UNSER BOULEVARD/LADERA DRIVE INTRESECTION IMPROVEMENTS

ALBUQUERQUE, NEW MEXICO

INDEX OF DRAWINGS

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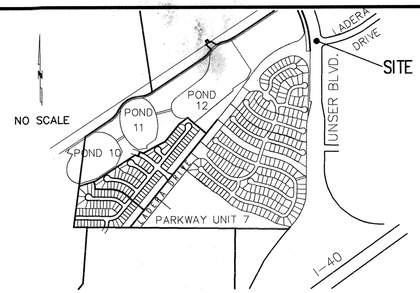


VICINITY MAP

ZONE ATLAS MAP H-9 & J-9

GENERAL NOTES

1. 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 AMENDED WITH UPDATE NO. 6.

2. 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 SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMUM DELAY.

3. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE @ 260-1990 FOR LOCATION OF EXISTING UTILITIES.

4. A. WARNING – EXISTING UTILITY LINE LOCATIONS ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. THE LOCATION OF ANY SUCH EXISTING LINES IS BASED UPON INFORMANTION PROVIDED BY THE UTILITY COMPANY, THE OWNER, OR BY OTHERS, AND THE INFORMATION MAY BE INCOMPLETE OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES.

   B. THERE ARE EXISTING HIGH VOLTAGE LINES WITHIN THE PNM EASEMENT ADJACENT TO LADERA DRIVE. THESE LINES MUST REMAIN ENERGIZED AT ALL TIMES. CONTRACTOR SHALL COORDINATE WITH PNM PRIOR TO START OF CONSTRUCTION. CONTRACTOR IS ADVISED THAT OSHA REQUIRES A MINIMUM CLEARANCE OF 15' IN ALL DIRECTIONS FROM THE POWERLINE.

5. THE ENGINEER HAS UNDERTAKEN NO FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE OR TYPE OF EXISTING UNDERGROUND UTILITY LINES, MAKES NO REPRESENTATION PERTAINING THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE IN OR NEAR THE AREA OF WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES. THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES, IN PLANNING AND CONDUCTING EXCAVATION, WHETHER BY CALLING OR NOTIFYING THE UTILITIES, COMPLYING WITH "BLUE STAKES" PROCEDURES, OR OTHERWISE.

6. TRAFFIC CONTROL: THREE (3) 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 CONSTRUCTION COORDINATION DIVISION. CONTRACTOR SHALL NOTIFY BARRICADE ENGINEER (768-2551) PRIOR TO OCCUPYING AN INTERSECTION. SEE SECTION 19 OF THE SPECIFICATIONS. ALL STREET STRIPING ALTERED OR DESTROYED SHALL BE REPLACED BY CONTRACTOR TO LOCATION AND IN KIND AS EXISTING AT NO ADDITIONAL COST TO THE OWNER.

7. THE CONTRACTOR SHALL PROMPTLY CLEAN UP ANY MATERIAL EXCAVATED WITHIN THE PUBLIC RIGHT-OF-WAY SO THAT THE EXCAVATED MATERIAL IS NOT SUSCEPTIBLE TO BEING WASHED [illegible] THE STREET.

8. THE CONTRACTOR IS RESPONSIBLE FOR [illegible]CTING AND MAINTAINING ALL EXISTING MONUMENTATION CONTROLS. [illegible]VENT OF INADVERTENT DESTRUCTION OR ALTERATION THE CO[illegible] MUST IMMEDIATELY NOTIFY THE CITY CHIEF SURVEYOR.

9. ANY WORK OCCURRING WITHIN AN ARTE[illegible]ROADWAY REQUIRES TWENTY-FOUR HOUR CONSTRUCTION.

10. ALL WHEELCHAIR RAMPS SHALL ADHERE TO CURRENT ADA REQUIREMENTS.

APPROVAL OF AS BUILT DRAWINGS
CHIEF CONSTRUCTION ENGINEER
Leo Chang
DATE 11-9-98

RECORD DRAWING
DATE: 9-14-98

DRB Case# 94-443

CINFRAN ENGINEERING INC.
333 RIO RANCHO DR. N.E. STE. 101
RIO RANCHO, NEW MEXICO 87124
(505)-892-5141

REV.	SHEETS	CITY ENGINEER	DATE	USER DEPARTMENT	DATE	USER DEPARTMENT	DATE

ENGINEERS STAMP & SIGNATURE

WILLIAM L. WREN NEW MEXICO 8131 REGISTERED PROFESSIONAL ENGINEER 10/16/98

WALLACE L. BINGHAM NEW MEXICO 7281 REGISTERED PROFESSIONAL ENGINEER 9/24/96

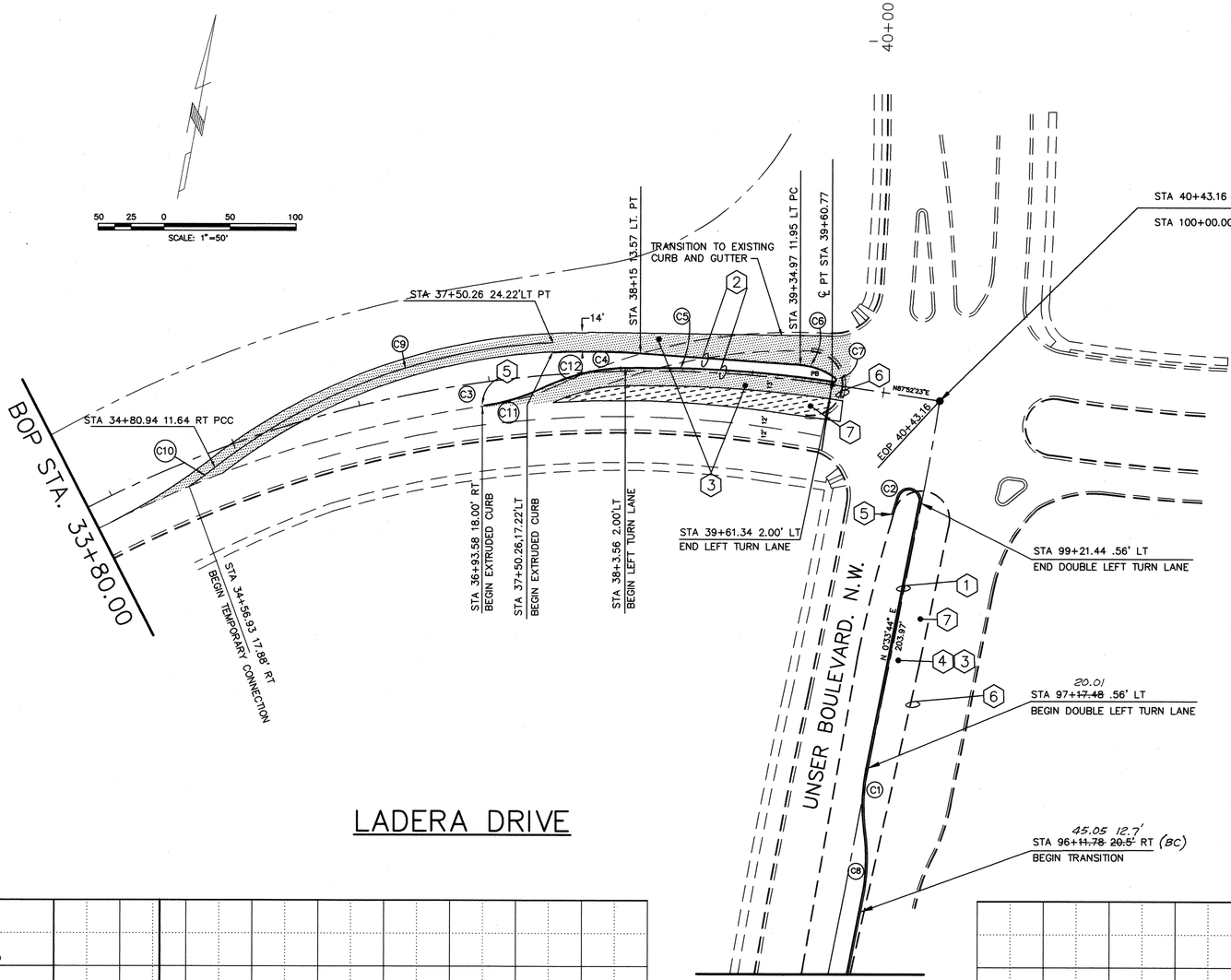
APPROVALS	ENGINEER	DATE
DRC Chairman	[signature]	3-31-97
Transportation	[signature]	1-31-97
Water/Wastewater	N/A JLS	2-10-97
Hydrology	N/A PM	2-11-97
Parks		
Constr. Mngmt.		
NMSH&TD	[signature]	22 Jan 98

* * * * * * * * * * * * * *
APPROVED FOR CONSTRUCTION
[signature] 2/10/98
City Engineer Date

City Project No. 5548.81

Sheet 1 Of 16

1-16.DWG 5-1-96
UD13SEP96



Vertical for new curb & gutter and paving set from existing paving on E. bound.

2-16.DWG 22APR96
UDOT JAN97

NOTES

1. SEE ROADWAY TYPICAL SECTIONS AND PAVEMENT SECTION ON SHEET 4.
2. SEE SHEET 3 FOR INTERSECTION PAVEMENT MARKING DETAILS.
3. SEE SHEETS 5 TO 13 FOR TRAFFIC SIGNALIZATION PLAN.

BUILD NOTES

1. BUILD STANDARD 1'-6" MEDIAN CURB & GUTTER, C.O.A. DWG #2415.
2. BUILD 6" EXTRUDED CONCRETE MEDIAN CURB PER DETAIL SHEET 4
3. BUILD ARTERIAL PAVEMENT SECTION PER DETAIL ON SHEET 4.
4. BUILD TYPICAL SECTION, SEE SHEET 4.
5. ELEVATION & GRADE TO MATCH EXISTING
6. REMOVE EXISTING EXTRUDED CURB
7. BUILD ARTERIAL PAVEMENT SECTION WITHOUT OPEN GRADED FRICTION COURSE

(C1) ℄ CURVE DATA
Δ = 20°00'02"
R = 150.00'
T = 26.45'
L = 52.36'

(C2) ℄ CURVE DATA
Δ = 180°00'00"
R = 8.31'
T = NA.
L = 26.10'

(C3) ℄ CURVE DATA
Δ = 35°48'35"
R = 930.00'
T = 300.47'
L = 581.25'

(C4) ℄ CURVE DATA
Δ = 6°34'12"
R = 575.00'
T = 33.00'
L = 65.93'

(C5) ℄ CURVE DATA
Δ = 9°03'57"
R = 849.00'
T = 74.22'
L = 148.12'

(C6) ℄ CURVE DATA
Δ = 32°50'14"
R = 50.00'
T = 14.73'
L = 28.66'

(C7) ℄ CURVE DATA
Δ = 151°43'13"
R = 2.00'
T = 7.94'
L = 5.30'

(C8) ℄ CURVE DATA
Δ = ~~21°25'26"~~ 26°44'40"
R = ~~150.00'~~ 82.07'
T = 28.38'
L = ~~56.09'~~ 38.30'

(C9) ℄ CURVE DATA
Δ = 35°16'54"
R = 450.00'
T = 143.10'
L = 277.10'

(C10) ℄ CURVE DATA
Δ = 11°19'54"
R = 450.00'
T = 44.64'
L = 89.00'

(C11) ℄ CURVE DATA
Δ = 17°54'38"
R = 150.00'
T = 23.64'
L = 46.89'

(C12) ℄ CURVE DATA
Δ = 24°41'10"
R = 150.00'
T = 32.82'
L = 64.63'

CINFRAN ENGINEERING INC.
333 Rio Rancho Dr. N.E., Ste. 101
Rio Rancho, New Mexico 87124

WILLIAM L. WRIGHT — NEW MEXICO — 8136 — REGISTERED PROFESSIONAL ENGINEER — 10/1/98

RECORD DRAWING
DATE: 9-14-98

SCALE
1" = 50' HORZ.
1" = 5' VERT.

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

BENCH MARKS
ALBUQUERQUE ACS MONUMENT "3-H10"
LOCATED NORTHEAST OF THE INTER-SECTION OF UNSER BLVD. & LADERA DR. THE STATION MARK IS A STANDARD ACS CAP SET FLUSH IN THE CONCRETE SURFACE OF THE SPILLWAY.
ELEVATION = 5193.38

C.O.A. INSPECTOR: JERRY JOHNSON

AS BUILT INFORMATION

CONTRACTOR	Alb. Underground, Inc.	
WORK STAKED BY	AUT	DATE 9/98
WORK INSPECTED FOR ACCEPTANCE BY	BH	DATE 9/98
FIELD VERIFICATION BY	AUT	DATE 9/98
DRAWINGS CORRECTED BY	BH	DATE 9/98
MICRO-FILM INFORMATION		
RECORDED BY		DATE
NO.		

ENGINEER'S SEAL
WILLIAM L. BINGHAM — NEW MEXICO — 7281 — REGISTERED PROFESSIONAL ENGINEER — 11/6/97

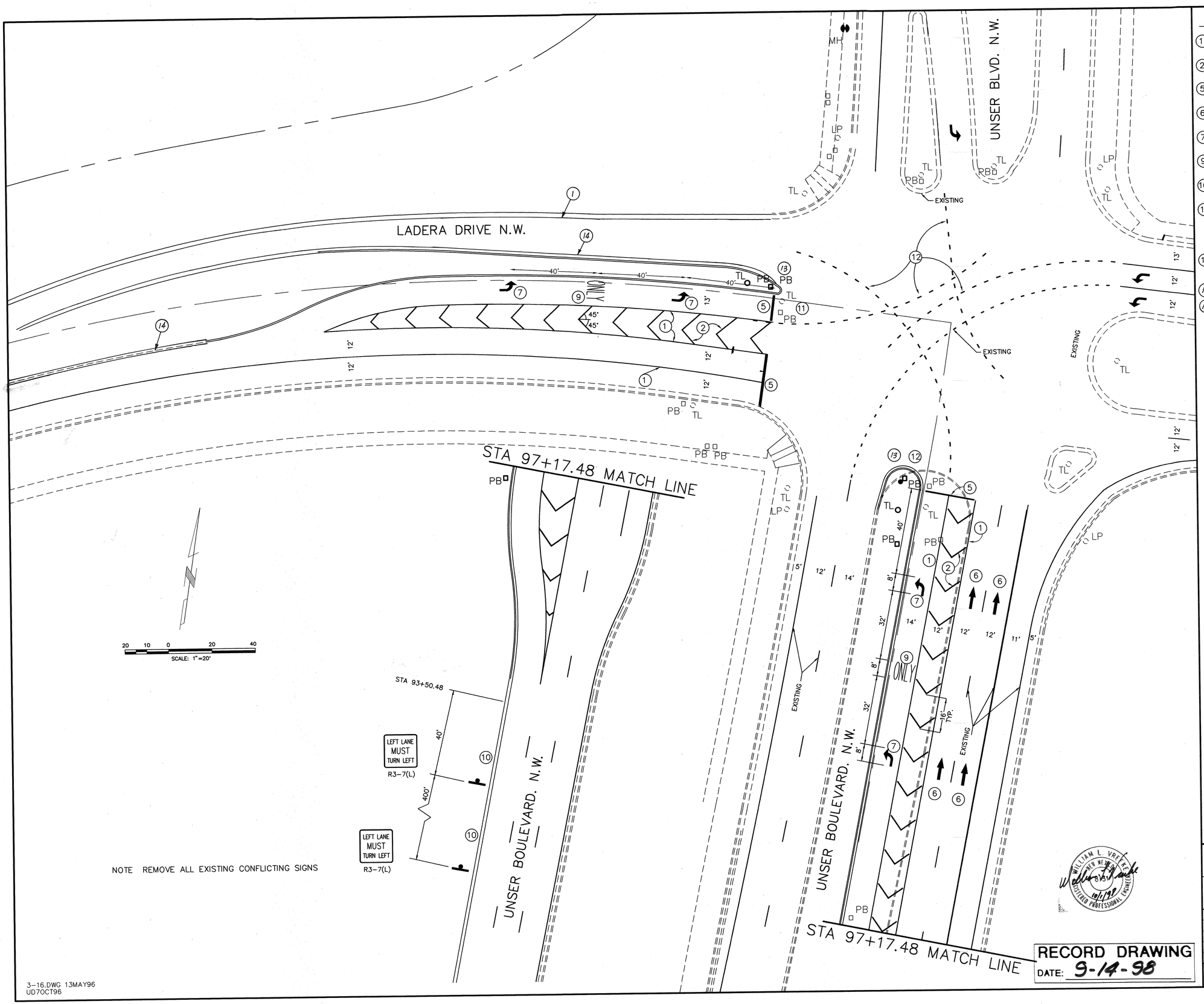
NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
DESIGNED		WLB	DATE 2MAY96
DRAWN BY		GMA	DATE 2MAY96
CHECKED BY		WLB	DATE 2MAY96

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: LADERA & UNSER INTERSECTION IMPROVEMENTS
PAVING PLAN AND PROFILE – LADERA DRIVE

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
D.R.C. Chair					
Trans. Dev.		MAR 31 1997			
Utility Dev.		DESIGN REVIEW COMMITTEE			

PROJECT NO.	MAP NO.	SHEET	OF
5548.81	H-9&J-9	2	16



KEYED NOTES

1. REFLECTORIZED WHITE PLASTIC PAVEMENT MARKING, 4", SOLID
2. REFLECTORIZED WHITE PLASTIC PAVEMENT MARKINGS, 6", SOLID
5. REFLECTORIZED WHITE PLASTIC PAVEMENT MARKING, 12", SOLID
6. REFLECTORIZED PLASTIC THRU ARROW
7. REFLECTORIZED PLASTIC LEFT ARROW
9. REFLECTORIZED PLASTIC WORD "ONLY"
10. INSTALL INDICATED SIGN AND POST
11. ALL SIGNAL MODIFICATION DETAILS ON SHEETS 5 THRU 13. SHOWN HERE FOR INFORMATION ONLY.
12. REFLECTORIZED PLASTIC SKIP MARKING, 4" X 2' AT 6' INTERVALS
13. *PAINT MEDIAN NOSES YELLOW.*
14. *REFLECTORIZED YELLOW PLASTIC PAVEMENT MARKING, 4" SOLID.*

NOTE REMOVE ALL EXISTING CONFLICTING SIGNS

LEGEND

	EXISTING	PROPOSED
PULLBOX	PB	PB
SIGNAL	TL	TL

CINFRAN ENGINEERING INC.
333 Rio Rancho Dr. N.E., Ste. 101
Rio Rancho, New Mexico 87124

RECORD DRAWING
DATE: 9-14-98

3-16.DWG 13MAY96
UD7OCT96

AS BUILT INFORMATION

BENCH MARKS
ALBUQUERQUE ACS MONUMENT "3-H10" LOCATED NORTHEAST OF THE INTER-SECTION OF UNSER BLVD. & LADERA DR. THE STATION MARK IS A STANDARD ACS CAP SET FLUSH IN THE CONCRETE SURFACE OF THE SPILLWAY.
ELEVATION = 5193.38

CONTRACTOR *Alb. Underground, Inc.*
WORK STAKED BY *AUT* DATE *9/98*
INSPECTOR'S ACCEPTANCE BY *BH* DATE *9/98*
FIELD VERIFICATION BY *AUT* DATE *9/98*
REMARKS CORRECTED BY *BH* DATE *9/98*
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL
WALLACE L. BINGHAM NEW MEXICO (7281) REGISTERED PROFESSIONAL ENGINEER
1/21/97

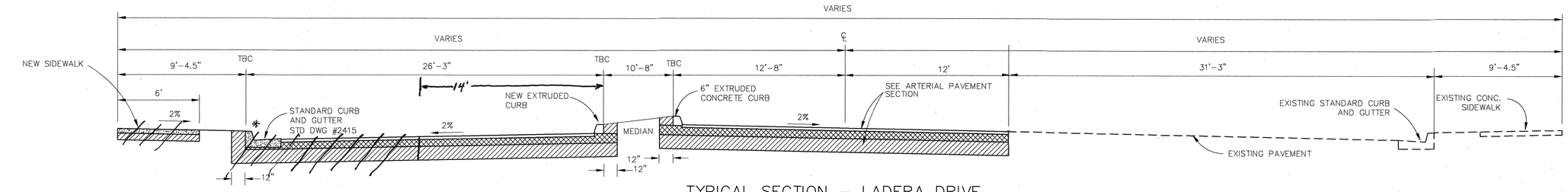
NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
DESIGNED	BLB	DATE	2MAY96
DRAWN BY	BLB	DATE	2MAY96
CHECKED BY	WLB	DATE	2MAY96

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: LADERA & UNSER INTERSECTION IMPROVEMENTS
INTERSECTION PAVEMENT MARKINGS

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
D.R.C. Chair					
Trans. Dev.		MAR 3 1 1997			
Utility Dev.		DESIGN REVIEW COMMITTEE			

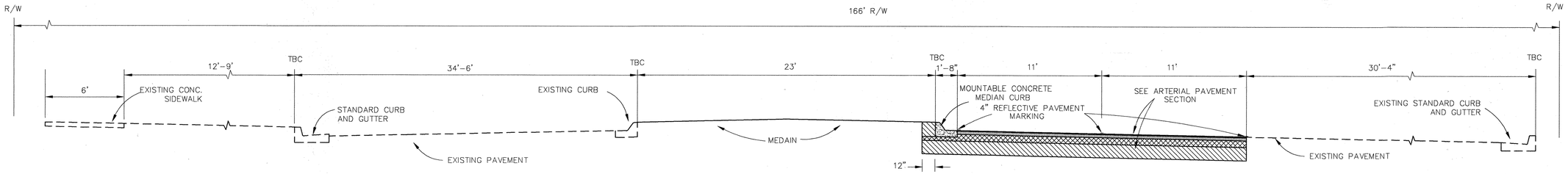
PROJECT NO. 5548.71 | MAP NO. H-9-Z | SHEET 3 OF 16



* BUILT AS DRAWN WITH EXCEPTION OF LEFT SIDE C&G AND SIDEWALK

TYPICAL SECTION – LADERA DRIVE

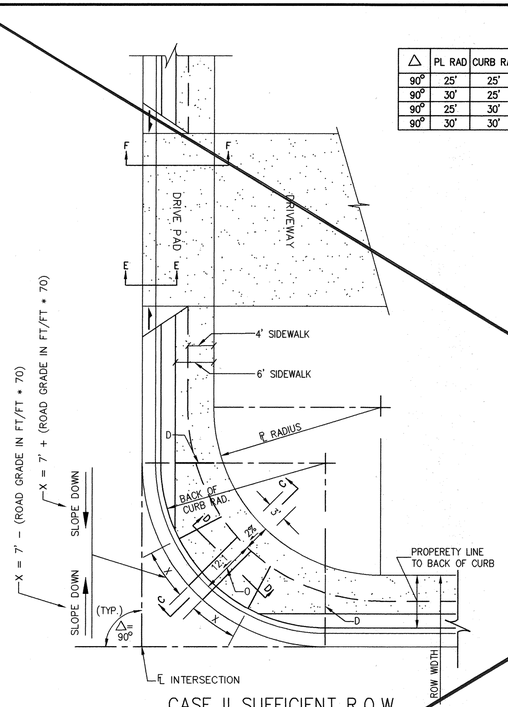
NTS



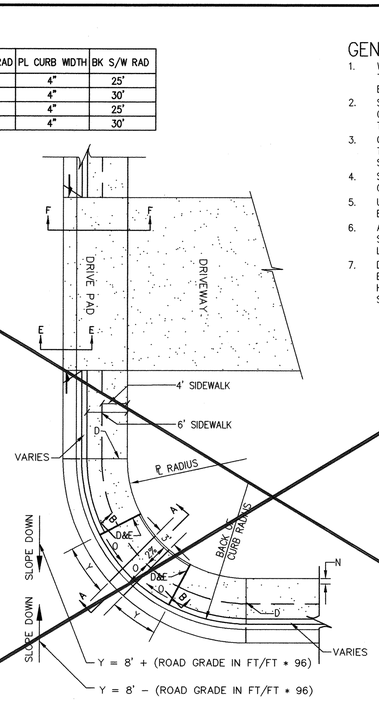
TYPICAL SECTION – UNSER BLVD.

NTS

△	PL RAD	CURB RAD	PL CURB WIDTH	BK S/W RAD
90°	25'	25'	4"	25'
90°	30'	25'	4"	30'
90°	25'	30'	4"	25'
90°	30'	30'	4"	30'



CASE II SUFFICIENT R.O.W. FOR FULL LENGTH RAMP



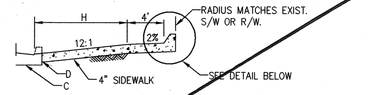
CASE I INSUFFICIENT R.O.W. FOR FULL LENGTH RAMP

GENERAL NOTES

1. WHEEL CHAIR RAMPS ARE NORMALLY TO BE LOCATED AT THE CENTER OF THE RETURN OR AS APPROVED BY THE ENGINEER.
2. SURFACE TEXTURE OF WHEEL CHAIR RAMPS SHALL BE OBTAINED BY HEAVY BROOMING (TEXTURE DEPTH 0.035"), TRAVERSE TO THE SLOPE OF THE RAMP.
3. GUTTER FLOW LINE PROFILE SHALL BE MAINTAINED THROUGH THE AREA OF THE RAMP. DRAINAGE CATCH BASIN STRUCTURES SHALL NOT BE PLACED IN LINE WITH RAMPS.
4. SUBGRADE SHALL BE COMPACTED TO 95% D1557. CONCRETE SHALL MEET 3,000 PSI, 28 DAY STRENGTH.
5. USE 1/2" EXP. JT. WHERE SIDEWALK OR DRIVEPAD ABUTS BLDGS., FENCES, WALLS OR OTHER IMMOVABLE OBJECTS.
6. ALL DRIVEPADS SHALL BE A MIN. OF 6.5' IN DEPTH OR SHALL BE CONSTRUCTED FROM BACK OF CURB TO PROP. LINE, WHICHEVER IS GREATER.
7. DRIVEPADS WIDER THAN 18' (NOMINAL) SHALL HAVE 1/2" EXP. JT. AT MIDPOINT. DRIVEPADS WIDER THAN 36' SHALL HAVE 1/2" EXP. JT., 18' MAX BETWEEN JOINTS EQUALLY SPACED.

CONSTRUCTION NOTES

A. SLOPE OF GUTTER DEPENDENT ON REQUIREMENTS FOR VALLEY GUTTER.
B. 1/2" LIP ABOVE FLOW LINE.
C. CURB & GUTTER.
D. 1/2" EXPANSION JOINT.
E. RADIAL LINES CONCENTRIC WITH FLOW LINE RADIUS.
F. 8" AT FACE OF CURB.
G. CONTRACTION (DUMMY) JOINT.
H. VARIES WITH AVAILABLE R.O.W.
J. VARIABLE.
K. HEADER CURB.
L. 6' AT FACE OF CURB.
M. BACK OF SIDEWALK RADIUS TO BE ESTABLISHED SO AS TO MAINTAIN 12' LENGTH OF RAMP.
N. 4-1/2" MAX.
O. 12:1 SLOPE MAXIMUM ON RAMP.



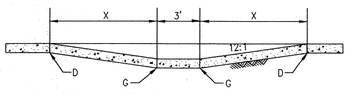
ALTERNATIVE SECTION A–A

CURB DETAIL

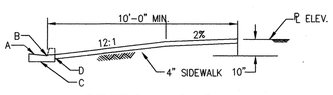
SECTION D–D

SECTION E–E

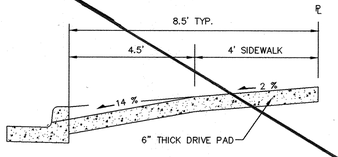
SECTION A–A



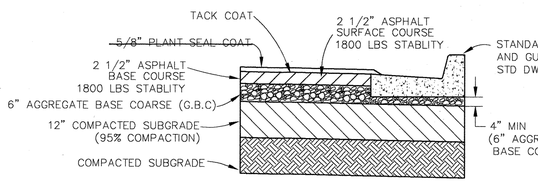
SECTION B–B



SECTION C–C

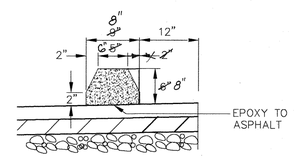


SECTION F–F



ARTERIAL PAVEMENT SECTION

NTS



8" EXTRUDED CONCRETE CURB

NTS

(PER COA STD. DWG. 2415)

4-16.DWG 4-22-96
UD13SEP96

AS BUILT INFORMATION
CONTRACTOR Alb. Underground, Inc.
WORK STAKED BY AUT DATE 9/98
WORK ACCEPTANCE BY BH DATE 9/98
FIELD VERIFICATION BY AUT DATE 9/98
DRAWINGS CORRECTED BY BH DATE 9/98
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS
ALBUQUERQUE ACS MONUMENT "3-H10"
LOCATED NORTHEAST OF THE INTER-SECTION OF UNSER BLVD. & LADERA DR. THE STATION MARK IS A STANDARD ACS CAP SET FLUSH IN THE CONCRETE SURFACE OF THE SPILLWAY.
ELEVATION = 5193.38

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL
BRADLEY L. BINGHAM NEW MEXICO 12697 REGISTERED PROFESSIONAL ENGINEER
1/21/97

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
	DATE	DESIGNED WLB	2MAY96
	DATE	DRAWN BY GMA	2MAY96
	DATE	CHECKED BY WLB	2MAY96

CINFRAN ENGINEERING INC.
333 Rio Rancho Dr. N.E., Ste. 101
Rio Rancho, New Mexico 87124

WILLIAM L. VOSS NEW MEXICO 6131 REGISTERED PROFESSIONAL ENGINEER 10/1/98

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: LADERA & UNSER INTERSECTION IMPROVEMENTS TYPICAL SECTONS

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
D.R.C. Chair					
Trans. Dev.		MAR 31 1997			
Utility Dev.		DESIGN REVIEW COMMITTEE			

RECORD DRAWING
DATE: 9-14-98

PROJECT NO.	MAP NO.	SHEET	OF
5548.81	H-9-Z	4	16

SIGNAL NOTES

1. ALL WORK ON THESE PLANS TO BE PERFORMED UNDER THIS CONTRACT SHALL CONFORM TO THE CURRENT NATIONAL ELECTRIC CODE, AND THE STANDARDS OF THE NATIONAL BOARD OF FIRE UNDERWRITERS FOR ELECTRICAL WIRING AND APPARATUS.

2. ALL WORK ON THESE PLANS TO BE PERFORMED UNDER THIS CONTRACT SHALL CONFORM TO THE "THIRD DRAFT SPECIFICATIONS AND CONTRACT ITEM LISTING" TRAFFIC ENGINEERING OPERATIONS, CITY OF ALBUQUERQUE. JUNE, 1994. COPIES OF THESE SPECIFICATIONS ARE AVAILABLE FROM THE ENGINEER AT THE COST OF REPRODUCTION.

3. 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 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.

4. THE CONTRACTOR IS WARNED THAT EXISTING CONDUITS MAY CONTAIN AC POWER AND CAUTION SHALL BE EXERCISED IN INTERCEPTING OR INSTALLING CABLE IN EXISTING CONDUIT.

5. THE CONTRACTOR SHALL BORE, DRILL, OR PUSH WHEN CROSSING EXISTING PAVEMENTS AND ANY DRIVEWAYS FOR 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.

6. SPLICING FOR TRAFFIC SIGNALS MCC WILL BE PERMITTED IN LARGE PULL BOXES INCLUDING LARGE MEDIAN PULL BOXES. SPLICING OF OPTICAL DETECTOR CABLE WILL NOT BE PERMITTED BETWEEN THE OPTICAL DETECTOR AND THE CONTROL CABINET.

7. ALL LOOP LEAD-IN CABLES SHALL BE TAGGED AT CABINET TO IDENTIFY EACH CABLE BY PHASE AND LOOP NUMBER.

8. 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.

9. 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 TESTING, FIELD LOCATION OF EQUIPMENT INCLUDING STRUCTURES, LOOP DETECTORS, AND PULL BOXES 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 PERFORM ALL FIELD WIRING.

10. THE CONTRACTOR SHALL REMOVE ALL CONFLICTING SIGNING AND DELIVER TO THE CITY YARDS WHEN TRAFFIC SIGNALS ARE PUT INTO OPERATION.

11. 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.

12. 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.

13. THE CITY OF ALBUQUERQUE TRAFFIC ENGINEERING OPERATIONS PERSONNEL WILL PROVIDE TRAFFIC SIGNAL TIMING PLANS AND WILL PROGRAM TRAFFIC SIGNAL CONTROLLER.

14. EXISTING CONDUITS TO BE REMOVED OR ABANDONED SHALL HAVE ALL WIRING REMOVED.

15. AT LOCATIONS WHERE NEW ELECTRICAL PULL BOXES AND TRAFFIC MANHOLES ARE TO BE INSERTED INTO EXISTING CONDUIT RUNS, THE EXISTING CONDUITS SHALL BE REPAIRED, ADJUSTED, OR REPLACED AS DIRECTED BY THE ENGINEER.

16. THE CONTRACTOR SHALL ARRANGE TO HAVE OFF-DUTY POLICE OFFICERS DIRECT TRAFFIC WHEN SIGNALS ARE TURNED OFF.

17. 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.

INCIDENTAL ITEMS *

1. REMOVAL OF EXISTING CONDUITS, OR OTHER SIGNAL EQUIPMENT FOR INSTALLATION OF NEW SIGNAL EQUIPMENT.
2. CABLE TESTING AND DIAGRAMS.
3. BORING, DRILLING, PUSHING, AND TRENCHING, INCLUDING REMOVAL AND REPLACEMENT OF PAVEMENT, SIDEWALKS, DRIVEPADS, 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.
4. LOCATION OF UTILITY LINES INCLUDING EXPLORATORY TRENCHING AND EXPOSING OF GAS LINES WHEN BORING.
5. DESIGN, MATERIALS, INSTALLATION AND REMOVAL OF SAFETY BARRIER FOR SHIELDING EQUIPMENT OR MATERIAL.
6. APPRISING PUBLIC THROUGH THE LOCAL NEWS MEDIA.
7. HAULING OF MATERIAL TO BE DISPOSED TO CITY LANDFILL.
8. TRANSPORTATION OF SALVAGED SIGNAL EQUIPMENT TO THE CITY TRAFFIC ENGINEERING OPERATIONS YARD.
9. LEAN FILL FOR CONDUIT TRENCHES.
10. PULL BOX ADJUSTMENT TO GRADE.
11. OFF-DUTY POLICE OFFICER FOR TRAFFIC CONTROL.
12. REMOVAL AND REPLACEMENT IN KIND OR BETTER OF LANDSCAPING INCLUDING SPRINKLERS, FOR INSTALLATION OF PULL BOXES, CONDUITS AND SIGNAL FOUNDATIONS.
13. 3M REPRESENTATIVE FIELD ASSISTANCE DURING INSTALLATION.

* 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.

TRAFFIC SIGNAL LEGEND

NEW	EXISTING	ITEM
■	□	PULL BOX
M	M	METER PEDESTAL
	C	CONTROLLER CABINET
———	- - - -	CONDUIT RUN
		LOOP DETECTOR
●→	○→	TRAFFIC SIGNAL & PEDESTAL POLE
2	2	CONDUIT RUN NUMBER
		POLE WITH MASTARM, TRAFFIC SIGNAL AND BACKPLATE
		PEDESTRIAN PUSH BUTTON (MOUNTED TO SIDE OF POLE WHERE INDICATED)
		PEDESTRIAN SIGNALS (MOUNTED TO SIDE OF POLE WHERE INDICATED)
	⊘	TRAFFIC MANHOLE

TRAFFIC SIGNAL EQUIPMENT REQUIREMENTS

1. THIS PROJECT IS A MODIFICATION OF AN EXISTING SIGNAL SYSTEM. THE CITY OF ALBUQUERQUE TRAFFIC ENGINEERING OPERATIONS DIVISION WILL MODIFY THE EXISTING CONTROLLER AND CABINET TO PROVIDE THE MODIFIED OPERATION SHOWN ON THE PLANS. THE CONTRACTOR SHALL PULL ALL FIELD WIRING REQUIRED INTO THE CABINET AND COORDINATE WITH THE CITY AS REQUIRED.
2. SPLICE CABINETS ARE EXISTING AND SHALL REMAIN IN PLACE.
3. INTERCONNECT CABLES ARE EXISTING AND SHALL REMAIN IN PLACE.
4. THE CONTRACTOR SHALL FURNISH TWO (2) 3M "OPTICOM" MODEL 562 PHASE SELECTORS, AND ONE (1) 3M "OPTICOM" MODEL 360 RACK, OR APPROVED EQUAL, WHICH ARE TO BE INSTALLED BY THE CITY. THE CONTRACTOR SHALL FURNISH AND INSTALL FOUR (4) 3M "OPTICOM" MODEL 511 OPTICAL DETECTORS, SINGLE DIRECTION, SIGNAL CHANNEL (1D/1C) AND 3M "OPTICOM" MODEL 138, DETECTOR CABLE OR APPROVED EQUAL FROM THE OPTICAL DETECTORS TO THE CONTROLLER CABINET. THE CITY WILL COMPLETE THE CONNECTIONS IN THE CONTROL CABINET TO MAKE THE SYSTEM OPERATIONAL. 3M REPRESENTATIVES SHALL FURNISH FIELD ASSISTANCE FOR THE INSTALLATION.
5. ALL NEW TRAFFIC SIGNAL POLES, EQUIPMENT, AND HARDWARE SHALL MATCH THE SPECIAL FINISH OF THE EXISTING EQUIPMENT (POWER COAT AND COLOR).

DEFINITIONS

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

AS-BUILT INFORMATION
CONTRACTOR Alb. Underground, Inc. DATE
WORK STAKED BY AUZ DATE 9/98
FIELD CHANGES ACCEPTANCE BY BH DATE 9/98
FIELD VERIFICATION BY AUZ DATE 9/98
DRAWING CORRECTED BY BH DATE 9/98
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS
ALBUQUERQUE ACS MONUMENT "3-H10" LOCATED NORTHEAST OF THE INTERSECTION OF UNSER BLVD & LADERA DR. THE STATION MARK IS A STANDARD ACS CAP SET FLUSH IN THE CONCRETE SURFACE OF THE SPILLWAY.
ELEVATION=5193.38

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL
CHARLES W. TRASK III NEW MEXICO 9876 REGISTERED PROFESSIONAL ENGINEER
12-26-95

REVISIONS
NO. DATE REMARKS BY
DESIGN DATE 12-95 DESIGNED BY BHI
DRAWN BY BHI DATE 12-95
CHECKED BY BHI DATE 12-95

WILLIAM L. VAN METER 8131 REGISTERED PROFESSIONAL ENGINEER 10/1/97

RECORD DRAWING
DATE: 9-14-98

BOHANNAN-HUSTON INC.
ENGINEERS • PLANNERS • PHOTOGRAMMETRISTS • SURVEYORS • LANDSCAPE ARCHITECTS
ALBUQUERQUE LAS CRUCES SANTA FE

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: TRAFFIC SIGNAL NOTES AND LEGEND

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION		MAR 31 1997	WASTE WATER		
HYDROLOGY		DESIGN REVIEW COMMITTEE	TRAF. OPER.		12/96

DRAWING NO. 5548.81 | MAP NO. H-9-Z | SHEET 5 OF 16

TRAN2:ET95378A2211.SHEETS.SIGNALJCOASIGNOTES.GRF

TRAFFIC SIGNAL ESTIMATED QUANTITIES

ITEM NO	ITEM DESCRIPTION	UNIT	TOTAL
0422.03	TRAFFIC SIGNAL PEDESTAL POLE, 13 FOOT	EACH	4
0422.101	TRAFFIC SIGNAL PEDESTAL POLE ANY SIZE REMOVE AND SALVAGE	EACH	4
0423.01	TRAFFIC SIGNAL FOUNDATION FOR PEDESTAL POLE	EACH	2
0423.101	TRAFFIC SIGNAL FOUNDATION, REMOVE & DISPOSE	EACH	2
0424.01	RIGID ELECTRICAL CONDUIT, 1"	LIN FT	60
0424.05	RIGID ELECTRICAL CONDUIT, 2"	LIN FT	280
0424.10	RIGID ELECTRICAL CONDUIT, 3"	LIN FT	80
0425.02	ELECTRICAL PULL BOX, STANDARD	EACH	3
0425.03	ELECTRICAL PULL BOX, LARGE	EACH	2
0425.101	ELECTRICAL PULL BOX ANY SIZE REMOVE AND DISPOSE	EACH	4
0426.04	SINGLE CONDUCTOR, 8	LIN FT	305
0426.10	MULTI-CONDUCTOR CABLE 5	LIN FT	35
0426.11	MULTI-CONDUCTOR CABLE 7	LIN FT	440
0426.14	MULTI-CONDUCTOR CABLE 20	LIN FT	610
0427.02	3 SECTION TRAFFIC SIGNAL ASSEMBLY	EACH	1
0427.12	5 SECTION TRAFFIC SIGNAL ASSEMBLY	EACH	4
0427.101	TRAFFIC SIGNAL ASSEMBLY REMOVE AND SALVAGE	EACH	5
0428.21	LOOP DETECTOR WIRE	LIN FT	2918
0428.50	LOOP LEAD-IN CABLE	LIN FT	7240
0428.60	DETECTOR SAW CUT	LIN FT	1054
0428.70	PHASE SELECTOR RACK, 4 CHANNEL	EACH	1
0428.71	PHASE SELECTOR MODULE, 2 CHANNEL	EACH	2
0428.75	OPTICAL DETECTOR 1D/1C	EACH	4
0428.78	OPTICAL DETECTOR CABLE	LIN FT	1095

RECORD DRAWING
DATE: 9-14-98

AS-BUILT INFORMATION
CONTRACTOR Etc. As Underground DATE 9/98
WORK STAKED BY AUT DATE 9/98
INSPECTOR'S ACCEPTANCE BY BH DATE 9/98
FIELD VERIFICATION BY AUT DATE 9/98
DRAWINGS CORRECTED BY BH DATE 9/98

BENCH MARKS

ALBUQUERQUE ACS MONUMENT "3-H10" LOCATED NORTHEAST OF THE INTERSECTION OF UNSER BLVD & LADERA DR. THE STATION MARK IS A STANDARD ACS CAP SET FLUSH IN THE CONCRETE SURFACE OF THE SPILLWAY. ELEVATION=5193.38

MICRO-FILM INFORMATION
RECORDED BY
DATE
NO.

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

SEAL

ENGINEER'S SEAL
WILLIAM L. TRASK, NEW MEXICO 6878, REGISTERED PROFESSIONAL ENGINEER
12-22-95

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	

DESIGNED BY BHI DATE 12-95
DRAWN BY BHI DATE 12-95
CHECKED BY BHI DATE 12-95

BOHANNAN-HUSTON INC.
ENGINEERS • PLANNERS • PHOTOGRAMMETRISTS • SURVEYORS • LANDSCAPE ARCHITECTS
ALBUQUERQUE LAS CRUCES SANTA FE

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: TRAFFIC SIGNAL ESTIMATED QUANTITIES

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION		MAR 31 1997	WASTE WATER		
HYDROLOGY			TRAF. OPER.		1/2/96
	DESIGN REVIEW COMMITTEE				

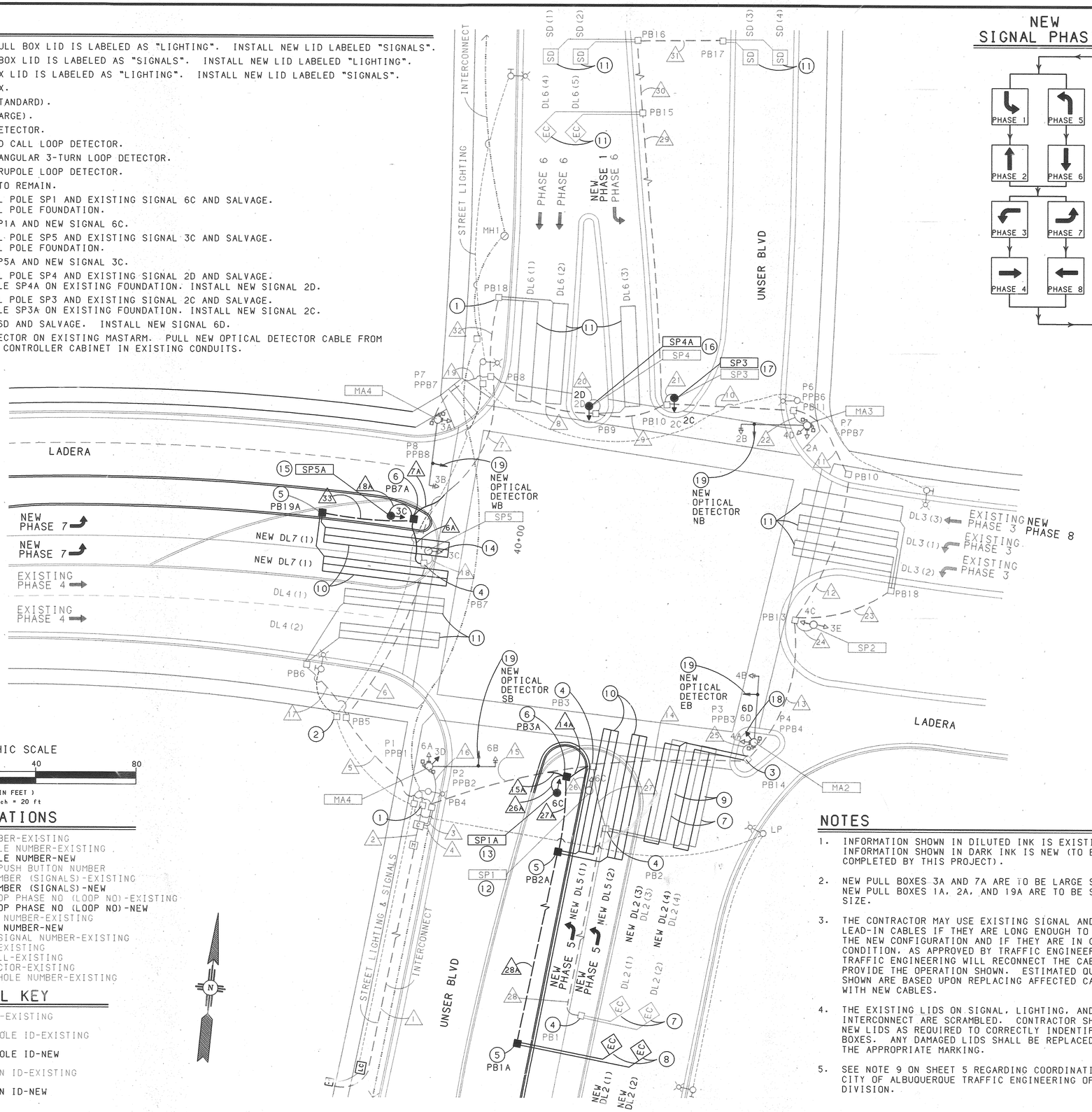
DRAWING NO. 5548.81 | MAP NO. H-9-Z | SHEET 6 OF 16

WILLIAM L. TRASK, NEW MEXICO 6878, REGISTERED PROFESSIONAL ENGINEER
12/1/95

TRAN2+(T95378A2211.SHEETS.SIGNALJCOASIGQUANT.GRF

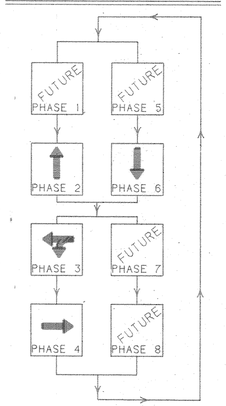
KEYED NOTES

1. EXISTING INTERCONNECT PULL BOX LID IS LABELED AS "LIGHTING". INSTALL NEW LID LABELED "SIGNALS".
2. EXISTING LIGHTING PULL BOX LID IS LABELED AS "SIGNALS". INSTALL NEW LID LABELED "LIGHTING".
3. EXISTING SIGNAL PULL BOX LID IS LABELED AS "LIGHTING". INSTALL NEW LID LABELED "SIGNALS".
4. REMOVE EXISTING PULL BOX.
5. INSTALL NEW PULL BOX (STANDARD).
6. INSTALL NEW PULL BOX (LARGE).
7. ABANDON EXISTING LOOP DETECTOR.
8. INSTALL NEW 6'x6' EXTEND CALL LOOP DETECTOR.
9. INSTALL NEW 6'x40' RECTANGULAR 3-TURN LOOP DETECTOR.
10. INSTALL NEW 6'x50' QUADRUPOLE LOOP DETECTOR.
11. EXISTING LOOP DETECTOR TO REMAIN.
12. REMOVE EXISTING PEDESTAL POLE SP1 AND EXISTING SIGNAL 6C AND SALVAGE. REMOVE EXISTING PEDESTAL POLE FOUNDATION.
13. INSTALL PEDESTAL POLE SP1A AND NEW SIGNAL 6C.
14. REMOVE EXISTING PEDESTAL POLE SP5 AND EXISTING SIGNAL 3C AND SALVAGE. REMOVE EXISTING PEDESTAL POLE FOUNDATION.
15. INSTALL PEDESTAL POLE SP5A AND NEW SIGNAL 3C.
16. REMOVE EXISTING PEDESTAL POLE SP4 AND EXISTING SIGNAL 2D AND SALVAGE. INSTALL NEW PEDESTAL POLE SP4A ON EXISTING FOUNDATION. INSTALL NEW SIGNAL 2D.
17. REMOVE EXISTING PEDESTAL POLE SP3 AND EXISTING SIGNAL 2C AND SALVAGE. INSTALL NEW PEDESTAL POLE SP3A ON EXISTING FOUNDATION. INSTALL NEW SIGNAL 2C.
18. REMOVE EXISTING SIGNAL 6D AND SALVAGE. INSTALL NEW SIGNAL 6D.
19. INSTALL NEW OPTICAL DETECTOR ON EXISTING MASTARM. PULL NEW OPTICAL DETECTOR CABLE FROM NEW OPTICAL DETECTOR TO CONTROLLER CABINET IN EXISTING CONDUITS.

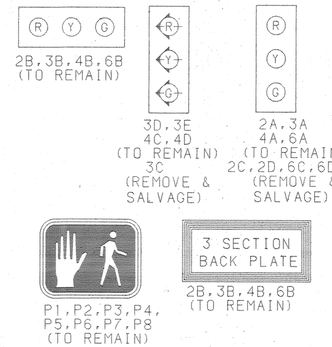


NEW SIGNAL PHASING

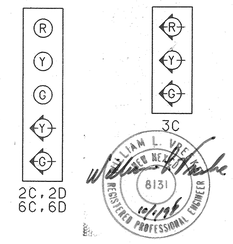
EXISTING SIGNAL PHASING



EXISTING SIGNAL FACE DETAILS



NEW SIGNAL FACE DETAILS



GRAPHIC SCALE

20 0 10 20 40 80

(IN FEET)
1 inch = 20 ft

ABBREVIATIONS

MA1	MASTARM NUMBER-EXISTING
SP1	PEDESTAL POLE NUMBER-EXISTING
SP1A	PEDESTAL POLE NUMBER-NEW
PPB1	PEDESTRIAN PUSH BUTTON NUMBER
PB1	PULL BOX NUMBER (SIGNALS)-EXISTING
PB1A	PULL BOX NUMBER (SIGNALS)-NEW
DL1(1)	DETECTOR LOOP PHASE NO (LOOP NO)-EXISTING
DL1(1)	DETECTOR LOOP PHASE NO (LOOP NO)-NEW
3A	SIGNAL HEAD NUMBER-EXISTING
3A	SIGNAL HEAD NUMBER-NEW
P1	PEDESTRIAN SIGNAL NUMBER-EXISTING
BP	BACK PLATE-EXISTING
EC	EXTENDED CALL-EXISTING
SD	SYSTEM DETECTOR-EXISTING
MH1	TRAFFIC MANHOLE NUMBER-EXISTING

SYMBOL KEY

MA1	MASTARM ID-EXISTING
SP1	PEDESTAL POLE ID-EXISTING
SP1A	PEDESTAL POLE ID-NEW
99	CONDUIT RUN ID-EXISTING
99	CONDUIT RUN ID-NEW

NOTES

1. INFORMATION SHOWN IN DILUTED INK IS EXISTING. INFORMATION SHOWN IN DARK INK IS NEW (TO BE COMPLETED BY THIS PROJECT).
2. NEW PULL BOXES 3A AND 7A ARE TO BE LARGE SIZE. NEW PULL BOXES 1A, 2A, AND 19A ARE TO BE STANDARD SIZE.
3. THE CONTRACTOR MAY USE EXISTING SIGNAL AND LOOP LEAD-IN CABLES IF THEY ARE LONG ENOUGH TO FIT THE NEW CONFIGURATION AND IF THEY ARE IN GOOD CONDITION, AS APPROVED BY TRAFFIC ENGINEERING. TRAFFIC ENGINEERING WILL RECONNECT THE CABLES TO PROVIDE THE OPERATION SHOWN. ESTIMATED QUANTITIES SHOWN ARE BASED UPON REPLACING AFFECTED CABLES WITH NEW CABLES.
4. THE EXISTING LIDS ON SIGNAL, LIGHTING, AND INTERCONNECT ARE SCRAMBLED. CONTRACTOR SHALL FURNISH NEW LIDS AS REQUIRED TO CORRECTLY INDENTIFY THE PULL BOXES. ANY DAMAGED LIDS SHALL BE REPLACED WITH THE APPROPRIATE MARKING.
5. SEE NOTE 9 ON SHEET 5 REGARDING COORDINATION WITH THE CITY OF ALBUQUERQUE TRAFFIC ENGINEERING OPERATIONS DIVISION.

RECORD DRAWING
DATE: 9-14-98

AS-BUILT INFORMATION
CONTRACTOR Abeyta Excavating INC. DATE
WORK STAKED BY ACT DATE 9/98
FIELD VERIFICATION BY ACT DATE 9/98
ACCEPTANCE BY BH DATE 9/98
FIELD VERIFICATION BY ACT DATE 9/98
DRAWINGS CORRECTED BY BH DATE 9/98
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS
ALBUQUERQUE ACS MONUMENT "3-H10" LOCATED NORTHEAST OF THE INTERSECTION OF UNSER BLVD & LADERA DR. THE STATION MARK IS A STANDARD ACS CAP SET FLUSH IN THE CONCRETE SURFACE OF THE SPILLWAY.
ELEVATION=5193.38

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL
WILLIAM L. WRASK NEW MEXICO 8131 REGISTERED PROFESSIONAL ENGINEER
12.22.95

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
	DATE 12-95	DESIGNED BY BHI	
	DATE 12-95	DRAWN BY BHI	
	DATE 12-95	CHECKED BY BHI	

BOHANNAN-HUSTON INC.
ENGINEERS • PLANNERS • PHOTOGRAMMETRISTS • SURVEYORS • LANDSCAPE ARCHITECTS
ALBUQUERQUE LAS CRUCES SANTA FE

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: TRAFFIC SIGNAL PLAN
UNSER/LADERA

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION	MAR 31 1997		WASTE WATER		
HYDROLOGY	DESIGN REVIEW COMMITTEE		TRAF. OPER.		12/96

DRAWING NO. 5548.81 | MAP NO. H-9-Z | SHEET 7 OF 16

TRAN4:CTTOVHD.WORKAREA3COASIGPLAN-UNSER.GRF

CONDUIT AND CONDUCTOR REQUIREMENTS

POWER

INTERSECTION "BOX" RUNS

SIGNAL RUNS

RUN ID ⚠	SIZE/LENGTH 1"	2"	3"	TYPE	REMARKS	MCC 5 (# @ ft)	MCC 7 (# @ ft)	MCC 20 (# @ ft)	SCC #10 (# @ ft)	SCC #2 (# @ ft)	EXIST DLLIC (# @ ft)	NEW DLLIC (# @ ft)	CC 12 (# @ ft)	OPTICOM (# @ ft)	SCC #8 (# @ ft)
1			200'	REC	POWER TO PNM TRANS					3@220'					
2			10'	REC	METER TO CONTROLLER					3@ 20'					
3			20'	REC	CONTROLLER TO PB4		1@ 30'		1@ 30'		18@ 30'	20@ 30'	1@ 30'	1@ 30'	
4			20'	REC	CONTROLLER TO PB4			2@ 30'	1@ 30'						
5			60'	REC	PB4 TO PB5		1@ 70'	2@ 70'	1@ 70'		11@ 70'	13@ 70'	1@ 70'	1@ 70'	
6			70'	REC	PB5 TO PB7		1@ 80'	2@ 80'	1@ 80'		9@ 80'		1@ 80'		
6 & 6A			25'	REC	PB7A TO EX CONDUIT		1@ 95'	2@ 95'				11@ 95'		1@ 95'	1@ 95'
7			90'	REC	PB7 TO PB8		1@100'	2@100'	1@100'		9@100'		1@100'		
7 & 7A			25'	REC	PB7A TO EX CONDUIT		1@ 70'	2@ 70'				9@ 70'		1@ 70'	1@ 70'
8			40'	REC	PB8 TO PB9		1@ 50'	2@ 50'	1@ 50'		7@ 50'	7@ 50'			
9			40'	REC	PB9 TO PB10		1@ 50'	2@ 50'	1@ 50'		6@ 50'	6@ 50'			
10			50'	REC	PB10 TO PB11		1@ 60'	2@ 60'	1@ 60'						
11			40'	REC	PB11 TO PB12		1@ 50'	2@ 50'	1@ 50'					1@ 50'	
12			60'	REC	PB12 TO PB13		1@ 70'	2@ 70'	1@ 70'					1@ 70'	
13			50'	REC	PB13 TO PB14		1@ 60'	2@ 60'	1@ 60'		3@ 60'	3@ 60'		1@ 60'	
14			60'	REC	PB3 TO PB14		1@ 70'	2@ 70'	1@ 70'		3@ 60'				
14 & 14A			15'	REC	PB3 TO EX CONDUIT		1@ 80'	2@ 80'				5@ 80'		2@ 80'	1@ 80'
15			65'	REC	PB3 TO PB4		1@ 75'	2@ 75'	1@ 75'		7@ 75'				
15 & 15A			15'	REC	PB3A TO EX CONDUIT		1@ 60'	2@ 60'				9@ 60'		2@ 60'	1@ 60'
16			20'	REC	PB4 TO MA1		5@ 30'		1@ 30'					1@ 30'	
17		35'		REC	PB5 TO PP6						2@ 45'				
18			10'	REC	PB7 TO SP4		1@ 20'		1@ 20'						
18A		15'		REC	PB7A TO SP5A	1@ 20'									
19			30'	REC	PB8 TO MA4		4@ 40'		1@ 40'					1@ 40'	
20			10'	REC	PB9 TO SP4		1@ 20'		1@ 20'						
20					SP4A		1@ 20'								
21			10'	REC	PB10 TO SP3		1@ 20'		1@ 20'						
21					PB10 TO SP3A		1@ 20'								
22			15'	REC	PB11 TO MA3		5@ 25'		1@ 25'					1@ 25'	
23		55'		REC	PB13 TO SP2						3@ 65'	3@ 65'			
24			15'	REC	PB13 TO SP2		2@ 25'		1@ 25'						
25			5'	REC	PB14 TO MA2		5@ 15'		1@ 15'					1@ 15'	
25					PB14 TO MA2		1@ 15'								
26			15'	REC	PB3 TO SP1		1@ 25'		1@ 25'						
26A				REC	PB3A TO SP1A		1@ 20'								
27		35'		REC	PB2 TO PB3						4@ 45'				
27A		35'		REC	PB3A TO PB2A									2@ 40'	
28		175'		REC	PB1 TO PB2						2@185'				
28A		175'		REC	PB2A TO PB1A									2@180'	
29		200'		REC	PB15 TO PB16						6@205'	6@205'			
30		150'		REC	PB16 TO PB15						4@155'	4@155'			
31		70'		REC	PB17 TO PB16						2@ 75'	2@ 75'			
32		25'		REC	PB18 TO PB8						2@ 35'		1@ 35'		
33		40'		REC	PB7A TO PB19A							2@ 45'		2@ 45'	
	60'			REC	LOOP TERMINATION										
TOTALS	60'	280'	80'			20'	380'	610'				7240'		925'	305'

CONDUIT AND CONDUCTOR REQUIREMENTS (CONTINUED)

SIGNAL CABLES FOR INDIVIDUAL POLES

RUN ID ⚠	SIZE/LENGTH 1"	2"	3"	TYPE	REMARKS	MCC 5 (# @ ft)	MCC 7 (# @ ft)	MCC 20 (# @ ft)	SCC#10 (# @ ft)	SCC#2 (# @ ft)	EXIST DLLIC (# @ ft)	NEW DLLIC (# @ ft)	CC 12 (# @ ft)	OPTICOM (# @ ft)	SCC #8 (# @ ft)
MA1					BASE TO 6A	1@ 50'									
MA1					BASE TO 6B	1@ 50'									
MA1					BASE TO 3D	1@ 15'									
MA1					BASE TO P1 & P2	1@ 15'									
MA1					BASE TO PPB1 & PPB2	1@ 15'									
MA1					BASE TO OPTICOM									1@ 45'	
MA2					BASE TO 4A	1@ 40'									
MA2					BASE TO 4B	1@ 40'									
MA2					BASE TO 6D	1@ 15'	1@ 15'								
MA2					BASE TO P3 & P4	1@ 15'									
MA2					BASE TO PPB3 & PPB4	1@ 15'									
MA2					BASE TO OPTICOM									1@ 35'	
MA3					BASE TO 2A	1@ 50'									
MA3					BASE TO 2B	1@ 50'									
MA3					BASE TO 4D	1@ 15'									
MA3					BASE TO P5 & P6	1@ 15'									
MA3					BASE TO PPB5 & PPB6	1@ 15'									
MA3					BASE TO OPTICOM									1@ 45'	
MA4					BASE TO 3A	1@ 50'									
MA4					BASE TO 3B	1@ 50'									
MA4					BASE TO P7 & P8	1@ 15'									
MA4					BASE TO PPB7 & PPB8	1@ 15'									
MA4					BASE TO OPTICOM									1@ 45'	
SP1					BASE TO 6C	1@ 15'									
SP1A					BASE TO 6C		1@ 15'								
SP2					BASE TO 4C	1@ 15'									
SP2					BASE TO 3E	1@ 15'									
SP3					BASE TO 2C	1@ 15'									
SP3A					BASE TO 2C		1@ 15'								
SP4					BASE TO 2D	1@ 15'									
SP4A					BASE TO 2D		1@ 15'								
SP5					BASE TO 3C	1@ 15'									
SP5A					BASE TO 3C	1@ 15'									
TOTALS						15'	60'							170'	

ABBREVIATIONS

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

WILLIAM L. VREELAND NEW MEXICO 8131 REGISTERED PROFESSIONAL ENGINEER 10/1/98

RECORD DRAWING
DATE: 9-14-98

AS-BUILT INFORMATION
CONTRACTOR Alta Underground Inc. DATE
WORK STAKED BY AUI DATE 9/98
WORK INSPECTED BY BH DATE 9/98
ACCEPTANCE BY DATE
FIELD LOCATION BY AUI DATE 9/98
DRAWINGS CORRECTED BY BH DATE 9/98
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

SURVEY INFORMATION
BENCH MARKS
ALBUQUERQUE ACS MONUMENT "3-H10" LOCATED NORTHEAST OF THE INTERSECTION OF UNSER BLVD & LADERA DR. THE STATION MARK IS A STANDARD ACS CAP SET FLUSH IN THE CONCRETE SURFACE OF THE SPILLWAY.
ELEVATION=5193.38

FIELD NOTES
NO. | BY | DATE

ENGINEER'S SEAL
CHARLES W. TRASK NEW MEXICO 6870 REGISTERED PROFESSIONAL ENGINEER 12-22-95

REVISIONS
NO. | DATE | REMARKS | BY
DESIGN
DESIGNED BY BHI DATE 12-95
DRAWN BY BHI DATE 12-95
CHECKED BY BHI DATE 12-95

BOHANNAN-HUSTON INC.
ENGINEERS • PLANNERS • PHOTOGRAMMETRISTS • SURVEYORS • LANDSCAPE ARCHITECTS
ALBUQUERQUE LAS CRUCES SANTA FE

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: TRAFFIC SIGNAL CABLES & CONDUITS

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION			WASTE WATER		
HYDROLOGY			TRAF. OPER.		12/96

MAR 31 1997 DESIGN REVIEW COMMITTEE

DRAWING NO. 5548.81 | MAP NO. H-9-Z | SHEET 8 OF 16

TRAN2:LT95378A2211.SHEETS.SIGNALJCOACONCAB.GRF

DETECTOR LOOPS

LOOP ID	VEHICLE DETECTOR MODE	CALL	UNIT NO	CHANNEL	LOOP TYPE	LOOP DIMENSIONS L	W	S	T	LOOP WIRE	PAVEMENT SAWCUT	
DL2(1)	PULSE	EXTEND 3	FOUR	CH 1	4-TURN	6'	6'	5'	2'	115'	29'	(7)
DL2(2)	PULSE	EXTEND 3	FOUR	CH 1	4-TURN	6'	6'	15'	2'	135'	39'	(7)
DL2(3)	PRESENCE		TWO	CH 1	3-TURN	40'	6'	5'	2'	295'	97'	(7)
DL2(4)	PRESENCE		TWO	CH 2	3-TURN	40'	6'	15'	2'	315'	107'	(7)
DL3(1)	PRESENCE		FIVE	CH 1	OP	40'	6'	5'	2'	363'	137'	
DL3(2)	PRESENCE		FIVE	CH 1	OP	40'	6'	15'	2'	363'	147'	
DL3(3)	PRESENCE		FIVE	CH 1	OP	40'	6'	25'	2'	335'	117'	(6)
DL4(1)	PRESENCE		SIX	CH 1	3-TURN	40'	6'	15'	2'	315'	107'	
DL4(2)	PRESENCE	DELAY 5	SIX	CH 2	3-TURN	40'	6'	5'	2'	295'	102'	
DL6(1)	PRESENCE		THREE	CH 1	3-TURN	40'	6'	5'	2'	295'	102'	
DL6(2)	PRESENCE		THREE	CH 1	3-TURN	40'	6'	15'	2'	315'	107'	
DL6(3)	PRESENCE		THREE	CH 2	3-TURN	40'	6'	8'	8'	313'	100'	(5)
DL6(4)	PULSE	EXTEND 3	FOUR	CH 2	4-TURN	6'	6'	15'	2'	135'	39'	
DL6(4)	PULSE	EXTEND 3	FOUR	CH 2	4-TURN	6'	6'	5'	2'	115'	29'	
SD(1)	PRESENCE		S-3	CH 1	4-TURN	6'	6'	15'	2'	135'	39'	
SD(2)	PRESENCE		S-4	CH 1	4-TURN	6'	6'	5'	2'	115'	29'	
SD(3)	PRESENCE		S-6	CH 1	4-TURN	6'	6'	5'	2'	115'	29'	
SD(4)	PRESENCE		S-6	CH 2	4-TURN	6'	6'	15'	2'	135'	39'	
DL2(1)	PULSE	EXTEND 3	FOUR	CH 1	4-TURN	6'	6'	30'	5'	166'	54'	(8)
DL2(2)	PULSE	EXTEND 3	FOUR	CH 1	4-TURN	6'	6'	42'	5'	190'	66'	(8)
DL2(3)	PRESENCE		TWO	CH 1	3-TURN	40'	6'	27'	5'	376'	119'	(8)
DL2(4)	PRESENCE		TWO	CH 2	3-TURN	40'	6'	39'	5'	358'	131'	(8)
DL5(1)	PRESENCE		ONE	CH 2	OP	50'	6'	3'	5'	445'	165'	(8)
DL5(2)	PRESENCE		ONE	CH 2	OP	50'	6'	15'	5'	469'	177'	(8)
DL7(1)	PRESENCE		FIVE	CH 2	OP	50'	6'	3'	5'	445'	165'	(8)
DL7(2)	PRESENCE		FIVE	CH 2	OP	50'	6'	15'	5'	469'	177'	(8)
TOTALS										2918 LF	1054 LF	

QUANTITY ESTIMATING ASSUMPTIONS:

LOOP WIRE

6' X 30' QP LOOP = (8*L) + (4*W) + (2*S) + (2*T) + 5 = 269 + 2(S+T)
6' X 40' QP LOOP = (8*L) + (4*W) + (2*S) + (2*T) + 5 = 349 + 2(S+T)
6' X 50' QP LOOP = (8*L) + (4*W) + (2*S) + (2*T) + 5 = 429 + 2(S+T)
6' X 6' EC LOOP = (6*L) + (6*W) + (2*S) + (2*T) + 5 = 77 + 2(S+T)
6' X 6' SYS LOOP = (8*L) + (8*W) + (2*S) + (2*T) + 5 = 96 + 2(S+T)
6' X 40' RECT LOOP=(6*L) + (6*W) + (2*S) + (2*T) + 5= 312 + 2(S+T)

PAVEMENT SAWCUT

6' X 30' QP LOOP = (3*L) + (2*W) + S = 102 + S
6' X 40' QP LOOP = (3*L) + (2*W) + S = 132 + S
6' X 50' QP LOOP = (3*L) + (2*W) + S = 162 + 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
6' X 40' RECT 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)

DETECTOR RACK ASSIGNMENTS - 8 PHASE DUAL RING 16 POSITION RACK

UNIT NUMBER →	POWER SUPPLY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
CHANNEL 1 →		Φ1	Φ2	Φ6	Φ2 EC	Φ3	Φ4	Φ8	Φ4 EC	SD 1	SD 3	SD 5	SD 7	SD 9	PED ISOLATION	OPTICOM 1	OPTICOM 3
CHANNEL 2 →		Φ5	Φ2	Φ6	Φ6 EC	Φ7	Φ4	Φ8	Φ8 EC	SD 2	SD 4	SD 6	SD 8	SD 10		OPTICOM 2	OPTICOM 4
DETECTOR MODULE REQUIRED →	*	✓	✓	✓	✓	✓	✓	✓		✓	✓				*	✓	✓

* INCIDENTAL TO CONSTRUCTION

FUNCTION CHART - 115 VOLT CIRCUIT 1/

CONDUCTOR NUMBER	CONDUCTOR BASE COLOR	CONDUCTOR TRACER	RING 1 - MULTI CONDUCTOR CABLE 20 FUNCTION	RING 1 FIELD CONNECTION	RING 2 - MULTI CONDUCTOR CABLE 20 2/ FUNCTION	RING 2 FIELD CONNECTION
1	BLACK	-	PHASE 3 WALK		SPARE	
2	WHITE	-	PHASE 3 DON'T WALK		SPARE	
3	RED	-	PHASE 1 RED		PHASE 5 RED	2C,2D LEFT ARROW (4)
4	GREEN	-	PHASE 1 GREEN	6C,6D LEFT ARROW (3)	PHASE 5 GREEN	2C,2D LEFT ARROW (4)
5	ORANGE	-	PHASE 1 YELLOW	6C,6D LEFT ARROW (3)	PHASE 5 YELLOW	2C,2D LEFT ARROW (4)
6	BLUE	-	PHASE 1 WALK		PHASE 5 WALK	
7	WHITE	BLACK	PHASE 1 DON'T WALK		PHASE 5 DON'T WALK	
8	RED	BLACK	PHASE 2 RED	2A,2B,2C,2D (4)	PHASE 6 RED	6A,6B,6C,6D (3)
9	GREEN	BLACK	PHASE 2 GREEN	2A,2B,2C,2D (4)	PHASE 6 GREEN	6A,6B,6C,6D (3)
10	ORANGE	BLACK	PHASE 2 YELLOW	2A,2B,2C,2D (4)	PHASE 6 YELLOW	6A,6B,6C,6D (3)
11	BLUE	BLACK	PHASE 2 WALK	P4, P5	PHASE 6 WALK	P1, P8
12	BLACK	WHITE	PHASE 2 DON'T WALK	P4, P5	PHASE 6 DON'T WALK	P1, P8
13	RED	WHITE	PHASE 3 RED	3A,3B,3C,3D,3E (2)	PHASE 7 RED	
14	GREEN	WHITE	PHASE 3 GREEN	3A,3B,3C,3D,3E (2)	PHASE 7 GREEN	
15	BLUE	WHITE	PHASE 3 YELLOW	3A,3B,3C,3D,3E (2)	PHASE 7 YELLOW	
16	BLACK	RED	PHASE 4 RED	4A,4B,4C,4D	PHASE 8 RED	3A,3B (2)
17	WHITE	RED	PHASE 4 GREEN	4A,4B,4C,4D	PHASE 8 GREEN	3A,3B (2)
18	ORANGE	RED	PHASE 4 YELLOW	4A,4B,4C,4D	PHASE 8 YELLOW	3A,3B (2)
19	BLUE	RED	PHASE 4 WALK	P2, P3	PHASE 3 WALK	P6, P7 (1)
20	RED	GREEN	PHASE 4 DON'T WALK	P2, P3	PHASE 3 DON'T WALK	P6, P7 (1)

FUNCTION CHART - 24 VOLT CIRCUIT 3/

MULTI CONDUCTOR CABLE 5

CONDUCTOR NUMBER	BASE COLOR	FUNCTION	FIELD CONNECTION
1	BLACK	PHASE 2 PPB	PPB4 & PPB6
2	WHITE	COMMON	PPB1 & PPB3
3	RED	PHASE 4 PPB	PPB2 & PPB3
4	GREEN	PHASE 6 PPB	PPB7 & PPB1
5	ORANGE	PHASE 3 (1)	PPB8 & PPB5

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 BOX 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.

4/ CONDUCTOR CABLE RUNS TO TRAFFIC SIGNALS, PEDESTRIAN SIGNALS, AND PEDESTRIAN PUSH BUTTONS SHALL BE SPLICED INTO THE MAIN CONDUCTORS AT THE NEAREST LARGE PULL BOX AND RUN WITHOUT ADDITIONAL SPLICES INTO EACH SIGNAL HEAD OR PUSH BUTTON ASSEMBLY.

KEYED NOTES

(1) MOVE SIGNALS P6 & P7 AND PUSH BUTTONS PPB5 & PPB8 FROM PHASE 3 TO PHASE 8
(2) MOVE SIGNALS 3A & 3B TO PHASE 8
(3) EXISTING SIGNALS 6C & 6D TO BE REPLACED WITH 5-SECTION HEADS
(4) EXISTING SIGNALS 2C & 2D TO BE REPLACED WITH 5-SECTION HEADS
(5) REASSIGN LOOP DL6(3) TO PHASE 1
(6) REASSIGN LOOP DL3(3) TO PHASE 8
(7) EXISTING LOOP TO BE ABANDONED
(8) INSTALL NEW LOOP

ABBREVIATIONS

DL	DETECTOR LOOP
EC	EXTENDED CALL LOOP
L	DETECTOR LOOP LENGTH
W	DETECTOR LOOP WIDTH
S	SAWCUT LOOP TO CURB
T	TERMINAL LENGTH
QP	QUADRAPOLE LOOP
SDWBA	SYSTEM DETECTOR WESTBOUND APPROACH
SDWBD	SYSTEM DETECTOR WESTBOUND DEPARTURE
SDEBA	SYSTEM DETECTOR EASTBOUND APPROACH
SDEBD	SYSTEM DETECTOR EASTBOUND DEPARTURE
SDNBA	SYSTEM DETECTOR NORTHBOUND APPROACH
SDNBD	SYSTEM DETECTOR NORTHBOUND DEPARTURE
SDSBA	SYSTEM DETECTOR SOUTHBOUND APPROACH
SDSBD	SYSTEM DETECTOR SOUTHBOUND DEPARTURE

AS-BUILT INFORMATION
CONTRACTOR Ab. Underground DATE
WORK STAKED BY AUI DATE 9/98
WORK PERFORMED BY BH DATE 9/98
ACCEPTANCE BY FIELD VERIFICATION BY AUI DATE 9/98
DRAWINGS CORRECTED BY BH DATE 9/98
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

SURVEY INFORMATION
BENCH MARKS
ALBUQUERQUE ACS MONUMENT "3-H10" LOCATED NORTHEAST OF THE INTERSECTION OF UNSER BLVD & LADERA DR. THE STATION MARK IS A STANDARD ACS CAP SET FLUSH IN THE CONCRETE SURFACE OF THE SPILLWAY. ELEVATION=5193.38

FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL
JESSE W. TRASK, III NEW MEXICO 6878 REGISTERED PROFESSIONAL ENGINEER
12-26-95

REVISIONS
NO. DATE BY REMARKS
DESIGN DATE 12-95
DESIGNED BY BHI
DRAWN BY BHI DATE 12-95
CHECKED BY BHI DATE 12-95

WILLIAM L. VREELAND NEW MEXICO 8131 REGISTERED PROFESSIONAL ENGINEER
10/1/98

RECORD DRAWING
DATE: 9-14-98

BOHANNAN-HUSTON INC.
ENGINEERS • PLANNERS • PHOTOGRAMMETRISTS • SURVEYORS • LANDSCAPE ARCHITECTS
ALBUQUERQUE LAS CRUCES SANTA FE

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

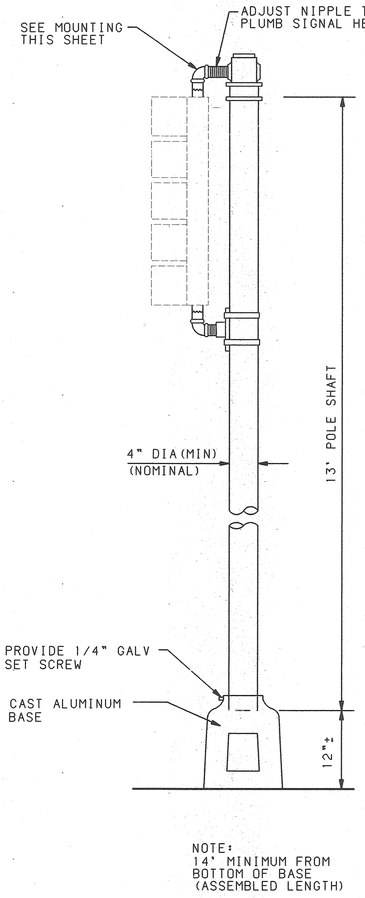
TITLE: TRAFFIC SIGNAL FUNCTIONS & DETECTORS UNSER/LADERA

APPROVALS	ENGINEER	DATE
DRC CHAIRMAN		
TRANSPORTATION		MAR 31 1997
HYDROLOGY		
	DESIGN REVIEW COMMITTEE	

APPROVALS	ENGINEER	DATE
WATER		
WASTE WATER		
TRAF. OPER.		12/96

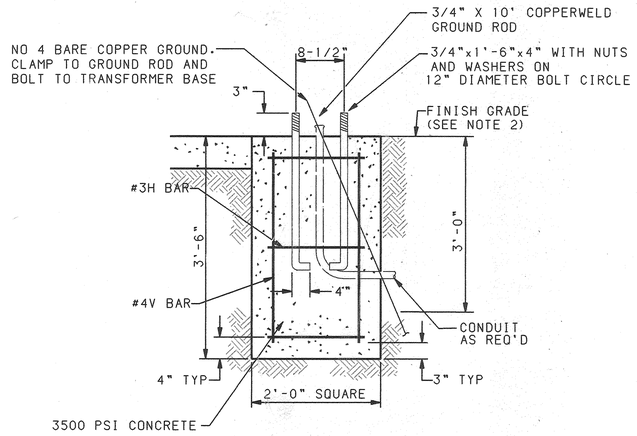
DRAWING NO. 5548.81
MAP NO. H-9-Z
SHEET 9 OF 16

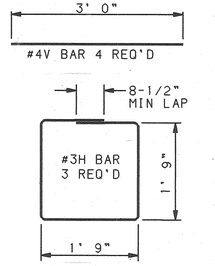
TRAN2:[1953]8A2211.SHEETS.SIGNALJCOAFUNDET.GRF



NOTE:
14' MINIMUM FROM BOTTOM OF BASE (ASSEMBLED LENGTH)

PEDESTAL POLE MOUNTING DETAIL





REINFORCING STEEL

PEDESTAL FOUNDATION DETAIL

ESTIMATED QUANTITIES

FOUNDATION TYPE	3500 PSI CONCRETE CU YD	REINFORCING BARS POUNDS
PEDESTAL FOUNDATION	0.52	17

(FOR CONTRACTORS INFORMATION ONLY)

TRAFFIC SIGNAL FOUNDATION NOTES

1. ALL FOUNDATIONS SHALL INCLUDE COPPERWELD GROUND RODS. ALL GROUND RODS SHALL BE 3/4" Ø x 10'-0" AND WILL BE CONSIDERED INCIDENTAL TO THE FOUNDATION BID ITEMS.
2. FINISHED GRADE FOR ALL FOUNDATIONS TO BE DETERMINED IN THE FIELD BY THE PROJECT ENGINEER. FOUNDATIONS MAY BE SLOPED TO MATCH SIDEWALKS. SLOPES SHALL CONFORM TO THE AMERICANS WITH DISABILITIES ACT REQUIREMENTS.

WILLIAM L. VREELAND NEW MEXICO 8131 REGISTERED PROFESSIONAL ENGINEER 10/1/96

RECORD DRAWING
DATE: 9-14-98

AS-BUILT INFORMATION
CONTRACTOR Alta Underground, Inc. DATE 9/98
STAKED BY AUT DATE 9/98
INSPECTOR'S SIGNATURE & NO. BH DATE 9/98
FIELD INSPECTION BY AUT DATE 9/98
DRAWINGS CORRECTED BY BH DATE 9/98
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS
ALBUQUERQUE ACS MONUMENT "3-H10" LOCATED NORTHEAST OF THE INTERSECTION OF UNSER BLVD & LADERA DR. THE STATION MARK IS A STANDARD ACS CAP SET FLUSH IN THE CONCRETE SURFACE OF THE SPILLWAY. ELEVATION=5193.38

SURVEY INFORMATION
FIELD NOTES
NO. BY DATE

ENGINEER'S SEAL
JESSE W. TRASK, III NEW MEXICO 6876 REGISTERED PROFESSIONAL ENGINEER 12-22-95

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	
		DESIGNED BY BHI/COA	DATE 12-95
		DRAWN BY BHI/COA	DATE 12-95
		CHECKED BY BHI/COA	DATE 12-95

BOHANNAN-HUSTON INC.
ENGINEERS • PLANNERS • PHOTOGRAMMETRISTS • SURVEYORS • LANDSCAPE ARCHITECTS
ALBUQUERQUE LAS CRUCES SANTA FE

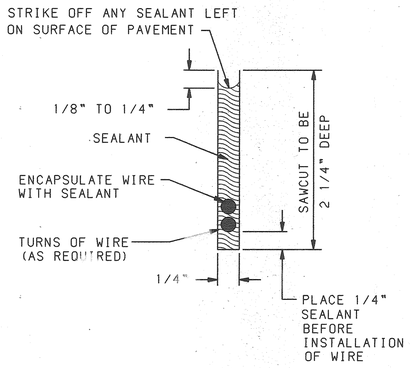
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: TRAFFIC SIGNAL PEDESTAL POLE DETAILS

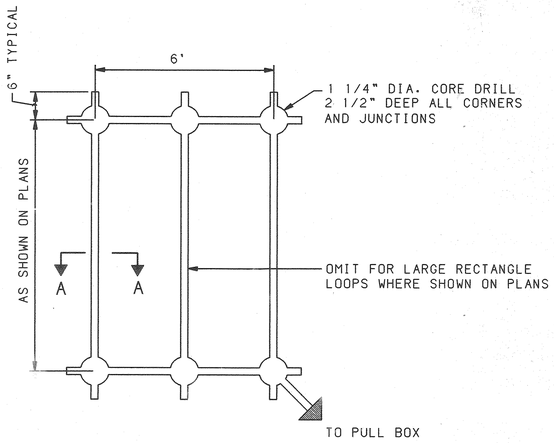
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION	MAR 31 1997		WASTE WATER		
HYDROLOGY	DESIGN REVIEW COMMITTEE		TRAF. OPER.		10/1/96

DRAWING NO. 5548.81 | MAP NO. H-9-Z | SHEET 10 OF 16

TRAN4:ETTOVHD.CITYJCOAPEDCONFD.GRF

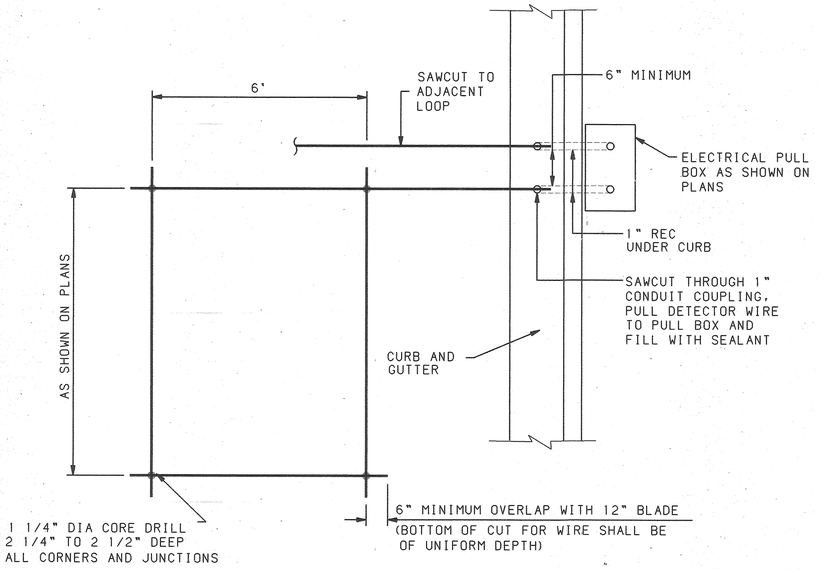


SECTION A-A

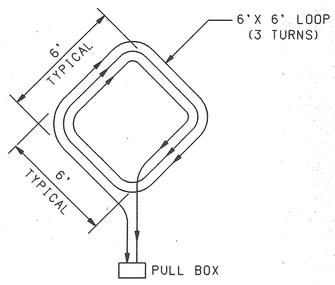


PLAN VIEW

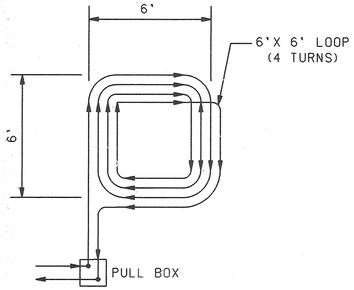
TYPICAL ROADWAY LOOP SAWCUT DETAIL



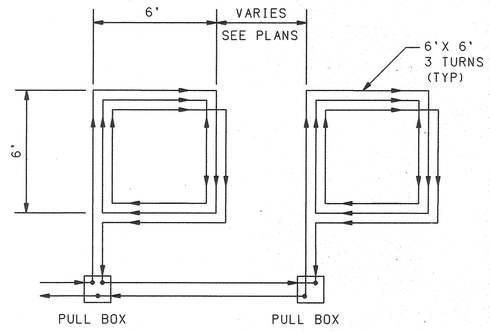
PLAN VIEW



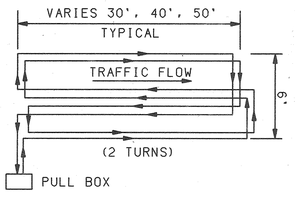
EXTEND CALL LOOP WIRING DETAIL



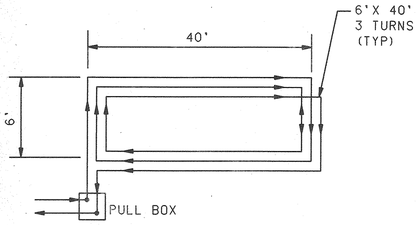
SYSTEM LOOP WIRING DETAIL



SERIES LOOP WIRING DETAIL



QUADRUPOLE LOOP WIRING DETAIL

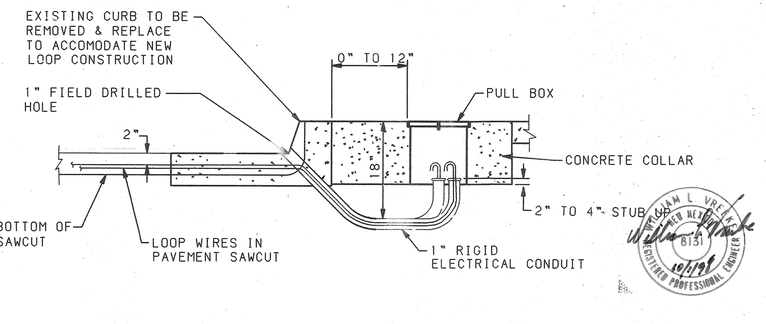


LARGE RECTANGULAR LOOP WIRING DETAIL

NOTES

1. WIRES MUST BE WOUND IN THE DIRECTION SHOWN.
2. QUADRUPOLE LOOPS SHALL HAVE 2 TURNS.
3. EXTEND CALL LOOPS SHALL HAVE 3 TURNS.
4. SYSTEM DETECTOR LOOPS SHALL HAVE 4 TURNS.
5. LARGE RECTANGLE LOOPS SHALL HAVE 3 TURNS

TYPICAL LOOP WIRE PLACEMENT DETAILS



SECTION

RECORD DRAWING
DATE: 9-14-98

LOOP WIRE TERMINATION DETAILS

LOOP DETECTOR NOTES

1. ALL LOOP DETECTOR WIRE SHALL BE NO. 14 AWG STRANDED COPPER WIRE WITH CROSSLINKED POLYETHYLENE INSULATION (INDUSTRY TYPE XHHW) CONFORMING TO THE REQUIREMENTS OF I.M.S.A. SPECIFICATIONS NO 51-3 1984. BACKER ROD SHALL NOT BE USED IN THE INSTALLATION OF LOOP (EXCEPT PIECES LESS THAN 12" WHICH MAY BE PLACED OVER THE WIRE AT THE SAW CUT CORNERS TO HOLD THE WIRE. A 1/4" LAYER OF SEALANT SHALL BE PLACED IN THE SAWCUT BEFORE PLACEMENT OF THE WIRE AND THEN THE WIRE SHALL BE ENCAPSULATED WITH SEALANT. HOT-MELT RUBBERIZED ASPHALT LOOP DETECTOR SEALANT MANUFACTURED BY CRAFCO SHALL BE AN ACCEPTABLE SEALANT ALTERNATE.
2. ALL LOOP LEAD IN CABLES SHALL BE TAGGED AT CABINET TO IDENTIFY EACH CABLE BY LOOP AND AND PHASE NUMBER.
3. GROUND LOOP LEAD IN CABLE SHIELDING IN CONTROL CABINET.
4. SEPARATE 1" RIGID ELECTRICAL CONDUITS ARE REQUIRED FOR EACH PAIR OF DETECTOR WIRES.

AS-BUILT INFORMATION
CONTRACTOR Alb. Underground, Inc. DATE
WORK STAKED BY AUT DATE 9/98
INSPECTOR'S ACCEPTANCE BY BH DATE 9/98
FIELD VERIFICATION BY AUT DATE 9/98
DRAWINGS CORRECTED BY BH DATE 9/98
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

BENCH MARKS
ALBUQUERQUE ACS MONUMENT "3-H10" LOCATED NORTHEAST OF THE INTERSECTION OF UNSER BLVD & LADERA DR. THE STATION MARK IS A STANDARD ACS CAP SET FLUSH IN THE CONCRETE SURFACE OF THE SPILLWAY.
ELEVATION=5193.38

SURVEY INFORMATION
FIELD NOTES
NO. | BY | DATE

ENGINEER'S SEAL
JEFFREY W. TRASK 13 NEW MEXICO 8876 REGISTERED PROFESSIONAL ENGINEER
12-26-95

REVISIONS
NO. | DATE | REMARKS | BY
DESIGN
DESIGNED BY BHI/COA DATE 12-95
DRAWN BY BHI/COA DATE 12-95
CHECKED BY BHI/COA DATE 12-95

WILLIAM L VREELAND NEW MEXICO 8131 REGISTERED PROFESSIONAL ENGINEER 10/1/98

BOHANNAN-HUSTON INC.
ENGINEERS • PLANNERS • PHOTOGRAMMETRISTS • SURVEYORS • LANDSCAPE ARCHITECTS
ALBUQUERQUE LAS CRUCES SANTA FE

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

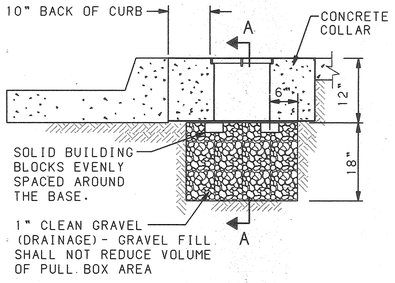
TITLE: TRAFFIC SIGNAL LOOP DETECTOR DETAILS

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION			WASTE WATER		
HYDROLOGY			TRAF. OPER.		12/96

DESIGN REVIEW COMMITTEE
NOV 3 1 1997

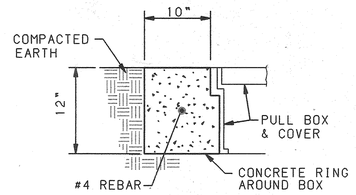
DRAWING NO. 5548.81 | MAP NO. H-9-Z | SHEET 11 OF 16

TRAN4+CTTOVHD.CITYJCOALOOPDET.GRF

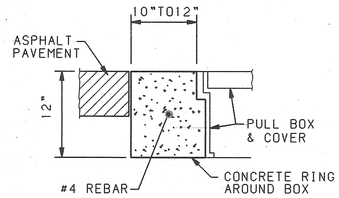


TYPICAL PULL BOX INSTALLATION

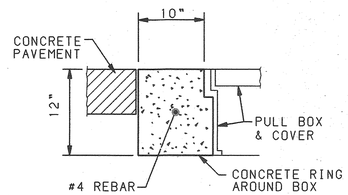
NOTE: SEE "CONCRETE COLLAR DETAILS"



IN COMPACTED EARTH



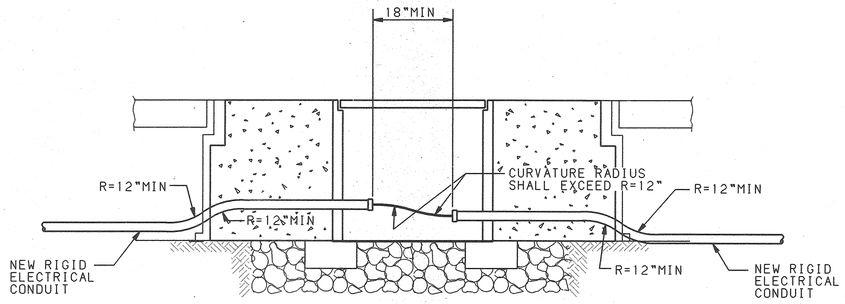
IN ASPHALT PAVEMENTS



IN CONCRETE PAVEMENTS

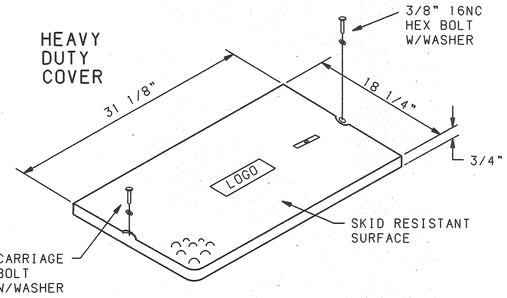
CONCRETE COLLAR DETAILS

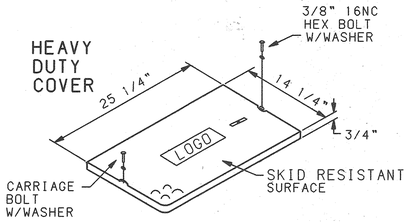
NOTE: THE CONCRETE COLLAR FOR THE PULL BOXES WILL BE CONSIDERED INCIDENTAL TO THE TO THE PULL BOX BID ITEMS.

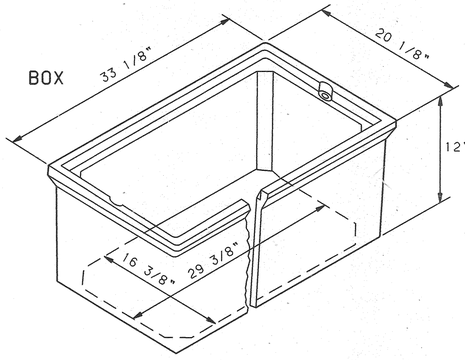


SECTION A-A

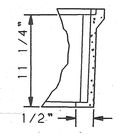
TRAFFIC SIGNAL PULL BOX (TYPICAL)
NEW CONDUIT INSTALLATION

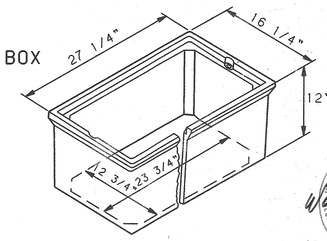






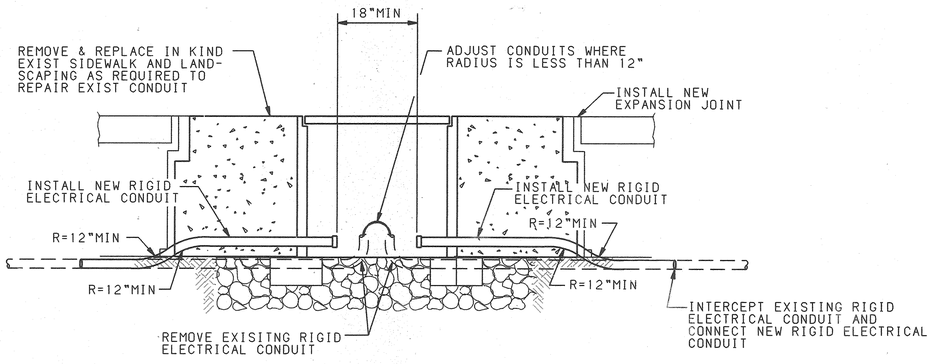
LARGE PULL BOX





STANDARD PULL BOX

PULL BOX DETAILS



TRAFFIC SIGNAL PULL BOX (TYPICAL)
RETROFIT INSTALLATION

NOTES FOR HEAVY DUTY REINFORCED POLYMER MORTAR PULL BOXES AND COVERS

1. MATERIAL TO BE AN AGGREGATE CONSISTING OF SAND AND GRAVEL BOUND TOGETHER WITH A POLYMER AND REINFORCED WITH A HEAVY WEAVE FIBERGLASS. THE MATERIAL MUST HAVE THE FOLLOWING MECHANICAL PROPERTIES: COMPRESSIVE STRENGTH-11,000 PSI, TENSILE STRENGTH-1700 PSI, FLEXURAL STRENGTH-7500 PSI.
2. ALL PULL BOX COVERS SHALL BE HEAVY DUTY REINFORCED POLYMER MORTAR, HAVING A SERVICE LOAD OF 15,000 LBS. OVER A 10" SQUARE (150 PSI). NO CONCRETE OR STEEL COVERS WILL BE ACCEPTABLE.
3. ELECTRICAL PULL BOX (SMALL) SHALL BE A HEAVY DUTY REINFORCED POLYMER MORTAR PULL BOX AND COVER MEASURING 12-7/8"x12-7/8"x3/4".

AS-BUILT INFORMATION

CONTRACTOR: Abo Underground Inc. DATE

WORK STAKED BY: AUT DATE 9/98
WORK INSPECTED BY: BH DATE 9/98
ACCEPTANCE BY: DATE
FIELD VERIFICATION BY: AUT DATE 9/98
DRAWINGS CORRECTED BY: BH DATE 9/98

MICRO-FILM INFORMATION

RECORDED BY: DATE
NO.

BENCH MARKS

ALBUQUERQUE ACS MONUMENT "3-H10" LOCATED NORTHEAST OF THE INTERSECTION OF UNSER BLVD & LADERA DR. THE STATION MARK IS A STANDARD ACS CAP SET FLUSH IN THE CONCRETE SURFACE OF THE SPILLWAY. ELEVATION=5193.38

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL

CHARLES W. TRASK, NEW MEXICO, 6876, REGISTERED PROFESSIONAL ENGINEER — 12-26-97

WILLIAM L. VREELAND, NEW MEXICO, 8151, REGISTERED PROFESSIONAL ENGINEER — 10/1/98

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	DATE 12-95
		DESIGNED BY BHI/COA	DATE 12-95
		DRAWN BY BHI/COA	DATE 12-95
		CHECKED BY BHI/COA	

RECORD DRAWING
DATE: 9-14-98

BOHANNAN-HUSTON INC.
ENGINEERS • PLANNERS • PHOTOGRAMMETRISTS • SURVEYORS • LANDSCAPE ARCHITECTS
ALBUQUERQUE LAS CRUCES SANTA FE

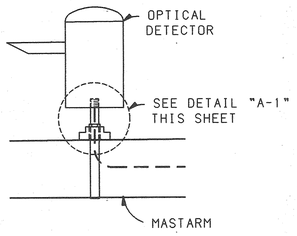
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

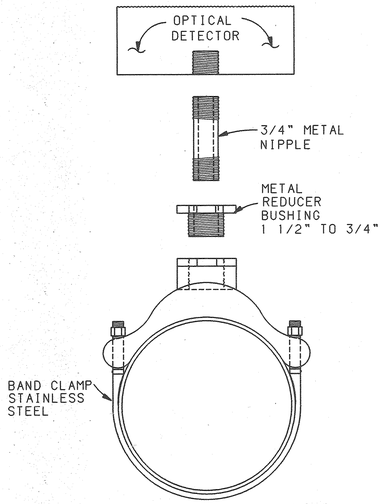
TITLE: TRAFFIC SIGNAL PULL BOX DETAILS

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION	MAR 3 1 1998		WASTE WATER		
HYDROLOGY	DESIGN REVIEW COMMITTEE		TRAF. OPER.		12/96

DRAWING NO. 5548.81 | MAP NO. H-9-Z | SHEET 12 OF 16

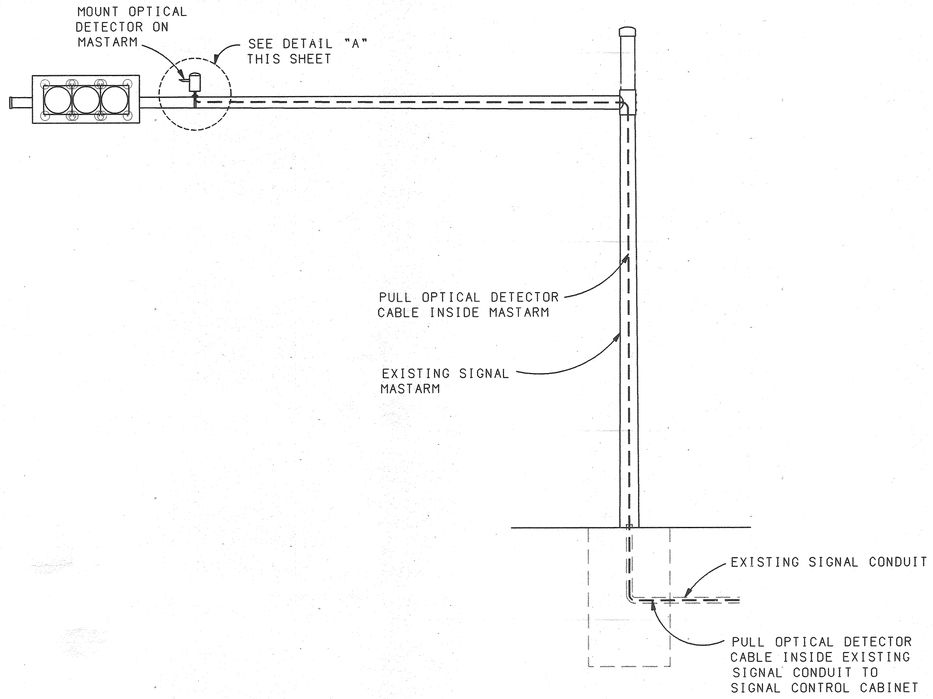
TRAN2:[T95378A2211.SHEETS.SIGNAL]COAPBDET.GRF





DETAIL "A-1"

OPTICAL DETECTOR MOUNTING - DETAIL "A"



TYPICAL OPTICAL DETECTOR INSTALLATION - MASTARM

NOTE

1. ALL OPTICAL DETECTOR MOUNTING HARDWARE SHALL CONFORM TO OPTICAL DETECTOR MANUFACTURER'S REQUIREMENTS.

RECORD DRAWING
DATE: 9-14-98

AS-BUILT INFORMATION
CONTRACTOR Alb. Underground, Inc. DATE
MARK STAKED BY AUT DATE 9/98
FIELD VERIFICATION BY BH DATE 9/98
ACCEPTANCE BY AUT DATE 9/98
DRAWINGS CONNECTED BY BH DATE 9/98
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

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ELEVATION=5193.38

SURVEY INFORMATION
FIELD NOTES
NO. | BY | DATE

ENGINEER'S SEAL
CHARLES W. TRASK III NEW MEXICO REGISTERED PROFESSIONAL ENGINEER (9878)
12-26-95

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGN	DESIGNED BY BHI/COA DATE 12-95
			DRAWN BY BHI/COA DATE 12-95
			CHECKED BY BHI/COA DATE 12-95

BOHANNAN-HUSTON INC.
ENGINEERS • PLANNERS • PHOTOGRAMMETRISTS • SURVEYORS • LANDSCAPE ARCHITECTS
ALBUQUERQUE LAS CRUCES SANTA FE

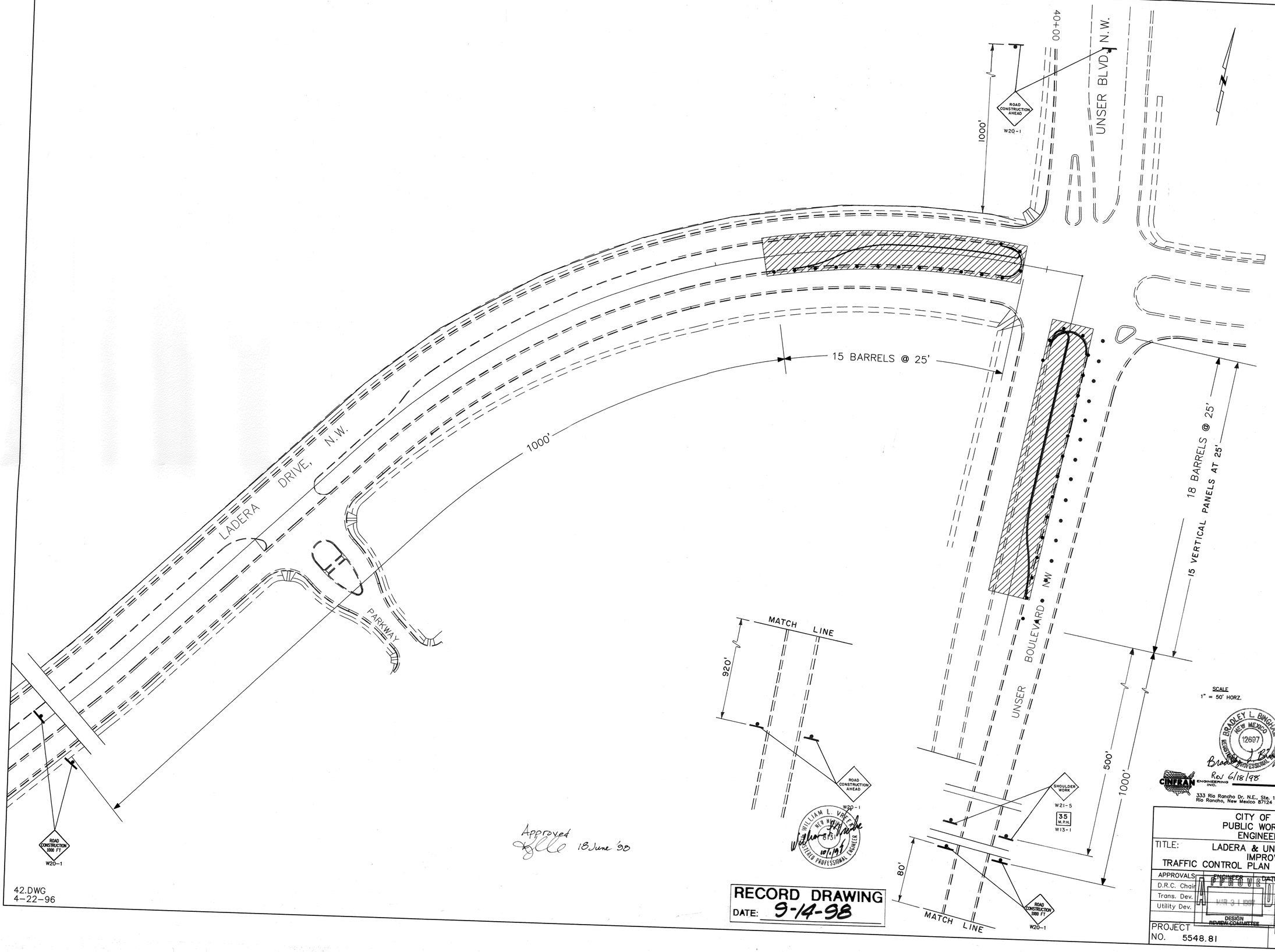
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: TRAFFIC SIGNAL
OPTICAL DETECTION INSTALLATION DETAILS

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN	APPROVED MAR 31 1997 DESIGN REVIEW COMMITTEE		WATER		
TRANSPORTATION			WASTE WATER		
HYDROLOGY			TRAF. OPER.		12-26-95

DRAWING NO. 5548.81 | MAP NO. H-9-Z | SHEET 13 OF 16

TRAN2:CT95378A2211.SHEETS.SIGNAL_OPTINST.GRF



42.DWG
4-22-96

Approved
18 June '98

RECORD DRAWING
DATE: 9-14-98

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

BENCH MARKS
ALBUQUERQUE ACS MONUMENT "3-H10" LOCATED NORTHEAST OF THE INTER-SECTION OF UNSER BLVD. & LADERA DR. THE STATION MARK IS A STANDARD ACS CAP SET FLUSH IN THE CONCRETE SURFACE OF THE SPILLWAY.
ELEVATION = 5193.38

AS BUILT INFORMATION
CONTRACTOR Alb. Underground, Inc.
WORK STAKED BY AUT DATE 9/98
INSPECTION ACCEPTANCE BY BH DATE 9/98
FIELD VERIFICATION BY AUT DATE 9/98
DRAWINGS CORRECTED BY BH DATE 9/98
MICRO-FILM INFORMATION
RECORDED BY DATE
NO.

ENGINEER'S SEAL
BRADLEY L. BINGHAM NEW MEXICO 12697 REGISTERED PROFESSIONAL ENGINEER
Bradley L. Bingham
5/23/96

NO.	DATE	REMARKS	BY
		REVISIONS	
		DESIGNED	BLB
1	3-19-96	DRAWN BY	BLB
2	3-19-96	CHECKED BY	WLB
3	3-19-96		

SCALE
1" = 50' HORZ.

BRADLEY L. BINGHAM NEW MEXICO 12697 REGISTERED PROFESSIONAL ENGINEER
Bradley L. Bingham
Rev 6/18/98

CINFRAN ENGINEERING INC.
333 Rio Rancho Dr. N.E. Ste. 101
Rio Rancho, New Mexico 87124

WILLIAM L. VREELAND NEW MEXICO 8131 REGISTERED PROFESSIONAL ENGINEER
6/1/98

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: LADERA & UNSER INTERSECTION IMPROVEMENTS
TRAFFIC CONTROL PLAN UNSER/LADERA INTERSECTION

APPROVALS	ENGINEER	DATE
D.R.C. Chair	APPROVED	
Trans. Dev.	MAR 31 1998	
Utility Dev.	DESIGN REVIEW COMMITTEE	

APPROVALS	ENGINEER	DATE

PROJECT NO. 5548.81
MAP NO. H-9-Z
SHEET 14 OF 16

CONSTRUCTION TRAFFIC CONTROL GENERAL NOTES

1. CONTRACTOR MUST OBTAIN FROM CONSTRUCTION COORDINATION AN EXCAVATION/BARRICADING PERMIT BEFORE ENGAGING IN ANY CONSTRUCTION, MAINTENANCE OR REPAIR WORK IN ANY OF THE CITY OF ALBUQUERQUE'S RIGHTS-OF-WAY. EMERGENCY WORK THAT WOULD PRESERVE LIFE OR PROPERTY IS EXCLUDED WITH THE UNDERSTANDING, THAT A PERMIT SHALL BE OBTAINED WITHIN 24 TO 48 HOURS.

2. CONTRACTOR SHALL AT THE TIME OF PERMIT REQUEST, SUBMIT FOR APPROVAL BY CONSTRUCTION COORDINATION, A TRAFFIC CONTROL PLAN DETAILING ALL EXISTING TOPOGRAPHY SUCH AS LANE WIDTHS, DRIVEWAYS, AND BUSINESS/RESIDENTIAL ACCESSES. THE TRAFFIC CONTROL PLAN SHALL INCLUDE ALL PHASES OF WORK AND SCHEDULES INVOLVED IN THE CONSTRUCTION PROJECT. ANY SEPARATE PHASES OF A CONSTRUCTION PROJECT SHALL BE GIVEN AN INDIVIDUAL PERMIT EACH. BLANKET PERMITS WILL NOT BE ISSUED.

3. THESE TYPICAL TRAFFIC CONTROL PLANS DO NOT REFLECT THE EXISTING TOPOGRAPHY SUCH AS DRIVEWAYS, LANE WIDTHS, AND BUSINESS/RESIDENTIAL ACCESSES. EVERY LOCATION THAT REQUIRES CONSTRUCTION TRAFFIC CONTROL SHALL HAVE A DETAILED TRAFFIC CONTROL PLAN SHOWING ALL EXISTING TOPOGRAPHY.

4. CONSTRUCTION SHALL NOT BEGIN UNLESS A TRAFFIC CONTROL PLAN HAS BEEN APPROVED AND VERIFIED BY CONSTRUCTION COORDINATION.

5. CONSTRUCTION COORDINATION SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY TRAFFIC CONTROL CHANGES NEEDED BY CONTRACTOR, THAT WERE NOT PREVIOUSLY APPROVED. THESE TRAFFIC CONTROL CHANGES SHALL BE REQUESTED IN WRITING ACCOMPANIED WITH A TRAFFIC CONTROL PLAN REFLECTING SUCH CHANGES.

6. ALL CONSTRUCTION TRAFFIC CONTROL DEVICES SHALL COMPLY TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL, SERVICE AND MAINTAIN ALL TRAFFIC CONTROL DEVICES. TRAFFIC CONTROL DEVICES SHALL NOT BE REMOVED OR ALTERED IN ANY WAY WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION, PER SECTION 6A-4 OF THE MUTCD, LATEST EDITION.

7. THE CONSTRUCTION TRAFFIC CONTROL INITIAL SET-UP SHALL BE BY AN AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED WORKSITE TRAFFIC SUPERVISOR. THE MAINTENANCE AND SERVICING SHALL ALSO BE DONE BY AN ATSSA CERTIFIED WORKSITE TRAFFIC SUPERVISOR OR EQUIVALENT.

8. CONTRACTOR IS RESPONSIBLE TO MAINTAIN AND SERVICE ALL TRAFFIC CONTROL DEVICES 24 HOURS A DAY, 7 DAYS A WEEK THROUGHOUT LENGTH OF PROJECT. CONTRACTOR IS RESPONSIBLE THAT ALL TRAFFIC CONTROL DEVICES COMPLY WITH THE MUTCD, LATEST EDITION.

9. ALL ADVANCE WARNING SIGNS SHALL BE DOUBLE INDICATED WHENEVER THERE ARE MULTI-LANE TRAFFIC IN ANY ONE GIVEN DIRECTION AND THERE IS SUFFICIENT MEDIAN SPACE.

10. ALL BARRICADES IN ALL TAPERS AND TANGENTS SHALL BE PLACED APART, A DISTANCE MEASURED IN FEET, EQUAL TO THAT OF THE POSTED SPEED LIMIT. NO EXCEPTIONS UNLESS APPROVED BY CONSTRUCTION COORDINATION PER MUTCD SECTION 6A-4.

11. CONTRACTOR SHALL NOT BEGIN WORK BEFORE 8:30 A.M. OR END WORK AFTER 4:00 P.M. WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION.

12. CONTRACTOR IS RESPONSIBLE TO PROVIDE CONSTRUCTION COORDINATION, A WEEKLY LOG OF DAILY INSPECTIONS OF BARRICADE AND MAINTENANCE SCHEDULES ON PROJECTS THAT ARE OVER ONE WEEK DURATION.

13. EQUIPMENT OR MATERIALS SHALL NOT BE STORED WITHIN 15 FEET OF A TRAVELLED TRAFFIC LANE DURING NON-WORKING HOURS WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION.

14. CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFE AND ADEQUATE MEANS OF CHANNELIZING PEDESTRIAN TRAFFIC AROUND AND THROUGH THE CONSTRUCTION AREA.

15. CONTRACTOR IS RESPONSIBLE FOR OBLITERATION OF ANY CONFLICTING STRIPING AND RESPONSIBLE FOR ALL TEMPORARY STRIPING.

16. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL FACILITIES, BUSINESSES AND/OR RESIDENTS AT ALL TIMES.

17. CONTRACTOR SHALL PROVIDE ACCESS SIGNS FOR BUSINESSES LOCATED WITHIN THE CONSTRUCTION AREA UNDER THE SUPERVISION OF CONSTRUCTION COORDINATION. EACH ACCESS SIGN SHALL HAVE 5 INCH, WHITE OPAQUE LETTERING ON BLUE REFLECTORIZED BACKGROUND. ACCESS SIGNS SHALL BE CONSIDERED INCIDENTAL TO THE BID AND NOT PART OF THE CONTRACT UNLESS OTHERWISE STATED. NO MORE THAN 3 BUSINESSES SHALL BE LISTED ON A ACCESS SIGN. SHOPPING CENTERS AND MALLS SHALL BE LISTED AS SUCH.

18. ALL ADVANCE WARNING SIGNS SHALL MEET THE MINIMUM REFLECTIVE INTENSITY REQUIREMENTS SET FORTH BY THE CITY OF ALBUQUERQUE. CONSTRUCTION COORDINATION SHALL DETERMINE ALL REQUIREMENTS AND APPROVE OR DISAPPROVE ANY ADVANCE WARNING SIGN PER SECTION 6A-4 OF THE MUTCD, LATEST EDITION.

19. 24 HOURS PRIOR TO OCCUPYING OR CLOSING OF A RIGHT-OF-WAY, CONTRACTOR SHALL NOTIFY: POLICE, FIRE DEPARTMENT, SCHOOLS, HOSPITALS, TRANSIT AUTHORITY, BUSINESSES AND/OR RESIDENTS THAT WILL BE AFFECTED BY THE CONSTRUCTION.

20. ANY FIELD ADJUSTMENTS SHALL BE APPROVED BY CONSTRUCTION COORDINATION.

21. EXCAVATIONS SHALL BE PLATED, TEMPORARILY PATCHED OR RESURFACED PRIOR TO OPENING OF TRAFFIC. A MINIMUM OF 11 FEET SHALL BE PROVIDED FOR TRAFFIC IN ANY GIVEN DIRECTION. CONTRACTOR IS RESPONSIBLE FOR ANY WORK INVOLVED IN SATISFYING THESE REQUIREMENTS.

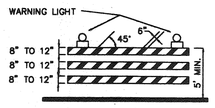
22. CONTRACTOR SHALL AT ALL TIMES COMPLY WITH THE FOLLOWING:
    1. STANDARDS AND REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
    2. THE CITY OF ALBUQUERQUE TRAFFIC CODE, LATEST EDITION.
    3. SECTION 19 OF THE CITY OF ALBUQUERQUE'S STANDARD SPECIFICATIONS FOR PUBLIC WORK CONSTRUCTION, AS WELL AS OTHER SECTIONS.

23. FAILURE TO COMPLY WITH ANY OF THE ABOVE MENTIONED, WILL BE ADEQUATE CAUSE TO CEASE ALL WORK ON ANY CONSTRUCTION PROJECT. WORK WILL NOT RESUME UNTIL ALL REQUIREMENTS ARE ADDRESSED AND APPROVED BY CONSTRUCTION COORDINATION.

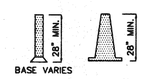
24. ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN NEW-CLEAN CONDITION. WASHING OF EQUIPMENT IS INCIDENTAL TO IT'S PLACEMENT AND MAINTENANCE.

25. TRAFFIC CONTROL STANDARDS APPLY ONLY WHERE THE CONSTRUCTION TRAFFIC CONTROL PLANS ARE NOT SPECIFIC.

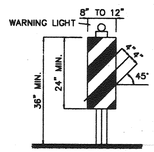
PROJECT CONSTRUCTION TRAFFIC CONTROL GENERAL NOTES



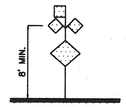
TYPE III BARRICADE



CONES



VERTICAL PANEL

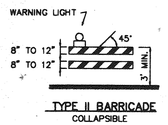


HIGH LEVEL WARNING DEVICE

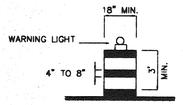
LEGEND

- WORK AREA
- BARRICADE – TYPE I, TYPE II, OR BARREL
- BARRICADE – TYPE III
- X VERTICAL PANEL
- WARNING SIGN
- D DISTANCE BETWEEN SIGNS – A DISTANCE MEASURED IN FEET EQUAL TO A VALUE OF TEN TIMES THE SPEED LIMIT OF THE STREET
- FLAGMAN POSITION
- S SPACING BETWEEN BARRICADES– A DISTANCE MEASURED IN FEET EQUAL TO THE SPEED LIMIT OF THE STREET
- L TAPER LENGTH – SEE CHART BELOW

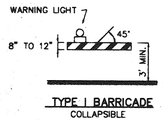
THE TANGENT LENGTH IS EQUAL TO THE TAPER LENGTH FOR A GIVEN STREET.



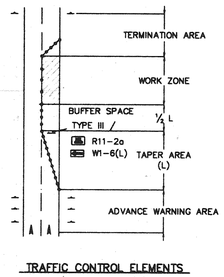
TYPE II BARRICADE
COLLAPSIBLE



BARREL



TYPE I BARRICADE
COLLAPSIBLE



TRAFFIC CONTROL ELEMENTS

TAPER REQUIREMENTS

SPEED LIMIT (MPH)	TAPER LENGTH (FEET) 10' LANE	11' LANE	12' LANE	MINIMUM NUMBER OF DEVICES FOR TAPER	MAXIMUM DEVICE SPACING IN FEET ALONG TAPER	AFTER TAPER
20	70	75	80	5	20	20
25	105	115	125	6	25	25
30	150	165	180	7	30	30
35	205	225	245	8	35	35
40	270	295	320	9	40	40
45	450	495	540	13	45	45
50	500	550	600	13	50	50
55	550	605	660	13	55	55

RECOMMENDED SIGN SPACING FOR ADVANCE WARNING SIGN SERIES

SPEED MILES PER HOUR	MINIMUM DISTANCE IN FEET BETWEEN SIGNS	FROM LAST SIGN TO TAPER
0-20	10 X SPEED LIMIT	10 X SPEED LIMIT
25-30	10 X SPEED LIMIT	10 X SPEED LIMIT
30-35	10 X SPEED LIMIT	10 X SPEED LIMIT
40-45	10 X SPEED LIMIT	10 X SPEED LIMIT
50-60	10 X SPEED LIMIT	10 X SPEED LIMIT

TAPER CRITERIA

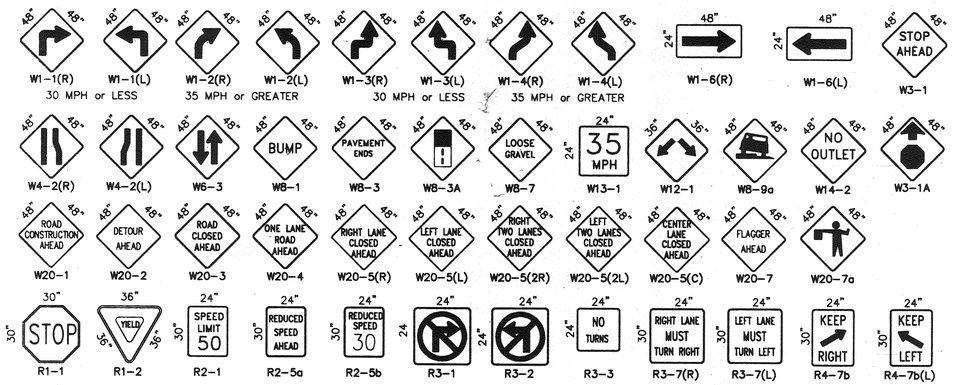
TYPE OF TAPER	TAPER LENGTH
UPSTREAM TAPER:	
MERGING TAPER	L MINIMUM
SHIFTING TAPER	1/2 L MINIMUM
SHOULDER TAPER	1/3 L MINIMUM
TWO-WAY TRAFFIC TAPER	100 FEET MAXIMUM
DOWNSTREAM TAPERS	100 FEET PER LANE

TAPER LENGTH COMPUTATION

SPEED LIMIT	
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR GREATER	$L = W \times S$

L = TAPER LENGTH
W = WIDTH OF OFFSET IN FEET
S = POSTED SPEED OR OFF-PEAK 85-PERCENTILE SPEED IN MPH

SIGN FACE DETAILS



ALL CONSTRUCTION WARNING SIGNS SHALL HAVE A BLACK LEGEND ON A ORANGE BACKGROUND.

ALL ADVANCE WARNING SIGNS SHALL BE A MINIMUM OF FORTY EIGHT (48) INCHES BY FORTY EIGHT (48) INCHES IN SIZE AND SHALL HAVE ONE WARNING LIGHT.

RECORD DRAWING
DATE: 9-14-98

AS BUILT INFORMATION
CONTRACTOR Alb. Concrete Structures DATE
WORK STAKED BY AUT DATE 9/98
ACCEPTANCE BY BH DATE 9/98
VERIFICATION BY AUT DATE 9/98
DRAWING CORRECTIONS BY BH DATE 9/98
MICRO-FILM INFORMATION
RECORDED BY DATE

BENCH MARKS
ALBUQUERQUE ACS MONUMENT "3-H10"
LOCATED NORTHEAST OF THE INTER-SECTION OF UNSER BLVD. & LADERA DR. THE STATION MARK IS A STANDARD ACS CAP SET FLUSH IN THE CONCRETE SURFACE OF THE SPILLWAY.
ELEVATION = 5193.38

SURVEY INFORMATION
FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL
REGISTERED PROFESSIONAL ENGINEER
RICHARD B. ROYBAL
STATE OF NEW MEXICO
5548
Richard B. Roybal

NO.	DATE	REMARKS REVISIONS DESIGN	BY
		DESIGNED BY RICARDO ROYBAL P.E. DATE AUG. 1992	
		DRAWN BY CADD,- A.F.V. DATE AUG. 1992	
		CHECKED BY DATE	

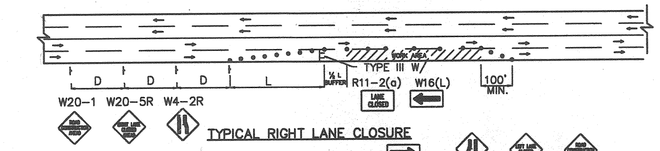
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE:
SIGNING AND CONSTRUCTION TRAFFIC CONTROL STANDARDS

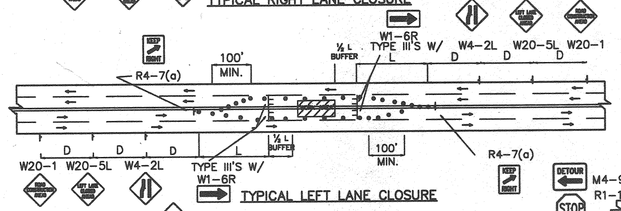
APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION			WASTE WATER		
HYDROLOGY					

PROJECT NO. 5548.81
MAP NO. H-9-Z
SHEET 15 OF 16

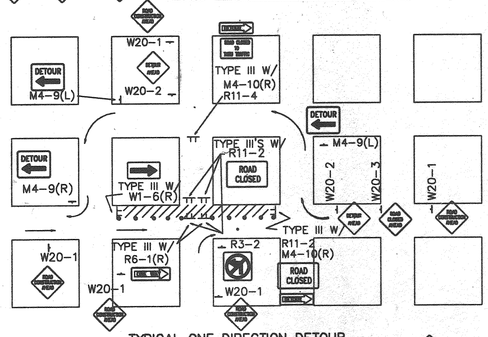
08-11-92
CITCSTD.DWG (1=1)



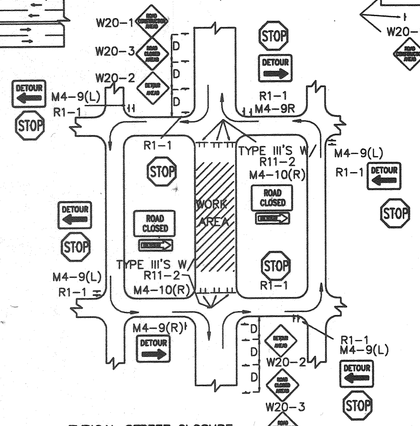
TYPICAL RIGHT LANE CLOSURE



TYPICAL LEFT LANE CLOSURE

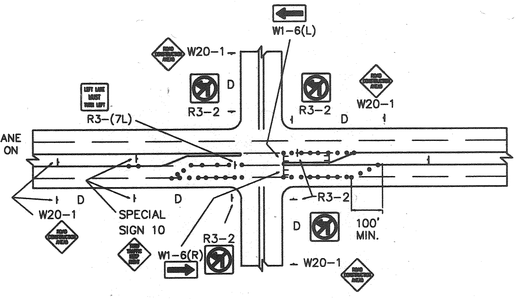


TYPICAL ONE DIRECTION DETOUR



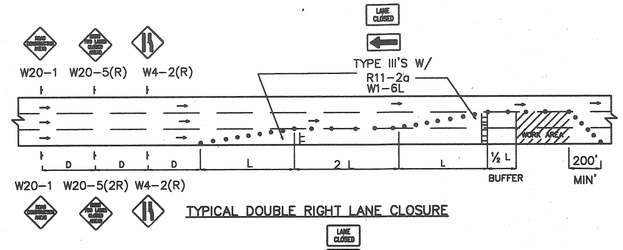
TYPICAL STREET CLOSURE

NOTE: (R1–1) BASED ON FIELD CONDITIONS.

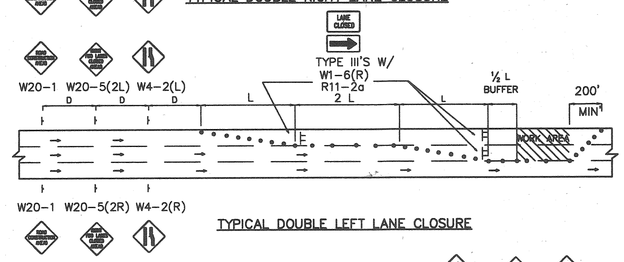


TYPICAL LANE CLOSURE AT INTERSECTION

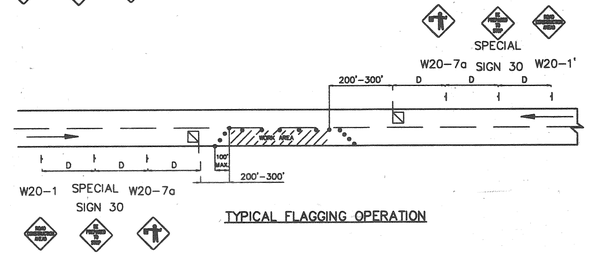
NOTE: DEPENDING ON WORK ZONE LOCATION



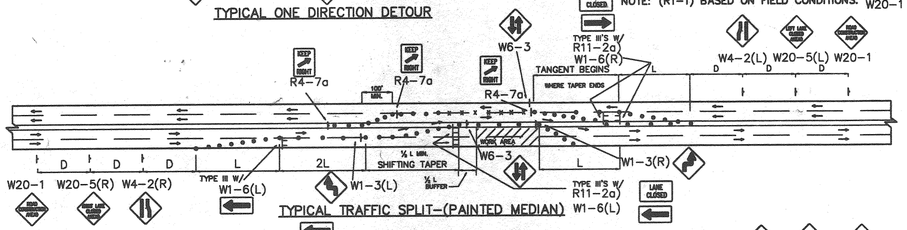
TYPICAL DOUBLE RIGHT LANE CLOSURE



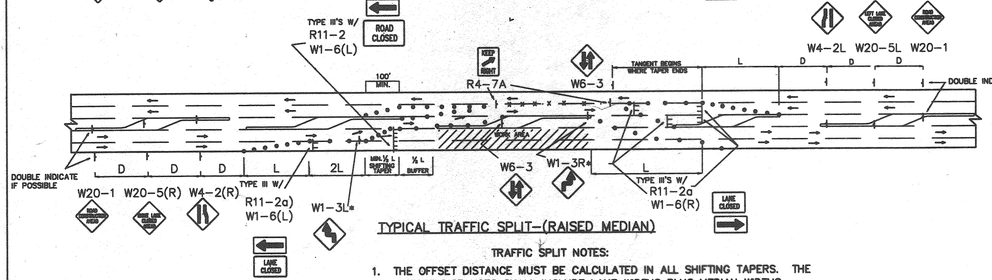
TYPICAL DOUBLE LEFT LANE CLOSURE



TYPICAL FLAGGING OPERATION



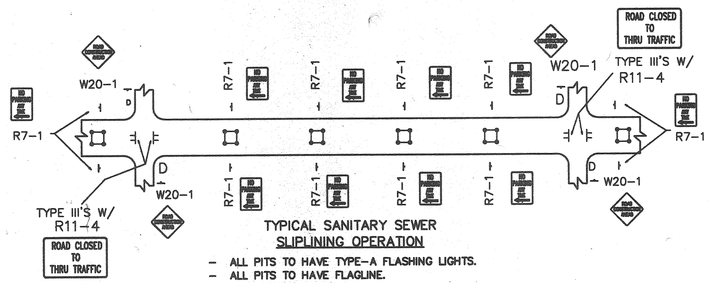
TYPICAL TRAFFIC SPLIT–(PAINTED MEDIAN)



TYPICAL TRAFFIC SPLIT–(RAISED MEDIAN)

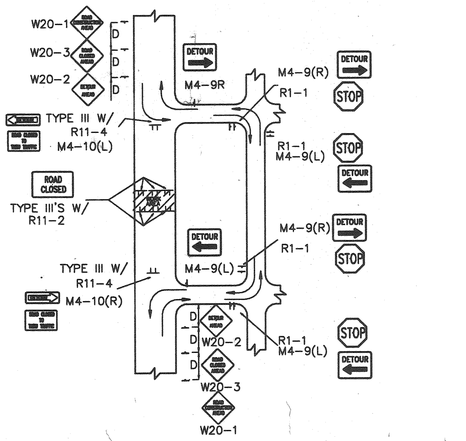
TRAFFIC SPLIT NOTES:

1. THE OFFSET DISTANCE MUST BE CALCULATED IN ALL SHIFTING TAPERS. THE OFFSET DISTANCES SHALL INCLUDE LANE WIDTHS PLUS MEDIAN WIDTHS.
2. ½ L IS MINIMUM DISTANCE FOR SHIFTING TAPERS.
3. REVERSE CURVES MAY BE IMPLEMENTED. ALL CURVE DATA SHALL BE CALCULATED.
4. MEDIAN REMOVAL SHALL BE REQUIRED IF ½ L OR REVERSE CURVE IS NOT SUFFICIENT. MEDIAN REMOVAL SHALL TAKE PLACE BEFORE SPLITS.
5. REDUCED SPEED MAY BE CONSIDERED.
6. * USE 1–3 FOR 30 MPH OR LESS, W1–4 FOR SPEED 35 MPH OR GREATER.



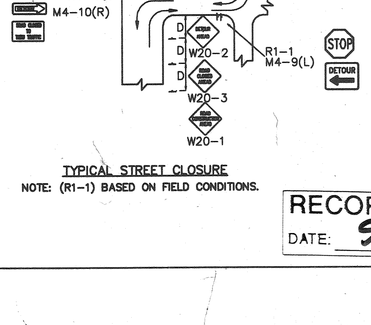
TYPICAL SANITARY SEWER SLIPLINING OPERATION

- ALL PITS TO HAVE TYPE–A FLASHING LIGHTS.
- ALL PITS TO HAVE FLAGLINE.



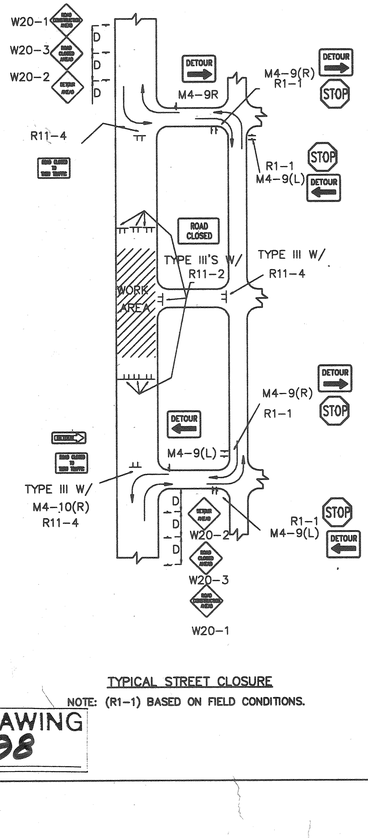
TYPICAL MID–BLOCK CLOSURE

NOTE: (R1–1) BASED ON FIELD CONDITIONS.



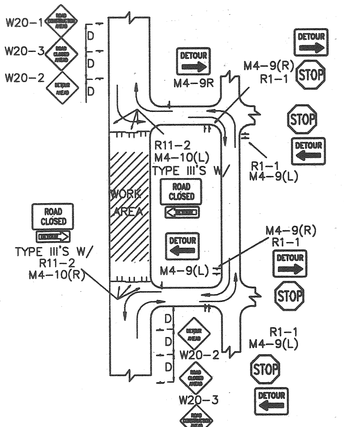
TYPICAL STREET CLOSURE

NOTE: (R1–1) BASED ON FIELD CONDITIONS.



TYPICAL STREET CLOSURE

NOTE: (R1–1) BASED ON FIELD CONDITIONS.



TYPICAL STREET CLOSURE

NOTE: (R1–1) BASED ON FIELD CONDITIONS.

RECORD DRAWING
DATE: 9-14-98

05-13-92
CTCSTD2.DWG

AS BUILT INFORMATION

CONTRACTOR	Alb. Underground, Inc.	DATE
WORK STAKED BY	AUI	DATE 9/98
ACCEPTANCE BY	BH	DATE 9/98
FIELD VERIFICATION BY	AUI	DATE 9/98
DRAWINGS CORRECTED BY	BH	DATE 9/98

MICRO-FILM INFORMATION

RECORDED BY: DATE:
NO.:

BENCH MARKS

ALBUQUERQUE ACS MONUMENT "3–H10" LOCATED NORTHEAST OF THE INTER–SECTION OF UNSER BLVD. & LADERA

DR. THE STATION MARK IS A STANDARD ACS CAP SET FLUSH IN THE CONCRETE SURFACE OF THE SPILLWAY.

ELEVATION = 5193.38

SURVEY INFORMATION

FIELD NOTES

NO.	BY	DATE

ENGINEER'S SEAL

RICARDO B. ROYBAL
NEW MEXICO
REGISTERED PROFESSIONAL ENGINEER

REMARKS

REVISIONS

NO.	DATE	BY

DESIGN

DESIGNED BY	RICARDO ROYBAL, P.E.	DATE NOV. 1991
DRAWN BY	C.A.D.D./WLB./A.F.V.	DATE NOV. 1991
CHECKED BY		DATE

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE:
TYPICAL TRAFFIC CONTROL & SIGNING EXAMPLES (REF. M.U.T.C.D.)

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION			WASTE WATER		
HYDROLOGY					

PROJECT NO.	MAP NO.	SHEET	OF
5548.81	H-9-Z	16	16