

DEPARTMENTAL INPUT

CONTRACT/PROJECT MEASURE ANALYSIS AND RECOMMENDATION

New
 OTR
 Sole Source
 Bid Waiver
 Emergency
 Previous Contract/Project No.

Contract
 Re-Bid
 Other
 LIVING WAGE APPLIES: YES NO

Requisition No: RQID1700016
 TERM OF CONTRACT YEAR(S) WITH YEAR(S) OTR

Requisition /Project Title:

Description:

Issuing Department:
 Contact Person:
 Phone:

Estimate Cost:
 Funding Source:

ANALYSIS

Commodity Codes:	<input type="text" value="120-21"/>		
Contract/Project History of previous purchases three (3) years Check here <input type="checkbox"/> if this is a new contract/purchase with no previous history.			
	EXISTING	2ND YEAR	3RD YEAR
Contractor:	<input type="text"/>	<input type="text"/>	<input type="text"/>
Small Business Enterprise:	<input type="text"/>	<input type="text"/>	<input type="text"/>
Contract Value:	\$ <input type="text"/>	\$ <input type="text"/>	\$ <input type="text"/>
Comments:	<input type="text"/>		

Continued on another page (s): YES NO

RECOMMENDATION

	Set-aside	Sub-contractor goal	Bid preference	Selection factor
SBE	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>

Basis of recommendation:

Signed:
 Date sent to SBD:

Also send to: oca@miamidade.gov

Date returned to DPM:

To meet this requirement, effective immediately, please use the same input document used for SBD review for measures. Please copy OCA at oca@miamidade.gov when sending the Input Document to SBD. Please feel free to reach out to your respective manager or me directly with any questions.

Revised April 2005

SECTION 2 - SPECIAL TERMS AND CONDITIONS

2.1 PURPOSE

The purpose of this solicitation is to establish a contract for the purchase of aquatic weed harvester boats, for Miami-Dade County as required.

2.2 TERMS OF CONTRACT

This contract will commence on the first calendar day of the month succeeding approval of the contract by the Board of County Commissioners, or designee, unless otherwise stipulated in the Notice of Award letter, which is distributed by the County's Department of Procurement Management, Purchasing Division; and contingent upon the completion and submittal of all required bid documents. This contract shall remain in effect for three (3) years, provided that the goods and services rendered by the bidder during the contract period are satisfactory and that County funding is available as appropriated on an annual basis and upon completion of the expressed and/or implied warranty period.

2.3 METHOD OF AWARD

Award of this contract will be made to the lowest responsive and responsible bidder who meets the qualifications listed below:

- A. The bidders must be an industrial aquatic weed harvester manufacturer or an authorized dealer of the manufacturer. Bidders shall submit documentation in the form of a letter on the company letterhead stating they are a manufacturer for aquatic weed harvest boats or an authorized dealer of aquatic harvest boats.
- B. Bidder must provide a name and address of a local representative that will be used to make any warranty repairs and services as needed.
- C. The bidder shall supply a copy of the manufacturer's and/or supplier's certificates of warranty with its bid.

Bidders shall submit all requested documentation as evidence that they meet the qualifications stated above. The County, at its sole discretion, may allow bidders to supplement and provide additional information and documentation during the bid evaluation period.

2.4 PRICES

The prices proposed by the bidder shall remain fixed for a period of no less than one year after the commencement of the contract. After the initial one year period, the price offered may be subject to an annual price adjustment (i.e. increase or decrease) based on the most recent Producer Price Index as published by the U.S. Department of Labor, Bureau of Labor Statistics, at www.bls.gov, for the Commodity Series ID.: PCU3366123366128, entitled " Boat Building, All other boats (excluding military and commercial)". Each year anniversary of the inception of this contract, the bidder may submit a written request for a price adjustment.

The County shall consider the bidders failure to submit the request during the time specified above, as a waiver of the request for any price adjustment for the following year of the contract.

It shall be further understood that the County reserves the right to reject any price adjustments submitted by the bidder, and/or to terminate the contract with the bidder based on such price adjustments.

2.6 "EQUAL" PRODUCT

The manufacturer's name, brand name and/or model number information contained in this solicitation are being used for the sole purpose of establishing the minimum requirement of level of quality, standard of performance, and design. They are in no way intended to prohibit the bidding of other manufacturer's brands of equal material, quality, design and standards of performance.

This specific solicitation requires submission of the following documentation to enable County evaluation of "Approved Equal or Equivalent" products:

- : Product Information Sheets
- : Product Samples Upon Specific Request
- : Performance Test Results

If an "Approved Equal or Equivalent" product is considered by the County in accordance with the specifications, the unit shall be equal in quality, standards of performance, and design to the item specified in the solicitation. Where an "Approved Equal or Equivalent" item is offered, and product information sheets are required, the initial offer must be accompanied with two (2) complete sets of product information sheets (such as factory specifications, standard manufacturer information sheets, catalogues, and brochures), and if required, two (2) copies of performance test results of the unit offered as an equal. The product information submittals and all supporting documentation submitted by the bidder must meet or exceed the required specifications set forth in this solicitation. Where the standard product literature submitted with the offer provides information that does not comply with the specifications, the bidder shall state, in an official letter on corporate letterhead, as part of their initial offer, the differences between the item they are specifically offering, and the equipment described by the standard product literature, to substantiate compliance to all of the specifications set forth in this solicitation. In such cases, any offer submitted with standard product literature but without the letter explaining compliance, may result in the rejection of the offer for not meeting the solicitation specifications.

If samples of "Approved Equal or Equivalent" items bid are required for evaluation, such items are to be provided at no cost to the County, and should be submitted with the initial offer, or at the time of specific request. Failure to meet this requirement may result in your offer being rejected. The County will only make reasonable sample requests, such as samples of parts or materials, and will not request samples of complete assemblies or units, during the evaluation period.

The County shall be sole judge of equality or equivalency, based on the best interests of the County, and its decision in this regard shall be final. Items labeled "No Substitute" in the specifications are the only products that will be accepted under this solicitation.

2.7 **DELIVERY**

The awarded bidder shall deliver all ordered vessels within two-hundred and ten (210) calendar days after a purchase order has been issued to, SHOP # 3 located at 8801 Northwest 58 Street Miami, FL 33178 and accepted by an authorized County representative. All deliveries shall be made in accordance with good commercial practice and all required delivery timeframes shall be adhered to by the bidder(s); except in such cases where the delivery will be delayed due to acts of nature, strikes, or other causes beyond the control of the bidder. In these cases, the bidder shall notify the County of the delays in advance of the original delivery date so that a revised delivery schedule can be appropriately considered by the County.

Comment [PL(1): Why 210 days? Is this per vessel? I created a line for the bidder to probe the number of days they can deliver unless elaborated ...

Should the bidder to whom the contract(s) is awarded fail to deliver in the number of days stated above, the County reserves the right to cancel the contract on a default basis after any back order period that has been mutually agreed on, has lapsed. If the contract is so terminated, it is hereby understood and agreed that the County has the authority to purchase the goods elsewhere and to charge the incumbent bidder with any re-procurement costs.

2.8 **WARRANTY REQUIREMENTS**

A. Type of Standard Warranty Coverage Required

The warranty certificates shall provide a comprehensive liability of all components that are covered under the standard warranty. Under no circumstances shall the County accept a standard warranty period of less than twelve (12) months. The warranty shall start when the vessel has been delivered and accepted by the County. The warranty supplied by the bidder shall remain in force for the full period identified by the bidder, regardless of whether the bidder is under contract with the County at the time of defect. Any payment by the County on behalf of the goods or services received from the bidder does not constitute a waiver of these warranty provisions.

B. Correcting Defects Covered Under the Standard Warranty

If repairs and/or parts covered under the standard warranty become defective and must be repaired and/or replaced by the bidder or their local representative, the bidder hereby understands and agrees to complete the repair at no cost to the County, within five (5) work days after the request for such repairs and/or parts is made by a County representative. If the bidder fails to complete the repair and/or supply the parts within this prescribed period, the County may, at its sole option, take any of the following actions: (a) obtain the repair and/or parts from another bidder; and/or (b) place the bidder in default of its contract. If, in the course of exercising these options, the County incurs additional costs, the County shall charge the bidder for the costs, either through a credit memorandum or through invoicing.

C. Type of Warranty Coverage Required for Repairs and Parts

In addition to the standard warranty, it is hereby agreed and understood that all repairs and replacements parts supplied by the bidder shall be warranted for a minimum period of ninety (90) calendar days after the repairs and/or parts have been received and accepted by the County.

D. Correcting Repeat Failures Covered Under the Warranty for Repairs and Parts.

If any warranty repair experiences a repeat failure within fifteen (15) calendar days following the repair due to faulty workmanship supplied by the bidder, the bidder hereby understands and agrees that it will repair the failure and incur any and all costs associated with the repeat failure within two (2) working day after notification of the failure by a County representative. If the bidder fails to complete the repair and/or supply the parts within this prescribed period, the County may, at its sole discretion, deduct \$200.00 for each work day that the repair remains incomplete and/or the parts are not delivered; either through a credit memorandum, a deduction from an appropriate invoice from the bidder, or through a separate invoice from the County.

Comment [PL(2): Basia and I would like to understand why and how the rate of \$200.00 is implemented?

2.9 ACCEPTANCE OF PRODUCT BY THE COUNTY

The product(s) to be provided hereunder shall be delivered to the County, and maintained if applicable to the contract, in full compliance with the specifications and requirements set forth in this contract. If a bidder-provided product is determined to not meet the specifications and requirements of this contract, either prior to acceptance or upon initial inspection, the item will be returned, at bidder expense, to the bidder. At the County's own option, the bidder shall either provide a direct replacement for the item, or provide a full credit for the returned item. The bidder shall not assess any additional charge(s) for any conforming action taken by the County under this clause.

2.10 COMPLIANCE WITH FEDERAL STANDARDS

All items to be purchased under this contract shall be in accordance with all governmental standards, to include, but not be limited to, those issued by the Occupational Safety and Health Administration (OSHA), the National Institute of Occupational Safety Hazards (NIOSH), and the National Fire Protection Association (NFPA).

2.11 EQUIPMENT PROPOSED

The equipment furnished by the bidder shall be new and the most recent model available. Demonstrator models are not acceptable. Any optional components that are recommended by the manufacturer for the application intended must be included and will be considered standard equipment for the purposes of this solicitation. The application and usage of all components, sub-components or parts must be in accordance with their manufacturers' recommendations as well as the recommendations of all associated component manufacturers. Omission of any essential detail from these specifications does not relieve the bidder from furnishing a complete and ready to work unit. The silence of specifications on any point shall mean that only the finest commercial practices of the industry shall apply and all interpretations of Bid Specifications shall be so governed. The unit shall conform to all applicable

Occupational Safety and Health Administration (OSHA), State and Federal and American National Standards Institute (ANSI) requirements and standards, and Department of Transportation (D.O.T.) regulations. All components and included craftsmanship are to be in accordance with current Society of Automotive Engineers (S.A.E.) standards and recommended practices. The engineering, materials and workmanship shall exhibit a high level of quality and appearance consistent with or exceeding the industry standards.

2.12 PARTS, REPAIRS AND TRAINING MANUALS

At the first delivery and for each vessel, the awarded Bidder shall provide the County with a minimum of one (1) comprehensive training manual which describes the appropriate use of the equipment purchased, and one (1) comprehensive repairs and parts manuals which identify the component parts and which describe the appropriate process for repairing the equipment purchased. This may be done by book, CD or online access to the appropriate complying information.

2.13 WATER TRIALS AND TESTS

The awarded bidder will be required to conduct water trials for each vessel with County personnel prior to delivery. The awarded bidder may select the location of the trials, subject to agreement by Miami-Dade County. Water trails should be done at no cost to the County.

The trials must be conducted in an environment similar to that which the boats will be subjected during normal usage.

The operational parameters and aspects of all equipment, instrumentation, and the performance abilities of the vessels must be tested according to acceptable industry practices. The written results of the testing must be provided to the County for additional review, evaluation, and comment.

If any operational or performance metric of the vessels do not meet the standards required, the bidder agrees to correct such deficiencies prior to the delivery and acceptance of the vessels by the County.

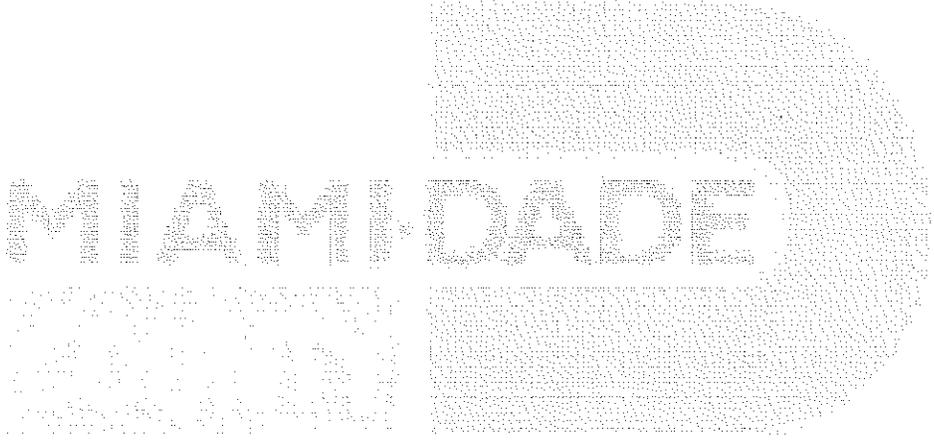
2.14 PRODUCTION/PROTOTYPE INSPECTION

The awarded bidder may be required to provide an on-site production/prototype inspection of the first unit manufactured at a time and location which is mutually convenient to the bidder and the County officials attending. This inspection shall be performed prior to the final assembly of the equipment in order to evaluate the placement of controls and lines, structural changes and general construction techniques. The bidder shall provide reasonable notice to the County prior to the scheduling of the on-site production inspection.

The County reserves the right to require modifications to the equipment if such modifications are necessary in order to bring the equipment into compliance with the technical specifications, the bidder's offer, or best commercial practices. No material changes shall be made to the County's technical specifications or the bidder's offer.

The County reserves the right to require multiple production inspections where multiple locations or companies are involved with the construction of a final unit. Any costs incurred by these County Officials in conjunction with on-site production/prototype inspection will be borne by the County.

The awarded Bidder shall be required to attend a Pre-Construction Conference conducted by the County prior to the manufacturing or assembly of the equipment which is specified in this solicitation. The County will select the location of this construction conference. Any costs incurred by the County in conjunction with the pre-construction conference shall be borne by the County.



SECTION 3 – TECHNICAL SPECIFICATIONS

3.1 SCOPE

The vessels required and described by these specifications shall be the manufacturer's newest model for the year solicited and shall be equipped with all the necessary equipment and accessories in accordance with the design and specification requirements. A copy of any literature and or drawings shall accompany the bid along with any applicable information necessary to verify that the vessel meets the required specifications.

The specifications include, but are not limited to, stated conditions, components, etc. The vessel and all components shall be of heavy-duty reinforced construction. Construction shall conform to industry quality and safety standards.

3.2 DESCRIPTION OF WORK FUNCTIONS

Miami-Dade County employs mechanical harvesting to control aquatic weeds, in canals, waterways and lakes throughout the County. Aquatic weed harvester boats are used to remove submerged aquatic vegetation/weeds and other items illegally dumped in the waterways. This prevents aquatic weeds from obstructing the flow of water and blocking the canal systems, which are a critical component of the County's overall drainage system to minimize flooding.

The primary function of the vessel is to tow a plow/cutter behind the vessel to cut or uproot submerged aquatic vegetation. The plow is lowered into the water and retrieved using a rear-mounted hydraulic winch. After the vessel drags this plow/cutter along the bottom, the plow/cutter is dislodged and retrieved to a resting position upon the rear deck area of the vessel. Then, the cut vegetation that floats to or near the surface is gathered and picked up using the front basket. The vessel will then lower the front mounted basket into the water and move forward, gathering the floating vegetation. When the basket is full, it is elevated to retain the vegetation. The vegetation is then transported to a canal bank or barge within the waterway. The vessel is steered as close as possible to the bank and maintains that position using the front hull design and engine power. After the vegetation is dumped onto the bank or barge, the vessel backs up and resumes gathering and dumping the floating vegetation until this task is completed. Using this process, the County removes approximately 1,800 Tons of aquatic weeds every year.

These vessels are highly specialized with a unique design. The length, width and height of the vessel are limited due to canal widths, turning radius limitations, water depth and clearance between existing water levels and bridges or culvert structures. Thus, there is little room for variance concerning the length, width, and height dimensions of the vessel as per the specifications. In addition, the vessel is exposed to bottom hazards such as

sharp pointed boulders and sunken vehicles. Therefore, the vessel shall be designed with the appropriate bottom protection. The weight of the existing boats is approximately 18,000 lbs.

3.3 DETAILED DRAWINGS

The County is acquiring these vessel based upon the specifications, requirements, general illustrations, digital photos, etc. Thus, upon completion of the vessel, before shipment to destination, a set of detailed drawings shall be submitted to the Miami-Dade County Internal Service Department, Fleet Management Division (ISD) to keep for preservation. Photos of the existing vessels are included for informational purposes, in Section 3, Paragraph 3.13, of this bid solicitation.

3.4 PARTS & FITTINGS

Parts and fittings for the vessel and accessories (i.e. engine & accessories, hydraulic lines, hydraulic pumps and valves, hydraulic motors, hoses, fittings, bolts, hardware, electronics etc.) shall be of a manufacture, design and size that are readily available from South Florida area suppliers.

Hydraulic fittings for hoses and pumps shall be at minimum #304 or #316 stainless. Tubes shall be a minimum .049 stainless steel. Pot metal, inferior metallic fittings or plastic fittings will not be accepted. Hydraulic hoses shall be of sufficient size and/or pressure rating of the hydraulic pumps and all circuits and devices

Odd sized, hard-to-find and, or single source items are not to be used. The bidder may be required to submit a listing of suppliers located in the South Florida area who are available to supply parts and fittings for the vessels.

The bidder shall supply a complete list (also known as a line setting ticket) of all components for the entire vessel, which shall include manufacturer's part name, part number, description, warranty and supplier or bidder (name, address, and phone number), etc. The list shall be mailed to the County, before the completed vessel is shipped. The County shall review the list to ensure that the parts and fittings response is in compliance with all requirements as listed throughout this solicitation. Failure to comply with this requirement shall result in an order from the County to NOT ship the vessel, as it will not be accepted.

3.5 ACCEPTANCE

The paperwork (parts lists, line setting ticket(s), legal documents, etc.) will be inspected for completion. When all the listed conditions have been met, the vessel(s) will be accepted and dated by the County. Contractual terms for payment will commence from the date of acceptance. Failure to comply with correct documentation or failure to correct any deficiency will delay acceptance and payment.

3.6 HULL CORROSION PROTECTION

The County requires the hull of these units to include the maximum protection from the corrosive elements to which the units will be exposed. The bidder shall strictly adhere to the specific hull coating requirements. Patch tests of the hull above and below the water line will be conducted by County technicians to verify that the bidder has complied with the following specifications.

1. SURFACE PREPARATION:

All structural elements shall be thoroughly cleaned to remove all grease, oil and foreign material. Weld splatter, slag, flux, rust and corrosion shall be completely removed by chipping, wire brushing, shot blasting, sand blasting, etc.

2. PAINT/COATING OF INTERIOR AND EXTERIOR STEEL SURFACES:

a) Primer:

All bare steel or iron alloy surfaces that are prone to rust and corrosion shall be primed with Devco BarRust 235, Amercoat 235 or County approved epoxy primer equal and applied to a thickness of 4 to 8 mils dry film thickness. All aluminum alloy surfaces prone to corrosion shall be primed with Devco Etching Primer or County approved equal and applied to a thickness of 2 to 4 mils dry film thickness.

b) Finish Coat:

All surfaces below the water line shall be finish coated with Devco Bar Rust 235, Amercoat 235 or County approved equal epoxy paint and applied to a thickness of 4 to 8 mils. The finish shall be Machine Grey and free from defects and imperfections.

All surfaces above the water line shall be finish coated with Devco Devthane 379, Amercoat 450H or county approved polyurethane equal and applied to a 2 to 4 mils dry film thickness. The finish shall be Machine Grey and free from defects and imperfections.

c) Non-Skid Deck Coating: All deck areas subject to foot traffic shall have a non-skid coating such as "Awlgrip-Griptex" or "Interlux 2398 Interthane Non Skid Additive Polymeric", or County approved equal/equivalent product. The finish shall be Machine Grey and free from defects and imperfections.

d) The units shall be guaranteed against peeling, cracking or oxidation for a period of one (1) year from date of acceptance.

3.7 GENERAL HARVESTER REQUIREMENTS

A. The vessels shall comply with the following :

1. The vessels shall conform to all Federal, State, Marine, and safety regulations.

2. The vessel shall not be foreign built, pursuant to Federal Statute Title 46 United States Code, Section 292.
 3. This vessel shall be eligible for State of Florida Marine Vessel Registration.
- B. The hull configuration shall be a streamlined design to allow the most rapid response to operator controls (steering, forward, reverse). A square barge configured hull is not acceptable. This is a safety issue because the vessel will be operating in fast moving currents near to bridges, floodgates, and dams. Rapid response and maneuverability is critical.
 - C. The vessels shall be a completely self-contained systems; self-powered, capable of being operated by one-person on the water, and transportable over land by trailer.
 - D. The vessel shall be capable of:
 1. Towing (dragging) a submerged 1,000 lb. cutting blade (plow) to cut or uproot bottom vegetation.
 2. Gathering floating vegetation and debris with a front mounted basket.
 3. Discharging the load upon a canal/river bank or barge.
 - E. The vessel shall be capable of each operation independently.
 - F. The vessel shall be capable of being configured for land transportation without major disassembly.
 - G. All bolts and fasteners shall be marine grade stainless or cadmium plated Grade 8 as required for corrosion resistance and/or maximum clamping strength.
 - H. 1 (One) complete set of operating manuals, detailed technical parts bulletin, schematics, engine manual, and operation and maintenance manuals shall be provided per vessel (See Section 2.12)
 - I. Any required odd shaped, special type, or specially configured tools, which are not standard tools, shall be identified and supplied at the time of delivery.
 - J. A factory representative shall conduct eight (8) hours of on-site testing and training for operators and technicians. The time and place shall be determined by mutual agreement between the bidder and the County just prior to delivery.

3.8 VESSEL CONFIGURATION

- A. The general hull shape, design, and configuration shall be similar to the existing "porpoise shape" hull vessels presently operated by the County (See the General Illustrations attached to this Solicitation).

- B. Construction shall be with American Society for Testing Materials (ASTM) specification A131-AH36 carbon steel or County approved equal. A 5/16" plate shall be used for the bottom and sides. The side-to-bottom connection seam for the full outside length of the vessel shall include a 3/8" thick, 3" angle to serve as a wear plate. This angle shall be a continuous weld. Spot welds or stitch welds are not acceptable.
- C. 20 ft long (not including the basket), 8 ft beam.
- D. Squared off 45° degree (approximate) front bow design.
- E. The engine compartment shall have a protective covering on all side to protect from water intrusion. The engine compartment shall have diamond-plate aluminum hatch covers capable of withstanding foot traffic. The hatch covers shall be designed and fabricated to be opened without strain on the operator. Gas lift-support cylinders shall be installed on the hatch covers to assist lifting and holding covers in the open position. A central locking system shall be incorporated into each hatch cover with lockable handle located in operator compartment. (each shall consist of single rod with doglegs that engage rings attached to bottom side of hatch when in locked position); (Drawings are available.)
- F. A ridge vent shall be constructed between engine hatch covers that shall supply fresh air to engine compartment while preventing the direct water entry. The ridge vent shall match the engine hatch cover in length excepting the last 28 inches before the winch compartment. Ridge vent height shall not exceed 2 inches; airflow entry shall follow an "S" path configuration.
- G. The operator compartment shall have a protective covering on all sides to protect from water intrusion. The operator compartment shall be fitted with 1/4" diamond-plate aluminum hatch covers. The hatch covers shall be in 3 sections designed with forward-most hatch sliding forward within a set of roller tracks, then the middle and rear covers folding on top of and ahead of the operator compartment when in the open position. The hatch covers shall be secured with padlocks when closed. (See attached Drawings)
- H. Lower dash shall be padded with (4"x 54" with minimum 4" padding).
- I. One (1) pedestal seat comprised of a Wise Big-Man high back 300 lb. capacity folding chair mounted on an Attwood SeaSport fixed height bell pedestal with slide adjustment. "No Substitution" The seat shall swivel 360 degrees with fore and aft adjustment.
- J. Steering shall have a system which is hydraulically isolated from the basket lift and tilt system. Steering shall be with a 17" wheel thru a "Char-Lynn model # 211-1001-002 Steering Unit", "No Substitution". and a "Kobelt" 7050-B7.5 or approved equal steering cylinder (metallic piston required).
- K. Dash gauges and control panel shall be ("John Deere Marine" or approved equivalent) and shall include, but not be limited to tachometer, fuel gauge, voltmeter, engine temperature.

- L. The vessel will be equipped with a Johnson Pump Aguajet WD 5.2 deck wash down system "No Substitution". System location and plumbing to be determined at Pre-Construction conference.
- M. To provide cooling to the operator, one (1) Flex-a-Lite Trimline 116N fan or County approved shall be installed into starboard side of the rear cockpit safety shield. The fan shall be wired with flex-coiled wire to provide unrestricted up & down travel of safety shield. The fan shall be controlled thru a dash-mounted switch.
- N. The electrical system shall be equipped with a marine grade "battery-disconnect" switch that is easily accessible from the operators station and a waterproof "DC Hi-Amp" circuit breaker for the fire suppression system which shall be wired to "hot-side" of battery disconnect.
- O. The electrical system shall include a Blue Sea system Model #5426036 "No Substitution" switch and breaker panel located in the cockpit dash to protect all lighting and accessory circuits. Switches and breakers shall be properly labeled to circuit and function.
- P. Afex dual agent automatic fire suppression system with manual control inside operators station "No Substitution".
- Q. Skeg System for steering and stability shall include rudder stops @ 35 degrees port & starboard. Access shall be provided for maintenance of rudder shaft and steering cylinder.
- R. Navigation lights and horn per U.S. Coast Guard requirements.
- S. Rubrails / Rubwear protection:
Exposed gunnels, bow, and sides shall include half round steel pipe front-to-back. Top of gunnels and bow shall be additionally protected with 4"x 4" reinforced plastic lumber ("TriMax Structural Plastic Lumber" or approved equal). The plastic lumber shall be black in color.
- T. Four heavy duty lifting eyes (1" x 6" flat bar) with (3-inch) round openings shall be appropriately installed for "balance" when lifting the vessel from the water and four B40 size D-rings shall be welded to each lifting pad for vessel tie-downs.
- U. Port and Starboard sides of front hull/deck shall have pockets/chambers that encompass the basket lifting cylinders. The pockets/chambers shall each have a below deck (16 1/2" x 20 1/2") access port with removable cover to provide for maintenance of hydraulic cylinder, and debris removal; (cylinder pin removal bung with PVC cap is also required). The top of the pockets/chambers shall have a coming with flexible neoprene flap covers to allow cylinder movement while providing a seal against the entry of ducks, fish, snakes and other hazards. The pockets/chambers shall drain to the front bilge pump. A 4" drain plug shall be located on the keel or the lowest point of the vessel.

- V. The vessel shall be so designed with a low profile so it can navigate under obstructions that are 24" above the surface of the water.
- W. The rear deck shall be designed for retrieval and transport of the towed cutter/plow. The cutter/plow dimensions are supplied as part of this bid. (See Section 3, Paragraph 3.12)

NOTE 2: The existing cutter/plow weight is one thousand (1000) U.S. pounds. The design of the vessel shall take into consideration that the floatplane of the vessel shall include the weight of the cutter/plow on the rear deck. Proper floatplane is critical as the vessel gathers floating vegetation and operates the basket.

- X. Each compartment shall include a submersible Rule 2000 GPH heavy duty bilge pump "No Substitution" with a Rule SuperSwitch float switch "No Substitution" and individually controlled by a Rule or Johnson Pump (automatic and manual override) panel switch "No Substitution". Pump thru hull discharge fittings shall be marine grade stainless steel. For purpose of maintenance and inspections the pumps and float switches should be easily accessible without the use of tools.

NOTE 3: Pumps shall be wired to "hot-side" of battery disconnect.

- Y. The keel coolers shall be bow-to-stern (not starboard to port) configuration constructed with 8" steel channel. They shall be so designed and fabricated to allow sufficient water flow, while protecting the keel cooler tubes from vegetation and debris accumulation. An alternative configuration may be acceptable provided it is pre-approved before bid submission.
- Z. The vessel shall be designed with access ports strategically placed for easy access to hard-to-reach areas in order to service and repair the engine, transmission, hydraulics, accessories, etc. accordingly.

3.9 **POWERTRAIN**

- A. The engine shall be a diesel John Deere Model 4045AFM85 with a 160 BHP rating @ -2300 rpm, or the most current model and with County approval ; air and oil filters; industrial muffler; above water exhaust; keel cooled; electronic shut down system for low oil (10 psi), overheat (220 degrees), with warning light, audible alarm, and manual override not exceeding 30 seconds in duration; minimum 80 U.S. gallon fleet tank capacity; fuel-water separator (not heated) with paper filter element. Engine oil pan shall be fitted with an oil drain hose with an easily accessible quick-connect fitting.
- B. Transmission shall be a Twin Disc MG-5061-SC "No Substitution" of appropriate ratio for engine, vessel and perform intended work as described in section 3.2. Transmission control and engine control shall be a Twin Disc EC300 Power Commander "No Substitution".

- C. Engine and transmission shall have individual/independent mounting. Engine shall have (4) mounts independent of transmission mounts, so as to allow removal of transmission for maintenance without disturbing engine mountings.
- D. Hydraulic system shall be powered by a "Parker-Tyrone" TP16-115/PVP16-45-2N55 pump or County approved equal Hydraulic pickup shall be located 1" above the bottom of the tank and return line at the top of the tank. Hydraulic tanks shall have ball-valve shut-offs installed on pump supply line and on both sides of return line filter. All ball valves shall be safety tie-wired to the "Open" position.
- E. All hoses shall be number-marked indicating component attachment and/or function, (Shall correspond with indications on hydraulic schematic).
- F. A keel cooler shall be incorporated to maintain hydraulic system temperature.
- G. Magnetic drain plugs shall be fabricated and installed in all tanks.
- H. Engine shall be equipped with a sealed coolant system with "John Deere" long-life coolant or approved equal. Heat exchange cooling shall be accomplished through the keel coolers.
- I. Propeller shaft shall be made of stainless steel with a 2" (2 Inch) diameter of correct strength and design for engine torque and drive system. Shaft shall be installed with a 2" (2 inch) Cutlass bearing on a removable bearing housing "No Substitution"
- J. Quality marine shaft-through-transom packing with stainless steel or county approved material or designed compression ring.
- K. Three blade Brass propeller with weedless design of appropriate diameter and pitch for engine and vessel to provide the best performance of intended work as described in section 3.2.
- L. Ladder rungs / steps shall be installed on engine side of the firewall between cockpit and engine compartment to provide ingress and egress. Rungs will be coated with a non-slip coating or adhesive tape.
- M. Engine compartment floor shall have a removable aluminum grate-type walk surface.
- N. Grease fittings for shafts, bearings, sleeves, etc. shall be easily accessible for servicing. Where access is limited, a grease tube / hose with a remote grease fitting shall be installed to provide grease maintenance without removal of component covers; (i.e. drive shaft thru-hull bearing, basket lifting arm cylinder base pins, etc.).

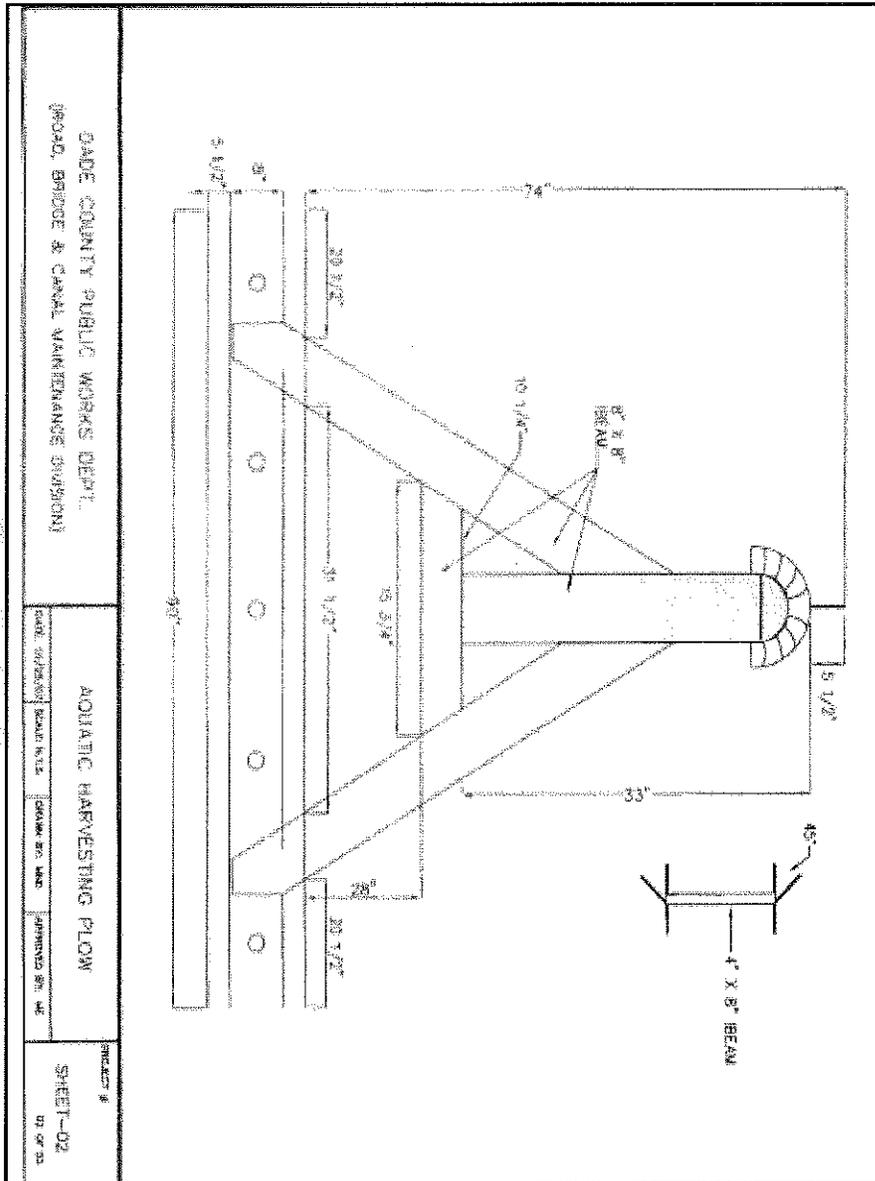
3.10 BASKET AND WINCH

- A. Basket dimensions shall be 8'x 4'x 4' with recessed arms; covered with 3 lb rated expanded metal (see general illustration page for design configuration).

- B. Hydraulic lift cylinders — "Yates Cylinder 303020PP-39.625" or County approved equal/equivalent; for maximum height lifting capability; all pivot points shall incorporate bronze bushings with pivot pin grease fittings.
- C. Hydraulic tilt cylinders - Prince PMC42024 or County approved equal/equivalent; for maximum tilt / dumping capability, all pivot points shall incorporate bronze bushings with pivot pin grease fittings.
- D. Basket shall be equipped with mechanical stops to limit tilt angle and prevent tilt cylinder damage.
- E. Stainless Steel hydraulic lines shall be configured and recessed within "I-Beams" to prevent damage.
- F. Winch shall be a hydraulic powered Tulsa model RN10WHRFO or County approved equal 10,000 lb capacity with multiple speeds and free spool capability. Winch shall be configured to allow visibility to operator; (top of spool should be no more than 10½ inches above deck).
- G. Winch compartment shall be designed and built to prevent debris from entering engine compartment; (i.e.; expanded metal protection).
- H. There shall be (6) 2"x 12" roller type vertical cable-guide posts (posts shall be solid round bar surrounded with replaceable pipe), solid round bar shall have an upper washer & retainer pin/bolt and lower wear plate to prevent deck damage.
- I. The rear plow storage roller shall be constructed of solid 3" x 56" round bar with ends machined to 1" diameter for pillow block bearing retention. Material and design must withstand the weight of the 1000 pound plow.
- J. A rear cockpit safety shield shall be designed to protect the operator when the vessel is in the towing or cutter/plow winch recovery mode of operation. It shall protect the operator from impact or "whipping" from a snapped/broken winch wire rope. A control shall be installed on dash to provide up-down operation.
- K. Hydraulic valves shall be Gresen model # V20-4 or County approved equal. All hydraulic operated functions are momentary controls with spring return to neutral. There shall be 4 (four) individual valves or segments; (basket raise / lower function, basket tilt / dump function, winch and cockpit safety shield). The valves shall control operational speed of each hydraulic function and shall incorporate a hydraulic pressure relief. Control locations shall be as followed. Basket lift and dump controls shall be 11 ½" (eleven and one half inch) port of center of steering wheel. Tow winch control shall be 22 ½" (twenty two and one half inch) port of center of steering wheel. Safety gate control shall be 31" (thirty one inches) port of center of steering wheel.

3.11 **PLOW**

- A. Plow shall be designed and constructed with 1/2" steel I-Beams, with a 1" solid front pulling bar/eye utilizing the following dimensions:



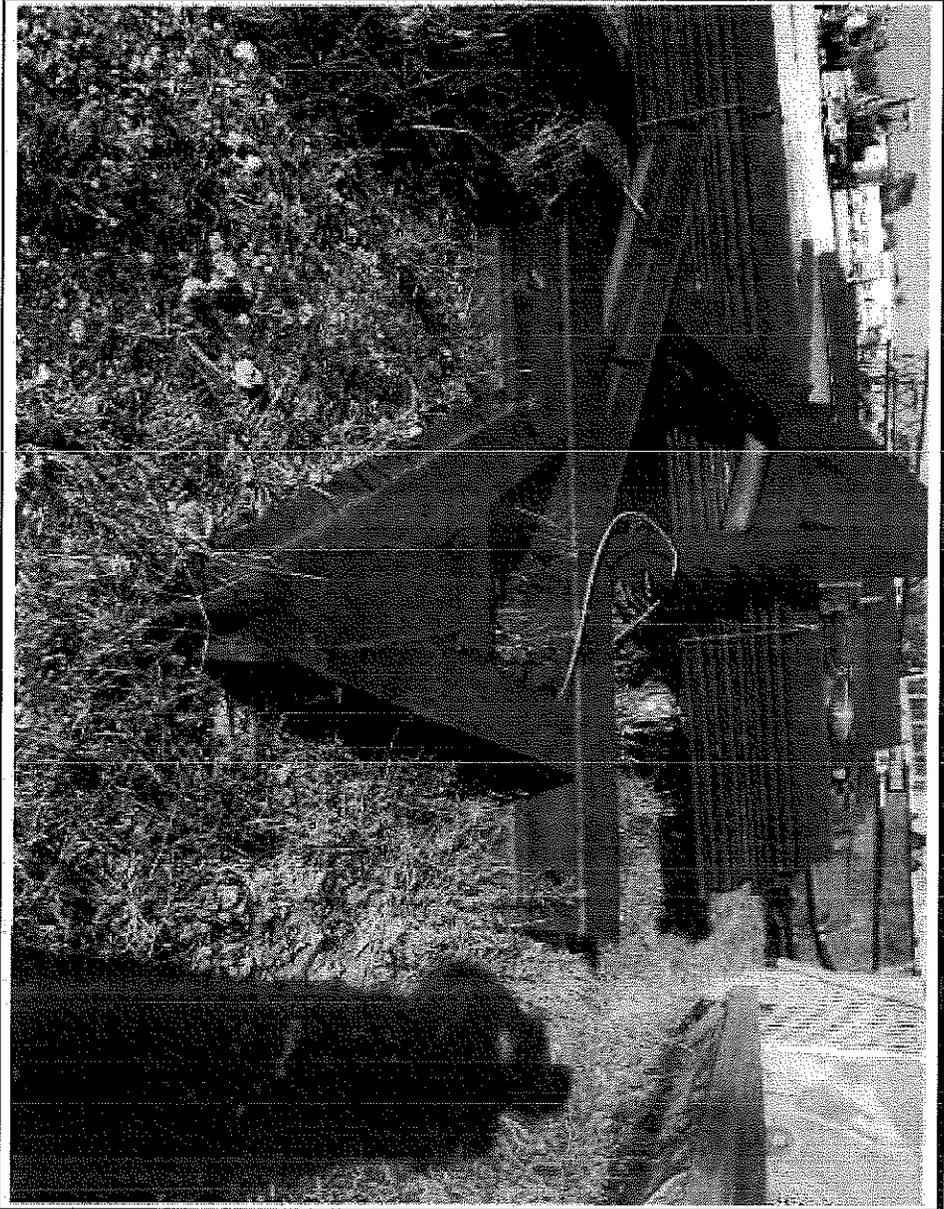
Plow Picture # 1



Plow Picture # 2

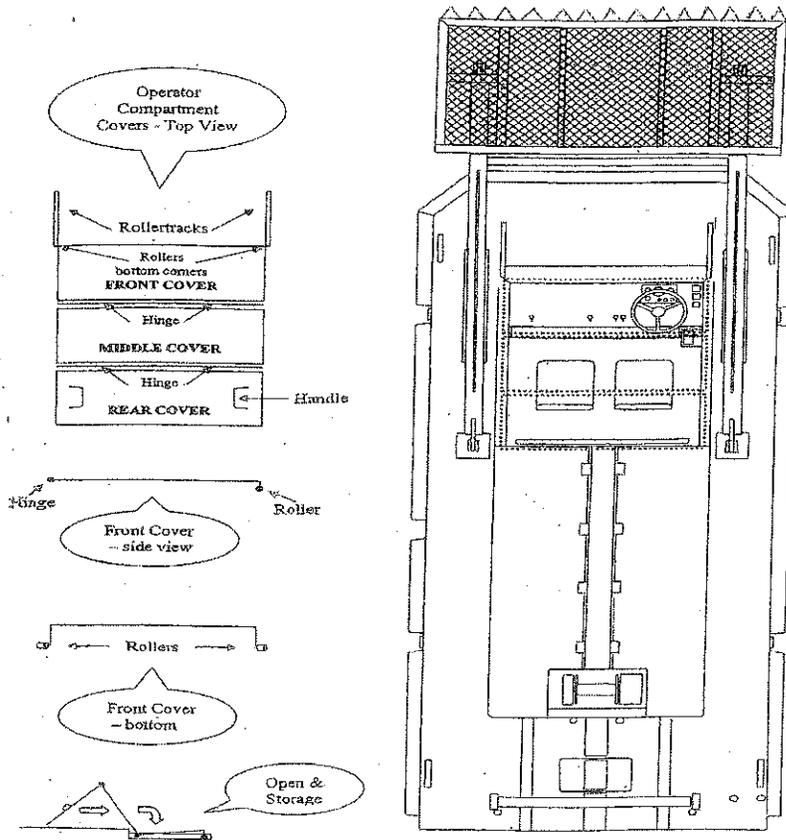


Plow Picture # 3



3.12 **GENERAL ILLUSTRATION OF WEED HARVESTER BOAT**

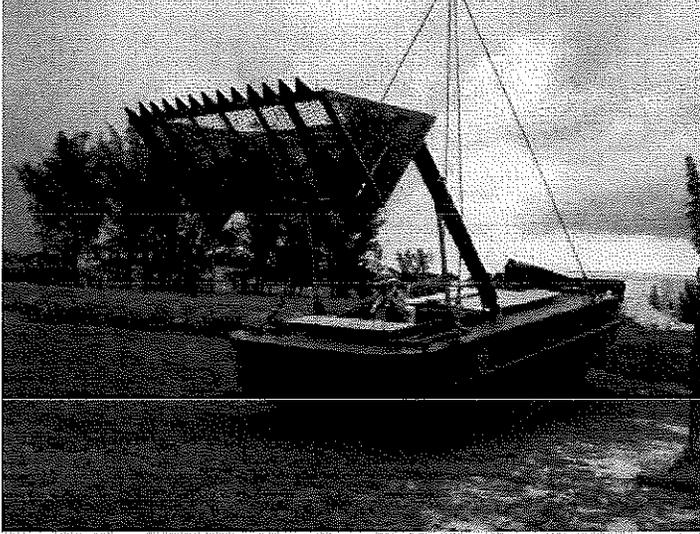
The illustration below is only for the purpose of showing a general configuration of the vessel and should not be considered a scale drawing of the vessel. (Drawing is not to scale.)



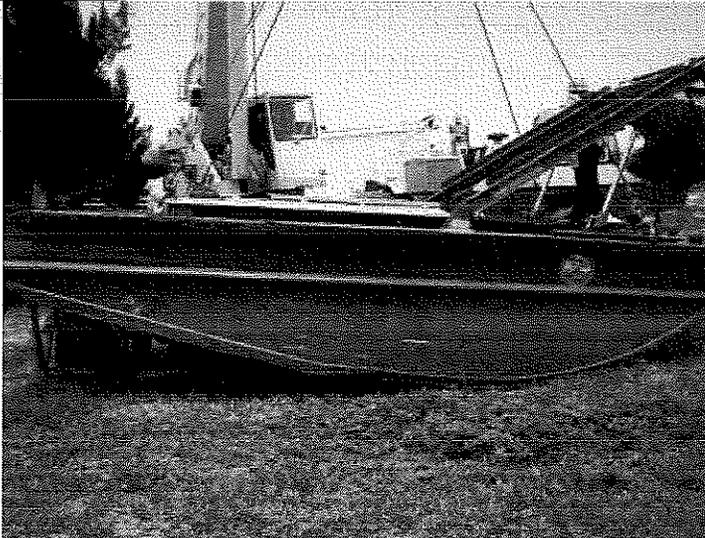
3.13 PICTURES OF AQUATIC WEED HARVESTER BOAT

The following pictures are provided for informational purposes only .

Boat Picture #1



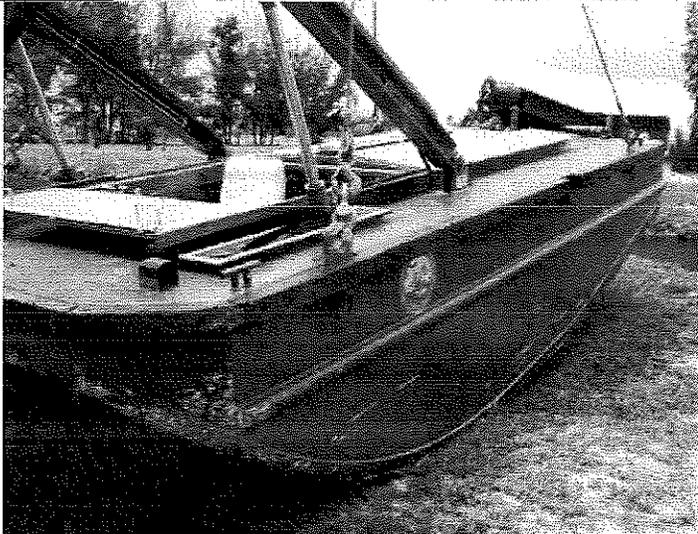
Boat Picture #2



Boat Picture #3



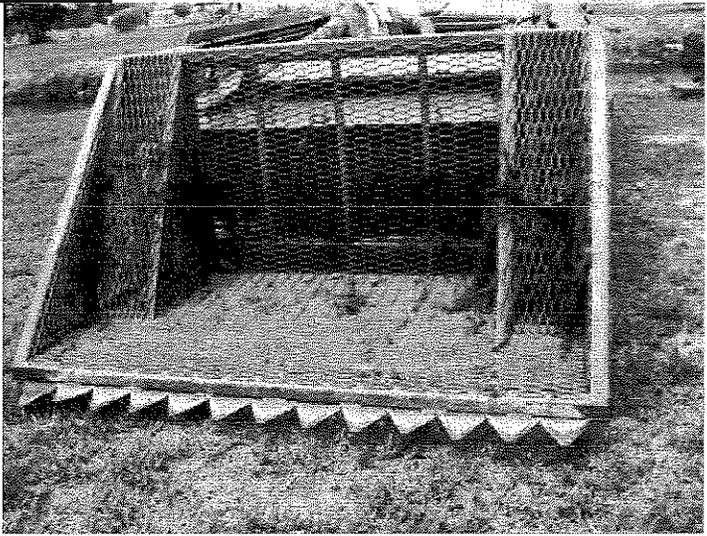
Boat Picture #4



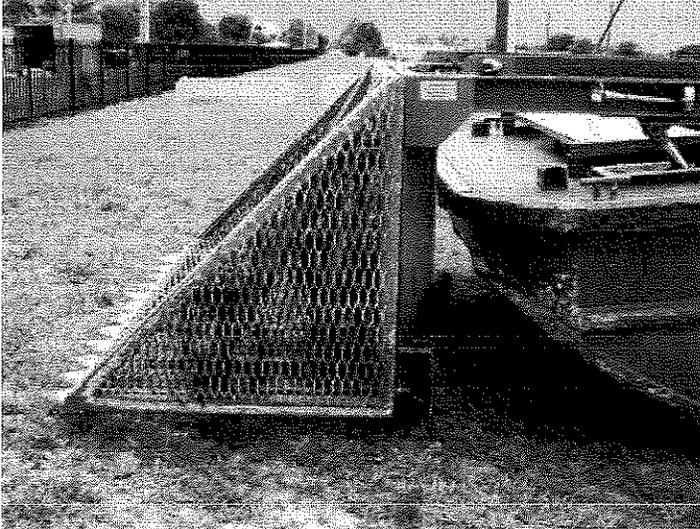
Boat Picture #5



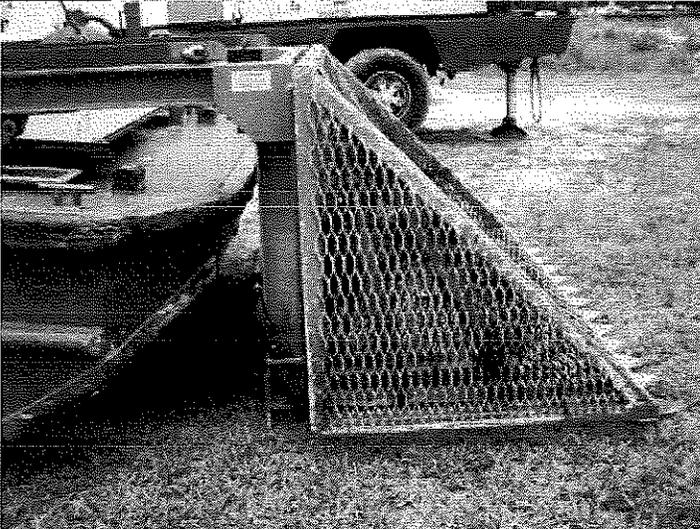
Boat Picture #6



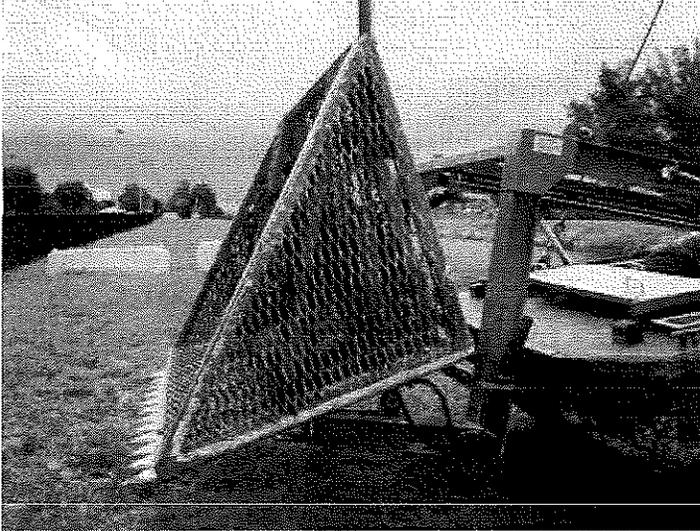
Boat Picture #7



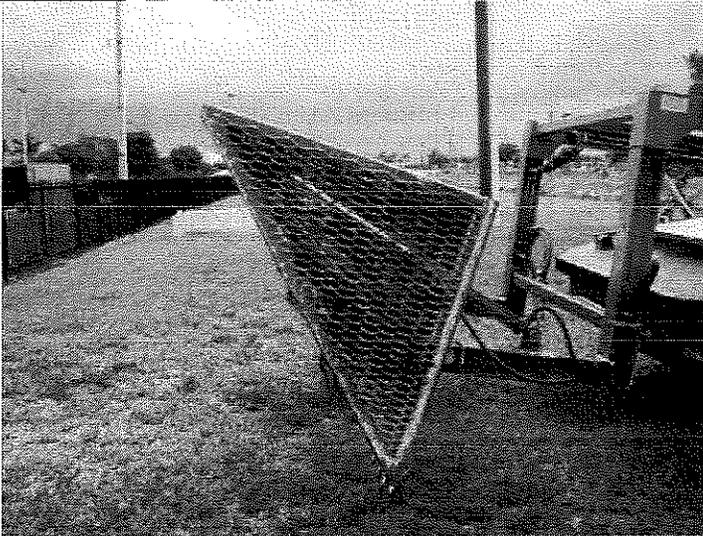
Boat Picture #8



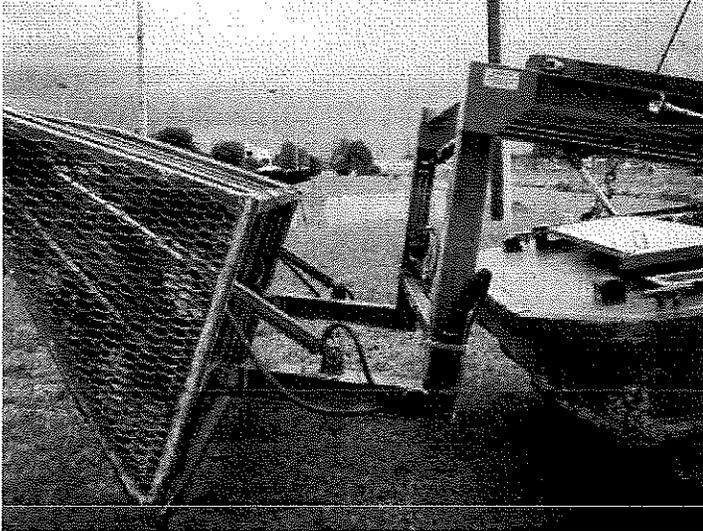
Boat Picture #9



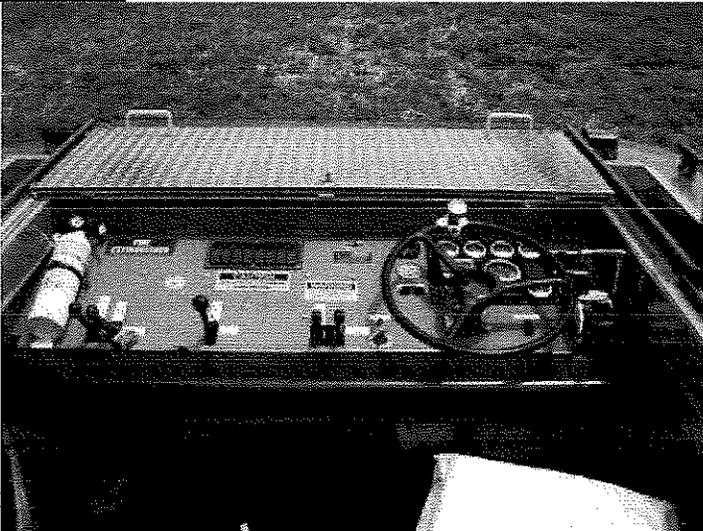
Boat Picture #10



Boat Picture #11



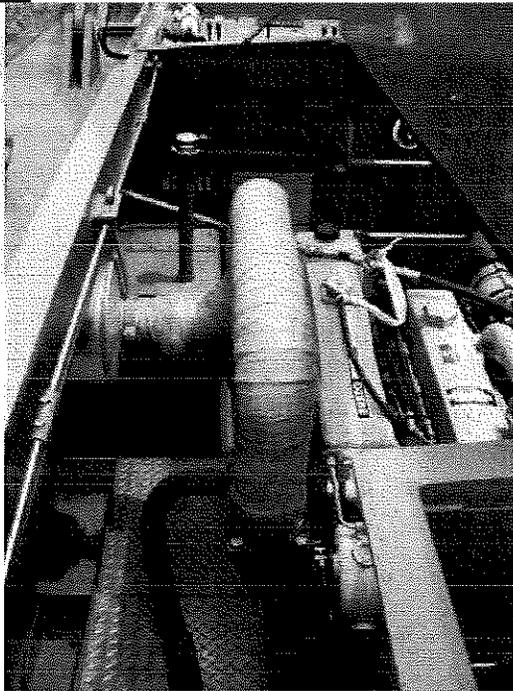
Boat Picture #12



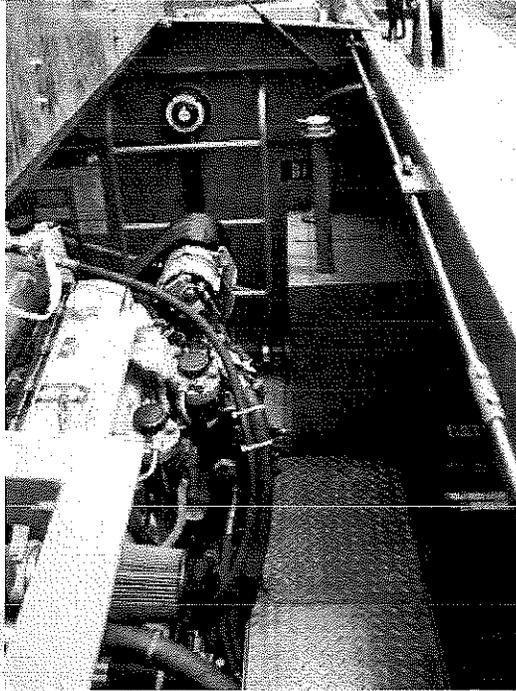
Boat Picture #13



Boat Picture #14



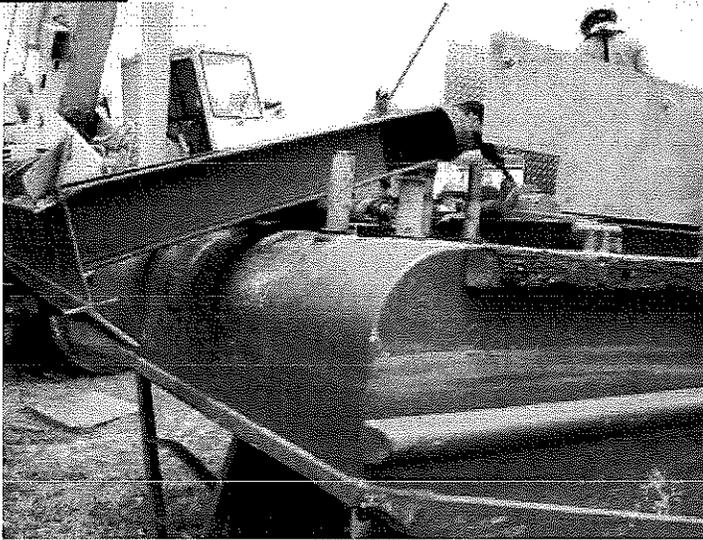
Boat Picture #15



Boat Picture #16



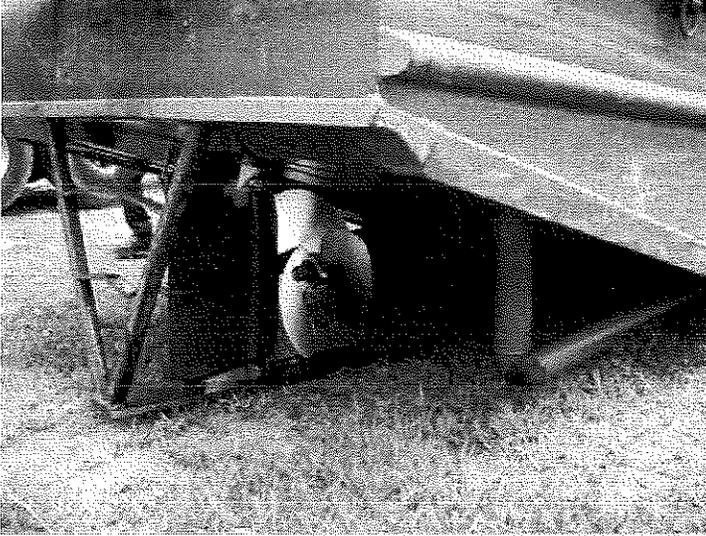
Boat Picture #17



Boat Picture #18



Boat Picture #19



MIAMI DADE

SECTION 4

AQUATIC WEED HARVESTS BOATS: SECTION 4			
Line Item	Quantity	Description	Unit price per vessel
1	4	Aquatic Weed Harvest Boats	\$
Per Section 2.3, please provide the information indicated.			
A. Bidder as attached documentation stating they are a manufacture or dealer for aquatic weed harvest boats offered.			Circle: YES or NO
<p align="center">MIAMI DADE</p> B. Bidder must provide the address of a local facility in Miami Dade County where the repairs and services under warranty can be performed:			
Address:			
A. Bidder shall attached a copy of the manufacture's and/or suppliers certifications of warranty with this bid.			Circle: YES or NO