

ORIGINAL PERMIT
AND CALCULATIONS

SOUTH FLORIDA WATER
MANAGEMENT DISTRICT

BEG. PERMIT NUMBER:

OG - 00442 - S - 14

APPLICATION NUMBER:

OG - 9100419 - 22

**SOUTH FLORIDA WATER MANAGEMENT DISTRICT
SURFACE WATER MANAGEMENT
GENERAL PERMIT NO. 06-00442-S-14**

Form #0942
08/95

DATE ISSUED: June 3, 1996

PERMITTEE: MULLINAX FORD SOUTH, INC.
5401 WEST COPANS ROAD
MARGATE, FL 33480

PROJECT DESCRIPTION: MODIFICATION OF A SURFACE WATER MANAGEMENT SYSTEM SERVING 29.12
ACRE(S) OF COMMERCIAL DEVELOPMENT KNOWN AS MULLINAX SHERMAN
PARCEL.

PROJECT LOCATION: BROWARD COUNTY, SECTION 19 TWP 48S RGE 42E
SECTION 30 TWP 48S RGE 42E

This is to notify you of the District's agency action concerning Permit Application No. 960419-22, dated April 19, 1996. This action is taken pursuant to Rule 40E-1.606 and Chapter 40E-40, Florida Administrative Code (F.A.C.).

Based on the information provided, District rules have been adhered to and a Surface Water Management General Permit is in effect for this project subject to:

1. Not receiving a filed request for a Chapter 120, Florida Statutes, administrative hearing,
2. the attached Standard Limiting Conditions,
3. the attached 8 Special Conditions, and
4. the attached 7 Exhibit(s).

Should you object to these Conditions, please refer to the attached "Notice of Rights" which addresses the procedures to be followed if you desire a public hearing or other review of the proposed agency action. Please contact this office if you have any questions concerning this matter. If we do not hear from you in accordance with the "Notice of Rights," we will assume that you concur with the District's action.

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that a "Notice of Rights" has been mailed to the Permittee (and the persons listed in the attached distribution list) no later than 5:00 p.m. on the 3rd day of June, 1996, in accordance with Section 120.60(3), Florida Statutes.

BY:


Anthony M. Waterhouse, P.E.
Director - Surface Water Management
West Palm Beach Service Center

Certified Mail No. Z 261 279 542

Enclosures



Form 0537
3/96

South Florida Water Management District
**GENERAL PERMIT
NOTICE OF RIGHTS**

This Notice of Rights is intended to inform the recipient of the administrative and judicial review which may be available as mandated by section 120.60(3), Florida Statutes. Be advised that although this notice is intended to be comprehensive, the review procedures set forth herein have been the subject of judicial construction and interpretation which may affect the administrative or judicial review available. Recipients are therefore advised to become familiar with Chapters 120 and 373, Florida Statutes, and the judicial interpretation of the provisions of these chapters.

1. If a substantially affected person objects to the staff's recommendation, that person has the right to request an administrative hearing on the proposed agency action. The substantially affected person may request either a formal or an informal hearing, as set forth below. Failure to comply with the prescribed time periods shall constitute a waiver of the right to a hearing.
2. If a substantially affected person believes a genuine issue of material fact is in dispute, that person may request a formal hearing pursuant to section 120.57(1), Florida Statutes, by filing a petition not later than:
 - a. IF NOTICE OF THE APPLICATION WAS PUBLISHED BY THE APPLICANT, within fourteen (14) days after mailing of the proposed agency action or
 - b. IF NOTICE OF THE APPLICATION WAS NOT PUBLISHED, within fourteen (14) days after receipt of actual notice.The request for a section 120.57(1), F.S., formal hearing must comply with the requirements of Rule 40E-1.521, Florida Administrative Code, a copy of which is attached. Petitions are deemed filed upon receipt by the District. Failure to substantially comply with the provisions of Rule 40E-1.521, Florida Administrative Code, shall constitute a waiver of the right to a 120.57(1) hearing. If a petition for administrative hearing is not timely filed, the staff's proposed agency will automatically mature into final agency action.
3. If a substantially affected person believes that no issues of material fact are in dispute, that person may request an informal hearing pursuant to section 120.57(2), F.S., by filing a petition for hearing not later than:
 - a. IF NOTICE OF THE APPLICATION WAS PUBLISHED BY THE APPLICANT, within fourteen (14) days after mailing of the proposed agency action or
 - b. IF NOTICE OF THE APPLICATION WAS NOT PUBLISHED, within fourteen (14) days after receipt of actual notice.A request for informal hearing shall be considered as a waiver of the right to request a formal section 120.57(1), F.S., hearing. A request for a section 120.57(1) F.S., formal hearing not in substantial compliance with the provisions of rule 40E-1.521, F.A.C., may be considered by the District as a request for informal hearing. If a petition for administrative hearing is not timely filed, the staff's proposed agency action will automatically mature into final agency action.
4. Pursuant to section 373.114, Florida Statutes, a party to the proceeding below may seek review of a Final Order rendered on the permit application before the Land and Water Adjudicatory Commission, as provided therein. Review under this section is initiated by filing a request for review with the Land and Water Adjudicatory Commission and serving a copy of the Department of Environmental Protection and any person named in the order within 20 days after rendering of the District's Order. However, when the order to be reviewed has statewide or regional significance, as determined by the Land and Water Adjudicatory Commission within 60 days after receipt of a request for review, the commission may accept a request for review from any affected person within 30 days after the rendering of the order. Review under section 373.114, Florida Statutes, is limited solely to a determination of consistency with the provisions and purposes of Chapter 373, Florida Statutes. This review is appellate in nature and limited to the record below.
5. A party who is adversely affected by final agency action on the permit application is entitled to judicial review in the District Court of Appeal pursuant to section 120.68, Florida Statutes, as provided therein. Review under Section 120.68, Florida Statutes in the District Court of Appeal is initiated by filing a petition in the appropriate District Court of Appeal in accordance with Florida rule of appellate procedure 9.110. The Notice of Appeal must be filed within 30 days of the final agency action.
6. Section 373.617(2), Florida Statutes, provides:

Any person substantially affected by a final action of any agency with respect to a permit may seek review within 90 days of the rendering of such decision and request monetary damages and other relief in the circuit court in the judicial circuit in which the affected property is located; however, circuit court review shall be confined solely to determining whether final agency action is an unreasonable exercise of the state's police power constituting a taking without just compensation. Review of final agency action for the purpose of determining whether the action is in accordance with existing statutes or rules and based on component substantial evidence shall proceed in accordance with Chapter 120.
7. Please be advised that exhaustion of administrative remedies is generally a prerequisite to appeal to the District Court of Appeal or the seeking of Circuit Court review of final agency action by the District on the permit application. There are, however, exceptions to the exhaustion requirement. The applicant is advised to consult the case law as to the requirements of exhaustion exceptions.

(1) Initiation of formal proceedings shall be made by petition to the District. The term petition as used herein includes any application or other document which expresses a request for formal proceedings. Each petition should be printed, typewritten or otherwise duplicated in legible form on white paper or standard legal size. Unless printed, the impression shall be on one side of the paper only and lines shall be double-spaced and indented.

(2) All petitions filed under these rules shall contain:

- (a) The name and address of the District and the District's file or identification number, if known;
- (b) The name and address of the petitioner or petitioners;
- (c) An explanation of how each petitioner's substantial interests will be affected by the District's determination;
- (d) A statement of when and how petitioner received notice of the District's decision or intent to render a decision;
- (e) A statement of all disputed issues of material fact. If there are none, the petitioner must so indicate;
- (f) A concise statement of the ultimate facts which petitioner believes entitle petitioner to the relief sought as well as the rules and statutes which support petitioner's claim for relief;
- (g) A demand for the relief to which the petitioner deems himself entitled; and
- (h) Other information which the petitioner contends is material.

(3) Upon receipt of a petition for formal proceedings, the Office of Counsel shall review the petition for compliance with subsection (2). The Board shall accept those petitions in substantial compliance therewith, which have been timely filed, which establish that the petitioner is a substantially affected party, and which state a dispute which is within the jurisdiction of the District to resolve. If accepted, the Board shall designate the presiding officer of the administrative hearing. The District shall promptly give written notice to all parties of the action taken on the petition, and shall state with particularity its reasons therefor.

(4) If a petition is filed that does not substantially comply with the requirement of subsection (2) of this section, the District shall issue an order dismissing the petition with leave to file an amended petition complying with the requirements of this rule within the time period designated in the order. If an amended petition complying with this rule is not filed with the District Clerk within the designated time period, the petitioner's right to a processing under Section 120.57, Florida Statutes, is waived.

(5) If a valid petition is filed, with the consent of all parties and upon a showing of good cause, Board action on the petition pursuant to Section 120.57(1)(b) shall be waived. "Good cause" shall mean a set of circumstances unforeseen and outside of the control of the person requesting the waiver.

(6) When a valid petition for administrative hearing has been filed, the Board action shall defer consideration of the matter pending the completion of the administrative hearing and the submittal of a recommended order, and any exceptions to that order.

(7) If the Board designates a Hearing Officer assigned by the Division of Administrative Hearings as the presiding officer, the District Clerk shall forward the petition and all relevant materials filed with the District to the Division of Administrative Hearings, and shall notify all parties of its action.

Specific Authority 120.53, 373.044, 373.113 F.S. Law Implemented 120.53(1), 120.57, 373.113 F.S. History -- new 9-3-81, formerly 16K-109.(1), 16K-1.112(1) --(3), 16K-1.12, Amended 5-11-93.

STANDARD LIMITING CONDITIONS

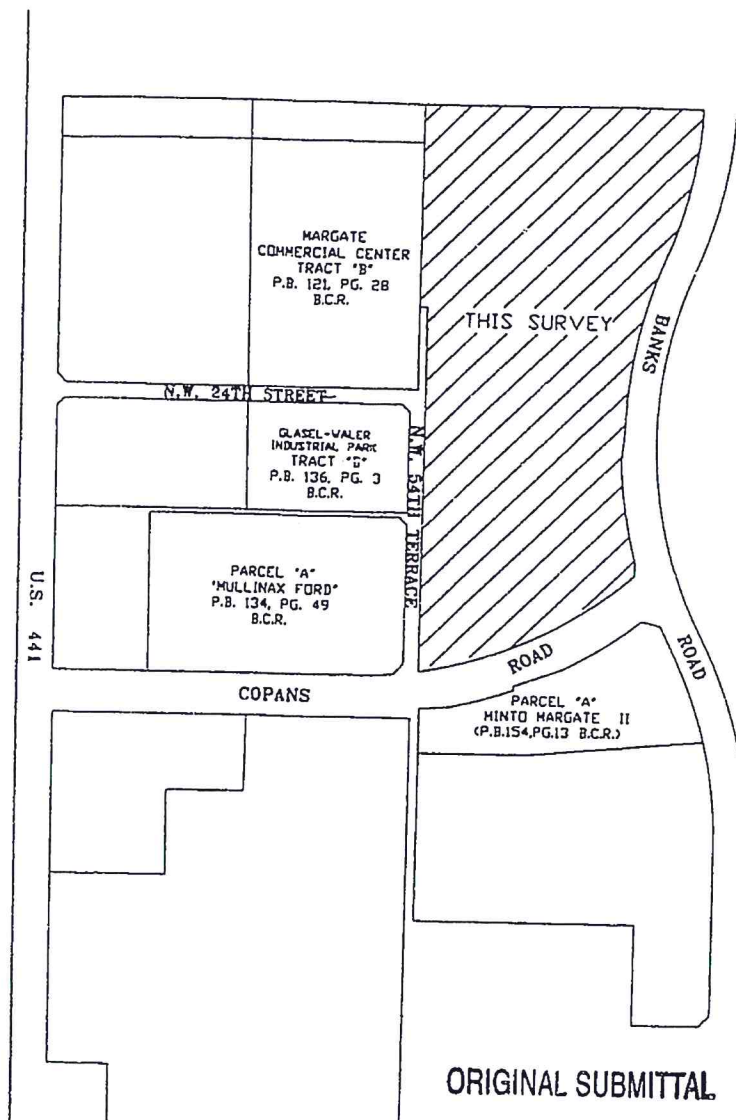
1. THE PERMITTEE SHALL IMPLEMENT THE WORK AUTHORIZED IN A MANNER SO AS TO MINIMIZE ANY ADVERSE IMPACT OF THE WORKS ON FISH, WILDLIFE, NATURAL ENVIRONMENTAL VALUES, AND WATER QUALITY. THE PERMITTEE SHALL INSTITUTE NECESSARY MEASURES DURING THE CONSTRUCTION PERIOD, INCLUDING FULL COMPACTION OF ANY FILL MATERIAL PLACED AROUND NEWLY INSTALLED STRUCTURES, TO REDUCE EROSION, TURBIDITY, NUTRIENT LOADING AND SEDIMENTATION IN THE RECEIVING WATERS.
2. WATER QUALITY DATA FOR THE WATER DISCHARGED FROM THE PERMITTEE'S PROPERTY OR INTO SURFACE WATERS OF THE STATE WILL BE SUBMITTED TO THE DISTRICT AS REQUIRED BY SECTION 5.9, "BASIS OF REVIEW FOR SURFACE WATER MANAGEMENT PERMIT APPLICATIONS WITHIN SOUTH FLORIDA WATER MANAGEMENT DISTRICT - MARCH, 1994." PARAMETERS TO BE MONITORED MAY INCLUDE THOSE LISTED IN CHAPTER 62-302, F.A.C. IF WATER QUALITY DATA IS REQUIRED, THE PERMITTEE SHALL PROVIDE DATA ON VOLUMES OF WATER DISCHARGED, INCLUDING TOTAL VOLUME DISCHARGED DURING THE DAYS OF SAMPLING AND TOTAL MONTHLY DISCHARGES FROM THE PROPERTY OR INTO SURFACE WATERS OF THE STATE.
3. THIS PERMIT SHALL NOT RELIEVE THE PERMITTEE OF ANY OBLIGATION TO OBTAIN NECESSARY FEDERAL, STATE, LOCAL OR SPECIAL DISTRICT APPROVALS.
4. THE OPERATION PHASE OF THIS PERMIT WILL NOT BECOME EFFECTIVE UNTIL THE DISTRICT'S ACCEPTANCE OF CERTIFICATION OF THE COMPLETED SURFACE WATER WATER MANAGEMENT SYSTEM. THE PERMITTEE SHALL REQUEST TRANSFER OF THE PERMIT TO THE RESPONSIBLE OPERATIONAL ENTITY ACCEPTED BY THE DISTRICT, IF DIFFERENT FROM THE PERMITTEE. THE TRANSFER REQUEST CAN BE SUBMITTED CONCURRENTLY WITH THE CONSTRUCTION COMPLETION CERTIFICATION.
5. ALL ROAD ELEVATIONS SHALL BE SET IN ACCORDANCE WITH THE CRITERIA SET FORTH IN SECTION 6.5, "BASIS OF REVIEW FOR SURFACE WATER MANAGEMENT PERMIT APPLICATIONS WITHIN SOUTH FLORIDA WATER MANAGEMENT DISTRICT - MARCH, 1994."
6. ALL BUILDING FLOOR ELEVATIONS SHALL BE SET IN ACCORDANCE WITH THE CRITERIA SET FORTH IN SECTION 6.4, "BASIS OF REVIEW FOR SURFACE WATER MANAGEMENT PERMIT APPLICATIONS WITHIN SOUTH FLORIDA WATER MANAGEMENT DISTRICT - MARCH, 1994."
7. OFF-SITE DISCHARGES DURING CONSTRUCTION AND DEVELOPMENT WILL BE MADE ONLY THROUGH THE FACILITIES AUTHORIZED BY THIS PERMIT.
8. A PERMIT TRANSFER TO THE OPERATION PHASE SHALL NOT OCCUR UNTIL A RESPONSIBLE ENTITY MEETING THE REQUIREMENT IN SECTION 9.0, "BASIS OF REVIEW FOR SURFACE WATER MANAGEMENT PERMIT APPLICATIONS WITHIN SOUTH FLORIDA WATER MANAGEMENT DISTRICT - MARCH, 1994," HAS BEEN ESTABLISHED TO OPERATE AND MAINTAIN THE SYSTEM. THE ENTITY MUST BE PROVIDED WITH SUFFICIENT OWNERSHIP OR LEGAL INTEREST SO THAT IT HAS CONTROL OVER ALL WATER MANAGEMENT FACILITIES AUTHORIZED HEREIN.
9. THE PERMIT DOES NOT CONVEY TO THE PERMITTEE ANY PROPERTY RIGHT NOR ANY RIGHTS OR PRIVILEGES OTHER THAN THOSE SPECIFIED IN THE PERMIT AND CHAPTER 40E-4, FAC.
10. THE PERMITTEE SHALL HOLD AND SAVE THE DISTRICT HARMLESS FROM ANY AND ALL DAMAGES, CLAIMS, OR LIABILITIES WHICH MAY ARISE BY REASON OF THE CONSTRUCTION, OPERATION, MAINTENANCE OR USE OF ANY FACILITY AUTHORIZED BY THE PERMIT.
11. THIS PERMIT IS ISSUED BASED ON THE APPLICANT'S SUBMITTED INFORMATION WHICH REASONABLY DEMONSTRATES THAT ADVERSE WATER RESOURCE RELATED IMPACTS WILL NOT BE CAUSED BY THE COMPLETED PERMIT ACTIVITY. SHOULD ANY ADVERSE IMPACTS CAUSED BY THE COMPLETED SURFACE WATER MANAGEMENT SYSTEM OCCUR, THE DISTRICT WILL REQUIRE THE PERMITTEE TO PROVIDE APPROPRIATE MITIGATION TO THE DISTRICT OR OTHER IMPACTED PARTY. THE DISTRICT WILL REQUIRE THE PERMITTEE TO MODIFY THE SURFACE WATER MANAGEMENT SYSTEM, IF NECESSARY, TO ELIMINATE THE CAUSE OF THE ADVERSE IMPACTS.

STANDARD LIMITING CONDITIONS

12. WITHIN 30 DAYS OF ISSUANCE OF THIS PERMIT, THE PERMITTEE OR AUTHORIZED AGENT SHALL NOTIFY THE DISTRICT (VIA THE SUPPLIED CONSTRUCTION COMMENCEMENT NOTICE OR EQUIVALENT) OF THE ACTUAL OR ANTICIPATED CONSTRUCTION START DATE AND THE EXPECTED COMPLETION DATE.
13. WHEN THE DURATION OF CONSTRUCTION EXCEEDS ONE YEAR, THE PERMITTEE OR AUTHORIZED AGENT SHALL SUBMIT CONSTRUCTION STATUS REPORTS ON AN ANNUAL BASIS (VIA THE SUPPLIED ANNUAL STATUS REPORT OR EQUIVALENT) BEGINNING ONE YEAR AFTER THE INITIAL COMMENCEMENT OF CONSTRUCTION.
14. WITHIN 30 DAYS AFTER COMPLETION OF CONSTRUCTION OF THE SURFACE WATER MANAGEMENT SYSTEM, THE PERMITTEE OR AUTHORIZED AGENT SHALL FILE A WRITTEN STATEMENT OF COMPLETION AND CERTIFICATION BY A FLORIDA REGISTERED PROFESSIONAL ENGINEER. THESE STATEMENTS MUST SPECIFY THE ACTUAL DATE OF CONSTRUCTION COMPLETION AND MUST CERTIFY THAT ALL FACILITIES HAVE BEEN CONSTRUCTED IN SUBSTANTIAL CONFORMANCE WITH THE PLANS AND SPECIFICATIONS APPROVED BY THE DISTRICT (VIA THE SUPPLIED CONSTRUCTION COMPLETION/CONSTRUCTION CERTIFICATION OR EQUIVALENT). THE CONSTRUCTION COMPLETION CERTIFICATION MUST INCLUDE, AT A MINIMUM, EXISTING ELEVATIONS, LOCATIONS AND DIMENSIONS OF THE COMPONENTS OF THE WATER MANAGEMENT FACILITIES. ADDITIONALLY, IF DEVIATIONS FROM THE APPROVED DRAWING ARE DISCOVERED DURING THE CERTIFICATION PROCESS, THE CERTIFICATION MUST BE ACCOMPANIED BY A COPY OF THE APPROVED PERMIT DRAWINGS WITH DEVIATIONS NOTED.
15. WITHIN 30 DAYS OF ANY SALE, CONVEYANCE OR OTHER TRANSFER OF ANY OF THE LAND WHICH IS PROPOSED FOR DEVELOPMENT UNDER THE AUTHORIZATION OF THIS PERMIT, THE PERMITTEE SHALL NOTIFY THE DISTRICT OF SUCH TRANSFER IN WRITING VIA EITHER FORM 0483, REQUEST FOR PERMIT TRANSFER; OR FORM 0920, REQUEST FOR TRANSFER OF SURFACE WATER MANAGEMENT CONSTRUCTION PHASE TO OPERATION PHASE (TO BE COMPLETED AND SUBMITTED BY THE OPERATING ENTITY), IN ACCORDANCE WITH SECTIONS 40E-1.6105 AND 40E-4.351, F.A.C.
16. A PRORATED SHARE OF SURFACE WATER MANAGEMENT RETENTION/DETENTION AREAS, SUFFICIENT TO PROVIDE THE REQUIRED FLOOD PROTECTION AND WATER QUALITY TREATMENT, MUST BE PROVIDED PRIOR TO OCCUPANCY-OF-ANY-BUILDING-OR-RESIDENCE.
17. A STABLE, PERMANENT AND ACCESSIBLE ELEVATION REFERENCE SHALL BE ESTABLISHED ON OR WITHIN ONE HUNDRED (100) FEET OF ALL PERMITTED DISCHARGE STRUCTURES NO LATER THAN THE SUBMISSION OF THE CERTIFICATION REPORT. THE LOCATION OF THE ELEVATION REFERENCE MUST BE NOTED ON OR WITH THE CERTIFICATION REPORT.
18. IT IS THE RESPONSIBILITY OF THE PERMITTEE TO INSURE THAT ADVERSE OFF-SITE WATER RESOURCE RELATED IMPACTS DO NOT OCCUR DURING CONSTRUCTION.
19. THE PERMITTEE MUST OBTAIN A WATER USE PERMIT PRIOR TO CONSTRUCTION DEWATERING, UNLESS THE WORK QUALIFIES FOR A GENERAL PERMIT PURSUANT TO SUBSECTION 40E-20.302(4), F.A.C.

SPECIAL CONDITIONS

1. MINIMUM BUILDING FLOOR ELEVATION: 14 FEET NGVD.
2. DISCHARGE FACILITIES: THROUGH PREVIOUSLY PERMITTED FACILITIES.
3. THE PERMITTEE SHALL BE RESPONSIBLE FOR THE CORRECTION OF ANY EROSION, SHOALING OR WATER QUALITY PROBLEMS THAT RESULT FROM THE CONSTRUCTION OR OPERATION OF THE SURFACE WATER MANAGEMENT SYSTEM.
4. MEASURES SHALL BE TAKEN DURING CONSTRUCTION TO INSURE THAT SEDIMENTATION AND/OR TURBIDITY PROBLEMS ARE NOT CREATED IN THE RECEIVING WATER.
5. THE DISTRICT RESERVES THE RIGHT TO REQUIRE THAT ADDITIONAL WATER QUALITY TREATMENT METHODS BE INCORPORATED INTO THE DRAINAGE SYSTEM IF SUCH MEASURES ARE SHOWN TO BE NECESSARY.
6. LAKE SIDE SLOPES SHALL BE NO STEEPER THAN 4:1 (HORIZONTAL:VERTICAL) TO A DEPTH OF TWO FEET BELOW THE CONTROL ELEVATION. SIDE SLOPES SHALL BE NURTURED OR PLANTED FROM 2 FEET BELOW TO 1 FOOT ABOVE CONTROL ELEVATION TO INSURE VEGETATIVE GROWTH.
7. FACILITIES OTHER THAN THOSE STATED HEREIN SHALL NOT BE CONSTRUCTED WITHOUT AN APPROVED MODIFICATION OF THIS PERMIT.
8. OPERATION OF THE SURFACE WATER MANAGEMENT SYSTEM SHALL BE THE RESPONSIBILITY OF MULLINAX FORD SOUTH, INC..



ORIGINAL SUBMITTAL

APR 19 1996

WPB

EXHIBIT 1



SCALE	1" = 100'	DATE	11/13/95	BY	W.P.B.	SHERMAN PLAT	EXTENSIONS	
REVISIONS		DATE		BY		LOCATION MAP		

SUN-TECH Engineering, Inc.
 4001 S.W. 113th Avenue, Suite 200
 Ft. Lauderdale, FL 33309 Phone: (754) 990-0000
 Fax: (754) 990-1130

MULLINAX SHERMAN PARCEL

PERMIT SUMMARY SHEET

APPLICATION NUMBER: 960419-22

PERMIT MODIFICATION NO.: 06-00442-S

LOCATION: BROWARD COUNTY, S19/T48S/R42E
S30/T48S/R42E

OWNER: MULLINAX FORD SOUTH, INC.

PROJECT AREA: 29.12 ACRES DRAINAGE AREA: 29.12 ACRES

PROJECT USE: COMMERCIAL

FACILITIES:

1. PROPOSED: This application is a request to modify Permit No. 06-00442-S for construction and operation of a surface water management system to serve a 29.12 acre commercial parcel located within the Cocomar Water Control District (Margate Eastern Tier). A system of inlets and culverts will direct runoff from the site to dry retention swales and exfiltration trench for water quality pretreatment. Overflow is to a 4.0 acre lake which will be incorporated into the Margate Eastern Tier master water management system. Staff recommends approval with conditions.

PROJECT LEVEL:

DRAINAGE BASIN: C-14

RECEIVING BODY: EXISTING SYSTEM

WATER QUALITY:

Dry pre-treatment of the first 1/2 inch of runoff for this site will be provided in retention swales and exfiltration trench.

Water quality for the entire Margate Eastern Tier basin is provided within the Cocomar Water Control District canal system.

ENVIRONMENTAL ASSESSMENT:

Exhibit 2a

MULLINAX SHERMAN PARCEL

PERMIT SUMMARY SHEET

EXISTING ON SITE UPLAND COMMUNITIES:

ID NO	TOTAL ACREAGE	BIOLOGICAL CONDITION	COMMUNITY TYPE	COMMUNITY ACREAGE
1	29.12	N/A	ROW CROPS	29.12

TOTAL ON SITE UPLAND ACREAGE: 29.12

ENVIRONMENTAL SUMMARY:

The project site currently consists of remnant agricultural fields with Brazilian pepper along the existing ditches. There are no wetlands on the site and there are no wetland protection or mitigation requirements in the permit for this parcel.

Adverse impacts to wetlands are not anticipated as a result of the proposed construction.

	<u>TOTAL PROJECT</u>	<u>PREVIOUSLY PERMITTED</u>	<u>THIS PHASE</u>	
TOTAL ACRES	29.12		29.12	acres
WTRM ACREAGE	4.80		4.80	acres
PAVEMENT	15.12		15.12	acres
BUILD COVERAGE	3.50		3.50	acres
PERVIOUS	5.70		5.70	acres

DIVISIONAL APPROVAL:

SURFACE WATER MANAGEMENT

Carlos A. de Rojas
Carlos A. de Rojas, P.E.

DATE: 5/28/96

NATURAL RESOURCE MANAGEMENT

Robert M. Brown
Robert M. Brown

DATE: 5/28/96

Exhibit 2b

MULLINAX FORD
SHERMAN PARCEL
Storm Water Management Calculations
April, 1996

1) Landuse Breakdown

Total Site	=	29.12AC + 1.52AC (off-site) = 30.64
Building	=	3.50 AC
Grass	=	5.70AC + 0.55AC (off-site) = 6.24
Lake	=	4.00AC + 0.97AC (off-site) = 4.97
Asphalt	=	15.12AC
Dry Retention	=	0.80AC

2) Soil Storage

Depth to Water Table		3.50
Design Water Elevation =		9.50
Avg. Finish Grade =		13.00
Cumulative Water Storage =		$\frac{9.0 + 5.4 \times 0.75}{2} = 5.4''$
Flatwoods		
$S = 5.40''$ (Previous Area)		$\frac{5.40 \times 7.04}{25.67} = 1.48$
Site Area - Lake		

3) Required Detention

According to the existing master permit, the project must provide 15% of lake area. This criteria will be met by 4.0 acres on-site and 0.97 acres of off-site per the attached agreement Exhibit "J", equating to 16.2%

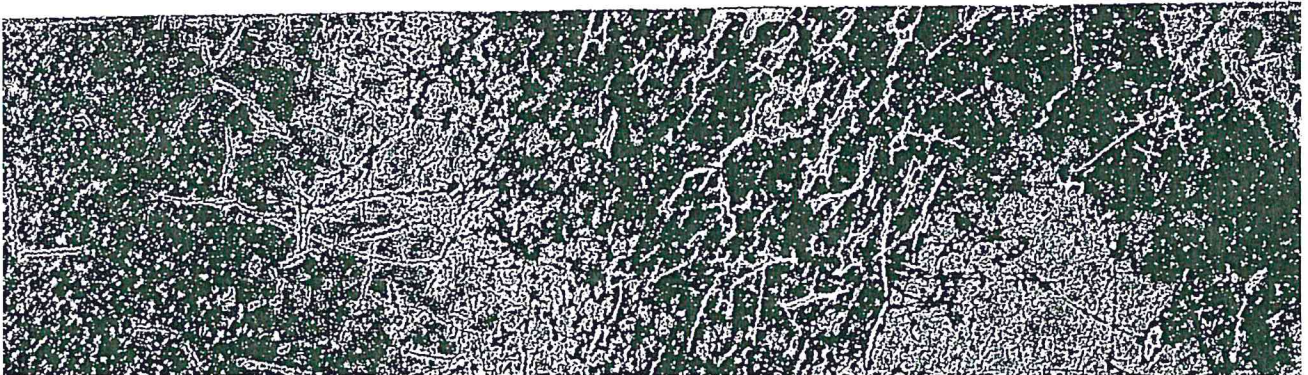
4) Pretreatment

A. Areas to be handled by exfiltration trench

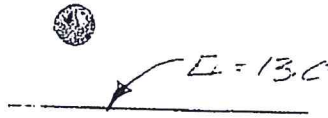
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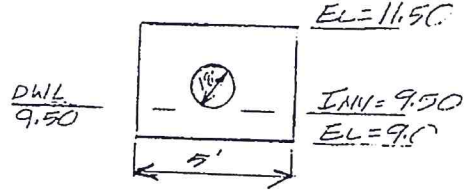
provided?



$$L = \frac{V}{K(H_2W + 2H_2Du - Du^2 + 2H_2DS) + (1.39 \times 10^{-4}) W Du}$$



V = Varies by areas
 K = 1.0 x 1.0⁻⁴
 W = 5'
 H₂ = 3.5
 Du = 2
 DS = 0.5



$$L = \frac{V}{1.0 \times 1.0^{-4} [3.5 \times 5 + 2(3.5 \times 2.0) - 2.0^2 + 2(3.5 \times 0.5)] + (1.39 \times 10^{-4}) \times 5 \times 2}$$

$$L = \frac{V}{.00409}$$

Control Structure #1

Acres Served = 1.73
 1.73 x 0.5" = 0.87AC - Inches

$$L = \frac{0.87}{.00409} = 213 \text{ L.F. Req.}$$

Control Structure #2

Acres Served = 1.51
 1.51 x 0.5" = 0.76AC - Inches

$$L = \frac{0.76}{.00409} = 186 \text{ L.F. Req.}$$

Control Structure #3

Acres Served = 0.75
 0.75 x 0.5" = 0.38AC - Inches

$$L = \frac{0.38}{.00409} = 93 \text{ L.F. Req.}$$

Control Structure #4

Acres Served = 0.76
 0.76 x 0.5" = 0.38AC - Inches

$$L = \frac{0.38}{.00409} = 93 \text{ L.F. Req.}$$

213
 186
 93
 93
 120
 705 req'd.

Control Structure #5

Acres Served = 0.98

$0.98 \times 0.5'' = 0.49 \text{ AC - Inches}$

5.73 ac

$$L = \frac{0.49}{.00409} = 120 \text{ L.F. Req.}$$

Pre-treatment in Dry Retention areas

Total Site = 29.12 AC

Lakes = (4.00) AC

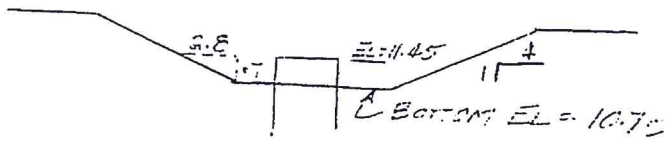
Bldgs. = (3.50) AC

Areas handled

by trench = (5.73) AC

Total Served by Dry Retention

15.89 AC



Total Bottom area Dry Retention = 0.80

Total Volume Required

$$L = \frac{15.89 \times 0.5''}{12} = 0.66 \text{ AC - FT}$$

Volume stored at EL 11.45

Bottoms $0.7' \times 0.80 = 0.56 \text{ AC - FT}$

Banks $\frac{0.7' \times 2.8 \times 2}{2} = 1.96 \text{ C.F./L.F.}$

$$\frac{2600 \text{ L.F.} \times 1.96 \text{ C.F.}}{43,560} = 0.12 \text{ AC - FT}$$

TOTAL PROVIDED = 0.68 AC - FT

21.62? vs. 29.12

7.50 ac. buildings + lake

5) Check Minimum Finish Floor

$$100\text{yr} - 3\text{day} = 20''$$

Runoff Q

$$\frac{Q = (P - 0.2S)^2}{P + 0.8S} = \frac{(20 - .30)^2}{20 + 1.18}$$

$$\frac{Q = 396.41}{21.18} = 18.72''$$

$$\frac{18.72'' \times 30.64\text{AC}}{12} = 47.80\text{AC} - \text{FT}$$

From stage vs. storage this results in a stage of 14.11 minimum FF = 14.75

6) Check Minimum Road EL

$$10\text{yr} - 1\text{day} = 10''$$

$$\frac{Q = (P - 0.2S)^2}{P + 0.8S} = \frac{(10 - .30)^2}{10 + 1.18}$$

$$\frac{Q = 94.17}{11.18} = 8.42''$$

$$\frac{8.42'' \times 30.64\text{AC}}{12} = 21.50\text{AC} - \text{FT}$$

From stage vs. storage this results in a stage of 12.42 min. RD EL = 12.75

c:\winword\95-2034\swmcalc.doc

Stage - Storage Computations

=====

Stage Feet NGVD	4.97 ac lake Storage ac-ft	.8 ac ret Storage ac-ft	15.12 ac pav't Storage ac-ft	6.24 ac grass Storage ac-ft	Total Storage ac-ft
	*****	*****	* 14.5	* 14.2	
	*****	*****	**	**	
	*****	*****	***	***	
	*****	*****	****	****	
	***** 9.5	***** 10.7	***** 12.7	***** 9.5	
9.50	0.00	0.00	0.00	0.00	0.00
10.00	2.48	0.00	0.00	0.16	2.64
10.50	4.97	0.00	0.00	0.66	5.63
11.00	7.46	0.20	0.00	1.48	9.14
11.50	9.94	0.60	0.00	2.63	13.17
12.00	12.42	1.00	0.00	4.11	17.53
12.50	14.91	1.40	0.00	5.91	22.22
13.00	17.39	1.80	0.27	8.05	27.51
13.50	19.88	2.20	2.43	10.51	35.02
14.00	22.37	2.60	6.75	13.30	45.02
14.50	24.85	3.00	13.23	16.38	57.46
15.00	27.34	3.40	20.79	19.50	71.03

SUN-TECH ENGINEERS, INC.
 3477 N.W. 80th Avenue, Suite 202, Palm Beach Gardens, FL 33418
 TEL: (561) 955-2122 FAX: (561) 955-2122

TECH
 SPECIAL TECHNICAL LAYOUT

REVISIONS
 NO. DATE DESCRIPTION

MULLINAX FORD SHERMAN PARCEL
MASTER DRAINAGE

JOB NUMBER: 14-004
 DATE: 02/20/14
 SCALE: 1" = 40'
 DESIGNED BY: [blank]
 DRAWN BY: [blank]
 C.A.L.

SEAL: [blank]

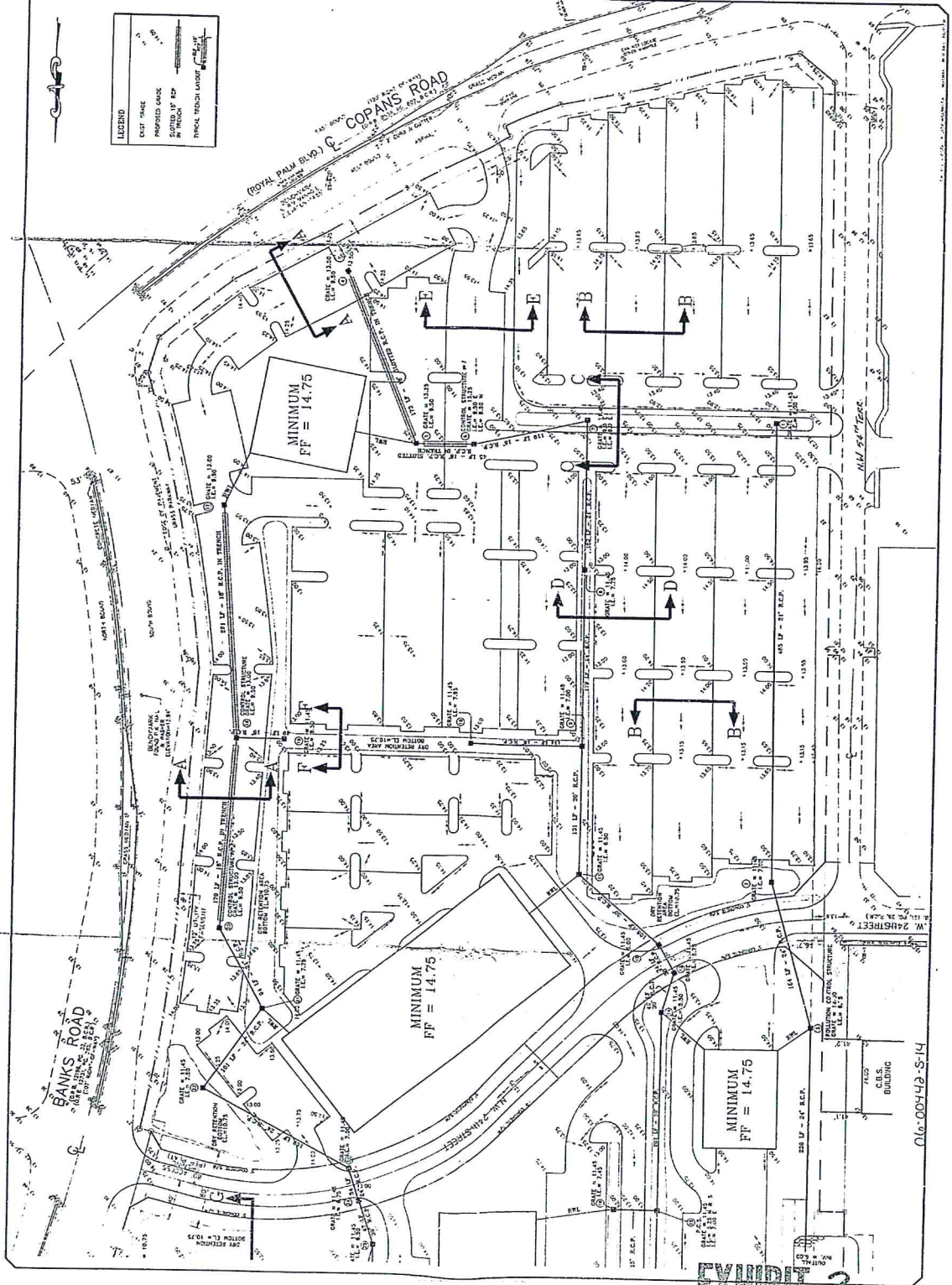


EXHIBIT 3
 016-00442-S-14

MULLINAX FORD
SHERMAN PARCEL
MASTER DRAINAGE

DATE: _____
 SCALE: 1" = 40'
 DESIGNED BY: _____
 DRAWN BY: _____
 JOB NUMBER: _____
 SHEET: _____

REVISIONS

NO.	DATE	DESCRIPTION

Sun-Tech Engineering, Inc.
 2007 N.W. 9th Avenue, Suite 210
 Ft. Lauderdale, FL 33309
 Phone: (561) 534-2123
 Fax: (561) 534-8123

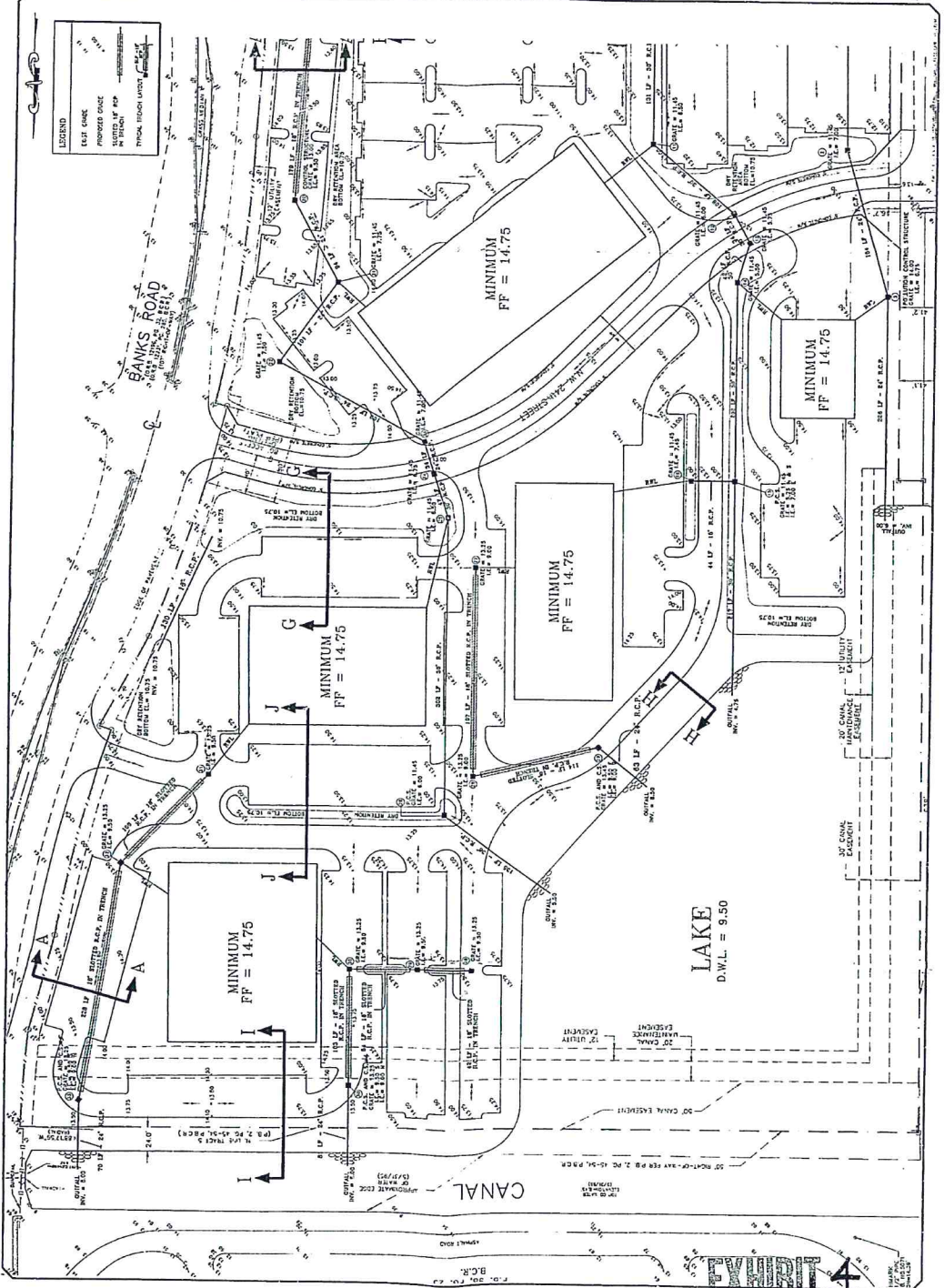


EXHIBIT 4

F.D. No. 17-A
 B.C.R. 17-A-1

LEGEND

- EXIST. CANAL
- PROPOSED CANAL
- LOCATED BY RCP
- IN TRENCH
- FINAL ENGINE LAYOUT

REVISIONS	
NO.	DESCRIPTION

MULLINAX FORD
 SHERMAN PARCEL
 PAVING AND DRAINAGE DETAILS

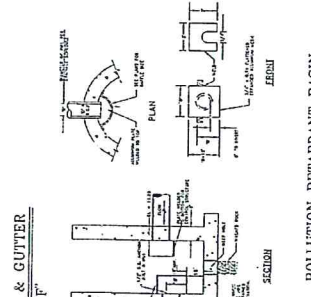
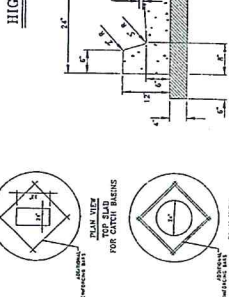
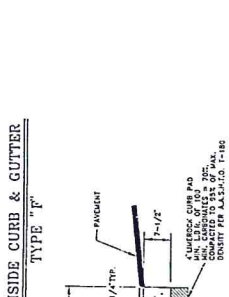
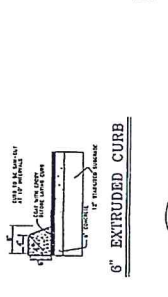
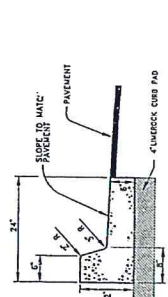
DATE:	
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SHEET:	
OF:	

GENERAL NOTES

1. ALL PROPOSED ELEVATIONS REFER TO FINISHED GRADE.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS FROM THE APPLICABLE AGENCIES.
3. ALL UTILITIES SHALL BE DEPTH MARKED AND SHOWN ON THE DRAWINGS.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING ALL EXISTING UTILITIES.
5. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL ADJACENT PROPERTIES AT ALL TIMES.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING STRUCTURES AND UTILITIES.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING TREES AND LANDSCAPING.
8. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING CURBS AND GUTTERS.
9. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING SIDEWALKS AND DRIVEWAYS.
10. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING PAVEMENT.
11. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROTECTION OF ALL EXISTING UTILITIES.
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SIZE	AREA (SQ. FT.)	PERCENTAGE OF AREA
18" x 18"	3.24	1.00
24" x 24"	5.76	1.77
30" x 30"	9.00	2.78
36" x 36"	12.96	3.95
42" x 42"	17.64	5.40
48" x 48"	23.04	7.11
54" x 54"	29.16	8.93
60" x 60"	36.00	10.96
66" x 66"	43.56	13.21
72" x 72"	51.84	15.68
78" x 78"	60.84	18.38
84" x 84"	70.56	21.31
90" x 90"	81.00	24.47

