

Marcus Hook Transit Oriented Development Plan

RESOURCE BINDER

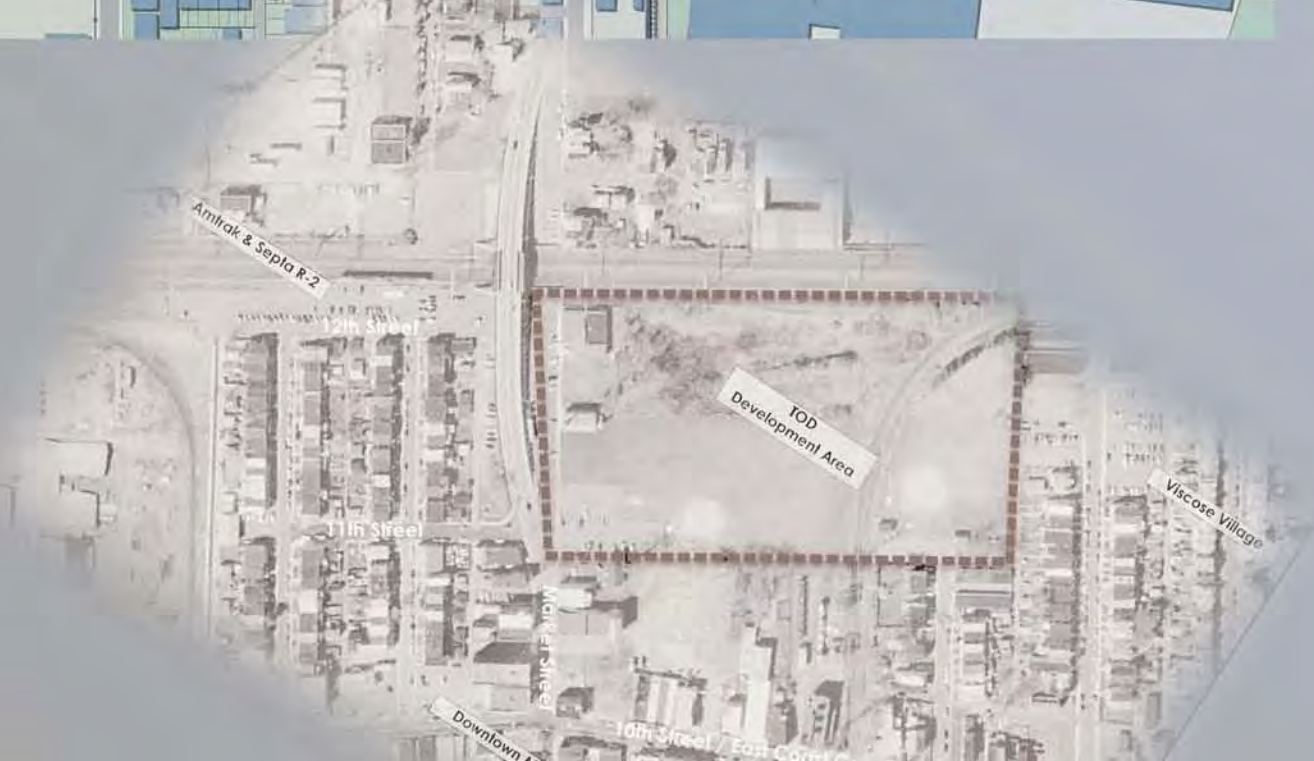


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Delaware Valley Regional Planning Commission (DVRPC)

Transportation & Community Development Initiative (TCDI) grant

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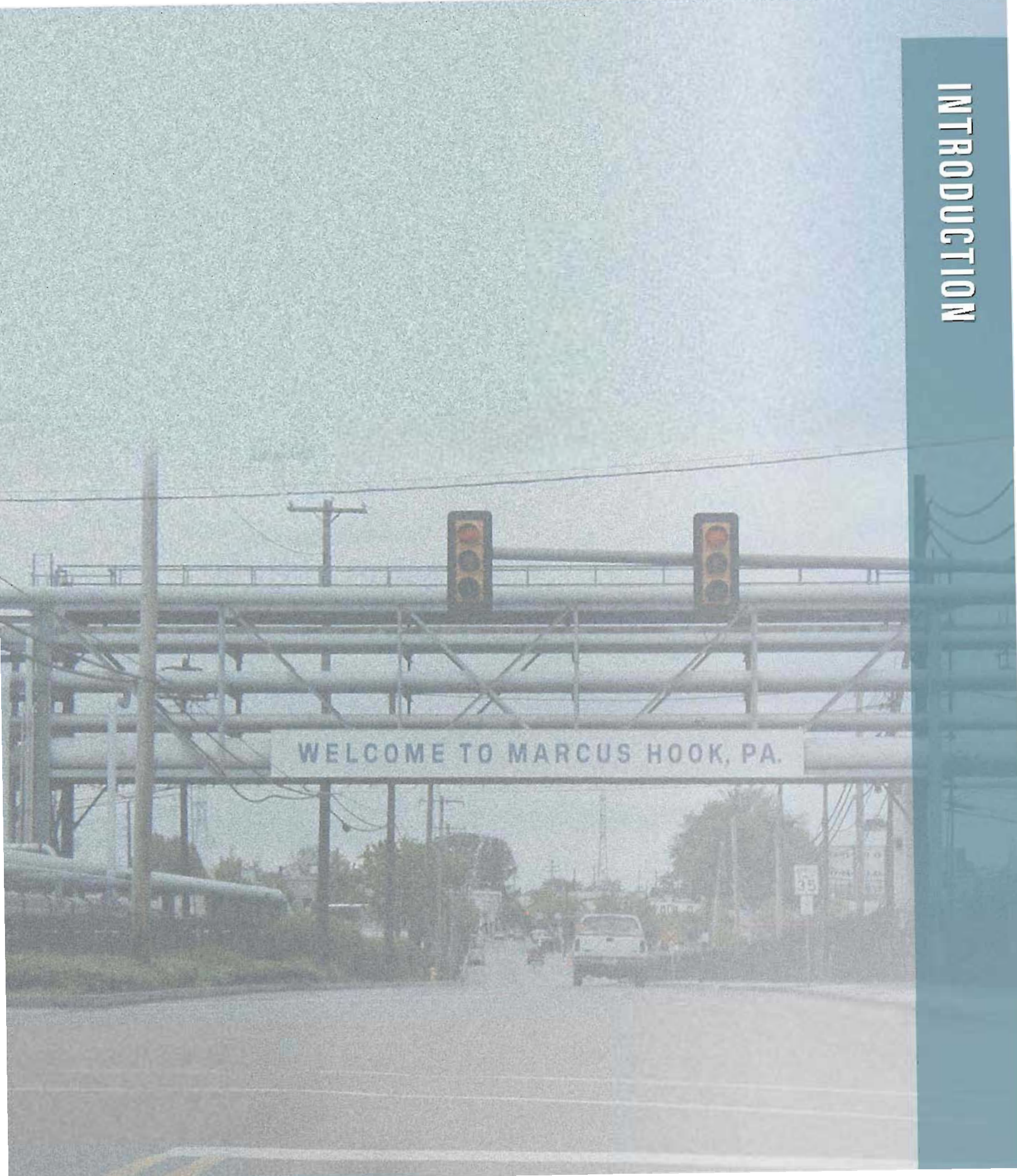
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Background

Recent demographic trends indicate that the Borough of Marcus Hook remains attractive to workers and a middle-aged population, but the borough needs to attract a new younger population of families and workers in order to retain the viability of the community.

The Borough of Marcus Hook is served by the SEPTA R2 regional rail line that provides access to both Center City Philadelphia and the City of Wilmington. The station is presently located in a trailer surrounded by surface parking, west of the Market Street Bridge (Rt. 452). The Market Street Bridge provides a direct link between Marcus Hook and I-95, and separates the station from the central business district to the east.

East of the Market Street Bridge, immediately south of the SEPTA regional rail line, and immediately north of the central business district is a mostly vacant 7-acre parcel, much of which is owned by Marcus Hook Borough. The May 1980 "Revitalization Plan for the Business District" for Marcus Hook recommended the relocation of the train station to the east side of the Market Street Bridge along with new commercial development. The 1980 plan identified the parcel on the east side of the bridge as a site for a new, relocated train station because it was closer to the existing central business district. This recommendation was further reinforced by the October 2002 Marcus Hook Comprehensive Plan which also advised relocating the SEPTA commuter rail station to the east side of the Market Street Bridge. The Comprehensive Plan identified the Market Street Bridge site as a prime transit-oriented development (TOD) opportunity that could serve as a gateway to the business district. The Comprehensive Plan also proposed pedestrian connections between the TOD site and the existing commercial development along 10th Street. It also recommended that the existing bus routes serving Marcus Hook be linked to the station, and that the site be designed as a bus/rail/bike/pedestrian transportation hub for commuters and residents. In addition, because PennDOT is replacing the deteriorated Market Street Bridge with a new structure immediately east of the existing bridge, access and circulation from the new bridge to the TOD site would need to be addressed.

Transit Oriented Development

Transit-Oriented Development (TOD) is the integration of land use and transit, and the construction of walkable, mixed-use development, around new or existing transit facilities, based on the following principles:

- Compact, transit supportive development within walking distance of transit
- Pedestrian-friendly street networks that directly link destinations
- A mix of housing types, densities, and costs

- Creation of public spaces that become the focus of building orientation and neighborhood activity
- Connecting various modes of transportation in one location
- Reinforcement of existing neighborhood patterns

Transit-oriented development at the Market Street Bridge site was seen as providing the following potential benefits:

- Increase in transit usage, by both Borough residents and employees
- Increase in borough tax base
- New housing choices that would attract new residents who could contribute to the revitalization of Marcus Hook
- Attraction of new businesses to reinvigorate the central business district
- Joint use parking that could support both transit and businesses

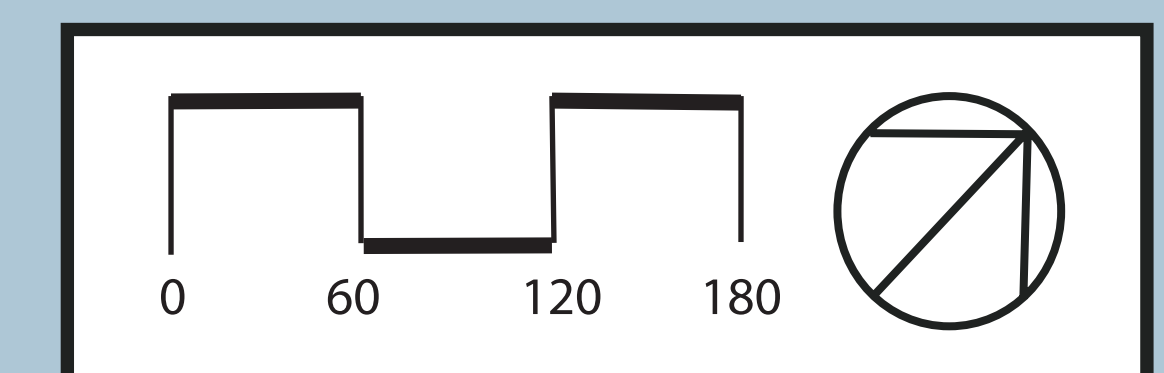
The Borough of Marcus Hook determined that a Transit-Oriented Development Study was required to assess the feasibility of such an approach. The TOD study would address the following:

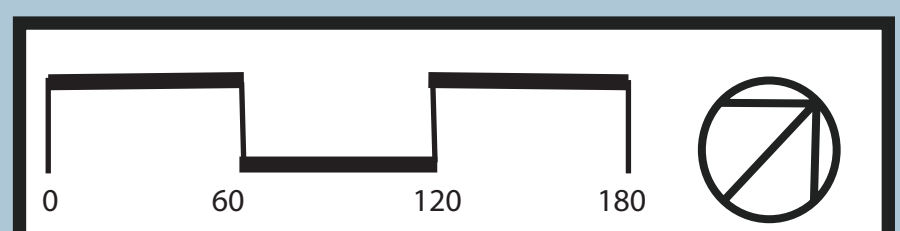
- Assess the market for housing and commercial development of the site, including the appropriate density of housing and specific retail/commercial uses that could be attracted.
- Review the feasibility of relocating the station, and integration of bus routes with rail transit, in the context of the relocation of the Market Street Bridge

The outcome would be a detailed site development plan for the Market Street Bridge site, as well as a financing plan for implementation. The borough envisioned the TOD study as a model for other older towns in the Delaware Valley Regional Planning Commission region that are experiencing decline but could use the leverage of access to transit as a powerful community and economic development tool, as well as a tool to increase transit ridership.

In 2002, the Borough of Marcus Hook was awarded a planning grant by the Delaware Valley Regional Planning Commission under the Transportation and Community Development Initiative (TCDI) Program. This study was completed with funding under the TCDI grant.

The Marcus Hook TOD plan attempts to address all of the Borough's goals for a successful transit-oriented development through market and transportation analyses, as well as design. This resource binder contains background information for the TOD, including opportunities and challenges of the site, the final recommended development scenario, and a marketing brochure highlighting its many features. In addition, the binder contains an appendix of the detailed analyses that support the preferred conceptual design for the TOD.





OPPORTUNITIES AND CHALLENGES



OPPORTUNITIES AND CHALLENGES

Background

The project team prepared a comprehensive assessment of potential development opportunities for the TOD site as well as an identification of existing challenges and constraints that may inhibit or limit redevelopment.

The resulting Opportunities and Challenges Report consisted of a package containing detailed memorandums from Zimmerman/Volk Associates and Michael Baker Jr., and an in-depth PowerPoint presentation prepared by KSK summarizing results of the analyses. The memorandums from Zimmerman/Volk Associates and Michael Baker Jr. are included in the appendix. The PowerPoint presentation is included in the Opportunities and Challenges portion of this report.

Shawn McCaney of Kise Straw & Kolodner, Laurie Volk of Zimmerman/Volk Associates, and Pierre Ravacon of Michael Baker, Jr. each presented portions of the PowerPoint presentation to the Steering Committee in January 2004.

TOD Master Plan



Opportunities and Challenges Report

KEY ISSUES



- Existing Land Use
- Existing Market Demand
- Transit Circulation
- Vehicular Circulation
- Parking
- Pedestrian Circulation
- Rail Station Location
- Summary of Planning Assumptions
- Recommended Development Strategy



Existing Land Use Analysis



Within Study Area

- Commercial



Existing Land Use Analysis



Within Study Area

- Institutional



Existing Land Use Analysis



Within Study Area

- Open Space/Recreational



Existing Land Use Analysis



Adjoining Study Area

- Commercial



Existing Land Use Analysis

Adjoining Study Area

- Residential



Existing Land Use Analysis

Adjoining Study Area

- Industrial



Market Analysis



Assets of Site

- Walking distance to existing SEPTA station
- Mid-point between Center City and Wilmington
- Close to tax-free Delaware
- Opportunity for new construction
- Relatively good condition of nearby dwelling units
- Proximity to attractive waterfront park
- Proximity to historic Viscose Village
- Redevelopment potential of Viscose factory building

Market Analysis



Challenges of Site

- Heavily industrial character of the borough
- Limited direct access to TOD site
- Extensive truck traffic through the borough
- At-grade rail crossings on site
- Absence of desirable retailers (cafés, market) nearby

Recommended Development Program

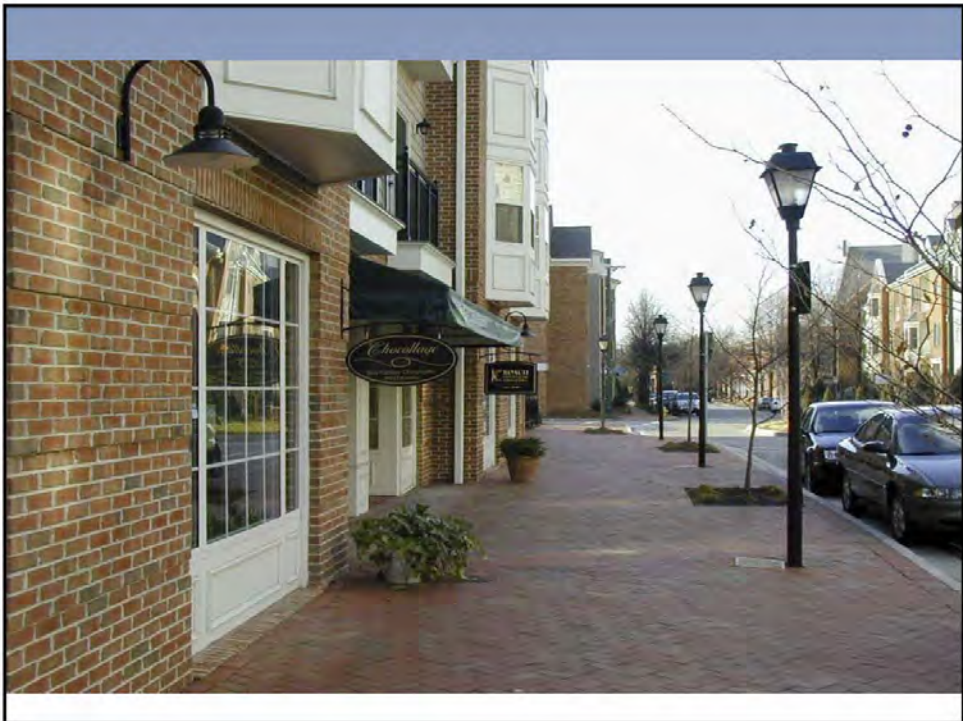
- Residential: 200 dwelling units
- Retail: 7,000 square feet
- Office: 50,000 square feet

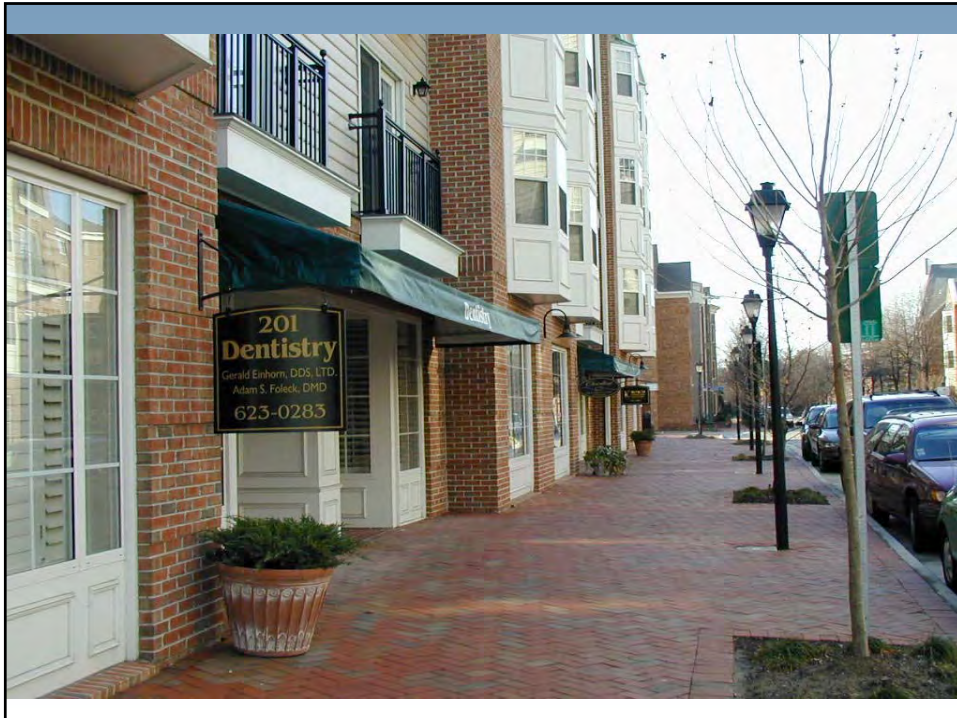


Non-Residential Uses

Retail:

7,000 square feet
(35 sq. ft. per household)





Market Analysis

95
13
Marcus Hook

Non-Residential Uses

Office:

50,000 square feet

(One job per dwelling unit; 250 sq.
ft. per worker)



Market Analysis

95
13
Marcus Hook

**Transit Oriented
Development:
The Rediscovery of
Place-making**

Where does the potential market live now?

How many are likely to move to the site?

Who are they?

What are their housing preferences?

What are they willing to pay?

How fast will they rent or buy the dwelling units?

Where Does the Potential
Market Live Now?

Migration Analysis

The Draw Areas

Primary Draw Area:	48%
Delaware County:	36%
Adjacent Counties:	8%
U.S.:	8%

How Many Are Likely to
Move to the Marcus Hook
TOD?

Mobility Analysis

Annual Market Potential

540 households

(5,800 for Primary Draw Area)

Who Are The
Target Households?

Target Market Analysis

Market Analysis

Younger Singles & Couples:

53%



Market Analysis



Empty Nesters &

Retirees:

37%

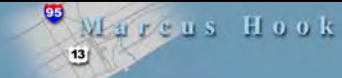




**Traditional &
Non-Traditional Families:
11%**



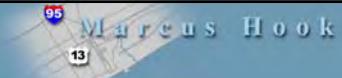
**What Are The
Housing Preferences
Of The Target Households?**



Target Residential Mix

(based on Market Preferences)

- Rental Multi-Family: 61%
- For Sale Multi-Family: 19%
- For Sale Single-Family Attached: 20%



Target Mix: 200 Units

- Rental Multi-Family: 122
- For Sale Multi-Family: 38
- For Sale Single-Family Attached: 40

What Are The
Target Households
Able to Pay?



72 Loft Apartments

- Base rents from \$500 to \$900
- Sizes ranging from 500 to 1,000 sq. ft.



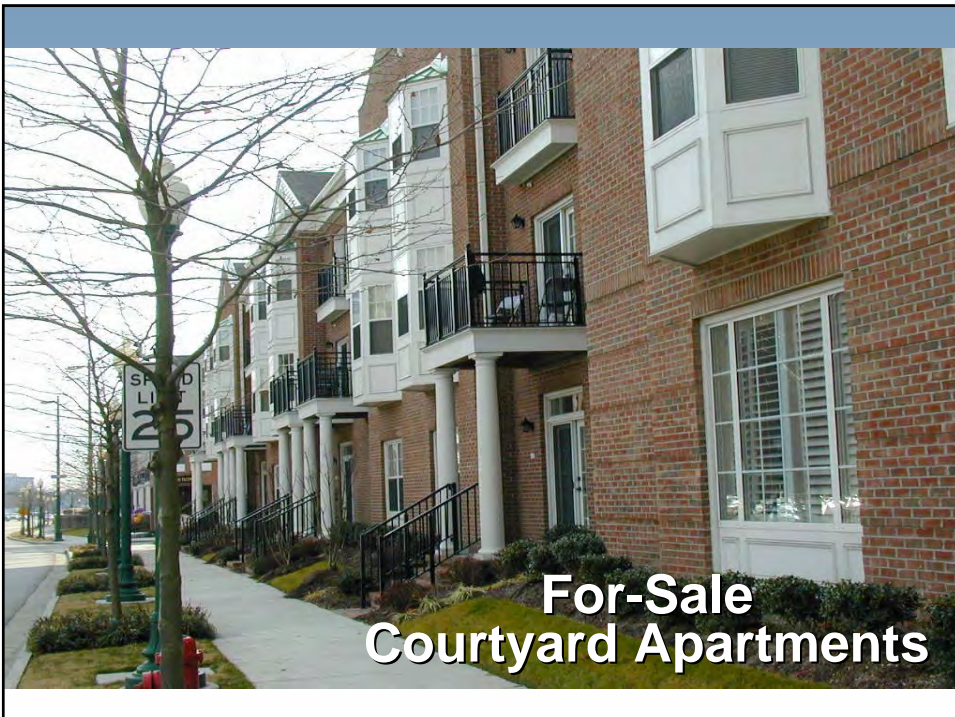
50 Courtyard Apartments

- Base rents from \$625 to \$1,225
- Sizes ranging from 600 to 1,250 sq. ft.



20 For-Sale Loft Apartments

- Base prices from \$55,000 to \$100,000
- Sizes ranging from 500 to 1,000 sq. ft.



18 For-Sale Courtyard Apartments

- Base prices from \$85,000 to \$135,000
- Sizes ranging from 750 to 1,250 sq. ft.



Rowhouses

22 Rowhouses

- Base prices from \$115,000 to \$185,000
- Sizes ranging from 900 to 1,500 sq. ft.



18 Duplexes

- Base prices from \$145,000 to \$195,000
- Sizes ranging from 1,100 to 1,600 sq. ft.

How Fast Will the New Dwelling Units Rent or Sell?

Annual Absorption

- Rental Lofts / Apartments: 60 units
- For Sale Lofts / Apartments: 11 units
- Rowhouses / Duplexes: 11 units

Four Year Build-out

Station Relocation Recommendation

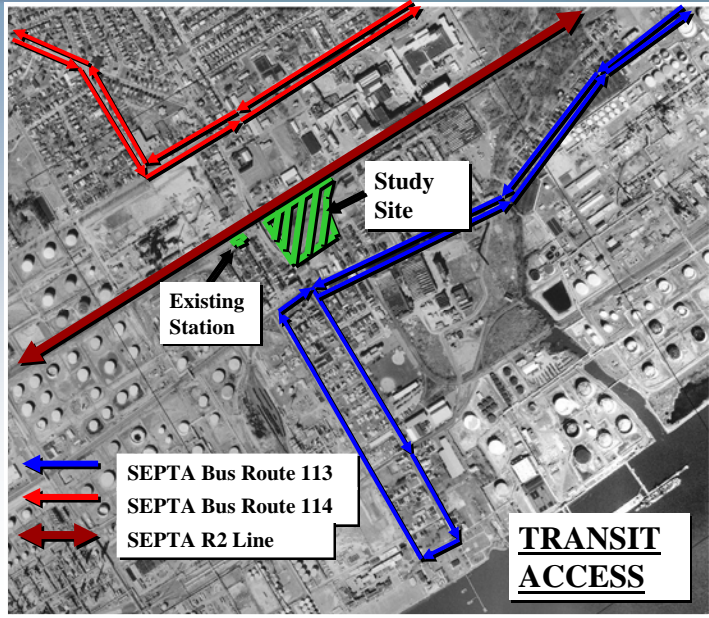
From the market perspective, moving the train station to a location on the site is **NOT RECOMMENDED**.

WHY?

- A new on-site station, with associated parking field would diminish the market potential of the site by removing acreage from development that could be more economically utilized as residential or commercial land.
- The costs of a station relocation would dramatically exceed any potential economic benefit to the downtown

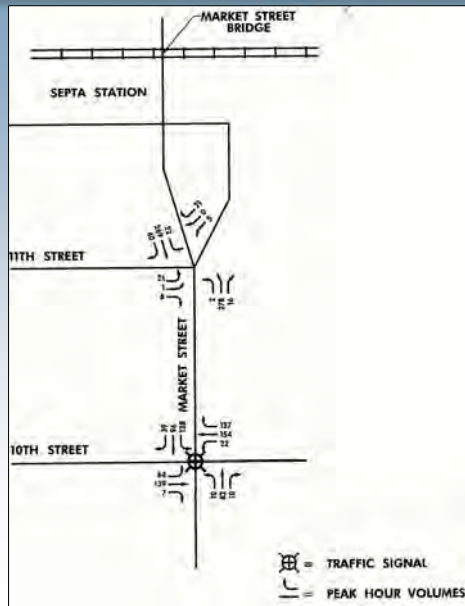
- SEPTA Routes 113 and 114 circulate in close proximity to the Marcus Hook R-2 station, but do not access station or site

Transit Analysis



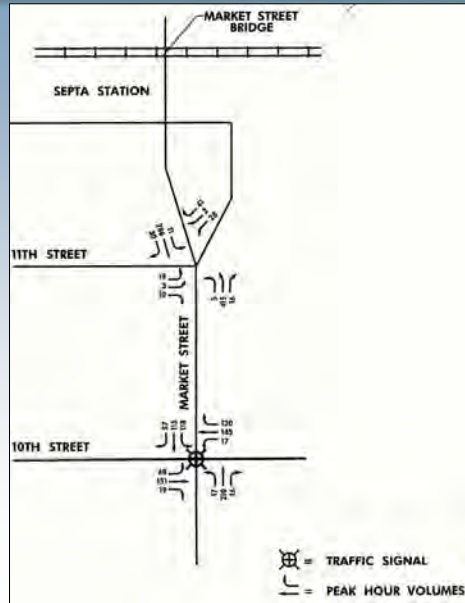
Vehicular Circulation Analysis

AM Peak Hour



Vehicular Circulation Analysis

PM Peak Hour



Parking Analysis

Inventory of Parking Spaces

Parameters set within a ¼ mile radius from the study site

- Transit (SEPTA): 207 spaces
- Borough (metered/non-metered): 73 spaces
- Curb-side (metered): 55 spaces
- Residential: 43 spaces
- Special purpose (recreational/community): 48 spaces
- Private: 96 spaces

Parking Analysis



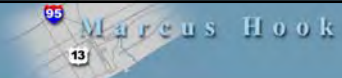
Inventory of Parking Spaces

Grand total available parking:
522 spaces

Potential areas for parking expansion



Parking Analysis



Parking Utilization Rates

- Transit (SEPTA): near 100% during weekday day hours, near 10% after 7 pm weekdays and on weekends
- Borough (metered/non-metered): 20-30%
- Curb-side (metered): 75-100%
- Residential: 75%
- Special purpose (recreational/community): 0-20% (during non event times)
- Private: 40-50%

Parking Analysis

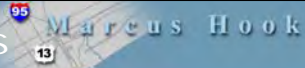


Managing Parking Impacts from TOD

243 new spaces needed for new mixed-use development

- Encourage joint parking for adjacent uses – transit lot, underutilized open parcels, and private lots
- Physically integrate parking into new development, including internal and adjacent street network
- Disperse parking throughout development area
- Maximize use of short-term parking
- Continue existing parking management practices, such as residential parking zones and short-term parking controls

Pedestrian Circulation Analysis



Existing Circulation Patterns

Dominant pedestrian flows (in order of magnitude):

- Transit station to Marcus Hook surface parking lot and to Lower Chichester surface parking lot
- 10th Street retail businesses and Viscose Village
- 10th/Market Street intersection over Market Street bridge to Lower Chichester
- Transit station to 10th Street/Market Street and distributed to retail businesses and neighborhoods

Existing Circulation Patterns



Quality of Pedestrian Access

Criteria:

- Sidewalk network provides connectivity
- Sidewalk obstructions are non-existent/infrequent
- Pedestrian amenities at intersections are provided (crosswalks, pedestrian signals, curb ramps)
- Vehicle-pedestrian conflict points are minimal
- Vehicular speeds and volumes are moderate/low
- Walking route is direct and distances are minimized
- Pedestrians feel strong sense of safety and security
- Façades and land uses are conducive to walking

Pedestrian Circulation Analysis

Quality of Pedestrian Access



Rating: Excellent, Sufficient, Inadequate

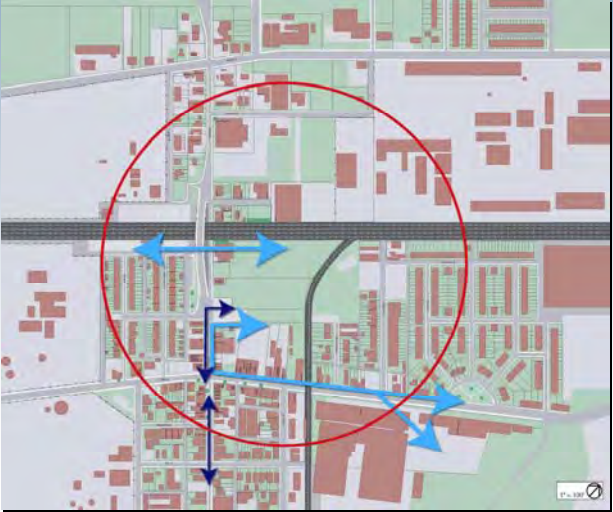
- Transit station/station parking: *Inadequate*
- 10th Street (East Coast Greenway): *Sufficient*
- South of 10th Street neighborhoods: *Sufficient*
- Viscose Building/Viscose Village: *Inadequate*

Pedestrian Circulation Analysis

Quality of Pedestrian Access

Inadequate Access
←→

Sufficient Access
←→



Pedestrian Circulation Analysis

Proposed Pedestrian Access

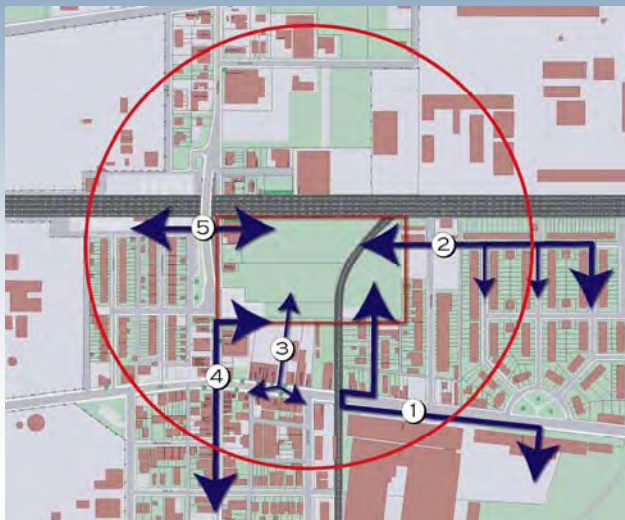
Optimal pedestrian routes linking the TOD site to the borough's major destinations

- Viscose Building via McClenachan Terrace
- Viscose Village via Chestnut Street
- 10th Street (East Coast Greenway) via vacant lot adjacent to Produce Market
- Neighborhoods east of 10th Street/waterfront via eastern boundary of site
- Transit parking via underpass of new Market St. bridge

Pedestrian Circulation Analysis

Proposed Pedestrian Access

1. Viscose Building via McClenachan Terrace
2. Viscose Village via Chestnut Street
3. 10th St. via vacant lot
4. Neighborhoods via Eastern border of site
5. Transit parking via bridge underpass



Station Relocation Analysis



Possible Outcomes

- **OPTION "A":** Leave station where it is
- **OPTION "B":** Relocate inbound station
- **OPTION "C":** Relocate entire station

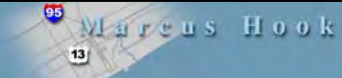
Station Relocation Analysis



Criteria for Optimal Station Location

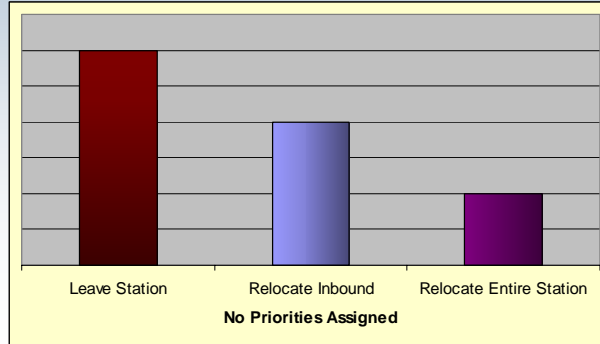
1. Vehicular access and parking
2. Passenger crossover
3. Station building: Passenger waiting area and ticket office
4. Railroad operation: Operating modes/work by Amtrak
5. Multi-modal service
6. Accessibility
7. Ridership
8. Commercial impact on Borough
9. Real estate
10. Amtrak issues
11. Station site suitability for development

Station Relocation Analysis



Station Relocation Analysis Summary

Analysis #1	
Priorities	Best Option
No Priorities Assigned	Option "A": Leave station where it is

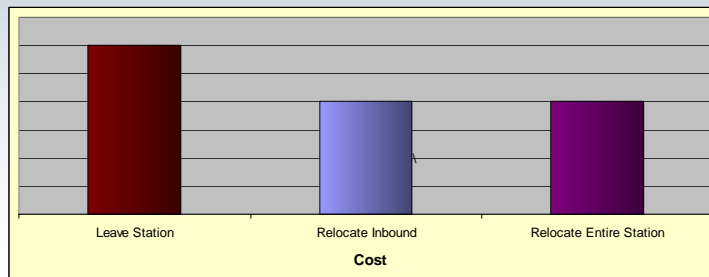


Station Relocation Analysis



Station Relocation Analysis Summary

Analysis #2	
Priorities	Best Option
High Priority: Cost Lowest Priority: Station Usability	Option "A": Leave station where it is



Station Relocation Analysis

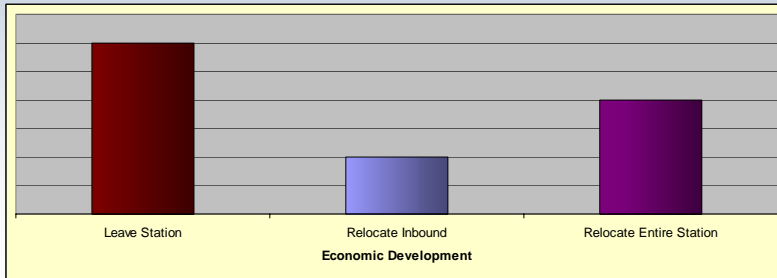


Station Relocation Analysis Summary

Analysis #3

Priorities
High Priority: Economic Development
Lowest Priority: Station Usability

Best Option
Option "A": Leave station where it is



Station Relocation Analysis

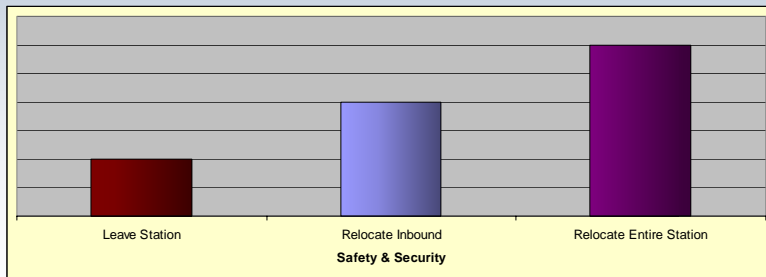


Station Relocation Analysis Summary

Analysis #4

Priorities
High Priority: Safety & Security
Lowest Priority: Cost

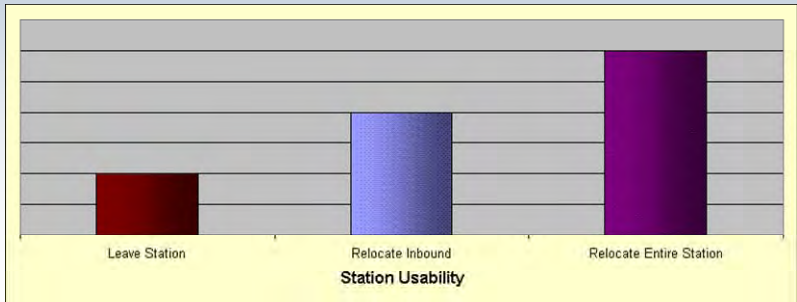
Best Option
Option "C": Relocate entire station



Station Relocation Analysis Summary

Analysis #5

Priorities	Best Option
High Priority: Station Usability Lowest Priority: Cost	Option "C": Relocate entire station



Station Relocation Recommendation

- **Leave station where it is**



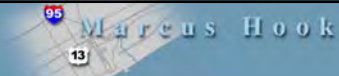
Station Relocation Analysis



Summary of Planning Assumptions:

- Assets of the site outweigh the challenges
- Transit-oriented development of the site appears to be feasible
- Both from a market / development and operational/technical perspective, relocation of the SEPTA station is NOT preferred
- Market analysis suggests demand for 200 dwellings, 700 square feet of retail, and 50,000 square feet of office (Viscose Building)

Station Relocation Analysis



Recommended Development Strategy:

- Rather than move the SEPTA station, redevelop the T.O.D. site to function as a more attractive and efficient connection between 10th Street, particularly the Viscose Building, and the SEPTA station
- Rather than create significantly more commercial to compete with the existing business district, emphasize new housing opportunities that will generate customers for business along 10th Street

Station Relocation Analysis



Recommended Development Strategy:

- Improve and enhance the pedestrian connections between the SEPTA station and the TOD site to make the proposed homes attractive to commuters
- Seamlessly integrate new residential development with the existing business district through better and multiple new pedestrian linkages

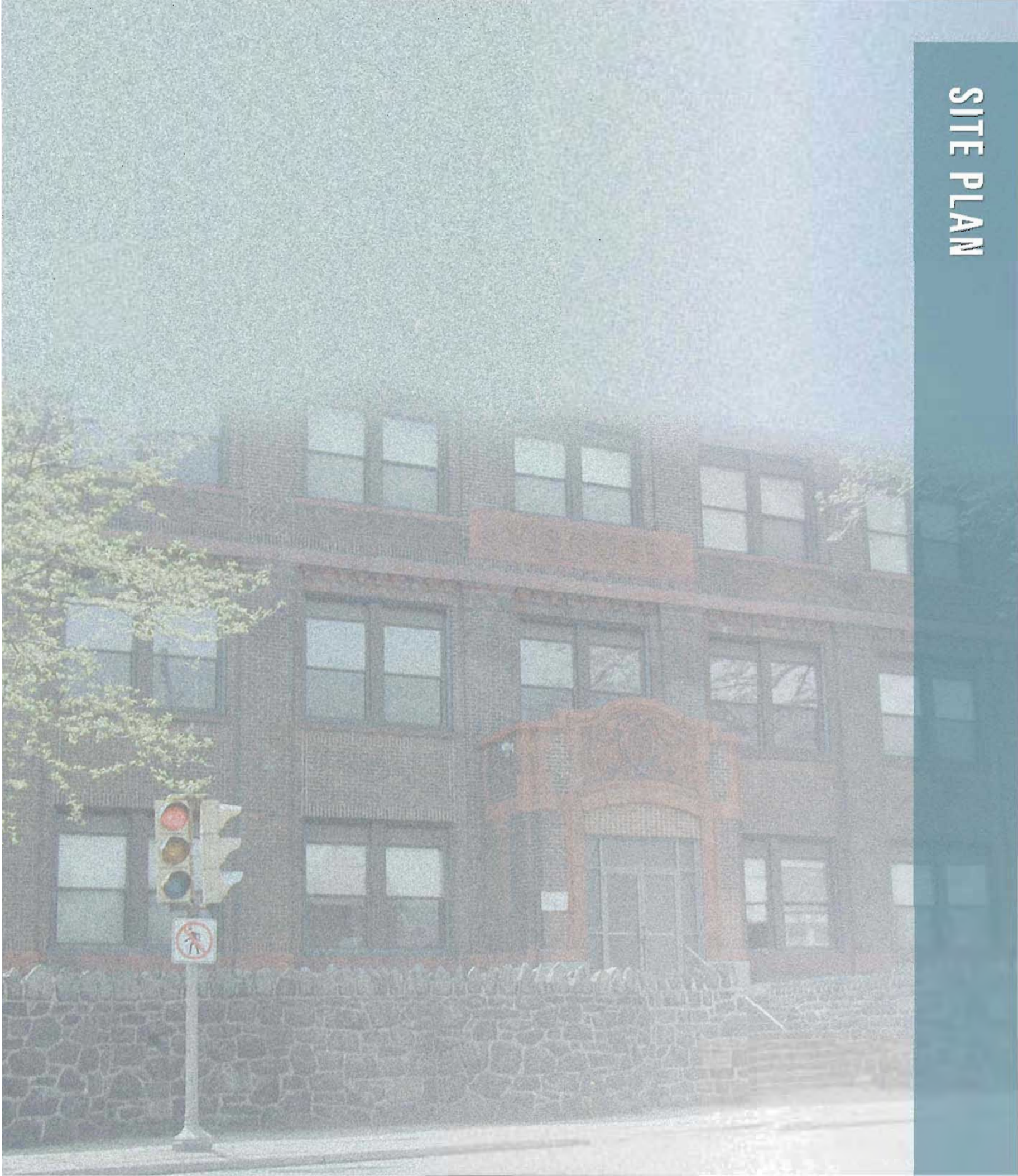
Recommended Development Strategy



1. Improve station conditions and connections, but leave it where it is
2. Create a new, primarily residential neighborhood to support business district and attract new residents
3. Enhance connection to SEPTA station
4. Integrate development with new connections & linkages



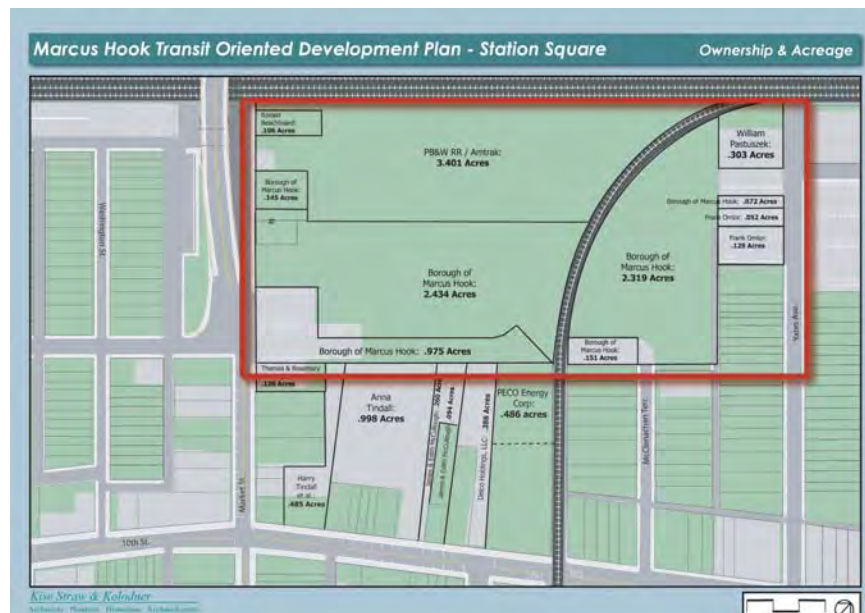
SITE PLAN



TOD SITE PLAN & CONCEPTUAL DESIGN RECOMMENDATIONS

Background

The Marcus Hook TOD site is a mostly vacant 7 acre area directly to the east of the Market Street Bridge and southeast of the SEPTA regional rail line. The site currently contains a church owned by the Union Gospel Mission, a small privately-owned automotive business facility (.10 acres), vacant land owned by Amtrak (3.4 acres), and land owned by Marcus Hook Borough presently used for recreational baseball fields and a commuter parking lot (3.5 acres). The Borough owns additional vacant land on the north side of a rail spur adjacent to the Viscose Village historic housing complex. This land is envisioned to be redeveloped in concert with the TOD site. The Borough is also working to acquire two sites that would connect this large site directly to 10th Street. In addition, a key component of the transit oriented development plan centers on making improvements to the existing one-acre station area.



As part of the Comprehensive Plan update, the Borough is also completing a revision to the zoning ordinance that will provide the site with a new TOD District designation, permitting mixed-use, transit-oriented development by-right. Some important elements of the new zoning ordinance include:

- Designing a walk-able block that does not exceed 600 feet;
- Relegating surface parking lots to the rear of any new building;
- Establishing dimensional standards that allow for a diversity of housing types - from multi-family to single family - while still maintaining minimum setbacks and height requirements that will ensure that any new development is compact, supports transit, and is within walking distance of transit;
- Orienting new buildings toward the pedestrian;
- Encouraging shared parking;

Recommendations

- And, promoting a mix of uses throughout the development

In addition to enabling the density and physical environment that defines transit oriented development, the updated zoning ordinance also ensures that the new development is well integrated into the existing character of the borough. This is achieved through an emphasis on guidelines for building facades and landscaping and the inclusion of sidewalks and open space.

A draft copy of the zoning ordinance has been included in the appendix.

Goals for the TOD Site

The Borough has established several goals associated with the TOD in its quest for a development that will provide significant tax benefits, new retail services, new housing choices, and an improved quality of life:

- A development providing tax benefits to the Borough
- New retail services to compliment the existing central business district
- New for-sale housing choices for residents of all income levels
- Safe and convenient pedestrian connections from the SEPTA station to the TOD site
- Attractive and convenient pedestrian connections from the TOD site to the central business district
- Connections to the East Coast Greenway along Route 13 (10th Street) and the waterfront
- Active and passive open space and recreational amenities
- Redevelopment of the Viscose/FMC site to compliment the TOD and central business district
- Linking SEPTA bus Routes 113 and 114 at the station/site
- Accessibility to multiple modes of transit and an increase in ridership

In order to realize these goals, the Marcus Hook TOD Plan concentrates on improvements to two key areas - the 7 acre site to the east of the Market Street Bridge and the SEPTA Station.

Design Recommendations

The TOD Site:

The site plan for the 7 acre TOD site offers a vision for creating a walk-able, mixed-use development that functions as an extension of both the existing business district and the nearby Viscose Village, a residential neighborhood. Zimmerman/Volk Associates conducted a market analysis which determined that, with an appropriate mix of uses within a pedestrian-friendly neighborhood plan, transit oriented development is feasible.

Recommendations

A summary of cost estimates relating to the TOD site improvements and the Station Area Improvements has been included in the implementation section of the report.

The proposed plan recommends the following improvements:

I. Streets

The Marcus Hook TOD plan aims to seamlessly integrate a variety of new residential units and commercial structures into the community. First, in extending 11th Street, 12th Street, Church Street, and McClenachan Terrace, the TOD site becomes an extension of the existing street network. The new street network is an essential component of the development as it will foster a pedestrian-friendly environment and create linkages to the station area and business district. The following improvements are recommended:

Extension of 12th Street: Market Street Bridge to Yates Avenue

Extension of 11th Street: Market Street to newly constructed Church Street

Extension of Church Street: 10th Street to newly extended 12th Street

Extension of McClenachan Terrace: to newly extended 12th Street

II. Parks and Recreation

The Marcus Hook TOD Plan seeks to create a walk-able design with the pedestrian as the priority. As such, two new parks are featured as key components of the plan. First, Station Square, located in the center of the new development, serves as a key pedestrian linkage between the station and the commercial center. The park also maintains a valued green space in the center of Marcus Hook. Second, a new recreation area on the eastern side of the Linwood Spur replaces the baseball field that is currently located on the development site. Additionally, a recreation path adjacent to the Linwood Spur connects to the East Coast Greenway, the waterfront, and locations to the east.

III. Construction of New Housing

In order to realize the optimum market position for residential development on the TOD site, Zimmerman/Volk Associates recommends 200 new dwelling units - with a mixture of housing types including loft apartments, courtyard apartments, rowhouses, and duplexes. The proposed residential neighborhood will be constructed around a street network that is an extension of the existing roadway system.

Loft Apartments: Two newly constructed loft apartment buildings have been programmed for the northern section of the site, adjacent to the railroad tracks. Loft-style architecture, which reinterprets older warehouse and manufacturing buildings, appropriately fits into the industrial context of Marcus Hook. In addition, loft-style units offer a unique housing option that, at the present time, is difficult to find within the Delaware Valley.

Recommendations

- Approximately 75 units @ 1,000 sq ft per unit
- 20 For Sale Units and 55 For Rent Units
- 4 stories

Courtyard Apartments: Three newly constructed courtyard apartment buildings have been programmed for the site - one on the northern end and two at the southern end. Courtyard apartments are small in scale - typically 3 to 4 stories - and built with minimal setbacks. The building style is well suited to an urban, pedestrian-oriented community.

- Approximately 68 units @ 1,250 sq ft per unit
- 15 For Sale Units and 53 For Rent Units
- 3 stories

Townhouses: Two single-family, attached townhouse structures frame the proposed neighborhood square. The townhouses are built with minimal front yard setbacks and have detached garages accessible via a rear alleyway. Townhouses, like the courtyard apartments, help to create a pedestrian friendly environment.

- Approximately 22 units @ 1,200 sq ft per unit
- All For Sale
- 2-3 stories

Duplexes: Located to the east of the Linwood Spur, the TOD plan calls for a “Duplex Neighborhood.” This neighborhood of single family attached homes functions as an extension of the residential structures already located on McClenachan Terrace and in historic Viscose Village. Like the townhouses, the duplexes have detached garages accessed via rear alleyways. The attached, single-family, alleyway design remains consistent with the residential types in Viscose Village.

- Approximately 16 units @ 1,600 sq ft per unit
- All For Sale
- 2 stories

IV. Construction of Retail and Office Space

Zimmerman/Volk Associates correlated the amount of retail space with the number of proposed dwelling units to determine that 7,000 square feet of new retail space could be developed. The site plan places two new commercial buildings at the corner of Market Street and 11th Street. These buildings maintain the existing build-to line and help to better link the commercial district with the station area. Both commercial structures are serviced by rear parking.

- 2 commercial units - 3,000 and 4,000 sq. feet
- 1 story

Recommendations

No significant amount of office space has been recommended for the TOD site. However, a great deal of office space could be developed within some of Marcus Hook's existing buildings, such as the Viscose/FMC site. Zimmerman/Volk Associates estimates that approximately 50,000 square feet of office space could be developed in mixed use structures built as adaptive reuse projects.

V. Parking

TODs are constructed with a transit station at their core and are based on pedestrian-scale distances to encourage walking. Because this development calls for the development of an intermodal transit center, 200 new dwelling units, 7,000 square feet of retail space, and 50,000 square feet of office space, a significant amount of parking is necessary in order to accommodate commuters, residents, visitors, workers. Therefore, parking remains a key component of the proposed development. Both public and private investment will be required for the development of parking areas on the TOD site.

Private Investment: The construction of the surface parking areas servicing the loft and courtyard apartments would be funded through private development. The required surface parking will need to be evaluated in terms of the new parking requirements created for the TOD district in the updated zoning code. The alleyways accessing the detached garages for the townhouses and duplexes would also be constructed through private funding. The site plan accounts for approximately 175 surface lot parking spaces.

Shared Public and Private Investment: Two proposed parking areas - one located behind the proposed townhouses and another behind the 10th Street commercial district - will function for both overflow residential parking and public parking. Because the lots will service both the new residents and the public, the development of these lots should occur through both public and private funding. The site plan has incorporated approximately 150 parking spaces for both the residents and the public. The borough would be required to account for the ongoing maintenance of only the public parking areas.

VI. The Pedestrian Environment

One of the primary goals of this transit oriented development is to improve linkages between the station area and central business district. Currently, the station location is physically and visually cut off from the rest of the downtown by the Market Street Bridge. An early concept plan explored the possibility of relocating the station. However, based on a station location analysis and market analysis, it was determined that the most cost effective measure was to keep the station in its present location. Thus, a great deal of importance has been placed on pedestrian linkages to the station area. Again, both public and private investment will be required for the development of the pedestrian environment.

Recommendations

Pedestrian Amenities include:

- New walkways through parking areas and proposed development sites that create connections between the station area and the commercial district.
- New streets that are designed to integrate the new development into the existing street network. Additionally, street trees and pedestrian scale lighting are essential components in creating vibrant streets.
- An at-grade crossing along the Linwood Spur. This crossing will help to seamlessly connect the proposed TOD development with Viscose Village.
- Extending the recreation path to connect with 10th Street / the East Coast Greenway.

Private Investment: A pedestrian-friendly environment includes such aesthetic amenities as street trees, attractive landscaping, and sidewalks / pedestrian walkways. All landscaping improvements and walkways in private areas should be incorporated into a developer's land development plans as well as funded by the development company.

Public Investment: In addition to attractive street conditions, pedestrian-friendly amenities such as traffic calming and a well-connected street network help to create a sense of place. The borough might also consider supplementing much of the landscaping that is required by the Subdivision and Land Development Ordinance. Such street-related improvements may be funded by public monies. Additionally, the borough may be responsible for the ongoing maintenance of new street trees and public roadways and walkways.

The SEPTA Station Area:

In an effort to better integrate the station with the borough's central business district, an early concept plan explored the possibility of relocating the station to the east side of the Market Street Bridge. However, a detailed station relocation analysis determined that the best option would be to leave the station in its current location. Thus, the Marcus Hook TOD Plan seeks to create a prominent presence for the station in its current location. The plan proposes to achieve this in the following ways:

VII. New Station Building

The present station is a temporary trailer that has become a permanent fixture in the borough. The station does not operate as an attractive gateway into Marcus Hook and contributes little to the life of the business district. However, a new station building housing a SEPTA ticketing booth, passenger waiting areas, a small retail shop, or a cafe can help to integrate the station with the business district and can

Recommendations

function as an impressive gateway into the community. SEPTA would be directly involved with the funding and construction of a new station. This is a long term project that would be included in the Capital Improvements Program. Information on SEPTA's Capital Improvement Program is included in the implementation component of this report.

VIII.12th Street Improvements

A key component of the development plan centers on improvements to and the extension of 12th Street. In order to make the existing station area into a focal point for the community as well as a transportation hub, the redesign of 12th Street will include new sidewalks and street trees. Twelfth Street would also be extended through the TOD site in order to create better connections to the existing residential neighborhoods as well as the core commercial area.

IX. Redesign of the SEPTA Parking Lot

The existing station area is approximately 1 acre. By reconfiguring the existing lot, approximately 145 new parking spaces and a pick up/drop off spot or a short term parking area can be incorporated into the station area. In addition, four ingress/egress points will help to separate automobile and bus traffic and create a more efficient parking lot. New sidewalks and plantings will create an attractive, accessible, and safe pedestrian-oriented environment. It is important to note that, municipal funding for parking lot improvements can help to jumpstart the implementation of the TOD plan.

X. Sidewalk Extension Connecting the Station Platform to the new development

Creating a sidewalk extending from the platform to the new development will create important pedestrian linkages to the TOD site, the downtown, and the existing residential community. A well designed and well lit sidewalk extension can help the Marcus Hook Station become better integrated into the central business district. This alteration would be jointly funded and constructed by SEPTA, private developers, and the Borough. Information on SEPTA's Capital Improvement Program is included in the implementation component of this report.

XI. Establishment of a Bus Connection and Transfer Area

Two bus routes, the #113 and #114 circulate in close proximity to the station but do not access the station or study site. By redesigning the parking lot to include a bus transfer area these two routes can interchange at the station, providing an ideal transfer center between the bus routes and train. As a Bus-Rail transfer center, the Marcus Hook Station can offer residents transportation alternatives to Center City Philadelphia, Wilmington, DE, and suburban communities throughout Delaware County. Altering these two bus routes requires action and implementation by

Recommendations

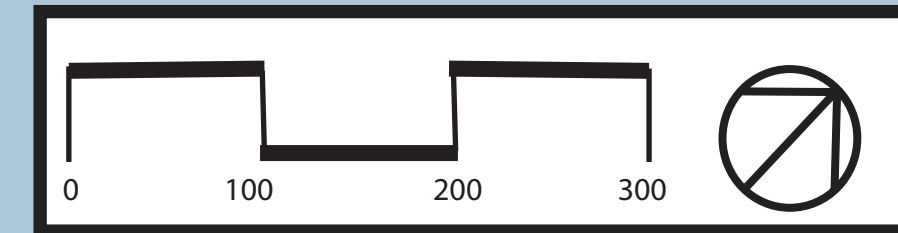
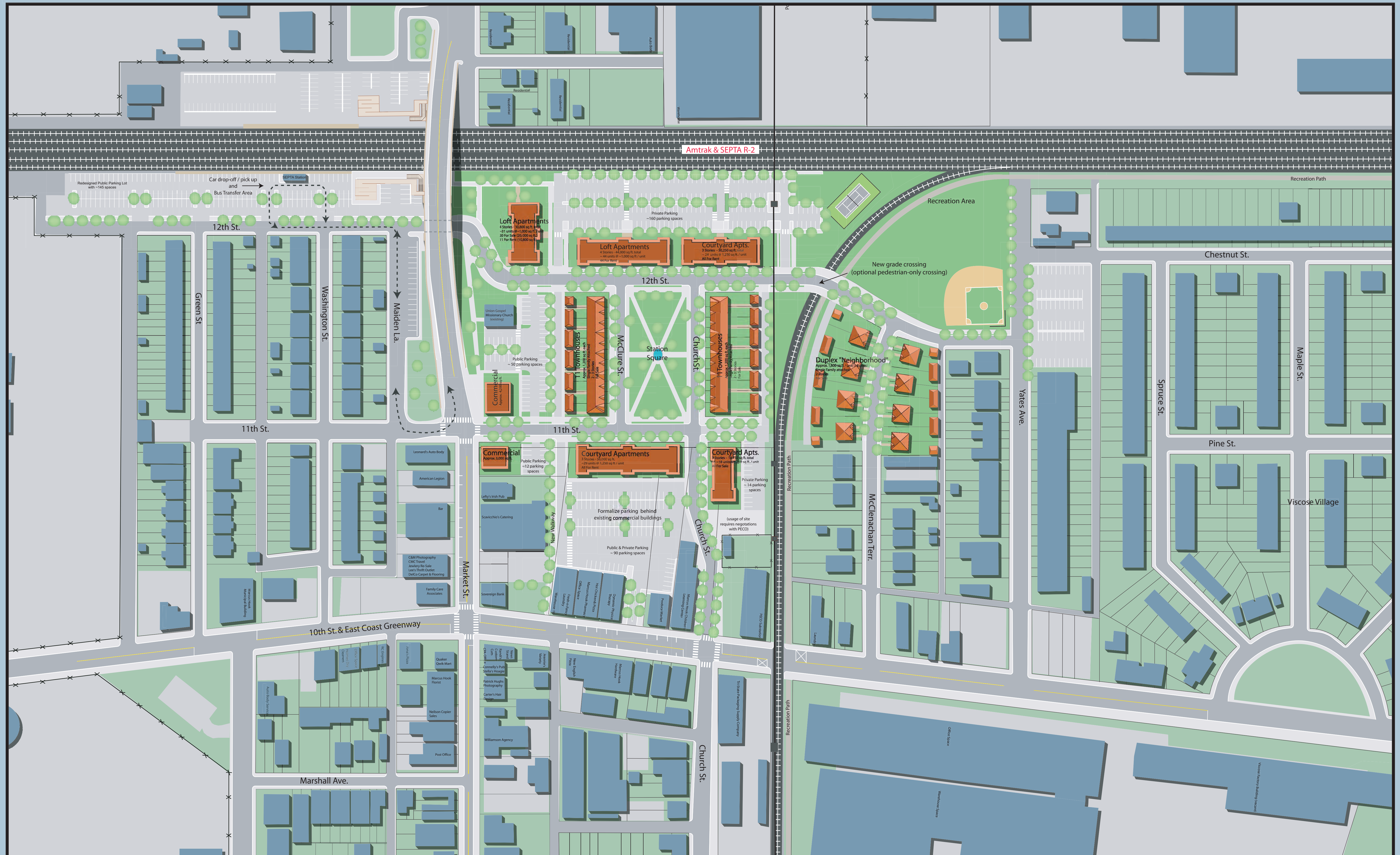
SEPTA. Information relating to the process of altering a bus route has been included in the implementation component of this report.

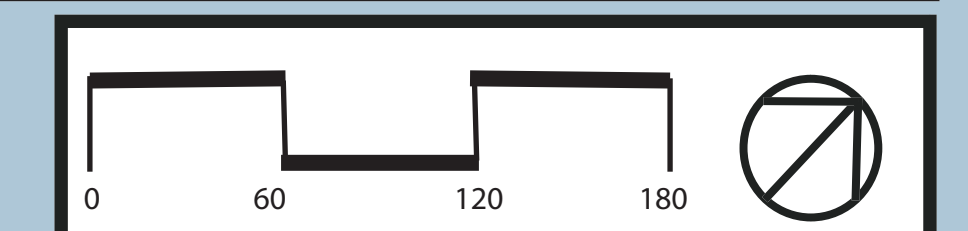
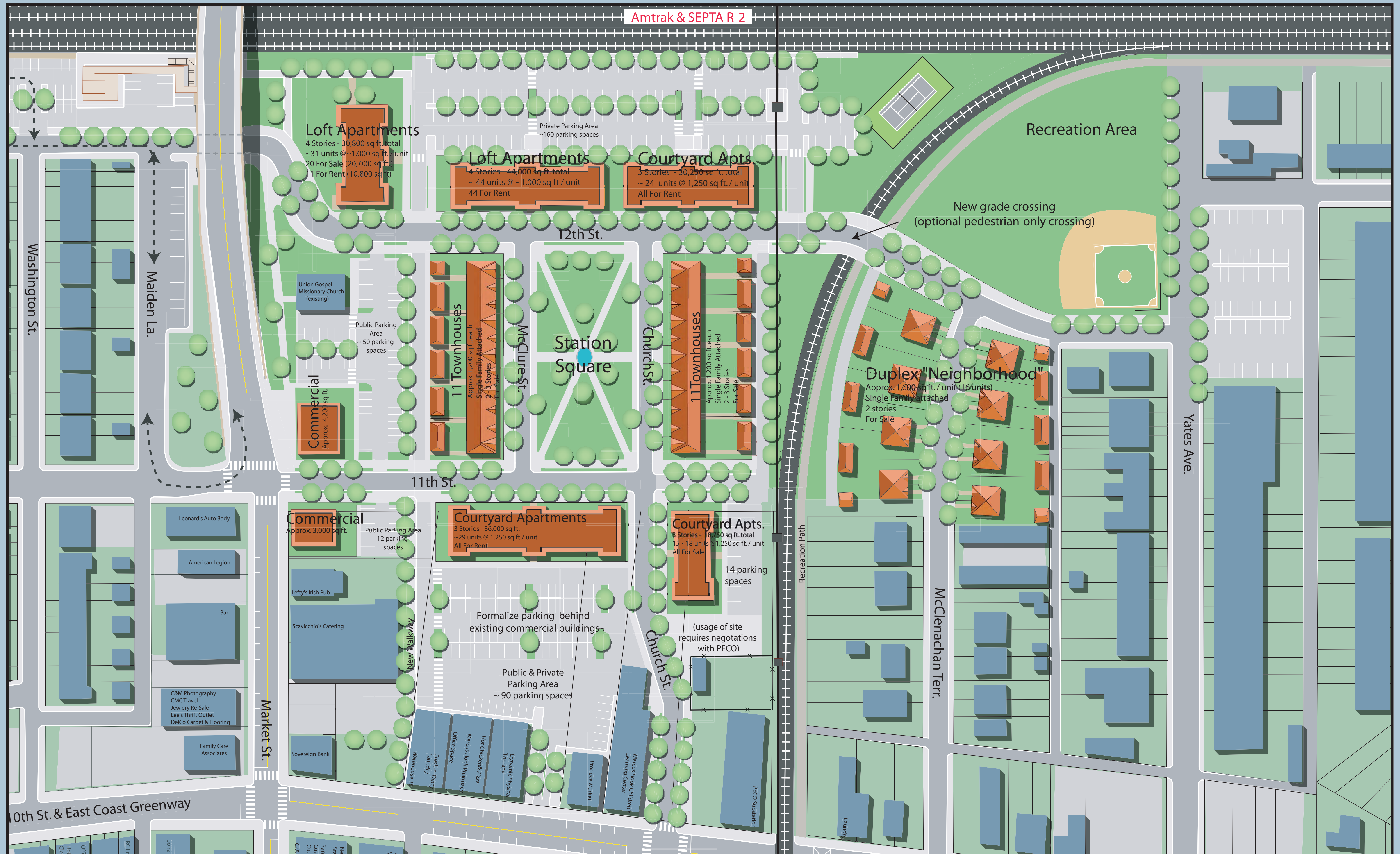
XII. A New Market Street Bridge

A new stairway and handicapped accessible ramp has been incorporated into the new bridge design. The stairway and ramp will improve pedestrian connections between Marcus Hook and Lower Chichester. For the pedestrian, motorist, or bus/train passenger, the new bridge will also function as a prominent gateway into the borough. The construction of the new bridge will be funded through the Pennsylvania Department of Transportation.

Marcus Hook Transit Oriented Development Plan - Station Square

SITE PLAN



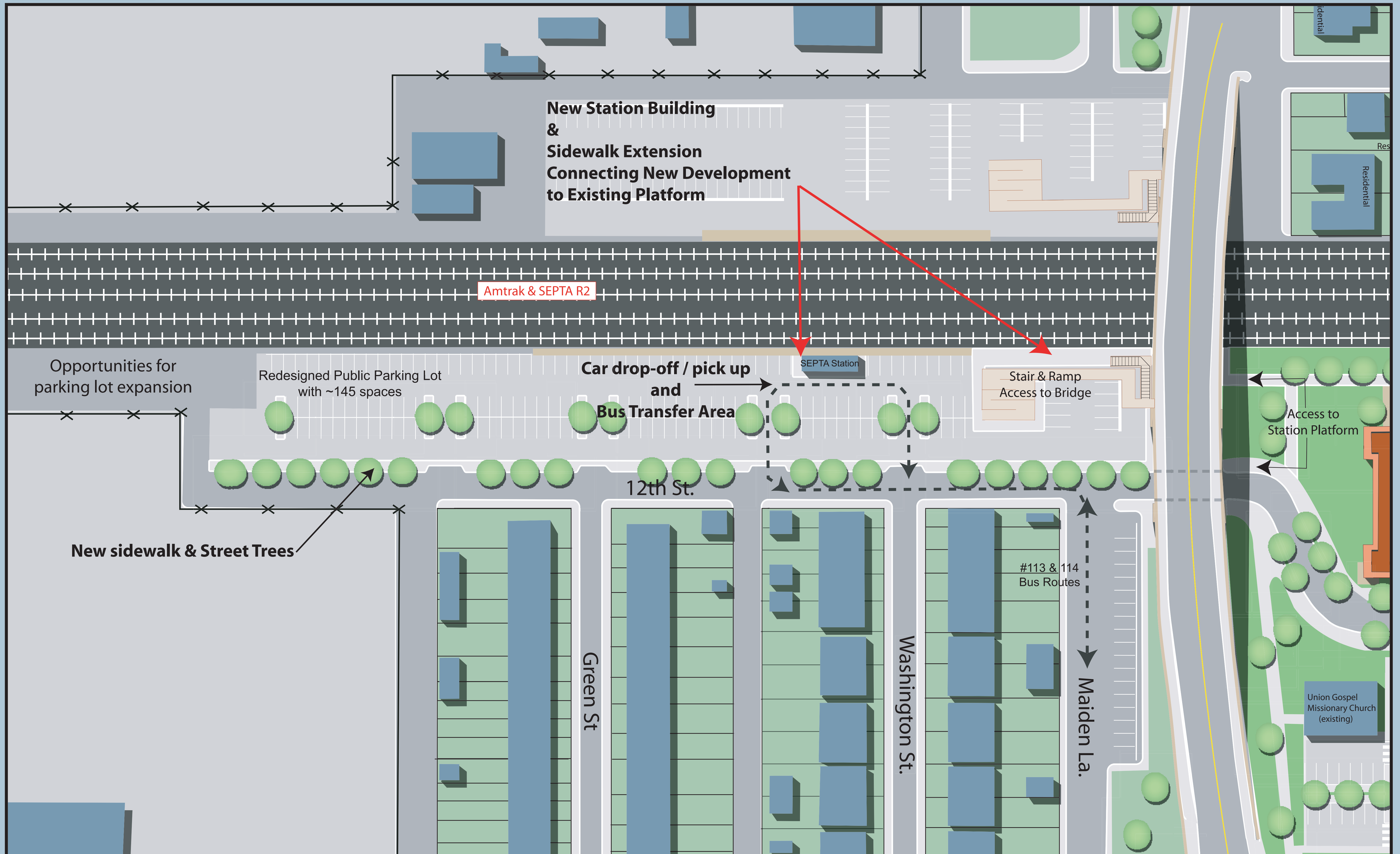


Marcus Hook Transit Oriented Development Plan - Station Square

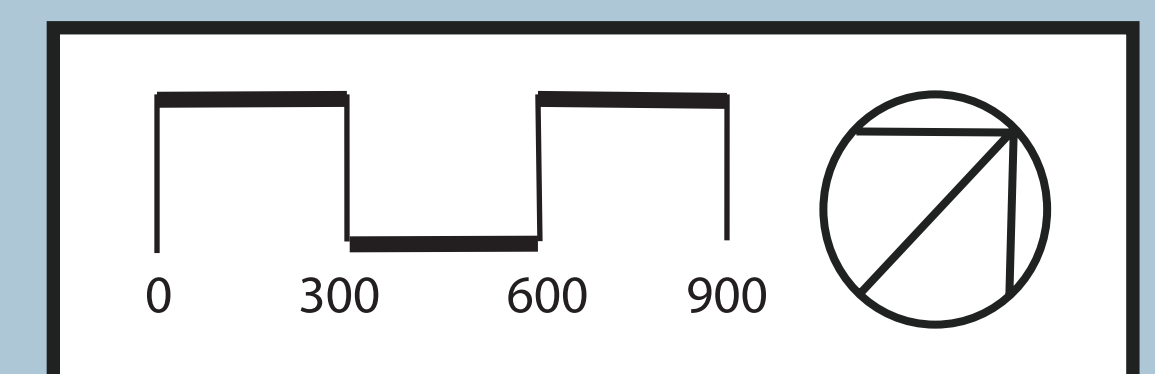


Kise Straw & Kolodner

Architects Planners Historians Archaeologists



Marcus Hook Transit Oriented Development Plan - Proposed Bus Access



IMPLEMENTATION



Project Approach

As a result of positive feedback from the development community for a TOD development in Marcus Hook, the Borough intends to move forward immediately with project implementation. Follow-up work that needs to be completed includes: conducting real estate studies (environmental, appraisal, title) necessary to assemble and package the entire site for subsequent transfer to and acquisition by a private developer; obtaining option for municipal site control of the several privately-owned parcels that are necessary to complete the site; and conducting a process for developer solicitation, developer selection, and negotiating a developer agreement that will establish the requirements for transfer of the entire site to a private developer to then implement project construction.

To begin the process of implementing the Marcus Hook TOD plan, the Pennsylvania Environmental Council (PEC) has offered to assist with these next steps. Specifically, they include:

Task 1. Negotiate the Acquisition of the Amtrak Property

- Assist with discussions with Amtrak Real Estate.
- Coordinate conduct and review Fair Market Appraisal and Phase I Environmental Investigation.
- Conduct negotiations; coordinate follow-up environmental investigations as appropriate.
- Coordinate with Borough Manager on property acquisition and transfer to the Borough, or transfer directly to private developer.

Task 2. Coordinate acquisition of private business property to be included within the TOD site.

- Coordinate real estate studies necessary to be performed for this acquisition - Fair Market Value appraisal, Phase I Environmental Investigation, property survey, and title report - and review all reports.
- Coordinate with Borough Manager on acquisition negotiations and property transfer to the Borough or private developer.

Task 3. Coordinate Developer Selection Process

- Engage sub-consultant to develop a Letter of Intent followed by a full Request for Proposal to send out to interested private developers.
- Coordinate process for analysis and review of developer submissions and selection, including review of site plans and proposals with Borough Manager and Borough Council.
- Work with sub-consultant on an outline of a Developer Agreement that sets benchmarks for responsibilities for Borough and developer to be met throughout the process.
- Coordinate with Borough Manager and Borough Council on review of developer submissions, developer agreement and developer selection.

Task 4. Coordinate Phase I and II Environmental Investigation of Borough parcel and any other investigations or information as required by a private developer in order to complete a property transfer. (Assumption is that the Borough parcel would be transferred at no cost.)

Task 5. Coordinate with the Delaware Redevelopment Authority to acquire the private property for redevelopment should negotiations with the private landowners prove to be unsuccessful. The Borough will be required to follow the redevelopment process outlined in the Pennsylvania Urban Redevelopment Law.

Task 6. Prepare engineering, architectural construction documentation, permit applications, and subdivision documentation.

Task 7. Begin construction.

Responsible Parties

Several parties will be involved in the implementation process. They should include, by task:

Project Approach Task	Responsible Parties
1 Negotiate the acquisition of the Amtrak Property	Borough of Marcus Hook, PEC, Amtrak
2 Coordinate acquisition of private business property to be included within the TOD site.	Borough of Marcus Hook, PEC, real estate sub-consultants
3 Coordinate Developer Selection Process	Borough of Marcus Hook, PEC, real estate sub-consultant
4 Coordinate Phase I and II Environmental Investigation of all TOD properties.	PEC, environmental sub-consultant
5 Coordinate with the Delaware County Redevelopment Authority to acquire the private property for redevelopment unable to be acquired through negotiation.	Borough of Marcus Hook, Delaware County Commerce Center - Redevelopment Authority
6 Prepare engineering, architectural construction documentation, permit applications, and subdivision documentation	Developer, engineering and architectural consultant
7 Begin construction	Developer, contractor

Implementation

Approximate Project Schedule

The property negotiation and acquisition process will take several months, but efforts can begin as soon as the Borough or County is able to contract with PEC. The following provides an estimated timeline for the process:

Project Approach Task	Approximate Timeframe
1 Negotiate the acquisition of the Amtrak Property	Months 1-3
2 Coordinate acquisition of private business property to be included within the TOD site.	Months 1-6
3 Coordinate Developer Selection Process	Months 6-9
4 Coordinate Phase I and II Environmental Investigation of all TOD properties.	Months 9-12
5 Coordinate with the Delaware County Redevelopment Authority to acquire the private property for redevelopment unable to be acquired through negotiation.	Months 12-24 (optional, depending on negotiations with property owners)
6 Prepare engineering, architectural construction documentation, permit applications, and subdivision documentation	Months 12-24 (Assuming no Redevelopment Authority intervention necessary)
7 Begin construction	Months 24-48+

Implementation

Implementation Costs

The costs for implementing the Marcus Hook TOD plan will be incurred by both the Borough and the private developer. Roughly estimated, the development of the TOD site will require nearly \$60 million of public and private investment. The itemization of development costs is included on the following pages.

Marcus Hook Transit Oriented Development Plan Construction Costs for TOD

TOD Costs	Unit	Unit Cost	Total
	Unit	Unit Cost	Total
Land Assembly			
Land Acquisition, Property Appraisal, Negotiations, Environmental Analysis:			\$1,000,000.00
Total			\$1,000,000.00
Station Area Improvements			
12th Street Improvements / Construction / Paving:	2,670 Sq.Yd.	\$50.00 Sq.Yd.	\$133,500.00
New Sidewalks (12-foot) Plain Concrete - Along 12th Street and at the train platform:	2,120 Sq.Yd.	\$50.00 Sq.Yd.	\$106,000.00
New Curbs Plain Concrete:	1,920 L.Ft.	\$30.00 L.Ft.	\$57,600.00
Pedestrian Lights:	40	\$6,000.00 each	\$240,000.00
Street Trees:	30	\$500.00 each	\$15,000.00
New Station Building:	1,500 Sq. Ft.	\$150.00 Sq. Ft.	\$225,000.00
Parking Lot Paving (station lot):	10,700 Sq.Yd.	\$50.00 Sq. Yd.	\$535,000.00
Painting:	2,560 L.Ft.	\$5.00 L. Ft.	\$12,800.00
Total			\$1,324,900.00
TOD Development Site Improvements			
<i>12th, 11th, Church, McClure, McClenachan</i>			
New Street Construction / Paving:	14,080 Sq.Yd.	\$50.00 Sq.Yd.	\$704,000.00
New Curbs Plain Concrete:	6,590 L.Ft.	\$30.00 L.Ft.	\$197,700.00
New Sidewalks (12-foot) Plain Concrete:	5,950 Sq.Yd.	\$50.00 Sq. Yd.	\$297,500.00
Pedestrian Lights:	120	\$5,000.00 each	\$600,000.00
Street Trees:	110	\$500.00 each	\$55,000.00
Water Lines:	4,255 L.Ft.	\$60.00 L. Ft.	\$255,300.00
Sewer Lines:	4,255 L.Ft.	\$50.00 L. Ft.	\$212,750.00
Trenching:	2,360 Cu.Yd.	\$50.00 Cu.Yd.	\$118,000.00
Total			\$2,440,250.00
Parks and Recreation			
Station Square (Design and Construction):			\$750,000.00
Ballfield (backstop, scoreboard, field mix):	1	\$13,000.00 each	\$13,000.00
Tennis Court (net, posts, asphalt, fence, paint):	1	\$25,000.00 each	\$25,000.00
Trees (3 - 3 1/2 cal.):	16	\$525.00 each	\$8,400.00
Total			\$796,400.00
Parking			
Paving (public lots):	12,140 Sq.Yd.	\$50.00 Sq. Yd.	\$607,000.00
Painting:	2,980 L.Ft.	\$5.00 L. Ft.	\$14,900.00
Total			\$621,900.00
New Development			
Loft Apartment Buildings	74,800 Sq Ft	\$150.00 Sq Ft	\$11,220,000.00
Courtyard Apartments	134,000 Sq Ft	\$150.00 Sq Ft	\$20,100,000.00
Townhomes	26,400 Sq Ft	\$150.00 Sq Ft	\$3,960,000.00
Duplexes	25,600 Sq Ft	\$150.00 Sq Ft	\$3,840,000.00
Commerical	7,200 Sq Ft	\$150.00 Sq Ft	\$1,080,000.00
New Sidewalks (10-foot) Plain Concrete:	2,900 Sq.Yd.	\$50.00 Sq.Yd.	\$145,000.00
New Curbs Plain Concrete:	3,570 L.Ft.	\$30.00 L.Ft.	\$107,100.00
Pedestrian Lights:	75	\$6,000.00 each	\$450,000.00
Trees (3 - 3 1/2 cal.):	85	\$525.00 each	\$44,625.00
Parking Lot Paving (private lots and alleys):	13,800 Sq.Yd.	\$50.00 Sq. Yd.	\$690,000.00
Total			\$41,636,725.00
Construction Subtotal			\$47,820,175.00
Construction Contingency			
Based on 15% of Construction Subtotal:			\$7,173,026.25
Construction Total			\$54,993,201.25
Design			
Based on 7% of Construction Subtotal:			\$3,347,412.25
GRAND TOTAL			\$58,340,613.50

Funding Sources

As a municipality with a clearly defined vision for development, Marcus Hook will have access to various sources of federal, state, local, and private funding that encourage many of the improvements that will help to jumpstart new development. The funding sources and grants listed below can help to off set some of the upfront costs that are necessary for the implementation of the Marcus Hook Transit Oriented Development Plan. The most promising funding sources will be federal. Applicable funding sources include:

Federal:

United States Department of Transportation - Federal Highway Administration {under TEA-3, the latest bill of the Intermodal Surface Transportation Efficiency Act (ISTEA)}

- Transportation Enhancement Program (TE)
- Transportation and Community and System Preservation (TCSP) Pilot Program
- Congestion Management and Air Quality Improvement Program (CMAQ)

Federally funded transportation-related projects must be coordinated through the Delaware County Planning Department and the Delaware Valley Regional Planning Commission. All Community Development Block Grants are coordinated by the county.

Funding Source	Target	Eligible Activities	Amount	Application Deadline	For More Information
TE	Develop/Improve Transportation Facilities	Community revitalization and economic development activities, including streetscape improvements	Usually \$150,000 - \$200,000 per grant	Rolling	www.inventpa.com
TCSP	Build livable communities through transportation and community improvements	A variety of projects including streetscape and traffic calming improvements, way finding, and gateway signage transit station and planning improvements and design studies	\$120 million FYs 1999-2003	Rolling	www.fhwa.dot.gov/tcsp
CMAQ	Infrastructure improvement	Environmental remediation, water and sewer systems, and transportation facilities, including streetscape	Loans and grants up to \$1,250,000	Rolling	www.inventpa.com
CDBG	Technical aid to communities in economic development	Housing rehabilitation, public assistance services, infrastructure improvement, development and planning	Grants up to \$500,000	Ongoing	www.co.delaware.pa.us/hcd/coupro.html

Implementation

State:

Pennsylvania Department of Community and Economic Development (DCED)

- Communities of Opportunity Program (COP)
- Infrastructure Development Program (IDP)
- Community Revitalization Program (CRP)
- Shared Municipal Services Grants (SMS)
- Pennsylvania Department of Transportation (Home Town Streets and Safe Routes to School)

Funding Source	Target	Eligible Activities	Amount	Application Deadline	For More Information
COP	Local economic development and community revitalization	Local economic development and community revitalization Community revitalization and economic development activities and/or the rehabilitation of housing	Usually \$150,000 - \$200,000 per grant	Rolling	www.inventpa.com
IDP	Infrastructure improvement	Environmental remediation water and sewer systems, and transportation facilities, including streetscape	Loans and grants up to \$1,250,000	Rolling (via county)	www.inventpa.com
CRP	Community stability initiatives	A variety of improvements such as the construction and rehabilitation of infrastructure	\$5,000 - \$25,000 per grant	Usually Rolling	www.inventpa.com
SMS	Assistance to municipalities to foster efficiency of municipal services	Programs of intermunicipal cooperation	Usually \$150,000 - \$200,000 per grant Grants finance up to 50% of project cost	Rolling	www.inventpa.com
PennDOT: Hometown Streets and Safe Routes to School Programs	To encourage reinvestment in & redevelopment of downtowns; and to establish safe walking routes to school and to promote healthy living.	Streetscape improvements undertaken within a defined "downtown" and pedestrian and bicycle safety	This program utilizes federal funds. There is a matching funding requirement associated with their use. The match is 20% of the total project costs.	Summer	http://www.dot.state.pa.us/PennDOT/Bureaus/CPDM/Prod/Saferoute.nsf

Implementation

Private:

- Local Businesses and Major Employers
- Potential Developers

Foundations:

- The Allstate Foundation
- Ford Foundation
- Roger S. Firestone Foundation
- Surdna Foundation
- Metropolitan Life Foundation
- Sovereign Bank Foundation
- William Penn Foundation

Foundation	Applicable Eligible Activities	Contact Number
The Allstate Foundation	Highway and automobile safety, as well as community development	(847) 402-5502
Ford Foundation	Economic development	(212) 573-5000
Roger S. Firestone Foundation	Urban/community development	(610) 520-9490
Surdna Foundation	Transportation, urban/suburban issues, and community revitalization	(212) 557-0100
Metropolitan Life Foundation	Urban/community development	(212) 578-6272
Sovereign Bank Foundation	Urban community development	(610) 320-8504
William Penn Foundation	Environment and Communities	(215) 988-1830

Implementation

Station Area & Rail-Related Implementation Guidelines

Because the Station Area is visually and physically separated from both the proposed development and the core commercial area, physical and aesthetic improvements to the station area are an essential component of the development plan. Therefore, it is important to have an understanding of some of SEPTA's processes.

The Capital Programs Budget:

The TOD plan calls for some significant improvements to the station area in order to create a true gateway to the community. The reconstruction of the present station building, parking lot improvements, and the addition of a sidewalk at the platform are some projects that should be included in SEPTA long range Capital Program.

SEPTA's Capital Program offers a twelve year outlook for proposed and on-going projects throughout the region. The capital budget is coordinated with the Pennsylvania Department of Transportation's statewide twelve year plan. Inclusion on the Capital Programs Budget is intended for long-term projects that will have a significant impact on the region. Capital Programs projects are determined based on available funding at the federal and state levels as well as need.

Marcus Hook should consider a two-pronged approach in applying for consideration on the Capital Programs Budget:

- Write to the SEPTA General Manager, Faye Moore, as well as the Chairman of the Board, Pasquale T. Deon, Sr., in order to make SEPTA aware of Marcus Hook's potential to become a multi-model transit oriented development site. It is important to make SEPTA staff aware of the assets of the development site because SEPTA staff members serve as a driving force in determining project funding.

Contact: SEPTA
1234 Market Street
Philadelphia, PA 19107

- Delaware County also works closely with SEPTA's Capital Programs division in order to lobby for funding and support for local transportation initiatives. Marcus Hook should coordinate efforts with the county's division of transportation planning as the proposed development will have county-wide impacts.

Implementation

Contact: Tom Shaffer
Manager of Transportation Planning
Delaware County Planning Department
Court House / Government Center
201 W. Front Street
Media, PA 19063
(610) 891-5217

Requesting a Bus Route Change:

One component of the TOD plan suggests the re-routing of Bus Routes 113 and 114. Currently, these routes circulate in close proximity to the Marcus Hook Station but do not access the station or proposed TOD site. By slightly adjusting the course of these two bus routes to stop at the Marcus Hook Station, a multi-modal center can be created.

When considering a revision to an existing bus route, SEPTA analyzes the proposed adjustment through the Comparative Evaluation Process for possible inclusion in the Annual Service Plan. The process includes:

- A consideration of the existing site geometrics. SEPTA must determine that the buses can maneuver through the streets
- The development of operating costs
- A ridership and revenue projection based on census data, potential traffic generators, and automobile ownership data
- An operating ratio and analysis
- The projected effect of a proposal on passengers' travel time and service access / community benefit analysis

Following the collection of the above background information, a tariff document which lists a street-by-street description (including a map) of the change is filed and circulated. A public hearing is then held after adequate public notice (30 days). Hearings are conducted by an independent hearing examiner who listens to testimony from staff and the general public. At the conclusion of the public hearing the examiner writes a non-binding recommendation to the SEPTA Board. SEPTA staff may then submit changes to the proposal based on input at the hearing(s). The Board makes the final determination regarding all routing changes. The entire process may take between four and six months from filing of tariff to implementation of service.

It is important to note that, generally, on suburban bus routes, an area is considered "well-served" if a stop is no more than 1/4 mile (approximately 1,320 feet) from a passenger's origin point; approximately five minutes walking time and a minimum service frequency of 30 minutes is provided. An area is considered "served" if a stop is no more than 1/2 mile (approximately 2,640 feet) from passenger's origin point; approximately ten minutes walking time and a service frequency of at least 60 minutes is provided. At the present time, bus routes 113 and 114 "serve" the train station area. However, once the

Implementation

new development is in place and 200 new residential units are occupied, the demand for bus transit may very well justify the re-routing of the 113 and 114.

A service/route change request must be submitted in writing from the general public, SEPTA's Citizen Advisory Committee, Elected Officials, the County Planning Commission, the local Transportation Management Association, the local Chamber of Commerce, a transit advocacy group, or from SEPTA employees. Therefore, moving forward, the Borough should encourage members of the public as well as county officials to write to SEPTA advocating that Bus Routes 113 and 114 stop at the Marcus Hook train station.

Contact: John Calman
Manager, Suburban Service Planning and Schedules
1234 Market Street, 9th Floor
Philadelphia, PA 19107
215-580-7947

Requesting an At-Grade Crossing at the Linwood Spur:

The TOD plan proposes an at-grade crossing linking the Station Square area with the new ballpark and duplex neighborhood. This is an essential means of linking the TOD site and historic Viscose Village to the station area. The process for creating an at-grade crossing begins with the Pennsylvania Public Utilities Commission.

Step 1: File application with Pennsylvania Public Utility Commission, Bureau of Transportation and Safety, for the construction of a grade crossing.

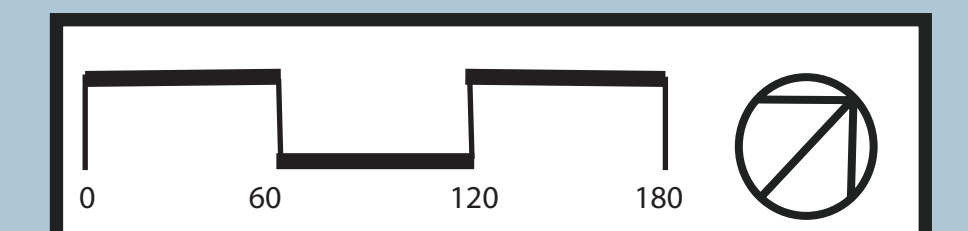
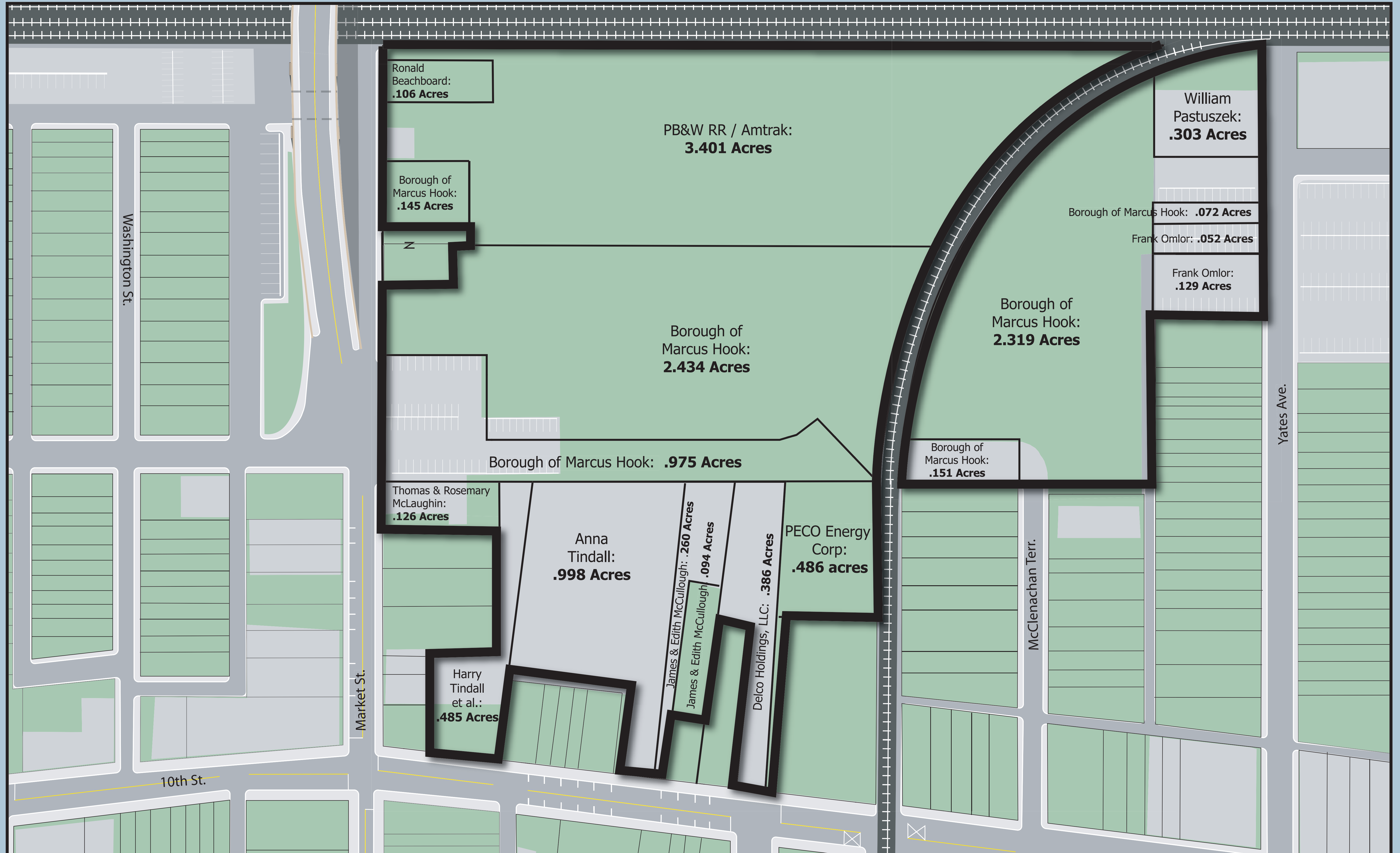
Step 2: Conduct a field meeting at the site with all interested parties. In this case all interested parties would include: the owner of the railroad line, the Borough, the County, the Public Utilities commission, and representatives from any other public utility located within the crossing.

Step 3: If all parties are in concurrence - authorization is granted.

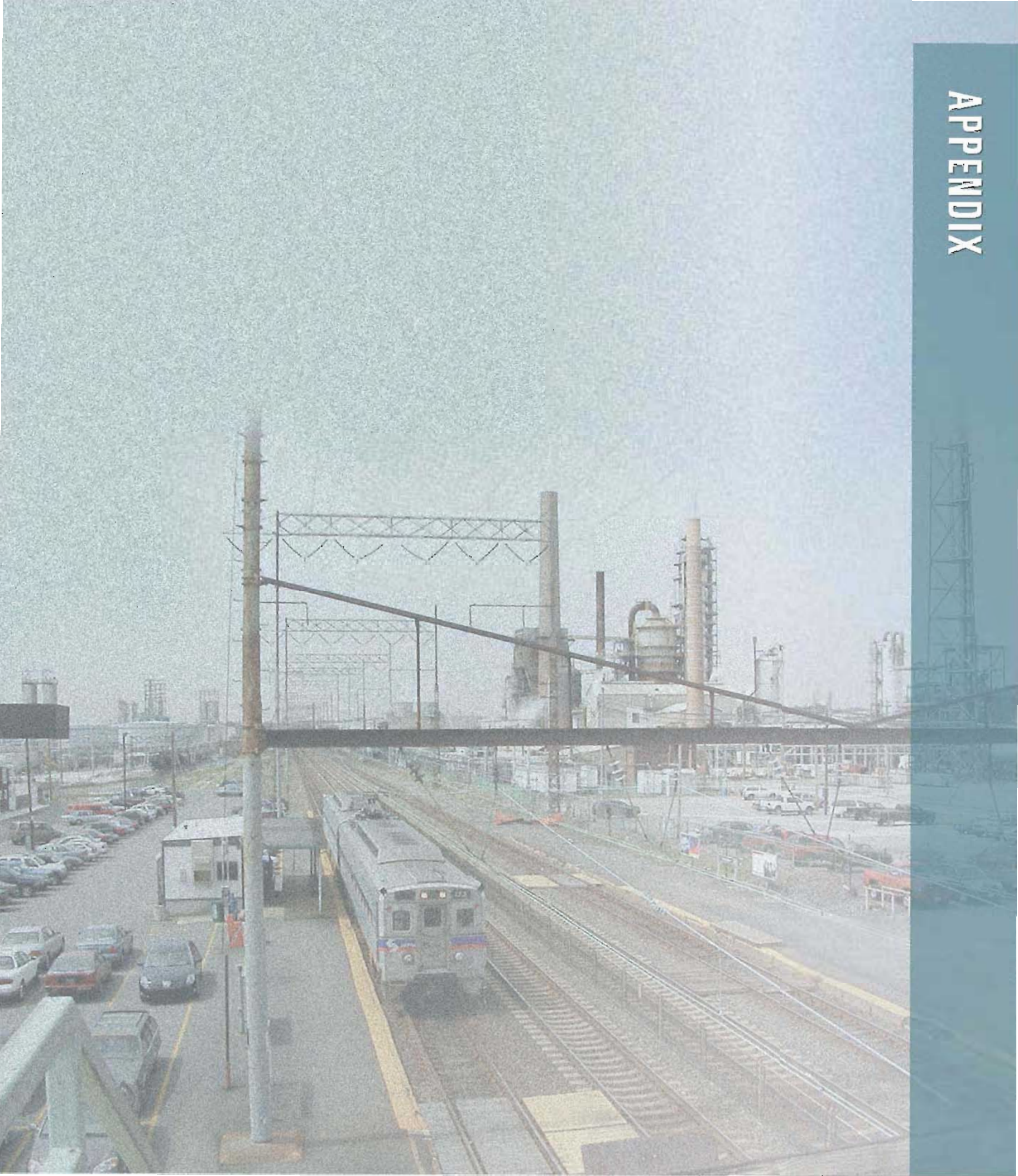
Step 4: If there any objections the application would go to a formal hearing and a decision would be made by an Administrative Law Judge.

Mailing Address: Pennsylvania Public Utility Commission
Post Office Box 3265
Harrisburg, PA 17102-3265

Implementation



APPENDIX



ZIMMERMAN/VOLK ASSOCIATES, INC.

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Research & Strategic Analysis

PRELIMINARY FINDINGS

Marcus Hook Transit-Oriented Development
Borough of Marcus Hook, Delaware County, Pennsylvania

July 11, 2003

The optimum market position for new construction within a transit-oriented, mixed-use development on an approximately seven-acre site adjacent to the Marcus Hook Station of SEPTA's R-2 regional line—and including adaptive re-use of existing buildings in Downtown—within the Borough of Marcus Hook, Delaware County, Pennsylvania, has been derived from Zimmerman/Volk Associates' proprietary target market methodology and through the company's extensive experience with transit-oriented development and redevelopment.

The Marcus Hook transit-oriented development (TOD) site is bordered to the northwest by the rail line and to the southwest by Market Street. The site is also located adjacent to Viscose Village, an historic neighborhood to the northeast.

From a market perspective, the assets of the site and of Downtown Marcus Hook include:

- Walking distance to the SEPTA station;
 - A mid-point location between the major employment centers of Center City Philadelphia and Downtown Wilmington, as well as easy access to Philadelphia International Airport;
 - Close proximity to sales-tax-free shopping in Delaware;
 - The opportunity for new residential construction in a borough with little new construction and along a transit line with limited new construction;
 - The relatively good condition of nearly all of Marcus Hook's dwelling units;
 - The borough's attractive waterfront park;
 - Adjacency to historic Viscose Village; and
 - The redevelopment potential of the Viscose factory building.
-
-

July 11, 2003

From a market perspective, the challenges of the site and of Downtown Marcus Hook include:

- The heavily industrial character of much of the land in the borough, with large-scale oil refineries flanking the borough's residential neighborhoods on both sides;
- Direct access to the site limited by construction of the new Market Street Bridge;
- The extensive truck traffic through the borough;
- The at-grade rail crossings; and
- The absence of desirable retailers—such as cafés and upscale restaurants, bookstores, art galleries, grocery stores—anywhere in the borough or in adjacent municipalities.

The assets of the area outweigh the challenges, most of which can be overcome once new construction is underway. The market analysis has determined that, with an appropriate mix of uses within a pedestrian-friendly neighborhood plan, transit-oriented development is feasible on the site. However, from the market perspective, moving the station to a location on the site is not recommended. A new on-site station, with associated parking field, would diminish the market potential of the site by removing acreage from development that could be more economically utilized as residential or commercial land. It is also likely that the costs of such a re-location would dramatically exceed any potential economic benefit to the Downtown.

DEVELOPMENT PROGRAM
TRANSIT-ORIENTED DEVELOPMENT
Borough of Marcus Hook, Delaware County, Pennsylvania

Residential:	200 dwelling units
Retail:	7,000 square feet
Office:	50,000 square feet

SOURCE: Zimmerman/Volk Associates, Inc., 2003.

The mix of uses proposed for new construction on the site and for adaptive re-use of existing buildings in Downtown Marcus Hook is sustainable over both the short- and long-term. Two hundred new dwelling units, which are likely to be absorbed by the market in less than four years, represent a more than 20 percent increase in Marcus Hook's existing housing stock. The type of retail that could be developed on the site is likely to be neighborhood-oriented—for example, a small coffee shop, a drop-off dry cleaners—and should be positioned to be complementary to, and not competitive with the Downtown. The type of office that could be developed in new construction on the site or in adaptive re-use of the existing Viscose factory is likely to be small

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scale as well, providing spaces for firms of four to six persons, and positioned to be leased by lawyers, insurance agencies, accountants, and bank branches, among others.

RESIDENTIAL:

The optimum market position for the residential uses has been developed based on a variety of factors, including but not limited to:

- The site's characteristics and adjacencies, assets and challenges as outlined above;
- Development of the site following the planning principles of the New Urbanism;
- The new unit rental and purchase propensities of draw area households; and
- Current residential market dynamics along the SEPTA R-2 transit corridor.

Based on the socio-economic and lifestyle characteristics of the target households, the supply-side context, and the target residential mix distribution, the optimum market position for new residential development on the TOD site is as follows (*see Tables 3 through 5*):

Optimum Market Position
 TRANSIT-ORIENTED DEVELOPMENT
 Borough of Marcus Hook, Delaware County, Pennsylvania

NUMBER	NET DENSITY	HOUSING TYPE	BASE RENT/PRICE RANGE	UNIT SIZE RANGE	RENT/PRICE PER SQ. FT.
MULTI-FAMILY FOR-RENT—61.1%					
72	50 du	Loft Apartments	\$500 to \$900	500 to 1,000	\$0.90 to \$1.00
50	50 du	Courtyard Apartments	\$625 to \$1,225	600 to 1,250	\$0.98 to \$1.04
MULTI-FAMILY FOR-SALE—18.5%					
20	50 du	Loft Apartments	\$55,000 to \$100,000	500 to 1,000	\$100 to \$110
18	50 du	Courtyard Apartments	\$85,000 \$135,000	750 to 1,250	\$108 to \$113
SINGLE-FAMILY ATTACHED FOR-SALE—20.4%					
22	15 du	Rowhouses	\$115,000 to \$185,000	900 to 1,500	\$123 to \$128
18	12 du	Duplexes	\$145,000 to \$195,000	1,100 to 1,600	\$122 to \$132

200 dwelling units

SOURCE: Zimmerman/Volk Associates, Inc., 2003.

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The above rents and prices are in year 2003 dollars and apply to the first phase only. The proposed rents and prices are also exclusive of options, upgrades, and floor/location premiums. Housing types include rental units in mixed-use buildings, lofts as well as conventional apartments. Ownership housing types include condominium lofts and apartments as well as townhouses and duplexes. (See BUILDING TYPES *below*.)

Net densities range from 12 units per acre for the duplex units up to 50 units per acre for the multi-family buildings. The average net density for the proposed range of housing types is 32 units per acre. On a seven-acre site, the gross density of the proposed 200 dwelling units would be approximately 25 units per acre. Transit-oriented development is supported by higher densities, and gross residential densities on land adjacent to a transit stop should not fall below 20 units per acre.

Absorption of 200 dwelling units could be achieved within four years from commencement of marketing, depending on phasing and construction, and barring a significant and persistent downturn in the national, regional and local economies over those four years

Annual Absorption	
TRANSIT-ORIENTED DEVELOPMENT	
Borough of Marcus Hook, Delaware County, Pennsylvania	
Multi-family for-rent	60
Loft apartments	36
Courtyard apartments	24
Multi-family for-sale	11
Loft apartments	6
Courtyard apartments	5
Single-family attached for-sale	11
Rowhouses	6
Duplexes	5
Total For-Sale	22
Total Including Rentals	82

SOURCE: Zimmerman/Volk Associates, Inc., 2003.

At the forecast absorption of 82 units, including rental apartments, in one year, new residential development on the site would require a capture rate of 15.2 percent of the 540 households, identified through target market analysis, that have the potential to rent or purchase new multi-

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family and single-family attached housing units on the site in the year 2003—a rate that is within the target market methodology’s parameters of feasibility.

The annual absorption paces require specific capture rates of those households that, in the year 2003, represent the potential market for each housing type on the site, as follows:

Capture of the Potential Market
Based on Absorption Forecasts
TRANSIT-ORIENTED DEVELOPMENT
Borough of Marcus Hook, Delaware County, Pennsylvania

HOUSING TYPE	ANNUAL MARKET POTENTIAL (HHS)	AVERAGE ANNUAL ABSORPTION (UNITS)	REQUIRED CAPTURE RATE
Multi-family for-rent	330	60	18.2%
Multi-family for-sale	100	11	11.0
Single-family attached for-sale	110	11	10.0

SOURCE: Zimmerman/Volk Associates, Inc., 2003.

These housing type-specific capture rates are within the parameters required for feasible development. For a development of this size and scale, there is a high degree of confidence in a capture rate of up to 25 percent for rental apartments, and a capture rate of up to 15 percent for each of the for-sale housing types.

NOTE: The target market capture rates of the potential purchaser or renter pool are a unique and highly-refined measure of feasibility. Target market capture rates are not equivalent to—and should not be confused with—penetration rates or traffic conversion rates.

The target market capture rate is derived by dividing the annual forecast absorption by the number of households that have the potential to move to the site in a given year.

The penetration rate is derived by dividing the total number of dwelling units planned for a property by the total number of draw area households, sometimes qualified by income.

The traffic conversion rate is derived by dividing the total number of buyers or renters by the total number of prospects that have visited a site.

Because the prospective market for a property is more precisely defined using target market methodology, a substantially smaller number of households are qualified; as a result, target market capture rates are higher than the more grossly-derived penetration rates. The resulting higher capture rates remain within the range of feasibility.

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RETAIL:

The amount of retail space has been correlated with the number of dwelling units proposed for the site rather than derived from conventional retail void and leakage analysis. Based on an average of 35 square feet per household (not per person), and 200 new dwelling units, up to 7,000 square feet of new retail space could be developed in mixed-use buildings, with four to five floors of residential uses over a ground floor of retail uses. No free-standing retail has been contemplated for the development.

OFFICE:

Given the extended period of time that could be required to absorb Class A office space, no significant amount office space is recommended to be developed on the site. However, the amount of office space that could be developed within existing buildings in Marcus Hook, including the Viscose factory buildings, has been correlated with the number of proposed new dwelling units rather than derived from conventional supply-demand analysis. Based on the assumptions that the goal of new development/redevelopment should be to 1) create a balance of jobs and housing in Downtown Marcus Hook; 2) create at least one new job per new dwelling unit, and that 3) an average of 250 square feet of office space is required per worker, and 4) ultimately 200 new dwelling units will be added to the borough, then up to 50,000 square feet of office space could be developed in mixed-use buildings, both adaptive re-use and new construction.

THE SUPPLY-SIDE CONTEXT

Existing commercial uses (retail and office) in Downtown Marcus Hook include:

- Sovereign Bank Branch
- Hardware store
- Two pizza parlors
- Small market
- News/tobacco shop
- Autobody shop
- Pharmacy
- Laundromat

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- Variety store
- Beauty parlor
- Caterers
- Thrift outlet
- Carpeting and flooring store
- Travel agent
- Three bars/pubs/taverns
- Accountant
- Medical practice
- Packaging supply
- Photography store
- Graphics store
- A community center and senior citizens' center

In addition to the above, local employment is provided at the Alan McIlvain Company, as well as the Sunoco and Conoco refineries.

The nearest full-service grocery stores are the Super Fresh supermarket on Route 322 in Upper Chichester and the Super Fresh store on Alternate Route 13 in Claymont. Additional nearby retailers include Wal-Mart, the Fashion Bug, Dollar Tree, among others, also on Route 322, and, on Naamans Road just over the border in New Castle County are located Home Depot, Sav-a-Lot, and Kmart.

The nearest large-scale malls are the Granite Run Mall, anchored by Sears, Boscovs and J.C. Penney, located on the Baltimore Pike in Middletown, and the Springfield Mall, with Macy's and Strawbridge & Clothiers, among others, approximately two miles east of the Granite Run Mall on the Baltimore Pike adjacent to Swarthmore.

Contract market-rate rents in the market area, excluding Center City Philadelphia, start at just under \$600 a month for a studio apartment and go up to \$1,200 per month for a three-bedroom apartment. (See Table 4.) In Center City, rents for studios exceed \$1,100 per month and the newest three-bedrooms are leasing for more than \$4,000 per month. All properties included in the survey were at functional full occupancy (95 percent or better).

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Current new construction prices for multi-family and single-family attached developments in the market area range between \$84,000 for a 700-square-foot, one-bedroom condominium at the Paladin Club outside Wilmington, Delaware to nearly \$350,000 for a 2,300-square-foot townhouse in eastern Chester County. (See Table 5.) Most new properties are achieving sales paces of between two and eight units per month. One, Rittenhouse at Locust Grove in Gloucester County, developed by K. Hovnanian Companies, is averaging sales of 17 units per month. The highest sales pace is being achieved at City View Condominiums in Philadelphia, where more than 150 units have been sold since the opening in January, for an average of nearly 38 sales per month.

BUILDING AND UNIT TYPES

–Multi-Family–

- Courtyard Apartment Building: In new construction, an urban, pedestrian-oriented equivalent to conventional garden apartments. An urban courtyard building is four or more stories, often combined with non-residential uses on the ground floor. The building should be built to the sidewalk edge and, to provide privacy and a sense of security, the first floor should be elevated significantly above grade. Parking is either below grade or in an integral structure.

The building's apartments can be leased, as in a conventional income property, or sold to individual buyers, under condominium or cooperative ownership, in which the owner pays a monthly maintenance fee in addition to the purchase price.

- Loft Apartment Building: Either adaptive re-use of older warehouse and manufacturing buildings or a new-construction building type inspired by those buildings. The new-construction version is usually elevator-served with double-loaded corridors.

Hard Lofts: Unit interiors typically have high ceilings and commercial windows and are minimally finished (with limited architectural elements such as columns and fin walls), or unfinished (with no interior partitions except those for bathrooms).

Soft Lofts: Unit interiors typically have high ceilings, are fully finished and often include full or partial interiors. Units may also contain architectural elements reminiscent of "hard

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lofts,” such as brick walls and iron railings, particularly if the building is an adaptive re-use of an existing industrial structure.

The building’s loft apartments can be leased, as in a conventional income property, or sold to individual buyers, under condominium or cooperative ownership, in which the owner pays a monthly maintenance fee in addition to the purchase price. (Loft apartments can also be incorporated into multifamily buildings along with conventionally-finished apartment units.)

–Single-Family Attached–

- Rowhouse/Duplex: Similar in form to a conventional suburban townhouse or duplex except that the garage—either attached or detached—is located to the rear of the unit and accessed from an alley or auto court. Unlike conventional townhouses and duplexes, urban rowhouses and duplexes conform to the pattern of streets, typically with shallow front-yard setbacks. To provide privacy and a sense of security, the first floor should be elevated significantly above grade.



Table 1

Potential Housing Market

Derived From New Unit Purchase And Rental Propensities Of Draw Area Households
With The Potential To Move To The Site In 2003

The Marcus Hook Transit-Oriented Development

Borough of Marcus Hook, Delaware County, Pennsylvania

Primary Draw Area; Balance of Delaware County; Philadelphia, Montgomery and
Chester Counties, Pennsylvania and New Castle County, Delaware; All Other US Counties
Draw Areas*

Total Target Market Households
With Potential To Rent/Purchase In The
Primary Draw Area*, Delaware County, Pennsylvania 5,840

Total Target Market Households
With Potential To Rent/Purchase At The
The Marcus Hook Transit-Oriented Development 1,090

Potential Housing Market

	<i>Multi- Family</i>		<i>Single- Family</i>				<u>Total</u>
	<i>For-Rent</i>	<i>For-Sale</i>	<i>.. Attached .. All Ranges</i>	<i>Low-Range</i>	<i>Mid-Range</i>	<i>High-Range</i>	
Total Households:	330	100	110	290	200	60	1,090
{Mix Distribution}:	30.3%	9.2%	10.1%	26.6%	18.3%	5.5%	100.0%

**Target Residential Mix
(Excluding Single-Family Detached)**

	<i>Multi- Family</i>		<i>Single- ... Family Attached .. All Ranges</i>	<u>Total</u>
	<i>For-Rent</i>	<i>For-Sale</i>		
Total Households:	330	100	110	540
{Mix Distribution}:	61.1%	18.5%	20.4%	100.0%

* Zip Codes 19061, 19013, 19014, 19015.

NOTE: Reference Appendix One, Tables 1 through 10.

SOURCE: Claritas, Inc.;
Zimmerman/Volk Associates, Inc.

Table 2

Potential Housing Market By Household Type
 Derived From New Unit Purchase And Rental Propensities Of Draw Area Households
 With The Potential To Move To The Site In 2003

The Marcus Hook Transit-Oriented Development

Borough of Marcus Hook, Delaware County, Pennsylvania

Potential Housing Market By Household Type

	<i>Multi- Family</i>			<i>Single- Family</i>			
	<u>Total</u>	<u>For-Rent</u>	<u>For-Sale</u>	<i>.. Attached ..</i>			
				<i>..... Detached</i>			
Number of Households:	<u>Total</u>	<u>For-Rent</u>	<u>For-Sale</u>	<u>All Ranges</u>	<u>Low-Range</u>	<u>Mid-Range</u>	<u>High-Range</u>
1,090	330	100	110	290	200	60	
Empty Nesters & Retirees	50%	33%	40%	45%	59%	70%	67%
Traditional & Non-Traditional Families	12%	12%	10%	10%	17%	10%	0%
Younger Singles & Couples	38%	55%	50%	45%	24%	20%	33%
	100%	100%	100%	100%	100%	100%	100%

Target Residential Mix By Household Type

	<i>Multi- Family</i>			<i>Single- .. Family ..</i>
	<u>Total</u>	<u>For-Rent</u>	<u>For-Sale</u>	<i>.. Attached ..</i>
				<i>..... All Ranges</i>
Number of Households:	<u>Total</u>	<u>For-Rent</u>	<u>For-Sale</u>	<u>All Ranges</u>
540	330	100	110	
Empty Nesters & Retirees	37%	33%	40%	45%
Traditional & Non-Traditional Families	11%	12%	10%	10%
Younger Singles & Couples	52%	55%	50%	45%
	100%	100%	100%	100%

SOURCE: Claritas, Inc.;
 Zimmerman/Volk Associates, Inc.

Table 3

Optimum Market Position--200 Dwelling Units
Marcus Hook Transit-Oriented Development Site
Borough of Marcus Hook, Delaware County, Pennsylvania
June, 2003

Percent of Units Number	<i>Average Net Density</i>	<i>Housing Type</i>	<i>Base Rent/Price Range*</i>	<i>Base Unit Size Range</i>	<i>Base Rent/Price Per Sq. Ft.*</i>	<i>Annual Average Absorption</i>	
61.1%		Multi-Family For-Rent				60	
72	50 du	Loft Apartments	\$500 to \$900	500 to 1,000	\$0.90 to \$1.00	36	
50	50 du	Courtyard Apartments	Eff. 1br 2br 3br	\$625 \$775 \$1,000 \$1,225	600 750 1,000 1,250	\$1.04 \$1.03 \$1.00 \$0.98	24
18.5%		Multi-Family For-Sale				11	
20	50 du	Loft Apartments	\$55,000 to \$100,000	500 to 1,000	\$100 to \$110	6	
18	50 du	Courtyard Apartments	1br 2br 3br	\$85,000 \$110,000 \$135,000	750 1,000 1,250	\$113 \$110 \$108	5
20.4%		Single-Family Attached For-Sale				11	
22	15 du	Rowhouses 2 and 3 BR units	\$115,000 to \$185,000	900 to 1,500	\$123 to \$128	6	
18	12 du	Duplexes 2 and 3 BR units	\$145,000 to \$195,000	1,100 to 1,600	\$122 to \$132	5	
100.0%						82	
						including rentals	
200	Dwelling Units					22	
						excluding rentals	

* Base rents/prices in year 2003 dollars and exclude options and upgrades.

SOURCE: Zimmerman/Volk Associates, Inc.

Summary Of Selected Rental Properties

Delaware and Philadelphia Counties, Pennsylvania;

New Castle County, Delaware

May, 2003

<u>Property (Date Opened)</u> <u>Address</u>	<u>Number</u> <u>of Units</u>	<u>Reported</u> <u>Base Rent</u>	<u>Reported</u> <u>Unit Size</u>	<u>Rent per</u> <u>Sq. Ft.</u>	<u>Additional Information</u>
. Boothwyn, Delaware County					
Meetinghouse Gardens (1973) 3131 Meetinghouse Road	367 1BR/1BA	\$635 to \$675	611 to 718	\$0.94 to \$1.04	98% occupancy. <i>Private entrances, Pool, playground.</i>
	2BR/1BA	\$760	778	\$0.98	
	2BR/2BA	\$810 to \$910	850 to 1,062	\$0.86 to \$0.95	
Rolling Glen 1521 Rolling Glen Drive	192 1BR/1BA	\$725	793	\$0.91	99% occupancy. <i>Includes heat and hot water</i>
	2BR/1BA	\$760 to \$780	905	\$0.84 to \$0.86	
	2BR/2BA TH	\$885 to \$910	988	\$0.90 to \$0.92	
. Ridley Park, Delaware County					
Ridley Brook Apts (1955:2000) 111 Macdade Boulevard	244 1BR/1BA	\$700 to \$760	650 to 800	\$0.95 to \$1.08	97% occupancy. <i>Includes heat and hot water</i>
	2BR/1BA	\$775 to \$860	1,000	\$0.78 to \$0.86	
Stonewood Village (1963) 300 Walnut Street	83 1BR/1BA	\$750	650	\$1.15	
	2BR/1BA	\$850	825	\$1.03	
	2BR/1BA TH	\$925	875	\$1.06	
. Glenolden, Delaware County					
Glen Manor (1970:2001) 200 Karen Circle	174 Studio	\$570 to \$610	300 to 365	\$1.67 to \$1.90	96% occupancy. <i>Heat and hot water included.</i>
	1BR/1BA	\$695 to \$775	600 to 800	\$0.97 to \$1.16	
	2BR/1BA	\$895 to \$935	600 to 850	\$1.10 to \$1.49	

SOURCE: Zimmerman/Volk Associates, Inc.

Summary Of Selected Rental Properties

Delaware and Philadelphia Counties, Pennsylvania;

New Castle County, Delaware

May, 2003

<u>Property (Date Opened)</u> <u>Address</u>	<u>Number</u> <u>of Units</u>	<u>Reported</u> <u>Base Rent</u>	<u>Reported</u> <u>Unit Size</u>	<u>Rent per</u> <u>Sq. Ft.</u>	<u>Additional Information</u>
..... Center City Philadelphia					
Locust on the Park (1999) 25th and Locust Streets	152				97% occupancy.
	Studio	\$1,125			Concierge,
	1BR/1BA	\$1,395 to			fitness facility,
		\$1,625			in-unit washer/dryers.
	2BR/1BA	\$1,975 to			Parking fee \$165 to
		\$2,800			\$265 per month.
The Left Bank (2001) 3131 Walnut Street	282				99% occupancy.
	Studio	\$1,190			Concierge,
	1BR/1BA	\$1,410			fitness facility,
	1BR/1BA w/Den	\$2,075			in-unit washer/dryers.
	2BR/2BA	\$1,650			Parking fee \$130 to
	3BR/2BA	\$3,120			\$180 per month.
The Riverloft (1978) 2300 Walnut Street	184				95% occupancy.
	Studio	\$1,469 to	658 to	\$1.78 to	Concierge, garages,
		\$1,649	924	\$2.23	hi-speed internet,
	1BR/1BA	\$1,739	851	\$2.04	fitness center,
	1BR/1 1/2BA	\$1,669 to	958 to	\$1.68 to	in-unit washer/dryers.
		\$2,589	1,544	\$1.74	
	3BR/2 1/2BA	\$3,969	2,041	\$1.94	
Dockside (10/02) 717 S. Christopher Columbus Blvd	240				In lease-up.
	Studio	\$1,666 to	669	\$2.49 to	50% leased.
		\$1,791		\$2.68	Waterfront hi-rise.
	1BR/1BA	\$1,908 to	792 to	\$2.41 to	concierge, pool,
		\$2,175	852	\$2.55	garages, fitness
	2BR/2BA	\$2,795 to	1,251 to	\$2.23 to	facility, rent includes
		\$3,724	1,502	\$2.48	limousine services
	3BR/2 1/2BA	\$3,946 to	1,845 to	\$2.11 to	by appointment.
		\$4,145	1,963	\$2.14	

Summary Of Selected Rental Properties*Delaware and Philadelphia Counties, Pennsylvania;**New Castle County, Delaware***May, 2003**

<u>Property (Date Opened)</u> <u>Address</u>	<u>Number</u> <u>of Units</u>	<u>Reported</u> <u>Base Rent</u>	<u>Reported</u> <u>Unit Size</u>	<u>Rent per</u> <u>Sq. Ft.</u>	<u>Additional Information</u>
<i>..... New Castle County, Delaware</i>					
Harbor House (Redone 2000) <i>31-2 Harbor Drive</i>	476				
	Studio	\$558	400	\$1.40	<i>Includes heat and hot water.</i>
	1BR/1BA	\$628	550	\$1.14	
	2BR/1BA	\$728	900	\$0.81	
Society Hill (1970s) <i>3000 Society Drive</i>	507				
	Studio	\$540 to	400 to	\$0.99 to	<i>Hi-rise, Pool, tennis, community room, exercise room, putting green.</i>
		\$840	845	\$1.35	
	1BR/1BA	\$675 to	700 to	\$0.96 to	
		\$900	812	\$1.11	
	2BR/1BA	\$785	900	\$0.87	
	2BR/2BA	\$855 to	1,025	\$0.83 to	
		\$1,045		\$1.02	
	3BR/2BA	\$1,075 to	1,120	\$0.84 to	
		\$1,089	1,300	\$0.96	
Vill. at Fox Pt. (1949:1997) <i>1436 Lynlyn Drive</i>	340				
	1BR/1BA	\$660 to	484 to	\$1.24 to	97% occupancy. <i>Pool, clubhouse, fitness center, washer/dryer in unit, high-speed internet.</i>
		\$895	720	\$1.36	
	2BR/1BA	\$785	720	\$1.09	
	2BR/2BA	\$1,060	990	\$1.07	
	3BR/2BA	\$1,200	1,179	\$1.02	

Table 5

Summary Of Selected For-Sale Multi-Family Developments

New Castle County, Delaware and Philadelphia County, Pennsylvania

May, 2003

<i>Development (Date Opened)</i>	<i>Unit Type</i>	<i>Unit Price Range</i>	<i>Unit Size Range</i>	<i>Price Per Sq. Ft.</i>	<i>Total Units</i>	<i>Total Sales (Monthly Average)</i>
<i>..... Eastern Chester County, Pennsylvania</i>						
Greenbriar at Thornbury (4/02)					207	99 (8.3)
<i>Orleans</i>	TH	\$272,490 to \$332,490	2,038 to 2,338	\$134 to \$142		
Reserve at Chesterfield (1/03)					49	8 (2.0)
<i>Iacobucci Homes</i>	TH	\$279,990 to \$294,990	2,264 to 2,443	\$121 to \$124		
Hunter's Run (1/02)					114	54 (3.9)
<i>Pulte Homes</i>	TH	\$284,990 to \$321,990	1,747 to 2,287	\$141 to \$163		
Willistown Hunt (2/02)					98	58 (4.1)
<i>Orleans</i>	TH	\$305,990 to \$345,990	2,038 to 2,338	\$148 to \$150		
<i>..... City of Philadelphia, Philadelphia County, Pennsylvania</i>						
City View Condominiums (1/03)					303	151 (37.8)
<i>Crescent Heights Development</i>	Condo	\$96,900 to \$248,900	450 to 937	\$215 to \$266		
<i>..... North of the City of Wilmington, New Castle County, Delaware</i>						
Paladin Club (1999)					600	70 (1.7)
<i>Pettinaro Builders</i>	Condo	\$84,000 to \$180,000	700 to 1,700	\$106 to \$120		{approx.}
<i>..... Gloucester County, New Jersey</i>						
Rittenhouse at Locust Grove (1/03)					154	68 (17.0)
<i>K. Hovnanian Companies</i>	TH	\$185,000	1,723	\$107		

SOURCE: Zimmerman/Volk Associates, Inc.

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Research & Strategic Analysis

ASSUMPTIONS AND LIMITATIONS—

Every effort has been made to insure the accuracy of the data contained within this analysis. Demographic and economic estimates and projections have been obtained from government agencies at the national, state, and county levels. Market information has been obtained from sources presumed to be reliable, including developers, owners, and/or sales agents. However, this information cannot be warranted by Zimmerman/Volk Associates, Inc. While the methodology employed in this analysis allows for a margin of error in base data, it is assumed that the market data and government estimates and projections are substantially accurate.

Absorption scenarios are based upon the assumption that a normal economic environment will prevail in a relatively steady state during development of the subject property. Absorption paces are likely to be slower during recessionary periods and faster during periods of recovery and high growth. Absorption scenarios are also predicated on the assumption that the product recommendations will be implemented generally as outlined in this report and that the developer will apply high-caliber design, construction, marketing, and management techniques to the development of the property.

Recommendations are subject to compliance with all applicable regulations. Relevant accounting, tax, and legal matters should be substantiated by appropriate counsel.



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Research & Strategic Analysis

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Transit Analysis

SEPTA Bus Routes #113 & #114 circulate in very close proximity to the Marcus Hook R2 Station and study site, but do not actually access the station or study site. This analysis identifies the origin, terminus, and major transit interchanges and commercial and institutional destinations of each route.

Route #113

- Origin - 69th Street Terminal
- Terminus - Marcus Hook
- Major Interchanges / Destinations - 69th St. Terminal, R3 (Lansdowne Station), Trolleys #11, #13 (Darby Transportation Center), MacDade Mall, Widener University, Chester Transportation Center

Route #114

Please note, as part of SEPTA's Fiscal Year 2005 Annual Service Plan, Route 114 will be altered and will no longer operate between the west-end wards of Chester and Larkin's Corner. The bus route will operate between Darby Transportation Center and the Granite Run Mall. The revised bus route will become effective November 22, 2004.

- Origin - Darby Transportation Center
- Terminus - Larkin's Corner Shopping Center
- Major Interchanges / Destinations - Sharon Hill Station, Eddystone Crossings Shopping Center, Chester Transportation Center

Due to their proximity, the Routes 113 and 114 should interchange at the Marcus Hook station, providing an ideal transfer center between bus routes, as well as between both routes and the R2 train.

Parking Analysis

This analysis of parking for the study site and surrounding area involves an inventory of existing parking spaces, their utilization rates, an assessment of the impacts on parking from potential development on the study site, and a strategy for using shared parking and other parking facilities and properties to accommodate any projected increases in parking demand.

Inventory of Parking Spaces

The parameters for this inventory were set within a ¼-mile radius, or a 5-minute walk, from the study site. (A ¼-mile radius represents the maximum distance that a majority of people are willing to walk to transit parking.) Within this radius are those parking spaces located within the study site, parking adjacent to the station (on both the Marcus Hook and Lower Chichester sides), and spaces along both Market Street and 10th Street. The inventory did not include any restricted parking along neighborhood streets.

Appendix

Parking spaces within the ¼-mile radius tend to have specific primary uses and are dispersed throughout the study area:

- Transit (SEPTA) parking (207 spaces) - located adjacent to station
- Borough (metered and non-metered) (73) - on and adjacent to study site
- Curb-side (metered) (55) - along Market and 10th Streets
- Residential (43) - adjacent to / near station
- Special Purpose (recreational / community) (48) - at outer limits of ¼ mile radius
- Private (96) - adjacent to private businesses along Market and 10th Streets

A total of 522 spaces were identified for all uses and locations.

Parking Utilization Rates

Parking located at the transit station is at or near full utilization during weekday daytime hours. (This rate drops to near 10% utilization after 7 pm on weekdays and at all times on weekends.) Curb-side (metered) parking near the station and within the commercial district also stands at or near full utilization, while residential spaces reserved for permitted users are at 75% utilization.

Available capacity exists, however, at the borough public (metered) surface lot located on the study site (70-80% available), at several special purpose lots (100% available), and at several lots serving private businesses (50-60% available.)

Parking Demand Generated from Potential Development

A potential mixed-use development at the Marcus Hook study site representing 200 residential units and 7,000 square feet of retail will generate an estimated need of 221 parking spaces:

(1 space / residential unit @ 200 units) + (3 spaces / 1,000 square feet of retail @ 7,000 square feet) = 221 spaces.

The potential loss of 64 of the borough's metered spaces (at 30% utilization) would result in the need for an additional 22 spaces, for a total of approximately 243 spaces. (This total assumes no increases in R2 ridership at the Marcus Hook Station.)

Assessment of Parking Impacts from Potential Development

The impacts of additional parking generated from a new development on the adjacent community can be minimized through the careful application of the following guidelines for a Transit-Oriented Development site plan:

- Encourage joint parking for adjacent uses with staggered peak periods of demand
- Physically integrate parking into new development

- Disperse parking throughout development area
- Maximize the use of short-term parking and kiss-and-ride areas

Existing measures in place in Marcus Hook, such as restricted residential parking zones and short-term commercial parking controls, would mitigate against any spillover parking impacts in the adjacent neighborhoods and along Market Street and 10th Street.

Strategies for Accommodating New Parking Demand

In following these TOD parking guidelines, several strategies are listed below that would minimize the spillover impacts of new parking demand:

- A substantial portion of the residential parking demand could be integrated into the residential and retail units (preferably behind and beneath)
- Transit parking at the Marcus Hook Station could accommodate a portion of the development's weekend and evening parking needs
- Several unused parcels immediately adjacent to the study site (and behind the commercial buildings on 10th Street) could potentially be used as auxiliary parking
- Parking could be accommodated on the street network throughout the potential development as well as along its edges
- Several underutilized private parking facilities (in particular, Scavicchio's Catering) could be explored as auxiliary parking.

Pedestrian Circulation Analysis

This analysis of pedestrian access to the study site is comprised of observations of existing circulation patterns in the surrounding area, and an evaluation of the quality of pedestrian access to major destinations. The information gathered from these two exercises was used in proposing new pedestrian access routes for linking the study site to the borough's transportation nodes, employment and commercial sites, and entertainment and recreational destinations.

Pedestrian Circulation Patterns

Existing pedestrian flows and circulation patterns were observed during peak activity hours within a ¼-mile radius of the study site. (A ¼-mile radius, or 5-minute walk, represents a distance that most people are easily willing to walk to transit; a ½-mile radius, or 10-minute walk, represents the maximum distance people are willing to walk to transit.)

These observations demonstrated that the dominant pedestrian flows occur within the following corridors (in order of magnitude):

- Transit station to the Marcus Hook transit surface parking, and over the Market Street bridge, to the Lower Chichester transit parking lot
- 10th Street to retail businesses and Viscose Village neighborhood
- 10th/Market Street intersection over Market Street bridge to Lower Chichester
- Transit station to Market Street/10th Street, and distributed to retail businesses and neighborhoods.

Quality of Pedestrian Access

The quality of pedestrian access and circulation within a ¼-mile radius of the study site and the borough's major destinations was evaluated according to a set of criteria for walkable environments:

- sidewalk network provides good connectivity to multiple destinations, is well-integrated with other transportation modes, is well-maintained, and accommodates all types of pedestrians (including wheelchair travelers)
- sidewalk obstructions and interruptions such as driveway curb cuts are nonexistent or at the least infrequent
- crosswalk paving markings, pedestrian signal devices, and curb ramps are provided at intersections
- vehicle-pedestrian conflict points are minimal
- vehicular speeds and volumes are moderate-to-low
- walking route is direct, and distances are kept to a minimum
- pedestrians feel a strong sense of personal safety and security
- building frontages are continuous and inviting / adjacent spaces are "defensible" / adjacent land uses are compatible for walkers.

Based on these criteria, the quality of the pedestrian environment from the study site to each of the borough's major destinations was rated Excellent, Sufficient, and Inadequate. For each destination, the dominant feature that justifies this rating is highlighted:

- Transit Station / Station Parking - *Inadequate* - pedestrian facilities are nonexistent; due to route under bridge, pedestrian sense of safety is moderately poor (especially at night.)
- 10th Street (East Coast Greenway) - *Sufficient* - indirect route (access limited to Market Street); sidewalk conditions are good overall, but punctuated with obstructions; pedestrian's sense of safety is moderately good.
- South of 10th Street Neighborhoods - *Sufficient* - sidewalk conditions are good; pedestrian's sense of safety is good due to presence of "defensible" spaces in neighborhood.
- Viscose Building / Viscose Village - *Inadequate* - indirect route (access limited to Market Street, then 10th Street); sidewalk conditions are good overall.

Proposed Pedestrian Access to Study Site

With this information in hand - existing pedestrian patterns and the quality of the walking environment - it is possible to begin planning the most optimal pedestrian routes linking the study site to the borough's major transportation, commercial, and entertainment and recreational destinations. Five optimal routes were identified.

- 1) Viscose Building via McClenachan Terrace (challenge: crossing of at-grade rail tracks)
- 2) Viscose Village via Chestnut Street (challenge: crossing of at-grade rail tracks)
- 3) 10th Street (East Coast Greenway) via vacant lot adjacent to Produce Market
- 4) Neighborhoods east of 10th Street / Waterfront via eastern border of site
- 5) Transit parking via underpass of new PENNDOT bridge

Marcus Hook TOD - SEPTA Station Issues



Date: 12/15/2004

Priorities - Highest: (None)

Lowest: (None)

Scoring	Value	Priority	Cost	Priorities This Sheet:
1	Really Bad Idea	Lowest	Very High >\$1,000,000	(None)
2	Lousy Situation	Low	High <\$1,000,000	(None)
3	OK Compromise	Medium	Medium <\$100,000	(None)
4	Very Good Idea	High	Low <\$10,000	(None)
5	Ideal Solution	Highest	Free (0)	(None)

Priorities List:
U = Usability
\$ = Cost
S = Safety & Security
G = Growth
E = Economic Development

Issues

Priority A - Leave Station Where it Is B - Relocate Inbound Station C - Relocate Entire Station

Issues	Priority		A - Leave Station Where it Is		B - Relocate Inbound Station		C - Relocate Entire Station					
	Type	Rank	Value	Score	Value	Score	Value	Score				
1. Vehicular Access & Parking	Assumptions		Existing 205 space parking lots remains as they are, split between IB and OB.		Add small new parking (40 spaces) area to new IB station. Leave existing parking where it is and make good pedestrian connections from it to new IB station. Parking is also gained where the old station is removed.		Add new parking areas to both sides of station (40 spaces IB and 200 spaces OB). Leave existing parking where it is and make good pedestrian connections on both IB and OB sides.					
	Visibility of Station from 452	U	3	Station not visible except from bridge. Vehicular access is unclear.	3	9	Station(s) not visible except from bridge. Vehicular access is confusing at best, due to two stations, one on each side of bridge.	2	6	Station not visible except from bridge. Vehicular access is unclear.	3	9
	Access from 452	U	3	Need signs from either direction.	2	6	Need signs from either direction.	2	6	Need signs from either direction.	2	6
	Convenience from parking to IB platform	U	3	From IB parking: excellent. From OB parking: lousy.	3	9	From old IB parking: lousy. From old OB parking: lousy. From new IB lot, good but too small.	2	6	From old IB parking: lousy. From old OB parking: lousy. From new IB lot, good but too small. From new OB lot: lousy.	2	6
	Expansion	G	3	No room for parking expansion.	3	9	Small expansion possible (20%).	4	12	Large expansion possible (117%).	5	15
	COST of Parking Design	\$	3	None	5	15		4	12		4	12
	COST of Parking Const	\$	3	None	5	15		3	9		2	6
2. Passenger Crossover	Assumptions		Use new 452 bridge over tracks with ramps as designed.		Use new 452 bridge over tracks with ramps redesigned. Ramps need to be designed to avoid pedestrians having to cross 452 on the bridge.		Use new 452 bridge over tracks with ramps relocated to north side of bridge.					
	Convenience	U	3	OK	3	9	Farther from IB station.	2	6	Farther from both stations.	2	6
	Accessibility	S	3	Will be with new bridge.	5	15	Will be with new bridge.	5	15	Will be with new bridge.	5	15
	COST of Crossover Design	\$	3	Already done, no additional cost.	5	15	Extra to PennDOT	4	12	Extra to PennDOT	4	12
	COST of Crossover Const	\$	3	Already In PennDOT Contract	5	15	May be more costly than ramps for Options A or C.	3	9	Already in PennDOT Contract.	5	15

Issues

Priority
Type Rank

A - Leave Station Where it Is

Value Score

Priorities - Highest: (None)

B – Relocate Inbound Station

Value Score

Lowest: (None)

C – Relocate Entire Station

Value Score

Issues	Priority		A - Leave Station Where it Is			B – Relocate Inbound Station			C – Relocate Entire Station		
	Type	Rank	Value	Score	Value	Score	Value	Score			
3. Station Building: Passenger Waiting Area Ticket Office	Assumptions		Existing modular station stays.			New IB Station indoor/outdoor shelter with ticket office is built by site developer.			New IB Station indoor/outdoor shelter with ticket office is built by site developer. Outdoor shelter only on OB side, built by SEPTA		
	Safety	S	3	3	9	Better on IB, not as good on OB. Shared with bus passengers.	4	12	Better on IB and OB. Shared with bus passengers.	5	15
	Comfort	U	3	3	9	OK	4	12	Good	4	12
	Convenience to Public	U	3	3	9	Convenient to IB platform (when IB trains leave on NB track).	4	12	Convenient to IB platform	4	12
	Operational Efficiency	U	3	3	9	OK	4	12	Better	4	12
	COST of Station Building Design	\$	3	5	15	None	3	9		3	9
	COST of Station Building Const	\$	3	5	15	None	2	6		2	6
4. RR Operation: Operating Modes, Work by Amtrak	Assumptions		IB trains leave from track 1, or occasionally 4, depending on where they can cross over.			Thru OB trains stop at old station, track 4. Terminal trains stop at new station, track 1. All IB trains board track 1 at new station.			Thru OB trains stop at new station, track 4. Terminal trains stop at new station, track 1. All IB trains board track 1 at new station.		
	Terminal Operation Passenger Convenience	U	3	3	9	Lousy when IB passengers have to board on wrong side (track 4). Otherwise OK.	2	6	Good. Boarding locations are where people expect them.	4	12
	Thru Operation Passenger Convenience	U	3	4	12	Good. Boarding locations are where people expect them.	2	6	Good. Boarding locations are where people expect them.	4	12
	COST of RR Infrastructure Design	\$	3	5	15	None	5	15	None	5	15
	COST of RR Infrastructure Const	\$	3	5	15	None	5	15	None	5	15

Issues

Priority
Type Rank

A - Leave Station Where it Is

Value Score

Priorities - Highest: (None)

B – Relocate Inbound Station

Value Score

Lowest: (None)

C – Relocate Entire Station

Value Score

Issues	Priority		A - Leave Station Where it Is		B – Relocate Inbound Station		C – Relocate Entire Station					
	Type	Rank	Value	Score	Value	Score	Value	Score				
5. Multi-Modal Service	Assumptions		Busses 113 and 114 stop a block or more from train station.		113, 114 Busses could stop at new IB station		113, 114 Busses could stop at new IB Station					
	Connections to SEPTA busses	U	3	Lousy connection now.	2	6	Ideal connection for IB rail trips; not as good for OB.	4	12	Ideal connection for IB rail trips; not as good for OB.	5	15
	Connections to other ground transportation services	U	3	OK for Taxis and Vans	3	9	Ideal connection for IB rail trips; not as good for OB.	4	12	Ideal connection for IB rail trips; not as good for OB.	5	15
	COST of Bus Stop Design	\$	3	None	5	15	Low	4	12	Low	4	12
	COST of Bus Stop Const	\$	3	None	5	15	Medium	3	9	Medium	3	9
6. Accessibility	Assumptions		Existing facilities (not accessible) remain. New accessible crossover via bridge. No other corrective work done.		New IB station and crossover (on bridge) are accessible. Audio-Visual on both sides.		New IB, OB stations and crossover (on bridge) are accessible. Audio-Visual on both sides.					
	Parking	S	3	Existing	5	15	Provided	5	15	Provided	5	15
	Path to office/platform	S	3	Not Accessible	3	9	IB & OB Provided New	4	12	IB & OB Provided New	4	12
	Platform Edge	S	3	Not Accessible - No Edge Warning	2	6	IB & OB Provided New	4	12	IB & OB Provided New	4	12
	Mini-High or Full High Platforms	S	3	Not Accessible - No High Platforms	2	6	IB & OB Provided New - Mini-High Platforms Only	4	12	IB & OB Provided New - Mini-High Platforms Only	4	12
	Lighting	S	3	Minimal	2	6	IB & OB Provided New	5	15	IB & OB Provided New	5	15
	Audio-Visual	S	3	Not Accessible	2	6	IB & OB Provided New	5	15	IB & OB Provided New	5	15
	COST of Accessibility Design	\$	3	None	5	15	Medium	3	9	Medium	3	9
	COST of Accessibility Const	\$	3	None	5	15	High	4	12	High	4	12
7. Ridership	Assumptions		Ridership is limited by existing parking, patrons within walking distance, headways, safety, convenience.		Ridership will increase due to new development and more parking but growth will be limited by less convenient old parking.		Ridership will increase due to new development and much more parking but growth will still be limited by less convenient old parking.					
	Related to expanded parking	G	3	Probably won't increase since there is no additional parking.	3	9	May increase slightly.	4	12	Probably will increase more than B.	5	15
	Related to TOD development	E	3	Probably will increase.	4	12	Probably will increase more than A.	4	12	Probably will increase more than B.	5	15

Issues

Priority
Type Rank

A - Leave Station Where it Is

Value Score

Priorities - Highest: (None)

B – Relocate Inbound Station

Value Score

Lowest: (None)

C – Relocate Entire Station

Value Score

8. Commercial Impact on Borough.	Assumptions		No additional development would be done by SEPTA, due to the fact that Amtrak owns all commercial rights under lease agreement. Current train riders offer little commercial impact to Borough, except those that live nearby and walk to station.	Developer of site would also develop a small retail space in or adjacent to station. There would be more walk-to-station riders. Both of these scenarios will increase commercial impact.	No additional development would accompany the relocated outbound station, therefore commercial impacts would be similar to option B, although with more drive-to-station riders.							
	Spending by drive-to-station riders	E	3	No change.	3	9	No change, except at commercial within station.	3	9	No change, except at commercial within station.	3	9
	Spending by walk-to-station riders	E	3	New development will add walk-to station riders & therefore commercial impact in borough.	4	12	New development will add walk-to station riders & therefore commercial impact in borough.	4	12	New development will add walk-to station riders & therefore commercial impact in borough.	4	12
9. Real Estate	Assumptions		No changes in real estate ownership.	An easement for station use would be leased by site developer to SEPTA.	SEPTA would acquire approximately 2 acres plus road access in Lower Chichester to support OB station & parking.							
	Cost of Land Acquisition & Easement Fees	\$	3	None	5	15	Legal fees for Easement Agreement Only	4	12	Broker/Legal fees	3	9
	Cost of Land Acquisition	\$	3	None	5	15	None	5	15	Land cost.	2	6
10. Amtrak Issues	Assumptions		No change to current relationship between SEPTA and Amtrak.	This option would require a Force Account agreement with Amtrak for track protection and possible Amtrak construction as well.	This option would require a Force Account agreement with Amtrak for track protection and possible Amtrak construction as well.							
	Cost of Track Protection	\$	3	None	5	15	High cost for platform work.	2	6	High cost for platform work.	2	6
	NS Side Clearance suit	\$	3	None	5	15	This suit will prohibit all high-level platforms, involve large gap for bridge-plate at mini-highs.	3	9	This suit will prohibit all high-level platforms, involve large gap for bridge-plate at mini-highs.	3	9
11. Station Site Suitability for Development	Assumptions		There are no issues here as nothing is being changed.	Environmental issues would have to be investigated at IB station.	Environmental issues would have to be investigated at both IB & OB stations.							
	Environmental	\$	3	None	5	15	Investigation needed.	3	9	Investigation needed.	3	9
	Archaeological	\$	3	None	5	15	Investigation needed.	3	9	Investigation needed.	3	9
Points TOTALS:				489		450		474				

Marcus Hook TOD - SEPTA Station Issues



Date: 12/15/2004

Priorities - Highest: \$ = Cost

Lowest: U = Usability

Scoring	Value	Priority	Cost	Priorities This Sheet:
1	Really Bad Idea	Lowest	Very High >\$1,000,000	U = Usability
2	Lousy Situation	Low	High <\$1,000,000	S = Safety & Security
3	OK Compromise	Medium	Medium <\$100,000	G = Growth
4	Very Good Idea	High	Low <\$10,000	E = Economic Development
5	Ideal Solution	Highest	Free (0)	\$ = Cost

Priorities List:
U = Usability
\$ = Cost
S = Safety & Security
G = Growth
E = Economic Development

Issues

Priority A - Leave Station Where it Is B - Relocate Inbound Station C - Relocate Entire Station

Issues	Priority		A - Leave Station Where it Is		B - Relocate Inbound Station		C - Relocate Entire Station					
	Type	Rank	Value	Score	Value	Score	Value	Score				
1. Vehicular Access & Parking	Assumptions		Existing 205 space parking lots remains as they are, split between IB and OB.		Add small new parking (40 spaces) area to new IB station. Leave existing parking where it is and make good pedestrian connections from it to new IB station. Parking is also gained where the old station is removed.		Add new parking areas to both sides of station (40 spaces IB and 200 spaces OB). Leave existing parking where it is and make good pedestrian connections on both IB and OB sides.					
	Visibility of Station from 452	U	1	Station not visible except from bridge. Vehicular access is unclear.	3	3	Station(s) not visible except from bridge. Vehicular access is confusing at best, due to two stations, one on each side of bridge.	2	2	Station not visible except from bridge. Vehicular access is unclear.	3	3
	Access from 452	U	1	Need signs from either direction.	2	2	Need signs from either direction.	2	2	Need signs from either direction.	2	2
	Convenience from parking to IB platform	U	1	From IB parking: excellent. From OB parking: lousy.	3	3	From old IB parking: lousy. From old OB parking: lousy. From new IB lot, good but too small.	2	2	From old IB parking: lousy. From old OB parking: lousy. From new IB lot, good but too small. From new OB lot: lousy.	2	2
	Expansion	G	3	No room for parking expansion.	3	9	Small expansion possible (20%).	4	12	Large expansion possible (117%).	5	15
	COST of Parking Design	\$	5	None	5	25		4	20		4	20
	COST of Parking Const	\$	5	None	5	25		3	15		2	10
2. Passenger Crossover	Assumptions		Use new 452 bridge over tracks with ramps as designed.		Use new 452 bridge over tracks with ramps redesigned. Ramps need to be designed to avoid pedestrians having to cross 452 on the bridge.		Use new 452 bridge over tracks with ramps relocated to north side of bridge.					
	Convenience	U	1	OK	3	3	Farther from IB station.	2	2	Farther from both stations.	2	2
	Accessibility	S	2	Will be with new bridge.	5	10	Will be with new bridge.	5	10	Will be with new bridge.	5	10
	COST of Crossover Design	\$	5	Already done, no additional cost.	5	25	Extra to PennDOT	4	20	Extra to PennDOT	4	20
	COST of Crossover Const	\$	5	Already In PennDOT Contract	5	25	May be more costly than ramps for Options A or C.	3	15	Already in PennDOT Contract.	5	25

Issues

Priority
Type Rank

A - Leave Station Where it Is

Value Score

**Priorities - Highest: \$ = Cost
B – Relocate Inbound Station**

Value Score

**Lowest: U = Usability
C – Relocate Entire Station**

Value Score

Issues	Priority			A - Leave Station Where it Is			B – Relocate Inbound Station			C – Relocate Entire Station		
	Type	Rank		Value	Score	Value	Score	Value	Score			
3. Station Building: Passenger Waiting Area Ticket Office	Assumptions			Existing modular station stays.			New IB Station indoor/outdoor shelter with ticket office is built by site developer.			New IB Station indoor/outdoor shelter with ticket office is built by site developer. Outdoor shelter only on OB side, built by SEPTA		
	Safety	S	2	Little activity or observability.	3	6	Better on IB, not as good on OB. Shared with bus passengers.	4	8	Better on IB and OB. Shared with bus passengers.	5	10
	Comfort	U	1	OK	3	3	Good	4	4	Good	4	4
	Convenience to Public	U	1	Convenient to IB platform (when IB trains leave on NB track).	3	3	Convenient to IB platform.	4	4	Convenient to IB platform	4	4
	Operational Efficiency	U	1	OK	3	3	Better	4	4	Better	4	4
	COST of Station Building Design	\$	5	None	5	25		3	15		3	15
	COST of Station Building Const	\$	5	None	5	25		2	10		2	10
4. RR Operation: Operating Modes, Work by Amtrak	Assumptions			IB trains leave from track 1, or occasionally 4, depending on where they can cross over.			Thru OB trains stop at old station, track 4. Terminal trains stop at new station, track 1. All IB trains board track 1 at new station.			Thru OB trains stop at new station, track 4. Terminal trains stop at new station, track 1. All IB trains board track 1 at new station.		
	Terminal Operation Passenger Convenience	U	1	Lousy when IB passengers have to board on wrong side (track 4). Otherwise OK.	3	3	This is a poor idea, since every round trip requires crossing the length of the stations.	2	2	Good. Boarding locations are where people expect them.	4	4
	Thru Operation Passenger Convenience	U	1	Good. Boarding locations are where people expect them.	4	4	Poor idea, since every round trip requires crossing the length of the stations.	2	2	Good. Boarding locations are where people expect them.	4	4
	COST of RR Infrastructure Design	\$	5	None	5	25	None	5	25	None	5	25
	COST of RR Infrastructure Const	\$	5	None	5	25	None	5	25	None	5	25

Issues

Priority
Type Rank

A - Leave Station Where it Is

Value Score

Priorities - Highest: \$ = Cost

B – Relocate Inbound Station

Value Score

Lowest: U = Usability

C – Relocate Entire Station

Value Score

Issues	Priority		A - Leave Station Where it Is		B – Relocate Inbound Station		C – Relocate Entire Station					
	Type	Rank	Value	Score	Value	Score	Value	Score				
5. Multi-Modal Service	Assumptions		Busses 113 and 114 stop a block or more from train station.		113, 114 Busses could stop at new IB station		113, 114 Busses could stop at new IB Station					
	Connections to SEPTA busses	U	1	Lousy connection now.	2	2	Ideal connection for IB rail trips; not as good for OB.	4	4	Ideal connection for IB rail trips; not as good for OB.	5	5
	Connections to other ground transportation services	U	1	OK for Taxis and Vans	3	3	Ideal connection for IB rail trips; not as good for OB.	4	4	Ideal connection for IB rail trips; not as good for OB.	5	5
	COST of Bus Stop Design	\$	5	None	5	25	Low	4	20	Low	4	20
	COST of Bus Stop Const	\$	5	None	5	25	Medium	3	15	Medium	3	15
6. Accessibility	Assumptions		Existing facilities (not accessible) remain. New accessible crossover via bridge. No other corrective work done.		New IB station and crossover (on bridge) are accessible. Audio-Visual on both sides.		New IB, OB stations and crossover (on bridge) are accessible. Audio-Visual on both sides.					
	Parking	S	2	Existing	5	10	Provided	5	10	Provided	5	10
	Path to office/platform	S	2	Not Accessible	3	6	IB & OB Provided New	4	8	IB & OB Provided New	4	8
	Platform Edge	S	2	Not Accessible - No Edge Warning	2	4	IB & OB Provided New	4	8	IB & OB Provided New	4	8
	Mini-High or Full High Platforms	S	2	Not Accessible - No High Platforms	2	4	IB & OB Provided New - Mini-High Platforms Only	4	8	IB & OB Provided New - Mini-High Platforms Only	4	8
	Lighting	S	2	Minimal	2	4	IB & OB Provided New	5	10	IB & OB Provided New	5	10
	Audio-Visual	S	2	Not Accessible	2	4	IB & OB Provided New	5	10	IB & OB Provided New	5	10
	COST of Accessibility Design	\$	5	None	5	25	Medium	3	15	Medium	3	15
	COST of Accessibility Const	\$	5	None	5	25	High	4	20	High	4	20
7. Ridership	Assumptions		Ridership is limited by existing parking, patrons within walking distance, headways, safety, convenience.		Ridership will increase due to new development and more parking but growth will be limited by less convenient old parking.		Ridership will increase due to new development and much more parking but growth will still be limited by less convenient old parking.					
	Related to expanded parking	G	3	Probably won't increase since there is no additional parking.	3	9	May increase slightly.	4	12	Probably will increase more than B.	5	15
	Related to TOD development	E	4	Probably will increase.	4	16	Probably will increase more than A.	4	16	Probably will increase more than B.	5	20

Issues

Priority
Type Rank

A - Leave Station Where it Is

Value Score

**Priorities - Highest: \$ = Cost
B – Relocate Inbound Station**

Value Score

**Lowest: U = Usability
C – Relocate Entire Station**

Value Score

8. Commercial Impact on Borough.	Assumptions		No additional development would be done by SEPTA, due to the fact that Amtrak owns all commercial rights under lease agreement. Current train riders offer little commercial impact to Borough, except those that live nearby and walk to station.			Developer of site would also develop a small retail space in or adjacent to station. There would be more walk-to-station riders. Both of these scenarios will increase commercial impact.			No additional development would accompany the relocated outbound station, therefore commercial impacts would be similar to option B, although with more drive-to-station riders.			
	Spending by drive-to-station riders	E	4	No change.	3	12	No change, except at commercial within station.	3	12	No change, except at commercial within station.	3	12
	Spending by walk-to-station riders	E	4	New development will add walk-to station riders & therefore commercial impact in borough.	4	16	New development will add walk-to station riders & therefore commercial impact in borough.	4	16	New development will add walk-to station riders & therefore commercial impact in borough.	4	16
9. Real Estate	Assumptions		No changes in real estate ownership.			An easement for station use would be leased by site developer to SEPTA.			SEPTA would acquire approximately 2 acres plus road access in Lower Chichester to support OB station & parking.			
	Cost of Land Acquisition & Easement Fees	\$	5	None	5	25	Legal fees for Easement Agreement Only	4	20	Broker/Legal fees	3	15
	Cost of Land Acquisition	\$	5	None	5	25	None	5	25	Land cost.	2	10
10. Amtrak Issues	Assumptions		No change to current relationship between SEPTA and Amtrak.			This option would require a Force Account agreement with Amtrak for track protection and possible Amtrak construction as well.			This option would require a Force Account agreement with Amtrak for track protection and possible Amtrak construction as well.			
	Cost of Track Protection	\$	5	None	5	25	High cost for platform work.	2	10	High cost for platform work.	2	10
	NS Side Clearance suit	\$	2	None	5	10	This suit will prohibit all high-level platforms, involve large gap for bridge-plate at mini-highs.	3	6	This suit will prohibit all high-level platforms, involve large gap for bridge-plate at mini-highs.	3	6
11. Station Site Suitability for Development	Assumptions		There are no issues here as nothing is being changed.			Environmental issues would have to be investigated at IB station.			Environmental issues would have to be investigated at both IB & OB stations.			
	Environmental	\$	5	None	5	25	Investigation needed.	3	15	Investigation needed.	3	15
	Archaeological	\$	5	None	5	25	Investigation needed.	3	15	Investigation needed.	3	15
Points TOTALS:					577			478			482	

Marcus Hook TOD - SEPTA Station Issues



Date: 12/15/2004

Priorities - Highest: E = Economic Development Lowest: U = Usability

Scoring	Value	Priority	Cost	Priorities This Sheet:
1	Really Bad Idea	Lowest	Very High >\$1,000,000	U = Usability
2	Lousy Situation	Low	High <\$1,000,000	S = Safety & Security
3	OK Compromise	Medium	Medium <\$100,000	\$ = Cost
4	Very Good Idea	High	Low <\$10,000	G = Growth
5	Ideal Solution	Highest	Free (0)	E = Economic Development

Priorities List:
U = Usability
\$ = Cost
S = Safety & Security
G = Growth
E = Economic Development

Issues

Issues	Priority		A - Leave Station Where it Is		B - Relocate Inbound Station		C - Relocate Entire Station					
	Type	Rank	Value	Score	Value	Score	Value	Score				
1. Vehicular Access & Parking	Assumptions		Existing 205 space parking lots remains as they are, split between IB and OB.		Add small new parking (40 spaces) area to new IB station. Leave existing parking where it is and make good pedestrian connections from it to new IB station. Parking is also gained where the old station is removed.		Add new parking areas to both sides of station (40 spaces IB and 200 spaces OB). Leave existing parking where it is and make good pedestrian connections on both IB and OB sides.					
	Visibility of Station from 452	U	1	Station not visible except from bridge. Vehicular access is unclear.	3	3	Station(s) not visible except from bridge. Vehicular access is confusing at best, due to two stations, one on each side of bridge.	2	2	Station not visible except from bridge. Vehicular access is unclear.	3	3
	Access from 452	U	1	Need signs from either direction.	2	2	Need signs from either direction.	2	2	Need signs from either direction.	2	2
	Convenience from parking to IB platform	U	1	From IB parking: excellent. From OB parking: lousy.	3	3	From old IB parking: lousy. From old OB parking: lousy. From new IB lot, good but too small.	2	2	From old IB parking: lousy. From old OB parking: lousy. From new IB lot, good but too small. From new OB lot: lousy.	2	2
	Expansion	G	4	No room for parking expansion.	3	12	Small expansion possible (20%).	4	16	Large expansion possible (117%).	5	20
	COST of Parking Design	\$	3	None	5	15		4	12		4	12
	COST of Parking Const	\$	3	None	5	15		3	9		2	6
2. Passenger Crossover	Assumptions		Use new 452 bridge over tracks with ramps as designed.		Use new 452 bridge over tracks with ramps redesigned. Ramps need to be designed to avoid pedestrians having to cross 452 on the bridge.		Use new 452 bridge over tracks with ramps relocated to north side of bridge.					
	Convenience	U	1	OK	3	3	Farther from IB station.	2	2	Farther from both stations.	2	2
	Accessibility	S	2	Will be with new bridge.	5	10	Will be with new bridge.	5	10	Will be with new bridge.	5	10
	COST of Crossover Design	\$	3	Already done, no additional cost.	5	15	Extra to PennDOT	4	12	Extra to PennDOT	4	12
	COST of Crossover Const	\$	3	Already In PennDOT Contract	5	15	May be more costly than ramps for Options A or C.	3	9	Already in PennDOT Contract.	5	15

Priorities - Highest: E = Econ Devel

Lowest: U = Usability

Issues

Issues	Priority			A - Leave Station Where it Is			B – Relocate Inbound Station			C – Relocate Entire Station		
	Type	Rank		Value	Score	Value	Score	Value	Score			
3. Station Building: Passenger Waiting Area Ticket Office	Assumptions			Existing modular station stays.			New IB Station indoor/outdoor shelter with ticket office is built by site developer.			New IB Station indoor/outdoor shelter with ticket office is built by site developer. Outdoor shelter only on OB side, built by SEPTA		
	Safety	S	2	Little activity or observability.	3	6	Better on IB, not as good on OB. Shared with bus passengers.	4	8	Better on IB and OB. Shared with bus passengers.	5	10
	Comfort	U	1	OK	3	3	Good	4	4	Good	4	4
	Convenience to Public	U	1	Convenient to IB platform (when IB trains leave on NB track).	3	3	Convenient to IB platform.	4	4	Convenient to IB platform	4	4
	Operational Efficiency	U	1	OK	3	3	Better	4	4	Better	4	4
	COST of Station Building Design	\$	3	None	5	15		3	9		3	9
	COST of Station Building Const	\$	3	None	5	15		2	6		2	6
4. RR Operation: Operating Modes, Work by Amtrak	Assumptions			IB trains leave from track 1, or occasionally 4, depending on where they can cross over.			Thru OB trains stop at old station, track 4. Terminal trains stop at new station, track 1. All IB trains board track 1 at new station.			Thru OB trains stop at new station, track 4. Terminal trains stop at new station, track 1. All IB trains board track 1 at new station.		
	Terminal Operation Passenger Convenience	U	1	Lousy when IB passengers have to board on wrong side (track 4). Otherwise OK.	3	3	This is a poor idea, since every round trip requires crossing the length of the stations.	2	2	Good. Boarding locations are where people expect them.	4	4
	Thru Operation Passenger Convenience	U	1	Good. Boarding locations are where people expect them.	4	4	Poor idea, since every round trip requires crossing the length of the stations.	2	2	Good. Boarding locations are where people expect them.	4	4
	COST of RR Infrastructure Design	\$	3	None	5	15	None	5	15	None	5	15
	COST of RR Infrastructure Const	\$	3	None	5	15	None	5	15	None	5	15

Priorities - Highest: E = Econ Devel

Lowest: U = Usability

Issues

Issues	Priority		A - Leave Station Where it Is			B - Relocate Inbound Station			C - Relocate Entire Station			
	Type	Rank	Value	Score	Value	Score	Value	Score				
5. Multi-Modal Service	Assumptions		Busses 113 and 114 stop a block or more from train station.			113, 114 Busses could stop at new IB station			113, 114 Busses could stop at new IB Station			
	Connections to SEPTA busses	U	1	Lousy connection now.	2	2	Ideal connection for IB rail trips; not as good for OB.	4	4	Ideal connection for IB rail trips; not as good for OB.	5	5
	Connections to other ground transportation services	U	1	OK for Taxis and Vans	3	3	Ideal connection for IB rail trips; not as good for OB.	4	4	Ideal connection for IB rail trips; not as good for OB.	5	5
	COST of Bus Stop Design	\$	3	None	5	15	Low	4	12	Low	4	12
	COST of Bus Stop Const	\$	3	None	5	15	Medium	3	9	Medium	3	9
6. Accessibility	Assumptions		Existing facilities (not accessible) remain. New accessible crossover via bridge. No other corrective work done.			New IB station and crossover (on bridge) are accessible. Audio-Visual on both sides.			New IB, OB stations and crossover (on bridge) are accessible. Audio-Visual on both sides.			
	Parking	S	2	Existing	5	10	Provided	5	10	Provided	5	10
	Path to office/platform	S	2	Not Accessible	3	6	IB & OB Provided New	4	8	IB & OB Provided New	4	8
	Platform Edge	S	2	Not Accessible - No Edge Warning	2	4	IB & OB Provided New	4	8	IB & OB Provided New	4	8
	Mini-High or Full High Platforms	S	2	Not Accessible - No High Platforms	2	4	IB & OB Provided New - Mini-High Platforms Only	4	8	IB & OB Provided New - Mini-High Platforms Only	4	8
	Lighting	S	2	Minimal	2	4	IB & OB Provided New	5	10	IB & OB Provided New	5	10
	Audio-Visual	S	2	Not Accessible	2	4	IB & OB Provided New	5	10	IB & OB Provided New	5	10
	COST of Accessibility Design	\$	3	None	5	15	Medium	3	9	Medium	3	9
	COST of Accessibility Const	\$	3	None	5	15	High	4	12	High	4	12
7. Ridership	Assumptions		Ridership is limited by existing parking, patrons within walking distance, headways, safety, convenience.			Ridership will increase due to new development and more parking but growth will be limited by less convenient old parking.			Ridership will increase due to new development and much more parking but growth will still be limited by less convenient old parking.			
	Related to expanded parking	G	4	Probably won't increase since there is no additional parking.	3	12	May increase slightly.	4	16	Probably will increase more than B.	5	20
	Related to TOD development	E	5	Probably will increase.	4	20	Probably will increase more than A.	4	20	Probably will increase more than B.	5	25

Priorities - Highest: E = Econ Devel

Lowest: U = Usability

Issues

Priority
Type Rank

A - Leave Station Where it Is

Value Score

B – Relocate Inbound Station

Value Score

C – Relocate Entire Station

Value Score

8. Commercial Impact on Borough.	Assumptions		No additional development would be done by SEPTA, due to the fact that Amtrak owns all commercial rights under lease agreement. Current train riders offer little commercial impact to Borough, except those that live nearby and walk to station.			Developer of site would also develop a small retail space in or adjacent to station. There would be more walk-to-station riders. Both of these scenarios will increase commercial impact.			No additional development would accompany the relocated outbound station, therefore commercial impacts would be similar to option B, although with more drive-to-station riders.			
	Spending by drive-to-station riders	E	5	No change.	3	15	No change, except at commercial within station.	3	15	No change, except at commercial within station.	3	15
	Spending by walk-to-station riders	E	5	New development will add walk-to station riders & therefore commercial impact in borough.	4	20	New development will add walk-to station riders & therefore commercial impact in borough.	4	20	New development will add walk-to station riders & therefore commercial impact in borough.	4	20
9. Real Estate	Assumptions		No changes in real estate ownership.			An easement for station use would be leased by site developer to SEPTA.			SEPTA would acquire approximately 2 acres plus road access in Lower Chichester to support OB station & parking.			
	Cost of Land Acquisition & Easement Fees	\$	3	None	5	15	Legal fees for Easement Agreement Only	4	12	Broker/Legal fees	3	9
	Cost of Land Acquisition	\$	3	None	5	15	None	5	15	Land cost.	2	6
10. Amtrak Issues	Assumptions		No change to current relationship between SEPTA and Amtrak.			This option would require a Force Account agreement with Amtrak for track protection and possible Amtrak construction as well.			This option would require a Force Account agreement with Amtrak for track protection and possible Amtrak construction as well.			
	Cost of Track Protection	\$	3	None	5	15	High cost for platform work.	2	6	High cost for platform work.	2	6
	NS Side Clearance suit	\$	2	None	5	10	This suit will prohibit all high-level platforms, involve large gap for bridge-plate at mini-highs.	3	6	This suit will prohibit all high-level platforms, involve large gap for bridge-plate at mini-highs.	3	6
11. Station Site Suitability for Development	Assumptions		There are no issues here as nothing is being changed.			Environmental issues would have to be investigated at IB station.			Environmental issues would have to be investigated at both IB & OB stations.			
	Environmental	\$	3	None	5	15	Investigation needed.	3	9	Investigation needed.	3	9
	Archaeological	\$	3	None	5	15	Investigation needed.	3	9	Investigation needed.	3	9
Points TOTALS:					424			377			390	

Marcus Hook TOD - SEPTA Station Issues



Date: 12/15/2004

Priorities - Highest: S = Safety & Security

Lowest: \$ = Cost

Scoring	Value	Priority	Cost	Priorities This Sheet:
1	Really Bad Idea	Lowest	Very High >\$1,000,000	\$ = Cost
2	Lousy Situation	Low	High <\$1,000,000	E = Economic Development
3	OK Compromise	Medium	Medium <\$100,000	G = Growth
4	Very Good Idea	High	Low <\$10,000	U = Usability
5	Ideal Solution	Highest	Free (0)	S = Safety & Security

Priorities List:
U = Usability
\$ = Cost
S = Safety & Security
G = Growth
E = Economic Development

Issues

Priority **A - Leave Station Where it Is** **B - Relocate Inbound Station** **C - Relocate Entire Station**

Issues	Priority		A - Leave Station Where it Is		B - Relocate Inbound Station		C - Relocate Entire Station					
	Type	Rank	Value	Score	Value	Score	Value	Score				
1. Vehicular Access & Parking	Assumptions		Existing 205 space parking lots remains as they are, split between IB and OB.		Add small new parking (40 spaces) area to new IB station. Leave existing parking where it is and make good pedestrian connections from it to new IB station. Parking is also gained where the old station is removed.		Add new parking areas to both sides of station (40 spaces IB and 200 spaces OB). Leave existing parking where it is and make good pedestrian connections on both IB and OB sides.					
	Visibility of Station from 452	U	4	Station not visible except from bridge. Vehicular access is unclear.	3	12	Station(s) not visible except from bridge. Vehicular access is confusing at best, due to two stations, one on each side of bridge.	2	8	Station not visible except from bridge. Vehicular access is unclear.	3	12
	Access from 452	U	4	Need signs from either direction.	2	8	Need signs from either direction.	2	8	Need signs from either direction.	2	8
	Convenience from parking to IB platform	U	4	From IB parking: excellent. From OB parking: lousy.	3	12	From old IB parking: lousy. From old OB parking: lousy. From new IB lot, good but too small.	2	8	From old IB parking: lousy. From old OB parking: lousy. From new IB lot, good but too small. From new OB lot: lousy.	2	8
	Expansion	G	3	No room for parking expansion.	3	9	Small expansion possible (20%).	4	12	Large expansion possible (117%).	5	15
	COST of Parking Design	\$	1	None	5	5		4	4		4	4
	COST of Parking Const	\$	1	None	5	5		3	3		2	2
2. Passenger Crossover	Assumptions		Use new 452 bridge over tracks with ramps as designed.		Use new 452 bridge over tracks with ramps redesigned. Ramps need to be designed to avoid pedestrians having to cross 452 on the bridge.		Use new 452 bridge over tracks with ramps relocated to north side of bridge.					
	Convenience	U	4	OK	3	12	Farther from IB station.	2	8	Farther from both stations.	2	8
	Accessibility	S	5	Will be with new bridge.	5	25	Will be with new bridge.	5	25	Will be with new bridge.	5	25
	COST of Crossover Design	\$	1	Already done, no additional cost.	5	5	Extra to PennDOT	4	4	Extra to PennDOT	4	4
	COST of Crossover Const	\$	1	Already In PennDOT Contract	5	5	May be more costly than ramps for Options A or C.	3	3	Already in PennDOT Contract.	5	5

Priorities - Highest: S = Safety & Security

Lowest: \$ = Cost

Issues

Priority
Type Rank

A - Leave Station Where it Is

Value Score

B – Relocate Inbound Station

Value Score

C – Relocate Entire Station

Value Score

Issues	Priority			A - Leave Station Where it Is			B – Relocate Inbound Station			C – Relocate Entire Station		
	Type	Rank		Value	Score		Value	Score	Value	Score		
3. Station Building: Passenger Waiting Area Ticket Office	Assumptions			Existing modular station stays.			New IB Station indoor/outdoor shelter with ticket office is built by site developer.			New IB Station indoor/outdoor shelter with ticket office is built by site developer. Outdoor shelter only on OB side, built by SEPTA		
	Safety	S	5	Little activity or observability.	3	15	Better on IB, not as good on OB. Shared with bus passengers.	4	20	Better on IB and OB. Shared with bus passengers.	5	25
	Comfort	U	4	OK	3	12	Good	4	16	Good	4	16
	Convenience to Public	U	4	Convenient to IB platform (when IB trains leave on NB track).	3	12	Convenient to IB platform.	4	16	Convenient to IB platform	4	16
	Operational Efficiency	U	4	OK	3	12	Better	4	16	Better	4	16
	COST of Station Building Design	\$	1	None	5	5		3	3		3	3
	COST of Station Building Const	\$	1	None	5	5		2	2		2	2
4. RR Operation: Operating Modes, Work by Amtrak	Assumptions			IB trains leave from track 1, or occasionally 4, depending on where they can cross over.			Thru OB trains stop at old station, track 4. Terminal trains stop at new station, track 1. All IB trains board track 1 at new station.			Thru OB trains stop at new station, track 4. Terminal trains stop at new station, track 1. All IB trains board track 1 at new station.		
	Terminal Operation Passenger Convenience	U	4	Lousy when IB passengers have to board on wrong side (track 4). Otherwise OK.	3	12	This is a poor idea, since every round trip requires crossing the length of the stations.	2	8	Good. Boarding locations are where people expect them.	4	16
	Thru Operation Passenger Convenience	U	4	Good. Boarding locations are where people expect them.	4	16	Poor idea, since every round trip requires crossing the length of the stations.	2	8	Good. Boarding locations are where people expect them.	4	16
	COST of RR Infrastructure Design	\$	1	None	5	5	None	5	5	None	5	5
	COST of RR Infrastructure Const	\$	1	None	5	5	None	5	5	None	5	5

Priorities - Highest: S = Safety & Security

Lowest: \$ = Cost

Issues

Priority
Type Rank

A - Leave Station Where it Is

Value Score

B - Relocate Inbound Station

Value Score

C - Relocate Entire Station

Value Score

Issues	Priority		A - Leave Station Where it Is		B - Relocate Inbound Station		C - Relocate Entire Station					
	Type	Rank	Value	Score	Value	Score	Value	Score				
5. Multi-Modal Service	Assumptions		Busses 113 and 114 stop a block or more from train station.		113, 114 Busses could stop at new IB station		113, 114 Busses could stop at new IB Station					
	Connections to SEPTA busses	U	4	Lousy connection now.	2	8	Ideal connection for IB rail trips; not as good for OB.	4	16	Ideal connection for IB rail trips; not as good for OB.	5	20
	Connections to other ground transportation services	U	4	OK for Taxis and Vans	3	12	Ideal connection for IB rail trips; not as good for OB.	4	16	Ideal connection for IB rail trips; not as good for OB.	5	20
	COST of Bus Stop Design	\$	1	None	5	5	Low	4	4	Low	4	4
	COST of Bus Stop Const	\$	1	None	5	5	Medium	3	3	Medium	3	3
6. Accessibility	Assumptions		Existing facilities (not accessible) remain. New accessible crossover via bridge. No other corrective work done.		New IB station and crossover (on bridge) are accessible. Audio-Visual on both sides.		New IB, OB stations and crossover (on bridge) are accessible. Audio-Visual on both sides.					
	Parking	S	5	Existing	5	25	Provided	5	25	Provided	5	25
	Path to office/platform	S	5	Not Accessible	3	15	IB & OB Provided New	4	20	IB & OB Provided New	4	20
	Platform Edge	S	5	Not Accessible - No Edge Warning	2	10	IB & OB Provided New	4	20	IB & OB Provided New	4	20
	Mini-High or Full High Platforms	S	5	Not Accessible - No High Platforms	2	10	IB & OB Provided New - Mini-High Platforms Only	4	20	IB & OB Provided New - Mini-High Platforms Only	4	20
	Lighting	S	5	Minimal	2	10	IB & OB Provided New	5	25	IB & OB Provided New	5	25
	Audio-Visual	S	5	Not Accessible	2	10	IB & OB Provided New	5	25	IB & OB Provided New	5	25
	COST of Accessibility Design	\$	1	None	5	5	Medium	3	3	Medium	3	3
	COST of Accessibility Const	\$	1	None	5	5	High	4	4	High	4	4
7. Ridership	Assumptions		Ridership is limited by existing parking, patrons within walking distance, headways, safety, convenience.		Ridership will increase due to new development and more parking but growth will be limited by less convenient old parking.		Ridership will increase due to new development and much more parking but growth will still be limited by less convenient old parking.					
	Related to expanded parking	G	3	Probably won't increase since there is no additional parking.	3	9	May increase slightly.	4	12	Probably will increase more than B.	5	15
	Related to TOD development	E	2	Probably will increase.	4	8	Probably will increase more than A.	4	8	Probably will increase more than B.	5	10

Priorities - Highest: S = Safety & Security

Lowest: \$ = Cost

Issues

Priority
Type Rank

A - Leave Station Where it Is

Value Score

B – Relocate Inbound Station

Value Score

C – Relocate Entire Station

Value Score

8. Commercial Impact on Borough.	Assumptions		No additional development would be done by SEPTA, due to the fact that Amtrak owns all commercial rights under lease agreement. Current train riders offer little commercial impact to Borough, except those that live nearby and walk to station.			Developer of site would also develop a small retail space in or adjacent to station. There would be more walk-to-station riders. Both of these scenarios will increase commercial impact.			No additional development would accompany the relocated outbound station, therefore commercial impacts would be similar to option B, although with more drive-to-station riders.			
	Spending by drive-to-station riders	E	2	No change.	3	6	No change, except at commercial within station.	3	6	No change, except at commercial within station.	3	6
	Spending by walk-to-station riders	E	2	New development will add walk-to station riders & therefore commercial impact in borough.	4	8	New development will add walk-to station riders & therefore commercial impact in borough.	4	8	New development will add walk-to station riders & therefore commercial impact in borough.	4	8
9. Real Estate	Assumptions		No changes in real estate ownership.			An easement for station use would be leased by site developer to SEPTA.			SEPTA would acquire approximately 2 acres plus road access in Lower Chichester to support OB station & parking.			
	Cost of Land Acquisition & Easement Fees	\$	1	None	5	5	Legal fees for Easement Agreement Only	4	4	Broker/Legal fees	3	3
	Cost of Land Acquisition	\$	1	None	5	5	None	5	5	Land cost.	2	2
10. Amtrak Issues	Assumptions		No change to current relationship between SEPTA and Amtrak.			This option would require a Force Account agreement with Amtrak for track protection and possible Amtrak construction as well.			This option would require a Force Account agreement with Amtrak for track protection and possible Amtrak construction as well.			
	Cost of Track Protection	\$	1	None	5	5	High cost for platform work.	2	2	High cost for platform work.	2	2
	NS Side Clearance suit	\$	5	None	5	25	This suit will prohibit all high-level platforms, involve large gap for bridge-plate at mini-highs.	3	15	This suit will prohibit all high-level platforms, involve large gap for bridge-plate at mini-highs.	3	15
11. Station Site Suitability for Development	Assumptions		There are no issues here as nothing is being changed.			Environmental issues would have to be investigated at IB station.			Environmental issues would have to be investigated at both IB & OB stations.			
	Environmental	\$	1	None	5	5	Investigation needed.	3	3	Investigation needed.	3	3
	Archaeological	\$	1	None	5	5	Investigation needed.	3	3	Investigation needed.	3	3
Points TOTALS:					398			429			467	

Marcus Hook TOD - SEPTA Station Issues



Date: 12/15/2004

Scoring	Value	Priority	Cost	Priorities This Sheet:
1	Really Bad Idea	Lowest	Very High >\$1,000,000	
2	Lousy Situation	Low	High <\$1,000,000	
3	OK Compromise	Medium	Medium <\$100,000	
4	Very Good Idea	High	Low <\$10,000	
5	Ideal Solution	Highest	Free (0)	

Priorities List:
U = Usability
\$ = Cost
S = Safety & Security
G = Growth
E = Economic Development

Issues

Issues	Priority			A - Leave Station Where it Is			B - Relocate Inbound Station			C - Relocate Entire Station		
	Type	Rank	Assumptions	Value	Score	Value	Score	Value	Score			
1. Vehicular Access & Parking	Assumptions			Existing 205 space parking lots remains as they are, split between IB and OB.			Add small new parking (40 spaces) area to new IB station. Leave existing parking where it is and make good pedestrian connections from it to new IB station. Parking is also gained where the old station is removed.			Add new parking areas to both sides of station (40 spaces IB and 200 spaces OB). Leave existing parking where it is and make good pedestrian connections on both IB and OB sides.		
	Visibility of Station from 452	U	3	Station not visible except from bridge. Vehicular access is unclear.	3	9	Station(s) not visible except from bridge. Vehicular access is confusing at best, due to two stations, one on each side of bridge.	2	6	Station not visible except from bridge. Vehicular access is unclear.	3	9
	Access from 452	U	3	Need signs from either direction.	2	6	Need signs from either direction.	2	6	Need signs from either direction.	2	6
	Convenience from parking to IB platform	U	3	From IB parking: excellent. From OB parking: lousy.	3	9	From old IB parking: lousy. From old OB parking: lousy. From new IB lot, good but too small.	2	6	From old IB parking: lousy. From old OB parking: lousy. From new IB lot, good but too small. From new OB lot: lousy.	2	6
	Expansion	G	3	No room for parking expansion.	3	9	Small expansion possible (20%).	4	12	Large expansion possible (117%).	5	15
	COST of Parking Design	\$	3	None	5	15		4	12		4	12
	COST of Parking Const	\$	3	None	5	15		3	9		2	6
2. Passenger Crossover	Assumptions			Use new 452 bridge over tracks with ramps as designed.			Use new 452 bridge over tracks with ramps redesigned. Ramps need to be designed to avoid pedestrians having to cross 452 on the bridge.			Use new 452 bridge over tracks with ramps relocated to north side of bridge.		
	Convenience	U	3	OK	3	9	Farther from IB station.	2	6	Farther from both stations.	2	6
	Accessibility	S	3	Will be with new bridge.	5	15	Will be with new bridge.	5	15	Will be with new bridge.	5	15
	COST of Crossover Design	\$	3	Already done, no additional cost.	5	15	Extra to PennDOT	4	12	Extra to PennDOT	4	12
	COST of Crossover Const	\$	3	Already In PennDOT Contract	5	15	May be more costly than ramps for Options A or C.	3	9	Already in PennDOT Contract.	5	15

Issues

Issues	Priority		A - Leave Station Where it Is			B - Relocate Inbound Station			C - Relocate Entire Station		
	Type	Rank	Value	Score	Value	Score	Value	Score			
3. Station Building: Passenger Waiting Area Ticket Office	Assumptions		Existing modular station stays.			New IB Station indoor/outdoor shelter with ticket office is built by site developer.			New IB Station indoor/outdoor shelter with ticket office is built by site developer. Outdoor shelter only on OB side, built by SEPTA		
	Safety	S	3	3	9	Better on IB, not as good on OB. Shared with bus passengers.	4	12	Better on IB and OB. Shared with bus passengers.	5	15
	Comfort	U	3	3	9	Good	4	12	Good	4	12
	Convenience to Public	U	3	3	9	Convenient to IB platform (when IB trains leave on NB track).	4	12	Convenient to IB platform	4	12
	Operational Efficiency	U	3	3	9	Better	4	12	Better	4	12
	COST of Station Building Design	\$	3	5	15	None	3	9	None	3	9
	COST of Station Building Const	\$	3	5	15	None	2	6	None	2	6
4. RR Operation: Operating Modes, Work by Amtrak	Assumptions		IB trains leave from track 1, or occasionally 4, depending on where they can cross over.			Thru OB trains stop at old station, track 4. Terminal trains stop at new station, track 1. All IB trains board track 1 at new station.			Thru OB trains stop at new station, track 4. Terminal trains stop at new station, track 1. All IB trains board track 1 at new station.		
	Terminal Operation Passenger Convenience	U	3	3	9	Lousy when IB passengers have to board on wrong side (track 4). Otherwise OK.	2	6	Good. Boarding locations are where people expect them.	4	12
	Thru Operation Passenger Convenience	U	3	4	12	Good. Boarding locations are where people expect them.	2	6	Good. Boarding locations are where people expect them.	4	12
	COST of RR Infrastructure Design	\$	3	5	15	None	5	15	None	5	15
	COST of RR Infrastructure Const	\$	3	5	15	None	5	15	None	5	15

Issues

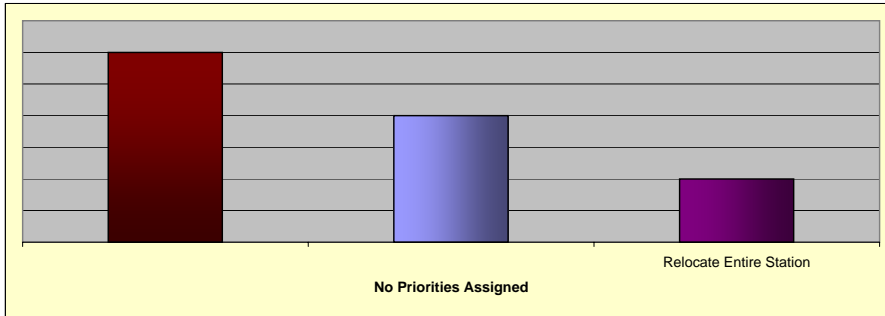
Issues	Priority		A - Leave Station Where it Is			B - Relocate Inbound Station			C - Relocate Entire Station			
	Type	Rank	Value	Score	Value	Score	Value	Score				
5. Multi-Modal Service	Assumptions		Busses 113 and 114 stop a block or more from train station.			113, 114 Busses could stop at new IB station			113, 114 Busses could stop at new IB Station			
	Connections to SEPTA busses	U	3	Lousy connection now.	2	6	Ideal connection for IB rail trips; not as good for OB.	4	12	Ideal connection for IB rail trips; not as good for OB.	5	15
	Connections to other ground transportation services	U	3	OK for Taxis and Vans	3	9	Ideal connection for IB rail trips; not as good for OB.	4	12	Ideal connection for IB rail trips; not as good for OB.	5	15
	COST of Bus Stop Design	\$	3	None	5	15	Low	4	12	Low	4	12
	COST of Bus Stop Const	\$	3	None	5	15	Medium	3	9	Medium	3	9
6. Accessibility	Assumptions		Existing facilities (not accessible) remain. New accessible crossover via bridge. No other corrective work done.			New IB station and crossover (on bridge) are accessible. Audio-Visual on both sides.			New IB, OB stations and crossover (on bridge) are accessible. Audio-Visual on both sides.			
	Parking	S	3	Existing	5	15	Provided	5	15	Provided	5	15
	Path to office/platform	S	3	Not Accessible	3	9	IB & OB Provided New	4	12	IB & OB Provided New	4	12
	Platform Edge	S	3	Not Accessible - No Edge Warning	2	6	IB & OB Provided New	4	12	IB & OB Provided New	4	12
	Mini-High or Full High Platforms	S	3	Not Accessible - No High Platforms	2	6	IB & OB Provided New - Mini-High Platforms Only	4	12	IB & OB Provided New - Mini-High Platforms Only	4	12
	Lighting	S	3	Minimal	2	6	IB & OB Provided New	5	15	IB & OB Provided New	5	15
	Audio-Visual	S	3	Not Accessible	2	6	IB & OB Provided New	5	15	IB & OB Provided New	5	15
	COST of Accessibility Design	\$	3	None	5	15	Medium	3	9	Medium	3	9
	COST of Accessibility Const	\$	3	None	5	15	High	4	12	High	4	12
7. Ridership	Assumptions		Ridership is limited by existing parking, patrons within walking distance, headways, safety, convenience.			Ridership will increase due to new development and more parking but growth will be limited by less convenient old parking.			Ridership will increase due to new development and much more parking but growth will still be limited by less convenient old parking.			
	Related to expanded parking	G	3	Probably won't increase since there is no additional parking.	3	9	May increase slightly.	4	12	Probably will increase more than B.	5	15
	Related to TOD development	E	3	Probably will increase.	4	12	Probably will increase more than A.	4	12	Probably will increase more than B.	5	15

Issues

Issues	Priority		A - Leave Station Where it Is			B – Relocate Inbound Station			C – Relocate Entire Station			
	Type	Rank	Value	Score	Value	Score	Value	Score				
8. Commercial Impact on Borough.	Assumptions		No additional development would be done by SEPTA, due to the fact that Amtrak owns all commercial rights under lease agreement. Current train riders offer little commercial impact to Borough, except those that live nearby and walk to station.			Developer of site would also develop a small retail space in or adjacent to station. There would be more walk-to-station riders. Both of these scenarios will increase commercial impact.			No additional development would accompany the relocated outbound station, therefore commercial impacts would be similar to option B, although with more drive-to-station riders.			
	Spending by drive-to-station riders	E	3	No change.	3	9	No change, except at commercial within station.	3	9	No change, except at commercial within station.	3	9
	Spending by walk-to-station riders	E	3	New development will add walk-to station riders & therefore commercial impact in borough.	4	12	New development will add walk-to station riders & therefore commercial impact in borough.	4	12	New development will add walk-to station riders & therefore commercial impact in borough.	4	12
9. Real Estate	Assumptions		No changes in real estate ownership.			An easement for station use would be leased by site developer to SEPTA.			SEPTA would acquire approximately 2 acres plus road access in Lower Chichester to support OB station & parking.			
	Cost of Land Acquisition & Easement Fees	\$	3	None	5	15	Legal fees for Easement Agreement Only	4	12	Broker/Legal fees	3	9
	Cost of Land Acquisition	\$	3	None	5	15	None	5	15	Land cost.	2	6
10. Amtrak Issues	Assumptions		No change to current relationship between SEPTA and Amtrak.			This option would require a Force Account agreement with Amtrak for track protection and possible Amtrak construction as well.			This option would require a Force Account agreement with Amtrak for track protection and possible Amtrak construction as well.			
	Cost of Track Protection	\$	3	None	5	15	High cost for platform work.	2	6	High cost for platform work.	2	6
	NS Side Clearance suit	\$	3	None	5	15	This suit will prohibit all high-level platforms, involve large gap for bridge-plate at mini-highs.	3	9	This suit will prohibit all high-level platforms, involve large gap for bridge-plate at mini-highs.	3	9
11. Station Site Suitability for Development	Assumptions		There are no issues here as nothing is being changed.			Environmental issues would have to be investigated at IB station.			Environmental issues would have to be investigated at both IB & OB stations.			
	Environmental	\$	3	None	5	15	Investigation needed.	3	9	Investigation needed.	3	9
	Archaeological	\$	3	None	5	15	Investigation needed.	3	9	Investigation needed.	3	9
Points TOTALS:			489			450			474			

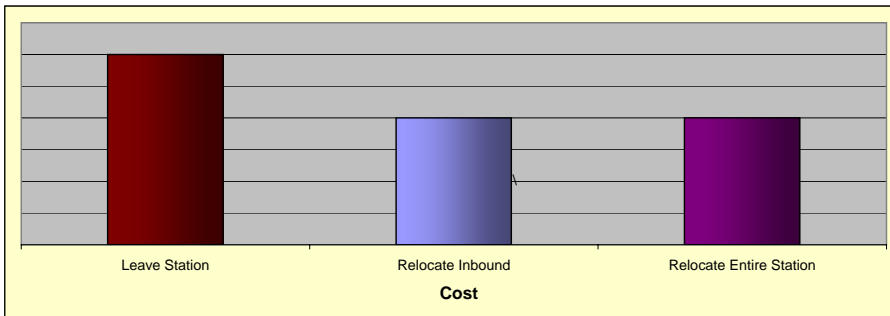
Analysis #1

Priorities	Best Option
No Priorities Assigned	Option "A": Leave station where it is



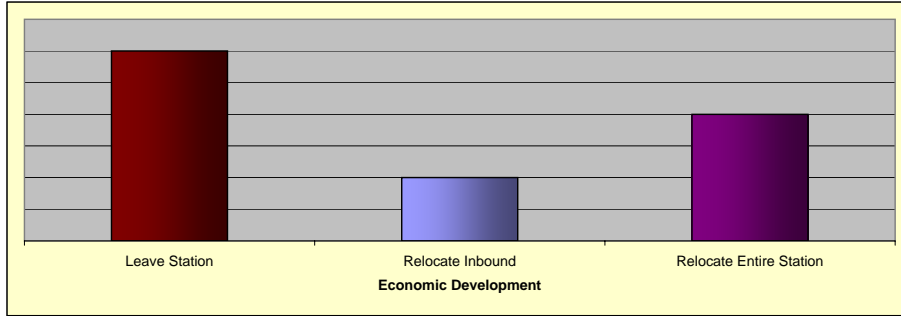
Analysis #2

Priorities	Best Option
High Priority: Cost Lowest Priority: Station Usability	Option "A": Leave station where it is



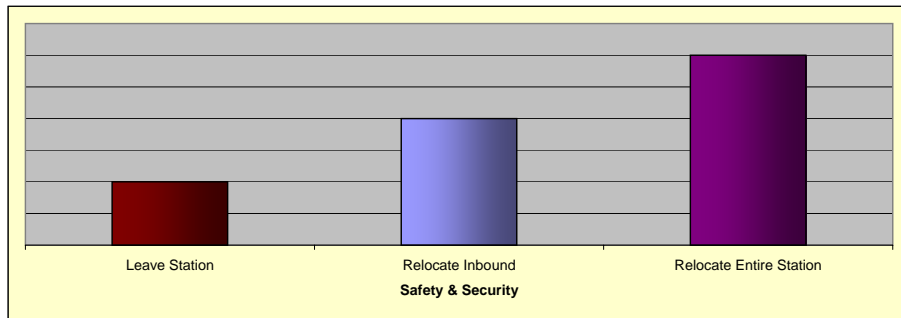
Analysis #3

Priorities	Best Option
High Priority: Economic Development Lowest Priority: Station Usability	Option "A": Leave station where it is



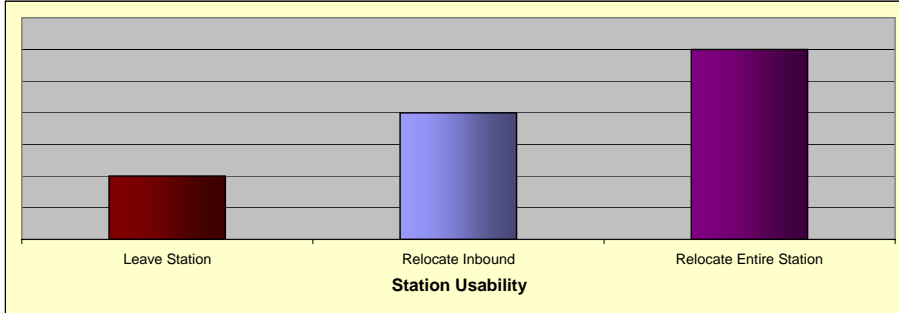
Analysis #4

Priorities	Best Option
High Priority: Safety & Security Lowest Priority: Cost	Option "C": Relocate entire station



Analysis #5

Priorities	Best Option
High Priority: Station Usability Lowest Priority: Cost	Option "C": Relocate entire station



ARTICLE 12

TRANSIT ORIENTED DEVELOPMENT DISTRICT

1200 **Purposes**

The purposes of this district are to promote well-integrated residential, commercial and other development close to regional transit stations, support public transit by locating higher density, mixed-use development adjacent or near to transit stops, reduce automobile dependency and roadway congestion by combining trips and locating destinations within walking or biking distance, and provide an alternative to conventional development by emphasizing pedestrian-oriented mixed development.

1201 **Conflicts**

Where the provisions of this district do not agree with the standards of another provision of this Ordinance, the provisions of this district shall control.

1202 **Uses Permitted by Right**

The following uses, and no others, shall be *permitted as part of a unified development plan*.

1. Residential Uses
 - a. Multi-family dwelling (apartment or condominium)
 - b. Single family attached dwelling (townhouse)
 - c. Single family semi-detached dwelling (twin)
 - d. Two family dwelling (duplex)
2. Nonresidential uses
 - a. Retail store or shop, including pharmacy
 - b. Food store, restaurant or coffee shop
 - c. Personal service shop, such as barber, dry cleaner
 - d. Child Day Care Center, subject to Section 1810

3. Arrangement of Uses

In mixed use buildings having two or more stories, retail and other commercial uses shall be located on the ground floor while multi-family units and/or offices are located above the ground floor.

1203 **Conditional Uses**

The following shall be permitted as individual (detached) buildings fronting major streets, as part of a unified plan, only when authorized as a conditional use, subject to the applicable provisions of Article 18, Procedures and Standards for Conditional Uses.

1. Office building and office, subject to Section 1814.
2. Hotel and/or entertainment establishment (excluding adult entertainment), subject to Section 1816.
3. Any use of the same general character as those permitted in Sections 1202 and 1203. Such use shall be permitted by the Borough Council upon the recommendation of the planning commission, consistent with the purposes of the district, comply with the Performance Standards in Article 20 and not detrimental to the surrounding neighborhood. To determine if a proposed use is of the same general character as any of the listed permitted uses, the planning commission and zoning officer shall evaluate its impacts in relation to the Compatibility Standards in Article 17.

1204 **Accessory Structures**

1. Off-street parking and loading, subject to Article 15.
2. Signs, subject to Article 16.
3. Recreation area
4. Commercial drop-off and pick-up boxes, stations for letters or packages, or newspaper vending machines, provided that such boxes shall be not be located within a right-of-way of a public street.
5. Plazas, courtyards
6. Neighborhood parks and green areas
7. Any accessory use on the same lot with and customarily incidental

to the principal use(s) on the property and not detrimental to the area.

1205 **Dimensional Standards**

Unless specifically stated otherwise, the following shall be minimum requirements:

1. For Mixed Use Buildings or Multi family buildings
 - a. Density -- Between 20 and 30 units per acre
 - b. Setback from road -- 15 feet
 - c. Setback from parking area -- 15 feet
 - d. Distance between buildings -- 45 feet
 - d. Height -- 45 feet or 4 stories, maximum.
2. For Single family and Two-family dwellings
 - a. Density (*minimum*)
 - 1) Single family attached dwellings -- 15 units/acre (townhouses)
 - 2) Single family semi-detached dwellings -- 10 units /acre
 - 3) Two-family (duplex) -- 10 units/acre
 - b. Setback from street -- 10 feet
 - c. Landscaping -- 25% for portion covered with single-family and two- family dwellings.
 - d. Height -- 35 feet, maximum

1206 **Development Standards**

1. **Building facades**
 - a. While architectural styles shall be compatible throughout the development, building facades should be visually interesting and diverse.
 - b. Where practicable, buildings shall have at least one (1) main entrance on the façade nearest to or facing a transit station or street leading to transit station, except in the case of single and two family dwellings.
 - c. Unscreened, flat, blank walls shall be avoided to provide a pleasant pedestrian experience by connecting activities within a structure to the adjacent sidewalk and/or transit stop.
 - d. At street level of mixed-use buildings, not less than 75 % of the length and 40% of the wall surface must be in public entranceways and windows or retail/service display windows.

2. **Pedestrian System and Building Orientation**
 - a. Sidewalks shall be required in front of, and/or adjacent to mixed use or residential buildings as necessary to connect with the pedestrian walkway system and to provide connection to a transit station.
 - b. Walkways that cross parking, loading, or driveway areas must be clearly identifiable through the use of elevation changes, speed bumps, different paving materials or other similar method.
 - c. Buildings shall be oriented toward the pedestrian by providing a direct link between the building and the pedestrian walkway network, with emphasis on directing people toward transit stops/stations.
 - d. Lighting shall be provided for parking areas and pedestrian paths to ensure safety and convenience.
 - e. Plazas shall be provided in the development. Not less than one seating space for each 250 square feet of plaza area shall be provided. Seating shall be at least 16 inches high

and 30 inches wide. Ledge benches shall have a minimum depth of 30 inches.

3. Blocks

- a. Blocks shall be walkable and shall not exceed 600 feet in length, and pedestrian linkages shall be provided at least every 200 feet.

4. Parking Lots and Garages

- a. Surface parking shall preferably be located at the rear of the building or if not feasible, at the side.
- b. Surface parking lots and parking garages shall not dominate the development site.
- c. Surface parking areas with 50 or more spaces shall be divided into separate areas by landscaped islands not less 15 feet in width. Such parking areas shall have not more than 20 continuous parking spaces.
- d. Surface parking areas shall be screened along all sidewalks by a 3 foot high masonry wall, fence or similar treatment that is compatible with adjacent structures.
- e. Shared parking is encouraged. Where applicable, a shared parking plan must be approved by the Borough. Shared parking and off site parking shall comply with Section 1505.
- f. Parking garages shall include pedestrian walkways and connection to the sidewalk/pedestrian system. These walkways shall be clearly marked and continuous in design and clearly marked
- g. Not less than 20 percent of the parking lot shall be landscaped.

5. Bicycle Controls

- a. Bicycle parking facilities shall be provided for all office and multi-family structures, and freestanding commercial uses.

- b. The number of bicycle parking spaces required for each use shall be as follows:

Multi-family residential	-	1 space/dwelling unit
Retail	-	1 space per 2,000 sq. ft.
Office	-	1 space per 4,000 sq. ft.
Park and ride facilities	-	10 spaces per acre

- c. Bicycle parking facilities must be located in a secure, lockable and well-lighted area.
- d. All bicycle racks, lockers or other facilities shall be securely anchored to the ground or to the structure.

1207 **Open Space and Landscaping**

- 1. Except for areas devoted to single family and two family dwellings, not less than 40% of the project area shall be landscaped and/or hard surfaced for use by pedestrians (e.g. courts, plazas). If hard surfaced, the area must contain pedestrian amenities such as benches, courts, drinking fountains, planters etc. and be separated from parking or maneuvering areas by tire stops, hedges, fences or other devices. Landscaping must meet the standards in Article 17, General Regulations.

1208 **Walls and Hedges**

- 1. Except for areas with single family and two-family dwellings, no wall or hedge, shall exceed 4 feet in height.
- 2. Decorative walls or fences are encouraged.

1209 **Development Plan/Concept Plan**

- 1. A Conceptual Plan (CP) shall be prepared for each proposed development in the TOD district and shall be submitted to the Borough Council to advise them of the general scope and characteristics of the proposed development.
 - a. The Conceptual Plan shall depict the following proposed development features in a general fashion: building layout, land uses, bicycle and pedestrian pathways, parking and other similar items.

- b. After the Borough Council reviews the Conceptual Plan and advises the applicant/developer of any desired revisions, the applicant shall submit a Development Plan to the Borough.
2. The Development Plan (DP) shall be first submitted to the Borough Planning Commission then after review by the Planning Commission, to Borough Council
3. The DP shall provide for the physical design of the proposed development relative to public improvements, development standards, urban design criteria and public incentives.
4. The preparation of the DP shall include major stakeholders, including but not limited to major property owners, neighborhood organizations, local officials and other interested parties. These individuals shall serve as an advisory committee that will work with the Borough Council, Planning Commission, Borough Manager, other Borough officials, consultants and other appropriate parties to prepare the DP.
5. The DP shall include the following components:
 - a. Existing land use, property ownership, development character, and related characteristics.
 - b. Real estate market analysis of the development potential. The analysis shall consider potential demand for commercial (retail, service and office), hotel, entertainment, and residential development (multi-family owner and renter occupied, single family semi detached and single family attached dwellings, and duplexes).
 - c. Analysis of potential impacts, development opportunities, infrastructure needs, etc.
 - d. A traffic study.
 - e. Final development plan indicating development pattern by use, density, and similar characteristics; supporting infrastructure; pedestrian and bicycle system; urban design guidelines and implementation timetable.
 - f. An incentive package that matches the unique aspects of the location of the development and is responsive to market conditions for that area. The incentive package shall consist of public improvements to streets, sidewalks, curb and gutter,

water and sewer infrastructure and public facilities such as schools.

- g. The DP shall include all other information required by the Borough, and the latest County Subdivision and Land Development Ordinance for the preparation of land development plans.

Kise Straw & Kolodner Inc.

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