

SEPTEMBER 20, 1996

LASER ENGINEERING

P.O. BOX 810488

BOCA RATON, FL 33481-0488

RE: TOWNGATE VILLAGE #14
PEMBROKE PINES, FL

SEMSCO

DRAINAGE SYSTEM

SOUTH BROWARD DRAINAGE DISTRICT	
SHOP DRAWINGS	
☐	APPROVED
☐	RESUBMIT
☒	APPROVED SUBJECT TO REVISION
BY <u>WJL</u>	DATE <u>10/14/96</u>

NEED MORE GASKET ON PRE'S DOWN BENT SIDES
AND ACROSS THE TOP.

2200 W. SUNRISE BLVD.
FORT LAUDERDALE, FLORIDA 33311
(305) 583-7720
FAX: 305-581-5734

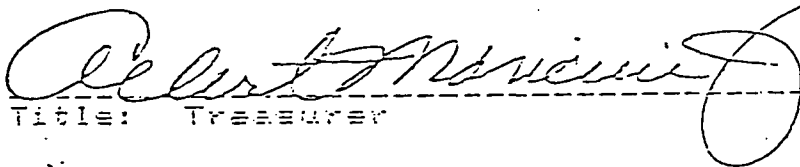


UNITED STATES CONCRETE PIPE COMPANY

TO WHOM IT MAY CONCERN:

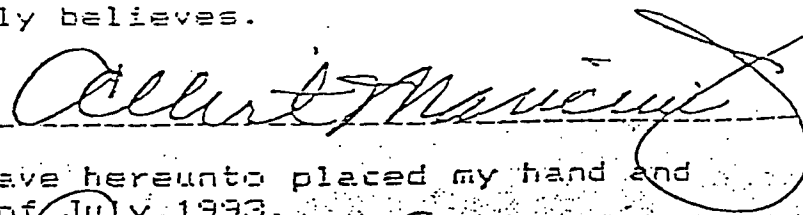
This letter is to certify that the Reinforced Concrete Pipe which we propose to furnish Southeastern Municipal Supply for the construction of confirms in all respects to ASTM specification C-76 Class III Wall B with rubber gasket joints. The gaskets meet the requirement of ASTM C443-85a. The pipe, gaskets and lubricant also meet all requirements of Florida D.O.T. specification Sections 41 and 942.

UNITED STATES CONCRETE PIPE COMPANY


Title: Treasurer

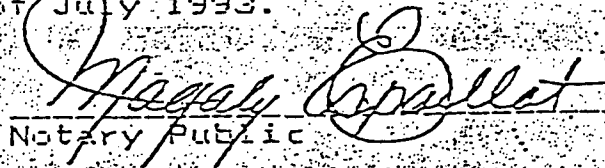
STATE OF FLORIDA)
COUNTY OF BROWARD)

Before me, the subscriber, a Notary Public in and for said State and County, personally came Albert Mancini being duly by me, did say he is the Treasurer of United States Concrete Pipe Company, and that the averments contained in the statement are true as he verily believes.



In the testimony whereof, I have hereunto placed my hand and Notarial Seal this 12th day of July 1993.

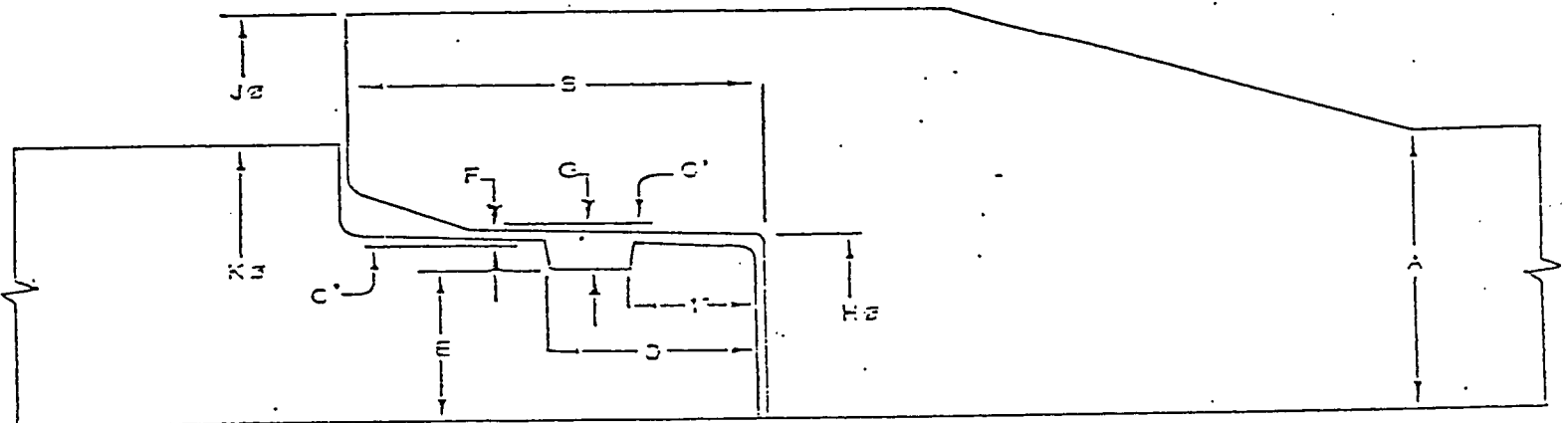
NOTARY PUBLIC STATE OF FLORIDA
MY COMMISSION EXP. AUG. 28, 1994
BONDED THRU GENERAL INS. UND.


Notary Public

UNITED STATES CONCRETE PIPE COMPANY

STANDARD JOINT

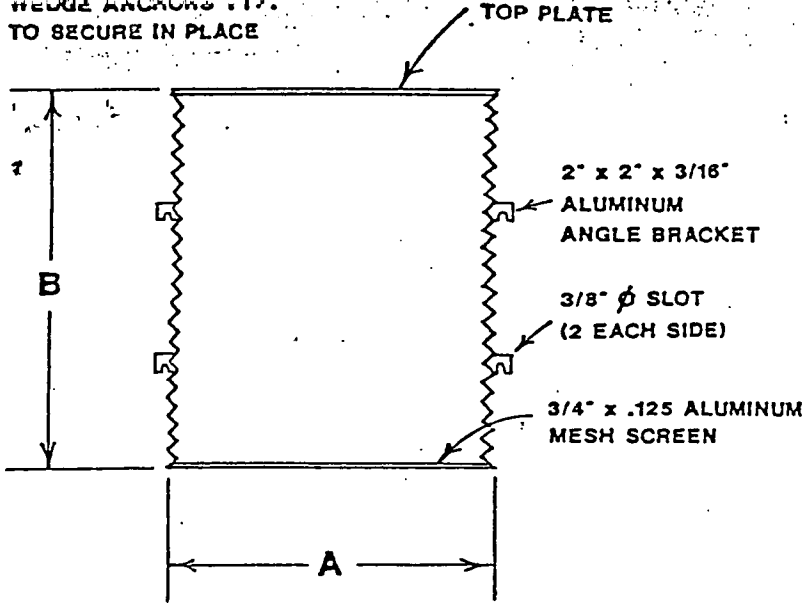
D E S I G N



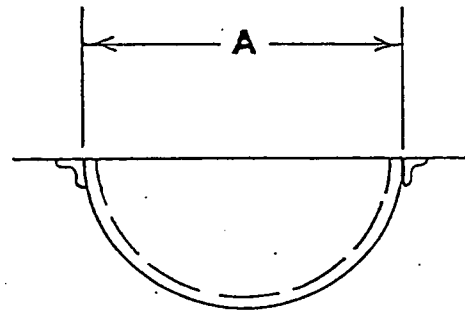
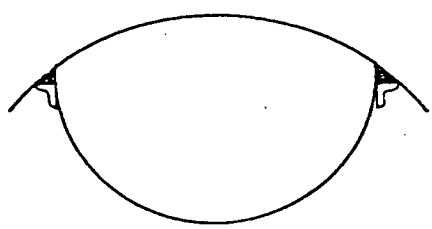
Conforms to ASTM Specifications

	WALL		TONGUE			BELL		JOINT			
	A	KØ	C	D	E	HØ	JØ	B	F	G	TONS/PC
12	2	15	1°-30'	1-13/16	1.276	15.252	20	3-5/8	1/16	.400	.480
→ 15	2-1/4	19-1/2	1°-30'	1-13/16	1.525	18.782	24	3-5/8	1/16	.400	.544
→ 18	2-1/2	23	1°-30'	1-13/16	1.713	22.157	26	3-5/8	1/16	.400	.736
21	2-3/4	25-1/2	1°-30'	1-13/16	1.954	25.638	31-3/4	3-7/8	1/16	.400	.904
→ 24	3	30	1°-30'	1-13/16	2.204	29.136	35-1/2	3-7/8	1/16	.400	1.184
30	3-1/2	37	1°-30'	1-13/16	2.637	36.005	43-1/4	4	1/16	.400	1.664
36	4	44	1°-30'	1-13/16	3.075	42.860	51-1/4	4	1/16	.400	2.352
42	4-1/2	51	2°	2	3.172	49.141	57-1/2	4-1/4	.094	.451	2.844
→ 48	5	58	2°	2	3.172	55.141	63-1/2	4-1/4	.094	.451	3.556
54	5-1/2	65	2°	2	3.172	61.141	69-1/2	4-1/4	.094	.451	4.400
60	6	72	2°	2	3.172	67.141	75-1/2	4-1/4	.094	.451	5.200
66	6-1/2	79	2°	2	3.172	73.141	81-1/2	4-1/4	.094	.451	6.200
72	7	86	2°	2	3.172	79.141	87-1/2	4-1/4	.094	.451	7.600
84	8-3/4	101-1/2	2°	2-1/2	3.168	91.459	101-1/2	5-1/4	.125	.610	10.620
96	9	114	2°	2-1/2	3.375	103.634	114	5-1/4	.125	.610	12.368

WEDGE ANCHORS 1/2"
TO SECURE IN PLACE



PIPE SIZE..	DIM "A"	DIM "B"
12"	15"	21"
15"	18"	24"
18"	21"	27"
21"	24"	30"
24"	30"	36"
30"	36"	42"
36"	42"	48"
42"	48"	54"
48"	54"	60"
54"	60"	66"
60"	66"	72"
66"	72"	84"



DEBRIS BAFFLE DETAIL

NO SCALE

NOTES:

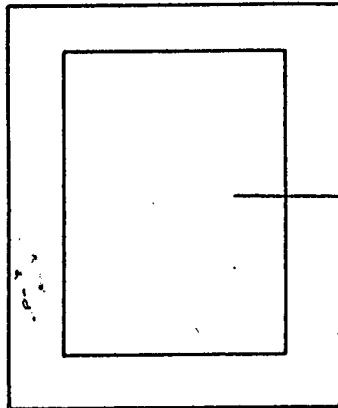
ALL BAFFLES SHALL BE 180° HALF ROUND ALUMINUM PIPE AS MANUFACTURED BY FLORIDA FABRICATION OR APPROVED EQUAL. TOP PLATES SHALL BE CONTOURED TO FIT CURVED STRUCTURES. BAFFLES LARGER THAN 30" DIAMETER SHALL HAVE 3 SUPPORTS ON EACH SIDE. MID WELDS ARE ACCEPTABLE IF ANNULAR PIPE IS UTILIZED.

Date: _____ Scale: _____ Drawn By: _____ Chk'd By: _____		 (407) 842-1766 FAX: (407) 881-0013	Project: _____ Owner: _____ Submitted To: _____	
DATE	REVISIONS			

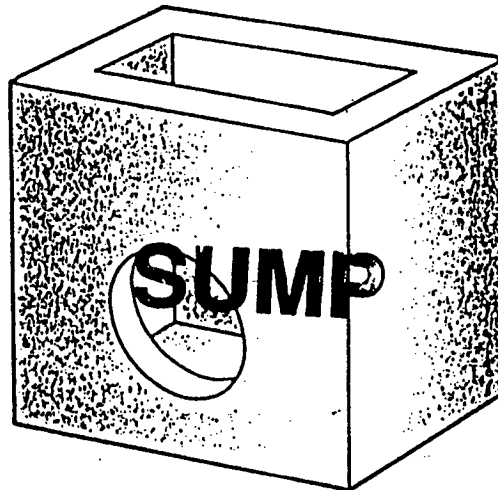
TRI-COUNTY · CONCRETE · PRODUCTS

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

TYPE "C" CATCH BASIN.



15" RCP
@ 3.00
418"



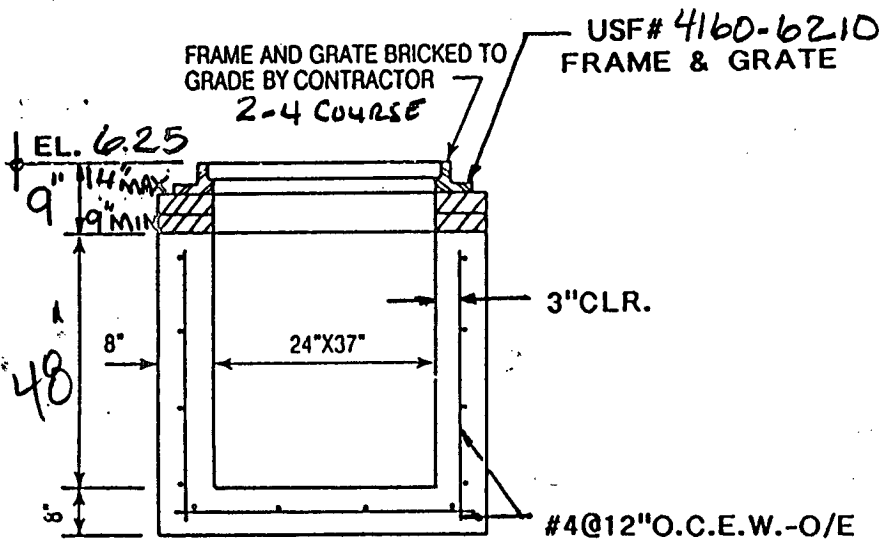
NO.	35
ELEV.	6.25
INV.	3.00
HT.	3.25
CUT	39"
PRICE	418-9

48"

LASER ENGINEERING, INC.

DATE: 10-1-98

INITIALS: [Signature]



	DATE MADE	DATE SHIPPED
BASE		
RISER		
RISER		
COLLAR		
TOP		
USF#		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

INLET CONFORMS TO F.D.O.T.

INDEX 232

18" Sump

97-058

"C" INLET-FRAME & GRATE

CONTRACTOR:

LASER ENGRG

JOB TOWN GATE
VILLAGE 14

SOUTH BROWARD DRAINAGE DISTRICT

SHOP DRAWINGS

☒ **APPROVED**

☐ **RESUBMIT**

☐ **APPROVED SUBJECT TO REVISION**

BY wee DATE 12/14/96

WINNICHAM & FRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

REC'D wee

☒ **APPROVED**

☐ **RESUBMIT**

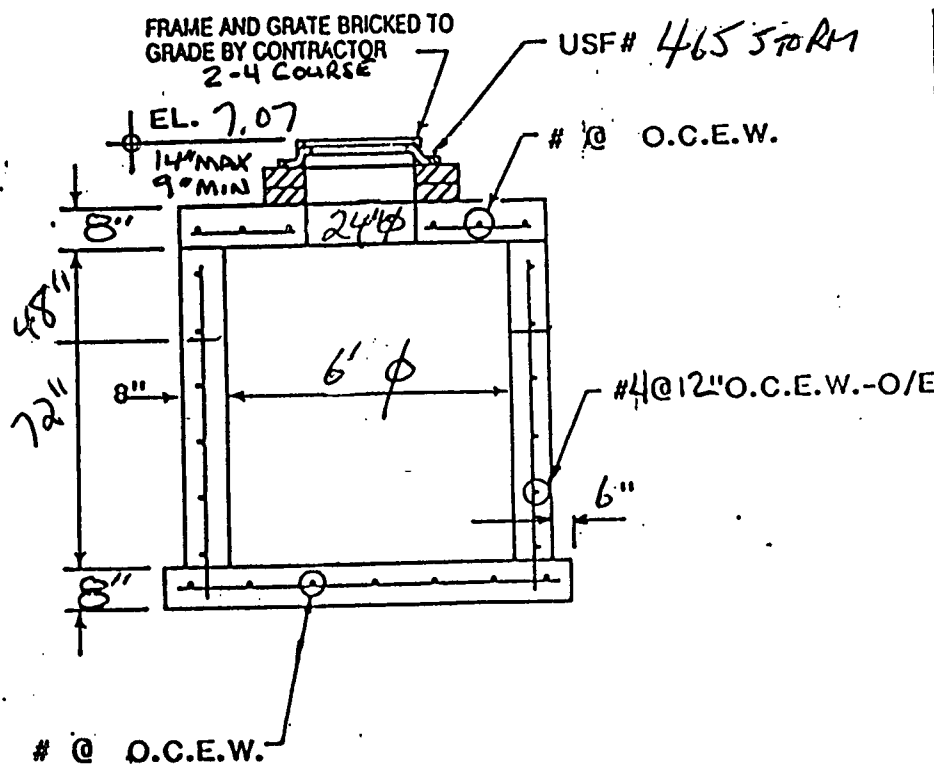
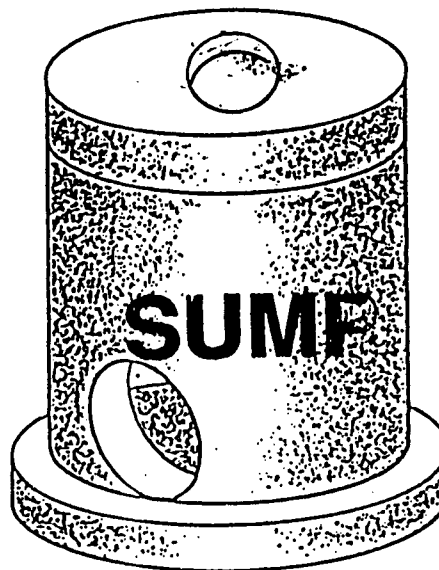
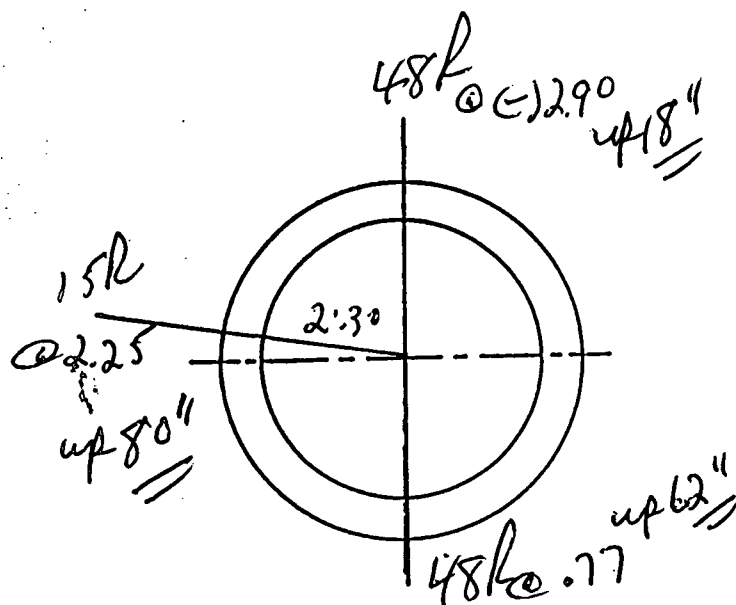
DATE 10-3-96

DOCUMENT ALL WORK IN CONFORMANCE WITH
DESIGN CONCESSIONS. CONTRACTOR SHALL VERIFY ALL
FIELD CONDITIONS AND PROVIDE QUANTITIES
REQUIRED BY CONSTRUCTION DOCUMENTS.

TRI-COUNTY · CONCRETE · PRODUCTS

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

NO.	32
ELEV.	7.07
INV.	-12.90
HT.	9.97
CUT	+1.50
PRICE	11.47
	138



BASE	DATE MADE	DATE SHIPPED
RISER		
RISER		
CCLLAR		
TCP		
USF		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

18" Sump

97-058

6'-0" I.D.-STORM

CONTRACTOR:
LASER ENGRG

JOB: TOWNGATE
VILLAGE 14

SOUTH BROWARD DRAINAGE DISTRICT

SHOP DRAWINGS

☒ APPROVED

☐ RESUBMIT

☐ APPROVED SUBJECT TO REVISION

BY Wol DATE 10/14/96

WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

RECEIVED Wol

☒ APPROVED

☐ RESUBMIT

DATE 10-3-96

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

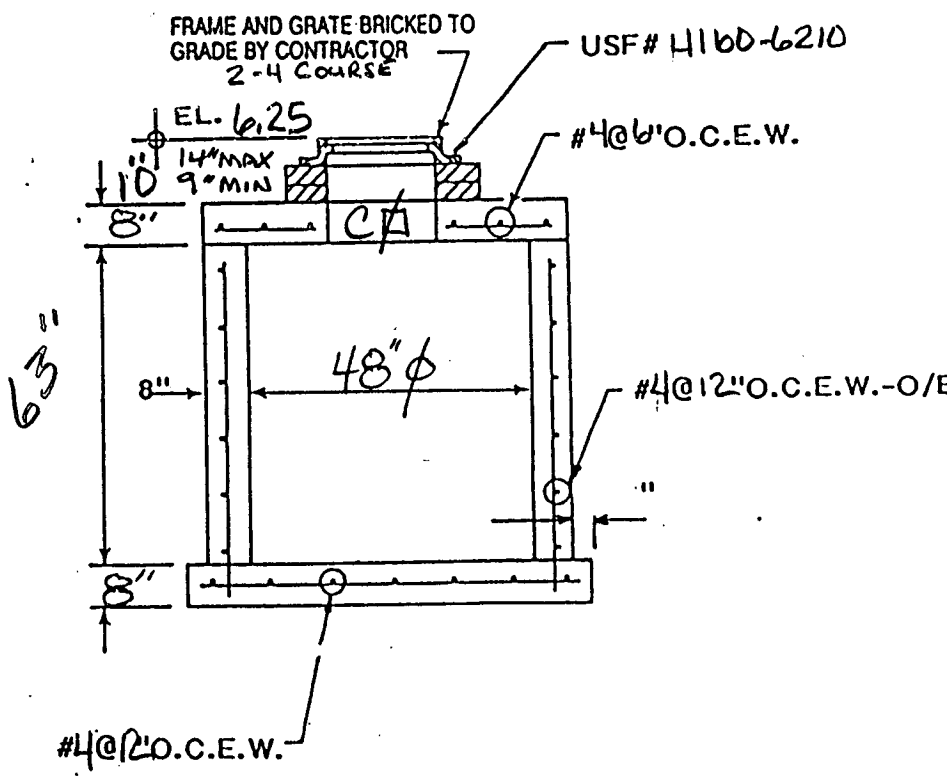
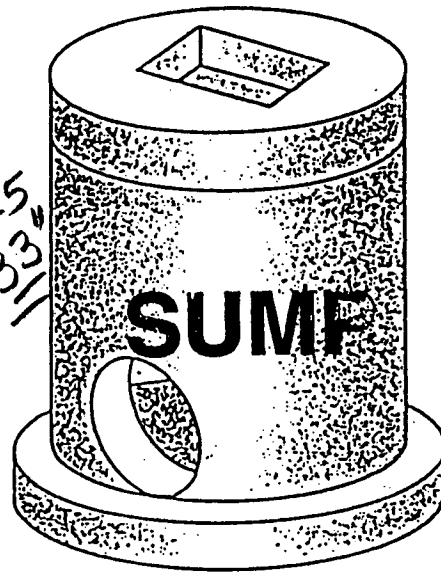
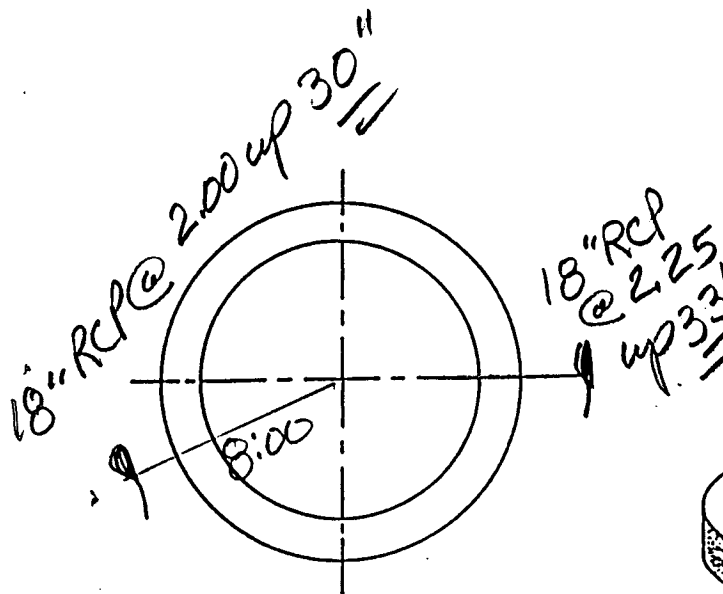
TRI-COUNTY · CONCRETE · PRODUCTS

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

P.R.B

NO.	30
ELEV.	6.25
INV.	2.00
HT.	4.25
CUT	51"
PRICE	+30-18

63"



BASE	DATE MADE	DATE SHIPPED
RISE		
RISE		
COLLAR		
TCP		
USF		

GENERAL NOTES
4000 PSI @ 28 DAYS
TYPE II CEMENT.
30" Sump
97-058

I.D.-STORM INLET

CONTRACTOR:
LASER ENGRG

JOB: TOWNGATE
1/11/11 AGE 11.

SOUTH BROWARD DRAINAGE DISTRICT

SHOP DRAWINGS

☒ **APPROVED**

☐ **RESUBMIT**

☐ **APPROVED SUBJECT TO REVISION**

BY *ew* DATE 10/14/96

WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

RECEIVED *J.D.*

☒ **APPROVED AS NOTED**

☐ **REVISION**

DATE 10-3-96

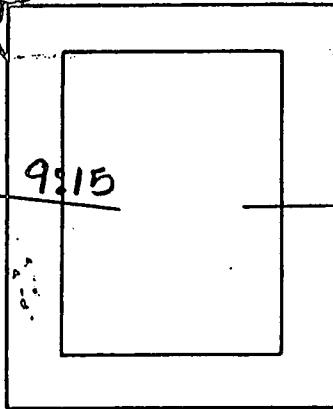
DOCUMENT **FOR CONFORMANCE WITH**
DESIGN CONTRACT. CONTRACTOR SHALL VERIFY ALL
FIELD CONDITIONS AND PROVIDE QUANTITIES
REQUIRED BY CONTRACT DOCUMENTS.

TRI-COUNTY · CONCRETE · PRODUCTS

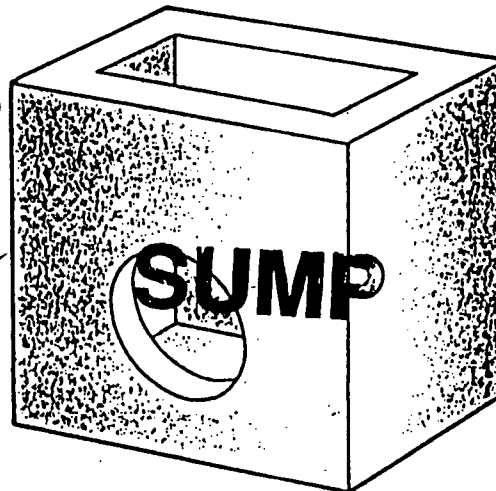
1926 SKEES ROAD, WEST PALM BEACH, FLORIDA, 33411 (407) 686-4622

TYPE "C" CATCH BASIN

18" RCP @ 2.25
up 18"



15" RCP @ 2.25
up 18"



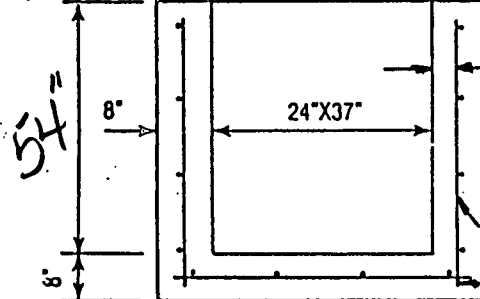
NO.	29
ELEV.	6.25
INV.	2.25
HT.	4.00
CUT	48"
PRICE	+18-12

54"

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

USF# 4160-6210
FRAME & GRATE

EL. 6.25
12" MAX
9" MIN



3" CLR.

#4 @ 12" O.C. E.W. - O/E

BASE	DATE MADE	DATE SHIPPED
RISER		
RISER		
COLLAR		
TOP		
USF #		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

INLET CONFORMS TO F.D.O.T.

INDEX 232

18" Sump

97-058

CONTRACTOR: LASER ENGRG

CONTRACTOR:

JOB TOWN GATE VILLAGE 14

JOB TOWN GATE

VILLAGE 14

SOUTH BROWARD DRAINAGE DISTRICT

SHOP DRAWINGS

☒ APPROVED

☐ RESUBMIT

☐ APPROVED SUBJECT TO REVISION

BY Wes DATE 6/14/96

WINNACRE & FRADLEY INC.
CIVIL ENGINEERS & SURVEYORS

RECEIVED J.D.

☒ APPROVED FOR CONSTRUCTION

☐ NOT APPROVED

DATE 10-3-96

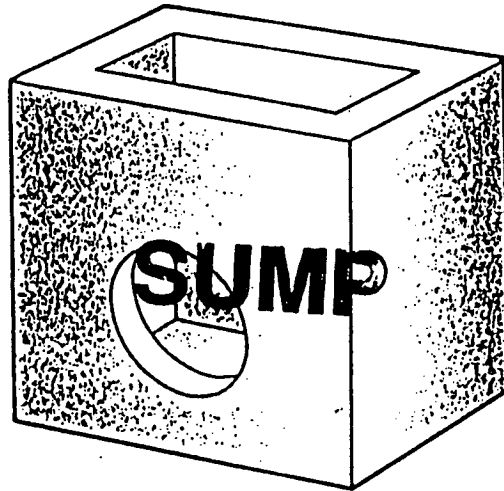
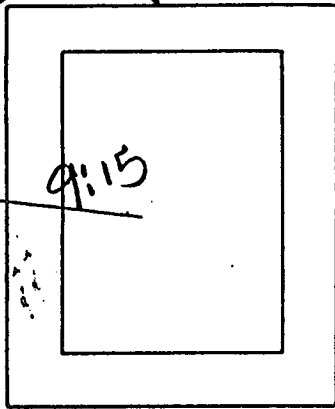
DOCUMENT REVIEWED FOR CONFORMANCE WITH
 DESIGN CONDITIONS. CONTRACTOR SHALL VERIFY ALL
 FIELD CONDITIONS AND PROVIDE CORRECTIONS
 REQUIRED BY INSTRUCTION DOCUMENTS.

TRI-COUNTY · CONCRETE · PRODUCTS

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

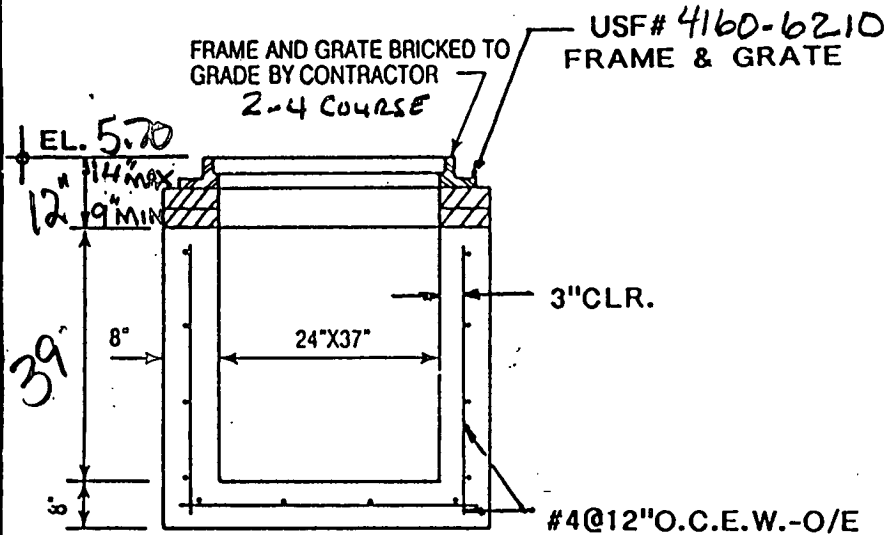
TYPE "C" CATCH BASIN

15" RCP @ 2.95
up 18"



NO.	28
ELEV.	5.70
INV.	2.95
HT.	2.75
CUT	33"
PRICE	+18-12

39"



	DATE MADE	DATE SHIPPED
BASE		
RISER		
RISER		
COLLAR		
TOP		
USF#		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

INLET CONFORMS TO F.D.O.T.

INDEX 232

18" Sump

97-058

"C" INLET-FRAME & GRATE

CONTRACTOR:

LASER ENGRG

JOB: TOWN GATE

VILLAGE 14

SOUTH BROWARD DRAINAGE DISTRICT

SHOP DRAWINGS

☒ **APPROVED**

☐ **RESUBMIT**

☐ **APPROVED SUBJECT TO REVISION**

BY *WSE* DATE 6/14/96

WILLIAM R. BRADLEY INC.

REGISTERED SURVEYORS

RECEIVED *WSE*

☒ **APPROVED**

☐ **RESUBMIT**

DATE 10-3-96

DO NOT SCALE DRAWINGS FOR CONFORMANCE WITH
DESK
FIELD CHECK ALL QUANTITIES
REQUIREMENTS

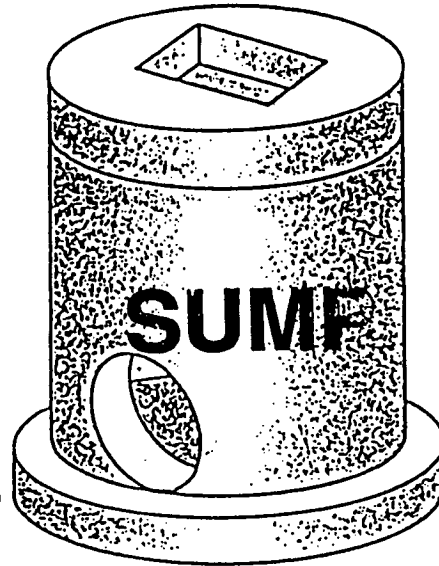
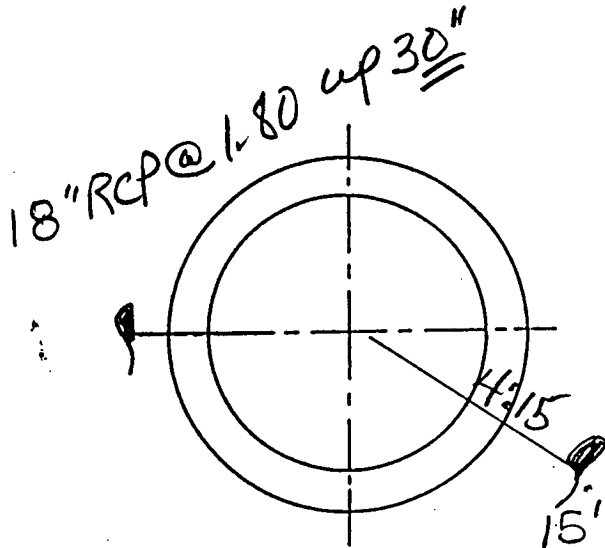
TRI-COUNTY · CONCRETE · PRODUCTS

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

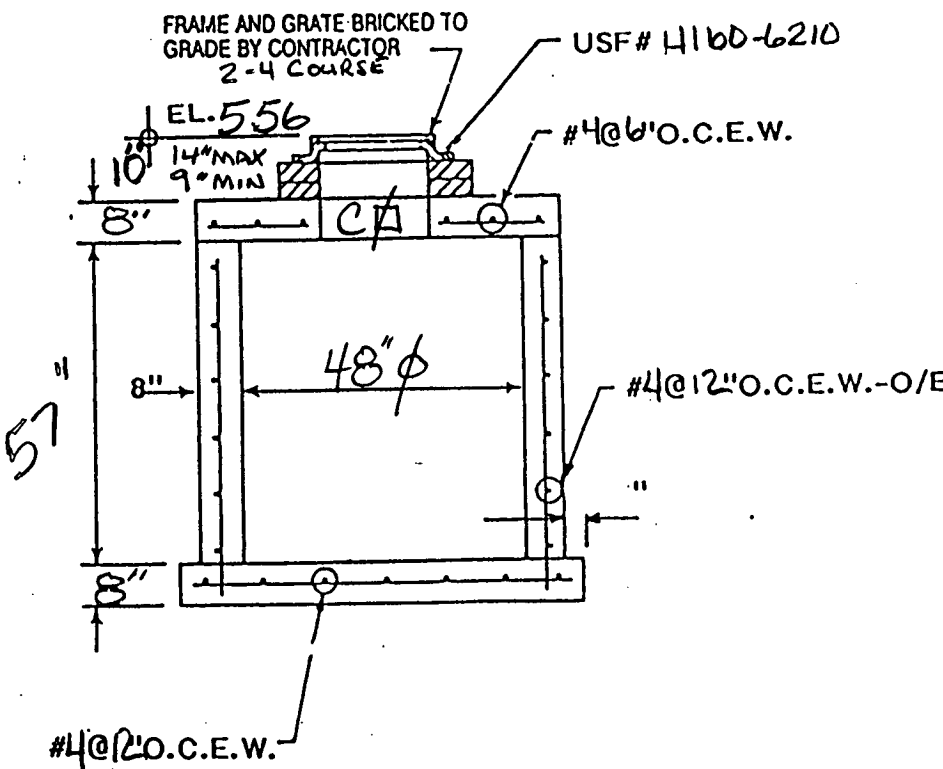
P. R. B.

NO.	26
ELEV.	5.56
INV.	1.80
HT.	3.76
CUT	45
PRICE	+30-18

57'



15" RCP
@ 2.50
up 38"



BASE	DATE MADE	DATE SHIPPED
RISER		
RISER		
COLLAR		
TCP		
USF#		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT.

30" Sump

97-058

I.D.-STORM INLET

CONTRACTOR:
LASER ENGRG

JOB: TOWNGATE
VILLAGE 14

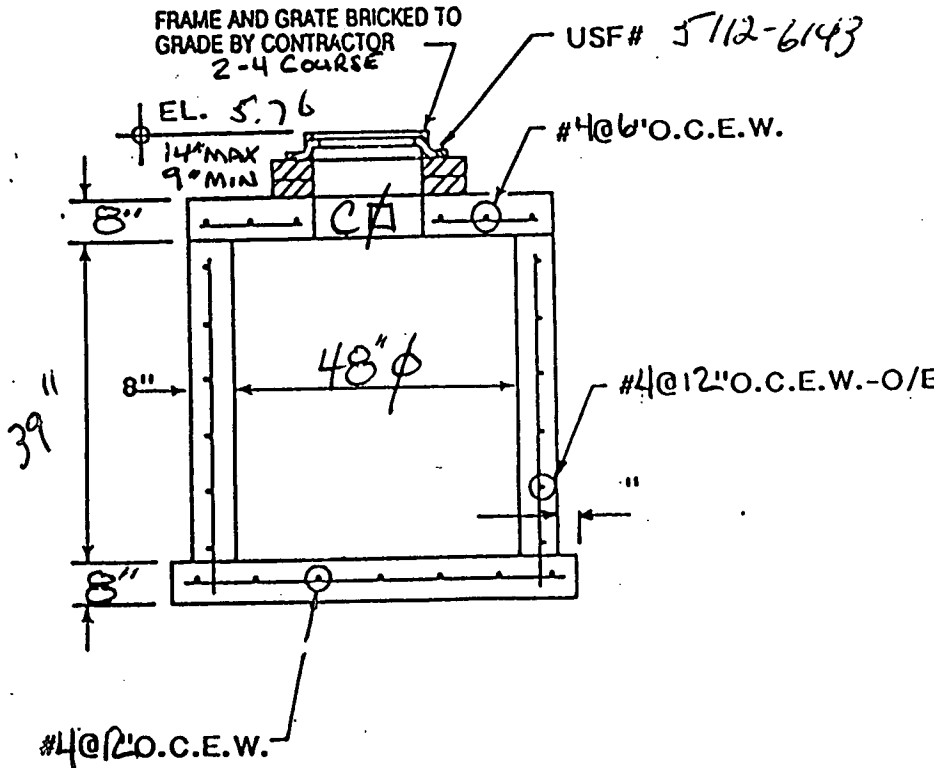
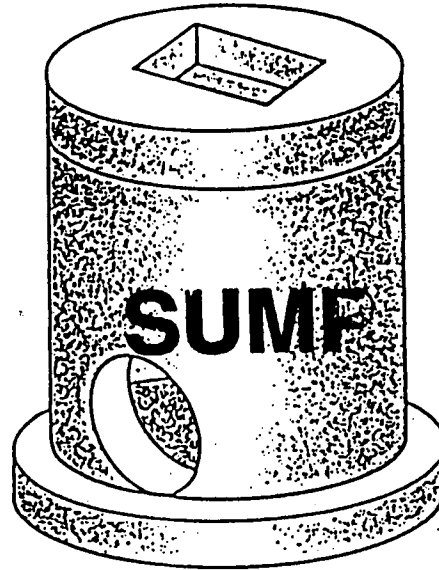
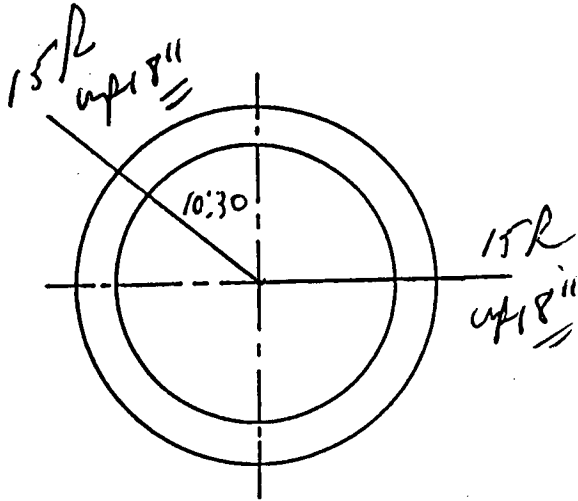
SOUTH BROWARD DRAINAGE DISTRICT	
SHOP DRAWINGS	
☒	APPROVED
☐	RESUBMIT
☐	APPROVED SUBJECT TO REVISION
BY <i>Wes</i>	DATE <i>10/14/90</i>

WENTINGHAM & THADLEY INC. CONSULTING ENGINEERS SURVEYORS	
RECEIVED	<i>W.T.</i>
☒	
☐	
DATE	<i>10-3-90</i>
DOCUMENT FOR CONFORMANCE WITH DESIGN CONTRACT. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS. PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.	

TRI-COUNTY · CONCRETE · PRODUCTS

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

NO.	25
ELEV.	5.76
INV.	2.55
HT.	3.21
CUT	+1.50
PRICE	4.71
	57.4



BASE	DATE MADE	DATE SHIPPED
RISE		
RISE		
COLLAR		
TCP		
USF #		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

18" Sump

97-058

I.D.-STORM INLET

CONTRACTOR:
LASER ENGRG

JOB: TOWNGATE
VILLAGE 14

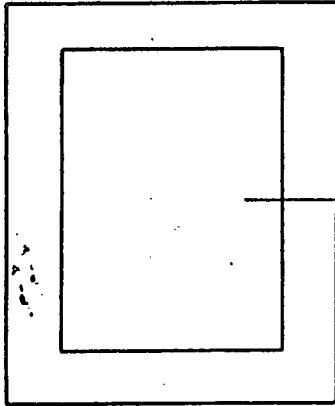
SOUTH BROWARD DRAINAGE DISTRICT	
SHOP DRAWINGS	
☒	APPROVED
☐	RESUBMIT
☐	APPROVED SUBJECT TO REVISION
BY <u>WES</u>	DATE <u>6/14/96</u>

WINNINGHAM & FRADLEY INC. CONSULTING ENGINEERS SURVEYORS	
RECEIVED	<u>Od</u>
☒	
☐	
DATE	<u>10-3-96</u>
DOCUMENTS	FOR CONFORMANCE WITH
DESIGN	CONTRACTOR SHALL VERIFY ALL
FIELD OF	STATE MADE QUANTITIES
REQUIREMENTS	DESIGN DOCUMENTS.

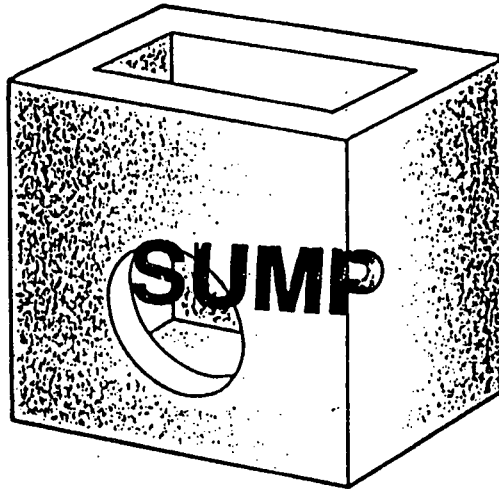
TRI-COUNTY · CONCRETE · PRODUCTS

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

TYPE "C" CATCH BASIN

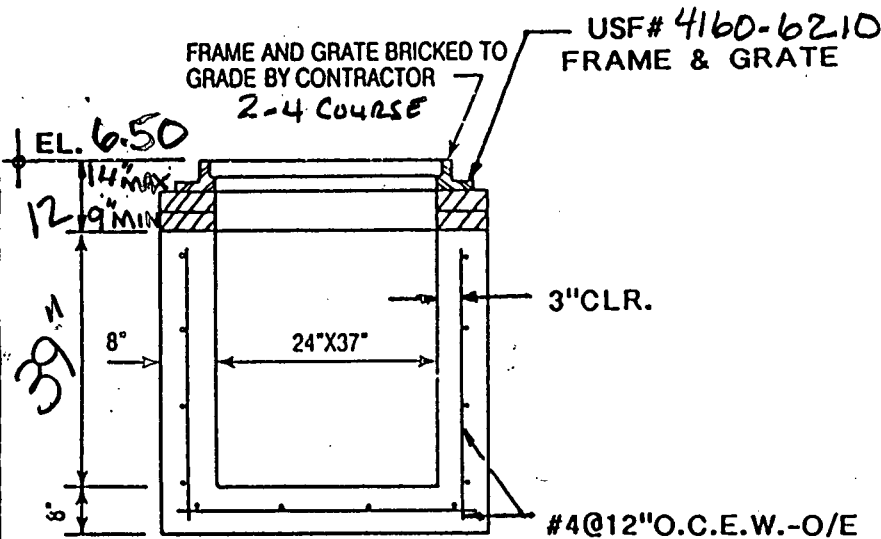


18" RCP
@ 3.75
up 18" //



NO.	24
ELEV.	6.50
INV.	3.75
HT.	2.75
CUT	33"
PRICE	+18-12

39"



BASE	DATE MADE	DATE SHIPPED
RISER		
RISER		
COLLAR		
TOP		
USF#		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

INLET CONFORMS TO F.D.O.T.

INDEX 232

18" Sump

97-058

00 INLET-FRAME & GRATE

CONTRACTOR:

LASER ENGRG

JOB TOWN GATE

VILLAGE 14

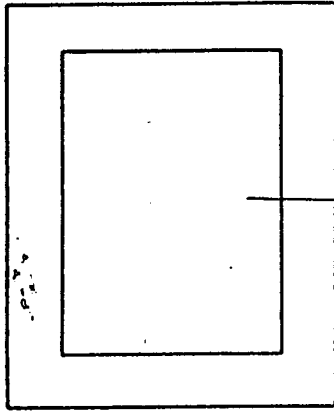
SOUTH BROWARD DRAINAGE DISTRICT	
SHOP DRAWINGS	
☒	APPROVED
☐	RESUBMIT
☐	APPROVED SUBJECT TO REVISION
BY <u>WJ</u>	DATE <u>10/14/96</u>

WINNINGHAM & FRADLEY INC. CONSULTING ENGINEERS & SURVEYORS	
RECEIVED	<u>WJ</u>
☒	AS NOTED
☐	"
DATE	<u>10-3-96</u>
DOCUMENT REVIEW FOR CONFORMANCE WITH DESIGN CONCEPTS. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND MAKE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS	

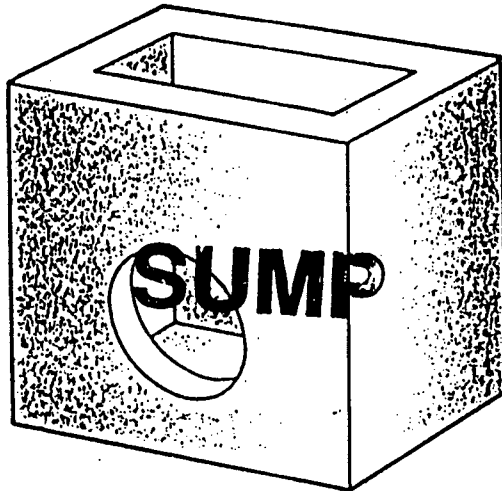
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1926 SKEES ROAD, WEST PALM BEACH, FLORIDA, 33411 (407) 686-4622

TYPE "C" CATCH BASIN

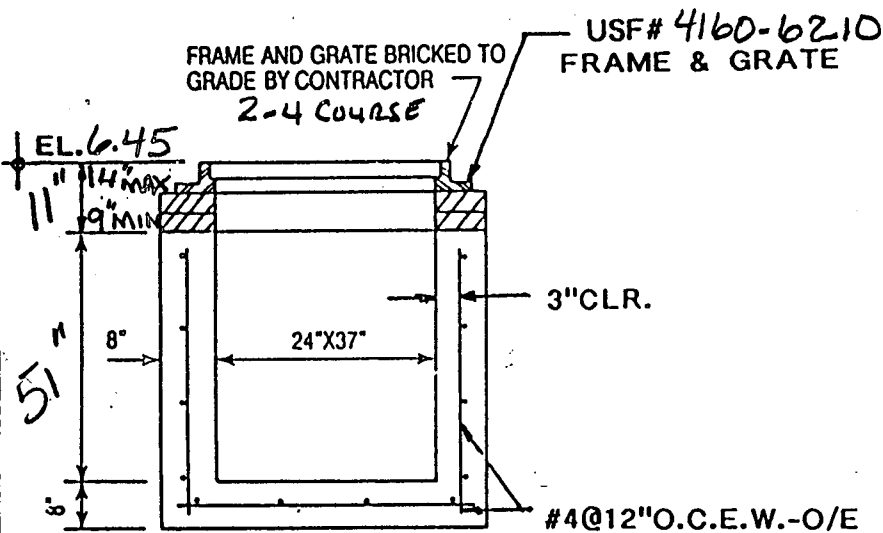


15" RCP
@ 2.75
up 18" =



NO.	23
ELEV.	6.45
INV.	2.75
HT.	3.70
CUT	44"
PRICE	+18-11

5.1"



BASE	DATE MADE	DATE SHIPPED
RISER		
RISER		
COLLAR		
TOP		
USF #		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

INLET CONFORMS TO F.D.O.T.

INDEX 232

18" Sump

97-058

"C" INLET-FRAME & GRATE

CONTRACTOR:

LASER ENGRG

JOB TOWN GATE

VILLAGE 14

SOUTH BROWARD DRAINAGE DISTRICT	
SHOP DRAWINGS	
☒	APPROVED
☐	RESUBMIT
☐	APPROVED SUBJECT TO REVISION
BY <u>WJ</u>	DATE <u>10/14/96</u>

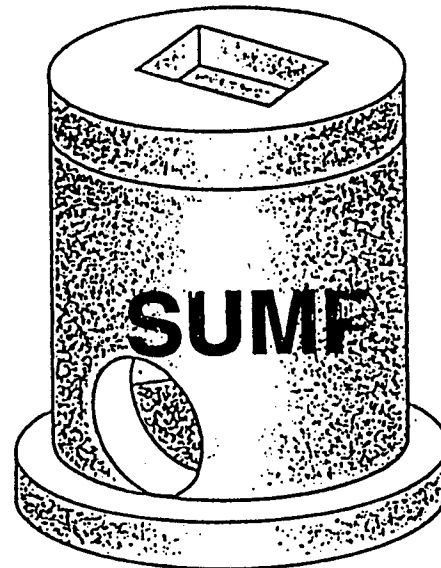
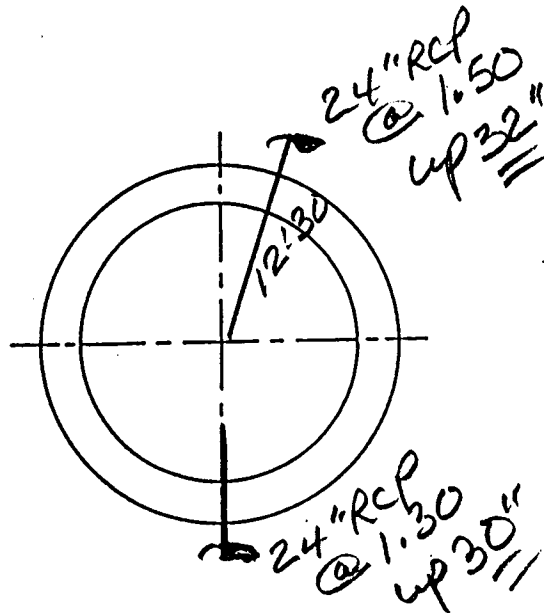
WINNINGHAM & FRADLEY INC. CONSULTING ENGINEERS SURVEYORS	
RECEIVED <u>WJ</u>	
☒	APPROVED
☐	REVIS
DATE <u>10-3-96</u>	
DOCUMENT REVIEWED FOR CONFORMANCE WITH DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.	

TRI-COUNTY · CONCRETE · PRODUCTS

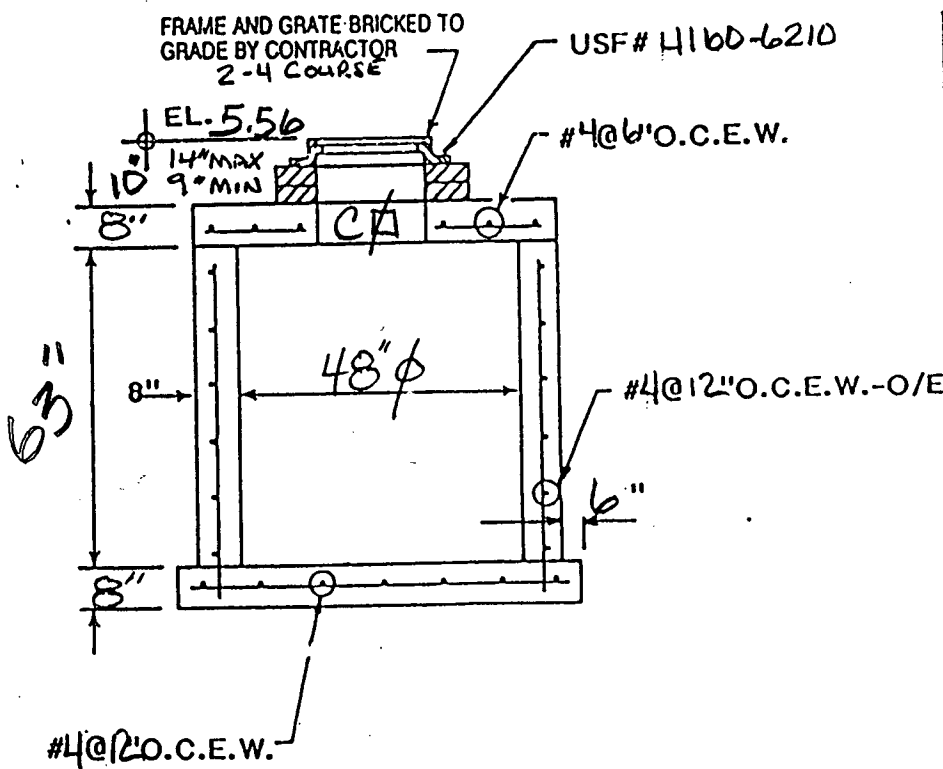
1926 SKEES ROAD, WEST PALM BEACH, FLORIDA, 33411 (407) 686-4622

P.R.B.

NO.	21
ELEV.	5.56
INV.	1.30
HT.	4.26
CUT	51"
PRICE	+30-18



63"



BASE	DATE MADE	DATE SHIPPED
RISE		
RISE		
COLLAR		
TCP		
USF		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

30" Sump

97-058

I.D.-STORM INLET

CONTRACTOR:
LASER ENGRG

JOB: TOWNGATE
VILLAGE 14

SOUTH BROWARD DRAINAGE DISTRICT

SHOP DRAWINGS

☒ **APPROVED**

☐ **RESUBMIT**

☐ **APPROVED SUBJECT TO REVISION**

BY Wae DATE 10/14/94

WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

RECEIVED Wae

☒ **APPROVED**

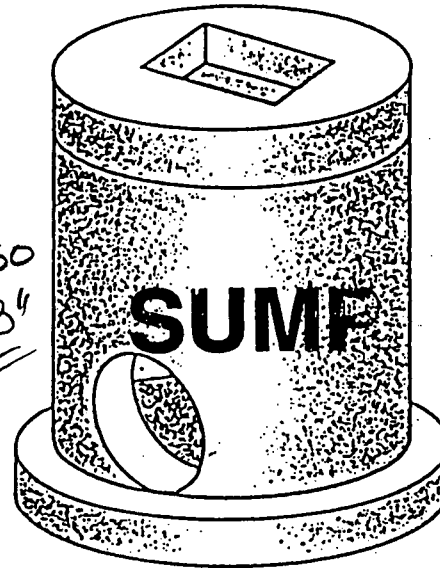
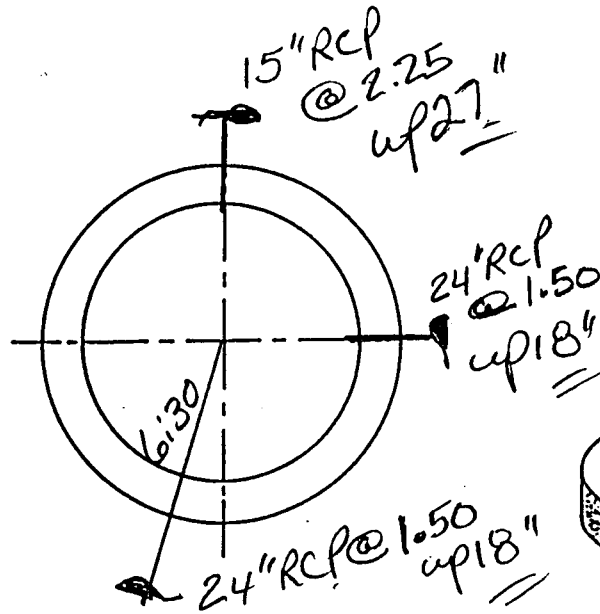
☐ **REVISION**

DATE 10-3-96

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

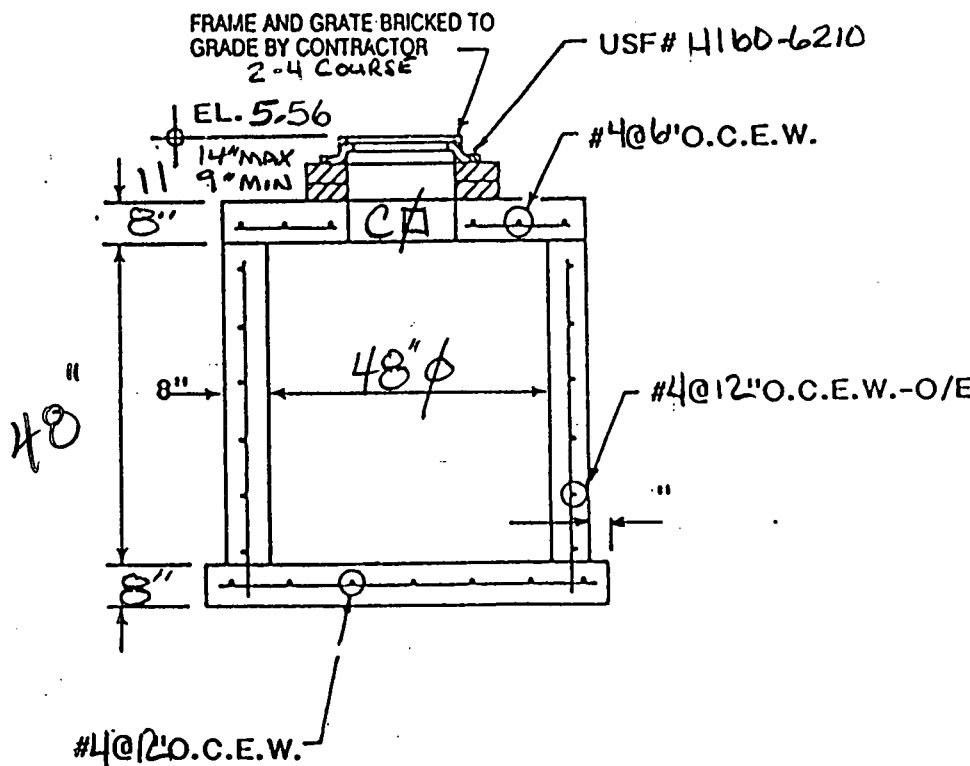
TRI-COUNTY · CONCRETE · PRODUCTS

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



NO.	20
ELEV.	5.56
INV.	1.50
HT.	4.06
CUT	49"
PRICE	+18-19

48"



BASE	DATE MADE	DATE SHIPPED
RISE		
RISE		
COLLAR		
TCP		
USF		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

18" Sump

97-058

I.D.-STORM INLET

CONTRACTOR:
LASER ENGRG

JOB: TOWNGATE
VILLAGE III

SOUTH BROWARD DRAINAGE DISTRICT

SHOP DRAWINGS

☒ **APPROVED**

☐ **RESUBMIT**

☐ **APPROVED SUBJECT TO REVISION**

BY *WJ* DATE 10/14/96

WINNINGHAM & BRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

RECEIVED *WJ*

☒ **APPROVED**

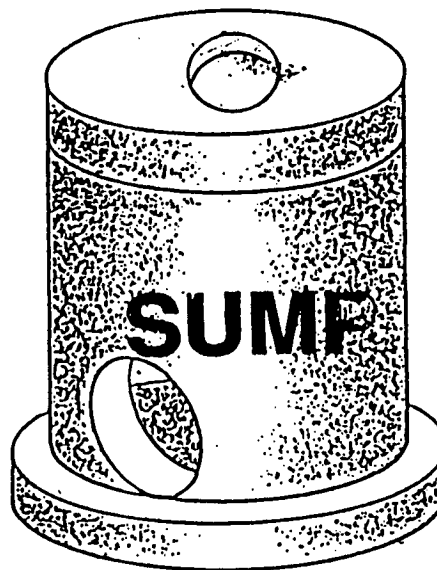
☐ **REJECT**

DATE 10-3-96

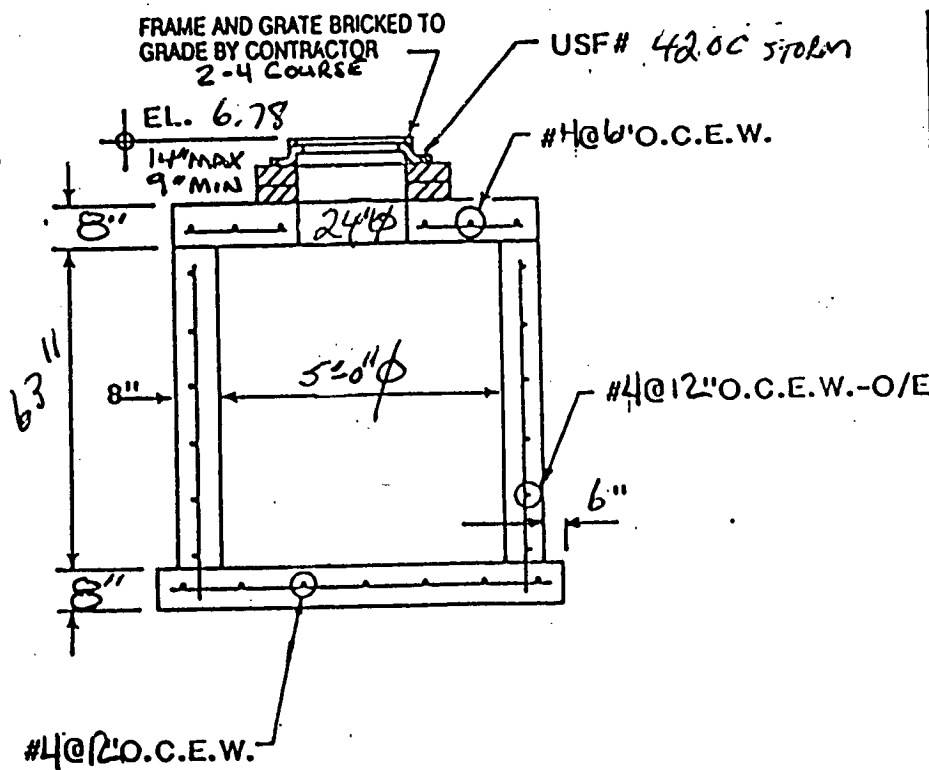
DOCUMENT REVIEWED FOR CONFORMANCE WITH
DESIGN CONCEPTS. ENGINEER SHALL VERIFY ALL
FIELD CONDITIONS. RECORD QUANTITIES
REQUIRED BY CONSTRUCTION DOCUMENTS.

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

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



NO.	19
ELEV.	6.78
INV.	1.50
HT.	5.28
CUT	+1.50
	<u>6.78</u>
PRICE	811



BASE	DATE MADE	DATE SHIPPED
RISEA		
RISEA		
CCLAR		
TCP		
USE		

4000 PSI @ 28 DAYS

TYPE II CEMENT.

18" Samp

97-058

5'-0" I.D.-STORM

CONTRACTOR:

CONTRACTOR:
LASER ENGRG

JOB

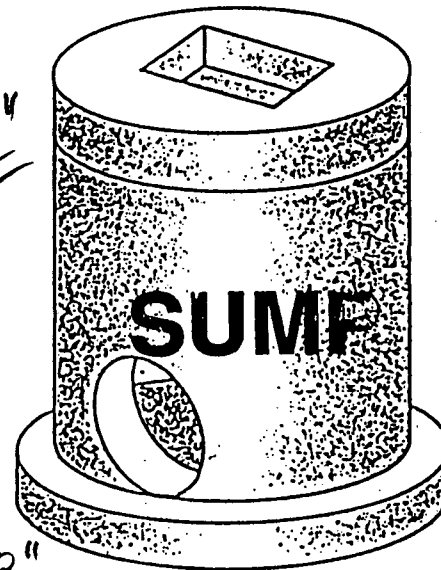
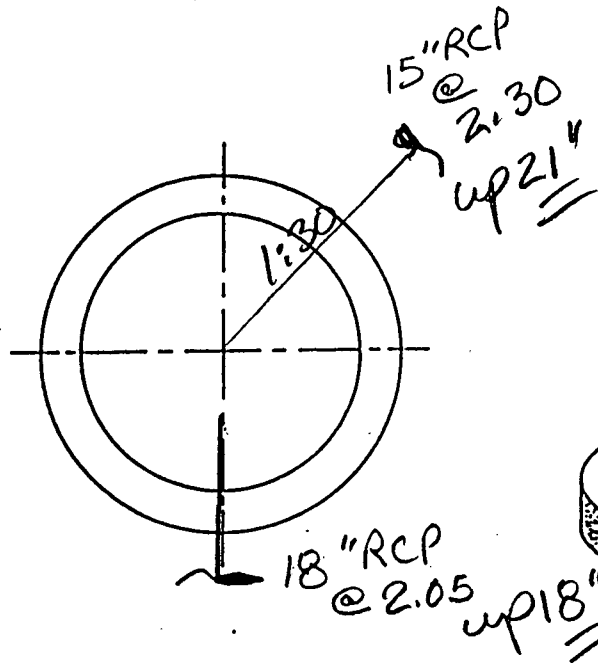
JOB: TOWN GATE
VILLAGE 14

SOUTH BROWARD DRAINAGE DISTRICT	
SHOP DRAWINGS	
☒ APPROVED	
☐ RESUBMIT	
☐ APPROVED SUBJECT TO REVISION	
BY <u>WCS</u>	DATE <u>10/14/96</u>

WINNINGHAM & FRADLEY INC. CONSULTING ENGINEERS SURVEYORS	
RECEIVED <u>WCS</u>	
☒ APPROVED	
☐ RESUBMIT	
DATE <u>10-3-96</u>	
DOCUMENT REVIEWED FOR CONFORMANCE WITH DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.	

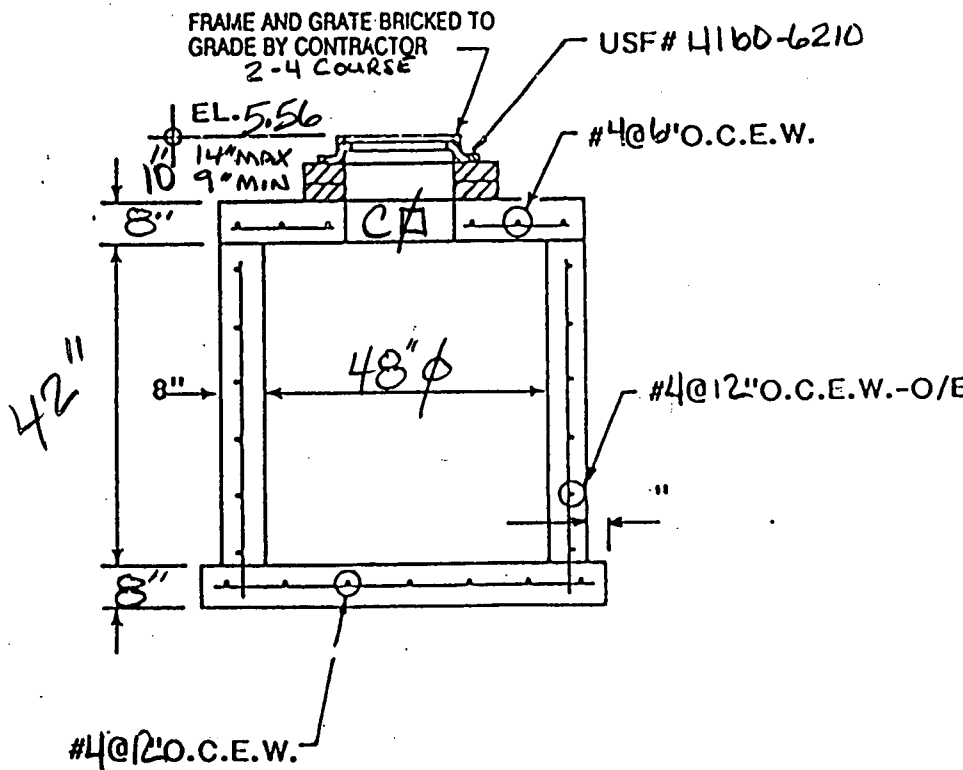
TRI-COUNTY · CONCRETE · PRODUCTS

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



NO.	18
ELEV.	5.56
INV.	2.05
HT.	3.51
CUT	42"
PRICE	118-18

42"



BASE	DATE MADE	DATE SHIPPED
RISER		
RISER		
COLLAR		
TCP		
USF		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT.

18" Sump

97-058

I.D.-STORM INLET

CONTRACTOR:
LASER ENGRG

JOB: TOWNGATE
VILLAGE IV

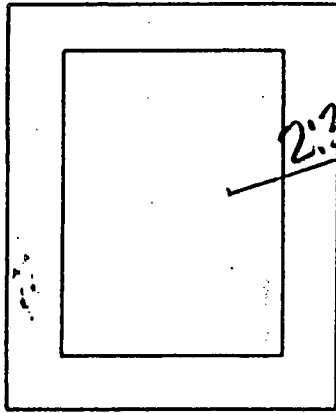
SOUTH BROWARD DRAINAGE DISTRICT	
SHOP DRAWINGS	
☒	APPROVED
☐	RESUBMIT
☐	APPROVED SUBJECT TO REVISION
BY <u>WED</u>	DATE <u>10/17/96</u>

WINNINGHAM & FREDLEY INC. CONSULTING ENGINEERS SURVEYORS	
RECEIVED	<u>W.F.</u>
☒	
10-3-96	
DO NOT WRITE IN THESE SPACES ALL INFORMATION HEREIN IS THE PROPERTY OF WINNINGHAM & FREDLEY INC. ALL INFORMATION HEREIN IS TO BE USED ONLY FOR THE PURPOSES REQUIRED BY CONSTRUCTION DOCUMENTS.	

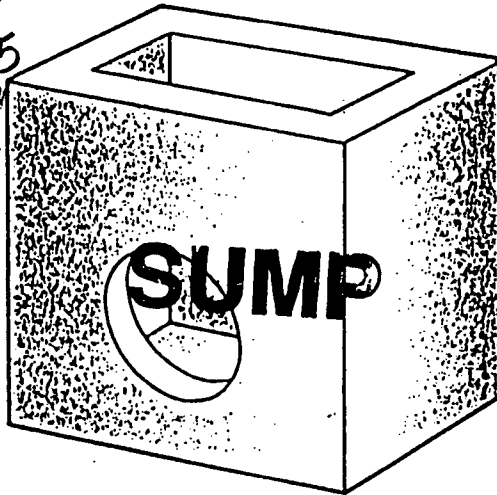
TRI-COUNTY · CONCRETE · PRODUCTS

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

TYPE "C" CATCH BASIN

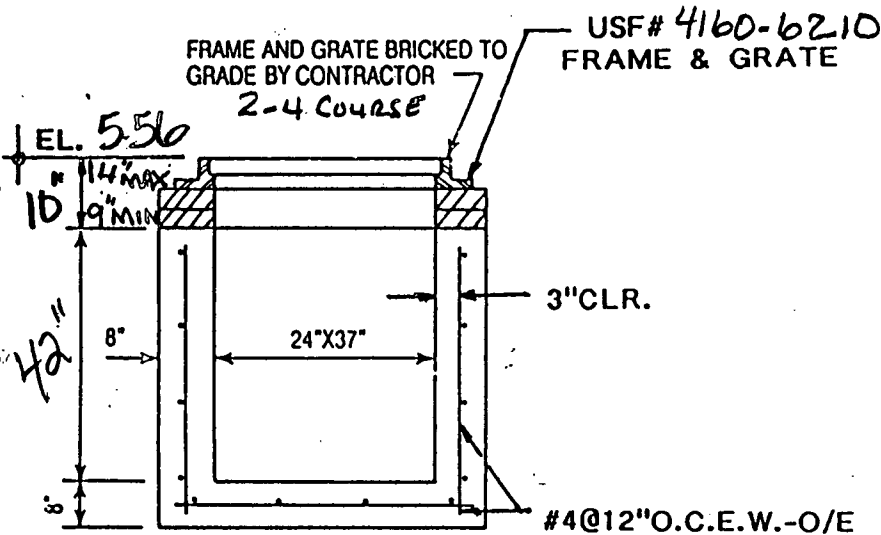


15" RCP
@ 2.75
2.30 f up 18"



NO.	17
ELEV.	5.56
INV.	2.75
HT.	2.81
CUT	34"
PRICE	+18-10

42"



	DATE MADE	DATE SHIPPED
BASE		
RISER		
RISER		
COLLAR		
TOP		
USF#		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

INLET CONFORMS TO F.D.O.T.

INDEX 232

18" Sump

97-058

"C" INLET-FRAME & GRATE

CONTRACTOR:

LASER ENGRG

JOB TOWN GATE

VILLAGE 14

SOUTH BROWARD DRAINAGE DISTRICT

SHOP DRAWINGS

☒ **APPROVED**

☐ **RESUBMIT**

☐ **APPROVED SUBJECT TO REVISION**

BY *lwe* DATE *10/14/94*

WINNINGHAM & BRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

RECEIVED *del*

☒ **APPROVED**

☐ **RESUBMIT**

DATE *10-3-90*

DOCUMENT REVIEWED FOR CONFORMANCE WITH
DESIGN CONCEPTS. FIELD INSPECTOR SHALL VERIFY ALL
FIELD CONDITIONS. PROVIDE QUANTITIES
REQUIRED BY CONSTRUCTION DOCUMENTS.

TRI-COUNTY · CONCRETE · PRODUCTS

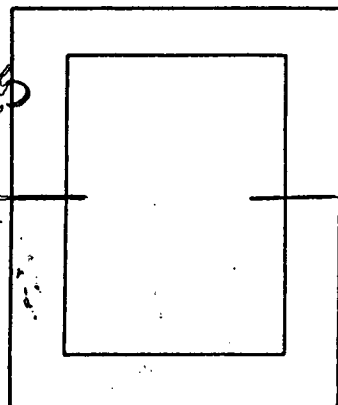
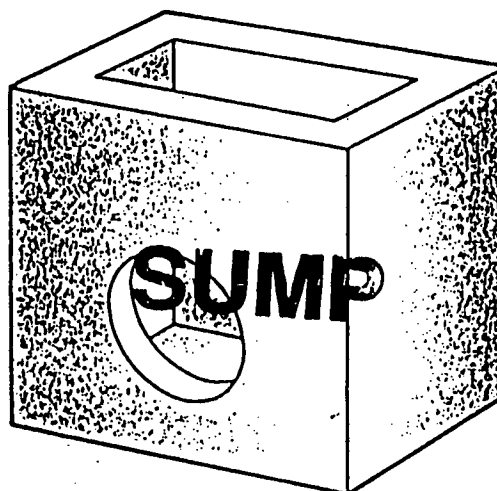
1926 SKEES ROAD, WEST PALM BEACH, FLORIDA, 33411 (407) 686-4622

TYPE "C" CATCH BASIN

P.R.B.

NO.	15
ELEV.	5.56
INV.	2.00
HT.	3.56
CUT	43"
PRICE	130-10

63"



up 33"
15" RCP
@ 2.25

18" RCP
@ 2.00
up 30"

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

USF# 4160-6210
FRAME & GRATE

EL. 5.56
10" 14" MAX
9" MIN

3" CLR.

24" X 37"

#4 @ 12" O.C. E.W.-O/E

BASE	DATE MADE	DATE SHIPPED
RISER		
RISER		
COLLAR		
TOP		
USF #		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

INLET CONFORMS TO F.D.O.T.

INDEX 232

30" Sump

97-058

00C00 INLET-FRAME & GRATE

CONTRACTOR:

LASER ENGRG

JOB TOWN GATE
VILLAGE 14

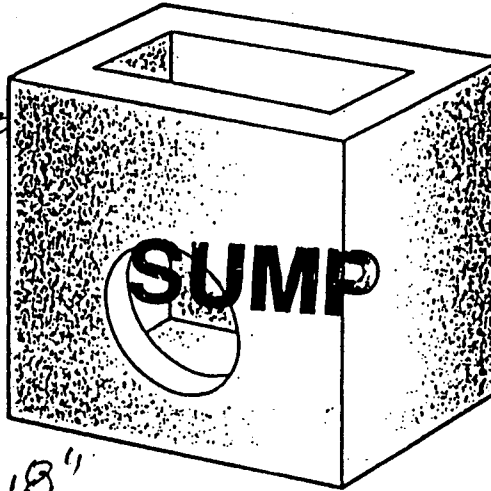
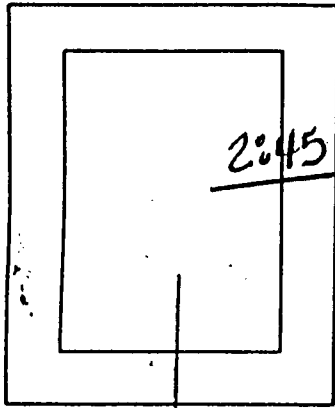
SOUTH BROWARD DRAINAGE DISTRICT	
SHOP DRAWINGS	
☒	APPROVED
☐	RESUBMIT
☐	APPROVED SUBJECT TO REVISION
BY <u>WJ</u>	DATE <u>10/14/96</u>

WINNINGHAM & FRADLEY INC. CONSULTING ENGINEERS SURVEYORS	
RECEIVED	<u>JO</u>
☒	AS SHOWN
☐	AS NOTED
DATE	<u>10-3-96</u>
DOCUMENT REVIEWED FOR CONFORMANCE WITH DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.	

TRI-COUNTY · CONCRETE · PRODUCTS

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

TYPE "C" CATCH BASIN



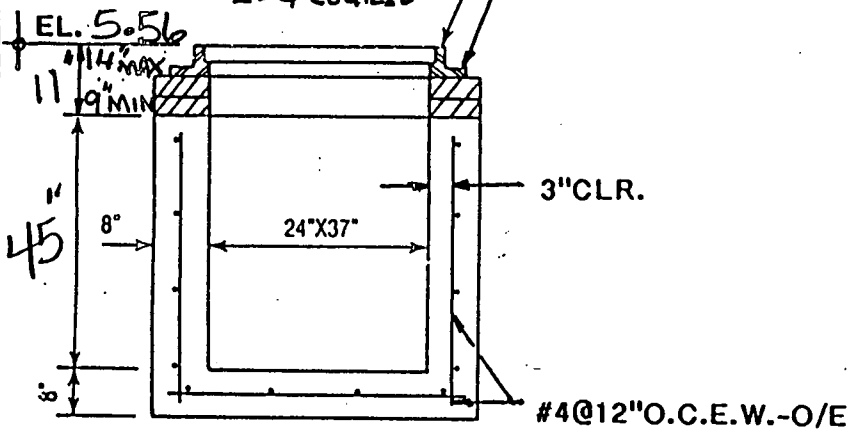
NO.	14
ELEV.	5.56
INV.	2.40
HT.	3.16
CUT	38"
PRICE	118-11

45"

15" RCP 2.40 @ 5.56 up 18"

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

USF# 4160-6210
FRAME & GRATE



BASE	DATE MADE	DATE SHIPPED
RISER		
RISER		
COLLAR		
TOP		
USF#		

GENERAL NOTES -

4000 PSI @ 28 DAYS

TYPE II CEMENT

INLET CONFORMS TO F.D.O.T.

INDEX 232

18" Sump

97-058

"C" INLET-FRAME & GRATE

CONTRACTOR:

LASER ENGRG

JOB TOWN GATE
VILLAGE 14

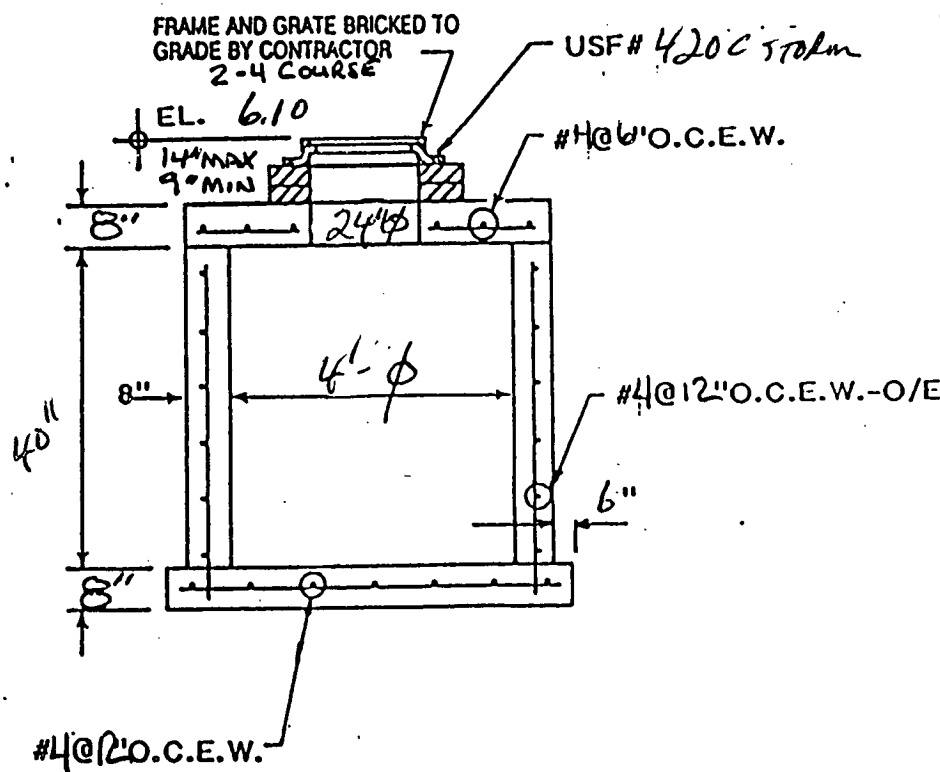
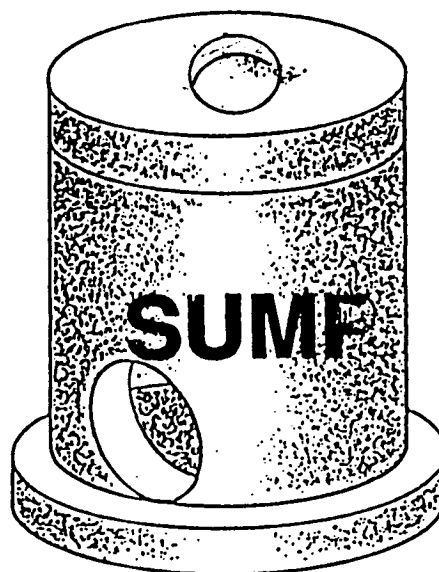
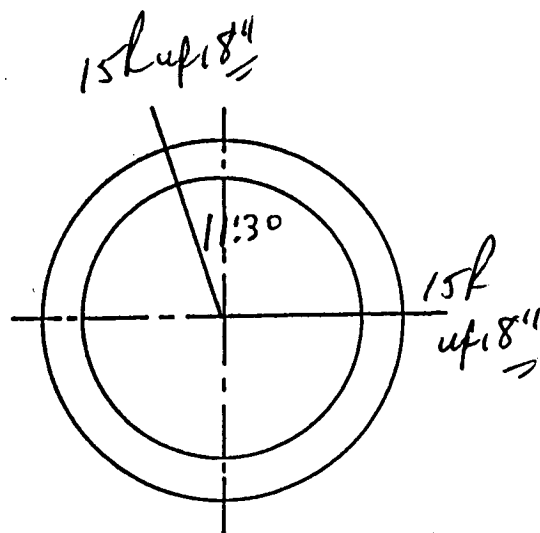
SOUTH BROWARD DRAINAGE DISTRICT	
SHOP DRAWINGS	
☐ APPROVED	
☐ RESUBMIT	
☒ APPROVED SUBJECT TO REVISION	
BY <u>WSE</u>	DATE <u>10/14/96</u>

WINNINGHAM & FRADLEY INC. CONSULTING ENGINEERS SURVEYORS	
RECEIVED <u>WSE</u>	
☒ APPROVED ALL	
☐	
DATE <u>10-3-96</u>	
DOCUMENT REVIEW FOR CONFORMANCE WITH DESIGN CONCEPTS. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.	

TRI-COUNTY · CONCRETE · PRODUCTS

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

NO.	13
ELEV.	6.10
INV.	2.80
HT.	3.30
CUT	+1.50
PRICE	4.80



BASE	DATE MADE	DATE SHIPPED
RISE A		
RISE B		
CELLAR		
TCP		
USF		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

18" Sump

97-058

4'-0" I.D. STORM

CONTRACTOR:
LASER ENGRG

JOB: TOWNGATE
VILLAGE 14

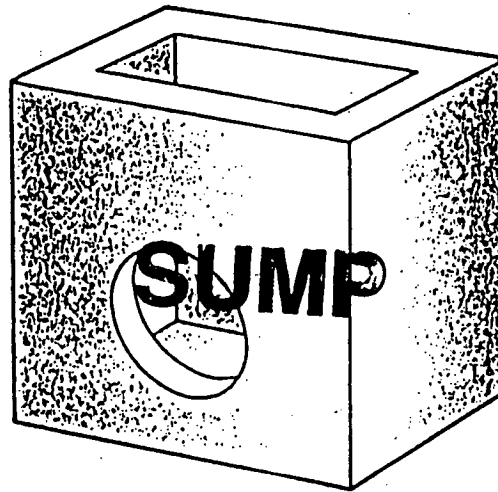
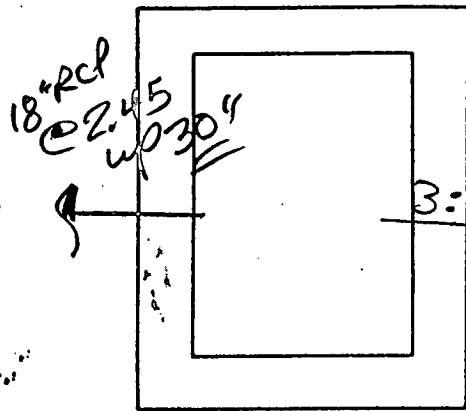
SOUTH BROWARD DRAINAGE DISTRICT	
SHOP DRAWINGS	
☒	APPROVED
☐	RESUBMIT
☐	APPROVED SUBJECT TO REVISION
BY <u>wee</u>	DATE <u>10/14/96</u>

WINNINGHAM & TRADLEY INC. CONSULTING ENGINEERS SURVEYORS	
RECEIVED <u>Id.</u>	
☒	APPROVED AT FIELD
☐	
10-3-96	
DOCUMENT ALL FIELD WORK IN ACCORDANCE WITH DESIGN CONDITIONS. VERIFY ALL FIELD CONDITIONS AND QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.	

TRI-COUNTY · CONCRETE · PRODUCTS

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

TYPE "C" CATCH BASIN

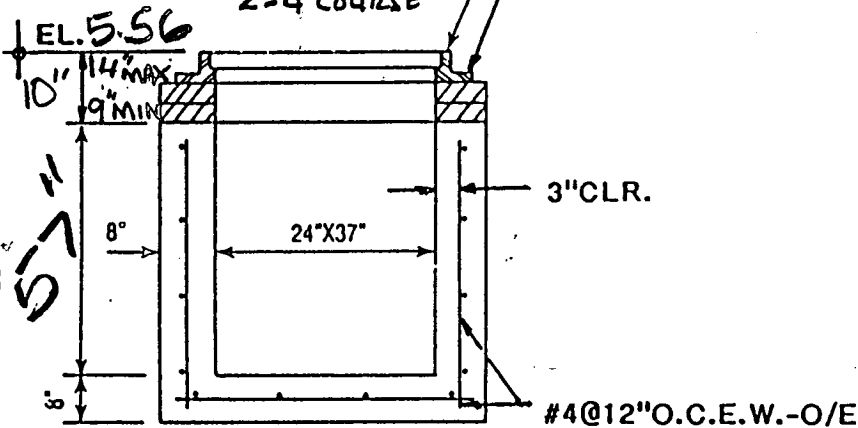


NO.	10
ELEV.	5.56
INV.	2.45
HT.	3.11
CUT	37"
PRICE	+30-10

57"

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

USF# 4160-6210
FRAME & GRATE



	DATE MADE	DATE SHIPPED
BASE		
RISER		
RISER		
COLLAR		
TOP		
USF #		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

INLET CONFORMS TO F.D.O.T.

INDEX 232

30" Sump

97-058

00C INLET-FRAME & GRATE

CONTRACTOR:

LASER ENGRG

JOB TOWN GATE
VILLAGE 14

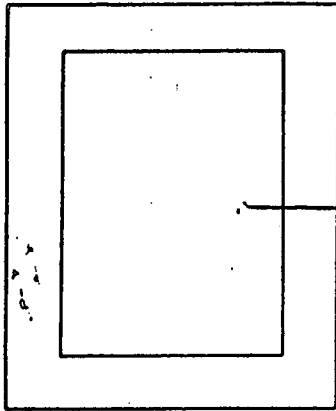
SOUTH BROWARD DRAINAGE DISTRICT	
SHOP DRAWINGS	
☒	APPROVED
☐	RESUBMIT
☐	APPROVED SUBJECT TO REVISION
BY <u>WJ</u>	DATE <u>12/17/96</u>

WINNINGHAM & FRADLEY INC. CONSULTING ENGINEERS SURVEYORS	
RECEIVED	<u>WJ</u>
☒	APPROVED AS SHOWN
10-3-96	
DOCUMENTS TO BE USED IN CONSTRUCTION OF PROJECTS WITH DESIGN CONTRACTORS. CHECK ALL VERTY ALL FIELD COND. P. ... REQUIRED BY CONSTRUCTION DOCUMENTS.	

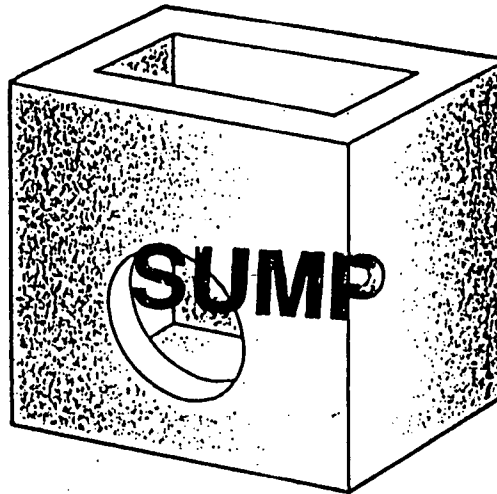
TRI-COUNTY · CONCRETE · PRODUCTS

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

TYPE "C" CATCH BASIN

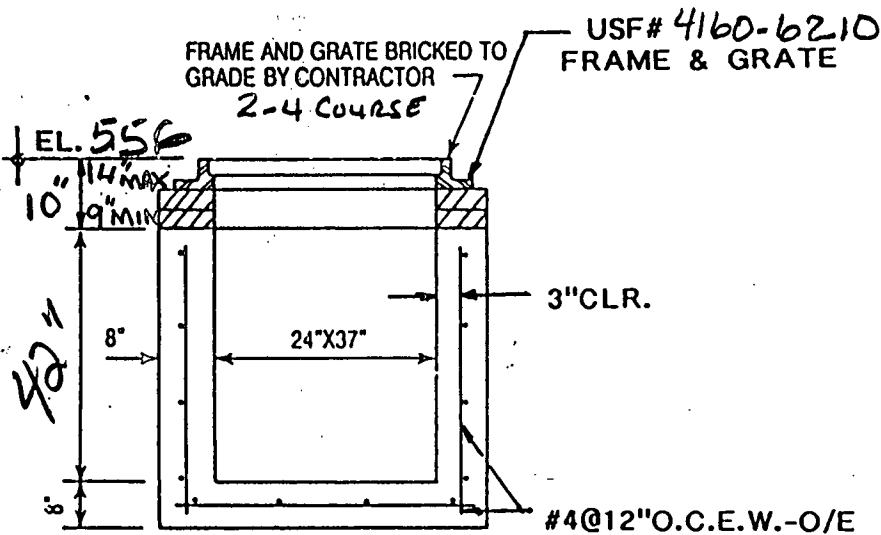


15" RCP
@ 2.75
up 18" =



NO.	9
ELEV.	5.56
INV.	2.75
HT.	2.81
CUT	34"
PRICE	+18-10

42"



BASE	DATE MADE	DATE SHIPPED
RISER		
RISER		
COLLAR		
TOP		
USF #		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

INLET CONFORMS TO F.D.O.T.

INDEX 232

18" Sump

97-058

"C" INLET-FRAME & GRATE

CONTRACTOR:

LASER ENGRG

JOB TOWN GATE

VILLAGE 14

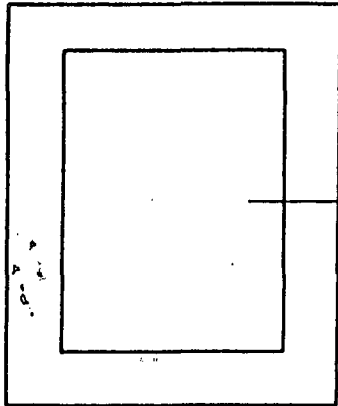
SOUTH BROWARD DRAINAGE DISTRICT	
SHOP DRAWINGS	
☒	APPROVED
☐	RESUBMIT
☐	APPROVED SUBJECT TO REVISION
BY <u>WJ</u>	DATE <u>10/14/96</u>

WINN-DIXIE & FRADLEY INC.	
CIVIL ENGINEERS & SURVEYORS	
RECEIVED	<u>WJ</u>
☒	FOR REVIEW
☐	FOR APPROVAL
DATE	<u>10-3-96</u>
DOCUMENTED FOR CONFORMANCE WITH DESIGN CONDITIONS FACTOR SHALL VERIFY ALL FIELD CONDITIONS PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.	

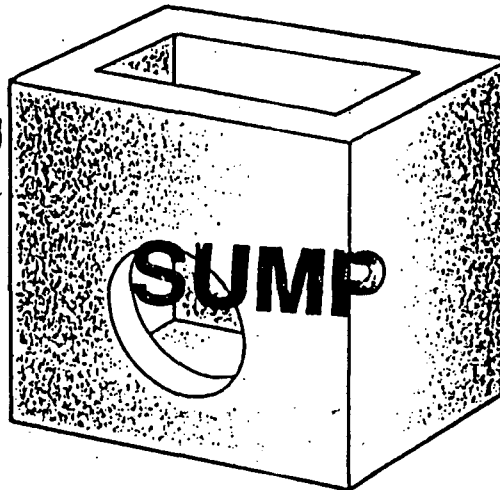
TRI-COUNTY · CONCRETE · PRODUCTS

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

TYPE "C" CATCH BASIN

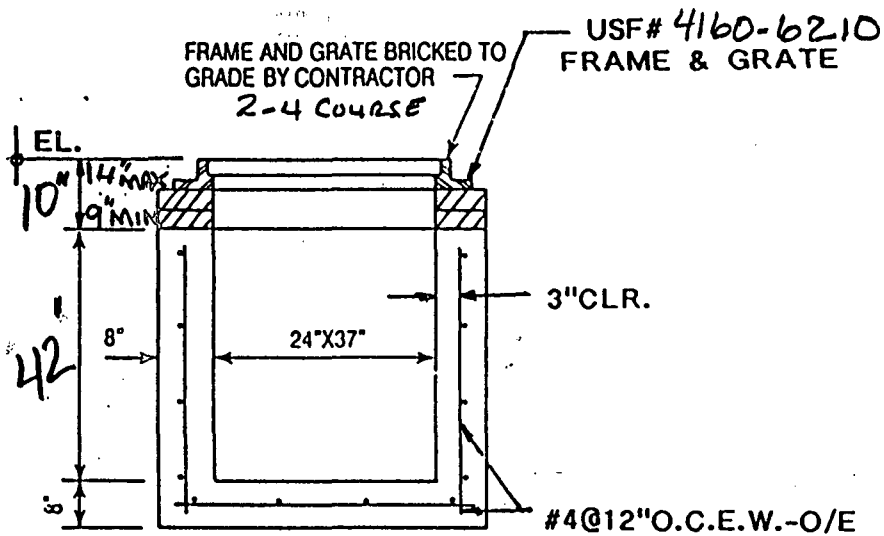


15" RCP
@ 2.75
up 18" =



NO.	8
ELEV.	5.56
INV.	2.75
HT.	2.81
CUT	34"
PRICE	+18-10

42"



	DATE MADE	DATE SHIPPED
BASE		
RISE		
RISE		
COLLAR		
TOP		
USF#		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

INLET CONFORMS TO F.D.O.T.

INDEX 232

18" Sump

9.7-058

"C" INLET-FRAME & GRATE

CONTRACTOR:

LASER ENGRG

JOB TOWN GATE

VILLAGE 11

SOUTH BROWARD DRAINAGE DISTRICT

SHOP DRAWINGS

☒ **APPROVED**

☐ **RESUBMIT**

☐ **APPROVED SUBJECT TO REVISION**

BY Wol DATE 10/14/96

WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

RECEIVED JO

☒ **APPROVED AS NOTED**

☐ **REVISE & RESUBMIT**

DATE 10-3-96

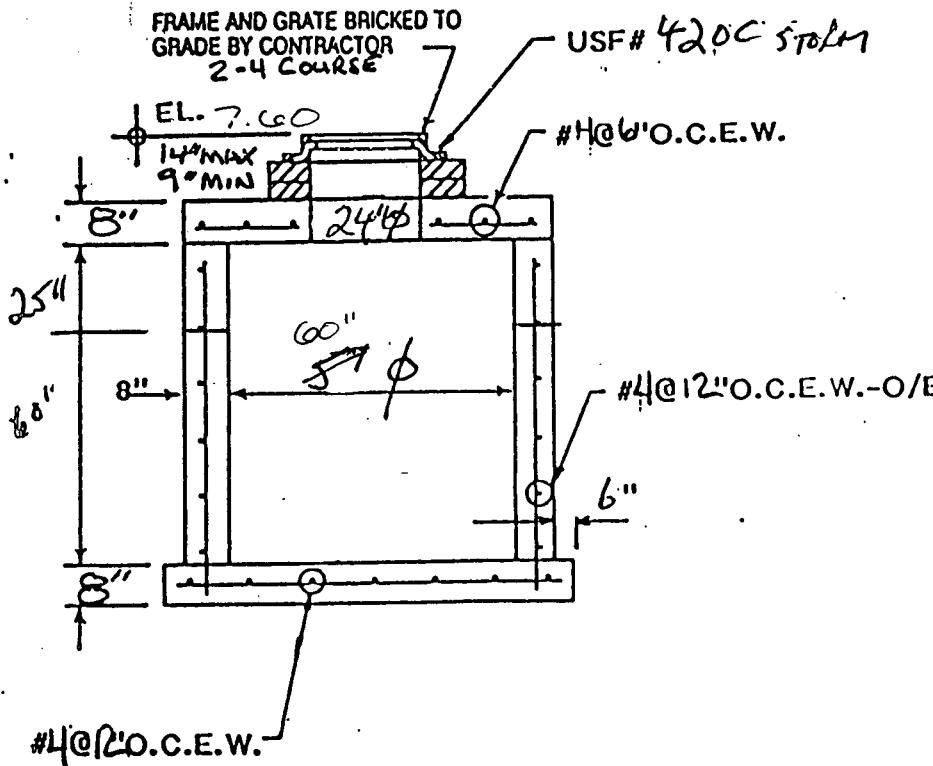
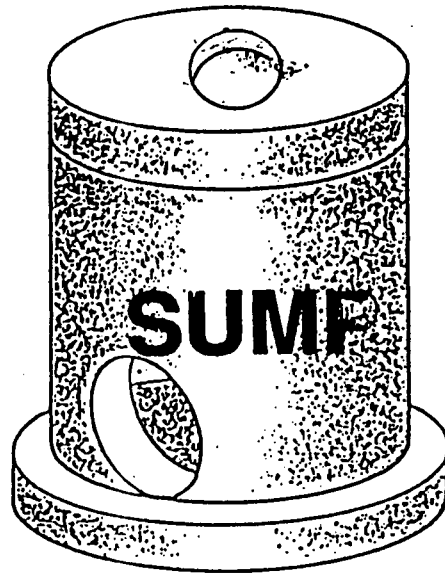
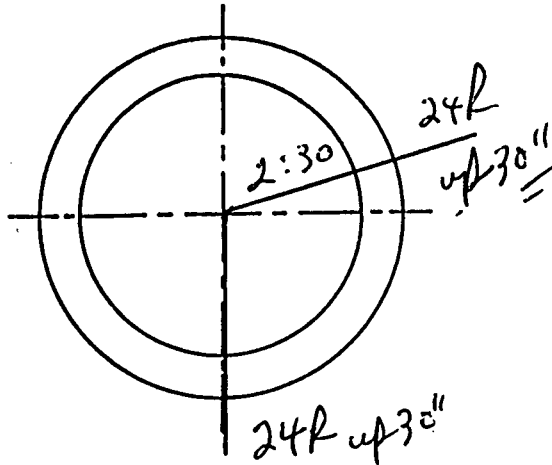
DOCUMENT REVIEWED FOR CONFORMANCE WITH
DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL
FIELD CONDITIONS AND QUANTITIES
REQUIRED BY CONSTRUCTION DOCUMENTS.

TRI-COUNTY · CONCRETE · PRODUCTS

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

PRB

NO.	7
ELEV.	7.60
INV.	1.50
HT.	6.10
CUT	+2.50
	8.60
PRICE	103 ¹¹



BASE	DATE MADE	DATE SHIPPED
RISE		
RISE		
CCLAR		
TCP		
USF		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

18" Sump

30" PRB

97-058

5'-0" I.D.-STORM

CONTRACTOR:
LASER ENGRG

JOB: TOWNGATE
VILLAGE 14

SOUTH BROWARD DRAINAGE DISTRICT

SHOP DRAWINGS

☒ **APPROVED**

☐ **RESUBMIT**

☐ **APPROVED SUBJECT TO REVISION**

BY *W. J. [Signature]* DATE *10/14/92*

WINN-DIXIE STORES, INC.
CONSTRUCTION DEPARTMENT

RECEIVED *[Signature]*

☒ **APPROVED**

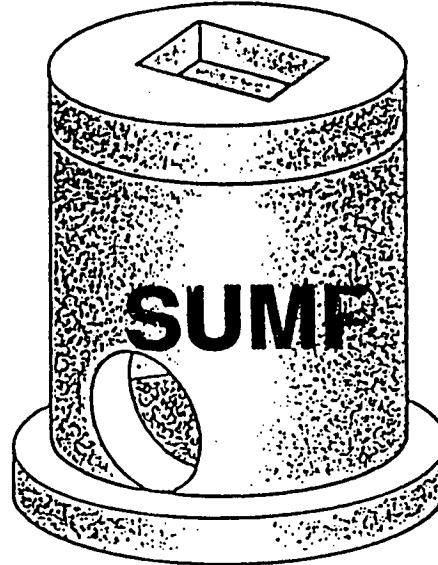
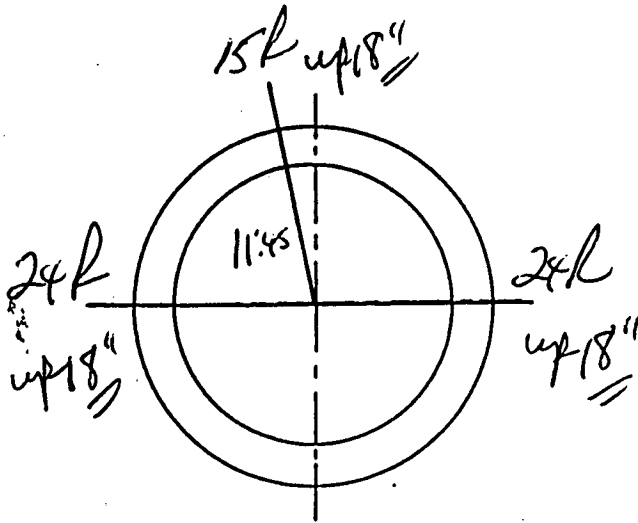
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DATE *10-3-96*

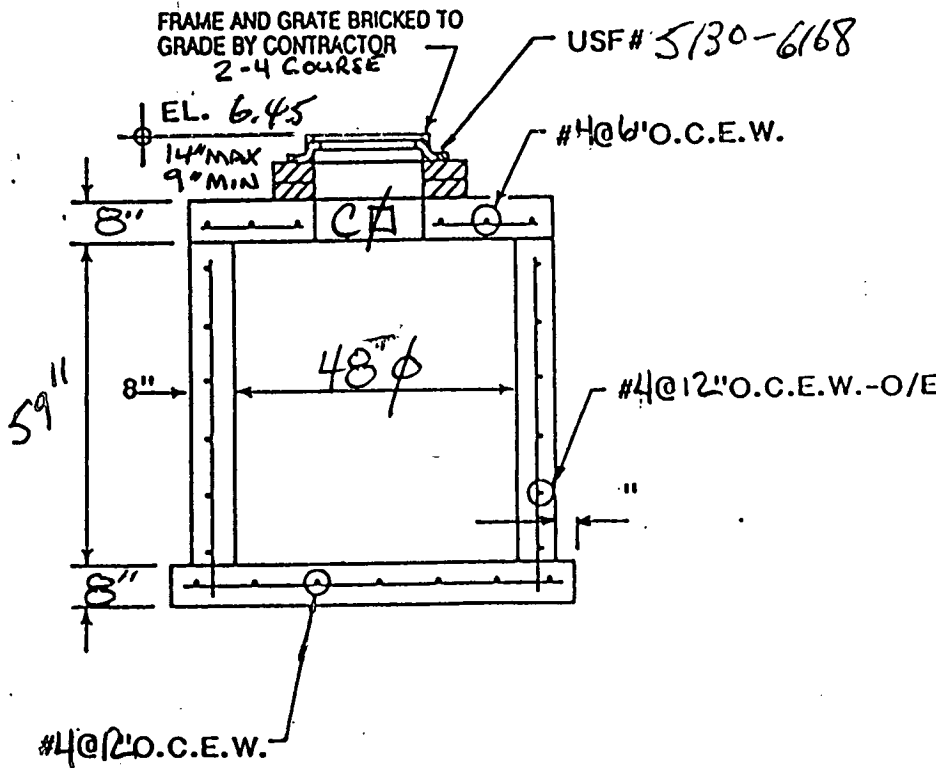
DOCUMENT & FIELD CONFORMANCE WITH
 DESIGN CONDITIONS. FIELD SHALL VERIFY ALL
 FIELD CONDITIONS & QUANTITIES
 REQUIRED BY CONSTRUCTION DOCUMENTS.

TRI-COUNTY · CONCRETE · PRODUCTS

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



NO.	6
ELEV.	6.45
INV.	1.50
HT.	4.95
CUT	+1.50
PRICE	6.45
	77.11



BASE	DATE MADE	DATE SHIPPED
RISE A		
RISE B		
COLLAR		
TOP		
USF #		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

18" Sump

97-058

4'-8" I.D.-STORM INLET

CONTRACTOR:
LASER ENGRG

JOB: TOWNGATE
VILLAGE III

SOUTH BROWARD DRAINAGE DISTRICT

SHOP DRAWINGS

☒ **APPROVED**

☐ **RESUBMIT**

☐ **APPROVED SUBJECT TO REVISION**

BY W.S. DATE 10/14/96

WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

RECEIVED Ad.

☒ **APPROVED**

☐ **REJECTED**

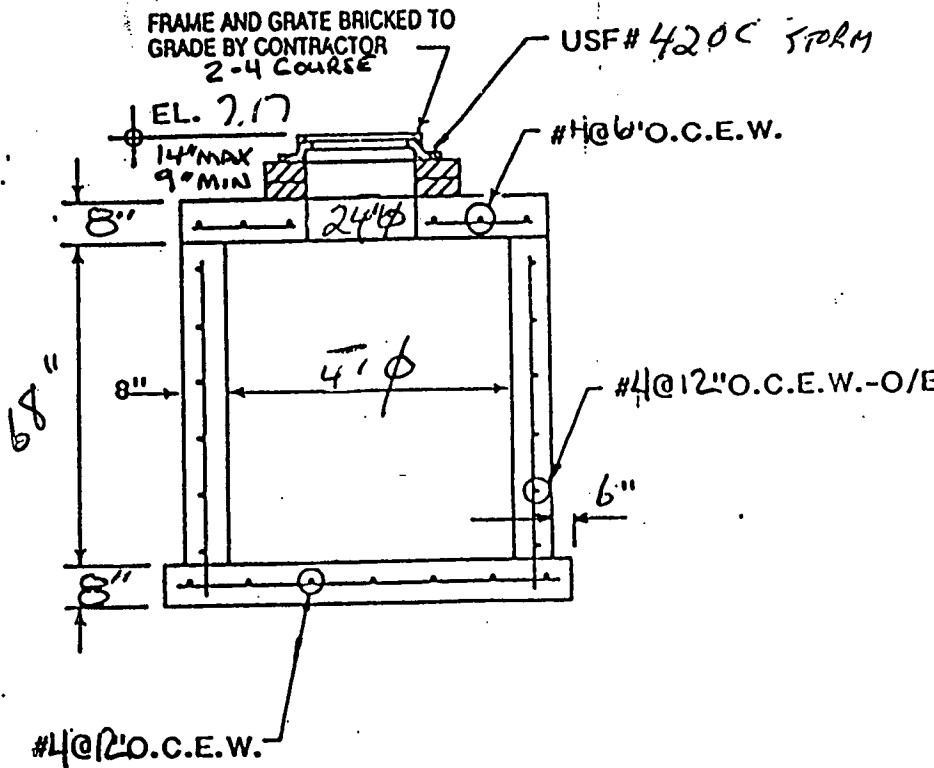
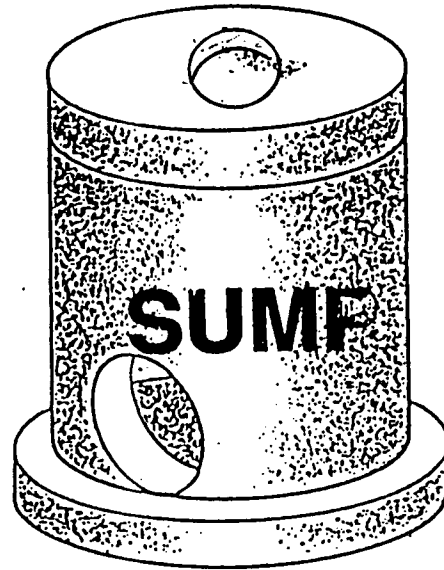
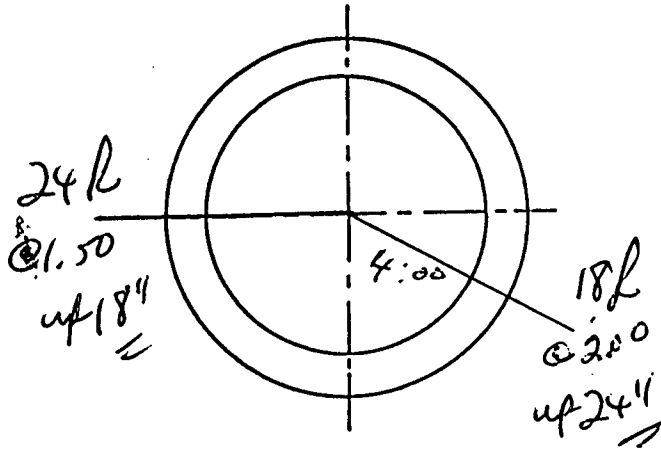
DATE 10-3-96

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

TRI-COUNTY · CONCRETE · PRODUCTS

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

NO.	5
ELEV.	7.17
INV.	1.50
HT.	5.67
CUT	41.50
	7.17
PRICE	86.11



BASE	DATE MADE	DATE SHIPPED
RISEA		
RISEA		
CCLAR		
TCP		
USF		

GENERAL NOTES
4000 PSI @ 28 DAYS
TYPE II CEMENT
18" Sump
97-058

4'-0" I.D.-STORM

CONTRACTOR:
LASER ENGRG

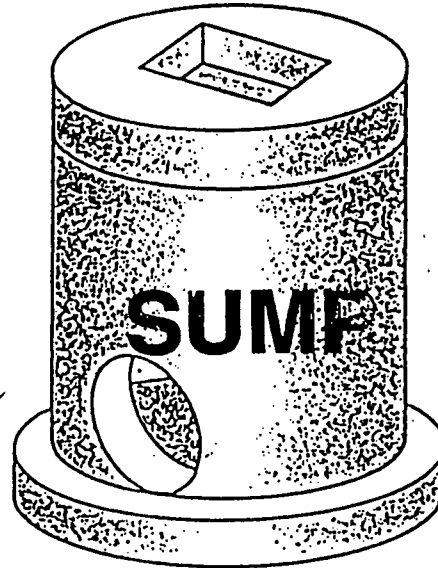
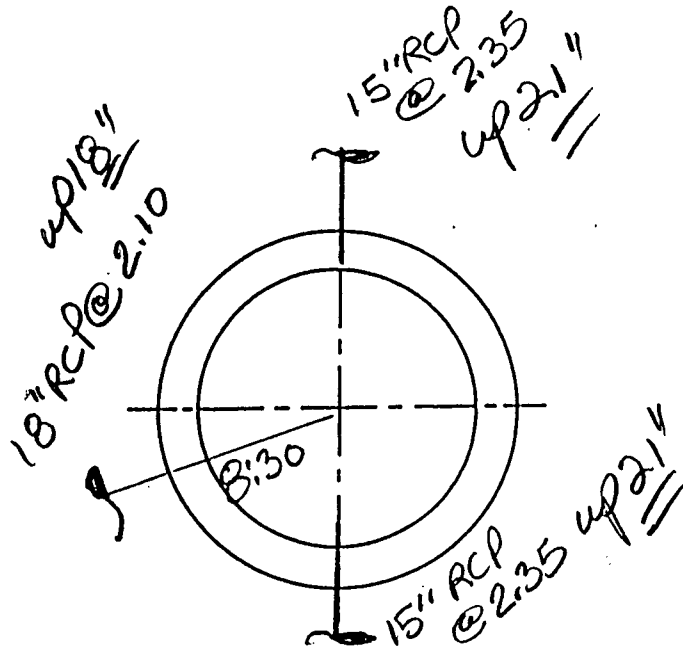
JOB: TOWNGATE
VILLAGE 14

SOUTH BROWARD DRAINAGE DISTRICT	
SHOP DRAWINGS	
☒	APPROVED
☐	RESUBMIT
☐	APPROVED SUBJECT TO REVISION
BY <u>WJG</u>	DATE <u>10/14/96</u>

WINNINGHAM & FRADLEY INC.	
CONSULTING ENGINEERS SURVEYORS	
RECEIVED	<u>WJG</u>
☒	APPROVED
☐	
DATE	<u>10-3-96</u>
DOCUMENTS REVIEWED FOR CONFORMANCE WITH DESIGN CONDITIONS. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS	

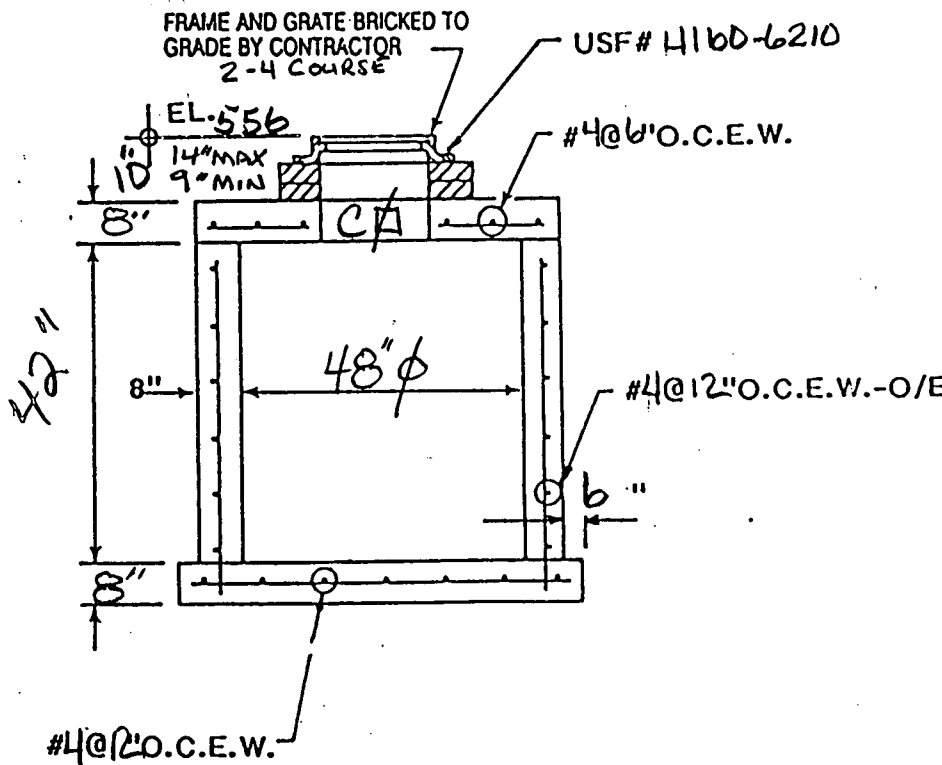
TRI-COUNTY · CONCRETE · PRODUCTS

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



NO.	4
ELEV.	5.56
INV.	2.10
HT.	3.46
CUT	42"
PRICE	118-18

42"



BASE	DATE MADE	DATE SHIPPED
RISER		
RISER		
COLLAR		
TCP		
USF		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT.

18" Sump

97-058

I.D.-STORM INLET

CONTRACTOR:
LASER ENGRG

JOB: TOWNGATE
VILLAGE III

SOUTH BROWARD DRAINAGE DISTRICT

SHOP DRAWINGS

☒ **APPROVED**

☐ **RESUBMIT**

☐ **APPROVED SUBJECT TO REVISION**

BY coe DATE 10/24/96

WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS SURVEYORS

RECEIVED JD

☒ **APPROVED** ☐ **NOTED**

☐ **REVISION**

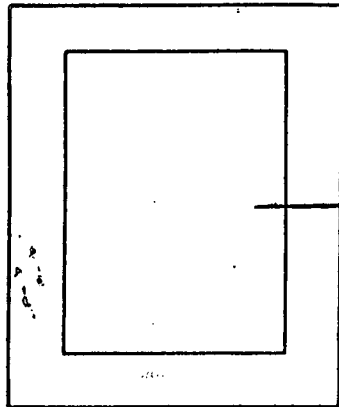
DATE 10-3-96

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

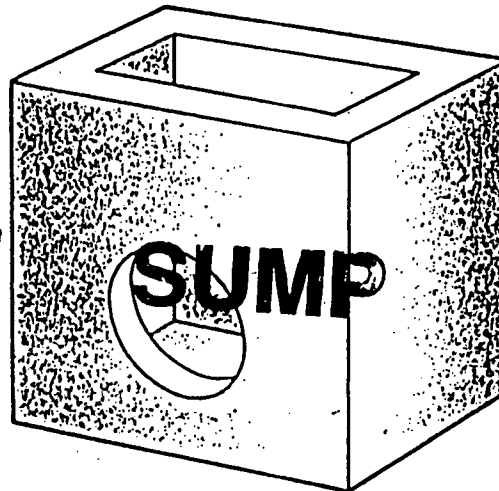
TRI-COUNTY · CONCRETE · PRODUCTS

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

TYPE "C" CATCH BASIN



15" RCP
@ 3.25
up 18" =

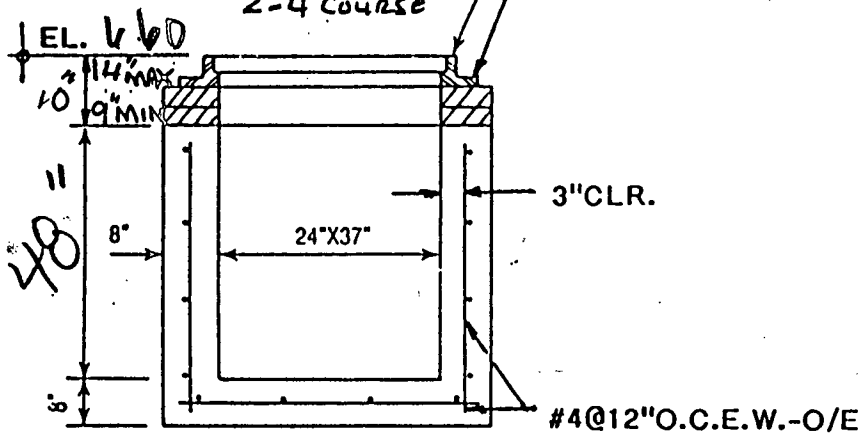


NO.	3
ELEV.	6.60
INV.	3.25
HT.	3.35
CUT	410'
PRICE	418-10

48"

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

USF# 4160-6210
FRAME & GRATE



BASE	DATE MADE	DATE SHIPPED
RISER		
RISER		
COLLAR		
TOP		
USF#		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

INLET CONFORMS TO F.D.O.T.

INDEX 232

18" Sump

97-058

00C00 INLET-FRAME&GRATE

CONTRACTOR:

LASER ENGRG

JOB TOWN GATE
VILLAGE II

SOUTH BROWARD DRAINAGE DISTRICT

SHOP DRAWINGS

☒ **APPROVED**

☐ **RESUBMIT**

☐ **APPROVED SUBJECT TO REVISION**

BY we DATE 10/14/94

WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS & ARCHITECTS

RECEIVED DD

☒ **APPROVED**

☐ **NOT APPROVED**

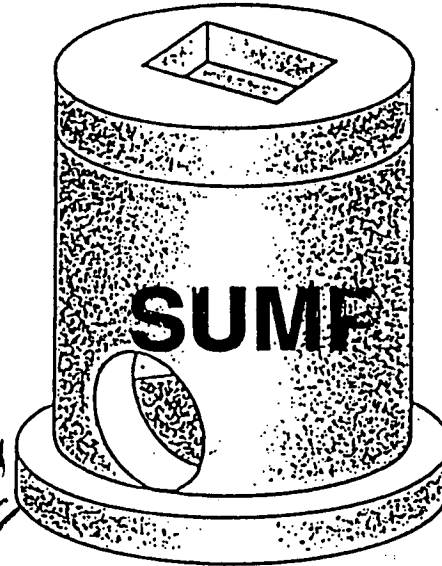
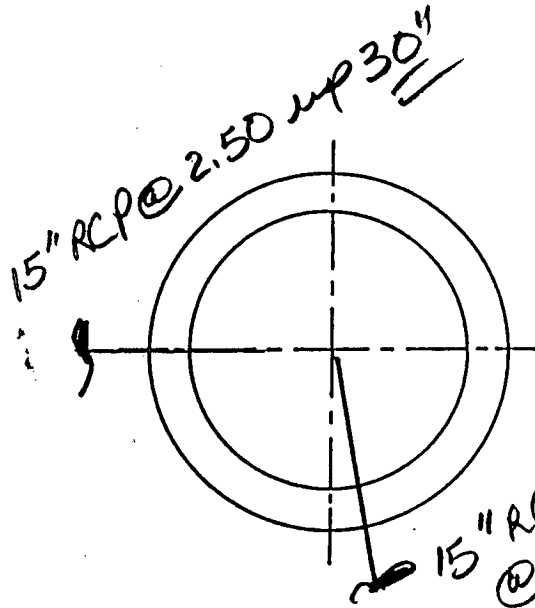
10-3-94

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

TRI-COUNTY · CONCRETE · PRODUCTS

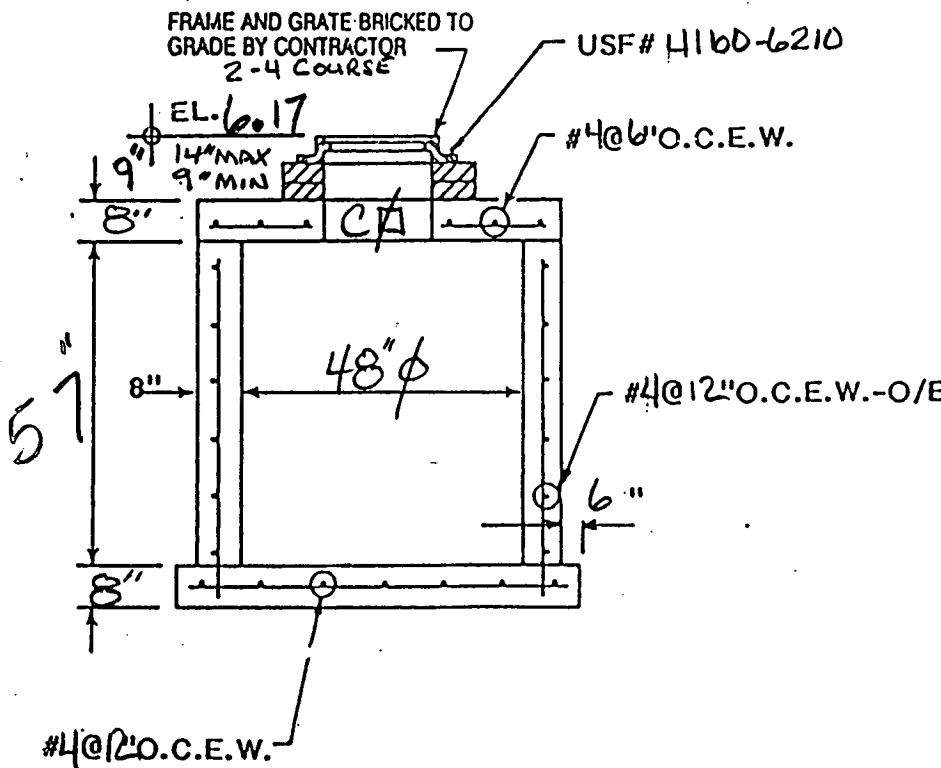
1926 SKEES ROAD, WEST PALM BEACH, FLORIDA, 33411 (407) 686-4622

P.R.B.



NO.	2
ELEV.	6.17
INV.	2.50
HT.	3.67
CUT	44"
PRICE	+30-17

57"



BASE	DATE MADE	DATE SHIPPED
RISE		
RISE		
COLLAR		
TOP		
USF		

GENERAL NOTES

4000 PSI @ 28 DAYS

TYPE II CEMENT

30" Sump

97-058

I.D.-STORM INLET

CONTRACTOR:
LASER ENGRG

JOB: TOWNGATE
1/1/1997

SOUTH BROWARD DRAINAGE DISTRICT

SHOP DRAWINGS

☒ **APPROVED**

☐ **RESUBMIT**

☐ **APPROVED SUBJECT TO REVISION**

BY WJ DATE 10/14/94

WINNINGHAM & FRADLEY INC.
CONSULTING ENGINEERS

RECEIVED AO

☒ **APPROVED AS NOTED**

☐ **REVISE & RESUBMIT**

DATE 10-3-96

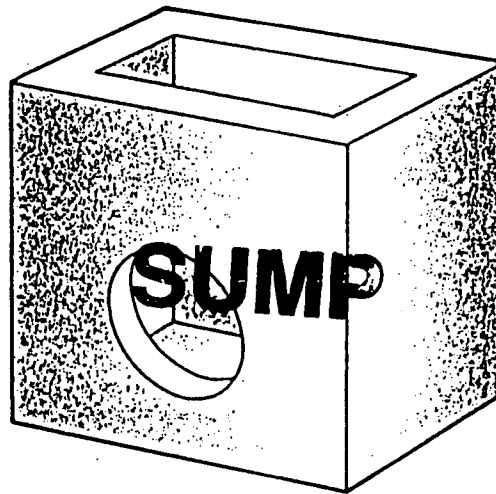
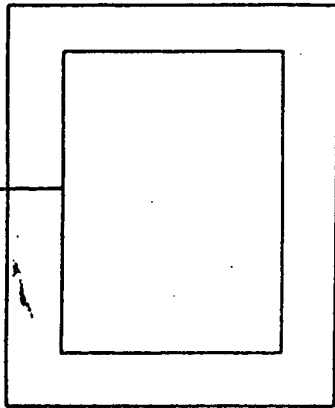
DOCUMENT REVIEWED FOR CONFORMANCE WITH
DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL
FIELD CONDITIONS AND PROVIDE QUANTITIES
REQUIRED BY CONSTRUCTION DOCUMENTS.

TRI-COUNTY · CONCRETE · PRODUCTS

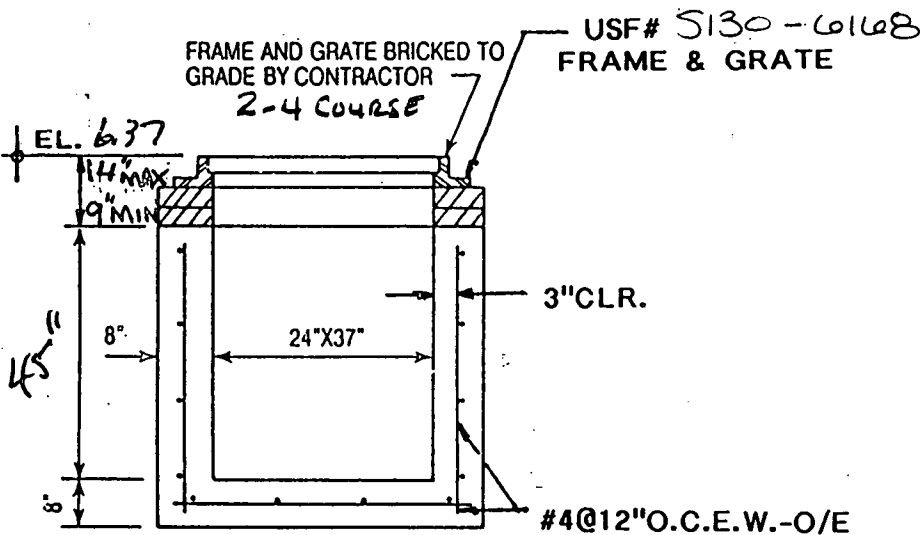
1926 SKEES ROAD, WEST PALM BEACH, FLORIDA, 33411 (407) 686-4622

TYPE "C" CATCH BASIN

152cl
up 18"



NO.	1
ELEV.	6.37
INV.	325
HT.	312
CUT	+1.50
PRICE	6.62
	53"



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.T.

INDEX 232

18" Sump

97-058

18" INLET-FRAME & GRATE

CONTRACTOR:

LASER ENGRG

JOB TOWN GATE
VILLAGE 14

SOUTH BROWARD DRAINAGE DISTRICT	
SHOP DRAWINGS	
☒	APPROVED
☐	RESUBMIT
☐	APPROVED SUBJECT TO REVISION
BY <u>Lee</u>	DATE <u>10/14/96</u>

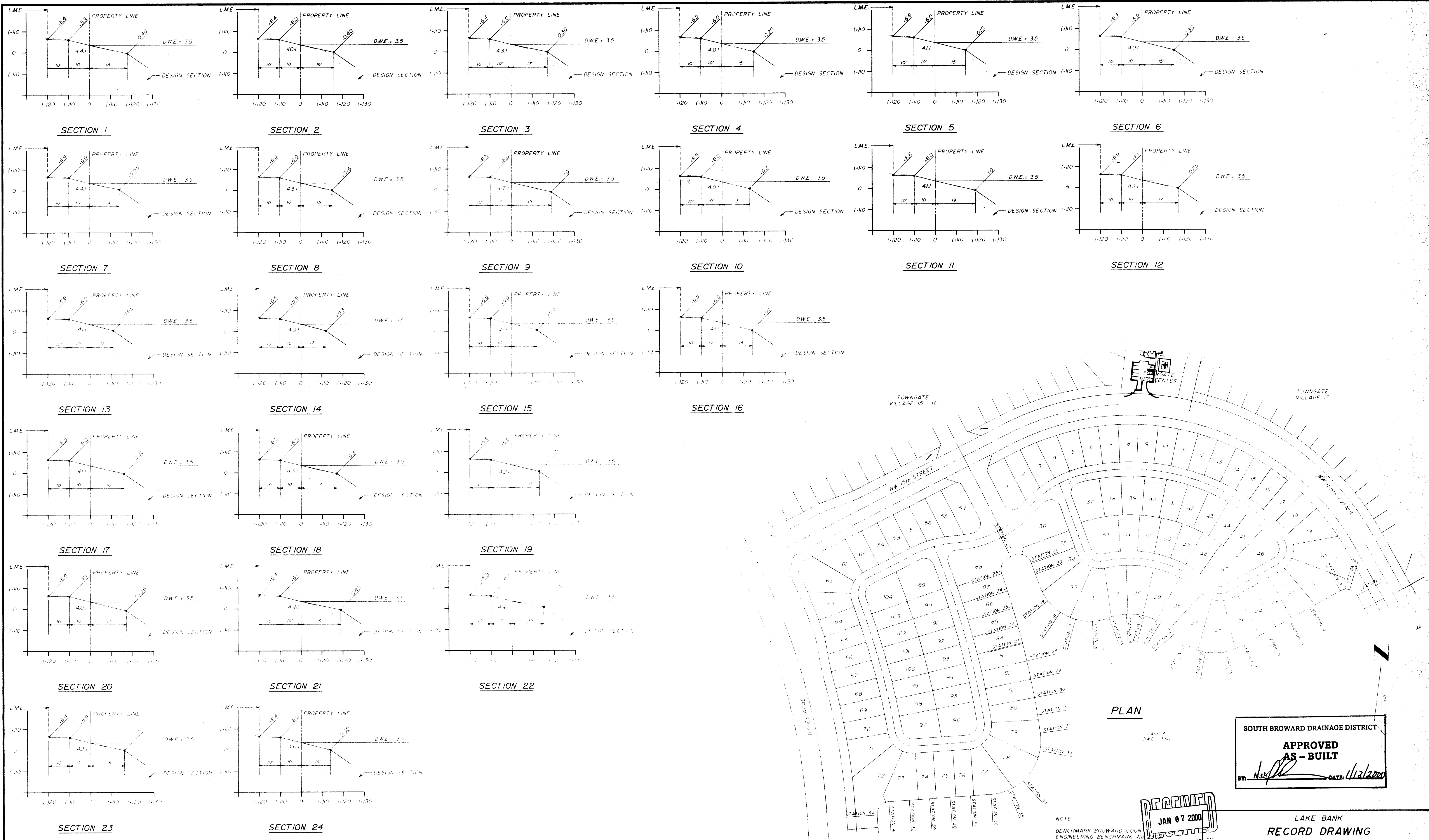
WINNINGHAM & PROFFER INC. CONSULTING ENGINEERS	
RECEIVED	<u>J.O.</u>
☒	APPROVED AS NOTED
☐	REVISE & RESUBMIT
DATE	<u>10-3-96</u>
DOCUMENT REVIEWED FOR CONFORMANCE WITH DESIGN CONCEPT. CONTRACTOR SHALL VERIFY ALL FIELD CONDITIONS AND PROVIDE QUANTITIES REQUIRED BY CONSTRUCTION DOCUMENTS.	

Category:

Paving & Drainage

Doc Type:

Plans & As-builts



SCALE
HORIZONTAL 1" = 20'
VERTICAL 1" = 20'

NOTE
BENCHMARK BROWARD COUNTY
ENGINEERING BENCHMARK NO. 135
ELEVATION 890.3 NGVD 1929

PLAN

SOUTH BROWARD DRAINAGE DISTRICT
**APPROVED
AS-BUILT**
BY: *[Signature]* DATE: 1/12/2000

RECEIVED
JAN 07 2000

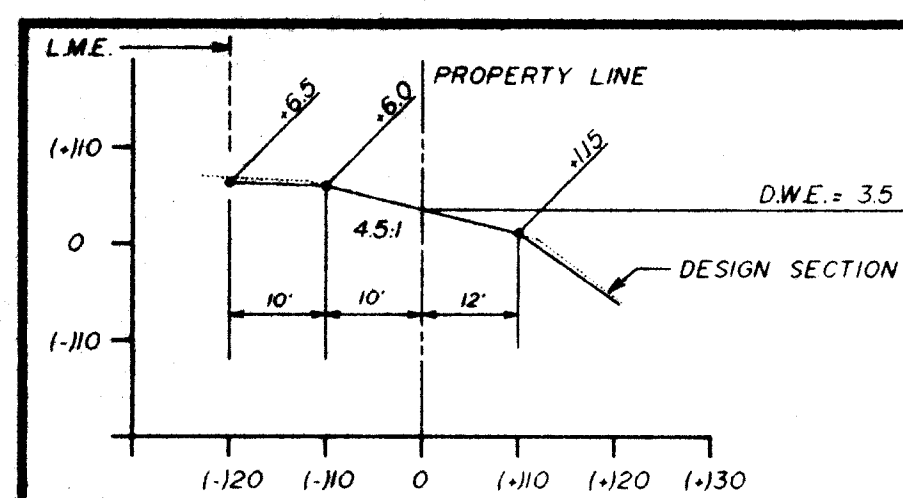
LAKE BANK
RECORD DRAWING

TOWNGATE VILLAGE 14
TOWNGATE LIMITED PARTNERSHIP
MINTO COMMUNITIES (PEMBROKE), INC.

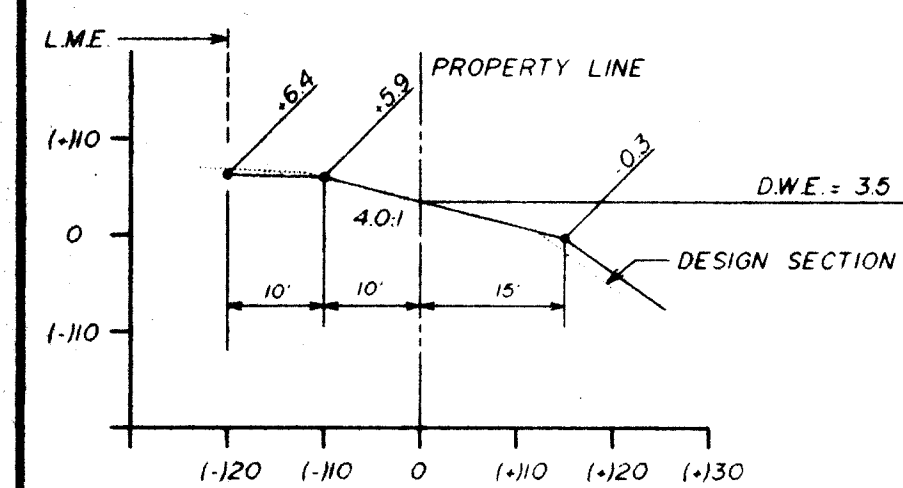
WINNINGHAM & FRADLEY, INC.
ENGINEERS • PLANNERS • SURVEYORS

DESIGNED	DQ1	DATE	6/97	APPROVED	<i>[Signature]</i>
DRAWN	DQ1	DATE	6/97	PROJECT	94513
NO.	REVISIONS	DATE	CHECKED	DATE	SHEET
					1 OF 2

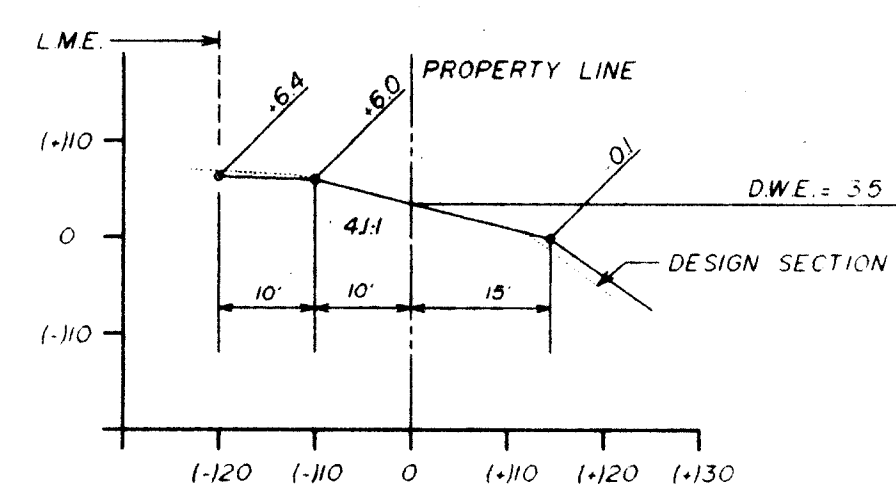
JAN 06 2000



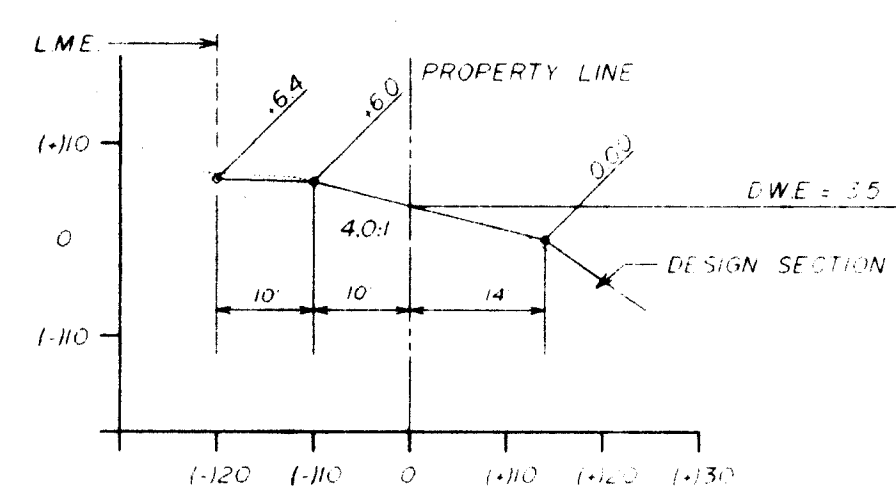
SECTION 25



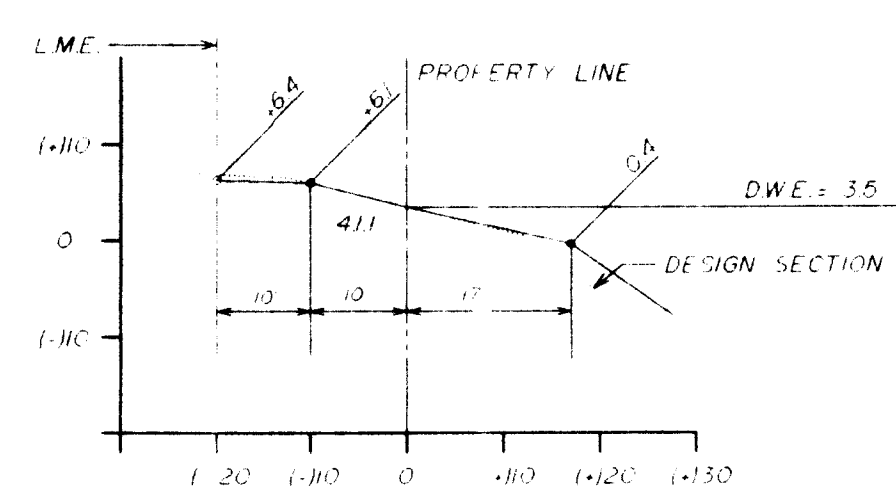
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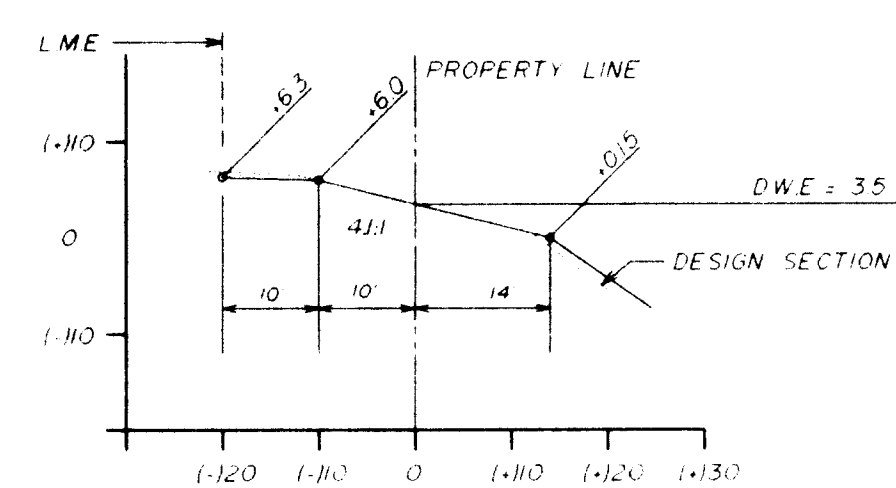
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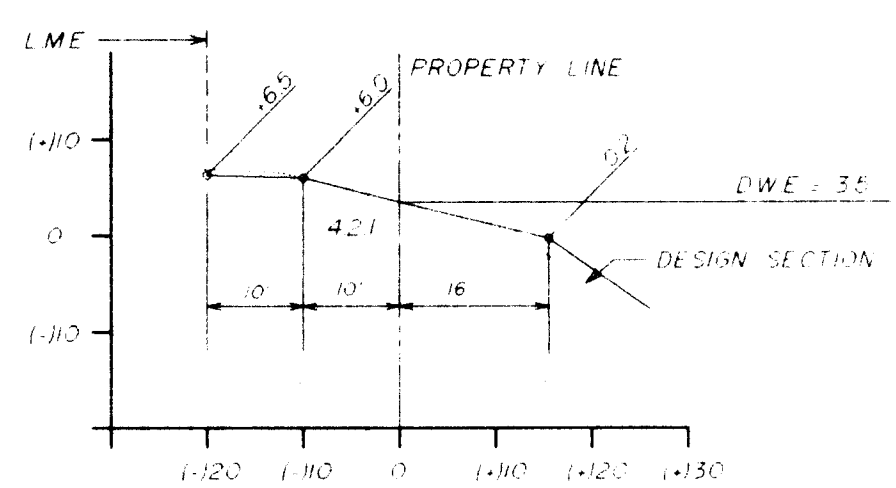
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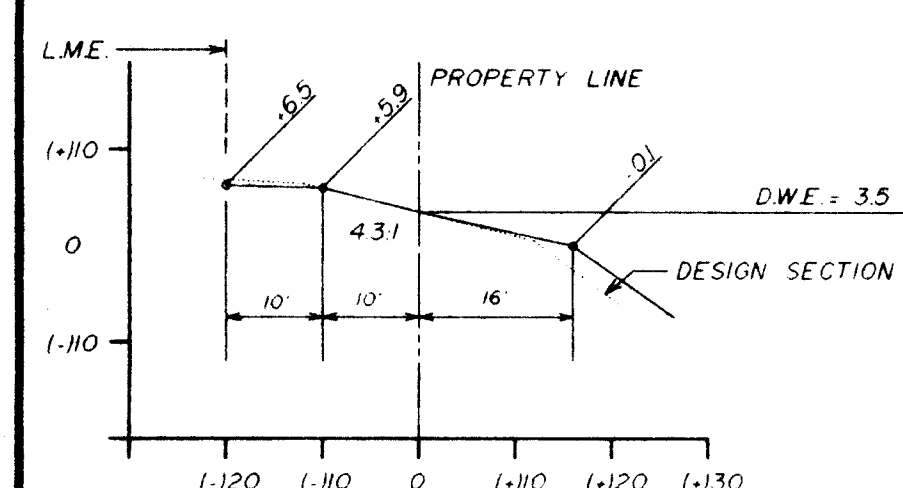
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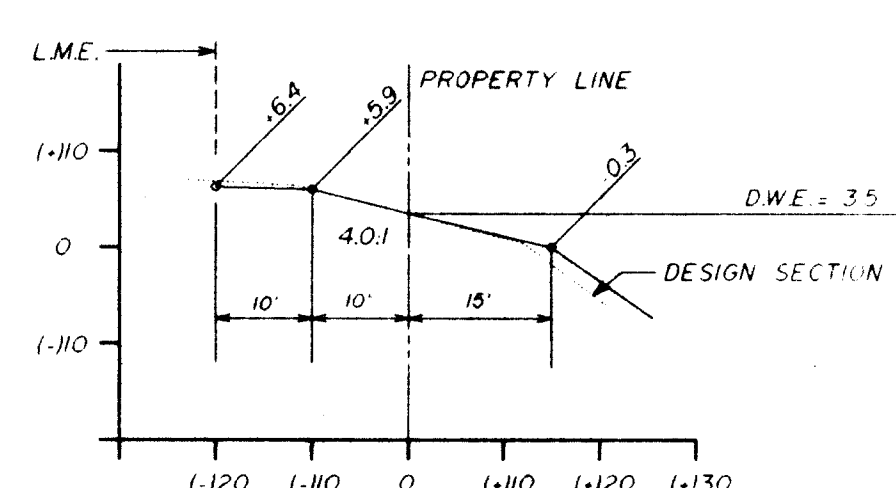
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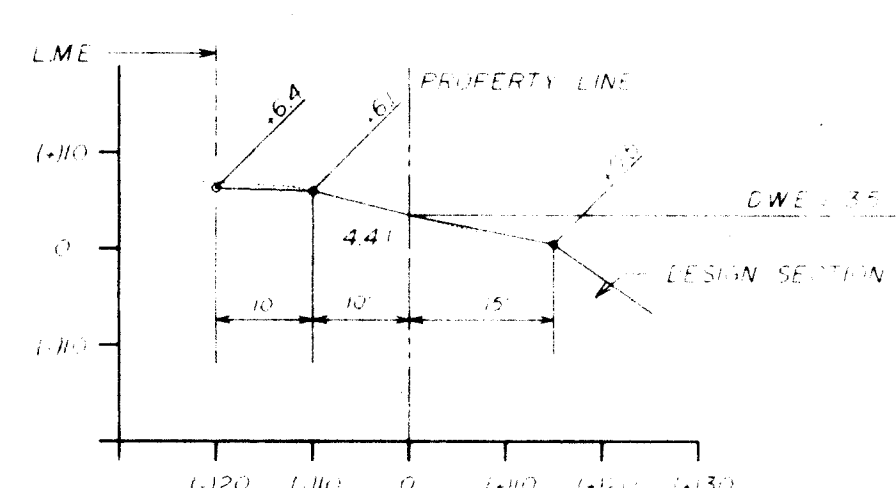
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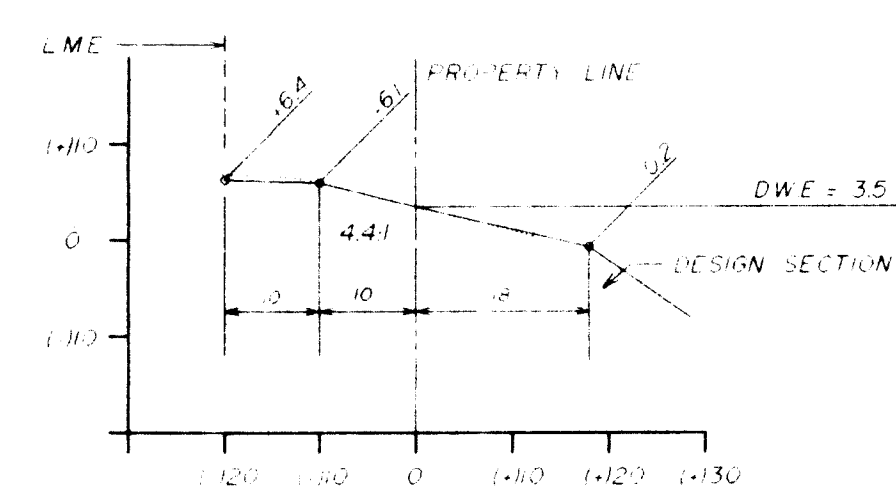
SECTION 32



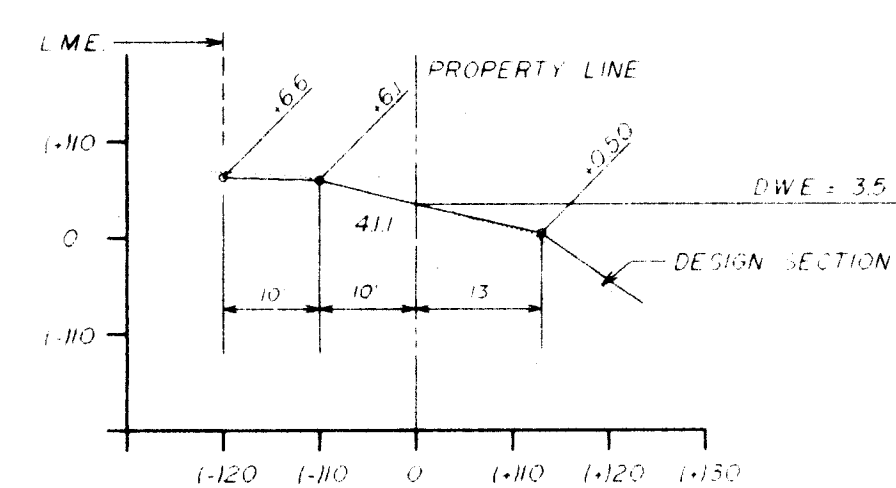
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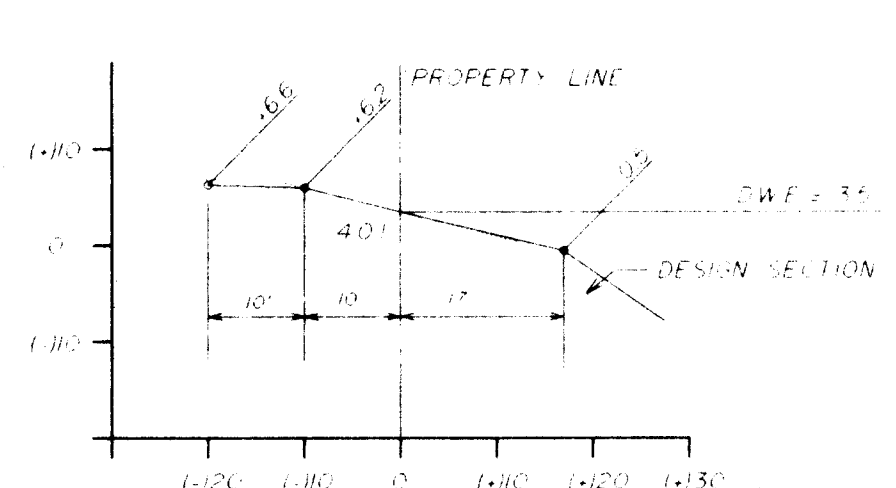
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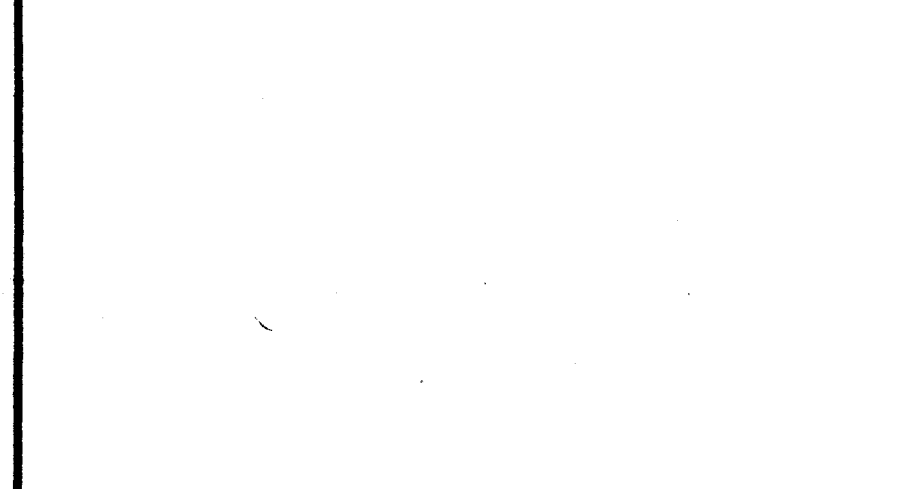
SECTION 35



SECTION 36



SECTION 37



SECTION 38



SECTION 39



SECTION 40



SECTION 41



SECTION 42

SCALE
HORIZONTAL: 1" = 20'
VERTICAL: 1" = 20'

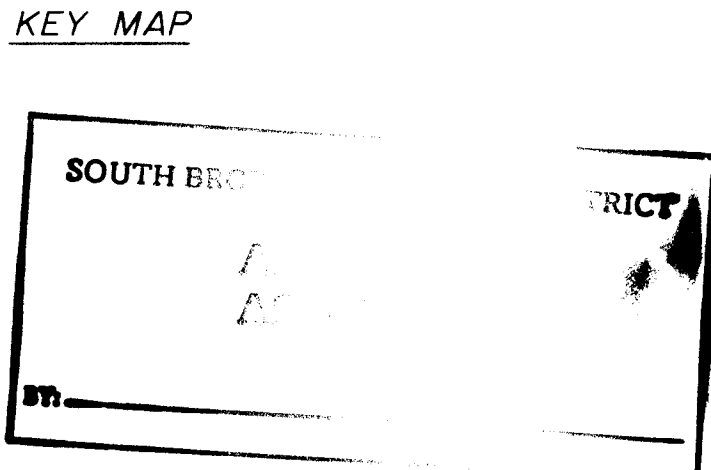
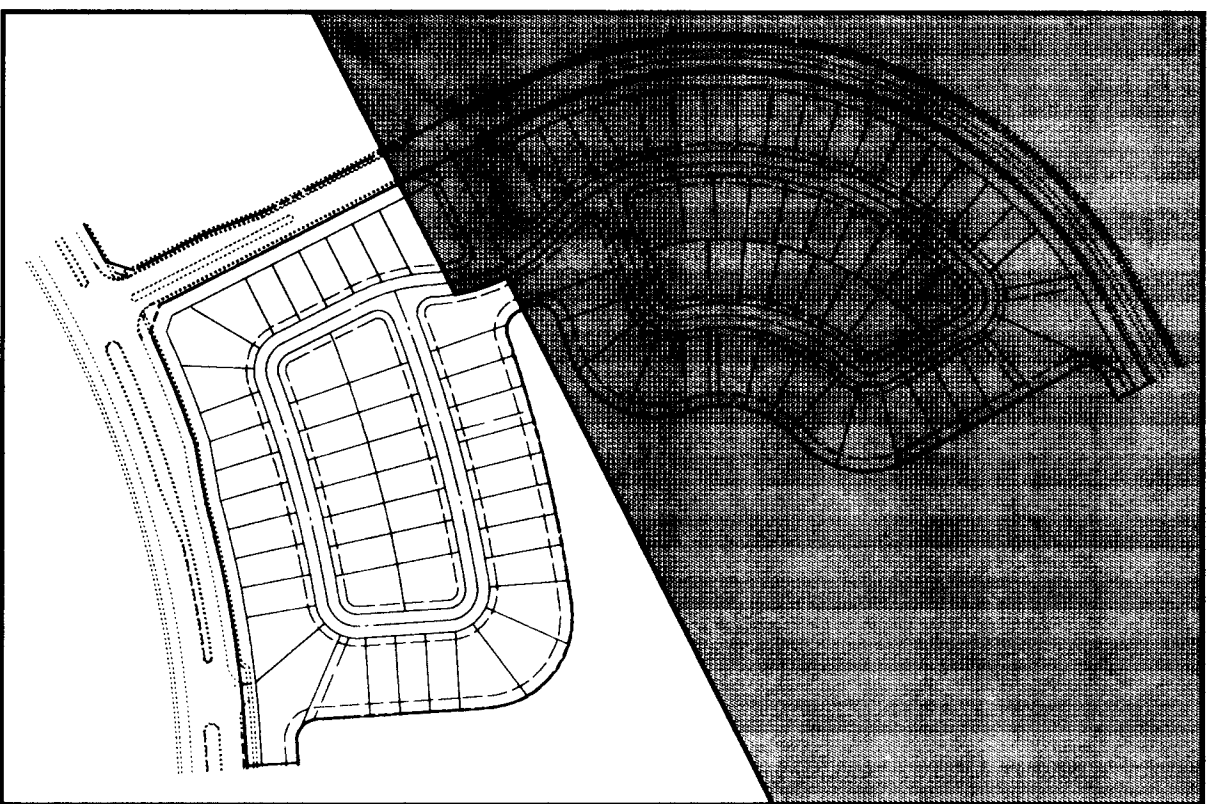
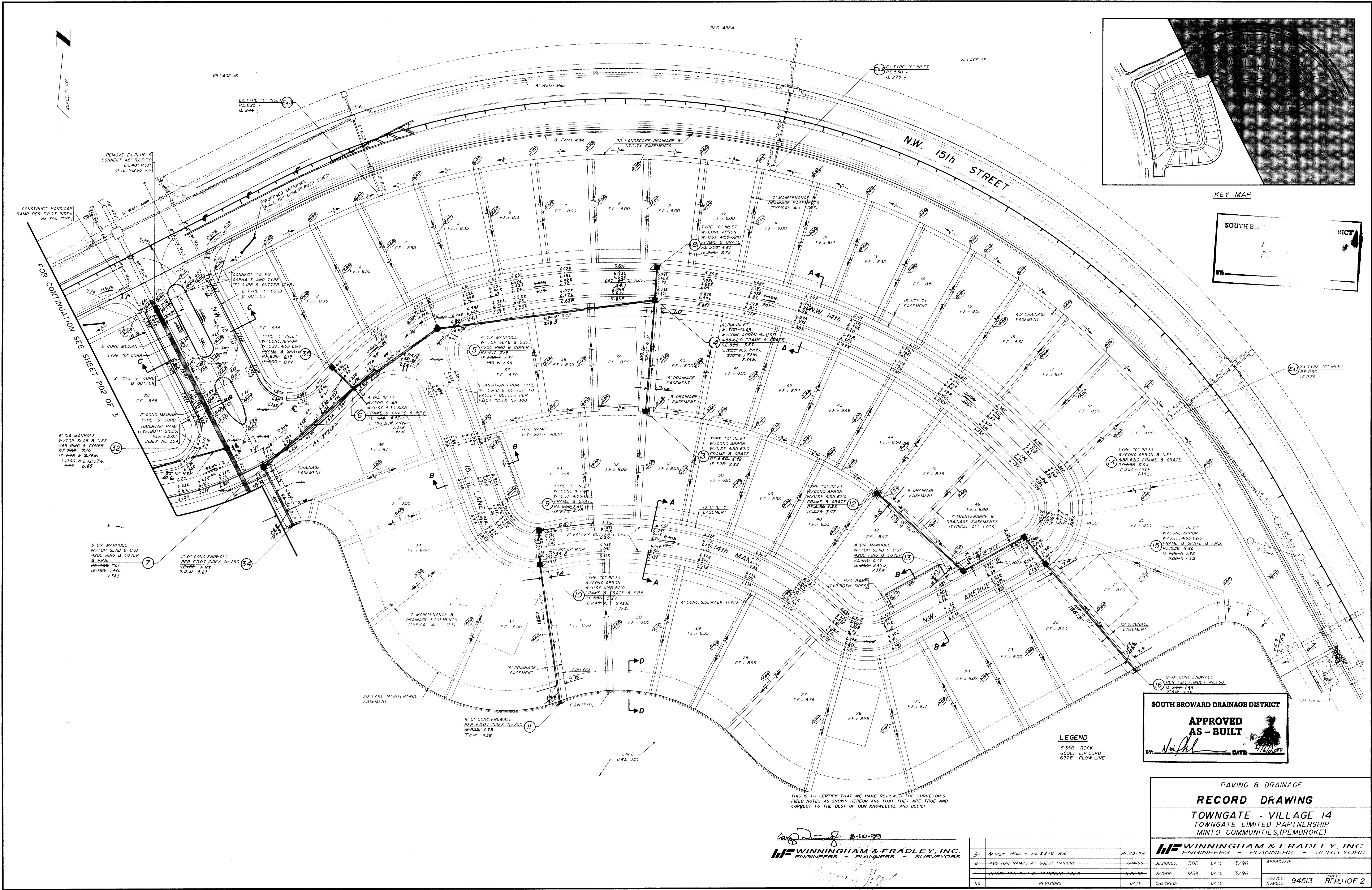
LAKE BANK
RECORD DRAWING

TOWNGATE VILLAGE 14
TOWNGATE LIMITED PARTNERSHIP
MINTO COMMUNITIES (PEMBROKE), INC.

WINNINGHAM & FRADLEY, INC.
ENGINEERS • PLANNERS • SURVEYORS

DESIGNED: D.O.	DATE: 6/97	APPROVED:
DRAWN: D.O.	DATE: 6/97	PROJECT NUMBER: 94513
CHECKED:	DATE:	SHEET: LB2 OF 2

JAN 06 2000



SOUTH BROWARD DRAINAGE DISTRICT
APPROVED AS - BUILT
BY: *[Signature]* DATE: 1/16/99

LEGEND
6.35R ROCK
6.50L LIP CURB
6.37F FLOW LINE

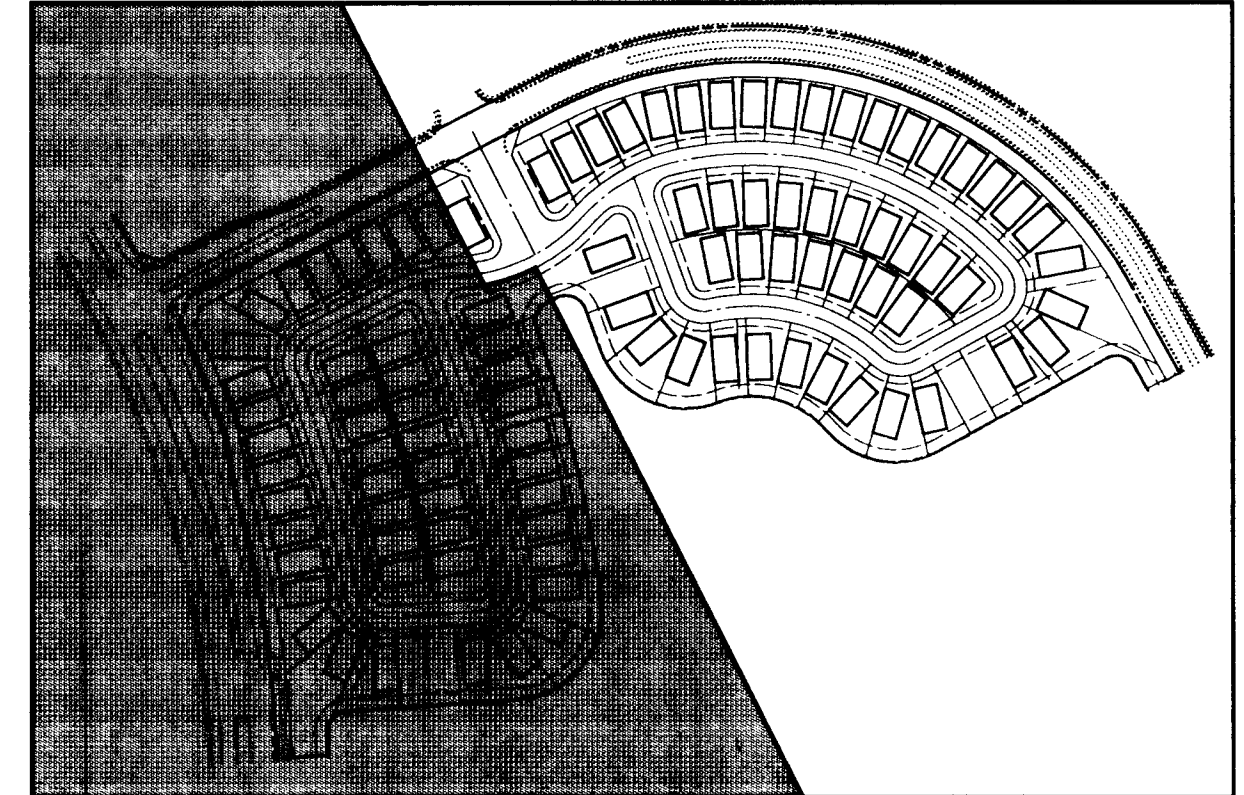
THIS IS TO CERTIFY THAT WE HAVE REVIEWED THE SURVEYOR'S FIELD NOTES AS SHOWN HEREON AND THAT THEY ARE TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

WINNINGHAM & FRADLEY, INC.
ENGINEERS - PLANNERS - SURVEYORS

NO.	REVISIONS	DATE
1	REVISED LINE 11-12 RE	10-23-98
2	ADD HYD RAMP AT GUEST PARKING	6-14-98
3	REVISE PER CITY OF PEMBROKE PINES	5-22-98

PAVING & DRAINAGE	
RECORD DRAWING	
TOWNGATE - VILLAGE 14	
TOWNGATE LIMITED PARTNERSHIP MINTO COMMUNITIES, (PEMBROKE)	
DESIGNED: DDD	DATE: 3/96
DRAWN: MSK	DATE: 3/96
CHECKED: [Signature]	DATE: [Signature]
PROJECT NUMBER: 94513	SHEET: R0210F 2

SCALE 1" = 40'



KEYMAP



LEGEND
63SR ROCK
650L LIP CURB
63TF FLOW LINE

THIS IS TO CERTIFY THAT WE HAVE REVIEWED THE SURVEYOR'S FIELD NOTES AS SHOWN HEREON AND THAT THEY ARE TRUE AND CORRECT TO THE BEST OF OUR KNOWLEDGE AND BELIEF.

8-10-99

WINNINGHAM & FRADLEY, INC.
ENGINEERS - PLANNERS - SURVEYORS

PAVING & DRAINAGE RECORD DRAWING			
TOWNGATE - VILLAGE 14 TOWNGATE LIMITED PARTNERSHIP MINTO COMMUNITIES (PEMBROKE), INC.			
WINNINGHAM & FRADLEY, INC. ENGINEERS - PLANNERS - SURVEYORS		DESIGNED: ODD	DATE: 3/96
		DRAWN: MSK	DATE: 3/96
		CHECKED: DATE:	APPROVED:
		PROJECT NUMBER: 94513	RDPD 2 OF 2

AUG 10 1999

TOWNGATE-VILLAGE 14

CITY OF PEMBROKE PINES, BROWARD COUNTY, FLORIDA

TOWNGATE LIMITED PARTNERSHIP MINTO COMMUNITIES (PEMBROKE), INC.

SOUTH BROWARD DRAINAGE DISTRICT

APPROVED

PERMIT # 0293450-17 DATE: 5-9-96

BY: [Signature]

INDEX TO SHEETS

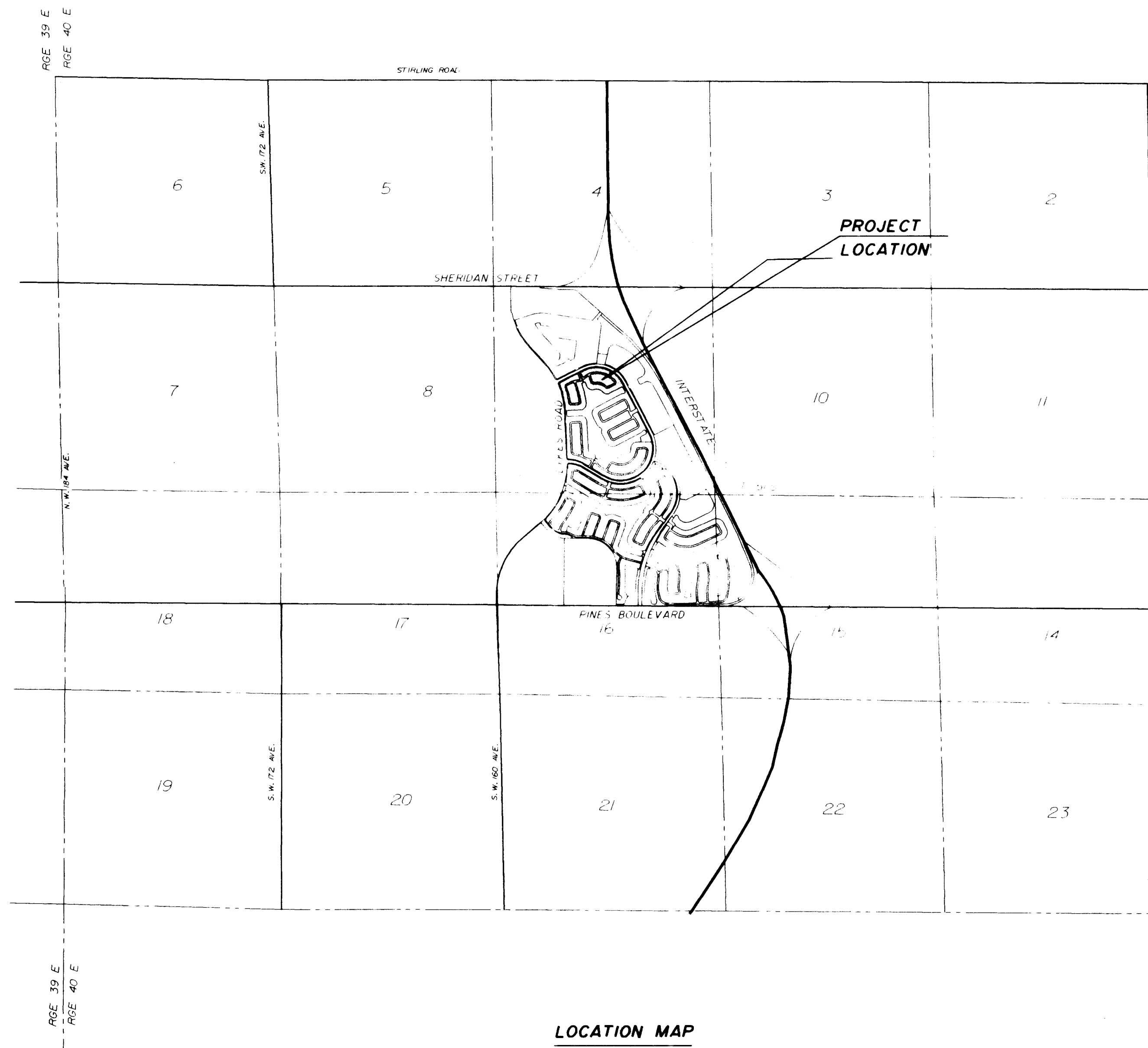
DESCRIPTION	SHEET NUMBER
GENERAL NOTES	GN OF 1
PAVING & DRAINAGE SYSTEM - PLAN	PD1 OF 3
PAVING & DRAINAGE SYSTEM - PLAN	PD2 OF 3
PAVING & DRAINAGE SYSTEM - DETAILS	PD3 OF 3
TRAFFIC MARKINGS - PLAN	TM OF 1
WATER DISTRIBUTION & SEWAGE COLLECTION SYSTEM - PLAN	WS1 OF 6
WATER DISTRIBUTION & SEWAGE COLLECTION SYSTEM - PLAN	WS2 OF 6
SEWAGE COLLECTION SYSTEM - PROFILES	WS3 OF 6
SEWAGE COLLECTION SYSTEM - PROFILES	WS4 OF 6
WATER DISTRIBUTION SYSTEM - DETAILS	WS5 OF 6
SEWAGE COLLECTION SYSTEM - DETAILS	WS6 OF 6

Legal Description

A 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 southernmost southwest corner of Parcel "D", as shown on said plat of TOWNGATE, thence North 18°58'34" East, (bearings are based on the record plat) for 48.64 feet, thence North 62°59'48" East, this course being along the north line of Parcel "D", for 471.11 feet to the POINT OF BEGINNING, thence North 62°59'48" East, for 150.00 feet, thence South 17°59'48" West, for 35.36 feet, thence North 62°59'48" East, for 88.29 feet to a point of curvature, thence northeasterly, easterly and southeasterly along the arc of a curve to the right, having a radius of 695.00 feet and a central angle of 88°08'01", for 1069.06 feet to a point of tangency, thence South 28°52'11" East, for 156.00 feet, thence South 61°07'49" West, for 35.00 feet, thence North 28°52'11" West, for 35.00 feet to a point of curvature, thence northeasterly, westerly and southwesterly along the arc of a curve to the left, having a radius of 35.00 feet and a central angle of 90°00'00", for 54.98 feet to a point of tangency, thence South 61°07'49" West, for 317.59 feet to a point of curvature, thence southwesterly, westerly and northwesterly along the arc of a curve to the right, having a radius of 150.00 feet and a central angle of 78°14'22", for 204.83 feet to a point of reverse curvature, thence northwesterly, westerly and southwesterly along the arc of a curve to the left, having a radius of 164.00 feet and a central angle of 69°56'22", for 200.19 feet to a point of reverse curvature, thence southwesterly, westerly and northwesterly along the arc of a curve to the right, having a radius of 150.00 feet and a central angle of 90°34'11", for 237.11 feet to a point of tangency, thence North 20°00'00" West, for 70.88 feet to a point of curvature, thence northwesterly, westerly and southwesterly along the arc of a curve to the left, having a radius of 35.00 feet and a central angle of 98°02'18", for 59.89 feet to a point of reverse curvature, thence southwesterly along the arc of a curve to the right, having a radius of 380.00 feet and a central angle of 02°28'12", for 16.38 feet to a point of reverse curvature, thence southwesterly and southerly along the arc of a curve to the left, having a radius of 35.00 feet and a central angle of 83°20'47", for 50.91 feet to a point of reverse curvature, thence southerly along the arc of a curve to the right, having a radius of 2417.00 feet and a central angle of 10°53'30", for 459.46 feet to a point of compound curvature, thence southerly, southwesterly and westerly along the arc of a curve to the right, having a radius of 150.00 feet and a central angle of 94°10'29", for 246.55 feet to a point of tangency, thence South 86°09'07" West, for 285.98 feet to a point of curvature, thence westerly, southwesterly and southerly along the arc of a curve to the left, having a radius of 35.00 feet and a central angle of 90°00'00", for 54.98 feet to a point of tangency, thence South 03°50'53" East, for 35.00 feet, thence South 86°09'07" West, for 60.00 feet, thence North 03°50'53" West, for 54.96 feet to a point of curvature, thence northerly along the arc of a curve to the left, having a radius of 1880.00 feet and a central angle of 11°57'16", for 392.25 feet, thence North 10°30'35" West, for 101.06 feet to a point on a curve at which a radial line bears South 71°08'54" West, thence northwesterly along the arc of a curve to the left, having a radius of 1892.00 feet and a central angle of 05°53'12", for 194.39 feet, thence North 18°58'34" East, for 28.47 feet, thence North 62°59'48" East, for 486.01 feet, thence North 72°00'12" West, for 35.36 feet to the POINT OF BEGINNING.

Said lands situate lying and being in the City of Pembroke Pines, Broward County, Florida.



LEGEND	SANITARY STRUCTURE DESIGNATION
280 LF. 8" P.V.C. 0.142%	LENGTH, SIZE, TYPE, AND SLOPE OF PIPE
[Symbol]	FIRE HYDRANT WITH GATE VALVE & B.R.
[Symbol]	BACTERIOLOGICAL SAMPLING POINT
RE.	RIM ELEVATION
IE.	INVERT ELEVATION
[Symbol]	INLET DESIGNATION
250 - 24" R.C.P. (24" C.M.P.)	LENGTH, SIZE, AND TYPE OF PIPE
[Symbol]	FLOW OR WARP LINE
[Symbol]	RIDGE LINE
0.40%	PAVEMENT SLOPE AND DIRECTION
[Symbol]	DIRECTION OF OVERLAND FLOW
P.R.B.	POLLUTION RETARDANT BAFFLE
F.F. - 8.00	FINISHED FLOOR ELEVATION
[Symbol]	CONCRETE SIDEWALK
[Symbol]	EXISTING OR FUTURE UTILITIES
[Symbol]	PROPOSED GRADE
[Symbol]	EXISTING GRADE
[Symbol]	PROPOSED PAVEMENT
[Symbol]	EXISTING OR FUTURE PAVEMENT
F.H.	FIRE HYDRANT
G.V.	GATE VALVE
W.M.	WATER MAIN
F.M.	FORCE MAIN
W.R.	WHITE REFLECTOR
B.R.	BLUE REFLECTOR

PAVING AND DRAINAGE TRAFFIC MARKINGS WATER DISTRIBUTION SYSTEM SEWAGE COLLECTION SYSTEM

GENERAL NOTES FOR WATER DISTRIBUTION AND SEWAGE COLLECTION SYSTEMS

1. ALL APPLICABLE PERMITS MUST BE OBTAINED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
2. ALL APPLICABLE FEES AND CHARGES MUST BE PAID PRIOR TO COMMENCEMENT OF CONSTRUCTION.
3. 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 & UTILITY DEPARTMENT AT LEAST 48 HOURS IN ADVANCE OF COMMENCING CONSTRUCTION.
7. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING LOCATIONS OF ALL UTILITIES, AND NOTIFICATION OF SUNSHINE STATE (1) PH: 800-432-4770, 48 HOURS IN ADVANCE OF CONSTRUCTION.
8. 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.

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.
10. 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.
11. 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.

13. 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.

15. 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.

16. 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 RPM'S FOR MANHOLES, WHITE RPM'S FOR GATE VALVES, AND GREEN RPM'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". FIRE HYDRANTS MUST HAVE A 7.5' CLEAR RADIUS OF ALL OBSTRUCTIONS, POLES, BOXES, PLANTINGS, ETC.
20. THE MINIMUM FOOT VALVE SIZE ON FIRE HYDRANTS SHALL BE 5 1/4".
21. AT PROJECT COMPLETION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REMOVING EXCESS DEBRIS FROM THE CONSTRUCTION SITE.

GENERAL NOTES FOR SEWAGE COLLECTION SYSTEM & DRAINAGE SYSTEM

1. PRECAST STRUCTURES SHALL CONFORM TO ASTM C-478 AND 647. PRECAST STRUCTURE MUST BE CERTIFIED BY AN 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 4000 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.
7. 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 CEMENT.
9. ALL SPACES AROUND PIPES ENTERING OR LEAVING MANHOLES SHALL BE COMPLETELY FILLED WITH EMBECO MORTAR (NON-METALLIC) OR BONSAL (NON-SHRINKING).
10. 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.

11. 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".
12. 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.
13. 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.
14. 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. 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.
17. ALL PROBLEMS/DEFECTS ASSOCIATED WITH THE SANITARY SEWER SYSTEM SHALL BE PROPERLY ADDRESSED PRIOR TO CITY CERTIFICATION TO ANY AGENCY.
18. 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

1. ALL WATER MAIN SHALL BE PVC CONFORMING TO AN 1/1 AWWA SPECIFICATION C-900-89 DR18.
2. FITTINGS SHALL BE DUCTILE IRON CLASS 350 MEETING AWWA/ANSI C153/A2153-88 SPECIFICATIONS. FITTINGS MUST BE CEMENT LINED AND SEAL COATED PER AWWA/ANSI C104/A214-90.
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, 200 PSI RATING.
5. 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.
6. PAVEMENT RESTORATION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
7. 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 HRS 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 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.

$$Q = S \cdot D \cdot \sqrt{P}$$
$$133200$$

- 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

11. THE MINIMUM DEPTH OF COVER OVER PVC WATER MAINS SHALL BE 36 INCHES & OVER DIP SHALL BE 30 INCHES.
12. DISINFECTING OF MAINS SHALL COMPLY WITH AWWA C-651-92 SPECIFICATIONS. STANDARD BACTERIOLOGICAL SAMPLING POINTS SHALL BE DESIGNATED ON THE ENGINEERING PLANS. (FOR THE MAIN SHALL NOT BE DISINFECTED)
13. MINIMUM VALVE SPACING SHALL BE AS PER SECTION 82 OF THE TEN STATES STANDARDS.
14. WHEN PVC IS USED FOR WATER MAIN, A 3" STRIP OF METALLIC 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-METALLIC TAPE SHALL BE USED ON DIP.
15. ALL DIP WATER MAIN SHALL BE CLASS 350, CONFORMING TO ANSI/AWWA SPECIFICATION C151/A214-91 AND BE CEMENT MORTAR LINED AND SEAL COATED PER ANSI/AWWA SPECIFICATION C104/A214-90.
15. PLUG VALVES SHALL BE DUCTILE IRON MANUFACTURED BY CLOW OR EQUAL.
16. A TEMPORARY METER SHALL BE INSTALLED BY THE CONTRACTOR FOR ANY TEMPORARY SERVICES.
17. 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

1. 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.
2. 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 C76-85a.
5. MINIMUM COVER FOR ALL PIPE CULVERTS SHALL MEET THE REQUIREMENTS OF THE FLORIDA DEPARTMENT OF TRANSPORTATION ROADWAY AND TRAFFIC DESIGN STANDARDS (INDEX NO. 2.15).
6. ALL UNDERGROUND FACILITIES SHALL BE INSTALLED PRIOR TO PLACING THE LIMEROCK BASE MATERIAL.
7. 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.

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 APPROVED BY THE CITY OF PEMBROKE PINES.
10. 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

1. 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.
2. 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%).
3. 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 x8. THE SOUTH BROWARD DRAINAGE DISTRICT'S WORKING HOURS ARE FROM 8:00 A.M. TO 4:30 P.M.
4. ANY REVISIONS TO THESE PLANS MUST BE APPROVED BY SOUTH BROWARD DRAINAGE DISTRICT PRIOR TO CONSTRUCTION.
5. BONDS AND INSPECTIONS
- UPON DISTRICT BOARD OF SUPERVISORS APPROVAL OF PLANS, BUT BEFORE CONSTRUCTION CAN COMMENCE, THE FOLLOWING ITEMS MUST BE COMPLIED WITH:
- A. 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.
- 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.
6. 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 x8. 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.
7. 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-BUILT'S 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.
8. LAKE AND CANAL AS-BUILT'S 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-BUILT'S", 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.
10. 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 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:

1. ALL WATER MAINS SHALL HAVE THE TOP OF PIPE'S ELEVATION SHOWN AT 100' O/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 SERVICES, VALVES, FIRE HYDRANTS & 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 CERTIFIED BY A PLS. REGISTERED IN THE STATE OF FLORIDA.

GENERAL NOTES

TOWNGATE - VILLAGE 14
TOWNGATE LIMITED PARTNERSHIP
MINTO COMMUNITIES (PEMBROKE), INC.

WINNINGHAM & FRADLEY, INC.
ENGINEERS - PLANNERS - SURVEYORS

DESIGNED: WBF DATE: 4/96

DRAWN: WBF DATE: 4/96

CHECKED: DATE:

APPROVED:

DATE:

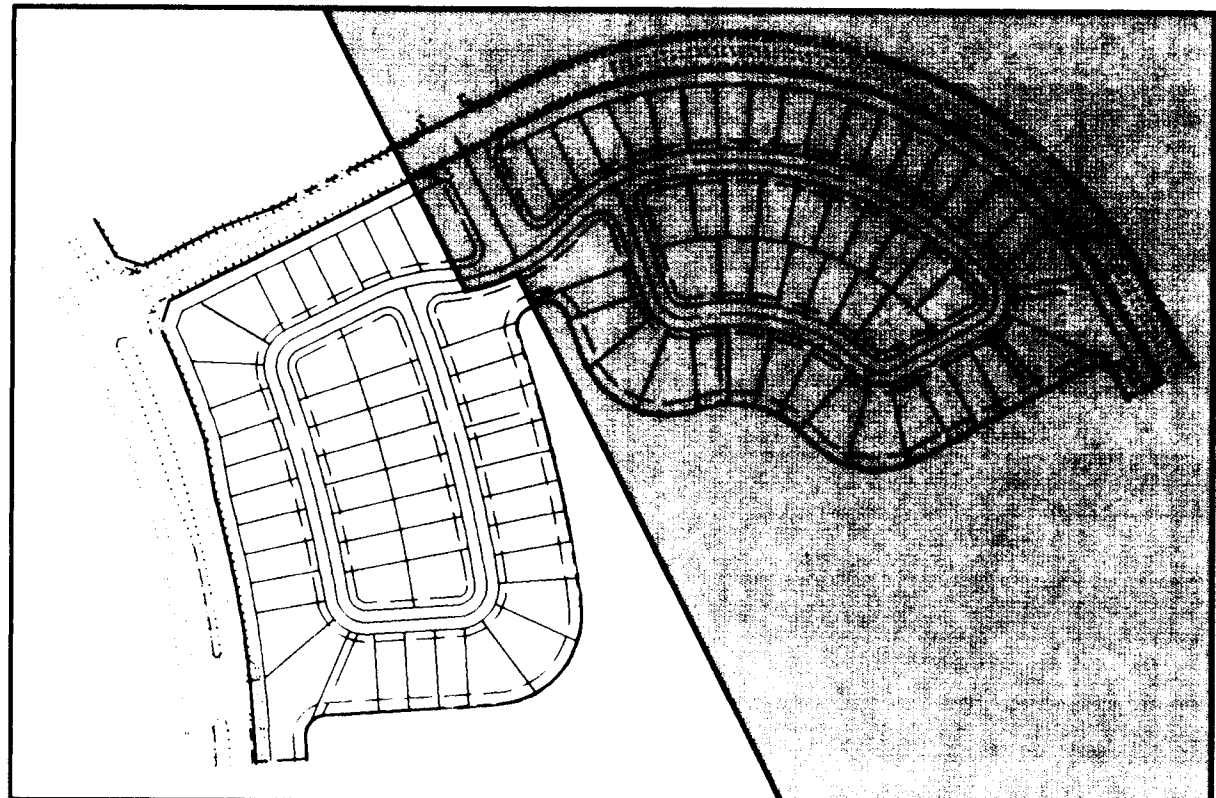
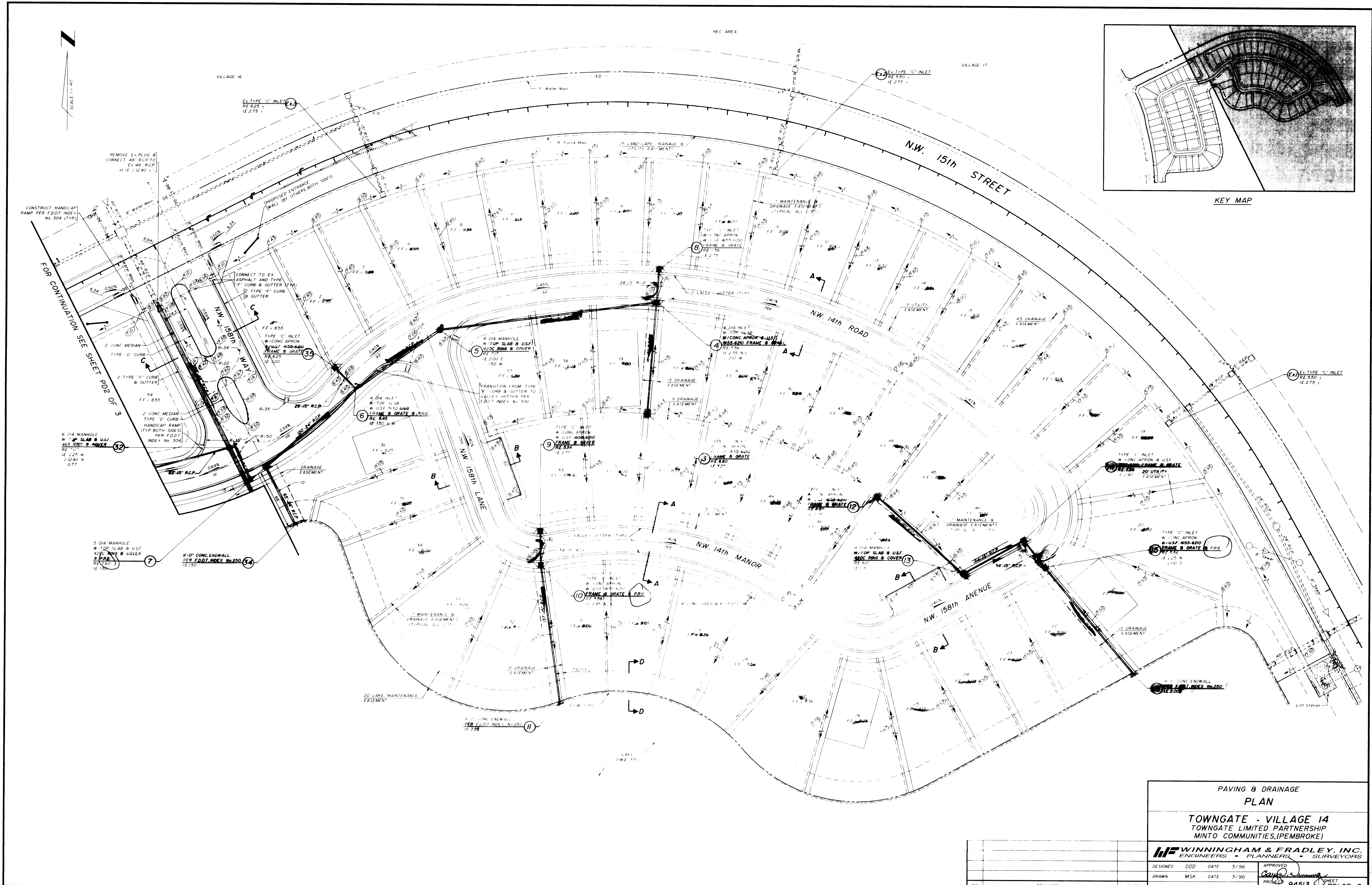
PROJECT NUMBER

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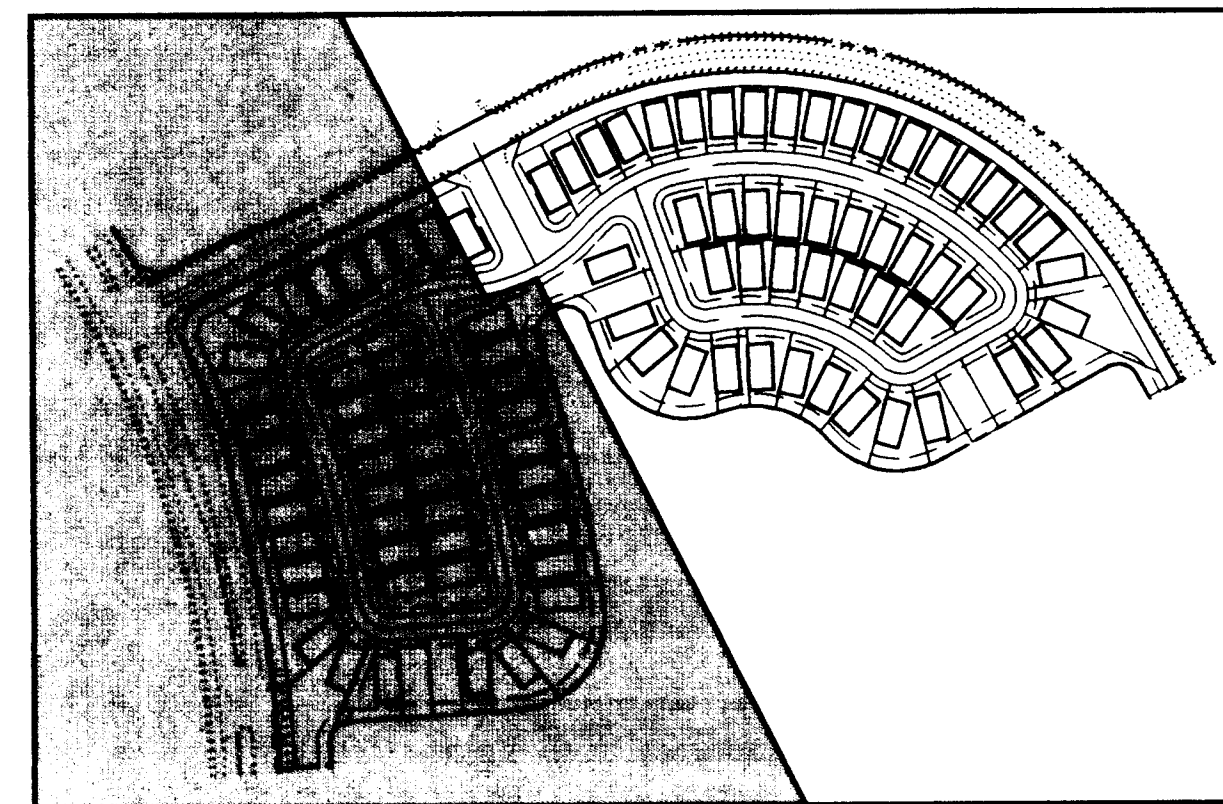


KEY MAP

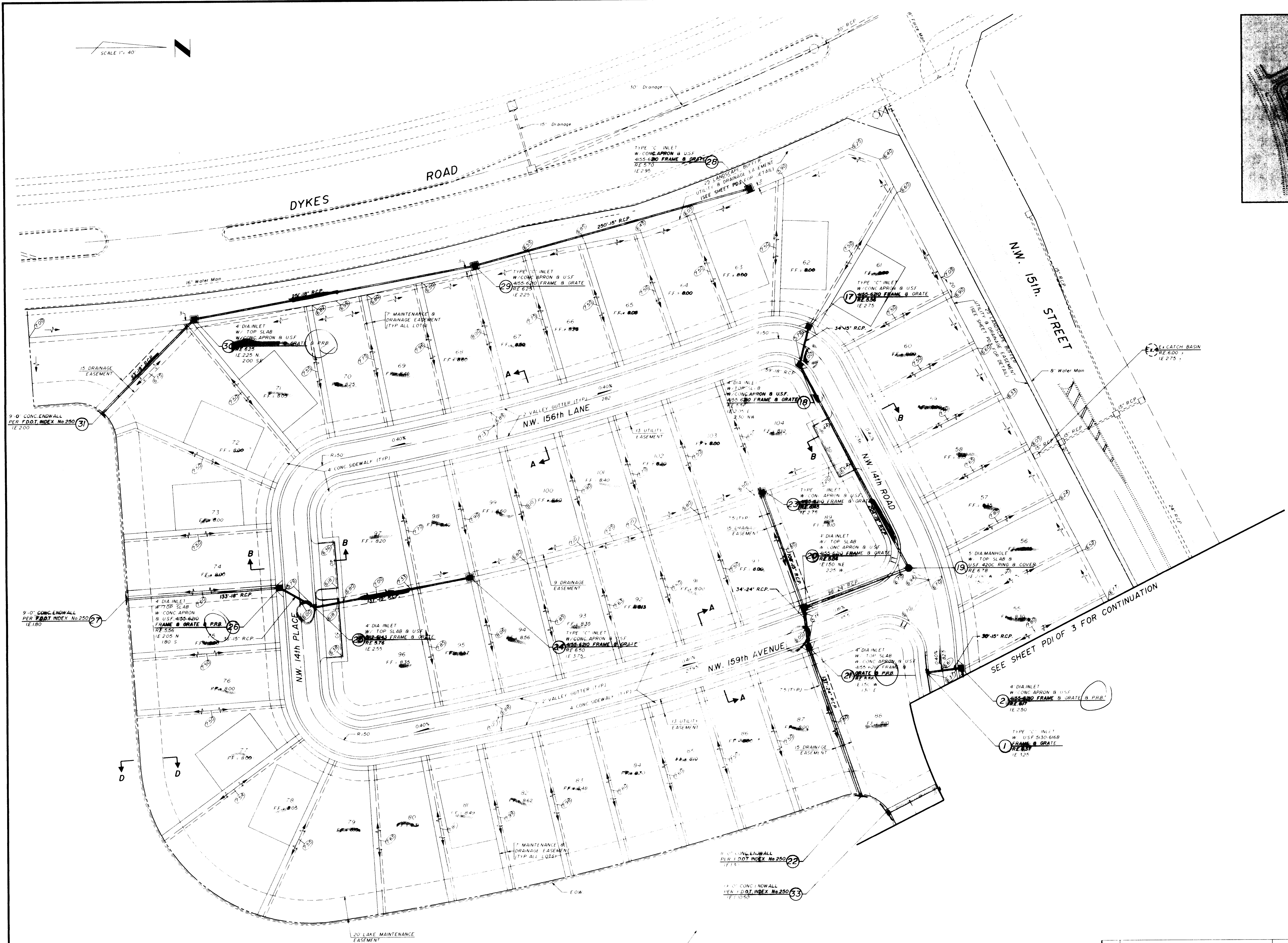
PAVING & DRAINAGE PLAN			
TOWNGATE - VILLAGE 14 TOWNGATE LIMITED PARTNERSHIP MINTO COMMUNITIES, (PEMBROKE)			
WINNINGHAM & FRADLEY, INC. ENGINEERS • PLANNERS • SURVEYORS			
DESIGNED	DDD	DATE	3/96
DRAWN	MSK	DATE	3/96
CHECKED		DATE	
APPROVED			
PROJECT NUMBER	94513	SHEET	PDI OF 3

APR 10 1996

SCALE 1" = 40'



KEYMAP



PAVING & DRAINAGE PLAN			
TOWNGATE - VILLAGE 14 TOWNGATE LIMITED PARTNERSHIP MINTO COMMUNITIES (PEMBROKE), INC.			
WINNINGHAM & FRADLEY, INC. ENGINEERS - PLANNERS - SURVEYORS			
DESIGNED: DDD	DATE: 3/96	APPROVED: <i>[Signature]</i>	SHEET: PD2 OF 3
DRAWN: MSK	DATE: 3/96	PROJECT NUMBER: 94513	
NO.	REVISIONS	DATE	CHECKED: DATE

APR 10 1996

APR 10 1996