SDA

NJ SCHOOLS DEVELOPMENT AUTHORITY

NEW JERSEY SCHOOLS DEVELOPMENT AUTHORITY

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Real Estate Practices Manual

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INTRODUCTION

This Real Estate Practices Manual represents a culmination of lessons learned over the last five years in addressing many of the land acquisition and development challenges faced by New Jersey in its school construction program.

This manual explains the typical site planning, site selection, preconstruction and land-acquisition steps and processes that the New Jersey Schools Development Authority (SDA) follows before a project is funded for design and construction by the State.

It describes the roles and responsibilities of the various stakeholders in school site selection and development, and the interdependent decisions required of them. The discussion in this manual starts at the point when a school district and its Board of Education propose a school project to the New Jersey Department of Education (DOE) for advancement as a project; proceeds through site development feasibility, preconstruction and land acquisition; and concludes with an overview of the process of relocating property and business owners who are displaced for the public benefit of constructing a new school.

This manual is intended to serve as a companion document to the SDA's 21st Century Schools Design Manual, which provides guidance on the design process. A copy of the 21st Century Schools Design Manual may be viewed or downloaded from SDA's website at www.njsda.gov.

Every school construction project offers its own unique challenges and complexities. There are no pat answers, and no cookie-cutter or prescriptive approaches, that can be followed for all school construction projects. It is the SDA's goal to give the reader an understanding of the many interrelated factors that must be considered in school site selection and development, especially in densely populated states such as New Jersey.

A consistent overriding theme of this manual is the importance placed by SDA on open and effective public communication and stakeholder participation throughout the school development processes, with the primary goal to deliver quality 21st Century schools to the children of New Jersey. In addition to playing a pivotal role in promoting an equitable, credible and democratic public influence in the site-selection decision process, these strategies have been found to support consistency, transparency and a layer of accountability. Whether it's a school construction project, or a mixed-use multimillion-dollar project intended to revitalize a community, most successful redevelopment projects have a common thread – early stakeholder involvement, commitment and collaboration is necessary and fundamental to gaining public confidence and trust.

This manual specifically applies to public school construction projects managed by the SDA. However, many of the concepts and best practices included in this manual are considered applicable to school site selection and development programs in general.

CONTENTS AND ORGANIZATION

The New Jersey Schools Development Authority's Real Estate Practices Manual is organized into four main sections along with introductory material and several appendices.

Section 1 – Preliminary Project Planning Steps

This section orients the user to the "what, why and how" of the manual. It defines what the manual contains, why it was developed, and defines the framework that follows in the real estate evaluation, acquisition and preconstruction processes.

Section 2 – School Site Selection Process

This section provides guidance and considerations taken into account by SDA when evaluating sites for construction of new schools.

Section 3 – SDA's Preconstruction, Land Acquisition and Communications Processes

This section provides an overview of SDA's preconstruction, land acquisition and relocation processes, including the methods used to communicate the findings to the public at large.

Appendix A: Site Feasibility and Environmental Site Closure Scope of Services

This appendix includes the Scope of Services for professional consultants working on site feasibility and environmental site closure for the SDA.

Appendix B: Schoolyard Planning

This appendix includes a publication on schoolyard planning and design in New Jersey.

Appendix C: SDA Relocation Procedures

This appendix provides a copy of the relocation procedures employed by SDA, including a pamphlet that summarizes the benefits afforded to residents and businesses that may require relocation.

Appendix D: Environmental Reviews by NJDEP

This appendix provides a summary of the various environmental reviews conducted by the New Jersey Department of Environmental Protection for school sites.

AUDIENCE FOR THE MANUAL

The audience for this manual is primarily key stakeholders involved with the site planning, site selection, preconstruction and land-acquisition phases of school development projects managed by the SDA. These stakeholders may include public, governmental and professional service providers such as:

- Local Community Officials
- Local School Boards
- Local Business and Community Leaders
- Parents, Teachers, Administrators and Staff
- Municipal Land Use Planners
- Architectural and Design Consultants
- Engineering and Environmental Professionals

It also is for interagency governmental agencies with which the SDA routinely collaborates, including:

- New Jersey Department of Environmental Protection (DEP)
- New Jersey Department of Education (DOE)
- New Jersey Department of Health and Senior Services (DHSS)
- New Jersey Department of Community Affairs (DCA)
- New Jersey Department of Transportation (DOT)
- The United States Environmental Protection Agency (USEPA)

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SECTION ONE

PRELIMINARY PROJECT PLANNING STEPS

Preliminary Meetings and Planning

The local school district and its elected Board of Education play the instrumental role of conductor in the process of school site planning and selection. As the future owner and operator of the school, the local school district bears much of the responsibility for ensuring that the most appropriate site is selected at the planning stages of the project.

District and Its Board Of Education Submit the LRFP

Every five years the governing body of each school district in New Jersey (typically the local Board of Education) is required to prepare and submit a Long Range Facilities Plan (LRFP) to the New Jersey Department of Education (DOE). There are several primary components to the LRFP, including an analysis of (1) district enrollment and grade alignments; (2) a district site and asset inventory; (3) a classroom inventory; and (4) a preschool community provider assessment and survey. The LRFP process provides the school district with the opportunity to formally assess its educational programs on a periodic basis, how they should be accommodated in their existing schools, and whether these educational objectives are not being met as a result of inadequate facilities issues or other factors.

Once the LRFP is adopted by the school district and its Board of Education, a copy of the LRFP must be submitted to the municipal planning board for a courtesy review. In reality, this does not happen in all New Jersey communities. Depending on the municipality, the LRFP is subject to a more formal review process to ensure consistency with the municipality's master plan, if such a master plan exists, and defines land uses for educational purposes. The Board of Education is ultimately required to adopt the LRFP through a formal Board resolution. Once adopted by a formal resolution, the LRFP is then submitted to the DOE for its review and approval.

Additional information on the LRFP process can be found on the DOE website at www.state.nj.us/education/facilities/lrfp/guidelines.pdf.

SDA Planning and Management Team Meets With the District

It is the goal of the SDA to meet with the District within 30 days after the DOE approves the LRFP adopted by the District and its Board of Education. During this meeting the specific educational needs of the District are formally communicated to the SDA's planning and management team, including concerns related to land acquisition, environmental remediation, displacement of residents and other unique site development issues affecting the ability to deliver schools within a specified schedule and budget.

DOE Reviews the Educational Needs and Prioritizes Facility Projects

The DOE evaluates the specific educational needs of the District within the context of the District's LRFP. When the LRFP is found to be consistent and aligned with DOE's educational planning objectives, the DOE formally notifies the SDA in writing that the District is in agreement and that the SDA should initiate the site selection and feasibility process with key stakeholders to acquire land or construct on an existing District-owned site. This written notification is also known as the "DOE Transmittal."

Identifying a Site

Public and Private Land Is Identified by the School District and Municipality

New Jersey currently exempts use of land for educational facilities from local zoning ordinances. By exempting schools from a local governing body's land use and development ordinances, it is not uncommon for unintended growth consequences to arise, especially when a school district decides to build a school on land that the municipality had designated for another use. Simply put, considerable financial pressure exists for many municipalities in New Jersey to maintain a sustainable tax base by preserving quality land for future residential and commercial development.

In accordance with SDA's preconstruction regulations adopted in November 2008, the Board of Education and the governing body of the municipality are required to complete an inventory of all District- and municipal-owned land within the municipality (e.g., owned by a parking authority, housing authority, redevelopment agency or county) and submit this land availability report to the DOE and the SDA. The report must include a map showing the location of each parcel owned by the District and the municipality within the sending area of the proposed school. If such land is not identified by the district or the municipality, the reasons why the land is not being offered for consideration must be explained in the report

Many of New Jersey's 566 municipalities effectively integrate school planning and local growth into their master planning framework. However, many do not. Many of New Jersey's municipal governments are highly capable and effective and have strong planning and community development abilities; others lack the resources to deliver these services in an effective manner.

Elected public officials and community leaders play a pivotal role in the school site selection and site development process. SDA has found that school planning is most successful when elected public officials and community leaders work collaboratively in a transparent and candid manner with school district educators. Whether this collaboration includes consideration of joint-use arrangements between the municipality and the district for parking, or the use of adjoining parkland for school recreational space, schools that are developed using Smart Growth principles benefit the communities they serve and vice versa. For a list

of Smart Growth principles considered by SDA in its school development program, see page 20 of this manual.

Where possible, the joint use of facilities is encouraged by the SDA. Not only do shared-use opportunities take maximum advantage of infrastructure and resources already in place, these shared uses often translate into shared maintenance costs between the district and the municipality. The District and its school board are required to consult with the local municipality to determine whether a joint-use facility is feasible and makes sense for the community. Joint-use projects can often reduce costs associated with land acquisition and infrastructure. Under a shared usage agreement for example, an adjacent park could be used by the new school for outdoor physical education programs during school hours.

School District and Municipality Submit a Land Availability Report

The SDA requires affirmation from the municipal governing body that the selected site(s) are consistent with community planning objectives. The intent of this affirmation is to avoid unnecessary spending of limited public resources on comprehensive site feasibility and environmental quality studies for sites that later prove unfeasible, or on sites that have been designated by the municipality for other uses.

The governing body of the municipality and the Board of Education are required to provide SDA with a written analysis concerning each District- or municipal-owned site, or privately owned site, explaining whether it is suitable for a school facilities project based on four key considerations: (1) cost and schedule impacts; (2) significant site location, size and improvement considerations; (3) known significant infrastructure considerations; and (4) known significant environmental considerations.

District is Encouraged to Identify Three Prospective School Sites in Order of Preference

The school district and its Board of Education are encouraged to identify three sites within the attendance area for the proposed school facilities project, and to submit a brief written analysis with the identified sites in order of their preference. This land may include District-owned land; municipal-owned land; other governmental-owned land (such as that owned by a parking authority, housing authority, redevelopment agency or county); undeveloped land; privately developed industrial or commercial land; and privately owned residential land.

The following information is required as part of the site identification and written analysis:

- Lot and block numbers and addresses of all parcels under consideration
- A description and photographs of the proposed site, including existing improvements
- A map of the district showing the location of the land in relation to existing schools
- A map showing the attendance area and the number of students who reside therein
- Data regarding the impact of the acquisition upon racial balance
- The District- and DOE-approved school programmatic model

- An assessment of the availability of water and sewer infrastructure
- The current municipal zoning and/or redevelopment plans for the properties under consideration
- To the extent available, any prior engineering, architectural and/or environmental quality reports for the properties
- To the extent available, as-built documents, in the case of acquisition of land with an existing facility to be renovated for a school.

SDA Reviews the Land Availability Report and Completes an Independent Desktop Site Review

The SDA reviews the written analysis provided by the municipality and the District and conducts a desktop site review of the preferred site in an independent peer review capacity using readily available information such as:

- Recent aerial photographs of the site and surrounding area
- Aerial history (one per decade back to 1940, or earlier for older parts of New Jersey)
- Surrounding area land uses (site visits)
- Historic Sanborn maps (old fire insurance maps) or other readily available historical city maps
- Wetlands, floodplain information (DEP file reviews)
- Surrounding known environmental issues from a commercial database search provider
- Community displacement and relocation cost and schedule estimates.

The desktop review provides an opportunity for SDA to conduct an independent evaluation of possible environmental challenges or extraordinary site development and infrastructure improvement issues that could affect a project construction schedule. This evaluation focuses on four key elements.

Cost and Schedule Impact: Adjustments to overall project schedule, complexity of land acquisition, fair-market value considerations, and time-value of money to advance the project through land acquisition, design and construction.

Significant Site Location and Improvement Requirements: Technical impracticability of remediation, constructability, community impacts related to construction and time to implement (extended and extensive transportation impacts in residential neighborhoods, etc.), compatibility of neighboring land uses, and excessive relocation and displacement impacts.

Significant Infrastructure Requirements: Insufficient water supply (drinking and fire), insufficient sewerage capacity (sanitary and storm), traffic impacts (e.g., requiring road widening, partial takings, redirection, signalization, etc.), utility relocation – cost and compatibility with school construction schedule.

Significant Environmental Requirements: Environmental quality in need of remediation (soil and groundwater), historic and cultural resources, compatibility with neighboring land uses, wetlands, stream encroachment, endangered species and Green Acres encumbrances (e.g., public park land or conservation easements).

If the District's preferred site does not survive the desktop review conducted by the SDA after consideration of the site-specific conditions, then the second preferred site is evaluated by SDA, and so forth.

Interaction with the Community

School District is Encouraged to Host a Community Advisory Committee

In response to new preconstruction rules adopted by the SDA in November 2008, all SDA Districts are encouraged to provide opportunity for the community at large to have a meaningful participation in the site selection process. The District is encouraged to establish a community advisory committee to receive reports and information concerning proposed school sites and provide input on the suitability of sites selected by the District.

While it is often not possible to reach unanimity among stakeholders, the SDA has found that this style of community participation early in the site selection and planning process often serves to address concerns about a proposed site in an open and civil manner. This early involvement is viewed by SDA as an opportunity to encourage open debate and build consensus in the site selection. This type of involvement is especially important to air environmental problems that may complicate site development.

This committee is not a decision-making body; however, SDA's experience has shown that formation of such an advisory committee plays a pivotal and important role in promoting transparency and a layer of accountability in the site selection process. This committee should ideally be composed of, but not limited to, a broad range of interested parties, such as parents and teachers, business and community leaders, school administrators and board members, land use planners and engineers, and government officials.

Prior to hosting such a meeting, the school district is encouraged to provide the following information to the committee members. Ideally, this information should include the following:

- District and DOE-approved LRFP.
- Current municipality zoning ordinance and tax maps.
- District map showing nominated site and nearby schools.
- District map showing sending area for the proposed school.
- District map showing District- and municipal-owned land within sending area.
- Addresses and their respective Tax Lot and Block designations.
- Municipal zoning of each parcel that comprise the proposed project locations.

- Description and photographs of the area (showing existing improvements).
- Available environmental quality and historic usage of the proposed locations.

School District Hosts a Public Hearing

Consistent with the goal of open and transparent site selection and school development program, each school district, after consideration of the many site selection factors that go into such a decision, is required to host an advertised public meeting to introduce the preferred site for the school to the community.

The school district is required to provide an endorsement of the selected sites by an authorized member of the community advisory committee, and a statement duly executed by school district officials that a special meeting of its school board has been held to inform community residents of the sites that have been prioritized by the district.

Board of Education Passes a Resolution

Upon finding there are no substantial objections by the community or other stakeholders to the chosen sites, and that the evaluation undertaken by the district and SDA to vet potential sites has not identified an insurmountable fatal flaw, the District's Board of Education is required to pass a resolution to initiate preconstruction activities.

SDA'S First Steps

DOE Authorizes the SDA to Start Preconstruction Activities

Once the Board of Education passes the resolution to initiate preconstruction, only then will DOE authorize SDA to proceed with preconstruction activities. At this point, DOE issues a formal "transmittal" to the SDA to initiate preconstruction. The transmittal is in the form of a letter to SDA that identifies the specific property or properties that may proceed into preconstruction. Preconstruction activities are defined as activities that must be undertaken before the DOE will approve funding. Such activities may include site feasibility analysis, investigation and acquisition of land, remediation and site-related design work, identification of relocation benefits for residents and businesses, and acquisition of temporary facilities.

Formation of Project Team

Once the DOE authorizes the SDA to initiate preconstruction activities, the SDA assembles a Project Team of real estate site-feasibility and planning professionals to prepare an initial project charter and order-of-magnitude cost estimate for the project. The SDA Project Teams rely on available information, conceptual site plans and schematic design drawings, desktop site review documentation and professional judgment to assist in estimating the real estate and environmental costs required for the initial Project Charter. Additional site feasibility and environmental site analysis takes place after the SDA Board approves the project charter.

SDA Board Approves the Project Charter

The Project Charter defines the project scope of work, the project milestones and the budget that will be presented to the SDA Board for approval. The approved Project Charter is the governing document that guides the decision-making for the SDA Project Team, defining the performance benchmarks of the project in terms of quality, schedule and budget. Most importantly, it establishes the authorization of the SDA Board to commit funding from the Capital Plan for a specific school project.

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SECTION TWO

SCHOOL SITE SELECTION PROCESS

As previously noted, school site selection in New Jersey is the responsibility of the local school district. As the future owner and operator of the school, the local school district has a vested interest in identifying viable sites for school construction within its community. Not only do school site-selection decisions not only directly impact the learning environment but are critical to the continued success and vitality of New Jersey's cities.

Site identification, site development feasibility studies, land-related design work, site remediation, demolition and acquisition of temporary facilities are governed in New Jersey by preconstruction regulations (N.J.A.C. 19:34-3.2). These rules outline the standards and procedures for the SDA's undertaking and funding of preconstruction activities on behalf of SDA Districts. These rules provide for the involvement of SDA Districts, the public and stakeholders at critical points throughout the preconstruction phase of a school facilities project, including the identification and selection of proposed school sites for school facilities projects. The opportunities created by these rules for community input in the identification and selection of prospective school sites by the school districts integrates greater transparency, accountability and environmental equity into the site development process.

SDA's preconstruction regulations require a meaningful public participation process in site selection and encourage school districts to establish a community advisory committee to promote community participation during the various phases in the development of school facilities projects. The preconstruction regulations require that the committee be composed of a broad range of interested parties, such as parents and teachers, business and community leaders, school administrators and board members, land use planners and engineers, and government officials.

Figure 1 provides a summary of the key components of the site planning and site selection process followed by SDA before a school project is advanced for funding by the State of New Jersey. ***Figure 2*** provides an overview of the preconstruction process followed by the SDA once it receives authorization from DOE to initiate preconstruction activities on a particular site selected by the school district for a new educational facility.

Figure 1: SDA Site Planning and Site Selection Process Overview

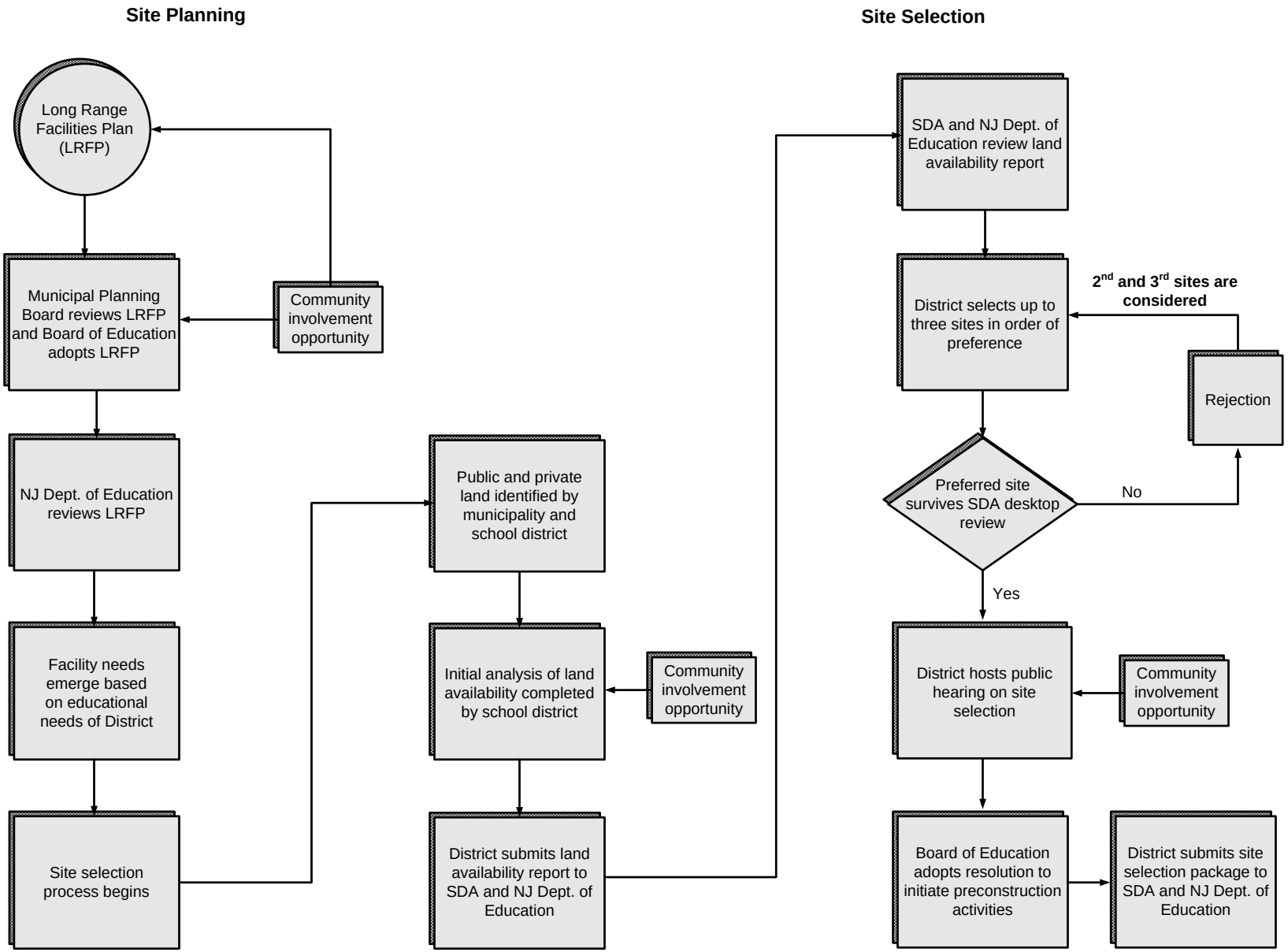

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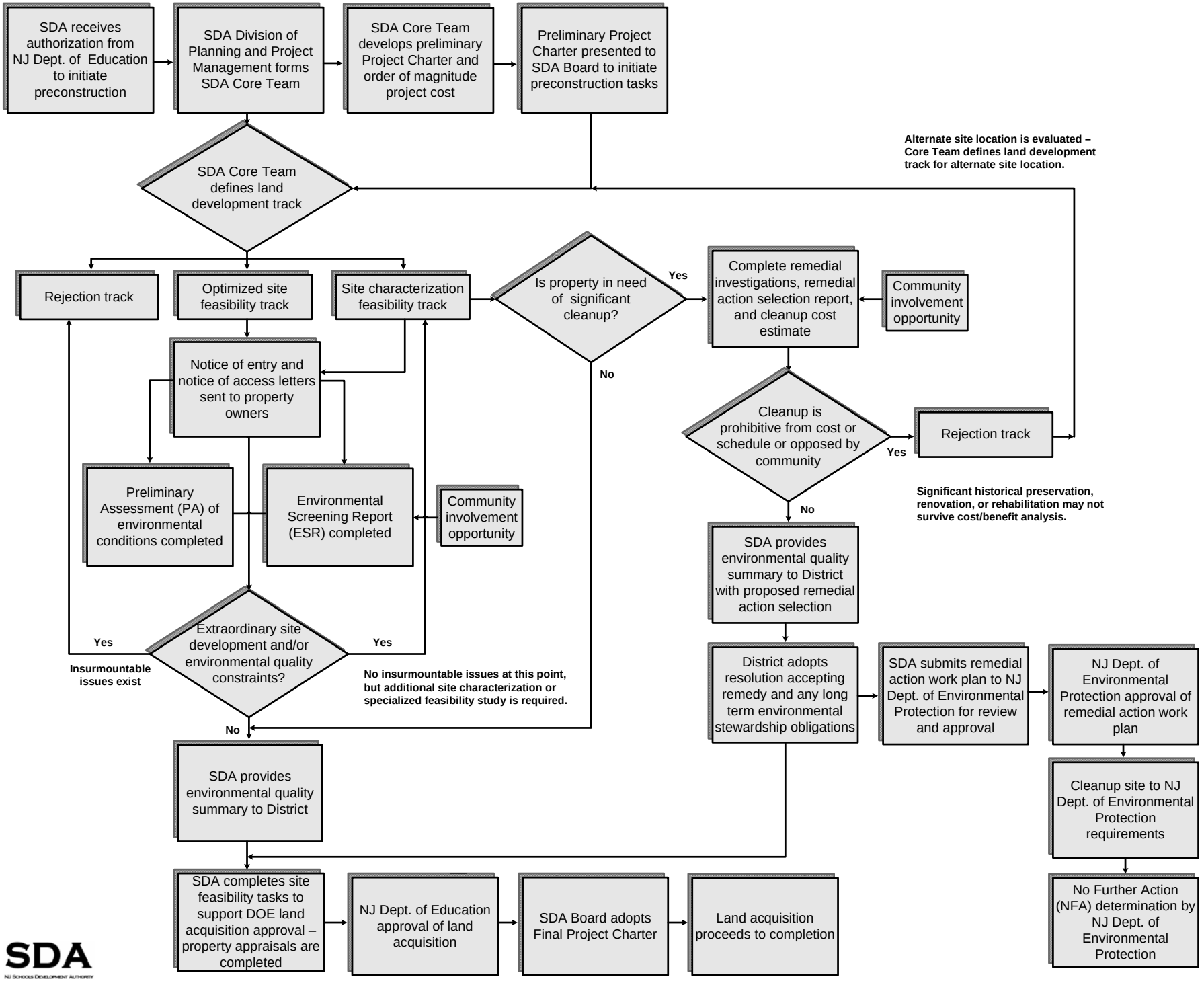
Figure 2: SDA Real Estate Preconstruction Process



Understanding the Basics

There are no minimum acreage criteria for schools in New Jersey. Although some states have defined minimum acreage requirements for different educational programs, most states and school districts have steered away from establishing minimum school size guidelines. New Jersey law only requires that the land be of sufficient size to meet the educational needs of the student enrollment and the faculty. Specific land requirements for building size, outdoor physical education space, and parking need to accommodate the school's educational model and unique circumstances of the school and is best managed in partnership with school districts, design professionals and the local community that the school serves.

In 2007, the New Jersey Institute of Technology (NJIT) Center for Architecture and Building Science Research developed guidelines for the design of outdoor spaces for school construction projects funded in New Jersey. A copy of this guidance document is included in Appendix B.

Key Considerations in School Site Selection

In addition to the primary considerations for school site selection described above, a number of other key factors are addressed during site development feasibility studies performed by professional architectural and engineering firms under a three-year term contract with the SDA. These site feasibility studies are multidisciplinary reviews that provide additional details on site development constraints that may impact the project scope, schedule and budget, and are best completed before real estate acquisition through fee simple or condemnation proceeds.

The scope of a feasibility assignment is typically defined by the location of the proposed school facility project, and the complexity of the assignment can vary widely depending on the site-specific circumstances of the property under consideration. Feasibility studies may include, but are not limited to: geotechnical and preliminary architectural design studies; evaluation of land-use requirements to meet educational adequacy needs; evaluation of community relocation and displacement requirements of the project; adequacy of utilities such as water supply, sewerage, power and gas; evaluation and quantification of environmental quality issues; development of appropriate specifications for exposure pathway controls and site remediation; evaluation of traffic impacts related to the school; compatibility of neighboring land uses, impacts to the local community; and the evaluation and definition of preservation needs for historical buildings and culturally significant resources.

Table 1 summarizes the site-specific factors that are considered by the SDA in site selection.

The SDA relies on a wide range of professionals and firms to perform the work associated with the site feasibility process. The professional services of these firms are obtained through an open procurement process. Specific activities performed by these professional is defined by a Site Feasibility and Environmental Site Closure Scope of Services, a copy of which is

included in ***Appendix A***. This Scope of Services sets forth responsibilities, obligations and deliverables required of the Site Consultant. In December 2007, SDA revised its Site Feasibility Scope of Services to clarify various task and responsibilities and identify additional performance-based tasks that may be needed during the course of the project feasibility analysis.

Table 1
Selection Criteria Evaluated by SDA for Proposed School Sites

Public Acceptance Considerations

- Public acceptance of proposed site.
- Community involvement in selection process is open and transparent
- Receptivity of joint use arrangements
- School concept is consistent with Healthy and Smart Schools
- Zoning conflicts, title clearance, condemnation by eminent domain issues are manageable
- Public acceptance of site remediation program
- Compatible with Smart Growth principles
- Joint land use opportunities exist and are vetted with municipality
- Adaptive reuse of older schools is fully considered from educational adequacy perspective
- Minimizes relocation of residences and businesses

Property Size and Shape Consideration

- Sufficient land for athletic field and playfields if no joint use options
- Municipality setbacks are clearly defined.
- Adequate bus loading and teacher parking if no joint use option
- Potential for expansion
- Site is free of encumbrances, conservation easements
- Meets NJDEP education model
- Sensitive to community needs

Location Considerations

- Sustainability is considered in site selection
- Site encourages safe and pedestrian access for the community
- Centrally located to balance transportation options
- Compatible with current and probable future zoning regulations
- Close to libraries, parks, and other community services
- Favorable orientation to wind and natural light
- Sensitive to open space needs of community

Accessibility Considerations

- Access and dispersal roads
- Natural obstacles, such as creeks, rivers, gullies
- Access for emergency response vehicles, sanitation vehicles.
- Road widening and traffic improvements are minimized

Environmental Considerations

- Long history of industrial or commercial use in area - Proximity
- Consistent with redevelopment plans of community
- Noise mitigation needs are considered - Opportunities exist for FAA noise reduction grants
- Environmental remediation and regulatory approvals are compatible to project schedule
- Radon and soil vapor intrusion issues can be mitigated using proven engineering methods
- Regulatory conflict, such as wetlands, stream encroachment, Green Acres, endangered species
- Historical and cultural resource preservation addresses local, state and federal requirements
- Aircraft flight patterns are understood and considered

Utility and Infrastructure Considerations

- Availability of water, electricity, gas, sewerage.
- Condition of existing utilities, obsolescence, leaking water lines
- Fiber optic corridors requiring relocation
- Easements

Safety Consideration

- Adjacent to highways
- Railroad proximity
- Airport proximity
- High-voltage power line proximity
- High-pressure utility lines
- Close to dumps, junkyards, landfills, chemical plants, refineries, fuel storage tanks, nuclear plants
- Close to gasoline service stations, automobile repair shops, drycleaners, nail salons.
- Close to metal manufacturers, hazardous air pollution emitters, incinerators, prisons.
- Social hazards in the neighborhood, such as bars, high crime incidence

Cost Considerations

- Fair market value
- Diminution of property value due to environmental concerns
- Cost for purchase - complexity of land acquisition
- Inverse condemnation liability
- Excessive relocation of residents and businesses
- Adaptive reuse costs - historic preservation needs
- Demolition plans include asbestos and lead-based paint abatement
- Reasonable site preparation, drainage, grading
- Long term stewardship obligations defined for District
- Remediation cost/benefit analysis completed
- Public private partnerships must be explored
- Remediation costs exceed property value
- Extraordinary site development costs are excessive

Soils and Topography Considerations

- Stable subsurface and load bearing capacity
- Danger of slope failure
- Permeable soils to allow drainage and stormwater detention
- Presence of historic fill resulting in incremental soil disposal costs.
- Steep grades result in extraordinary site development
- Level areas for playfields

Determining Property Size

In many of New Jersey's older cities, land parcels are small, and it usually requires the assemblage of numerous parcels to accumulate sufficient land to build a school. As previously stated, there is no minimum acreage requirement for school sites in New Jersey. Many states and school districts have steered away from establishing minimum school size guidelines. New Jersey law only requires that the land be of sufficient size to meet the educational needs of the student enrollment and the faculty. Districts are required to optimize land acreage to meet the educational adequacy and outdoor education space requirements, and to be sensitive to the needs of the community.

Outdoor Education and Play Space Requirements

Land necessary for outdoor education and play areas is considered in the site feasibility and preconstruction process. In the spring of 2006, the DOE engaged the Center for Architecture and Building Science Research at the New Jersey Institute of Technology and the Educational Law Center to assist in the development of guidelines for the design of outdoor spaces for school construction projects. A report was published in the summer of 2007 entitled "Schoolyard Planning and Design in New Jersey." A copy of this report is included as ***Appendix B.***

Parking Guidelines

The amount of parking necessary for a school varies by the type of school, population density and availability of public transportation. Adequate parking for teachers, staff and visitors is considered as part of the site selection and acquisition process (see ***Table 2***), but generally parking is considered subordinate to the need for adequate outdoor educational space where constraints in available land do not allow for the optimal creation of both play space and parking. When this situation arises, creative alternatives for parking are sometimes necessary. This may include cooperative agreements with the municipality for on-street parking, off-site parking or the use of underground parking options.

The number of faculty parking spaces can vary by the type of school, the population density of the community, and the availability of public transportation. Table 2 provides the parking guidelines recommended by SDA for use in pre-kindergarten through 8th grade and high school construction projects.

Table 2: Parking Guidelines

Site Conditions	Guidelines for Parking Spaces per Teaching Station
High density urban site with public transportation nearby	0.8 spaces
Low density urban site without public transportation	1.2 spaces
Non urban site without public transportation	1.4 spaces

The district and its board may consider underground parking options, among other strategies such as off-site parking, in lieu of acquiring additional land solely for the purposes of parking. In order to determine whether underground parking is cost effective, the district must take into account certain factors including:

- Whether excess soil generated during construction may be reused on-site from an environmental quality perspective;
- Whether groundwater conditions will add premiums to the construction/operation of the substructure parking; and
- A review of security concerns relating to faculty parking beneath school buildings, specifically in context of newly enacted Homeland Security requirements.

This has led to consideration of parking alternatives other than below-grade parking. The parking need not be directly adjacent to the school except as otherwise required to meet the Americans with Disabilities Act, accommodate bus drop-off/pick-up lanes and provide faculty parking spaces in accordance with the parking standards adopted by the DOE. The SDA may opt to provide faculty parking in a consolidated manner (serving more than one school's needs) in locations which are remote from one or more of the schools served.

Should additional parking be required beyond the guidance established in this manual, such as in instances where community features are built into the school, the municipality or the district should consider providing for parking through means of street closures, permit angled parking and/or the adoption of other parking regulations or local share agreements between the municipality and the school district.

Evaluating Adaptive Reuse Options

Under certain circumstances, it may make sense to enlarge or renovate an existing school. This evaluation needs to be compared to the cost, time and complications of purchasing property and constructing a new school. However, many older schools are in poor condition and don't meet current educational needs and standards. The challenge is to determine whether these schools can be rehabilitated efficiently and cost effectively to meet 21st Century educational standards.

Older school buildings can be significant community assets and require careful evaluation before deciding to demolish and build new. The educational, health and community benefits of older schools can be compelling. Older schools located in established neighborhoods offer easy accessibility for students to walk or bike to school, can serve to sustain established neighborhoods, and provide a center for community activity.

Smart Growth

Because schools profoundly affect the communities they serve, the integration of Smart Growth principles into educational facility planning is fundamental. Successful Smart Growth programs involve residents, businesses and other stakeholders early in the project to define, refine and implement the community's vision and goals.

Smart Growth is broadly defined by the United States Environmental Protection Agency (USEPA) as a development that serves the economy, the community and the environment. The USEPA recognizes a number of key attributes of Smart Growth, including mixed land uses, compact building designs, walkable neighborhoods, development of communities with a strong sense of place, integration of open space, use of infill development strategies and consideration of balanced transportation options.

Mixed Land Uses: Mixed land use concepts by definition promote livable and sustainable neighborhoods. Pedestrian-oriented opportunities arise when housing, shops, offices, schools and other land uses are integrated into the same neighborhood, With more people walking through the streets at different times of the day, communities benefit from diversified economic activity, and in some situations, increased security.

Compact Building Design: Compact building designs reduce infrastructure costs. Water, sewer, electricity, phone service and other utilities are less expensive to construct and maintain per unit in more compact sites than in dispersed sites. The preferred model of construction to be used by the SDA where possible shall be a vertical model and it is recommended that districts take such models into consideration when proposing sites.

Walkable Neighborhoods: Walkable communities expand transportation options and create places that serve a range of users: pedestrians, bicyclists, transit riders and drivers. Walkable places also encourage everyday physical activity, which is vital to good personal health. To encourage walking, communities should mix land uses, build compactly, and ensure safe and inviting pedestrian corridors.

Communities with a Strong Sense of Place: Development should represent the values and the unique history, culture, economy, and geography of a community. Smart growth development creates a sense of defined neighborhoods, towns and regions. It encourages construction and preservation of buildings that prove to be assets to a community over time because of the services they provide and the unique contribution they make to the look and feel of a city.

Open Space and Preservation of Critical Environmental Areas: Open space preserves critical environmental areas, improves air quality, improves the quality of life and guides new growth into existing communities.

Infill Development: Development that invests in existing neighborhoods takes advantage of the infrastructure and resources already in place, thereby maintaining the value of public and private investment. By encouraging "infill" development, communities benefit from a stronger tax base, greater proximity of a range of jobs and services, and reduced development pressure in fringe areas.

Balanced Transportation Options: A balanced transportation system that incorporates many means of travel — private cars, buses, rail, walking and biking — and is supported by land-use patterns increases choices for moving around a city. Providing more transportation options can help reduce air pollution and traffic congestion. For citizens who do not drive, it increases mobility.

Increased Community and Stakeholder Collaboration: Smart growth can create great places to live, work, and play — if it responds to a community's sense of how and where it wants to grow.

Transportation Routes: Traffic impacts can affect local neighborhoods. Significant traffic impacts such as road widening, partial takings, redirection of traffic and closing streets can add to local congestion and reduce access. To the extent that a new school will increase parking needs, this should also be considered.

Another consideration is the presence of major roadways. Several states have laws preventing the location of schools near interstate highways or major busy roadways. Although there are no restrictions for locating schools near major roadways, such proposals are subject to community objection and potential rejection. The presence of railroads should also be considered as well as the proximity of nearby airport and associated landing patterns. Noise of approaching and departing aircraft can impact the school environment and may adversely impact student performance.

The Federal Aviation Administration (FAA), in conjunction with the Port Authority of New York and New Jersey (PANYNJ), provides grants to urban school districts for noise abatement for schools near New Jersey's major airports. In order for a school to be eligible for inclusion in the program, it must meet federal criteria established by the FAA. Schools must either be within the latest 65 Day-Night Sound Level (DNL) noise contour around the airport, as measured by FAA's Noise Model, or the interior noise levels of educational space within the school must exceed 55 decibels using band limited dB(A). Items that are funded include triple glazed windows and soundproofing.

Surrounding Land Use: Studies have shown that land-use conditions surrounding a school can affect the learning environment within the school. Consideration should be

given to the surrounding land uses. Activities such as prisons, landfilling, incinerators, bulk liquid storage terminals, manufacturing facilities that emit hazardous gases and particulates and/or loud noises should be avoided.

Also to be included in this discussion are environmental features such as wetlands, endangered species, floodplains, stream encroachment and steep slopes that are to be preserved. Wetlands are protected throughout the United States. In particular New Jersey has laws against destroying certain types of wetlands. The site needs to be surveyed by a Certified Wetlands Specialist and a determination made as the presence of wetlands.

Utilities: The availability and adequacy of utilities should be considered. This includes water supply, sewer, gas, telephone, power (electrical lines), fire protection, police protection and other support systems for the school. If certain utilities are present, a basic assessment as to their adequacy to support the additional requirements of the school should be made. The relocation of utilities to accommodate the school building should be considered. Fiber-optic cable is an example of a utility that is very expensive to move and cannot be placed under a school**.**

Relocation and Displacement: School site acquisition in urban areas usually includes the relocation of business and/or residents. This will impact cost and time to acquire the site and add complexity to the project. Relocation should be avoided when the proposed site contains any of the following uses: large apartment buildings and commercial, industrial and manufacturing facilities requiring extensive relocation of machinery and other equipment.

Environmental Analyses Unique to School-Aged Children

Because child behavior differs from adult behavior in ways that directly impact their duration and exposure to various types of environmental pollution, the SDA undertakes comprehensive site characterizations to support the ultimate goal of building schools that are safe for children, faculty and the community.

Children differ anatomically and physiologically from adults. Children generally eat more food, drink more water, and breathe more air relative to their body size than adults do and, consequently, may be exposed to relatively higher amounts of environmental pollution. Children's normal activities, such as putting their hands in their mouths or playing on the ground, can result in exposures to pollution that adults do not face. In addition, environmental pollution can affect children disproportionately more than adults because the immune systems and bodily organs of school-aged children are still developing.

All environmental investigation and remediation activities must comply with Department of Environmental Protection (DEP) and DHSS guidance and regulations, which are based on strict exposure thresholds based on property usage. New Jersey's Soil Remediation Standards are among the strictest in the nation, and are subject to continuous revision to protect public health.

Depending on the unique conditions of a property and documented historical use, some or all of the reports listed below are required by SDA to satisfy state regulatory requirements to demonstrate that a site is safe for the children, faculty and the community. This documentation may include:

- Preliminary Environmental Assessment Reports
- Environmental Screening Reports
- Remedial Investigation Reports
- Remedial Alternative Analyses and Remedial Action Selection Reports
- Remedial Action Work Plans
- Technical Bid Specifications for Asbestos Abatement, Demolition and Site Remediation Work
- Remediation Progress Reports
- Remedial Action Reports
- Human Health Risk Characterization Reports
- Environmental Quality Fact Sheets

Environmental Equity

SDA Districts are among some of New Jersey's historically most disadvantaged communities. The SDA believes that environmental equity is attained through strict compliance with all environmental laws, regulations, and internal policies and procedures, and by working collaboratively with the public to ensure a consistent and equitable approach to environmental decision-making, resulting in fairness to both the public and the planet.

The mission of the SDA is to create a more promising future for the children of New Jersey by providing safe, healthy and sustainable schools that create a positive learning environment and strengthen the community. The SDA promotes environmental equity concepts in its real estate program. For example, SDA is committed to building environmentally safe and sustainable schools; is proactive in involving children, teachers, parents, school districts and communities in the development of schools; constructs schools that are multifunctional to address the needs of the entire community; and incorporates green building-design elements in its construction.

The level of resources and technical expertise committed to assuring healthy schools is consistent with all other school districts throughout the state. As previously discussed, children are among the most susceptible populations to environmental conditions, regardless of their geographic location. The same approach to evaluating site environmental conditions and eliminating exposure is applicable to all schools, both in SDA and Regular Operating Districts. The remediation and design standards required by SDA do not vary by geographic location.

NJSDA Real Estate Practices Manual

SECTION THREE

PRECONSTRUCTION AND REAL ESTATE ACQUISITION

The Real Estate Division of the SDA is composed of three service units – Land Acquisition, Environmental Services and Community Relations. Land Acquisition is responsible for the appraisal and acquisition of real property, relocation of displaced residents or businesses, and property management until the time that school construction commences. Environmental Services is responsible for completing site feasibility and environmental surveys and remediation of the real estate in accordance with state and federal environmental laws and regulations. Community Relations is responsible for providing community outreach and communications support to the Environmental Services and Land Acquisition functions.

Land Acquisition: Roles and Responsibilities

Under the Eminent Domain Act of 1971, real estate may be acquired for a public use either through a consensual fee-simple negotiated purchase or through a taking, which is commonly referred to as condemnation. Well-established laws and regulations exist for appraising property values, negotiating with land owners, providing written offers to property owners, and where necessary, making a petition to the courts for the taking of property for public purposes. Under both scenarios, all property owners' rights are preserved by the Fifth Amendment of the United States Constitution and Article 20, Paragraph 1 of the New Jersey Constitution, which provide for just compensation of owners whose property has been identified for public purposes.

Real Estate Condemnation Proceedings

If the issue of just compensation cannot be resolved through voluntary settlement negotiations, the SDA may file a lawsuit to acquire property through an eminent-domain proceeding. Eminent-domain proceedings are often called condemnation proceedings.

The first step in the condemnation proceeding is the filing of a "Civil Action Complaint" by the SDA. This complaint "freezes" the valuation of the real estate as the basis for all future settlement discussions, including commissioner's award and trial. The commissioners are appointed by the court and are typically composed of two attorneys and one appraiser.

After the civil action complaint is filed, the SDA is required to provide the property owner with an updated appraisal report current to the date of the civil action complaint, and may attempt to settle with the seller for this updated amount.

Prior to seeking physical possession of the real estate, the SDA will deposit into court an amount of money not less than its offer of just compensation for the property. If the updated appraisal is revised from the original just compensation offer, then the amount of money deposited into the court is also subject to a commensurate revision.

At this point the court-appointed commissioners will render their award of just compensation. If there is disagreement with the amount of the award by the SDA or the property owner, an appeal can be filed and a trial by judge and jury will determine the just compensation.

Real Estate Appraisals

The appraisal of real estate is an integral function of SDA's Real Estate Division. Before an offer can be made to any property owner, an appraisal of the real property and improvements must be completed by a licensed real estate appraiser under contract by SDA. All licensed real estate appraisal firms are required to complete their appraisals using nationally recognized appraisal standards and techniques.

Before an appraisal is commissioned, the SDA provides the qualified appraiser with:

- Name and address of the property owner
- Tax map lot and block designation of the property along with a copy of the relevant portion of the tax map of the municipality where the property is located
- Copies of any other maps, legal description or dimensions of the property that SDA might have.

The concept of "highest and best use" is very important when estimating land value. The highest and best use of a property means the most profitable or beneficial use of the property. Such a use represents the theoretical balance between land and building investment. It also results in the greatest present value of the land during the economic life of the improvements or the structures.

By law, SDA must offer just compensation for the property. This amount can never be less than the approved appraisal's stated fair market value. The payment of just compensation for property is arrived at through negotiations between the property owner and the SDA, or if a mutually agreeable price is not negotiated, through eminent domain. Fair-market value is defined as the price at which a knowledgeable, willing seller would agree to sell the property and a knowledgeable, willing buyer would agree to buy it, with neither seller nor buyer being forced to act. This process is also known as "bona fide negotiations."

In addition to an appraisal of the value of the land and structures (real property), during the process of purchasing property for school development, the Land Acquisition section may be required to estimate value of machinery and equipment (personal property). While not described in all of its technical details in the manual, most appraisals commissioned by SDA use one of the following three approaches:

- Cost New in Place (CNIP)
- Fair Market Value in Place (FMVIP)
- Orderly Liquidation Value (OLV).

The appraisal process includes:

- An inventory of the personal property, machinery, equipment, office furniture, etc.
- Site inspection to identify the assets and determine condition and functionality
- Highest and best use analysis of the assets in their current condition
- Appraisal of cost to replace or fair market value.

SDA Board Approval for Land Acquisition

All land acquisition must be approved by the SDA Board. Based on the results of the site feasibility and environmental review, title search, appraisal and a relocation assessment, a detailed memorandum is prepared for the SDA Board to approve the purchase of real estate in closed session. Only after such approval may the SDA begin negotiations with property owners.

DOE Land Acquisition Approval

In addition to approval by SDA's Board, approval is required from the DOE before real estate may be acquired by the SDA. The primary role of the DOE is to ensure that the proposed site meets the educational needs of the school. This "educational adequacy" generally translates into size and suitability of the site to accommodate the educational programmatic model for the school, including outdoor physical educational requirements, adequate faculty parking, pedestrian walkways, fire lanes and public-service access roads.

The DOE, in its land acquisition approval, also takes into account other factors such as water and sewerage availability, consistency determinations with the local municipality master plan (if one exists), and the likelihood of obtaining various environmental regulatory approvals from the DEP. This approval is not a substitute for detailed engineering investigations that would be necessary to satisfy environmental due diligence or to define remediation requirements.

Offer Package to Land Owners

Once the SDA Board approves the land acquisition, the SDA is able to proceed with bona fide negotiations with the property owner with the intent to reach a voluntary agreement on just compensation. An offer package is provided to the property owners at this time. This offer package is sent to the property owner by certified mail, or in some instances, hand-delivered by the assigned SDA Real Estate negotiator. Generally, payment is made by SDA within 60 days upon reaching a voluntary agreement to sell the property.

The offer package includes a letter from SDA that defines the purchase price (based on an appraisal of fair-market value). The offer package includes a standard form of contract of sale, which is unique to the State of New Jersey in compliance with the Eminent Domain Act of 1970. This contract specifies the purchase price, and if applicable based on an environmental review of existing site conditions, an estimate of environmental cleanup costs

associated with the property. This environmental review may be completed through visual inspection and does not necessarily include field testing for environmental pollution. Environmental testing is a critical component of the land acquisition process. The scope of the testing is generally based on an environmental review of existing site conditions and site history. The results of the testing and the estimated remedial action costs to meet DEP requirements are contained in a detailed Property Acquisition Environmental Cost Estimate Report (PAECER). This report is prepared by qualified environmental consultants and a copy is provided to the seller.

The draft contract of sale includes a copy of the real estate appraisal prepared by a state-certified real estate appraiser, and may also include a "metes and bounds" survey of the real estate prepared by a licensed surveyor. It is important to note that the final metes and bounds survey of the property may still be under development at this time. However, the final survey is required to complete the real estate transaction at closing.

Although not required, the SDA encourages property owners to hire an attorney to prepare contract and transactional documents and represent them during negotiations. The SDA is not permitted to pay the seller for the costs of transactional document preparation and representation by their legal counsel. However, if the property owner agrees to waive legal representation, the SDA's legal counsel will prepare the contract documents at no cost to the seller.

Once the standard form of contact is fully executed and delivered to both parties, the contract of sale is considered a valid contract, and the real estate closing process can be scheduled.

Real Estate Closing Process

A mutually agreed-upon date for the real estate closing is scheduled, usually within 60 days of delivery of the fully executed contract of sale. During this time period, several actions are completed by SDA's legal counsel and SDA's in-house legal assistance staff related to the "clearing of title." A property is considered to have a clear title when it is free of liens and judgments against the seller and free of mortgages. Closing can take place once the title is clear. It is common for liens on the property to be satisfied at closing.

Closing documents are prepared by SDA's legal counsel (or by the seller's attorney if the seller so chooses to pay for this service.) These closing documents include an original deed, an affidavit of consideration (which is an attachment to the deed that lets the County Clerk know the transaction is exempt from realty transfer taxes), a certification of the seller to ensure that appropriate capital gains taxes are distributed to the State of New Jersey, and an affidavit of title (a sworn statement that the seller owned the property.)

There may be income tax consequences if property is acquired for public purposes such as a school. Internal Revenue Services Publication No. 544, available from the IRS, explains the tax implications.

All documents and keys to the real estate are exchanged, and a Housing and Urban Development (HUD) settlement statement is executed memorializing the financial terms of the transaction. This settlement statement is conventionally known as the HUD-1 form.

SDA's legal counsel prepares a "closing binder" containing all documents, and closing is now considered complete.

Property Management

At the time of closing, SDA takes title to the property and responsibility for its condition. Land Acquisition assigns a property manager, who maintains the property until it is vacated. Once vacated, the property manager disconnects the utilities and prepares any structures on the property for demolition.

Relocation

There are strict state and federal laws and regulations that govern the relocation of residents and businesses that may be displaced from land proposed for construction of a new school. Relocation of these residents and businesses is a critical function of the Land Acquisition Unit. ***Appendix C*** provides a copy of the relocation procedures employed by SDA, including a pamphlet that summarizes the relocation benefits afforded to eligible residents and businesses that may require relocation.

The SDA is required to develop a Workable Relocation Assistance Plan (WRAP) for each residential or commercial relocation eligible for relocation benefits. The purpose of the WRAP is to summarize the needs of the displaced, assist in obtaining replacement housing and business locations, and define the amount and availability of funds necessary to complete relocation.

Environmental Services: Roles and Responsibilities

The Environmental Services Group within SDA's Real Estate Division was created in 2006 and is charged with evaluating site development feasibility and environmental quality conditions and their impact on the school development. A number of important initiatives and controls were put in place in 2006, including the requirement to maintain site feasibility and environmental expertise on every project throughout the life cycle of the project. The SDA employs real estate site-feasibility and environmental professionals, and relies on professional engineers and academia support to specifically address the challenges posed by the redevelopment of urban land for use as school sites.

The Environmental Services Group has the authority to reject a proposed site and eliminate it from further consideration if proven and effective remediation technologies cannot be applied to develop the property as a safe school, or if an expected remedial action will not meet the construction schedule for the school. As part of this deliberative and scientific process, the

SDA is required to provide sufficient documentation to DEP that the remedial actions proposed for a candidate school site are protective of human health and the environment, and that the remedies have been selected after careful consideration of various factors, including but not limited to implementability, reliability, effectiveness and appropriateness for the intended future use of the property as a school.

Two approvals are required before the school may be occupied by students and faculty – a No Further Action (NFA) letter issued by DEP and a certification from DHSS that the building interior is not impacted by exterior environmental conditions. Building interior testing is often completed when a potential for underground soil vapor intrusion is identified based on underground soil and groundwater quality sampling results obtained during environmental studies.

Site Feasibility and Environmental Analysis

Once a prospective school site is identified by the school district, and the prospective school site survives a desktop environmental review and community vetting, the school site enters the site feasibility and environmental analysis phase of the work. A series of initial site feasibility and environmental studies are completed before any firm decision is made by SDA to pursue land acquisition.

Recognizing that each proposed site does not require the same evaluation program, the SDA has developed a process for increasingly detailed feasibility evaluations. This process may include the completion of an USEPA Triad-type environmental site characterization program to reduce uncertainty in site conditions, as well as to assist in community outreach presentation of complex environmental quality data. This process provides for the rapid elimination of proposed sites that may be inappropriate for a school. An overview of these processes is shown in ***Figure 3*** and ***Figure 4***. Conversely, the process also provides for an optimized acquisition program where a proposed site is suitable for school development. An overview of this optimized land acquisition process is shown in ***Figure 5.***

It is recommended that a limited environmental assessment be conducted before commissioning a full site-feasibility study. This assessment typically includes a review of historic property uses, a review of fire insurance maps, aerial photographs, land title information and local, state and federal environmental records available in a database. This type of assessment is useful to eliminate from further consideration sites that have extraordinary development constraints.

Figure 3: SDA Site Characterization Track Overview

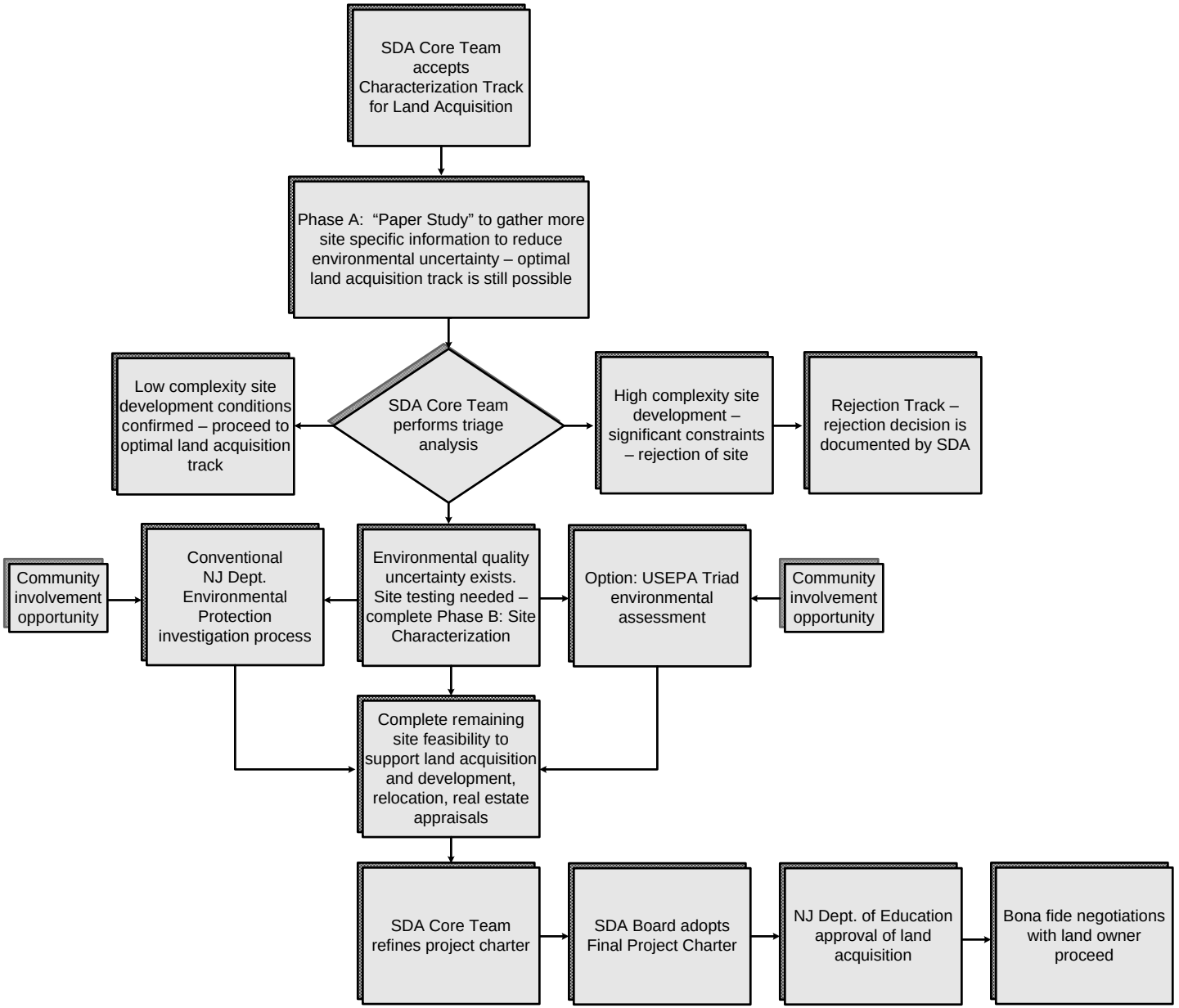


Figure 4: SDA Detailed Environmental Site Characterization Process (Phase B)

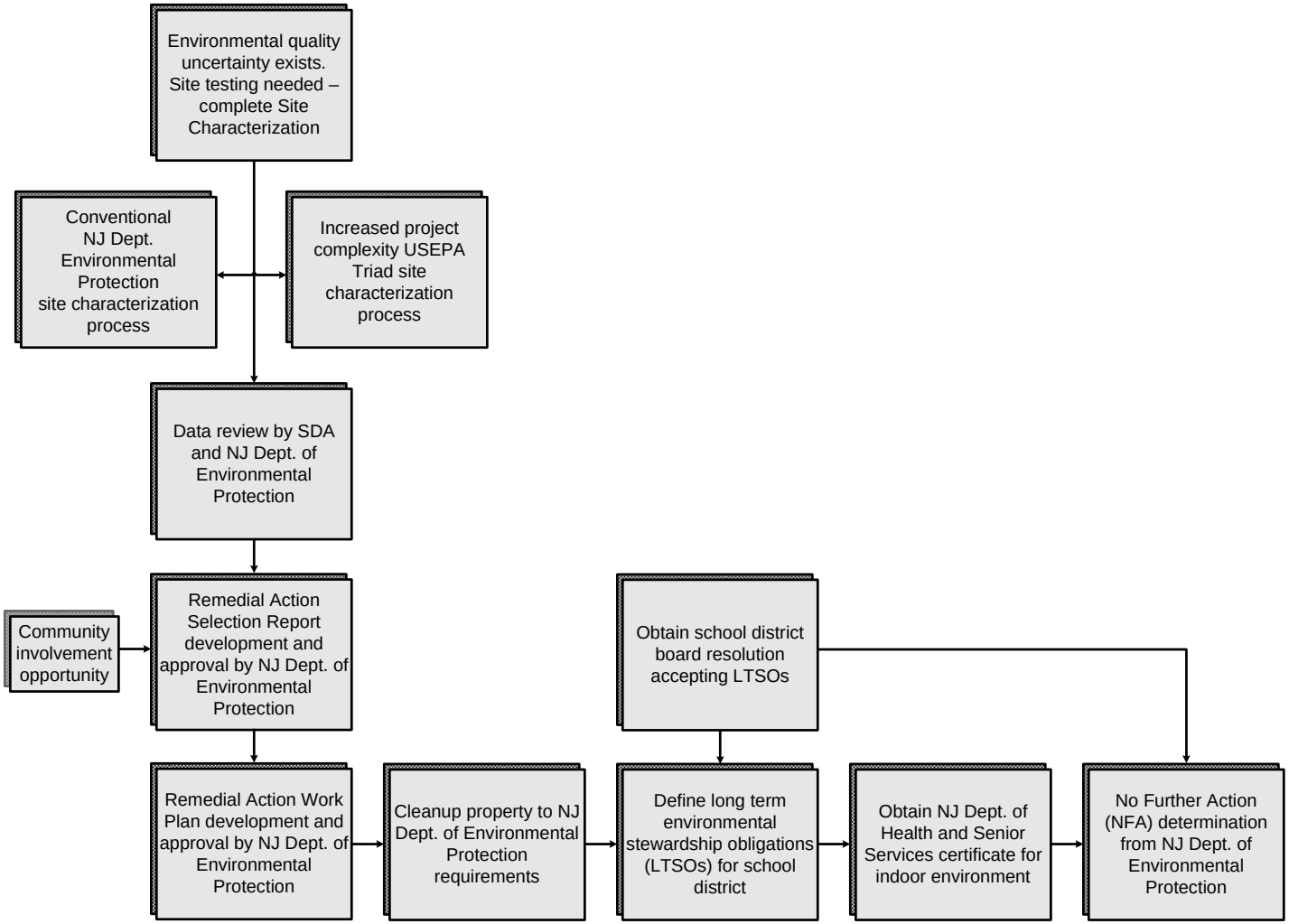
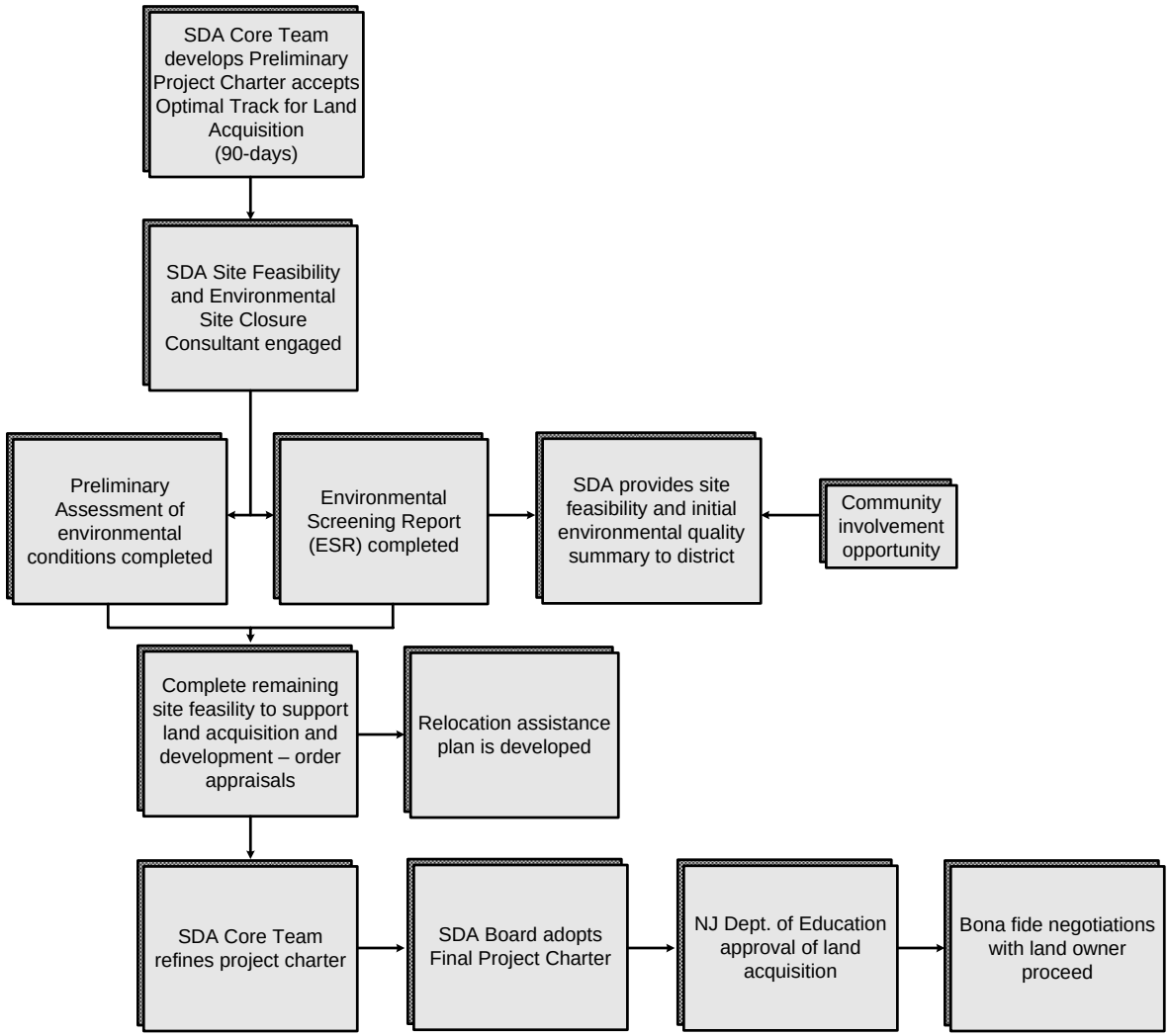


Figure 5: SDA Optimal Land Acquisition Process



Environmental Due Diligence

Environmental Services is responsible for completing an Environmental Screening Report (ESR) for submission to the DEP. The DEP developed the ESR to assist SDA early in the site-feasibility phase of a project. Not only is the ESR designed to alert SDA that potential insurmountable technical and administrative obstacles may exist on a proposed school site, it provides notice to all stakeholders, including the district and the DOE, that potential fatal flaws may exist that cannot be overcome, serving as the preliminary basis for rejecting a site from further consideration. A DEP approval of the ESR must be provided to DOE. This is normally in the form of a review and approval letter from DEP.

The ESR provides an analysis of site constraints, including the likelihood of obtaining the appropriate environmental regulatory approvals. Site constraints considered in the 15-point checklist include: (1) availability of sewerage service; (2) availability of potable water supply; (3) presence of coastal and freshwater wetlands; (4) encumbrances due to public Green Acres land; (5) stream encroachment constraints; (6) presence of historical or archeological resources; (7) presence of endangered plant species; (8) presence of threatened or endangered animal species; and (9) whether the land has insurmountable environmental quality constraints.

Environmental Services is also responsible for completing an initial inquiry of the past and current uses of a property in the form of a New Jersey Preliminary Assessment. This process is commonly known as a Phase 1 Environmental Site Assessment (ESA). A Phase I Environmental Site Assessment, or New Jersey Preliminary Assessment, is often referred to as "environmental due diligence." These studies are used by purchasers and lenders to evaluate whether a property has the potential for current or historic environmental impacts that complicate development.

In November 2005 the EPA updated its requirements for completing Phase 1 ESAs to qualify for landowner liability protections under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA). New Jersey has integrated the substantive requirements of EPA's Phase 1 ESA program into its Technical Requirements for Site Remediation, which include the requirement to complete a Preliminary Assessment (PA).

This environmental quality assessment is completed by qualified engineering and environmental firms, and at a minimum, include:

- A Certification that the inquiry into the property and the resulting report was prepared by a qualified "Environmental Professional" with requisite experience;
- Visual inspections of the property and adjacent properties by the Environmental Professional;
- Interviews with past and present owners, operators, occupants and the prospective purchaser;
- Reviews of historical sources back to the first obvious use of the property, including the review of historical Sanborn Fire Insurance Maps, and historical aerial photographs;

- Review of available government records;
- An evaluation of commonly known or reasonably attainable information, including the degree of obviousness of the presence of contamination and the ability to detect the presence of such contamination.

Conceptual Site Plan and Schematic Design Development

Due to the many site-specific factors that must be considered in the school development process, SDA relies on a broad range of design professionals to support its feasibility analysis and acquisition of sites for schools. These professionals provide the critical technical roles of evaluating site conditions, determining if the site is capable of supporting a school (size requirements), designing remediation systems, preparing reports and other documents, interacting with oversight agencies with regard to site analysis, supporting the SDA in community outreach functions and preparing permit applications. Professionals under contract to SDA (procured through public competitive bidding processes) include architects, engineers, landscape architects, planners, surveyors, construction management professionals, geologists, hydro-geologists, chemists, wetland specialists and others.

These professionals also provide another role in the initial evaluation of potential school site properties performed by the districts before the involvement of SDA. As mentioned earlier, SDA encourages the districts to establishment of a Site Selection Advisory Committee to participate in the identification of proposed school sites. It is recommended that committee personnel include various design professional who have certain technical skills critical to objective site analysis.

Involvement of State Health Officials in SDA's Environmental Review

DHSS is responsible for ensuring compliance with indoor environmental quality standards and to ensure that school facilities are protective of the current and future occupants. A clearance is required by DHSS before a Certificate of Occupancy is issued for the school. Since 2007, the DHSS has taken on increased responsibilities in the oversight and development of school facility projects. This is largely due to the adoption of what is commonly known as the "Madden Bill." The Madden Bill, signed into law by New Jersey Governor Jon S. Corzine on January 11, 2007, has profoundly impacted school construction and will continue to do so in the future.

The law is specifically aimed at protecting children in schools and daycare facilities from exposure to environmental hazards as a result of former property uses. Comprehensive site testing and indoor health assessments are required. The law is often referred to as the "Kiddie Kollege Bill, taking the name of the private child-care center (not affiliated with SDA) in Franklinville, New Jersey, discovered to be operating on a former thermometer factory that was not completely cleaned up. Children were exposed to mercury left from the thermometer manufacturing process. The law applies to all child-care centers and school construction in New Jersey, both public and private.

Involvement of State Environmental Officials in SDA's Environmental Review

Most proposed urban school sites require some form of cleanup as a result of former land uses. Whether it is soil pollution, groundwater, historic fill, asbestos, lead paint chips, PCBs, or leaking oil tanks, SDA's goal is to maximize risk reduction through environmental remediation. As of August 2009, approximately $55 million was spent by SDA specifically to address site environmental issues on over 120 projects.

Environmental remediation is a major consideration for urban site development programs in New Jersey, and the SDA takes its societal obligation to build safe and healthy schools seriously. To meet these environmental challenges, a number of important initiatives and controls were put in place over the past two years at the SDA, including the requirement to maintain environmental expertise on every project throughout the life cycle of the project. The SDA employs experienced environmental professionals to specifically address the challenges posed by the redevelopment of urban land for use as school sites.

Although DEP's primary role on school facility projects in the SDA Districts is to ensure that a thorough site assessment and any necessary environmental remediation activities are satisfactorily completed according to applicable laws and regulations, the DEP is also charged with conservation of the natural, cultural, historical and scenic resources of the State. Examples of the various environmental documents requiring a review from the DEP are listed in ***Appendix D.***

All investigation and remediation activities undertaken at school sites are reviewed and approved by DEP. The DEP requires compliance with a set of regulations called the Technical Requirements for Site Remediation (N.J.A.C. 7:26E-1 et seq.) which defines the minimum standards for investigation and, where necessary, remediation to eliminate any exposure to environmental conditions that would result in a risk to human health. To determine the requirements of the remedial process and to establish the basis for controlling exposure to environmental impacts from past activities, the DEP has developed criteria standards for a wide range of compounds.

Soil Remediation Standards Assessment

DEP has developed soil, groundwater and other standards and criteria to be used to define compliance and remedial actions. These standards are under continual review because they are health-based and driven by evolving science on the effects of environmental contaminants on humans. For the most current standards and criteria, visit the following DEP web page at www.nj.gov/NJDEP/srp/regs.

Soil standards are specific values that have been defined for a large number of elements and compounds. They are values determined by DEP as protective of human health and the environment under two different development scenarios: residential use and industrial use. Schools have to be compliant with residential-use standards, the most stringent soil remediation standards from an exposure perspective.

An issue that has direct bearing on school construction in older urban New Jersey cities is the presence of historic fill. This is defined as non-indigenous material used to replace soil in an area or raise the topographic elevation. In the early part of the 1900s, fill material was placed throughout low lying areas in urban New Jersey. In many cases this fill contained amounts of industrial material and residues formed by the incomplete combustion of coal and petroleum, and as a result the fill quality does not meet DEP's unrestricted soil remediation standards. In older cities of New Jersey, the thickness of historic fill is often ten feet or more.

The DEP has defined policies for the management of exposure to historic fill. The DEP recognizes that in many cases it is not feasible to remove large volumes of historic fill. Where historic fill is present, the DEP requires the integration of engineering and institutional controls to eliminate exposure.

For engineering and institutional controls to be effective, SDA and DEP require legal accountability on the part of the future property owner. The SDA requires the local Board of Education to adopt a public board resolution agreeing to comply with long-term environmental stewardship obligations associated with any engineering control. Under the New Jersey Site Remediation Reform Act of 2009, all property owners are required by law to periodically demonstrate that their engineering control remains intact. All engineering and institutional controls are regulated and enforced by DEP through an environmental permit program.

Groundwater Quality Assessment

Groundwater quality standards have been established by the State. These standards were developed to protect underground drinking water supplies from degradation. New Jersey's Ground Water Quality Standards apply to all areas of the State and are numerical values based on consumption of drinking water. Even though groundwater in many areas of the state is not used for drinking purposes, the State of New Jersey has an anti-degradation policy and must protect these resources. These standards too are continually undergoing review and revision. The most current groundwater quality standards are available on the DEP website at www.state.nj.us/dep/srp/

In light of the long commercial and industrial history of New Jersey, SDA is required to complete a groundwater quality assessment of all proposed school sites. This involves defining groundwater flow direction and elevations, collecting groundwater samples for laboratory analysis and defining the extent of groundwater quality problems that would have an impact on the site development. Proposed school sites are evaluated for the presence of groundwater quality problems early in the preconstruction phase of the project

Vapor Intrusion Assessment

The potential for vapor intrusion into overlying buildings has received much attention in the last decade. Vapor intrusion is generally defined as the underground migration of volatile organic compounds (VOCs) into overlying buildings at a level that could adversely impact indoor air quality and present an unacceptable exposure to occupants. In October 2005, the DEP published a Vapor Intrusion Guidance document. The purpose of this document was to provide standardized guidance for completing underground soil vapor assessments.

Although the SDA continues to demonstrate that well-engineered, well-constructed and well-operated school buildings are not generally susceptible to vapor intrusion, the SDA is obligated to ensure that its buildings are safe for students, faculty and community. Although most new school designs in New Jersey do not incorporate underground basements or crawl spaces, the SDA requires environmental safeguards be included in the building design as a precautionary measure.

As a consequence of New Jersey's long manufacturing history, regional groundwater quality impacts can be found in many of New Jersey's older cities. To address concerns associated with potential vapor intrusion into buildings, sub-slab depressurization systems equipped with chemical vapor barriers are increasingly common in schools constructed by SDA. Most systems operate under passive venting systems and are installed out of an abundance of caution because vapor intrusion processes are often dependent on many site-specific variables. Such systems typically consist of sub-slab collection and venting piping designed to prevent the accumulation of vapor. Where testing indicates a need for more aggressive measures, these passive systems may be retrofitted into active sub-slab depressurization systems.

Community Relations: Roles and Responsibilities

Communication and community outreach activities related to real estate development for schools focus on three primary areas. These are related to communicating the environmental facts about the site and the safety of the school building, explaining to property owners and tenants about the land acquisition and condemnation process, and describing the relocation assistance offered by SDA to affect property owners and tenants.

Robust and proactive communication and public community participation is absolutely essential. Communicating findings of the complex site-feasibility and environmental assessments is a major function of the Community Relations unit in conjunction with the Environmental Services unit. The SDA strongly believes that regular communication of environmental conditions often and early is the basis for successful site selection and construction of a new school.

Formal Informational Meetings with District to Discuss Environmental Matters

No later than 30 days after the SDA has received DEP comments on the ESR, a meeting is held at the district. The meeting is open to the public. At the meeting, information is distributed about the school development project. Also, preliminary environmental information is discussed with the public and district representatives. The purpose of the meeting is to engage the district and the community as soon as possible regarding factual environmental issues and the remedial options available.

A second meeting is initiated no later than 30 days from when the Design Consultant has been authorized to undertake design work but before drafting schematic plans for the schools facilities project.

Critical to acceptance of a site complicated by environmental issues is the willingness of the community and the district to recognize that environmental impacts can be controlled and mitigated so that there is no threat to occupants of the school building and play areas. This requires engaging the community and others in dialogue about the proposed school site and honest and open representation of the site conditions. Schools are critical components of the community and much emotion is invested in the safety and health of the children and teachers who will use the site for an extended period of time.

Environmental education requires patience and persistence. People automatically assume the worst if not given alternative information. Robust, routine and consistent information about environmental conditions and the steps being taken to understand and clean them up should be provided to the district and community. It will take multiple events to establish the message and deflate fears. The SDA has a well-defined process to assess environmental conditions, involve all the appropriate state agencies in the decision-making, and control and eliminate exposure.

DEP Public Notification Requirements

New regulations have been implemented by DEP that require the person responsible for remediation of a contaminated site to provide notification of these activities. Two weeks prior to the initiation of any field activities associated remedial investigation or single phase of remediation, a sign is posted (in English and Spanish) informing the public of the proposed activities. The sign identifies an SDA point of contact, a DEP point of contact, and what entity will be performing the work.

Environmental Fact Sheets and Flyers

Environmental fact sheets and flyers are prepared and distributed for each phase of the school development activities. As per DEP requirements, they are mailed to addresses within 200 feet of the site perimeter.

Presentations to School Boards

From time to time during the course of a school development project, environmental presentations are needed to be made to school board members and district officials.

Environmental Communication

The first formal engagement with district officials and the community is to convey preliminary environmental information about the proposed site. This meeting is a requirement of Section 13C Implementation Agreement of the Educational Facilities Construction and Financing Act of 2000. The meeting, held by the district for the community (with the SDA attending and/or participating), is to convey basic environmental data about the site to stakeholders. This meeting is held within 30 days after SDA has received comments by DEP on the Environmental Screening Report (ESR). The ESR was created by DEP as a tool for assessing the likelihood of obtaining the various environmental, historical and cultural, and land use approvals and permits relevant to the site. It represents a summary of environmental conditions and the degree to which they constrain site development.

Recent requirements by DEP establish the obligation of SDA to inform the communities near the proposed school site when field activities will begin. Two weeks before field work begins, signs are posted (in English and in Spanish) informing people about the upcoming project activities. Also, an informational flyer is mailed to community residences and businesses within 200 feet of the perimeter of the proposed site informing them of upcoming project activities.

Environmental information is distributed in several formats. The most basic involves fact sheets. These are one- to three-page descriptions of the environmental issues associated with a proposed school site and the remedial actions that will be or have been taken. The fact sheet provides:

- History and background of the site
- Findings of environmental investigations
- Proposed Clean up Plan
- Schedule of project activities.

Essentially, the purpose of environmental communication is to:

- Provide an update on the project
- Describe what is currently known
- Describe what was done to determine the site conditions
- Identify what is unknown
- Describe what will be done to address unknown factors
- Provide a schedule of work activities associated with the project.

Other methods of environmental communication include:

- Environmental Quality Summary Letters
- PowerPoint presentations to school boards and other interested stakeholders and/or officials
- Environmental information workshops for community and parents.

Land Acquisition Communication

One of the primary objectives of the Real Estate Services Division is to acquire land for new school construction. This can be done through a negotiated purchase/sale agreement or through condemnation. As would be expected, property owners at locations being considered for school sites are concerned and need information. SDA has developed an informational pamphlet (in English and Spanish) that explains the land acquisition process, the rights and obligations of SDA when approaching land owners regarding property purchase and the rights of property owners to fair compensation. Additionally, SDA holds landlord/tenant meetings to discuss land acquisition and relocation.

Relocation Communication

In addition to purchasing the land for a new school, SDA provides specific relocation assistance to eligible property owners and tenants by assigning a relocation representative to each owner or tenant. A pamphlet (in English and Spanish) explains the assistance SDA will provide and whom to contact.

APPENDIX A

SITE FEASIBILITY AND ENVIRONMENTAL SITE CLOSURE
SCOPE OF SERVICES

APPENDIX A

SCOPE OF SERVICES

1.0 INTRODUCTION

The following Scope of Services was updated in December 2006 and shall replace the previous version dated August 2003.

The following Scope of Services sets forth responsibilities, obligations, and project deliverables required of the Site Consultant for the term of the proposed three-year contract. Terms defined in this Scope of Services shall have the same definitions as set forth in Section 1.0 of the Agreement, except as otherwise indicated herein. The Scope of Service represent an Appendix to the Agreement between the New Jersey Schools Development Authority (the "Authority") and the site Consultant for site feasibility investigation and environmental site closure services (pursuant to "task orders") for school facilities projects.

2.0 BASIS AND BACKGROUND FOR REVISED SITE FEASIBILITY PROCESS

The need for a more flexible and end-focused site feasibility program exists. This need is largely due to the fact that Abbott school districts comprise much of New Jersey's urban districts, where land availability is not only scarce, existing infrastructure is often in need of significant improvement, and because New Jersey was at the forefront of early commercial and industrial development available land often requires some environmental remediation to meet public health and safety exposure thresholds for constructing a school.

2.1 Site Feasibility Process Overview

The scope of a feasibility program will be dictated by the proposed location of a school facility project, and the complexity of the assignment may vary widely depending on site-specific circumstances of the project under consideration.

Recognizing that each proposed site does not require the same evaluation program, a process for increasingly detailed feasibility evaluations is envisioned. This process will provide for the rapid elimination of proposed sites where it may be inappropriate for a school. Conversely, the process also provides for an expedited acquisition program where a proposed site is suitable for school development.

After completing an initial site review, the site feasibility program for a proposed school will typically fall into one of the following four feasibility tracks.

- **Initial Site Review and Data Package**: Provides upfront critical review of nominated sites. The initial site review establishes the first go/no go decision point, and establishes the critical path feasibility track the project will undergo.

- **Renovation and Adaptive Reuse Track:** Identifies the fundamental scoping tasks to support a decision for expansion or renovation of an existing school facility.

- **Optimal Land Development Track:** Provides the framework for a focused site feasibility and land acquisition process. This process is ideal for situations where environmental and other development constraints are minimal (predominantly residential, no extraordinary infrastructure improvements, the site has a known historic use, remediation is limited, and the environmental regulatory involvement would have a minimal impact on project schedule and budget.)

- **Characterization Track:** Establishes the site characterization framework when site-selection choices are limited, yet significant infrastructure and environmental uncertainty remains, and further environmental characterization is necessary to quantify development and remediation liability exposure.

- **Rejection Track:** Establishes the formal procedure to follow once a nominated site is determined to be inappropriate for school. Provides criteria for rejection documentation.

2.2 The Initial Site Review and Data Package

The initial site review and data package provides upfront critical review of nominated sites. The initial site review establishes the first go/no go decision point, and establishes the critical path feasibility track the project will undergo.

The earliest point that the Authority is authorized to engage a task order consultant and conduct site feasibility services is when the New Jersey Department of Education (NJDOE) notifies the Authority of a School Facilities Project. This is currently accomplished by issuance of a School Facilities Project Transmittal (the "NJDOE Transmittal.") Within 10 days upon receipt of this NJDOE Transmittal, the Authority will establish a Project Team to preliminarily evaluate the suitability of the nominated site based on readily available information. The Project Team may consist of:

- Project Manager (Division of Project Management) – Key Contact
- Real Estate Services Manager
- Environmental Specialist
- District/Community/Municipal Representative
- Invited Task Order Environmental Consultant (selected by rotation and/or area of expertise)
- Others based on need:
    - Historical/Cultural Resources Expert
    - Architect or Planner
    - Acquisition and Relocation Specialist

The District and/or Municipality will be responsible to supply certain information to the Site Review Team. Ideally, this information will include:

- District and NJDOE-approved school model
- Current municipality zoning ordinance and tax maps
- Block and Lot, and addresses of all parcels that comprise the proposed project.

- Description and available photographs of site (showing existing improvements)
- District map showing nominated site and nearby schools
- District map showing sending area for the proposed school
- District map showing district and municipal-owned land within sending area.
- Water/sewer availability letter from municipality or regulatory agency.
- Available environmental quality and historic usage of the nominated site.
- Project Team evaluation questionnaire

Additionally the Authority will generate an information package on the Site that will consist of the following (to be supplied under agreement with a qualified environmental database record search firm or through the task order consultant as part of the initial engagement of the consultant, the costs of which are reimbursable).

- Recent aerial photograph of Site and Surrounding Area
- Aerial history (one per decade back to 1940)
- Surrounding area land uses
- Historic Sanborn maps
- Wetlands, flood plain information
- Surrounding known environmental issues from a database search

It will be the responsibility of the Project Manager to assemble the Initial Data Package (collectively described above) and distribute the package to the Project Team for review in advance of a site visit and meeting.

Once the Project Team has reviewed the Initial Data Package and a site visit is completed, a collective decision will be made regarding the site feasibility track for the site.

The Team will utilize their professional judgment, appropriate experts, the Initial Data Package, and the site inspection to prepare an evaluation. The results of the evaluation will be memorialized in an Executive Summary Memorandum**,** the contents of which are prescribed below:

- Project name, location, District, NJDOE project number
- Meeting date, purpose, meeting attendees
- Decision reached:
    - Site enters the Optimal Land Development Track
    - Site enters the Characterization Track
    - Site is Rejected for construction of a new school
    - Renovation of existing school
- Rationale for the track decision
- Schedule impacts
- Extraordinary development or infrastructure improvement issues

2.3 Renovation and Adaptive Reuse Tack

Under certain circumstances, it may make sense to enlarge or renovate an existing school. This evaluation needs to be compared to the cost, time and complications of purchasing property and constructing a new school. The Project Team, in consultation with the District and other stakeholders, will evaluate existing data provided in the Initial Data Package to determine if renovation is an option that should be further considered.

If the Renovation Track is considered viable, the following tasks may be performed (where appropriate)

Immediate Tasks (always required)

- Swing Space Identification and Requirements
- Title Services (ordered by SDA under separate contract)
- Boundary Survey Plan
- Preliminary Assessment Report (PAR)
- Environmental Screening Report (ESR)
- Asbestos Containing Materials (ACM), Lead-based Paint, Lead in Drinking Water, Radon, Mold and PCB Investigation
- Architectural Pre-Design and Programming Services
- Architectural/Building Site Evaluation Services

Optional Tasks (assign as appropriate)

- Historic and Cultural Resources (ordered by SDA under separate contract)
- Abatement, Demolition and Site Improvements
- Topographic/Utility Survey Plan
- Traffic Feasibility Analysis
- Geotechnical Investigation and Report
- Executive Order 215 Report

2.4 Optimal Land Development Track

This track may lead to a streamlined site acquisition process in situations where environmental issues may be effectively managed in a timely manner (such as properties that have been historically residential), relocation assistance would be limited, and there is less resistance from owners or the community. The goal of this track is to develop supporting data for an unconditional offer to property owner(s) within 90 days of initiating the site evaluation process.

A thorough and comprehensive analysis of site conditions is necessary for all sites proposed for school construction. At a minimum, these activities include the completion of a Preliminary Assessment (PA) supported by various land acquisition tasks, such as boundary surveys, title searches, relocation analyses, site feasibility concept plans, preliminary geotechnical investigations, and utility evaluations, for example.

Depending on the site-specific circumstances of the project, the following tasks are available to support the expedited land development track.

Immediate Tasks:

- Boundary Survey
- Title Search and Appraisal Services
- Relocation/Displacement Analysis
- Environmental Screening Report (ESR)
- Preliminary Assessment Report (PAR)
- Site Feasibility Report and Conceptual Site Plan
- DOE Land Acquisition Checklist

Deferred or Optional Tasks (purchased as appropriate based on site conditions)

- Wetlands Investigation and Determination
- Geotechnical Investigation and Report
- Historic & Cultural Resources
- Traffic Feasibility Analysis
- Architectural Pre-Design & Programming
- Executive Order 215 Report
- Topographic/Utility Survey Report
- Utility Investigation Analysis and Report
- Local Planning Board Capital Project Review Submission and Meeting Attendance

2.5 Characterization Track

Based on readily available information, proposed sites often appear suitable as a future school site. However, due to unknown previous uses of the properties, some uncertainty may still exist that would affect a land acquisition decision. These uncertainties often are related to environmental quality and remediation requirements, extraordinary site development and infrastructure improvement needs, former property ownership, adequacy of water and sewerage, unknown geotechnical conditions, and title complications, etc.

Additional studies in these situations would serve to further quantify potential impacts to a particular project schedule and budget.

This characterization track consists of two phases that allow for a process of increasingly more stringent investigations to remove uncertainty. Phase A is composed of a more rigorous "paper" study designed to answer key site development questions without the need for conducting intrusive field testing. Phase B studies would consist of intrusive field investigations to help define potential site improvements and/or remedial action objectives.

2.5.1 Phase A-Characterization Track

The Authority may require additional "paper" studies to address as many of the issues of uncertainty as possible (see below for type of studies). The purpose of "Phase A" is to gather readily available site information to support a next round of site review (assuming the project site has no readily apparent fatal flaws.)

Examples of "Phase A" characterization tasks include boundary surveys, title search, topographic/utility surveys, NJDEP environmental screening reports, land acquisition preliminary assessment reports, and site feasibility and conceptual site plan reports. Under the "Phase A," focused site investigation (SI) sampling may be warranted. For example, samples obtained from the location of a former UST would eliminate any uncertainty of residual impacts from former petroleum releases.

Once the required information from the Phase A is evaluated, the Site Review Team would reconvene to perform a more detailed level of evaluation. If, after reviewing the information, the Project Team is comfortable that site development consultants are well understood and would not impede or hamper the development of the property for a school, the site would re-enter the optimal land development track. If information is uncovered that indicates that the site is unsuitable in consultation with stakeholders for a new school, then the site will follow a rejection track during the supplemental review appropriate written documentation would be developed to support the rejection.

If the "paper" studies were unable to adequately answer uncertainties, then the site may warrant additional intrusive field work to address remaining uncertainties ("Phase B.") Uncertainty is often associated with environmental quality, but uncertainly could also be related to geotechnical conditions, adequacy of available utilities, or building materials reuse and disposal for example. Field investigation programs will primarily occur under "Phase B" of the characterization track.

2.5.2 Phase B-Characterization Track

"Phase B" characterization involves "field" work consisting of site sampling, detailed utility investigations, and other activities that rely on site-specific field data to quantify remediation liability exposure and to make an informed business decision to move forward with a proposed school project on the site. "Phase B" characterizations will entail the planning and implementation of environmental investigations to define the extent of impacts, the development of site-specific remedial action objectives, and the development of remedial action alternatives and their corresponding remediation costs estimates. Other tasks that could be performed under "Phase B" of the site characterization track are detailed geotechnical investigations and utility investigations and analyses.

Reasonable costs for remediation are necessary at this stage of review to support construction estimates, acquisition negotiations, "just compensation" associated with condemnation proceedings, or defining possible school layouts to the property constraints.

An encouraged method for conducting environmental quality investigations under the Phase B track is the NJDEP and USEPA Triad approach.

2.5.3 Characterization Track Tasks

Detailed descriptions of tasks are contained in Section 3.0. The following lists the tasks that are part of the Scope of Services for the two phases of the characterization track.

Phase A - Characterization Track:

1. **Required Tasks**

- Historic Fill Potential
- Boundary Survey
- Topography/Utility Survey Plan
- Title Search/Appraisal Report
- Relocation/Displacement Analysis
- Environmental Screening Report (ESR)
- Preliminary Assessment (PA)
- Executive Order 215 Report
- Site Feasibility and Concept Site Plan
- Utility Investigation Analysis and Report
- DOE Land Acquisition Checklist
- Geotechnical Research Study

2. **Optional Tasks (assign as appropriate)**

- Property Acquisition Environmental Cost Report (Single Owner Site)
- Property Acquisition Environmental Cost Report (Multiple Owners Site)
- Architectural Pre-Design and Programming Services
- Local Planning Board Capital Project Review Submission and Meeting Attendance
- Wetlands Investigation and Determination
- Historic & Cultural Resources Research Study
- Traffic and Air Quality Feasibility Analysis
- Abatement, Demolition and Site Improvements
- Utility Investigation Analysis Report

Phase B of Characterization Track

- Land Acquisition Site Investigation
- Property Acquisition Environmental Cost Report (Single Owner Site)
- Property Acquisition Environmental Cost Report (Multiple Owners Site)
- Site Feasibility Report and Concept Site Plan
- Systematic Planning with NJDEP and NJSDA
- Dynamic Work Strategy Development
- Dynamic Field Investigation Implementation
- Geotechnical Investigation and Report
- Asbestos Containing Materials (ACM), Lead-Based Paint (LBP), Lead in Drinking Water, Radon, Mold and PCB Investigations.
- Land Acquisition Remedial Alternative Analysis
- Professional Service to Support the Design and Construction Process
- Abatement, demolition, and site improvement specifications
- Historic and Cultural Resources Investigations

2.6 Rejection Track

After the Initial Site Review the project team may decide that a nominated site is inappropriate for development as a school site, and recommend that the Authority formally reject the site. This rejection recommendation will be documented in an Executive Summary Memorandum. The level of supporting documentation for the rejection memorandum will be established on a case by case basis. The Task Order Consultant may be engaged to provide technical assistance in developing supporting information for the justification of the rejection decision.

2.6.1 General Rejection Criteria

Cost and Schedule Impacts: Adjustments to overall project schedule, complexity of land acquisition, fair market value considerations, or time-value of money.

Significant Site Location and Improvement Concerns: Technical impracticability of remediation, constructability, community impacts related to construction and time to implement (extended and extensive transportation impacts in residential neighborhoods, etc.), compatibility of neighboring land uses, and excessive relocation and displacement impacts.

Significant Infrastructure Concern: Insufficient water supply (drinking and fire), insufficient sewerage capacity (sanitary and storm), traffic impacts (e.g., requiring road widening, partial takings, redirection, signalization, etc.), utility relocation – cost and compatibility with school scenario.

Significant Environmental Concerns: Environmental quality impacts (soil and groundwater), historic and cultural resources, compatibility with neighboring land uses, wetlands, stream encroachment, endangered species, and Green Acres encumbrances.

2.7 Issuance of Task Orders

A Task Order will specify the service(s) the Site Consultant will perform at a specific site. At any time up until three (3) years after the Effective Date of the Agreement, the Authority, at its option may issue Task Orders to the Site Consultant, specifying which of the Services set forth in this Scope of Services (SOS) shall be required. Additionally the Authority has no obligation under this Agreement to issue any Task Order to the Site Consultant.

From time to time, it may be in the best interest of the Authority to issue one or more other Task Orders to one or more Site Consultants (also engaged by the Authority), requiring the performance of other Services at the same Site. The Site Consultant shall be required to appropriately coordinate its activities with those of any other Consultants assigned to perform Services at the same Site. The Site Consultant or its subconsultants are required to coordinate selected activities with the Design Consultant.

2.8 Schedule for Task Orders

After the Authority awards the contract, the Authority will place the Site Consultants in an original order of sequence established via a random computer-generated selection process (the "rotation

list"). This rotation shall be subject to a preemptive factor, which enables the Authority to select a firm out of rotation and issue a task order to another Site Consultant elsewhere on the rotation list, if that other Site Consultant has had prior experience with the Site that warrants assigning the work to it and/or the project requires specific expertise that one site consultant may have. It is the Authority's intent to effectively distribute project assignments based on site consultant resource availability and per performance.

The Site Consultant will be invited to attend the Initial Site Review meeting to be hosted by the Authority before a Preliminary Task Order Request ("PTOR") for a specific project is issued.

A PTOR will be issued after the Initial Site Review Meeting. The PTOR will identify in a preliminary sense the technical scope of work to be completed for the project, but will not define the specific details of the work, nor the schedule and budget for completing the scope of work. The scope of the PTOR will be developed in a collaborative manner between the Authority and the Site Consultant.

The Site Consultant shall submit to the Authority Environmental Specialist (in consultation with the Authority) a written proposed scope, schedule, and budget necessary to complete the scope of work requested in the PTOR.

The Authority Environmental Specialist will review the proposed scope, schedule and budget. If the Authority Environmental Specialist approves the scope, schedule, and budget, the Authority will issue a Task Order and a Notice to Proceed (NTP) to the Site Consultant. If the proposed scope, schedule, and budget are not acceptable to the Authority, the Authority may elect to negotiate the scope with the Site Consultant, or to seek an additional scope, schedule and budget from the next site consultant in rotation.

3.0 DESCRIPTION OF SCOPE OF SERVICES

3.1 Introduction

This section provides descriptions of the work items that compromise the Scope of Services required by the New Jersey School Development Authority (NJSDA) to perform feasibility analysis. Depending on the development track selected for the project and the complexity of the project, the Site Consultant may be required to perform all or portions of these tasks. These tasks represent the range of activities needed to evaluate the suitability of a proposed site for a school, the determination of available utilities, geotechnical suitability analysis, demolition considerations, traffic impact analysis and various tasks designed to support and interface with the Project Management team of the school as well as community outreach and environmental risk communication.

3.2 Surveying Services

Surveying services shall include all necessary fieldwork, file research, office work and coordination with the Authority's title company (hereinafter the "Title Company") in order to compile boundary, topographic, and utility survey data fully describing the Site. On the basis of such data, the Site

Consultant shall develop boundary surveys and topographic/utility surveys for the Site. These services shall comply with all American Land Title Association/American Congress of Survey and Mapping ("ALTA/ACSM") survey requirements, in addition to the requirements set forth below.

3.2.1 Boundary Survey Plan

The Site Consultant shall research all available records of deeds, easements, plans of survey, right-of-way ("ROW") maps, utility company maps, and Federal, State, County and City/Municipal records as necessary to fulfill the requirements of the boundary survey, and shall prepare and submit the boundary survey plan for the Site to the Authority Project Manager.

The Site Consultant shall provide the boundary survey plan for the entire Site at a scale of 1"= 50' or other scale as approved by the Authority Environmental Specialist. The boundary survey plan shall depict all individual tax blocks and tax lots that comprise the entire Site, and all adjoining rights-of-way to fully delineate and describe the property boundary, including, but not limited to, the delineation and description of any individual internal tax lots. The boundary survey plan shall show metes and bounds for the entire Site and all individual internal tax lots.

The boundary survey plan shall show all structures, buildings, pavement areas, existing easements and street rights-of-way, on the Site. The boundary survey plan shall show distances between structures and/or buildings and the property and lot lines, at their closest points. The distances shown on the boundary survey plan shall have been field measured.

The boundary survey plan shall identify all owners of record and the acreage of each individually owned property within the Site, and shall also identify all adjoining property owners of record. All acreage shall be calculated to one one-hundredth (0.01) of an acre. Lot areas shall be calculated in acres and square feet. All current tax block and lot numbers shall be shown for all lots within the Site and for all adjoining properties.

The Authority will order a title search for all properties within the Site, which shall identify and describe any and all encumbrances of any kind. Copies of the completed title search shall be provided to the Site Consultant in a timely manner. The Site Consultant shall coordinate such activity with the Title Company, as necessary to complete the final boundary survey plan within the Schedule. The final boundary survey plan will delineate and describe any and all encumbrances of any kind, and any additional pertinent information revealed by the title search. In the event the Title Company, if any, has not produced a report of title at the time these survey services are required, the Site Consultant shall proceed with the survey based on its research of information available from appropriate municipal and/or County records, and shall confirm such information in a supplement to the final boundary survey plan, at such time as the formal report of title becomes available. The Site Consultant will be required to certify the boundary survey plan to the Authority's selected title insurance company.

The boundary survey plan, and all horizontal control, shall be presented in the New Jersey State Plane Coordinate System ("NJSPCS"). State Plane Coordinates shall be provided for all external property corners.

The boundary survey plan shall delineate and describe all utility easements and rights-of-way within the Site and within 100 feet of the Site boundary, or within such additional distance as may be required by local subdivision or land development ordinance.

The boundary survey plan shall show all street names, ROW lines, and ROW widths. A location or key map, north arrow and the appropriate graphic scale must be included on the final boundary survey plan.

The Site Consultant shall prepare a certified metes and bounds description for the entire Site and for each individual property that may comprise the Site.

The boundary survey plan shall indicate the location and description of all of the Site's property corners. The exact location of all property corners shall be marked in the field by temporary iron pins, drill holes, or other suitable recoverable marker. For this purpose, the Site Consultant shall use any existing monuments and, if necessary, shall establish a new permanent monument.

The boundary survey plan must be certified to the New Jersey Schools Development Authority, the School District, the New Jersey Department of Education, the Title Company, and if requested, the designated attorney that will represent the Authority during the transaction.

3.2.2 Topographic/Utility Survey Plan

The Site Consultant shall perform all field survey measurements necessary to develop a topographic/utility survey plan. All horizontal control shall be presented in the NJSPCS; vertical datum shall be National Geodetic Vertical Datum of 1929 ("NGVD").

The Site Consultant shall prepare and provide a topographic plan of the Site at a scale of 1"=50' or other appropriate scale as approved by the Authority Environmental Specialist. This plan shall show all Site topographic features, including, but not limited to, utilities, structures/buildings, pavements, slabs, vegetation, and surface materials. Contours shall be shown on a one (1) foot contour interval. Spot elevations shall be provided as necessary within the Site at locations of structures, pavements, high and low points of elevation, and other appropriate points, in order to accurately document elevations of the Site's surface and subsurface features. Where practical, the topographic mapping shall extend to 100 feet beyond the Site or to such additional distance as may be required by local subdivision or land development ordinances. The topographic mapping may be prepared via aerial photography at a scale sufficient to accurately produce the required topographic/utility survey plan. If the Site Consultant proposes to prepare the topographic mapping from existing aerial photography, the date of the aerial photography shall not be more than two (2) years prior to the Effective Date of this Agreement. The Site Consultant shall verify the existence of all structures indicated by the aerial photography, above or below ground, prior to commencement of the survey, and the location of all building corners, permanent structures and the like shall be field verified and relayed on to the topographic/utility survey plan.

Utility information shall include accurate locations of any and all utilities, such as water lines, storm sewer, sanitary sewer, gas mains, telephone and underground electric lines; utility poles with identity numbers and street lights; the size of all such lines and their type of material construction, e.g., RCP, DIP, and PVC. The utility information shall also include the accurate location of all manholes, catch basins, chambers, culverts, utility vaults, valve boxes, hydrants, headwalls, and any other features/structures related to utilities. The Site Consultant shall provide surveyed elevations of all invert, top of grate/casting, outfall inverts and top of headwall associated with the above-mentioned features/structures, where accessible. Any sewers containing combined sanitary and storm sewer flows shall be noted as such.

The final topographic/utility survey plan shall include pertinent data from the boundary survey plan, such as each individual tax lot line and description, area calculations, easements, street right-of-way lines and descriptions, street names and tax lot numbers.

The Site Consultant shall provide the topographic/utility survey plan in a digital format AutoCAD version 14 (DXF or DWG file) or greater. Survey information shall be layered to facilitate its use as a base map for geotechnical and environmental investigations of the Site, and for subsequent architectural and design phases of the project.

3.2.3 Survey Deliverables

The Site Consultant shall provide certified, reproducible vellums and AutoCAD Compact Disks of the boundary survey plan, and topographic/utility survey plan. The Site Consultant shall provide six (6) sets of signed and sealed prints of the final boundary survey plan and the final topographic/utility survey plan. These survey plans shall be signed and sealed by a New Jersey Licensed Professional Surveyor. The Site Consultant shall provide six (6) signed and sealed, certified, written boundary descriptions of the overall Site and of each individual property that may comprise the Site.

If requested, the Site Consultant shall provide one (1) set of 8"x 8" contact prints of any aerial photography used to prepare the topographic base map. The Site Consultant, if requested, shall provide two (2) color aerial photographs of the Site at a resolution suitable to produce a 30" x 42" presentation poster board for later use at public meeting.

3.3 Environmental Screening Report

The NJDEP developed the Environmental Screening Report ("ESR") as a tool for assessing the likelihood of obtaining the various environmental, historical and cultural, and land use approvals and permits relevant to the site.

It is incumbent on the Site Consultant to identify the environmental and land use permits that are necessary to construct a school. It is strongly recommended that the Site Consultant submit a Permit Identification Form to NJDEP to assist in facilitating the permitting process.

The ESR is designed to alert stakeholders that potential insurmountable technical and administrative obstacles may exist on a proposed schools facility project. Specifically, it provides notice that potential fatal flaws may exist that cannot be overcome, and therefore, may serve as a basis for rejecting a site from further consideration.

Examples of the technical and administrative factors considered in the ESR include utility availability, known environmental contamination and regulatory conflicts, potential compatibility of neighboring land uses and community impacts, historic and cultural and natural resource impacts, and endangered species. The ESR is not a substitute for any detailed environmental quality investigation that would be necessary to quantify site remediation liability exposure.

The Site Consultant shall prepare an ESR for submission to the NJDEP as part of the application and approval process for land acquisition by the Department of Education pursuant to N.J.A.C. 6A: 26-7.1.

The following sections describe the contents of the ESR.

3.3.1 Availability of Sewer Service

The Site Consultant shall provide an analysis of the existing sewer system that will serve the proposed site. The Site Consultant shall determine if the site is located in an approved sewer service area and there is: (1) sufficient capacity to connect to an existing sewage collection line and the treatment facility has adequate capacity to treat the wastewater for the proposed maximum enrollment, or (2) In the case that the site of the proposed school is in a non-sewered area, the site consultant shall indicate the likelihood of the site being suitable for a discharge to ground water from either a package treatment plant or a septic system.

The determination shall also include the locations' status with respect to the locally approved Water Quality Management Plan (WQMP). If the location of the proposed school site is inconsistent with the WQMP the site consultant shall include an estimated timetable for approval of a WQMP Amendment by the local, County and State agencies.

3.3.2 Availability of Potable Water Supply

The Site Consultant shall determine from the local water purveyor if the proposed School Facilities Project site can be serviced with potable water, and there is capacity within the system to service the proposed maximum enrollment. Alternatively, if potable water is not available at the proposed site, provide a statement from a professional engineer or licensed geologist indicating the likelihood that there is sufficient groundwater available to provide for the drilling of potable water wells, and that approvals for withdrawal may be obtained to meet the project schedule.

3.3.3 Identification of Potential Coastal and/or Freshwater Wetlands

The Site Consultant shall conduct an on-site inspection of the proposed site and provide a professional opinion on the presence/absence of wetlands. If this preliminary wetlands evaluation

indicates the presence of wetlands on the site, the Site Consultant shall prepare a brief report including a review of published wetlands information, photo-documentation of the wetlands area, a sketch map outlining the extent of wetlands and a list of potential NJDEP coastal or freshwater wetlands permits necessary to conduct construction activities within the proposed school site.

3.3.4 Identification of Streams, Flood Hazard Areas or Other Water Bodies

The Site Consultant shall conduct an on-site inspection and determine the presence or absence of streams or other water bodies on the proposed site. If a stream, ditch, or other water body is identified, the Site Consultant shall prepare a brief report including a review of published data, photo documentation on the stream or water body, and a sketch map showing the 100 and 500 year flood hazard area delineations if applicable. The report should also indicate if school construction activity would require a stream encroachment permit.

3.3.5 Identification of Dedicated Open Space

The Site Consultant shall identify any land related encumbrances on the proposed site including but not limited to deed restrictions, easements, protective covenants or rights of way. The Site Consultant shall determine if there are Green Acres covenants based on a review of the municipal and/or county Recreation and Open Space Inventories or documents on file with the NJDEP's Green Acres Program. If any restrictions are identified, the Site Consultant shall prepare a report on the extent of the restriction(s) and the likelihood of meeting the school facility needs with the restrictions in place.

3.3.6 Identification of Historic and/or Archeological Resources

The Site Consultant shall investigate the presence or absence of historic or archeological resources on or eligible for inclusion on the New Jersey Register of Historic Places on or adjacent to the proposed School Facilities Project site. The Site Consultant shall prepare a brief report on the methods used in the investigation and provide photo documentation on any structures over 50 years old. If historic sites, historic districts, or archeological resources are identified on or adjacent to the site of the proposed school, additional documentation including historic background information and maps shall be provided. The report shall also include an assessment of the likelihood of obtaining regulatory approval from the NJDEP to allow for school construction on the proposed site.

3.3.7 Identification of Threatened or Endangered Plant or Animal Species

The Site Consultant shall provide a professional opinion on the presence or absence of State or Federal threatened or endangered plant or animal species.

3.3.8 Assessment of the Potential of Soil and/or Groundwater Quality Concerns

The Site Consultant shall perform an assessment of potential contamination sources due to known historic or current use of the proposed site. This assessment shall include a review of historical published documentation of properties located within and adjacent to the proposed school site, an

on-site inspection of the site and adjacent properties, and shall incorporate the substantive findings of the PA Report.

3.3.9 Investigation of Prior or Current Environmental Enforcement Actions, Site Remediation Activities and Regional Context

While most of this information is readily available from environmental radius search providers, the Site Consultant shall contact the NJDEP Bureau of Responsible Party Site Remediation School Development Program to assist in completion of this task.

The task shall consist of a limited file search of municipal, county, state, and federal records to determine the history of any prior or current remediation performed on the site or any portion thereof, as well as a history of any prior or current environmental violations or enforcement actions associated with or connected to the proposed site by the prior or current owner thereof.

Special emphasis shall be placed on sites adjacent and nearby to the proposed School Facilities Project site. The Site Consultant shall review the NJDEP Known Contaminated Sites List; facilities that report under the Toxic Release Inventory; major facilities permitted for Hazardous Air Pollutants; facilities regulated under the Discharge Prevention Control and Countermeasure Program; hazardous waste treatment, storage and/or disposal facilities; and pipelines transmitting petroleum products and hazardous substances.

3.4 Environmental Services

3.4.1 Introduction

This section describes the scope of environmental services that a Site Consultant may be requested to perform. These consist of preliminary assessments, determination of the presence of environmental impacts, delineation of these impacts if they exist, evaluation of possible remedial options, preparation of remedial action work plans, design and implementation of possible remedial actions and communication of site environmental issues and clean up programs to community groups and school boards.

General environmental activities, such as attendance at school Project Management bid meetings to communicate environmental issues to potential bidders, integration with the Authority's Project Management Division to provide input on school design issues with regard to site environmental issues, and development of environmental summaries for distribution to communities and school districts.

3.4.2 Land Acquisition Preliminary Assessment

3.4.2.1 Preliminary Assessment

The Site Consultant shall conduct all appropriate inquiry and prepare an environmental report in compliance with ASTM E-1527-05 (Standard Practice for Environmental Site Assessments) and

N.J.A.C. 7:26E-3.1. The objective of the Preliminary Assessment ("PA") is to identify potential areas of concern ("AOC") and/or recognized environmental conditions at the Site, as well as to establish an appropriate Site Investigation ("SI") scope of work to document soil and groundwater quality to support the future intended use of the property as a school facility.

The Site Consultant shall perform an inquiry of the Site's past and current use. Such review and search shall include, but not be limited to, a review of municipal records, Sanborn Maps, historic aerial photographs, property surveys, local and County health department records, State records (including those of the NJDEP), Federal records (including those of the USEPA), and property owner records. Where practicable, the Site Consultant shall conduct interviews of existing and former property owners and/or other persons familiar with or responsible for operations and maintenance at the Site, including satisfying the all appropriate inquiry interview requirements of ASTM-1527-05 for abandoned properties.

In conducting the files review and document search, the Site Consultant shall, at a minimum, address all of the following AOCs:

(i) Underground Storage Tanks (USTs) and Aboveground Storage Tanks (ASTs)
(ii) Transformers and lighting fixtures with PCB constituents
(iii) Hazardous substance drop-off, handling, storage, and pick-up areas
(iv) Mechanical and work rooms
(v) Stained soil and building areas
(vi) Dump and disposal sites
(vii) Industrial activities
(viii) Powerhouse/Boiler Plant
(ix) Sewage disposal, septic fields and cisterns
(x) Equipment and automotive maintenance and repair areas
(xi) Drainage/piping systems associated with a potential AOC
(xii) Cemeteries/Burial Grounds

The Site Consultant shall take into consideration available guidance on characterizing property for the presence of historic fill.

3.4.2.2 Preliminary Assessment Report

The Site Consultant shall submit for the Authority's review and approval a PA Report that shall describe in detail:

(i) The completed file review, document search and any other tasks accomplished to fulfill the inquiry,
(ii) Each known or potential AOC
(iii) A scope of services and cost estimate for any recommended site investigation.

The Report shall set forth recommended sampling and analytical parameters in an itemized tabular format for each AOC on the Site. The site consultant shall deliver a cover-to-cover electronic file of

this report in PDF format.

3.4.2.3 Preliminary Relocation and Displacement Analysis

The site consultant may be requested to conduct preliminary relocation and displacement analysis. A project that requires a significant residential or business displacement may directly affect the feasibility of a proposed school construction project. Socioeconomic conditions such as the displacement of the population, direct displacement of businesses, employment and residences from the project site, and potential indirect displacement within the study area shall be considered.

The preliminary analysis of direct residential displacement would typically include an estimate of the number of existing households that would require displacement by the proposed project, and would include a preliminary cost estimate of relocation benefits that would be available to the displaced homeowners and tenants as required by New Jersey's relocation law.

The preliminary analysis of direct business displacement would typically include the identification of the number of businesses and an estimate of the number of employees that would be affected as a result of the project. This analysis may also include an assessment of the direct economic costs attributed to physical moving, temporary space requirements, and reinstallation of equipment, as well as a general evaluation as to whether the business can be easily relocated within the community or with great difficulty.

The preliminary relocation and displacement report shall include the following: (1) a map showing the project location, (2) the number of parcels to be acquired under the proposed plan and their displacement characteristics. These characteristics generally include a summary of the dwelling, whether the property is a commercial or residential use, whether the dwelling is occupied by the owner or a tenant, and whether the dwelling is occupied by elderly or disabled which would impact relocation; (3) the period of time of the proposed displacement; (4) probable status of each occupant as to owner or tenant; (5) estimate of housing comparables for the area including range of sale price or rent; (6) moving costs; and (7) estimated owner housing or tenant rent supplement obligations. To complete the work product, it is expected that door to door surveys may be necessary.

3.4.3 Land Acquisition Environmental Quality Investigation

3.4.3.1 General Overview

Environmental quality analyses represent a critical part of the land acquisition feasibility study process. Depending on the property under review, the scope of the environmental survey can range from site investigations to more complex remedial investigations and supporting studies to identify remedial actions and their cost to implement. The basic guidance for conducting environmental investigations in New Jersey is outlined by NJDEP in their Technical Requirements for Site Remediation (N.J.A.C. 7:26E-1 et. seq.).

Because children differ from adults anatomically, physiologically, and behaviorally in ways that affect exposure to environmental conditions, it is appropriate to require site characterization

programs that specifically address the unique exposure scenarios associated with schools. For this reason, environmental investigations completed under New Jersey's School Development Program will require a broader holistic sampling program for the entire site.

For this reason, the SDA has adopted the use of the Triad Approach in its real estate practice to ensure that representative and sufficiently robust site characterizations are completed in a timely manner, environmental quality uncertainty is sufficiently reduced, environmental liabilities are quantified, and proposed remedial action work plans are effectively developed.

The Technical Requirements identify a two step process for performing environmental investigations. The two steps are a Site Investigating (SI) and a Remedial Investigation (RI).

3.4.3.2 Site Investigation Activities

Site Investigation Work Plan: If recognized environmental conditions are identified through completion of an environmental site assessment and production of a Preliminary Assessment Report (PA), additional site characterization activities may be requested. If requested, the Site Consultant, in collaboration with a representative from environmental services, shall develop a Site Investigation Work Plan to comply with the minimum provisions of N.J.A.C. 7:26E.

Site Investigation Activities shall include, but are not limited to, those set forth in the list below. Further requirements of certain activities are set forth in the paragraphs following the list.

(i) Health and Safety Plan
(ii) Site Clearing – Access Notifications
(iii) Geophysical Surveys/Test Pit Excavations/Geotechnical
(iv) Building Interior Inspections
(v) UST Investigations
(vi) Initial Soil and Groundwater Sampling/Temporary/Passive Diffusive Bailers
(vii) Laboratory Analyses
(viii) Reporting
(ix) Report revisions based on reasonable review comments

UST Preliminary Assessment Investigation: Based on the findings of the PA, the Site Consultant shall determine and list the location, capacity, and history of operation of each UST (if known). The use of geophysical methods and qualified operators are strongly encouraged to assist in this investigation. The Site Consultant shall develop and submit for approval a sampling program for any UST identified as an AOC.

Initial Soil and Groundwater Sampling and Analyses: Because New Jersey was at the forefront of industrialization and uniquely proximate to major population centers, it is expected that historic soil and groundwater quality impacts will be encountered. It is preferable to proactively identify these impacts early in the site predevelopment program. There is no regulatory obligation to conduct soil and groundwater quality investigations without first identifying an "area of potential environmental concern." Nevertheless, the Site Consultant may be contracted to conduct an initial assessment of

soil and groundwater quality.

Groundwater samples may be collected via direct push technologies or by installing temporary well points to determine impacts to groundwater. Sufficient groundwater samples shall be collected to preliminarily evaluate groundwater quality and hydrogeologic conditions of the proposed school site. The Site Consultant shall provide tabulated soil and groundwater quality data in a manner that will promote a timely review by others on the project team.

Preparation of Land Acquisition Site Investigation Report, and Responsibility for Subsequent Revisions: If requested, the Site Consultant shall submit a "Land Acquisition" Site Investigation ("LA/SI") Report in accordance with the schedule agreed upon in the task order. The Site Consultant shall be responsible for revising the LA/SI Report and/or any associated plans, as required pursuant to review and reasonable comments. Revisions to this report shall not be considered an additional service, unless substantive comments exceed two written pages. Revisions to correct typographic editing errors or omissions by the Site Consultant shall be provided at no additional cost. Two hard copies of the LA/SI Report shall be provided in addition to one color copy of the report in a "cover-to-cover" electronic PDF format. Electronic data deliverables from the laboratory shall be provided separate from the PDF report.

Preparation of a NJDEP PA/SI Report, and Responsibility for Subsequent Revisions: The Site Consultant shall prepare a PA/SI report for submission to the NJDEP, in accordance with the schedule, and in accordance with both substantive and formatting requirements of N.J.A.C. 7:26E. The Site Consultant shall be responsible for revising the PA/SI Report and/or any associated plans, as required pursuant to review and reasonable comments. Revisions to this report shall not be considered an additional service, unless substantive comments from the NJDEP exceed two written pages. Two hard copies of the PA/SI Report shall be provided to the Authority in addition to one color copy of the report in a "cover-to-cover" PDF format. Electronic data deliverables from the laboratory shall be provided separate from the PDF report.

3.4.3.3 Remedial Investigation

Remedial Investigation Work Plan: The Site Consultant shall submit for review and approval a Remedial Investigation (RI) Work Plan that briefly outlines the proposed remedial investigation for the site addressing soil, groundwater and/or indoor air quality impacts.

Remedial Investigation Activities shall include collecting and analyzing soil, groundwater, soil gas, air and other media samples necessary to adequately delineate an impacted area in accordance with recognized industry standards and the scope outlined in the work plan. The Site Consultant shall develop a budget for implementing the field work and submit this for review and approval prior to implementing field work.

The Site Consultant shall be responsible for mobilizing all equipment necessary to conduct the investigation and collect the necessary samples as well as providing all personnel needed to operate the equipment and record the investigation. The Site Consultant shall be responsible for the quality and accuracy of the information collected regarding site environmental conditions and shall provide

for the safe and accessible storage of this information. All remedial investigation costs shall be maintained for possible cost recovery purposes

Reporting: Based on the implementation of the RI, the Site Consultant shall prepare an RI Report in accordance with N.J.A.C. 7:26E. The Site Consultant shall submit the final RI Report for review and approval. The Site Consultant shall be responsible for revising the final RI Report and/or any associated plans by the Authority prior to submission to NJDEP, as required pursuant to review and reasonable comments. Revisions to this report shall not be considered an additional service, unless substantive comments exceed two written pages. Two hard copies of the final RI Report shall be provided in addition to one complete color copy of the report in a "cover-to-cover" PDF format. Plans, figures, and tables shall also be provided in AutoCAD and/or PDF format.

3.4.3.4 Triad Investigation

Depending on the level of uncertainty over environmental quality, the Site Consultant may be contracted to employ alternative or innovative site investigation techniques, such as the Triad approach.

For a Triad Approach investigation, the Site Consultant shall develop the necessary components to implement such an investigation including:

- Identification of the site stakeholder team
- Utilization of systematic planning for the development of a conceptual site model utilizing all available data collected to date
- Development of a dynamic work strategy and decision logic
- Implementation of a field based investigation plan that can accommodate real-time data collection
- Data visualization technology
- Data integration methodology

During the planning and implementation of a Triad investigation program, it is necessary to recognize the substantial compliance requirements of NJDEP's Technical Requirements. Thus, the Triad work product needs to substantially conform to the NJDEP Remedial Investigation reporting requirements described above. The data needs to be of sufficient quality to be consistent with NJDEP requirements for delineation and remedial action selection. A Triad investigation report shall be prepared in accordance with N.J.A.C. 7:26E. The Site Consultant shall submit the RI Report for review and approval. The Site Consultant shall be responsible for revising the RI Report and/or any associated plans, as required pursuant to review and reasonable comments. Revisions to this report shall not be considered an additional service, unless substantive comments exceed two written pages. Two hard copies of the RI Report shall be provided to the Authority in addition to one complete color copy of the report in a "cover-to-cover" PDF format. Plans, Figures, and tables shall also be provided in PDF format. Plans provided in AutoCAD format may be requested from time to time. One hard copy of the analytical data deliverables is required. Electronic data deliverables shall be provided as required by NJDEP.

3.4.4 Remedial Alternatives Analysis

3.4.4.1 Environmental Risk Evaluation Services

Risk analysis concepts are a key component of any successful site feasibility and environmental site closure strategy. The ultimate goal of all environmental remediation is to eliminate unacceptable exposure, minimize costs, and limit liabilities. Proactive risk evaluation can accomplish both of these objectives.

The site consultant may be contracted to develop remediation strategies that employ human health risk and exposure assessments as a strategic tool to establish and defend compliance with rational remedial action objectives. This risk evaluation may include the following primary elements: (1) a site characterization; (2) an exposure assessment; (3) a toxicity assessment; and (4) a risk characterization that evaluates if the current and/or post-remedial risks meet human health protection goals that are compatible with an intended future use of the site for a school.

The site characterization shall include an identification of the chemicals of concern found at the site, and the development of a site conceptual model that defines exposure. This conceptual site model may be graphical, tabular, or in narrative format, but must provide an accurate understanding of complete exposure pathways for the site. Elements this assessment must include the physical setting and the potential exposed populations.

The exposure assessment must determine or estimate the magnitude, frequency, duration and routes of exposure. The assessment must identify the sources and receiving media; fate and transport considerations in the release media; and the identification of exposure points and exposure routes. Because most exposure factors exhibit some uncertainty and variability, the consultant may want to consider the use of ranges of risk exposure through the use of a probabilistic assessment.

The toxicity assessment shall consider the potential for particular contaminants to cause adverse effects in exposed individuals as well as to provide an estimate of the relationship between the extent of the exposure to a contaminant and the increase likelihood and/or severity of adverse effects. Where appropriate, this assessment shall consider the carcinogenic and noncarcinogenic effects of each chemical, appropriate reference doses and cancer slope factors from recognized sources (e.g. IRIS, HEAST, ATSDR, etc.)

The risk characterization shall be a summary of the toxicity and quantitative exposure assessments consistent with USEPA policy for risk characterization (1995). This guidance may be found at http://www.epa.gov/ORD/spc/rcpolicy.htm. Paramount to this characterization is a demonstration that the selected remedy will attain the appropriate site-specific remedial action objectives. It is possible that a specific soil and groundwater cleanup criteria for certain constituents may not be attained, however, an overall post-remedial risk could be acceptable for the project. For example, capping of the site would eliminate exposure and resultant risk would be negligible.

If certain site conditions warrant, the site consultant may be contracted to perform a more robust human health risk assessment to support the school construction activities.

3.4.4.2 Development of Remedial Action Objectives (RAOs)

In a collaborative manner, the Site Consultant shall develop a list of specific remedial action objectives (RAOs) that must be met for the intended future use of the property as a school.

The Site Consultant may be asked to prepare a Remedial Action Selection Report (RASR) that provides sufficient documentation that the remedial actions proposed for the site are protective of human health and the environment, and have been selected after consideration of various factors, including but not limited to: cost, implementability, reliability, effectiveness, and the intended future use of the property for the school facilities projects. Specific guidance for the preparation of a RASR may be found in Subchapter 5 of New Jersey's Technical Requirements for Site Remediation.

The RASR shall include (1) a narrative description of appropriate remedial action objectives (RAOs) that would be consistent with the future intended use of the site for a school, (2) identification and evaluation of an applicable and focused list of soil and groundwater remediation alternatives that satisfy the RAOs. The remedial alternatives may be presented as broadly defined measures that by themselves or in combination with other measures, will satisfy the applicable RAOs for the site; and, (3) an analysis of the applicable evaluation criteria - effectiveness, implementability, and cost. Other factors including potential impacts of the remediation to the local community, the degree of permanence of the remedial action, and potential injury to natural resources may also be considered.

Effectiveness

The effectiveness evaluation focuses on three factors: (1) the overall protection of human health and the environment; (2) the potential short-term and long-term effectiveness in handling estimated areas or volumes of impacted media (soil and groundwater) and meeting the remedial action objectives of mitigating direct and indirect exposure and discharges to sensitive downgradient receptors; and, (3) the proven performance and reliability with respect to the reduction of toxicity, mobility, and volume of contaminants and conditions at the site.

Implementability

This criterion encompasses the technical and logistical, and administrative feasibility of implementing the remedial action. The site-related aspects of implementability may include, but are not limited to: site work accessibility; final structural integrity of the site during and after remediation; ability to obtain the necessary permits for remedial actions; community acceptance; availability of necessary resources, equipment, and skilled workers to implement the remedy.

The determination that an alternative is not technically feasible and is not available will usually preclude it from further consideration unless steps can be taken to change the conditions responsible for the determination. Typically, this type of "fatal flaw" would have been identified during the technology screening, and the infeasible alternative would not have been assembled. Negative factors affecting administrative feasibility will normally involve coordination steps to lessen the negative aspects of the alternative but will not necessarily eliminate an alternative from

consideration

Consistency with Applicable Laws and Regulations

This criterion encompasses the regulatory feasibility of implementing the remedial action. The selected remedial alternative must be consistent with applicable laws and regulations. Specifically, the selected remedy must satisfy NJDEP's Technical Requirements for Site Remediation (N.J.A.C. 7:26E-1 et. seq.), in addition to the feasibility of acquiring stream encroachment permits, soil erosion and sediment control permits, local construction permits, and general stormwater permits. These criteria must be considered with respect to each alternative evaluated.

Cost

Estimates of capital and operation and maintenance (O&M) costs associated with each alternative shall be presented. The cost estimates used in the alternative screening process may originate from several sources of information. Commercial cost estimating guides, such as Means Site Work Cost Data, generic unit costs derived from other publications, vendor contacts and actual cost data from similar sites subjected to remedial actions in New Jersey are recommended.

3.4.4.3 Remedial Action Selection Report

The following table of contents is presented as an acceptable format for a Remedial Action Selection Report (RASR) submitted to the Authority:

I. Executive Summary
II. Introduction
    A. Purpose and Scope
    B. Brief Site Description
    C. Content of RASR
III. Appropriate and Relevant Remedial Action Objectives
    A. Soil
    B. Groundwater
    C. Indoor Air Quality
    D. Identification of Constituents of Concern
    E. Applicable Remediation Criteria
IV. Focused Evaluation of Remedial Alternatives
    A. Applicable Evaluation Criteria
        1. Effectiveness
        2. Implementability and Consistency with Project Schedule
        3. Consistency with Applicable Laws and Regulations
        4. Potential impacts to the Local Community
        5. Potential for Natural Resource Injury
    B. Identification, Evaluation, and Selection of Site Specific Remedial Alternatives
        1. Identification and Screening of Site Specific Remedial Alternatives
        2. Evaluation of Applicable and Relevant Remediation Technologies

C. Preliminary Engineering Evaluation
    1. Remedial Alternatives that Satisfy RAOs.
    2. Capital and O&M Cost Analyses.
D. Results of the Evaluation

V. Recommendation for Remedial Action

Two hard copies of the RASR shall be provided in addition to one complete color copy of the report in a "cover-to-cover" PDF format. Plans, Figures, and tables shall also be provided in PDF format. Revisions to this report shall not be considered an additional service, unless substantive comments from the Authority exceed two written pages.

3.4.4.4 Development of Preliminary Remediation Cost Estimates

The Site Consultant may be asked to develop preliminary cost estimates for appropriate remedial actions for submission under separate cover. The cost estimate shall assume that all remedial action is conducted in accordance with applicable local, State and Federal regulatory and code requirements. The cost estimates shall include a breakdown of anticipated Project Management costs associated with completing each such remedial action. Remediation cost estimates shall include an appropriate net present value analysis (if long term operations and maintenance of engineering and institutional controls are needed), as well as an estimate of engineering fees to obtain necessary permits and approvals.

3.4.5 Remedial Action Work Plan

The Site Consultant shall prepare and submit for review and approval a Remedial Action Work Plan (RAWP) in accordance with the applicable provisions N.J.A.C. 7:26E. This RAWP shall include, but not be limited to:

- A summary of the report or a copy of the findings/recommendation section of the Remedial Investigation Report (RIR) and Remedial Action Selection Report (RASR);
- The identification of all applicable remedial action objectives (RAOs) to be satisfied;
- A detailed description of the remedial action and the remedial technology to be conducted;
- A building decontamination and demolition plan, where requested;
- A scaled site map that clearly identifies the area(s) proposed for remediation. This map shall include: the location of remedial treatment units, where applicable; the volume and mass of each environmental medium to be remediated; the vertical and horizontal extent of area to be remediated, to the extent practicable; the location, depth and concentration of all contaminants in excess of the remediation standard; sample locations, depths and parameters for all post-construction samples;

- A quality assurance project plan (QAPP) including proposed sampling and analytical methods to demonstrate that the RAOs have been satisfied where requested;

- A health and safety plan that is compliant with OSHA 1910.120 requirements;

- A descriptive soil management plan that includes specific erosion and sedimentation control measures to be undertaken;

- A descriptive plan that describes dust and odor control and monitoring measures;

- An identification of all permits required for the remedial activities;

- A detailed description of site restoration plans;

- A description of procedures for dismantling and removal of remedial structures and equipment from the site, if applicable; and

- A cost estimate for the building demolition and site remedial actions.

Two hard copies of the RAWP shall be provided in addition to one complete color copy of the report in a "cover-to-cover" PDF format. Plans, Figures, and tables shall also be provided in PDF format. Revisions to this report shall not be considered an additional service, unless substantive comments exceed two written pages.

3.4.6 Remedial Design and Implementation

3.4.6.1 Remediation Plans and Technical Specifications

The Site Consultant shall prepare remediation plans and technical specifications for the purposes of engaging a remediation contractor by the Authority. The technical specifications shall include signed and sealed plans for implementing the approved RAWP. These technical specifications shall be consistent with Construction Specifications Institute (CSI) format (compatible with the Authority's procurement documents), and shall include, but not be limited to, the following: (1) detailed plans and specifications for the removal of USTs and remediation of impacted soil and groundwater to satisfy the agreed upon remedial action objectives; (2) detailed plans for remediation soil and/or groundwater quality impacts; (3) accurate depictions of contaminant mass requiring remediation; (4) the estimated quantity of soil and/or groundwater to be excavated, treated, or contained; and (5) the source and quality of backfill materials proposed for the restoration of all excavations.

The Site Consultant shall provide a minimum of two (2) copies (including one (1) unbound copy) of all specifications to the Authority, including exhibits, plans and drawings in a cover-to-cover PDF format. The Site Consultant shall provide scaled reproducible vellums, and AutoCAD disks/CD of all plans and drawings acceptable to the Authority for construction documents.

3.4.6.2 Remediation Oversight

The Site Consultant may be contracted to provide either full-time or part-time construction monitoring staff to ensure that the remedial actions performed on the Site by the remediation contractor are documented in compliance with the plans and specifications. The Site Consultant may be contacted to provide qualified staff to be available to perform soil and/or groundwater sampling and contract laboratory analyses as necessary to confirm post-excavation results of remedial soil removal operations.

The Site Consultant may be contracted to maintain daily progress logs and issue weekly status reports on the progress of remedial actions at the Site as required by the task order.

3.4.6.3 Post-Remedial Action Requirements

The Site Consultant may be contracted to comply with all post-Remedial Action requirements, including all progress reporting requirements and the preparation of a Remedial Action Report upon completion of all remedial actions upon the Site, in accordance with the applicable provisions of N.J.A.C. 7:26E. The Site Consultant shall also provide all technical and plan preparation requirements as may be necessary to the declaration of environmental restrictions for the Site in accordance with the applicable provisions of N.J.A.C. 7:26E.

Two hard copies of the RAR shall be provided in addition to one complete color copy of the report in a "cover-to-cover" PDF format. Plans, Figures, and tables shall also be provided in PDF format. Revisions to this report shall not be considered an additional service, unless substantive comments exceed two written pages.

3.4.7 Environmental Communication Plan and Support Services

NJSDA recognizes that negative public perception of a remediation project could add substantially to its cost, disrupt its schedule, and damage the public image of a company. As part of this revised scope of services, NJSDA is requiring that its environmental consultant have the ability to assist with environmental outreach and communication. This will be accomplished through the development of materials to encourage positive perception of the project and facilitate its cost effective and timely completion. This assistance will likely include the development of fact sheets, community mailers, preparation of Open House materials, attendance at Open House presentations, and attend planning meetings with an established communications management team.

Fact sheets for an NJSDA Open House will typically consist of one-page that contains information regarding the history of the site; the environmental, health and safety impacts of the site constituents; a description of the remediation activities; the safety, health and environmental impacts of the remediation activities; a clarification of the roles and responsibilities of the parties involved; a schedule of activities; and a telephone number to call for more information. Other readily publications, such as constituent-specific toxicological data from ATSDR, may also be appropriate.

3.4.8 General Environmental Support Services

3.4.8.1 Environmental Quality Presentations during Pre-Bid Meetings

Many of the site feasibility services are relevant to project management activities; for example, site remediation activities may be appropriately integrated into the site development. By maintaining continuity of the professional team critical knowledge of past investigations can be transferred and duplication of effort can be avoided.

TOC will be invited to coordination meetings at certain project milestones to ensure that critical pre-acquisition data are transferred to project teams; including:

- Milestone - Design kickoff meeting after the Notice of Award – which will involve a presentation by the TOC on pre-acquisition site feasibility investigations. This meeting will also be used by NJSDA to preliminarily discuss building placement to avoid environmental constraints, remedial action work plan etc.
- Milestone – 30% design – which will involve a discussion of the schematic design prior to submission to NJDOE, to determine if any early design adjustments are needed.
- Milestone – 60% to 80% design – which will involve a discussion of the design prior to eligible final cost determination, to gain internal concurrence from NJSDA divisions.

To more effectively interact with the stakeholders at the milestone meetings and to assist during the design and construction phases of the project the TOC must gain an understanding of the architectural design including the scope of the project and schematic plans.

3.4.8.2 Environmental Remediation Cost Recovery Support Services

While environmental cost recovery actions may be limited, it is very important to preserve the right to pursue cost recovery through project documentation should it become necessary to do so. Simply put, it takes much more effort, time, and money to recreate detailed site remediation data and cost information years in the future when it may be required for litigation defense. Well-documented information is necessary during all states of remediation efforts. Cost data must be accurate, complete, and consistent from the beginning to the end of the project.

Photo-documentation, complete field notes, written notification to property owners, and provisions to allow property owners to obtain split samples for analysis are recognized methods to prevent claims of "spoilage of evidence." In addition to field documentation, the need exists for engineering and scientific reporting that provides sufficient documentation that a proposed remedial action is protective of human health and the environment, allows for possible cost allocation and insurance recovery, and was selected after consideration of various factors identified in the remedial action selection process.

The site consultant may be contracted to prepare a report that summarizes project cost documentation for potential cost recovery purposes.

3.4.8.3 Development of Environmental Quality Summaries for School Districts

The Site Consultant may be contracted to develop brief summaries of environmental investigation work completed on a particular project, including work yet to be performed. These summaries shall be prepared for School District officials at specific milestones during the site feasibility and site development phase of the work. Key milestones include the completion of the site investigation report, remedial investigation report, remedial action selection report, and remedial action work plan. The objective of these summaries is to provide the District with key information relative to the remedial action objectives for the site, as well as to inform the District of any long term stewardship obligations that may exist with respect to maintaining institutional and engineering controls on the property.

3.4.8.4 Development of Health and Safety Guidance for Visitors and Inspectors

Employee compliance with site health and safety requirements is the obligation of the employer. According to OSHA's Hazard Communication Standard (29 CFR 1910.1200), an obligation exists for employers to inform employees about the chemical hazards that they may encounter in the workplace. It includes provisions for employee training, labeling of hazardous chemicals, maintaining material safety data sheets, and developing a written hazard communication plan.

To support the Hazard Communication Standard, the Site Consultant, depending on site conditions, may be contracted to develop informational fact sheets that summarize environmental quality at the site. These fact sheets would outline the management practices visitors, construction inspectors, and other regulatory officials must adhere to. The Site Consultant may be asked to summarize the existing health and safety requirements that their employees are required to follow, present brief orientations to site visitors describing the health and safety issues associated with the site. This may also include the identification of various exclusion zones that may exist, and specific procedures to follow in case of an emergency.

3.5 Preliminary Geotechnical Investigation And Report

The Site Consultant shall conduct a preliminary geotechnical evaluation of the Site to develop an understanding of geotechnical conditions that may affect the proposed development. This preliminary geotechnical report is not intended to satisfy code requirements for foundation design. It is simply to provide preliminary geotechnical information in preparation for site development.

The Site Consultant shall provide a boring/test pit location and sampling plan prior to the start of geotechnical investigation fieldwork. The Site Consultant shall consider both environmental requirements (as evidenced in the PASI Report) and the geotechnical requirements of the proposed School Facilities Project, and shall maximize the efficiency of the boring/test pit location and sampling plan through minimizing the test pit/boring locations and the required fieldwork. All geotechnical investigation services shall be supervised by a Professional Engineer licensed in the

State of New Jersey.

3.5.1 Borings

The location of borings on the Site shall be reviewed and approved. The Site Consultant shall provide a minimum of two borings per acre, or such other number as requested in the task order. Geotechnical soil borings shall be completed to a depth of 40 feet below surface elevation or to refusal if competent bedrock is encountered at a lesser depth. The underlying geology shall be confirmed.

Drilling and representative sampling shall be accomplished in accordance with ASTM D 1586, and laboratory testing shall be accomplished in accordance with the Unified Soil Classification System. The Site Consultant shall perform all sampling and testing necessary in order to complete the geotechnical investigation, and shall, at a minimum, identify soil and rock types, densities, bearing capacities and groundwater elevation. All borings shall be backfilled and/or grouted to existing grade.

The Site Consultant may be contracted to collect environmental soil and groundwater samples at select geotechnical boring locations. Groundwater sampling may be accomplished through the installation of temporary well points within the borings. The purpose of the groundwater investigation is to determine groundwater flow direction and a general sense of groundwater quality.

3.5.2 Test Pits

The proposed location of test pits shall be reviewed and approved prior to excavation activities. The Site Consultant shall complete a minimum of six test pits per acre, or such other number as the task order may direct, to a depth of ten (10) feet below the ground surface. Test pits may be used for the identification of soil types, presence of fill, presence of ground water, exploration of utilities, and other obstructions and areas that are or appear to have been previously disturbed or developed. All test pits shall be backfilled and compacted to existing grade, and restored to the existing surface condition. If excavations are to be conducted in asphalt-paved areas, the area shall be repaved.

3.5.3 Geotechnical Report

The Site Consultant shall submit a written report containing logs for all test pits and borings, drawings/profiles and testing results. This report shall summarize the geotechnical work accomplished, describe in a general sense the earthwork needs of the Site to support the project, and provide recommendations and suggestions for the most cost effective type(s) of foundation system(s) for development of the school. The report shall address the suitability of subsurface conditions to support the project. The Site Consultant shall estimate the volume and expected cost to remove the different types of soil classifications, fill, miscellaneous solid waste material, and former building foundations.

The Site Consultant shall prepare a geotechnical base map. All boring and test pit locations shall be accurately surveyed and located on the geotechnical base map.

Two hard copies of the report shall be provided in addition to one complete color copy of the report in a "cover-to-cover" PDF format. Plans, figures, and tables shall also be provided in AutoCAD and PDF format. Revisions to this report shall not be considered an additional service, unless substantive comments exceed two written pages. The report shall be certified by a Professional Engineer licensed in the State of New Jersey.

3.6 Wetland Investigation And Determination

Where appropriate, the Site Consultant shall expand upon the potential wetlands identified during the initial screening of the site, and perform a wetland investigation in accordance with applicable regulatory and code requirements, including, but not limited to, NJDEP freshwater wetlands regulations. The field investigation shall be completed by a qualified professional experienced in wetland investigations.

3.6.1 Wetlands Evaluation Report

The Site Consultant shall prepare a wetlands evaluation report detailing the results of the wetlands investigation. If the wetlands evaluation report confirms the presence of wetlands on the Site, the Site Consultant shall provide a cost proposal to the Authority to physically survey the limits of wetlands on the Site, by staking and/or flagging their limits and producing a survey map.

In the event that the subject Site is not encumbered by wetlands including streams and ditches, the Site Consultant shall, at a minimum, provide a statement that in his/her professional opinion the subject Site does not contain regulated wetlands.

If wetlands are identified, the Site Consultant shall provide a list of potential NJDEP Individual and/or Statewide General Permits ("SGP") necessary to support construction activities within the delineated wetlands. As required, the Site Consultant shall provide a cost proposal to the Authority to prepare an application to the NJDEP for a Letter of Interpretation ("LOI") and for approval of the wetlands delineation, and the preparation of a freshwater wetlands application for submission to the NJDEP.

Two hard copies of the report shall be provided in addition to one complete color copy of the report in a "cover-to-cover" PDF format. Plans, figures, and tables shall also be provided in AutoCAD and PDF format. Revisions to this report shall not be considered an additional service, unless substantive comments exceed two written pages.

3.7 Utility Investigation Analysis Report

The Site Consultant shall evaluate the capacity of the existing utility infrastructure to support the proposed project. If capacity of the infrastructure exists to support the project, the Site Consultant shall identify and verify the locations of all underground and aboveground utilities existing on the Site in a report.

The report shall consist of a utility inventory and evaluation, including, but not limited to, sanitary sewer and storm sewer systems, potable water, electric power, natural gas, telephone service, cable television, communication lines, noting the age, size and condition of said utilities. The report shall assess the utility systems' compatibility with the proposed project. The report shall include an inventory of active and non-active utilities in each of the streets surrounding the Site.

The report shall identify any restrictions imposed by local ordinance or State requirements and/or moratoria. The report shall list all utility companies, with contact telephone numbers and point of contact persons who provided information to the Site Consultant. Notes from all meetings and phone conversations and other communications with the local utility companies shall be included with the Report. The report shall contain a statement/letter from each utility agency and or authority stating whether there is sufficient capacity for the proposed School Facilities Project.

The Report shall include all utility mapping completed under the survey provisions of this Scope of Services, and the utility investigation conducted under this Section shall be used to confirm the utility data shown on such survey plans.

Two hard copies of the report shall be provided in addition to one complete color copy of the report in a "cover-to-cover" PDF format. Plans, figures, and tables shall also be provided in AutoCAD and PDF format. Revisions to this report shall not be considered an additional service, unless substantive comments exceed two written pages.

3.8 Asbestos Containing Materials (ACM), Lead-Based Paint, Lead In Drinking Water, Radon, Mold And PCB Investigation

Where applicable within each individual building and affected Site area, the Site Consultant shall perform asbestos, lead-based paint, lead in drinking water, radon, mold and PCB investigations for all suspected materials and systems as warranted.

3.8.1 ACM and LBP Survey

The Site Consultant shall provide adequate sampling and analysis on: (i) suspect ACM (friable and non-friable and non-friable organically-bound) within each individual building and affected site area, such as interior and exterior pipe/duct insulations, equipment and boiler insulations, fire brick, HVAC units, plaster materials, floor and ceiling tiles, mastics/glues, roofing materials, glazing caulks, wire wrap, fireproofing, and (ii) suspected LBP, such as floor/wall/ceiling/equipment housing paint materials. The Site Consultant shall provide all required sampling and analysis procedures for determining the Total Lead Concentration and TCLP of all suspected LBP materials for disposal. The Site Consultant shall obtain an adequate number of individual and bulk analyses to accomplish this task in compliance with all applicable regulatory and code requirements, including applicable provisions of N.J.A.C. 7:26E.

Where the evaluation of an existing School Facility building is required, the Site Consultant shall review the "District's AHERA Management Plan" to determine whether building materials were

actually sampled and found to contain asbestos and which materials were assumed to contain asbestos. The Site Consultant shall be responsible for investigation of any indication of the presence of any other hazardous materials, including but not limited to, radon, radioactive exit lights, molds, and mildews. If any known hazardous materials will be disturbed by activity of the Site Consultant or by the proposed development of the School Facilities Project, the Site Consultant must identify the appropriate investigation, testing, and abatement methodology, which must include sampling for ACM in concealed spaces. Transmission electron microscopy (TEM) analytical techniques are required for non-friable organically bound materials found to contain less than 1% asbestos fiber using polarized light microscopy methods (PLM).

3.8.2 ACM and LBP Report

The Site Consultant shall submit an ACM and LBP Inventory Report, with appropriate exhibits. Each individual building shall be itemized separately in the Report. The Report shall summarize all work accomplished, and shall include: (i) all laboratory data, (ii) sketch plans identifying the location of all samples obtained, (iii) summary tables identifying all analytical results, including, but not limited to, detection and friability levels of all ACM/non-ACM, concentrations of Total Lead, and TCLP analyses for disposal, and (iv) a comparison of all such levels/concentrations to residential action levels as determined by NJDEP and the United States Environmental Protection Agency (the "USEPA"). The report shall include an itemized inventory of all suspected ACM and LBP materials found to exist in each individual building in an itemized format with a corresponding cost estimate to successfully abate such conditions in accordance with all applicable regulatory agency and code requirements.

Two hard copies of the report shall be provided in addition to one complete color copy of the report in a "cover-to-cover" PDF format. Plans, figures, and tables shall also be provided in AutoCAD and PDF format. Revisions to this report shall not be considered an additional service, unless substantive comments exceed two written pages.

3.8.3 PCB Inspection and Report

The Site Consultant may be contracted to investigate existing buildings/structures to determine the presence of PCB-containing equipment/fixtures. A PCB Inventory Report shall be submitted, identifying light fixtures, electrical equipment, and any other items suspected of containing PCBs. The PCB inventory report shall clearly define the federal and state regulatory requirements applicable to PCB items for handling, storage, and marking.

Two hard copies of the report shall be provided in addition to one complete color copy of the report in a "cover-to-cover" PDF format. Plans, figures, and tables shall also be provided in AutoCAD and PDF format. Revisions to this report shall not be considered an additional service, unless substantive comments exceed two written pages.

3.8.4 Lead in Drinking Water Report

For schools that are to be renovated or expanded, the Site Consultant shall perform sampling and analyses of potable water systems within the building(s) to determine the presence and concentration of lead. The Site Consultant shall prepare a report that includes the identification of all potable water sources (and locations) that contain lead above State/Federal safe drinking water standards. If potable water systems are found to contain lead in excess of the standard, the Site Consultant shall prepare a cost estimate to successfully abate such conditions in accordance with all applicable regulatory and code requirements. The results of this analysis shall also be included in the Existing Conditions Report.

Two hard copies of the report shall be provided in addition to one complete color copy of the report in a "cover-to-cover" PDF format. Plans, figures, and tables shall also be provided in AutoCAD and PDF format. Revisions to this report shall not be considered an additional service, unless substantive comments exceed two written pages.

3.8.5 Radon Testing and Report for Existing Schools or Adaptive Re-use Facilities

In accordance with N.J.S.A. 18A:20-40, N.J.S.A. 26:2D-70 to -80 and N.J.A.C. 7:28-27, the Site Consultant shall conduct testing for the presence of radon. Where levels are identified equal to or greater than 4.0 pCi/L, the Site Consultant shall present the radon testing results in a brief report to the Authority.

Two hard copies of the report shall be provided in addition to one complete color copy of the report in a "cover-to-cover" PDF format. Plans, figures, and tables shall also be provided in AutoCAD and PDF format. Revisions to this report shall not be considered an additional service, unless substantive comments exceed two written pages. The results of this testing shall also be included in the Existing Conditions Report.

3.8.6 Mold, Mildew, Fungi and Bacteria Inspections and Report for Existing Schools or Adaptive Re-use Facilities

The Site Consultant may be contracted to conduct a visual inspection of the existing buildings/structures for signs of water staining or microbial growth and check humidity levels with a moisture meter. The entire building should be inspected including all floors, wings, basements, and crawlspaces. Common sources of water infiltration include leaky roofs, poor drainage along building foundations, deteriorated caulking or lack of weather stripping, pipe leaks or ruptures, and overflows from restrooms and kitchen areas.

If signs of water infiltration, water damage, or active microbial growth are observed and/or relative humidity levels are not within established American Society of Heating, Refrigerating, and Air-Conditioning Engineers (ASHRAE) guidelines of 30-60% (ASHRAE 55), then airborne and surface swipe samples shall be collected and analyzed for fungi and bacteria. Results should be compared to target levels established by the American Industrial Hygiene Association (AIHA). In addition, all

HVAC units that service areas of water infiltration or mold growth should be visually inspected and sampled for the presence of fungi and bacteria.

Two hard copies of the report shall be provided in addition to one complete color copy of the report in a "cover-to-cover" PDF format. Plans, figures, and tables shall also be provided in AutoCAD and PDF format. Revisions to this report shall not be considered an additional service, unless substantive comments exceed two written pages. The results of this inspection shall also be included in the Existing Conditions Report.

3.9 Abatement, Demolition, And Site Improvement

If requested, the Site Consultant shall prepare construction documents (plans and technical specifications) for demolition and site improvement construction work, and shall provide administration and supervision services for same. Where necessary, the Site Consultant shall include in such construction documents any required asbestos, lead, PCB or other hazardous material abatement, and the Site Consultant shall incorporate all ACM and LBP Inventory Reports and PCB Reports into the abatement and demolition construction documents. The Site Consultant shall submit to the Authority a cost estimate for demolition and any related hazardous materials abatement required on the Site. These cost estimates should provide a detail breakdown of the estimated demolition cost for each individual building within the proposed school project site.

In the event that historic structures are slated for demolition and regulatory conditions are placed on the Authority by the NJDEP, those conditions shall be incorporated into the demolition services construction documents.

3.9.1 Scope of Demolition

Generally, structures to be demolished may include: (i) all buildings/structures located on the Site and all associated utility systems servicing same, including all basements, foundation walls and foundation systems; (ii) all pavements, slabs, curbing on the Site, which are located outside of street ROW; (iii) all on-site miscellaneous features or structures, except those the Client School District wishes to save. In addition, this activity may include, but not be limited to utility work (for example, abandoning, capping, removal, protection, reconnection), UST removal, earthwork/grading and drainage, vehicular and pedestrian safety, maintenance of traffic, improvement and restoration, soil erosion and sediment control.

3.9.2 DCA Permits

The Site Consultant shall be responsible for identifying all abatement, demolition and construction permits required from the New Jersey Department of Community Affairs ("DCA").

3.9.3 Deliverables

Deliverables for these services shall include: (i) Demolition Plans and Specifications, (ii) Site Improvement Plans and Specifications, and, as appropriate, (iii) Asbestos Abatement Services Plans

and Specifications, (vi) Lead-based Paint Abatement Services Plans and Specifications, (v) PCBs Abatement Services Plans and Specifications, and (v) such plans and specifications as may be required for any other hazardous materials.

3.9.4 Format of Submissions

The Plans and Specifications and construction documents must be submitted in CSI format compatible with the Authority's procurement documents. The Site Consultant shall provide a minimum of two (2) copies (including one (1) unbound copy) of all submissions, including exhibits, plans and drawings. The Site Consultant shall provide scaled reproducible vellums, and AutoCAD disks/CDS of all construction documents.

3.9.5 Abatement Services - Construction Documents

As more fully set forth below, where necessary, the Site Consultant shall incorporate the activities associated with the abatement of asbestos, lead, PCBs, and any other hazardous materials into the demolition and site improvement construction documents, in accordance with all applicable local, State, and Federal regulations.

3.9.6 Demolition Services - Construction Documents

The Site Consultant shall perform document research and field investigations as necessary to determine the types of structural and foundation systems in all buildings on the Site slated for demolition and in all existing structures or buildings located adjacent to those slated for demolition, both on-Site and off-Site, as well as all utilities located within adjacent on-Site and off-Site buildings and ROWs. The Site Consultant shall also confirm the square footage and structural framing and foundation systems of all structures to be demolished. The Site Consultant shall field verify the location of all existing basements and tunnels, utility chases or chambers, and incorporate same into the demolition and abatement construction documents, as appropriate. The construction documents shall include all plans and specifications necessary for the successful demolition of on-Site structures and the stabilization of adjacent, off-Site structures, as necessary.

3.9.7 Regulatory Compliance

The Site Consultant shall prepare all demolition construction documents, i.e., plans and specifications, to ensure that all related Construction Work is accomplished in accordance with all local, State and Federal regulatory requirements. In addition, the Site Consultant shall prepare all construction documents specifically for the abatement of asbestos or other hazardous materials to ensure that all related construction work is accomplished in accordance with all local, State and Federal requirements applicable to such abatement activity.

The scope of demolition work may include, but not be limited to, demolition, utility work (for example, abandoning, capping, removal, protection, reconnection), UST removal, earthwork/grading and drainage, vehicular and pedestrian safety, maintenance of traffic, improvement and restoration,

soil erosion and sediment control, details.

ACM: Where ACM is found to exist in a building on the Site, the Site Consultant shall prepare construction documents to permit its handling and/or removal in accordance with all applicable local, State and Federal regulations. The Site Consultant shall assist the Authority in securing all necessary approvals and permits for such construction work.

LBP: Where lead-based paint or lead containing materials is found to exist in a building on the Site, the Site Consultant shall prepare construction documents to permit on-site recycling/processing of building rubble for both on-Site and off-Site use to the extent possible. The Site Consultant shall assist the Authority in securing all necessary approvals and permits for such construction work.

PCBs: The Site Consultant shall perform an adequate inspection of light fixtures and a thorough inspection of any transformers to confirm the presence of PCBs. Where necessary, the Site Consultant shall prepare construction documents for the successful removal and disposal of PCB ballasts in lighting fixtures and of PCB oils from transformers and associated equipment, in accordance with all local, State and Federal requirements. The site consultant shall clearly define the federal and state regulatory requirements applicable to PCB items for handling, storage, and marking.

Equipment Inventory: The Site Consultant may be required to provide an equipment inventory of all existing, major mechanical, electrical, plumbing, and elevator equipment to be demolished with any buildings on the Site. The inventory shall include, but not be limited to, type of equipment, manufacturer and model number. The major equipment inventory shall be included as part of the demolition construction documents.

3.9.8 Site Improvement and Demolition Services - Construction Documents

The Site Consultant shall perform document research and field investigations necessary to prepare the site improvement and demolition construction documents, i.e. plans and specifications. Site improvement work shall include, but not be limited to, earthwork and backfilling; sidewalk, pavement, and curb restoration; required utility restorations; perimeter fencing; soil erosion and sediment control measures, vector control, and lawn establishment and stabilization. All demolished basements and depressions shall be backfilled to original grade. All site improvement construction documents services shall be supervised under the direction of a professional engineer and environmental specialist licensed/certified in the State of New Jersey.

The Site Consultant shall prepare site improvement construction documents, i.e. plans and specifications, so that all such construction work is accomplished in accordance with all Authority, local, State and Federal requirements.

3.9.9 Construction Phase Abatement, Demolition and Site Improvement Services

During a School Facilities Project's Construction Phase, the Site Consultant shall provide: (i) on-Site coordination and supervision services in connection with hazardous material abatement activities, as

set forth below, on a part-time basis, which shall mean on at least one (1) day per week (7:30 a.m. to 4:00 p.m.) in accordance with the Schedule determined by the Authority Environmental Specialist, and (ii) on-Site Construction Phase coordination and supervision services in connection with demolition and site improvement activities, as set forth below, on a full-time basis, which shall mean on at least five (5) days per week during the hours that Construction Work is performed (generally Monday through Friday 7:30 a.m. to 4:00 p.m.), in accordance with the Schedule determined by the Authority Environmental Specialist.

- The Site Consultant shall provide part-time and full-time construction inspection and supervision services, and shall supervise the coordination between the abatement, demolition and site improvements, as necessary, in regard to implementation of the requirements and procedures (including, but not limited to, compaction and density tests) set forth in the construction documents.

- The Site Consultant shall provide coordination between the Authority and the Contractor when necessary during abatement and demolition activities.

- The Site Consultant shall review and approve shop drawings submitted by the Contractor under the direction of a New Jersey-licensed professional engineer, where applicable.

- The Site Consultant shall review and approve the Contractor's monthly invoices for work relating to abatement, demolition, and site improvements, prior to payment, in cooperation with the Authority.

- The Site Consultant shall submit to the Authority Environmental Specialist a Progress Report at the end of each week, as well as daily work logs of all construction activities relating to abatement, demolition, and site improvement.

- The Site Consultant shall represent the Authority at related pre-construction and weekly job meetings, as requested by the Authority Program Manager.

- The Site Consultant shall prepare as-built drawings as required.

- The Site Consultant shall evaluate contract bulletins and Change Orders, if any, relating to abatement, demolition, and site improvement activities, in cooperation with the Authority.

3.10 Property Acquisition Environmental Cost Estimate Report (Single And Multiple Owner Sites)

The PAECER serves to summarize environmental conditions for current site property owners, based on preliminary assessments and site investigations (when available) for a specific property or multiple properties. In consultation with the Environmental Specialist, the Site Consultant shall develop the report from an analysis of studies conducted at the property to be acquired. Cost estimates shall be based on professional experience for projects of similar scope and complexity.

The Site Consultant shall prepare a Property Acquisition Environmental Cost Estimate Report (PAECER) for each property proposed for land acquisition and/or condemnation. The report shall define the remedial cost to be borne by the Authority to remediate the site in order to build the proposed school facilities project.

The PAECER shall contain a brief summary of the environmental investigations conducted at the Site. The report shall contain a site plan showing the exact location of each AOC, soil sampling locations, monitoring wells, and all other significant items on the Site. This report shall contain a tabular summary, in accordance with NJDEP requirements, showing the results of the soil and/or ground water sampling on the Site. The report shall contain the Site Consultant's recommendations for remedial actions, if any.

The report shall also include a separate cost estimates for the specific soft costs (such as environmental investigation and reporting, design, permits, fees, oversight, post excavation sampling) and for the hard costs (such as soil or groundwater remedial actions, asbestos abatement, and UST removal), which may be required to complete the remedial actions recommended for the Site. These line item cost estimates shall include an estimated schedule to complete the remediation.

If the Authority's appraiser has not concluded its appraisal of the Site, the Site Consultant shall prepare the report, with the approval of the Authority Environmental Specialist, solely based on the approved local land use or current use of the Site.

The Site Consultant shall prepare an Environmental Summary Memorandum (ESM) (Exhibit 2), for each PAECER. The ESM must be consistent with the format in the samples provided in this Scope of Work. Assistance by the Authority will be available for the selection of the most appropriate ESM for the subject property.

The report shall also include as a separate attachment costs estimates for building demolition and site clearing on the Site. These cost estimates shall include both hard and soft costs associated with demolition, including demolition engineering plans, specifications, permits, utility disconnects, and contractor costs. This attachment shall also include an estimate of the cost of any necessary off-site remediation. These cost estimates shall include an estimated project schedule for clearing and building demolition.

The PAECER shall be prepared in a format, with accompanying attachments, suitable for presentation to the current property owners. The content of the PAECER shall be consistent to the Remedial Action Selection Report above.

Suggested Outline of the PAECER:

1. Executive Summary
2. Introduction
    - 2.1 Purpose, Scope, and Project Description
    - 2.2 Brief Physical Site Description
    - 2.3 Brief Description of AOCs

3. Summary of Soil and Groundwater Sampling Data
4. Identification of Appropriate and Relevant Remedial Action Objectives
5. Identification of Remedial Alternatives
6. Focused Evaluation and Preliminary Cost Estimate of Remedial Alternatives to Satisfy Remedial Action Objectives
    6.1 Remedial Alternative/Cost to State
7. Recommendation for Remedial Action

Cost estimates should reflect cost to satisfy NJDEP technical requirements, assumptions need to be outlined

3.11 Traffic And Air Quality Feasibility Analysis

The Site Consultant may be contracted to conduct a Traffic Impact Study assessing the traffic, parking, and generalized air quality effects of the proposed school on existing patterns in proximity to the Site. This study shall include a traffic engineering analysis, determining the capacity and existing levels of service ("LOS") of roadways and highways serving the Site. The Study shall also address anticipated traffic requirements of local, county and State transportation agencies, and potential traffic mitigation improvements (both on-Site and off-Site), as appropriate. Traffic counts at all affected intersections, and both preliminary and shall be required, as directed by the Authority Environmental Specialist. The Study shall take into account the phasing of the School Facilities Project and any related improvements. Where appropriate and when directed by the Authority Environmental Specialist, potential air quality impacts shall be analyzed through accepted monitoring and modeling techniques approved by the NJDEP. The results of the analysis shall be provided as a report appended to the Traffic Impact Study.

3.11.1 Sight Distance Analysis

The Site Consultant shall provide a detailed site distance analysis along all frontages in order to determine the best and most efficient location for all points of ingress and egress, which maximize the site distances for vehicles entering and exiting the site.

3.11.2 Traffic Impact Study

The Traffic Study shall assess the current level of services of the existing roadway network adjacent to the Site, and shall describe the project's impact on the surrounding area and changes to the existing level of services necessitated by the Site's intended use.

- The Traffic Study shall include a field inspection conducted to obtain an inventory of existing roadway geometry, traffic control, and the location and geometry of such adjacent driveways and intersections as may be gathered without an instrument survey.

- The Traffic Study shall include traffic volume recordings conducted during weekday AM and PM peak hours at adjacent intersections.

- The Traffic Study shall include estimates of traffic to be generated by the proposed School Facilities Project based on standard trip generation rates published by the Institute of Transportation Engineers, and/or trip generation research, including school buses, conducted by the Site Consultant. Site traffic shall be assigned to the adjacent roadway systems based upon the anticipated directional distribution.

- The Traffic Study shall include capacity analyses of the affected roadways and intersections surrounding the Site conducted to obtain existing and projected peak hour capacities and to define existing and projected levels of service.

- The Traffic Study shall include recommendations based on the resultant capacity computations, if deemed necessary, for offsetting any negative impacts of the proposed School Facilities Project, including, but not limited to, signalized intersections, modification to existing signal timing, roadway widening and/or roadway re-striping.

- The Traffic Study shall set forth the proposed points of ingress and egress, which shall have been inspected for adequacy of geometric design, spacing from adjacent driveways, and conformance with generally accepted design standards.

- The Traffic Study shall advise the Authority whether the Site's internal geometry properly accommodates large wheel vehicles, such as school buses, delivery trucks, refuse trucks and emergency vehicles, and shall recommend any actions required to ensure that the geometry necessary for vehicle accommodation is maintained.

- The Traffic Study shall include a comparison of the proposed parking layout to generally accepted design standards, local ordinances and demands experienced at similar developments, and shall recommend any actions required to ensure that an appropriate parking layout is maintained.

3.11.3 Traffic Study Report

Upon completion of the Study, the Site Consultant shall submit the Traffic Study Report and any presentation graphics required for the Authority's review, for local planning board acceptance, and for any other presentations required by the Authority.

Two hard copies of the report shall be provided in addition to one complete color copy of the report in a "cover-to-cover" PDF format. Plans, figures, and tables shall also be provided in AutoCAD and PDF format. Revisions to this report shall not be considered an additional service, unless substantive comments exceed two written pages.

3.12 Site Feasibility Report And Conceptual Site Plan

The Site Consultant may be contracted to prepare a Site Feasibility Report. This Report shall summarize the feasibility of the proposed School Facilities Project based on the information established in this Scope of Services. The Site Feasibility Report shall include a summary overview of the Site's characteristics, development constraints, environmental issues, civil engineering and geotechnical design requirements, and permit issues and requirements.

The Site Feasibility Report shall include a preliminary project schedule for pre-construction services, including, but not limited to, site development permits, abatement and remedial actions, demolition and site clearing. The Report shall also include a preliminary project budget or cost estimate, identifying the estimated hard and soft costs necessary to remediate, design, and construct the proposed School Facilities Project.

The Site Consultant shall perform a detailed permit analysis for the proposed School Facilities Project. The permit analysis shall include all required permits necessary for pre-construction activities, including but not limited to environmental site remediation, demolition, historic preservation, utility abandonment and roadway openings and all associated permitting costs. The permit analysis shall also include all necessary permits for the intended development and construction, including but not limited to, jurisdictional permits *(see DOE Form 150 – Land Acquisition Checklist)*, local permits and state permits *(NJDEP, DCA)*. The final permit analysis shall be prepared within a matrix listing all applicable permits, the costs of such permits, the duration for receiving each permit approval, the permit application forms, and any other information requested by the Authority Environmental Specialist.

The conceptual site plans within the Site Feasibility Report shall be discussed with, presented to and submitted for approval to DOE, the Client School District, the municipal planning board, the municipal zoning board and/or the municipal city council.

The Site Feasibility Report shall be suitable in form and substance for use in procuring design phase and construction phase services of an architect (the "Design Consultant") by the Authority.

Conceptual Site Plan: The Site Consultant shall prepare a Conceptual Plan that includes: recommend optimum location(s) for siting the proposed building(s) and related improvements, as described in the Architectural Pre-design and Programming section of this Scope of Services. The Site Consultant shall include a minimum of three (3) alternative conceptual site plans (30" by 42"), showing such locations. The Site Consultant shall indicate each building with its associated footprint or envelope. The conceptual site plan shall conform to all applicable zoning and land development ordinances. The Site Consultant shall be mindful that conceptual site plans will be referenced in the Site Feasibility Report.

Two hard copies of the report shall be provided in addition to one complete color copy of the report in a "cover-to-cover" PDF format. Plans, figures, and tables shall also be provided in PDF format. Revisions to this report shall not be considered an additional service, unless substantive comments

exceed two written pages. At the request of the Authority, the consultant shall provide electronic files of plans and figures in AutoCAD format.

3.13 Executive Order 215 Report

Executive Order 215 report may be deferred to post-acquisition depending on design development phase of the project.
The Site Consultant shall prepare a report in accordance with Executive Order No. 215 (1989) ("E.O. 215") for submission of the project to the NJDEP Office of Program Coordination. A copy of the E.O. 215 Guidelines is set forth as an appendix to this Scope of Services. The EO 215 report shall build upon the information contained in the Environmental Screening Report in Item B (above). Some of the information gathered in other tasks shall be incorporated in summary form into the Executive Order 215 document or as appropriate, shall be attached as appendices. The tasks to be incorporated may include, but not limited to:

- Environmental Screening Report
- Preliminary Assessment
- Site Investigations
- Wetland Investigation and Determination
- Asbestos Containing Materials (ACM), Lead-Based Paint, Lead in Drinking Water, Radon, Mold and PCB Investigation
- Traffic Feasibility Analysis
- Historic and Cultural Resources

The Authority also recognizes that certain components of the E.O. 215 submission depend on the production of design elements, which may not be part of this Scope of Services, and which, therefore, shall be provided pursuant to future architectural design services for the proposed School Facilities Project. The Site Consultant shall be required to coordinate appropriately with any later-procured architectural firm in order to meet such E.O. 215 requirements. The schedule for submission of the E.O. 215 report shall be coordinated with the Authority Environmental Specialist.

Two hard copies of the report shall be provided in addition to one complete color copy of the report in a "cover-to-cover" PDF format. Plans, figures, and tables shall also be provided in PDF format. Revisions to this report shall not be considered an additional service, unless substantive comments exceed two written pages. At the request of the Authority, the consultant shall provide electronic files of plans and figures in AutoCAD format.

3.13.1 Historic and Cultural Resources

Where the Site contains structures over 50 year old or is in or near a State Registered historic district, the School Facilities Project Management team must take into consideration and be sensitive to historic buildings and resources, and any archaeological resources on the Site. The services addressed in this section shall be provided by a historic preservation specialist, pre-qualified by the Authority and having met the minimum professional qualification standards promulgated by the National Park Service, 36 C.F.R. § 61. Sites or historic districts listed on the New Jersey Register of

Historic places will be reviewed under both the EO-215 review process and the New Jersey Register of Historic Places regulations.

3.13.2 Historic and Cultural Resources Report

The Site Consultant shall submit to the Authority a Historic and Cultural Resources Report. The Historic and Cultural Resources Report shall set forth the results of a file search and on-site investigation identifying the likelihood of archaeological or historic resources on and near the Site and a review of any previously completed and/or ongoing historic investigations or reports conducted by the State of New Jersey, or other agencies. The Report shall set forth the location and boundaries and origin of historic structures, districts or archeological resources on the Site and relevant surrounding area. The report shall contain photo-documentation of all buildings affected by the proposed school project and in the vicinity of the proposed school site. Photographs shall include at a minimum of two (2) facades, and two (2) exterior building corners. The historic and cultural resources report shall be summarized in the EO 215 report and included as an appendix.

3.13.3 Historic Preservation and/or Mitigation

If the Historic and Cultural Resources Report indicates that significant historic and/or archaeological resources exist on or adjacent to the Site, the Site Consultant shall perform further investigation of the Site to determine the impacts of the proposed school facilities and ways to avoid, minimize or mitigate adverse impacts. The Site Consultant shall submit a report containing his/her findings and a series of recommendations for preservation through avoidance, adaptive reuse, or minimization of impacts. Failing those possibilities, the Site Consultant shall make recommendations on mitigation, including, but not limited to, archival recording, Site design parameters to minimize impacts, preservation of component artifacts, or archeological recovery. In the event that properties listed on the New Jersey Register of Historic Places will be impacted by the proposed school project, the Site Consultant shall prepare an application for submission to the NJDEP pursuant to the regulations of the State Register Act.

3.14 Architectural Pre-Design And Programming Services

The Site Consultant shall provide architectural pre-design services, which shall consist of preparing a conceptual program document, a conceptual design and cost estimate for the proposed School Facilities Project based on the approved DOE Programmatic model, as defined by N.J.A.C. 6A: 26-1.2 (the "Programmatic Model"). The Site Consultant shall inform the Authority Environmental Specialist whether or not the proposed Site is of adequate size to accommodate the proposed School Facilities Project based on the approved Programmatic Model.

3.14.1 Programming and Conceptual Design

Programming and conceptual design services shall include, but not be limited to the following:

- The Site Consultant shall consult with the Authority, the Client School District, and the PMF and other parties, as appropriate, to ascertain the applicable requirements of the Project and

shall review the understanding of such requirements with the Authority, the Client School District, and the PMF.

- The Site Consultant shall document the applicable requirements necessary for the various School Facilities Project functions or operations, such as those for existing and projected staff, students, other personnel, and space allocations.

- The Site Consultant shall review information supplied by the Authority, the Authority and the School District and the DOE, including but not limited to, any preliminary conceptual program documents, Programmatic Model, and budget estimates.

- The Site Consultant shall confirm with the Client School District the following information:

Preliminary information from the School District's Long Range Facilities Plan ("LRFP"), including, but not limited to: student populations, grade breakdown, school planning areas, and demographic data;

The Site Consultant shall develop typical spatial configurations including, but not limited to, classroom, laboratory, media center, administration and cafeteria configurations (pursuant to the Programmatic Model, where applicable). Deviation from typical classroom sizes shall be fully documented with respect to need (e.g., special education support).

The Site Consultant shall review both existing and/or proposed departmental spaces, including, but not limited to any special requirements, and security or public access issues, and make recommendations for departmental space utilization.

3.14.2 Deliverables

The Site Consultant shall provide a draft Conceptual Program Report describing the recommended design concept. Two hard copies of the report shall be provided in addition to one complete color copy of the report in a "cover-to-cover" PDF format. Plans, figures, and tables shall also be provided in PDF format. Revisions to this report shall not be considered an additional service, unless substantive comments exceed two written pages. At the request of the Authority, the consultant shall provide electronic files of plans and figures in AutoCAD format.

The Site Consultant shall provide a minimum of three (3) conceptual alternatives for the proposed School Facilities Project, unless the Authority has informed the Site Consultant that the Authority and the School District have agreed to a final plan.

The Site Consultant shall provide draft blocking and stacking diagrams illustrating, per floor, each department's, wing's or classrooms' total space. The diagrams shall be submitted on reproducible vellums with five (5) black-lined copies each and in an electronic format.

At the request of the Authority, the Site Consultant shall provide a conceptual schedule for the proposed School Facilities Project, with a bar chart diagram showing Pre-Development Activities,

design phase, bidding, and other construction phase time-frames.

The Site Consultant shall identify the estimated hard and soft costs necessary to remediate, design, and construct the proposed School Facilities Project.

3.15 Architectural/Building Site Evaluation Services

3.15.1 Existing Conditions Analysis

The Site Consultant shall inspect any buildings on the Site in order to report on the condition of the building systems and their suitability for reuse in the School Facilities Project. The Existing Conditions Report shall include an exterior and interior building survey and a review of the structural system.

3.15.1.1 Exterior Survey

The exterior building survey shall examine roof systems, doors, windows, exterior walls, exterior paving and sidewalks.

3.15.1.2 Interior Survey

The interior survey shall include, but not be limited to, the restrooms, bathrooms, lobby, floors, ceilings, interior partitions, stairways and elevators. The types of systems and general condition/expected life will be included in the report. The report will note the type of structural systems present, e.g., steel frame, concrete, or metal fill deck, noting the design floor loads and other pertinent factors, and identifying any visible structural deficiencies, such as floor cracks, observed settlement, and column corrosion.

3.15.1.3 Existing Conditions Report

The Existing Conditions Report shall set forth the existing HVAC system within the building, noting the types of mechanical systems present in the building, the age, condition, and expected life cycle of the equipment and whether or not it is viable for continued use, given the proposed renovation. This Report shall include a review of building code issues associated with the existing structure and the reuse of the building as a School Facility. The code review shall identify life safety and energy code issues associated with the intended reuse. The HVAC system review and code review shall include a review of Project Management issues associated with the classroom renovation and associated administrative space.

The Existing Conditions Report shall evaluate the existing plumbing and fire protection systems. The review of existing conditions shall include the plumbing system water service size and location to the building, and the domestic water system supply to each floor of the building.

The existing conditions review shall include a review of the sanitary waste water system and the storm water system, including roof drains and conveyance from the building and an evaluation of the

fire protection system. The Existing Conditions Report shall include preliminary analysis and recommendations for the reconfiguration of these systems for the intended re-use of the building.

The Existing Conditions Report shall include an evaluation of the existing building electrical systems. This analysis shall include an inspection of the electrical room(s) and switchgear, the metering system, the building distribution system, HVAC electrical loads, the emergency lighting systems, building lighting systems, telephone data systems and the fire and security system. The Site Consultant shall report on the condition of said systems and make recommendations on their re-use or replacement based on the intended building re-use.

Two hard copies of the report shall be provided in addition to one complete color copy of the report in a "cover-to-cover" PDF format. Plans, figures, and tables shall also be provided in PDF format. Revisions to this report shall not be considered an additional service, unless substantive comments exceed two written pages.

3.15.1.4 Existing Conditions Report Outline

This Report shall include the following sections:

- Executive Summary
- Building Overview
- Exterior Building Survey
  - Roof; Doors; Windows; Exterior Walls; Exterior Paving; Site Improvements
- Interior Building Survey
  - Restrooms; Lobby Areas; Ceilings; Interior Partitions; Stairways; Elevators
- Structural Survey
  - Structural System; Design Loads; Observations
- HVAC System Descriptions
  - Major HVAC Equipment Observations; Building Code Issues; Indoor Air Quality; Life Safety Code; Energy Code; Recommendations
- Plumbing and Fire Protection Systems
  - Existing System Observations; Plumbing Systems; Domestic Water System; Sanitary Waste System; Storm Water System; Fire Protection Systems; Analysis and Recommendations
- Electrical Systems
  - Service and Distribution Systems; Emergency Power Systems; Lighting; Telephone/Data; Fire Alarm System; Security System; Overall Condition of System/Recommendations
- Conceptual Renovation Cost Estimates
  - Exterior; Interior; Structural; HVAC; Building Code; Plumbing Fire Protection; Electrical; Selective Demolition

3.15.2 ACM, Lead-Base Paint, Lead in Drinking Water, Radon, Mold and PCB Investigation

The Site Consultant shall review the "Asbestos Management Plan" and the Client School District's AHERA report regarding ACM in buildings on the Site, and shall investigate and include in the Existing Conditions Report, its findings on the presence of any other hazardous materials, including, but not limited to radon, PCBs, lead-based paint, radioactive exit lights, molds, and mildews.

3.15.3 Utility Feasibility Analysis

When applicable the Site Consultant shall investigate and, in the Existing Conditions Report, set forth its findings on whether the Site/building can support the proposed re-use and whether adequate utility capacity, including water, sewer, and electric, exist in sufficient capacity to support the maximum enrollment. Copies of letters from the local utility authorities and/or companies stating whether sufficient capacity is available to support the proposed development shall be included as exhibits to the Report.

3.15.4 Letter of Suitability for the Proposed Development

The Existing Conditions Report shall contain a letter signed and certified by a professional engineer and/or licensed architect, as appropriate under the Building Design Services Act, N.J.S.A. 45:4B-1 *et seq*., indicating whether the site/building appears to be technically suitable for the proposed School Facilities Project and whether the proposed School Facilities Project is feasible from a regulatory and permitting standpoint.

3.16 Local Planning Board Capital Project Review Submission And Meeting Attendance

The Site Consultant shall prepare a Capital Project Review submission to the local planning board for a courtesy review of the proposed School Facilities Project, when directed to do so by the Authority. The Site Consultant shall prepare all plans and renderings in a manner suitable for presentation at a minimum of one public meeting. The Site Consultant shall attend a meeting with the Authority, the Client School District and the local officials prior to any local planning board meeting.

3.17 Potential Expert Witness Testimony

At the request of the Authority, the appropriate Site Consultant personnel shall provide testimony as an expert witness in connection with the Authority's acquisition of the Site, condemnation of the Site, and/or potential legal proceedings involving the Site or any individual properties within the Site. This requirement shall not apply in the event that the Site Consultant and the Authority are adverse parties. These services typically entail the preparation and/or review of reports, studies and memoranda and other documents related to this Scope of Services as applied to the Site.

3.18 Land Acquisition Checklist

The Site Consultant shall assist the Authority in completing the DOE Land Acquisition Checklist, pursuant to N.J.A.C. 6A: 26-7.1. The School District shall provide the data addressing the checklist items regarding demographics, attendance area, and local endorsements. The Site Consultant shall provide the Authority with three (3) copies of the checklist in the form approved by the Authority.

3.19 Meetings

The Site Consultant shall develop a program to support the Authority at meetings. For the purposes of cost estimating the Site Consultant shall assume a minimum of four (4) 2-hour meetings, or meet as directed by the Authority's Environmental Specialist.

Depending on the subject matter to be discussed at the proposed meeting, the Task Order Consultant shall propose to the Environmental Specialist for approval, a staffing plan to support the project meetings.

3.20 Deliverables

The Site Consultant shall provide one electronic and one hard-copy of each draft deliverable for review and comment. In accordance with the instructions contained within the notice to proceed, complete draft deliverables shall be submitted electronically by email to the Authority in a cover-to-cover Acrobat PDF format. All draft deliverables shall contain a cover page marked "DRAFT," and where appropriate, each deliverable shall include plans, figures, tables, and, if requested, color photographs. All narrative reports shall include a brief and concise executive summary, table of contents, and appropriate certification pages prepared for certification.

"Final deliverables" shall be complete documents with executed certification pages where appropriate. Boundary and topographic plans shall be sealed by a New Jersey Licensed Professional Surveyor. All Final deliverables shall contain a cover page marked "FINAL," and shall include plans, figures, tables, and color photographs. Final deliverables shall be submitted electronically by email to the Authority in a single cover-to-cover Acrobat PDF format.

Analytical data shall be provided in an electronic HAZSITE format compatible with NJDEP requirements.

Upon completion, the Site Consultant shall provide one electronic final copy of each deliverable, and the minimum number of printed copies of each deliverable according to the following schedule.

Report Title	No. of Printed Final Copies
Boundary Survey Plan	6
Topographic/Utility Survey Plan	6
Environmental Screening Report	5

Preliminary Assessment Report	2
Preliminary Relocation and Displacement Analysis	2
Land Acquisition Preliminary Assessment Site Investigation Report	2
Remedial Investigation Work Plan	2
Remedial Investigation Report	2
Human Health Risk Characterization Report	2
Remedial Action Selection Report	2
Remedial Action Work Plan	2
Environmental Communications Plan	2
Environmental Quality Summary for School District	2
Health and Safety Guidance Summary for Visitors and Inspectors	2
Remediation Plans and Technical Specifications	2
Remedial Action Report	2
Geotechnical Investigation Report	2
Wetlands Evaluation Report	2
Utility Investigation Analysis Report	2
ACM, Lead-Based Paint, and PCB Investigation Reports	2
Abatement, Demolition Plans and Specifications	2
Property Acquisition Environmental Cost Estimate Report	2
Traffic and Air Quality Feasibility Analysis Report	2
Site Feasibility Report	2
Executive Order 215 Report	2
Historic & Cultural Resources Report	2
Conceptual Programming Report	2
Architectural/Building Existing Conditions Report	2
DOE Land Acquisition Checklist	2

Format of Final Submissions Cover Page: all reports and CD labels shall include the following:

- Project Name
- Location
- District
- DOE number
- Task Order number (unique to consultant and phase of project) and Title
- Consultant name, address
- Date
- Lot and Block numbers

Other reports may be required. Deliverables for those reports will be defined as necessary.

NJSDA Real Estate Practices Manual

APPENDIX B

SCHOOLYARD PLANNING AND DESIGN IN NEW JERSEY

Schoolyard Planning and Design in New Jersey

Enhancing Outdoor Play and Learning

August 25, 2007

New Jersey School Outdoor Area Working Group

The Center for Architecture and Building Science Research
New Jersey Institute of Technology
Newark, NJ

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We wish to thank Bernie Piaia and Susan Kutner of the Office of Facilities, Department of Education for their gracious support of the Working Group.

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Schoolyards

"Parks, playgrounds, urban wilds, and community gardens have long been important to Bostonians, but schoolyards were simply too degraded to register in the mind's eye. Today, schoolyards are being acknowledged as perhaps our most important urban open space. Centrally located, open to neighborhood residents, and integrated into the educational system, schoolyards have truly become grounds for celebration." The Boston Schoolyard Initiative"

It is time to abandon the *"ill-conceived notions of substituting high-stakes testing, indoor sedentary play, physical education classes, and organized sports for recess and free play"* " The Developmental Benefits of Playgrounds" J. L. Frost Association of Childhood Education International

Background for this Report

The Department of Education (Department), Office of Facilities, has reached out to the Center for Architecture and Building Science Research (Center) at the New Jersey Institute of Technology and the Education Law Center (ELC) to assist with the development of guidelines for the design of outdoor spaces for all school construction projects under the jurisdiction of the Department. An advisory committee consisting of designers, educators, engineers and others familiar with the subject was convened by the Center in the Spring of 2006. Committee comments are addressed to outdoor space planning in urban, suburban and rural schools - Abbott and non-Abbott districts - for both new facilities and redesign of existing facilities.

We believe that the process of identifying and acquiring adequately sized school parcels by the state and local districts must be organized in a way that gives full weight to the importance of outdoor space, including schoolyards, parking and related needs. While it is not the mission of this working group to grapple with issues of land acquisition, we do not believe that the current policies regarding land acquisition – particularly in the Abbott districts - support the creation of adequately sized outdoor areas. *A detailed analysis of the opportunities of a proposed site to accommodate the full range of outdoor space needs in addition to the school building should be undertaken prior to the acquisition of any site*. Unless this procedural change in the site planning and acquisition process is instituted by the New Jersey Schools Development Authority (NJSDA) schoolyard space is likely to remain less than optimal.

This report is presented for consideration by the Department. We also recommend that the 2003 report – Where Do Our Children Play, the Importance and Design of Schoolyards- published by the New Jersey Appleseed Public Interest Law Center, become an integral part of the Department guidelines. Schoolyard Planning and Design in New Jersey builds upon and embraces much of the analysis and recommendations contained in the Appleseed report. We also recommend a careful review of From Playgrounds to Play/Learning Environments published by the Virginia Department of Education (2003).

The Problem

The outdoor spaces associated with a public school should provide a well designed and adequately sized schoolyard as well as adequate parking, circulation and loading areas. Unfortunately all too many of our existing schools and some of our newest schools, particularly in urban and other densely settled areas, provide neither a sufficient area for schoolyards or parking. Even when available areas are ample, schoolyard design is often perfunctory, with little attention given to the research or best practices on schoolyard design.

Urban schoolyards - and many suburban schools - rarely have gardens or green space. This contributes to what Richard Louv author of Last Child in the Woods: Saving Our Children from Nature-Deficit Disorder calls "nature-deficit disorder", a "disorder" believed to be the experience of all too many school children in urban and suburban settings.

Inadequately designed and sized schoolyards also send a symbolic message to the residents of the neighborhood adjacent to the school about the value of play and the value of pleasing design.

The design and construction of schoolyards with little more than off the shelf manufactured play equipment, with few specialized areas for play/learning, and without integration into the pedagogical program of the school is wholly inadequate to provide for the cognitive, physical, social and developmental needs of our students. Schoolyards can and must be more than simply places for children to run around during recess.

The larger problem is that American culture does not value play, as evidenced by the dismissive saying that something is only 'childs play'. Until enough parents, educators and policy makers recognize the importance of childs play, schoolyards will not be designed to maximize the developmental needs of our children. And what might be worse, designing schoolyards in appropriate ways does not guarantee that educators will value the schoolyard enough to actually use it as a fundamental component of learning.

Part of the devaluation of play results from an increasingly risk averse society. Fear of liability and lawsuits often trumps common sense when considering schoolyard design. Some schools have even banned 'tag' or running to prevent injury. Broward County, Florida has signs at its 137 elementary schools advising children not to play without adult supervision, and not to run on the playground (Chris Kahn, "In pursuit of safety, teeter-totters and swings are disappearing from playgrounds," Sun-Sentinel, July 18, 2005)

The widespread recognition of the epidemic of obesity among children is in part related to the absence of play at school – as well as at home. Some 70% of today's mothers played outdoors every day; only 31% of kids today play outside daily [1]. In the past forty years the percentage of children and adolescents who are overweight or obese has doubled to approximately 15% [2].

1 Clements, Rhoda. *An Investigation of the status of Outdoor Play.* Contemporary Issues in Early Children 5(1) 2004

2 Hedley, A. A., C. L. Ogden, C. L. Johnson, M. D. Carroll, L. R. Curtain, and K. M. Flegal. 2004. *Prevalence of Overweight and Obesity among U.S. Children, Adolescents, and Adults, 1999-2002*. Journal of American Medical Association 291: 2847-2850.

Core Recommendation

The state, in partnership with school districts, design professionals and local communities must insure – through education, financial resources and regulation - that schoolyard design, construction and operation reflects the best practices and latest research on the importance of well-designed outdoor areas for the cognitive, physical, social, emotional and developmental needs of our children. This includes insuring both high performance design and integration with the academic program that maximizes opportunities for active use of the schoolyard during the day and throughout the school year.

Adequate parking for staff and visitors must continue to be considered as part of the site planning and acquisition process but should be subordinate to children's needs for outdoor activity in those cases where sufficient land acquisition or design constraints does not allow for optimal creation of both schoolyards snd parking.

We believe that the Department can provide valuable guidance to New Jersey school districts through the development of outdoor space guidelines. However development of guidelines, while necessary, is insufficient to achieve the goal of creating high performance schoolyards without a vigorous effort to provide training and technical assistance to all parties involved in the design process. This training can be provided directly by the department or through organizations and individuals throughout New Jersey with the necessary interest and expertise.

Implementation Strategies

1. The Department of Education through regulations should require district Boards of Education to develop a districtwide policy to govern the planning and design of outdoor space to accomodate all grade levels and all sports. The policy should include recommendations for incorporation of curriculum into outdoor space and development for time in scheduling for outdoor play, especially for younger children. This policy should be part of the district's Long Range Facility Plan.

2. During project development for each school, the Department should require appropriate planning and design of outdoor space that reflects the district's policy and considers the specific circumstances and needs surrounding the location of the building. This should include requirements for community input, security considerations, priorities for outdoor play space, accessibility for special needs students, and sports activities. A demand and supply management plan should be developed to minimize the number of parking spaces for the site.

3. The Depatment's Facilities Efficiency Standards must be updated to include guidelines for outdoor space.

4. Legislation for school facilities funding should include necessary requirements for public-private partnerships, leasing arrangements, and mixed use projects.

5. The Department should provide training programs for district policy development and for project planning for schoolyards.

Current status of schoolyards:

Nationally there are no established standards for schoolyard size, design or function, with the exception of a variety of criteria – from as many as five different national organizations - for schoolyard and play equipment safety.

Nor is there a comprehensive data base of New Jersey schools – existing, under construction or planned - that catalogues or analyzes the size, configuration and functioning of outdoor spaces.

Department regulations require that pre-school construction provide 100 square feet per child of outdoor play space for each child using that space at one time. Section 6A-26:6.4(d) of the Administrative Code stipulates that all school sites require sufficient acreage for outdoor recreation as follows:

"Multi-purpose physical education fields and for pre-school through grade 5 school facilities, a playground required to support the achievement of the Core Curriculum Content Standards as defined by the number of physical education teaching stations applicable to the school facility pursuant to the facility efficiency standards and the approved programmatic model."

New Jersey Core Curriculum Content Standards include standards for "Comprehensive health and physical education". However they do not contain explicit standards for outdoor play and learning except as noted above, nor do they specify the minimum time required for physical education or recess. (Many schools provide 150 minutes of physical education and/or health instruction to students per week. All of this may be provided indoors.)

By September 2007 school districts must implement a policy consistent with the New Jersey Department of Agriculture Model School Nutrition Policy. N.J.A.C2:36-1.7 (b). The model policy sets the following minimum requirements: a commitment to providing students with "the opportunity to engage in daily physical activity:" and the scheduling of physical education or recess "before lunch whenever possible."

While there is no comprehensive information on the prevalence of recess in New Jersey, there appears to be a national trend to cut back or eliminate recess. This cutback is ostensibly done in order to 'fit in' academic and testing requirements despite some research which suggests that student performance is enhanced when recess is offered.

Furthermore, the process by which schoolyards are designed often occurs with little input from students, educators and the community at large, and without a full appreciation of the importance of schoolyards in the development of children of all ages.

The importance of schoolyards

- *Creative thinking*
- *Problem solving*
- *Ability to cope with tension and anxiety*
- *Ability to use tools*
- *Language development*

An ever-growing body of research continues to demonstrate the critical importance of play in the cognitive, interpersonal, emotional and physical development of children. In "Where Do Our Children Play?: The Importance and Design of Schoolyards," New Jersey Appleseed and Dr. Selim Iltus presented extensive research and detailed the findings supporting the significance and impact of properly designed schoolyards, and the prospective harm that stems from lack of access to such schoolyards. They determined that play is linked positively to:

- Creative thinking
- Problem solving
- Ability to cope with tension and anxiety
- Ability to use tools
- Language development

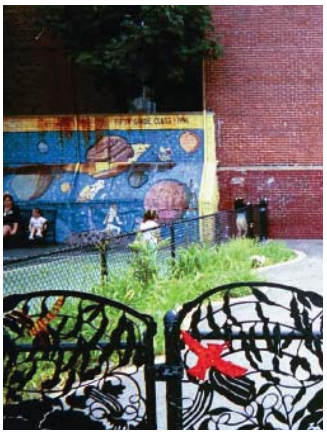
The principal findings of "Where Do Our Children Play?" in summary are:

1. Play and recreation are necessary developmental activities, essential for the appropriate cognitive and social development of children.

- Cognitive Skills: Play fosters creativity, enhances thinking capacity, and can improve a child's intellectual performance
- Language Skills: Play creates rich opportunities for the use of language, such as in peer negotiations, and telling stories utilizing elements of the play environment
- Ability to focus: Physical activity during the school day can improve a child's ability to focus, improve attention levels and thus boost academic performance
- Social and Emotional Development: Play situations develop leadership and decision making skills, promote better understanding of peers, sociability, (taking turns, sharing, respecting other's perspectives, learning rules), and the ability to resolve conflict. It also fosters ability to function on a team, the lack of which leads to anti-social behavior and pathologies. Mastering new challenges contributes to self-esteem.

2. Outdoor play and natural environments facilitate children's cognitive and social developmental processes.

- They create increased opportunities for creativity and social interactions
- Schoolyards with natural elements provide greater opportunity for dramatic and creative play and



activities requiring both planning skills and physical strength.

- Exercise affects the brain's chemistry, making it more efficient, and creating connections that stimulate learning.

- Access to recreational facilities can decrease violent crimes among youth.

3. Outdoor play and exercise benefit physical health and motor development

- The 1996 Surgeon General's Report stated that physical activity reduces the risks of hypertension, type 2 diabetes, obesity and cardiovascular disease, among other chronic diseases.

- Better outdoor play environments enhance the development of motor, locomotive, balancing and eye-hand-foot coordination skills.

- Play not only improves childhood development but reduces long term community health costs through the reduction of chronic disease.

- Regular participation in vigorous physical activity enhances children's belief in themselves, their self esteem and their confidence in their capacity to meet situational demands. These qualities in turn improve academic and social performance. The lack of access denies children these opportunities.

- Picture a healthy space, one that moderates mood swings, calms, creates a sense of well-being and less stress. No doubt you pictured a natural environment. Schoolyards should incorporate such natural elements, while providing safe easy access to natural light and settings. Lack of such access increases mood volatility, depression, lethargy and carbohydrate cravings.

- Students exposed to the most daylight have higher test scores.

4. Outdoor settings provide effective alternative learning environments

- Hands-on, experiential learning enhances teaching science, math, as well as multi-disciplinary approaches and problem-solving.

- Without gaining an appreciation of natural environments and their significance for human life at an early age, adults will not make as intelligent decisions about the environment.

- Perceived safety threats decrease parent's willingness to let their children play outdoors. Providing safe outdoor schoolyards would address this issue and let children in such neighborhoods experience the health and developmental benefits of outdoor play.

5. In addition to these important outcomes other research has shown:

- The transformation of a portion of an asphalt schoolyard to green areas with streams, ponds and flowers led to more positive social relationships and more creative play

- Natural light is essential in the provision of Vitamin D at appropriate latitudes and times of the year

- Exposure to sunlight bouncing off of leaves stimulates children's brains and actually helps brain development more than light reflecting off of a flat wall

These myriad benefits that arise out of well designed and actively used schoolyards are particularly important at a time when the amount of time that children play outdoors outside of school seems to have declined significantly, according to several studies in the United States and Britain.

Teaching and Learning

The Boston Schoolyard Initiative, a public private partnership created to retrofit Boston playgrounds describes the opportunities for using the playground for teaching and learning as follows:

"Schoolyards are different from parks and playgrounds. Their proximity to schools demands a higher degree of interactivity and they offer us the opportunity to combine recreation, creative play, and academic learning. A student for whom English is a second language, or who is under-performing in a text-based environment, may blossom in an outdoor classroom where hands-on activities are the rule. Measuring the schoolyard's metes and bounds will add a "real world" application to the study of mathematics. Planting and caring for a tree adds a living three-dimensional element to biology. Birdfeeders in the schoolyard inspire observation and classification that is intimate as well as instructional. No textbook will equal the thrill of watching a real bird snatch sunflower seeds from a class-constructed feeder. Experiential learning is a proven teaching methodology that has groups of students problem-solving and critically thinking in ways that will benefit them throughout their academic and working lives."

New Jersey has no state requirements or policy to encourage formal teaching and learning to take place in schoolyards. Those decisions are left to the school district and individual school. While no data is available documenting the extent of outdoor teaching and learning that currently occurs in New Jersey schools, the advisory committee members are unaware of any school district or school that actively and comprehensively promotes outdoor learning in schoolyards.

The Virginia Department of Education publication cited earlier gives examples of schoolyard activities and physical features that can promote learning for children of various ages.

Using the equivalent of New Jersey Core Curriculum Content standards (entitled Standards of Learning), the following excerpts from the Virginia examples are shown:

English, Oral Language, Reading, Writing, & Research

Activity Example	Appropriate for Grades K-1	Appropriate for Grades 2-5
Story telling circle	◆	◆
Imprint short verses of poetry or quotes in various places		◆
Imprint letters of the alphabet		◆
Imprint vowels only	◆	
Build a platform for oral presentations	◆	◆

History, Geography, Economics, & Civics

Activity Example	Appropriate for Grades K-1	Appropriate for Grades 2-5
Embed an engraved stone or emblem in the ground showing directions of the compass	◆	◆
Imprint important dates in history on different levels of a play structure		◆
Have a rotating large globe of the earth	◆	◆
Imprintpatriotic symbols (mountains, bald eagle, etc.) and/ or colors		◆
Imprint a penny, nickel, dime, and quarter on a hard surface	◆	◆

Science, Investigation, Reasoning, Logic, Force, Motion, Energy, Matter, Life Processes, Earth/ Space Systems, Cycles & Changes & Resource

Activity Example	Appropriate for Grades K-1	Appropriate for Grades 2-5
Make a weather station		◆
Have windsock showing motion and wind direction	◆	
Imprint natural shapes (leaves, animal tracks, rocks, minerals, etc.)	◆	◆
Have small pool of water within school site to study liquid, solid, and gas (evaluation) and provide enticement for wildlife	◆	◆
Plant shrubs, trees, groundcovers, and flowers to produce outdoor rooms, color, texture, fragrance, shade, and wildlife habitat	◆	◆
Arrange stationary balls in an open area to represent the solar system. Have some balls that are movable (meteorites, asteroids, etc.)		◆
Emphasize earth's resources used to make the play area (steel structures - iron, plastic-oil, wood-trees, mulch-trees, etc.)	◆	◆
Place thermometers to measure Fahrenheit and Centigrade		◆
Construct a sundial	◆	◆

Mathematics, Numbers, Computation, Estimation, Measurement, Geometry, Probability, Statistics, Pattern, & Algebra

Activity Example	Appropriate for Grades K-1	Appropriate for Grades 2-5
Imprint geometric shapes (and different colors) within or on a hard surface	◆	◆
Imprint +, -, =, >. < symbols at appropriate points - use numbers or shapes to enhance	◆	◆
Arrange play equipment so as to emphasize geometric shapes and forms	◆	◆
Imprint 10's, 100's, 1000's on different levels	◆	◆
Imprint feet, yards, inches on a flat surface (perhaps even fractions of an inch) - The metric system may also be displayed	◆	◆
Place three dimensional objects to represent numbers or shapes	◆	
Imprint the numbers I-99 on a hard surface	◆	
Imprint the multiplication and division tables		◆

Physical Education, Exercise, Kinds of Movemnt, Dances, Ball Handling, Balancing

Activity Example	Appropriate for Grades K-1	Appropriate for Grades 2-5
Woodland trails	◆	◆
Arrange low-balance beams to emphasize shapes and slight height changes	◆	◆
Create berms for rooling, sliding boards. age group separation, and evaluation interest	◆	◆
Create a maze on concrete	◆	
Create a sand area for digging and exploration	◆	
Imprint the Hop Scotch pattern	◆	◆

Art & Music

Activity Example	Appropriate for Grades K-1	Appropriate for Grades 2-5
Create an outdoor art terrace	◆	◆
Build a sculpture garden	◆	◆
Install wind chimes	◆	◆
Build a wall to display artwork tiles	◆	◆
Stretch elastic material over supports (barrels, etc.) to create "drums"	◆	

The School and the Community

As can be seen from the Virginia examples, outdoor learning is more than simply learning about the outdoors. The teaching of mathematics, language, science, geography, drama, art and music – and more – can be enhanced through use of the schoolyard.

The schoolyard is also a critical component of community life. Many communities in New Jersey have a significant shortfall in the amount of park and open space land available and accessible for use by children. For example according to the Trust for Public Land more than 50 percent of Newark children under age 18 do not live within one quarter-mile of a usable park.

A well designed architecturally inviting schoolyard open for community use, becomes an important community asset. This must be balanced with security requirements to protect students from harm during and after school.

Yet schoolyards that are designed to achieve a fortress look – with walls and or high security fences – can reinforce a perception that they are dangerous places to be avoided when possible.

Schoolyards that are designed with trees and vegetation reduce the heat island effect in urban areas, leading to lower temperatures in the summer. Schoolyards that utilize non-toxic, recycled and recyclable materials also contribute to reducing the significant asthmatic and other health and environmental burdens in many neighborhoods.

Schoolyards that contain artistic or other representations of the community's history, heritage and architectural vernacular provide important educational resources while enhancing community use and image. It has also been suggested that community ownership of schools (and schoolyards) reduces vandalism.

Maximizing the benefits of play/learning

It is easy to summarize the benefits of play/learning. It is harder to develop a comprehensive approach to insure that students are provided the opportunity to engage in appropriate types and amounts of play during the school day.

We believe that the following elements are all necessary to provide the kind of play experience that will lead to the benefits described in this report.

1. Schoolyards that are designed to provide both adequate space and specialized features to support a wide variety of play and learning experiences must be available to all children.
2. The educational community at the state and local levels should recognize that outdoor play is an essential element of pedagogy, and should be given substantial attention in design and programming decisions.
3. Training and support to educators needs to be provided and institutionalized so that well designed schoolyards are used throughout much of the year in both structured and unstructured activities.

While this report necessarily focuses primarily on item 1, we strongly urge the Department to use these guidelines as a springboard for addressing items 2 and 3. The committee is ready and willing to offer our support to the Department in this effort.

Redesigning Existing Schoolyards

While this publication primarily addresses new schoolyards, the redesign of existing schoolyards is essential to meet the goals established in this report.

A number of large cities, including Denver, Boston, and New York City have programs to systematically redesign obsolete schoolyards. These programs are typically designed as partnerships between school districts, city governments, community groups and philanthropic organizations.

The Department should develop a program to support the redesign of existing schoolyards.

Such a program should contain elements that have proven successful in other cities as mentioned above including:

- Public private partnerships
- Student involvement in design
- A competitive process to select schools to be funded
- A local community organizer to coordinate involvement by all segments of the community
- Close coordination with educational staff to maximize opportunities for use of schoolyard for formal learning
- Documentation of best practices and lessons learned to be shared amongst all schools involved in the redesign process

The Planning Process and Design Process

Any planning process can only be effective to the degree to which the outcomes can be fully integrated into the decision making for delivering new and renovated schools. That does not occur at this time.

Achieving the goal of creating high performance schoolyards requires a deliberate and inclusive planning process. The following recommendations are offered with this goal in mind:

- All districts should develop a set of objectives for their outdoor play spaces. These objectives should ideally be created through the Long Range Facility Planning Process (LRFP) and augmented through individual project planning. In the absence of guidance from the LRFP a more intensive objective/goal setting process will need to be established as part of the project planning process and ultimately incorporated into the LRFP.

- A starting point for determining minimum site size includes calculating the sum of the building footprint, schoolyard, one or more playfields, secure parking, and green space.

- Schoolyards should include where possible a multipurpose area that may be used for field games and organized play. Such activities may include touch football, soccer, field hockey, softball, or little league baseball. Regulation sized fields for any of these activities, although desirable, are not necessary when land is just not available.

- The planning process should be closely coordinated with the municipal master plan and with the staff of the local government.

- The planning process should be designed with the active participation of all stakeholder groups – teachers, maintenance staff, community residents, municipal and district officials, youth groups, crime watch programs and students.

- Opportunities to participate in the design process should be provided to students at all grades to enrich the educational experience of students while improving the ultimate design of the project.

- An interdisciplinary team of professionals – educators, architects, landscape architects, engineers, municipal officials and others should guide, not dominate, the process.

- Opportunities for partnerships with community groups, community development corporations, and private or public employers should be sought at the planning stage. These partnerships can provide capital assistance, as well as ongoing maintenance and program support.

- Participants in the planning process should be familiar with this document and have had specialized training in schoolyard design provided by the New Jersey Department of Education.

- The planning process should be closely integrated with the pedagogical philosophy and goals of the district and school. The planning process should center first on providing space for activities that support the Core Curriculum Content Standards in physical education. It can then be extended to include science, language arts, social studies and math. Finally, the planning process should address the quality of life issues of the students, faculty and community.

- Periodic public meetings of the stakeholder group should be scheduled at times and in locations conducive to public participation.

- The final design shall include both an analysis of the maintenance requirements and costs of the area and the resources required to insure that adequate maintenance and operation of the area will occur.

- The planning and design process should maximize the unique topographic, climatic and locational aspects of the site to create a schoolyard that is representative of the environmental, architectural and historic attributes of the area. (For example, a schoolyard developed on a brownfields site can incorporate a small area showing the prior underground brownfields condition – providing a unique learning opportunity.) In fact, a section of the schoolyard or the entire yard may reflect an environmental, architectural or historical theme consistent with the context of the area.

- The use of natural materials – water, dirt, vegetation, animals, wood – should be given first priority in design.

- Sites where space is at a premium should consider courtyards and schoolyards above parking or other structures. Larger sites should consider creation of meadows or other environmentally rich landscapes rather than simply planting grass over the site.

- The schoolyard should be a tool for learning itself – by incorporating physical features such as sundials, maps designed into the play surfaces, murals, and labeling of materials, flora and fauna.

- The design process should consider leaving one or more areas of the schoolyard 'undesigned' so that the users can assess the functioning of the schoolyard and add – or remove – additional equipment or features. This may be able to occur through involving the community in the construction or reconstruction of the schoolyard though a 'community build day'.

Area requirements for young children

Possibly the most contentious and difficult decision in schoolyard design is the overall size of the schoolyard. Land costs and availability, relocation issues, access to nearby school or community play areas, tradeoffs with building footprint and parking needs, educational philosophy, scheduling of recess, opportunities of use of courtyards and rooftops, equity with other schools and community culture and tradition all influence this decision.

A memo prepared by the Center in 2005 concludes that most states and districts do not have firm square footage regulations for schoolyards. Among the jurisdictions that do, the most commonly recommended square footage per child for K-8 schools in the schoolyard at one time (not the enrollment of the school) is 75 square feet per student, according to the National Program for Playground Safety at the University of Northern Iowa. Among the jurisdictions surveyed playground recommendations ranged from 30 square feet per student in New York City to as much as 122 square feet per student in the Los Angeles Unified School District, with Ohio at 50-75 square feet and Orange NJ at 80 to 90 square feet.

An analysis by the Center of schoolyard areas for seven elementary and middle schools recently constructed by the NJSDA shows schoolyards ranging from as little as 7 to a high of 216 square feet per student. The mean area is 70 square feet.

Since programming the number and duration of recess/lunch times can vary from school to school and year to year, schoolyard area determinations are made in part based on assumptions about such variables. Fortunately since recess periods can be changed, the capacity of the schoolyard to accommodate all students can be optimized regardless of what is built. More specialized spaces, such as outdoor classroom or amphitheater areas also need to be planned to provide flexible use, while reflecting the pedagogical program of the school.

Our recommendation is that schoolyard size should be based on functional needs and performance goals. Once a preliminary design is developed based on these needs and goals, if there is a significant variance from a 70-90 sq ft per student average, special justification would have to be provided to the Department.

Functional requirements

It is not enough to provide adequate gross area to have a high performance schoolyard. Specialized spaces or zones accommodating children of different ages, engaged in a variety of play and learning activities need to be provided.
These zones include:

- Organized games and sports
- Play structures
- Floor and game tables
- Fantasy play/drama
- Outdoor classrooms
- Art and performance spaces
- Natural areas and gardens, with varied ecosystems (eg. beach, forest, meadow)
- Quiet areas
- Social activity spaces
- Sand and water play
- Ponds
- Indoor/outdoor areas
- Areas for children with special needs
- Lining up areas
- Covered pavilions and roof overhangs

Wherever possible spaces should be designed to be flexible and adaptable for use during different functions or by groups at different times. For example given New Jersey's climate, creating areas with roof overhangs, porches, and small covered structures in the schoolyard can provide places where children can play/learn in rainy or chilly weather.

Play areas for toddlers and pre-school should be physically separated from play areas for older children while retaining some visual tie. K-5 playgrounds should typically be accessed from or near the cafeteria. Pre-K should be accessed from or near the classroom. Student drop off and pick up also play a role in location. Play areas should accommodate special needs students. The use of texture, color, and sloped walkways can assist special needs students and provide a richer environment for all students.

Playgrounds are outdoor extensions of classrooms, providing many of the same opportunities as indoor spaces. Play spaces should provide for a variety of developmentally appropriate activities and include storage for curriculum equipment as well as loose play equipment.

Designs should consider culturally, architecturally and historically sensitive features, colors and textures that reflect the community and regional context. Gardens that are actively used by students and maintained by students and staff should be included in all schoolyards.

Transitional areas such as porches, decks and mezzanines are encouraged to provide greater flexibility in the availability and use of outdoor space

The development of green rooftops for play space should be given full consideration.

Designs should consider culturally, architecturally and historically sensitive features, colors and textures that reflect the community and regional context.

Environmental, health, safety and community considerations

Acoustical measures are necessary. The center should not be located near noise sources such as major highways, street intersections, railroad lines, power lines, or airport flight paths without mitigation. If proximity to high levels of noise is unavoidable, acoustical measures are necessary.

The play space area must not be exposed to fumes or dust emissions from industrial enterprises and operations, transportation vehicles, furnace and incinerator exhaust, mists from cooling towers, or other similar sources. Avoid placing centers near exhausts from food processing, waste handling operations, loading docks, or similar sources of unpleasant odors.

The location of the play space must allow for the safe arrival and departure of children from the school facility.

The location must be free of hazards including fountains, wells, open pools, unprotected edges, drop-offs and cliffs, and dangerous equipment. Play areas must not have open drainage ditches or openings to storm sewer systems.

Play space should be located to maximize community access to facility after hours and should provide least intrusive and least restrictive barriers to access play spaces by the community.

The play space location must be readily identifiable and accessible to emergency response personnel.

Green space should be provided around the school; building from sidewalk-to-sidewalk should be avoided. Green space provides for informal instructional spaces and landscaping areas. Landscaped areas may be included in various curricula such as art, science, languages and social studies.

If a courtyard is provided as a result of building design, every attempt should be made to utilize it for educational purposes. Courtyards can provide protected play areas, gardens, or instructional spaces. Care should be taken to prevent visual or noise distractions for the adjacent indoor instructional areas. Access to storage, water, maintenance equipment, and electrical supply is needed in courtyards.

Play Equipment

Equipment should be designed to engage the child in use of imagination, role playing and physical activity. The less structured and more oriented to large muscle movement and activity, the better. Manufactured play equipment, while increasingly colorful and multi-functional essentially provide students with static play experiences. The equipment is generally not designed to provide students with opportunities to modify or adapt the equipment to their learning needs. As such the opportunities for true learning with manufactured equipment are minimal. As such we do not recommend the use of manufactured play equipment except as a limited component of a diverse range of adaptable play areas.

Guidelines for Middle and High School

Schoolyards and outdoor areas for middle and high school grade levels need a master plan of their own with special consideration to the relationship to the school building.

An education program developed by the staff and administration for the site should identify the experiences and activities that will take place outside the school building. Basic principles for design of outdoor space should include discussions of the need for organized sports, social gathering space, natural areas for environmental education, community activities, and open space for exercise, running and physical education activities.

Access for the students from the school to the outdoors is important. Direct access from the locker room is the preferred arrangement. Additional parking space must be considered if spectators are anticipated for sports activities or after-school activities. An additional challenge must be the accessibility to all areas for students with disabilities.

Additional design considerations should include:

- Barriers and perimeter outlines
- School property line boundary designation
- Stable, paved pathways to allow all students to reach outlying areas
- Lighting
- Adequate trash can placement
- Bicycle racks
- Storage areas for equipment
- Clear sight lines over entire schoolyard and field areas for supervision
- Signage indicating age-appropriate equipment
- Easy access for maintenance trucks and equipment

Middle School

Middle school age children present a particular problem. Their schedules should allow for some outdoor recreation time in addition to physical education. The space allowed should be larger than the area allotted to younger students and should be less constrained. Open space for pick-up games and running should be part of a design. These students are usually not involved in interscholastic sports so access to fields is more limited but structured competitive sports still require the availability of fields. An amphitheater is ideal for this age group.

Outdoor time is important and some developmentally appropriate equipment should be provided during the school day or lunch time and could include:

- Rope or chain climbers on angles
- Climbing apparatus
- Horizontal bars and ladders
- Sliding poles
- Balance beams (no higher than 12 inches off the ground)
- Benches and chat areas that allow for gender separation
- Built in chess boards

This age group should be included in schoolyard design discussions. Even if space is limited, middle school students have definite ideas about their needs for recreation and relaxation.

High School

The National Federation of State High School Associations (NFSHSA) as the governing body for standards for athletic fields and interscholastic playing requirements provides the necessary guidelines for just about any sport likely to be played in a structured school setting. These guidelines are too extensive to be repeated here but are available in the "Court and Field Diagram Guide" published by NFSHSA. The guide also includes ball and equipment specifications, recording keeping, and youth level sport field layouts (examples, Little League and Pop Warner football).

The design of athletic programs presents a challenge for schools striving to accommodate increasing numbers of participants and activities. Lack of space for fields is especially problematic in urban areas.

Natural grass remains the standard for sports fields, but new developments in synthetic turf technologies have created multiple options where there is a shortage of land for fields. Grass is difficult and expensive to maintain properly because constant use is hard on high-traffic areas. Even though the initial expense is greater for artificial turf, the cost of upkeep can be significantly reduced.

Universal Design to Benefit Special Needs Children

The positive benefits of play areas can only occur if the environment is designed to benefit all users. Children come to school with a wide range of needs and the challenge of designing a play area is to match those needs. A schoolyard or building designed to accommodate, to the maximum extent possible, children of a range of developmental needs, mobility, and perceptual acuity is often described as universal design.

The Americans with Disabilities Act (ADA) is a comprehensive civil rights law that prohibits discrimination on the basis of disability. The ADA requires that newly constructed and altered state and local government facilities, places of public accommodation, and commercial facilities be readily accessible to, and usable by, individuals with disabilities. The Recreation Advisory committee of the U.S. Architectural and Transportation Barriers Compliance Board has guidelines on accessibility and playground equipment. The guidelines specify the minimum level of accessibility required in the construction and alteration of play areas covered by the law. (http://www.access-board.gov)

Play areas should offer some stable paths paved with engineered wood, fiber, rubber mats or other material to access wheelchairs. Transfer stations on equipment will aid physically-challenged children to get off and on play structures. Wide paths, wheelchair parking spaces adjacent to the play areas, wider platforms and walkways help children using wheelchairs or crutches. Different textures and colors for paths and handrails can help visually-impaired children.

Parking

Developing parking guidelines that can fit all New Jersey schools, or even all urban districts is daunting. The current NJSDA guidelines provide for .8 spaces for each teaching station in PreK through 8 schools, with adjustments for high schools, for access to public transportation and density of the community. The parking ratios are based on teaching stations, not on full time staff housed at the building. Full time staff can be as much as 50% greater than the number of teaching stations. In addition neither 'urban', 'low density' or 'public transportation' is defined, and at many sites honest disagreements will occur concerning the applicability of these terms.

Presently NJSDA's approach is based on their comfort level for the cost of the land and is driving decisions about the amount of necessary space for parking. While the NJSDA standards are a useful approach to providing guidance for parking supply, we propose a policy that calls on the local school district to develop a demand and supply management plan to minimize the number of parking spaces to be provided on site. We also strongly recommend that greater weight be given by the local school board and Department to space requirements for playgrounds over those for parking, should significant tradeoffs need to be made.

Adequate and secure parking must be provided, especially in urban areas subject to high crime. Parent volunteers may be coming from the local neighborhood or taking public transportation, but teachers, administrators and other professionals will be coming from outside the neighborhood, the district, or even the state. Parking should include a number of spaces for visitors.

A survey should be undertaken of staff housed or anticipated to be housed at the facility to determine residential location, mode of travel and opportunities for car pooling and use of mass transit. If it is unknown who the staff at a new facility will be, the district should survey staff at similar schools to estimate the number of staff who are likely to travel other than by single occupancy vehicle. Districts should analyze the feasibility of programs to reduce automobile trip demand, including the use of transit passes, computerized or other techniques to encourage car and van pooling, discussion with New Jersey Transit to modify or change the routings and frequency of service, and the possible institution of financial incentives for staff, to reward those who take advantage of alternative means of transportation.

Alternative parking locations in the area shall also be identified, including on street parking and long term leasing of nearby parking areas, as well as shared parking with facilities that may have excess capacity. While on-street parking should be given full consideration it can be problematic in some neighborhoods due to safety issues and supply limitations.

Provisions for overflow parking for special events or community use on schoolyards or at neighboring locations shall be incorporated into the analysis.

Underground and shared parking in mixed or shared use buildings or sites are strongly encouraged.

The Department should develop procedures to verify that the district has undertaken all possible actions – including but not limited to those discussed above - to reduce parking demand and to secure parking off site before approving any district plan.

Schoolyard cost guidelines

A survey of other states done by the Center last year concluded that no state had cost guidelines for playgrounds.

We recommend that in line with other states, no specific cost guidelines be developed. Rather the cost of the schoolyard is and should be part of the overall budget for the project. Tradeoffs between schoolyards and other budgetary expenses should be made using a systemic planning and design process intended to maximize value while achieving performance and other objectives for the project. Following these guidelines should lead to schoolyards that are cost effective.

The Next Steps

This report outlines a series of steps that should be undertaken to improve the quality of outdoor spaces at New Jersey schools.
In order for these sweeping changes to occur the committee recommends the following actions be undertaken.

1. A widespread review of this report by offices within the Department of Education that are responsible for pedagogy as well as facilities.
2. Incorporation of the report recommendations and strategies into appropriate departmental guidelines and regulations after adequate public review.
3. An initiative to create an ongoing working group with representatives from school boards, teachers, administrators, students, parents, academics, community members and design professionals to guide the department and other state agencies – the SDA, Department of Environmental Protection, Department of Community Affairs, and Department of Transportation among others - in best ways to implement these recommendations
4. Outreach to the private sector, foundations, public interest groups, media and the legislature to gain their support
5. The creation of a web site or section of an existing web site to provide support for the various constituencies to more effectively implement these recommendations.

APPENDIX C

RELOCATION PROCEDURES OF THE SDA

INTRODUCTION

Part I, Section A of this pamphlet provides general information about public acquisition of private property (real estate) that should be useful to you.

Part II, Section B of this pamphlet provides general information about services and benefits provided under the New Jersey State law if you must move because the property you occupy is purchased for public use, (construction of a school).

This pamphlet may not answer all of your questions concerning property acquisition and relocation assistance. If you have more questions about the acquisition of your property or relocation assistance, please contact NJSDA. Please refer to the end of this pamphlet for the names of the people to contact at NJSDA.

ACQUISITION OF PROPERTY BY THE NEW JERSEY SCHOOLS DEVELOPMENT AUTHORITY ("NJSDA")

Some General Questions

What right has NJSDA or any Public Agency to acquire my property?

The Federal Government and every State Government have certain powers that are necessary for them to operate effectively. For example, they have the power to levy taxes and the power to maintain order. Another governmental power is the power to acquire private property for public purposes. This is known as the power of eminent domain.

The rights of each of us are protected, however, by the Fifth and Fourteenth Amendments of the U.S. Constitution and the eminent domain law of the State of New Jersey which guarantee that, if a public agency acquires private property for a public purpose, it must pay "just compensation" to the owner.

The New Jersey Schools Development Authority, (of but not in the New Jersey Department of Treasury) has been given the power to acquire private property reasonably necessary for construction, renovation and addition projects for any school facilities project by purchasing it, through exercising the power of eminent domain, or otherwise on such terms and conditions, and in such manner as it may deem proper.

Toward this end, the acquisition of your property may be necessary.

How will NJSDA determine how much to offer me for my property?

Before making you an offer, NJSDA will obtain an appraisal of your real property by an independent state certified real estate appraiser who is familiar with local property values. The appraiser will inspect your property and provide a professional opinion of its current fair market value in an appraisal report. You will be given the opportunity to accompany the appraiser on the inspection of your property and you should provide information you believe relevant. After the appraiser has completed his or her work, another independent, state certified appraiser will review the work to assure that the work conforms to professional appraisal standards.

NJSDA must offer you "just compensation" for the value of your property. This amount cannot be less than NJSDA's approved appraisal of the fair market value of the property. In addition to "just compensation" for your property, you and/or your tenants may be entitled to additional separate relocation assistance and benefits. Part II, Section B of this pamphlet describes relocation.

What is Fair Market Value?

The measure of just compensation is the fair market value of the property on the date of appraisal. Fair market value is defined as the price at which a knowledgeable willing seller would agree to sell and a knowledgeable willing buyer would agree to buy, neither being under any compulsion to act. Fair market value cannot take into account intangible elements such as sentimental value, good will, business profits, or any special value that your property may have for you or for NJSDA.

How does the Appraiser determine the Fair Market Value of my property?

Each parcel of real property is different and therefore, no single formula can be devised to appraise all properties. Therefore each property must be evaluated separately.

The factors an appraiser typically considers in estimating the value of real property are:

- How it compares with similar properties in the area that have sold recently.
- How much it would cost to reproduce the building and other structures, less various type of any depreciation.
- How much rental income it could produce less the owner's expenses.

Will I have a chance to talk to the Appraiser?

Yes. You will be contacted and given the opportunity to accompany NJSDA's appraiser on his or her inspection of your property. You may then provide the appraiser with any information you believe relevant or any special features which you believe increase the value of your property. It is in your best interest to provide the appraiser with all of the potentially useful information you can in order to ensure that nothing of allowable real property value will be overlooked. If you personally are unable to meet with the appraiser, you may wish to have a person who is familiar with your property meet with the appraiser in your place.

When will I receive a Written Offer of Just Compensation?

Once all of the school site analysis is complete, including the total estimated acquisition/relocation costs and the environmental investigations, the NJSDA will submit its findings to the NJSDA Members of the Board for approval to purchase the affected properties. This process generally takes 4-6 months from the date that the appraiser contacts you.

Assuming the NJSDA Board approves the acquisition, within 3-4 weeks you will be mailed an offer to purchase your property. Either at the time of the offer or shortly thereafter, a relocation representative will contact you to discuss any relocation benefits that may be available to you.

Must I accept NJSDA's Offer during property value negotiations?

No. While it is hoped that purchase negotiations will result in a voluntary agreement, it is recognized that this may not always happen. However, please be assured that during these negotiations, NJSDA will consider and respond to any input from you concerning the fair market value of your property.

May someone represent me during negotiations?

Yes. If you would like an attorney or anyone else to represent you during negotiations, the Real Estate Specialist listed at the end of this pamphlet needs to receive a letter from them stating that he/she represents you in the purchase negotiations. However, NJSDA is not required to pay and will not pay the costs of such representation.

If I reach agreement with NJSDA, how soon will I be paid?

If you reach a voluntary agreement to sell your property to NJSDA and your ownership (title to the property) is clear, payment will be made at a mutually acceptable time. Generally, this should be possible within 60 days after you sign the contract to sell. If the evidence obtained by NJSDA indicates that further action is necessary to clear the title records, payment may take longer. You may be able to hasten the payment by helping NJSDA obtain any necessary proof to assure that you are able to convey good and marketable title. (Title evidence is basically a legal record of the ownership to the property. It identifies the owner of record and lists any restrictive deed covenants, recorded mortgages, leases, liens, easements and other interests or instruments affecting your ownership of the property.)

What happens if I don't agree to NJSDA's offer?

If the issue of just compensation cannot be resolved through negotiations, NJSDA may file a law suit in New Jersey Superior Court to acquire your property through an eminent domain proceeding. Eminent domain proceedings are often called condemnation actions.

What happens when NJSDA condemns my property?

If NJSDA is going to begin a condemnation action to acquire your property, you will receive a letter that advises condemnation will occur.

The first step in condemnation will be the filing of a "Civil Action Complaint" by NJSDA. The complaint freezes the property value at that point in time for all future settlement discussions including the condemnation commissioner's award and later, the value trial. After the condemnation complaint is filed, etc., the NJSDA will update the appraisal report to reflect the property value on the date of the filing of the condemnation complaint and attempt settlement discussions (not negotiations, a key legal point) based

on the condemnation complaint appraisal report, which is provided to the seller.

After NJSDA commences the condemnation action and prior to taking physical possession of the property, NJSDA will deposit into the court an amount of money not less than its offer of just compensation for the property. Upon appropriate application to the court, you may withdraw the amount deposited by obtaining an order from the court. By withdrawing the amount on deposit you in no way affect your right to seek just compensation in an amount greater than the deposit withdrawn from court.

Upon the court approving the NJSDA's condemnation action, the court will appoint three disinterested commissioners who will a hold a hearing to determine just compensation. When this hearing is held, NJSDA will present evidence of its opinion of the just compensation for your property. You will have the opportunity to do likewise if you so choose. The commissioners will advise their award of just compensation.

If dissatisfied with the amount of the commissioner's award, either side, within the time allowed by the court rule, may appeal the commissioners' award which will result in a trial before a judge and/or jury. At trial both sides will present their respective opinions of just compensation.

As a result of the trial, the issue of just compensation will be final and NJSDA will pay any balance owing above the amount of any deposit made into court.

To help you in presenting your case in the condemnation action, you may wish to retain an attorney and an appraiser. If you do, you must pay the costs of these professional services, including but not limited to: attorneys, appraisers, planners, environmentalists, and all other professionals.

Will I have to pay property title closing costs?

As provided by the eminent domain law, NJSDA will reimburse you for necessary actual expenses incurred for:

- Recording fees, transfer taxes and similar expenses, which are incidental to conveying your property to NJSDA.
- Real property taxes covering the period beginning on the date of title to the property vests in NJSDA, either by Deed or Condemnation Declaration of Taking.

If you have incurred any of these expenses, you will be reimbursed for them by NJSDA.

Can NJSDA purchase only a part of my property?

Yes, NJSDA may purchase only a portion of your property. However, the amount of just compensation must include the loss in value, if any, to your remaining property caused by

the partial property acquisition. If your remaining property has little or no economic value, NJSDA, in its own discretion, may acquire the remainder.

Will I have to pay rent to NJSDA after my property is acquired?

The eminent domain law provides that NJSDA will be entitled to collect rent for your continued occupancy of the property, beginning 20 days after you receive notice that title to the property has vested in NJSDA, after NJSDA files with the New Jersey Superior Court its Declaration of Taking and deposits with the court its offer of just compensation. However, such rent required shall not exceed the fair rental value of the property for a short-term occupier.

Does NJSDA's acquisition have income tax consequence for me?

Yes. Whether done by agreement or condemnation proceedings, the acquisition of your property by NJSDA for public purposes may present federal and state income tax consequences. Internal Revenue Service Publication No. 544, which may be obtained at your IRS office, explains the tax implications resulting from the acquisition of your property by a public agency for public purposes. If you have any questions about these tax implications, you should consult with your personal tax advisor or your local IRS office.

Part II
Section B

RELOCATION ASSISTANCE PROGRAM
YOUR BENEFITS AND RIGHTS
IF YOU MUST MOVE

Personalized Assistance

The New Jersey Schools Development Authority ("NJSDA") will provide specific relocation assistance to eligible property owners and tenants by assigning a relocation representative to each owner or tenant.

What shall I expect when the relocation representative contacts me?

When the relocation representative contacts you, he or she will explain the benefits and services that are available to you and will assist you in developing a personalized relocation plan. After the offer to purchase your property is made, the relocation representative will assist you at every stage of your move and will remain in contact with you until your relocation has been successfully completed.

How do I find a new dwelling or business location?

The relocation representative will help you find a new place in which to live or do business. The representative assigned to assist you will provide you with lists of properties being offered for sale or rent that are in suitable condition, price or rental range to accommodate your needs. You will also be provided with information concerning typical real estate purchase prices and lease costs, public housing, and the services offered by other agencies in your area. You will be provided transportation, if required, for your inspection of the replacement dwelling or business location.

Some Frequently Asked Questions about Moving

Who is eligible for relocation assistance?

A person who is:

- Residential owner for at least 180 days prior to offer being made is eligible for full benefits.
- Residential tenant for at least 90 days prior to offer being made is eligible for full benefits.
- All residential owners and tenants, as well as all business owners and tenants, are eligible for moving cost benefits upon execution of the sales agreement or deposit in court.

When will I become eligible for relocation assistance?

Eligibility for relocation assistance shall begin on the date of the initiation of negotiations, which is the delivery of the initial written offer of just compensation to the owner or owner's representative, to purchase the property for the project.

When will I have to move?

At the appropriate time after NJSDA's offer to purchase the property, you will be given at least 30 days' advance written notice before you are required to move. If you are a residential owner or tenant, you cannot be required to move unless at least one, and preferably three, comparable dwellings have been made available to you.

Will my moving expenses be reimbursed?

Yes. Most residential occupants, businesses and farms displaced by a school project will be eligible for payment of their actual reasonable moving and related expenses.

Reasonable moving and related expenses include:

- dismantling, disconnecting and reconnecting the machinery and equipment of a business
- packing, crating and unpacking the personal property
- transporting the personal property
- loading and unloading the personal property
- insuring the personal property during the move
- temporary storage (when necessary and approved)
- uninstalling and reinstalling the personal property
- modifying personal property (businesses only) to adapt it to the replacement structure, if covered by the governing law.

Is there a distance limit on moving costs?

Yes. Reimbursement for transportation costs associated with a move is usually limited to moves of up to 50 miles. However, for good cause, reimbursement may be authorized for transportation for a reasonable distance farther than 50 miles, on a case-by-case basis.

Are there different types of moving payments?

Yes. A homeowner or residential tenant of a dwelling unit may choose between a payment based on a "room count" or reimbursement for "actual moving cost." You may choose the method best for you. However, all relocation payments are reimbursements, so you must move prior to receiving payment.

What is the room count schedule?

Number of Counted Rooms	Amount
1	$275
2	$370
3	$425
4 or more	$500

Instead of the "room count" schedule, you may choose the "actual moving cost" method, which provides for payment of the actual reasonable expenses of moving, including your family's transportation to the new home site, if required.

All business and commercial or similar moves must be done by the "actual moving cost" method.

NJSDA will secure a minimum of two (2) moving cost estimates for residential moves or three (3) moving cost estimates for commercial moves from professional, licensed movers. Your only obligation is to prepare an inventory of all personal property that you wish to move. NJSDA's relocation representative will assist you in preparing the inventory.

How do I claim payment for moving costs?

To receive payment after you have moved, submit the forms furnished by the NJSDA, certifying that you have relocated. Upon verification of the move by the relocation representative, your claim will be processed promptly for payment.

Fixed Payment to a Business in Lieu of Moving Cost Reimbursement

As an operator of a business or farm, you may be eligible for either your actual cost of moving (including search expenses up to $1,000 for finding a new site) or, depending on the circumstances of your case, a fixed payment.

The fixed payment may not be in an amount less than $2,500 or more than $10,000. This is a payment (instead of the "actual cost" of moving expenses) equal to the average of the net earnings of your business or farm for the two taxable years prior to your displacement.

The relocation representative will explain the details of a possible fixed payment to you. At that time, if you believe you are eligible for this option, the relocation representative will give you the proper forms to be completed. The NJSDA then will review the forms to determine if you are eligible, and the amount to which you may be entitled.

Housing Payments

What supplemental housing payments are available?

There are a few kinds of supplemental housing payments to which residential occupants may be entitled if they buy or rent, and actually occupy a decent, safe, and sanitary replacement dwelling.

NOTE: Before you buy a replacement dwelling, you should be aware that NJSDA is required to certify that the dwelling you plan to purchase and occupy is decent, safe, and sanitary, in order for you to be eligible for any relocation housing related payment.

At your request, NJSDA will conduct an inspection of any dwelling that you may wish to purchase, to determine whether it qualifies as decent, safe, and sanitary.

A decent, safe, and sanitary dwelling is one which:

- conforms to local building, housing and occupancy codes for existing structures;
- is structurally sound;
- has an adequate and safe wiring system for lighting and other electrical services;
- has a heating system capable of sustaining a healthful temperature of approximately 70 degrees;
- contains unobstructed exit to safe open space at ground level. If the replacement dwelling is on the second story or above, with access directly from or through a common corridor, the common corridor must have at least two means of exiting the building;
- is adequate in size with respect to the number of rooms and living space needed to accommodate the displaced person. There shall be a separate, well lighted and ventilated bathroom that provides privacy to the user, and contains a sink, a bathtub or shower stall, and a toilet, all in good working order and properly connected to appropriate sources of water and to a sewage drainage system;
- for a handicapped displaced person, is free of any barriers which would preclude reasonable entry, exiting or use of the dwelling by such displaced person.

In the case of a housekeeping dwelling, there shall be a kitchen area that contains a fully usable sink, properly connected to hot and cold water suitable for drinking and to a sewage drainage system, adequate space and utility service connections for a stove and refrigerator.

What is an "Owner Replacement Housing Supplement?"

An owner who also occupies a residential dwelling may be eligible to receive a

supplementary payment, representing the difference (if any) between the price NJSDA paid for his/her dwelling and the price of a functionally comparable dwelling that is available on the market.

Who is eligible for an Owner Replacement Housing Payment?

Persons are eligible for owner replacement housing payments who:

- Have actually owned and occupied the displacement dwelling as their principal residence for not less than 180 days immediately prior to the offer to purchase; and
- Purchase and occupy a decent, safe, and sanitary replacement dwelling within one year after the title closing date on the displacement dwelling (the one-year period may be extended for good cause), or in the case of condemnation, the date the full amount of just compensation is deposited in the Court, or the date a comparable replacement dwelling was made available to them, whichever is later. When possible, three or more comparable replacement dwellings should be made available.

A Comparable Replacement Dwelling will be Considered To Have Been Made Available if:

- You are informed of its location; and,
- You have sufficient time to negotiate and enter into a purchase agreement or lease for the property; and,
- Subject to reasonable safeguards, you are assured of receiving the relocation assistance and acquisition payment to which you are entitled in sufficient time to complete the purchase or lease of the property.

What is a "Comparable Replacement Dwelling?"

The term "comparable replacement dwelling" means a dwelling, which is:

- decent, safe, and sanitary;
- functionally equivalent to the displacement dwelling. The term "functionally equivalent" means that it performs the same function, provides the same utility, and is capable of contributing to a comparable style of living;
- adequate in size to accommodate the occupants;
- in an area not subject to unreasonable adverse environmental conditions;
- in a location generally not less desirable than the location of the displacement dwelling with respect to public utilities, and reasonably accessible to the displaced person's place of employment;
- on a site that is typical in size for a residential building with normal site improvements including customary landscaping-the site need not include special

improvements such as outbuildings, swimming pools or greenhouses;

- currently available to the displaced person on the private market, however, a comparable replacement dwelling for a person receiving government housing assistance before displacement will reflect similar government housing assistance;
- within the financial means of the displaced person.

How will the amount of this payment be established?

NJSDA will determine the typical market price of decent, safe, and sanitary dwellings functionally comparable to your own. If the price paid to you by NJSDA to purchase your dwelling is lower than the price of comparable replacement dwellings on the market, you will be offered the difference as a supplemental payment. The final amount you are paid will depend on what you actually pay for your replacement dwelling ("spend to get") and how it compares to your current dwelling.

If you are eligible for a supplement, a written statement of the amount of this payment, if any, will be given to you when the offer to purchase is made or soon thereafter, if the residential market indicates it is necessary. If possible, the amount will also be included in NJSDA's offer letter for your present property .

What do I do about increased mortgage interest payments?

Owner residential occupants for 180 days or more who are being displaced are eligible for a payment to compensate them for increased mortgage interest costs, as well as costs incidental to the purchase of their new dwelling (not to include escrowed amounts). NJSDA's relocation representative will explain these payments and will provide to you the required application forms.

What happens if I owned and occupied my home for at least 180 Days, but do not plan to buy a replacement home?

If you are a displaced homeowner who does not plan to purchase a replacement home, you may qualify for a rental supplement payment. NJSDA's relocation representative will explain how this supplement is determined, if you decide upon this option.

What are tenant rental supplements?

Residential tenants who have occupied a property being purchased by NJSDA, for at least 90 days prior to the initiation of negotiations for that property, may be eligible for a rental supplement. The supplement, if there is one indicated, will be based upon the difference between the actual rent and utility cost for the dwelling currently occupied by the tenant displacee, and the rent and utility cost required to lease a comparable replacement dwelling that is decent, safe, and sanitary.

When can a claim for a rental supplement be paid?

A rental supplement will be paid as soon as possible after you have:

- moved from your present dwelling, and
- have occupied a decent, safe, and sanitary replacement dwelling.

Rental supplements are paid in yearly installments, for three (3) years. In certain instances, a portion of the first year's supplement may be made available to you prior to your occupancy of the replacement dwelling, to pay the security deposit and first and last months' rent, if required by the new landlord. The relocation representative will assist you in providing this payment to the landlord, when required.

Other Help Available

Down Payment Assistance

Down payment assistance is available to eligible displaced tenants who choose to purchase a replacement dwelling instead of renting and who qualify for a purchase money mortgage. NJSDA's relocation representative will explain the specific details.

Other Forms of Assistance

It is NJSDA's intention to cooperate with and assist those persons, families and businesses displaced because of real property acquisition for school projects, in every way possible.

Your relocation representative will explain and help you to obtain those benefits and payments to which you are entitled, and will assist you in the development of a personalized relocation plan.

Your relocation representative is also personally available on a continuing basis for consultation throughout your move. In addition, he or she maintains contact with many public agencies and should you so desire, will assist you in contacting these agencies.

How to Appeal

Can I appeal denials of applications for assistance?

The NJSDA has 15 days from the date of your request for benefits to give written notice approving, denying or advising of a decision delay due to the complexity and length of documentation received with your application for assistance. In the event no written notice is given within the 15 day period, you will be deemed denied for the purpose of trial. Should NJSDA deny your application, you may file a written appeal if you believe that NJSDA has failed to properly consider the application, which may include, but is not

limited to: your eligibility for or the amount of, a relocation payment.

You have the right to be represented by a lawyer or other agent, but solely at your expense. You are permitted to inspect and copy all materials pertinent to the appeal, except those considered confidential. Reasonable conditions may be imposed on your inspection of documents. In deciding an appeal, all materials submitted shall be considered to ensure a fair and full review of the appeal.

How is an appeal made?

The appeal must be initiated within 90 calendar days after you receive written notification of NJSDA's denial of your claim. The written appeal should be addressed to the Director, Real Estate Services, NJSDA, at P.O. Box 991, Trenton, NJ 08625-0991.

Within 30 calendar days after NJSDA's receipt of all information from you in supporting your request for an appeal, the Director or designee shall make a written determination, including the basis for the decision, and provide you with a copy. If the matter is not resolved to your satisfaction, then you may request, within 15 days of receipt of the Director or his designee's determination, an in-person review by writing to the NJSDA Managing Director, Real Estate Services at the same address. The Managing Director has 30 days after the in-person review to make a written determination of your appeal, including the basis for the decision, and provide you with a copy.

If the matter is still not resolved to your satisfaction, you will be advised of your right to appeal the decision to the Hearing Coordinator, Division of Codes and Standards, P.O. Box 802, Trenton, NJ 08625 within 15 days receipt of the Managing Director's decision. That review will be conducted by the Office of Administrative Law and the Commissioner will issue a final decision based on the merit of the claim.

Relocation Rules and Regulations

The rules and regulations pertaining to NJSDA's Relocation Assistance program are as follows:

Relocation Assistance Law (N.J.S.A. 52:31B-1 et seq.)
Relocation Assistance Act (N.J.S.A. 20:4-1 et seq as amended),
Regulations for Provision of Relocation Assistance (N.J.A.C. 5:11 et seq.).

The regulations are available for viewing in the State Library and on the Internet at http://www.njleg.state.nj.us/

Fair Housing

Federal and New Jersey State Law provides that replacement housing is to be open to all persons regardless of race, color, religion, sex, handicap or national origin. Additional information regarding fair housing can be obtained from your relocation representative.

Contact Information:

If, after reading this pamphlet, you have further questions, please feel free to contact NJSDA and discuss your concerns with the appropriate NJSDA representative designated below:

New Jersey Schools Development Authority
PO Box 991
Trenton, NJ 08625-0991

Acquisition Contact:

XXXXX, Real Estate Specialist
Telephone Number:

Relocation Contact:

XXXXXXXX, Relocation Specialist
Telephone Number:

Additional Information

The New Jersey Economic Development Authority (EDA) offers low-cost financing and relocation solutions to help find the right home for you business. With the ability to issue tax-exempt bonds that result in affordable long-term loans, and the ability to participate in and guarantee loans through your bank, the EDA can provide the assistance you need to finance your move. Depending on your new location and the number of employees you have, your business may also be eligible for grants and incentives. In addition, a full range of site selection solutions is available, including development services and assistance in facilitating the permitting process.

Contact Info:

New Jersey Economic Development Authority
PO Box 990
Trenton, NJ 08625-0990

(609) 777-4898
CustomerCare@njeda.com

NJSDA Real Estate Practices Manual

APPENDIX D:

DEP ENVIRONMENTAL REVIEWS AND APPROVALS REQUIRED BY SDA

The following technical documents, depending on the unique circumstances of the project, may require review and approval by DEP.

Environmental Screening Report

The Environmental Screening Report ("ESR") was created by DEP as a tool for assessing the likelihood of obtaining the various environmental, historical and cultural, and land use approvals and permits relevant to the site. The ESR is recommended for every school facilities capital project, regardless of whether land acquisition is necessary to support the project. Specifically, it provides notice that potential fatal flaws may exist that cannot be overcome, and therefore, may serve as a basis for rejecting a site from further consideration.

Preliminary Assessment Report

This is a technical report produced in compliance with ASTM E-1527-05 (Standard Practice for Environmental Site Assessments) and N.J.A.C. 7:26E-3.1. The objective of the Preliminary Assessment ("PA") is to identify potential areas of concern ("AOC") and/or recognized environmental conditions at the site, as well as to establish an appropriate Site Investigation ("SI") scope of work to document soil and groundwater quality to support the future intended use of the property as a school facility. A PA is required for every school facilities capital project, regardless of whether land acquisition is necessary to support the project.

Site Investigation and Remedial Investigation Work Plans and Reports

Depending on the property under review, the scope of the environmental survey can range from site investigations to more complex remedial investigations and supporting studies to identify remedial actions and their cost to implement. Collaboration with DEP in the scope development and review of environmental quality data gathered during these investigations is essential to the successful development of a school project.

Executive Order 215 Report

This is a technical report prepared in accordance with Executive Order No. 215 (1989) (E.O. 215). The EO 215 is a more detailed document that builds upon the information contained in the ESR.

Historic and Cultural Resources Reports

Sites or historic districts listed on the New Jersey Register of Historic Places are reviewed under both the EO 215 review process and the New Jersey Register of Historic Places regulations. These studies are often done to assist in the evaluation of adaptive reuse options.

Human Health Risk and Exposure Assessments

Risk analysis concepts are often a key element of a successful site feasibility and environmental site closure strategy. It may be necessary from time to time to conduct a human health risk characterization in consultation with DEP and DHSS. These scientific studies take into account specific pollutants that may exist in soil or groundwater at a particular site and the potential exposures that could occur. The SDA has found that these studies are sometimes helpful in communicating complicated environmental cause-and-effect matters to the public.

Remedial Action Selection Reports

Remedial Action Selection Reports (RASR) provide supporting documentation that the proposed remedial action is protective of human health and the environment, and was selected after consideration of various factors, including but not limited to: ability to implement, reliability, effectiveness and cost and the intended future use of the property for a school. This is a critical step in the site remediation process and is completed once a robust environmental quality assessment is completed. Remedial Action Objectives (RAOs) for the development are established at this point.

Common examples of RAOs may include:

- Removal of separate phase hydrocarbon
- Horizontal and vertical delineation of on-site soil and groundwater impacts
- Mitigation of off-site migration of pollution from on-site sources
- Mitigation of on-site migration (if present) of pollution from off-site sources
- Mitigation of potential vapor intrusion pathways
- DEP-approved remediation closure (NFA)
- DHSS indoor environment certification
- Minimization of long term operations and maintenance costs.

Remedial Action Work Plans

Upon agreement on the proposed remedy, a remedial action work plan is developed. Remedial Action Work Plans typically include a detailed description of the remedial action and the remedial technology to be conducted. The RAWP must be approved by DEP prior to obtaining a construction permit from the DCA.

Environmental Communication Plans

The DEP will participate in the planning and implementation of environmental communication plans, provide assistance in the development of fact sheets, attend Open House presentations and attend planning meetings with SDA's communications management team.

Development of Environmental Quality Summaries for School Districts

The DEP and various stakeholders review environmental quality summaries in preparation for District acceptance. This summary report is historically known as the "Buy-In" letter, but it really serves to communicate regarding the environmental quality and seeks to obtain concurrence with the District on construction of engineering and institutional controls that may be necessary to remediate a site to residential soil exposure scenarios. SDA recommends that DEP review these environmental quality summaries, including proposed Board resolutions that will specify the terms and conditions of the long-term stewardship obligations by the District.

Because New Jersey was at the forefront of early commercial and industrial development in the United States, urbanized land is often complicated by the presence of environmental conditions that require assessment, and where necessary, remediation, integrated into the site development program. The SDA is duty-bound to meet the requirements of DEP. If after a complete and through investigation it is determined in consultation with DEP that the use of a site for a school would not be impeded or hampered by an engineering and/or institutional control, the DEP, upon the express agreement by the district to accept the controls and comply with long-term environmental stewardship obligations, approves the use of integrated engineering and institutional controls. These long-term stewardship obligations often include periodic monitoring, maintenance, and reporting, and compliance with biennial certification and reporting requirements.

Wetlands Evaluation Reports

The DEP will review various land-use technical reports, such as wetlands and stream encroachment reports.

Permit Coordination and Independent Review of Permit Applications

The DEP may be asked to assist in the coordination and independent review of various permit applications to enable a timely acquisition of various environmental permits necessary to advance the site development project.

ABOUT THE NEW JERSEY'S SCHOOLS DEVELOPMENT PROGRAM

During the 1990s, the New Jersey Supreme Court issued several landmark rulings to address inequities in the education provided to schoolchildren in various disadvantaged and underserved school districts of New Jersey. As a result of these rulings, known collectively as the Abbott decisions, the Court ordered various remedies, including the enactment of regulations, standards and policies to assure all children a 21st Century education. Among the remedies was an order to provide school facilities improvements.

In response, on July 18, 2000, the Educational Facilities Construction and Financing Act was enacted. This Act assigned the New Jersey Economic Development Authority (EDA) the responsibility of repairing, renovating and constructing schools facilities in the 31 Abbott school districts. (The School Funding Reform Act of 2008 removed the Abbott designation; these districts are now known as SDA Districts for the purposes of school construction). The Act gave the EDA power to issue bonds for these purposes, with the aggregate amount not to exceed $6 billion for SDA District projects, $2.5 billion for Regular Operating District (ROD) projects, and $100 million for county vocational district school projects.

On July 29, 2002, the New Jersey Schools Construction Corporation (SCC) was created as a subsidiary of the EDA. The SCC was charged with meeting the facilities improvement mandate of the New Jersey Supreme Court, and in consultation with the various 31 disadvantaged districts, embarked on an ambitious program to address the inadequacies in the quality, utility and safety of educational facilities throughout the State of New Jersey.

On August 6, 2007, the New Jersey State Legislature created the SDA as the successor agency to the SCC to coordinate and centralize efforts to develop, design and construct school facilities projects in the 31 disadvantaged districts. These SDA Districts are Asbury Park, Bridgeton, Burlington City, Camden, East Orange, Elizabeth, Garfield, Gloucester City, Harrison, Hoboken, Irvington, Jersey City, Keansburg, Long Branch, Millville, Neptune Township, Newark, New Brunswick, Orange, Passaic, Paterson, Pemberton Township, Perth Amboy, Phillipsburg, Plainfield, Pleasantville, Salem City, Trenton, Union City, Vineland, and West New York.

Many of these districts are New Jersey's older urban and underserved communities, where redevelopment is often complicated by the presence of environmental problems in need of cleanup, and existing infrastructure is often in need of major capital investment and improvement.

It is important to recognize that not all SDA Districts represent urban centers. A number of SDA Districts are rural communities that have experienced significant population growth, but do not possess a sufficient tax-base to adequately support educational facilities without government support.