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PLANNING

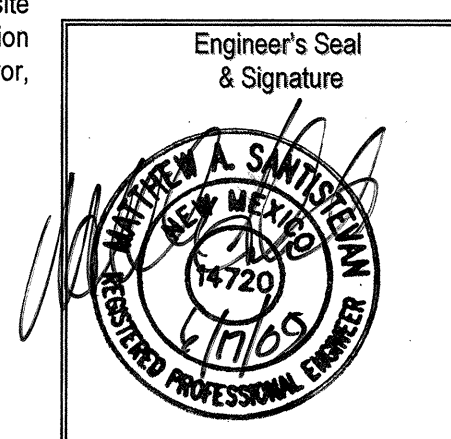
CONSTRUCTION PLANS FOR LOWE'S of NE ALBUQUERQUE TRAFFIC SIGNAL IMPROVEMENTS PALOMAS AVENUE / SAN PEDRO DRIVE ALBUQUERQUE, NEW MEXICO

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CERTIFICATE OF SUBSTANTIAL COMPLIANCE ON PLANS

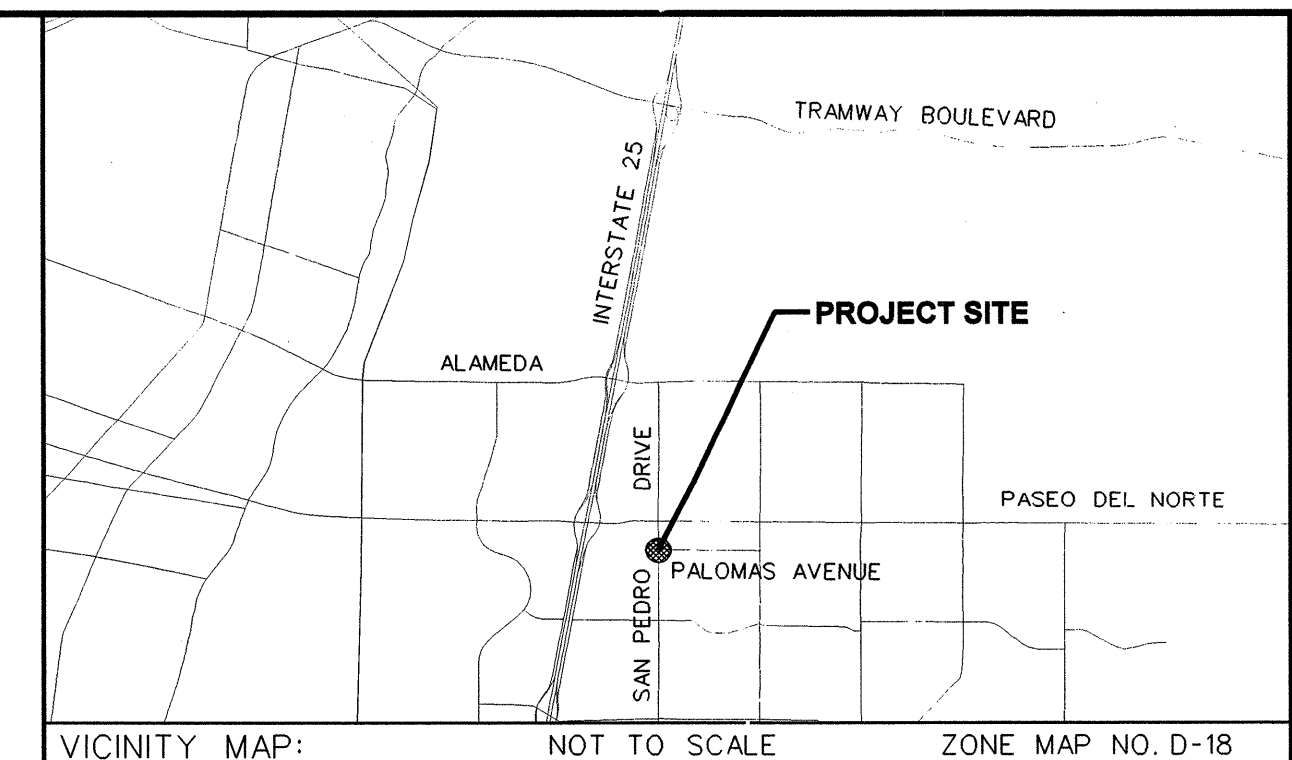
I, Matthew A. Santistevan of the firm of Bohannon Huston, Inc., a Registered Professional Engineer in the State of New Mexico, do hereby certify, to the best of my knowledge and belief, that the infrastructure installed as shown on these drawings (Lowe's of NE Albuquerque Traffic Signal Improvements Palomas Avenue/San Pedro Drive) has been inspected by me or by a qualified person under my direct supervision and has been constructed in accordance with the plans and specifications and that the original design intent of the approved plans has been met, except as noted by me on the as-built construction drawings. This Certification is based on site inspections by me or personnel under my direction and survey information provided by the contractor, Northwest Commercial, Inc. and their surveyor, Lynn D. Lantz, NMRPS 10856.



RECORD DRAWING

APPROVED AS RECORD DRAWINGS
DESIGN REVIEW SECTION
CITY CONSTRUCTION ENGINEER
DATE: 07/16/09

Bohannon & Huston
Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING • SPATIAL DATA • ADVANCED TECHNOLOGIES

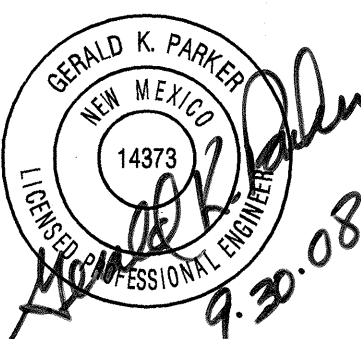


NOTICE TO CONTRACTORS

- AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN THE CITY RIGHT-OF-WAY.
- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AS REVISED THROUGH UPDATE No. 7, INCLUDING AMENDMENT No. 1.
- TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM (280-1990) FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR SURVEYOR IMMEDIATELY SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- SEVEN (7) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT, TO THE CONSTRUCTION COORDINATION DIVISION, A DETAILED CONSTRUCTION SCHEDULE. TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN A BARRICADING PERMIT FROM THE CONST. COORDINATION DIVISION. CONTRACTOR SHALL NOTIFY CONSTRUCTION COORDINATION ENGINEER (924-3400) PRIOR TO OCCUPYING AN INTERSECTION. REFER TO SECTION 19 OF THE GENERAL CONDITIONS OF THE STANDARD SPECIFICATIONS.
- ALL WORK AFFECTING ARTERIAL ROADWAYS REQUIRES TWENTY-FOUR HOUR CONSTRUCTION.
- ALL STREET STRIPING ALTERED OR DESTROYED SHALL BE REPLACED W/ PLASTIC REFLECTORIZED PAVEMENT MARKING BY CONTRACTOR TO THE SAME LOCATION AS EXISTING, OR AS INDICATED BY THIS PLAN SET.
- CONTRACTOR SHALL NOTIFY THE ENGINEER NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK IN ORDER THAT THE CITY SURVEYOR MAY TAKE NECESSARY MEASURES TO INSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE CITY SURVEYOR AND SHALL NOTIFY THE CITY SURVEYOR AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE CITY SURVEYOR. WHEN A CHANGE IS MADE IN THE FINISHED ELEVATIONS OF THE PAVEMENT OF ANY ROADWAY IN WHICH A PERMANENT SURVEY MONUMENT IS LOCATED, CONTRACTOR SHALL, AT HIS OWN EXPENSE, ADJUST THE MONUMENT COVER TO THE NEW GRADE UNLESS OTHERWISE SPECIFIED. REFER TO SECTION 4.4 OF THE GENERAL CONDITIONS OF THE STANDARD SPECIFICATIONS.
- CONTRACTOR SHALL RECORD DATA ON ALL UTILITY LINES AND ACCESSORIES AS REQUIRED BY THE CITY OF ALBUQUERQUE FOR THE PREPARATION OF "AS CONSTRUCTED" DRAWINGS. CONTRACTOR SHALL NOT COVER UTILITY LINES AND ACCESSORIES UNTIL ALL DATA HAS BEEN RECORDED.
- CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORK SITE. CONTRACTOR SHALL PROMPTLY REMOVE ANY GRAFFITI FROM ALL EQUIPMENT, WHETHER PERMANENT OR TEMPORARY.
- CONTRACTOR SHALL COORDINATE WITH THE WATER AUTHORITY SEVEN WORKING DAYS IN ADVANCE OF ANY WORK THAT MAY AFFECT EXISTING PUBLIC WATER OR SEWER UTILITIES. EXISTING VALVES TO BE OPERATED BY WATER AUTHORITY PERSONNEL ONLY. CONTRACTOR SHALL CONTACT THE WATER AUTHORITY THREE (3) DAYS PRIOR TO NEEDING VALVES TURNED ON OR OFF.
- CONTRACTOR SHALL PROVIDE AND MAINTAIN ALL CONSTRUCTION SIGNAGE UNTIL PROJECT IS ACCEPTED BY THE CITY OF ALBUQUERQUE.

THE FOLLOWING NOTES ALSO APPLY WHEN CHECKED

- ☒ ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
- ☒ BACKFILL COMPACTION SHALL BE ACCORDING TO SPECIFIED STREET USE.
- ☒ TACK COAT REQUIREMENTS SHALL BE DETERMINED BY THE ENGINEER.
- ☒ SIDEWALKS AND WHEELCHAIR RAMPS WITHIN THE CURB RETURNS SHALL BE CONSTRUCTED WHEREVER A NEW CURB RETURN IS CONSTRUCTED.
- ☒ IF CURB IS DEPRESSED FOR A DRIVEPAD, THE DRIVEPAD SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF CURB AND GUTTER.
- ☒ ALL STORM DRAINAGE FACILITIES SHALL BE COMPLETED PRIOR TO FINAL ACCEPTANCE.
- ☒ THE REQUESTOR OR DEVELOPER SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ALL CURB AND GUTTER OR SIDEWALK DAMAGED AFTER APPROVAL BY THE CITY ENGINEER OF WORK COMPLETED BY THE CONTRACTOR.

1	5, 9, 10		10-7-08	Woodell	10/16/08			
REV.	SHEETS	CITY ENGINEER	DATE	USER DEPARTMENT	DATE	USER DEPARTMENT	DATE	
ENGINEERS STAMP & SIGNATURE		APPROVALS	ENGINEER	DATE	*****			
		DRC Chairman	A. Woodell	10/17/08	APPROVED FOR CONSTRUCTION			
		Transportation	J. [Signature]	10-7-08				
		Water/Wastewater	[Signature]	10-7-08				
		Hydrology	[Signature]	10-7-08				
		CIP	[Signature]	10-7-08				
		Const. Mngmt.				City Engineer Date 4:30-08		
		Const. Coord.						
DRB CASE NUMBER		CITY PROJECT NO.		SHEET			OF	
1001946		754382		1			12	

SIGNAL NOTES

- ALL WORK ON THESE PLANS TO BE PERFORMED UNDER THIS CONTRACT SHALL CONFORM TO THE CURRENT NATIONAL ELECTRIC CODE, THE STANDARDS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS FOR ELECTRICAL WIRING AND APPARATUS, THE CITY'S TRAFFIC ENGINEERING OPERATIONS THIRD DRAFT SPECIFICATIONS (JUNE 1994), AND THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION (STANDARD SPECIFICATIONS).
- LOCATIONS OF CONDUITS, FOUNDATIONS, CONTROL CABINETS, POLES, PULL BOXES, MANHOLES, AND SPLICE CABINETS SHOWN ON THE PLANS ARE SCHEMATIC AND SHALL BE ADJUSTED IN THE FIELD TO MAXIMIZE CLEAR SPACE AVAILABLE FOR PEDESTRIANS AND WHEELCHAIRS TO COMPLY WITH THE AMERICANS WITH DISABILITIES ACT. THE CONTRACTOR SHALL MEET WITH THE CITY'S TRAFFIC ENGINEERING OPERATIONS PERSONNEL IN THE FIELD AT ALL LOCATIONS TO SPOT EQUIPMENT BEFORE BEGINNING THE WORK. ALL SUCH EQUIPMENT SHALL BE INSTALLED WITHIN THE RIGHT- OF-WAY.
- THE CONTRACTOR IS WARNED THAT EXISTING CONDUITS MAY CONTAIN AC POWER AND CAUTION SHALL BE EXERCISED IN INTERCEPTING OR INSTALLING CABLE IN EXISTING CONDUIT.
- THE CONTRACTOR SHALL BORE, DRILL, OR PUSH WHEN CROSSING EXISTING PAVEMENTS AND ANY DRIVEWAYS FOR SIDE STREET CROSSINGS. BEFORE CONDUIT CAN BE BORED, DRILLED, OR PUSHED THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES. THE CONTRACTOR SHALL LOCATE AND EXPOSE GAS LINES WHICH CROSS ANY PROPOSED BORES. THESE EXCAVATIONS SHALL REMAIN OPEN UNTIL AFTER THE BORE IS COMPLETE. CONTRACTOR SHALL REMOVE AND REPLACE IN KIND ANY SIDEWALK OR PAVEMENT REQUIRED TO EXPOSE SUCH LINES. THE CONTRACTOR MAY CUT, TRENCH, AND REPLACE EXISTING PAVEMENT ONLY WHEN APPROVED BY THE PROJECT MANAGER. SPLICING OF COMMUNICATIONS CABLE WILL NOT BE PERMITTED IN PULL BOXES.
- SPLICING OF COMMUNICATIONS CABLE (CONNECTIONS) WILL BE PERMITTED ONLY AT SPLICE CABINETS OR CONTROLLER CABINETS WITH SPLICE BARS. SPLICING OF TRAFFIC SIGNALS MCC WILL BE PERMITTED IN LARGE PULL BOXES INCLUDING LARGE MEDIAN PULL BOXES.
- ALL PULL BOXES SHALL BE REINFORCED POLYMER MORTAR HEAVY DUTY TYPE WITH REINFORCED POLYMER MORTAR HEAVY DUTY COVERS. CONCRETE COVERS, STEEL COVERS, AND CONCRETE PULL BOXES WILL NOT BE ACCEPTABLE.
- THE CONTRACTOR SHALL NOTIFY THE CITY OF ALBUQUERQUE TRAFFIC ENGINEERING OPERATIONS(857-8000) THREE WORKING DAYS IN ADVANCE OF ANY ANTICIPATED WORK ON SIGNALS, LIGHTING, AND POWER SERVICES. TRAFFIC ENGINEERING OPERATIONS PERSONNEL WILL ASSIST THE CONTRACTOR IN FIELD LOCATION OF EQUIPMENT, COLOR CODING OF WIRING, AND MUST BE PRESENT WHEN SIGNALS AND LIGHTING ARE SHUT-OFF OR TURNED ON. THE CONTRACTOR SHALL ALSO NOTIFY THE CITY OF ALBUQUERQUE TRAFFIC ENGINEERING OPERATIONS EACH TIME A TRAFFIC SIGNAL CONTROL DOOR IS OPENED.
- THE CONTRACTOR SHALL NOTIFY PUBLIC SERVICE COMPANY 30 DAYS IN ADVANCE OF ANTICIPATED POWER SERVICE CONNECTIONS. THE CONTRACTOR SHALL COORDINATE WITH PUBLIC SERVICE COMPANY TO ESTABLISH ELECTRICAL SERVICE IN THE CITY'S NAME. THE CONTRACTOR SHALL PAY THE LOCAL POWER COMPANY ALL COSTS TO PROVIDE ELECTRICAL SERVICE. THIS WORK WILL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
- LIVE UNUSED CONDUCTORS WILL NOT BE ALLOWED AT MASTARM POLES AND PEDESTAL POLES. ALL SUCH UNUSED CONDUCTORS SHALL BE DISCONNECTED AT THE LARGE PULL BOX ADJACENT TO THE POLE.
- IF TRENCH WIDTHS LESS THAN 12" ARE PROPOSED BY THE CONTRACTOR, APPROVED COMPACTION METHODS SHALL BE USED DURING BACKFILL TO PREVENT LATENT TRENCH FAILURES. THE CONTRACTOR SHALL USE GROUT OR LEAN FILL AS APPROVED BY THE PROJECT MANAGER IN LIEU OF EARTH BACKFILL.
- FOR CONDUITS CONTAINING ONLY LOW VOLTAGE COMMUNICATIONS CABLES, THE REQUIREMENTS FOR A SINGLE CONDUCTOR BARE COPPER #8 AWG MAY BE WAIVED WHERE PERMITTED BY THE NATIONAL ELECTRIC CODE.
- THE CITY OF ALBUQUERQUE TRAFFIC ENGINEERING OPERATIONS PERSONNEL WILL PROVIDE TRAFFIC SIGNAL TIMING PLANS AND WILL PROGRAM TRAFFIC SIGNAL CONTROLLERS.
- THE CONTRACTOR SHALL PROVIDE OFF-DUTY POLICE OFFICERS TO DIRECT TRAFFIC WHEN SIGNALS ARE TURNED OFF.
- ALL DATA SHOWN HEREIN CONCERNING EXISTING UTILITIES HAS BEEN OBTAINED FROM "AS-BUILT" DRAWINGS AND FROM FIELD OBSERVATIONS WHICH MAY OR MAY NOT BE ACCURATE. THE CONTRACTOR WILL BE RESPONSIBLE FOR EXPLORATORY TRENCHING. IF NECESSARY, TO MORE SPECIFICALLY LOCATE UTILITY LINES. COST OF LOCATING UTILITY LINES INCLUDING EXPLORATORY TRENCHING WILL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.
- IN THE EVENT THAT LANDFILL DEBRIS IS ENCOUNTERED IN EXCAVATIONS WITHIN THE PUBLIC RIGHT-OF-WAY, THE CONTRACTOR SHALL REMOVE THE DEBRIS WITHIN THE LIMITS OF THE WORK AND DISPOSE IN ACCORDANCE WITH ALBUQUERQUE ENVIRONMENTAL HEALTH DEPARTMENT REQUIREMENTS. THIS WORK WILL BE CONSIDERED INCIDENTAL.
- THE CONTRACTOR SHALL COIL EXCESS INTERCONNECT CABLE IN NEW OR EXISTING TRAFFIC MANHOLES BETWEEN SPLICE CABINETS.
- THE FOLLOWING CITY OF ALBUQUERQUE STANDARD DRAWINGS SHALL BE USED FOR THIS PROJECT:

2415A & B	CURB AND GUTTER AND TEMPORARY PAVING SECTION
2420	CONCRETE VALLEY GUTTER
2430	SIDEWALK DETAILS
2441	CURB ACCESS RAMP
2465	PAVEMENT CUTS FOR ALL UTILITIES
2550	TRAFFIC SIGNAL PULL BOX DETAIL
2551	TRAFFIC SIGNAL MANHOLE DETAIL
2552	TRAFFIC SIGNAL LOOP DETECTOR DETAILS
2555	TRAFFIC SIGNAL CONTROLLER CABINET & PEDESTAL FOUNDATION DETAIL
2557	TRAFFIC SIGNAL SPLICE CABINET GROUND MOUNT (LARGE)
2558	TRAFFIC SIGNAL FOUNDATION DETAILS TYPE II AND TYPE III STANDARDS
2560	TRAFFIC SIGNAL MISCELLANEOUS DETAILS
2562A	TRAFFIC SIGNAL MASTARM DETAILS, TYPE II STANDARD
2562B	TRAFFIC SIGNAL MASTARM DETAILS, TYPE II STANDARD
2562C	TRAFFIC SIGNAL MASTARM DETAILS, TYPE III STANDARD
2562D	TRAFFIC SIGNAL TYPE III STANDARD MISC. DETAILS
2570	TRAFFIC SIGNAL ELECTRICAL SERVICE DETAILS
2572	TRAFFIC SIGNAL METER PEDESTAL DETAILS COMBINATION SIGNAL & LIGHTING
2580	STREET LIGHTING FOUNDATION & MISCELLANEOUS DETAILS
2581	STREET LIGHTING INSTALLATION & POLE DETAILS
2801	GENERAL NOTES
2802	TRAFFIC CONTROL SIGNING
2803	CONSTRUCTION TRAFFIC CONTROL
2804-2808	SIGNING EXAMPLES (MUTCD)

TRAFFIC SIGNAL EQUIPMENT REQUIREMENTS

- THE CONTRACTOR SHALL FURNISH AND INSTALL THE FOLLOWING:
 - THE TRAFFIC SIGNAL CONTROLLER SUPPLIED FOR THIS PROJECT SHALL BE AS DIRECTED BY COA TRAFFIC ENGINEERING DEPARTMENT (ANDREW GALLEGOS, 857-8004).
 - THE TRAFFIC SIGNAL CONTROLLER CABINET SUPPLIED FOR THIS PROJECT SHALL BE AS DIRECTED BY COA.
- SPLICE CABINETS SHALL BE AS DETAILED ON THE PLANS. LOW VOLTAGE SPLICE BLOCKS SHALL BE 50 UNITS TO THE FOOT, WITH EACH SPLICE BLOCK CAPABLE OF HANDLING 25 PAIR CABLE (NUMBER OF SPLICE BLOCKS IN EACH CABINET CAPABLE OF HANDLING NUMBER OF CONDUCTORS SHOWN ON PLANS). SPLICE BLOCKS SHALL BE BELL SYSTEMS PART #66B3-50 OR APPROVED EQUAL. ALL COMMUNICATION CABLE PAIRS SHALL BE TERMINATED AT THE SPLICE BLOCK INCLUDING INACTIVE PAIRS.
- GDI 4195A TWISTED PAIR MODEM WITH 4-WIRE SURGE PROTECTOR TO INTEGRATE WITH I2 (SIEMENS SYSTEM).
- INTERCONNECT CABLES SHALL COMPLY WITH REA SPECIFICATION PE-22. INTERCONNECT CABLE SHALL CONTAIN THE NUMBER OF WIRE PAIRS SHOWN ON THE PLANS AND THE INDIVIDUAL CONDUCTORS SHALL BE 19 AWG SOLID.
- ALL SIGNAL INDICATORS AND PEDESTRIAN SIGNALS SHALL BE LED, AS APPROVED BY THE CITY. PEDESTRIAN SIGNAL SHALL BE COUNTDOWN MODEL AS APPROVED BY THE CITY.
- ILLUMINATED STREET NAME SIGNS SHALL BE CARMANAH OR APPROVED EQUAL.

LIGHTING NOTES

- ALL SINGLE CONDUCTOR #10 COPPER WIRES CONNECTING THE MAIN CIRCUIT WIRING TO CORRESPONDING LUMINAIRES SHALL BE CONSIDERED INCIDENTAL TO THE COST OF THE MASTARMS.
- THE SIGNAL & LIGHTING SYSTEM INSTALLED AS PART OF THIS PROJECT SHALL BE ACCEPTED AND MAINTAINED BY THE CITY OF ALBUQUERQUE.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE AND COST OF ENERGIZING THE SYSTEM UNTIL SUCH TIME THAT THE CITY ACCEPTS THE RESPONSIBILITY.
- THE CONTRACTOR SHALL INSTALL TYPE III, 400 WATT, HIGH PRESSURE SODIUM, FLAT GLASS LUMINAIRES WITHOUT INDIVIDUAL PHOTO CELLS AS INDICATED ON THE PLANS.
- THE LIGHTING IS TO BE SERVED BY METER PEDESTAL IN COMBINATION WITH TRAFFIC SIGNALS (SEE SIGNAL PLAN).

CONSTRUCTION TRAFFIC CONTROL NOTES

- THE CONTRACTOR SHALL PREPARE A TRAFFIC CONTROL PLAN AND OBTAIN AN EXCAVATION/BARRICADING PERMIT IN ACCORDANCE WITH SECTION 2800 OF THE STANDARD SPECIFICATIONS.
- THE CONTRACTOR SHALL NOT CLOSE MORE THAN ONE TRAFFIC LANE IN ANY ONE DIRECTION AT A TIME
- IN THE EVENT THAT THE CONTRACTOR IS REQUIRED BY THE CITY OR OTHER AUTHORITY TO PERFORM WORK DURING OFF-PEAK OR OVERNIGHT HOURS IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, ADDED COSTS ASSOCIATED WITH SUCH WORK HOURS WILL BE CONSIDERED INCIDENTAL.
- CONTRACTOR TO COORDINATE TRAFFIC CONTROL WITH LOWE'S PROJECT MANAGER AND LOWE'S STORE MANAGER. ACCESS TO BE MAINTAINED THROUGHOUT THE PROJECT. NO LANE CLOSURES TO BE LEFT THROUGH A WEEKEND.

GENERAL NOTES

- THE CONTRACTOR SHALL VISIT THE SITE PRIOR TO BID. AND DISCREPANCIES IN THE PROJECT DOCUMENTS ARE TO BE ALERTED TO THE LOWE'S PROJECT MANAGER.
- THE CONTRACTOR TO ROUTE ALL PROJECT SCHEDULES, RFI's, CONTRACT INFORMATION, SHOP DRAWINGS, SUBMITTAL SHEETS, WARRANT INFORMATION, AND PAYMENT REQUESTS TO THE LOWE'S PROJECT MANAGER ASSIGNED TO THE PROJECT.
- CONTRACTOR SHALL SEED ALL DISTURBED AREAS AT THE COMPLETION OF CONSTRUCTION ACTIVITIES USING CLASS "A" NATIVE GRASS SEED MIXTURE IN ACCORDANCE WITH COA STANDARD SPECIFICATIONS. THIS WORK WILL BE CONSIDERED INCIDENTAL TO THE PROJECT.

TRAFFIC SIGNAL LEGEND

NEW	EXISTING	ITEM
		PULL BOX
		SERVICE POLE
		METER PEDESTAL
		CONTROLLER CABINET
		CONDUIT RUN (SIGNALS)
		CONDUIT RUN (INTERCONNECT)
		LOOP DETECTOR
		TRAFFIC SIGNAL PEDESTAL POLE
		CONDUIT RUN NUMBER (SIGNAL)
		TYPE II STANDARD WITH MASTARM, TRAFFIC SIGNAL, BACKPLATE, AND OPTICAL DETECTOR
		TYPE III STANDARD WITH MASTARM, TRAFFIC SIGNAL, BACKPLATE, OPTICAL DETECTOR, LUMINAIRE, AND CAMERA
		PEDESTRIAN PUSH BUTTON (MOUNTED TO SIDE OF POLE WHERE INDICATED)
		PEDESTRIAN SIGNAL (MOUNTED TO SIDE OF POLE WHERE INDICATED)
		SPLICE CABINET
		TRAFFIC MANHOLE

DEFINITIONS

- "ENGINEER" - FOR THE PURPOSES OF THIS PROJECT, THE TERM "ENGINEER" IS SYNONYMOUS WITH THE TERM "PROJECT MANAGER".

RECORD DRAWING

Bohannon & Huston Court yard 7500 Jefferson St. NE Albuquerque, NM 87109-4335 ENGINEERING • SPATIAL DATA • ADVANCED TECHNOLOGIES	
LOWE'S of NE ALBUQUERQUE CITY OF ALBUQUERQUE, NM	
TRAFFIC SIGNAL IMPROVEMENTS - PALOMAS AVENUE / SAN PEDRO DRIVE	
TRAFFIC SIGNAL NOTES, EQUIPMENT REQUIREMENTS AND LEGEND	
DESIGN REVIEW COMMITTEE DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL CITY ENGINEER
NO. / DAY / YR	NO. / DAY / YR
CITY PROJECT NO. 754382	ZONE MAP NO. D-18
SHEET 3	OF 12

ESTIMATED QUANTITIES							
		UNIT	ROADWAY	TRAFFIC SIGNAL	LIGHTING	INTERCONNECT	TOTAL
0340.010	SIDEWALK, 4" THICK, PORTLAND CEMENT CONCRETE, INCL. SUBGRADE	SY	17				17
	COMPACTION, CIP, SD 2430						
0340.023	WHEELCHAIR ACCESS RAMP, 4" PCC, STD. CURB, CIP.	SY	14				14
0340.035	VALLEY GUTTER, PORTLAND CEMENT CONCRETE, REMOVE, DISPOSE & REPLACE, CIP.	SY	34				34
0340.110	HEADER CURB, PORTLAND CEMENT CONCRETE, INCL. SUBGRADE, CIP, SD 2415	LIN FT	80				80
0343.085	EXISTING SIDEWALK, 4" PC CONCRETE, REMOVE & DISPOSE	SY	23				23
0343.130	EXISTING ARTERIAL AC PAVEMENT, INCL, 2" EXTRA AC THICKNESS, TWO MACHINE, REMOVE & REPLACE, CIP.	SY	5				5
0343.140	SAWCUT AC PAVEMENT, 6" THICK OR LESS, COMPL.	LIN FT	60				60
0421.005	SERVICE RISER (SIGNAL)	EACH		1			1
0421.011	METER PEDESTAL (SIGNAL)	EACH		1			1
0422.xxx	PEDESTRIAN PUSH BUTTON POLE, 4 FOOT	EACH		2			2
0422.004	TRAFFIC SIGNAL PEDESTAL POLE, 15 FOOT	EACH		3			3
0422.015	TRAFFIC SIGNAL MASTARM, 25 FOOT ARM, TYPE III, TROMBONE	EACH		1			1
0422.016	TRAFFIC SIGNAL MASTARM, 30 FOOT ARM, TYPE II, TROMBONE	EACH		2			2
0422.017	TRAFFIC SIGNAL MASTARM, 30 FOOT ARM, TYPE III, TROMBONE	EACH		1			1
0423.001	TRAFFIC SIGNAL FOUNDATION FOR PEDESTAL POLE	EACH		3			3
0423.002	TRAFFIC SIGNAL MASTARM FOUNDATION	EACH		4			4
0423.003	TRAFFIC CONTROLLER FOUNDATION (TYPE M & P CABINETS)	EACH		1			1
0424.006	RIGID ELECTRICAL CONDUIT, 2" INCLUDING TRENCH, BACKFILL, PATCHING, PUSHING, BORING & JACKING	LIN FT		425		10	435
0424.011	RIGID ELECTRICAL CONDUIT, 3" INCLUDING TRENCH, BACKFILL, PATCHING, PUSHING, BORING & JACKING	LIN FT		300		760	1060
0425.003	ELECTRICAL PULL BOX, (LARGE)	EACH		1		4	5
0425.012	SPLICE CABINET GROUND MOUNT (LARGE)	EACH				1	1
0425.020	TRAFFIC SIGNAL MANHOLE	EACH		1		1	2
0426.001	SINGLE CONDUCTOR, 2	LIN FT		210	1050		1260
0426.004	SINGLE CONDUCTOR, 8	LIN FT		690			690
0426.010	MULTI-CONDUCTOR CABLE 5	LIN FT		2455			2455
0426.011	MULTI-CONDUCTOR CABLE 7	LIN FT		145			145
0426.014	MULTI-CONDUCTOR CABLE 20	LIN FT		1380			1380
0426.020	COMMUNICATION CABLE 6 PAIR	LIN FT				20	20
0426.021	COMMUNICATION CABLE 12 PAIR	LIN FT				840	840
0427.002	3 SECTION TRAFFIC SIGNAL ASSEMBLY (LED)	EACH		11			11
0427.004	5 SECTION TRAFFIC SIGNAL ASSEMBLY (LED)	EACH		4			4
0427.031	3 SECTION BACKPLATE	EACH		4			4
0427.XXX	PEDESTRIAN SIGNAL, COUNTDOWN, LED	EACH		8			8
0428.001	LOOP VEHICLE DETECTOR	EACH		6			6
0428.010	PEDESTRIAN PUSH BUTTON STATION	EACH		8			8
0428.021	LOOP DETECTOR WIRE	LIN FT		2470			2470
0428.050	LOOP LEAD-IN CABLE	LIN FT		1160			1160
0428.060	DETECTOR SAWCUT	LIN FT		907			907
0428.071	PHASE SELECTOR MODULE, 2 CHANNEL	EACH		2			2
0429.001	TRAFFIC ACTUATED CONTROLLER	EACH		1			1
0429.021	EIGHT PHASE DUAL RING CONTROLLER CABINET	EACH		1			1
0432.002	ROADWAY LUMINAIRE, TYPE 400S	EACH			2		2
0440.XX1	RETROREFLECTIVE PREFORMED PLASTIC PAVEMENT MARKING - 4", CIP.	LIN FT	1350				1350
0440.XX2	RETROREFLECTIVE PREFORMED PLASTIC PAVEMENT MARKING - 12"	LIN FT	650				650
0440.XX3	RETROREFLECTIVE PREFORMED PLASTIC PAVEMENT MARKING - 24"	LIN FT	180				180
0440.XX4	RETROREFLECTIVE PREFORMED PLASTIC PAVEMENT MARKING - LEFT ARROW	EA	4				4
0440.XX5	RETROREFLECTIVE PREFORMED PLASTIC PAVEMENT MARKING - WORD ONLY	EA	2				2
0443.101	REMOVAL OF PAVEMENT STRIPE, ANY WIDTH, PAINTED OR PLASTIC, COMPL.	LIN FT	420				420
0450.101	SIGN POST & BASE POST, REMOVE & SALVAGE, COMPL.	EA	2				2
0450.XXX	INTERNALLY ILLUMINATED SIGN	EACH		4			4
XXXX.XXX	GDI 419SA TWISTED PAIR MODEM W/4-WIRE SURGE PROTECTOR	EACH				1	1

INCIDENTAL ITEMS *

- ANCHOR BOLTS FOR FOUNDATIONS.
- GROUND RODS FOR FOUNDATIONS
- UNIVERSAL SUPPORT BRACKETS FOR SERVICE RISERS.
- CABLE TESTING AND DIAGRAMS.
- BORING, DRILLING, PUSHING, AND TRENCHING, INCLUDING REMOVAL AND REPLACEMENT OF PAVEMENT, SIDEWALKS, DRIVE PADS, VALLEY GUTTERS, WHEELCHAIR RAMPS, CURB & GUTTER, AND LANDSCAPING (INCLUDING SPRINKLERS) FOR INSTALLATION OF PULL BOXES, CONDUITS, AND SIGNAL FOUNDATIONS, EXCEPT AS NOTED ON THE PLANS.
- LOCATION OF UTILITY LINES INCLUDING EXPLORATORY TRENCHING AND EXPOSING OF GAS LINES WHEN BORING.
- DESIGN, MATERIALS, INSTALLATION AND REMOVAL OF SAFETY BARRIER FOR SHIELDING EQUIPMENT OR MATERIAL.
- APPRISING PUBLIC THROUGH THE LOCAL NEWS MEDIA.
- HAULING OF MATERIAL TO BE DISPOSED TO CITY LANDFILL.
- LEAN FILL FOR CONDUIT TRENCHES.
- PULL BOX ADJUSTMENT TO GRADE.
- OFF-DUTY POLICE OFFICER FOR TRAFFIC CONTROL.
- PULL STRING IN CONDUITS.
- SEEDING DISTURBED AREAS.
- DETECTABLE WARNING SURFACE

* ITEMS LISTED ARE ONLY A GENERAL DESCRIPTION OF THE REQUIRED WORK AND MATERIALS, AND MAY NOT BE COMPLETE. THIS LIST DOES NOT INCLUDE ANY INCIDENTAL WORK OR MATERIALS REQUIRED BY THE SPECIAL PROVISIONS SERIALS (STANDARD DETAILS), SUPPLEMENTAL SPECIFICATIONS, OR THE STANDARD SPECIFICATIONS.

NOTES

- QUANTITY INCLUDES TWO SAWCUTS FOR SAN PEDRO PAVEMENT ADJACENT TO VALLEY GUTTER TO ACCOUNT FOR PAVEMENT THICKNESS GREATER THAN 6".

RECORD DRAWING

Bohannon

Huston

Courtyard I

7500 Jefferson St. NE

Albuquerque, NM 87109-4335

ENGINEERING ▴ SPATIAL DATA ▴ ADVANCED TECHNOLOGIES

LOWE'S

LOWE'S of NE ALBUQUERQUE

CITY OF ALBUQUERQUE, NM

TRAFFIC SIGNAL IMPROVEMENTS - PALOMAS AVENUE / SAN PEDRO DRIVE

TRAFFIC SIGNAL ESTIMATED QUANTITIES

AND INCIDENTAL ITEMS

DESIGN REVIEW COMMITTEE

CITY ENGINEER APPROVAL

FOR INFORMATION ONLY

LAST DESIGN UPDATE

CITY PROJECT NO.

754382

ZONE MAP NO.

D-18

SHEET

4

OF

12

NO. DATE

REMARKS

REVISIONS

DESIGN

DESIGNED BY

JCP

DATE

MAR 2008

DRAWN BY

LAH

DATE

MAR 2008

CHECKED BY

KOT

DATE

MAR 2008

P: \\080339\\Trans\\Design\\General\\Spreadsheets\\080039-COA-SGQN.xls
 01-AUG-2008 -
 p: \\080339\\Trans\\Design\\Signal\\080339-SGQN.sht

BHI JOB NO. 080339



CONDUIT AND CONDUCTOR REQUIREMENTS													
CONDUIT LENGTH, SIZE, AND TYPE						CONDUIT FILL BY CONDUCTOR LENGTH AND TYPE							
RUN ID	SIZE/LENGTH			TYPE	REMARKS	MCC 5 (#@FT)	MCC 7 (#@FT)	MCC 20 (#@FT)	SCC #2 (#@FT)	SCC #8 (#@FT)	SCC #2 - LIGHTING #@FT)	PS (#@FT)	DLLIC (#@FT)
	1"	2"	3"										
S1		50		REC	POWER TO METER				3 @ 55				
S2		10		REC	METER TO CC1				3 @ 15				
1			20	REC	CC1 TO MH1	2 @ 25		2 @ 25		1 @ 25			
2		20		REC	CC1 TO MH1								6 @ 25
3			20	REC	CC1 TO MH1	2 @ 25		2 @ 25		1 @ 25			
4		65		REC	MH1 TO PB1						2 @ 70		
5			65	REC	MH1 TO PB1	2 @ 70		2 @ 70		1 @ 70			3 @ 70
X6		(65)		REC	PB1 TO PB2						2 @ 70		
X7			(65)	REC	PB1 TO PB2	2 @ 70		2 @ 70		1 @ 70			3 @ 70
X8			(50)	REC	PB2 TO PB3						2 @ 55		
X9			(50)	REC	PB2 TO PB3	2 @ 55		2 @ 55		1 @ 55			2 @ 55
10		30		REC	PB3 TO PB4	2 @ 35		2 @ 35		1 @ 35			
11			30	REC	PB3 TO PB4	2 @ 35		2 @ 35		1 @ 35			2 @ 35
X12		(75)		REC	PB4 TO PB5							1 @ 80	
X13			(75)	REC	PB4 TO PB5	2 @ 80		2 @ 80		1 @ 80			
14		40		REC	PB5 TO PB6							1 @ 45	
15			40	REC	PB5 TO PB6	2 @ 45		2 @ 45		1 @ 45			
X16		(75)		REC	PB6 TO PB7						2 @ 80		
X17			(75)	REC	PB6 TO PB7	2 @ 80		2 @ 80		1 @ 80			
X18			(50)	REC	PB7 TO PB8						2 @ 55		
X19			(50)	REC	PB7 TO PB8	2 @ 55		2 @ 55		1 @ 55			1 @ 55
20		50		REC	PB8 TO PB9						2 @ 55		
21			50	REC	PB8 TO PB9	2 @ 55		2 @ 55		1 @ 55			1 @ 55
X22		(55)		REC	PB9 TO MH1						2 @ 60		
X23			(55)	REC	PB9 TO MH1	2 @ 60		2 @ 60		1 @ 60			3 @ 60
24			25	REC	MA1 TO PB1	6 @ 30	1 @ 30						
25			15	REC	MA2 TO PB3	3 @ 20							
26			20	REC	MA3 TO PB6	6 @ 25	1 @ 25						
27			15	REC	MA4 TO PB8	7 @ 20							
28		10		REC	PP1 TO PB2		1 @ 15						1 @ 15
29		15		REC	PP2 TP PB4	3 @ 20							
30		10		REC	PP3 TO PB7		1 @ 15						1 @ 15
31		20		REC	PED1 TO PB3	1 @ 25							
32		15		REC	PED2 TO PB3	1 @ 20							
33		40		REC	PB10 TO PB4								2 @ 45
34		15		REC	MA2 TO PB3						2 @ 20		
35		20		REC	MA3 TO PB6						2 @ 25		
36		30		REC	METER TO MH1						2 @ 35		

NOTE: CONDUIT QUANTITIES SHOWN IN PARENTHESIS (#) ARE EXISTING AND ARE NOT INCLUDED IN THESE QUANTITY TOTALS.



ABBREVIATIONS


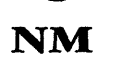


CC 6	COMMUNICATION CABLE—6 PAIR
CC 12	COMMUNICATION CABLE—12 PAIR
DLIC	DETECTOR LOOP LEAD IN CABLE
MA	MASTARM
MCC	MULTI CONDUCTOR CABLE
PB	PULL BOX
PP	PEDESTAL POLE
PPB	PEDESTRIAN PUSH BUTTON
PS	PULL STRING
REC	RIGID ELECTRIC CONDUIT
SCC	SINGLE CONDUCTOR CABLE

RECORD DRAWING

Bohannon  **Huston** 

Courtyard | 7500 Jefferson St. NE Albuquerque, NM 87109-4335

ENGINEERING  **SPATIAL DATA**  **ADVANCED TECHNOLOGIES**

	LOWE'S of NE ALBUQUERQUE CITY OF ALBUQUERQUE, NM											
TRAFFIC SIGNAL IMPROVEMENTS - PALOMAS AVENUE / SAN PEDRO DRIVE CABLES & CONDUITS PALOMAS AVENUE / SAN PEDRO DRIVE												
DESIGN REVIEW COMMITTEE 	CITY ENGINEER APPROVAL 	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">MO./DAY/YR.</td> <td style="width: 50%; text-align: center;">MO./DAY/YR.</td> </tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> <tr><td> </td><td> </td></tr> </table>	MO./DAY/YR.	MO./DAY/YR.								
MO./DAY/YR.	MO./DAY/YR.											
CITY PROJECT NO. 754382		ZONE MAP NO. D-18										
SHEET 6 OF 12												

[illegible]

CONDUIT AND CONDUCTOR REQUIREMENTS																																					
CONDUIT LENGTH, SIZE, AND TYPE						CONDUIT FILL BY CONDUCTOR LENGTH AND TYPE																															
RUN	SIZE/LENGTH			TYPE	REMARKS	MCC 5 (#@FT)		MCC 7 (#@FT)		MCC 20 (#@FT)		SCC #2 (#@FT)		SCC #8 (#@FT)		SCC #2 - LIGHTING (#@FT)		PS (#@FT)		DLLIC (#@FT)																	
ID	1"	2"	3"			1	@	1	@	1	@	1	@	1	@	1	@	1	@	1	@	1	@														
MA1					BASE TO 1A	1	@	15																													
MA1					BASE TO 2B				1	@	15																										
MA1					BASE TO 1M1	1	@	50																													
MA1					BASE TO P2A	1	@	15																													
MA1					BASE TO PPB2A	1	@	5																													
MA1					BASE TO P8B	1	@	15																													
MA1					BASE TO PPB8B	1	@	5																													
MA2					BASE TO 2A	1	@	15																													
MA2					BASE TO 2M1	1	@	45																													
MA2					BASE TO P2B	1	@	15																													
MA3					BASE TO 3A	1	@	15																													
MA3					BASE TO 3M1	1	@	50																													
MA3					BASE TO 4B				1	@	15																										
MA3					BASE TO P6A	1	@	15																													
MA3					BASE TO PPB6A	1	@	5																													
MA3					BASE TO P4B	1	@	15																													
MA3					BASE TO PPB4B	1	@	5																													
MA4					BASE TO 4A	1	@	15																													
MA4					BASE TO 4M1	1	@	50																													
MA4					BASE TO 1B	1	@	15																													
MA4					BASE TO P8A	1	@	15																													
MA4					BASE TO PPB8A	1	@	5																													
MA4					BASE TO P6B	1	@	15																													
MA4					BASE TO PPB6B	1	@	5																													
PP1					BASE TO 2C				1	@	15																										
PP2					BASE TO 1C	1	@	15																													
PP2					BASE TO 3B	1	@	15																													
PP2					BASE TO P4A	1	@	15																													
PP3					BASE TO 4C				1	@	15																										
PED1					BASE TO PPB4A	1	@	5																													
PED2					BASE TO PPB2B	1	@	5																													
TOTALS	0	440	300					2475			145			1380			210			690						1050			125								1160

ABBREVIATIONS

- CC 6
- CC 12
- DLLIC
- MA
- MCC
- PB
- PP
- PPB
- PS
- REC
- SCC
- COMMUNICATION CABLE-6 PAIR
- COMMUNICATION CABLE-12 PAIR
- DETECTOR LOOP LEAD IN CABLE
- MASTARM
- MULTI CONDUCTOR CABLE
- PULL BOX
- PEDESTAL POLE
- PEDESTRIAN PUSH BUTTON
- PULL STRING
- RIGID ELECTRIC CONDUIT
- SINGLE CONDUCTOR CABLE

RECORD DRAWING

Bohannon & Huston

Courtyard I 7500 Jefferson St. NE Albuquerque, NM 87109-4335

ENGINEERING ▴ SPATIAL DATA ▴ ADVANCED TECHNOLOGIES

LOWE'S

LOWE'S of NE ALBUQUERQUE

CITY OF ALBUQUERQUE, NM

TRAFFIC SIGNAL IMPROVEMENTS - PALOMAS AVENUE / SAN PEDRO DRIVE

CABLES & CONDUITS

PALOMAS AVENUE / SAN PEDRO DRIVE

DESIGN REVIEW COMMITTEE

CITY ENGINEER APPROVAL

LAST DESIGN UPDATE

MO./DAY/YR.

MO./DAY/YR.

CITY PROJECT NO.

754382

ZONE MAP NO.

D-18

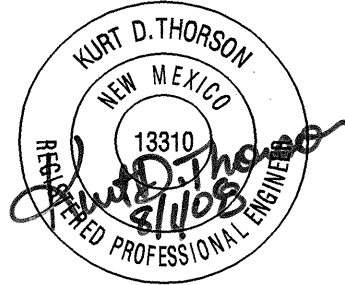
SHEET

7

OF

12

AS-BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL		REVISIONS		DESIGN	
CONTRACTOR	N.C.I.	DATE	DATE	NO.	BY	NO.	DATE	NO.	DATE	NO.	DATE
WORK STARTED BY	S.M.A.	DATE	DATE	NO.	BY	NO.	DATE	NO.	DATE	NO.	DATE
ACCEPTANCE BY	DATE	DATE	DATE	NO.	BY	NO.	DATE	NO.	DATE	NO.	DATE
FIELD OBSERVATION BY	S.M.A.	DATE	DATE	NO.	BY	NO.	DATE	NO.	DATE	NO.	DATE
DRAWINGS CORRECTED BY	S.M.A.	DATE	DATE	NO.	BY	NO.	DATE	NO.	DATE	NO.	DATE
MICRO-FILM INFORMATION				NO.	BY	NO.	DATE	NO.	DATE	NO.	DATE
RECORDED BY				NO.	BY	NO.	DATE	NO.	DATE	NO.	DATE
NO.				NO.	BY	NO.	DATE	NO.	DATE	NO.	DATE



SCANNED BY
PLANNING

[illegible]

QUANTITY ESTIMATING ASSUMPTION:

LOOP WIRE

6' × 30'	OP LOOP =	(8 λ L) +	(4 λ W) +	(2 λ S) +	(2 λ T) +	5 =	269 + 2(S+T)
6' × 40'	OP LOOP =	(8 λ L) +	(4 λ W) +	(2 λ S) +	(2 λ T) +	5 =	349 + 2(S+T)
6' × 50'	OP LOOP =	(8 λ L) +	(4 λ W) +	(2 λ S) +	(2 λ T) +	5 =	429 + 2(S+T)
6' × 30'	REC LOOP =	(6 λ L) +	(6 λ W) +	(2 λ S) +	(2 λ T) +	5 =	216 + 2(S+T)
6' × 40'	REC LOOP =	(6 λ L) +	(6 λ W) +	(2 λ S) +	(2 λ T) +	5 =	276 + 2(S+T)
6' × 6'	EC LOOP =	(6 λ L) +	(6 λ W) +	(2 λ S) +	(2 λ T) +	5 =	77 + 2(S+T)
6' × 6'	SY LOOP =	(8 λ L) +	(8 λ W) +	(2 λ S) +	(2 λ T) +	5 =	96 + 2(S+T)

PAVEMENT SAWCUT

6'	x 30'	OP LOOP	= (3*L) + (2*W) + S=102 + S
6'	x 40'	OP LOOP	= (3*L) + (2*W) + S=132 + S
6'	x 50'	OP LOOP	= (3*L) + (2*W) + S=162 + S
6'	x 30'	REC LOOP	= (2*L) + (2*W) + S=72 + S
6'	x 40'	REC LOOP	= (2*L) + (2*W) + S=92 + S
6'	x 6'	EC LOOP	= (2*L) + (2*W) + S= 24 + S
6'	x 6'	SYS LOOP	= (2*L) + (2*W) + S= 24 + S

WHERE:

L = DETECTOR LOOP LENGTH (FROM PLAN)
W = DETECTOR LOOP WIDTH (FROM PLAN)
S = SAWCUT LENGTH FROM DETECTOR LOOP TO
FACE OF CURB (FROM PLAN)
T = LOOP WIRE TERMINAL LENGTH FROM FACE
OF CURB TO PULL BOX (FROM PLAN)

ABBREVIATIONS:

DLLEC = DETECTOR LOOP LEAD IN CABLE
EC = EXTENDED CALL LOOP
L = DETECTOR LOOP LENGTH
W = DETECTOR LOOP WIDTH
S = SAWCUT LOOP TO CURB
T = TERMINAL LOOP
EC = QUADRAPOLE LOOP
REC = RECTANGULAR LOOP

NOTES:

- 1/ IDENTIFY CONDUCTORS LISTED AS "115 VOLTS".
- 2/ WRAP RING 2 CABLE AT EACH SPLICE POINT WITH COLORED ELECTRICAL TAPE. THE IDENTIFICATION MARKING SHALL BE PROVIDED ON EACH RING 2 CABLE AT EACH SPLICE AND LOCATED 6" BACK FROM THE END.
- 3/ IDENTIFY CONDUCTORS LISTED AS "PPB - LOW VOLTAGE" AT EACH SPLICE POINT. FIVE (5) CONDUCTOR CABLE SHALL BE 24 VOLTS AND USED FOR PUSH BUTTONS ONLY.

DETECTOR RACK ASSIGNMENTS

[illegible]

* INCIDENTAL TO CONSTRUCTION

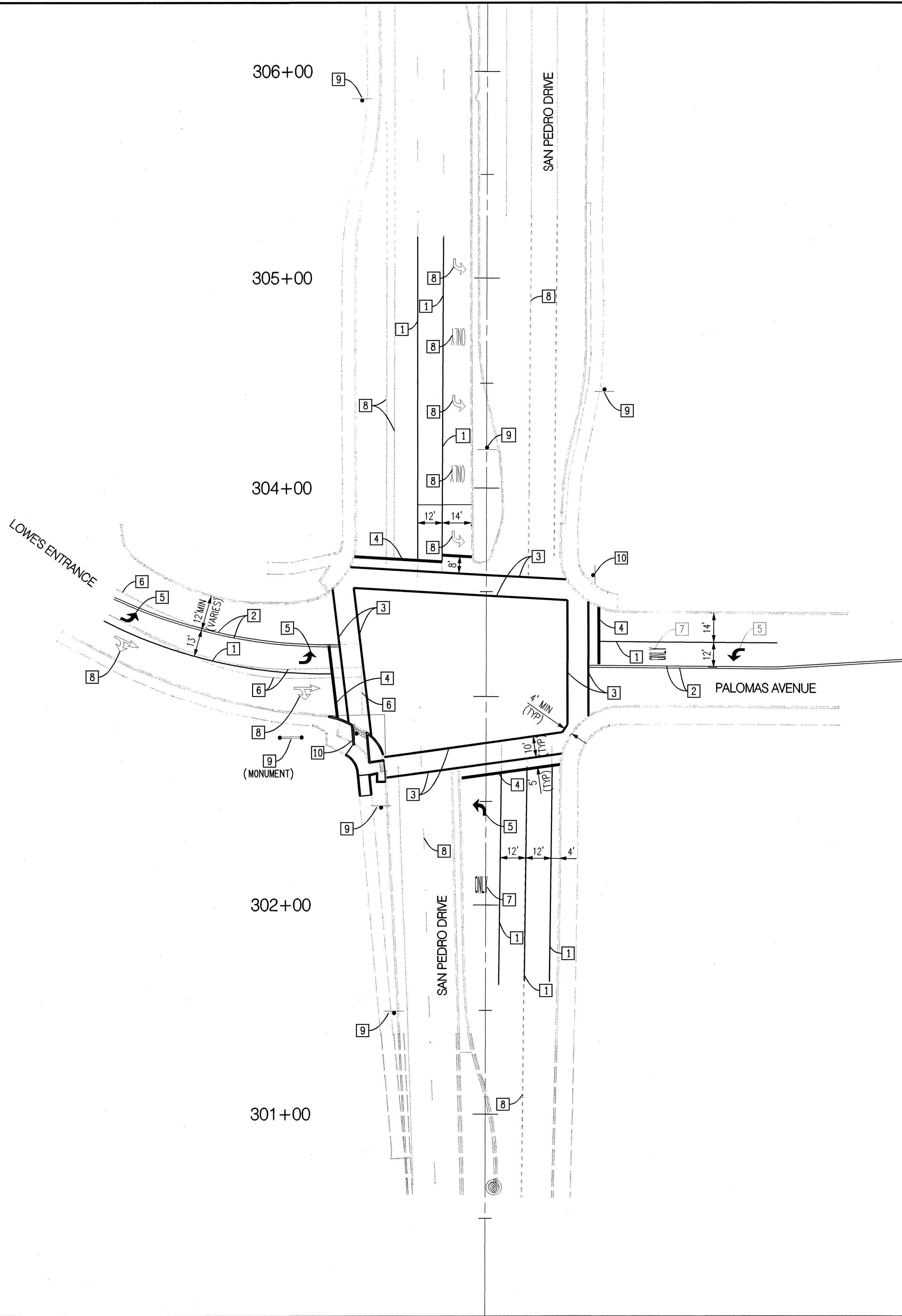
FUNCTION CHART — 115 VOLT CIRCUIT

CONDUCTOR			RING 1 – MULTI CONDUCTOR CABLE 20		RING 2 – MULTI CONDUCTOR CABLE 20 2/	
CONDUCTOR NUMBER	BASE COLOR	TRACER	FUNCTION	FIELD CONNECTION	FUNCTION	FIELD CONNECTION
1	BLACK	—	SPARE	SPARE	SPARE	SPARE
2	WHITE	—	SPARE	SPARE	SPARE	SPARE
3	RED	—	PHASE 1 RED	SPARE	PHASE 5 RED	SPARE
4	GREEN	—	PHASE 1 GREEN	GREEN LEFT TURN ARROW 2B, 2C	PHASE 5 GREEN	GREEN LEFT TURN ARROW 4B, 4C
5	ORANGE	—	PHASE 1 YELLOW	YELLOW LEFT TURN ARROW 2B, 2C	PHASE 5 YELLOW	YELLOW LEFT TURN ARROW 4B, 4C
6	BLUE	—	SPARE	SPARE	SPARE	SPARE
7	WHITE	BLACK	SPARE	SPARE	SPARE	SPARE
8	RED	BLACK	PHASE 2 RED	RED BALL 4A, 4B, 4C, 4M1	PHASE 6 RED	RED BALL 2A, 2B, 2C, 2M1
9	GREEN	BLACK	PHASE 2 GREEN	GREEN BALL 4A, 4B, 4C, 4M1	PHASE 6 GREEN	GREEN BALL 2A, 2B, 2C, 2M1
10	ORANGE	BLACK	PHASE 2 YELLOW	YELLOW BALL 4A, 4B, 4C, 4M1	PHASE 6 YELLOW	YELLOW BALL 2A, 2B, 2C, 2M1
11	BLUE	BLACK	PHASE 2 WALK	PEDESTRIAN WALK P2A, P2B	PHASE 6 WALK	PEDESTRIAN WALK P6A, P6B
12	BLACK	WHITE	PHASE 2 DON'T WALK	PEDESTRIAN DON'T WALK P2A, P2B	PHASE 6 DON'T WALK	PEDESTRIAN DON'T WALK P6A, P6B
13	RED	WHITE	PHASE 3 RED	SPARE	PHASE 7 RED	SPARE
14	GREEN	WHITE	PHASE 3 GREEN	SPARE	PHASE 7 GREEN	SPARE
15	BLUE	WHITE	PHASE 3 YELLOW	SPARE	PHASE 7 YELLOW	SPARE
16	BLACK	RED	PHASE 4 RED	RED BALL 1A, 1B, 1C, 1M1	PHASE 8 RED	RED BALL 3A, 3B, 3M1
17	WHITE	RED	PHASE 4 GREEN	GREEN BALL 1A, 1B, 1C, 1M1	PHASE 8 GREEN	GREEN BALL 3A, 3B, 3M1
18	ORANGE	RED	PHASE 4 YELLOW	YELLOW BALL 1A, 1B, 1C, 1M1	PHASE 8 YELLOW	YELLOW BALL 3A, 3B, 3M1
19	BLUE	RED	PHASE 4 WALK	PEDESTRIAN WALK P4A, P4B	PHASE 8 WALK	PEDESTRIAN WALK P8A, P8B
20	RED	GREEN	PHASE 4 DON'T WALK	PEDESTRIAN DON'T WALK P4A, P4B	PHASE 8 DON'T WALK	PEDESTRIAN DON'T WALK P8A, P8B

FUNCTION CHART - 24 VOLT CIRCUIT

CONDUCTOR		RING 1—MULTI CONDUCTOR CABLE 5		RING 2—MULTI CONDUCTOR CABLE 5	
NUMBER	BASE COLOR	FUNCTION	FIELD CONNECTION	FUNCTION	FIELD CONNECTION
1	BLACK	PHASE 2	PPB2A, PPB2B	SPARE	
2	WHITE	COMMON	PPB2A, 2B, 4A, 4B	COMMON	PPB6A, 6B, 8A, 8B
3	RED	PHASE 4	PPB4A, PPB4B	SPARE	
4	GREEN	SPARE		PHASE 6	PPB6A, PPB6B
5	ORANGE	SPARE		PHASE 8	PPB8A, PPB8B

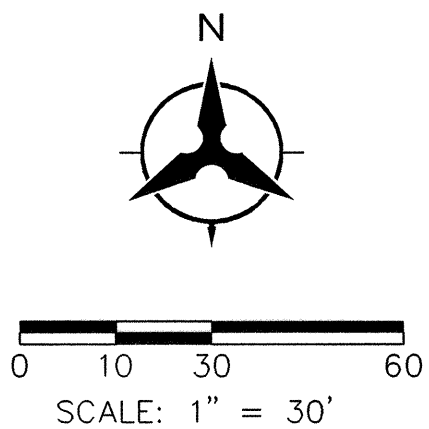
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- KEYED NOTES**
1. INSTALL NEW 4" SOLID WHITE RETROREFLECTIVE PREFORMED PLASTIC PAVEMENT MARKING
 2. INSTALL NEW 4" DOUBLE SOLID YELLOW RETROREFLECTIVE PREFORMED PLASTIC PAVEMENT MARKING
 3. INSTALL NEW 12" SOLID WHITE RETROREFLECTIVE PREFORMED PLASTIC PAVEMENT MARKING (CROSSWALK)
 4. INSTALL NEW 24" SOLID WHITE RETROREFLECTIVE PREFORMED PLASTIC PAVEMENT MARKING (STOP BAR)
 5. INSTALL NEW RETROREFLECTIVE PREFORMED PLASTIC PAVEMENT MARKING, LEFT ARROW
 6. REMOVE EXISTING PAVEMENT MARKING
 7. INSTALL NEW RETROREFLECTIVE PREFORMED PLASTIC PAVEMENT MARKING, WORD, ONLY
 8. EXISTING STRIPING TO REMAIN
 9. EXISTING SIGN TO REMAIN
 10. REMOVE AND SALVAGE EXISTING SIGN (DELIVER TO CITY NORTH PINO YARDS - TRAFFIC OPERATIONS)

- NOTES**
1. ALL SIGNING & STRIPING SHALL BE INSTALLED IN ACCORDANCE WITH MUTCD LATEST EDITION AND COA STANDARD SPECIFICATIONS, SECTION 400.
 2. THE CONTRACTOR SHALL CONTACT COA TRAFFIC OPERATIONS PRIOR TO INSTALLING SIGNING AND STRIPING AT THE INTERSECTION OF PALOMAS / SAN PEDRO. CONTRACTOR SHALL OBLITERATE CONFLICTING STRIPING AS DIRECTED BY THE CITY.
 3. THE CONTRACTOR SHALL REPLACE EXISTING PAVEMENT MARKINGS THAT ARE OBLITERATED FOR TRAFFIC CONTROL REASONS. THIS WORK SHALL BE CONSIDERED INCIDENTAL TO TRAFFIC CONTROL.
- STIPING EROSION SHALL BE ACCOMPLISHED BY WATER BLASTING OR SURFACE PLANING OF THE PAVEMENT TO A MAXIMUM DEPTH OF 0.25 INCHES AND FOR A WIDTH TO TWO-TIMES THE WIDTH OF THE STRIPE OR PAVEMENT TO BE REMOVED.**

RECORD DRAWING



Bohannon & Huston
Court yard | 7500 Jefferson St. NE Albuquerque, NM 87109-4335
ENGINEERING & SPATIAL DATA & ADVANCED TECHNOLOGIES

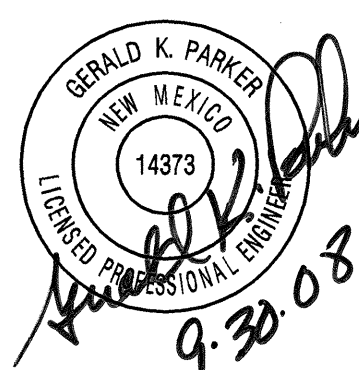
LOWE'S **LOWE'S of NE ALBUQUERQUE**
CITY OF ALBUQUERQUE, NM

TRAFFIC SIGNAL IMPROVEMENTS - PALOMAS AVENUE / SAN PEDRO DRIVE
PERMANENT
SIGNING & STRIPING PLAN

DESIGN REVIEW COMMITTEE APPROVED OCT 03 2008 DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL APPROVED APR 30 2009 CITY ENGINEER	LAST DESIGN UPDATE	MO./DAY/YR	MO./DAY/YR

CITY PROJECT NO. 754382	ZONE MAP NO. D-18	SHEET 10	OF 12
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AS-BUILT INFORMATION				BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL		REVISIONS		DESIGN		CHECKED BY	
CONTRACTOR	N.C.I.	DATE	6/09	NO.	BY	NO.	BY	DATE	1/07/08	DATE	1/07/08	DATE	1/07/08	DATE	1/07/08
STAMPED BY	S.M.A.	DATE	6/09	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
ACCEPTANCE BY	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
FIELD CORRECTION BY	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
DRAWINGS	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
CORRECTED BY	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
MICRO-FILM INFORMATION	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
RECORDED BY	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.	NO.




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KEYED NOTES



- 1 REMOVE EXISTING VALLEY GUTTER FILLET AND RECONSTRUCT PER COA STANDARD DRAWING 2420 AT SAME LOCATION AND ELEVATIONS. REMOVE FILLET WITH CARE SUCH THAT EXISTING NO. 4 BARS ARE NOT DAMAGED.
- 2 SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT AND REPLACE IN KIND AFTER CONSTRUCTION OF NEW FILLET PER COA STD DWG 2465 (NOTE 2)
- 3 REUSE EXISTING NO. 4 BARS
- 4 EXISTING VALLEY GUTTER TO REMAIN
- 5 INTERSECTION OF PROJECTED FLOWLINES
- 6 LEAVE 1' WIDE GAP IN CURB AT SIDEWALK LOW POINT FOR SIDEWALK DRAINAGE
- 7 BUILD HEADER CURB PER COA STANDARD DRAWING 2415B
- 8 REMOVE EXISTING SIDEWALK AND HEADER CURB TO NEAREST JOINT AND RECONSTRUCT PER COA STANDARD DRAWINGS 2430 AND 2415B AT SAME LOCATION AND ELEVATION. HEADER CURB REMOVAL IS INCIDENTAL TO SIDEWALK REMOVAL.
- 9 BUILD 4" CONCRETE SIDEWALK ACCESS RAMP AS DETAILLED AND PER COA STANDARD DRAWING 2441 WHERE APPLICABLE.
- 10 INSTALL 2" DETECTABLE WARNING SURFACE AT BASE OF PEDESTRIAN ACCESS RAMP. THIS IS CONSIDERED INCIDENTAL TO CONSTRUCTION OF THE ACCESS RAMP.

Point Table			
○	STATION	OFFSET	DESCRIPTION
1	302+90.89	75.09' LT	PC
2	302+86.67	63.52' LT	POC
3	302+83.28	57.19' LT	POC
4	302+72.64	48.83' LT	POC
5	302+77.01	62.64' LT	POT
6	302+68.35	55.83' LT	POT
7	302+69.46	48.77' LT	MATCH
8	302+59.73	47.99' LT	MATCH
9	302+63.87	51.70' LT	PI
10	302+62.81	55.95' LT	POT
11*	302+52.86	54.95' LT	MATCH
12*	302+52.38	59.74' LT	MATCH

Bohannon  **Huston** INC.

Courtyard | 7500 Jefferson St. NE Albuquerque, NM 87109-4335

ENGINEERING  **SPATIAL DATA**  **ADVANCED TECHNOLOGIES**

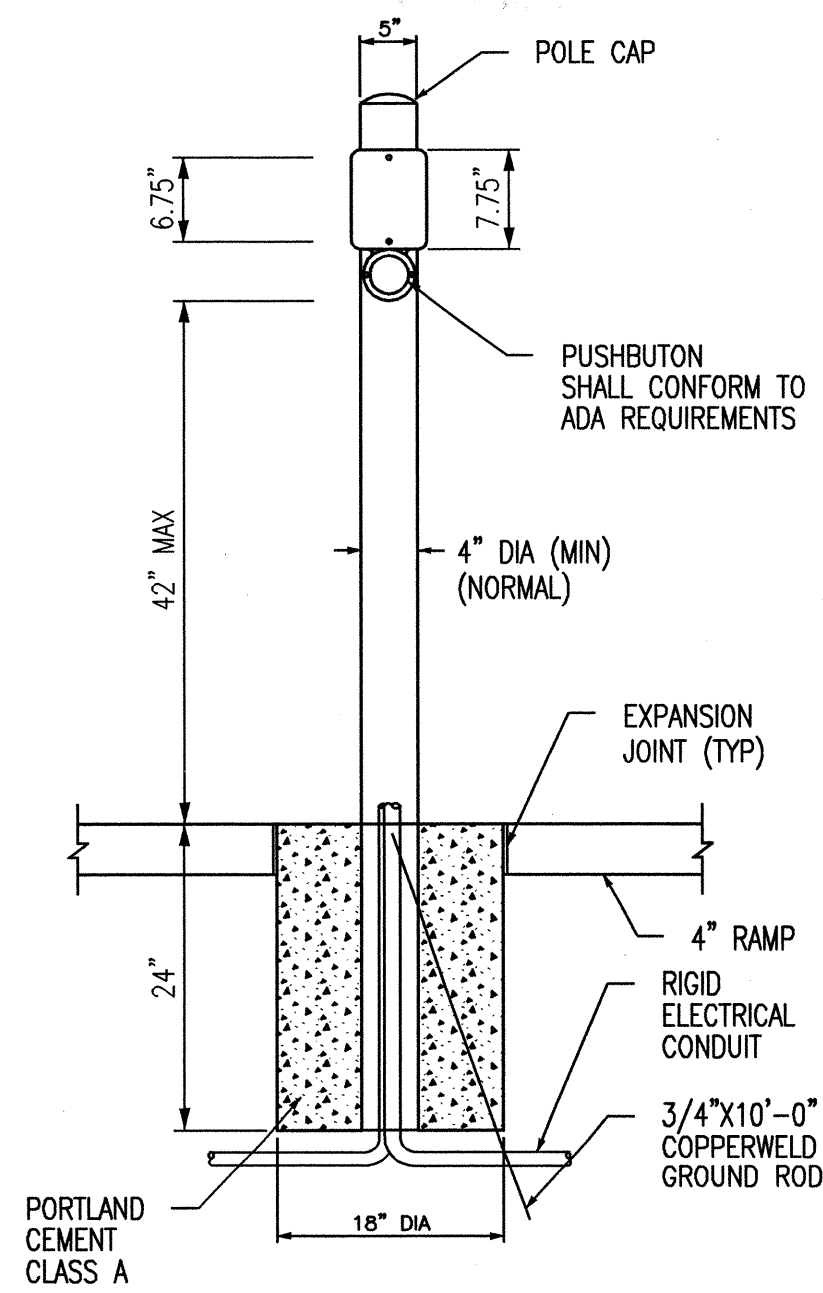

LOWE'S of NE ALBUQUERQUE
CITY OF ALBUQUERQUE, NM


TRAFFIC SIGNAL IMPROVEMENTS - PALOMAS AVENUE / SAN PEDRO DRIVE
ACCESS RAMP MODIFICATION PLAN
PALOMAS AVENUE/SAN PEDRO DRIVE

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL		MO./DAY/YR.	MO./DAY/YR.
APPROVED OCT 07 2009 DESIGN REVIEW COMMITTEE	APPROVED APR 08 2009 CITY ENGINEER	LAST DESIGN UPDATE		

CITY PROJECT NO. 754382	ZONE MAP NO. D-18	SHEET 11	OF 12
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DESIGNED BY	JGP	DATE	MAR 2008
DRAWN BY	LAH	DATE	MAR 2008
CHECKED BY	KOT	DATE	MAR 2008
NO.	DATE	REMARKS	BY
A	6-8-09	Defined TBC-FL 7/14/23	SMA
ENGINEER'S SEAL		SURVEY INFORMATION	
FIELD NOTES		BENCH MARKS	
NO.	BY	DATE	AS-BUILT INFORMATION
			CONTRACTOR
			WORKED BY
			INSPECTED BY
			BOHANNAN
			S.M.A.
			DATE
			6/09
			STAMPED "9-C18-1985." THE STATION IS LOCATED AT
			THE SOUTHWEST CORNER OF WILSHIRE AVE/SAN PEDRO
			VEGETATION BY
			S.M.A.
			DATE
			6/09
			DRAWINGS
			DATE
			6/09
			DR INTERSECTION. NM STATE PLANE COORDINATES
			DATE
			6/09
			CENTRAL ZONE. NAD 83/NAVD 88.
			DATE
			6/09
			RECORDED BY
			DATE
			6/09
			NO.
			ELEV=5232.470



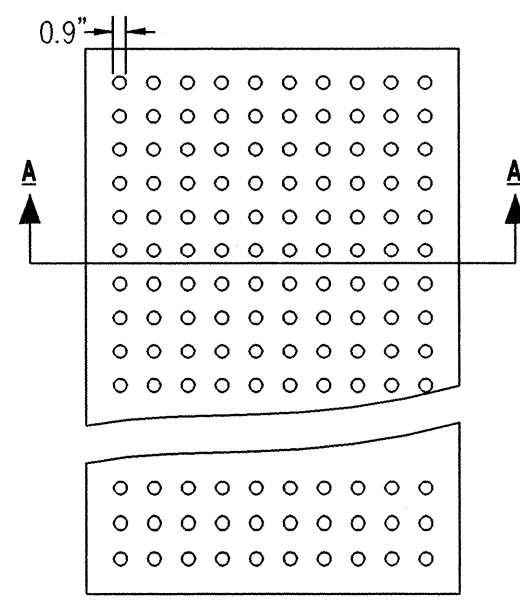
PEDESTRIAN / BICYCLE PUSHBUTTON POLE
AND FOUNDATION DETAIL
NTS

NOTES

1. POLE IS SPUN ALUMINUM 4.5" O.D., .237" WALL, 3.8 LBS/FT
2. POLE CAP FOR 4.5" O.D.
3. ALTERNATE DESIGN (IF REQUESTED) FOR FOUNDATION AND POLE SHALL BE SUBMITTED TO PROJECT MANAGER FOR APPROVAL.
4. FINISHED GRADE FOR ALL FOUNDATIONS TO BE DETERMINED BY THE PROJECT MANAGER. THE TOP OF STANDARD FOUNDATION SHALL BE FLUSH WITH ADJACENT SIDEWALK OR PAVED AREAS.
5. PORTLAND CEMENT CONCRETE CLASS A SHALL BE USED.

DETECTABLE WARNING SURFACE NOTES:

1. THE DETECTABLE WARNING SURFACE SHALL CONSIST OF RAISED TRUNCATED DOMES WITH A NOMINAL DIAMETER OF 23mm. (0.9"), A NOMINAL HEIGHT OF 5mm. (0.2"), AND A NOMINAL CENTER TO CENTER SPACING OF 60mm. (2.35"). THE SURFACE SHALL BE FIBERGLASS PANELS (PROCESS TO BE COORDINATED WITH AND FIELD APPROVED WITH CITY PRIOR TO INSTALLATION).
2. THE DETECTABLE WARNING SURFACE SHALL CONTRAST VISUALLY WITH ADJOINING SURFACES, EITHER LIGHT-ON-DARK OR DARK-ON-LIGHT. THE MATERIAL USED TO PROVIDE CONTRAST SHALL BE INTEGRAL PART OF THE WALKING SURFACE. PROVIDE 70/30 CONTRAST PER ADA.
3. CONTRACTOR SHALL COORDINATE THE EXACT CONTRAST OF DETECTABLE WARNING SURFACE W/ OWNER.



DETECTABLE WARNING SURFACE DETAIL
NTS

RECORD DRAWING

Bohannon & Huston
Court yard | 7500 Jefferson St. NE | Albuquerque, NM 87109-4335
ENGINEERING & SPATIAL DATA & ADVANCED TECHNOLOGIES

LOWE'S of NE ALBUQUERQUE
CITY OF ALBUQUERQUE, NM
TRAFFIC SIGNAL IMPROVEMENTS - PALOMAS AVENUE / SAN PEDRO DRIVE
DETAILS

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.

CITY PROJECT NO.	ZONE MAP NO.	SHEET	OF
754382	D-18	12	12

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