

PLANS FOR CONSTRUCTION OF

# RAINBO BREAD FIRE HYDRANTS IMPROVEMENTS

NOVEMBER, 1996

INDEX TO DRAWINGS

SHEET	TITLE
1	TITLE SHEET
2	OVERALL FIRE LINE PLAN
3	FIRE LINE PLAN AND PROFILES
4	TRAFFIC CONTROL PLAN

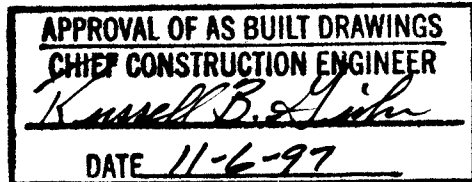
THESE DRAWINGS DO NOT INCLUDE NECESSARY COMPONENTS FOR THE CONSTRUCTION SAFETY WHICH SHALL REMAIN THE RESPONSIBILITY OF THE CONTRACTOR.

ALL IDEAS, DESIGNS, ARRANGEMENTS, AND PLANS INDICATED OR REPRESENTED BY THIS INSTRUMENT ARE OWNED BY AND THE PROPERTY OF BRASHER & LORENZ, INC., AND WERE CREATED AND DEVELOPED FOR USE ON AND IN CONNECTION WITH THE SPECIFIED PROJECT. THESE IDEAS, DESIGNS, ARRANGEMENTS OR PLANS SHALL NOT BE USED BY ANY PERSON, FIRM OR CORPORATION FOR ANY PURPOSE WHATSOEVER WITHOUT THE WRITTEN CONSENT OF BRASHER & LORENZ, INC.

CERTIFICATION OF AS-BUILT MEASUREMENTS

I, the undersigned, being a Professional Engineer in the State of New Mexico, do hereby certify that this drawing was prepared by me or under my supervision, and that the as-built information shown hereon is based on actual field measurements and inspection performed by Brasher & Lorenz, Inc.

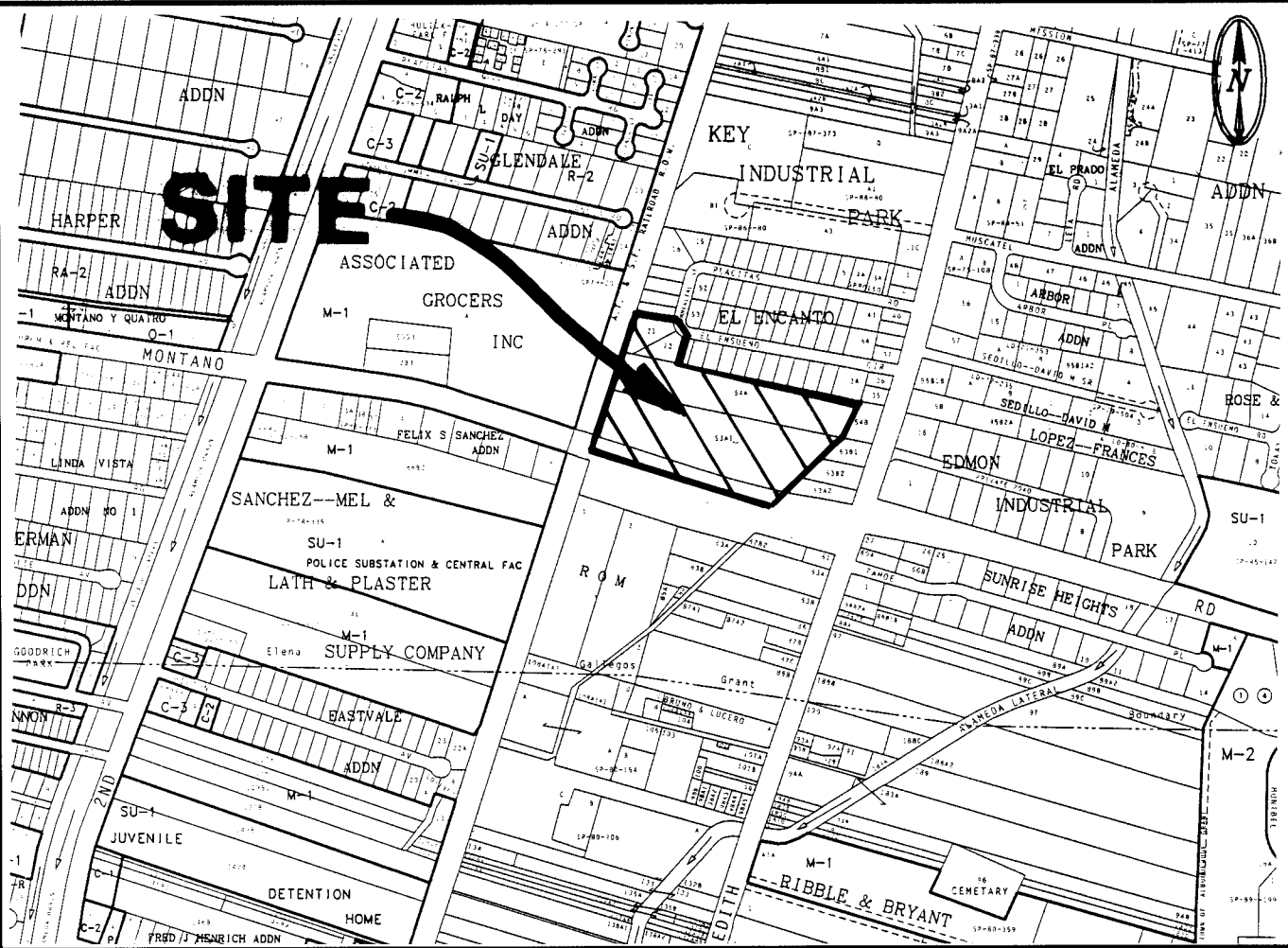
Paul Brasher, NMPE 7282



**BL** BRASHER & LORENZ, INC.  
Consulting Engineers  
2201 San Pedro NE Building 1, Suite 210  
Albuquerque, New Mexico 87110  
Ph: 505-888-8088 Fax: 505-888-8188

SCANNED BY  
BY LASON

© COPYRIGHT



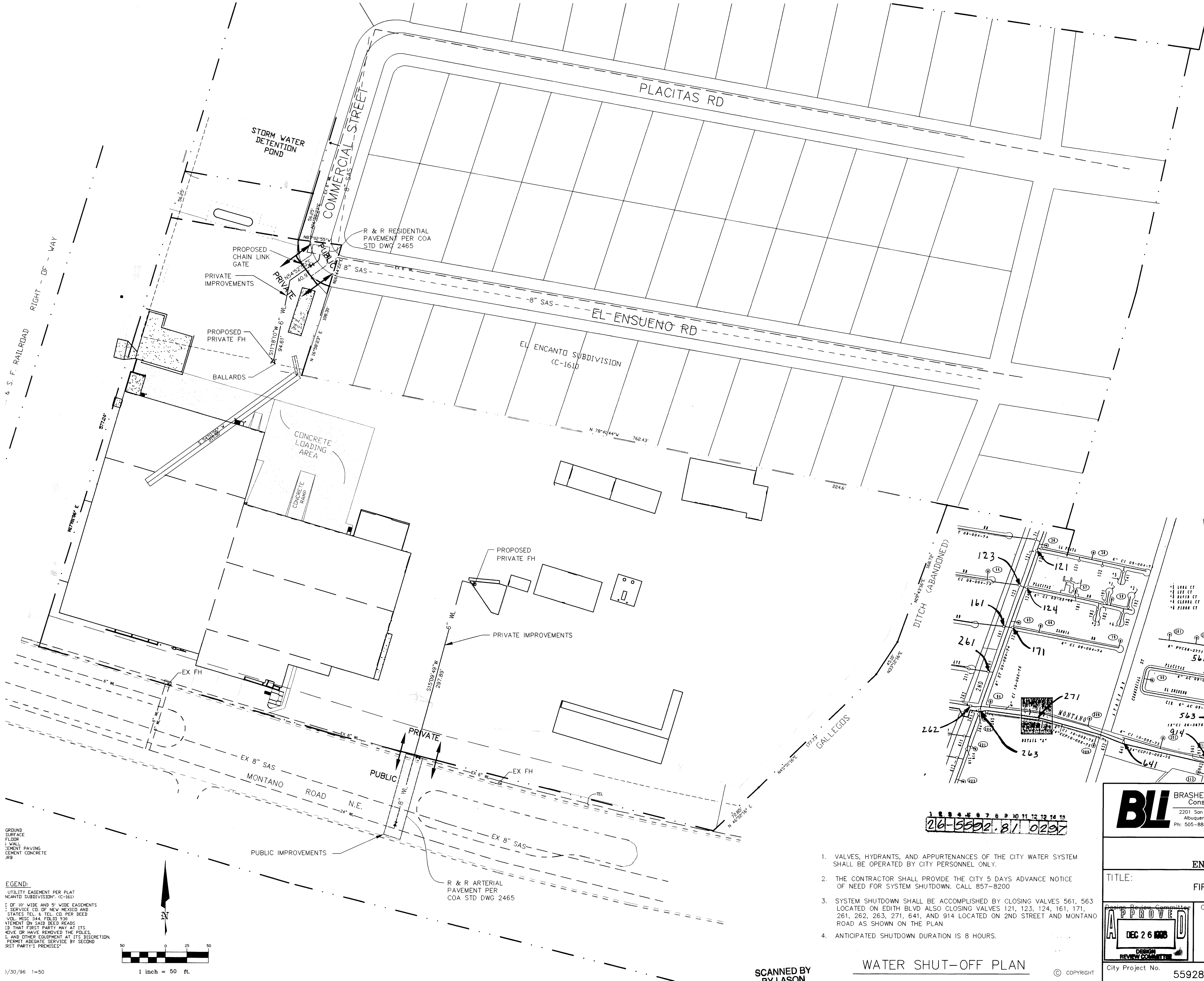
VICINITY MAP: F-15

SCALE: 1"=750'

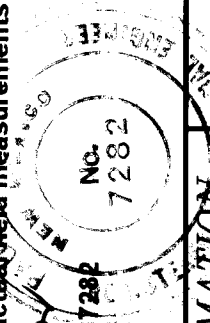
GENERAL NOTES:

- 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" (COA STD). THROUGH UPDATE NO 6.
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM, 260-1990, 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 SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMUM AMOUNT OF DELAY.
- IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS UNDERTAKEN NO FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THE CONTRACTOR SHALL INFORM HIMSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY HIS FAILURE TO LOCATE, IDENTIFY ANY AND ALL EXISTING UTILITIES, PIPE LINES, AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
- THE CONTRACTOR SHALL SECURE A "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.
- THE CONTRACTOR SHALL ASSIST THE ENGINEER/INSPECTOR IN THE RECORDING OF DATA ON ALL UTILITY LINES AND ACCESSORIES AS REQUIRED BY THE OWNERS FOR THE PREPARATION OF "RECORD DRAWINGS". THE CONTRACTOR SHALL NOT COVER UTILITY LINES AND ACCESSORIES UNTIL ALL DATA HAS BEEN RECORDED.
- REFERENCE MADE TO STANDARD DRAWINGS REFER TO ALBUQUERQUE STANDARD DRAWINGS.
- ELECTRONIC MARKER DISCS SHALL BE PLACED IN ACCORDANCE WITH SECTION 170 OF THE CITY OF ALBUQUERQUE, STANDARD SPECIFICATIONS, PUBLIC WORKS CONSTRUCTION.
- WATERLINE CONNECTIONS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY STD. DWG. 2301.
- WATER METERS ARE TO BE INSTALLED AT ALL SERVICES IN ACCORDANCE WITH CITY STD. DWG. 2362 AND 2363.
- ALL CONSTRUCTION WITHIN CITY RIGHT-OF-WAY OR EASEMENTS MUST BE DONE FROM APPROVED WORK ORDER DOCUMENTS FROM THE CITY OF ALBUQUERQUE AND PREPARED BY BRASHER & LORENZ, INC.
- AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING ANY WORK WITHIN CITY RIGHT-OF-WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR THIS PERMIT.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING, IN ADVANCE OF HIS CONSTRUCTION, IF OVERHEAD UTILITY LINES, SUPPORT STRUCTURES, POLES, GUYS, ETC. ARE AN OBSTRUCTION TO CONSTRUCTION OPERATIONS. IF ANY OBSTRUCTION TO CONSTRUCTION OPERATIONS IS EVIDENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE APPROPRIATE UTILITY OWNER TO REMOVE OR SUPPORT THE UTILITY OBSTRUCTION. ANY COST ASSOCIATED WITH THIS EFFORT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- CONTRACTOR IS TO SUPPORT AND MAINTAIN THE INTEGRITY OF ALL UNDERGROUND TELEPHONE, ELECTRIC CABLES, AND CABLE TELEVISION UTILITIES AT NO ADDITIONAL COST TO THE OWNER. CABLE IS TO BE SUPPORTED EVERY 15' (MINIMUM). CONTRACTOR SHALL COORDINATE WITH AND MAKE NECESSARY PAYMENT (IF ANY) TO UTILITY OWNER FOR DE-ENERGIZATION OF CABLES OR SUPPORT OF CABLES BY THE UTILITY OWNER.
- 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. THE CONTRACTOR SHALL NOTIFY THE BARRICADE ENGINEER (768-2551) PRIOR TO OCCUPYING AN INTERSECTION. SEE SECTION 19 OF THE SPECIFICATIONS.
- ALL STREET STRIPING ALTERED OR DESTROYED SHALL BE REPLACED WITH PLASTIC REFLECTORIZED PAVEMENT MARKINGS BY THE CONTRACTOR TO LOCATION AS EXISTING OR AS INDICATED ON THE PLANSET.
- ANY WORK OCCURRING IN AN ARTERIAL ROADWAY REQUIRES TWENTY-FOUR (24) HOUR CONSTRUCTION.

REV.	SHEETS	CITY	ENGINEER	DATE	USER	DEPARTMENT	DATE	USER	DEPARTMENT	DATE	
ENGINEERS' STAMP & SIGNATURE		APPROVALS		ENGINEER		DATE		*****			
		DRC Chairman		B. J. Brasher		12-26-96		APPROVED FOR CONSTRUCTION			
		Transportation		Paul T. Brasher		11-26-96					
		Water/Wastewater		B. J. Brasher		11-26-96					
		Hydrology		B. J. Brasher		11-26-96					
		Parks		B. J. Brasher		11-26-96					
Constr. Mngmt.		B. J. Brasher		11-26-96		11-26-96		City Engineer Date			
CITY PROJECT NO.		559281		SHEET		1		OF		4	



CERTIFICATION OF AS-BUILT MEASUREMENTS  
I, the undersigned, being a Professional Engineer in the State of New Mexico, do hereby certify that this drawing was prepared by me or under my supervision, and that the as-built information shown hereon is based on actual field measurements and inspection performed by Brasher & Lorenz, Inc.  
Paul Brasher, NMPE 7282



LEGEND:  
UTILITY EASEMENT PER PLAT  
NCANTO SUBDIVISION: (C-161)  
1. OF 10' WIDE AND 5' WIDE EASEMENTS  
2. SERVICES TO NEW MEXICO AND  
STATES TEL. & TEL. CO. PER DEED  
VOL. REC. 344, FILED 930  
ATTENTION ON SAID DEED READS  
SO THAT FIRST PARTY MAY AT ITS  
MOVE OR HAVE REMOVED THE POLES,  
S. AND OTHER EQUIPMENT AT ITS DISCRETION.  
PERMIT AGENCIES SERVICE BY SECOND  
FIRST PARTY'S PREMISES

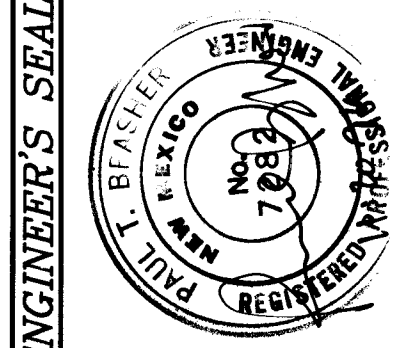
1 inch = 50 ft.

1. VALVES, HYDRANTS, AND APPURTENANCES OF THE CITY WATER SYSTEM SHALL BE OPERATED BY CITY PERSONNEL ONLY.
2. THE CONTRACTOR SHALL PROVIDE THE CITY 5 DAYS ADVANCE NOTICE OF NEED FOR SYSTEM SHUTDOWN. CALL 857-8200
3. SYSTEM SHUTDOWN SHALL BE ACCOMPLISHED BY CLOSING VALVES 561, 563, 261, 262, 263, 271, 641, AND 914 LOCATED ON 2ND STREET AND MONTANO ROAD AS SHOWN ON THE PLAN
4. ANTICIPATED SHUTDOWN DURATION IS 8 HOURS.

26-5592-81 0297

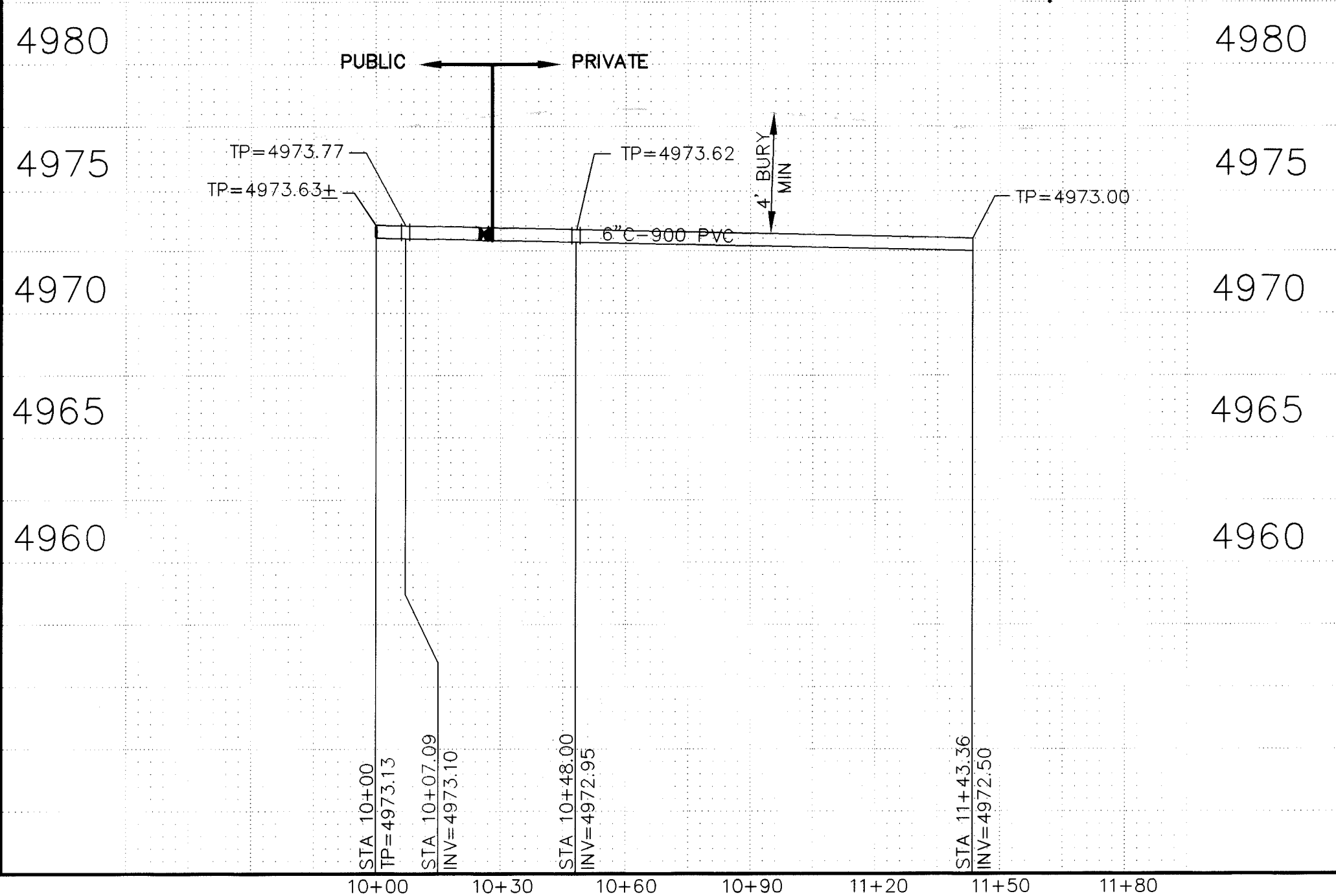
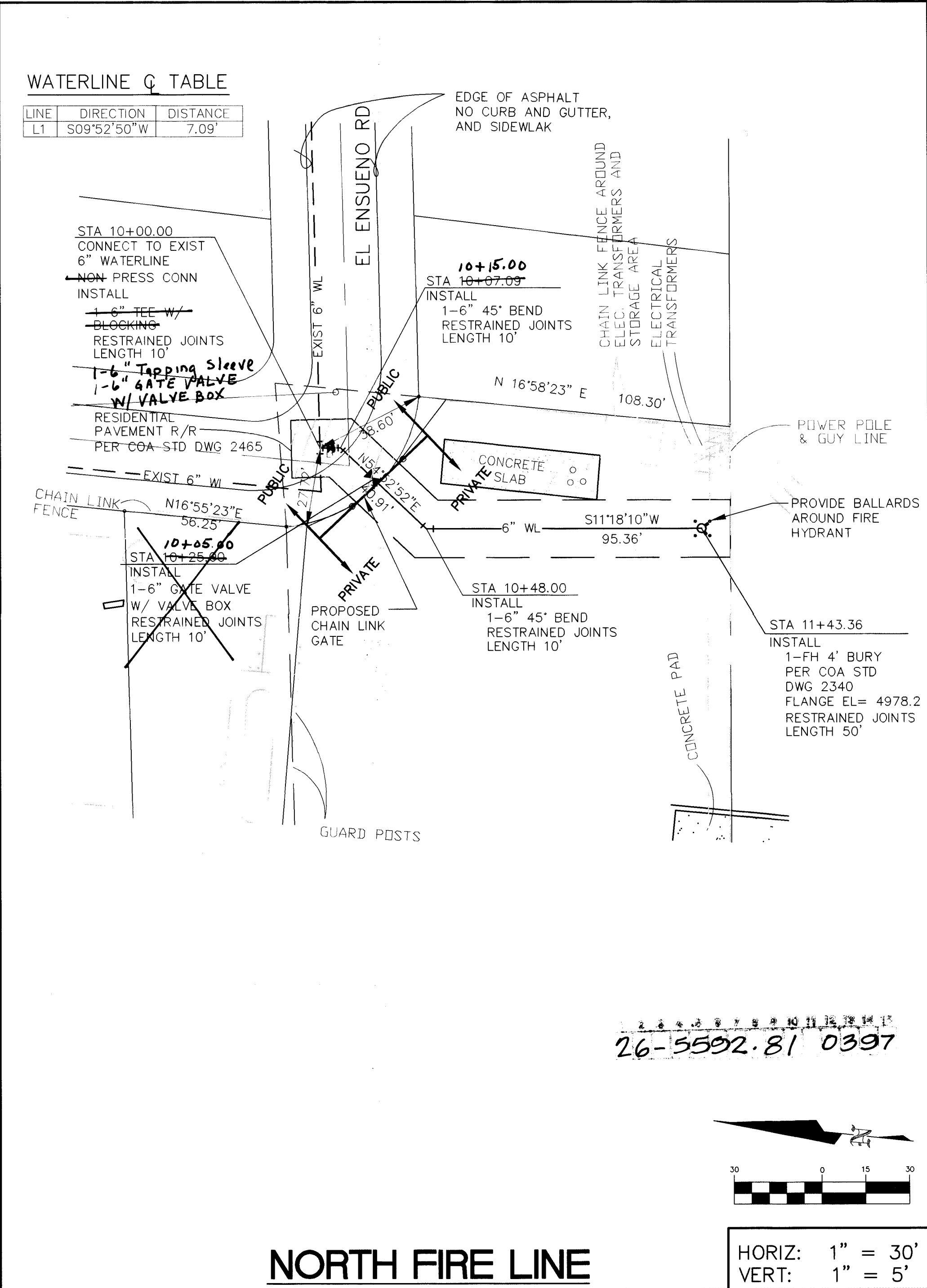
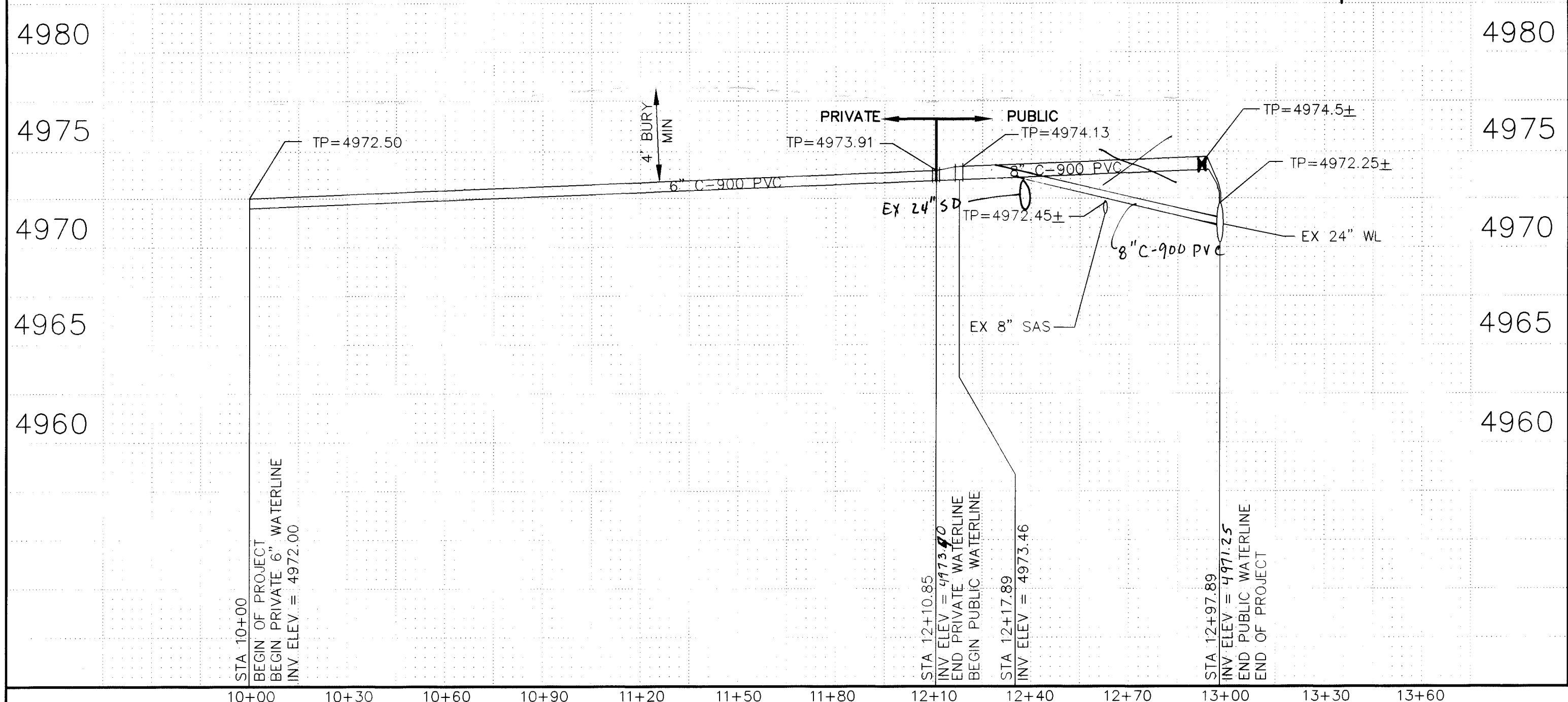
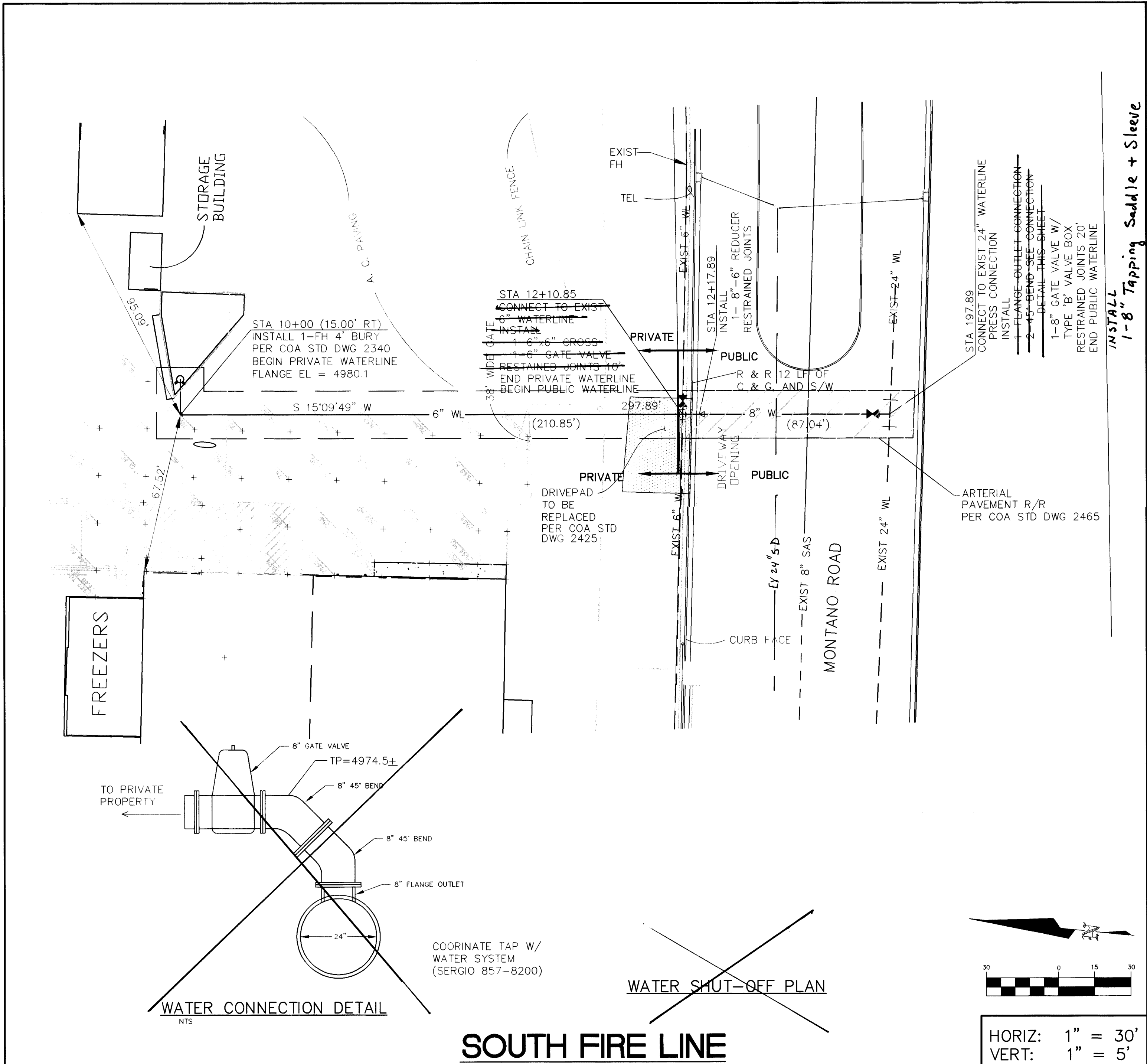
**BL** BRASHER & LORENZ, INC.  
Consulting Engineers  
2201 San Pedro NE Building 1, Suite 210  
Albuquerque, New Mexico 87110  
Ph: 505-888-6088 Fax: 505-888-6188

CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP	
TITLE: RAINBO BREAD FIRE HYDRANTS IMPROVEMENTS OVERALL FIRE LINE PLAN	
DESIGNED BY M.D.T.	DATE 10/96
DRAWN BY STAFF	DATE 10/96
CHECKED BY P.B.	DATE 10/96
City Project No.	Zone Map No.
559281	F-15
Sheet	Of
2	4



SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
NO.	BY	DATE	CITY OF ALBUQUERQUE BENCH MARK "D-438" ELEV 4975.380 LOCATED IN THE S.E. QUADRANT OF MONTANO RD. AND THE A.T.&S.F. RAILROAD TRACTS INTERSECTION. 42.5 FT EAST OF CL OF THE TRACTS & APPROX. 144 FT SOUTH OF CENTERLINE OF MONTANO RD. NE. & 1.1 FT WEST OF CHAIN LINK FENCE. THE TOP OF A STAINLESS STEEL ROD SET BENEATH A 5-1/2" NGS ACCESS COVER STAMPED "D-438 1984"	CONTRACTOR	DATE
				WORK BY	DATE
				INSPECTORS	DATE
				ACCEPTANCE BY	DATE
				VERIFICATION BY	DATE
				DRAWINGS BY	DATE
				REVISIONS BY	DATE
				MICRO-FILM INFORMATION	
				RECORDED BY	DATE





LEGEND

ITEM	EXISTING	PROPOSED
WATERLINE	6" W	6" W
SANITARY SEWER	8" SAS	8" SAS
STORM SEWER	36" SD	24" SD
FIRE HYDRANT		
VALVE		
WATER SERVICE (SINGLE)		
WATER SERVICE (DOUBLE)		
MANHOLE		
CURB		
DROP INLET		
OVERHEAD ELEC.	OHE	
UNDERGROUND ELEC.	UGT	
GAS, TEL, TV		
FLOWLINE ELEV.	FL 0.14	FL 0.14
TOP OF CURB ELEV.	99.3	99.31
SPOT ELEV.	x 16.7	16.7
SEWER SERVICE		
RIGHT OF WAY		
POWER POLE (GUYYED)	PP	
CHAIN LINK FENCE	X	
CENTERLINE		
RETAINING WALL		
TOP OF ASPHALT ELEV.	TA 16.2	TA 16.2

CERTIFICATION OF AS-BUILT MEASUREMENTS

I, the undersigned, being a Professional Engineer in the State of New Mexico, do hereby certify that this drawing was prepared by me or under my supervision and that the measurements shown hereon are based on actual field measurements and inspection performed by Brasher & Lorenz, Inc.

BRASHER & LORENZ, INC.

2201 San Pedro NE Building 1 Suite 210  
Albuquerque, New Mexico 87110  
Ph: 505-888-6088 Fax: 505-888-6188

AS BUILT INFORMATION

CONTRACTOR	WORK	DATE
BRASHER & LORENZ, INC.	AS BUILT	11/96

SURVEY INFORMATION

FIELD NOTES	DATE	BY

ENGINEER'S SEAL

PAUL T. BRASHER

REGISTERED PROFESSIONAL ENGINEER

7282

REVISIONS

NO.	DATE	REMARKS	BY

DESIGNED BY P.B.

DRAWN BY M.D.T.

CHECKED BY P.B.

DATE 11/96

DATE 11/96

DATE 11/96

CITY OF ALBUQUERQUE

PUBLIC WORKS DEPARTMENT

ENGINEERING DEVELOPMENT GROUP

TITLE:

RAINBO BREAD

FIRE HYDRANTS IMPROVEMENTS

FIRE LINE PLAN AND PROFILES

Design Review Committee

City Engineer Approval

Mo./Day/Yr.

Mo./Day/Yr.

APPROVE

DEC 26 1996

DESIGN

BRASHER & LORENZ, INC.

City Project No.

559281

Zone Map No.

F-15

Sheet

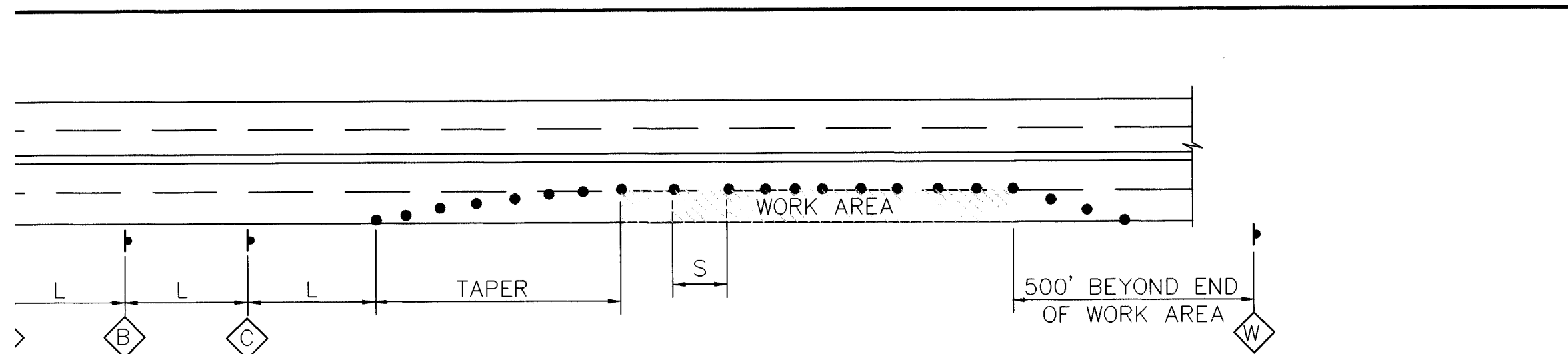
3

of

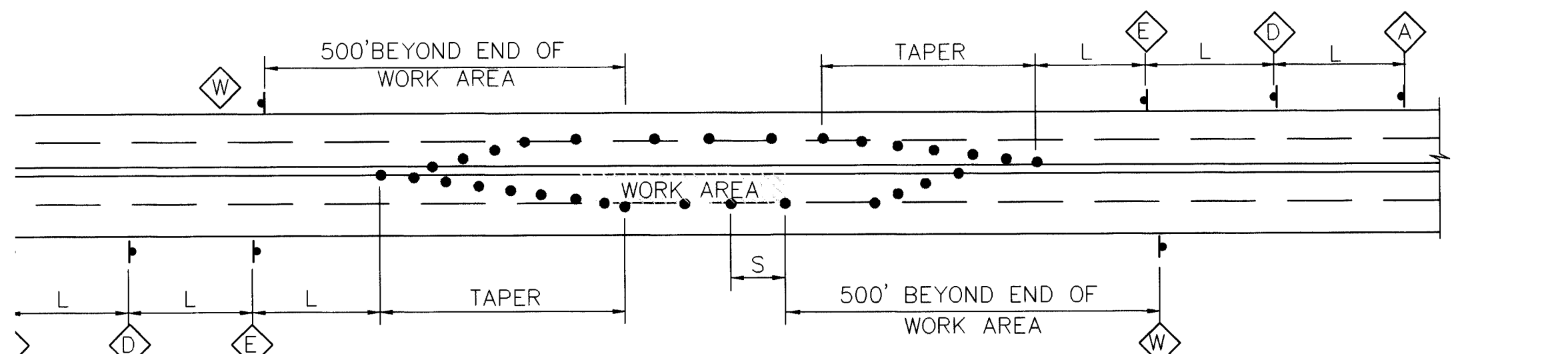
4

SCANNED BY LASON

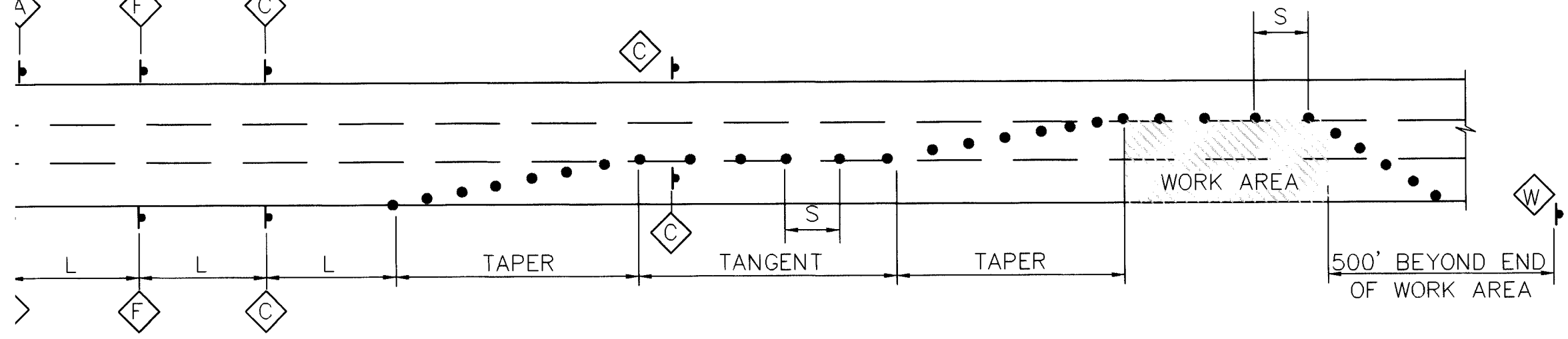
© COPYRIGHT



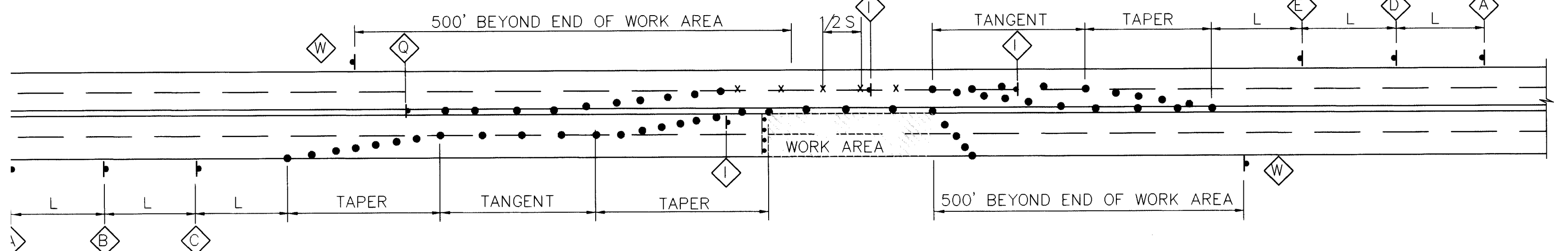
TYPICAL RIGHT LANE CLOSURE



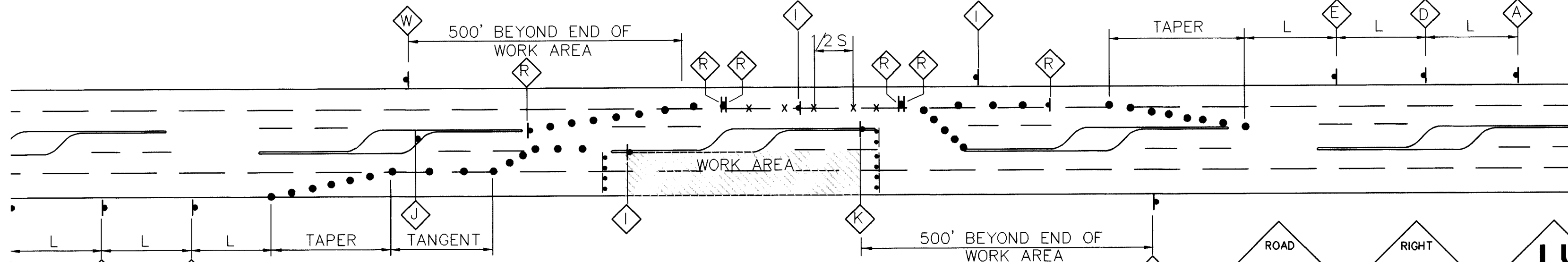
TYPICAL LEFT LANE CLOSURE



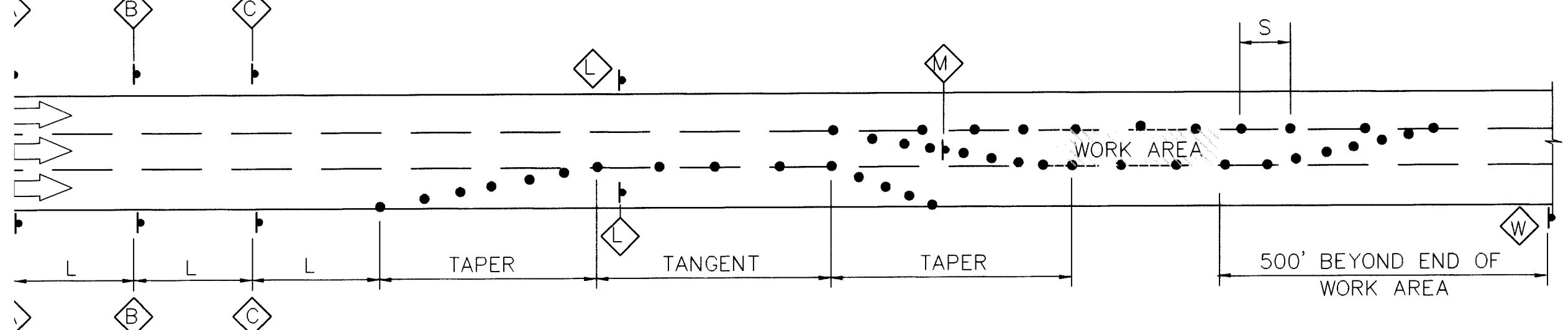
TYPICAL MULTI-LANE CLOSURE



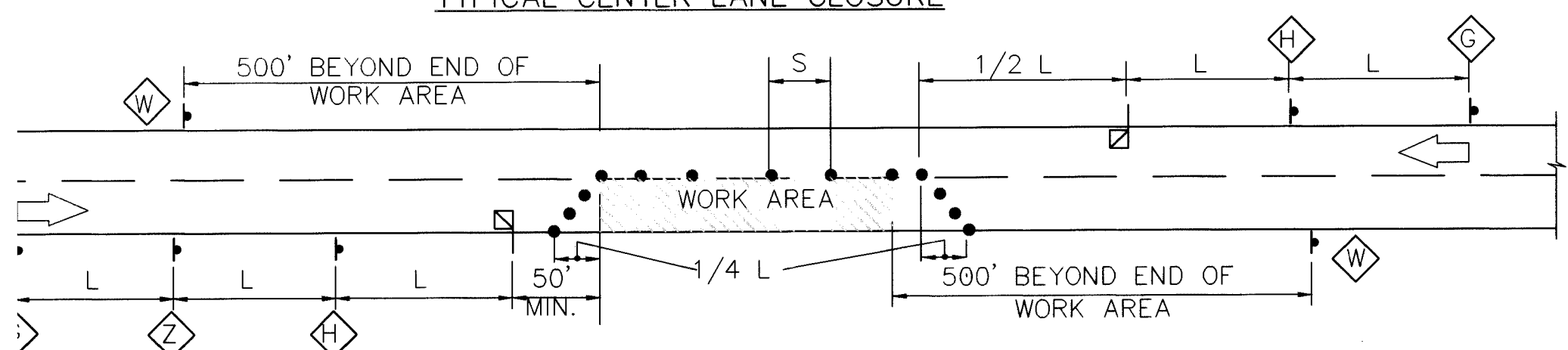
TYPICAL TRAFFIC SPLIT--(PAINTED MEDIAN)



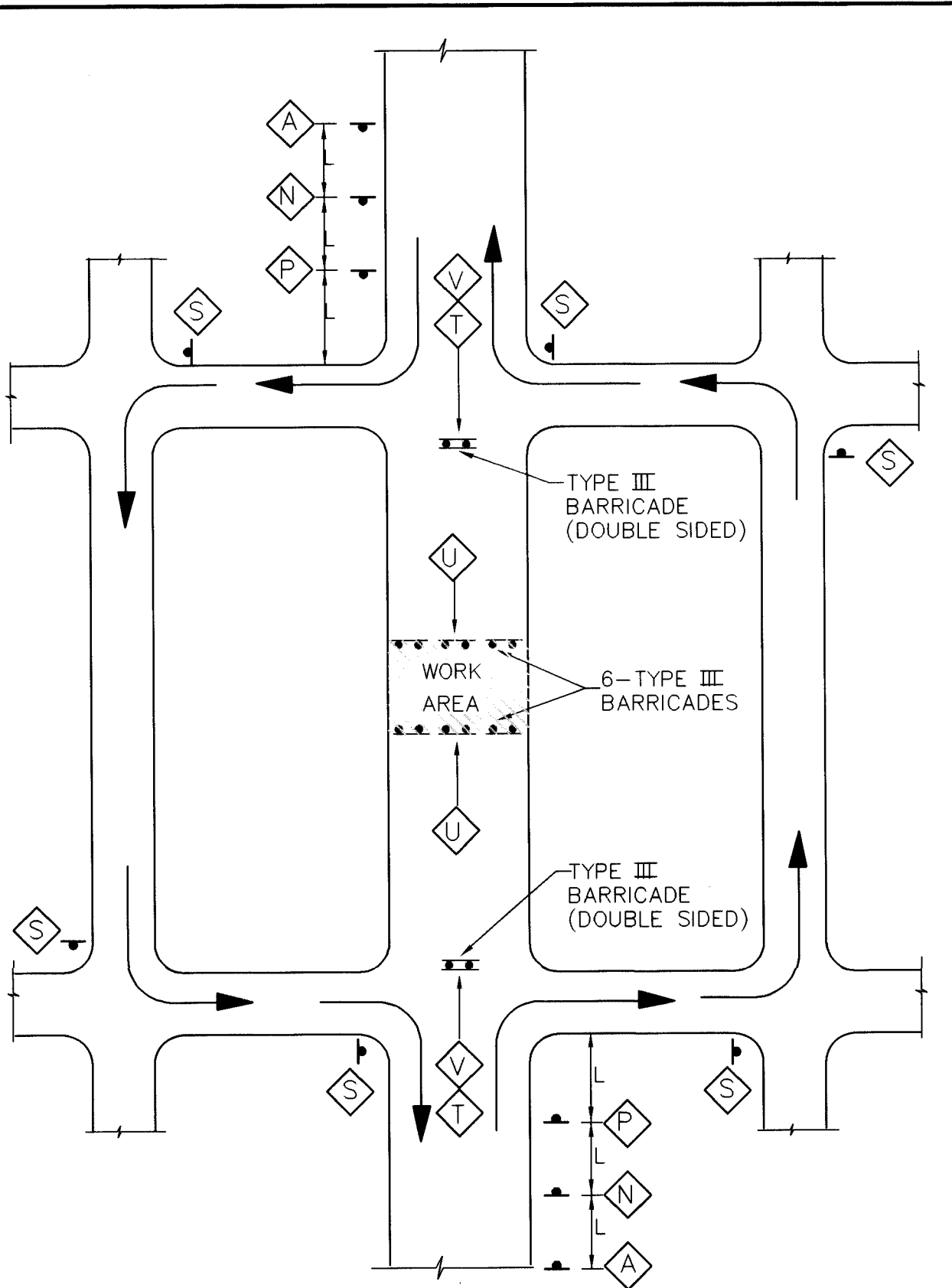
TYPICAL TRAFFIC SPLIT--(RAISED MEDIAN)



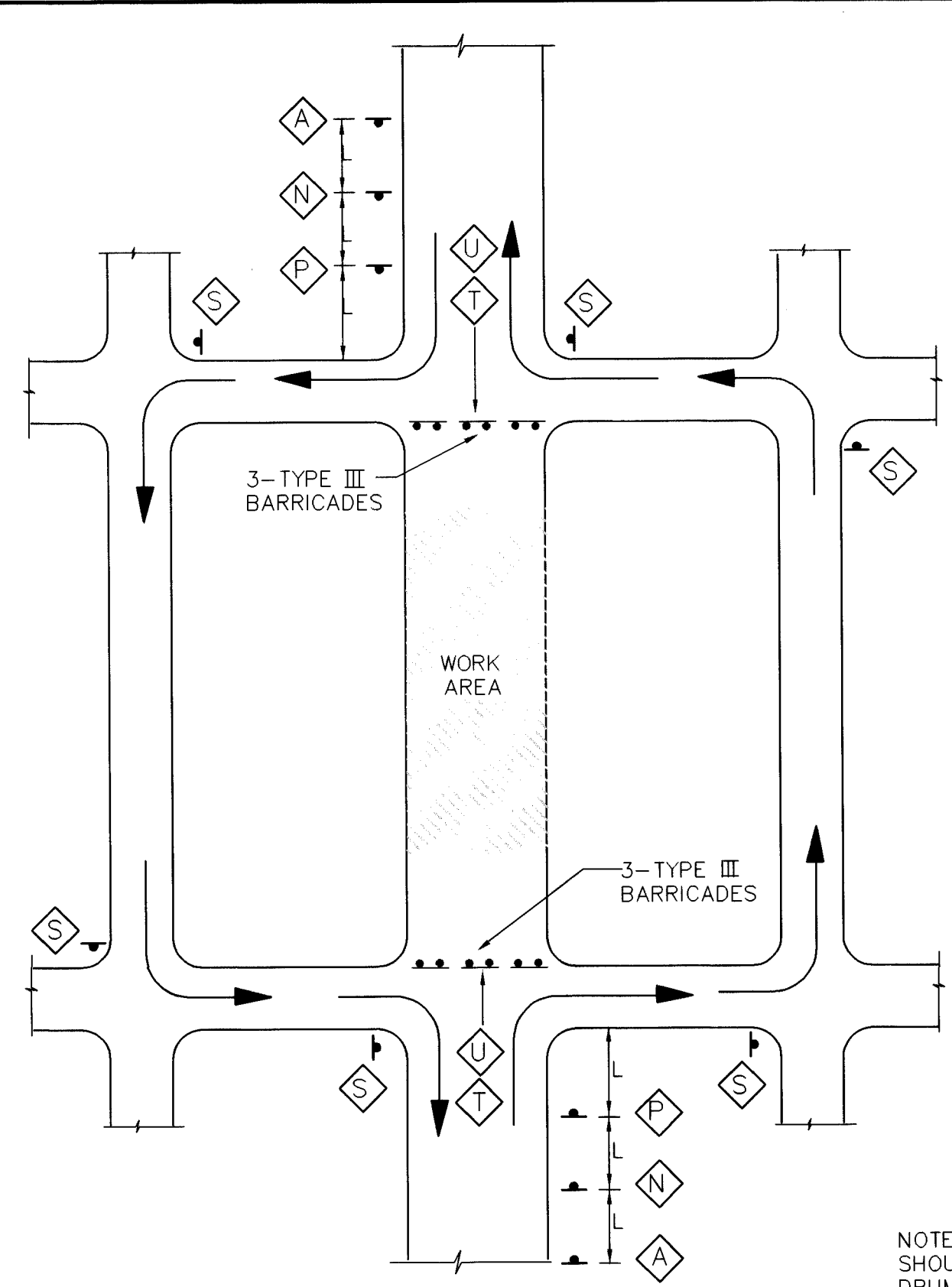
TYPICAL CENTER LANE CLOSURE



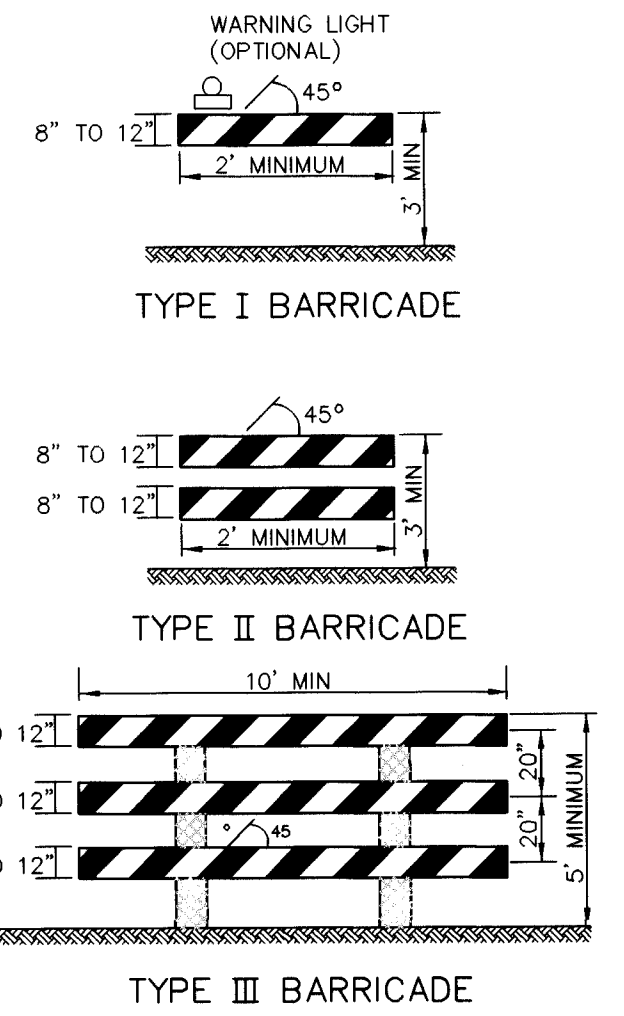
TYPICAL FLAGGING OPERATION



TYPICAL STREET CLOSURE  
(MID BLOCK)



TYPICAL STREET CLOSURE



NOTE: FLASHING OR STEADY BURN WARNING LIGHTS SHOULD BE USED ON BARRICADES, PANELS, AND DRUMS AS NEEDED.

**TAPER REQUIREMENTS**

SPEED LIMIT (MPH)	TAPER LENGTH (FEET)			MAXIMUM DISTANCE BETWEEN DEVICES (FEET)	MINIMUM NUMBER OF DEVICES REQUIRED
	10' LANE	11' LANE	12' LANE		
25	104	115	125	25	6
30	150	165	185	30	7
35	204	225	245	35	8
40	267	293	320	40	9
45	450	495	540	45	13
50	500	550	600	50	13
55	550	605	660	55	13

- LEGEND**
- WORK AREA
  - TRAFFIC SIGN & QUANTITY (SEE THIS SHEET FOR DESIGNATION)
  - BARRICADE - TYPE I, TYPE II, OR BARREL
  - BARRICADE - TYPE III
  - VERTICAL PANEL
  - WARNING SIGN
  - FLAGMAN POSITION
  - SPACING BETWEEN BARRICADES--A DISTANCE MEASURED IN FEET EQUAL TO THE SPEED LIMIT OF THE STREET
- TAPER LENGTH - ON CHART AT LEFT  
TANGENT LENGTH - IS EQUAL TO THE TAPER LENGTH FOR A GIVEN STREET

**NOTES**

- ALL ADVANCE WARNING SIGNS ARE TO BE DOUBLE INDICATED WHENEVER MEDIANS ARE PRESENT.
- TRANSFORMATION FROM EXISTING SIGNALS TO SPAN WIRE IS TO OCCUR AT OFF PEAK HOURS.
- THIS IS A STANDARD TRAFFIC CONTROL PLAN AND SOME TRAFFIC CONTROL SITUATIONS MAY BE SHOWN THAT ARE NOT REQUIRED ON THIS PARTICULAR PROJECT.

**ROAD CONSTRUCTION AHEAD**

W20-1 48"x48" -A-

W20-7a 36"x36" -H-

W20-3 48"x48" -P-

**LEFT LANE MUST TURN LEFT**

R3-7L 30"x30" -X-

**RIGHT LANE CLOSED AHEAD**

W20-5R 48"x48" -B-

W6-3 48"x48" -I-

R4-7a 24"x30" -O-

**BE PREPARED TO STOP**

48"x48" -Z-

**LEFT LANE CLOSED AHEAD**

W4-2R 36"x36" -C-

W1-4L 30"x30" -J-

R3-7R 60"x24" -A-A-

**RIGHT TWO LANES CLOSED AHEAD**

W4-2L 36"x36" -E-

W1-4R 30"x30" -K-

R3-2 24"x30" -B-B-

**CENTER LANE CLOSED AHEAD**

W20-5 48"x48" -L-

M4-10 30"x24" -T-

**ROAD CLOSED TO THRU TRAFFIC**

W20-5 48"x48" -N-

R11-4 60"x60" -V-

**ACCESS TO**

ACCESS INFORMATION SIGN 60"x60" -Y-

W20-4 48"x48" -G-

**LEFT TWO LANES CLOSED AHEAD**

W20-3 48"x48" -O-

G20-2 60"x24" -W-

**BL BRASHER & LORENZ, INC.**  
Consulting Engineers  
2201 San Pedro NE Building 1, Suite 210  
Albuquerque, New Mexico 87110  
Ph: 505-888-6088 Fax: 505-888-6188

**CITY OF ALBUQUERQUE  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DEVELOPMENT GROUP**

**RAINBO BREAD  
FIRE HYDRANTS IMPROVEMENTS  
TRAFFIC CONTROL PLAN**

TITLE: \_\_\_\_\_

Design Review Committee

**APPROVED**

DEC 26 1996

DESIGN REVIEW COMMITTEE

City Engineer Approval

\_\_\_\_\_  
City Project No. 559281

Zone Map No. F-15

Sheet 4 of 4

City Project No. 559281

Zone Map No. F-15

Sheet 4 of 4

**AS BUILT INFORMATION**

CONTRACTOR: *Highway Sept 7*

WORK ORDER BY: *Highway Sept 7*

INSPECTOR'S SIGNATURE: *Highway Sept 7*

ACCEPTANCE BY: *Highway Sept 7*

DATE: *Highway Sept 7*

**ENGINEER'S SEAL**

*Professional Engineer Seal*

**REVISIONS**

NO.	DATE	REMARKS

DESIGNED BY: JSM DATE: 11/96

DRAWN BY: STAFF DATE: 11/96

CHECKED BY: PB DATE: 11/96