



**NEC COMMUTER RAIL IMPROVEMENTS**  
 NEW NEWARK, DELAWARE SEPTA STATION  
 ACCESS DRIVE CONNECTING  
 EXISTING AND PROPOSED STATIONS  
 MAY 2005 SCALE: 1"=300' SHEET 1 OF 1



SCALE BAR  
 0 100 200  
 FEET

Federal Aid Number: TBD

**I. Purpose and Need**

**1. Background**

The Newark passenger rail station is located off of South College Avenue on Mopar Drive in central Newark, New Castle County, Delaware (see Study Area map). Commuter rail service operates on weekdays during peak travel periods to and from points north, terminating in Central Philadelphia. Amtrak also offers daily service to destinations both north and south of Newark on its New York – Philadelphia – Washington, DC, regional service.

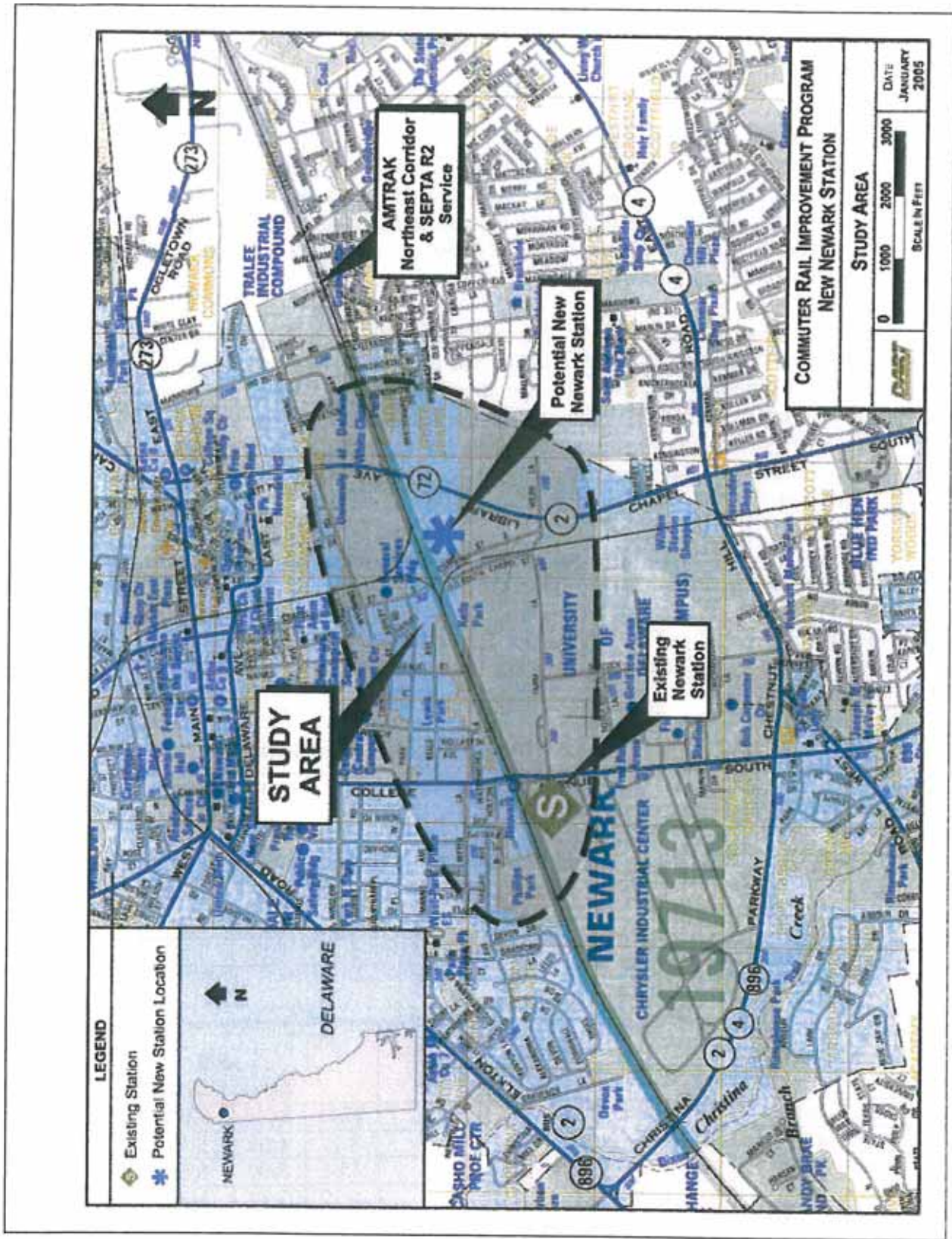
Commuter rail service between Newark and points north is provided by Southeastern Pennsylvania Transportation Authority (SEPTA) R2 regional rail service. The Delaware Transit Corporation (DTC), an operating division of the Delaware Department of Transportation (DelDOT), presently contracts with SEPTA to extend rail service from Central Philadelphia into Delaware. SEPTA R2 service operates along the Northeast Corridor (NEC), which is owned, operated and maintained by Amtrak. SEPTA shares tracks with Amtrak and Norfolk Southern (NS).

SEPTA R2 service is provided in Delaware at Claymont, Wilmington, Fairplay at Churchmans Crossing, and Newark Stations. A total of 17 SEPTA R2 trains serve the Newark Station with both northbound and southbound service during the peak travel periods of 6-9 AM and 4:30-7:30 PM. The table below represents the current SEPTA R2 rail service between Newark Station and Suburban Station in Central Philadelphia:

**Table 1: 2004 SEPTA R2 Weekday Regional Rail Service Schedule**

<b>Northbound</b>	<b>AM</b> <i>(peak direction)</i>					<b>PM</b>			
	<b>9208</b>	<b>9212</b>	<b>9216</b>	<b>4730</b>	<b>9220</b>	<b>4760</b>	<b>7294</b>	<b>9254</b>	<b>7256</b>
Newark	6:22	6:52	7:24	8:17	8:54	4:46	5:43	6:46	7:21
Wilmington	6:39	7:10	7:41	8:39	9:11	5:03	6:00	7:05	7:38
Philadelphia	7:41	7:58	8:40	9:32	10:08	5:58	6:56	7:56	8:28
<b>Southbound</b>	<b>AM</b>					<b>PM</b> <i>(peak direction)</i>			
	<b>7295</b>	<b>7203</b>	<b>7207</b>	<b>0211</b>		<b>9241</b>	<b>9243</b>	<b>9251</b>	<b>9257</b>
Philadelphia	5:17	5:44	6:35	7:08		3:17	4:09	5:11	5:38
Wilmington	6:06	6:33	7:25	7:56		4:06	5:00	5:54	6:33
Newark	6:26	6:56	7:53	8:21		4:30	5:24	6:13	6:55

Source: <http://www.septa.org/service/pdfs/R2MHW.pdf>. Effective October 31, 2004.



**LEGEND**

- ◆ Existing Station
- ★ Potential New Station Location

NEWARK

DELAWARE

N

**AMTRAK  
Northeast Corridor  
& SEPTA R2  
Service**

**Potential New  
Newark Station**

**Existing  
Newark  
Station**

**STUDY  
AREA**

**COMPUTER RAIL IMPROVEMENT PROGRAM  
NEW NEWARK STATION**

**STUDY AREA**

0 1000 2000 3000  
SCALE IN FEET

DATE  
JANUARY  
2005

## **2. Description of the Project**

The proposed project is to improve the track and station infrastructure to allow more frequent and reliable commuter rail service at the Newark Station. Currently at Newark Station, there is one track that commuter and freight trains must share and parking is limited to 276 spaces. The proposed project would increase the number of available tracks for commuter and freight trains and expand the parking lot capacity. The study area for the track and station improvements is depicted on the previous figure.

## **3. Project Need**

The track and station infrastructure for commuter trains at the Newark Station poses limitations on the current and projected operations.

In 2002, there were an average of 456 boardings and alightings per weekday at the Newark Station and 2,796 at the four Delaware stations (DTC/SEPTA Survey, September 17, 2002). By 2030, with no change in service, it is projected that ridership will increase by one-third to 608 boardings and alightings at Newark and 3,689 at the four Delaware stations (*Wilmington to Newark Commuter Rail Improvement Project Ridership Forecast*, November 10, 2004).

As part of the statewide long-range plan of increasing transit ridership by 130% in 2025, DTC has determined that SEPTA R2 service between Wilmington and Newark should be increased by eight trains per weekday by 2005 (Delaware Transit Corporation, *Transitioning to Transit: Delaware's Long Range Transit Plan for the 21<sup>st</sup> Century, Long Range Plan Highlights, 2000-2025*). In order to increase current service, a number of infrastructure improvements are necessary between Wilmington and Newark. If improvements are made along the corridor, it is projected that by 2030, 889 boardings and alightings per weekday will occur at the Newark Station and 4,987 at the four Delaware stations. Ridership increases by 46% at the Newark Station, and 35% at the four Delaware Stations, rail improvements are made between Wilmington and Newark.

The needs for the existing track and station infrastructure at the Newark Station that prevents this increase in service are summarized below.

### **a) Track Capacity**

SEPTA commuter trains can only operate on the southernmost track (Track A) in and out of Newark Station. This allows only one commuter train to serve the station at a time and only at times when there is no conflict with freight trains. As a result, the current commuter train service (17 trains per weekday during peak times only) cannot be expanded by number of trains each day, hours each day, or days of the week.

The limited track availability at Newark Station also restricts the potential for Maryland Commuter (MARC) rail service to be extended from Perryville, Maryland to New Castle County.

**b) Train Frequency**

With the conflict with freight trains and limited track capacity, service cannot be provided as desired every 30 minutes during peak periods in the peak direction. In the morning peak direction (northbound), trains are scheduled to depart approximately every 30 minutes for the first hour of service (6:22AM-7:24AM). However, the next scheduled departure approaches 60 minutes. In the evening peak direction (southbound), train frequencies (headways) vary from 42 to 54 minutes.

**c) Train Reliability**

Currently an arriving SEPTA commuter train must wait for the departure of the previous train. If the departing train is delayed, subsequent arrivals and departures are delayed, compromising schedule reliability.

**d) Train Storage**

There is no storage area for commuter train sets at the Newark Station. The first scheduled commuter train at Newark Station departs northbound each weekday morning at 6:22 AM. To have that train available for the first scheduled departure, SEPTA operates a train with no passengers (called a "deadhead" run) from Philadelphia to Newark to begin the scheduled service from Newark. Elimination of the deadhead run will reduce operating costs for the commuter rail service.

**e) Elimination of Conflict with Freight Trains at Newark Station**

Both NS freight trains and SEPTA commuter trains must share one track (Track A) at the Newark Station. Furthermore, NS freight trains must access the rail yard at the Chrysler plant during peak commuter travel periods. Shifting freight trains must move past the passenger platform, causing SEPTA trains to move out of the way. Freight train movements along the platform also create a potential safety hazard to passengers.

The Delmarva Secondary line, approximately one-half mile east of the Newark passenger rail station, is the principal route for NS trains to and from the Delmarva Peninsula. When SEPTA trains are present on Track A, NS access from Chrysler Yard to and from the Delmarva Secondary is blocked.

#### **f) Parking Lot Capacity**

There are 276 spaces in the Newark Station parking lot. With the projected ridership increase resulting from improvements to the Wilmington-Newark corridor, in 2030, approximately 445 riders (half of 889 projected boardings and alightings) are projected to use the station each weekday. Most riders currently access the station by driving alone. The capacity of the current station parking lot will be exceeded in 2030.

#### **g) Future Connection to Newark-Middletown Commuter Rail Service**

Commuter rail service from Newark to Middletown has been determined to be the one of the most feasible initial segments of service envisioned to eventually extend from Wilmington to Dover (Delaware Transit Corporation, *Delaware Passenger Rail Engineering Study Technical Memorandum #8: Proposed Route and Alternates*, January 15, 2002). One alternative corridor for Newark-Middletown passenger rail service is along the Delmarva Secondary, track owned and operated by Norfolk Southern. The Newark Station is less than one mile southwest of the Delmarva Secondary. For future service from Middletown continuing to points north, the existing Newark Station would not be along a direct path from Middleton to Wilmington and use of the existing Newark Station would not be feasible.

### **4. Project Purpose**

The purposes of the project are as follows:

- to eliminate track conflicts between freight trains and SEPTA R2 commuter trains at the Newark Station;
- to have the track capacity to serve the Newark Station with more than one commuter train at a time, thereby improving schedule reliability;
- to have the track capacity to provide peak period, peak direction commuter rail service every 30 minutes;
- to provide for overnight storage of commuter train sets to minimize operating costs due to deadhead runs;
- to increase the capacity of the station parking lot to accommodate riders who drive to the station;
- to provide expansion capacity for possible future use for MARC trains( from Baltimore, MD/Washington, DC); and
- to facilitate the connection for future commuter rail service from Newark to Middletown.

## Wilmapco

### Public Comments of Draft FY 2005 – 07 Transportation Improvement Program

February 2004

#### Summary of Comments on Newark Train Station

- Concerned about moving the Newark Train Station without better public involvement. Would recommend separate public hearing on the train station with sign posted at the existing train station and Fairplay station to alert riders to date of hearing.
- Using the Delmarva Secondary track to extend service seems silly as a justification for moving the Newark. Service to Wilmington from Downstate should go through the Porter Road area, which would provide a shorter ride, and serve more population areas. Providing more parking isn't relevant, because there is an adequate amount of parking now. Accessing the station via a pedestrian bridge is simply bad planning, in addition to being an ADA nightmare. At station like Claymont, at least once a day you are on the same side of the tracks as the parking lot. With your proposed plan, people would have to use the bridge morning and night. A survey of the license plates in the Newark parking would tell you that a substantial number of riders come from Maryland and Pennsylvania. The new station would require them to drive further through Newark, not a good thing given Newark's traffic. Unless more service is guaranteed, the negatives associated with moving the station do not justify the move. Especially important is the location of the parking lot. It must be on the same side of the tracks as the station.
- As a University of Delaware student, the current location is a convenient walk to campus for myself and others. While the new location will not be that much further for those who "park and ride", I think it will leave quite a few students without other means of transportation.
- I believe this improvement will allow people more of an option to use the service, and they will make use of public transportation on a more regular bases. However, I believe that the benefit of the station move of extending service to Middletown and Dover is a farce and will unlikely happen. My reasoning behind this is: Delmarva 2n track is a single track leading from Newark to the Dove area. There will be a limited number of trains that can access this line at a single time. Catenary wires are not currently installed on this track, nor do I believe they can be the length of this track with the necessary use of the mechanical train bridge that crosses the C&D Canal. The cost of any of these additions is very high. I also do not believe that the moving of the train station to the new location which is currently a concrete plant has been completely thought out or investigated. The general idea is good, but there are more in depth concerns which are: If parking is to be established in that specific area, a great deal of that area is a considerable amount of concrete that has been dumped, changing the landscape and this will impact the drainage of the parking area. Route 72, and the access road to that

location are both two-lane roads, currently with no traffic signal at the entrance, the addition of a signal is necessary, even of only for rush hour. A concern with this change will be the reinstatement of charging for parking, due to the cost of the new station. If this a necessity, a lesser amount than \$2.00 for daily parking and the confinement that unless a monthly train pass is purchased, the ridge cannot purchase a monthly parking pass, needs to be dismissed. Improvements to the frequency of train service, and existing stations will b more welcome improvements rather than the addition or moving of an existing station. An example of these improvements is: Expansion lanes exiting the stations, and extending the traffic signal duration during peak hours of service. Addition of a station, or structure with bathroom facilities. It is a long commute, and many of the passengers have a considerable drive to get home.

- I measure the distance from the center of Newark to the old train station and came up with a distance 1.78 miles. I then measured the distance from the center to the new location and came up with a distance of 2.2 miles. The move transforms the walk from a 15 minute one to one that is over 40 minutes.
- The proposed location is further from the city center, especially for foot traffic suing the current location. I also see Septa to Elkton (and connection to MARC) as inevitable with NEC growth, so any change made to get Middletown-Newark rail transit should take this into account. Can the proposed relocation – if necessary – be made to accommodate future transit to BOTH Middletown AND Elkton? The stretch between Rt. 4 and Wyoming Rd. is already congested and would need a traffic light, leading to further congestion. Essentially, the proposed location encourages driving to the train station, exacerbating this problem. Will bike, pedestrian, and bus travel to this new location be facilitated, and how?
- New Newark Train Station a great idea – can be even better. 1. Access needs to be made to cross tracks at the station. If you cannot get to station by foot or bike from Newark side, it will not be useful. Route 72 overpass is too far away. 2. Provide a link to new Newark transit hub. 3. Work with Norfolk Southern and Chrysler to improve rail loading to Chrysler. Get fewer trucks to Chrysler and more trains. Less trucks in Newark.
- The Newark Planning Dept. has concerns about accessibility of the new site. The current location is more user friendly for walkers. Question of north/south to Dover is needed or would be used. Funds may be better used for buses.
- Newark train station relocation project – The inconvenience to pedestrians/bikers, the additional vehicle miles to a relocation station don't seem to be counterbalanced by enough plusses for the new proposed location. All Chrysler/Dover line/additional Newark-Wilmington run issues seem solved by the extended Septa rail to Elkton project, without any of the minuses.
- Newark transit hub might be best located at the new train station.
- Proposed new location of train station in not reachable easily. Care must us U of D farm lane: too far. No easy pedestrian access from U of D/Newark residential areas. Needs pedestrian access (at least) from the Newark City side of Old S.



Chapel Street. A pedestrian bridge is essential. How do passengers from Track A platform reach the parking lot? You need a pedestrian bridge with handicapped access or subway with handicapped access. Public reports suggest ability to "store" trains overnight at Newark. Where is this area on the plan? How would these be cleaned and serviced for the next day? What happens to this plan if line to Middletown is double-tracked as proposed elsewhere? Would freight trains use the new curve from Middletown/Dover to Wilmington?

- Will Library Avenue be expanded to 4 lanes to accommodate traffic? Will train connect to Maryland?
- Relocation of Newark Station needs better access!! Pedestrian crossing over Amtrak.
- Relocation of Newark Train Station – farther from residential neighborhoods and University students than current location. Pedestrian/bike connection must be established to cross tracks and provide access to James Hall bike trail.
- The move of the Newark train station to the Concrete property looks to be an expensive proposal without benefit to train commuters, particularly traffic from University of Delaware students, faculty and employees. Finding alternative site for Newark Concrete seems like a tough problem.
- The proposed new location of the Newark Train Station. I am concerned with the remote location both for walkers and bikers and cars. A bridge across the tracks would help but won't give access like the present station. More parking is good but not if fewer people use the station access. The few extra minutes it would take to use the current station for rail to Dover is less a concern than the new location.
- The relocation train station needs ped and bike access to north of Amtrak line. Current planned crossing on 72 bridge is out of the way and a hard climb up bridge. Should do ped/bike underpass under Amtrak to connect to Hall Trail. This would provide practical ped/bike access to high density housing on north side of tracks, university, and commercial district. It would also have a secondary benefit of facilitation extension of Hall Trail to South and North.
- Train station – ability to enter and leave new station, where and how? Rt. 72 connected now; can it handle a major bus and train station? Access between Rt. 72 and 896 would be how? There is no public road besides Rt. 4.
- Train station – traffic already congested on Rt. 72

# REVIEW OF OPTIONS

## New Newark Station

Goals / Criteria	OPTION		
	Overpass with Ramps	Overpass with Elevators	Tunnel
Provides required increases in Track Capacity, Train Frequency and Train Reliability (i.e. two track station)	Yes	Yes	Yes
Provides Train Storage at Station	Yes	Yes	Yes
Eliminates Conflicts between Norfolk Southern freight trains and SEPTA Commuter Rail trains	Yes	Yes	Yes
Provides Parking Lot Capacity for 445 vehicles	Yes	Yes	Yes
Allows for future connection to Newark-Middleton Commuter Rail Service	Yes	Yes	Yes
Accommodates future Maryland Commuter Rail (MARC) service from Perryville, MD	Yes	Yes	Yes
<b>Pros</b>	Minimal cost to maintain Easily accessible by bikes	Overpass enclosed Less physically demanding	Less elevational difference Easily accessible by bikes Enclosed crossing
<b>Con</b>	User exposed to the elements May be used by skateboarders More physically demanding	High operating costs Limited number of passengers Less conducive to bikes Somewhat remote	15 feet below water table Moderate maintenance costs "Canyon" like environment
Estimated Construction Cost	\$21,100,000	\$19,900,000	\$21,900,000

**CONSTRUCTION COST ESTIMATE**

**New Newark Station**

Description	OPTION		
	Overpass with Ramps	Overpass with Elevators	Tunnel
Parking Lot	\$6,051,000	\$6,051,000	\$6,051,000
SR 72 Widening	\$1,164,000	\$1,164,000	\$1,164,000
Pedestrian Crossing of Amtrak	\$3,469,000	\$2,522,000	\$4,415,000
Trackwork, Signals, Catenary	\$7,148,000	\$7,148,000	\$7,148,000
Utilities	\$279,000	\$50,000	\$124,000
Right-of-Way	\$3,000,000	\$3,000,000	\$3,000,000

<b>TOTAL COST</b>	<b>\$21,111,000</b>	<b>\$19,935,000</b>	<b>\$21,902,000</b>
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REVIEW OF OPTIONS

Modify Existing Newark SEPTA Station

Goals / Criteria	CONCEPT "A" Surface Parking and Tracks on UD	CONCEPT "B" Deck over Existing Lot, Tracks on Amtrak	CONCEPT "C" Parking on Chrysler, Tracks on Amtrak	CONCEPT "D" Deck over Existing Lot, Tracks on UD	CONCEPT "E" Deck over Existing Lot, New Freight Track
Provides required increases in Track Capacity, Train Frequency and Train Reliability (i.e. 2 track station)	Yes	Yes	Yes	Yes	Yes
Provides Train Storage at Station	Yes	Yes	Yes	Yes	Yes
Eliminates Conflicts between Norfolk Southern freight trains and SEPTA Commuter Rail trains	Somewhat. Track available for NS operations is half the length if station at new site	Somewhat. Track available for NS operations is half the length if station at new site	Somewhat. Track available for NS operations is half the length if station at new site	Somewhat. Track available for NS operations is 2/3rds the length if station at new site	Somewhat. Track available for NS operations is 2/3rds the length if station at new site.
Provides Parking Lot Capacity for 445 vehicles	Yes	Yes	Yes	Yes	Yes
Allows for future connection to Newark-Middleton Commuter Rail Service	Yes, but 5 to 8 minute loss in schedule to reverse direction (brake check) for continuance of service to Wilmington	Yes, but 5 to 8 minute loss in schedule to reverse direction (brake check) for continuance of service to Wilmington	Yes, but 5 to 8 minute loss in schedule to reverse direction (brake check) for continuance of service to Wilmington	Yes, but 5 to 8 minute loss in schedule to reverse direction (brake check) for continuance of service to Wilmington	Yes, but 5 to 8 minute loss in schedule to reverse direction (brake check) for continuance of service to Wilmington
Accommodates future Maryland Commuter Rail (MARC) service from Perryville, MD	No	No	No	No	Yes
Required Right-of-way - University of Delaware	5.7 acres	1.4 acres	1.4 acres	2.7 acres	1.4 acres
Required Right-of-way - Chrysler	-0- acres	-0- acres	1.4 acres	-0- acres	-0- acres
<b>Pros</b>	Allows right turn onto northbound College Avenue Avoids major utilities	Minimizes real estate takes Existing station amenities on route to platform	Minimal construction required for new parking lot Existing station amenities on route to platform	Avoids major utilities Existing station amenities on route to platform	Minimizes real estate takes Existing station amenities on route to platform
<b>Con</b>	Large real estate take from University of Delaware Additional traffic at Girl Scouts	Higher maintenance costs More traffic using current exit Impacts Amtrak communication ducts and 16" water line	Eliminates Chrysler parking for offices Longer walk to platform More traffic using current exit Impacts Amtrak communication ducts and 16" water line	Large real estate take from University of Delaware Higher maintenance costs More traffic using current exit	Freight tracks separate platform and parking lot Patrons must use elevator or stairs to access platform Higher maintenance costs More traffic using current exit Impacts Amtrak communication ducts and 16" water line
Estimated Construction Cost	\$15,500,000	\$21,300,000	\$17,500,000	\$18,400,000	\$20,700,000



**CONSTRUCTION COST ESTIMATE**

**Modify Existing Newark SEPTA Station**

Description	CONCEPT "A" Surface Parking and Tracks on UD	CONCEPT "B" Deck over Existing Lot, Tracks on Amtrak	CONCEPT "C" Parking on Chrysler, Tracks on Amtrak	CONCEPT "D" Deck over Existing Lot, Tracks on UD	CONCEPT "E" Deck over Existing Lot, New Freight Track
Parking Lot	\$1,033,000	\$4,703,000	\$499,000	\$4,703,000	\$4,703,000
Trackwork, Signals, Catenary	\$11,877,000	\$12,392,000	\$12,392,000	\$11,877,000	\$10,983,000
Utilities	\$1,111,000	\$3,874,000	\$3,874,000	\$1,111,000	\$4,697,000
Right-of-Way	\$1,500,000	\$360,300	\$733,200	\$691,542	\$353,400
<b>TOTAL COST</b>	<b>\$15,521,000</b>	<b>\$21,329,300</b>	<b>\$17,498,200</b>	<b>\$18,382,542</b>	<b>\$20,736,400</b>

*50-60 cond  
coming from  
Newark  
Station*

## **Newark Station Working Group**

Recommendations to DTC

May 25, 2005

After reviewing options for improved commuter rail service in Newark, including making improvements at the existing station location, establishing a new Newark station at the site of the existing Newark Concrete plant on DE Route 72/Library Avenue, and discussing other possible sites for a new station, the Newark Station Working Group offers the following recommendations to DTC:

1. Construct a new Newark commuter rail station at the site of the existing Newark Concrete plant on Library Avenue in order to best meet the purpose and need of expanding commuter rail service to Newark and eliminating the conflicts between commuter rail and freight rail service.
2. Provide optimum access to the new station for pedestrians, bicyclists, buses, and autos. Construct a direct pedestrian / bicycle connection to the new site from the north side of the Northeast Rail Corridor near the South Chapel Street connection with the James Hall Trail.
3. Construct a new Newark station which allows for potential extensions of commuter rail service, such as a MARC service from Maryland, SEPTA service south to Elkton, Maryland, and downstate service to Middletown or Dover.
4. Working with the City of Newark, New Castle County Planning and WILMAPCO, DTC should explore potential for Transit Oriented Development (TOD) at the new station site.

### NOTE:

Since the City of Newark Planning Commission would ultimately need to review and approve plans for the station project, the City of Newark representative "abstained" from voting on the recommendations.

# Newark Station Working Group

April 27, 2005





# Presentation Agenda

- ◆ Walk / Bike Passenger Survey
- ◆ Existing Station Location - Conceptual Designs
- ◆ New Newark Station - Conceptual Designs
- ◆ Alternative Station Location
- ◆ Traffic Analysis

# Walk / Bike Passenger Count

- ◆ A count of persons walking or biking to/from the station was conducted on April 6th.
- ◆ Staff were positioned to record pedestrians from the north and south.
- ◆ A total of 59 pedestrian/bicycle trips (29 AM and 30 PM) were recorded.
  - 6 of the 59 trips used a bicycle
- ◆ Count represents 11% of the daily ridership of 517 trips. The majority (89%) drive.

# Walk / Bike Passenger Count

## AM Trains

	6:22 AM	6:26 AM	6:52 AM	6:56 AM	7:24 AM	7:53 AM	8:17 AM	8:21 AM	8:54 AM	TOTAL
<b>TO</b>	0	0	7	0	2	0	2	0	5	16
<b>FROM</b>	0	1	0	1	1	4	0	6	0	13

## PM Trains

	4:30 PM	4:46 PM	5:24 PM	5:43 PM	6:13 PM	6:46 PM	6:55 PM	7:21 PM	TOTAL
<b>TO</b>	0	8	0	4	0	3	0	0	15
<b>FROM</b>	1	1	2	0	10	0	1	0	15

# Walk / Bike Passenger Survey

- ◆ A survey of pedestrians walking or biking to/from the station was conducted on April 15th during the AM period.
- ◆ There were a total of 22 pedestrians to or from the station
- ◆ Passengers were asked:
  - What is the intersection where you are walking to (if alighting train)/from (if boarding train)?
  - What station are you using at your other trip end?
  - How often do you use the Newark station?
  - How long does it take you to walk to the Newark station?
- ◆ A total of 12 persons responded to the survey

# Walk / Bike Passenger Survey

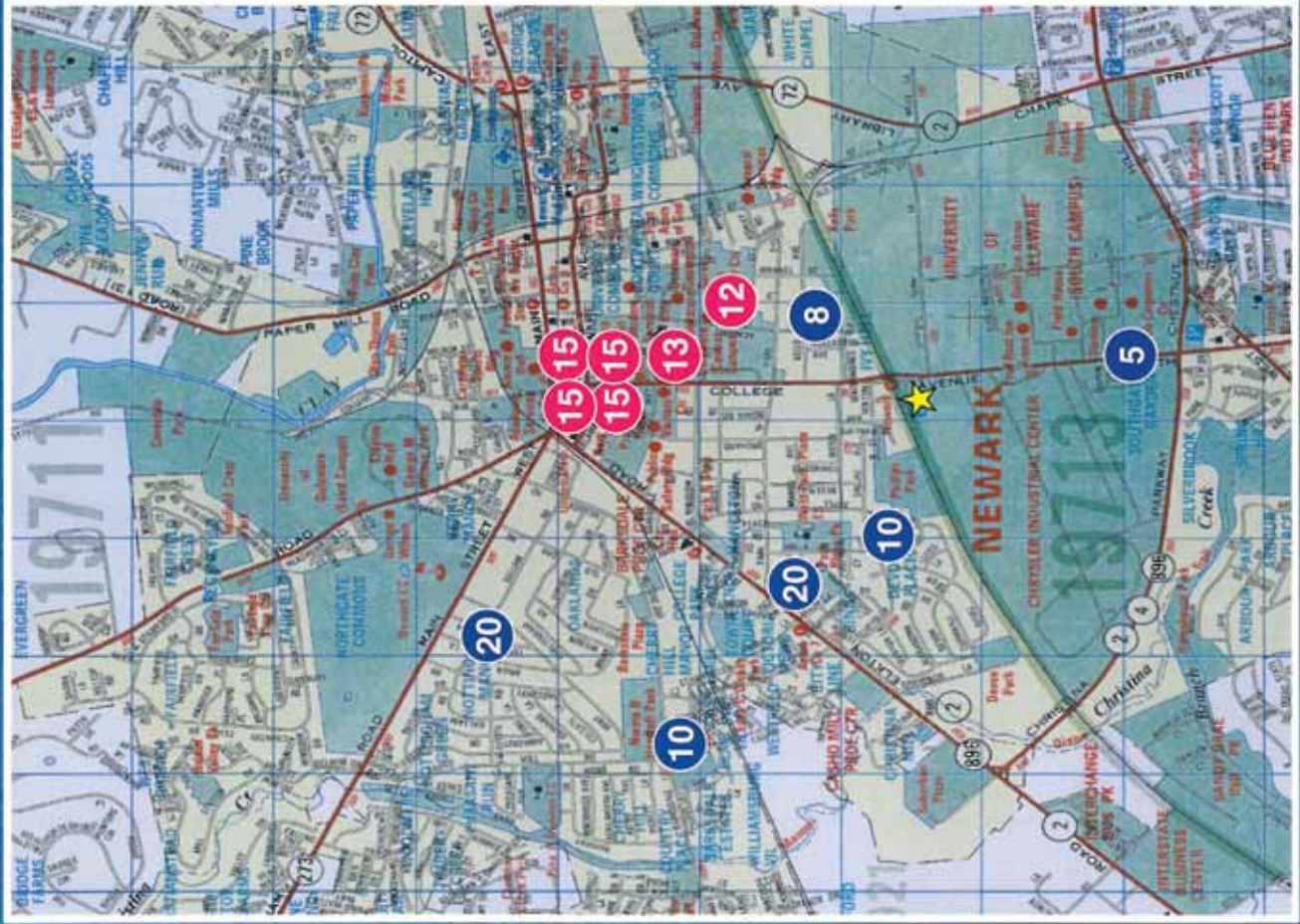
## To the Station

Origin	Destination	Time per Week	Average Walk/bike Time (Existing)	Average Walk/bike Time (New)
Park Place Apts	Suburban	5	20 min	30 min
Briar Ln & Dallam Rd	Wilmington	5	20 min	18 min (bike)
Kells Ave & Academy	Temple	5	8 min	8 min
Southgate Apts	Wilmington	5	5 min (bike)	10 min (bike)
Barksdale Rd & Casho Mill Rd	Wilmington	4	10 min (bike)	15 min
Bradford Lane & Chrysler Ave	Market East	1	10 min	20 min

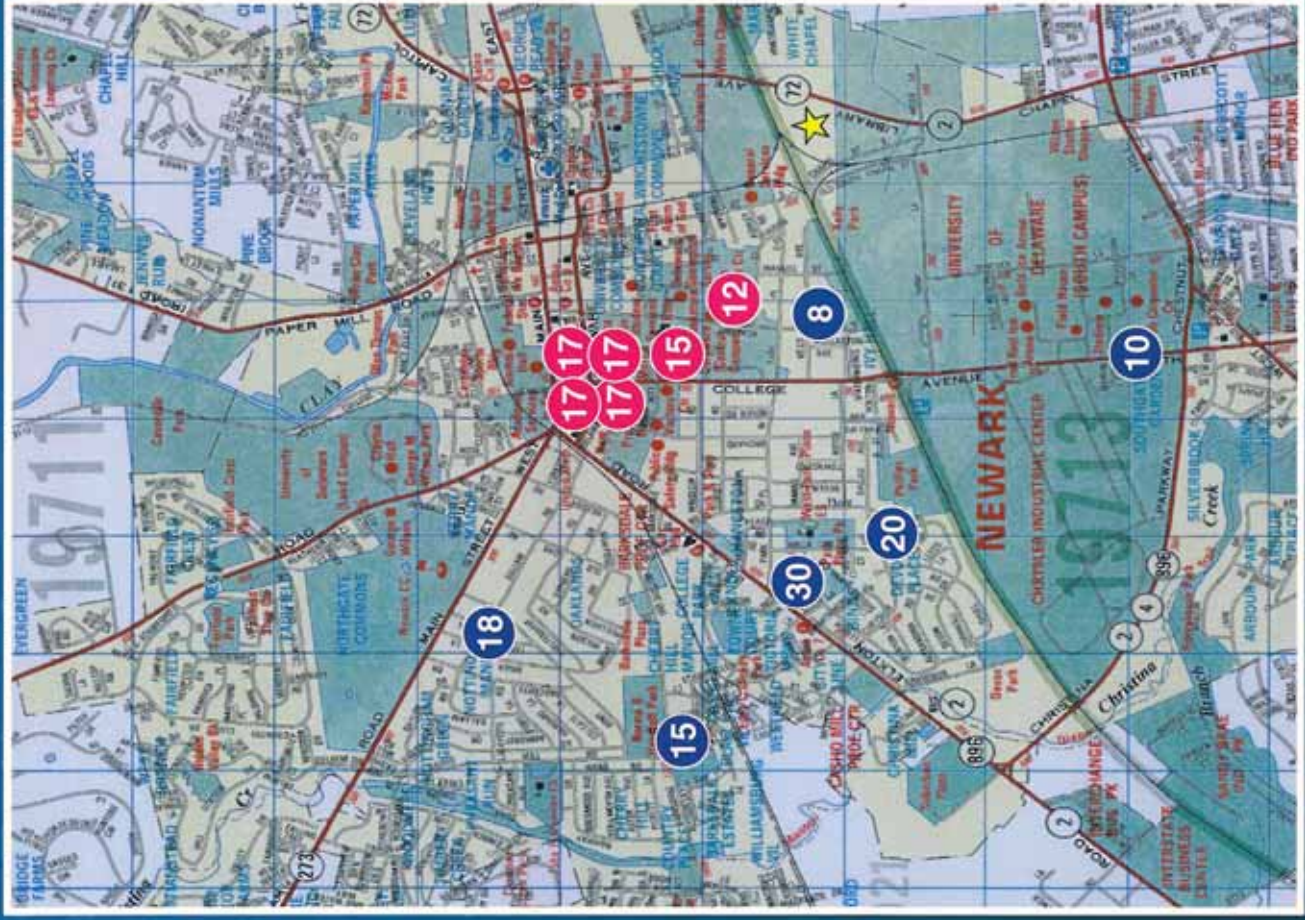
## From the Station

30 <sup>th</sup> Street Station	S. College & Amstel	3	15 min	17 min
Wilmington	Perkins Student Center	3-4	12 min	12 min
Wilmington	Trabant Student Center	3-4	15 min	17 min
30 <sup>th</sup> Street Station	S. College Av & Main St	5	15 min	17 min
30 <sup>th</sup> Street Station	S. College Av & Main St	2-3	15-20 min	17 min
Jenkintown	Morris Library	5	15 min	15 min

# Existing Station



# New Newark Station



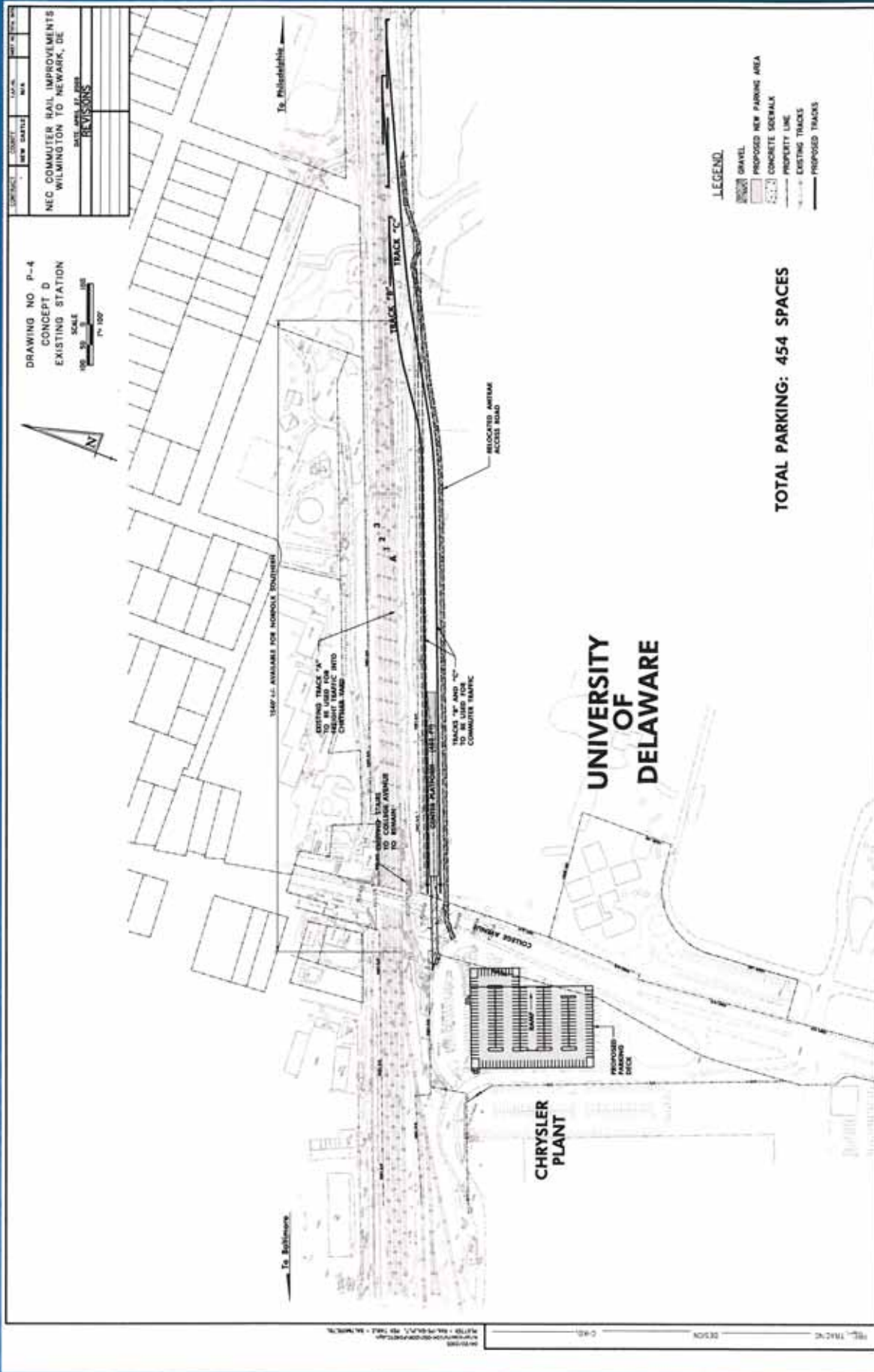






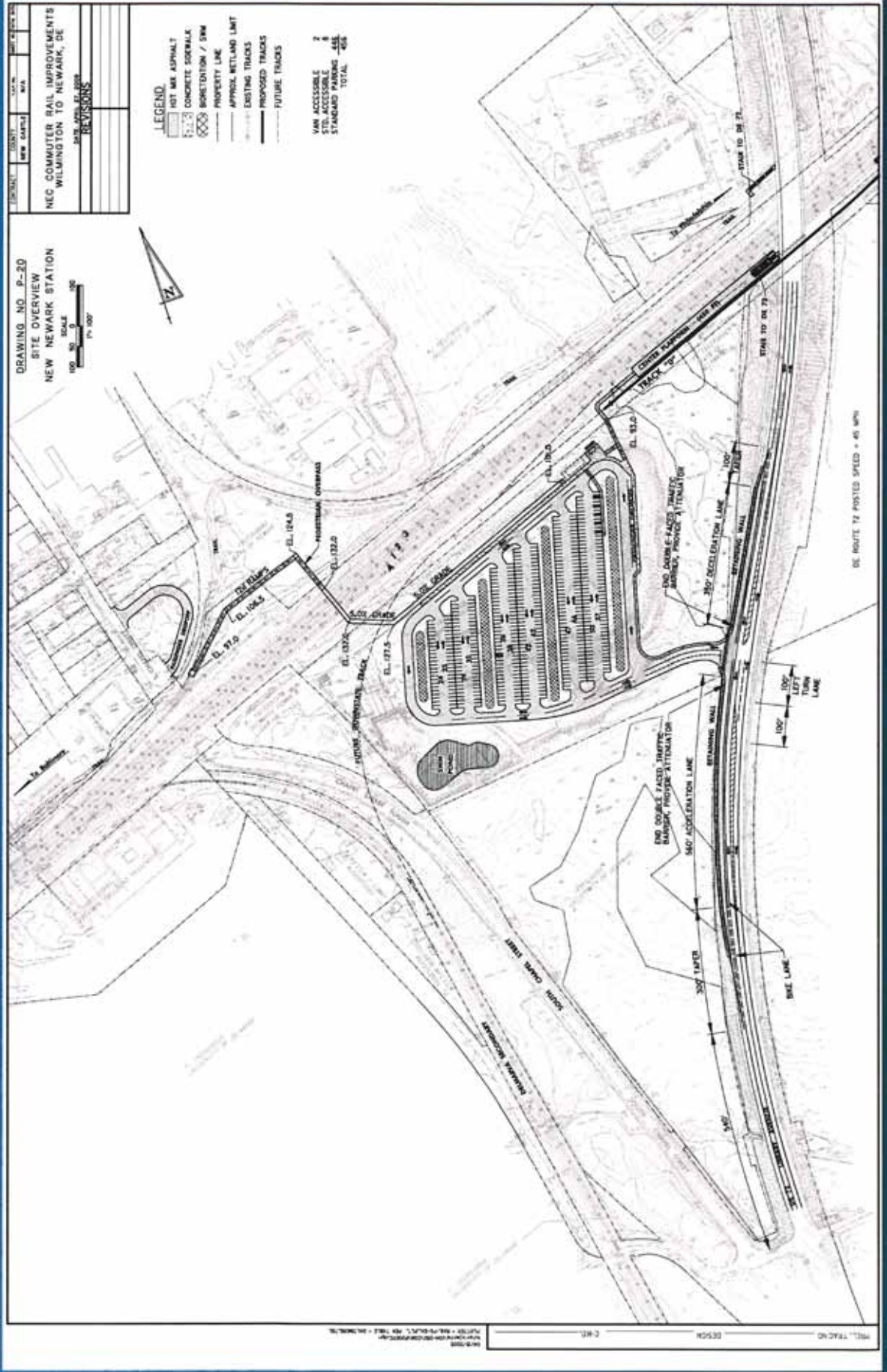


# Existing Station – Concept D

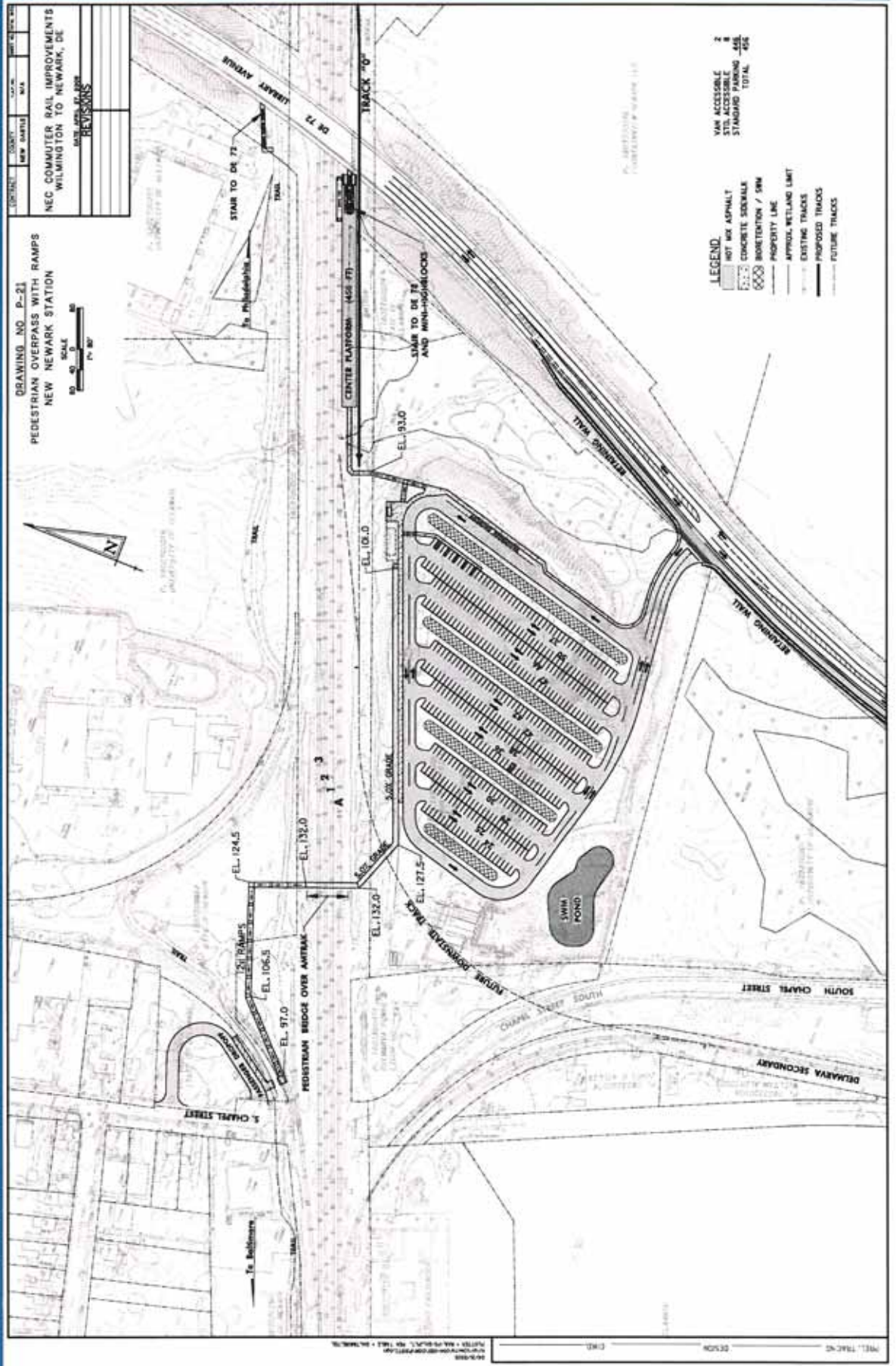




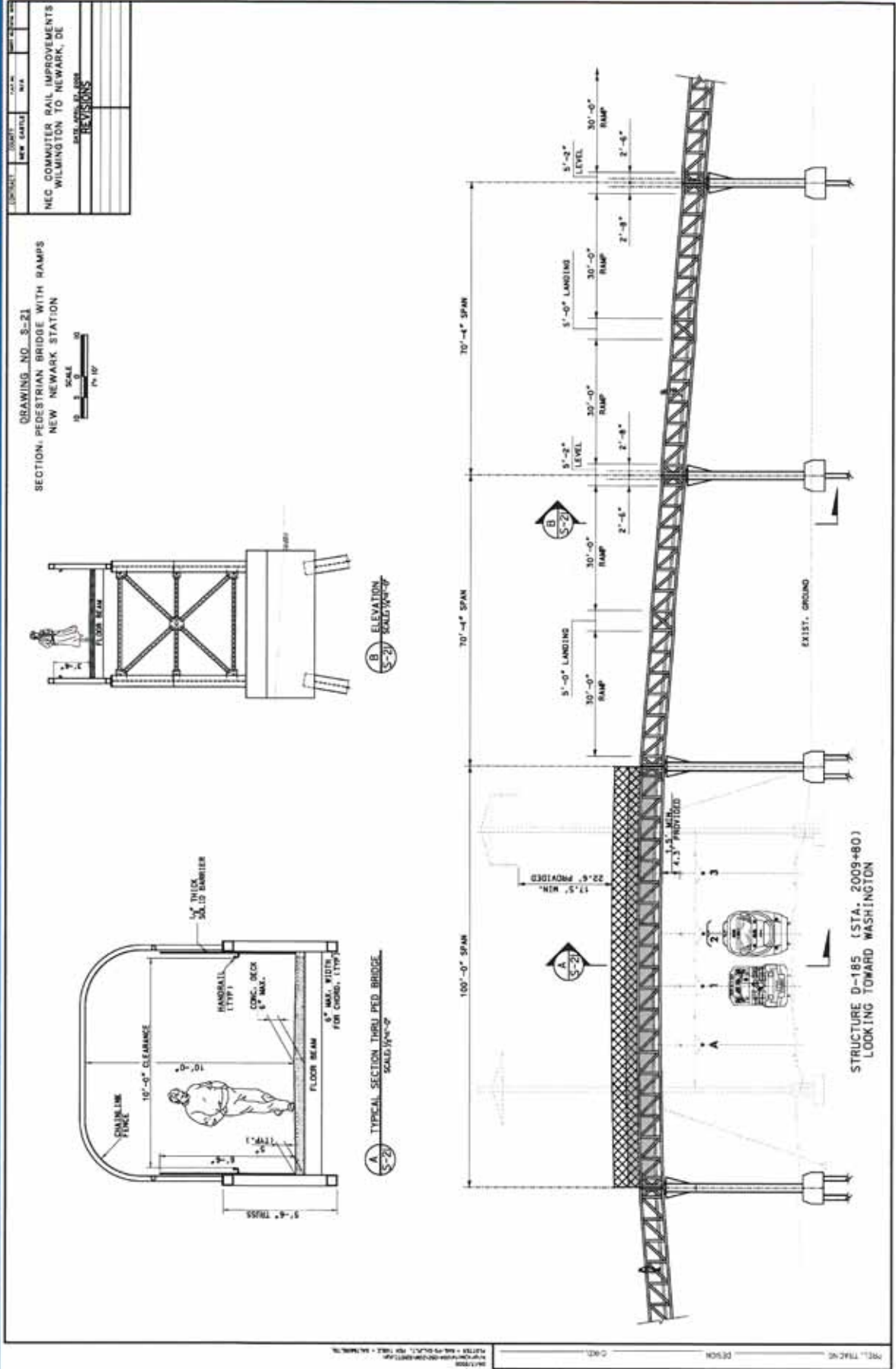
# New Newark Station - Overview



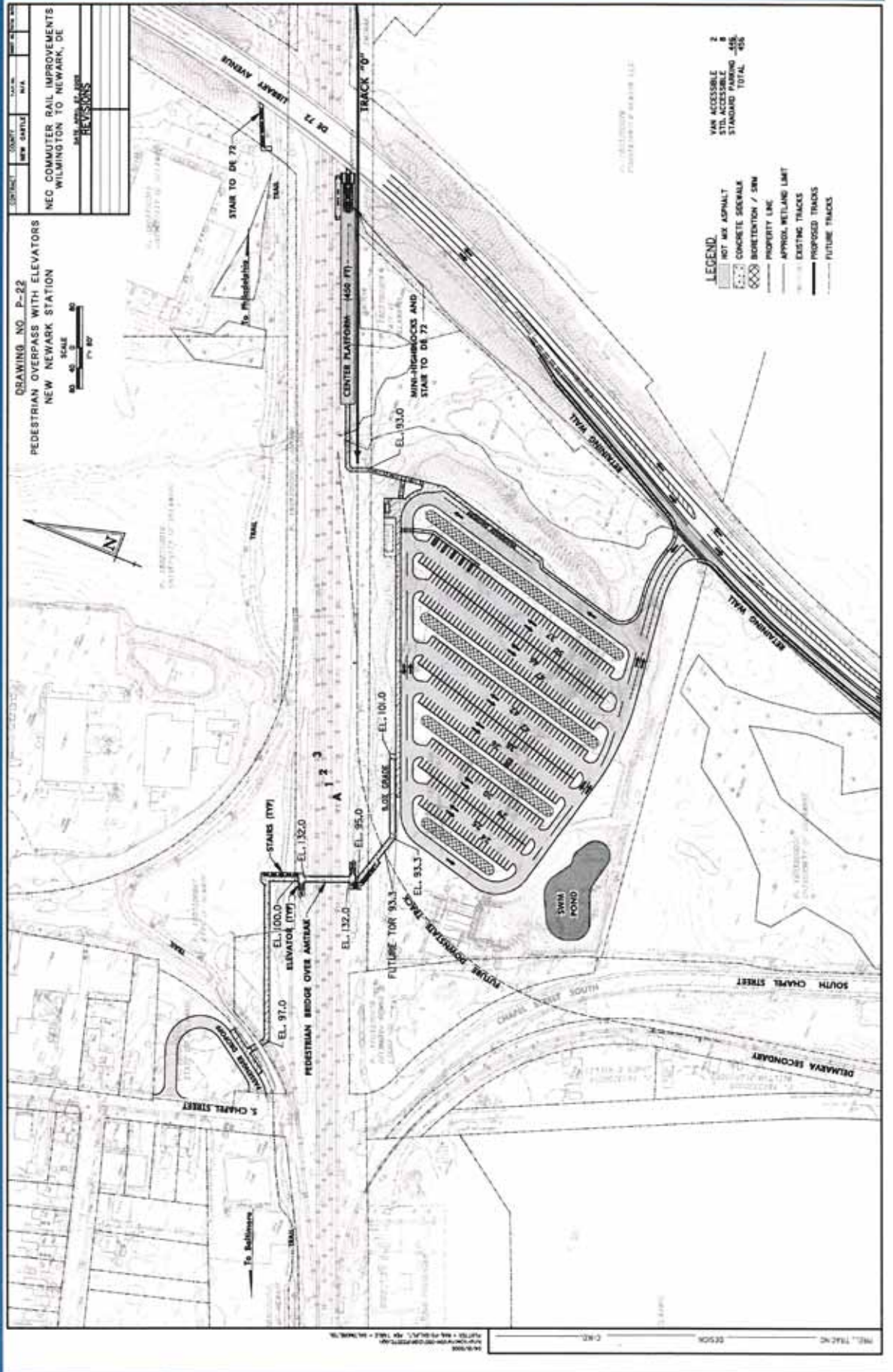
# New Newark Station Pedestrian Overpass with Ramps



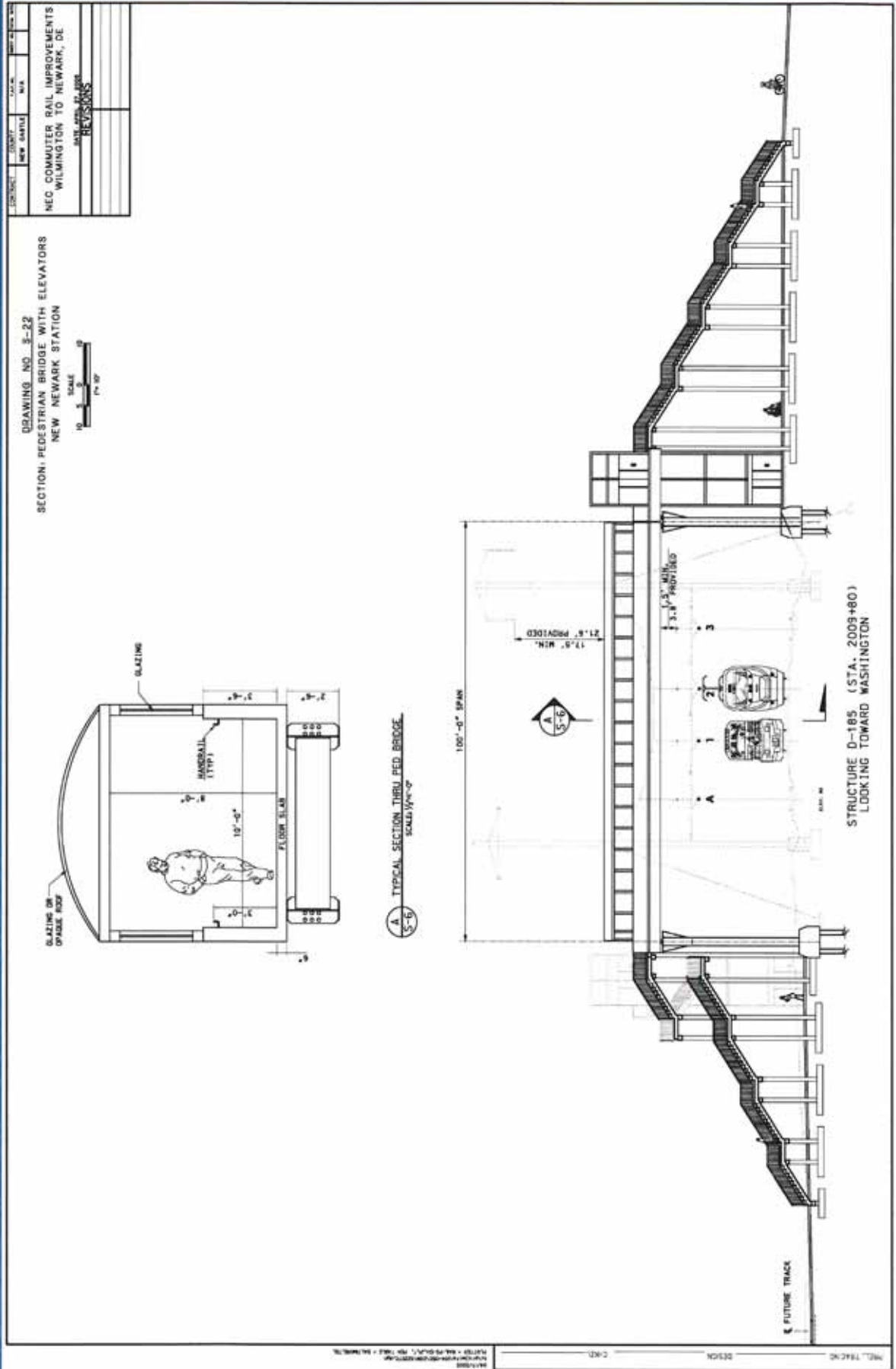
# New Newark Station Pedestrian Overpass with Ramps



# New Newark Station Pedestrian Overpass with Elevators



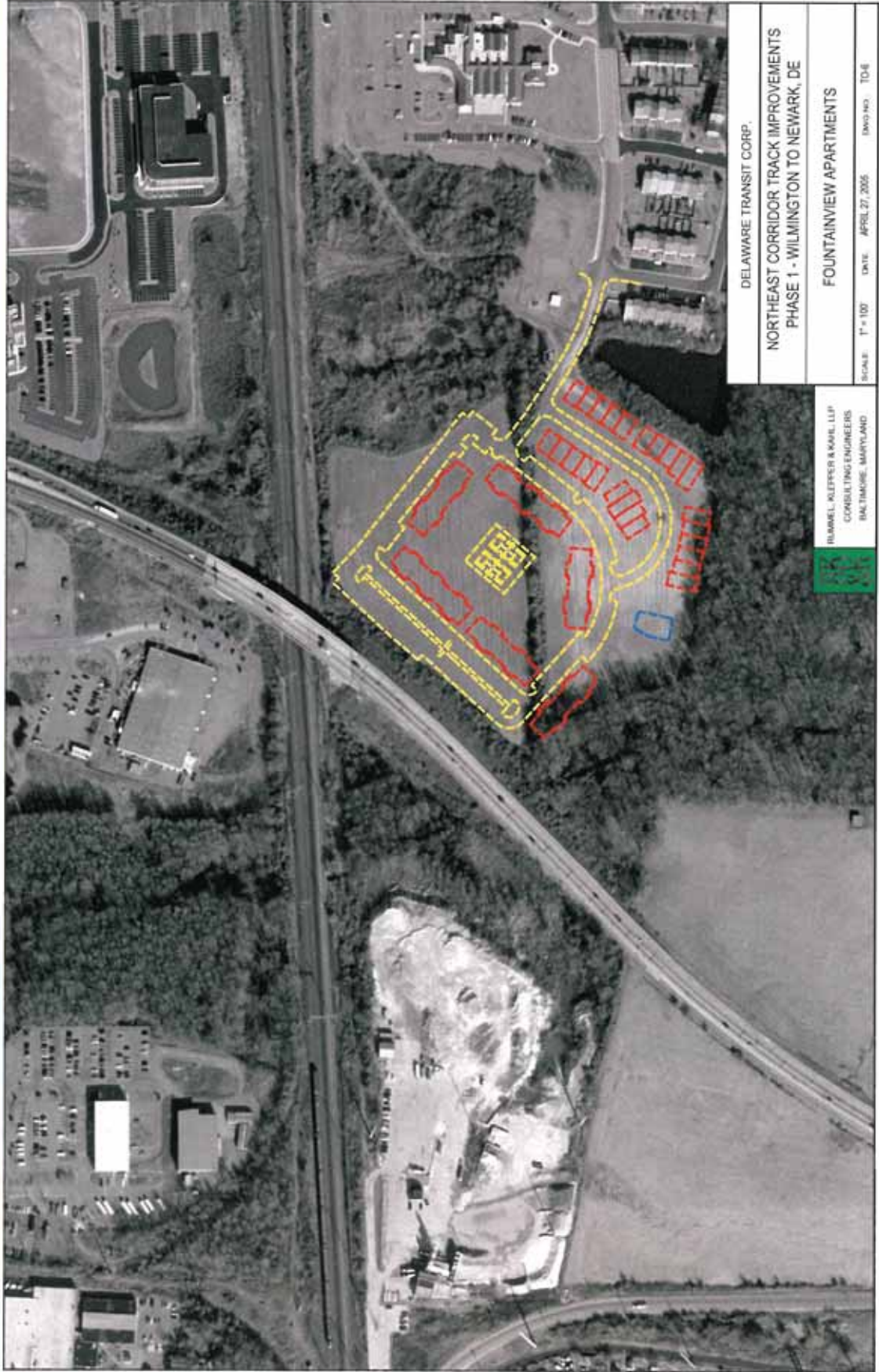
# New Newark Station Pedestrian Overpass with Elevators







# Alternative Station Location



SCALE: 1" = 100'

DATE: APRIL 27, 2005

DWG NO. TD-4

HUMMEL, KLEPPER & KAHLE LLP  
CONSULTING ENGINEERS  
BALTIMORE, MARYLAND

DELAWARE TRANSIT CORP.

NORTHEAST CORRIDOR TRACK IMPROVEMENTS  
PHASE 1 - WILMINGTON TO NEWARK, DE

FOUNTAINVIEW APARTMENTS

# Traffic Analysis

## Sight Distance

- ◆ Evaluated Sight Distance at new Newark Station Location
  - Sight Distance Exceeds AASHTO Minimum Recommendations for Left Turns to and From Station

	Measured Available ISD	AASHTO Recommended Minimum ISD (Based on 85 <sup>th</sup> Percentile Speed)
Looking Left from Station	840'	585'
Looking Right from Station	>1500'	
Looking Ahead from Northbound Left Turn Lane	900'	415'

# Traffic Analysis

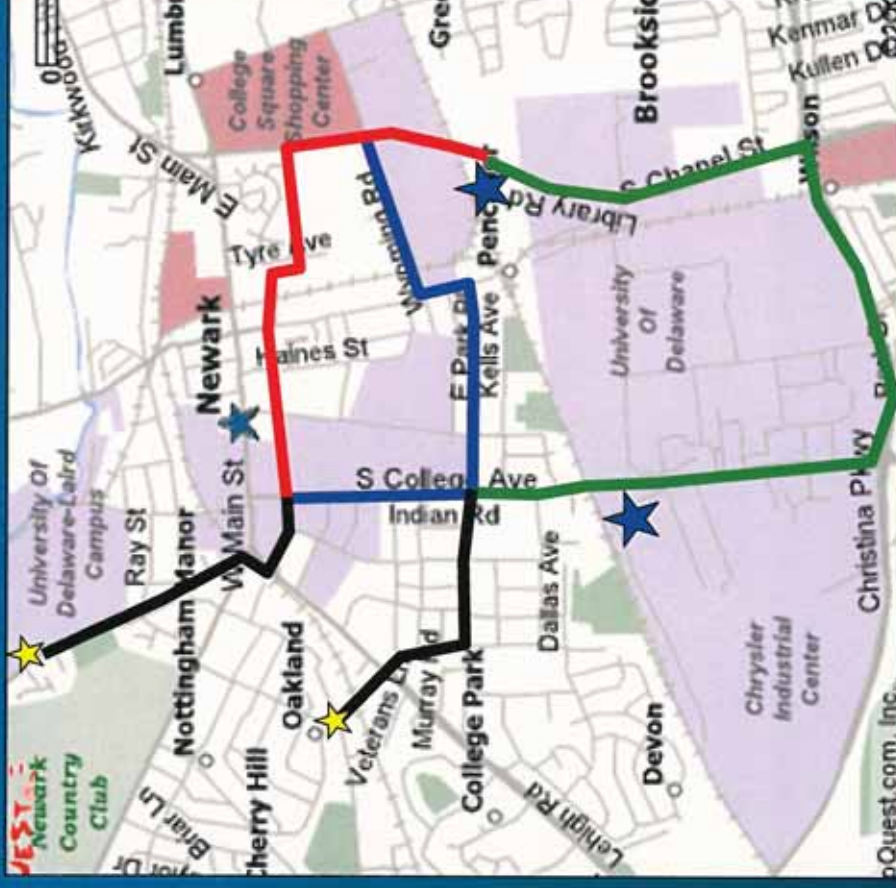
- ◆ Developed 2005 & 2030 traffic projections @ new Newark station on SR 72
- ◆ Based on:
  - 2002 Newark Station Origin/Destination Survey
  - 2002/2004 SEPTA Ridership Data
  - 2005 Traffic Volume Counts
  - 2005 Travel Time Study
  - 2030 Ridership Projections
  - 2030 Network Traffic Projections

# Traffic Analysis

- ◆ Signal Warrant Analysis
  - Being investigated with DeIDOT.
  - Analyzing adjacent traffic signals to determine if projected gaps will exist

# Travel Time Study

- ◆ Travel time studies conducted for locations to south and northwest of proposed station
- ◆ Verified that northern routes (via Wyoming Rd and Delaware Ave) are slightly faster
- ◆ Does not include delay leaving new Newark station



# Travel Time Study

Route	Start: Casho Mill & Barksdale	
	AM	PM
Green (SR 4)	9 min	12 min
Blue (Wyoming)	7 min	11 min
Red (Delaware / Main St.)	7 min	15 min
Route	Start: New London & Country Club	
	AM	PM
Green (SR 4)	11 min	13 min
Blue (Wyoming)	9 min	12 min
Red (Delaware / Main St.)	8 min	13 min

