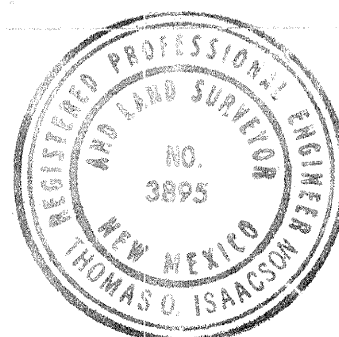


RECORD DRAWING CERTIFICATION
I, HEREBY CERTIFY THAT THE INFORMATION CONTAINED ON THESE DRAWINGS HAS BEEN REVISED IN ACCORDANCE WITH INFORMATION OBTAINED FROM FIELD CONSTRUCTION OBSERVATION BY ISAACSON & ARFMAN, P.A. AND REFLECTS THE CONSTRUCTION AS ACTUALLY ACCOMPLISHED. THESE PLANS, AS CONSTRUCTED, ARE IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED PLANS.

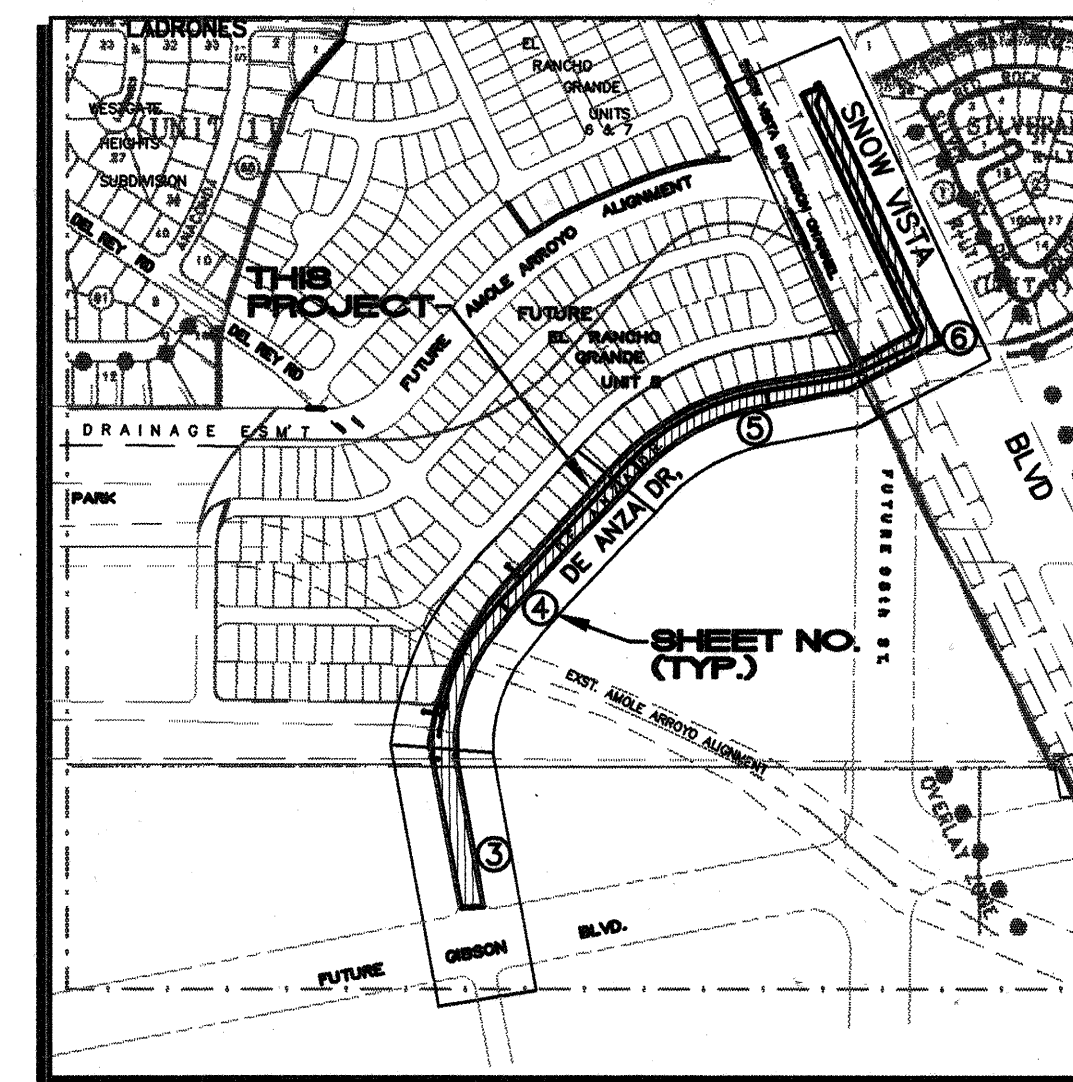
Thomas O. Isaacson
THOMAS O. ISAACSON, NMPE & LS NO. 3895

5/11/04
DATE



CONSTRUCTION PLANS FOR ZONE 2W WATER TRANSMISSION LINE DE ANZA DRIVE & SNOW VISTA BLVD.

PROJECT NO. 7108.91
PUBLIC WORKS DEPARTMENT
CITY OF ALBUQUERQUE
AUGUST 2003



M-9, N-9
VICINITY & SHEET INDEX MAP

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 Edition as amended with Update No. 6.
- Prior to construction, the Contractor shall excavate & verify the horizontal and vertical locations of all obstructions, including traffic signal conduit. Should a conflict exist, the Contractor shall notify the Engineer so that the conflict can be resolved with minimum delay.
- Two (2) working days prior to any excavation, Contractor must contact New Mexico One Call System @ 260-1990 for location of existing utilities.
- Contractor shall conduct his operations in a manner which will minimize interference with local traffic. Contractor shall comply with all applicable laws, ordinances, rules, regulations, and orders of any public body having jurisdiction for the safety of persons or property, and to protect them from damage, injury, or loss. Contractor shall erect and maintain, as required by the conditions and progress of the work, all necessary safeguards for safety continuously and not limited to normal working hours, throughout the duration of the project. Contractor shall adhere to Section 19 of the General Conditions of the City of Albuquerque Standard Specifications for Public Works Construction, 1986, as amended with Update No. 6.
- The Contractor agrees that he shall assume the sole and complete responsibility for the job site conditions during the course of construction of this project, including safety of all persons and property; that this requirement shall apply continuously and not be limited to normal working hours; and that the Contractor shall defend, indemnify, and hold harmless the Owner & Engineer from any and all liability real or alleged, in connection with the performance of work on this project, excepting liability arising from the sole negligence of the Owner or Engineer.
- TRAFFIC CONTROL:** Five (5) 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 (768-2554) prior to occupying an intersection. See Section 19 of the specifications. **924-3400**
- 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 down the street or into any public drainage facility.
- Contractor shall assist the Engineer/Inspector in the recording of data on all utility lines and accessories as required by the City of Albuquerque for the preparation of record drawings. Contractor shall not cover utility lines and accessories until all data has been recorded. Record drawings shall be prepared by the consultant using information supplied by the contractor and the City Inspector.
- Existing curb and gutter, sidewalks and driveways not to be removed under the contract which are damaged or displaced by the Contractor, shall be removed and replaced by the Contractor at his expense.
- All work on this project shall be performed in accordance with applicable federal, state, and local laws, rules, and regulations concerning construction safety and health.
- The Contractor is responsible for protecting and maintaining all existing monumentation controls. In the event of inadvertent destruction or alteration, the Contractor must immediately notify the City Chief Surveyor.
- 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 information 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.

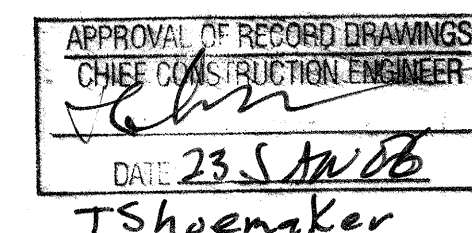
The Engineer has undertaken no field verification of the location, depth, size, or type of existing underground utility lines, makes no representation pertaining thereto, and assumes no responsibility or liability therefor. The Contractor shall inform itself of the location of any utility line in or 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 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.
- The Contractor shall be responsible for notifying utilities for adjustment or relocation of existing utilities required by construction. The Contractor may be required to reschedule his activities to allow utility crews to perform their work. No additional costs will be allowed for delays or inconvenience caused by utility company crews.
- The Contractor shall confine his work within the street right-of-way. Overnight parking of the Contractor's equipment shall not obstruct access roads or traffic lanes.
- Open excavations shall be tightly barricaded at the completion of each day and all open excavations shall be backfilled over weekends.
- Contractor shall maintain a graffiti-free work site. Contractor shall promptly remove any and all graffiti from equipment, whether permanent or temporary.
- The contractor shall provide all required construction surveys including as-built surveys for record drawings.
- The contractor is responsible for removal and disposal of all demolition debris in an environmentally acceptable manner. All salvaged materials shall be handled in accordance with Section 801.15 of the standard specifications.
- Street grades shall be restored by the contractor to the existing grades unless otherwise directed by the engineer.
- The contractor shall maintain all trenches in a safe condition protecting the workers and the general public. Trench protection shall be in accordance with O.S.H.A. 29 CFR 1926.650 subpart p. Excavations shall be sloped, braced or shored as required by O.S.H.A. regulations. The contractor is solely responsible for job site safety, and for knowledge and compliance with applicable O.S.H.A. standards. No additional compensation will be made therefor.

UTILITY COMPANY CONTACTS

Crowel, David	Office phone: (505) 842-2911 Office fax: 842-2890 dcrowel@att.com	AT&T Resource Supervisor 111 3rd Street NW Albuquerque, NM 87103
Darnell, Andy	Office phone: (505) 346-4476 Office fax: 346-4481 andy.darnell@wcom.com	MCI Worldcom Operations Manager 3700 Singer NE, Suite A Albuquerque, NM 87109
Erickson, Rita	Office phone: (505) 761-6235 Office fax: (505) 761-0599 rita_erickson@cable.comcast.com	Comcast Planning and Design Supervisor 4611 Montbel Place NE Albuquerque, NM 87107
Gabel, Elisabeth	Office phone: (505) 241-7745 Office fax: (505) 241-7753 egabel@pnm.com	PNM - Gas Co. of NM Planning Engineer 4625 Edith Blvd. NE MS-GS66 Albuquerque, NM 87107
Garcia, Robert	Office Phone: (505) 241-3334 Office Fax: (505) 241-3620 rgarcia@pnm.com	PNM - Electric Engineering Representative 4201 Edith Blvd. NE Albuquerque, NM 87107
Harrison, Royal	Office phone: (505) 938-7339 Office fax: 938-7380 Royal.Harrison@twtelecom.com	Time Warner Telecom Plant Manager 3830 Singer Blvd. NE Suite 1000 Albuquerque, NM 87109
Mares, John	Office phone: (505) 998-2274 Office fax: 998-9161 john.mares@espire.net	E. Spire 505 Marquette NW Suite 1605 Albuquerque, NM 87102
Mueller, Rick	Office phone: (505) 244-3161 Office fax: 244-0094 Mobile: 228-3329 rdmueller@mcleadusa.com	McLead USA Supervisor of Outside Techs. 505 Marquette NW (Compass Bank) Suite 1600 Albuquerque, NM 87102
Muller, David	Office phone: (505) 245-8706 Office fax: 245-6831 or 245-6733 dmuller@uswest.com	Qwest/US West Capacity Provisioning Specialist 201 3rd Street NW (Bank of Albuquerque) Suite 700 Albuquerque, NM 87102
Nelson, Joshua	Mobile: (505) 991-2120 Office fax: (505) 217-0070 jncookco_jn@att.net	CityNet Telecommunications Consultant 505 Marquette Ave. N.W. Suite 119-A Albuquerque, NM 87102
Olson, Greg	Office phone: (505) 768-2719 Office fax: (505) 768-3629 golson@cabq.gov	City Of Albuquerque Principal Engineer, Utility Development P.O. Box 1293 Albuquerque, NM 87103
Turley, Tom	Office phone: (636) 561-0339 Office fax: (636) 561-0355 tom.turley@genuity.com	Genuity Supervisor - OSP Maintenance 50 Centre on the Lake Lake Saint Louis, MO 63367

INDEX TO DRAWINGS

SHEET	TITLE
1	TITLE SHEET, VICINITY MAP, GENERAL NOTES
2	SUBDIVISION PLAT PLAN & PROFILE SHEETS
3	WATER TRANSMISSION LINE - STA 5+00 TO 10+00.00 (ALTERNATE BID)
4	WATER TRANSMISSION LINE - STA 10+00.00 TO 19+00 (BASE BID)
5	WATER TRANSMISSION LINE - STA 19+00 TO 26+03.98 (BASE BID)
6	WATER TRANSMISSION LINE - STA 26+03.98 TO END (BASE BID)
7	AIR VACUUM RELEASE VALVE, WATER VALVE BOX DETAILS,
8	LARGE DIAMETER VALVE VAULT DETAIL, RESTRAINED JOINT DETAILS
9	COA SIGNING & CONSTRUCTION TRAFFIC CONTROL STANDARDS
10	COA TYPICAL TRAFFIC CONTROL & SIGNING EXAMPLES (REF. M.U.T.C.D.)



REV.	SHEETS	CITY ENGINEER	DATE	USER	DEPARTMENT	DATE	USER	DEPARTMENT	DATE
ENGINEERS STAMP & SIGNATURE				APPROVALS		ENGINEER		DATE	
				DRC Chairman		[Signature]		9-3-03	
				Transportation		N/A		9/3/03	
				Water/Wastewater		[Signature]		9/3/03	
				Hydrology		[Signature]		9/3/03	
				CIP		[Signature]		9-3-03	
City Project No.				7108.91		Sheet		Of	
						1		10	

Table with 4 columns: CURVE, RADIUS, LENGTH, DELTA. Contains data for curves C1 through C28.

Table with 4 columns: LINE, DIRECTION, DISTANCE. Contains data for lines L1 through L19.

SCANNED BY MESA REDBO
State of New Mexico } SS
County of Bernalillo }
This instrument was filed for record on
JULY 28 1994
At the County Clerk's Office
of records and County Files

94139440 PLAT OF
ALBUQUERQUE SOUTH,
UNIT THREE
TRACTS A THROUGH E
WITHIN PROJECTED SECTION 33, T. 10 N., R. 2 E., N.M.P.M.
TOWN OF ATRISCO GRANT
ALBUQUERQUE NEW MEXICO
SEPTEMBER 1994

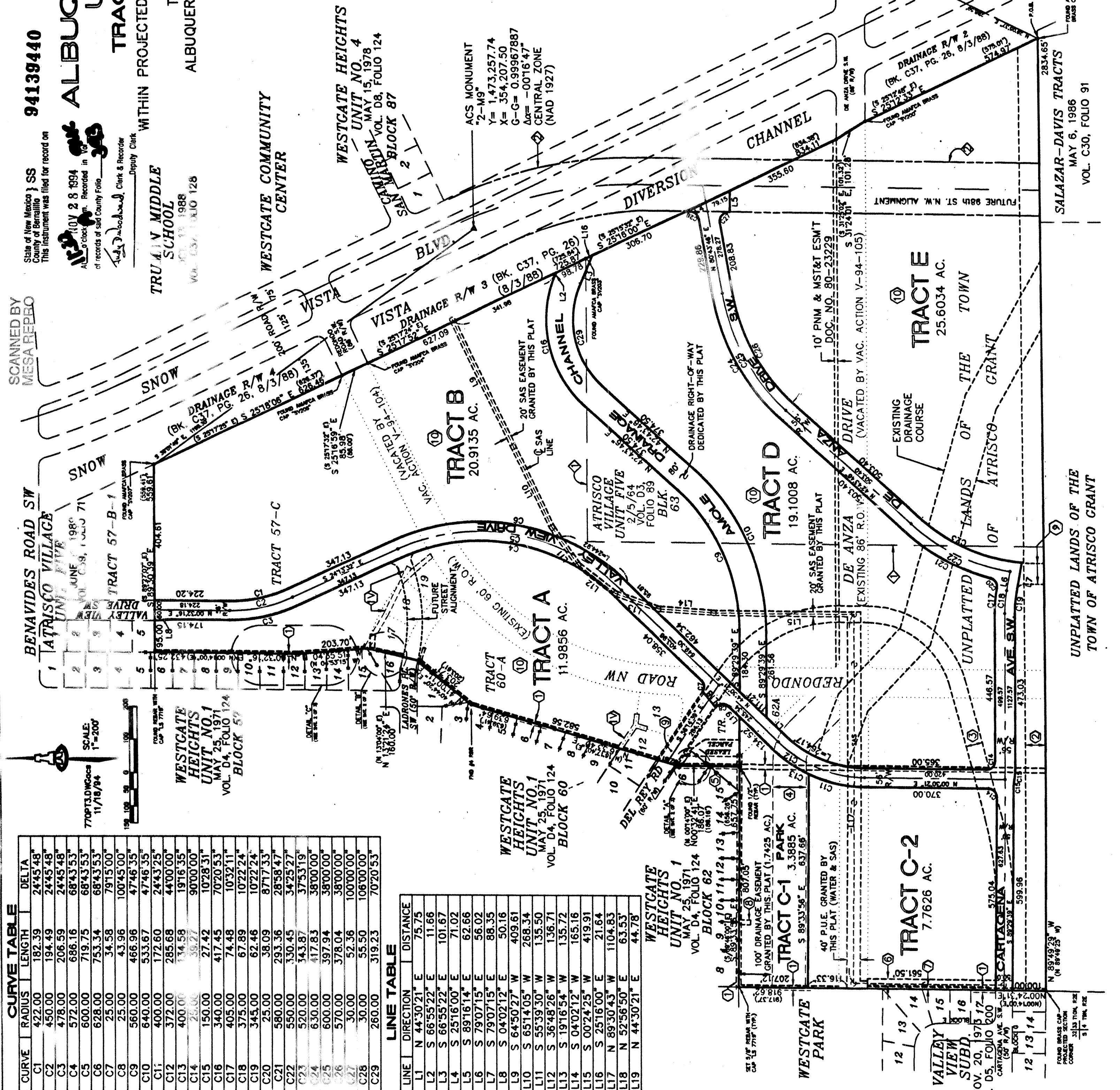
EASEMENT NOTES

- 1. 14' PUBLIC UTILITY EASEMENT AS FOUND ON THE PLAT OF "UNIT FIVE" ATRISCO VILLAGE, BLOCKS 50-63, OF SNOW VISTA SUBD. FILED ON 2/5/64 IN VOL. D3, FOLIO 89 (EASEMENTS TO BE VACATED BY THIS PLAT INDICATED BY V. SEE NOTE NO. 5, SHT. 2 OF 3).
- 2. 60' SEWER LINE EASEMENT, CAUSE NO. 83464 FILED 8/25/60 TO ATRISCO UTILITIES INC (TO BE VACATED BY THIS PLAT).
- 3. 50' TEMPORARY ACCESS, & DRAINAGE EASEMENT FILED 6/23/80 IN BK. MSC. 780 PP. 794-803.
- 4. 100' DRAINAGE EASEMENT AS FOUND ON THE PLAT OF "UNIT FIVE" ATRISCO VILLAGE, BLOCKS 50-63, OF SNOW VISTA SUBD. FILED ON 2/5/64 IN VOL. D3, FOLIO 89 (TO BE VACATED BY THIS PLAT).
- 5. 30' DRAINAGE EASEMENT AS FOUND ON THE PLAT OF "UNIT FIVE" ATRISCO VILLAGE, BLOCKS 50-63, OF SNOW VISTA SUBD. FILED ON 2/5/64 IN VOL. D3, FOLIO 89.
- 6. 20' PUBLIC UTILITY EASEMENT FILED 1/30/80 IN BK. MSC. 749, PG. 620.
- 7. 10' PNM & M&T&T EASEMENT FILED 1/30/80 IN BK. MSC. 749, PG. 596.
- 8. 14'35" PUBLIC UTILITY EASEMENT FILED 2/5/64 IN BK. D3, PG. 89.
- 9. 60' PUBLIC ROADWAY, DRAINAGE & UTILITY EASEMENT GRANTED BY THIS PLAT.
- 10. A BLANKET DRAINAGE EASEMENT IS GRANTED ACROSS TRACTS A, B, D, & E TO THE CITY OF ALBUQUERQUE. REMOVAL OF THIS EASEMENT SHALL BE PER THE CONDITIONS LISTED IN THE BULK LAND VARIANCE.

SUBMISSION NOTES

- 1. PROPERTY BOUNDARY BY SPECIAL WARRANTY DEED FILED IN VOL. D-915, FOLIO 612.
- 2. PROPOSED RE-ALIGNMENT OF SNOW VISTA BLVD. (98th ST) PER THE RIO BRAVO SECTOR DEVELOPMENT PLAN.

PARK DEDICATION (TRACT C-1)
A PARK (TRACT C-1: 3.3885 AC) IS BEING DEDICATED TO THE CITY OF ALBUQUERQUE BY THIS PLAT ACTION. THE 1.7425 ACRES OF PARK LAND WITHIN THE NEW 100' DRAINAGE EASEMENT IS NOT ELIGIBLE AS A PARK CREDIT FOR FUTURE DEVELOPMENT.



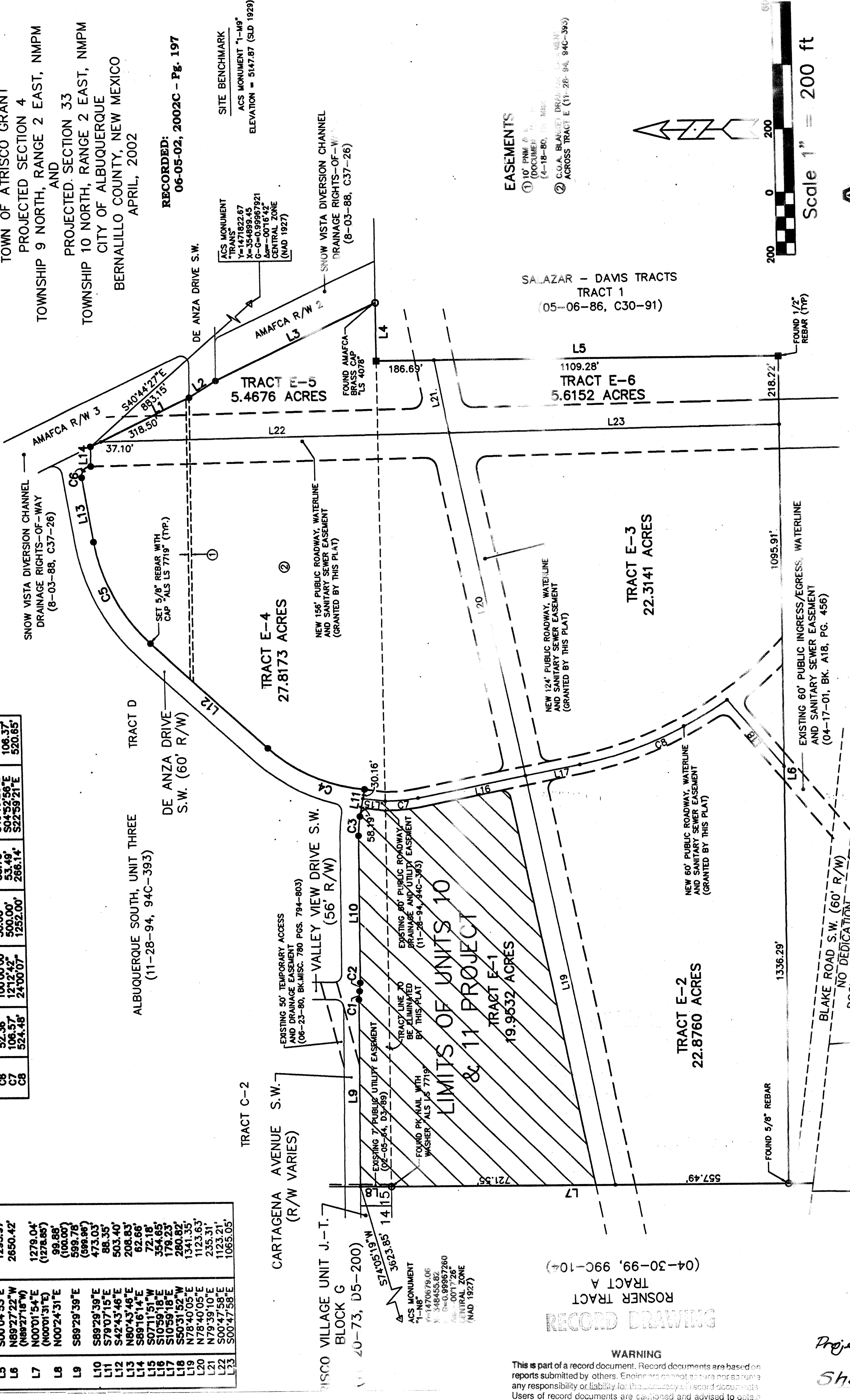
BULK LAND PLAT FOR
ALBUQUERQUE SOUTH, UNIT THREE
TRACTS E-1 THRU E-6
WITHIN THE
TOWN OF ATRISCO GRANT
PROJECTED SECTION 4
AND
TOWNSHIP 9 NORTH, RANGE 2 EAST, NMPM
AND
PROJECTED SECTION 33
TOWNSHIP 10 NORTH, RANGE 2 EAST, NMPM
CITY OF ALBUQUERQUE
BERNALILLO COUNTY, NEW MEXICO
APRIL, 2002

RECORDED:
06-05-02, 2002C - Pg. 197

NOTE:
DEVELOPMENT OF TRACTS E-5 AND E-6
WILL REQUIRE AN ALL-WEATHER CROSSING
AT 98TH STREET AND THE SNOW VISTA
CHANNEL.

Table with 5 columns: CURVE, LENGTH, DELTA, RADIUS, TANGENT, CHORD. Contains data for curves C1 through C8.

Table with 5 columns: LINE, DIRECTION, DISTANCE. Contains data for lines L1 through L23.



ALDRICH LAND
SURVEYING
P.O. BOX 30701, ALBUQ., N.M. 87190
505-884-1990

Table with 4 columns: Drawn By, Checked By, Date, Sheet. Contains information for the survey project.

SA LAZAR - DAVIS TRACTS
TRACT 1
(05-06-86, C30-91)

SA LAZAR - DAVIS TRACTS
TRACT 4-A
(05-08-86, C30-91)

WARNING
This is part of a record document. Record documents are based on reports submitted by others. Enginee is not responsible for any responsibility or liability for the accuracy of record documents. Users of record documents are cautioned and advised to obtain independent verification of actual conditions.

SCANNED BY
MESA REPRO

PROPOSED 20" WL
COA PROJECT #679581

STA 5+36.66 C DE ANZA DRIVE=
C GIBSON BLVD.

RANGE RD.

HIGHRANGE RD.

EL RANCHO GRANDE
UNIT 10
PROJECT No. 6993.85

STA 8+86.49, 10' LT
BEGIN CURVILINEAR
WATERLINE

1-24" 11'14" BEND

GIBSON BLVD.

STA 6+70.00, 10' LT
BEGIN 24" WATERLINE
CONNECT TO 20" WL
W/ 24"x20" REDUCER, 1-20" SOLID SLEEVE
IF 20" WL NOT IN PLACE AT
TIME OF CONSTRUCTION
INSTALL 1-24" END-CAP
AND 11-LF RESTRAINED JOINTS
Deleted

CURVE DATA
 $\Delta = 19'17.35"$
 $R = 500.00'$
 $L = 168.36'$

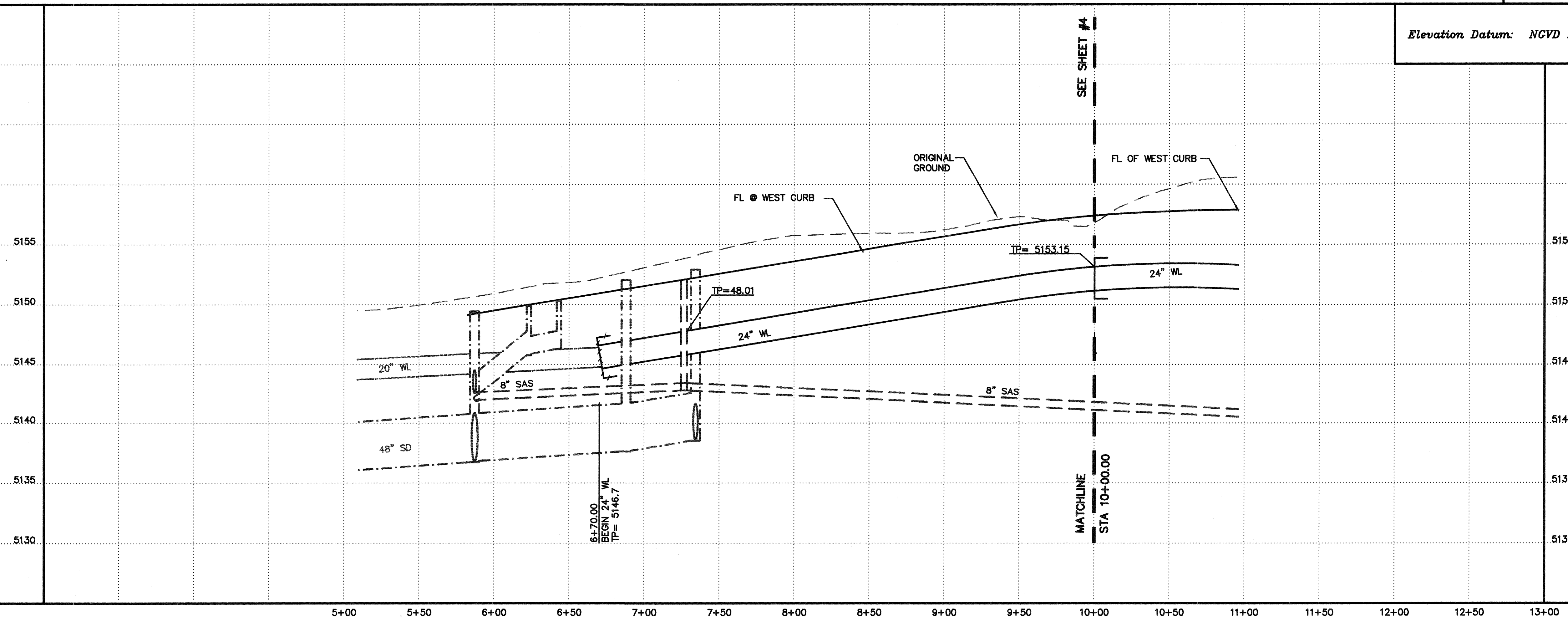
MATCHLINE
STA 10+00.00

- NOTES:
- THE CONTRACTOR SHALL COORDINATE THE WATER LINE WORK SHOWN ON THIS SHEET WITH STORM DRAIN AND SANITARY SEWER WORK TO BE CONSTRUCTED UNDER CITY PROJECT No. 6993.85
 - IF THE ALTERNATE BID WORK IS NOT AWARDED UNDER THIS CONTRACT, THE WORK SHALL BE CONSTRUCTED UNDER PROJECT No. 6993.85, EL RANCHO GRANDE, UNIT 10.

DE ANZA DRIVE (ALTERNATE BID)

SCALES:
1"=40' HOR.
1"= 5' VERT.

Elevation Datum: NGVD 29



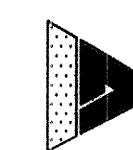
LEGEND

—+— GATE VALVE W/ VALVE BOX
PER DETAIL SHEET 7

—+— WATER LINE W/ FITTING

RECORD DRAWING

WARNING
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ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque, New Mexico 87102
1226UT1.DWG/rh VIEW:1 08/21/03

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: ZONE 2W WATER TRANSMISSION LINE
DE ANZA DRIVE
STA. 5+00 TO 10+00.00

Design Review Committee
APPROVED
SEP-3-03
DESIGN REVIEW COMMITTEE

City Engineer Approval
APPROVED
CITY ENGINEER

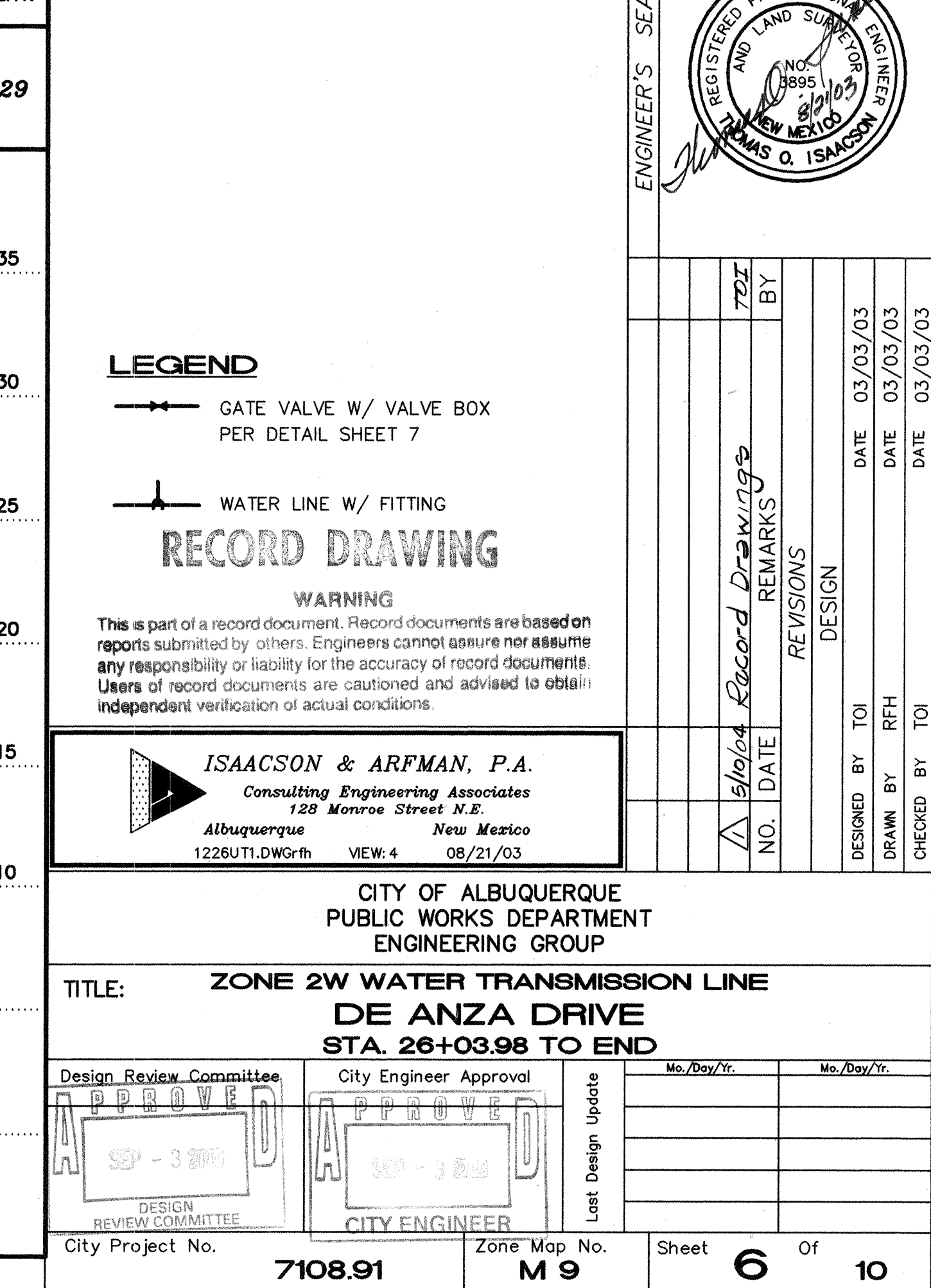
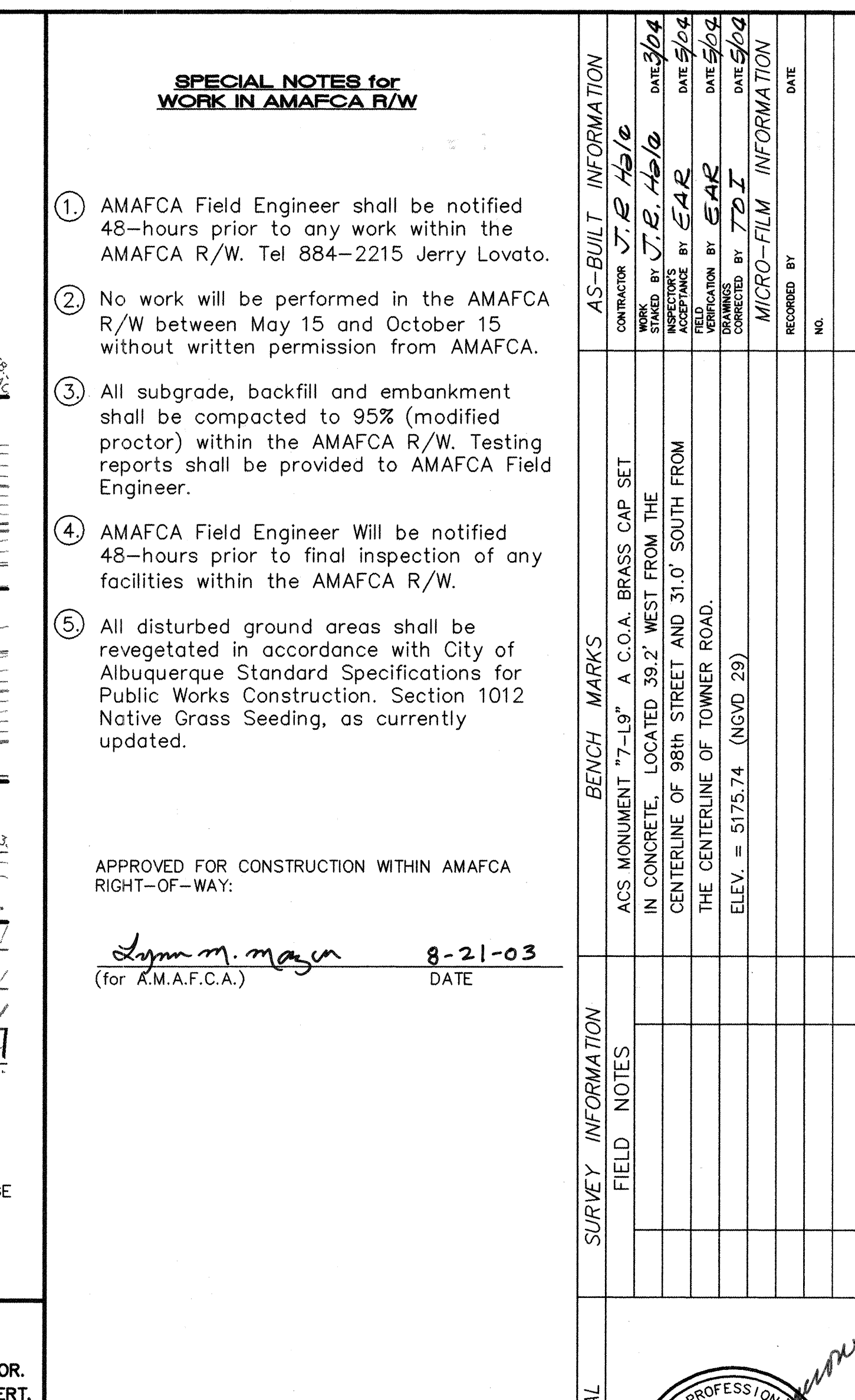
Last Design Update

City Project No. 7108.91

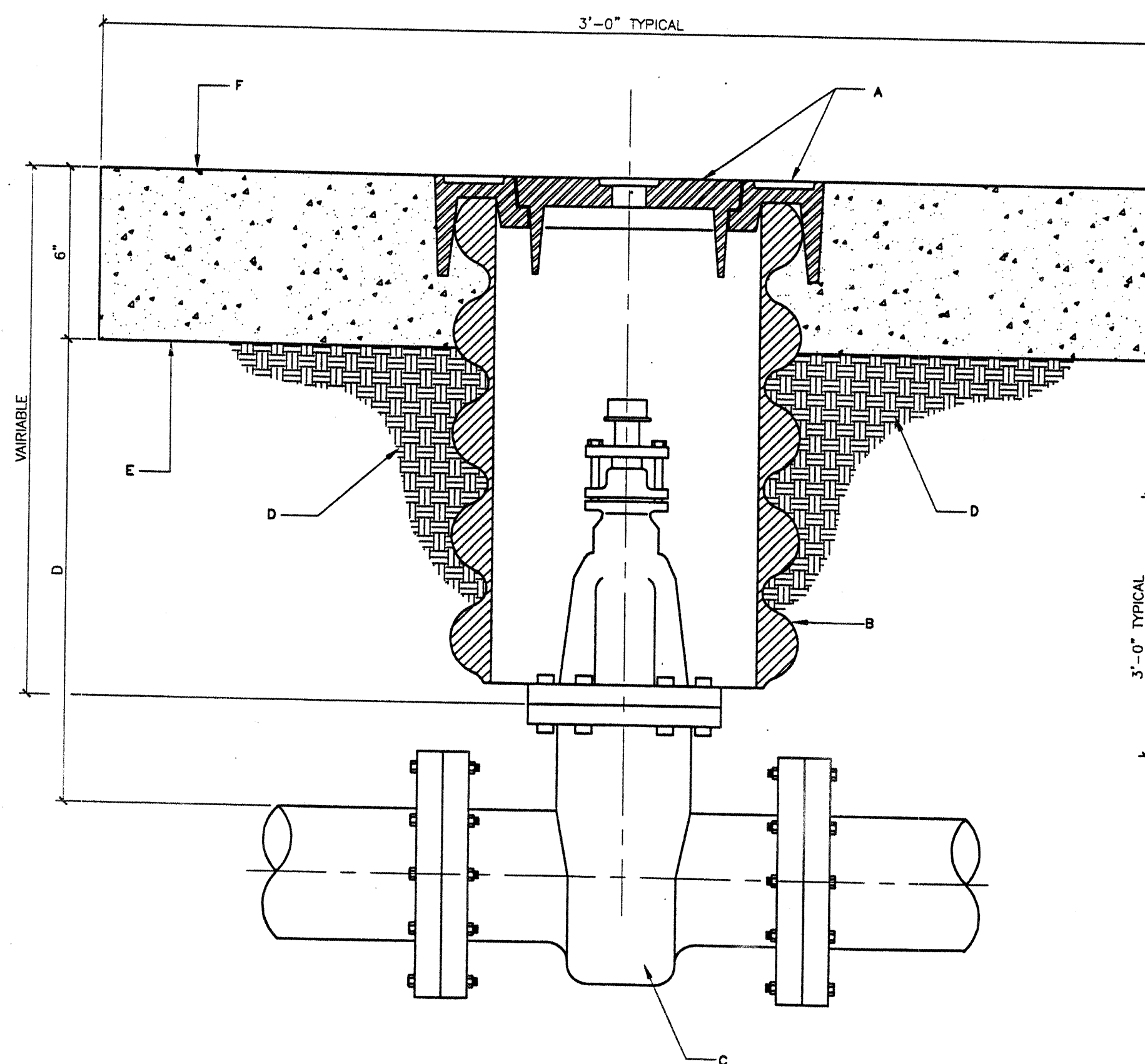
Zone Map No. N9

Sheet 3 Of 10

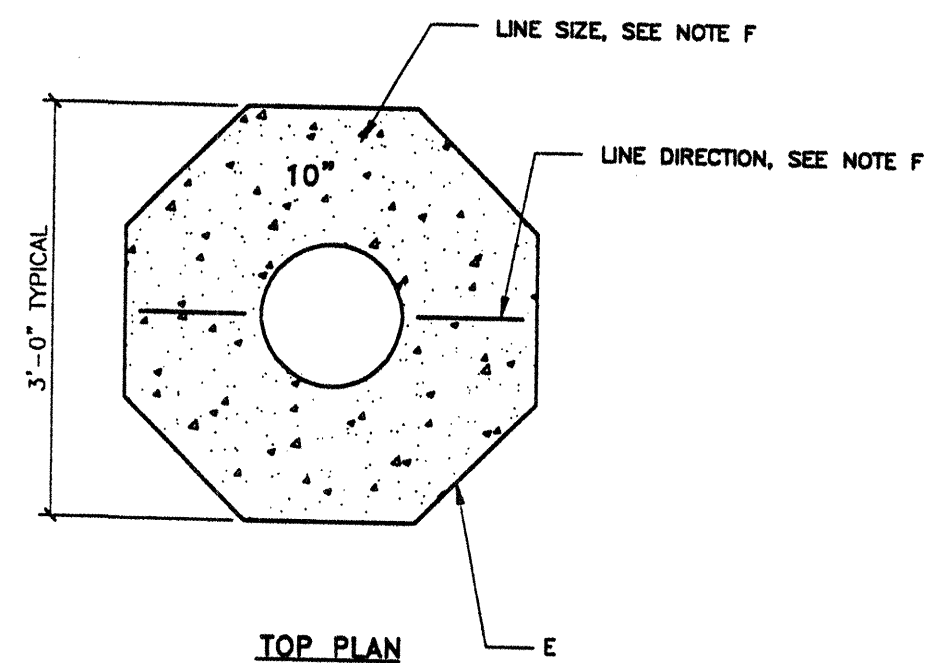
AS-BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION	
CONTRACTOR <i>J.B. Hale</i>		ACS MONUMENT "7-19" A C.O.A. BRASS CAP SET		FIELD NOTES	
WORK STAKED BY	<i>J.B. Hale</i>	IN CONCRETE, LOCATED 39.2' WEST FROM THE CENTERLINE OF 98th STREET AND 31.0' SOUTH FROM THE CENTERLINE OF TOWER ROAD.			
DATE	<i>5/04</i>	ELEV. = 5175.74 (NGVD 29)			
ACCEPTANCE BY	<i>EAR</i>				
FIELD VERIFICATION BY	<i>EAR</i>				
DATE	<i>5/04</i>				
REVISIONS					
CORRECTED BY	<i>T.D. I</i>				
DATE	<i>5/04</i>				
MICRO-FILM INFORMATION					
RECORDED BY					
DATE					
<i>See I&EA Inspector: Eddie P. Hall</i>					



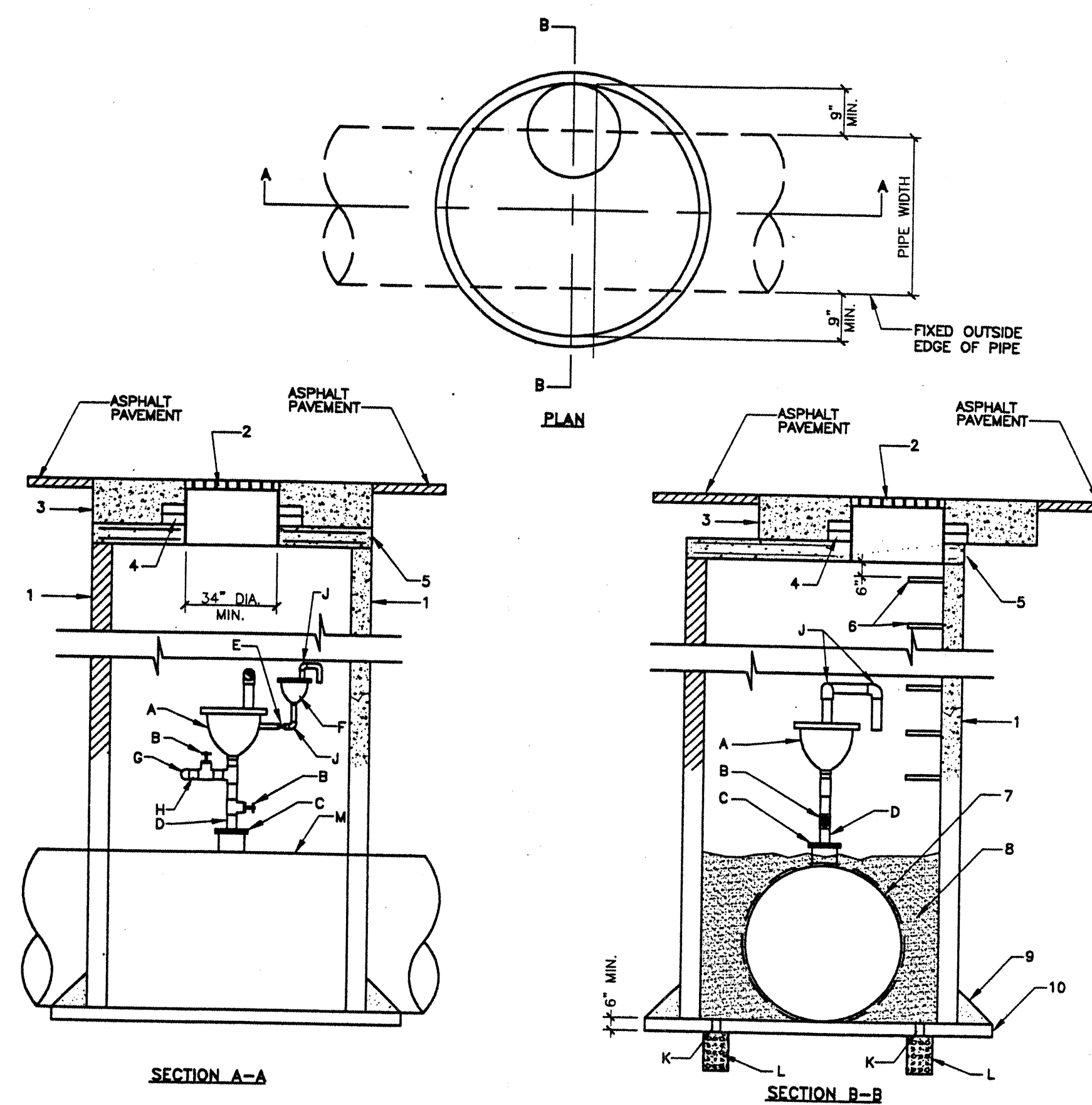
SCANNED BY
MESA REPRO



- GENERAL NOTES:**
- A VALVE BOX RING AND COVER. SEE DWG. 2328.
 - B 10" DIAMETER RIBBED OR CORRUGATED PVC OR PE PIPE WITH SMOOTH INTERIOR.
 - C NEW OR EXISTING VALVE.
 - D COMPACTED BACKFILL. SOIL OR BASE COURSE MATERIAL (98% COMPACTION). SEE SECTION 701.
 - E 3'-0"x3'-0" OCTAGONAL CONCRETE COLLAR. COLLAR IS TO BE TAPERED IN UNPAVED ROADWAYS AND FLUSH IN PAVED ROADWAY. CONCRETE STRENGTH SHALL BE PER SECTION 101 OF THE STANDARD SPECIFICATIONS, LATEST EDITION.
 - F TOP OF CONCRETE COLLAR SHALL BE STAMPED WITH LINE SIZE AND DIRECTION. MINIMUM LETTER SIZE SHALL BE 5" IN HEIGHT.



REVISIONS	CITY OF ALBUQUERQUE
	WATER VALVE BOX
	DWG. 2326 JANUARY 2002



MATERIALS LIST

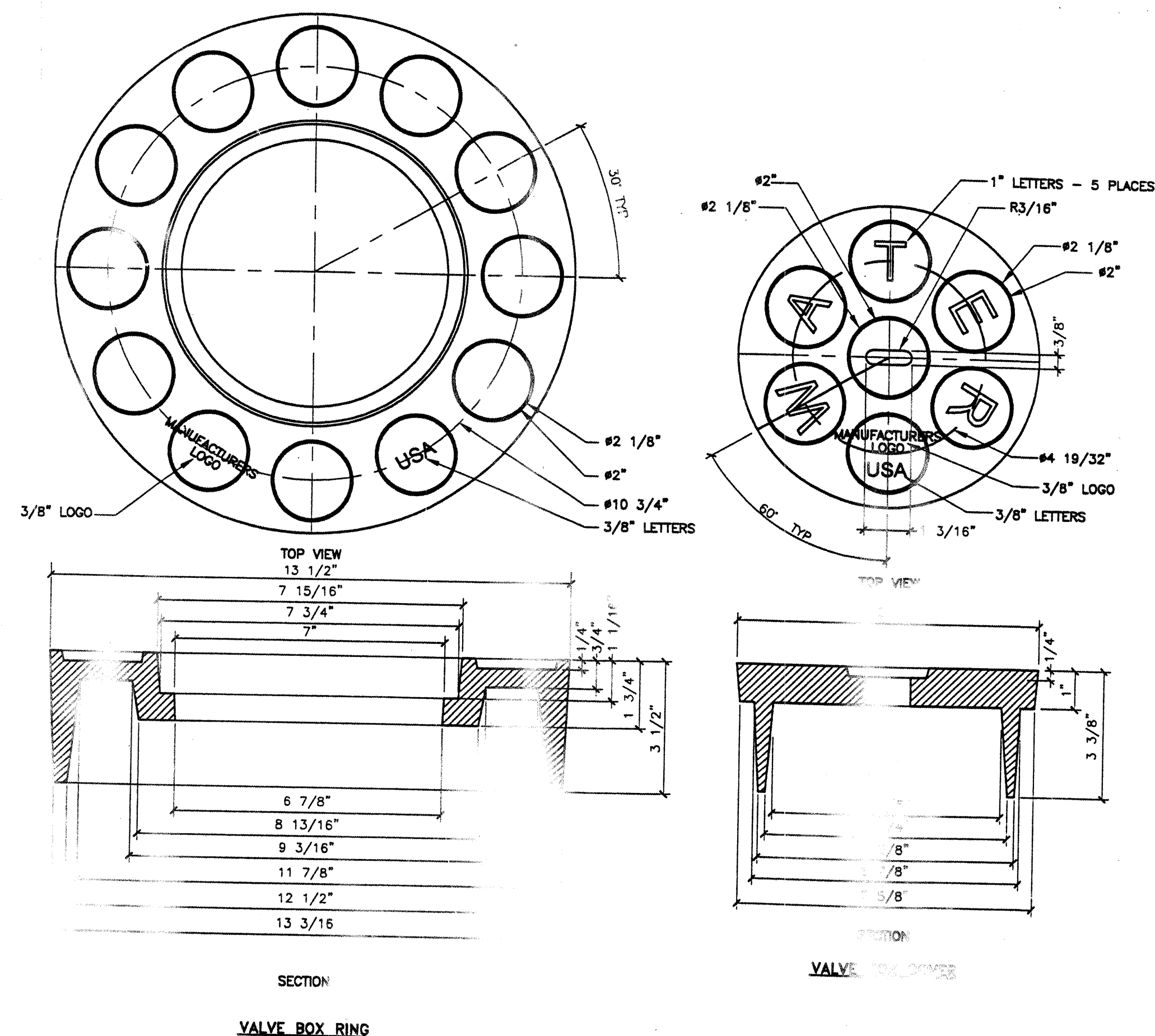
NOTE: ALL PIPING AND FITTINGS SHALL BE SCH. 40 THREADED GALVANIZED STEEL. SIZE IS DETERMINED BY SPECIFIC AIR/VACUUM RELEASE VALVE TO BE INSTALLED.

- A COMBINATION AIR AND VACUUM RELEASE VALVE, SIZE AS SHOWN ON PLAN.
- B GATE VALVE, SAME SIZE AS COMBINATION AIR AND VACUUM RELEASE VALVE INLET.
- C MINIMUM 6" FLANGE NOZZLE OR FLANGE TAPPING SADDLE. PROVIDE BLIND FLANGE TAPPED FOR THREADED NIPPLE WHERE AIR/VAC VALVE IS SHOWN TO BE LESS THAN 6".
- D CAST IRON NIPPLE.
- E 1" BALL VALVE.
- F 1" AIR RELEASE VALVE.
- G THREADED CAP.
- H THREADED NIPPLE FOR VENT AND HOSE CONNECTION.
- J 90° ELBOW.
- K 4" DIA. SCHEDULE 40 PVC PIPE SLEEVE THROUGH MANHOLE BASE.
- L 12"x12"x18" DEEP 1" CLEAN GRAVEL.
- M WATER MAIN.

CONSTRUCTION NOTES:

- 1 MANHOLE MAY BE CONSTRUCTED OF CONCRETE BLOCK, GR. MS BRICK, POURED CONCRETE, OR PRECAST REINFORCED CONCRETE. IF BLOCK OR BRICK, PLASTER INTERIOR AND OUT WITH 1/2" MORTAR. SEE DWG 2101.
- 2 USE 36" MH FRAME AND COVER. COVER MARKED "WATER".
- 3 5'x5' OCTAGONAL CONCRETE PAD.
- 4 USE ADJUSTMENT RINGS OR MAX. 2 COURSES GR MS BRICK FOR ADJUSTMENT OF MH FRAME TO PAVEMENT GRADE.
- 5 PRECAST CONCRETE COVER. SEE DWG 2107, EXCEPT OPENING SHALL BE 34" DIAMETER MINIMUM.
- 6 STEPS TO BE INSTALLED PER STD SPEC SEC 920.
- 7 CUT MANHOLE TO PROVIDE A 4" CLEARANCE AROUND WATER MAIN.
- 8 1" CLEAN GRAVEL TO TOP OF MAIN.
- 9 6" GROUT FILLET AROUND BASE.
- 10 CONCRETE BASE TO BE POURED IN PLACE USING #4 BARS AT 12" OC EACH WAY.

REVISIONS	CITY OF ALBUQUERQUE
	WATER AIR/VACUUM RELEASE VALVE
	DWG. 2350 JANUARY 2002



GENERAL NOTES - RING

- 1 ALBUQUERQUE VALVE BOX RING DESIGNED TO ACCEPT AN ALBUQUERQUE VALVE BOX COVER.
- 2 THE CASTING NUMBER, MANUFACTURER'S LOGO, DATE OF MANUFACTURE AND "USA" SHALL BE CAST IN A CONSPICUOUS LOCATION ON BOTH THE RING AND THE COVER.
- 3 FILLETS SHALL BE 1/4"R UNLESS OTHERWISE SPECIFIED.
- 4 A DRAFT ANGLE OF 3°-5° SHALL BE APPLIED UNLESS OTHERWISE SPECIFIED.
- 5 FINISH: REMOVE EXCESS IRON AND FINIS.
- 6 THIS DETAIL DOES NOT APPLY FOR VALVE BOX RING AND COVER TO BE USED ON REUSE OR NON-POTABLE WATER SYSTEMS.

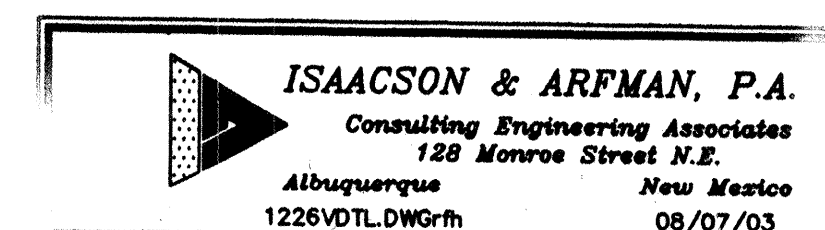
GENERAL NOTES - COVER

- 1 ALBUQUERQUE VALVE BOX COVER DESIGNED TO FIT INTO AN ALBUQUERQUE VALVE BOX RING.
- 2 THE CASTING NUMBER, MANUFACTURER'S LOGO, DATE OF MANUFACTURE AND "USA" SHALL BE CAST IN A CONSPICUOUS LOCATION ON BOTH THE RING AND THE COVER.
- 3 FILLETS SHALL BE 1/4"R UNLESS OTHERWISE SPECIFIED.
- 4 A DRAFT ANGLE OF 3°-5° SHALL BE APPLIED UNLESS OTHERWISE SPECIFIED.
- 5 FINISH: REMOVE EXCESS IRON AND FINIS.

REVISIONS	CITY OF ALBUQUERQUE
	WATER RING AND COVER FOR VALVE BOX
	DWG. 2328 JANUARY 2002

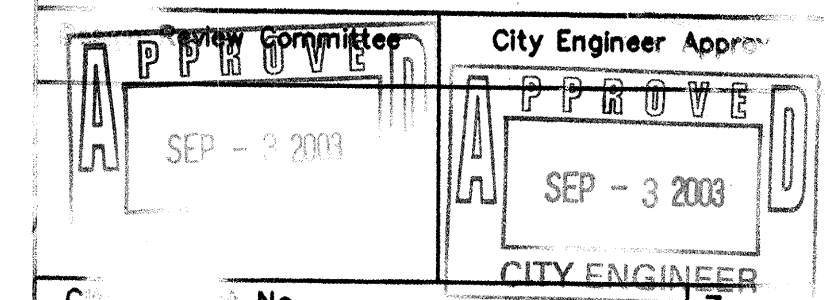
RECORD DRAWING

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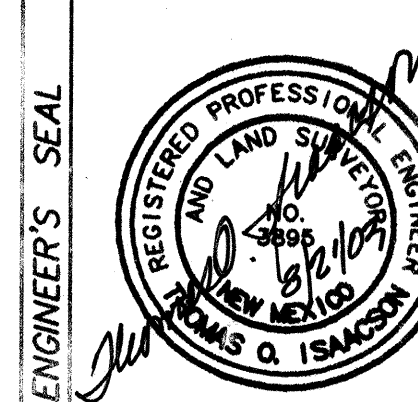
CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

ZONE 2W WATER TRANSMISSION LINE
AIR/ VACUUM RELEASE VALVE
WATER VALVE BOX DETAILS

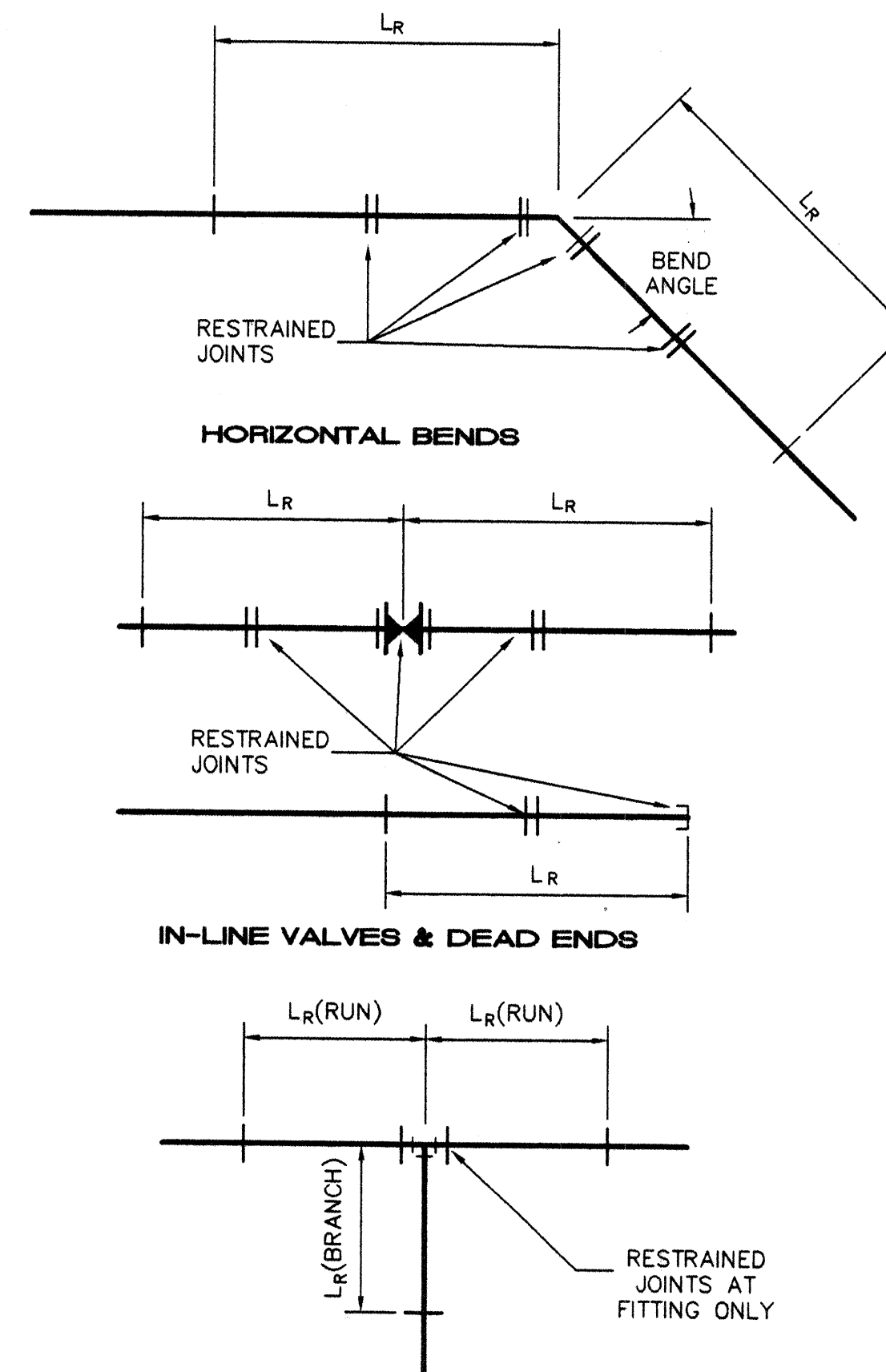
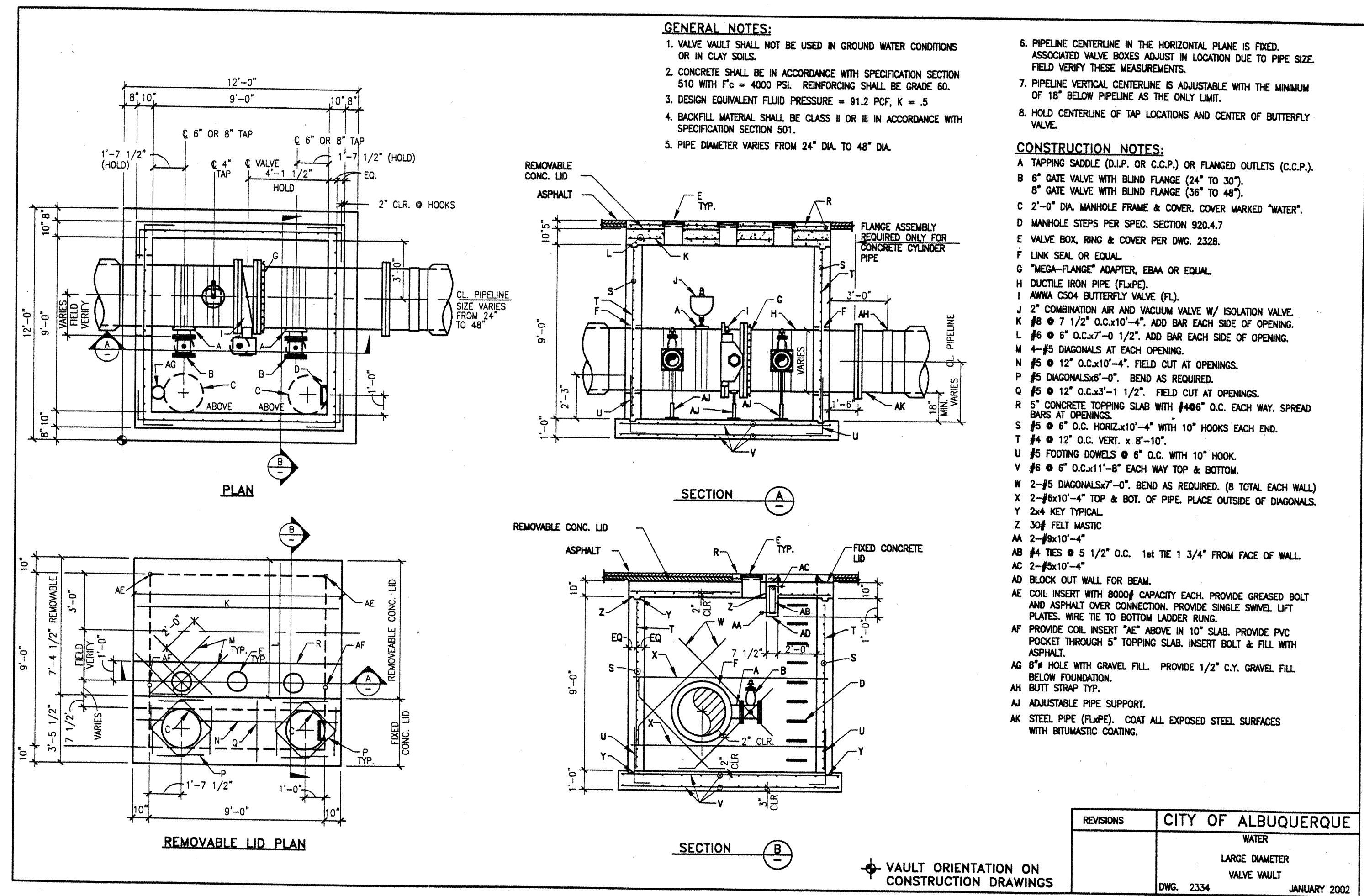


No. 7108.91 Zone

Sheet 7 Of 10



NO.	DATE	REVISIONS	DESIGN
1	03/03/03	TOI	RECORD DRAWING
2	03/03/03	BY	REVISIONS
3	03/03/03	DATE	DESIGN
4	03/03/03	DATE	DESIGN
5	03/03/03	DATE	DESIGN



**RESTRAINED JOINT LENGTHS
FOR WATERLINE FITTINGS**

RECORD DRAWING

WARNING

This is part of a record document. Record documents are based on reports submitted by others. Engineers cannot assure nor assume any responsibility or liability for the accuracy of record documents. Users of record documents are cautioned and advised to obtain independent verification of actual conditions.

ISAACSON & ARFMAN, P.A.
Consulting Engineering Associates
128 Monroe Street N.E.
Albuquerque New Mexico
1226UDTL.DWG.rh 08/21/03

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

**TITLE: ZONE 2W WATER TRANSMISSION LINE
LARGE DIAMETER VALVE VAULT DETAIL
RESTRAINED JOINT DETAILS**

Design Review Committee City Engineer Approval
APPROVED SEP - 3 2003
DESIGN CITY ENGINEER

City Engineer's Note Zone Map No. 7108.91 N9

AS-BUILT INFORMATION

CONTRACTOR J.B. H&B
WORK STARTED BY J.B. H&B
DATE 9/04
ACCEPTANCE BY E.A.R.
DATE 9/04
DRAWINGS CORRECTED BY TOI
DATE 9/04
RECORDED BY MICRO-FILM INFORMATION
DATE

BENCH MARKS

ACS MONUMENT "7-19" A C.O.A. BRASS CAP SET
IN CONCRETE, LOCATED 39.2' WEST FROM THE
CENTERLINE OF 98th STREET AND 31.0' SOUTH FROM
THE CENTERLINE OF TOWER ROAD.
ELEV. = 5175.74 (NGVD 29)

SURVEY INFORMATION

FIELD NOTES

ENGINEER'S SEAL

REGISTERED PROFESSIONAL ENGINEER
AND LAND SURVEYOR
NEW MEXICO
ISAACSON & ARFMAN, P.A.

REVISIONS

NO.	DATE	REMARKS
1	03/03/03	DESIGN
2	03/03/03	REVISIONS
3	03/03/03	DESIGN

DESIGNED BY TOI
DRAWN BY RFH
CHECKED BY TOI

Sheet 8 Of 10

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 SEPERATE 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. ALL WORK IN ARTERIAL ROADWAYS SHALL BE ON A CONTINUOUS 24 HOUR PER DAY BASIS UNTIL COMPLETED.

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 TRAVELED 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. 48 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.

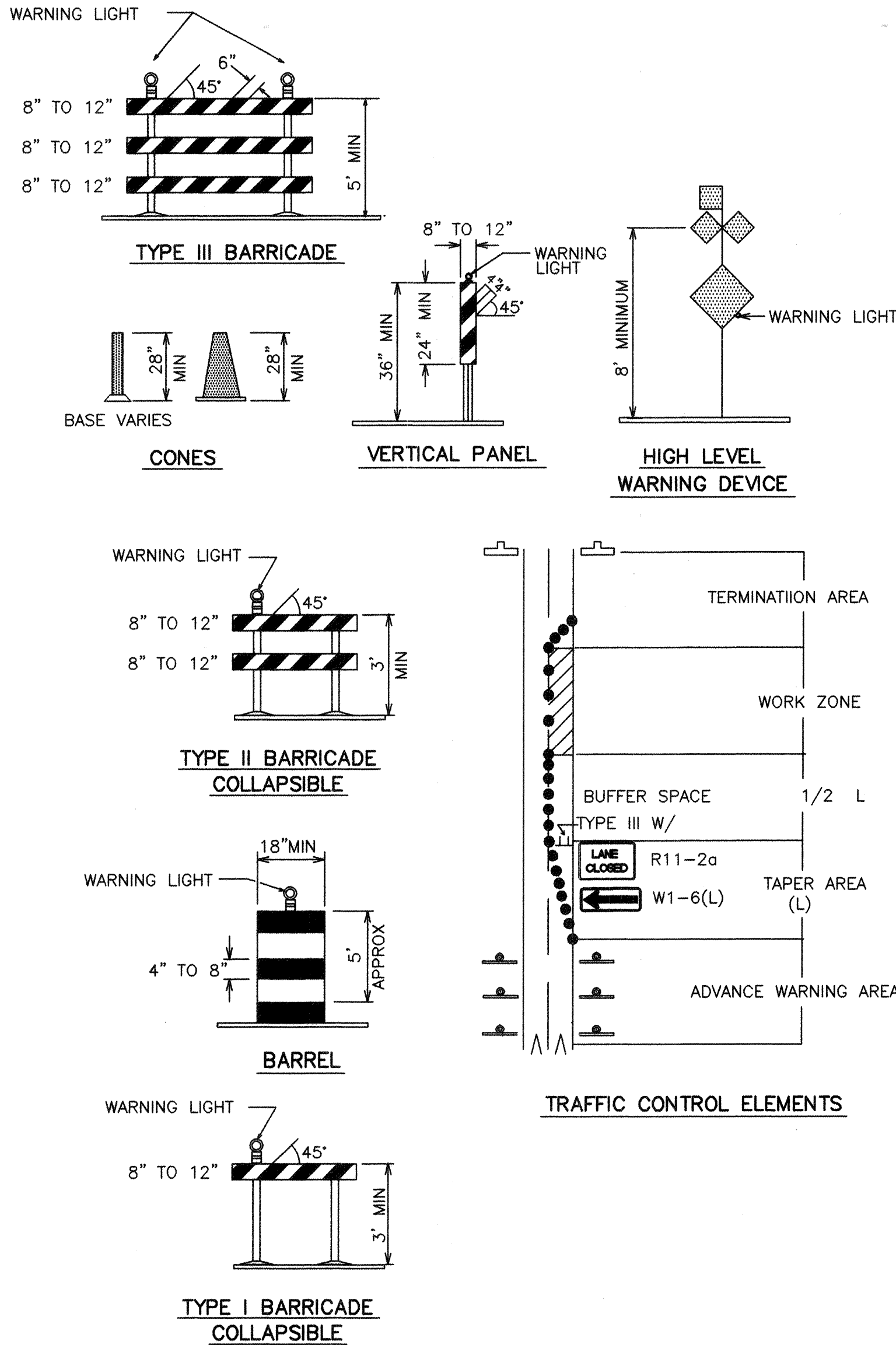
23. FAILURE TO COMPLY WITH ANY OF THE ABOVE MENTIONED, WILL BE ADEQUATE CAUSE TO CEASE ALL WORK ON ANY CONSTRUCTION PROJECT. WORK WILL NOT RESUME UNTIL ALL REQUIREMENTS ARE ADDRESSED AND APPROVED BY CONSTRUCTION COORDINATION.

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.

26. ADVANCE WARNING SIGNS SHALL BE 36"x36" MIN. WITH SUPER ENGINEERING GRADE SHEETING OR BETTER. MOUNTING HEIGHT AT TOP OF SIGN SHALL BE THE SAME AS FOR A 48" SIGN AS INDICATED IN THE M.U.T.C.D.

27. CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORKSITE. ALL GRAFFITI SHALL BE PROMPTLY REMOVED FROM ALL EQUIPMENT, BOTH PERMANENT AND TEMPORARY.



LEGEND

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

TAPER REQUIREMENT

SPEED LIMIT (MPH)	TAPER LENGTH(L) (FEET)			MINIMUM NUMBER OF DEVICES FOR TAPER	MAXIMUM DEVICE SPACING IN FEET	
	10' LANE	11' LANE	12' LANE		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(D) FOR ADVANCE WARNING SIGN SERIES

SPEED LIMIT (MPH)	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

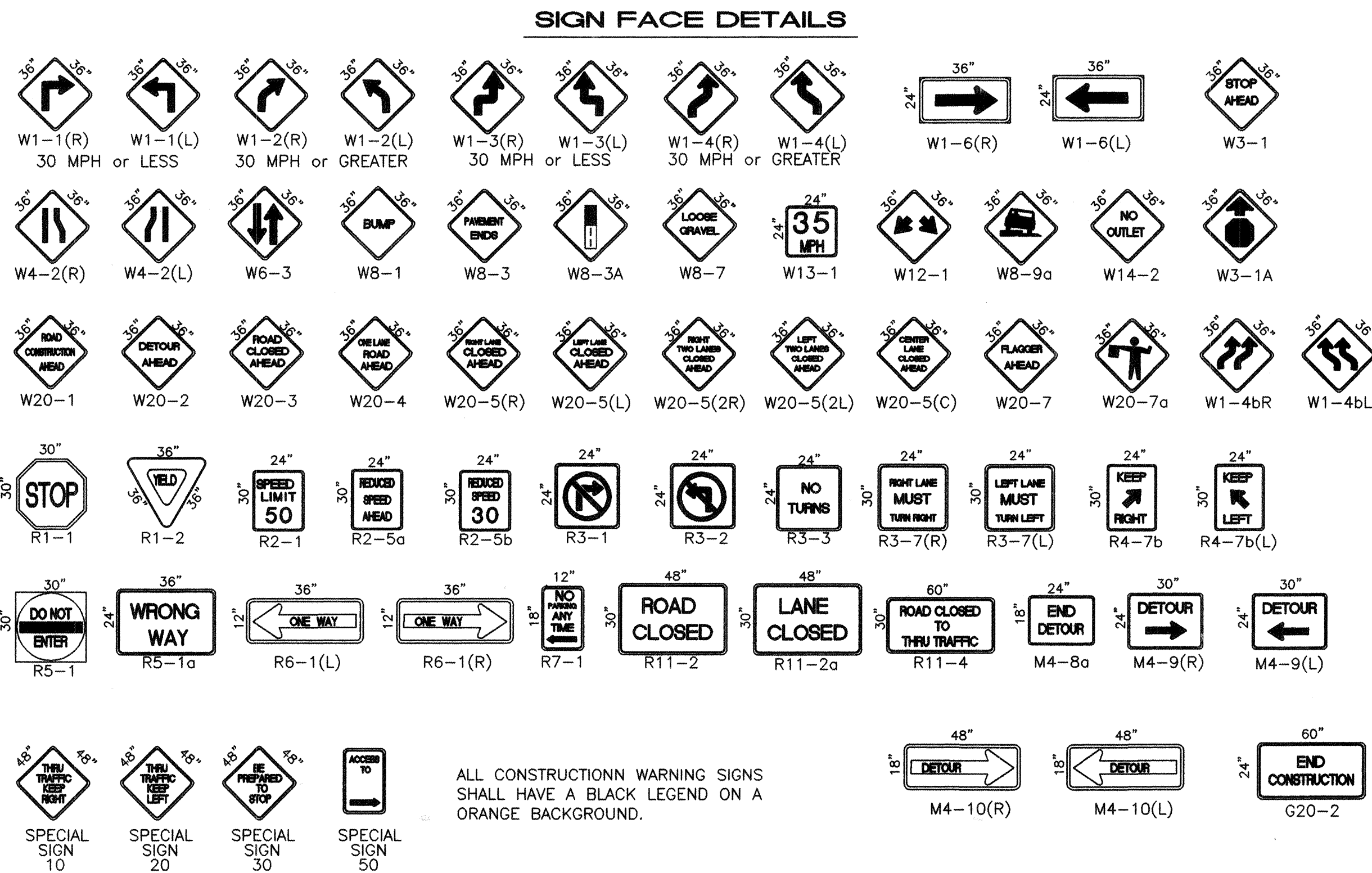
TAPER CRITERIA

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

TAPER LENGTH COMPUTATION

SPEED LIMIT	
40 MPH OR LESS	$L = \frac{WS^2}{60}$
40 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



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

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1226TRF1.DWG 08/07/03

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

TITLE: ZONE 2W WATER TRANSMISSION LINE
TRAFFIC CONTROL
SIGNING & CONSTRUCTION TRAFFIC CONTROL STANDARDS

Design Review Committee	City Engineer Approval	Mo./Day/Yr.	Mo./Day/Yr.
APPROVED	APPROVED		
DESIGN	DESIGN		
City Project No.	Zone Map No.	Sheet	Of
7108.91	M 9	9	10

