



PINAL COUNTY PUBLIC WORKS

To: **PROSPECTIVE BIDDERS**
Date: **April 1, 2016**
Project Name: **Gantzel Rd & Empire Blvd Traffic Signal**

Addendum #1

The following items shall be incorporated in the Work. All items shown on the plans or specified in the Project Manual shall remain unchanged except as specified herein.

QUESTIONS:

1. When is the bid opening?
Answer: April 26, 2016. See Invitations for Bids, page INV-1 for details.
2. Are all street crossing existing?
Answer: Yes.
3. Are all services existing?
Answer: No for railroad crossing. Yes for SRP.
4. Will there be another contractor on board doing the SRP transformer pad?
Answer: No. SRP will install the pad, but contractor will need to coordinate with SRP to establish new power. See Technical Provisions and Specifications page 14, Item 46 for full details.
5. Are notification signage required prior to start of work?
Answer: Yes. See Technical Provisions and Specifications page 5, Item 6.

CLARIFICATIONS:

Item 1

Plan sheet 3 of 5: Pole Schedule "E" – Type Q/Bid Schedule

Revised

Pole Schedule "E" shall be **Type R**. This will reflect an additional item to the **Bid Schedule** to include Type R. Item #15 shall have a quantity of **1**, not 2. See revised Bid Schedule and plan sheet.

Scott Bender P.E.,
County Engineer



P I N A L ♦ C O U N T Y
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Gantzel Road at Empire Boulevard Traffic Signal

Bid Schedule

Project No. 60640566

Item No.	Description	Unit	Qty	Total
1	REMOVE (EXISTING SIGN, POST & FOUNDATION)	EACH	1	
2	REMOVE (PULL BOX)	EACH	8	
3	PERFORATED SIGN POST (2" X 2")	L. FT.	26	
4	PERFORATED SIGN POST FOUNDATION	EACH	2	
5	FLAT SHEET ALUMINUM SIGN PANEL (DIAMOND GRADE)	SQ FT	15	
6	NOTIFICATION SIGNAGE	EACH	3	
7	CONSTRUCTION TRAFFIC CONTROL	L. SUM	1	
8	PINAL COUNTY OFF DUTY SHERIFF DEPUTY	HOUR	40	
9	PAVEMENT MARKING (WHITE THERMOPLASTIC) (ALKYD) (0.090")	L. FT.	764	
10	PAVEMENT MARKING (YELLOW THERMOPLASTIC) (ALKYD) (0.090")	L. FT.	60	
11	PAVEMENT LEGEND (EXTRUDED THERMOPLASTIC) (ALKYD) (0.090")	EACH	2	
12	PAVEMENT SYMBOL (EXTRUDED THERMOPLASTIC) (ALKYD) (0.090")	EACH	4	
13	POLE (TYPE A) (10')	EACH	1	
14	POLE (TYPE G)	EACH	1	
15	POLE (TYPE Q)	EACH	1	
16	POLE (TYPE R)	EACH	1	
17	POLE (TYPE W)	EACH	1	
18	POLE FOUNDATION (TYPE A)	EACH	1	
19	POLE FOUNDATION (TYPE G) (STANDARD BASE)	EACH	1	
20	POLE FOUNDATION (TYPE Q OR TYPE R)	EACH	2	
21	POLE FOUNDATION (TYPE W)	EACH	1	
22	MAST ARM (20 FT.) (TAPERED)	EACH	4	
23	MAST ARM (35 FT.) (TAPERED)	EACH	1	
24	MAST ARM (55 FT.) (TAPERED)	EACH	1	
25	MAST ARM (65 FT.) (TAPERED)	EACH	1	
26	INTERNALLY ILLUMINATED STREET NAME SIGN	EACH	3	



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Gantzel Road at Empire Boulevard Traffic Signal

Bid Schedule

Project No. 60640566

Item No.	Description	Unit	Qty	Total
27	ELECTRICAL CONDUIT (2") (PVC)	L. FT.	10	
28	ELECTRICAL CONDUIT (2 1/2") (PVC)	L. FT.	110	
29	ELECTRICAL CONDUIT (3") (PVC)	L. FT.	150	
30	ELECTRICAL CONDUIT (3-3") (PVC)	L. FT.	30	
31	ELECTRICAL CONDUIT (4") (PVC)	L. FT.	90	
32	PULL BOX (NO.7)	EACH	3	
33	PULL BOX (NO.7) (W/EXTENSION)	EACH	1	
34	CONDUCTORS	L. SUM	1	
35	TRAFFIC SIGNAL FACE (TYPE F)	EACH	10	
36	TRAFFIC SIGNAL FACE (TYPE Q)	EACH	4	
37	TRAFFIC SIGNAL MOUNTING ASSEMBLY (TYPE II)	EACH	7	
38	TRAFFIC SIGNAL MOUNTING ASSEMBLY (TYPE IV)	EACH	1	
39	TRAFFIC SIGNAL MOUNTING ASSEMBLY (TYPE V)	EACH	2	
40	TRAFFIC SIGNAL MOUNTING ASSEMBLY (TYPE VII)	EACH	2	
41	CONTROL CABINET ASSEMBLY (TYPE IV)	EACH	1	
42	EMERGENCY VEHICLE PREEMPTION (SENSORS & CONFIRMATION LIGHTS)	L SUM	1	
43	METER PEDESTAL (ELECTRICAL)	EACH	1	
44	VIDEO DETECTION SYSTEM (4-CAMERA) (ITERIS RADAR VANTAGE)	EACH	1	
45	LUMINAIRE (LED)	EACH	4	
46	MISCELLANEOUS ELECTRICAL (RECORD DRAWINGS)	L. SUM	1	
47	ALLOWANCE (PROVIDE ELECTRICAL SERVICE)		1	\$5,000.00
48	ALLOWANCE (CONTINGENCIES)		1	\$15,000.00
TOTAL BID AMOUNT				\$

Quantities appearing in the Bid Documents are approximate only and are not to be used for the comparison of bids. Payment to Contractor shall be made only for the actual quantities of work performed and/or for materials furnished in accordance with the contract at the unit price(s) in the bid. Contractor shall verify actual quantities prior to construction and notify the Engineer of any deviation, either exceeding or under the Bid Price/Contract Price. No additional payment shall be paid to Contractor for additional quantities without prior written change order approved by Pinal. Any additional payment paid to Contractor for additional quantities shall be based on the applicable unit price in the Bid. No payment shall be made for unused materials.

F.H.W.A. REGION	STATE	PROJECT NO.	SHEET NO.	TOTAL SHEETS	RECORD DWG.
9	AZ	60640566	3	5	

POLE SCHEDULE

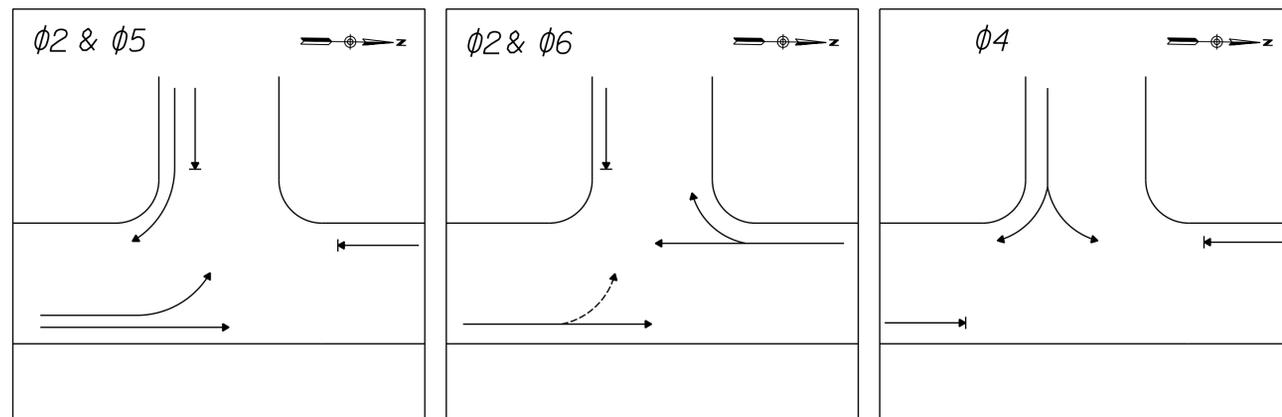
TRAFFIC SIGNAL CONTROLLER				AUX. CONTROL	LOCATION
CABINET	TYPE	CONTROLLER	REMARKS		
	2-DOOR TYPE IV (P) W/ELEVATOR BASE & MAINT PADS	EAGLE m60	T.S. 2-4 T.S. 3-9 T.S. 3-10	CLARY UPS SPI250LX-N W/41 AH BATTERIES D PANEL FOR PREEMPTION	TO BE FIELD LOCATED AS SHOWN PER NOTE 3
	METER PEDESTAL W/MAINT PAD	MYERS MEUG16-TS		FURNISH & INSTALL PEC AND LTG CONTACTOR	TO BE FIELD LOCATED AS SHOWN PER NOTE 3

POLE	TYPE	MAST ARM		SIGNALS		IISNS	REMARKS	LOCATION
		SIG.	LUM.	MTG.	FACE			
	G		20'	V	Q		LED LUMINAIRE & VIDEO DETECTION	TO BE FIELD LOCATED AS SHOWN PER NOTE 3
	W	65'	20'	// 2-II VII	Q 2-F 2-F	IISNS	LED LUMINAIRE, PREEMPTION SENSOR, & VIDEO DETECTION	TO BE FIELD LOCATED AS SHOWN PER NOTE 3
	Q	35'	20'	2-II V	2-F Q (Rt)	IISNS	LED LUMINAIRE, PREEMPTION SENSOR, & VIDEO DETECTION	TO BE FIELD LOCATED AS SHOWN PER NOTE 3
	R	55'	20'	2-II VII	2-F 2-F	IISNS	LED LUMINAIRE, PREEMPTION SENSOR, & VIDEO DETECTION	TO BE FIELD LOCATED AS SHOWN PER NOTE 3
	A 10'			IV	Q (Rt)			TO BE FIELD LOCATED AS SHOWN PER NOTE 3

NOTES:

- THE CONTROL CABINET SHALL BE A 2-DOOR TS-2 TYPE 1 CONFIGURATION, WIRED AND LABELED WITH THE SAME PHASE NUMBER DESIGNATIONS, FOR INITIAL AND FUTURE PHASES, AS SHOWN IN THE PHASE MOVEMENT DIAGRAM ON THE PLANS.
- THE CONTROLLER CABINET SHALL BE WIRED IN THE FIELD BY THE CONTRACTOR, IN THE PRESENCE OF THE TRAFFIC SIGNAL TECHNICIAN. THE CABINET SHALL BE FLASHED OUT FOR FUNCTIONALITY, WITH ALL VEHICLE AND PREEMPTION DETECTION CONNECTED, TESTED AND FULLY OPERATIONAL PRIOR TO SIGNAL ACTIVATION. ACTIVATION SHALL BE COORDINATED AND SCHEDULED WITH THE TRAFFIC SIGNAL TECHNICIAN.
- POLE, CABINET, & PULL BOX LOCATIONS, ELEVATIONS & ORIENTATIONS SHALL BE FIELD VERIFIED WITH THE TRAFFIC SIGNAL TECHNICIAN PRIOR TO EXCAVATION. THE TRAFFIC SIGNAL TECHNICIAN MAY MAKE FIELD ADJUSTMENTS TO LOCATIONS OF TRAFFIC SIGNAL FACILITIES, IN RESPONSE TO FIELD CONDITIONS, TO COMPLY WITH CLEAR ZONE, AND TO AVOID UTILITIES. THE DESIGNER, DAVE BRUGGEMAN (602) 618-0406 SHALL CONFIRM POLE LOCATIONS AFTER STAKING.
- ALL NEW POLE LOCATIONS SHALL BE INSPECTED BY THE TRAFFIC SIGNAL INSPECTOR PRIOR TO PLACEMENT OF CONCRETE. PLACEMENT OF ALL STEEL POLES SHALL PROVIDE 10 FT MINIMUM CLEARANCE FROM STEEL POLE/ARMS/FIXTURES AND ALL SIGNAL FEATURES TO ANY ELECTRICAL POWER LINES. THE CONTRACTOR SHALL BE RESPONSIBLE FOR INSURING THE HEIGHT OF THE SIGNAL MAST ARM IS A NOMINAL 21' ABOVE PAVEMENT.
- ALL TRAFFIC SIGNAL POLES SHALL BE TAPERED GALVANIZED STEEL.
- ALL SIGNAL HEADS SHALL BE LED AND HAVE FIVE INCH LOUVERED BACKPLATES.
- ELECTRICAL SERVICE SHALL BE FULLY METERED FOR SIGNALS AND LIGHTING. COORDINATION WITH AND ANY MISCELLANEOUS COSTS FROM UTILITY COMPANY ARE COVERED UNDER "PROVIDE ELECTRICAL SERVICE".
- ILLUMINATED STREET NAME SIGNS TO BE MOUNTED ON SIGNAL POLES, AS INDICATED ON THE PLANS. ALL SIGNS SHALL BE IN PLACE PRIOR TO TURN-ON OF THE NEW SIGNAL.
- ALL VIDEO DETECTION AND EMERGENCY VEHICLE PRE-EMPTION SHALL BE FUNCTIONAL AT TURN-ON. VIDEO DETECTION CAMERAS SHALL BE ATTACHED TO 6-FOOT PIPE RISERS ATTACHED TO THE SIGNAL MAST ARMS HALF WAY BETWEEN THE END OF ARM SIGNAL AND MID-ARM SIGNAL, EXCEPT ON POLE B. MOUNT EVP SENSOR ON SIGNAL MAST ARM AT LOCATION AS DIRECTED BY THE TRAFFIC SIGNAL TECHNICIAN. PRE-EMPTION AND VIDEO DETECTION CABLING SHALL RUN UNSPLICED FROM SENSOR/CAMERA TO THE CONTROLLER CABINET.
- TERMINAL COMPARTMENTS SHALL BE ASSEMBLED IN THE MOUNTING BRACKETS AS SHOWN IN THE STANDARD DRAWINGS. THE TERMINAL COMPARTMENT SHALL BE MANUFACTURED OF BRONZE. PIPE NIPPLES MAY REQUIRE ADDITIONAL LENGTH TO ACHIEVE DESIRED SIGNAL HEAD AIMING, AT NO ADDITIONAL COST, WITHOUT CONFLICTING WITH POLE OR MAST ARM.
- INSTALL 30-AMP SINGLE-POLE DISCONNECT FOR SIGNALS AND A 20-AMP DISCONNECT FOR LIGHTING.
- THE CONTRACTOR SHALL CONTACT THE TRAFFIC SIGNAL TECHNICIAN FOR REVIEW AND APPROVAL BEFORE DRILLING POLES FOR SIGNAL MOUNTINGS.
- THE CONTRACTOR SHALL HAVE AT LEAST ONE IMSA LEVEL ONE AND ONE IMSA LEVEL TWO CERTIFIED TRAFFIC SIGNAL TECHNICIANS ON SITE DURING ALL PHASES OF THE TRAFFIC SIGNAL WORK. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO PROVIDE VERIFICATION OF CERTIFICATION. IF A JOB SITE INSPECTION SHOWS NO CERTIFIED TECHNICIANS ON SITE, THE TRAFFIC SIGNAL WORK WILL BE SUSPENDED.
- ALL LIGHTING SHALL BE INSTALLED WITH LIGHTING MAST ARM PERPENDICULAR TO THE ROADWAY OVER WHICH THEY ARE INTENDED TO ILLUMINATE. ALL LUMINAIRES SHALL BE LED, 120 VOLT, WITHOUT INDIVIDUAL PHOTOCELLS.
- CONTRACTOR SHALL PERFORM A GROUND-RESISTANCE TEST FOR EACH INSTALLED GROUND ROD, AND EACH POLE FOUNDATION GROUNDING COIL, IN ACCORDANCE WITH SUBSECTION 732-3.03. RESULTS SHALL BE DOCUMENTED IN WRITING AND SUBMITTED TO THE ENGINEER.
- METER PEDESTAL SHALL BE FURNISHED & INSTALLED WITH PHOTOCCELL AND LIGHTING CONTACTOR. INTERSECTION LIGHTING TO BE CONTROLLED FROM THE METER PEDESTAL.
- CONTRACTOR TO FURNISH AND INSTALL ONLY COUNTY-APPROVED PRODUCTS:
 EDI SSM-12LEIP CONFLICT MONITOR
 PDC SSF-86-3 SOLID STATE FLASHER
 PDC SSS-87 LOAD SWITCH
 EDI PS-175 RACK POWER SUPPLY
 OPTICOM 138 DETECTOR CABLE
 OPTICOM 722 DETECTOR
 OPTICOM 760 CARD RACK
 OPTICOM 764 PHASE SELECTOR
 OPTICOM 575 CONFIRMATION LIGHT ASSEMBLY
 ITERIS RADAR VANTAGE VECTOR VIDEO DETECTION SYSTEM, W/ 10" MONITOR
 CLARY UPS SPI250LX-N, WITH SPD-302C, SP-19N, SP-19N1 AND OPT2C BATTERIES
 MYERS MEUG16-TS METERED ELECTRICAL SERVICE PEDESTAL, 100A, W/PEC AND LTG CONTACTOR
 COOPER NAVION LED LUMINAIRE *NVN-AE-03-E-U-T3R-10K-4-AP

PHASE MOVEMENTS



DESIGN	J.P./DB	02/16	3610N, 44th Street Suite 100 Phoenix, AZ 85018 602955-7206 LEE ENGINEERING	
DRAWN	J.P./DB	02/16		
CHECKED	DWB	02/16		
LOCATION			TRAFFIC SIGNAL GANTZEL RD. AT EMPIRE BLVD.	POLE SCHEDULE EXPIRES 3/31/17 DRAWING NO. TS-02