

SEMINOLE COUNTY
PUBLIC WORKS DEPARTMENT

CONTRACT PLANS

INDEX OF ROADWAY PLANS

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90% SUBMITTAL
JANUARY 14, 2022

GOVERNING STANDARD SPECIFICATIONS:

Florida Department of Transportation, January 2022 Standard Specifications for Road and Bridge Construction at the following website:
<https://www.fdot.gov/programmanagement/Implemented/SpecBooks>

GOVERNING STANDARD PLANS:

Florida Department of Transportation, FY2021-22 Standard Plans for Road and Bridge Construction and applicable Interim Revisions (IRs).

Standard Plans for Road Construction and associated IRs are available at the following website: <http://www.fdot.gov/design/standardplans>

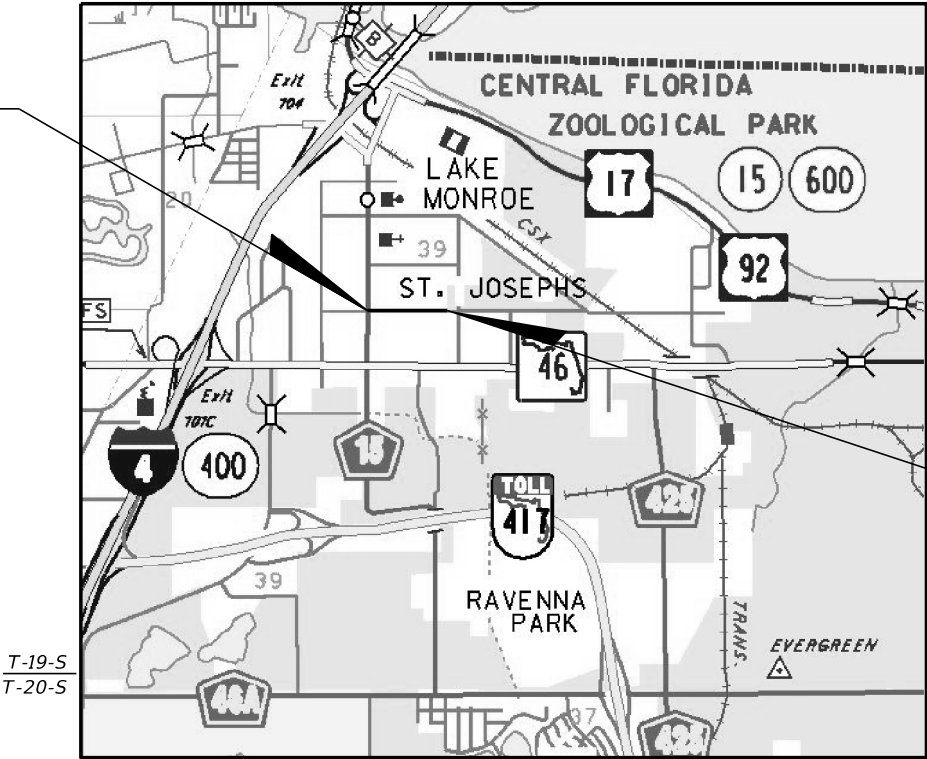
KEY SHEET REVISIONS	
DATE	DESCRIPTION

CIP NO. 02107077

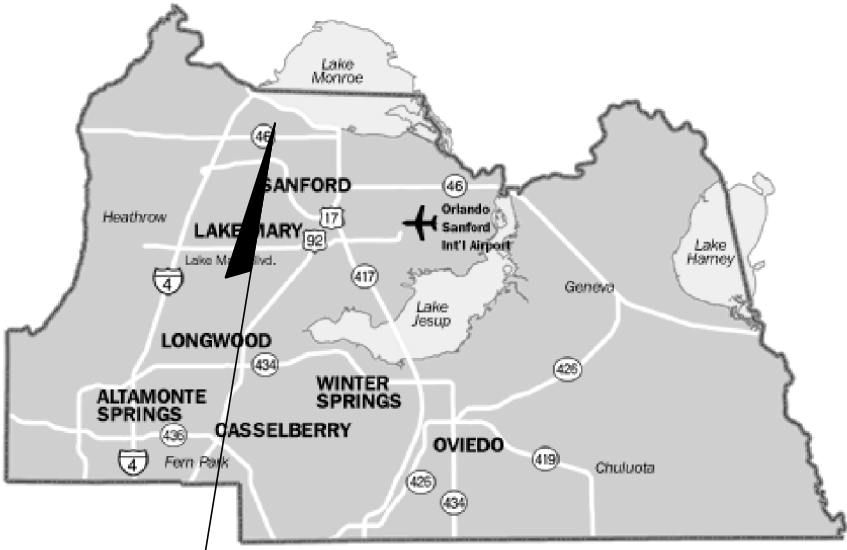
NARCISSUS AVE. ROADWAY IMPROVEMENTS
DISTRICT 5

PUBLIC WORKS DIRECTOR: JEAN JREIJ, P.E.
PUBLIC WORKS DEPUTY DIRECTOR: ANTHONY NELSON, P.E.
COUNTY COMMISSIONER- DISTRICT 1: BOB DALLARI (CHAIRMAN)
COUNTY COMMISSIONER- DISTRICT 2: JAY ZEMBOWER
COUNTY COMMISSIONER- DISTRICT 3: LEE CONSTANTINE (VICE CHAIRMAN)
COUNTY COMMISSIONER- DISTRICT 4: AMY LOCKHART
COUNTY COMMISSIONER- DISTRICT 5: ANDRIA HERR

BEGIN PROJECT
STA. 32+19.18
@ CONST. NARCISSUS AVE.



END PROJECT
STA. 51+78.15
@ CONST. NARCISSUS AVE.



PROJECT LOCATION

SHOP DRAWINGS
TO BE SUBMITTED TO:

ADAM CROUCH P.E.
1025 GREENWOOD BLVD.
SUITE 371
LAKE MARY, FL 32746

PLANS PREPARED BY:


moffatt & nichol

1025 GREENWOOD BLVD.
SUITE 371
LAKE MARY, FL 32746
(407) 562-2030

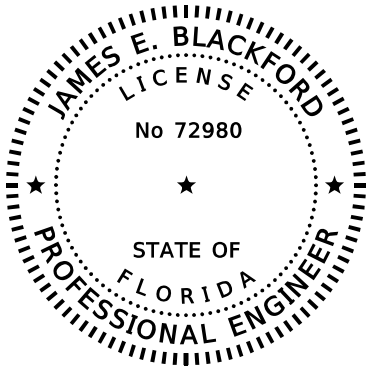
VENDOR #: F951951343001
CERTIFICATE OF AUTHORIZATION #: 4877


SEMINOLE COUNTY
FLORIDA'S NATURAL CHOICE

NOTE: THE SCALE OF THESE PLANS MAY
HAVE CHANGED DUE TO REPRODUCTION.
ROADWAY PLANS
ENGINEER OF RECORD: JAMES E. BLACKFORD III, P.E.
P.E. NO.: 72980

FISCAL YEAR	SHEET NO.
21	1

PROJECT MANAGER: AARON JOHNSON, P.E.

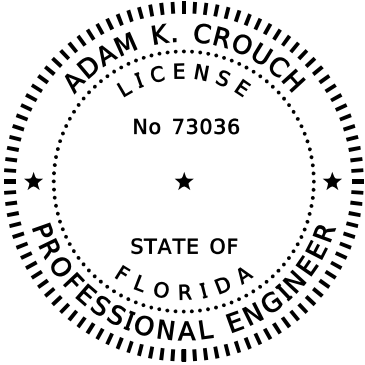


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1025 GREENWOOD BLVD, SUITE 371
LAKE MARY, FL 32746
JAMES E. BLACKFORD, P.E. NO. 72980

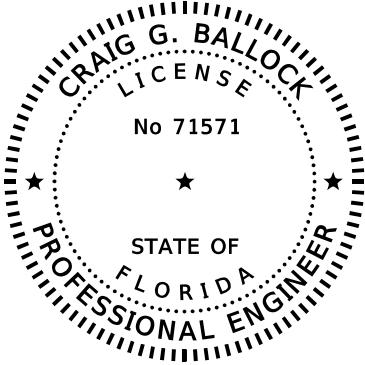


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MOFFATT & NICHOL
1025 GREENWOOD BLVD, SUITE 371
LAKE MARY, FL 32746
ADAM K. CROUCH, P.E. NO. 73036



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GEC
919 LAKE BALDWIN LN,
ORLANDO, FL 32814
CRAIG G. BALLOCK, P.E. NO. 71571

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE
FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

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FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.004, F.A.C.

INDEX OF ROADWAY PLANS

<u>SHEET NO.</u>	<u>SHEET DESCRIPTION</u>
25	ROADWAY SOIL SURVEY

REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	SIGNATURE SHEET	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION				
					NARCISSUS AVE. ROADWAY IMPROVEMENTS		2

SUMMARY OF PAY ITEMS				
PAY ITEM NUMBER	DESCRIPTION	UNIT	PLAN QUANTITY	FINAL QUANTITY
0101-001-000	MOBILIZATION	LS	1.000	
0102-001-000	MAINTENANCE OF TRAFFIC	LS	1.000	
0104-010-003	SEDIMENT BARRIER	LF	2412.000	
0104-012-000	STAKED TURBIDITY BARRIER - NYLON REINFORCED PVC	LF	78.000	
0104-018-000	INLET PROTECTION SYSTEM	EA	4.000	
0110-001-001	CLEARING & GRUBBING	LS	1.000	
0110-004-010	REMOVAL OF EXISTING CONCRETE	SY	53.000	
0120-001-000	REGULAR EXCAVATION	CY	233.230	
0120-006-000	EMBANKMENT	CY	333.270	
0160-004-000	TYPE B STABILIZATION	SY	5422.000	
0285-709-000	BASE GROUP 09, TYPE B-12.5	SY	4404.000	
0327-070-006	MILLING EXISTING ASPHALT PAVEMENT, 1 1/2" AVG DEPTH	SY	93.000	
0334-001-013	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	TN	1.400	
0337-007-083	ASPHALT CONCRETE FRICTION COURSE, FC-12.5	TN	371.100	
0425-001-529	INLETS, DT BOT, TYPE C MODIFY	EA	1.000	
0427-002-071	MANHOLE, J-7, <10'	EA	1.000	
0430-174-124	CONCRETE PIPE CULVERT, SD, CLASS III, 24"	LF	8.000	
0430-174-130	CONCRETE PIPE CULVERT, SD, CLASS III, 30"	LF	10.000	
0430-174-236	ELLIPTICAL CONCRETE PIPE CULVERT, SD, CLASS HE-III, 29"X45"	LF	39.000	
0430-174-248	ELLIPTICAL CONCRETE PIPE CULVERT, SD, CLASS HE-III, 38"X60"	LF	5.000	
0430-536-102	STRAIGHT CONCRETE ENDWALLS, 36", SINGLE, 0 DEGREES, ELLIPTICAL	EA	1.000	
0430-548-102	STRAIGHT CONCRETE ENDWALLS, 48" SINGLE, 0 DEGREES, ELLIPTICAL	EA	1.000	
0440-001-020	UNDERDRAIN, TYPE II	LF	1619.000	
0440-073-001	UNDERDRAIN OUTLET PIPE, 4"	LF	148.000	
0515-002-111	PEDESTRIAN / BICYCLE RAILING, NS, 42" TYPE 1	LF	30.000	
0520-001-010	CONCRETE CURB & GUTTER, TYPE F	LF	3973.000	
0522-001-000	CONCRETE SIDEWALK AND DRIVEWAYS, 4" THICK	SY	1211.000	
0522-002-000	CONCRETE SIDEWALK AND DRIVEWAYS, 6" THICK	SY	64.000	
0524-001-002	CONCRETE DITCH PAVEMENT, NON REINFORCED, 4"	SY	38.000	
0550-010-220	FENCING, TYPE B, 5.1-6.0', STANDARD	LF	213.000	
0550-060-232	FENCE GATE, TYPE B, SLIDING/CANTILEVER, 6.1-12' OPENING	EA	1.000	
0527-002-000	DETECTABLE WARNINGS	SF	41.000	
0570-001-002	PERFORMANCE TURF, SOD	SY	1433.000	
0700-001-050	SINGLE POST SIGN, RELOCATE	AS	1.000	
0706-001-003	RAISED PAVEMENT MARKER, TYPE B	EA	101.000	
0711-011-121	THERMOPLASTIC, STANDARD, WHITE, SOLID, 6"	LF	3922.000	
0711-011-123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK	LF	115.000	
0711-011-125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	195.000	
0711-011-221	THERMOPLASTIC, STANDARD, YELLOW, SOLID, 6"	LF	3972.000	

PAY ITEM NOTES:

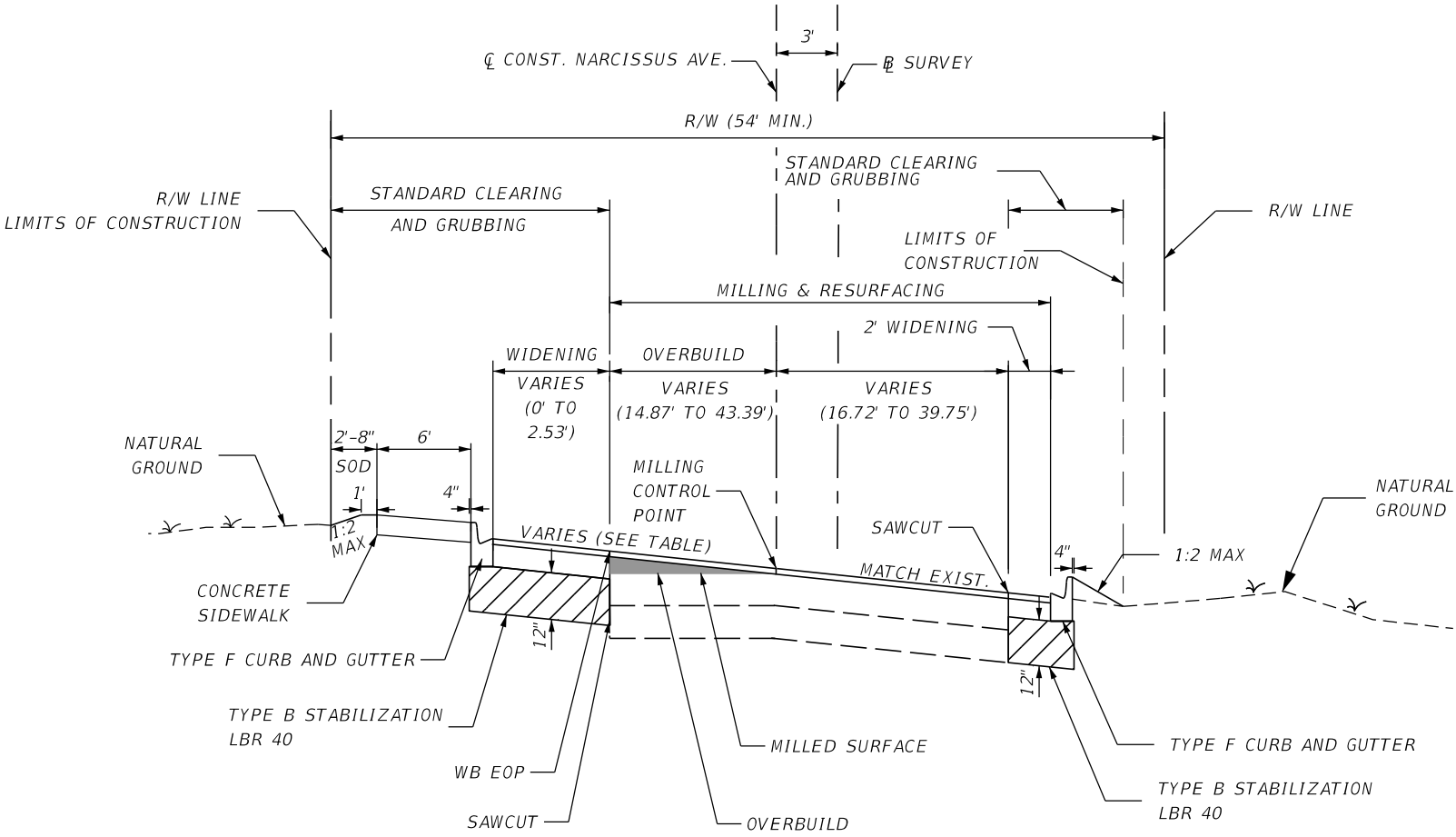
- 0102-001-000

INCLUDES ALL ITEMS AND LABOR NECESSARY FOR THE IMPLEMENTATION OF THE TRAFFIC CONTROL PLAN AS SPECIFIED IN THIS PLAN AND AS OTHERWISE REQUIRED BY THE CONTRACTOR. INCLUDES THE COST TO FURNISH AND MAINTAIN TEMPORARY RESTROOM FACILITIES TO BE USED DURING CONSTRUCTION. INCLUDES THE COST FOR THE CONTRACTOR TO CLEAN THE JOBSITE BY REMOVING ALL LOOSE AGGREGATE, ASPHALT AND MISCELLANEOUS CONSTRUCTION DEBRIS BEFORE LEAVING THE JOBSITE EACH DAY. FOLLOWING CONSTRUCTION, THE CONTRACTOR SHALL THOROUGHLY CLEAN AND SWEEP THE PROJECT TO ASSURE ALL DEBRIS HAS BEEN REMOVED.
- 0440-001-020

INCLUDES COST OF ANY DEWATERING, TEMPORARY DRAINAGE, DIVERSION OF STORMWATER, COFFERDAMS AND OTHER RELATED ACTIVITIES NECESSARY FOR THE CONSTRUCTION OF THE UNDERDRAIN.
- 0520-001-010

INCLUDES FLUMES AND DROP CURB.
- 0430-174-2XX

CONCRETE JACKETS SHALL BE INCLUDED IN THE COST OF PIPE CULVERTS.



TYPICAL SECTION
NARCISSUS AVE.
STA. 32+19.18 TO STA. 32+36.37

TRAVEL LANES

MILL EXISTING ASPHALT PAVEMENT (1 1/2" DEPTH)
FRICTION COURSE FC 12.5 (1 1/2")

WIDENING

OPTIONAL BASE GROUP 9 (TYPE B-12.5 ONLY) WITH
FRICTION COURSE FC 12.5 (1 1/2")

WESTBOUND OVERBUILD NARCISSUS AVE						
LOCATION		MCP ELEV.	WIDTH TO WB EOP	EXIST. SLOPE (%)	PROPOSED SLOPE (%)	MAX DEPTH OF OVERBUILD (IN)
STATION	DIRECTION					
	WB EOP EL					
32+19.18	22.49	22.44	43.39	0.11%	0.11%	0.00
32+25.00	22.40	22.31	24.94	0.10%	0.36%	0.90
32+30.00	22.36	22.21	19.04	0.12%	0.80%	1.49
32+35.00	22.34	22.16	15.67	0.20%	1.16%	1.85
32+36.37	22.33	22.15	14.87	0.42%	1.20%	1.82

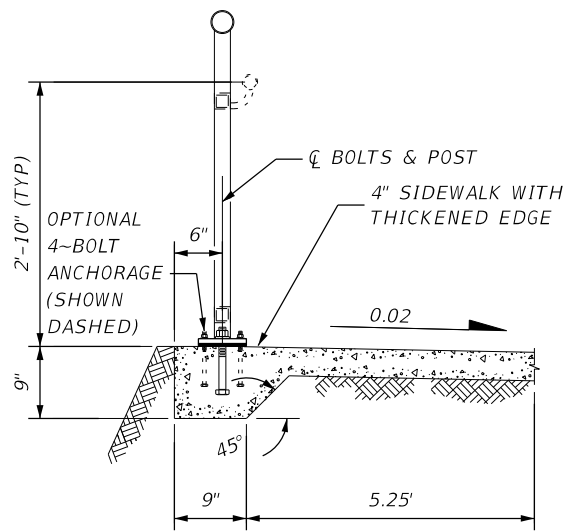
REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	TYPICAL SECTION		SHEET NO. 4
DATE	DESCRIPTION	DATE	DESCRIPTION					

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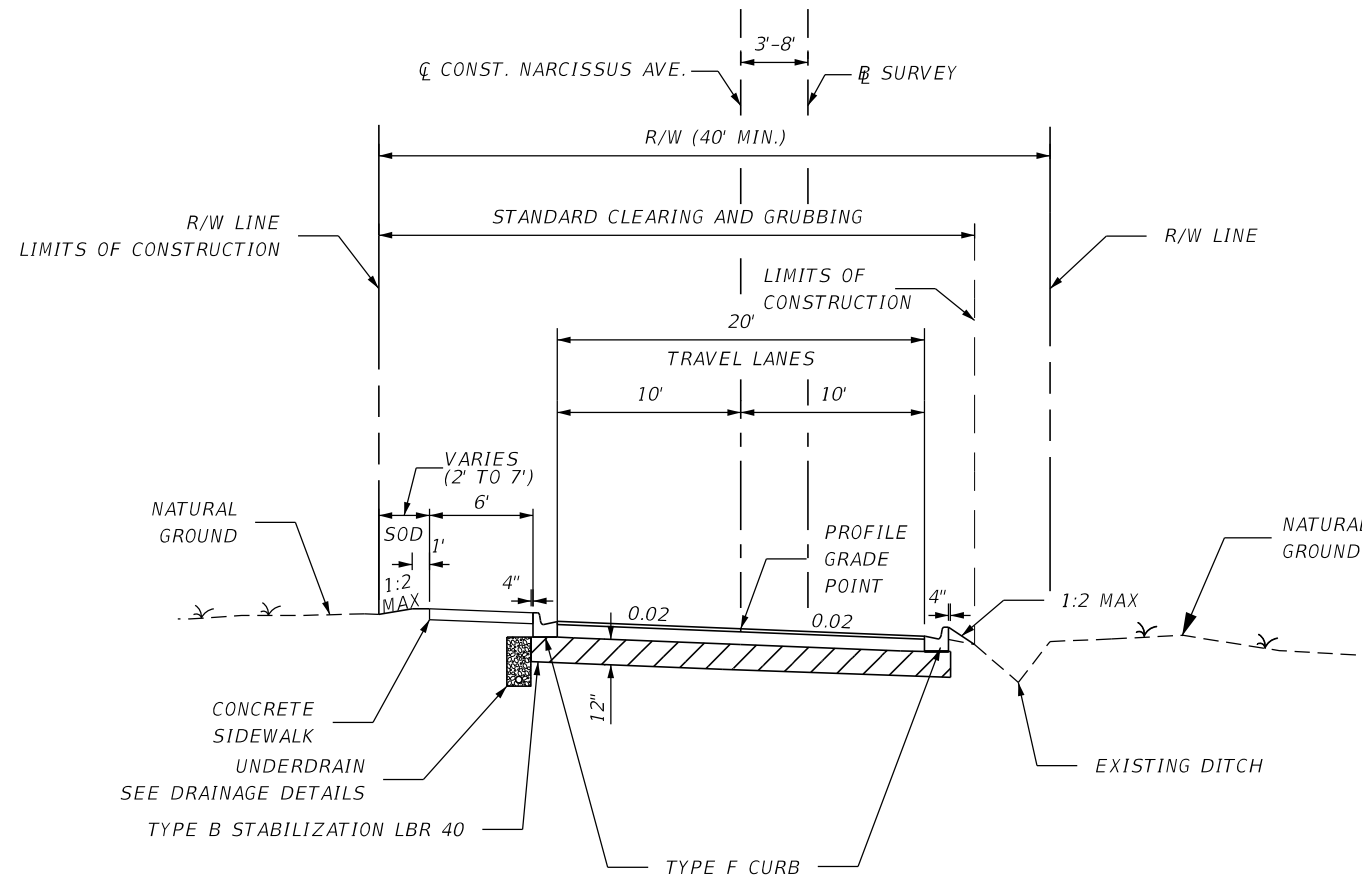
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PEDESTRIAN/BICYCLE RAILING DETAIL
STA. 44+76.00 TO STA. 45+06.00 LT

TRAFFIC DATA

DESIGN SPEED = 30 MPH



TYPICAL SECTION
NARCISSUS AVE.
STA. 32+36.37 TO STA. 51+78.15

TRAVEL LANES

OPTIONAL BASE GROUP 9 (TYPE B-12.5 ONLY) WITH
FRICTION COURSE FC 12.5 (1 1/2")

REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	TYPICAL SECTION		SHEET NO. 5
DATE	DESCRIPTION	DATE	DESCRIPTION					

QUANTITY	STR. NO.	STATION	SIDE	DESCRIPTION	BARRELS	STORM DRAIN				MANHOLES	DITCH BOTTOM INLETS	ENDWALLS		REMARKS
										J-7	TYPE C			
						24"	30"	29"x45"	38"x60"	<10'	MOD	29"x45"	38"x60"	
P F	S-01	32+62.89	LT.	Inlet, Pipe	1	8					1			BACK OF SIDEWALK INLET, CONC. JACKET
P F	CD-01	44+87.49	RT.	EW, Pipe	1			39				1		
P F	S-04	44+94.61	LT.	Pipe, MH	1		10			1				CONC. JACKET, 3.5'x7.0'
P F	S-05	44+94.61	LT.	Pipe, EW	1				5				1	
P F														
P F														
P F														
P F														
P F														
P F														
P F														
P F														
P F														
FINAL TOTALS				PLAN QUANTITIES		8	10	39	5	1	1	1	1	
				FINAL QUANTITIES										

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GENERAL NOTES

1. GRADES SHOWN ARE FINISHED GRADES.

2. B.M. DATUM IS NORTH AMERICAN VERTICAL DATUM OF 1988. (NAVD88)

3. DURING CONSTRUCTION, CONTRACTOR SHALL ADHERE TO THE REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).

4. ALL MATERIALS, CONSTRUCTION, INSPECTIONS AND TESTS SHALL, AT A MINIMUM, CONFORM TO FDOT STANDARD SPECIFICATIONS DATED 2022, AND SUPPLEMENTS THERETO, AND TO SPECIAL PROVISIONS FOR THIS PROJECT.

5. THE UTILITIES SHOWN ON THE PLANS ARE APPROXIMATE LOCATION ONLY AND ARE INTENDED ONLY TO SHOW THE UTILITIES LIKELY TO BE ENCOUNTERED DURING CONSTRUCTION, ALL EXISTING UTILITIES, PUBLIC OR PRIVATE, SHALL BE LOCATED BY THE CONTRACTOR IN AREAS OF CONSTRUCTION AND OWNERS OF SAID MENTIONED UTILITIES NOTIFIED PRIOR TO COMMENCING WORK.

UTILITY/AGENCY OWNERS:

COMPANY

AT&T DISTRIBUTION

CENTURY LINK

CHARTER (BRIGHOUSE)

CITY OF SANFORD-UTILITIES/PUBLIC WORKS

FLORIDA GAS TRANSMISSION

FLORIDA PUBLIC UTILITIES

FLORIDA POWER & LIGHT - SEMINOLE

SEMINOLE COUNTY UTILITIES

SEMINOLE COUNTY TRAFFIC ENGINEERING

UNITI FIBER

ZAYO GROUP

CONTACT

SHAUN PURVIS

DAVE KENNEDY

JOHN SMITH

RICHARD BLAKE

JOSEPH SANCHEZ

JOHNNY HILL

CHRISTOPHER BUINANNI

PAUL ZIMMERMAN

CHARLES WETZEL

JAMES MOSLEY

TESS BENTAYOU

TELEPHONE NUMBERS

(407) 999-2636

(407) 830-3279

(407) 448-5513

(407) 688-5101

(407) 838-7171

(386) 747-6862

(407) 328-1911

(407) 665-2021

(407) 665-5686

(251) 645-8216

(813) 363-6797
6. IT IS THE RESPONSIBILITY OF THE EXCAVATOR TO COMPLY WITH THE CURRENT STATE OF FLORIDA UNDERGROUND FACILITY DAMAGE PREVENTION AND SAFETY ACT AND/OR RELATED STATE LAW. THE FOLLOWING INFORMATION IS BEING PROVIDED BY SEMINOLE COUNTY IN AN EFFORT TO ASSIST THE EXCAVATOR BY LISTING UTILITIES THAT MAY PROVIDE SERVICE IN THE APPROXIMATE AREA OF PROPOSED CONSTRUCTION. THE EXCAVATOR SHOULD ASSUME OTHER UTILITIES THAT ARE NOT LISTED MAY PROVIDE SERVICE IN THE APPROXIMATE AREA OF PROPOSED CONSTRUCTION.
7. ANY NGVD29 OR NAVD88 MONUMENT WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF IN DANGER OF DAMAGE, THE CONTRACTOR SHOULD NOTIFY:

GEODETIC INFORMATION CENTER

ATTN: MARK MAINTENANCE SECTION

N/CG-162

6001 EXECUTIVE BOULEVARD

ROCKVILLE, MARYLAND 20852

TELEPHONE: (301) 443-8319
8. ANY PUBLIC LAND CORNER WITHIN THE LIMITS OF CONSTRUCTION IS TO BE PROTECTED. IF A CORNER MONUMENT IS IN DANGER OF BEING DESTROYED AND HAS NOT BEEN PROPERLY REFERENCED, THE CONTRACTOR SHOULD NOTIFY THE COUNTY LOCATION SURVEYOR WITHOUT DELAY BY TELEPHONE.

9. ALL SURVEY CORNERS INDICATED ON THE PLANS SHALL BE REFERENCED AND CERTIFIED BY A REGISTERED PROFESSIONAL LAND SURVEYOR PRIOR TO COMMENCEMENT OF CONSTRUCTION. ALL CORNERS DESTROYED OR OBLITERATED BY CONSTRUCTION SHALL BE RESET AND SO CERTIFIED BY THE LAND SURVEYOR PRIOR TO COMPLETION OF THE PROJECT. CERTIFIED SKETCHES SHALL BE SUBMITTED TO:

SEMINOLE COUNTY ENGINEERING DIVISION

SURVEY SECTION

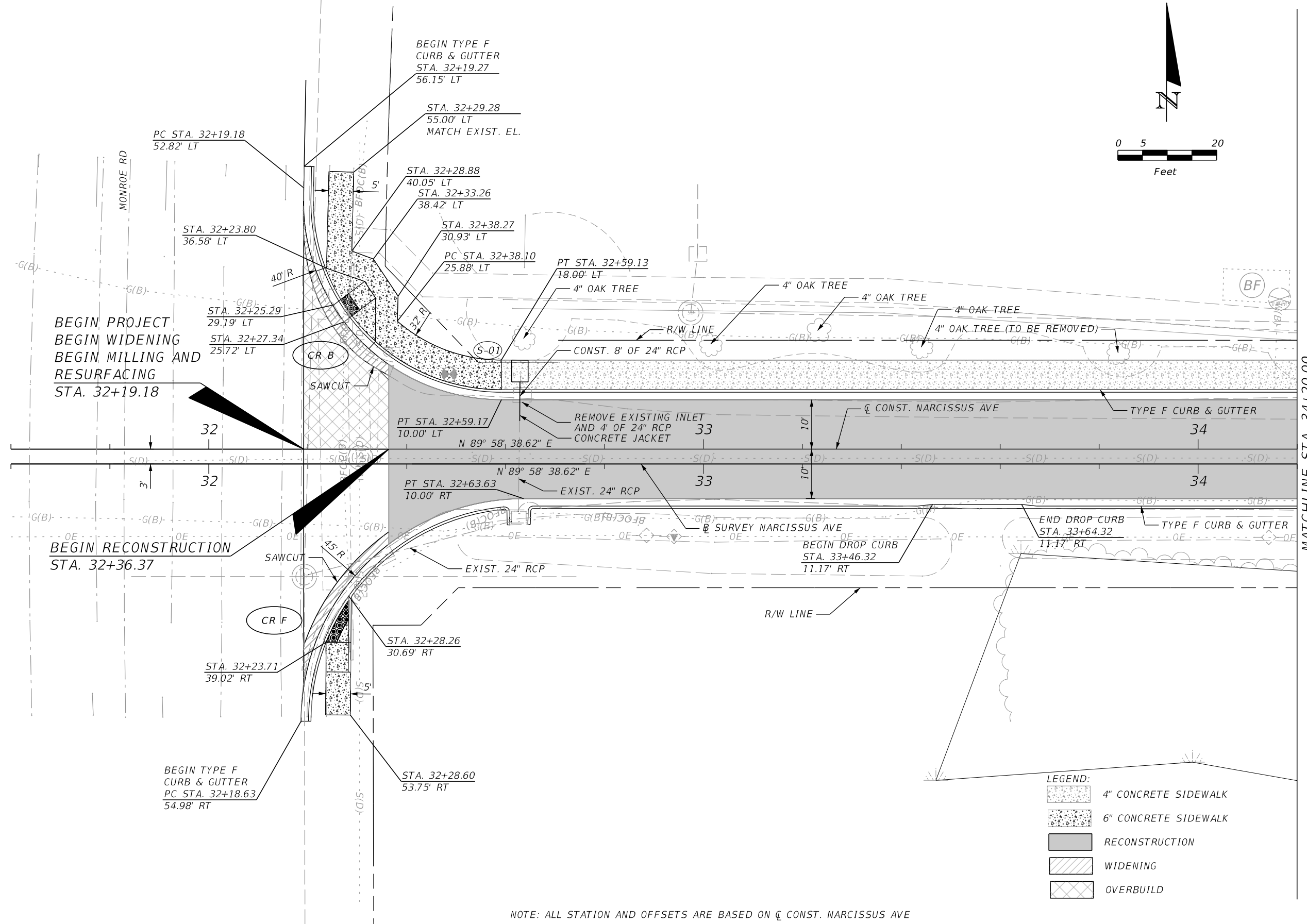
520 W. LAKE MARY BLVD., SUITE 200

SANFORD, FL 32773
10. EXISTING DRAINAGE STRUCTURES WITHIN CONSTRUCTION LIMITS SHALL REMAIN UNLESS OTHERWISE NOTED.
11. TEMPORARY DRAINAGE SHALL BE PROVIDED DURING CONSTRUCTION TO ELIMINATE ANY FLOODING OF PRIVATE PROPERTY.
12. ANY DRAINAGE PROBLEMS, CREATED BY CONSTRUCTION OR EXISTING BEFORE CONSTRUCTION, THAT ARE NOT ALLEVIATED SHOULD BE BROUGHT TO THE ATTENTION OF THE ENGINEERING DIVISION.
13. ALL STORM SEWER LINES AND INLETS SHALL BE CLEARED OF DEBRIS AND ERODED MATERIALS AT LAST STAGES OF CONSTRUCTION.
14. ALL PRIVATE AND PUBLIC PROPERTY AFFECTED BY THE CONSTRUCTION WORK SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THE EXISTING PRE-CONSTRUCTION CONDITION, UNLESS SPECIFICALLY EXEMPTED BY THE PLANS. COST TO BE INCIDENTAL TO OTHER CONSTRUCTION AND NO EXTRA COMPENSATION TO BE ALLOWED. ANY AREA OUTSIDE THE IMMEDIATE CONSTRUCTION AREA DISTURBED BY THE CONTRACTOR WILL BE SODDED AT THE CONTRACTORS EXPENSE.
15. ALL SHOP DRAWING MUST BE APPROVED BY SEMINOLE COUNTY PRIOR TO FABRICATION.
16. ONE WEEK PRIOR TO CONSTRUCTION, THE CONTRACTOR IS TO OBTAIN A R/W UTILIZATION PERMIT FROM SEMINOLE COUNTY PUBLIC WORKS, ENGINEERING DIVISION. PERMIT FEE WILL BE WAIVED.
17. IRRIGATION LINES DAMAGED DURING CONSTRUCTION ARE TO BE CAPPED IMMEDIATELY AND REPORTED TO THE SEMINOLE COUNTY ENGINEERING INSPECTOR. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO REPAIR AND/OR REPLACE THE DAMAGED IRRIGATION COMPONENTS TO PRE-CONSTRUCTION CONDITION WITH NO ADDITIONAL COMPENSATION PRIOR TO COMPLETION OF THE PROJECT.
18. ANY MAILBOX CONFLICTING WITH THE CONSTRUCTION OF THE PROJECT SHALL BE RELOCATED BY THE CONTRACTOR IN ACCORDANCE WITH FDOT STANDARD PLANS INDEX 110-200. NEW LOCATIONS TO BE COORDINATED WITH LOCAL POST OFFICE.
19. ARTESIAN CONDITIONS MAY EXIST IN THE AREA OF BASS DITCH. SHOULD AN ARTESIAN BE ENCOUNTERED, CONTRACTOR SHALL NOTIFY COUNTY IMMEDIATELY AND BE PREPARED TO REMEDY IF CORRECTIVE ACTIONS ARE REQUIRED.

TTCP NOTES

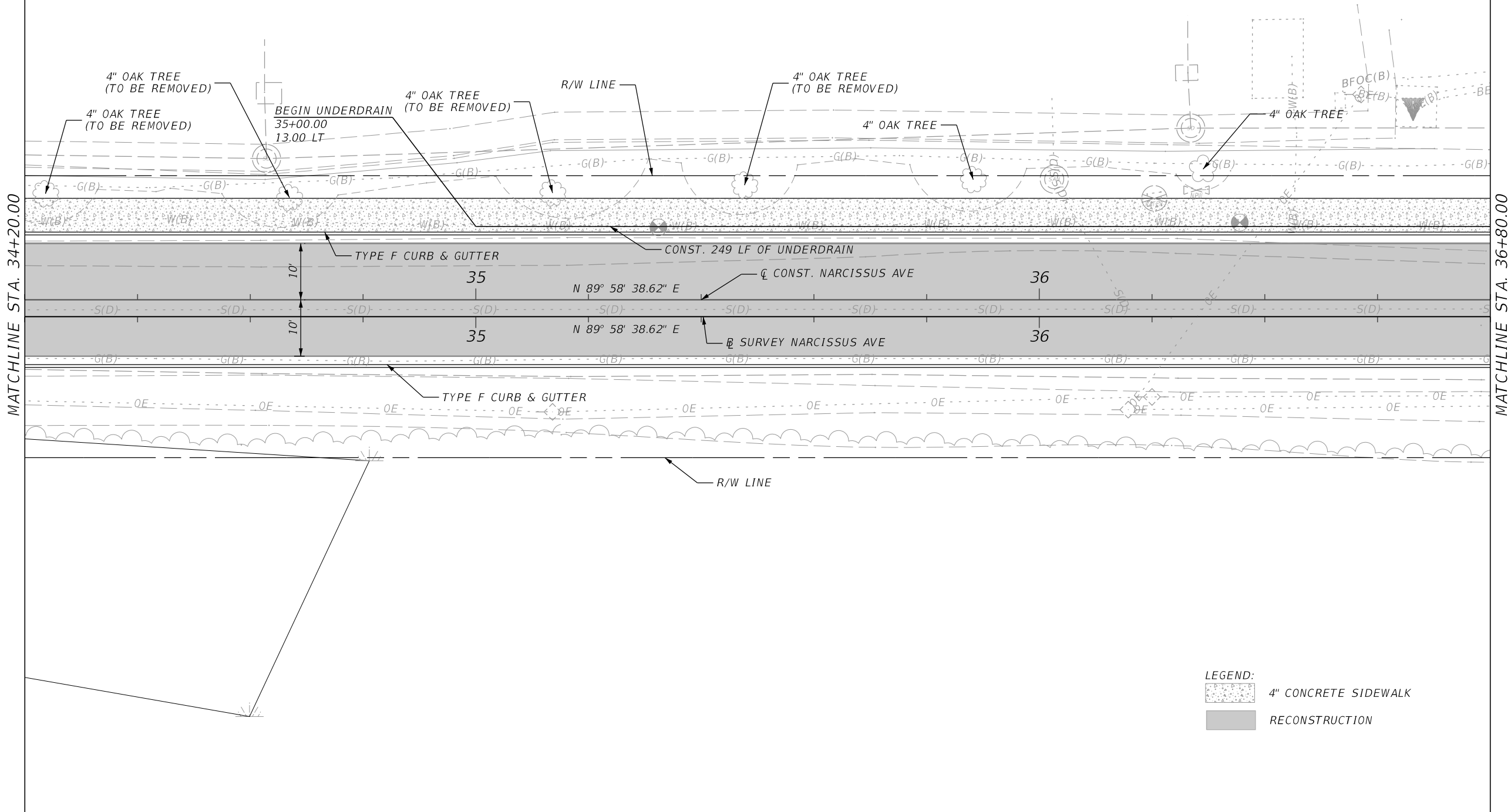
1. VEHICULAR AND PEDESTRIAN TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH FDOT DESIGN STANDARD PLANS 102-600 SERIES, THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION AND THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) AS A MINIMUM.
2. COMPLETE ROAD CLOSURE WHILE MAINTAINING LOCAL ACCESS IS PERMITTED DURING ROADWAY RECONSTRUCTION.

REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	GENERAL NOTES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION				
					NARCISSUS AVE. ROADWAY IMPROVEMENTS		7



NOTE: ALL STATION AND OFFSETS ARE BASED ON $\varnothing$ CONST. NARCISSUS AVE

REVISIONS				 moFFatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	ROADWAY PLAN (1)		SHEET NO. 8
DATE	DESCRIPTION	DATE	DESCRIPTION					



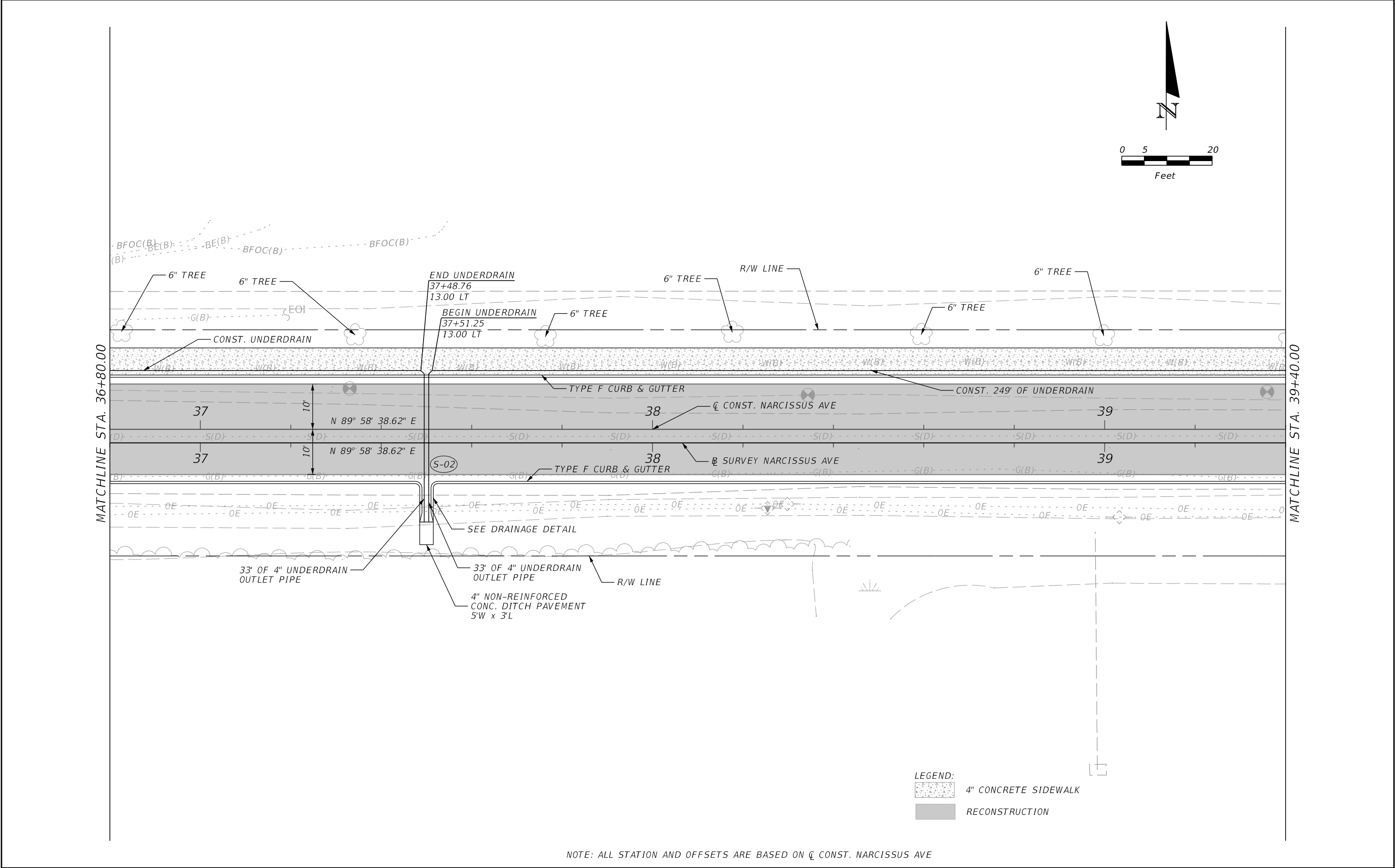
LEGEND:

 4" CONCRETE SIDEWALK

 RECONSTRUCTION

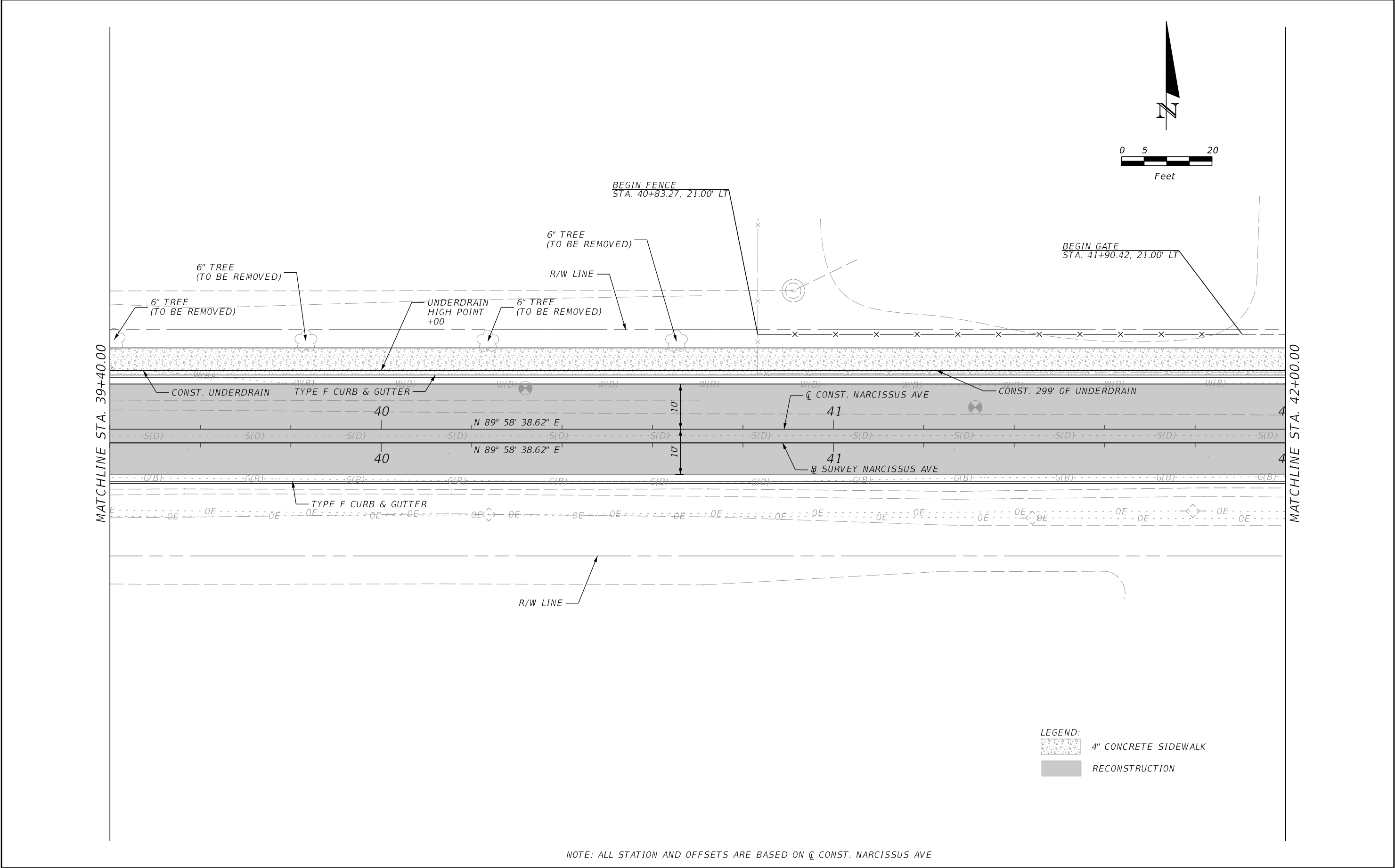
REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	ROADWAY PLAN (2)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		NARCISSUS AVE. ROADWAY IMPROVEMENTS		9

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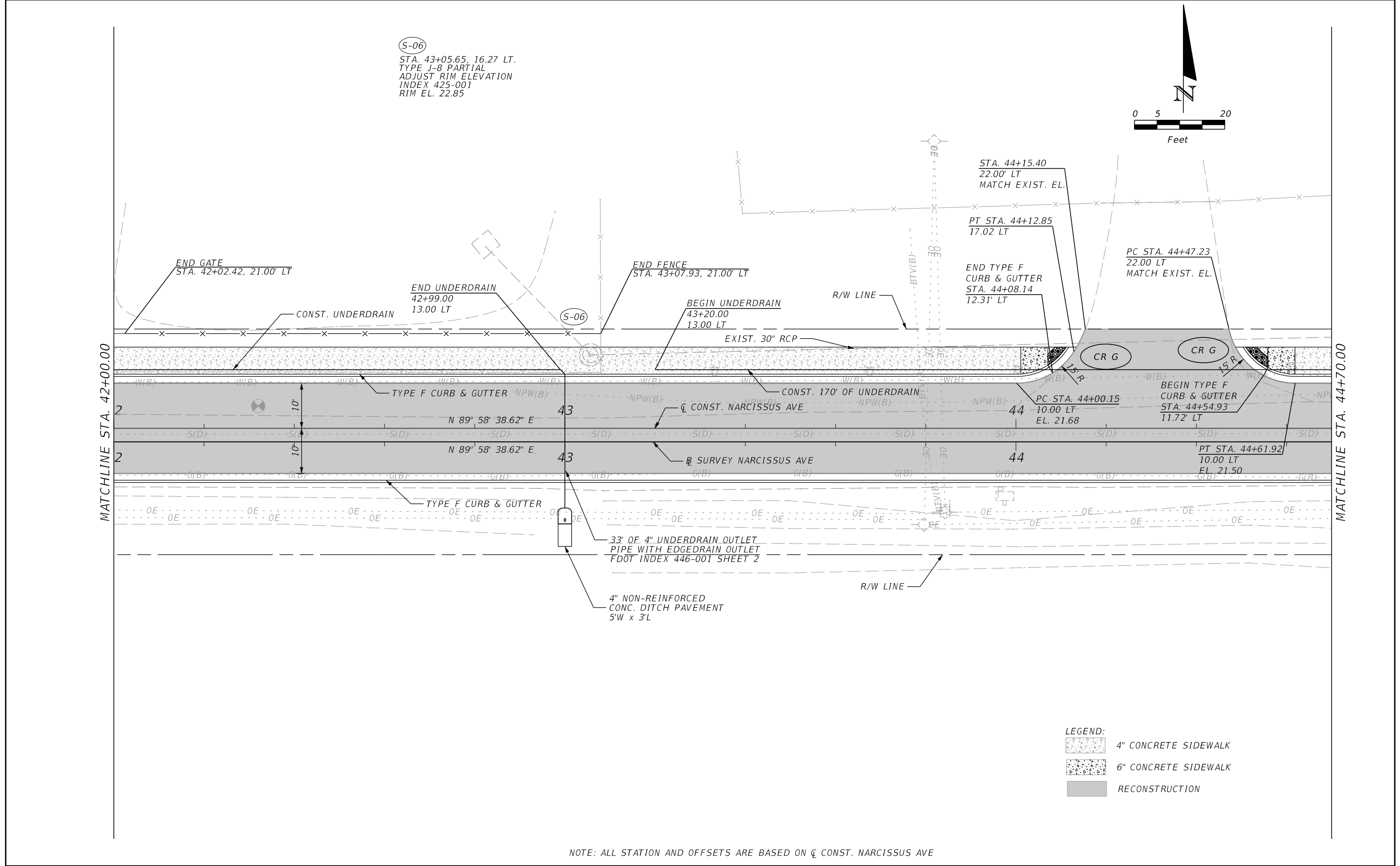
REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	ROADWAY PLAN (3)	SHEET NO. 10
DATE	DESCRIPTION	DATE	DESCRIPTION				

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



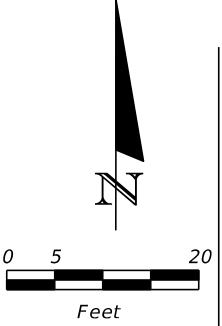
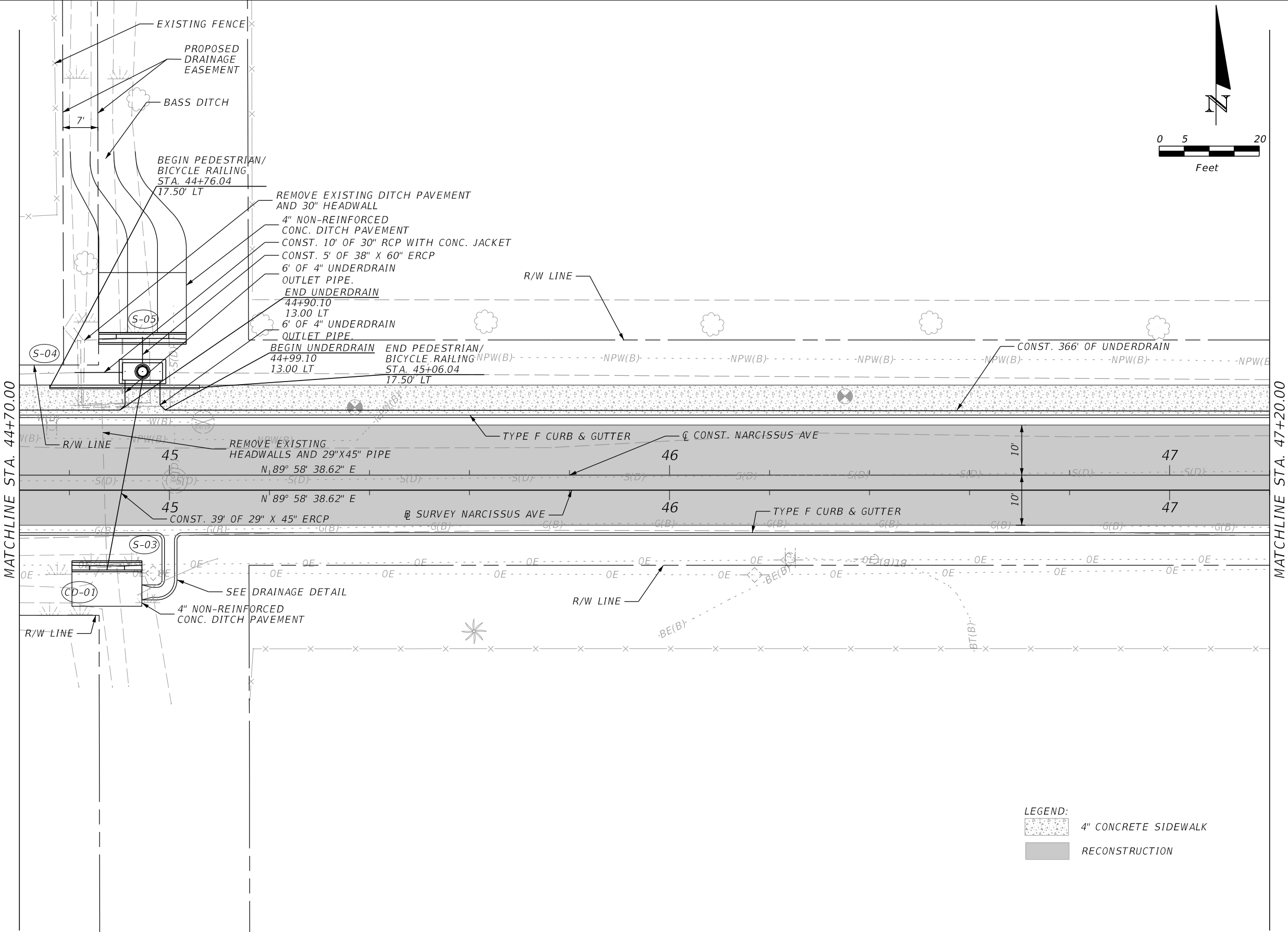
REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	ROADWAY PLAN (4)	SHEET NO. 11
DATE	DESCRIPTION	DATE	DESCRIPTION				

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REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	ROADWAY PLAN (5)	SHEET NO. 12
DATE	DESCRIPTION	DATE	DESCRIPTION				

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

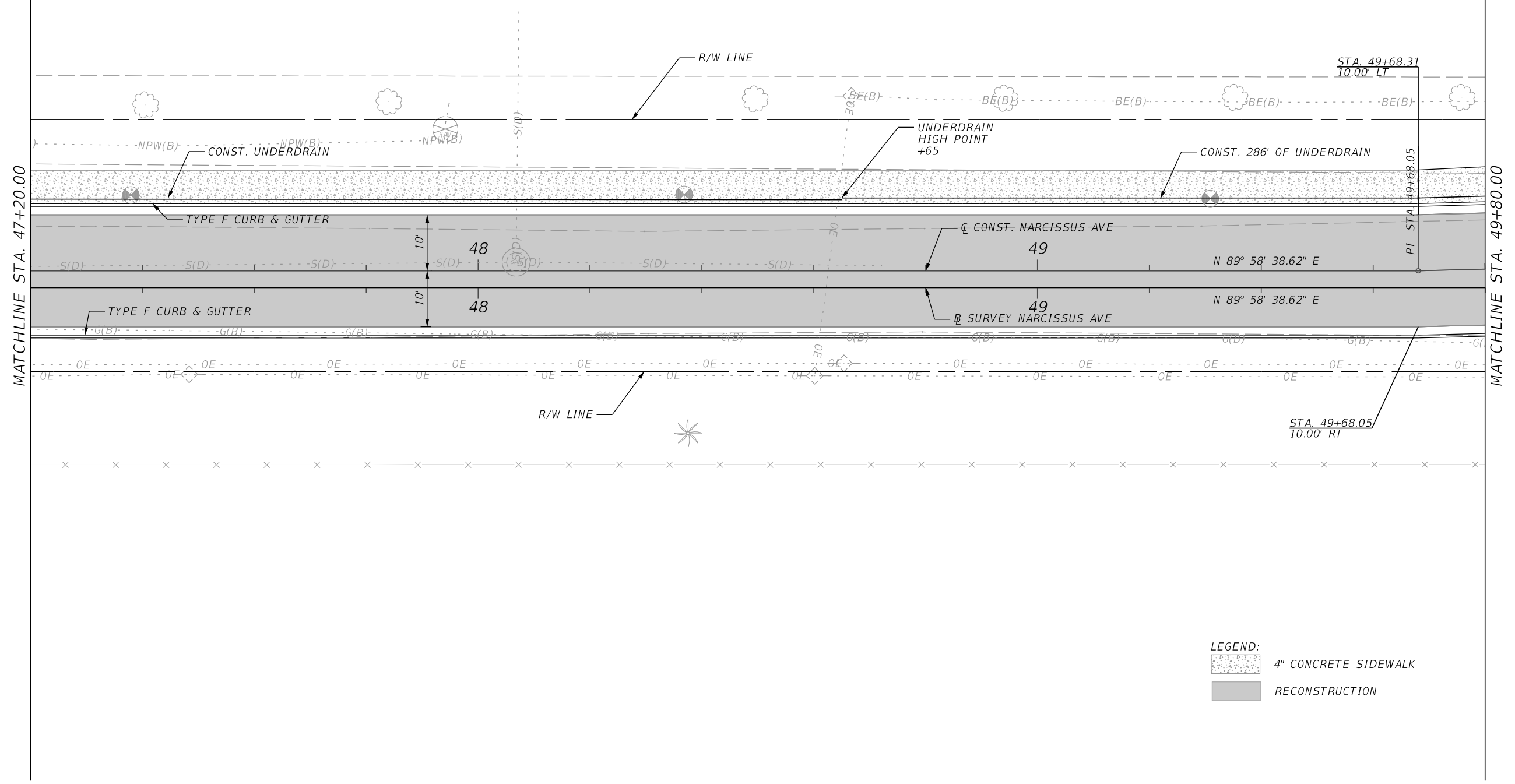
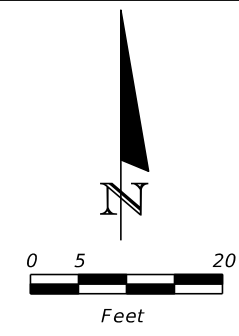


LEGEND:
4" CONCRETE SIDEWALK
RECONSTRUCTION

NOTE: ALL STATION AND OFFSETS ARE BASED ON CL CONST. NARCISSUS AVE

REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	ROADWAY PLAN (6)		SHEET NO. 13
DATE	DESCRIPTION	DATE	DESCRIPTION					

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



LEGEND:

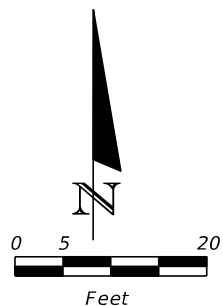
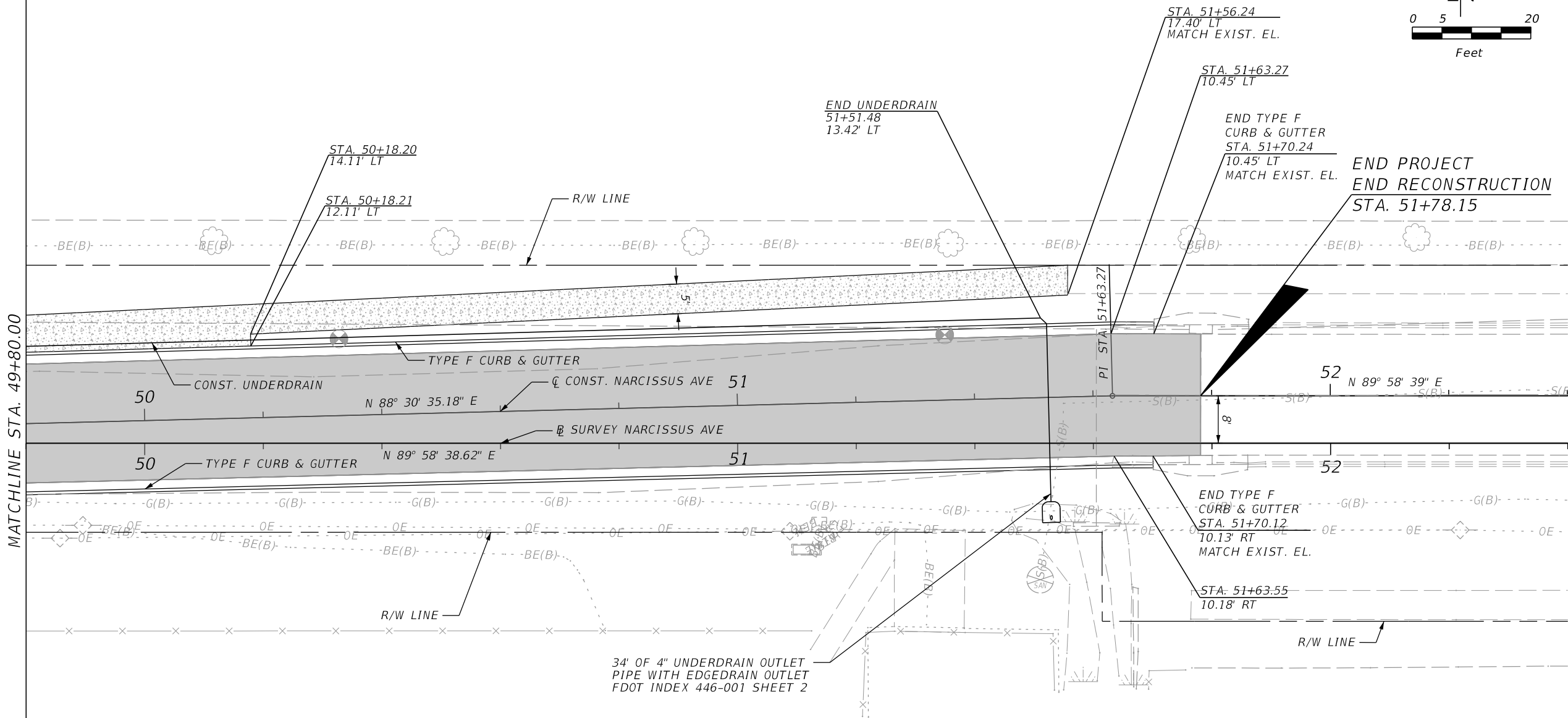
 4" CONCRETE SIDEWALK

 RECONSTRUCTION

NOTE: ALL STATION AND OFFSETS ARE BASED ON CL CONST. NARCISSUS AVE

REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	ROADWAY PLAN (7)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION				
					NARCISSUS AVE. ROADWAY IMPROVEMENTS		14

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

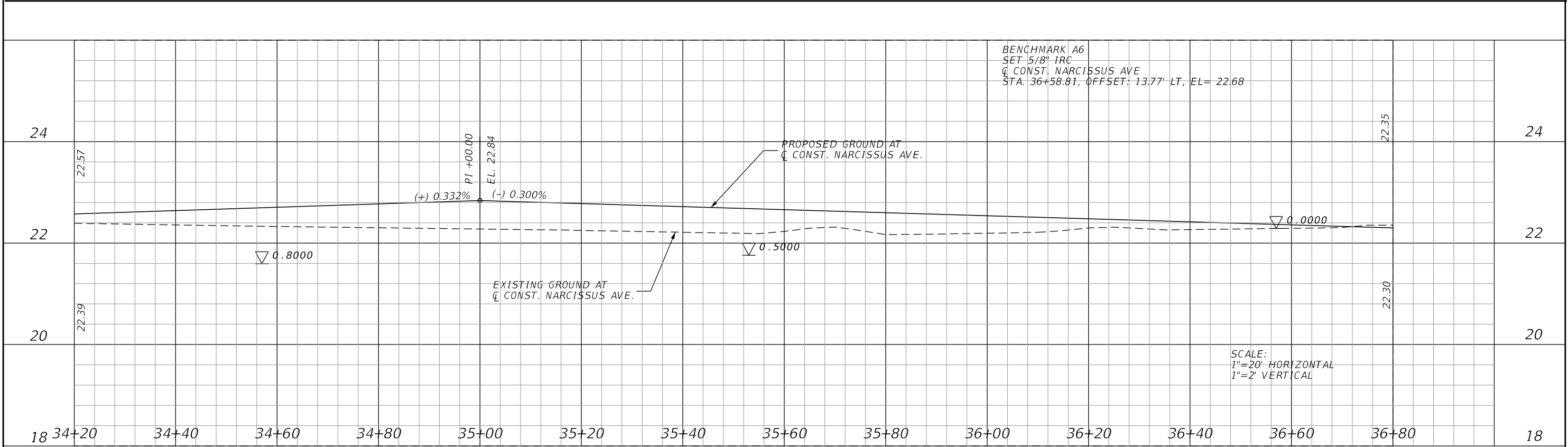
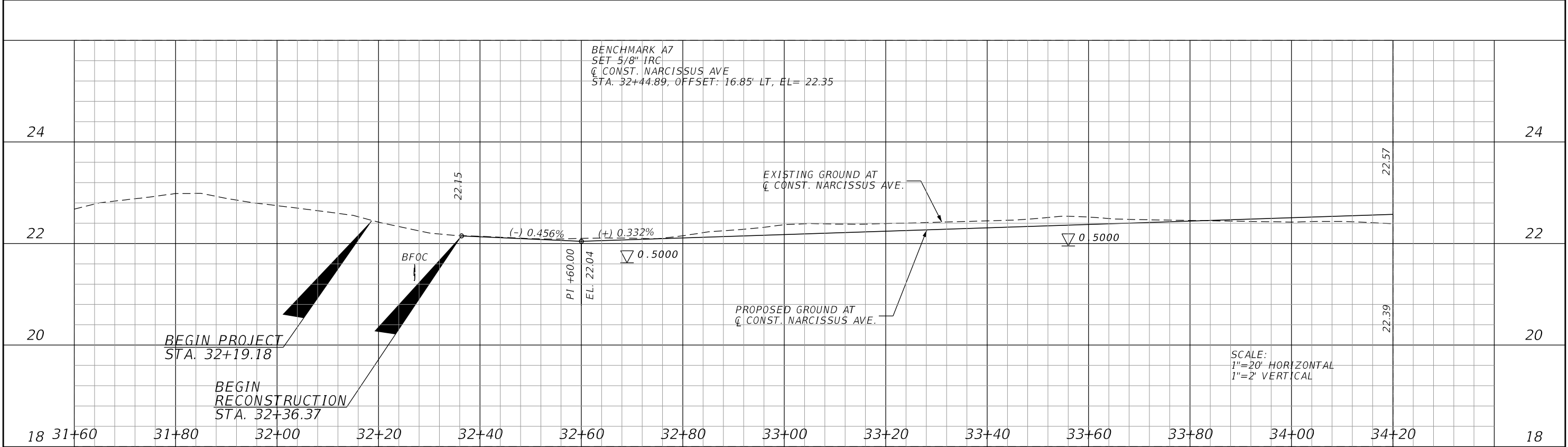


- LEGEND:
- 4" CONCRETE SIDEWALK
 - RECONSTRUCTION

NOTE: ALL STATION AND OFFSETS ARE BASED ON ϕ CONST. NARCISSUS AVE

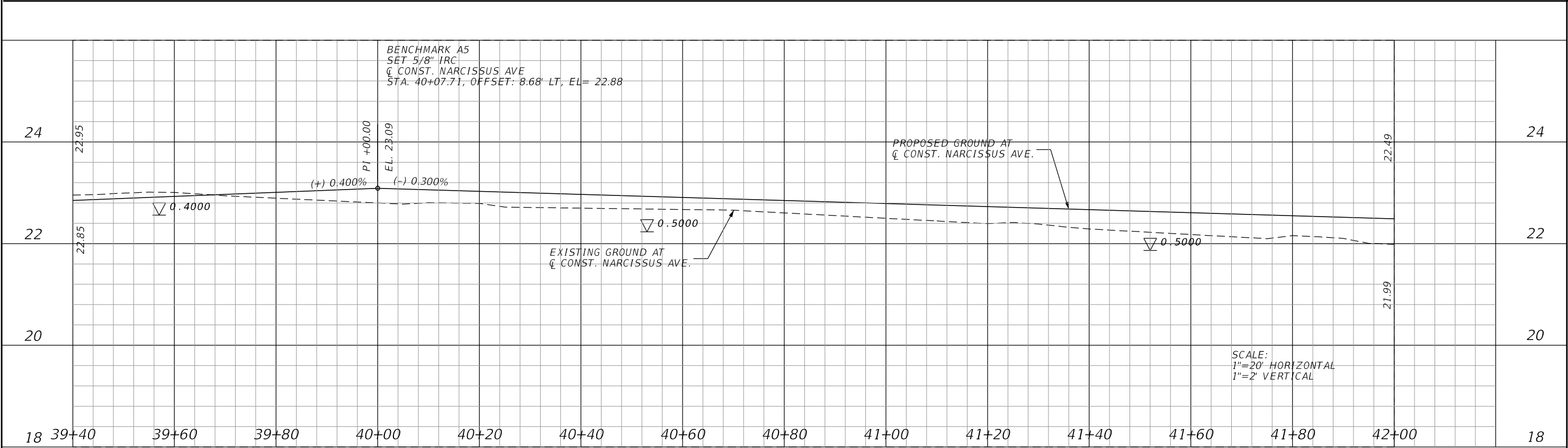
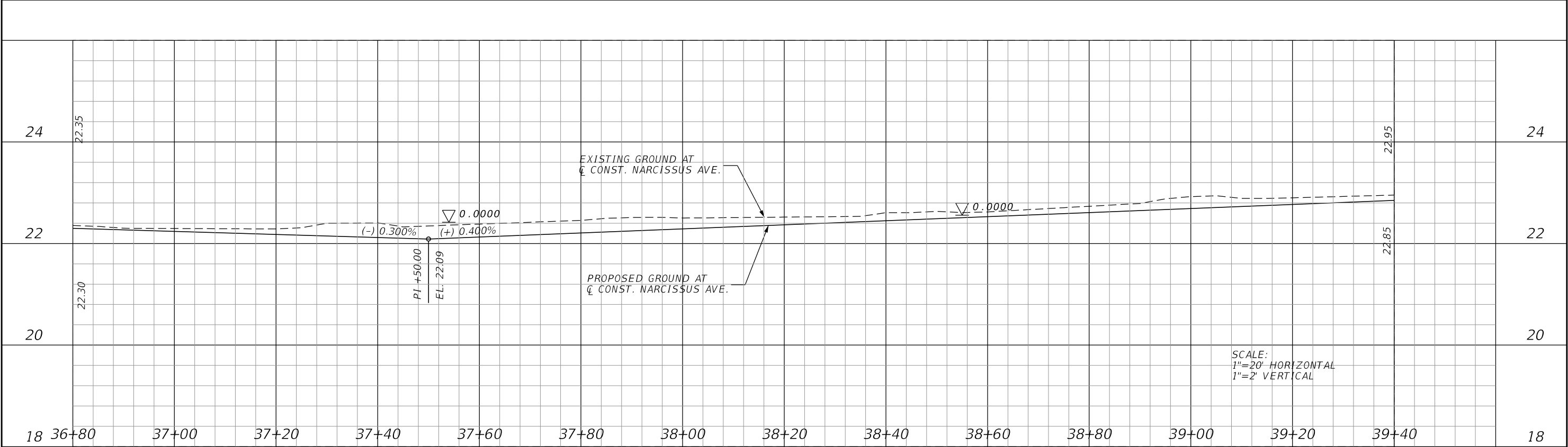
REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	ROADWAY PLAN (8)		SHEET NO. 15
DATE	DESCRIPTION	DATE	DESCRIPTION					

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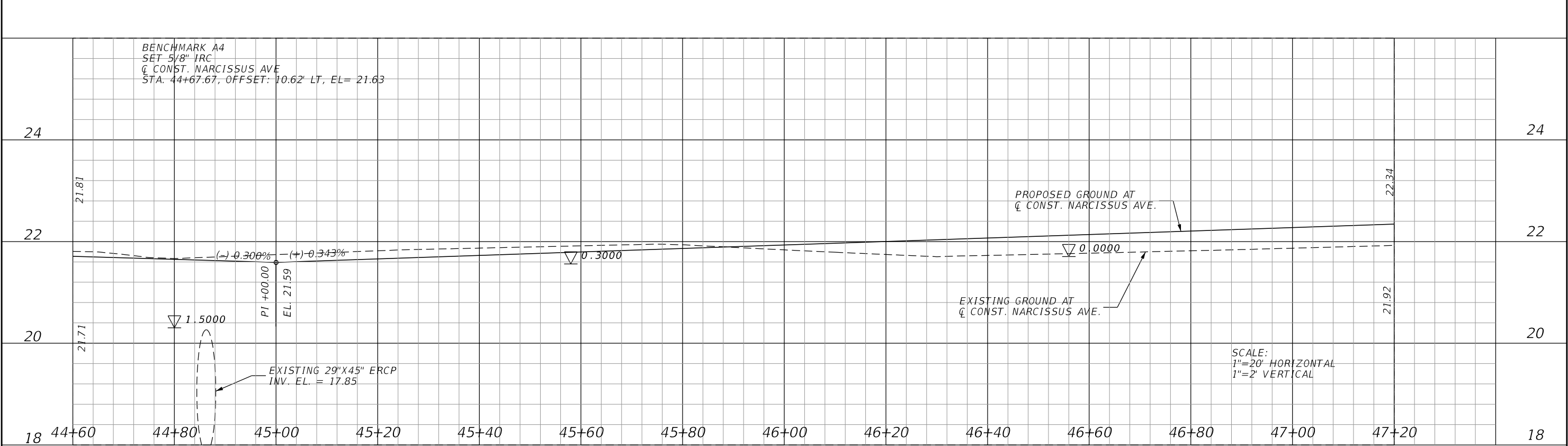
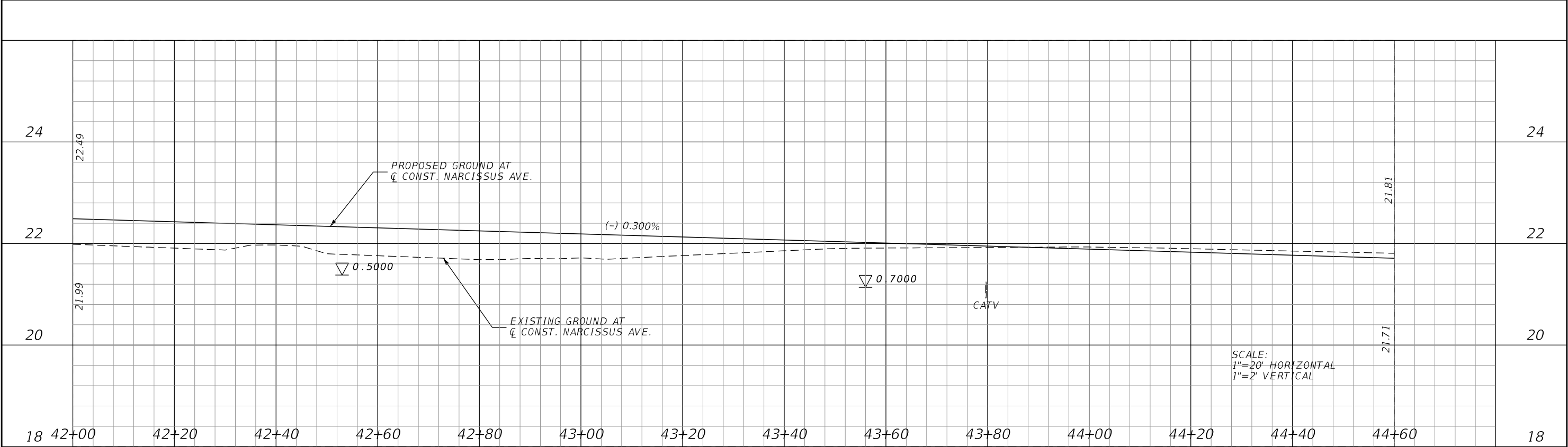
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DATE	DESCRIPTION	DATE	DESCRIPTION					

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



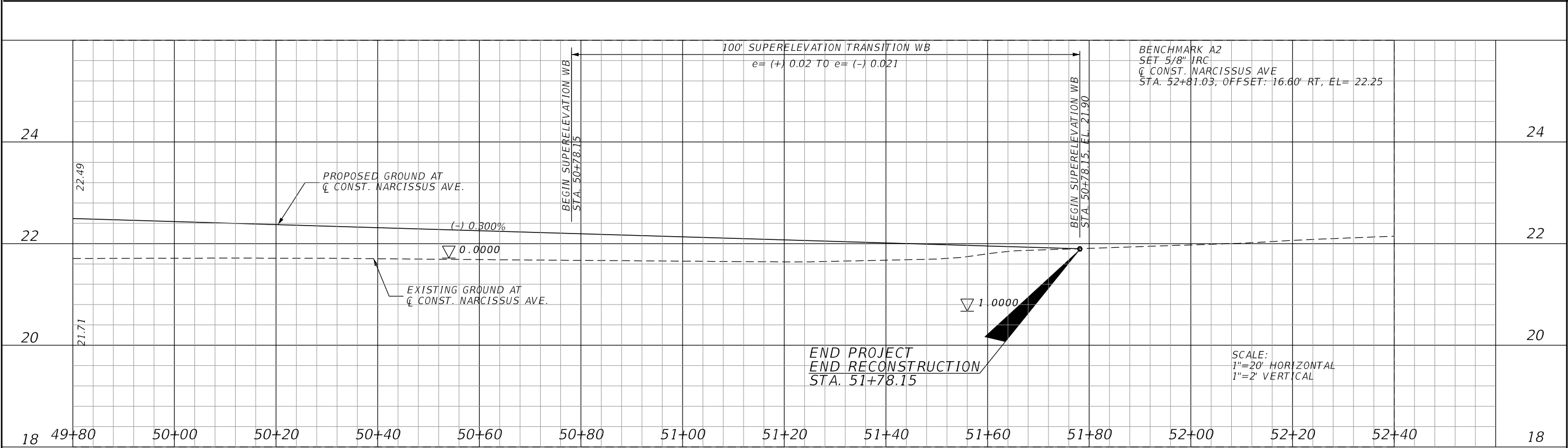
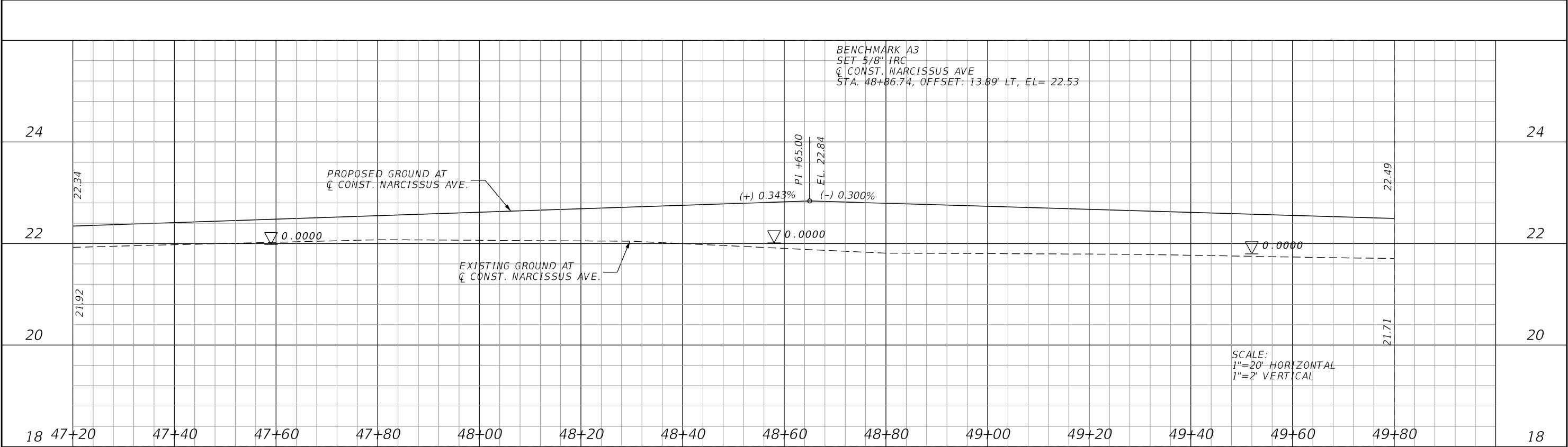
REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	ROADWAY PROFILE (2)		SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION					17

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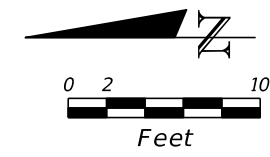
REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	ROADWAY PROFILE (3)		SHEET NO. 18
DATE	DESCRIPTION	DATE	DESCRIPTION					

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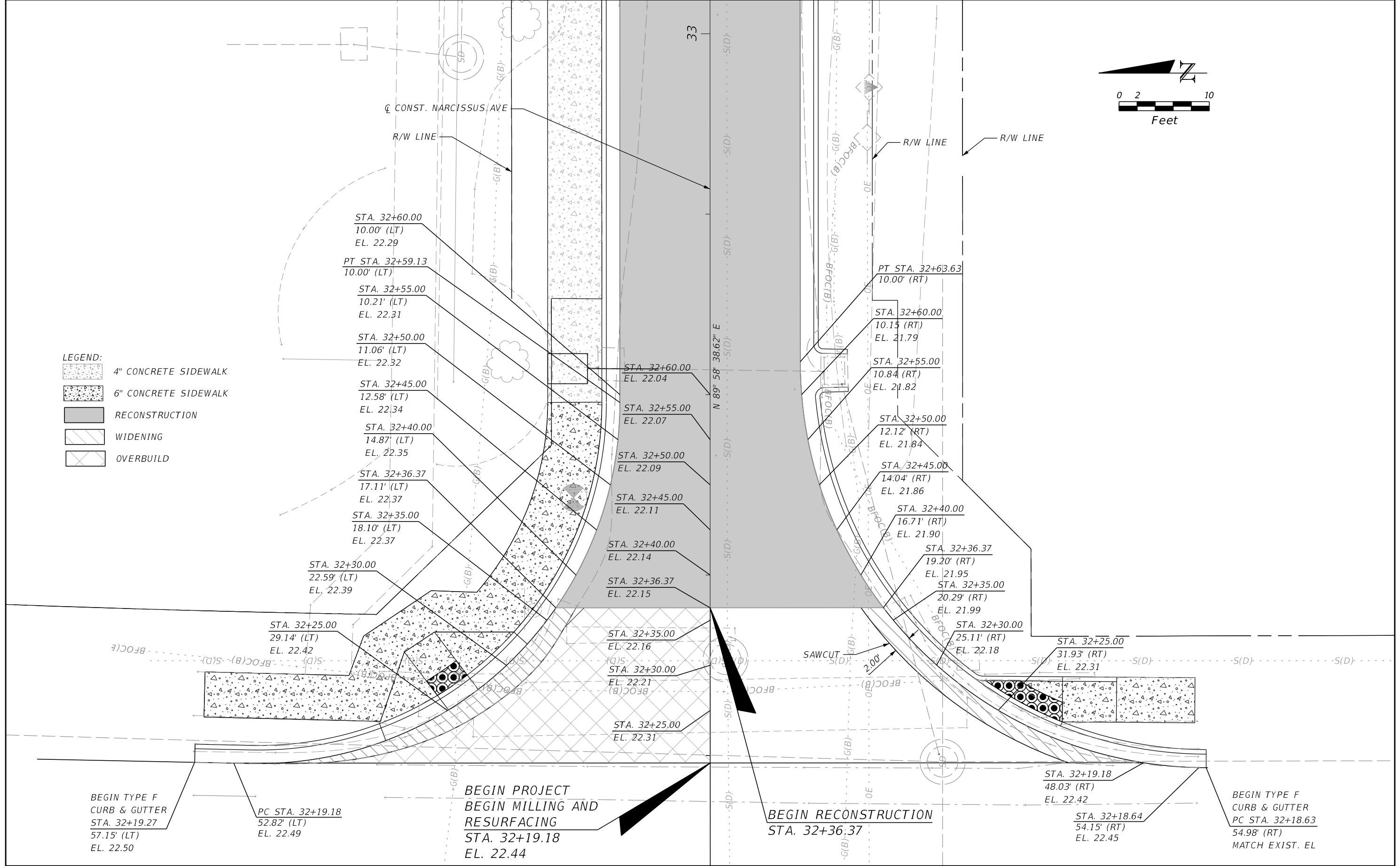


REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	ROADWAY PROFILE (4)		SHEET NO. 19
DATE	DESCRIPTION	DATE	DESCRIPTION					

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

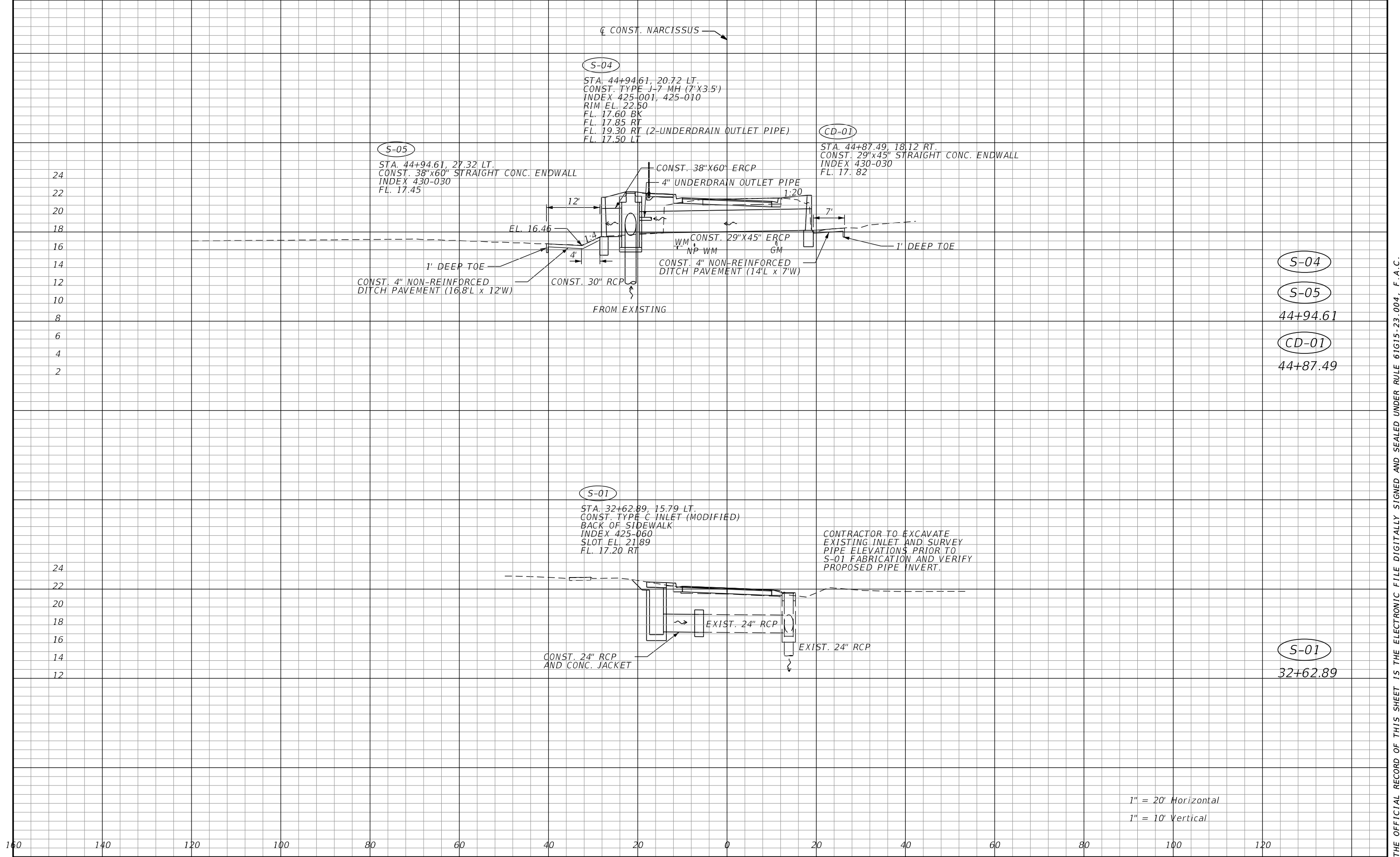


- LEGEND:
- 4" CONCRETE SIDEWALK
 - 6" CONCRETE SIDEWALK
 - RECONSTRUCTION
 - WIDENING
 - OVERBUILD



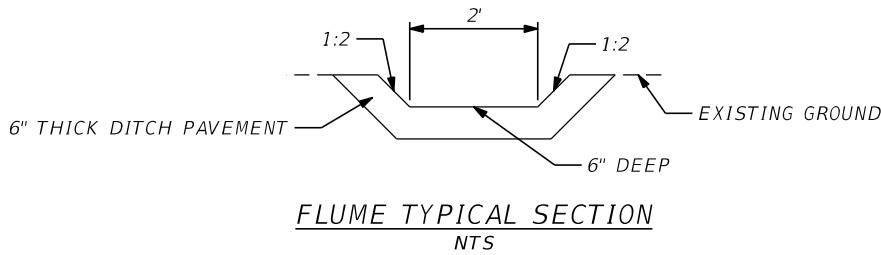
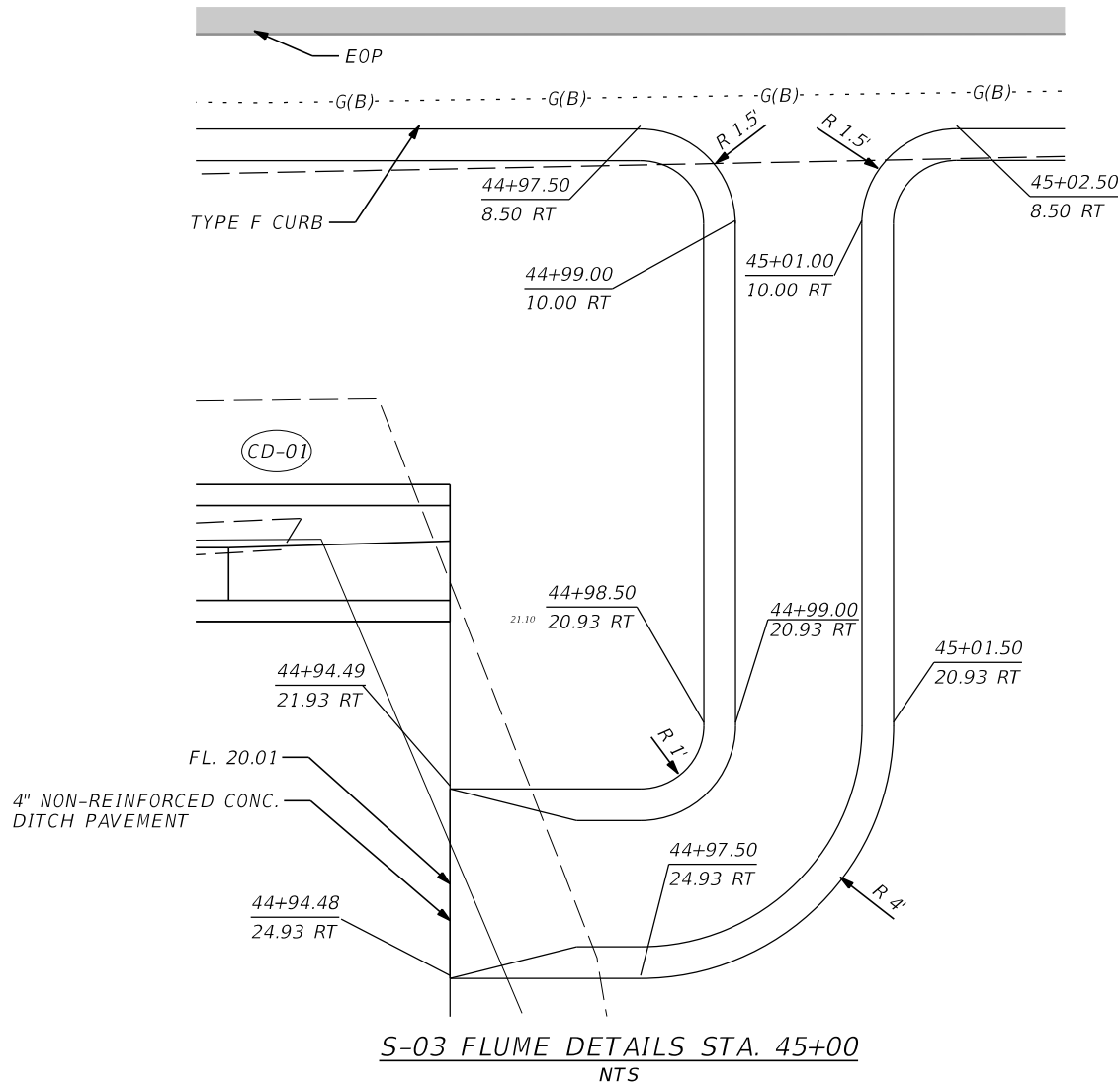
REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	INTERSECTION DETAIL	SHEET NO. 20
DATE	DESCRIPTION	DATE	DESCRIPTION				

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

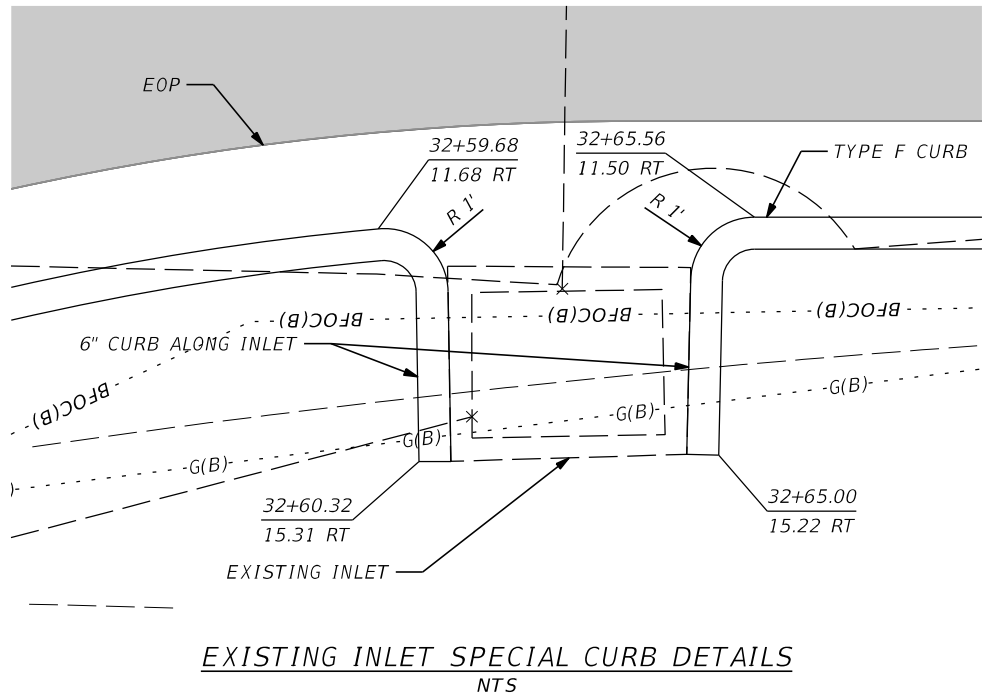
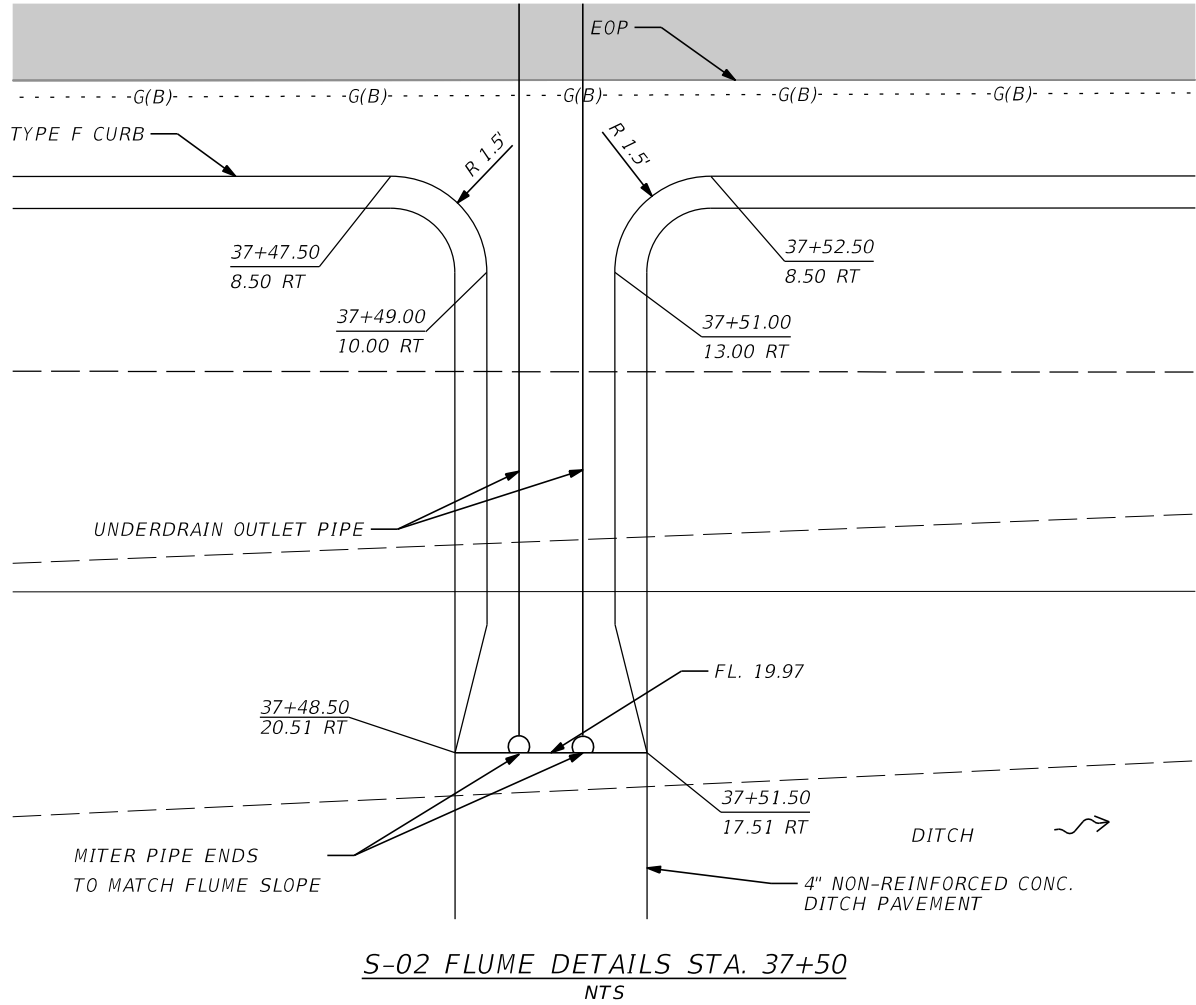


REVISIONS				 mo ffatt & nichol ENGINEER OF RECORD: ADAM K. CROUCH, P.E. FL REGISTRATION NO. 73036	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	DRAINAGE STRUCTURES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION				21

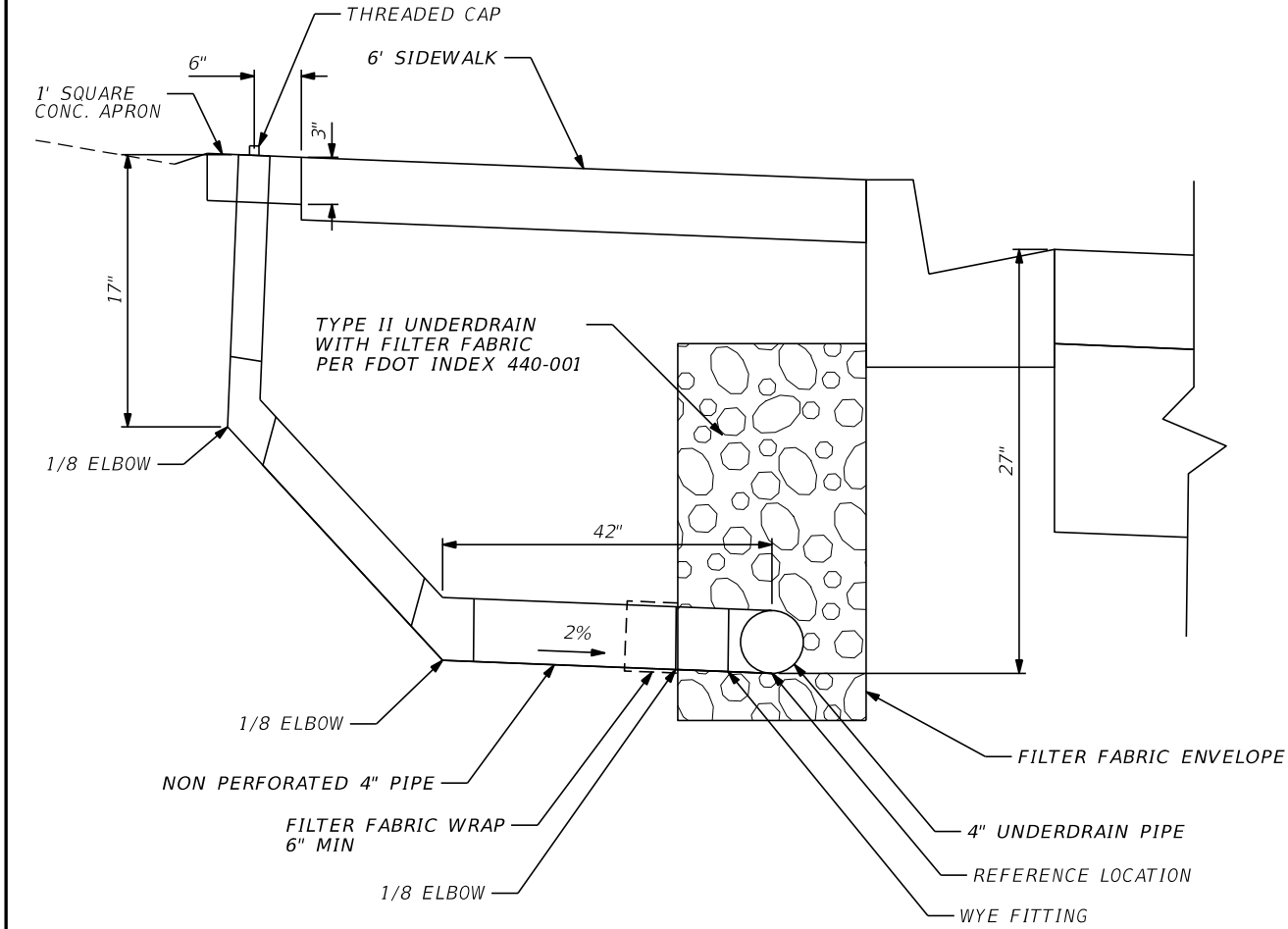
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



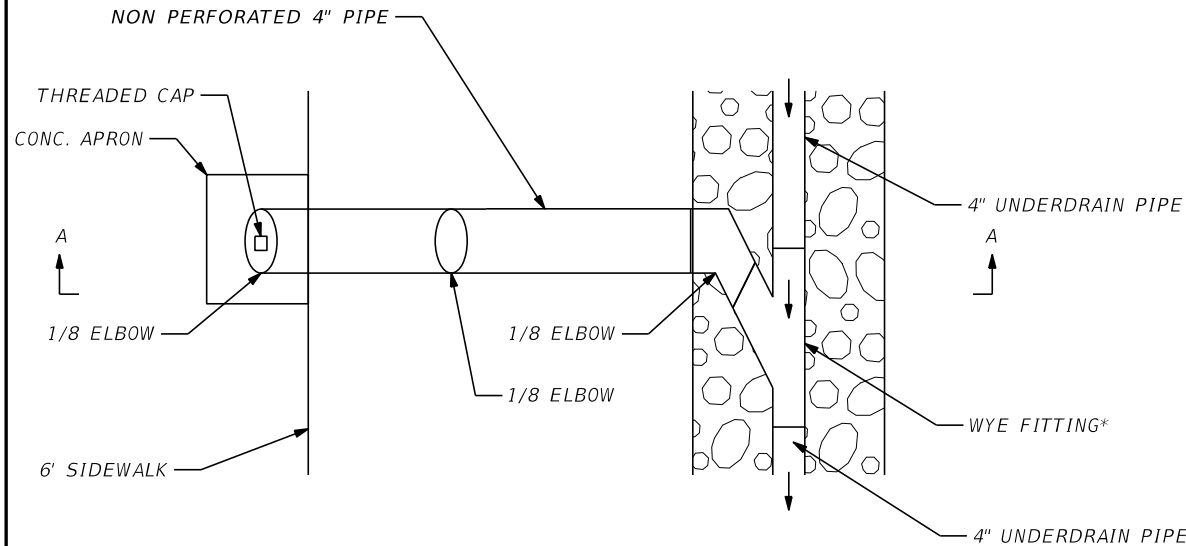
NOTE: COST OF CURB AND GUTTER INCLUDES FLUMES



REVISIONS				 moFFatt & nichol ENGINEER OF RECORD: ADAM K. CROUCH, P.E. FL. REGISTRATION NO. 73036	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	DRAINAGE DETAILS	SHEET NO. 22
DATE	DESCRIPTION	DATE	DESCRIPTION				



UNDERDRAIN DETAIL
CLEANOUT SECTION A-A
NTS



UNDERDRAIN CLEANOUT PLAN
NTS

UNDERDRAIN SUMMARY					
STATION	OFFSET (FT)	INVERT	DEPTH (IN)	EOP	COMMENTS
35+00	16.00	20.79	27.00	23.04	HIGH POINT
37+50	16.00	20.04	27.00	22.29	OUTLET
40+00	16.00	21.04	27.00	23.29	HIGH POINT
43+00	16.00	20.14	27.00	22.39	OUTLET
43+20	16.00	20.08	27.00	22.33	HIGH POINT
45+00	16.00	19.54	27.00	21.79	OUTLET
48+65	16.00	20.79	27.00	23.04	HIGH POINT
51+52	16.00	19.93	27.00	22.18	OUTLET

SUMMARY OF CLEANOUTS		
STATION	OFFSET (FT)	WYE DIRECTION
35+00	21.50	AH
37+40	21.50	AH
37+60	21.50	BK
39+90	21.50	BK
40+00	21.50	AH
42+90	21.50	AH
43+20	21.50	AH
46+00	21.50	BK
48+50	21.50	BK
48+65	21.50	AH
51+40	21.50	AH

DATE OF SURVEY: JULY 2021
SURVEY MADE BY: GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS, INC.
SUBMITTED BY: CRAIG G. BALLOCK, P.E.

ROAD NO.: NARCISSUS AVENUE
COUNTY: SEMINOLE

CROSS SECTION SOIL SURVEY FOR THE DESIGN OF ROADS
PROJECT NAME: NARCISSUS AVENUE ROADWAY IMPROVEMENTS

NARCISSUS AVENUE SURVEY BEGINS STATION: 32+20 ENDS STATION: 51+60
REFERENCE: CENTERLINE

STRATUM NO.	ORGANIC CONTENT		MOISTURE CONTENT		SIEVE ANALYSIS RESULTS PERCENT PASS (%)						ATTERBERG LIMITS (%)				DESCRIPTION	CORROSION TEST RESULTS				
	NO. OF TESTS	% ORGANIC	NO. OF TESTS	MOISTURE CONTENT	NO. OF TESTS	10 MESH	40 MESH	60 MESH	100 MESH	200 MESH	NO. OF TESTS	LIQUID LIMIT	PLASTIC INDEX	AASHTO GROUP		NO. OF TESTS	RESISTIVITY ohm-cm	CHLORIDE ppm	SULFATES ppm	pH
1	0	-	0	-	1	95	91	78	30	9	0	-	-	A-3	LIGHT BROWN TO DARK BROWN FINE SAND TO FINE SAND WITH SILT	0	-	-	-	-
2	1	3.9	1	22	4	86-97	80-95	71-86	29-34	11-12	0	-	-	A-2-4	LIGHT BROWN TO DARK BROWN TO LIGHT GRAY FINE SAND WITH SILT TO SILTY FINE SAND, OCCASIONAL TRACE LIMESTONE AND ORGANIC MATERIAL	2	2400-2900	30-45	54-120	7.2-7.9
3	0	-	1	25	5	99-100	95-100	83-92	38-63	15-21	1	NP	NP	A-2-4	LIGHT BROWN TO LIGHT GRAY TO GRAY SILTY FINE SAND, OCCASIONAL TRACE LIMEROCK	0	-	-	-	-
4	0	-	1	27	1	100	100	96	60	36	1	31	17	A-2-6	LIGHT BROWN CLAYEY FINE SAND, OCCASIONAL TRACE SHELL	1	4800	15	60	8.2
5	0	-	2	39-50	2	99-100	96-100	94-98	83	68-73	2	59-62	40-48	A-7-6	LIGHT GRAY TO GRAY SANDY CLAY, OCCASIONAL TRACE SHELL	0	-	-	-	-

- NOTES
- SOIL BOUNDARIES ARE APPROXIMATE AND REPRESENT SOIL STRATA AT EACH BORING LOCATION ONLY. ANY SUBSOIL CONNECTING LINES SHOWN ARE FOR ESTIMATING EARTHWORK ONLY AND DO NOT INDICATE ACTUAL STRATUM LIMITS. SUBSURFACE VARIATIONS BETWEEN BORINGS SHOULD BE ANTICIPATED AS INDICATED IN FDOT STANDARD SPECIFICATIONS SECTION 2-4. FOR FURTHER DETAILS SEE SECTION 120-3.
 - WATER TABLE SHOWN AS ▾ WHERE ENCOUNTERED AT TIME OF SURVEY. ESTIMATED SEASONAL HIGH GROUNDWATER LEVELS SHOWN AS ▽ .
 - REMOVAL OF MUCK AND PLASTIC MATERIAL OCCURRING WITHIN ROADWAY SHALL BE ACCOMPLISHED IN ACCORDANCE WITH FDOT STANDARD PLANS, INDEX 120-002, UNLESS OTHERWISE SHOWN ON PLANS. THE MATERIAL USED IN EMBANKMENT CONSTRUCTION SHALL BE IN ACCORDANCE WITH STANDARD PLANS, INDEX 120-001.
 - SOIL PARAMETER NOT TESTED DENOTED AS "-" ABOVE. SOIL DATA IS FROM ROADWAY AND DRAINAGE IMPROVEMENT BORINGS.
 - "NP" DENOTES NON-PLASTIC.
 - STRATA NOS. 1, 2 AND 3 SHALL BE TREATED AS SELECT (S) MATERIAL IN ACCORDANCE WITH FDOT INDEX 120-001.
 - STRATUM NO. 4 SHALL BE TREATED AS PLASTIC (P) IN ACCORDANCE WITH FDOT INDEX 120-001.
 - STRATA NOS. 2, 3, 4 AND 5 MAY RETAIN EXCESS MOISTURE AND MAY BE DIFFICULT TO DRY AND COMPACT.
 - STRATUM NO. 5 SHALL BE TREATED AS HIGH PLASTIC (H) IN ACCORDANCE WITH FDOT INDEX 120-001.
 - ACCORDING TO THE FDEP 2017 UPPER FLORIDAN AQUIFER SURFACE MAP, THE POTENTIOMETRIC SURFACE OF THE UPPER FLORIDAN AQUIFER IN THE PROJECT VICINITY IS APPROXIMATELY +27 FEET NGVD. THE CONTRACTOR SHALL BE PREPARED TO HANDLE ARTESIAN HEAD LEVELS UP TO +27 FEET NGVD.

REVISIONS

DATE	DESCRIPTION	DATE	DESCRIPTION

GEC

Geotechnical and Environmental Consultants, Inc.

919 LAKE BALDWIN LANE

ORLANDO, FL 32814

ENGINEER OF RECORD:
CRAIG G. BALLOCK, P.E.
FL REGISTRATION NO. 71571

SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

NARCISSUS AVE. ROADWAY IMPROVEMENTS

ROADWAY SOIL SURVEY

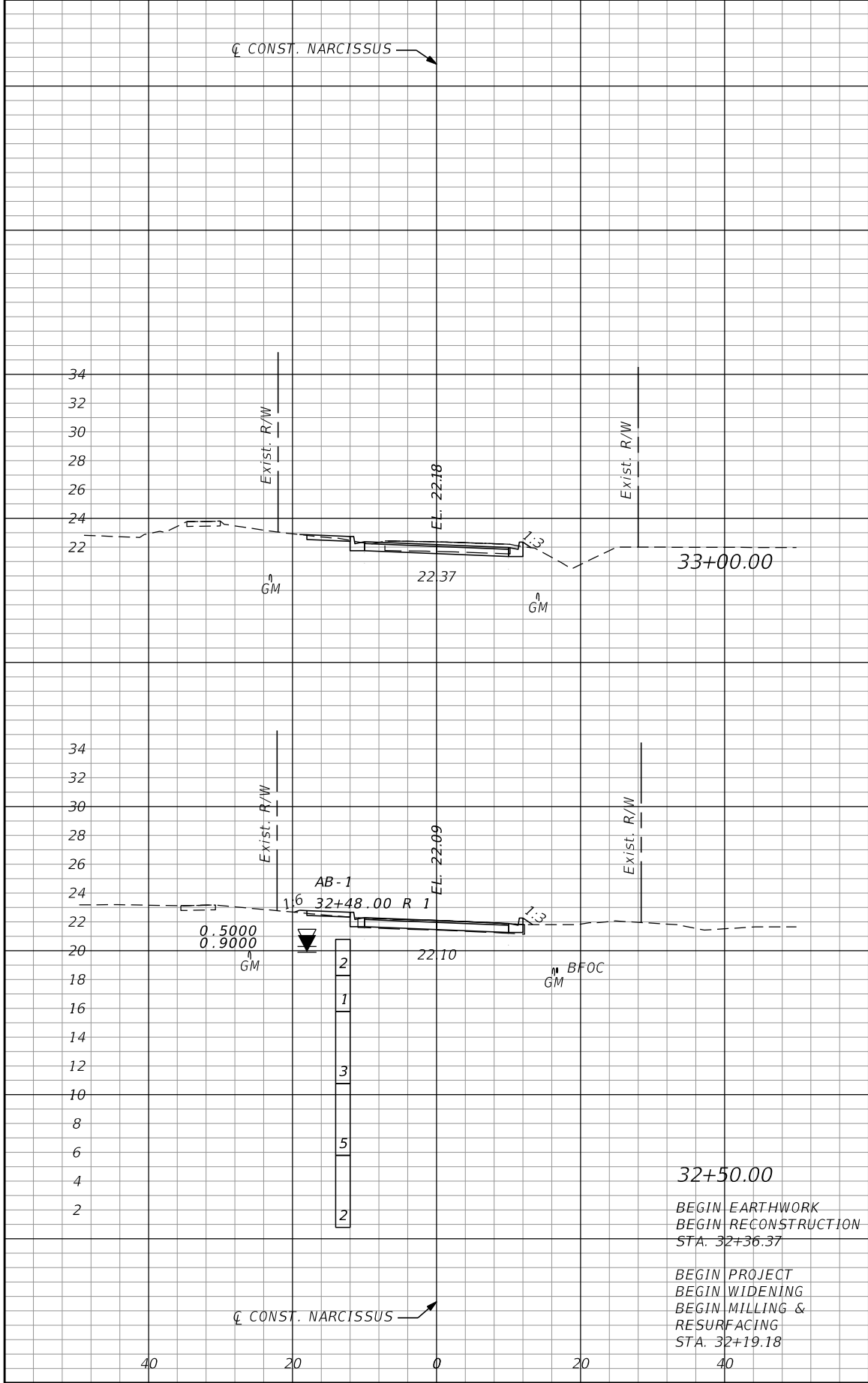
FIGURE 3

SHEET NO.

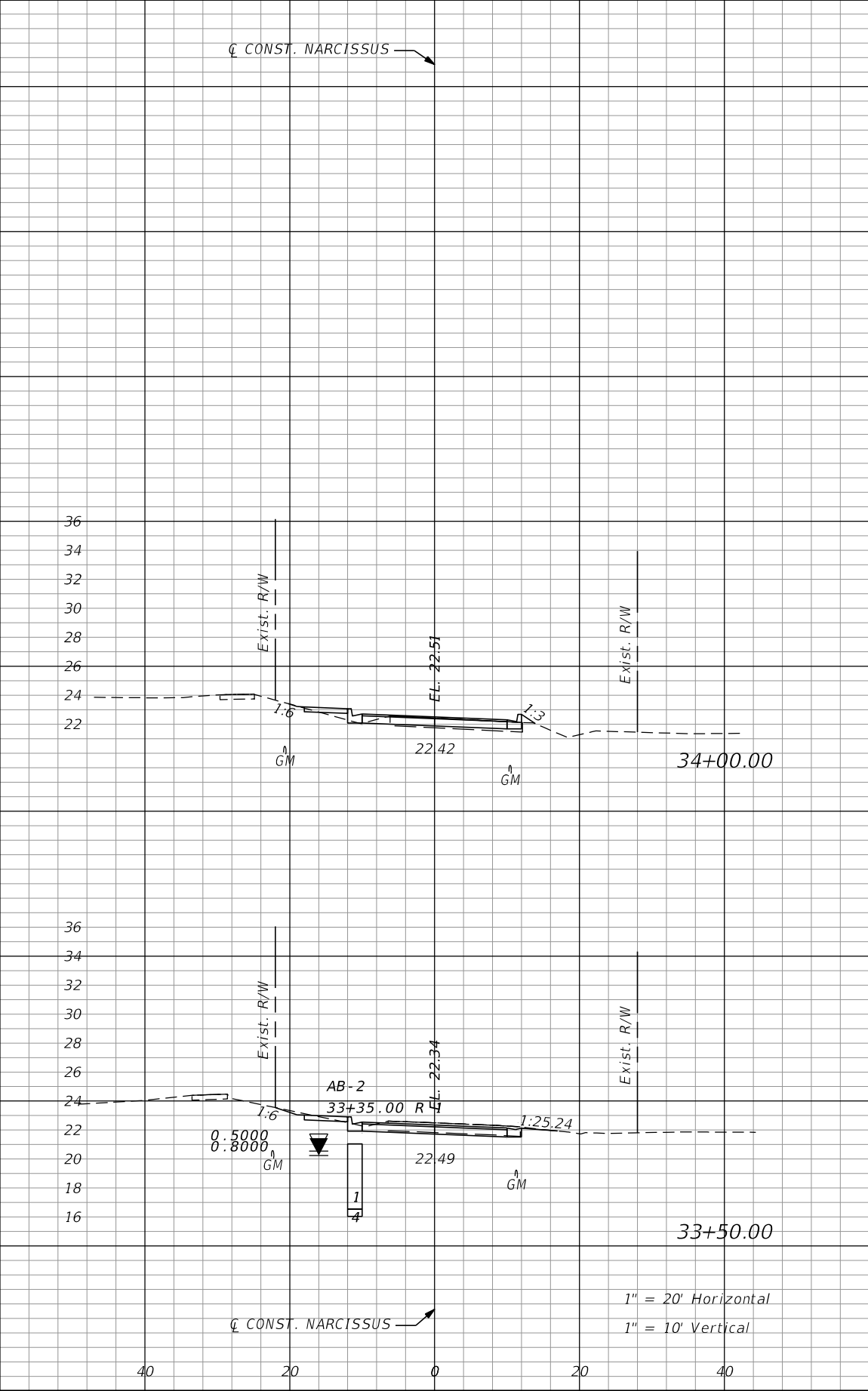
25

1/14/2022 Q:\ORL\210416-01\20 CADD\Working\Narcissus\geotech\SSUVRD01.DGN

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Regular		Exc.	Embankment	
A	V		A	V
0.20			8.02	
2.01			8.42	
1.97			1.08	
1.83			1.00	
0.00			0.00	



Regular		Exc.	Embankment	
A	V		A	V
1.40			1.73	
1.32			7.69	
0.03			6.58	
0.21			13.51	

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION



moffatt & nichol
ENGINEER OF RECORD:
JAMES BLACKFORD, P.E.
FL REGISTRATION NO. 72980

SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

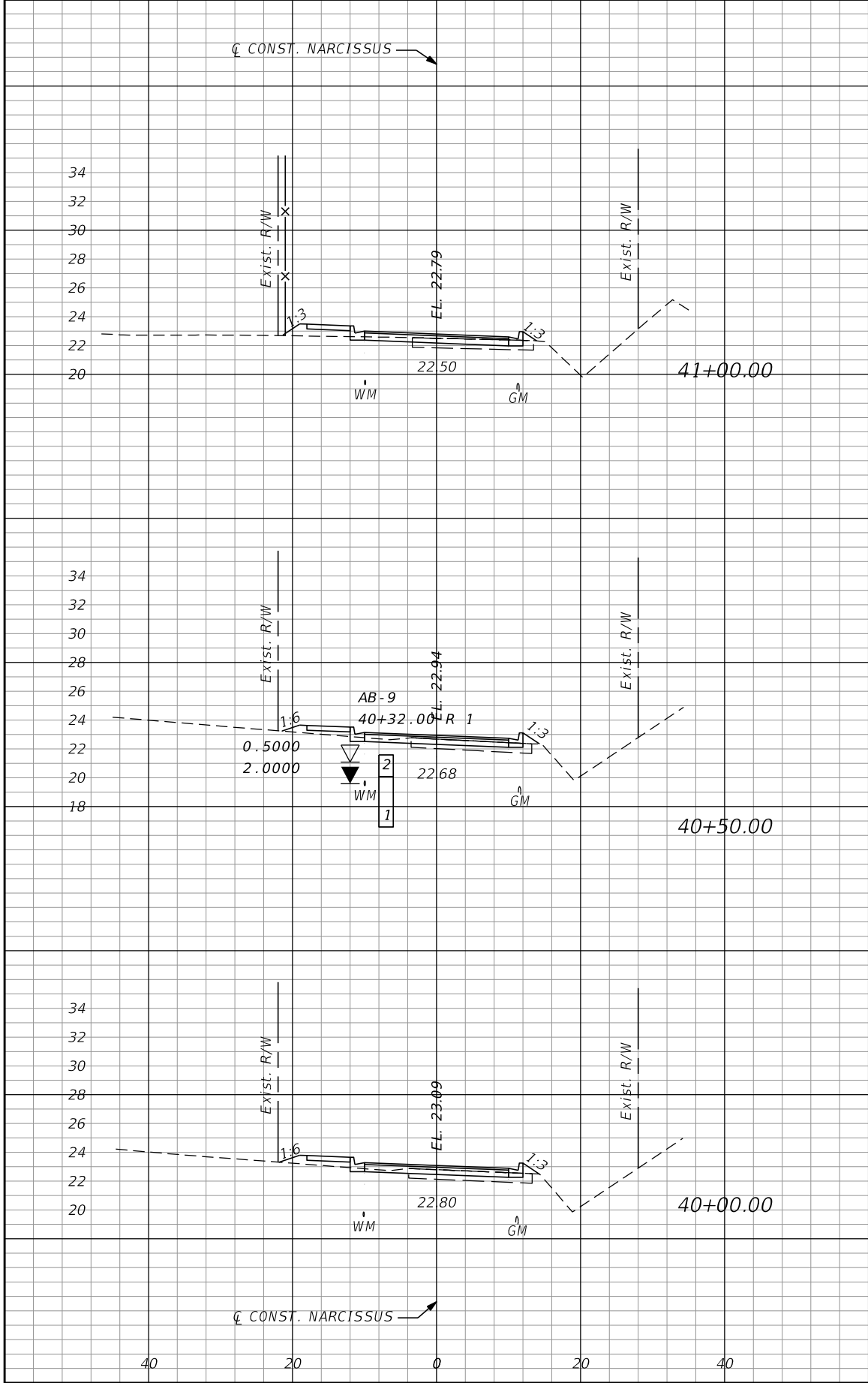
NARCISSUS AVE. ROADWAY IMPROVEMENTS

CROSS SECTIONS

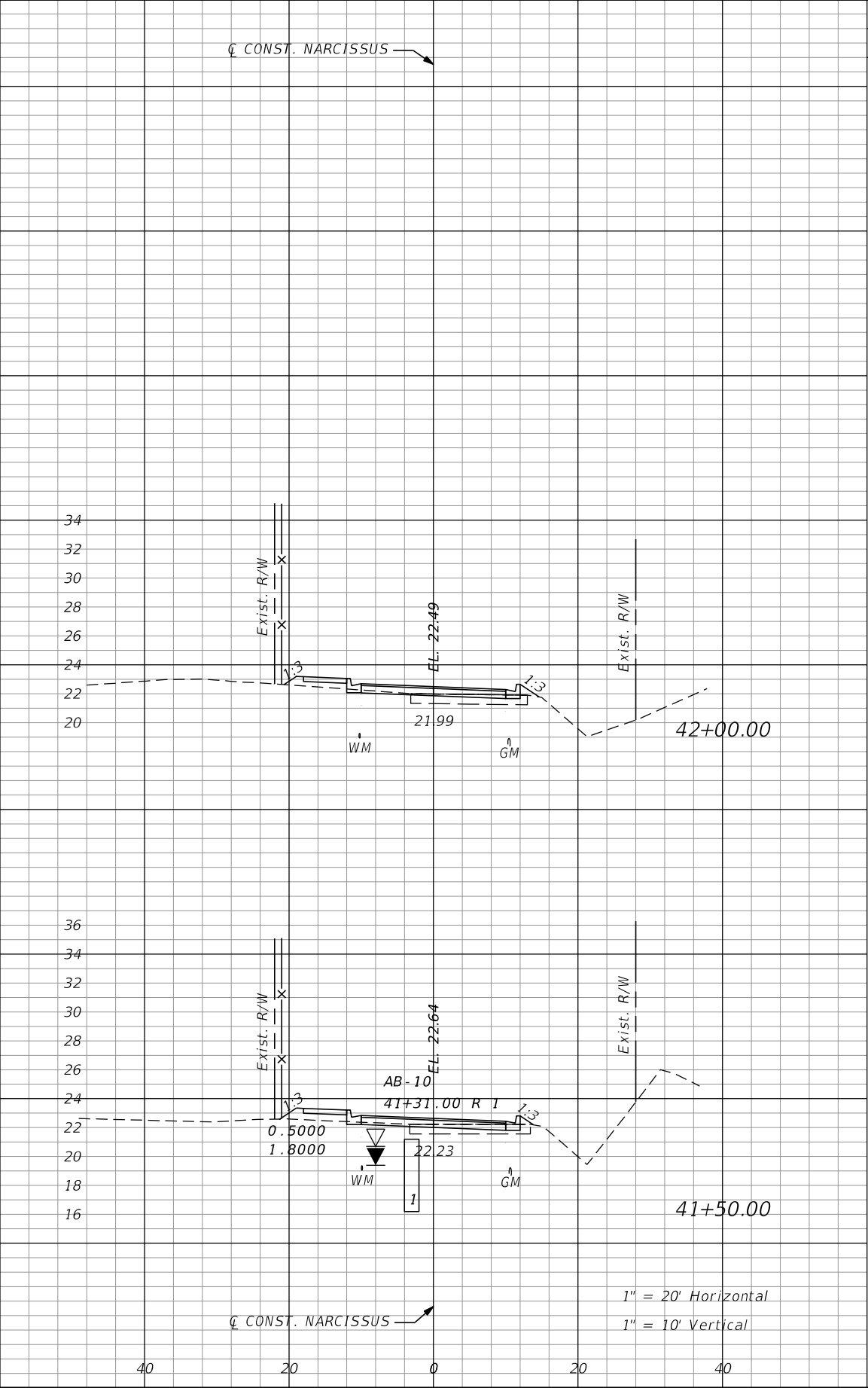
SHEET NO.

26

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Regular		Exc.	Embankment	
A	V		A	V
5.15	9.32		2.31	3.44
8.07			4.24	
3.56			2.26	
7.25			3.65	
4.27			1.68	



Regular		Exc.	Embankment	
A	V		A	V
4.22	5.78		1.42	3.53
8.45			2.61	
4.91			1.41	

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION



moffatt & nichol
ENGINEER OF RECORD:
JAMES BLACKFORD, P.E.
FL REGISTRATION NO. 72980

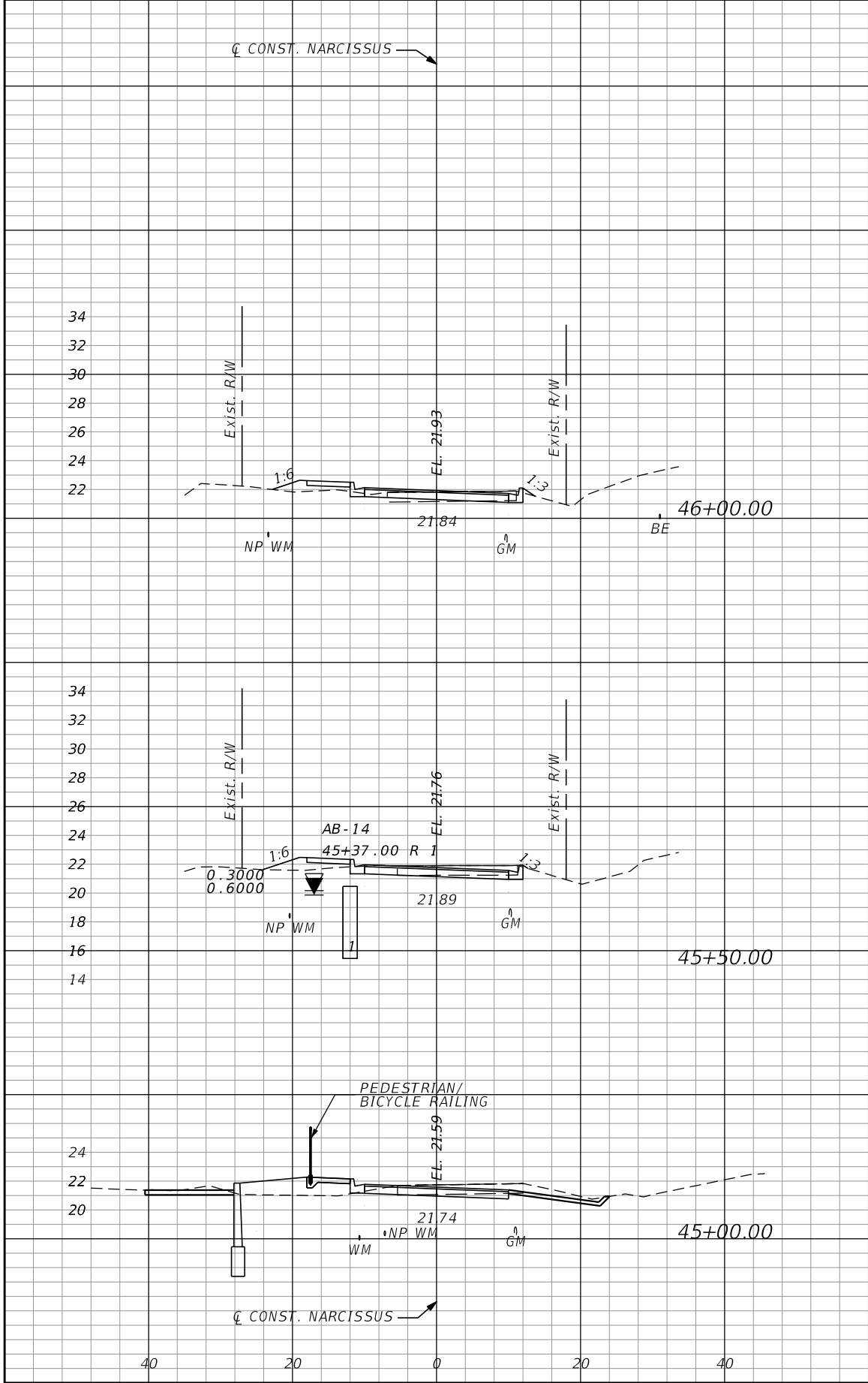
SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

NARCISSUS AVE. ROADWAY IMPROVEMENTS

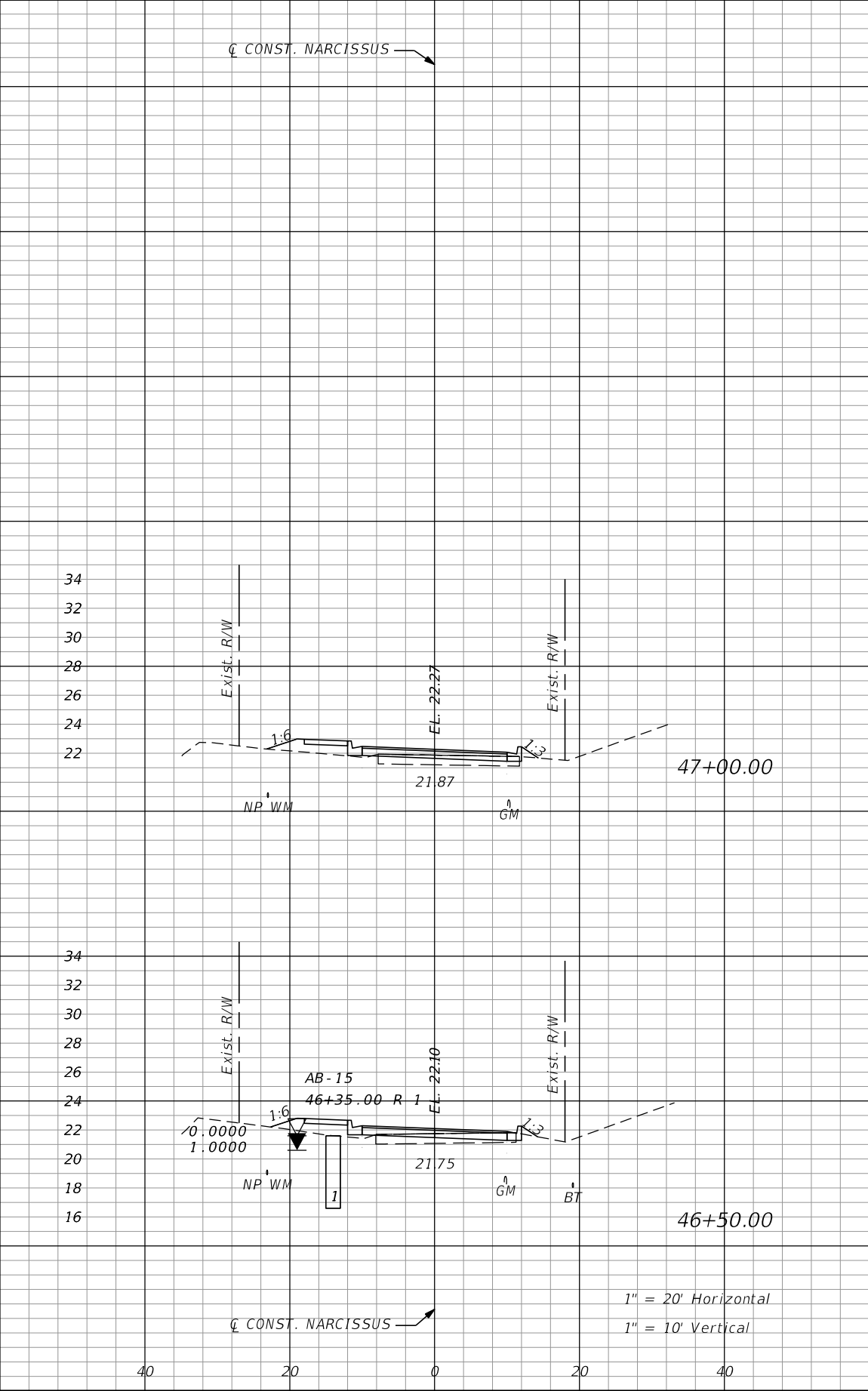
CROSS SECTIONS

29

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Regular		Exc.	Embankment	
A	V		A	V
4.52	11.35		3.11	
9.10	9.10		8.72	
5.31	5.31		6.99	
14.93	14.93		11.26	
10.81	10.81		5.17	



Regular		Exc.	Embankment	
A	V		A	V
7.45	14.58		0.08	
14.07	14.07		0.95	
7.75	7.75		0.93	

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION



moffatt & nichol
ENGINEER OF RECORD:
JAMES BLACKFORD, P.E.
FL REGISTRATION NO. 72980

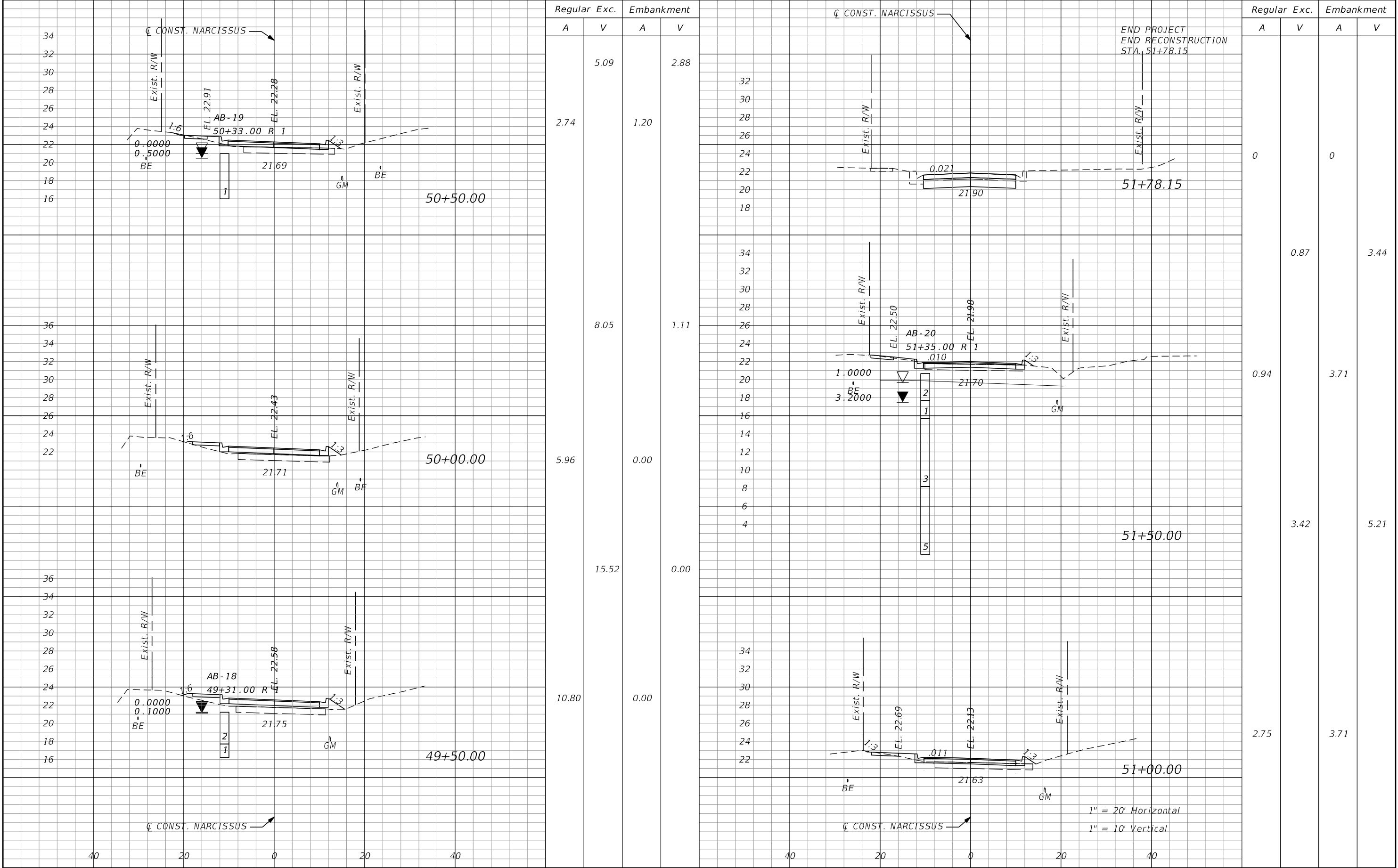
SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT
ENGINEERING DIVISION

NARCISSUS AVE. ROADWAY IMPROVEMENTS

CROSS SECTIONS

31

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REVISIONS				mo ffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION		CROSS SECTIONS	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		NARCISSUS AVE. ROADWAY IMPROVEMENTS			33

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

THE FOLLOWING NARRATIVE OF THE STORMWATER POLLUTION PREVENTION PLAN CONTAINS REFERENCES TO THE STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION, THE DESIGN STANDARDS, AND OTHER SHEETS OF THESE CONSTRUCTION PLANS. THE FIRST SHEET OF THE CONSTRUCTION PLANS (CALLED THE KEY SHEET) CONTAINS AN INDEX TO THE OTHER SHEETS. THE COMPLETE STORMWATER POLLUTION PREVENTION PLAN INCLUDES SEVERAL ITEMS: THIS NARRATIVE DESCRIPTION, THE DOCUMENTS REFERENCED IN THIS NARRATIVE, THE CONTRACTOR'S APPROVED EROSION CONTROL PLAN REQUIRED BY FDOT SPECIFICATION SECTION 104, AND REPORTS OF INSPECTIONS MADE DURING CONSTRUCTION.

I. SITE DESCRIPTION:

(1) NATURE OF CONSTRUCTION ACTIVITY:

i. ROADWAY RECONSTRUCTION, AND DRAINAGE IMPROVEMENTS ALONG NARCISSUS AVE FROM MONROE BOULEVARD TO 500' WEST OF N. CEDAR RD IN SEMINOLE COUNTY.

(2) SEQUENCE OF MAJOR SOIL DISTURBING ACTIVITIES: IN THE SEDIMENT AND EROSION CONTROL PLAN, THE CONTRACTOR SHALL PROVIDE A DETAILED SEQUENCE OF CONSTRUCTION FOR ALL CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL FOLLOW THE SEQUENCE OF MAJOR ACTIVITIES DESCRIBED BELOW, UNLESS THE CONTRACTOR PROPOSES A DIFFERENT SEQUENCE THAT IS EQUAL OR BETTER AT CONTROLLING EROSION AND TRAPPING SEDIMENT AND IS APPROVED BY THE ENGINEER. FOR EACH CONSTRUCTION PHASE, INSTALL PERIMETER CONTROLS AFTER CLEARING AND GRUBBING NECESSARY FOR INSTALLATION OF CONTROLS BUT BEFORE BEGINNING OTHER WORK FOR THE CONSTRUCTION PHASE. REMOVE PERIMETER CONTROLS ONLY AFTER ALL UPSTREAM AREAS ARE STABILIZED.

i. INSTALLATION OF EROSION CONTROL DEVICES

ii. CLEARING AND GRUBBING

iii. CONSTRUCTION OF ROADWAY RECONSTRUCTION, DRAINAGE STRUCTURES, SIDEWALKS, AND MILLING AND RESURFACING

iv. FINAL SOD

(3) GENERAL NOTES

i. ALL EROSION AND SEDIMENT CONTROL DEVICES FOR EACH PHASE OF WORK ARE TO BE INSTALLED PRIOR TO BEGINNING WORK ON THAT PHASE.

ii. INSTALL EROSION AND SEDIMENT CONTROL DEVICES WHERE LISTED IN THE CONTRACTOR'S APPROVED EROSION AND SEDIMENT CONTROL PLAN FOR PERIMETER CONTROLS BEFORE THE LAND IS DISTURBED.

iii. PROVIDE SEDIMENT BARRIERS WHERE LISTED IN THE CONTRACTOR'S APPROVED EROSION AND SEDIMENT CONTROL PLAN FOR DITCH/SWALE CHECK DAMS DURING CONSTRUCTION.

iv. PROVIDE INLET PROTECTION SYSTEMS AT INLET OPENINGS.

v. COVER OR STABILIZE DISTURBED AREAS AS SOON AS POSSIBLE.

vi. DO NOT DISTURB AN AREA UNTIL IT IS NECESSARY FOR CONSTRUCTION TO PROCEED.

vii. TIME CONSTRUCTION ACTIVITIES TO LIMIT IMPACT FROM SEASONAL CLIMATE CHANGES OR WEATHER EVENTS.

viii. DO NOT REMOVE PERIMETER CONTROLS UNTIL ALL UPSTREAM AREAS ARE FULLY STABILIZED AND PERMANENT VEGETATION IS ESTABLISHED.

(4) PROJECT AREAS:

TOTAL SITE AREA: 1.90 ACRES

TOTAL AREA TO BE DISTURBED: 1.89 ACRES

(5) ESTIMATED RUNOFF COEFFICIENTS EXISTING SOIL DATA:

NARCISSUS AVE

ESTIMATED RUNOFF COEFFICIENTS:

BEFORE CONSTRUCTION: 0.70

DURING CONSTRUCTION: 0.70

AFTER CONSTRUCTION: 0.77

(6) DESCRIPTION OF SOIL OR QUALITY OF DISCHARGE: THE PREDOMINANT SOILS ARE POORLY DRAINED FINE SANDS.

(7) ESTIMATED DRAINAGE FLOW DIRECTION AND AVERAGE SLOPE OF DRAINAGE AREA FOR EACH OUTFALL:

i. SITE MAP: THE CONSTRUCTION DRAWINGS WILL SERVE AS THE SITE MAP.

ii. DRAINAGE MAP NARRATIVE: OVERALL DRAINAGE PATTERNS WILL NOT BE ALTERED FROM PRE TO POST CONDITIONS.

1. DESCRIPTION: FLOW IS CAPTURED IN DITCHES AND INLETS, THEN CONVEYED NORTH TO LAKE MONROE.

(8) RECEIVING WATERS/WETLAND AREAS: THERE ARE 2 OUTFALLS

i. DESCRIPTION: CROSS DRAIN DRAINS TO BASS DITCH. LOCATION: LATITUDE 28° 48' 56.6" N, LONGITUDE 81° 19' 21" W. RECEIVING WATER NAME: LAKE MONROE

ii. DESCRIPTION: CROSS DRAIN TO EXISTING STORM SEWER. LOCATION: LATITUDE 28° 48' 56.1" N, LONGITUDE 81° 18' 59" W. RECEIVING WATER NAME: LAKE MONROE

(9) WETLAND AND/OR SURFACE WATER IMPACTS ARE ANTICIPATED TO OCCUR FOR THE PROPOSED IMPROVEMENTS.

(10) DESCRIPTION OF STORMWATER MANAGEMENT (EXISTING/PROPOSED):

i. EXISTING AND PROPOSED DRAINAGE FLOWS ARE TYPICALLY CONVEYED THROUGH STORM SEWER INLETS AND PIPES, ROADSIDE DITCHES, SIDEDRAINS AND CROSS DRAINS ALONG THE PROJECT.

ii. OFF- SITE RUNOFF SHOULD BE DIVERTED AWAY OR THROUGH THE CONSTRUCTION AREA, IF POSSIBLE. THIS ADDITIONAL FLOW, IF NOT DIVERTED, CAN ADD VOLUME AND SIZE TO STRUCTURAL PRACTICES, REQUIRING MORE FREQUENT MAINTENANCE AND LIMITING EFFECTIVENESS OF EROSION AND SEDIMENT CONTROLS.

iii. THE CONTRACTOR WILL PROVIDE POLLUTION CONTROL BY IMPLEMENTING DUST CONTROL DURING ALL PHASES OF CONSTRUCTION. SEDIMENT CONTROL WILL BE ACCOMPLISHED BY USING STREET OR VACUUM SWEEPERS.

iv. STORMWATER RUNOFF SHALL BE CONVEYED TO EITHER TEMPORARY SEDIMENT BASINS, CONTAINMENT SYSTEMS, AND/OR TO PERMANENT STORMWATER MANAGEMENT FACILITIES (TREATMENT AND ATTENUATION PONDS). THE PROPOSED SEDIMENT BASINS, CONTAINMENT SYSTEMS AND/OR STORMWATER MANAGEMENT FACILITIES SHALL BE CONSTRUCTED DURING THE INITIAL PHASE OF CONSTRUCTION AND USED DURING CONSTRUCTION OF THE ROADWAY. THE OUTFALL STRUCTURES ARE TO BE PLUGGED WHEN TEMPORARY SEDIMENT BASINS, CONTAINMENT SYSTEMS OR PERMANENT STORMWATER MANAGEMENT FACILITIES ARE USED FOR EROSION AND SEDIMENT CONTROL.

v. THE CONTRACTOR SHALL TAKE ALL REASONABLE PRECAUTIONS TO PREVENT UNAUTHORIZED MATERIALS FROM ENTERING WETLANDS, WATERWAYS, OTHER SURFACE WATERS OR WATERS OF THE U.S.

II. CONTROLS: SEDIMENT AND EROSION CONTROLS

(1) WATER QUALITY MONITORING:

i. WATER QUALITY MONITORING SHALL BE CONDUCTED IN ACCORDANCE WITH THE SPECIAL CONDITIONS OF ANY ENVIRONMENTAL PERMIT OR BY THE CONTRACTOR UPON THE OBSERVATION THAT WATER QUALITY STANDARDS MAY BE VIOLATED BY THE CONTRACTOR'S ACTIVITIES. MONITORING LOCATIONS MAY BE SPECIFIED IN THE ENVIRONMENTAL PERMIT OR MAY BE DESIGNATED BY THE CONTRACTOR AND APPROVED BY THE PROJECT ADMINISTRATOR.

ii. THE PROJECT ADMINISTRATOR WILL BE RESPONSIBLE FOR MONITORING ANY ACTIVITIES FOR VIOLATION OF WATER QUALITY STANDARDS AS THEY RELATE TO TURBIDITY. NO GREATER THAN 29 NEPHELOMETRIC TURBIDITY UNITS (NTU) ABOVE BACKGROUND OR GREATER THAN 0 NTU ABOVE BACKGROUND FOR DIRECT DISCHARGES TO OFW'S.

iii. IF WATER QUALITY STANDARDS ARE VIOLATED, CONSTRUCTION SHALL BE STOPPED IMMEDIATELY, THE ENVIRONMENTAL PERMIT CONDITIONS FOLLOWED AND EROSION AND SEDIMENT CONTROL DEVICES REEVALUATED AND APPROVED BY THE ENGINEER PRIOR TO ANY CONTINUATION OF ACTIVITY. MONITORING ACTIVITIES AND TURBIDITY READINGS SHALL BE RECORDED ON THE CONSTRUCTION INSPECTION REPORT AND CONTINUED UNTIL TURBIDITY READINGS FALL BELOW AN ACCEPTABLE LEVEL (LESS THAN 29 NTU ABOVE BACKGROUND OR LESS THAN 0 NTU ABOVE BACKGROUND FOR DIRECT DISCHARGES TO OFW'S.

iv. WATER QUALITY MONITORING MAY BE CONDUCTED DURING ANY PHASE OF CONSTRUCTION AS DIRECTED BY THE PROJECT ENGINEER.

(2) STABILIZATION PRACTICES:

i. STABILIZATION MEASURES SHALL INCLUDE, BUT NOT BE LIMITED TO MAINTAINING, ESTABLISHING AND USING VEGETATION, APPLYING MULCHES, SODDING, SEEDING BEST MANAGEMENT PRACTICES (BMP) AND THE USE OF ROLLED EROSION CONTROL PRODUCTS. WHEN CONSTRUCTION ACTIVITIES HAVE TEMPORARILY OR PERMANENTLY CEASED, SIDE SLOPES SHALL BE STABILIZED WITH PERFORMANCE SODDING OR SEEDING OR ANY OTHER APPROVED METHOD OF STABILIZATION INCLUDED IN THE STATE OF FLORIDA EROSION AND SEDIMENT CONTROL DESIGNER AND REVIEW MANUAL (E&SC MANUAL).

ii. STABILIZATION SHALL TAKE PLACE AS SOON AS PRACTICAL IN PORTIONS OF THE PROJECT WHERE CONSTRUCTION ACTIVITIES HAVE CEASED, BUT NO LATER THAN 7 DAYS AFTER ANY CONSTRUCTION ACTIVITY CEASES EITHER TEMPORARILY OR PERMANENTLY.

iii. ALL EROSION CONTROL DEVICES SHALL BE INSTALLED ACCORDING TO THE CONTRACT DOCUMENTS AND THE CONTRACTOR'S APPROVED EROSION CONTROL PLAN.

iv. ANY TEMPORARY MATERIAL USED FOR POLLUTION OR EROSION AND SEDIMENT CONTROL DURING CONSTRUCTION SHALL BE REMOVED AT THE COMPLETION OF THE PROJECT AND FINAL STABILIZATION OF THE PROJECT HAS BEEN ACHIEVED.

v. SEDIMENT BARRIERS SHOULD BE USED ALONG THE LENGTH OF THE PROJECT WHERE THE GROUND SLOPES AWAY FROM THE RIGHT OF WAY OR WHERE THERE IS POTENTIAL FOR SEDIMENT TO BE DIRECTED OFF- SITE. PARTICULAR CARE SHOULD BE USED WHEN THERE IS POTENTIAL FOR SEDIMENT TO BE DIRECTED OFF- SITE. PARTICULAR CARE SHOULD BE USED WHEN THERE ARE WETLANDS OR WATERS OF THE U.S. ARE INVOLVED. SEDIMENT BARRIERS SHOULD BE USED AROUND THE PERIMETER OF STOCKPILE AREAS.

vi. SPACING OF SEDIMENT BARRIERS USED AS DITCH OR SWALE CHECKS/DAMS SHOULD BE BASED UPON THE HEIGHT OF THE BARRIER AND THE SLOPE OF THE DITCH OR SWALE.

vii. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MODIFYING SOIL TRACKING PREVENTION SYSTEMS OR PROCEDURES AS NEEDED.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

moffatt & nichol

ENGINEER OF RECORD:
JAMES BLACKFORD, P.E.
FL REGISTRATION NO. 72980

SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT

ENGINEERING DIVISION

NARCISSUS AVE. ROADWAY IMPROVEMENTS

STORMWATER POLLUTION

PREVENTION PLAN

SHEET NO.

34

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- ### (3) STRUCTURAL PRACTICES FOR EROSION AND SEDIMENT CONTROL

- i. **ROLLED EROSION CONTROL PRODUCTS (ARTIFICIAL COVERINGS)**
PURPOSE: TO PROTECT DISTURBED SLOPE SURFACES AGAINST EROSION DUE TO RAINFALL OR FLOWING WATER.
 - 1. USED FOR PAUSES IN CONSTRUCTION DUE TO INCLEMENT WEATHER OR OTHER CIRCUMSTANCES.
 - 2. USED FOR EROSION CONTROL THAT FACILITATES PLANT GROWTH WHILE PERMANENT GRASS IS ESTABLISHED COULD INCLUDE BIODEGRADABLE EROSION CONTROL BLANKETS INSTALLED ON A SEEDED AREA, ON FILL SLOPES OR DITCHES.
 - 3. USED TO STABILIZE DRAINAGE CHANNELS. CONSULT E&SC MANUAL TO DETERMINE CORRECT PRODUCT TYPE FOR CHANNEL STABILIZATION.
- ii. **RUNOFF CONTROL STRUCTURE (TEMPORARY SLOPE DRAIN)**
PURPOSE: TO PROTECT HILLSIDE SURFACES AGAINST EROSION DUE TO CONCENTRATED FLOW OF RUNOFF WATER.
 - 1. USED ON FILL SLOPES AND CUT SLOPES TO REDUCE SEDIMENT TRANSPORT AND COULD INCLUDE TEMPORARY SLOPE DRAINS, GRASS-LINED CHANNELS, ROCK-LINED CHANNELS AND CHECK DAMS.
 - 2. RUNOFF CONTROL STRUCTURES TYPICALLY DISCHARGE TO A SEDIMENT BASIN.
- iii. **SEDIMENT BASIN (CONTAINMENT SYSTEM)** PURPOSE: A CONTAINMENT SYSTEM IS DESIGNED TO DETAIN AN ADEQUATE VOLUME OF RUNOFF, REDUCE THE VELOCITY OF FLOW THROUGH THE SYSTEM, ALLOW FOR SETTLEMENT OF SUSPENDED SOLIDS AND REGULATE THE DISCHARGE RATE FROM THE SEDIMENT BASIN.
 - 1. SEDIMENT BASINS MUST BE PLACED IN STRATEGIC LOCATIONS WITHIN THE ACTIVE AREAS OF CONSTRUCTION. CONTRIBUTING AREA AND SIZE OF TARGET SOIL PARTICLE WILL DICTATE WHETHER THE SEDIMENT BASIN WILL BE TYPE 1, TYPE 2 OR TYPE 3 SYSTEM.
 - 2. THE USE OF SMALLER PRE-SEDIMENTATION BASINS USED IN CONJUNCTION WITH LARGER PERMANENT RETENTION/DETENTION PONDS ARE EFFECTIVE IN CAPTURING LARGER VOLUMES OF SEDIMENTS. THIS TECHNIQUE REQUIRES PERIODICALLY SCHEDULED REMOVAL OF THE ACCUMULATED SEDIMENTS.
- iv. **SEDIMENT BARRIERS (TEMPORARY CONSTRUCTION SITE BMP)**
PURPOSE: SEDIMENT BARRIERS EITHER OBSTRUCT FLOW OR PREVENT THE PASSAGE OF WATER WHILE CONSTRUCTION ACTIVITIES OCCUR. SMALLER SEDIMENT BARRIERS MAY FUNCTION AS A SMALL SEDIMENT CONTAINMENT SYSTEM OR AS A METHOD TO REDUCE FLOW VELOCITY.
 - 1. THESE CONSTRUCTION BMP'S CAN INCLUDE SYNTHETIC BALES, STAKED SILT FENCE, TURBIDITY BARRIER, STORM SEWER INLET BARRIERS, ROCK BARRIERS, GEOSYNTHETIC BARRIERS, ETC.
 - 2. APPROPRIATE LOCATIONS INCLUDE SITE PERIMETER, BELOW DISTURBED AREAS SUBJECT TO SHEET AND RILL EROSION, BELOW THE TOE OF EXPOSED AND ERODIBLE SLOPES, ALONG THE TOE OF STREAM AND CHANNEL BANKS, AROUND DRAINS AND INLETS LOCATED IN LOW POINTS OR THE DOWNSTREAM EDGE OF AREAS UNDERGOING VERTICAL OR BOX CULVERT CONSTRUCTION ACTIVITIES.
 - 3. INAPPROPRIATE LOCATIONS FOR THESE SAME MEASURES INCLUDE PARALLEL TO A HILLSIDE CONTOUR, IN CHANNELS WITH CONCENTRATED FLOW (UNLESS PROPERLY REINFORCED), UPSTREAM OR DOWNSTREAM OF CULVERTS WITH CONCENTRATED FLOW, IN FRONT OF OR AROUND INLETS ON A GRADE WITH CONCENTRATED FLOW, IN FRONT OF OR AROUND INLETS ON A GRADE WITH CONCENTRATED FLOW OR IN FLOWING STREAMS.
- v. **FLOATING TURBIDITY BARRIER** PURPOSE: USED IN PERMANENT BODIES OF WATER TO RETAIN SEDIMENT AND FLOATING DEBRIS FROM A CONSTRUCTION AREA SO THAT REMOVAL OR CONTAINMENT OF THE MATERIAL IS POSSIBLE. THEY ARE ALSO USED TO CONTROL MIGRATION OF SUSPENDED SEDIMENTS.

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| | <ol style="list-style-type: none"> 1. TYPE I, LIGHT DUTY, IS USED WHERE THERE IS LITTLE OR NO CURRENT, NO WIND AND NO WAVE ACTION. 2. TYPE II, MODERATE DUTY IS USED WITH SOME CURRENT (3.5 PER SECOND) AND SOME EXPOSURE TO WIND. 3. TYPE III, HEAVY DUTY, IS USED WITH GREATER CURRENT (3.5- 5.0 FT. PER SECOND) MODERATE WIND AND WAVE ACTION. 4. BARRIER MUST BE ATTACHED AT BOTH ENDS AND WEIGHTED ON THE BOTTOM. 5. MULTIPLE LINES OF BARRIER MAY BE USED IN SOME CIRCUMSTANCES FOR ADDITIONAL PROTECTION. 6. STANDARD PANELS FOR WATER DEPTHS ARE 5.0'. ADDITIONAL PANELS CAN BE USED FOR WATER DEPTHS > 5.0'. <p>ii. STAKED TURBIDITY BARRIER PURPOSE: THIS ITEM IS COMMONLY USED IN AREAS WHERE CONTINUOUS CONSTRUCTION ACTIVITIES CHANGE THE NATURAL CONTOURS AND DRAINAGE RUNOFF PATTERNS.</p> <ol style="list-style-type: none"> 1. COMMONLY USED IN LAKES AND STREAMS AS A SEDIMENT CONTAINMENT SYSTEM. SHOULD NOT BE USED WHERE WATER CURRENTS MOVE THE CURTAIN AND DISLODGE COLLECTED SEDIMENTS. 2. MAXIMUM DEPTH OF PANEL IS 3' 8". 3. POST MUST BE A MINIMUM LENGTH OF 5.0' AND A MINIMUM OF 10" OF FABRIC MUST BE EMBEDDED IN THE GROUND. <p>iii. INLET PROTECTION SYSTEM PURPOSE: ANY NUMBER OF SEDIMENT BARRIERS THAT EITHER PREVENT SEDIMENT FROM ENTERING AN INLET OR TRAP THE SEDIMENTS ONCE THEY ENTER THE INLET.</p> <ol style="list-style-type: none"> 1. TYPICAL APPLICATIONS INCLUDE ROCK BARRIERS, FRAME AND FILTER BARRIERS, CURB INLET "SUMP" BARRIER, CURB INLET DIVERSION BERM, CURB AND GUTTER SEDIMENT CONTAINMENT SYSTEM OR CURB INLET SUMP. 2. SHOULD BE INSTALLED ONLY WHEN CONSTRUCTION ACTIVITIES ARE ONGOING AND ONLY WHERE SUMP CONDITIONS EXIST. 3. SHOULD NOT BE USED WHEN CONSTRUCTION IS COMPLETE AND SHOULD NOT BE USED IN AREAS WHERE FLOODING COULD ENCROACH INTO THE TRAVEL LANES. <p>iv. SOIL TRACKING PREVENTION DEVICE PURPOSE: TEMPORARY STRUCTURES TO ASSIST WITH THE REMOVAL OF SOIL MATERIAL CAPTURED ON VEHICLE TIRES BEFORE THE VEHICLES ENTER THE ROADWAY.</p> <ol style="list-style-type: none"> 1. USE ONE DEVICE PER MILE WITH A MINIMUM OF TWO PER PROJECT. 2. USE ADDITIONAL DEVICES FOR CONSTRUCTION AREAS THAT ARE NOT ADJACENT TO THE ROAD RIGHT OF WAY AND NO ACCESS IS PROVIDED THROUGH A SOIL TRACKING PREVENTION DEVICE. 3. RRR PROJECTS SHOULD BE HANDLED ON A CASE BY CASE BASIS. <p>4. CHEMICAL TREATMENTS FOR EROSION AND SEDIMENT CONTROL.</p> <p>i. CHEMICAL TREATMENT POLYACRYLAMIDES (PAM AND PAM BLENDS) PURPOSE: REDUCE SOIL EROSION THROUGH SOIL BINDING, USED AS A WATER TREATMENT ADDITIVE TO REMOVE SUSPENDED SOLIDS FROM RUNOFF, PROVIDES APPROPRIATE MEDIUM FOR GROWTH OF VEGETATION FOR STABILIZATION AND INCREASES INFILTRATION BY INCREASING SIZE OF SOIL PARTICLE.</p> <ol style="list-style-type: none"> (1) CAN BE USED ON DISTURBED SOILS. CAN BE USED IN CONJUNCTION WITH OTHER BMP'S TO ENHANCE PERFORMANCE. CAN BE APPLIED IN DISSOLVED FORM WITH WATER, CAN BE USED AS A DRY POWDER, CAN BE USED IN GRANULAR FORM OR MAY BE USED IN THE FORM OF FLOC LOGS. (2) HIGHER CONCENTRATION OF PAM DOES NOT INCREASE THE EFFECTIVENESS OF THE PRODUCT. (3) ACTIVELY WORKED AREAS WILL REQUIRE REAPPLICATION TO REMAIN EFFECTIVE. (4) PAM SHOULD NOT BE USED WHERE THERE IS A POTENTIAL FOR EQUIPMENT CLOGGING OR TOXICITY IS A CONCERN. | <p>SEMINOLE COUNTY PUBLIC WORKS
ENGINEERING</p> <p>NARCISSUS AVE. ROAD</p> |
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- ii. *CHEMICAL TREATMENT ALUM PURPOSE: REMOVE SUSPENDED SOLIDS AND POLLUTANTS BY ENMESHMENT AND ABSORPTION INTO ALUM. COLLECT FLOCS OF SUSPENDED SEDIMENTS IN RUNOFF AND STORE THEM IN SEDIMENT BASINS OR STORMWATER MANAGEMENT FACILITIES.*
 - (1) *ALUM IS INJECTED INTO THE FLOW STREAM CONTAINING TURBID WATER. INJECTION IS CONTROLLED BY VARIABLE SPEED CHEMICAL PUMP TO FEED ALUM AT MULTIPLE TREATMENT POINTS. ALUM TREATMENT IS EFFECTIVE IN TREATMENT OF RUNOFF THAT CONTAINS LIMEROCK FROM UNPAVED SURFACES.*
 - (2) *ALUM TREATMENT REQUIRES CLOSE MONITORING OF DOSAGE COMBINATION WITH OTHER COMPOUNDS MAY VIOLATE TOXICITY REQUIREMENTS AND THE USE OF ALUM MAY LOWER PH LEVELS.*
 5. *DEWATERING OPERATION (OPTIONAL BASED ON PROJECT APPLICABILITY) DESCRIPTION: DEWATERING OPERATIONS ARE PRACTICES THAT MANAGE THE DISCHARGE OF TURBID WATER WHEN WATERS OTHER THAN STORMWATER AND ACCUMULATED SURFACE WATERS MUST BE REMOVED FROM A LOCATION SO THAT CONSTRUCTION WORK MAY BE ACCOMPLISHED. THESE WATERS CAN INCLUDE GROUNDWATER, WATER FROM COFFERDAMS, WATER DIVERSIONS AND WATER USED DURING CONSTRUCTION THAT MUST BE REMOVED FROM A WORK AREA.*
 - i. *ENVIRONMENTAL AGENCIES ARE ESPECIALLY CONCERNED WITH THE PROTECTION OF WETLANDS FROM DRAW DOWN EFFECTS, PROTECTING RECEIVING BODIES FROM SEDIMENTATION AND POSSIBLE CAPACITY LIMITATIONS.*
 - ii. *THREE PRIMARY METHODS OF DEWATERING COMMONLY USED IN FLORIDA ARE RIM-DITCHING, SOCK/PIPE/HORIZONTAL CELLS AND WELL-POINT SYSTEMS.*
 - iii. *METHODS FOR CONTAINING SEDIMENTATION CAN INCLUDE A COMBINATION OF BMP'S AND SEDIMENT TRAPS, SEDIMENT BASINS, GRAVITY BAG FILTERS, WEIR TANKS, DEWATERING TANKS, SAND MEDIA/PRESSURIZED BAGS AND CHEMICAL TREATMENTS.*

III. *OTHER CONTROLS:*

 - (1) *WASTE DISPOSAL:*
 - i. *THE CONTRACTOR WILL PROVIDE LITTER CONTROL AND COLLECTION WITHIN THE PROJECT BOUNDARIES DURING CONSTRUCTION ACTIVITIES.*
 - ii. *ALL FERTILIZER AND CHEMICAL CONTAINERS SHALL BE DISPOSED OF BY THE CONTRACTOR ACCORDING TO EPA'S STANDARD PRACTICES AS DETAILED BY THE MANUFACTURER.*
 - iii. *NO SOLID MATERIALS, INCLUDING BUILDING AND CONSTRUCTION MATERIALS, SHALL BE DISCHARGED TO WETLANDS OR BURIED ON SITE.*
 - iv. *ALL SANITARY WASTE WILL BE COLLECTED FROM PORTABLE UNITS BY A LICENSED SANITARY WASTE MANAGEMENT CONTRACTOR AS REQUIRED BY STATE REGULATIONS.*
 - (6) *OFF-SITE VEHICLE TRACKING WILL BE CONTROLLED BY THE FOLLOWING METHODS:*
 - i. *LOADED HAUL TRUCKS ARE TO BE COVERED BY A TARPULIN AT ALL TIMES.*
 - ii. *EXCESS DIRT ON ROAD WILL BE REMOVED DAILY.*
 - (7) *STATE AND FEDERAL REGULATIONS: THIS PROJECT IS ANTICIPATED TO QUALIFY FOR A SJRWMD PERMIT EXEMPTION.*
 - (a) *CONSTRUCTION GENERIC*
 - (b) *FDEP STATE 404*
 - (8) *NON-STORMWATER (INCLUDING SPILL REPORTING) THE CONTRACTOR WILL PROVIDE THE COUNTY WITH AN EROSION AND SEDIMENT CONTROL PLAN THAT WILL INCLUDE SPILL CONTAINMENT, REPORTING, AND RESPONSES. THE PLAN SHALL SPECIFY WHAT MANAGEMENT PRACTICES AND CONTAINMENT METHODS WILL BE USED TO PREVENT POTENTIAL POLLUTANTS (FUEL, LUBRICANTS, HERBICIDES, ETC.) FROM SPILLING ONTO THE SOIL OR INTO THE SURFACE WATERS. IF A SPILL DOES OCCUR, OR IF CONTAMINATED SOIL OR GROUNDWATER IS ENCOUNTERED, THE COUNTY SHALL BE NOTIFIED IMMEDIATELY.*

REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	STORMWATER POLLUTION PREVENTION PLAN	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION				
					NARCISSUS AVE. ROADWAY IMPROVEMENTS		35

IV. MAINTENANCE:

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND REPAIRS OF ALL EROSION AND SEDIMENT CONTROL DEVICES THROUGHOUT THE DURATION OF CONSTRUCTION ACTIVITES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE REMOVAL AND PROPER DISPOSAL OF SEDIMENT BUILDUP THROUGH THE LIFE OF THE INSTALLED EROSION AND SEDIMENT CONTROL DEVICES.

- (1) ALL CONTROL MEASURES WILL BE MAINTAINED DAILY BY THE CONTRACTOR AND ALL MEASURES WILL BE MAINTAINED IN GOOD WORKING ORDER. ANY DAMAGES TO SEDIMENT AND EROSION CONTROL ITEMS WILL BE CORRECTED IMMEDIATELY.
- (2) SODDING WILL BE INSPECTED FOR BARE SPOTS, WASHOUTS, AND HEALTHY GROWTH.
- (3) SYNTHETIC BALES SHALL BE MAINTAINED TO ENSURE THEIR USEFULNESS AND NOT BLOCK OR IMPEDE STORMWATER FLOW OR DRAINAGE.
- (4) STABILIZED CONSTRUCTION ENTRANCES SHALL BE MAINTAINED TO PREVENT CLOGGING OF ROCK BEDDING WHICH MAY IMPEDE THE USEFULNESS OF THE STRUCTURE.

V. INSPECTION:

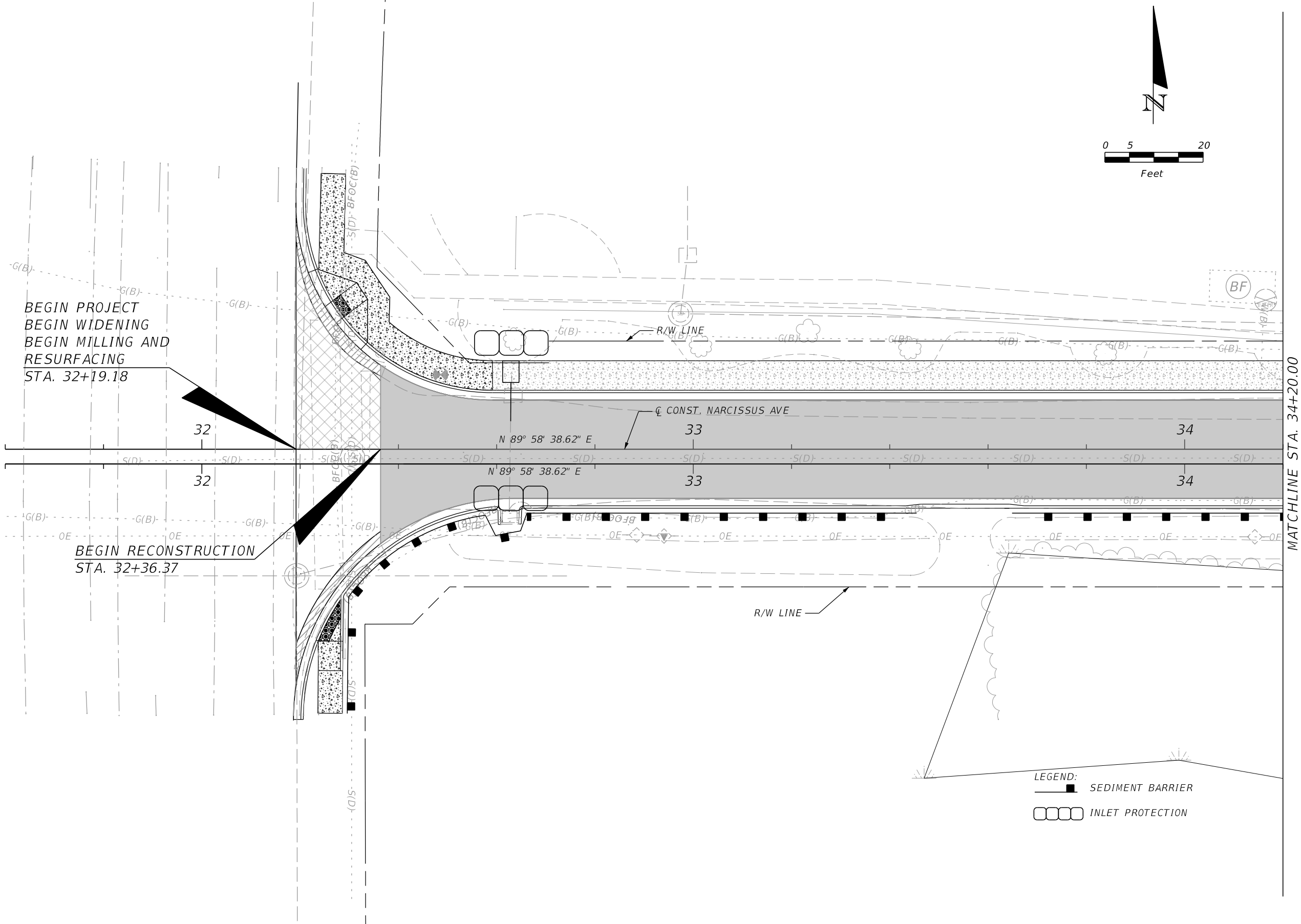
- (1) THE CONTRACTOR SHALL INSTALL AND MAINTAIN RAIN GAUGES ON THE PROJECT SITE AND RECORD DAILY RAINFALL IN ACCORDANCE WITH THE NPDES PERMIT.
- (2) ALL EROSION AND SEDIMENT CONTROL MEASURES WILL BE INSPECTED WEEKLY BY CONTRACTOR'S PERSONNEL WHO ARE FDEP CERTIFIED STORMWATER MANAGEMENT INSPECTORS.
- (3) THE CONTRACTOR SHALL COMPLETE ALL SWPPP INSPECTION REPORT FORMS REQUIRED FOR THE NPDES PERMIT.
- (4) ALL EROSION AND CONTROL DEVICES WILL BE INSPECTED WITHIN 24 HOURS OF A RAINFALL EVENT THAT IS 0.5 INCHES OR GREATER.

VI. TRACKING AND REPORTING:

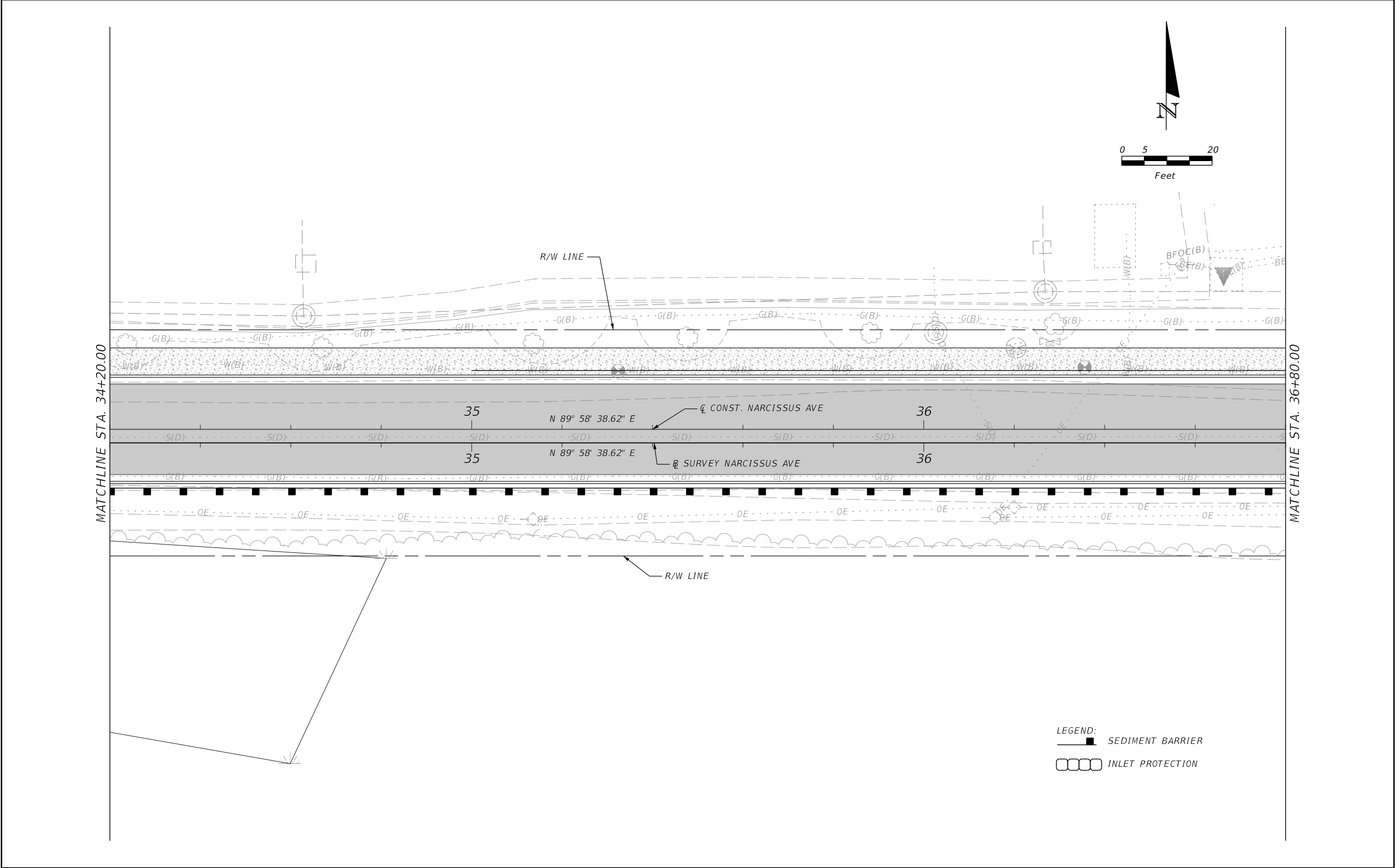
- (1) THE CONTRACTOR SHALL SUBMIT A WEEKLY REPORT TO THE COUNTY DOCUMENTING THE DAILY INSPECTIONS AND MAINTENANCE OR REPAIRS TO THE EROSION AND SEDIMENT CONTROL DEVICES. THE CONTRACTOR SHALL MAINTAIN ALL REQUIRED REPORTS AND COMPLETE ALL SWPPP INSPECTION FORMS.
- (2) PREPARATION OF ALL THE CONTRACTOR'S REPORTS OF INSPECTION, MAINTENANCE AND REPAIRS REQUIRED FOR THE CONTROL AND ABATEMENT OF EROSION AND WATER POLLUTION SHALL BE INCLUDED IN THE INDIVIDUAL COSTS OF THE EROSION AND SEDIMENT CONTROL DEVICES OR LUMP SUM COST OF THE PROJECT.
- (3) THE CONTRACTOR SHALL USE THE SWPPP CONSTRUCTION INSPECTION REPORT FORM #650-040-03 FOR DAILY INSPECTIONS.

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DATE	DESCRIPTION	DATE	DESCRIPTION		NARCISSUS AVE. ROADWAY IMPROVEMENTS		36

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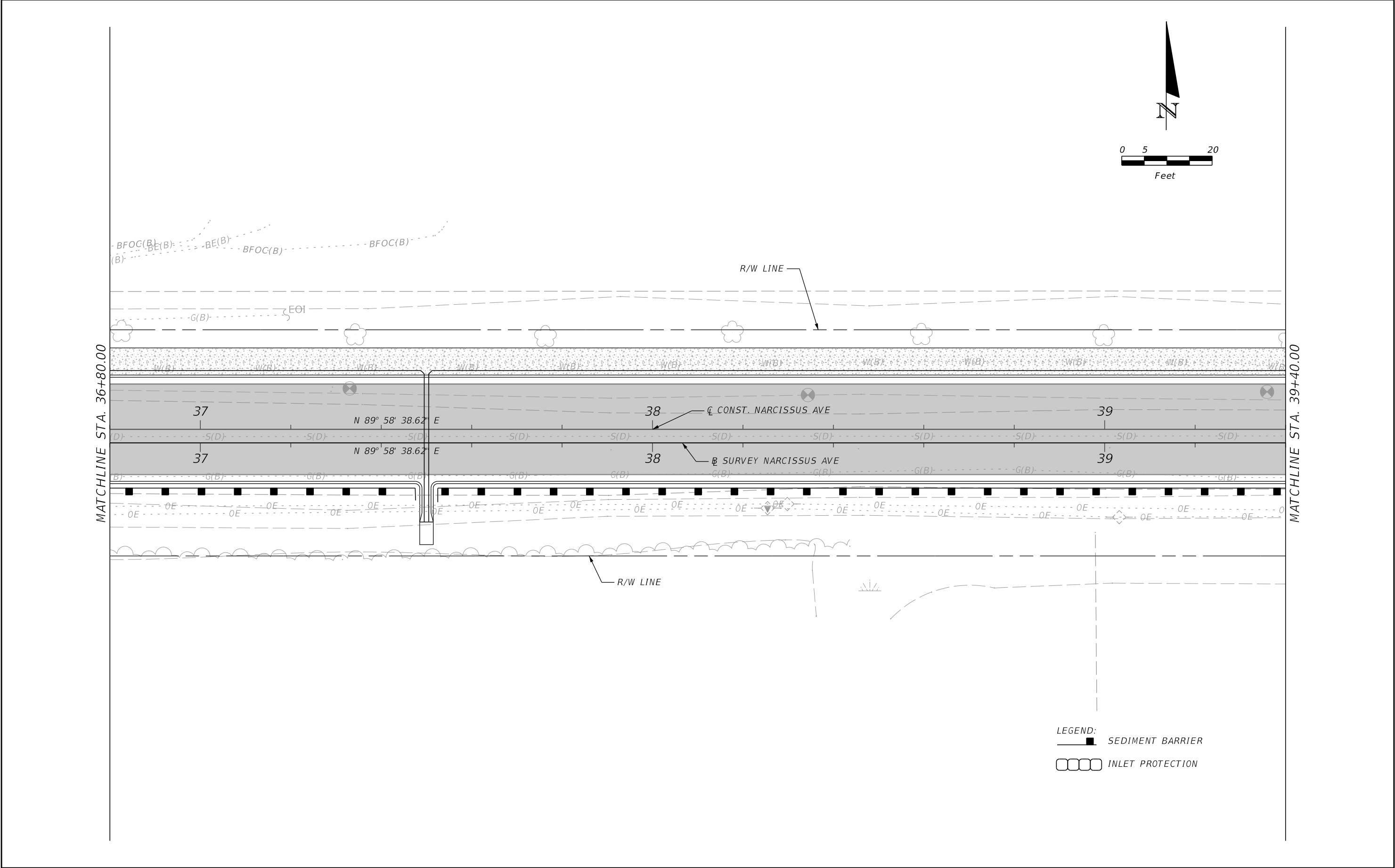


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DATE	DESCRIPTION	DATE	DESCRIPTION				



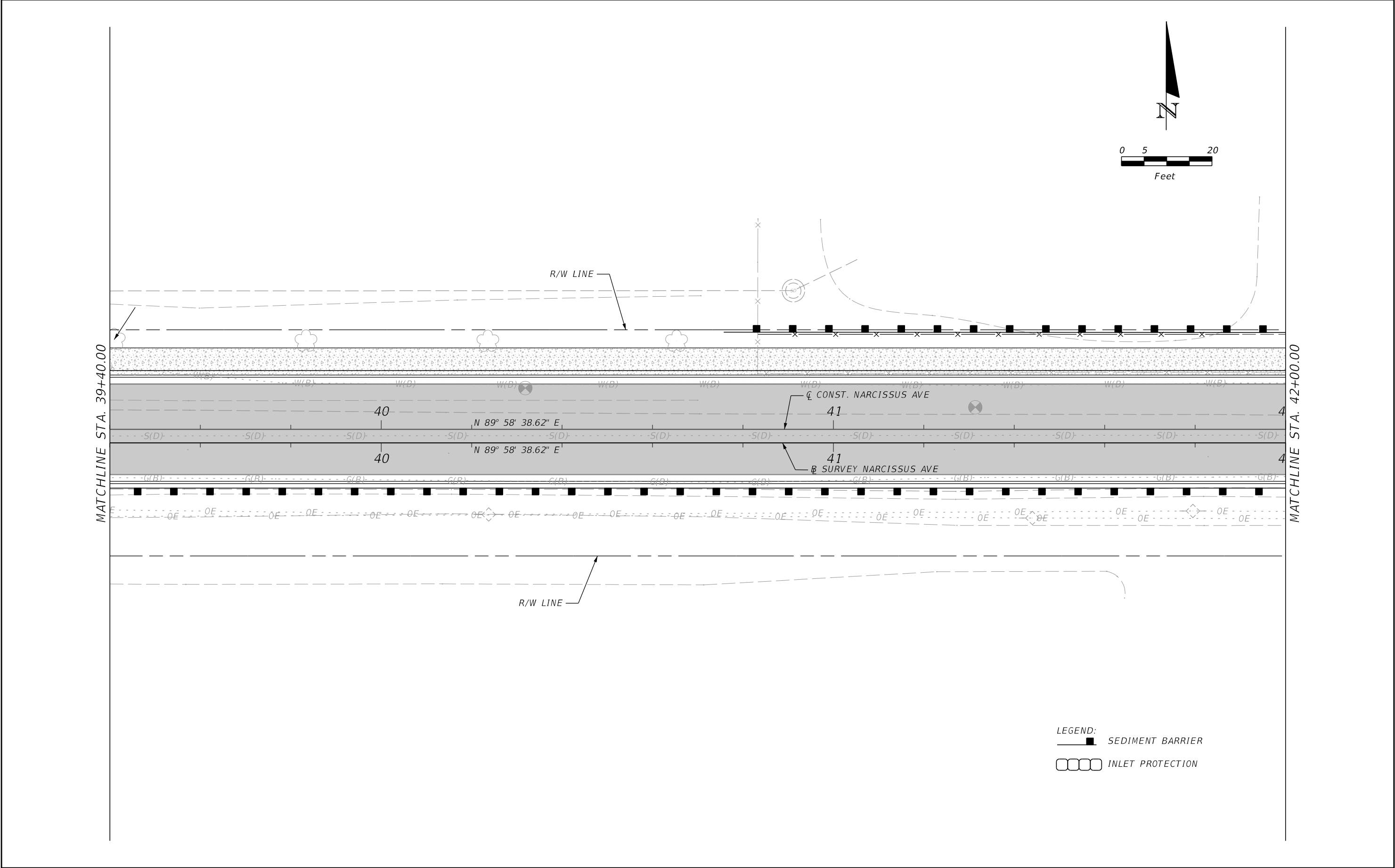
REVISIONS				 moffatt & nichol ENGINEER OF RECORD: ADAM K. CROUCH, P.E. FL REGISTRATION NO. 73036	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	EROSION CONTROL PLAN (2)	SHEET NO. 38
DATE	DESCRIPTION	DATE	DESCRIPTION				

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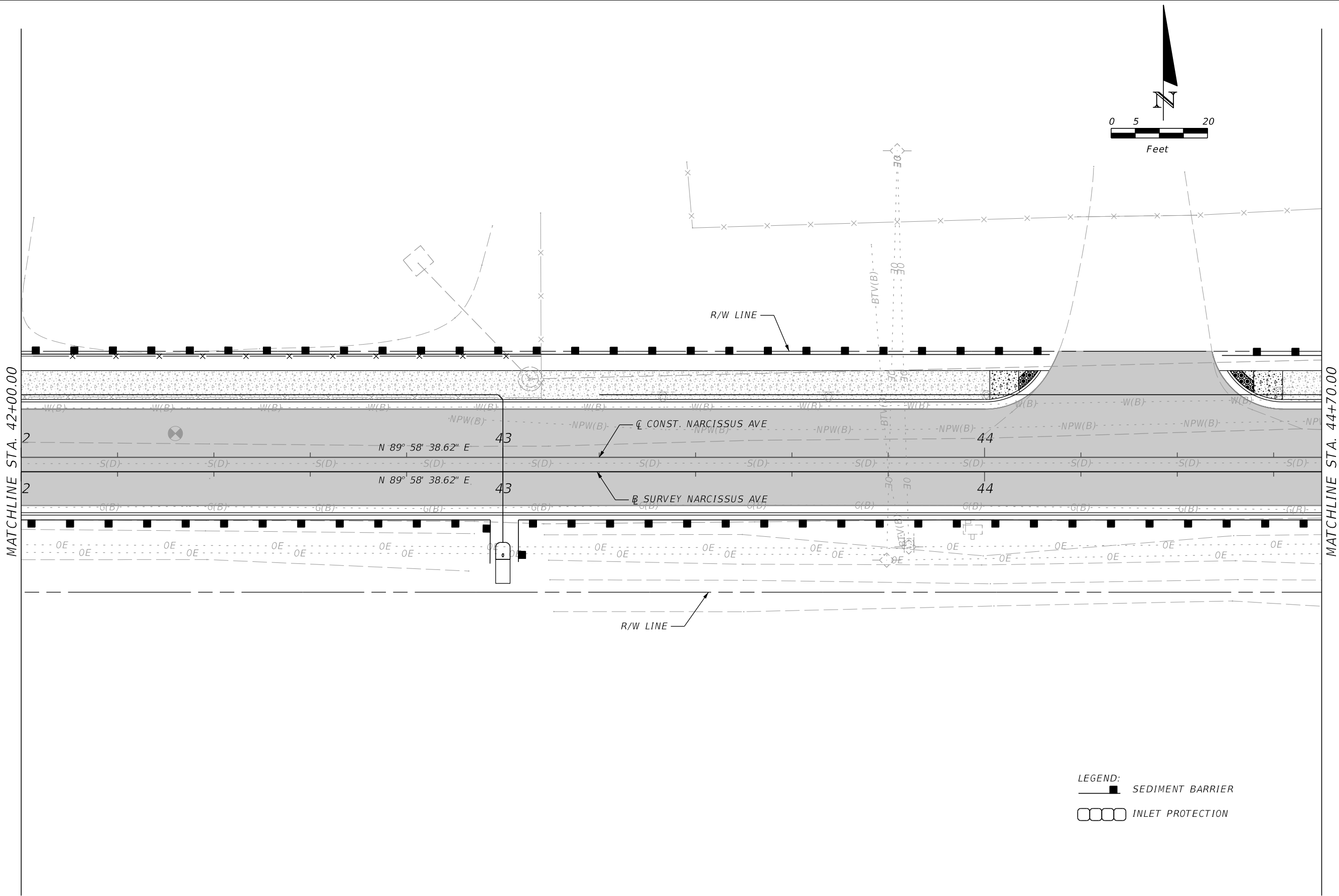
REVISIONS				 moffatt & nichol ENGINEER OF RECORD: ADAM K. CROUCH, P.E. FL REGISTRATION NO. 73036	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	EROSION CONTROL PLAN (3)	SHEET NO. 39
DATE	DESCRIPTION	DATE	DESCRIPTION				

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REVISIONS				 moffatt & nichol ENGINEER OF RECORD: ADAM K. CROUCH, P.E. FL REGISTRATION NO. 73036	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	EROSION CONTROL PLAN (4)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION				
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THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

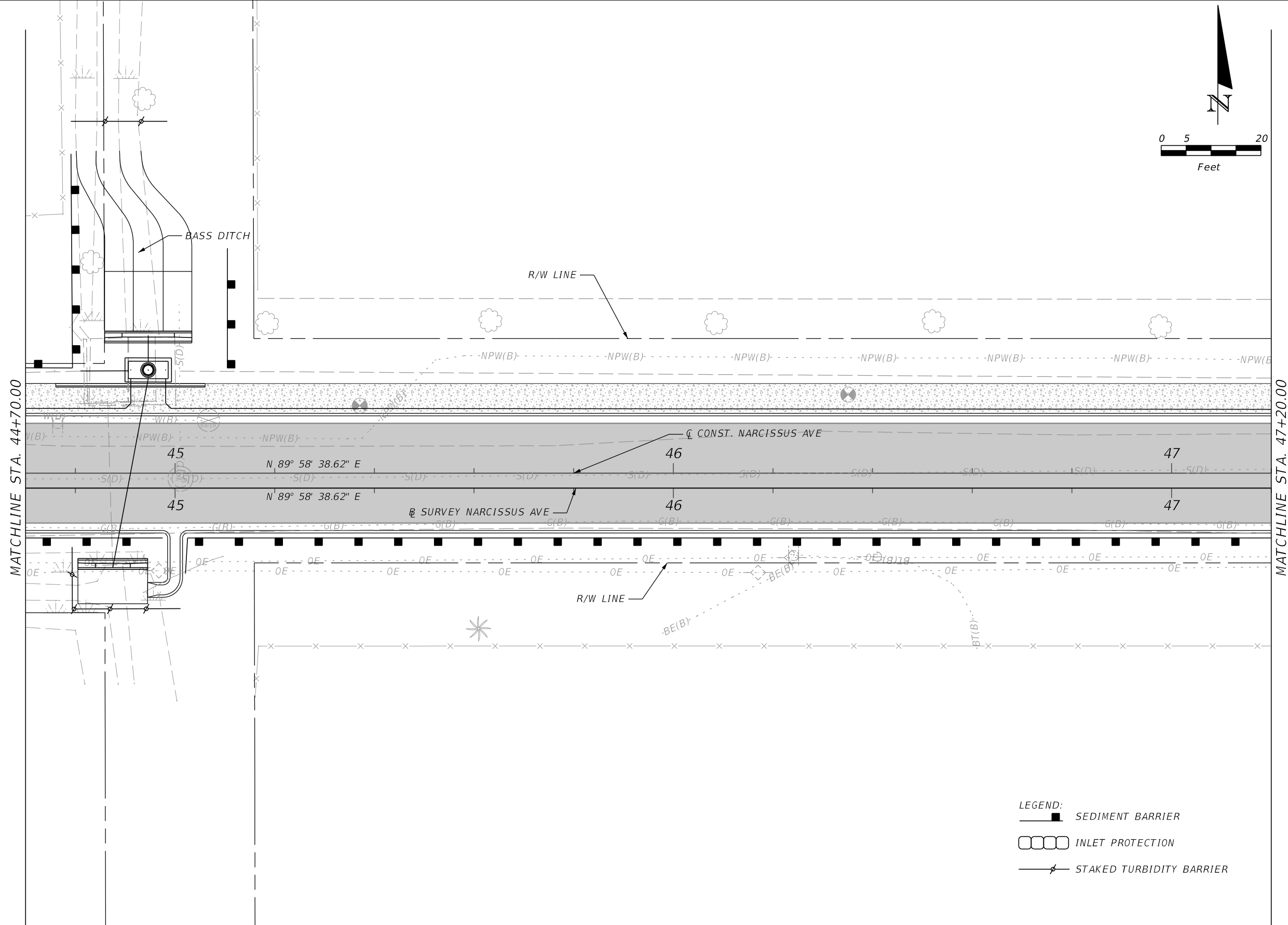


LEGEND:

 SEDIMENT BARRIER

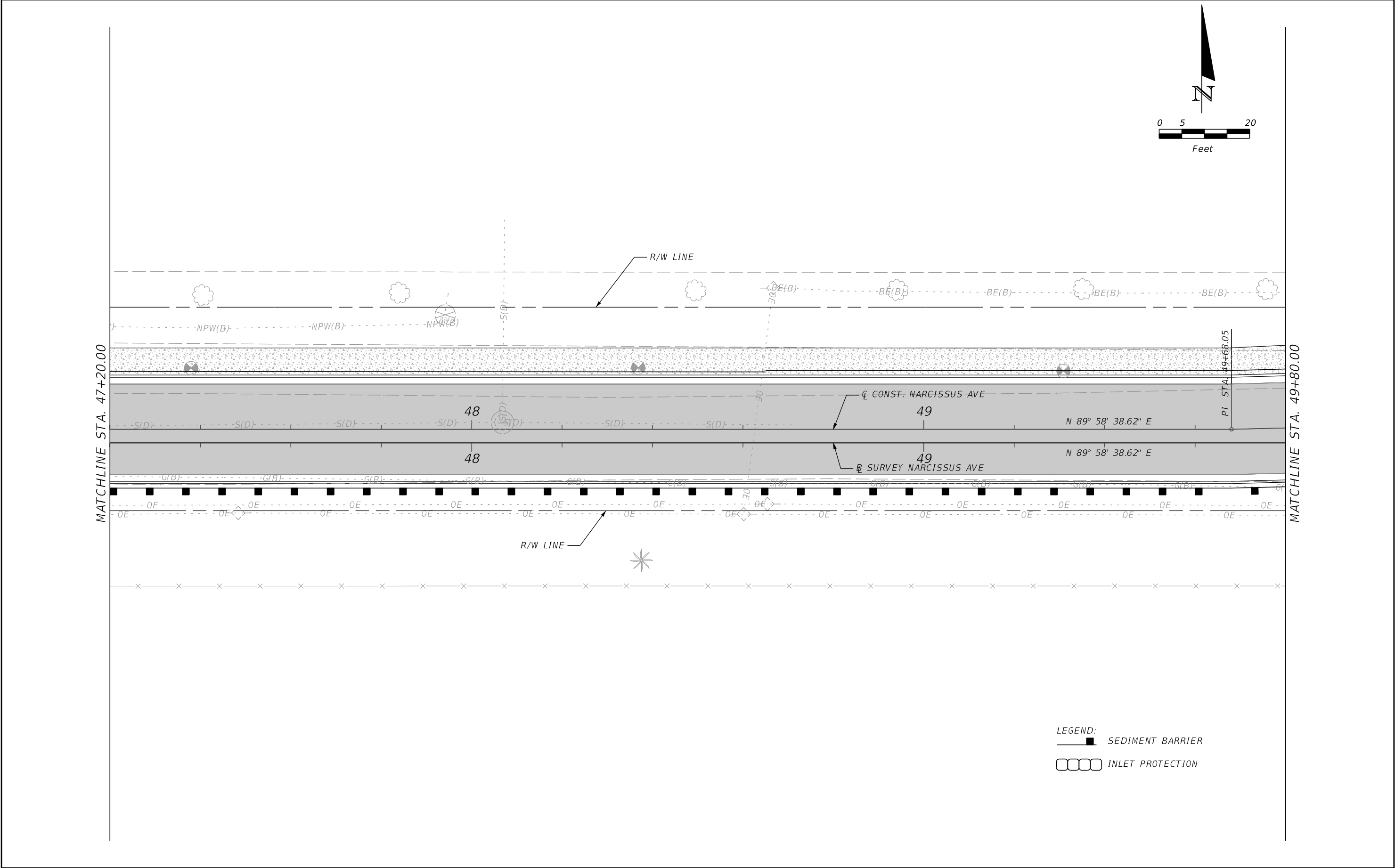
 INLET PROTECTION

REVISIONS				 moffatt & nichol ENGINEER OF RECORD: ADAM K. CROUCH, P.E. FL REGISTRATION NO. 73036	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	EROSION CONTROL PLAN (5)		SHEET NO. 41
DATE	DESCRIPTION	DATE	DESCRIPTION					



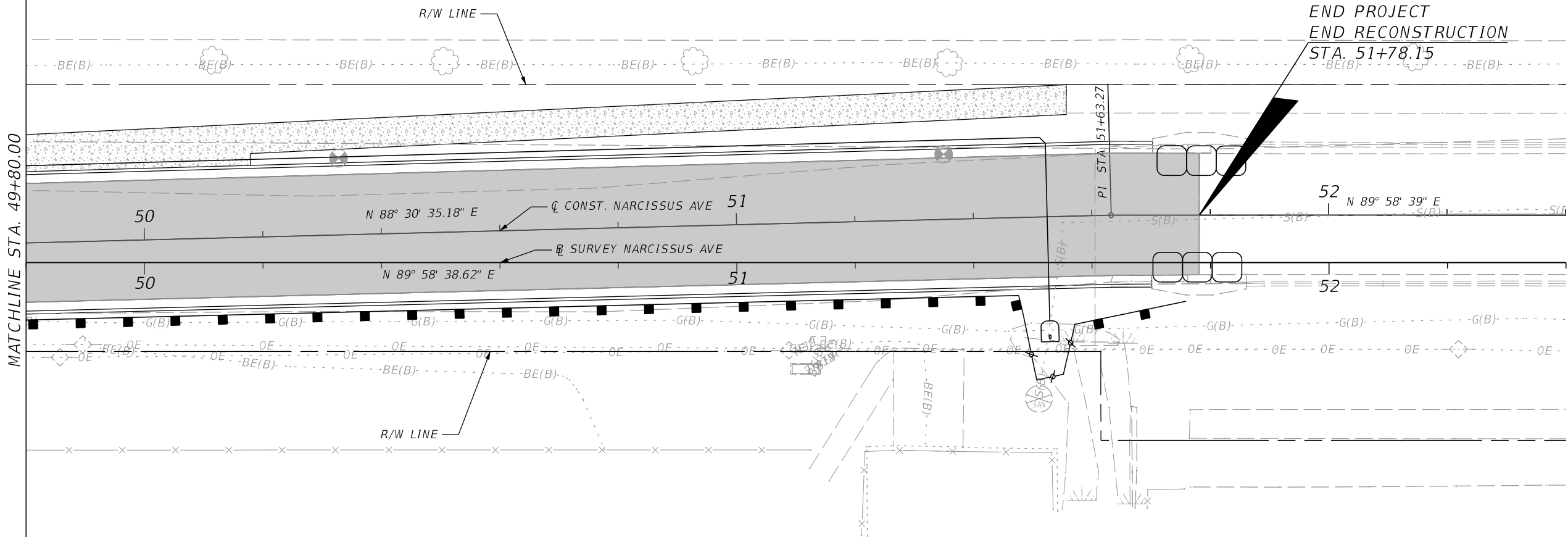
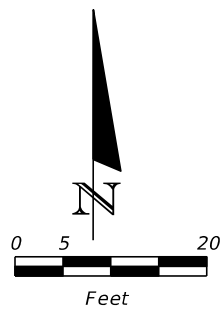
				 moffatt & nichol ENGINEER OF RECORD: ADAM K. CROUCH, P.E. FL REGISTRATION NO. 73036	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	<i>EROSION CONTROL PLAN (6)</i>	SHEET NO.
REVISIONS					NARCISSUS AVE. ROADWAY IMPROVEMENTS		42
DATE	DESCRIPTION	DATE	DESCRIPTION				

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REVISIONS				 moffatt & nichol ENGINEER OF RECORD: ADAM K. CROUCH, P.E. FL REGISTRATION NO. 73036	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	EROSION CONTROL PLAN (7)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION				
							43

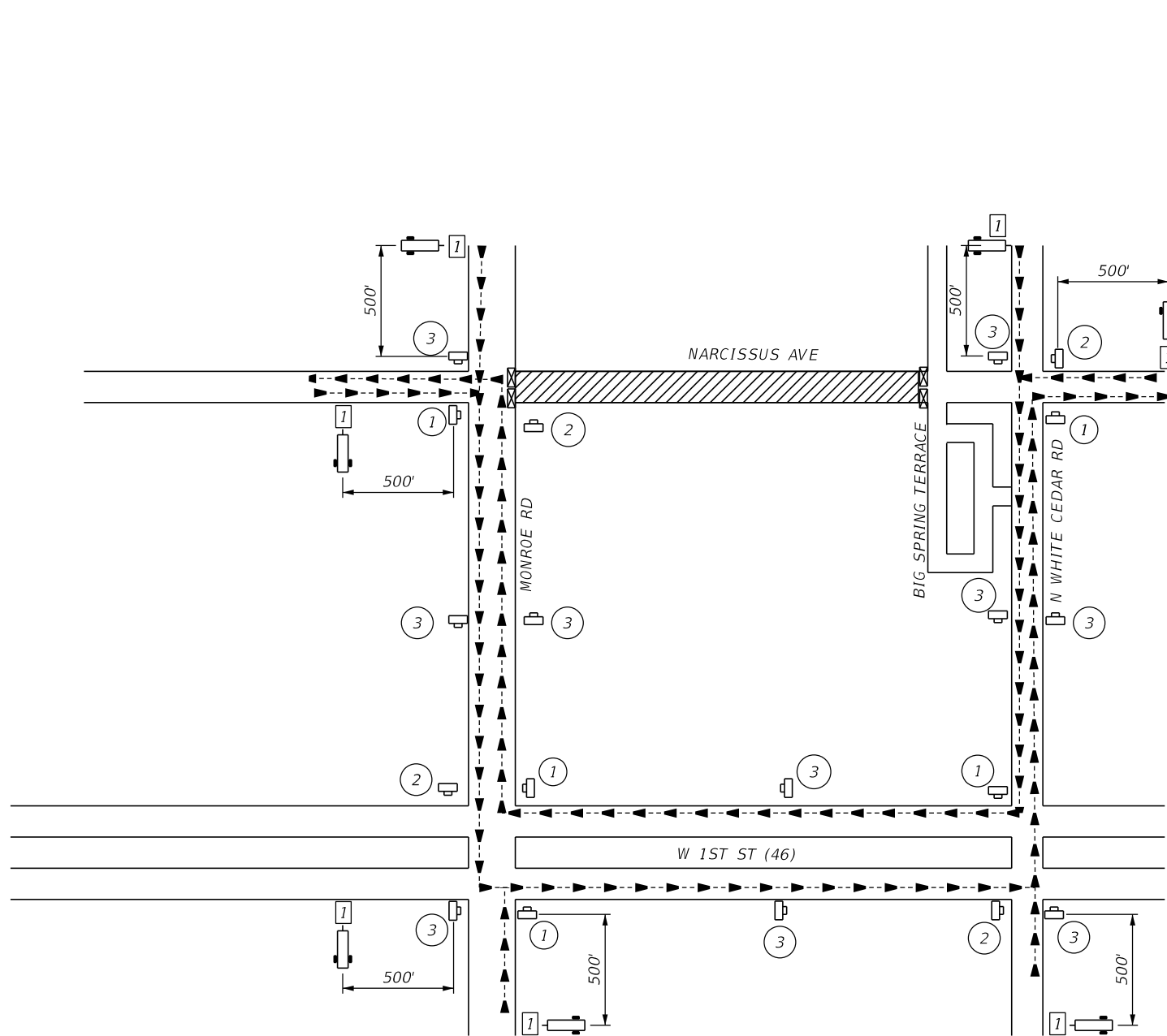
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



- LEGEND:
- SEDIMENT BARRIER
 - INLET PROTECTION
 - STAKED TURBIDITY BARRIER

REVISIONS				 moffatt & nichol ENGINEER OF RECORD: ADAM K. CROUCH, P.E. FL REGISTRATION NO. 73036	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	EROSION CONTROL PLAN (8)		SHEET NO. 44
DATE	DESCRIPTION	DATE	DESCRIPTION					

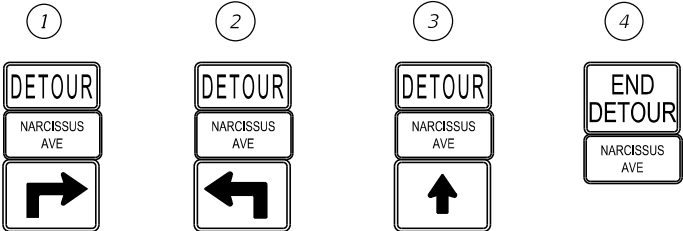
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



- DETOUR NOTES:
- THIS DETOUR IS NOT TO BE SET UP IN CONFLICT WITH ANY OTHER DETOUR PLAN.
 - SIGNS 1 & 2 ARE TO BE PLACED 200' PRIOR TO DETOUR INTERSECTION. SIGN 3 IS TO BE PLACED 500' AFTER DETOUR INTERSECTION AND EVERY 1/2 MILE BETWEEN INTERSECTIONS.
 - LOCATIONS INDICATED IN THE PLANS FOR TYPE III BARRICADES ARE TO HAVE A MINIMUM OF 1 BARRICADE PER TRAVEL LANE.
 - DETOUR SIGNS SHALL BE IN PLACE AND APPROVED BY ENGINEER 48-HRS PRIOR TO USE OF DETOUR
 - PCMS 1 SHALL BE PLACED AS SHOWN ON THIS SHEET TWO WEEK PRIOR TO IMPLEMENTING DETOUR. THE DISPLAYS ARE AS FOLLOWS:

MESSAGE 1: NARCISUS AVE TO CLOSE
MESSAGE 2: MM/DD/YY
 - PCMS 1 SHALL BE PLACED AS SHOWN ON THIS SHEET DURING DETOUR. THE DISPLAYS ARE AS FOLLOWS:

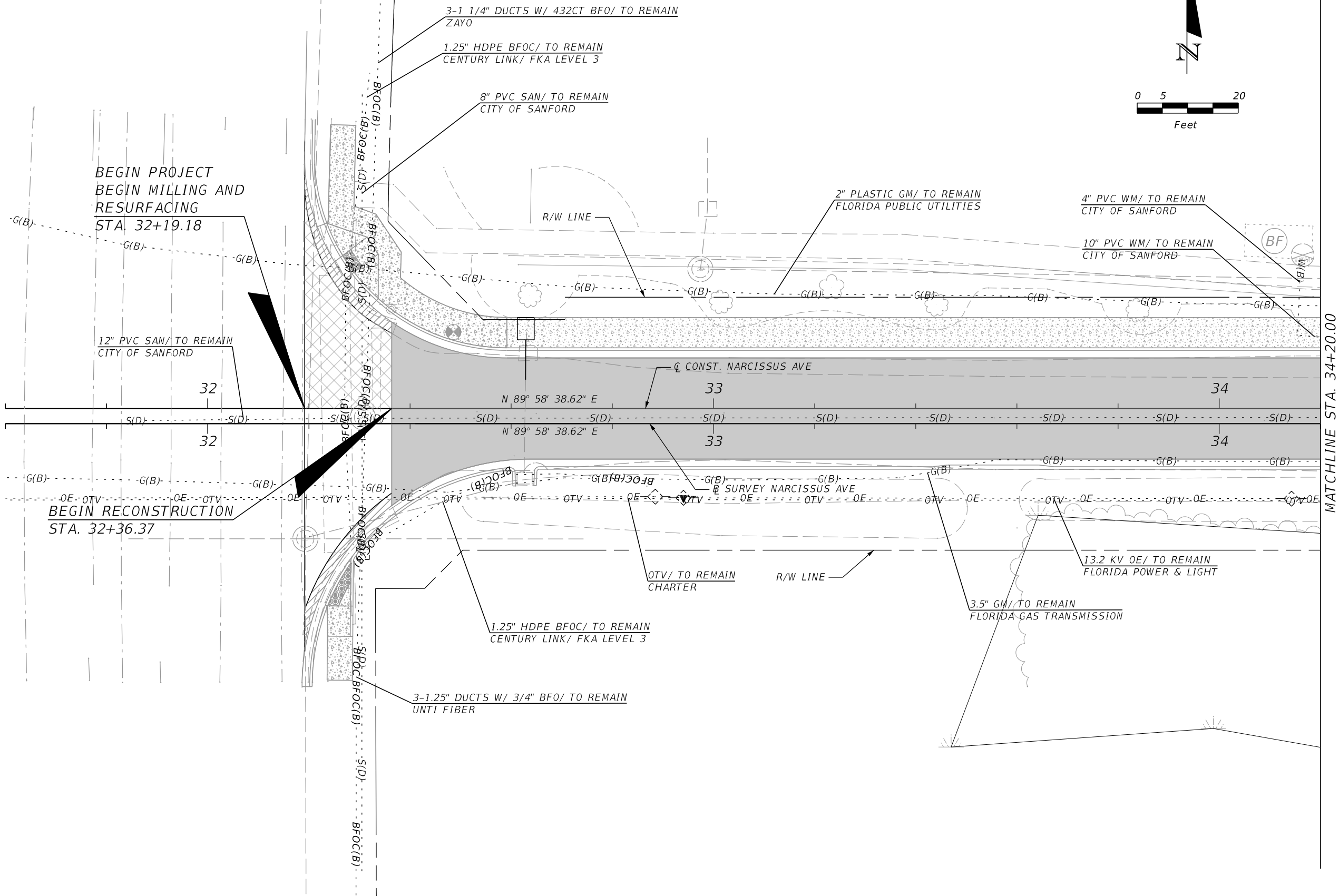
MESSAGE 1: NARCISUS AVE CLOSED
MESSAGE 2: FOLLOW DETOUR



- Work Area
- Type III Barricade
- Work Zone Sign
- Portable Changeable (Variable) Message Sign
- Detour Path

NARCISSUS AVE

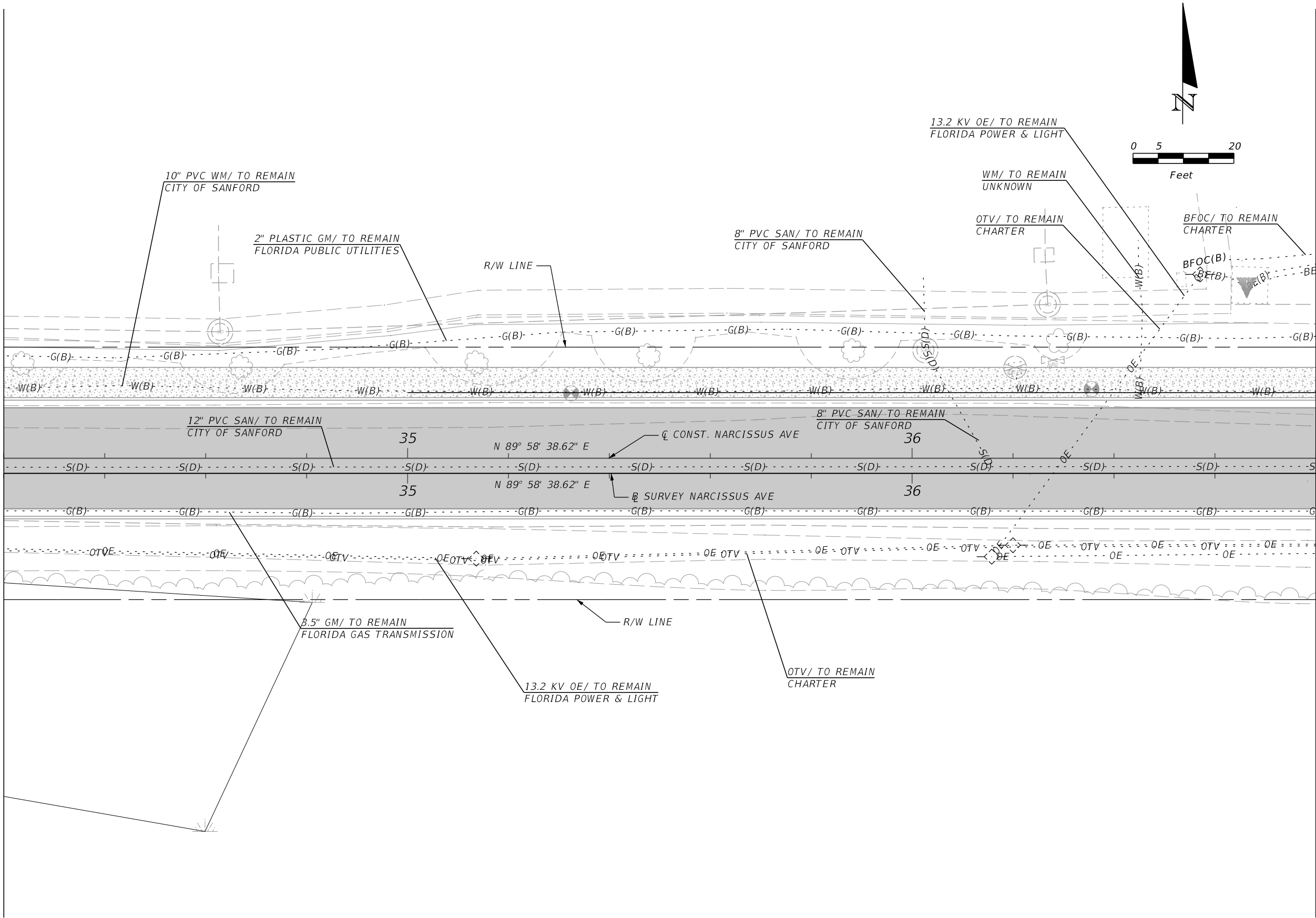
REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	DETOUR PLAN	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		NARCISSUS AVE. ROADWAY IMPROVEMENTS		45



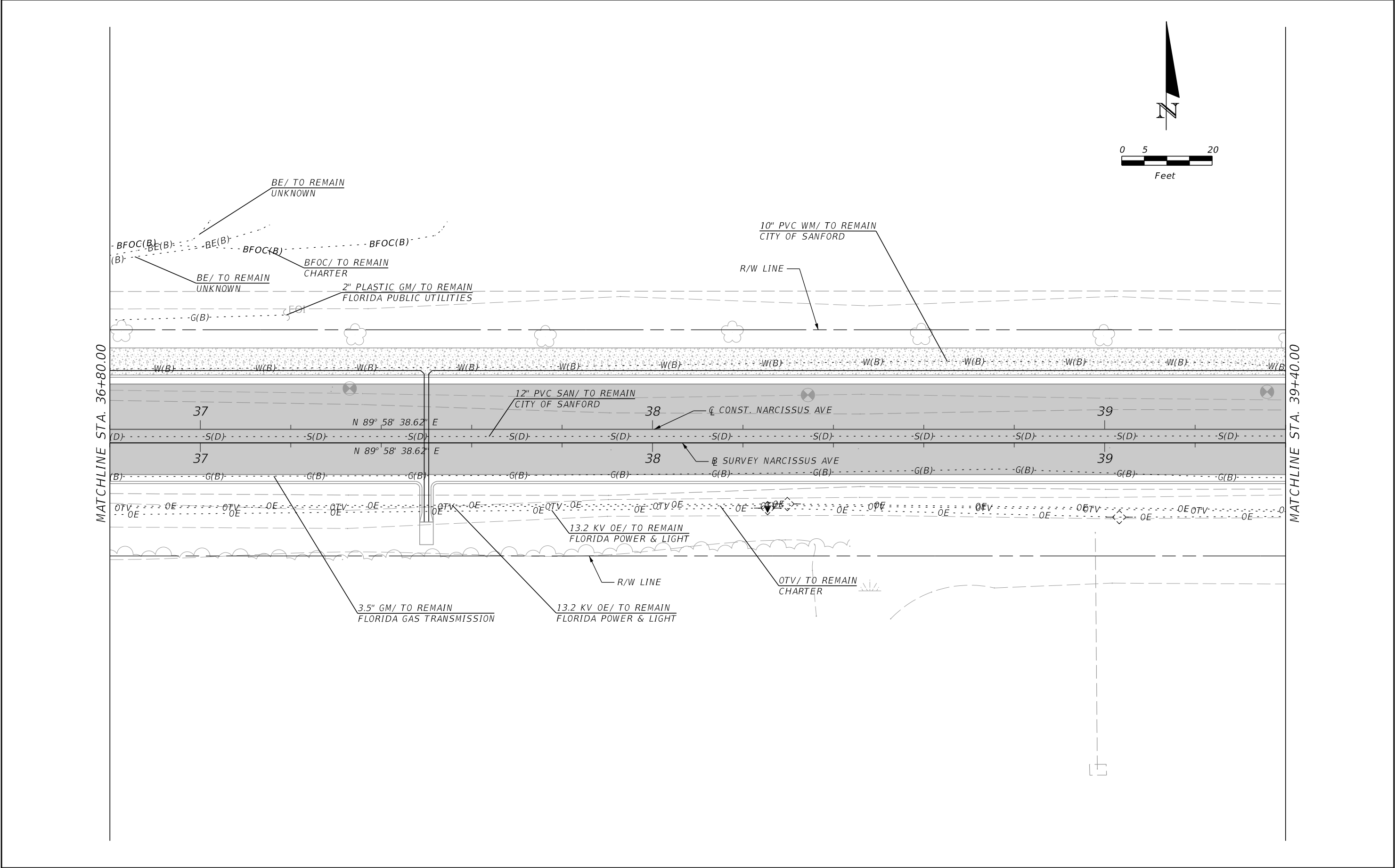
REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	UTILITY ADJUSTMENTS (1)	SHEET NO. 46
DATE	DESCRIPTION	DATE	DESCRIPTION				

MATCHLINE STA. 34+20.00

MATCHLINE STA. 36+80.00

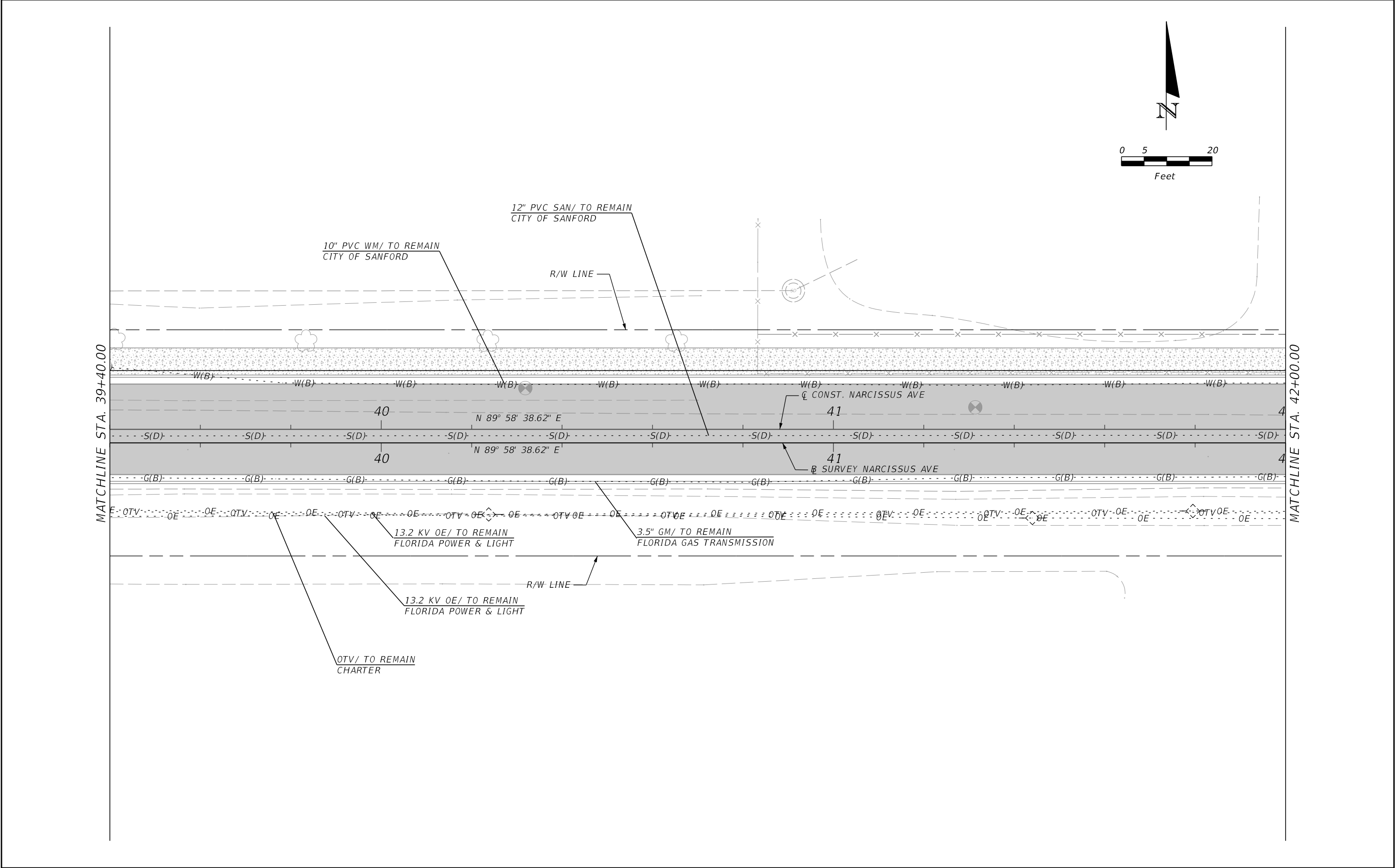


REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	UTILITY ADJUSTMENTS (2)	SHEET NO. 47
DATE	DESCRIPTION	DATE	DESCRIPTION				



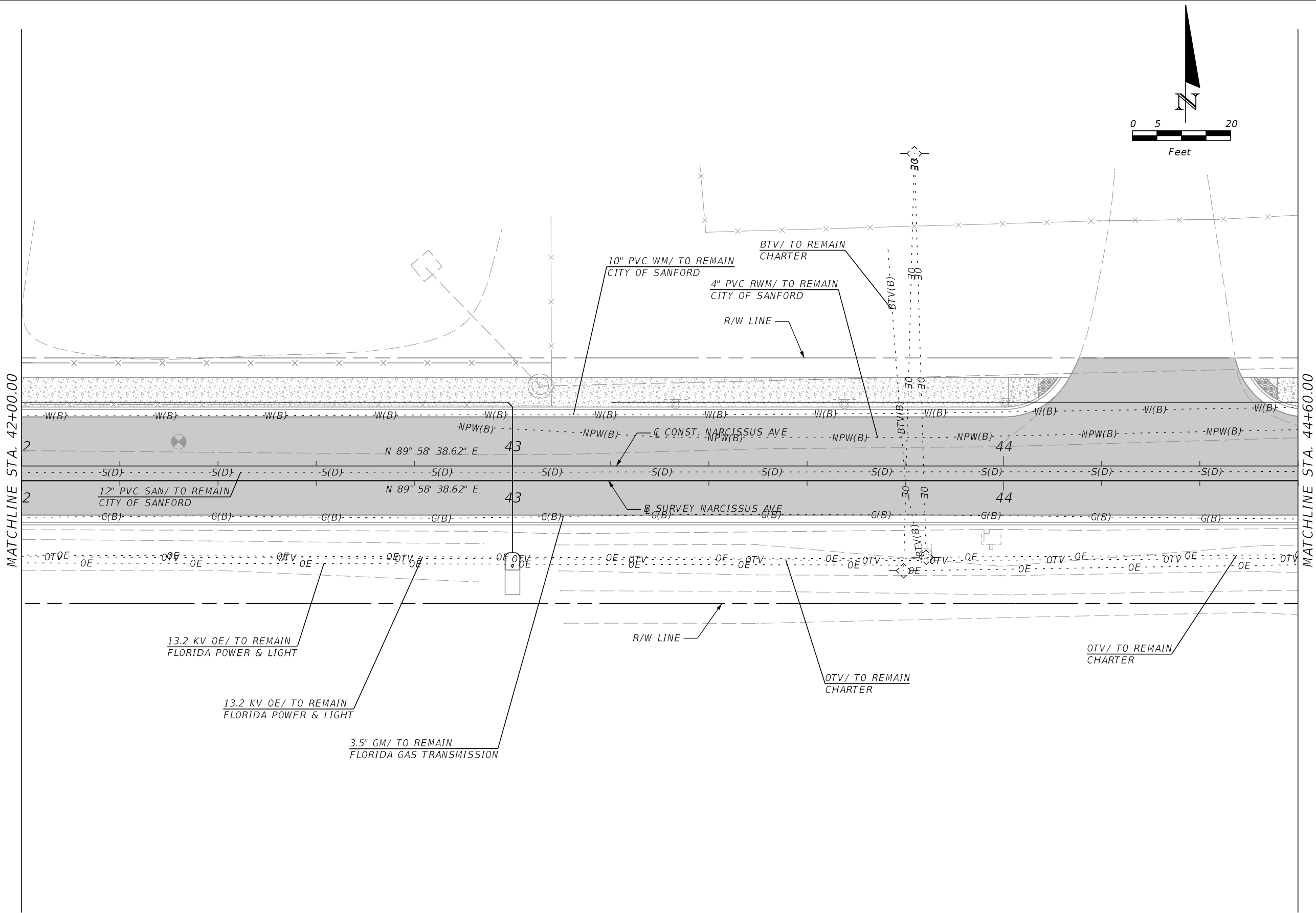
REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	UTILITY ADJUSTMENTS (3)	SHEET NO. 48
DATE	DESCRIPTION	DATE	DESCRIPTION				

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



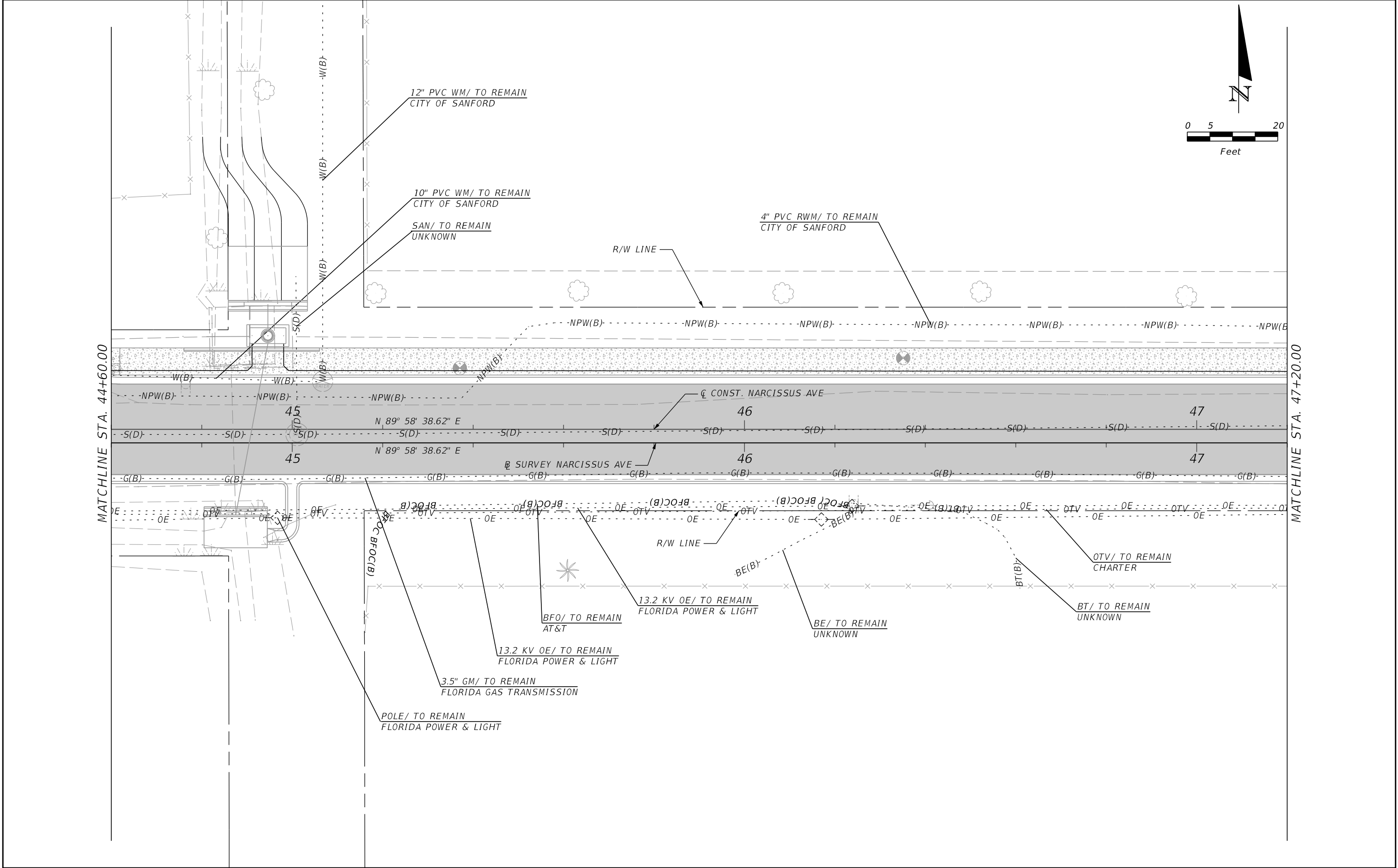
REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	UTILITY ADJUSTMENTS (4)	SHEET NO. 49
DATE	DESCRIPTION	DATE	DESCRIPTION				

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



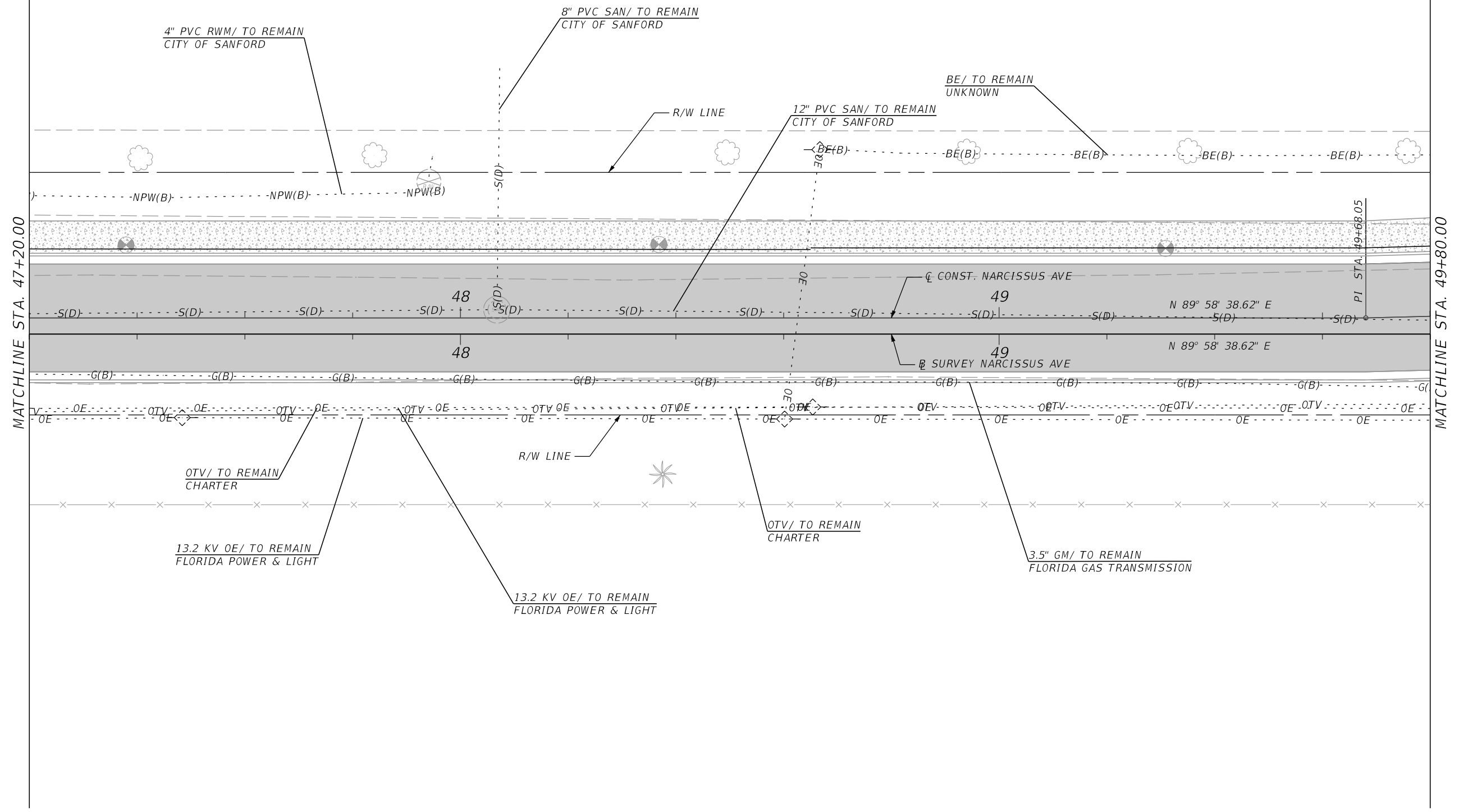
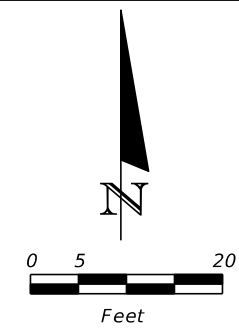
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DATE	DESCRIPTION	DATE	DESCRIPTION				

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



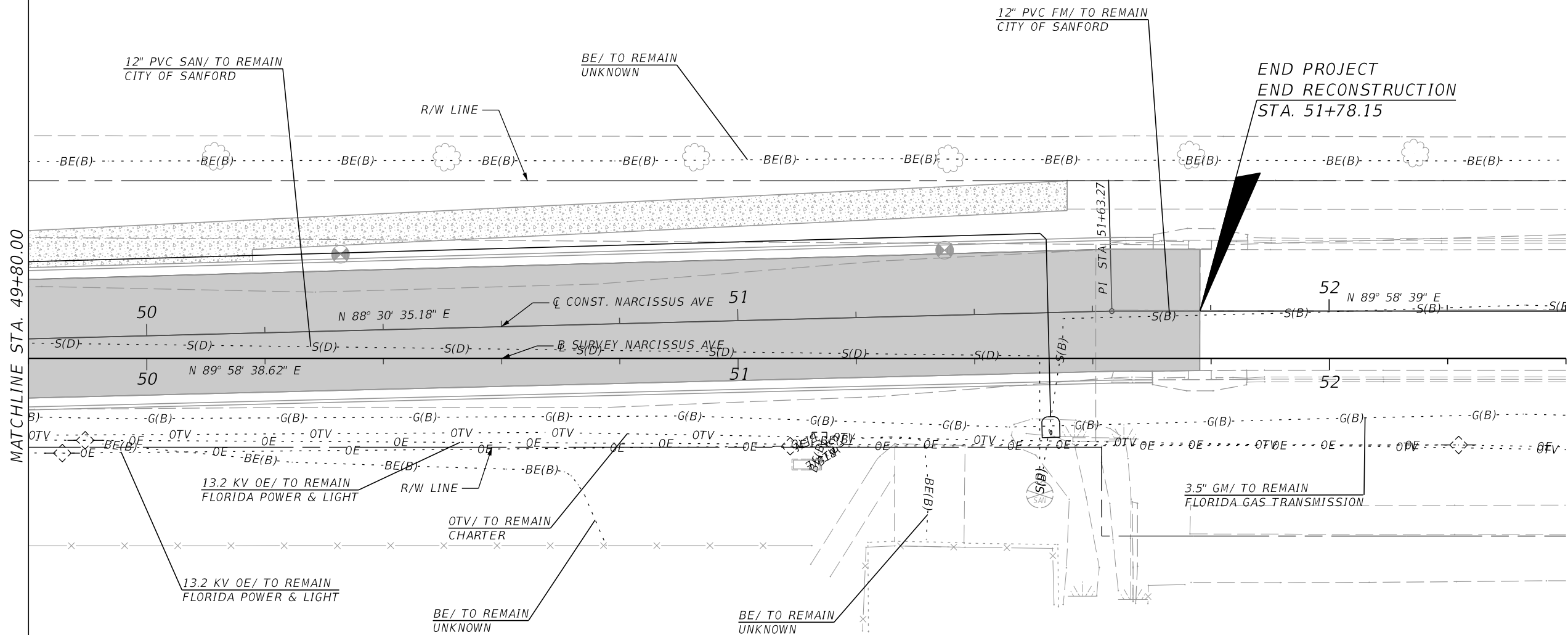
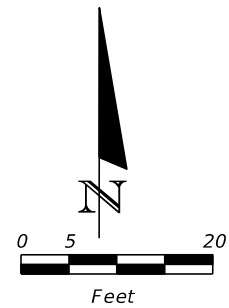
REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	UTILITY ADJUSTMENTS (6)	SHEET NO. 51
DATE	DESCRIPTION	DATE	DESCRIPTION				

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

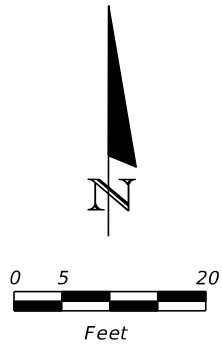
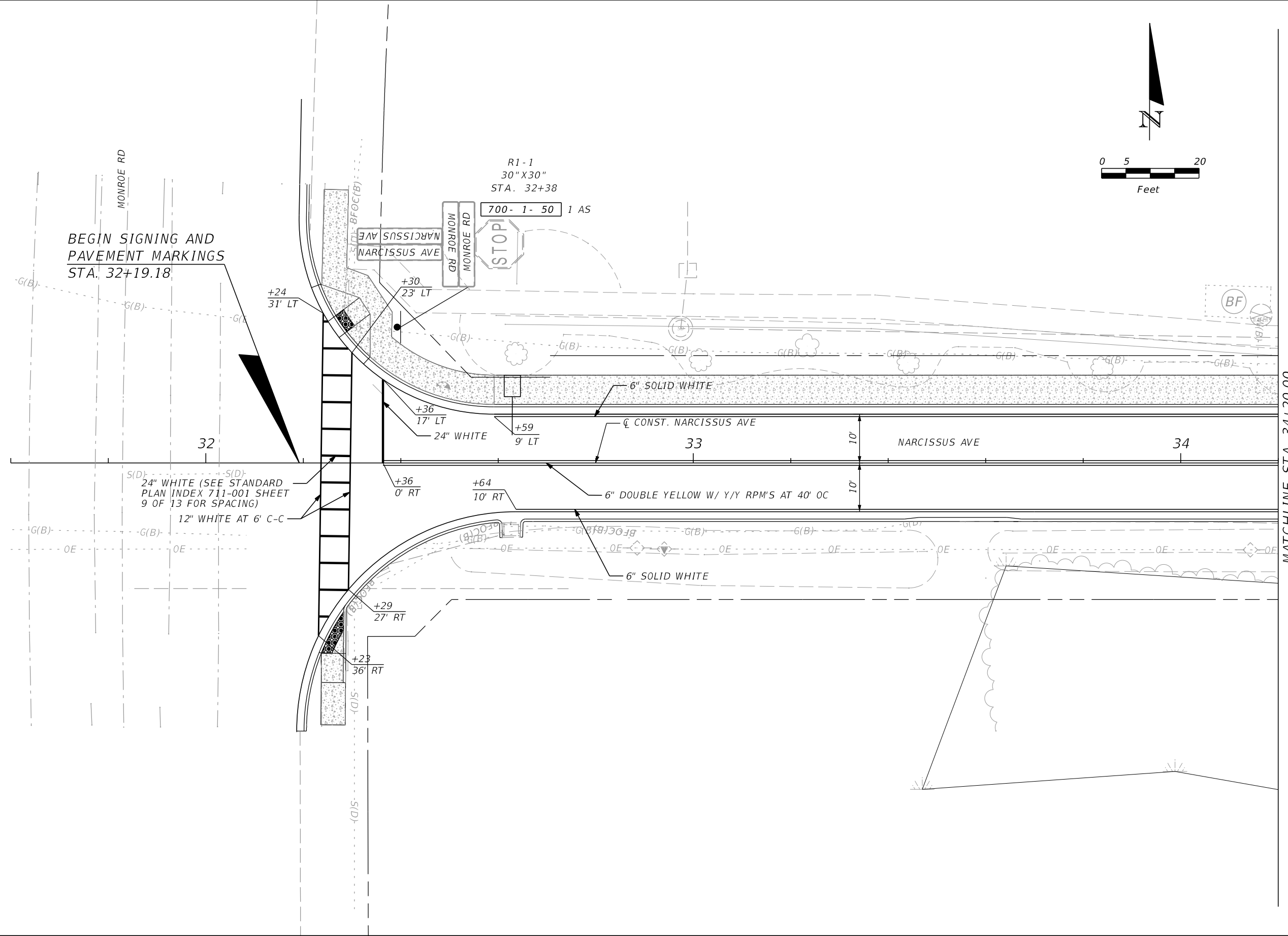


REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	UTILITY ADJUSTMENTS (7)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		NARCISSUS AVE. ROADWAY IMPROVEMENTS		52

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

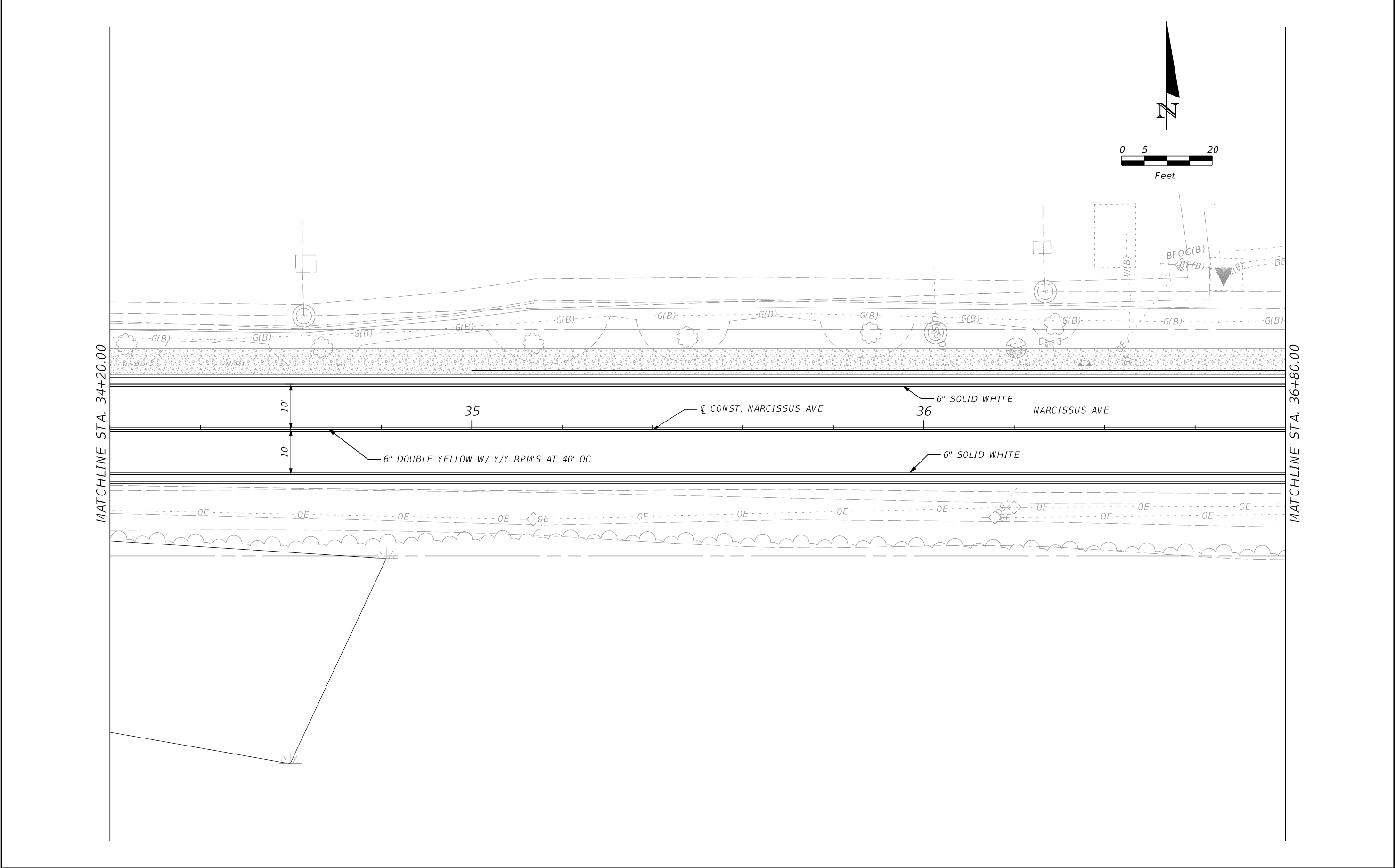


REVISIONS				 mo ffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	UTILITY ADJUSTMENTS (8)	SHEET NO. 53
DATE	DESCRIPTION	DATE	DESCRIPTION				



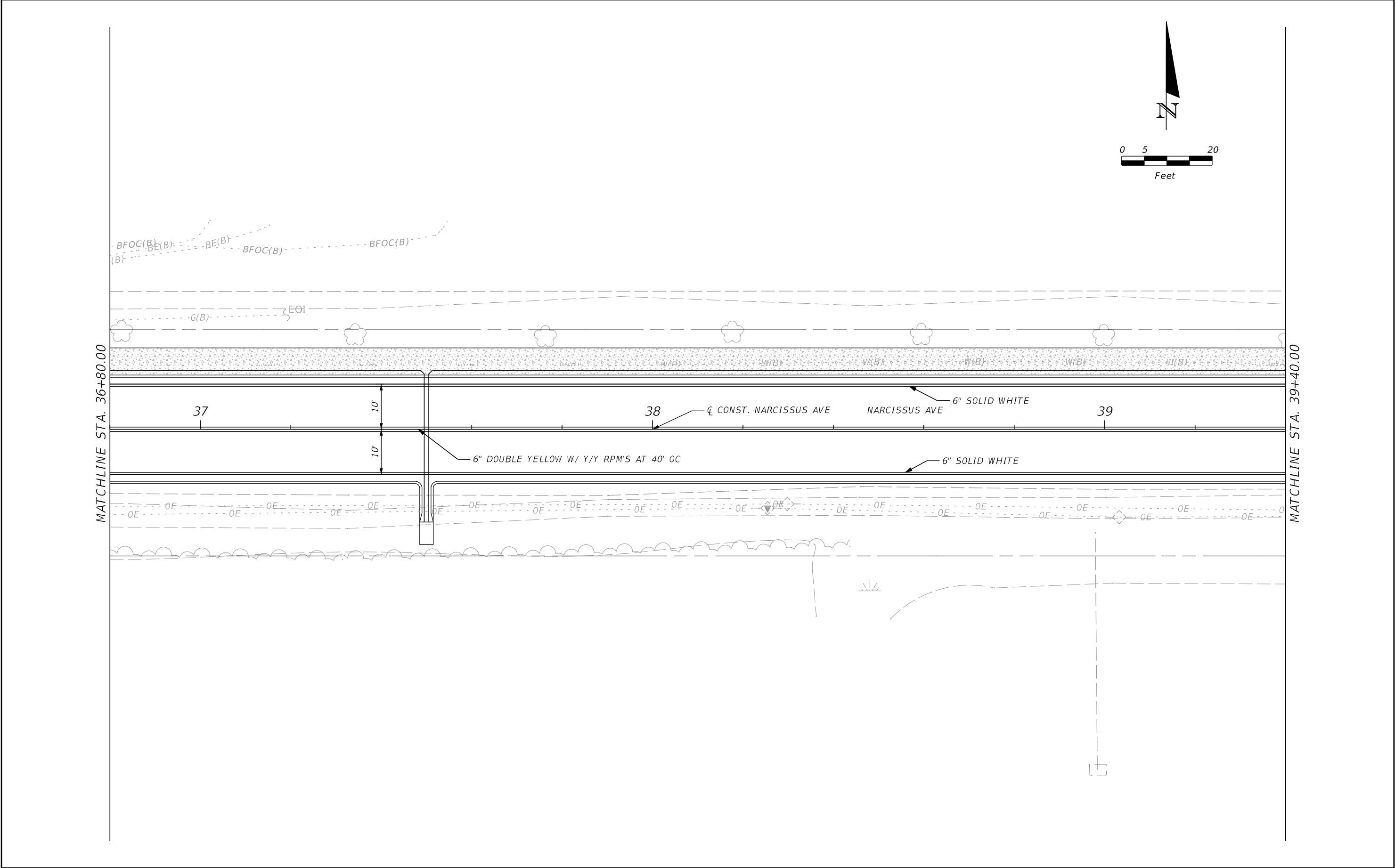
REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	SIGNING AND PAVEMENT MARKING PLAN (1)	SHEET NO. 54
DATE	DESCRIPTION	DATE	DESCRIPTION				

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



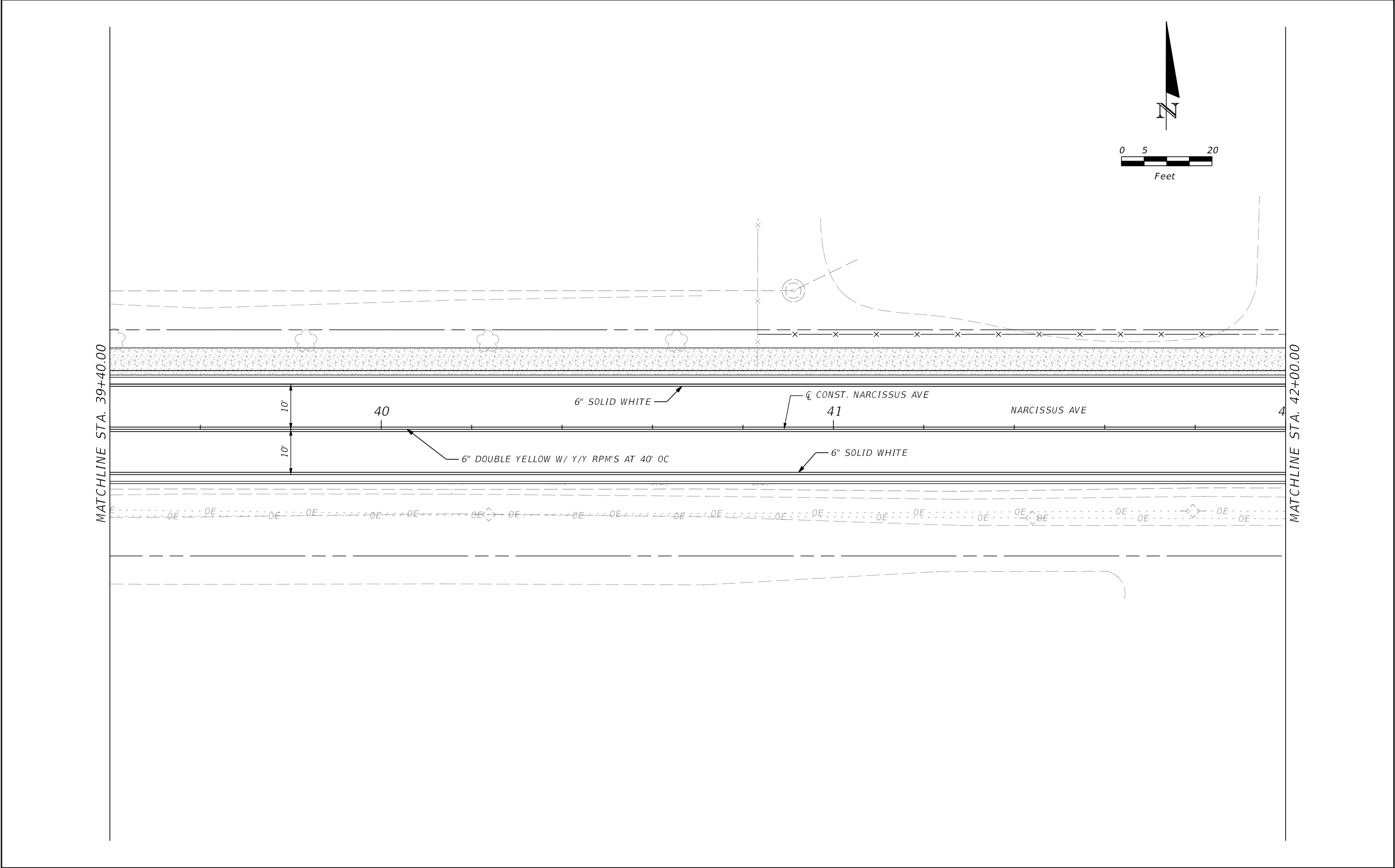
REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	SIGNING AND PAVEMENT MARKING PLAN (2)		SHEET NO.	
DATE	DESCRIPTION	DATE	DESCRIPTION					55	

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

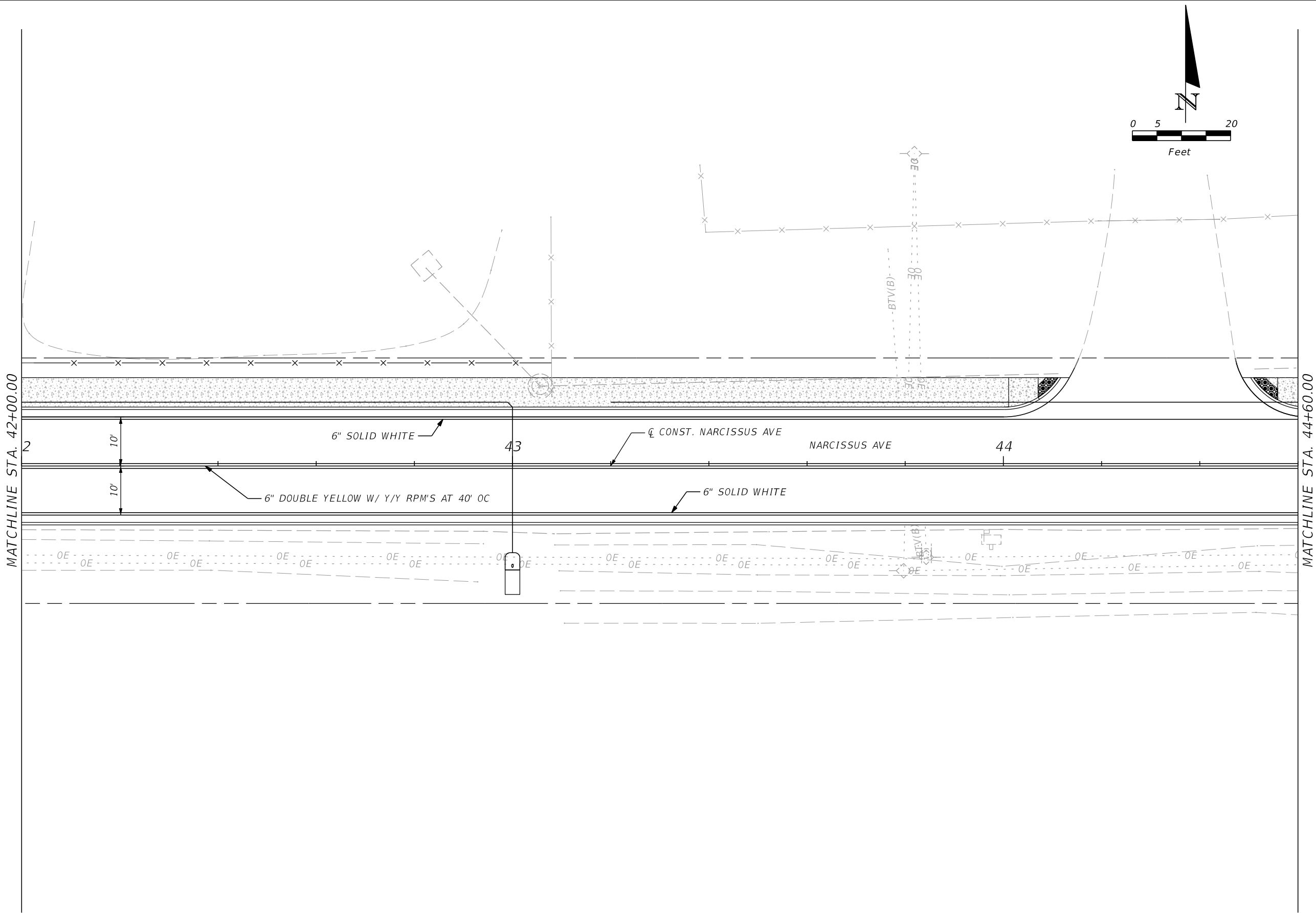


REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION NARCISSUS AVE. ROADWAY IMPROVEMENTS	SIGNING AND PAVEMENT MARKING PLAN (3)	SHEET NO. 56
DATE	DESCRIPTION	DATE	DESCRIPTION				

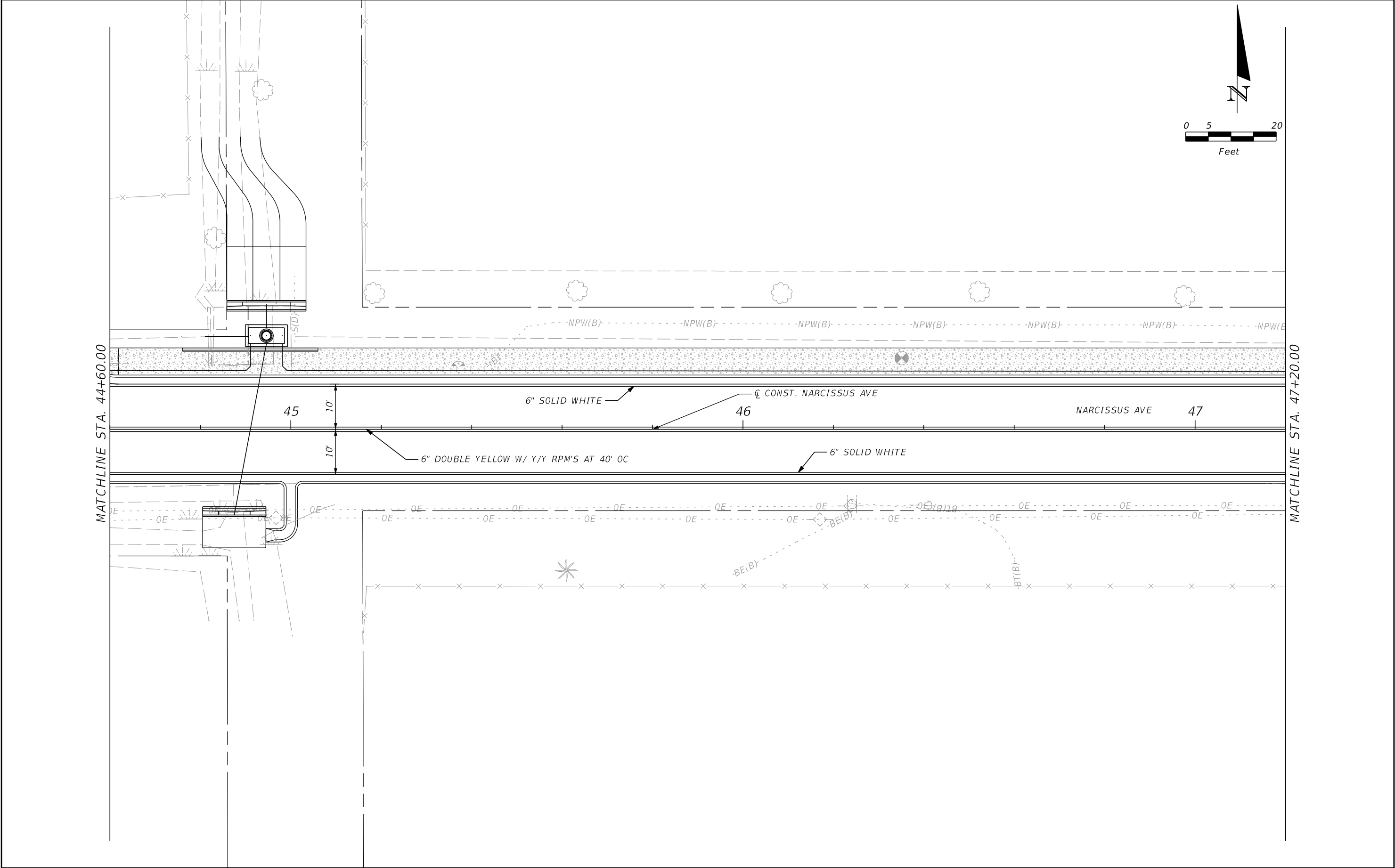
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	SIGNING AND PAVEMENT MARKING PLAN (4)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		NARCISSUS AVE. ROADWAY IMPROVEMENTS		57

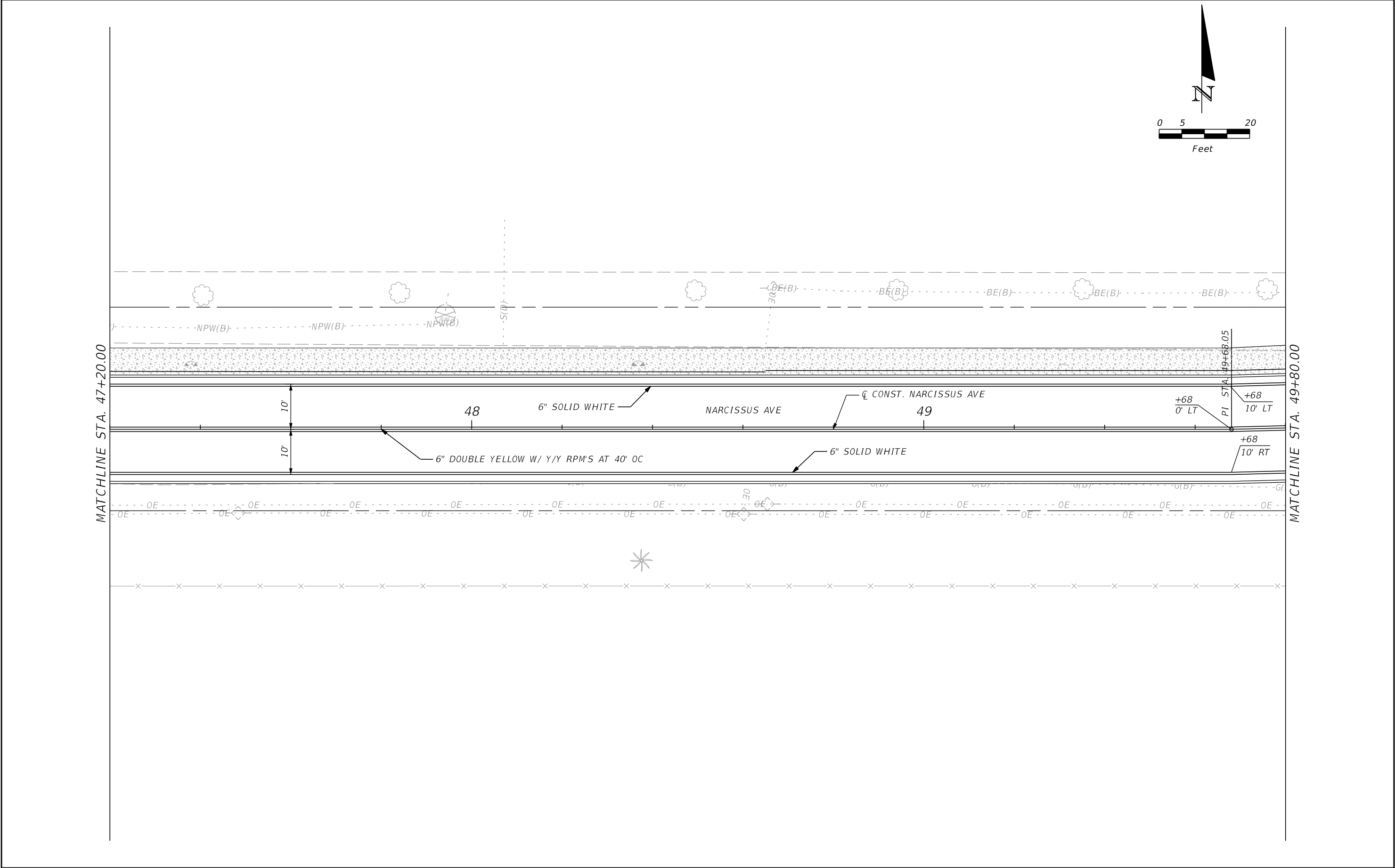


REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	SIGNING AND PAVEMENT MARKING PLAN (5)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		NARCISSUS AVE. ROADWAY IMPROVEMENTS		58



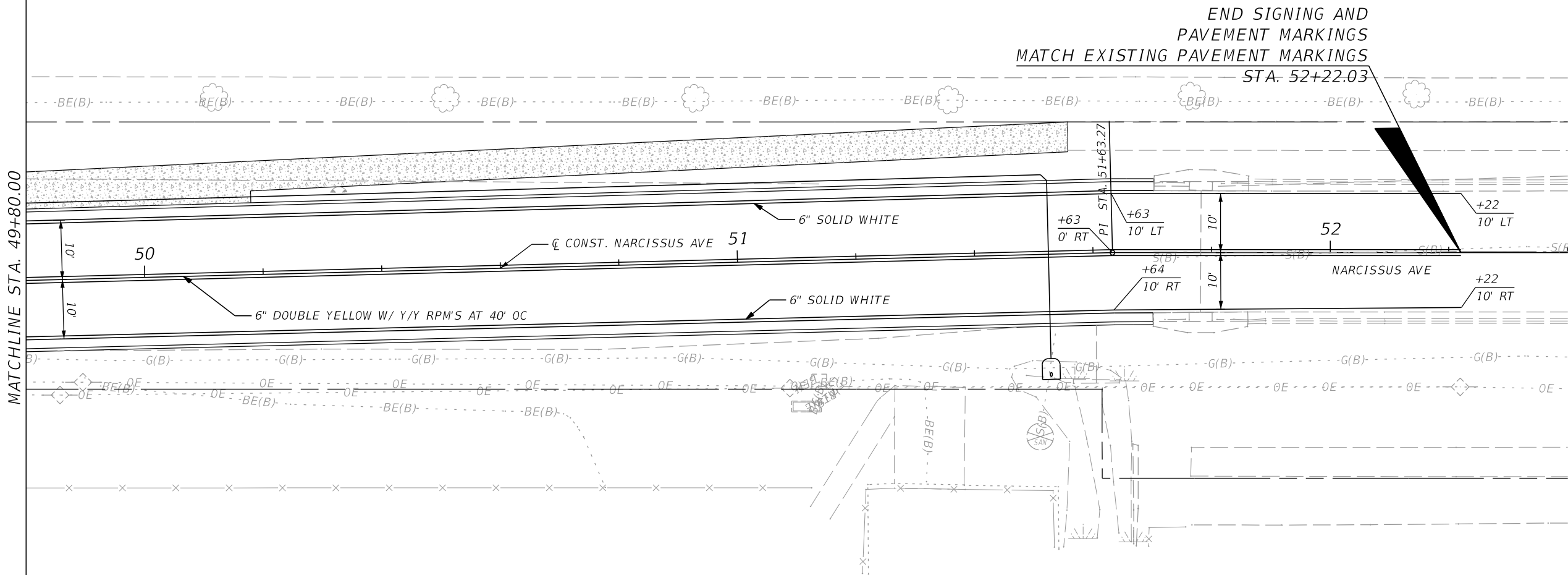
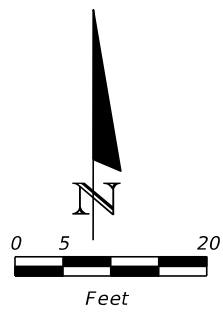
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DATE	DESCRIPTION	DATE	DESCRIPTION				

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REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	SIGNING AND PAVEMENT MARKING PLAN (7)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		NARCISSUS AVE. ROADWAY IMPROVEMENTS		60

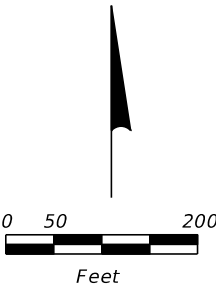
THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.



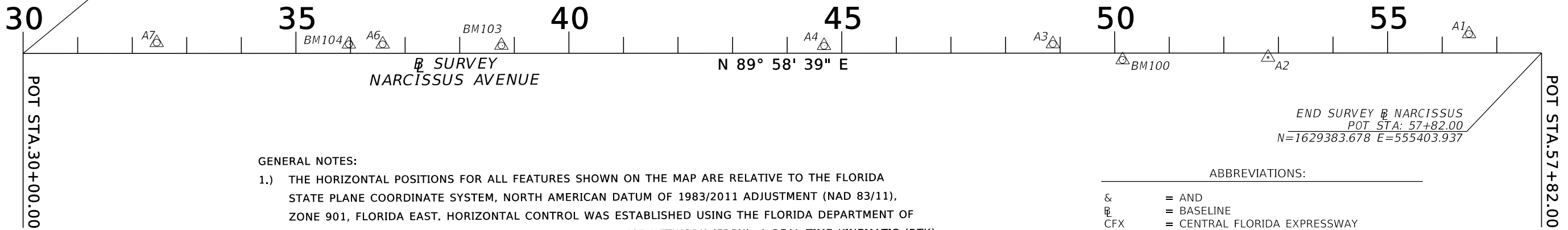
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DATE	DESCRIPTION	DATE	DESCRIPTION				

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

PROJECT CONTROL POINTS
B SURVEY NARCISSUS AVENUE



BEGIN SURVEY B NARCISSUS AVENUE
POT STA: 30+00.00
N=1629382.580 E=552621.936



GENERAL NOTES:

- 1.) THE HORIZONTAL POSITIONS FOR ALL FEATURES SHOWN ON THE MAP ARE RELATIVE TO THE FLORIDA STATE PLANE COORDINATE SYSTEM, NORTH AMERICAN DATUM OF 1983/2011 ADJUSTMENT (NAD 83/11), ZONE 901, FLORIDA EAST. HORIZONTAL CONTROL WAS ESTABLISHED USING THE FLORIDA DEPARTMENT OF TRANSPORTATION'S (FDOT) FLORIDA PERMANENT REFERENCE NETWORK (FRPN), A REAL TIME KINEMATIC (RTK) GLOBAL POSITIONING SYSTEM (GPS).
- 2.) VERTICAL CONTROL IS RELATIVE TO NORTH AMERICAN VERTICAL DATUM OF 1988 AND WAS ESTABLISHED FROM EXISTING TRAVERSE POINTS FOUND IN SEMINOLE COUNTY DRAWING 20-035.
- 3.) THE SURVEY ALIGNMENT SHOWN HEREON IS RANDOM AND NOT BASED ON ANY EXISTING RIGHT-OF-WAY OR ALIGNMENT MAPPING. ALIGNMENT GRAPHICALLY DEPICTED WAS STAKED IN THE FIELD AND IS ALSO SHOWN FOR MATHEMATICAL REFERENCE TIES TO SECONDARY CONTROL POINTS.
- 4.) ATTENTION IS DIRECTED TO THE FACT THESE MAPS MAY HAVE BEEN REDUCED IN SIZE BY REPRODUCTION. THIS MUST BE CONSIDERED WHEN OBTAINING SCALED DATA.
- 5.) ALL DISTANCES AND BEARINGS ARE COMPUTED UNLESS OTHERWISE INDICATED. COORDINATES, DISTANCES, AND ELEVATIONS SHOWN HEREON ARE BASED ON UNITED STATES SURVEY FOOT AND DECIMALS OF A FOOT THEREOF.

ABBREVIATIONS:

&	= AND
B	= BASELINE
CFX	= CENTRAL FLORIDA EXPRESSWAY
E	= EASTING
FDOT	= FLORIDA DEPARTMENT OF TRANSPORTATION
IRC	= IRON ROD & CAP
LT.	= LEFT
N	= NORTHING
N&D	= MAG NAIL AND DISK
N/A	= NOT APPLICABLE
NO.	= NUMBER
POT	= POINT ON TANGENT
RT.	= RIGHT
S.R.	= STATE ROAD
STA:	= STATION

HORIZONTAL AND VERTICAL CONTROL

CONTROL POINTS	(Y) NORTHING	(X) EASTING	SCALE FACTOR	LATITUDE	LONGITUDE	BL SURVEY STATION	OFFSET	(Z) ELEVATION	DESCRIPTION
A1	1629418.5240	555271.0350	0.99995284	28 48 56.60154 N	81 18 54.26699 W	56+49.11	34.90 LT	22.120	SET 5/8" IRC "ECHO UES TP RP LB8184"
A2	1629375.4750	554902.9260	0.99995293	28 48 56.16564 N	81 18 58.40392 W	52+80.99	8.01 RT	22.250	SET MAG N&D STAMPED "ECHO UES TP RP LB8184"
A3	1629400.2110	554508.6620	0.99995302	28 48 56.40014 N	81 19 02.83691 W	48+86.73	16.89 LT	22.530	SET 5/8" IRC "ECHO UES TP RP LB8184"
A4	1629396.7780	554089.4890	0.99995312	28 48 56.35505 N	81 19 07.54908 W	44+67.56	13.62 LT	21.630	SET 5/8" IRC "ECHO UES TP RP LB8184"
A6	1629399.5910	553280.7630	0.99995330	28 48 56.36134 N	81 19 16.64073 W	36+58.83	16.75 LT	22.680	SET 5/8" IRC "ECHO UES TP RP LB8184"
A7	1629402.5390	552866.8010	0.99995341	28 48 56.37943 N	81 19 21.29451 W	32+44.87	19.86 LT	22.350	SET 5/8" IRC "ECHO UES TP RP LB8184"
A8	1629015.0070	552846.1040	0.99995341	28 48 52.54201 N	81 19 21.51536 W	32+24.02	367.66 RT	23.040	SET MAG N&D STAMPED "ECHO UES TP RP LB8184"
BM100	1629370.8300	554636.4060	0.99995299	28 48 56.11262 N	81 19 01.39995 W	50+14.46	12.55 RT	21.500	FOUND 5/8" IRC "SEM CO TRAV"
BM103	1629397.4050	553498.4250	0.99995326	28 48 56.34552 N	81 19 14.19374 W	38+76.49	14.48 LT	22.670	FOUND 5/8" IRC "SEM CO TRAV"
BM104	1629399.6180	553218.9020	0.99995332	28 48 56.35995 N	81 19 17.33616 W	35+96.97	16.80 LT	22.620	FOUND 5/8" IRC "SEM CO TRAV"

REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	PROJECT CONTROL	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION				
					NARCISSUS AVE. ROADWAY IMPROVEMENTS		CTL-1

SUMMARY OF LUMP SUM ITEMS					
PAY ITEM NO.	PAY ITEM DESCRIPTION	QUANTITY		DESIGN NOTES	CONSTRUCTION REMARKS
		P	F		
0101 1	MOBILIZATION	1			
0102 1	MAINTENANCE OF TRAFFIC	1			

SUMMARY OF EROSION AND SEDIMENT CONTROL DEVICES										
LOCATION	SIDE	AREA ID	SEDIMENT BARRIER		STAKED TURBIDITY BARRIER		INLET PROTECTION SYSTEM		DESIGN NOTES	CONSTRUCTION REMARKS
STA. TO STA.			0104 10 3		0104 12		0104 18			
			LF		LF		EA			
			P	F	P	F	P	F		
32+29.60 to 32+29.67	RT		8.7							
32+29.67 to 32+29.88	RT		15.1							
32+29.88 to 32+57.69	RT		33.2							
32+57.69 to 32+66.17	RT		13.6							
32+66.17 to 33+45.47	RT		79.3							
33+64.89 to 37+47.50	RT		382.6							
37+47.50 to 37+47.59	RT		2.7							
37+52.50 to 37+52.50	RT		3.1							
37+52.50 to 42+97.37	RT		544.9							
40+75.76 to 44+13.52	LT		337.8							
42+97.32 to 42+97.37	RT		9.0							
43+03.21 to 43+03.21	RT		8.7							
43+03.21 to 44+97.50	RT		194.3							
44+49.28 to 44+79.42	LT		30.1							
44+79.12 to 44+79.42	LT		43.0							
45+02.09 to 45+02.50	RT		7.2							
45+02.50 to 49+68.05	RT		465.6							
45+10.50 to 45+10.51	LT		24.0							
49+68.05 to 51+48.07	RT		183.2							
51+56.68 to 51+75.93	RT		19.2							
52+00.69 to 52+00.69	RT		6.6							
44+79.07 to 44+98.44	LT				19.4					
44+79.33 to 45+01.09	RT				34.2					
51+48.07 to 51+56.68	RT				24.3					
32+55.37 to 32+71.37	RT						1			
32+55.48 to 32+70.76	LT						1			
51+70.33 to 51+86.61	RT						1			
51+71.02 to 51+87.29	LT						1			
SUB-TOTAL :			2411.9		77.9		4			
TOTAL :			2412		78		4			

REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	SUMMARY OF QUANTITIES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION				
					NARCISSUS AVE. ROADWAY IMPROVEMENTS		SQ-1

SUMMARY OF CLEARING AND GRUBBING & REMOVAL ITEMS												
PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	SIDE	AREA ID	UNITS	SECONDARY UNITS (IF LUMP SUM)	QUANTITY		TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
		STA. TO STA.				AREA (AC)	P	F	P	F		
0110 1 1	CLEARING AND GRUBBING	32+18.63 TO 51+78.23	LT/RT	11172	LS	1.895	1.0		1		1.895	
0110 4 10	REMOVAL OF EXISTING CONCRETE	32+18.63 to 32+37.77	RT	11003	SY		10.6		53		CURB AND GUTTER	
		32+19.08 to 32+37.60	LT	10929			12.0				CURB AND GUTTER	
		32+22.99 to 32+29.28	LT	10870			15.8				SIDEWALK	
		32+23.32 to 32+28.66	RT	11037			11.2				SIDEWALK	
		51+62.95 to 51+70.13	RT	11156			1.5				CURB AND GUTTER	
		51+63.27 to 51+70.27	LT	11150			1.6				CURB AND GUTTER	

SUMMARY OF EARTHWORK					
PAY ITEM NO.	PAY ITEM DESCRIPTION	CY		DESIGN NOTES	CONSTRUCTION REMARKS
		P	F		
0120-1-	REGULAR EXCAVATION				
	STA. 32+19.18 TO STA. 51+78.15	210.07			
	BASS DITCH (STA. 44+94.60)	23.15			
	TOTAL REGULAR EXCAVATION	233.23			
0120-6-	EMBANKMENT				
	STA. 32+19.18 TO STA. 51+78.15	323.31			
	BASS DITCH (STA. 44+94.60)	9.96			
	TOTAL EMBANKMENT	333.27			

SUMMARY OF PAVEMENT														
PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION		SIDE	AREA ID	LENGTH	WIDTH	UNIT	QUANTITY		TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
		STA. TO STA.	DESCRIPTION						P	F	P	F		
0160 4	TYPE B STABILIZATION	32+18.63 to 32+36.37		RT	9834			SY	17.2		5422			
		32+19.18 to 32+36.37		LT	9812				18.4					
		32+36.36 to 51+78.23		LT/RT	14348				5386.4					
285709	OPTIONAL BASE, BASE GROUP 09	32+19.18 to 32+36.37		LT	14315			SY	7.1		4404			
		32+19.18 to 32+36.37		RT	14310				7.0					
		32+36.37 to 51+78.15		LT/RT	14270				4390.2					
0327 70 6	MILLING EXIST ASPH PAVT, 1 1/2" AVG DEPTH	32+19.18 to 32+36.37		LT/RT	10027			SY	93.3		93			
0334 1 13	SUPERPAVE ASPHALTIC CONC, TRAFFIC C	32+19.18 to 32+36.37	OVERBUILD	LT				TN	1.4		1.4			
0337 7 83	ASPHALT CONCRETE FRICTION COURSE,	32+19.18 to 32+36.37		LT/RT	10066			TN	8.86		371.1			
	TRAFFIC C, FC-12.5, PG 76-22	32+36.37 to 51+78.23		LT/RT	10034				362.20					

REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	SUMMARY OF QUANTITIES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION				
					NARCISSUS AVE. ROADWAY IMPROVEMENTS		SQ-2

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THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

SUMMARY OF UNDERDRAIN							
LOCATION	SIDE	UNDERDRAIN TYPE		OUTLET PIPE		DESIGN NOTES	CONSTRUCTION REMARKS
		0440	1 10	0440	73 1		
STA. TO STA.		I (LF)		4" (LF)			
		P	F	P	F		
35+00.00 to 37+48.76	LT	248.8					
37+51.26 to 40+00.00	LT	248.7					
40+00.00 to 42+99.00	LT	299.0					
43+20.00 to 44+90.10	LT	170.1					
44+99.10 to 48+65.01	LT	365.9					
48+65.01 to 51+51.48	LT	286.1					
37+48.76 to 37+49.51	LT			1.1			
37+49.50 to 37+49.51	LT/RT			32.7			
37+50.50 to 37+50.51	LT/RT			32.7			
37+50.51 to 37+51.26	LT			1.1			
42+99.00 to 43+00.00	LT			1.4			
42+99.99 to 43+00.00	LT/RT			31.7			
44+89.65 to 44+91.65	LT			6.3			
44+95.31 to 44+97.31	LT			6.3			
51+51.48 to 51+52.48	LT			1.4			
51+52.45 to 51+52.48	LT/RT			33.0			
SUB-TOTAL :		1618.6		147.7			
TOTAL :		1619		148			

SUMMARY OF RAILING					
LOCATION	SIDE	PEDSETRIAN /BICYCLE RAILING , NS, 42" TYPE I		DESIGN NOTES	CONSTRUCTION REMARKS
		0515 2 111			
		LF			
		P	F		
STA. TO STA.					
44+76.04 to 45+06.04	LT	30.0			
SUB-TOTAL:		30.0			
TOTAL:		30			

REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980	SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	SUMMARY OF QUANTITIES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		NARCISSUS AVE. ROADWAY IMPROVEMENTS		SQ-3

THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE DIGITALLY SIGNED AND SEALED UNDER RULE 61G15-23.004, F.A.C.

SUMMARY OF CURB & GUTTER AND/OR TRAFFIC SEPARATORS															
PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION	SIDE	AREA ID	UNIT	QUANTITY					TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS	
		STA. TO STA.				GROSS LENGTH	DEDUCTIONS		NET LENGTH		P	F			
							TYPE	LENGTH	P	F					
0520 1 10	CONCRETE CURB & GUTTER, TYPE F	32+20.13 to 32+23.42	RT		LF	17.0				17.0		3973			
		32+20.64 to 32+20.77	LT			6.3				6.3					
		32+20.64 to 32+59.13	LT			61.3				61.3					
		32+23.42 to 32+28.67	RT			10.7				10.7					
		32+28.67 to 32+57.48	RT			34.4				34.4					
		32+57.48 to 32+59.00	RT			1.8				1.8					
		32+59.00 to 32+60.36	RT			2.8				2.8					
		32+59.17 to 44+00.15	LT			1141.0				1141.0					
		32+60.36 to 32+60.91	RT			2.1				2.1					
		32+61.90 to 32+62.26	RT			0.7				0.7					
		32+61.90 to 32+63.19	RT			3.1				3.1					
		32+62.26 to 32+63.68	RT			2.1				2.1					
		32+63.19 to 32+63.63	RT			0.4				0.4					
		32+63.63 to 33+43.32	RT			79.7				79.7					
		33+43.32 to 33+46.32	RT			3.0				3.0					
		33+46.32 to 33+64.32	RT			18.0				18.0					
		33+64.32 to 33+67.32	RT			3.0				3.0					
		33+67.32 to 37+47.50	RT			380.2				380.2					
		37+47.50 to 37+49.00	RT			2.4				2.4					
		37+48.50 to 37+49.00	RT			2.1				2.1					
		37+49.00 to 37+49.00	RT			5.5				5.5					
		37+51.00 to 37+51.00	RT			5.5				5.5					
		37+51.00 to 37+51.50	RT			2.1				2.1					
		37+51.00 to 37+52.50	RT			2.4				2.4					
		37+52.50 to 44+97.50	RT			745.0				745.0					
		44+00.15 to 44+11.69	LT			13.8				13.8					
		44+50.38 to 44+61.93	LT			13.8				13.8					
		44+61.93 to 49+67.89	LT			506.0				506.0					
		44+89.30 to 44+91.32	RT			2.1				2.1					
		44+89.59 to 44+91.56	RT			2.1				2.1					
		44+91.32 to 44+97.58	RT			6.3				6.3					
		44+91.56 to 44+97.70	RT			6.1				6.1					
		44+97.50 to 44+99.00	RT			2.4				2.4					
		44+97.58 to 44+99.00	RT			2.3				2.3					
		44+97.70 to 45+01.00	RT			5.3				5.3					
		44+99.00 to 44+99.00	RT			3.8				3.8					
		45+01.00 to 45+01.00	RT			3.8				3.8					
		45+01.00 to 45+02.50	RT			2.4				2.4					
		45+02.50 to 49+68.05	RT			465.6				465.6					
		49+67.89 to 51+63.27	LT			195.1				195.1					
		49+68.05 to 51+63.60	RT			195.5				195.5					
		51+63.27 to 51+70.24	LT			7.2				7.2					
		51+63.56 to 51+70.13	RT			6.6				6.6					

SUMMARY OF SIDEWALK & DETECTABLE WARNINGS												
LOCATION	SIDE	AREA ID	LENGTH	WIDTH	CONC SIDEWALK 4"		CONC SIDEWALK 6"		DETECTABLE WARNINGS		DESIGN NOTES	CONSTRUCTION REMARKS
					0522 1		0522 2		0527 2			
SY					SY		SF					
STA. TO STA.					P	F	P	F	P	F		
32+59.13 to 44+01.08	LT	8963			761.3							
48+08.76 to 48+08.76	LT	8969			450.1							
32+23.60 to 32+28.67	RT	8905					10.2					
32+23.78 to 32+59.17	LT	8922					44.2					
44+01.08 to 44+11.10	LT	8938					4.5					
44+50.97 to 44+61.86	LT	8942					5.1					
32+23.71 to 32+28.28	RT	9201							15.0			
32+26.67 to 32+30.52	LT	9196							8.0			
44+07.08 to 44+11.10	LT	9206							8.0			
44+50.97 to 44+55.86	LT	9211							10.0			
SUB-TOTAL:					1211.4		64.0		41.0			
TOTAL:					1211		64		41			

SUMMARY OF FENCING										
PAY ITEM NO.	DESCRIPTION	LOCATION	SIDE	UNIT	QUANTITY		TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
		STA. TO STA.			P	F	P	F		
0550 10220	FENCING, TYPE B, 5.1- 6.0', STANDARD	40+83.27 to 41+90.42	LT	LF	107.1		213			
		42+02.42 to 43+07.93	LT		105.5					
0550 60232	FENCE GATE, TYPE B, SLIDING/CANTILEVER, 6.1-12.0' OPENING	41+90.42 to 42+02.42	LT	EA	1		1			

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SUMMARY OF PERFORMANCE TURF								
LOCATION	SIDE	AREA ID	LENGTH	WIDTH	PERFORMANCE TURF (SOD)		DESIGN NOTES	CONSTRUCTION REMARKS
					0570	1 2		
					SY			
STA. TO STA.					P	F		
30+40.48 to 30+67.17	LT/RT	14080			42.2			
32+20.63 to 32+23.71	RT	12020			3.3			
32+21.14 to 32+24.28	LT	12073			5.3			
32+28.60 to 32+59.66	RT	12025			17.1			
32+28.88 to 44+15.40	LT	12074			426.0			
32+62.34 to 37+48.50	RT	12037			144.0			
37+51.50 to 44+98.50	RT	12045			221.3			
44+47.23 to 51+56.27	LT	12068			324.5			
45+01.50 to 51+70.15	RT	12052			198.1			
50+18.20 to 51+56.17	LT	11650			51.2			
SUB-TOTAL :					1433.0			
TOTAL :					1433			

SUMMARY OF DITCH PAVEMENT								
LOCATION	SIDE	AREA ID	LENGTH	WIDTH	CONCRETE DITCH PAVEMENT - NON-REINF (4")		DESIGN NOTES	CONSTRUCTION REMARKS
STA. TO STA.					0524 1 2			
					SY			
					P	F		
37+48.50 to 37+51.50	RT	14101			1.7		S-02	
42+98.48 to 43+01.49	RT	14097			1.7		S-06	
44+80.48 to 44+94.49	RT	14014			10.8		S-03	
44+85.86 to 45+03.37	LT	14009			23.3		S-05	
SUB-TOTAL :					37.5			
TOTAL :					38			

TABULATION OF QUANTITIES																								
PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS																		TOTAL THIS SHEET		GRAND TOTAL	
			54		55		56		57		58		59		60		61							
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL
0700-001-050	SINGLE POST SIGN, RELOCATE	AS	1																	1				
0706-001-003	RAISED PAVEMENT MARKER, TYPE B	EA	10		13		13		13		13		13		13		13		13		101			
0711-011-121	THERMOPLASTIC, STANDARD, WHITE, SOLID, 6"	LF	317		520		520		520		520		520		520		520		485		3922			
0711-011-123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK	LF	115																		115			
0711-011-125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF	195																		195			
0711-011-221	THERMOPLASTIC, STANDARD, YELLOW, SOLID, 6"	LF	367		520		520		520		520		520		520		520		485		3972			
REVISIONS				 moffatt & nichol ENGINEER OF RECORD: JAMES BLACKFORD, P.E. FL REGISTRATION NO. 72980		SEMINOLE COUNTY PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION				SUMMARY OF QUANTITIES										SHEET NO.				
DATE	DESCRIPTION	DATE	DESCRIPTION																	5Q-6				
								NARCISSUS AVE. ROADWAY IMPROVEMENTS																