

STATE OF FLORIDA
DEPARTMENT OF TRANSPORTATION

CONTRACT PLANS

FINANCIAL PROJECT ID 430185-4-52-01

POLK COUNTY (16070)

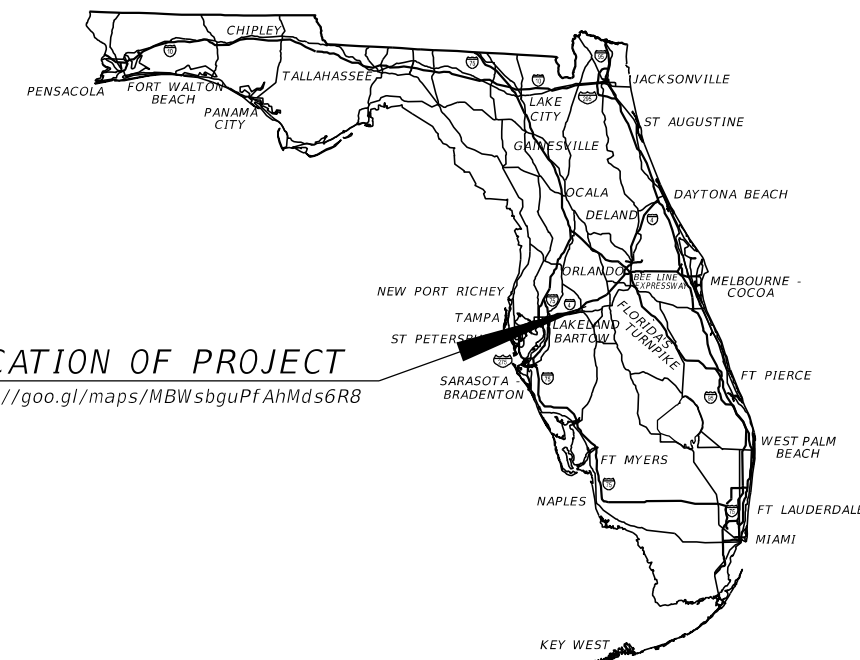
STATE ROAD NO. 33

FROM OLD COMBEE ROAD TO S OF FIRSTPARK BLVD S

SIGNALIZATION PLANS

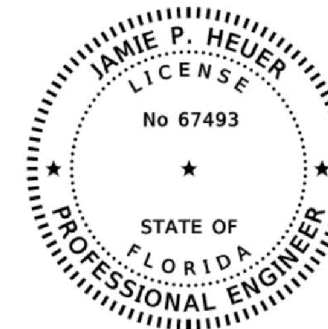
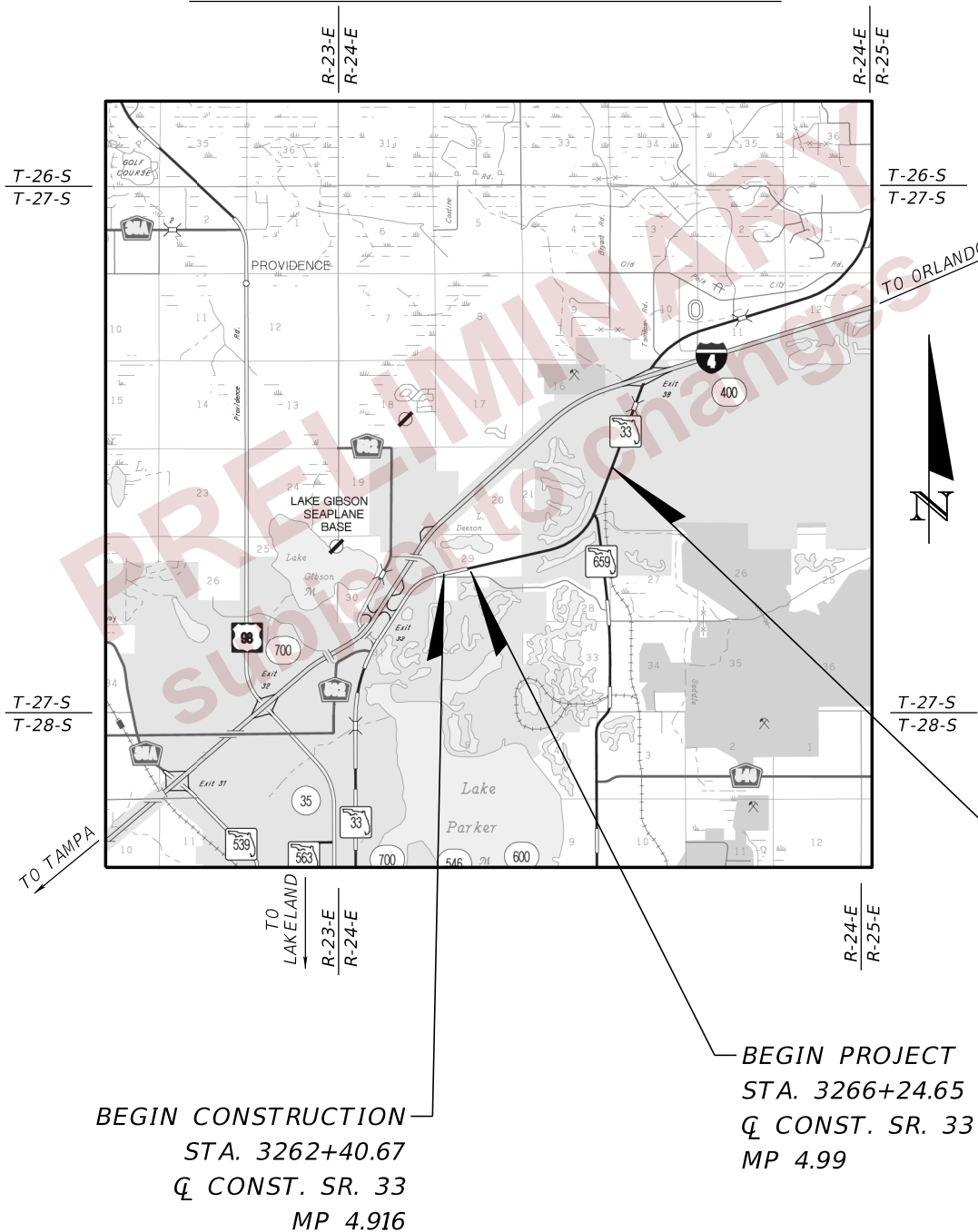
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LOCATION OF PROJECT

<https://goo.gl/maps/MBWsbguPfAhMds6R8>



THIS ITEM HAS BEEN DIGITALLY SIGNED AND SEALED BY

ON THE DATE ADJACENT TO THE SEAL.
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PHASE IV PLANS
FEBRUARY 2024

3/1/2024
SIGNALIZATION PLANS
ENGINEER OF RECORD:

JAMIE P. HEUER, P.E.
P.E. No. 67493
H.W. LOCHNER, INC.
4300 W. CYPRESS STREET
SUITE 500
TAMPA, FLORIDA 33607
(813) 357-3750
CONTRACT NO. C9C38
VENDOR NO. VF362338811001

FDOT PROJECT MANAGER:

DOUG BURKHART, P.E.
PHONE: 850-536-8539

END PROJECT
END CONSTRUCTION
STA. 3399+74.08
Q CONST. SR. 33
MP 7.518

BEGIN PROJECT
STA. 3266+24.65
Q CONST. SR. 33
MP 4.99

BEGIN CONSTRUCTION
STA. 3262+40.67
Q CONST. SR. 33
MP 4.916

CONSTRUCTION CONTRACT NO.	FISCAL YEAR	SHEET NO.
TBD	25	T-1

GENERAL NOTES

1. WHERE MAST ARM, STRAIN POLES, OR ANY OTHER SIGNAL EQUIPMENT REQUIRING FOUNDATIONS ARE PROPOSED WITHIN 4 FEET OF ANY UNDERGROUND UTILITY, THE UTILITY SHALL BE LOCATED AND PROTECTED AND THE INITIAL 5 FEET OF THE SHAFT INSTALLATION SHALL BE HAND DUG.
2. FOR REMOVED SIGNAL EQUIPMENT CLAIMED BY MAINTAINING AGENCY, CONTACT CITY OF LAKELAND. (SEE CONTACT INFORMATION IN NOTE 7)
3. MAINTAINING AGENCY: CITY OF LAKELAND.
4. PAVEMENT MARKINGS ARE SHOWN FOR REFERENCE PURPOSES ONLY. FOR PAVEMENT MARKING DESIGN INFORMATION, SEE PAVEMENT MARKING PLANS.
5. AT LEAST (2) FULL BUSINESS DAYS PRIOR TO BEGINNING THE TRAFFIC SIGNAL INSTALLATION, CONTACT THE TRAFFIC SIGNAL INSPECTION/LIAISON:

GRAYSON O'CAIN
FLORIDA DEPARTMENT OF TRANSPORTATION
BARTOW OPERATIONS CENTER
2730 S.R. 60 WEST
BARTOW, FL. 33830
PHONE (863) 519-4110 CELL: (863) 279-5107
6. AT LEAST TWO (2) FULL BUSINESS DAYS PRIOR TO BEGINNING THE TRAFFIC SIGNAL INSTALLATION, CONTACT THE CITY OF LAKELAND TRAFFIC OPERATIONS AT (863) 834-3491
7. WHEN CONSTRUCTION IS COMPLETE, IN ADDITION TO THE REQUIREMENT OF STANDARD SPECIFICATIONS 9-8, PROVIDE A SET OF "AS-BUILT" PLANS TO:

CITY OF LAKELAND TRAFFIC OPERATIONS
JEFF WEATHERFORD, P.E.
834 E. ROSE STREET
LAKELAND, FL. 33801
8. WHEN CONSTRUCTION IS COMPLETE, PROVIDE A SET OF "AS-BUILT" PLANS IN ELECTRONIC FORM (PDF) TO:

FDOT TRAFFIC OPERATIONS
NEAL TURNER, P.E., TSM&O ENGINEER - ARTERIALS
801 N. BROADWAY AVENUE
P.O. BOX 1249
BARTOW, FL. 33830-1249
EMAIL: NEAL.TURNER@DOT.STATE.FL.US
PHONE: (863) 519-2216
9. 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 POINTS HAVE NOT BEEN VERIFIED.

PAY ITEM NOTES

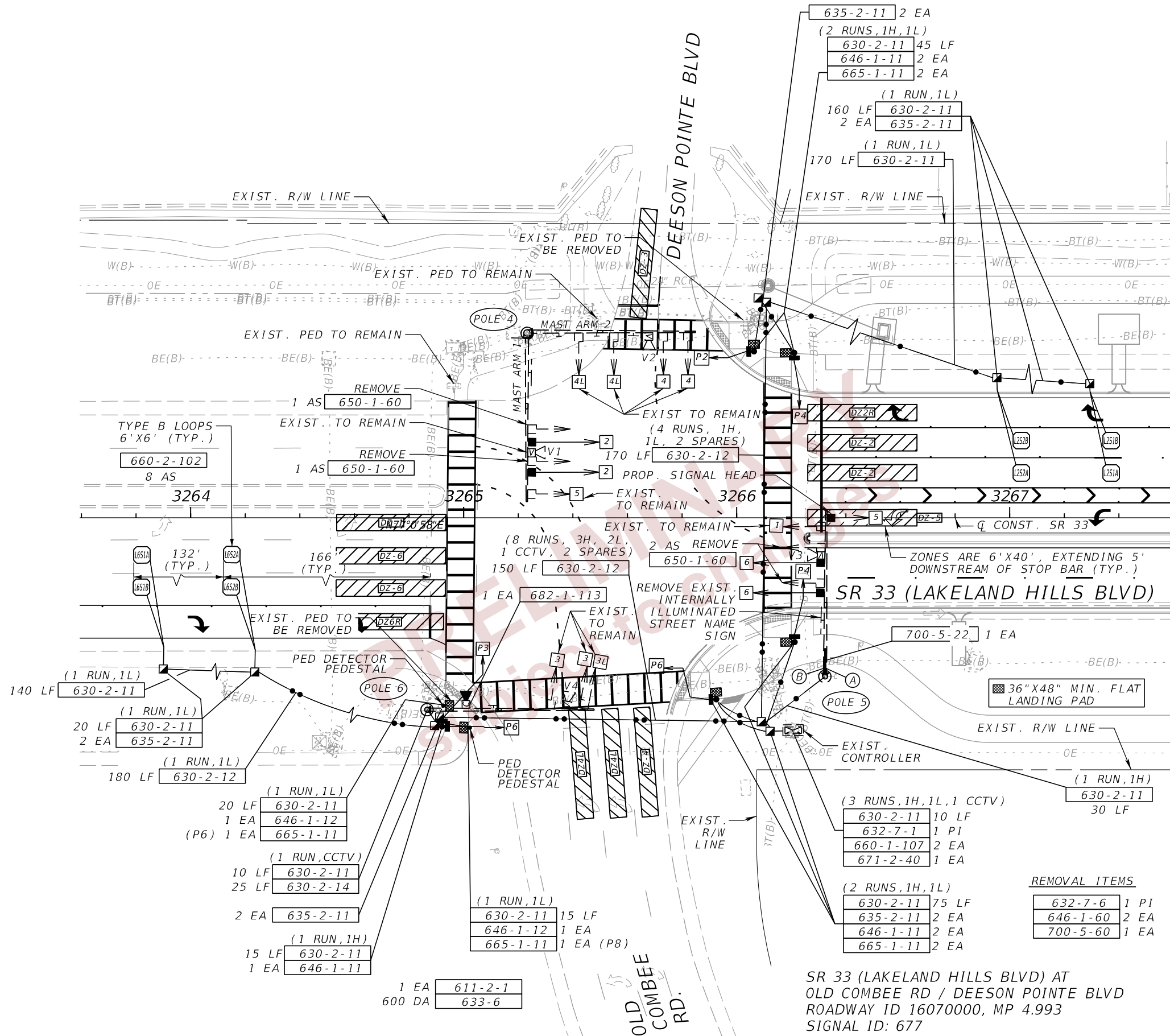
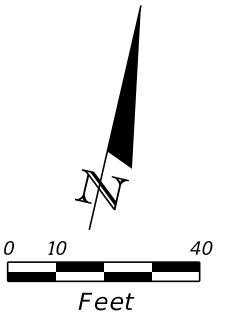
- 632-7-1
COMPLETELY REWIRE INTERSECTION AT ALL SIGNAL LOCATIONS.
VERIFY THE COLOR CODE OF SIGNAL CABLE WITH THE MAINTAINING AGENCY PRIOR TO WIRING INTERSECTION.
- 635-2-11:
PULL BOXES ARE TO BE REPLACED BEHIND CURB & GUTTER. IF THERE IS NO CURB & GUTTER, PULL BOXES SHALL BE PLACED A MINIMUM OF 7' FROM THE EDGE OF PAVEMENT.
USE POLYMER CONCRETE CONSTRUCTION PULL BOXES WITH POLYMER CONCRETE COVERS.
- 646-1-11 AND 646-1-12:
USE LOCKING COLLARS WHEN MOUNTING ALUMINUM PEDESTRIAN POLES TO PEDESTRIAN PEDESTAL BASES.
USE BREAKAWAY ALUMINUM SQUARE BASE ASSEMBLIES WITH ALUMINUM DOORS FOR PEDESTRIAN PEDESTAL BASES.
- 650-1-14 AND 650-1-16:
AVOID ADDITIONAL STRESS ON EXISTING SIGNAL SUPPORT STRUCTURE BY ALTERNATING INSTALLATION OF EACH NEW SIGNAL HEAD WITH REMOVAL OF EACH OLD SIGNAL HEAD.
- 653-1-11 AND 653-1-12:
PEDESTRIAN SIGNAL HEADS TO BE 16" INTERNATIONAL SYMBOL, LED COUNTDOWN TYPE.
- 660-2-102:
PERMANENTLY MARK EACH LOOP PER PHASE AND PER VEHICLE MOVEMENT AT EACH SPLICE POINT AND AT THE CABINET TERMINATION POINT.
PER INCREASED SENSITIVITY, INDUCTANCE LOOPS TO HAVE A MINIMUM OF THREE TURNS OF WIRE.
- 665-1-11:
USE PEDESTRIAN BUTTON SIGNAL SIGN FTP-68B-06. STREET NAME SHALL BE IN ACCORDANCE WITH THE STREET NAMES SHOWN ON THE SIGNALIZATION PLAN SHEETS.
- 671-2-40:
ADD LOOP DETECTORS IN CABINET. MODIFY EXISTING CONTROLLER ADDING LOOP HARNESES, CIRCUIT BOARD (WHEN REQUIRED), AND PERFORM ANY CABINET AND FIELD WIRING.
MODIFY EXISTING CONTROLLER AND PERFORM ANY CABINET AND FIELD WIRING NECESSARY TO ACCOMMODATE NEW LOOP DETECTORS, NEW PEDESTRIAN SIGNALS, NEW SIGNAL HEADS AND RELATED EQUIPMENT.
CORE-DRILL EXISTING CONTROLLER CABINET BASE AND INSTALL NEW CONDUITS IF SPARE CONDUIT STUB-OUTS CANNOT BE USED. INSTALL NEW CONDUITS INTO THE EXISTING FOUNDATION AS REQUIRED IN PLANS. WHEN ADDITIONAL CONDUITS ARE REQUIRED, THE CONDUIT SHALL HAVE A MINIMUM OF 3" IN DIAMETER. LOCATE NEW CONDUITS SO THEY WILL NOT OBSTRUCT THE MAINTENANCE OF EQUIPMENT IN THE CABINET OR THE ANCHORING OF THE CABINET FLANGE TO THE CONCRETE FOUNDATION.
PROTECT INTERNAL CABINET AND EQUIPMENT FROM DUST AND DEBRIS CAUSED BY CORE DRILLING.
- 682-1-113:
CCTV HARDWARE AND SOFTWARE SHALL BE COMPATIBLE WITH CITY OF LAKELAND'S EXISTING CCTV CAMERA SYSTEM AND TRAFFIC SIGNAL CONTROLLER.
- 700-5-22:
USE LED INTERNALLY ILLUMINATED, TWO SIDED, FREE SWINGING STREET NAME SIGNS.

PRELIMINARY
subject to changes

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REVISIONS				ENGINEER OF RECORD		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			GENERAL NOTES	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	JAMIE P. HEUER, P.E. LICENSE NUMBER 67493 H. W. LOCHNER 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA 33607		ROAD NO.	COUNTY	FINANCIAL PROJECT ID		T-2
						SR 33	POLK	430185-4-52-01		

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



REMOVAL ITEMS

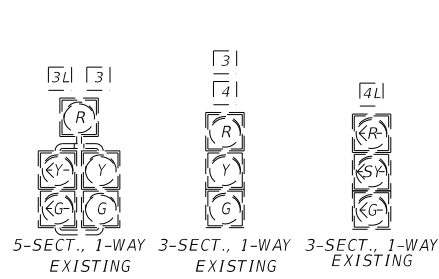
632-7-6	1 PI
646-1-60	2 EA
700-5-60	1 EA

SR 33 (LAKELAND HILLS BLVD) AT
 OLD COMBEE RD / DEESON POINTE BLVD
 ROADWAY ID 16070000, MP 4.993
 SIGNAL ID: 677

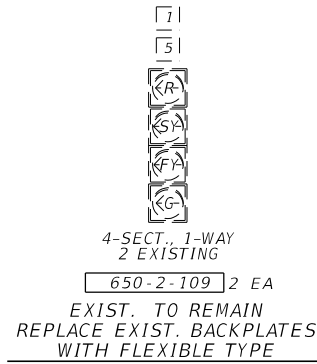
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REVISIONS				ENGINEER OF RECORD	STATE OF FLORIDA			SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION		DEPARTMENT OF TRANSPORTATION			
				JAMIE P. HEUER, P.E. LICENSE NUMBER 67493 H. W. LOCHNER 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA 33607	ROAD NO.	COUNTY	FINANCIAL PROJECT ID	SIGNALIZATION PLAN (1) T-3
					SR 33	POLK	430185-4-52-01	

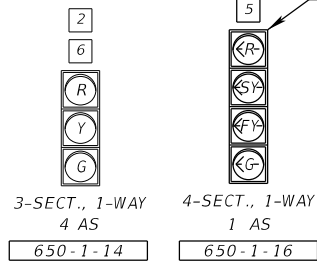
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EXIST. TO REMAIN



EXIST. TO REMAIN
REPLACE EXIST. BACKPLATES
WITH FLEXIBLE TYPE

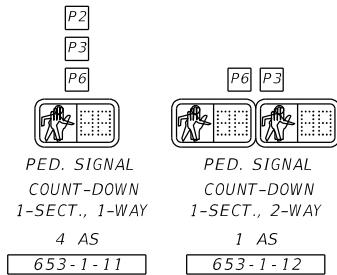


INCLUDE FLEXIBLE
BACKPLATES

LOCATED ON THE
BACK SIDE OF POLE
5 MAST ARM

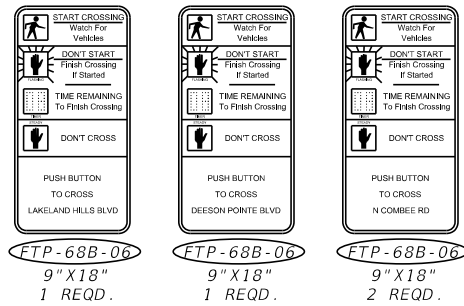
CONTROLLER OPERATIONS NOTES

- MAJOR STREET IS SR 33 (LAKELAND HILLS BLVD), POSTED SPEED 45 MPH, MOVEMENTS 1, 2, 5 & 6; MINOR STREET IS OLD COMBEE RD/DEESON POINTE BLVD, POSTED SPEED 45/20 MPH, MOVEMENTS 3 & 4.
- STANDARD SIGNAL OPERATING PLAN NO. 9 (EXISTING TO REMAIN) WITH THE FOLLOWING:
 - REQUEST UPDATED SIGNAL TIMINGS FROM FDOT TSM&O ENGINEER-ARTERIALS (863-519-2216) WHEN ALL LANES, STRIPING, SIGNALS, AND PEDESTRIAN FACILITIES ARE IN THEIR FINAL CONFIGURATION AND THE SIGNAL IS OPERATING AS DESIGNED. PROVIDE FDOT WITH ALL AS-BUILT INFORMATION NECESSARY TO DEVELOP THE BASIC SIGNAL TIMING PARAMETERS AND ALLOW THREE (3) WEEKS FOLLOWING THE REQUEST FOR FDOT TO DEVELOP THE UPDATED TIMINGS. PROGRAM THE CONTROLLER PER THE TIMINGS PROVIDED BY FDOT.
 - CONCURRENT/ACTUATED PEDESTRIANS FOR MOVEMENTS 2 (P2), 3 (P3), 4 (P4), AND 6 (P6).
 - PROGRAM PHASE RESTRICTIONS TO OMIT MOVEMENT 1 AND REDIRECT CALLS FROM MOVEMENT 1 TO MOVEMENT 6, WHEN MOVEMENT 2 IS GREEN AND TO OMIT MOVEMENT 5 AND REDIRECT CALLS FROM MOVEMENT 5 TO MOVEMENT 2, WHEN MOVEMENT 6 IS GREEN.
 - PROGRAM A START-UP DELAY OF 2 SECONDS FOR THE FLASHING YELLOW ARROW ON MOVEMENTS 1 AND 5 (RELATIVE TO THE OPPOSING THROUGH MOVEMENTS).
- EXISTING EMERGENCY VEHICLE PRE-EMPTION TO REMAIN.
- WHEN SIGNAL IS IN FLASHING MODE, MOVEMENTS 2 AND 6 SHALL FLASH YELLOW. ALL OTHER VEHICLE MOVEMENTS SHALL FLASH RED.
- EXISTING VIDEO DETECTION ZONES FOR MOVEMENTS 1, 3, 4, 4L, AND 6, TO REMAIN. VIDEO DETECTION ZONES FOR MOVEMENTS 2 AND 5 TO BE CALIBRATED FOR RELOCATED VIDEO DETECTOR LOCATION AND REVISED LANE CONFIGURATIONS.



PED. SIGNAL
COUNT-DOWN
1-SECT., 1-WAY
4 AS
653-1-11

PED. SIGNAL
COUNT-DOWN
1-SECT., 2-WAY
1 AS
653-1-12



FTP-68B-06
9" X 18"
1 REQD.

FTP-68B-06
9" X 18"
1 REQD.

FTP-68B-06
9" X 18"
2 REQD.

EMERGENCY PREEMPTION NOTES

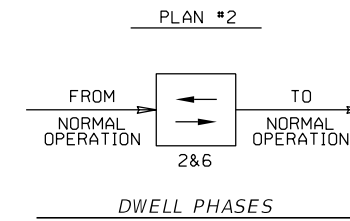
- *ENTRY INTO PREEMPTION SHALL NOT VIOLATE MINIMUM GREEN OR PEDESTRIAN CLEARANCE INTERVALS.
- ** YELLOW AND ALL RED INTERVALS DURING PREEMPTION SHALL BE THE SAME VALUES USED DURING NORMAL CONTROLLER OPERATIONS.



SIGN A
9' - 0" X 2' - 0"
1 REQD.



SIGN B
9' - 0" X 2' - 0"
1 REQD.



EMERGENCY VEHICLE PREEMPTION

PREEMPTION TIMING PLAN	1	2	3	4	5	6
PRIORITY						
DELAY BEFORE PREEMPTION (SEC)		0				
MIN. GREEN BEFORE PREEMPTION (SEC)		*				
LOCK CALL		ON				
MAXIMUM PRESENCE (SEC)		120				
YELLOW CLEARANCE (SEC)		**				
RED CLEARANCE (SEC)		**				
DWELL PHASE(S)		2&6				
MINIMUM DWELL (SEC)		40				
YELLOW CLEARANCE (SEC)		**				
RED CLEARANCE (SEC)		**				
EXIT PHASES		4				

CONTROLLER TIMINGS									
TIMING FUNCTION		1	2	3	4	5	6	7	8
MOVEMENT NUMBER									
MINIMUM GREEN*		5	20	7	10	5	20	-	-
EXTENSION*		3.0	5.0	3.0	3.0	3.0	5.0	-	-
MAXIMUM GREEN 1*		15	30	35	45	15	30	-	-
MAXIMUM GREEN 2		-	-	-	-	-	-	-	-
YELLOW CLEARANCE		4.8	4.8	3.4	4.8	4.8	4.8	-	-
ALL RED		2.0	2.0	4.0	2.0	2.0	2.0	-	-
PEDESTRIAN WALK		-	7	7	7	-	7	-	-
PED. CLEARANCE		-	9	30	23	-	21	-	-
RECALL		EXISTING TO REMAIN							

*GREEN TIMES AND EXTENSIONS ARE EXISTING TO REMAIN.

DETECTORS FOR LOOPS				
LOOP	NO. OF LOOPS	NO. OF NEW DETS.	CHANNEL NO.	DELAY TIME (SEC)
L2S1A	1	1	1	---
L2S2A	1		2	---
L2S1B	1		3	---
L2S2B	1		4	---
L6S1A	1	1	1	---
L6S2A	1		2	---
L6S1B	1		3	---
L6S2B	1		4	---

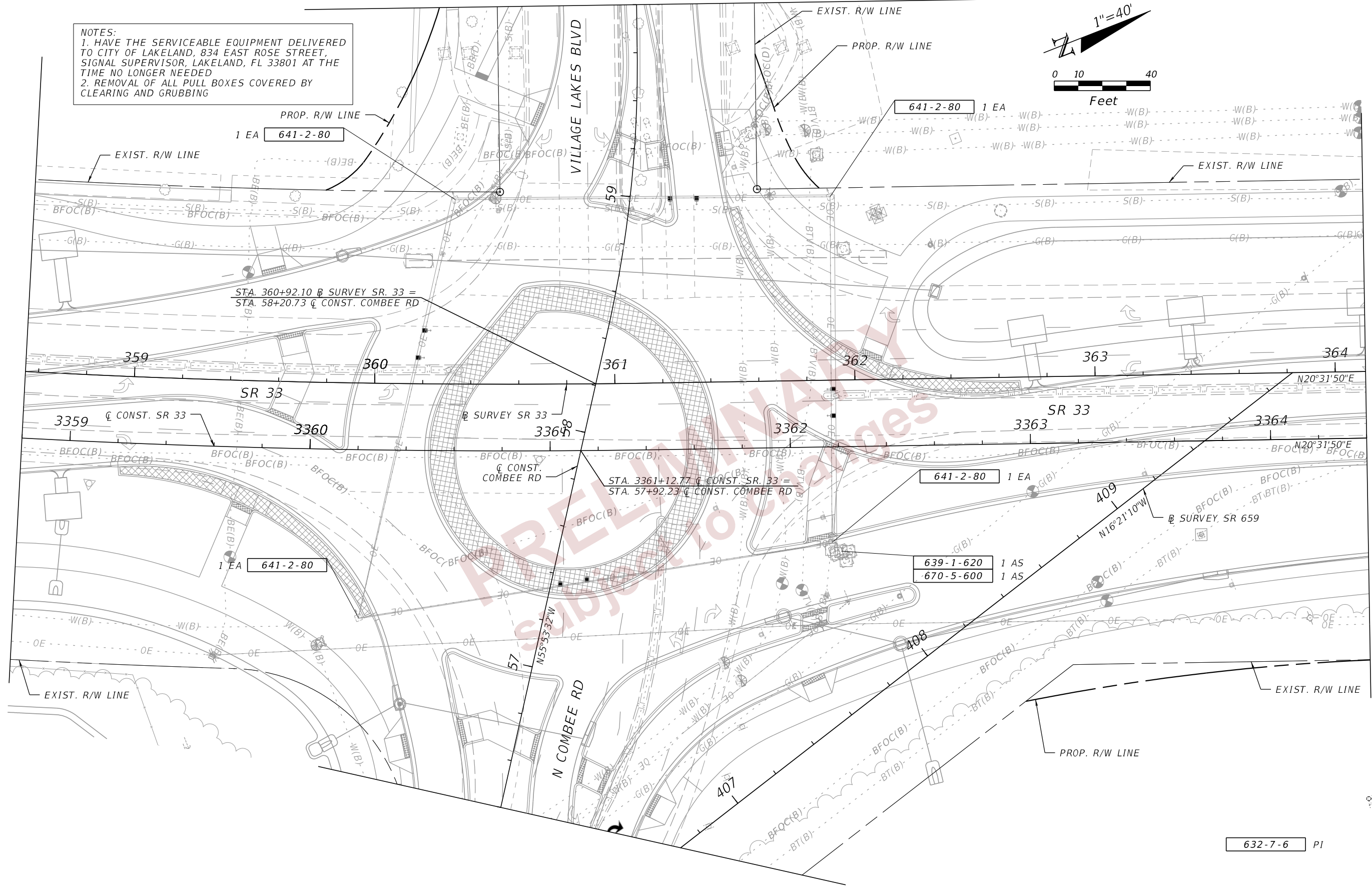
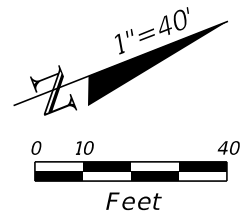
VIDEO VEHICLE DETECTION ASSIGNMENTS		
EXISTING DETECTOR	DETECTION ZONE	DELAY TIME (SECS.)
V1	DZ-2	0
	DZ2R	5
	DZ-5	5
V2	DZ4L	0
	DZ-4	5
V3	DZ-1	5
	DZ-6	0
	DZ6R	5
V4	DZ-3	6

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DATE	DESCRIPTION	DATE	DESCRIPTION				ROAD NO.	COUNTY		FINANCIAL PROJECT ID
				JAMIE P. HEUER, P.E. LICENSE NUMBER 67493 H. W. LOCHNER 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA 33607						

SIGNALIZATION PLAN (2)

T-4

NOTES:
 1. HAVE THE SERVICEABLE EQUIPMENT DELIVERED TO CITY OF LAKELAND, 834 EAST ROSE STREET, SIGNAL SUPERVISOR, LAKELAND, FL 33801 AT THE TIME NO LONGER NEEDED
 2. REMOVAL OF ALL PULL BOXES COVERED BY CLEARING AND GRUBBING



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REVISIONS		ENGINEER OF RECORD		STATE OF FLORIDA DEPARTMENT OF TRANSPORTATION			SIGNALIZATION PLAN (3)	SHEET NO.
DATE	DESCRIPTION	DATE	DESCRIPTION	ROAD NO.	COUNTY	FINANCIAL PROJECT ID		
				JAMIE P. HEUER, P.E. LICENSE NUMBER 67493 H. W. LOCHNER 4300 W. CYPRESS STREET, SUITE 500 TAMPA, FLORIDA 33607	SR 33	POLK		430185-4-52-01

