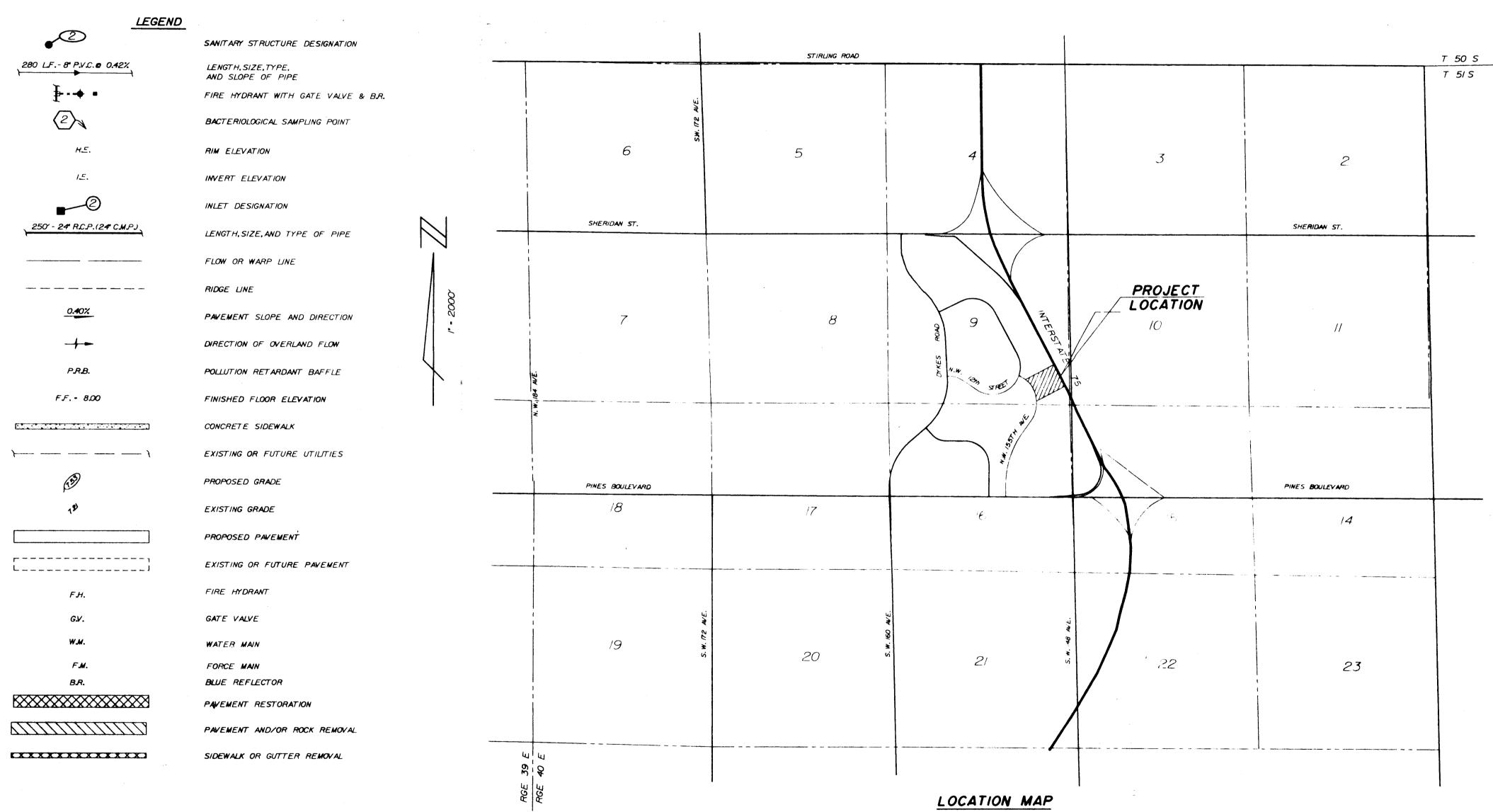


TOWNGATE RECREATIONAL PARK

CITY OF PEMBROKE PINES, BROWARD COUNTY, FLORIDA

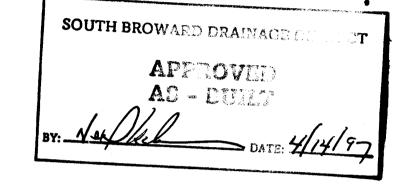
TOWNGATE LIMITED PARTNERSHIP MINTO COMMUNITIES (PEMBROKE), INC.



PAVING AND DRAINAGE SYSTEM
WATER DISTRIBUTION SYSTEM
SEWAGE COLLECTION SYSTEM
TRAFFIC MARKINGS

INDEX TO SHEETS

DESCRIPTION		SHEET NUMBE
GENERAL NOTES AND	SPECIFICATIONS	GNI OF 1
PAVING & DRAINAGE	SYSTEM - PLAN	PDI OF 2
PAVING & DRAINAGE	SYSTEM - DETAILS	PD2 OF 2
TRAFFIC MARKINGS -	PLAN & DETAILS	TMI OF 1
WATER DISTRIBUTION	8 SEWAGE COLLECTION SYSTEM - PLAN	WSI OF 4
SEWER PROFILES		WS2 OF 4
SEWAGE COLLECTION	SYSTEM - DETAILS	W\$3 OF 4
WATER DISTRIBUTION	SYSTEM - DETAILS	WS4 OF 4

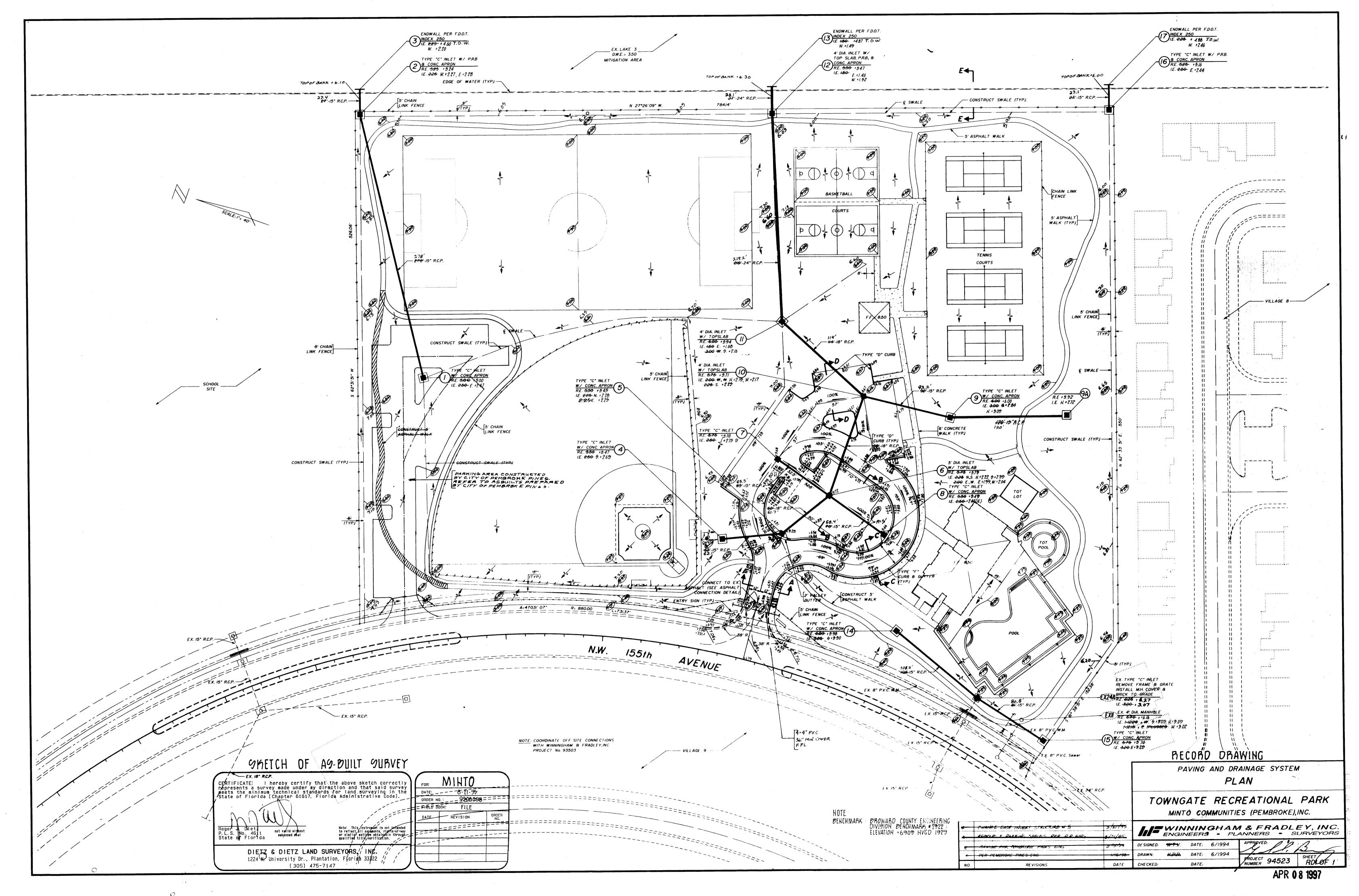


LEGAL DESCRIPTION

THE SOUTH 10 ACRES OF PARCEL "E" OF THE PLAT OF "TOWNGATE" AS RECORDED IN PLAT BOOK 156, PAGE II, OF THE BROWARD COUNTY RECORDS.



AFR 03 (8)2-

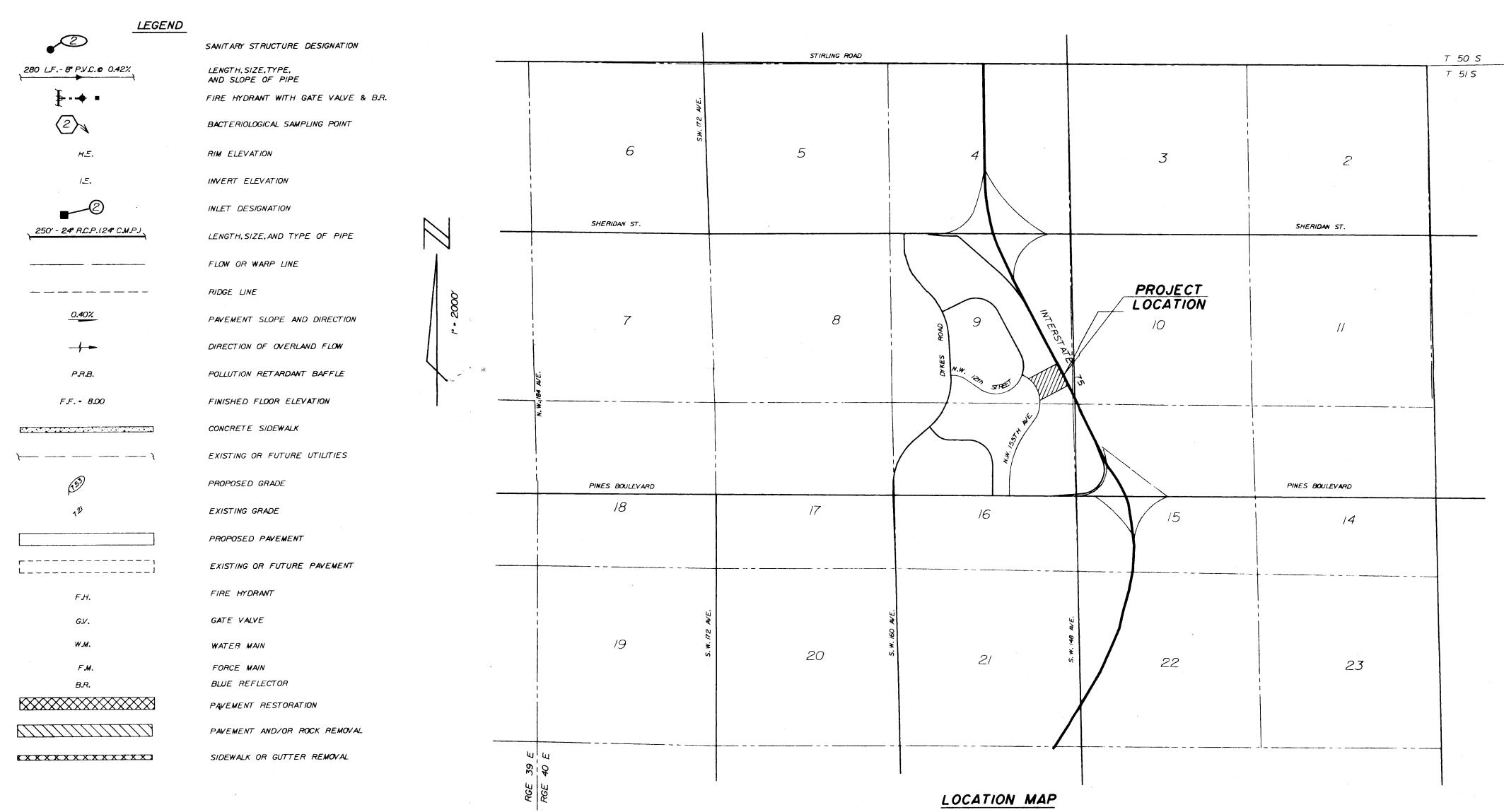


C. o

TOWNGATE RECREATIONAL PARK

CITY OF PEMBROKE PINES, BROWARD COUNTY, FLORIDA

TOWNGATE LIMITED PARTNERSHIP MINTO COMMUNITIES (PEMBROKE), INC.



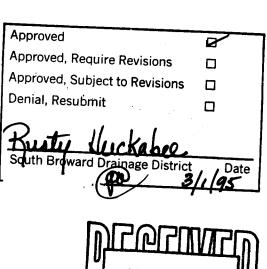
PAVING AND DRAINAGE SYSTEM
WATER DISTRIBUTION SYSTEM
SEWAGE COLLECTION SYSTEM
TRAFFIC MARKINGS

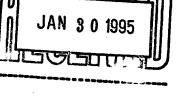
INDEX TO SHEETS

	DESCRIPTION	SHEET NUMBER
	CENEDAL NOTES AND SPECIFICATIONS	CALLOS
g.	GENERAL NOTES AND SPECIFICATIONS	GNI OF I
	PAVING & DRAINAGE SYSTEM - PLAN	PDIOF 2
	PAVING & DRAINAGE SYSTEM - DETAILS	PD2 OF 2
	TRAFFIC MARKINGS - PLAN & DETAILS	TMI OF 1
	WATER DISTRIBUTION & SEWAGE COLLECTION SYSTEM - PLAN	WSI OF 4
	SEWER PROFILES	WS2 OF 4
	SEWAGE COLLECTION SYSTEM - DETAILS	WS3 OF 4
	WATER DISTRIBUTION SYSTEM - DETAILS	WS4 OF 4

LEGAL DESCRIPTION

THE SOUTH IO ACRES OF PARCEL "E" OF THE
PLAT OF "TOWNGATE" AS RECORDED IN
PLAT BOOK 156, PAGE II, OF THE
BROWARD COUNTY RECORDS







GENERAL NOTES FOR WATER DISTRIBUTION AND SEWAGE COLLECTION SYSTEMS

- ALL APPLICABLE PERMITS MUST BE OBTAINED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- ALL APPLICABLE FEES AND CHARGES MUST BE PAID PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- THE LOCATIONS OF EXISTING UTILITIES AS SHOWN ON THE APPROVED PLANS ARE TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR.APPROVAL OF DEVELOPMENT PLANS BY THE CITY IN NO WAY IMPLIES VERIFICATION OF THE ACCURACY OF THOSE PLANS OR FEATURES DEPICTED THEREON.ANY DISCREPANCY IN, OR VARIATION FROM, THE APPROVED PLANS IS TO BE BROUGHT TO THE ATTENTION OF THE CITY'S ENGINEER BY THE OWNERS ENGINEER.
- 4. THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TAKING SUCH MEASURES AS NECESSARY TO PROTECT THE HEALTH, SAFETY AND WELFARE OF THOSE PERSONS HAVING ACCESS TO THE WORK SITE.
- 6. THE CONTRACTOR SHALL INFORM THE CITY OF PEMBROKE PINES ENGINEERING 8 UTILITY DEPARTMENT AT LEAST 48 HOURS IN ADVANCE OF COMMENCING CONSTRUCTION.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATIONS OF ALL UTILITIES,AND NOTIFICATION OF SUNSHINE STATE 1,(PH.1-800-432-4770,48 HOURS IN ADVANCE OF CONSTRUCTION.
- THE CONTRACTOR SHALL INFORM THE CITY OF PEMBROKE PINES ENGINEERING & UTILITY DEPERTMENT AND WINNINGHAM 8 FRADLEY,INC.A MINIMUM OF 48 HOURS IN ADVANCE OF COMMENCEMENT OF CONNECTING TO A CITY FACILITY.
- 9. A PRE-CONSTRUCTION MEETING IS TO BE HELD AT CITY HALL AND ATTENDED BY THE CONTRACTOR, OWNER'S ENGINEER, AND OTHER INTERESTED PARTIES PRIOR TO ISSUANCE OF ANY CONSTRUCTION PERMITS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE SCHEDULING OF TESTS AS MAY BE DEEMED NECESSARY
 BY THE CITY OF PEMBROKE PINES UTILITY DEPARTMENT AND THE OWNER'S ENGINEER OR AS CALLED
 FOR IN THE PLANS AND SPECIFICATIONS.
- II. CONSTRUCTION SHALL BE CARRIED OUT IN STRICT COMPLIANCE WITH THOSE STANDARDS ACCEPTED BY BROWARD COUNTY OFFICE OF ENVIRONMENTAL SERVICES AND ADOPTED BY THE CITY OF PEMBROKE PINES.
- 12. THE CONTRACTOR SHALL MAINTAIN A CURRENT APPROVED SET OF CONSTRUCTION PLANS ON-SITE.THE PLANS ARE TO BE MADE AVAILABLE TO THE CITY ENGINEER OR HIS DESIGNEE UPON REQUEST.
- 3. WHERE SANITARY SEWER MAINS CROSS UNDER WATER MAINS WITH LESS THAN 18 INCH VERTICAL CLEARANCE, AND WHERE THE SANITARY SEWER CROSSES ABOVE A WATER MAIN, BOTH PIPES SHALL BE DUCTILE IRON PIPE FOR A DISTANCE OF 20 FEET CENTERED ON THE POINT OF INTERSECTION. IN NO CASE SHALL VERTICAL CLEARANCE BETWEEN ANY UNDERGROUND PIPING BE LESS THAN 12 INCHES. A HORIZONTAL SEPARATION OF 10 FEET SHALL BE MAINTAINED BETWEEN SANITARY SEWER AND WATER MAIN.
- 14: THE OWNER'S ENGINEER SHALL MAKE SUFFICIENT OBSERVATIONS OF THE WORK TO ENABLE HIM TO CERTIFY TO THE INSTALLATION AS BEING IN SUBSTANTIAL CONFORMANCE WITH APPLICABLE STANDARDS AND SPECIFICATIONS.
- THE CITY OF PEMBROKE PINES UTILITY DEPARTMENT AND THE ENGINEER OF RECORD WILL CARRY OUT INSPECTIONS OF THE WORK, AND WILL WITNESS PRESSURE, BACTERIOLOGICAL, AND INFILTRATION/
 EXFILTRATION TESTS TELEVISION INSPECTION OF ALL GRAVITY SANITARY SEWER SYSTEMS ARE REQUIRED.
- THE CONTRACTOR SHALL SUPPLY AND INSTALL APPROVED REFLECTIVE MARKERS PLACED IN THE CENTER OF THE DRIVING LANE ADJACENT TO; FIRE HYDRANTS (BLUE REFLECTOR), AND VALVES OR M.H.S. OUTSIDE PAVEMENT AREAS ORANGE R.P.M.'S FOR MANHOLES, WHITE R.P.M.'S FOR GATE VALVES, AND GREEN R.P.M.'S FOR FORCE MAIN VALVES.
- 17. THE FOLLOWING DOCUMENTS ARE TO BE ON FILE AT THE CITY OF PEMBROKE PINES PRIOR TO THE CONNECTION OF THE FIRST WATER METER:
 - A. LETTERS OF ACCEPTANCE FROM:
 BROWARD COUNTY PUBLIC HEALTH UNIT
 BROWARD COUNTY DEPARTMENT OF NATURAL RESOURCE PROTECTION.
 - B. CERTIFICATION OF ENGINEER OF RECORD.
 - C. THREE SIGNED AND SEALED COPIES OF AS-BUILTS CERTIFIED BY A
 PROFESSIONAL ENGINEER OR LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA.
- 18. NO DEVIATION FROM APPROVED PLANS SHALL BE PERMITTED WITHOUT THE WRITTEN CONSENT OF THE OWNER'S ENGINEER.
- 19. THE MINIMUM ALLOWABLE HORIZONTAL CLEARANCE BETWEEN UTILITIES AND OBSTRUCTIONS TO BE 3'-0" INCLUDING CATCH BASINS. THE MINIMUM ALLOWABLE HORIZONTAL CLEARANCE BETWEEN UTILITIES AND TREES IS TO BE 5'-0"
- 20. THE MINIMUM FOOT VALVE SIZE ON FIRE HYDRANTS SHALL BE 5 1/4".

GENERAL NOTES FOR SEWAGE COLLECTION SYSTEM & DRAINAGE SYSTEM

- 1. PRECAST STRUCTURES SHALL CONFORM TO ASTM C-478 AND 64T. PRECAST STRUCTURE MUST BE CERTIFIED
 BYAN INDEPENDANT ENGINEERING TESTING LABATORY. SIGNED AND DATED, CERTIFYING THAT THEY MEET THE REQUIREMENTS
 OF ASTM C-478 FOR CONCRETE STRENGTH, STEEL REINFORCEMENT AREA AND PLACEMENT, AND APPEARANCE.
 MANHOLES AND CATCH BASINS MUST BE INSPECTED BY THE CITY BEFORE UNLOADING.
- 2. CONCRETE FOR PRECAST MANHOLES AND CATCH BASINS OR CAST IN PLACE MANHOLES AND CATCH BASINS SHALL ATTAIN A MINIMUM COMPRESSIVE STRENGTH OF 4,000 PSI AT 28 DAYS.
- 3. MINIMUM WALL AND BASE THICKNESS FOR PRECAST MANHOLES SHALL BE 8 INCHES, EXCEPT FOR P BOTTOMS
 WHICH SHALL HAVE 6" WALLS, REINFORCING STEEL FOR MANHOLES AND CATCH BASINS SHALL CONFORM TO THE REQUIREMENTS OF ASTM
 A-615, A-305, A-185, AND A-497 LATEST REVISION. SPLICES SHALL HAVE A MINIMUM LAP OF 24 BAR DIAMETERS.
 MINIMUM COVER OVER REINFORCING STEEL SHALL BE 3 INCHES. ALL DRAINAGE STRUCTURES SHALL MEET FOOT SPECIFICATION.
- 4. ALL OPENINGS IN PRECAST MANHOLES AND CATCH BASINS SHALL BE CAST AT THE TIME OF MANUFACTURE.
- 5. PRECAST MANHOLE AND CATCH BASIN SHOP DRAWINGS SHALL BE SUBMITTED TO THE CITY OF PEMBROKE PINES AND ENGINEER FOR.
- 6. ALL MANHOLES AND CATCH BASINS SHALL BE SET PLUMB TO LINE AND GRADE,AND SHALL REST ON A FIRM,
 CAREFULLY GRADED SUBGRADE,WHICH SHALL PROVIDE UNIFORM BEARING UNDER BASE.
- MANHOLE SECTIONS SHALL BE JOINED WITH A MASTIC COMPOUND PRODUCING A WATER TIGHT BOND. THE REMAINING SPACE SHALL BE FILLED WITH CEMENT MORTAR AND FINISHED SO AS TO PRODUCE A SMOOTH CONTINUOUS SURFACE INSIDE AND OUTSIDE THE WALL SECTIONS.
- 8. ALL CONCRETE AND MORTAR USED IN MANHOLE AND CATCH BASIN CONSTRUCTION SHALL HAVE TYPE II
- 9. ALL SPACES AROUND PIPES ENTERING OR LEAVING MANHOLES SHALL BE COMPLETELY FILLED WITH EMBECO MORTAR (NON-METALLIC) OR BONSAL (NON-SHRINKING).
- TWO COATS OF KOPPER'S 300 M SHALL BE APPLIED TO THE INSIDE OF THE MANHOLES AND WETWELLS.

 FIRST COAT RED, SECOND COAT BLACK ON THE OUTSIDE OF THE MANHOLE, ONLY ONE COAT IS

 NECESSARY.

- SANITARY MANHOLES AND LIDS SHALL BE CAPABLE OF WITHSTANDING AASHTO H-20 LOADING. USF 420A.

 DAE LIDS SHALL SAY "CITY OF PEMBROKE PINES SANITARY SEWER".
- ALL GRAVITY SEWER PIPE SHALL BE PVC OR DUCTILE IRON.PVC PIPE SHALL CONFORM TO ASTM D 3034,SDR 35,LATEST REVISION,WITH MAXIMUM 13 FOOT LENGTHS AND PUSH-ON RUBBER GASKET JOINTS.DUCTILE IRON GRAVITY PIPE SHALL CONFORM TO THE SPECIFICATION FOR FORCE MAIN. ALL FORCE MAINS SHALL BE LINED WITH A VIRGIN POLYETHYLENE LINER COMPLYING WITH A.S.T.M. D-1248 COMPOUNDED WITH SUFFICIENT ADDITIVES TO RESIST ULTRAVIOLET RAYS DURING ABOVE GROUND STORAGE OF THE PIPE. THE POLYETHYLENE SHALL BE FUSED TO THE INTERIOR OF THE PIPE BY HEAT, FORMING A TIGHTLY BONDED LINING APPROXIMATELY 40 MILS THICK EXTENDING FROM SPIGOT END TO THE BARREL SOCKET
- CONNECTING TO THE EXISTING SYSTEM ALL CONNECTIONS TO EXISTING MAINS SHALL BE MADE UNDER THE DIRECTION OF THE CITY UTILITIES DEPARTMENT VALVES THAT SEPARATE THE MAINS BEING INSTALLED FROM THE EXISTING MAINS SHALL BE OPERATED BY OR UNDER THE DIRECTION OF THE CITY UTILITIES DEPARTMENT REPRESENTATIVE ONLY.
- THE CONTRACTOR SHALL TEST THE COMPLETED SEWER LINE TO DETERMINE THE ALIGNMENT AND TIGHTNESS OF THE JOINTS.GRAVITY SEWER MAINS SHALL BE LAMPED AND MUST SHOW A FULL CIRCLE OF LIGHT.
 INFILTRATION AND EXFILTRATION TESTING SHALL BE CONDUCTED.LEAKAGE SHALL NOT EXCEED 100
 GALLONS PER INCH DIAMETER PER MILE PER DAY. NO VISIBLE INFILTRATION SHALL BE ALLOWED.
- 15. A READ STAKE SHALL BE INSTALLED AT EVERY SEWER SERVICE LOCATION.
- 16. SANITATY SEWER SHALL BE TELEVISED AT OWNERS EXPENSE. OWNER / CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY DEFICIENCIES PROIR TO THE CITY'S CERTIFICATION OF COMPLETION TO ANY AGENCY.

WATER DISTRIBUTION SYSTEM NOTES

- I. ALL WATER MAIN SHALL BE PVC CONFORMING TO ANSI/AWWA SPECIFICATION C-900-89-DRIB.
- 2. FITTINGS SHALL BE DUCTILE IRON CLASS 350 MEETING AWWA/ANSI CI53/A21.53-88 SPECIFICATIONS.
 FITTINGS MUST BE CEMENT LINED AND SEAL COATED PER AWWA/ANSI CI04/A21.4-90.
- 3. GATE VALVES 4" AND LARGER SHALL MEET AWWA C-509-87 SPECIFICATION. VALVES MUST BE MUELLER CO. OR APPROVED EQUAL. MECHANICAL JOINT, RESILIENT SEATED.
- 4. WATER SERVICE PIPING, FITTINGS, AND SERVICE TUBING SHALL BE POLYBUTYLENE CONFORMING TO AWWA SPECIFICATION C-902-88. SDR 9, 250 psi RATING.
- 5. ALL METER SERVICE CONNECTIONS SHALL BE BRONZE FROM PLUG VALVE TO PLUG VALVE. NO GATE VALVES ARE TO BE USED [2" OR LESS]. 90° ANGLE LOCK WING.
- 5. PAVEMENT RESTORATION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
- ALL TRENCHING, PIPE-LAYING, BACKFILL, PRESSURE TESTING AND DISINFECTING MUST COMPLY WITH THE CITY OF PEMBROKE PINES UTILITIES WATER AND WASTEWATER MINIMUM CONSTRUCTION REQUIREMENTS.
- 8. THE ENGINEER WILL TAKE ALL BACTERIOLOGICAL SAMPLES TO AN HR.S.CERTIFIED LABORATORY AND SUBMIT RESULTS TO THE CITY OF PEMBROKE PINES UTILITIES.
- 9. ALL CONNECTIONS TO EXISTING MAINS SHALL BE MADE UNDER THE DIRECTION OF THE CITY OF PEMBROKE PINES UTILITIES DEPARTMENT.
- 10 ALL PIPE,ETC.SHALL BE TESTED UNDER A CONSTANT PRESSURE OF 150 PSIFOR A MINIMUM TEST OF 2 HOURS AND SHALL NOT EXCEED THE LEAKAGE REQUIREMENTS AS PER AWWA/ANSI SPECIFICATIONS OF C600-93 LEAKAGE FORMULA:

$Q = \frac{SD\sqrt{F}}{133200}$

- Q = ALLOWABLE LEAKAGE IN GALLONS PER HOUR
- S = TOTAL LENGTH OF PIPE TESTED IN FEET
 D = DIAMETER OF THE PIPE TESTED IN INCHES
- P = AVERAGE TEST PRESSURE IN POUNDS PER SQUARE INCH
- II. THE MINIMUM DEPTH OF COVER OVER PV.C. WATER MAINS SHALL BE 36 INCHES 8 OVER DJP. SHALL BE 30 INCHES.
- 12. DISINFECTION OF MAINS SHALL COMPLY WITH AWWA C-651-92 SPECIFICATIONS.STANDARD BACTERIOLOGICAL SAMPLING POINTS SHALL BE DESIGNATED ON THE ENGINEERING PLANS.(FORCE MAIN SHALL NOT BE DISINFECTED):
- 13. MINIMUM VALVE SPACING SHALL BE AS PER SECTION 8.2 OF THE TEN STATES STANDARDS.
- WHEN PVC IS USED FOR WATER MAIN, A 3" STRIP OF METALIC TAPE SHALL BE INSTALLED THE LENGTH OF THE PIPE 18" ABOVE THE PIPE WITH THE WORDS "WATERIOR FORCE) MAIN BURIED BELOW" FACING UPWARD. NON-METALIC TAPE SHALL BE USED ON DIP
- 15. ALL DIP.WATER MAIN SHALL BE CLASS 350, CONFORMING TO A.N.S.I.ZA.W.W.A.SPECIFICATION C151/A21.4-91 AND BE CEMENT MORTAR LINED AND SEAL COATED PER A.N.S.I.ZA.W.W.A.SPECIFICATION C104/A21.4-90.
- 16 PLUG VALVES SHALL BE DUCTILE IRON MANUFACTURED BY CLOW OR FOUAL

PAVING AND DRAINAGE SYSTEM NOTES

- ALL CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE CITY OF PEMBROKE PINES ENGINEERING DEPARTMENT, THE SOUTH BROWARD DRAINAGE DISTRICT AND THE FLORIDA DEPARTMENT OF TRANSPORTATION.
- PRIOR TO CONSTRUCTION,THE CONTRACTOR SHALL GIVE TIMELY NOTIFICATION TO ALL UTILITY COMPANIES WITH FACILITIES IN THE AREA.
- 3. THE LOCATIONS OF EXISTING FACILITIES WERE PLOTTED FROM AVAILABLE RECORDS.THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO SAFEGUARD ALL EXISTING STRUCTURES,UTILITIES AND SURVEY MARKERS.
- 4. ALL DRAINAGE PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP) MEETING THE REQUIREMENTS OF ASTM SPECIFICATION C76-850
- 5. MINIMUM COVER FOR ALL PIPE CULVERTS SHALL MEET THE REQUIREMENTS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS (INDEX NO.205).
- ALL UNDERGROUND FACILITIES SHALL BE INSTALLED PRIOR TO PLACING THE LIMEROCK BASE MATERIAL.
- THE CONTRACTOR AND/OR HIS SUPERINTENDENT SHALL HAVE AT LEAST ONE COPY OF EACH OF THE FOLLOWING PUBLICATIONS ON THE JOB SITE DURING CONSTRUCTION OF THIS PROJECT:

 A) CITY OF PEMBROKE PINES ENGINEERING DEPARTMENT-STANDARD DETAILS SPECIFICATIONS 8
 - PROCEDURAL MANUAL, JANUARY 1990.

 B.J. FLORIDA DEPARTMENT OF TRANSPORTATION-STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, LATEST EDITION.
 - C.) FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS, JANUARY 1992.
 - D.I.U.S.DEPARTMENT OF TRANSPORTATION-FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, MARCH 1988.

- 8. THE FOLLOWING INSPECTIONS ARE REQUIRED BY THE CITY OF PEMBROKE PINES ENGINEERING DEPT. PLEASE CALL 435-6512 48 HRS PRIOR TO THE TIME THE INSPECTION IS NEEDED.
 - A.CLEARING AND FILLING
 B.STORM DRAINS/UTILITIES
 C.SUBGRADE
 D.ROCK BASE
 E.PRIME COAT
 F.ASPHALT
 G.FINAL
 H.PAVEMENT MARKINGS
- 9. DENSITY TESTS FOR SUBGRADE MUST BE SUBMITTED TO AND APROVED BY THE CITY OF PEMBROKE PINES.
- IO. DENSITY TESTS AND AS-BUILTS FOR LIMEROCK BASE MUST BE SUBMITTED AND APPROVED BY THE CITY OF PEMBROKE PINES PRIOR TO THE PLACEMENT OF ANY ASPHALT.

SOUTH BROWARD DRAINAGE DISTRICT GENERAL NOTES

THE FOLLOWING GENERAL NOTES ARE REQUIRED BY SOUTH BROWARD DRAINAGE DISTRICT. THEY AIRE NOT MEANT TO BE ALL INCLUSIVE AND IT IS THE ENGINEER'S RESPONSIBILITY TO ADD ANY NOTES WHICH WILL INFORM THE OWNER AND THE CONTRACTOR OF ANY ADDITIONAL REQUIREMENTS OF THE SOUTH BROWARD DRAINAGE DISTRICT.

LIMEROCK BASE COURSE SHALL CONFORM TO THE REQUIREMENTS OF SECTION 311 OF FLORIDA DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATIONS EXCEPT THE MINIMUM PERCENTAGE OF CARBONATE OF CALCIUM AND MAGNESIUM SHALL BE SIXTY PERCENT (60%).

THE CONTRACTOR SHALL CALL THE SOUTH BROWARD DRAINAGE DISTRICT
24 HOURS PRIOR TO BACK-FILLING OF DRAINAGE TRENCHES, PLACEMENT
OF ASPHALT, SHAPING OF CANAL OR LAKE BANKS FROM THE DEEP CUT
LINE AND AS REQUIRED BY DISTRICT. CALL (305) 681-3337 OR
(305) 681-3338. THE SOUTH BROWARD DRAINAGE DISTRICT'S WORKING

ANY REVISIONS TO THESE PLANS MUST BE APPROVED BY SOUTH BROWARD DRAINAGE DISTRICT PRIOR TO CONSTRUCTION.

BONDS AND INSPECTIONS

HOURS ARE FROM 8:00 A.M.TO 4:30 P.M.

UPON DISTRICT BOARD OF SUPERVISORS APPROVAL OF PLANS, BUT BEFORE CONSTRUCTION CAN COMMENCE, THE FOLLOWING ITEMS MUST BE COMPLIED WITH:

- A BOND ICASH OR SURETY) OR LETTER OF CREDIT, IN THE DISTRICT'S FAVOR, MUIST BE POSTED IN THE AMOUNT STATED IN SECTION 4.11 OF THE DISTRICT'S DESIGN CRITERIA MANUAL.
- B. ALL EASEMENTS, DEED RESTRICTIONS, INDEMNIFICATION
 AGREEMENTS, MAINTENANCE AGREEMENTS AND DEEDS AS REQUIRED
 BY THE DISTRICT SHALL BE PRESENTED TO THE DISTRICT
 MANAGER AND ATTORNEY FOR APPROVAL BEFORE RECORDATION.
 ALL COSTS OF RECORDING THE APPLICABLE INSTRUMENT WILL BE
 BORNE BY THE DEVELOPER.
- C. UPON COMPLIANCE WITH THE CONDITIONS REQUIRED BY THE DISTRICT FOR APPROVAL AND RECEIPT OF APPROVED PLANS FROM THE DISTRICT'S ENGINEER, THE DISTRICT'S MANAGER WILL MARK THE PLANS "APPROVED" AND SIGN SAME AND DISTRIBUTE THE APPROVED PLANS TO THE DEVELOPER AND THE DISTRICT FILES.
- D. BONDS SHALL BE PROVIDED BY THE PRINCIPALS OF DEVELOPMENTS ONLY CONTRACTOR OR SUB-CONTRACTOR BONDS ARE NOT ACCEPTABLE.
- E. IF REQUIRED BY DISTRICT, A PRE-CONSTRUCTION MEETING SHALL BE SCHEDULED AT LEAST SEVEN (7) DAYS PRIOR TO CONSTRUCTION.

- WHEN CONSTRUCTION IS IN PROGRESS, THE DISTRICT'S INSPECTOR
 WILL INSPECT THE INSTALLATION OF DRAINAGE WORKS, ACCORDING TO
 AN INSPECTION SCHEDULE ESTABLISHED BY THE DISTRICT.
 INSPECTION MUST BE MADE BY DISTRICT PERSONNEL OF ALL
 UNDERGROUND STORM DRAIN FACILITIES BEFORE BACKFILLING; CALL
 (305) 680-3337 OR (305) 680-3338 FOR AN INSPECTION APPOINTMENT
 A MINIMUM OF TWENTY-FOUR (24) HOURS IN ADVANCE. ALL COSTS OF
 PERIODIC INSPECTIONS OF CONSTRUCTION BY THE DISTRICT SHALL BE
 BORNE BY THE DEVELOPER.
- CERTIFIED "AS-BUILT" PLANS FROM THE ENGINEER OF RECORD WHICH ARE ACCEPTED AND APPROVED BY THE DISTRICT'S ENGINEERS AND MANAGER WILL BE REQUIRED BEFORE RELEASE OF THE BOND OR LETTER OF CREDIT, AS-BUILTS SHALL BE PROVIDED AS AN OVERLAY ON THE APPROVED CONSTRUCTION DRAWINGS AT THE SAME SCALE FOR COMPARISON PURPOSES. AS-BUILT SUBMITTAL SHALL FOLLOW THE SAME FORMAT OF GENERAL REVIEW AS OUTLINED IN SECTION 32 OF SOUTH BROWARD DRAINAGE DISTRICT'S CRITERIA AND PERMIT MANUAL
- LAKE AND CANAL AS-BUILTS SHALL BE CROSS SECTIONED SHOWING THE DESIGNED SECTION AS DASHED, AS-BUILT SECTION AS SOLID AND HAVE THE TOP OF BANK REFERENCED TO THE LAKE/CANAL MAINTENANCE EASEMENT AND PROPERTY LINES SPACING BETWEEN EACH CROSS-SECTION SHALL BE SUCH AS TO PROVIDE ENOUGH DATA TO DETERMINE IF THE LAKE/CANAL WAS CONSTRUCTED AS DESIGNED, BUT NO GREATER THAN ONE HUNDRED (100) FEET BETWEEN CROSS-SECTIONS, UNLESS APPROVED BY DISTRICT'S ENGINEER PLAN VIEW OF ACTUAL LOCATION OF THE TOP OF BANK AND DEEP-CUT LINE SHALL BE PROVIDED WITH CROSS-SECTIONS.
- 9. UPON SUCCESSFUL COMPLETION OF THE CONSTRUCTION AND ACCEPTANCE OF "AS-BUILTS", THE BOND OR LETTER OF CREDIT MAY BE RELEASED FOLLOWING PAYMENT TO THE DISTRICT FOR ALL EXPENSES AND COSTS INCURRED BY THE DISTRICT WHICH ARE REQUIRED TO BE PAID BY THE DEVELOPER.
- THE CONTRACTOR CONSTRUCTING OR EXCAVATING LAKES OR OTHER WATER BODIES SHALL EXERCISE EXTREME CAUTION TO ENSURE THAT THE BANK SLOPES AND DEEP-CUT LINES ARE CONSTRUCTED IN ACCORDANCE WITH APPROVED PLANS FOR THE DEVELOPMENT THE CONTRACTOR OR OWNER SHALL PERIODICALLY OR AS REQUESTED BY THE DISTRICT OBTAIN A SURVEY FROM A FLORIDA REGISTERED SURVEYOR OF THE LOCATION OF THE DEEP CUT LINES PRIOR TO FORMING THE BANK SLOPES. THIS SURVEY SHALL BE TAKEN PRIOR TO THE OWNER/CONTRACTOR BEGINNING CONSTRUCTION OF THE BUILDING PAD ADJACENT TO THE WATER BODY. IN THE EVENT THE CONTRACTOR/OWNER OVERCUTS OR OVERDIGS THE WATER BODY, THE CONTRACTOR/OWNER SHALL SUBMIT TO THE DISTRICT ITS RECOMMENDED SOLUTION TO CORRECT THE OVER DIGGING, ANY SUGGESTED REMEDY OR CORRECTION MUST BE APPROVED BY THE DISTRICT BEFORE THE CONTRACTOR/OWNER COMMENCES CONSTRUCTION OF THE PROPOSED CORRECTION/REMEDY.

FIRE HYDRANTS

FIRE HYDRANTS SHALL HAVE A MINIMUM 5 I/4" VALVE OPENING AND SHALL OPEN AGAINST THE PRESSURE AND CLOSING WITH THE FLOW. HYDRANTS SHALL BE MUELLER CENTURION, MODEL NUMBER A-423 OR EQUAL. HYDRANTS SHALL MEET OR EXCEED ANSI/AWWA C502-85, C503-88 OR LATEST REVISION, AND SHALL COMPLY WITH FACTORY MUTUAL RESEARCH CORPORATION AND UNDERWRITERS LABORATORIES UL246 STANDARD.

RECORD DRAWING DATA REQUIREMENTS:

- I. ALL WATER MAINS SHALL HAVE THE TOP OF PIPE'S ELEVATION SHOWN AT 100' 0/C MINIMUM.
- 2. ALL FITTINGS AND VALVES SHALL BE LOCATED USING A PHYSICAL BASELINE AT THE TOP OF FITTING ELEVATION.
- 3. LOCATE ALL WATER SERVICES, SEWER SERVICE'S, VALVES, FIRE HYDRANTS 8 CLEANOUTS FROM A PHYSICAL BASELINE.
- 4. SHOW ALL BACTERIOLOGICAL SAMPLE POINTS AND NUMBER CONSECUTIVELY.
- 5. IDENTIFY ALL PIPE MATERIAL USED ON THE PROJECT SPECIFICALLY SHOWING WHERE PIPE WAS CHANGED IN MATERIAL TYPE.
- 6. RECORD DRAWINGS SHALL BE LOCATED AND CERIFIED BY A PL.S. REGISTERED IN THE STATE OF FLORIDA.

GENERAL NOTES

TOWNGATE RECREATIONAL PARK
TOWNGATE LIMITED PARTNERSHIP
MINTO COMMUNITIES (PEMBROKE), INC.

		,	///=	W/N ENGI	ININ VEERS	GHAN	M & FRADLEY, INC. ANNERS - SURVEYORS
			DE SIGNED:	wa _F	DATE:	6/94	APPROVED:
			DRAWN:	WaF	DATE:	6/94	Could Immedian
NO.	REVISIONS	DATE	CHECKED:		DATE:		NUMBER 94523 GNI OF I

