

CONSTRUCTION PLANS
FOR
SHADOW MOUNTAIN

ALBUQUERQUE, NEW MEXICO
FEBRUARY 1999

INDEX OF DRAWINGS

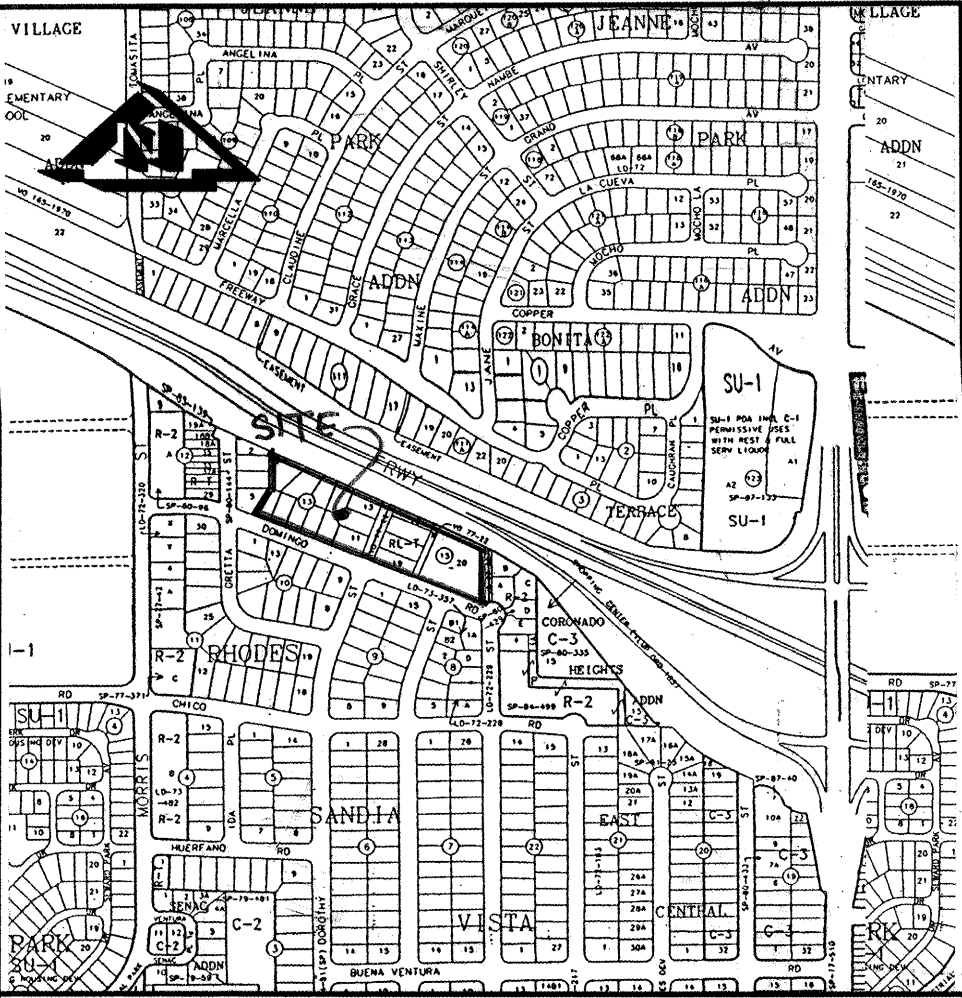
SHEET NO.	TITLE
1	COVER
2	PLAT
3	GRADING & DRAINAGE PLAN
4	PAVING PLAN & PROFILE
5	SEWER & WATER PLAN & PROFILE
6	SIGNING AND CONSTRUCTION TRAFFIC CONTROL STANDARDS
7	TYPICAL TRAFFIC CONTROL & SIGNING EXAMPLES (REF. M.U.T.C.D.)

APPROVAL OF AS BUILT DRAWINGS
CHIEF CONSTRUCTION ENGINEER
Edo Chang
DATE 10/26/99

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.
- 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.
- 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 A MINIMUM DELAY.
- 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 FULL 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 ALL 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 NOTIFY THE ENGINEER NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK IN ORDER THAT THE ENGINEER MAY TAKE NECESSARY MEASURES TO TO INSURE THE PRESERVATION OF SURVEY MONUMENTS. THE CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE ENGINEER AND SHALL NOTIFY THE ENGINEER AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITH OUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE CITY SURVEYOR. WHEN A CHANGE IS MADE IN THE FINISHED ELEVATIONS OF THE PAVEMENT OF ANY ROADWAY IN WHICH A PERMANENT SURVEY MONUMENT IS LOCATED, THE CONTRACTOR SHALL AT HIS EXPENSE, ADJUST THE MONUMENT COVER TO THE NEW GRADE UNLESS OTHERWISE SPECIFIED. REFER TO SECTION 4.4 OF THE GENERAL CONDITIONS OF THE STANDARD SPECIFICATIONS.
- ALL EXCAVATION, TRENCHING AND SHORING ACTIVITIES SHALL BE ACCOMPLISHED IN ACCORDANCE WITH OSHA 29CFR 1926.650.
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR SHALL CONTACT THE LINE LOCATING SERVICE AT 260-1990 FOR THE LOCATION OF EXISTING UTILITIES.
- 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. THE CONTRACTOR SHALL NOTIFY THE BARRICADE ENGINEER (768-2551) PRIOR TO OCCUPYING A INTERSECTION. SEE SECTION 19 OF THE STANDARD SPECIFICATIONS. ALL STREET STRIPING ALTERED OR DESTROYED SHALL BE REPLACED WITH REFLECTORIZED PAVEMENT MARKINGS BY THE CONTRACTOR TO THE EXISTING LOCATION OR AS SHOWN ON THE PLANS.
- THE 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. THE CONTRACTOR SHALL NOT COVER UTILITY LINES AND ACCESSORIES UNTIL ALL DATA HAS BEEN RECORDED.
- THE CONTRACTOR SHALL ADEQUATELY SUPPORT AND PROTECT EXISTING UTILITIES AFFECTED BY THE CONTRACTOR'S EXCAVATION ACTIVITY. IN THE EVENT THAT EXISTING UTILITIES ARE DAMAGED BY THE CONTRACTOR'S OPERATIONS, THE CONTRACTOR SHALL ARRANGE FOR AND COORDINATE THE PROMPT REPAIR BY THE RESPECTIVE UTILITY AND SHALL BEAR THE COST OF REPAIRS.
- ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED, INSPECTED AND TESTED PRIOR TO PAVING.
- EXISTING CURB AND GUTTER NOT TO BE REMOVED UNDER THE CONTRACT, WHICH IS DAMAGED OR DISPLACED BY THE CONTRACTOR SHALL BE REMOVED AND REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
- IF CURB IS DEPRESSED FOR A DRIVEPAD OR A HANDICAP RAMP, THE DRIVEPAD OR RAMP SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF THE CURB AND GUTTER.



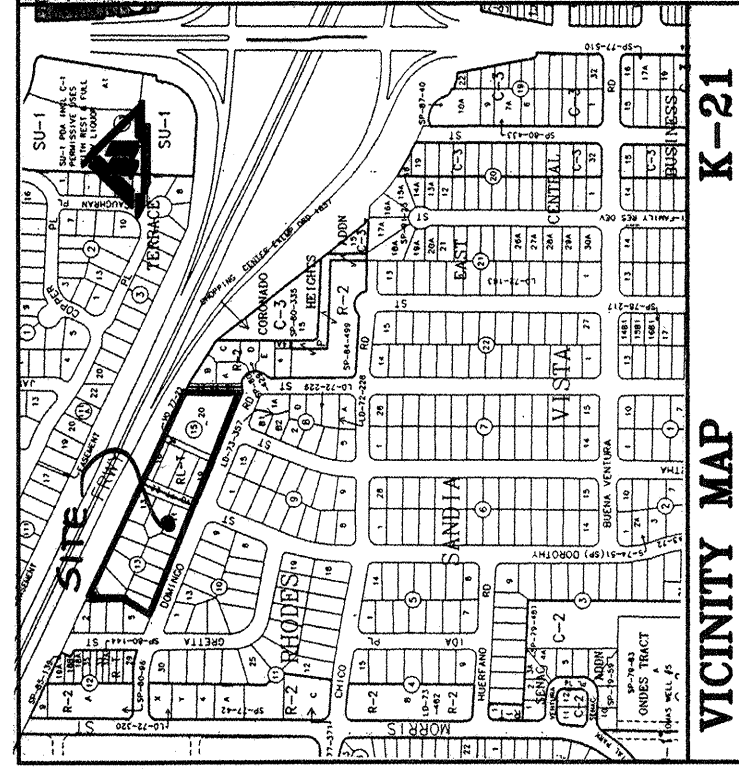
VICINITY MAP K-21

DRB NO. 98-224

Engineering &
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5312 Noreen Drive NE • Albuquerque, NM 87111
(505) 298-4651



REV.	SHEETS	CITY ENGINEER	DATE	USER DEPARTMENT	DATE	USER DEPARTMENT	DATE
ENGINEER'S STAMP & SIGNATURE	APPROVALS	ENGINEER	DATE	*****			
	DRC Chairman	<i>Billy G. Bostley</i>	4-1-99	APPROVED FOR CONSTRUCTION			
	Transportation	<i>R. W. Kane</i>	3-11-99				
	Water/Wastewater	<i>R. W. Kane</i>	2-5-99				
	Hydrology	<i>John Calogre</i>	3-9-99				
	CIP						
	Constr. Mngmt.	<i>John Calogre</i>	3-9-99	City Engineer _____ Date _____			
	Constr. Coord.	<i>John Calogre</i>	3-9-99				
	City Project No.			Sheet 1 Of 7			
				609581			



PUBLIC UTILITY EASEMENTS

PUBLIC UTILITY EASEMENTS SHOWN ON THIS PLAT ARE GRANTED FOR THE COMMON AND JOINT USE OF:

1. PNM ELECTRIC SERVICES FOR THE INSTALLATION, MAINTENANCE AND SERVICE OF OVERHEAD AND UNDERGROUND ELECTRICAL LINES, TRANSFORMERS, POLES AND ANY OTHER EQUIPMENT, FIXTURES, STRUCTURES AND RELATED FACILITIES REASONABLY NECESSARY TO PROVIDE ELECTRICAL SERVICE;
2. PNM GAS SERVICES FOR INSTALLATION, MAINTENANCE AND SERVICE OF NATURAL GAS LINES, VALVES AND OTHER EQUIPMENT AND FACILITIES REASONABLY NECESSARY TO PROVIDE NATURAL GAS.
3. AS NECESSARY FOR THE INSTALLATION, MAINTENANCE AND SERVICE OF ALL BURRED AND AERIAL COMMUNICATION LINES AND OTHER RELATED EQUIPMENT AND FACILITIES REASONABLY NECESSARY TO PROVIDE COMMUNICATION SERVICES, INCLUDING BUT NOT LIMITED TO ABOVE GROUND PEDESTALS AND CLOSURES,
4. JONES INTERCAL FOR THE INSTALLATION, MAINTENANCE AND SERVICE OF SUGH LINES, CABLE AND OTHER RELATED EQUIPMENT AND FACILITIES REASONABLY NECESSARY TO PROVIDE CABLE TV SERVICE.
- INCLUDED IS THE RIGHT TO BUILD, REBUILD, CONSTRUCT, RECONSTRUCT, LOCATE, RELOCATE, CHANGE, REMOVE, RENOVATE AND OPERATE AND MAINTAIN FACILITIES FOR THE PURPOSES DESCRIBED ABOVE, TOGETHER WITH FREE ACCESS TO FROM AND OVER SAID PREMISES, INCLUDING SUFFICIENT WORKING AREA SPACE FOR ELECTRIC TRANSMISSION, WITH THE RIGHT TO TAKE POSSESSION OF ANY PORTION OF SAID PREMISES AT ANY TIME DURING THE PROJECT PERIOD, WITHOUT NOTICE, AND TO ALLOW LONG TERM STORAGE OF MATERIALS, EQUIPMENT OR SUPPLIES ON HOT TAP CONCRETE OR WOODEN PAVS, DECKING OR OTHER STRUCTURE SHALL BE ERECTED OR CONSTRUCTED ON SAID EASEMENTS, NOR SHALL ANY WELL BE DRILLED OR OTHER THREATEN. PROPERTY OWNERS SHALL BE SOLELY RESPONSIBLE FOR CORRECTING ANY VIOLATIONS OF THE EASEMENT AGREEMENT, INCLUDING THE PROTECTION OF POOLS, DECKING OR ANY OTHER STRUCTURES ADJACENT TO OR NEAR EASEMENTS SHOWN ON THIS PLAT.
- IN APPROVING THIS PLAT, PNM ELECTRICAL SERVICES AND GAS SERVICES (PNM) DID NOT CONDUCT A TITLE SEARCH OF RECORDS IN ORDER TO IDENTIFY ANY EASEMENTS OR RIGHTS THAT MAY BE ENLITLED. THEREAFTER, PNM DOES NOT HAVE NOR RELEASE ANY EASEMENT OR EASEMENT RIGHTS TO WHICH IT MAY BE ENTITLED.

NOTES

1. U.C.L.S. LOC NUMBER 9800100861000
2. THE SITE IS LOCATED WITHIN SECTION 20, T10N, R4E, N4PM.
3. A FIELD SURVEY WAS PERFORMED IN AUGUST 1998 TO LOCATE THE BOUNDARY CORNERS WERE FOUND OR SET AS SHOWN.
4. DISTANCES ARE GROUND DISTANCES AND ALL BEARINGS ARE TRUE BEARINGS. THE SURVEY IS A STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE.
5. THE PURPOSE OF THIS PLAT IS TO CREATE A THIRTY TWO LOT SUBDIVISION AND GRANT EASEMENTS, DEICATED RIGHT-OF-WAY AND VACATE UTILITY EASEMENTS, DERIVED FROM THE SURVEY. THE PLAT IS THAT ARE NO LONGER COMPATIBLE WITH THE CURRENT PLATING.
6. THE PLAT SHOWS ALL EASEMENTS DISCLOSED IN LAWYERS TITLE INSURANCE CO. NO. 86588089F.
7. MILEAGE OF STRIETS CREATED BY THIS SUBDIVISION:
a. HALF WIDTH = 0.015 MILES
b. HALF WIDTH = 0.00 MILES
8. CENTERLINE (IN LIEU OF R/W MONUMENTATION) TO BE PLACED AT THE INTERSECTIONS OF THE STRIETS AND STREET INTERSECTIONS PRIOR TO ACCEPTANCE OF SUBDIVISION STREET IMPROVEMENTS AND WILL CONSIST OF STANDARD FOUR-FOOTING. CENTERLINE MANHOLE CAP STAMPED "SURVEY MARKER" DO NOT DISTURB" THIS 3/31/72.

DESCRIPTION

A CERTAIN TRACT OF LAND LOCATED WITHIN ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO, COMPRISING ALL OF LOTS 7-12, PORTIONS OF LOTS 13-18, ALL OF LOTS 17-19 AND PORTIONS OF LOTS 16 AND 20, BLOCK 5, RODEOS SANTA VISTA ADDITION AS SHOWN ON THE PLAT FILED IN THE OFFICE OF THE COUNTY CLERK OF BERNALILLO COUNTY, NEW MEXICO ON MARCH 24, 1950, VOLUME D, FOLIO 87 AND THE PORTIONS OF DOROTHY STREET NE AND THE ALLEY IN BLOCK 5 AS VACATED BY RESOLUTION 77-22 OF THE CITY OF ALBUQUERQUE AND BEING MORE PARTICULARLY DESCRIBED AS FOLLOWS:

BEGINNING AT A POINT WHENCE THE ACS MONUMENT 6°-12' BEARS S104°46'W A DISTANCE OF 2863.77' SOUTH, POINT BEING THE CORNER COMMON TO LOT'S 5 AND 6 AND THE NORTH RIGHT-OF-WAY OF DOWLING ROAD, THENCE, N60°07'14"E A DISTANCE OF 128.46' FEET; THENCE, N76°14'42"E A DISTANCE OF 149.84' FEET; THENCE, S64°05'17"E A DISTANCE OF 247.14' FEET; THENCE, S60°17'41"E A DISTANCE OF 136.85' FEET; THENCE, S70°05'37"W A DISTANCE OF 209.24' FEET; THENCE, N07°29'20"W ALONG THE NORTH RIGHT-OF-WAY OF DOWLING ROAD A DISTANCE OF 912.58' FEET TO THE POINT OF BEGINNING AND CONTAINING 41,573 SQUARE MORE OR LESS.

TREASURER'S CERTIFICATION

THIS IS TO CERTIFY THAT TAXES ARE CURRENT AND
PAID ON UPC #

PROPERTY OWNER OF RECORD

BERNALILLO COUNTY TREASURER'S OFFICE

FREE CONSENT AND DEDICATION

THE SUBDIVISION SHOWN HEREON IS WITH THE FREE CONSENT AND IN ACCORDANCE WITH THE DESIRES OF THE UNDERSIGNED OWNER(S) AND/OR PROPRIETOR(S) THEREOF AND SAID OWNER(S) AND/OR PROPRIETOR(S) DO HEREBY DEDICATE ALL STREETS AND PUBLIC RIGHT-OF-WAY SHOWN HEREON TO THE CITY OF ALBUQUERQUE IN FEE SIMPLE WITH WARRANTY COVENANTS AND DO HEREBY GRANT EASEMENTS AS SHOWN HEREON FOR THE PURPOSES NOTED.

Charles Sachdev	2-10-99
CHARLES SACHELDER	DATE
Greg Lipson	2-10-99
GARY LIPSON	DATE

ACKNOWLEDGEMENT

STATE OF NEW MEXICO }
COUNTY OF BERNALILLO }

THIS INSTRUMENT WAS ACKNOWLEDGED BEFORE ME
THIS 10th DAY OF February, 1999

Andrew P. Muen 04/03/02
NOTARY PUBLIC MY COMMISSION EXPIRES



OFFICIAL SEAL
SADIE L. MANN
NOTARY PUBLIC - STATE OF NEW MEXICO
Notary Bond Filed With Secretary of State
My Commission Expires *after*

CITY OF ALBUQUERQUE

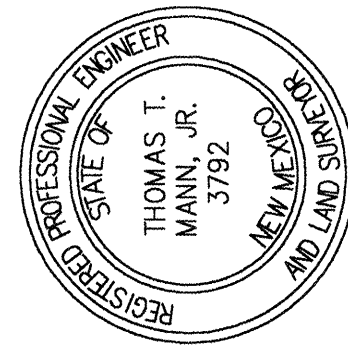
PROPERTY MANAGEMENT
CITY OF ALBUQUERQUE

PNW ELECTRIC SERVICES	DATE
<i>PNW Electric</i>	<i>2-16-9</i>
PNW ELECTRIC SERVICES	DATE
<i>PNW Electric</i>	<i>2-16-9</i>

NAME AND SURNAME	DATE
Mathias Schneider	02-11-92
US WEST COMMUNICATIONS	DATE
Niederl Watson	2-23-92
INDEX INTERFACIBLE INC.	DATE

CERTIFICATION

I, THOMAS T. MANN, JR., A REGISTERED PROFESSIONAL SURVEYOR UNDER THE LAWS OF THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT THIS PLAT WAS PREPARED BY ME OR UNDER MY SUPERVISION, MEETS THE MINIMUM REQUIREMENTS OF MONUMENTATION AND SURVEYS OF THE CITY OF ALBUQUERQUE SUBDIVISION ORDINANCE AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.



INDEXING INFORMATION FOR COUNTY CLERK

NAME OF OWNER: _____

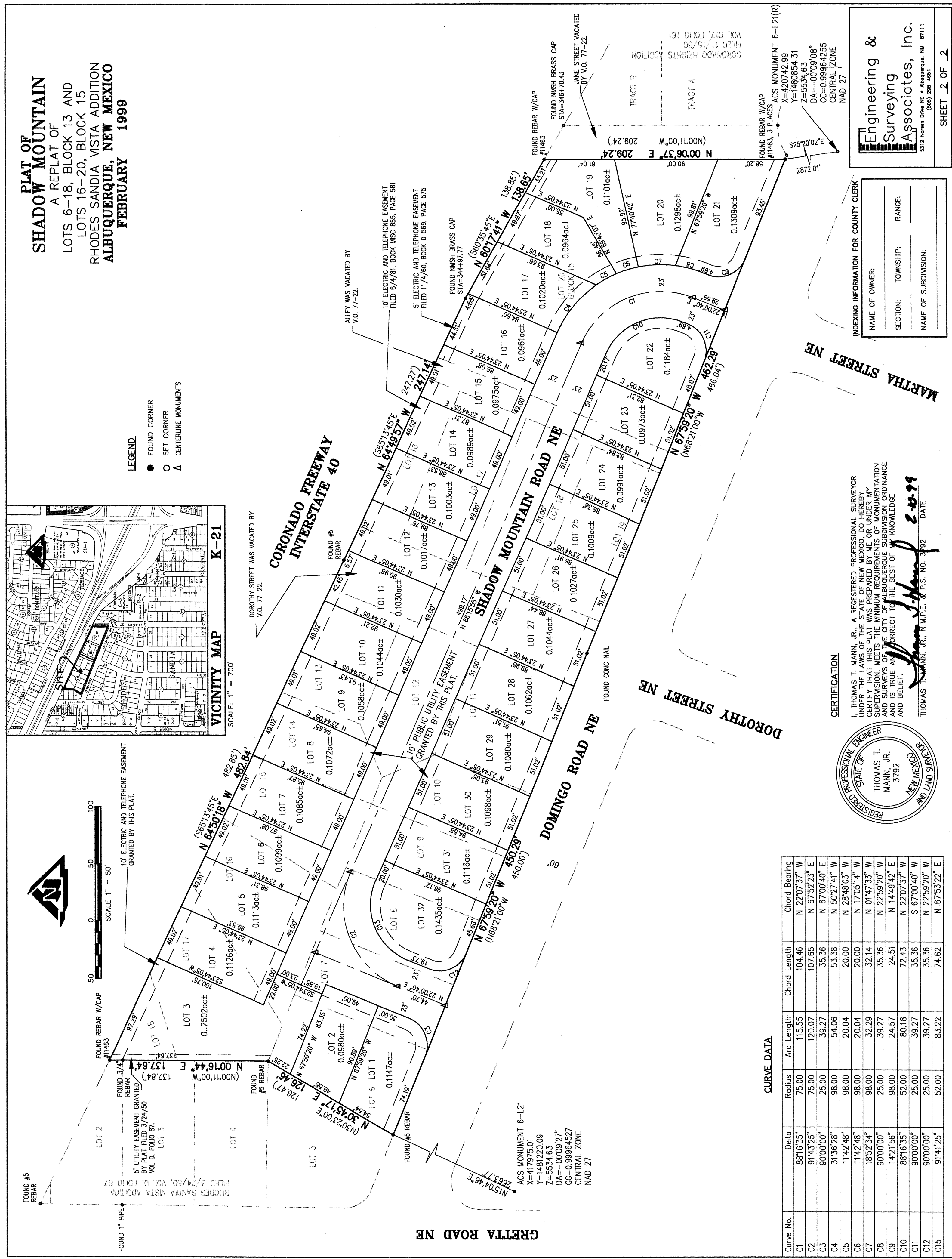
SECTION: _____ TOWNSHIP: _____ RANGE: _____

NAME OF SUBDIVISION: _____

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(505) 262-4661

8010fblt.dwg 1/29/99



8010fplt.dwg 2/16/99

CPN 609581 2 of 7

DRAINAGE PLAN

THE PROPOSED MOUNTAIN SHADOW SUBDIVISION IS LOCATED ADJACENT TO AND SOUTH OF I-40, NORTH OF DOMINGO ROAD NE BETWEEN JANE STREET NE AND GRETTA STREET NE. THE SITE IS UNDEVELOPED IT WAS PLATTED IN THE 1950'S AS A SINGLE FAMILY RESIDENTIAL SUBDIVISION, BUT I-40 WAS ROUTED THROUGH THIS AREA AND THIS PARTICULAR PORTION OF THE ORIGINAL SUBDIVISION DID NOT DEVELOP DUE TO THE ODD REMNANTS OF LAND AFTER THE I-40 CONSTRUCTION. THE LAND SLOPES FROM EAST TO WEST WITH A CROSS SLOPE TO THE SOUTH.

THE SITE IS HIGHER THAN DOMINGO ROAD TO THE SOUTH AND THE LAND TO THE WEST. IT IS PARALLEL WITH I-40 TO THE NORTH AND LOWER THAN THE LAND TO THE EAST. I-40 HAS BEEN GRADED TO CONTAIN THE RUNOFF WITHIN THE RIGHT-OF-WAY. THE LAND TO THE EAST HAS BEEN GRADED TO DIRECT THE RUNOFF INTO DOMINGO ROAD. THEREFORE, RUNOFF FROM OFFSITE IS MINIMAL.

THE DRAINAGE BASIN FOR THE OFFSITE FLOWS FROM THE EAST IS SHOWN ON THE ATTACHED COPIES OF AN AERIAL PHOTO AND SUPPLEMENTAL TOPOGRAPHY. THE I-40 RIGHT-OF-WAY WAS INCREASED TO ALLOW THE RECONSTRUCTION OF THE JUAN TABO OFF RAMP. THE OFF RAMP DIVERTS THE MAJORITY OF THE OFF SITE FLOW INTO THE INTERSTATE RIGHT-OF-WAY. THE REMAINING AREA IS DIVIDED INTO BASINS A, B AND C. BASIN A DRAINS INTO THE PROJECT AND BASINS B AND C DRAIN INTO JANE STREET AND AWAY FROM THE PROJECT. DOROTHY STREET, MARTHA STREET AND JANE STREET CONTAIN WATER BLOCKS THAT CONVEY THE FLOWS SOUTH AWAY FROM DOMINGO ROAD. GRETTA STREET TO THE WEST OF THE PROJECT CONTRIBUTES FLOWS TO DOMINGO ROAD.

THE SUBDIVISION WILL BE GRADED TO DRAIN TO MOUNTAIN SHADOW ROAD. MOUNTAIN SHADOW WILL DRAIN INTO DOMINGO ROAD AT THE WEST END OF THE PROJECT SITE. THE COMBINED FLOWS FROM THE OFF SITE BASIN, THE PROJECT, DOMINGO ROAD AND GRETTA STREET WILL FLOW WEST IN DOMINGO TO MORRIS STREET AND THEN NORTH INTO THE CHANNEL THAT FLOWS WEST ALONG THE SOUTH RIGHT-OF-WAY OF I-40.

THE CALCULATIONS, WHICH APPEAR BELOW, ANALYZE THE EXISTING AND PROPOSED CONDITIONS FOR THE 6-HOUR, 100-YEAR RAINFALL EVENT. THE ANALYSIS IS IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE DEVELOPMENT PROCESS MANUAL, VOLUME II. AS SHOWN BY THE CALCULATIONS, THE RATE OF RUNOFF AND THE VOLUME OF RUNOFF WILL INCREASE AS A RESULT OF THE PROPOSED DEVELOPMENT. HOWEVER, THE PERCENT OF INCREASE IS SMALL WHEN COMPARED TO THE EXISTING RUNOFF AND THE FLOWS ARE CONTAINED WITHIN THE STREET RIGHT-OF-WAYS AND MEET THE DPM STANDARDS.

CALCULATIONS

PRECIPITATION ZONE = 3
EXISTING CONDITIONS

AREA = 0.3 ACRES LAND TREATMENT C=80% D=20%
E = 1.29*0.80+2.36*0.20 = 1.50 INCHES
V = 1.50*0.3/12 = 0.04 ACRE FEET
Q = (3.45*0.80+5.02*0.20)0.3 = 1.14 CFS

DOMINGO ROAD
AREA = 2.41 ACRES LAND TREATMENT B=22% C=10% D=68%
E = 0.92*0.22+1.29*0.10+2.36*0.68 = 1.94 INCHES
V = 1.94*2.41/12 = 0.39 ACRE FEET
Q = (2.60*0.22+3.45*0.10+5.02*0.68)2.41 = 10.44 CFS

GRETTA STREET
AREA = 6.43 ACRES LAND TREATMENT B=55% D=45%
E = 0.92*0.55+2.36*0.45 = 1.57 INCHES
V = 1.57*6.43/12 = 0.84 ACRE FEET
Q = (2.60*0.55+5.02*0.45)6.43 = 23.72 CFS

MORRIS SOUTH
AREA = 0.91 ACRES LAND TREATMENT B=15% D=85%
E = 0.92*0.15+2.36*0.85 = 2.14 INCHES
V = 2.14*0.91/12 = 0.16 ACRE FEET
Q = (2.60*0.15+5.02*0.85)0.91 = 4.24 CFS

MORRIS NORTH
AREA = 1.49 ACRES LAND TREATMENT B=15% D=85%
E = 0.92*0.15+2.36*0.85 = 2.14 INCHES
V = 2.14*1.49/12 = 0.27 ACRE FEET
Q = (2.60*0.15+5.02*0.85)1.49 = 6.94 CFS
PROJECT SITE
AREA = 4.52 ACRES LAND TREATMENT C=100%
E = 1.29*1.00 = 1.29 INCHES
V = 1.29*4.52/12 = 0.49 ACRE FEET
Q = 3.45*1.00*4.52 = 15.59 CFS

DEVELOPED CONDITIONS

PROJECT SITE
AREA = 4.52 ACRES LAND TREATMENT B=46% D=54%
E = 0.92*0.46+2.36*0.54 = 1.70 INCHES
V = 1.70*4.52/12 = 0.64 ACRE FEET
Q = (2.60*0.46+5.02*0.54)4.52 = 17.66 CFS
DOMINGO ROAD
AREA = 2.41 ACRES LAND TREATMENT B=10% C=10% D=80%
E = 0.92*0.10+1.29*0.10+2.36*0.80 = 2.11 INCHES
V = 2.11*2.41/12 = 0.42 ACRE FEET
Q = (2.60*0.10+3.45*0.10+5.02*0.80)2.41 = 11.14 CFS
INCREASE IN RATE OF RUNOFF = 17.66-15.59+11.14-10.44 = 2.66 CFS
INCREASE IN VOLUME OF RUNOFF = 0.64-0.49+0.42-0.39 = 0.18 ACRE FEET
STREET CAPACITIES

A. SHADOW MOUNTAIN ROAD JUST NORTH OF DOMINGO
STREET WIDTH = 25' CURB HEIGHT = 0.33'
STREET SLOPE = 1.76% CROWN HEIGHT = 0.25'
Q = 1.49/n*A*R^0.67*S^0.5
FOR FLOW DEPTH EQUAL TO THE TOP OF THE CURB
Q = 19.87 CFS>17.66 CFS V = 3.87 FPS THEREFORE, THE STREET FLOWING FULL HAS A CAPACITY EXCEEDING THE DEVELOPED FLOW RATE AND THE ENERGY GRADE LINE = 9.57' WHICH IS WITHIN DPM STANDARDS.

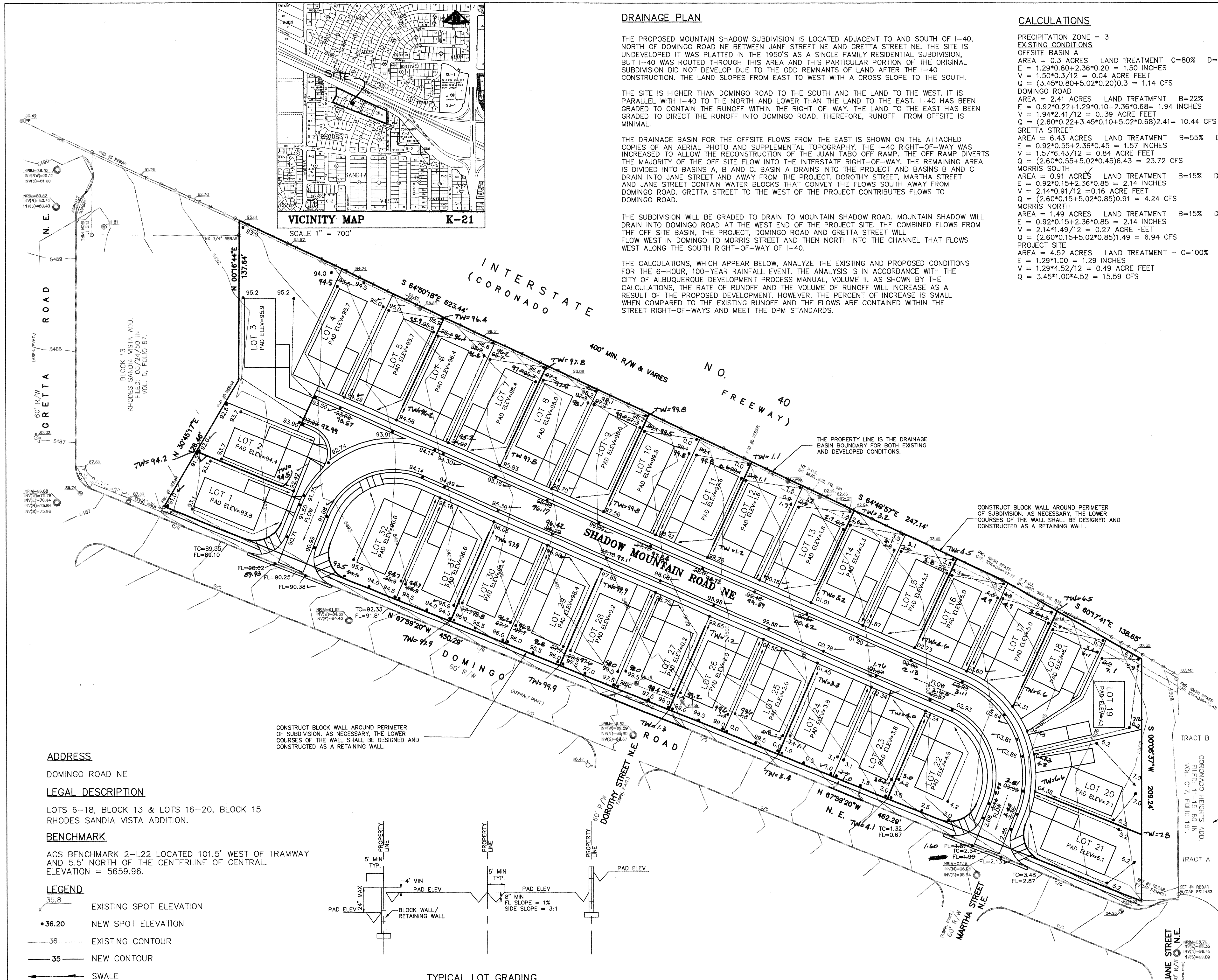
B. DOMINGO UPSTREAM OF GRETTA
RATE OF RUNOFF - EXISTING = 1.14+10.44+15.59 = 27.17 CFS 88.46 EQL=88.05 88.14
RATE OF RUNOFF - DEVELOPED = 1.14+11.14+17.66 = 29.94 CFS 88.10 WS=87.83 87.81 87.99
RATE OF RUNOFF - PERCENT INCREASE = 10.2%
STREET WIDTH = 40' STREET SLOPE = 1.7%
Q = 1.49/n*A*R^0.67*S^0.5
FOR FLOW DEPTH=CROWN+0.02, Q = 30.60 CFS AND V = 3.79 FPS.
THEREFORE, THE TOTAL STREET AT 0.02' ABOVE THE CROWN
HAS A CAPACITY EXCEEDING THE EXISTING AND DEVELOPED FLOW RATES AND THE ENERGY GRADE LINE=CROWN+0.24' WHICH EXCEEDS THE NORTH CURB BUT NOT THE SOUTH CURB.

C. DOMINGO DOWNSTREAM OF GRETTA
RATE OF RUNOFF - EXISTING = 27.17+23.72 = 50.89 CFS
RATE OF RUNOFF - DEVELOPED = 29.94+23.72 = 53.66 CFS
STREET PARAMETERS ARE THE SAME AS UPSTREAM OF GRETTA
FOR A FLOW DEPTH=CROWN+0.12', Q = 53.60 AND V = 4.79 FPS
THEREFORE, THE TOTAL STREET AT 0.12' ABOVE THE CROWN HAS A CAPACITY EXCEEDING THE EXISTING AND DEVELOPED FLOW RATES AND THE ENERGY GRADE LINE=CROWN+0.48' WHICH IS WITHIN DPM STANDARDS.

D. MORRIS NORTH OF DOMINGO
RATE OF RUNOFF - EXISTING & DEVELOPED = 4.24 CFS
RATE OF RUNOFF - EXISTING = 6.94+4.24+50.89 = 62.07 CFS
RATE OF RUNOFF - DEVELOPED = 6.94+4.24+53.66 = 64.84 CFS
RATE OF RUNOFF - PERCENT INCREASE = 4.5%
STREET WIDTH = 48' STREET SLOPE = 0.5%
EQL=82.94 83.12 82.52 82.87 82.20
WS=82.78

FOR A FLOW DEPTH=CROWN+0.26', Q = 64.11 CFS AND V = 3.25 FPS
THEREFORE, THE TOTAL STREET AT 0.26' ABOVE THE CROWN
HAS A CAPACITY EXCEEDING THE EXISTING AND DEVELOPED FLOW RATES AND THE ENERGY GRADE LINE = CROWN+0.42' WHICH IS BELOW THE WEST CURB AND WITHIN DPM STANDARDS AT THE EAST PROPERTY LINE.

F. EARTH CHANNEL @ LINKURTI
Q=(1.49/0.03)(9)(0.95)(0.16)=67.94 CFS
V=7.55FPS @ 1.50 FEET OF DEPTH.



ADDRESS

DOMINGO ROAD NE

LEGAL DESCRIPTION

LOTS 6-18, BLOCK 13 & LOTS 16-20, BLOCK 15
RHODES SANDIA VISTA ADDITION.

BENCHMARK

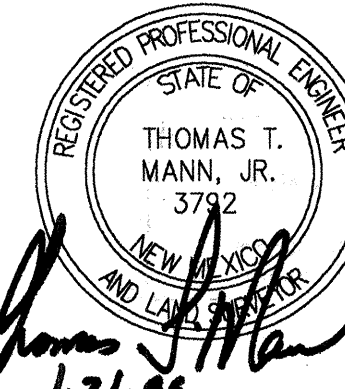
ACS BENCHMARK 2-L22 LOCATED 101.5' WEST OF TRAMWAY
AND 5.5' NORTH OF THE CENTERLINE OF CENTRAL.
ELEVATION = 5659.96.

LEGEND

- EXISTING SPOT ELEVATION
- NEW SPOT ELEVATION
- EXISTING CONTOUR
- NEW CONTOUR
- SWALE
- VERIFIED ELEVATION
- AS-BUILT ELEVATION
- BASIN BOUNDARY

TYPICAL LOT GRADING

THE WALLS BETWEEN LOTS HAVE BEEN
CONSTRUCTED IN SUBSTANTIAL COMPLIANCE
WITH THE APPROVED DRAINAGE PLAN. THE
ELEVATION OF THE EARTH WAS LEFT BELOW
THE DESIGN ELEVATION IN ORDER TO
ACCOMMODATE THE EXCESS EARTH TO BE
GENERATED BY THE FOUNDATIONS FOR
MANUFACTURED HOUSES.



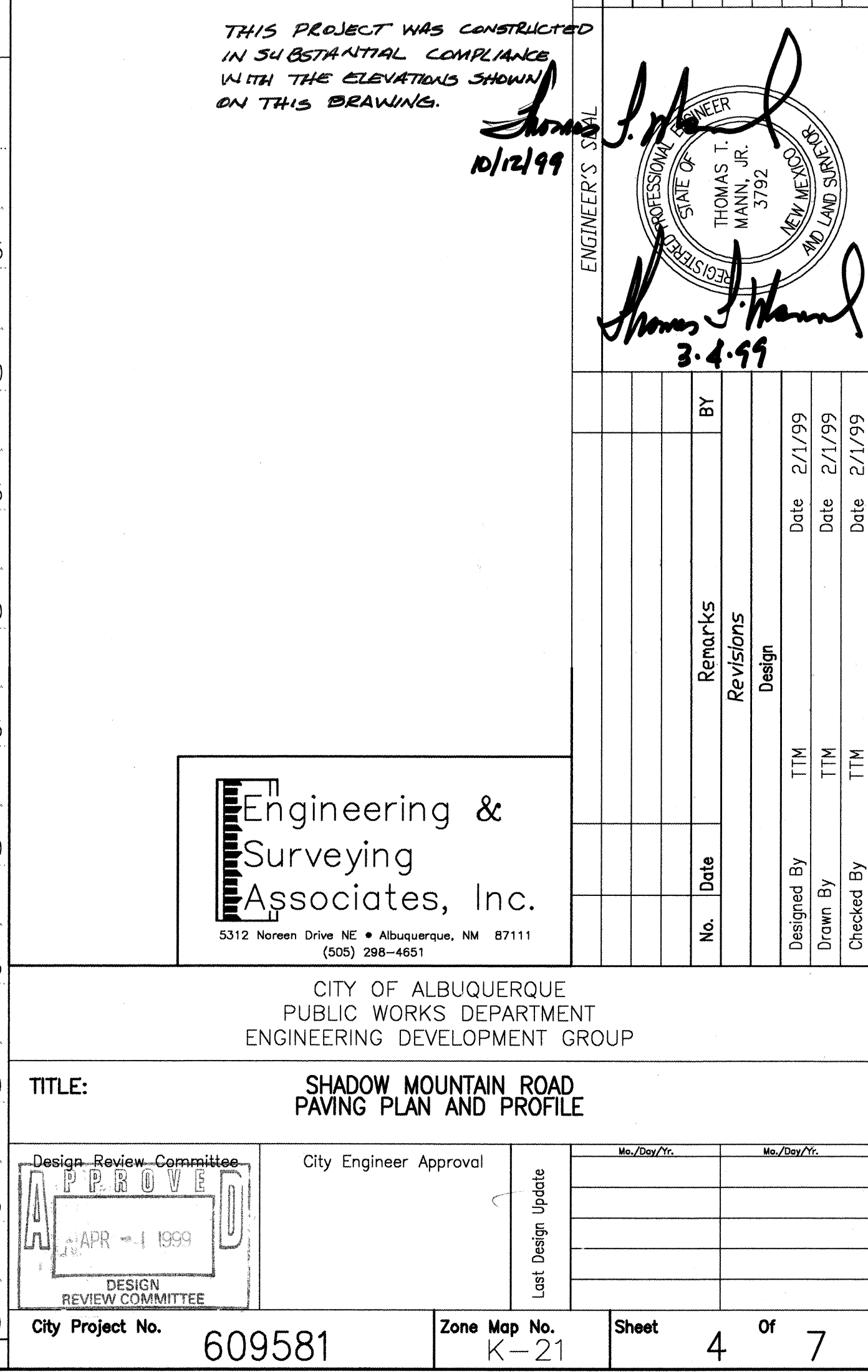
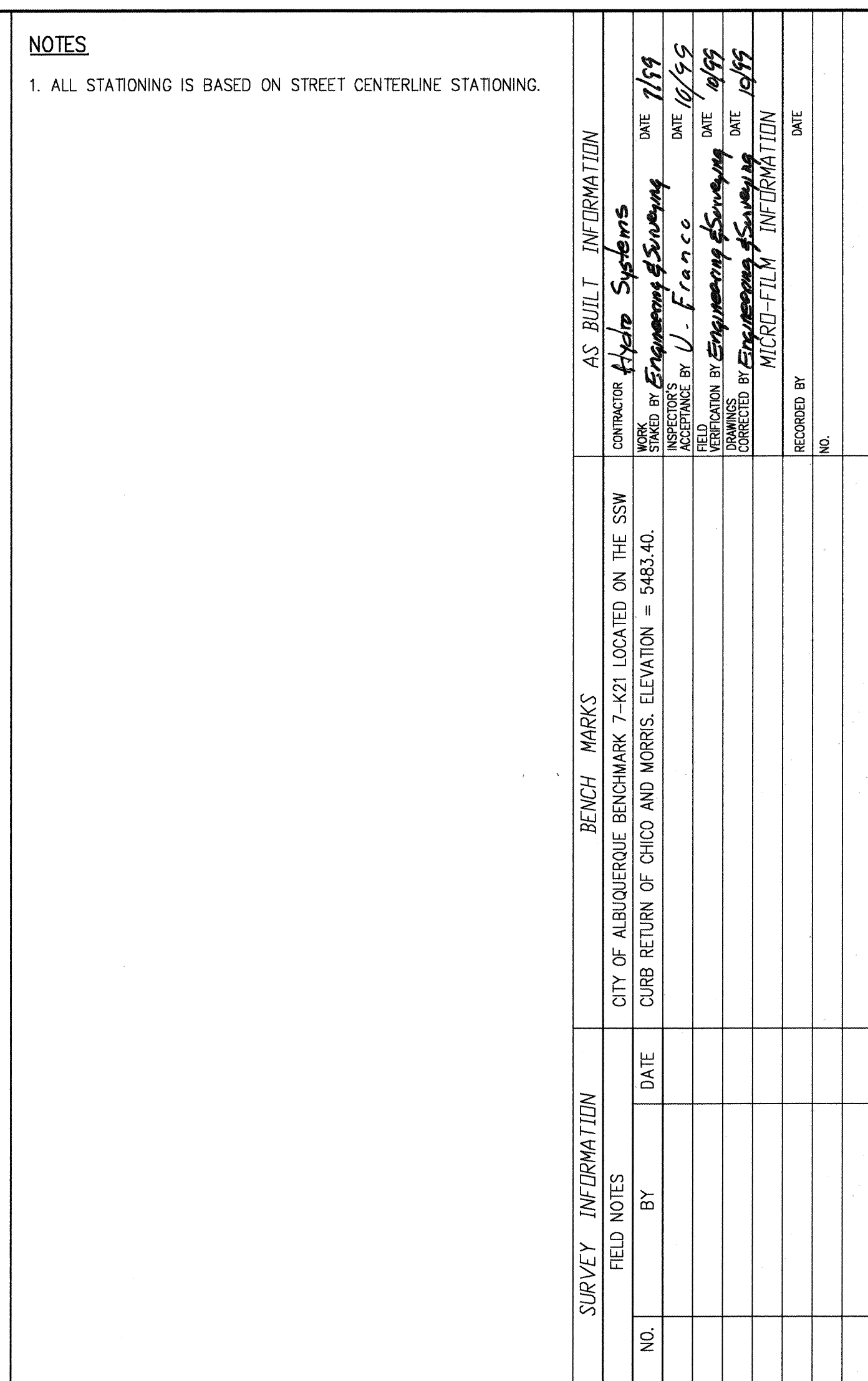
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(505) 288-4851

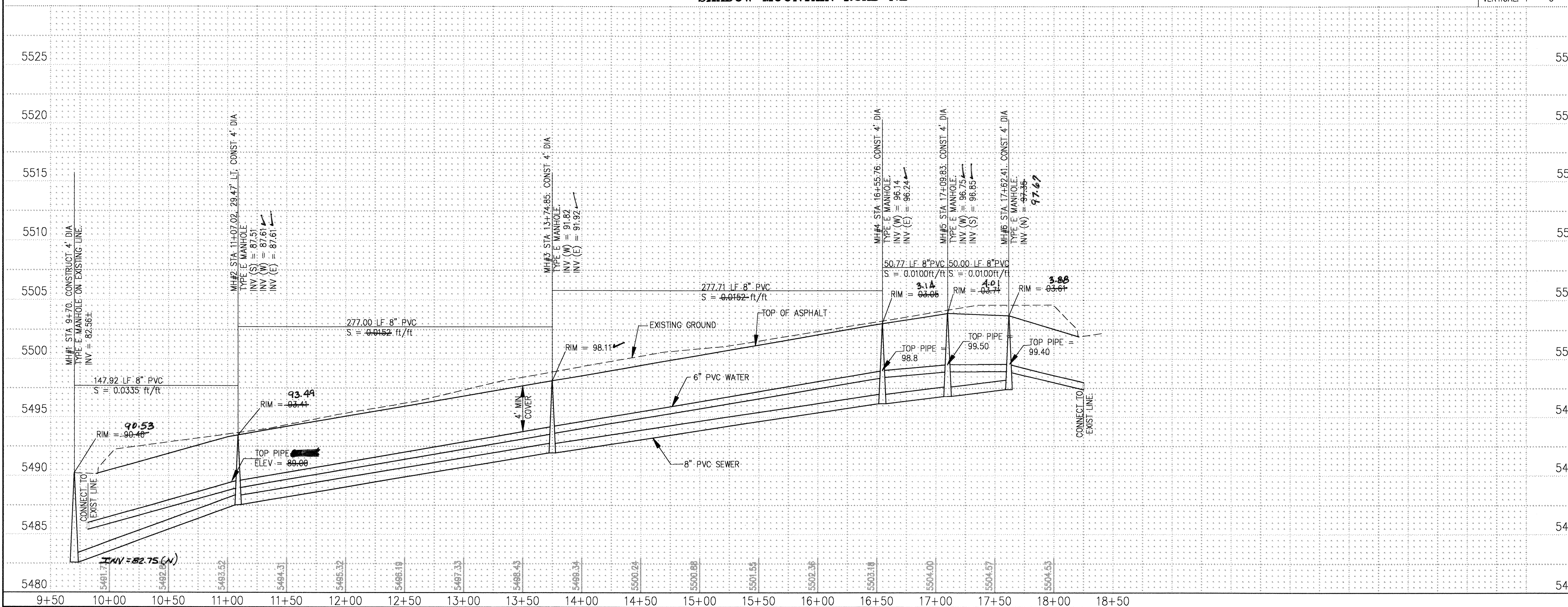
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SHEET NO.

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1. ALL STATIONING IS BASED ON STREET CENTERLINE STATIONING.
2. SEWER LINE MATERIALS SHALL BE PVC PIPE MEETING THE REQUIREMENTS OF SECTION 121.5 OF THE STANDARD SPECIFICATIONS.
3. SEWER LINE MATERIALS SHALL BE PVC PIPE MEETING THE REQUIREMENTS OF SECTION 121.5 OF THE STANDARD SPECIFICATIONS.
4. ALL BACKFILL FOR TRENCHES SHALL BE COMPACTED TO A MINIMUM OF 90% MAXIMUM DENSITY PER ASTM D-1557 AND AS SPECIFIED IN SECTION 701.14.2 AND STANDARD DRAWING 2315 OF THE STANDARD SPECIFICATIONS.

WATER VALVE SHUT-OFF PLAN

1. TO INSERT THE VALVES AND FITTINGS AT MARTHA STREET AND DOMINGO ROAD, CLOSE VALVES NUMBERED 962, 1012, 1021, 1022 AND 1023.
2. TO INSERT THE VALVES AND FITTINGS AT SHADOW MOUNTAIN AND DOMINGO ROAD OR REMOVE THE VALVE AND FITTINGS AT DOROTHY STREET AND DOMINGO ROAD, CLOSE VALVES NUMBERED 904, 962 AND1012.
3. THE CONTRACTOR SHALL CONTACT THE CITY OF ALBUQUERQUE WATER SYSTEMS AT 857-8200 FIVE (5) DAYS PRIOR TO THE DATE THAT WORK IS TO BE PERFORMED.
4. VALVES SHALL BE OPERATED ONLY BY CITY OF ALBUQUERQUE EMPLOYEES.



CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: SHADOW MOUNTAIN ROAD
SANITARY SEWER AND WATER
PLAN AND PROFILE

Design Review Committee

APPROVED

APR - 1 1994

City Engineer Approval

Last Design Update

Day/Yr.

Mo./Day/yr

City Project No. 609581

Zone Map No.
K-21

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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. 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 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:
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.

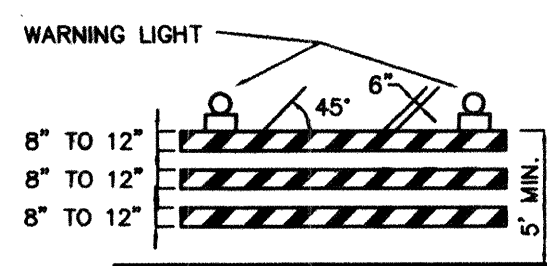
23. FAILURE TO COMPLY WITH ANY OF THE ABOVE MENTIONED, WILL BE ADEQUATE CAUSE TO CEASE ALL WORK ON ANY CONSTRUCTION PROJECT. WORK WILL NOT RESUME UNTIL ALL REQUIREMENTS ARE ADDRESSED AND APPROVED BY CONSTRUCTION COORDINATION.

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

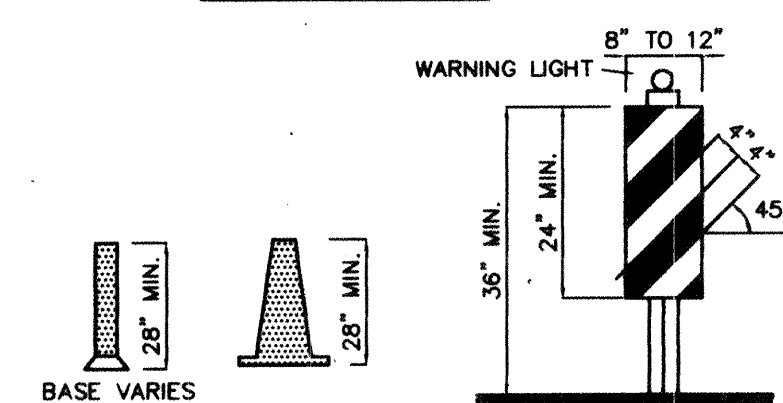
25. TRAFFIC CONTROL STANDARDS APPLY ONLY WHERE THE CONSTRUCTION TRAFFIC CONTROL PLANS ARE NOT SPECIFIC.

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.

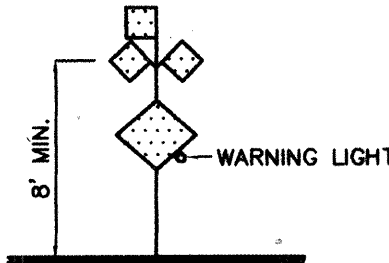
27. CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORKSITE. ALL GRAFFITI SHALL BE PROMPTLY REMOVED FROM ALL EQUIPMENT, BOTH PERMANENT AND TEMPORARY.



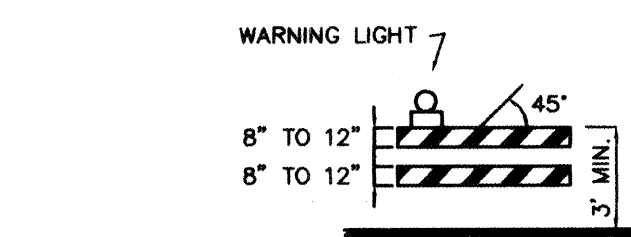
TYPE III BARRICADE



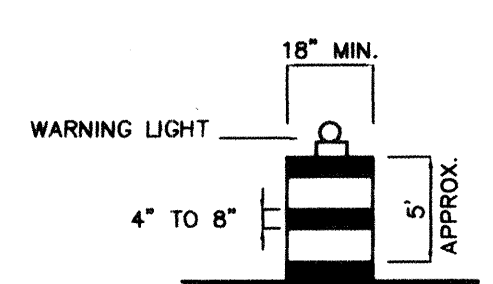
VERTICAL PANEL



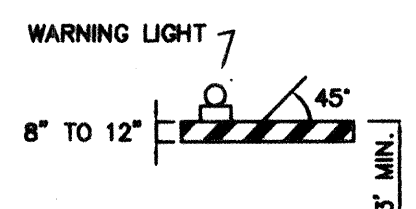
HIGH LEVEL WARNING DEVICE



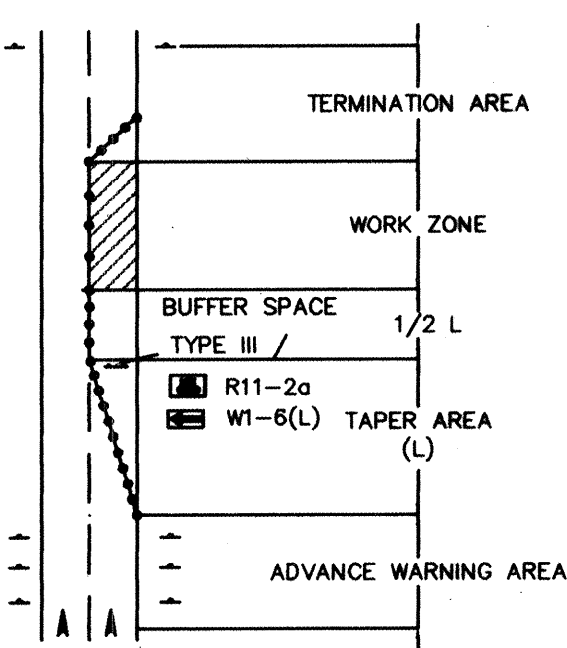
TYPE II BARRICADE



BARREL



TYPE I BARRICADE



TRAFFIC CONTROL ELEMENTS

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 REQUIREMENTS

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 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

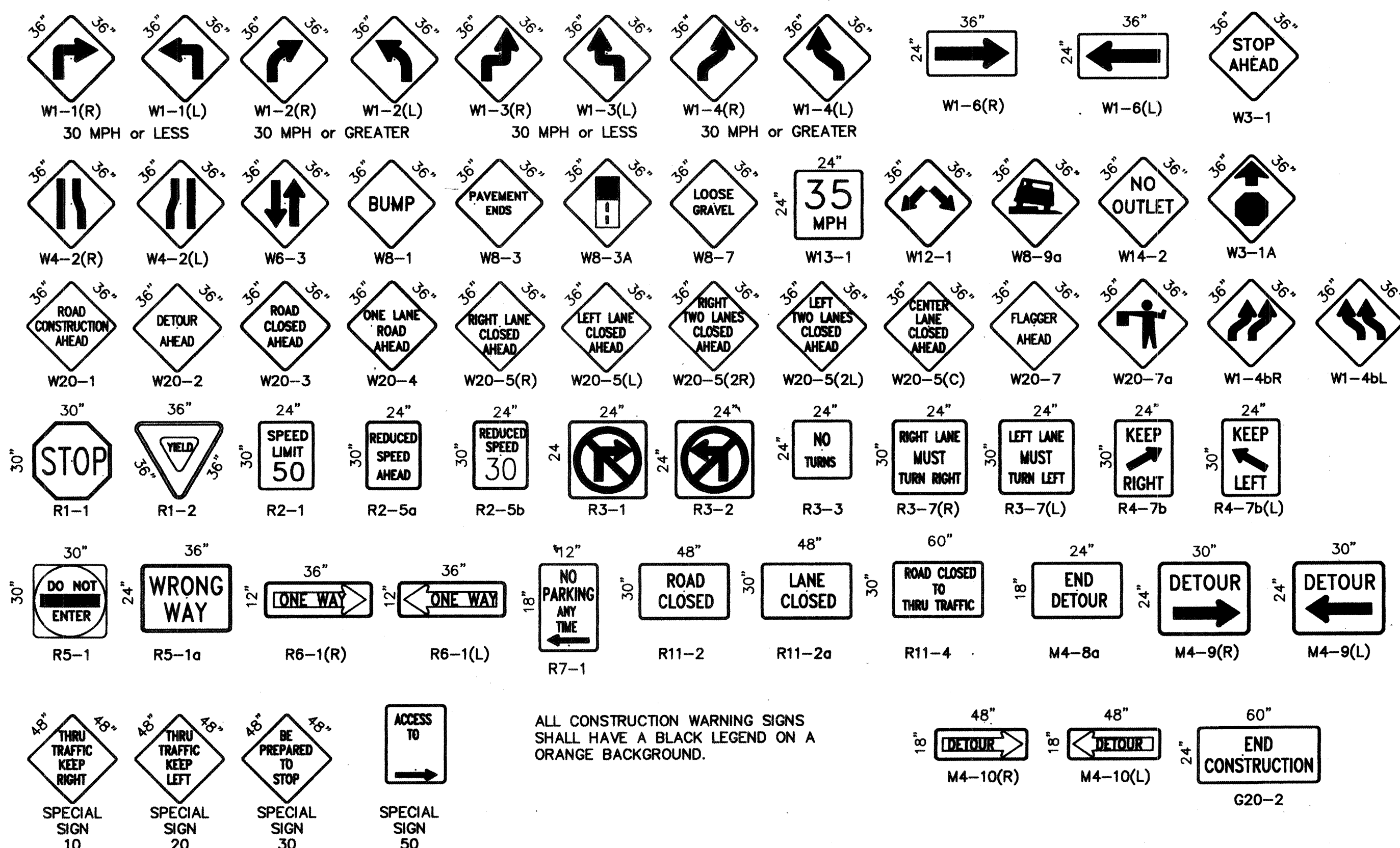
TAPER CRITERIA

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

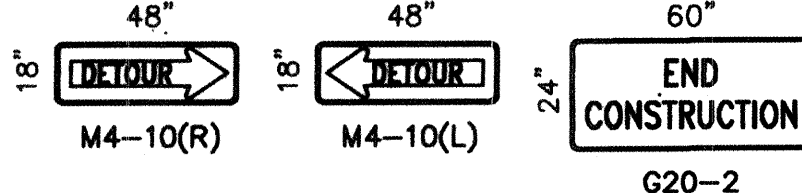
TAPER LENGTH COMPUTATION

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



G20-2

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE:
SIGNING AND CONSTRUCTION TRAFFIC CONTROL STANDARDS

DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	MO./DAY/YR.	MO./DAY/YR.
CDA Standard		LAST UPDATE	
PROJECT NO. 609581	MAP NO. K-21	SHEET 6	OF 7

