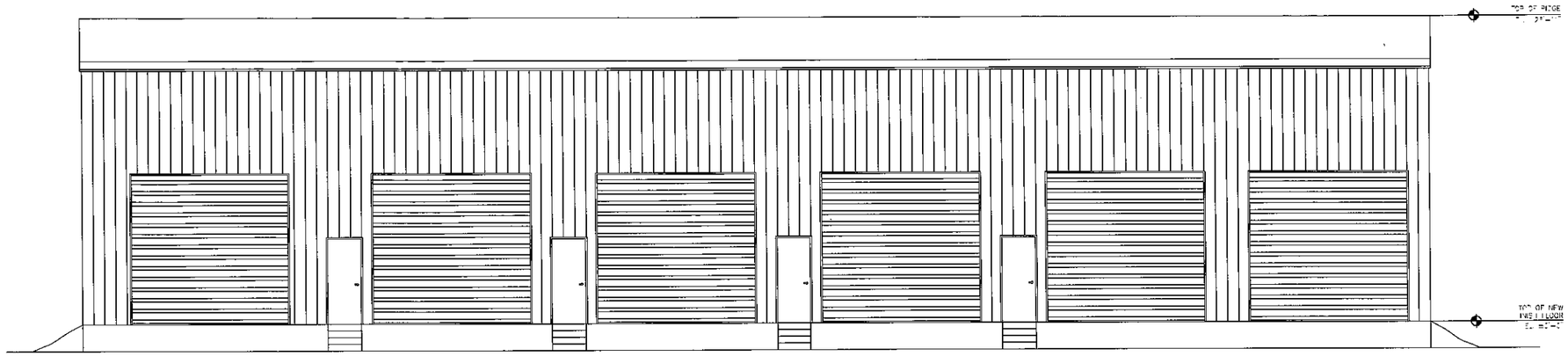
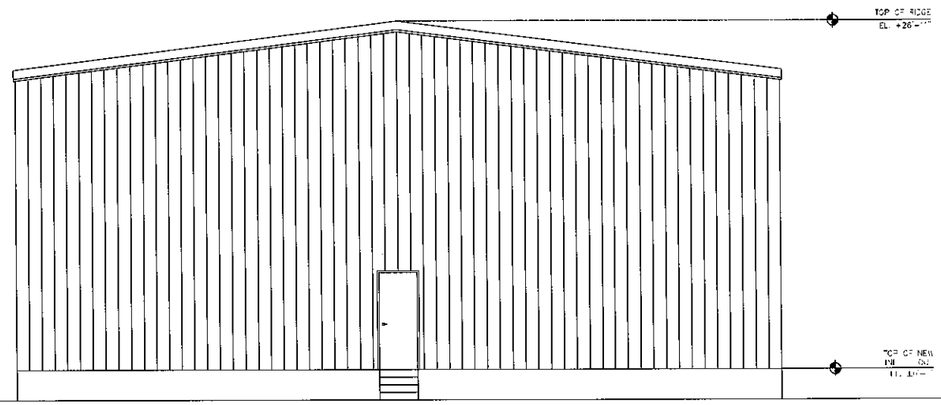
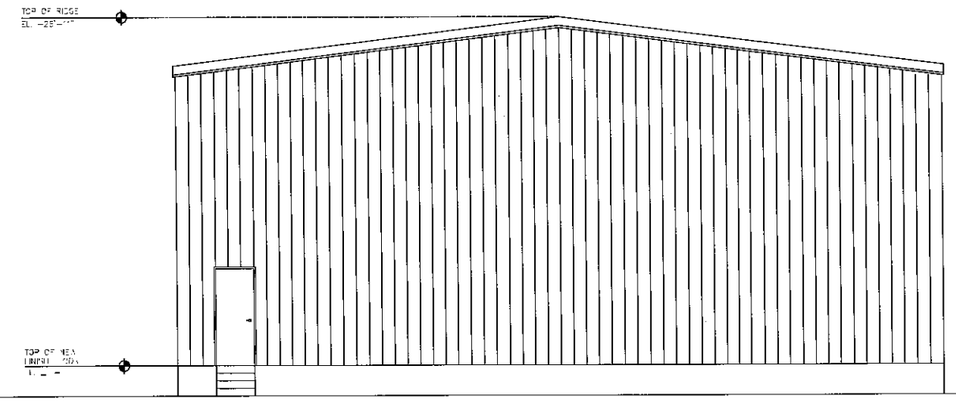


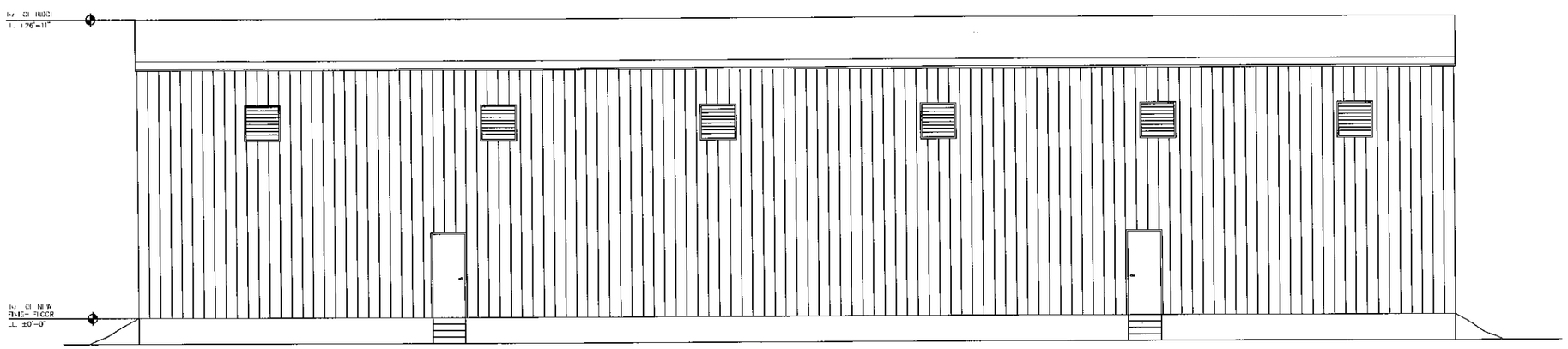
FRONT SIDE ELEVATION
SCALE: 3/16=1'-0"



LEFT SIDE ELEVATION
SCALE: 3/16=1'-0"



RIGHT SIDE ELEVATION
SCALE: 3/16=1'-0"



REAR SIDE ELEVATION
SCALE: 3/16=1'-0"

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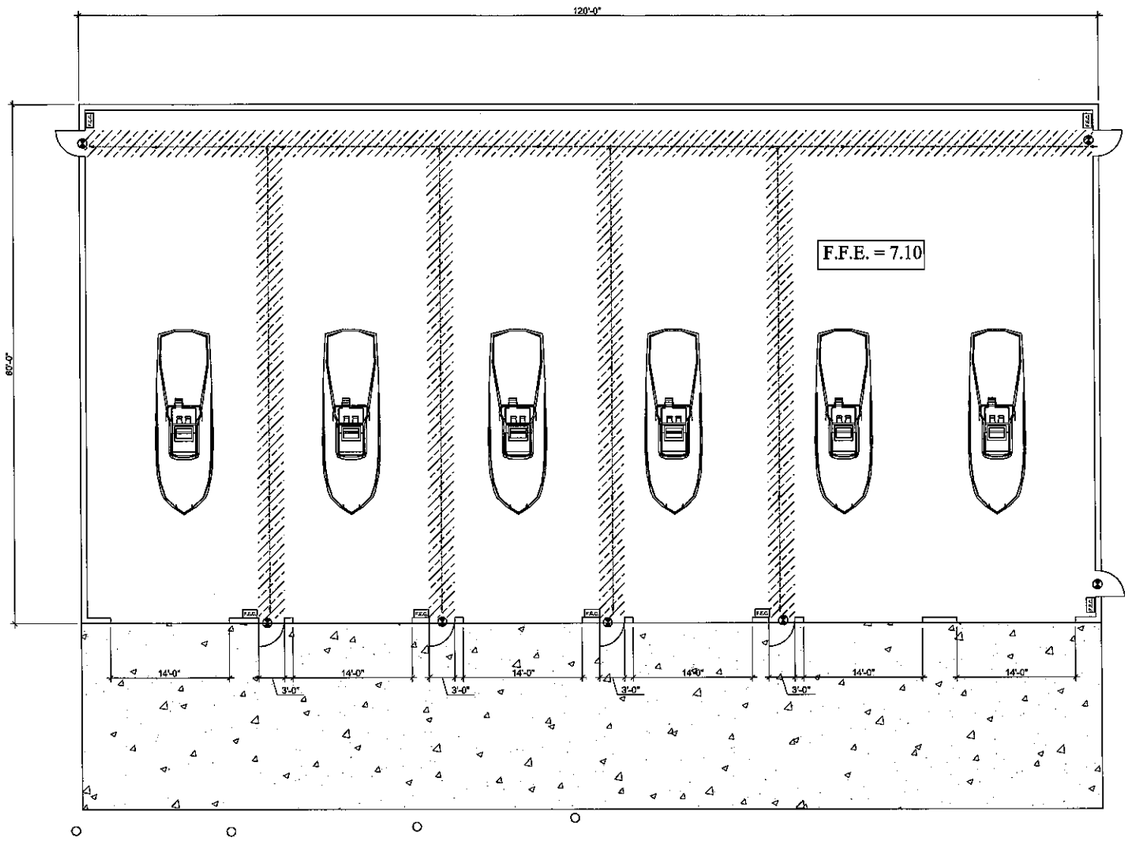
ENGINEERS

SIGN AND SEAL

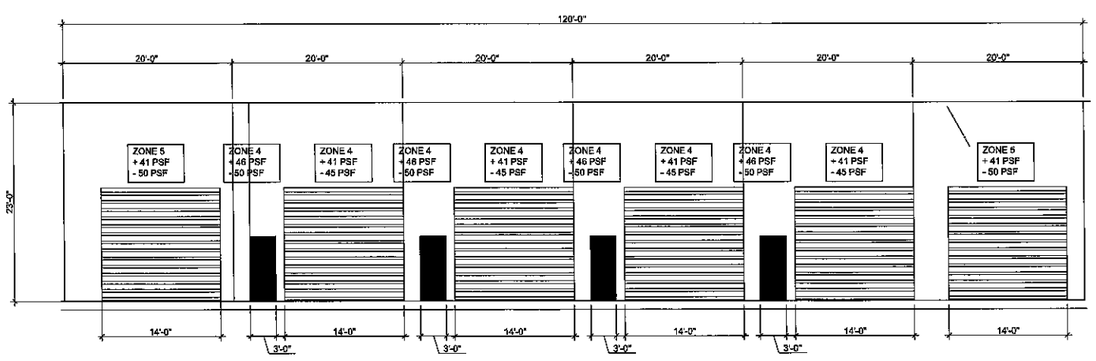
PROPOSED BOAT STORAGE BUILDING FOR:
ANGLERS AVENUE MARINA
4470 ANGLERS AVENUE
DANIA BEACH, FL 33312

Date	04/30/2014
Scale	NOTED
Drawn	R.S.
Job	20113011001
Sheet	A-1



FLOOR PLAN/EGRESS PLAN

SCALE: 1/8"=1'-0"



SIDE ELEVATION VIEW

SCALE:1/8"=1'-0"

VENTILATION:

MINIMUM OPENABLE AREA TO THE OUTDOORS FOR NATURAL VENTILATION 4% OF FLOOR AREA
ACTUAL FLOOR AREA = 7,200 SF * 4% = 288 SF REQUIRED
OPENABLE AREA PROVIDED = 6 A ROLL-UP DOOR @ 244 SF EA + 6 EA 36" X 36" GRAVITY LOUVERS
= 1,344 SF + 54 SF
= 1,398 SF NATURAL VENTILATION PROVIDED MINIMUM
* LOUVERS TO REMAIN OPEN WHEN ROLL-UP DOORS ARE CLOSED

NOTES:

1. PLANS SHALL COMPLY WITH ALL REQUIREMENTS OF THE FLORIDA FIRE PREVENTION CODE 2009 EDITION, THE BROWARD COUNTY AMENDMENTS TO THE FLORIDA FIRE PREVENTION CODE, 2009 EDITION, N.F.P.A. 101(LIFE SAFETY CODE), 2006 EDITION AND NFPA1 (UNIFORM FIRE CODE) 2006 EDITION
2. FIRE SPRINKLER SYSTEM REQUIRED FBC 28.1.6.2.2.1
3. FIRE ALARM SYSTEM NOT REQUIRED FBC 907.2

OCCUPANCY GROUP: "S-1" MODERATE HAZARD STORAGE

TRAVEL DISTANCE: (TABLE 1016.1) 200 FT. MAX (NO SPRINKLERS)
MINIMUM CORRIDOR/ AISLE WIDTH: 44" FBC 1017.2 (FOR >50 OCCUP. LOAD)
MAX. DEAD END CORRIDOR LENGTH: 20'-0" (FBC 1017.3)
MIN. CLEAR OPEN'G OF EXIT DOORS: 32" (FBC 1008.1.1)
MIN. NUMBER OF EXITS FOR OCCUP. LOAD 1 TO 500 = 2 (FBC 1019.1)
MEANS OF EGRESS ILLUMINATION, EMERGENCY LIGHTING REQUIREMENTS, NONE, FBC TABLE 1006

F.B.C. 2007:
OCCUPANCY GROUP: "S-1" MODERATE HAZARD STORAGE DRY BOAT STORAGE

SQUARE FEET PER OCCUPANT BASE ON FLOOR AREA			
SQ. FT.	USE	SQ. FT./ OCCUPANT	#OF OCCUPANTS ALLOWED
7200	STORAGE	300 net	MAXIMUM =24

EXIT REQUIREMENTS

1. EGRESS REQUIREMENTS SHALL COMPLY WITH NFPA 101 CHAPTER 7 SECTION 7-2.1 & 38-22.2
2. ALL HARDWARE SHALL COMPLY WITH 101-7.2.1.5 REQUIREMENTS.
3. ALL DOORS IN THE MEANS OF EGRESS SHALL BE SINGLE ACTION RELEASE NOT REQUIRED THE USE OF A KEY, TOOL, OR SPECIAL KNOWLEDGE TO OPEN FROM EGRESS SIDE

DESIGN CRITERIA
PER 2007 FBC W/ 2009 SUPPLEMENTS

DEAD LOAD	=	7.0 PSF
COLLATERAL LOAD	=	3 PSF
ROOF LIVE LOAD	=	20 PSF
FRAME LIVE LOAD	=	20 PSF
WIND SPEED	=	140 MPH
EXPOSURE	=	C

LEGEND SYMBOL		DESCRIPTION
	—	EXTERIOR WALL
	—	COLUMN GRID
	—	[illegible]
FEC	—	[illegible]

REVISIONS | BY

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ENGINEERS

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4470 ANGLERS AVENUE
DANIA BEACH, FL 33312

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Sheet	A-2

GENERAL NOTES

A. OCCUPANCY GROUP "S-1" MODERATE-HAZARD STORAGE

B. OCCUPANCY LOAD FOR 300sf PER OCCUPANT. MAX 24

C. MINIMUM NUMBER OF EXITS FOR OCCUPANCY 1 TO 500 = 2 (FBC1019.1)

D. SOIL BEARING CAPACITY 2,500psf

E. ALL WORK TO BE DONE IN ACCORDANCE WITH THE FBC 2007 WITH 2009 SUPLEMENTS.

APPLICABLE CODES

A. GENERAL

All construction and materials shall conform to the Standards and Specifications of the City of Dania Beach, Broward County Public Health Department (BCPHD), Central Broward Control Water District (CBCWD), South Florida Water Management District (SFWMD), and all other local and national codes where applicable.

B. CONSTRUCTION SAFETY

All construction shall be done in a safe manner, specifically, the rules and regulations of the Occupational Safety and Health Administration (OSHA) and the Manual of Uniform Traffic Control Devices (MUTCD) shall be strictly observed.

C. TRENCH SAFETY ACT

1. Contractor shall be solely responsible for compliance with the State of Florida Trench Safety Act.
2. Where excavations to a depth in excess of five feet (5') are required, the Contractor shall include the following information in the bid:
   a. A reference to the trench safety standards that will be in effect during the period of construction of the project.
   b. Written assurances by the Contractor performing the trench excavation that such Contractor will comply with the applicable trench safety standards.
   c. A separate item identifying the cost of compliance with the applicable trench safety standards.
3. When a bid is not submitted, the Contractor shall submit the information listed in Item 2 to the Engineer prior to starting work.

D. SURVEY DATA

All elevations on the plans or referenced in the specifications are based on National Geodetic Vertical Datum of 1929 (NGVD).

PRECONSTRUCTION RESPONSIBILITIES

A. Upon receipt of Notice of Award, the Contractor shall arrange a Preconstruction Conference to include all involved governmental agencies, all affected utility owners, the Owner, the Engineer and itself.

B. The Contractor shall obtain a SUNSHINE Certification number at least two full business days (but not more than five) prior to beginning any excavation.

C. Prior to beginning construction, the Contractor shall verify the size, location, elevation, and material of all existing utilities within the area of construction.

D. Existing utility locations shown on these plans are approximate. The Engineer assumes no responsibility for the accuracy of existing utilities shown or for any existing utilities not shown.

E. The Contractor shall be responsible for damage to any existing utilities for which it fails to request locations from the utility owner. The Contractor is responsible as well for damage to any existing utilities which are properly located.

F. If upon excavation, an existing utility is found to be in conflict with the proposed construction or to be of a size or material different from that shown on the plans, the Contractor shall immediately notify the Engineer.

INSPECTIONS

A. The Contractor shall notify the City of Dania Beach, and the Engineer of Record at least 48 hours prior to beginning construction and prior to the inspection of the following items:

1. storm drainage
2. water system
3. sub-grade
4. limerock base
5. asphaltic concrete
6. final

B. All inspections will be made by the City of Dania Beach. The Engineer of Record will provide construction observation service.

PROJECT CLOSEOUT

A. CLEANING UP

1. During construction, the project site and all adjacent areas shall be maintained in a neat and clean manner. Upon final clean up, the project site shall be left clear of all surplus material or trash. The paved areas shall be swept broom clean.
2. The Contractor shall restore or replace, when and as directed by the Engineer or City of Dania Beach, any public or private property damaged by its work, equipment, employees or those of its subcontractors to a condition at least equal or better to the existing condition immediately prior to the beginning of operations. To this end, the Contractor shall do all necessary highway or driveway, walk and landscaping work. Suitable materials and methods shall be used for such restoration.
3. Where material or debris has washed or flowed into or been placed in water courses, ditches, drains, catch basins, or elsewhere as a result of the Contractor's operations, such material or debris shall be removed and satisfactorily disposed of during progress of the work, and the area kept in a clean and neat condition.

B. PROJECT RECORD DOCUMENTS

1. The Contractor shall maintain accurate and complete records of work items completed.
2. Prior to the placement of any asphalt or concrete pavement, the Contractor shall submit to the Engineer "as-built" plans showing limerock base grades, all drainage and water improvements. Paving operations shall not commence until the Engineer has reviewed the "as- builts".
3. All required density and LBR test results for sub-grade shall be provided to the Engineer prior to placing limerock base material.
4. All required density and LBR test results for limerock shall be provided to the Engineer prior to placing asphalt.
5. All "as-built" information submitted to the Engineer shall be sufficiently accurate, clear and legible to satisfy the Engineer that the information provides a true representation of the improvements constructed.
6. Upon completion of construction, the Contractor shall submit to the Engineer of Record complete sets of "as-built" construction drawings as required for submittal and approval. These drawings shall be marked to show "as-built" construction changes and dimensioned locations and elevations of all improvements and shall be signed and sealed by a registered land surveyor.
7. All "as-built" information on elevations of water, paving, and drainage shall be certified by a registered land surveyor.
8. As-built information on the water system shall include locations of all valves, fittings, fire hydrants, water services and top of pipe elevations at all fittings and at a minimum of 100' spacing.

EARTHWORK

A. GENERAL

1. None of the existing material is to be incorporated in the limerock base.
2. All sub-grade under paved areas shall be 8" thick and have a minimum LBR value of 40 and shall be compacted to 98% of the maximum density as determined by AASHTO T-180.
3. All fill material in areas not to be paved shall be compacted to 95% of the maximum density as determined by AASHTO T-180.
4. A 2" blanket of top soil shall be placed over all areas to be sodded.
5. Sod shall be St. Augustine, Bitter Blue or Floratam and shall be placed on the graded top soil and watered to insure satisfactory condition upon final acceptance of the Project.
6. When working in and around existing drainage canals or lakes, appropriate silt barriers shall be installed.
7. Base and subgrade density tests shall be conducted for maximum 7000 square feet of finished pavement.
8. Proctor shall be performed on all material, subgrade and base and any subsequent changes in materials. Limerock bearing ratios, sieve analysis and densities required by the contract documents shall be submitted to the City of Dania Beach.

B. ON-SITE

1. All organic and other unsuitable material under those areas to be paved shall be removed to a depth of three (3) feet below finished grade and for three (3) feet beyond the perimeter of the paving.
2. Suitable backfill shall be minimum LBR 40 material compacted to 98% of the maximum density as determined by AASHTO T-180 three (3) feet beyond the perimeter of the paving.

PAVING

A. GENERAL

1. All underground utilities shall be completed prior to the construction of the limerock base and prior to the placement of the pavement.
2. Minimum longitudinal slope of pavement shall be 0.50 percent.

B. MATERIALS

1. Limerock base material shall have a minimum of 60% carbonates (calcium and magnesium) with a minimum LBR of 100.
2. Prime coat shall be applied at the rate of 0.25 gal/yd sq. and tack coat shall meet Florida Department of Transportation (FDOT) Standards.
3. Surface course shall be equal to FDOT Type S-3 asphaltic concrete.

C. INSTALLATION

1. Limerock base material shall be 12" thick and compacted to 98% of the maximum density as determined by AASHTO T-180.
2. Limerock base material shall be placed in maximum 6" lifts. Bases greater than 6" shall be placed in two or more equal lifts. Limerock base shall be compacted to 98% of the maximum density as determined by AASHTO T-180.
3. For asphaltic concrete details refer to paving and drainage details drawing (PD-3).
4. Prime coat shall be placed on all limerock bases in accordance with FDOT Standards.
5. Tack coat shall be placed as required in accordance with FDOT Standards.

D. TESTING

1. All sub-grade, limerock and asphalt tests required shall be taken at the direction of the Engineer.
2. After asphalt is placed the Contractor shall obtain from an independent testing laboratory at minimum interval of 200 feet, core boring of asphalt to determine:
   1. Thickness and density
   2. Marshall Stability
   3. Sieve Analysis of Aggregate
   4. Bitumen Content of Asphalt

   The tests shall be submitted to the City of Dania Beach Engineer for approval.

SIGNING AND MARKING

A. All pavement marking shall be paint in accordance with FDOT Standard Specification Section 711.

B. All signs shall be manufactured and installed in accordance with the Manual on Uniform Traffic Control Devices.

C. Reflective pavement markers shall be Class B Markers manufactured in accordance with FDOT Standard Specification 706 and installed in accordance with the manufacturer's recommended procedures.

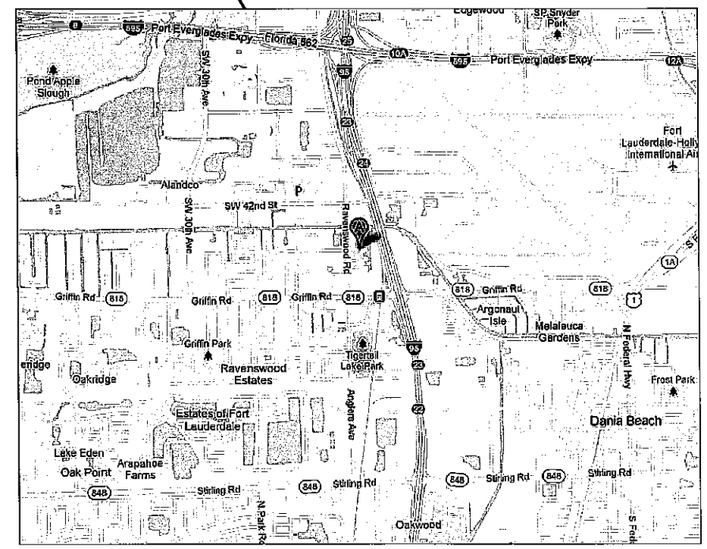
SHOP DRAWINGS

Prior to their construction or installation, shop drawings shall be submitted to and reviewed by the Engineer of Record for sanitary manholes, catch basins, fire hydrants, valves and other accessories. Catalogue literature shall be submitted for water and sewer pipes, fittings, and appurtenances.

Prior to submitting shop drawings to the Engineer, the Contractor shall review and approve the drawings, and shall note in red any deviations from the Engineer's plans or specifications.

Individual shop drawings for all precast structures are required. Catalogue literature will not be accepted for precast structures.

PROJECT LOCATION



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LOCATION SKETCH
SCALE: N.T.S.

Anglers Avenue
MARINE CENTER

SP-1 SITE PLAN
SP-2 PAVING PLAN
SP-D1 SITE DETAILS
SP-D2 SITE DETAILS
E-1 PHOTOMETRIC SITE PLAN
A-1 BUILDING ELEVATION
A-2 FLOOR PLAN AND WIND LOADS
LP-1 LANDSCAPE PLAN
LP-2 LANDSCAPE DETAILS
IR-1 IRRIGATION PLAN
IR-2 IRRIGATION DETAILS

UNDERGROUND UTILITY INFORMATION IS TAKEN FROM THE BEST AVAILABLE SOURCES, BUT SHOULD BE VERIFIED BY CONTRACTOR IN THE FIELD WITH THE APPROPRIATE UTILITY AGENCY PRIOR TO COMMENCEMENT OF ANY WORK.

EXISTING UTILITY LINES OTHER THAN THOSE INDICATED ON THIS DRAWING MAY BE ON SITE. THE CONTRACTOR IS WARNED TO PROCEED WITH CAUTION WITH ALL WORK. IT IS TO MAKE ALL POSSIBLE INVESTIGATION AS TO POSSIBLE UNMARKED UTILITIES.

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LEGEND.

7.18 EXIST. GRADE EL.	T-180. EXIST. ASPHALT PAVEMENT.
ELEV. EXIST. GRADE ELEV. TO MATCH	PROP. ASPHALT PAVEMENT.
ELEV. PROP. GRADE ELEV.	I.E. TR. PROP. INLET W/ FRENCH DRAIN
T.O.C. 7.18 B.O.C. 6.18 PROP. TOP OF CURB AND BOTTON OF CURB ELEV.	PAVEMENT RESTORATION
PROP. FLOW LINE	DRAINAGE FLOW DIRECTION

NOTE:
ATTENTION IS DIRECTED TO THE FACT THAT THESE PLANS MAY HAVE BEEN ALTERED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN DETERMINING SCALED DATA.

REVISIONS	BY

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ENGINEERS

SIGN AND SEAL

PROPOSED BOAT STORAGE BUILDING FOR:
ANGLERS AVENUE MARINA
4470 ANGLERS AVENUE
DANIA BEACH, FL 33312

Date	04/30/2014
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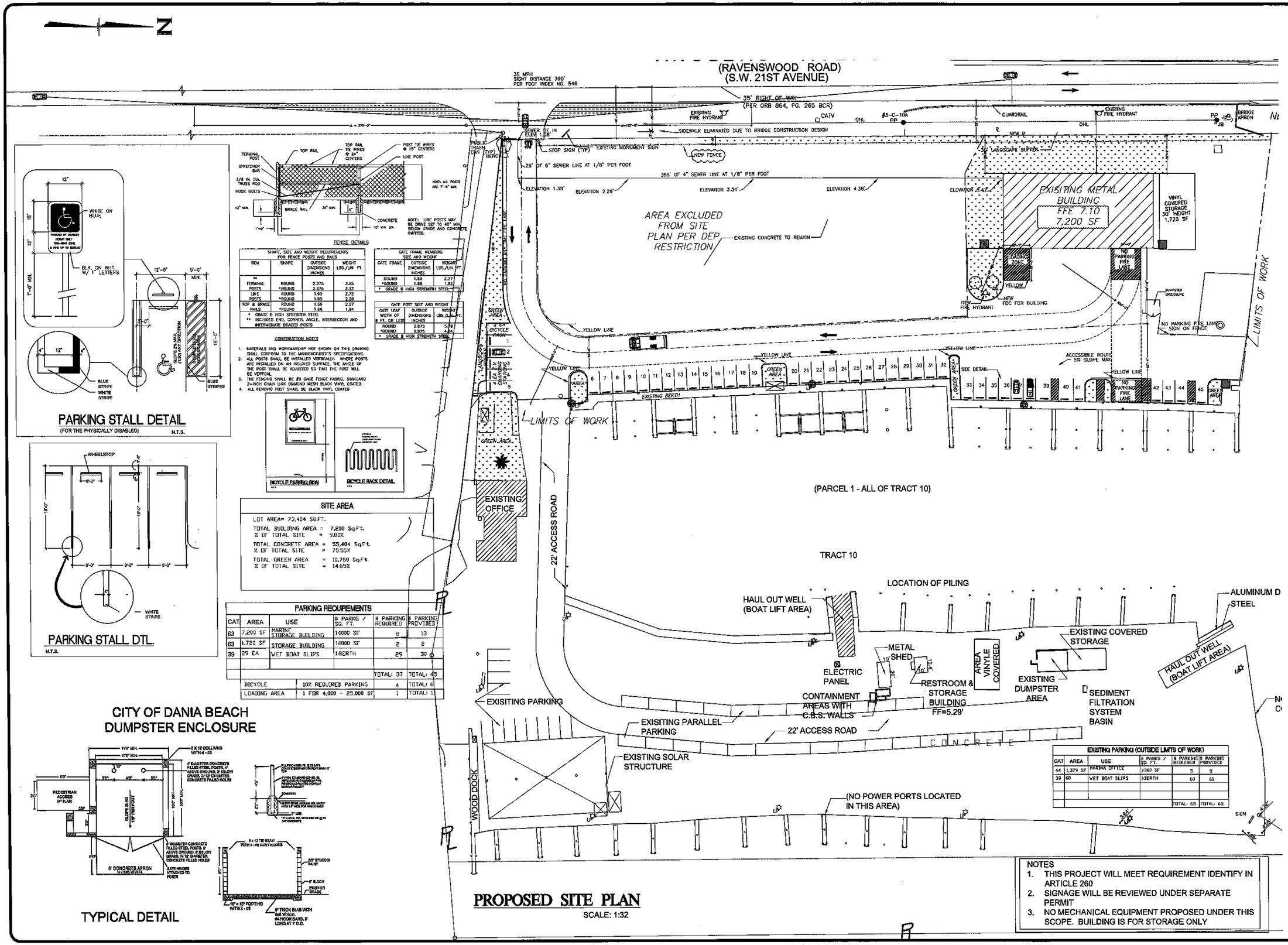

PARKING STALL DETAIL
(FOR THE PHYSICALLY DISABLED) N.T.S.

PARKING STALL DTL.
N.T.S.

FENCE DETAILS

SHAPE, SIZE AND WEIGHT REQUIREMENTS FOR FENCE POSTS AND RAILS			
ITEM	SHAPE	OUTSIDE DIMENSIONS INCHES	WEIGHT LBS./LIN. FT.
** TERMINAL POSTS	ROUND	2.375	3.65
	*ROUND	2.375	3.12
LINE POSTS	ROUND	1.90	2.72
	*ROUND	1.90	2.28
TOP & BRACE RAILS	ROUND	1.66	2.27
	*ROUND	1.66	1.84

* GRADE B HIGH STRENGTH STEEL
** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

GATE FRAME MEMBERS SIZE AND WEIGHT		
GATE FRAME	OUTSIDE DIMENSIONS INCHES	WEIGHT LBS./LIN. FT.
ROUND	1.59	2.27
*ROUND	1.66	1.84

* GRADE B HIGH STRENGTH STEEL

GATE POST SIZE AND WEIGHT		
GATE LEAF WIDTH OF 6 FT. OR LESS	OUTSIDE DIMENSIONS INCHES	WEIGHT LBS./LIN. FT.
ROUND	2.875	5.79
*ROUND	2.875	4.64

* GRADE B HIGH STRENGTH STEEL

CONSTRUCTION NOTES
1. MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE MANUFACTURER'S SPECIFICATIONS.
2. ALL POSTS SHALL BE INSTALLED VERTICALLY. WHERE POSTS ARE INSTALLED ON AN INCLINED SURFACE, THE ANGLE OF THE POST SHALL BE ADJUSTED SO THAT THE POST WILL BE VERTICAL.
3. THE FENCING SHALL BE #9 GAGE FENCE FABRIC, STANDARD 2-INCH CHAIN LINK DIAMOND MESH BLACK VINYL COATED.
4. ALL FENCING POST SHALL BE BLACK VINYL COATED

BICYCLE PARKING SIGN — BICYCLE RACK DETAIL

SITE AREA
LOT AREA= 73,404 SQ.FT.
TOTAL BUILDING AREA = 7,200 Sq.Ft.
% OF TOTAL SITE = 9.80%
TOTAL CONCRETE AREA = 55,404 Sq.Ft.
% OF TOTAL SITE = 75.55%
TOTAL GREEN AREA = 10,760 Sq.Ft.
% OF TOTAL SITE = 14.65%

PARKING REQUIREMENTS

CAT	AREA	USE	# PARKG / SQ. FT.	# PARKING REQUIRED	# PARKING PROVIDED
63	7,200 SF	MARINE STORAGE BUILDING	1/1000 SF	8	13
63	1,720 SF	STORAGE BUILDING	1/1000 SF	2	2
39	29 EA	WET BOAT SLIPS	1/BERTH	29	30
				TOTAL: 37	TOTAL: 45
BICYCLE		10% REQUIRED PARKING		4	TOTAL: 6
LOADING AREA		1 FOR 4,000 - 25,000 SF		1	TOTAL: 1

CITY OF DANIA BEACH DUMPSTER ENCLOSURE

TYPICAL DETAIL

EXISTING PARKING (OUTSIDE LIMITS OF WORK)

CAT	AREA	USE	# PARKG / SQ. FT.	# PARKING REQUIRED	# PARKING PROVIDED
44	1,379 SF	MARINA OFFICE	1/360 SF	5	5
39	60	WET BOAT SLIPS	1/BERTH	60	60
				TOTAL: 65	TOTAL: 65

PROPOSED SITE PLAN
SCALE: 1:32

NOTES
1. THIS PROJECT WILL MEET REQUIREMENT IDENTIFY IN ARTICLE 260
2. SIGNAGE WILL BE REVIEWED UNDER SEPARATE PERMIT
3. NO MECHANICAL EQUIPMENT PROPOSED UNDER THIS SCOPE. BUILDING IS FOR STORAGE ONLY

REVISIONS	BY

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Miramar, FL 33027

ENGINEER'S SIGN AND SEAL

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DANIA BEACH, FL 33312

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Drawn	R.S.
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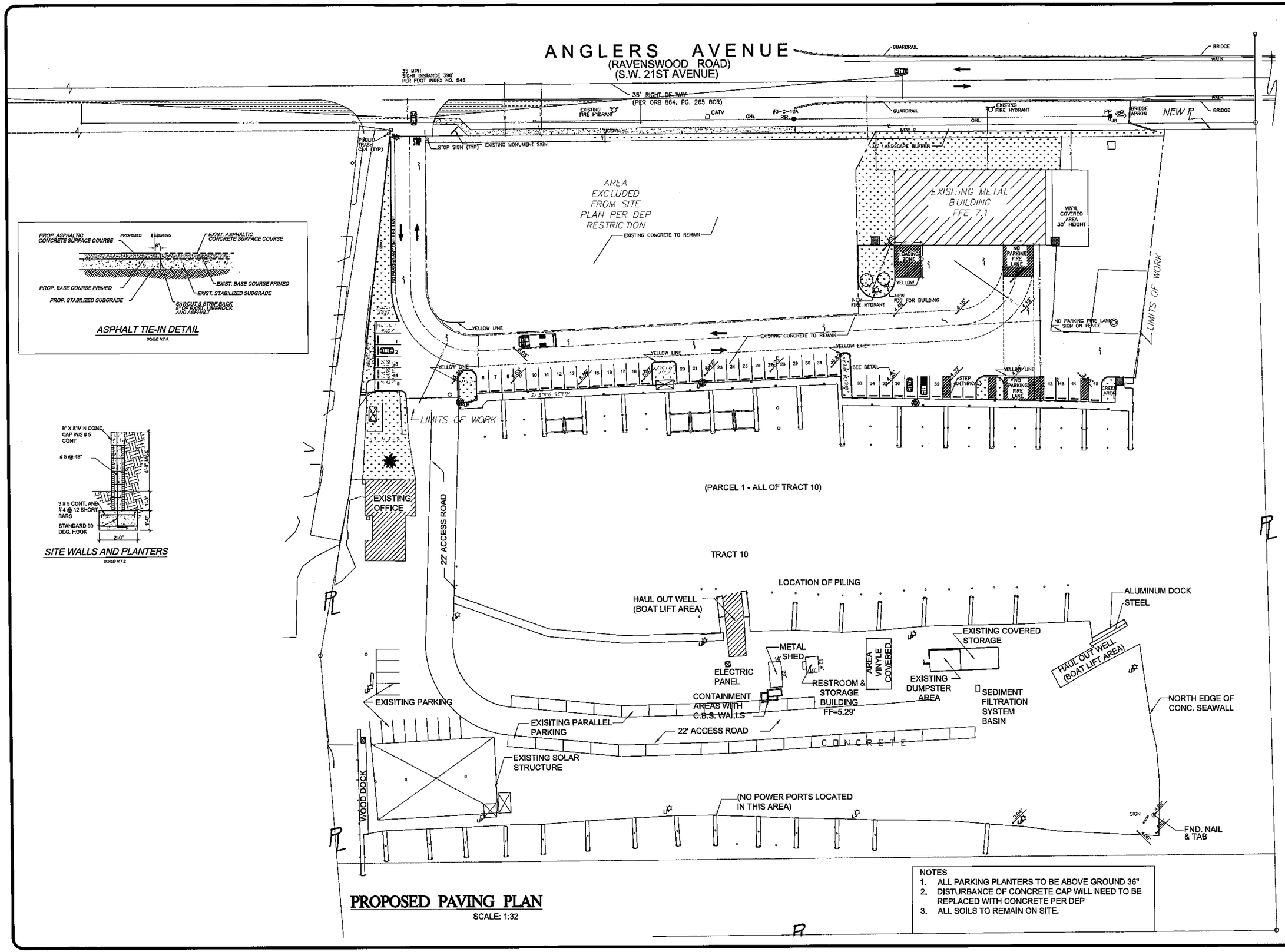

PROPOSED PAVING PLAN

SCALE: 1:32

NOTES
1. ALL PARKING PLANTERS TO BE ABOVE GROUND 36"
2. DISTURBANCE OF CONCRETE CAP WILL NEED TO BE REPLACED WITH CONCRETE PER DEP
3. ALL SOILS TO REMAIN ON SITE.

REVISIONS	BY

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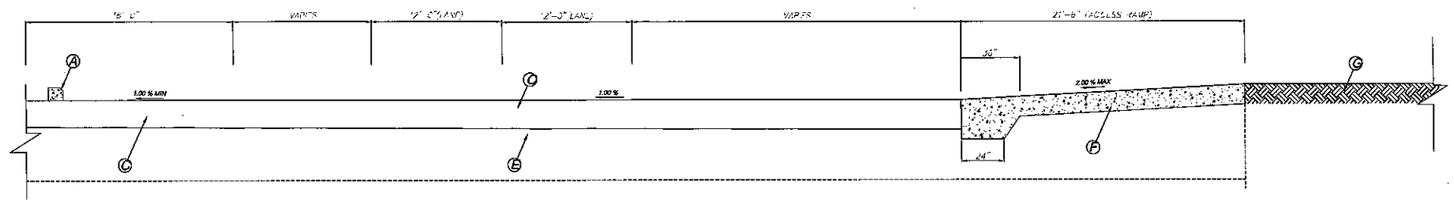
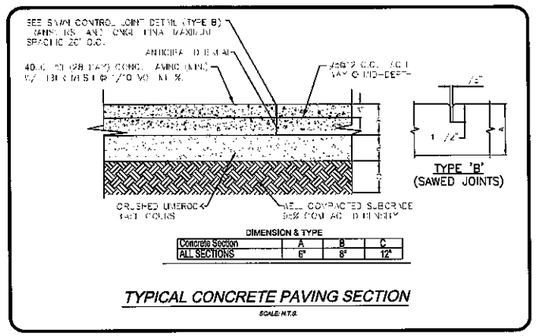
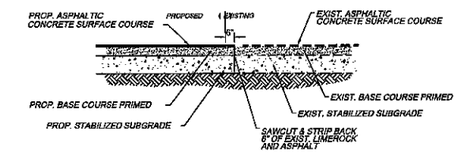


- (A) CONCRETE WHEEL STOP
- (C) EXISTING CONCRETE PAVEMENT TO REMAIN
- (E) EXISTING BASE TO REMAIN
- (F) 6" CONCRETE PAVEMENT (SEE TYPICAL CONCRETE PAVEMENT SECTION)
- (G) PROP. BUILDING PAD

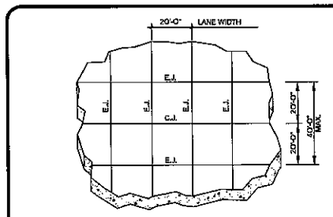
A / PD-2 CROSS SECTION DETAIL
N.T.S.



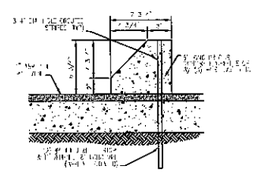
TYPICAL CONCRETE PAVING SECTION
SCALE: N.T.S.



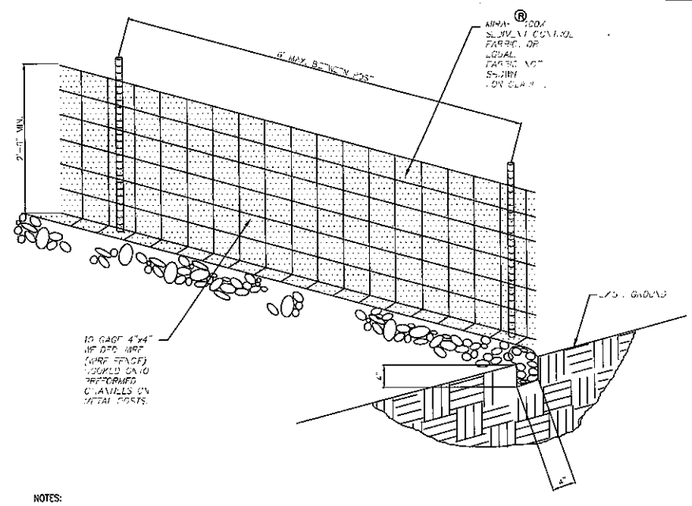
ASPHALT TIE-IN DETAIL
SCALE: N.T.S.



TYPICAL CONCRETE PAVEMENT JOINT PATTERNS
N.T.S.



CONCRETE WHEEL STOP DETAIL
SCALE: N.T.S.



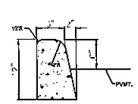
NOTES:

1. DRIVE WOOD POSTS (1.3 LBS/FT MIN) 18" MIN INTO GROUND AND EXCAVATE A 4"X4" TRENCH UPHILL 5' LONG (MIN) ALONG LINE OF POSTS. WOOD. POSTS 4" IN DIAMETER OR 2"X4" MAY BE USED.
2. ATTACH WIRE FENCE TO POSTS AND EXTEND THE BOTTOM OF THE FENCE 8" INTO THE EXCAVATED TRENCH. ALTERNATE : USE SEDIMENT CONTROL FABRIC WITH PRE-SEWN POCKETS FOR POSTS SO THAT WIRE FENCE IS NOT REQ'D.
   ATTACH THE SEDIMENT CONTROL FABRIC (36" WIDE) TO THE WIRE
3. FENCE W/METAL CLIPS OR WIRE AND EXTEND THE BOTTOM OF THE FABRIC 6" INTO THE TRENCH.
4. BOTTOM OF SEDIMENT CONTROL FABRIC MUST BE PLACED IN TRENCH AND SECURED WITH GRANULAR FILL TO A HEIGHT OF 6" ABOVE GROUND LEVEL, SO THAT RUNOFF IS FORCED TO GO THROUGH THE FENCE AND CANNOT GO UNDER IT.
   SILT FENCE SHALL BE MAINTAINED AND TRAPPED SEDIMENTS SHALL
5. BE REMOVED BY THE CONTRACTOR PERIODICALLY AS DETERMINED BY THE ENGINEER OR AS NECESSARY (MAX. 6 MONTHS).
   THE CONTRACTOR IS REQUIRED TO REMOVE ALL SILT FENCES AND
6. AREA TO BE RESTORED TO THE ORIGINAL CONDITION UPON COMPLETION OF CONSTRUCTION.

SILT FENCE DETAIL
SCALE: N.T.S.

CONCRETE PAVEMENT NOTES

1. PRIOR TO CONSTRUCTION, THE ADEQUACY OF ALL FOUNDATION SOILS SHALL BE VERIFIED BY A SOILS ENGINEER. UNSUITABLE OR DELETERIOUS MATERIAL SHALL BE REMOVED AND DISPOSED OF FROM ALL AREAS WHICH SUPPORT DRIVEWAYS AND PARKING AREAS.
2. ALL NEW STRUCTURAL FILL MATERIAL SHALL BE PLACED IN 8" THICK LOOSE LIFTS, AND COMPACTED TO AT LEAST 95% OF LABORATORY MAXIMUM DENSITY, AS DETERMINED BY THE MODIFIED PROCTOR TEST (ASTM D-1557).
3. REINFORCING STEEL SHALL CONFORM TO ASTM A615-75, GRADE 60, FY = 60,000 PSI.
4. ALL SAWING, AS FOR C.J. IN SLABS MUST BE DONE BETWEEN 12 TO 24 HOURS AFTER POURING.
5. PROVIDE #5 @ 12" O.C. EACH WAY AT MID-DEPTH FOR 6" THICK CONC. SLABS. (MINIMUM THICKNESS ALLOWED.) SEE DETAIL.
6. TYP. JOINT SEALANT TO BE ONE PART POLYURETHANE, COLOR GRAY, "VULKEM" A.S.T.M. 116, BY MAMECO INT., CLEV., OHIO. PHONE (800) 321-6412
7. GROOVE IN CONTROL JOINT MAY BE FORMED BY TEMPORARY EMBEDMENT OF A SUITABLE MANDREL OR INSTALLATION OF A STRIP OF PRE-MOULDED JOINT FILLER MATERIAL OR BY SAWING AFTER HARDENING OF CONCRETE.



TYPE "D" MEDIAN CURB
SCALE: N.T.S.

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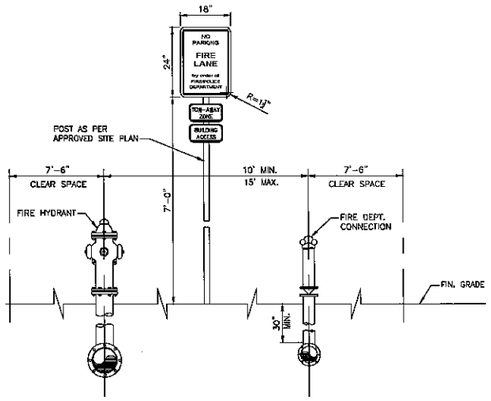
ENGINEERS

SIGN AND SEAL

PROPOSEDBOAT STORAGE BUILDING FOR:
ANGLERS AVENUE MARINA
4470 ANGLERS AVENUE
DANIA BEACH, FL 33312

Date	04/30/2014
Scale	NOTED
Drawn	R.S.
Job	20113011001
Sheet	SP-D1



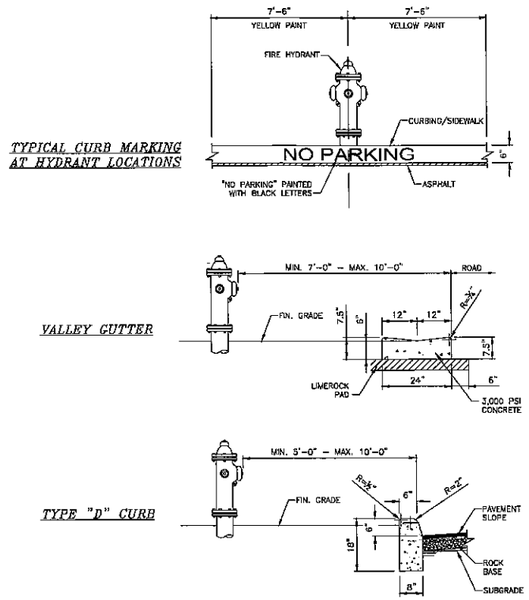
NOTE: FIRE HYDRANT AND FDC SHALL BE ON THE SAME PLANE

NOTES:

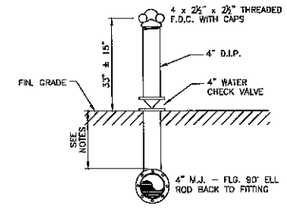
FIRE LANE SIGN:
1. SIGNS SHALL HAVE A WHITE REFLECTORIZED BACKGROUND WITH RED OPAQUE LEGEND AND BORDER.
2. "FIRE LANE" LETTERS SHALL BE 1½" AND ALL OTHER LETTERS SHALL BE 1" SERIES "C".
3. SIGNS SHALL BE MOUNTED ON POST AT LOCATIONS DEPICTED ON SITE PLAN AT A MAXIMUM HEIGHT OF 7'-0" FROM THE FINISHED GRADE TO THE BOTTOM PART OF THE SIGN.

TOW-AWAY ZONE SIGN AND BUILDING ADDRESS SIGN:
1. SIGNS SHALL BE A MINIMUM OF 9"x12" WHITE BACKGROUND WITH RED LETTERS MINIMUM LETTER SIZE TO BE ONE INCH.

FIRE HYDRANT–FIRE DEPT. CONNECTION LOCATION DETAIL



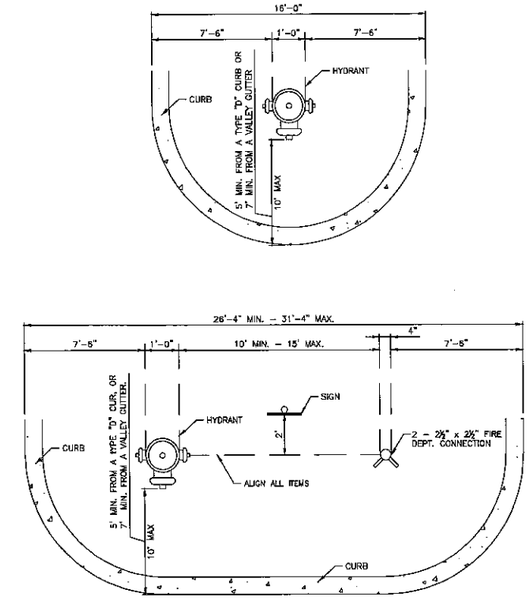
STANDARD FIRE HYDRANT PLACEMENT DETAIL



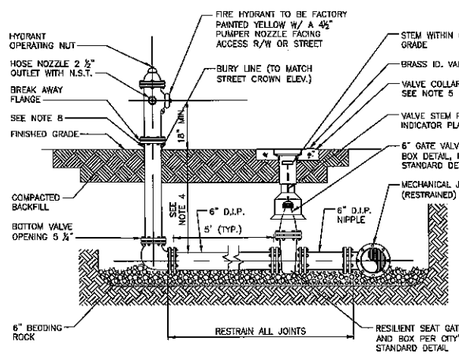
THERE SHALL BE NO SHUT OFF VALVE IN THE FIRE DEPARTMENT CONNECTION.
NFPA 24 2-8.3

NOTES:
1. DEPTH OF COVER TO TOP OF PVC UNDERGROUND PIPING SHALL BE NOT LESS THAN 36" MINIMUM.
2. DEPTH OF COVER TO TOP OF DIP UNDERGROUND PIPING SHALL BE NOT LESS THAN 30" MINIMUM.

STANDARD FIRE DEPARTMENT CONNECTION DETAIL



TYP. FIRE HYDRANT/FIRE DEPT. CONNECTION ISLAND DETAIL (PLAN VIEW)

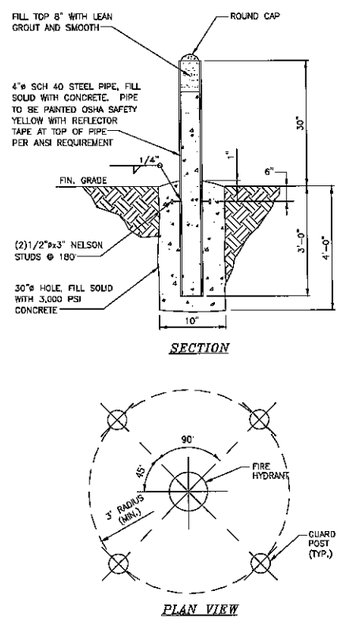


NOTES:
1. PIPE SHALL BE DUCTILE IRON CLASS 52. DIP SPOOL PIECES TO BE CLASS 350.
2. ALL PIPES AND FITTINGS SHALL BE RESTRAINED MECHANICAL JOINT, MATERIAL TO BE DUCTILE IRON.
3. HYDRANT VALVES SHALL BE INSTALLED AS CLOSE TO WATER MAIN AS POSSIBLE.
4. DEPTH OF COVER TO TOP OF UNDERGROUND PIPING: 30" MINIMUM TYPICAL; 36" MINIMUM UNDER DRIVING SURFACES.
5. VALVE COLLAR SHALL BE 24"x24"x8" CONCRETE COLLAR W/ 1–#4 BAR (CONT.) PER CITY'S STANDARD DETAIL.
6. NO HYDRANT SHOULD BE LOCATED CLOSER THAN 5' TO A TYPE "D" CURB OR 7' TO A VALLEY GUTTER.
7. GUARD POSTS AROUND FIRE HYDRANTS ARE REQUIRED WHEN HYDRANTS ARE PLACED WITH IN 6 FEET OF ALL ROADWAYS, DRIVEWAYS, TURN RADIUS, OR PARKING AREA.
8. A BLUE REFLECTIVE PAVEMENT MARKER SHALL BE PROVIDED IN THE CENTER OF THE NEAREST LANE OF ROAD PAVEMENT ADJACENT TO ALL FIRE HYDRANT LOCATIONS.
9. CLEARANCE BETWEEN BOTTOM OF BOLTS AND GRADE SHALL BE 6" MINIMUM.

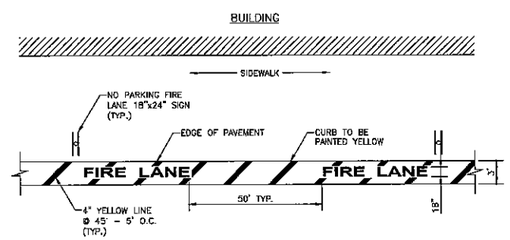
CONTRACTOR SHALL COLOR CODE THE TOP OF EACH HYDRANT INDICATED BY THE GALLONS PER MINUTE OF FLOW. THE BODY OF ALL FIRE HYDRANT SHALL BE PAINTED YELLOW (RUST–OLEUM #944 SAFETY YELLOW, D.A.E. WITH A 40 MIL DFT.) AND THE TOP COLOR CODED AS FOLLOWS:

FLOW	COLOR OF BONNETS & CAPS
1,500 GPM OR GREATER	BLUE
1,000 GPM OR GREATER	GREEN
500–1,000 GPM	ORANGE
LESS THAN 500 GPM	RED

FIRE HYDRANT ASSEMBLY DETAIL

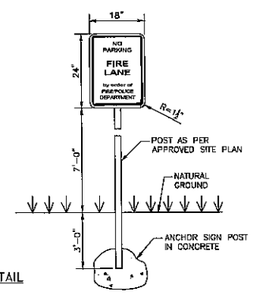


GUARD POST DETAIL



NOTES:
1. ALL PAVEMENT MARKING SHALL BE OF THERMOPLASTIC PAINT.

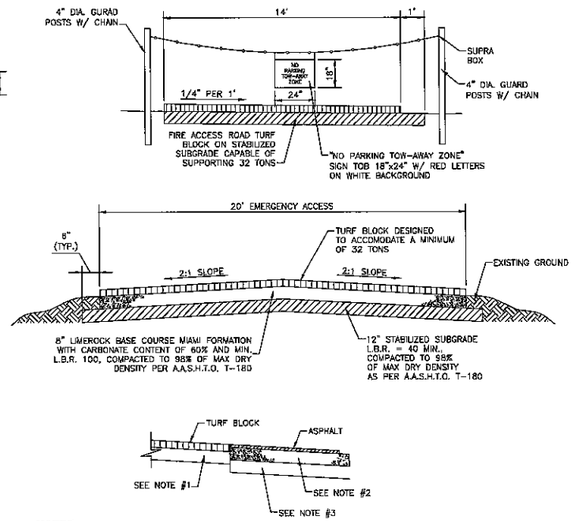
FIRE LANE STRIPING DETAIL



SIGN DETAIL

NOTES:
1. "NO PARKING FIRE LANE BY ORDER OF FIRE/POLICE DEPARTMENT" SIGN AT MAX 75' O.C. SIGN TO BE 18"x24" W/ RED LETTERS ON WHITE BACKGROUND.
2. SIGN TO BE POSTED 7' ABOVE FINISHED GRADE, ON B.C.T.E.D. STANDARD POST.

FIRE LANE DETAIL



NOTES:
1. 12" STABILIZED SUBGRADE MIN. LBR 40 COMPACTED TO 98% A.A.S.H.T.O. T-180 CAPABLE OF SUPPORTING 32 TONS.
2. THE BASE COURSE SHALL BE LIMEROCK (70% CALCIUM), 8" THICK COMPACTED IN ACCORDANCE WITH A.A.S.H.T.O. SPECIFICATION T-180 TO 98% DENSITY.
3. ALL ORGANIC AND YIELDING MATERIAL WITHIN THE LIMITS SHOWN SHALL BE REMOVED AND REPLACED WITH CLEAN FILL. THE SUBBASE SHALL EXTEND 12" BELOW THE BASE COURSE, SHALL HAVE A MINIMUM DRY DENSITY OF 115 PCF AND SHALL BE COMPACTED TO 98% OF MAXIMUM DRY DENSITY PER A.A.S.H.T.O. SPECIFICATION T-180, METHOD "C". MINIMUM LBR TO BE 40.

EMERGENCY ACCESS ROADWAY DETAIL

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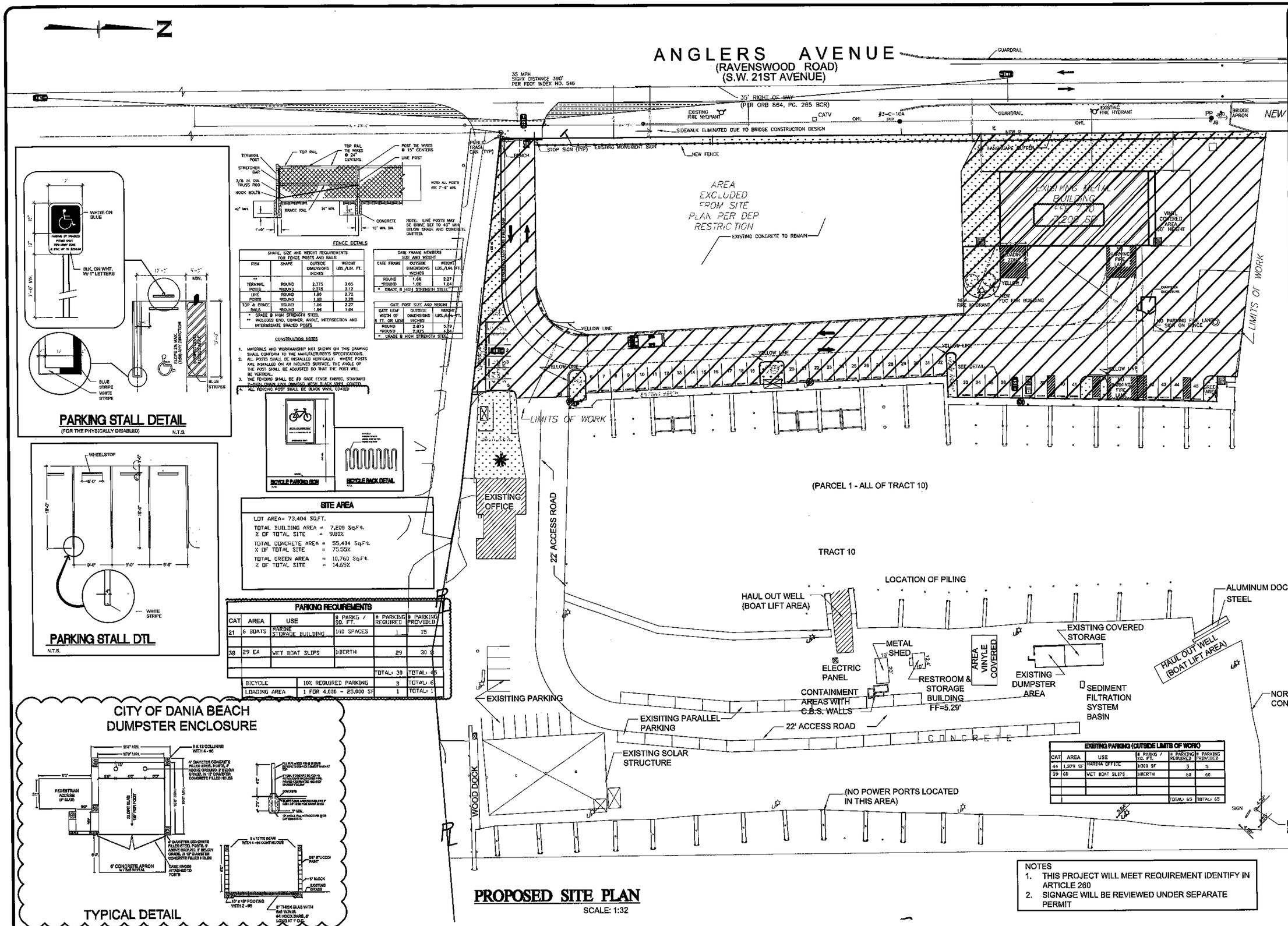
ENGINEERS

SIGN AND SEAL

PROPOSED BOAT STORAGE BUILDING FOR:
ANGLERS AVENUE MARINA
4470 ANGLERS AVENUE
DANIA BEACH, FL 33312

Date	04/30/2014
Scale	NOTED
Drawn	R.S.
Job	20113011001
Sheet	SP-D2



NOTES
1. THIS PROJECT WILL MEET REQUIREMENT IDENTIFY IN ARTICLE 260
2. SIGNAGE WILL BE REVIEWED UNDER SEPARATE PERMIT

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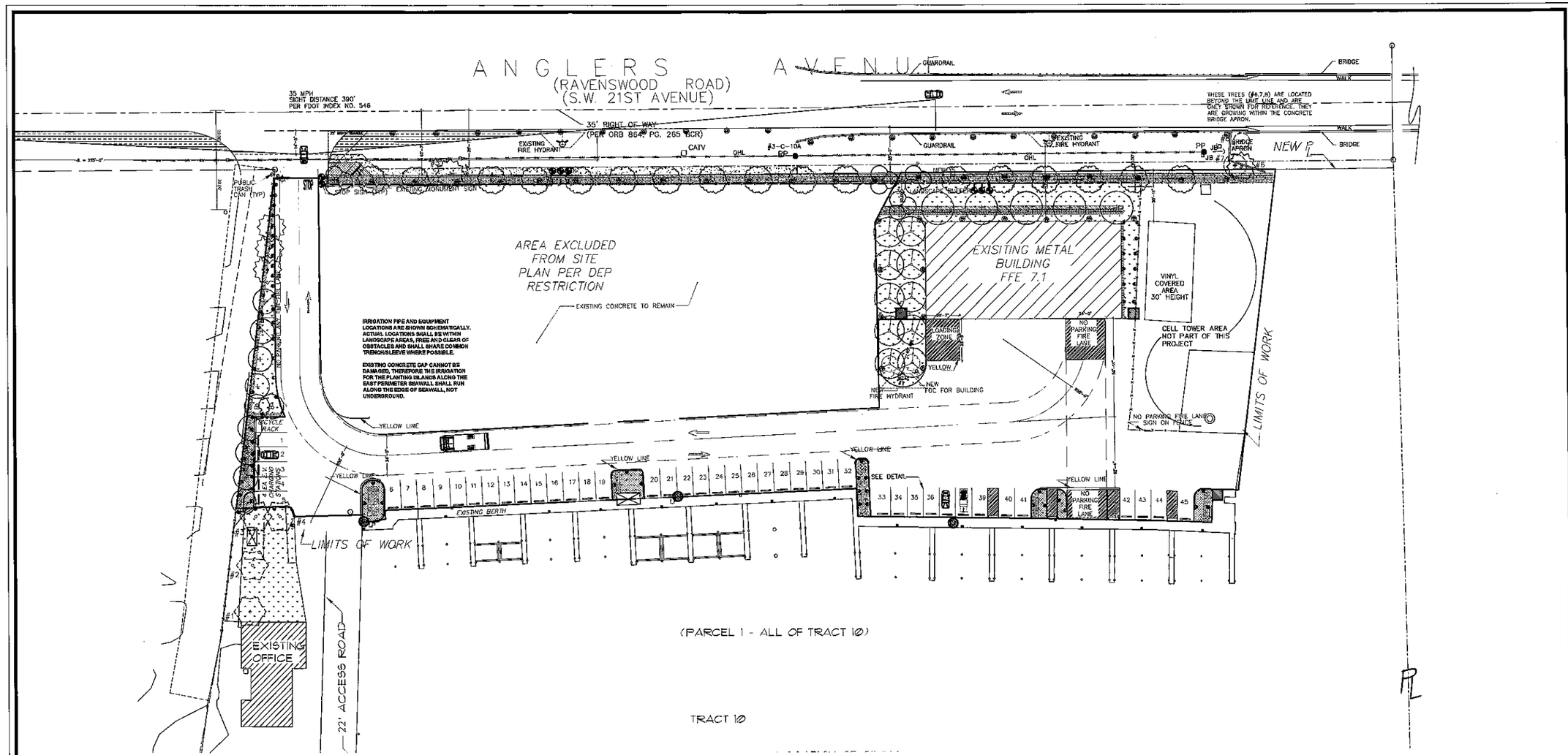
PROPOSED BOAT STORAGE BUILDING FOR:
ANGLERS AVENUE MARINA
4470 ANGLERS AVENUE
DANIA BEACH, FL 33312

Date	04/30/2014
Scale	1/32=1
Drawn	R.S.
Job	20113011001
Sheet	SP-1 DEP



IRRIGATION EQUIPMENT GRAPHIC KEY:

RAINBIRD 3000 SERIES F, H, Q, 6" OR 12" COMMERCIAL ROTOR BODY, w/ SCREEN AND NOZZLES TO TYP. SPACING. UTILIZE FULL SPECTRUM OF NOZZLES AVAILABLE BY MANUFACTURER TO PROVIDE FULL COVERAGE WITHOUT OVERSPRAY ONTO PAVEMENT. NOZZLES w/ SEAL-A-MATIC INTERCHANGEABLE NOZZLES. OPERATING POUNDS PER SQUARE INCH (PSI) AT 40.

RAINBIRD PRS - 1800 SERIES F, TQ, H, Q, 6" OR 12" COMMERCIAL POP-UP BODY, w/ SCREEN AND NOZZLES TO TYP. SPACING. UTILIZE FULL SPECTRUM OF NOZZLES AVAILABLE BY MANUFACTURER TO PROVIDE FULL COVERAGE WITHOUT OVERSPRAY ONTO PAVEMENT. NOZZLES w/ SEAL-A-MATIC INTERCHANGEABLE NOZZLES. OPERATING POUNDS PER SQUARE INCH (PSI) AT 40.

RAINBIRD 1806SS; 15 EST. 6" COMMERCIAL POP-UP BODY, w/ SCREENS AND NOZZLES TO TYP. SPACING. UTILIZE FULL SPECTRUM OF NOZZLES AVAILABLE BY MANUFACTURER TO PROVIDE FULL COVERAGE WITHOUT OVERSPRAY ONTO PAVEMENT. NOZZLES SERIES 9 SIDE STRIPS.

M EXISTING WATER METER. THE CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY THE CONDITION AS WELL AS THE EXACT LOCATION, SIZE, AND PRESSURE AVAILABILITY OF THE METER.

EXISTING BACK FLOW PREVENTOR.

RAINBIRD ESP-SMART-20 STATION OPERATING SPECIFICATIONS, BATTERIES, AS REQUIRED FOR A FULLY OPERATIONAL SYSTEM TO CONTROL ALL VALVES INSTALLED IN THIS PHASE OF CONSTRUCTION. WALL MOUNTED IN LOCATION SHOWN ON PLAN (VERIFY W/OWNER)

RAINBIRD RAIN SWITCH AND BYPASS SWITCH. (SEE DETAILS) MOUNTED IN LOGICAL LOCATION AWAY FROM OVERHEAD OBSTRUCTIONS.

RAINBIRD SERIES (OR EQUAL), 24V ELECT., GLASS FILLED NYLON BODY VALVE W/ PRESSURE REGULATOR, INSTALLED IN A VALVE BOX ASSEMBLY AS PER DETAILS.

VALVE BOXES SHALL BE AMETEK OR APPROVED EQUAL, STANDARD 12" ROUND FOR ALL LOCATIONS. ALL VALVES, FILTERS, AND SIMILAR ASSEMBLIES AS SHOWN IN DETAILS WILL REQUIRE A SEPARATE VALVE BOX WHETHER SHOWN ON PLANS OR NOT. IT IS IMPLIED THAT EACH ASSEMBLY REQUIRES ITS OWN SEPARATE VALVE BOX ASSEMBLY.

IRRIGATION LATERAL LINE, SIZE AS NOTED ON PLANS. ALL CONTROL WIRES SHALL BE INSTALLED IN GRAY CONDUIT IN SAME TRENCH WITH LATERAL LINES.

MAINLINE AS SHOWN ON PLANS. CONTRACTOR SHALL BE RESPONSIBLE TO FIELD VERIFY EXACT SIZE, LOCATION AND PRESSURE AVAILABILITY OF EXISTING MAINLINE.

SLEEVE FOR IRRIGATION MAIN LINE, SECTION LINES AND CONDUITS. SEE NOTES ON PLAN AND SLEEVE SIZING CHART.

ZONE: 3 / 30 GPM — THE ALPHABETICAL FIGURE INDICATES THE PARTICULAR CONTROLLER (BUILDING OR MASTER). THE NUMERICAL FIGURE INDICATES THE PARTICULAR ZONE MASTER OR STATION. SEE VALVE SIZING SCHEDULE FOR APPROPRIATE 1", 1.5" OR 2" VALVE SIZE. THE LOWER NUMERICAL FIGURE INDICATES THE TOTAL NUMBER OF GALLONS PER MINUTE (GPM) THAT THE ZONE IS DESIGNED FOR, CORRESPONDING TO THE APPROPRIATE SIZE VALVE. SEE VALVE SIZING CHART INFORMATION.

DEPTH OF COVER FOR PIPING TO COMPLY WITH F.P.C. APPENDIX F PART V (A)(6).

TESTING AND INSPECTIONS ARE REQUIRED AS PER F.P.C. APPENDIX F PART VI.

NORTH

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Thomas J. Laubenthal
TOM@LACFL.COM
LC-26000422
LA-0000563

DATE	REVISIONS:

DATE:	4-30-14
SCALE:	1" = 30'
DRAWING BY:	KMG
DESIGNED BY:	KMG

PROJECT: ANGLERS AVENUE MARINA
4470 ANGLERS AVENUE
DANIA BEACH, FLORIDA 33312
BROWARD COUNTY

IRRIGATION PLAN:

PROJECT NO. 12-025.C

SHEET: IR-1 of 2

DATE:
THOMAS J. LAUBENTHAL
#LA-0000563 #LC-26000422

IRR. DETAIL - TIME CLOCK CONTROLLER MINIMUM REQUIREMENTS

RAINBIRD MFG. = MODEL ESP-LX-20

A. 20 STATION CLOCK W/ MULTIPLE PROGRAMMABLE FEATURES FOR A, B, C AND D (DRIP CYCLES)

B. INDIVIDUAL ZONE S ETTINGS IN 1-120 MINUTE INCREMENTS, WITH TIME OF DAY, MULTIPLE START TIMES, 365 DAY CALENDAR. PLUS ODD-EVEN DAY WATERING OPTIONS.

C. WATER BUDGET AND SEASONAL PROGRAM ADJUSTMENTS WITHIN 1% TO 300% ADJUSTMENT RANGE

D. DEFAULT PROGRAM SETTING TO RETAIN MEMORY IN CASE OF POWER LOSS.

E. BATTERY BACK UP RESERVE POWER FOR MINIMUM 3 DAYS.

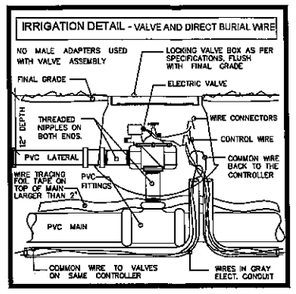
F. RAIN AND MOISTURE SENSOR BYPASS TO OVER RIDE SYSTEM

G. EASY PROGRAMMING GUIDE IN FACE PANEL OF UNIT.

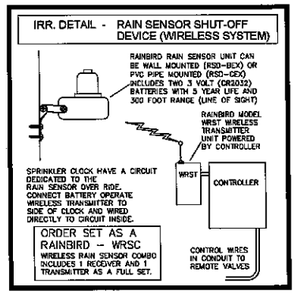
H. DIAGNOSTIC SELF TEST CIRCUIT BREAKER FOR WIRE FAULTS

J. 120VAC +10%, 60 HZ WITH 26.5 VAC, 1.0 AMP OUTPUT

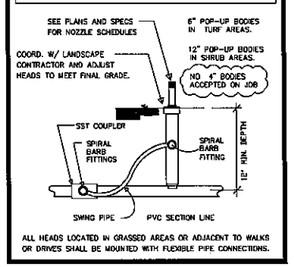
IRRIGATION DETAIL - VALVE AND DIRECT BURIAL WIRE



IRR. DETAIL - RAIN SENSOR SHUT-OFF DEVICE (WIRELESS SYSTEM)

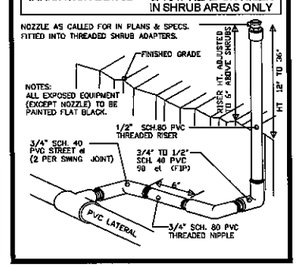


IRRIGATION DETAIL- SPRAY HEAD DETAIL

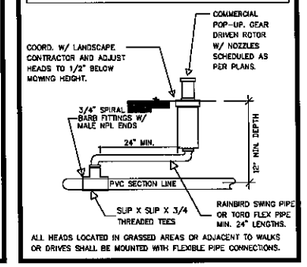


ALL HEADS LOCATED IN GRASSED AREAS OR ADJACENT TO WALKS OR DRIVES SHALL BE MOUNTED WITH FLEXIBLE PIPE CONNECTIONS.

IRRIGATION DETAIL - SPRAY HEAD ON RISER IN SHRUB AREAS ONLY



IRRIGATION DETAIL- POP-UP ROTOR HEAD



ALL HEADS LOCATED IN GRASSED AREAS OR ADJACENT TO WALKS OR DRIVES SHALL BE MOUNTED WITH FLEXIBLE PIPE CONNECTIONS.

IRRIGATION DETAIL-PRESSURE TESTING MAIN LINES

MAIN LINE PIPE SHALL BE INSTALLED WITH A MINIMUM OF 18" OF COVER. NO ROCK SHALL BE IN CONTACT WITH PIPE.

MAIN LINE PIPE SHALL BE SCHEDULE 40 PVC PIPE ONLY. WITH SOLVENT WELDED FITTINGS, INSTALLED AS PER THE MANUFACTURERS RECOMMENDATIONS INCLUDING PIPE CLEANER AND SOLVENT WELDING.

ALL NEW CONSTRUCTED MAIN LINES MUST BE PRESSURE CHECKED PRIOR TO BACK FILLING. PRESSURE CHECKS SHALL INCLUDE INSTALLED VALVE ASSEMBLIES, WITH TEMPORARY CAPS TO CLOSE THE SYSTEM. PRESSURE SHALL BE BROUGHT UP TO 100 PSI, WITH A PRESSURE GAUGE IN PLACE, AND LEFT AT THAT PRESSURE FOR 24 HOURS. ANY PRESSURE LOSS OF GREATER THAN 5 PSI IN 24 HOURS IS A FAILURE OF THE MAIN.

ANY LEAKS OR BREAKS IN THE MAIN SHALL BE LOCATED AND REPAIRED, THEN THE MAIN LINE SHALL BE RETESTED BY THE SAME PROCEDURE, FOR FINAL APPROVAL AND ACCEPTANCE.

IRRIGATION DETAIL - PIPE SIZING NOTES

PIPES ARE SIZED SPECIFICALLY TO THE ANTICIPATE THE USE OF THE APPROPRIATE NOZZLE REQUIRED FOR ADEQUATE COVERAGE WITHOUT OVERSPRAY. THE PIPE SIZE IS DESIGNED WITH A REASONABLE MINIMUM CUSHION IN THE LINE SIZE THAT WILL ALLOW THE OWNER THE LATITUDE TO EFFECT NORMAL REPAIRS AND CHANGES OVER COMING YEARS. DO NOT REDUCE THE LINE SIZES FROM THE SCHEDULE SHOWN.

NO PVC PIPE AND FITTINGS, SMALLER THAN 3/4" PIPE SHALL BE PERMITTED, EXCEPT FOR SWING JOINT ADAPTERS TO FLEX PIPE FITTINGS. ALL SECTION LINE PIPE SHALL BE STANDARD INDUSTRY PIPE SIZES 3/4", 1", 1 1/4", 1 1/2", 2" 2 1/2", 3", AND 4" PIPE, WITH APPROPRIATE NEW SCH. 40 PVC FITTINGS FOR SOLVENT WELDED ASSEMBLY USING CLEANERS/PRIMERS.

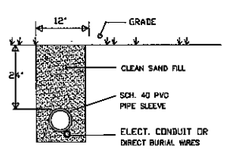
IT IS THE INTENT OF THE LANDSCAPE ARCHITECT / DESIGNER TO PROVIDE A SCHEMATIC DRAWING DEMONSTRATING THE RECOMMENDED PIPING LAYOUT. THE CONTRACTOR SHALL CONFORM TO THAT PLAN DIAGRAM WHEREVER POSSIBLE. WHEN A CHANGE IN THE LAYOUT IS DEEMED NECESSARY DUE TO A CONFLICTS, ADJUST PIPE AS NEEDED AND PROVIDE AS-BUILT DATA.

IRRIGATION DETAIL - PIPE SIZING & NOZZLE NOTES

CONTRACTORS SHALL EMPLOY THE FULL SPECTRUM OF NOZZLE PATTERN AVAILABLE FROM THE MANUFACTURER TO PROVIDE THE CORRECT NOZZLES TO COVER THE LANDSCAPE AREAS AND AVOID OVERSPRAY ONTO PAVED AREAS. THIS WOULD INCLUDE BUT NOT BE LIMITED TO, ADJUSTABLE ARC NOZZLES, CENTER STRIP, END STRIP & SIDE STRIP NOZZLES, AND OTHER BASIC NOZZLES DESIGNED TO CONTROL OVERSPRAY ONTO AREAS NOT INTENDED TO GET WET OR REQUIRED COVERAGE. THE USE OF THESE NOZZLE TYPES IS IMPLIED AS PART OF THE BASE BID PRICE AND REPRESENTS A SYSTEM INSTALLATION THAT IS STANDARD TO THE INDUSTRY AND REQUIRED BY LOCAL CODES FOR WATER CONSERVATION AND SAFETY PROTECTION AGAINST WET SURFACES, SLIP & FALL SITUATIONS OR SKID ACCIDENT.

PIPES ARE SIZED SPECIFICALLY TO THE ANTICIPATE THE USE OF THE APPROPRIATE NOZZLE REQUIRED FOR ADEQUATE COVERAGE WITHOUT OVERSPRAY. THE PIPE SIZE IS DESIGNED WITH A REASONABLE MINIMUM CUSHION IN THE LINE SIZE THAT WILL ALLOW THE OWNER THE LATITUDE TO EFFECT NORMAL REPAIRS AND CHANGES OVER COMING YEARS. DO NOT REDUCE THE LINE SIZES FROM THE SCHEDULE SHOWN.

IRRIGATION DETAIL - MAIN LINE PIPE INSTALLATION



NOTE:
FLOOD SAND FILL INTO PLACE AND VIBRATE WITH CONCRETE VIBRATOR.

IRRIGATION DETAIL - PIPE SLEEVE SCHEDULE

NOTE: SEE PIPE SLEEVING SCHEDULE FOR SLEEVE SIZES. FOR PIPES 2 1/2" AND OVER THERE SHOULD BE A 2" MINIMUM BETWEEN THE INSIDE WALL OF THE SLEEVE AND THE OUTSIDE WALL OF THE PIPE.

PIPE SLEEVING SCHEDULE

PIPE SIZE	SLEEVE SIZE
1"	2"
1 1/4"	2 1/2"
1 1/2"	3"
2"	4"
2 1/2"+	6"

SLEEVES THAT PROTECT TWO OR MORE LATERALS AND/OR MAINS IN THE SAME SLEEVE SHALL BE SIZED BY THE CONTRACTOR WITH THE SAME MINIMUM 2" CLEARANCE STANDARD FOR ALL PIPES.

GENERAL SPRINKLER NOTES:

1. IRRIGATION CONTRACTOR IS RESPONSIBLE TO COORDINATE WITH ALL OTHER DRAWINGS OF THE PROJECT TO RESOLVE COORDINATION AND POTENTIAL CONFLICTS WITH EXISTING UNDERGROUND PIPES AND UTILITIES OR WORK BY OTHERS, PRIOR TO ANY WORK BEING DONE. MOST MAIN LINES SHARE ALIGNMENT WITH PERIMETER UTILITY EASEMENTS & SIGNIFICANT LANDSCAPE BUFFER PLANTINGS. AVOID CONFLICTS WITH ROOTBALL AREA OF TREES.
2. THE IRRIGATION CONTRACTOR IS RESPONSIBLE TO CALL FOR LOCATIONS AND TO COORDINATE WITH LOCAL AGENCIES TO IDENTIFY LINES, PIPES, CABLES OF EASEMENTS WITHIN THE EFFECTED AREAS, PRIOR TO WORK.
3. THE INSTALLING CONTRACTORS ARE RESPONSIBLE FOR THEIR OWN LICENSE, AND PERMITS WITHIN THE MUNICIPALITY AND MIAMI-DADE COUNTY AS WELL AS THE RELATED FEES WITHIN THE CONTRACT PRICE. PERMITS FOR SOUTH FLORIDA WATER MANAGEMENT DISTRICT ARE PULLED BY THE OWNER. (QUALIFIED APPLICANT 104.6.1.2) PERMITS WILL ONLY BE ISSUED TO QUALIFIED PEOPLE OR FIRMS. QUALIFICATION SHALL BE IN ACCORDANCE WITH; THE RULES OF THE BROWARD COUNTY CENTRAL EXAMINING BOARD, ORDINANCE 78-9 AND CHAPTER 9 OF THE COUNTY CODES; STATE DBPR, CHAPTER 489, PART 1 OF FLORIDA STATE STATUTES; OR OTHER EXAMINING BOARDS APPROVED BY THE BROWARD BOARD OF RULES AND APPEALS.
4. THE HORIZONTAL CONTROL FOR THE PROJECT WILL BE ESTABLISHED BY THE GENERAL CONTRACTOR WHO WILL LOCATE AND STAKE PROPERTY LINES, ALL RECORDED EASEMENTS, LIMIT OF WORK LINE, LIGHT POLES, PAVED AREAS, PARKING ISLANDS, DRAINAGE STRUCTURES AND RELATED FEATURES.
5. ALL MAINS AND SECTION LINES ARE SHOWN SCHEMATICALLY. LINES WHERE EVER POSSIBLE SHALL BE CONSOLIDATED INTO COMMON TRENCHES. THE CONTROL WIRES IN GRAY ELECTRICAL CONDUIT SHALL BE LOCATED UNDER THE MAIN FOR PROTECTION.
6. ALL MAIN LINES SHALL BE BURIED A UNIFORM 24" BELOW GRADE. ALL SECTION LINES SHALL BE INSTALLED A MINIMUM OF 12" BELOW GRADE.
7. SLEEVES UNDER ROADWAYS MAY BE DEEPER THAN 24" TO COORDINATE WITH ROADWAY CONSTRUCTION REQUIREMENTS OR TO COORDINATE WITH UTILITIES. SLEEVES UNDER PAVED PARKING AREAS WILL TYPICALLY MAINTAIN A 24" DEPTH TO ALIGN WITH MAIN LINE INSTALLATION DEPTHS.
8. ALL MAIN LINE PIPE SHALL BE SCHEDULE 40 PVC NEW PIPE ONLY. TYPE 1, PIPE, ASTM D-2241.
9. ALL SECTION LINE PIPE FROM 3/4" TO 2" I.D. SHALL BE SCHEDULE 40 PVC NEW PIPE ONLY. TYPE 1, PIPE, ASTM D-2241. ALL SECTION LINE PIPE FROM 2.5" TO 6" SHALL BE SDR-25 (160 PSI) PVC 1120 TYPE 1 PIPE.
10. ALL PIPING IS SIZED TO MEET DESIGN CALCULATIONS FOR GPM FLOW AND FOR A PRE-DESIGNED CUSHION TO ALLOW FOR NOMINAL REPAIRS AND FOR MODIFICATIONS TO THE SYSTEM WHICH OCCUR OVER TIME IN NORMAL OPERATION OF SYSTEM. LINE SHALL BE INSTALLED TO THE SIZE AS SHOWN IN PLANS. DOWN SIZING LINES IS NOT PERMITTED WITHOUT A CHANGE ORDER AND A REVISION OF THE DRAWING. THE CONTRACTOR MAY SUGGEST REVISION OR VALUE ENGINEERING WITH THE LANDSCAPE ARCHITECT FOR REVIEW AND WRITTEN APPROVALS PRIOR TO IMPLEMENTATION.
11. ALL PVC SOLVENT WELDED ASSEMBLY SHALL BE CLEANED AND PRIMED PRIOR TO THE SOLVENT WELD. ALL PVC CEMENT SHALL CONFORM TO ASTM D-2564. ALL PVC PIPE CLEANER SHALL CONFORM TO ASTM F-656.
12. ALL WORK SHALL BE DONE IN A GOOD WORKMAN-LIKE MANNER AND IN ACCORDANCE WITH THE MANUFACTURERS RECOMMENDATIONS AND STANDARDS OF THE FLORIDA IRRIGATION SOCIETY, BROWARD COUNTY AND FLORIDA BUILDING CODE APPENDIX F.
13. ALL CONTROL WIRES SHALL BE U.L. APPROVED DIRECT BURIAL TYPE PLASTIC COATED WIRE, AWG SIZE MINIMUM 14 GAUGE SOLID OR 12 STRAND WIRE. ALL SPLICES SHALL BE MADE WITH RAINBIRD ST-03 SNAP TIGHT WATERPROOF CONNECTORS. ALL WIRES SHALL BE MARKED WITH DURABLE TAGS IDENTIFYING EACH AND ALL WIRES.
14. ALL CONTROL WIRES SHALL BE INSTALLED IN U.L. APPROVED SIZE OF CLASS 160 GRAY ELECTRICAL CONDUIT WITH SWEEPS UP INTO A PULL BOX OR VALVE BOX ASSEMBLY.
15. THE IRRIGATION CONTRACTOR SHALL BRING THE CONTROL WIRES TO THE TIMECLOCK/CONTROLLER AND CONNECT ALL WIRING ON THE LOW VOLTAGE SIDE OF THE PANEL. ALL HIGH VOLTAGE WIRING AND POWER IS PROVIDED BY THE PUMP MANUFACTURER AND THE OWNER. LABEL ALL CONTROL WIRES AT THE PANEL TO CONFORM TO THOSE IN THE FIELD.
16. ALL VALVE BOXES AND PULL BOXES FOR CONTROL WIRES SHALL BE AN AMETEX BOX, MINIMUM 10" DIAMETER ROUND BOX. ONE PER EACH VALVE.
17. EACH LENGTH OF MAIN LINE BETWEEN THE PUMP STATION AND EACH ISOLATION VALVE SHALL BE PRESSURE CHECKED AND INSPECTED BY THE DESIGN PROFESSIONAL. PRESSURE MUST MAINTAIN A MINIMUM OF 5 PSI LOSS IN 24 HOURS FROM A 100 PSI PRIMING FOR ANY GIVEN TEST LENGTH.
18. THE SPRINKLER CONTRACTOR SHALL COORDINATE WITH THE WATER DEPARTMENT TO INSTALL THE BACK FLOW PREVENTOR ACCORDING TO LOCAL CODES & STANDARDS ADJUSTING TO SCHEDULES OF EQUIPMENT, PIPING, MATERIALS FOR SIGN OFF AND APPROVALS. CODE REQUIREMENTS TAKE PRECEDENT OVER DETAILS & SPECIFICATIONS.
19. THE FULL SPECTRUM OF NOZZLES, NOZZLE ANGLES, FULL CIRCLE, PART CIRCLE & ADJUSTABLE PATTERN HEADS IS TO BE EMPLOYED IN THIS CONSTRUCTION. THE CONTRACTOR SHALL ADJUST THE SYSTEM FOR COMPLETE COVERAGE WITH THE MANUFACTURERS RECOMMENDED 100% OVERLAP, AND UTILIZE THE ADJUSTABLE PATTERN HEADS TO AVOID OVERSPRAY TO PAVED SURFACES. THE CONTRACTOR IS ALSO TO INCLUDE IN HIS BID AND PROVIDE FOR THE INSTALLATION OF ANY ADDITIONAL HEADS REQUIRED TO BE ADDED TO INSURE COVERAGE FOR THE PROJECT.
20. ALL HEADS SHALL BE SET USING THE MANUFACTURES RECOMMENDED SWING JOINT ASSEMBLIES INCLUDING SPIRAL BARB FITTINGS AND THICK WALL PIPE OR SUBMIT SHOP DRAWINGS FOR APPROVAL.
21. ALL MATERIALS ARE GUARANTEED FREE FROM DEFECTS AND ALL WORKMANSHIP AND INSTALLATION ARE GUARANTEED FOR THE COST OF FULL REPLACEMENT FOR A PERIOD OF ONE YEAR FROM THE TIME OF COMPLETION AND FINAL ACCEPTANCE OF EACH SEPARATE, COMPLETED, AND FULLY OPERATIONAL SYSTEM.

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Thomas J. Laubenthal
TOM@LACFL.COM
LC-26000422
LA-0000563

DATE	REVISIONS:

DATE: 4-30-14
SCALE: N.T.S.
DRAWING BY: KMG
DESIGNED BY: KMG

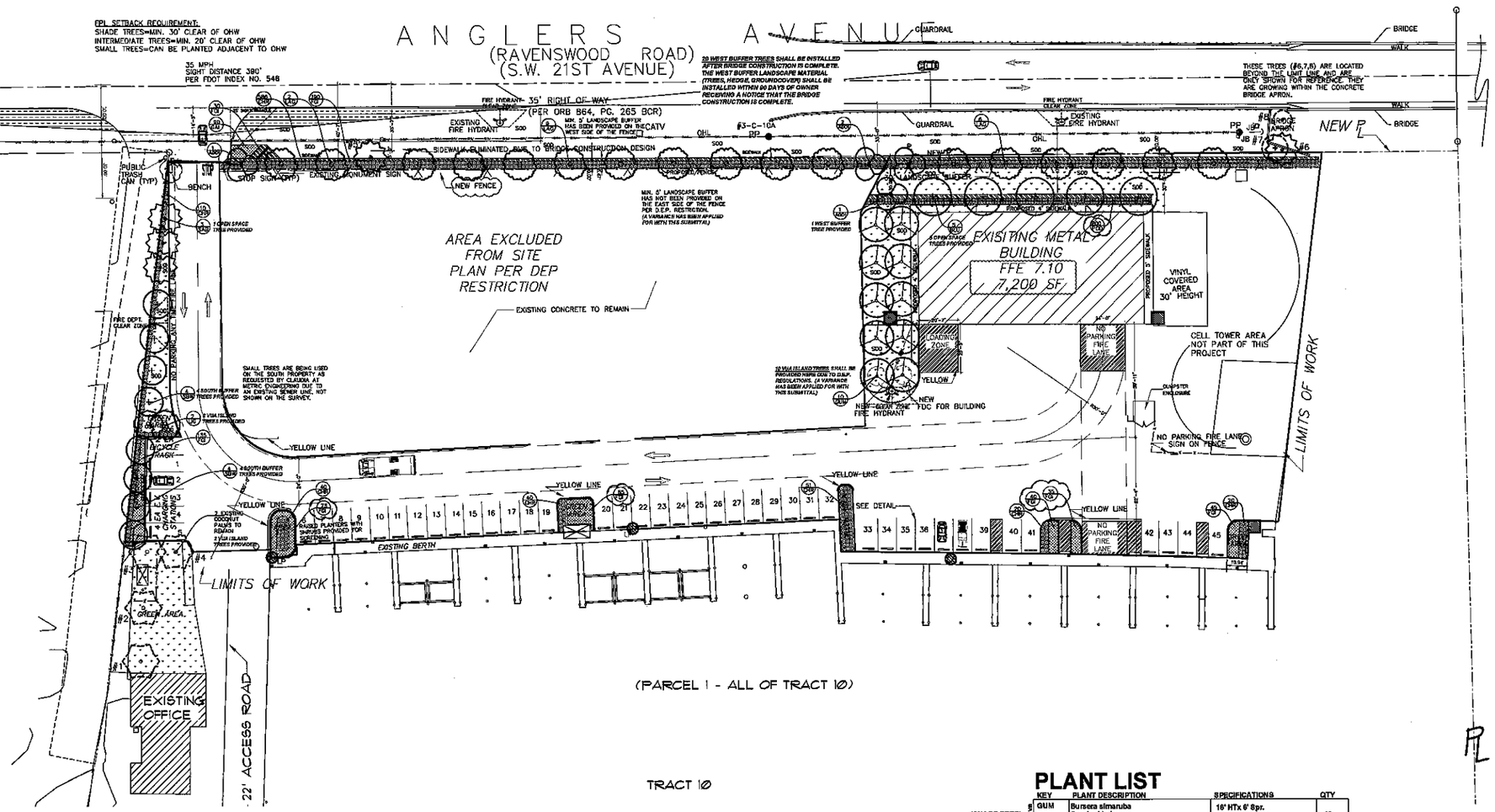
PROJECT: ANGLERS AVENUE MARINA
4470 ANGLERS AVENUE
DANIA BEACH, FLORIDA 33312
BROWARD COUNTY

IRRIGATION PLAN:

PROJECT NO. 12-025.C

SHEET: IR-2 of 2

DATE:
THOMAS J. LAUBENTHAL
#LA-0000563 #LC-26000422



LANDSCAPE CODE FOR CITY OF DANIA

	LOT AREA:	73,404 SF	(100.00%)		
	BUILDING	7,200 SF	(9.80%)		
	LANDSCAPE AREA	10,760 SF	(14.65%)		
	VUA / CONCRETE AREA	55,404 SF	(75.55%)		
				REQUIRED	NEW TREES PROVIDED
SEC. 26-47	REQUIRED LANDSCAPING FOR VEHICLE USE AREAS				
SEC. 26-51	between abutting right-of-way and V.U.A. = 1 TREE / 30 LF				
	WEST BUFFER (Ravenswood Road)	617.65 LF/30=20.5		21	25
	between abutting property and V.U.A. = 1 TREE / 40 LF				
	NORTH BUFFER (this side abuts cell tower)	223.20 LF/40= 5.5		N/A	N/A
	EAST BUFFER (this side abuts our own property)	633.51 LF/40= N/A		N/A	N/A
	SOUTH BUFFER	214.60 LF/40= 5.3		6	6
SEC. 26-48	INTERIOR LANDSCAPING FOR ALL V.U.A. (VUA ISLAND TREES)				
	2 TREE REQ/ EA. ISLAND PROV. 7 ISLANDS PROVIDED x 2 TREES EA. =			14	14 (includes 2 existing trees to remain)
SEC. 26-49	LANDSC. REQ. FOR ALL NON-VEHICULAR OPEN SPACE (OPEN SPACE TREES)				
SEC. 26-49 (c)	1 TREE + 8 SHRUBS / 3000 SF	10,760 / 3000= 3.5		4	4
ART. 4	DANIA CODE/ WILDLIFE PROTECTION			YES	YES
	0 TREES REQUIRED FOR MITIGATION			0	0
	TOTAL TREES REQUIRED			45	49

PERCENT REQUIRED		TREES REQUIRED	TREES PROVIDED
100%		45	47
40%	14' SHADE TREES/ 2"CAL	18	15 New Trees
30%	12' INTERMEDIATE TREES/ 2" CAL	13	0 New Trees
10%	10' SMALL TREES/ 1 1/2" CAL	5	27 New Trees
20%	PALMS, MIN. 6' G.W.	9	1 New Trees = (3 New single Palms 3:1) 4 New Trees = (4 New triple Palms 1:1)
40%	NATIVE TREES REQUIRED	18	19

A PRE-INSTALLTION MEETING WITH THE CITY LANDSCAPE CONSULTANT MUST BE HELD PRIOR TO LANDSCAPE INSTALLATION. CONTACT MICHAEL MCCOY AT 305-235-5098 TO SCHEDULE THE INSPECTION.

PLANT LIST

		KEY	PLANT DESCRIPTION	SPECIFICATIONS	QTY
(SHADE TREE)	native	GUM	Bursera simaruba Gumbo Limbo FPL APPROVED LARGE TREE BFA (MINIMUM 30' SETBACK FROM OHW)	16' HTx 6' Spr. 5' CT, 3" caliper (SHADE TREE)	10
(SHADE TREE)		BLU	Elaeocarpus decipiens Japanese Blueberry	14' OA ht x 6' spr. 3" caliper, well formed (SHADE TREE)	5
(SMALL TREE)		LAG	Lagerstroemia indica "Natchez" Natchez White Crape Myrtle FPL APPROVED SMALL TREE BFP. (CAN BE PLANTED ADJACENT TO OHW)	12' ht.x 8' Spr. / Matched 5' CT, 5 main stems 2" cal. per trunk stem	17
(SMALL TREE)		LIG	Ligustrum japonicum Japanese Privet FPL APPROVED SMALL TREE BFP. (CAN BE PLANTED ADJACENT TO OHW)	8' OA ht x 5' spr, matching. B&B, multi-stem	2
(SMALL TREE)	native	SBW	Conocarpus erectus sericeus Silver Buttonwood FPL APPROVED SMALL TREE BFP. (CAN BE PLANTED ADJACENT TO OHW)	10' ht.x 5' Spr. . 5' CT, 2" caliper, Multi- 5 trunks min.	8
(PALM)		ADO-t	Veitchia merrill Christmas Palm - TRIPLE (1 TRIPLE = 1 TREE)	10' CT., 14-16' OA ht., matched trunk heights	4
(PALM)	native	SAB	Sabal palmetto Cabbage Palm FPL APPROVED LARGE PALM BFP. (FUR. PROND LENGTH (7)+2'MIN. CLEARANCE FROM OHW = MIN. 9' CLEAR)	S= 12' HT M= 18' HT T= 24' HT	12'-24' OA height, Booted, Staggered Heights see plan for heights (S-M-T)	3
	native	CHR	Chrysobalanus icaco "Red Tip" Red Tip Cocoplum	24" Ht X 24" Spr. 24" O.C. sp.	867
		FGI	Ficus microcarpa 'Green Island' Green Island Ficus	18" Ht X 18" Spr. 18" O.C. sp.	835
	native	GAI	Gaillardia pulchella Blanket Flower	1 gal., full to pot 12" O.C. sp.	90
		POD	Podocarpus macrophyllus 'Maki' Maki Podocarpus	36" ht.x 24" Spr. Full, Well formed shape 24" O.C. sp.	200
		PTV	Pittosporum tobira 'Variegata' Variegated Pittosporum	18" Ht X 18" Spr. 18" O.C. sp.	- 0 -
		SOD	Stenotaphrum secundatum "Palmetto" St. Augustine Grass	Solid sod tight joints, weed free	as needed

*PLANS TAKE PRECEDENCE OVER PLANT LIST

ALL MECHANICAL EQUIPMENT SHALL BE SCREENED FROM VIEW BY A CONTINUOUS HEDGE

NORTH

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LC-26000422
LA-0000593

DATE	REVISIONS:
7/14/14	REVISE SHRUB SPECIES / UPDATE BACKGROUND

DATE:	4-30-14
SCALE:	1" = 30'
DRAWING BY:	KMG
DESIGNED BY:	KMG

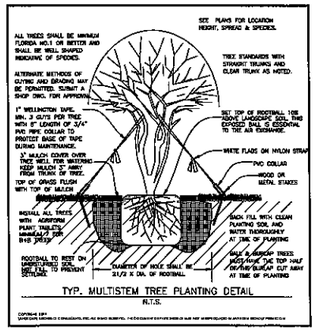
PROJECT: ANGLERS AVENUE MARINA
4470 ANGLERS AVENUE
DANIA BEACH, FLORIDA 33312
BROWARD COUNTY

LANDSCAPE PLAN:

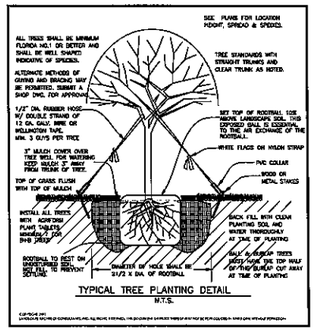
PROJECT NO. 12-025.C

SHEET: LP-1 of 2

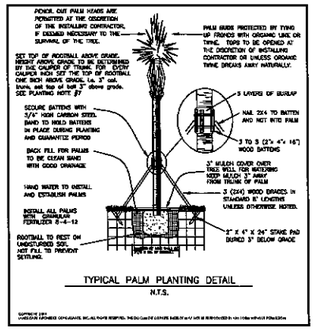
DATE:
THOMAS J. LAUBENTHAL
#LA-0000593 #LC-26000422



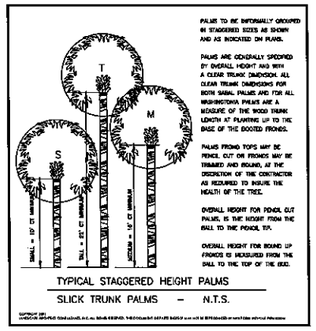
TYP. MULTISTEM TREE PLANTING DETAIL
N.T.S.



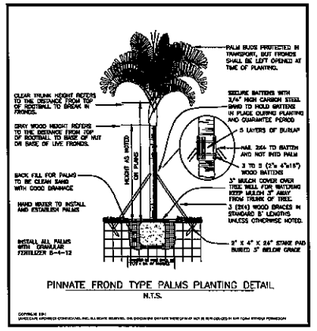
TYPICAL TREE PLANTING DETAIL
N.T.S.



TYPICAL PALM PLANTING DETAIL
N.T.S.



TYPICAL STAGGERED HEIGHT PALMS
SLICK TRUNK PALMS – N.T.S.



PINNATE FROND TYPE PALMS PLANTING DETAIL
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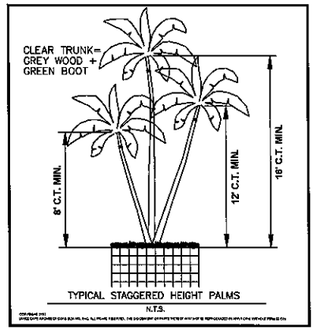

TYPICAL STAGGERED HEIGHT PALMS
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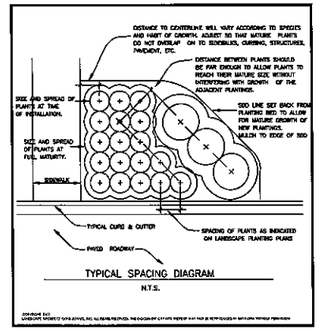
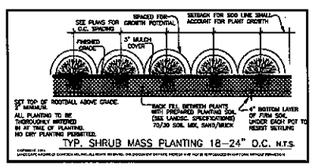
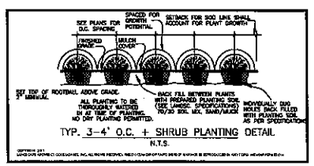


TYPICAL SPACING DIAGRAM
N.T.S.



TYP. SHRUB MASS PLANTING 18–24" O.C. N.T.S.



TYP. 3–4' O.C. + SHRUB PLANTING DETAIL
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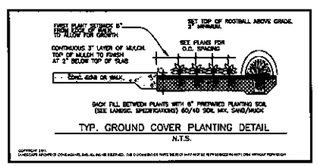
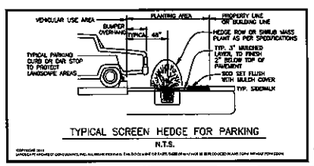
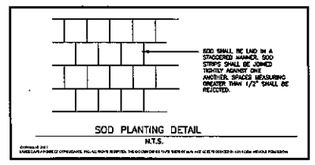


TYP. GROUND COVER PLANTING DETAIL
N.T.S.

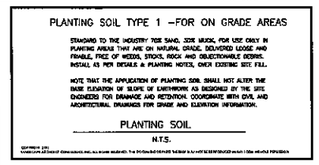


TYPICAL SCREEN HEDGE FOR PARKING
N.T.S.

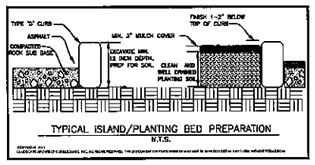


SOD PLANTING DETAIL
N.T.S.

TYPICAL SOD PLANTING DETAIL
N.T.S.



PLANTING SOIL
N.T.S.



TYPICAL ISLAND/PLANTING BED PREPARATION
N.T.S.

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P L A N T I N G N O T E S:

1. All sizes shown for plant material shown on plan are to be considered as minimums. All plant material must meet or exceed these minimum requirements for both height and spread. Any other requirements for specific shape or effect as noted on the plan will also be required for final acceptance.

2. All plant material furnished by the Landscape Contractor shall be Florida No.1 or better, unless otherwise specified , and shall be installed as specified in the most current edition of Grades and Standards for Nursery Plants, Part I by the Florida Department of Agriculture, Consumer Services Division, State Plant Board of Florida.

3. Landscape Design and installation shall conform to xeriscape landscape principles as included in the South Florida Water Management District's xeriscape Principle Guide II, updated version. Xeriscape requirements apply to all materials required by code. Additional plantings over and above code are provided to develop a higher aesthetic than code requires, and are not bound by these minimum standards.

4. In addition to these requirements all local landscape codes and requirements shall be met as a part of this base bid and contract in order to satisfy the review and approval of the governing municipality.

5. Quantities for landscape materials as noted on plans supersede any quantities as listed in summary tables or lists.

6. All landscaping scheduled to occur in vehicular use areas shall be protected from vehicular encroachment by curbing or other durable barriers.

7. All planting holes shall be a minimum of 2½ times greater than the diameter of the plant ball or a minimum of 12" of soil on all sides of the plant ball, whichever is greater. All planting holes shall be excavated to remove all objectionable materials, such as asphalt, sub-base, concrete, rock, caustic materials with an excessive soil Ph, or similar materials not suited for landscape planting. Planting hole(s) shall be dug to a depth that is 10% the height of the root ball, with the installed root ball resting on undisturbed soil. Top of root ball to be 10% above final grade. For small caliper trees of 4" or less, plant the root ball above grade 1" for every 1" caliper. (i.e. if you have a 3" caliper tree plant the rootball 3" above grade. For all shrubs and ground cover plant the rootball minimum 2" above grade.

8. All plant material shall be planted in planting soil that is delivered to the site in a clean, loose and friable condition. All soil shall have well drained characteristics. Soil must be free of all rocks, sticks, objectionable debris including weeds and weed seed. Minimum soil depth requirements may vary with each municipality. See details and local codes for clarification.

9. All plant materials shall be thoroughly watered in at the time of planting. No dry planting shall be permitted.

10. Local codes require specific formulas for the use of native plants, as well as calculations for required number of code size trees by type and caliper inch. See code calculation tables provided with plan drawings.

11. Plans and new plantings shall be required to provide for safe sight lines at all access and egress points from the site, as well as intersections. All emergency equipment such as fire hydrants shall be maintained as visible and accessible, free of obstruction by new plantings. Trees require setbacks from lighting poles and fixtures. The contractor is required to field adjust the location of plant materials to meet these standards as work in contract.

12. Fertilizer shall be applied directly to the surface of the plant bed immediately after installation and prior to mulching.
    - Turf Areas - Sunniland Fertilizer 16-4-8, applied per mfg. recommendation noted on the bag.
    - Shrub Areas - Atlantic Fertilizer 12-6-8 plus Minors, applied per mfg. recommendation noted on the bag.
    - Canopy Trees- Atlantic Fertilizer 12-6-8 plus Minors, applied per mfg. recommendation noted on the bag.
    - Palm Trees - Atlantic Fertilizer Palm Mix 8-4-12 plus Minors, applied per mfg. recommendation noted on the bag.

13. All landscape areas not covered by shrubs or ground cover shall be planted with sod, and conversely all areas not covered by sod shall be covered with mulch to a minimum depth of (3) three inches of cover when settled. Mulch shall be kept 3" away from the face of the trunk (tree or palm). Eco-Cypress mulch or Eco-Melaleuca mulch shall be used; see natural mulch products at www.mulchingsolutions.com for product information or call 561-499-8148.

14. Sod shall be (as noted) solid sod, and shall be laid on a smooth planting base which has been graded to meet the drainage characteristics of the site. All sod shall be laid with closely fitted joints, and shall be in a green and healthy growing condition at planting. Sod shall be free of disease, debris, sticks, rocks and weeds. Variety as specified in plans. Where sod is abutting shrub and/or ground cover beds, the sod line shall be cut in a clean smooth line (radial or straight) free of any jaggad or crooked edges.

15. All landscape areas shall be finished graded such that they are flush and level with the surrounding paved surfaces as not to impede the flow of drainage into landscape areas and to prevent the back wash of mulch and debris onto paved areas.

16. All new landscaped areas shall be excavated of all road rock, existing site fill down to a depth of 12" minimum from top of curb. SEE DETAIL THIS SHEET FOR SPECIFICS.

17. All landscape areas shall be irrigated by a fully automatic system adjusted to provide 100% coverage of all landscape areas. All heads shall be adjusted to minimum 100% overlap.

18. The irrigation system shall be equipped with a rain sensor shutoff device, hard wired to over ride the time clock, controller or pump station in the event of rain or equally wet conditions. This requirement conforms to the County and SFWMD ordinance.

19. Any existing trees on site shall be protected from damage including the root zones during construction. Any and all trees/palms to be removed or relocated shall require proper permitting and documentation of size, species, condition and proposed action as well as established values for mitigation in the case of removals. Trees to be relocated shall be free of any hazardous defects and/or characteristics including but not limited to: Girdling roots, codominant leaders with bark inclusions, active trunk decay, stub cuts, open trunk wounds and broken leader(s). All permitting and review processes must be complete prior to work being done. Any relocation's shall be root pruned in advance except for palm species.

20. All selective trimming of existing or relocated trees on site, shall be done applying the standards of the American National Standards Institute, ANSI 300, 2001.

21. All new trees and relocated trees shall be guyed and braced applying the Standards of the National Arborist Association Guide Lines 1988 edition or most current.

22. All trees and palms shall be setback from roadways, walks and utility clear zones as required to conform to safety standards of the local municipality, FDOT and/or the utility companies, whether the plans show dimensions or not. These standards shall supersede all plan documents and are included in the work required by the contractor to complete the project.

23. Any substitutions to plant materials for areas and items addressed on the plans shall be approved by the governing municipality prior to work performed.

24. Landscape materials shall be maintained during construction as part of this base contract and any materials that die or decline below grades and standards shall be replaced immediately and prior to final acceptance.

25. All landscape materials are guaranteed for full replacement including the material and labor for a period of one year from the time of final acceptance. This applies to any materials which are dead or declined beyond grades and standards. The guarantee is void only in cases of 75 mph hurricane force winds at the site and/or freeze below 35 degrees when established by the weather bureau as effecting the project location.

26. Medium and large maturing palms shall be planted at least 3' (feet) from all hardscapes and at least their typical frond length from a building or light pole.

27. Medium and large maturing trees shall be planted at least 5' (feet) from all hardscapes (e.g. sidewalks, driveways, pavers, curbs, etc.) They shall be planted a minimum of 10' (feet) from a building or light pole.

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DATE	REVISIONS:

DATE:	4-30-14
SCALE:	N.T.S.
DRAWING BY:	KMG
DESIGNED BY:	KMG

PROJECT: ANGLERS AVENUE MARINA
4470 ANGLERS AVENUE
DANIA BEACH, FLORIDA 33312
BROWARD COUNTY

LANDSCAPE NOTES & DETAILS:

PROJECT NO. 12-025.C

SHEET: LP-2 of 2

DATE:
THOMAS J. LAUBENTHAL
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