

RESOLUTION No. 10 – 113

**A RESOLUTION OF THE MAYOR AND THE CITY COUNCIL OF
THE CITY OF DORAL, FLORIDA APPROVING THE
CONCEPTUAL STUDY FOR THE PUBLIC WORKS DEPARTMENT
VEHICLE MAINTENANCE BUILDING; AND PROVIDING FOR AN
EFFECTIVE DATE**

WHEREAS, during the July 2009 Council Meeting, the City Council approved an award to Post, Buckley, Schuh and Jernigan, Inc. (PBS&J) for a Conceptual Study of the City needs from a public works and transit facility perspective; and

WHEREAS, the Conceptual Study was completed and submitted to the Public Works Department in May 2010 and is presented herein as Exhibit "A;" and

WHEREAS, upon review of the Conceptual Study for the Public Works Department Vehicle Maintenance Building, Staff respectfully requests that the City Council approve the Conceptual Study in order to proceed with the design phase of the project.

**NOW THEREFORE, BE IT RESOLVED BY THE CITY COUNCIL OF THE CITY
OF DORAL, FLORIDA, AS FOLLOWS:**

Section 1. The City Council hereby approves the Conceptual Study for the Public Works Department Vehicle Maintenance Building presented herein as Exhibit "A."

Section 2. This Resolution shall take effect immediately upon adoption.

The foregoing resolution was offered by Councilman DiPietro who moved its adoption. The motion was seconded by Councilman Cabrera and upon being put to a vote, the vote was as follows:

Mayor Juan Carlos Bermudez	Yes
Vice Mayor Robert Van Name	Yes
Councilman Pete Cabrera	Yes
Councilman Michael DiPietro	Yes
Councilwoman Sandra Ruiz	Yes

PASSED and ADOPTED this 11th day of August, 2010.



JUAN CARLOS BERMUDEZ, MAYOR

ATTEST:



BARBARA HERRERA, CITY CLERK

APPROVED AS TO FORM AND
LEGAL SUFFICIENCY:

 for:

JIMMY MORALES, ESQ., CITY ATTORNEY

EXHIBIT “A”



Memorandum

Date: July 19, 2010

To: Honorable Mayor and Council Members

Via: Yvonne Soler-McKinley, City Manager *YMS*

From: Eric Carpenter, Public Works Director *EC*

Subject: Conceptual Study Public Works and Transit Hub Facilities Master Plan

During the Council Meeting of July 2009, the City Council approved the recommendation to award the firm of Post, Buckley, Schuh and Jernigan, Inc. (PBS&J) with a contract for a conceptual study of the City needs from a Public Works and Transit facility perspective. Two potential properties were identified based upon available land.

The Conceptual Study for the Public Works Department (PWD) Vehicle Maintenance Building and Transit Hub was completed and submitted to Public Works Department in May 2010.

After reviewing the results of the study, the Public Works Department respectfully requests City Council approval of the Conceptual Study completed by PBS&J for the PWD Vehicle Maintenance Building, so that we can move into the design phase of the project. The Transit Hub portion of the study is recommended to be tabled at this time until additional need for this facility arises. A copy of the Conceptual Study report is available at the City Clerk's Office for your review.

CONCEPTUAL STUDY



Vehicle Maintenance Building and Transit Hub



PBSJ

MAY 3, 2010

**City of Doral
Vehicle Maintenance Building and Transit Hub
Concept Narrative**

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City of Doral

Vehicle Maintenance Building and Transit Hub

Concept Narrative

I. SITE PARAMETERS

A. Vehicle Maintenance Facility

The Vehicle Maintenance Facility shall sit on a 5-acre site that needs to be configured with the ability to expand in the future and to allow for vehicle flow in a parking lot area for approximately 30 vehicles. The site shall take into consideration the following:

- Orientation; to maximize vehicle circulation and flow
- Future right-of-way of NW 62nd street with possible future access to yard areas
- Definition of “front door” or street frontage
- Impact to future expansion, horizontal vs. vertical
- On-site amenities
 - Vehicle wash
 - Vehicle storage (Dead-line)
 - Fueling station
 - Public Works Storage Building
 - Dumpsters
 - Emergency generator
- Civil impact, pervious/impervious, drainage, retention, water/sewer service
- Landscaping requirements, drought resistant species, irrigation
- Covered storage bins for gravel, sand, soil, etc.
- Site lighting
- Site security
 - Fencing at site perimeter (visual screening)
 - Secondary fence internal to maintenance area, gated with card access
 - Security / CCTV; monitoring and connectivity

Site access and egress for pedestrian and vehicular approach will be primarily from N.W. 99th Avenue. Once the development of N.W. 62nd Street has been completed a secondary vehicular approach should be constructed for access by trolleys and maintenance vehicles. The site layout assumes that fleet vehicles will be stored off-site and will accommodate parking for trolleys and other maintenance vehicles on-site.

The Vehicle Maintenance Building should be positioned East to West on the site to allow for future expansion to the West of the property. The Massing Diagrams of Option 1 (Appendix B) positions the Administration area on the first floor where access is given directly to the East side and file storage on the second floor. The Massing Diagram of Option 2 (Appendix B) positions the Administration area on the second floor and requires

that the building be elevated slightly higher than code requires because the first floor will be used as file storage.

The Administration area has two options for expansion as is illustrated on the Massing Diagrams of Options 3 and 4 (Appendix B). Option 3 is recommended to minimize new construction cost of the expansion and additional cost in parking and sitework.

B. Transit Hub

The Transit Hub shall sit on approximately a 1-acre site that needs to be configured to allow for the staging area of approximately 4 Trolleys. The Hub will include a building that will offer shelter for the patrons and positioned on the site so that it is visible to all pedestrians entering the site. The site shall take into consideration the following:

- Orientation; to maximize pedestrian and vehicular circulation and flow
- Definition of “front door” or street frontage
- Kiss-&-Ride
- Civil impact, pervious/impervious, drainage, retention, water/sewer service
- Landscaping requirements, drought resistant species, irrigation
- Site lighting
- Security / CCTV; monitoring and connectivity

Alternate 1: Site access and egress for pedestrian and vehicular approach will be from N.W. 84th Avenue in Alternate 1 (Appendix C). The site layout for this alternate assumes that the Southeast quadrant of the property will be used by the facility. In this alternate the Transit Hub Building should be positioned so that the “front door” faces the entry to the site allowing for maximum visibility by pedestrian and vehicular approach.

Alternate 2: Site access for pedestrian and vehicular approach will be from N.W. 85th Avenue and the site egress will be from N.W. 84th Avenue in Alternate 2 (Appendix C). The site layout for this alternate assumes that the South end of the property will be used by the facility. In this alternate the Transit Hub Building should be positioned so that the “front door” faces the pick-up and drop-off area and should be centered on the site for pedestrian and vehicular approach.

II. SUSTAINABILITY

A. LEED® CERTIFICATION

The City requires that the Vehicle Maintenance Facility be certified by the U.S. Green Building Council's Leadership in Energy and Environmental Design (LEED®) Green Building Rating System. LEED® provides a set of performance standards for certifying the design and construction phases of commercial, institutional and high-rise residential buildings. The specific credits in the rating system provide guidelines for the design and construction of buildings of all sizes in the public and private sectors. The intent of LEED® is to assist in the creation of high performance, healthful, durable, affordable and environmentally sound buildings. The Vehicle Maintenance Facility is required to accomplish certification to a Gold level at a minimum using the LEED-NC latest edition guidelines.

Individual LEED® certification points targeted in the site and building design are at the option of the A/E Team; however the City shall reserve the right to mandate the acquisition of preferred credits. LEED is essentially broken down into five main categories that offer various credit opportunities for an individual project. The following are possible strategies that may be incorporated into the project to achieve certification.

1. Sustainable Sites

On-Site Water Treatment

- Provide bio-swales and other strategies for natural on-site treatment of water runoff to significantly reduce or eliminate requirements for off-site treatment.
- Consider green roofs to provide pretreatment of stormwater flows, reduce discharge and control temperatures. Select plants carefully to avoid attracting birds or rodents.

2. Water Efficiency

Water Reduction

- Use low-flow fixtures, waterless urinals, and sensors to reduce potable water use.
- Consider use of gray-water systems and rainwater harvesting. Use cisterns to capture rainwater for toilet flushing.

3. Energy and Atmosphere

High-Performance Exterior Envelope

- Integrate energy reduction goals in envelope design: consider high-performance envelope design, shading devices and fritted glass to limit heat gain and loss while providing natural light.

Roof Design

- Roof design can play a significant role in developing an integrated sustainable solution that responds to the sun, rain and wind.

- Integrate daylighting strategies with the roof design. Consider opportunities to penetrate the roof surface to allow natural light into the space below and use roof overhangs to shade exterior walls from direct sun.
- Consider using the roof surface for energy generation, with photovoltaics, and to capture and channel rainwater.

Control Systems

- Use automated control systems to shut down lighting and mechanical systems in unoccupied spaces.

4. Materials and Resources

Sustainable Materials

- Select all materials from the wide range of available environmentally preferable interior and exterior materials.
- Choose materials that are durable and that can be maintained with nontoxic cleaners.
- Provide for education of the maintenance staff to require nontoxic cleaners.

Design for Flexibility

- Use modular floor, partition, furniture and ceiling systems to reconfigure office spaces faster and with much less construction waste and indoor air concerns.

Waste Reduction and Recycling

- Consider installation of filtered water systems to eliminate reliance on bottled water.
- Plan for comprehensive in-building recycling, to allow for easy collection, sorting, bailing and pickup of discarded items.

5. Indoor Environmental Quality

Natural Light and Views

- Develop space planning strategies and furniture solutions that provide access to daylight and views to all work areas to the greatest extent possible.

Indoor Air Quality Source Control

- The most effective way to protect indoor air quality is to control sources of contamination through proactive measures.
- Isolate large copy machines and other VOC-emitting devices and separately vent in order to avoid cross contamination into work areas.
- Select low-emission materials; give special attention to adhesives, sealants, paint and finishes as low-VOC or zero-VOC alternatives exist for all of these.

B. BEST MANAGEMENT PRACTICES

At a minimum, sustainability objectives should include some long-term best management practices that would be implemented as part of the maintenance of the facility. The following items are some strategies that could be implemented at this facility.

1. Building Exterior and Hardscape Management Plan

Employ an environmentally sensitive, low-impact building exterior and hardscape management plan that helps preserve surrounding ecological integrity. The plan must employ best management practices that significantly reduce harmful chemical use, energy waste, water waste, air pollution, solid waste and/or chemical runoff (e.g., gasoline, oil, antifreeze) compared with standard practices. The plan must address all of the following operational elements that occur on the building and grounds, as applicable:

- Maintenance equipment
- Cleaning of building exterior
- Paints and sealants used on building exterior
- Cleaning of sidewalks, pavement and other hardscape

2. Integrated Pest Management, Erosion Control and Landscape Management Plan

Have in place an environmentally sensitive management plan for the site's natural components. The plan must employ best management practices that significantly reduce harmful chemical use, energy waste, water waste, air pollution, solid waste and/or chemical runoff (e.g., gasoline, oil, antifreeze) compared with standard practices. The plan must address all of the following operational elements:

- Outdoor integrated pest management, defined as managing outdoor pests in a way that protects human health and the surrounding environment and that improves economic returns through the most effective, least-risk option.
- Erosion and sedimentation control for ongoing landscape operations (where applicable) and future construction activity.
- Diversion of landscape waste from the waste stream via mulching, composting or other low-impact means.
- Chemical fertilizer use. The use of artificial chemicals can be minimized by the use of locally adapted plants that need no fertilizer, less polluting alternatives to artificial chemicals, or other low-impact maintenance.

3. Refrigerant Management: Ozone Protection

If CFC-based refrigerants are maintained in the building, reduce annual leakage to 5% or less using EPA Clean Air Act, Title VI, Rule 608 procedures governing refrigerant management and reporting and reduce the total leakage over the remaining life of the unit to less than 30% of its refrigerant charge.

Small HVAC&R units (defined as containing less than 0.5 pounds of refrigerant), standard refrigerators, small water coolers and any other cooling equipment that contains less than 0.5 pounds of refrigerant are not considered part of the base building system and are exempt.

4. Sustainable Purchasing: Ongoing Consumables

Maintain a sustainable purchasing program covering materials with a low cost per unit that are regularly used and replaced through the course of business. These materials include, but are not limited to, paper (printing or copy paper, notebooks, notepads, envelopes), toner cartridges, binders, batteries and desk accessories but exclude food and beverages. Sustainable purchases are those that meet one or more of the following criteria:

- Purchases contain at least 10% postconsumer or 20% postindustrial material.
- Purchases contain at least 50% rapidly renewable materials.
- Purchases contain at least 50% materials harvested and processed or extracted and processed within 500 miles of the project.
- The purchase consists of at least 50% Forest Stewardship Council certified paper products.
- Batteries are rechargeable.

5. Sustainable Purchasing: Durable Goods

Maintain a sustainable purchasing program covering items available at a higher cost per unit and durable goods that are replaced infrequently and/or may require capital program outlays to purchase.

Electric powered equipment – sustainable purchase of at least 40% of total purchases of electric-powered equipment (by cost). Examples of electric-powered equipment include, but are not limited to, office equipment (computers, monitors, copiers, printers, scanners, fax machines), appliances (refrigerators, water coolers), external power adapters, and televisions and other audiovisual equipment. Sustainable purchases are those that meet one of the following criteria:

- The equipment is Energy Star labeled (for product categories with developed specifications).
- The equipment (either battery or corded) replaces gas-powered equipment. Examples include, but are not limited to, maintenance equipment and vehicles, landscaping equipment and cleaning equipment.

6. Sustainable Purchasing: Facility Alterations and Additions

Maintain a sustainable purchasing program covering materials for facility renovations, demolitions, refits and new construction additions. This applies only to base building elements permanently or semi-permanently attached to the building itself. Examples include, but are not limited to, building components and structures, panels, attached finishings, carpet and other flooring material, adhesives, sealants, paints and coatings.



- Purchases contain at least 10% postconsumer or 20% postindustrial material.
- Purchases contain at least 70% material salvaged from off-site or outside the organization.
- Purchases contain at least 70% material salvaged from on-site, through an internal organization materials and equipment reuse program.
- Purchases contain at least 50% rapidly renewable materials.
- Purchases contain at least 50% materials harvested and processed or extracted and processed within 500 miles of the project.
- The purchase consists of at least 50% Forest Stewardship Council certified paper products.
- Adhesives and sealants have a VOC content less than the current VOC content limits of South Coast Air Quality Management District Rule #1168, or sealants used as fillers meet or exceed the requirements of the Bay Area Air Quality Management District Regulation 8, Rule 501.
- Paints and coatings have VOC emissions not exceeding the VOC and chemical component limits of Green Seal's Standard GS-11 requirements.
- Noncarpet finished flooring is FloorScore-certified and constitutes a minimum of 25% of the finished floor area.
- Carpet meets the requirements of the CRI Green Label Plus Carpet Testing Program.
- Carpet Cushion meets the requirements of the CRI Green Label Testing Program.
- Composite panels and agrifiber products contain no added urea-formaldehyde resins.

7. Sustainable Purchasing: Reduced Mercury in Lamps

Develop a lighting purchasing plan that specifies maximum levels of mercury permitted in mercury-containing lamps purchased for the building and associated grounds. The purchasing plan must specify a target for the overall average of mercury content in lamps of 90 picograms per lumen-hour or less. The plan must include lamps for both indoor and outdoor fixtures, as well as both hard-wired and portable fixtures. The plan must require that at least 90% of purchased lamps comply (as measured by the number of lamps). Lamps containing no mercury may be counted toward plan compliance only if they have energy efficiency at least as good as their mercury-containing parts.

8. Solid Waste Management: Ongoing Consumables

Maintain a waste reduction and recycling program that addresses materials with a low cost per unit that are regularly used and replaced through the course of business. These materials include, but are not limited to, paper, toner cartridges, glass, plastics, cardboard and old corrugated cardboard, food waste and metals. Reuse, recycle or compost 50% of the ongoing consumables waste stream (by weight or volume).

9. Solid Waste Management: Durable Goods

Maintain a waste reduction, reuse and recycling program that addresses durable goods that are replaced infrequently and/or may require capital program outlays to purchase. Examples include, but are not limited to, office equipment (computers, monitors, copiers, printers, scanners, fax machines), appliances (refrigerators, water coolers), external power adapters, televisions and other audiovisual equipment. Reuse or recycle 75% of the durable goods waste stream (by weight, volume or replacement value).

10. Solid Waste Management: Facility Alterations and Additions

Divert at least 70% of waste (by volume) generated by facility alterations and additions from disposal to landfills and incineration facilities. This applies only to base building elements permanently or semi-permanently attached to the building itself that enter the waste stream during facility renovations, demolitions, refits and new construction additions. Examples include, but are not limited to, building components and structures, panels, attached finishings, carpet and other flooring material, adhesives, sealants, paints and coatings.

11. Environment Tobacco Smoke Control

Prohibit smoking in the building and designate exterior smoking areas at least 25 feet from building entries, outdoor air intakes and operable windows.

12. Green Cleaning Policy

Have in place a green cleaning policy for the building and site addressing the following:

- Purchase of sustainable cleaning and hard floor and carpet care products.
- Establishment of standard operating procedures addressing how an effective cleaning and hard floor and carpet maintenance system will be consistently utilized, managed and audited. Specifically address cleaning to protect vulnerable building occupants.
- Development of strategies for promoting and improving hand hygiene, including both hand washing and the use of alcohol-based waterless hand sanitizers.
- Development of guidelines addressing the safe handling and storage of cleaning chemicals used in the building, including a plan for managing hazardous spills or mishandling incidents.
- Development of requirements for staffing and training of maintenance personnel appropriate to the needs of the building. Specifically address the training of maintenance personnel in the hazards of use, disposal and recycling of cleaning chemicals, dispensing equipment and packaging.
- Provision for collecting occupant feedback and continuous improvement to evaluate new technologies, procedures and processes.

At a minimum, the policy must cover the green cleaning materials that are within the building and site management's control.

13. Green Cleaning: High-Performance Cleaning Program

Have in place a high-performance cleaning program, supported by a green cleaning policy, that addresses the following:

- Appropriate staffing plan.
- Implementation of training of maintenance personnel in the hazards, use, maintenance, disposal and recycling of cleaning chemicals, dispensing equipment and packaging.
- Use of chemical concentrates with appropriate dilution systems to minimize chemical use wherever possible.
- Use of sustainable cleaning materials, products, equipment, janitorial paper products and trash bags (including microfiber tools and wipes).
- Use of sustainable cleaning and hard floor and carpet care products.

14. Green Cleaning: Purchase of Sustainable Cleaning Products and Materials

Implement sustainable purchasing for cleaning materials and products, disposable janitorial paper products and trash bags. Cleaning product and material purchases include items used by in-house staff or outsourced service providers. Sustainable cleaning products and materials purchase of at least 30% of the total annual purchases of these products (by cost) should meet at least one of the following sustainability criteria:

- The cleaning products meet one or more of the following standards for the appropriate category:
 - Green Seal GS-37, for general purpose, bathroom, glass and carpet cleaners used for industrial and institutional purposes.
 - Environmental Choice CCD-110, for cleaning and degreasing compounds.
 - Environmental Choice CCD-146, for hard surface cleaners.
 - Environmental Choice CCD-148, for carpet and upholstery care.
- Disinfectants, metal polish, floor finishes, strippers or other products not addressed by the above standards meet one or more of the following standards for the appropriate category:
 - Green Seal GS-40, for industrial and institutional floor care products.
 - Environmental Choice CCD-112, digestion additives for cleaning and odor control.
 - Environmental Choice CCD-113, for drain or grease traps additive.
 - Environmental Choice CCD-115, for odor control additives.
 - Environmental Choice CCD-147, for hard floor care.
- Disposable janitorial paper products and trash bags meet the minimum requirements of one or more of the following programs for the applicable product category:

- U.S. EPA Comprehensive Procurement Guidelines for Janitorial Paper and Plastic Trash Can Liners.
- Green Seal GS-09, for paper towels and napkins.
- Green Seal GS-01, for tissue paper.
- Environmental Choice CCD-082, for toilet tissue.
- Environmental Choice CCD-086, for hand towels.
- Janitorial paper products derived from rapidly renewable resources or made from tree-free fibers.
- Hand soaps meet one or more of the following standards:
 - No antimicrobial agents (other than a preservative) except where required by health codes and other regulations (i.e., food service and health care requirements).
 - Green Seal GS-41, for industrial and institutional hand cleaners.
 - Environmental Choice CCD-104, for hand cleaners and hand soaps.

15. Green Cleaning: Indoor Integrated Pest Management

Develop, implement and maintain an indoor integrated pest management (IPM) plan, defined as managing indoor pests in a way that protects human health and the surrounding environment and that improves economic returns through the most effective, least-risk option. IPM calls for using least-toxic chemical pesticides, minimum use of chemicals, use only in targeted locations and use only for targeted species. IPM requires routine inspection and monitoring. The plan must include the following elements, integrated with any outdoor IPM plan used for the site as appropriate:

- Integrated methods, site or pest inspections, pest population monitoring, evaluation of the need for pest control and one or more pest control methods, including sanitation, structural repairs, mechanical and living biological controls, other nonchemical methods, and if nontoxic options are unreasonable and have been exhausted, a least-toxic pesticide.
- Specification of the circumstances under which an emergency application of pesticides in a building or on surrounding grounds being maintained by building management can be conducted without complying with the early provisions.
- A communications strategy directed to building occupants that addresses universal notification, which requires advance notice of not less than 72 hours under normal conditions and 24 hours in emergencies before a pesticide, other than a least-toxic pesticide, is applied in a building or on surrounding grounds that the building management maintains.

III. ARCHITECTURAL

Vehicle Maintenance Facility

The Vehicle Maintenance Building shall include an estimated minimum square footage of 16,000 square feet and should have spaces as identified herein. In addition, a Public Works Storage Building is recommended with an estimated minimum square footage of 4,800 square feet with an exterior secured storage yard. These two buildings would satisfy the current and immediate future needs of the City of Doral for approximately 10 years assuming regular growth of the department. The building size and function is comparable to other cities/agencies such as City of Miami and Miami-Dade County Public Schools Transportation System.

Trolley and maintenance vehicles must be maintained, stored, washed, fueled, etc. A rough rule of thumb for a new transit system with no operating history is that a single mechanic can service approximately five vehicles on a daily basis. The proposed layout accommodates service for up to 30 vehicles and/or service for up to 3 trolleys on a daily basis.

Specialized maintenance bays such as body repair, painting, steam cleaning (for internal heavy maintenance), and engine testing are usually not necessary as those services are contracted out to a firm with the required facilities.

System miles and actual numbers of trolleys are used throughout the industry to determine maintenance and support service requirements. The average miles per trolley per year is 20,000 miles.

A parallelogram lift or individual wheel lifts are recommended for rural or small urban systems. Pits or inground lifts are more useful for larger systems with many trolleys needing to be serviced in a short amount of time. Similarly, inground lifts are not cost effective for smaller systems.

The Parts Room is for storing small parts and maintenance supplies. It should be located adjacent to the general maintenance area. On average, 230 square feet is typically needed per 100,000 miles traveled.

Fluids (oil, grease, solvents, etc.), larger parts, tools and shop supplies are held in maintenance storage. The area should be located near the maintenance doors to accommodate easy truck deliveries, and away from heat and flame sources. Securing this room is recommended.

In smaller maintenance facilities, Tire Repair is typically done in the Maintenance Bay area. If space and budget allow, a separate tire repair area has the advantage of isolating the dirty and noisy repair. Tire Storage should be located conveniently to the repair area. 250 square feet is recommended as a minimum size without a separate tire bay.

A wash bay is recommended when maintenance is brought in-house. One wash bay can handle up to 200 vehicles. It is assumed that a steam cleaner would be an added function of the wash bay as opposed to a separate steam cleaning room.

Transit Hub

The building square footage is approximately 300 square feet with an exterior covered waiting area of approximately 200 square feet. The Transit Hub Building shall include, at a minimum, spaces as identified herein.

The exterior design of the Vehicle Maintenance Building and the Transit Hub shall have a character which fits with the contemporary architecture of the City of Doral.

A. Space Programming:

Vehicle Maintenance Building

The building shall have an Administration and a Maintenance function. The Administration function of the building will include the following spaces:

- Lobby/Reception area
- 2 Offices
- Break room (shared space)
- Restrooms
- Conference/Training room
- Shop Supervisor's Office
- File storage

The Maintenance function of the building will include the following spaces:

- Restroom with showers & lockers
- Parts storage / distribution counter
- Tire storage and tire repair
- Battery storage
- (6) Service Bays
- Equipment storage
- Vehicle Wash Bay(s)
- Welding Shop
- Paint Shop/Paint Booth

The elements of the Administration area shall include high ceilings with an exposed structure supported by natural lighting and compatible lighting fixtures. It is desirable that the Administration function has clear visibility to the exterior and minimal corridor lengths with connection to adjacent interior spaces. The Vehicle Service Bays shall have sufficient area and working space including storage. The building shall allow the flexibility to have space for future expansion of both the Administration and Maintenance functions. Expansion for the Administration function should be vertically and for the Maintenance function horizontally.

Transit Hub

The building shall have an exterior covered waiting area for approximately 10 patrons with an area for vending machines. The function of the building will include the following spaces:

- Office
- Driver's Break room
- Unisex Restroom

B. Exterior Envelope:

Vehicle Maintenance Building and Transit Hub

The exterior envelope of the facilities shall be composed of a concrete shell construction with storefront glazing systems that are impact resistant and insulated for energy efficiency. The point of entry shall be covered with a canopy structure. The roofing shall be of a low maintenance material with internal roof drains/emergency overflow roof drains.

All equipment located at grade related to the operation of the Vehicle Service Building shall be screened from view in such a way as to not detract from the architecture of the building.

C. Interior Finishes:

Vehicle Maintenance Building

The interior walls of the Administration areas shall consist of gypsum wallboard and/or cement board with a painted finish. The interior walls of the Vehicle Service Bays shall consist of exposed or split-face concrete masonry units (CMU). Restroom walls shall have a ceramic tile finish to full wall height. Vehicle Service Bay walls shall be epoxy based paint to a minimum height of 20'-0".

The flooring throughout the Administration areas shall be of low maintenance durable material and the restrooms shall have slip resistant durable flooring. Vehicle Service Bay floors shall be epoxy sealed concrete.

The ceiling throughout the Administration area shall be a combination of painted gypsum board and acoustical lay in tile with lighting that complements the architecture. The restrooms ceilings shall have moisture resistant painted gypsum board.

Transit Hub

The interior walls shall consist of gypsum wallboard and/or cement board with a painted finish. Restroom walls shall have a ceramic tile finish to full wall height.

The flooring throughout shall be of low maintenance durable material and the restrooms shall have slip resistant durable flooring.

The ceiling throughout shall be acoustical lay in tile with lighting that complements the architecture. The restrooms ceilings shall have moisture resistant painted gypsum board.

D. Equipment:

The Vehicle Maintenance Building shall have accommodations for the following equipment that will be confirmed with the City during the design process:

- Emergency Generators
- Air compressors
- Fuel facility with gas & diesel fuel, alternative fuels (E-85, bio-diesel, hydrogen fuel cells, etc.)
- Electrical charging stations in car parking lot(s) and maintenance bays
- Vehicle wash, automated vs. manual, enclosed/attached vs. free standing/detached
- Ventilation system, vehicle exhaust control
- Fluid storage & dispenser system, with containment
- Hazardous waste disposal
- Vehicle lifts, surface vs. in-ground hydraulic vs. pit service
- Maintenance equipment for the future service of Police vehicles
- Electronic equipment repair (dust free and temperature controlled)
- Emergency eyewashes/showers
- Hand wash group sink(s)

IV. STRUCTURAL

A. Foundation System:

The foundation system(s) shall be in compliance with the Florida Building Code and Building Code Requirements for Reinforced Concrete, ACI 318. Design of the foundation systems, including but not limited to foundation types, allowable service loads, dimensions, embedment depths, and reinforcement shall be determined and designed entirely by the Structural Engineer. Foundation design and site preparation shall be in accordance with geotechnical report recommendations.

B. Slabs-on-Grade:

Cast-in-place concrete slabs-on-grade shall have a minimum thickness of 6 inches and shall be constructed on compacted sub-grade. 10-mil polyethylene vapor barrier shall be provided under all slabs of the buildings. Slab reinforcement shall not be less than 6x6 W2.1xW2.1 welded wire fabric placed at 2" clear from the top of the slab. The Structural Engineer shall design the slab thickness and reinforcement.

Pre-molded expansion joint material shall be provided where the slab is placed around columns and adjacent to walls. Contraction or construction joints shall be provided as necessary at an intermediate spacing not to exceed 15 feet.

C. Wall Framing System:

Main Wind Force Resisting System (MWFRS): Wall framing system shall consist of engineered reinforced concrete masonry unit (CMU) walls or precast concrete panels in conjunction with steel or concrete moment frames.

Structural steel or concrete columns and beams shall be provided as necessary to transmit gravity and wind loads. Any additional columns required shall be placed within walls or coordinated with architecture to avoid interfering with the openness and clear span of the interior rooms and spaces.

Reinforced CMU walls shall be adequately braced by and connected to the roof framing system and shall be connected to the foundation using deformed bar dowels. Reinforced CMU walls shall be reinforced vertically as required to resist lateral wind loads.

D. Roof Framing Systems:

The roof framing for the building shall consist of a steel bar joist system supporting galvanized corrugated metal decking or precast concrete double-tees. Joists shall be anchored and bridged as per governing codes and manufacturer's specifications. A steel bar joist system will be supported by structural steel or concrete beams throughout.

Roof diaphragm action shall be provided by an engineered steel roof deck system designed to distribute wind forces uniformly to the MWFRS. The Structural Engineer shall design all roof diaphragms and diaphragm connections for the loads and forces



determined in accordance with the FBC and the Steel Deck Institute Diaphragm Design Manual, latest edition.

Wind bracing shall be provided as required by design for secondary structural members.

V. MECHANICAL

The mechanical equipment to be provided shall be high-efficiency and low-noise equipment, properly isolated and/or insulated, to minimize building systems' generated noise/vibration in the occupied spaces.

All the equipment and other components requiring access for servicing and/or adjustment shall be installed in accessible spaces or provided with access doors with proper working clearances. All equipment shall have clearances per manufacturer's recommendations. Maximum noise level in unoccupied spaces with all building systems and equipment in operation shall not exceed the preferred room criteria (RC) curve noise-rating levels recommended by ASHRAE. Install all mechanical equipment, ductwork and piping with 7 inches min. clear above ceiling to allow installation/relocation of lighting fixtures. Coordinate with all disciplines horizontal and vertical clearances for the various installations in the ceiling space.

Combustible materials shall not be used in return air plenums unless they are properly protected or rated for plenum use.

A. Fire Suppression:

The building shall be fully protected by an automatic wet pipe sprinkler system. Provide all required components required for a fully protected building meeting the building occupancy, layout and building size by an automatic piped fire sprinkler system/s where required by Codes.

Provide wet or dry sprinkler and/or standpipe systems, complete with all required appurtenances. Systems shall be designed and installed in accordance with National Fire Prevention Association (NFPA) State Fire Marshal requirements, Florida Building Code Latest Edition, and/or other authorities having jurisdiction. The systems shall be hydraulically calculated and engineered by a Professional Engineer registered in the State of Florida. Hazard classification shall be as required for the building.

B. HVAC System:

Provide all new equipment as required for building operation; including cooling/heating and ventilation systems, supply fans, exhaust fans and associated accessories.

All HVAC equipment shall be new energy efficient systems complying with building use requirements. All systems shall meet the requirements of the Florida Statutes Chapter 255.251 through 255.258 and Florida Energy Conservation in Buildings Act of 1974.

The entire air handling unit shall be of double-wall construction furnished complete with mixing box, 85% efficiency filters, Direct Expansion (DX). Coils shall be selected to handle peak ventilation loads at 500fpm (max) face velocity and a coil fin spacing of 7 fins/inch (max).

The building requires continuous cooling during power outages and/or interruptions. The entire HVAC system shall be designed to continue operation under stand-by power.



A vehicle emission exhaust system shall be provided so that vehicles may be in operation for maintenance testing. The system may be a fixed ducted, wall attached with an intake at 6" above floor or a flexible duct, air-inflated exhaust tip connection system.

All outdoor equipment shall be restrained and protected to withstand windstorms of 146 mph 3 second wind gusts.

C. Air Distribution:

The air distribution system shall be sized for minimum pressure drops, minimal noise and capable of providing 74°F or 72°F as the average interior temperature in all conditioned areas without wasting energy for cooling or heating.

Ductwork shall be designed with adequate margins and adjustment capabilities so all room air supplies can be easily adjusted to achieve temperatures cooling ranging from a low of 71°F to a high of 77°F in each individual room. Detailed room by room, load and low-pressure ductwork friction calculations/analyses as well as diffuser selection data shall be submitted to the Department to substantiate this requirement. Air handling units shall deliver conditioned and ventilation air to the supply ductwork as indicated under HVAC systems. Air return from the conditioned spaces to the air conditioning unit shall be through a ducted return air system that is ducted to the air-handling unit.

All air inlets/outlets shall be aluminum. Diffusers shall be high-capacity louver-face. Return/Exhaust air grilles shall be louvered face with ½" spacing x 30 degree deflection angle.

All HVAC ductwork shall be galvanized sheet metal externally wrapped with 2" thick R-6 min. fiberglass insulation and vapor sealed duct wrap; provide additionally internal lining where required for noise control. All duct wrap seams, joints, etc., shall be sealed with glass fabric and mastic. A maximum of 6' 0" insulated flexible ducts will be allowed from ducts to ceiling diffusers or small individual return grilles.

Provide all extractors, turning vanes, splitter dampers, fire dampers, etc. All fire and fire/smoke dampers shall be out-of-the air stream and airfoil low loss types respectively. Provide spin-in fittings with balancing dampers at each diffuser take off. Flexible connectors between ducts and mechanical systems shall be of an approved flame retardant fabric.

All ductwork shall be fabricated and installed in accordance with SMACNA standards except that all ductwork, regardless of service or pressure class, shall be sealed and checked for air tightness. All transverse and longitudinal seams, gaps, openings, etc., shall be sealed with mastic and pressure-tested for leakage prior to insulating the ductwork.

Fire dampers and combination fire and smoke dampers with access doors shall be provided in penetrations of fire and/or smoke-rated assemblies.

D. Control System:

Controls shall continuously regulate the air-conditioning system refrigeration capacity and supply air temperature dew point to maintain the selected space temperature settings at 60% maximum relative humidity in the conditioned spaces. The anticipated range of space cooling or heating temperatures is 70°F to 76°F. Covers or means to prevent unauthorized tampering with control devices shall be provided.

There shall also be a computerized energy management system to optimize energy conservation by automatic control of all HVAC system components and illumination.

E. Plumbing:

The plumbing system shall consist of high quality materials that will contribute to high performance, low maintenance operation throughout the life of the buildings. All plumbing fixtures in toilet rooms shall be constructed of vitreous china. Water closets shall be wall mounted flush valve type.

Lavatory faucets shall be low voltage sensor operated. Flush valves shall also be low voltage sensor operated with courtesy flush button for manual operation and fabricated by the same manufacturer of the valve.

Type "K" copper pipe shall be used for below grade domestic water and type "L" copper for above grade domestic water. No-hub cast iron shall be used for above grade sanitary waste, vent, storm drainage and air-conditioning condensate, and Polyvinyl (PVC) Schedule 40 for all below grade air-conditioning condensate.

Insulate all air-conditioning condensate lines inside the building and above the floor slab. Also insulate storm drainage piping from roof drain to floor slab penetration. Provide trap re-seals at all floor drains. Freeze-protect all exposed-to-weather and/or outdoor plumbing.

All underground and/or under slab piping within the footprint of the building located in areas over deleterious or poor load bearing soils shall be supported from the building structure.

F. Specialty Requirements:

The Vehicle Maintenance Building shall accommodate the following equipment, including but not limited to:

- Compressed air systems
- Overhead dispensing reels for water, motor oil, transition fluid, lubrication oil, compressed air and power
- Air pumps and storage of oils and fluids
- Storage for used oil and fluids

All equipment requirements and specialty items needed for the Vehicle Service Bay will need to be coordinated with the City.

VI. ELECTRICAL

The Electrical System shall be designed under NFPA 70, National Electrical Code latest edition, NFPA 72, Fire Alarm Code, Illumination Engineering Society of North America Lighting Handbook (IESNA) and the Florida Building Code.

A. Lighting System:

A complete lighting system shall be provided for the interior and exterior of each building that complements the Architectural aesthetics of the facilities. Exterior lighting will be provided on building walls, under canopies and at entrances. Exterior lighting control shall employ a digital time controller with photocell. The indoor lighting system shall consist of general lighting system and an emergency/night light system. Interior lighting control shall be local. The emergency/night light /life safety system shall consist of a percentage of the unswitched connected to an emergency panelboard. All design illumination levels shall be in accordance with the (IESNA) values.

B. Normal Power System:

The electrical power service to the buildings shall originate from an outdoor utility transformer to be supplied by the utility power company serving the area. All buildings shall have single voltage system of 277/480V only. The normal electrical power system and equipments shall be sized to serve the anticipated demand load of the building plus 50% future capacity. Metering shall consist of one meter for each site.

C. Standby Power System:

The Vehicle Maintenance Building shall be equipped with a standby generator set. The generator will be sized based on the system connected loads and the fuel storage capacity will be determined by the requested run duration.

D. Communications-(Voice/ Data Systems):

Provide in the each accessible structure the necessary provisions to accommodate a complete empty conduit and junction box for voice and data telecommunications. Provide all spatial requirements and other accommodations necessary to allow the installation of telecommunication system (including equipment rooms, conduit, power, HVAC requirements and floor/wall sleeves).

Phone communication shall be located inside the building communication room. 4' x 8' x ¾" plywood backboard shall be installed on each wall in the each building's communication room. Make provisions for 19" rack system with wire management capabilities and cable tray ladder system in the communication room. A ¾" empty conduit shall be installed from each office telephone/data junction box to the ceiling space. All runs for modular partitions shall be run in a minimum 1-inch conduit unless otherwise noted. Junction boxes shall be properly labeled to ensure ease of identifying and maintaining the system.

E. Fire Alarm System:

The installed system shall meet all requirements of the National Fire Code (NFPA-72) and local fire codes having jurisdiction. The fire alarm system shall be of an electronic multiplexed addressable system consisting of initiating, annunciating, communication and control systems for shutdown of mechanical equipment and power systems.

The Main Fire Alarm Panel shall have enough capacity to accommodate an expansion of 50% future expansion. The whole system shall be connected to the Standby Power System.

F. Security and Satellite System:

The security system shall consist of two separate systems: a Close Circuit Television (CCTV) surveillance system and an access control system. The electrical design shall include raceway, rough-ins and emergency branch circuit power only to the security devices and equipment. The security system shall have enough reserve capacity for future expansion of both monitoring and equipment. The entire system shall be connected to the Standby Power System.

G. Grounding System:

The Building's grounding system shall consist of a grounding electrode system, equipment grounding of the electric system, telecommunications grounding and lightning protection. All systems shall be designed to meet their applicable codes and standards and tied together to form a complete comprehensive grounding system. Only copper wire shall be used.

H. Lightning Protection System:

Provide a Lightning protection system for all buildings, in accordance with NFPA 78 and Underwriters Laboratory (UL) 96. A UL master label shall be provided for each system installation. The master label shall be installed in the electrical room.

The Lightning protection system guidelines shall be as follows:

The down conductors shall be installed in Polyvinyl Chloride (PVC) conduits and shall be installed concealed inside the building walls and or columns. Counterpoises shall be provided and interconnected to the down conductors. Ground rods 5/8"x 20 ft, shall be installed in ground test wells. The counterpoise shall be bonded to the main grounding system of the building. Where metal covers are provided for the test wells, they shall be bonded to the ground rods.

I. Lighting Systems:

A complete interior and exterior lighting system shall be provided for the Buildings.

- Interior Lighting:

Lighting Calculations shall be provided for each room.

The following illumination levels in Foot-Candle (FC) shall be used as guidelines. For areas not listed below, the lesser of the average maintained FC levels listed in the IESNA Lighting Handbook shall be used.

<u>AVERAGE MAINTAINED AREA</u>	<u>FOOT CANDLE (FC)</u>
Corridor/hallways	20
Lobby	30
Office Areas	50 + task lighting
Restrooms	20
Storage rooms	20
Mech/Electrical	30
Fueling areas	75
Vehicle Service Bays	75

- The Office Lighting in all buildings shall consist of fluorescent and/or compact fluorescent fixtures and electronic ballasts. Provide return air fixtures where applicable.
 - The fueling area shall consist of 400 watts metal halide square luminaries.
 - Voltage shall be 277 volts.
 - Down lighting shall mainly consist of compact fluorescent fixtures type PL with high power factor ballast.
 - Interior lighting shall be controlled by occupancy sensors in private offices.
 - Lighting fixtures for means of egress shall have battery back-up.
 - Exits lights shall be Light Emitting Diode (LED) and shall have battery back-up.
 - Avoid use of incandescent lighting.
 - Lights in toilets rooms shall be lens fluorescent fixtures or down lights.
 - Lights in storage/mechanical rooms shall be industrial type fluorescent fixtures.
 - All fluorescent lamps shall be T-8 or PL type, 4,100 degree Kelvin color temperature light source high.
 - Lighting using LED technology is strongly desired.
- Exterior / Site Lighting:
Photometric Lighting Calculations shall be provided for the entire site.
The following illumination levels in Foot-Candle (FC) shall be used as guidelines.
For areas not listed below, the lesser of the average maintained FC levels listed in the IESNA Lighting Handbook shall be used.

<u>AVERAGE MAINTAINED AREA</u>	<u>FOOT CANDLE (FC)</u>
Parking areas	1
Fueling areas	75

City of Doral
Vehicle Maintenance Building and Transit Hub
Concept Narrative

CONCEPTUAL COST ESTIMATE

VII. CONCEPTUAL COST ESTIMATE

A. Vehicle Maintenance Building

• Sitework:	\$740,000
• Office / File Storage Area: +/- 7,000 SF x \$210/SF=	\$1,470,000
• Maintenance Area: +/- 9,000 SF x \$185/SF=	\$1,665,000
• Exterior Covered Storage: +/- 1,600 SF x \$100/SF=	\$160,000
• Storage Facility: +/- 4,800 SF x \$150/SF=	\$720,000
• Miscellaneous Site Structures:	
○ Fuel Facility: Two Tanks with Two Dispensers	\$150,000
○ Storage Bins: Six Exterior Covered Bins	\$75,000
<hr/>	
Subtotal:	\$4,980,000
Estimate Contingency @ 20% (due to conceptual stage)	\$996,000
<hr/>	
Estimated Probable Construction Cost (2010):	\$5,976,000

Estimated Range of Probable Construction Costs: \$5.5 to \$6.4M

Basis of square foot cost is consistent with current industry costs for the building type and region.

B. Transit Hub

• Sitework:	\$160,000
• Transit Hub Building: +/- 300 SF x \$200/SF=	\$60,000
• Exterior Canopy: +/- 200 SF x \$75/SF=	\$15,000
<hr/>	
Subtotal:	\$235,000
Estimate Contingency @ 20% (due to conceptual stage)	\$47,000
<hr/>	
Estimated Probable Construction Cost (2010):	\$282,000

Estimated Range of Probable Construction Costs: \$260 to \$304K

Basis of square foot cost is consistent with current industry costs for the building type and region.

**City of Doral
Vehicle Maintenance Building and Transit Hub
Concept Narrative**

**APPENDIX A
LEED CHECKLIST**



LEED 2009 for New Construction and Major Renovation

Project Checklist

Project Name: City of Doral - Vehicle Maintenance Building

Date: May 3, 2010

15	11	0
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Sustainable Sites

Possible Points: 26

Y	N	?
Y		
	1	
3	2	
	1	
2	4	
1		
2	1	
1	1	
1		
1		
1		
1		
	1	
1		
1		

Prereq 1	Construction Activity Pollution Prevention	
Credit 1	Site Selection	1
Credit 2	Development Density and Community Connectivity	5
Credit 3	Brownfield Redevelopment	1
Credit 4.1	Alternative Transportation—Public Transportation Access	6
Credit 4.2	Alternative Transportation—Bicycle Storage and Changing Rooms	1
Credit 4.3	Alternative Transportation—Low-Emitting and Fuel-Efficient Vehicles	3
Credit 4.4	Alternative Transportation—Parking Capacity	2
Credit 5.1	Site Development—Protect or Restore Habitat	1
Credit 5.2	Site Development—Maximize Open Space	1
Credit 6.1	Stormwater Design—Quantity Control	1
Credit 6.2	Stormwater Design—Quality Control	1
Credit 7.1	Heat Island Effect—Non-roof	1
Credit 7.2	Heat Island Effect—Roof	1
Credit 8	Light Pollution Reduction	1

10	0	0
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Water Efficiency

Possible Points: 10

Y		
4		

Prereq 1	Water Use Reduction—20% Reduction	
Credit 1	Water Efficient Landscaping	2 to 4
	<input checked="" type="checkbox"/> Reduce by 50%	2
	<input checked="" type="checkbox"/> No Potable Water Use or Irrigation	4
2		
Credit 2	Innovative Wastewater Technologies	2
4		
Credit 3	Water Use Reduction	2 to 4
	<input checked="" type="checkbox"/> Reduce by 30%	2
	<input checked="" type="checkbox"/> Reduce by 35%	3
	<input type="checkbox"/> Reduce by 40%	4

10	25	0
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Energy and Atmosphere

Possible Points: 35

Y		
Y		
Y		
3	16	

Prereq 1	Fundamental Commissioning of Building Energy Systems	
Prereq 2	Minimum Energy Performance	
Prereq 3	Fundamental Refrigerant Management	
Credit 1	Optimize Energy Performance	1 to 19
	<input checked="" type="checkbox"/> Improve by 12% for New Buildings or 8% for Existing Building Renovations	1
	<input checked="" type="checkbox"/> Improve by 14% for New Buildings or 10% for Existing Building Renovations	2
	<input checked="" type="checkbox"/> Improve by 16% for New Buildings or 12% for Existing Building Renovations	3
	<input type="checkbox"/> Improve by 18% for New Buildings or 14% for Existing Building Renovations	4
	<input type="checkbox"/> Improve by 20% for New Buildings or 16% for Existing Building Renovations	5
	<input type="checkbox"/> Improve by 22% for New Buildings or 18% for Existing Building Renovations	6
	<input type="checkbox"/> Improve by 24% for New Buildings or 20% for Existing Building Renovations	7
	<input type="checkbox"/> Improve by 26% for New Buildings or 22% for Existing Building Renovations	8
	<input type="checkbox"/> Improve by 28% for New Buildings or 24% for Existing Building Renovations	9
	<input type="checkbox"/> Improve by 30% for New Buildings or 26% for Existing Building Renovations	10

			Improve by 32% for New Buildings or 28% for Existing Building Renovations	11
			Improve by 34% for New Buildings or 30% for Existing Building Renovations	12
			Improve by 36% for New Buildings or 32% for Existing Building Renovations	13
			Improve by 38% for New Buildings or 34% for Existing Building Renovations	14
			Improve by 40% for New Buildings or 36% for Existing Building Renovations	15
			Improve by 42% for New Buildings or 38% for Existing Building Renovations	16
			Improve by 44% for New Buildings or 40% for Existing Building Renovations	17
			Improve by 46% for New Buildings or 42% for Existing Building Renovations	18
			Improve by 48%+ for New Buildings or 44%+ for Existing Building Renovations	19
2	5		Credit 2 On-Site Renewable Energy	1 to 7
			1% Renewable Energy	1
			3% Renewable Energy	2
			5% Renewable Energy	3
			7% Renewable Energy	4
			9% Renewable Energy	5
			11% Renewable Energy	6
			13% Renewable Energy	7
	2		Credit 3 Enhanced Commissioning	2
2			Credit 4 Enhanced Refrigerant Management	2
3			Credit 5 Measurement and Verification	3
	2		Credit 6 Green Power	2

8	6	0	Materials and Resources	Possible Points: 14
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Y			Prereq 1 Storage and Collection of Recyclables	
	3		Credit 1.1 Building Reuse—Maintain Existing Walls, Floors, and Roof	1 to 3
			Reuse 55%	1
			Reuse 75%	2
			Reuse 95%	3
	1		Credit 1.2 Building Reuse—Maintain 50% of Interior Non-Structural Elements	1
2			Credit 2 Construction Waste Management	1 to 2
			X 50% Recycled or Salvaged	1
			X 75% Recycled or Salvaged	2
1	1		Credit 3 Materials Reuse	1 to 2
			X Reuse 5%	1
			Reuse 10%	2
2			Credit 4 Recycled Content	1 to 2
			X 10% of Content	1
			X 20% of Content	2
1	1		Credit 5 Regional Materials	1 to 2
			X 10% of Materials	1
			20% of Materials	2
1			Credit 6 Rapidly Renewable Materials	1
1			Credit 7 Certified Wood	1

13	2	0	Indoor Environmental Quality	Possible Points: 15
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Y			Prereq 1 Minimum Indoor Air Quality Performance	
Y			Prereq 2 Environmental Tobacco Smoke (ETS) Control	
1			Credit 1 Outdoor Air Delivery Monitoring	1
	1		Credit 2 Increased Ventilation	1

1			Credit 3.1 Construction IAQ Management Plan—During Construction	1
1			Credit 3.2 Construction IAQ Management Plan—Before Occupancy	1
1			Credit 4.1 Low-Emitting Materials—Adhesives and Sealants	1
1			Credit 4.2 Low-Emitting Materials—Paints and Coatings	1
1			Credit 4.3 Low-Emitting Materials—Flooring Systems	1
1			Credit 4.4 Low-Emitting Materials—Composite Wood and Agrifiber Products	1
	1		Credit 5 Indoor Chemical and Pollutant Source Control	1
1			Credit 6.1 Controllability of Systems—Lighting	1
1			Credit 6.2 Controllability of Systems—Thermal Comfort	1
1			Credit 7.1 Thermal Comfort—Design	1
1			Credit 7.2 Thermal Comfort—Verification	1
1			Credit 8.1 Daylight and Views—Daylight	1
1			Credit 8.2 Daylight and Views—Views	1

3	3	0	Innovation and Design Process	Possible Points: 6
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1			Credit 1.1 Innovation in Design: Specific Title	1
1			Credit 1.2 Innovation in Design: Specific Title	1
	1		Credit 1.3 Innovation in Design: Specific Title	1
	1		Credit 1.4 Innovation in Design: Specific Title	1
	1		Credit 1.5 Innovation in Design: Specific Title	1
1			Credit 2 LEED Accredited Professional	1

1	3	0	Regional Priority Credits	Possible Points: 4
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1			Credit 1.1 Regional Priority: Specific Credit	1
	1		Credit 1.2 Regional Priority: Specific Credit	1
	1		Credit 1.3 Regional Priority: Specific Credit	1
	1		Credit 1.4 Regional Priority: Specific Credit	1

60	50	0	Total	Possible Points: 110
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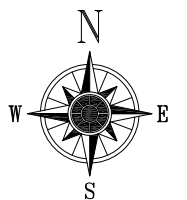
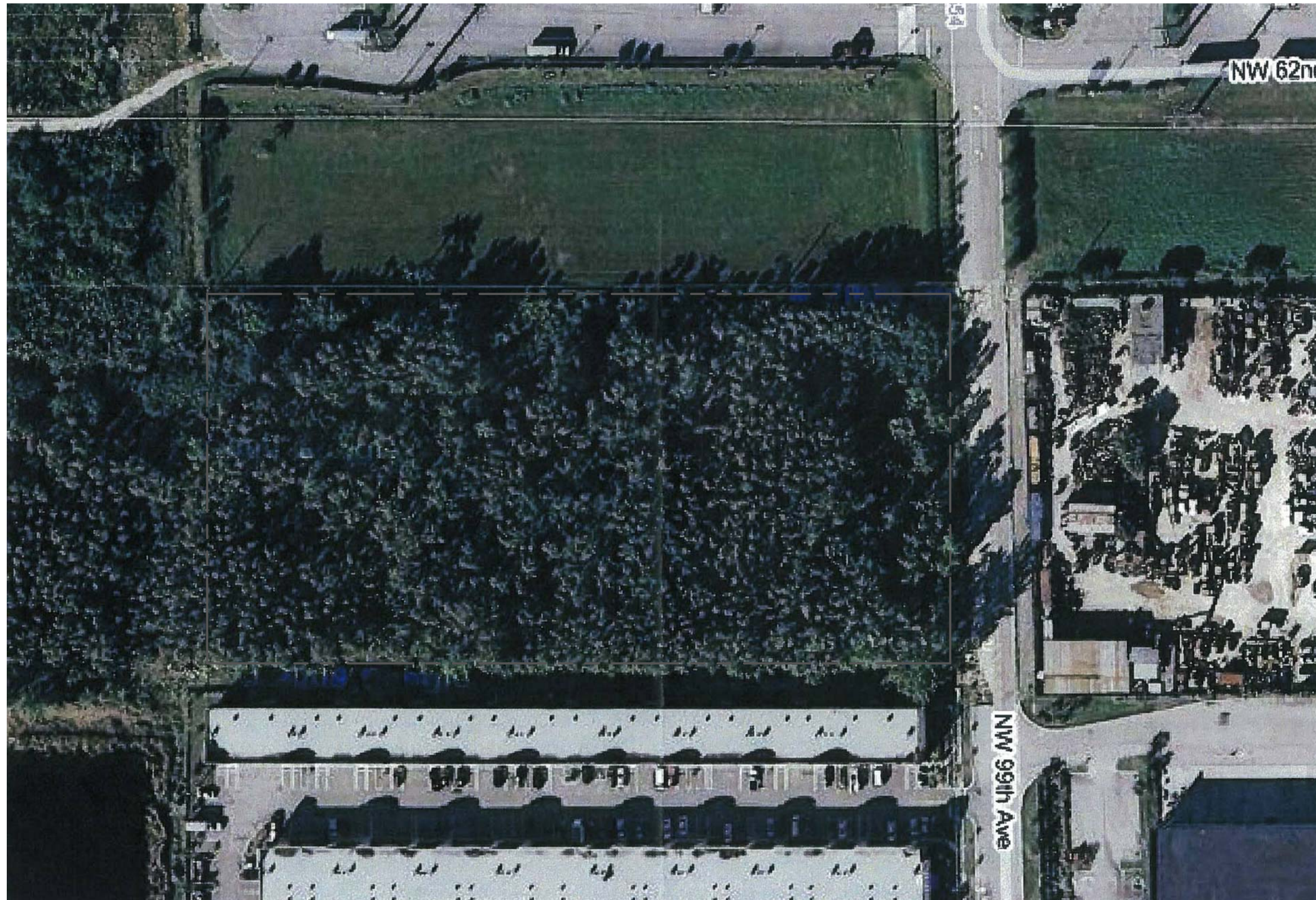
Certified 40 to 49 points Silver 50 to 59 points Gold 60 to 79 points Platinum 80 to 110

**City of Doral
Vehicle Maintenance Building and Transit Hub
Concept Narrative**

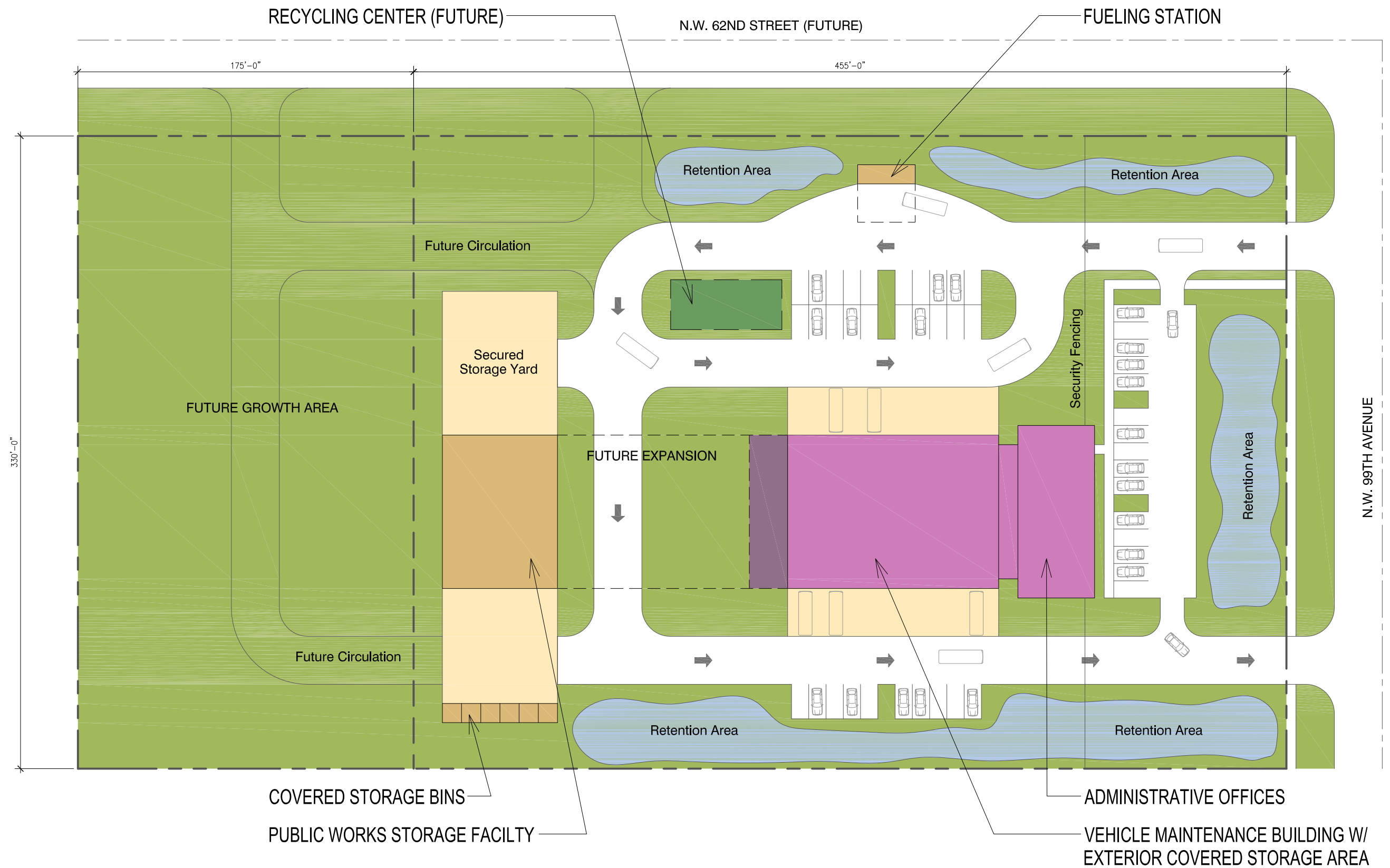
APPENDIX B

VEHICLE MAINTENANCE BUILDING

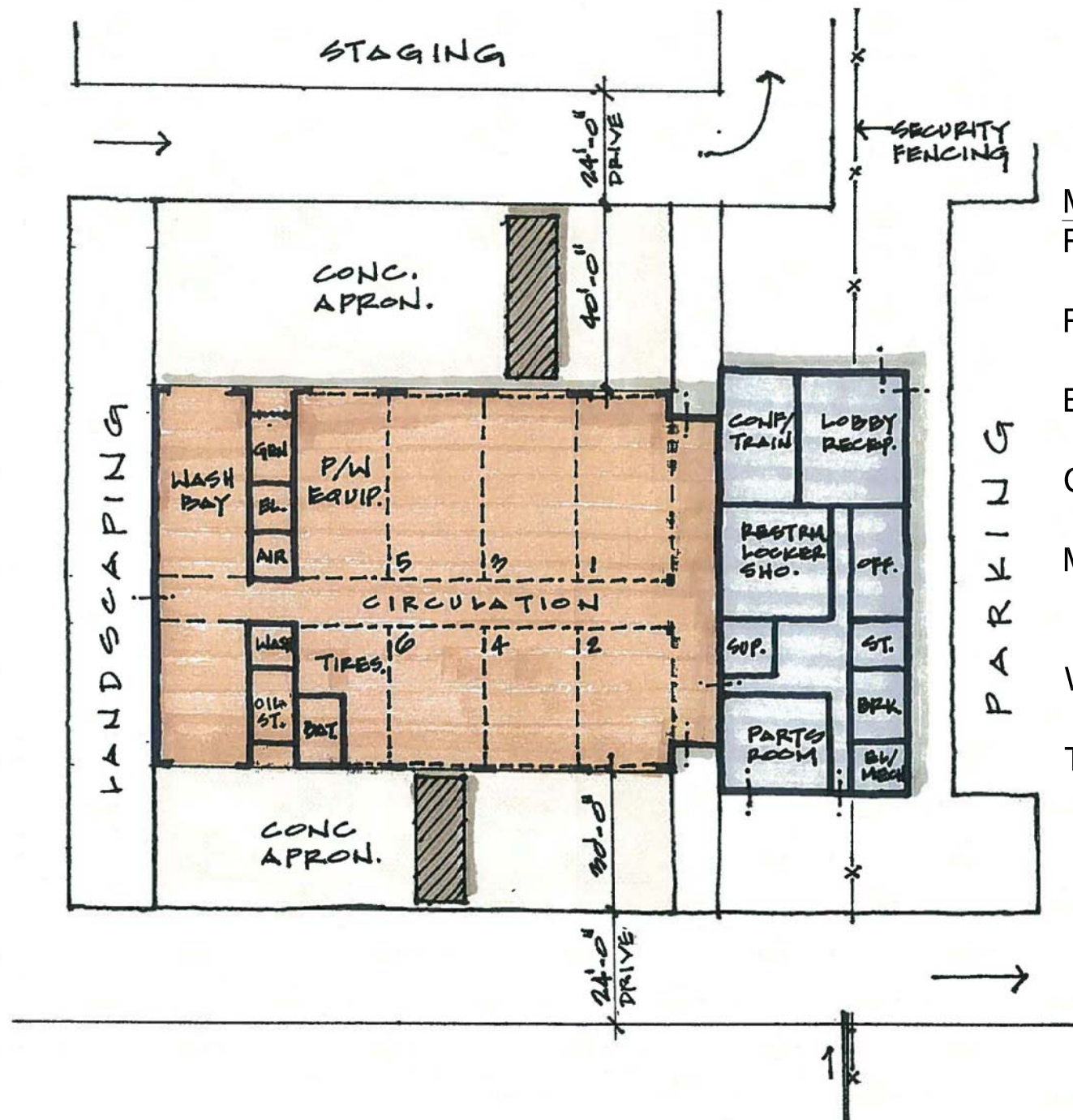




AERIAL



CONCEPTUAL SITE PLAN



MINIMUM SPACE REQUIREMENTS

Parts Room:

22'-0" x 20'-0" = 440 SF

Restroom / Showers / Locker Room:

23'-0" x 23'-0" = 529 SF

Break Room:

12'-0" x 15'-0" = 180 SF

Conference / Training Room:

16'-0" x 28'-0" = 448 SF

Maintenance Bays:

20'-0" x 40'-0" = 800 SF (Trolleys)

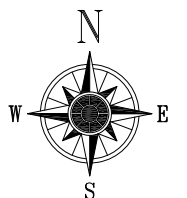
20'-0" x 30'-0" = 600 SF (Vehicles)

Wash Bay:

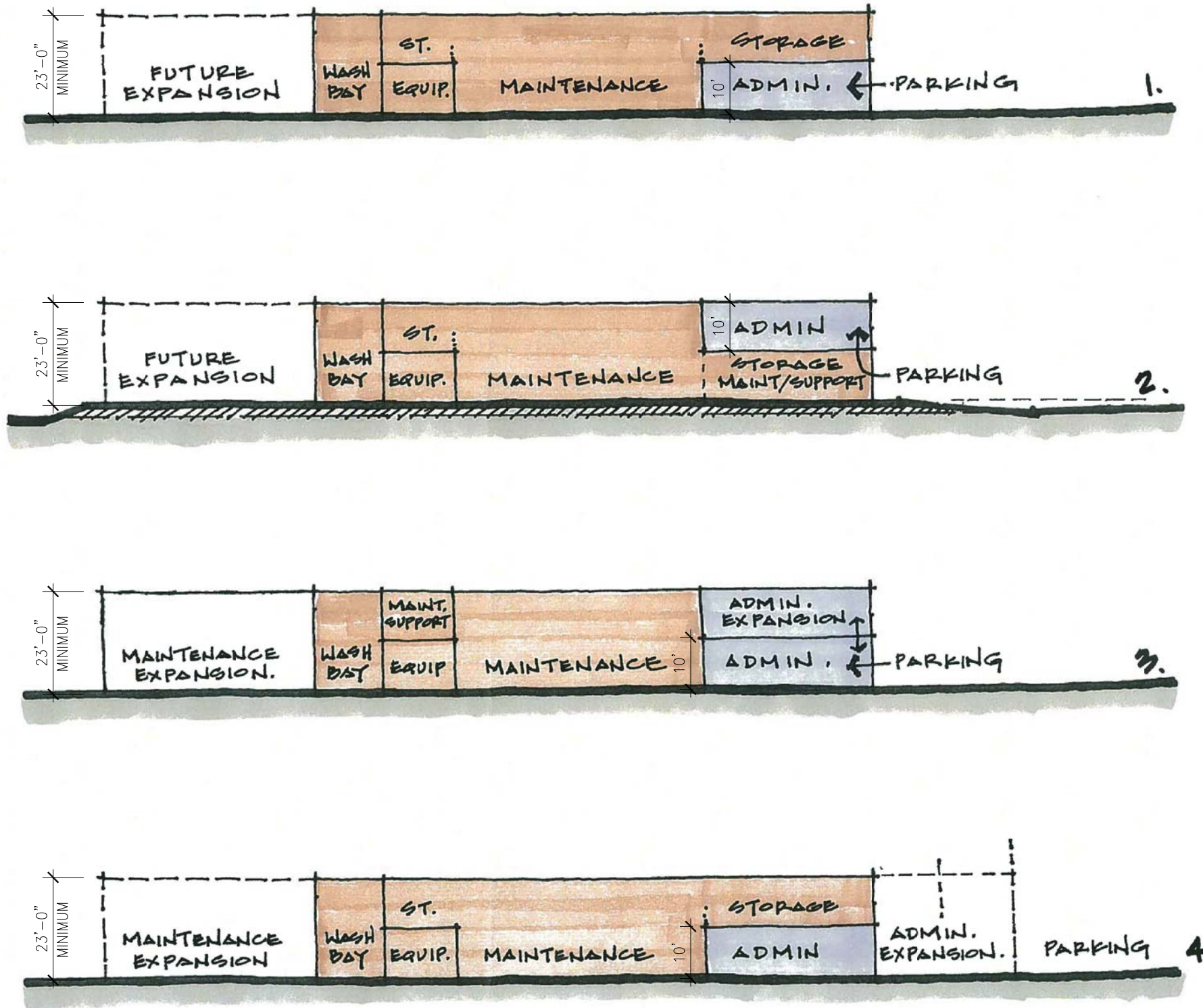
20'-0" x 80'-0" = 1,600 SF

Tire / Battery Storage:

20'-0" x 30'-0" = 600 SF



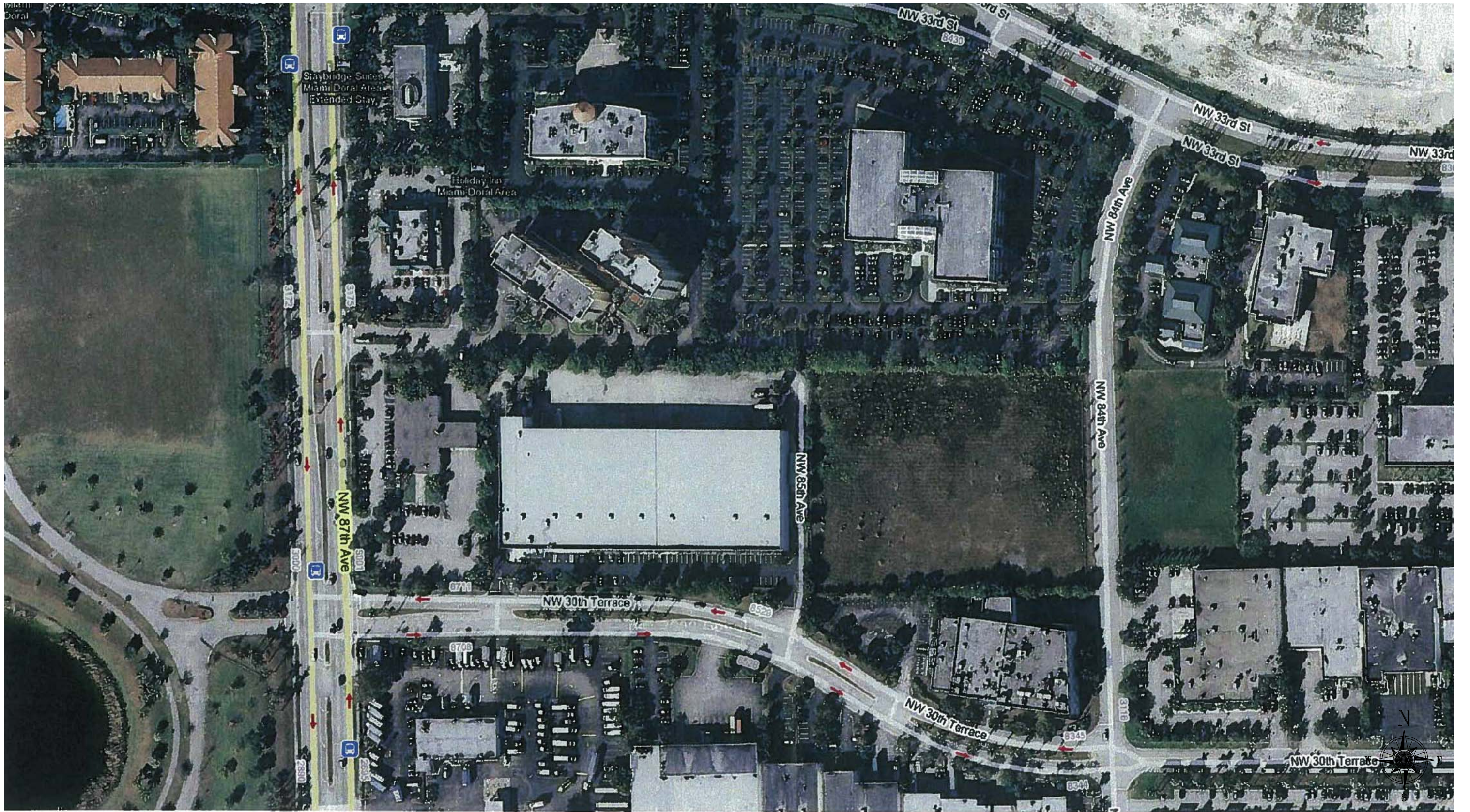
FLOOR PLAN DIAGRAM



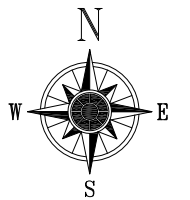
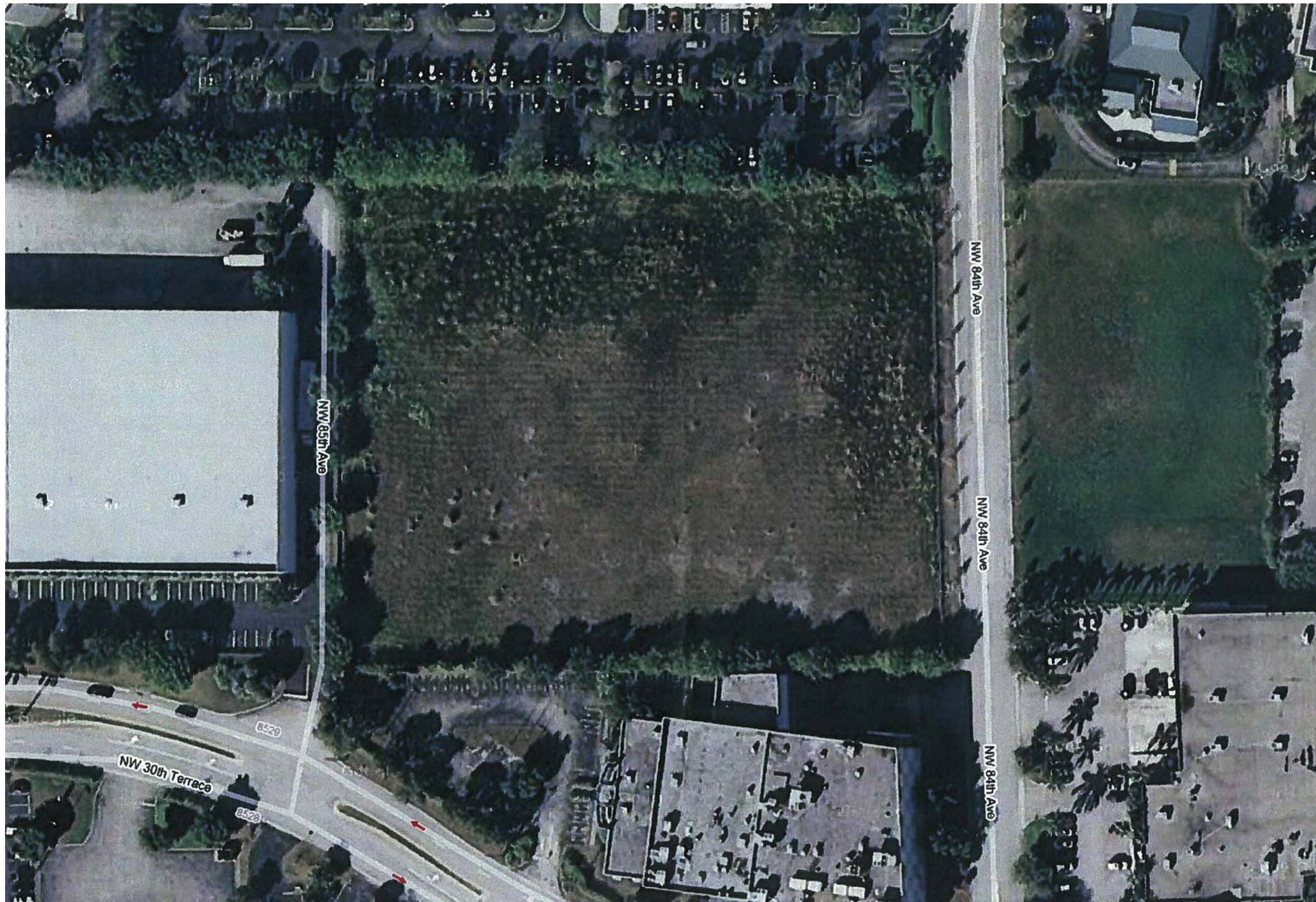
MASSING DIAGRAM

**City of Doral
Vehicle Maintenance Building and Transit Hub
Concept Narrative**

**APPENDIX C
TRANSIT HUB**



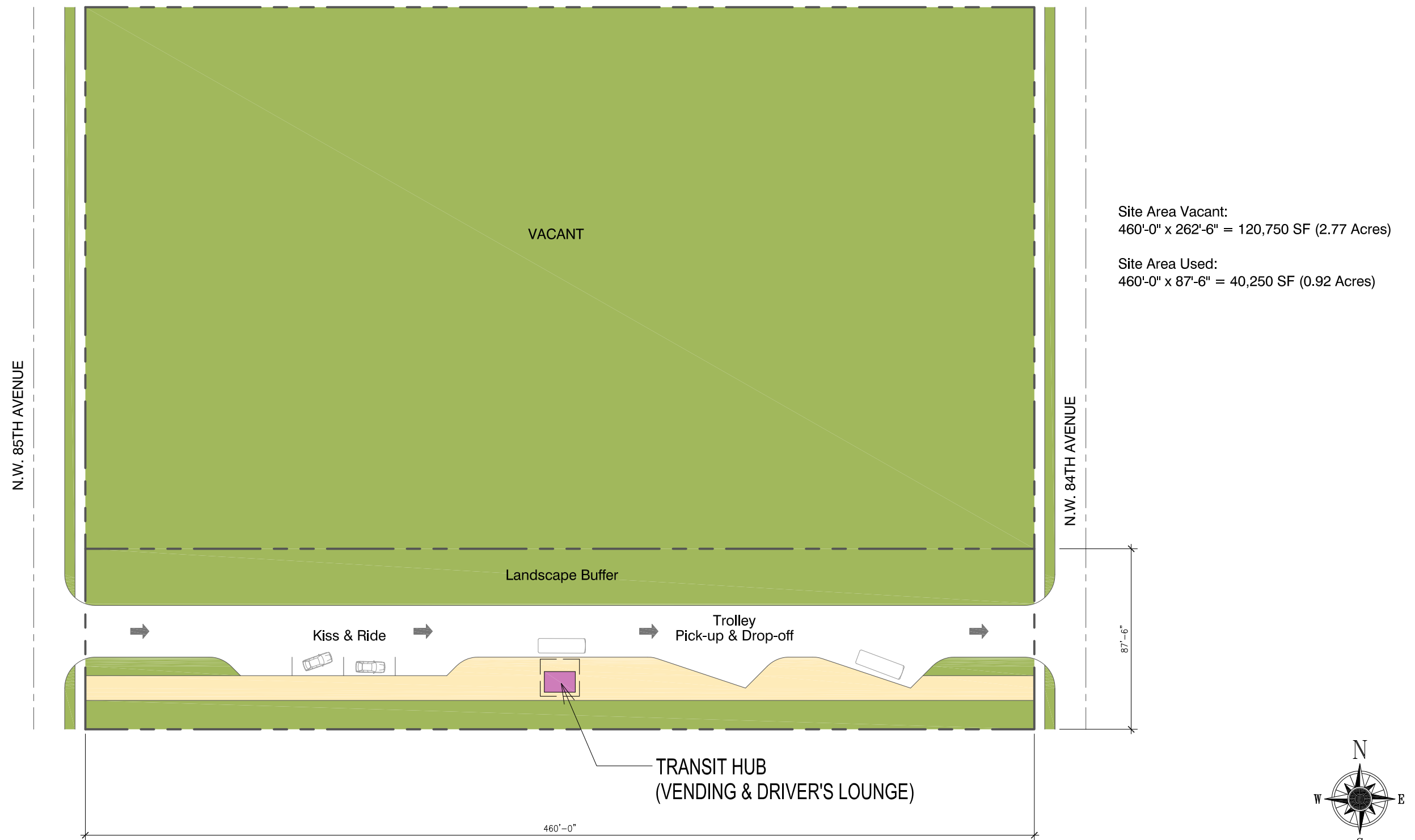
CONTEXTUAL AERIAL



AERIAL



CONCEPTUAL SITE PLAN



CONCEPTUAL SITE PLAN

(Please refer
to accompanying
agenda documents)