CONSTRUCTION CONTRACT NO. T1629

COMPONENTS OF CONTRACT PLANS SET

ROADWAY PLANS
SIGNING AND PAVEMENT MARKING PLANS

A DETAILED INDEX APPEARS ON THE KEY SHEET OF EACH COMPONENT

INDEX OF ROADWAY PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	SIGNATURE SHEET
3	SUMMARY OF PAY ITEMS
4	TYPICAL SECTION
SQ-1 - SQ-7	SUMMARY OF QUANTITIES
5	REFERENCE POINTS
6	BENCHMARKS
7	PROJECT NOTES
8 - 11	ROADWAY PLAN
12	TEMPORARY TRAFFIC CONTROL PLAN

AS-BUILT REVISIONS
KEY SHEET
FINAL "AS BUILT" SIGNATURE SHEET
SHEET 10

LIST OF REVISED INDEX DRAWINGS

INDEX NO.	SHEET NO.
600	ALL
619	ALL
11860	4 OF 8
17302	ALL
17346	1-2 & 13-14 OF 14

GOVERNING STANDARDS AND SPECIFICATIONS:
Florida Department of Transportation, 2015 Design Standards and revised Index Drawings as appended herein, and July 2015 Standard Specifications for Road and Bridge Construction, as amended by Contract Documents.

For Design Standards click on the "Design Standards" link at the following web site:
http://www.dot.state.fl.us/rddesign/

For the Standard Specifications for Road and Bridge Construction click on the "Specifications" link at the following web site:
http://www.dot.state.fl.us/specificationsoffice/

REVISIONS
CONTRACTOR : AJAX PAVING
CONSULTANTS: NONE
PROJECT ADMINISTRATOR: NATHAN KAUTZ, P.E.
PROJECT MANAGER: GREG FALCONE
OPERTIONS ENGINEER: ALBERT ROSENSTEIN, P.E.
DISTRICT SECRETARY: BILLY HATTAWAY, P.E.
DATE WORK STARTED: MARCH 12, 2016
DATE WORK FINAL ACCEPTED: MAY 24, 2016

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

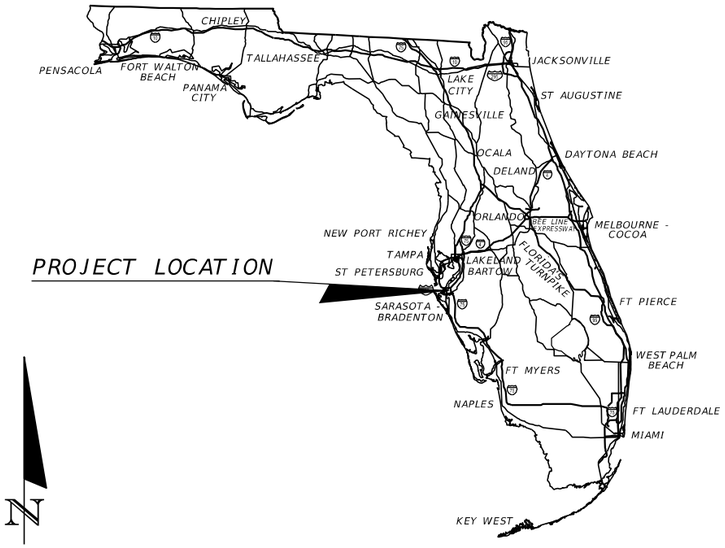
FINAL AS-BUILT PLANS
~~CONTRACT PLANS~~

FINANCIAL PROJECT ID 433256-1-52-01

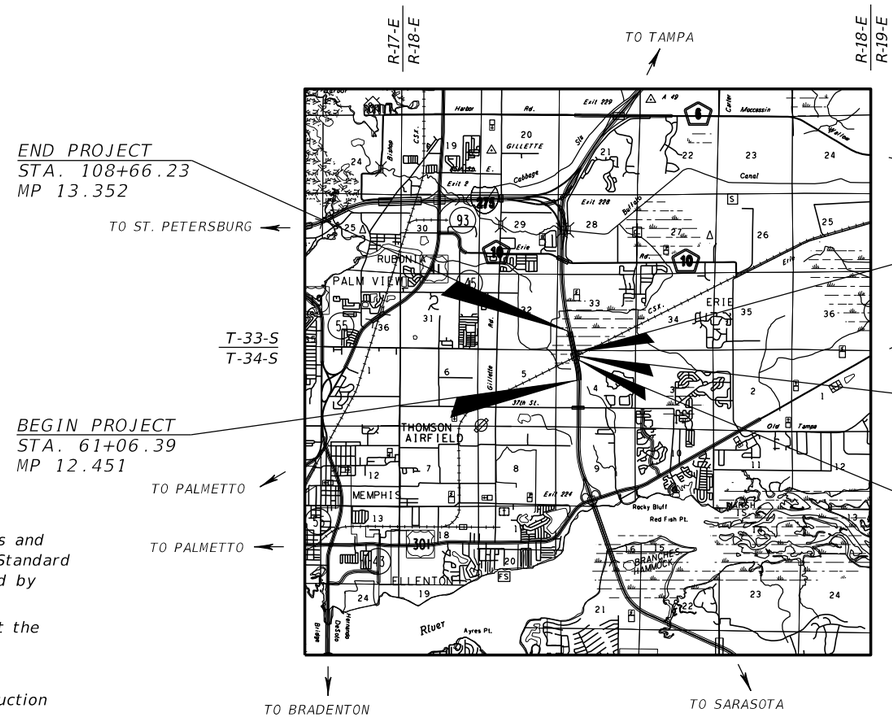
(FEDERAL FUNDS)

MANATEE COUNTY (13075)

STATE ROAD NO. 93(I-75)



PROJECT LOCATION



N

0 1 2
Miles

END BRIDGE #130075 & #130076
STA. 85+04.13 LT.
STA. 85+62.71 RT.

TO PARRISH

RR CROSSING # 621484-F
RR MP SW 866.00
FLORIDA POWER & LIGHT CO.
STA. 84+62.11

BEGIN BRIDGE #130075 & #130076
STA. 83+34.38 LT.
STA. 83+87.15 RT.

BRIDGE LENGTH IS BASED ON NORTHBOUND BRIDGE

LENGTH OF PROJECT	LINEAR FEET	MILES
ROADWAY	4,584.28	0.868
BRIDGES	175.56	0.033
NET LENGTH OF PROJECT	4,759.84	0.901
EXCEPTIONS	0.00	0.000
GROSS LENGTH OF PROJECT	4,759.84	0.901

FDOT PROJECT MANAGER: RANDY LACHLER, P.E.

KEY SHEET REVISIONS	
DATE	DESCRIPTION

ROADWAY SHOP DRAWINGS
TO BE SUBMITTED TO:

ANDRA DIGGS II, P.E.
FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT ONE OFFICE
801 N. BROADWAY AVENUE
BARTOW, FL 33830-3809
(863) 519-2426

PLANS PREPARED BY:

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT ONE OFFICE
801 N. BROADWAY AVE.
BARTOW, FL 33830-3809
(863)519-2300

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

ROADWAY PLANS
ENGINEER OF RECORD: RYAN M. LAZENBY, P.E.

P.E. NO.: 57517

FISCAL YEAR	SHEET NO.
16	1

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

CONSTRUCTION CONTRACT NO. T1629

COMPONENTS OF CONTRACT PLANS SET

ROADWAY PLANS
SIGNING AND PAVEMENT MARKING PLANS

A DETAILED INDEX APPEARS ON THE KEY SHEET OF EACH COMPONENT

INDEX OF ROADWAY PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
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3	SUMMARY OF PAY ITEMS
4	TYPICAL SECTION
SQ-1 - SQ-7	SUMMARY OF QUANTITIES
5	REFERENCE POINTS
6	BENCHMARKS
7	PROJECT NOTES
8 - 11	ROADWAY PLAN
12	TEMPORARY TRAFFIC CONTROL PLAN

LIST OF REVISED INDEX DRAWINGS

INDEX NO.	SHEET NO.
600	ALL
619	ALL
11860	4 OF 8
17302	ALL
17346	1-2 & 13-14 OF 14

GOVERNING STANDARDS AND SPECIFICATIONS:
Florida Department of Transportation, 2015 Design Standards and revised Index Drawings as appended herein, and July 2015 Standard Specifications for Road and Bridge Construction, as amended by Contract Documents.

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http://www.dot.state.fl.us/rddesign/

For the Standard Specifications for Road and Bridge Construction click on the "Specifications" link at the following web site:
http://www.dot.state.fl.us/specificationsoffice/

REVISIONS

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

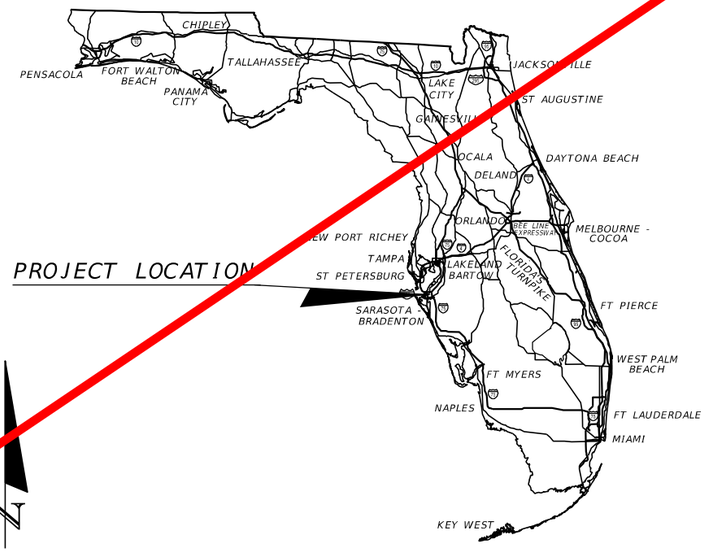
CONTRACT PLANS

FINANCIAL PROJECT ID 433256-1-52-01

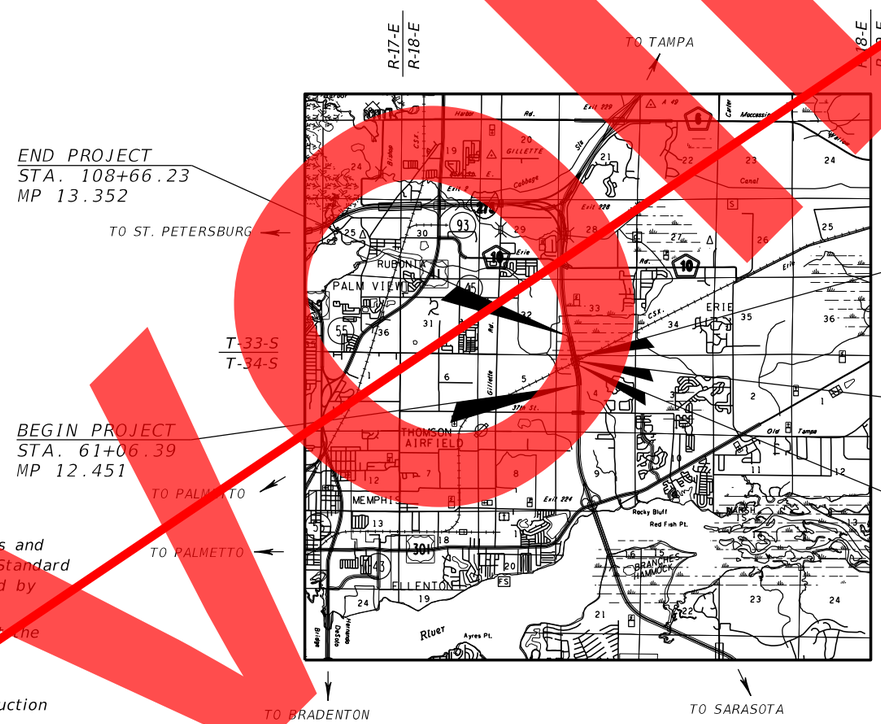
(FEDERAL FUNDS)

MANATEE COUNTY (13075)

STATE ROAD NO. 93(I-75)



PROJECT LOCATION



N

0 1 2
Miles

ROADWAY SHOP DRAWINGS TO BE SUBMITTED TO:

ANDRA DIGGS II, P.E.
FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT ONE OFFICE
801 N. BROADWAY AVENUE
BARTOW, FL 33830-3809
(863) 519-2426

PLANS PREPARED BY:

FLORIDA DEPARTMENT OF TRANSPORTATION
DISTRICT ONE OFFICE
801 N. BROADWAY AVE.
BARTOW, FL 33830-3809
(863)519-2300

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

BRIDGE LENGTH IS BASED ON NORTHBOUND BRIDGE

LENGTH OF PROJECT

	LINEAR FEET	MILES
ROADWAY	4,584.28	0.868
BRIDGES	175.56	0.033
NET LENGTH OF PROJECT	4,759.84	0.901
EXCEPTIONS	0.00	0.000
GROSS LENGTH OF PROJECT	4,759.84	0.901

FDOT PROJECT MANAGER: RANDY LACHLER, P.E.

KEY SHEET REVISIONS

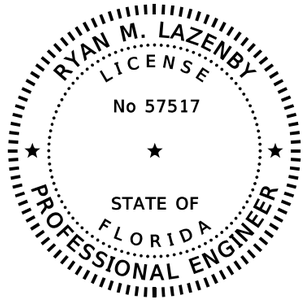
DATE	DESCRIPTION

ROADWAY PLANS
ENGINEER OF RECORD: RYAN M. LAZENBY, P.E.

P.E. NO.: 57517

FISCAL YEAR	SHEET NO.
16	1

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.



FLORIDA DEPARTMENT OF TRANSPORTATION
801 N. BROADWAY AVENUE
BARTOW, FL 33830-3809
RYAN M. LAZENBY, P.E.
P.E. LICENSE NUMBER 57517

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.003, F.A.C.

ROADWAY PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2	SIGNATURE SHEET
3	SUMMARY OF PAY ITEMS
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SQ-1 - SQ-7	SUMMARY OF QUANTITIES
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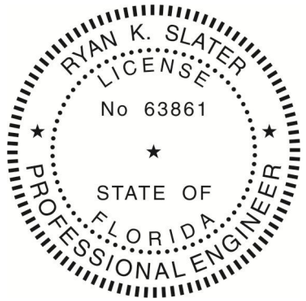


FLORIDA DEPARTMENT OF TRANSPORTATION
801 N. BROADWAY AVENUE
BARTOW, FL 33830-3809
RYAN KEITH SLATER, P.E.
P.E. LICENSE NUMBER 63861

THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH RULE 61G15-23.003, F.A.C.

ROADWAY PLANS

SHEET NO.	SHEET DESCRIPTION
2	SIGNATURE SHEET

SIGNING AND PAVEMENT MARKING PLANS

SHEET NO.	SHEET DESCRIPTION
S-1	KEY SHEET
S-2	TABULATION OF QUANTITIES
S-3	GENERAL NOTES
S-4 - S-9	PLAN SHEETS

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

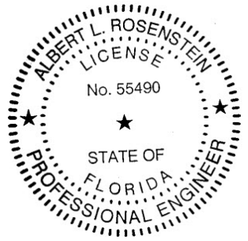
FLORIDA DEPARTMENT OF TRANSPORTATION
801 N. BROADWAY AVENUE
BARTOW, FL 33830-3809

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	MANATEE	433256-1-52-01

SIGNATURE SHEET

SHEET NO. 2



THE ABOVE NAMED PROFESSIONAL ENGINEER SHALL BE RESPONSIBLE FOR THE FOLLOWING SHEETS IN ACCORDANCE WITH F.A.C. RULE 61G15-23.003.
THIS PROJECT WAS CONSTRUCTED IN SUBSTANTIAL COMPLAINCE WITH THESSE PLANS AS PROVIDED BY THE ENGINEER OF RECORD. IF CHANGES WERE MADE, THOSE CHANGES ARE INDICATED BY REDLINE REVISIONS.

ROADWAY PLANS

SHEET NO.	SHEET DESCRIPTION
1	KEY SHEET
2B	FINAL "AS-BUILT" SIGNATURE SHEET
10	ROADWAY PLAN

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION
5/11/16	FINAL "AS-BUILT" SIGNATURE SHEET SHEET 10		

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	MANATEE	433256-1-52-01

SHEET NO.
2B

06/02/2015 09:28:43 AM

FLORIDA DEPARTMENT OF TRANSPORTATION
PROPOSAL SUMMARY OF PAY ITEMS
FOR PROPOSAL: T1629

LEAD PROJECT : 433256-1-52-01	DISTRICT : 01	COUNTY/SECTION : 13075000
PROJECT(S) : 43325615201	COUNTY : MANATEE	

0001 SUMMARY OF ROADWAY

SPC	ALT	ITEM NUMBER	ITEM DESCRIPTION	UNIT	43325615201	QUANTITY TOTAL
		0999-102- 1	SPEED & LAW ENFORCEMENT OFFICER, STATE FURNISHED, CENTRAL CO NTRACT, NON BID ITEM	MH	714.000	714.000
		0999- 2-	LUMP SUM CONTRACT, ALTERNATIVE BIDDING 43325615201	LS	1.000	1.000
		0999- 25-	INITIAL CONTINGENCY AMOUNT, DO NOT BID 43325615201	LS	1.000	1.000

999-2 LUMP SUM CONTRACT: ALL OTHER PAY ITEM NUMBERS SHOWN IN THE CONTRACT PLANS ARE PROVIDED ONLY FOR THE PURPOSE OF DESCRIBING THE WORK TO BE PERFORMED. PAY ITEM DESCRIPTIONS ARE FOUND IN THE DEPARTMENT'S BASIS OF ESTIMATES MANUAL.

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

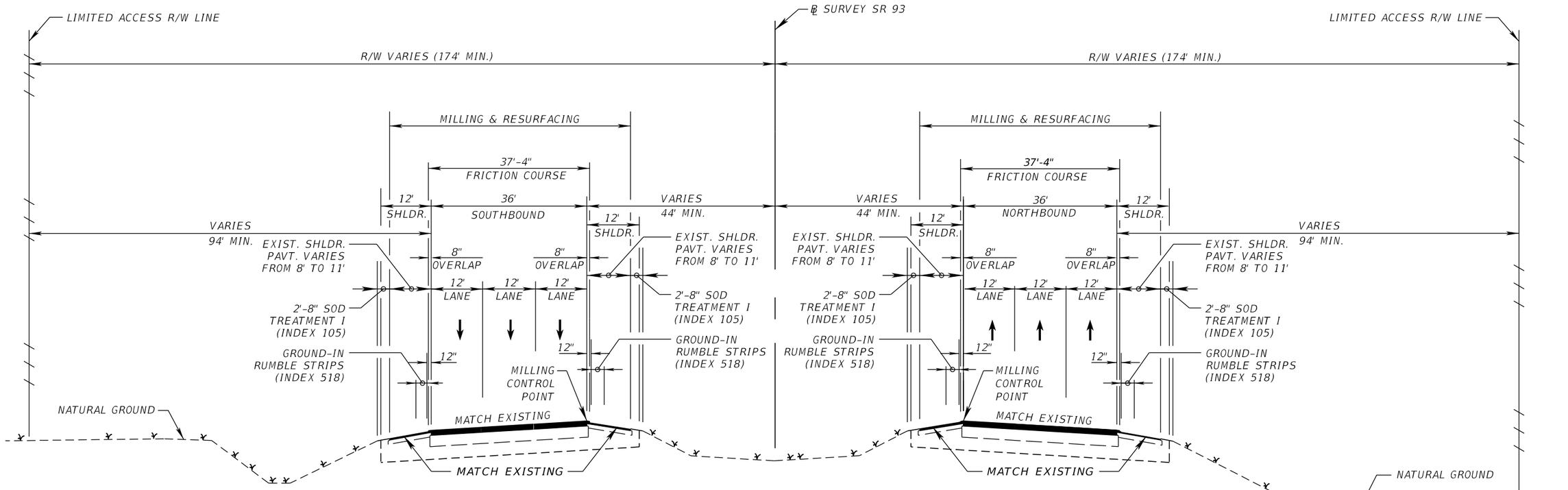
ENGINEER OF RECORD:
RYAN M. LAZENBY, P.E.
P.E. LICENSE NUMBER 57517
FLORIDA DEPARTMENT OF TRANSPORTATION
801 N. BROADWAY AVENUE
BARTOW, FL 33830-3809

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	MANATEE	433256-1-52-01

SUMMARY OF PAY ITEMS

SHEET NO. 3



TYPICAL SECTION
SR 93 (I-75)

NORTHBOUND
STA. 61+06.39 TO STA. 89+89.22

SOUTHBOUND
STA. 78+10.10 TO STA. 108+66.23

TRAFFIC DATA

CURRENT YEAR = 2015 AADT = 86,900
ESTIMATED OPENING YEAR = 2016 AADT = 89,500
ESTIMATED DESIGN YEAR = 2028 AADT = 121,300
K = 9.0% D = 52.4% T = 15.5% (24 HOUR)
DESIGN HOUR T = 7.7%
DESIGN SPEED = 70 MPH

MAINLINE

MILLING

MILL EXISTING ASPHALT PAVEMENT FOR DEPTH (2.25") (INCLUDE 8" OVERLAY)

RESURFACING

TYPE SP STRUCTURAL COURSE (1.50") (TRAFFIC D) (PG 76-22, PMA), AND FRICTION COURSE FC-5 (0.75") (PG 76-22, PMA) (INCLUDE 8" OVERLAY)

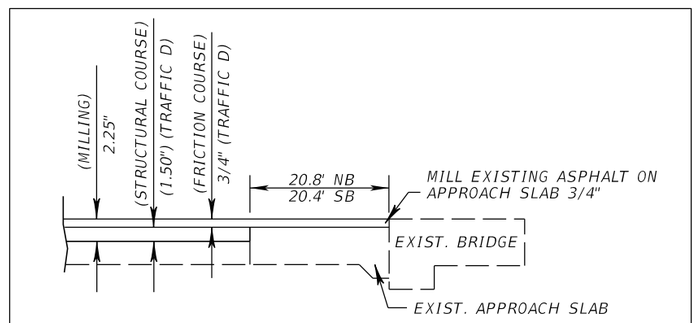
PAVED SHOULDERS

MILLING

MILL EXISTING ASPHALT PAVEMENT FOR DEPTH (1.50")

RESURFACING

TYPE SP STRUCTURAL COURSE (1.50") (TRAFFIC D) (PG 76-22, PMA)



APPROACH SLAB DETAIL

NORTHBOUND: STA. 83+66.35 - STA. 83+87.15
STA. 85+62.71 - STA. 85+83.51

SOUTHBOUND: STA. 83+13.98 - STA. 83+34.38
STA. 85+04.13 - STA. 85+24.53

NOT TO SCALE

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD:
RYAN M. LAZENBY, P.E.
P.E. LICENSE NUMBER 57517
FLORIDA DEPARTMENT OF TRANSPORTATION
801 N. BROADWAY AVENUE
BARTOW, FL 33830-3809

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	MANATEE	433256-1-52-01

TYPICAL SECTION

SHEET NO. 4

SUMMARY OF LUMP SUM ITEMS

PAY ITEM NO.	PAY ITEM DESCRIPTION	QUANTITY		DESIGN NOTES	CONSTRUCTION REMARKS
		P	F		
0101-1	MOBILIZATION	1.0	✓		

SUMMARY OF GENERAL ITEMS

PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION STA.	SIDE	UNIT	QUANTITY		TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
					P	F	P	F		
0630-2-12	CONDUIT F&I DIRECTIONAL BORE	62+03.05	RT	LF	12	✓				
0741-1-11	TRAFFIC MONITORING SITE VEHICLE SENSOR-NON-WEIGHT APPLICATIONS	62+03.05	RT	EA	3	✓				
	F&I TYPE I AXLE SENSOR IN-ROAD									
0745-70-12	TRAFFIC MONITORING SITE, INDUCTIVE LOOP ASSEMBLY	62+03.05	RT	AS	3	✓				
	F&I TYPE I 2 LOOPS PER LANE									

SUMMARY OF TEMPORARY TRAFFIC CONTROL PLAN ITEMS

PAY ITEM NO.	PAY ITEM DESCRIPTION	UNIT	PHASE I			DESIGN NOTES	CONSTRUCTION REMARKS
			DURATION	QUANTITY	TOTAL		
			DAYS	P	P		
0102-1	MAINTENANCE OF TRAFFIC	LS	85	1	✓		
0102-14	TRAFFIC CONTROL OFFICER	MH		192	✓		
0102-60	WORK ZONE SIGN	ED		3072	✓		
0102-74-1	CHANNELIZING DEVICES-TYPS I, II, DI, VP, DRUM, LCD	ED		3012	✓		
0102-76	ARROW BOARD/ADVANCED WARNING ARROW PANEL	ED		30	✓		
0102-77	HIGH INTENSITY FLASH LI, TEMP, TYP B	ED		720	✓		
0102-78	TEMPORARY RETROREFLECTIVE PAVT MARKER	EA		608	✓		
0102-99	PORTABLE CHANGEABLE MESSAGE SIGN, TEMP	ED		85	✓		
0102-150-1	PORTABLE REGULATORY, SIGN	ED		170	✓		
0102-150-2	RADAR SPEED DISPLAY UNIT	ED		170	✓		
0710-11-101	PAINTED PAVT MARK, STD, WHITE, SOLID, 6"	GM		2.256	✓		
0710-11-131	PAINTED PAVT MARK, STD, WHITE, SKIP, 6"	GM		4.506	✓		
0710-11-201	PAINTED PAVT MARK, STD, YELLOW, SOLID, 6"	GM		2.256	✓		

THE TOTALS SHOWN ON THE SUMMARY OF ROADWAY PAY ITEMS ARE FOR PAINTED PAVEMENT MARKING USED FOR MAINTENANCE OF TRAFFIC.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD:
RYAN M. LAZENBY, P.E.
P.E. LICENSE NUMBER 57517
FLORIDA DEPARTMENT OF TRANSPORTATION
801 N. BROADWAY AVENUE
BARTOW, FL 33830-3809

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	MANATEE	433256-1-52-01

SUMMARY OF QUANTITIES

SHEET NO. SQ-1

SUMMARY OF EROSION AND SEDIMENT CONTROL DEVICES

LOCATION	SIDE	AREA ID	SEDIMENT BARRIER 0104 10 3 LF		SOIL TRACKING PREVENTION DEVICE 0104 15 EA		INLET PROTECTION SYSTEM 0104 18 EA		DESIGN NOTES	CONSTRUCTION REMARKS
STA. TO STA.			P	F	P	F	P	F		
64+10.87 to 64+16.07	RT		5.3	✓						
75+78.82 to 76+18.73	RT		41.4	✓						
74+87.44 to 74+90.56	LT		3.2	✓						
77+48.19 to 77+51.86	LT		3.6	✓						
77+82.82 to 77+86.32	LT		3.5	✓						
80+72.31 to 80+75.75	LT		3.4	✓						
81+64.87 to 81+69.19	RT		4.3	✓						
86+67.91 to 86+71.56	LT		3.7	✓						
87+64.96 to 87+68.52	RT		3.6	✓						
89+94.93 to 89+99.25	LT		4.3	✓						
90+65.96 to 90+69.44	RT		3.5	✓						
92+98.31 to 93+01.99	LT		3.7	✓						
95+98.90 to 96+02.24	LT		3.4	✓						
98+47.10 to 98+50.76	LT		3.7	✓						
63+85.22 to 63+90.63	RT						1	✓		
66+44.51 to 66+50.81	RT						1	✓		
74+84.04 to 74+88.35	RT						1	✓		
77+47.67 to 77+52.06	LT						1	✓		
77+78.07 to 77+82.23	RT						1	✓		
80+71.96 to 80+76.47	LT						1	✓		
81+69.97 to 81+74.33	RT						1	✓		
86+66.38 to 86+71.93	LT						1	✓		
87+69.00 to 87+74.02	RT						1	✓		
89+96.81 to 90+01.19	LT						1	✓		
90+68.74 to 90+74.18	RT						1	✓		
92+96.29 to 93+00.73	LT						1	✓		
95+97.24 to 96+01.60	LT						1	✓		
98+47.47 to 98+51.82	LT						1	✓		
PROJECT LIMITS	RT/LT		81.0	✓	1	✓				
SUB-TOTAL:			171.6		1		14			
TOTAL:			171.6		1		14			

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD:
RYAN M. LAZENBY, P.E.
P.E. LICENSE NUMBER 57517
FLORIDA DEPARTMENT OF TRANSPORTATION
801 N. BROADWAY AVENUE
BARTOW, FL 33830-3809

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	MANATEE	433256-1-52-01

SUMMARY OF QUANTITIES

SHEET NO. SQ-2

SUMMARY OF LITTER REMOVAL AND MOWING

CONST. PHASE	LOCATION STA. TO STA.	DURATION (DAYS)	FREQUENCY (DAYS)	LITTER REMOVAL 0107 1 AREA ID	CYCLES	AREA AC/CYCLE	TOTAL (AC) P	TOTAL (AC) F	MOWING 0107 2 AREA ID	CYCLES	AREA AC/CYCLE	TOTAL (AC) P	TOTAL (AC) F	DESIGN NOTES	CONSTRUCTION REMARKS
1	61+06.39 TO 68+02.14	85	30	815869	3	1.48	4.19	✓							
1	61+06.39 TO 68+02.14	85	30	816202	3	1.44	4.08	✓							
1	61+06.39 TO 68+02.14	85	30	815992	3	1.54	4.36	✓							
1	68+02.14 TO 75+02.14	85	30	815879	3	1.78	5.04	✓							
1	68+02.14 TO 75+02.14	85	30	815885	3	1.90	5.38	✓							
1	68+02.14 TO 75+02.14	85	30	815890	3	1.74	4.93	✓							
1	75+02.14 TO 82+02.14	85	30	815896	3	1.80	5.10	✓							
1	75+02.14 TO 82+02.14	85	30	815903	3	2.72	7.71	✓							
1	75+02.14 TO 82+02.14	85	30	815909	3	1.81	5.13	✓							
1	82+02.14 TO 83+99.35	85	30	815916	3	0.46	1.30	✓							
1	82+02.14 TO 84+54.73	85	30	816207	3	1.04	2.95	✓							
1	82+02.14 TO 84+90.24	85	30	816217	3	0.67	1.90	✓							
1	84+28.50 TO 89+02.14	85	30	815836	3	1.15	3.26	✓							
1	84+72.99 TO 89+02.14	85	30	815863	3	0.76	2.15	✓							
1	85+07.78 TO 89+02.14	85	30	816227	3	0.76	2.15	✓							
1	85+17.41 TO 89+02.14	85	30	815844	3	0.92	2.61	✓							
1	89+02.14 TO 96+02.14	85	30	815812	3	1.66	4.70	✓							
1	89+02.14 TO 96+02.14	85	30	815818	3	3.98	11.28	✓							
1	89+02.14 TO 96+02.14	85	30	815829	3	1.52	4.31	✓							
1	96+02.14 TO 103+02.14	85	30	815788	3	1.53	4.34	✓							
1	96+02.14 TO 103+02.14	85	30	815795	3	4.01	11.36	✓							
1	96+02.14 TO 103+02.14	85	30	815804	3	1.49	4.22	✓							
1	103+02.14 TO 108+66.23	85	30	815763	3	1.12	3.17	✓							
1	103+02.14 TO 108+66.23	85	30	815769	3	1.21	3.43	✓							
1	103+02.14 TO 108+66.23	85	30	815774	3	2.57	7.28	✓							
1	61+06.39 TO 68+02.14	85	30						816528	3	1.33	3.77	✓		
1	61+06.39 TO 68+02.14	85	30						816534	3	1.15	3.26	✓		
1	61+06.39 TO 68+02.14	85	30						816539	3	1.37	3.88	✓		
1	68+02.14 TO 75+02.14	85	30						816545	3	1.57	4.45	✓		
1	68+02.14 TO 75+02.14	85	30						816553	3	1.59	4.51	✓		
1	68+02.14 TO 75+02.14	85	30						816560	3	1.53	4.34	✓		
1	75+02.14 TO 82+02.14	85	30						816569	3	1.57	4.45	✓		
1	75+02.14 TO 82+02.14	85	30						816575	3	1.54	4.36	✓		
1	75+02.14 TO 82+02.14	85	30						816861	3	2.24	6.35	✓		
1	82+02.14 TO 83+99.35	85	30						816593	3	0.42	1.19	✓		
1	82+02.14 TO 84+90.24	85	30						816728	3	0.61	1.73	✓		
1	82+02.14 TO 84+54.72	85	30						816736	3	0.94	2.66	✓		
1	84+28.50 TO 89+02.14	85	30						816711	3	1.02	2.89	✓		
1	84+72.99 TO 89+02.14	85	30						816451	3	0.63	1.79	✓		
1	85+07.83 TO 89+02.14	85	30						816872	3	0.67	1.90	✓		
1	85+20.03 TO 89+02.14	85	30						816720	3	0.85	2.41	✓		
1	89+02.14 TO 96+02.14	85	30						816412	3	1.43	4.05	✓		
1	89+02.14 TO 96+02.14	85	30						816418	3	1.29	3.66	✓		
1	89+02.14 TO 96+02.14	85	30						816425	3	3.5	9.92	✓		
1	96+02.14 TO 103+02.14	85	30						816382	3	1.33	3.77	✓		
1	96+02.14 TO 103+02.14	85	30						816393	3	1.36	3.85	✓		
1	96+02.14 TO 103+02.14	85	30						816402	3	3.68	10.43	✓		
						SUB-TOTAL:	116.33	✓			SUB-TOTAL:	89.62	✓		
						TOTAL:	116.33	✓			TOTAL:	89.62	✓		

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REVISIONS DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD:
RYAN M. LAZENBY, P.E.
P.E. LICENSE NUMBER 57517
FLORIDA DEPARTMENT OF TRANSPORTATION
801 N. BROADWAY AVENUE
BARTOW, FL 33830-3809

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	MANATEE	433256-1-52-01

SUMMARY OF QUANTITIES

SHEET NO. SQ-3

SUMMARY OF LITTER REMOVAL AND MOWING

CONST. PHASE	LOCATION STA. TO STA.	DURATION (DAYS)	FREQUENCY (DAYS)	LITTER REMOVAL 0107 1 AREA ID	CYCLES	AREA AC/CYCLE	TOTAL (AC) P	TOTAL (AC) F	MOWING 0107 2 AREA ID	CYCLES	AREA AC/CYCLE	TOTAL (AC) P	TOTAL (AC) F	DESIGN NOTES	CONSTRUCTION REMARKS
1	103+02.14 TO 108+66.23	85	30						816357		0.99	2.81	✓		
1	103+02.14 TO 108+66.23	85	30						816363		1.09	3.09	✓		
1	103+02.14 TO 108+66.23	85	30						816368		2.31	6.55	✓		
				SUB-TOTAL:							SUB-TOTAL:	12.44	✓		

SUMMARY OF REMOVAL ITEMS

PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION STA. TO STA.	SIDE	AREA ID	UNITS	SECONDARY UNITS (IF LUMP SUM) AREA (AC)	QUANTITY P	QUANTITY F	TOTAL P	TOTAL F	DESIGN NOTES	CONSTRUCTION REMARKS
0110-1-1	CLEARING & GRUBBING	61+06.93 TO 68+02.14	LT	815203	LS	0.04	0.04	✓	0.04	✓		
		61+06.93 TO 68+02.14	LT	815208		0.04	0.04	✓	0.04	✓		
		68+02.14 TO 71+26.49	LT	815213		0.02	0.02	✓	0.02	✓		
		68+02.14 TO 72+36.92	LT	815251		0.03	0.03	✓	0.03	✓		
		71+26.49 TO 74+05.33	LT	815219		0.02	0.02	✓	0.02	✓		
		96+59.06 TO 103+02.14	RT	815240		0.04	0.04	✓	0.04	✓		
		96+64.88 TO 98+54.25	RT	815245		0.01	0.01	✓	0.01	✓		
		98+54.24 TO 103+02.14	RT	815234		0.03	0.03	✓	0.03	✓		
		103+02.14 TO 108+66.23	RT	815224		0.03	0.03	✓	0.03	✓		
		103+02.14 TO 108+66.23	RT	815229		0.03	0.03	✓	0.03	✓		

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REVISIONS DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD:
RYAN M. LAZENBY, P.E.
P.E. LICENSE NUMBER 57517
FLORIDA DEPARTMENT OF TRANSPORTATION
801 N. BROADWAY AVENUE
BARTOW, FL 33830-3809

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	MANATEE	433256-1-52-01

SUMMARY OF QUANTITIES

SHEET NO. SQ-4

SUMMARY OF PAVEMENT

PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION		SIDE	AREA ID	UNIT	QUANTITY		TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
		STA. TO STA.	DESCRIPTION				P	F	P	F		
0327 70 6	MILLING EXIST ASPH PAVT, 1 1/2" AVG DEPTH	61+06.39 to 68+02.14		RT	814796	SY	701.3	✓				
		61+06.39 to 68+02.14		RT	814801		814.4	✓				
		68+02.14 to 75+02.14		RT	814811		844.1	✓				
		68+02.14 to 75+02.14		RT	814806		735.4	✓				
		75+02.14 to 82+02.14		RT	814821		907.9	✓				
		75+02.14 to 82+02.14		RT	814816		618.6	✓				
		78+10.10 to 82+02.14		LT	814869		479.3	✓				
		78+10.39 to 82+02.14		LT	814862		322.2	✓				
		82+02.14 to 83+10.10		LT	818700		96.0	✓				
		82+02.14 to 83+20.06		LT	818771		135.3	✓				
		82+02.14 to 83+62.41		RT	818735		145.0	✓				
		82+02.14 to 83+72.67		RT	818741		155.6	✓				
		85+18.57 to 89+02.14		LT	818724		321.6	✓				
		85+28.40 to 89+02.14		LT	818730		456.2	✓				
		85+76.76 to 89+02.14		RT	818746		403.0	✓				
		85+87.50 to 89+02.14		RT	818752		260.4	✓				
		89+02.14 to 89+84.60		RT	814844		68.7	✓				
		89+02.14 to 89+89.22		RT	814839		112.1	✓				
		89+02.14 to 96+02.14		LT	814925		868.0	✓				
		89+02.14 to 96+02.14		LT	814919		552.6	✓				
		96+02.14 to 103+02.14		LT	814913		695.5	✓				
		96+02.14 to 103+02.14		LT	814908		740.4	✓				
		103+02.14 to 108+66.23		LT	814898		610.5	✓				
		103+02.14 to 108+66.23		LT	814903		597.8	✓				
0327 70 11	MILLING EXIST ASPH PAVT, 2 1/4" AVG DEPTH	61+06.39 to 68+02.14		RT	814693	SY	2747.3	✓				
		68+02.14 to 75+02.14		RT	814698		2778.8	✓				
		75+02.14 to 82+02.14		RT	814703		2776.4	✓				
		78+10.10 to 82+02.14		LT	814662		1583.4	✓				
		82+02.14 to 83+17.96		LT	817504		449.1	✓				
		82+02.14 to 83+70.35		RT	817565		647.9	✓				
		85+20.69 to 89+02.14		LT	817520		1519.9	✓				
		85+79.10 to 89+02.14		RT	817594		1308.3	✓				
		89+02.14 to 89+88.10		RT	814719		340.4	✓				
		89+02.14 to 96+02.14		LT	814678		2857.5	✓				
		96+02.14 to 103+02.14		LT	814683		2851.7	✓				
		103+02.14 to 108+66.23		LT	814688		2294.6	✓				
0327 70 19	MILLING EXIST ASPH PAVT, 3/4" AVG DEPTH	83+13.98 to 83+34.38		LT	818776	SY	126.3	✓				
		83+66.35 to 83+87.15		RT	818802		128.3	✓				
		85+04.13 to 85+24.53		LT	818790		125.7	✓				
		85+62.71 to 85+83.51		RT	818813		127.6	✓				
0334 1 24	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC D, PG 76-22, PMA)	61+06.39 to 68+02.14		RT	813298	TN	57.86	✓				
		61+06.39 to 68+02.14		RT	813180		226.65	✓				
		61+07.63 to 68+02.14		RT	813303		67.18	✓				
		68+02.14 to 75+02.14		RT	813185		229.25	✓				
		68+02.14 to 75+02.14		RT	813308		60.67	✓				
		68+02.14 to 75+02.14		RT	813313		69.64	✓				
		75+02.14 to 82+02.14		RT	813190		229.05	✓				
		75+02.14 to 82+02.14		RT	813318		51.03	✓				
		75+02.14 to 82+02.14		RT	813323		74.90	✓				
		78+10.10 to 82+02.15		LT	813429		39.54	✓				

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD:
RYAN M. LAZENBY, P.E.
P.E. LICENSE NUMBER 57517
FLORIDA DEPARTMENT OF TRANSPORTATION
801 N. BROADWAY AVENUE
BARTOW, FL 33830-3809

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	MANATEE	433256-1-52-01

SUMMARY OF QUANTITIES

SHEET NO. SQ-5

SUMMARY OF PAVEMENT

PAY ITEM NO.	PAY ITEM DESCRIPTION	LOCATION		SIDE	AREA ID	UNIT	QUANTITY		TOTAL		DESIGN NOTES	CONSTRUCTION REMARKS
		STA. TO STA.	DESCRIPTION				P	F	P	F		
0334 1 24	SUPERPAVE ASPHALTIC CONCRETE (TRAFFIC D, PG 76-22, PMA) (CONT'D)	78+10.10 to 82+02.14		LT	813195	TN	130.63	✓				
		78+10.10 to 82+02.14		LT	813422		26.58	✓				
		82+02.14 to 83+10.10		LT	817440		7.92	✓				
		82+02.14 to 83+17.96		LT	817369		37.05	✓				
		82+02.14 to 83+20.06		LT	817446		11.21	✓				
		82+02.14 to 83+62.41		RT	817473		11.96	✓				
		82+02.14 to 83+70.35		RT	817286		53.45	✓				
		82+02.14 to 83+72.67		RT	817479		12.84	✓				
		85+18.57 to 89+02.14		LT	817452		26.54	✓				
		85+20.69 to 89+02.14		LT	817386		125.39	✓				
		85+28.40 to 89+02.14		LT	817468		37.64	✓				
		85+76.76 to 89+02.14		RT	817484		33.25	✓				
		85+79.10 to 89+02.14		RT	817315		107.94	✓				
		85+87.50 to 89+02.14		RT	817491		21.49	✓				
		89+02.14 to 89+84.60		RT	813359		5.67	✓				
		89+02.14 to 89+88.10		RT	813215		28.08	✓				
		89+02.14 to 89+89.22		RT	813353		9.25	✓				
		89+02.14 to 96+02.14		LT	813385		45.59	✓				
		89+02.14 to 96+02.14		LT	813391		71.61	✓				
		89+02.14 to 96+02.14		LT	813210		235.74	✓				
		96+02.14 to 103+02.14		LT	813205		235.26	✓				
		96+02.14 to 103+02.14		LT	813380		61.08	✓				
		96+02.14 to 103+02.14		LT	813374		57.38	✓				
		103+02.14 to 108+63.23		LT	813364		50.37	✓				
		103+02.14 to 108+66.23		LT	813200		189.30	✓				
		103+02.14 to 108+66.23		LT	813369		49.32	✓				
0337 7 22	ASPHALTIC CONCRETE FRICTION COURSE (FC-5, PG 76-22, PMA)	61+06.39 to 68+02.14		RT	813102	TN	119.12	✓				
		68+02.14 to 75+02.14		RT	813107		120.17	✓				
		75+02.14 to 82+02.14		RT	813112		119.67	✓				
		78+10.16 to 82+02.14		LT	813117		66.72	✓				
		82+02.14 to 83+38.58		LT	813148		22.41	✓				
		82+02.14 to 83+91.37		RT	813164		31.36	✓				
		85+00.05 to 89+02.14		LT	813155		67.55	✓				
		85+58.38 to 89+02.14		RT	813171		58.56	✓				
		89+02.14 to 89+88.21		RT	813138		14.39	✓				
		89+02.14 to 96+02.14		LT	813132		119.93	✓				
		96+02.14 to 103+02.14		LT	813127		119.91	✓				
		103+02.14 to 108+66.23		LT	813122		96.54	✓				
0546-72-55	RUMBLE STRIPS, GROUND-IN, 16" MIN. WIDTH	61+06.39 to 83+87.15		RT		GM	0.9	✓				
		85+62.71 to 89+89.22		RT			0.2	✓				
		78+10.10 to 83+34.38		LT			0.2	✓				
		85+04.13 to 108+66.23		LT			0.9	✓				

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD:
RYAN M. LAZENBY, P.E.
P.E. LICENSE NUMBER 57517
FLORIDA DEPARTMENT OF TRANSPORTATION
801 N. BROADWAY AVENUE
BARTOW, FL 33830-3809

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	MANATEE	433256-1-52-01

SUMMARY OF QUANTITIES

SHEET NO. SQ-6

SUMMARY OF PERFORMANCE TURF

LOCATION STA. TO STA.	SIDE	AREA ID	PERFORMANCE TURF (SOD) 0570 1 2 SY P	PERFORMANCE TURF (SOD) 0570 1 2 SY F	DESIGN NOTES	CONSTRUCTION REMARKS
61+06.39 TO 68+02.14	RT	815054	206.3	✓		
61+06.39 TO 68+02.14	RT	815059	207.3	✓		
68+02.14 TO 71+26.49	RT	815064	96.9	✓		
68+02.14 TO 72+36.92	RT	815114	131.2	✓		
71+26.49 TO 74+05.33	RT	815078	83.5	✓		
96+59.06 TO 103+02.14	LT	815099	190.0	✓		
96+64.88 TO 98+54.25	LT	815104	56.0	✓		
98+54.24 TO 103+02.14	LT	815093	132.4	✓		
103+02.14 TO 108+66.23	LT	815083	166.5	✓		
103+02.14 TO 108+66.23	LT	815088	166.7	✓		
SUB-TOTAL :			1436.8	✓		
TOTAL :			1436.8	✓		

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD:
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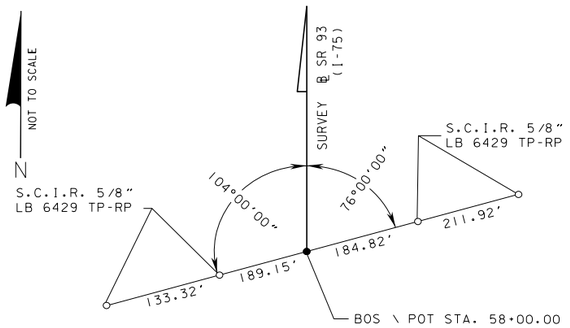
P.E. LICENSE NUMBER 57517
FLORIDA DEPARTMENT OF TRANSPORTATION
801 N. BROADWAY AVENUE
BARTOW, FL 33830-3809

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

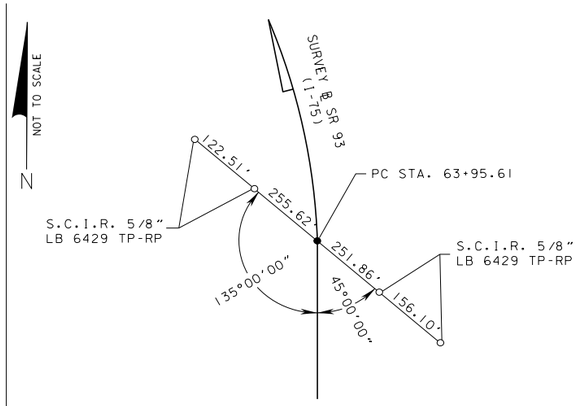
ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	MANATEE	433256-1-52-01

SUMMARY OF QUANTITIES

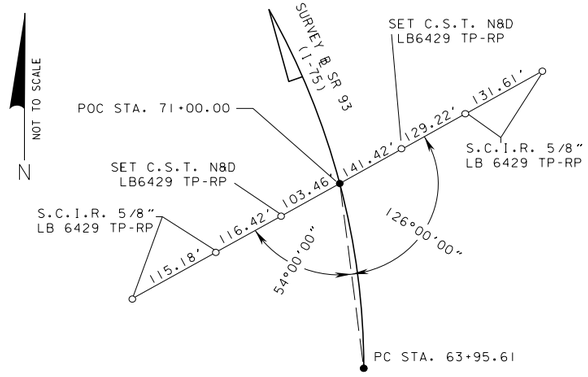
SHEET NO. SQ-7



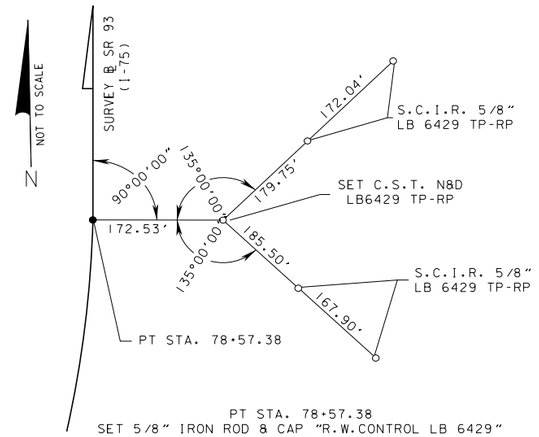
BOS \ POT STA. 58+00.00
SET 5/8" IRON ROD & CAP "R.W.CONTROL LB 6429"
SURVEY BASELINE SR 93 (I-75)



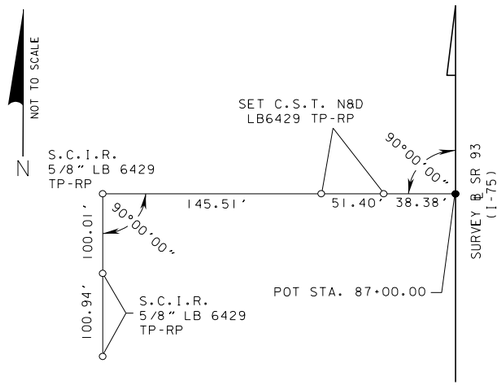
PC STA. 63+95.61
FOUND 5/8" IRON ROD WITH NO CAP
SURVEY BASELINE SR 93 (I-75)



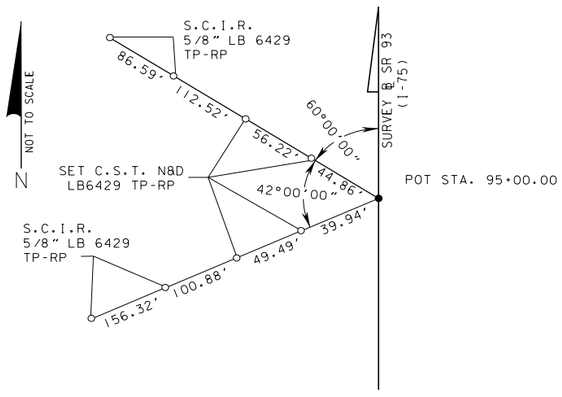
POC STA. 71+00.00
FOUND 5/8" IRON ROD & CAP "McKEAN CREED"
SURVEY BASELINE SR 93 (I-75)



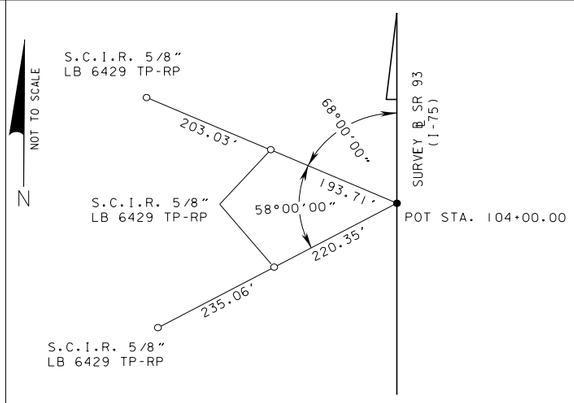
PT STA. 78+57.38
SET 5/8" IRON ROD & CAP "R.W.CONTROL LB 6429"
SURVEY BASELINE SR 93 (I-75)



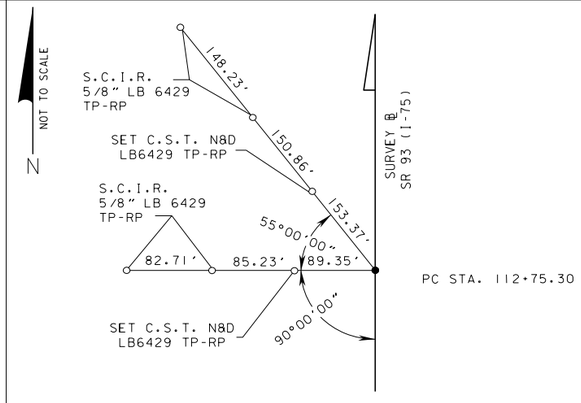
POT STA. 87+00.00
FOUND 5/8" IRON ROD & CAP "LB 6566"
SURVEY BASELINE SR 93 (I-75)



POT STA. 95+00.00
SET 5/8" IRON ROD & CAP "R.W.CONTROL LB 6429"
SURVEY BASELINE SR 93 (I-75)



POT STA. 104+00.00
FOUND 5/8" IRON ROD & CAP "LB 6566"
SURVEY BASELINE SR 93 (I-75)



PC STA. 112+75.30
SET 5/8" IRON ROD & CAP "R.W.CONTROL LB 6429"
SURVEY BASELINE SR 93 (I-75)

LEGEND

- ○ = SET PARKER KALON NAIL AND DISK
- ● = SET 5/8" IRON ROD AND CAP
- F.I.R.C. = FOUND IRON ROD AND CAP
- F.P.K. = FOUND PARKER KALON NAIL
- FND = FOUND
- LB = LAND SURVEYING BUSINESS REGISTRATION NUMBER
- P.K.N.D. = PARKER KALON NAIL AND DISK
- S.P.K.D. = SET PARKER KALON NAIL AND DISK

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD:
RYAN M. LAZENBY, P.E.
P.E. LICENSE NUMBER 57517
FLORIDA DEPARTMENT OF TRANSPORTATION
801 N. BROADWAY AVENUE
BARTOW, FL 33830-3809

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	MANATEE	433256-1-52-01

REFERENCE POINTS

SHEET NO. 5

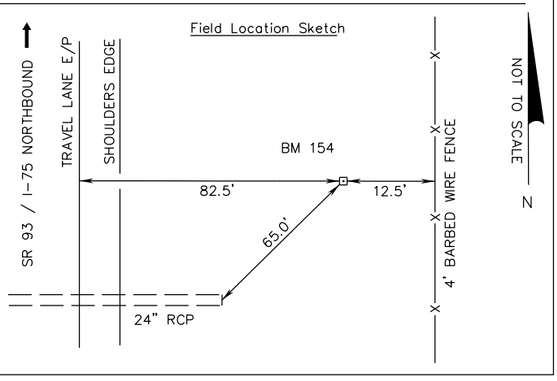
NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

Florida Department of Transportation District One
Vertical Control Data Sheet
DATUM
NGVD 1929 X
NAVD 1988 ___

Monument Name or Designation: BM 154 Elevation feet: 27.489'
State Road No.: SR 93 / I-75 County: MANATEE
Section: 4 Township: 34 S Range: 18 E Roadway Section I.D.: 13075-000
Establishing Firm: ECHEZABAL & ASSOCIATES INC. Financial Project ID: 433256-1
Established: / / Recovered: 9 / 26 / 13 Field Book No.: 502175
State Plane Coordinates:
(Nearest Foot) N (Y): = 1169806 E (X): = 490801
Base Line Station and Offset: STA: 64+72.36 OFFSET: 162.36' RIGHT
Description of Monument: FOUND 4" X 4" STANDARD FDOT CONCRETE MONUMENT WITH BRASS DISK STAMPED BM 154

Distance and Direction from Nearest Intersection: 0.3 MILES NORTH OF THE INTERSECTION OF MENDOZA RD. AND SR 93 / I-75

Field Location Sketch

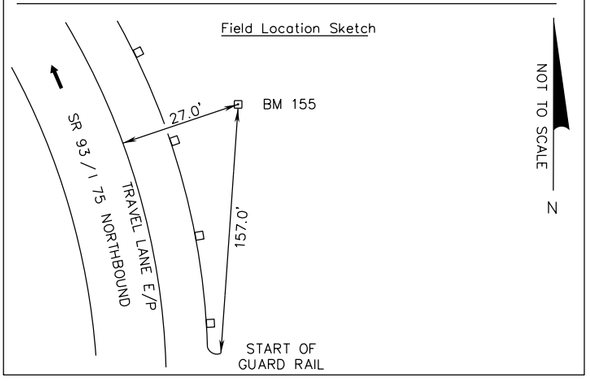


Florida Department of Transportation District One
Vertical Control Data Sheet
DATUM
NGVD 1929 X
NAVD 1988 ___

Monument Name or Designation: BM 155 Elevation feet: 48.231'
State Road No.: SR 93 / I-75 County: MANATEE
Section: 4 Township: 34 S Range: 18 E Roadway Section I.D.: 13075-000
Establishing Firm: ECHEZABAL & ASSOCIATES INC. Financial Project ID: 433256-1
Established: / / Recovered: 9 / 26 / 13 Field Book No.: 502175
State Plane Coordinates:
(Nearest Foot) N (Y): = 1170749 E (X): = 490712
Base Line Station and Offset: STA: 73+94.87 OFFSET: 151.23' RIGHT
Description of Monument: FOUND 4" X 4" STANDARD FDOT CONCRETE MONUMENT WITH BRASS DISK STAMPED "BM 155"

Distance and Direction from Nearest Intersection: 0.5 MILES NORTH OF THE INTERSECTION OF MENDOZA RD. AND SR 93 / I-75

Field Location Sketch

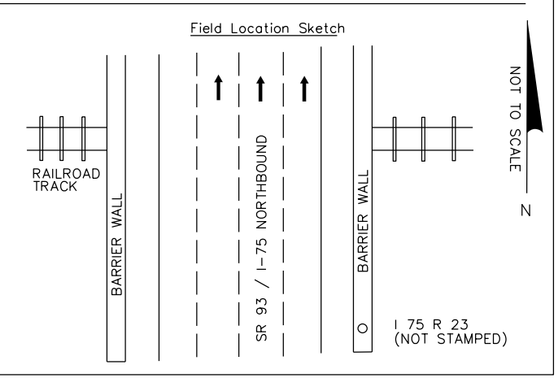


Florida Department of Transportation District One
Vertical Control Data Sheet
DATUM
NGVD 1929 X
NAVD 1988 ___

Monument Name or Designation: BM I 75 R 23 Elevation feet: 62.982'
State Road No.: SR 93 / I-75 County: MANATEE
Section: 4 Township: 34 S Range: 18 E Roadway Section I.D.: 13075-000
Establishing Firm: ECHEZABAL & ASSOCIATES INC. Financial Project ID: 433256-1
Established: / / Recovered: 9 / 26 / 13 Field Book No.: 502175
State Plane Coordinates:
(Nearest Foot) N (Y): = 1171749 E (X): = 490544
Base Line Station and Offset: STA: 83+94.32 OFFSET: 210.31' RIGHT
Description of Monument: FDOT BRASS DISK IN THE SOUTHEAST CORNER OF THE EAST BARRIER WALL OF A BRIDGE OVER RAILROAD TRACKS.

Distance and Direction from Nearest Intersection: 0.7 MILES NORTH OF THE INTERSECTION OF MENDOZA RD. AND SR 93 / I 75

Field Location Sketch

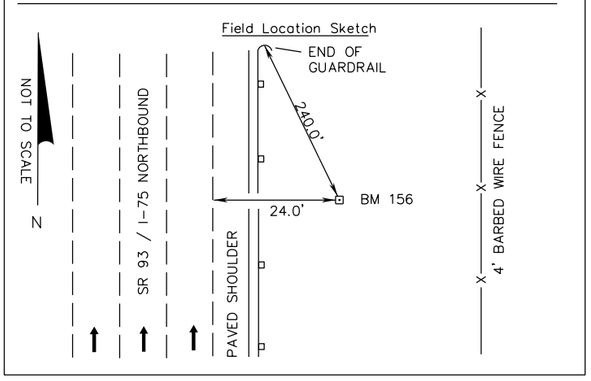


Florida Department of Transportation District One
Vertical Control Data Sheet
DATUM
NGVD 1929 X
NAVD 1988 ___

Monument Name or Designation: BM 156 Elevation feet: 50.816'
State Road No.: SR 93 / I-75 County: MANATEE
Section: 33 Township: 33 S Range: 18 E Roadway Section I.D.: 13075-000
Establishing Firm: ECHEZABAL & ASSOCIATES INC. Financial Project ID: 433256-1
Established: / / Recovered: 9 / 26 / 13 Field Book No.: 502175
State Plane Coordinates:
(Nearest Foot) N (Y): = 1172684 E (X): = 490388
Base Line Station and Offset: STA: 93+39.05 OFFSET: 284.29' RIGHT
Description of Monument: FOUND 4" X 4" STANDARD FDOT CONCRETE MONUMENT WITH BRASS DISK STAMPED "BM 156"

Distance and Direction from Nearest Intersection: 0.8 MILES NORTH OF THE INTERSECTION OF MENDOZA RD. AND SR 93 / I 75

Field Location Sketch

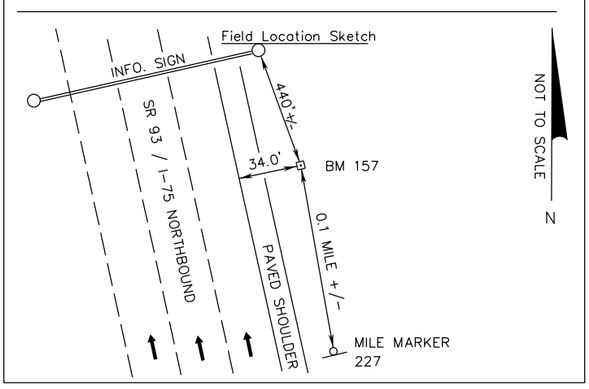


Florida Department of Transportation District One
Vertical Control Data Sheet
DATUM
NGVD 1929 X
NAVD 1988 ___

Monument Name or Designation: BM 157 Elevation feet: 32.420'
State Road No.: SR 93 / I-75 County: MANATEE
Section: 33 Township: 33 S Range: 18 E Roadway Section I.D.: 13075-000
Establishing Firm: ECHEZABAL & ASSOCIATES INC. Financial Project ID: 433256-1
Established: / / Recovered: 3 / 14 / 12 Field Book No.: 502175
State Plane Coordinates:
(Nearest Foot) N (Y): = 1173719 E (X): = 490214
Base Line Station and Offset: STA: 103+85.46 OFFSET: 364.71' RIGHT
Description of Monument: FOUND 4" X 4" STANDARD FDOT CONCRETE MONUMENT WITH BRASS DISK STAMPED "BM 157"

Distance and Direction from Nearest Intersection: 1.0 MILES NORTH OF THE INTERSECTION OF MENDOZA RD. AND SR 93 / I 75

Field Location Sketch



BENCHMARKS

DATE	DESCRIPTION	REVISIONS	DATE	DESCRIPTION

ENGINEER OF RECORD:
RYAN M. LAZENBY, P.E.
P.E. LICENSE NUMBER 57517
FLORIDA DEPARTMENT OF TRANSPORTATION
801 N. BROADWAY AVENUE
BARTOW, FL 33830-3809

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	MANATEE	433256-1-52-01

SHEET NO. 6

RD152JM
7/14/2015
5:11:00 PM
C:\e\Projects\433256152O1\roadway\CURCRD02.DGN

NOTICE: THE OFFICIAL RECORD OF THIS SHEET IS THE ELECTRONIC FILE SIGNED AND SEALED UNDER RULE 61G15-23.003, F.A.C.

PROJECT NOTES

1. BENCHMARK ELEVATIONS SHOWN IN THE PLANS ARE NATIONAL GEODETIC VERTICAL DATUM OF 1929 (NGVD 1929).

2. THE LOCATION(S) OF THE UTILITIES SHOWN IN THE PLANS (INCLUDING THOSE DESIGNATED VV, VH AND VVH) ARE BASED ON LIMITED INVESTIGATION TECHNIQUES AND SHOULD BE CONSIDERED APPROXIMATE ONLY. THE VERIFIED LOCATION/ELEVATIONS APPLY ONLY AT THE POINTS SHOWN. INTERPOLATIONS BETWEEN THESE POINTS HAVE NOT BEEN VERIFIED. EXISTING UTILITIES ARE TO REMAIN IN PLACE UNLESS OTHERWISE NOTED.

3. NOTIFY UTILITY OWNERS OF ANY EXCAVATION OR DEMOLITION ACTIVITY THROUGH SUNSHINE ONE-CALL OF FLORIDA, INC. (1-800-432-4770) AND ALSO NOTIFY THOSE UTILITY OWNERS/AGENCIES LISTED WITHIN OR IMPACTED BY THESE PLANS, NOT LESS THAN TWO (2) FULL BUSINESS DAYS IN ADVANCE OF THE BEGINNING OF CONSTRUCTION ON THE JOB SITE.

UTILITY / AGENCY OWNERS

COMPANY	CONTACT	TELEPHONE NUMBER
FP&L TRANSMISSION	PETER WASHIO	(561) 904-3693

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

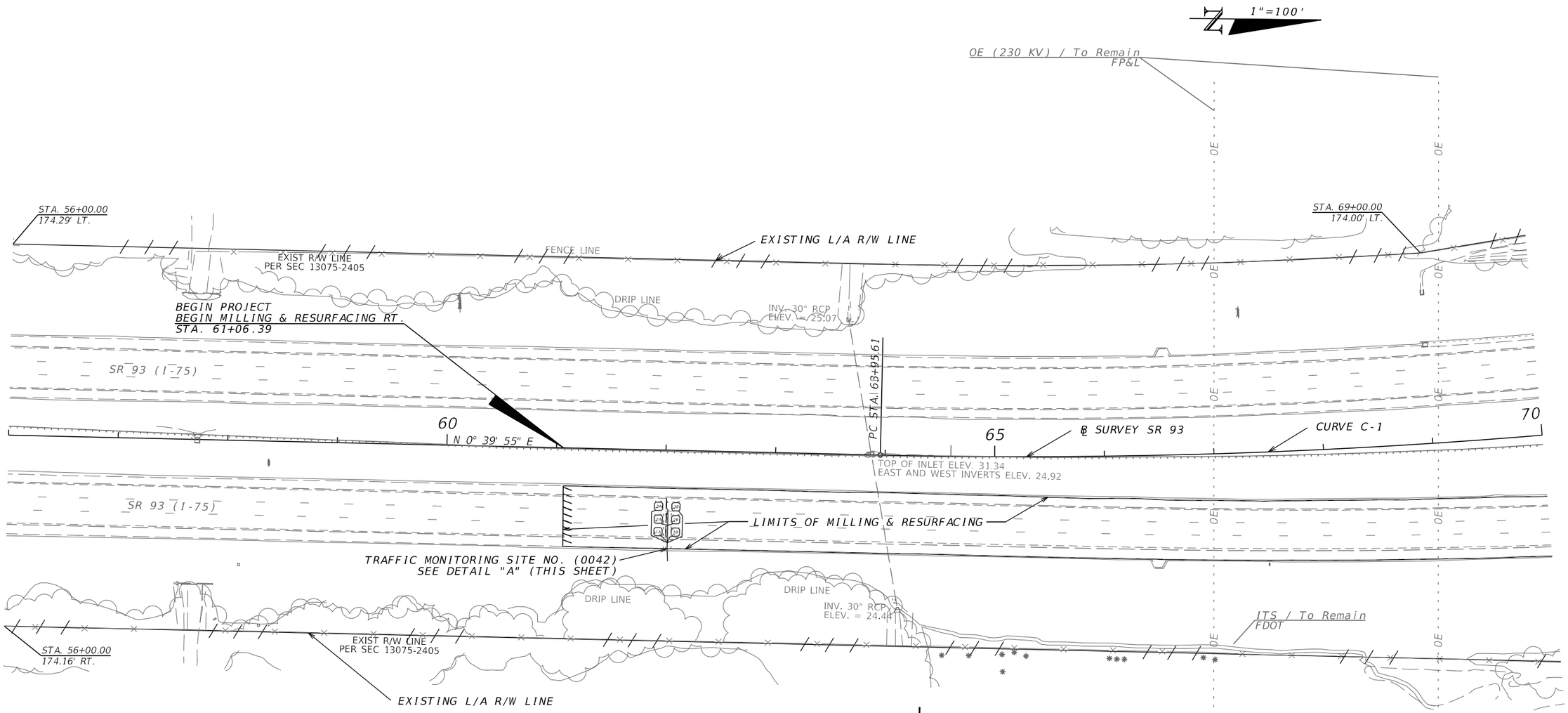
ENGINEER OF RECORD:
RYAN M. LAZENBY, P.E.
P.E. LICENSE NUMBER 57517
FLORIDA DEPARTMENT OF TRANSPORTATION
801 N. BROADWAY AVENUE
BARTOW, FL 33830-3809

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	MANATEE	433256-1-52-01

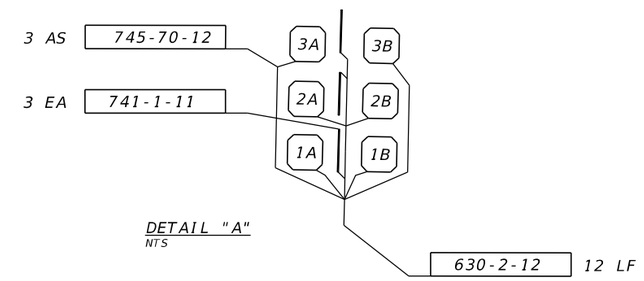
PROJECT NOTES

SHEET NO. 7



TELEMETERED TRAFFIC MONITORING SITE NO. (0042) ROADWAY IDENTIFYING # 13075000 MP 12.463 NOTES:

1. TELEMETERED TRAFFIC MONITORING SITES IS MAINTAINED BY F.D.O.T. DISTRICT ONE, TRAFFIC OPERATIONS OFFICE.
2. NOTIFY THE DISTRICT ONE, TRAFFIC OPERATIONS OFFICE AT (863) 519-2490 AT LEAST TEN DAYS PRIOR TO THE INSTALLATION OF LOOPS AND SENSORS.
3. FURNISH AND INSTALL AXLE SENSORS AND SPEED CLASSIFICATION LOOP ASSEMBLIES PER DESIGN STANDARDS INDEX 17900.



DETAIL "A"
NTS

CURVE DATA C-1
PI STA. = 71+30.48
Δ = 14° 37' 04" (LT.)
D = 1° 00' 00"
T = 734.88
L = 1,461.77
R = 5,729.58
PC STA. = 63+95.61
PT STA. = 78+57.38
e = MATCH EXISTING

REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD:
RYAN M. LAZENBY, P.E.
P.E. LICENSE NUMBER 57517
FLORIDA DEPARTMENT OF TRANSPORTATION
801 N. BROADWAY AVENUE
BARTOW, FL 33830-3809

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	MANATEE	433256-1-52-01

ROADWAY PLAN

SHEET NO. 8

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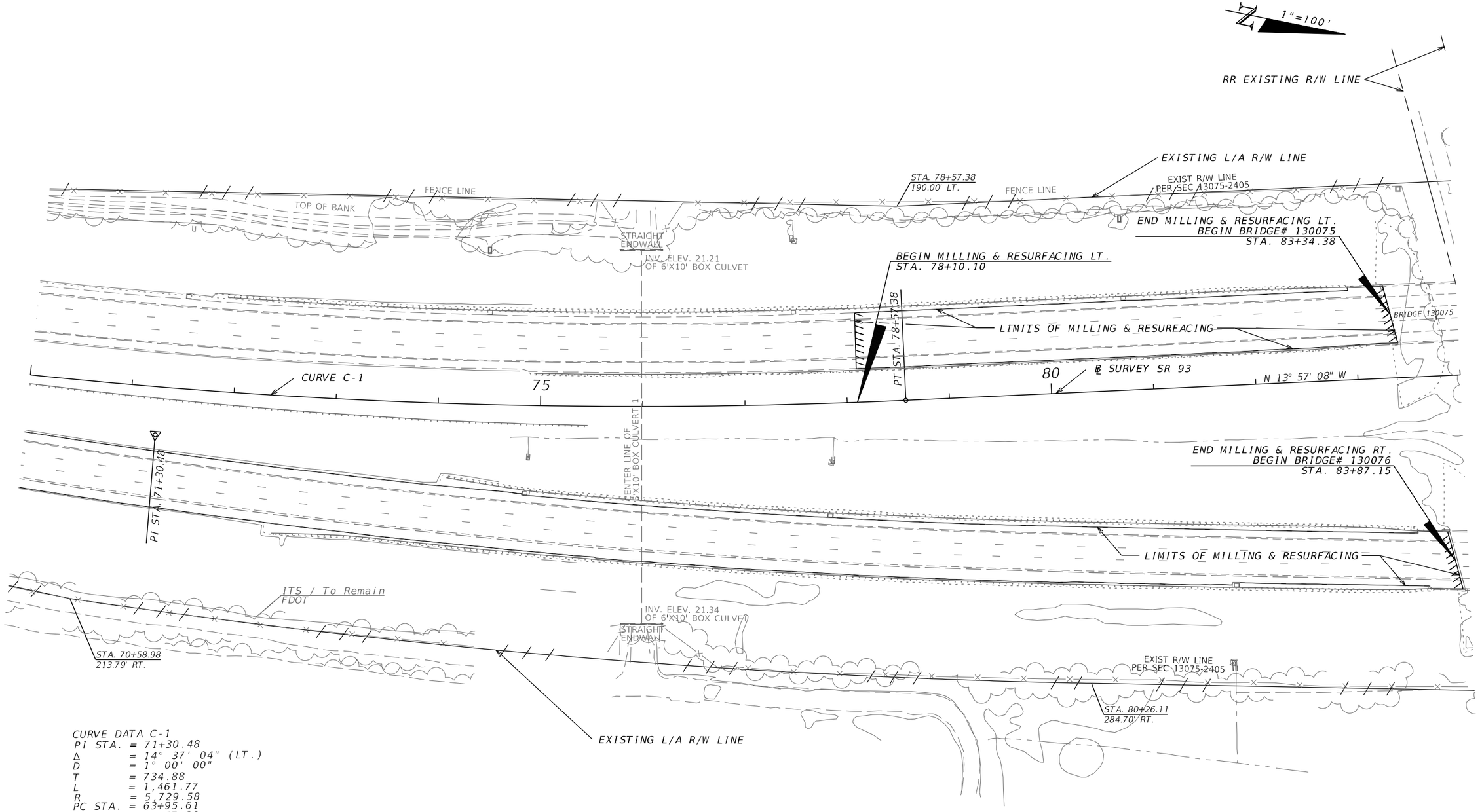

CURVE DATA C-1
PI STA. = 71+30.48
Δ = 14° 37' 04" (LT.)
D = 1° 00' 00"
T = 734.88
L = 1,461.77
R = 5,729.58
PC STA. = 63+95.61
PT STA. = 78+57.38
e = MATCH EXISTING

REVISIONS			
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ENGINEER OF RECORD:
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P.E. LICENSE NUMBER 57517
FLORIDA DEPARTMENT OF TRANSPORTATION
801 N. BROADWAY AVENUE
BARTOW, FL 33830-3809

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	MANATEE	433256-1-52-01

ROADWAY PLAN

SHEET NO. 9

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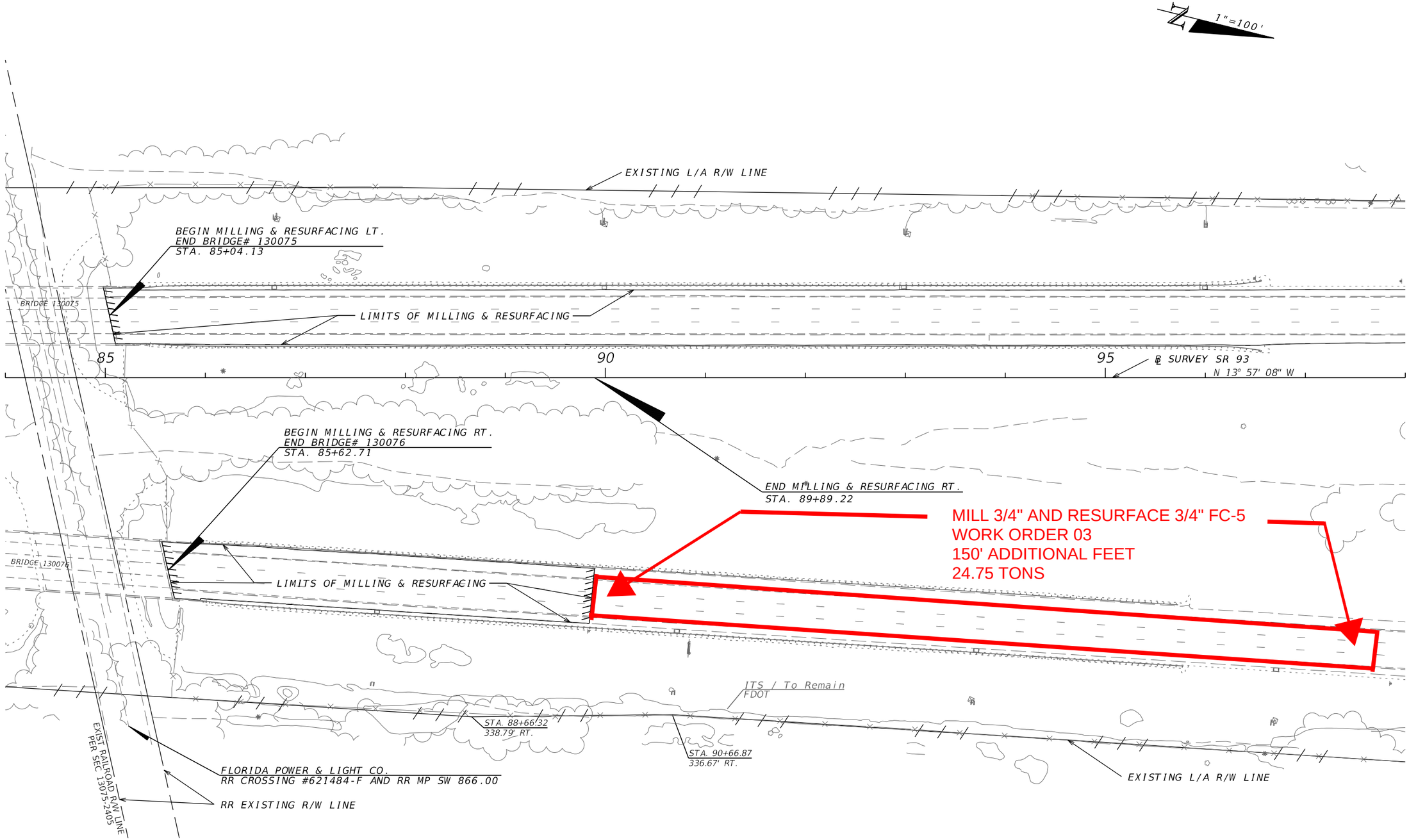
RD152JM 7/14/2015 5:11:02 PM C:\e\Projects\43325615201\roadway\PLANRD01.dgn



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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD:
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P.E. LICENSE NUMBER 57517
FLORIDA DEPARTMENT OF TRANSPORTATION
801 N. BROADWAY AVENUE
BARTOW, FL 33830-3809

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	MANATEE	433256-1-52-01

ROADWAY PLAN

SHEET NO. 10

STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION

WORK ORDER

RECEIVED
MAY 13 18
Ajax Paving
Area 2

700-010-80
CONSTRUCTION
04/11

Supplemental Agreement No.*N/A Work Order No.**0999-25-03

Fin Proj. ID 433256-1-52-01 Contract No. T1629 Date 4/19/2016

F.A.P. No. 0756130I Road No. 93

Contractor Ajax Paving, Inc.

DESCRIPTION OF WORK:
Furnish labor, equipment, and materials to mill 3/4" of existing asphalt pavement and resurface the three lanes of SR 93 right roadway between stations 89+89 and 91+39.

RECEIVED A-S
MAY 18 2016
Distributed
File Job #

REASON:
During the course of normal construction, a section of asphalt pavement immediately upstation of the north bound milling limits on SR 93 right roadway was found to be raveling. Following discussions with the Contractor and Engineer, the Department decided to remediate the raveling issue and bring all three lanes to a consistent joint by milling and resurfacing the 3/4" friction course for an additional 150' beyond the north bound M&R limits.

Revised Plan Sheet Nos. N/A

Granted time due to delays to controlling items of work shown on approved work schedule: 0 days

TOTAL COST OF WORK: $13,197.66 Premium Cost[1]: $0.00

Amount to be paid from Lump Sum Contingency S.A. or Pay Item shown above: $0.00

Work described results from a Design Error or Omission: ☐Yes ☒No

*N/A when funding by contingency pay item
**Number Work Orders on a Contingency Pay item sequentially beginning with 01, 02, 03, etc.
For each subsequent Contingency Supplemental Agreement (CSA) restart the numbering of the Work Orders on that CSA sequentially beginning with 01, 02, 03, etc.

GF 5/4/16 5/9/16

☒ Costs negotiated; work sheets documenting negotiated costs and basis for costs attached.
OR
☐ Costs based on actual costs plus mark-ups as shown in above referenced Contingency Supplemental Agreement; work sheets itemizing costs attached.

If, prior to execution of this Work Order, the Department has not issued a Notice to Proceed to the Contractor for the work outlined herein, execution of this document by the Department shall serve as the Notice to Proceed.

The Department and the Contractor agree that the contract time adjustment and sum agreed to in this document constitute a full and complete settlement of the matters set forth herein, including all direct and indirect costs for equipment, manpower, materials, overhead, profit, and delay relating to the issues set forth in this document

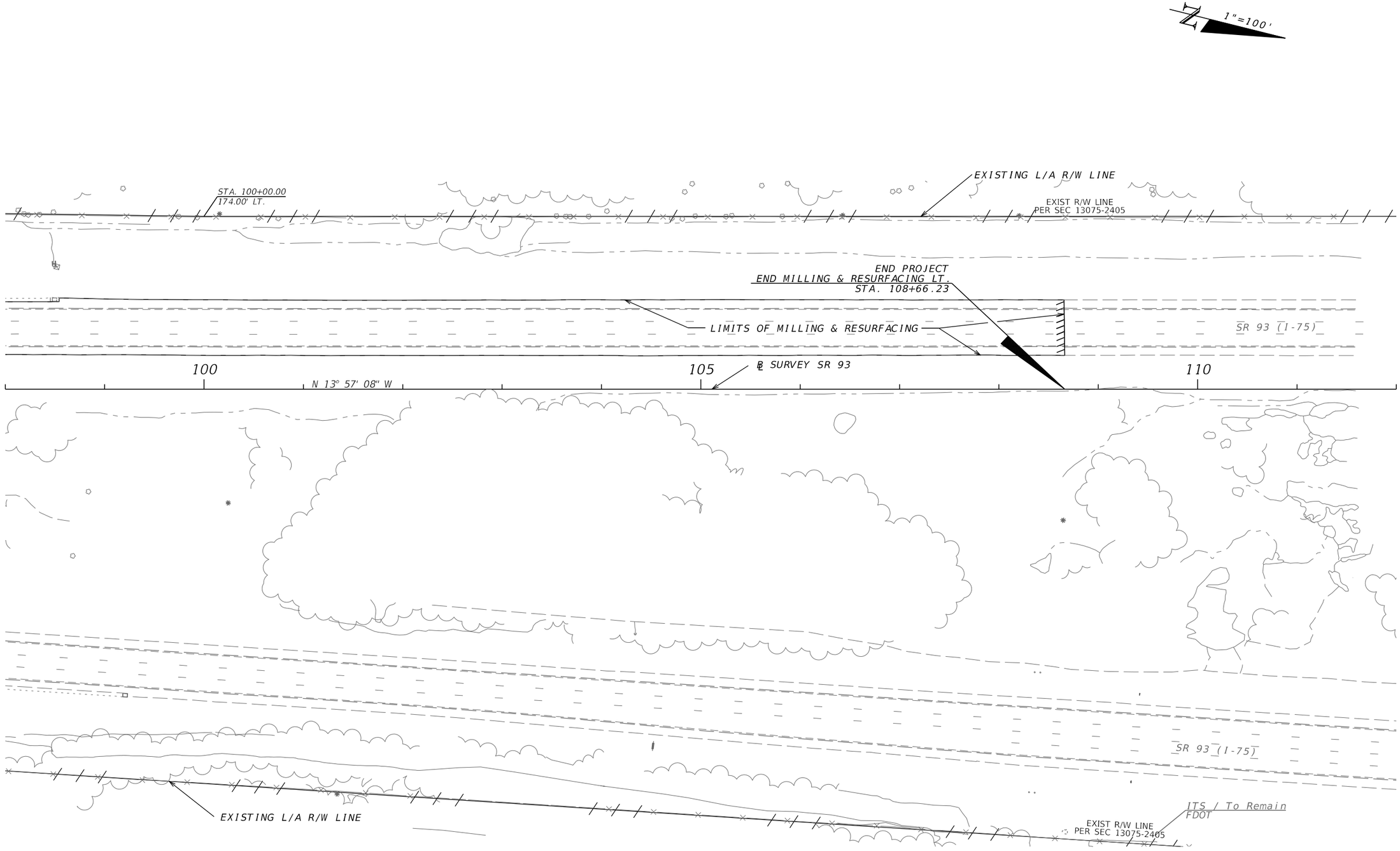
Contractor Signature — Printed Name: Jim Price; Title: PROS MGR; Date: 5/16/16

Nathan Kautz
FDOT or CCEI — Printed Name: Nathan Kautz, P.E.; Title: Project Oversite I; Date: 4/16/2016

Approved: _____ _____
FHWA Date

FHWA Participation[2] $13,197.66
Non-Participation _____

[1] Premium Cost is defined as additional cost which would not have been incurred if the work described herein had been included in the original contract
[2] Attach reasons justifying FHWA participation



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REVISIONS			
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BARTOW, FL 33830-3809

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	MANATEE	433256-1-52-01

ROADWAY PLAN

SHEET NO. 11

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TRAFFIC CONTROL PLAN

1. ROADWAY PLAN OPERATIONS ARE TO UTILIZE INDEX NO. 611, 612, 613 614 & 670.
2. PERMANENT SIGNING OPERATIONS ARE TO UTILIZE INDEX NO. 611, & 612.
3. PERMANANT PAVEMENT MARKING OPERATIONS ARE TO UTILIZE INDEX NO. 613, 614, 619 AND 670.
4. THERE ARE NO LANE CLOSURES ALLOWED BETWEEN THE HOURS OF 5:00 AM AND 8:00 PM AND DURING NON-WORK PERIODS. ONLY ONE TRAVEL LANE SHALL BE CLOSED AT A TIME FOR EACH DIRECTION.
5. EXISTING POSTED SPEED LIMITS SHALL BE MAINTAINED FOR ALL PHASES OF WORK, UNLESS INDEX NO. 614 OR 670 IS BEING USED.

POSTED SPEED LIMIT

STA. 61+06.39 TO STA. 108+66.23 = 70 MPH

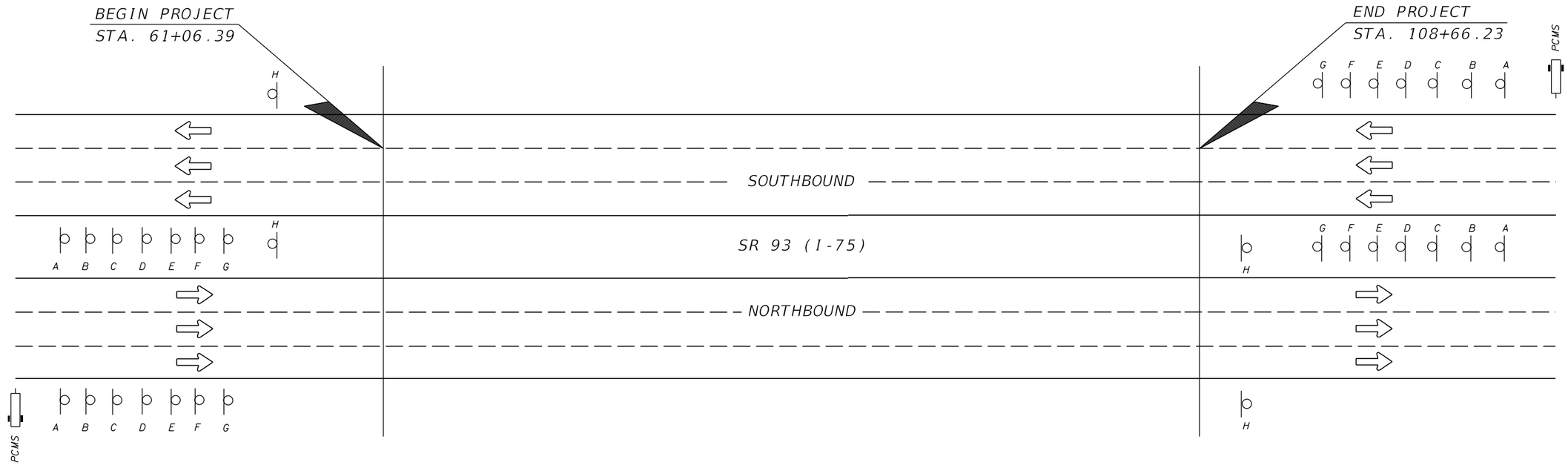
PCMS ON SR 93 (I-75)

2 WEEKS PRIOR TO LANE CLOSURE	
DISPLAY 1	DISPLAY 2
I-75 LANE CLOSURES	(BEGIN DATE) TO (END DATE)

DURING LANE CLOSURE	
DISPLAY 1	DISPLAY 2
LANE CLOSED AHEAD	KEEP LEFT/RIGHT

DURING LANE CLOSURE (INDEX 670)	
DISPLAY 1	DISPLAY 2
WORKERS PRESENT AHEAD	SPEED REDUCED NEXT MI

NTS



THIS DIAGRAM IS NOT TO SCALE

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REVISIONS			
DATE	DESCRIPTION	DATE	DESCRIPTION

ENGINEER OF RECORD:
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BARTOW, FL 33830-3809

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

ROAD NO.	COUNTY	FINANCIAL PROJECT ID
93	MANATEE	433256-1-52-01

TEMPORARY TRAFFIC CONTROL PLAN

SHEET NO. 12

SHEET NO.	CONTENTS
1	Preface Manual On Uniform Traffic Control Devices Abbreviations Symbols
2	Definitions Temporary Traffic Control Devices Pedestrian and Bicyclist Overhead Work Railroads Sight Distance Above Ground Hazard
3	Clear Zone Widths For Work Zones Superelevation Length Of Lane Closures Overweight/Oversize Vehicles Lane Widths High-Visibility Safety Apparel Regulatory Speeds In Work Zones
4	Flagger Control Survey Work Zones Signs
5	Work Zone Sign Supports
6	Project Information Sign
7	Commonly Used Warning and Regulatory Signs In Work Zones
8	Manholes/Crosswalks/Joints Truck Mounted Attenuators Removing Pavement Markings Signals Channelizing and Lighting Devices Channelizing and Lighting Devices Consistency Warning Lights Standard Orange Flag Portable Changeable (Variable) Message Signs (PCMS) Advanced Warning Arrow Boards
9	Drop-Offs In Work Zones
10	Business Entrance Temporary Asphalt Separator
11	Identifications-Channelizing and Lighting Devices
12	Pavement Markings

PREFACE

All projects and works on highways, roads and streets shall have a traffic control plan. All work shall be executed under the established plan and Department approved procedures. This index contains information specific to the Federal and State guidelines and standards for the preparation of traffic control plans and for the execution of traffic control in work zones, for construction and maintenance operations and utility work on highways, roads and streets on the State Highway System. Certain requirements in this Index are based on the high volume nature of State Highways. For highways, roads and streets off the State Highway System, the local agency (City/County) having jurisdiction may adopt requirements based on the minimum requirements provided in the MUTCD.

Index No. 600 provides Department policy and standards. Changes are only to be made thru Department approved procedures. Index Nos. 601 thru 670 provide typical applications for various situations. Modification can be made to these Indexes as long as the changes comply with the MUTCD and Department Design Standards.

The sign spacing shown on the Indexes are typical (recommended) distances. These distances may be increased or decreased based on field conditions, in order to avoid conflicts or to improve site specific traffic controls.

Except for emergencies, any road closure on State Highway System shall comply with Section 335.15, F.S.

MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES

The Florida Department of Transportation has adopted the "Manual On Uniform Traffic Control Devices For Streets And Highways" (MUTCD) and subsequent revisions and addendums, as published by the U.S. Department of Transportation, Federal Highway Administration, for mandatory use on the State Maintained Highway System whenever there exists the need for construction, maintenance operations or utility work.

SYMBOLS

The symbols shown are found in the FDOT site menu under Traffic Control cell library on the CADD system. Symbols assigned to the 600 series Design Standards and applicable to traffic control plans, unless otherwise identified in the plans, are as follows:


Work Area, Hazard Or Work Phase (Any pattern within a boundary)


Sign With 18" x 18" (Min.) Orange Flag And Type B Light

Channelizing Device


Pedestrian Longitudinal Channelizing Device (LCD)

Type III Barricade


Work Zone Sign


Flagger


Automated Flagger Assistance Device (AFAD)


Traffic Signal


Advance Warning Arrow Board


Portable Signal

Crash Cushion

Stop Bar

Work Vehicle With Flashing Beacon

Shadow (S) Or Advance Warning (AW) Vehicle With Advance Warning Arrow Board And Warning Sign

Truck/Trailer Mounted Attenuator (TMA)


Orange Flag For TCZ Signs


Type B Light For TCZ Signs


Law Enforcement Officer


Portable Regulatory Sign


Radar Speed Display Unit


Portable Changeable (Variable) Message Sign


Lane Identification + Direction Of Traffic

Traffic Control Officer

12/16/2014 8:54:29 AM

LAST REVISION	REVISION	DESCRIPTION:	2015 DESIGN STANDARDS	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES	INDEX NO.	SHEET NO.
12/15/14		Added the Automated Flagger Assistance Device (AFAD) to the Symbols; Deleted Sheet #4; Renumbered Index.	FDOT		600	1 of 12

DEFINITIONS

Regulatory Speed (In Work Zones)

The maximum permitted travel speed posted for the work zone is indicated by the regulatory speed limit signs. The work zone speed must be shown or noted in the plans. This speed should be used as the minimum design speed to determine runout lengths, departure rates, flare rates, lengths of need, clear zone widths, taper lengths, crash cushion requirements, marker spacings, superelevation and other similar features.

Advisory Speed

The maximum recommended travel speed through a curve or a hazardous area.

Travel Way

The portion of the roadway for the movement of vehicles. For traffic control through work zones, travel way may include the temporary use of shoulders and any other permanent or temporary surface intended for use as a lane for the movement of vehicular traffic.

a. Travel Lane: The designated widths of roadway pavement marked to carry through traffic and to separate it from opposing traffic or traffic occupying other traffic lanes.

b. Auxiliary Lane: The designated widths of roadway pavement marked to separate speed change, turning, passing and climbing maneuvers from through traffic.

Detour, Lane Shift, and Diversion

A detour is the redirection of traffic onto another roadway to bypass the temporary traffic control zone. A lane shift is the redirection of traffic onto a different section of the permanent pavement. A diversion is the redirection of traffic onto a temporary roadway, usually adjacent to the permanent roadway and within the limits of the right of way.

Above Ground Hazard

An above ground hazard is any object, material or equipment other than traffic control devices that encroaches upon the travel way or that is located within the clear zone which does not meet the Department's safety criteria, i.e., anything that is greater than 4" in height and is firm and unyielding or doesn't meet breakaway requirements.

TEMPORARY TRAFFIC CONTROL DEVICES

All temporary traffic control devices shall be ON the Department's Approved Products List (APL). Ensure the appropriate APL number is permanently marked on the device in a readily visible location.

All temporary traffic control devices shall be removed as soon as practical when they are no longer needed. When work is suspended for short periods of time, temporary traffic control devices that are no longer appropriate shall be removed or covered.

Arrow Boards, Portable Changeable Message Signs, Radar Speed Display Trailer, Portable Regulatory Signs, and any other trailer mounted device shall be delineated with a temporary traffic control device placed at each corner when in use and shall be moved outside the travel way and clear zone or be shielded by a barrier or crash cushion when not in use.

PEDESTRIAN AND BICYCLIST

When an existing pedestrian way or bicycle way is located within a traffic control work zone, accommodation must be maintained and provision for the disabled must be provided.

Only approved pedestrian longitudinal channelizing devices may be used to delineate a temporary traffic control zone pedestrian walkway.

Advanced notification of sidewalk closures and marked detours shall be provided by appropriate signs.

OVERHEAD WORK

Work is only allowed over a traffic lane when one of the following options is used:

OPTION 1 (OVERHEAD WORK USING A MODIFIED LANE CLOSURE)

Overhead work using a modified lane closure is allowed if all of the following conditions are met:

a. Work operation is located in a signalized intersection and limited to signals, signs, lighting and utilities.
b. Work operations are 60 minutes or less.
c. Speed limit is 45 mph or less.
d. Aerial lift equipment in the work area has high-intensity, rotating, flashing, oscillating, or strobe lights operating.
e. Aerial lift equipment is placed directly below the work area to close the lane.
f. Traffic control devices are placed in advance of the vehicle/equipment closing the lane using a minimum 100 foot taper.
g. Volume or complexity of the roadway may dictate additional devices, signs, flagmen and/or a traffic control officer.

OPTION 2 (OVERHEAD WORK ABOVE AN OPEN TRAFFIC LANE)

Overhead work above a open traffic lane is allowed if all of the following conditions are met:

a. Work operation is located on a utility pole, light pole, signal pole, or their appurtenances.
b. Work operations are 60 minutes or less.
c. Speed limit is 45 mph or less.
d. No encroachment by any part of the work activities and equipment within an area bounded by 2 feet outside the edge of travel way and 18 feet high.
e. Aerial lift equipment in the work area has high-intensity, rotating, flashing, oscillating, or strobe lights operating.
f. Volume or complexity of the roadway may dictate additional devices, signs, flagmen and/or a traffic control officer.
g. Adequate precautions are taken to prevent parts, tools, equipment and other objects from falling into open lanes of traffic.
h. Other Governmental Agencies, Rail facilities, or Codes may require a greater clearance. The greater clearance required prevails as the rule.

OPTION 3 (OVERHEAD WORK ADJACENT TO AN OPEN TRAFFIC LANE)

Overhead work adjacent to an open traffic lane is allowed if all of the following conditions are met:

a. Work operation is located on a utility pole, light pole, signal pole, or their appurtenances.
b. Work operations are 1 day or less.
c. Speed limit is 45 mph or less.
d. No encroachment by any part of the work activities and equipment within 2 foot from the edge of travelway up to 18" height.
   Above 18" in height, no encroachment by any part of the work activities and equipment over the open traffic lane (except as allowed in Option 2 for work operations of 60 minutes or less).
e. Aerial lift equipment in the work area has high-intensity, rotating, flashing, oscillating, or strobe lights operating.
f. Volume or complexity of the roadway may dictate additional devices, signs, flagmen and/or a traffic control officer.
g. Adequate precautions are taken to prevent parts, tools, equipment and other objects from falling into open lanes of traffic.
h. Other Governmental Agencies, Rail facilities, or Codes may require a greater clearance. The greater clearance required prevails as the rule.

OPTION 4 (OVERHEAD WORK MAINTAINING TRAFFIC WITH NO ENCROACHMENT BELOW THE OVERHEAD WORK AREA)

Traffic shall be detoured, shifted, diverted or paced as to not encroach in the area directly below the overhead work operations in accordance with the appropriate standard index drawing or detailed in the plans. This option applies to, but not limited to, the following construction activities:

a. Beam, girder, segment, and bent/pier cap placement.
b. Form and falsework placement and removal.
c. Concrete placement.
d. Railing construction located at edge of deck.
e. Structure demolition.

OPTION 5 (CONDUCTOR/CABLE PULLING ABOVE AN OPEN TRAFFIC LANE)

Overhead cable and/or de-energized conductor installations initial pull to proper tension shall be done in accordance with the appropriate Standard Index or temporary traffic control plan.

Continuous pulling operations of secured cable and/or conductors are allowed over open lane(s) of traffic with no encroachment by any part of the work activities, materials or equipment within the minimal vertical clearance above the travel way. The utility shall take precautions to ensure that pull ropes and conductors/cables at no time fall below the minimum vertical clearance.

On Limited Access facilities, a site specific temporary traffic control plan is required. The temporary traffic control plan shall include:

a. The temporary traffic control set up for the initial pulling of the pull rope across the roadway.
b. During pulling operations, advance warning consisting of no less than a Changeable Message Sign upstream of the work area with alternating messages, "Overhead Work Ahead" and "Be Prepared to Stop" followed by a traffic control officer and police vehicle with blue lights flashing during the pulling operation.

RAILROADS

Railroad crossings affected by a construction project should be evaluated for traffic controls to reduce queuing on the tracks. The evaluation should include as a minimum: traffic volumes, distance from the tracks to the intersections, lane closure or taper locations, signal timing, etc.

SIGHT DISTANCE

Tapers: Transition tapers should be obvious to drivers. If restricted sight distance is a problem (e.g., a sharp vertical or horizontal curve), the taper should begin well in advance of the view obstruction. The beginning of tapers should not be hidden behind curves.

Intersections: Traffic control devices at intersections must provide sight distances for the road user to perceive potential conflicts and to traverse the intersection safely. Construction equipment and materials shall not restrict intersection sight distance.

ABOVE GROUND HAZARD

Above ground hazards (see definitions) are to be considered work areas during working hours and treated with appropriate work zone traffic control procedures. During nonworking hours, all objects, materials and equipment that constitute an above ground hazard must be stored/placed outside the travel way and clear zone or be shielded by a barrier or crash cushion.

For above ground hazards within a work zone the clear zone required should be based on the regulatory speed posted during construction.

CLEAR ZONE WIDTHS FOR WORK ZONES

The term 'clear zone' describes the unobstructed relatively flat area, impacted by construction, extending outward from the edge of the traffic lane. The table below gives clear zone widths in work zones for medians and roadside conditions other than for roadside canals; where roadside canals are present, clear zone widths are to conform with the distances to canals as described in Volume I, Chapter 4, Section 4.2 and Exhibit 4-A and 4-B of the Plans Preparation Manual.

CLEAR ZONE WIDTHS FOR WORK ZONES		
WORK ZONE SPEED (MPH)	TRAVEL LANES & MULTILANE RAMPS (feet)	AUXILIARY LANES & SINGLE LANE RAMPS (feet)
60-70	30	18
55	24	14
45-50	18	10
30-40	14	10
ALL SPEEDS CURB & GUTTER	4' BEHIND FACE OF CURB	4' BEHIND FACE OF CURB

SUPERELEVATION

Horizontal curves constructed in conjunction with work zone traffic control should have the required superelevation applied to the design radii. Under conditions where normal crown controls curvature, the minimum radii that can be applied are listed in the table below.

MINIMUM RADII FOR NORMAL CROWN	
WORK ZONE POSTED SPEED	MINIMUM RADIUS
MPH	feet
65	3130
60	2400
55	1840
50	1390
45	1080
40	820
35	610
30	430
Superelevate When Smaller Radii is Used	

LENGTH OF LANE CLOSURES

Lane closures shall not exceed 2 miles in total length (taper, buffer space and work space) in any given direction on the Interstate or on state highways with a posted speed of 55 MPH or greater.

OVERWEIGHT/OVERSIZE VEHICLES

Restrictions to Lane Widths, Heights or Load Capacity can greatly impact the movement of over dimensioned loads. The Contractor shall notify the Engineer who in turn shall notify the State Permits Office, phone no. (850) 410-5777, at least seven calendar days in advance of implementing a maintenance of traffic plan which will impact the flow of overweight/oversized vehicles. Information provided shall include location, type of restriction (height, width or weight) and restriction time frames. When the roadway is restored to normal service the State Permits Office shall be notified immediately.

LANE WIDTHS

Lane widths of through roadways should be maintained through work zone travel ways wherever practical. The minimum widths for work zone travel lanes shall be as follows: 11' for Interstate with at least one 12' lane provided in each direction, unless formally excepted by the Federal Highway Administration; 11' for freeways; and 10' for all other facilities.

HIGH-VISIBILITY SAFETY APPAREL

All high-visibility safety apparel shall meet the requirements of the International Safety Equipment Association (ISEA) and the American National Standards Institute (ANSI) for "High-Visibility Safety Apparel", and labeled as ANSI/ISEA 107-2004 or 107-2010. The apparel background (outer) material color shall be either fluorescent orange-red or fluorescent yellow-green as defined by the standard. The retroreflective material shall be orange, yellow, white, silver, yellow-green, or a fluorescent version of these colors, and shall be visible at a minimum distance of 1,000 feet. Class 3 apparel may be substituted for Class 2 apparel. Replace apparel that is not visible at 1,000 feet.

WORKERS: All workers within the right-of-way shall wear ANSI/ISEA Class 2 apparel. Workers operating machinery or equipment in which loose clothing could become entangled during operation shall wear fitted high-visibility safety apparel. Workers inside the bucket of a bucket truck are not required to wear high-visibility safety apparel.

UTILITIES: When other industry apparel safety standards require utility workers to wear apparel that is inconsistent with FDOT requirements such as NFPA, OSHA, ANSI, etc., the other standards for apparel may prevail.

FLAGGERS: For daytime activities, Flaggers shall wear ANSI/ISEA Class 2 apparel. For nighttime activities, Flaggers shall wear ANSI/ISEA Class 3 apparel.

REGULATORY SPEEDS IN WORK ZONES

Traffic Control Plans (TCP's) for all projects must include specific regulatory speeds for each phase of work. This can either be the posted speed or a reduced speed. The speed shall be noted in the TCPs; this includes indicating the existing speed if no reduction is to be made. Regulatory speeds are to be uniformly established through each phase.

In general, the regulatory speed should be established to route vehicles safely through the work zone as close as to normal highway speed as possible. The regulatory speed should not be reduced more than 10 mph below the posted speed and never below the minimum statutory speed for the class of facility. When a speed reduction greater than 10 mph is imposed, the reduction is to be done in 10 mph per 500' increments.

Temporary regulatory speed signs shall be removed as soon as the conditions requiring the reduced speed no longer exist. Once the work zone regulatory speeds are removed, the regulatory speed existing prior to construction will automatically go back into effect unless new speed limit signing is provided for in the plans.

On projects with interspaced work activities, speed reductions should be located in proximity to those activities which merit a reduced speed, and not "blanketed" for the entire project. At the departure of such activities, the normal highway speed should be posted to give the motorist notice that normal speed can be resumed.

If the existing regulatory speed is to be used, consideration should be given to supplementing the existing signs when the construction work zone is between existing regulatory speed signs. For projects where the reduced speed conditions exist for greater than 1 mile in rural areas (non-interstate) and on rural or urban interstate, additional regulatory speed signs are to be placed at no more than 1 mile intervals. Engineering judgement should be used in placement of the additional signs. Locating these signs beyond ramp entrances and beyond major intersections are examples of proper placement. For urban situations (non-interstate), additional speed signs are to be placed at a maximum of 1000' apart.

When field conditions warrant speed reductions different from those shown in the TCP the contractor may submit to the project engineer for approval by the Department, a signed and sealed study to justify the need for further reducing the posted speed, or, the engineer may request the District Traffic Operations Engineer (DTOE) to investigate the need. It will not be necessary for the DTOE to issue regulations for regulatory speeds in work zones due to the revised provisions of F.S. 316.07451(2) (b). Advisory Speed plates will be used at the option of the field engineer for temporary use while processing a request to change the regulatory speed specified in the plans when deemed necessary. Advisory speed plates cannot be used alone but must be placed below the construction warning sign for which the advisory speed is required.

For additional information refer to the FDOT Plans Preparation Manual, Volume I, Chapter 10.

FLAGGER CONTROL

Where flaggers are used, a FLAGGER symbol or legend sign must replace the WORKERS symbol or legend sign.

The flagger must be clearly visible to approaching traffic for a distance sufficient to permit proper response by the motorist to the flagging instructions, and to permit traffic to reduce speed or to stop as required before entering the work site. Flaggers shall be positioned to maintain maximum color contrast between the Flagger's high-visibility safety apparel and equipment and the work area background.

Hand-Signaling Devices

STOP/SLOW paddles are the primary hand-signaling device. The STOP/SLOW paddle shall have an octagonal shape on a rigid handle. If the STOP/SLOW paddle is placed on a rigid staff, the minimum length of the staff, measured from the bottom of the paddle to the end of the staff that rests on the ground, should be 7 ft. STOP/SLOW paddles shall be at least 24 inches wide with letters at least 6 inches high and should be fabricated from light semirigid material. The background of the STOP face shall be red with white letters and border. The background of the SLOW face shall be orange with black letters and border. When used at night-time, the STOP/SLOW paddle shall be retroreflectorized.

Flag use is limited to immediate emergencies, intersections, and when working on the centerline or shared left turn lanes where two (2) flaggers are required and there is opposing traffic in the adjacent lanes. Flags, when used, shall be a minimum of 24 inches square, made of a good grade of red material, and securely fastened to a staff that is approximately 36 inches in length. When used at nighttime, flags shall be retroreflectorized red.

Flashlight, lantern or other lighted signal that will display a red warning light shall be used at night.

Flagger Stations

Flagger stations shall be located far enough in advance of the work space so that approaching road users will have sufficient distance to stop before entering the work space. When used at nighttime, the flagger station shall be illuminated.

SURVEY WORK ZONES

The SURVEY CREW AHEAD symbol or legend sign shall be the principal Advance Warning Sign used for Traffic Control Through Survey Work Zones and may replace the ROAD WORK AHEAD sign when lane closures occur, at the discretion of the Party Chief. Dual orange flags shall be used at all times to enhance the SURVEY CREW AHEAD sign, even with mesh signs.

When Traffic Control Through Work Zones is being used for survey purposes only, the END ROAD WORK sign as called for on certain 600 Series Indexes should be omitted.

Survey Between Active Traffic Lanes or Shared Left Turn Lanes

The following provisions apply to Main Roadway Traffic Control Work Zones. These provisions must be adjusted by the Party Chief to fit roadway and traffic conditions when the Survey Work Zone includes intersections.

(A) A STAY IN YOUR LANE (MOT-1-06) sign shall be added to the Advance Warning Sign sequence as the second most immediate sign from the work area.

(B) Elevation Surveys-Cones may be used at the discretion of the Party Chief to protect prism holder and flagger(s). Cones, if used, may be placed at up to 50' intervals along the break line throughout the work zone.

(C) Horizontal Control-With traffic flow in the same direction, cones shall be used to protect the backsight tripod and/or instrument. Cones shall be placed at the equipment, and up to 50' intervals for at least 200' towards the flow of traffic.

(D) Horizontal Control-With traffic flow in opposite directions, cones shall be used to protect the backsight tripod and/or instrument. Cones shall be placed at the equipment, and up to 50' intervals for at least 200' in both directions towards the flow of traffic.

SIGNS

SIGN MATERIALS

Mesh signs may be used only for Daylight Operations.

Vinyl signs may be used for Day or Night Operations not to exceed 1 day except as noted in the standards.

Rigid or Lightweight sign panels may be used in accordance with the vendor drawing for the sign stand to which they are attached.

INTERSECTING ROAD SIGNING

Signing for the control of traffic entering and leaving work zones by way of intersecting crossroads shall be adequate to make drivers aware of work zone conditions. When Work operations exceed 60 minutes, place the ROAD WORK AHEAD sign on the side street entering the work zone.

ADJOINING AND/OR OVERLAPPING WORK ZONE SIGNING

Adjoining work zones may not have sufficient spacing for standard placement of signs and other traffic control devices in their advance warning areas or in some cases other areas within their traffic control zones. Where such restraints or conflicts occur or are likely to occur, one of the following methods will be employed to avoid conflicts and prevent conditions that could lead to misunderstanding on the part of the traveling public as to the intended travel way by the traffic control procedure applied:

(A) For scheduled projects the engineer in responsible charge of project design will resolve anticipated work zone conflicts during the development of the project traffic control plan. This may entail revision of plans on preceding projects and coordination of plans on concurrent projects.

(B) Unanticipated conflicts arising between adjoining in progress highway construction projects will be resolved by the Resident Engineer for projects under his residency, and, by the District Construction Engineer for in progress projects under adjoining residencies.

(C) The District Maintenance Engineer will resolve anticipated and occurring conflicts within scheduled maintenance operations.

(D) The Unit Maintenance Engineer will resolve conflicts that occur within routine maintenance works; between routine maintenance work, unscheduled work and/or permitted work; and, between unit controlled maintenance works and highway construction projects.

SIGN COVERING AND INTERMITTENT WORK STOPPAGE SIGNING

Existing or temporary traffic control signs that are no longer applicable or are inconsistent with intended travel paths shall be removed or fully covered.

Sign blanks or other available coverings must completely cover the existing sign. Rigid sign coverings shall be the same size as the sign it is covering, and bolted in a manner to prevent movement.

Sign covers are incidental to work operations and are not paid for separately.

SIGNING FOR DETOURS, LANE SHIFTS AND DIVERSIONS

Detours should be signed clearly over their entire length so that motorists can easily determine how to return to the original roadway. The reverse curve (W1-4) warning sign should be used for the advanced warning for a lane shift. A diversion should be signed as a lane shift.

EXTENDED DISTANCE ADVANCE WARNING SIGN

Advance Warning Signs shall be used at extended distance of one-half mile or more when limited sight distance or the nature of the obstruction may require a motorist to bring their vehicle to a stop. Extended distance Advanced Warning Signs may be required on any type roadway, but particularly be considered on multilane divided highways where vehicle speed is generally in the higher range (45 MPH or more).

UTILITY WORK AHEAD SIGN

The UTILITY WORK AHEAD (W21-7) sign may be used as an alternate to the ROAD WORK AHEAD or the ROAD WORK XX FT (W20-1) sign for utility operations on or adjacent to a highway.

LENGTH OF ROAD WORK SIGN

The length of road work sign (G20-1) bearing the legend ROAD WORK NEXT_____ MILES is required for all projects of more than 2 miles in length. The number of miles entered should be rounded up to the nearest mile. The sign shall be located at begin construction points.

SPEEDING FINES DOUBLED WHEN WORKERS PRESENT SIGN

The SPEEDING FINES DOUBLED WHEN WORKERS PRESENT sign should be installed on all projects, but may be omitted if the work operation is less than 1 day. The placement should be 500 feet beyond the ROAD WORK AHEAD sign or midway to the next sign whichever is less.

GROOVED PAVEMENT AHEAD SIGN

The GROOVED PAVEMENT AHEAD sign is required 500 feet in advance of a milled or grooved surface open to traffic. The W8-15P placard shall be used in conjuction with the GROOVED PAVEMENT AHEAD sign.

END ROAD WORK SIGN

The END ROAD WORK sign (G20-2) should be installed on all projects, but may be omitted where the work operation is less than 1 day. The sign should be placed approximately 500 feet beyond the end of a construction or maintenance project unless other distance is called for in the plans. When other Construction or Maintenance Operations occur within 1 mile this sign should be omitted and signing coordinated in accordance with Index No. 600, ADJOINING AND/OR OVERLAPPING WORK ZONE SIGNING.

PROJECT INFORMATION SIGN

The Project information sign shall be installed when called for in the plans.

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GENERAL NOTES:

1. All signs shall be post mounted when work operations exceed one day except for:

   a. Road closure signs mounted in accordance with the vendor drawing for the Type III Barricade shown on the APL.
   b. Pedestrian advanced warning or regulatory signs mounted on sign supports in accordance with the vendor drawing shown on the APL.
   c. Median barrier mounted signs per Index 11871.

TEMPORARY SIGN SUPPORT NOTE:

1. Signs mounted on temporary supports or barricades, and barricade/sign combination shall be crashworthy in accordance with NCHRP 350 requirements and included on the Approved Products List (APL).

POST MOUNTED SIGN NOTES:

1. Use only approved systems listed on the Department's Approved Products List (APL).

2. Manufacturers seeking approval of U-Channel and steel square tube sign support assemblies for inclusion on the Approved Products List (APL) must submit a APL application, design calculations (for square tube only), and detailed drawings showing the product meets all the requirements of this Index.

3. Provide 3 lb/ft Steel U-Channel Posts with a minimum section modulus of 0.43 in^3 for 60 ksi steel, a minimum section modulus of 0.37 in^3 for 70 ksi steel, or a minimum section modulus of 0.34 in^3 for 80 ksi steel.

4. Provide 4 lb/ft Steel U-Channel Posts with a minimum section modulus of 0.56 in^3 for 60 ksi steel, or a minimum section modulus of 0.47 in^3 for 70 ksi or 80 ksi steel.

5. U-channel posts shall conform with ASTM A 499, Grade 60, or ASTM A 576, Grade 1080 (with a minimum yield strength of 60 ksi). Square tube posts shall conform with ASTM A 653, Grade 50, or ASTM A 1011, Grade 50.

6. Sign attachment bolts, washers, nuts and spacers shall conform with ASTM A307 or A 36.

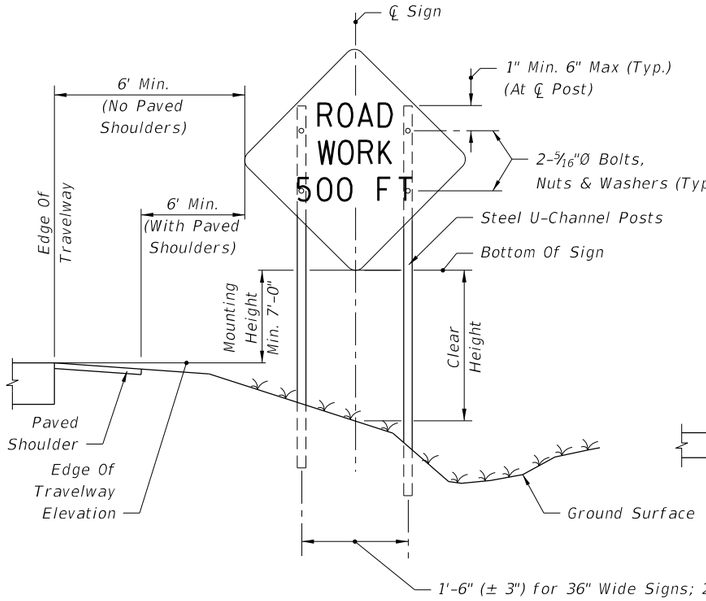
7. For diamond warning signs with supplement plaque (up to 5 ft^2 in area), use 4 lb/ft posts for up to 10 ft Clear Height (measure to the bottom of diamond warning sign).

8. Install 4 lb/ft Steel U-Channel Posts with approved breakaway splice in accordance with the manufacturer's detail shown on the APL.

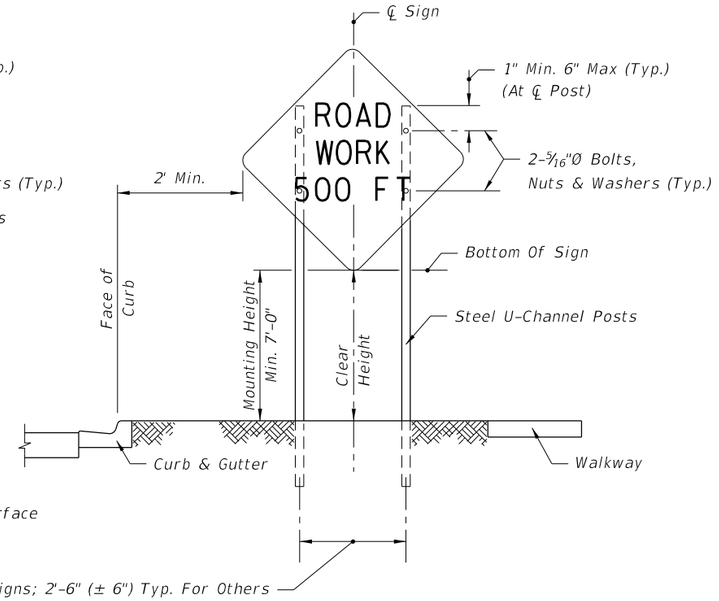
9. The contractor may install 3 lb/ft Steel U-Channel Posts with approved breakaway splice in accordance with the manufacturer's detail shown on the APL.

10. Install all posts plumb.

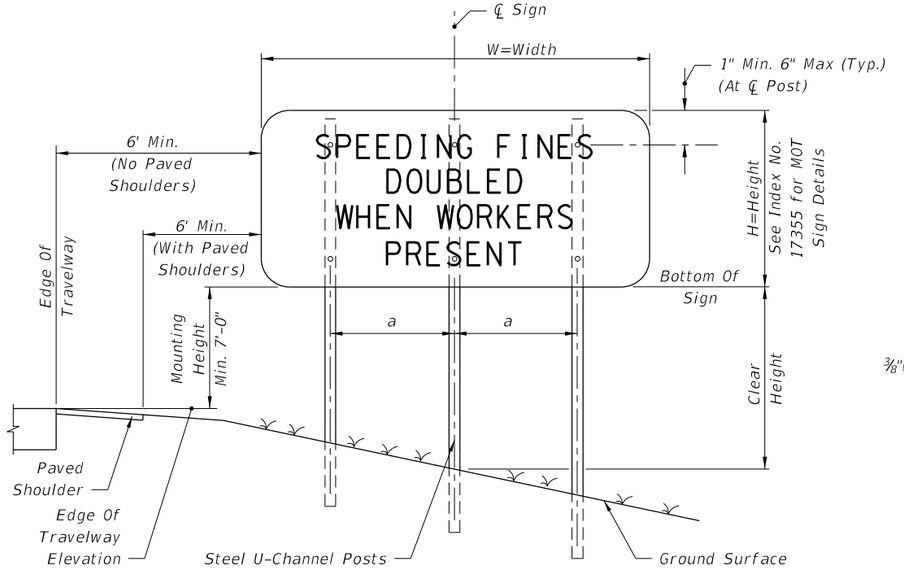
11. The contractor may set posts in preformed holes to the specified depth with suitable backfill tamped securely on all sides, or drive 3 lb/ft sign posts and any size base post in accordance with the manufacturer's detail shown on the APL.



2 POST SIGN SUPPORT MOUNTING DETAILS
(SINGLE POST SIMILAR)
RURAL



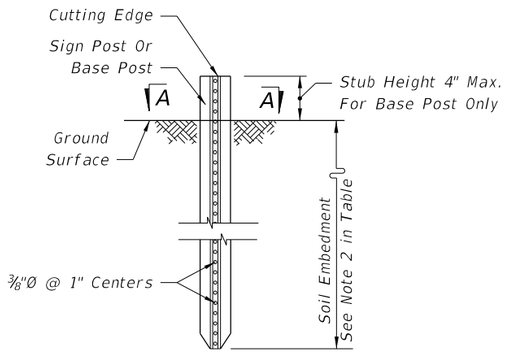
2 POST SIGN SUPPORT MOUNTING DETAILS
(SINGLE POST SIMILAR)
URBAN



3 POST SIGN SUPPORT MOUNTING DETAILS

Where W = 48": a = 1' - 4½" (± 1")
W = 60": a = 1' - 9" (± 1")
W = 72": a = 2' - 1" (± 1")

WORK ZONE SIGN SUPPORTS



TYPICAL FOUNDATION DETAIL

See APL for post, splice and connection details.
No bolts installed closer than 1" to cutting edge.

SECTION A-A
(SCHEMATIC)

POST AND FOUNDATION TABLE FOR WORK ZONE SIGNS		
SIGN SHAPE	SIGN SIZE (inches)	NUMBER OF STEEL U CHANNEL POSTS
Octagon	30x30	1
Triangle	36x36x36	1
	48x48x48	1
	60x60x60	2
Rectangle (W x H)	24x18	1
	24x30	1
	30x24	1
	36x18	1
	36x24	1
	48x18	1
	48x24	1
	36x48	2
	48x30	2
	48x36	2
	54x36	2
	48x60	3
	60x54	3
	72x48	3
	120x60*	4*
Square	30x30	1
	36x36	2
	48x48	2
Diamond (See Note 6)	48x48	2
Circle	360	2

Notes For Table:

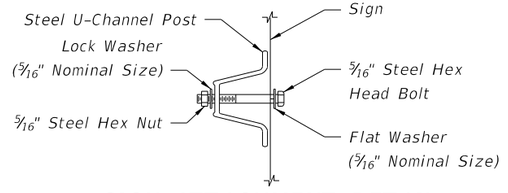
1. Use 3 lb/ft posts for Clear Height up to 10' and 4 lb/ft posts for Clear Height up to 12'.

* Use 4 lb/ft U-channel sign post with a mounting height of 7' min. and 8' max. Attach sign panel using Z-bracket detail on Sheet 7.

2. Minimum foundation depth is 4.0' for 3 lb/ft posts and 4.5' for 4 lb/ft posts.

3. For both 3 lb/ft and 4 lb/ft base or sign posts installed in rock, a minimum cumulative depth of 2' of rock layer is required.

4. The soil plate as shown on the APL vendor drawing is not required for base posts or sign posts installed in existing rock (as defined in note 3), asphalt roadway, shoulder pavement or soil under sidewalk.



SIGN ATTACHMENT DETAIL
(WITHOUT Z-BRACKET)

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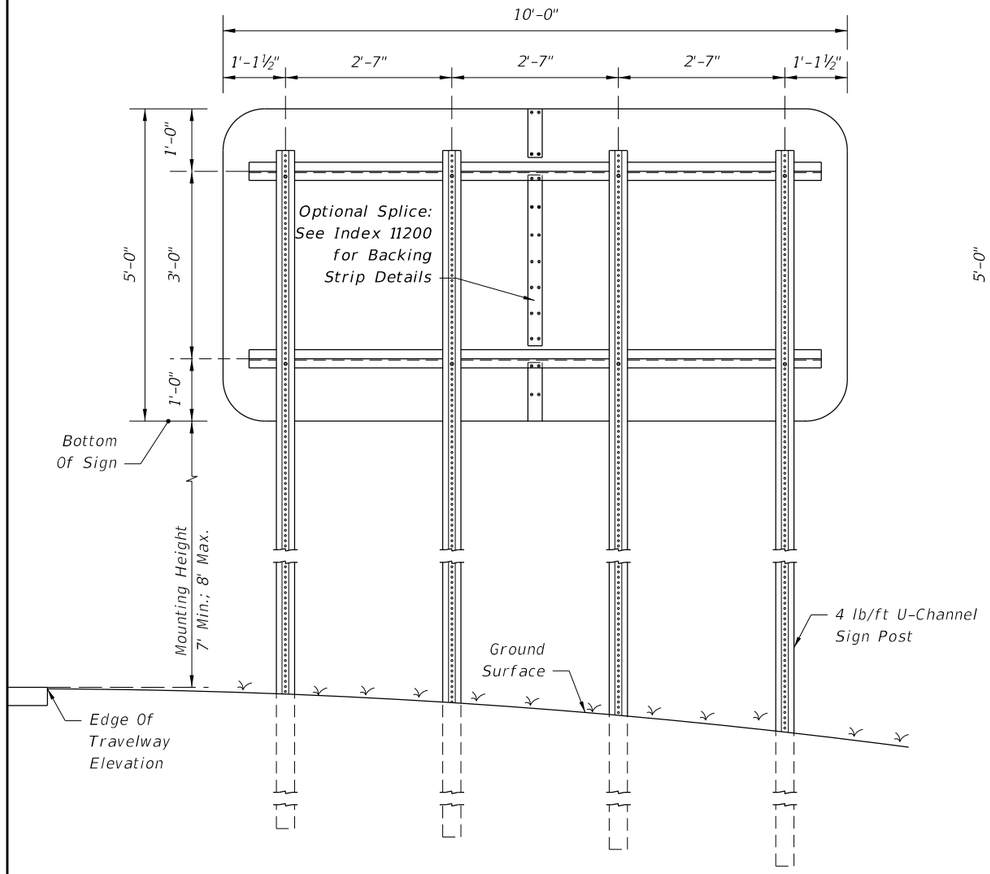
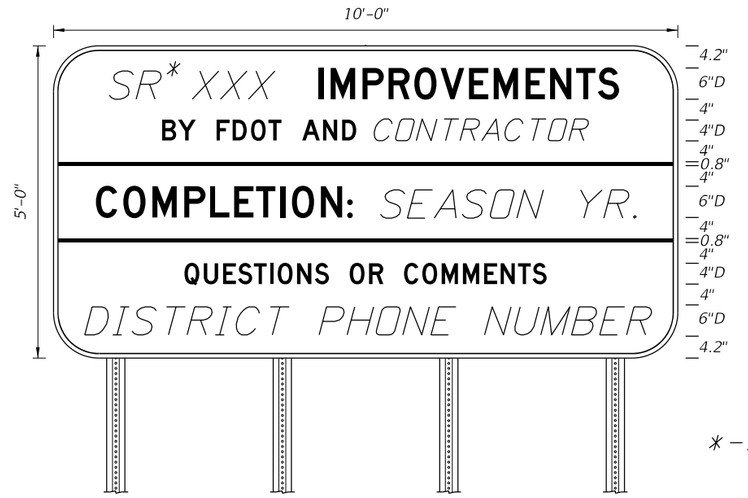
LAST REVISION	REVISION	DESCRIPTION:				
12/15/14		Deleted Sheet #4; Renumbered Index.	FDOT	2015 DESIGN STANDARDS	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES	INDEX NO. 600 / SHEET NO. 5 of 12



4 POST SIGN SUPPORT MOUNTING DETAIL

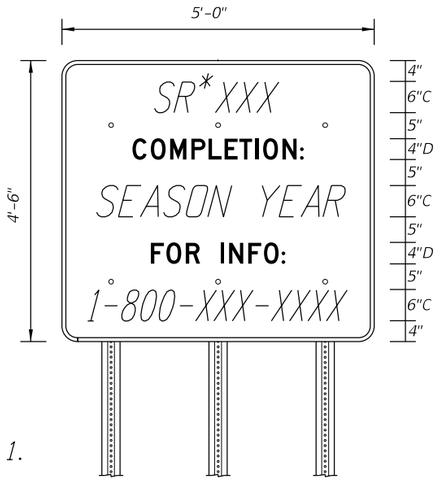


*-See Note 1.

BORDER	10'-0"x 5'-0"
R=8"	8" Radii
TH=0.25"	4" and 6" series D Legend
IN=0.75"	Blue Background
	White Legend and Border

PROJECT INFORMATION SIGN DETAIL
50 MPH OR GREATER

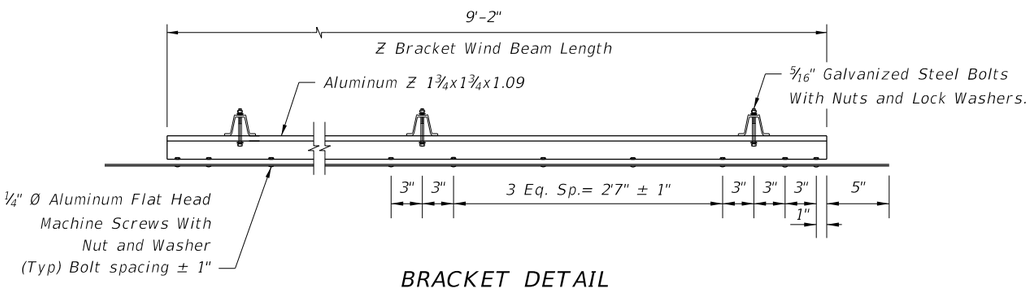
Use SIGN ATTACHMENT DETAIL
(WITH Z-BRACKET).



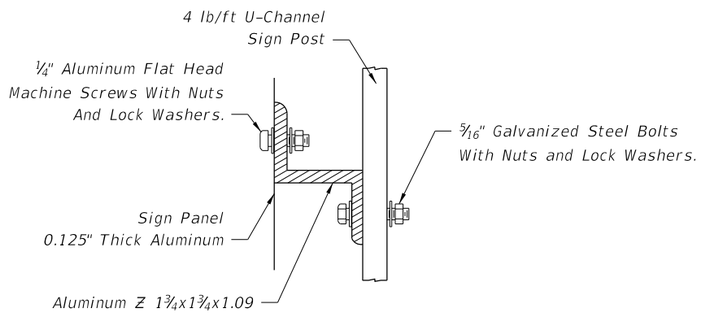
BORDER	5'-0"x 4'-6"
R=3"	3" Radii
TH=0.25"	4" series D Legend and
IN=0.75"	6" series C Legend
	Blue Background
	White Legend and Border

PROJECT INFORMATION SIGN DETAIL
45 MPH OR LESS

Use SIGN ATTACHMENT DETAIL
(WITHOUT Z-BRACKET)
On Sheet 6.



BRACKET DETAIL



SIGN ATTACHMENT DETAIL
(WITH Z-BRACKET)

PROJECT INFORMATION SIGN NOTES:

1. Road designation should be the most common designation (ie. I-Interstate, SR-State Road or US.)
2. See sheet 6 for POST AND FOUNDATIONS TABLE FOR WORK ZONE SIGNS.
3. See sheet 6 for TYPICAL FOUNDATION DETAILS.
4. Payment for Project Information Sign shall be included in Lump Sum MOT.

PROJECT INFORMATION SIGN

12/16/2014 8:54:33 AM

LAST REVISION	REVISION	DESCRIPTION:			
12/15/14		Deleted Sheet #4; Renumbered Index.	2015 DESIGN STANDARDS	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES	INDEX NO. 600 / SHEET NO. 6 of 12

E5-2
B/0

E5-2a
B/0

G20-1
B/0

G20-2
B/0

G20-4
B/0

M4-8
B/0

M4-8A
B/0

M4-9L
B/0

M4-9R
B/0

M4-10L
O/B

M4-10R
O/B

OM-3R
B/Y

R1-1
W/R

R1-2
RW/R

R2-1
B/W

R4-1
B/W

R4-2
B/W

R4-5
B/W


R4-7
B/W


R4-8
B/W

R4-7AL
B/W

R4-7AR
B/W

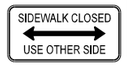
R4-7BL
B/W

R4-7BR
B/W

R5-1
WR/W

R9-8
B/W

R9-9
B/W



R9-10
B/W

R9-11
B/W

R9-11a
B/W

R11-2
B/W


W1-1R
B/0


W1-2R
B/0


W1-3R
B/0


W1-4R
B/0


W1-4b
B/0


W1-4c
B/0


W1-6
B/0


W1-7
B/0


W1-8
B/0

W3-1
RB/O

W3-2
RB/O

W3-3
B(RYG)/O

W3-4
B/O

W3-5
B/O

W4-1
B/O

W4-2
B/O

W5-1
B/O

W5-2
B/O

W5-3
B/O

W6-1
B/O

W6-2
B/O

W6-3
B/O

W8-1
B/O

W8-2
B/O

W8-3
B/O

W8-4
B/O

W8-5
B/O

W8-6
B/O

W8-7
B/O

W8-8
B/O

W8-9
B/O

W8-9a
B/O

W8-15P
B/O

W8-11
B/O

W9-1L
B/O

W9-1R
B/O

W9-2L
B/O

W9-2R
B/O

W10-1
B/Y

W11-2
B/O

W12-1
B/O

W12-2
B/O

W13-1
B/O

W20-1A
B/O

W20-1B
B/O

W20-1C
B/O

W20-1D
B/O

W20-1E
B/O

W20-1F
B/O

W20-2A
B/O

W20-2B
B/O

W20-2C
B/O

W20-2D
B/O

W20-2E
B/O

W16-7P
B/O

W20-3
B/O

W20-4
B/O

W20-5a
B/O

W20-5L
B/O

W20-5R
B/O

W20-5C
B/O

W20-7A
B/O

W20-7
B/O

W21-1A
B/O

W21-1
B/O

W21-5
B/O

W21-5a
B/O

W21-6
B/O

W21-7
B/O

W16-2P
B/O

W22-1
B/O

W22-2
B/O

W22-3
B/O

COLOR CODES
Legend and/or Symbol Background

O-Orange (Reflectorized)
B-Black (Non-Reflectorized)
W-White (Reflectorized)
R-Red (Reflectorized)
Y-Yellow (Reflectorized)
G-Green (Reflectorized)

Notes:

1. *The size of diamond shaped Temporary Traffic Control (TTC) warning signs shall be a minimum of 48" X 48".*
2. *Fluorescent orange shall be used for all orange colored work zone signs.*
3. *When standard orange flags or flashing warning lights are used in conjunction with signs, they shall not block the sign face.*
4. *The sign shields, symbols and messages contained on this sheet are provided for ready reference to those signs used in the development of the 600 series Design Standards and are commonly used in the development of traffic control plans. For additional signs and sign detail information refer to the STANDARD HIGHWAY SIGNS MANUAL as specified in the MUTCD. Special signs for traffic control plans will be as approved by the State Traffic Plans Engineer. The sign codes shown on this sheet are for the purpose of identifying cell names found in the Traffic Control Cell Library (TCZ.Cel). The STANDARD HIGHWAY SIGNS MANUAL should be referenced for the official sign codes for use in the development of traffic control plans. See Index No. 17355 for MOT sign details.*

MOT-1-06
B/O

MOT-4-06
B/O

MOT-5-06
MOT-6-06
B/O

MOT-7-06
B/O

MOT-8-06
B/O

MOT-9-06
B/O

MOT-10-06
B/O

MOT-11-06
BLUE/W

MOT-12-06R
B/W

MOT-12-06L
B/W

MOT-13-06
(Limited access facilities)
MOT-14-06
(All other facilities)

MOT-15-06
B/O

W8-15P
B/O

MOT-16-06
B/O

MOT-17-06
B/O

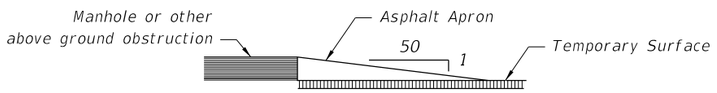
MOT-18-10
B/O

COMMONLY USED WARNING AND REGULATORY SIGNS IN WORK ZONES

MANHOLES/CROSSWALKS/JOINTS

Manholes extending 1" or more above the travel lane and crosswalks having an uneven surface greater than ¼" shall have a temporary asphalt apron constructed as shown in the diagram below.

All transverse joints that have a difference in elevation of 1" or more shall have a temporary asphalt apron constructed as shown in the diagram below.



The apron is to be removed prior to constructing the next lift of asphalt. The cost of the temporary asphalt shall be included in the contract unit price for Maintenance of Traffic, LS.

TRUCK/TRAILER-MOUNTED ATTENUATORS

Truck/Trailer-mounted attenuators (TMA) can be used for moving operations and short-term stationary operations. For moving operations, see Index Nos. 607 and 619. For short-term, stationary operations, see Part VI of the MUTCD.

REMOVING PAVEMENT MARKINGS

Existing pavement markings that conflict with temporary work zone delineation shall be removed by any method approved by the Engineer, where operations exceed one daylight period. Painting over existing pavement markings with black paint or spraying with asphalt shall not be accepted as a substitute for removal or obliteration. Full pavement width overlays of either a structural or friction course are a positive means to achieve obliteration.

SIGNALS

Existing traffic signal operations that require modification in order to carry out work zone traffic control shall be included in the TCP and be approved by the District Traffic Operations Engineer.

Maintain all existing actuated or traffic responsive mode signal operations for main and side street movements for the duration of the Contract and require restoration of any loss of detection within 12 hours. The contractor shall select only detection technology listed on the Department's Approved Products List (APL) and approved by the Engineer to restore detection capabilities.

CHANNELIZING AND LIGHTING DEVICES

Channelizing and lighting devices for work zone traffic control shall be as prescribed in Part VI of the MUTCD, subject to supplemental revisions provided in the contract documents and Index 600 requirements.

CHANNELIZING AND LIGHTING DEVICE CONSISTENCY

Barricades, vertical panels, cones, tubular markers and drums shall not be intermixed within either the lateral transition or within the tangent alignment.

WARNING LIGHTS

Warning lights shall be in accordance with the MUTCD except for the application limitations stipulated below:

Flashing

Type A Low Intensity Flashing Warning Lights are to be mounted on barricades, drums, vertical panels or advance warning signs (except as noted below) and are intended to continually warn drivers that they are approaching or proceeding in a hazardous area. Flashing lights shall not be used to delineate the intended path of travel, and not placed with spacings that will form a continuous line to the drivers eye. The Type A light will be used to mark obstructions that are located adjacent to or in the intended travel way. Type A lights shall not be used in conjunction with the first advance warning sign nor the second such sign when used.

For post-mounted signs, Type B High Intensity Flashing Warning Lights shall be mounted on the first advanced warning sign and on the first and second advanced warning sign where two or more signs are used; this applies to all approaches to any work zone. The light shall be mounted on the channel post or on the upper edge of the sign nearest the traffic.

Type B High Intensity Flashing Warning Lights are not to be placed on temporary portable sign supports.

Steady-Burn

Type C Steady-Burn Lights are to be mounted on barricades, drums, or vertical panels and used in combination with those devices to delineate the travel way on lane closures, lane changes, diversion curves and other similar conditions. Steady-burn lights are intended to be placed in a line to delineate the travel way through and around obstructions in the transition, buffer, work and termination areas of the traffic control zone. Their intended purpose is not for warning drivers that they are approaching or proceeding through a hazardous area.

STANDARD ORANGE FLAG

For post-mounted signs a standard orange flag 18"x 18" (min.) shall be mounted on the first advanced warning sign and on the first and second advanced warning sign where two or more signs are used; this applies to all approaches to any work zone. The flag shall be mounted on the channel post or on the upper edge of the sign furthest from traffic.

Standard orange flags are not to be placed on temporary portable sign supports except to enhance the SURVEY CREW AHEAD sign where dual orange flags shall be used at all times.

PORTABLE CHANGEABLE MESSAGE SIGNS (PCMS)

The PCMS can be used to:

1. Supplement standard signing in construction or maintenance work zones.
2. Reinforce static advance warning messages.
3 Provide motorists with updated guidance information.

PCMS should be placed approx. 500 to 800 feet in advance of the work zone conflicts or 0.5 to 2 miles in advance of complex traffic control schemes which require new and/or unusual traffic maneuvers.

If PCMS are to be used at night, the intensity of the flashers shall be reduced during darkness when lower intensities are desirable.

For additional information refer to the FDOT Plans Preparation Manual, Volume I, Chapter 10.

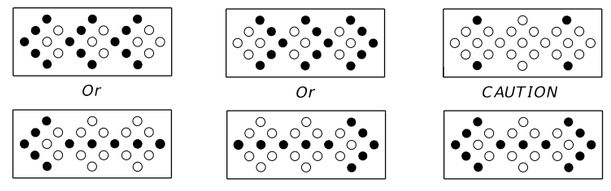
ADVANCE WARNING ARROW BOARDS

An arrow board in the arrow or chevron mode shall be used only for stationary or moving lane closures on multilane roadways.

For shoulder work, blocking the shoulder, for roadside work near the shoulder, or for temporarily closing one lane on a two-lane, two-way roadway, an arrow board shall be used only in the caution mode.

A single arrow board shall not be used to merge traffic laterally more than one lane. When arrow boards are used to close multiple lanes, a single board shall be used at the merging taper for each closed lane.

When Advance Warning Arrow Boards are used at night, the intensity of the flashers shall be reduced during darkness when lower intensities are desirable.



MODES

12/16/2014 8:54:34 AM

LAST REVISION	REVISION	DESCRIPTION:	2015 DESIGN STANDARDS	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES	INDEX NO.	SHEET NO.
12/15/14		Deleted Sheet #4; Renumbered Index; Changed the Portable Changeable Message Sings (PCMS) note.			600	8 of 12

DROP-OFF CONDITION NOTES

1. These conditions and treatments can be applied only in work areas that fall within a properly signed work zone.

2. A drop-off is defined as a drop in elevation, parallel to the adjacent travel lanes, greater than 3" with slopes (A:B) steeper than 1:4. When drop-offs occur within the clear zone due to construction or maintenance activities, protection devices are required. See Table 1.

3. Distance X is to be the maximum practical under project conditions.

4. For Clear Zone widths, see Index No. 600 sheet 3.

5. Distance from the travel lane to the barrier or warning device should be maximum practical for project conditions.

6. For Conditions 1 and 3 only, any drop-off condition that is created and restored within the same work period will not be subject to the use of barriers; however, warning devices will be required.

7. When permanent curb heights are ≥ 6", no warning device will be required. For curb heights < 6", see Table 1.

8. Where a barrier is specified, any of the types below may be used in accordance with the applicable Index:

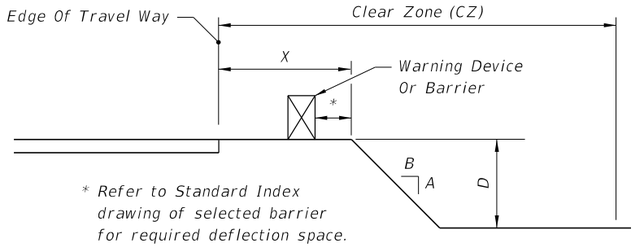
Index No.	Description
400	Temporary guardrail and end anchorage
412	Temporary low profile barrier
414	Type K temporary concrete barrier
415	Temporary concrete barrier

For other types of temporary barriers see the APL

Table 1
Drop-off Protection Requirements

Condition	X (ft)	D (in.)	Device Required
1	0-12	> 3	Barrier (See Note 6)
2	12-CZ	> 3 to ≤ 5	Warning Device
3	0-CZ	> 5	Barrier (See Note 6)
4	Removal of Bridge/ Retaining Wall Barrier		Barrier
5	Removal of portions of Bridge Deck		Barrier

1. This Table is for all speeds.
2. See Drop-off Condition Notes.



* Refer to Standard Index drawing of selected barrier for required deflection space.

WARNING DEVICE NOTES

1. The following are defined as acceptable warning devices:
   a. Vertical panel
   b. Type I Or Type II barricades
   c. Drum
   d. Cone (where allowed)
   e. Tubular marker (where allowed)

2. Warning device spacing shall be as shown in Table 2.

Table 2
Warning Device Spacing

Speed (mph)	Max. Distance Between Devices (ft)			
	Cones orTubular Markers		Type I or Type II Barricades or Vertical Panels or Drums	
	Taper	Tangent	Taper	Tangent
25	25	50	25	50
30 to 45	25	50	30	50
50 to 70	25	50	50	100

PEDESTRIAN AND/OR BICYCLIST WAY DROP-OFF CONDITION NOTES

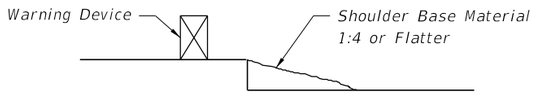
1. A pedestrian and/or bicyclist way drop-off is defined as:

   a. a drop in elevation greater than 10 inches that is closer than 2 feet from the edge of the pedestrian or bicyclist way

   b. a slope steeper than 1:2 that begins closer than 2 feet from the edge of the pedestrian or bicyclist way when the total drop-off is greater than 60 inches.

2. Any drop-off adjacent to a pedestrian or bicyclist way shall be protected with warning devices, temporary barrier wall or approved handrail.

SHOULDER TREATMENT



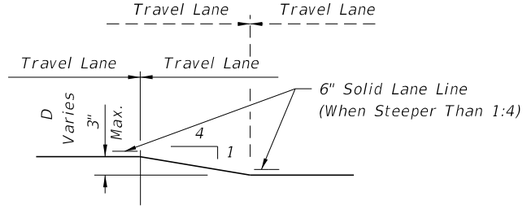
NOTES

1. Shoulder treatment may be used in lieu of barrier. Warning devices are required.

2. Daily inspections shall be conducted to assure that no erosion, excessive slopes, rutting, or other adverse conditions exist. Any deficiencies shall be repaired immediately.

3. Compensation for the placement and removal of the material required for the shoulder treatment shall be included in the cost for Maintenance Of Traffic, LS. Use of shoulder treatment in lieu of a barrier is not eligible for CSIP consideration.

TRAVEL LANE TREATMENT FOR MILLING OR RESURFACING



NOTES

1. This treatment applies to resurfacing or milling operations between adjacent travel lanes.

2. Whenever there is a difference in elevation between adjacent travel lanes, the W8-11 sign with "UNEVEN LANES" is required at intervals of ½ mile maximum.

3. If D is 1½" or less, no treatment is required.

4. Treatment allowed only when D is 3" or less.

5. If the slope is steeper than 1:4 (not to be steeper than 1:1), the R4-1 and MOT-1-06 signs shall be used as a supplement to the W8-11; this condition should never exceed 3 miles in length.

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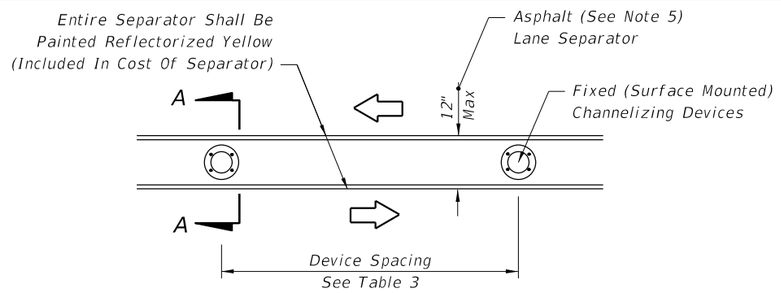
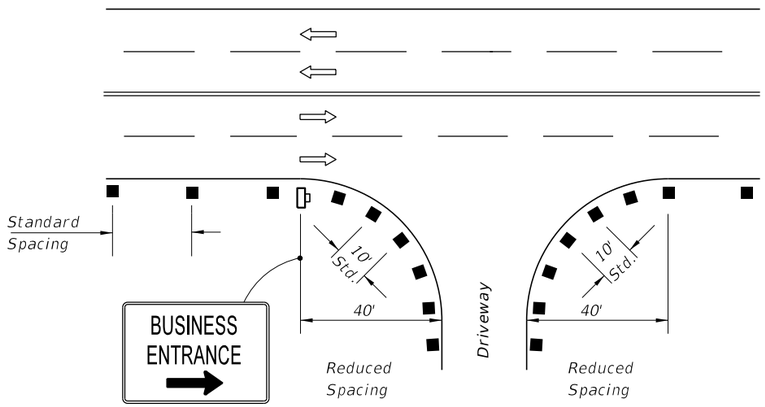
DROPOFFS IN WORK ZONES

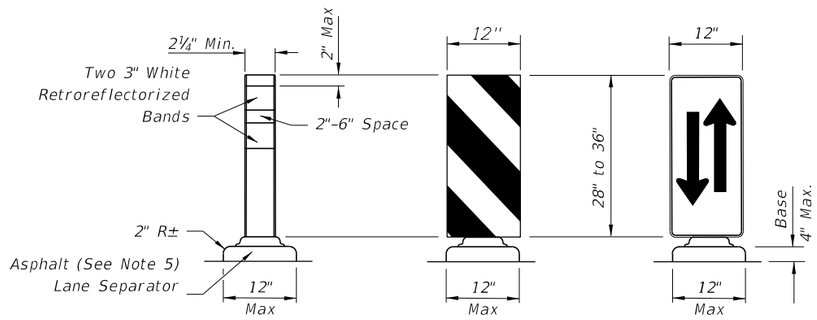
LAST REVISION	REVISION	DESCRIPTION:	2015 DESIGN STANDARDS	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES	INDEX NO.	SHEET NO.
12/15/14		Deleted Sheet #4; Renumbered Index.			600	9 of 12

Table 3 Device Spacing				
Speed (mph)	Max. Distance Between Devices (ft.)			
	Tubular Markers		Vertical Panels or Opposing Traffic Lane Divider	
	Taper	Tangent	Taper	Tangent
25	25	50	25	50
30 to 45	25	50	30	50
50 to 70	25	50	50	100



PLAN





FIXED (SURFACE MOUNTED) CHANNELIZING DEVICES

SECTION AA

1. Temporary lane separators shall be supplemented with any of the following approved fixed (surface mounted) channelizing devices: tubular markers, vertical panels, or opposing traffic lane divider panels. Opposing traffic lane divider panels (W6-4) shall only be used as center lane dividers to separate opposing vehicular traffic on a two-lane, two-way operation. Tubular Markers, Vertical Panels and Opposing Traffic Lane Divider panels shall not be intermixed within the limits where the temporary lane separator is used. The connection between the channelizing device and the temporary lane separator curb shall hold the channelizing device in a vertical position.

2. Reflectorized materials shall have a smooth sealed outer surface which will display the same approximate color day and night. Furnish channelizing devices having retroreflective sheeting meeting the requirements of Section 990.

3. 12" openings for drainage shall be constructed in the asphalt and portable temporary lane separator at a maximum spacing of 25' in areas with grades of 1% or less or 50' in areas with grades over 1% as directed by the Engineer.

4. Tapered ends shall be used at the beginning and end of each run of the temporary lane separator to form a gradual increase in height from the pavement level to the top of the temporary lane separator.

5. The Contractor has the option of using portable temporary lane separators containing fixed channelizing devices in lieu of the temporary asphalt separator and channelizing devices detailed on this sheet. The portable temporary lane separator shall come in portable sections that can be connected to maintain continuous alignment between the separate curb sections. Each temporary lane separator section shall be 36 inches to 48 inches in total length. Portable temporary lane separators shall duplicate the color of the pavement marking. Portable temporary lane separators shall be one of those listed on the Qualified Products List.

6. Any damage to existing pavement caused by the removal of temporary lane separator shall be satisfactorily repaired and the cost of such repairs are to be included in the cost of Maintenance of Traffic, LS.

TEMPORARY LANE SEPARATOR

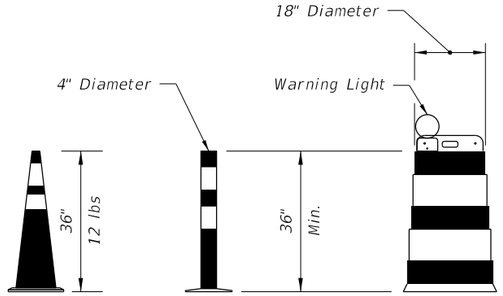
1. For single business entrances, place one 24" x 36" business sign for each driveway entrance affected. Signs shall show specific business names. Logos may be provided by business owners. Standard BUSINESS ENTRANCE sign in Index 17355 may be used when approved by the Engineer.

2. When several businesses share a common driveway entrance, place one 24" x 36" standard BUSINESS ENTRANCE sign according with Index 17355 at the common driveway entrance.

3. Channelizing devices shall be placed at a reduced spacing on each side of the driveway entrance, but shall not restrict sight distance for the driveway users.

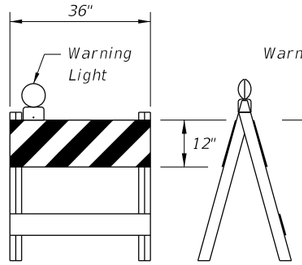
4. Business entrance signs are intended to guide motorist to business entrances moved/modified or disturbed during construction projects. Business entrance signs are not required where there is minimal distruption to business driveways which is often the case with resurfacing type projects.

PLACEMENT OF BUSINESS ENTRANCE SIGNS AND CHANNELIZING DEVICES AT BUSINESS ENTRANCE

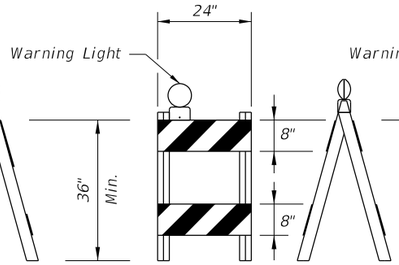


CONES TUBULAR MARKER PLASTIC DRUMS

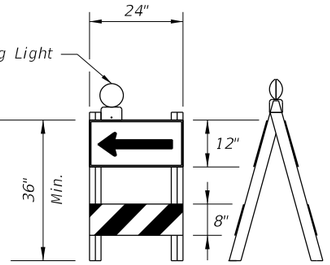
TUBULAR NON-FIXED MARKER TO BE USED DURING DAYLIGHT ONLY



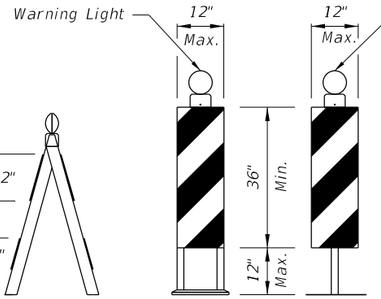
TYPE I BARRICADE



TYPE II BARRICADE

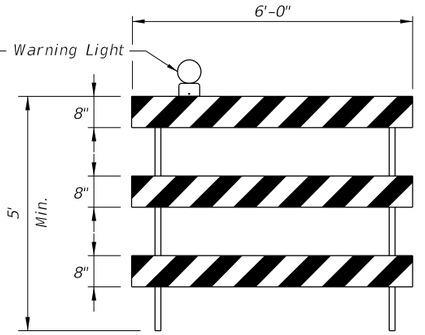


DIRECTION INDICATOR BARRICADE



A-FRAME POST MOUNT

VERTICAL PANEL



TYPE III BARRICADE

CHANNELIZING AND LIGHTING DEVICE NOTES

1. The details shown on this sheet are for the following purposes:

   (a) For ease of identification and
   (b) To provide information that supplements or supersedes that provided by the MUTCD.

2. The Type III Barricade shall have a unit length of 6'-0" only. When barricades of greater lengths are required those lengths shall be in multiples of the 6'-0" unit.

3. No sign panel should be mounted on any channelizing device unless the channelizing device/sign combination was found to be crashworthy and the sign panel is mounted in accordance with the vendor drawing for the channelizing device shown on the APL.

4. During hours of darkness, warning lights shall be used on LCDs, drums, vertical panels, Type I, Type II, Type III, and direction indicator barricades in accordance with 'Warning Lights' in Index No. 600.

5. Ballast shall not be placed on top rails or any striped rails or higher than 13" above the driving surface.

6. The direction indicator barricade may be used in tapers and transitions where specific directional guidance to drivers is necessary. If used, direction indicator barricades shall be used in series to direct the driver through the transition and into the intended travel lane.

7. The splicing of sheeting is not permitted on either channelizing devices or MOT signs.

8. For rails less than 3'-0" long, 4" stripes shall be used.

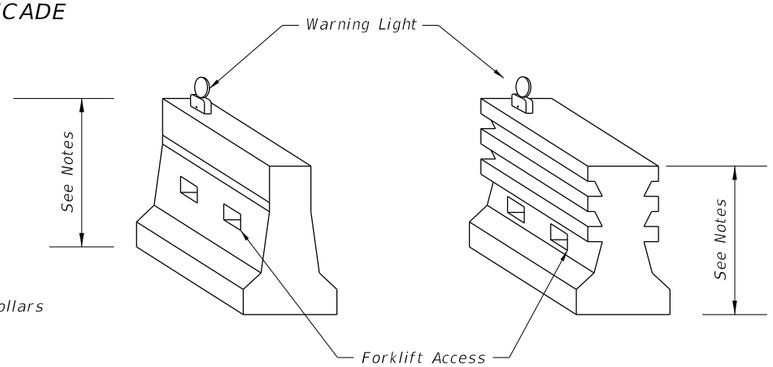
9. Cones shall:

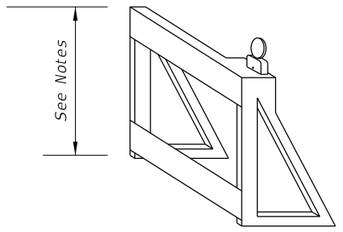
   a. Be used only in active work zones where workers are present.
   b. Not exceed 2 miles in length of use at any one time.
   c. Be reflectorized as per the MUTCD with Department approved reflective collars when used at night.

10. Spacing for longitudinal channelizing devices when placed singly shall be the same as Type I or Type II barricades or drums.

11. Vehicular longitudinal channelizing devices shall not exceed 36" in height. For vehicular longitudinal channelizing devices (LCDs) less than 32" in height, the LCD shall be supplemented with approved fixed (surface mounted) channelizing devices (tubular markers, vertical panels, etc.) along the run of the LCD, at the ends, at 50' centers on tangents, and 25' centers on radii. The cost of the fixed supplemented channelizing devices shall be included in the cost of the LCD. LCDs less than 32" in height shall not be used for speeds greater than 45 mph.

12. For pedestrian longitudinal channelizing devices, the device shall have a minimum of 8" continuous detectable edging above the walkway. A gap not exceeding a height of 2" is allowed to facilitate drainage. The top surface of the device shall be a minimum height of 32" and have smooth connection points between the devices to facilitate hand trailing. The bottom and the top surface of the device shall be in the same vertical plane. If pedestrian drop-off protection is required, the device shall have a footprint or offset of at least 2', otherwise the device must be at least 42" in height above the walkway and be anchored or ballasted to withstand a 200 lb lateral point load at the top of the device.





LONGITUDINAL CHANNELIZING DEVICE

IDENTIFICATIONS - CHANNELIZING AND LIGHTING DEVICES

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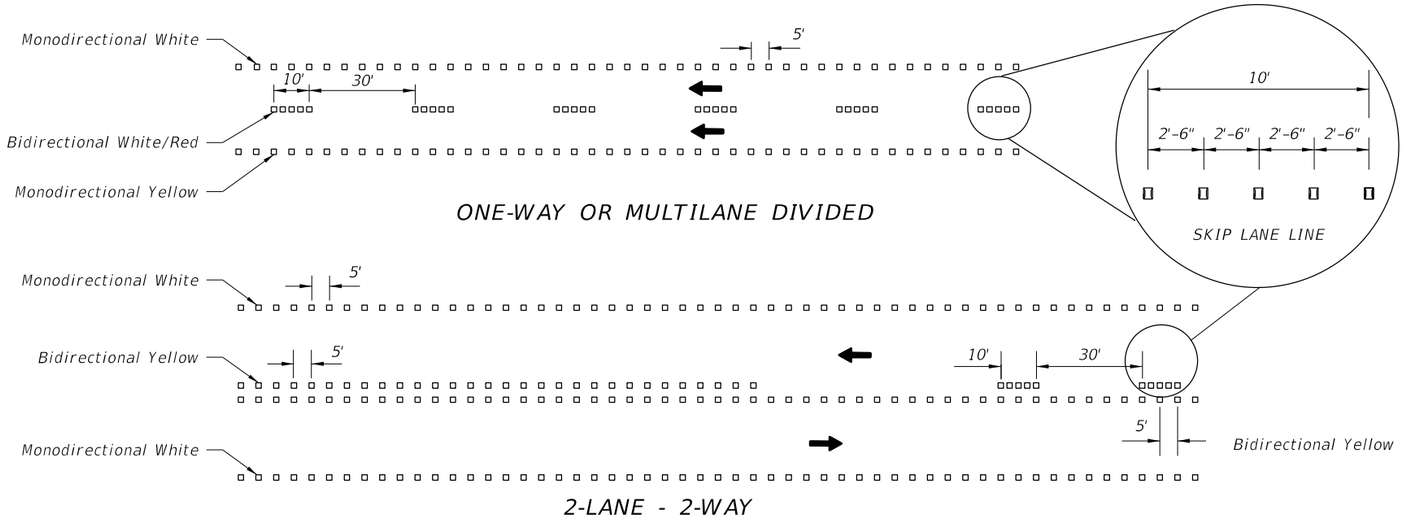
LAST REVISION	REVISION	DESCRIPTION:				
12/15/14		Deleted Sheet #4; Renumbered Index.	FDOT 2015 DESIGN STANDARDS	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES	INDEX NO. 600	SHEET NO. 11 of 12



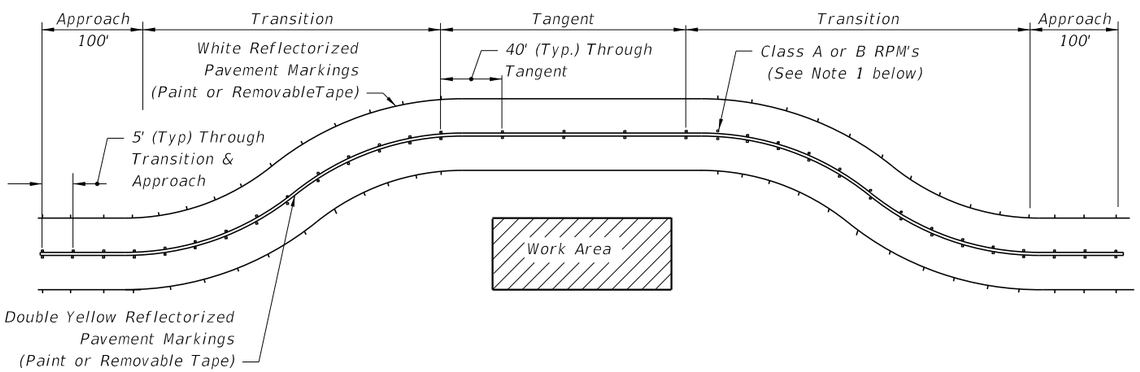
TEMPORARY SUBSTITUTION OF RPM'S FOR PAINT OR REMOVABLE TAPE

1. Paint or removable tape are the required work zone markings and shall be placed in accordance with the plans and specifications. If these work zone markings can not be placed due to weather restrictions identified in the appropriate specification, temporary substitution of RPM's for work zone markings will be allowed until the weather condition permits the placement of appropriate work zone marking. Temporary substitution of RPM's for work zone markings will be allowed for equipment malfunction, placement of the appropriate work zone marking shall be made within 3 days, or sooner if possible. When RPM's are used as a temporary substitution for work zone markings the following shall apply:

   a. Lane widths identified in the plans must be maintained. Placement of RPM's should consider where work zone markings will be placed as soon as conditions allow. If the RPM's can not be placed so that the lane width is maintained after the placement of the work zone markings, the conflicting RPM's must be removed.

   b. The color of the RPM body and the reflective face shall conform to the color of the marking for which they substitute.

   c. In work zones, CLASS A or B RPM's may be used to form lane lines, edge lines and temporary gore areas as a temporary substitute for paint or removable tape at the spacing shown above.



USE OF RPMS TO SUPPLEMENT PAINT OR REMOVABLE TAPE IN WORK ZONES

1. RPM's shall be installed as a supplement to:
   a. All lane lines.
   b. Edge lines in transition & approach areas.
   c. Edge lines of gore areas.
2. Placement of RPM's should be as shown in Index No. 17352 with the following exceptions: RPM's shall be placed at 5 feet center to center in approach and transition areas.

RPM CLASS APPLICATION FOR REFLECTIVE PAVEMENT MARKERS

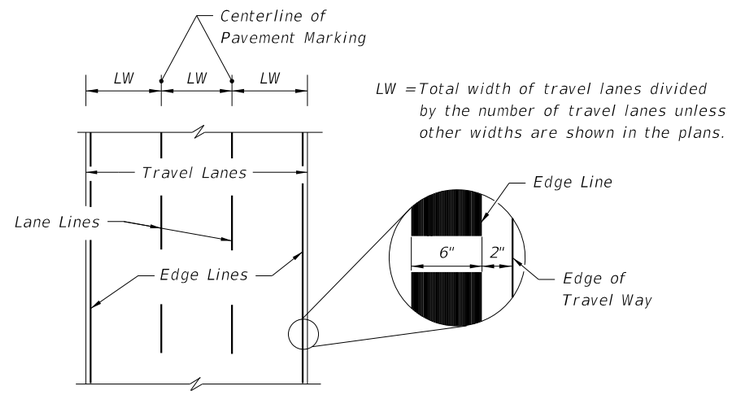
RPM CLASS	APPLICATION FOR REFLECTIVE PAVEMENT MARKERS
A	Work Zone Applications Only, For Traffic And Nontraffic Areas.
B	Permanent Application In Traffic And Nontraffic Areas Or Can Be Used In Work Zone Applications For Traffic And Nontraffic Areas.

NOTES FOR REFLECTIVE PAVEMENT MARKERS

1. The color of the raised pavement marker under both day and night conditions shall conform to the color of the marking for which they serve as a positioning guide, or for which they supplement or substitute.

2. To provide contrast on concrete pavement, or light asphalt, the five (5) white RPM's shall be followed by five black RPM's. The spacing between RPM's shall be 2'-6". Black RPM's will not be required for contrast with yellow RPM's.

3. RPM's used to supplement lane lines are to be paid for as Reflective Pavement Marker (Temporary), EA. RPM's used as a temporary substitute for paint or removable tape due to weather restrictions are to be paid for as Reflective Pavement Marker (Temporary), EA. RPM's used as a temporary substitute for paint or removable tape due to equipment malfunction are to be placed at the Contractor's expense.



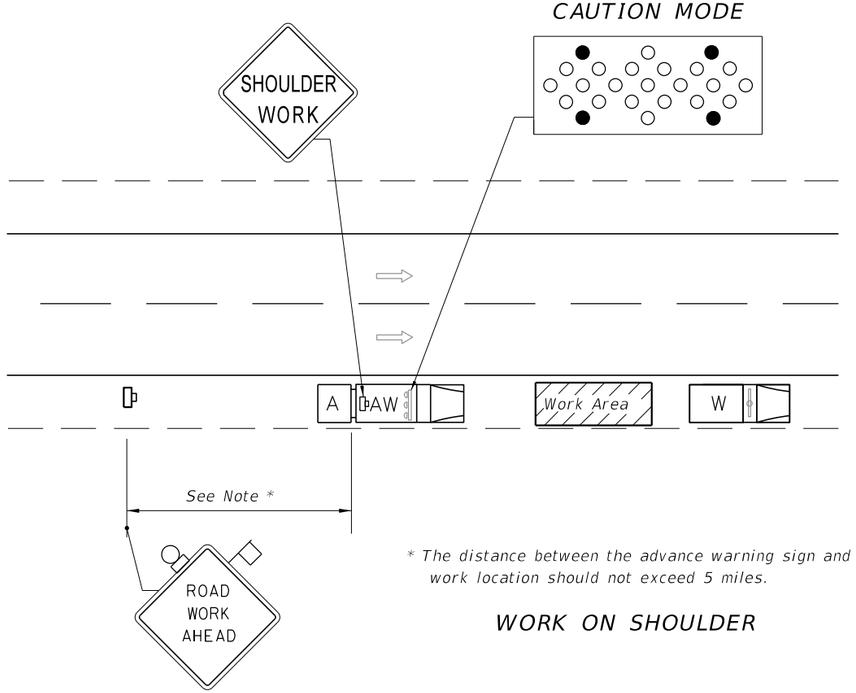
PLACEMENT OF PAVEMENT MARKINGS

PAVEMENT MARKINGS

12/16/2014 8:54:37 AM

LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
12/15/14		Deleted Sheet #4; Renumbered Index.	FDOT 2015 DESIGN STANDARDS	GENERAL INFORMATION FOR TRAFFIC CONTROL THROUGH WORK ZONES	600	12 of 12

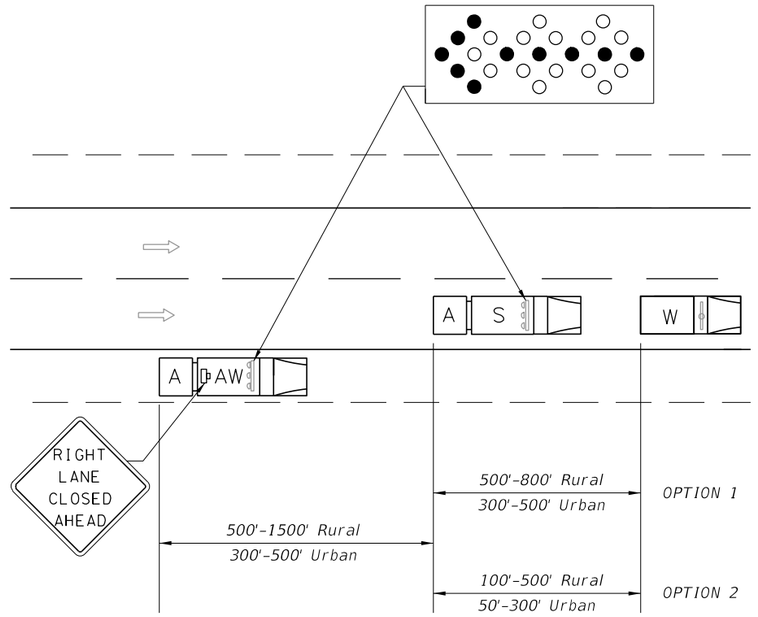
CAUTION MODE



* The distance between the advance warning sign and the work location should not exceed 5 miles.

WORK ON SHOULDER

MOVE/MERGE MODE



OPTION 1: Advance Warning Vehicle may be operated in the lane behind the Shadow Vehicle where adequate shoulder width is not available. Approved Truck Mounted Attenuators are required on both the Advance Warning Vehicle and the Shadow Vehicle.

OPTION 2: Advance Warning Vehicle must be operated in the lane behind the Shadow Vehicle. Approved Truck Mounted Attenuators are required on both the Advance Warning Vehicle and the Shadow Vehicle.

WORK WITHIN TRAVEL LANE
(Option 1 Shown, Option 2 Similar)

SYMBOLS

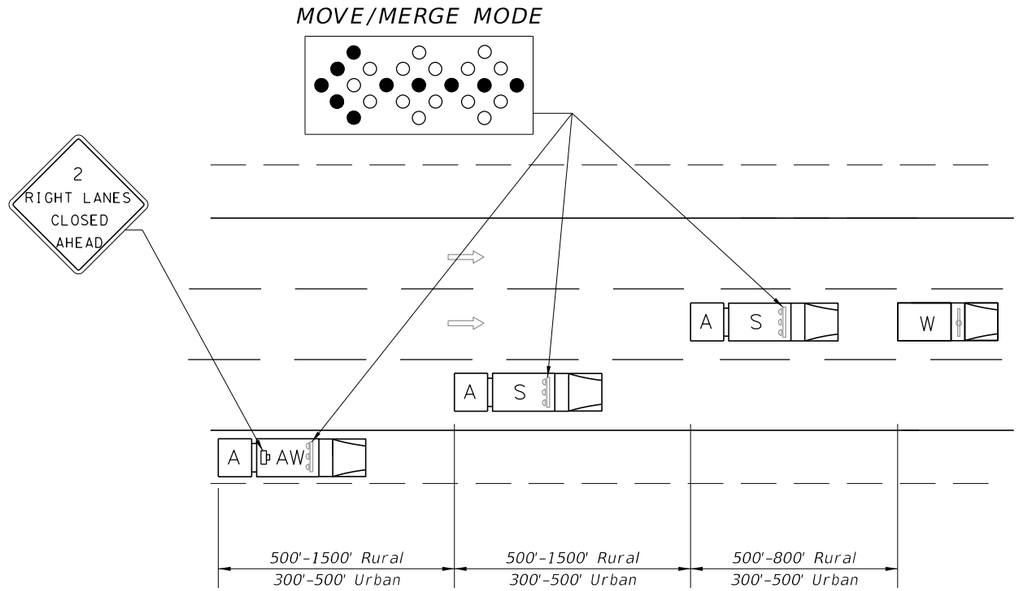
- W — Work Vehicle With Rotating/Strobe Lights
- S — Shadow (S) Vehicle with Arrow Board
- AW — Advance Warning (AW) Vehicle with Arrow Board and Sign Message or Changeable Message Sign
- A — Truck/Trailer Mounted Attenuator (TMA)
- Lane Identification And Direction Of Traffic
- Arrow Board

GENERAL NOTES

1. These illustrations are representative of general conditions.
2. The figures illustrate closing the right shoulder or right lanes for various lane configurations. When work is required on left side of roadways, the inverted plan is to be applied. The intent of this index is to allow passing on only one side of the work convoy.
3. Arrow boards shall not be obscured by equipment, supplies, signs, or the enclosure.
4. Vehicle-mounted signs shall be mounted with the bottom of the sign at a minimum height of 48 inches above the pavement. Vehicle mounted changeable message signs may be used in lieu of truck mounted static signs. Changeable message signs shall flash alternately to read "Left or Right Lane" or "Two Left or Two Right Lanes", "Closed Ahead", and the arrow symbol. Arrow boards shall not be used with truck mounted changeable message signs. Sign legends shall be covered or turned from view when work is not in progress.
5. On freeway facilities (interstates, toll roads, and expressways), a traffic control officer is required for all nighttime operations for work within the travel lane.
6. If the work vehicle speed exceeds the minimum legal speed limit on limited access facilities and one half the posted speed limit on other facilities, the Engineer may delete requirements for shadow vehicle and attenuator. The work vehicle will be required to have an arrow board and sign message.
7. Where work activities within 2' of the edge of travel way are Incidental (i.e. Mowing, Litter Removal), the Engineer may delete requirements for signs and the advance warning vehicle provided vehicles in the work area have high-intensity rotating, flashing, oscillating, or strobe lights operating.
8. Work, Shadow, and Advance Warning Vehicles shall have high-intensity, rotating, flashing, oscillating, or strobe lights operating.
9. Functional two-way communication is required between all vehicles in the mobile operation convoy.
10. For general TCZ requirements and additional information, refer to Index No. 600.

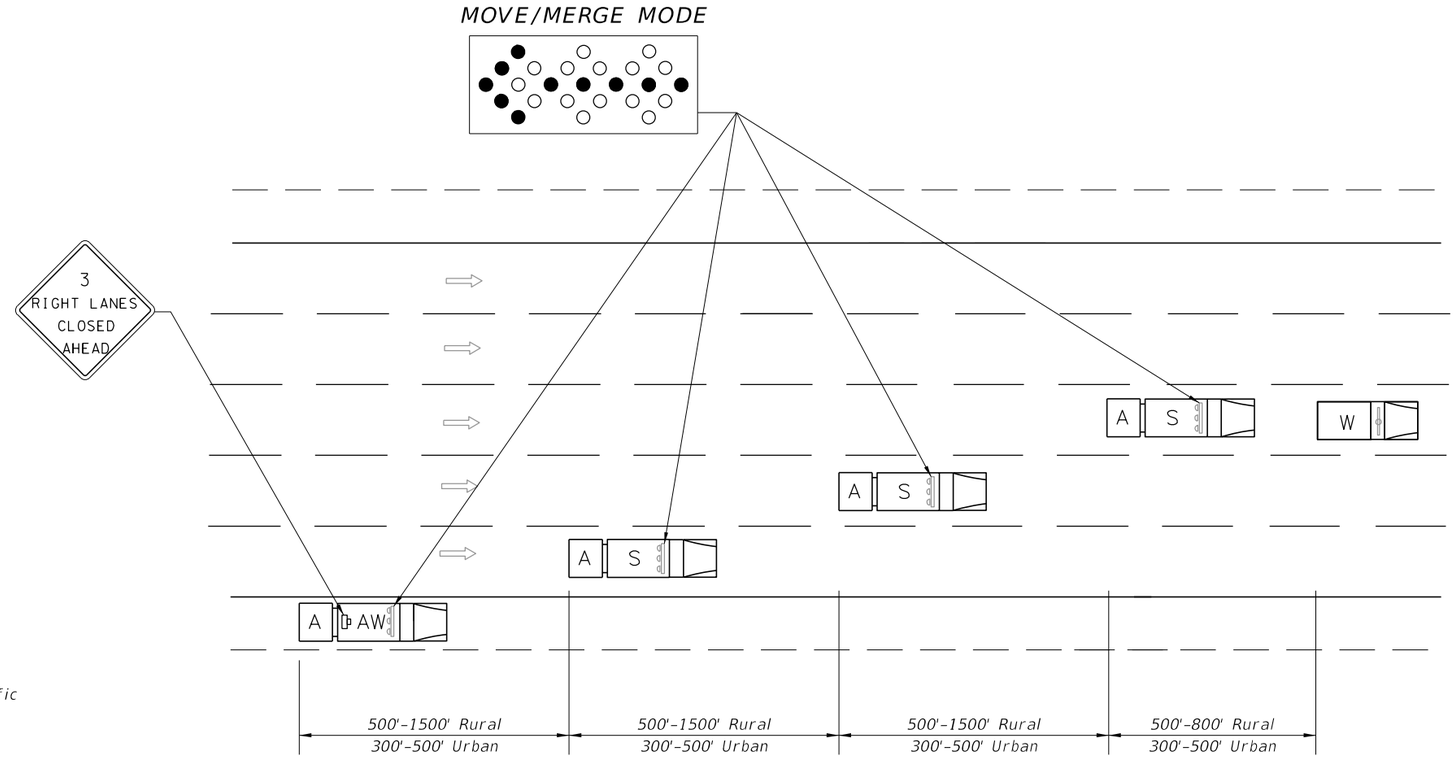
4/1/2015 3:09:56 PM

LAST REVISION	REVISION	DESCRIPTION:	FDOT 2015 DESIGN STANDARDS	MULTILANE, MOBILE OPERATIONS WORK ON SHOULDER, WORK WITHIN TRAVEL WAY	INDEX NO.	SHEET NO.
4/1/15		Changed the Work Within Travel Way Detail to show additionas option.			619	1 of 2



WORK WITHIN TRAVEL WAY, CENTER LANE OR OUTSIDE CENTERLINE

Where adequate shoulder width is not available, the advance warning vehicle may drive in the lane.



SYMBOLS

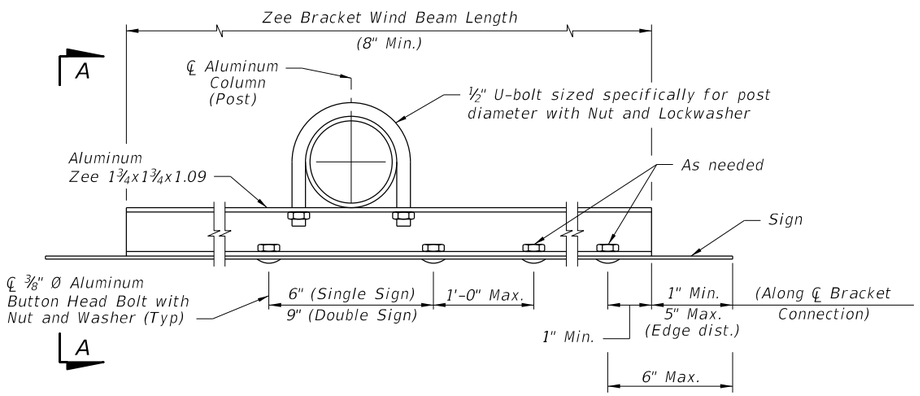
- W — *Work Vehicle*
- S — *Shadow (S) Vehicle with Arrow Board*
- AW — *Advance Warning (AW) Vehicle with Arrow Board and Sign Message or Changeable Message Sign*
- A — *Truck/Trailer Mounted Attenuator (TMA)*
- *Lane Identification And Direction Of Traffic*
- *Arrow Board*

WORK WITHIN TRAVEL LANE

4/1/2015 3:10:22 PM

LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
4/1/15		Changed the Advance Warning (AW) Vehicle Arrow Board Mode in the Work Within Travel Way, Center Lane or Outside Center Lane and Work Within Travel Lane Details.	FDOT	2015 DESIGN STANDARDS	619	2 of 2

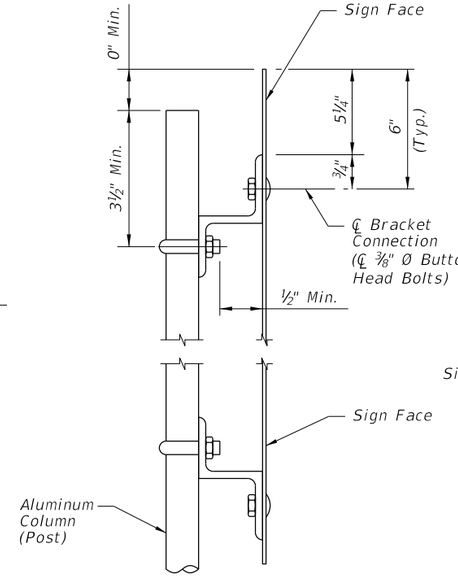
MULTILANE, MOBILE OPERATIONS WORK ON SHOULDER, WORK WITHIN TRAVEL WAY



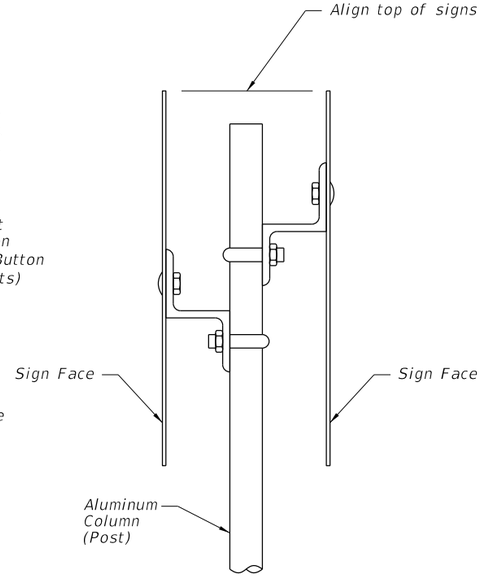
NOTES:

1. ⅝" Ø Stainless Steel Hex Head Bolts with Flat Washer under Head and Lockwasher under Nut may be used in lieu of ⅜" Ø Aluminum Button Head Bolts.
2. Nylon washers provided by the sheeting supplier shall be used on all ground mounted signs. The washers shall be installed under the sign bolt head to protect the sheeting.
3. Vertical spacing of brackets shall not exceed 2'-6". Use additional brackets, spaced evenly, to maintain maximum spacing.
4. Slots for U-bolts are allowed in zee bracket to accommodate various post diameters.

BRACKET DETAIL

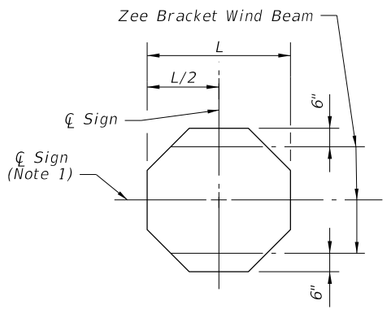


VIEW A-A

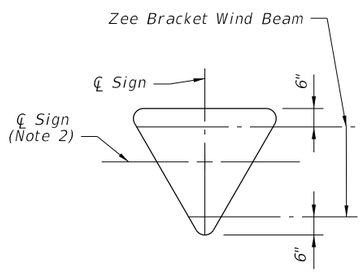


NOTE:
Use the area and the centroid location of the largest sign to determine column (post) size.

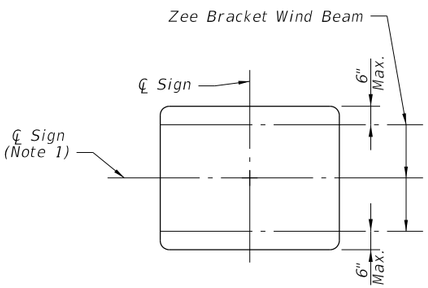
SIGNS BACK-TO-BACK



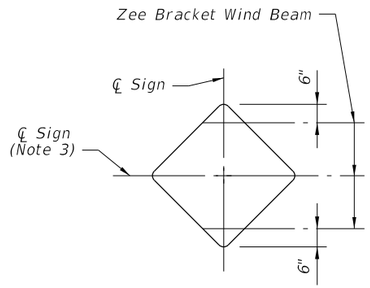
STOP



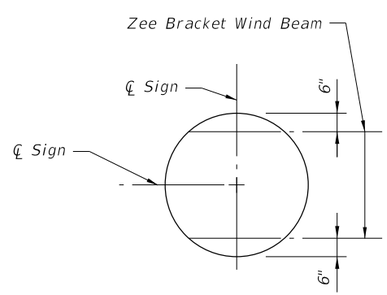
YIELD



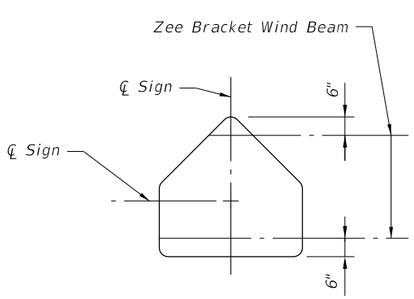
RECTANGLE



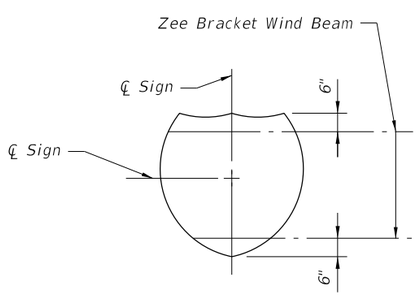
DIAMOND



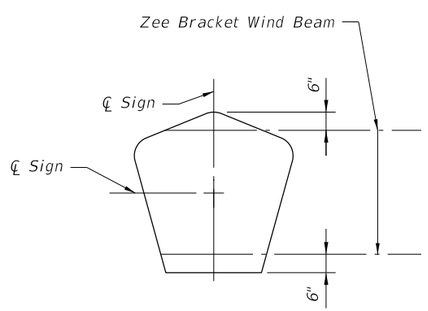
RAILROAD



SCHOOL



SHIELD



COUNTY

NOTES:

1. For signs with heights greater than 30" a third zee bracket wind beam shall be installed along the ℄.
2. For Yield signs greater than 36" a third zee bracket wind beam shall be installed along the ℄.
3. Diamond signs with dimesions greater than 30" a third zee bracket wind beam shall be installed along the ℄.
4. Use only one Wind Beam at ℄ Sign for sign height up to 12".

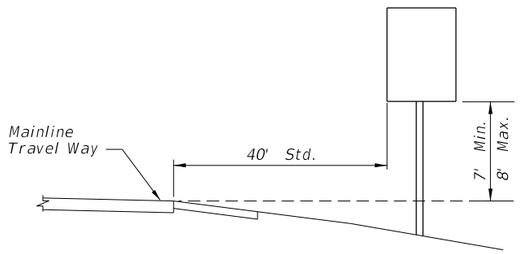
CONNECTION AND WIND BEAM

LAST REVISION	REVISION	DESCRIPTION:	2015 DESIGN STANDARDS	SINGLE COLUMN GROUND SIGNS	INDEX NO.	SHEET NO.
12/15/14		Added Note for Diamond signs.			11860	4 of 8

12/15/2014 1:46:54 PM

CASE I

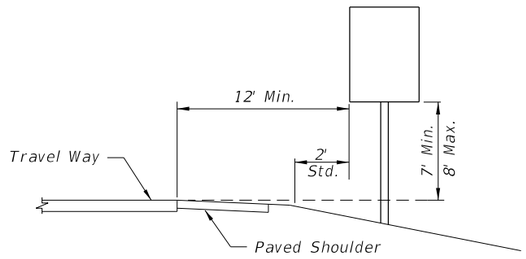
For Use On Freeway And
Expressway Systems For Signs On Mainline.



For Median Installation:
If Median Width Does Not Allow Std. Offset
From Both Roadways, Center Sign In Median.

CASE II

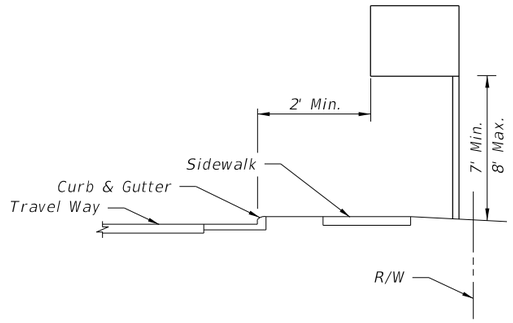
For Use In All Rural Roads And
On Freeway And Expressway Ramps.



14' Horizontal Clearance Standard On All Freeway And
Expressway Ramps.

CASE III

For Use On All Roads With
Signs Mounted Behind Sidewalk.

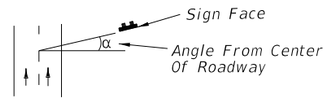


GENERAL NOTES:

1. The typical sections shown hereon serve as a guide for locating the traffic signs required under various roadside conditions. For size and details of sign construction and footing, refer to the appropriate standard index drawing for roadside sign.

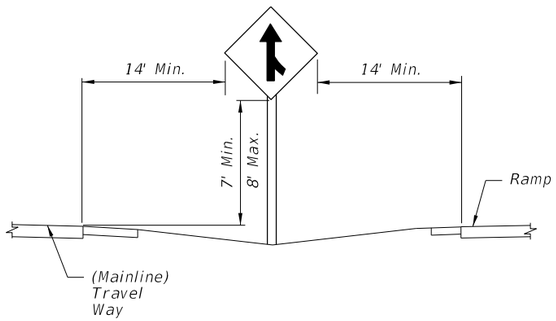
2. It shall be the CONTRACTORS responsibility to verify the length of sign supports in the field prior to fabrication.

3. Ground signs shall be installed at an angle of 1 to 4 degrees away from the traffic flow (see illustration). Shoulder mounted signs shall be rotated counterclockwise and median mounted signs rotated clockwise. Signs on curves shall be mounted as noted above from the perpendicular to the motorist line of sight.



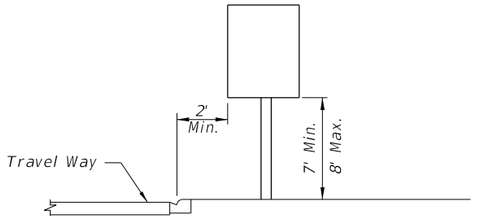
CASE IV (MERGE SIGN)

For Use On All Rural, Freeway And Expressway Systems.



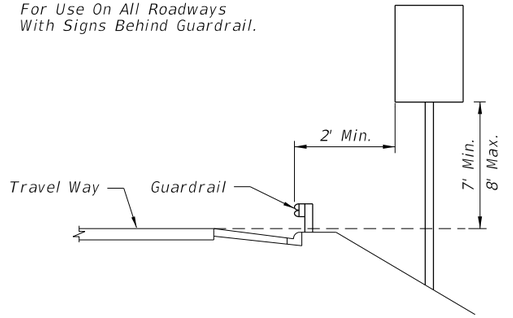
CASE V

For Use In Business Or Residential Areas Only.



CASE VI

For Use On All Roadways
With Signs Behind Guardrail.



4. The setback for stop and yield signs may be reduced to 3' minimum from the driving lane if required for visibility in business or residential sections with no curb and speeds of 30 MPH or less.

5. The mounting heights are measured from the bottom of the sign panel to a horizontal line extended from the edge of the driving lane. If the standard heights cannot be met, the minimum heights are as follows:

Expressway & Freeway Systems	7'
Other Roadway Systems	
Rural	5'
Urban (including residential with parking and /or pedestrian activity)	7'

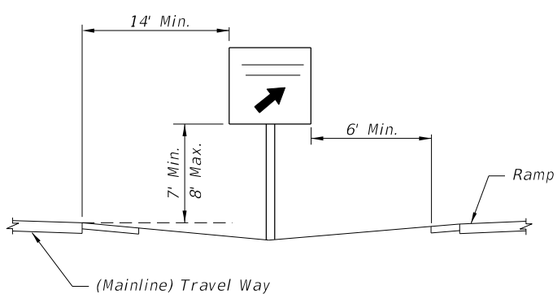
If a secondary sign is mounted below the major sign, the major sign shall be at least 8' and the secondary sign at least 5' for expressway & freeway systems and for other systems the height to the secondary sign shall be at least 5' for rural and 7' for urban sections.

6. Sign supports should never be placed in the bottom of ditches where erosion might affect the proper operation of the breakaway feature.

7. Sign supports shall not reduce the accessible route /continuous passage to less than 4' min. clear width as required by the Americans with Disabilities Act (ADA) Accessibility Guidelines.

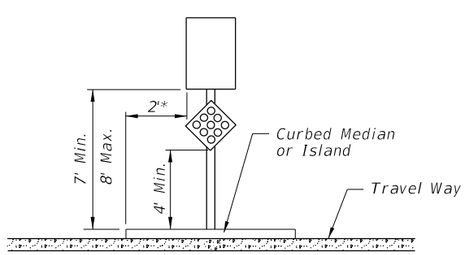
CASE VII (REST AREA & EXIT GORE SIGNS)

For Use On All Freeway And Expressway Systems



CASE VIII

Sign On Island or Curbed Median

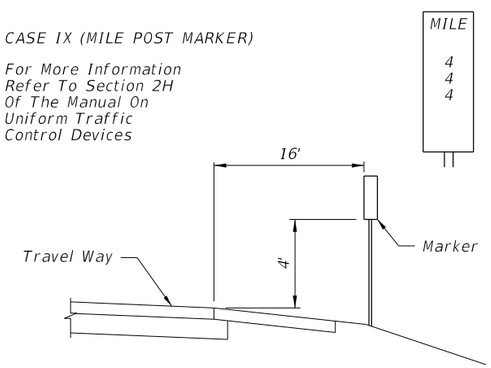


* For Separators < 6', Center The Sign Within The Separator.

Center Sign Column On Island

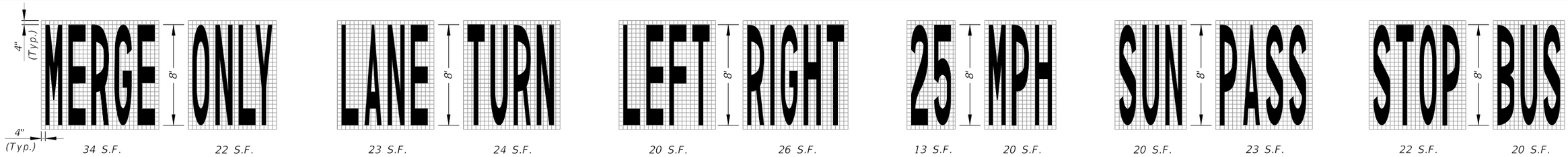
CASE IX (MILE POST MARKER)

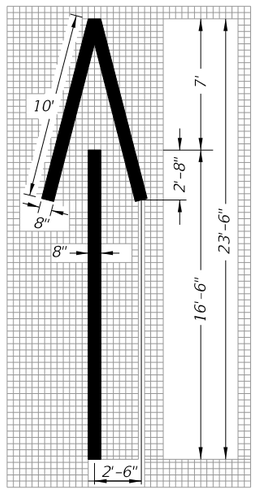
For More Information
Refer To Section 2H
Of The Manual On
Uniform Traffic
Control Devices



12/15/2014 1:48:33 PM

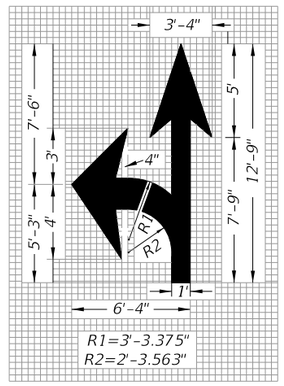
LAST REVISION	REVISION	DESCRIPTION:				
12/15/14		Added note to CASE VIII.	FDOT 2015 DESIGN STANDARDS	TYPICAL SECTIONS FOR PLACEMENT OF SINGLE & MULTI-COLUMN SIGNS	INDEX NO. 17302	SHEET NO. 1 of 1





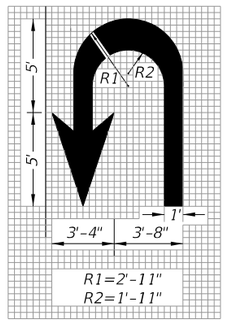
Wrong-Way Arrow

24 S.F.



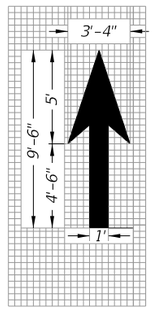
Turn and Through Lane-Use Arrow

29 S.F.



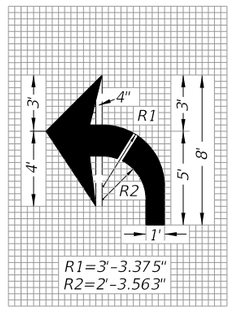
U Turn Lane-Use Arrow

27 S.F.



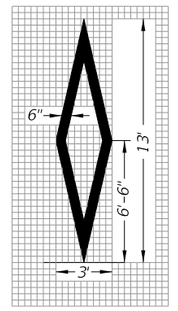
Through Lane-Use Arrow

12 S.F.



Turn Lane-Use Arrow (Left Turn Shown – Right Turn Similar by Opposite Hand)

17 S.F.



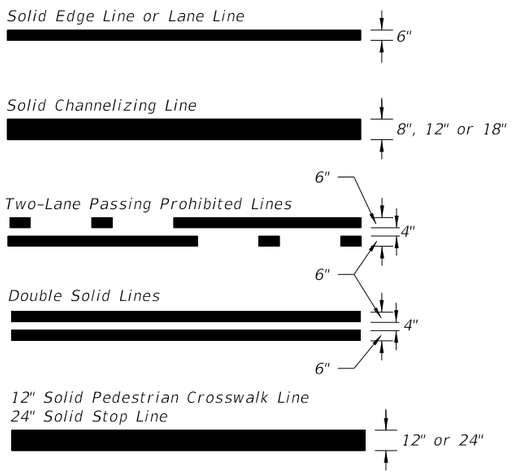
Preferential Lane Symbol

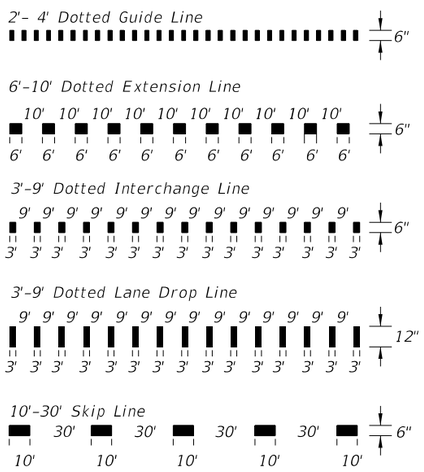
11 S.F.

PAVEMENT ARROW AND MESSAGE DETAILS NOTE: When arrow and pavement message are used together, the arrow shall be located down stream of the pavement message and shall be separated from the pavement message by a distance of 25' (Base of the arrow to the base of the message). Stop message shall be placed 25' back of stop line.

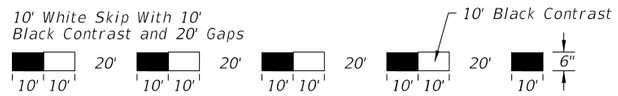
DIMENSIONS ARE WITHIN 1" ±

PAVEMENT ARROW AND MESSAGE DETAILS

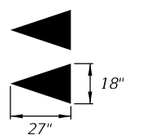




TYPES OF PAVEMENT MARKING LINES



CONTRAST MARKINGS

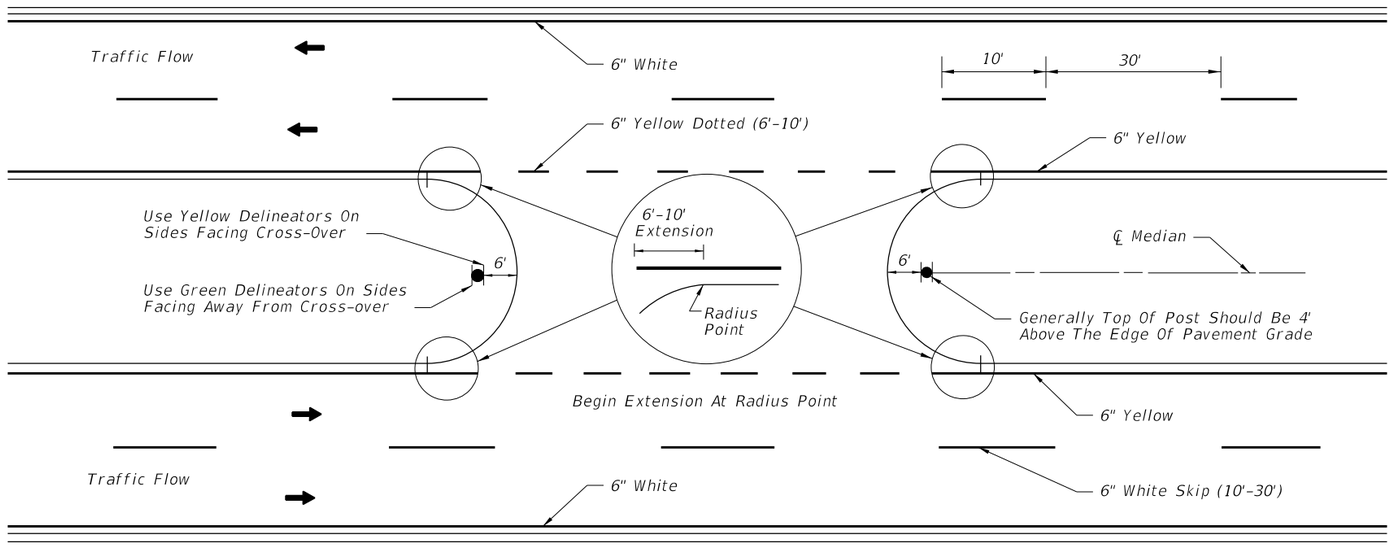


Yield Lines consist of five – 18" X 27" white triangles which face traffic. Equally space triangles within travel lane. Add one additional triangle using same spacing when a bike lane is present.

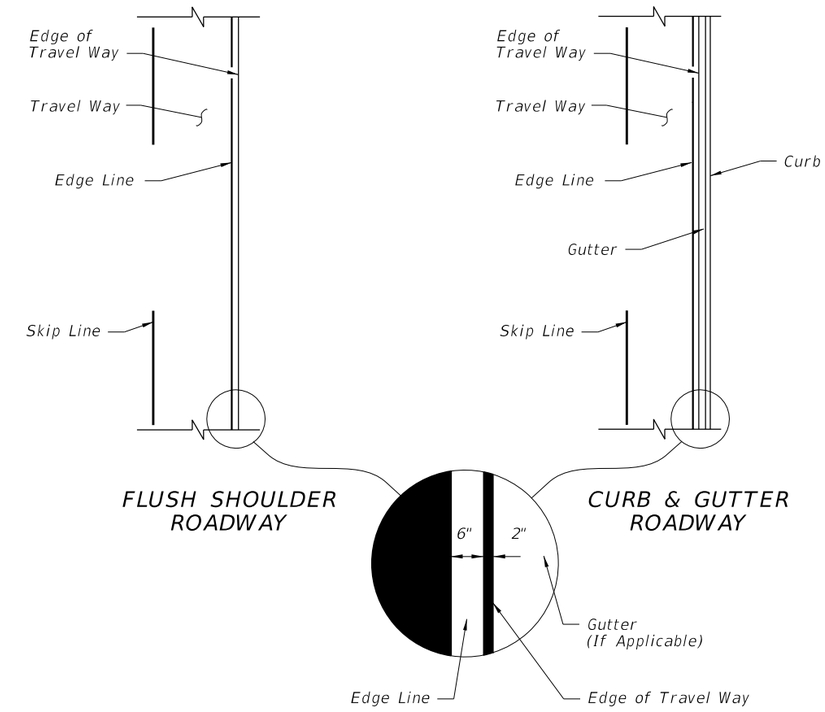
YIELD LINES

1/22/2015 4:39:12 PM

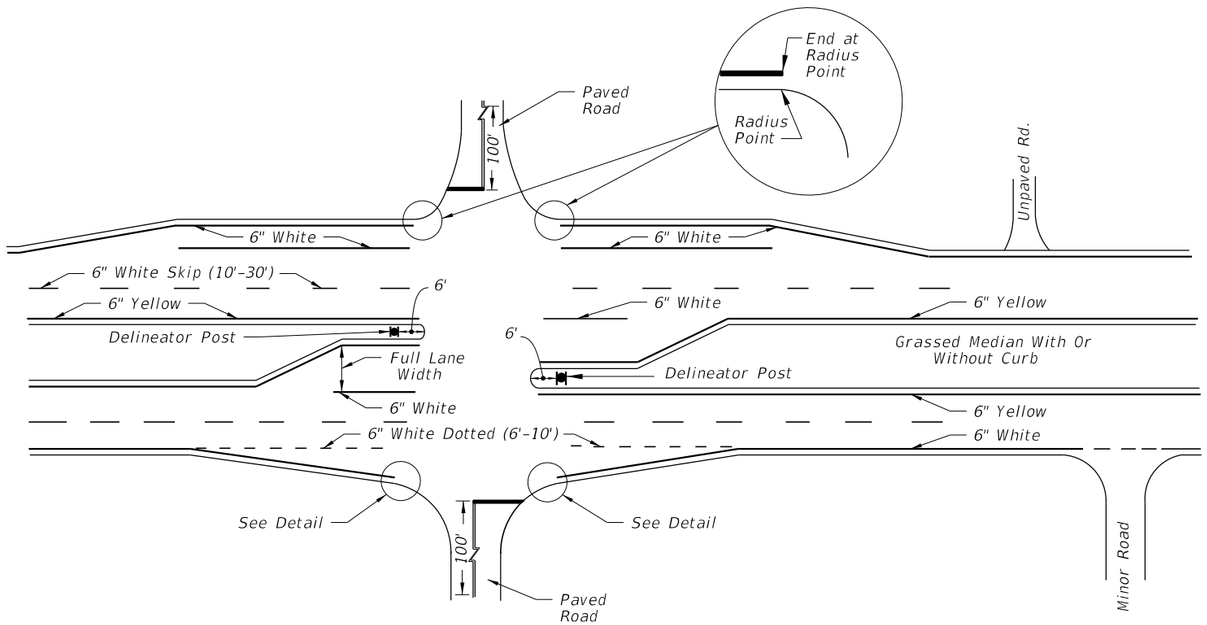
LAST REVISION	REVISION	DESCRIPTION:	2015 DESIGN STANDARDS	SPECIAL MARKING AREAS	INDEX NO.	SHEET NO.
01/21/15		Deleted the Black Edge Contrast Option For 10'-30' White Skip; Clarified 2'-4' As Dotted Lines; Changed 3'-9' Skip Line to Dotted Line; Deleted Basic Color Rule Note; Clarified Arrow & Message Note; and Clarified Yield Marking Note.			17346	1 of 14



PAVEMENT MARKINGS AND DELINEATORS FOR MEDIAN CROSS-OVER



PLACEMENT OF EDGE LINES

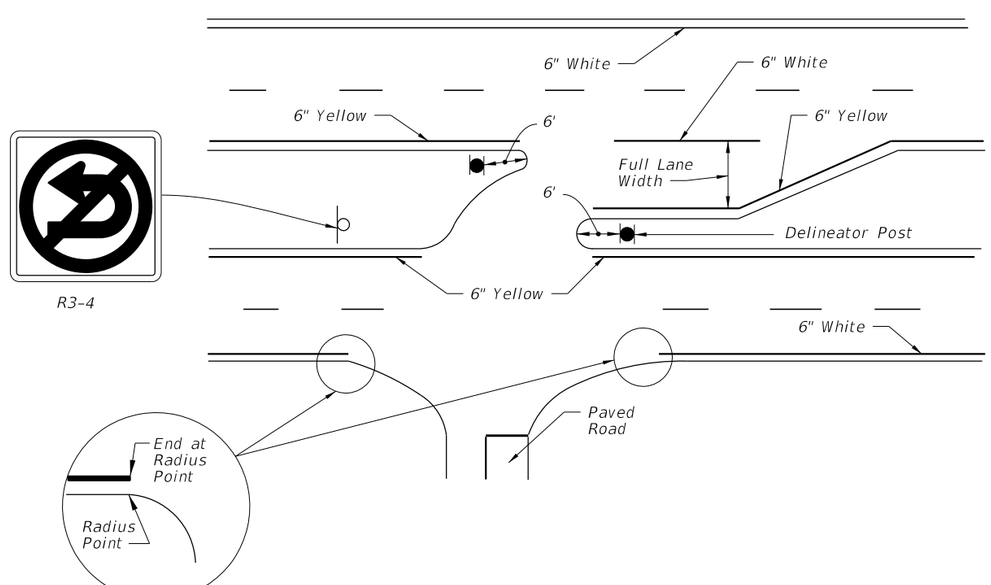


PAVEMENT MARKINGS FOR INTERSECTIONS WITH MAJOR AND MINOR ROADS

PLACEMENT OF EDGE LINES

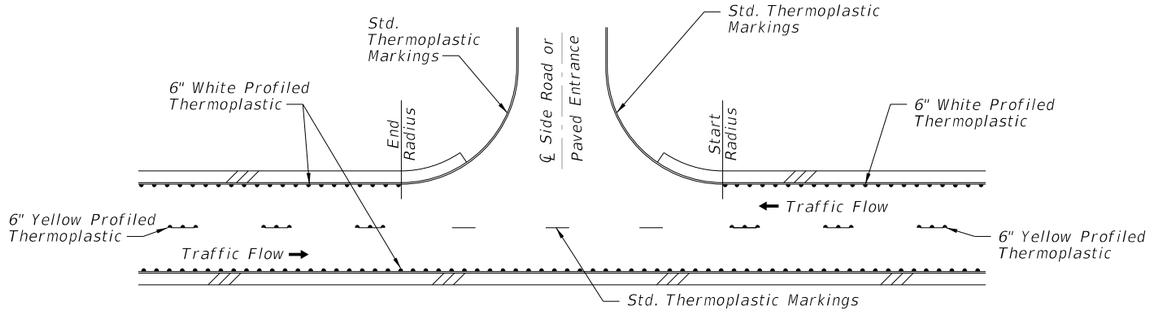
NOTE:

Markings applied to median noses shall be yellow in color.

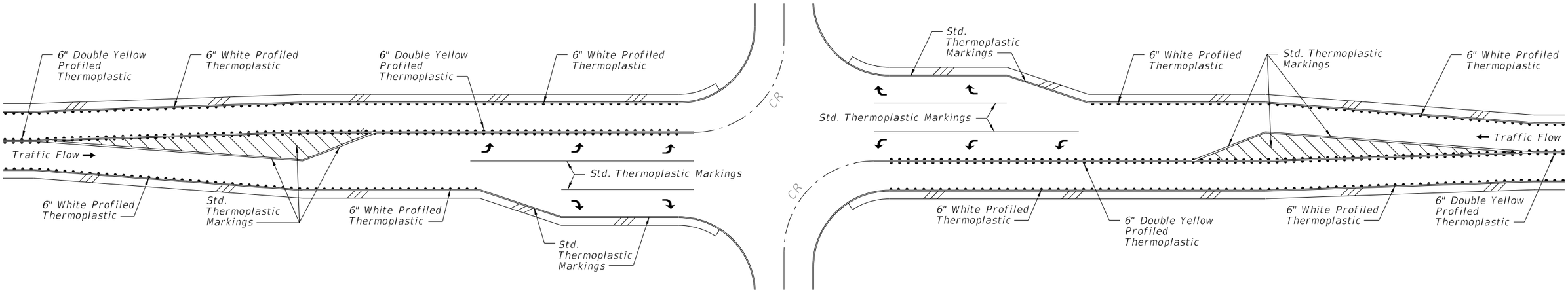


1/22/2015 4:39:12 PM

LAST REVISION	REVISION	DESCRIPTION:			INDEX NO.	SHEET NO.
01/21/15		Changed 6'-10' Skip to 6'-10' Dotted.	FDOT 2015 DESIGN STANDARDS	SPECIAL MARKING AREAS	17346	2 of 14



TYPICAL RURAL INTERSECTION WITHOUT TURN LANES



TYPICAL RURAL INTERSECTION WITH TURN LANES

GENERAL NOTES:

1. Remove raised retroreflective pavement markers when in conflict with the installation of the centerline profiled thermoplastic pavement markings. The cost of removal is included in the cost of the profiled thermoplastic pavement marking.

2. Replacement of retroreflective pavement markers removed during the installation of the centerline profiled thermoplastic pavement markings will be paid for under Pay Item 706.

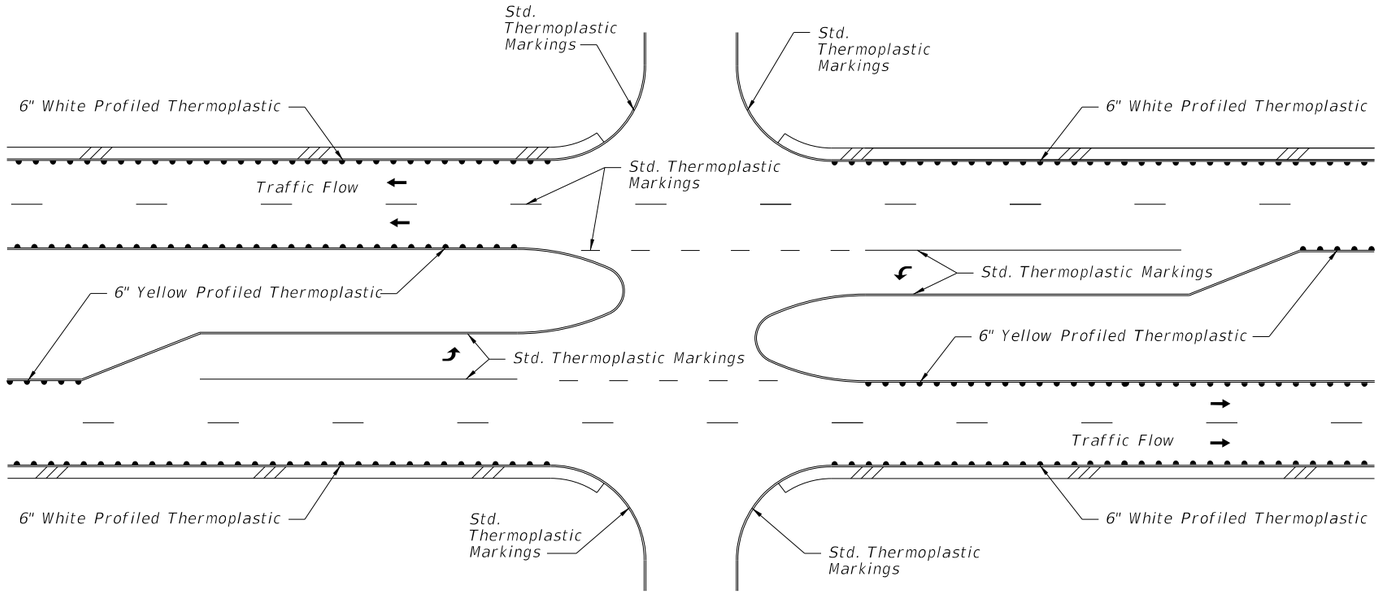
PROFILED THERMOPLASTIC MARKINGS
2 LANE CONCRETE ROADWAYS

1/22/2015 4:39:13 PM

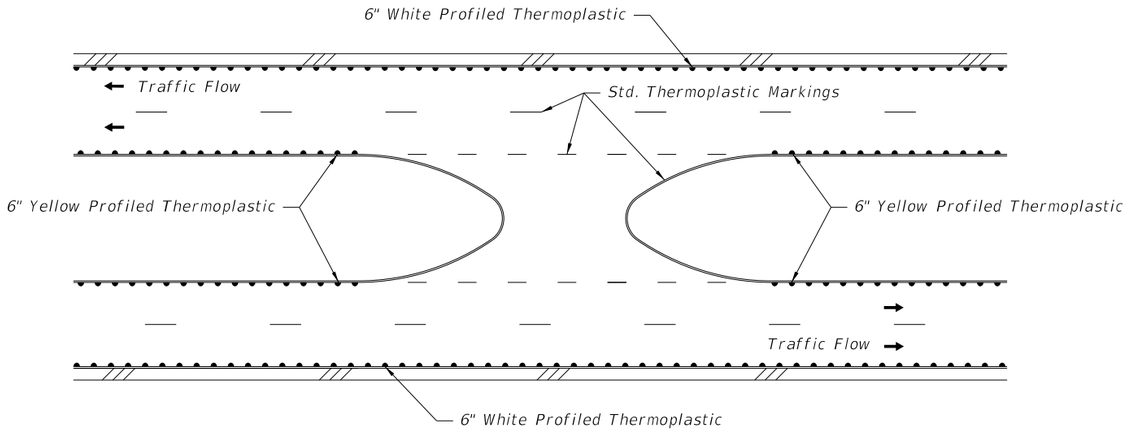
LAST REVISION	REVISION	DESCRIPTION:				
01/21/15		Changed Audible & Vibratory term to Profiled Thermoplastic; Changed General Notes; Modified Sheet Title; Modified Rural Intersection Layout.	FDOT	2015 DESIGN STANDARDS	SPECIAL MARKING AREAS	INDEX NO. 17346 / SHEET NO. 13 of 14

REFERENCE:

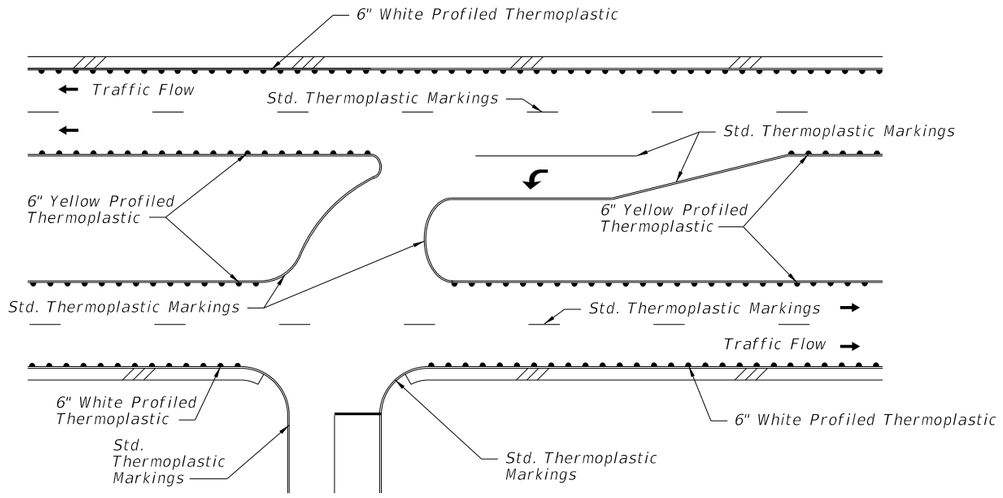
See Profiled Thermoplastic Markings General Notes on Sheet 13.



TYPICAL RURAL INTERSECTION



TYPICAL RURAL MEDIAN OPENING



TYPICAL RURAL DIRECTIONAL INTERSECTION

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PROFILED THERMOPLASTIC MARKINGS
MULTI-LANE CONCRETE ROADWAYS

LAST REVISION	REVISION	DESCRIPTION:	2015 DESIGN STANDARDS	SPECIAL MARKING AREAS	INDEX NO.	SHEET NO.
01/21/15		Changed Audible & Vibratory term to Profiled Thermoplastic; Modified Sheet Title.			17346	14 of 14