



STATE OF OKLAHOMA  
 PLAN OF PROPOSED TRAFFIC SIGNAL AT  
 MAIN STREET  
 AND STEVE OWENS BOULEVARD  
 CITY OF MIAMI PROJECT  
 PROJECT NO. HSIP-258N(036)TR  
 STATE JOB NO. 33078(04)  
 OTTAWA COUNTY

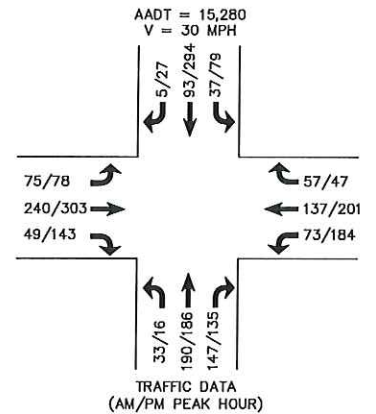
YEAR	STATE JOB NO.
2017	33078 (04)

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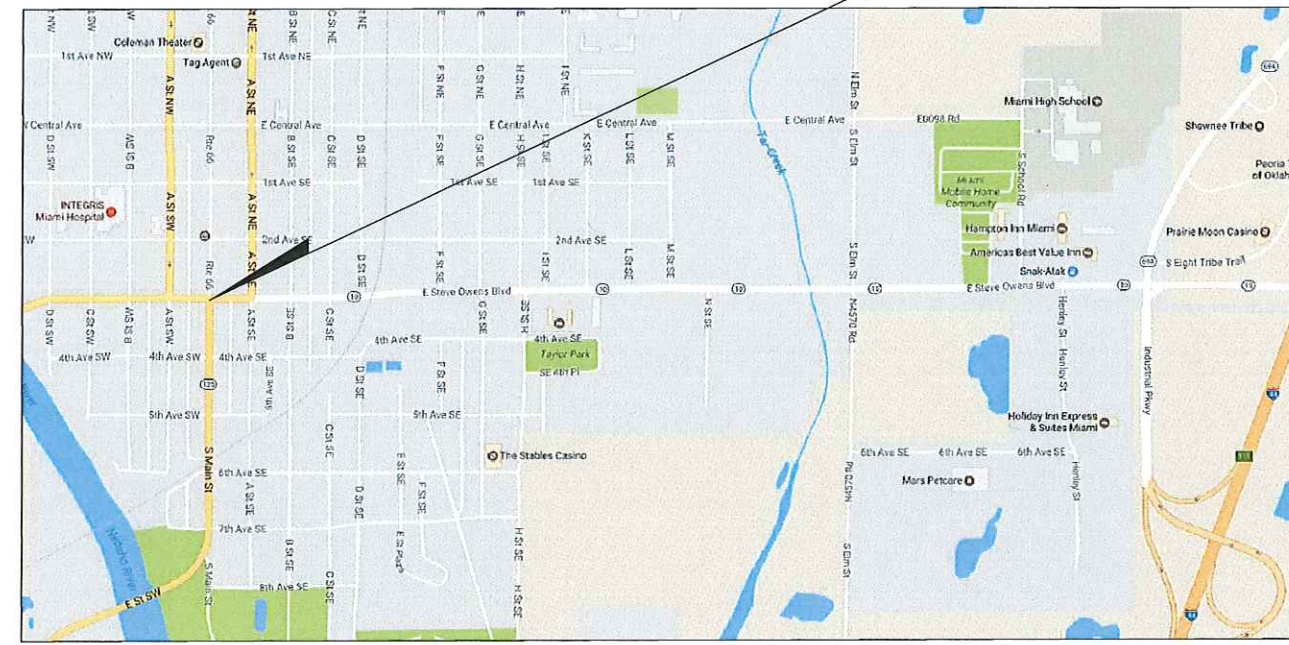
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SCALES  
 PLAN 1" = 20'  
 PROFILE HOR. NA  
 VER. NA  
 LAYOUT MAP N.T.S.  
 CONVENTIONAL SYMBOLS

- PROPOSED ROAD
- RAILROADS
- RANGE & TOWNSHIP SECTION LINES
- QUARTER SECTION LINES
- FENCES
- GROUND LINE
- EXISTING ROADS
- BASE LINE
- GRADE LINES
- TELEPHONE & TELEGRAPH
- POWER LINES
- BUILDINGS
- OILWELL
- TELEPHONE UNDERGROUND
- SANITARY SEWER
- GAS LINE
- WATER LINE
- DRAINAGE STRUCTURES - IN PLACE
- DRAINAGE STRUCTURES - NEW
- RIGHT-OF-WAY LINES - EXISTING
- RIGHT-OF-WAY LINES - NEW
- RIGHT-OF-WAY MARKERS - IN PLACE
- RIGHT-OF-WAY MARKERS - REMOVE & REPLACE
- RIGHT-OF-WAY MARKERS - NEW
- CONTROLLED ACCESS
- RIGHT-OF-WAY FENCE



**LAYOUT MAP**

ROADWAY LENGTH	_____	0.0 FT.	0.0 MI.
BRIDGE LENGTH	_____	0.0 FT.	0.0 MI.
PROJECT LENGTH	_____	_____	0.0 MI.
EQUATIONS:	NONE		
EXCEPTIONS:	NONE		

**STANDARDS**

PMAP1-2-00	TCS1-1-01	PM1-1-02
SPBP1-1-00	TCS2-1-00	PM6-1-00
SA1-1-02	TCS3-1-01	
SNS1-1-02	TCS4-1-01	
TSSS1-1-00	TCS5-1-00	
PWD1-2-00	TCS6-1-02	
CFD1-2-00	TCS7-1-02	
CC1-1-00	TCS8-1-00	
TSSP1-1-00	TCS11-1-01	
MDL1-1-00		
MDL2-1-00		
MAD1-1-00		
RPMAD1-1-00		
MPMAD1-1-00		

**HORIZONTAL CONTROL**  
 OKLAHOMA STATE PLANE COORDINATE SYSTEM, NAD83, NORTH ZONE

**VERTICAL DATUM**  
 NORTH AMERICAN VERTICAL DATUM OF 1983 (NAVD88)

**BENCHMARK INFORMATION**

CP#2005  
 SET P.K. NAIL 30± SOUTH OF THE SOUTH CURB OF HIGHWAY 10 AN 25± WEST OF WEST CURB ON S. MAIN STREET.  
 NORTHING: 695868.39  
 EASTING: 2881702.70  
 ELEVATION=790.89

CP#2564  
 FOUND 3/8" CAPPED IRON PIN NORTHWEST CORNER OF "B" STREET SE AND HIGHWAY 10  
 NORTHING: 695808.65  
 EASTING: 2882369.12

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

TITLE SHEET	2017
WO#7 - TRAFFIC SIGNAL PLANS	
MAIN STREET AND STEVE OWENS BOULEVARD	
CITY OF MIAMI, OKLAHOMA	
MIAMI, OKLAHOMA	
drawn by: JRS	
checked by: JSS	
approved by: TAF	
DATE: 07-18-2017	
SHEET	
01 of 08	

DWS: F:\2016\2001-2500\016-2300\40-Design\AutoCAD\WO 7 Traffic Signal\Sheets\TRFC\F\_TITL\_62300\_W07.dwg  
 DATE: Jul 25, 2017 5:14pm  
 USER: tmchenry  
 XREFS: F:\BULK\_62300\_W07

2009 OKLAHOMA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION GOVERN, APPROVED BY THE U.S. DEPARTMENT OF TRANSPORTATION, FEDERAL HIGHWAY ADMINISTRATION, JANUARY 4 2010.



BY	
REVISIONS DESCRIPTION	
DATE	9/8/2017
REV. NO.	1

SIGNAL PAY QUANTITIES & NOTES  
 WO#7 - TRAFFIC SIGNAL PLANS  
 MAIN STREET AND STEVE OWENS BOULEVARD  
 CITY OF MIAMI, OKLAHOMA  
 MIAMI, OKLAHOMA  
 2017

drawn by: JRC  
 checked by: JSS  
 approved by: TAF  
 QA/QC by: JSS  
 project no.: 016-2300 WO#7  
 drawing no.: SEE PLOT STAMP  
 date: 07-18-2017

TRAFFIC SIGNAL PAY QUANTITIES CATEGORY 0300  
 STEVE OWENS BOULEVARD AND MAIN STREET - MIAMI, OKLAHOMA

ITEM	DESCRIPTION	NOTES	UNIT	TOTAL
802(A) 8302	1" GALVANIZED STEEL ELECTRICAL CONDUIT EXPOSED	(7)	LF	30
802(B) 8342	2" PVC SCH. 40 PLASTIC CONDUIT TRENCHED	(TP-1)	LF	50
802(B) 8346	3" PVC SCH. 40 PLASTIC CONDUIT TRENCHED	(TP-1)	LF	10
802(B) 8348	4" PVC SCH. 40 PLASTIC CONDUIT BORED	(TP-1)	LF	261
803(A) 8065	PULL BOX (SIZE I)	(2)	EA	3
803(A) 8066	PULL BOX (SIZE II)	(2)	EA	1
804(A) 2915	STRUCTURAL CONCRETE	(TP-1)	CY	21.1
804(B) 2916	REINFORCING STEEL	(TP-1)	LB	3,086.9
805(A) 8726	(PL) REMOVAL OF TRAFFIC SIGNAL EQUIPMENT	(TR-24) (3)	LSUM	1
806(A) 8350	32' MH POLE 30' T.S. & 10' LMA (G.STL)	(4)	EA	1
806(A) 8312	32' MH POLE 40' T.S. & 10' LMA (G.STL.)	(4)	EA	2
806(A) 8314	32' MH POLE 50' T.S. & 10' LMA (G.STL.)	(4)	EA	1
806(B) 8896	12' MTG HT TS PED POLE (G. STL)	(4) (7)	EA	1
809(A) 8090	ROADWAY LUMINAIRE	(5)(7)	EA	4
810(A) 3118	SERVICE POLE	(SP-1)	EA	1
811 8044	1/C N.10 ELECTRICAL CONDUCTOR	(TP-1)	LF	828
811 8050	3/C NO.4 ELECTRICAL CONDUCTOR (AERIAL)	(TP-1)	LF	108
825 8550	TRAFFIC SIGNAL CONTROLLER ASSEMBLY	(6)	EA	1
828 8132	(PL) DETECTION SYSTEM (VIDEO)	(6)(7)	LSUM	1
830 8000	PEDESTRIAN PUSH BUTTON	(7)	EA	8
831 8231	1WAY 3 SEC. ADJ. SIG. HD. S-6	(7,9)	EA	8
831 8280	1WAY 4 SEC. ADJ. SIG. HD. S-13	(7,9)	EA	4
831 8286	1WAY 5 SEC. ADJ. SIG. HD. S-19	(7,9)	EA	1
831 8295	1WAY 2 SEC. ADJ. PED. SIG. HD. S-20	(7,9)	EA	8
833 3030	BACKPLATE		EA	13
834(A) 8207	5/C TRAFFIC SIGNAL ELECTRICAL CABLE	(TP-1)	LF	1,184
834(A) 8208	7/C TRAFFIC SIGNAL ELECTRICAL CABLE	(TP-1)	LF	273
834(A) 8213	21/C TRAFFIC SIGNAL ELECTRICAL CABLE	(TP-1)	LF	484
850(C) 8118	MAST ARM MOUNTED SIGNS (ALUMINUM)		SF	106

TRAFFIC SIGNAL GENERAL CONSTRUCTION NOTES

- (C-150) SYMBOLS AND LEGENDS ARE DIAGRAMMATIC ONLY AND LOCATIONS SHALL BE ADJUSTED FOR EXISTING FIELD RELOCATIONS WILL BE MADE WITHOUT FIRST CONSULTING WITH THE CHIEF TRAFFIC ENGINEER.
- (C-151) THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING THE EXISTING ROAD TO LOCAL AND THROUGH TRAFFIC. SEE STANDARD SPECIFICATIONS FOR MAINTENANCE OF LOCAL AND THROUGH TRAFFIC.
- (C-152) ALL BROKEN CONCRETE, WASTE MATERIAL AND DEBRIS SHALL BECOME THE PROPERTY OF THE CONTRACTOR, AND SHALL BE REMOVED FROM THE LIMITS OF THE PROJECT AND DISPOSED OF IN AN AREA APPROVED BY THE ENGINEER. NO PAYMENT WILL BE MADE FOR THE DISPOSAL OF THIS MATERIAL.
- (C-155) THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE HE MAY INFLICT TO THE EXISTING UNDERGROUND UTILITIES WITHIN THE PROJECT AREA AS A RESULT OF HIS DIGGING, TRENCHING, BORING, ETC.... PRIOR TO DIGGING NEAR THE UTILITIES, THE CONTRACTOR SHALL CALL FOR A LIST OF ALL UNDERGROUND FACILITIES REGISTERED IN THE AREA OF CONSTRUCTION LISTED WITH THE FOLLOWING AGENCIES:  
 THE "OKIE" NOTIFICATION CENTER (405)-840-9955 OR 1-800-522-6343.  
 THE LOCAL COUNTY CLERK'S OFFICE.  
 DEPTH OF EXISTING UTILITIES SHALL BE VERIFIED BY THE CONTRACTOR PRIOR TO CONSTRUCTION.
- (TP-1) PAYMENT FOR THIS ITEM WILL BE BASED ON PLAN QUANTITY. SEE THE 2009 SPECIFICATIONS FOR HIGHWAY CONSTRUCTION.
- (TP-10) THE CONTROLLERS TO BE FURNISHED ON THIS PROJECT SHALL BE 16 PHASE VEHICLE ACTUATED SOLID STATE DIGITAL TRAFFIC SIGNAL CONTROLLERS. A MINIMUM OF 16 LOAD SWITCH RECEPTACLES SHALL BE FURNISHED AND WIRED TO THE MOUNTING FRAMES. THE CONTROLLER SHALL BE CAPABLE OF PERFORMING AS SHOWN ON THE PHASE AND SEQUENCE DIAGRAM.
- (TR-24) ALL TRAFFIC SIGNAL EQUIPMENT REMOVED SHALL BECOME THE PROPERTY OF THE CITY. THE CONTRACTOR SHALL NEATLY STACK SUCH REMOVED MATERIAL AT A LOCATION ON THE JOB SITE AS DIRECTED BY THE ENGINEER AND THEN DELIVER THEM TO A LOCATION, AS DIRECTED BY THE ENGINEER. THE PRICE BID SHALL INCLUDE THE REMOVAL OF ALL FOOTINGS BELOW GROUND LEVEL OR AS DIRECTED BY ENGINEER. FOOTINGS TO BECOME THE PROPERTY OF THE CONTRACTOR.
- (4) THE HAND HOLES AT THE BASE OF THE POLES SHALL BE PLACED AT 45 OR 225 DEGREE ANGLES FROM THE MAST ARMS IN ORDER TO AVOID CONFLICTS WITH THE PEDESTRIAN PUSH BUTTONS AND SIGNS BEING INSTALL ON THE PROJECT, AS SHOWN ON THE PLANS. ALL POLES AND EQUIPMENT SHALL BE POWDER COATED BLACK IN COLOR.
- (5) THE LUMINAIRES TO BE INSTALL ON THE LUMINAIRE MAST ARMS SHALL BE PRICE BID FOR THIS ITEM SHALL INCLUDE ALL HARDWARE AND EQUIPMENT IN ORDER TO INSTALL THE FIXTURES ON THE SIGNAL POLE LUMINAIRE MAST ARMS. ALL LUMINAIRES SHALL BE BLACK LED, 240W HPS EQUIPMENT.
- (6) THIS PROJECT INVOLVES THE INSTALLATION OF A VIDEO VEHICLE DETECTION SYSTEM, THEREFORE, THE CONTRACTOR SHALL FURNISH AND INSTALL THE FOLLOWING:  
 A. GRIDSMAST GS-3-CAM FISHEYE CAMERA STOPLINE DETECTION CAMERA AND GS-3-TCA TRADITIONAL ADVANCED CAMERA OR APPROVED EQUAL VEHICLE DETECTION SYSTEM UNIT INCLUDING A LAPTOP COMPUTER. ALL NECESSARY CABLES, HARNESSES, MATERIALS, FITTINGS AND MISCELLANEOUS COMPONENTS NECESSARY TO PROVIDE A COMPLETE AND OPERATIONAL SYSTEM AT ONE (1) INTERSECTION. MINIMUM SPECIFICATIONS FOR THE COMPUTER SYSTEM - PENTIUM 1v, 850 MHZ PROCESSOR, 524 MB RAM, 200 GB HARD DRIVE, USB PORTS, AND A 48X CDR-RW.  
 ANY "APPROVED EQUAL": SHALL BE APPROVED BY BOTH TRAFFIC ENGINEERING DIVISION OF ODOT AND THE CITY. SUCH A SYSTEM SHALL BE CONSIDERED EXPERIMENTAL UNTIL A 12 MONTH TEST PERIODS HAS PROVEN THAT THE SYSTEM CAN OPERATE SUCCESSFULLY WITH NO PROBLEMS. AT THE END OF THE 12 MONTH TEST PERIOD BOTH THE TRAFFIC ENGINEERING DIVISION OF ODOT AND THE CITY WILL NEED TO SIGN OFF THAT THE SYSTEM HAS OPERATED SUCCESSFULLY AND IS THEREBY APPROVED.  
 B. CAMERAS WITH ZOOM LENS CAPABILITY  
 C. VIDEO POWER COAX CABLE SHALL BE AS PER THE MANUFACTURER SPECIFICATIONS.  
 D. ONE DAY FOR TRAINING FOR CITY PERSONNEL IN THE USE AND MAINTENANCE FOR THE SYSTEM SHALL BE PROVIDED BY A MANUFACTURERS REPRESENTATIVE. DOCUMENTATION OF THE TRAINING PROVIDED SHALL BE PROVIDED FOR THE ENGINEER.  
 E. TRAFFIC SIGNAL CABINET SHALL HAVE 16 POSITION LOAD SWITCH, 8 VEHICLE PHASE, 4 PEDESTRIAN PHASE, AND 4 OVERLAP PHASE CAPABILITY.
- (7) THIS SIGNAL EQUIPMENT SHALL BE BLACK IN COLOR.
- (8) RED, YELLOW AND GREEN LED TRAFFIC SIGNAL HEADS SHALL BE FURNISHED AND INSTALLED ON THIS PROJECT. THIS LED TRAFFIC MODULES, LENSES, AND ALL ASSOCIATED MATERIAL. AND EQUIPMENT SHALL CONFORM TO I.T.E VEHICLE TRAFFIC CONTROL SIGNAL HEAD (VTCSH) STANDARDS IN EFFECT AT THE TIME THAT THE ORDER IS PLACED. LED HEADS SHALL BE CAPABLE OF OPERATING WITHOUT A REFLECTOR.
- (9) COUNTDOWN LED INTERNATIONAL HEADS DISPLAYING FULLY- ILLUMINATED SYMBOLS (WALKING PERSON AND UPRaised HAND) SHALL BE REQUIRED ON THIS PROJECT.
- (10) PAY ITEM IS TO RUN FROM THE PEDESTRIAN PUSH BUTTONS TO THE TERMINAL STRIP AT THE BASE OF THE POLES.
- (11) ELECTRICAL TRENCHES CROSSING DRIVEWAYS SHALL BE BACKFILLED WITH LIMESTONE SCREENING OR CRUSHED STONES.

TRAFFIC SIGNAL PAY QUANTITY NOTES

- (1) THE NEW TRAFFIC SIGNAL POWER SUPPLY INCLUDING FOOTING, CONDUIT, CONSOLE, BREAKERS, OVERRIDE, SWITCHES, GROUNDING, AND PULLBOX SHALL BE INSPECTED AND APPROVED BY A LICENSED CITY ENGINEER. TRAFFIC SIGNAL POWER SUPPLY. PRICE BID FOR THIS PAY ITEM SHALL INCLUDE THE COST OF THIS INSPECTION.  
 FOR ADDITIONAL INFORMATION CONCERNING THE POWER SUPPLY CONTACT THE FOLLOWING PRIOR TO THE INSTALLATION:  
 PERSON'S NAME.....TYLER CLINE  
 WITH THE CITY OF.....MIAMI  
 TELEPHONE NO.....918-542-6685
- (2) SYMBOLS AND LEGENDS ARE DIAGRAMMATIC ONLY AND LOCATIONS SHALL BE ADJUSTED FOR EXISTING FIELD CONDITION RELOCATIONS WILL BE MADE WITHOUT FIRST CONSULTING WITH THE CHIEF TRAFFIC ENGINEER.
- (3) PAY ITEM IS FOR THE REMOVAL OF ALL TRAFFIC SIGNAL EQUIPMENT AT THE INTERSECTION. ALL EXISTING SIDEWALKS AND RAMPS AFFECTED SHALL BE REPAIRED OR REPLACED TO NEAREST SAW CUT.

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 DATE: Sep 08, 2017 11:42am  
 USER: jclemeence  
 XREFS: F\_TBLK\_62300\_WO7

SIGNING AND STRIPING PAY QUANTITIES CATEGORY 0305				
STEVE OWENS BOULEVARD AND MAIN STREET - MIAMI, OKLAHOMA				
ITEM	DESCRIPTION	NOTES	UNIT	TOTAL
855(A) 8812	TRAFFIC STRIPE (PLASTIC) (4" WIDE)	(TS-11)	LF	1,144
855(A) 8813	TRAFFIC STRIPE (PLASTIC) (6" WIDE)	(TS-20)	LF	500
855(A) 8818	TRAFFIC STRIPE (PLASTIC) (12" WIDE)	(TS-22)	LF	13
855(A) 8825	TRAFFIC STRIPE (PLASTIC) (24" WIDE)	(TS-14)	LF	67
855(B) 8818	TRAFFIC STRIPE (PLASTIC) (ARROWS)		EA	6
857(F) 8006	PAVEMENT MARKING REMOVAL (TRAFFIC STRIPE)	(TS-32)	LF	1,092
857(F) 8007	PAVEMENT MARKING REMOVAL (ARROWS)	(TS-32)	EA	4

1  
1

TRAFFIC CONTROL PAY QUANTITIES CATEGORY 0306				
STEVE OWENS BOULEVARD AND MAIN STREET -- MIAMI, OKLAHOMA				
ITEM	DESCRIPTION	NOTES	UNIT	TOTAL
880(J) 8905	CONSTRUCTION TRAFFIC CONTROL	(C-52,TC-84,1)	LSUM	1

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SIGNING AND MARKING GENERAL CONSTRUCTION NOTES

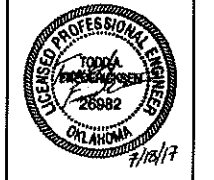
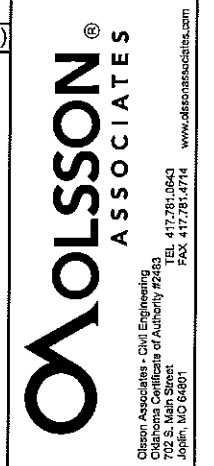
- (C-51) REMOVED MATERIAL TO BECOME PROPERTY OF CONTRACTOR AND IT SHALL BE DISPOSED OF IN A MANNER APPROVED BY THE ENGINEER.
- (C-53) ANY DAMAGE CAUSED BY THE CONTRACTOR TO ANY STRUCTURES, ROADWAY SURFACES, STRIPING, RAISED PAVEMENT MARKERS, GUARDRAIL, SLOPES, AND SIGNS SHALL BE REPAIRED AT CONTRACTOR'S EXPENSE TO THE SATISFACTION OF THE ENGINEER.
- (C-56) ALL REGULATORY SIGNS SHALL HAVE HIGH INTENSITY SHEETING. THE HIGH INTENSITY SHEETING SHALL MEET THE REQUIREMENTS OF ASTM D4956--(LATEST REVISION) FOR TYPE III SHEETING.
- (C-60) THE STATIONS AND LOCATIONS OF THE SIGN PLACEMENT, AS SHOWN ON THE PLAN SHEETS, ARE APPROXIMATE. EXACT STATIONS AND LOCATIONS SHALL BE DETERMINED BY THE CONTRACTOR SO THAT THE SIGN IS INSTALLED IN ACCORDANCE WITH DEPARTMENT STANDARDS AND THE MUTCD IN ORDER TO PROVIDE OPTIMUM VISIBILITY TO THE ONCOMING/APPROACHING MOTORIST. IF PROPOSED LOCATION CONFLICTS WITH OTHER SIGNS, UTILITIES OR OTHER ROADWAY FEATURES, THE ENGINEER SHALL BE NOTIFIED.
- (C-61) POST LENGTHS SHOWN ON SIGN SUMMARY ARE APPROXIMATE, EXACT LENGTH SHALL BE DETERMINED BY FIELD SURVEY BY THE CONTRACTOR.

TRAFFIC CONTROL GENERAL CONSTRUCTION NOTES

- (C-52) THIS PROJECT SHALL BE CONSTRUCTED WITHOUT CLOSING THE EXISTING ROAD TO LOCAL AND THROUGH TRAFFIC. SEE O.D.O.T. STANDARDS AND DETAIL DRAWINGS FOR MAINTENANCE OF LOCAL AND THROUGH TRAFFIC.
- (TC-84) 45 CONSTRUCTION CALENDAR DAYS WERE USED TO COMPUTE THE SIGN DAY PAY ITEMS. THE AMOUNT OF CALENDAR DAYS USED TO COMPUTE THE SIGN DAY PAY ITEMS IS AN ESTIMATED QUANTITY ONLY, BASED ON THE CURRENT O.D.O.T. STANDARDS AND SUGGESTED CONSTRUCTION SEQUENCE FOR THIS PROJECT. THESE ESTIMATED SIGN DAY QUANTITIES MAY CHANGE AS THE PROJECT'S CONSTRUCTION TRAFFIC CONTROL IS MODIFIED DURING CONSTRUCTION.
- (1) TRAFFIC CONTROL FOR THE TRAFFIC SIGNAL REPLACEMENT SHALL CONSIST OF INSTALLATION OF STOP SIGNS ON ALL APPROACHES TO THE INTERSECTIONS. INSTALL ADVANCED SIGNS AS NECESSARY INCLUDING ROAD WORK AHEAD AND STOP AHEAD SIGNING. FOLLOW ODOT STANDARDS FOR SINGLE LANE CLOSURES AS REQUIRED.

SIGNING AND MARKING PAY QUANTITY NOTES

- (TS-11) QUANTITY SHOWN INCLUDES 299 L.F. TRAFFIC STRIPE (PLASTIC)(WHITE) AND 845 L.F. TRAFFIC STRIPE (PLASTIC)(YELLOW) AND WILL BE MEASURED BY THE LINEAR FOOT OF FOUR INCH (4") WIDE TRAFFIC STRIPE. THIS STRIPE SHALL BE APPLIED AT A THICKNESS OF 70 MILS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND APPROVAL BY THE ENGINEER.
- (TS-14) QUANTITY SHOWN INCLUDES 67 L.F. TRAFFIC STRIPE (PLASTIC)(WHITE) AND WILL BE MEASURED BY THE LINEAR FOOT OF TWENTY-FOUR INCH (24") WIDE TRAFFIC STRIPE. THIS STRIPE SHALL BE APPLIED AT A THICKNESS OF 70 MILS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS AND APPROVAL BY THE ENGINEER.
- (TS-22) QUANTITY SHOWN INCLUDES 500 L.F. TRAFFIC STRIPE (PLASTIC)(WHITE) AND WILL BE MEASURED BY THE LINEAR FOOT OF SIX INCH (6") WIDE TRAFFIC STRIPE.
- (TS-22) QUANTITY SHOWN INCLUDES 0 L.F. TRAFFIC STRIPE (PLASTIC) (WHITE) AND 13 L.F. TRAFFIC STRIPE (PLASTIC) (YELLOW) WILL BE MEASURED BY THE LINEAR FOOT OF TWELVE INCH (12") WIDE TRAFFIC STRIPE.
- (TS-32) THE AMOUNT SHOWN IS AN APPROXIMATION AND THE ACTUAL AMOUNT OF REMOVAL, IF NECESSARY, SHALL BE DETERMINED BY THE ENGINEER. PRICE BID FOR PAVEMENT MARKING REMOVAL (TRAFFIC STRIPE) SHALL INCLUDE COST OF REMOVAL OF ARROWS, WORDS, AND SYMBOLS. THE PAVEMENT MARKING TO BE REMOVED SHALL BE CONSIDERED THERMOPLASTIC AND BID ACCORDINGLY. DURING REMOVAL OF EXISTING STRIPING AND REPLACEMENT WITH NEW STRIPING, PERMANENT STRIPING SHALL BE REPLACED WITHIN 48 HOURS AFTER OLD STRIPING IS REMOVED.
- (TS-33) INCLUDED IN THIS PAY ITEM IS ALL HARWARE ASSOCIATED WITH PROPERLY ANCHORING AND MOUNTING THE HIGHWAY SIGN IN ACCORDANCE WITH O.D.O.T. PLANS AND STANDARD DRAWINGS SSA1-1 AND SSP1-1--(LATEST REVISION).

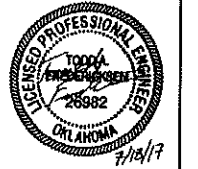


REV. NO.	DATE	DESCRIPTION
1	8/23/17	CHANGE DESCRIPTION & UNIT

SIGNAL PAY QUANTITIES & NOTES	2017
WC#7 - TRAFFIC SIGNAL PLANS	
MAIN STREET AND STEVE OWENS BOULEVARD	
CITY OF MIAMI, OKLAHOMA	
MIAMI, OKLAHOMA	

drawn by: JSS  
checked by: JSS  
approved by: JSS  
QAVOC by: JSS  
project no.: 015-2300 W087  
drawing no.: SEE PLOT STAMP  
date: 07-18-2017

DWG: F:\2016\2001-2300\16-2300\16-2300\Autocad\WC\_7 Traffic Signal\Sheets\TRFC\F\_GEN NOTES\_02300\_W07.dwg  
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 USER: jelerence



REV. NO.	DATE	REVISION DESCRIPTION

TRAFFIC SIGNAL PLAN WO#7 - TRAFFIC SIGNAL PLANS	2017
MAIN STREET AND STEVE OWENS BOULEVARD CITY OF MIAMI, OKLAHOMA	MIAMI, OKLAHOMA
SHEET 04 of 08	

### TRAFFIC SIGNAL LEGEND

(30') ○ Mast Arm Pole (Length)	FO HDPE Fiber Optic Conduit with Locating Cable (Sized as Noted)
(30') ● Combination Pole (Traffic Signal and Street Light)	PVC Conduit (Size as Noted)
● Pedestal Pole	1" HDPE Conduit
△ Traffic Signal Head	1.5" HDPE Conduit
△ Traffic Signal Head W/Backplate	2" HDPE Conduit
□ Pedestrian Signal Indication	3" HDPE Conduit
⊕ EVP Detector	4" HDPE Conduit
⊕ Rodor Detector	Electrical Service
○ Size 1 Pull Box	◇ Construction Note
□ Size 2 Pull Box	□ Service Box Number
□ Traffic Signal Controller	△ Vehicular Signal Head No.
□ 6x30 Video Detection Zone	○ Pedestrian Signal Head No.
□ 6x6 Advanced Video Detection Zone	— Flat Sheet Street Name Sign
◇ Video Detection Camera	— Flat Sheet Traffic Sign
□ Advance Video Detection Camera	
● Luminaire on Combination Pole	

- ### CONSTRUCTION NOTES:
- VIDEO DETECTION WILL BE PROVIDED FOR THIS INTERSECTION. THE DETECTOR ZONES SHOWN ON THE PAVEMENT ARE SHOWN ONLY TO DEPICT THE AREAS OF DETECTION FOR THE VIDEO DETECTION UNITS ALONG WITH THE PHASES THAT EACH VIDEO DETECTOR UNIT WILL CALL. VIDEO DETECTION CAMERA LOCATION(S) SHALL BE COORDINATED WITH MANUFACTURE AND OR MANUFACTURERS REPRESENTATION FOR FIELD LOCATIONS AND INITIAL SET UP.
  - CONTRACTOR IS TO REMOVE ALL EXISTING SIGNAL EQUIPMENT UNLESS OTHERWISE NOTED. CONTRACTOR SHALL REPAIR OR REPLACE EXISTING CONCRETE SIDEWALKS AND RAMPS AFFECTED BY REMOVED EQUIPMENT TO NEAREST SAW CUT.
  - REMOVE AND REPLACE EXISTING CABINET AND CONTROLLER.
  - POLE SHALL BE PROVIDED OVERHEAD SERVICE FOR TRAFFIC SIGNAL CABINET. FOLLOW ODOT STANDARDS FOR INSTALLATION INSTRUCTIONS (T-209).
  - COORDINATE WITH CITY FOR RECONNECTION TO EXISTING POWER SUPPLY.

### TABLE 1 SIGNAL HEADS

SIGNAL HEAD NUMBER	NUMBER AND TYPE	MOUNTING	VISOR	BACKPLATE
2,7,8,13,18,19	6 ONE WAY (S-6)	MAST ARM	V-1	B-2
9,14,20	3 ONE WAY (S-6)	CLAMP	V-1	B-2
1,6,12,17	4 ONE WAY (S-13) L	MAST ARM	V-1	B-2
4,5,10,11,15,16,21,22	8 ONE WAY (S-20)	CLAMP	-	-
3	1 ONE WAY (S-19)R	MAST ARM	V-1	B-2

### TABLE 2 MAST ARMS & POLES

LOCATION	TYPE	MAST ARMS LENGTHS	FOUNDATION
POLE B	COMBINATION	50' TS, 10'	S-55
POLE F	COMBINATION	40' TS, 10'	S-40
POLE D	COMBINATION	30' TS, 10'	S-40
POLE C	COMBINATION	40' TS, 10'	S-40
POLE E	PEDESTAL POLE	12' PED POLE	P-4

### TABLE 3 ELECTRICAL CABLE\*

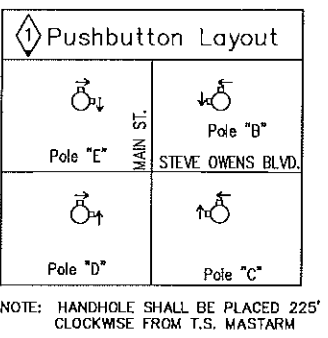
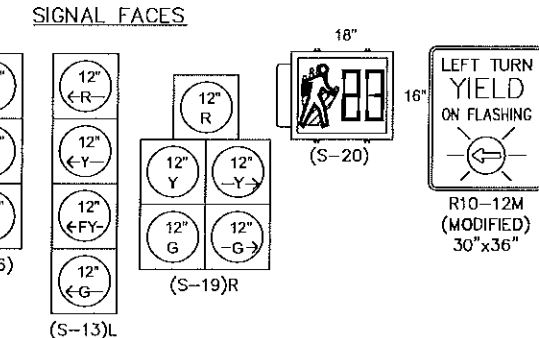
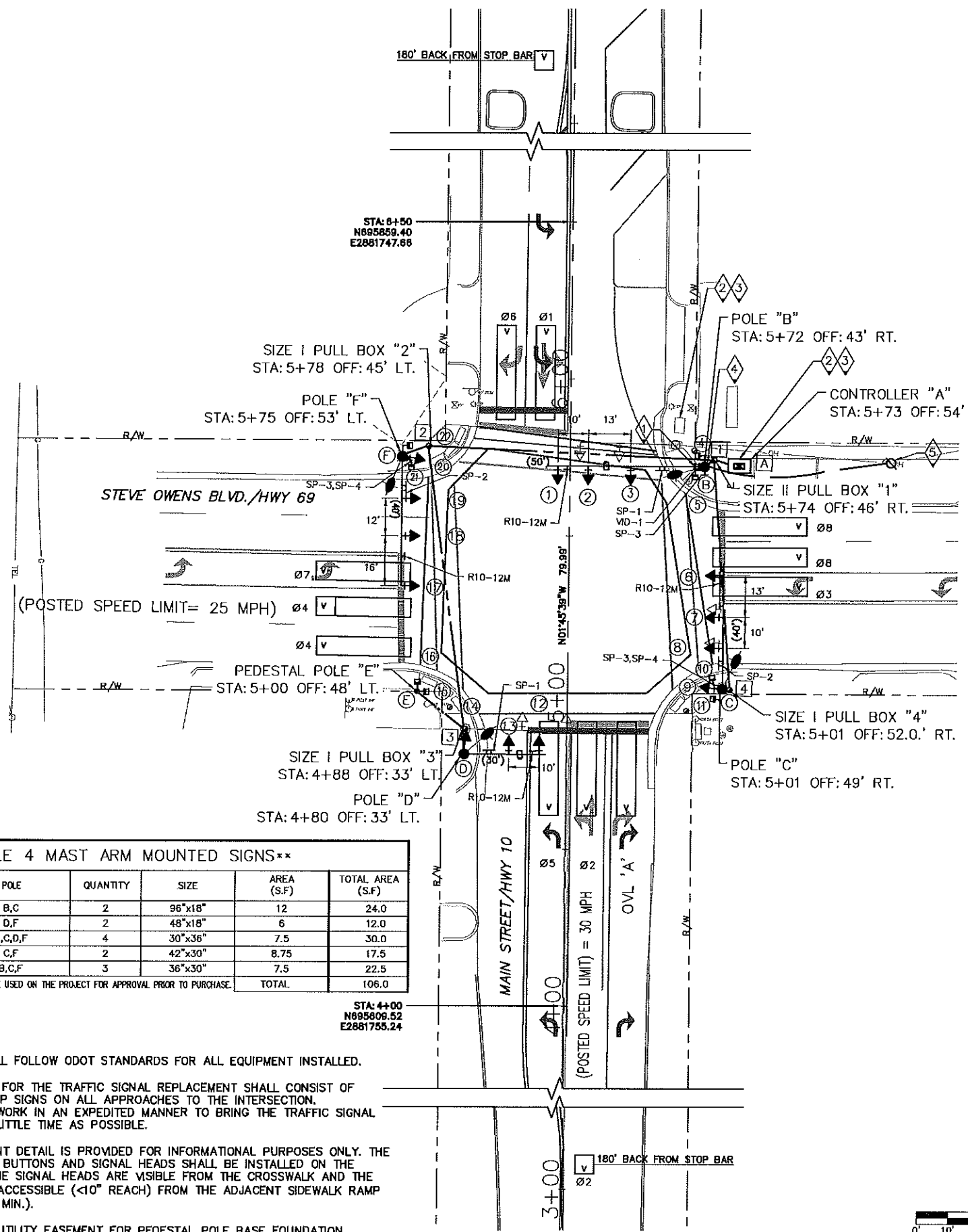
ELECTRICAL CABLE TO CONTROLLER "A" LOCATION				
B-21c/5c	C-21c/5c	D-21c	E-5c/5c	F-21c/5c

\* SUPPLY VIDEO CABLE AS REQUIRED

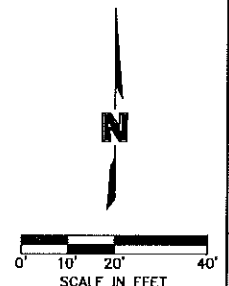
### TABLE 4 MAST ARM MOUNTED SIGNS\*\*

NAME	MESSAGE	POLE	QUANTITY	SIZE	AREA (S.F)	TOTAL AREA (S.F)
SP-2	W STEVE OWENS BLVD	B,C	2	96"x18"	12	24.0
SP-1	S MAIN STREET	D,F	2	48"x18"	6	12.0
R10-12M	LEFT TURN YIELD ON FLASHING YELLOW	B,C,D,F	4	30"x36"	7.5	30.0
SP-4	DOWNTOWN BUSINESS DISTRICT	C,F	2	42"x30"	8.75	17.5
SP-3	NO TRUCKS ON MAIN STREET	B,C,F	3	36"x30"	7.5	22.5
TOTAL					106.0	106.0

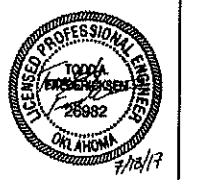
\*\* THE CONTRACTOR SHALL SUBMIT CUT SHEETS FOR ALL SIGNS TO BE USED ON THE PROJECT FOR APPROVAL PRIOR TO PURCHASE.



- ### GENERAL NOTES:
- CONTRACTOR SHALL FOLLOW ODOT STANDARDS FOR ALL EQUIPMENT INSTALLED.
  - TRAFFIC CONTROL FOR THE TRAFFIC SIGNAL REPLACEMENT SHALL CONSIST OF INSTALLATION OF STOP SIGNS ON ALL APPROACHES TO THE INTERSECTION. CONTRACTOR SHALL WORK IN AN EXPEDITED MANNER TO BRING THE TRAFFIC SIGNAL BACK ONLINE IN AS LITTLE TIME AS POSSIBLE.
  - POLE ARRANGEMENT DETAIL IS PROVIDED FOR INFORMATIONAL PURPOSES ONLY. THE PLACEMENT OF PUSH BUTTONS AND SIGNAL HEADS SHALL BE INSTALLED ON THE POLES SUCH THAT THE SIGNAL HEADS ARE VISIBLE FROM THE CROSSWALK AND THE PUSH BUTTONS ARE ACCESSIBLE (<10" REACH) FROM THE ADJACENT SIDEWALK RAMP LANDING AREA (4'x4' MIN.).
  - CITY TO PROVIDE UTILITY EASEMENT FOR PEDESTAL POLE BASE FOUNDATION.

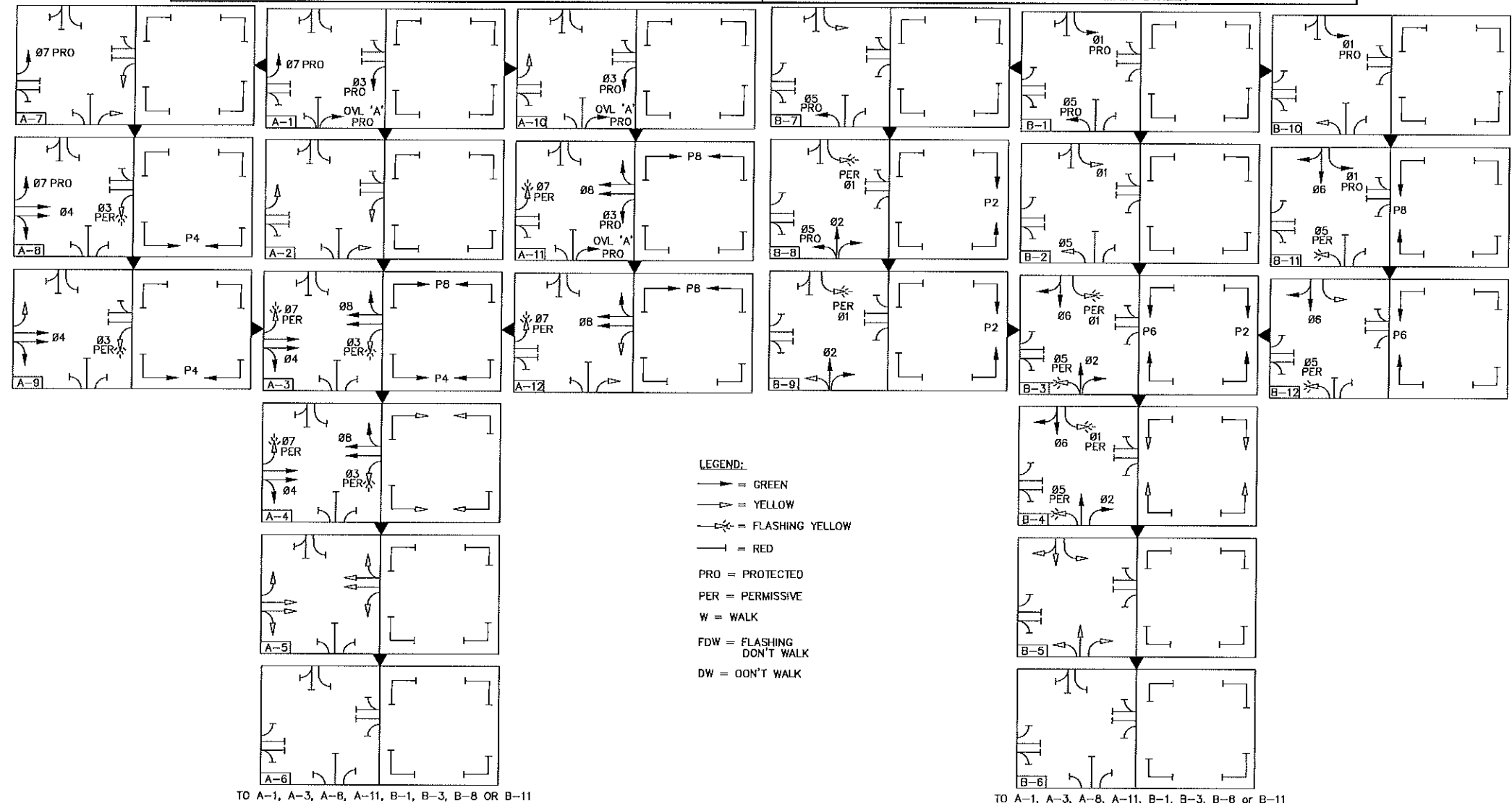


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**PHASING DIAGRAM**

EAST-WEST MOVEMENTS  
STEVE OWENS BOULEVARDNORTH-SOUTH MOVEMENTS  
MAIN STREET



**LEGEND:**

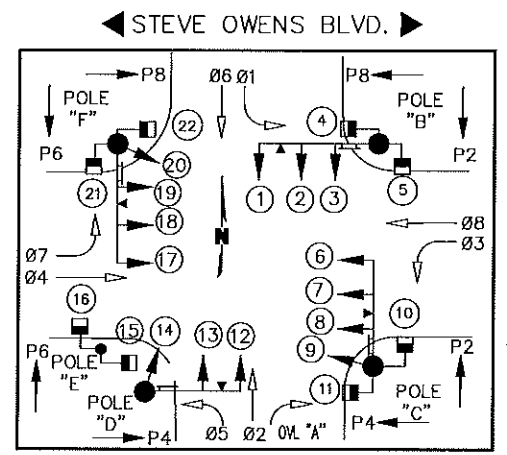
- = GREEN
- = YELLOW
- = FLASHING YELLOW
- = RED

PRO = PROTECTED  
 PER = PERMISSIVE  
 W = WALK  
 FDW = FLASHING DON'T WALK  
 DW = DON'T WALK

TO A-1, A-3, A-8, A-11, B-1, B-3, B-8 OR B-11

**SEQUENCE CHART**

BLOCK NO.	PHASE DESIGNATION	PHASE												
		01	02	03	04	05	06	07	08	P2	P4	P6	P8	OVL "A"
A-1	03 & 07 PRO LEFT	R	R	G	R	R	R	G	R	R	G	R	R	R
A-2	03 & 07 PRO LEFT CLEARANCE	R	R	Y	R	R	R	Y	R	DW	DW	DW	DW	YRT
A-3	04 & 08 THRU, 03 & 07 PER LEFT, P4 & P8 ROW	R	R	FY	G	R	R	FY	G	DW	W	DW	W	R
A-4	04 & 08 THRU, 03 & 07 PER LEFT ROW, P4 & P8 CLEARANCE	R	R	FY	G	R	R	FY	G	DW	FDW	DW	FDW	R
A-5	04 & 08 THRU, 03 & 07 PER LEFT CLEARANCE	R	R	Y	Y	R	R	Y	Y	DW	DW	DW	DW	R
A-6	ALL RED	R	R	R	R	R	R	R	R	DW	DW	DW	DW	R
A-7	07 PRO LEFT, 03 LEFT & OVL "A" CLEARANCE	R	R	Y	R	R	R	G	R	DW	DW	DW	DW	YRT
A-8	07 PRO LEFT, 04 THRU, 03 PER LEFT, P4 ROW	R	R	FY	G	R	R	G	R	DW	W	DW	DW	R
A-9	04 THRU, P4 ROW, 03 PER LEFT, 07 LEFT CLEARANCE	R	R	FY	G	R	R	Y	R	DW	W	DW	DW	R
A-10	03 PRO LEFT, OVL "A", 07 LEFT CLEARANCE	R	R	G	R	R	R	Y	R	DW	DW	DW	DW	GRT
A-11	03 PRO LEFT, 08 THRU, P8 ROW, 07 PER LEFT, OVL "A"	R	R	G	R	R	R	FY	G	DW	DW	DW	W	GRT
A-12	08 THRU, P8 ROW, 07 PER LEFT, 03 LEFT CLEARANCE	R	R	Y	R	R	R	FY	G	DW	DW	DW	W	YRT
B-1	01 & 05 PRO LEFT	G	R	R	R	G	R	R	R	DW	DW	DW	DW	R
B-2	01 & 05 PRO LEFT CLEARANCE	Y	R	R	R	Y	R	R	R	DW	DW	DW	DW	R
B-3	02 & 06 THRU, 01 & 05 PER LEFT, P2 & P6 ROW	FY	G	R	R	FY	G	R	R	W	DW	W	DW	G
B-4	02 & 06 THRU, 01 & 05 PER LEFT ROW, P2 & P6 CLEARANCE	FY	G	R	R	FY	G	R	R	FDW	DW	FDW	DW	G
B-5	02 & 06 THRU, 01 & 05 PER LEFT CLEARANCE	Y	Y	R	R	Y	Y	R	R	FDW	DW	FDW	DW	Y
B-6	ALL RED	R	R	R	R	R	R	R	R	DW	DW	DW	DW	R
B-7	05 PRO LEFT, 01 LEFT CLEARANCE	Y	R	R	R	G	R	R	R	DW	DW	DW	DW	R
B-8	05 PRO LEFT, 02 THRU, 01 PER LEFT, P2 ROW	FY	G	R	R	R	R	R	R	G	DW	DW	DW	G
B-9	01 PER LEFT, 02 THRU, 05 LEFT CLEARANCE, P2 ROW	R	G	R	R	Y	R	R	R	G	DW	DW	DW	G
B-10	01 PRO LEFT, 05 LEFT CLEARANCE	G	R	R	R	Y	R	R	R	DW	DW	DW	DW	R
B-11	06 THRU, 01 PRO LEFT, P6 ROW, 05 PER LEFT	G	R	R	R	R	R	R	R	DW	DW	G	DW	R
B-12	06 THRU, 01 LEFT CLEARANCE, P6 ROW, 05 PER LEFT	Y	R	R	R	R	R	R	R	DW	DW	G	DW	R



**TIMING SCHEDULE**

INTERVALS	PHASES							
	01	02	03	04	05	06	07	08
MINIMUM GREEN	6	10	6	10	6	10	6	10
PASSAGE	3	3	3	3	3	3	3	3
MAXIMUM GREEN	25	40	25	30	25	40	25	30
YELLOW CLEARANCE	3.3	3.3	3.0	3.0	3.3	3.3	3.0	3.0
RED CLEARANCE	2.8	2.5	3.4	3.5	2.5	2.8	3.5	3.4
WALK		7		7		7		7
PED. CLEARANCE	X	19	X	19	X	20	X	20

SIGNAL DESIGN

**REVISIONS**

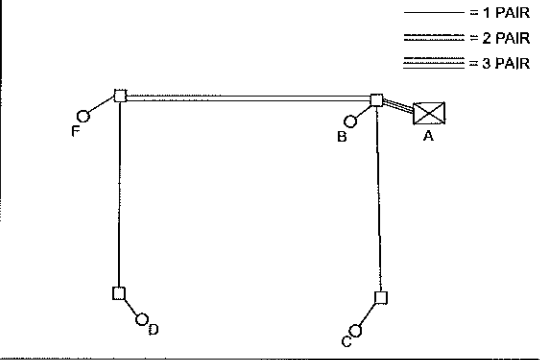
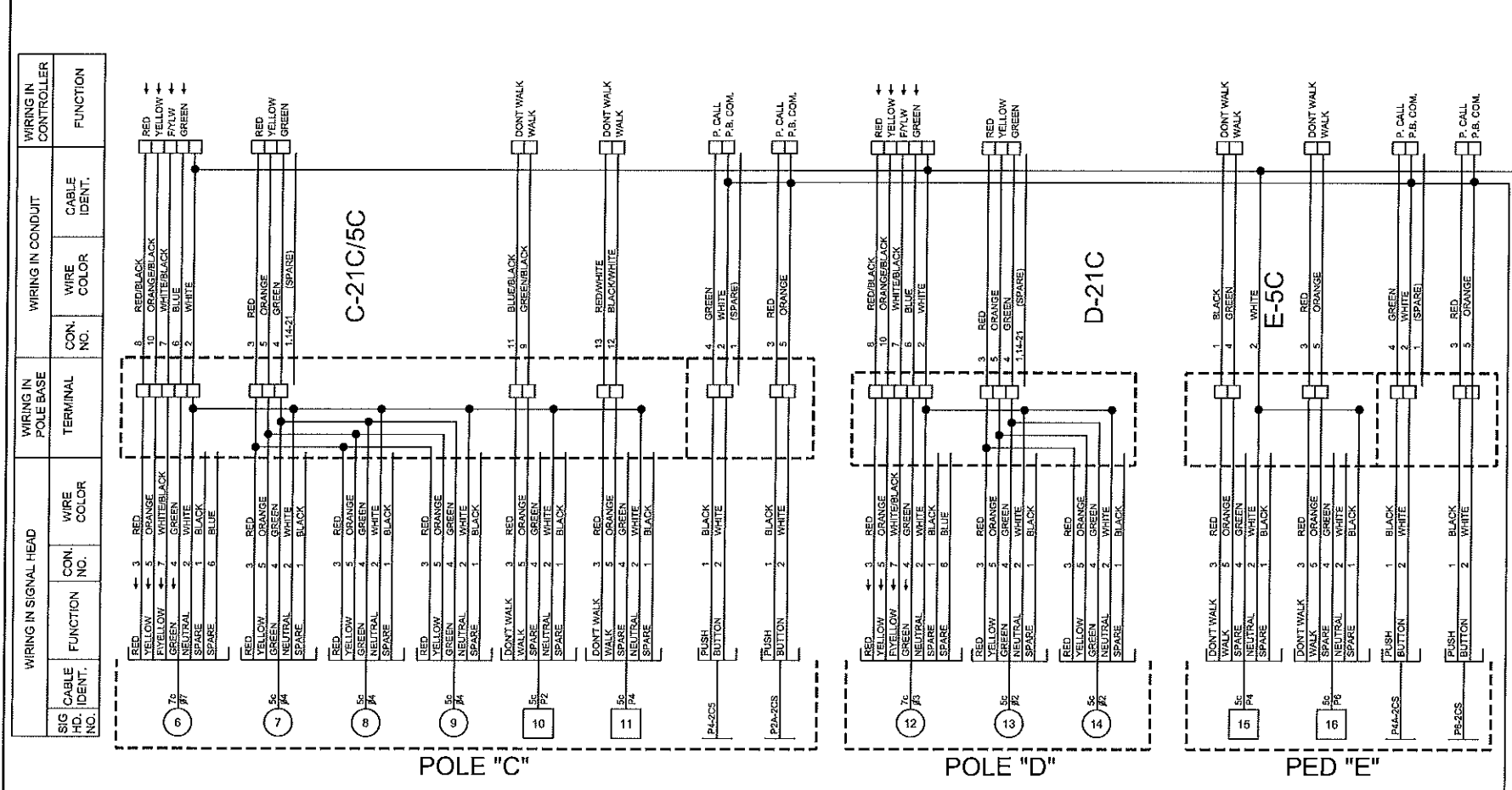
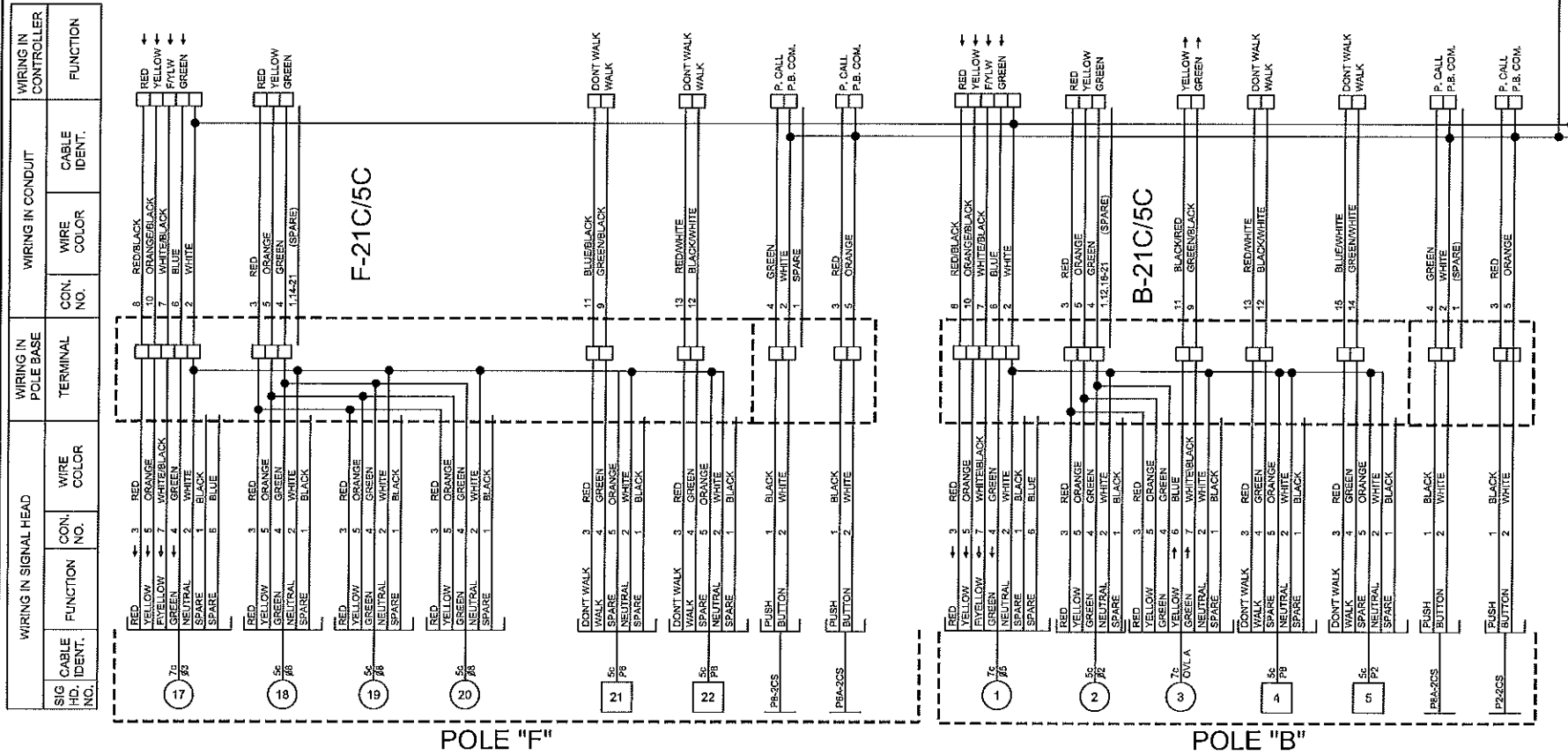
REV. NO.	DATE	REVISION DESCRIPTION	BY

**PHASING DIAGRAM  
 WO#7 - TRAFFIC SIGNAL PLANS**

**MAIN STREET AND STEVE OWENS BOULEVARD  
 CITY OF MIAMI, OKLAHOMA**

MIAMI, OKLAHOMA 2017

drawn by: \_\_\_\_\_  
 checked by: \_\_\_\_\_  
 dated by: \_\_\_\_\_  
 project no.: 015-2300 WO#7  
 drawing no.: SEE PLOT STAMP  
 date: 07-16-2017



NOTE: STREET LIGHT WIRING  
 ONE PAIR EQUALS TWO CONDUCTORS (1/1C-10AWG COPPER)  
 ONE BLACK, ONE WHITE. CONDUCTORS SHALL BE SPLICED ONLY AT THE TERMINAL BLOCK AT EACH POLE. BASE. A FUSE HOLDER SHALL BE PROVIDED IN THE HANDHOLE OF EACH COMBINATION TRAFFIC SIGNAL AND STREET LIGHT POLE. THE FUSE HODER SHALL BE INSTALLED IN THE LINE SIDE CONDUCTOR FOR THE LUMINAIRE. THE FUSE HOLDER SHALL BE A WATERPROOF INLINE FUSE HOLDER. IT SHALL BE SIMILAR TO BUSSMAN WFG. CO. TYPE "TRON" HEB. OR OTHER APPROVED EQUAL, COMPLETE WITH A PROPERLY SIZED TYPE KTK FUSE.

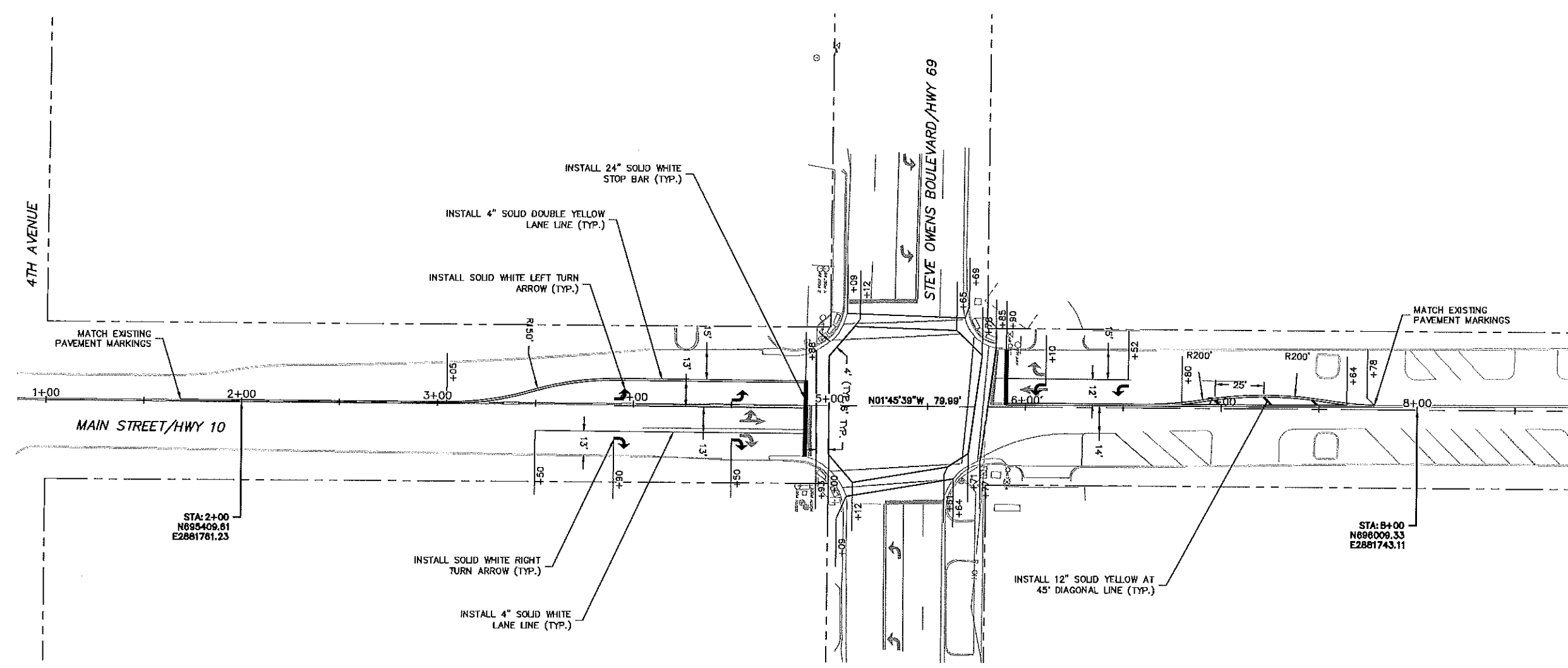
YEAR	STATE JOB NO.
2017	33078 (04)



**MOLSSON ASSOCIATES**  
 Molsson Associates - Civil Engineering  
 Oklahoma Certified as of Authority #2643  
 702 S. Main Street  
 Joplin, MO 64801  
 TEL: 417.751.0643  
 FAX: 417.751.4714  
 www.molssonassociates.com

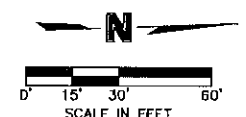
REV. NO.	DATE	REVISIONS DESCRIPTION	BY

SIGNAL WIRING DIAGRAM  
 WO#7 - TRAFFIC SIGNAL PLANS  
 MAIN STREET AND STEVE OWENS BOULEVARD  
 CITY OF MIAMI, OKLAHOMA  
 MIAMI, OKLAHOMA 2017



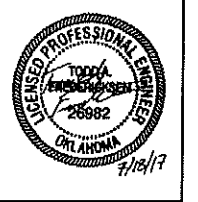
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- NOTES:
- 1) ALL EXISTING PAVEMENT MARKINGS IN CONFLICT WITH NEW SHALL BE OBLITERATED.
  - 2) PAVEMENT MARKING ON ASPHALT SHALL BE HOT APPLIED THERMOPLASTIC MATERIAL OR PRE-FORMED THERMOPLASTIC MATERIALS. FOLLOW ODOT STANDARDS FOR MATERIALS AND APPLICATION PROCEDURES.



REV. NO.	DATE	REVISIONS DESCRIPTION	BY

PAVEMENT MARKING PLAN WO#7 - TRAFFIC SIGNAL PLANS		2017
MAIN STREET AND STEVE OWENS BOULEVARD CITY OF MIAMI, OKLAHOMA		
MIAMI, OKLAHOMA		
drawn by:	JRC	
checked by:	JSS	
approved by:	TAF	
QA/QC by:	JSS	
project no.:	016-2300 W07	
drawing no.:	SEE PLOT STAND	
date:	07-18-2017	
SHEET 07 of 08		

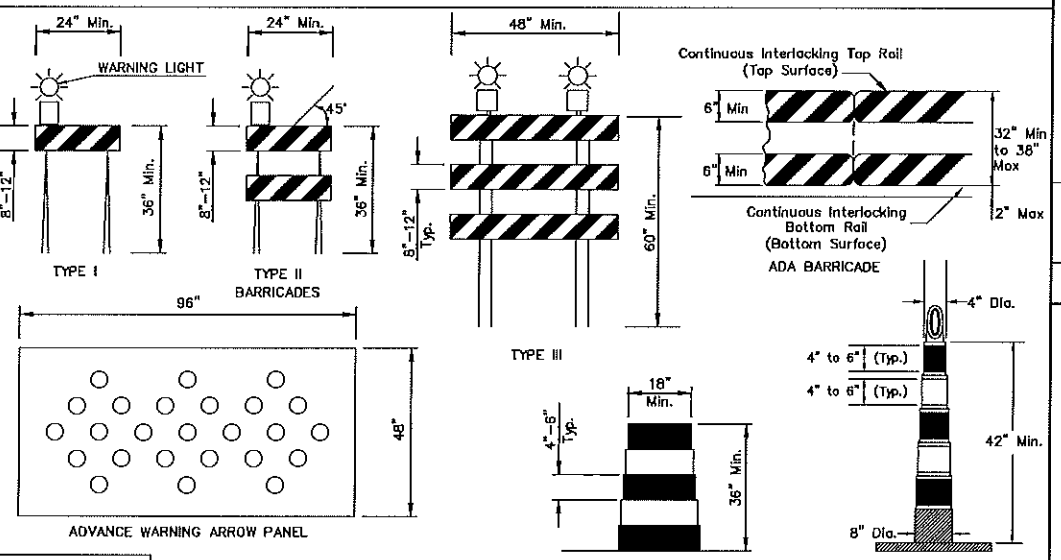
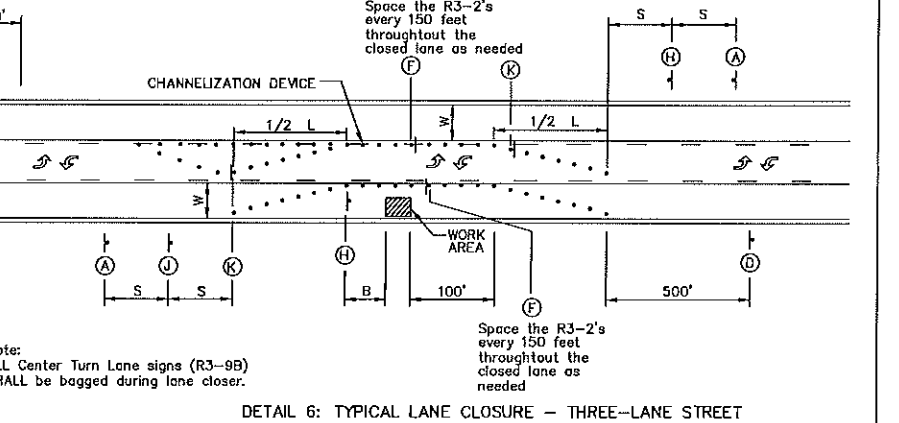
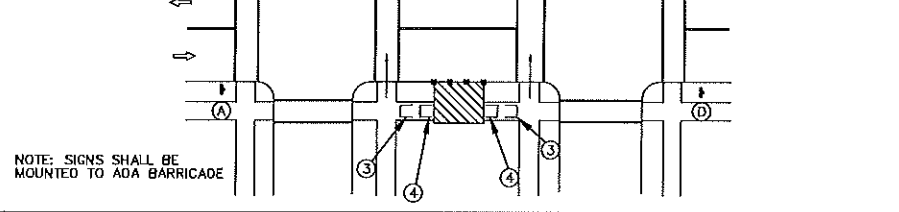
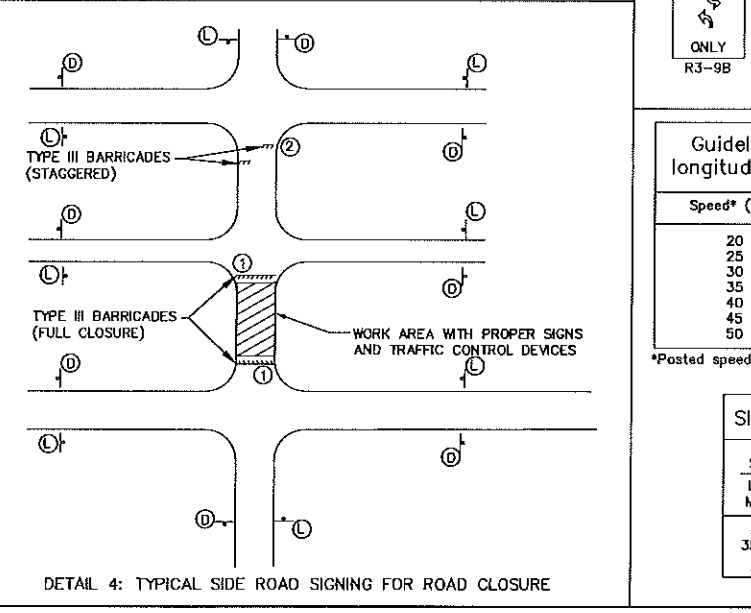
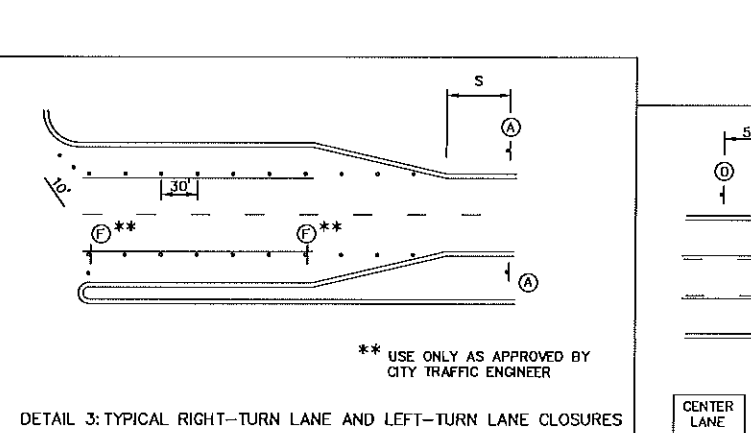
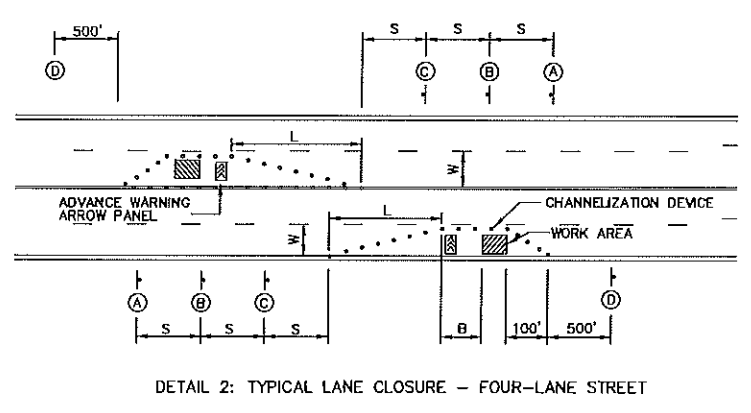
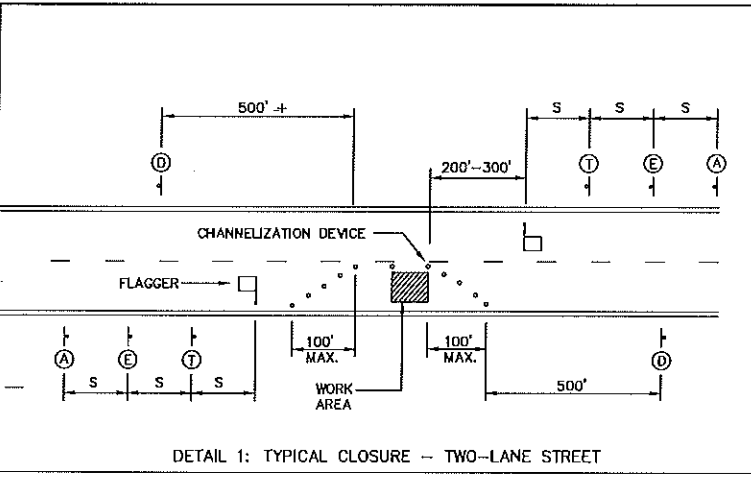
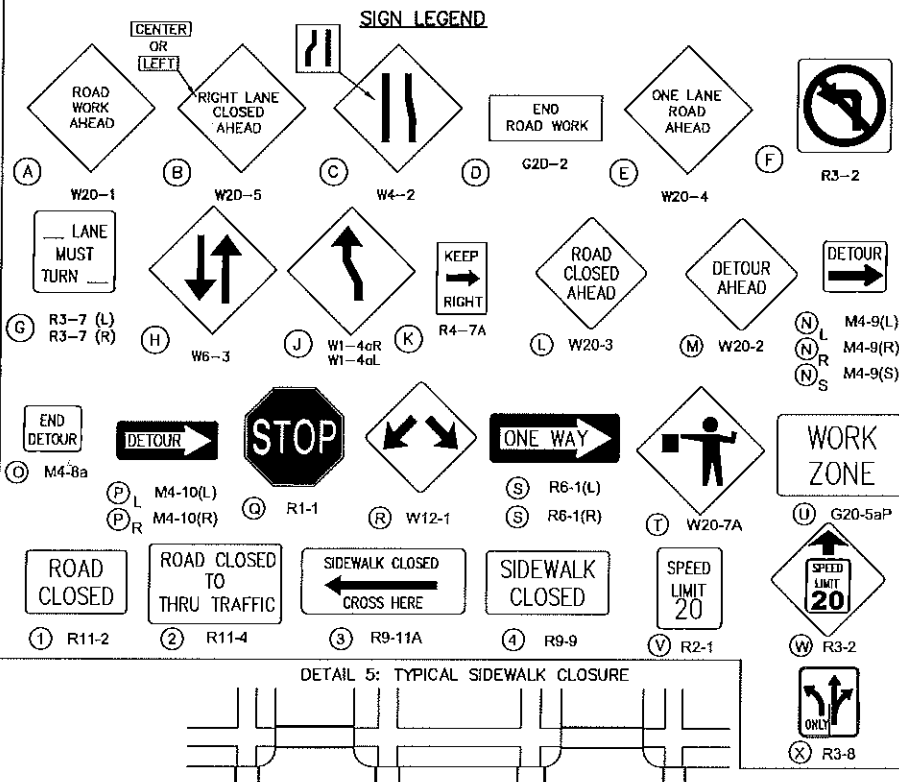


REV. NO.	DATE	REVISION DESCRIPTION

drawn by: JRC  
 checked by: JSS  
 approved by: TAF  
 project no.: 016-2300-10017  
 drawing no.: SEE PLOT STAMP  
 date: 07-18-2017

**GENERAL NOTES:**

- All signs, barricades, drums, markings and other traffic control devices shall conform to the Manual on Uniform Traffic Control Devices (MUTCD), most current edition.
- All traffic control devices shall be standard in size, shape, color and message, in good condition, and reflectorized. All signs and barricades in place at night shall be reflectorized with high intensity sheeting. All signs shall be securely mounted with height and lateral location as described in the MUTCD.
- Warning lights shall be used on all channelization devices and warning signs in place at night except drums that are fully reflectorized with high intensity reflective sheeting. Type A Low Intensity Flashing Warning lights shall be mounted on warning signs as well as barricades where used singly. Type C Steady-Burn lights shall be mounted on barricades where used in series to delineate the edge of the travel way.
- Advance Warning Arrow Panels shall be used for all lane closures on multi-lane streets but should not be used in lieu of proper traffic control signs, barricades and channelization devices.
- Flaggers shall be used where indicated on the plans, where construction vehicles interact with normal traffic or where construction activities impose a restriction on traffic, as directed by the Engineer in charge of construction. Where flaggers are used, advance signing shall be erected as shown above or as specified in the MUTCD. Flaggers shall meet the requirements in the MUTCD in regard to character, training, attire and behavior.
- Channelization devices used in the street shall be either drums, cones or Triline channelizers.
- Traffic control devices not in use or not applicable shall be either covered or removed from the work area.
- The Contractor shall place as many barricades as needed to effectively shield pedestrians and traffic from exposed objects, excavations and construction activities. ADA Pedestrian Barricades shall be installed around all excavations left open during non-construction times or as directed by the Engineer in charge of construction.
- Access shall be maintained to all driveways and side streets unless noted otherwise on the plans.
- Construction materials shall be kept off of sidewalks, consolidated in one location within City Right-Of-Way, and removed daily unless otherwise approved by the Engineer in charge of construction.
- Dirt, mud and other construction debris on streets and sidewalks shall be removed immediately.
- The Contractor shall not perform any work that will restrict traffic in any way between the hours of 7:00 a.m. and 8:30 a.m. or 4:30 p.m. and 6:00 p.m.
- The Contractor shall be responsible for maintaining all traffic control devices on an around-the-clock basis, whether or not work is actively being pursued and any deficiencies noted shall be corrected immediately.
- The traffic control requirements shown on these plans are minimum requirements only and do not attempt to address in depth the variety of situations that may occur once construction has started. In no way do the requirements shown on these plans relieve the contractor of his responsibility for selecting the proper traffic control devices and implementation procedures that will assure the safety of motorists, pedestrians, and workers at all times. Any additional quantities of traffic control devices necessary to complete the contract or as ordered by the Engineer shall be considered subsidiary to the contract bid price.
- Construction vehicles parked along streets and construction signs shall not restrict sight distance for vehicles exiting at streets or any drives.
- Should the contractor fail to enforce the traffic control plan or fail to clean, replace or otherwise maintain the traffic control devices when directed to do so by the Engineer or representative, the City/Controlling Jurisdiction may take one or more of the following actions:
  - Employ another agency to correct deficiencies in signing or warning devices and deduct the cost from the contractor's pay estimate
  - Suspend all pay Estimates until deficiencies are corrected.
  - Stop the work until deficiencies are corrected.
  - Place the contractor in default.
- The Contractor shall keep roadway closures due to construction activities to a minimum.
- The Contractor shall notify enforcement and emergency agencies before the start of construction to request their cooperation and to provide coordination of services when emergencies arise during the construction at the project site. When the contractor completes this notification with enforcement and emergency agencies, a report shall be furnished to the engineer on the status of incident management.
- The Contractor should, at the request of the Engineer, place reduced speed limit signing and work zone speed limit signing in advance of all active work zone areas. Work zone speed limit reduction shall not be greater than 10 mph throughout construction areas without advanced signing in place. Contractor shall cover or replace all speed limit signs in conflict with the work zone speed limit throughout the construction area.



**Guidelines for length of longitudinal buffer space (B)**

Speed* (mph)	Length (Feet)
20	35
25	55
30	85
35	120
40	170
45	220
50	300

\*Posted speed

**MAXIMUM CHANNELIZATION SPACING IN FEET \***

Speed Limit M.P.H.	Along Taper		After Taper
	Along Taper	After Taper	
20	20	40	40
25	25	50	50
30	30	60	60
35	35	70	70
40	40	80	80
45	45	90	90
50	50	100	100
55	55	100	100

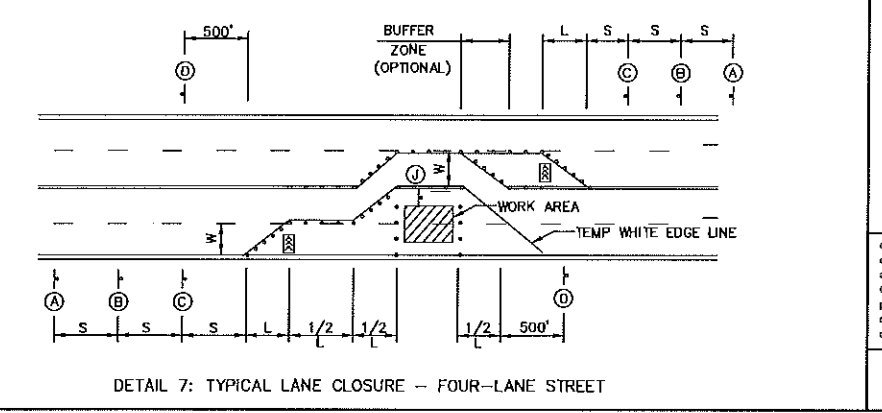
**TAPER DETAIL**

Speed Limit M.P.H.	Minimum Taper Length (L)			Minimum Number of Channelizing Devices for Taper
	Lane Width (W)			
	10	11	12	
20	70	75	80	5
25	105	115	125	6
30	150	165	180	7
35	205	225	245	8
40	270	295	320	9
45	450	495	540	13
50	500	550	600	13
55	550	605	660	13

**SIGN SPACING(S)**

Speed Limit M.P.H.	Spacing (Feet)
≤ 30	100
35 - 45	350
≥ 55	500

\* The maximum distance in feet between devices in a taper should not exceed 1.0 times the speed limit in MPH.



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