# RAYO DEL SOL WATER LINE PUBLIC WATERLINE IMPROVEMENTS

### PHASE IIA

### LUNA AZUL AVE. SW/RAYO DEL SOL DRIVE SW ALBUQUERQUE, NM 87121

(REF MUTCD)

## **COVER SHEET** PUBLIC UTILITIES PLAN NEW 10" WATERLINE PLAN AND PROFILE TRAFFIC CONTROL SIGNING AND CONSTRUCTION

TYPICAL TRAFFIC CONTROL & SIGNING EXAMPLES

INDEX OF DRAWINGS

TRAFFIC CONTROL STANDARDS

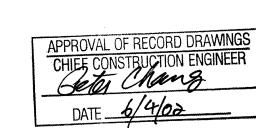
#### REFERENCE PROJECT

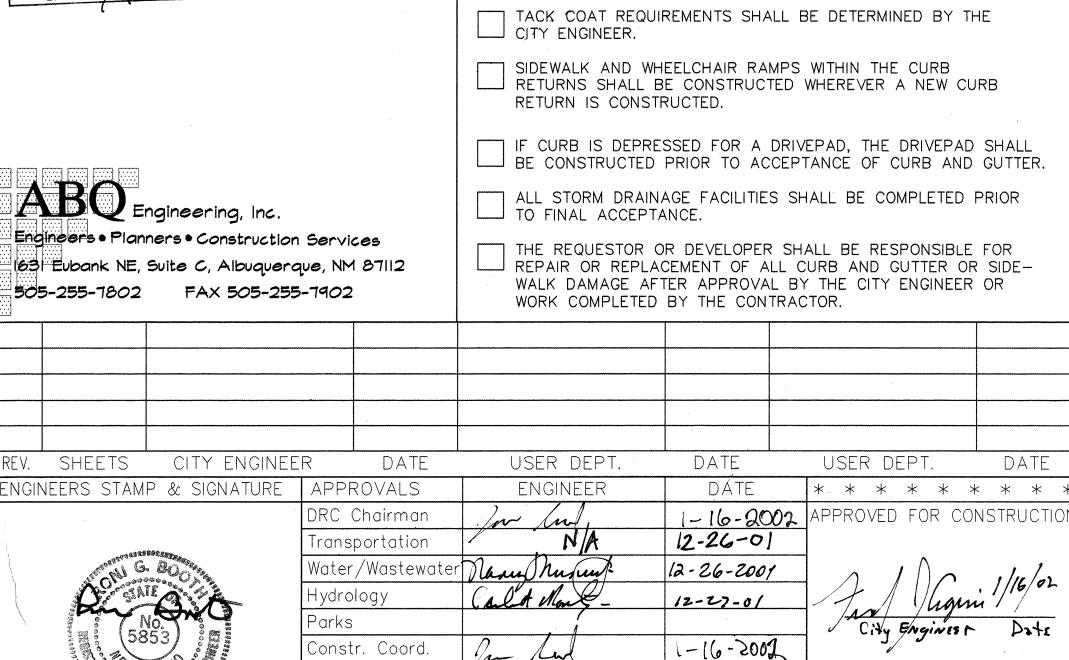
CITY PROJECT No. 5794.82

We have inspected the reference project (Project No.5794.83) and find that the projected has been completed. The construction of this projected was performed in conformance with the City of Albuquerque specifications, construction standards, the approved construction drawings.

THE AS-CONSTRUCTED PROJECT 15 ABQ Engineering Inc// IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED PLANT. MARTIN J. GARCIA P.E. #11767

CAUTION: NOTE THAT ALL EXISTING UTILITIES MAY NOT BE SHOWN. ALL EXISTING SERVICE CONNECTIONS ARE NOT SHOWN. ANY EXISTING UTILITIES THAT ARE SHOWN ARE APPROXIMATE LOCATION ONLY. IT SHALL BE THE SOLE RESPONSIBILTY OF THE CONTRACTOR TO CONTACT ALL THE UTILITY OWNERS AND TO CONDUCT ALL NECESSARY FIELD INVESTIGATIONS PRIOR TO ANY EXCAVATIONS TO DETERMINE THE ACTUAL LOCATION OF UTILITIES AND OTHER IMPROVEMENTS.





City Project No.

579483

VALLEY WEST

VICINITY MAP M-10

GENERAL NOTES

BY THE CONTRACTOR.

SPECIFICATIONS.

STREET USE.

NOTICE TO CONTRACTORS

CITY OF ALBUQUERQUE SPECIFICATIONS FOR PUBLIC WORKS

CONSTRUCTION, 1986 EDITION AS AMENDED THROUGH UPDATE 6, WILL BE REFERRED TO HEREIN AS THE "STANDARD SPECIFICATIONS".

PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE

ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR

CONTRACTOR SHALL, AT HIS OWN EXPENSE, ADJUST THE MONUMENT

COVER TO THE NEW GRADE UNLESS OTHERWISE SPECIFIED. REFER TO

THE FOLLOWING NOTES ALSO APPLY WHEN CHECKED

Sheet

SECTION 4.4 OF THE GENERAL CONDITIONS OF THE STANDARD

3. ANY WORK AFFECTING AN ARTERIAL ROADWAY REQUIRES A

ALL UTILITIES AND UTLITY SERVICE LINES SHALL BE

BACKFILL COMPACTION SHALL BE ACCORDING TO SPECIFIED

TWENTY-FOUR HOUR CONSTRUCTION.

INSTALLED PRIOR TO PAVING.

TWO WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM (260-1990)

AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF

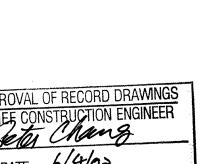
SHALL NOTIFY THE ENGINEER OR THE SURVEYOR SO THAT THE

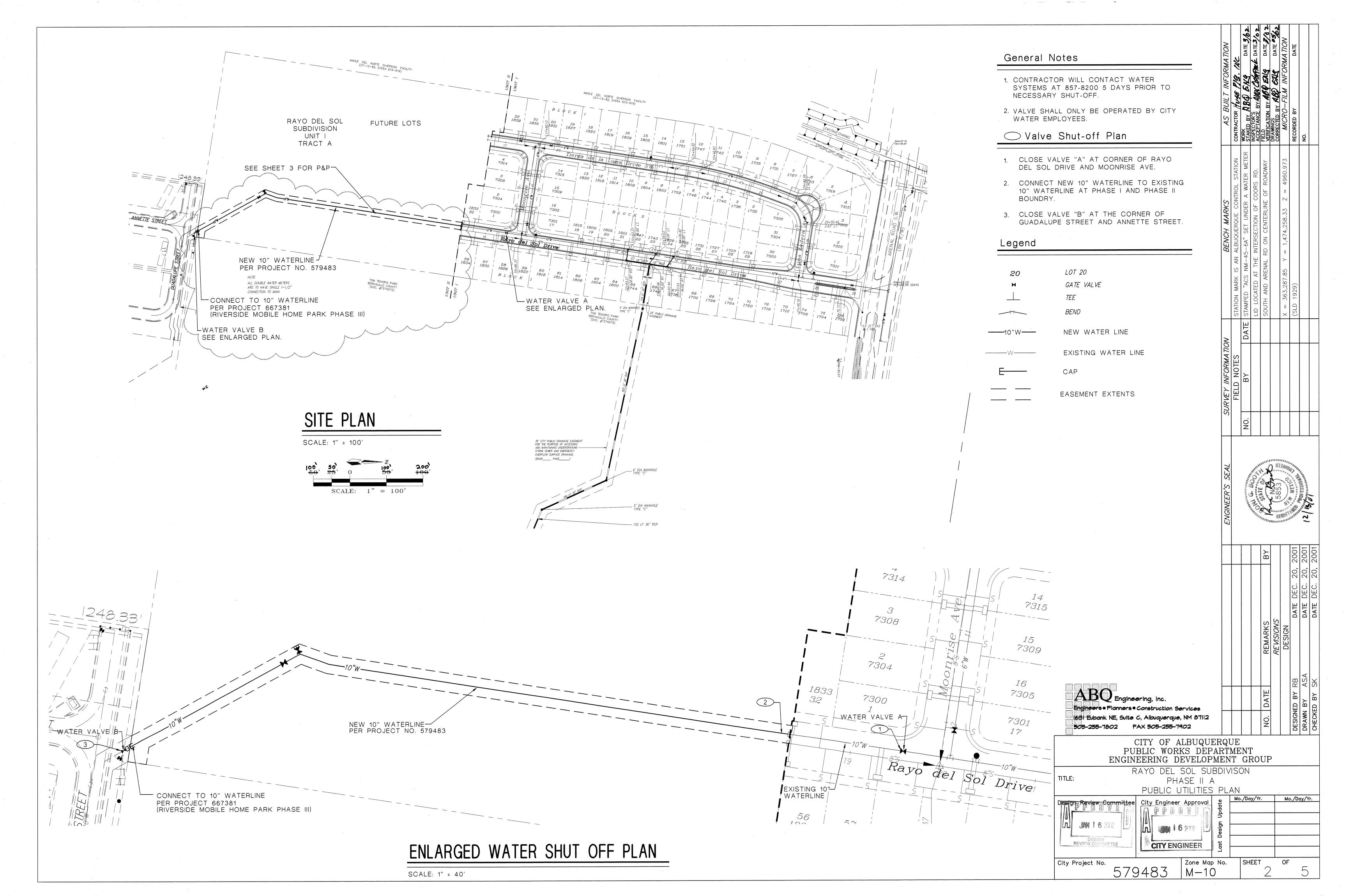
. ALL EXISTING SIGNS, MARKERS, DELINEATORS, ETC., WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED, STORED AND RE-SET

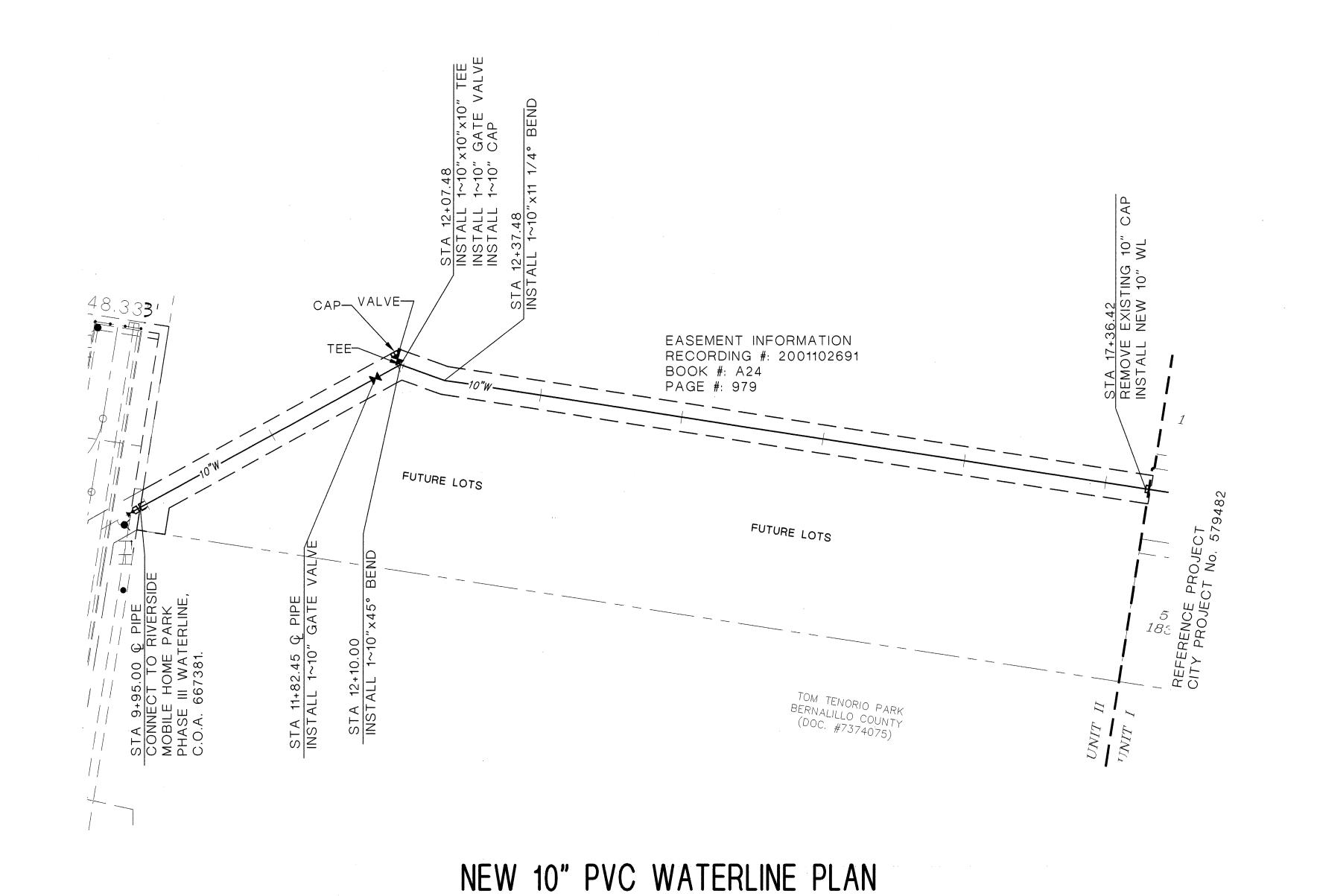
AND DETERMINE LOCATION OF EXISTING UTILITIES.

CONFLICT CAN BE RESOLVED WITHOUT DELAY

ZONE ATLAS N-10







SCALE: 1" = 50'

Legend

----10"W--- NEW WATER LINE

— — W— — EXISTING WATER LINE

NEW VALVE

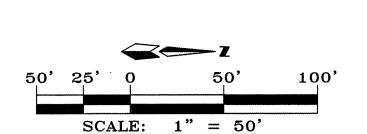
Г			
l		INFRASTRUCTURE LIST	
Ī	ITEM	DESCRIPTION	QTY
Ī	1	10" WL PIPE, W/O FIT	741.42
	2	NON PRESS CONN, W/ FIT, WL	2
Ī	3	10" GATE VALVE	2
ſ	Δ	VIV BOX A	2

LENGTI	H OF	REST	RAINE	D PIP	E (FE	EET)
PIPE SIZE	90	45	22.5	11.25	TEE	VALVE
6"	18'	7'	4'	2'	18′	46'
8"	22'	8'	4'	2'	22'	59'
10"	27'	11'	5′	3'	27'	72'

LENGTH OF RESTRAINED PIPE ON EACH SIDE OF THE BEND. RESTRAIN BRANCH AT FITTING ONLY. MINIMUM ATTACHED PIPE LENGTH, RUN EACH SIDE OF TEE: 10.00 FEET

SCALE: 1" = 50' HORIZ 1" - 10' VERT

### ### ##############################		A 10"×10" TEE GATE VALVE A 997 00 TEE A 997 00 TEE BEND A 11 11/4" BEND A 10" CAP A 10
STA 12+07.48  STA 112+07.48  STA 110"×10"  STA 11-62-45  STA 11-82-45  STA 11-82-45  STA 11-82-45  STA 11-82-45  TOP OF PIPE  TOP O	5010	STA   NSTA   N
	4990	NEW 10" WL
9+00 10+00 11+00 12+00	4990	12+00 13+00 14+00 15+00 16+00 17+00 18+0



Engineering, Inc. Engineers • Planners • Construction Services 1631 Eubank NE, Suite C, Albuquerque, NM 87112 505-255-7802 FAX 505-255-7902

> CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP

RAYO DEL SOL SUBDIVISON UNIT II

NEW 10" WATERLINE PLAN/PROFILE esign Review Committee City Engineer Approval

DESIGN
REVIEW COMMITTEE CITY ENGINEER

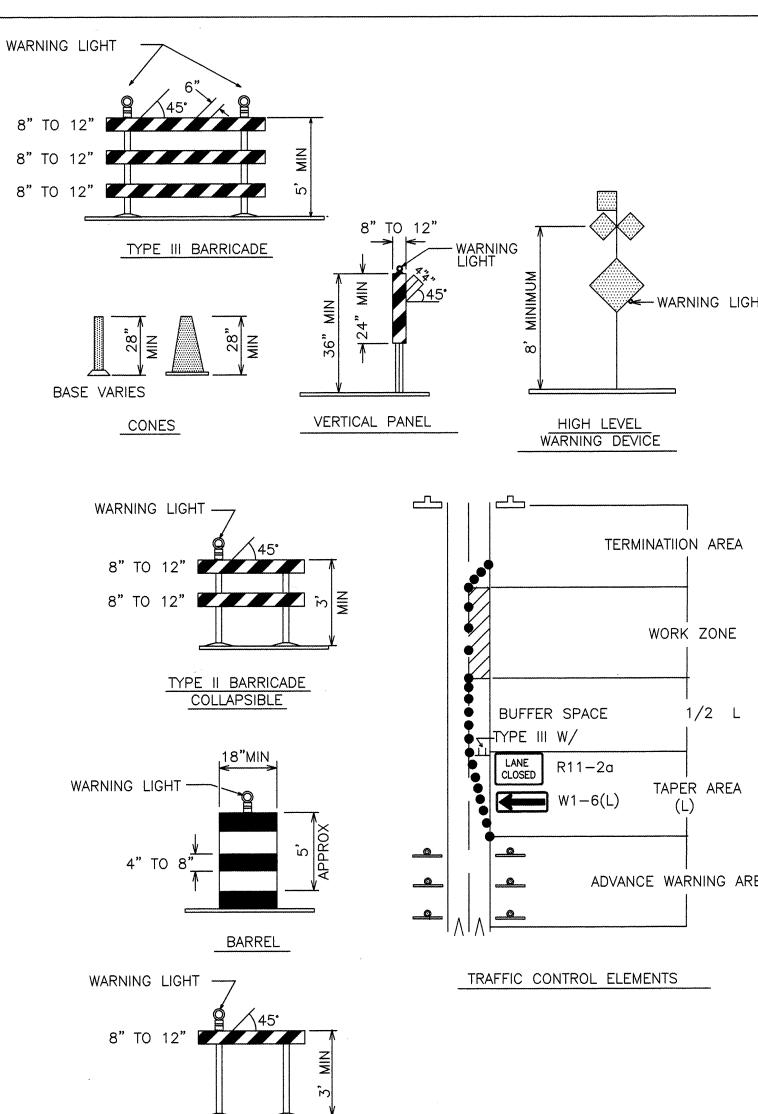
SHEET City Project No. Zone Map No. 579483

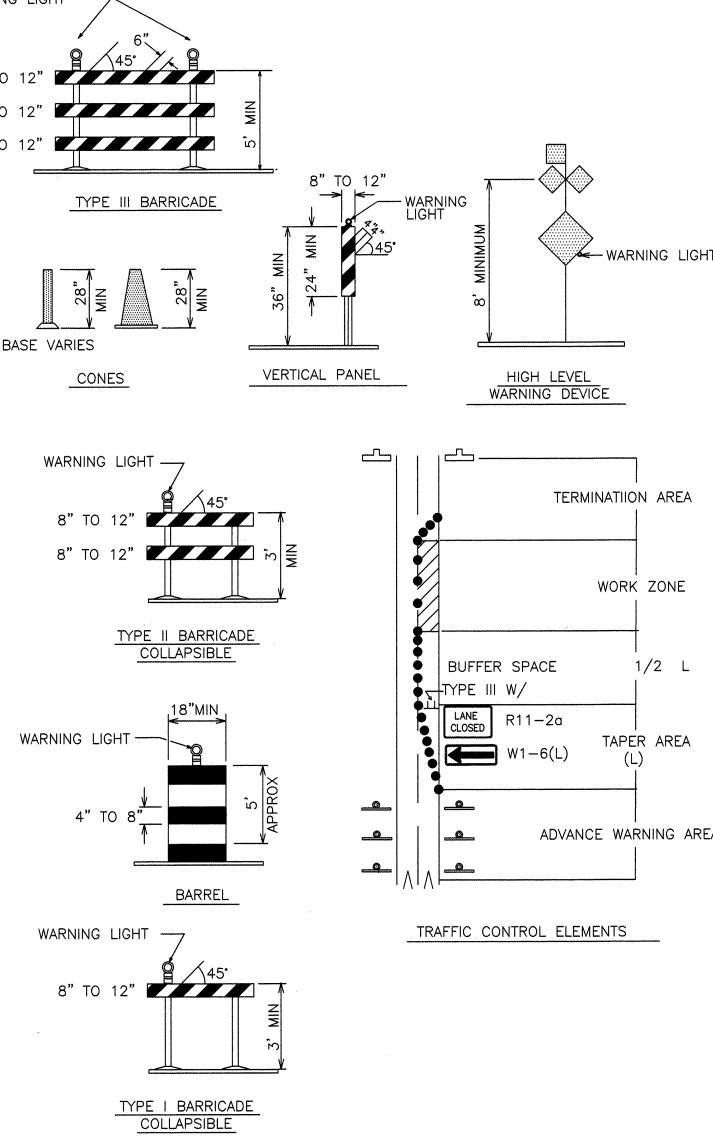
- 1. CONTRACTOR MUST OBTAIN FROM CONSTRUCTION COORDINATION AN EXCAVATION/BARRICADING PERMIT BEFORE ENGAGING IN ANY CONSTRUCTION, MAINTENANCE OR REPAIR WORK IN ANY OF THE CITY OF ALBUQUERQUE'S RIGHTS-OF-WAY. EMERGENCY WORK THAT WOULD PRESERVE LIFE OR PROPERTY IS EXCLUDED WITH THE UNDERSTANDING, THAT A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

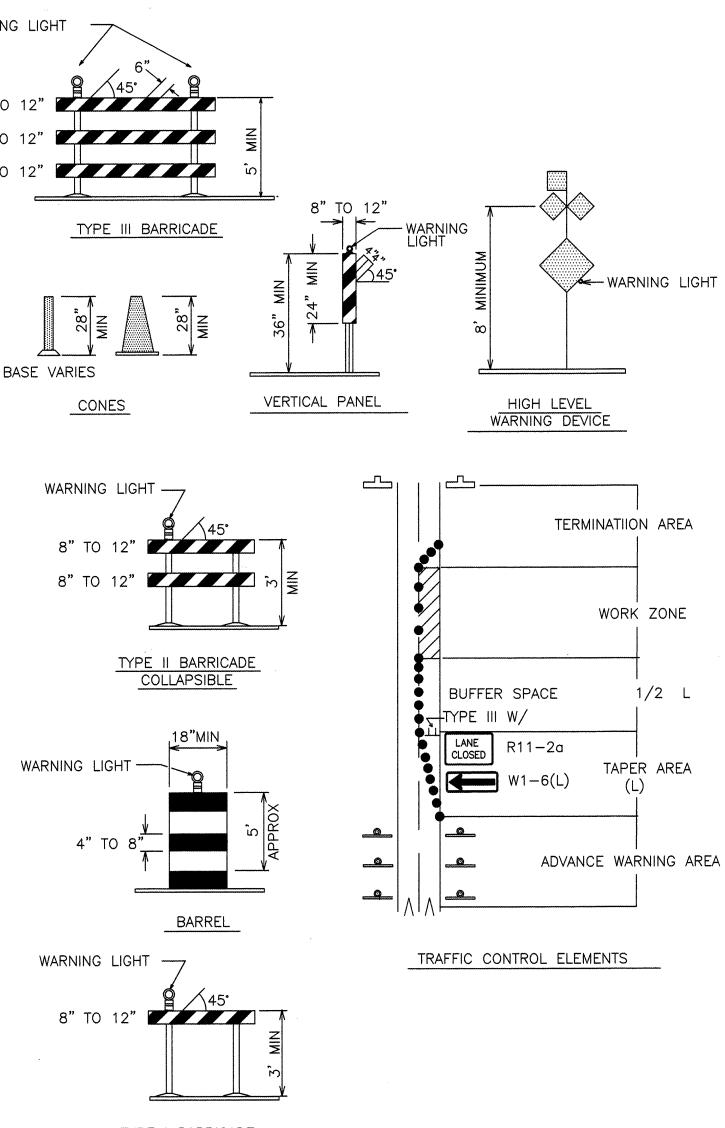
- 21. EXCAVATIONS SHALL BE PLATED, TEMPORARILY PATCHED OR RESURFACED PRIOR TO OPENING OF TRAFFIC. A MINIMUM OF 11 FEET SHALL BE PROVIDED FOR TRAFFIC IN ANY GIVEN DIRECTION. CONTRACTOR IS RESPONSIBLE FOR ANY WORK INVOLVED IN SATISFYING THESE REQUIREMENTS
- 22. CONTRACTOR SHALL AT ALL TIMES COMPLY WITH 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 EQUIPTMENT, BOTH PERMANENT AND TEMPORARY.









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 STREET 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	/FFFT)				MAXIMUM DEVICE SPACING IN FEET		
(MPH)	10' LANE	11' LANE	12' LANE	DEVICES FOR TAPER	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 MILES PER HOUR			MINIMU BETWE SIGN:	EN	TANC		IN FEET FROM L GN TO	AST
0-20 25-30 30-35 40-45 50-60	10 10 10	X X X	SPEED SPEED SPEED SPEED SPEED	LIMIT LIMIT LIMIT	10 10 10	X X X	SPEED SPEED SPEED SPEED SPEED	LIMIT LIMIT LIMIT

#### TAPER CRITERIA

TYPE OF TAPER
UPSTREAM TAPER: MERGING TAPER SHIFTING TAPER SHOULDER TAPER TWO—WAY TRAFFIC TAPER DOWNSTREAM TAPERS

#### TAPER LENGTH COMPUTATION

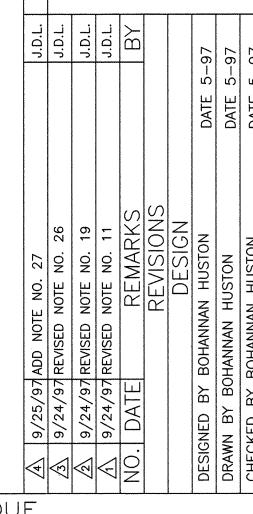
 $L = W \times S$ 

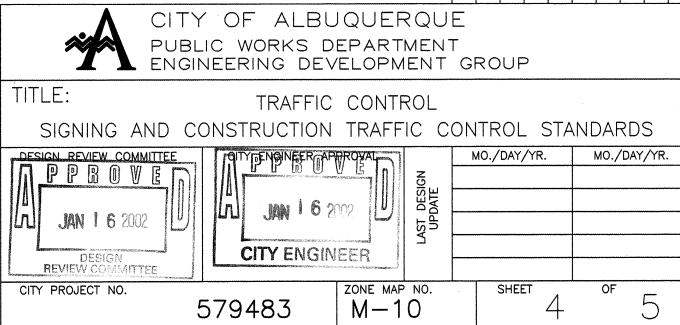
SPEED LIMIT

40 MPH OR LESS

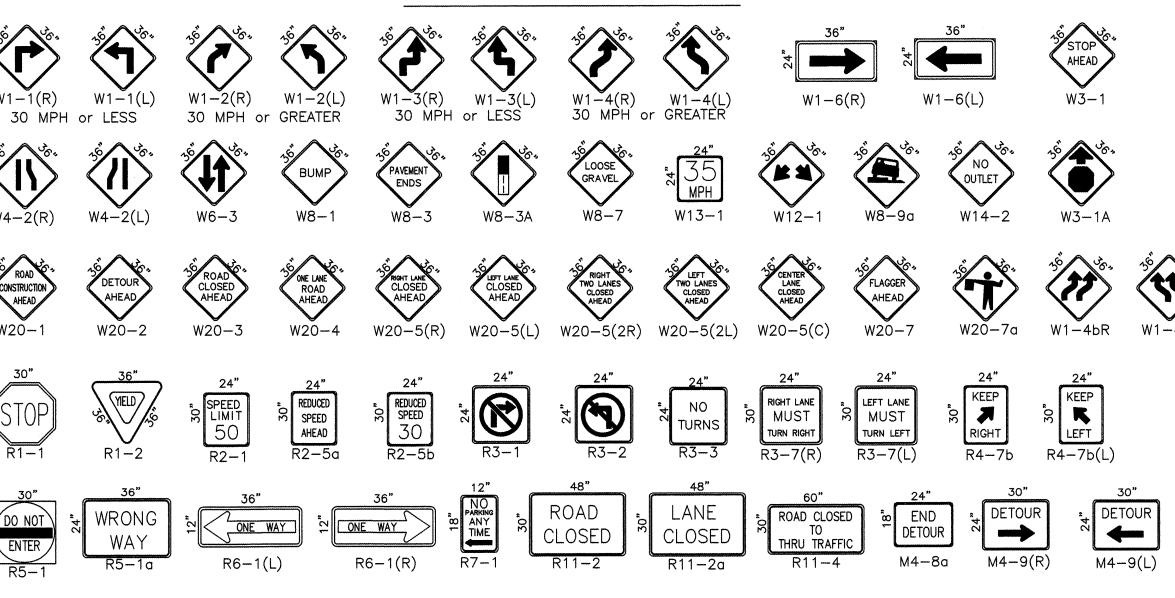
40 MPH OR GREATER

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





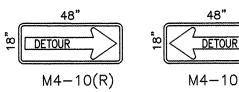
SIGN FACE DETAILS

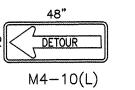




SPECIAI SIGN 50

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





END CONSTRUCTION

