4.10 Threatened and Endangered Species

4.10.1 No-Action Alternative, Threatened and Endangered Species

The No-Action Alternative would not impact any threatened or endangered species.

4.10.2 Action Alternatives, Threatened and Endangered Species

According to the USFWS and Natural Heritage Database of the NJDEP, no federally listed threatened, endangered, or candidate species are documented in the study area. According to the Natural Heritage Program, there is historical documentation of barred owl within the Rogers Wildlife Preserve, located adjacent to, but outside, the study area. Field investigations of this area confirmed that the Preserve contains suitable habitat for barred owl. However, none of the Action Alternatives would require construction at or adjacent to the Preserve. Action Alternatives B.2 and C include a connection between Washington Road and Alexander Road. This connection would be approximately 1,100 feet (0.21 miles) to the east of the Preserve. There is a residential development, park, and forested area situated between the Washington Road and Alexander Road connection and Rogers Wildlife Preserve. The areas that would be directly impacted by these alignments include recreational fields and agricultural land. Neither of these provides suitable barred owl habitat. According to field investigations by qualified environmental scientists experienced in the conduct of threatened and endangered species surveys, the study area does not contain suitable barred owl nesting habitat. Therefore, the Action Alternatives are not expected to have an impact on any existing barred owl or its habitat.

The long-eared owl report, which was accepted by the NJDEP, located a roosting owl in the spruce grove located on the Sarnoff property, east of Little Bear Brook. Examination of the Action Alternatives indicates that those which include an east-side connector would have an adverse impact on the owl roosting site. Those Action Alternatives would include A, A.1, A.2, A.3, A.4, B, B.1, B.2, D, D.1, E, F, and F.1. Action Alternatives that would avoid impacting the owl roost include C, C.1, D.2, G, G.1, and G.2. The VDC alignments would not impact the roost area. It should be noted that, irrespective of the Penns Neck Area EIS, implementing the Sarnoff GDP would appear to adversely impact the owl and its localized habitat.

4.10.3 Mitigation Measures, Threatened and Endangered Species

If an Action Alternative is selected which would appear to impact the reported long-eared owl or its localized habitat, a biological assessment may be required. NJDOT would coordinate with the U.S. Fish and Wildlife Service and NJDEP as appropriate. An assessment would verify the occurrence of the species, identify the extent and nature of its localized habitat, identify foreseeable impacts to the bird and its localized habitat in light of the selected alternative, assess means to avoid impacting the bird

and its localized habitat, and identify means to minimize impacts along with mitigation strategies.

4.11 Contaminated Sites

4.11.1 No-Action Alternative, Contaminated Sites

The No-Action Alternative would involve no changes to Route 1 or other roadways in the study area, and the existing roadway network would remain in the same configuration. The No-Action Alternative would have no impact on and would not exacerbate any areas of potential or known contaminated materials concerns identified during this investigation. It should be noted, however, that while there would be no potential impacts to contaminated materials, the No-Action Alternative would allow these source areas to remain in place. The contaminated materials would not be removed and, if they are left unattended, could continue to have an impact on the human health and the environment.

4.11.2 Action Alternatives, Contaminated Sites

The following sections detail the potential impacts associated with the nineteen Action Alternatives. Table 4-30 summarizes these impacts. All the Action Alternatives would impact contaminated materials.

Table 4- 30
Summary of Potential Impacts - Sites of Contaminated Materials Concern

PROPERTY NAME	ALTERNATIVES																				
	NO-ACTION	A	A.1	A.2	A.3	A.4	B	B.1	B.2	C	C.1	D	D.1	D.2	E	F	F.1	G	G.1	G.2	VDC.1	VDC.2	VDC.3
Larry's Sunoco		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		X				
4/96 & 7/96 Roadway Fuel Oil Releases		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
Eden Institute		X	X	X	X	X	X	X	X							X	X						
Princeton Circle Exxon		X	X	X	X	X				X	X	X	X	X	X	X	X	X	X				
Cumberland Gulf Station		X	X	X	X	X				X	X	X	X	X	X	X	X	X	X				
Getty Station		X	X	X	X	X				X	X	X	X		X	X	X		X				
Former Gas Station (Century 21 Realty Office)		X	X	X	X	X				X	X	X	X	X	X	X	X						
Farmlands -west of Rte 1		X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
Sarnoff Corporation Chlorinated Compounds Release												X	X										
Sarnoff Former/Current USTs and Processing Systems												X	X										
Sarnoff Lab Equipment Dump Site		X	X	X	X	X	X	X	X			X	X		X	X	X						
Sarnoff Radiation Lab Equipment Dump Site		X	X	X	X	X	X	X	X			X	X		X	X	X						
Princeton Station Garage																					X		
Princeton-Windsor News																						X	
Office Building																						X	

Alternatives A, A.1, A.2, A.3, and A.4

Alternatives A through A.4 would require the acquisition of the Gulf and Exxon stations located at the Penns Neck Circle and the Sunoco service station located at the intersection of Harrison Street and Route 1. The acquisition of the Gulf, Exxon, and Sunoco gas stations would require the removal of the associated UST systems at each of these facilities. Extensive excavation and disposal of contaminated soils, as well as the potential for dewatering at the construction sites as a result of Route 1 in a cut, would be possible. Although acquisition or direct impacts to the Getty and former gasoline stations are not proposed, extensive road cuts in this area would also increase the likelihood of intercepting potential subsurface releases associated with these nearby properties on the eastern portion of the Penns Neck Circle.

The west-side connector and/or frontage roads would require road work and grading of the current farmlands located in this area. The potential exists for encountering herbicides and pesticides related to current and former farming practices.

Each of the A Action Alternatives would also include an east-side connector road which should avoid impacts to the centrally located UST and processing systems and the deeper-seated chlorinated compounds on the Sarnoff property. However, the east-side connector road would impact the former low-level radiation and the former laboratory dumpsites located on the eastern portion of the Sarnoff property.

The interchange proposed near Harrison Street would also impact the Eden Institute. This property contains a fuel oil UST and possible asbestos-containing building materials that would require removal and remediation, if they are detected.

The four A Action Alternatives would be essentially equal with regards to impacts on contaminated materials; however, Action Alternative A would have slightly less impact due to the absence of an eastern frontage road.

Figures 4-61 through 4-65 provide the locations of the contaminated material impacts relative to the proposed Action Alternatives A, A.1, A.2, A.3, and A.4, respectively.

Alternatives B, B.1, and B.2

The B Action Alternatives require acquisition of the Sunoco, Gulf, and Exxon stations located along Route 1. The acquisition of these gas stations would require the removal of the associated UST systems at each of these facilities and the potential for extensive excavation and disposal of contaminated soils. Route 1 at grade would minimize the likelihood of intercepting potential subsurface releases associated with the nearby Getty and former gasoline stations located on the eastern portion of the Penns Neck Circle.

Action Alternatives B, B.1, and B.2 would all include a west-side connector road through the current farmlands west of Route 1, with a west-side connector road between Washington and Alexander roads in Alternative B.2. The potential exists for encountering herbicides and pesticides related to the current and former farming

practices. Because of the west-side connector, Alternative B.2 would have a greater potential for impacts as a result of the increased road network.

The interchange proposed near Harrison Street for the B Action Alternatives would also impact the Eden Institute. This property contains a fuel oil UST and possible asbestos-containing building materials that would require their removal and remediation, if they are detected.

Each of the B Action Alternatives would also include an east-side connector road which should avoid impacts to the centrally located UST and processing systems and the deeper-seated chlorinated compounds on the Sarnoff property. However, the east-side connector road would impact the former low-level radiation and the former laboratory dumpsites located on the eastern portion of the Sarnoff property.

Figure 4-66 provides the locations of the contaminated materials impacts relative to the proposed B Action Alternatives.

Alternatives C and C.1

Action Alternatives C and C.1 require the acquisition of the current Exxon and Gulf gasoline stations on the western portion of the Penns Neck Circle and the Sunoco station at the intersection of Route 1 and Harrison Street. Removal of the UST systems and potentially contaminated materials associated with the active gasoline service stations would be required. Extensive road cuts in this area would also increase the likelihood of intercepting potential subsurface releases associated with the nearby Getty and former gasoline stations on the eastern portion of the Penns Neck Circle.

Alternative C would provide a west-side connector road between Washington Road and Alexander Road. This roadway would be located west of Route 1 and would run through the current farmlands. The potential exists for encountering herbicides and pesticides related to current and former farming practices.

These alternatives would avoid contact with the former low-level radiation and laboratory dumpsites and Sarnoff's processing and storage systems, and should avoid the potential for contact with groundwater contamination related to the recorded chlorinated compounds release.

Figure 4-67 provides the locations of the contaminated materials impacts relative to Action Alternatives C and C.1.

Alternatives D, D.1, and D.2

Action Alternatives D, D.1, and D.2 require the acquisition of the Exxon and Gulf stations located at the Penns Neck Circle as well as the Sunoco station at Route 1 and Harrison Street. The acquisition of these properties would require the removal of the UST systems at these facilities and possibly extensive excavation and disposal of contaminated soils. Extensive road cuts in this area would also increase the likelihood

of intercepting potential subsurface releases associated with the nearby Getty and former gasoline stations on the eastern portion of the Penns Neck Circle.

The west-side connector and/or frontage roads of Action Alternatives D, D.1, and D.2 would require road work and grading of the current farmlands located in this area. The potential exists for encountering herbicides and pesticides related to current and former farming practices.

Action Alternatives D and D.1 would both include an east-side connector road which would directly impact or be proximate to the current and former USTs on the Sarnoff property. These alternatives would be proximate to the source area of the recorded chlorinated compounds release. The nature of chlorinated compounds is to settle deep within the groundwater table. As such, it is not expected that these compounds would be encountered during the relatively shallow excavation required to construct a roadbed. However, if D or D.1 is selected for construction as a result of the EIS, further examination of the relationship between project excavation and the location of the compounds would be undertaken. The east-side connector road would impact the former low-level radiation and laboratory dumpsites on the eastern portion of the Sarnoff property.

Figures 4-68 and 4-69 provide the locations of the contaminated materials impacts relative to the proposed Action Alternatives D and D.1, respectively.

Alternative E

Action Alternative E would require the acquisition of the Exxon and Gulf stations located at the Penns Neck Circle. The acquisition of these properties would require the removal of the UST systems and possibly extensive excavation and disposal of contaminated soils, and the potential for dewatering of the groundwater at the construction sites exists. Extensive road cuts in this area would also increase the likelihood of intercepting potential subsurface releases associated with the nearby Getty and former gasoline stations on the eastern portion of the Penns Neck Circle.

The west-side connector road between Route 1 and Harrison Street would require road work and grading through the current farmlands located in this area. The potential exists for encountering herbicides and pesticides related to current and former farming practices.

Action Alternative E would include an east-side connector road which would avoid impacts to the centrally located UST and processing systems and the source of the recorded chlorinated compound release on the Sarnoff property. However, it would impact the former low-level radiation and laboratory dumpsites on the eastern portion of the Sarnoff property.

Figure 4-70 provides the locations of the contaminated materials impacts relative to Action Alternative E.

Alternatives F and F.1

Action Alternatives F and F.1 would require the acquisition of the Gulf and Exxon Stations located at the Penns Neck Circle and the acquisition of the Sunoco service station located at the intersection of Harrison Street and Route 1. The acquisition of these properties would require the removal of the UST systems and possibly extensive excavation and disposal of contaminated soils, as well as the potential for dewatering the construction sites.

The west-side connector road and frontage roads between Route 1 and Harrison Street would require road work and grading through the current farmlands in this area. The potential exists for encountering herbicides and pesticides related to current and former farming practices.

Both Action Alternatives would include an east-side connector road which should avoid impacts on the centrally located USTs and processing systems and the site of the reported chlorinated compounds release on the Sarnoff property. However, the east-side connector road would impact the former low-level radiation and laboratory dumpsites on the eastern portion of the Sarnoff property.

The loop interchange that would be built near Harrison Street would also impact the Eden Institute. This property contains a fuel oil UST and possible asbestos-containing building materials that would require removal and remediation, if detected.

Figure 4-71 provides the locations of the contaminated materials impacts relative to Action Alternatives F and F.1.

Alternatives G, G.1, and G.2

Action Alternative G would require acquisition of the Exxon and Gulf stations is anticipated. Action Alternative G.1 would require acquisition of the Exxon, Gulf, Getty, and Sunoco service stations, as well as removal and remediation of associated UST systems and potentially impacted soils. Alternative G.2 would require minor easements or acquisitions for the continuation of the shoulder but no major property acquisitions or road cuts are expected. No impacts to contaminated materials are anticipated.

Figure 4-72 provides the locations of the contaminated materials impacts relative to Action Alternatives G and G.1. Figure 4-73 provides the locations of the contaminated materials impacts relative to Action Alternative G.2.

Vaughn Drive Connector Alternatives 1, 2, and 3

VDC 1 would require the acquisition of an automotive repair facility. The construction of the connector at this location would require the remediation of contaminated materials and/or removal of relic USTs, should they exist. VDC 2 would impact the Princeton-Windsor News Service property (19 Washington Avenue) and bisect the office complexes located south of Washington Road. The proposed roadway for VDC 2 would require the acquisition and demolition of one

office building and could require the removal and disposal of asbestos-containing building materials and a heating oil tank (and any associated materials). VDC 3 would provide for the roadway to be located along the current roadways of the complex and would not require any acquisitions or remediation of contaminated materials. Thus, VDC 3 would have the least impact.

Figure 4-74 provides the locations of the contaminated materials impacts relative to the Vaughn Drive Connector Alternatives.

4.11.3 Mitigation Measures, Contaminated Sites

Encountering contaminated materials would require mitigation, remediation, and removal as well as protection from those contaminants during project construction if an Action Alternative is selected. Typically, the property owner is responsible for addressing the remediation of contamination originating on their property, although responsibilities are decided during property acquisition negotiations. Protection of project construction workers when contaminated materials are encountered would be the responsibility of the contractor hired by NJDOT. The following discussion details the potential handling of each type of identified contaminant and potential methods for dealing with each contaminated material.

UST Systems
UST systems at each gasoline service station that is acquired and impacted would have to be removed. Regulations for removal of the USTs must be followed pursuant to NJAC 7:14B.

Petroleum-Impacted Soils
Soils associated with the current and former gasoline service stations may contain soils impacted with gasoline and or gasoline-related by-products. Free-phase petroleum hydrocarbons may also be present in the subsurface at these locations. In accordance with NJAC 7:26E, all free-phase hydrocarbons would be required to be removed and disposed of at an approved, off-site facility. Potentially impacted soils must be addressed in accordance with NJAC 7:26E, including but not limited to, the NJDEP guidance document, The 1998 Revised Guidance Document for the Remediation of Contaminated Soils.

Contaminated soils encountered would likely require off-site disposal. Residual soils not excavated and/or left in place at the roadway properties may require further remediation.

Chlorinated Compounds
Chlorinated compounds were reportedly released from a neutralization chamber centrally located on the Sarnoff property. If one of the D-series alternatives is selected for construction as a result of the EIS, further examination of the relationship between project excavation and the location of the compounds would be undertaken. Contaminated soils encountered would most likely require off-site disposal. Residual

soils not excavated and/or left in place at the roadway properties may require further remediation. Potentially impacted soils must be addressed in accordance with NJAC 7:26E, including but not limited to, the NJDEP guidance document entitled, *The 1998 Revised Guidance Document for the Remediation of Contaminated Soils.*

Herbicides and Pesticides

Herbicides, pesticides, and/or their by-products may be encountered during the construction of the connector roads through the farmlands west of Route 1. Potentially impacted soils must be addressed in accordance with NJAC 7:26E, including, but not limited to, the NJDEP guidance document entitled, *The 1998 Revised Guidance Document for the Remediation of Contaminated Soils.*

Contaminated soils potentially impacted by herbicides and or pesticides may likely be incorporated into an on-site soil reuse plan, included in the grading of the highway, and/or installed at abutments and ramps associated with the connector roads. The inherent engineering controls of the roadbed and abutment walls and of the fill encapsulating these soils should be adequate remediation to meet the criteria of the NJDEP.

Low-Level Radiation Impacted Soils

Impacts as a result of Sarnoff's low-level radiation dumpsite should be limited due to the reported material (cathode tubes, etc.) placed in this area. However, investigation and work practice at or near these soils should be addressed in accordance with NJAC 7:26E, including, but not limited to, the NJDEP guidance document entitled, *The 1998 Revised Guidance Document for the Remediation of Contaminated Soils* and NJAC 7:28-12, *Soil Remediation Standards for Radioactive Materials.*

Groundwater

Petroleum hydrocarbons and chlorinated compounds are documented to exist in the groundwater in the Penns Neck area. Contaminated groundwater may be encountered during the excavations for Route 1 in a cut and during installation of associated utilities. Contaminated groundwater, if encountered, must be addressed in accordance with all local or county regulations, including but not limited to, NJAC 7:26E; NJSA 58:10A-1 et seq., New Jersey Water Pollution Control Act; NJSA 58:11-49 et seq., Pretreatment; NJAC 7:14, Water Pollution Control Act; NJAC 7:14A, New Jersey Pollutant Discharge Elimination System (NJPDES); and NJAC 7:1C, 90-Day Construction Permits.

Petroleum Hydrocarbon Impacted Groundwater

Groundwater occurs in the Penns Neck area at a depth between 15 and 30 feet below ground surface. Dewatering activities may be required to facilitate construction at these depths. Potential treatment and disposal options for contaminated groundwater include off-site disposal, groundwater treatment and re-injection (NJDEP Permit-by-Rule and or 90-Day Construction Permits), and/or discharge to the local public works or sewer authority.

Floating free-phase petroleum hydrocarbons, if encountered, must be remediated in accordance with NJAC 7:26E. Remedial actions could include disposal at an off-site disposal or recycling facility.

Chlorinated Compound Impacts to Groundwater

Groundwater in the study area is reported to be contaminated by chlorinated compounds. Sites sampled and known to contain chlorinated compounds in the groundwater, as identified by the EPA's CERCLIS database, include the Sarnoff Corporation campus within the study area, the FMC Corporation immediately north of the study area, and the Millstone Road Site northeast of the study area. Chlorinated compounds are fairly mobile and are denser than water and therefore tend to migrate to the bottom of the water column. The area of greatest concern to this study is located at or proximal to the reported chlorinated compound release site at Sarnoff. Direct disturbance of this area would be expected to have the greatest potential impacts.

Subsurface work for a roadway located on the central portion of the Sarnoff property (Action Alternatives D and D.1) is more likely to impact groundwater than work located farther from the source of the release. To a lesser extent, groundwater contamination may also be encountered during construction of Route 1 in a cut. In particular, dewatering activities may be required to facilitate construction in this area. Potential treatment and disposal options include off-site disposal, groundwater treatment and re-injection (NJDEP Permit-by-Rule), and/or discharge to the local public works or sewer authority or to Sarnoff's on-site treatment facilities, if applicable.

Any free-phase chlorinated compounds encountered must be remediated in accordance with NJAC 7:26E, which could include disposal at an off-site disposal or recycling facility.

Asbestos-Containing Building Materials

Buildings requiring demolition may include asbestos-containing building materials (ACM). ACM can be present within ceiling tiles, pipe wrap, insulation, floor tiles, mastics (i.e., glue and sealants), and roofing and siding materials. A survey for ACM must be conducted prior to the anticipated demolition of a building or structure. All work must be completed in accordance with the NJDEP's regulations NJAC 7:26-1 et seq., which pertains to the management, transportation, and disposal of ACM.

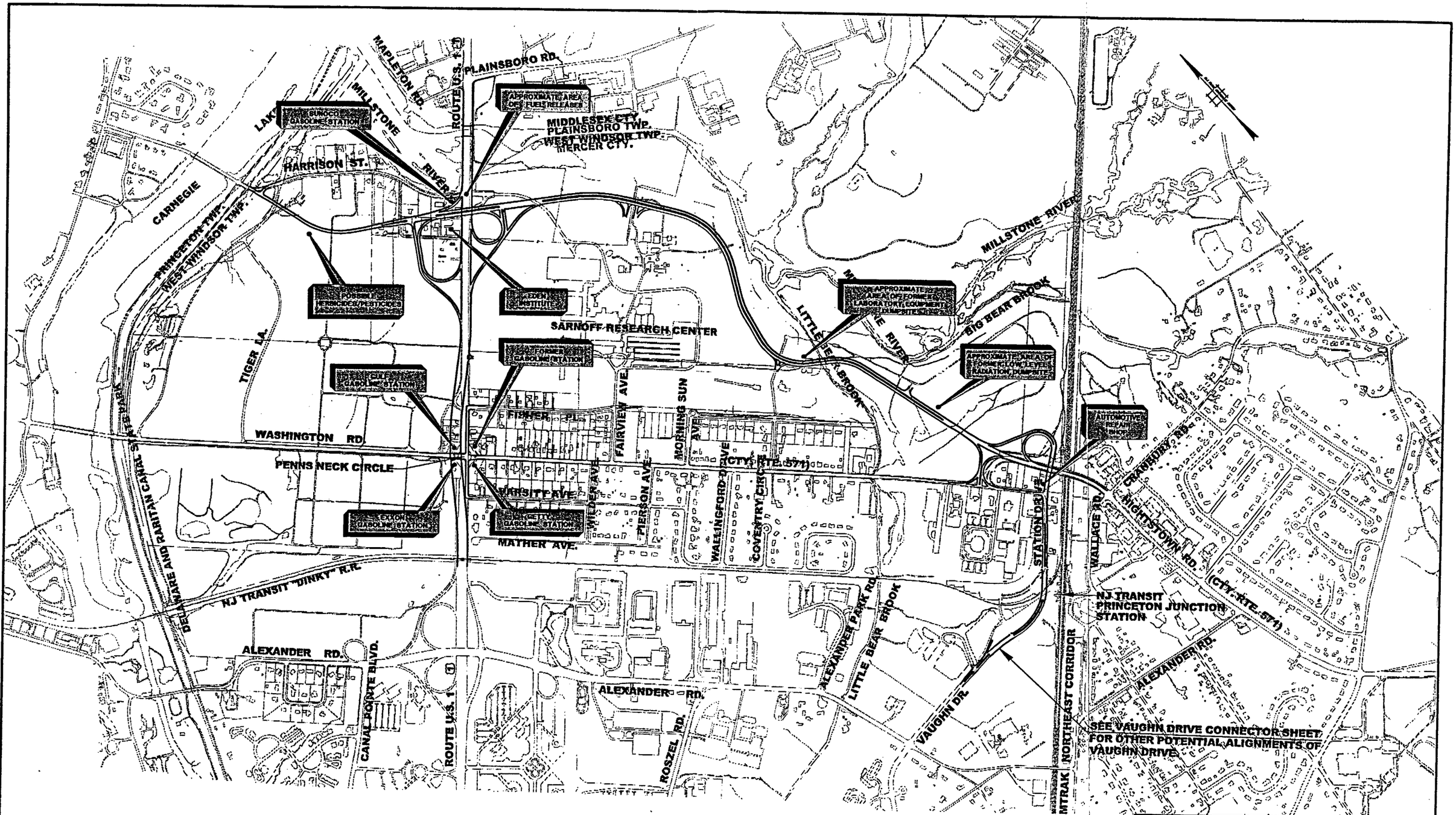
It should be noted that the NJDEP regulates only the management, transportation, and disposal of ACM. Additional agencies and responsibilities include:

- The Department of Community Affairs (DCA), Asbestos Contractor Unit, provides information on methods of asbestos remediation in schools and buildings in which public employees are located and regulates the air monitoring firms for asbestos abatement projects.

- The Department of Health (DOH), the lead agency for asbestos and environmental health information, administers the Asbestos Hazard Emergency Response Act (AHERA) and provides site audits and a quality assurance/quality control program for asbestos abatement in schools.
- The United States Environmental Protection Agency (USEPA) enforces the AHERA and the National Emission Standards for Hazardous Air Pollutants (NESHAPS) and regulates ACM abatements in residences of more than four units, commercial buildings, and federal facilities.

Air Monitoring and Personal Protective Equipment

For the protection of the workers, it is recommended that monitoring for and precautions regarding petroleum hydrocarbons, chlorinated compounds, low-level radiation, and ACM be included in the Health and Safety Plan for construction in the identified areas of concern. Additional consideration and safety precautions should be applied towards the advancement of pre-construction geotechnical borings throughout the project area. The advancement of these deeper borings could extend to and through depths where greater concentrations of the chlorinated compounds may be present.



POTENTIALLY CONTAMINATED SITES AS IDENTIFIED VIA DATABASE SEARCHES, SITE INSPECTIONS AND REVIEW OF REGULATORY PUBLICATIONS FOR THE PENNS NECK E.I.S.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PENNS NECK AREA
ENVIRONMENTAL IMPACT STATEMENT

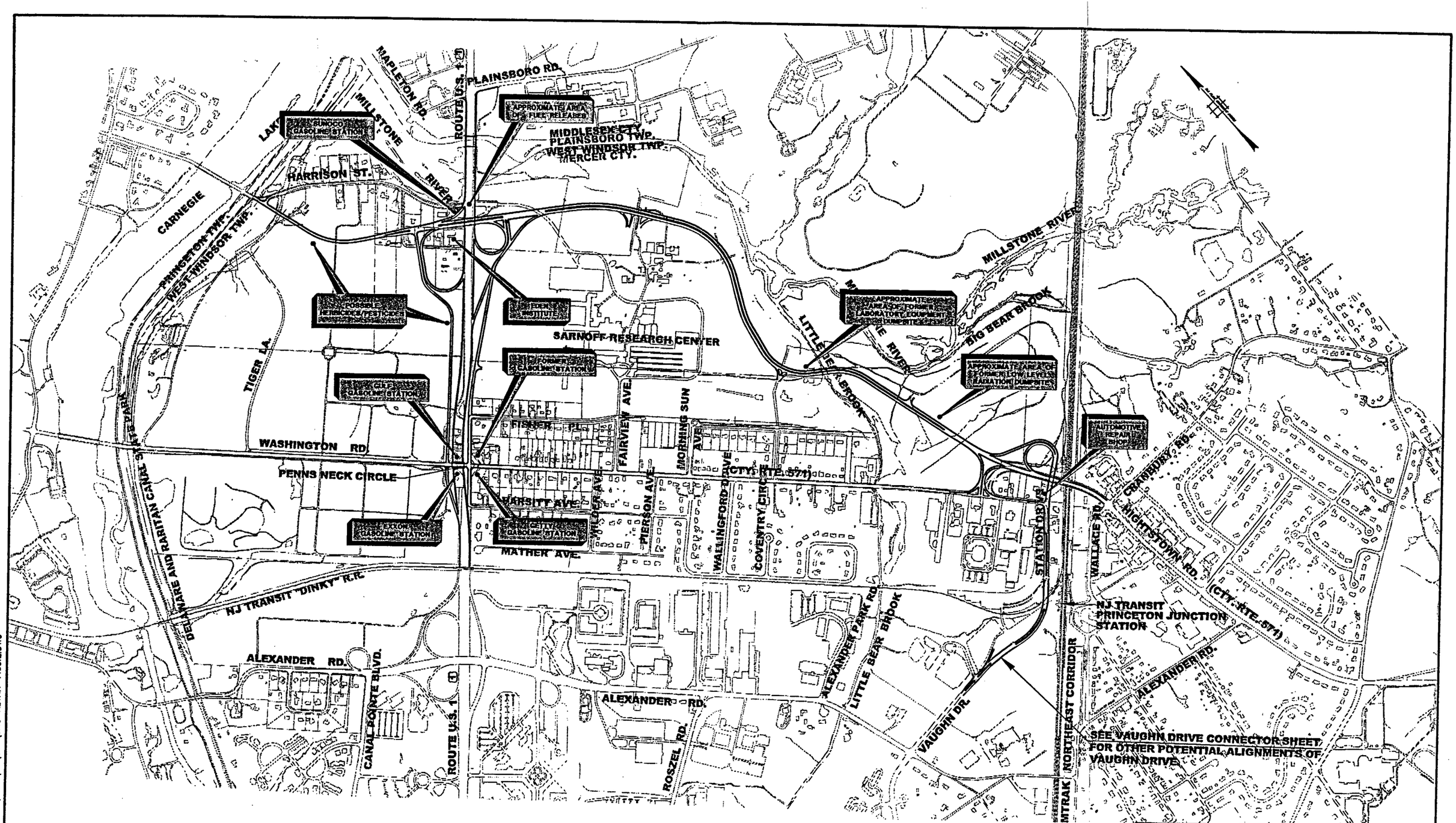
CONTAMINATED MATERIALS SCREENING
ACTION ALTERNATIVE A

DATE: 08/23/02
SCALE: 1"=1000'

FIGURE 4-61

X-REF'S:NONE
LAST EDIT:08/23/02
PROJECT#:366-22
FILE NAME#: \1366\CC\ENV\CMS-ALTA-FIG3.1.DWG

4-256



POTENTIALLY CONTAMINATED SITES AS IDENTIFIED VIA DATABASE SEARCHES, SITE INSPECTIONS AND REVIEW OF REGULATORY PUBLICATIONS FOR THE PENNS NECK E.I.S.

X-REFS: NONE
LAST EDIT: 08/23/02
PROJECT: 1366-22
FILE NAME: P:\1366\CC\ENV\CMS-ALTA.1-FIG3.2.DWG

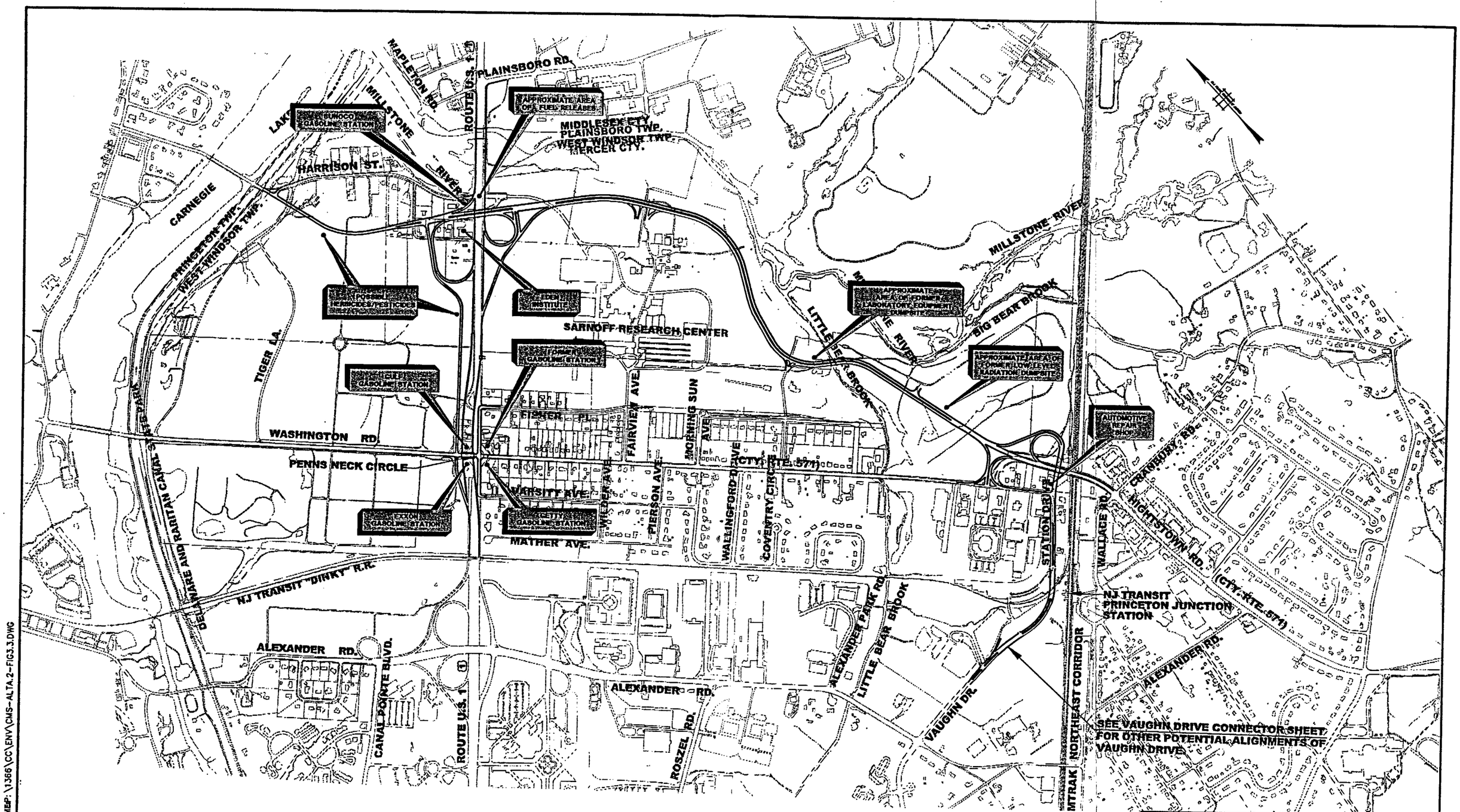
NEW JERSEY DEPARTMENT OF TRANSPORTATION

PENNS NECK AREA
ENVIRONMENTAL IMPACT STATEMENT

CONTAMINATED MATERIALS SCREENING
ACTION ALTERNATIVE A.1

DATE: 08/23/02
SCALE: 1"=1000'

FIGURE 4-62



POTENTIALLY CONTAMINATED SITES AS IDENTIFIED VIA DATABASE SEARCHES, SITE INSPECTIONS AND REVIEW OF REGULATORY PUBLICATIONS FOR THE PENNS NECK E.I.S.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

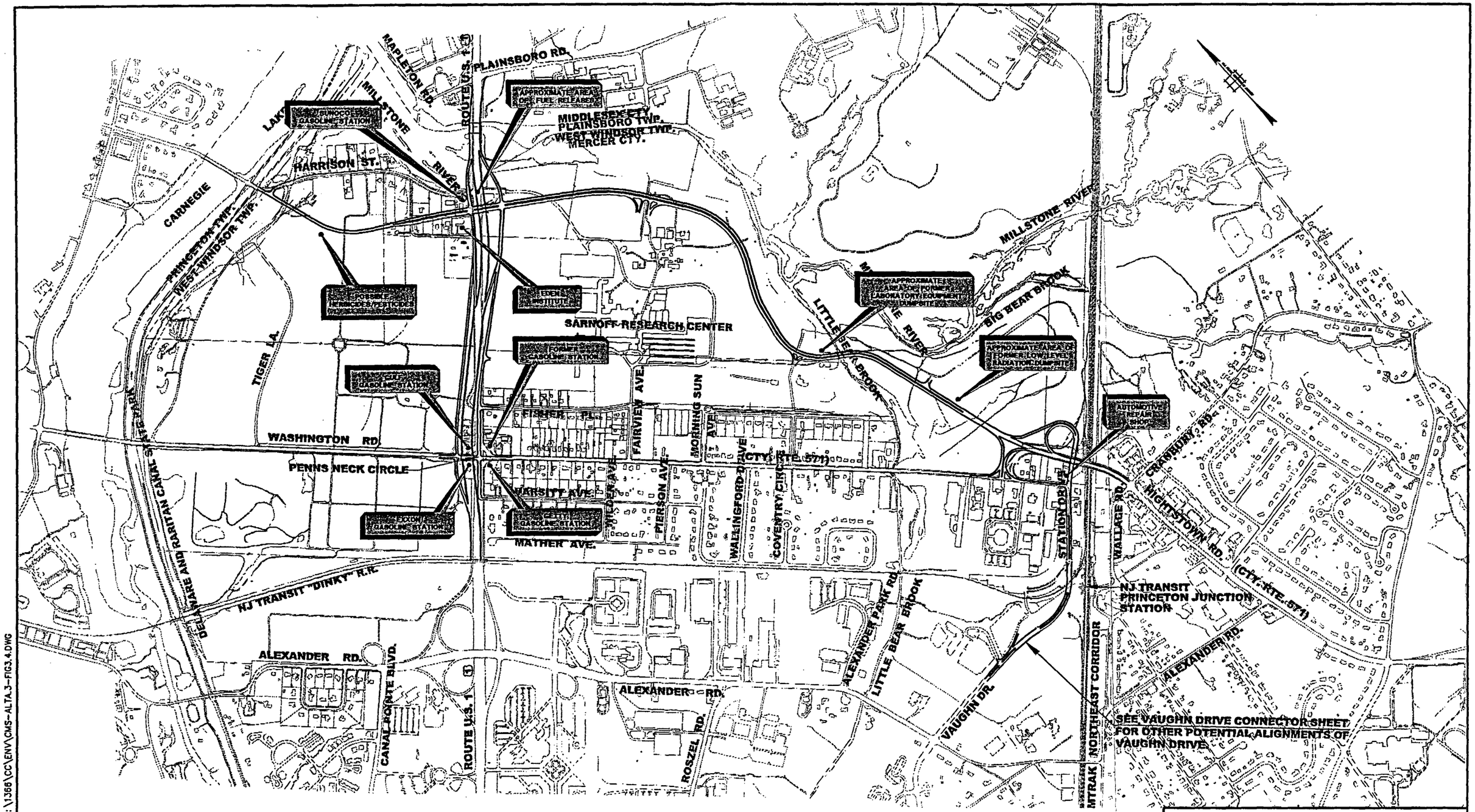
PENNS NECK AREA
ENVIRONMENTAL IMPACT STATEMENT

CONTAMINATED MATERIALS SCREENING
ACTION ALTERNATIVE A.2

DATE: 08/23/02
SCALE: 1"=1000'

FIGURE 4-63

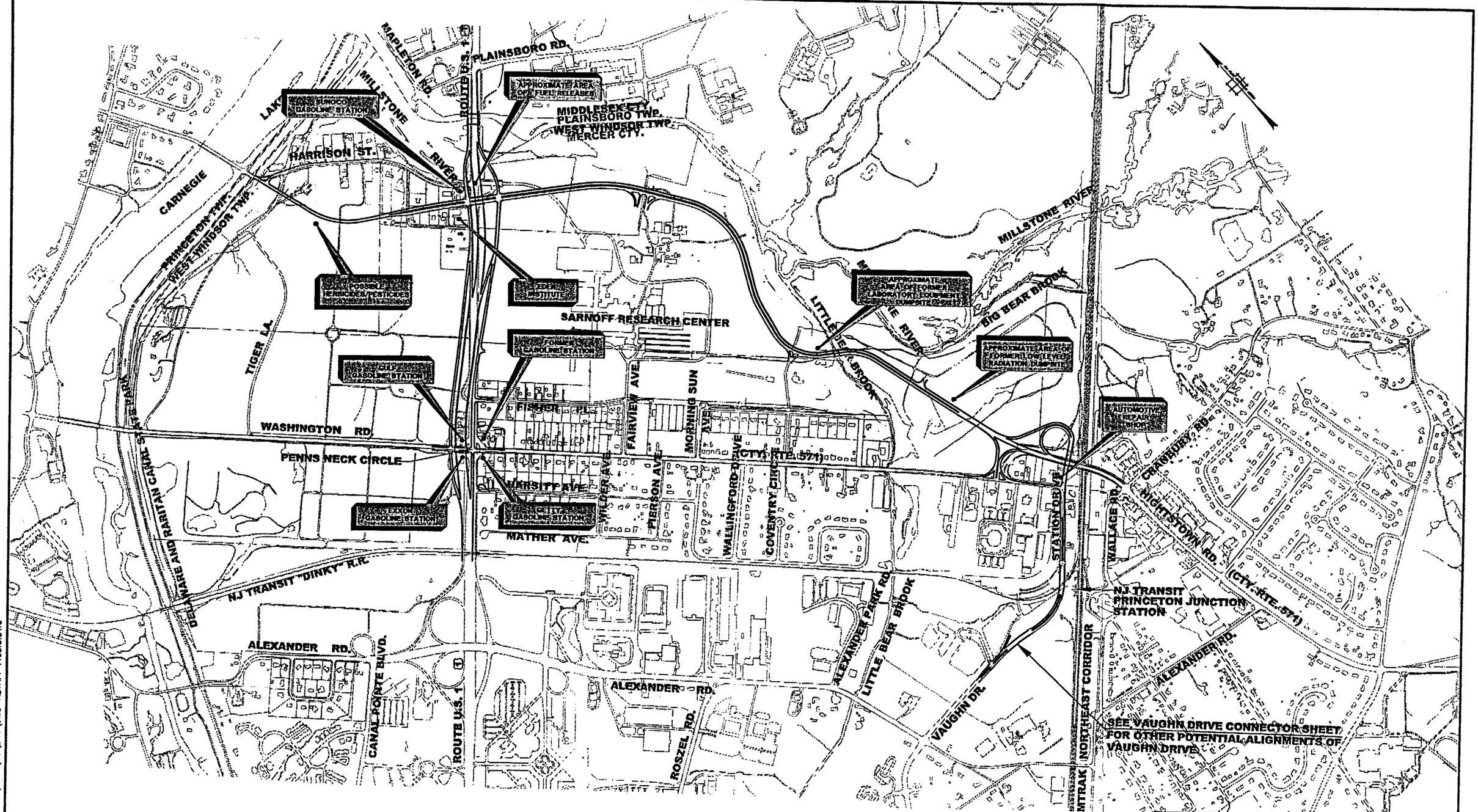
X-REFS:NONe
LAST EDIT:08/23/02
PROJECT#:1366-22 FILE NAME#: \1366\CC\ENV\CMS-ALTA.2-FIG3.DWG



POTENTIALLY CONTAMINATED SITES AS IDENTIFIED VIA DATABASE SEARCHES, SITE INSPECTIONS AND REVIEW OF REGULATORY PUBLICATIONS FOR THE PENNS NECK E.I.S.

NEW JERSEY DEPARTMENT OF TRANSPORTATION	
PENNS NECK AREA ENVIRONMENTAL IMPACT STATEMENT	
CONTAMINATED MATERIALS SCREENING ACTION ALTERNATIVE A.3	
DATE: 08/23/02 SCALE: 1"=1000'	FIGURE 4-64

X-REF'S:NC
LAST EDITED:8/23/02
PROJECT#1366-22 FILE NAME#: \1366\CC\ENV\CMS-ALTA.3-FIG3.4.DWG



POTENTIALLY CONTAMINATED SITES AS IDENTIFIED VIA DATABASE SEARCHES, SITE INSPECTIONS AND REVIEW OF REGULATORY PUBLICATIONS FOR THE PENNS NECK E.I.S.

X-REF'S:NONE
LAST EDIT:08/23/02
PROJECT:1366-22 FILE NAME:P:\1366\CC\ENV\CMS-ALTA.4-FIG3.5.DWG

NEW JERSEY DEPARTMENT OF TRANSPORTATION

PENNS NECK AREA
ENVIRONMENTAL IMPACT STATEMENT

CONTAMINATED MATERIALS SCREENING
ACTION ALTERNATIVE A.4

DATE: 08/23/02
SCALE: 1"=1000'

FIGURE 4-65

EXEMPT FROM ALT. B.2

ALT. B.2

ALT. B.1, B.2

APPROXIMATE AREA OF FUEL RELEASE

EXXON GASOLINE STATION

POSSIBLE HERBICIDES/PESTICIDES

GULF GASOLINE STATION

APPROXIMATE AREAS OF FORMER LOW LEVEL RADIATION DUMPSITE

APPROXIMATE AREAS OF FORMER LOW LEVEL RADIATION DUMPSITE AT LABORATORY COMPONENT

AUTOMOTIVE REPAIR SHOP

SARNOFF RESEARCH CENTER

EDISON INSTITUTE

NJ TRANSIT PRINCETON JUNCTION STATION

NORTHEAST CORRIDOR

SEE VAUGHN DRIVE CONNECTOR SHEET FOR OTHER POTENTIAL ALIGNMENTS OF VAUGHN DRIVE

POTENTIALLY CONTAMINATED SITES AS IDENTIFIED VIA DATABASE SEARCHES, SITE INSPECTIONS AND REVIEW OF REGULATORY PUBLICATIONS FOR THE PENNS NECK E.I.S.

X-REFS:NONE
LAST EDIT:08/23/02
PROJECT#:1366-22
FILE NAME#: \1366\CC\ENV\CMS-ALTB, B.1, B.2-FIG3.6.DWG

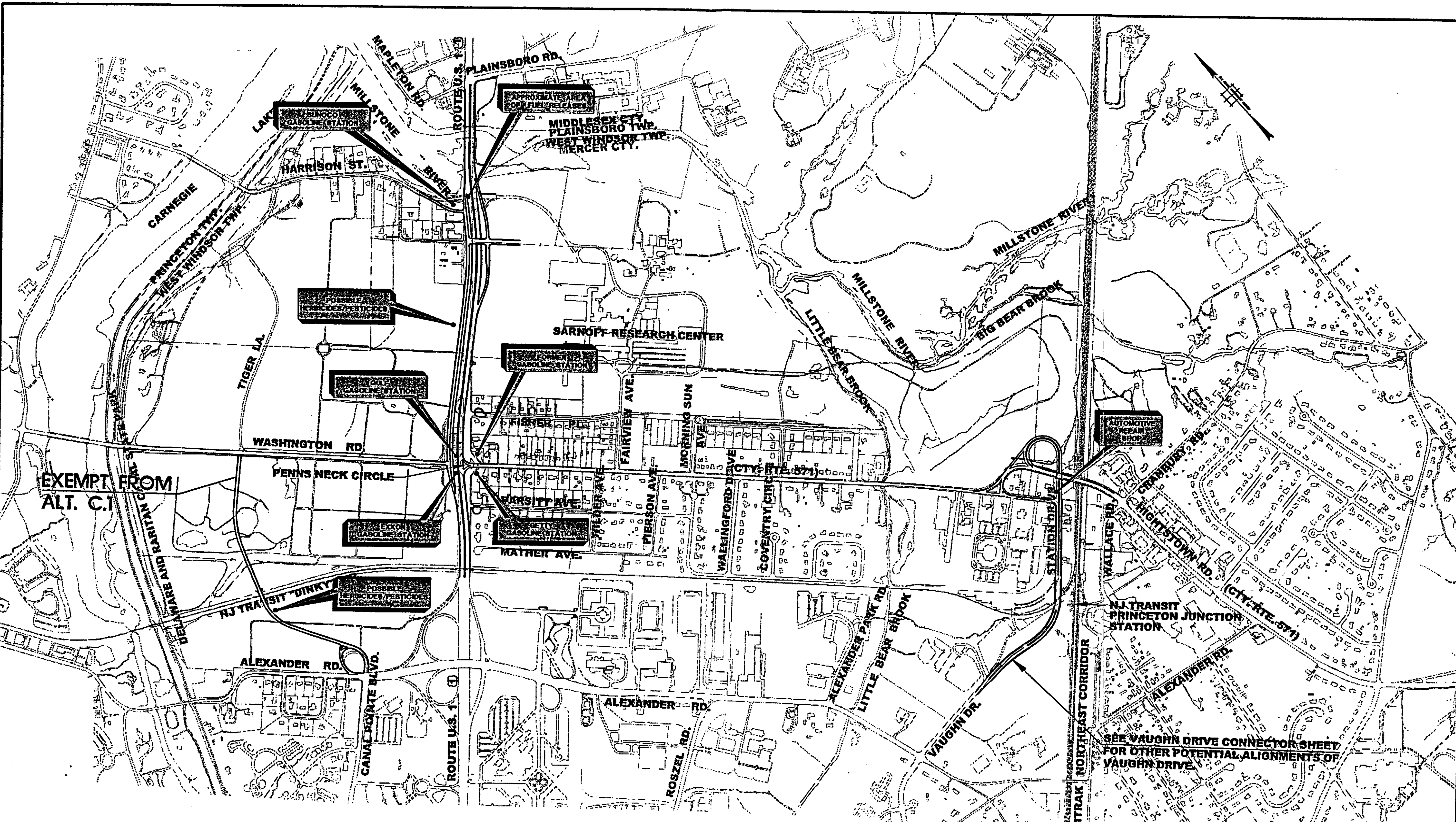
NEW JERSEY DEPARTMENT OF TRANSPORTATION

PENNS NECK AREA
ENVIRONMENTAL IMPACT STATEMENT

CONTAMINATED MATERIALS SCREENING
ACTION ALTERNATIVE B, B.1, B.2

DATE: 08/23/02
SCALE: 1"=1000'

FIGURE 4-66



PLAINSBORO RD.
MAPLETON RD.
MILLSTONE
RIVER
ROUTE U.S. 1
SUNOCO GASOLINE STATION
APPROXIMATE AREA OF FUEL RELEASES
MIDDLESEX CTY.
PLAINSBORO TWP.
WEST WINDSOR TWP.
MERCER CTY.
HARRISON ST.
CARNEGIE
PRINCETON TWP.
WEST WINDSOR TWP.
POSSIBLE HERBICIDES/PESTICIDES
SARNOFF RESEARCH CENTER
FORMER GASOLINE STATION
GULF GASOLINE STATION
TIGER LA.
FISHER PL.
FAIRVIEW AVE
MORNING SUN AVE
WASHINGTON RD.
PENNS NECK CIRCLE
EXEMPT FROM ALT. C.1
VARSITY AVE.
EXXON GASOLINE STATION
GETTY GASOLINE STATION
MATHER AVE.
PIERSON AVE
WALLINGFORD DRIVE
COVENTRY CIRC.
(CTY. RTE. 571)
MILLSTONE RIVER
BIG BEAR BROOK
LITTLE BEAR BROOK
AUTOMOTIVE REPAIR SHOP
CRANBURY RD.
HIGHTSTOWN RD.
STATION DRIVE
WALLACE RD.
DELAWARE AND RARITAN CANAL STATE PARK
NJ TRANSIT "DINKY"
POSSIBLE HERBICIDES/PESTICIDES
NJ TRANSIT PRINCETON JUNCTION STATION
(CTY. RTE. 571)
ALEXANDER RD.
CANAL POINTE BLVD.
ROUTE U.S. 1
ALEXANDER RD.
ROSZEL RD.
ALEXANDER PARK RD.
LITTLE BEAR BROOK
VAUGHN DR.
AMTRAK NORTHEAST CORRIDOR
ALEXANDER RD.
SEE VAUGHN DRIVE CONNECTOR SHEET FOR OTHER POTENTIAL ALIGNMENTS OF VAUGHN DRIVE.

DMJMHARRIS P:\1366\22\ENV\CMS-ALTC-FIG3.7.dwg FSMITH 06/11/02 - 4:36 P

POTENTIALLY CONTAMINATED SITES AS IDENTIFIED VIA DATABASE SEARCHES, SITE INSPECTIONS AND REVIEW OF REGULATORY PUBLICATIONS FOR THE PENNS NECK E.I.S.

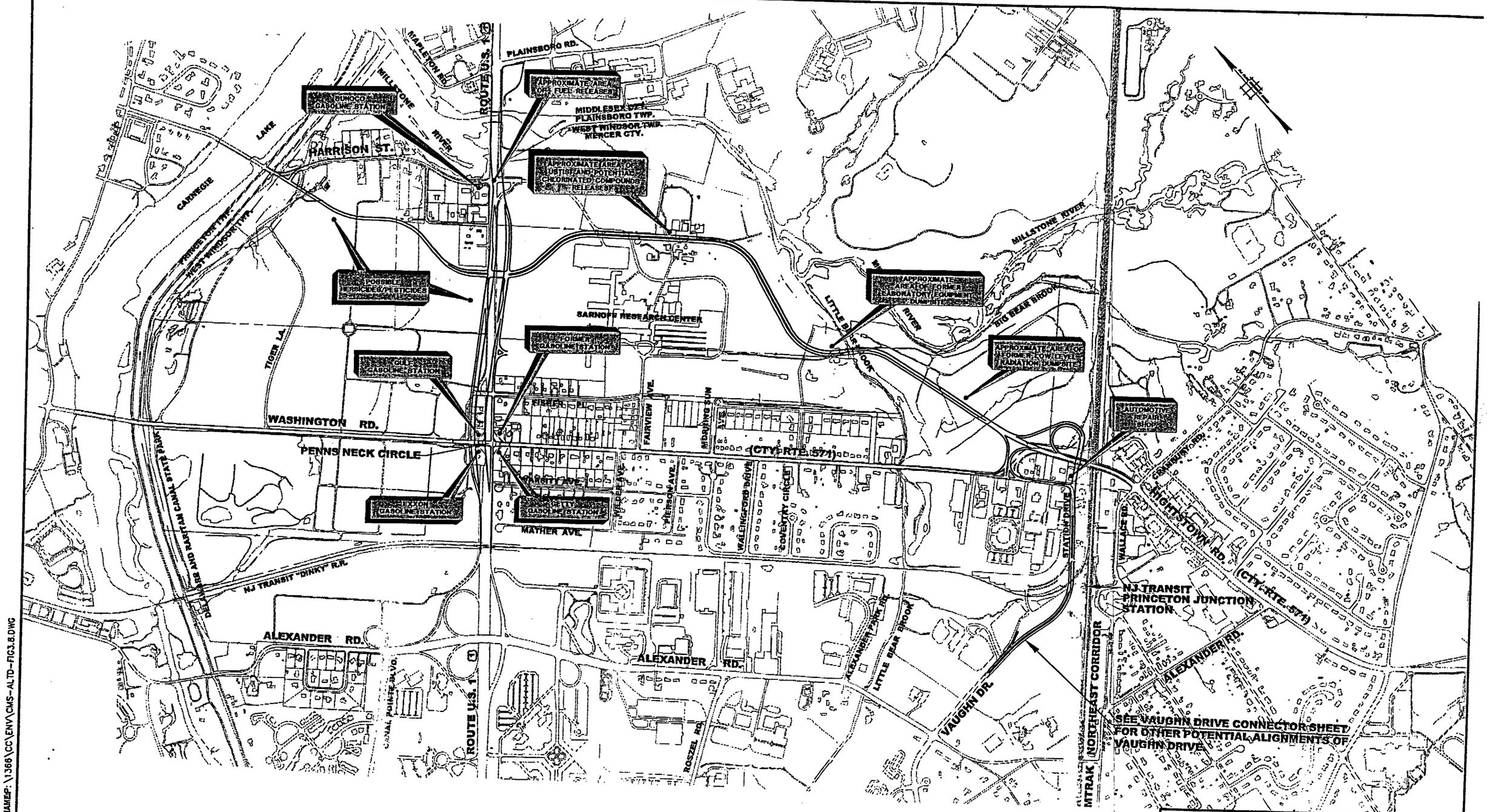
NEW JERSEY DEPARTMENT OF TRANSPORTATION

PENNS NECK AREA
ENVIRONMENTAL IMPACT STATEMENT

CONTAMINATED MATERIALS SCREENING
ACTION ALTERNATIVE C, C.1

DATE: 11/04/02
SCALE: 1"=1000'

FIGURE 4-67



POTENTIALLY CONTAMINATED SITES AS IDENTIFIED VIA DATABASE SEARCHES, SITE INSPECTIONS AND REVIEW OF REGULATORY PUBLICATIONS FOR THE PENNS NECK E.I.S.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

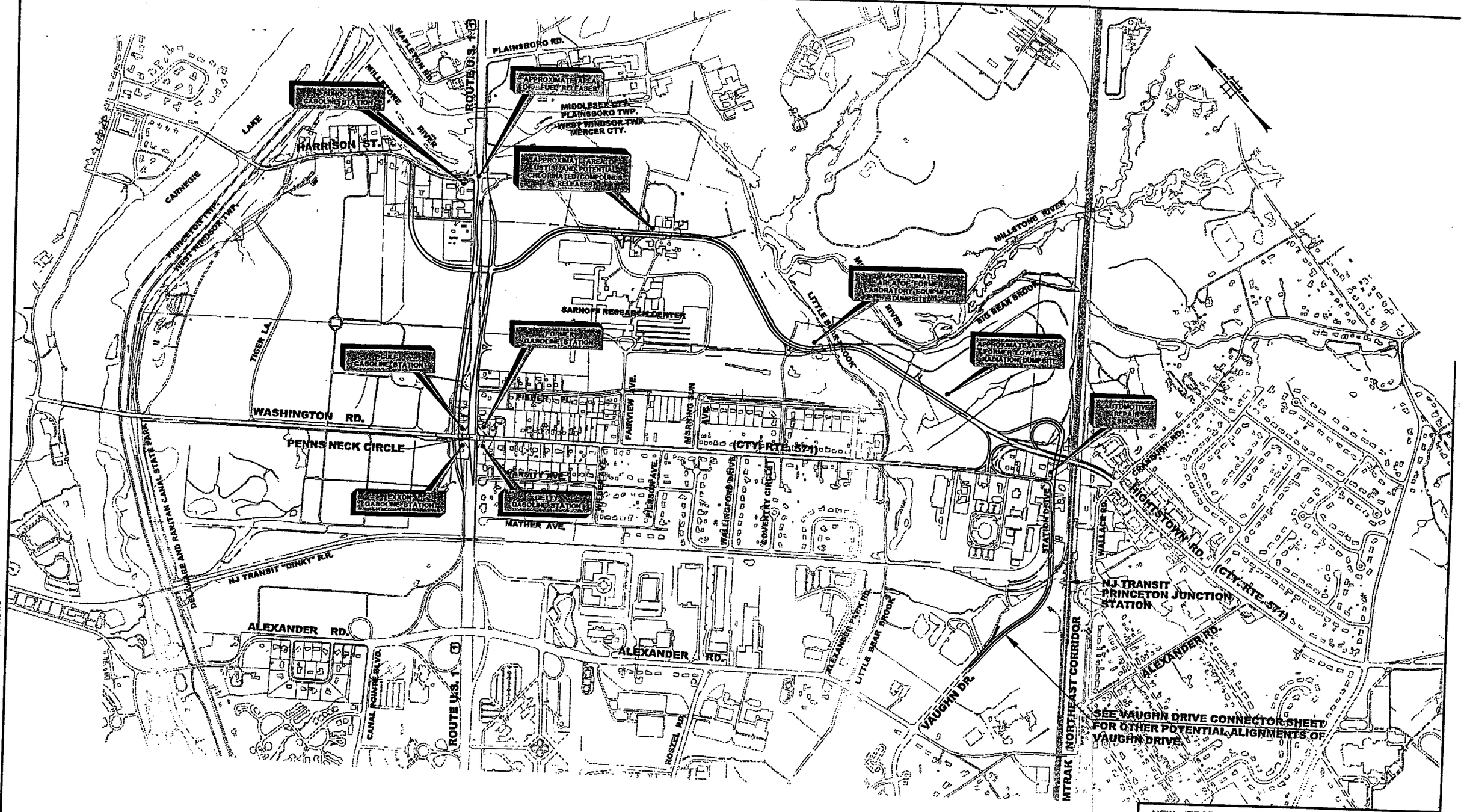
PENNS NECK AREA
ENVIRONMENTAL IMPACT STATEMENT

CONTAMINATED MATERIALS SCREENING
ACTION ALTERNATIVE D

DATE: 08/23/02
SCALE: 1"=1000'

FIGURE 4-68

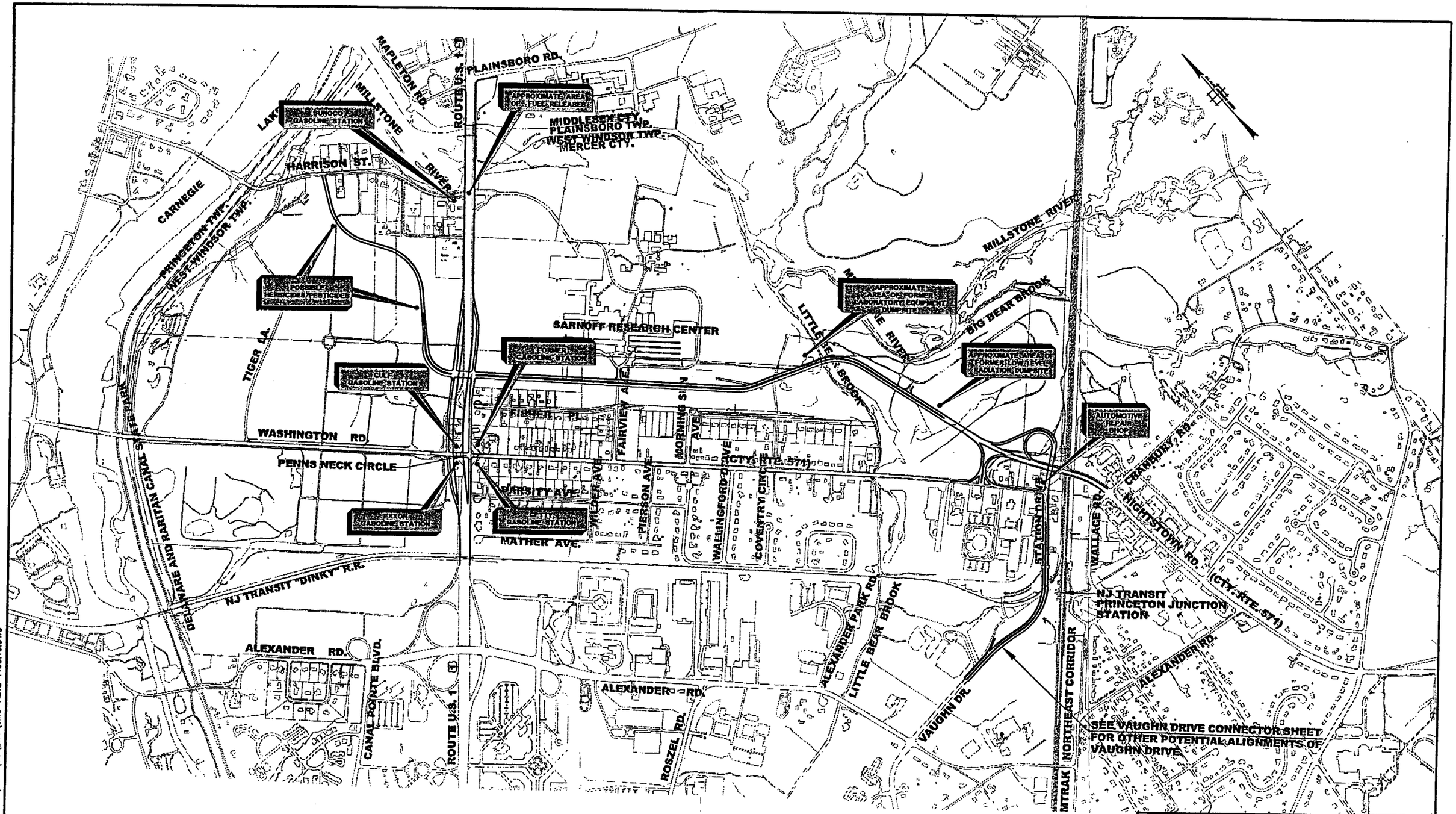
X-REFS:
LAST EDIT:08/23/02
PROJECT#1366-22
FILE NAME#: \1366\CC\ENV\CMS-ALTD-F103.8.DWG



POTENTIALLY CONTAMINATED SITES AS IDENTIFIED VIA DATABASE SEARCHES, SITE INSPECTIONS AND REVIEW OF REGULATORY PUBLICATIONS FOR THE PENNS NECK E.I.S.

X-REF'S:
LAST EDITED: 08/23/02
PROJECT#: 1366-22
FILE NAME/P: \1366\CC\ENV\CMS-ALTD.1-FIG3.9.DWG

NEW JERSEY DEPARTMENT OF TRANSPORTATION	
PENNS NECK AREA ENVIRONMENTAL IMPACT STATEMENT CONTAMINATED MATERIALS SCREENING ACTION ALTERNATIVE D.1	
DATE: 08/23/02 SCALE: 1"=1000'	FIGURE 4-69



POTENTIALLY CONTAMINATED SITES AS IDENTIFIED VIA DATABASE SEARCHES, SITE INSPECTIONS AND REVIEW OF REGULATORY PUBLICATIONS FOR THE PENNS NECK E.I.S.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

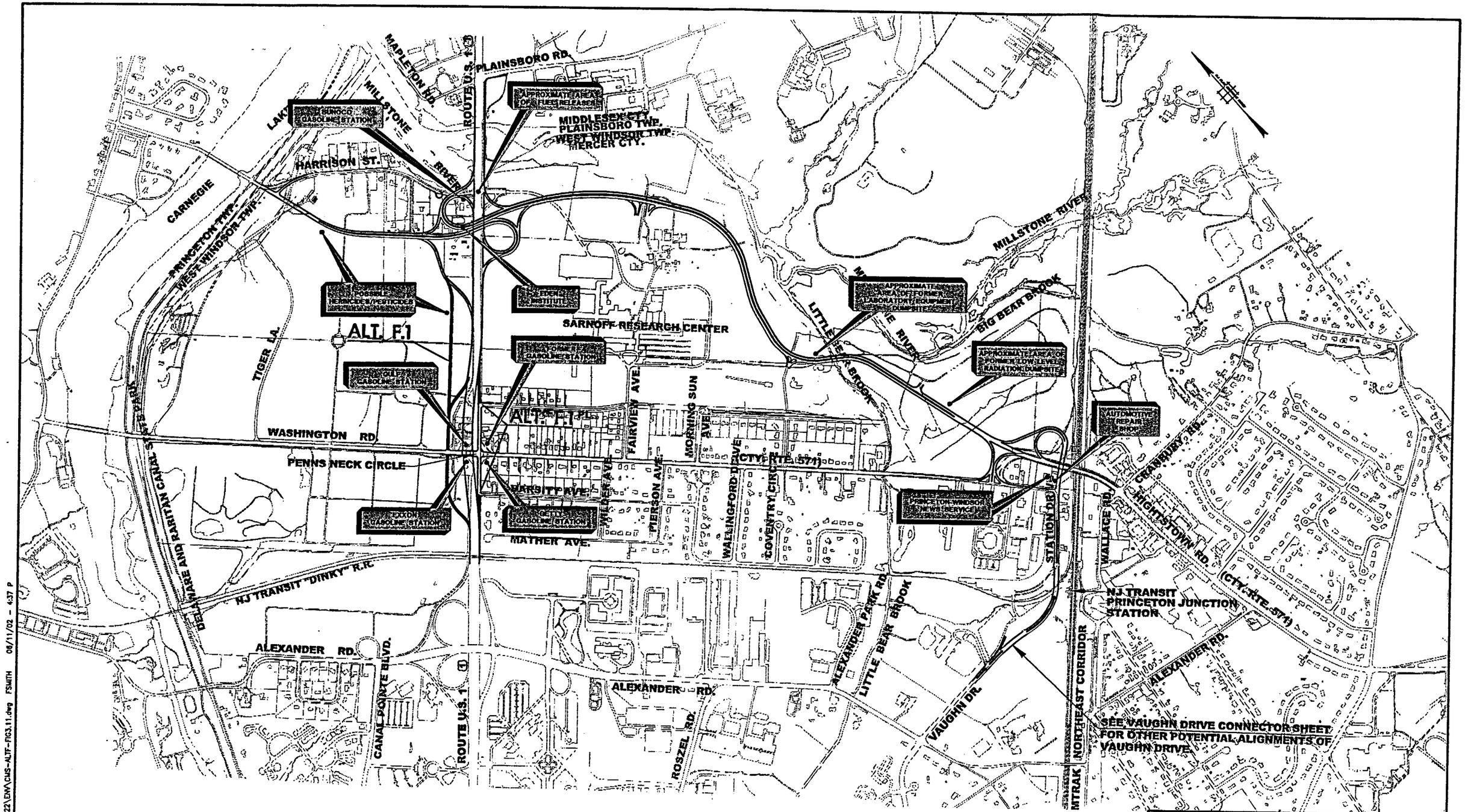
PENNS NECK AREA
ENVIRONMENTAL IMPACT STATEMENT

CONTAMINATED MATERIALS SCREENING
ACTION ALTERNATIVE E

DATE: 08/23/02
SCALE: 1"=1000'

FIGURE 4-70

X-REFS:NONE
LAST EDIT:08/23/02
PROJECT#1366-22 FILE NAME:P:\1366\CC\ENV\CMS-ALTE-FIG3.10.DWG



POTENTIALLY CONTAMINATED SITES AS IDENTIFIED VIA DATABASE SEARCHES, SITE INSPECTIONS AND REVIEW OF REGULATORY PUBLICATIONS FOR THE PENNS NECK E.I.S.

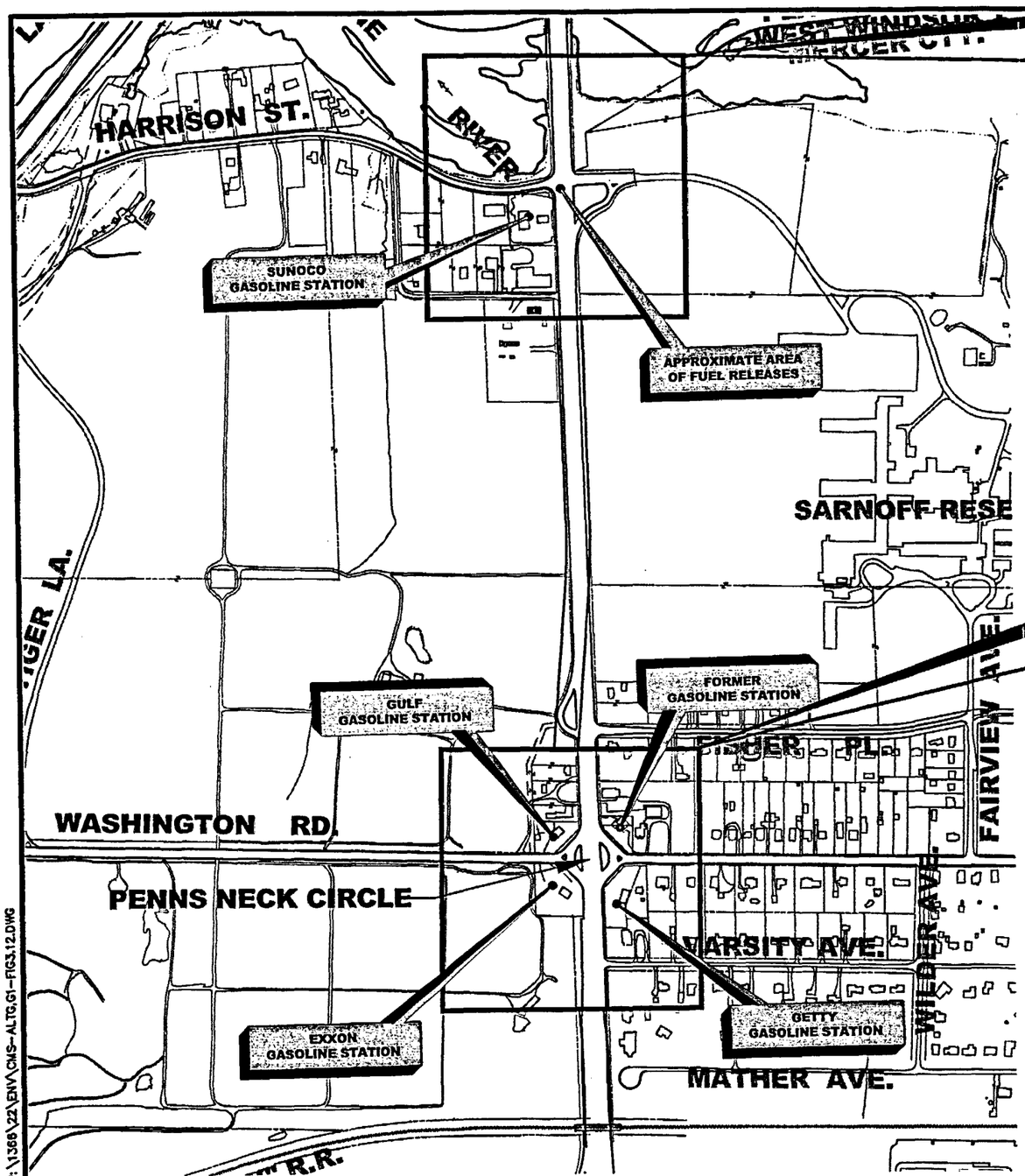
DMJMHARRIS P:\1366\22\ENV\CMS-ALTF-FIG3.11.dwg FSMITH 06/11/02 - 4:37 P

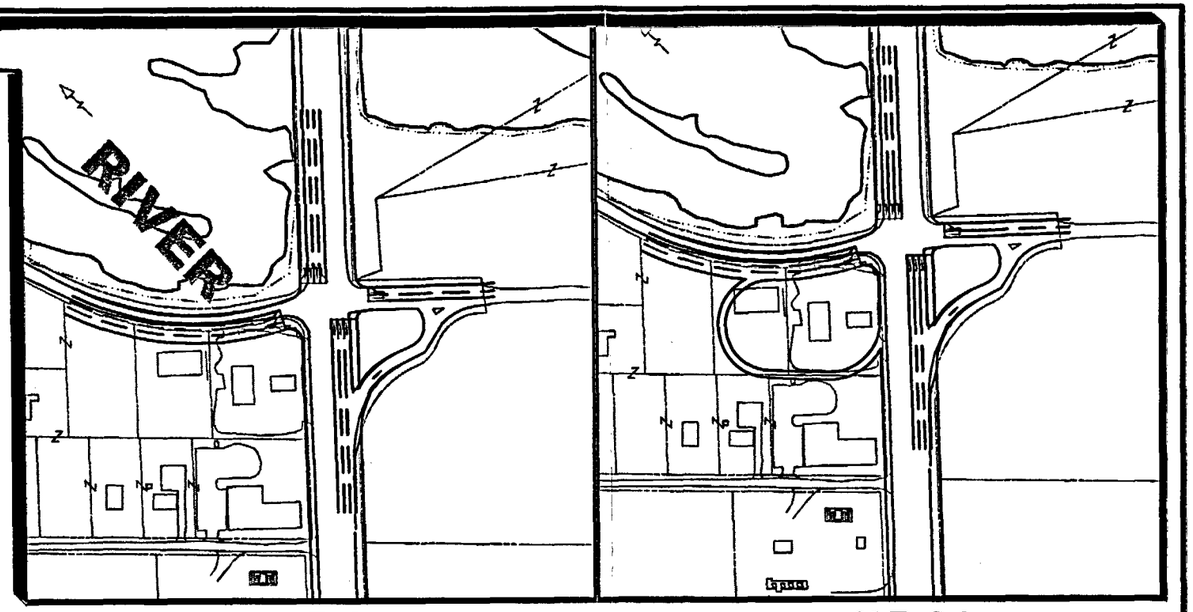
NEW JERSEY DEPARTMENT OF TRANSPORTATION

PENNS NECK AREA
ENVIRONMENTAL IMPACT STATEMENT
CONTAMINATED MATERIALS SCREENING
ACTION ALTERNATIVE F, F.1

DATE: 8/23/02
SCALE: 1"=1000'

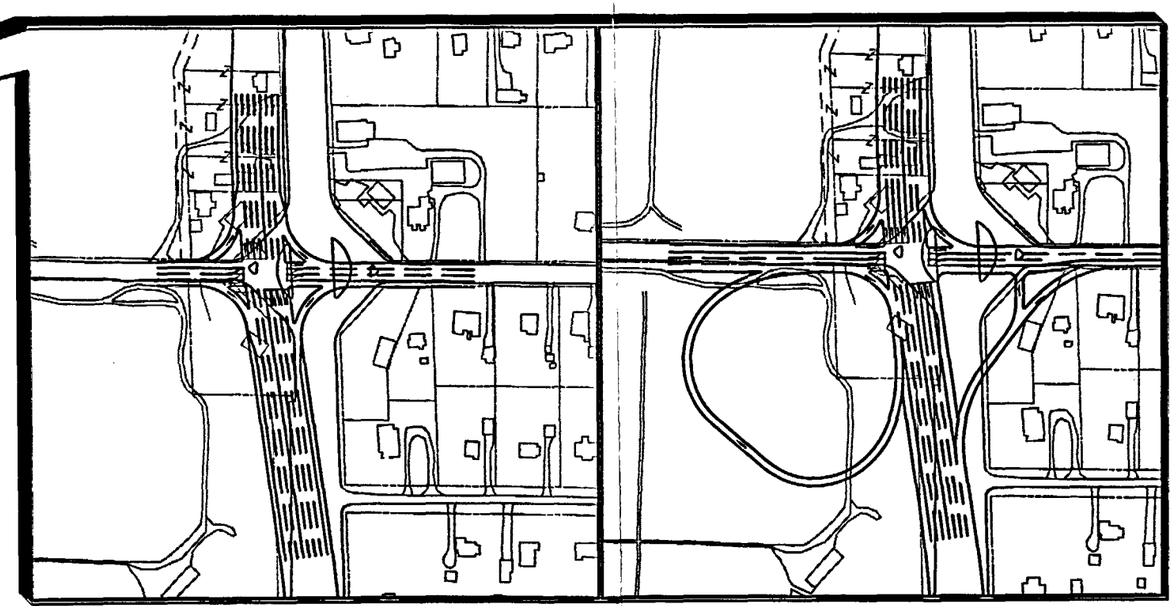
FIGURE 4-71





ALT G

ALT G.1



ALT G

ALT G.1

POTENTIALLY CONTAMINATED SITES AS IDENTIFIED VIA DATABASE SEARCHES, SITE INSPECTIONS AND REVIEW OF REGULATORY PUBLICATIONS FOR THE PENNS NECK E.I.S.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

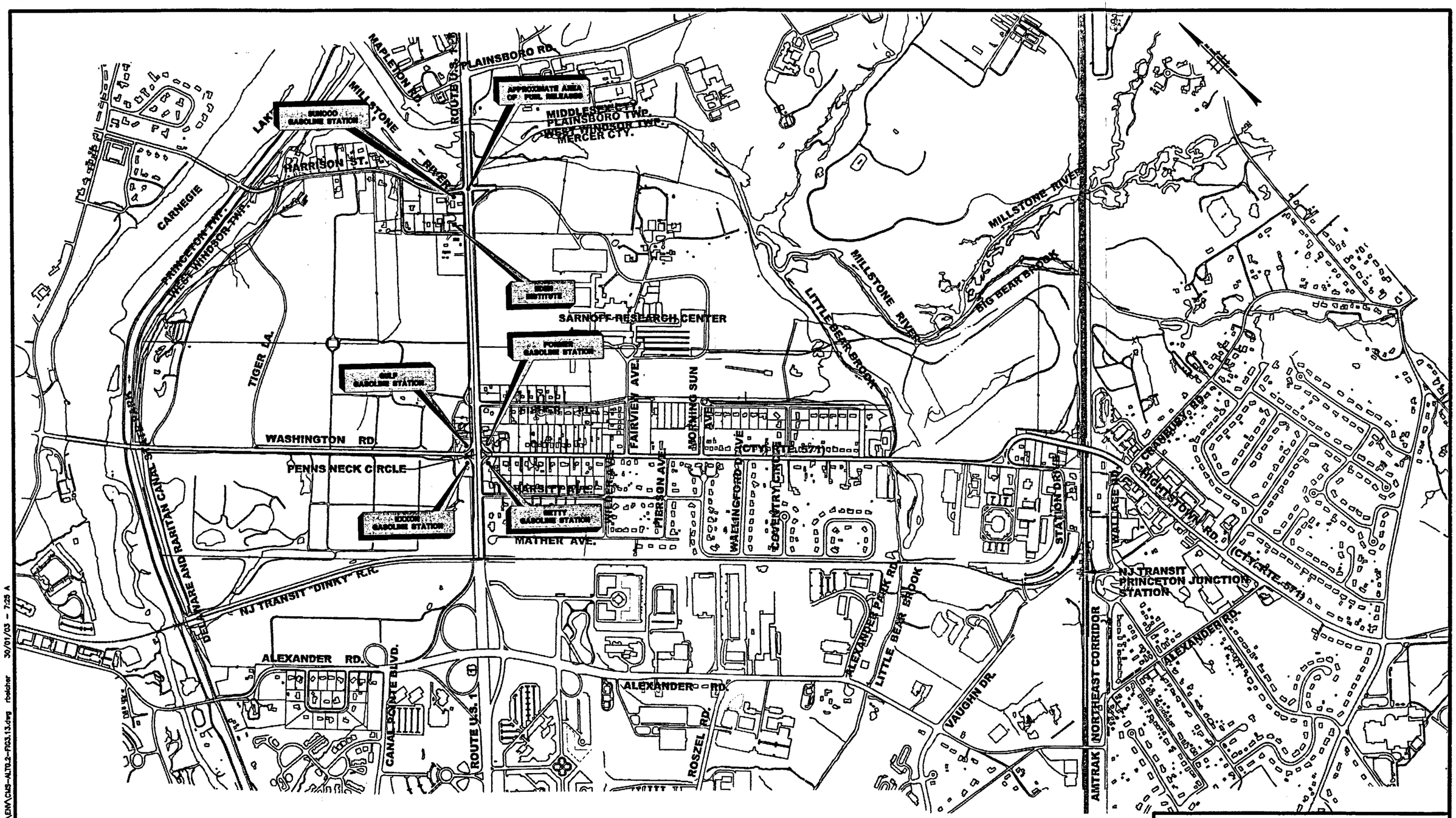
PENNS NECK AREA
ENVIRONMENTAL IMPACT STATEMENT

CONTAMINATED MATERIALS SCREENING
ACTION ALTERNATIVES G, G.1

DATE: 00/00/00
SCALE: N.T.S.

FIGURE 4-72

X-REFS:NONE
LAST EDIT:09/05/02
PROJECT#1366-22 FILE NAME:P:\1366\22\ENV\CMS-ALTG,G1-FIG3.12.DWG



POTENTIALLY CONTAMINATED SITES AS IDENTIFIED VIA DATABASE SEARCHES, SITE INSPECTIONS AND REVIEW OF REGULATORY PUBLICATIONS FOR THE PENNS NECK E.I.S.

DMJMHARRIS P:\13661.22\EIM\CMS-ALT0.2-FIG3.13.dwg rdeicher 30/01/03 - 7:25 A

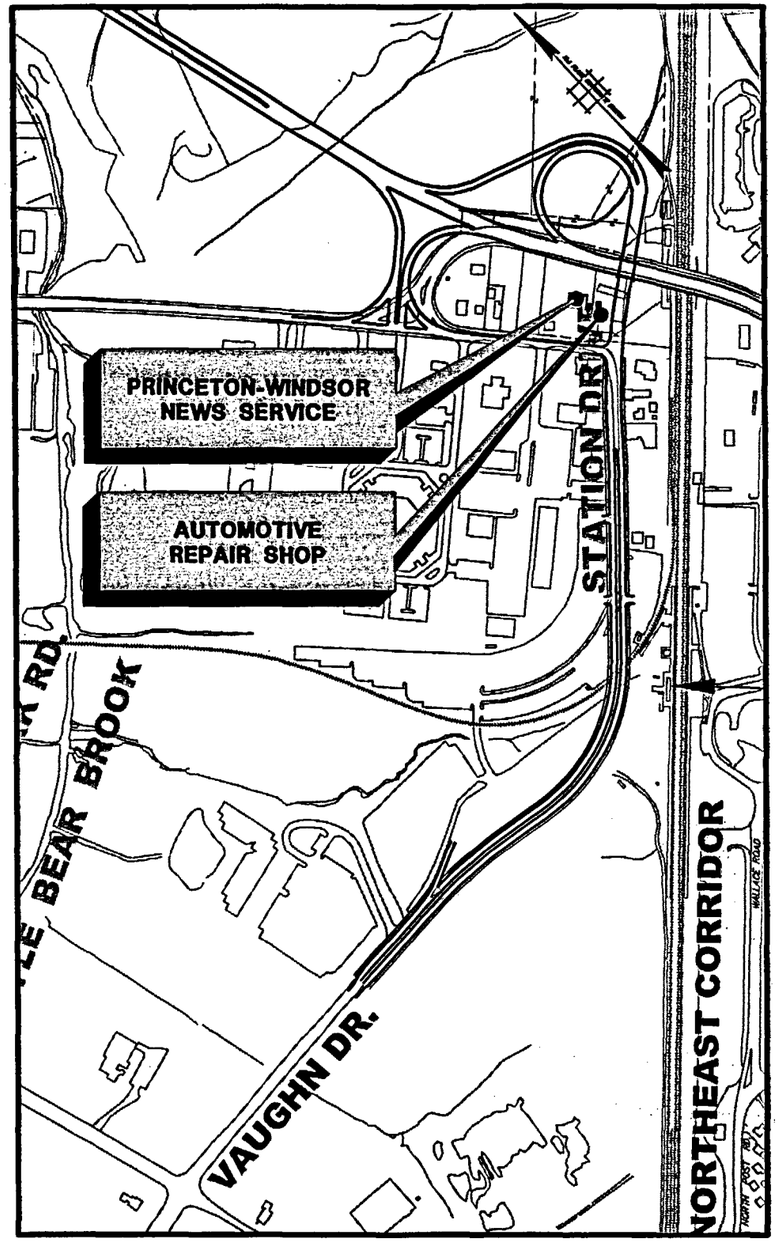
NEW JERSEY DEPARTMENT OF TRANSPORTATION

PENNS NECK AREA
ENVIRONMENTAL IMPACT STATEMENT

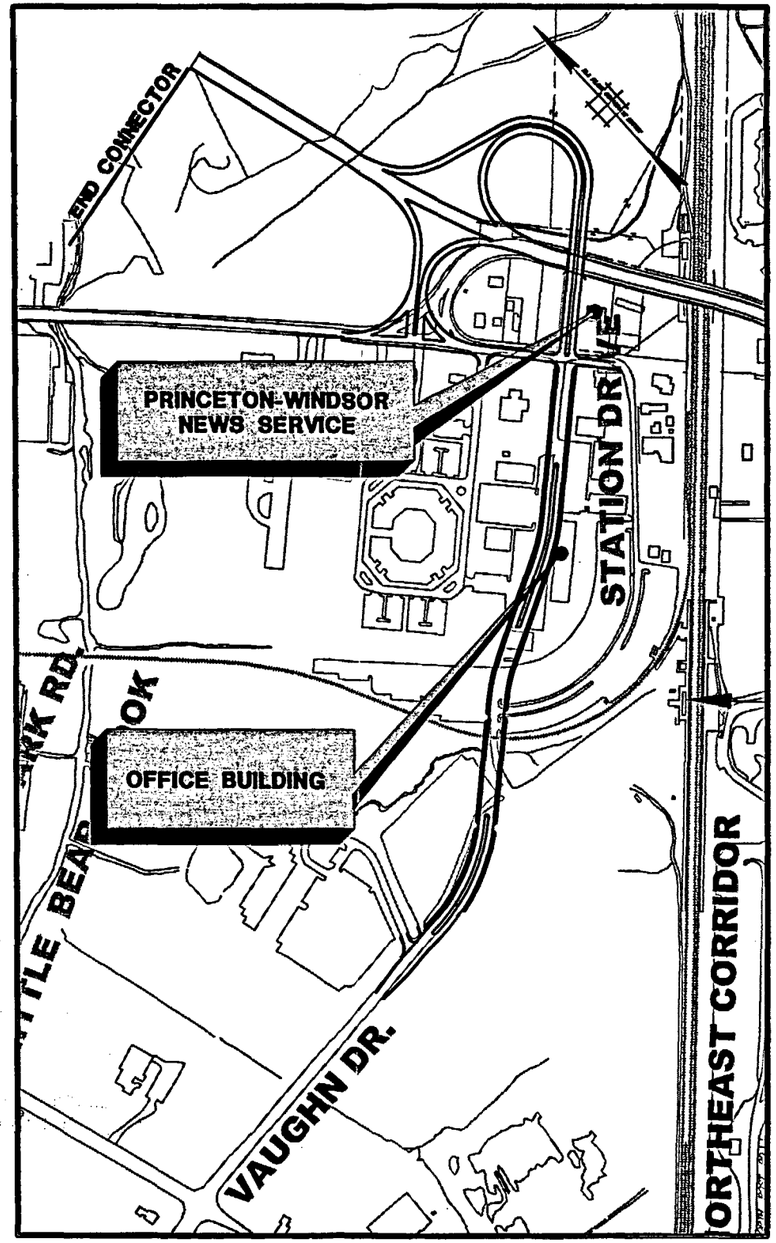
CONTAMINATED MATERIALS SCREENING
ACTION ALTERNATIVE G.2

DATE: NOV. 2002
SCALE: 1"=1000'

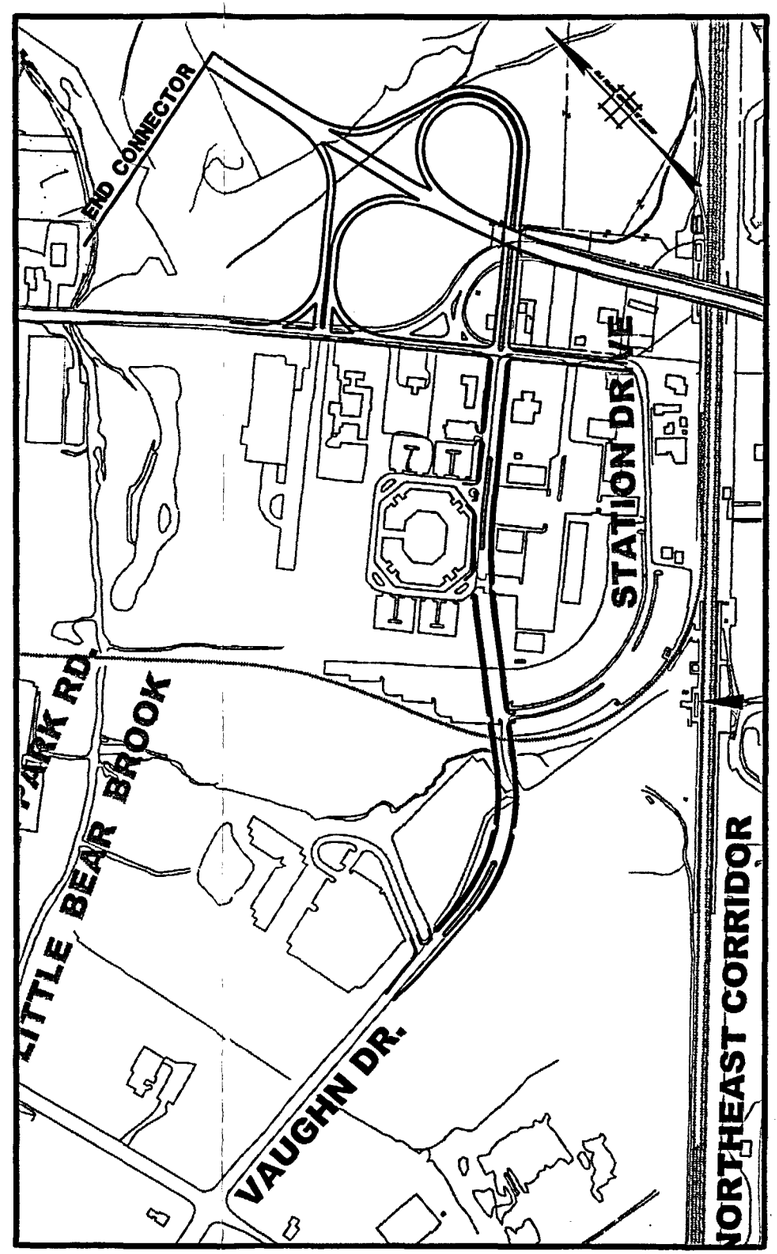
FIGURE 4-73



ALIGNMENT 1



ALIGNMENT 2



ALIGNMENT 3

POTENTIALLY CONTAMINATED SITES AS IDENTIFIED VIA DATABASE SEARCHES, SITE INSPECTIONS AND REVIEW OF REGULATORY PUBLICATIONS FOR THE PENNS NECK E.I.S.

NEW JERSEY DEPARTMENT OF TRANSPORTATION	
PENNS NECK AREA ENVIRONMENTAL IMPACT STATEMENT CONTAMINATED MATERIALS SCREENING VAUGHN DRIVE CONNECTOR ALIGNMENTS 1, 2 & 3	
DATE: 00/00/00 SCALE: 1"=500'	FIGURE 4-74

X-REFS:NONE
LAST EDITED:03/23/02
PROJECT#:366-22
FILE NAME&P: \1366\22\ENV\CMS-VAUGHN_ALIGNMENTS.DWG

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