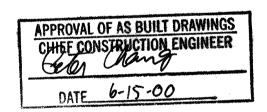


CITY OF ALBUQUERQUE

CONSTRUCTION PLANS FOR

SOUTH VALLEY SEWER EXTENSIONS LOS PADILLAS AREA VACUUM LIFT STATION FORCE MAIN REPLACEMENT

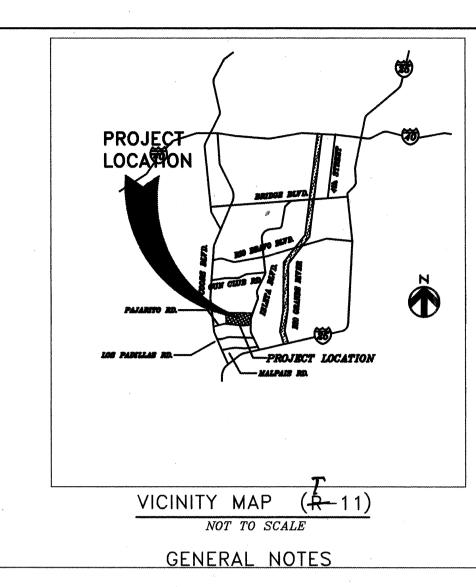


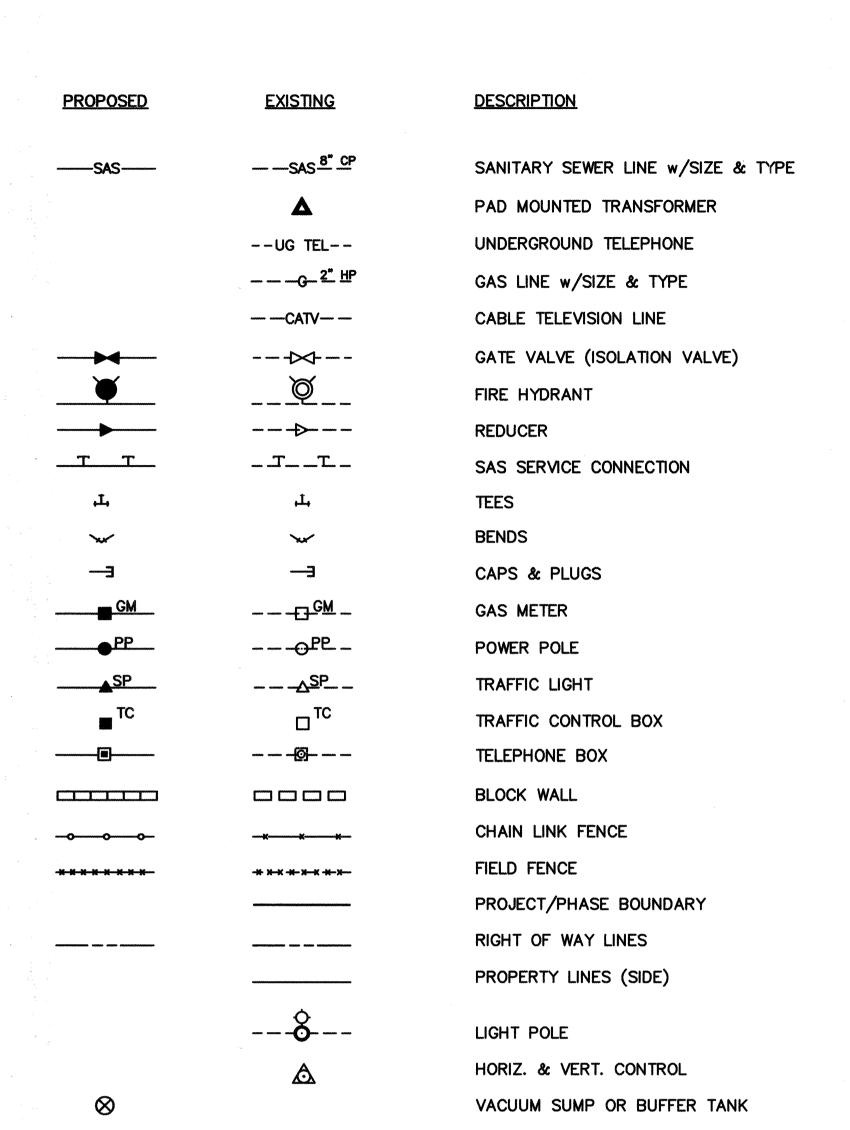
NOVEMBER 1999

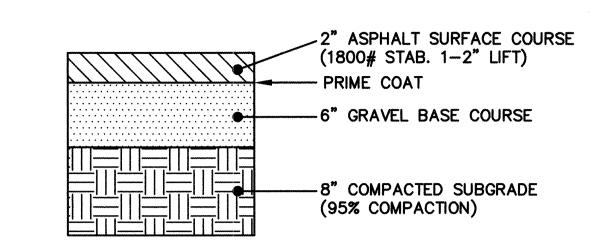
INDEX OF DRAWINGS

- COVER SHEET
- 2 STANDARD DETAILS AND GENERAL NOTES
- JENSEN DRIVE PLAN AND PROFILE
- NORMENT ROAD PLAN AND PROFILE
- 6 SIGNING AND CONSTRUCTION TRAFFIC CONTROL STANDARDS
- 7 TYPICAL TRAFFIC CONTROL AND SIGNING EXAMPLES (REF. M.U.T.C.D.)

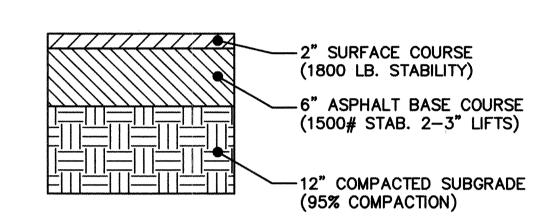








RESIDENTIAL PAVING SECTION N.T.S.



COLLECTOR PAVING SECTION N.T.S.

ASPHALT CONCRETE 10' WIDTH FOR PAYMENT PAVEMENT REPLACEMENT OF ASPHALT REMOVAL PER DETAILS AND AND REPLACEMENT SCHEDULES THIS SHEET -WARNING TAPE PER CITY STD SAWCUT ASPHALT PAVEMENT TO NEAT EDGE (TYP.) TRENCH DEPTH VARIES. SEE PLAN AND PROFILE SHEETS 6" FORCE MAIN TRENCH WIDTH PER SPEC. SEC. 701

REFER TO SPECIFICATION SECTION 701 FOR CONSTRUCTION REQUIREMENTS

TYPICAL TRENCH DETAIL

N.T.S.

NOTE: CONTACT BCPWD INSPECTOR DURING CONSTRUCTION TO VERIFY PAVEMENT REMOVAL LIMITS AND EXISTING PAVING SECTIONS. ADJUSTMENTS TO THE TYPICAL PAVEMENT REMOVAL AND REPLACEMENT SECTIONS IN THE PLANS MAY BE REQUIRED DE-PENDING ON THE FIELD CONDITIONS.

GENERAL NOTES:

- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER THIS 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 VERSION NO.6 (REFERRED TO HEREAFTER AS THE STANDARD SPECIFICATIONS), THE LATEST VERSION OF THE BERNALILLO COUNTY PUBLIC WORKS STANDARDS, OR AS INDICATED ON THESE DRAWINGS.
- 2. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT N.M. ONE-CALL SYSTEM, 260-1990, FOR LOCATION OF EXISTING UTILITIES.
- 3. THE CONTRACTOR SHALL EXERCISE CARE TO AVOID DISTURBING EXISTING UNDERGROUND UTILITIES. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO COORDINATE WITH THE UTILITY COMPANIES IN ORDER TO PREVENT ANY SERVICE DISRUPTION.
- 4. 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 AMOUNT OF DELAY.
- 5. RELOCATION OF EXISTING UTILITIES AND THE INSTALLATION OF NEW UTILITY LINES WILL BE COMPLETED IN ADVANCE OF STARTING THE PAVEMENT WORK. TEMPORARY PAVEMENT WILL BE PLACED IN ALL TRENCHES REQUIRED FOR THE UTILITY REPLACEMENTS IN THOSE AREAS THAT MUST MAINTAIN TRAFFIC UNTIL THE PAVEMENT WORK STARTS IN EACH AREA. PAVEMENT REPLACEMENT MUST BEGIN WITHIN SEVEN (7) DAYS OF TRENCH CLOSURE. TEMPORARY STRIPING SHALL BE THE CONTRACTOR'S RESPONSIBILITY.
- 6. ALL NEW STREET PAVING ABUTTING EXISTING AREAS SHALL MATCH THE ELEVATIONS OF THOSE AREAS.
- 7. CONTRACTOR SHALL PROVIDE A WEEKLY CONSTRUCTION ACTIVITY SCHEDULE TO BERNALILLO COUNTY PUBLIC WORKS DEPARTMENT, ATTN: HOSS FOSTER.
- 8. ALL EXCAVATED MATERIAL THAT IS NOT REQUIRED TO BE REUSED MUST BE REMOVED FROM THE PROJECT AREA WITHIN FOUR DAYS OF EXCAVATION. SPOIL PILES WILL BE ALLOWED ONLY AS DIRECTED BY
- 9. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES WITH ALL OTHER CONTRACTORS AND UTILITY COMPANIES WORKING IN THE SAME AREA. THE CONTRACTOR MAY BE REQUIRED TO RESCHEDULE THEIR ACTIVITIES TO ALLOW UTILITY CREWS TO PERFORM THEIR REQUIRED WORK. NO ADDITIONAL COMPENSATION WILL BE ALLOWED FOR DELAYS OR INCONVENIENCE CAUSED BY UTILITY COMPANY WORK CREWS.
- 10. WHEN ABUTTING NEW PAVEMENT TO EXISTING, CONTRACTOR SHALL SAW CUT EXISTING PAVEMENT TO A NEAT, STRAIGHT LINE, AS REQUIRED, TO REMOVE ANY BROKEN OR CRACKED PAVEMENT AND MATCH NEW TO
- 11. CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND DISPOSAL OF ALL DEMOLITION DEBRIS. SALVAGE OF ANY MATERIAL SHALL BE IDENTIFIED BY THE ENGINEER. WORK MATERIALS SHALL BE DISPOSED OF IN CITY APPROVED WASTE AREAS SECURED BY AND AT THE EXPENSE OF THE CONTRACTOR.
- 12. ALL UTILITY LINES WHICH ARE NOT SPECIFICALLY DESIGNATED TO BE REMOVED AND REPLACED ON THE PLANS SHALL BE MAINTAINED IN SERVICE. SHORING, SHEETING, AND OTHER MEANS OF SUPPORT SHALL BE EMPLOYED BY THE CONTRACTOR TO PREVENT DAMAGE OR LOSS OF THESE EXISTING UTILITIES. BEAM AND CABLE OR OTHER ADEQUATE SUPPORTS SHALL BE USED FOR TEMPORARY SUPPORT OF ALL UTILITY LINES WHICH CROSS THE TRENCH. ANY DAMAGE TO EXISTING UTILITIES SHALL PROMPTLY BE REPAIRED AT THE CONTRACTOR'S EXPENSE. THE ENGINEER WILL BE IMMEDIATELY NOTIFIED OF ANY SIGNIFICANT DEVIATION OF EXPOSED UTILITIES FROM THE LOCATIONS SHOWN ON THE PLANS SO THAT CONFLICTS CAN BE RESOLVED IN A TIMELY MANNER.
- 13. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ANY DAMAGE TO EXISTING PAVING OR CURB AND GUTTER DURING CONSTRUCTION. APART FROM THOSE SECTIONS INDICATED FOR REMOVAL ON THE PLANS. AND SHALL REPAIR OR REPLACE SAME AT CONTRACTOR'S EXPENSE.
- 14. ALL ABANDONED UTILITY LINES WHICH ARE EXPOSED AS A RESULT OF CONSTRUCTION SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTORS.
- 15. CONTRACTOR SHALL BE RESPONSIBLE FOR ACQUIRING ALL PERMITS NECESSARY FOR CONSTRUCTION. PERMITS SHALL BE ACQUIRED A MINIMUM OF TWO WEEKS PRIOR TO CONSTRUCTION. CONTACT HOSS FOSTER, BERNALILLO COUNTY PUBLIC WORKS DEPARTMENT (848-1500) FOR INFORMATION.
- 16. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT THE MIDDLE RIO GRANDE CONSERVANCY DISTRICT (MRGCD) AT 247-0234 TO PROVIDE NOTICE OF THE SCHEDULE FOR CONSTRUCTION AT THE MRGCD FACILITIES. ALL WORK TO BE PERFORMED IN THE MRGCD RIGHT-OF-WAY SHALL BE CLOSELY COORDINATED WITH MRGCD.
- 17. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE COUNTY TRAFFIC CONTROL MANAGER AT LEAST 48 HOURS PRIOR TO COMMENCEMENT OF WORK, TRAFFIC CONTROL PLANS SHALL BE PREPARED IN ACCORDANCE WITH AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) REQUIREMENTS AND BY ATSSA CERTIFIED PERSONNEL AND MUST BE APPROVED PRIOR TO COMMENCEMENT OF WORK ON THE PROJECT.

GENERAL NOTES (CONT.):

- 18. SUBJECT TO THE APPROVED TRAFFIC CONTROL PLAN, AT LEAST ONE LANE SHALL BE OPEN TO TRAFFIC AT ALL TIMES. CONTRACTOR SHALL PROVIDE PROPER SIGNAGE AND FLAGMEN AND SHALL MAINTAIN THE TRAFFIC LANES IN SUCH A MANNER AS TO ASSURE PROPER SAFETY TO THE TRAVELLING PUBLIC ON ALL AFFECTED ROADS. THE CONTRACTOR SHALL PROVIDE ACCESS TO ALL PRIVATE AND PUBLIC PROPERTY AT ALL TIMES, EXCEPT WHEN GRADING, PAVING, EXCAVATION AND BACKFILL OPERATIONS ARE BEING CONDUCTED IMMEDIATELY IN FRONT OF THE PROPERTY, IN WHICH CASE ACCESS WILL NOT BE DENIED FOR MORE THAN 24 HOURS WITHOUT APPROVAL BY THE COUNTY.
- 19. TRAFFIC LANES PROVIDED DURING CONSTRUCTION SHALL BE MAINTAINED, IN SUCH A CONDITION UNDER ALL WEATHER CONDITIONS, SO AS TO PERMIT THE REASONABLE PASSAGE OF PASSENGER VEHICLES, AND SHALL BE KEPT GRADED AND SMOOTH, AND WATERED SEVERAL TIMES DAILY TO CONTROL
- 20. A DAILY TRAFFIC CONTROL LOG SHALL BE MAINTAINED BY THE CONTRACTOR REFLECTING THE TYPES AND LOCATIONS OF ALL TRAFFIC CONTROL DEVICES. SIGNS, BARRICADES, ETC. BEING USED ON THE PROJECT IN COMPLIANCE WITH THE APPROVED TRAFFIC CONTROL PLAN. THIS LOG SHALL BE SUBMITTED TO THE BERNALILLO COUNTY TRAFFIC CONTROL MANAGER UPON COMPLETION OF THE PROJECT CONSTRUCTION WHEN SO REQUESTED BY THE PROJECT OR THE TRAFFIC CONTROL MANAGER.
- 21. CONTRACTOR SHALL POTHOLE AT 200 FOOT INTERVALS TO VERIFY LOCATION OF EXISTING FORCE MAIN AND POSSIBLE CONFLICTING UTILITIES PRIOR TO CONSTRUCTION.

22. SPECIAL NOTICES:

- a. HAND DELIVER SPECIAL NOTICES TO EACH RESIDENCE OR BUSINESS ADJACENT TO THE CONSTRUCTION AREA AND TO OTHERS WHICH MAY BE AFFECTED BY CONSTRUCTION ACTIVITIES. SPECIAL NOTICES ARE TO INFORM RESIDENTS AND BUSINESSES IN WRITING WHENEVER ACCESS, UTILITY SERVICES OR OTHER SERVICES TO THEIR PROPERTY MAY BE IMPAIRED.
- b. THE CONTRACTOR SHALL BE RESPONSIBLE FOR:
- 1. DELIVERY OF SPECIAL NOTICES NOT MORE THAN SEVEN (7) DAYS NOR LESS THAN FOUR (4) DAYS PRIOR TO PHYSICAL CONSTRUCTION THAT WILL AFFECT THE PROPERTY.
- 2. CORRECTED NOTICES ARE TO BE DELIVERED IF CONSTRUCTION DOES NOT START WITHIN 48 HOURS OF DATE GIVEN IN NOTICE.
- 3. THE WRITTEN NOTICE IS TO STATE:
- CONTRACTOR'S NAME, ADDRESS AND LOCAL TELEPHONE NUMBER
- NATURE OF WORK TO BE DONE
- TYPE OF DISRUPTION TO EXPECT
- EXPECTED DURATION OF CONSTRUCTION
- CONTRACTOR'S LOCAL PHONE NUMBER TO WHICH EMERGENCY CONDITIONS CAN BE REPORTED DURING NORMAL WORKING HOURS
- CONTRACTOR'S LOCAL PHONE NUMBER TO WHICH EMERGENCY CONDITIONS CAN BE REPORTED DURING NON-WORKING PERIODS.

- 1. FORCE MAIN SHALL BE:
- PIPE: CL. 52 DIP - FITTINGS: CL. 350 MECHANICAL JOINT
- 2. ALL JOINTS SHALL BE ACCOMPLISHED WITH RESTRAINING GLANDS. SEE PLANS FOR DISTANCES OF PIPES TO BE RESTRAINED.
- 3. TESTING SHALL BE IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS, SECTION 800 AT 180 PSI (120 X 1.5).

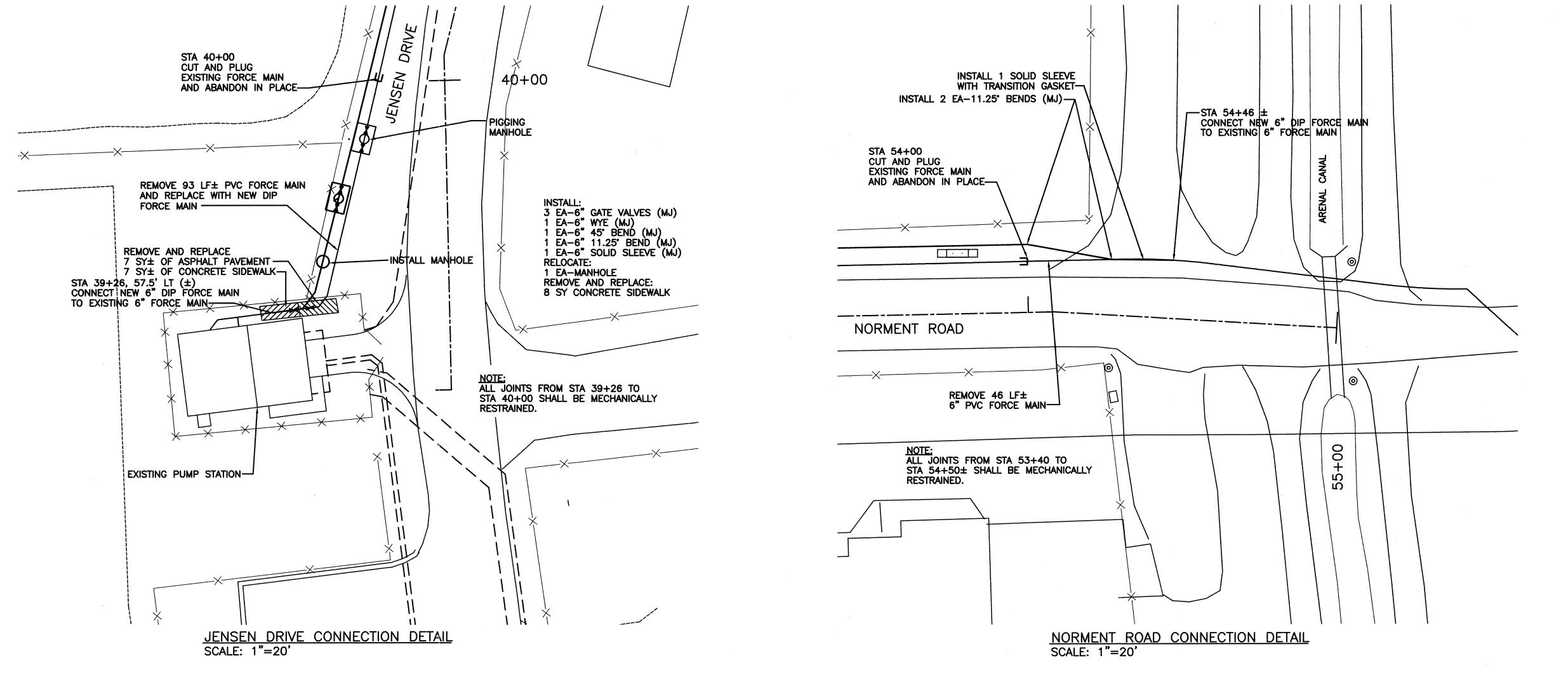
CONSTRUCTION SEQUENCE NOTES:

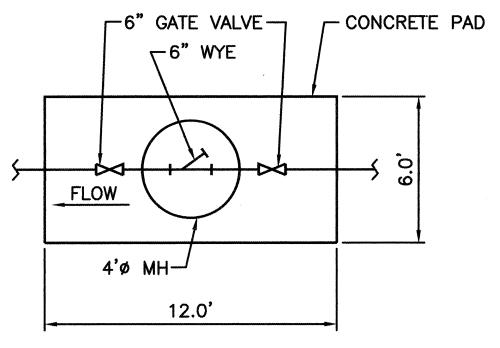
- 1. CONSTRUCT AND TEST NEW 6" DIP FORCE MAIN FROM JENSEN DRIVE STA 39+50 TO NORMENT ROAD STA 54+00.
- 2. COORDINATE WITH PUMP STATION OPERATIONS FOR CONNECTIONS TO EXISTING
- 3. CONNECTIONS TO EXISTING FORCE MAIN SHALL BE DONE CONCURRENTLY AT NIGHT. PUMP STATION CAN BE OFFLINE BETWEEN THE HOURS OF 11:00 PM AND 5:00 AM.

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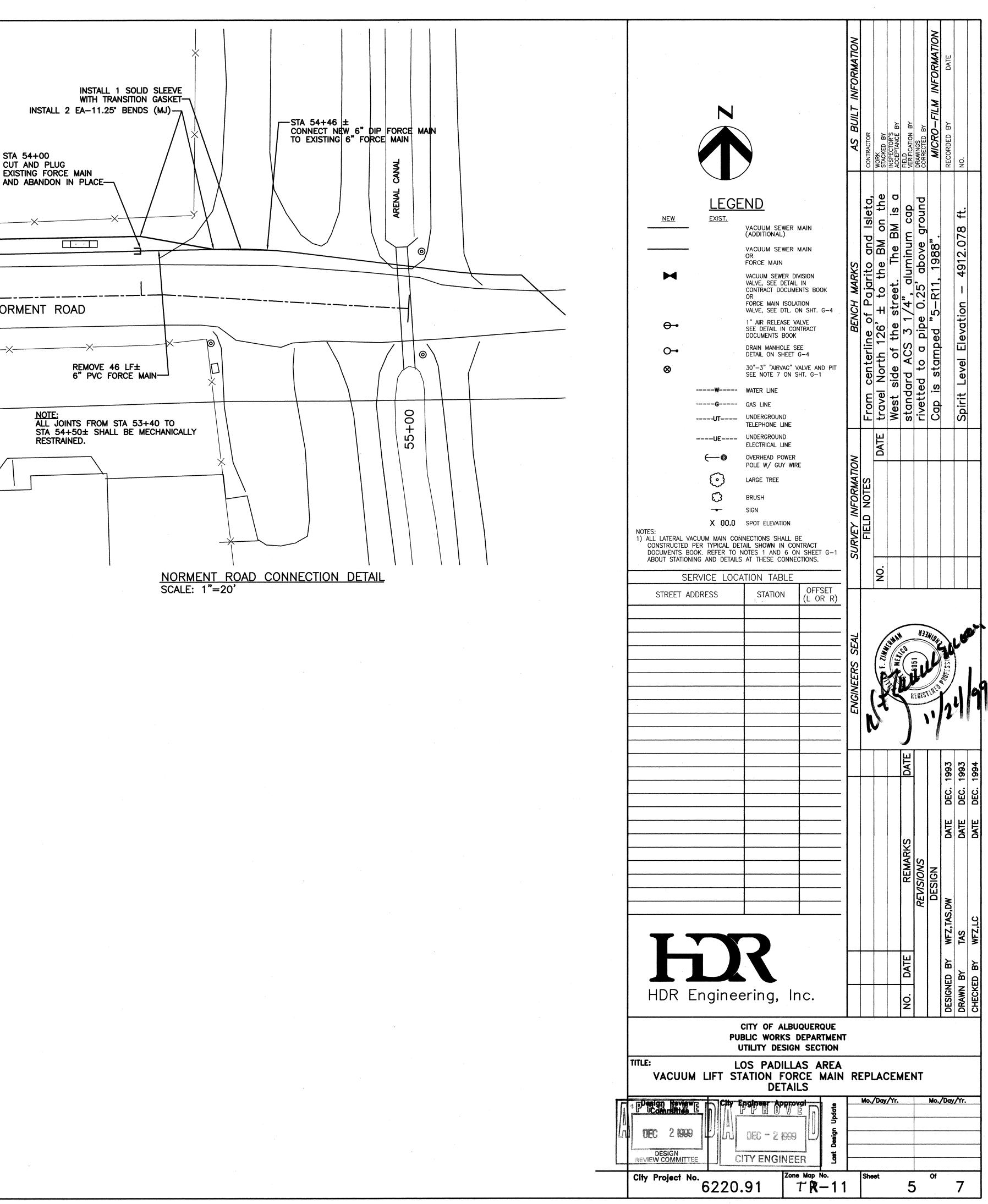
·		CITY OF A PUBLIC WORK UTILITY DE	S DEPAR	RTMENT				
TITLE:		LOS PADI LIFT STATION F DARD DETAILS	ORCE	MAIN			Γ	:
Design Review	Committee	City Engineer Ap	proval	2	Mo./Day/	Yr.	Mo./D	iay/Yr
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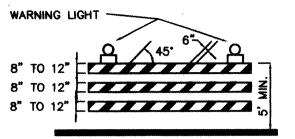
NOTE:
BRANCH SIDE OF WYE TO BE
UP WITH BLIND FLANGE.

PIGGING MANHOLE DETAIL SCALE: NONE



- 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. ALL WORK IN ARTERIAL ROADWAYS SHALL BE ON A CONTINUOUS A 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 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. 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.

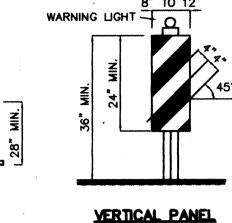
- 21. EXCAVATIONS SHALL BE PLATED, TEMPORARILY PATCHED OR RESURFACED PRIOR TO OPENING OF TRAFFIC. A MINIMUM OF 11 FEET SHALL BE PROVIDED FOR TRAFFIC IN ANY GIVEN DIRECTION. CONTRACTOR IS RESPONSIBLE FOR ANY WORK INVOLVED IN SATISFYING THESE REQUIREMENTS.
- 22. CONTRACTOR SHALL AT ALL TIMES COMPLY WITH THE FOLLOWING: STANDARDS AND REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION. 2. THE CITY OF ALBUQUERQUE TRAFFIC CODE, LATEST EDITION 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 HEIGTH AT TOP OF SIGN SHALL BE THE SAME AS FOR A 48" SIGN AS INDICATED IN THE M.U.T.C.D. /3
- 27. CONTRACTOR SHALL MAINTAIN A GRAFFITI FREE WORKSITE. ALL GRAFFITI SHALL BE PROMPTLY REMOVED FROM ALL EQUIPMENT, BOTH PERMANENT AND TEMPORARY. 4



TYPE III BARRICADE

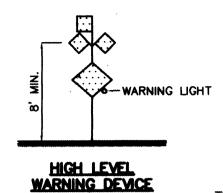
BASE VARIES

CONES



BARREL

8" TO 12"



LEGEND

WORK AREA

BARRICADE - TYPE I, TYPE II, OR BARREL

BARRICADE - TYPE III VERTICAL PANEL

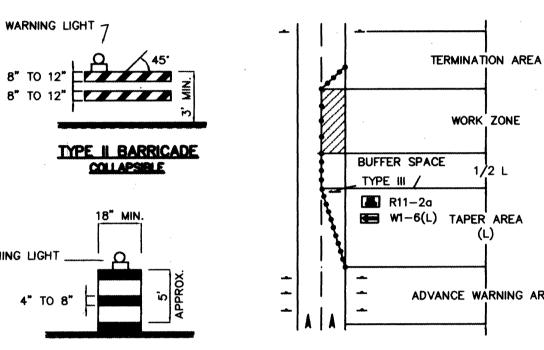
WARNING SIGN

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.



TERMINATION AREA ADVANCE WARNING AREA

TRAFFIC CONTROL ELEMENTS

TAPER REQUIREMENTS

	`						
SPEED LIMIT	TAPER LENGTH (L) (FEET)			MINIMUM NUMBER OF	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

ADVANC	E WARNING SI	<u>GN SERIES</u>	
SPEED	MINIMUM DIST	TANCE IN FEET	
MILES PER HOUR	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	

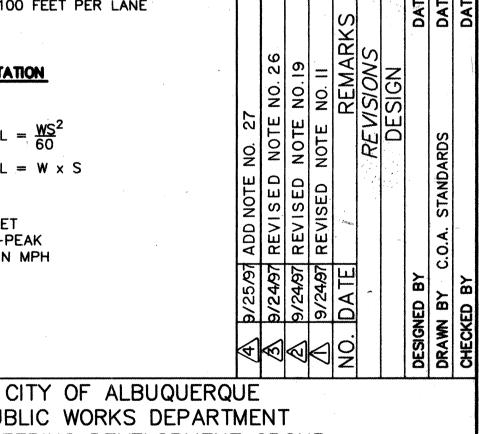
TAPER CRITERIA	Δ
TYPE OF TAPER	TAPER LENGTH
UPSTREAM TAPER:	
MERGING TAPER	L MINIMUM
SHIFTING TAPER	1/2 L MINIMUM
SHOULDER TAPER	1/2 L MINIMUM
TWO-WAY TRAFFIC TAPER	100 FEET MAXIMUM
DOWNSTREAM TAPERS	100 FEET DED LANE

TAPER LENGTH COMPUTATION

40	мРН	OR	LESS	l	_ =	60
45	MPH	OR	GREATER		_ ==	W
			LENGTH OF OFFSET	IN FFI	- T	

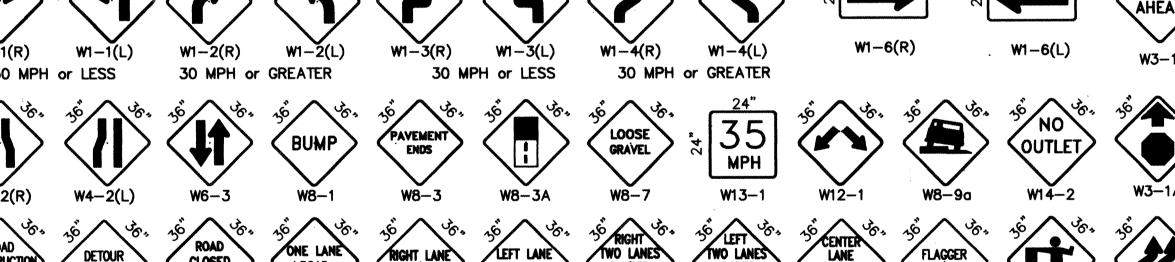
SPEED LIMIT

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



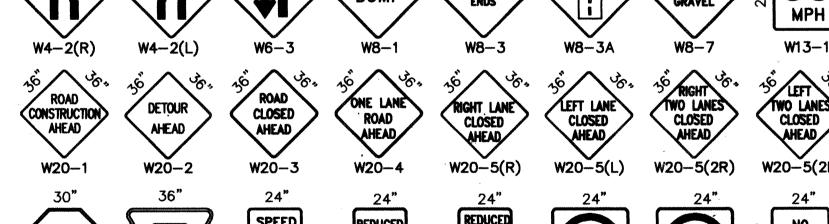
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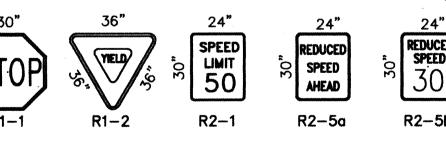
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E :	•	•			
SIGNING AND CO	ONSTRUCTION	TRAFFI	c co	NTROL STA	NDARDS
IGN REVIEW COMMITEE	CITY ENGINEER AF	PPROVAL		MO./DAY/YR.	MO./DAY/YR.
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CLOSED

SIGN FACE DETAILS





PREPARED TO

SPECIAL

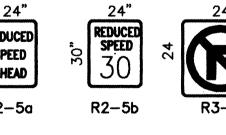
SIGN

R5-1

R5-1a

THRU TRAFFIC KEEP

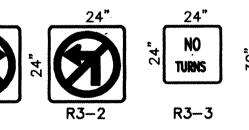
SIGN

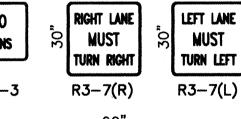


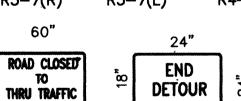
ONE WAY

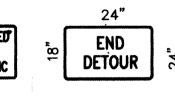
PARKING ANY TIME

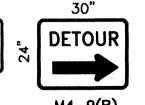
ORANGE BACKGROUND.





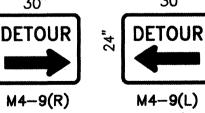


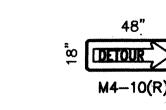




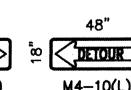
KEEP

RIGHT

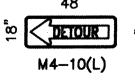




R11-4



M4-8a



CONSTRUCTION G20-2

KEEP

LEFT

R4-7b(L)

ALL CONSTRUCTION WARNING SIGNS SHALL HAVE A BLACK LEGEND ON A

LANE CLOSED

SPECIAL SIGN 50

ACCESS