493662 MAR 6 2009

RECEIVED MAR 10 2009 Bureau of Air Monitoring & Mobile Sources

CONCRETE BATCHING PLANT
AIR GENERAL PERMIT REGISTRATION FORM

Part II. Notification to Permitting Office

(Detach and submit to appropriate permitting office; keep copy onsite)

Instructions: To give notice to the Department of an eligible facility's intent to use this air general permit, the owner or operator of the facility must detach and complete this part of the Air General Permit Registration Form and submit it to the appropriate Department of Environmental Protection or local air pollution control program office which has permitting authority. Please type or print clearly all information, and enclose the appropriate air general permit registration processing fee pursuant to Rule 62-4.050, F.A.C. *($100 as of the effective date of this form)* 0251308-001

Registration Type

Check one:

INITIAL REGISTRATION - Notification of intent to:

- [x] Construct and operate a proposed new facility.
- [ ] Operate an existing facility not currently using an air general permit (e.g., a facility proposing to go from an air operation permit to an air general permit).

RE-REGISTRATION (for facilities currently using an air general permit) - Notification of intent to:

- [ ] Continue operating the facility after expiration of the current term of air general permit use.
- [ ] Continue operating the facility after a change of ownership.
- [ ] Make an equipment change requiring re-registration pursuant to Rule 62-210.310(2)(e), F.A.C., or any other change not considered an administrative correction under Rule 62-210.310(2)(d), F.A.C.

Surrender of Existing Air Operation Permit(s) - For Initial Registrations Only

If the facility currently holds one or more air operation permits, such permit(s) must be surrendered by the owner or operator upon the effective date of this air general permit. In such case, check the first box, and indicate the operation permits being surrendered. If no air operation permits are held by the facility, check the second box.

- [ ] All existing air operation permits for this facility are hereby surrendered upon the effective date of this air general permit; specifically permit number(s): _____
- [x] No air operation permits currently exist for this facility.

General Facility Information

Facility Owner/Company Name (Name of corporation, agency, or individual owner who or which owns, leases, operates, controls, or supervises the facility.)
South Florida Concrete Block, LLC

Site Name (Name, if any, of the facility site; e.g., Plant A, Metropolis Plant, etc. If more than one facility is owned, a registration form must be completed for each.)

Facility Location (Provide the physical location of the facility, not necessarily the mailing address.)
Street Address: 5804 Southwest 177 Avenue
City: Miami County: Miami-Dade Zip Code: 33193

Facility Start-Up Date (Estimated start-up date of proposed **new** facility.)(N/A for existing facility)
April 2009

Owner/Authorized Representative

Name and Position Title (Person who, by signing this form below, certifies that the facility is eligible to use this air general permit.) Print Name and Title: Sergio Abilleira. Mgr.
Owner/Authorized Representative Mailing Address Organization/Firm: South Florida Concrete Block, LLC Street Address: 5804 Northwest 177 Avenue City: Miami County: Miami-Dade Zip Code: 33193
Owner/Authorized Representative Telephone Numbers Telephone: 305-408-3444 Fax: 305-408-3445 Cell phone (optional):

Facility Contact (If different from Owner/Authorized Representative)

Name and Position Title (Plant manager or person to be contacted regarding day-to-day operations at the facility.) Print Name and Title:
Facility Contact Mailing Address Organization/Firm: Street Address: City: County: Zip Code:
Facility Contact Telephone Numbers Telephone: Fax: Cell phone (optional):

Owner/Authorized Representative Statement

This statement must be signed and dated by the person named above as owner or authorized representative

I, the undersigned, am the owner or authorized representative of the owner or operator of the facility addressed in this Air General Permit Registration Form. I hereby certify, based on information and belief formed after reasonable inquiry, that the facility addressed in this registration form is eligible for use of this air general permit and that the statements made in this registration form are true, accurate and complete. Further, I agree to operate and maintain the facility described in this registration form so as to comply with all applicable standards for control of air pollutant emissions found in the statutes of the State of Florida and rules of the Department of Environmental Protection and revisions thereof.

I will promptly notify the Department of any changes to the information contained in this registration form.

Signature

March 3, 2009
Date

Type of Facility

Check one:

[X] **Stationary Facility** [ ] **Relocatable Facility**

Type(s) of Reasonable Precautions Used to Prevent Unconfined Emissions

Check all precautions to be used for the management of roads, parking areas, stock piles and yards:

[ ] **Pave Roads**	[ ] **Pave Parking Areas**	[ ] **Pave Yards**
[X] **Maintain Roads/Parking/Yards**	[X] **Use Water Application**	[ ] **Use Dust Suppressant**
[ ] **Remove Particulate Matter**	[X] **Reduce Stock Pile Height**	[ ] **Install Wind Breaks**

Check all precautions to be used for the management of drop points to trucks:

[X] **Spray Bar**	[ ] **Chute**	[ ] **Enclosure**
	[X] **Partial enclosure**	

Description of Reasonable Precautions

Below, or as an attachment to this form, provide details of all types of reasonable precautions to be used to prevent unconfined emissions at the facility.

See attached DERM Air Quality Management Division Air Permit Application and Process Description.

Description of Facility

Below, or as an attachment to this form, provide a description of the concrete batching plant operations at the facility in sufficient detail to demonstrate the facility's eligibility for use of this air general permit and to provide a basis for tracking any future equipment or process changes at the facility. Describe all air pollutant-emitting processes and equipment at the facility, and identify any air pollution control measures or equipment used.

See attached DERM Air Quality Management Division Air Permit Application and Process Description.

Enviroassessments of South Florida, Inc.
Post Office Box 161649, Miami, Florida 33116
Tel (305) 279-3133 * Fax (305) 279-3383

Memo

To: FI Department of Environmental Protection Receipts

From: Leo Caraballo / ESFI

Fax:

Pages:

Phone:

Date: 3/4/2009

Re: South Florida Concrete Block, LLC
5804 Southwest 177th Avenue, Miami, FL

CC:

☐ **Urgent** X **For Review** ☐ **Please Comment** X **Please Reply** ☐ **Please Recycle**

In response to our most recent conference with personnel at Miami Dade County Department of Environmental Resources Management we are attaching the Department of Environmental Protection Division of Air Resource Management Concrete Batching Plant Air General Permit Registration Form as requested.

Please review and comment at your earliest convenience. If you should require any additional information please do not hesitate to call us.

Department of Environmental Resources Management
Air Quality Management Division
701 NW 1st Court, Suite 400
Miami, FL 33136-3912
305-372-6925

Air Construction Permit

Permit Number:	2007-CAP-PER-00034	**Issue Date:**	11/18/2008
DERM Project Manager:	Anthony Radhay	**Expiration Date:**	05/18/2009

Permittee	**Project Location**
South Florida Concrete Block, LLC Sergio Abilleira 5804 SW 177 Avenue Miami, FL 33193	5804 SW 177 Avenue, Miami, FL 33193

Proposed Work: A CBS Concrete Block & Interlocking Concrete Paver Manufacturing Facility as specified:
CBS Concrete Block Manufacturing with the following.
One (1) 75 ton cement silo, factory equipped with a baghouse that has seven (7) polyester filtering bags with a filter area of 264 sq ft , pulse jet cleaning apparatus, and an efficiency of 99 9%
One (1) cement screw conveyor, one (1) aggregate hopper, four (4) transport conveyors, one (1) transport/weight conveyor, one (1) mixed aggregate hopper, one (1) Besser enhanced single shaft batch mixer Model No 80, one (1) Besser Vibrapac V3-12 block machine, one (1) wet CBS block drying area, one (1) block turnover, and one (1) SF-7 cuber

Interlocking Concrete Paver Manufacturing with the following:
One (1) 75 ton silo to store gray cement, one (1) 50 ton silo to store white cement Each silo is factory equipped with a baghouse that has seven (7) polyester filtering bags with a filter area of 264 sq ft , pulse jet cleaning apparatus, and an efficiency of 99 9% One (1) cement screw conveyor, one (1) aggregate hopper,
two (2) transport conveyors, one (1) tri-component mix aggregate hopper, one (1) Shako Apollo Counter Current Mixer-Type 2250, one (1) mix feed conveyor, one (1) Zenith Mode No 844 Interlocking Pavers Manufacturing Equipment, one (1) wet paver conveyor, One (1) air drying area,and one (1) rack transporter

Est. Actual Emissions: PM: 2 91 TPY

Est. Potential Emissions: PM: 12 75 TPY

THE ABOVE NAMED PERMITTEE IS HEREBY AUTHORIZED TO PERFORM THE WORK SHOWN ON THE APPLICATION AND APPROVED DRAWINGS, PLANS, AND OTHER DOCUMENTS ATTACHED HERETO OR ON FILE WITH THE DEPARTMENT AND MADE PART HEREOF, SUBJECT TO THE ATTACHED GENERAL AND SPECIAL CONDITIONS.

THIS PERMIT AND PLANS SHALL BE KEPT ON SITE

Specific Permit Conditions

The permittee shall not cause, suffer, allow or permit the discharge of air pollutants which cause or contribute to an objectionable odor. An objectionable odor is any odor present in the outdoor atmosphere which by itself or in combination with other odors, is or may be harmful or injurious to human health or welfare, which unreasonably interferes with the comfortable use and enjoyment of life or property, or which creates a nuisance

The silo(s), hopper and other storage or conveying equipment shall be controlled to the extent necessary to limit visible emissions to 5 percent opacity

General Conditions

1 This document is required to be posted in a conspicuous location at the facility site during the entire period of construction

2.This permit authorizes construction and/or installation of the permitted emissions unit(s) and initial operation for testing purposes to determine compliance with the DERM rules Within 15 days of completion of construction or prior to regular operation (whichever comes first), notify this office in writing regarding the completion of construction An operating permit is required for regular operation of the emissions unit(s) The permittee shall apply for and receive an air emissions annual operating permit prior to expiration of this permit An application for an operating permit shall be submitted to the Miami-Dade County Department of Environmental Resources Management, Air Quality Management Division To apply for an operating permit, the applicant shall submit the appropriate application fee and the appropriate application form, including a notation of any deviations from the conditions on the construction permit, compliance test results, and such additional information as the DERM may by law require

3 The expiration date of this construction permit may be extended upon request of the permittee and submission of the appropriate fee to the Miami-Dade County Department of Environmental Resources Management, Air Quality Division at least 30 days prior to the expiration date of this permit Be advised that should the nature of the business, quantity of pollutants or the applicable rules change, you may be required to obtain a state air construction and/or operation permit

4 If for any reason, the applicant does not comply with or will be unable to comply with any condition or limitation specified on this document the applicant shall immediately notify and provide the department with the following information: (a) a description of and cause of non-compliance; and (b) the period of non-compliance including exact dates and times; or, if not corrected, the anticipated time the non-compliance is expected to continue, and steps taken to reduce, eliminate, and prevent recurrence of the non-compliance The applicant shall be responsible for any and all damages, which may result and may be subject to enforcement action by the department for penalties or revocation of this document

5.As provided in Section 24-15 of the Code of Miami-Dade County, the prior written approval of the Department of Environmental Resources Management shall be obtained for any alteration to this facility

6.The issuance of this document does not convey any vested rights or any exclusive privileges Nor does it authorize any injury to public or private property or any invasion of personal rights, nor any infringement of federal, state or local laws or regulations Nor does it relieve the applicant from liability for harm or injury to human health or welfare or property

7.Upon sale or legal transfer of the property or facility covered by this document, the applicant shall notify the department and the new owner must apply for a permit within thirty (30) days of such sale or legal transfer The applicant shall be liable for any non-compliance of the source until the transferee applies for and receives a new permit

8.The applicant, by acceptance of this document, specifically agrees to allow access to the named source at reasonable times by department personnel presenting credentials for the purposes of inspection and testing to determine compliance with this document and department rules

9.This Air Permit does not indicate a waiver of or approval for any other DERM permit (that may be required for other aspects of this facility), or agencies other than DERM from which approval may be necessary including: local municipality (structural, zoning, building), Miami-Dade County Building Department (if located in unincorporated Miami-Dade County), Miami-Dade County Fire Department, or the Florida Department of Environmental Protection (FDEP)

10 This document does not constitute an approval by DERM or certification that the applicant is in compliance with applicable laws, ordinances, rules or regulations The applicant acknowledges that separate enforcement actions may be initiated by DERM and that this document does not constitute compliance with orders issued in conjunction with enforcement actions for correction of violations

11.Failure to comply with any condition of this document, or the requirements of Chapter 24, Code of Miami-Dade County may subject the applicant to the penalty provisions of said Chapter including civil penalties up to $25,000 per day per offense and/or criminal penalties of $500 per day and/or sixty (60) days in jail

THIS PERMIT AND PLANS SHALL BE KEPT ON SITE
DURING ALL PHASES OF CONSTRUCTION

Department of
Environmental Resources Management
AIR QUALITY MANAGEMENT DIVISION

AIR PERMIT APPLICATION

INSTRUCTIONS

All information spaces must be completed in full. Submitting this application DOES NOT relieve you of any responsibility for complying with orders issued to you by the **CODE ENFORCEMENT SECTION** or stop or delay any normal enforcement procedures. **Read this application carefully before you begin to fill it out.** Call the **AIR FACILITIES SECTION** at 372-6925, if there are any questions. Please include ALL equipment, operations, procedures, and activities which have a potential to emit air pollutants. Failure to include any potential source of air pollutants could result in after-the-fact enforcement action. Application package should be submitted to the **DERM PLAN REVIEW SECTION, 11805 SW 26th Street, Miami, Florida 33175.**

A. Owner/Authorized Representative

Name and Title of Owner/Authorized Representative: Sergio Abilleira / Mgr

Mailing Address: 5804 Southwest 177th Avenue, Miami, Florida 33193
Organization/Firm: South Florida Concrete Block, LLC

Street Address: 5804 Southwest 177th Avenue

City: Miami State: FL Zip Code: 33193
Telephone: (305) 408-3444 Fax (305) 408-3445

Owner/Authorized Representative Statement:

I, the undersigned, am the owner or authorized representative* addressed in this Air Permit Application. I hereby certify that the statements made in this application are true, accurate and complete. Further, I agree to operate and maintain the facility so as to comply with all applicable standards for control of air pollutant emissions found in Chapter 24, Environmental Protection, of the Code of Miami-Dade County, Florida, and the statutes of the State of Florida and rules of the Department of Environmental Protection. I understand that a permit if granted by the DERM cannot be transferred without authorization from the DERM and I will promptly notify the DERM upon sale or legal transfer.

Signature Date 10/17/08

* Attached letter of authorization if not currently on file.

B. Purpose of Application

This Air Permit application is submitted to obtain (check one):

X Air construction permit for a new facility
[ ] Initial air operation permit for an existing, but previously unpermitted facility
[ ] Initial air operation permit for a newly constructed or modified facility
Current construction permit number: _____
[ ] Air operation permit renewal.
Operation permit to be renewed: _____

C. Application Processing Fee

[ ] Attached - Amount: $ _____ [ ] Not Applicable.

D. Construction/Modification Information

Description of Project
This project consists in the construction and installation of a Batch CBS Block Manufacturing Plant at the Subject Property located at 5804 SW 177th Avenue, Miami, FL.

Date of Commencement of Construction (DD-MON-YYYY): Upon issuance of permit

E. Professional Engineer Certification

Professional Engineer Name: Jose A. Martinez, P.E. Registration No.: 31509
Mailing Address: Post Office Box 161649
Street Address:

City: Miami State: FL Zip Code:33116

Telephone: (305) 279 - 3133 Fax (305) 279 - 3383

Professional Engineer Statement:

I, the undersigned, hereby certify that:
To the best of my knowledge the air pollutant and the air pollution control equipment described in this Air Permit Application, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in Chapter 24, Environmental Protection, of the Code of Miami-Dade County and in the Florida Statutes and rules of the Department of Environmental Protection.

Signature Date 10/17/08

GENERAL FACILITY INFORMATION

F. Facility Name, Location, and Type

Facility Operator: Sergio Abilleira, Mgr

Facility Name: South Florida Concrete Block, LLC

Facility Street Address: 5804 SW 177th Avenue

City: Miami State: FL Zip Code: 33193

Telephone: (305) 408 - 3444 Fax (305) 408 - 3445

Facility UTM Coordinates:

Zone: _____ East (km): _____ North (km): _____

Facility Latitude/Longitude:

Latitude (DD/MM/SS): _____ Longitude (DD/MM/SS): _____

Property Folio No.: 30-4824-000-0010 Facility Major Group SIC Code: _____

Sewer Service: Miami-Dade WASA Water Supplier: Miami-Dade WASA

FACILITY SUPPLEMENTAL INFORMATION

This subsection of the Air Permit Application form provides supplemental information related to the facility. This information must be submitted as an attachment to each copy of the form. **Two sets of the application package are required.**

G. Supplemental Requirements for ALL Applications

Area Map Showing Facility Location with Plot Plan:	
[x] Attached	[ ] Not Applicable
Facility Elevation Drawing:	
[ ] Attached	[x] Not Applicable
Process Flow Diagram(s):	
[x] Attached	[ ] Not Applicable
Detailed Description of Control Equipment	
[x] Attached	[ ] Not Applicable
Fuel Analysis or Specification	
[ ] Attached	[x] Not Applicable
Fuel Utilization Rate	
[ ] Attached	[x] Not Applicable
Material Safety Data Sheets	
[ ] Attached	[x] Not Applicable
Emissions Calculation	
[x] Attached	[ ] Not Applicable

H. Facility Description

Description
So Fla Concrete Block, LLC is installing a Low Profile Above Grade CBS Block Batch Plant Model 80/ZS as manufactured by Besser. The cement silos are equipped with their corresponding baghouse to insure dust and air quality control.

I. Spraybooth Data

Type: Automotive Floor _____ Bench _____

Booth Dimensions: Wide High Long

Exhaust Filter Area: Ft^2
Exhaust Fan Data:
No. of Fans: dia RPM HP CFM

J. Equipment Data

Package Unit: Besser CBS Block Batch Plant Model No.: 80/ZS
Manufacturer: Besser Products Serial No.
Generator Nameplate Rating: _____ MW: _____

K. Facility Operating Capacity N/A

Maximum Heat Input Rate: _____ mmBtu/hr: _____
Maximum Process or Throughput Rate: _____
Maximum Production Rate: _____

L. VOC and other Hazardous Air Pollutants See attached calculations

Indicate formulation for all cleaning and coating products and other chemicals compounds which are used in your operation, so that your status as per applicable regulations may be determined. **Use extra sheets as may be required.**

Operation	Chemicals and Solvents	CAS No.	lbs per gals	% Solvent by Weight	Utilization gals per day

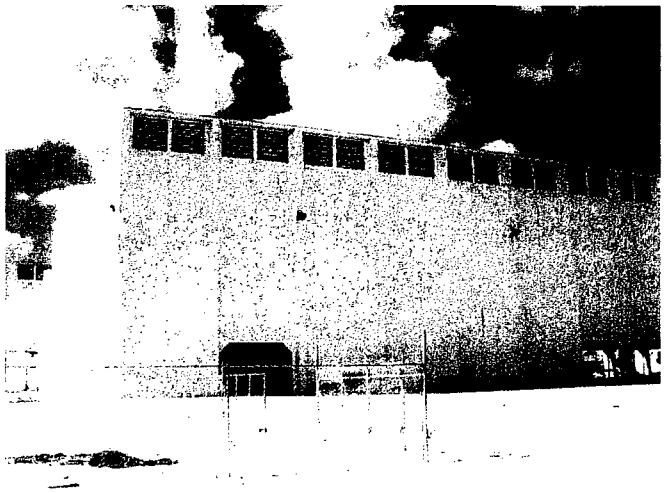
M. Facility Operating Schedule: 8 hours/day 5 days/week 50 weeks/year.

N. Seasonal Operation Percentage: 25% Dec-Feb 25% Mar-May 25% Jan-Aug 25% Sep-Nov

1.00 Plant & Process Description.

1.01 General Information.

This application is composed of two (2) manufacturing plants for South Florida Concrete Block, LLC "SFCB" at the same Subject Property located at 5804 Southwest 177th Avenue, Miami-Dade County, Florida and within the same structure. One is a CBS block manufacturing plant while the second one is an interlocking pavers manufacturing plant. This Process Description corresponds to the CBS block manufacturing plant. The Subject Property currently has several existing buildings which use to house Lehigh Cement Plant and are presently unused. These buildings are presently served with water and sanitary sewer facilities owned and operated by Miami-Dade County WASA, Florida. The CBS block manufacturing plant will be located at the northern portion of the Main Building (5804) within the Subject Property.



A CBS block manufacturing plant is a critical and integral part of the necessary infrastructure of one of the major industries in Miami-Dade County, more specifically, the construction industry. CBS blocks are utilized in all types of construction ranging from residential to industrial and commercial and at the present time this plant will be providing an invaluable service to this area. The location of the Subject Property is of primary importance since items such as the impact of noise and vibrations on its surroundings make their location an important feature. The location of the proposed plant itself within the Subject Property accomplishes the proposed attenuation necessary for this installation particularly since this location is surrounded by agricultural lands in all directions making this location ideal for this purpose since there are no noise sensitive zoning uses (residential properties, schools, office and commercial buildings) within the immediately surrounding properties.

The orientation of the proposed CBS block manufacturing plant within the Subject Property is also important. Wind is a major consideration for said orientation although in this particular case the location of the Subject Property, as stated above, is surrounded by agricultural lands in all directions making this location ideal for this purpose. Notwithstanding these facts, the stockpiles of sand and/or aggregated will be located within the existing Main Building at the Subject Property. Additionally, these stockpiles of sand and aggregates will be furnished with a sprinkler system to be used to control dust particles. Finally, the existing paving and drainage system presently serving the Subject Property will be used and they will not be affected by this installation. The required electrical, potable water supply as well as sanitary sewer facilities are existing at the site and are presently serving the entire Subject Property.

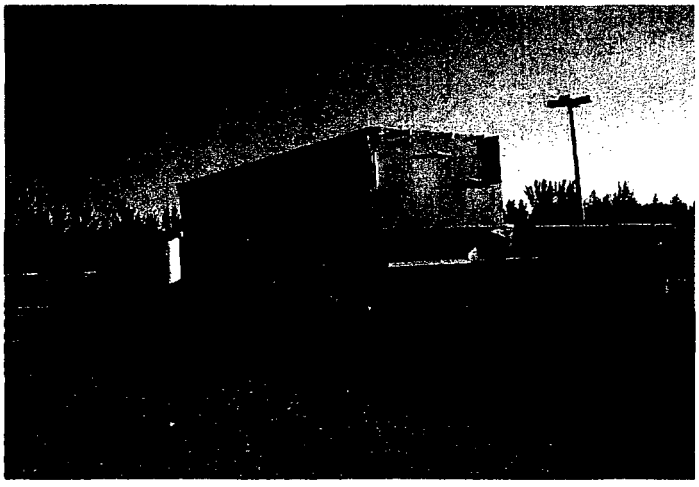
1.02 Process Description.

CBS blocks are produced almost universally because of their, simple design, high quality and the ever present demand for economical building materials. Many times local materials can be used making these plants very desirable for the community.

The raw materials used to produce CBS blocks are cement, sand and aggregates. These raw materials are usually delivered to the plant site via railroad or truck. Upon arrival, the cement is transferred into a storage silo equipped with baghouses to insure a clean operation. Likewise, the sand and aggregates are usually stockpiled in the yard for use as required. Dust control, as stated above, is achieved by regular sprinkling of water on these piles. Our project is equipped with one (1) storage silo capable of storing 75 tons of material. It is factory equipped with a baghouse for dust control. This 75 ton silo is factory equipped with a baghouse with seven (7) bags offering also a total bag or filter area of 264 sq ft.

Aggregates used to produce CBS blocks include sand, gravel and crushed stone. Sand and gravel may be naturally produced or produce by crushing the existing stone. Lightweight aggregates can reduce the weight of the CBS blocks without seriously affecting their structural capabilities; however, these light aggregates cost more consequently it will affect the final price of the unit.

Raw materials from the silos and the yard are transported by weight and transport conveyors to a batch machine in order to insure product consistency and quality control. The raw materials are sent to the mixer for dry mixing and once the desired mix is achieved water is added, again carefully measured in order to insure the proper consistency. Our plant will use the Besser Enhanced Single Shaft Batch Mixer Model 80 which produces a high quality concrete mix, the most critical element in the CBS block production. Besser's Enhanced Single Shaft Batch Mixer Model 80 is an example of modern technology.



1.02 Process Description (cont.).

This equipment's improved mixing geometry and high speed makes for a much improved, user friendly equipment. This equipment is simple to operate and requires less maintenance than previous models; thus minimizing the human touch and consequently the potential for lack of lubrication, spills and pollution.

The mixed concrete is transferred to a concrete products machine where it is fed into molds that vary in shape and sizes. Once placed in these molds the CBS block unit is compacted and consolidated by a combination of pressure and control vibration. In our plant CBS blocks are produced by the Bergen Besser Vibrapac V3-12. This equipment is a three at a time concrete products machine that is capable of producing up to 1,620 block unit per hour. This equipment consistently produces dense, strong products at a speed of up to nine cycles per minute, making this equipment one of the best in the current market. Their scheduled maintenance has been minimized with their automatic lubrication where precisely measured amounts of lubricants are automatically supplied to key bearings and pins, thus eliminating the human touch and consequently the potential for lack of lubrication, spills and pollution. Additionally, SFCB will be using Form-EZE Natural as manufactured by The Euclid Chemical Company. This product is a natural biodegradable form release which provides an environmentally friendly manner of quick and easy release of CBS blocks. This form release product will be purchased in 55 gals drums and stored in one of the two (2) 8 drum spill containment pallets as shown in the attached Exhibit. A maximum of two (2) 55 gallons drums will be in inventory at any times. Rags used in this process will be stored in one (1) 55 gallons drum for disposal by Safety Kleen and/or an approved IW hauler at the drum spill containment pallet shown in the attached exhibit.

At this point, the CBS concrete blocks are green or uncured. They are transported via mechanical conveyors and placed on curing racks for drying. The location of these curing / drying areas may vary according to their geographic location. In colder climates a kiln or curing chamber is required; however, in warmer climates the CBS blocks are placed in the open air to dry for a period of 12 to 24 hours. Once cured, the CBS blocks are removed from this area and taken to a processing area where these units are cubed or palletized and placed in storage. Cubing is the action of turning individual units and placing them in alternating layers to create an interlocking cube.

SFCB will be using the Multi-Spade Besser-Matic loader and unloader. This machine is actually two (2) machines in one with two (2) towers and spade combinations. One tower accumulates pallets of green CBS blocks while the spade loads them in racks for the open air

1.02 Process Description (cont.).

curing process. The second spade removes cured CBS blocks from the rack to the second tower. They are then lowered one pallet at a time to the storage area.

Finally, we will use Besser's Cuber SF-7 to turn individual units and place them in layers as required.

1.03 Environmental Design Considerations.

There are four (4) major Environmental Design Considerations for this project and they are as follows:

- Air Quality
- Equipment Maintenance & Repair and Fuel Storage
- Industrial Wastewater Runoff and
- Noise

1.03.1 Air Quality.

Air Quality is an environmental design consideration and since this project will require permitting from Miami-Dade County Environmental Resources Management Office "DERM" Air Section, we have filled out DERM's Air Permit Application for submittal, review and approval of this project.

Our project is equipped with one (1) storage silo capable of storing 75 tons of material. It is factory equipped with a baghouse for dust control. This unit's baghouse has seven (7) bags with a total bag area of 264 sq ft. This unit draws in the dusty air with an electric blower into a single filter bags compartment above the silo. To clean, the filter bags are shaken by an electric shaker assembly set on a timer. Daily and weekly observation of the exhaust air, pressure indicators, bag connections and exhaust fan will assist the owners in a safe and acceptable operation.

Aggregates used to produce CBS blocks shall be stockpiled at the site and a sprinkler system will be provided for dust control of said stockpiles.

1.03.2 Equipment Maintenance & Repair and Fuel Usage.

There will be no fuel storage at the site. The small amount required for some of the equipment being used will be serviced by a fuel truck contracted to provide said service. They will provide the necessary fuel as required and leave the premises. We will submit DERM's IW5 Permit Application for review and approval detailing our projected consumption and their origin and destination prior to obtaining a Certificate of Use. In keeping with the mandates of DERM's EQCB Order No. 04-31 recorded on April 4th, 2004 in the Public Records of Miami-Dade County, all oil, grease, transmission fluid, mold release and/or mineral spirits used as cleaner fluid required will be provided by outside contractors as required in a similar manner as the fuel.

1.03.2 Equipment Maintenance & Repair and Fuel Usage.

Any waste generated by incidental spills shall be stored in 55 gals drums stored on top of spill containment pallets equipped with a sump area capable of retaining an accidental spill as well as a removable steel grating for easy maintenance. These pallets will be those manufactured by P & D Solutions Corporation Model K17-3105 as detailed in the attached Exhibit and/or an approved equal. A maximum of three (3) 55 gallons drums will be in inventory at any time.

Each pallet is capable of holding 135 gallons of liquid material in a spill event. Additionally, each pallet is surrounded by a 6" high concrete berm to be used as secondary containment for accidental spills and this secondary containment is capable of holding an additional 450 gallons.

In addition to the plant's equipment, SFCB will use auxiliary equipment for handling of materials. SFCB will have two (2) front end loaders for this purpose. The maintenance and repair of the plant's equipment as well as these two (2) loaders will be performed outside the Subject Property and no maintenance, repair and/or equipment wash down will be done on site. Only cleaning of dry materials from the plant's equipment will be done at the site and the rags used will be properly disposed off in a 55 gallon drum to be removed regularly by Safety Kleen and/or an approved IW hauler.

1.03.3 Industrial Wastewater Runoff.

The project's Industrial Wastewater has also been an environmental design consideration; however, this project's only water usage is that which is added to the mixed solids at the beginning of the manufacturing process. Although this facility is connected to the existing sanitary sewer facilities no industrial wastewater will enter said sanitary sewer facilities as a part of this project.

1.03.4 Noise.

Noise is an environmental design consideration; however, an evaluation of the specifics of this project clearly shows that there should be no environmental concerns arising from this project on this respect. The proposed CBS block manufacturing plant has been located at the best location possible within the Subject Property, which is located within an industrial area with no residential neighborhoods in its immediate surroundings. These adjacent industrial properties are located sufficiently far away so that there should be no environmental concerns arising from this project.

Enviroassessments of South Florida, Inc.
Environmental Assessment Consultants

Date: October 18th, 2008

Air Pollution Application for South Florida Concrete Block, LLC
CBS Concrete Block Manufacturing Plant
Data & Emissions Calculations

Source Name:	South Florida Concrete Block, LLC
Source Address:	5804 Southwest 177th Avenue, Miami, FL 33193
Applicant Name:	Sergio Abilleira as Manager of South Florida Concrete Block, LLC
Applicant Address:	5804 Southwest 177th Avenue, Miami, FL 33193

The Actual Emissions Calculations as well as the Potential Emissions Calculations detailed below are based on data researched from the Portland Cement Association. The average weight for a CBS masonry unit is assumed to be 40 lbs/unit with a volumetric composition as detailed below. The average daily production shall be estimated at 1,300 units per hour.

Our project is equipped with one (1) storage silo. This one (1) silo is capable of storing 75 tons of material and it is factory equipped with a baghouse for dust control. This baghouse unit has seven (7) polyester bags with a total filter area capacity of 264 sq ft. These baghouses are rated at efficiency higher than 99.9%; consequently we have calculated a 0.05% emission rate, as shown below.

Concrete Mixture	%	Lbs/Unit	Lbs/Day Max	Emissions/Day
Air	6	2.40		
Portland Cement	11	4.68	45,826	22.91
Course Aggregate-	41	17.45	170,806	
Fine Aggregate - Sand	26	11.06	108,316	
Water	16	6.81	66,656	
		40.00	391,604	22.91

Actual Emissions Calculations (TPY)

(22.91 lbs/day) (5 days/week) (50 weeks/yr) / (2,000 lbs/Ton) = 2.86 TPY

Potential emissions calculations (TPY)

(22.91 lbs/day) (3) (365 days/yr) / (2,000 lbs/Ton) = 12.54 TPY

Post Office Box 161649, Miami, Florida 33116 * Tel(305) 279-3133 * Fax (305) 279-3383

ENHANCED SINGLE SHAFT BATCH MIXER

MIXING TECHNOLOGY BESSER MIXING TECHNOLOGY BESSER MIXING

Productivity

Besser understands that quality concrete is the most critical component in the production process, and the quality of the concrete depends heavily upon the mixer. The Enhanced Single Shaft Batch Mixer (EM Mixer) is the latest in a complete line of mixers designed to help you meet your production goals.

Improved mixing geometry and high speed are the two defining features of this mixer. Improved mixing geometry makes the EM Mixer ideal for the rapid production of dry cast products. A high speed homogeneous mix can be provided in 60–120 seconds, depending on material absorption factors.

Quality

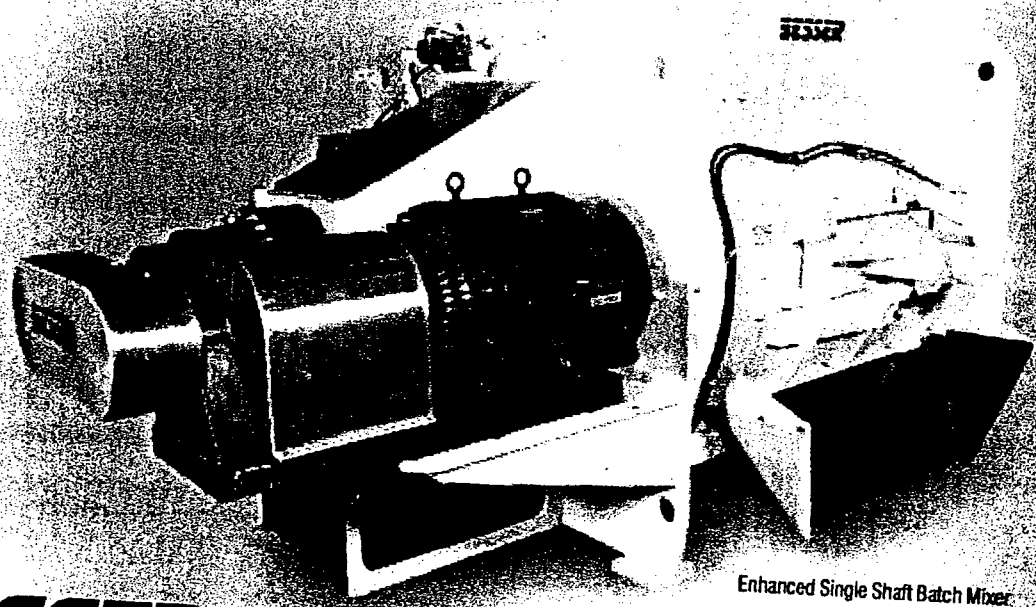
Quality is the hallmark of Besser machinery. Highly skilled staff follow the stringent Besser Quality System during the design, manufacture, assembly and testing of the mixer.

Superior Engineering

Besser engineers responded to the changing industry requirements for improved mixing technology with the EM Mixer. The EM Mixer incorporates innovative features desired by producers while retaining the features of the Besser Batch Mixer that have made it a long-time industry favorite. Thanks to a user-friendly design, the mixer is simple to operate and requires less routine maintenance than previous model Batch Mixers.

Mixer Specifications

MODEL	cu ft	80	100
	cu m	2.3	2.8
CAPACITY	lb	8000	10,000
	kg	3630	4540
MOTOR HORSEPOWER	hp	100	125
	kW	74.5	93.2
BLADE SHAFT RPM		25.5	24.5
WIDTH	in	8' 3"	8' 3"
	mm	2515	2515
HEIGHT	in	6' 8"	6' 8"
	mm	2032	2032
LENGTH	in	14' 3"	14' 3"
	mm	4343	4343
WEIGHT	lb	23,500	23,500
	kg	10,659	10,659
WATER SUPPLY INLET (inside diameter)	in	1-1/2"	1-1/2"
	mm	38	38



Enhanced Single Shaft Batch Mixer

BESSER

Standard Features

- The 93% efficient 3-stage planetary transmission utilizes a patented rare earth magnetic drive coupler, which replaces the soft starters and air or fluid clutches found on older models. The conductor and rotor operate with an air gap to fully isolate the motor from the load. This provides smooth, efficient power transfer as well as vibration isolation and overload protection.
- Mixers incorporate a fully welded uniframe, lateral throw-back mixing blades, a hydraulic discharge door and a hydraulic access door with safety lockout.
- Hydraulically operated discharge gate with locking center pivot mechanism includes a Rhino-Hyde liner with an overlapping positive seal.
- Hydraulic power unit for discharge door, access door and clean-out gate contains solenoid control valves, flow controls, a breather/filler, an oil level sight gauge, a system pressure gauge and an oil filter. Valves are provided for the discharge gate and front access panel.
- Discharge chute provided with polyurethane lining.
- Labyrinth positive displacement shaft seals allow for superior dry cast production.
- A heavy-duty gearbox oil cooler ensures a long gearbox life. The gearbox cooling package includes a radiator, fan, lube circulation pump and a lube oil filter. The cooling unit is automatically controlled by a temperature switch.
- One-piece Ni-Hard abrasion resistant left and right hand mixer blades (ribbons) are standard. Replaceable Ni-Hard abrasion resistant shell liners are provided.
- 8" (203 mm) diameter main blade shaft has pillow block support bearings. A spherical roller bearing is used on the drive end of the mixer and a double tapered roller bearing is used on the slave end. Shaft flex couplers accommodate shaft deflection and extend bearing and seal life.
- 125 hp drive motor – TEFC – provided with adjustable mounting base (does not include motor starter; see options).
- Double-hinged front access panel has a hydraulic cylinder actuator.
- Electric panel includes controls for the access door, gearbox cooler and discharge gate, plus an emergency stop pushbutton and lockable switch for control power.

Optional Enhancements

Ribbon Blades with Replaceable Liners

Eight Ni-Hard wear liners, attachment hardware and replaceable hardware protectors prevent excessive blade wear.

Cleaning Rings and Blade Shaft Covers

This option includes four circular cleaning rings and two split covers for the blade shaft. The cleaning rings help prevent buildup of concrete on the shaft and the replaceable covers prevent shaft wear.

Motor Starter

Includes part winding motor starter in NEMA 1 enclosure for 460 V., 3 phase, 60 Hertz (other voltages are available). Also includes disconnect circuit breaker with lockable operating mechanism, thermal overload protection, and start-stop pushbuttons. Starter mounting, wire and conduit to motor are provided by the customer.

Hydraulically Operated Clean-Out Gate

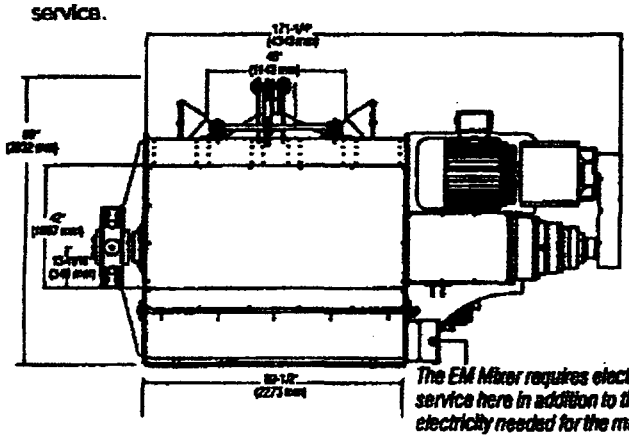
A 12" x 16" (305 mm x 406 mm) hinged gate is located at the bottom center of the mixer shell. A latching hinge mechanism, hydraulic cylinder and mounting bracket, solenoid control valve with flow control, selector switch and all necessary wiring, plumbing and hardware are included. The clean-out gate is required for use with MixerWash.

MixerWash — Automatic High Pressure Washdown System

The MixerWash provides automatic clean-out of the inside of the mixer with high-pressure water spray. Two oscillating spray bars with multiple spray nozzles provide thorough washdown of all internal surfaces. A hand-held spray wand is provided for additional cleaning. MixerWash also includes a power unit to provide the necessary high pressure/high flow water supply.

MixerMind

MixerMind provides automatic diagnostic operation and service planning; it monitors motors, gearboxes and the automatic lubrication system for temperature, pressure and service.



The EM Mixer requires electrical service here in addition to the electricity needed for the main drive.

BESSER

801 Johnson Street
Alpena, Michigan 49707 USA
phone: 989.354.4111
fax: 989.354.3120

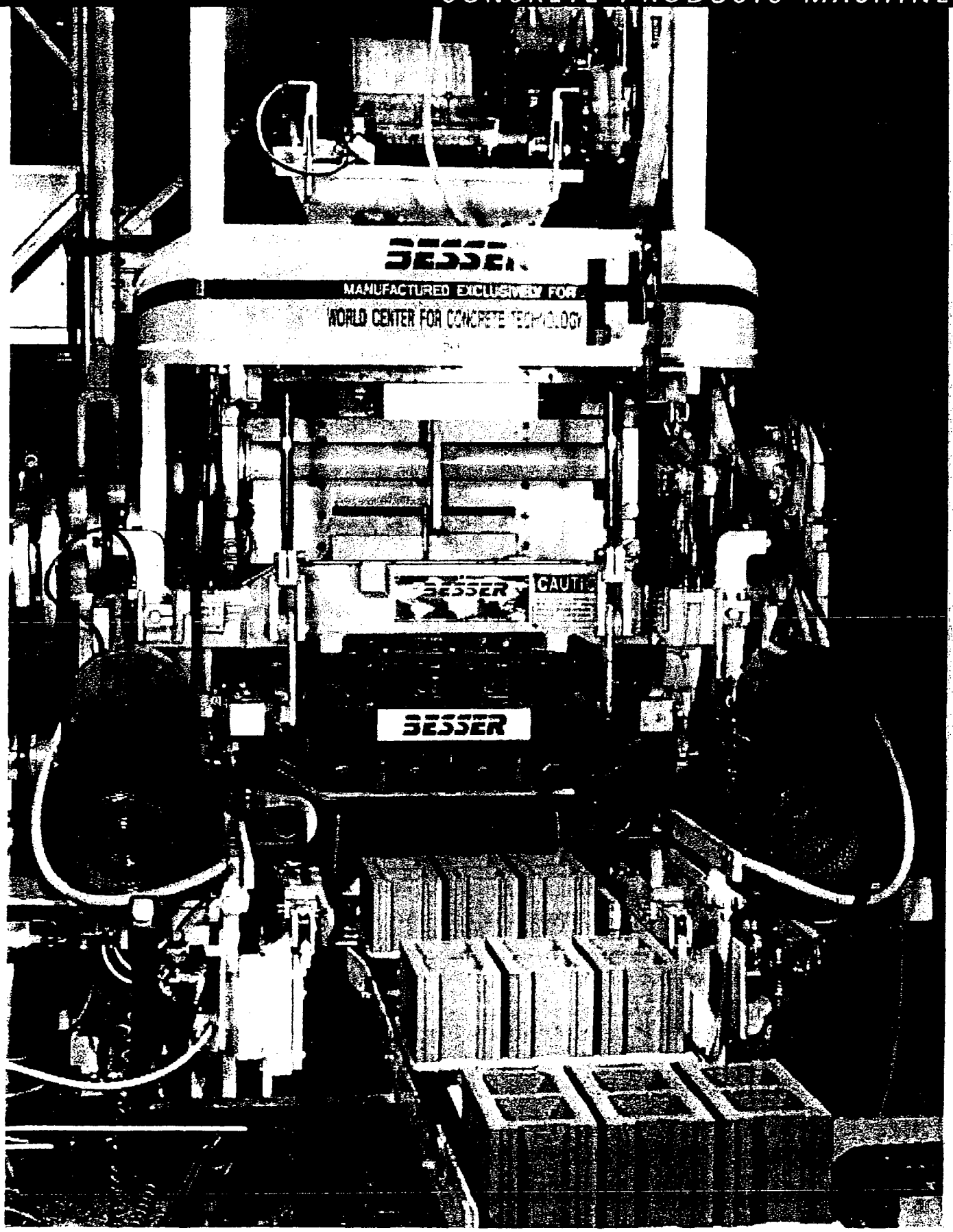
442 North W.W. White Road
San Antonio, Texas 78219 USA
phone: 800.330.5590 or 210.333.1111
fax: 210.333.1508

P.O. Box 1708
Sioux City, Iowa 51102 USA
phone: 712.277.8111
fax: 712.277.1222

www.besser.com
e-mail:
sales@besser.com

VIBRAPAC®

CONCRETE PRODUCTS MACHINE



RUGGED, DEPENDABLE AND EASY TO MAINTAIN

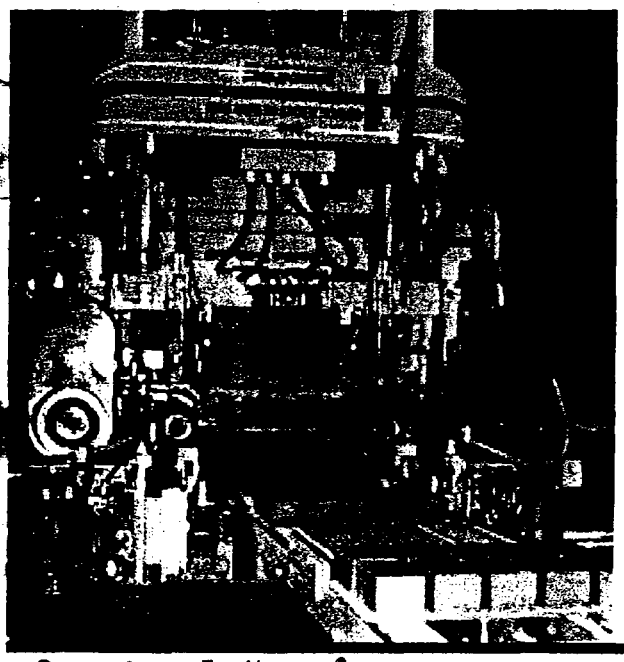
The Vibrapac® is a three-at-a-time concrete products machine that produces up to 1620 units (eight inch or 200 mm equivalents) per hour. The Vibrapac consistently produces dense, strong products such as architectural, standard and landscape units with exceptional cost efficiency at speeds up to nine cycles per minute. This concrete products machine is rugged, dependable and easy to maintain.

Quality

Quality is the hallmark of Besser machinery. Highly skilled staff follow the stringent Besser Quality System during the design, manufacture, assembly and testing of the equipment. All Besser equipment is manufactured with precision machinery, insuring consistent quality every time. This attention to detail translates into concrete products machines that produce the world's most dimensionally precise, aesthetically pleasing concrete masonry units.

Durability

Durability is an equally important reason for the outstanding productivity of the Vibrapac. Outboard bearing supports preserve bearing and shaft alignment. The automatic lubrication system protects the majority of the bearings and pins on the machine. Most of the wear is limited to parts that come in contact with aggregates and these parts are designed for easy replacement. Constant motor speed lowers power consumption and reduces wear on the drive.



Standard Features

Cam Driven

The Vibrapac is cam driven to provide consistent speeds and movements. The precise indexing of the cams achieves uniform product quality even in variable operating conditions.

Automatic Lubrication

Precisely measured amounts of lubricant are automatically supplied to key bearings and pins. This routine maintenance function insures optimum performance of the Vibrapac.

Allen-Bradley SLC500™ Control Panel with Color Graphics Display

Many of the operating functions of the Vibrapac can be easily adjusted by accessing the SLC500 through the color graphics display unit. This control panel: 1) automatically pinpoints problems and displays information for making corrections fast, and 2) improves quality control.

The color graphics display swivels on a floor-mounted pedestal providing convenient access for the machine operator. This solid state unit provides push-button command of the sequencing, on/off, interlocking and status monitoring functions. No computer expertise is needed. Plant personnel can program new set-ups with just a basic knowledge of the same logic diagrams used with relay controls.

Automatic Feed Control

Automatic feed control adjusts the feedbox for uniform filling of molds. Routine maintenance is simplified with a standard C-face motor and separate gear box allowing independent replacement of either part.

Digisolver™

The Digisolver provides cam position information to the controller. This allows adjustments to be made to the machine set points while the concrete products machine is operating. Adjustments are made through the color graphics display unit.

Bescodyne Hydraulic Clutch/Brake

A Bescodyne oil shear clutch/brake system is used on the main drive to provide quick and smooth starts and stops. The system is designed to handle the energy of rapid acceleration and deceleration, which allows for increased productivity. This clutch/brake also reduces stress on motors and other components in the machine, which extends the life of the components and reduces maintenance.

Cover photo: *The Vibrapac® concrete products machine consistently produces dense, strong units.*
Above photo: *Paving stone are easily produced by the Vibrapac concrete products machine.*

Specifications

Production Rates

- Machine Cycle Time (in seconds): 5.1
- Forming Time (feed, finish and delay - in seconds): 1.6
- Total Cycle Time (in seconds): 6.7
- Cycles Per Minute: up to 9
- Concrete Masonry Units (8" equivalents per minute): 27
- Concrete Masonry Units (8" equivalents per hour): 1620

  Note: Optimum production rates depend upon many variables, therefore actual production may vary from this example.

Horsepower

- Main Drive: 15 hp (11.2 kW)
- Automatic Feed: 1 hp (0.8 kW)
- Feedbox Agitator: 2 hp (1.5 kW)

Vibration

- Posapac Vibration (Warner or Bescostop brakes): requires two 10 hp motors (7.5 kW each), or
- AFC SmartPac® Vibration: requires two 10 hp motors (7.5 kW each), or
- Dual Vibration (Bescodyne clutch/brake): requires two 10 hp motors (7.5 kW each)

Pneumatic Requirements

- 1 SCFM* (.028 SCMM**) for miscellaneous concrete products machine functions
- 9 SCFM (.255 SCMM) with AFC SmartPac® Vibration
- 20 SCFM (.560 SCMM) with Dual Vibration
- 28 SCFM (.784 SCMM) with Air Compaction Device
- All above at 80 psi minimum

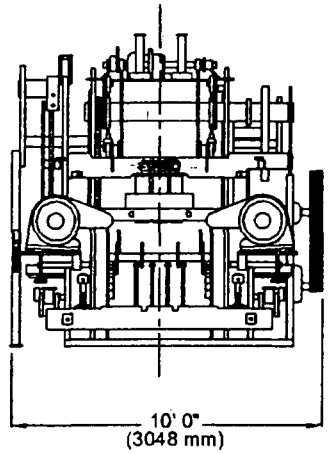
  * SCFM = standard cubic feet per minute
  ** SCMM = standard cubic meters per minute

Dimensions/Weight

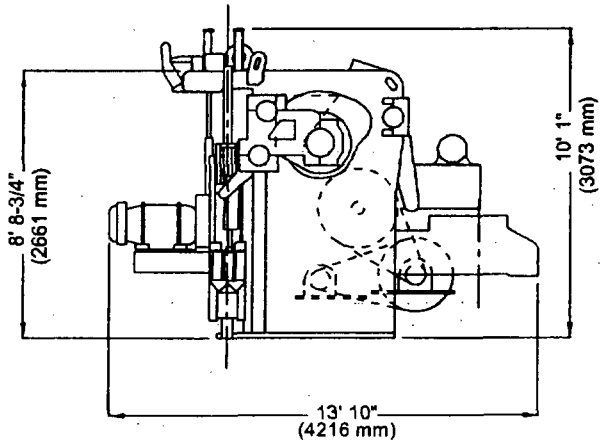
- Width: 10' 0" (3048 mm)
- Height: 10' 1" (3073 mm)
- Length: 13' 10" (4216 mm)
- Weight: 36,000 lbs (17,000 kg)
- Block Delivery Height: 36-5/16" (922 mm)
- Pallet Size:
  26" x 18-1/2" x 5/16" (660 mm x 470 mm x 8 mm)
  (other pallet sizes available)
- Product Height: 2-3/8" (60 mm) high – 12" (305 mm) high

Voltages

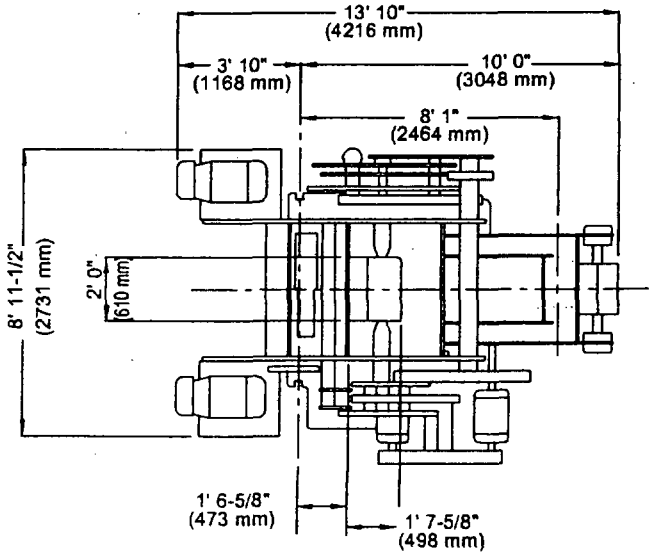
- Control Circuit: 120 V., single phase, 60 Hertz
- Motors: 230/460 V., 3 phase, 60 Hertz
  (other voltages are available)



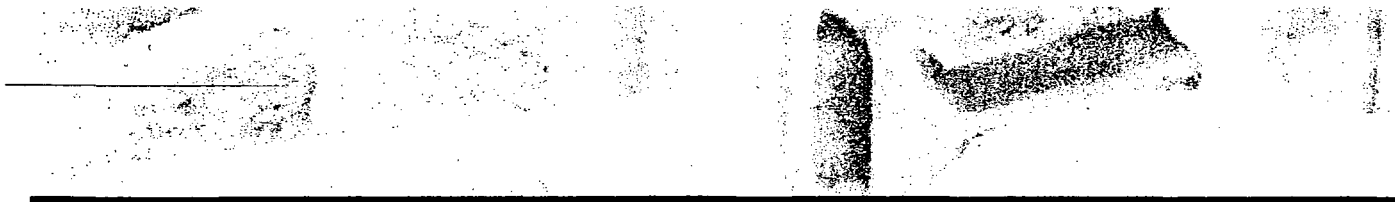
Front View



Right Side View



Top View



Optional Enhancements

Bescostop™ Oil Shear Brake System

Bescostop oil shear brake system is used on the vibrators to provide quick and smooth starts and stops.

AFC SmartPac® Vibration

By employing independent amplitude and frequency control, vibration is tunable to specific molds and product requirements. The ability to control both amplitude and frequency results in more rapid compaction and quicker finish times than can be obtained with conventional vibrating systems. Vibration can be engaged or disengaged multiple times within a single machine cycle.

AFC SmartPac and Posapac® Dual Vibration

Dual vibration utilizes both a Bescodyne clutch/brake and AFC SmartPac vibration which allows the concrete products machine to use Posapac weights for short production orders. This is beneficial if several existing molds are owned with weights attached. AFC SmartPac can then be used for longer production orders or for manufacturing specialized products. This allows you to take advantage of reduced mold wear as well as independent amplitude and frequency control to facilitate improved feeding and finishing of products.

Air Compaction

The use of air compaction reduces finish time, which improves overall cycle time. Air cylinders supplement the force on the mold exerted by the weight of the machine head. The addition of compressed air restrains the stripper head, bringing the height pins together sooner, compacting the unit faster and more effectively.

Frequency Drive for Main Drive Speed Control

The frequency drive controls the main drive speed so specific segments of the machine cycle can be slowed down or sped up. This feature slows down the stripping speed without sacrificing overall cycle speed. The variable speed frequency drive is remotely controlled from the color graphics display unit.

Pin Guidance

Manually inserted pins align the mold with the mold throat which extends mold life.

Pallet Scraper

Material build-up on pallets is automatically removed during each machine cycle. The tension forcing the scraper blade down on the pallet is fully adjustable to meet specific cleaning needs.

Vibrator Motor Air Bag Lift

The vibrator motor air bag lift is an easy and quick way to raise the vibrator motors for mold changes. A lever operated pneumatic valve is moved to the up position allowing air to flow into the air bags. When the bags inflate both vibrator motors rise. This allows the operator to remove the belts and begin the mold change procedure. Once the mold change is completed, the belts are reinstalled on the sheaves. The lever is moved to the down position, allowing the air bags to deflate and the vibrator motors to lower. A safety lockout device is included for safety during maintenance.

Mold Insertion Device

The time needed to change molds is shortened and simplified with the mold insertion device. This pneumatic powered mechanism lifts/lowers the entire mold assembly off/onto the mold throat. The mold assembly is manually rolled into/out of the mold throat area.

Quick Change Mold Device

The addition of the Quick Change Mold Device (QCMD) to your plant will provide automatic storage and retrieval of molds. The QCMD operates similar to a Multi-Spade Besser-Matic®. A shuttle removes the mold from the concrete products machine, deposits it into a rack and then places a new mold into the concrete products machine. Constructed of rugged structural steel tubing and outfitted with frequency controlled drives, the motion of the QCMD is quiet and effortless. The QCMD is available for all models of Besser concrete products machines.

Core Puller

A core puller is a concrete products machine attachment. Many of the complex concrete masonry unit designs which are popular today feature horizontal openings that have been formed by a core puller.

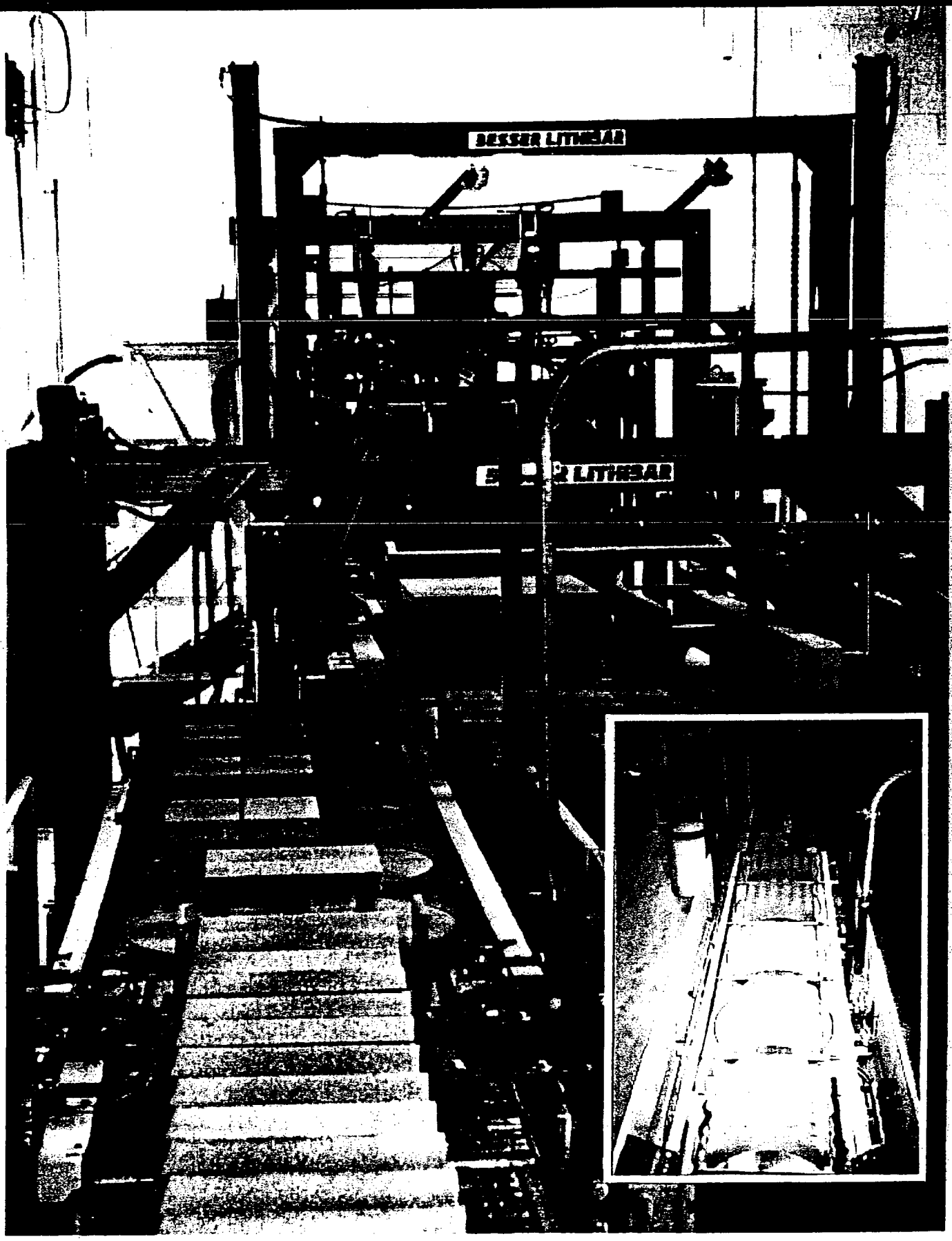
A core puller is installed in front of the mold on the concrete products machine, above the front delivery conveyor (green block conveyor). It can be wheel-mounted or leg-mounted.

BESSER
801 Johnson Street
Alpena, Michigan 49707 USA
phone: 989.354.4111
fax: 989.354.3120
www.besser.com
e-mail: sales@besser.com

For better viewing, all guards, safety devices and signs are not necessarily shown. Some of the equipment shown or described throughout this brochure is available at extra cost. Since the time of printing, some of the information in this brochure may have been updated; ask your Besser sales representative for details.

IIIVIBRAPAC-2500/12-01/2-03

AUTOMATIC AND SEMI-AUTOMATIC CUBERS



DEPENDABLE, GENTLE AND VERSATILE HANDLING OF CONCRETE PRODUCTS

Versatile Besser Cubers

Besser cubers are designed and manufactured to be safe, dependable and easy to use. They offer the flexibility to handle products ranging from 2" (50 mm) high patio slabs to 24" (600 mm) high units, including a full range of retaining wall products. Besser cubers can cube up to 3600 8" (200 mm) equivalents per hour to keep pace with the fastest concrete products machines.

Besser cubers are available in both automatic and semi-automatic models. Each cuber is custom designed and manufactured to fit into your facility and satisfy the handling requirements of your plant.

Dependability

Many Besser cubers in the field have been operating for more than 30 years. Heavy gauge tubular steel is used on the cuber frame for strength and longevity. Manufactured and purchased components are designed for years of reliable service. The moderate pressure hydraulic system maximizes component life.

Gentle Handling

Actuators involved in product movement have two-speed control for gentle handling, even at maximum operating speeds. Hydraulic side clamps hold products in place as they are lowered to assure smooth and precise handling. Proportional hydraulic control may be added for the most demanding applications.

Easy to Use

- Actuators are outboard whenever possible on the machine for easy access
- Each control output typically has a selector to allow manual jogging for easy adjustments and troubleshooting

Allen-Bradley Programmable Logic Controller and Operator Interface simplify machine operation by providing operator prompts and fault detection. A typical automatic cubing system has over 70 diagnostic fault messages to assist you in correcting the fault. Changes in cube patterns are made quickly and easily. A standard automatic cubing system includes up to 80 preprogrammed tier patterns. Operators can program up to 99 user defined custom tier patterns. This allows an operator to create up to 99 user defined cube programs. Once programmed, a simple, two-digit keystroke can recall each cube program.

Enhancements

- Four different side feed configurations are available:
  1) Standard – for speeds up to 1440 8" (200 mm) units per hour
  2) Overhead – for speeds up to 1800 8" (200 mm) units per hour
  3) Extended Overhead – for speeds up to 2400 8" (200 mm) units per hour
  4) Dual Extended Overhead – for high speed splitting operations
- Encoder controls on overhead side feed for automatic making of voids or for products whose contour does not allow one row to be pushed against another
- Gate and clamp positioning to square cubes with offset layers
- Gate heights available to accommodate products up to 26" (660 mm) high
- Tier turntable for crosstied cubes
- Double or triple pumping unit for reserve capacity for future add-on equipment or for use with a block splitter
- Allen-Bradley PanelView™ 1000 color graphic display with pictorial diagnostics, preventive maintenance and replacement parts screens
- Proportional controls for programmable speed control on overhead side feed, tier pusher, carriage and lift
- Open front end and powered roller cube discharge for high speed operations
- Segmented clamps for cubes with voids across the width of the cube
- Contoured pushers and special guides for cubing nonrectangular products
- Automatic strapping and cube transfer systems

Cover photo: *The Besser cuber is custom designed and manufactured to fit into your facility.*
Cover inset photo: *Curved, scalloped edgers are handled with ease.*

Automation Packages - Machine Patterning for Besser Cubers

Automation packages are available for a wide variety of applications. Whether you produce specialty products, standard block or operate a dedicated strapping line, an automation package can help your plant run more efficiently. Our patternmakers can automate your existing cuber and provide you with the most versatile system on the market.

Automation includes single, double, triple and quad turntable patternmakers. Patternmaker selection is dictated by the products produced, production speeds and cube patterns. The continuous feeding of product, required in high-speed operations, is handled with two patternmakers which feed one cuber; one from the left side and one from the right. Dual infeed lines allow splitting and/or turning of concrete products made on large pallet machines. Special guides allow the automatic cubing of customized products such as round slabs, scalloped edgers, manhole block, pavers, retaining wall units, L-corners, barrel block, chimney block, embankment block and concrete brick.

Triple turntable patternmaker

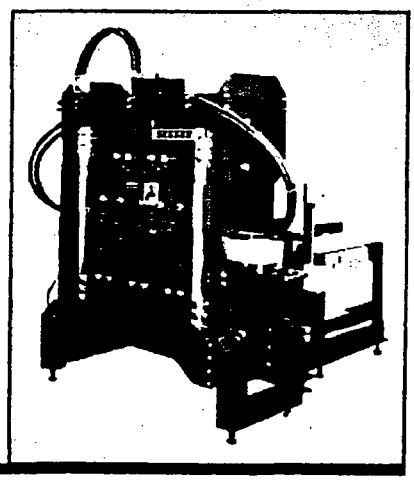
Custom product guides

Split and Turn

The Besser heavy duty model 6386 block splitter is another enhancement opportunity. The splitter has an optional operating pressure of up to 1500 psi to split retaining wall and architectural units as well as other types of units. The 1-5/8" steel plate frame and rugged construction are designed for years of trouble free service. Special models are available to split up to 16" (400 mm) high units.

A turnover module may be placed after the splitter to turn units after splitting. The turnover has the capacity of turning two 12" (300 mm) split units into a single 24" (600 mm) high unit. The turnover clamp arms adjust by using pins for clamping different length units. This design allows the clamping cylinder to short stroke for more precise and accurate clamping and consistent power and strength. The speed is adjustable for optimum performance.

Optional proportional flow controls allow programmable speed control for splitters and turnovers.

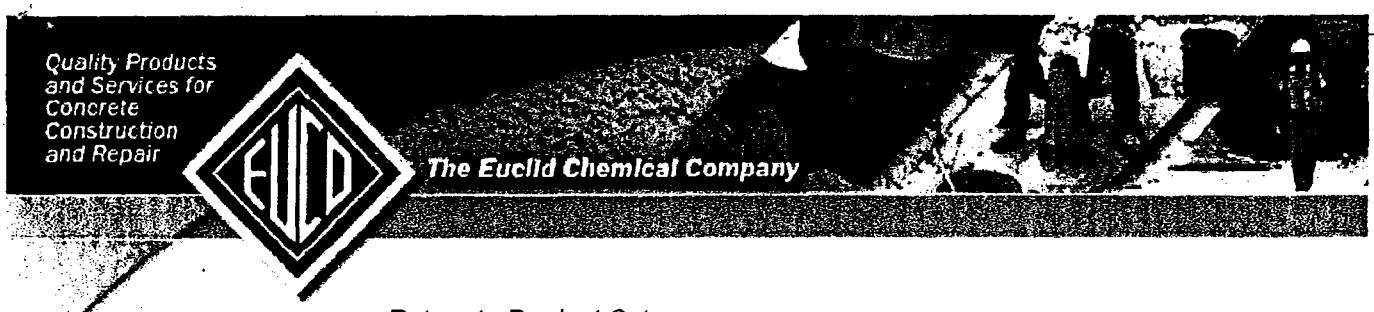


6386 Splitter

Pallet Dispensers

Pallet dispensers and pallet and block injectors maintain positive control for smooth handling and precise positioning of pallets or block bases in the load building area of the cuber. The dispenser lift raises the entire stack of pallets or base courses off of the bottom unit so it can be freely pushed into place in the cuber. This lessens the potential for jamming of pallets or block bases.

The dispenser is designed to feed onto the cuber without interrupting the cubing process. The pallet or base course is staged on a transfer conveyor. As the slider plate discharges a completed cube, the staged pallet or base is immediately transferred onto the load building rollers. As soon as the staged pallet or base is in position, the slider plate retracts, and places a layer of product on the pallet or base. The dispensers are easily adjusted to handle multiple pallet sizes.



Return to Product Category

FORM-EZE NATURAL

CONSTRUCTION PRODUCTS FOR VOX A SAFER ENVIRONMENT

BIODEGRADABLE CONCRETE FORM RELEASE AGENT

FORM-EZE NATURAL form release is an emulsion of natural, biodegradable oils that will minimize surface defects and provide a quick, easy release of concrete from forms. This environmentally friendly formula will not stain or discolor the surface of concrete. FORM-EZE NATURAL can be used on metal, wood and fiberglass forms.

FEATURES / BENEFITS

- All natural formula
- Helps eliminate surface defects
- Will not discolor the surface of concrete
- Economical and easy to use
- Safe to handle, safe to use
- Reduces clean-up cost while extending the life of the forms

PRIMARY APPLICATIONS

- Metal, fiberglass or wood forms
- Concrete molds, overlaid plywood and fiberglass
- Spray on precast, prestressed,masonry block and tile forms
- Use for hoist buckets, wheel barrows,and paving machinery
- Spray on tools and equipment to prevent build-up

PRODUCT DATA SHEETS

- Technical Data - English
- MSDS - French
- MSDS
- Companion Brochure

Email: info@euclidchemical.com

19218 Redwood Road, Cleveland, OH 44110
Phone (800) 321-7628 or (216) 531-9222

An RPM Company

THE EUCLID CHEMICAL COMPANY
19218 REDWOOD ROAD • Cleveland, OH 44110
(216) 531-9222 • (800) 321-7628 • FAX (216) 531-9596
www.euclidchemical.com

FORM-EZE NATURAL

◆ ◆ ◆ ◆ ◆ ◆

BIODEGRADABLE, CONCRETE FORM RELEASE AGENT

CONSTRUCTION PRODUCTS FOR
VOC
A SAFER ENVIRONMENT

FORM-EZE NATURAL form release is an emulsion of natural, biodegradable oils that will minimize surface defects and provide a quick, easy release of concrete from forms. This environmentally friendly formula will not stain or discolor the surface of concrete. FORM-EZE NATURAL can be used on metal, wood and fiberglass forms.

PRIMARY APPLICATIONS

- Metal, fiberglass or wood forms
- Concrete molds, overlaid plywood and fiberglass
- Spray on precast, prestressed, masonry block and tile forms
- Use for hoist buckets, wheelbarrows, and paving machinery
- Spray on tools and equipment to prevent build-up

FEATURES / BENEFITS

- All natural formula
- Helps eliminate surface defects
- Will not discolor the surface of concrete
- Economical and easy to use
- Safe to handle, safe to use
- Reduces clean-up cost while extending the life of the forms

PACKAGING

FORM-EZE NATURAL is packaged in 275 gal (1041 liter) totes, 55 gallon(208 liter) drums, and 5 gal (18.9 liter) pails.

SPECIFICATIONS/COMPLIANCES

FORM-EZE NATURAL meets V.O.C. contents in accordance to EPA 40 CFR Part 59 Table 1 Subpart D for Form Release Compounds with a maximum V.O.C. content of 450 g/l.

TECHNICAL INFORMATION

Typical Engineering Data

Freeze Point	30° F (-1.1°C)
Viscosity	50-300 cps
Specific Gravity	0.959
V.O.C.	0 g/l
Pounds per Gallon	8.0

COVERAGE

FORM-EZE NATURAL should be applied to the forms at the following rates:

- Wood forms - 600 to 800 sq. ft. /gal. (15 to 20 m^2/l)
- Metal forms - 800 to 1600 sq.ft./gal. (20 to 40 m^2/l)

DIRECTIONS FOR USE

FORM-EZE NATURAL can be sprayed or rolled on the forms or machinery in thin, even layers for maximum performance and economy. For a more uniform and economical application, use a sprayer equipped with a fan type nozzle. Overspray and puddling should be wiped up immediately. Excess application of FORM-EZE NATURAL may cause "bugholes" or imperfections. For best results, all surfaces should be completely free of old concrete. **Note:** Clean residual amounts of previous form release agents from forms or equipment using a degreaser.

Shelf Life: 1 year in original, unopened package.

Appearance: FORM-EZE NATURAL is a white emulsion.

PRECAUTIONS / LIMITATIONS

- Do not dilute
- Protect from freezing; store at 30° F (0°C) or above
- Always spray or roll thin, even layers
- Do not use as a bond breaker for tilt-up construction
- Agitate before use
- **IMPORTANT:** Clean forms of petroleum based form oil before using FORM-EZE NATURAL

MATERIAL SAFETY DATA

The Euclid Chemical Company • Cleveland, Ohio 44110

FOR TRANSPORTATION & SAFETY EMERGENCIES CALL: 1-800-255-3924
INTERNATIONAL USERS CALL COLLECT: 1-813-248-0585

TRADE NAME
Formeze Natural

CHEMICAL NAME
Concrete Release Agent

1. INGREDIENTS

MATERIAL	CAS #	%	ACGIH(TLV)	PEL
Water	7732-18-5	40 - 60		
Soy Bean Oil	8001-22-7	40 - 60		15 mg/m3
Fatty Acids	Proprietary	1 - 5	5mg/m3 (oil mist)	
Triethanolamine	102-71-6	1 - 3		

2. PHYSICAL DATA

APPEARANCE: Light Amber Liquid	ODOR: Oil	MELTPOINT: NA	SPECIFIC GRAVITY: 0.959
VAPOR DENSITY (AIR=1): NE	%VOLATILE BY WEIGHT: 50% / VOC: 0/g/l	BULK DENSITY: NA	BOILING POINT: 212°F
VAPOR PRESSURE: NE	%SOLUBILITY(H_2O): Missible	EVAPORATION RATE: NE	PH: 8 - 9

3. FIRE AND EXPLOSION HAZARD DATA

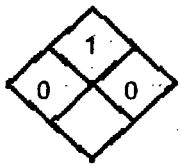
FLASH POINT & METHOD
>200 F CC

FLAMMABLE LIMITS
LEL NE UEL NE

EXTINGUISHING MEDIA
NFPA Class B extinguishers (CO2, Dry,, Foam)

SPECIAL FIRE FIGHTING PROCEDURES
Use fog nozzles to cool closed containers. Wear S.C.B. A.

NFPA FIRE HAZARDS IDENTIFICATION SYSTEM



UNUSUAL FIRE AND EXPLOSION HAZARDS
Keep containers tightly closed. Closed containers may explode when exposed to extreme heat.

4. PHYSIOLOGICAL EFFECTS

LD50 ORAL (INGESTION)	LD50 DERMAL (SKIN CONTACT)	LC50 (INHALATION)
NE	NE	NE

PRIMARY ROUTE OF EXPOSURE
Inhalation, skin eyes.

THRESHOLD LIMIT VALUE (TLV)
NE

EFFECTS OF OVEREXPOSURE

Inhalation: Vapors may cause irritation.
Eye: Vapor may cause irritation. Contact may cause irritation.
Skin: Contact may cause irritation, rash.
Ingestion: May cause gastrointestinal irritation.

THE EUCLID CHEMICAL COMPANY
19218 REDWOOD RD
CLEVELAND, OHIO 44110
1-800-321-7628 OR 216-531-9222

NE - NOT ESTABLISHED
NA - NOT APPLICABLE

5. EMERGENCY AND FIRST AID PROCEDURES

Inhalation: Move to fresh air. If symptoms persist, seek medical attention.
Eye: Irrigate eye for 15 minutes. If pain, irritation or burning persists, seek medical attention.
Skin: Wash area twice with soap and water. If pain or irritation occurs, or persists, seek medical attetnion.
Ingestion: Call a Physician or Poison Control Center immediately.

6. U.S. D.O.T. SHIPPING DESCRIPTION

DOT: Not Regulated.

7. SPECIAL PROTECTION INFORMATION

VENTILATION

Use with adequate fresh air. Other special precautions such as respiratory masks may be required in extreme cases.

RESPIRATORY
Not normally required with adequate ventilation.

EYE PROTECTION
Splash goggles

PROTECTIVE GLOVES	OTHER
Yes (rubberized)	Protective clothing to prevent skin contact.

All chemicals should be handled so as to prevent eye contact and excessive or repeated skin contact. Appropriate eye and skin protection should be employed. Inhalation of dusts and vapors should be avoided.

8. CHEMICAL REACTIVITY

CONDITIONS CAUSING INSTABILITY
Temperatures over 120°F.

INCOMPATIBILITY (MATERIALS TO AVOID)
Strong oxidizers.

HAZARDOUS DECOMPOSITION PRODUCTS
Carbon monoxide and carbon dioxide.

SPECIAL SENSITIVITY
NE

9. STORAGE INFORMATION

PRECAUTIONS TO BE TAKEN IN HANDLING AND STORING
Store full containers tightly sealed.

10. SPILL, LEAK, AND DISPOSAL INFORMATION

STEPS TO BE TAKEN IN CASE MATERIAL IS SPILLED OR RELEASED
Absorb with sand, vermiculite or inert absorbent.

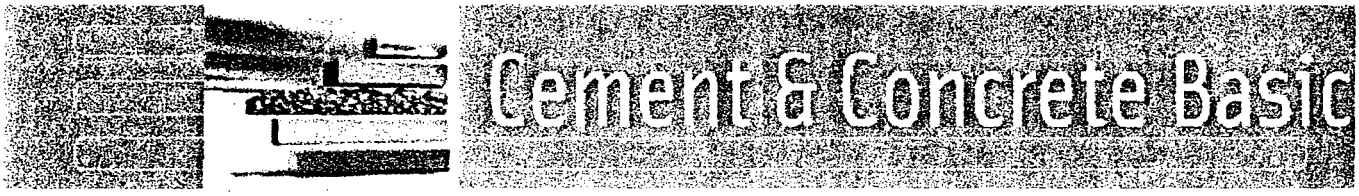
WASTE DISPOSAL METHOD
Dispose of in accordance with all federal, state, and local laws and regulations.

PREPARED BY	Rich Mikol	DATE 10/29/03	PAGE 2 OF Formeze Natural
TELEPHONE NUMBER	216–531–9222	SUPERSEDES MSDS DATED 3/18/02	

The information contained herein is based on data considered accurate. However, no warranty is expressed or implied regarding the accuracy of these data or the results to be obtained from the use thereof.

Vendor assumes no responsibility for injury to vendee or third persons proximately caused by the material if reasonable safety procedures are not adhered to as stipulated in the data sheet.

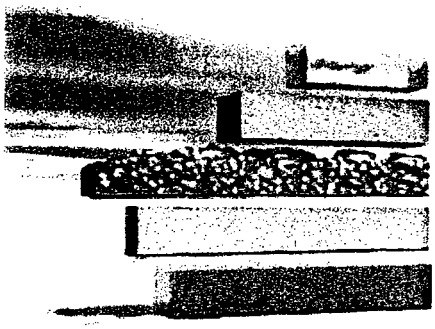
Additionally, vendor assumes no responsibility for injury to vendee or third persons proximately caused by abnormal use of the material even if reasonable safety procedures are followed. Furthermore, vendee assumes the risk in his use of the material.



Concrete Basics Home
How Concrete is Made
How Cement is Made
Cement Industry
Concrete Products
Aggregate
Chemical Admixtures
Supplementary Cementing
Air-Entrained Concrete
Placing & Finishing
Curing
Working Safely

Concrete Basics

Concrete Basics Home > Concrete Basics



In its simplest form, concrete is a mixture of paste and aggregates. The paste, composed of portland cement and water, coats the surface of the fine and coarse aggregates. Through a chemical reaction called hydration, the paste hardens and gains strength to form the rock-like mass known as concrete.

Within this process lies the key to a remarkable trait of concrete: it's plastic and malleable when newly mixed, strong and durable when hardened. These qualities explain why one material, concrete, can build skyscrapers, bridges, sidewalks and superhighways, houses and dams.

Proportioning

Portland Cement Association
5420 Old Orchard Rd.
Skokie, IL 60077
847.966.6200 PH
847.966.8389 FX
info@cement.org

The key to achieving a strong, durable concrete rests in the careful proportioning and mixing of the ingredients. A concrete mixture that does not have enough paste to fill all the voids between the aggregates will be difficult to place and will produce rough, honeycombed surfaces and porous concrete. A mixture with an excess of cement paste will be easy to place and will produce a smooth surface; however, the resulting concrete is likely to shrink more and be uneconomical.

A properly designed concrete mixture will possess the desired workability for the fresh concrete and the required durability and strength for the hardened concrete. Typically, a mix is about 10 to 15 percent cement, 60 to 75 percent aggregate and 15 to 20 percent water. Entrained air in many concrete mixes may also take up another 5 to 8 percent.

Portland cement's chemistry comes to life in the presence of water. Cement and water form a paste that coats each particle of stone and sand. Through a chemical reaction called hydration, the cement paste hardens and gains strength. The character of the concrete is determined by quality of the paste. The strength of the paste, in turn, depends on the ratio of water to cement. The water-cement ratio is the weight of the mixing water divided by the weight of the cement. *High-quality concrete is produced by lowering the water-cement ratio as* much as possible without sacrificing the workability of fresh concrete. Generally, using less water produces a higher quality concrete provided the concrete is

properly placed, consolidated, and cured.

Other Ingredients

Although most drinking water is suitable for use in concrete, aggregates are chosen carefully. Aggregates comprise 60 to 75 percent of the total volume of concrete. The type and size of the aggregate mixture depends on the thickness and purpose of the final concrete product. Almost any natural water that is drinkable and has no pronounced taste or odor may be used as mixing water for concrete. However, some waters that are not fit for drinking may be suitable for concrete.

Excessive impurities in mixing water not only may affect setting time and concrete strength, but also may cause efflorescence, staining, corrosion of reinforcement, volume instability, and reduced durability. Specifications usually set limits on chlorides, sulfates, alkalis, and solids in mixing water unless tests can be performed to determine the effect the impurity has on various properties. Relatively thin building sections call for small coarse aggregate, though aggregates up to six inches (150 mm) in diameter have been used in large dams. A continuous gradation of particle sizes is desirable for efficient use of the paste. In addition, aggregates should be clean and free from any matter that might affect the quality of the concrete.

Hydration Begins

Soon after the aggregates, water, and the cement are combined, the mixture starts to harden. All portland cements are hydraulic cements that set and harden through a chemical reaction with water. During this reaction, called hydration, a node forms on the surface of each cement particle. The node grows and expands until it links up with nodes from other cement particles or adheres to adjacent aggregates.

The building up process results in progressive stiffening, hardening, and strength development. Once the concrete is thoroughly mixed and workable it should be placed in forms before the mixture becomes too stiff.

During placement, the concrete is consolidated to compact it within the forms and to eliminate potential flaws, such as honeycombs and air pockets. For slabs, concrete is left to stand until the surface moisture film disappears. After the film disappears from the surface, a wood or metal handfloat is used to smooth off the concrete. Floating produces a relatively even, but slightly rough, texture that has good slip resistance and is frequently used as a final finish for exterior slabs. If a smooth, hard, dense surface is required, floating is followed by steel troweling.

Curing begins after the exposed surfaces of the concrete have hardened sufficiently to resist marring. Curing ensures the continued hydration of the cement and the strength gain of the concrete. Concrete surfaces are cured by sprinkling with water fog, or by using moisture-retaining fabrics such as burlap or cotton mats. Other curing methods prevent evaporation of the water by sealing the surface with plastic or special sprays (curing compounds).

Special techniques are used for curing concrete during extremely cold or hot weather to protect the concrete. The longer the concrete is kept moist, the stronger and more durable it will become. The rate of hardening depends upon the composition and fineness of the cement, the mix proportions, and the moisture and temperature conditions. Most of the hydration and strength gain take place within the first month of concrete's life cycle, but hydration continues at a slower rate for many years. Concrete continues to get stronger as it gets older.

The Forms of Concrete

Concrete is produced in four basic forms, each with unique applications and properties. Ready mixed concrete, by far the most common form, accounts for nearly three-fourths of all concrete. It's batched at local plants for delivery in the familiar trucks with revolving drums. Precast concrete products are cast in a factory setting. These products benefit from tight quality control achievable at a

production plant. Precast products range from concrete bricks and paving stones to bridge girders, structural components, and panels for cladding.

Concrete masonry, another type of manufactured concrete, may be best known for its conventional 8 x 8 x 16-inch block. Today's masonry units can be molded into a wealth of shapes, configurations, colors, and textures to serve an infinite spectrum of building applications and architectural needs. Cement-based materials represent products that defy the label of "concrete," yet share many of its qualities. Conventional materials in this category include mortar, grout, and terrazzo. Soil-cement and roller-compacted concrete-"cousins" of concrete-are used for pavements and dams. Other products in this category include flowable fill and cement-treated bases. A new generation of advanced products incorporates fibers and special aggregate to create roofing tiles, shake shingles, lap siding, and countertops. And an emerging market is the use of cement to treat and stabilize waste.

Department of
Environmental Resources Management
AIR QUALITY MANAGEMENT DIVISION

AIR PERMIT APPLICATION

INSTRUCTIONS

All information spaces must be completed in full. Submitting this application DOES NOT relieve you of any responsibility for complying with orders issued to you by the **CODE ENFORCEMENT SECTION** or stop or delay any normal enforcement procedures. **Read this application carefully before you begin to fill it out.** Call the **AIR FACILITIES SECTION** at 372-6925, if there are any questions. Please include ALL equipment, operations, procedures, and activities which have a potential to emit air pollutants. Failure to include any potential source of air pollutants could result in after-the-fact enforcement action. Application package should be submitted to the **DERM PLAN REVIEW SECTION, 11805 SW 26th Street, Miami, Florida 33175.**

A. Owner/Authorized Representative

Name and Title of Owner/Authorized Representative: Sergio Abilleira / Mgr

Mailing Address: 5804 Southwest 177th Avenue, Miami, Florida 33193
Organization/Firm: South Florida Concrete Block, LLC

Street Address: 5804 Southwest 177th Avenue

City: Miami State: FL Zip Code: 33193
Telephone: (305) 408-3444 Fax (305) 408-3445

Owner/Authorized Representative Statement:

I, the undersigned, am the owner or authorized representative* addressed in this Air Permit Application. I hereby certify that the statements made in this application are true, accurate and complete. Further, I agree to operate and maintain the facility so as to comply with all applicable standards for control of air pollutant emissions found in Chapter 24, Environmental Protection, of the Code of Miami-Dade County, Florida, and the statutes of the State of Florida and rules of the Department of Environmental Protection. I understand that a permit if granted by the DERM cannot be transferred without authorization from the DERM and I will promptly notify the DERM upon sale or legal transfer.

Signature Date 10/17/08

*Attached letter of authorization if not currently on file.

B. Purpose of Application

This Air Permit application is submitted to obtain (check one):

X Air construction permit for a new facility
[ ] Initial air operation permit for an existing, but previously unpermitted facility
[ ] Initial air operation permit for a newly constructed or modified facility
Current construction permit number: _____
[ ] Air operation permit renewal.
Operation permit to be renewed: _____

C. Application Processing Fee

[ ] Attached - Amount: $ _____ [ ] Not Applicable.

D. Construction/Modification Information

Description of Project
This project consists in the construction and installation of a Batch Interlocking Paver Manufacturing Plant at the Subject Property located at 5804 SW 177th Avenue, Miami, FL.

Date of Commencement of Construction (DD-MON-YYYY): Upon issuance of permit

E. Professional Engineer Certification

Professional Engineer Name: Jose A. Martinez, P.E. Registration No.: 31509
Mailing Address: Post Office Box 161649
Street Address:

City: Miami State: FL Zip Code:33116

Telephone: (305) 279 - 3133 Fax (305) 279 - 3383

Professional Engineer Statement:

I, the undersigned, hereby certify that:
To the best of my knowledge the air pollutant and the air pollution control equipment described in this Air Permit Application, when properly operated and maintained, will comply with all applicable standards for control of air pollutant emissions found in Chapter 24, Environmental Protection, of the Code of Miami-Dade County and in the Florida Statutes and rules of the Department of Environmental Protection.

Signature Date 10/19/08

GENERAL FACILITY INFORMATION

F. Facility Name, Location, and Type

Facility Operator: Sergio Abilleira, Mgr

Facility Name: South Florida Concrete Block, LLC

Facility Street Address: 5804 SW 177th Avenue

City: Miami State: FL Zip Code: 33193

Telephone: (305) 408 - 3444 Fax (305) 408 - 3445

Facility UTM Coordinates:
Zone: _____ East (km): _____ North (km): _____

Facility Latitude/Longitude:
Latitude (DD/MM/SS): _____ Longitude (DD/MM/SS): _____

Property Folio No.: 30-4824-000-0010 Facility Major Group SIC Code: _____

Sewer Service: Miami-Dade WASA Water Supplier: Miami-Dade WASA

FACILITY SUPPLEMENTAL INFORMATION

This subsection of the Air Permit Application form provides supplemental information related to the facility. This information must be submitted as an attachment to each copy of the form. **Two sets of the application package are required.**

G. Supplemental Requirements for ALL Applications

Area Map Showing Facility Location with Plot Plan:	
[x] Attached	[ ] Not Applicable
Facility Elevation Drawing:	
[ ] Attached	[x] Not Applicable
Process Flow Diagram(s):	
[x] Attached	[ ] Not Applicable
Detailed Description of Control Equipment	
[x] Attached	[ ] Not Applicable
Fuel Analysis or Specification	
[ ] Attached	[x] Not Applicable
Fuel Utilization Rate	
[ ] Attached	[x] Not Applicable
Material Safety Data Sheets	
[ ] Attached	[x] Not Applicable
Emissions Calculation	
[x] Attached	[ ] Not Applicable

H. Facility Description

Description
So Fla Concrete Block, LLC is installing a Low Profile Above Grade Interlocking Paver Batch Plant Model 80/ZS as manufactured by Besser. The cement silos are equipped with their corresponding baghouse to insure dust and air quality control.

I. Spraybooth Data

Type: Automotive Floor _____ Bench _____

Booth Dimensions: Wide High Long

Exhaust Filter Area: Ft^2
Exhaust Fan Data:
No. of Fans: dia RPM HP CFM

J. Equipment Data

Package Unit: Besser Paver Batch Plant Model No.: 80/ZS
Manufacturer: Besser Products Serial No.
Generator Nameplate Rating: _____ MW: _____

K. Facility Operating Capacity N/A

Maximum Heat Input Rate: _____ mmBtu/hr: _____
Maximum Process or Throughput Rate: _____
Maximum Production Rate: _____

L. VOC and other Hazardous Air Pollutants See attached calculations

Indicate formulation for all cleaning and coating products and other chemicals compounds which are used in your operation, so that your status as per applicable regulations may be determined. **Use extra sheets as may be required.**

Operation	Chemicals and Solvents	CAS No.	lbs per gals	% Solvent by Weight	Utilization gals per day

M. Facility Operating Schedule: 8 hours/day 5 days/week 50 weeks/year.

N. Seasonal Operation Percentage: 25% Dec-Feb 25% Mar-May 25% Jan-Aug 25% Sep-Nov

Enviroassessments of South Florida, Inc.
Environmental Assessment Consultants

Date: October 18th, 2008

Air Pollution Application for South Florida Concrete Block, LLC,
Interlocking Pavers Manufacturing Plant
Data & Emissions Calculations

Source Name:	South Florida Concrete Block, LLC
Source Address:	5804 Southwest 177th Avenue, Miami, FL 33193
Applicant Name:	Sergio Abilleira as Manager of South Florida Concrete Block, LLC
Applicant Address:	5804 Southwest 177th Avenue, Miami, FL 33193

The Actual Emissions Calculations as well as the Potential Emissions Calculations detailed below are based on data researched from the Portland Cement Association. The average weight for an interlocking pavers unit is assumed to be 5.5 lbs/unit with a volumetric composition as detailed below. The average daily production shall be estimated at 1,250 units/hr.

Our project is equipped with two (2) storage silos. One (1) silo is capable of storing 75 tons of material and the second one is capable of storing 50 tons of material. They are both factory equipped with baghouses for dust control and they each have seven (7) filtering bags offering a total bag or filter area of 528 sq ft. These baghouses are rated at efficiency higher than 99.9%; consequently we have calculated a 0.05% emission rate, as shown below.

Concrete Mixture	%	Lbs/Unit	Lbs/Day Max	Emissions/Day
Air	6	0.33		
Portland Cement	11	0.61	763	0.38
Course Aggregate-	41	2.25	2,813	
Fine Aggregate - Sand	26	1.43	1,788	
Water	16	0.88	1,100	
		5.50	6,462	0.38

Actual Emissions Calculations (TPY)

(0.38 lbs/day) (5 days/week) (50 weeks/yr) / (2,000 lbs/Ton) = 0.05 TPY

Potential emissions calculations (TPY)

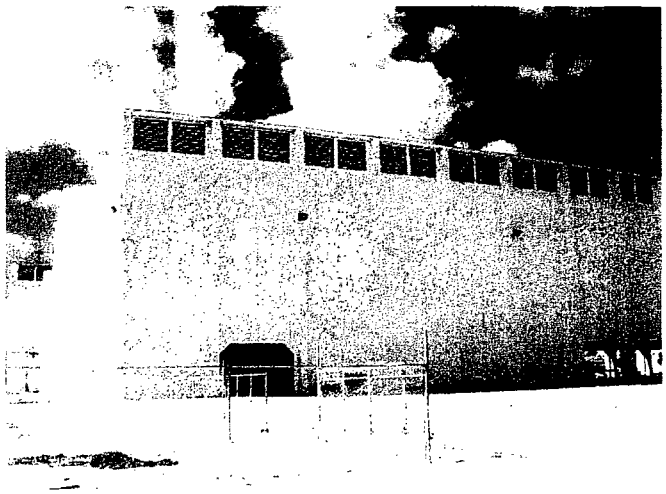
(0.38 lbs/day) (3) (365 days/yr) / (2,000 lbs/Ton) = 0.21 TPY

Post Office Box 161649, Miami, Florida 33116 * Tel (305) 279-3133 * Fax (305) 279-3383

1.00 Plant & Process Description.

1.01 General Information.

This application is composed of two (2) manufacturing plants for South Florida Concrete Block, LLC "SFCB" at the same Subject Property located at 5804 Southwest 177th Avenue, Miami-Dade County, Florida and within the same structure. One is a CBS block manufacturing plant while the second one is an interlocking pavers manufacturing plant. This Process Description corresponds to the interlocking pavers manufacturing plant. The Subject Property currently has several existing buildings which use to house Lehigh Cement Plant and are presently unused. These buildings are presently served with water and sanitary sewer facilities owned and operated by Miami-Dade County WASA, Florida. The interlocking pavers manufacturing plant will be located at the southern portion of the Main Building (5804) within the Subject Property.



Interlocking pavers manufacturing plants are a critical and integral part of the necessary infrastructure of one of the major industries in Miami-Dade County, more specifically, the construction industry. Interlocking pavers are utilized in all types of construction ranging from residential to industrial and commercial and at the present time this plant will be providing an invaluable service to this area. The location of the Subject Property is of primary importance since items such as the impact of noise and vibrations on its surroundings make their location an important feature. The location of the proposed plant itself within the Subject Property accomplishes the proposed attenuation necessary for this installation particularly since this location is surrounded by agricultural lands in all directions making this location ideal for this purpose since there are no noise sensitive zoning uses (residential properties, schools, office and commercial buildings) within the immediately surrounding properties.

The orientation of the proposed interlocking pavers manufacturing plant within the Subject Property is also important. Wind is a major consideration for said orientation although in this particular case the location of the Subject Property, as stated above, is surrounded by agricultural lands in all directions making this location ideal for this purpose. Notwithstanding these facts, the stockpiles of sand and/or aggregated will be located within the existing Main Building at the Subject Property. Additionally, these stockpiles of sand and aggregates will be furnished with a sprinkler system to be used to control dust particles. Finally, the existing paving and drainage system presently serving the Subject Property will be used and they will not be affected by this installation. The required electrical, potable water supply as well as sanitary sewer facilities are existing at the site and are presently serving the entire Subject Property.

1.02 Process Description.

Interlocking pavers are produced almost universally because of their, simple design, high quality and the ever present demand for economical building materials. Many times local materials can be used making these plants very desirable for the community.

The raw materials used to produce interlocking pavers are cement, sand, aggregates and coloring powders. These raw materials are usually delivered to the plant site via railroad or truck. Upon arrival, the cement is transferred into a storage silo equipped with baghouses to insure a clean operation. Likewise, the sand and aggregates are usually stockpiled in the yard for use as required. Dust control, as stated above, is achieved by regular sprinkling of water on these piles. Our project is equipped with two (2) storage silos. One (1) 75 ton capacity silo to store gray cement and one (1) 50 ton capacity silo to store white cement. They are both factory equipped with a baghouses for dust control. They are both factory equipped with each using a baghouse with seven (7) bags offering a total bag or filter area of 528 sq ft.

Aggregates used to produce interlocking pavers include sand, gravel and crushed stone. Sand and gravel may be naturally produced or produce by crushing the existing stone. Lightweight aggregates can reduce the weight of the interlocking pavers without seriously affecting their structural capabilities; however, these light aggregates cost more consequently it will affect the final price of the unit.

Raw materials from the silos and the yard are transported by weight and transport conveyors to a batch machine in order to insure product consistency and quality control. The raw materials are sent to the mixer for dry mixing and once the desired mix is achieved water is added, again carefully measured in order to insure the proper consistency. Our plant will use the Skako Apollo Counter Current Mixer – Type 2250 which produces a high quality concrete mix, the most critical element in the interlocking pavers' production. Skako Apollo Counter Current

1.02 Process Description (cont.).

Mixers are among the most efficient mixers in today's market. These mixers are simple to operate and require less maintenance than previous models; thus minimizing the human touch and consequently the potential for lack of lubrication, spills and pollution.

The mixed concrete is transferred via transport conveyors to the Zenith Model 844 interlocking pavers manufacturing equipment, where mixed concrete is fed into molds that vary in shape and sizes. Once the interlocking pavers leave these molds they are removed from the wet pavers' conveyor and laid out to cure and dry. The location of these curing / drying areas may vary according to their geographic location. In colder climates a kiln or curing chamber is required; however, in warmer climates the interlocking pavers are placed in the open air to dry for a period of 12 to 24 hours. Once cured, they are removed from this area and taken to a processing area where these units are cubed or palletized and placed in storage.

The equipment scheduled maintenance has been minimized with their automatic lubrication where precisely measured amounts of lubricants are automatically supplied to key bearings and pins, thus eliminating the human touch and consequently the potential for lack of lubrication, spills and pollution. Additionally, SFCB will be using Form-EZE Natural as manufactured by The Euclid Chemical Company. This product is a natural biodegradable form release which provides an environmentally friendly manner of quick and easy release of CBS blocks. This form release product will be purchased in 55 gals drums and stored in one of the two (2) 8 drum spill containment pallets as shown in the attached Exhibit. A maximum of two (2) 55 gallons drums will be in inventory at any times. Rags used in this process will be stored in one (1) 55 gallons drum for disposal by Safety Kleen and/or an approved IW hauler at the drum spill containment pallet shown in the attached exhibit.

1.03 Environmental Design Considerations.

There are four (4) major Environmental Design Considerations for this project and they are as follows:

Air Quality
Equipment Maintenance & Repair and Fuel Storage
Industrial Wastewater Runoff and
Noise

1.03.1 Air Quality.

Air Quality is an environmental design consideration and since this project will require permitting from Miami-Dade County Environmental Resources Management Office "DERM" Air Section, we have filled out DERM's Air Permit Application for submittal, review and approval of this project.

Our project is equipped with two (2) storages silo capable of storing 75 and 50 tons respectively of material. They are factory equipped with identical baghouses for dust control. Each unit's baghouse has seven (7) bags with a total bag area of 264 sq ft. These units draw in the dusty air with an electric blower into a single filter bags compartment above the silo. To clean, the filter bags are shaken by an electric shaker assembly set on a timer. Daily and weekly observation of the exhaust air, pressure indicators, bag connections and exhaust fan will assist the owners in a safe and acceptable operation.

Aggregates used to produce CBS blocks shall be stockpiled at the site and a sprinkler system will be provided for dust control of said stockpiles.

1.03.2 Equipment Maintenance & Repair and Fuel Usage.

There will be no fuel storage at the site. The small amount required for some of the equipment being used will be serviced by a fuel truck contracted to provide said service. They will provide the necessary fuel as required and leave the premises. We will submit DERM's IW5 Permit Application for review and approval detailing our projected consumption and their origin and destination prior to obtaining a Certificate of Use. In keeping with the mandates of DERM's EQCB Order No. 04-31 recorded on April 4th, 2004 in the Public Records of Miami-Dade County, all oil, grease, transmission fluid, mold release and/or mineral spirits used as cleaner fluid required will be provided by outside contractors as required in a similar manner as the fuel.

1.03.2 Equipment Maintenance & Repair and Fuel Usage.

Any waste generated by incidental spills shall be stored in 55 gals drums stored on top of spill containment pallets equipped with a sump area capable of retaining an accidental spill as well as a removable steel grating for easy maintenance. These pallets will be those manufactured by P & D Solutions Corporation Model K17-3105 as detailed in the attached Exhibit and/or an approved equal. A maximum of three (3) 55 gallons drums will be in inventory at any time.

Each pallet is capable of holding 135 gallons of liquid material in a spill event. Additionally, each pallet is surrounded by a 6" high concrete berm to be used as secondary containment for accidental spills and this secondary containment is capable of holding an additional 450 gallons.

In addition to the plant's equipment, SFCB will use auxiliary equipment for handling of materials. SFCB will have two (2) front end loaders for this purpose. The maintenance and repair of the plant's equipment as well as these two (2) loaders will be performed outside the

1.03.2 Equipment Maintenance & Repair and Fuel Usage (cont.)

Subject Property and no maintenance, repair and/or equipment wash down will be done on site. Only cleaning of dry materials from the plant's equipment will be done at the site and the rags used will be properly disposed off in a 55 gallon drum to be removed regularly by Safety Kleen and/or an approved IW hauler.

1.03.3 Industrial Wastewater Runoff.

The project's Industrial Wastewater has also been an environmental design consideration; however, this project's only water usage is that which is added to the mixed solids at the beginning of the manufacturing process. Although this facility is connected to the existing sanitary sewer facilities no industrial wastewater will enter said sanitary sewer facilities as a part of this project.

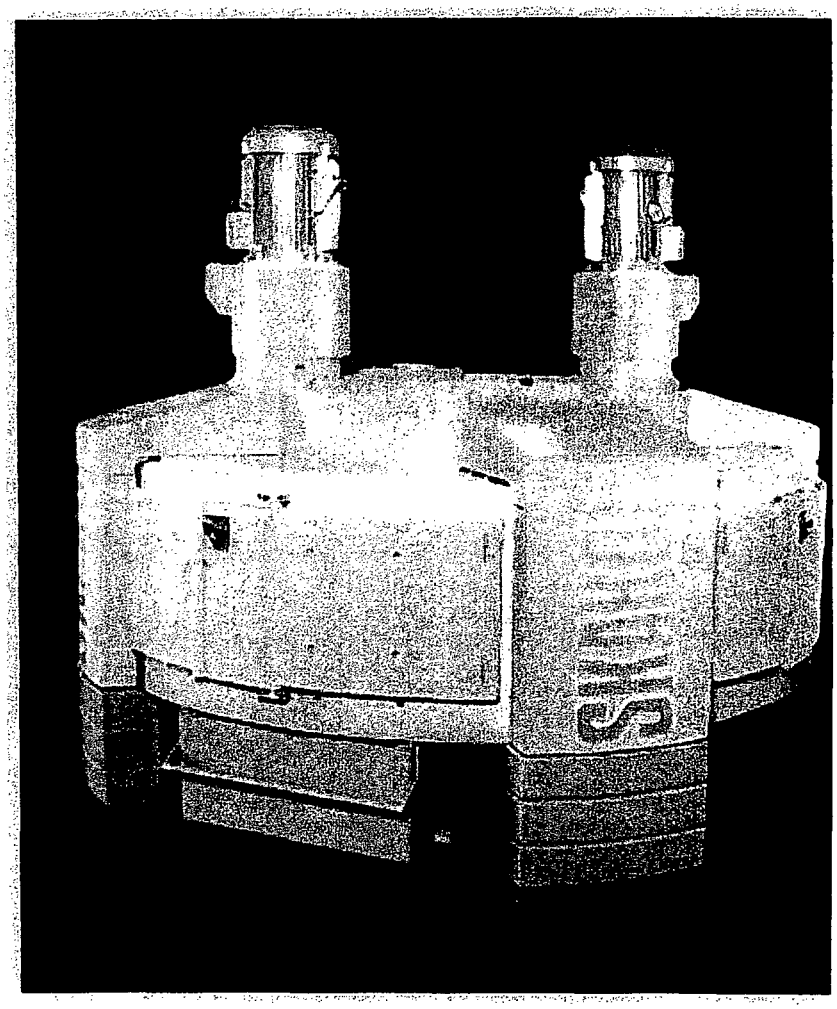
1.03.4 Noise.

Noise is an environmental design consideration; however, an evaluation of the specifics of this project clearly shows that there should be no environmental concerns arising from this project on this respect. The proposed interlocking pavers manufacturing plant has been located at the best location possible within the Subject Property, which is located within an industrial area with no residential neighborhoods in its immediate surroundings. These adjacent industrial properties are located sufficiently far away so that there should be no environmental concerns arising from this project.

SKAKO APOLLO

New counter-current mixer

Quicker, cleaner and safer



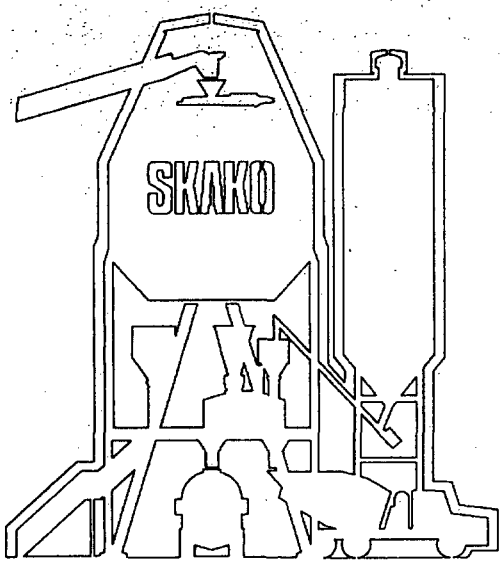
Concrete results:
The new APOLLO mixer's new advanced shovel technology maximizes the production of high quality, homogeneous concrete

SKAKO®

-more than a partn

SKAKO delivers concrete results

Concrete is one of the basic building blocks of strong communities. Made from 100% natural materials, it forms the foundations of the homes, businesses and major infrastructure projects that communities depend on to live comfortably and prosper.



SKAKO develops the technology and provides the services that make it easier for people to perform better and produce higher quality concrete so essential to best practices today.

SKAKO is one of the world's largest suppliers of complete concrete batching plants for ready-mix concrete, precast concrete and concrete elements.
Our batching plants are under continuous development to ensure we deliver the most efficient capital equipment and plant possible.

SKAKO understands that in today's production environment, productivity improvements and downtime reduction are on the top of every company's priority list. SKAKO concrete mixers are engineered to perform flawlessly under all conditions.

SKAKO equipment and solutions are your guarantee for long lifetime, safety, efficiency, and concern for communities and the environment.

SKAKO®

-more than a partner

Quicker, cleaner and safer

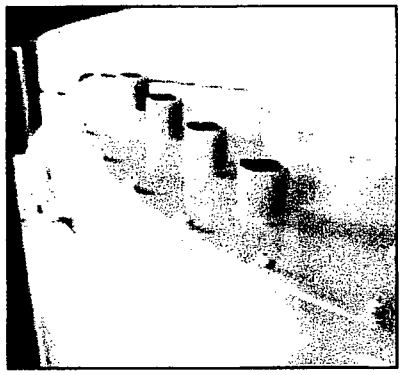
APOLLO is packed with features designed to increase productivity and produce more thorough mixes in shorter mixing times.
So much so, it is also developed to make new types of concrete such as self-compaction concrete.
Details like the placement and size of the discharge gate speed up the emptying process up to 23%.
Other features, like the rounded corners instead of sharp edges inside the mixer, also make a big difference. This design keeps concrete from getting trapped and prevents old concrete from being mixed in with the new batch. There is also a safety system for the hatch opening that enhances worker safety.
Moreover, it makes it possible to use an optional high-pressure automatic cleaning unit so the need for manual cleaning can actually be eliminated and total cleaning time can be reduced by up to 50%.
We've also given much thought to reducing lifecycle costs. The APOLLO mixer will need fewer manpower hours and less service during its lifetime, for instance wear part bolts are easy to mount and dismount. It is also designed for energy efficiency; the larger the model the greater the savings.
Altogether, the new features will contribute to increased productivity, lower operating costs and better safety.

The new APOLLO counter-current mixer raises productivity significantly

- Less manp needed du lifetime
- Up to 50% cleaning ti
- Up to 23% dischargin
- Shorter cy times
- Up to 19% savings on energy consumpti
- Lower ope and mainte costs
- Side-moun hatches fo easy acces
- Fast replac of wear pa
- Excellent visibility
- Self-lubric gear in oil

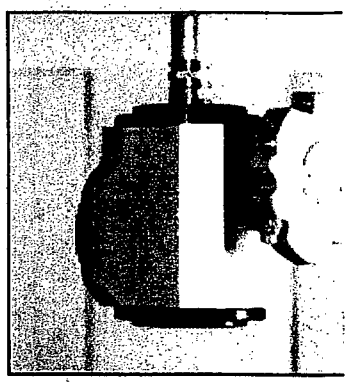
The high-pressure cleaning unit has a rotating cleaning head. The head spools the inside of the mixer with a high-pressure stream of water to dislodge any debris.
The mixer is turned on during cleaning so the shovels scrape the wall free of clinging concrete. After it stops, just empty and the job is done.

Water proportioning device enables the addition of water during production. Different models available for different types of concrete.

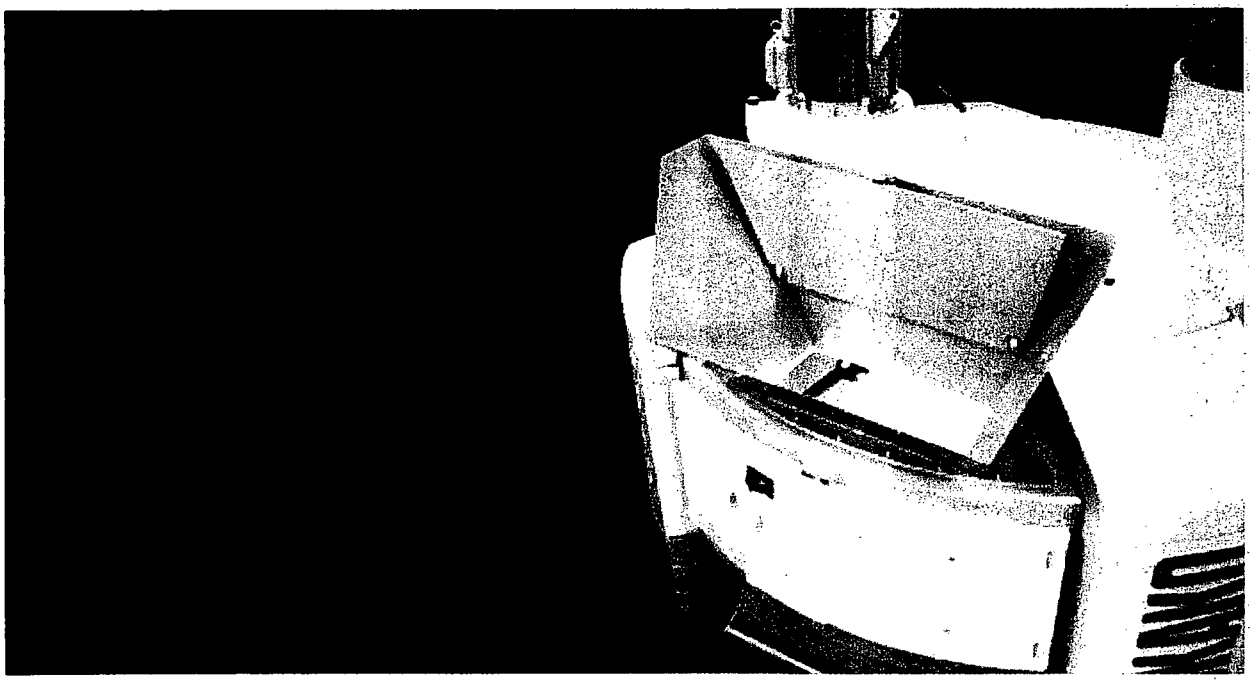


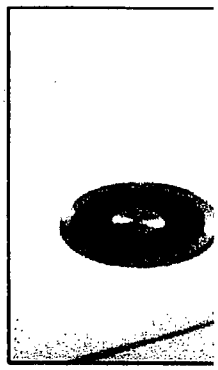
Mixer design ensures placement of inlets easily adaptable to individual customer requirements.

High-pressure cleaning system eliminates the need for manual cleaning of the inside of mixer.



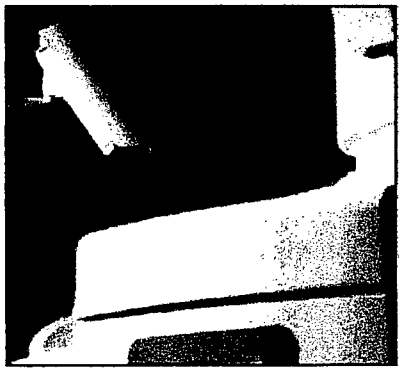
Automatic dust gate protects work environment against dust.

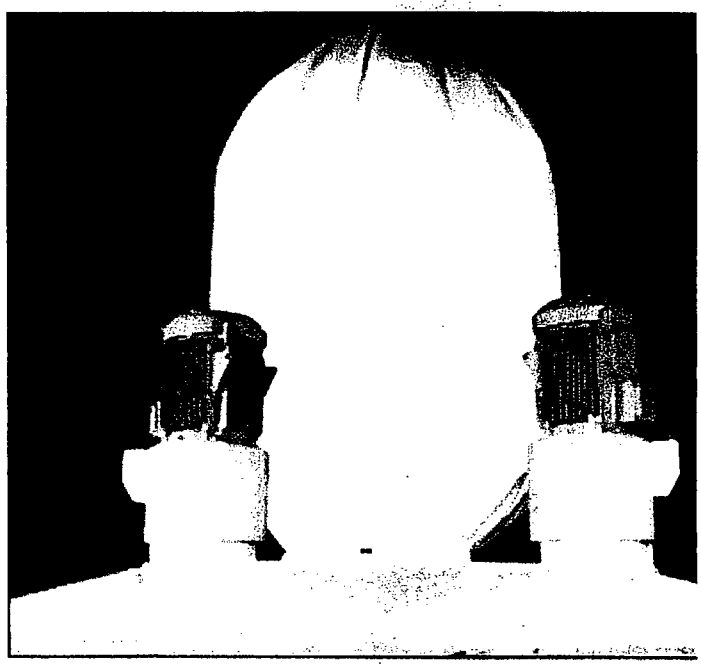




Electrodes mea humidity i concrete automatically reg additions of wate SKAKOMAT

Remote camera surveillance for monitoring mixing process from the control room.





Anti-dust airbag system prevents the dust from entering the work environment

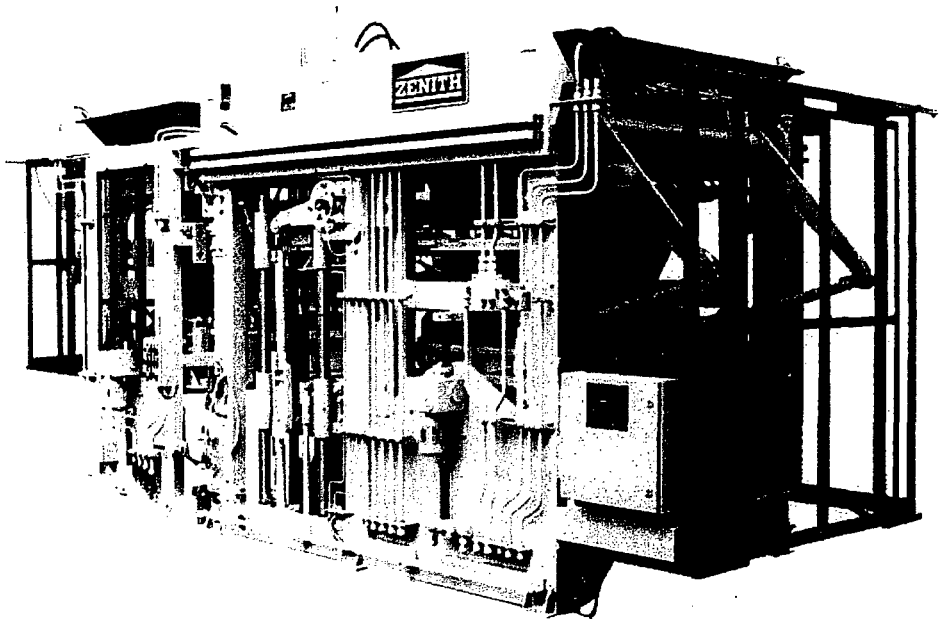
ZENITH

Model 844 - the perfect multilayer production

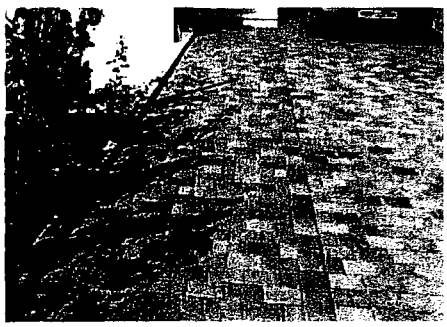
Worldwide the best in economical concept for the mass production of interlocking pavers and similar products of top quality. Model 844 is a stationary multilayer machine. The result of decades of research using the most modern technology. Performance at high level with simple handling and very low maintenance.

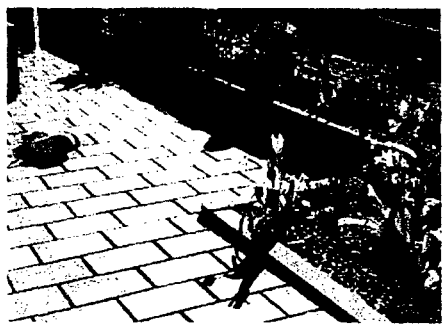
Designed for products ranging from 50 mm to 500 mm. With model 844 pavers are produced as easy as curbstones or landscaping products.

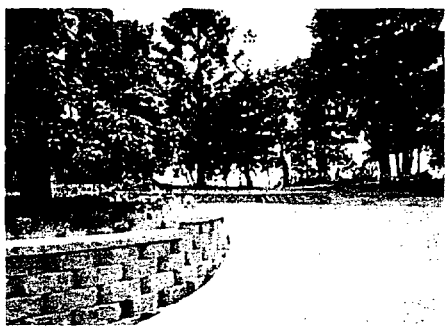
Using modular components, the production sequence can be fully automated to final cubes – ready for transport. Storage systems with robot for curing are the perfect answer. In addition, consolidating stations are available to match shipping requirements. Step by step the manufacturing system can be expended to a fully automatic production line. The ZENITH team will provide full assistance during an early stage to ensure your success, based on fifty years of experience. ZENITH – partner to the best.



Model 844: Perfection in production of horizontal market segments and landscaping.







ZENITH

Model 844: Technical Details

Model	**844 AZ**
Features	
Automation	fully automatic
Max. block height	500 mm
Min. block height	50 mm
Cube height	
Max. cube height	640 mm
(Max. cube height - option)	800 mm
Max. production area	1240 x 1000 mm
Production Pallet (standard)	1270 x 1050 mm
Min. height of pallet	125 mm
Max. height of pallet	140 mm
Back concrete hopper	
Volume	approx. 2100 l
Max. feeding height (cube height 640 mm)	3900 mm
Max. feeding height (cube height 800 mm)	4085 mm
Hard face hopper	
Volume	approx. 2100 l
Max. feeding height	same as back concrete hopper
Machine weight:	
With hard face unit	approx. 14.000 kgs
Roller and pusher conveyor, operating platform, hydraulic station, pallet retainer etc.	approx. 9.000 kgs
Machine dimensions	
Max. total length	6200 mm
Max. total height	3000 mm
Max. total width	2470 mm

Machine Data/power supply	
Vibration system:	
Vibrating table	two part
Table vibrator 3,0 kW	4 units
Tamper head vibrator 1,5 kW	4 units
Hydraulics:	
System: multi circuit medium pressure	
Pump: multistar piston pump	3 units
Capacity (total)	approx. 180 bar
Max. operation pressure	approx. 83 l/min.
Electric	
Max. power	approx. 48 kW
Max. consumption at 400 V/50 Hz	approx. 105 A
Control system (Siemens)	S7-400
Control equipment: OP170 (option WinCC)	

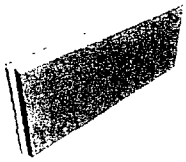
Technical details are subject to changes - without prior notice. Pictures of equipment shown are examples only. Photos may include optionals as per customer's demand.

Model 844: Example of products

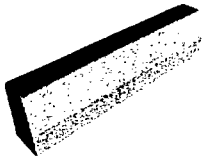
Horizontal segment

(interlocking) paver

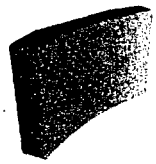
ecological paver



garden curb



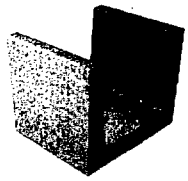
curbstone



water duct block

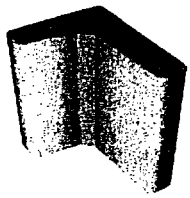
gutter block

Landscaping



U-block

wall retainer unit



L-shape block

: Leo Carrillo
E.S.F.I.
P.O. Box 161649
Miami, FL 33116

United States Postal Service®
DELIVERY CONFIRMATION™

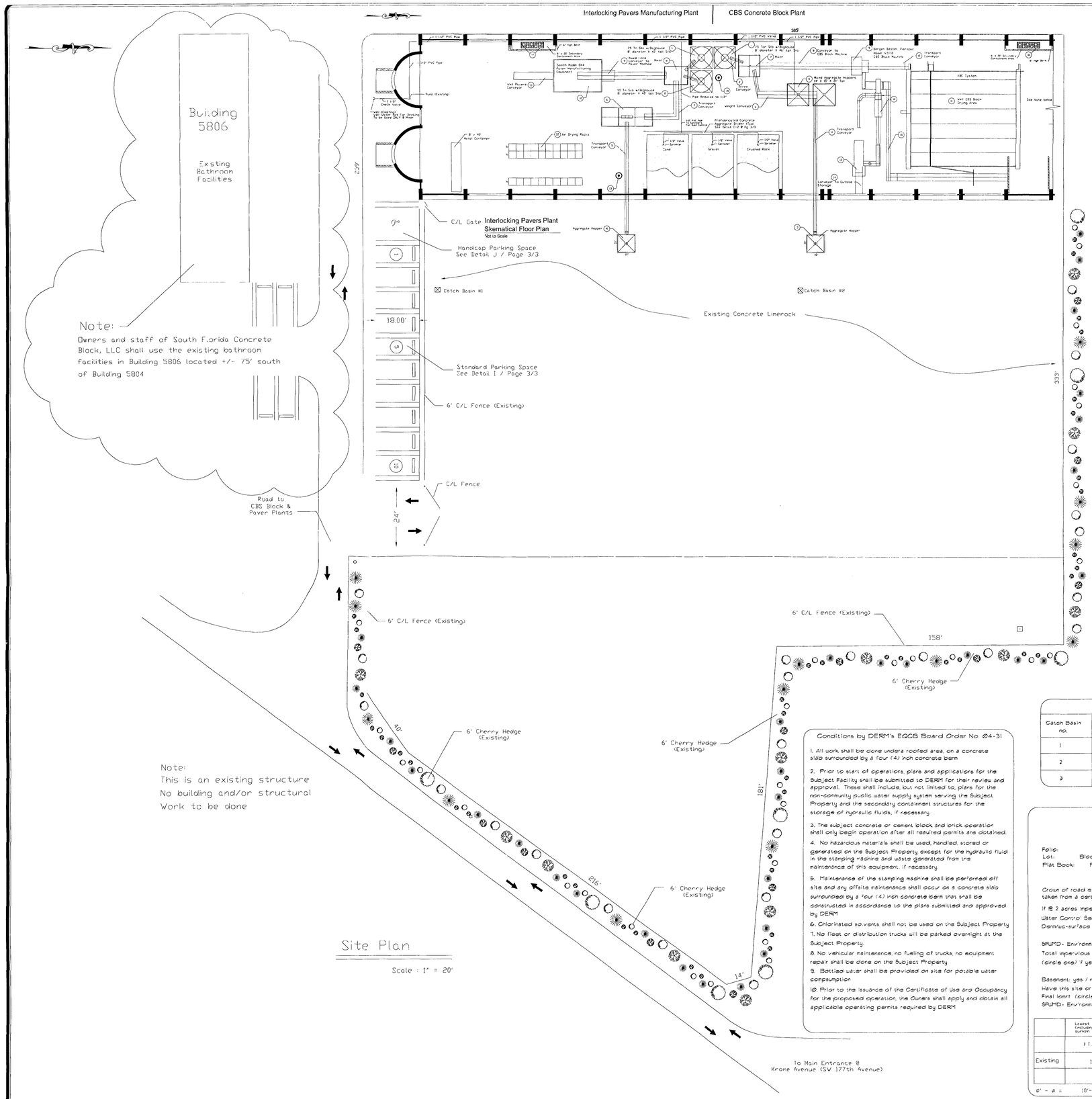
0308 2690 0000 6119 7534

UNITED STATES POSTAL SERVICE
0000
32315
U.S. POSTAGE PAID MIAMI, FL 33116 MAR 24 '03 AMOUNT
$4.95
00010898-1

UNITED STATES POSTAL SERVICE
0000
32315
U.S. POSTAGE PAID MIAMI, FL 33116 MAR 24 '03 AMOUNT
$0.65
00010898-17

PRIORITY® MAIL
POSTAL SERVICE
.com

TO: State of Florida
Dept of Environmental Protection
Post Office Box 3070
Tallahassee, FL
32315 - 3070



Current Zoning:		Industrial IU-1
Proposed Zoning:		Industrial IU-1
Gross Area:	152,850 sq ft	3.50 Acres
ROW Area	0 sq ft	0.00 Acres
Net Area:	152,850 sq ft	3.50 Acres
Preserved & Retention Areas:	0 sq ft	0.00 Acres
Net Usable Area:	152,850 sq ft	3.50 Acres
Net Usable Area:	152,850 sq ft	100.0%
Building Area - Footprint:	15,600 sq ft	10.2%
Ingress & Egress:	3,170 sq ft	2.0%
Parking Area:	18,200 sq ft	11.9%
Pedestrian Walks:	170 sq ft	0.1%
Green Space (Pervious Area):	114,810 sq ft	75.2%

	ALLOWED	PROVIDED
Floor Area Ratio:		
Lot Coverage:		
Building Height:		
Number of Stories:		
Total Building Area:		15,600 sq ft
Parking: 1.0 Parking Spaces per Worker, Ten (10) Workers @ Site		5 Spaces
Total Spaces Required:		5 Spaces
Handicap Spaces Provided:		1 Space
Standard Spaces Provided:		10 Spaces
Total Spaces Provided:		11 Spaces
Front Setback:		
Rear Setback:		
Side Setback (West Boundary)		
Side Setback (East Boundary)		

LANDSCAPE LEGEND

Gross Land Area 152,850 sq ft or 3.50 Acres
Net Land Area 152,850 sq ft or 3.50 Acres
Preserved and Retention Area 0 sq ft or 0.00 Acres
Usable Land Area 152,850 sq ft or 3.50 Acres

		REQUIRED		PROVIDED
Landscaped Open Space Area	100.0% of Usable Land Area	100.0% 15,285 sq ft 3.35 Acres		100.0% 15,285 sq ft 3.35 Acres
Lawn Area (As Defined in Ordinance)	60.0% of Required Open Space	20.0% 3,057 sq ft 0.07 Acres		20.0% 3,057 sq ft 0.07 Acres
Trees - Lot Trees - Street Trees - Total No. of Trees	15/Acre 1/35 L.F. @ R/W	53 Trees 11 Trees 64 Trees		55 Trees 15 Trees 70 Trees
Shrubs	10 Shrubs per tree req'd	640 Shrubs		700 Shrubs
Parking Spaces	See Site Calculations			

TREES

- Type "A" Native Species
- Type "B" Non Native Species
- Hose Bibs For Irrigation

Legend

Catch Basin no.	Rim Elev.	Invert Elev. North	Invert Elev. South
1	9.27'	4.72'	
2	9.03	4.29'	4.51'
3	9.20'	4.20'	4.25'

Conditions by DERM's EQCB Board Order No. 04-31

1. All work shall be done under a roofed area, on a concrete slab surrounded by a four (4) inch concrete berm
2. Prior to start of operations, plans and applications for the Subject Facility shall be submitted to DERM for their review and approval. These shall include, but not limited to, plans for the non-community public water supply system serving the Subject Property and the secondary containment structures for the storage of hydraulic fluids, if necessary.
3. The subject concrete or cement block and brick operation shall only begin operation after all required permits are obtained.
4. No hazardous materials shall be used, handled, stored or generated on the Subject Property except for the hydraulic fluid in the stamping machine and waste generated from the maintenance of this equipment, if necessary.
5. Maintenance of the stamping machine shall be performed off site and any offsite maintenance shall occur on a concrete slab surrounded by a four (4) inch concrete berm that shall be constructed in accordance to the plans submitted and approved by DERM
6. Chlorinated solvents shall not be used on the Subject Property
7. No fleet or distribution trucks will be parked overnight at the Subject Property.
8. No vehicular maintenance, no fueling of trucks, no equipment repair shall be done on the Subject Property
9. Bottled water shall be provided on site for potable water consumption
10. Prior to the issuance of the Certificate of Use and Occupancy for the proposed operation, the Owners shall apply and obtain all applicable operating permits required by DERM

Flood Legend
Commercial Industrial

Folio:
Lot: Block: Subdivision:
Plat Book: Pg: Meets & Bound

Crown of road elev.: 9.99' Ft. NGVD. Crown of road elevation was taken from a certified survey prepared by: Raul Izquierdo, Pls lic.# 6099

If @ 2 acres impervious plans shall be stamped with the DERM / Water Control Section approval
Dermwc-surface water management stormwater permit

SFWMD- Environmental Resources Permit
Total impervious area: Underground parking: yes/ no
(circle one) if yes, floodproofing plans and certificate shall be attached

Basement: yes / no (circle one)
Have this site or other portions of this property been granted a clear or Final letter? (circle one) yes (one#) no
SFWMD- Environmental Resources Permit (copy attached)

	Lowest Floor Elevation (including basement and sunken areas)	Adjacent Grade Elevation (next to the wall of the structure)	Catch Basin Elevation
	F.T. NGVD	F.T. NGVD	F.T. NGVD
Existing	11.59'	11.29'	9.27'

Ø' - Ø = 10'-2' NGVD

TREE SCHEDULE

NEW	EXIST.	SCIENTIFIC	COMMON	NATIVE SPECIES	MAXIMUM HEIGHT
X		Bursera Simaruba	Gumbo Limbo	Yes	10'-12'
X		Conocarpus Erectus	Green Buttonwood	Yes	10'-12'
X		Bucida Bucerhus	Blackolive	Yes	10'-12'
SHRUB SCHEDULE					
X		Chrysobalnus Icaco	Cocoplum	Yes	18"-24"X18"
X		Pychotria Ligusrtifolia	Bahama Wild Coffee	No	3'-4'
GROUND COVER (LOW GROWING PLANTS)					
X		Anthurium Andraeanum	Flamingo Flower	No	1'-2'
X		Hymenocallis Latifolia	Spider Lily	No	2'-3'
LAWN SCHEDULE					
X		Stenotaphrum Secundatum	St. Augustine Grass	No	2"
GROUND COVER					
X			Mulch	No	

E So Fla Inc
Enviroassessments of South Florida, Inc.
A Professional Engineering Firm
Certificate of Authorization No. 8843
Post Office Box 161649
Miami, FL 33116
Tel 305-279-3131
Fax 305-279-3381

RECORD OF REVISION

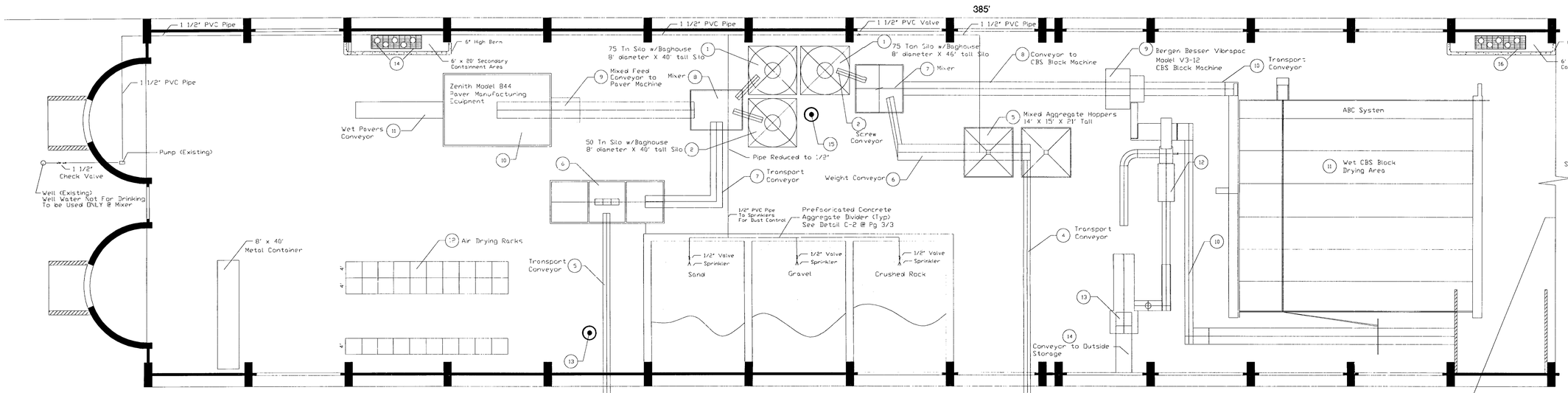
No.	Date	Description	By	App
1	01/08	Add Detail C-2 Aggregate Divider	LLC	JAM
2	01/08	Structural Detail for Wall Opening	JAM	JAM
3	02/08	Revise Site Information	JAM	JAM

Jose A. Martinez P.E. Registration No. 31509

PROJECT NAME: South Florida Concrete Block, LLC
PROJECT ENGINEER: Jose A. Martinez, P.E. Registration No. 31509
TYPE OF PROJECT: Proposed Site Plan
CLIENT/ADDRESS: 5804 Southwest 177th Avenue, Miami, FL.
PROJECT ADDRESS: 5804 Southwest 177th Avenue, Miami, FL.

DESIGNED : JAM	DRAWN BY: RZ
CHECKED : JAM/LLC	SCALE : As Shown
DATE: Aug/07	PROJ.
SHEET : 1 OF 3 SHEETS	

Interlocking Pavers Manufacturing Plant | CBS Concrete Block Plant



Interlocking Pavers Plant Skematical Floor Plan

Not to Scale

CBS Concrete Block Plant Skematical Floor Plan

Not to Scale

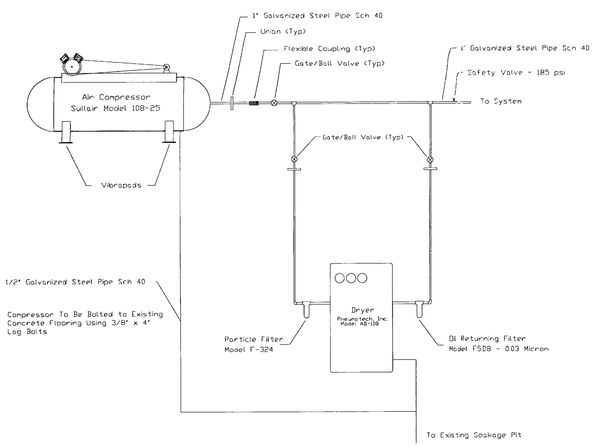
Note:
South Florida Concrete Block, LLC will be operating in Building 5804. In the event that another tenant were To occupy any space in Building 5804, the Owner will apply For a permit to construct a Tenant Separation Wall and Will construct same in accordance to Miami-Dade County Specifications at their sole cost and expense.
See attached letter

LEGEND

1	75 Tn Gray Cement Silo
2	50 Tn White Cement Silo
3	Cement Screw Conveyor
4	Aggregate Hopper
5	Transport Conveyor
6	Tri Compartment Mix Aggregate Hopper
7	Transport Conveyor
8	SKAKO APOLLO Counter Current Mixer - Type 2250
9	Mixed Feed Conveyors
10	Zenith Model 844 Paver Manufacturing Equipment
11	Wet Pavers Conveyor
12	Air Drying Racks
13	Air Compressor
14	Spill Containment Pallet w/Drums

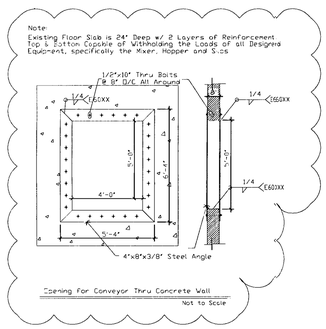
LEGEND

1	75 Tn Cement Silo
2	Cement Screw Conveyor
3	Aggregate Hopper
4	Transport Coveyor
5	Mixed Aggregate Hopper
6	Transport / Weight Coveyor
7	Besser Enhanced Single Shaft Mixer Model 80
8	Transport Coveyor
9	Besser Vibrapac V3-12 Block Machine
10	Transport Conveyor to ABC System
11	Wet CBS Block Drying Area
12	Block Turnover
13	SI - 7 Cuber
14	Transport Conveyor
15	Air Compressor
16	Spill Containment Pallet w/drums



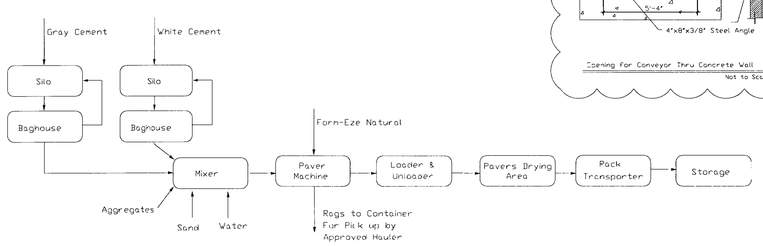
Air Compressor Detail

Not to Scale



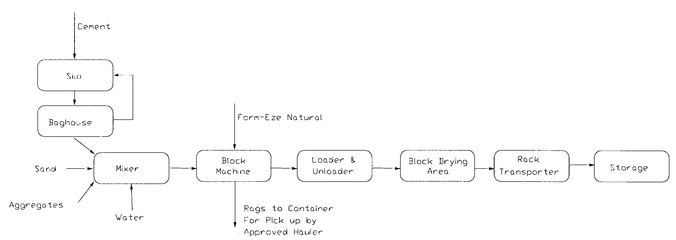
Opening For Conveyor Thru Concrete Wall

Not to Scale



Interlocking Pavers Plant Flow Diagram

Not to Scale



CBS Concrete Block Plant Flow Diagram

Not to Scale

E So Fla Inc

Enviroassessments of South Florida, Inc.
A Professional Engineering Firm
Certificate of Authorization No. 5843

Post Office Box 161649
Miami, FL 33116
Tel 305-279-3133
Fax 305-279-3383

RECORD OF REVISION

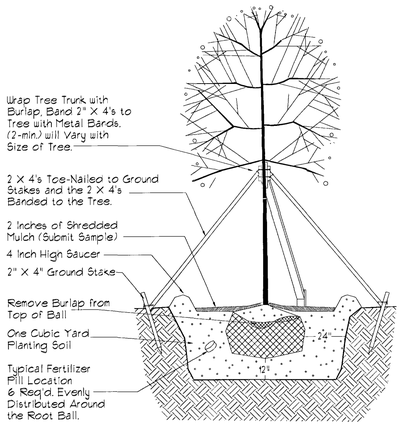
NO	DATE	DESCRIPTION	BY	APP.
1	01/08	Add Detail C-2 Aggregate Divider	LLC	JAM
2	01/08	Structural Detail for Wall Opening	JAM	JAM
3	02/08	Revise Silo Information	JAM	JAM

Jose A. Martinez Registration No. 31509

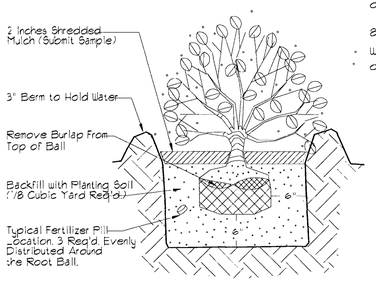
PROJECT NAME: South Florida Concrete Block, LLC
PROJECT ENGINEER: Jose A. Martinez, P.E. Registration No. 31509
TYPE OF PROJECT: Equipment Layout & Legend
CLIENT/ADDRESS: 5804 Southwest 177th Avenue, Miami, FL
PROJECT ADDRESS: 5804 Southwest 177th Avenue, Miami, FL

DESIGNED : JAM	DRAWN BY: RZ
CHECKED : JAM/LLC	SCALE : As Shown
DATE: Jan/07	PROJ.

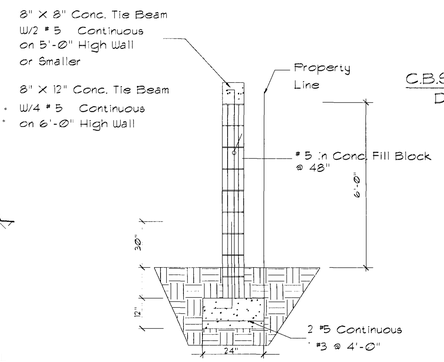
SHEET : 2 OF 3 SHEETS



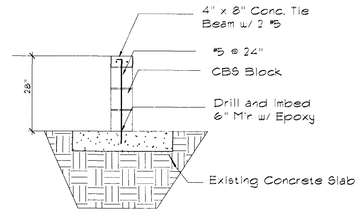
TREE PLANTING DETAIL
DETAIL A



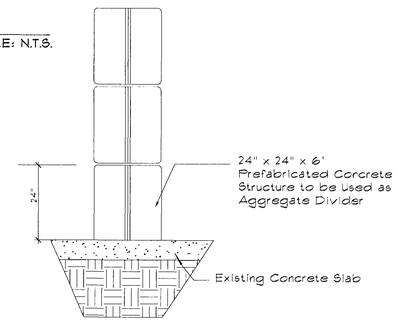
SHRUB PLANTING DETAIL
DETAIL B



C.B.S. WALL DETAIL
DETAIL C SCALE: N.T.S.

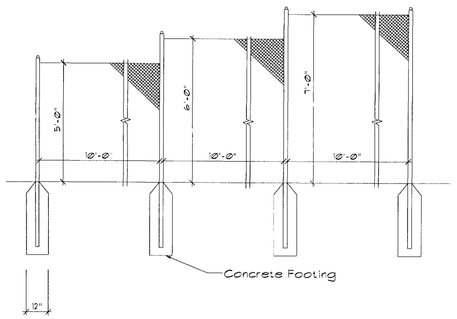


C.B.S. WALL DETAIL
DETAIL C-1 SCALE: N.T.S.

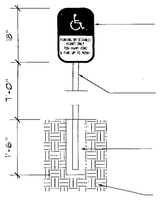


AGGREGATE DIVIDER DETAIL
DETAIL C-2 SCALE: N.T.S.

Detail of Typical Chain Linked Fence For Large Estates, Industrial Installation, Schools, and Institutions Barbed Tops are Often Used



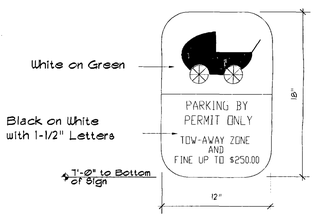
FENCE DETAIL
DETAIL D SCALE: N.T.S.



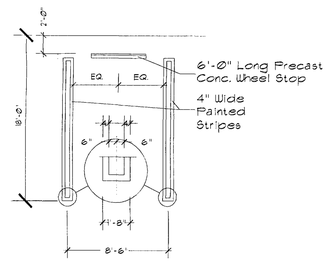
International'ly Approved Sign. White Symbol on Blue Background
1±1/2" Black Letters on White Background
1-3/4" O.D. Conc. Filled Galv. Mtl. Pipe Pain Color Selected by Architect
6" X 16" Deep Non-Shrink Expoxy Grout Footing W/ 2 Welded #3 Bars
4" Long Compacted Fill

SIGN INSTALLATION
SCALE: N.T.S.
DETAIL F

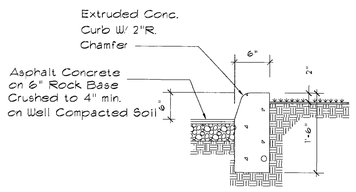
HANDICAP PARKING SIGN
SCALE: N.T.S.
DETAIL G



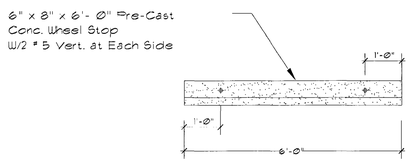
BABY STROLLER PARKING SIGN
SCALE: N.T.S.
DETAIL H



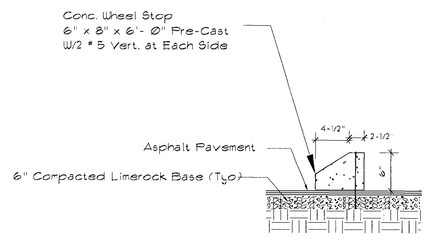
STANDARD PARKING STALL
DETAIL I SCALE: N.T.S.



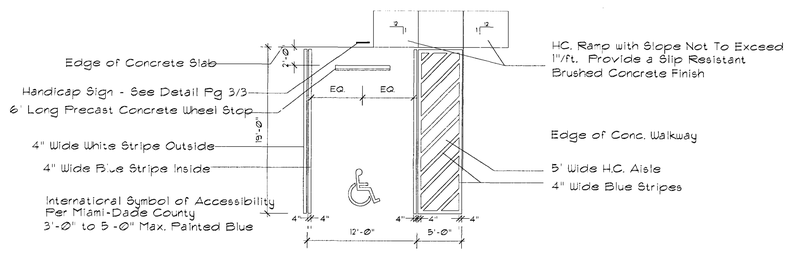
CONCRETE CURB
DETAIL K SCALE: N.T.S.



WHEEL STOP PLAN
DETAIL L SCALE: N.T.S.



WHEEL STOP SECTION
DETAIL M SCALE: N.T.S.



HANDICAP PARKING STALL
DETAIL J SCALE: N.T.S.

E So Fla Inc
Enviroassessments of South Florida, Inc
A Professional Engineering Firm
Certificate of Authorization No 8843
Post Office Box 161649
Miami, FL 33116
Tel. 305-279-3133
Fax 305-279-3382

RECORD OF REVISION

NO.	DATE	DESCRIPTION	BY	APP.
1	01/08	Add Detail C-2 Aggregate Divider	LLC	JAM

PROJECT NAME: South Florida Concrete Block, LLC
PROJECT ENGINEER: Jose A. Martinez, P.E. Registration No. 31509
TYPE OF PROJECT: Standard Details
CLIENT/ADDRESS: 5804 Southwest 177th Avenue, Miami, FL.
PROJECT ADDRESS: 5804 Southwest 177th Avenue, Miami, FL.

DESIGNED: JAM	DRAWN BY: RZ
CHECKED: JAM/LLC	SCALE: As Shown
DATE: Jan/08	PROJ.

SHEET: 3 OF 3 SHEETS

PATH FILE: C:\INVENTION, CORP.\05-05\0505-0002