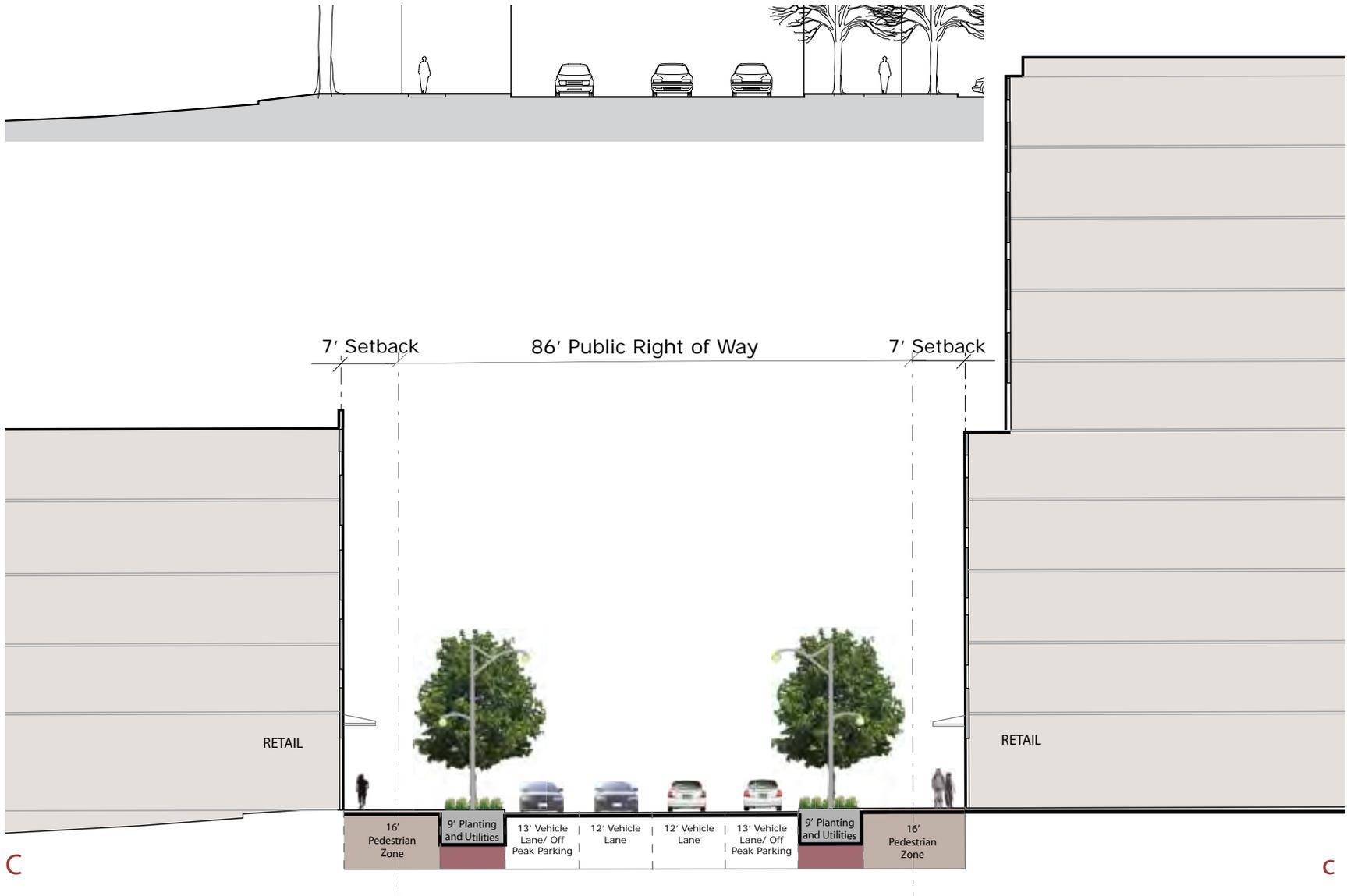
a

A-a : Chagrin Boulevard





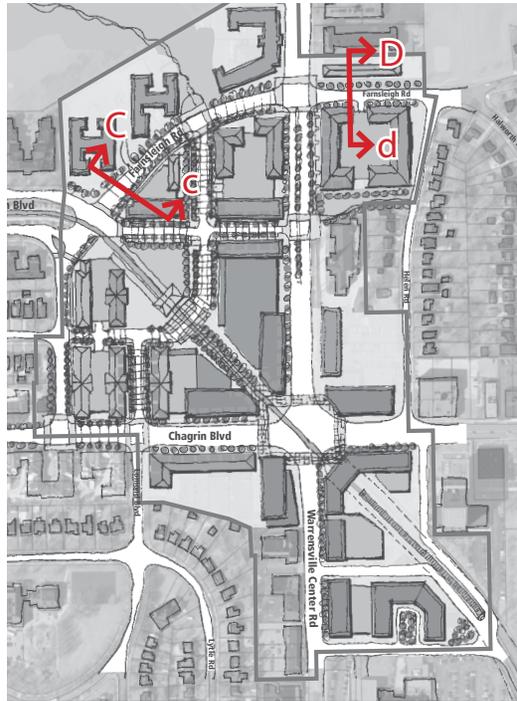
B-b : Warrensville Center Road



C

C

C-c : Farnsleigh Road west of Warrensville



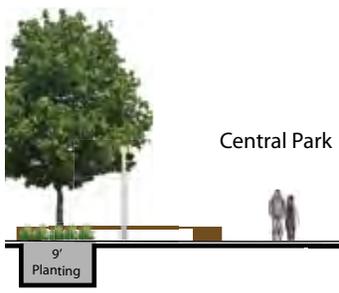
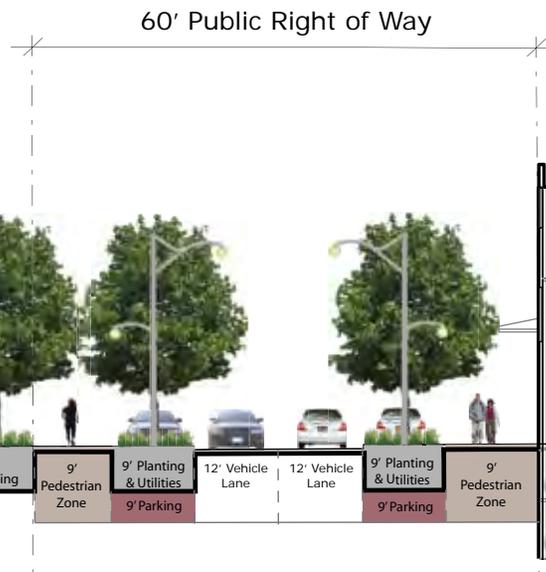
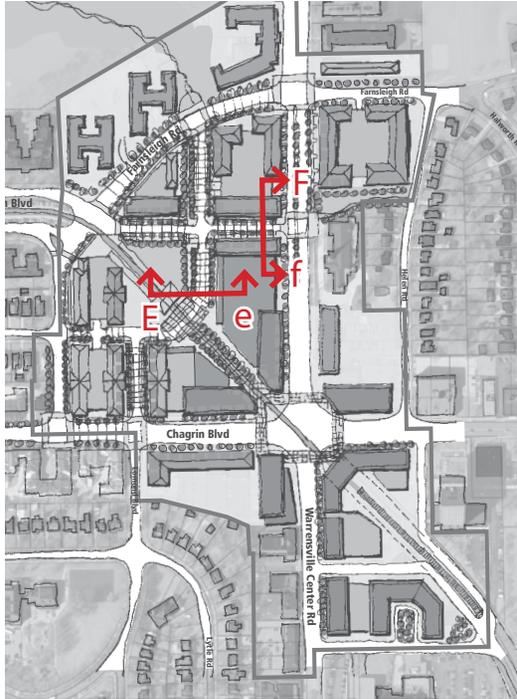
64' Public Right of Way



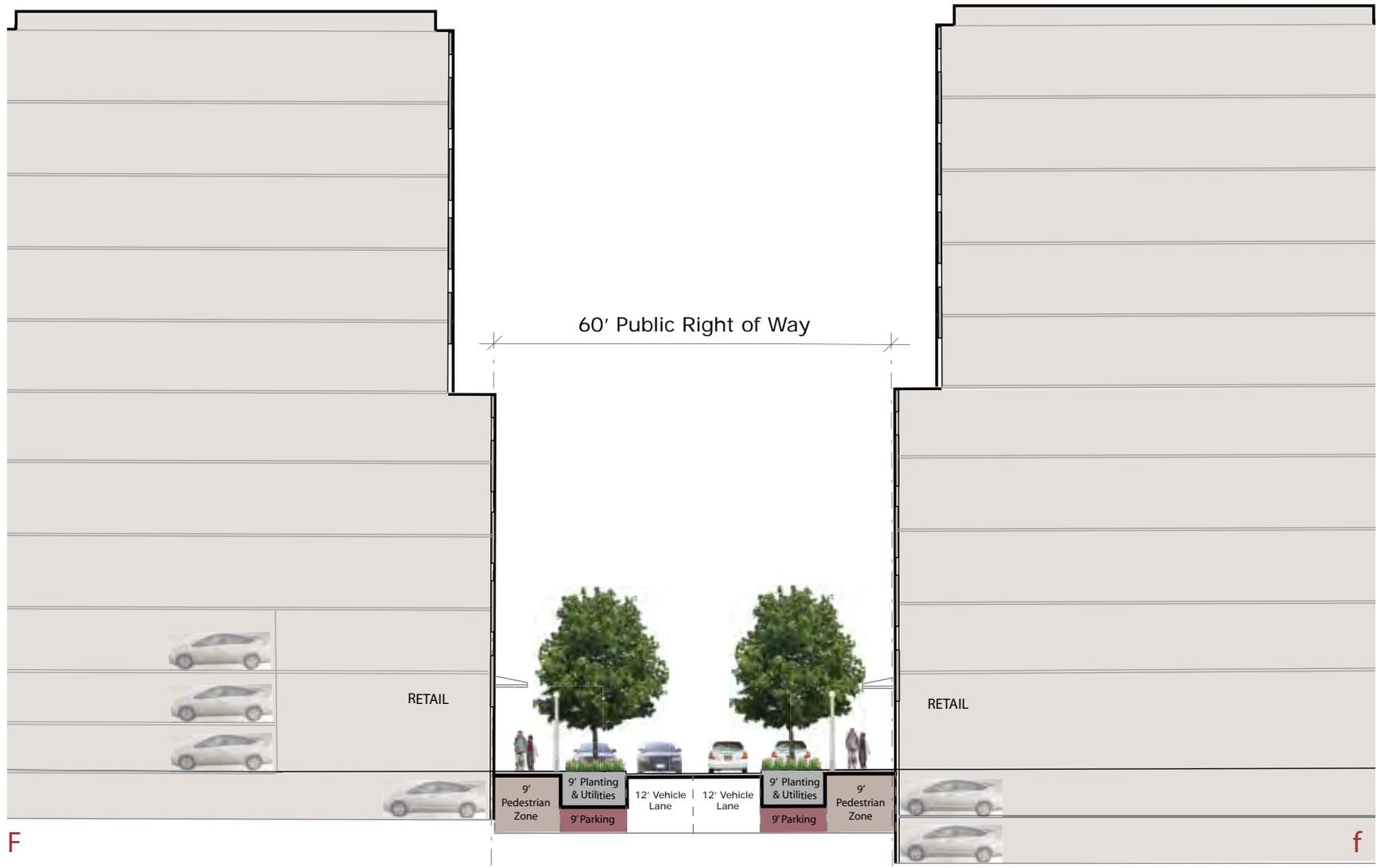
D

D-d : Farnleigh Road east of Warrensville

d

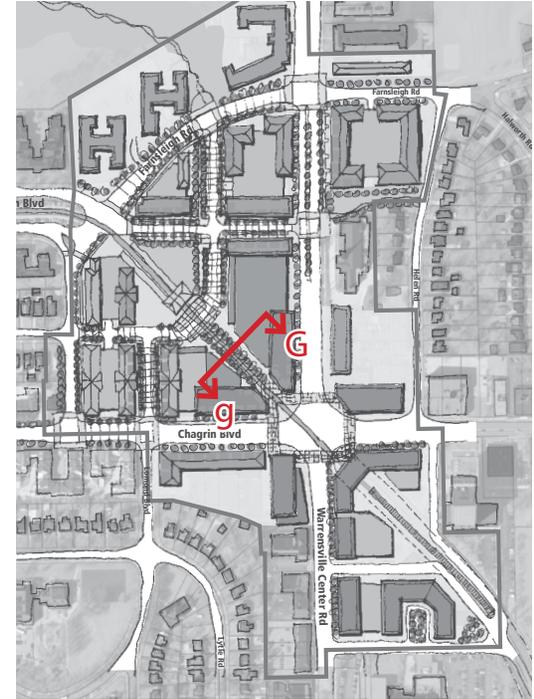


E
Internal N/S Street



F

Van Aken Extension

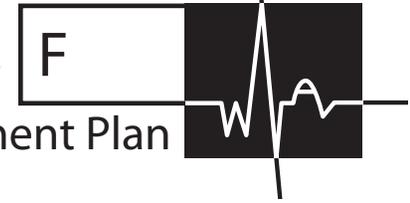


G-g : Transit Mall NW of Warrensville/Chagrin Intersection

City of Shaker Heights

Block by Block Analysis

APPENDIX



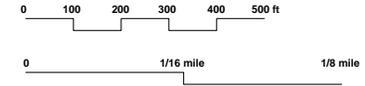
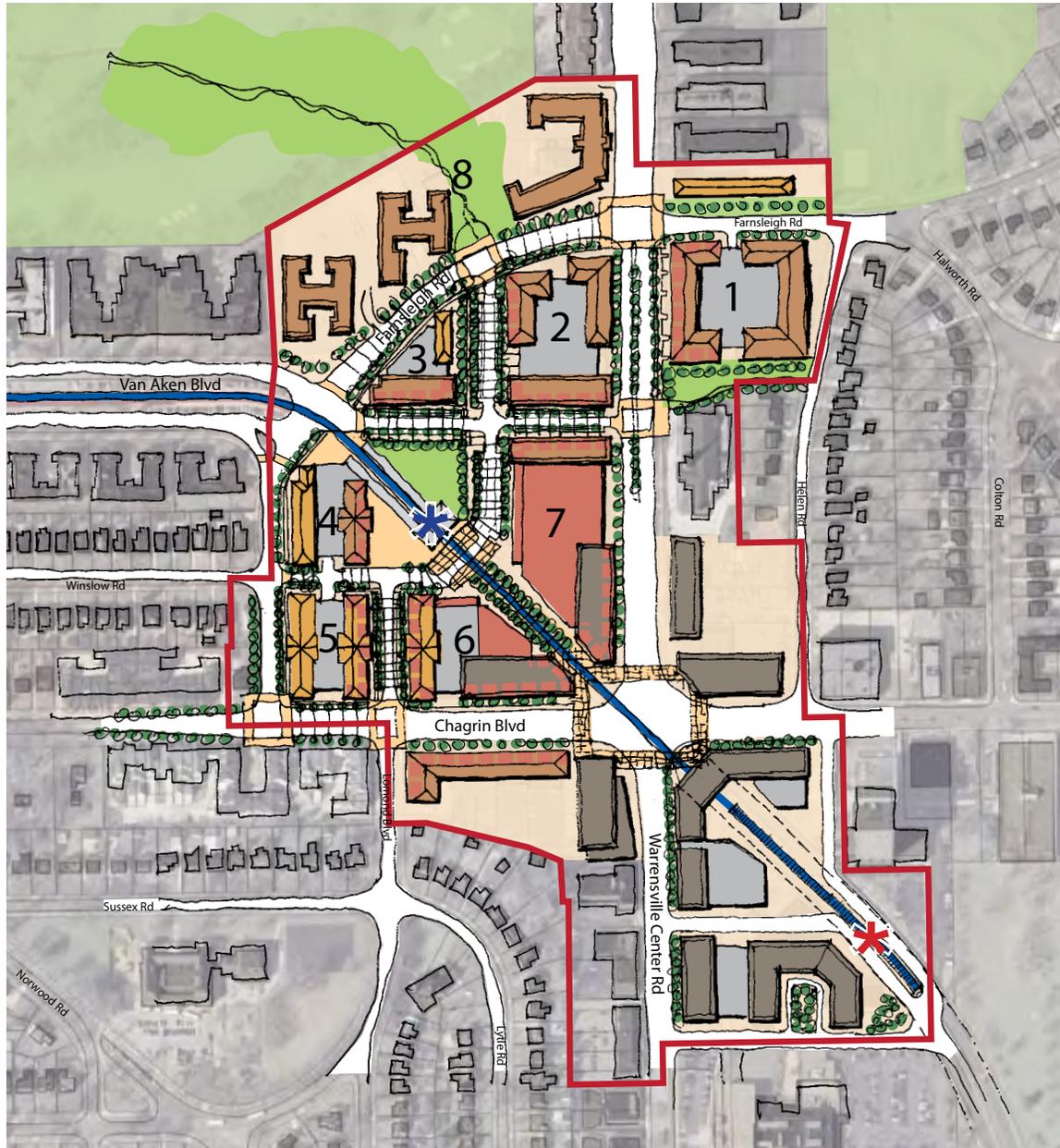
Warrensville/Van Aken Transit-Oriented Development Plan

Final Report

April 28, 2008

Contents

1.0 Description of the Blocks



Urban Design Plan
31 March, 2008

- Study Area Boundary
- Rapid (Blue Line)
- Retail at Grade
- Retail
- Office
- Apartments
- Townhouses
- Parking Garages
- Park/Green Space
- ★ Transit Station
- ★ Intermodal Station



1.0 | Description of the Blocks

For the purposes of the detailed block development analysis, only the study area in the northwest quadrant has been included. The development plan for the Warrensville/Van Aken TOD Plan was undertaken on a block by block basis in order to assure that the initial program of uses can be achieved, that transit can act as a catalyst to development, and to assure that parking can be accommodated within a pedestrian environment. In addition, by analyzing the WVA Plan on a block-by-block basis, a natural phasing plan can be established that achieves one of the objectives established early in the study process; to assure existing retail establishment can continue to function during the development of the plan.

The initial program for development included:

1. 160,000- 200,000 s.f. of retail
2. 500-600 residential units
3. 250,000-500,000 s.f. of office
4. an intermodal transit facility
5. parking to meet development needs
6. on-street parking where possible

A comparison of the program with the amount of development illustrated in the proposed plan and outlined on the block-by-block basis indicates that the program goals have been realized.

The individual blocks have been developed such that most have a mix of uses plus parking, ideally edged with uses at street level to hide the parking. Parking has been calculated using a module of 10'-0" x 20'-0". Residential

buildings are 62' deep and the average unit has been calculated at 1,000 s.f. Office buildings are 75' deep.

Parking in the table of block by block yields is calculated using the following TOD formula:

Residential	1.25 spaces / unit
Retail	4 spaces / 1000 sf
Office	3 spaces / 1000 sf

Current zoning uses as a guide 2 spaces / unit for residential, 3.3 spaces / 1000 sf for office, and 5 spaces / 1000 for retail, with flexibility for shared/mixed uses.

The following is an analysis of the development illustrated in the demonstration plan on a block-by-block basis.

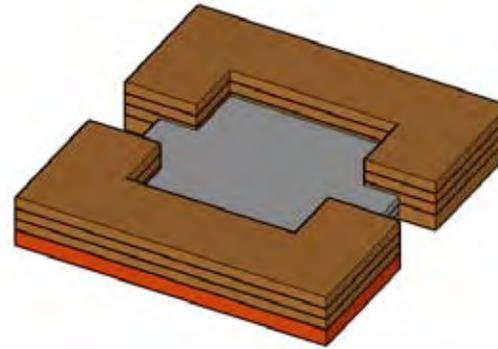
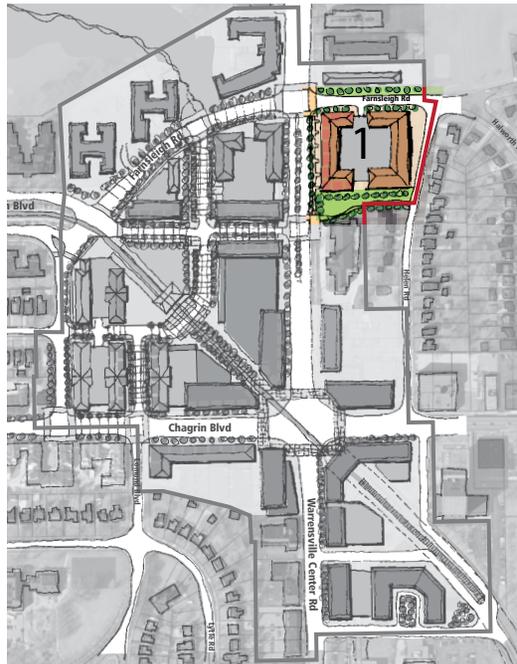
Reading the Charts

The chart with each block analysis indicates the location of the site as indicated in the master plan, the number of residential units (@1000s.f./unit), the amount of retail and office, the number of parking spaces on the block and the number of levels of parking above and below grade (i.e. 3 above + 1 below).

Site	Residential	Retail	Office	Parking	Heights
1	40 Apt. Units	6,000 s.f.	0	360 Cars (shared parking)	4 Flrs. Apts 3+1 Parking
2	70 Apt. Units	35,000 s.f.	0	180 Cars	8 Flrs. Apts. 3+1 Parking
3	6 T.H. Units 90 Apt. Units	4,000 s.f.	0	144 Cars	3 Flrs. T.H. 8 Flrs. Apts 3+1 Parking
4	102 Apt. Units	4,000 s.f.	0	288 Cars	8 Flrs Apts 3+1 Parking
5	24 T.H. Units	3,000 s.f.		240 Cars	4 Flrs. T.H. 6 Parking
6	70 Apt. Units	50,000 s.f.	120,000 s.f.	240 cars	8 Flrs Apts. 10 Flrs Off. 3+1 Parking
7	70 Apt. Units	100,000 s.f.	120,000 s.f.	1000 cars	8 Flrs Apts. 10 Flrs Off. 2 Flrs Retail 2 1/2 below grade
8	270 Apts 3 Buildings	10,000 s.f.		450 cars	5 Flrs 3+1 Parking
Totals	30 TH. Units 712 Apartments	212,000 s.f.	240,000 s.f.	2,902 cars	

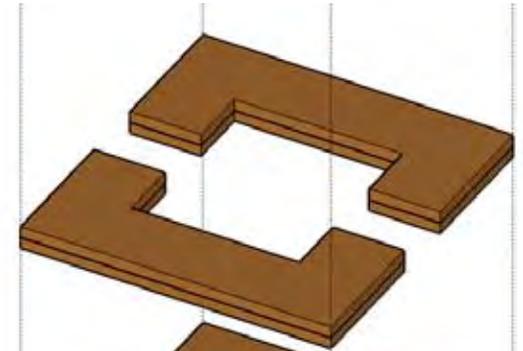
Block 1

Located on the south east corner of Warrensville Center Road and Farnsleigh Road (currently a car dealership) is a mixed-use block with residential apartments facing Farnsleigh Road, and ground floor retail on Warrensville Center Road. These uses conceal parking at the center of the block. There is a large excess of parking that is to be for retail, transit and office users. This site is outside of the immediate TOD core of the Plan but is important to the fully developed district.

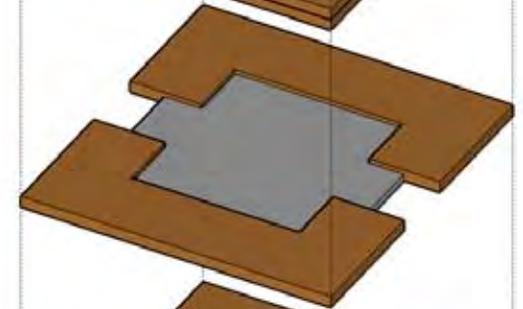


- Retail
- Apartments
- Parking Garages

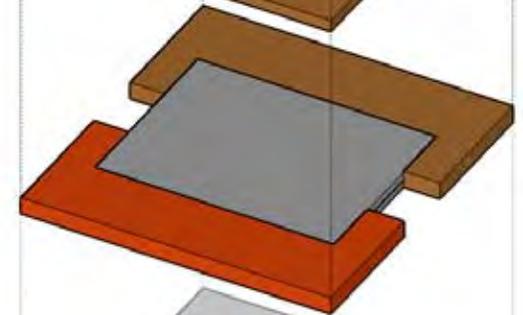
Levels 3-4



Level 2



Level 1
(2 levels parking)



Below Grade Parking
(1 Level)

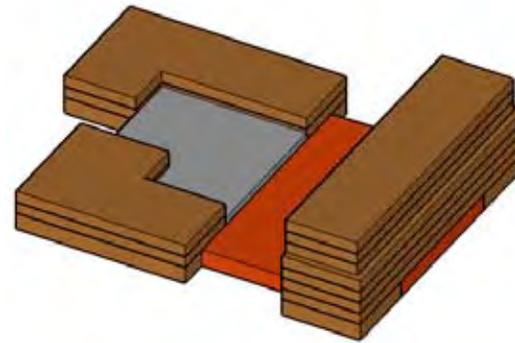
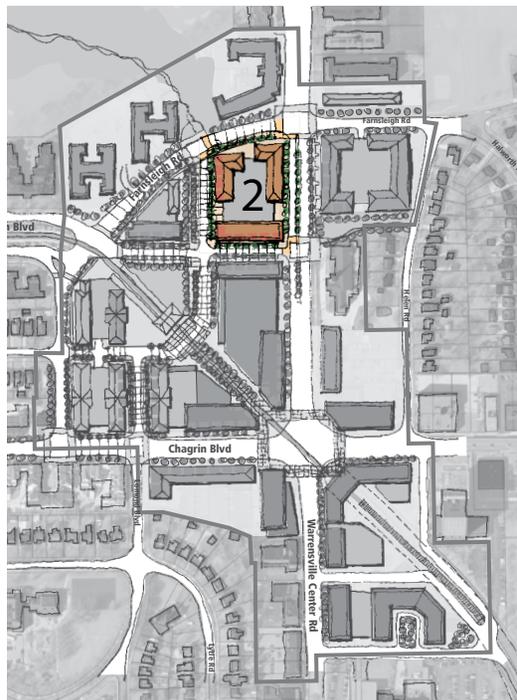


Site	Residential	Retail	Office	Parking	Heights
1	40 Apt. Units	6,000 s.f	0	360 Cars (Shared Parking)	4 Flrs. Apts



Block 2

Located at the south west corner of Warrensville Center Road and Farnsleigh Road is a structure with two 3 ½ story apartment buildings on Farnsleigh Road and an 8 story apartment building on the new Van Aken Boulevard extension. Retail occupies ½ of the site extending from the new retail street under the 8 story apartment building, and parking is at the center of the block.



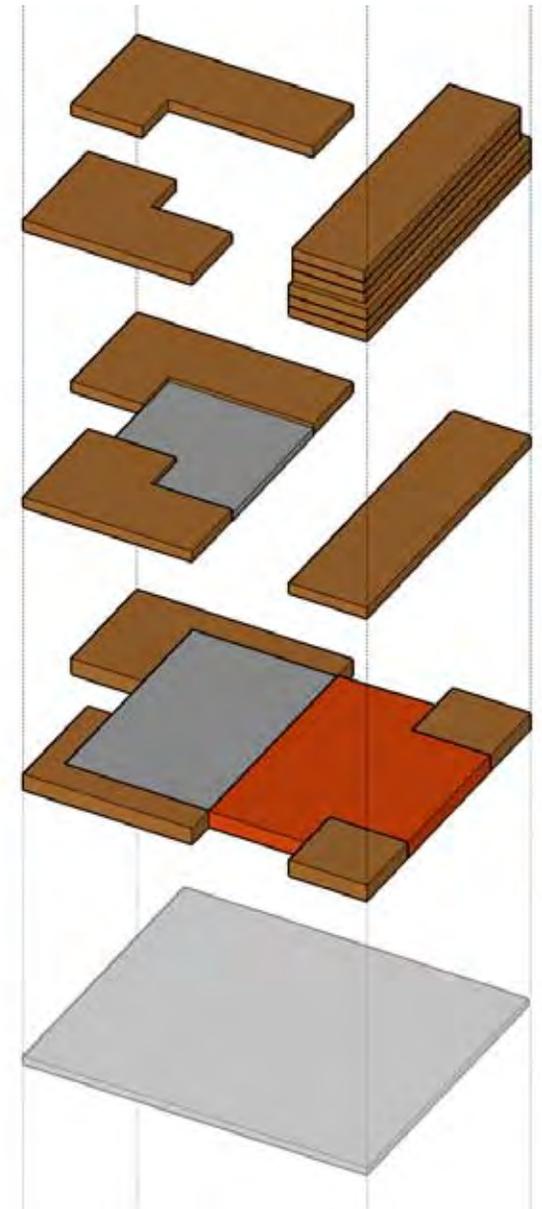
- Retail
- Apartments
- Parking Garages

Levels 3-up

Level 2

Level 1
(2 levels parking)

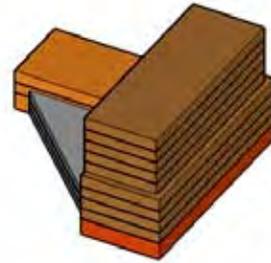
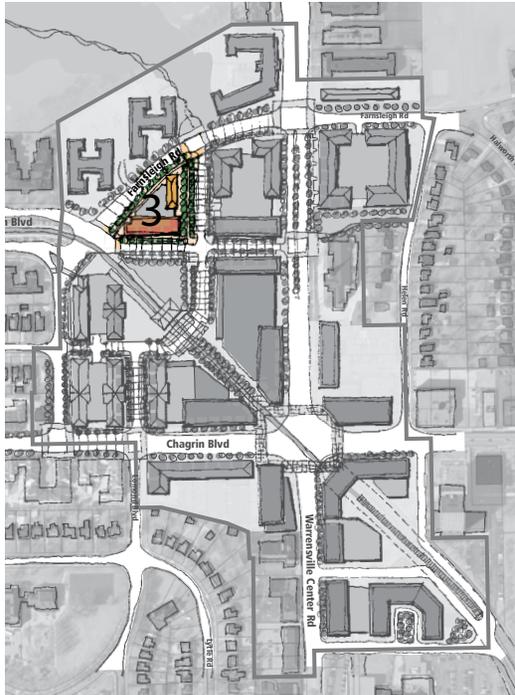
Below Grade Parking
(1 Level)



Site	Residential	Retail	Office	Parking	Heights
2	70 Apt. Units	35,000 s.f.	0	180 Cars	8 Flrs. Apts. 3+1 Parking

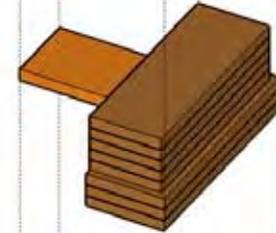
Block 3

Located on Farnsleigh Road on the north side of the Van Aken Boulevard extension (triangular site) is a residential block comprised of a parking structure with townhouses on the new north/south road and a 10 story "feature" apartment building at the end of Van Aken Boulevard coming from the west. There is retail at the base of the apartment building.

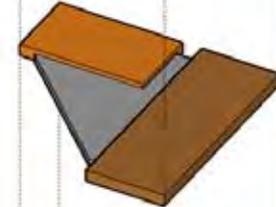


- Retail
- Apartments
- Townhouses
- Parking Garages

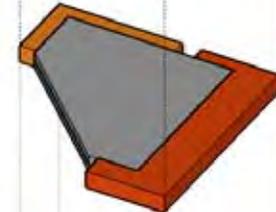
Levels 4-10



Level 2



Level 1
(2 levels parking)



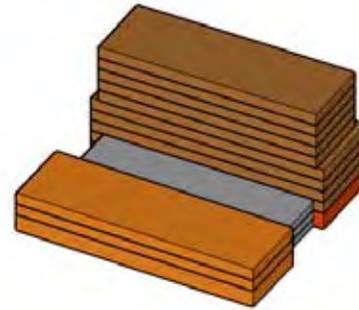
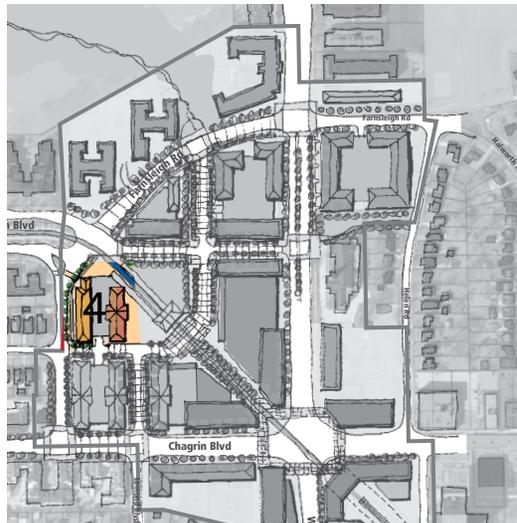
Below Grade Parking
(1 level)



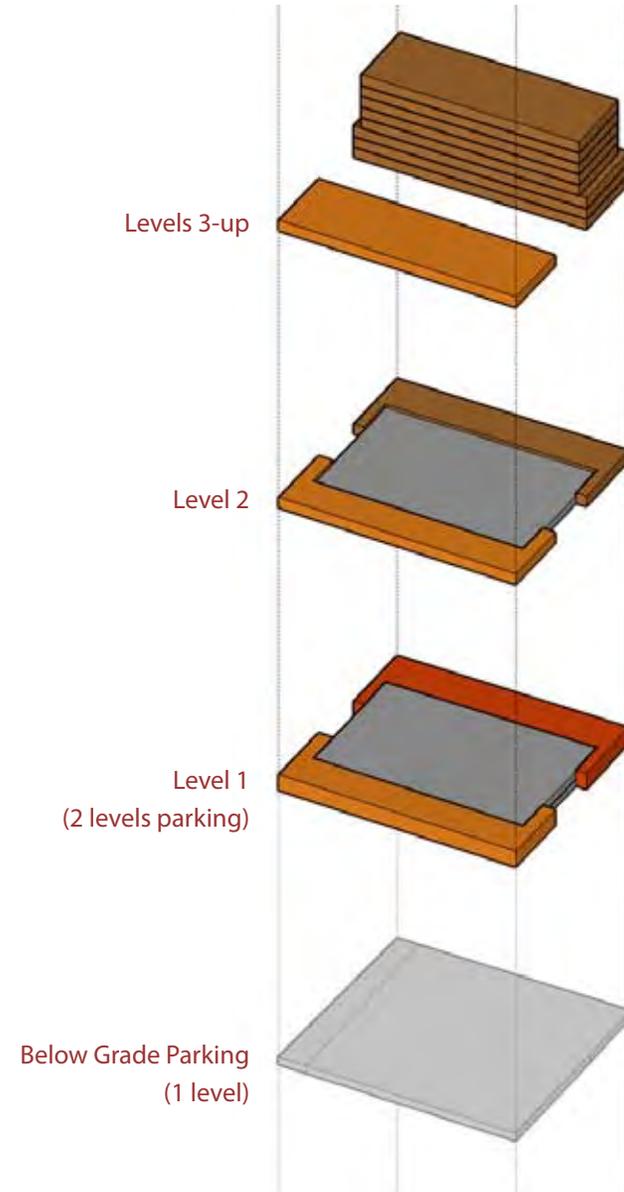
Site	Residential	Retail	Office	Parking	Heights
3	6 T.H. Units 90 Apt. Units	4,000 s.f.	0	144 Cars	3 Flrs. T.H. 8 Flrs. Apts 3+1 Parking

Block 4

This site is across the Rapid line to the south of block 3 on Farnsleigh Road. The proposal is to line the streets with residences. The resulting building is a parking garage with townhouses on Farnsleigh Road facing the existing single-family area and an 8 story apartment building on the extension of Winslow Road. Retail is located at the base of the apartment building. This building visually terminates Lomond Boulevard. The orientation of the building creates a small square to the east, illustrating the potential to create small intimate green spaces as part of the open space system.



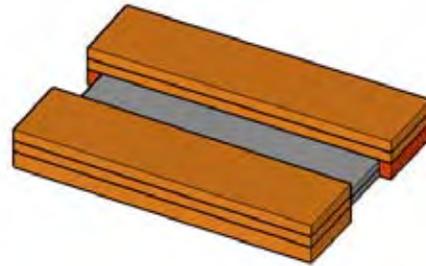
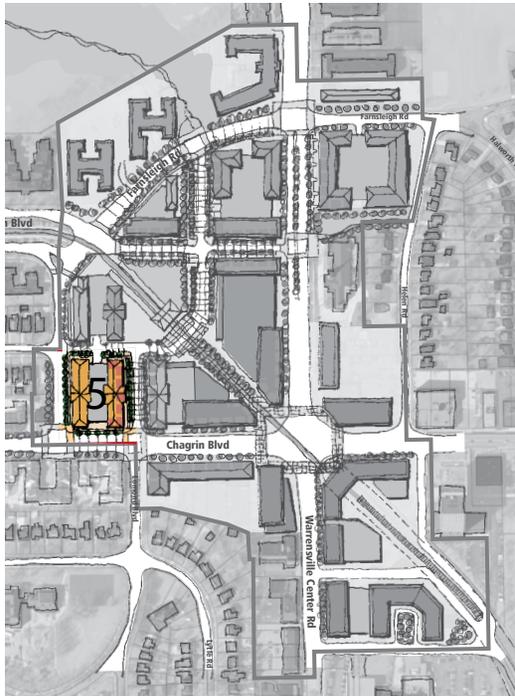
- Retail
- Apartments
- Townhouses
- Parking Garages



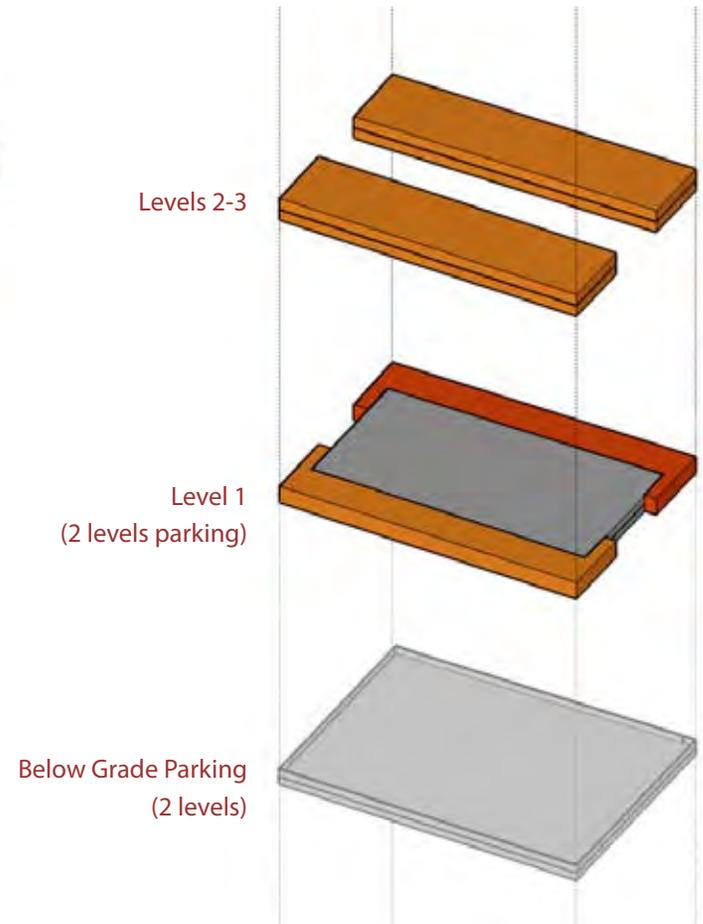
Site	Residential	Retail	Office	Parking	Heights
4	102 Apt. Units	4,000 s.f.	0	288 Cars	8 Flrs Apts 3+1 Parking

Block 5

Located on the northeast corner of Farnsleigh Road and Chagrin Boulevard, this block continues the residential nature of the street. The structure is made up of 3 story townhouses on the street, with parking to the interior of the block. The parking serves for the retail and the townhouses screen the garage. This could also be accomplished with at grade retail.



- Retail
- Townhouses
- Parking Garages

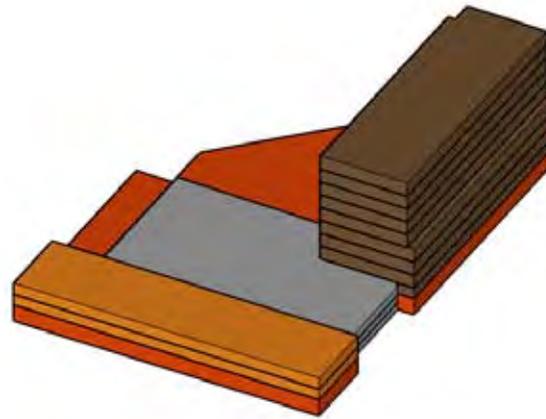
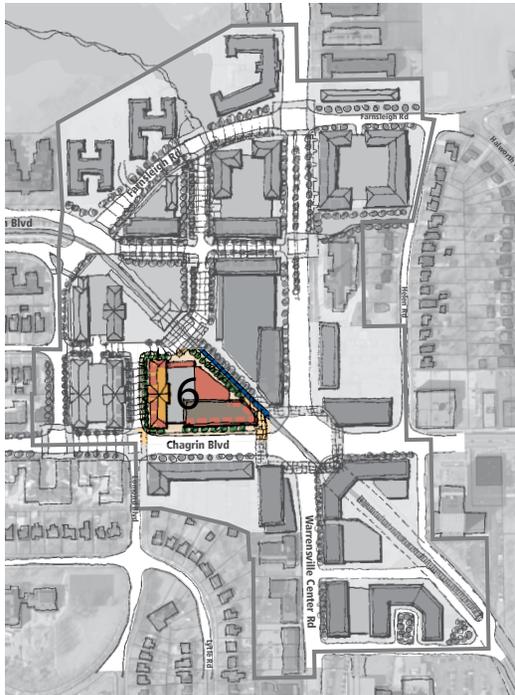


Site	Residential	Retail	Office	Parking	Heights
5	24 T.H. Units	3,000 s.f.		240 Cars	3 Flrs. T.H. 2+2 Parking

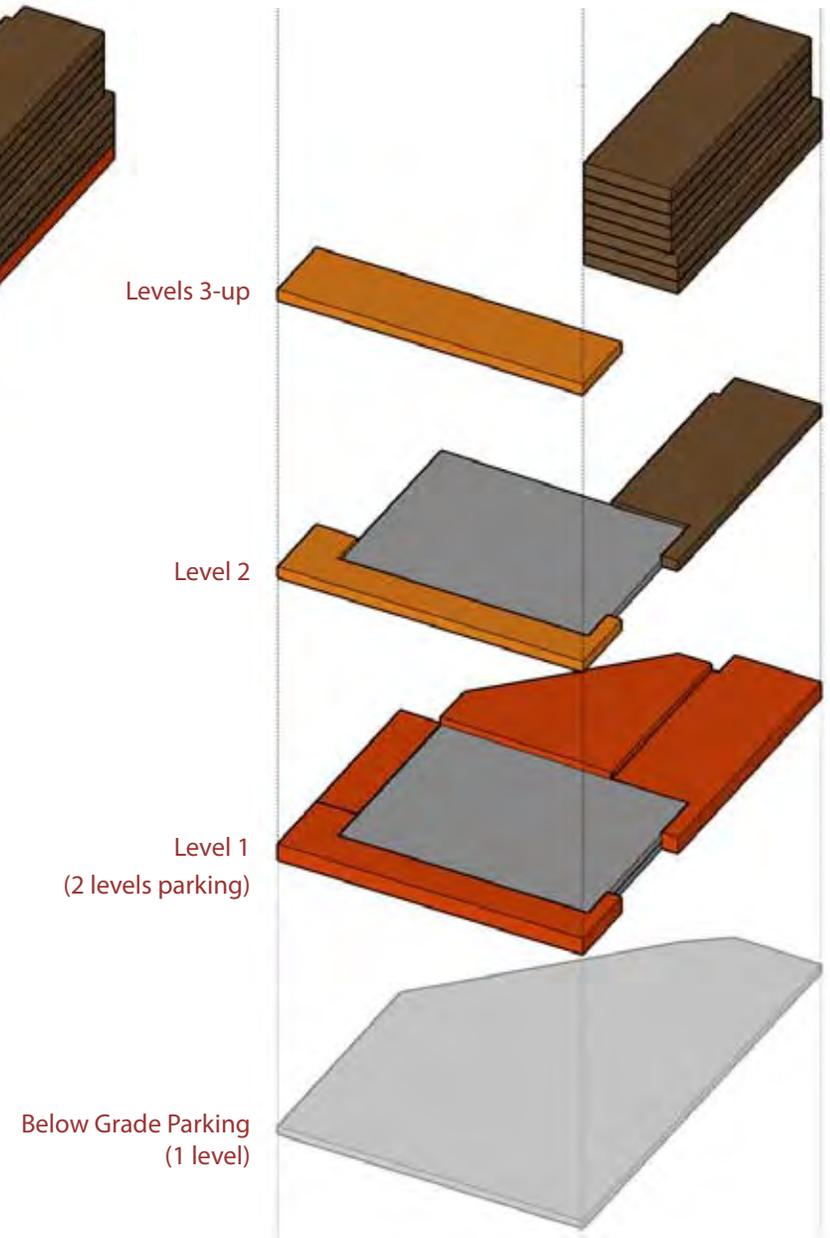


Block 6

To the east of Block 5 on Chagrin Boulevard, this block serves as a transition from residential to office uses. The structure includes an apartment building on the west end and the office building located at the major intersection of Warrensville Center Road and Van Aken Boulevard. The parking is provided for the office building and there is retail located facing the park to the north and Chagrin Boulevard to the south.



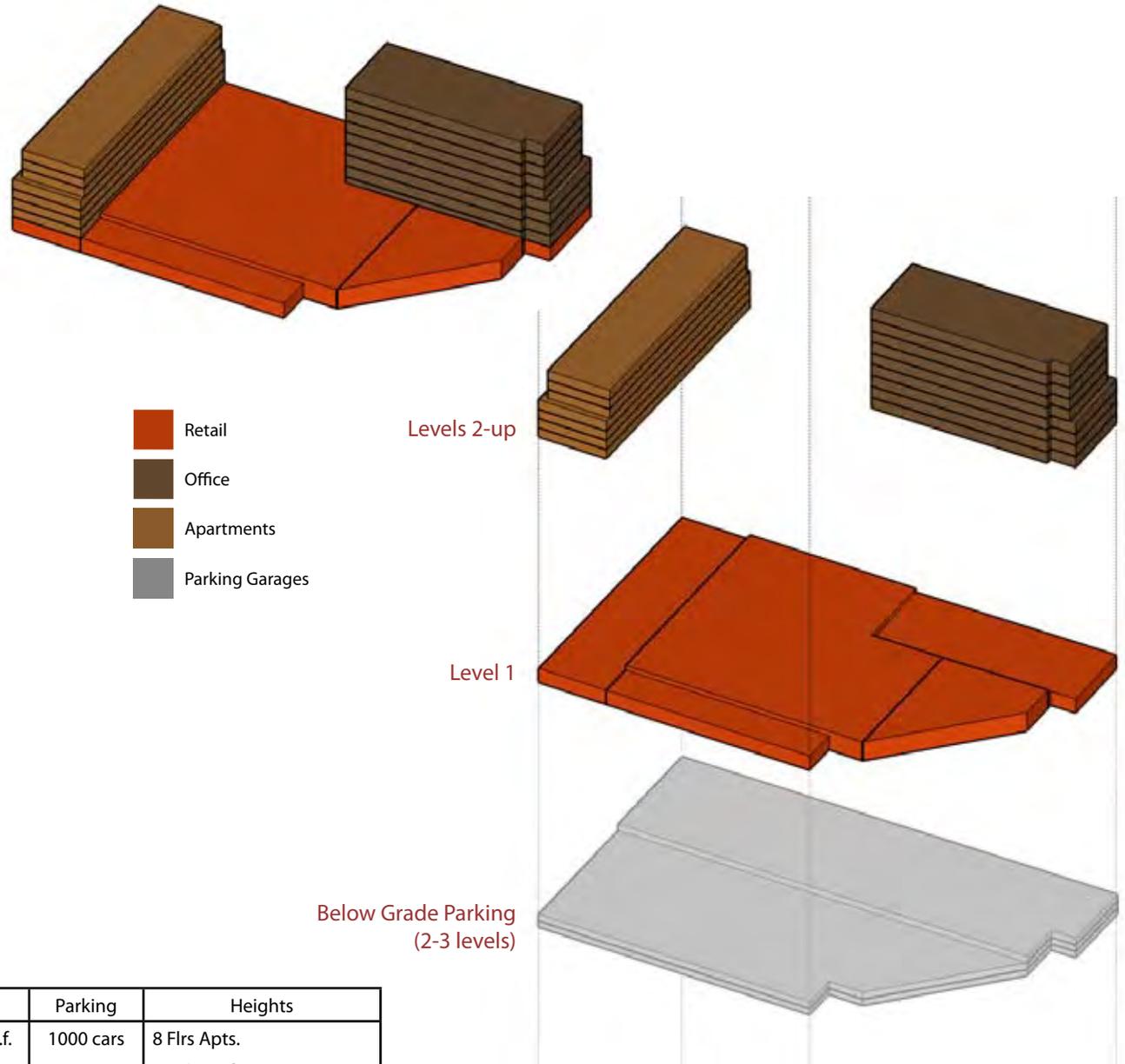
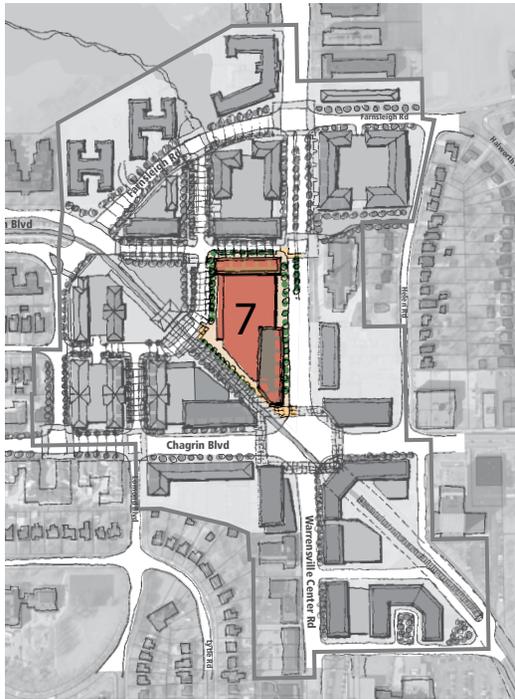
- Retail
- Office
- Townhouses
- Parking Garages



Site	Residential	Retail	Office	Parking	Heights
6	70 Apt. Units	50,000 s.f.	120,000 s.f.	240 cars	8 Flrs Apts. 10 Flrs Off. 3+1 Parking

Block 7

Located at the northwest corner of Chagrin Boulevard and Warrensville Center Road, this is a major retail site with an office tower above at the corner and an apartment building along the extension of Van Aken Boulevard. Retail is a large format with some at the base of the apartment building.

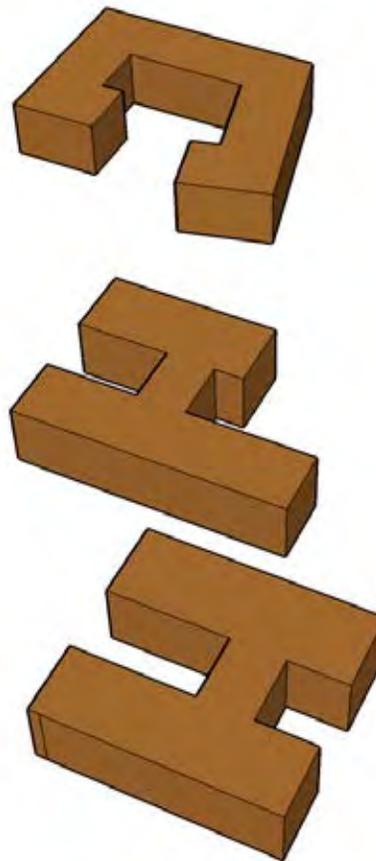
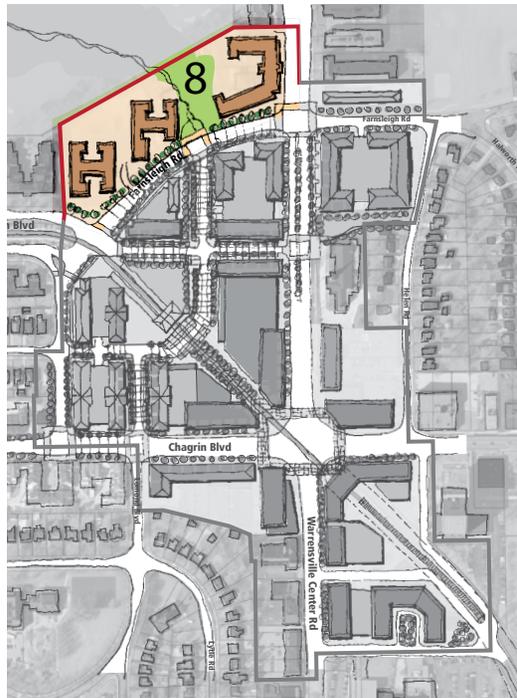


Site	Residential	Retail	Office	Parking	Heights
7	70 Apt. Units	100,000 s.f.	120,000 s.f.	1000 cars	8 Flrs Apts. 10 Flrs Off. 20 Ft Retail Parking (2 1/2 below grade)



Block 8 - North of Farnsleigh Road

The sites north of Farnsleigh Road are important to the residential mix and feel of the street. The buildings proposed for this area are residential apartment buildings, 5 stories in height. Site



Apartments

Site	Residential	Retail	Office	Parking	Heights
8	270 Apts 3 Buildings	10,000 s.f.	0	450 cars	5 Flrs 3+1 Parking

Implementation Strategy

APPENDIX



Warrensville/Van Aken Transit-Oriented Development Plan

Final Report

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Contents

1.0 Implementation Strategy

- 1.1 Introduction
- 1.2 Seven Implementation Principles
- 1.3 Six General Observations
- 1.4 Four Issues to Overcome
- 1.5 Three Actions to Stimulate Change
- 1.6 Four Intended Results - Future Success



Baldwin Park, Orlando, Florida

1.0 | Implementation Strategy

1.1 | Introduction

Ongoing change is a positive sign of a healthy city. In order for the City of Shaker Heights to continue to be successful in the long term – economically, aesthetically and in terms of quality of life – an urban structure that includes and supports Transit-Oriented Development (TOD) must be promoted, and more importantly, achieved.

The Warrensville/Van Aken district is considered a key component of an urban structure focused on transit investment. Its comprehensive redevelopment is an enormous opportunity for catalytic economic development and the creation of a more rich and diverse urban environment that offers multiple lifestyle choices, while both supporting existing transit and facilitating improved traffic flow and safety.

It is therefore the goal of the City of Shaker Heights to establish a TOD vision within the Warrensville/Van Aken district. The vision must aim to maximize transit ridership potential and ultimately result in the district's economic and aesthetic renewal. The Warrensville/Van Aken district is expected to evolve with a physical form that is higher in density, human in scale, and designed to be pedestrian-friendly and transit-supportive.

1.2 | Seven Implementation Principles

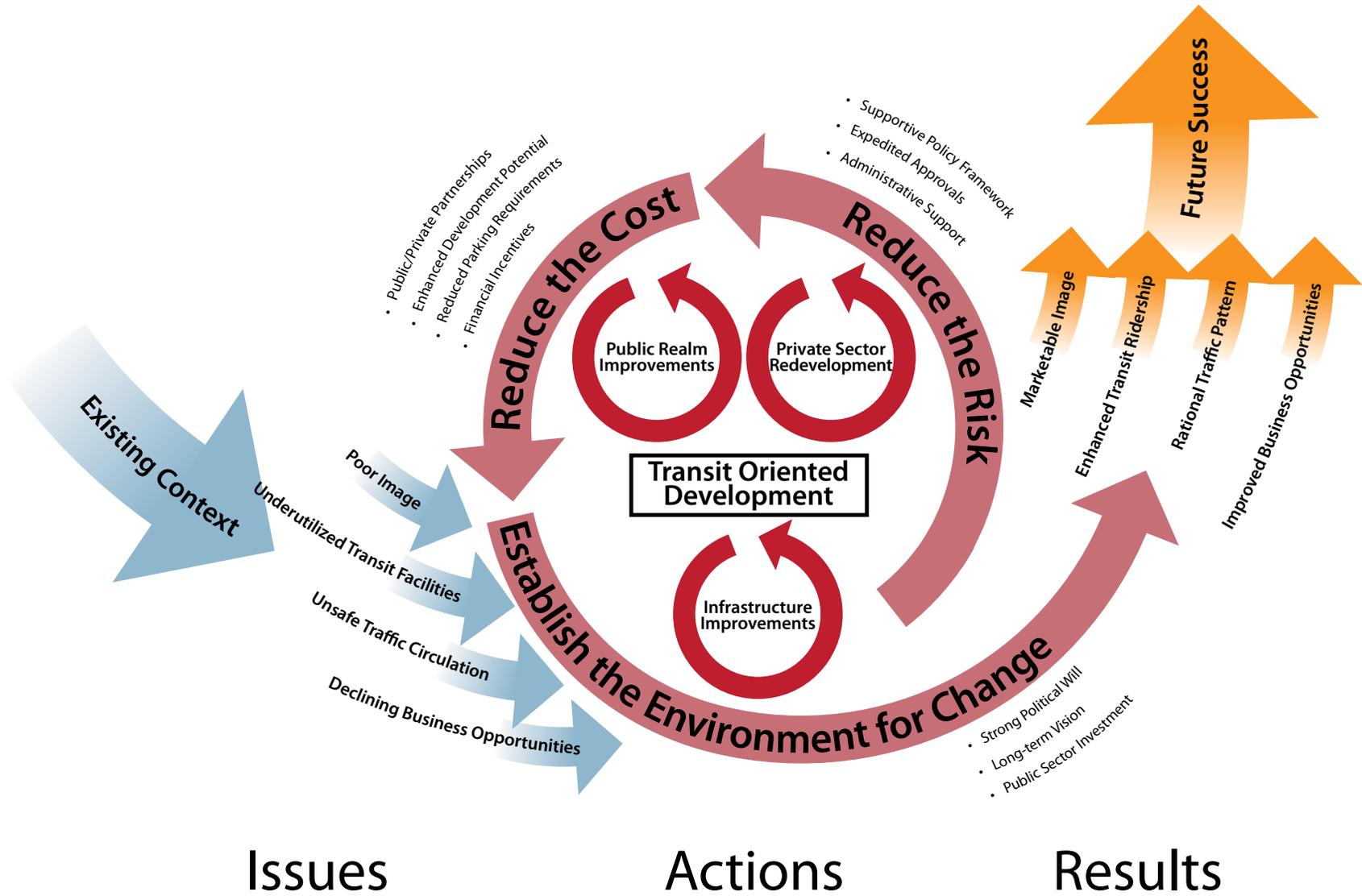
TOD often refers to the creation of denser, mixed-use activity centers that are well served by high order public transportation. Proponents of TOD believe that a combination of design features and policies will induce travel mode shifts that can result in a number of social, economic and environmental benefits. Seven key implementation principles of TOD are:

1. A strong vision is required to guide investment decisions.
2. Political will to achieve the vision is a fundamental requirement.
3. Administrative support is required from GCRTA and all municipal departments.

4. Cooperation with the private sector is necessary to make the vision become reality.
5. Public sector investment always precedes private sector investment.
6. Maximizing opportunities to leverage funds from regional, state and federal programs using available City resources is critical to both short and long-term feasibility.
7. Success takes time, and change will happen incrementally based on a variety of economic and market factors.

The achievement of the TOD vision promotes a fundamental and comprehensive change to the function and character of the Warrensville/Van Aken district. In addition to the physical transformation, success will also require economic development initiatives that result in job preservation and generation, live-work opportunities, enhanced business opportunities and incentives to encourage redevelopment.

Ultimately, the implementation of the TOD vision within the Warrensville/Van Aken district requires an understanding of the factors that either promote or frustrate its achievement within the City of Shaker Heights.





1.3 | Six General Observations

Generally, it is understood that market support for higher density forms of development in the City of Shaker Heights is generally weaker than for lower density, more suburban forms of development and that current physical form, and transportation system design within the Warrensville/Van Aken district work against the achievement of TOD. As a result, it is the purpose of the Implementation Strategy to establish a comprehensive set of planning tools and financial incentives that will facilitate the achievement of the vision. The six important observations articulated throughout this Report are as follows:

1. A New Urban Structure is Required

The majority of politicians, planners and other interested people are saying the same thing about the need to achieve a new, better balanced, urban structure that is based on a system of centers and corridors, served by higher order transit. Many observers across many disciplines stress that a continuation of suburban sprawl as the only lifestyle choice is neither sustainable nor financially viable. There must be a more balanced approach, where attractive lifestyle alternatives are provided within the City's urban centers, and that this urban lifestyle must be supported by urban amenities, including higher order transit.

2. There are Success Stories from Across North America

There have been some success stories in Shaker Heights and in other jurisdictions within Greater

Cleveland and throughout North America. Some locations in the City are slowly evolving into more "urban" districts. They are vibrant and successful and typically include a mix of uses developed at higher densities. Other jurisdictions have also achieved some success in implementing their TOD districts, although no one can yet claim complete success.

3. There are a Variety of Tools Needed to Achieve Success

A variety of tools have been used to help stimulate the development of TOD. Across North America, various levels of government have used a vast array of planning, financial and other tools to facilitate the desired higher density, pedestrian friendly environments. Success is, however, usually a result of a combination of tools and circumstances, as opposed to one critical action. Typically, government intervention beyond infrastructure investment and enhanced transit facilities (through building programs, incentives and permissive planning policy regimes, for example), is seen as a key redevelopment catalyst that can influence private sector investment decisions.

4. There are Quantifiable Benefits to TOD

Over time, the costs of implementation are typically offset by the quantitative and qualitative benefits of TOD. There is both a public interest and a business case for the implementation of a new urban structure. Its implementation, or, more correctly,

its faster implementation, requires a focused effort, political will and a complementary package of planning policy, building programs and financial tools.

5. Change Takes Time

Changing an established urban structure takes time, and will occur incrementally. It is not anticipated that wholesale changes to the urban fabric and consumer lifestyles can occur overnight in Shaker Heights. Rather, the introduction of TOD can provide much greater choices for transportation, living and working in the City for a sizeable and growing portion of residents over time, even while the predominant mode of choice remains private automobiles.

6. Cooperation and Commitment are Required

Lastly, it is critical that all private sector TOD initiatives be supported by a reciprocal commitment by the City and other public agencies to create the components of the road pattern, the pedestrian realm, public buildings and infrastructure. The improvements to the pedestrian realm and public infrastructure must be developed in concert with private sector investment.

The adjacent graphic represents the engine of transformation for achieving success in the Warrensville/Van Aken district. The graphic promotes a program focused on ISSUES – ACTIONS – RESULTS, and it forms the basis and structure for the implementation strategy.

1.4 | Four Issues to Overcome

More specifically, there are a number of variables that will determine the success of TOD within the Warrensville/Van Aken district. Based on the observations made over the course of this study, four key issues have been identified in Shaker Heights that must be overcome if the new vision is to be achieved. These issues are as follows:

1. Poor Image

Currently, the Warrensville/Van Aken district portrays a poor image, not equal to the quality of development in other parts of Shaker Heights. One of the primary reasons for this is that the district lacks a coherent pedestrian realm. With a shortage of public spaces, sparse tree coverage and a lack of an identifiable streetscape or architectural character, the Warrensville/Van Aken district is far from being pedestrian friendly. Combined with a hostile roadway pattern, misaligned sidewalks and isolated land uses, the district is not an inviting place for pedestrians, shoppers or transit passengers.

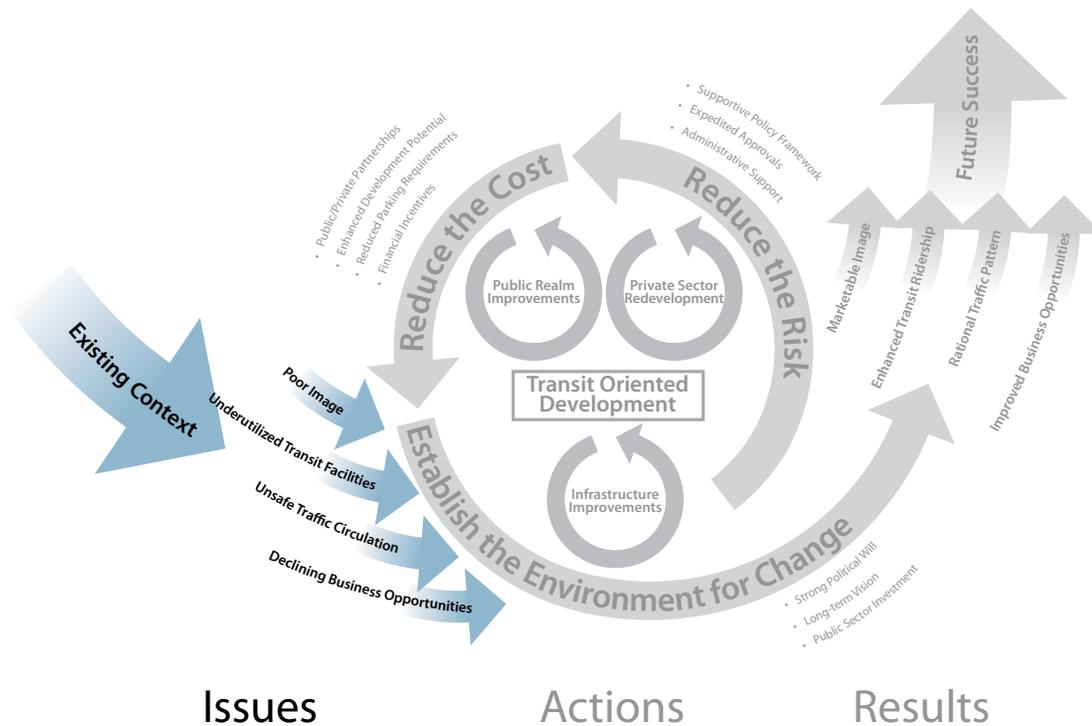
2. Transportation Infrastructure

The City of Shaker Heights has a wealth of transit facilities and service to the Warrensville/Van Aken district. Given existing transit capacity, there is the ability to increase transit facility utilization and ridership within the study area.

The reorganization required by future development and the improvements to the Chagrin/Warrensville intersection and the transit facilities will greatly enhance transit ridership, while creating a pleasant, safe and efficient interface between transit and the district context, and provide a unique character to this area.

3. Unsafe Traffic Circulation

In its present form, the Warrensville/Van Aken district presents significant safety concerns from the perspective of drivers, transit users and pedestrians alike. As a result of heavy traffic congestion, the convergence of numerous traffic lanes into the district and subsequently complex (and often confusing) traffic routes, users of the district and travelers within the surrounding area are at risk



of traffic accidents and increase the potential for conflicts between public transit, vehicular and pedestrian traffic.

4. Declining Business Opportunities

The Warrensville/Van Aken district is not currently functioning as a vibrant mixed use center. Like many older retail plazas, the Warrensville/Van Aken district has had increasing difficulties attracting and retaining tenants – including some of its established anchors – and has suffered financially as a result of growing retail vacancies and competition from nearby lifestyle centers. While rising property taxes have been blamed as a contributing factor in the district’s declining business opportunities, it is the lack of a clear planning vision for the Warrensville/Van Aken district that has ultimately limited the district’s ability to respond to shifting markets and attract reinvestment and redevelopment opportunities.

Retail formats and customer expectations have changed dramatically over the past ten years. As a result, the Warrensville/Van Aken district is in decline – it needs to be reinvented and redeveloped to achieve its potential, and to compete within its regional context.

1.5 | Three Actions to Stimulate Change

Previous chapters in this Report have identified the overall vision for the Warrensville/Van Aken district, and have provided the details as to “what” should be done to facilitate TOD in terms of:

- Public realm improvements;
- Private sector redevelopment; and,
- Infrastructure improvements.

The following text identifies the “how” the vision can be achieved.

Experience in other jurisdictions across North America, combined with the observations and obstacles identified in the City of Shaker Heights context suggest that a strategy for the successful implementation of TOD requires that the City focus their activities into three basic categories. The City must:

1. Establish the environment for change;
2. Reduce the cost; and,
3. Reduce the risk.

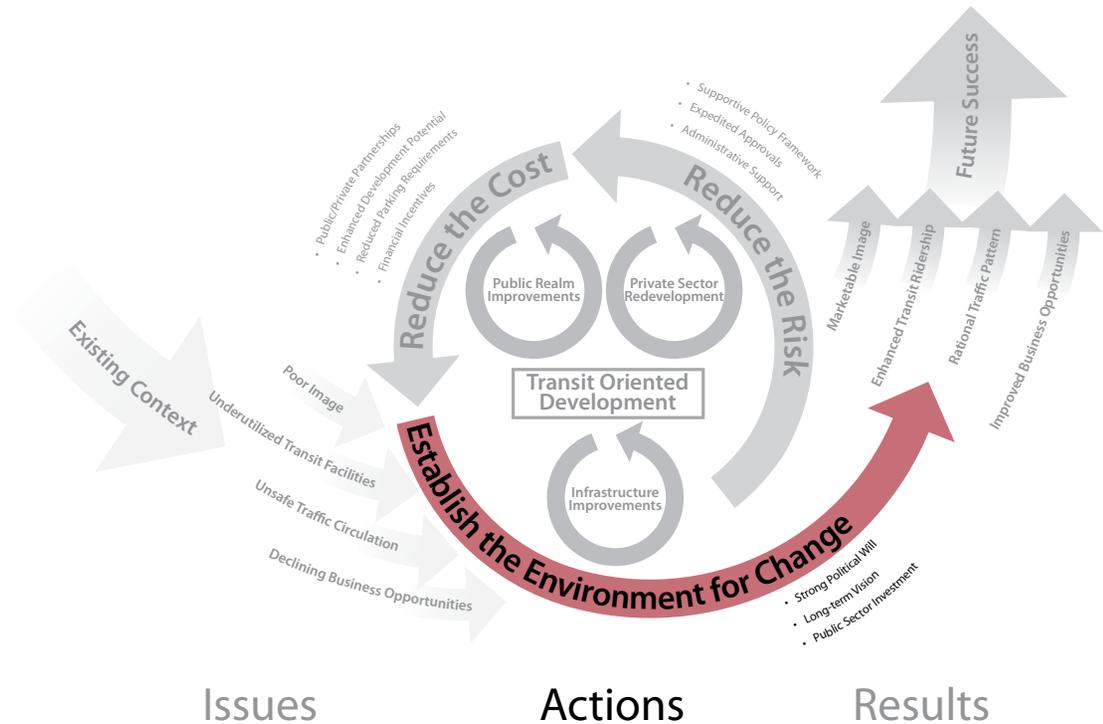
All three of these actions are completely interrelated and are required, in collaboration, to establish a comprehensive, and ultimately, a successful transformation of the Warrensville/Van Aken district from a suburban plaza to a TOD. The following text provides additional details with respect to each of the three actions.

Establish the Environment for Change

Tools in this category come in different scales and at different costs. The amount of the public investment typically has a corresponding scale of impact on demand enhancement for new development. While there is a large capital cost to infrastructure building, it can potentially have considerable positive impacts on market demand for TOD in proximity to that infrastructure. The experience across North America suggests that achievable rents and sales prices for properties closer to major public infrastructure, particularly high

order transit, are substantially higher than elsewhere, making higher density development more feasible, and thus, more attractive to the private sector. Key priority actions include:

- Strong Political Will – Foster the strong political will to ensure a coordinated long-term commitment by the City on a number of fronts will create a favorable private sector investment climate. This includes the development and implementation of a long-term planning and redevelopment strategy,





actively pursuing private sector partners to invest in and develop TOD and seeking tripartite partnerships with State and Federal agencies to fund infrastructure and transit improvements as well as economic development initiatives.

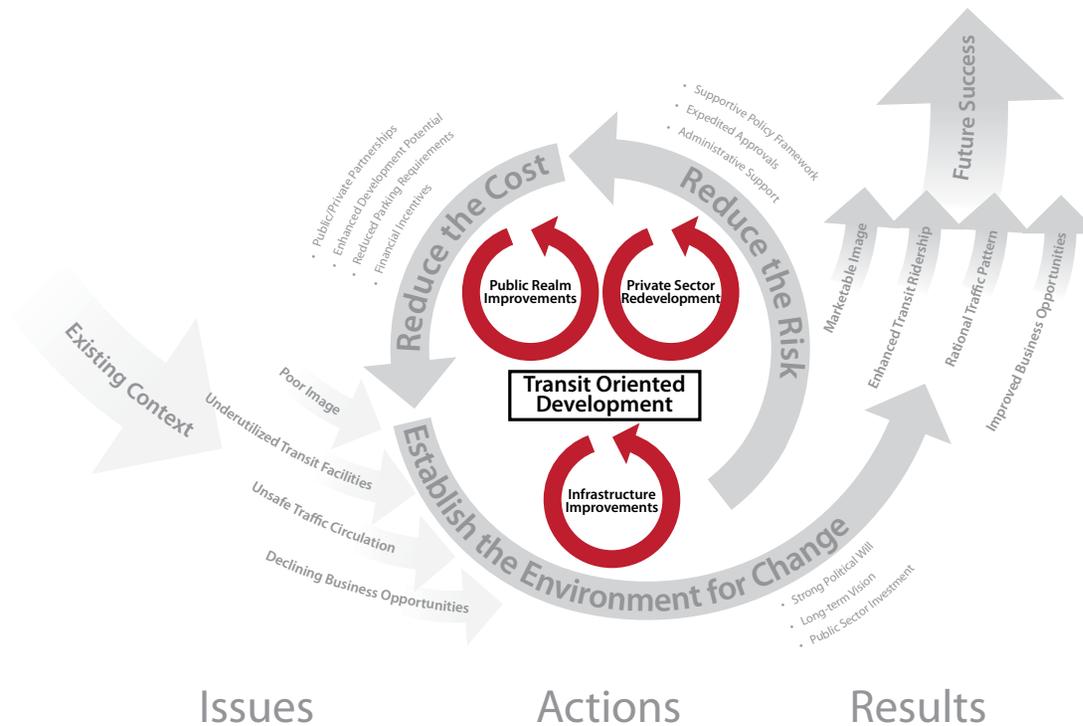
- Long-Term Vision – Establish a long-term vision for the Warrensville/Van Aken district, that outlines objectives for enhanced mobility, density targets, urban design performance standards, emission

reduction and air quality targets and appropriate engineering standards that facilitate TOD and increased transit ridership. The vision for the future should be based on strong policies and should provide the ability for the City to provide an array of financial incentives, specifically aimed at promoting TOD.

- Public Sector Investment – Invest in infrastructure and the public realm, including upgrades to the

road pattern, public utilities, streetscape enhancements, parks, new public buildings and other transit related infrastructure such as transit stations.

Public sector investment is not limited to the City of Shaker Heights. There is an important case to be made that all levels of government have a role to play in achieving a new urban structure, of which the Warrensville/Van Aken district can become a key component. Appendix D provides a listing of potential funding sources that the City and GCRTA should consider pursuing to assisting in funding the major infrastructure and public improvements that are considered necessary to stimulate the desired private sector reinvestment.



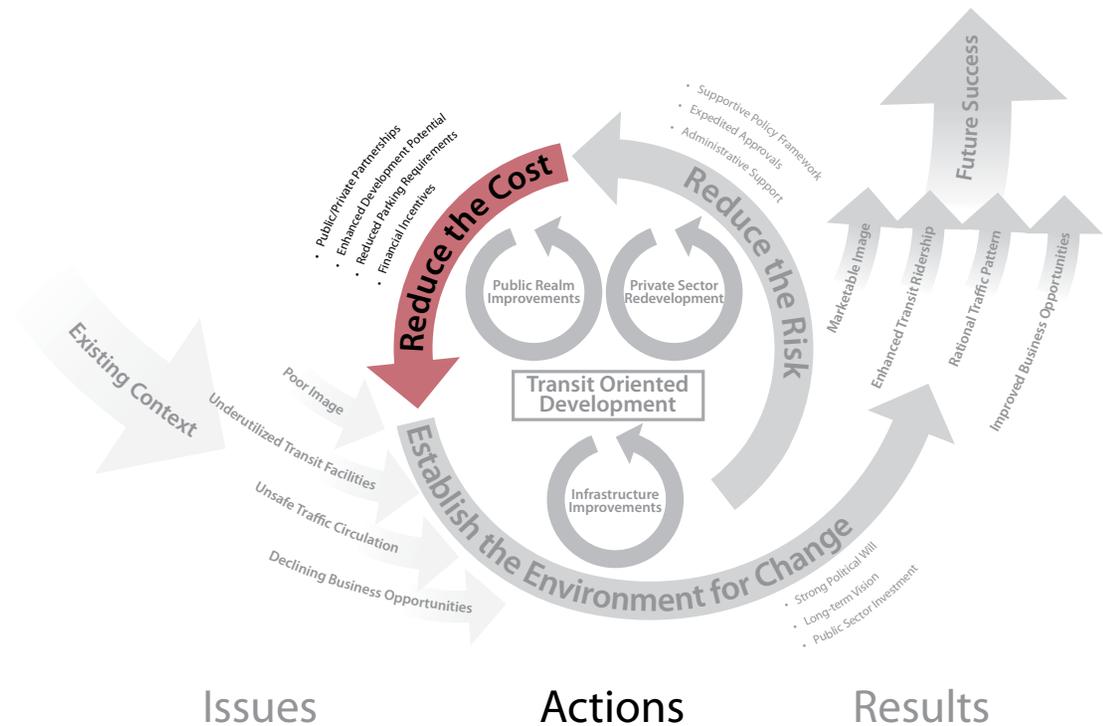
Reduce the Cost

TOD, and redevelopment in general, costs more than typical suburban greenfield development forms. The City has tools that can also be used to reduce the development costs to private developers and owners, which will increase the likelihood of TOD. Some of these key tools the City can use to reduce the costs of development include:

- Foster Public Private Partnerships – As the name suggests, Public Private Partnerships can result in a number of mutual benefits for both the public and private sector entities involved. Projects that might otherwise present too great a financial risk to private sector investors are made feasible through cost-sharing agreements and the leveraging of public funds. As well, Public Private Partnerships can result in increased development efficiencies that combine private sector development expertise with public sector administrative abilities to streamline development approvals and in some instances provide innovative tax abatement and debt financing options (i.e. TIFs and Location Efficient Mortgages).
- Enhanced Development Potential – With a comprehensive planning and redevelopment strategy for the Warrensville/Van Aken district and subsequent zoning ordinance amendments designed to facilitate higher density TOD, the district's development potential will be significantly enhanced

and development costs reduced. In particular, provisions for increased density will drive down development costs on a square foot basis as the economies of scale for higher density development are realized. At the same time, the added certainties with respect to the approvals process generated by new planning and zoning provisions will not only mitigate the level of development risk but also effectively reduce development costs associated with approval timing.

- Reduced Parking Standards - Reducing parking requirements for TOD to reflect the diminishing automobile use and greater opportunities for shared parking resulting from increased transit ridership. Given the current cost of building parking spaces, reducing parking requirements and ensuring that the parking supply reflects the true need of TOD subsequently reduces the overall cost of development.





- Provide Financial Incentives – The reduction of development costs can also be achieved through the provision of financial incentives. Incentives, either direct or indirect, can be used to entice the development industry to build TOD and ensure that it is developed in appropriate locations (i.e. within proximity to the Transit Station).

A list of potential incentive programs to assist the private sector is provided in Appendix D.

Reduce the Risk

A third set of tools relate to the reduction of risk for private developers. In other words, a private developer wishing to build TOD in the Warrensville/Van Aken district may be more likely to develop if there is more certainty surrounding the planned vision and more certainty surrounding the approval process.

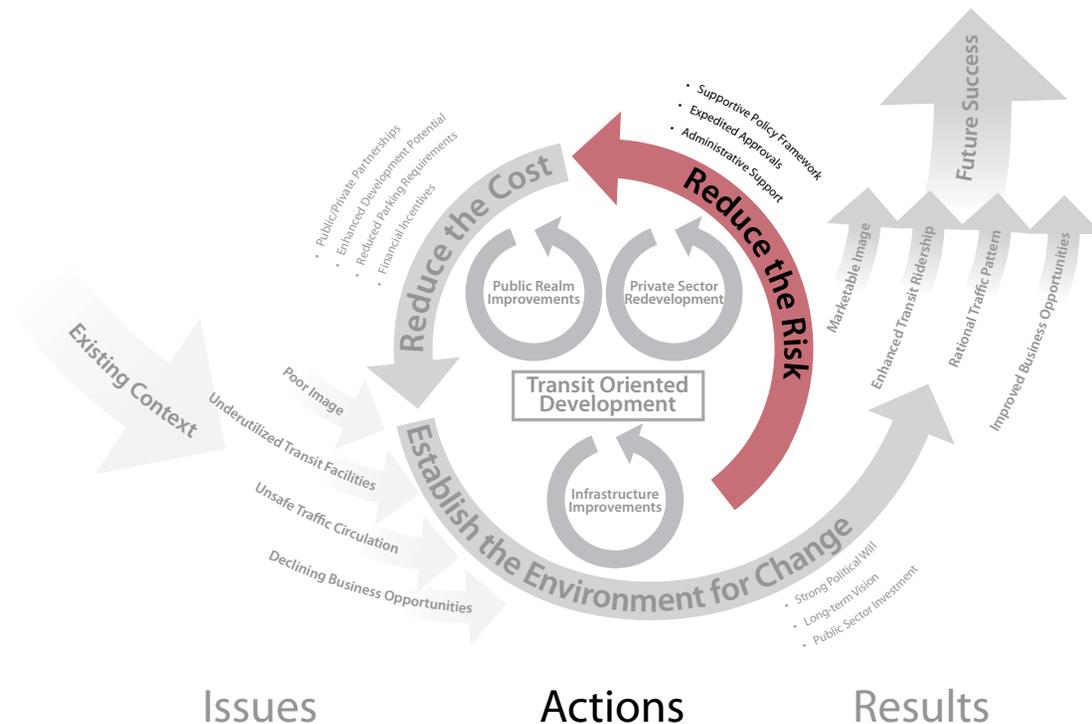
- Simplify Planning Policy - A simplified planning policy outlining permitted building heights, urban form and potential incentives for the Warrensville/Van Aken district could, in effect, reduce some non-market risk associated with development and redevelopment.
- Invest in the Public Realm - A significant amount of public realm investment also helps to ameliorate risk, by allowing alternative uses in locations with multiple demand generators and public infrastructure. Public realm investment sends a strong sig-

nal of government intent, substantially reducing the risk to “pioneer” private sector investors.

- Establish a Planning Framework to Facilitate TOD - One obvious way to diminish the risks associated with the approvals process is to establish a planning framework that permits and facilitates TOD. The establishment of a TOD Ordinance and corresponding engineering standards and design guidelines would provide the regulatory basis to facilitate TOD and at the same time provide greater certainty as to the City’s development expectations.

In the same vein, speeding up approvals through coordinated administrative process can also effectively mitigate development risks.

Enhanced coordination among various City departments to develop comprehensive TOD standards and subsequently speed up approvals would provide additional certainty to the development community trying to build TOD.



1.6 | Four Intended Results - Future Success

As previously mentioned in this Report, the benefits of TOD are multi-faceted, resulting in buildings and land uses that are attractive, walkable, and transit supportive. TOD is scaled to the pedestrian, encourages travel on foot and by other modal alternatives to the car, and ultimately fosters and facilitates public transit functionality and ridership.

The Warrensville/Van Aken district is at a crucial point in its evolution. Decisions made today will drive how the district redevelops overtime. Ensuring the long-term success and vibrancy of this important transit hub, will require a comprehensive vision and a strategy that maximizes the full array of planning and financial tools available. The future success of the Warrensville/Van Aken district will ultimately be measured against the following four intended results of the vision:

1. **Marketable Image** – achieved through the establishment of a long-term redevelopment vision that stimulates both public and private sector investment and consequently transforms the image of Warrensville/Van Aken district from a declining and outdated retail plaza to a vibrant transit supportive urban center.
2. **Enhanced Transit Ridership** – achieved through new higher density mixed use development, public realm enhancements, transit facility improvements and long-term efforts to transform Greater Cleveland’s urban pattern through the establishment of

a strong urban structure of connected urban centers and corridors.

3. **Rational Traffic Pattern** – achieved through federal, state and local level public investments in infrastructure enhancements and road network/intersection improvements designed to enhance vehicular, transit and pedestrian circulation and safety.

4. **Improved Business Opportunities** – achieved through the implementation of comprehensive economic development vision that includes public sector capital investments and the establishment of permissive development regulations, a predictable approvals process and financial incentive programs that will undoubtedly spur new business opportunities and new private sector investment in the Warrensville/Van Aken district.

