COMPONENTS OF CONTRACT PLANS SET

ROADWAY PLANS
SIGNAL PLANS
LIGHTING PLANS

A DETAILED INDEX APPEARS ON THE KEY SHEET OF EACH COMPONENT

INDEX OF ROADWAY PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2 - 6	TYPICAL SECTIONS
7	REFERENCE POINTS / GENERAL NOTES
8 - 13	ROADWAY PLAN-PROFILE SHEETS
14	SIDEWALK GEOMETRY
15	CONTROL STRUCTURE DETAIL
16 - 27	CROSS SECTIONS
28 - 33	SIGNING AND PAVEMENT MARKING SHEETS

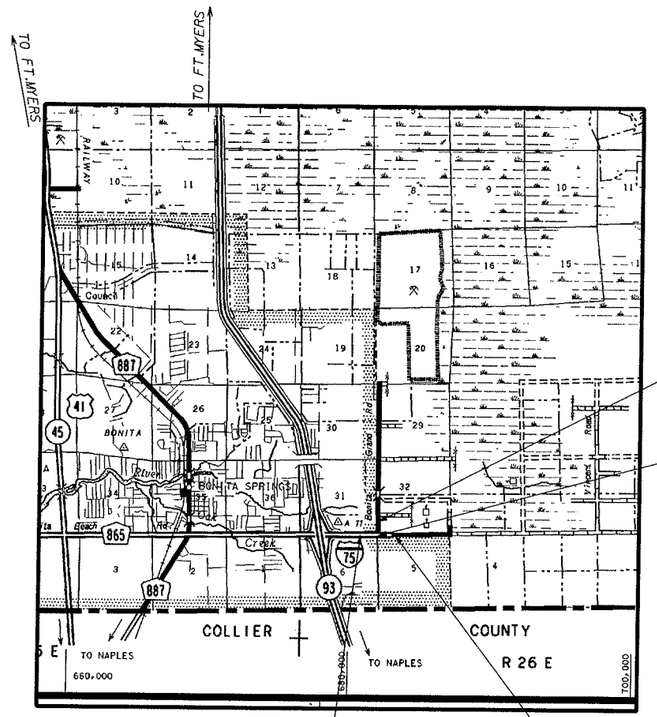
GOVERNING STANDARDS AND SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION, DESIGN STANDARDS DATED JANUARY 2002, AND STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED 2004, AS AMENDED BY CONTRACT DOCUMENTS.

LEE COUNTY
DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

BONITA GRANDE DRIVE AT BONITA BEACH ROAD INTERSECTION

LEE COUNTY PROJECT NO. 6039

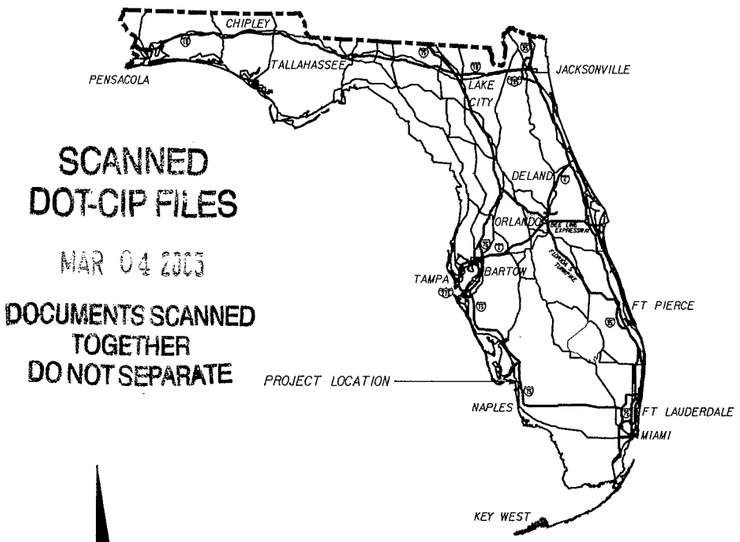


BEGIN PROJECT
STA. 2+29.02
BONITA BEACH ROAD

END PROJECT
STA. 19+36.15
BONITA BEACH ROAD

END PROJECT
STA. 106+02.32
BONITA GRANDE DRIVE

BEGIN PROJECT
STA. 99+89.20
BONITA GRANDE DRIVE



SCANNED
DOT-CIP FILES
MAR 04 2005
DOCUMENTS SCANNED TOGETHER
DO NOT SEPARATE

N

0 1 2
Miles

ROADWAY SHOP DRAWINGS TO BE SUBMITTED TO:

LEE COUNTY
DEPARTMENT OF TRANSPORTATION
P.O. BOX 398
FT. MYERS, FL. 33902

PLANS PREPARED BY:

HITMAN MARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA
12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.

FEB 11 2005

PROJECT LENGTH IS BASED ON ℄ CONSTRUCTION

LENGTH OF PROJECT		
	LINEAR FEET	MILES
ROADWAY	2320.25	0.4394
BRIDGES		
NET LENGTH OF PROJECT	2320.25	0.4394
EXCEPTIONS		
GROSS LENGTH OF PROJECT	2320.25	0.4394

LCDOT PROJECT MANAGER: JESSICA WHITE, E.I.

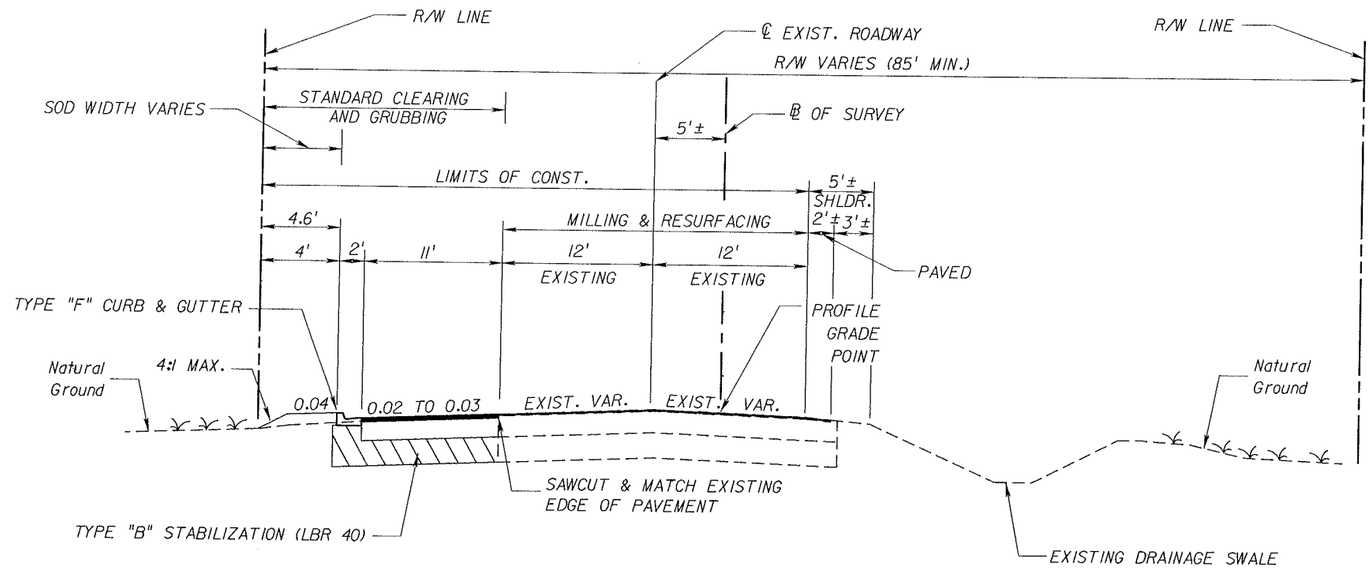
KEY SHEET REVISIONS		
DATE	BY	DESCRIPTION

ROADWAY PLANS
ENGINEER OF RECORD: DANIEL M. CRAIG

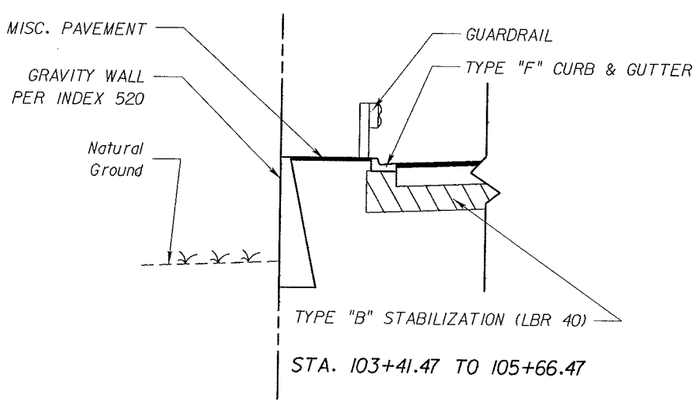
P.E. NO.: 38590

Daniel M Craig
2-11-05

FISCAL YEAR	SHEET NO.
04	1



TYPICAL SECTION
BONITA GRANDE DRIVE
STA. 99+89.20 TO 106+02.32



STA. 103+41.47 TO 105+66.47

DESIGN SPEED = 45 MPH

MILLING

STA. 99+89.20 TO 106+02.32 BONITA GRANDE NORTH

MILL EXISTING ASPHALT (1" AVG. DEPTH)

RESURFACING

STA. 99+89.20 TO 106+02.32 BONITA GRANDE NORTH

TYPE S-III SURFACE COURSE (105 LBS/SY)

WIDENING

OPTIONAL BASE GROUP 9 WITH
TYPE S-I STRUCTURAL COURSE (TRAFFIC C) (150 LBS/SY)
AND TYPE S-III SURFACE COURSE (105 LBS/SY)

GENERAL NOTES

1. FOR DETAILS AND LIMITS OF SELECTIVE CLEARING AND GRUBBING SEE TYPICAL SECTION.

DAN M. CRAIG
FL P.E. #38590
2-11-05

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PIZZAT ENGINEERS — PIZZAT • HARTENSTEIN & ASSOC., INC. — JACKSONVILLE • FORT MYERS • TAMPA
12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464

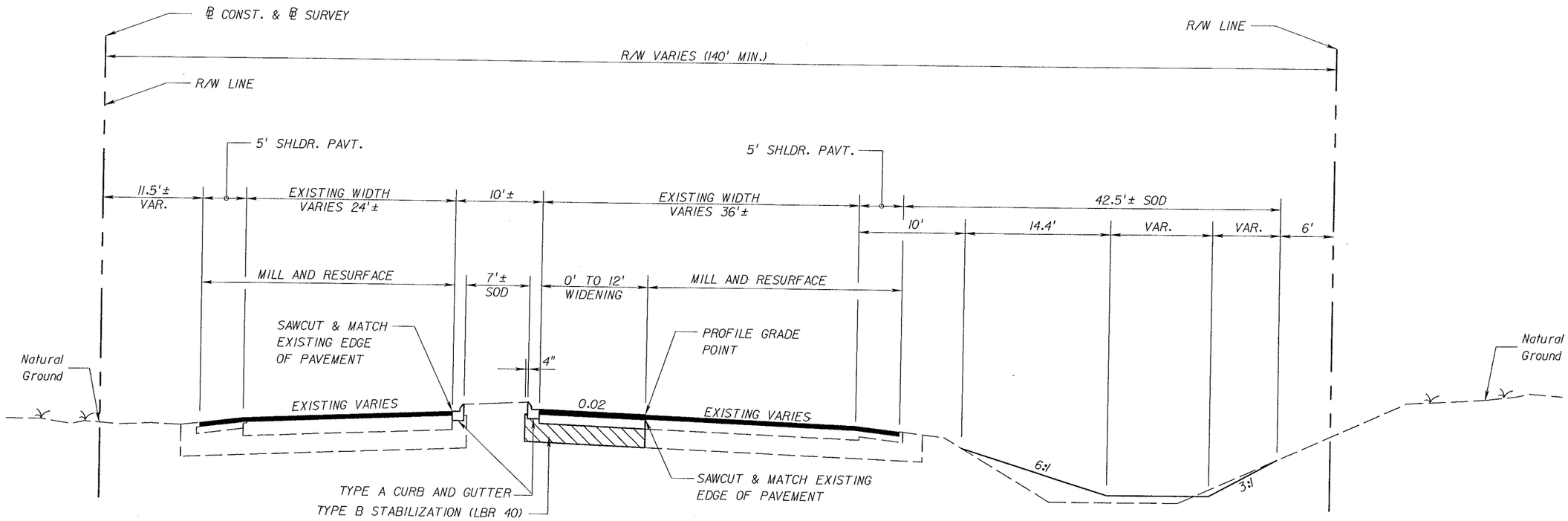
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

BONITA GRANDE DRIVE
TYPICAL SECTION

SHEET NO. 2

02/11/2005 11:07:34 AM P:\20008.201\cadd\roadway\typsrd01.dgn



TYPICAL SECTION
BONITA BEACH ROAD
STA. 2+29.02 TO STA. 6+97.14

MILLING

MILL EXISTING ASPHALT PAVEMENT (1" AVG. DEPTH)

RESURFACING

TYPE S-III SURFACE COURSE (105 LBS/SY)

WIDENING

OPTIONAL BASE GROUP 9 WITH
TYPE S-I STRUCTURAL COURSE (TRAFFIC C) (150 LBS/SY)
AND TYPE S-III SURFACE COURSE (105 LBS/SY)

DAN M. CRAIG
FL P.E. #38590

2-11-05

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA
12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

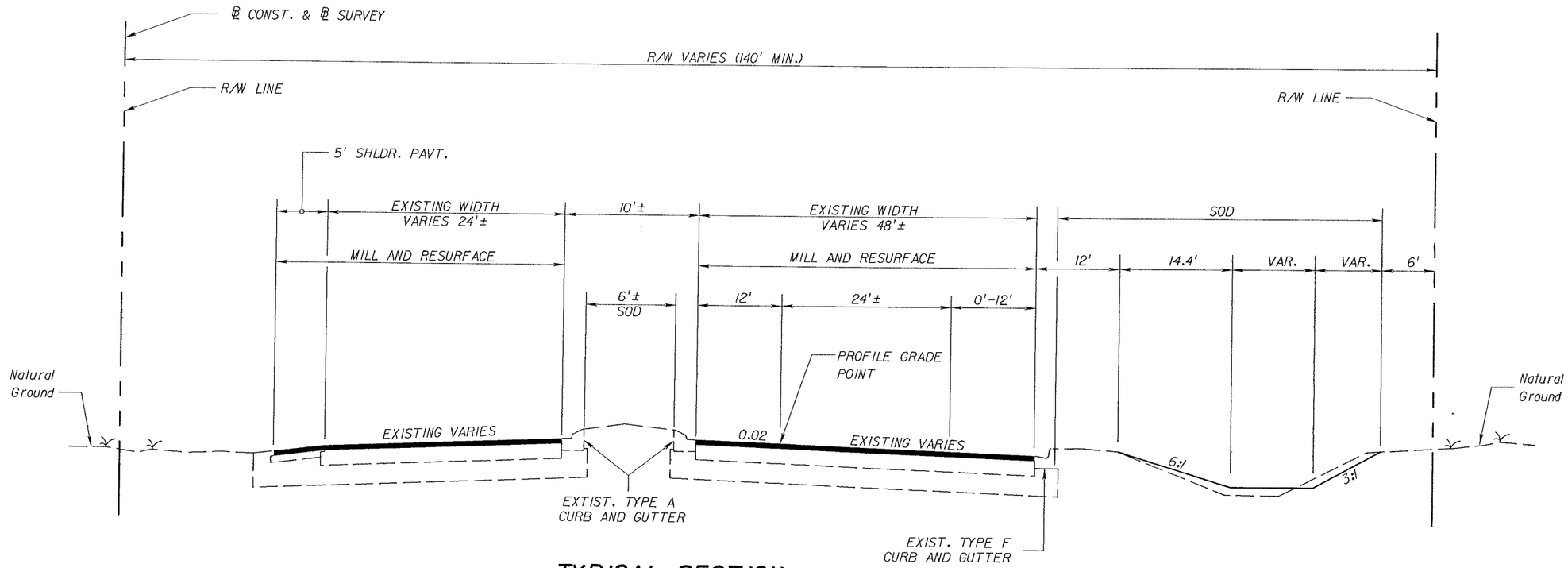
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

BONITA BEACH ROAD
TYPICAL SECTION

SHEET NO. 3

02/11/2005 11:07:37 AM P:\20008.201\cadd\roadway\typsrd02.dgn



TYPICAL SECTION
BONITA BEACH ROAD
STA. 6+97.14 TO STA. 10+30.00

MILLING

MILL EXISTING ASPHALT PAVEMENT (1" AVG. DEPTH)

RESURFACING

TYPE S-III SURFACE COURSE (105 LBS/SY)

Dan Craig
2-11-05

DAN M. CRAIG
FL P.E. #38590

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA

12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

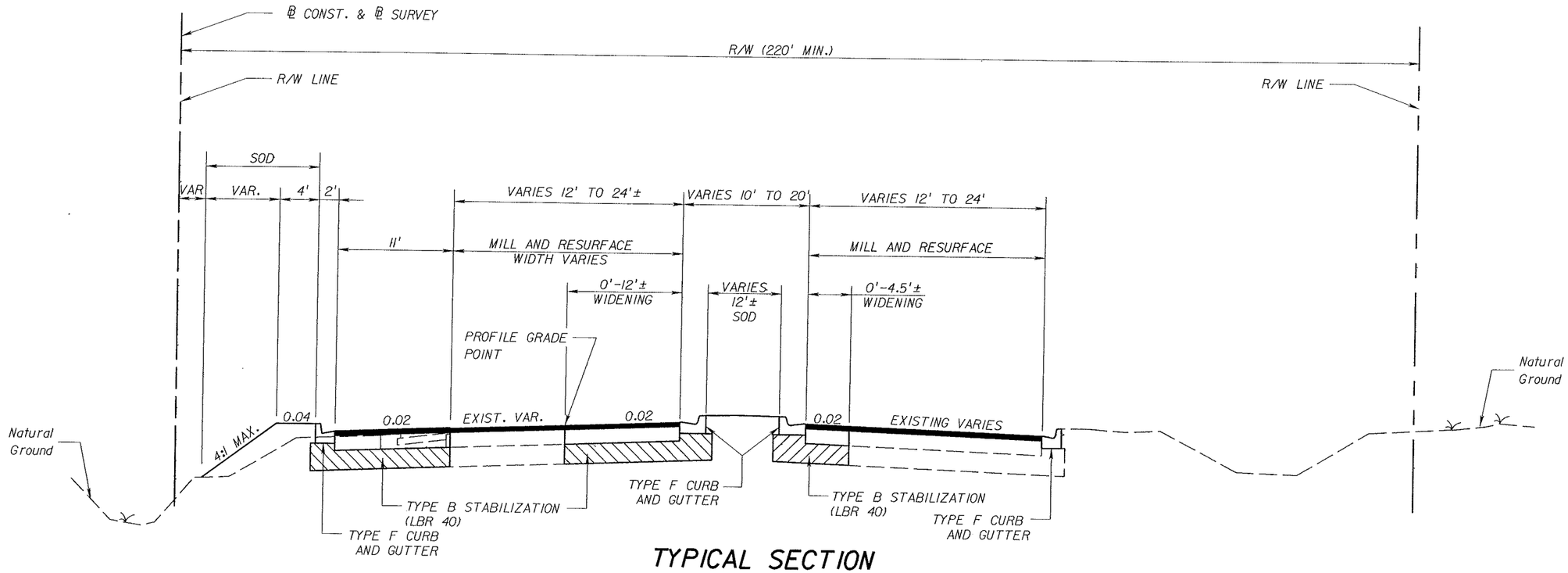
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

BONITA BEACH ROAD
TYPICAL SECTION

SHEET NO. 4

02/11/2005 11:07:37 AM P:\20008.201\cadd\roadway\typsrd02.dgn



TYPICAL SECTION
BONITA BEACH ROAD
STA. 10+30.00 TO STA. 11+70.98

MILLING

MILL EXISTING ASPHALT PAVEMENT (1" AVG. DEPTH)

RESURFACING

TYPE S-III SURFACE COURSE (105 LBS/SY)

WIDENING

OPTIONAL BASE GROUP 9 WITH
TYPE S-I STRUCTURAL COURSE (TRAFFIC C) (150 LBS/SY)
AND TYPE S-III SURFACE COURSE (105 LBS/SY)

Dan Craig
2-11-05

DAN M. CRAIG
FL P.E. #38590

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

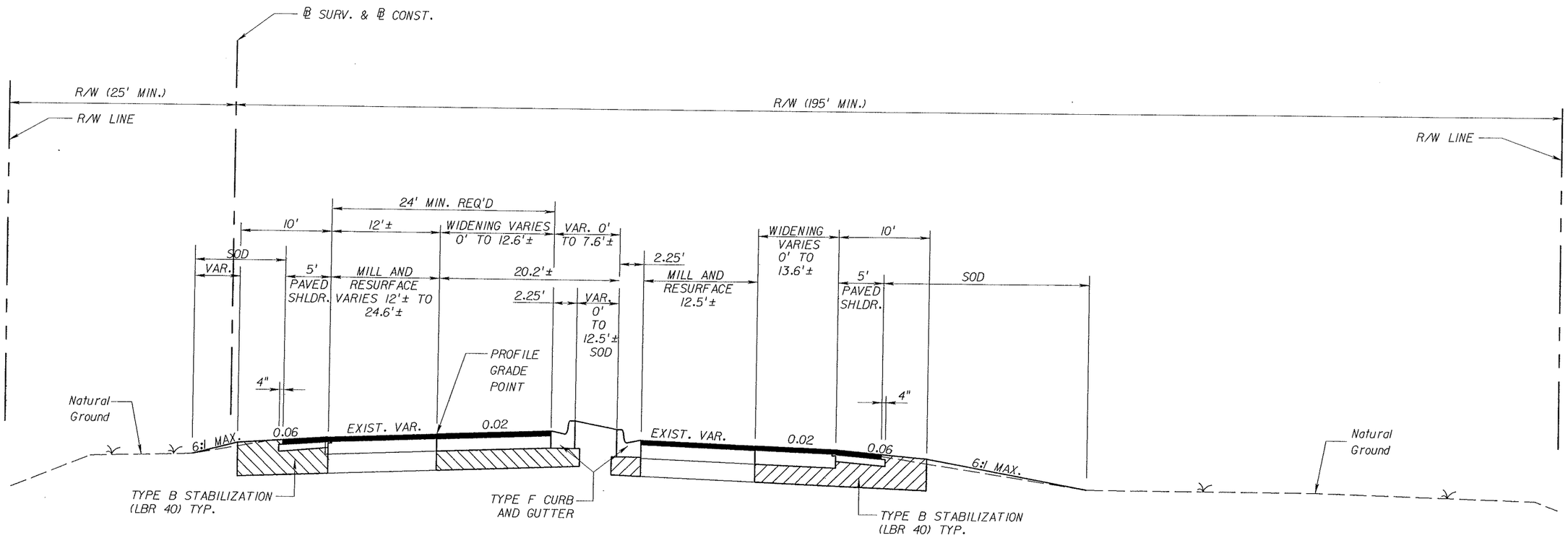
PITMAN HARTENSTINE & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA
12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

LEE COUNTY
DEPARTMENT OF TRANSPORTATION

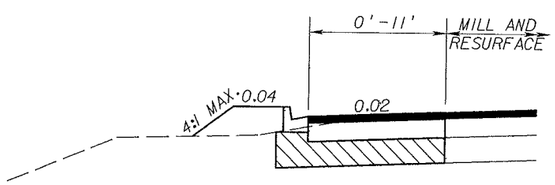
COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

BONITA BEACH ROAD
TYPICAL SECTION

SHEET NO. 5



TYPICAL SECTION
BONITA BEACH ROAD
STA. 11+70.98 TO STA. 19+36.15



TYPICAL SECTION LEFT HAND SIDE OF BONITA BEACH ROAD STA. 11+70.98 TO STA. 13+57.80

WIDENING

OPTIONAL BASE GROUP 9 WITH
TYPE S-I STRUCTURAL COURSE (TRAFFIC C) (150 LBS/SY)
AND TYPE S-III SURFACE COURSE (105 LBS/SY)

MILLING

MILL EXISTING ASPHALT PAVEMENT (1" AVG. DEPTH)

RESURFACING

TYPE S-III SURFACE COURSE (105 LBS/SY)

WIDENING

OPTIONAL BASE GROUP 9 WITH
TYPE S-I STRUCTURAL COURSE (TRAFFIC C) (150 LBS/SY)
AND TYPE S-III SURFACE COURSE (105 LBS/SY)

SHOULDER

OPTIONAL BASE GROUP 1 WITH
TYPE S-III SURFACE COURSE (105 LBS/SY)

Dan Craig 2-11-05
DAN M. CRAIG
FL P.E. #38590

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN HARTENSTEIN & ASSOC., INC. ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA
12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

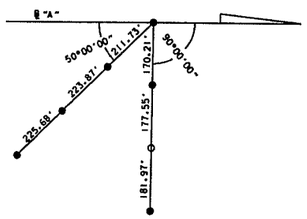
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

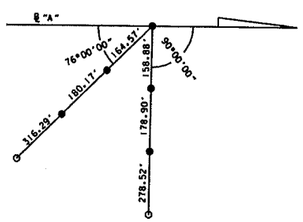
BONITA BEACH ROAD
TYPICAL SECTION

SHEET NO. 6

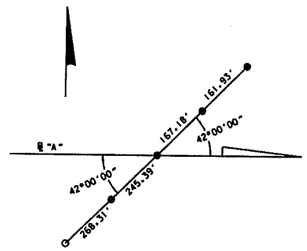
02/11/2005 11:07:37 AM P:\20008.201\cadd\roadway\typsrd02.dgn



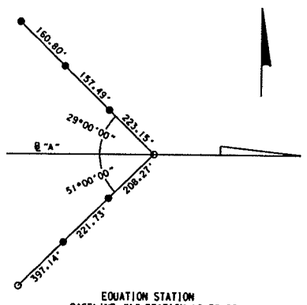
STATION 0+00.00
BASELINE "A"



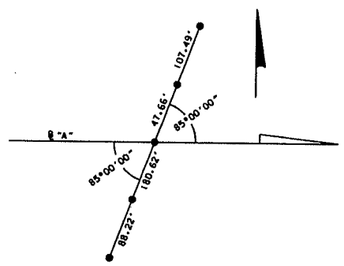
STATION 8+00.00
BASELINE "A"



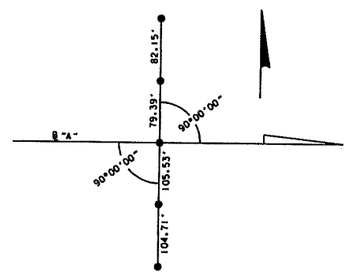
EQUATION STATION
BASELINE "A" STATION 10+00.00=
BASELINE "B" STATION 100+00.00



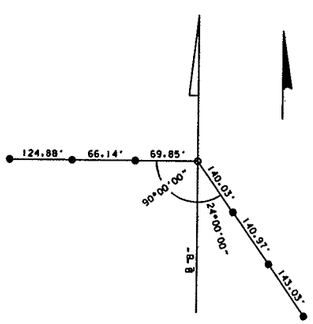
EQUATION STATION
BASELINE "A" STATION 10+30.00=
BASELINE "C" STATION 50+00.00



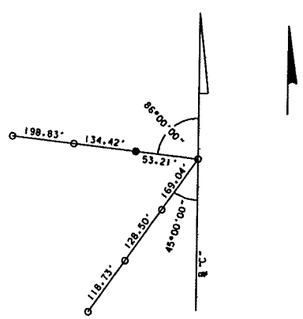
STATION 14+00.00
BASELINE "A"



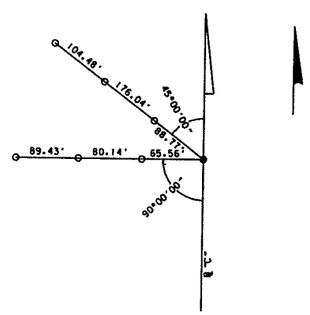
STATION 20+00.00
BASELINE "A"



STATION 108+00.00
BASELINE "B"



STATION 46+00.00
BASELINE "C"



STATION 44+00.00
BASELINE "C"

LEGEND:

- ● DENOTES SET 5/8" IRON ROD WITH "LB 3114" CAP UNLESS OTHERWISE NOTED
- O DENOTES SET P.K. NAIL WITH "LB 3114" DISC UNLESS OTHERWISE NOTED
- DENOTES SURVEY BASE LINE AS INDICATED

PAY ITEM NOTES:

CONTROL STRUCTURE SHALL INCLUDE ALL MATERIALS FOR COMPLETE STRUCTURE (I.E. 3" PVC, SODDING, CONCRETE DITCH PAVEMENT ETC.)

CLEAR & GRUBBING SHALL INCLUDE CURB & GUTTER AND SIDEWALK REMOVAL AS WELL AS REMOVAL OF CONCRETE DRIVEWAY AT THE LIFT STATION NOTED IN THE PLANS.

BM1
ELEV=17.27'
STA:8+00 155.4' RT.
C.M. WITH BRASS DISC
STANDARD 4" X 4" F.D.O.T.

BM2
ELEV=18.08'
STA:46+00 42.8' LT.
C.M. WITH BRASS DISC
STANDARD 4" X 4" F.D.O.T.

BM3
ELEV=12.72'
STA:108+00 54.8' LT.
C.M. WITH BRASS DISC
STANDARD 4" X 4" F.D.O.T.

BM4
ELEV=12.96'
STA:14+00 49.3' LT.
C.M. WITH BRASS DISC
STANDARD 4" X 4" F.D.O.T.

GENERAL NOTES:

1. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT UTILITY OWNERS AND DETERMINE THE EXACT LOCATION OF ALL UTILITIES. FLORIDA STATUTE 553.851 (1978) REQUIRES A MINIMUM OF TWO (2) DAYS AND MAXIMUM OF FIVE (5) DAYS NOTICE TO UTILITY OWNERS BEFORE START OF EXCAVATION.

FLORIDA POWER & LIGHT MR. ROY GARRISON 15834 WINKLER ROAD FORT MYERS, FL 33908 PHONE: (239) 332-9129	SPRINT MR. JOHN RENOLDS 3940 PROSPECT AVENUE, UNIT 10 NAPLES, FL 34104 PHONE: (239) 263-6342
BONITA SPRINGS UTILITIES MR. PAT JENNINGS 11860 EAST TERRY STREET BONTIA SPRINGS, FL 34135 PHONE: (239) 390-4818	COMCAST MR. BRIAN BELL 2931 MICHIGAN AVENUE FORT MYERS, FL 33916 PHONE: (239) 732-3870

2. ALL EXCAVATION AND TRENCHING MUST BE PERFORMED IN ACCORDANCE WITH THE FLORIDA TRENCH SAFETY ACT.

3. ALL DISTURBED AREA'S SHALL BE SODDED UPON COMPLETION OF CONSTRUCTION OR AS DIRECTED BY THE ENGINEER.

4. ALL DRAINAGE PIPE SHALL BE STEEL REINFORCED CONCRETE PIPE, CLASS III. NO SUBSTITUTIONS WILL BE ALLOWED.

5. CONTRACTOR IS TO SAW CUT THE EDGE OF PAVEMENT TO ENSURE A SMOOTH EDGE FOR NEW PAVEMENT STRUCTURE TO TIE INTO.

6. DISTURBED AREAS IN THE RIGHT-OF-WAY SHALL BE RESTORED TO MATCH EXISTING GRADES UNLESS OTHERWISE NOTED.

7. THE CONTRACTOR SHALL USE STAKED SILT FENCE (1 APPLICATION) AT THE RIGHT-OF-WAY LINES AND UTILIZE ROCK BAGS AROUND THE EXISTING AND NEW CURB INLETS (IN THE PROJECT AREA) TO PREVENT SEDIMENT FROM ENTERING THE DRAINAGE SYSTEM. HAYBALES SHALL BE USED AT SIDEDRAIN AND CONTROL STRUCTURES (REFER TO FDOT STANDARD INDEXES).

8. ALL EXISTING DRAINAGE PIPES AND STRUCTURES ARE TO REMAIN UNLESS OTHERWISE NOTED.

9. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH A TRAFFIC CONTROL PLAN WHICH HAS BEEN APPROVED BY THE LEE COUNTY DEPARTMENT OF TRANSPORTATION PRIOR TO CONSTRUCTION OF THE PROJECT. THE CONTRACTOR'S TRAFFIC CONTROL PLAN SHALL CONFORM TO THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), THE FDOT ROADWAY AND TRAFFIC DESIGN STANDARDS (600 SERIES), AND THE FDOT STANDARD SPECIFICATIONS.

10. EROSION CONTROL FOR THE PROJECT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR.

11. THE CONTRACTOR IS REQUIRED TO FILE A NOTICE OF INTENT (NOI) AND A NOTICE OF TERMINATION (NOT) WITH THE APPLICABLE AGENCIES.

12. 5 CY OF CLASS I CONCRETE (MISCELLANEOUS) SHALL BE INCLUDED IN THE BID PRICE.

13. CONTRACTOR IS RESPONSIBLE FOR OBTAINING THE FDEP, EPA AND NPDES PERMITS FOR CONSTRUCTION ACTIVITIES PRIOR TO CONSTRUCTION.

14. LEE COUNTY D.O.T. CONTRACTOR AND ANY SUBCONTRACTOR WILL UTILIZE EQUIPMENT WITH BOOM LIFT NO HIGHER THAN 18' (Ft) ABOVE GRADE WHEN WORKING IN THE VICINITY OF FPL's OVERHEAD ELECTRIC FACILITIES.

15. BOTTOM OF GRAVITY WALL MUST BE A MIN. OF 1' BELOW FINISHED EXISTING GRADE. CONTRACTOR MAY ELECT TO CONSTRUCT A UNIFORM GRAVITY WALL AT NO ADDITIONAL EXPENSE TO OWNER.

Dan Craig 2-11-05

DAN M. CRAIG
FL P.E. #38590

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PEYMANY HARVENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA
12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464

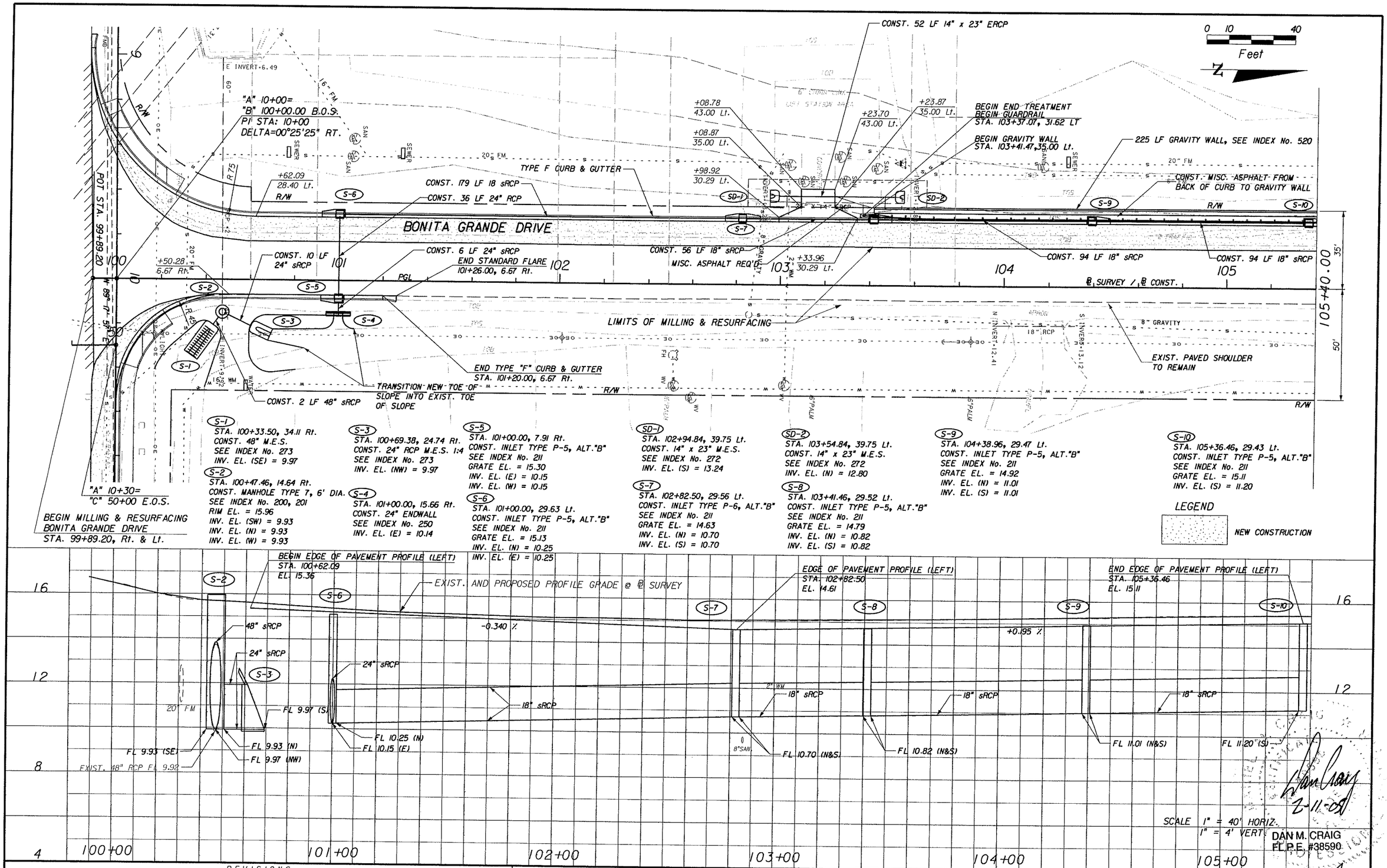
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

SURVEY REFERENCE POINTS, BENCHMARKS AND GEN. NOTES

SHEET NO. 7

02/11/2005 11:07:44 AM P:\20008.201\cadd\roadway\playrd01.dgn



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

BITMAN, HARTSHORN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA

12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464

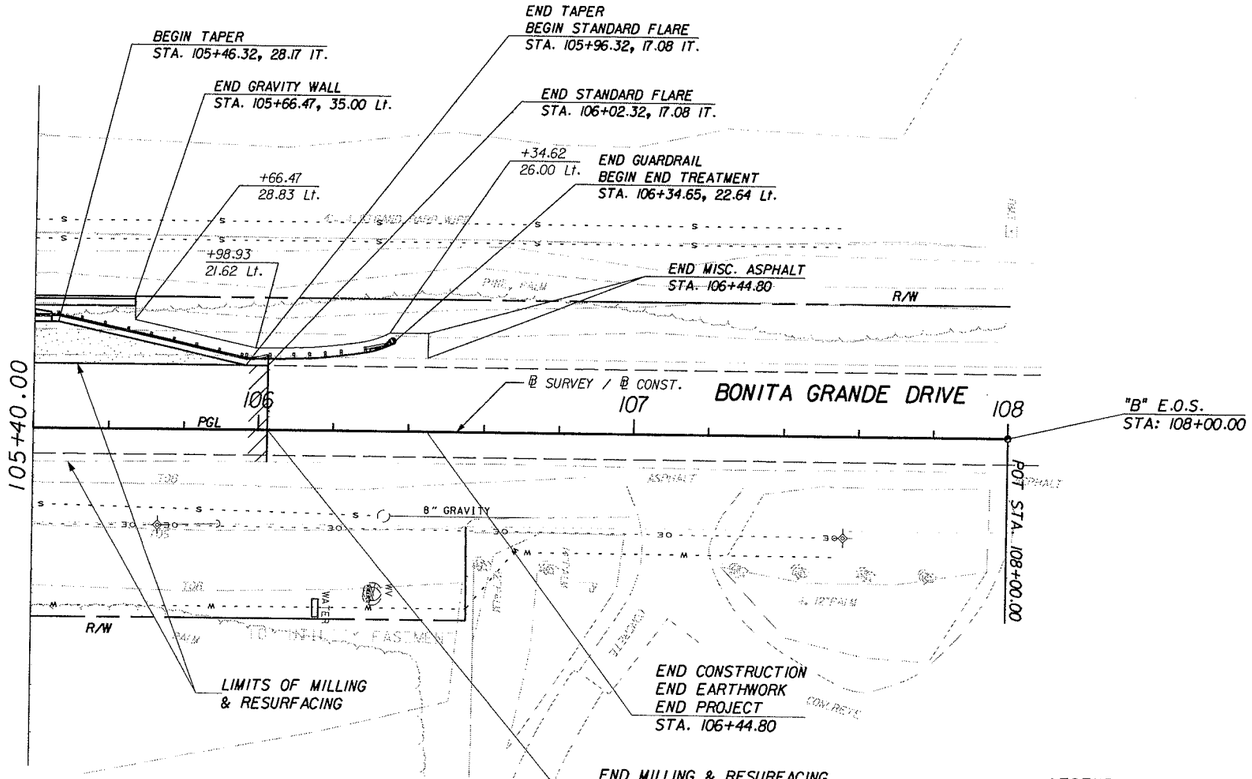
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

PLAN & PROFILE
BONITA GRANDE DRIVE

SHEET NO. 8

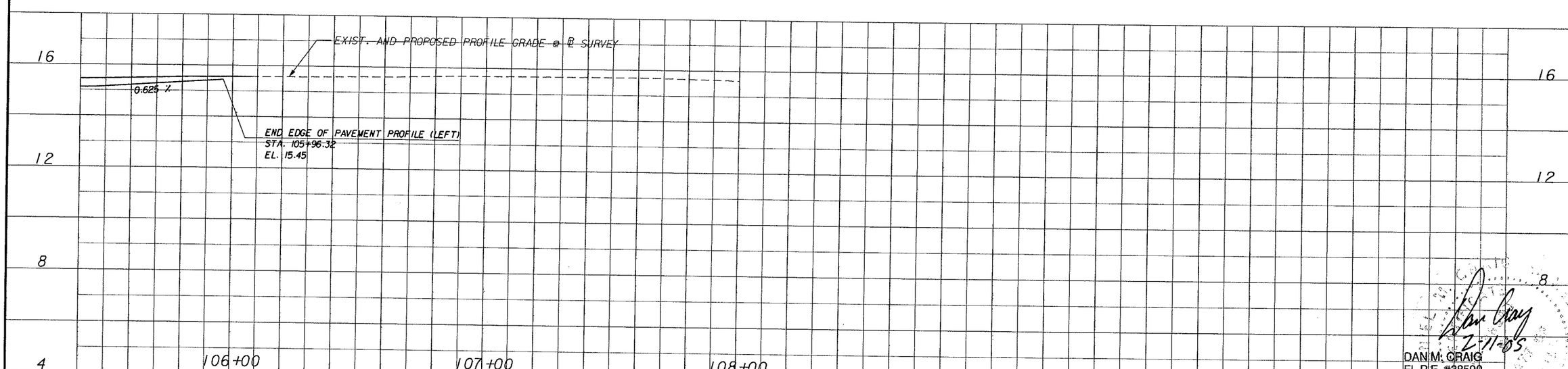
02/11/2005 11:07:53 AM P:\20008.201\cadd\roadway\plprrd01.dgn



0 10 40
Feet

LEGEND

NEW CONSTRUCTION



DAN M. CRAIG
FL P.E. #38590
2-11-05

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA
12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464

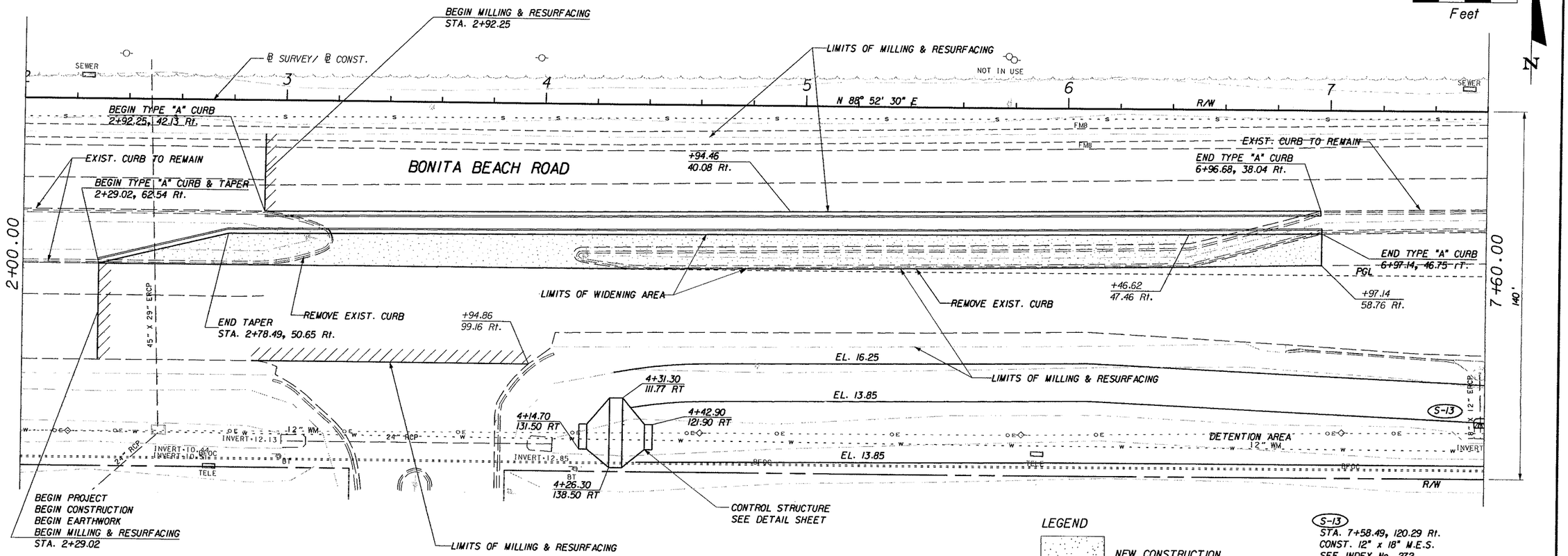
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

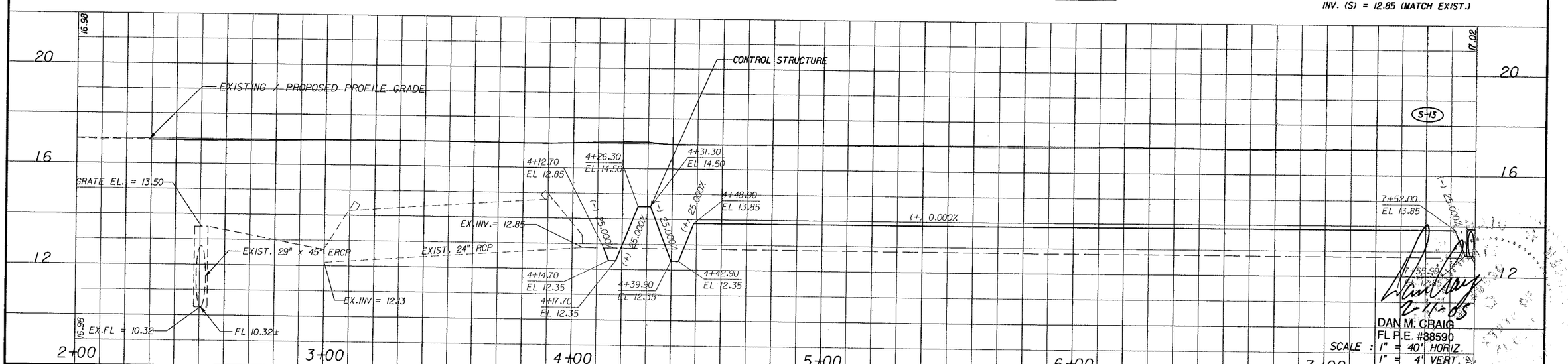
COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

PLAN & PROFILE
BONITA GRANDE DRIVE

SHEET NO.
9

02/11/2005 11:07:59 AM P:\20008.201\cadd\roadway\plprrd02.dgn





REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PIMAY HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA
12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464

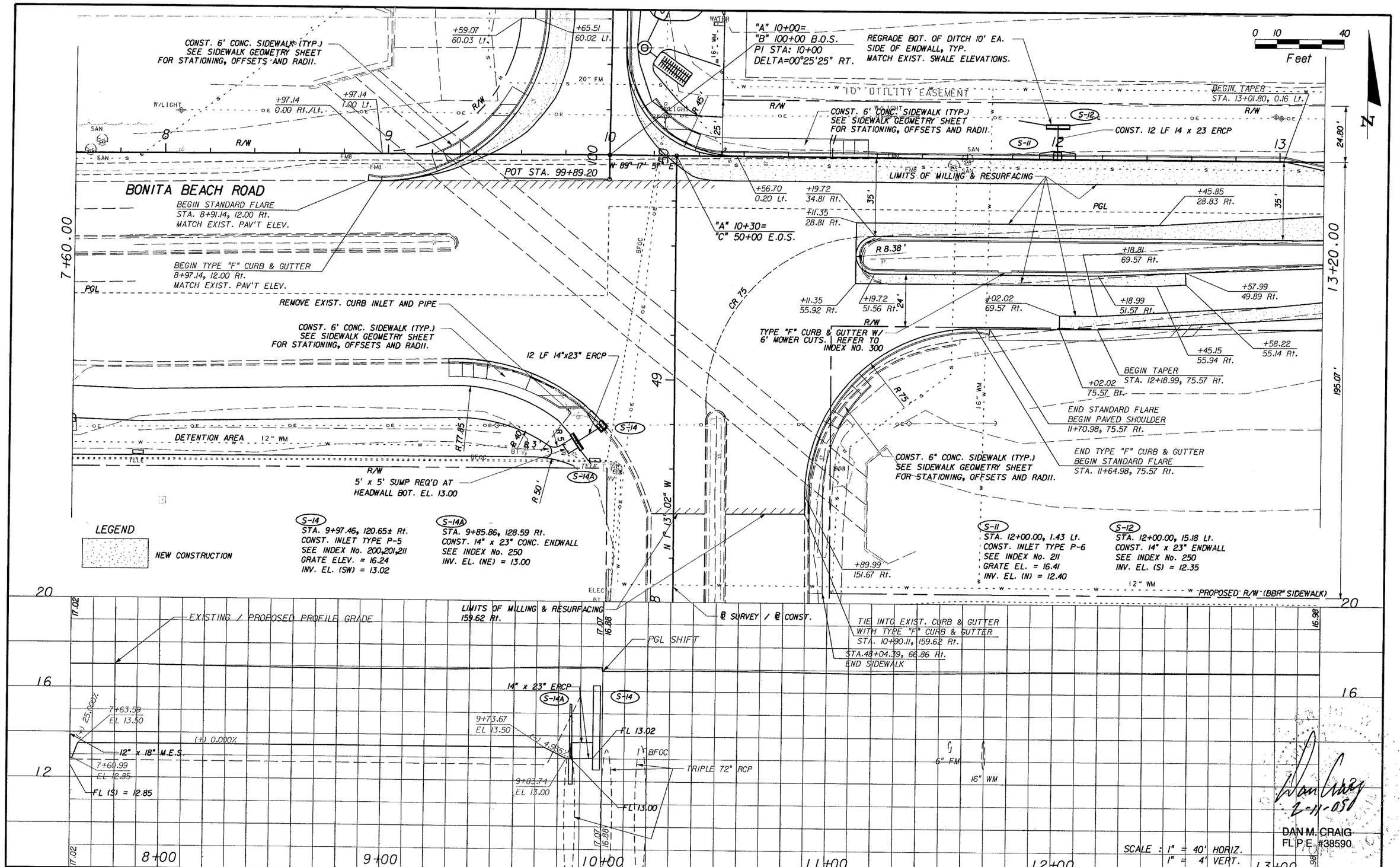
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

PLAN & PROFILE
BONITA BEACH ROAD

SHEET NO.
10

02/11/2005 11:08:04 AM P:\20008.201\cadd\roadway\plprrd03.dgn



REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA
12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464

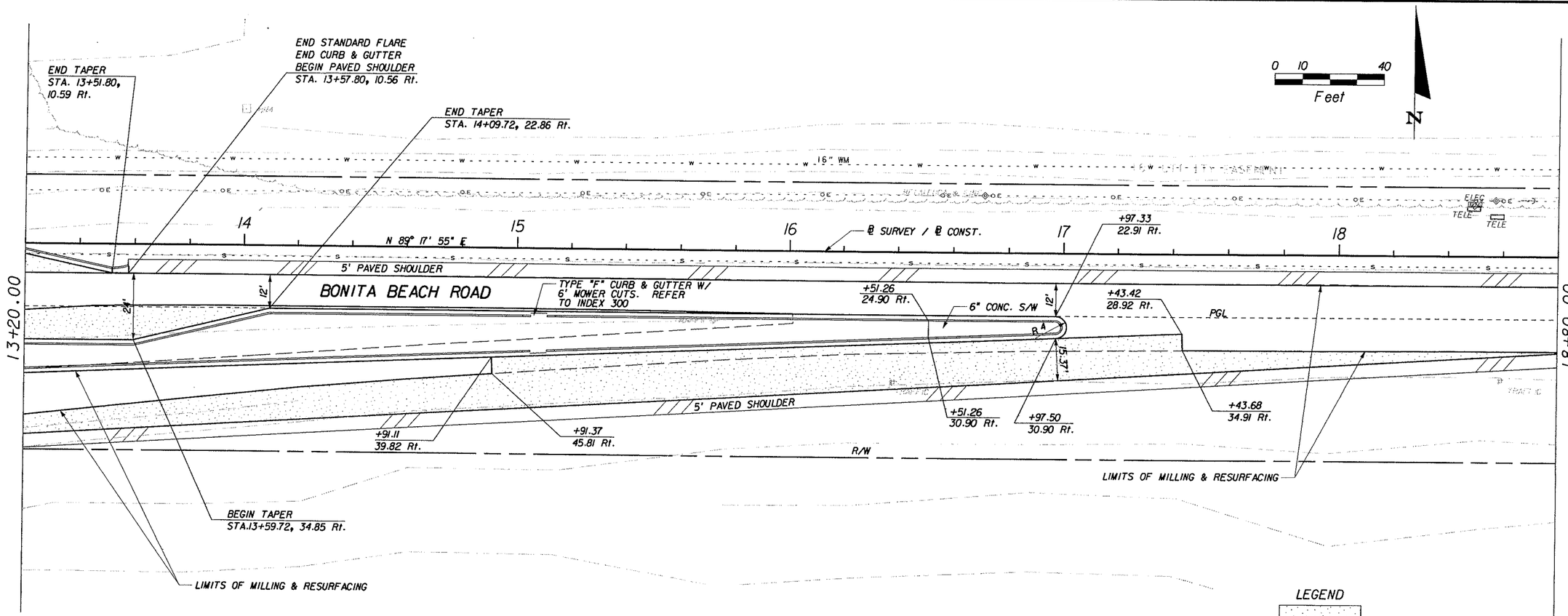
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

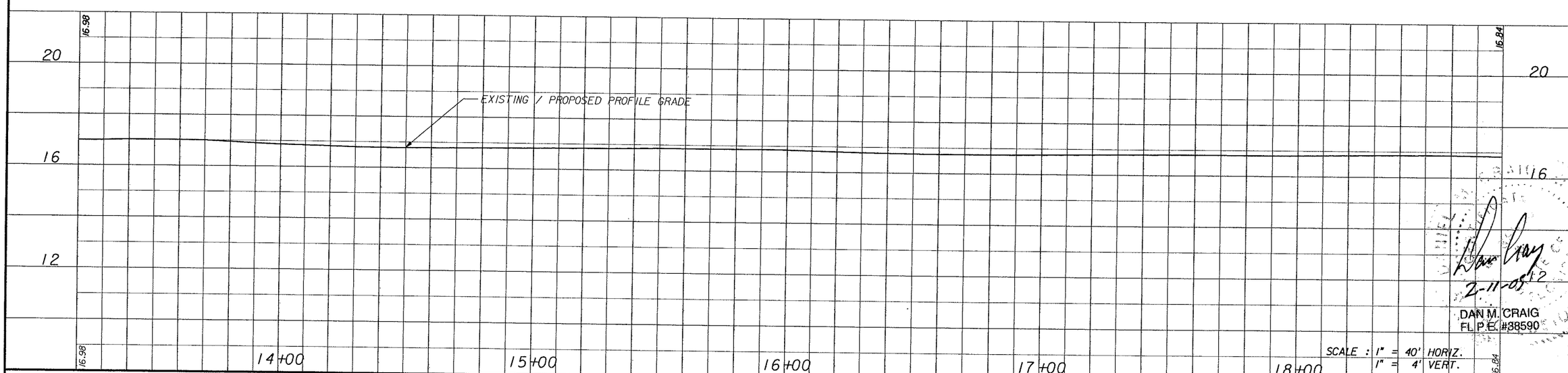
COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

PLAN & PROFILE
BONITA BEACH ROAD

SHEET NO. 11

02/11/2005 11:08:09 AM P:\20008.201\cadd\roadway\plprrd04.dgn





2-11-05
DAN M. CRAIG
FL P.E. #38590

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PIZZAGA NAEYMARK HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA
12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464

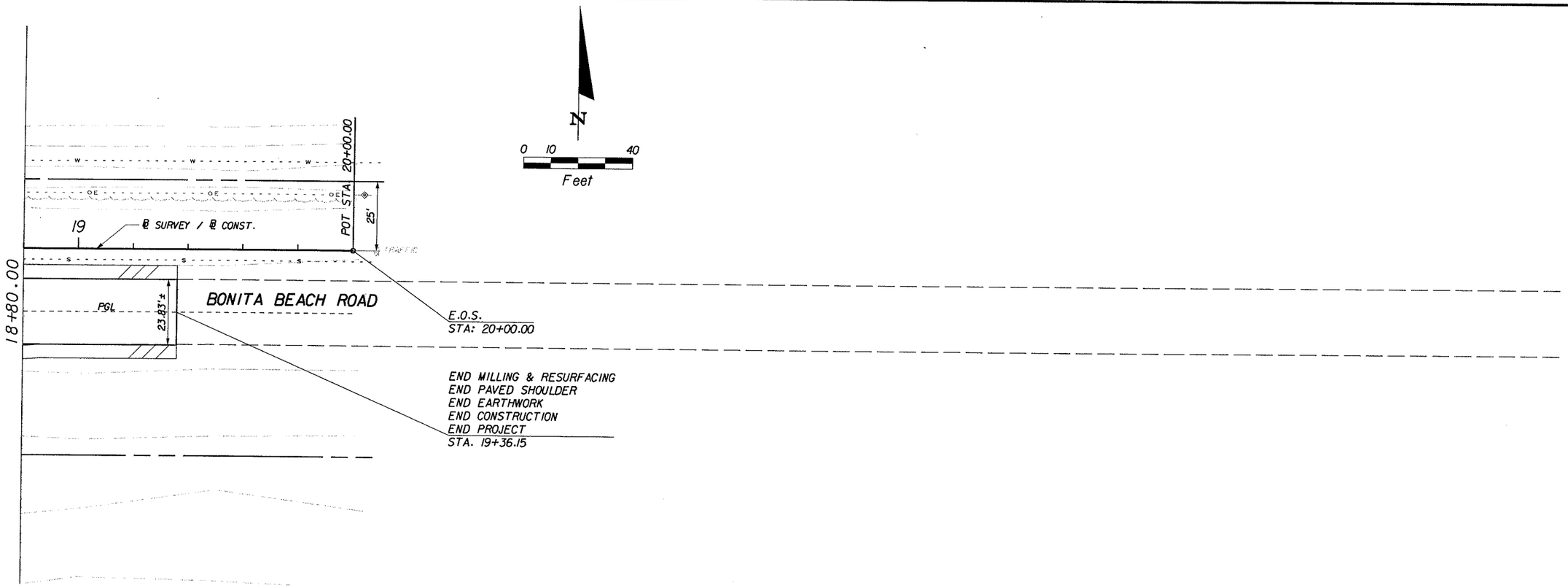
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

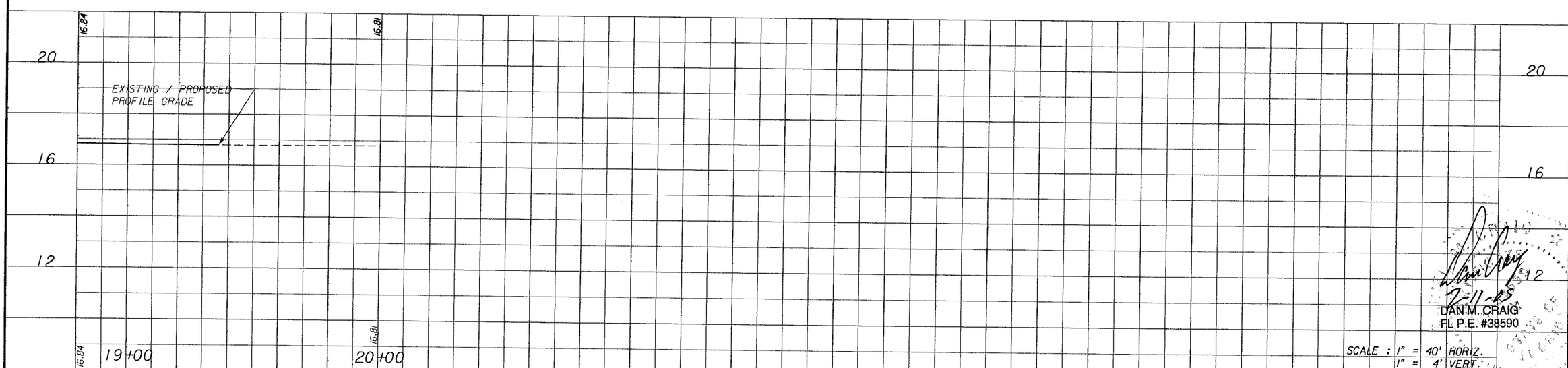
COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

PLAN & PROFILE
BONITA BEACH ROAD

SHEET NO.
12

02/11/2005 11:08:14 AM P:\20008.201\cadd\roadway\plprrd05.dgn





DAN M. CRAIG
FL P.E. #38590

SCALE : 1" = 40' HORIZ.
1" = 4' VERT.

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA
12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464

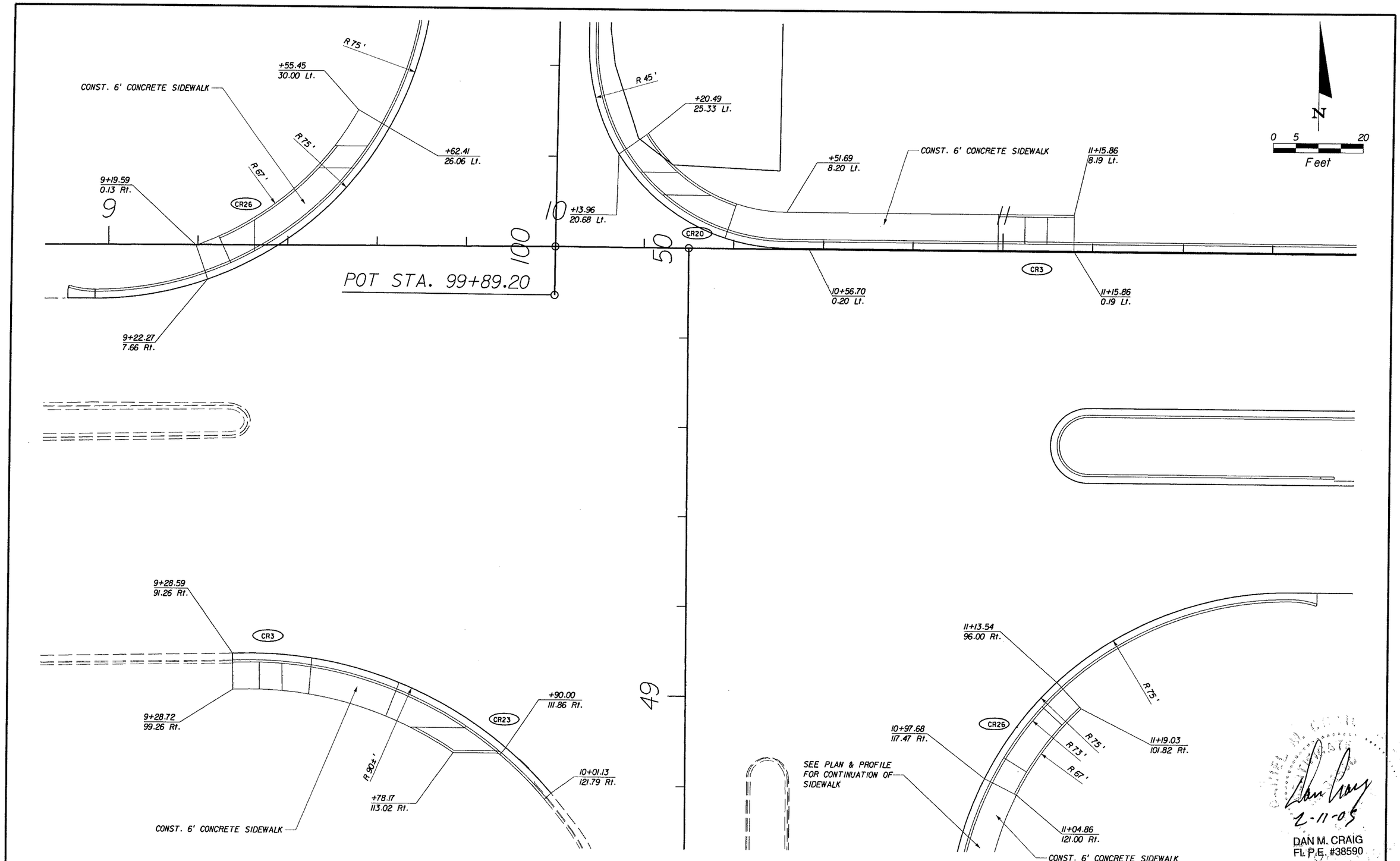
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

PLAN & PROFILE
BONITA BEACH ROAD

SHEET NO.
13

02/11/2005 11:08:18 AM P:\20008.201\cadd\roadway\plprrd06.dgn



2-11-05

DAN M. CRAIG
FL P.E. #38590

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PEMAN • HARTMANN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA

12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

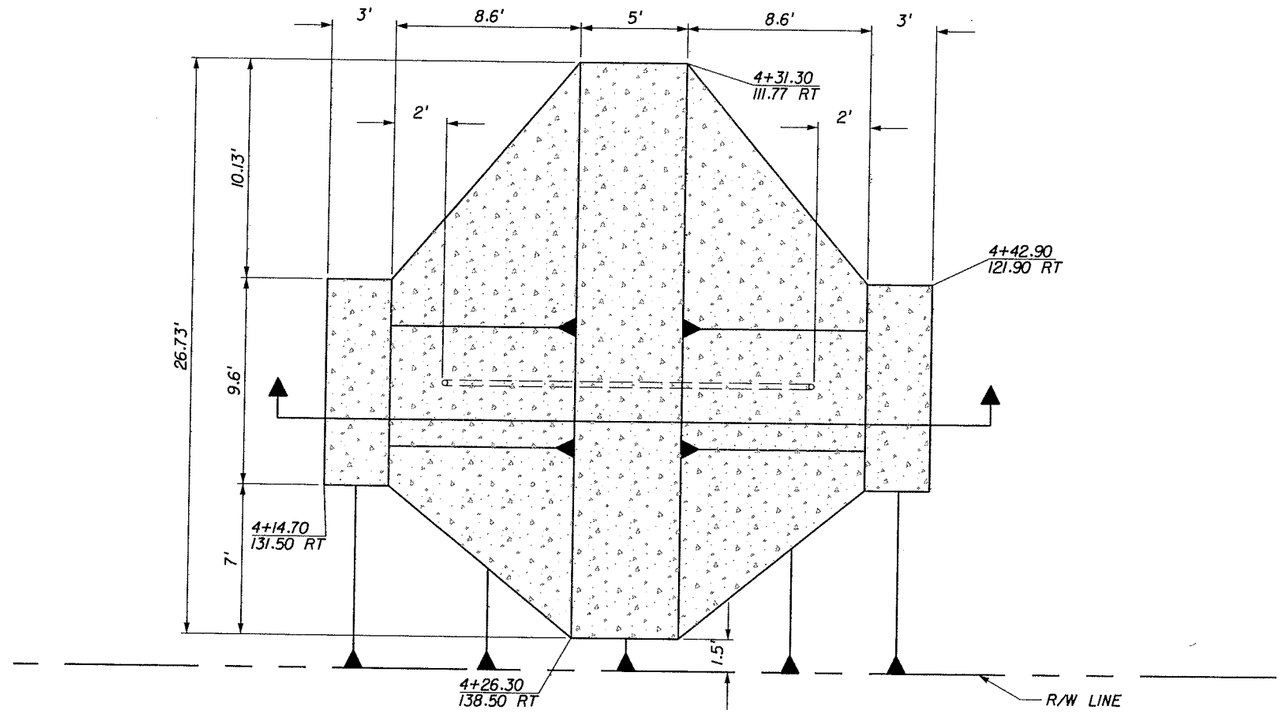
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

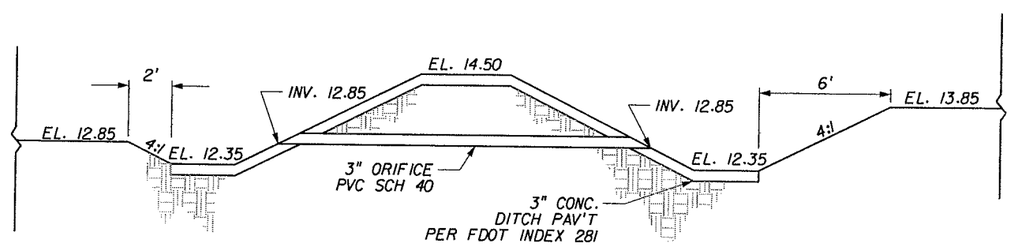
SIDEWALK GEOMETRY
BONITA BEACH ROAD

SHEET NO. 14

02/11/2005 11:08:21 AM P:\20008.201\cadd\roadway\Details.dgn



DITCH BLOCK PLAN
N.T.S.



DITCH BLOCK SECTION
N.T.S.

NOTE: CONTRACTOR TO PROVIDE BENCHMARK ON TOP OF CONTROL STRUCTURE BEFORE COMPLETION OF THE PROJECT.

Dan Craig
2-11-05

DAN M. CRAIG
FL P.E. #38590

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA

12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

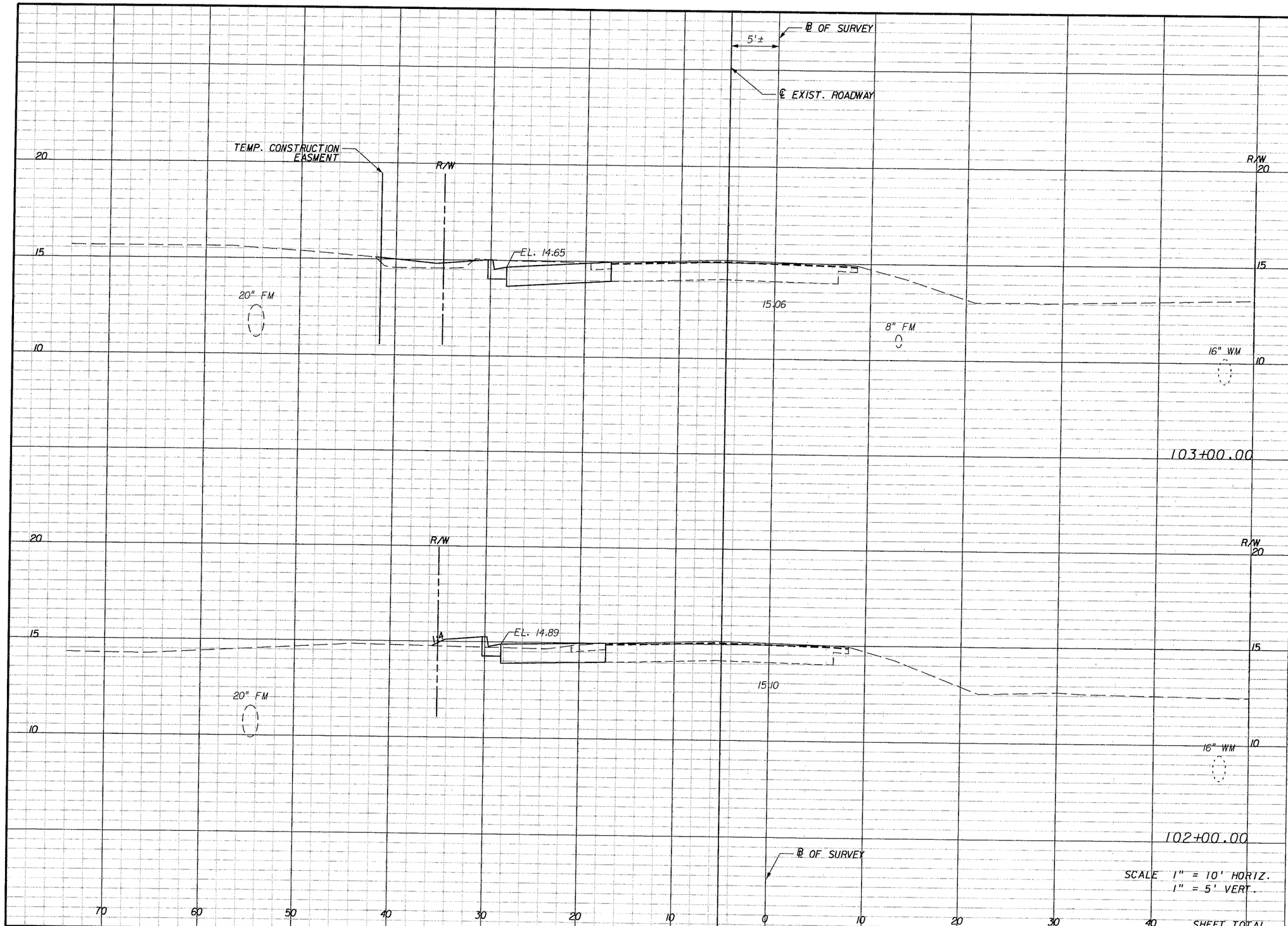
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6039	LEE	20008.201

DITCH BLOCK DETAIL

SHEET NO. 15

02/11/2005 11:08:23 AM P:\20008.201\cadd\roadway\DRDTRD00.dgn



	Regular Exc.		Embankment	
	A	V	A	V
	14.6		3.1	
		46		10
	10.2		2.0	
SHEET TOTAL	82	36	18	8

DAN M. CRAIG
FL P.E. #38590
2-11-05

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA
12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464

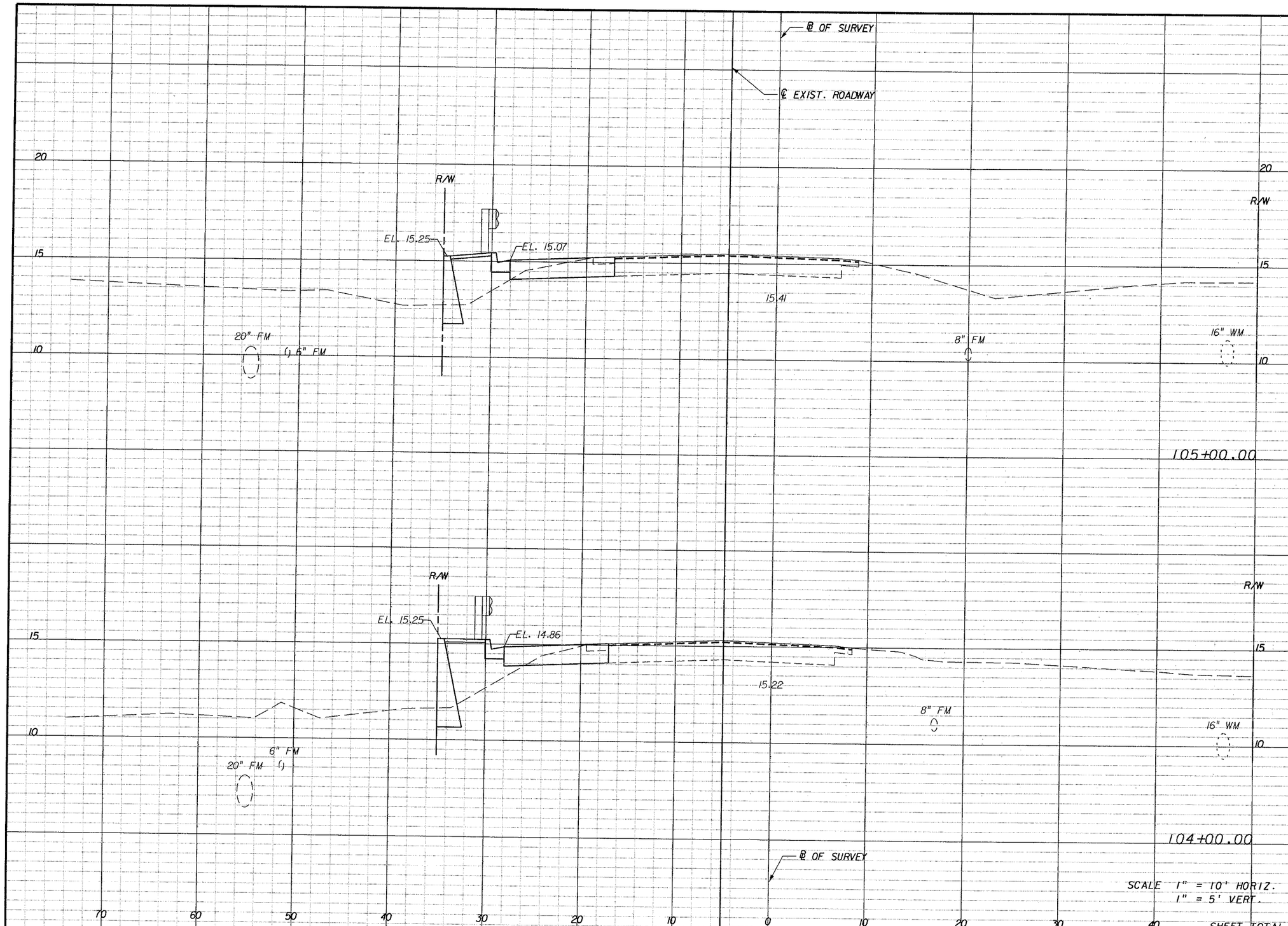
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

CROSS SECTIONS
BONITA GRANDE DRIVE

SHEET NO. 17

02/11/2005 11:08:30 AM P:\20008.201\cadd\roadway\rdxsrd01.shg



Regular Exc.		Embankment	
A	V	A	V
9.6		9.7	
	34		43
8.6		13.6	
	43		30
	77		73

DAN M. CRAIG
FL P.E. #38590
2-11-05

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • HARTENSTINE & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA
12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464

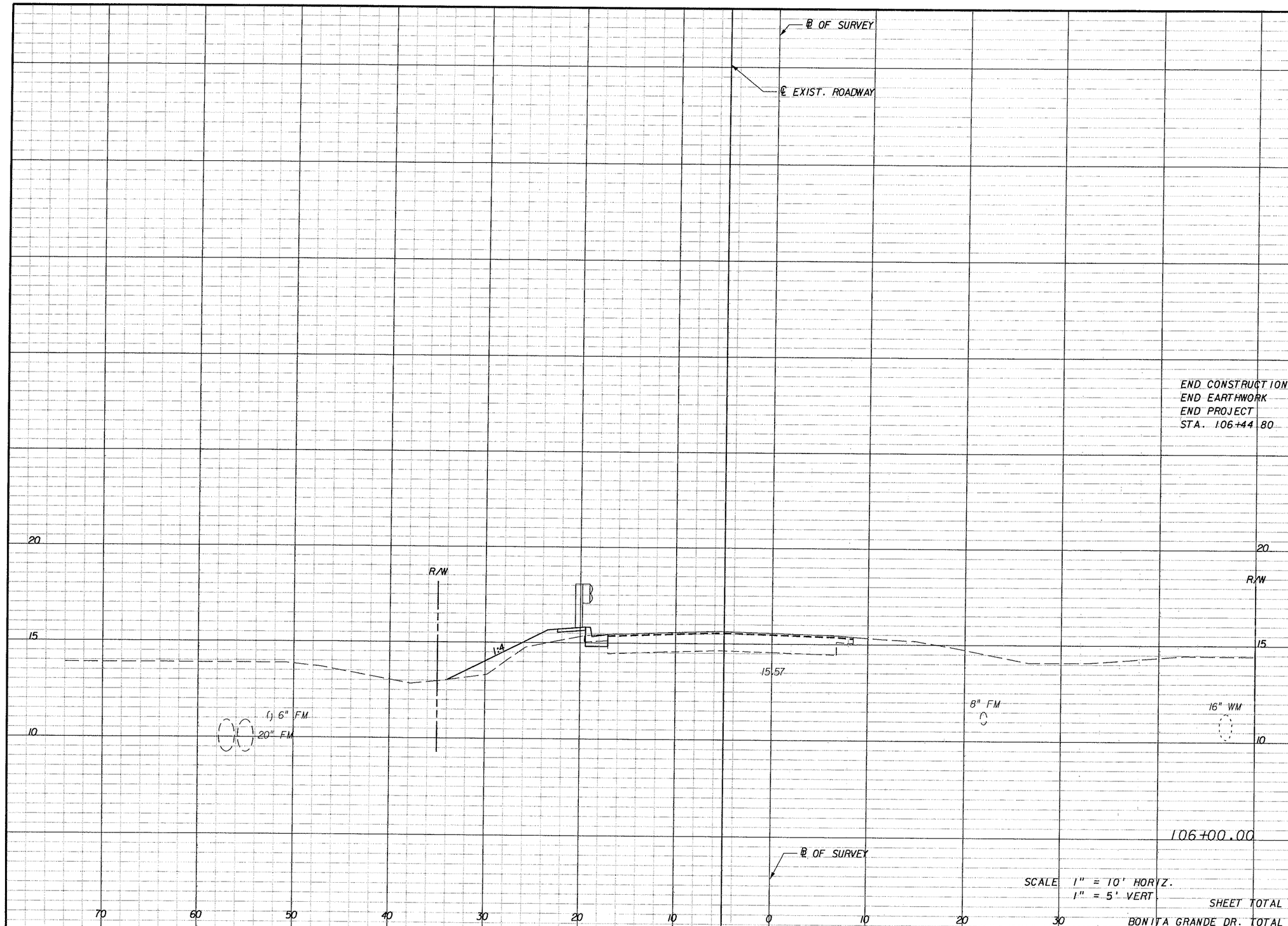
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

CROSS SECTIONS
BONITA GRANDE DRIVE

SHEET NO. 18

02/11/2005 11:08:30 AM P:\20008.201\cadd\roadway\rdxsrd01.shg



	Regular Exc.		Embankment	
	A	V	A	V
END CONSTRUCTION END EARTHWORK END PROJECT STA. 106+44.80	0.0		0.0	
	1.4	1	6.5	5
SHEET TOTAL	21	35		
BONITA GRANDE DR. TOTAL	312	131		

DAN M. CRAIG
FL P.E. #38590
2-11-05

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA

12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464

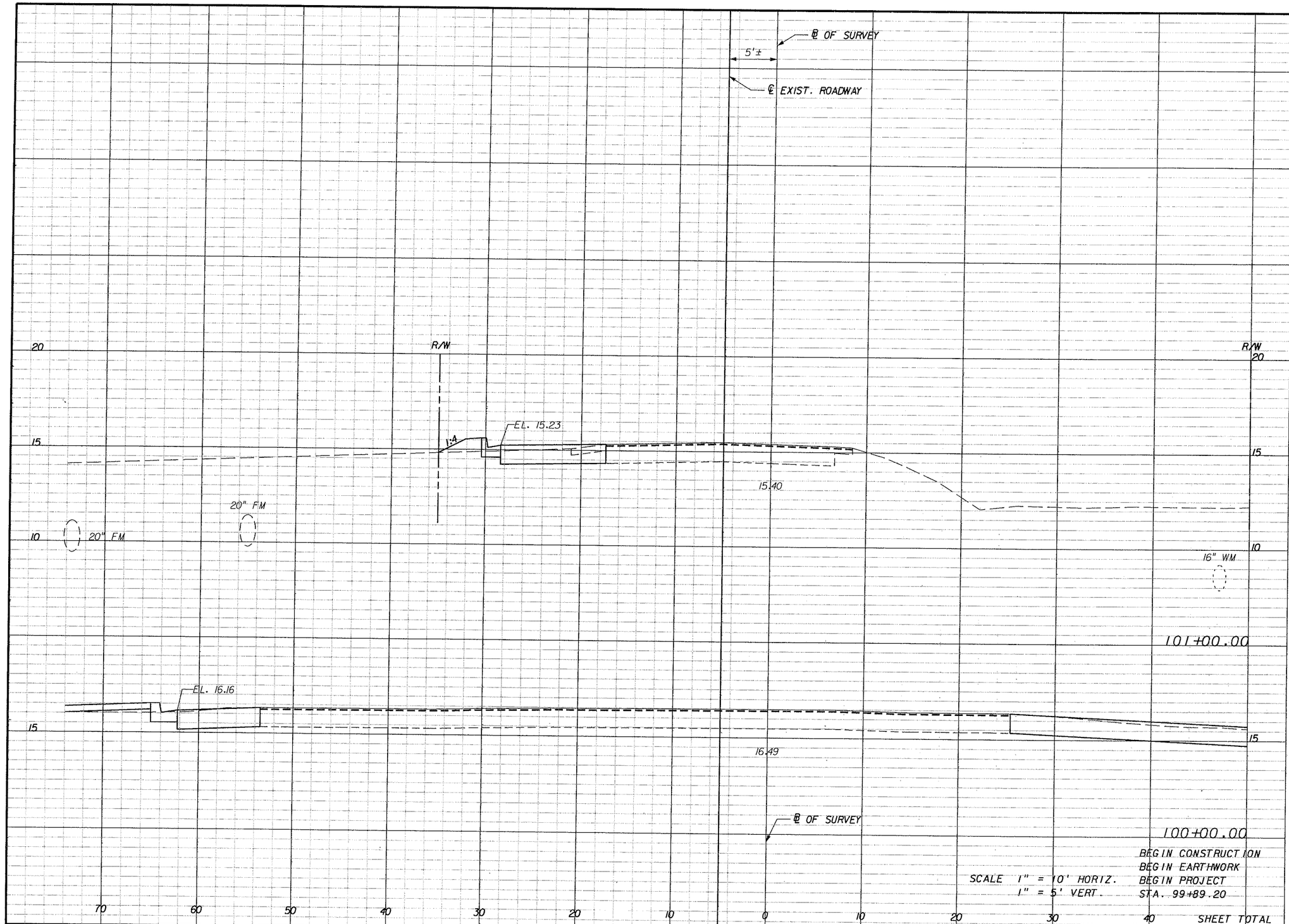
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

CROSS SECTIONS
BONITA GRANDE DRIVE

SHEET NO. 19

02/11/2005 11:08:30 AM P:\20008.201\cadd\roadway\rdxsrd01.shg



Regular Exc.		Embankment	
A	V	A	V
9.3		2.1	
	121		5
55.8		0.7	
0.0		0.0	
SHEET TOTAL	132		5

DAN M. CRAIG
FL P.E. #38590
2-11-05

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PIHA
PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA

12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464

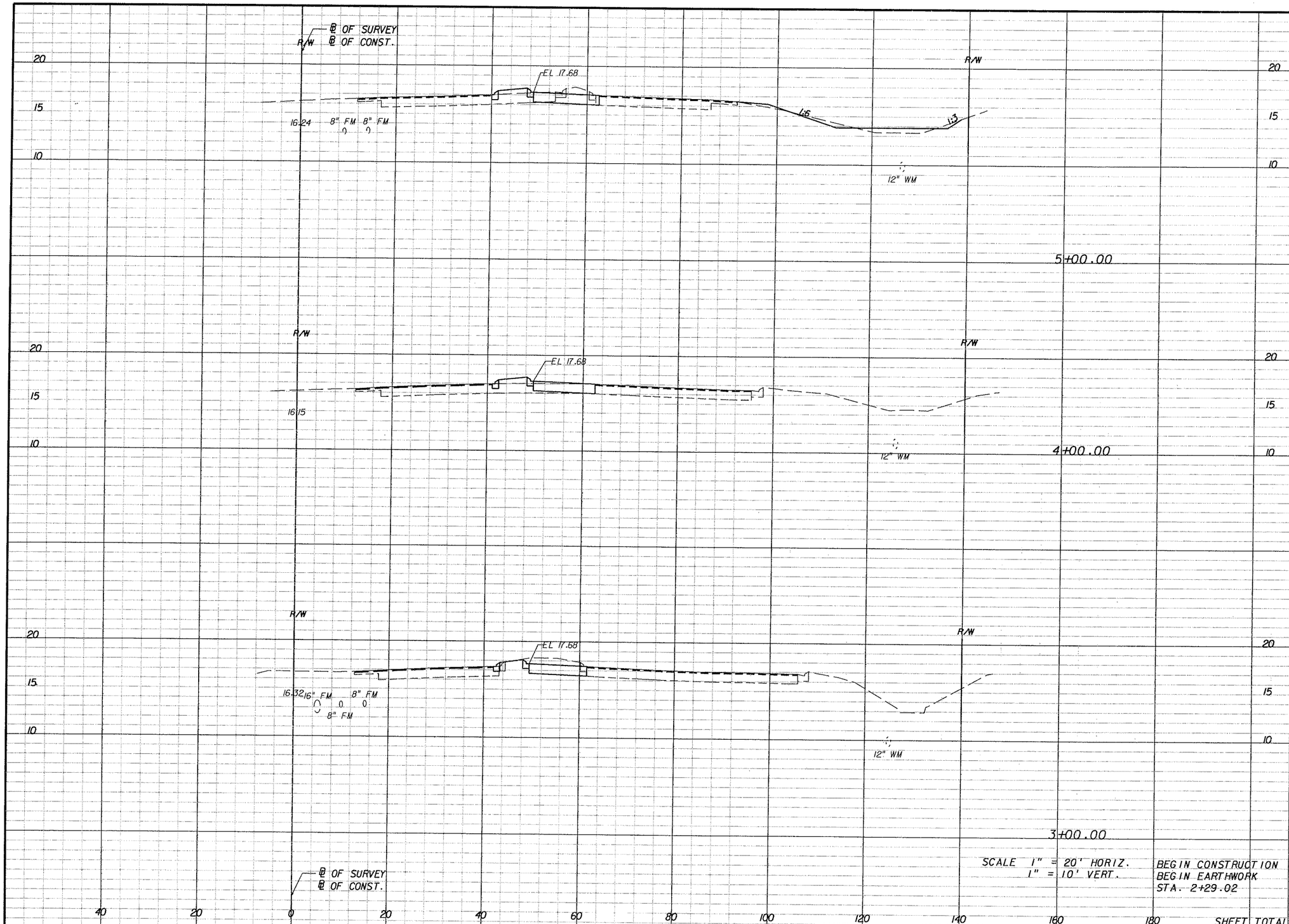
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

CROSS SECTIONS
BONITA GRANDE DRIVE

SHEET NO. 16

02/11/2005 11:08:30 AM P:\20008.201\cadd\roadway\rdxsrd01.shg



	Regular Exc. A	Regular Exc. V	Embankment A	Embankment V
	21.0	62	11.4	27
	12.7	61	3.1	7
	20.2	27	0.4	0
SHEET TOTAL	0.0	150	0.0	35

DANIEL M. CRAIG
FL P.E. #38590
2-11-05

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

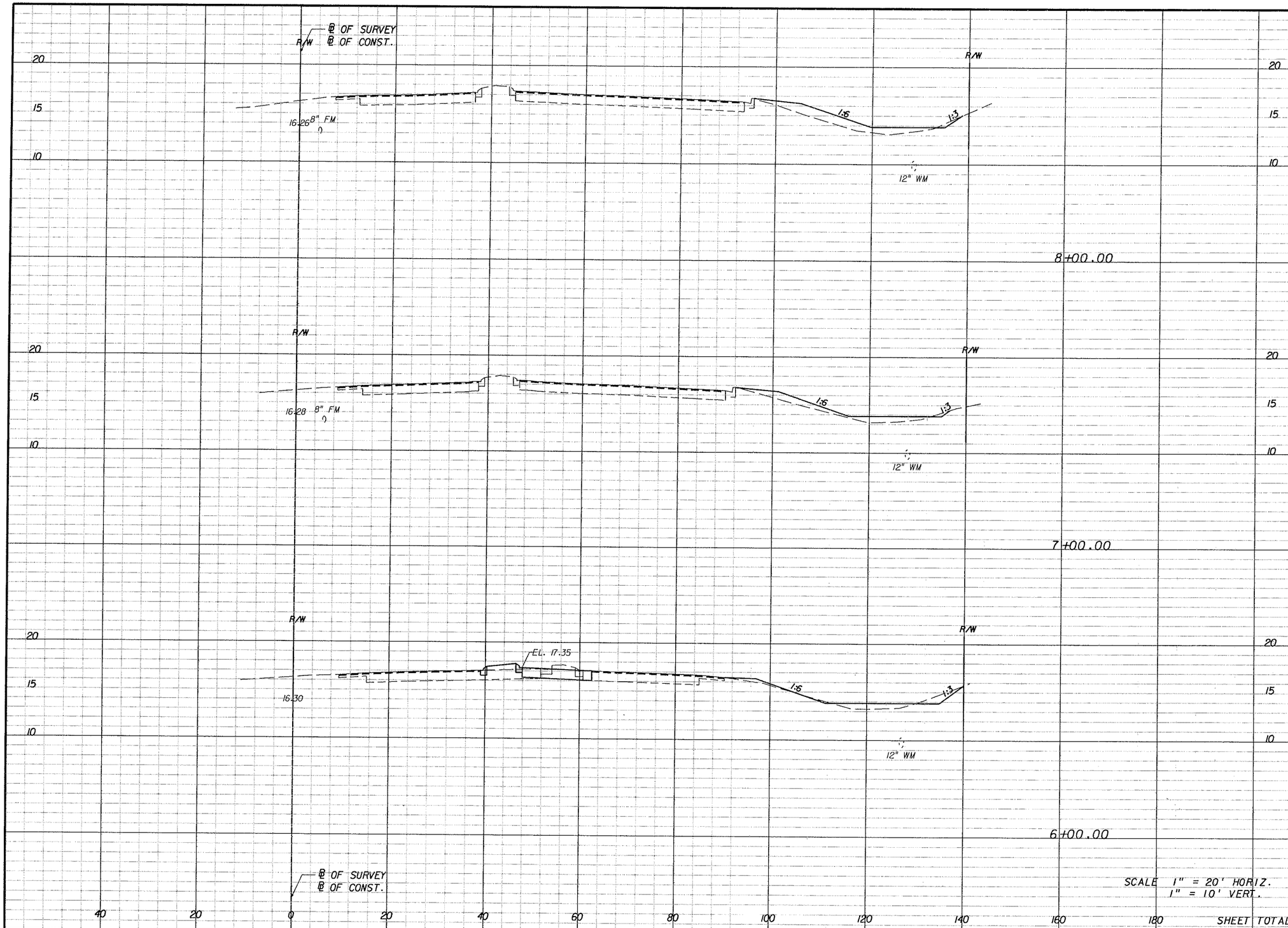
PETMAN, HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA
12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

CROSS SECTIONS
BONITA BEACH ROAD

SHEET NO. 20



	Regular Exc.		Embankment	
	A	V	A	V
	1.1		24.8	
		3		80
	0.6		18.6	
		38		59
	20.1		13.1	
		76		45
SHEET TOTAL		117		184

DAN M. CRAIG
FL P.E. #38590

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA

12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

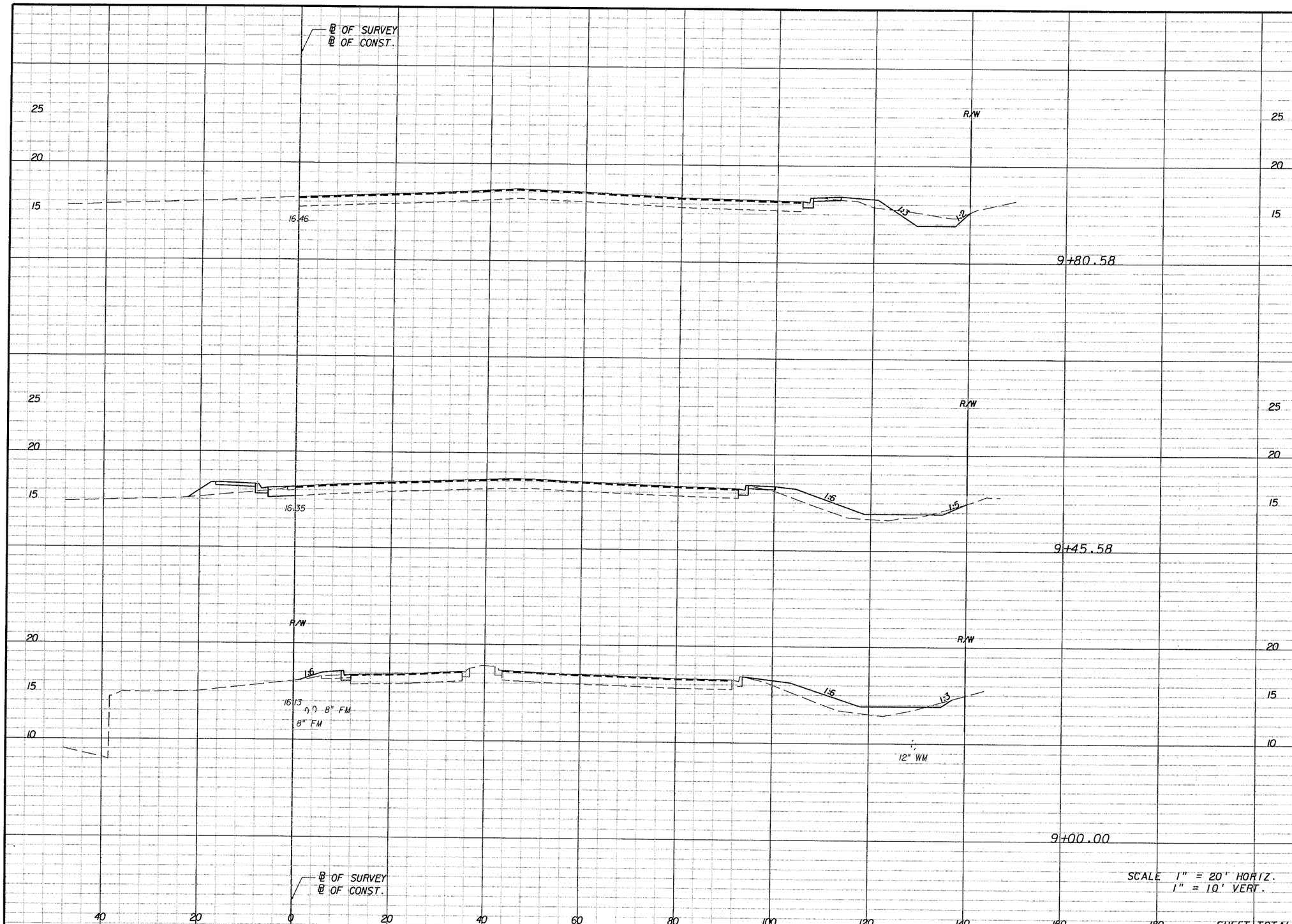
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

CROSS SECTIONS
BONITA BEACH ROAD

SHEET NO. 21

02/11/2005 11:08:35 AM P:\20008.201\cadd\roadway\rdxsrd02.shg



	Regular Exc.		Embankment	
	A	V	A	V
	14.2		5.0	
		14		25
	7.4		33.8	
		8		54
	2.4		30.3	
		6		102
SHEET TOTAL		28		181

Dan Craig
2-11-05
DAN M. CRAIG
FL P.E. #38590

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMANY HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA

12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

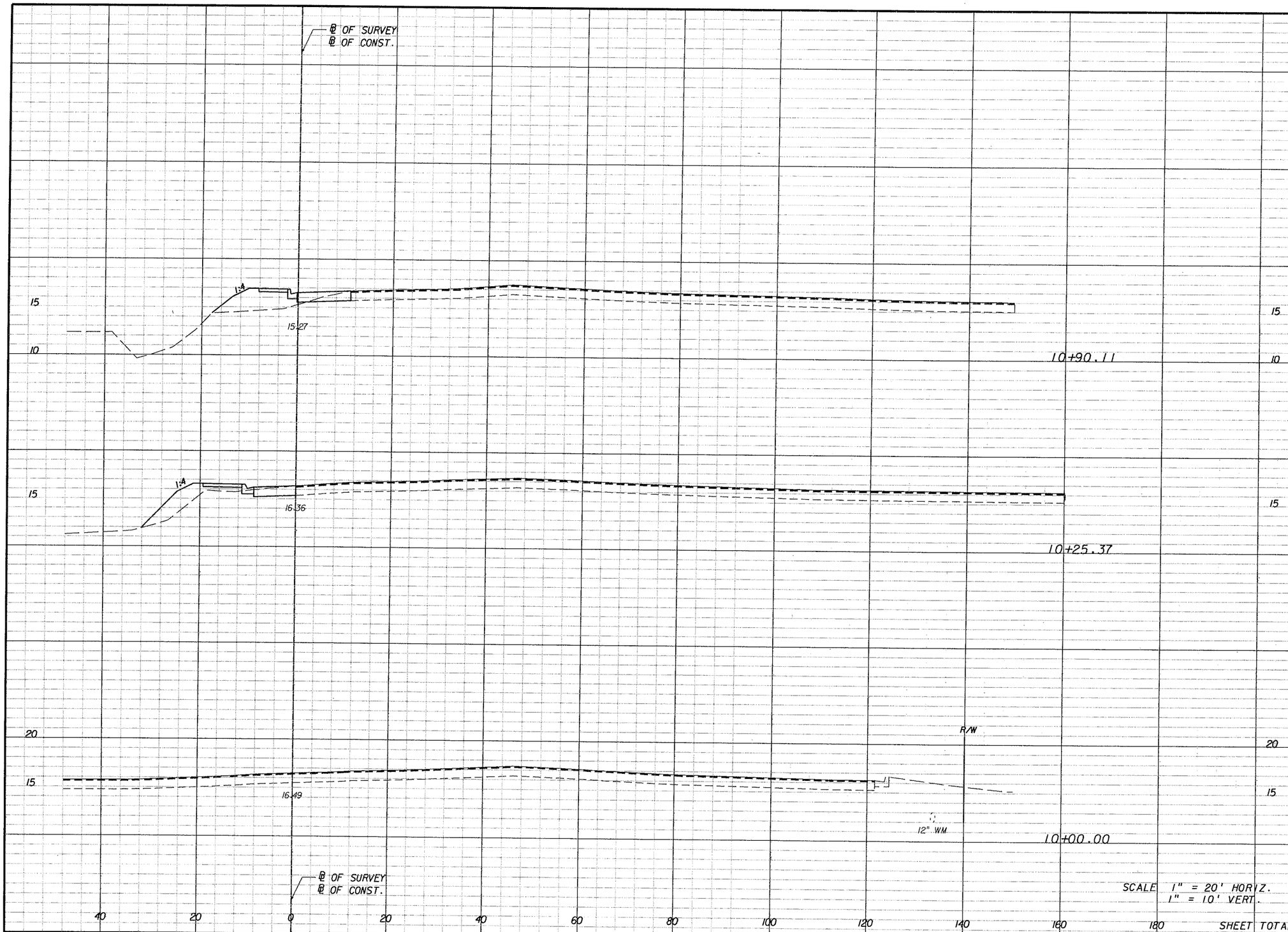
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

CROSS SECTIONS
BONITA BEACH ROAD

SHEET NO. 22

02/11/2005 11:08:35 AM P:\20008.201\cadd\roadway\rdxsrd02.shg



	Regular Exc.		Embankment	
	A	V	A	V
	5.1		27.3	
		16		60
	8.6		22.7	
		4		11
	0.0			
		5		2
SHEET TOTAL		25		73

2-11-05
DAN M. CRAIG
FL P.E. #38590

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • BARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA

12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

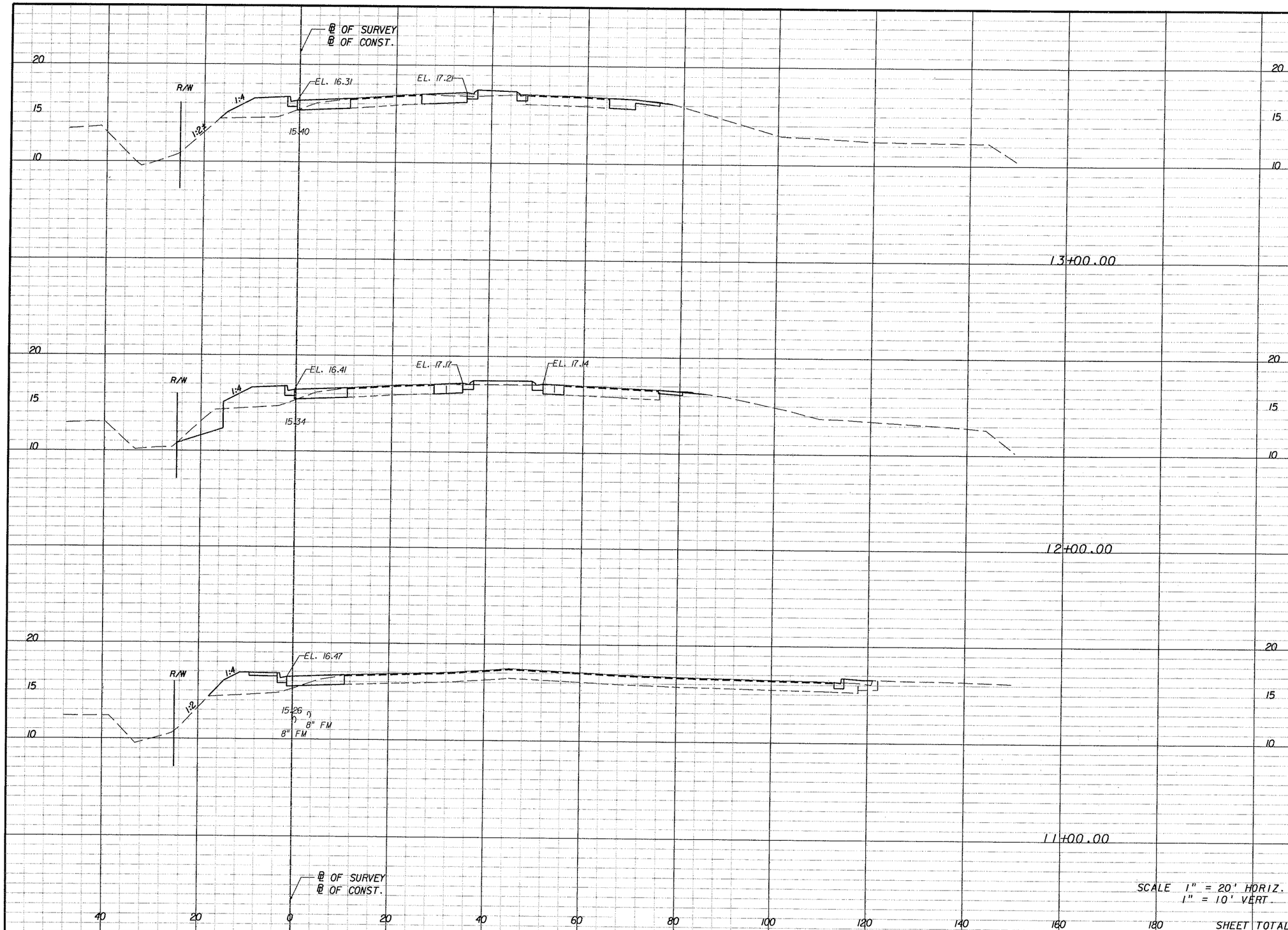
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

CROSS SECTIONS
BONITA BEACH ROAD

SHEET NO. 23

02/11/2005 11:08:35 AM P:\20008.201\cadd\roadway\rdxsrd02.shg



	Regular Exc.		Embankment	
	A	V	A	V
13+00.00	24.2	108	26.7	103
12+00.00	34.0	75	29.1	108
11+00.00	6.5	2	29.4	10
SHEET TOTAL	185		221	

DAN M. CRAIG
FL P.E. #38590

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA

12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

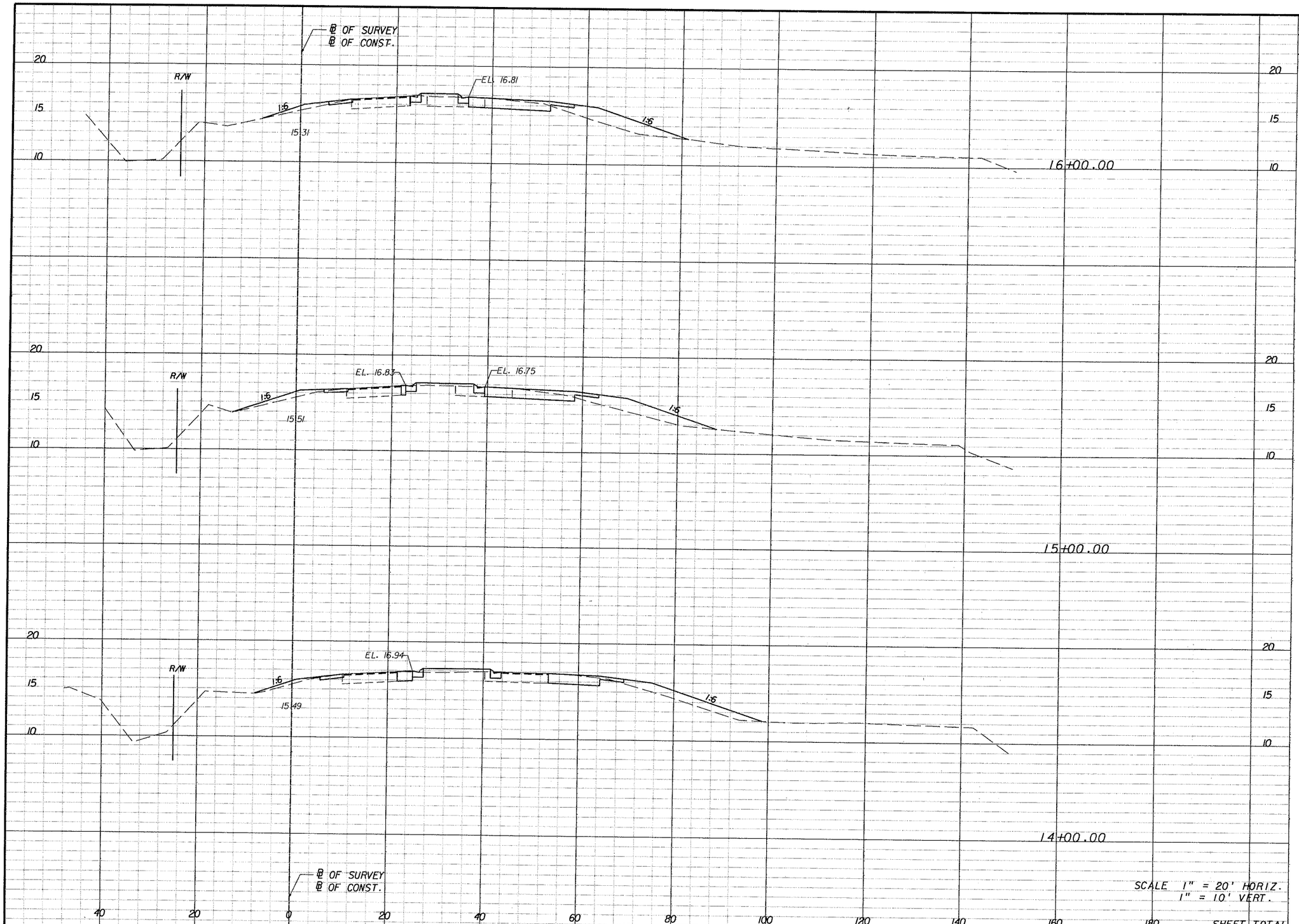
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

CROSS SECTIONS
BONITA BEACH ROAD

SHEET NO. 24

02/11/2005 11:08:35 AM P:\20008.201\cadd\roadway\rdxsrd02.shg



	Regular Exc.		Embankment	
	A	V	A	V
16+00.00	19.5	75	32.3	126
15+00.00	21.0	72	35.5	118
14+00.00	17.7	78	28.1	102
SHEET TOTAL		225		346

DAN M. CRAIG
FL.P.E. #38590

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PUTMAN HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE ▾ FORT MYERS ▾ TAMPA

12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

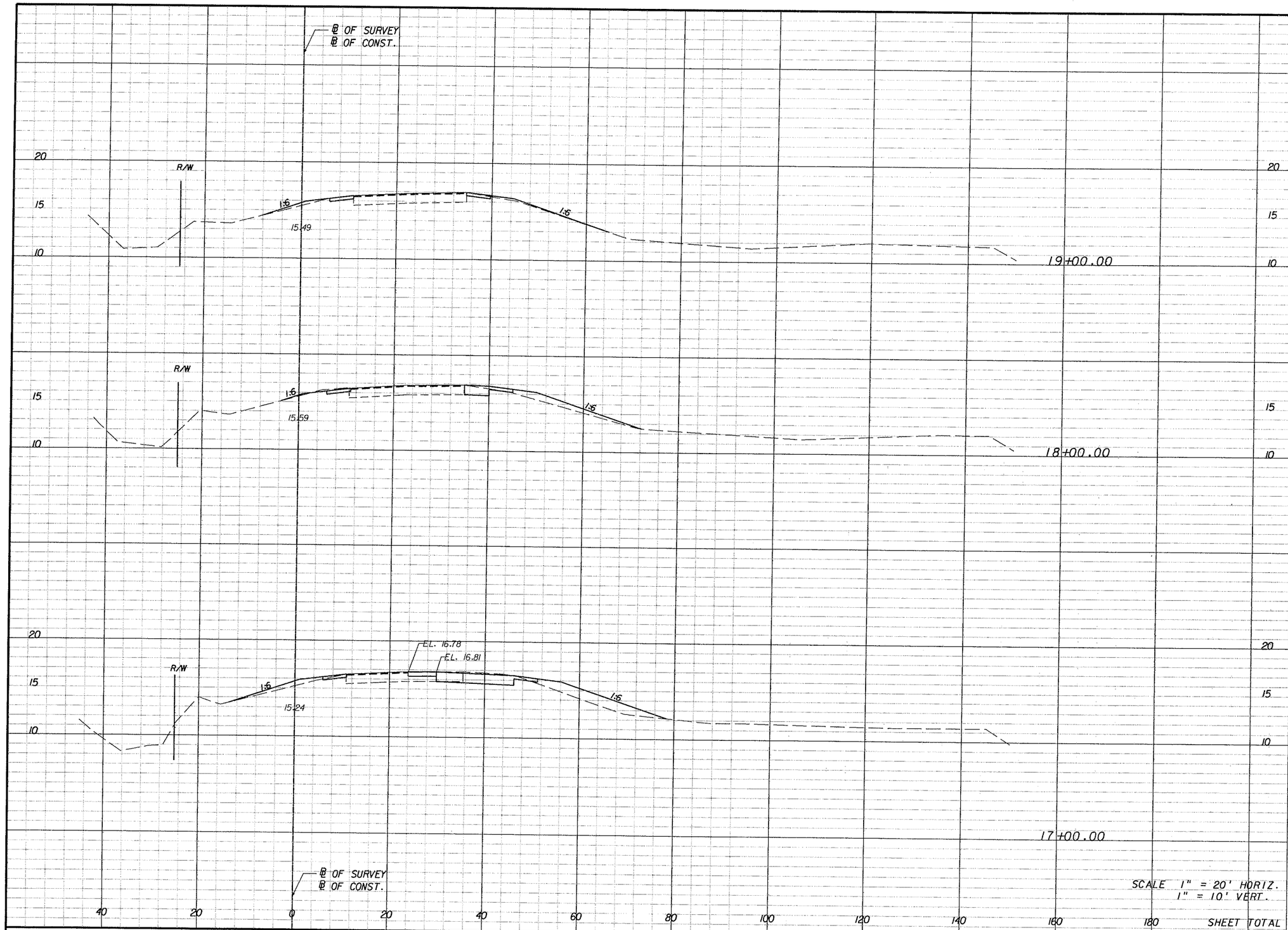
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

CROSS SECTIONS
BONITA BEACH ROAD

SHEET NO. 25

02/11/2005 11:08:36 AM P:\20008.201\cadd\roadway\rdxsrd02.shg



	Regular Exc.		Embankment	
	A	V	A	V
19+00.00	3.1	19	4.5	31
18+00.00	7.2	55	12.4	76
17+00.00	22.4	78	28.5	152
SHEET TOTAL		220		

DAN M. CRAIG
FL P.E. #38590

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

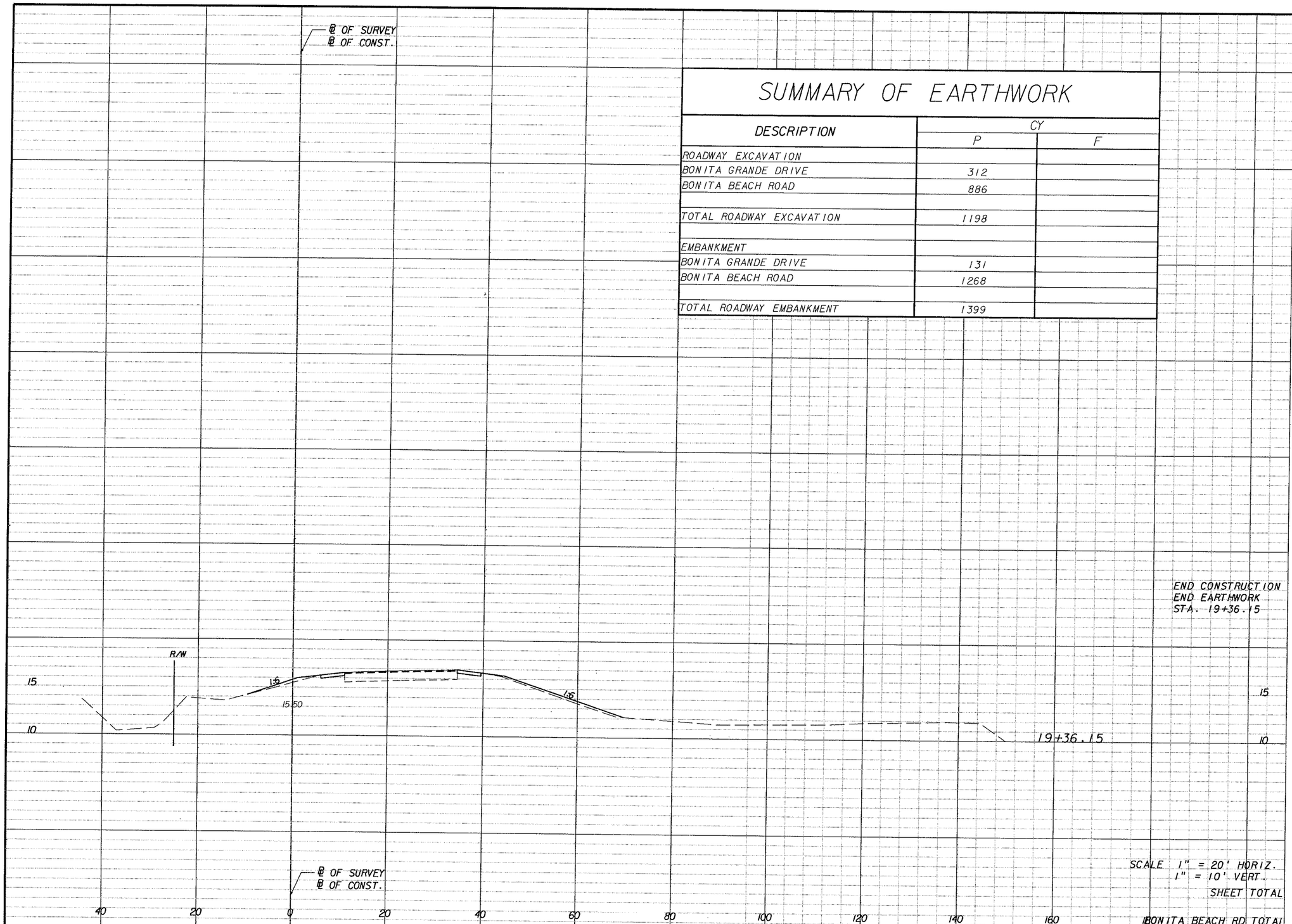
PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA
12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

CROSS SECTIONS
BONITA BEACH ROAD

SHEET NO. 26



SUMMARY OF EARTHWORK

DESCRIPTION	CY P	CY F
ROADWAY EXCAVATION		
BONITA GRANDE DRIVE	312	
BONITA BEACH ROAD	886	
TOTAL ROADWAY EXCAVATION	1198	
EMBANKMENT		
BONITA GRANDE DRIVE	131	
BONITA BEACH ROAD	1268	
TOTAL ROADWAY EMBANKMENT	1399	

	Regular Exc. A	Regular Exc. V	Embankment A	Embankment V
SHEET TOTAL	3.3		8.0	
BONITA BEACH RD TOTAL	886	4	1268	8

SCALE 1" = 20' HORIZ.
1" = 10' VERT.

DAN M. CRAIG
FL P.E. #38590
2-11-05

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

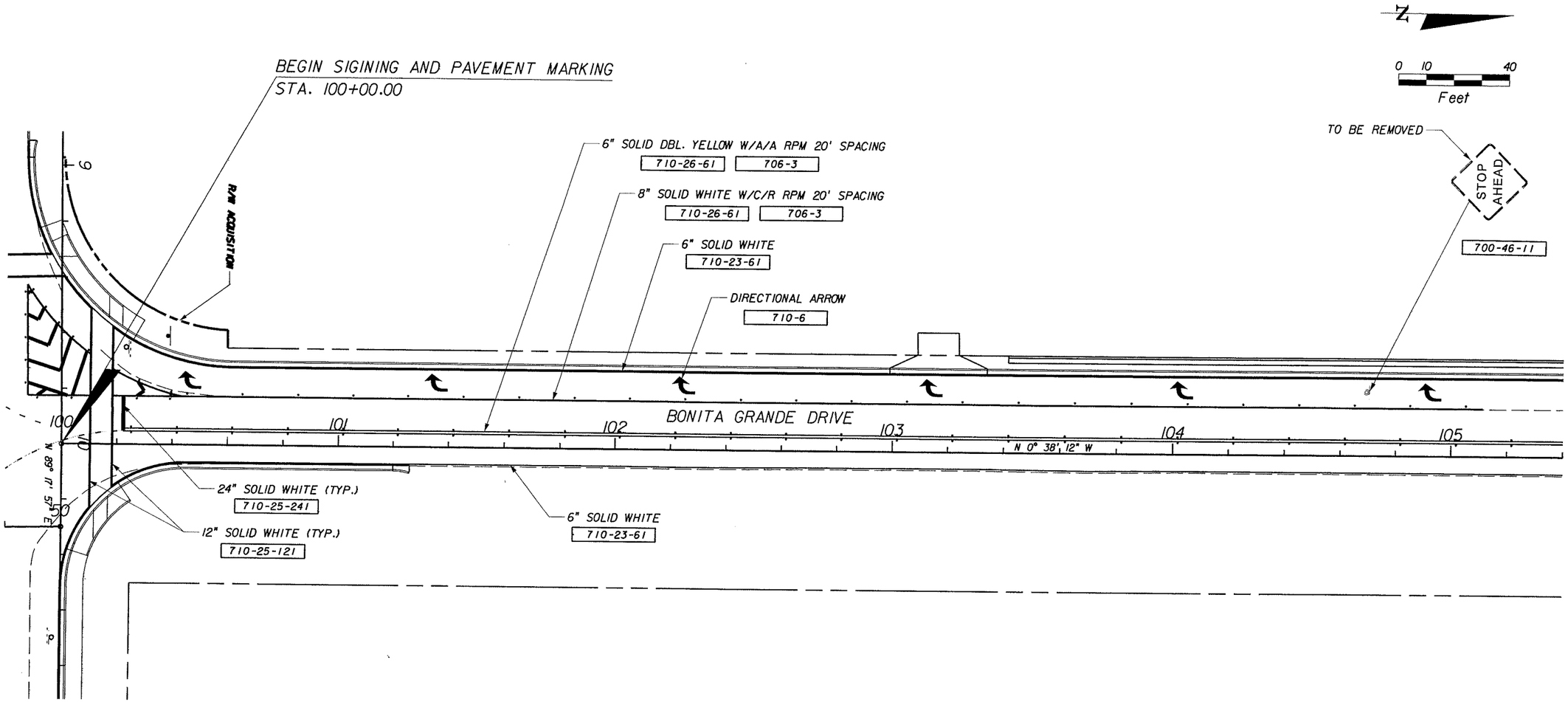
PITMANY HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA
12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

CROSS SECTIONS
BONITA BEACH ROAD

SHEET NO. 27



DAN M. CRAIG
FL P.E. #38590

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA

12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

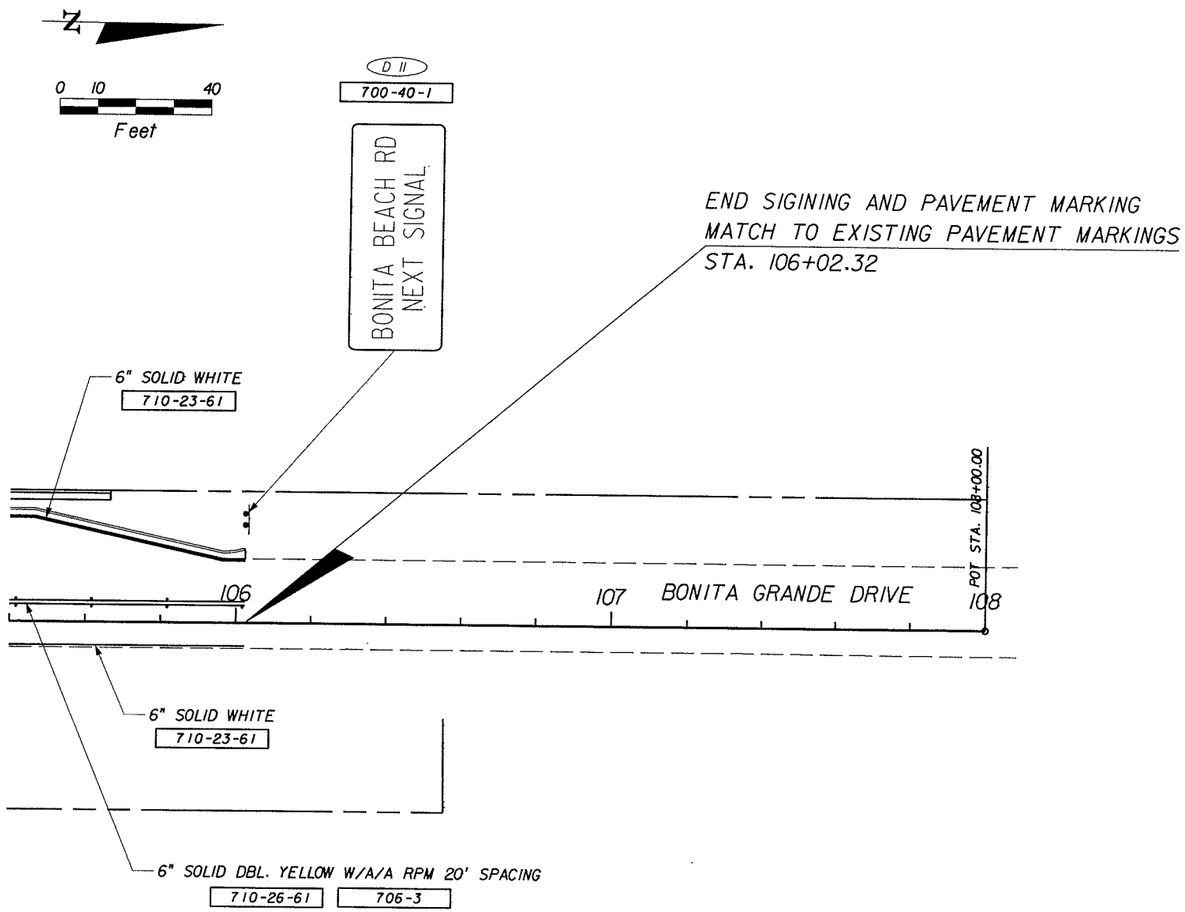
LEE COUNTY
DEPARTMENT OF TRANSORPTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

SIGNING AND PAVEMENT MARKING PLANS

SHEET NO.
28

02/11/2005 11:09:02 AM P:\20008.201\cadd\signing\plansp05.dgn



NOTE: BONITA BEACH RD NEXT SIGNAL SIGN
IS TO BE DESIGNED BY LEE COUNTY

2-11-05
DAN M. CRAIG
FL P.E. #38590

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

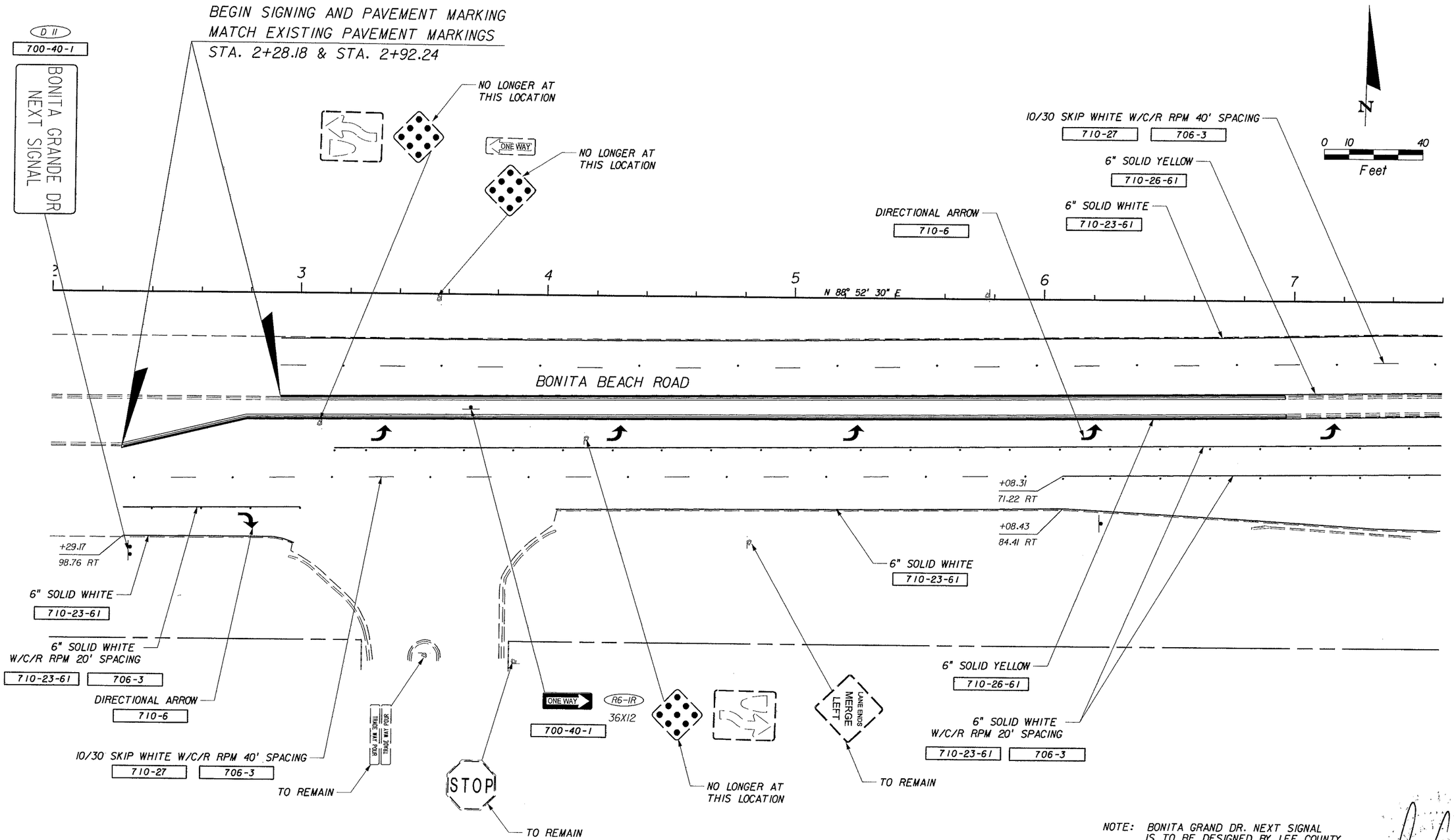
PIZZAGALLI
PIZZAGALLI, MARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA
12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

LEE COUNTY
DEPARTMENT OF TRANSORPTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

SIGNING AND PAVEMENT MARKING PLANS

SHEET NO.
29



NOTE: BONITA GRAND DR. NEXT SIGNAL IS TO BE DESIGNED BY LEE COUNTY

DAN M. CRAIG
FL P.E. #38590

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA

12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

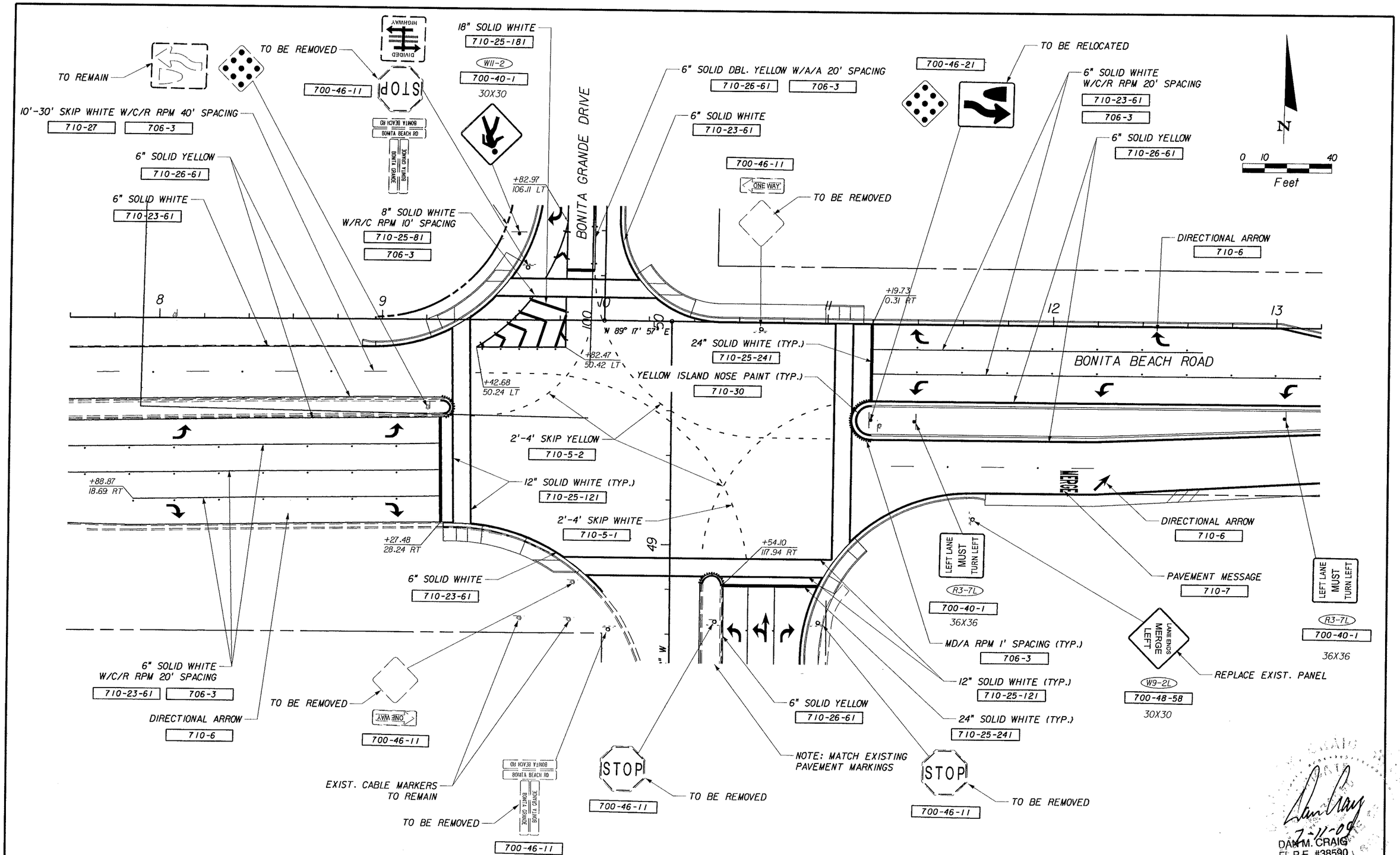
LEE COUNTY
DEPARTMENT OF TRANSORPTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

SIGNING AND PAVEMENT MARKING PLANS

SHEET NO. 30

02/11/2005 11:08:42 AM P:\20008.201\cadd\signing\planspl1.dgn



REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PIEMANY HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA

12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

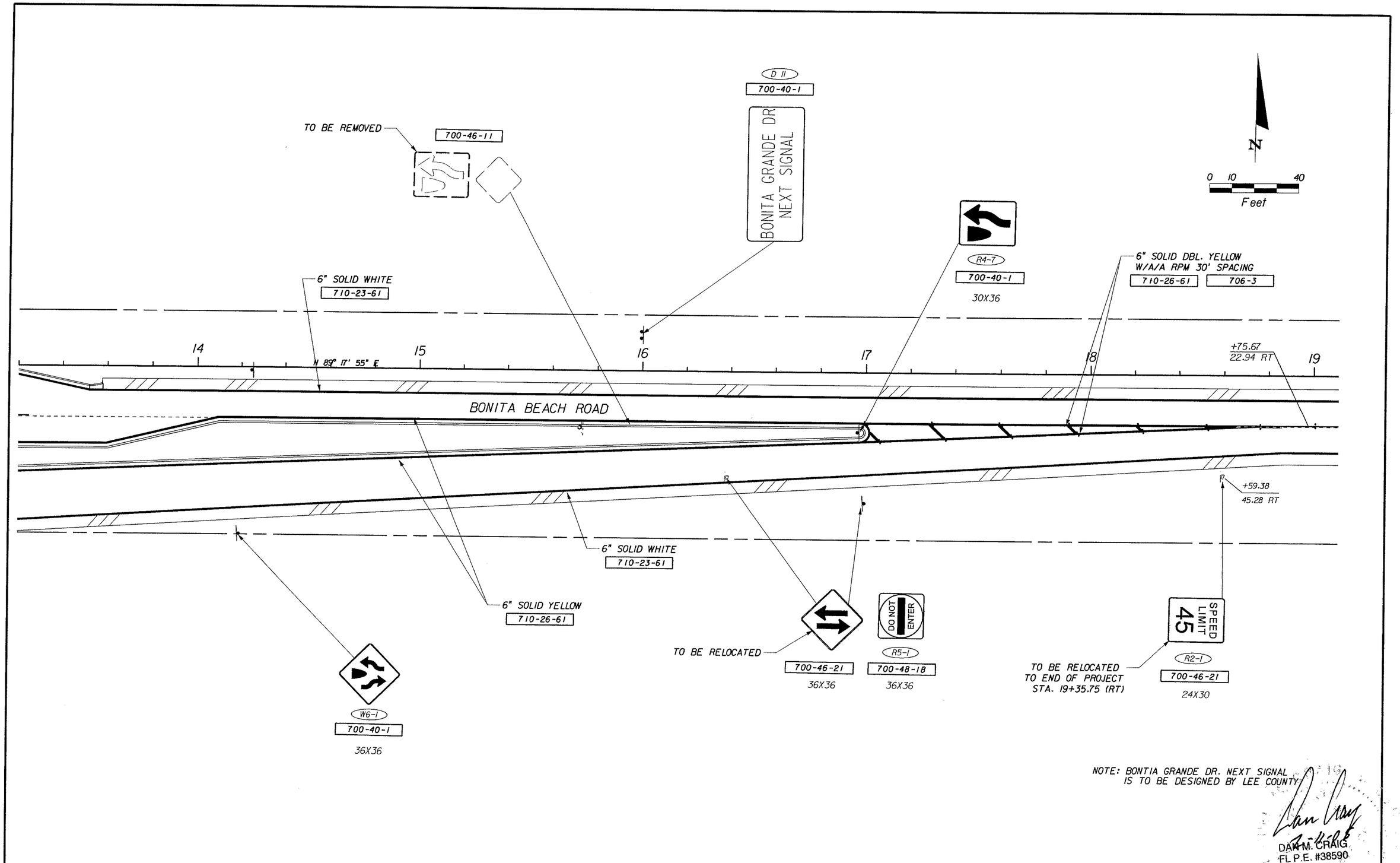
LEE COUNTY
DEPARTMENT OF TRANSORPTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

SIGNING AND PAVEMENT MARKING PLANS

SHEET NO. 31

02/11/2005 11:08:46 AM P:\20008.201\cadd\signing\plansp02.dgn



NOTE: BONTIA GRANDE DR. NEXT SIGNAL IS TO BE DESIGNED BY LEE COUNTY

DAN M. CRAIG
FL P.E. #38590

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN HARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA

12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

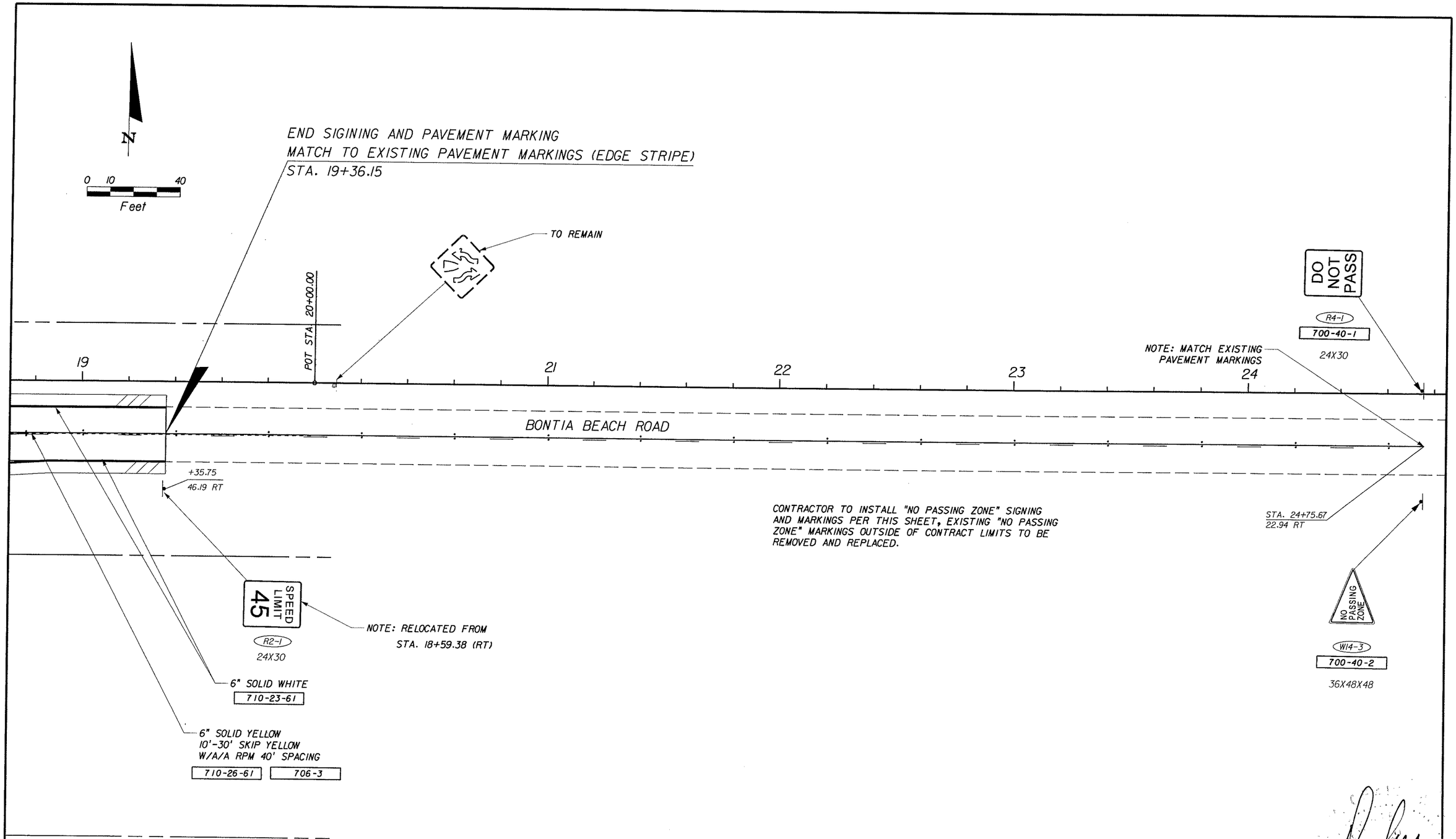
LEE COUNTY
DEPARTMENT OF TRANSORPTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

SIGNING AND PAVEMENT MARKING PLANS

SHEET NO.
32

02/11/2005 11:08:49 AM P:\20008.201\cadd\signing\planspo3.dgn



2-11-05
DAN M. CRAIG
FL P.E. #38590

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PIZZMAN • MARTENSTEIN & ASSOC., INC.
ENGINEERS
JACKSONVILLE • FORT MYERS • TAMPA
12701 World Plaza Lane
Bldg. 80
Fort Myers, FL 33907
EB-4464
(239) 936-6466

LEE COUNTY
DEPARTMENT OF TRANSORPTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

SIGNING AND PAVEMENT MARKING PLANS

SHEET NO. 33

02/11/2005 11:08:55 AM P:\20008.201\cadd\signing\planspd4.dgn

LEE COUNTY
DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

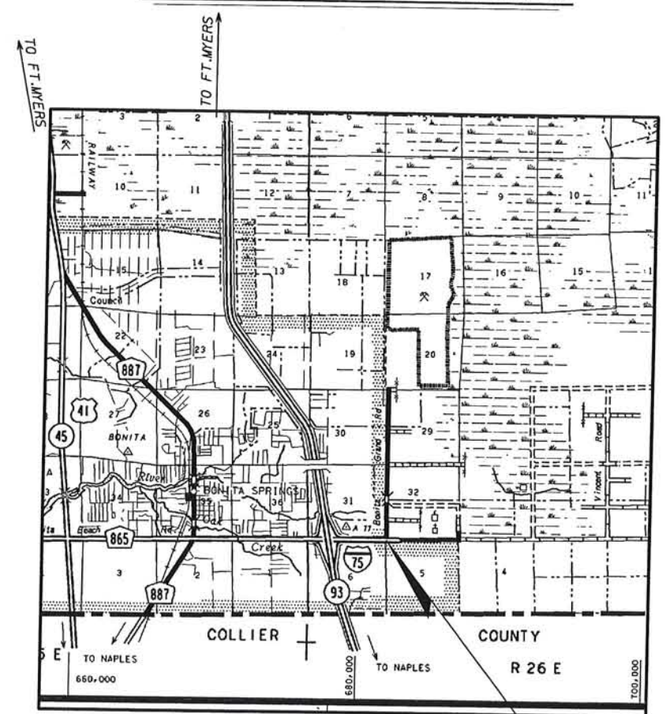
BONITA GRANDE DRIVE
AT
BONITA BEACH ROAD INTERSECTION

LEE COUNTY PROJECT NO. 6039

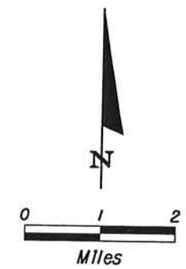
SIGNALIZATION PLANS

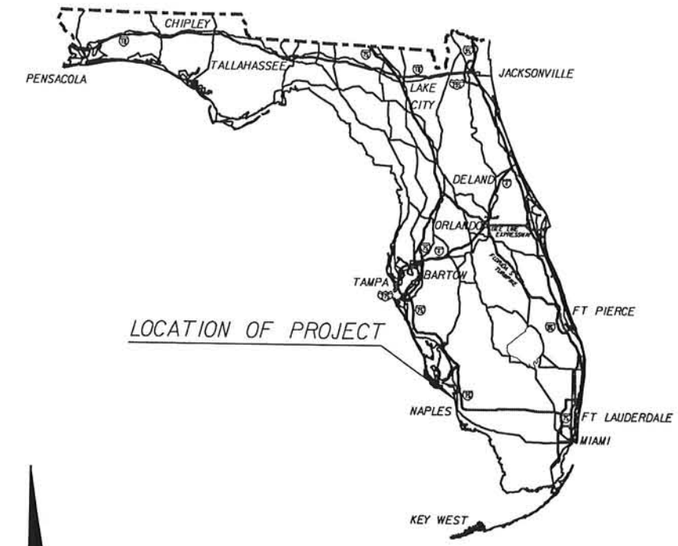
INDEX OF SIGNALIZATION PLANS

SHEET NO.	SHEET DESCRIPTION
T-1	KEY SHEET
T-2	TABULATION OF QUANTITIES
T-3	PAY ITEM NOTES
T-4	GENERAL NOTES
T-5	SIGNALIZATION PLAN SHEET
T-6	MAST ARM SCHEDULE (PRELIMINARY)
T-7	MAST ARM SCHEDULE (FUTURE)
T-8	TABLE OF VARIABLES FOR STANDARD MAST ARM ASSEMBLIES
T-9	TABLE OF VARIABLES FOR SPECIAL MAST ARM ASSEMBLIES
T-10 - T-11	INTERCONNECT PLAN SHEETS



SIGNALIZATION LOCATION
BONITA GRANDE DRIVE AT
BONITA BEACH ROAD





LOCATION OF PROJECT

SIGNALIZATION SHOP DRAWINGS
TO BE SUBMITTED TO:
CHRIS M. PETTERSON
PITMAN-HARTENSTEIN & ASSOCIATES, INC.
5620 EAST FOWLER AVENUE, SUITE F
TAMPA, FL 33617

NOTE:
THIS PROJECT WAS DESIGNED TO MEET LEE COUNTY DEPARTMENT OF TRANSPORTATION (LCDOT) HARDWARE SPECIFICATIONS.

GOVERNING STANDARDS AND SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION,
ROADWAY DESIGN STANDARDS
DATED JANUARY 2002, AND
STANDARDS SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED 2000,
AS AMENDED BY CONTRACT DOCUMENTS.

REVISIONS

PLANS PREPARED BY:

PITMAN-HARTENSTEIN & ASSOC., INC.
ENGINEERS
5620 E. FOWLER AVENUE, SUITE F
TAMPA, FLORIDA 33617
(813) 988-1882

EB No. 4464

VENDOR No. F-592695553-001

FINAL PLANS

2/15/05

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.

SIGNALIZATION ENGINEER OF RECORD: CHRIS M. PETTERSON, P.E.

P.E. NO.: 61804

LCDOT PROJECT MANAGER: JESSICA WHITE, E.I.

FISCAL YEAR	SHEET NO.
05	T-1

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS T-5 PLAN	T-5 FINAL	T-10 PLAN	T-10 FINAL	T-11 PLAN	T-11 FINAL	TOTAL THIS SHEET PLAN	TOTAL THIS SHEET FINAL	GRAND TOTAL PLAN	GRAND TOTAL FINAL	REF. SHEET
555-1-2	DIRECTIONAL BORE (6" TO <12")	LF	320		262		173		755		755		
555-1-3	DIRECTIONAL BORE (12" TO <18")	LF	212		-		-		212		212		
630-1-12	CONDUIT (F & I) (UNDERGROUND)	LF	303		1829		1291		3423		3423		
630-1-22	CONDUIT (FURNISH) (UNDERGROUND)	LF	2466		262		173		2901		2901		
632-7-1	CABLE (SIGNAL) (F & I)	PI	1		-		-		1		1		
632-8-212	CABLE (INTERCONNECT) (1-25) (F & I) (UNDERGROUND)	LF	-		2091		1682		3773		3773		
635-1-11	PULL BOX (F & I)	EA	10		10		7		27		27		
635-1-31	PULL BOX (INSTALL)	EA	-		1		-		1		1		
639-1-12	ELECTRICAL POWER SERVICE (OVERHEAD) (PURCHASED BY CONTRACTOR)	AS	1		-		-		1		1		
639-2-1	ELECTRICAL SERVICE WIRE (FURNISH & INSTALL)	LF	30		-		-		30		30		
641-11-12	CONCRETE STRAIN POLES (F&I W/FOUNDATIONXTYPE N-11 SERVICE POLEX12')	EA	1		-		-		1		1		
649-440	MAST ARM ASSEMBLY (F&I) (SPECIAL)	EA	1		-		-		1		1		
649-433-008	MAST ARM ASSEMBLY (F&IXSINGLE ARM WITH LUMINAIREXB3XQ22 LUM)	EA	1		-		-		1		1		
649-731-007	MAST ARM ASSEMBLY (F&IXSINGLE ARM WITH LUMINAIREXCIXR21 LUM)	EA	1		-		-		1		1		
650-51-313	TRAFFIC SIGNAL (F & IX3-SECT.X1 WAYXSPECIAL)	AS	6		-		-		6		6		
650-51-513	TRAFFIC SIGNAL (F & IX5-SECT.X1 WAYXSPECIAL)	AS	3		-		-		3		3		
653-181	PEDESTRIAN SIGNAL (F & I) (LED) (1 WAY)	AS	8		-		-		8		8		
659-101	SIGNAL HEAD AUXILIARIES (F & I) (BACK PLATES, 3 SECTION)	EA	3		-		-		3		3		
659-107	SIGNAL HEAD AUXILIARIES (F & I) (ALUMINUM PEDESTAL)	EA	6		-		-		6		6		
659-118	SIGNAL HEAD AUXILIARIES (F & I) (BACK PLATES, 5 SECTION CLUSTER)	EA	1		-		-		1		1		
663-74-11	VEHICLE DETECTOR ASSEMBLIES (F & I) (OPTICAL TYPE)	EA	6		-		-		6		6		
665-11	PEDESTRIAN DETECTOR (F & I) (POLE/PEDESTAL MOUNTED)	EA	8		-		-		8		8		
670-5-110	TRAFFIC CONTROLLER ASSEMBLY (F & I) (NEMA)	AS	1		-		-		1		1		
670-5-410	TRAFFIC CONTROLLER ASSEMBLY (MODIFY) ((NEMA)	AS	-		1		-		1		1		
680-106	SYSTEM CONTROL (F & I) (COMMUNICATIONS INTERFACE)	EA	1		-		-		1		1		
690-10	SIGNAL HEAD TRAFFIC ASSEMBLY, REMOVAL	EA	8		-		-		8		8		
690-32-2	POLE REMOVAL (SHALLOW) (BOLT-ON)	EA	2		-		-		2		2		
690-33-1	POLE REMOVAL (DEEP) (DIRECT BURIAL)	LF	6		-		-		6		6		
690-50	CONTROLLER ASSEMBLY, REMOVAL	EA	1		-		-		1		1		
690-60	DETECTOR VEHICLE ASSEMBLY, REMOVE	EA	4		-		-		4		4		
690-90	CONDUIT & CABLING, REMOVE	PI	1		-		-		1		1		
690-100	SIGNAL EQUIPMENT, MISCELLANEOUS REMOVE	PI	1		-		-		1		1		
700-48-18	SIGN PANEL (F&I) (15 OR LESS)	EA	1		-		-		1		1		
700-48-48	SIGN PANEL (RELOCATE) (15 OR LESS)	EA	5		-		-		5		5		
715-1-110	CONDUCTOR (F&I) (INSULATED, NO.12)	LF	1140		-		-		1140		1140		
715-2-115	CONDUIT (F&I-UNDERGROUND) (PVC SCHEDULE 40) (2")	LF	94		-		-		94		94		
715-2-715	CONDUIT (INSTALL UNDERGROUND) (PVC SCHEDULE 40) (2")	LF	216		-		-		216		216		
715-7-11	LOAD CENTER (FURNISH & INSTALL)	EA	1		-		-		1		1		
715-11-119	LUMINAIRE (F&I) (ROADWAY) (SPECIAL)	EA	3		-		-		3		3		
715-14-11	PULL BOX (F&I) (ROADSIDE-MOULDED)	EA	4		-		-		4		4		

Chris Petterson
2/15/05

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN HARTENSTEIN & ASSOC., INC.
ENGINEERS
5620 FOWLER AVENUE SUITE F TAMPA, FLORIDA 33617 EB# 4464
CHRIS M. PETTERSON P.E. NO. 61804

LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

TABULATION OF QUANTITIES

SHEET NO. T-2

02/15/2005 12:02:09 PM p:\20008_Bonita_Grande\signals\tabqsq01.dgn

PAY ITEM NOTES:

555-1-2 AND 555-1-3:

DURING INSTALLATION OF DIRECTIONAL BORE CONDUIT, TRAFFIC SIGNAL ACTUATION SHALL BE MAINTAINED.

630-1-12:

CONDUIT FOR INTERCONNECT CABLE SHALL BE A BUNDLE OF 3 - 1 1/4" ORANGE, GREEN, AND BLUE (SDR CONDUIT).

IN LIEU OF THE INSTALLATION OF NEW CONDUIT, EXISTING CONDUIT (IF NOT DAMAGED) MAY BE RE-USED, AS DIRECTED BY THE PROJECT ENGINEER.

PAYMENT SHALL INCLUDE THE COST OF TRENCHING AND ALL CONDUIT IN TRENCH.

ALL CONDUIT UNDER PROPOSED ROADWAY AND/OR SIDEWALK SHALL BE INSTALLED PRIOR TO INSTALLATION OF ROADWAY BASE AND SURFACE OR CONCRETE.

630-1-22:

CONDUIT FOR INTERCONNECT SHALL BE A BUNDLE OF 3-1/4" ORANGE, GREEN, AND BLUE (SDR CONDUIT).

632-7-1:

THIS ITEM SHALL INCLUDE ALL LABOR AND WIRE NECESSARY FOR COMPLETE REWIRING OF INTERSECTION.

THE COLOR CODE OF SIGNAL CABLE SHALL BE VERIFIED WITH THE MAINTAINING AGENCY PRIOR TO WIRING INTERSECTION.

632-8-212:

ONE PAIR OF CONDUCTORS (1 LINE AND 1 RETURN) SHALL BE USED FOR EACH FUNCTION (I.E., DIAL 1, OFFSET 2, ETC.) A MINIMUM OF 12 PAIRS OF CONDUCTORS SHALL BE INSTALLED.

COMPUTER INTERCONNECT CABLE SHALL BE IMSA SPECIFICATION PE-39, 12 PAIR, 300 VOLT VOICE GRADE, WITH COATED ALUMINUM SHIELD AND #19 AWG CONDUCTORS. INSTALL IN BLUE CONDUIT

INTERCONNECT CABLE SHALL NOT SHARE A PULL BOX OR CONDUIT WITH OTHER CABLES.

635-1-11:

PULL BOXES AND LIDS SHALL BE QUAZITE OR THE EQUIVALENT AND SIZED 24" x 36" FOR INTERCONNECT.

639-1-12:

THIS ITEM SHALL INCLUDE THE COST OF ALL SPECIAL IMPACT CONNECTION FEES CHARGED BY LOCAL POWER COMPANIES FOR ELECTRICAL SERVICE CONNECTION.

THE SERVICE DISCONNECT FOR AN ELECTRICAL POWER SERVICE ASSEMBLY SHALL BE COMPRISED OF TWO CIRCUIT BREAKERS - ONE 60 AMP/120 VOLT FOR SIGNAL AND ONE 15 AMP/240 VOLT LIGHTING LUMINAIRES.

639-2-1:

PAYMENT SHALL BE BASED ON THE LINEAR FOOT OF A SINGLE CONDUCTOR.

649-440, 649-731-007, AND 649-433-008:

MAST ARM POLES SHALL INCLUDE THREE 2" AND ONE 1" CONDUITS STUBBED OUT THROUGH THE FOUNDATION AND RUN TO SAME PULLBOX NEXT TO FOUNDATION.

650-51-313 AND 650-51-513

ALL SIGNAL HEADS SHALL BE RED, YELLOW, AND GREEN LED'S.

THIS ITEM SHALL INCLUDE ALL SUPPORTING HARDWARE NECESSARY TO RIGIDLY MOUNT SIGNAL HEAD TO MAST ARM (ATTACHMENT BANDS SHALL BE STAINLESS STEEL ONLY). SIGNAL HEAD SUPPORTING TUBE SHALL BE CAPABLE OF ADJUSTING VERTICALLY A MINIMUM OF 1.5 FT.

653-181:

PEDESTRIAN SIGNALS SHALL BE DOUBLE-SECTION, INTERNATIONAL SYMBOL, SOLID LED'S.

MOUNTING HEIGHT OF PEDESTRIAN SIGNALS SHALL BE 9.5' ABOVE GRADE.

659-101 AND 659-118:

SIGNAL BACK PLATES SHALL BE ONE-PIECE METAL LOUVERED.

659-107:

PEDESTRIAN PEDESTALS SHALL BE INSTALLED USING PELCO PB-5334 (OR EQUIVALENT) BASES. SIGNAL CABLE SHALL BE SPLICED IN BASE OF PEDESTAL (NOT IN PEDESTRIAN HEADS) WITH EPOXY FILLED (B-CAP) WIRE NUTS. INSIDE DIAMETER OF PEDESTALS SHALL BE FOUR INCHES (4").

665-11:

PEDESTRIAN SIGNAL SIGN FTP-25-04 SHALL BE MOUNTED ABOVE THE PEDESTRIAN BUTTON, AND PEDESTRIAN SIGNAL SIGN R13B SHALL BE MOUNTED BELOW THE PEDESTRIAN BUTTON.

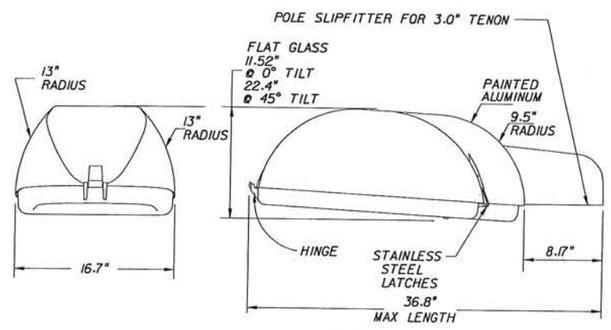
670-5-110:

CONTROLLER BASE SHALL BE QUAZITE P/N PB4058B502 AND SHALL BE INSTALLED IN ACCORDANCE WITH MANUFACTURER'S SPECIFICATIONS. BASE SHALL HAVE A TWELVE-INCH (12") BED OF PEAROCK OR CRUSHED STONE FOR DRAINAGE. STUB UP CONDUITS SHALL BE SIX INCHES (6") TO TWELVE INCHES (12") BELOW THE ACCESS HOLE IN THE CABINET PAD. A SERVICE SLAB SHALL BE THE WIDTH OF CABINET AND SHALL EXTEND OUT 30 INCHES (30").

THIS ITEM SHALL INCLUDE ADDITIONAL COST OF CONCRETE, LABOR, AND OTHER MATERIALS FOR CONTROLLER PAD AND STEPS AS REQUIRED.

LUMINAIRE DETAILS

MAX AMBIENT: 40° C
MAX. WT: 50lbs
EPA: 2.05 SF



LUMINAIRE INFORMATION

SOURCE AND WATTAGE: 250 HPS, MOGUL BASE, PROTECTED STARTER (POLES 1-2, 1-3)
400 HPS, MOGUL BASE, PROTECTED STARTER (POLE 1-1)

VOLTAGE : MULTI-VOLT (240 VOLT)

OPTICS : FORWARD THROW, FLAT GLASS

MOUNTING : POLE SLIPFITTER

TILT: 0° FOR ALL FIXTURES

FINISH COLOR : GRAY

Chris M. 6
2/15/05

THIS ITEM SHALL INCLUDE THE IMPLEMENTATION OF TIMINGS INTO ALL COMPONENTS. THE COORDINATION TIMINGS WILL BE SUPPLIED TO THE PROJECT ENGINEER UPON HIS REQUEST. REQUESTS SHOULD BE MADE TO LEE COUNTY TRAFFIC OPERATIONS ENGINEER, TELEPHONE (239) 694-7600.

THE CONTROLLER AND CABINET SHALL BE COMPATIBLE WITH THE EXISTING LEE COUNTY CLOSED-LOOP COMPUTER SYSTEM. ALL LABOR AND MATERIALS (INCLUDING THE INTERFACE PANEL AND LIGHTNING ARRESTORS) NECESSARY FOR A COMPLETE AND ACCEPTABLE INSTALLATION SHALL BE INCLUDED IN THE PRICE FOR A CONTROLLER ASSEMBLY.

670-5-410:

THIS ITEM SHALL INCLUDE THE IMPLEMENTATION OF TIMINGS INTO ALL COMPONENTS. THE COORDINATION TIMINGS WILL BE SUPPLIED TO THE PROJECT ENGINEER UPON HIS REQUEST. REQUESTS SHOULD BE MADE TO DISTRICT 1 TRAFFIC OPERATIONS ENGINEER, TELEPHONE (863) 519-2490.

THE COORDINATION UNIT SHALL BE COMPATIBLE WITH THE EXISTING LEE COUNTY CLOSED-LOOP COMPUTER SYSTEM. ALL LABOR AND MATERIALS (INCLUDING THE INTERFACE PANEL AND LIGHTNING ARRESTORS) NECESSARY FOR A COMPLETE AND ACCEPTABLE INSTALLATION SHALL BE INCLUDED IN THE PRICE FOR A CONTROLLER ASSEMBLY.

COORDINATION UNITS SHALL HAVE CAPABILITIES OF GENERATING SEPARATE FORCEOFFS AND PERMISSIVE PERIODS FOR MOVEMENTS 1, 3, 4, 5, 7, AND/OR 8.

THIS ITEM IS FOR INSTALLATION OF ADDITIONAL LOOP DETECTORS.

MODIFY EXISTING NEMA CONTROLLER AND PERFORM ANY CABINET AND FIELD WIRING NECESSARY TO ADD PEDESTRIAN FEATURES, LOOPS, AND INTERCONNECT INTERFACE.

THE EXISTING CABINET BASE SHALL BE CORE DRILLED FOR THE INSTALLATION OF NEW CONDUITS, IF SPARE CONDUIT STUBOUTS ARE NOT AVAILABLE FOR USE. NEW CONDUITS, AS REQUIRED IN THE PLANS, SHALL BE INSTALLED INTO THE EXISTING FOUNDATION. WHEN ADDITIONAL CONDUIT ARE REQUIRED, THE CONDUIT SHALL BE A MINIMUM OF 3" IN DIAMETER. THE NEW CONDUITS SHALL NOT BE LOCATED SO AS TO OBSTRUCT THE MAINTENANCE OF EQUIPMENT IN THE CABINET OR THE ANCHORING OF THE CABINET FLANGE TO THE CONCRETE FOUNDATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING INTERNAL CABINET AND EQUIPMENT FROM DUST AND DEBRIS CAUSED BY CORE DRILLING.

700-48-18 AND 700-48-48:

THIS ITEM SHALL INCLUDE SIGN ARM BRACKET AND ALL SUPPORTING HARDWARE TO MAKE A COMPLETE AND ACCEPTED INSTALLATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DESIGNING SIGN SUPPORT COMPONENTS TO MEET THE FOLLOWING CRITERIA:

SIGN AREA	20 S.F.
MINIMUM DEAD LOAD WEIGHT	200 LBS.
MINIMUM WIND LOAD	1100 LBS.

715-1-110:

INCLUDE CONDUCTORS AS INDICATED IN THE PLANS AND THE ROADWAY AND TRAFFIC DESIGN STANDARDS. PAYMENT SHALL BE MADE BASED ON LINEAR FEET OF SINGLE CONDUCTOR. INCLUDE BREAK-AWAY RECEPTACLES WITH SET SCREW CONNECTORS AND RUBBER BOOTS IN EACH POLE BASE.

715-2-115 AND 715-2-715:

INCLUDE CONDUIT, ELBOWS, SWEEPS, CONNECTING HARDWARE, TRENCHING AND BACKFILL AS INDICATED IN THE PLANS AND THE ROADWAY AND TRAFFIC DESIGN STANDARDS. THE LINEAR FOOT PRICE FOR CONDUIT SHALL ALSO INCLUDE THE COST OF RESTORING CUT PAVEMENT, SIDEWALKS, SOD, ETC., TO ITS ORIGINAL CONDITION. SOD SHALL BE REPLACED IN LIKE KIND OF THE ADJACENT SURROUNDINGS.

715-11-119:

THIS ITEM SHALL BE HOLOPHANE MONGOOSE (G400HPMTLFFVG-P3) FOR SIGNAL POLE 1-1 AND HOLOPHANE MONGOOSE (G250HPMTLFFVG-P3) FOR SIGNAL POLES 1-2 AND 1-3. SEE LUMINAIRE DETAILS FOR FURTHER INFORMATION. ONE PHOTO ELECTRIC CELL TO BE INSTALLED ON SERVICE DISCONNECT. ATTACHMENT BRACKETS FOR ALL LUMINAIRE FIXTURES SHALL BE HOLOPHANE P/N (BKT-1-G).

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
5620 FOWLER AVENUE SUITE F TAMPA, FLORIDA 33617 EB# 4464
CHRIS M. PETTERSON P.E. NO. 61804

LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

PAY ITEM NOTES

SHEET NO.
T-3

GENERAL NOTES:

THE PERMITTEE SHALL PROVIDE A QUALIFIED TECHNICIAN, TO PERFORM CONSTRUCTION ENGINEERING & INSPECTION SERVICES FOR THE INSTALLATION OF THE TRAFFIC SIGNAL, AND TO CERTIFY THAT ALL WORK HAS BEEN DONE IN ACCORDANCE WITH THE DEPARTMENT'S STANDARDS, SPECIFICATIONS, PERMIT REQUIREMENTS, AND ALL APPLICABLE FEDERAL, STATE AND LOCAL STATUTES, RULES, AND REGULATIONS. IN ADDITION, THE ON-SITE INSPECTOR SHALL BE IMSA LEVEL II CERTIFIED.

EXISTING EQUIPMENT OWNERS: LEE COUNTY/FLORIDA DOT

SIGNAL TO BE MAINTAINED BY: LEE COUNTY

FOR PAVEMENT MARKINGS, SEE PAVEMENT MARKING PLANS.

INSURANCE AS REFERENCED IN SECTION 7-13.5 IN THE F.D.O.T. STANDARD SPECIFICATIONS FOR ROADWAY AND BRIDGE CONSTRUCTION (EDITION AS SHOWN ON KEY SHEET) SHALL BE PROVIDED BY THE CONTRACTOR WHEN INSTALLING OR WHEN WORKING ON OR IN THE VICINITY OF JOINT-USE POLES OR WHEN WORKING IN THE VICINITY OF POWER LINES.

TRAFFIC CONTROL PLAN FOR SIGNAL INSTALLATION: MAINTAIN TRAFFIC ON EXISTING ROADWAY BY USE OF INDEX NOS. 600, 620 & 622 OF THE ROADWAY AND TRAFFIC DESIGN STANDARDS, BOOKLET EDITION AS NOTED ON KEY SHEET.

FP&L POWER COMPANY SHALL ASSIST CONTRACTOR IN PERFORMING ALL NECESSARY WORK UNDER THEIR POWER LINES, SUCH AS THE INSTALLATION OF SPAN WIRE, SIGNAL CABLE, FIBERGLASS INSULATORS AND SIGNAL POLES. CONTRACTOR SHALL NOTIFY THE POWER COMPANY LEAST 72 HOURS PRIOR TO INSTALLATION OF THIS EQUIPMENT. LEE COUNTY DOT CONTRACTOR AND ANY SUBCONTRACTOR WILL UTILIZE EQUIPMENT WITH BOOM TO LIFT NO HIGHER THAN 18' ABOVE GRADE WHEN WORKING IN THE VICINITY OF FP&L'S OVERHEAD ELECTRIC FACILITIES.

SIGNAL SHALL BE PLACED IN FULL OPERATION ON A MONDAY, TUESDAY OR WEDNESDAY, BUT SHALL NOT BE PLACED IN FULL OPERATION ON THE DAY PRECEDING A HOLIDAY.

SECTION 611-4, FIELD TESTS:

SCHEDULING OF THE PARTIAL AND FINAL ACCEPTANCE INSPECTIONS SHALL BE COORDINATED WITH THE TRAFFIC OPERATIONS LIAISON(S) NOTED BELOW WITH A MINIMUM OF 48 HOURS NOTICE.

RESULTS OF FIELD TESTS (i.e., SECTION 614) SHALL BE MADE AVAILABLE TO THE PROJECT ENGINEER IN WRITTEN FORM. A QUALIFIED REPRESENTATIVE SHALL BE PRESENT AT THE CONDITIONAL ACCEPTANCE INSPECTION OF THE CONTROLLER ASSEMBLY. THE QUALIFICATIONS OF THE REPRESENTATIVE SHALL INCLUDE:

(A) COMPLETE FAMILIARITY WITH ALL SYSTEM ELEMENTS INCLUDING CONTROLLERS, COORDINATING UNITS, SYSTEM CLOCKS AND SYSTEM COMMUNICATIONS ELEMENTS. THE REPRESENTATIVE SHALL BE QUALIFIED TO INPUT AND RECALL ALL CONTROLLER AND SYSTEM TIMING FUNCTIONS.

MAINTAINING AGENCY SHALL COORDINATE UTILITY RELOCATIONS IF NECESSARY.

UTILITY OWNERS:

COMCAST
BRIAN BELL
2931 MICHIGAN AVENUE
FORT MYERS, FL 33916
PHONE: (239) 732-3870

SPRINT
JOHN REYNOLDS
3940 PROSPECT AVENUE, UNIT 101
NAPLES, FL 34104
PHONE: (239) 263-6342

FPL
ROY GARRISON
15834 WINKLER ROAD
FORT MYERS, FL 33908
PHONE: (239) 332-9129

BONITA SPRINGS UTILITIES
PATRICK JENNINGS
11860 EAST TERRY STREET
BONITA SPRINGS, FL 34135
PHONE: (239) 390-4818

LEE COUNTY DOT
RICHARD LISENBEE
5650 ENTERPRISE PKWY.
FORT MYERS, FL
PHONE: (239) 694-7600

SUBMITTAL DATA FOR ALL PERMIT JOBS MUST BE DONE IN ACCORDANCE WITH SUPPLEMENTAL SPECIFICATIONS TO THE STANDARD SPECIFICATIONS, SECTION 603.5.

AT LEAST 48 HOURS PRIOR TO BEGINNING THE TRAFFIC SIGNAL INSTALLATION, CONTRACTORS SHALL CONTACT THE TRAFFIC SIGNAL INSPECTOR/LIAISON:

LAWRENCE MASSEY, TRAF. OPS. LIAISON
FDOT SOUTHWEST AREA OFFICE
2298 VICTORIA AVENUE, SUITE 292
FORT MYERS, FL 33902-1030
PHONE: (239) 461-4318
(SUNCOM 741-4318)

RICHARD LISENBEE
LEE COUNTY DOT
5650 ENTERPRISE PKWY.
FORT MYERS, FL 33905
PHONE: (239) 694-7600

WHEN CONSTRUCTION DEVIATES FROM APPROVED PERMIT PLANS, INCLUDING POSSIBLE EASEMENTS, PLEASE FURNISH THE DEPARTMENT OF TRANSPORTATION ONE SET OF "AS BUILT" PLANS FOR OUR RECORDS:

DEPARTMENT OF TRANSPORTATION
P.O. BOX 1249
(STREET ADDRESS: 801 N. BROADWAY AVE.)
BARTOW, FLORIDA 33831
ATTN: TRAFFIC OPERATIONS - SIGNAL DIVISION

FURNISH TWO SETS OF "AS BUILT" PLANS TO:
LEE COUNTY DOT TRAFFIC
5650 ENTERPRISE PKWY.
FORT MYERS, FL 33905
ATTENTION: MIKE BERENS

PULL BOXES ARE TO BE PLACED BEHIND CURB AND GUTTER. IF THERE IS NO CURB AND GUTTER, THEN PULL BOXES SHALL BE PLACED A MINIMUM OF 7' FROM THE EDGE OF PAVEMENT.

DURING CONSTRUCTION, IF ANY PEDESTRIAN FACILITIES ARE DISTURBED WITHIN THE LIMITED ACCESS R/W, THEY SHALL BE REPLACED TO COMPLY WITH THE CURRENT STANDARDS FOR THE AMERICAN WITH DISABILITIES ACT (ADA) OF 1990.

WORK ZONE TRAFFIC CONTROL (REWORK EXISTING SIGNAL)

A. THE CRITERIA AS OUTLINED IN THE "MINIMUM SPECIFICATIONS FOR TRAFFIC CONTROL SIGNALS AND DEVICES", SHALL BE ADHERED TO FOR ALL SIGNALS, BOTH PERMANENT AND TEMPORARY. MAINTAIN TRAFFIC BY USE OF TRAFFIC CONTROL INDEXES IN THE F.D.O.T. ROADWAY AND TRAFFIC DESIGN STANDARDS BOOKLET DATED JANUARY 2000. NO LANE CLOSURES WILL BE ALLOWED BETWEEN 6:00 A.M. AND 9:00 A.M. AND BETWEEN 4:00 P.M. AND 7:00 P.M.

B. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING SAFE AND EFFICIENT OPERATION OF ALL SIGNALS, AND THE SIGNALIZED MOVEMENT OF TRAFFIC WITHIN THE LIMITS OF THE PROJECTS. THIS IS TO INCLUDE DETERMINING TRAFFIC SIGNAL TIMINGS, AND ADJUSTING SIGNAL TIMINGS AS NECESSARY DURING EACH PHASE OF CONSTRUCTION. THIS SHALL ALSO INCLUDE MAINTAINING SIGNAL COORDINATION WITH SIGNALS BOTH INSIDE AND OUTSIDE THE PROJECT LIMITS.

C. MODIFICATION TO PERMANENT SIGNAL EQUIPMENT FOR TEMPORARY MAINTENANCE OF TRAFFIC PHASING SHALL BE ACCOMPLISHED IN A MANNER SO AS NOT TO CAUSE DAMAGE TO MAST ARMS, POLES, OR OTHER SIGNAL EQUIPMENT.

D. DURING EACH PHASE OF CONSTRUCTION, THE CONTRACTOR SHALL PROPERLY ALIGN SIGNAL HEADS.

E. "ALL SIGNALS SHALL REMAIN IN ACTUATED OPERATION THROUGHOUT THE DURATION OF THE PROJECT. THE CONTRACTOR MAY UTILIZE STANDARD LOOPS, PREFORMED LOOPS, OR AN ALTERNATIVE METHOD. ANY ALTERNATIVE DEVICE MUST BE ON THE APPROVED PRODUCTS LIST AND APPROVED BY THE PROJECT ENGINEER. NO MICROWAVE DETECTORS SHALL BE USED FOR SIGNAL ACTUATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROPER PLACEMENT AND ANY NECESSARY RELOCATION, ADJUSTMENT OR REPLACEMENT OF THESE DETECTORS AS NECESSARY TO MAINTAIN ACTUATED OPERATION FOR ALL MAIN STREET AND SIDE STREET MOVEMENTS FOR THE DURATION OF THE PROJECT. ALL COSTS OF TEMPORARY VEHICLE DETECTION, INCLUDING DETECTORS, INSTALLATION, RELOCATION, ADJUSTMENT, OR REPLACEMENT SHALL BE INCLUDED AND PAID FOR UNDER PAY ITEMS 2101-1 OR 102-1. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH LOCAL UTILITY COMPANIES AND VERIFY THAT TEMPORARY POLES WILL NOT CONFLICT WITH ANY EXISTING UTILITIES".

Chris M. Petterson
2/15/05

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
5620 FOWLER AVENUE SUITE F TAMPA, FLORIDA 33617 EB# 4464
CHRIS M. PETTERSON P.E. NO. 61804

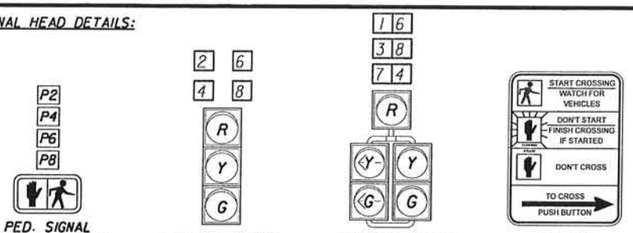
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

GENERAL NOTES

SHEET NO.
T-4

SIGNAL HEAD DETAILS:



653-181	8 AS	650-51-313	6 AS	650-51-513	3 AS
		659-101	3 EA	659-118	1 EA

EAST-WEST FACING SIGNAL HEADS SHALL HAVE BACKPLATES.

CONTROLLER OPERATIONS:

1. MAJOR STREET IS BONITA BEACH ROAD, MOVEMENTS 2 AND 6, AND MINOR STREET IS BONITA GRANDE DRIVE, MOVEMENTS 4 AND 8.

2. SPECIAL SIGNAL OPERATING PLAN WITH THE FOLLOWING:

(A) TS2 TYPE 1 CONTROLLER WITH TYPE V CABINET AND VIDEO DETECTION.

(B) COORDINATION ON PHASE 2 (MOVEMENT 2) WITH BACK-UP TIME-BASE COORDINATION. SIGNAL IS COORDINATED WITH PHASE 2 OF NORTHBOUND OFF-RAMP FROM I-75 AT BONITA BEACH ROAD.

(C) CONCURRENT/ACTUATED PEDESTRIANS FOR MOVEMENTS 2 (P2), 4 (P4), 6 (P6), AND 8 (P8). THE FORCE-OFF FUNCTION FOR PHASE 2 SHALL NOT BE EFFECTIVE DURING THE TIMING OF PEDESTRIAN CLEARANCE INTERVAL FOR P4 AND P8. SYNCHRONIZATION SHALL BE MAINTAINED. THE CONTROLLER SHALL REMAIN IN THE COORDINATED MODE AND SHALL NOT REVERT TO ISOLATED OPERATION AS A RESULT OF PEDESTRIAN ACTUATION.

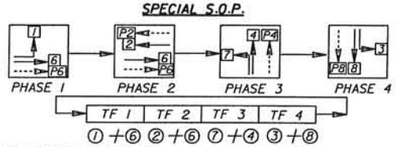
(D) THE YIELD POINT SHALL BE THE POINT IN THE CYCLE WHERE THE COORDINATED PHASE 2 (MOVEMENT 2) IS TERMINATED SUBJECT TO THE PRESENCE OF A CONFLICTING CALL. THE YIELD POINT SHALL BE THE ZERO PERCENT OFFSET OF THE LOCAL CYCLE LENGTH.

(E) THE CONTROLLER CABINET SHALL BE WIRED IN ACCORDANCE WITH THE SIGNAL OPERATING PLAN.

(F) LEFT TURN SIGNAL HEADS 3 AND 7 SHALL BE WIRED TO THE COMPANION THRU HEADS (FOR PHASES 3 AND 4) ON THE TERMINAL BLOCK IN THE CONTROLLER CABINET ONLY -- NOT IN THE OVERHEAD WIRING.

(A) 700-48-18	1 EA	(B) 700-48-48	1 EA	FTP-25-04	FTP-25-04

SPECIAL S.O.P.



(C) 700-48-48	2 EA	(D) 700-48-48	2 EA

VIDEO VEHICLE DETECTION ASSIGNMENTS			
CAMERA DETECTOR	DETECTION ZONE	CONNECT TO TIMING FUNCTION	DELAY TIME (SECS.)
CD1	DZ1	TF 1	0
	DZ6	TF 1, TF 2	0
	DZ6TD	TF 1, TF 2	5
CD2	DZ2	TF 2	0
	DZ2TD	TF 2	5
CD3	DZ8	TF 4	0
CD4	DZ4	TF 3	0
	DZ4TD	TF 3	5
CD5	DZ2S	SYS. DET.	0
CD6	DZ6S	SYS. DET.	0

DELAY TIME IS INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY PROJECT ENGINEER.

CONTROLLER TIMINGS					
TIMING FUNCTION		1	2	4	3	2
MOVEMENT NUMBER		1	2	3,8	7,4	6
TIMING FUNCTION	MINIMUM GREEN	6	15	10	10	15
	EXTENSION	3	5	3	3	5
	MAXIMUM GREEN 1	15	45	25	15	45
	YELLOW CLEARANCE	4.0	4.8	3.5	3.5	4.8
	ALL RED	2.0	3.0	2.8	2.8	3.0
	PEDESTRIAN WALK	-	7	7	7	7
	PED. CLEARANCE	-	16	25	25	29
	RECALL	-	MIN	-	MIN	-

TIMINGS ARE INITIAL AND MAY REQUIRE FIELD ADJUSTING AS DIRECTED BY PROJECT ENGINEER. INSTALL CONCURRENT TIMING OF INITIAL AND EXTENSION INTERVALS.

Chris M. Pe
2/15/05

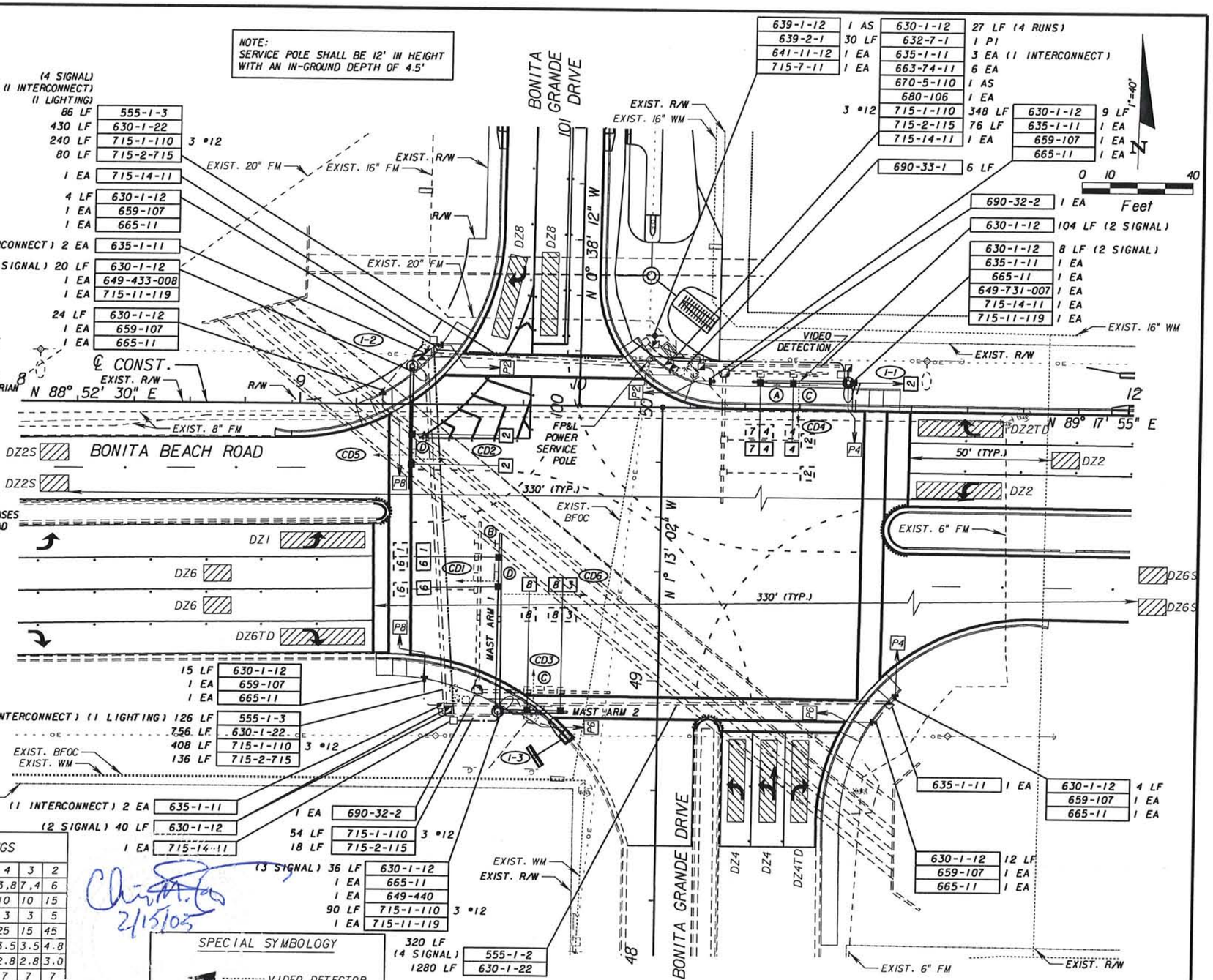
SPECIAL SYMBOLOGY

VIDEO DETECTOR

DZ5 ..... VIDEO DETECTION ZONE (30' TYP.)

DZ5 ..... VIDEO DETECTION ZONE (10' TYP.)

NOTE:
SERVICE POLE SHALL BE 12' IN HEIGHT WITH AN IN-GROUND DEPTH OF 4.5'



639-1-12	1 AS	630-1-12	27 LF (4 RUNS)
639-2-1	30 LF	632-7-1	1 PI
641-11-12	1 EA	635-1-11	3 EA (1 INTERCONNECT)
715-7-11	1 EA	663-74-11	6 EA
		670-5-110	1 AS
		680-106	1 EA
	3 #12	715-1-110	348 LF
		715-2-115	76 LF
		715-14-11	1 EA

630-1-12	9 LF
635-1-11	1 EA
659-107	1 EA
665-11	1 EA

690-33-1	6 LF
690-32-2	1 EA
630-1-12	104 LF (2 SIGNAL)

630-1-12	8 LF (2 SIGNAL)
635-1-11	1 EA
665-11	1 EA
649-731-007	1 EA
715-14-11	1 EA
715-11-119	1 EA

(4 SIGNAL) (1 INTERCONNECT) (1 LIGHTING)	86 LF	555-1-3
	430 LF	630-1-22
	240 LF	715-1-110 (3 #12)
	80 LF	715-2-715
	1 EA	715-14-11
	4 LF	630-1-12
	1 EA	659-107
	1 EA	665-11
(1 INTERCONNECT)	2 EA	635-1-11
(2 SIGNAL)	20 LF	630-1-12
	1 EA	649-433-008
	1 EA	715-11-119
	24 LF	630-1-12
	1 EA	659-107
	1 EA	665-11

	15 LF	630-1-12
	1 EA	659-107
	1 EA	665-11
(5 SIGNAL) (1 INTERCONNECT) (1 LIGHTING)	126 LF	555-1-3
	756 LF	630-1-22
	408 LF	715-1-110 (3 #12)
	136 LF	715-2-715
(1 INTERCONNECT)	2 EA	635-1-11
(2 SIGNAL)	40 LF	630-1-12
	1 EA	715-14-11
	1 EA	690-32-2
	54 LF	715-1-110 (3 #12)
	18 LF	715-2-115
(3 SIGNAL)	36 LF	630-1-12
	1 EA	665-11
	1 EA	649-440
	90 LF	715-1-110 (3 #12)
	1 EA	715-11-119
	320 LF	
(4 SIGNAL)		555-1-2
	1280 LF	630-1-22

635-1-11	1 EA	630-1-12
		659-107
		665-11

630-1-12	4 LF	
659-107	1 EA	
665-11	1 EA	

630-1-12	12 LF	
659-107	1 EA	
665-11	1 EA	

POLE (1-1)
STATION: 10+97.00
OFFSET: 10.20 LT.
ELEVATION AT POLE BASE: 16.99
ELEVATION AT CROWN OF ROAD: 17.10

POLE (1-2)
STATION: 9+37.00
OFFSET: 13.90 LT.
ELEVATION AT POLE BASE: 16.78
ELEVATION AT CROWN OF ROAD: 17.24

POLE (1-3)
STATION: 9+72.66
OFFSET: 111.94 RT.
ELEVATION AT POLE BASE: 17.23
ELEVATION AT CROWN OF ROAD: 17.48

690-10	8 EA
690-50	1 EA
690-60	4 EA
690-90	1 PI
690-100	1 PI

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
5620 FOWLER AVENUE SUITE F TAMPA, FLORIDA 33617 EB# 4464
CHRIS M. PETTERSON P.E. NO. 61804

LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

SIGNALIZATION PLAN
BONITA GRANDE DRIVE AT BONITA BEACH ROAD

SHEET NO.
T-5

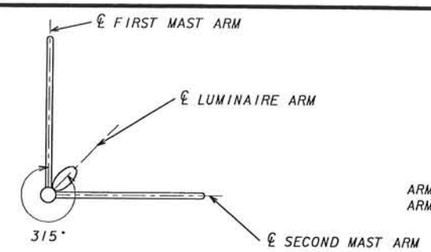
02/15/2005 02:26:49 PM p:\20008_Bonita_Grande\signals\plansg01.dgn

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE ELEVATION PRIOR TO POLE MANUFACTURING.

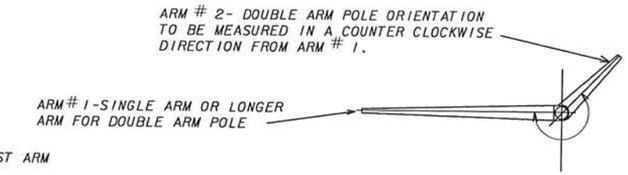
CONTRACTOR SHALL ALSO INSURE THAT TOP OF POLE FOUNDATION WILL NOT BE INSTALLED BELOW NATURAL GROUND LEVEL.

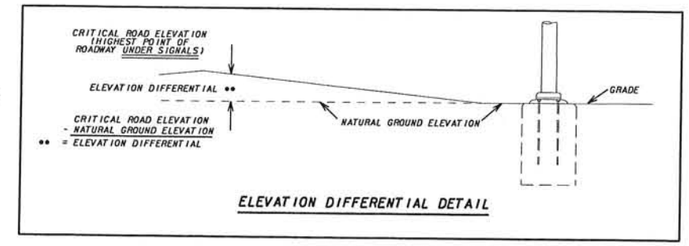
SIGNAL HEAD AND SIGN LOCATIONS SHOWN ON THIS SHEET REFLECT PRELIMINARY SIGNAL REQUIREMENTS. SEE APPROPRIATE PLAN SHEET FOR SIGNAL HEAD AND SIGN CONFIGURATION PER LOCATION.

MAST ARMS ASSEMBLIES ARE DESIGNED TO ACCOMMODATE BOTH FUTURE AND PRELIMINARY LOADINGS AS SPECIFIED IN THE PRELIMINARY AND FUTURE LOADING ARRANGEMENT TABLES.

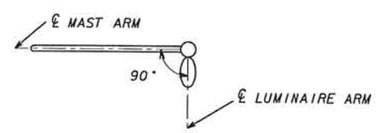


LUMINAIRE ORIENTATION
POLE 1-3

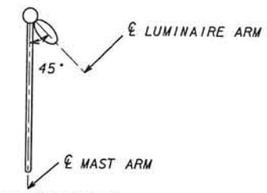




** A POSITIVE ELEVATION DIFFERENTIAL INDICATES THE POLE LOCATION IS LOWER THAN THE CRITICAL ROADWAY ELEVATION.



LUMINAIRE ORIENTATION
POLE 1-1



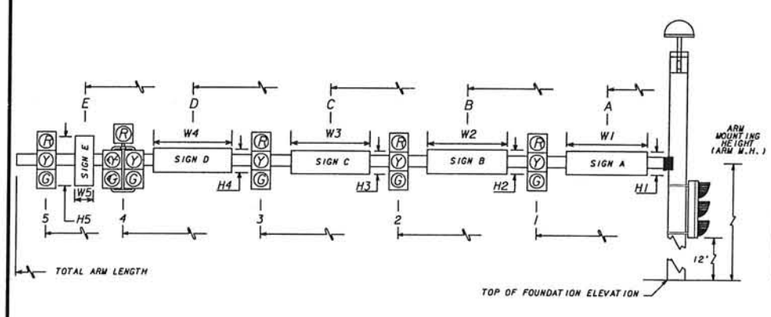
LUMINAIRE ORIENTATION
POLE 1-2

PRELIMINARY MAST ARM LOADING ARRANGEMENT

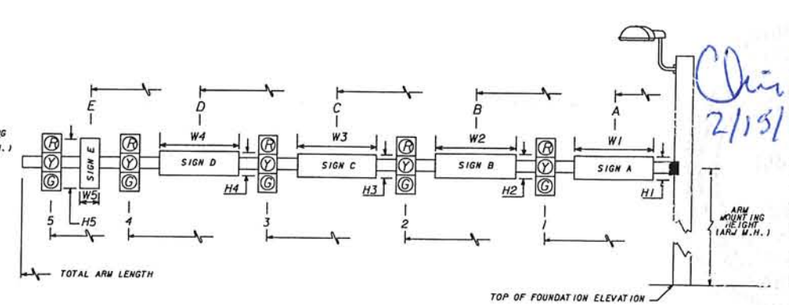
* DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY.

ID NO.	SHEET NO.	LOCATION BY STA.	** ELEVATION DIFFERENTIAL	RDWY ARM NO.	SIGNAL DATA: SIGNAL V/H	BACK PLATES Y/N	PED. SIGNAL Y/N	DISTANCE FROM POLE: 1	*	2	*	3	*	4	*	5	*	TOTAL ARM LENGTH	ARM M.H.	∠ BETWEEN DUAL ARMS 90/270
1-1	T-5	10+97	0.11	1	V	N	Y			18.5	3			30.5	5			34	19.5	
				2																
1-2	T-5	9+37	0.46	1	V	Y	Y			23.3	3			34.3	3			44	20.0	
				2																
1-3	T-5	9+72.66	0.25	1	V	Y	N			43.7	3			54.4	5			64	21.5	270
				2	V	N	N			8.7	3			20.7	5			24	21.5	

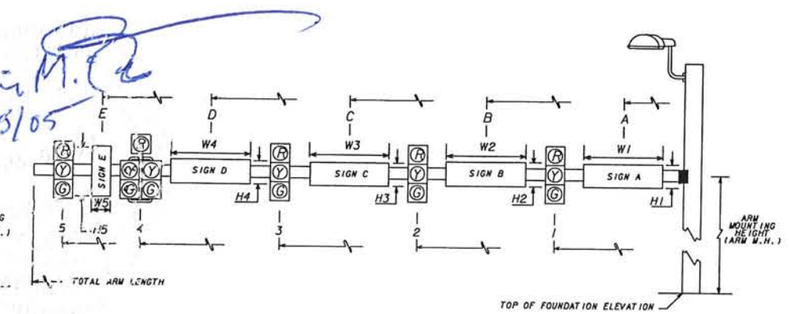
ID NO.	SIGN DATA: DISTANCE FROM POLE / HEIGHT AND WIDTH OF SIGN: A	H1	W1	B	H2	W2	C	H3	W3	D	H4	W4	E	H5	W5	PAINT COLOR
1-1	12.5	1.0	6.0				24.5	2.5	2.5							GALV.
1-2							28.8	1.0	6.0							GALV.
1-3							49.1	1.0	6.0				59.4	2.5	2.0	GALV.
							14.7	1.0	6.0							



TYPICAL DESIGN LOADING (POLE 1-1 MAST ARM 1)



TYPICAL DESIGN LOADING (POLE 1-2 MAST ARM 1)



TYPICAL DESIGN LOADING (POLE 1-3 MAST ARM 1 AND MAST ARM 2)

Chris M. Pe
2/15/05

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
5620 FOWLER AVENUE SUITE F TAMPA, FLORIDA 33617 EB# 4464
CHRIS M. PETTERSON P.E. NO. 61804

LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

MAST ARM SCHEDULE
PRELIMINARY

SHEET NO.
T-6

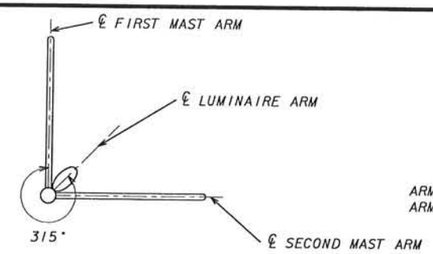
02/15/2005 02:27:49 PM p:\20008_Bonita_Grande\signals\mstd101.dgn

IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO FIELD VERIFY THE ELEVATION PRIOR TO POLE MANUFACTURING.

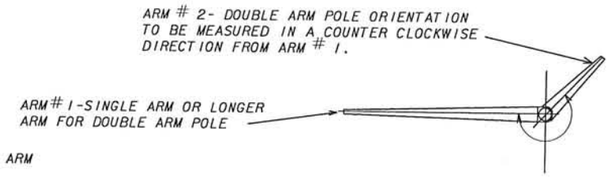
CONTRACTOR SHALL ALSO INSURE THAT TOP OF POLE FOUNDATION WILL NOT BE INSTALLED BELOW NATURAL GROUND LEVEL.

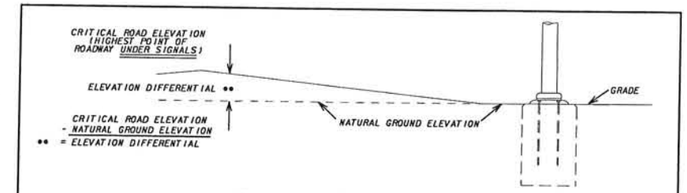
SIGNAL HEAD AND SIGN LOCATIONS SHOWN ON THIS SHEET REFLECT FUTURE SIGNAL REQUIREMENTS.

MAST ARMS ASSEMBLIES ARE DESIGNED TO ACCOMMODATE BOTH FUTURE AND PRELIMINARY LOADINGS AS SPECIFIED IN THE PRELIMINARY AND FUTURE LOADING ARRANGEMENT TABLES.



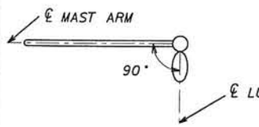
LUMINAIRE ORIENTATION
POLE 1-3



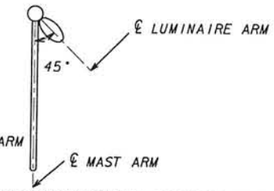


ELEVATION DIFFERENTIAL DETAIL

** A POSITIVE ELEVATION DIFFERENTIAL INDICATES THE POLE LOCATION IS LOWER THAN THE CRITICAL ROADWAY ELEVATION.



LUMINAIRE ORIENTATION
POLE 1-1



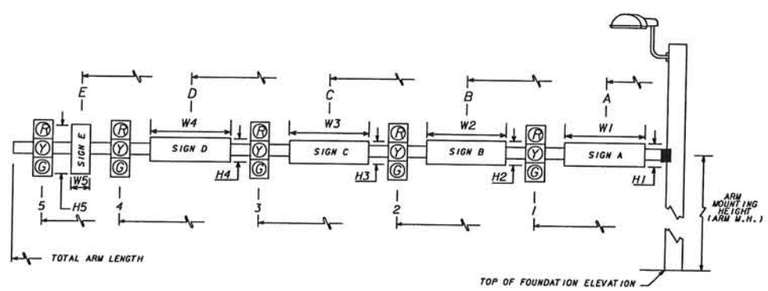
LUMINAIRE ORIENTATION
POLE 1-2

FUTURE MAST ARM LOADING ARRANGEMENT

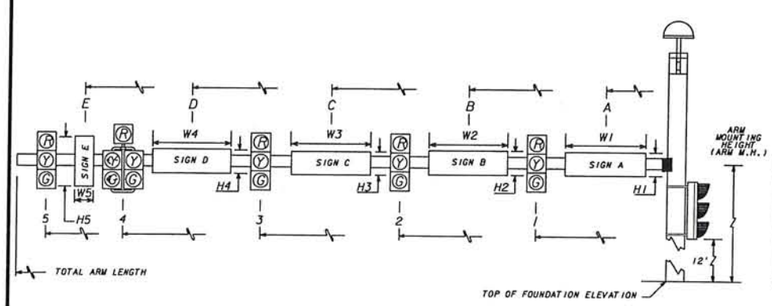
* DENOTES NUMBER OF SECTIONS IN SIGNAL HEAD ASSEMBLY.

ID NO.	SHEET NO.	LOCATION BY STA.	** ELEVATION DIFFERENTIAL	RDWY ARM NO.	SIGNAL DATA: SIGNAL V/H	BACK PLATES Y/N	PED. SIGNAL Y/N	DISTANCE FROM POLE: 1	*	2	*	3	*	4	*	5	*	TOTAL ARM LENGTH	ARM M.H.	∠ BETWEEN DUAL ARMS 90/270
1-1	T-5	10+97	0.11	1	V	N	Y			18.5	3			30.5	5			34	19.5	
				2																
1-2	T-5	9+37	0.46	1	V	Y	Y	17.8	3			28.8	3			40.3	3	44	20.0	
				2																
1-3	T-5	9+72.66	0.25	1	V	Y	N			31.9	3	43.7	3			61.1	3	64	21.5	270
				2	V	N	N			8.7	3			20.7	5			24	21.5	

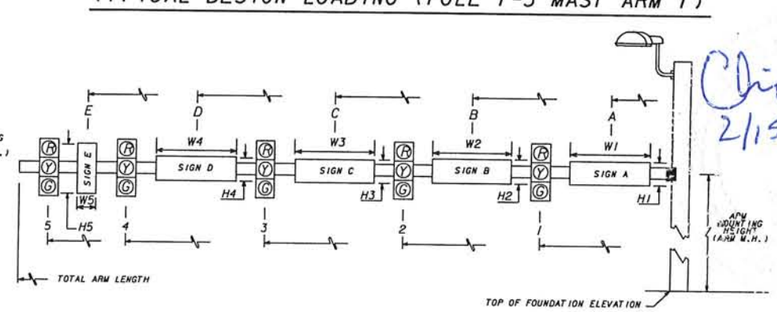
ID NO.	SIGN DATA: DISTANCE FROM POLE / HEIGHT AND WIDTH OF SIGN: A	H1	W1	B	H2	W2	C	H3	W3	D	H4	W4	E	H5	W5	PAINT COLOR
1-1	12.5	1.0	6.0				24.5	2.5	2.5							GALV.
				23.2	1.0	6.0										GALV.
1-3							37.7	1.0	6.0							GALV.
							14.7	1.0	6.0							



TYPICAL DESIGN LOADING (POLE 1-3 MAST ARM 1)

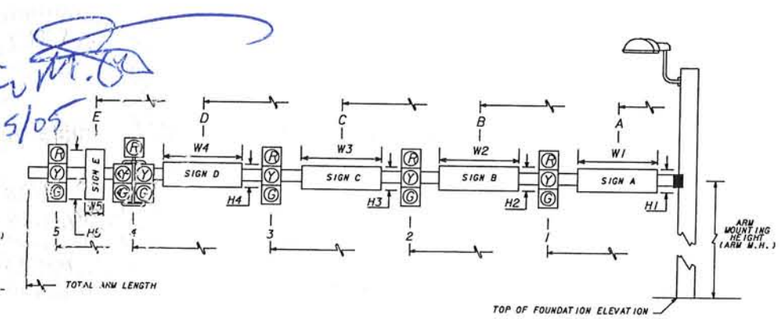


TYPICAL DESIGN LOADING (POLE 1-1 MAST ARM 1)



TYPICAL DESIGN LOADING (POLE 1-2 MAST ARM 1)

Chris M. Petterson
2/15/05



TYPICAL DESIGN LOADING (POLE 1-3 MAST ARM 2)

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
5620 FOWLER AVENUE SUITE F TAMPA, FLORIDA 33617 EB# 4464
CHRIS M. PETTERSON P.E. NO. 61804

LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

MAST ARM SCHEDULE
FUTURE

SHEET NO.
T-7

STANDARD MAST ARM ASSEMBLIES DESIGN TABLE

STRUCTURE ID NUMBERS	ASSEMBLY (1) NUMBERS	FIRST ARM			SECOND ARM			UF (deg)	LL (deg)	POLE				SPECIAL DRILLED SHAFT DATA (4)				LUMINAIRE CONNECTION (5)		
		ARM TYPE	FAA(2) (ft.)	FBA(2) (In.)	ARM TYPE	FAA(2) (ft.)	FBA(2) (In.)			POLE TYPE	UAA(3) (ft.)	UB (ft.)	UCA(3) (In.)	DA (ft.)	DB (ft.)	RA	RB	LG (In)	LK (In)	UG (ft.)
POLE 1-1	C1-R21 Lum	C1	34.000	6.24					90	R21 Lum		19.500		12	3.5	9	14	0.5	0.188	37.5
POLE 1-2	B3-022 Lum	B3	34.300	8.20					45	022 Lum	30.0	20.000	13.80					0.5	0.188	27.5

TABLE NOTES:

(1) Assembly Number Legend
Single Arm:
Arm Type - Pole Type = B* - Q*
= C* - R*
Double Arm:
First Arm Type - Second Arm Type - Pole Type = B* - B* - Q*
= C* - C* - R*

(2) If an entry appears in columns "FAA" and "FBA", a shorter arm is required. This is obtained by removing length from the arm tip. For these cases the mast arm length shall be shortened from "FA" to "FAA" and the tip diameter shall be increased from "FB" to "FBA".

(3) If an entry appears in columns "UAA" and "UCA", a shorter pole is required. This is obtained by removing length from the pole tip. For these cases the pole height shall be shortened from "UA" to "UAA" and the pole tip diameter shall be increased from "UC" to "UCA".

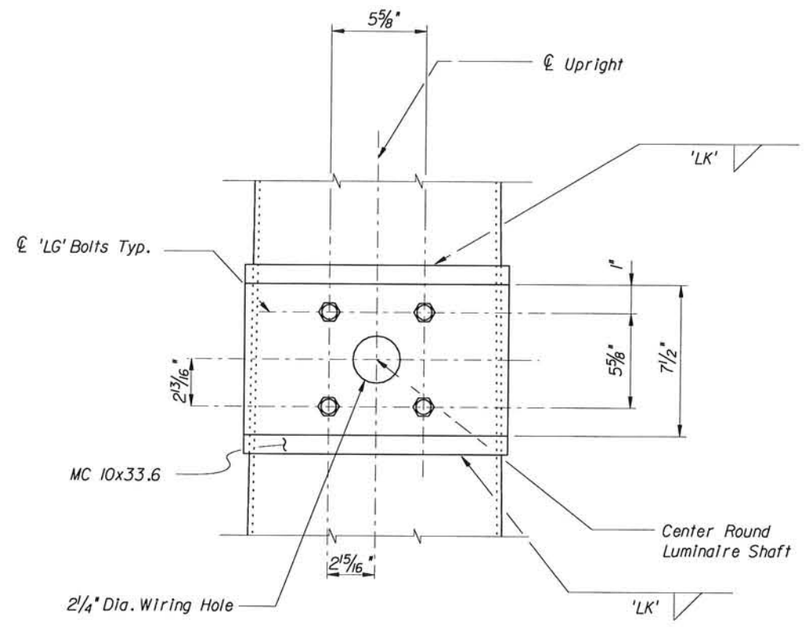
(4) For Foundation Notes see sheet T-9.

(5) For luminaire and mounting bracket see Signalization Plans sheet T-3. Bolt holes for attaching the mounting bracket shall be as per Section B-B this sheet. Section B-B shown on Index 17745 Sheet 5 of 5 is superceded by Section B-B shown on this sheet.

GENERAL NOTES:

(1) Work this sheet with the Signal Designer's "Mast Arm Tabulation". See "Mast Arm Tabulation" for special instructions that include non-standard Handhole location, paint color, terminal compartment requirement, and pedestrian features.

(2) Work this sheet with Design Standards Index Nos. 17741, 17743 and 17745 as necessary.



Section B-B

NOTE: The Fabricator may substitute a ½" thick bent plate with the same flange width, height, and length as the MC 10x33.6 Channel section.

02-14-05

REVISIONS

Date	By	Description	Date	By	Description
02-27-04	SDO	Semi-Standard Drawing Issue Date			

	Notes	Dates
Drawn by	EKC	02-05
Checked by	LZ	02-05
Designed by	LZ	02-05
Checked by	RCR	02-05
Approved by	S.W. JONES	

ENGINEER OF RECORD:
PITMAN-HARTENSTEIN & ASSOC.,INC.
ENGINEERS
EB# 00004464
7820 ARLINGTON EXPWY.
JACKSONVILLE, FLORIDA

LEE COUNTY DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT ID
6079	LEE	20008.201

SHEET TITLE: TABLES OF VARIABLES FOR STANDARD MAST ARM ASSEMBLIES INDEX NO. S-1700 MOD.

PROJECT NAME: BONITA GRANDE DRIVE AT BONITA BEACH ROAD

SHEET NO. T-8

$USERNAME$ R:\20008\struct\Signal Str\Cadd\1700s.dgn 03:21:13 PM 02/14/05

TABLE OF SIGNAL STRUCTURE VARIABLES

NUMBER OF LOCATIONS	STRUCTURE NUMBER	FIRST ARM				FIRST ARM EXTENSION				SECOND ARM				SECOND ARM EXTENSION				POLE						
		FA(ft)	FB(in)	FC(in)	FD(in)	FE(ft)	FF(in)	FG(in)	FH(in)	SA(ft)	SB(in)	SC(in)	SD(in)	SE(ft)	SF(in)	SG(in)	SH(in)	UA(ft)	UB(ft)	UC(in)	UD(in)	UE(in)	UF(deg)	UG(ft)
1	POLE 1-3	32.9	10.4	15	0.1793	33.1	14.37	19	0.313	24.0	9.64	13	0.1793	-	-	-	-	30	21.5	20.80	25	0.313	270	28.5

TABLE OF SIGNAL STRUCTURE VARIABLES (CONT.)

STRUCTURE NUMBER	FIRST ARM CONNECTION (In) First Arm Camber Angle = 2 Degrees													SECOND ARM CONNECTION (In) Second Arm Camber Angle = 2 Degrees												
	#Bolts	HT	FJ	FK	FL	FM	FN	FO	FP	FQ	FR	FS	FT	#Bolts	HT	SJ	SK	SL	SM	SN	SO	SP	SQ	SR	SS	ST
POLE 1-3	6	30	36	3	0.75	0.25	0.438	21.24	1.25	0.5	2.25	12.5	0.438	6	30	36	3	0.75	0.125	0.438	21.24	1.25	0.313	2.25	12.5	0.438

TABLE OF SIGNAL STRUCTURE VARIABLES (CONT.)

STRUCTURE NUMBER	POLE BASE CONNECTION (In)							SHAFT AND REINF.				LUMINAIRE AND LUMINAIRE CONNECTION (SEE NOTE (5) SHEET T-8)										
	#Bolts	BA	BB	BC	BD	BE	BF	DA(ft)	DB(ft)	RA	RB	LA(ft)	LB(ft)	LC(in)	LD(in)	LE	LF(ft)	LG(in)	LH(in)	LJ(in)	LK(in)	LL(deg)
POLE 1-3	6	41	1.75	2	0.313	0.25	40	14	4.5	9	23	-	-	-	-	-	-	0.5	-	-	0.188	315

NOTES:

1. Work this Drawing with Design Standards Index Nos. 17741 and 17745 as necessary.
2. Design Wind Speed = 110 mph
3. Contractor shall coordinate anchor bolt requirements with fabricator.
4. Contractor shall identify Structure Numbers and submit detailed shop drawings.

FOUNDATION NOTES:

1. Design based on Borings taken from "Subsurface Soil Exploration, Analysis and Recommendations Proposed Mast Arm Signals" Dated February 16, 2004. Prepared by Ardaman & Associates. Signed and Sealed by Martin A. Call, P.E.
2. Assumptions and Values used in design:
   - Soil Type Cohesionless (Sand)
   - Soil Layer Thickness = 20 ft.
   - Soil Friction Angle = 28 degrees
   - Soil Weight = 38 pcf
   - Design Water Table is 0.0 ft. below surface

02-14-05

REVISIONS

Date	By	Description	Date	By	Description
02-27-04	SDO	Semi-Standard Drawing Issue Date			

	Names	Dates
Drawn by	EKC	02-05
Checked by	LZ	02-05
Designed by	LZ	02-05
Checked by	RCR	02-05
Approved by	S.W. JONES	

ENGINEER OF RECORD: PITMAN-HARTENSTEIN & ASSOC., INC. ENGINEERS EB# 00004464 7820 ARLINGTON EXPWY. JACKSONVILLE, FLORIDA

LEE COUNTY DEPARTMENT OF TRANSPORTATION

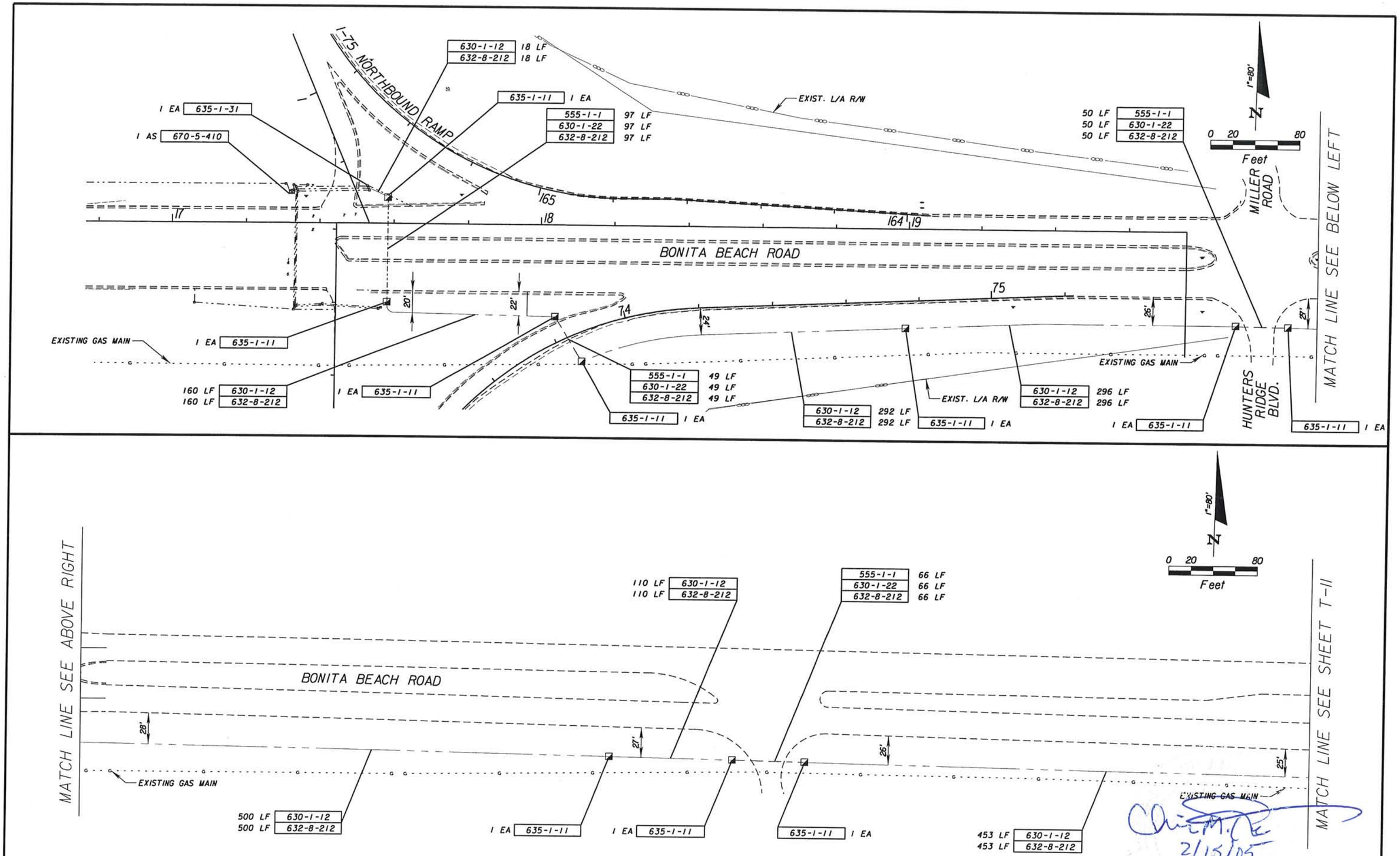
COUNTY PROJECT NO.	COUNTY	PH&A PROJECT ID
6079	LEE	20008.201

SHEET TITLE: TABLES OF VARIABLES FOR SPECIAL MAST ARM ASSEMBLIES - INDEX NO. S-1710

PROJECT NAME: BONITA GRANDE DRIVE AT BONITA BEACH ROAD

SHEET NO. T-9

$USERNAME$ R:\20008\struct\Signal Str\Cadd\7110s.dgn 03:20:47 PM 02/14/05



Chris M. Pe
2/15/05

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN HARTENSTEIN & ASSOC., INC.
ENGINEERS
5620 FOWLER AVENUE SUITE F TAMPA, FLORIDA 33617 EB# 4464
CHRIS M. PETTERSON P.E. NO. 61804

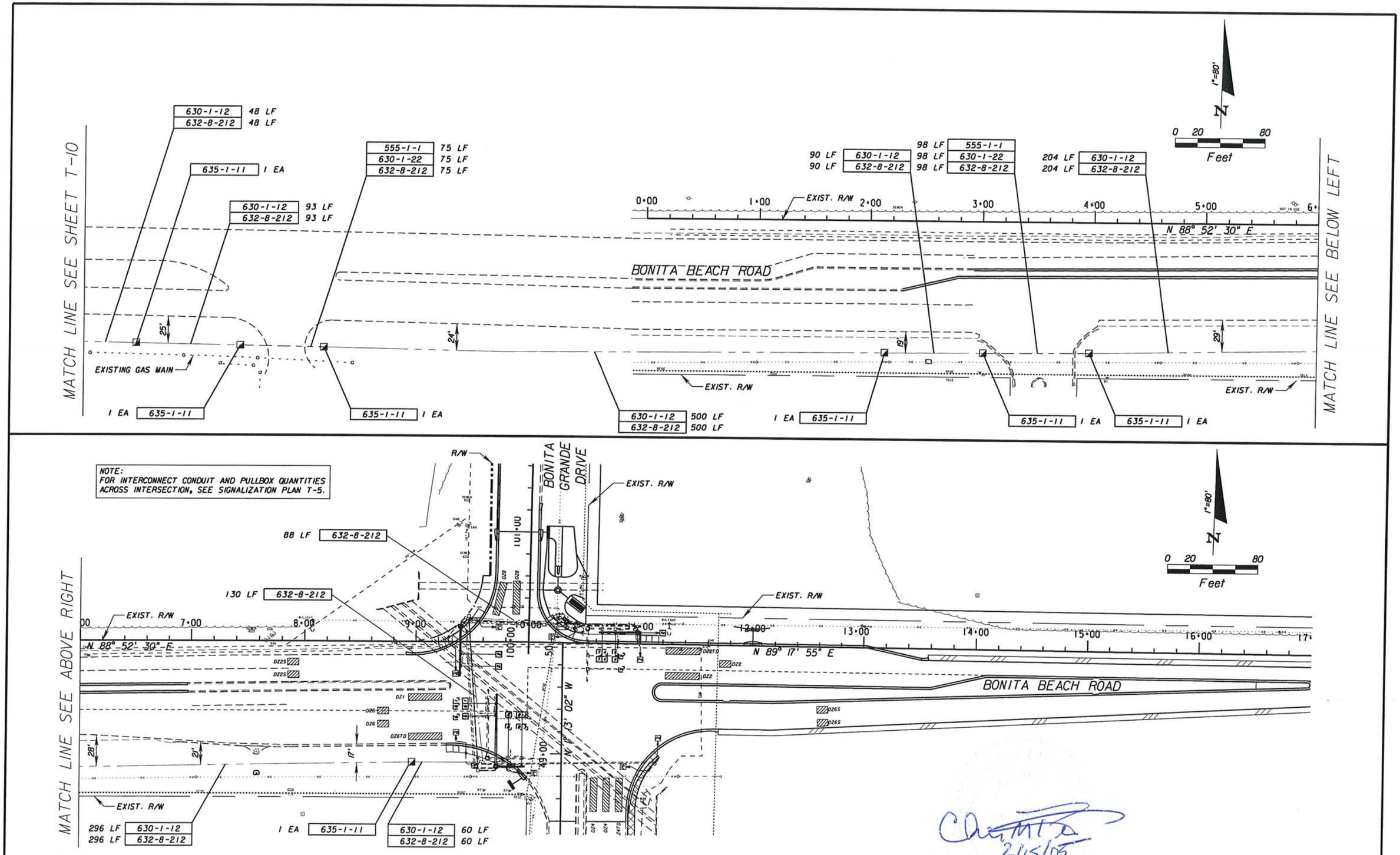
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

INTERCONNECT PLAN

SHEET NO. T-10

02/15/2005 12:03:07 PM p:\20008_Bonita_Grande\signals\plansg02.dgn



2/15/05

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
5620 FOWLER AVENUE SUITE F TAMPA, FLORIDA 33617 EB# 4464
CHRIS M. PETTERSON P.E. NO. 61804

LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

INTERCONNECT PLAN

SHEET NO. T-11

02/15/2005 12:03:18 PM p:\20008_Bonita_Grande\signals\plansg03.dgn

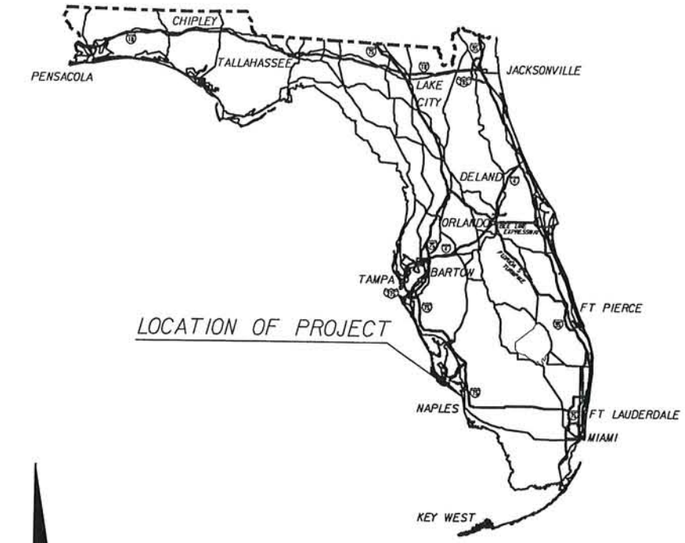
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

BONITA GRANDE DRIVE
AT
BONITA BEACH ROAD INTERSECTION

LEE COUNTY PROJECT NO. 6039

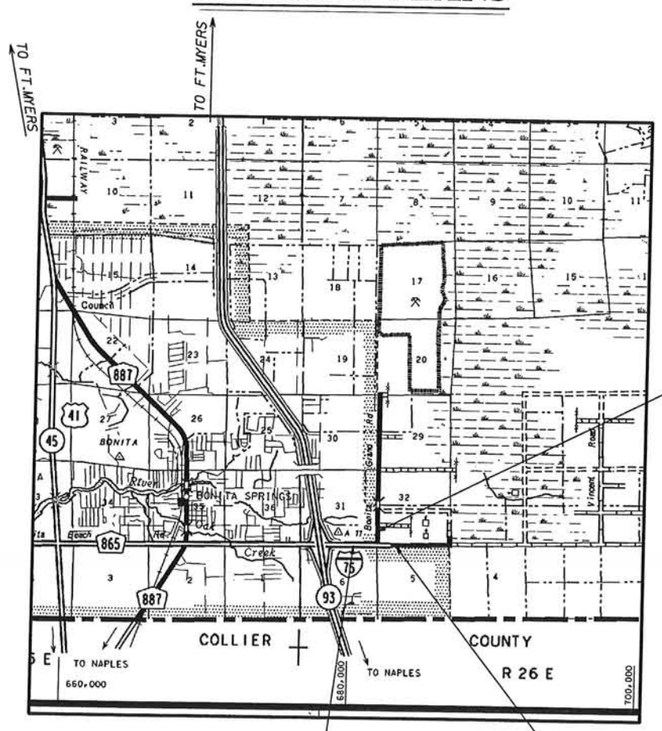
LIGHTING PLANS



LOCATION OF PROJECT

INDEX OF LIGHTING PLANS

SHEET NO.	SHEET DESCRIPTION
L-1	KEY SHEET
L-2	TABULATION OF QUANTITIES
L-3	GENERAL NOTES
L-4	POLE DATA AND LEGEND
L-5 - L-8	LIGHTING PLAN SHEETS
L-9	LIGHTING DETAIL SHEET



N

0 1 2
Miles

END LIGHTING PROJECT
STA. 105+09.94 ℄ CONST.
BONITA GRANDE DRIVE

BEGIN LIGHTING PROJECT
STA. 2+11.76 ℄ CONST.
BONITA BEACH ROAD

END LIGHTING PROJECT
STA. 13+19.06 ℄ CONST.
BONITA BEACH ROAD

LIGHTING SHOP DRAWINGS
TO BE SUBMITTED TO:
CHRIS M. PETTERSON
PITMAN-HARTENSTEIN & ASSOCIATES, INC.
5620 EAST FOWLER AVENUE, SUITE F
TAMPA, FL 33617

PLANS PREPARED BY:

PITMAN-HARTENSTEIN & ASSOC., INC.
ENGINEERS
5620 E. FOWLER AVENUE, SUITE F
TAMPA, FLORIDA 33617
(813) 988-1882

EB No. 4464

VENDOR No. F-592695553-001

FINAL PLANS

Chris M. Pe
2/15/05

NOTE: THE SCALE OF THESE PLANS MAY HAVE CHANGED DUE TO REPRODUCTION.

NOTE:
THIS PROJECT WAS DESIGNED TO MEET LEE COUNTY DEPARTMENT OF TRANSPORTATION (LCDOT) HARDWARE SPECIFICATIONS.

GOVERNING STANDARDS AND SPECIFICATIONS:
FLORIDA DEPARTMENT OF TRANSPORTATION,
ROADWAY DESIGN STANDARDS
DATED JANUARY 2002, AND
STANDARDS SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED 2000,
AS AMENDED BY CONTRACT DOCUMENTS.

REVISIONS

LIGHTING ENGINEER OF RECORD: CHRIS M. PETTERSON, P.E.

P.E. NO.: 61804

LCDOT PROJECT MANAGER: JESSICA WHITE, E.I.

FISCAL YEAR	SHEET NO.
05	L-1

TABULATION OF QUANTITIES

FORM 625-000-02
ROADWAY DESIGN 01-2000

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS L-5 PLAN	L-5 FINAL	L-6 PLAN	L-6 FINAL	L-7 PLAN	L-7 FINAL	L-8 PLAN	L-8 FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	TOTAL THIS SHEET PLAN	TOTAL THIS SHEET FINAL	GRAND TOTAL PLAN	GRAND TOTAL FINAL	REF. SHEET
555-1-1	DIRECTIONAL BORE (LESS THAN 6")	LF	103		300		-		40														443		443		
715-1-110	CONDUCTOR (F & I, INSULATED, NO. 12)	LF	945		837		162		405														2349		2349		
715-1-113	CONDUCTOR (F & I, INSULATED, NO. 6)	LF	1527		2775		120		1170														5592		5592		
715-2-115	CONDUIT (F & I - UNDERGROUND) (PVC SCHEDULE 40) (2")	LF	406		515		40		350														1311		1311		
715-2-245	CONDUIT (F & I - UNDERPAVEMENT) (PVC SCHEDULE 80) (2")	LF	-		-		-		40														40		40		
715-2-745	CONDUIT (FURNISH - UNDERGROUND) (PVC SCHEDULE 80) (2")	LF	103		300		-		-														403		403		
715-7-11	LOAD CENTER (F & I) (SECONDARY VOLTAGE)	EA	-		1		-		-														1		1		
715-14-11	PULL BOX (F & I) (ROADSIDE - MOULDED)	EA	-		1		-		2														3		3		
715-516-140	LIGHT POLE COMPLETE (ALUMINUM, TOP MOUNT) (40')	EA	1		5		-		3														9		9		
715-612-402	LIGHT POLE COMPLETE (ALUMINUM, STANDARD) (40') (15' ARM)	EA	5		1		1		-														7		7		

Chris M. Petterson
2/15/05

REVISIONS

DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
5620 FOWLER AVENUE SUITE F TAMPA, FLORIDA 33617 EB# 4464
CHRIS M. PETTERSON P.E. NO. 61804

LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

TABULATION OF QUANTITIES

SHEET NO. L-2

GENERAL NOTES:

1. PRIOR TO ANY EQUIPMENT ORDER, THE CONTRACTOR SHALL SUBMIT FOR APPROVAL EQUIPMENT SPECIFICATION OR DESIGN DATA FOR ALL MATERIAL PROPOSED FOR THE PROJECT. THESE MUST SPECIFICALLY INCLUDE:
   - A) LUMINAIRE PHOTOMETRICS
   - B) POLE STRENGTH CALCULATIONS
   - C) POLE FRANGIBILITY TEST
   - D) BOLT SPECIFICATIONS AND BOLT CIRCLE DIAMETER
   - E) POLE SHOP DRAWINGS

SEVEN (7) COPIES OF SHOP DRAWINGS AND DESIGN DATA FOR ROADWAY LIGHTING EQUIPMENT SHALL BE SUBMITTED TO THE ENGINEER OF RECORD IN ACCORDANCE WITH THE SPECIFICATIONS.

2. UTILITY OWNERS:

BONITA SPRINGS UTILITIES
11860 EAST TERRY STREET
BONITA SPRINGS, FL 34135
ATTN: MR. PATRICK JENNINGS
(239) 390-4818

COMCAST
2931 MICHIGAN AVENUE
FORT MYERS, FL 33916
ATTN: MR. BRIAN BELL
(239) 732-3870

LEE COUNTY DOT
RICHARD LISENBER
5650 ENTERPRISE PKWY.
FT. MYERS, FL
(239) 694-7600

FP&L
15834 WINKLER ROAD
FORT MYERS, FL 33908
ATTN: MR. ROY GARRISON
(239) 332-9129

SPRINT
3940 PROSPECT AVENUE, UNIT 101
NAPLES, FL 34104
ATTN: MR. JOHN REYNOLDS
(239) 263-6342

3. THE LOCATIONS OF EXISTING UTILITIES, AS SHOWN ON THESE PLANS, ARE APPROXIMATE AND BASED ON THE INFORMATION FURNISHED TO THE ENGINEER BY THE UTILITY OWNER(S) AND ARE SHOWN AS NOTICE TO THE CONTRACTOR THAT UNDERGROUND UTILITIES EXIST. THE CONTRACTOR SHALL NOTIFY THE UTILITY COMPANY OWNER(S) FOR LOCATION AND STAKING OF UNDERGROUND FACILITIES BEFORE EXCAVATING.

4. FLORIDA STATUTE 556 REQUIRES THAT BEFORE EXCAVATING, NOTICE BE GIVEN TO THE UTILITY OWNER NOT LESS THAN TWO (2) AND NO MORE THAN FIVE (5) FULL BUSINESS DAYS. NOT ALL UTILITY OWNERS ARE MEMBERS OF "SUNSHINE" 1-800-432-4770.

5. THE LOCATION OF THE POLES, CONDUCTORS, CONDUITS, JUNCTION BOXES AND SERVICE POLES ARE DIAGRAMMATIC ONLY AND MAY BE SHIFTED BY THE ENGINEER TO ACCOMMODATE LOCAL CONDITIONS AND EXISTING UTILITY LOCATIONS.

6. ALUMINUM POLES, LUMINAIRES AND BASES SHALL BE FABRICATED IN ACCORDANCE WITH AASHTO'S "STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES AND TRAFFIC SIGNALS" 100 MILE WIND LOAD DESIGN AND SHALL HAVE BEEN TESTED BY FHWA-APPROVED METHODS. MUST ALSO MEET LEE COUNTY SPECIFICATIONS. CERTIFICATION FOR TESTS SHALL BE SUBMITTED WITH THE SHOP DRAWINGS.

7. SHOP DRAWING SUBMITTAL DATA SHALL INCLUDE COMPUTER PRINTOUT SHOWING HORIZONTAL FOOT-CANDLE LEVELS TO BE OBTAINED USING THE SUBMITTED LUMINAIRES ON THIS PROJECT. AT FINAL INSPECTION THE CONTRACTOR SHALL VERIFY THE HORIZONTAL FOOT-CANDLE LEVELS ON THE ROADWAY WITH AN APPROVED CURRENTLY CALIBRATED LIGHT METER.

8. ALL ELECTRICAL WORK SHALL MEET ALL REQUIREMENTS OF THE LATEST EDITIONS OF THE NATIONAL ELECTRICAL CODE, THE NATIONAL ELECTRICAL SAFETY CODE AND THE STATE OF FLORIDA D.O.T. STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION. ALL COMPONENTS SHALL BE PROPERLY GROUNDED AND BONDED PER N.E.C. REQUIREMENTS.

9. INSTALL LIGHTNING ARRESTORS, PROPERLY GROUNDED, IN POWER (SECONDARY) ENTRANCES.

10. IN ACCORDANCE WITH N.E.C., IDENTIFY ALL CIRCUITS AND EQUIPMENT WITH "LAMACOID TAGS". INSTALL SIMILAR TAGS OF STAINLESS STEEL IDENTIFYING CIRCUIT FOR EACH LUMINAIRE AT ACCESS HANDHOLE FOR EACH POLE.

11. THE CONTRACTOR SHALL NOTIFY FP&L AT LEAST 48 HOURS PRIOR TO ANY INSTALLATION THAT IS WITHIN 10' OF ENERGIZED ELECTRICAL CONDUCTORS. FP&L, AT IT'S OPTION, SHALL ASSIST THE L.C. D.O.T. CONTRACTOR, COVER UP ENERGIZED CONDUCTORS AT INSTALLATION SITE, OR TAKE OTHER SAFETY PRECAUTIONS AS NECESSARY. EXTREME CAUTION SHALL BE EXERCISED AT ALL TIMES IN PERFORMANCE OF WORK AROUND THE PRIMARY HIGH VOLTAGE COMPONENTS.

12. PULLING INSTRUCTIONS: CONNECT PULLING DEVICES TO COPPER WIRE AND NOT TO JACKET AND MEET MANUFACTURER'S REQUIREMENTS. USE PULLING COMPOUND PER MANUFACTURER'S REQUIREMENTS. ALL BENDS SHALL NOT BE LESS THAN RECOMMENDED BY N.E.C. OR N.E.S.C. FOR CABLE USED.

13. CONTRACTOR SHALL STAKE ALL POLE LOCATIONS AND REQUEST UTILITY COMPANIES TO LOCATE AND STAKE UNDERGROUND UTILITIES PRIOR TO EXCAVATING.

14. FURNISH AND INSTALL AN ALUMINUM IDENTIFICATION TAG ON EACH ROADWAY LIGHTING STANDARD. TAGS SHALL BE 2" x 8" IN SIZE WITH BLACK LETTERS ON YELLOW BACKGROUND, ATTACHED WITH RIVETS (NO SCREWS). NUMBERS SHALL BE AS SHOWN ON THE POLE DATA SHEET, POLE IDENTIFICATION TAG DETAIL. COST OF TAGS SHALL BE INCLUDED IN THE BID ITEMS FOR LIGHT POLE COMPLETE.

15. ALL CONDUITS UNDER ROADWAY (AND/OR SIDEWALK) SHALL BE INSTALLED PRIOR TO INSTALLATION OF ROADWAY BASE AND SURFACE (OR CONCRETE), EXCEPT WHERE OTHERWISE SPECIFIED IN THE PLANS.

16. AT LOCATIONS WHERE UNDERGROUND UTILITIES ARE IN CLOSE PROXIMITY TO THE LIGHTING POLE FOUNDATIONS OR CONDUIT RUN, AS DETERMINED BY THE ENGINEER, THE CONTRACTOR WILL HAND DIG THE FIRST 4' OF THE HOLE FOR THE POLE FOUNDATION AND CONDUIT RUN.

17. THE CONTRACTOR'S ATTENTION IS DIRECTED TO THE PROVISIONS THAT REQUIRES THE PREPARATION AND APPROVAL OF AN EROSION CONTROL PLAN THAT ADDRESSES PREVENTION, CONTROL AND ABATEMENT OF WATER POLLUTION.

18. ALL CONDUIT TRENCHES SHALL BE BACKFILLED COMPLETELY TO PROVIDE SAFE CROSSING BY THE END OF EACH WORKING DAY OR WHENEVER THE WORK ZONE BECOMES INACTIVE. THE CONTRACTOR SHALL NOT OPEN ANY AREA THAT CAN NOT BE BACKFILLED IN THE SAME DAY/NIGHT OPERATION.

19. ALL EXCESS DIRT AND DEBRIS EXCAVATED FROM POLE FOUNDATIONS SHALL BE REMOVED DAILY TO AREAS APPROVED BY THE ENGINEER AND PAID FOR UNDER PAY ITEMS 715-516-140 AND 715-631-41.

20. THE CONTRACTOR SHALL MAINTAIN ACCESS TO ALL SIDE STREETS, PRIVATE AND COMMERCIAL DRIVEWAYS AT ALL TIMES DURING THE CONSTRUCTION OPERATION.

21. THE LIGHTING SYSTEM WILL BE MAINTAINED BY LEE COUNTY UPON FINAL ACCEPTANCE.

PAY ITEM NOTES:

1. ITEM 715-1-110 AND 715-1-113: INCLUDE CONDUCTORS AS INDICATED IN THE PLANS AND THE ROADWAY AND TRAFFIC DESIGN STANDARDS. PAYMENT SHALL BE MADE BASED ON LINEAR FEET OF SINGLE CONDUCTOR.

2. ITEMS 715-2-115 AND 715-2-245: INCLUDE CONDUIT, ELBOWS, SWEEPS, CONNECTING HARDWARE, TRENCHING AND BACKFILL AS INDICATED IN THE PLANS AND THE ROADWAY AND TRAFFIC DESIGN STANDARDS. THE LINEAR FOOT PRICE FOR CONDUIT SHALL ALSO INCLUDE THE COST OF RESTORING CUT PAVEMENT, SIDEWALKS, SOD, ETC., TO ITS ORIGINAL CONDITION. SOD SHALL BE REPLACED IN LIKE KIND OF THE ADJACENT SURROUNDINGS.

3. ITEM 715-7-11: INCLUDE METER BASE, SERVICE POLE INSULATORS, WEATHERHEADS, TRANSFORMERS, ENCLOSURES, PANEL BOARDS, BREAKERS, FUSES, LIGHTNING PROTECTOR, PHOTO-ELECTRIC ASSEMBLY, CONDUIT, FEEDER CONDUCTORS, PULL BOX AND ALL MISCELLANEOUS HARDWARE FOR A COMPLETE INSTALLATION AS PER PLANS AND STANDARD INDEX 17504 DETAIL "A". INCLUDE THE COST OF FURNISHING AND INSTALLING A 30' TYPE N-11 CONCRETE POLE.

4. ITEMS 715-516-140 AND 715-612-402: INCLUDE THE HAPCO OR EQUIVALENT POLE AND ARM, LUMINAIRE WITH LAMP, ANCHOR BOLTS WITH LOCK NUTS AND WASHERS, FRANGIBLE BASE, CONCRETE FOUNDATION AND SURGE PROTECTOR AS INDICATED IN THE ROADWAY AND TRAFFIC DESIGN STANDARDS. THE COST OF RESTORING SOD IN LIKE KIND OF THE ADJACENT SURROUNDINGS, AROUND EACH POLE, TO ITS ORIGINAL CONDITION IS INCLUDED IN THIS PAY ITEM. BREAK-AWAY RECEPTACLES WITH SET SCREW CONNECTORS AND RUBBER BOOTS SHALL BE INSTALLED IN THE FRANGIBLE BASE. KTK 5 AMP FUSE SHALL BE INSTALLED IN THE POWER RECEPTACLE AND A COPPER SLUG IN THE NEUTRAL RECEPTACLE.

2/15/05

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
5620 FOWLER AVENUE SUITE F TAMPA, FLORIDA 33617 EB# 4464
CHRIS M. PETTERSON P.E. NO. 61804

LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

GENERAL NOTES

SHEET NO. L-3

02/15/2005 02:52:01 PM p:\20008_Bonita_Grande\lighting\gnnt101.dgn

POLE DATA

POLE NO.	CIRCUIT	STATION	DIST. OR ARM	LUMINAIRE WATTAGE	MOUNTING HEIGHT	TILT	POLE SETBACK (TO FRONT OF BASE)	PAY ITEM
1	A-1	* 100+40.49, 43.10 LT.	-	400W	40'	17°	8.27' FACE OF CURB	715-516-140
2	A-1	* 101+99.08, 34.00 LT.	-	400W	40'	17°	3.17' FACE OF CURB	715-516-140
3	A-1	* 103+57.44, 33.08 LT.	-	400W	40'	17°	2.07' FACE OF CURB **	715-516-140
4	A-1	* 105+09.94, 33.09 LT.	-	400W	40'	17°	2.14' FACE OF CURB **	715-516-140
5	A-1	9+41.43, 103.31 RT.	-	400W	40'	17°	10.61' FACE OF CURB	715-516-140
6	A-1	11+28.00, 99.72 RT.	-	400W	40'	17°	9.64' FACE OF CURB	715-516-140
7	A-1	12+36.16, 100.22 RT.	15'	400W	40'	17°	24.65' EDGE OF PAV'T	715-612-402
8	A-1	13+19.06, 96.48 RT.	15'	400W	40'	17°	25.97' EDGE OF PAV'T	715-612-402
1	B-1	8+67.46, 100.86 RT.	-	400W	40'	17°	6.28' FACE OF CURB	715-516-140
2	B-1	7+83.95, 102.42 RT.	-	400W	40'	17°	6.20' FACE OF CURB	715-516-140
3	B-1	6+96.32, 106.50 RT.	-	400W	40'	17°	14.26' FACE OF CURB	715-516-140
4	B-1	6+23.94, 112.20 RT.	15'	400W	40'	17°	25.42' EDGE OF PAV'T	715-612-402
5	B-1	5+19.91, 113.03 RT.	15'	400W	40'	17°	26.09' EDGE OF PAV'T	715-612-402
6	B-1	4+00.87, 113.70 RT.	15'	400W	40'	17°	25.61' EDGE OF PAV'T	715-612-402
7	B-1	2+97.72, 126.80 RT.	15'	400W	40'	17°	26.68' EDGE OF PAV'T	715-612-402
8	B-1	2+11.76, 127.39 RT.	15'	400W	40'	17°	27.11' EDGE OF PAV'T	715-612-402

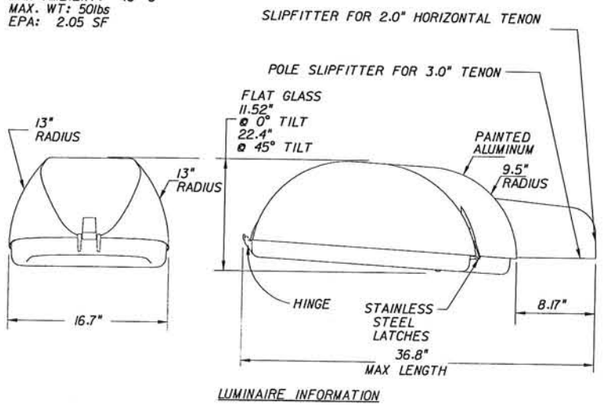
* STATION REFERENCED TO ℄ CONSTRUCTION BONITA GRANDE DRIVE.
** SEE DETAIL 'A' ON SHEET L-8 FOR SPECIAL FOUNDATION INSTALLATION DETAIL.

LEE COUNTY LIGHTING DESIGN CRITERIA

Minimum Intensity	1.0 Foot Candles
Uniformity Ratio Avg./Min.	4:1 Or Less
Max./Min.	10:1 Or Less
Wind Speed	100 MPH

LUMINAIRE DETAILS

MAX AMBIENT: 40° C
MAX. WT: 50lbs
EPA: 2.05 SF



LUMINAIRE INFORMATION

SOURCE AND WATTAGE: 400 HPS, MOGUL BASE, PROTECTED STARTER

VOLTAGE : 480 VOLT

OPTICS : WIDE ROADWAY, FLAT GLASS

MOUNTING : HORIZONTAL ARM OR POLE SLIPFITTER

FINISH COLOR : GRAY

LEGEND

SYMBOLS	DESCRIPTION
—•—	Schedule 40 PVC conduit with USE/XLP conductors inside (conduit and conductor size as shown on plan sheets). Run one (1) 6 AWG copper bond conductor (THW or THWN green insulation) inside conduit with other conductors.
—••—	Schedule 80 HDPE conduit with USE/XLP conductors inside (conduit and conductor size as shown on plan sheets). Extend conduit beyond edge of pavement to pull boxes when installing inside conduit with other conductors.
—••—	Schedule 80 HDPE conduit, directional bored under pavement with USE/XLP conductors inside (conduit and conductor size as shown on plan sheets). Extend conduit beyond edge of pavement to pull boxes. Run one (1) 6 AWG copper bond conductor (THW or THWN green insulation) inside conduit with other conductors.
□	Pull box. Shall meet Lee County specifications for size and type.
	Distribution point. Service panel shall be square D Night Master Stainless Steel P/N 8903 SQH63V06.
	Vertical Pole Slipfitter Mounted High Pressure Sodium Luminaire. Pole mounting 40 ft. Use Holophane Mongoose P/N G400HP48LWFVG-P3-LAMP.
	Horizontal Arm Slipfitter Mounted High Pressure Sodium Luminaire. 15 ft. arm at 40 ft. mounting height. Use Holophane Mongoose P/N G400HP48LWFHG-P-LAMP.

PERFORMANCE SPECIFICATIONS

MECHANICAL CONSTRUCTION:

THE HOUSING, DOOR AND FITTER SHALL BE CAST OF LOW COPPER (356.1 ALLOY). THEY SHALL BE PRETREATED WITH ZINC PHOSPHATE AND OVERCOATED WITH AN ELECTROSTATICALLY APPLIED 2 TO 4 MIL COAT OF TGIC POLYESTER POWDERPAINT CURED AT 425° F. THE FINISH SHALL WITHSTAND A 160 INCH-POUND IMPACT MEASURED WITH A STANDARD GARDNER IMPACT TESTER. IT SHALL HAVE PASSED A 1000 HOUR SALT SPRAY TEST AS SPECIFIED BY ASTM B-117. IT SHALL EXHIBIT NO CRACKING OR LOSS OF ADHESION FROM A 180° BEND OVER A 1 / 8" MANDREL DIAMETER PER ASTM D522. ALL EXTERNAL HARDWARE SHALL BE STAINLESS STEEL. HOUSING ACCESS SHALL NOT REQUIRE TOOLS. THE FITTER SHALL BE BUILT IN AND ACCOMMODATE A STANDARD 2 INCH HORIZONTAL TENON OR 3 INCH POLE TOP AS SPECIFIED IN THE PLANS. UNITS CAN BE TILTED BETWEEN 0° AND 45°. ELECTRICAL CONNECTION SHALL BE INSIDE THE FITTER ASSEMBLY AND NOT REQUIRE FIXTURE ENTRY. A TERMINAL BLOCK LOCATED INSIDE THE FITTER SHALL BE PROVIDED IF SPECIFIED.

QUICK DISCONNECT ELECTRICAL ASSEMBLY:

THE FIXTURE DOOR SHALL CONTAIN ALL BALLAST COMPONENTS AND BE HINGED FOR FAST TOOL-FREE REMOVAL AND REPLACEMENT. COMPLETE REPLACEMENT SHALL TAKE LESS THAN 60 SECONDS.

BALLAST:

SHALL BE COPPER WOUND, HIGH POWER FACTOR (1.0. BALLAST FACTOR) TYPE AS SPECIFIED. THEY SHALL RELIABLY START THE LAMP IN AMBIENT TEMPERATURES TO MINUS 40° F. THE PLUG IN HPS STARTER SHALL BE TOTALLY ENCAPSULATED WITH A MATERIAL THAT ELECTRICALLY AND THERMALLY INSULATES ALL COMPONENTS FROM LAMP AND BALLAST HEAT. THE PROTECTED STARTER SHALL SENSE AN INOPERATIVE LAMP AND SHUT DOWN AUTOMATICALLY TO PREVENT CONTINUOUS PULSING AND THERMAL DAMAGE TO ITSELF AND THE BALLAST SECONDARY WINDINGS.

OPTICAL AND SOCKET ASSEMBLY:

THE REFLECTOR SHALL CONSIST OF HIGH PURITY (3002 ALLOY) ALUMINUM OF MINIMUM 0.08" THICK SHEET. FLAT LENS SHALL BE 1 / 8" FULLY TEMPERED GLASS. PRESSED PRISMATIC OR CLEAR DROP LENS SHALL BE MANUFACTURED OF BOROSILICATE GLASS. THE REFLECTOR AND LENS OPTICAL ASSEMBLY SHALL BE DESIGNED TO PROVIDE THE IES PATTERN SPECIFIED. THE SOCKET SHALL BE PULSE RATED, NICKEL-PLATED AND LAMP GRIP PORCELAIN ENCLOSED. IT SHALL PREVENT UNDUE LAMP VIBRATION AND BACKOUT.

ANSI LAMP LABEL:

A SELF-ADHESIVE LABEL SHALL BE PROVIDED WHICH IDENTIFIES THE LAMP TYPE AND SIZE. IT SHALL MEET ANSI C-136 STANDARDS.

WARRANTY:

THE ELECTRICAL ASSEMBLY SHALL BE FULLY WARRANTED FOR A PERIOD OF 5 YEARS AND THE HOUSING FOR A PERIOD OF 2 YEARS FROM THE DATE OF INSTALLATION.

2/15/05

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
5620 FOWLER AVENUE SUITE F TAMPA, FLORIDA 33617 EB# 4464
CHRIS M. PETTERSON P.E. NO. 61804

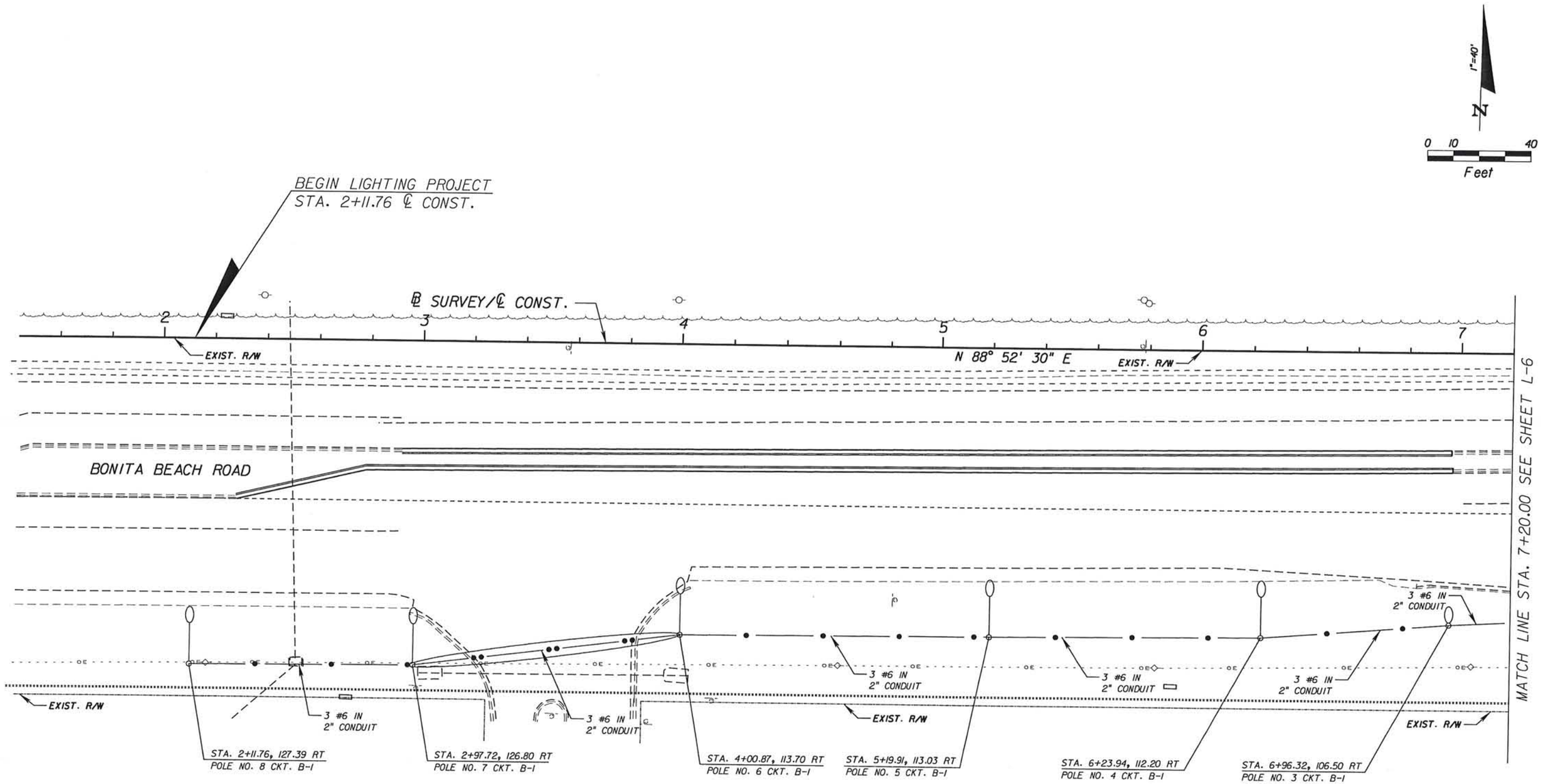
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

POLE DATA AND LEGEND

SHEET NO. L-4

02/15/2005 02:52:15 PM p:\20008_Bonita_Grande\lighting\pldtl101.dgn



2/15/05

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
5620 FOWLER AVENUE SUITE F TAMPA, FLORIDA 33617 EB# 4464
CHRIS M. PETTERSON P.E. NO. 61804

LEE COUNTY
DEPARTMENT OF TRANSPORTATION

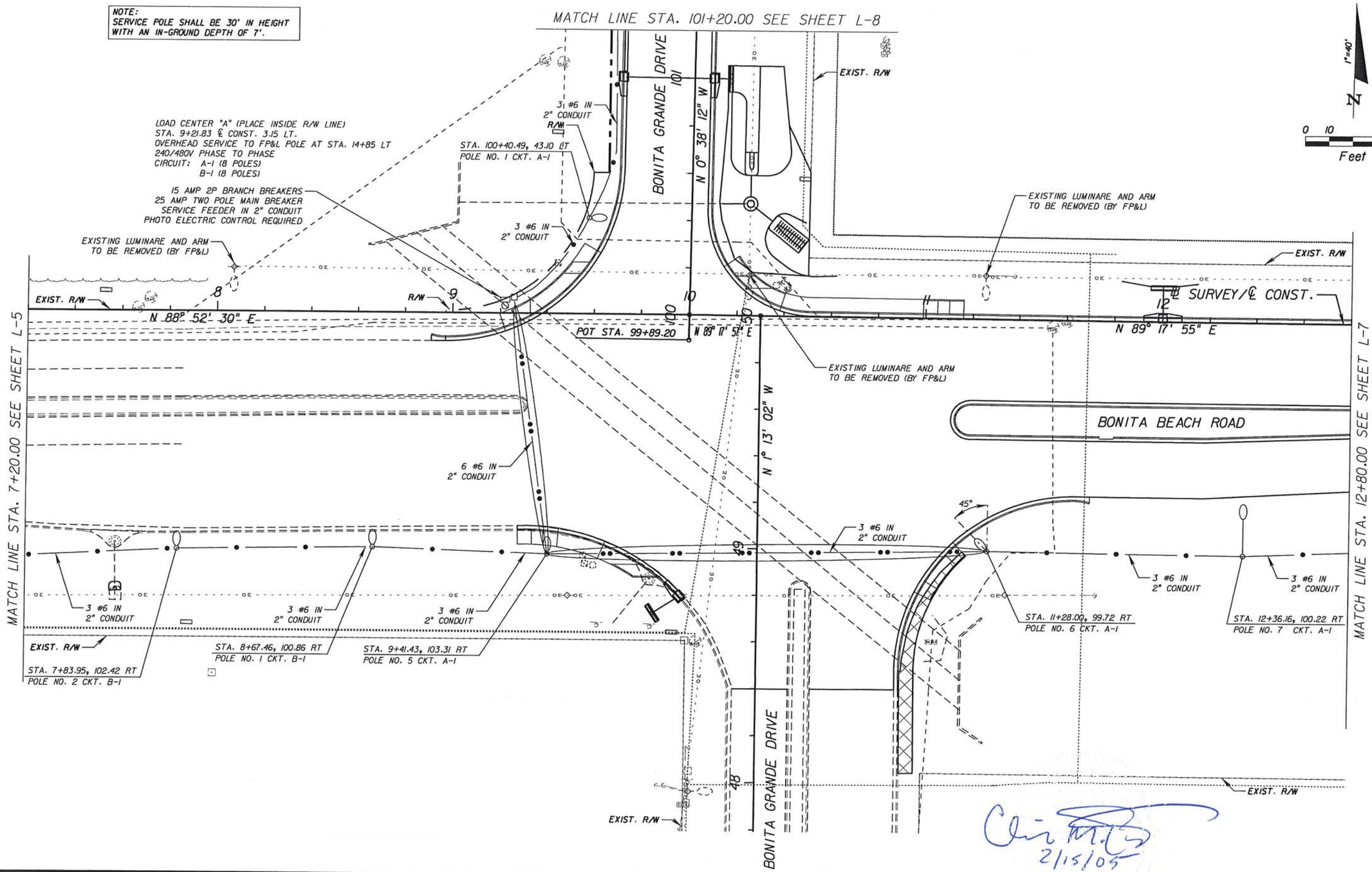
COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

LIGHTING PLAN
BONITA GRANDE DRIVE AT BONITA BEACH ROAD

SHEET NO.
L-5

02/15/2005 03:19:59 PM p:\20008_Bonita_Grande\lighting\plan101.dgn

NOTE:
SERVICE POLE SHALL BE 30' IN HEIGHT WITH AN IN-GROUND DEPTH OF 7'.



2/15/05

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
5620 FOWLER AVENUE SUITE F TAMPA, FLORIDA 33617 EB# 4464
CHRIS M. PETTERSON P.E. NO. 61804

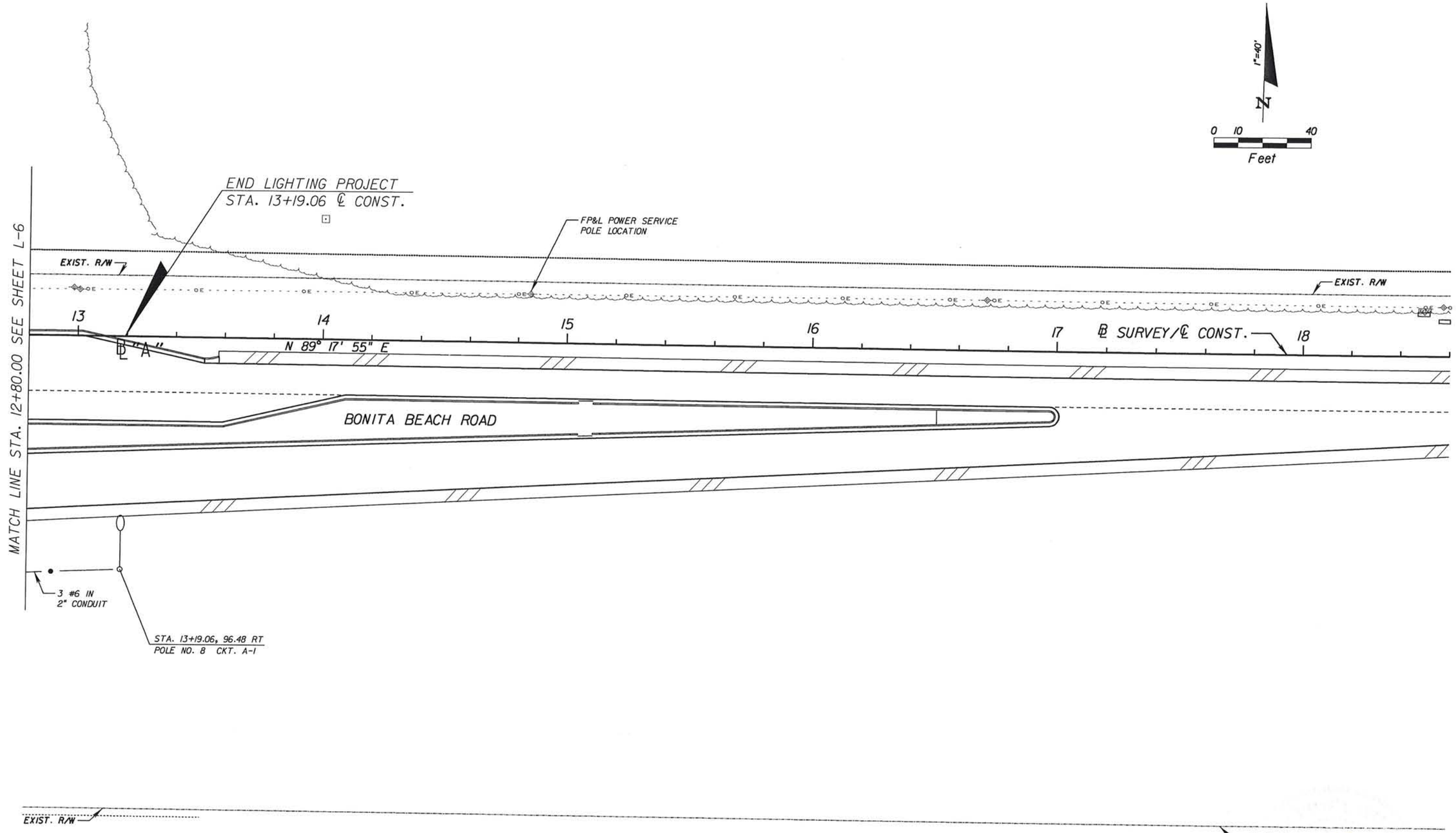
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

LIGHTING PLAN
BONITA GRANDE DRIVE AT BONITA BEACH ROAD

SHEET NO. L-6

02/15/2005 02:52:38 PM p:\20008_Bonita_Grande\lighting\plan1102.dgn



2/15/05

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN-HARTENSTEIN & ASSOC., INC.
ENGINEERS
5620 FOWLER AVENUE SUITE F TAMPA, FLORIDA 33617 EB# 4464
CHRIS M. PETTERSON P.E. NO. 61804

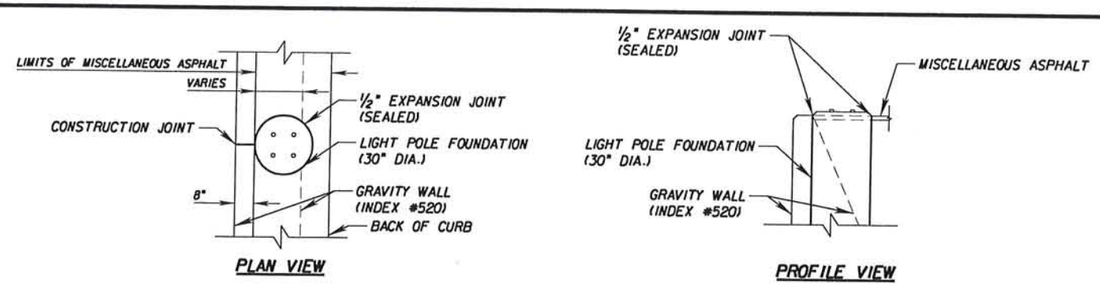
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

LIGHTING PLAN
BONITA GRANDE DRIVE AT BONITA BEACH ROAD

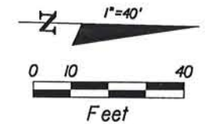
SHEET NO. L-7

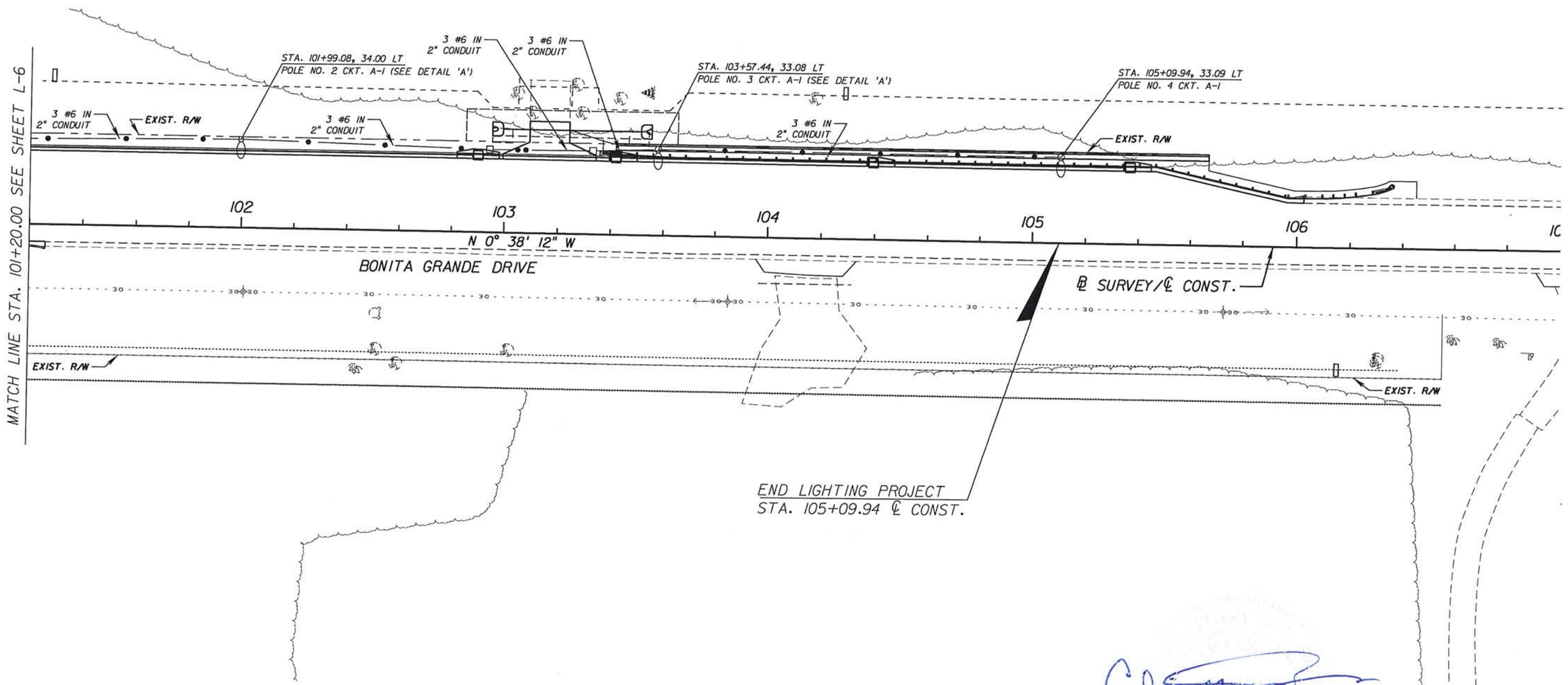
02/15/2005 02:52:48 PM p:\20008_Bonita_Grande\lighting\plan103.dgn



DETAIL 'A'
N.T.S.

NOTE:
LIGHTING CONTRACTOR SHALL COORDINATE WITH ROADWAY CONTRACTOR PRIOR TO GRAVITY WALL CONSTRUCTION.





2/15/05

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
5620 FOWLER AVENUE SUITE F TAMPA, FLORIDA 33617 EB# 4464
CHRIS M. PETTERSON P.E. NO. 61804

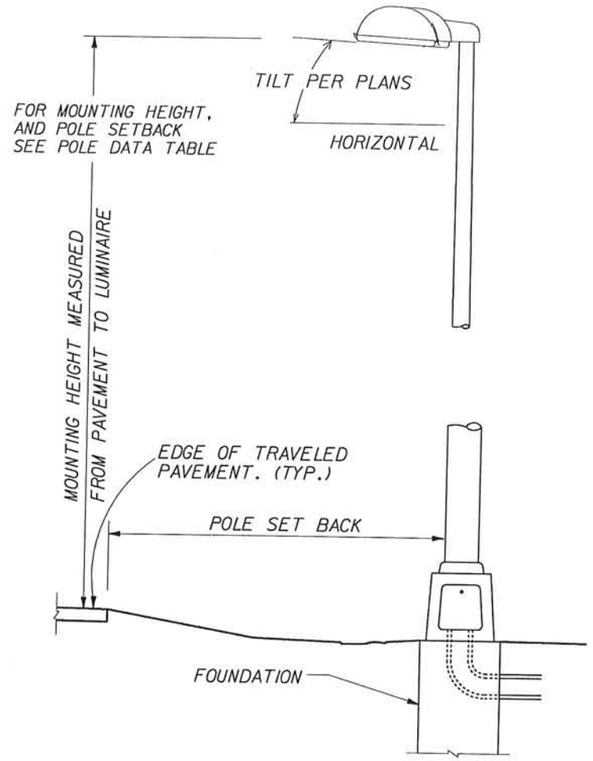
LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

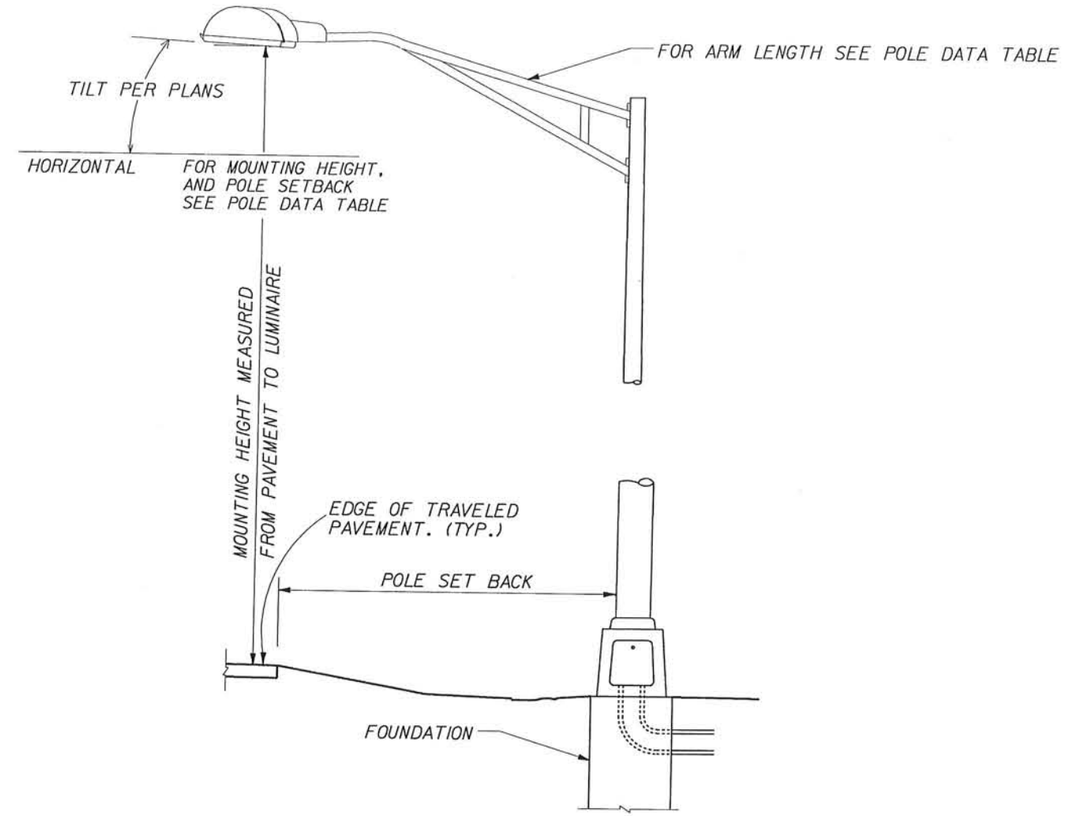
LIGHTING PLAN
BONITA GRANDE DRIVE AT BONITA BEACH ROAD

SHEET NO. L-8

02/15/2005 03:22:12 PM p:\20008_Bonita_Grande\lighting\plan104.dgn



SINGLE FIXTURE VERTICAL POLE SLIPFITTER MOUNTED DETAIL
N.T.S.



SINGLE FIXTURE HORIZONTAL ARM SLIPFITTER MOUNTED DETAIL
N.T.S.

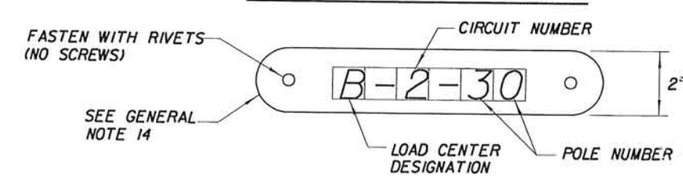
LUMINAIRE:

400 WATT HIGH PRESSURE SODIUM LUMINIARE WITH FLAT GLASS OPTICS DESIGNED FOR CUTOFF TYPE III DISTRIBUTION. INTEGRAL MAGNETIC REGULATOR TYPE BALLAST WIRED FOR 480 VOLT OPERATION. LAMP MUST PRODUCE A MINIMUM OF 50,000 INITIAL LUMENS. FIXTURE SHALL BE INSTALLED AT THE SPECIFIED TILT IN THE PLANS. THE CONTRACTOR SHALL FIELD VERIFY THE TILT AFTER INSTALLATION AND ERECTION OF THE POLES.

POLE:

TAPERED SPUN ALUMINUM POLE. POLE TO BE DESIGNED TO CURRENT DESIGN CRITERIA AND AASHTO 100 MILE WIND LOAD.

POLE IDENTIFICATION TAG DETAIL



2/15/05

REVISIONS					
DATE	BY	DESCRIPTION	DATE	BY	DESCRIPTION

PITMAN • HARTENSTEIN & ASSOC., INC.
ENGINEERS
5620 FOWLER AVENUE SUITE F TAMPA, FLORIDA 33617 EB# 4464
CHRIS M. PETTERSON P.E. NO. 61804

LEE COUNTY
DEPARTMENT OF TRANSPORTATION

COUNTY PROJECT NO.	COUNTY	PH&A PROJECT NO.
6079	LEE	20008.201

LIGHTING DETAIL SHEET

SHEET NO. L-9

02/15/2005 02:53:14 PM p:\20008_Bonita_Grande\lighting\udtl101.dgn