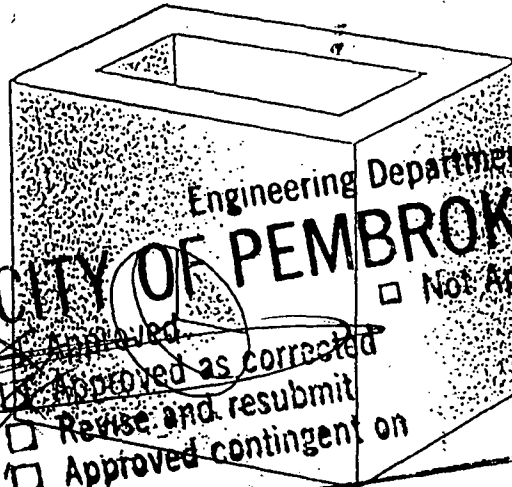
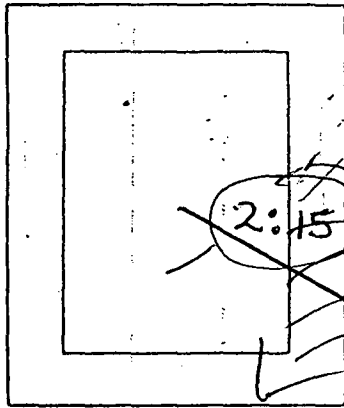


1926 SKEES ROAD, WEST PALM BEACH, FLORIDA, 33411 (407) 686-4622

TYPE "C" CATCH BASIN



Engineering Department
CITY OF PEMBROKE PINES
☐ Not Approved

☒ Approved
☒ Approved as corrected
☐ Revise and resubmit
☐ Approved contingent on

5-10-95

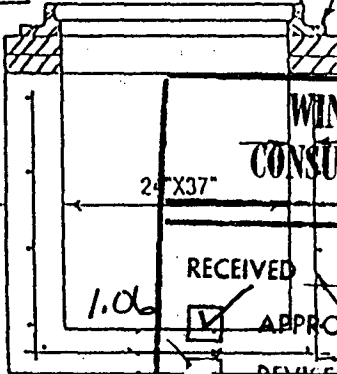
✓ NO. 1
ELEV. 5.56
✓ INV. 2.60
HT. 2.96
CUT 36"
PRICE 41.51/34

FRAME AND GRATE BRICKED TO
GRADE BY CONTRACTOR

USF# 4155-6210
FRAME & GRATE

2-4 COURSES

EL. 5.56



WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

RECEIVED 5/2/95

☒ APPROVED AS NOTED

REVISE & RESUBMIT 12" O.C.E.W.-O/E

DATE D.A.B. 5/3/95

DOCUMENT REVIEWED FOR CONFORMANCE WITH
DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL
FIELD CONDITIONS AND PROVIDE QUANTITIES
REQUIRED BY CONSTRUCTION DOCUMENTS.

LASER ENGINEERING, INC.

DATE 5-1-95

INITIALS JRS.

These plans have been reviewed only for general compliance with City requirements. The design engineer MUST be completely responsible for the engineering/design/technical competency and accuracy. The plans are being approved with the condition that they MUST conform to all City Ordinances, codes, standards and requirements. In case of conflict, the City Code of Ordinances shall supercede these plans. It shall be the responsibility of the engineer of record to have these plans approved by all other applicable federal, state, county or local agencies.

BASE	DATE MADE	DATE SHIPPED
RISE		
RISE		
COLLAR		
TOP		
USF#		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

INLET CONFORMS TO F.D.O.

INDEX 232

INLET-FRAME & GRATE

CONTRACTOR:

LASER ENGINEERING

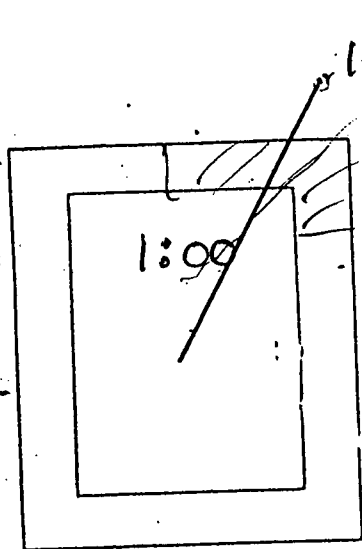
JOB:

TOWNGATE
VILLAGE II

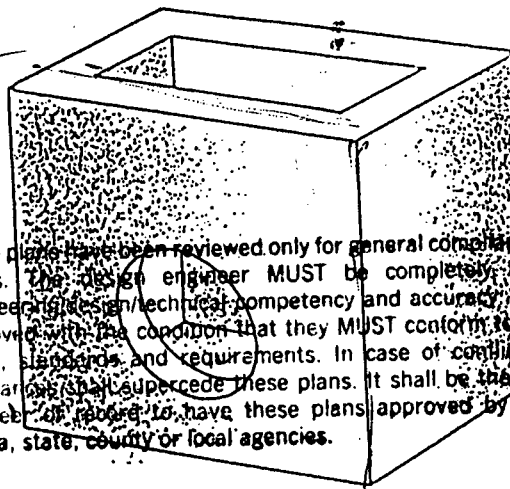
TRI-COUNTY CONCRETE PRODUCTS

1926 SKEES ROAD, WEST PALM BEACH, FLORIDA, 33411 (407) 686-4622

TYPE "C" CATCH BASIN

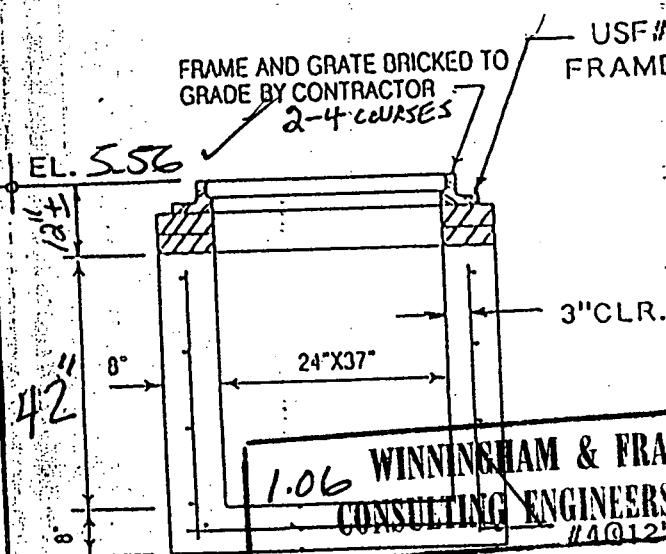


15" R @ 2.60 ✓
4P18"
30" Ø



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NO.	2
ELEV.	5.56
INV.	2.60
HT.	2.96
CUT	36"
PRICE	\$1,515.4



USF# 4155-6210
FRAME & GRATE

Engineering Department

CITY OF PEMBROKE PINES

- ☒ Approved
- ☒ Approved as corrected
- ☐ Revise and resubmit
- ☐ Approved contingent on

5-10-95
date

1.06 WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS SURVEYORS
#11012 O.C.E.W. O/E

RECEIVED 5/2/95

- ☒ APPROVED AS NOTED
- ☐ REVISE & RESUBMIT

DATE D.A.B. 5/3/95

DOCUMENT REVIEWED FOR CONFORMANCE WITH DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.

<input type="checkbox"/> Not Approved	
DATE	
USF#	
TOP	2.60
SIGNATURE	

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

INLET CONFORMS TO F.D.O

INDEX 232

18" FROM BASE TO LOW INVERT.

T.CO. JOB 95-300

"C" INLET-FRAME & GRATE

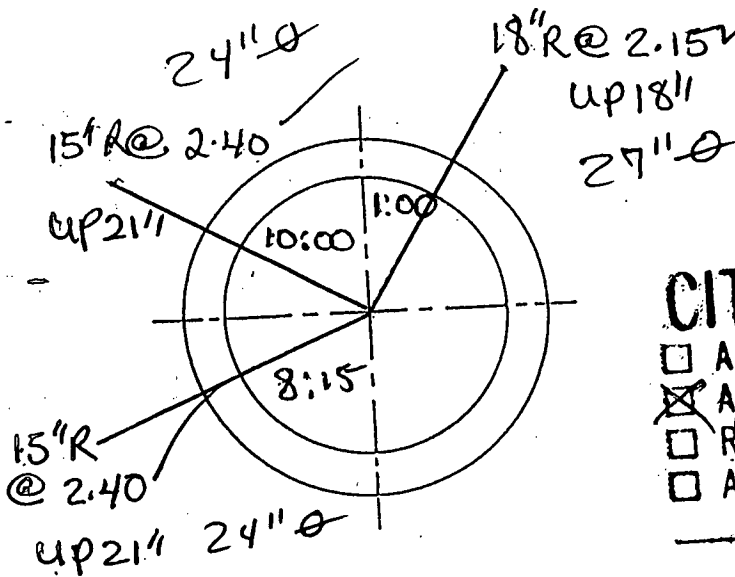
CONTRACTOR:
LASER ENGINEERING

JOB: TOWNGATE VILLAGE II

TRI-COUNTY CONCRETE PRODUCTS

1926 SKEES ROAD, WEST PALM BEACH, FLORIDA, 33411 (407) 686-4622

NO.	3
ELEV.	5.56
INV.	2.15
HT.	3.41 +1.5 4.91
CUT	59"
PRICE	-208

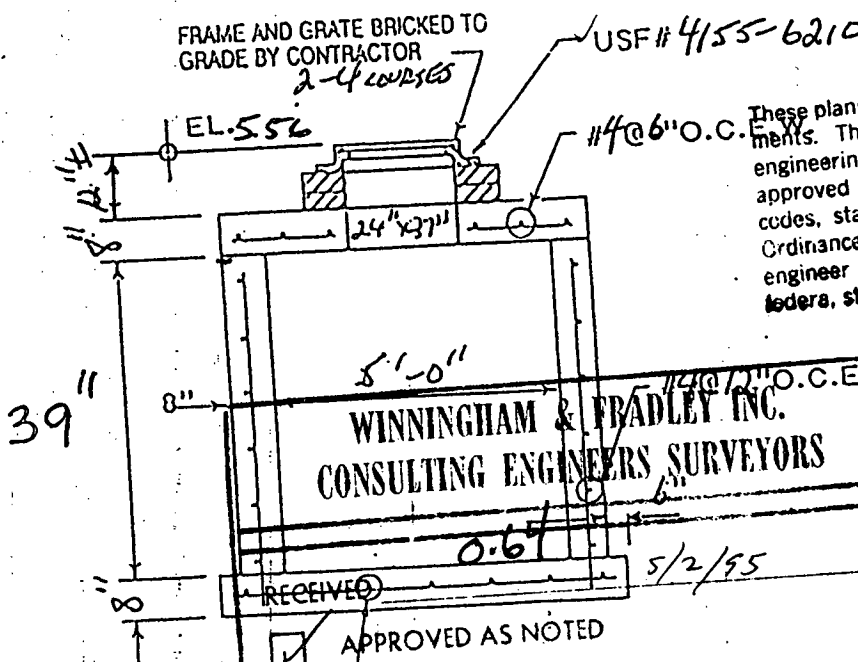


Engineering Department
CITY OF PEMBROKE PINES

- ☐ Approved
☒ Approved as corrected
☐ Revise and resubmit
☐ Approved contingent on

5-10-95
date

afj
signature



These plans have been reviewed only for general compliance with City Ordinances. The design engineer MUST be completely responsible for the engineering/design/technical competency and accuracy. The plans are approved with the condition that they MUST conform to all City Ordinances, standards and requirements. In case of conflict, the City Ordinances shall supersede these plans. It shall be the responsibility of the engineer of record to have these plans approved by all other appropriate federal, state, county or local agencies.

BASE	DATE MADE	DATE SHIPPED
GENERAL NOTES		
4000 PSI @ 28 DAYS		
TYPE II CEMENT		
18" FROM RASE TO		
LOW INVERT		
T.C.O. J&B 95-300		

- ☒ APPROVED AS NOTED
☐ REVISE & RESUBMIT

#4 @ 2' O.C. E.W. D.R.B. 5/3/95

DOCUMENT REVIEWED FOR CONFORMANCE WITH DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.

1'-0" I.D. STORM INLET

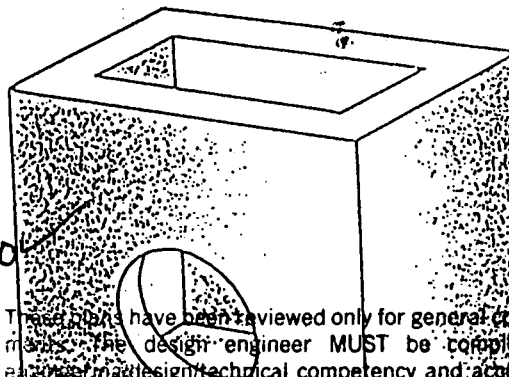
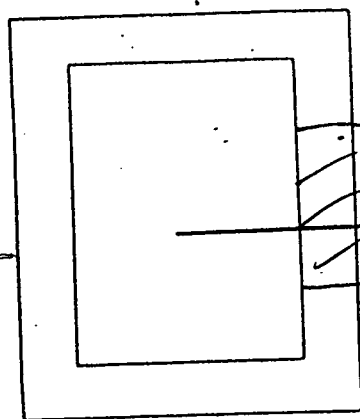
CONTRACTOR:
LASER ENGINEERING

JOB: TOWNGATE VILLAGE II

TRI-COUNTY · CONCRETE · PRODUCTS

1926 SKEES ROAD, WEST PALM BEACH, FLORIDA, 33411 (407) 686-4622

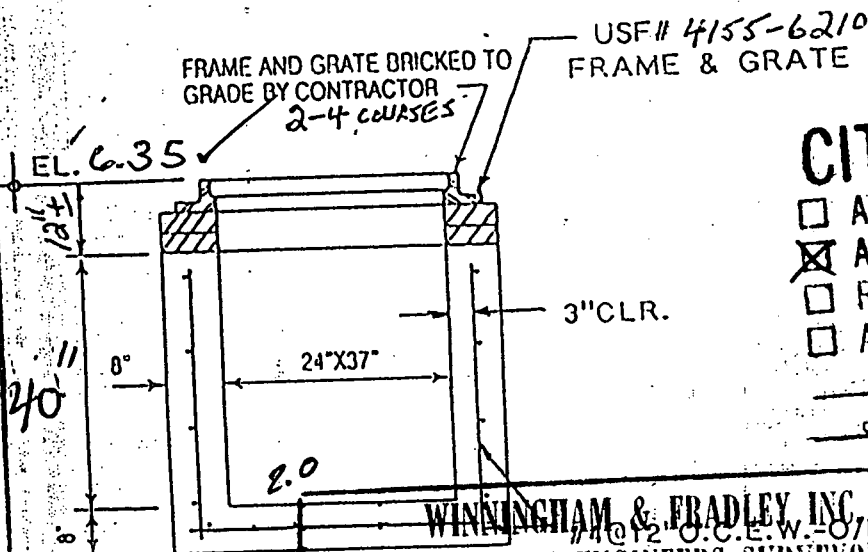
TYPE "C" CATCH BASIN



NO.	4
ELEV.	6.35
INV.	3.50
HT.	2.85
CUT	4.35 5.2
PRICE	1125

40

These plans have been reviewed only for general compliance with City requirements. The design engineer MUST be completely responsible for the accuracy and design/technical competency and accuracy. The plans are being submitted with the condition that they MUST conform to all City Ordinances, standards and requirements. In case of conflict, the City Code of Ordinances shall supercede these plans. It shall be the responsibility of the engineer of record to have these plans approved by all other applicable federal, state, county or local agencies.



Engineering Department
CITY OF PEMBROKE PINES

- ☐ Approved
- ☒ Approved as corrected
- ☐ Revise and resubmit
- ☐ Approved contingent on

5-10-95
date

DATE MADE	DATE SHIPPED
<input type="checkbox"/> Not Approved	
Signature: <i>[Signature]</i>	

WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

RECEIVED 5/2/95
☒ APPROVED AS NOTED
☐ REVISE & RESUBMIT
 DATE D.A.B. 5/3/95

DOCUMENT REVIEWED FOR CONFORMANCE WITH DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

INLET CONFORMS TO F.D.O.

INDEX 232

18" FROM BASE TO LOW INVERT.

T.CO. JOB 95-300

000 INLET-FRAME & GRATE

CONTRACTOR:
LASER ENGINEERING

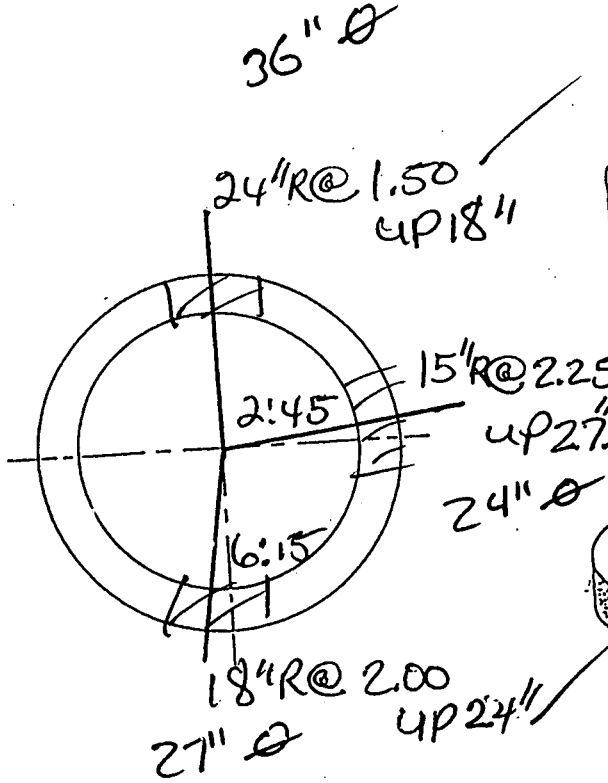
JOB: TOWNGATE
VILLAGE 11

1926 SKEES ROAD, WEST PALM BEACH, FLORIDA, 33411 (407) 686-4622

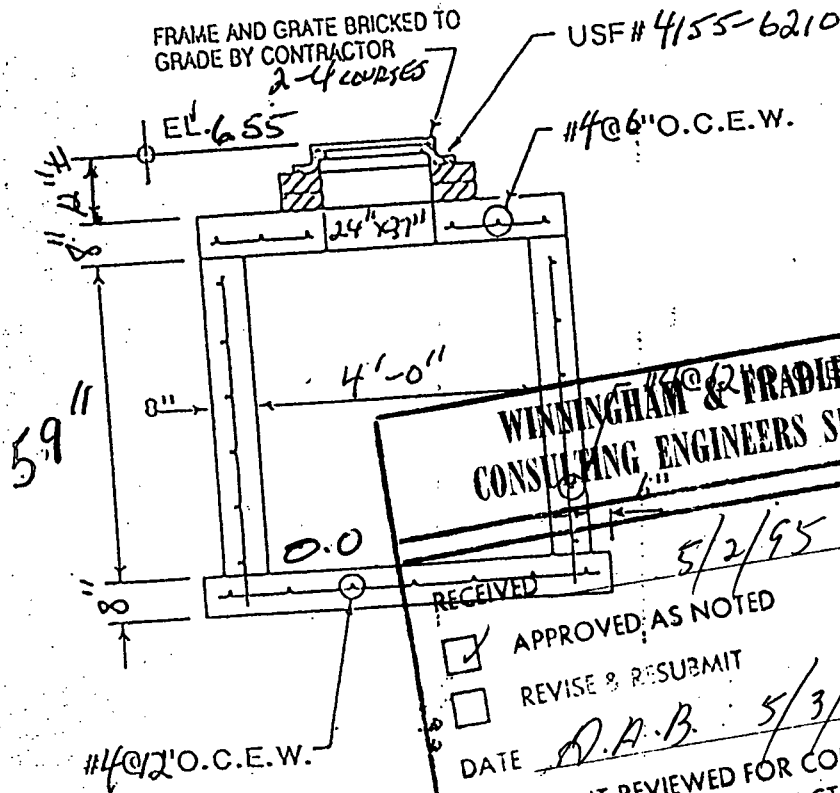
1926 SKEES ROAD, WEST PALM BEACH, FLORIDA, 33411 (407) 686-4622

NO.	5
ELEV.	6.55
INV.	1.50
HT.	5.05 +1.5 / 6.55
CUT	79"
PRICE	-208

These plans have been reviewed only for general compliance with City requirements. The design engineer MUST be completely responsible for the engineering/design/technical competency and accuracy. The plans are being approved with the condition that they MUST conform to all City Ordinances, standards and requirements, in case of conflict, the City Ordinance shall supersede these plans. It shall be the responsibility of the engineer of record to have these plans approved by all other applicable federal, state, county or local agencies.



CITY OF PEMBROKE PINES		Engineering Department	DATE MADE	BY	REMARKS
<input type="checkbox"/> Approved	<input type="checkbox"/> Not Approved				
<input checked="" type="checkbox"/> Approved as corrected					
<input type="checkbox"/> Revise and resubmit					
<input type="checkbox"/> Approved contingent on					



WINNINGHAM & TRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

RECEIVED
☒ APPROVED AS NOTED
☐ REVISE & RESUBMIT
 DATE D.A.B. 5
 REVIEWED FOR

APPROVED AS NOTED
REVISE & RESUBMIT
DATE D.A.B. 5

DATE D.A.B. 77
DOCUMENT REVIEWED FOR CONFORMANCE WITH
DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL
FIELD CONDITIONS AND PROVIDE QUANTITIES
REQUIRED BY CONSTRUCTION DOCUMENTS.

FROM RISE TO
LOW INVERT

T-Co. 508 95-300

CONTRACTOR:
LASER ENGINEERING

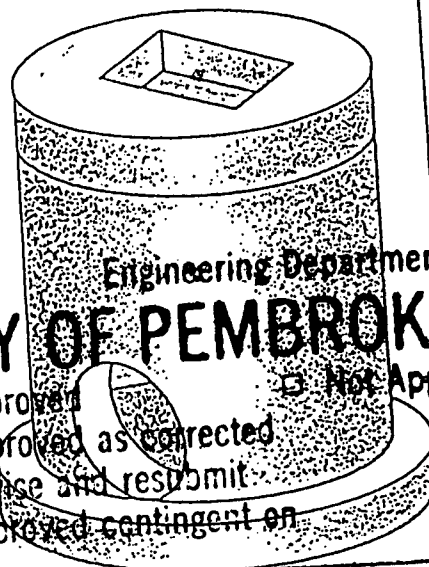
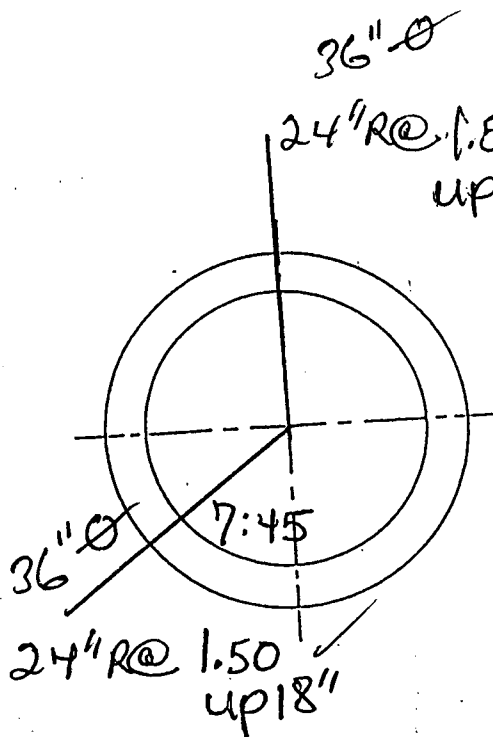
JOB: TOWNGATE
Village 11

IN STORM INLET

TRI-COUNTY CONCRETE PRODUCTS

1926 SKEES ROAD, WEST PALM BEACH, FLORIDA, 33411 (407) 686-4622

NO.	6
ELEV.	5.5.6
INV.	1.50
HT.	4.08/5.56
CUT	67"
PRICE	-20 477"

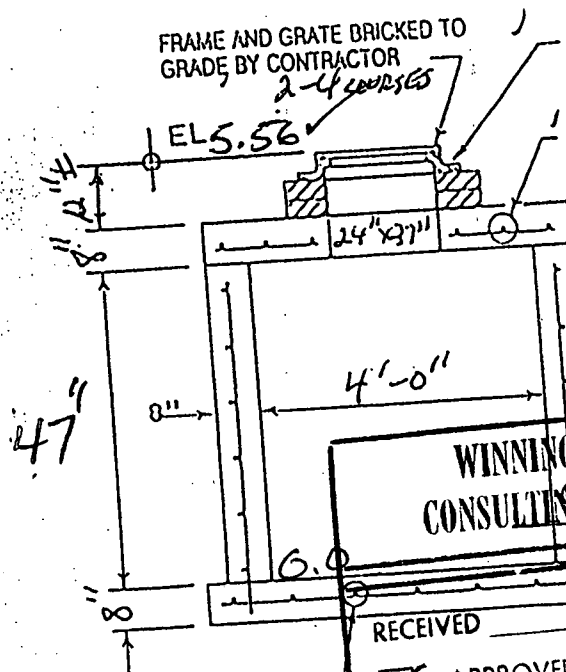


Engineering Department
CITY OF PEMBROKE PINES

- ☐ Approved
☒ Approved as corrected
☐ Revise and resubmit
☐ Approved contingent on

5-10-95
date

Signature



USF #4155-6210

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WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

RECEIVED

☒ APPROVED AS NOTED

☐ REVISE & RESUBMIT

DATE D.A.B. 5/3/95

DOCUMENT REVIEWED FOR CONFORMANCE WITH DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.

BASE	DATE MADE	DATE SHIPPED
RISE		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

18" FROM RISE TO

LOW INVERT

T-Co. 508 95-300

CONTRACTOR:

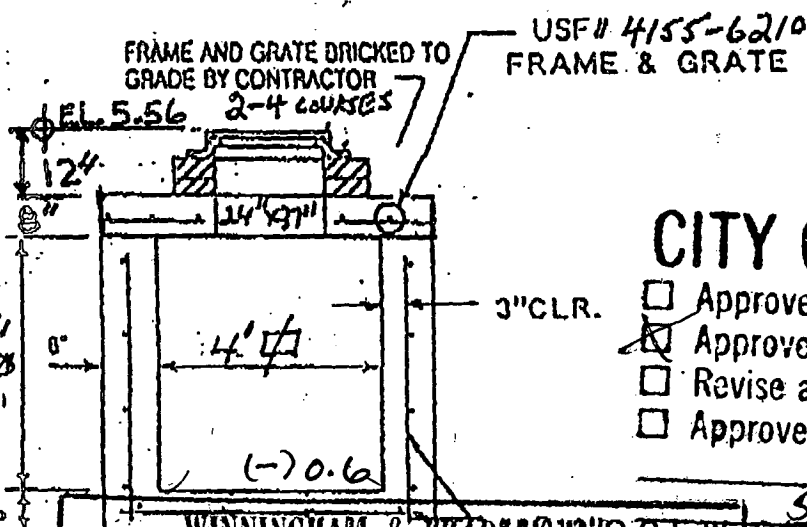
LASER ENGINEERING

JOB:

Town of Vero Beach

11" STORM INLET

60"



Engineering Department
CITY OF PEMBROKE PINES

- ☐ Approved
☒ Approved as corrected
☐ Revise and resubmit
☐ Approved contingent on

BASE	DATE MADE	DATE SHIP
ALISA		
ing Department		
ALISA		
MBROKE PINES		
COLLAR		
<input checked="" type="checkbox"/> Not Approved		
ed		
USP		
On		

GENERAL NOTES

4000 PSI @ 20 DAYS

Signature _____
 GEMENT _____
 for the _____
 RMS TO F.D.

29" PRB FROM BASE TO L

INVERT.

T. Co. 5th 95-300

RECEIVED

APPROVED AS NOTED

REF ID: A67314

DATE 5/8/93 *AK*

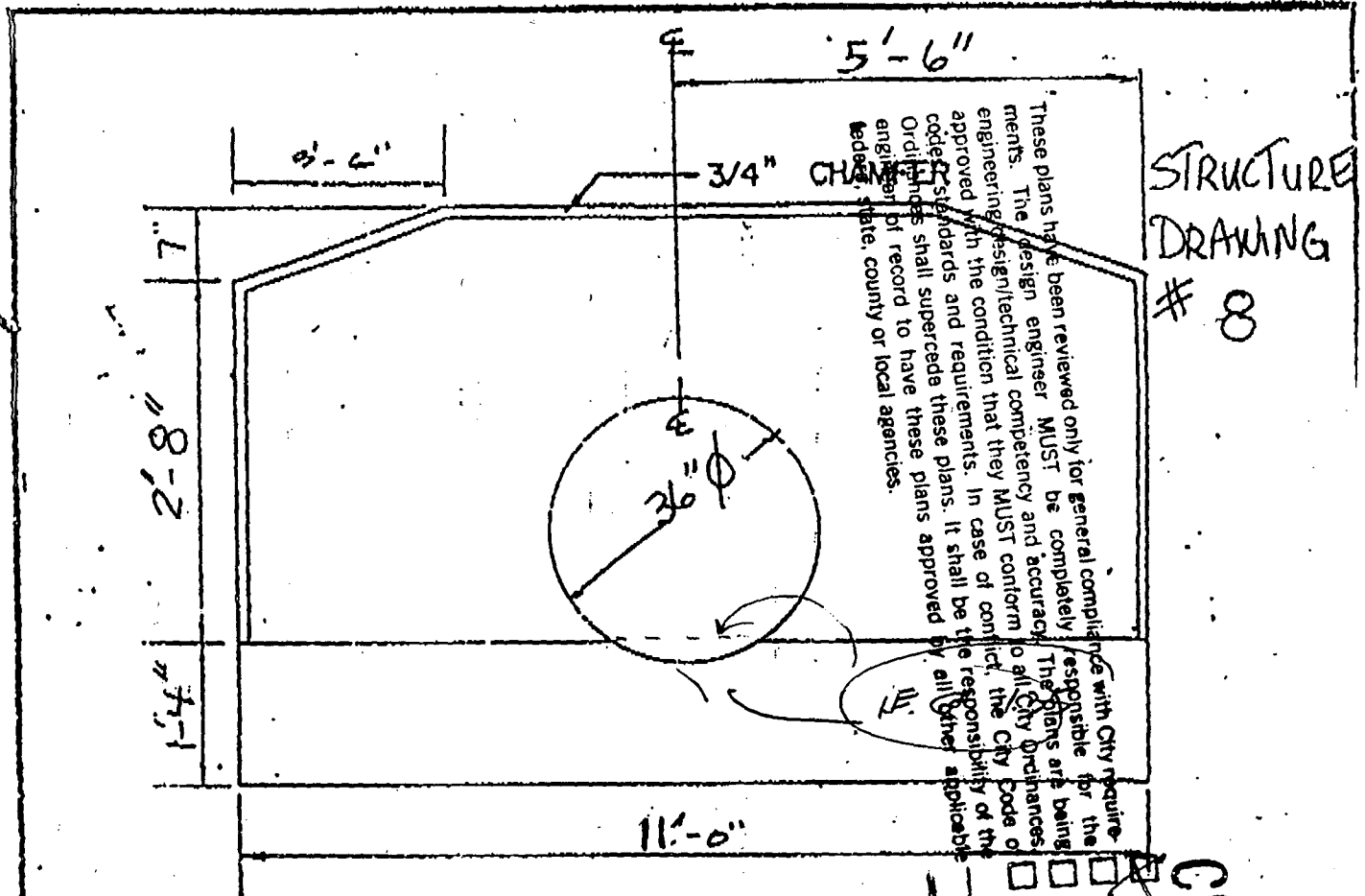
DOCUMENT REVIEWED FOR CONFORMANCE WITH
DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL
FIELD CONDITIONS AND PROVIDE QUANTITIES
REQUIRED BY CONSTRUCTION DOCUMENTS.

These plans have been reviewed only for general compliance with City requirements. The design engineer MUST be completely responsible for the engineering/design/technical competency and accuracy. The City Code of Ordinances shall supercede these plans. It shall be the responsibility of the engineer of record to have these plans approved by all other applicable federal, state, county or local agencies.

INLET-PRECAST MANHOLE

CONTRACTOR:
LASER ENGINEERING

JOD: TOWNGATE
VILLAGE II

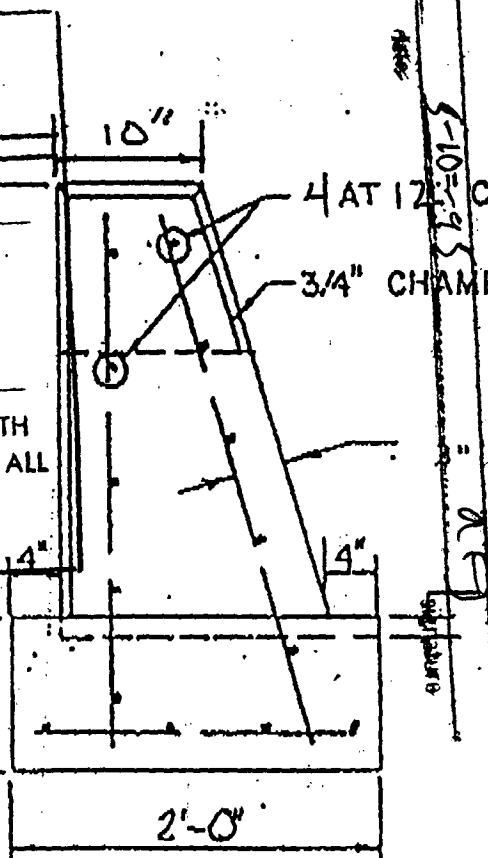


STRUCTURE
DRAWING
8

WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS, SURVEYORS

RECEIVED	
<input checked="" type="checkbox"/> APPROVED AS NOTED	
<input type="checkbox"/> REVISE & RESUBMIT	
DATE	08/15/95

DOCUMENT REVIEWED FOR CONFORMANCE WITH DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.



- ☒ Approved
- ☒ Approved as corrected
- ☒ Revise and Resubmit
- ☐ Approved contingent on ...
- ☐ Not Approved

CITY OF PEMBROKE PINES
Engineering Department

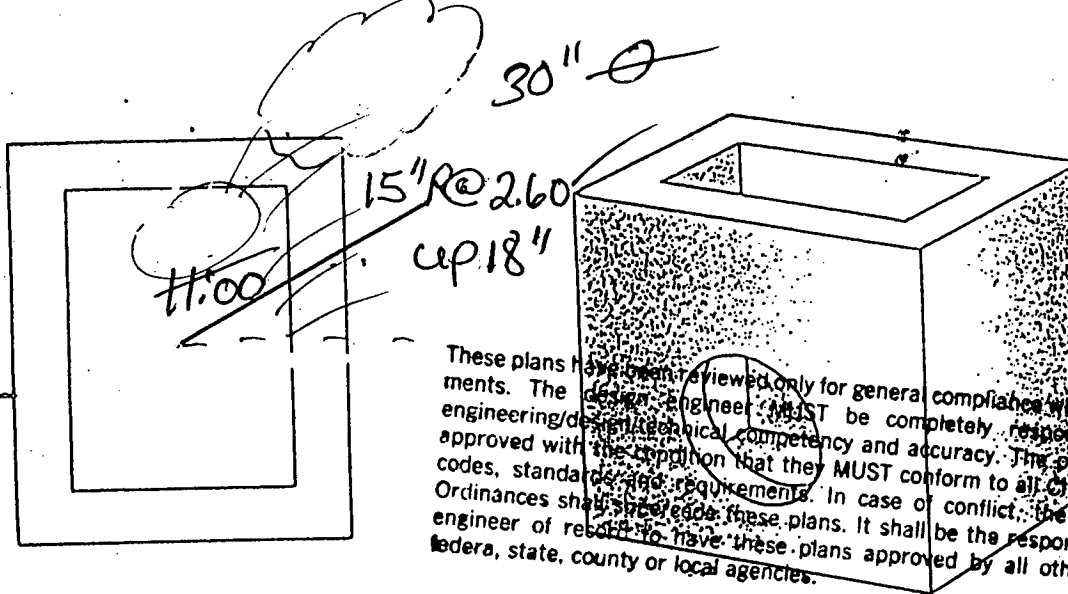
STRAIGHT ENDWALL 24" RCP

TOWNGATE VILLAGE
LASER ENGRG.

TRI-COUNTY CONCRETE PRODUCTS

1926 SKEES ROAD, WEST PALM BEACH, FLORIDA, 33411 (407) 686-4622

TYPE "C" CATCH BASIN



NO.	9
ELEV.	5.56
INV.	2.60
HT.	2.96
CUT	+1.50
PRICE	4.46
	54"
	-12 Stak
	42

These plans have been reviewed only for general compliance with City requirements. The design engineer MUST be completely responsible for the engineering/design technical competency and accuracy. The plans are being approved with the condition that they MUST conform to all City Ordinances, codes, standards and requirements. In case of conflict, the City Code of Ordinances shall prevail. These plans. It shall be the responsibility of the engineer of record to have these plans approved by all other applicable federal, state, county or local agencies.

Engineering Department

CITY OF PEMBROKE PIN

<input type="checkbox"/> Approved	<input type="checkbox"/> Not Approved
<input checked="" type="checkbox"/> Approved as corrected	
<input type="checkbox"/> Revise and resubmit	
<input type="checkbox"/> Approved contingent on	
5-10-95	date
TOP	
USF#	

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

INLET CONFORMS TO F.D.O.

INDEX 232

18" FROM BASE TO LOW

INVERT.

T. CO. JOB 95-300

FRAME AND GRATE BRICKED TO GRADE BY CONTRACTOR 2-4 COURSES.

USF# 4155-6210
FRAME & GRATE

3" CLR.

WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

RECEIVED 5/2/95

☒ APPROVED AS NOTED

☐ REVISE & RESUBMIT

DATE D.A.B. 5/3/95

DOCUMENT REVIEWED FOR CONFORMANCE WITH DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.

INLET-FRAME & GRATE

CONTRACTOR:

LASER ENGINEERING

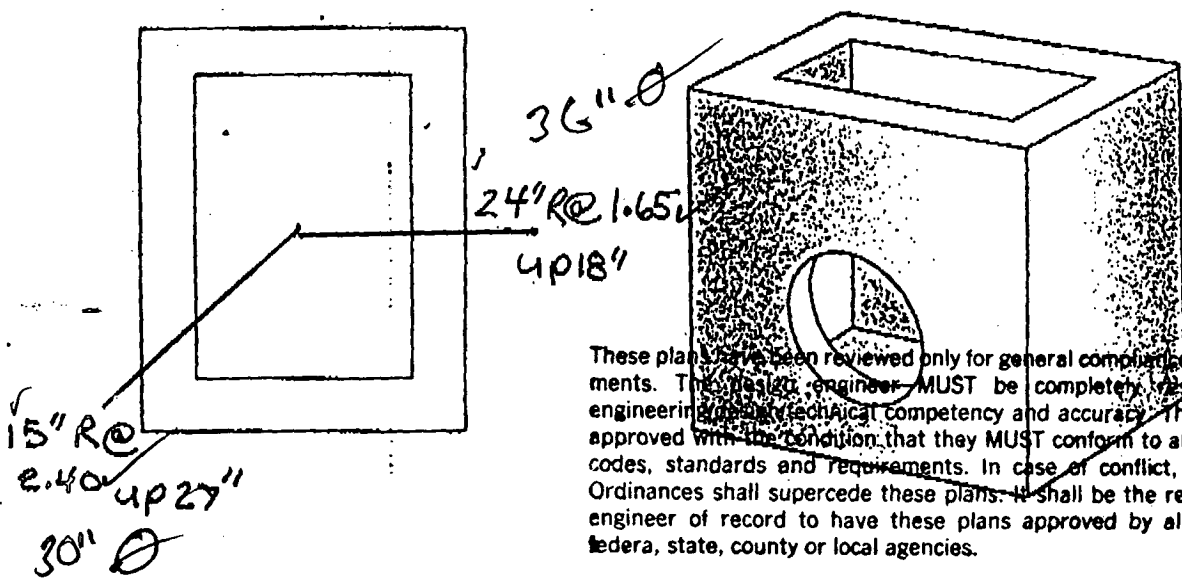
JOB:

TOWNGATE
Village II

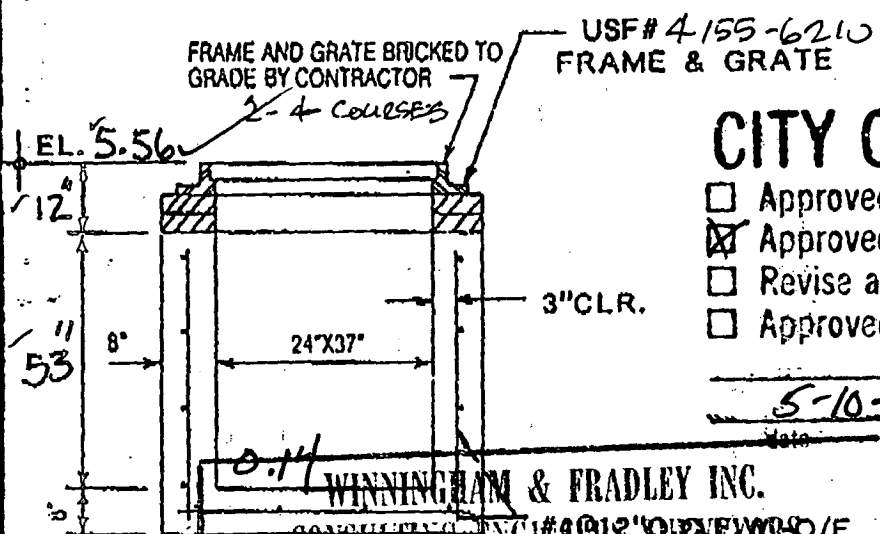
TYPE "C" CATCH BASIN

NO.	10
ELEV.	5.56
INV.	1.65
HT.	3.91
CUT	47"
PRICE	+18

53"



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Engineering Department

CITY OF PEMBROKE PINES

☐ Approved
☒ Approved as corrected
☐ Revise and resubmit
☐ Approved contingent on

5-10-95

DATE MADE DATE SHIPPED

WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS/SURVEYORS O/E

RECEIVED

☒ APPROVED AS NOTED
☐ REVISE & RESUBMIT

DATE 5/8/95

DOCUMENT REVIEWED FOR CONFORMANCE WITH DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

INLET CONFORMS TO F.D.O.

INDEX 232

12" FROM BASE TO LOW INVERT

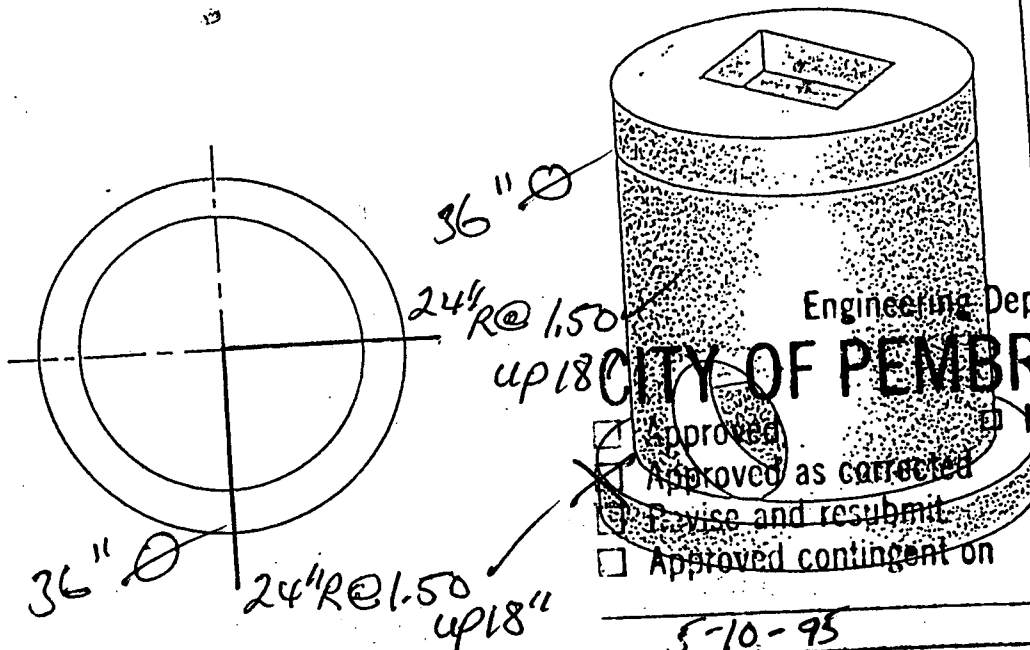
T.C.D. 95-300

"C" INLET-FRAME & GRATE

CONTRACTOR: LASER ENGRS.

JOB: TOWN GATE VILLAGE II

NO.	11
VEL. S.	6.36
INV.	1.50
WT.	4.86
CUT	58"
PRICE	+ 18 Spun - 20 Stk



Engineering Department

CITY OF PEMBROKE PINES

☒ Approved ☐ Not Approved
☒ Approved as corrected
☒ Revise and resubmit
☐ Approved contingent on

5-10-95

af

date _____

CATE MADE

~~SECRET~~

FRAME AND GRATE BRICKED TO
GRADE BY CONTRACTOR

USF# 4/55-6210

These plans have been reviewed only for general compliance with City requirements. The design engineer MUST be completely responsible for the engineering/design/technical competency and accuracy. The plans are being approved with the condition that they MUST conform to all City Ordinances, codes, standards and requirements. In case of conflict, the City Code of Ordinances shall supercede these plans. It shall be the responsibility of the engineer of record to have these plans approved by all other applicable federal, state, county or local agencies.

CASE

USF

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

1 18" FROM BASE TO

Low invert

T-Co. 50B 95-300

CONTRACTOR:

LASER ENGINEERING

JOB:

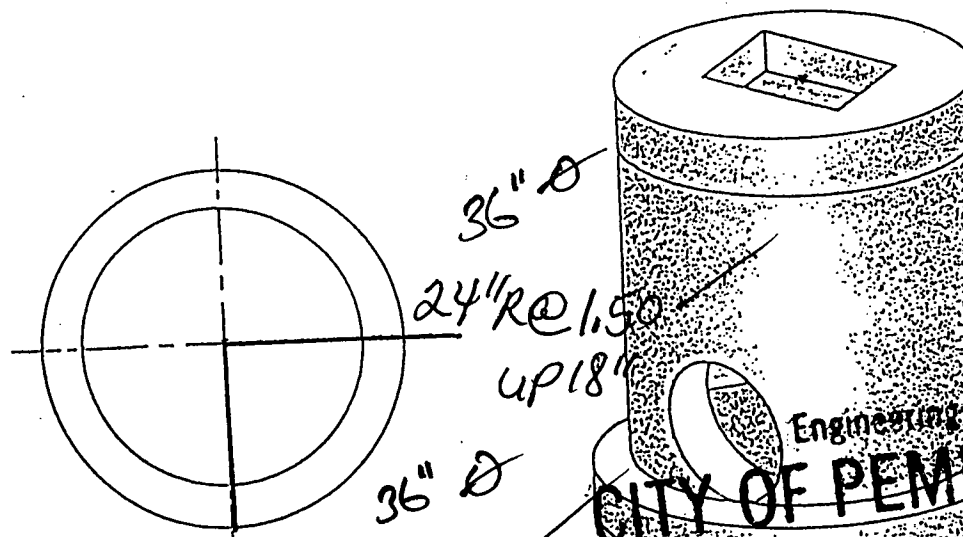
Towngate
Vintage 11

4'-0" I.D.-STORM INLET

TRI-COUNTY CONCRETE PRODUCTS

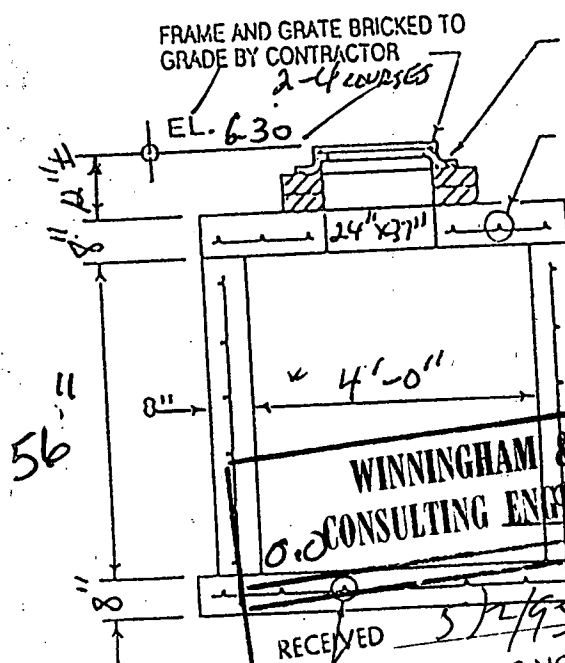
1926 SKEES ROAD, WEST PALM BEACH, FLORIDA, 33411 (407) 686-4622

NO.	12
1. ELEV.	6.30'
Inv.	1.50
HT.	4.80
CUT	58"
PRICE	+18 Sump -20 Sta 56"



Engineering Department
CITY OF PEMBROKE PINE

☒ Approved
☒ Approved as corrected
☐ Revise and resubmit
☐ Approved contingent on



USF # 4155

#4 @ 6" O.C.E.W. date

These plans have been reviewed only for general compliance with City requirements. The design engineer MUST be completely responsible for the engineering/design/technical competency and accuracy. The plans are being approved with the condition that they MUST conform to all City Ordinances, codes, standards and requirements. In case of conflict, the City Code of Ordinances shall supercede these plans. It shall be the responsibility of the engineer of record to have these plans approved by all other applicable engineer, state, county or local agencies.

WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

RECEIVED 5/24/95
☒ APPROVED AS NOTED
☐ REVISE & RESUBMIT
DATE D.A.B. 5/3/95

DOCUMENT REVIEWED FOR CONFORMANCE WITH DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.

DATE MADE	DATE SHIPPED
5-10-95	5-10-95
BASE	RAISE
GENERAL NOTES	
4000 PSI @ 28 DAYS	
TYPE II CEMENT	
18" FROM BASE TO	
Low INVERT	
T.CO. 508 95-300	

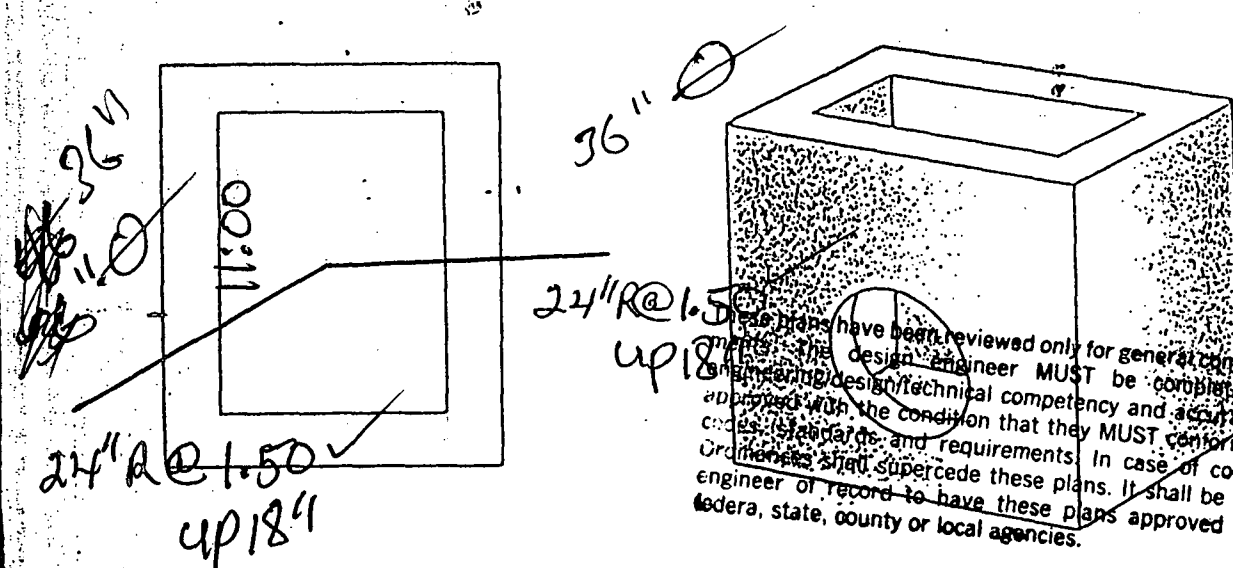
4'-0" I.D.-STORM INLET

CONTRACTOR:
LASER ENGINEERING

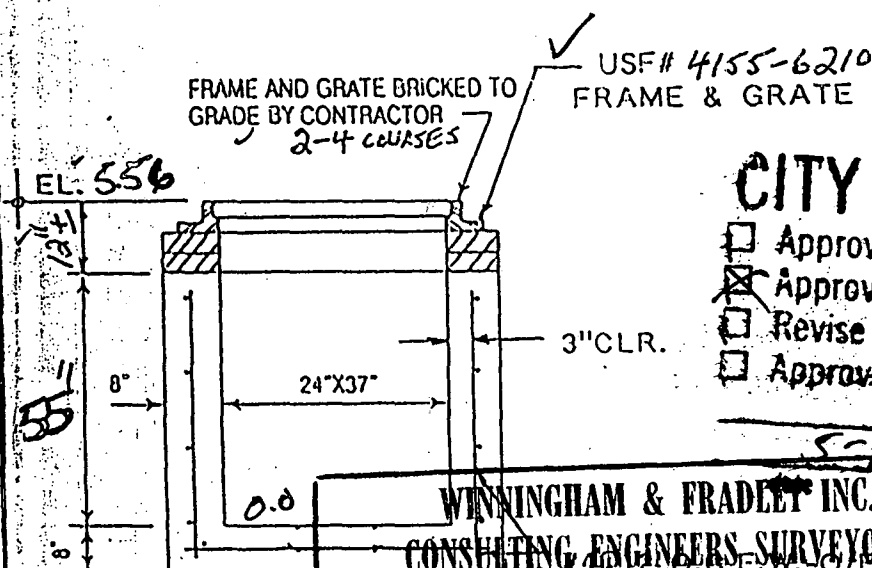
JOB: **Towngate Village II**

1926 SKEES ROAD, WEST PALM BEACH, FLORIDA, 33411 (407) 686-4622

NO.	13
✓ ELEV.	5.56
✓ INV.	1.50
HT.	4.06
CUT	49"
PRICE	+ 18 Surf - 12 <hr/> 55"



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CITY OF PEMBROKE PINES

- | | |
|---|---------------------------------------|
| <input type="checkbox"/> Approved | <input type="checkbox"/> Not Approved |
| <input checked="" type="checkbox"/> Approved as corrected | |
| <input type="checkbox"/> Revise and resubmit | |
| <input type="checkbox"/> Approved contingent on | |

WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

RECEIVED 5/2/95

- ☒ APPROVED AS NOTED
☐ REVISE & RESUBMIT

DATE DA. B 5/3/95

DOCUMENT REVIEWED FOR CONFORMANCE WITH
DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL
FIELD CONDITIONS AND PROVIDE QUANTITIES
REQUIRED BY CONSTRUCTION DOCUMENTS.

DATE	DATE MADE	DATE SHIPPED
ing Department		
MBROKE PINES		
Not Approved		
COLLAR		
on		
USE		

GENERAL ~~NOTES~~ ^{signature}

4000 PSI @ 28 DAYS

TYPE II CEMENT

INLET CONFORMS TO F.D.O.:

INDEX 232

18. FROM BASE TO LOW

INVERT.

T. Co. Job 95-300

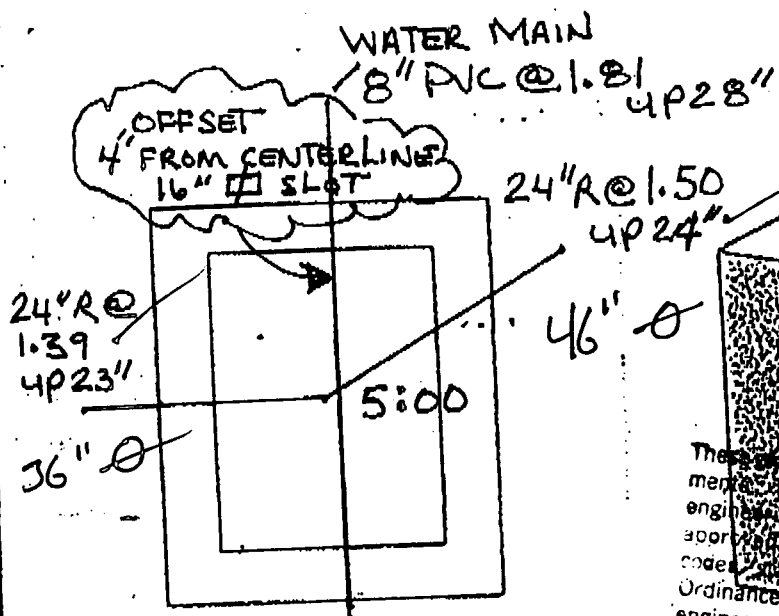
"C" INLET-FRAME & GRATE

CONTRACTOR:
LASER ENGINEERING

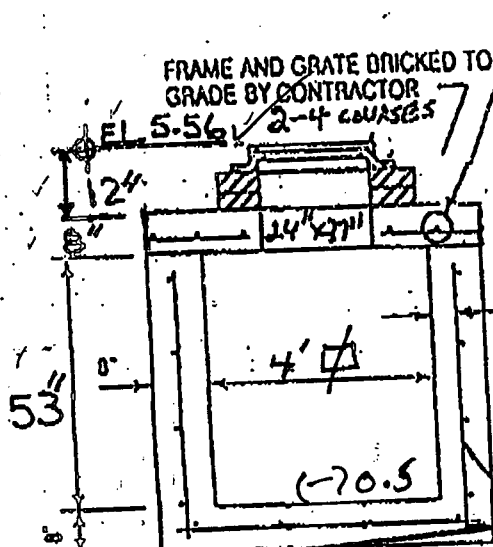
JOB: TOWNGATE
Village II

* PRB

NO.	14
ELEV.	5.56
INV.	1.39
ITT.	4.17
CUT	50"
PRICE	+23
	-20
	53"



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USF# 4155-6210
FRAME & GRATE

Engineering Department
CITY OF PEMBROKE PINES

- ☐ Approved
- ☒ Approved as corrected
- ☐ Revise and resubmit
- ☐ Approved contingent on

DATE	DATE MADE	DATE SHIPP
USER		
TOP		
USF#		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE 18 CEMENT

INLET CONFORMS TO F.D.C.

INDEX 232

23" FROM BASE TO LA

INVERT.

T. CO. JOB 95-300

WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

RECEIVED

☒ APPROVED AS NOTED

☐ REVISE & RESUBMIT

DATE 5/8/95

DOCUMENT REVIEWED FOR CONFORMANCE WITH DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.

INLET PRECAST MANHOLE

CONTRACTOR:
LASER ENGINEERING

JOB: **Towngate Village II**

STRUCTURE
DRAWING
15

These plans have been reviewed only for general compliance with City requirements. The design engineer MUST be completely responsible for the engineering/design/technical competency and accuracy. The plans are being approved with the condition that they MUST conform to all City Ordinances, codes, standards and requirements. In case of conflict, the City Code of Ordinances shall supercede these plans. It shall be the responsibility of the engineer of record to have these plans approved by all other applicable federal, state, county or local agencies.

Engineering Department

CITY OF PEMBROKE PINES

- ☒ Approved
☐ Approved as corrected
☐ Revise and resubmit
☐ Approved contingent on

WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

RECEIVED

☒ APPROVED AS NOTED

☐ REVISE & RESUBMIT

DATE

DOCUMENT REVIEWED FOR CONFORMANCE WITH
DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL
FIELD CONDITIONS AND PROVIDE QUANTITIES
REQUIRED BY CONSTRUCTION DOCUMENTS.

date

5-10-95

a f. j.

signature

4 AT 12" C.C.E.W.

3/4" CHAMFER

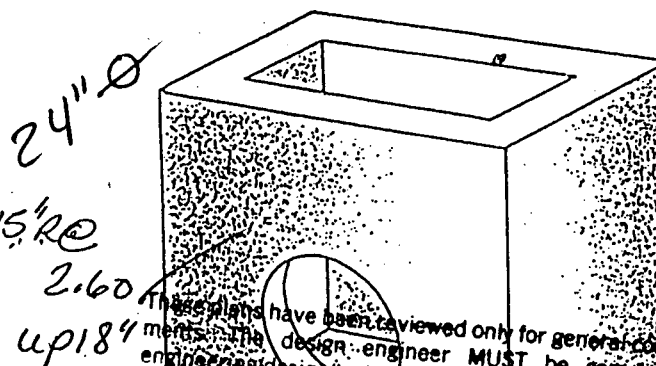
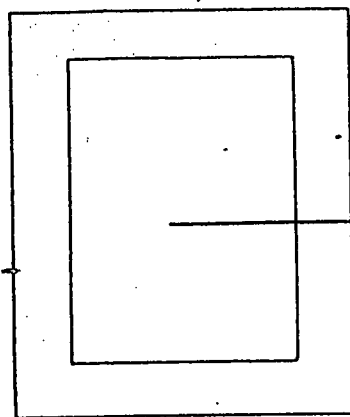
3" CLR TYP.

2'-0"

STRAIGHT ENDWALL 24" RCP

TOWNGATE VILLAGE
LASED ENGRG.

TYPE "C" CATCH BASIN



NO.	16
ELEV.	5.56
INV.	2.60
HT.	2.96
CUT	36.11
PRICE	18.54

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FRAME AND GRATE BRICKED TO GRADE BY CONTRACTOR
2-4 COURSES

USF# 4155-6210
FRAME & GRATE

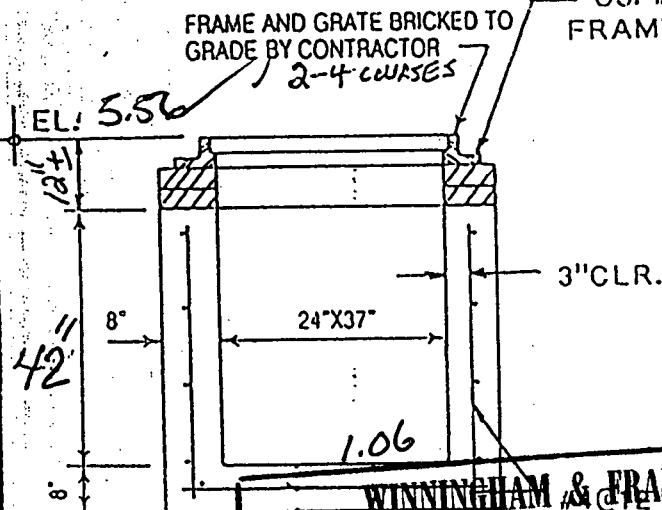
Engineering Department

CITY OF PEMBROKE PINES

- ☐ Approved
☒ Approved as corrected
☐ Revise and resubmit
☐ Approved contingent on

5-10-95
date

DATE MADE	DATE SHIPPED
RISE	Not Approved
USF#	
signature	



WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

RECEIVED 5/2/95

☒ APPROVED AS NOTED
☐ REVISE & RESUBMIT

DATE DAB 5/3/95

DOCUMENT REVIEWED FOR CONFORMANCE WITH DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

INLET CONFORMS TO F.D.O.T

INDEX 232

18" FROM BASE TO LOW INVERT.

T.CO. 528 95-300

"C" INLET-FRAME & GRATE

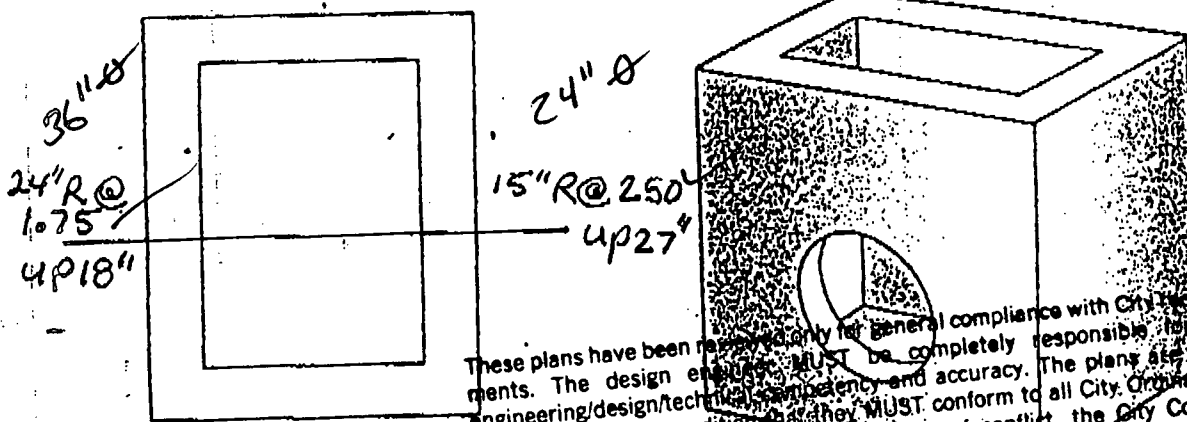
CONTRACTOR:
LASER ENGINEERING

JODI
TOWNGATE
VILLAGE 11

TYPE "C" CATCH BASIN

NO.	17
ELEV.	5.56
INV.	1.75
HT.	3.81
CUT	46
PRICE	+18

52"



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FRAME AND GRATE BRICKED TO GRADE BY CONTRACTOR

USF# 4155-6210
FRAME & GRATE

Engineering Department

CITY OF PEMBROKE PINES

Not Approved

Approved

Approved as corrected

Revise and resubmit

Approved contingent on

USF#

DATE MADE

DATE SHIP

WINNINGHAM & FRADLEY INC. 5-18-95
CONSULTING ENGINEERS SURVEYORS
#4012" O.C.E.W.-O/E

RECEIVED

☒ APPROVED AS NOTED

☐ REVISE & RESUBMIT

DATE 4/2/95 PM

DOCUMENT REVIEWED FOR CONFORMANCE WITH DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

INLET CONFORMS TO F.D.

INDEX 232

18" FROM BASE TO LOW INVERT

T.CO. 95-300

"C" INLET-FRAME & GRATE

CONTRACTOR:

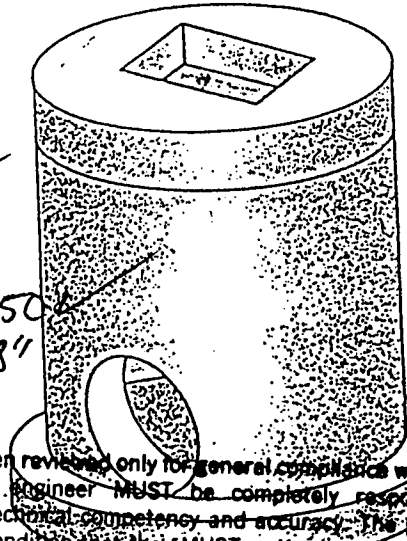
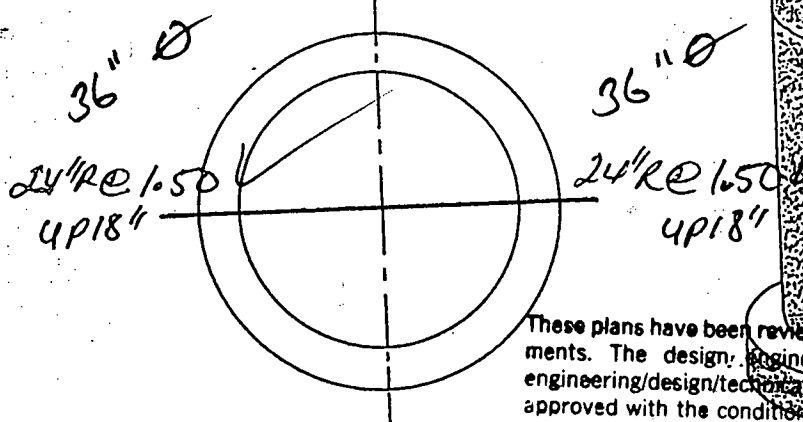
LASER ENGRG.

JOB:

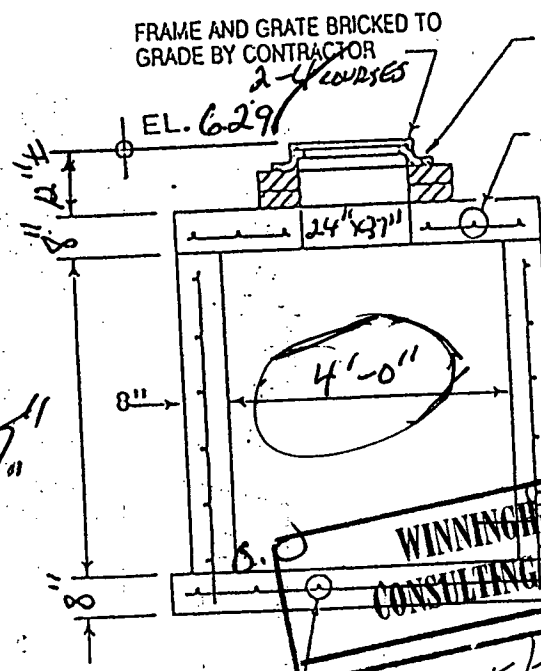
TOWNGATE VILLAGE II

NO.	18
ELEV.	6.29
INV.	1.50
HT.	4.79
CUT	57"
PRICE	+ 18 Survey

75
20 - 18 State
375.48
508 56"



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USF # 4155-6210

Engineering Department
CITY OF PEMBROKE PINES

- ☐ Approved
- ☒ Approved as corrected
- ☐ Revise and resubmit
- ☒ #4 @ 12" O.C.E.W. - O/E
- ☐ Approved continuation

BASE	DATE MADE	DATE SHIPPED
RISER		
RISER		
COLLAR		
TOP		
USF #		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

18" FROM BASE TO

LOW INVERT

T-Co. 508 95-300

WINNINGHAM & TRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

RECEIVED 5/2/95

☒ APPROVED AS NOTED

REVISE & RESUBMIT

DATE R.A.B. 5/3/95
DOCUMENT REVIEWED FOR CONFORMANCE WITH
DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL
FIELD CONDITIONS AND PROVIDE QUANTITIES
REQUIRED BY CONSTRUCTION DOCUMENTS.

4'-0" I.D.-STORM INLET

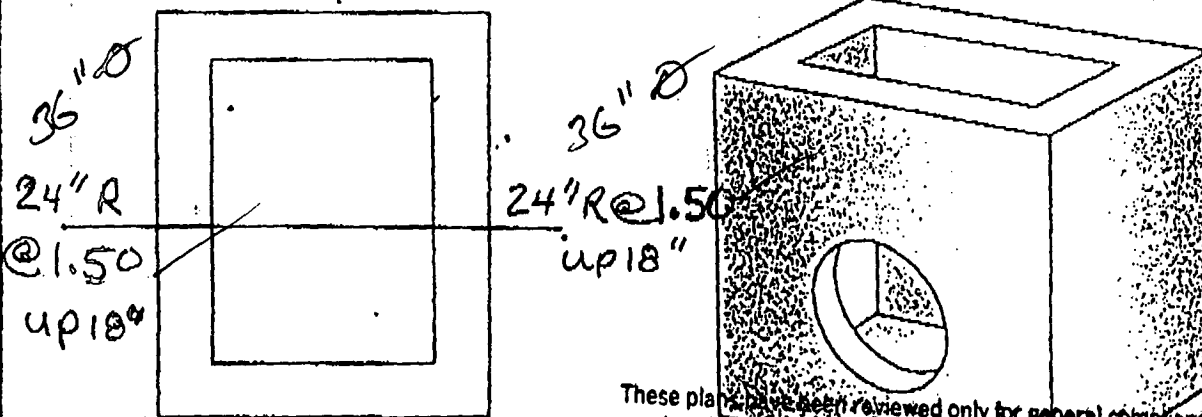
CONTRACTOR:
LASER ENGINEERING

JOB: **TOWNGATE VILLAGE II**

1926 SKEES ROAD, WEST PALM BEACH, FLORIDA, 33411 (407) 686-4622

TYPE "C" CATCH BASIN

NO.	19
ELEV.	5.56
INV.	1.50
HT.	4.06
CUT	49"
PRICE	+185



These plans have been reviewed only for general compliance with City requirements. The design engineer MUST be completely responsible for the engineering/design/technical competency and accuracy. The plans are being approved with the condition that they MUST conform to all City Ordinances, codes, standards and requirements. In case of conflict, the City Code of Ordinances shall supercede these plans. It shall be the responsibility of the engineer of record to have these plans approved by all other applicable federal, state, county or local agencies.

USF# 4155-6210

FRAME & GRATE

FRAME AND GRATE BRICKED TO GRADE BY CONTRACTOR

2-4 COURSES

EL. 5.56

12"

55"

8"

24"X37"

3"CLR.

- ☐ Approved
- ☒ Approved as corrected
- ☐ Revise and resubmit
- ☐ Approved contingent on

WINNINGHAM & FRADLEY INC.

CONSULTING ENGINEERS SURVEYORS

74012" O.G.E.W. O/E

Engineering Department

CITY OF PEMBROKE PINES

BASE	DATE MADE	DATE SHIPP

GENERAL NOTES
4000 PSI @ 28 DAYS
TYPE II CEMENT
INLET CONFORMS TO F.D.C.
INDEX 232
18" FROM BASE TO LOW INVERT

RECEIVED

- ☒ APPROVED AS NOTED
- ☐ REVISE & RESUBMIT

DATE 5/8/95 MLC

DOCUMENT REVIEWED FOR CONFORMANCE WITH DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.

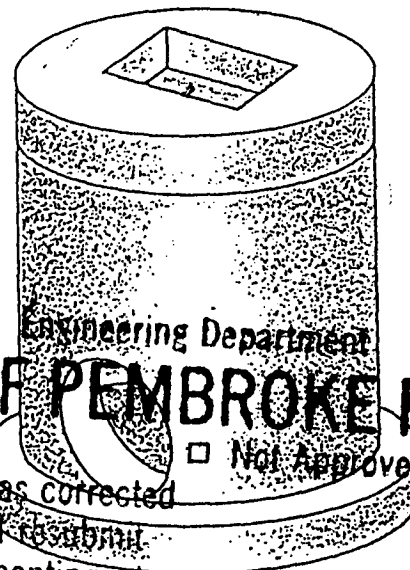
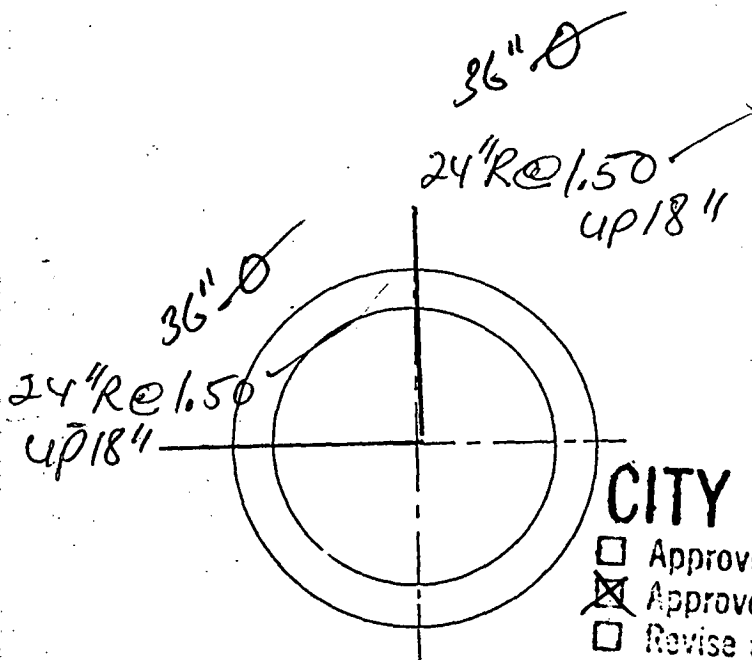
T.C.D. 95-300

"C" INLET-FRAME & GRATE

CONTRACTOR: LASER ENGRG

JOB: TOWNGATE VILLAGE II

NO.	20
ELEV.	5.56
INV.	1.50
HT.	4.06
CUT	49"
PRICE	+ 18 Scum - 18 sfad



CITY OF PEMBROKE PINES

- ☐ Approved ☐ Not Approved
- ☒ Approved as corrected
- ☐ Revise and resubmit
- ☐ Approved contingent on

FRAME AND GRATE BRICKED TO GRADE BY CONTRACTOR

2-4 courses

EL. 5.56

USF# 4/55-6210

#4@6"O.C.E.W.

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WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

RECEIVED

RECEIVED 3/7
☒ APPROVED AS NOTED
 REUSE & RESUBMIT

APPROVED
REUSE & RESUBMIT

DATE _____

REVISE & RESUBMIT 5/3/93

DATE D.A.B.

DOCUMENT REVIEWED FOR CONFORMANCE WITH
DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL
FIELD CONDITIONS AND PROVIDE QUANTITIES
REQUIRED BY CONSTRUCTION DOCUMENTS.

T.C.

~~GENERAL~~ NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

T. Co. Sub 95-300

5'-0" I.D.-STORM INLET

CONTRACTOR:

LASER ENGINEERING

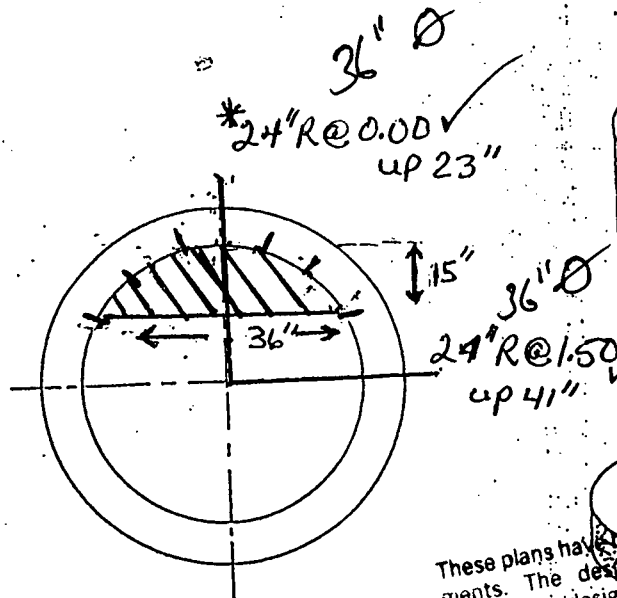
JOE:

Towngate
Village //

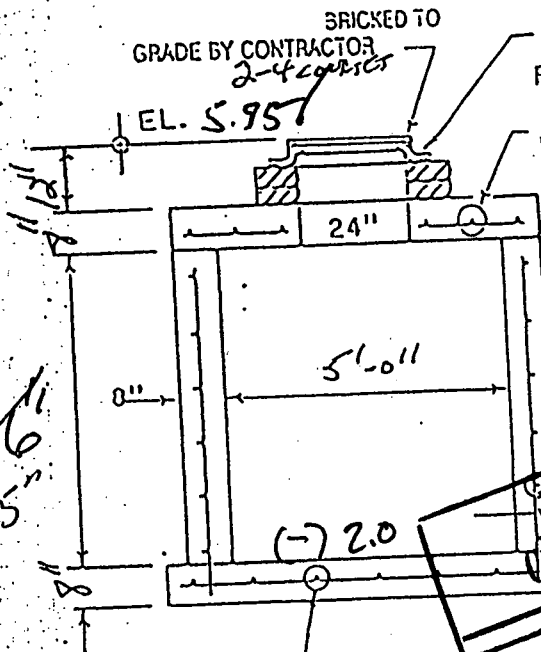
1926 SKEES ROAD, WEST PALM BEACH, FLORIDA, 33411 (407) 686-4622

* 36" X 15" P.R.B. ALUMINUM
PLATE, BAFFLE SCHEDULE
"E" = 1.5"

NO.	21
ELEV.	5.95
INV.	0.00
HT.	5.95
CUT	71"
PRICE	+ 18 Sum 20 18 96



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USE #4 @ 12" O.C.E.W. RING & COVER

Engineering Department

CITY OF PEMBROKE PINES

- ☐ Approved
- ☒ Approved as corrected
- ☐ Revise and resubmit
- ☒ Approved consistent on

SWINNAM & FRADLEY
CONSULTING ENGINEERS SURVEYORS

RECEIVED 5/2/95
☒ APPROVED AS NOTED
REVISE & RESUBMIT

DATE DA B. 5/3/95
DOCUMENT REVIEWED FOR CONFORMANCE WITH
DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL INFO TO
FIELD CONDITIONS AND PROVIDE QUANTITIES INVERT P.R.
REQUIRED BY CONSTRUCTION DOCUMENTS.
T.C.D. 95-300

5'-0" I.D.-STORM MANHOLE

CONTRACTOR:

LASER ENGINEERING

JOB:

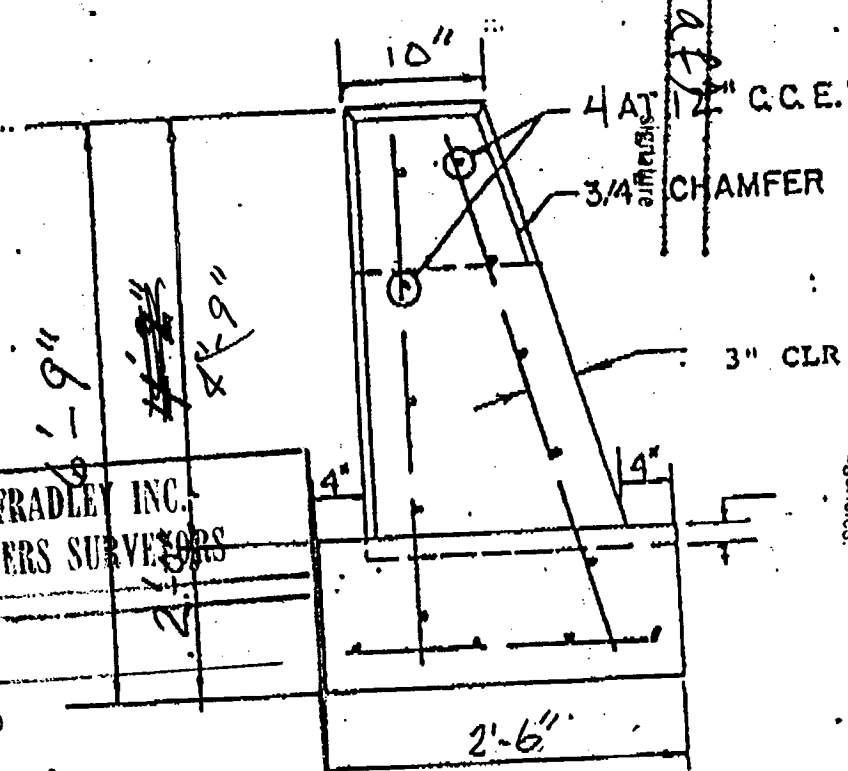
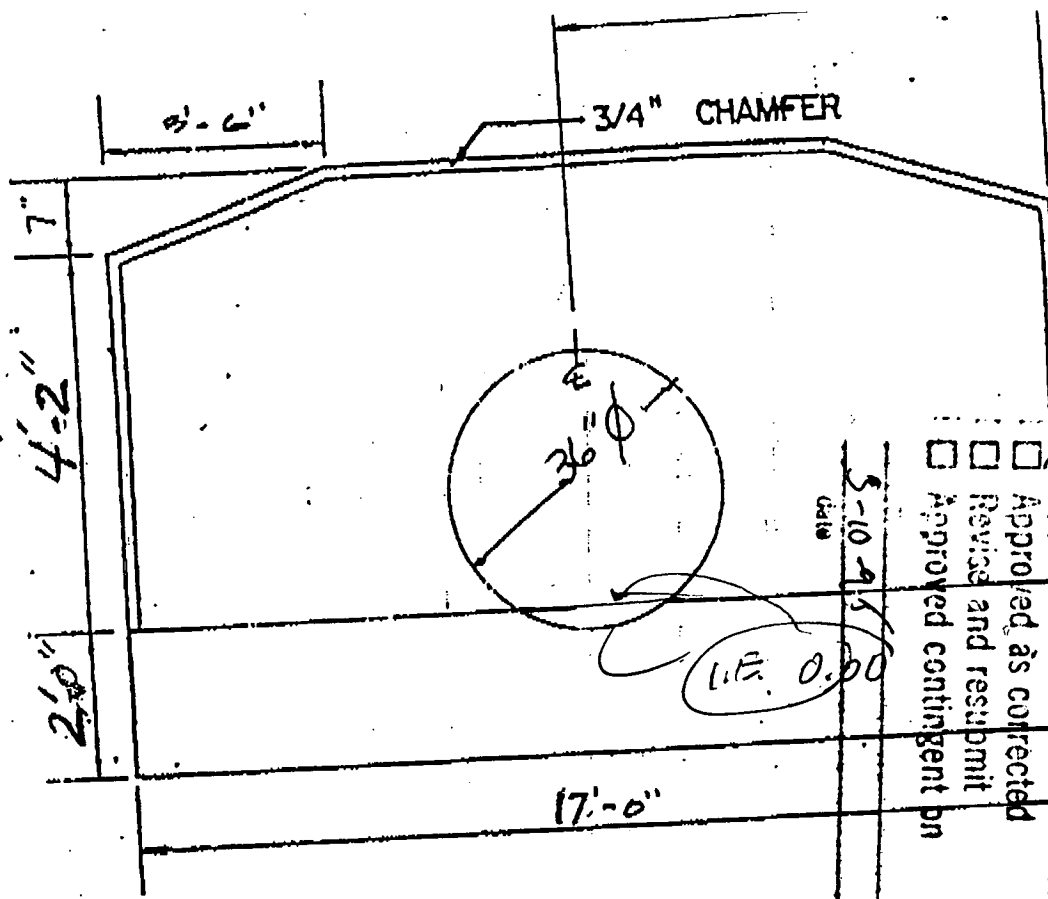
TOWNGATE
VILLAGE II

STRUCTURE
DRAWING
22

CITY OF PEMBROKE PINES

Engineering Department

☒ Approved
☐ Approved as corrected
☐ Revise and resubmit
☐ Approved contingent on
☐ Not Approved



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WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

RECEIVED

☒ APPROVED AS NOTED
☐ REVISE & RESUBMIT

DATE 5/6/83 MC

DOCUMENT REVIEWED FOR CONFORMANCE WITH DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND PROVIDE QUANTITIES REQUIRED FOR CONSTRUCTION DOCUMENTS.

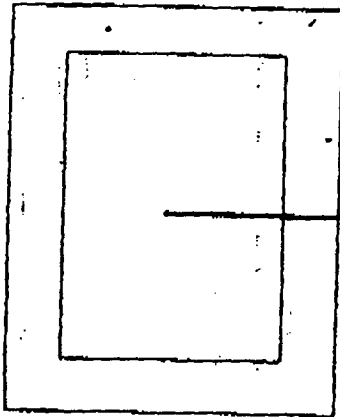
STRAIGHT ENDWALL 24" R.C.P.
MODIFIED FOR 17'-0" BASE LENGTH

TOWN OF PEMBROKE PINES
LASER ENGINEERING
TBO. 95-301

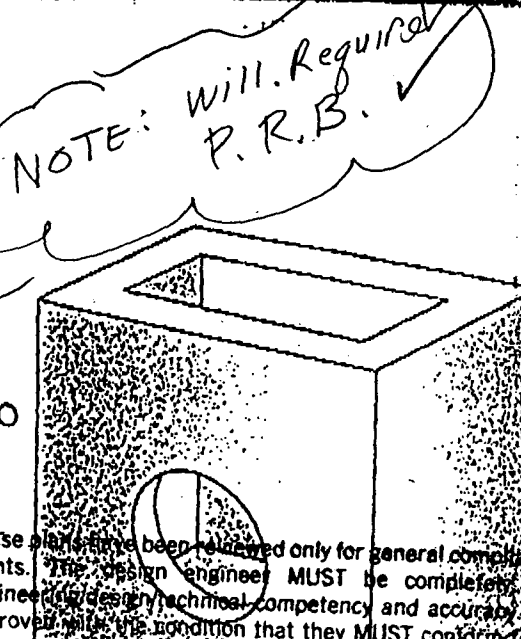
TRI-COUNTY CONCRETE PRODUCTS

1926 SKEES ROAD, WEST PALM BEACH, FLORIDA, 33411 (407) 686-4622

TYPE "C" CATCH BASIN

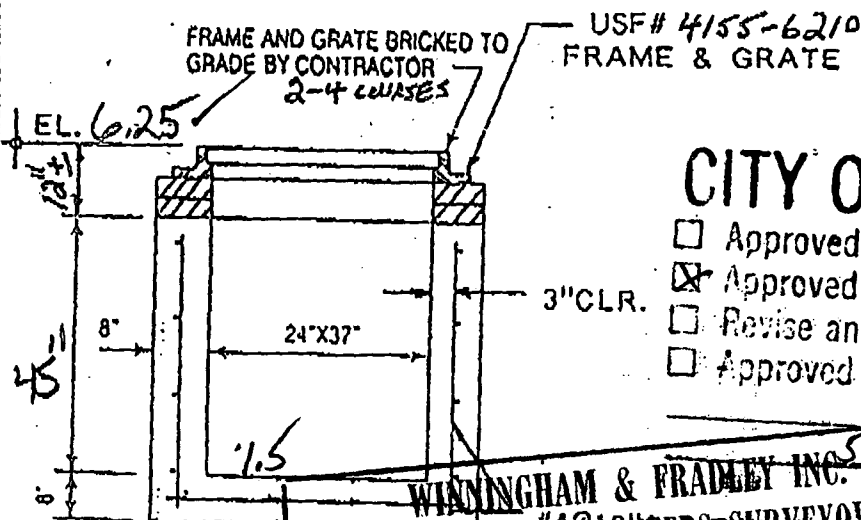


24" x 30"
15" R @ 300
4' 18"



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NO.	23
ELEV.	6.25
INV.	3.00
HT.	3.25
CUT	39"
PRICE	+18
	-12
	45"



Engineering Department CITY OF PEMBROKE PINES

- ☐ Approved
☒ Approved as corrected
☐ Revise and resubmit
☐ Approved contingent on

DATE	DATE MADE	DATE SHIPPED
BASE		
RISE		
COLLA		
TOP		
USF#		

WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS-SURVEYORS

RECEIVED 5/2/95
☒ APPROVED AS NOTED
☐ REVISE & RESUBMIT.
 DATE 5/3/95 D.A.B.
 DOCUMENT REVIEWED FOR CONFORMANCE WITH
 DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL
 FIELD CONDITIONS AND PROVIDE QUANTITIES
 REQUIRED BY CONSTRUCTION DOCUMENTS.

GENERAL NOTES

4000 PSI @ 28 DAYS
 TYPE II CEMENT
 INLET CONFORMS TO F.D.O.7
 INDEX 232
 18" FROM BASE TO LOW
 INVERT.
 T. CO. JOB 95-300

CONTRACTOR:

JOB:

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STRUCTURE DRAWING

4'-0" 4'-0"

3'-6"

7"

1'-11"

1'-2"

24" Ø

Engineering Department

CITY OF PEMBROKE PINES

☒ Approved

☐ Approved as corrected

☐ Revise and resubmit

☐ Approve contingent on

Not Approved

24" Ø

3"

WINNINGHAM & FRADLEY INC.

CONSULTING ENGINEERS SURVEYORS

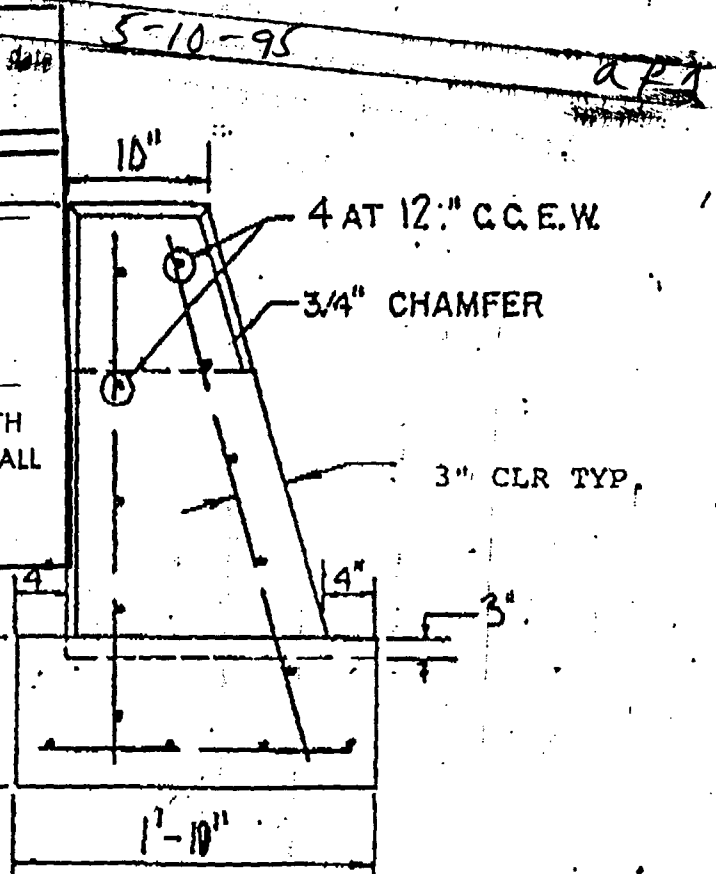
RECEIVED

☒ APPROVED AS NOTED

☐ REVISE & RESUBMIT

DATE

DOCUMENT REVIEWED FOR CONFORMANCE WITH DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.



1.23 C.Y.

STRAIGHT ENDWALL - 15" RCP.

TOWNGATE VILLAGE
LASER ENGRG.

Category:

Paving & Drainage

Doc Type:

Plans & As-builts

TOWNGATE-VILLAGE 11

CITY OF PEMBROKE PINES, BROWARD COUNTY, FLORIDA

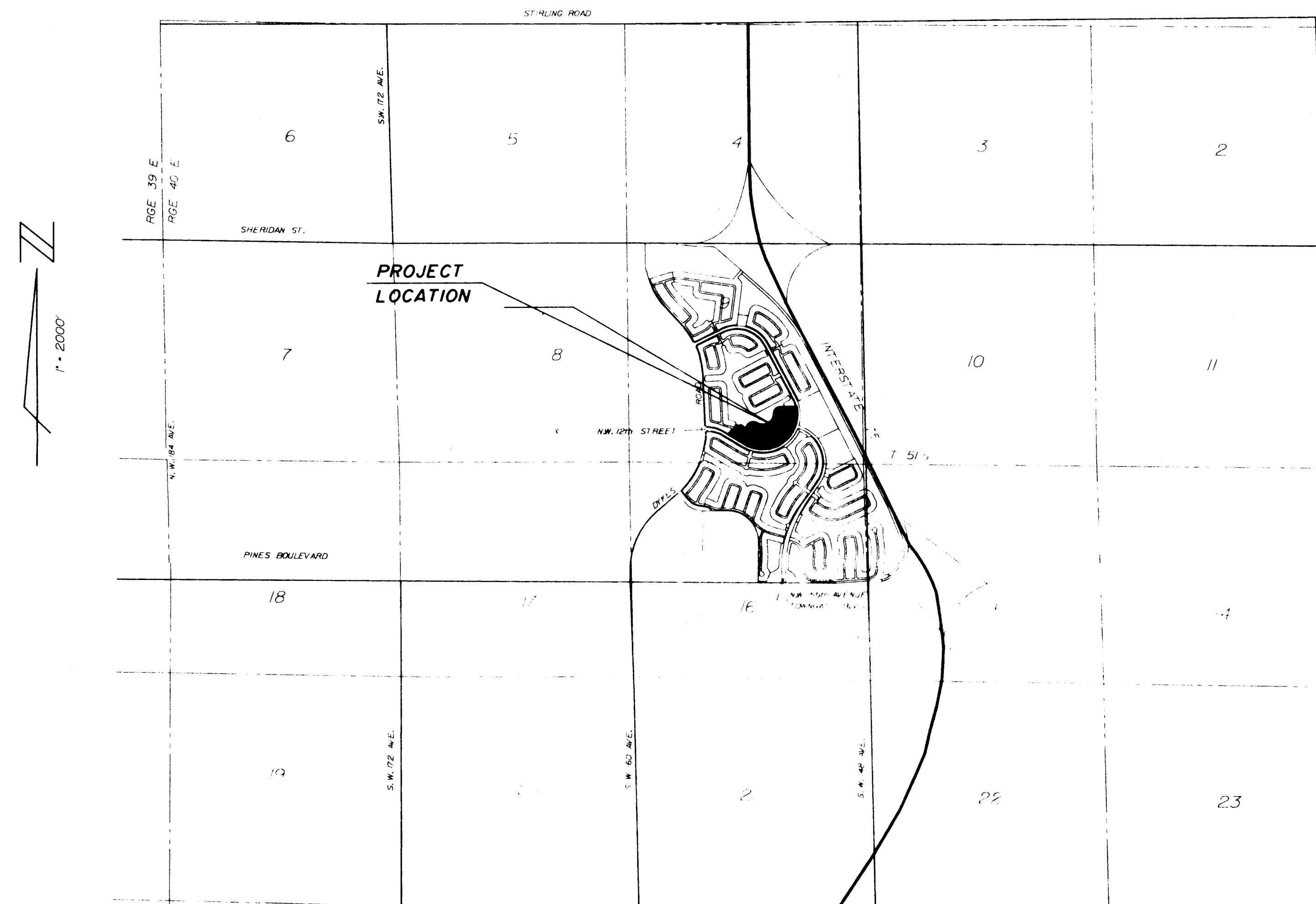
TOWNGATE LIMITED PARTNERSHIP MINTO COMMUNITIES (PEMBROKE), INC.

LEGAL DESCRIPTION:

Portion of Parcel "D", TOWNGATE, according to the plat thereof, as recorded in Plat Book 156, Page 11, of the public records of Broward County, Florida, being more particularly described as follows:

COMMENCING at the most westerly southwest corner of said Parcel "D", TOWNGATE; thence South 48°25'07" East, bearings based on the recorded plat, this and the following two described course being along the south line of said Parcel "D" for 49.3 feet to a point on a curve at which a radial line bears South 02°59'21" East, thence easterly along the arc of a curve to the right, having a radius of 690.00 feet and a central angle of 33°15'37", for 400.54 feet to a point of tangency; thence South 59°43'44" East for 175.24 feet to the POINT OF BEGINNING; thence North 37°16'16" East for 280.64 feet to a point on a curve at which a radial line bears North 41°41'57" East; thence southeasterly along the arc of a curve to the right, having a radius of 35.00 feet and a central angle of 10°28'14", for 6.40 feet to a point of compound curvature; thence southeasterly along the arc of a curve to the right, having a radius of 380.00 feet and a central angle of 05°25'44", for 36.01 feet to a point of reverse curvature; thence southeasterly and easterly along the arc of a curve to the left, having a radius of 35.00 feet and a central angle of 85°09'44", for 52.02 feet to a point of reverse curvature; thence easterly and southeasterly along the arc of a curve to the right, having a radius of 35.00 feet and a central angle of 94°50'17", for 57.93 feet to a point of compound curvature; thence southeasterly and southerly along the arc of a curve to the right, having a radius of 450.00 feet and a central angle of 07°37'13", for 59.85 feet to a point of reverse curvature; thence southeasterly, easterly and northeasterly along the arc of a curve to the left, having a radius of 35.00 feet and a central angle of 113°44'22", for 69.48 feet to a point of tangency; thence North 37°12'51" East for 62.9 feet to a point of curvature; thence northeasterly and easterly along the arc of a curve to the right, having a radius of 150.00 feet and a central angle of 33°02'02", for 243.56 feet to a point of reverse curvature; thence easterly, northeasterly and northerly along the arc of a curve to the left, having a radius of 240.00 feet and a central angle of 124°51'30", for 523.01 feet to a point of reverse curvature; thence northerly, northeasterly and easterly along the arc of a curve to the right, having a radius of 150.00 feet and a central angle of 90°00'00", for 235.62 feet to a point of tangency; thence North 88°23'22" East for 366.27 feet to a point on a curve, at which a radial line bears South 77°10'15" West; thence southerly, southwesterly and westerly along the arc of a curve to the right, having a radius of 771.00 feet and a central angle of 133°05'01", for 1791.06 feet to a point of tangency; thence North 59°43'44" West for 350.00 feet; thence South 14°43'44" East for 35.36 feet; thence North 59°43'44" West for 75.00 feet to the POINT OF BEGINNING.

Said lands situate, lying and being in the City of Pembroke Pines, Broward County, Florida and contain 18.302 acres, more or less.



LOCATION MAP

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

INDEX TO SHEETS

DESCRIPTION	SHEET NUMBER
GENERAL NOTES AND SPECIFICATIONS	GN1 OF 1
PAVING & DRAINAGE SYSTEM - PLAN	PD1 OF 3
PAVING & DRAINAGE SYSTEM - PLAN	PD2 OF 3
PAVING & DRAINAGE SYSTEM - DETAILS	PD3 OF 3
TRAFFIC MARKING - PLAN & DETAILS	TM1 OF 1
WATER DISTRIBUTION & SEWAGE COLLECTION SYSTEM - PLAN	WS1 OF 5
WATER DISTRIBUTION & SEWAGE COLLECTION SYSTEM - PLAN	WS2 OF 5
SEWAGE COLLECTION SYSTEM - PROFILES	WS3 OF 5
WATER DISTRIBUTION SYSTEM - DETAILS	WS4 OF 5
SEWAGE COLLECTION SYSTEM - DETAILS	WS5 OF 5

LEGEND	SANITARY STRUCTURE DESIGNATION
280 LF. 8" P.V.C. @ 0.42%	LENGTH, SIZE, TYPE, AND SLOPE OF PIPE
+	FIRE HYDRANT WITH GATE VALVE & B.R.
2	BACTERIOLOGICAL SAMPLING POINT
R.E.	RIM ELEVATION
I.E.	INVERT ELEVATION
2	INLET DESIGNATION
250' - 24" R.C.P. (24" C.M.P.)	LENGTH, SIZE, AND TYPE OF PIPE
---	FLOW OR WARP LINE
---	RIDGE LINE
0.40%	PAVEMENT SLOPE AND DIRECTION
+	DIRECTION OF OVERLAND FLOW
P.R.B.	POLLUTION RETARDANT BAFFLE
7.1 - 8.00	FINISHED FLOOR ELEVATION
---	CONCRETE SIDEWALK
---	EXISTING OR FUTURE UTILITIES
13	PROPOSED GRADE
18	EXISTING GRADE
---	PROPOSED PAVEMENT
---	EXISTING OR FUTURE PAVEMENT
F.H.	FIRE HYDRANT
G.V.	GATE VALVE
W.M.	WATER MAIN
F.M.	FORCE MAIN
B.R.	BLUE REFLECTOR
---	PAVEMENT RESTORATION
---	PAVEMENT AND/OR ROCK REMOVAL

SOUTH BROWARD DRAINAGE DISTRICT

APPROVED
AS - BUILT

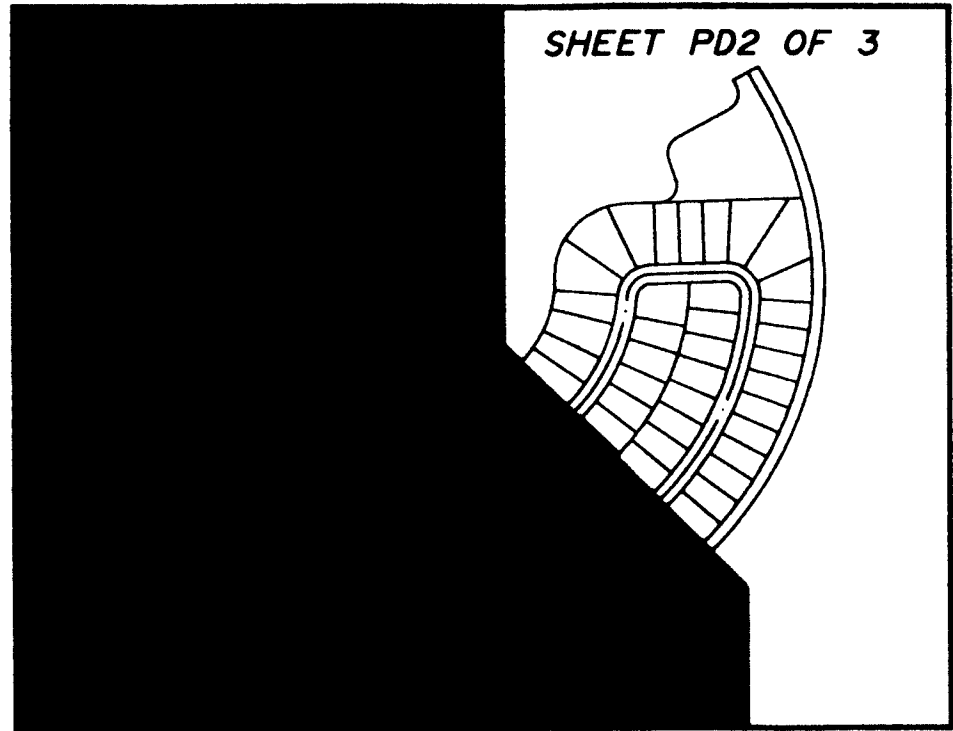
BY: *[Signature]* DATE: 2/17/96

RECEIVED
FEB 05 1997

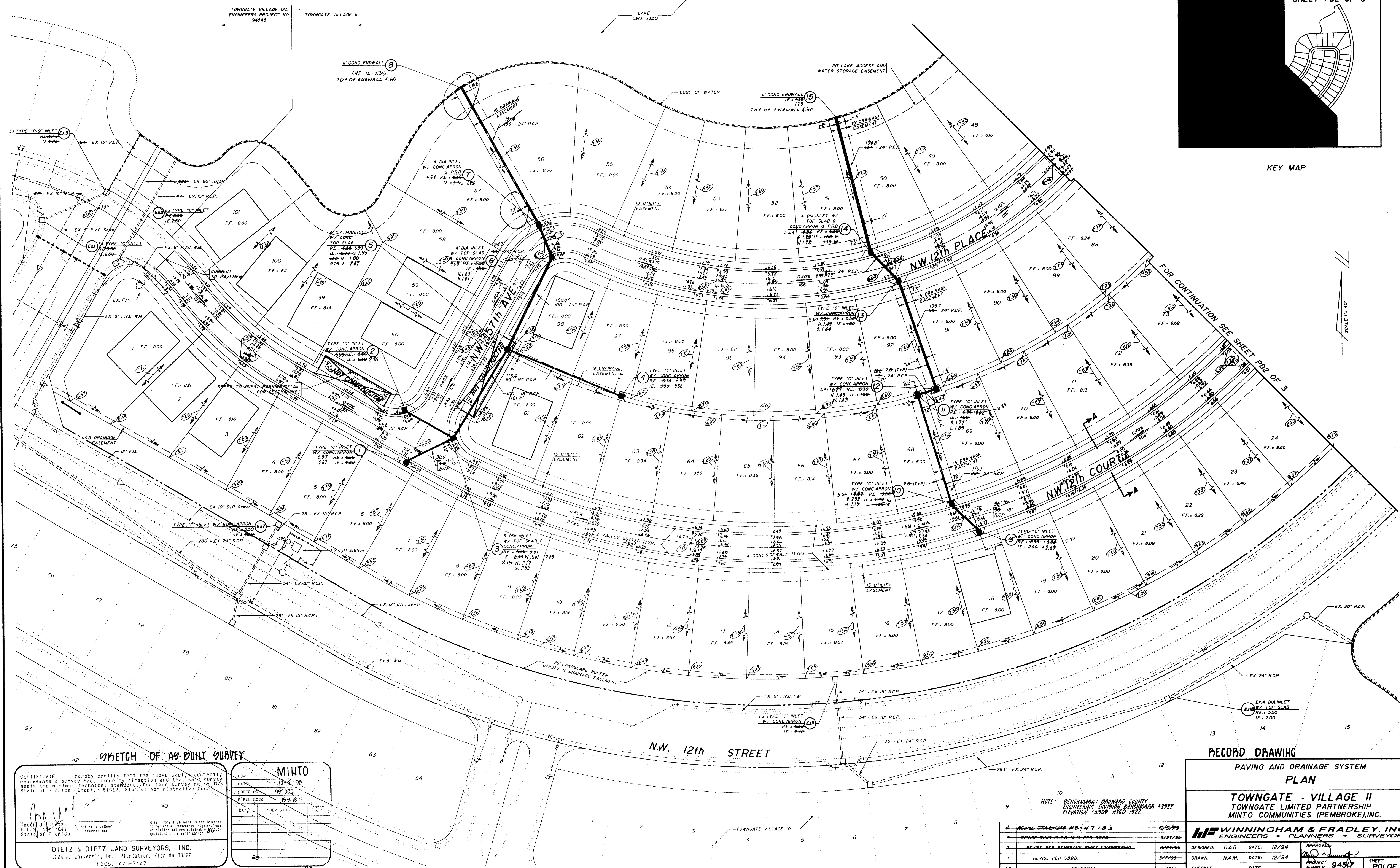
BY: _____

WINNINGHAM & FRADLEY, INC.
ENGINEERS • PLANNERS • SURVEYORS

APPROVED: _____
PROJECT NUMBER 94517 DATE DEC. 1994
JAN 28 1997



KEY MAP



SKETCH OF ADJUTANT SURVEY

CERTIFICATE: I hereby certify that the above sketch correctly represents a survey made under my direction and that said survey meets the minimum technical standards for land surveying in the State of Florida (Chapter 6101, Florida Administrative Code).

HUGH J. DIETZ
P.L.S. No. 4041
State of Florida

NOTE: This instrument is not intended to reflect all easements, rights-of-way or similar matters existing or hereafter created by any means.

DIETZ & DIETZ LAND SURVEYORS, INC.
1224 N. University Dr., Plantation, Florida 33322
(305) 475-7147

MINTO	
FOR	10-2-99
DATE	
ORDER NO.	991000
FIELD BOOK	199.10
DATE	REVISION

NOTE: BENCHMARK: BROWARD COUNTY ENGINEERING DIVISION BENCHMARK #2922 ELEVATION +6.900 HYD 1927

1.	REVISE STAIRWALK #8 IN 7-15-3	5/5/95
3.	REVISE RUNS 10-11-12-13 PER SBDD.	3/27/95
2.	REVISE PER PEMBROKE PINES ENGINEERING	3/24/96
4.	REVISE PER SBDD	3/7/96
NO.	REVISIONS	DATE

RECORD DRAWING

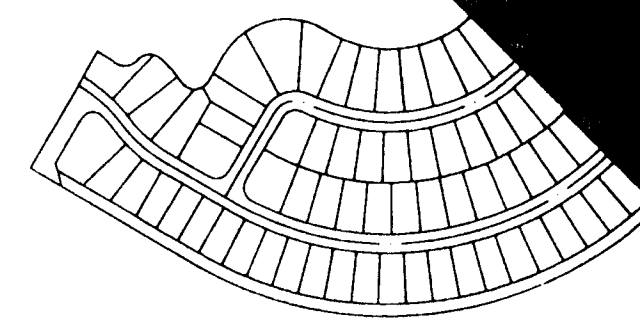
PAVING AND DRAINAGE SYSTEM
PLAN

TOWNGATE - VILLAGE II
TOWNGATE LIMITED PARTNERSHIP
MINTO COMMUNITIES (PEMBROKE), INC.

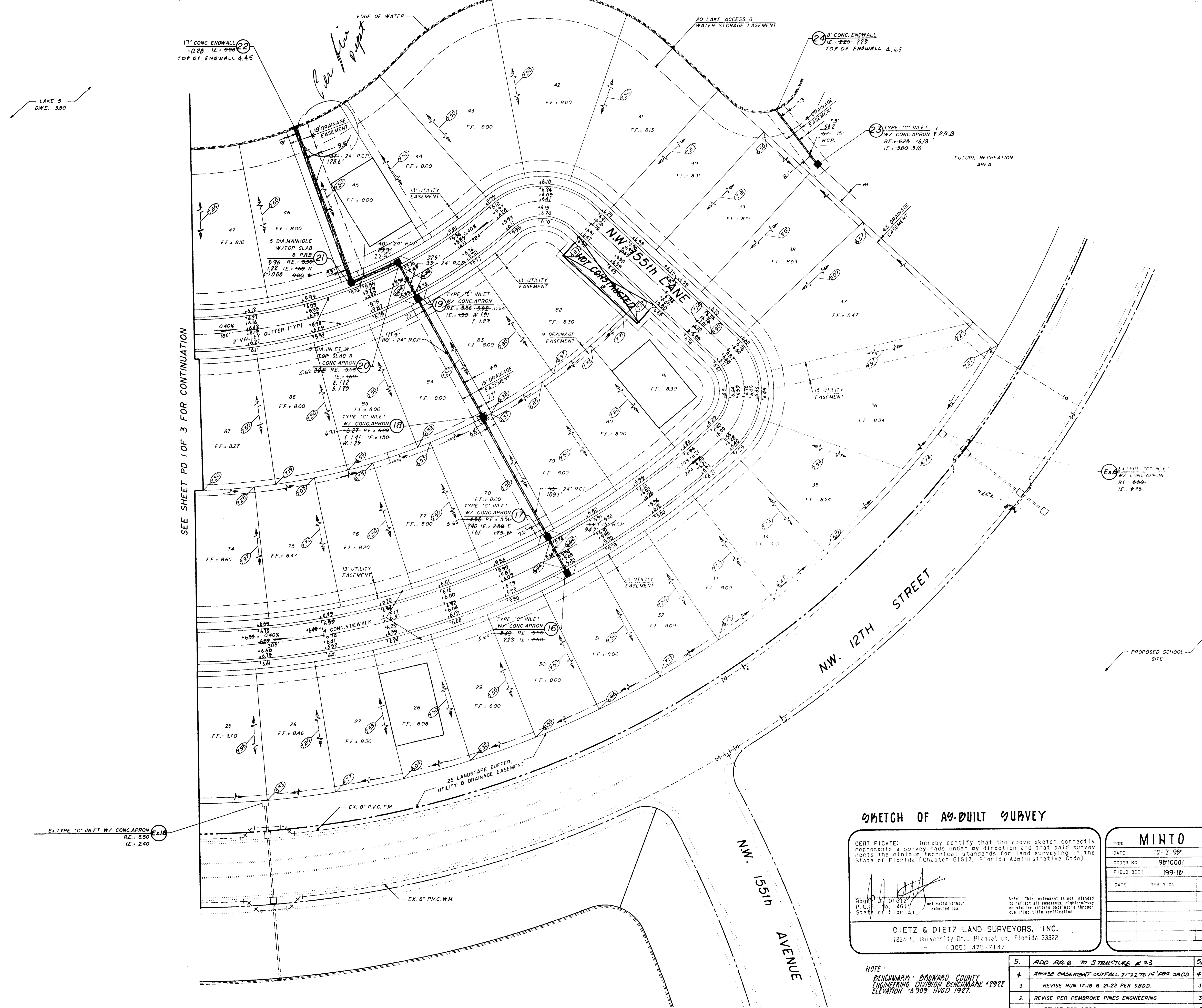
H. WINNINGHAM & FRADLEY, INC.
ENGINEERS - PLANNERS - SURVEYORS

DESIGNED: D.A.B.	DATE: 12/94	APPROVED: [Signature]
DRAWN: N.A.M.	DATE: 12/94	PROJECT NUMBER: 94517
CHECKED: [Signature]	DATE: [Signature]	SHEET: PDI OF 2

JAN 28 1997



KEY MAP



SKETCH OF AS-BUILT SURVEY

CERTIFICATE: I hereby certify that the above sketch correctly represents a survey made under my direction and that said survey meets the minimum technical standards for land surveying in the State of Florida (Chapter 61G17, Florida Administrative Code).

DIETZ & DIETZ LAND SURVEYORS, INC.
1224 N. University Cr., Plantation, Florida 33322
(305) 475-7147

FOR: MINTO	
DATE: 10-2-99	
ORDER NO.: 9910001	
FIELD BOOK: 199-10	
DATE: 10-2-99	
REVISION: 1	

RECORD DRAWING

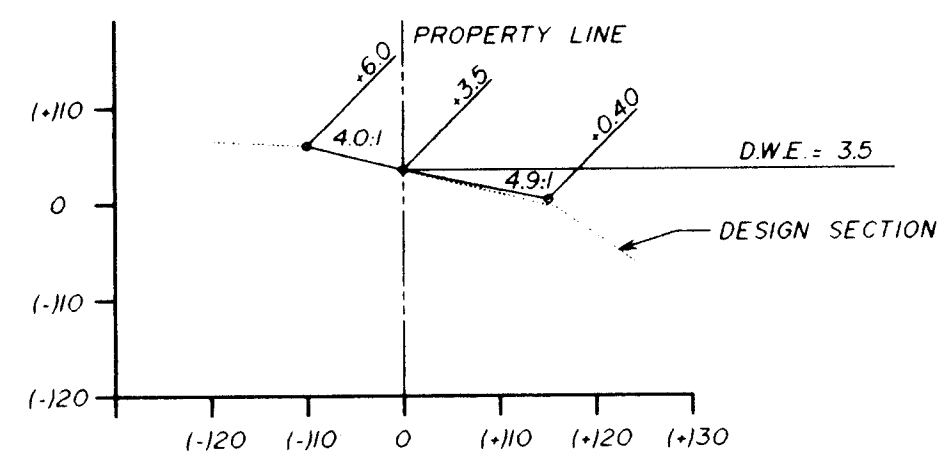
PAVING & DRAINAGE SYSTEM PLAN

TOWNGATE - VILLAGE II
TOWNGATE LIMITED PARTNERSHIP
MINTO COMMUNITIES (PERMBROKE), INC.

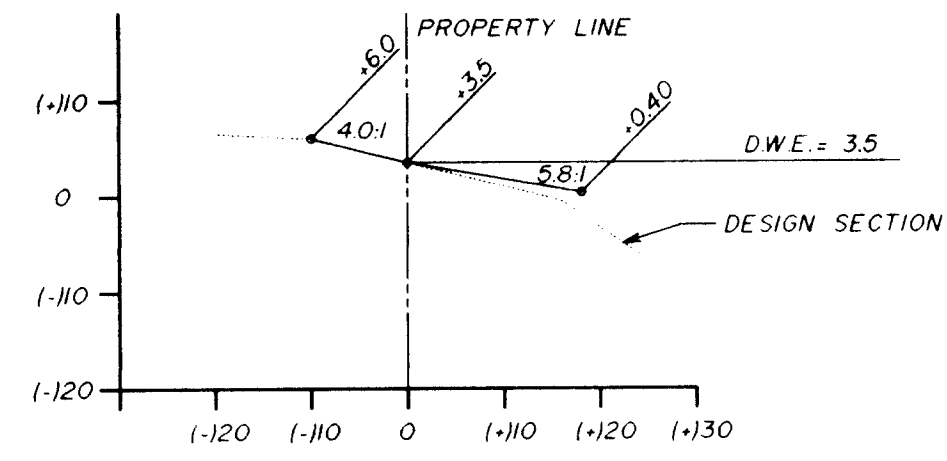
WINNINGHAM & FRADLEY, INC.
ENGINEERS - PLANNERS - SURVEYORS

DESIGNED: D.J.C.	DATE: 12/94	APPROVED: [Signature]
DRAWN: K.P.R./N.A.M.	DATE: 12/94	PROJECT NUMBER: 94517
CHECKED: [Signature]	DATE: [Signature]	SHEET PD2 OF 2

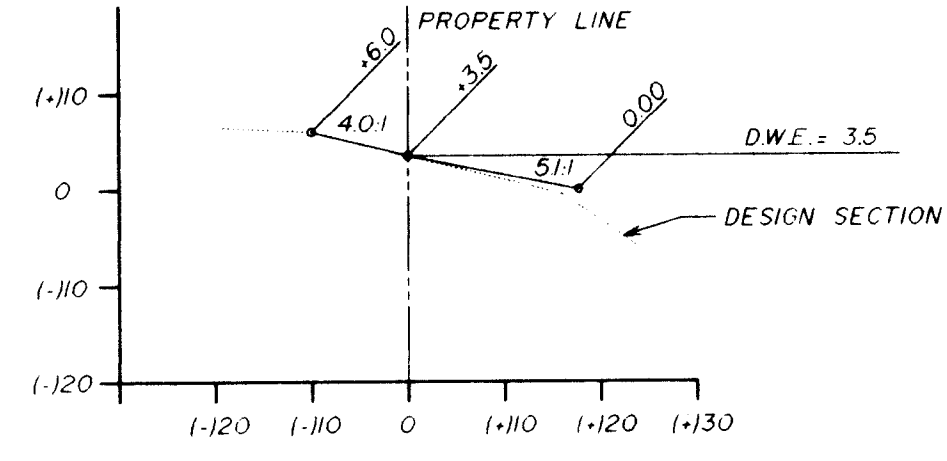
JAN 28 1997



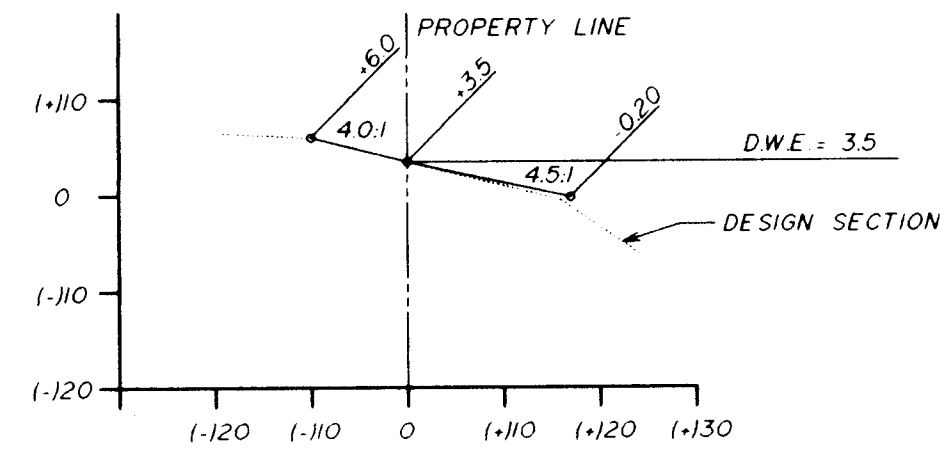
COMMON AREA / LOT 101



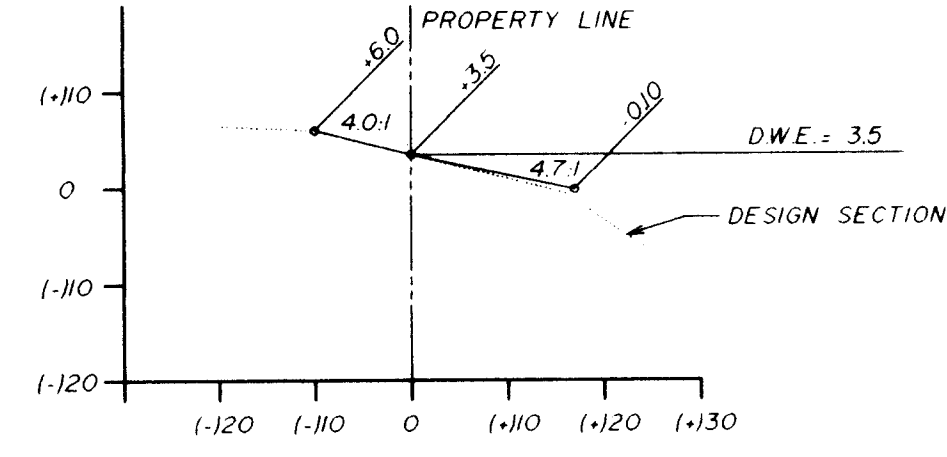
LOT 101 / LOT 100



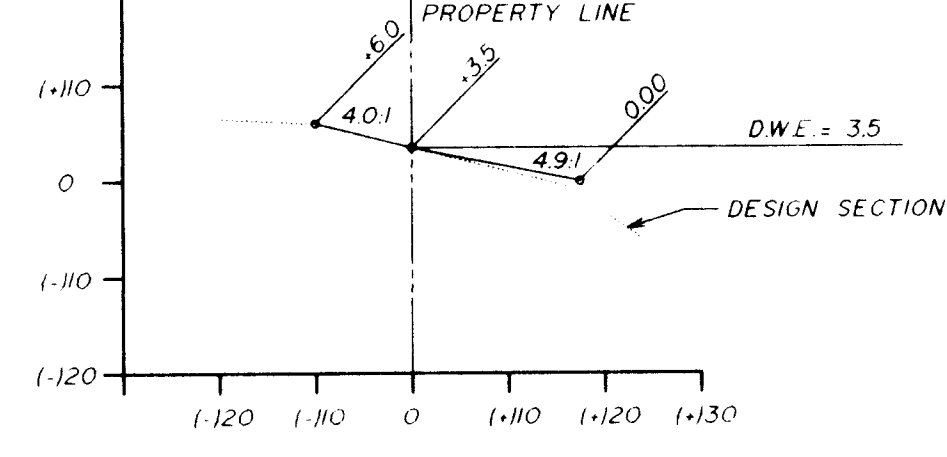
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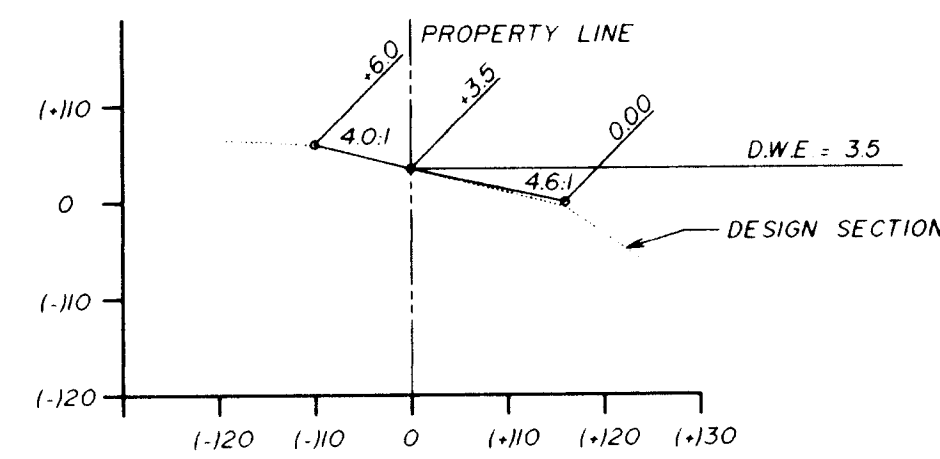
LOT 58 / LOT 57



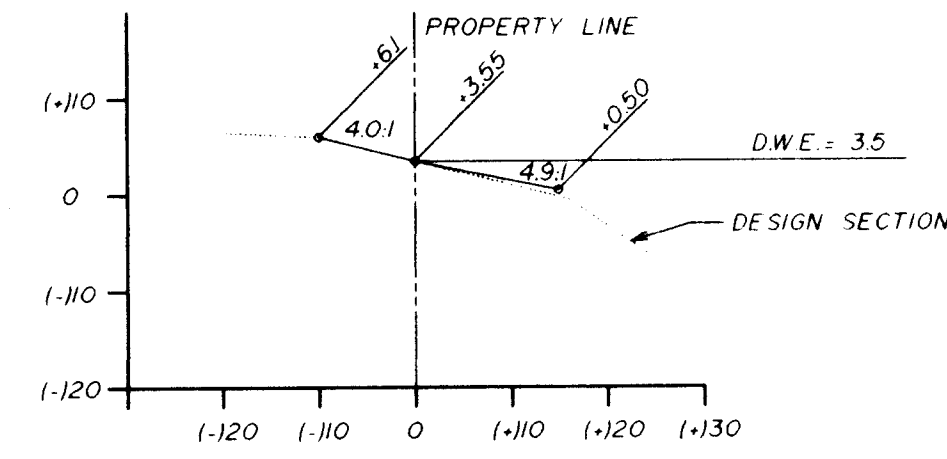
LOT 56 / LOT 55



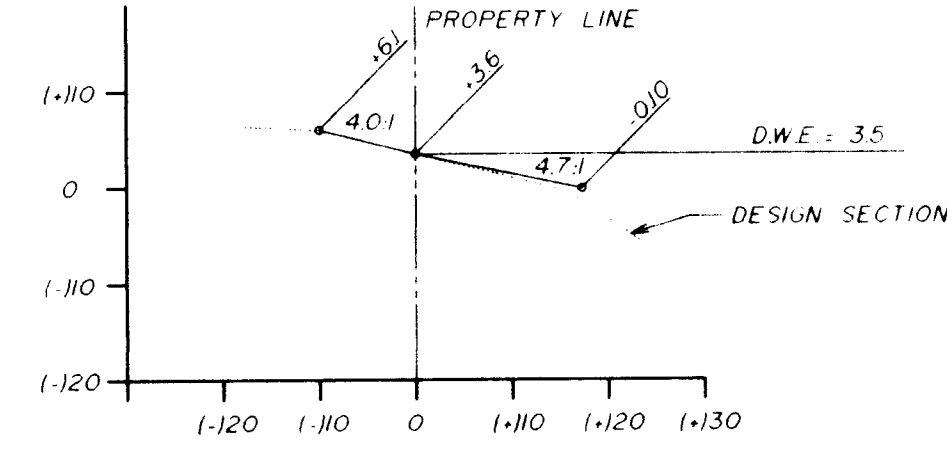
LOT 55 / LOT 54



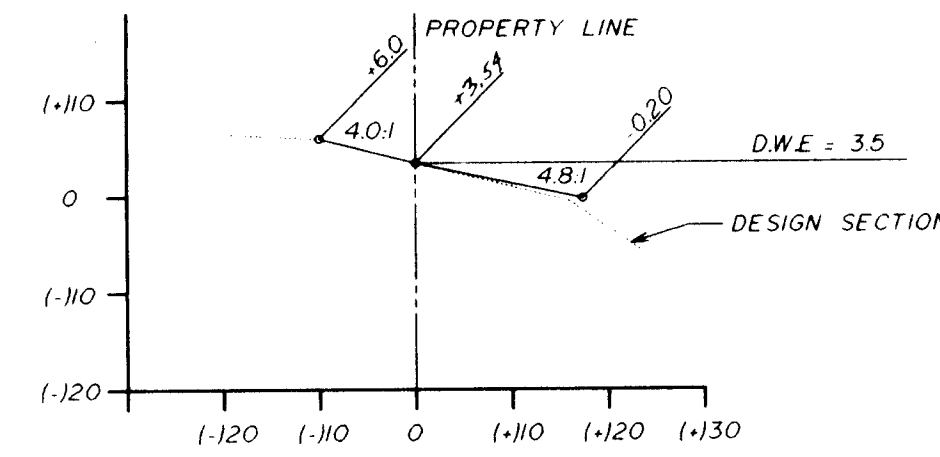
LOT 54 / LOT 53



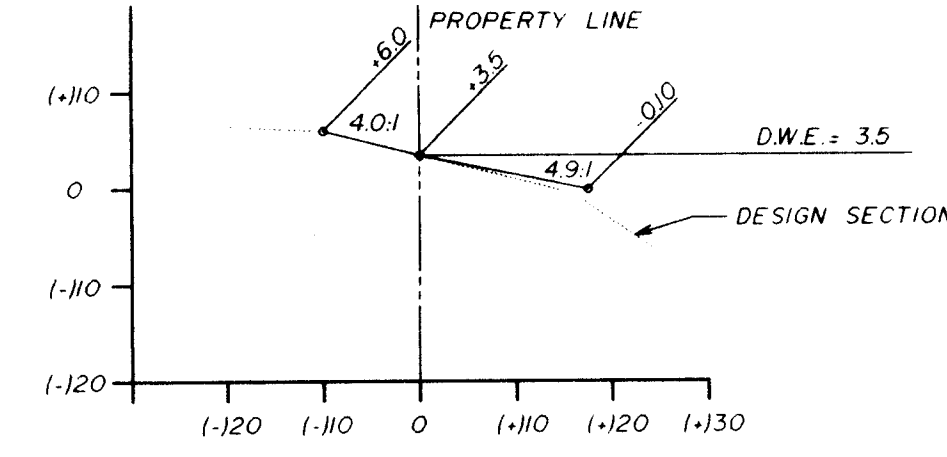
LOT 53 / LOT 52



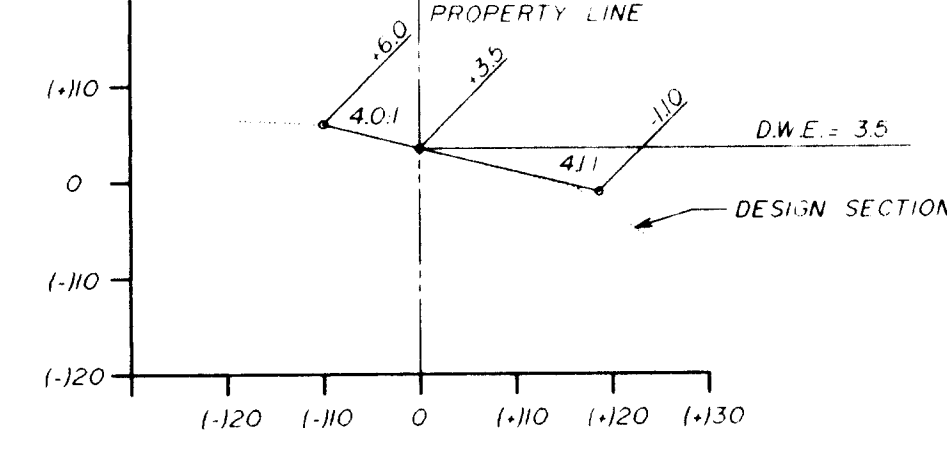
LOT 52 / LOT 51



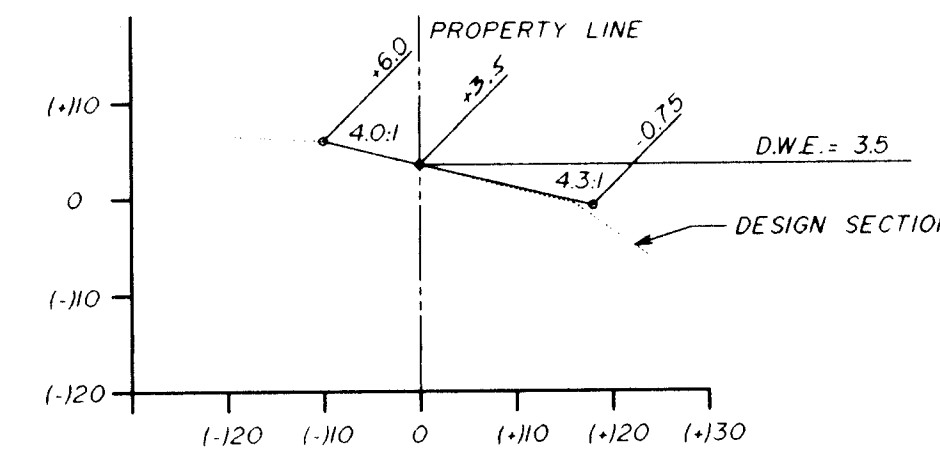
LOT 50 / LOT 49



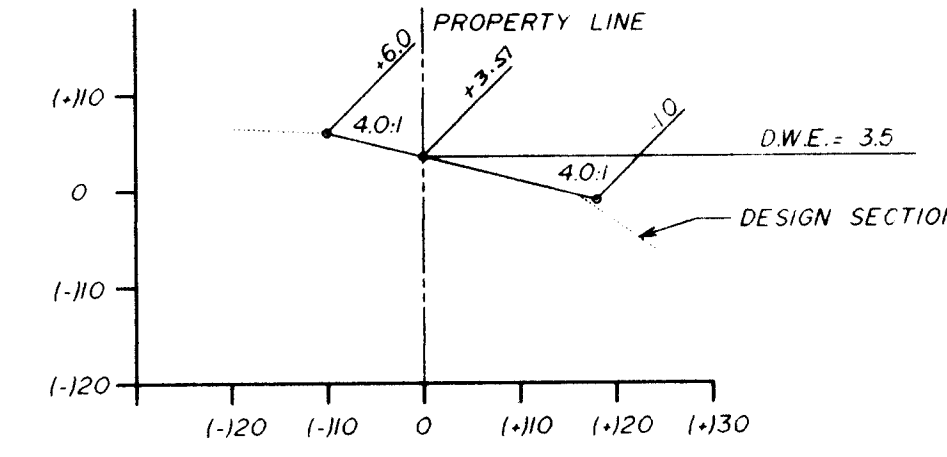
LOT 49 / LOT 48



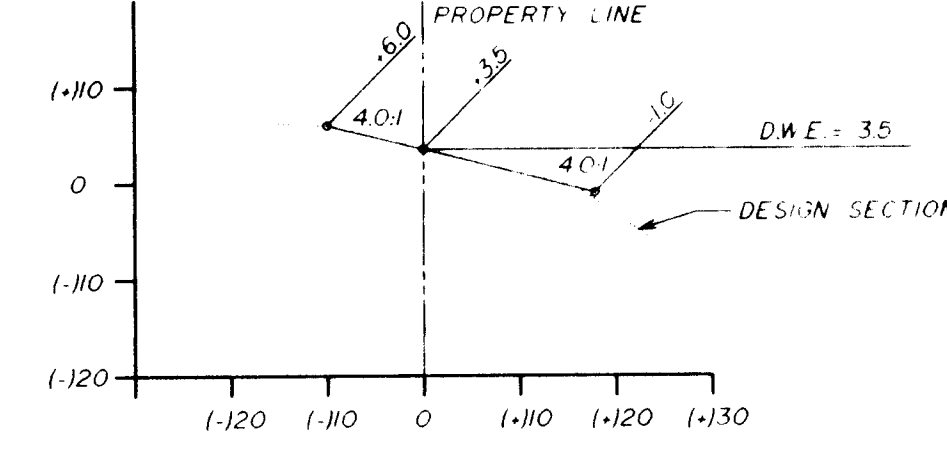
LOT 48 / LOT 47



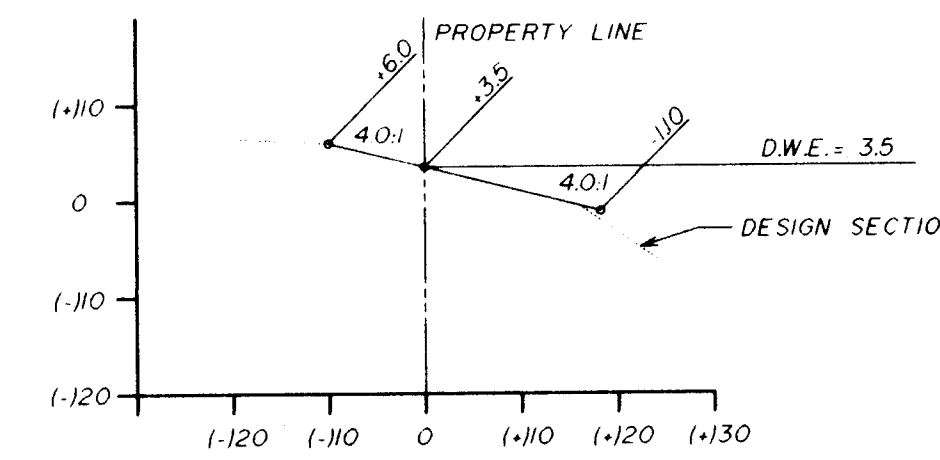
LOT 47 / LOT 46



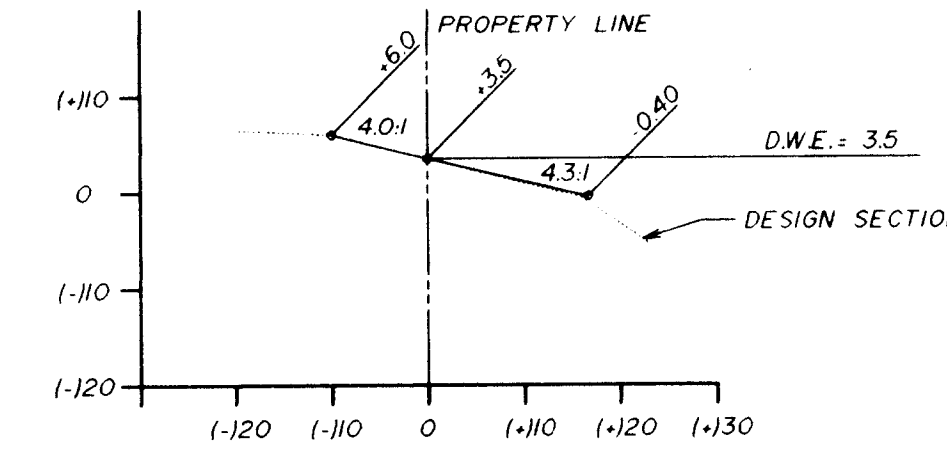
LOT 45 / LOT 44



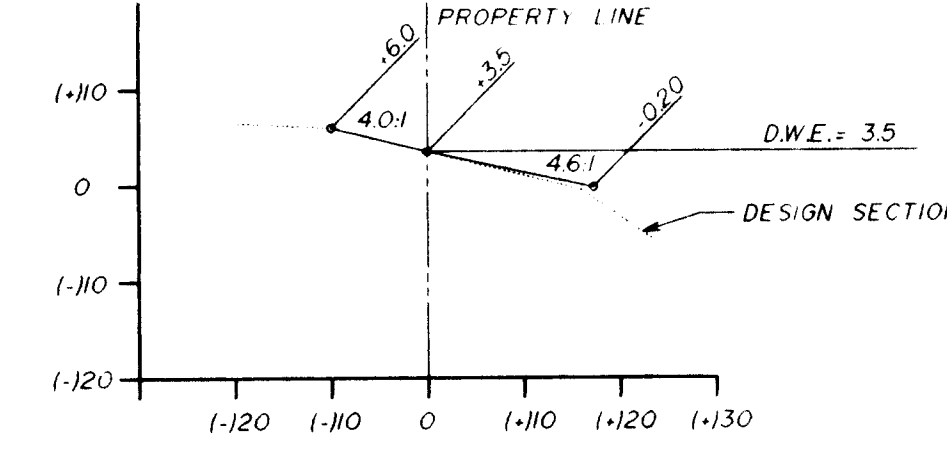
LOT 44 / LOT 43



LOT 43 / LOT 42

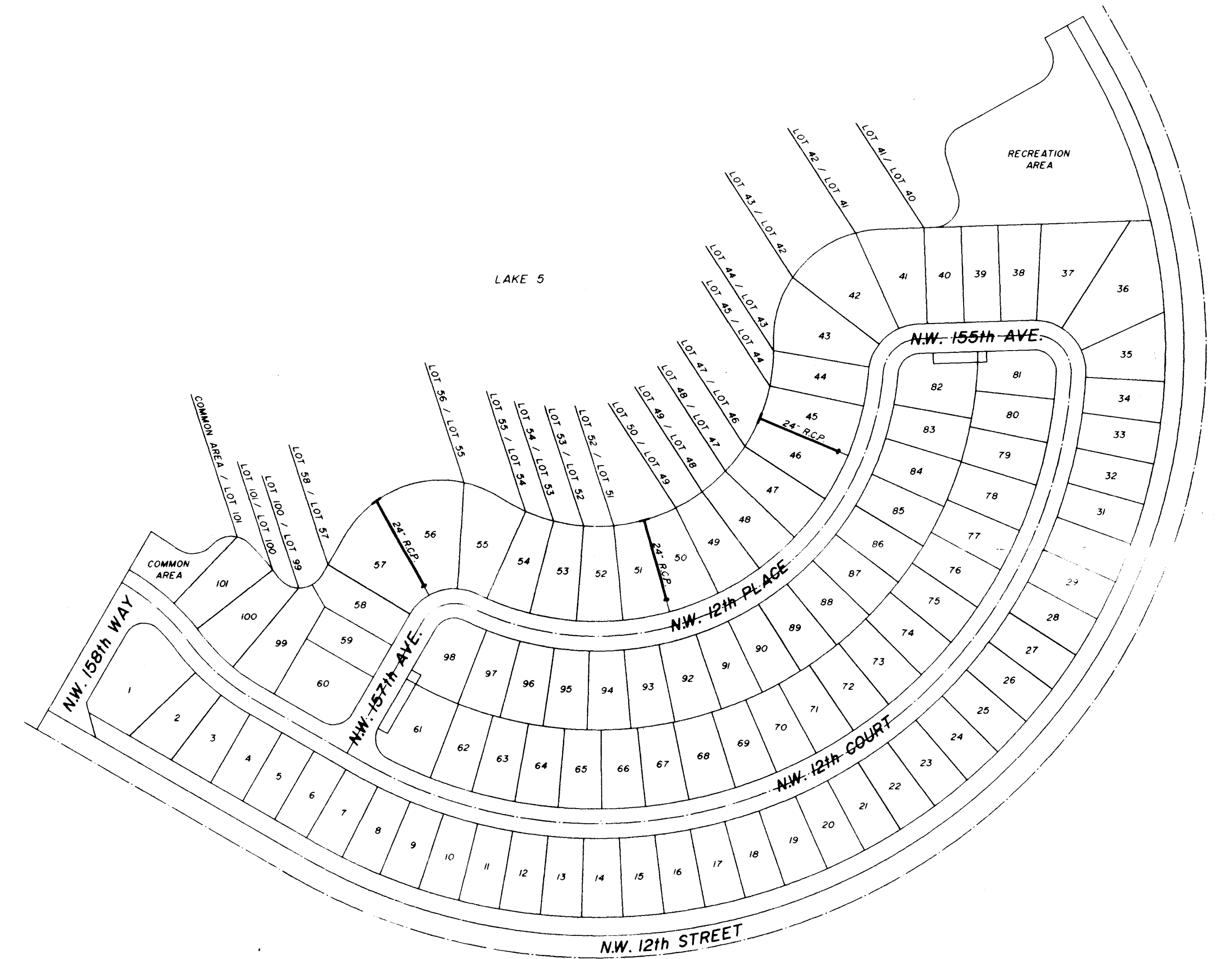


LOT 42 / LOT 41



LOT 41 / LOT 40

SOUTH BROWARD DRAINAGE DISTRICT
APPROVED
AS - BUILT
BY: *[Signature]* DATE: 3/6/99



- NOTES:
1. AS BUILT ELEVATION PLOTTED FROM DIETZ AND DIETZ FIELD BOOK DATED 4-3-96.
 2. LAKE SLOPES CONSTRUCTED BY GRIFFIN BROTHERS.
 3. SBDD PERMIT No. 93540H-11

LEGAL DESCRIPTION
A PORTION OF TOWNGATE PLAT BOOK 156, PAGE 11, BROWARD COUNTY, FLORIDA.

RECEIVED
MAR 05 1999
BY: *[Signature]*

LAKE BANK
RECORD DRAWING

TOWNGATE - VILLAGE II
TOWNGATE LIMITED PARTNERSHIP
MINTO COMMUNITIES (PEMBROKE), INC.

WINNINGHAM & FRADLEY, INC.
ENGINEERS - PLANNERS - SURVEYORS

DESIGNED: K.P.R. DATE: 9/96	APPROVED: <i>[Signature]</i>
DRAWN: K.P.R. DATE: 9/96	CHECKED: <i>[Signature]</i>
PROJECT NUMBER: 94517	SHEET: 1 OF 1

TOWNGATE-VILLAGE 11

CITY OF PEMBROKE PINES, BROWARD COUNTY, FLORIDA

TOWNGATE LIMITED PARTNERSHIP

MINTO COMMUNITIES (PEMBROKE), INC.

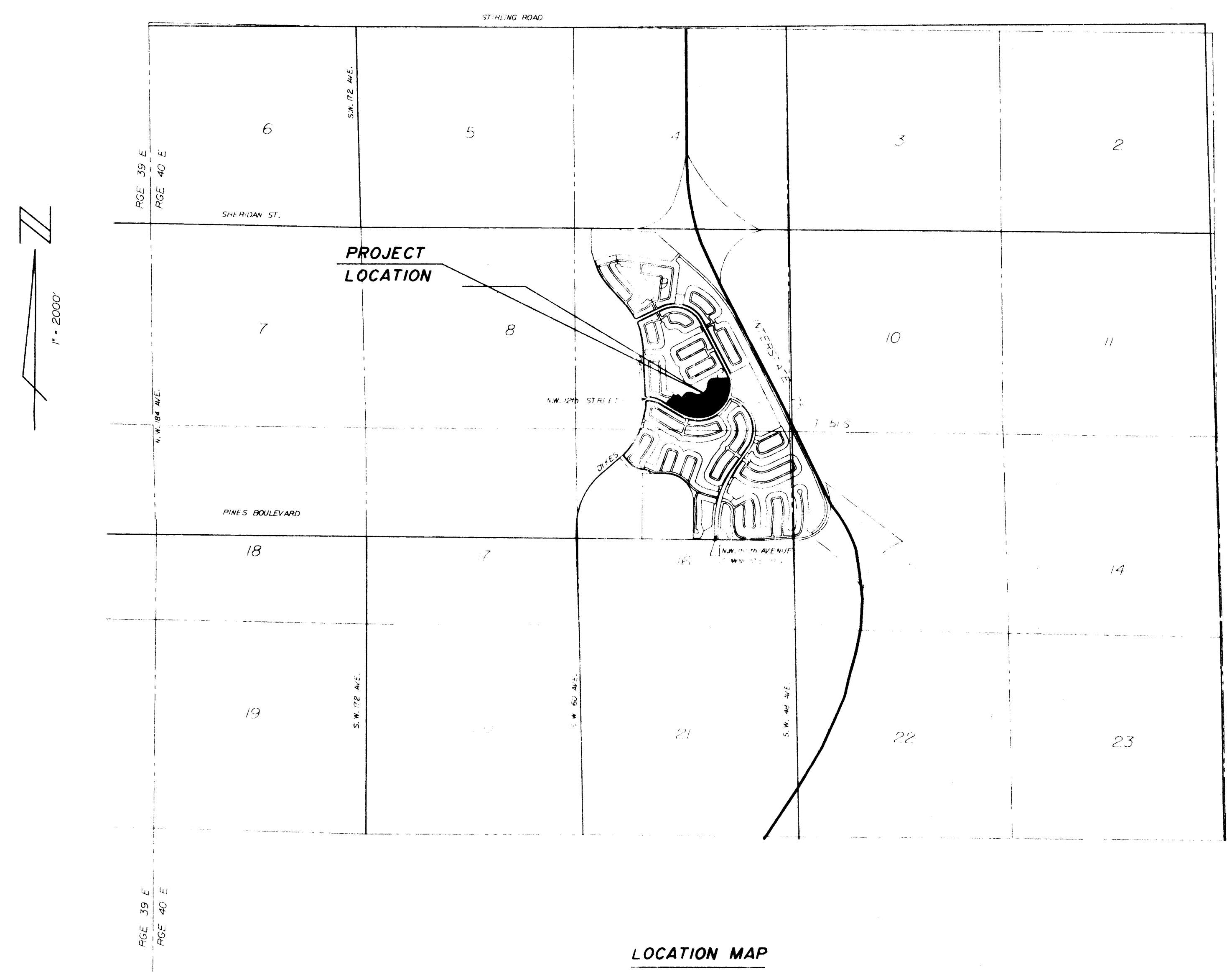
DESCRIPTION	SHEET NUMBER
GENERAL NOTES AND SPECIFICATIONS	GNI OF 1
PAVING & DRAINAGE SYSTEM - PLAN	PD1 OF 3
PAVING & DRAINAGE SYSTEM - PLAN	PD2 OF 3
PAVING & DRAINAGE SYSTEM - DETAILS	PD3 OF 3
TRAFFIC MARKING - PLAN & DETAILS	TM1 OF 1
WATER DISTRIBUTION & SEWAGE COLLECTION SYSTEM - PLAN	WS1 OF 5
WATER DISTRIBUTION & SEWAGE COLLECTION SYSTEM - PLAN	WS2 OF 5
SEWAGE COLLECTION SYSTEM - PROFILES	WS3 OF 5
WATER DISTRIBUTION SYSTEM - DETAILS	WS4 OF 5
SEWAGE COLLECTION SYSTEM - DETAILS	WS5 OF 5

LEGAL DESCRIPTION:

Portion of Parcel "D", TOWNGATE, according to the plat thereof, as recorded in Plat Book 156, Page 11, of the public records of Broward County, Florida, being more particularly described as follows:

COMMENCING at the most westerly southwest corner of said Parcel "D", TOWNGATE; thence South 48°25'07" East, bearings based on the recorded plat, (this and the following two described course being along the south line of said Parcel "D" for 49.13 feet to a point on a curve at which a radial line bears South 02°59'20" East, thence easterly along the arc of a curve to the right, having a radius of 690.00 feet and a central angle of 3°15'37", for 400.54 feet to a point of tangency; thence South 59°43'44" East for 175.24 feet to the POINT OF BEGINNING; thence North 30°16'16" East for 280.64 feet to a point on a curve at which a radial line bears North 4°41'57" East; thence southeasterly along the arc of a curve to the right, having a radius of 35.00 feet and a central angle of 10°28'14", for 6.40 feet to a point of compound curvature; thence southeasterly along the arc of a curve to the right, having a radius of 380.00 feet and a central angle of 05°25'44", for 36.01 feet to a point of reverse curvature; thence southeasterly and easterly along the arc of a curve to the left, having a radius of 35.00 feet and a central angle of 85°09'44", for 52.02 feet to a point of reverse curvature; thence easterly and southeasterly along the arc of a curve to the right, having a radius of 35.00 feet and a central angle of 94°50'17", for 57.93 feet to a point of compound curvature; thence southeasterly and southerly along the arc of a curve to the right, having a radius of 450.00 feet and a central angle of 07°37'13", for 59.85 feet to a point of reverse curvature; thence southeasterly, easterly and northeasterly along the arc of a curve to the left, having a radius of 35.00 feet and a central angle of 113°44'22", for 69.48 feet to a point of tangency; thence North 30°12'51" East for 62.19 feet to a point of curvature; thence northeasterly and easterly along the arc of a curve to the right, having a radius of 150.00 feet and a central angle of 93°02'02", for 243.56 feet to a point of reverse curvature; thence easterly, northeasterly and northerly along the arc of a curve to the left, having a radius of 240.00 feet and a central angle of 124°51'30", for 523.01 feet to a point of reverse curvature; thence northerly, northeasterly and easterly along the arc of a curve to the right, having a radius of 150.00 feet and a central angle of 90°00'00", for 235.62 feet to a point of tangency; thence North 88°23'22" East for 366.27 feet to a point on a curve, at which a radial line bears South 77°10'15" West; thence southerly, southwesterly and westerly along the arc of a curve to the right, having a radius of 771.00 feet and a central angle of 133°06'01", for 1791.06 feet to a point of tangency; thence North 59°43'44" West for 350.00 feet; thence South 14°43'44" East for 35.36 feet; thence North 59°43'44" West for 75.00 feet to the POINT OF BEGINNING.

Said lands situate, lying and being in the City of Pembroke Pines, Broward County, Florida, and contain 18.302 acres, more or less.



LOCATION MAP

PAVING & DRAINAGE SYSTEM

WATER DISTRIBUTION SYSTEM

SEWAGE COLLECTION SYSTEM

TRAFFIC MARKINGS

LEGEND

	SANITARY STRUCTURE DESIGNATION
	LENGTH, SIZE, TYPE, AND SLOPE OF PIPE
	FIRE HYDRANT WITH GATE VALVE & B.R.
	BACTERIOLOGICAL SAMPLING POINT
	RIM ELEVATION
	INVERT ELEVATION
	MANHOLE LOCATION
	LENGTH, SIZE, AND TYPE OF PIPE
	FLOW OR WARP LINE
	RIDGE LINE
	PAVEMENT SLOPE AND DIRECTION
	DIRECTION OF OVERLAND FLOW
	POLLUTION RETARDANT BAFFLE
	FINISHED FLOOR ELEVATION
	CONCRETE SIDEWALK
	EXISTING OR FUTURE UTILITIES
	PROPOSED GRADE
	EXISTING GRADE
	PROPOSED PAVEMENT
	EXISTING OR FUTURE PAVEMENT
	FIRE HYDRANT
	GATE VALVE
	WATER MAIN
	FORCE MAIN
	BLUE REFLECTOR
	PAVEMENT RESTORATION
	PAVEMENT AND/OR ROCK REMOVAL

ENGINEERS - PLANNERS - SURVEYORS

APPROVED

PROJECT NUMBER	94517	DATE	DEC. 1994
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JUL 14 1995

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.
- THE CONTRACTOR SHALL BE RESPONSIBLE AT ALL TIMES THROUGHOUT THE DURATION OF CONSTRUCTION FOR THE PROTECTION OF EXISTING AND NEWLY INSTALLED UTILITIES.
- 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.
- THE CONTRACTOR SHALL INFORM THE CITY OF PEMBROKE PINES ENGINEERING & 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 DEPARTMENT AND WINNINGHAM & FRADLEY, INC. A MINIMUM OF 48 HOURS IN ADVANCE OF COMMENCEMENT OF CONNECTING TO A CITY FACILITY.
- 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.
- 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.
- 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.
- 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. A MINIMUM VERTICAL CLEARANCE OF 24 INCHES AT 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.
- 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 MHS. OUTSIDE PAVEMENT AREAS ORANGE RPM'S FOR MANHOLES, WHITE RPM'S FOR GATE VALVES, AND GREEN RPM'S FOR FORCE MAIN VALVES.
- THE FOLLOWING DOCUMENTS ARE TO BE ON FILE AT THE CITY OF PEMBROKE PINES PRIOR TO THE CONNECTION OF THE FIRST WATER METER.
 - LETTERS OF ACCEPTANCE FROM BROWARD COUNTY PUBLIC HEALTH UNIT BROWARD COUNTY DEPARTMENT OF NATURAL RESOURCE PROTECTION
 - CERTIFICATION OF ENGINEER OF RECORD.
 - THREE SIGNED AND SEALED COPIES OF AS-BUILTS CERTIFIED BY A PROFESSIONAL ENGINEER OR LAND SURVEYOR REGISTERED IN THE STATE OF FLORIDA.

GENERAL NOTES FOR SEWAGE COLLECTION SYSTEM & DRAINAGE SYSTEM

- PRECAST STRUCTURES SHALL CONFORM TO ASTM C-478 AND 641. PRECAST STRUCTURE MUST BE CERTIFIED BY AN INDEPENDANT ENGINEERING TESTING LABORATORY, 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.
- 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.
- 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 SPALLS SHALL HAVE A MINIMUM LAP OF 24 BAR DIAMETERS. MINIMUM COVER OVER REINFORCING STEEL SHALL BE 3 INCHES. ALL DRAINAGE STRUCTURES SHALL MEET FDOT SPECIFICATION.
- ALL OPENINGS IN PRECAST MANHOLES AND CATCH BASINS SHALL BE CAST AT THE TIME OF MANUFACTURE.
- PRECAST MANHOLE AND CATCH BASIN SHOP DRAWINGS SHALL BE SUBMITTED TO THE CITY OF PEMBROKE PINES AND ENGINEER FOR.
- 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.
- ALL CONCRETE AND MORTAR USED IN MANHOLE AND CATCH BASIN CONSTRUCTION SHALL HAVE TYPE II CEMENT.
- 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 ASTM 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.
- A READ STAKE SHALL BE INSTALLED AT EVERY SEWER SERVICE LOCATION.
- SANITARY SEWER SHALL BE TELEVIEWED AT OWNERS EXPENSE. OWNER / CONTRACTOR SHALL BE RESPONSIBLE FOR CORRECTING ANY DEFICIENCIES PRIOR TO THE CITY'S CERTIFICATION OF COMPLETION TO ANY AGENCY.
- ALL PROBLEMS/DEFECTS ASSOCIATED WITH THE SANITARY SEWER SYSTEM SHALL BE PROPERLY ADDRESSED PRIOR TO CITY CERTIFICATION TO ANY AGENCY.
- SHOP DRAWINGS OF ALL MATERIALS BEING USED SHALL BE SUBMITTED TO THE ENGINEER AND THE CITY OF PEMBROKE PINES FOR APPROVAL PRIOR TO ORDERING MATERIALS. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REVISED OR UNACCEPTABLE MATERIALS INSTALLED OR ORDERED WITHOUT AN APPROVED SHOP DRAWING. FOUR COPIES OF THE SHOP DRAWINGS SHALL BE SUBMITTED.

WATER DISTRIBUTION SYSTEM NOTES

- ALL WATER MAIN SHALL BE PVC CONFORMING TO ANSI/AWWA SPECIFICATION C-900-89 DR18.
- FITTINGS SHALL BE DUCTILE IRON CLASS 350 MEETING AWWA/ANSI C153/A21.53-88 SPECIFICATIONS. FITTINGS MUST BE CEMENT LINED AND SEAL COATED PER AWWA/ANSI C104/A21.4-90.
- GATE VALVES 4" AND LARGER SHALL MEET AWWA C 509-87 SPECIFICATION. VALVES MUST BE MUELLER CO. OR APPROVED EQUAL. MECHANICAL JOINT, RESILIENT SEATED.
- WATER SERVICE PIPING, FITTINGS, AND SERVICE TUBING SHALL BE POLYBUTYLENE CONFORMING TO AWWA SPECIFICATION C-902-88, SDR 9, 200 PSI RATING.
- ALL METER SERVICE CONNECTIONS SHALL BE BRONZE FROM PLUG VALVE TO PLUG VALVE. NO GATE VALVES ARE TO BE USED (12" OR LESS). 90° ANGLE LOCK WING.
- 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.
- THE ENGINEER WILL TAKE ALL BACTERIOLOGICAL SAMPLES TO AN HRS. CERTIFIED LABORATORY AND SUBMIT RESULTS TO THE CITY OF PEMBROKE PINES UTILITIES.
- ALL CONNECTIONS TO EXISTING MAINS SHALL BE MADE UNDER THE DIRECTION OF THE CITY OF PEMBROKE PINES UTILITIES DEPARTMENT.
- ALL PIPE, ETC., SHALL BE TESTED UNDER A CONSTANT PRESSURE OF 150 PSI FOR A MINIMUM TEST OF 2 HOURS AND SHALL NOT EXCEED THE LEAKAGE REQUIREMENTS AS PER AWWA/ANSI SPECIFICATIONS OF C600-93 LEAKAGE FORMULA.

$$Q = \frac{S \cdot D^3}{33,200}$$

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

- THE MINIMUM DEPTH OF COVER OVER PVC WATER MAINS SHALL BE 36 INCHES & OVER DIP SHALL BE 30 INCHES.
- DISINFECTING OF MAINS SHALL COMPLY WITH AWWA C 65-92 SPECIFICATION. STANDARD BACTERIOLOGICAL SAMPLING POINTS SHALL BE DESIGNATED ON THE ENGINEERING PLANS. IF ONE MAIN SHALL NOT BE DISINFECTED.
- MINIMUM VALVE SPACING SHALL BE AS PER SECTION 82 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 "WATER OR FORCE MAIN BURIED BELOW" FACING UPWARD. NON METALIC TAPE SHALL BE USED ON DIP.
- ALL DIP WATER MAIN SHALL BE CLASS 350, CONFORMING TO ANSI/AWWA SPECIFICATION C151/A21.4-9 AND BE CEMENT MORTAR LINED AND SEAL COATED PER AWWA SPECIFICATION C104/A21.4-90.
- PLUG VALVES SHALL BE DUCTILE IRON MANUFACTURED BY CLIM OR FIDAL.
- A TEMPORARY MITH9 SHALL BE INSTALLED BY THE CONTRACTOR FOR ANY TEMPORARY SERVICES.
- SHOP DRAWINGS OF ALL MATERIALS BEING USED SHALL BE SUBMITTED TO THE ENGINEER AND THE CITY OF PEMBROKE PINES FOR APPROVAL PRIOR TO ORDERING MATERIALS. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY REVISED OR UNACCEPTABLE MATERIALS INSTALLED OR ORDERED WITHOUT AN APPROVED SHOP DRAWING. FOUR COPIES OF THE SHOP DRAWINGS SHALL BE SUBMITTED.

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.
- 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.
- ALL DRAINAGE PIPE SHALL BE REINFORCED CONCRETE PIPE (RCP) MEETING THE REQUIREMENTS OF ASTM SPECIFICATION C76-85b.
- 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 & PROCEDURAL MANUAL, JANUARY 1990.
 - B) 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) U.S. DEPARTMENT OF TRANSPORTATION FEDERAL HIGHWAY ADMINISTRATION MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, MARCH 1988.

- 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.

- CLEARING AND FILLING
- STORM DRAINS/UTILITIES
- SUBGRADE
- ROCK BASE
- PRIME COAT
- ASPHALT
- FINAL
- PAVEMENT MARKINGS

- DENSITY TESTS FOR SUBGRADE MUST BE SUBMITTED TO AND APPROVED BY THE CITY OF PEMBROKE PINES.
- 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 ARE 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 910 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 HOURS ARE FROM 8:00 AM TO 4:30 PM.
- ANY REVISIONS TO THESE PLANS MUST BE APPROVED BY SOUTH BROWARD DRAINAGE DISTRICT PRIOR TO CONSTRUCTION.
- BONDS AND INSPECTIONS
- UPON DISTRICT BOARD OF SUPERVISORS APPROVAL OF PLANS, BUT BEFORE CONSTRUCTION CAN COMMENCE, THE FOLLOWING ITEMS MUST BE COMPLIED WITH.
 - BOND (CASH OR SURETY) OR LETTER OF CREDIT, IN THE DISTRICT'S FAVOR, MUST BE POSTED IN THE AMOUNT STATED IN SECTION 410 OF THE DISTRICT'S DESIGN CRITERIA MANUAL.
 - ALL EASEMENTS, DEED RESTRICTIONS, INDEMNIFICATION AGREEMENTS, MAINTENANCE AGREEMENTS AND DEEDS, AS REQUIRED BY THE DISTRICT SHALL BE PRESENTED TO THE DISTRICT MANAGER AND ATTORNEY 10 DAYS BEFORE RECORDATION. ALL COSTS OF RECORDING THE APPLICABLE INSTRUMENT WILL BE BORNE BY THE DEVELOPER.
 - 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.
 - BONDS SHALL BE PROVIDED BY THE PRINCIPALS OF DEVELOPMENTS ONLY. CONTRACTOR OR SUB-CONTRACTOR BONDS ARE NOT ACCEPTABLE.
 - 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) 680-3337/8 8:00 AM-4:30 PM 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.
- 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 OVERDIPS 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 1/4" 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:

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

GENERAL NOTES

TOWNGATE - VILLAGE II
TOWNGATE LIMITED PARTNERSHIP
MINTO COMMUNITIES (PEMBROKE), INC.

WINNINGHAM & FRADLEY, INC.
ENGINEERS - PLANNERS - SURVEYORS

3	REVISE PER P.R. UTILITIES	4/5/95	DESIGNED	WBF	DATE:	12/94	APPROVED
2	REVISE PER PEMBROKE PINES UTILITIES	3/20/95	DRAWN	WBF	DATE:	12/94	PROJECT NUMBER
1	REVISE PER SBDD	3/7/95	CHECKED		DATE:		94517
NO.	REVISIONS	DATE					SHEET GNI OF 1

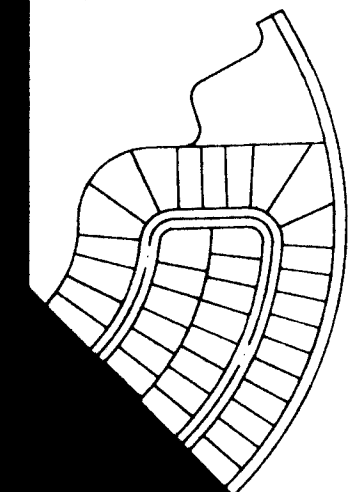
JUL 14 1995

TOWNGATE VILLAGE II
ENGINEERS PROJECT NO.
94548

TOWNGATE VILLAGE II

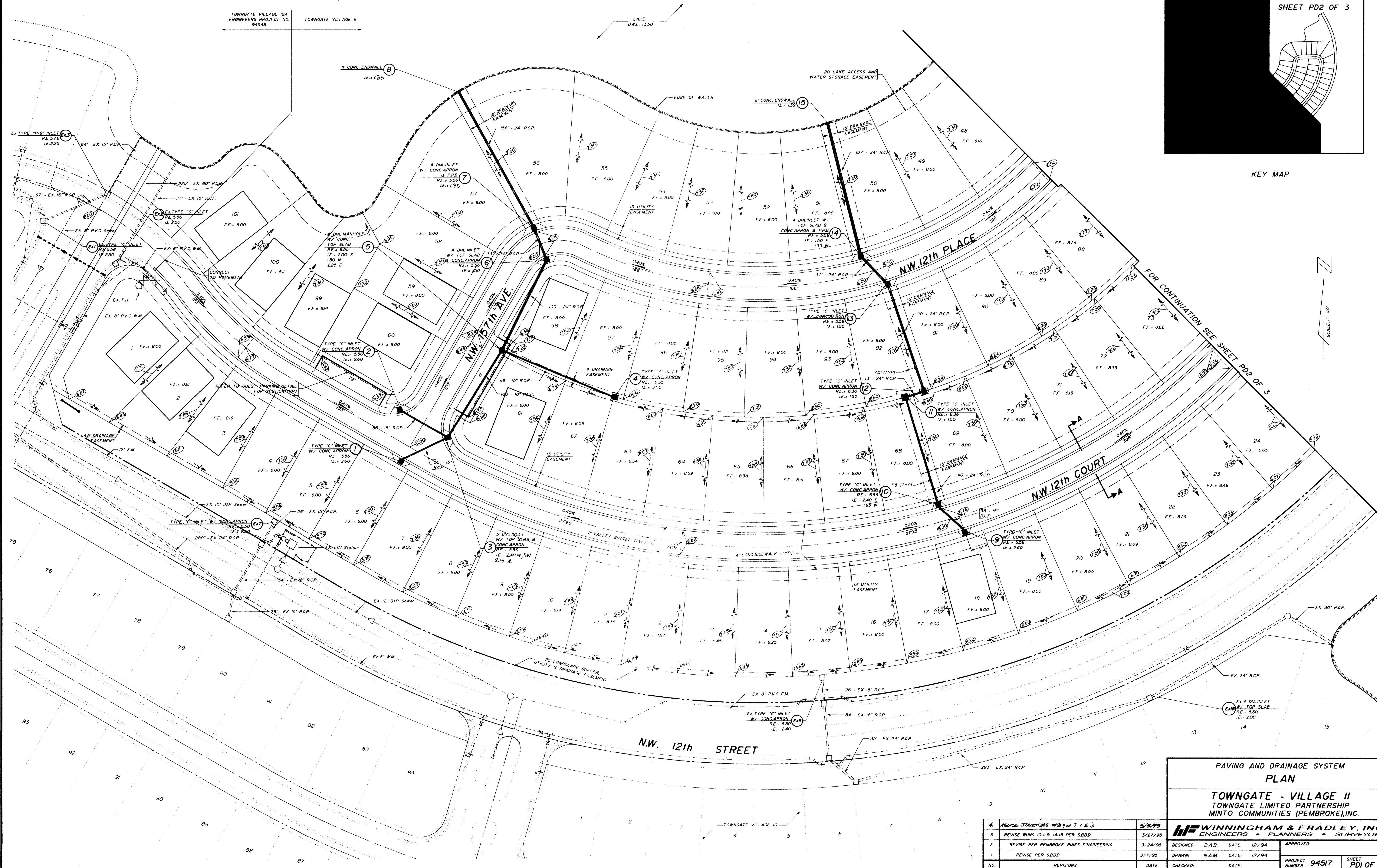
LAKE
DWE - 350

SHEET PD2 OF 3



KEY MAP

SCALE 1" = 40'



PAVING AND DRAINAGE SYSTEM
PLAN

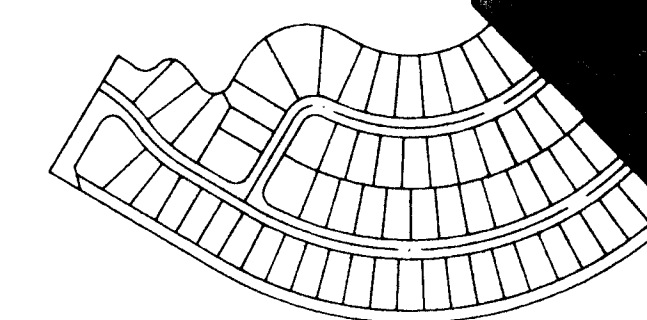
TOWNGATE - VILLAGE II
TOWNGATE LIMITED PARTNERSHIP
MINTO COMMUNITIES (PEMBROKE), INC.

WINNINGHAM & FRADLEY, INC.
ENGINEERS - PLANNERS - SURVEYORS

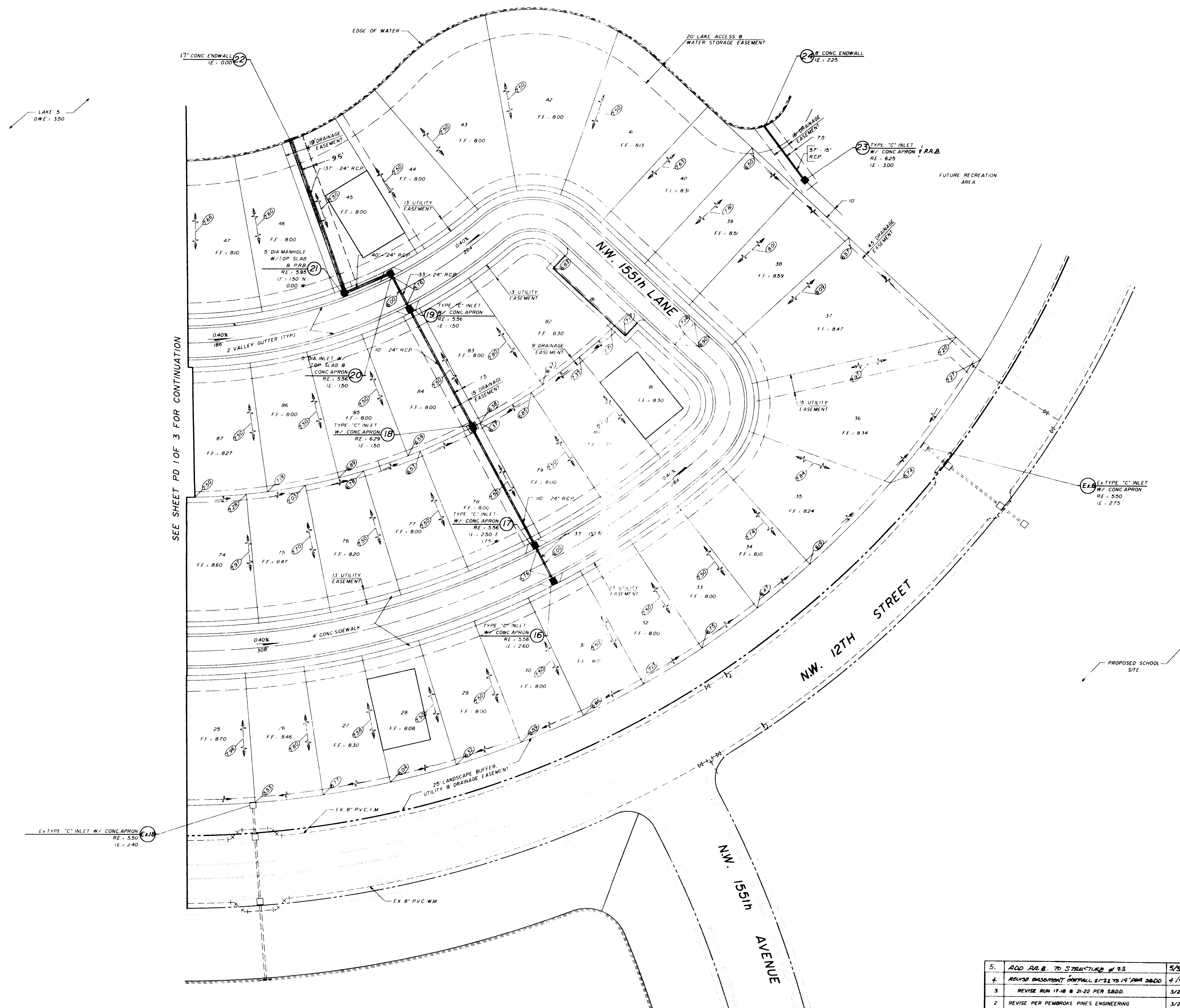
1	REVISE STAKEOUT FOR 7/1/93	5/5/93
2	REVISE RUNS 10/18/14/15 PER SBDD.	3/27/95
3	REVISE PER PEMBROKE PINES ENGINEERING	3/24/95
4	REVISE PER SBDD.	3/7/95
NO	REVISIONS	DATE

DESIGNED: D.A.B.	DATE: 12/94	APPROVED:
DRAWN: N.A.M.	DATE: 12/94	
CHECKED:	DATE:	
PROJECT NUMBER: 94517	SHEET: PD1 OF 2	

JUL 14 1995



KEY MAP



SEE SHEET PD 1 OF 3 FOR CONTINUATION

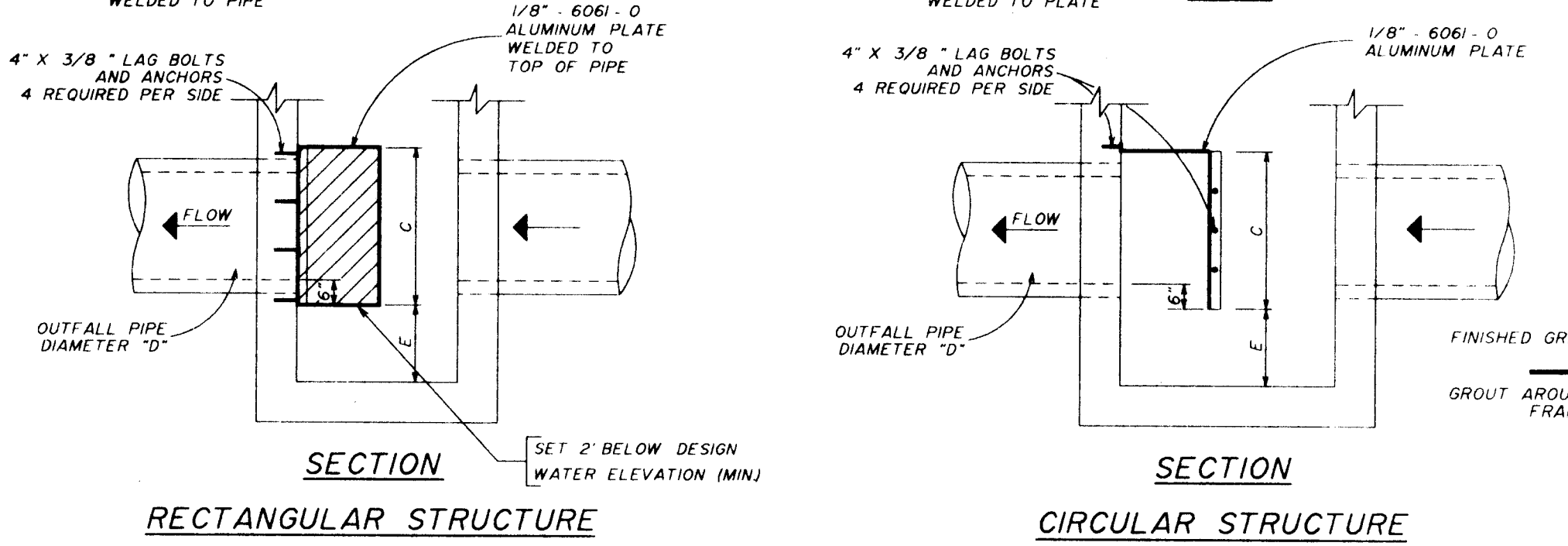
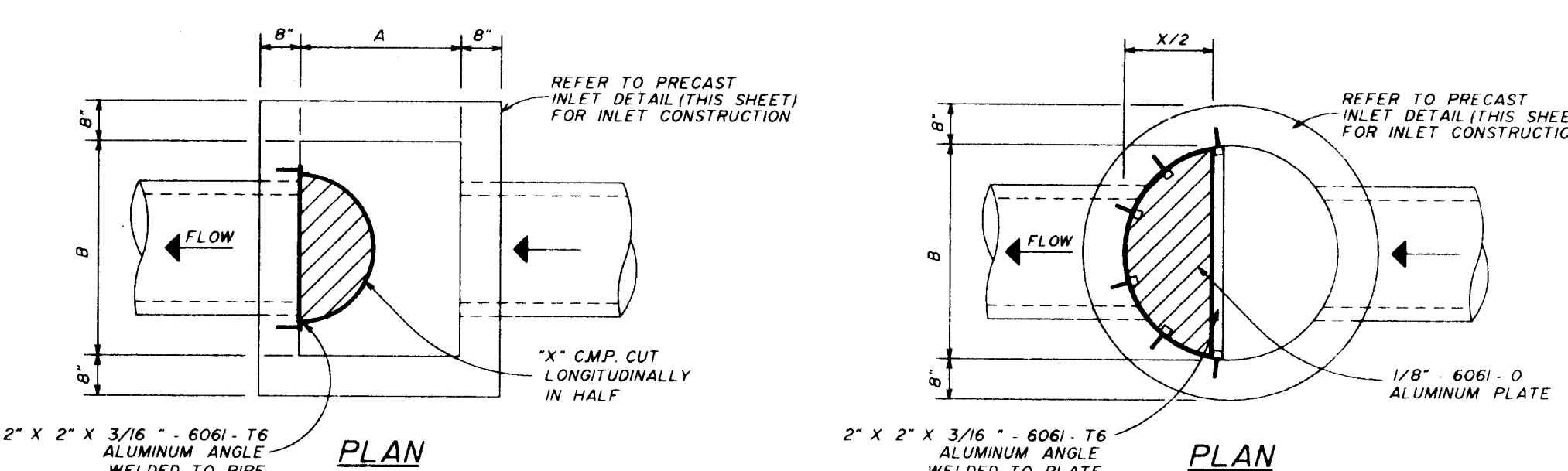
PAVING & DRAINAGE SYSTEM
PLANTOWNGATE - VILLAGE II
TOWNGATE LIMITED PARTNERSHIP
MINTO COMMUNITIES (PERMBROKE), INC.H.F. WINNINGHAM & FRADLEY, INC.
ENGINEERS - PLANNERS - SURVEYORS

5.	ADD R.R.B. TO STRUCTURE # 23	5/5/95
4.	REVISE BASEMENT DRAINAGE 21-22 TO 15' DIA. S.D.D.	4/5/95
3.	REVISE RUN 17-18 & 21-22 PER S.B.D.	3/27/95
2.	REVISE PER PERMBROKE PINE'S ENGINEERING	3/24/95
1.	REVISE PER S.B.D.	3/7/95
NO	REVISIONS	DATE

DESIGNED: D.J.C.	DATE: 12/94	APPROVED:
DRAWN: K.P.R./N.A.M.	DATE: 12/94	
CHECKED:	DATE:	

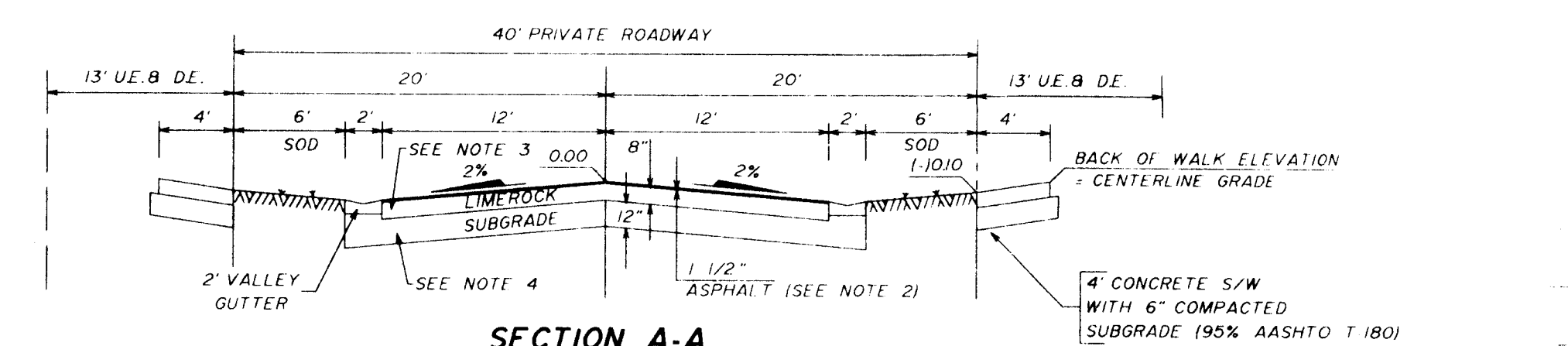
PROJECT NUMBER 94517 SHEET PD2 OF 3

JUL 14 1995

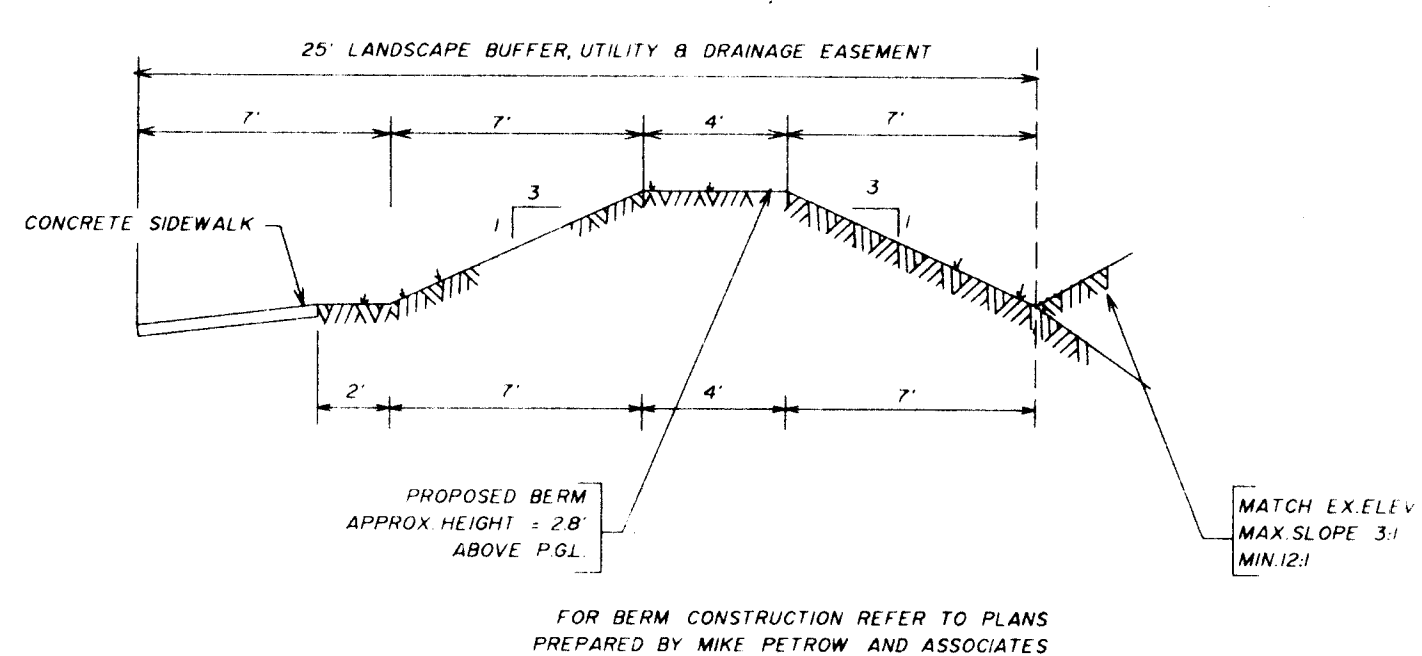


BAFFLE SCHEDULE					
D	A	B	C	E	X
15"	24"	37"	2'-3"	1'-0"	18"
18"	24"	37"	2'-6"	1'-0"	24"
21"	36"	36"	2'-9"	1'-3"	27"
24"	36"	36"	3'-0"	1'-5"	30"
30"	36"	42"	3'-6"	1'-7"	36"
36"	42"	54"	4'-0"	2'-2"	48"
42"	48"	60"	4'-8"	2'-6"	54"
48"	48"	66"	5'-0"	2'-10"	60"

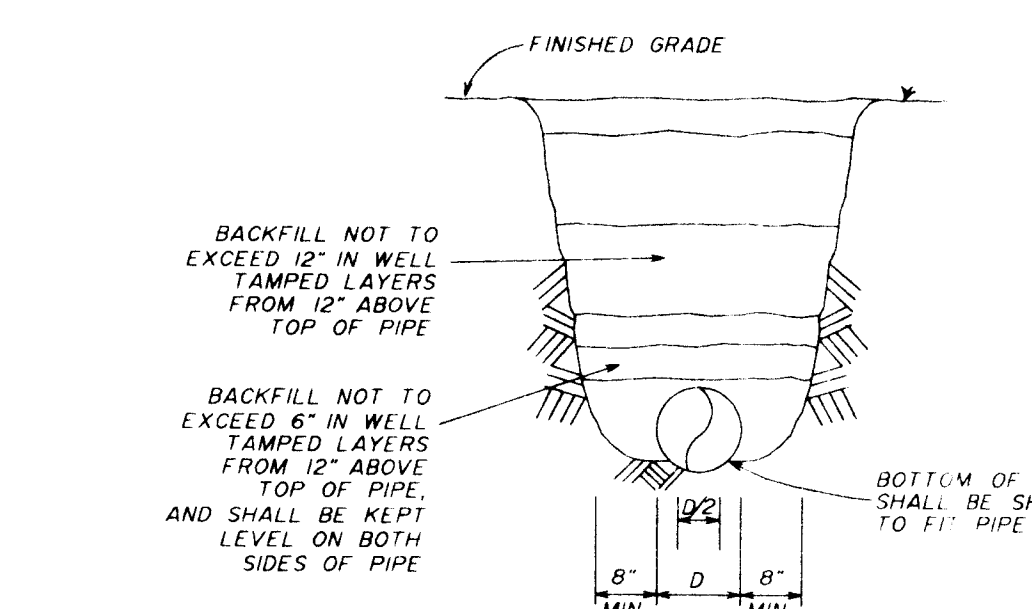
POLLUTION RETARDANT BASIN DETAIL



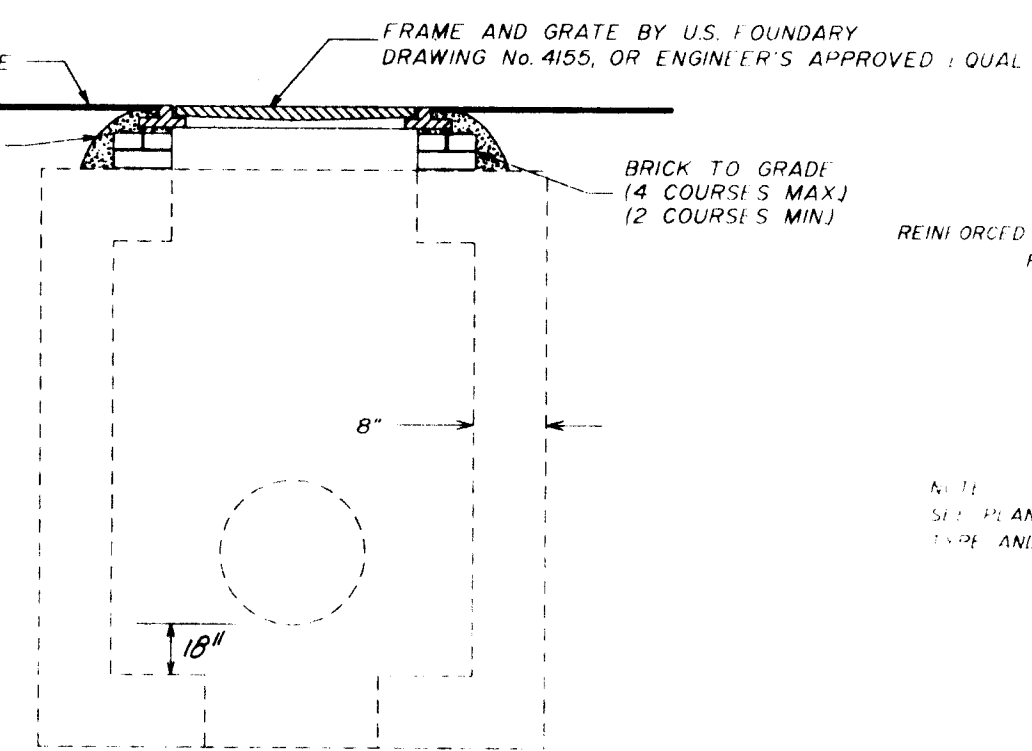
SECTION A-A



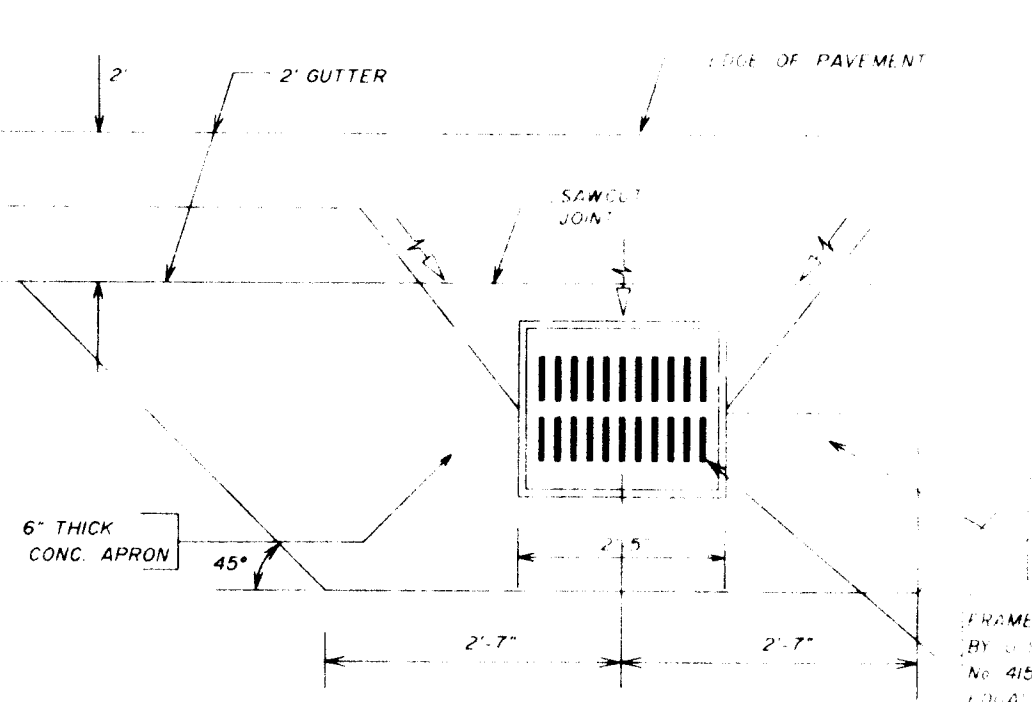
TYPICAL LANDSCAPE BUFFER SECTION



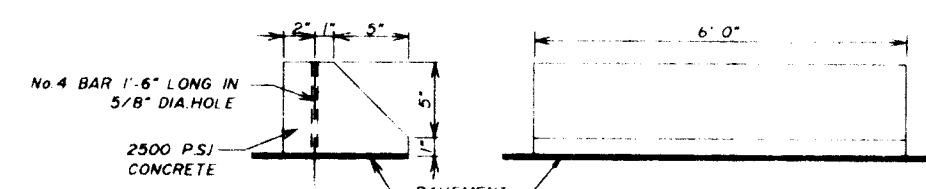
PIPE BEDDING DETAIL



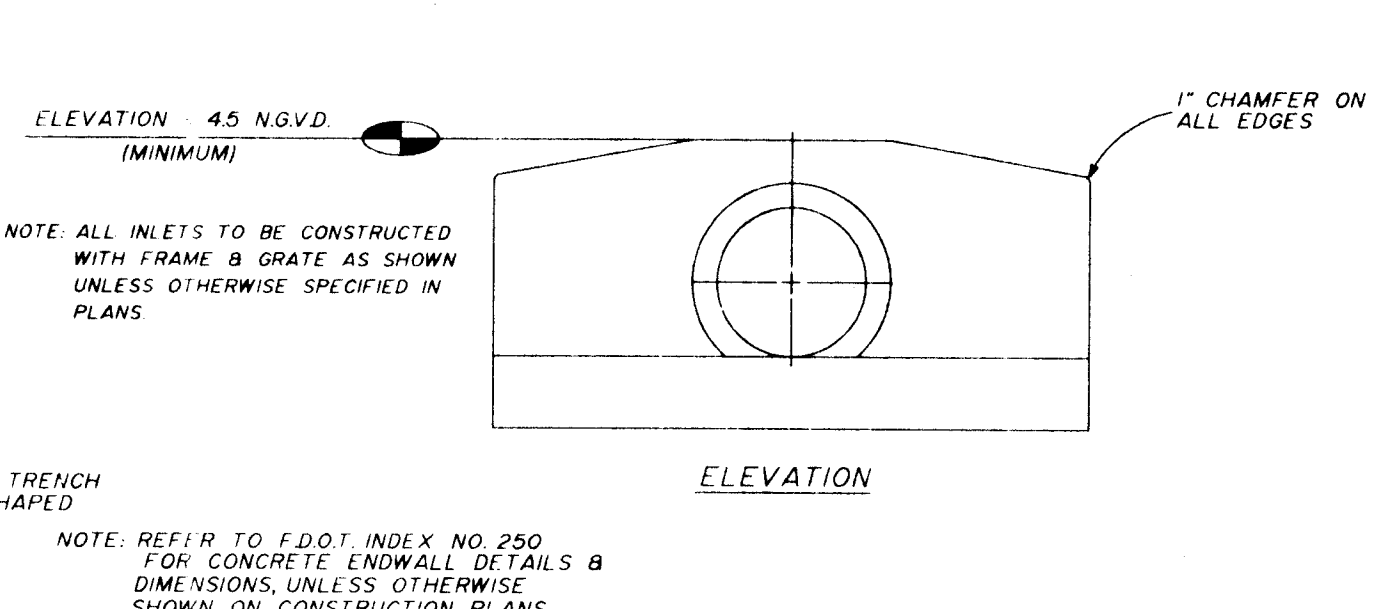
PRECAST INLET DETAIL



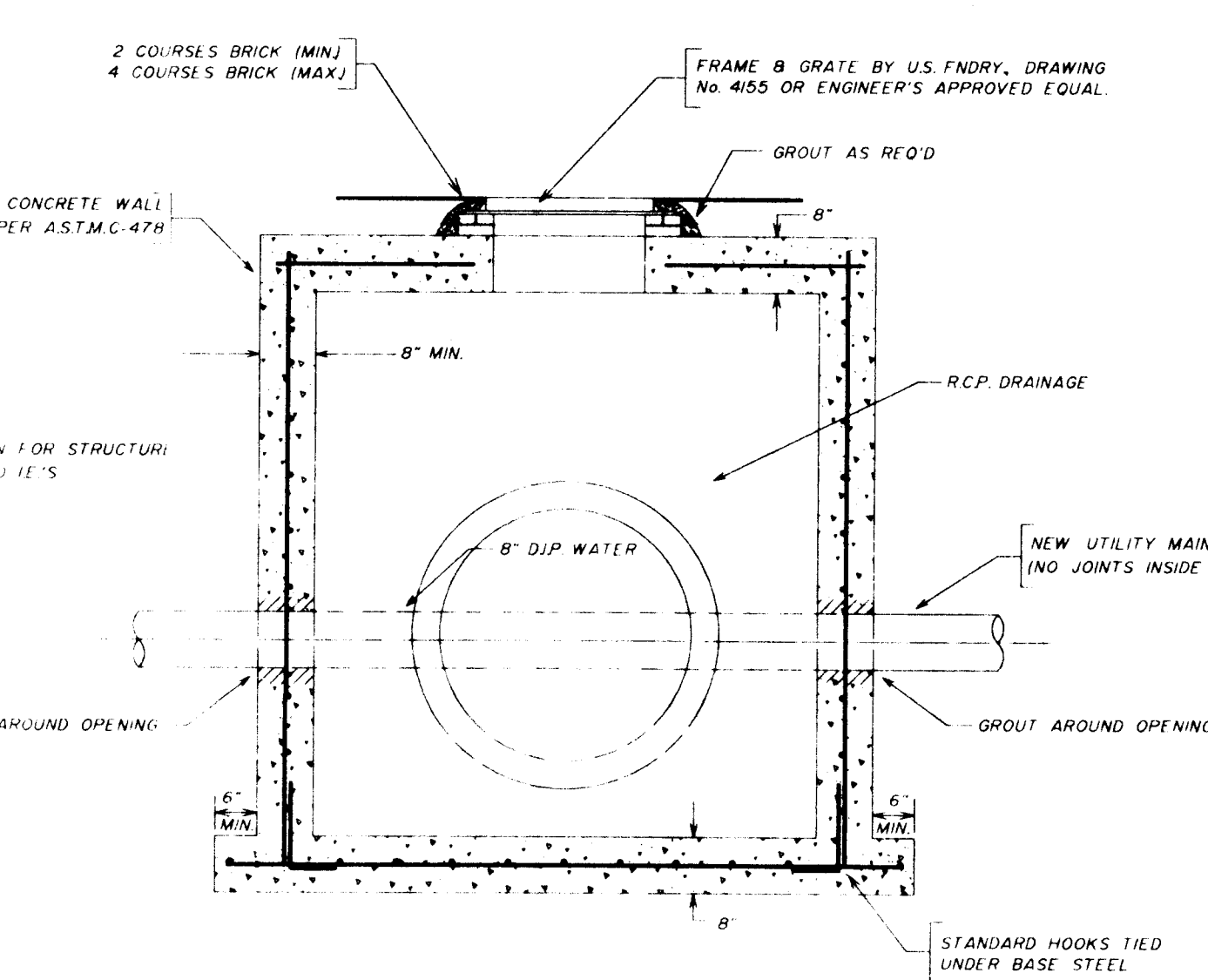
GUTTER INLET DETAIL



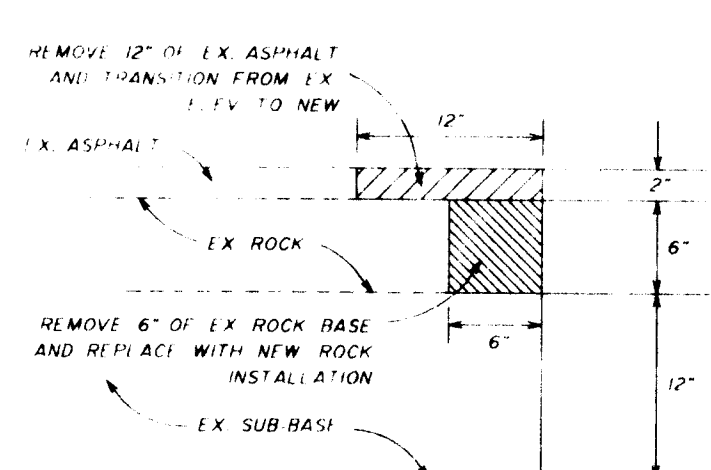
WHEEL STOP DETAIL



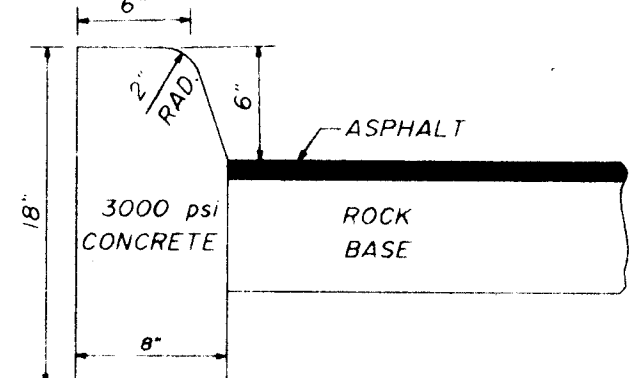
PRECAST CONCRETE ENDWALL DETAIL



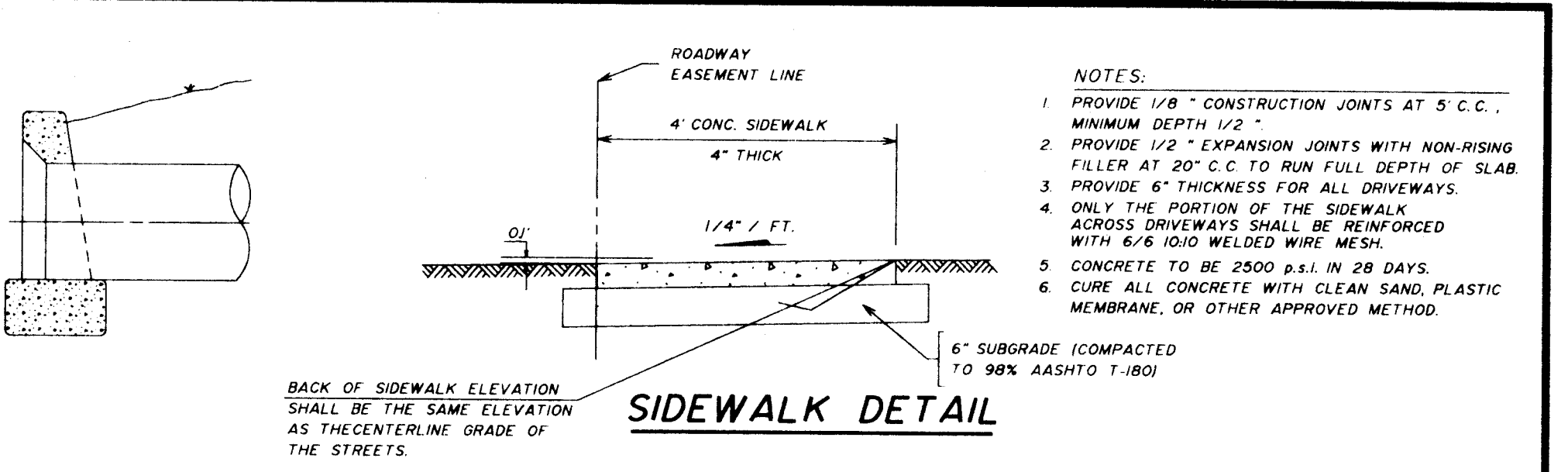
CONFLICT MANHOLE DETAIL



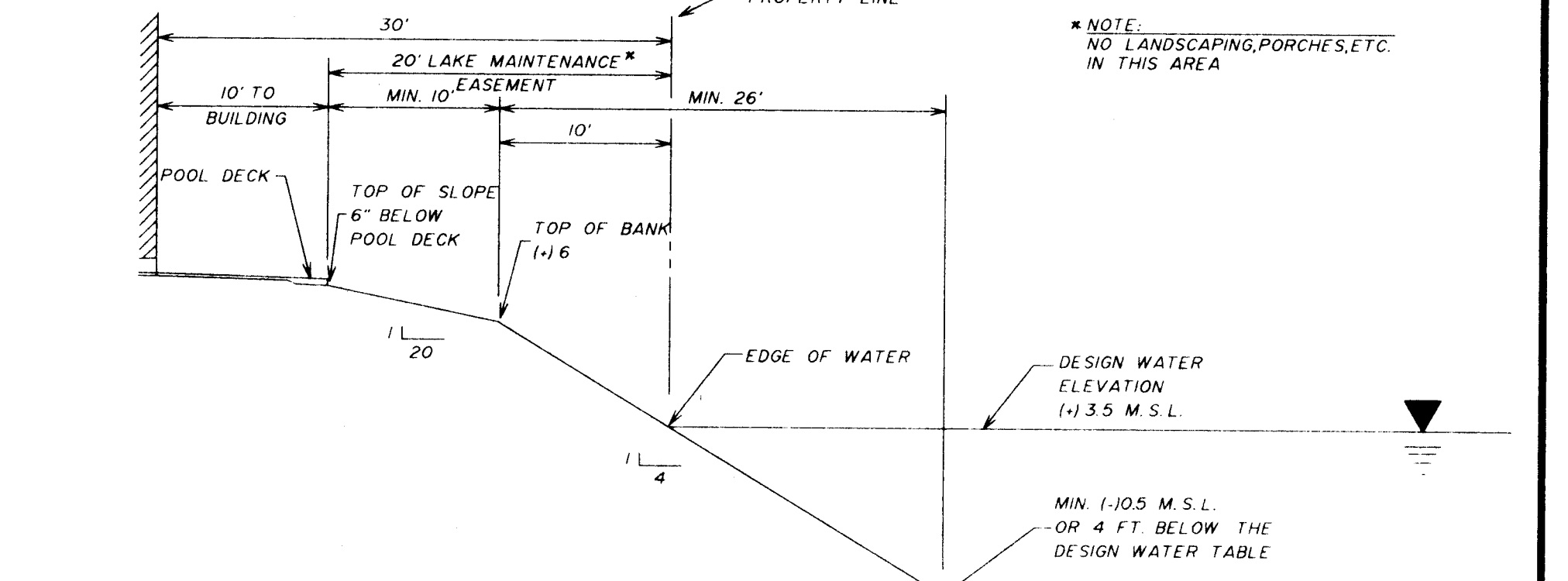
ASPHALT CONNECTION DETAIL



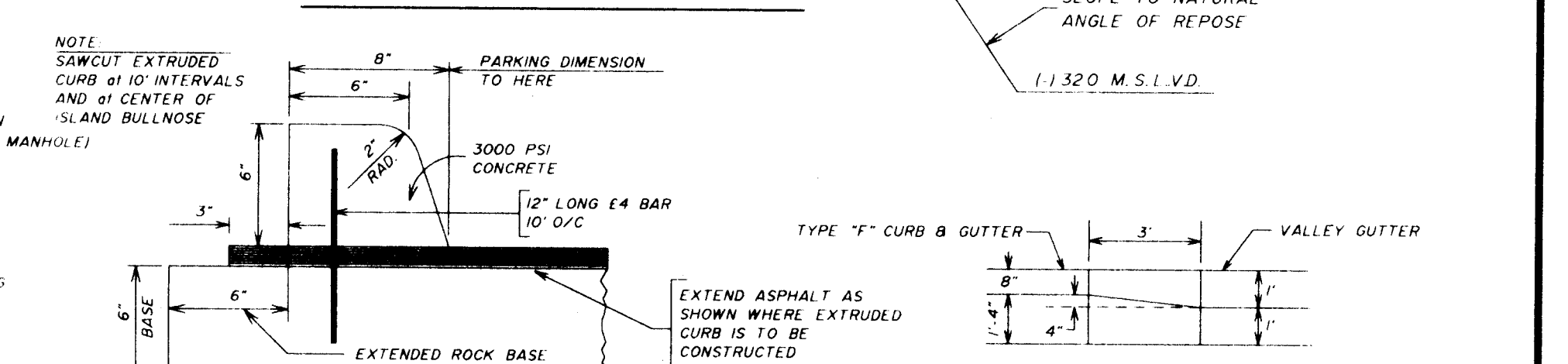
TYPE "D" CURB DETAIL



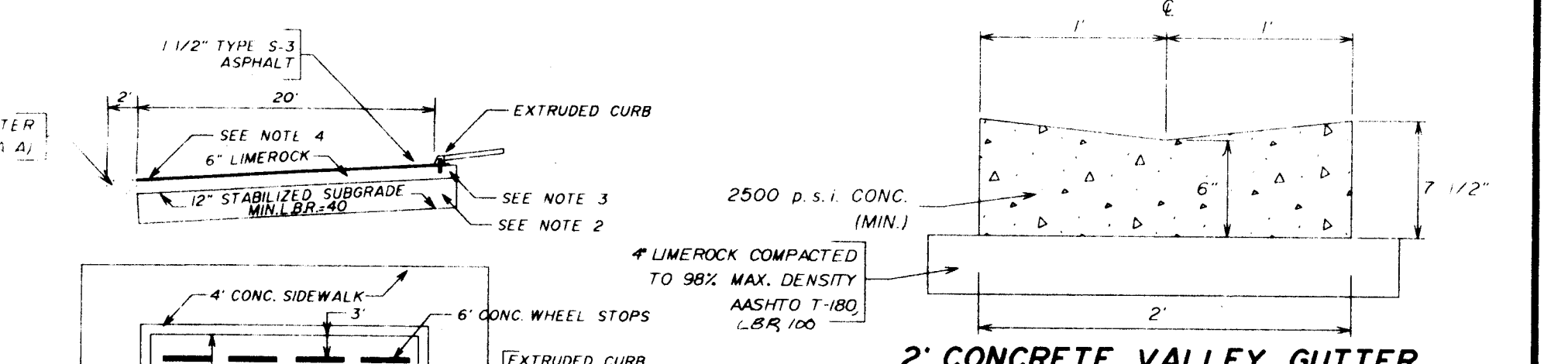
SIDEWALK DETAIL



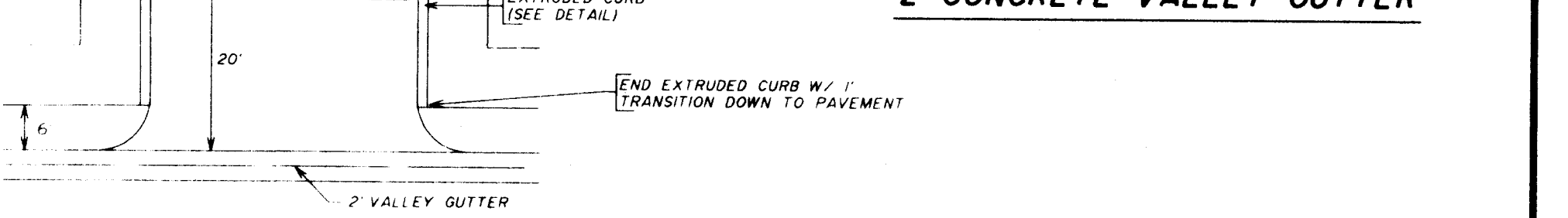
TYPICAL LAKE SECTION B-B



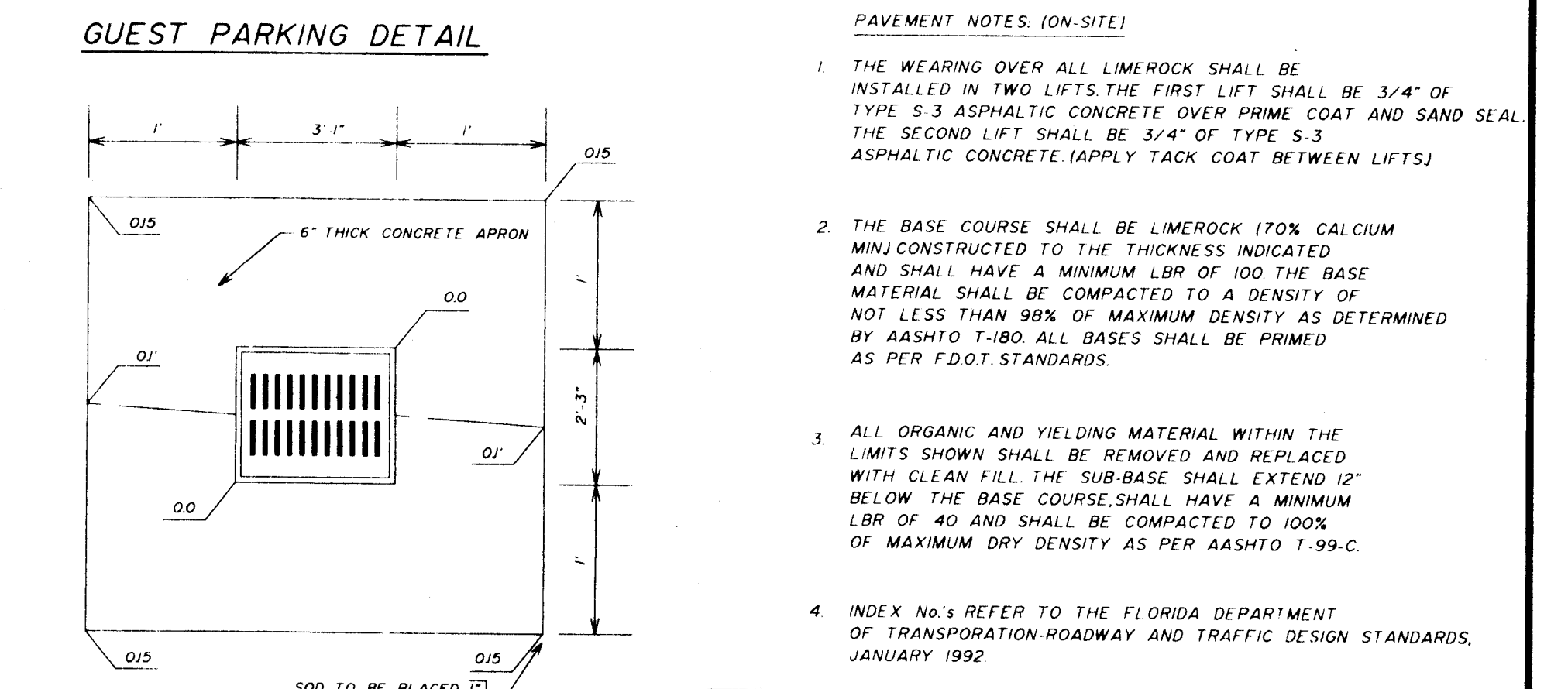
EXTRUDED CURB DETAIL



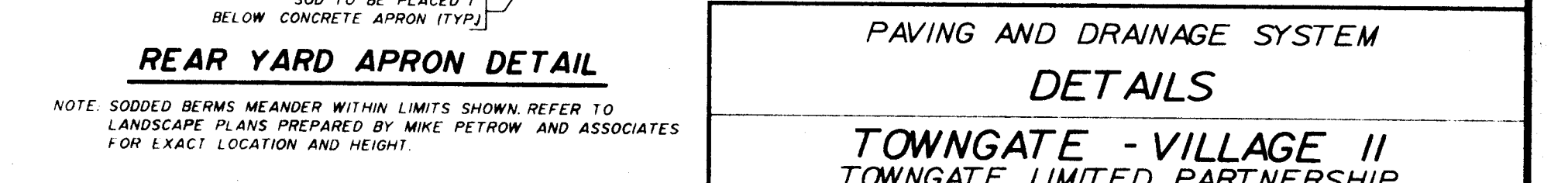
CURB TRANSITION DETAIL



2' CONCRETE VALLEY GUTTER



GUEST PARKING DETAIL



REAR YARD APRON DETAIL

- PAVEMENT NOTES: (ON-SITE)**
- THE WEARING OVER ALL LIMEROCK SHALL BE INSTALLED IN TWO LIFTS. THE FIRST LIFT SHALL BE 3/4" OF TYPE S-3 ASPHALTIC CONCRETE OVER PRIME COAT AND SAND SEAL. THE SECOND LIFT SHALL BE 3/4" OF TYPE S-3 ASPHALTIC CONCRETE (APPLY TACK COAT BETWEEN LIFTS).
 - THE BASE COURSE SHALL BE LIMEROCK (70% CALCIUM MIN) CONSTRUCTED TO THE THICKNESS INDICATED AND SHALL HAVE A MINIMUM LBR OF 100 THE BASE MATERIAL SHALL BE COMPACTED TO A DENSITY OF NOT LESS THAN 98% OF MAXIMUM DENSITY AS DETERMINED BY AASHTO T-180. ALL BASES SHALL BE PRIMED AS PER FDOT STANDARDS.
 - ALL ORGANIC AND YIELDING MATERIAL WITHIN THE LIMITS SHOWN SHALL BE REMOVED AND REPLACED WITH CLEAN FILL. THE SUB-BASE SHALL EXTEND 12" BELOW THE BASE COURSE. SHALL HAVE A MINIMUM LBR OF 40 AND SHALL BE COMPACTED TO 100% OF MAXIMUM DRY DENSITY AS PER AASHTO T-99.C.
 - INDEX NO'S REFER TO THE FLORIDA DEPARTMENT OF TRANSPORTATION-ROADWAY AND TRAFFIC DESIGN STANDARDS, JANUARY 1992.

PAVING AND DRAINAGE SYSTEM DETAILS

TOWNGATE - VILLAGE II
TOWNGATE LIMITED PARTNERSHIP
MINTO COMMUNITIES (PEMBROKE), INC.

WINNINGHAM & FRADLEY, INC.
Consulting Engineers • Land Surveyors

4.	Revise Sump and Inlet Detail per SBDD	4-10-95
3.	REVISE PER PEMBROKE PINES ENGINEERING	3/24/95
2.	REVISE PER SBDD.	3/7/95
1.	ADDED NOTE TO P.R.B. DETAIL	1/27/95
NO.	REVISIONS	DATE

DESIGNED: N/A DATE: 9/93
DRAWN: D.D.D. DATE: 9/93
CHECKED: DATE:

PROJECT NUMBER 94517 SHEET PD3 OF 3