

SIGNING AND PAVEMENT MARKING PLANS

COPANS ROAD
FROM EAST OF NW 49 TERRACE TO WEST OF NW 42 AVENUE
BROWARD COUNTY PROJECT NO. 104518

INDEX OF SIGNING AND
PAVEMENT MARKING PLANS

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(*) FOR INFORMATION ONLY

SIGNING & PAVEMENT MARKING
SHOP DRAWINGS TO BE SUBMITTED TO:

JOSEPH C. CHAN, P.E.
EBS ENGINEERING, INC.
4715 NW 157 TH STREET, SUITE #202
MIAMI, FL 33014

PLANS PREPARED BY:
JOSEPH C. CHAN, P.E.
EBS ENGINEERING, INC.
4715 NW 157 TH STREET, SUITE #202
MIAMI, FL 33014



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

SIGNING AND PAVEMENT
MARKING PLANS
ENGINEER OF RECORD: JOSEPH C. CHAN, P.E.

P.E. NO.: 40587

FISCAL YEAR	SHEET NO.
2020	S-01

COUNTY PROJECT MANAGER: NIRMAL DATTA, P.E.

TABULATION OF QUANTITIES

PAY ITEM NO.	DESCRIPTION	UNIT	SHEET NUMBERS												TOTAL THIS SHEET		GRAND TOTAL	
			S-4		S-5		S-6		S-7		S-8		PLAN	FINAL	PLAN	FINAL		
			PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL	PLAN	FINAL						
0700 1 11	SINGLE POST SIGN, F&I GROUND MT, UP TO 12 SF	AS	5		5		7		11		2						28	28
0700 1 12	SINGLE POST SIGN, F&I GROUND MT, 12-20 SF	AS			4												4	4
0700 1 50	SINGLE POST SIGN, RELOCATE	AS			1		2		2								5	5
0700 1 60	SINGLE POST SIGN, REMOVE	AS	1				5		10		2						18	18
0700 2 12	MULTI- POST SIGN, F&I GROUND MOUNT, 12 SF	AS			2		2				1						5	5
0700 2 60	MULTI- POST SIGN, REMOVE	AS			2		2				1						5	5
0700 3503	SIGN PANEL, RELOCATE, 21-30 SF	EA			1				1		1						3	3
0705 11 1	DELINEATOR, FLEXIBLE TUBULAR	EA			1												1	1
0710 90	PAINTED PAVEMENT MARKINGS, FINAL SURFACE	LS																
*	RAISED PAVEMENT MARKER, TYPE B	EA	60		99		103		110		48						420	420
*	PAINTED PM, STD, WHITE, SOLID, 6"	GM	0.322		0.306		0.247		0.323		0.229						1.427	1.427
*	PAINTED PM, STD, WHITE, SOLID, 8"	GM			0.034		0.081		0.020								0.136	0.136
*	PAINT, STD., WHITE, SOLID, CROSSWALK/RA, 12"	LF			201.0		795.0		295.0								1291.0	1291.0
*	PAINT, STD., WHITE, SOLID, CROSSWALK/RA, 18"	LF	34.0														34.0	34.0
*	PAINT, WHITE, SOLID, STOP LINES/CROSSWALK, 24"	LF			79.0		650.0		128.0								857.0	857.0
*	PAINT, STD., WHITE, DOTTED, 6" (10/30)	GM	0.144		0.295		0.167		0.243		0.208						1.058	1.058
*	PAINT, STD., WHITE, 2-4 DOTTED GUIDELINE/ 6-10 DOTTED EXTENSION, 6"	GM	0.050		0.092		0.103		0.132		0.05						0.428	0.428
*	PAINT, STD., MESSAGE OR SYMBOL (ONLY)	EA	13		22		45		22		14						116	116
*	PAINT, STD., ARROWS	EA	12		13		16		12		4						57	57
*	PAINTED PM, STD, YELLOW, SOLID, 6"	GM	0.180		0.194		0.170		0.177		0.152						0.873	0.873
0710 11290	PAINTED PAVEMENT MARKINGS, STANDARD, YELLOW, ISLAND NOSE	SF			64.9		26.4		5.20		5.2						101.7	101.7
0710 11102	THERMOPLASTIC, STANDARD, OTHER SURFACES, WHITE, SOLID, 8"	SF			0.03		0.081		0.020								0.136	0.136
0711 11123	THERMOPLASTIC, STANDARD, WHITE, SOLID, 12" FOR CROSSWALK AND ROUNDABOUT	LF			201.00		795.0		295.0								1291.0	1291.0
0711 11124	THERMOPLASTIC, STANDARD, WHITE, SOLID, 18" FOR DIAGONALS AND CHEVRONS	LF	34.0														34.0	34.0
0711 11125	THERMOPLASTIC, STANDARD, WHITE, SOLID, 24" FOR STOP LINE AND CROSSWALK	LF			79.0		650.0		128.0								857.0	857.0
0711 11141	THERMO., STD., WHITE, GUIDE LINE, 6" (2/4)/ 6-10 DOTTED EXTENSION, 6"	GM	0.050		0.092		0.1		0.13		0.05						0.428	0.428
0711 11160	THERMO., STD., MESSAGE OR SYMBOL (ONLY)	EA	13		22		45		22		14						116	116
0711 11170	THERMO., STD., ARROWS	EA	12		13		16		12		4						57	57
0711 14170	THERMO., PREFORMED, ARROWS (BIKE THRU)	EA	5.0		6.00		8.0		6.0		8						33	33
0711 16101	THERMOPLASTIC, STANDARD, OTHER SURFACES, WHITE, SOLID, 6"	GM	0.322		0.306		0.247		0.323		0.23						1.427	1.427
0711 16102	THERMOPLASTIC, STANDARD, OTHER SURFACES, WHITE, SOLID, 8"	GM			0.034		0.081		0.020								0.136	0.136
0711 16131	THERMO., STD. - OTHER, WHITE, DOTTED, 6" (10/30)	GM	0.144		0.295		0.17		0.24		0.21						1.058	1.058
0711 16201	THERMOPLASTIC, STANDARD, OTHER SURFACES, WHITE, SOLID, 6"	GM	0.180		0.194		0.170		0.177		0.15						0.873	0.873
0920 7142	GREEN COLORED PAVEMENT MARKINGS, BIKE LANE	SF			140.0		440.0		225.0								805.0	805.0

* THESE QUANTITIES ARE PAID FOR UNDER PAINTED PAVEMENT MARKINGS (FINAL SURFACE), LUMP SUM - ITEM NO. 710-90. THE QUANTITIES SHOWN ARE FOR ONE APPLICATION; SEE SPECIFICATION 710 FOR THE NUMBER OF APPLICATIONS REQUIRED.

REVISIONS		JOSEPH C. CHAN P.E. LICENSE NUMBER 40587 EBS ENGINEERING, INC. 4715 NW 157TH STREET, SUITE #202 MIAMI, FL 33014		PUBLIC WORKS DEPARTMENT HIGHWAY CONSTRUCTION AND ENGINEERING DIVISION			SIGNING AND PAVEMENT MARKING PLAN	SHEET NO.
DATE	DESCRIPTION			CITY	COUNTY ROAD	COUNTY PROJECT NO.		S-02
			TAMARAC	COPANS LYONS	104518			

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

1. ALL SIGNING AND PAVEMENT MARKINGS INSTALLED AS PART OF THESE PLANS SHALL CONFORM TO THE LATEST EDITION OF THE FEDERAL HIGHWAY ADMINISTRATION (FHWA) MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREET AND HIGHWAYS, FLORIDA DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS. ALL SIGN PANELS SHALL BE FABRICATED TO COMPLY WITH THE MOST RECENT EDITION OF THE FEDERAL HIGHWAY ADMINISTRATION STANDARD HIGHWAY SIGNS.
2. THE CONTRACTOR SHALL MATCH EXISTING PAVEMENT MARKINGS AT THE BEGINNING AND THE END OF THE PROJECT AND AT ALL SIDE STREETS WITHOUT JOGS AND OFFSETS.
3. SIGN ASSEMBLY LOCATIONS SHOWN ON PLANS WHICH ARE IN CONFLICT WITH LIGHTING, UTILITIES, DRIVEWAYS, WHEELCHAIR RAMPS, ETC., MAY BE ADJUSTED SLIGHTLY AS DIRECTED BY THE ENGINEER. EXTREME LOCATION CHANGES MUST BE APPROVED BY ENGINEER AND BROWARD COUNTY TRAFFIC ENGINEERING DIVISION.
4. INCORRECTLY PLACED THERMOPLASTIC OR PAINT MARKINGS OVER FRICTION COURSE WILL BE REMOVED BY MILLING AND FRICTION COURSE WILL BE REPLACED TO THE FULL LANE WIDTH OF THE IMPACTED AREA FOR A MINIMUM OF 50' ON EITHER SIDE OF THE DEFICIENCY AT THE CONTRACTOR'S EXPENSE. THE ENGINEER MAY APPROVE AN ALTERNATIVE METHOD IF IT CAN BE DEMONSTRATED TO COMPLETELY REMOVE THE MARKINGS WITHOUT DAMAGING THE ASPHALT.
5. THE CONTRACTOR SHALL RELOCATE ALL EXISTING CONFLICTING POST-MOUNTED SIGNS TO A VISIBLE AREA UNDISTURBED BY THE CONSTRUCTION SO AS TO MINIMIZE DAMAGE TO THE SIGNS DURING CONSTRUCTION. COST OF RELOCATION AND REATTACHMENT OF STREET NAME SIGN SHALL BE PAID FOR UNDER PAY ITEM 102-1, MAINTENANCE OF TRAFFIC.
6. ALL RELOCATED SIGNS MUST COMPLY WITH THE STANDARD SPECIFICATIONS, SPECIAL PROVISIONS AND ROADWAY DESIGN AND TRAFFIC STANDARDS AS IF THEY WERE NEW SIGNS. IF EXISTING CLAMPS, BRACKETS, POLES, ETC. NEED TO BE REPLACED THE COST SHALL BE INCLUDED IN THE RELOCATION PAY ITEMS.
7. THE CONTRACTOR SHALL SUBMIT EXISTING SIGNS INVENTORY, INCLUDING PHOTOS, TO THE ENGINEER OF RECORD PRIOR TO GROUND BREAKING. ANY LOST OR DAMAGED DURING CONSTRUCTION SIGNS SHALL BE REPLACED AT NO ADDITIONAL COST. COST OF MAINTAINING OF EXISTING SIGNS TO BE INCLUDED IN ITEM 102-1, MAINTENANCE OF TRAFFIC.


PAY ITEM NOTES: TBD

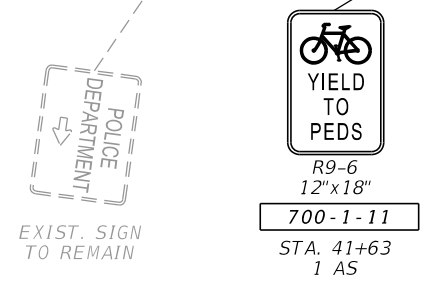
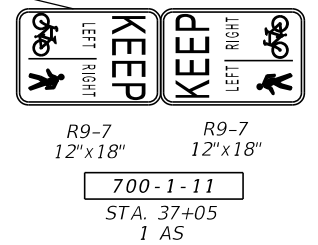
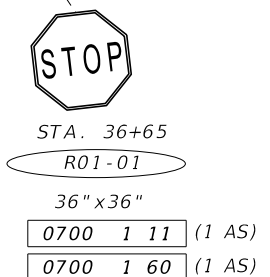
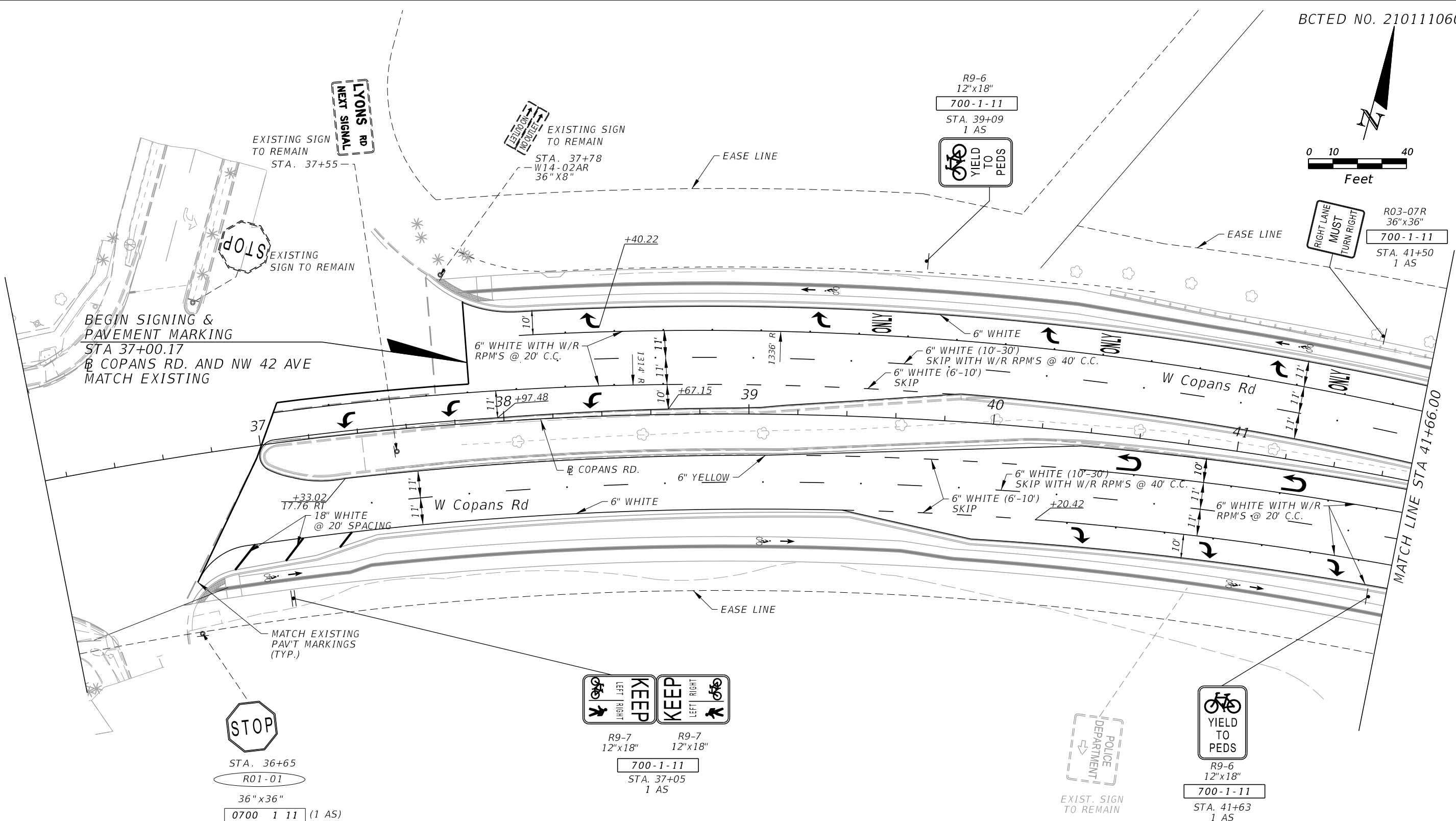
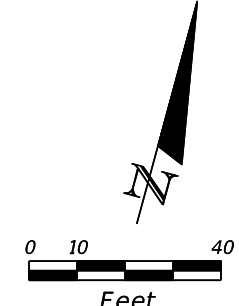
700-1-11 CONTRACTOR SHALL FOLLOW BCTED GROUND SIGN ASSEMBLY DETAILS. ALL SIGNS SHALL USE TYPE XI SHEETING.

700-1-60 INCLUDES DELIVERY OF REMOVED ASSEMBLY TO BROWARD COUNTY TRAFFIC ENGINEERING DIVISION OPERATIONS BUILDING AT 2300 WEST COMMERCIAL BOULEVARD, FORT LAUDERDALE, FLORIDA. PLEASE CONTACT THE TRAFFIC SIGNS SUPERINTENDENT AT (954) 847-2717 TO COORDINATE THE DELIVERY OF MATERIALS.

710-90 INCLUDES ALL FINAL PAINTED PAVEMENT MARKING. FOR QUANTITIES SEE 710-XX-XXX PAY ITEMS. THESE QUANTITIES ARE PAID FOR UNDER PAINTED PAVEMENT MARKINGS (FINAL SURFACE), LUMP SUM - ITEM NO. 710-90. THE QUANTITIES SHOWN ARE FOR ONE APPLICATION; SEE SPECIFICATION 710 FOR THE NUMBER OF APPLICATIONS REQUIRED. ITEMS ARE FOR A ONE TIME APPLICATION OF FINAL SURFACE. DO NOT PLACE THERMOPLASTIC PAVEMENT MARKING PRIOR TO 14 CALENDAR DAYS OF PLACEMENT OF THE FINAL ASPHALT SURFACE COURSE.

PATTERNED PAVEMENT/STAMPED ASPHALT WITH SPECIAL EMPHASIS MARKINGS WILL BE MAINTAINED BY CITY OF COCONUT CREEK (ALL 4 LEGS)

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DATE	DESCRIPTION			CITY	COUNTY ROAD	COUNTY PROJECT NO.		S-03
				TAMARAC	COPANS LYONS	104518		



REVISIONS	
DATE	DESCRIPTION

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 MIAMI, FL 33014

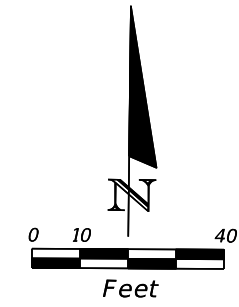


PUBLIC WORKS DEPARTMENT HIGHWAY CONSTRUCTION AND ENGINEERING DIVISION		
CITY	COUNTY ROAD	COUNTY PROJECT NO.
TAMARAC	COPANS LYONS	104518

SIGNING AND PAVEMENT MARKING PLAN

SHEET NO.
S-04

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GS-1
GS-2

STA. 43+94
SEE SHEET S-09

0700 2 60 (2 AS)
0700 2 12 (2 AS)

BUTTERFLY WORLD
TRADEWINDS
COUNTY PARK
NEXT LEFT

S1-01

36" x 36"

W-16-09P

24" x 12"

0700 1 60 (1 AS)

STA. 44+82



STA. 46+41

R2-1

30" x 36"

0700 1 11

0700 1 60



STA. 46+98

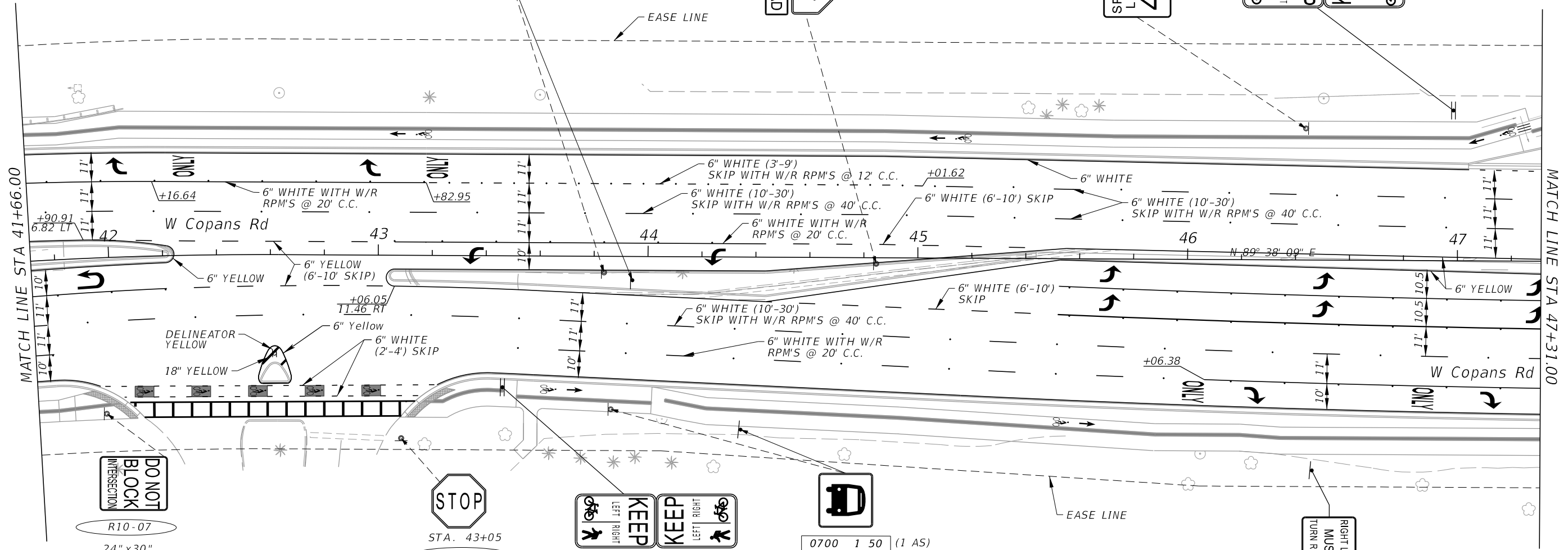
1 AS

700-1-11

R9-7
12"x18"



R9-7
12"x18"



MATCH LINE STA 41+66.00

MATCH LINE STA 47+31.00



R10-07

24" x 30"

0700 1 11A (1 AS)

0700 1 60 (1 AS)

STA. 42+00



STA. 43+05

R01-01

36" x 36"

0700 1 11 (1 AS)

0700 1 60 (1 AS)



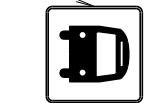
R9-7
12"x18"

R9-7
12"x18"

700-1-11

STA. 43+46

1 AS



0700 1 50 (1 AS)

STA. 44+34

EXISTING SIGN

TO RELOCATE



R03-07R

36" x 36"

700-1-11

STA. 46+46

1 AS

REVISIONS	
DATE	DESCRIPTION

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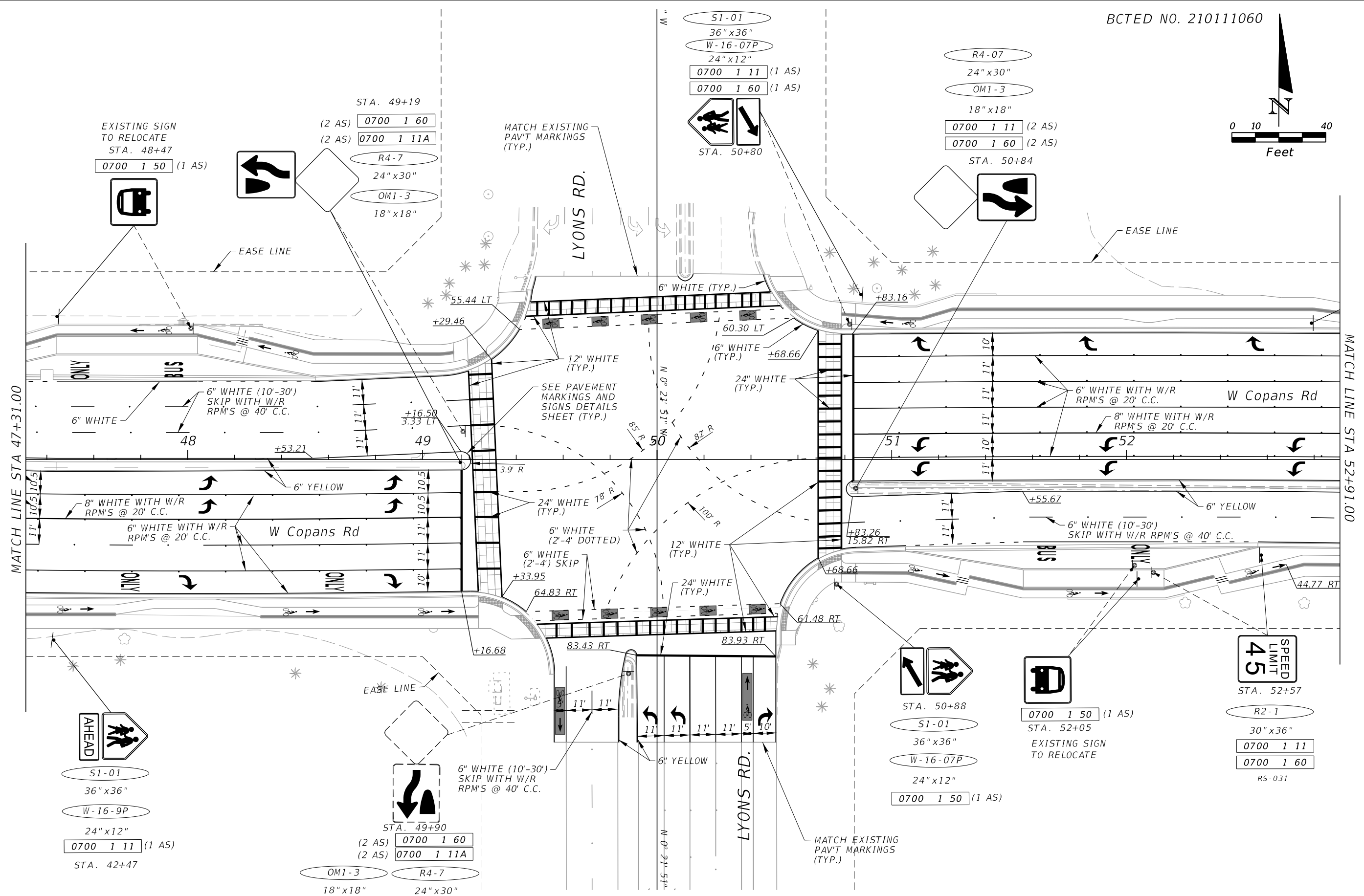
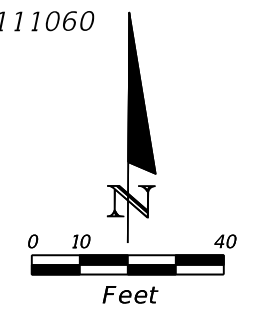


PUBLIC WORKS DEPARTMENT HIGHWAY CONSTRUCTION AND ENGINEERING DIVISION		
CITY	COUNTY ROAD	COUNTY PROJECT NO.
TAMARAC	COPANS LYONS	104518

SIGNING AND PAVEMENT
MARKING PLAN

SHEET NO.
S-05

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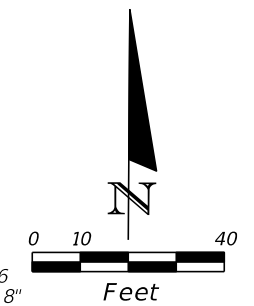
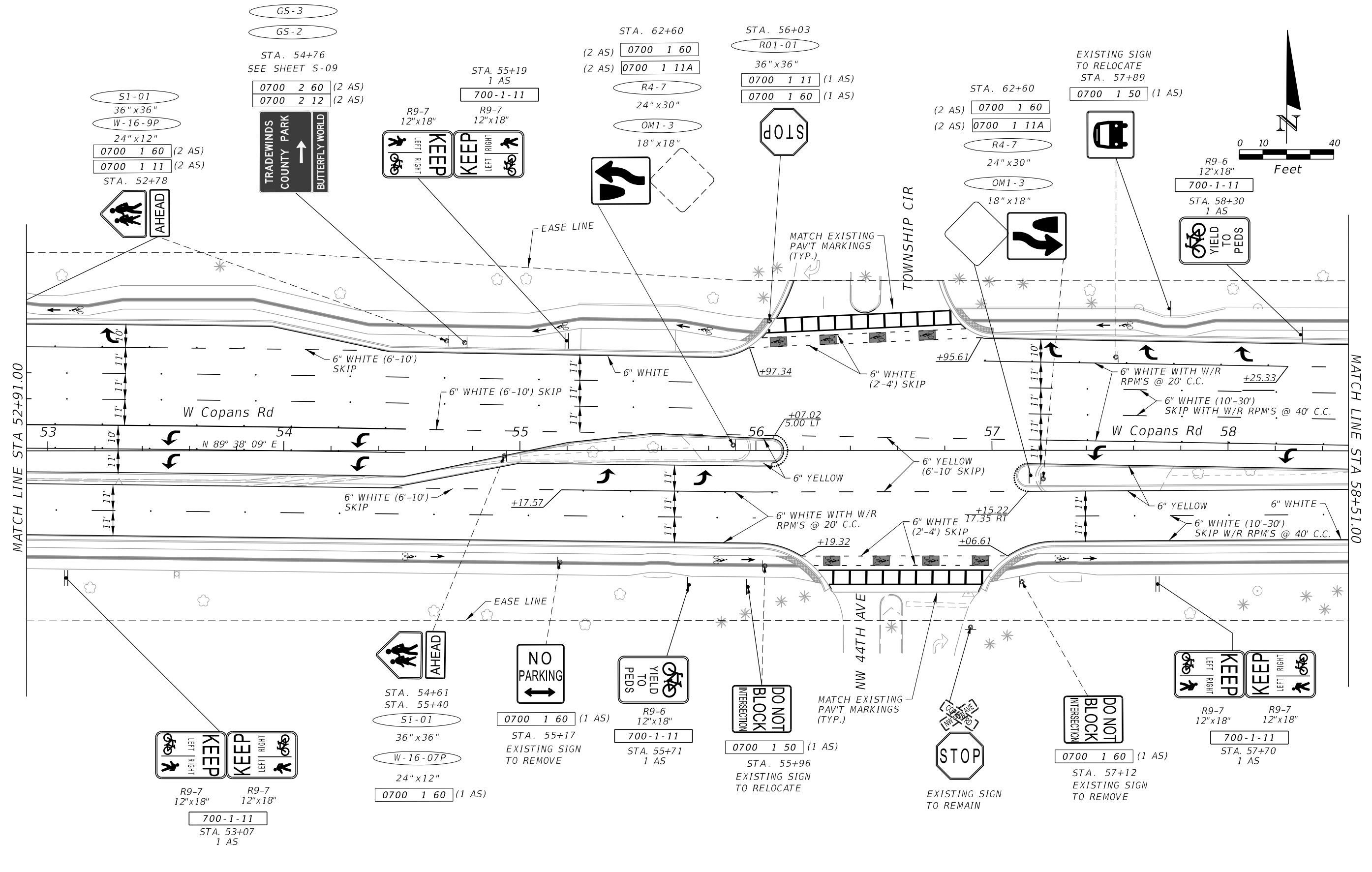


PUBLIC WORKS DEPARTMENT HIGHWAY CONSTRUCTION AND ENGINEERING DIVISION		
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TAMARAC	COPANS LYONS	104518

SIGNING AND PAVEMENT MARKING PLAN

SHEET NO.
S-06

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



MATCH LINE STA 52+91.00

MATCH LINE STA 58+51.00

REVISIONS	
DATE	DESCRIPTION

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 4715 NW 157TH STREET, SUITE #202
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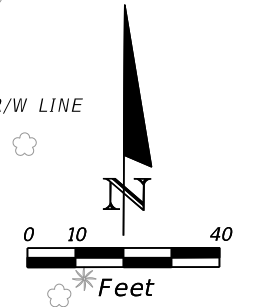
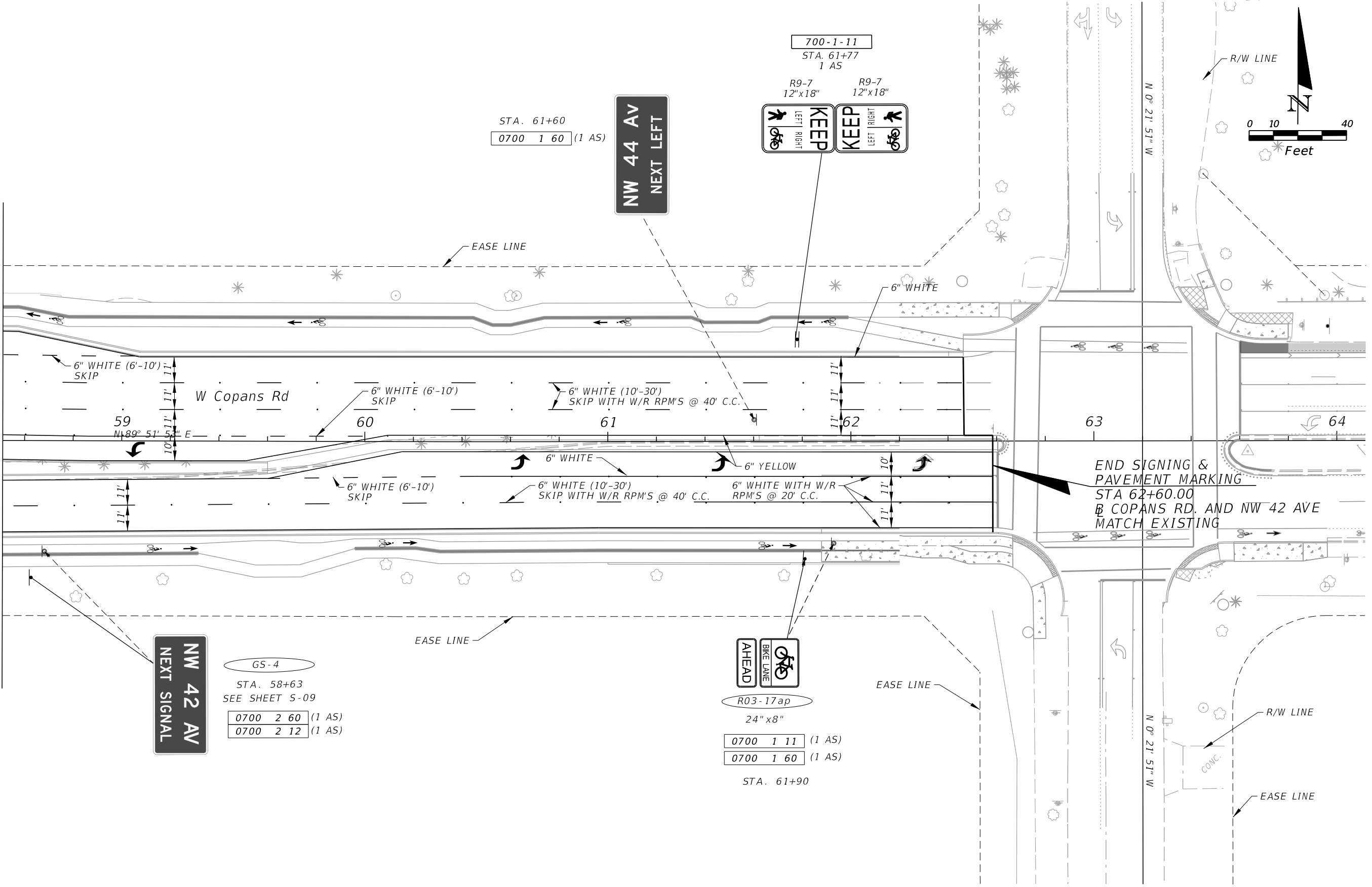
PUBLIC WORKS DEPARTMENT HIGHWAY CONSTRUCTION AND ENGINEERING DIVISION		
CITY	COUNTY ROAD	COUNTY PROJECT NO.
TAMARAC	COPANS LYONS	104518

**SIGNING AND PAVEMENT
MARKING PLAN**

SHEET NO.
S-07

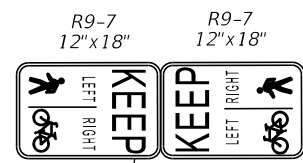
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MATCH LINE STA 58+51.00



STA. 61+60
0700 1 60 (1 AS)

700-1-11
STA. 61+77
1 AS



NW 44 AV
NEXT LEFT

END SIGNING & PAVEMENT MARKING
STA 62+60.00
B COPANS RD. AND NW 42 AVE
MATCH EXISTING

GS-4
STA. 58+63
SEE SHEET S-09
0700 2 60 (1 AS)
0700 2 12 (1 AS)

AHEAD
BIKE LANE
R03-17ap
24" x 8"
0700 1 11 (1 AS)
0700 1 60 (1 AS)
STA. 61+90

REVISIONS	
DATE	DESCRIPTION

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TAMARAC	COPANS LYONS	104518

**SIGNING AND PAVEMENT
MARKING PLAN**

SHEET NO.
S-08

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SIGN NAME	GS-01	QTY	1	SIGN NUMBER		STATION(S)	
PANEL	BORDER					43+94.00	
WIDTH	5'-6"	WIDTH	0.75"				
HEIGHT	3'-6"	RADII	3"				
LEGEND	White	COLOR	White				
COLOR	Brown						
SYMBOL(S)	ANGLE	X	Y	WID	HT		
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge of Lane	COLUMN SIZE	AVERAGE LENGTH			

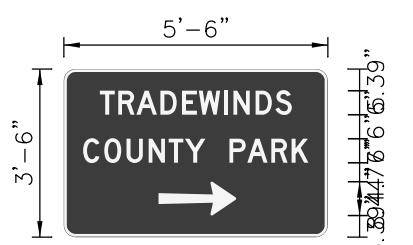


BORDER R=3" TH=0.75"
 Panel Style: guide_con_recreational.ssi
 M.U.T.C.D.: 2009 Edition

NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY	T	R	A	D	E	W	I	N	D	S	L									
SPACE	9	13.6	18.2	24.2	29.6	33.8	40	42.4	47.9	52.9	48									
COPY	C	O	U	N	T	Y	P	A	R	K	L									
SPACE	4.8	10.1	15.7	21.2	26.2	30.3	35.4	41.4	45.9	51.9	57	56.3								
COPY	N	E	X	T	L	E	F	T	L											
SPACE	12.4	17.9	22.2	26.8	30.5	36.5	41.1	45.8	49.9	41.3										
COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				

SIGN NAME	GS-03	QTY	1	SIGN NUMBER		STATION(S)	
PANEL	BORDER					54+76.00	
WIDTH	5'-6"	WIDTH	0.75"				
HEIGHT	3'-6"	RADII	3"				
LEGEND	White	COLOR	White				
COLOR	Brown						
SYMBOL(S)	ANGLE	X	Y	WID	HT		
AR_Type A - Exposed	23.7	5.4	8.4	19.4			
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge of Lane	COLUMN SIZE	AVERAGE LENGTH			

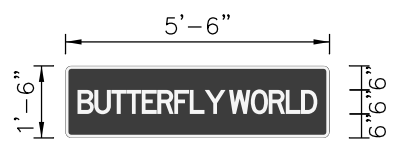


BORDER R=3" TH=0.75"
 Panel Style: guide_con_recreational.ssi
 M.U.T.C.D.: 2009 Edition

NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY	T	R	A	D	E	W	I	N	D	S	L									
SPACE	9	13.6	18.2	24.2	29.6	33.8	40	42.4	47.9	52.9	48									
COPY	C	O	U	N	T	Y	P	A	R	K	L									
SPACE	4.8	10.1	15.7	21.2	26.2	30.3	35.4	41.4	45.9	51.9	57	56.3								
COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				

SIGN NAME	GS-02	QTY	2	SIGN NUMBER		STATION(S)	
PANEL	BORDER					43+94	
WIDTH	5'-6"	WIDTH	0.75"				
HEIGHT	1'-6"	RADII	1.5"				
LEGEND	White	COLOR	White				
COLOR	Brown						
SYMBOL(S)	ANGLE	X	Y	WID	HT		
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge of Lane	COLUMN SIZE	AVERAGE LENGTH			

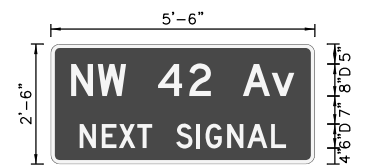


BORDER R=1.5" TH=0.75"
 Panel Style: guide_con_recreational.ssi
 M.U.T.C.D.: 2009 Edition

NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY		B	U	T	T	E	R	F	L	Y	W	O	R	L	D	L				
SPACE	37.6	37.6	3	7.2	11.5	15.2	19.1	23	27.2	31.1	34.8	40	40.9	46.4	50.8	55.1	58.9	25.4		
COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				
COPY																				
SPACE																				

SIGN NAME	GS-04	QTY	1	SIGN NUMBER		STATION(S)	
PANEL	BORDER					58+63.00	
WIDTH	5'-6"	WIDTH	1"				
HEIGHT	2'-6"	RADII	2.25"				
LEGEND	White	COLOR	White				
COLOR	Green						
SYMBOL(S)	ANGLE	X	Y	WID	HT		
SIGN NUMBER	NUMBER OF POSTS	CLEARANCE Edge of Lane	COLUMN SIZE	AVERAGE LENGTH			



BORDER R=2.25" TH=1"
 Panel Style: guide_con_street.ssi
 M.U.T.C.D.: 2009 Edition

NO. OF LIGHT FIXTURES	FIXTURE SPACING	PHOTOMETRIC CURVE	WATT	VOLTAGE

COPY	N	W	4	2	A	v	L												
SPACE	5.1	11.7	18.8	26.8	34.6	40	48	55.2	55.8										
COPY	N	E	X	T	S	I	G	N	A	L	L								
SPACE	7.2	12.7	17	21.6	25.3	31.3	36.4	38.7	44.1	49.1	55.1	51.6							
COPY																			
SPACE																			
COPY																			
SPACE																			
COPY																			
SPACE																			
COPY																			
SPACE																			

REVISIONS	
DATE	DESCRIPTION

JOSEPH C. CHAN
 P.E. LICENSE NUMBER 40587
 EBS ENGINEERING, INC.
 4715 NW 157TH STREET, SUITE #202
 MIAMI, FL 33014



PUBLIC WORKS DEPARTMENT
HIGHWAY CONSTRUCTION AND ENGINEERING DIVISION

CITY	COUNTY ROAD	COUNTY PROJECT NO.
TAMARAC	COPANS LYONS	104518

Design 9/27/2022 7:05:08 AM SFILES

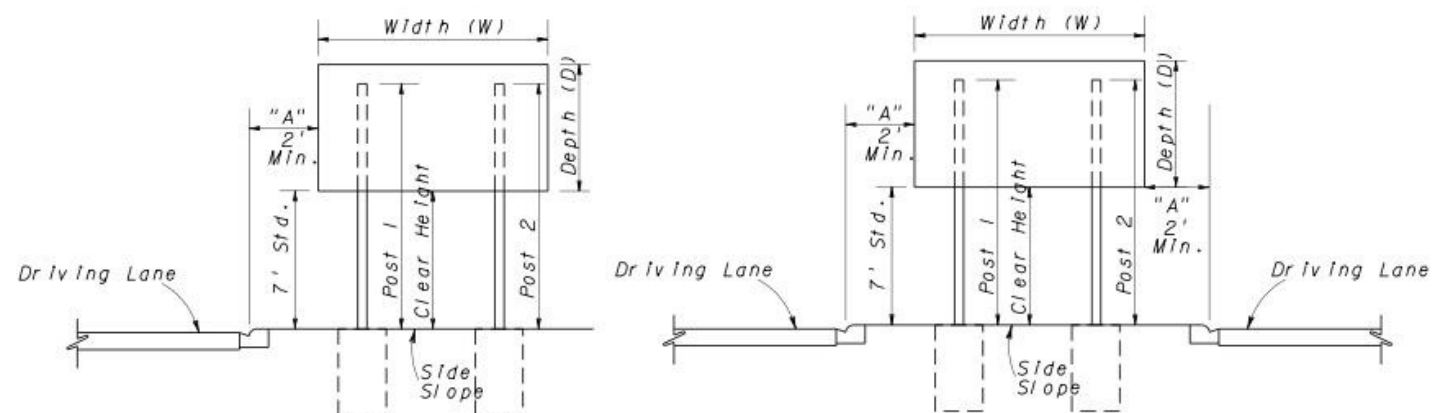
SIGNING AND PAVEMENT MARKING PLAN

SHEET NO.
S-09

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

MULTI COLUMN SIGN DATA

CLEARANCE FROM FACE OF CURB TO EDGE OF SIGN ("A")	STATION	SIGN NO.	SIGN SIZE (W X D)	SIDE SLOPE (RUN:RISE)	CLEAR HEIGHT	NO. OF POSTS	AVERAGE LENGTH OF POSTS	STEEL POSTS	ALUMINUM BEAMS	ALUMINUM TUBES	AVERAGE LENGTH OF POSTS AND FOOTING	U-CHANNEL POSTS	SQUARE STEEL TUBES
2'	37+60	GS-1	4.5 x 2.5	FLAT	7.00	2	XXXX	TWO S 3 x 5.7	N/A	N/A	XXXX	N/A	N/A



TYPICAL SECTIONS FOR PLACEMENT OF MULTI-COLUMN SIGNS

NOTES

1. CLEAR HEIGHT IS THE DISTANCE BETWEEN THE BOTTOM OF THE MAIN SIGN PANEL AND THE GROUND AT THE CENTER OF THE MAIN SIGN PANEL
2. AVERAGE LENGTH OF POSTS COLUMN IS APPLICABLE TO STEEL POSTS

REVISIONS	
DATE	DESCRIPTION

JOSEPH C. CHAN
 P.E. LICENSE NUMBER 40587
 EBS ENGINEERING, INC.
 4715 NW 157TH STREET, SUITE #202
 MIAMI, FL 33014

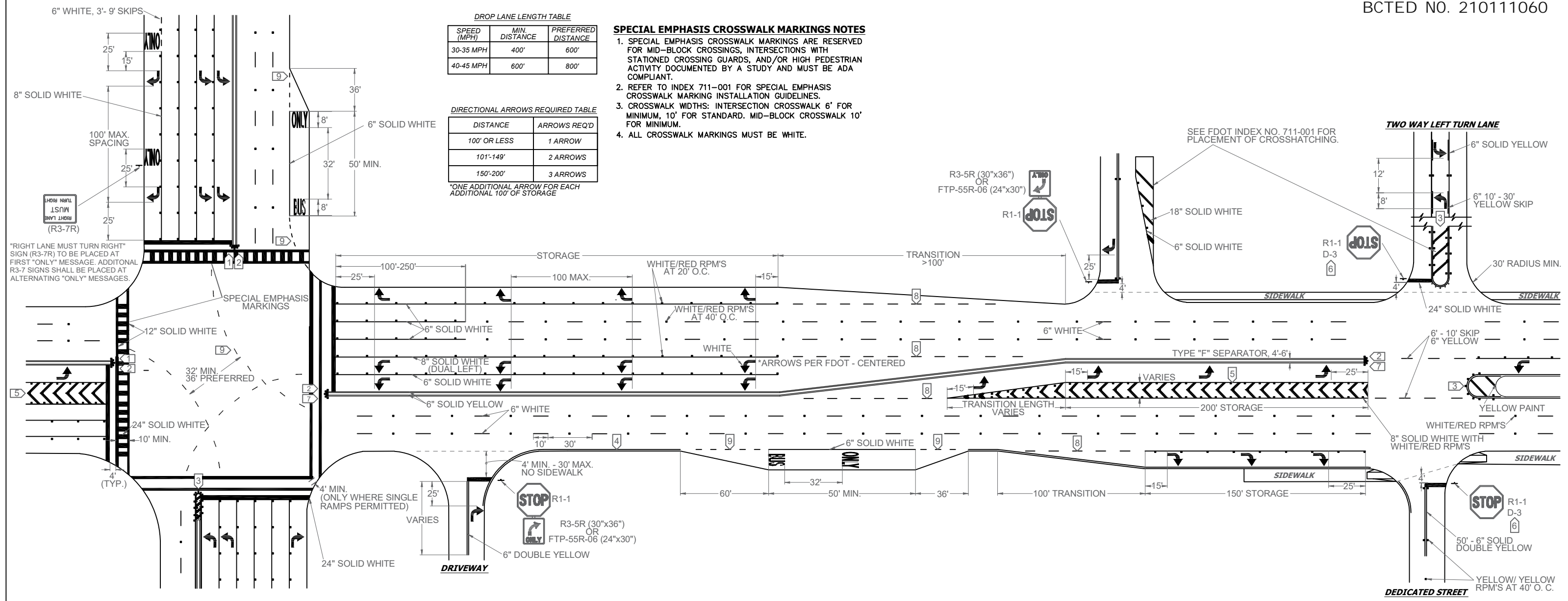


PUBLIC WORKS DEPARTMENT
HIGHWAY CONSTRUCTION AND ENGINEERING DIVISION

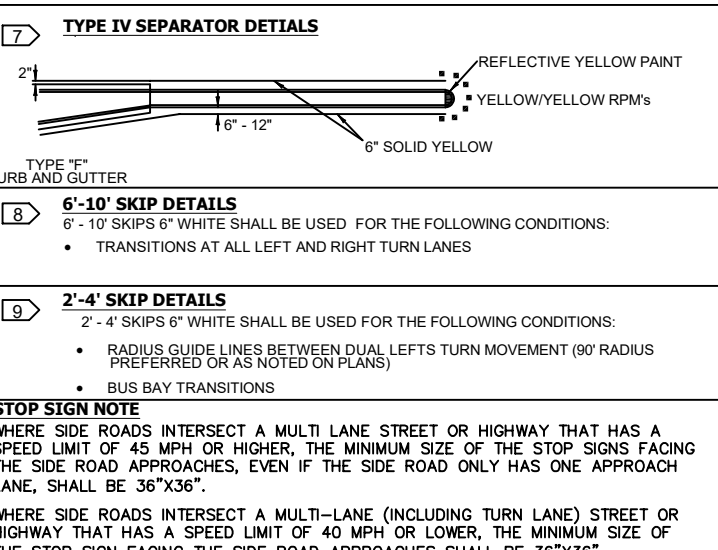
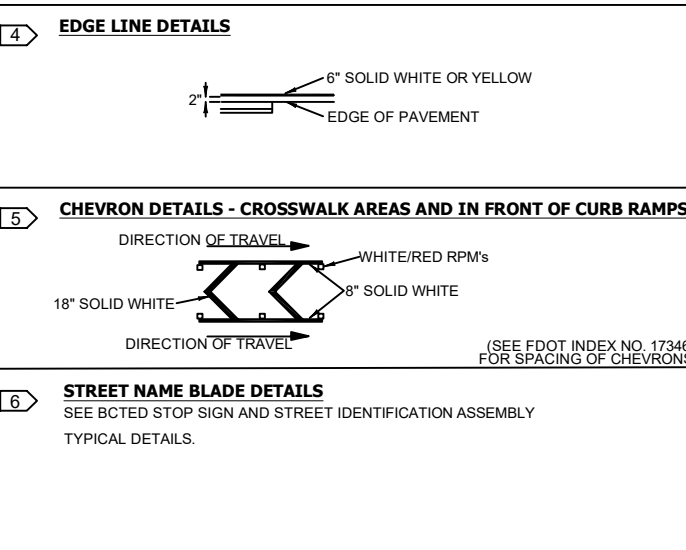
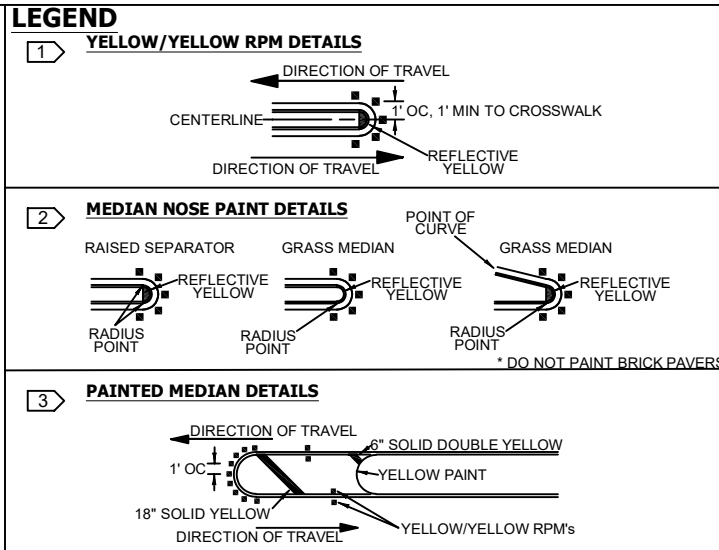
CITY	COUNTY ROAD	COUNTY PROJECT NO.
TAMARAC	COPANS LYONS	104518

SIGNING AND PAVEMENT
MARKING PLAN

SHEET NO.
 S-10



- NOTES**
- ALL PAVEMENT MARKINGS SHALL BE ALKYD BASED THERMOPLASTIC AND FULLY RETROREFLECTORIZED.
 - ALL PAVEMENT MARKINGS ON PAVEMENT SYSTEMS SHALL BE 3M 380/381 SERIES TAPE OR EQUIVALENT AND APPLIED WITH P60 ADHESIVE AS PER MANUFACTURERS SPECIFICATIONS.
 - ALL PAVEMENT MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES", BCTED STANDARDS, AND FDOT DESIGN STANDARDS.
 - SEE FDOT INDEX NO 706-001 FOR PLACEMENT OF RPM'S (FOR BULLNOSE RPM TREATMENT, SEE LEGEND NO. 1)
 - RPM'S SHALL BE CLASS "B" OR EQUIVALENT, APPLIED WITH EPOXY OR BITUMINOUS ADHESIVE.
 - FDOT APPROVED SEALER SHALL BE USED WHEN APPLYING MARKINGS ON CONCRETE.
 - FOR BIKE LANE DETAILS SEE FDOT INDEX NO. 711-002.
 - EXISTING MARKINGS SHALL BE REMOVED BY WATER BLASTING OR SAND BLASTING.
 - ALL STOP LINES TO BE 4' BEHIND CROSSWALK OR SIDEWALK.
 - PAVEMENT MARKING REFLECTIVITY SHALL BE UNIFORM ACROSS THE ENTIRE STRIPE AND SHALL HAVE A MINIMUM REFLECTIVITY READING OF 250 MILLICANDELAS FOR WHITE AND 175 MILLICANDELAS FOR YELLOW.
 - ALL PRODUCTS MUST BE ON FDOT'S APPROVED PRODUCTS LIST (APL).
 - RPMS SHALL NOT BE INSTALLED ADJACENT TO BIKE LANES.
 - LONGITUDINAL CROSSWALK MARKINGS SHALL BE INSTALLED AT ALL CROSS STREETS ON COUNTY ROADS THAT ARE FOUR LANES OR GREATER.



REVISIONS

DATE	DESCRIPTION
11-24-2020	UPDATED NOTES
04-14-2021	UPDATED NOTES
05-06-2022	UPDATED NOTES



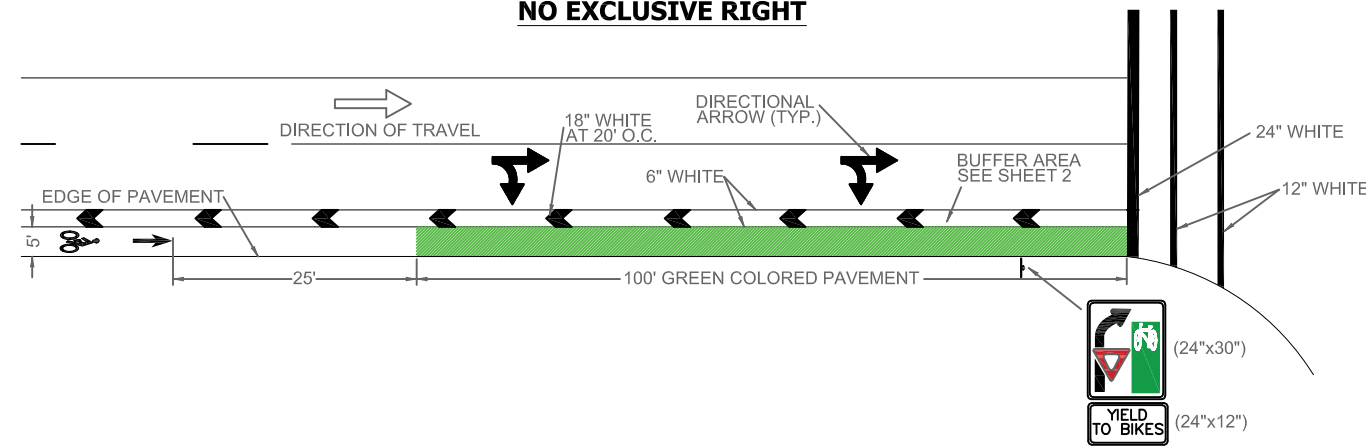
**PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING DIVISION**

DESIGN BY: CARMELO CARATTOZZOLO, P.E. SCALE: NTS
 DRAWN BY: STEPHON RAMOUTAR
 CHECKED BY: CARMELO CARATTOZZOLO, P.E.

**PAVEMENT MARKINGS
AND SIGNS
DETAILS**

SHEET NO.
S-11

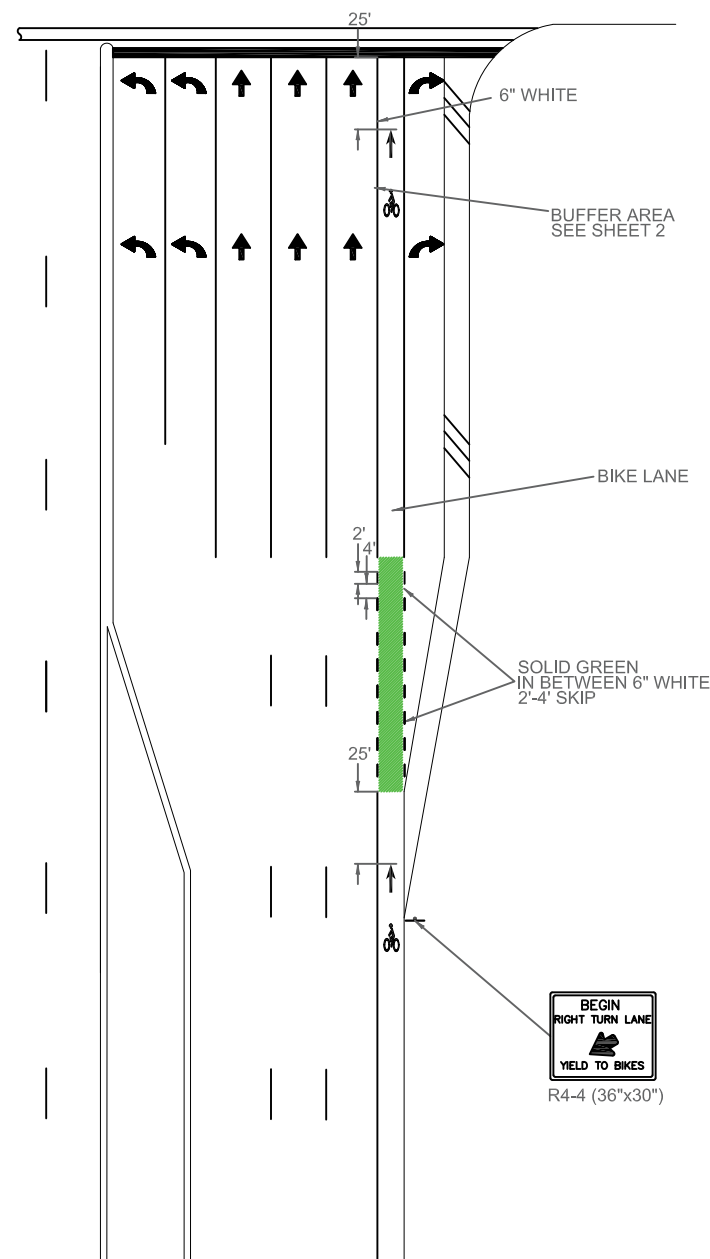
NO EXCLUSIVE RIGHT



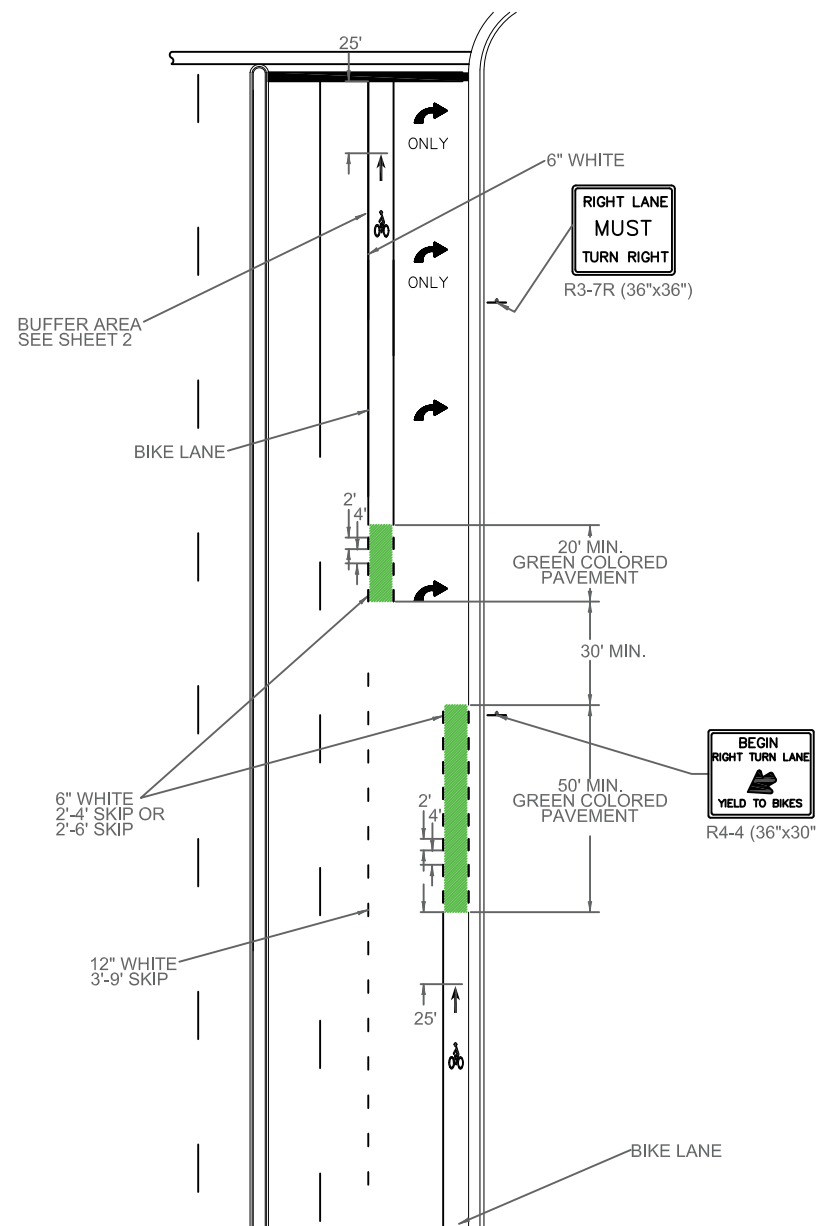
LEGEND



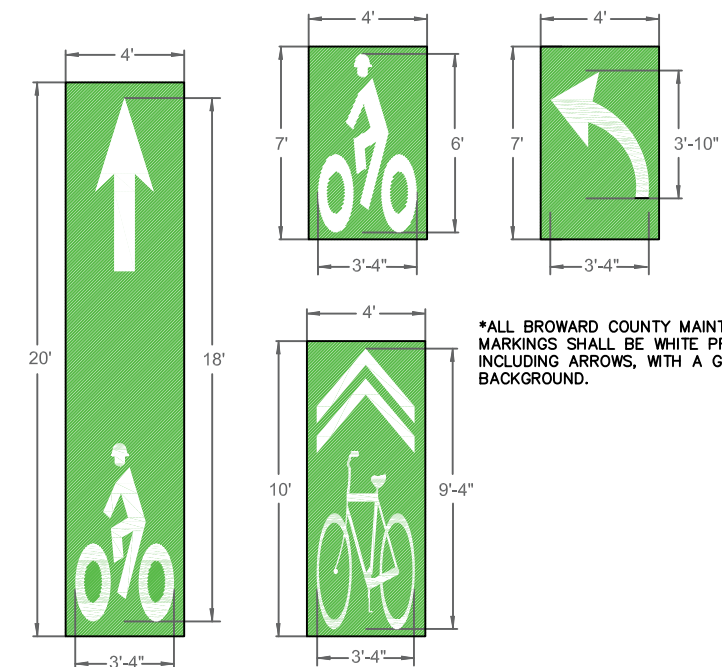
BIKE LANE WITH SEPARATE RIGHT TURN LANE



BIKE LANE WITH RIGHT TURN DROP LANE



BICYCLE PAVEMENT MARKING STANDARDS

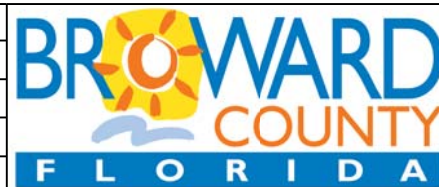


NOTES

1. THE PREFORMED THERMOPLASTIC MARKINGS SHALL MEET STATE SPECIFICATIONS AND BE APPROVED FOR USE BY THE APPROPRIATE MAINTAINING AGENCY. GREEN AND WHITE PREFORMED THERMOPLASTIC MARKINGS MUST BE ON THE FDOT APL SPECIFICATION 523 FOR GREEN AND 711 FOR WHITE PREFORMED THERMOPLASTIC MARKINGS.
2. THE SURFACE OF THE PREFORMED THERMOPLASTIC MATERIAL SHALL CONTAIN FACTORY APPLIED NON-SKID MATERIAL WITH A MINIMUM HARDNESS OF 8 (MOHS SCALE). UPON APPLICATION THE MATERIAL SHALL PROVIDE A MINIMUM SKID RESISTANCE VALUE OF 60 BPN WHEN TESTED ACCORDING TO ASTM E 303.
3. THE MATERIAL MUST BE APPLIED AT A MINIMUM THICKNESS OF 90 MILS (2.29 MM) OR 125 MILS (3.15 MM).
4. THE MATERIAL MUST CONTAIN A MINIMUM OF THIRTY PERCENT (30%) INTERMIXED GRADED GLASS BEADS BY WEIGHT. THE INTERMIXED BEADS SHALL BE CLEAR AND TRANSPARENT. NO MORE THAN TWENTY PERCENT (20%) SHALL CONSIST OF IRREGULAR FUSED SPHEROIDS OR SILICA
5. THE MATERIALS SHALL BE APPLIED USING THE PROPANE TORCH METHOD RECOMMENDED BY THE MANUFACTURER. THE MATERIAL MUST BE APPLIED WITHOUT PREHEATING OF THE PAVEMENT TO A SPECIFIC TEMPERATURE. FOR CONCRETE APPLICATION, A COMPATIBLE PRIMER SEALER MAY BE APPLIED BEFORE APPLICATION TO ASSURE PROPER ADHESION.

REVISIONS

DATE	DESCRIPTION
07-31-2017	N/A
08-16-2019	UPDATED SPACING



**PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING DIVISION**

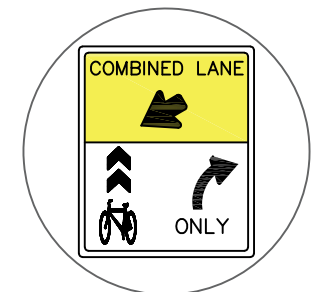
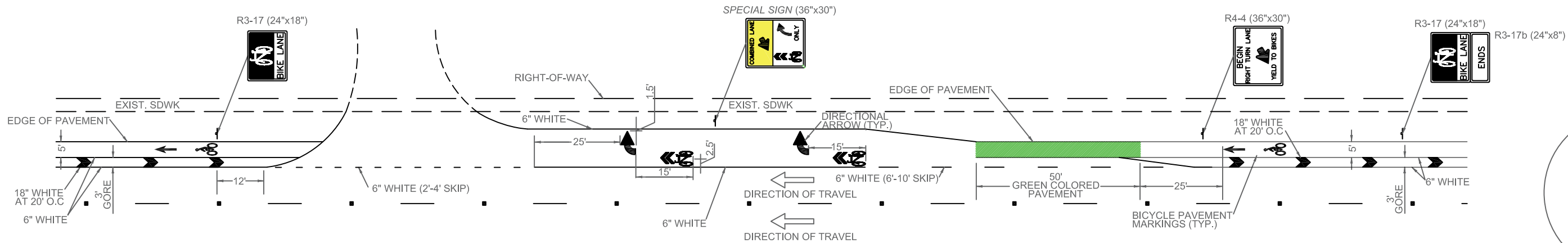
DESIGN BY: CARMELO CARATTOZZOLO, P.E.	SCALE: NTS
DRAWN BY: STEPHON RAMOUTAR	
CHECKED BY: ANDREW SEBO, P.E., P.T.O.E	

**BICYCLE PAVEMENT
MARKINGS AND SIGNS
DETAILS**

**SHEET
NO.**

S-12

SPECIAL AREA MARKING DETAIL # 1



SPECIAL AREA MARKING DETAIL #1 NOTES

- USE DETAIL #1 WHEN BIKE LANE CANNOT BE MAINTAINED ADJACENT TO RIGHT TURN LANE.

SPECIAL SIGN DETAIL (36"x30")

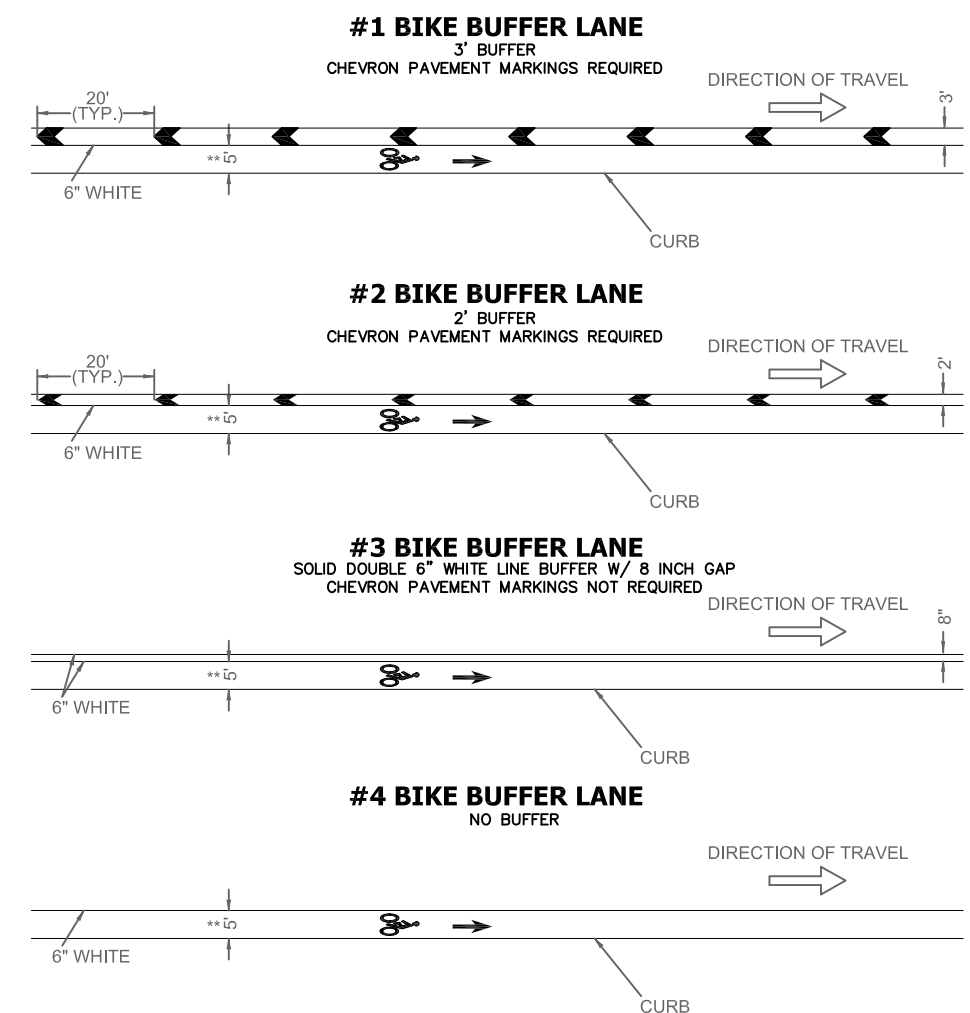
TYPICAL SECTION: TRANSPORTATION COMPONENTS

Functional Classification	Posted Speed (MPH)	Bicycle Space		On-Street Parallel Parking Requested Through Land Development Code Process for Context Sensitive Corridor Designation	
		Bicycle Lane **	Buffer ***	Door Zone This is in addition to the bicycle space ^^^	Parking Space Measured from curb face ****
Local Streets	30 or less	N/A	N/A	4'	7'
Residential Collector	30 or less	4'-5'^^	2'-3'^^	4'	7'
Collector & Above	35	4'-5'^^	2'-3'^^	4'	7'
Collector & Above	40	4'-5'	2'-3'	4'-5'	7'
Minor Arterial	45 or less	4'-5'	2'-3'	4'-5'	7'
Principal Arterial	55 or less	5'-6'	3' or Greater	N/A	N/A

TYPICAL SECTION: TRANSPORTATION COMPONENTS NOTES

- ** A FIVE-FOOT BICYCLE LANE IS THE COUNTY'S TARGET BICYCLE LANE WIDTH. IF A FIVE-FOOT BIKE LANE CANNOT BE ACHIEVED, A FOUR-FOOT BIKE LANE WIDTH SHALL BE USED.
- *** IF A BUFFER CAN BE INCORPORATED, THREE FEET IS THE TARGET BUFFER WIDTH. A FOUR-FOOT BIKE LANE WITH A THREE-FOOT BUFFER IS PREFERRED TO A FIVE-FOOT BICYCLE LANE WITH A TWO-FOOT BUFFER. IF A BUFFER CANNOT BE PROVIDED, A SOLID DOUBLE 6 INCH WHITE LINE WITH 8 INCH GAP WILL BE USED AS THE BIKE LANE STRIPE. THE BUFFER AREA SHOULD INCLUDE CHEVRON PAVEMENT MARKINGS. SEE BIKE BUFFER LANE OPTIONS.
- **** IF CURB AND GUTTER DOES NOT EXIST, THE PARKING SPACE WOULD BE EIGHT FEET WIDE MEASURED FROM THE EDGE OF PAVEMENT. PEDESTRIAN AND BICYCLE SPACE TAKES PRIORITY OVER ON-STREET PARKING WHEN RIGHT-OF-WAY IS LIMITED.
- ^ SLM - SHARED LANE MARKING (FDOT STANDARD PLAN 711-002) CAN BE USED ON COLLECTORS AND ABOVE WHEN APPROPRIATE.
- ^^ WILL CONSIDER A THREE-FOOT DOOR ZONE ON A CASE-BY-CASE BASIS.

BIKE BUFFER LANE - OPTIONS



BIKE BUFFER LANE OPTIONS NOTES

1. OPTION #1 IS DESIRED FIVE FOOT BICYCLE LANE WITH THREE FOOT BUFFER.
2. IF OPTION #1 CANNOT BE ACHIEVED THEN CONSIDER OPTION #2 AND OPTION #3
3. USE OPTION #4 ONLY IF NO BUFFER CAN BE ACHIEVED

REVISIONS

DATE	DESCRIPTION
07-31-2017	N/A
08-16-2019	UPDATED SPACING



PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING DIVISION

DESIGN BY: CARMELO CARATOZZOLO, P.E. SCALE: NTS
 DRAWN BY: STEPHON RAMOUTAR
 CHECKED BY: ANDREW SEBO, P.E., P.T.O.E

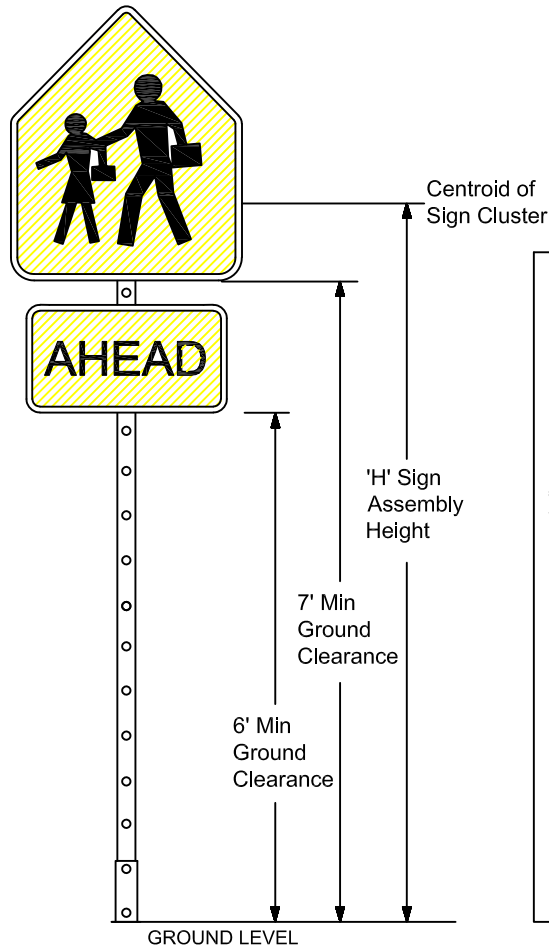
BICYCLE PAVEMENT
MARKINGS AND SIGNS
DETAILS

SHEET
NO.

S-13

GUIDE TO USE THIS STANDARD:

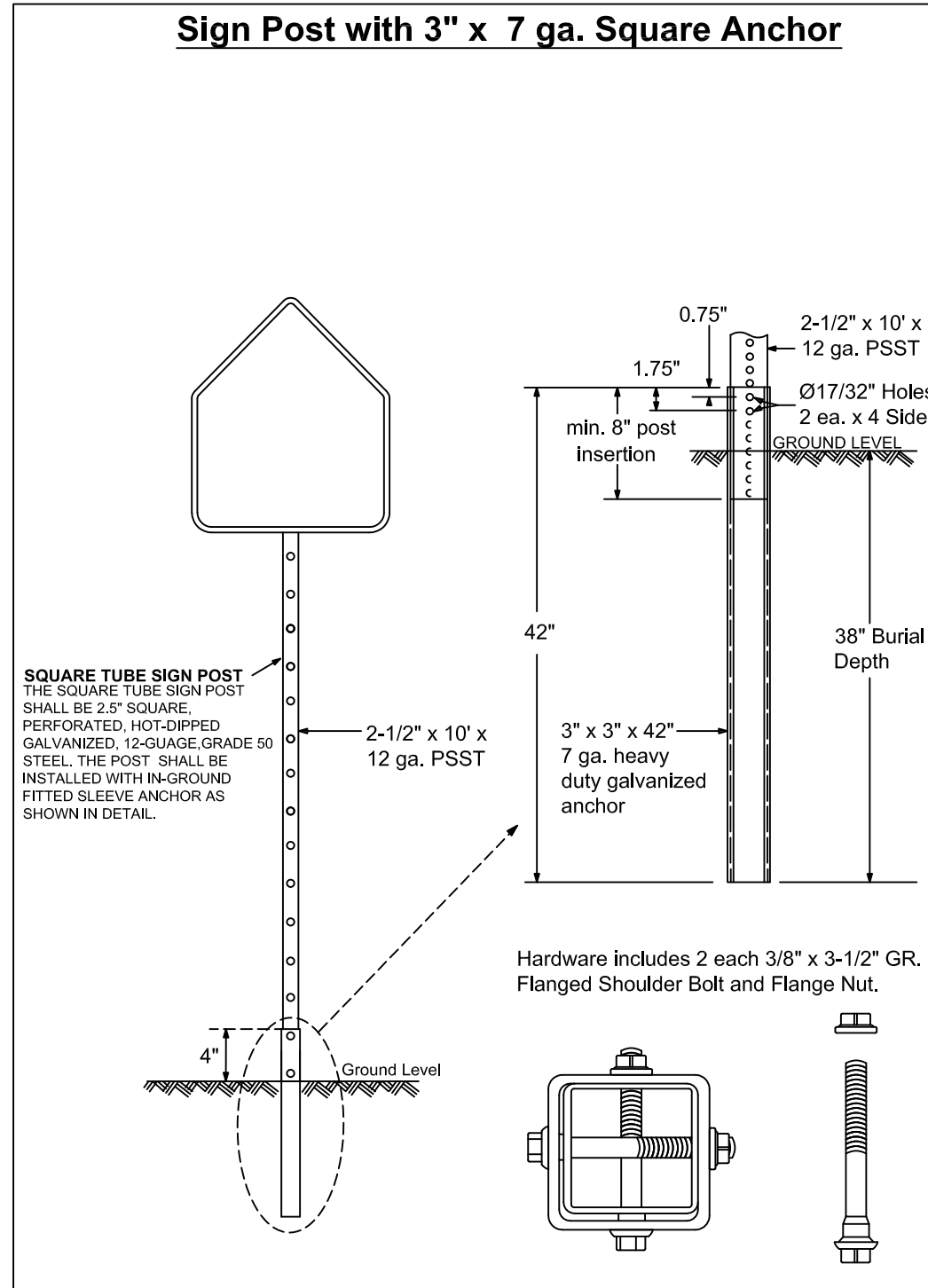
1. Calculate the Total Panel Area and the centroid 'C' for an individual sign or a sign cluster.
2. Determine the height 'H' from the groundline for the individual sign or the cluster.
3. Consult the Post Size Table and find the intersection point.
4. Design the post and the foundation according to the required Post Size and Assembly Details.



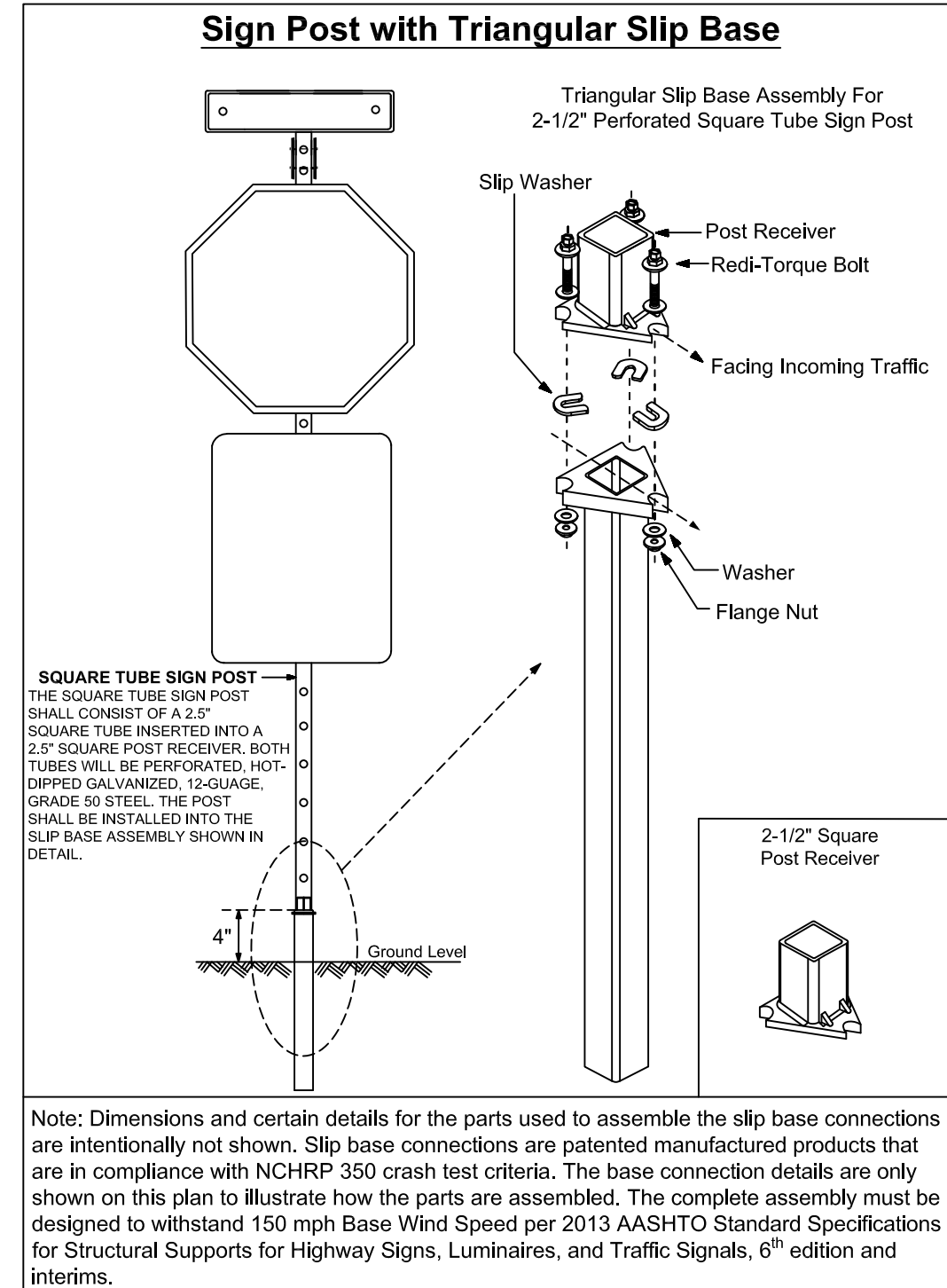
Total Panel Area (sf)	'H' Sign Assembly Height (ft) (measure from ground)				
	8	8.5	9	9.5	10
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					
13					
14					
15					
16					
17					
18					
19					
20+					

*REGARDLESS OF POST SIZE TABLE; IF A SIGN PANEL IS EQUAL TO OR GREATER THAN 4 FEET IN WIDTH, A TWO POST INSTALLATION IS REQUIRED WITH A TRIANGULAR SLIP BASE.

Sign Post with 3" x 7 ga. Square Anchor



Sign Post with Triangular Slip Base



REVISIONS	
DATE	DESCRIPTION
03-21-2017	UPDATED POST SIZE
11-24-2020	ADDED POST SIZE NOTE
02-05-2021	UPDATED POST BASE HEIGHT



PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING DIVISION

DESIGN BY: YVES D'ANJOU, P.E. SCALE: NTS

DRAWN BY: STEPHON RAMOUTAR

CHECKED BY: ANDREW SEBO, P.E., PTOE

**GROUND SIGN ASSEMBLY
DETAILS**

SHEET NO.

S-14

Typical Details

Typical Details

STREET ID (D3-1)

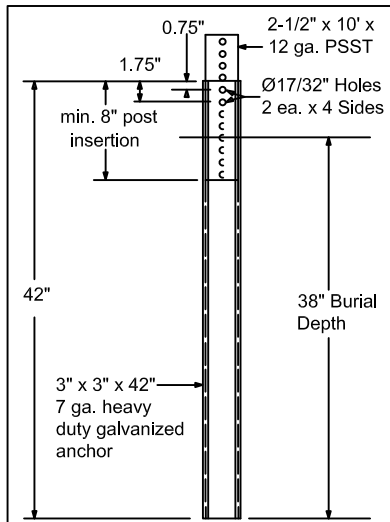


Isometric View

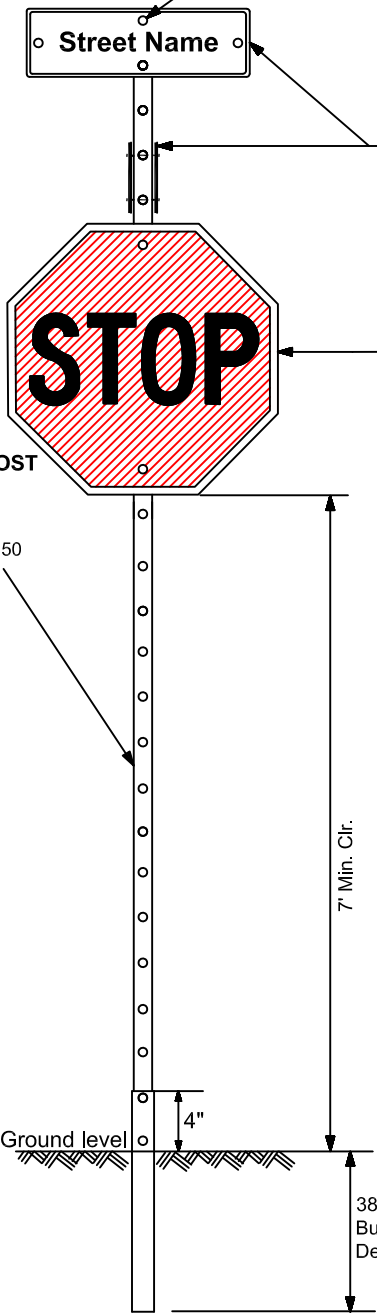
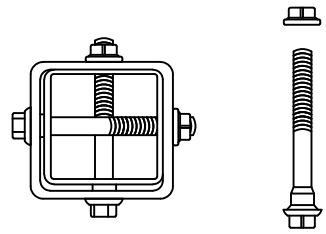
2-CROSS STREET BLADES
THE ENDS OF THE STREET ID SIGNS MUST BE BOLTED TOGETHER :
BOLTS - #18 HEX HEAD STAINLESS STEEL 5/16" x 3/4"
NUTS - 5/16" HEX HEAD STAINLESS STEEL W/ 3/8" NYLON WASHERS

SQUARE TUBE SIGN POST
The Square Tube Sign Post shall be 2.5" square, perforated, hot-dipped galvanized, 12-gauge, grade 50 steel. The post shall be installed with in-ground fitted sleeve anchor as shown in detail "A" below.

DETAIL "A"



Hardware includes 2 each 3/8" x 3-1/2" GR. 8 Flanged Shoulder Bolt and Flange Nut.

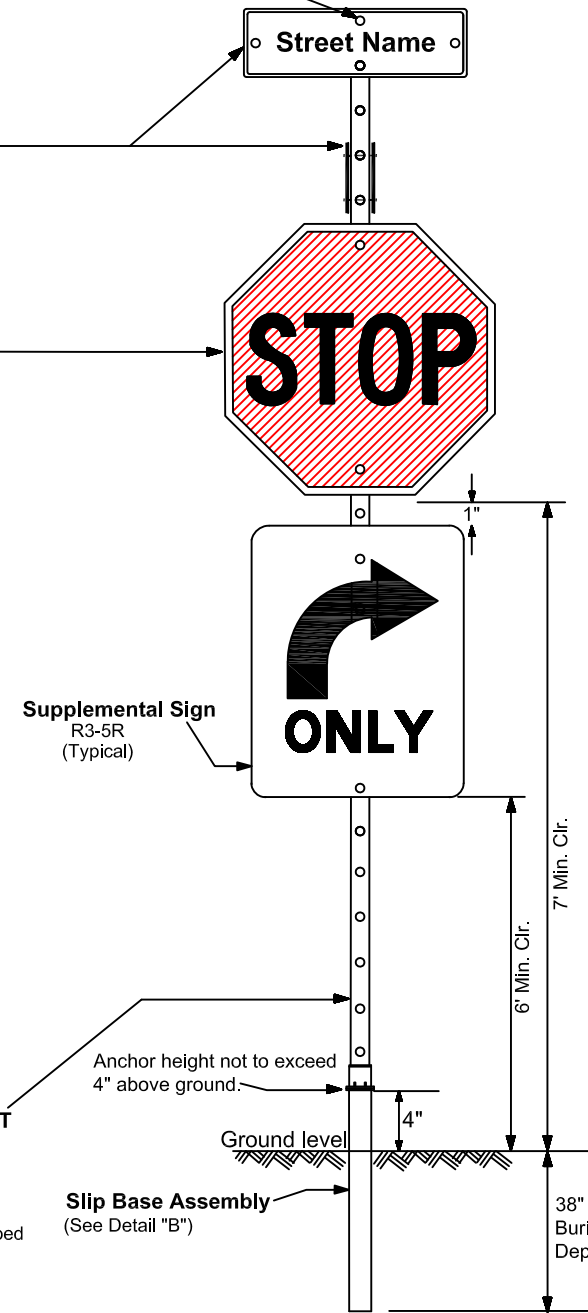
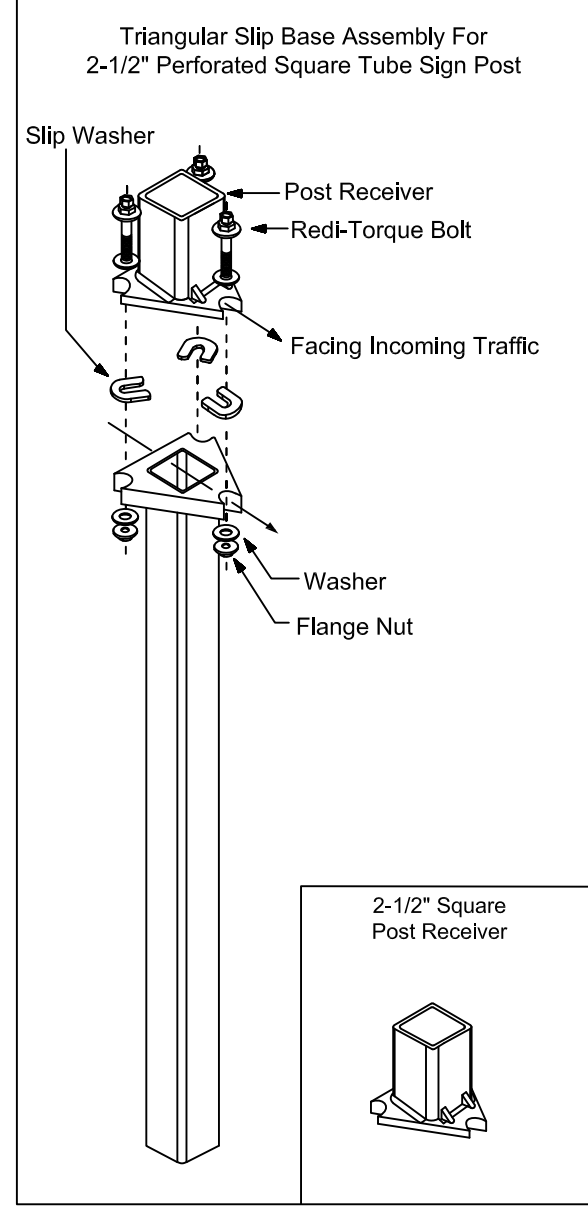


STREET ID (D3-1) MATERIALS:
LETTERS
WHITE TYPE XI SHEETING
LETTERING OF STREET NAME SIGNS SHALL BE COMPOSED OF A COMBINATION OF LOWERCASE LETTERS WITH INITIAL UPPERCASE LETTERS
BORDER
BORDER WIDTHS WILL VARY BASED ON LETTER HEIGHTS
LETTER HEIGHTS - BORDER WIDTHS
4 INCH LETTER = 0.375 INCH BORDER WIDTH
6 INCH LETTER = 0.500 INCH BORDER WIDTH
8 INCH LETTER = 0.750 INCH BORDER WIDTH
GREEN BACKGROUND
GREEN TRANSLUCENT INK SILK-SCREENED CLEAR-COATED OR ELECTRO-CUT (EC) FILM OR EQUIVALENT
LETTER SIZES
SEE MUTCD TABLE 2D-2 (PG 163) FOR MINIMUM LETTER HEIGHTS
LENGTH VARIES BY STREET NAME
HARDWARE
BOLTS - #18 HEX HEAD STAINLESS STEEL 5/16" x 3"
NUTS - 5/16" STAINLESS STEEL W/ NYLON WASHERS.
REGULATORY SIGN
WHEN NO STREET ID IS PRESENT THE STOP SIGN SHALL BE MOUNTED FLUSH TO THE TOP OF THE POST WHILE MAINTAINING 7 FEET MIN. CLEARANCE BETWEEN BOTTOM OF SIGN AND GROUND LEVEL. ANY SIGN INSTALLED BACK TO BACK WITH THE STOP SIGN SHALL BE SMALLER THAN THE STOP SIGN.
STOP, DO NOT ENTER OR YIELD
WHITE TYPE XI SHEETING
PRESSURE-SENSITIVE RED TRANSLUCENT INK SILK-SCREENED CLEAR-COATED OR ELECTRO-CUT (EC) FILM OR EQUIVALENT.
HARDWARE
FRONT: #18 HEX HEAD STAINLESS STEEL 5/16" x 3" BOLT W/ 3/8" NYLON WASHER
BACK: 5/16" HEX HEAD STAINLESS STEEL NUT W/ 3/8" STAINLESS STEEL WASHER.
NOTES: 1. ALL TYPE XI SHEETING UTILIZED MUST BE ON THE FDOT APL LIST.
2. SEE BCTED TECHNICAL POLICY MEMO #TPM - 16-001 - SPECIFICATIONS FOR RETROREFLECTIVE TRAFFIC SIGN MATERIALS.

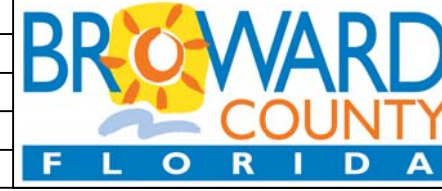
SQUARE TUBE SIGN POST
The Square Tube Sign Post shall consist of a 2.5" square tube inserted into a 2.5" square post receiver. Both tubes will be perforated, hot-dipped galvanized, 12-gauge, grade 50 steel. The post shall be installed into the slip base assembly shown in detail "B".

Notes:
1. Dimensions and certain details for the parts used to assemble the slip base connections are intentionally not shown. Slip base connections are patented manufactured products that are in compliance with NCHRP 350 crash test criteria. The base connection details are only shown on this plan to illustrate how the parts are assembled. The complete assembly must be designed to withstand 150 mph Base Wind Speed per 2013 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals, 6th edition and interims.
2. For standard ground sign installation, see detail entitled " Ground Sign Assembly Details".

DETAIL "B"



REVISIONS	
DATE	DESCRIPTION
04-09-2019	UPDATED MATERIAL NOTES
02-28-2020	ADDED ISOMETRIC VIEW
02-05-2021	UPDATED POST BASE HEIGHT



PUBLIC WORKS DEPARTMENT
TRAFFIC ENGINEERING DIVISION
DESIGN BY: CARMELO CARATOZZOLO, P.E. SCALE: NTS
DRAWN BY: STEPHON RAMOUTAR
CHECKED BY: ANDREW SEBO, P.E., PTOE

STOP SIGN AND STREET IDENTIFICATION ASSEMBLY TYPICAL DETAILS

SHEET NO.
S-15