- 2. ALL WORK ON THIS PLAN SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- 3. IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE LOCATION ONLY, AND LINES MAY EXIST WHERE NONE ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE UTILITY OWNER OR FROM EXISTING PLANS, AND THIS INFORMATION MAY BE INCOMPLETE, OR OBSOLETE AT THE TIME OF CONSTRUCTION. THE ENGINEER HAS NOT UNDERTAKEN ANY FIELD VERIFICATION OF THESE LOCATIONS, LINE SIZES OR MATERIAL TYPE, MAKES NO REPRESENTATION THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE OR UNDERGROUND INSTALLATION IN OR NEAR THE AREA IN ADVANCE OF AND DURING ANY EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES AND UNDERGROUND FACILITIES. IN PLANNING AND CONDUCTING EXCAVATIONS, THE CONTRACTOR SHALL COMPLY WITH ALL STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
- 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 AMOUNT OF
- THE CONTRACTOR SHALL OBTAIN ANY AND ALL PERMITS REQUIRED BY THE CITY OF ALB. FOR THE COMPLETION OF THE WORK PRIOR TO BEGINNING CONSTRUCTION.
- TWO WORKING DAYS PRIOR TO AN EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE A 260-1990 FOR LOCATION OF EXISTING UTILITIES.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING, IN ADVANCE OF HIS CONSTRUCTION OPERATIONS, IF OVERHEAD UTILITY LINES, SUPPORT STRUCTURES, POLES, GUYS, ETC. ARE AN OBSTRUCTION TO CONSTRUCTION OPERATIONS. IF ANY OBSTRUCTION IS EVIDENT, THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE APPROPRIATE UTILITY OWNER TO REMOVE OR SUPPORT THE UTILITY OBSTRUCTION, ANY COST ASSOCIATED WITH THIS EFFORT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR.
- STREET GRADES SHALL BE RESTORED BY THE CONTRACTOR TO THE EXISTING GRADES UNLESS OTHERWISE DIRECTED BY THE ENGINEER. SMOOTH TRANSITIONS SHALL BE MADE BETWEEN EXISTING PAVEMENT WHICH REMAINS IN PLACE AND PAVEMENT WHICH IS REPLACED. WHEN ABUTTING NEW PAVEMENT TO EXISTING, SAWCUT BACK EXISTING PAVEMENT TO A NEAT, STRAIGHT LINE AS REQUIRED TO REMOVE ANY BROKEN OR CRACKED PAVEMENT.
- 9. CONTRACTOR WILL BE RESPONSIBLE FOR DISPOSING OF ALL WASTE MATERIAL IN ACCORDANCE WITH ALL FEDERAL, STATE AND LOCAL LAWS.
- 10. ALL STREET STRIPING ALTERED OR DESTROYED DURING CONSTRUCTION SHALL BE REPLACED BY CONTRACTOR WITH PLASTIC REFLECTORIZED PAVEMENT MARKINGS AT LOCATION EXISTING PRIOR TO CONSTRUCTION ACTIVITIES, OR AS SHOWN IN THIS PLANSET.
- 11. BACKFILL, COMPACTION AND PAVEMENT SECTION SHALL BE RESTORED ACCORDING TO ARTERIAL STREET USE. SEE DETAIL #2407.
- 12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR TIMING AND COORDINATION OF THE WATER SHUT OFF. AT LEAST FIVE (5) WORKING DAYS PRIOR TO CONSTRUCTION, CONTRACTOR SHALL CONTACT THE WATER SYSTEMS DIVISION, 857-8200, TO INITIATE IMPLEMENTATION OF A NON-PRESSURIZED CONNECTION PLAN. IN ORDER TO COMPLETE THIS CONNECTION, ANY VALVES MUST BE CLOSED BY WATER SYSTEMS PERSONNEL. ALTERNARIVELY, THE CONTRACTOR MAY COMPLETE A PRESSURE CONNECTION.
- 13. CONTRACTOR SHALL COMPLY WITH COUNCIL ORDINANCE 0-79 FOR WATER SYSTEM CROSS CONNECTION PREVENTION AND CONTROL.
- 14. ANY WORK OCCURRING WITHIN AN ARTERIAL ROADWAY REQUIRES 24 HOUR CONSTRUCTION.
- 15. 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) DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN A BARRICADING PERMIT. THE CONTRACTOR SHALL NOTIFY THE BARRICADE ENGINEER (768–2551) OF HIS FINAL PLAN AND SCHEDULE A MINIMUM OF 24—HOURS PRIOR TO BEGINNING WORK. SEE SECTION 19 OF THE STANDARD SPECIFICATION FOR ADDITIONAL INFORMATION.

SECOND STREET NW SUBDIVIS INFRASTRUCTURE IMPROVEMENTS CITY OF ALBUQUERQUE, BERNALILLO COU NEW MEXICO - APRIL 1998

INDEX TO SHEETS

- TITLE SHEET AND GENERAL NOTES
- SURVEY DATA AND LOCATION INFORMATION
- WATER AND SANITARY SEWER
- PRIVATE ACCESS ROAD AND MEDIAN MODIFICATIONS
- TYPICAL TRAFFIC CONTROL & SIGNING EXAMPLES

RECORD DRAWING

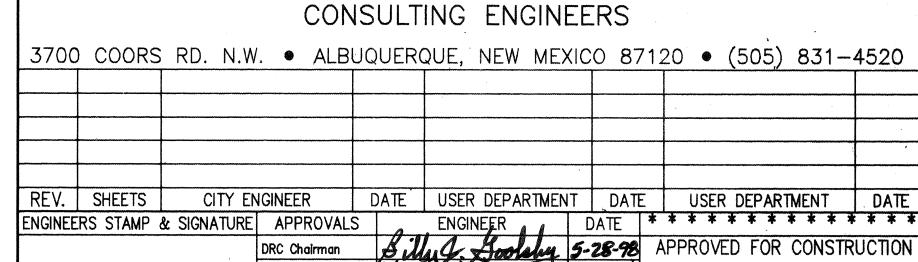
RECORD DRAWING INFORMATION SHOWN HEREON WAS PROVIDED BY THE CONTRACTOR AND/OR THE DEVELOPER. THE CONSTRUCTION

INSPECTION WAS PERFORMED BY THE CITY OF ALBUQUERQUE.

SIGNING & CONSTRUCTION TRAFFIC CONTROL STANDARDS

7.4 & B GRADING AND DRAINAGE PLAN (APPROVED BY DRB) (TWO SHEETS LABELED 1 of 2 & 2 of 2)



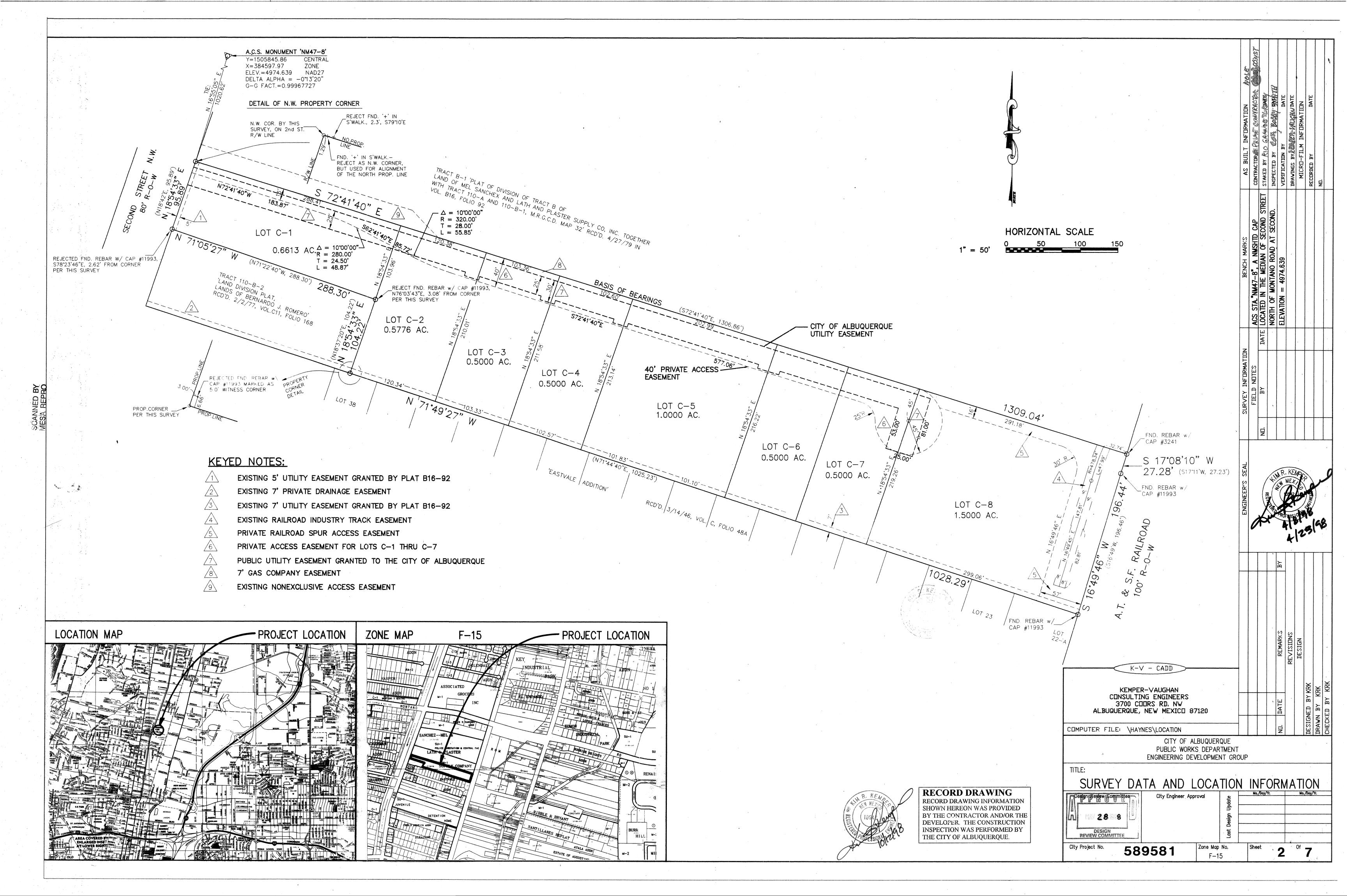


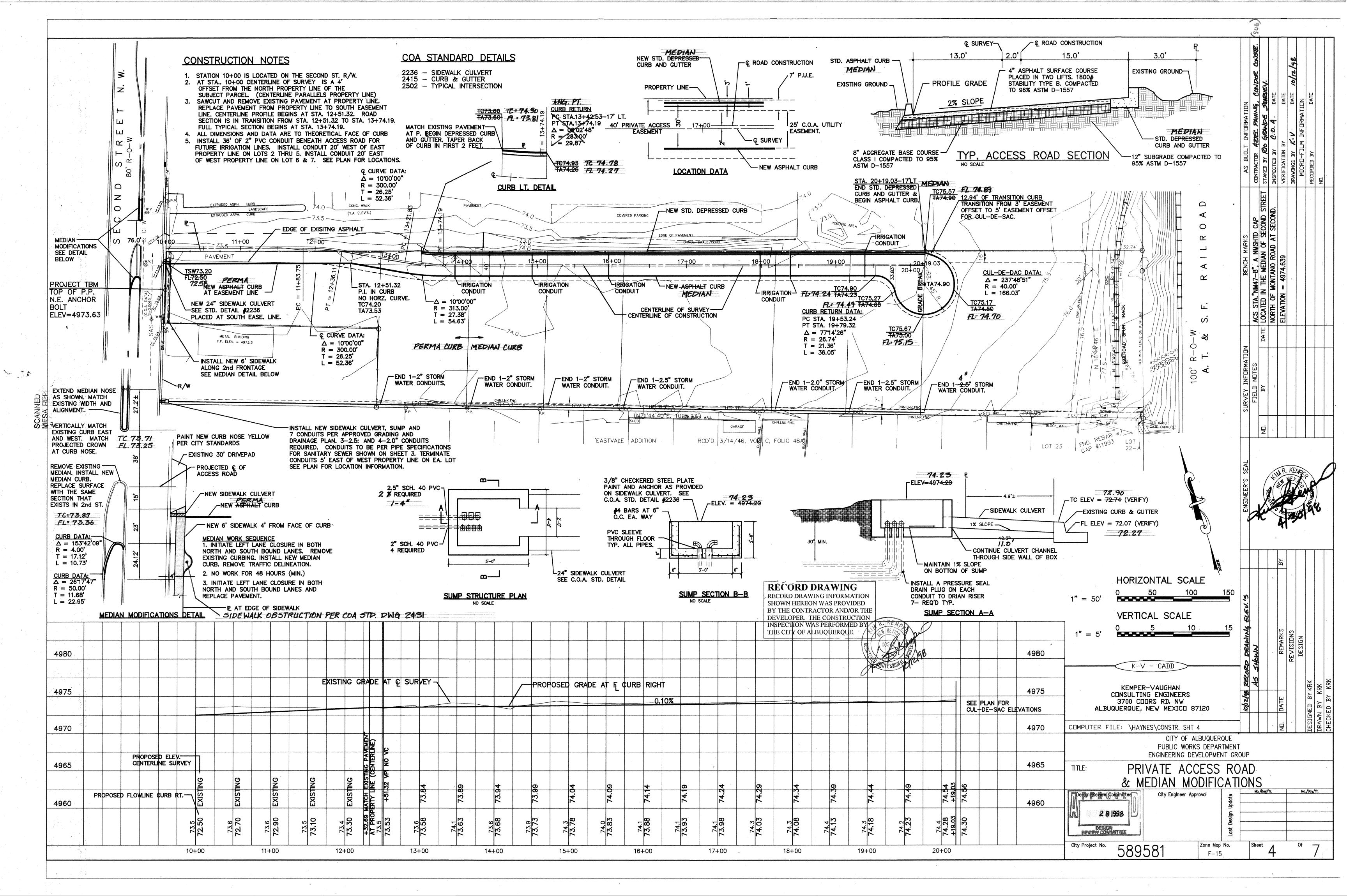
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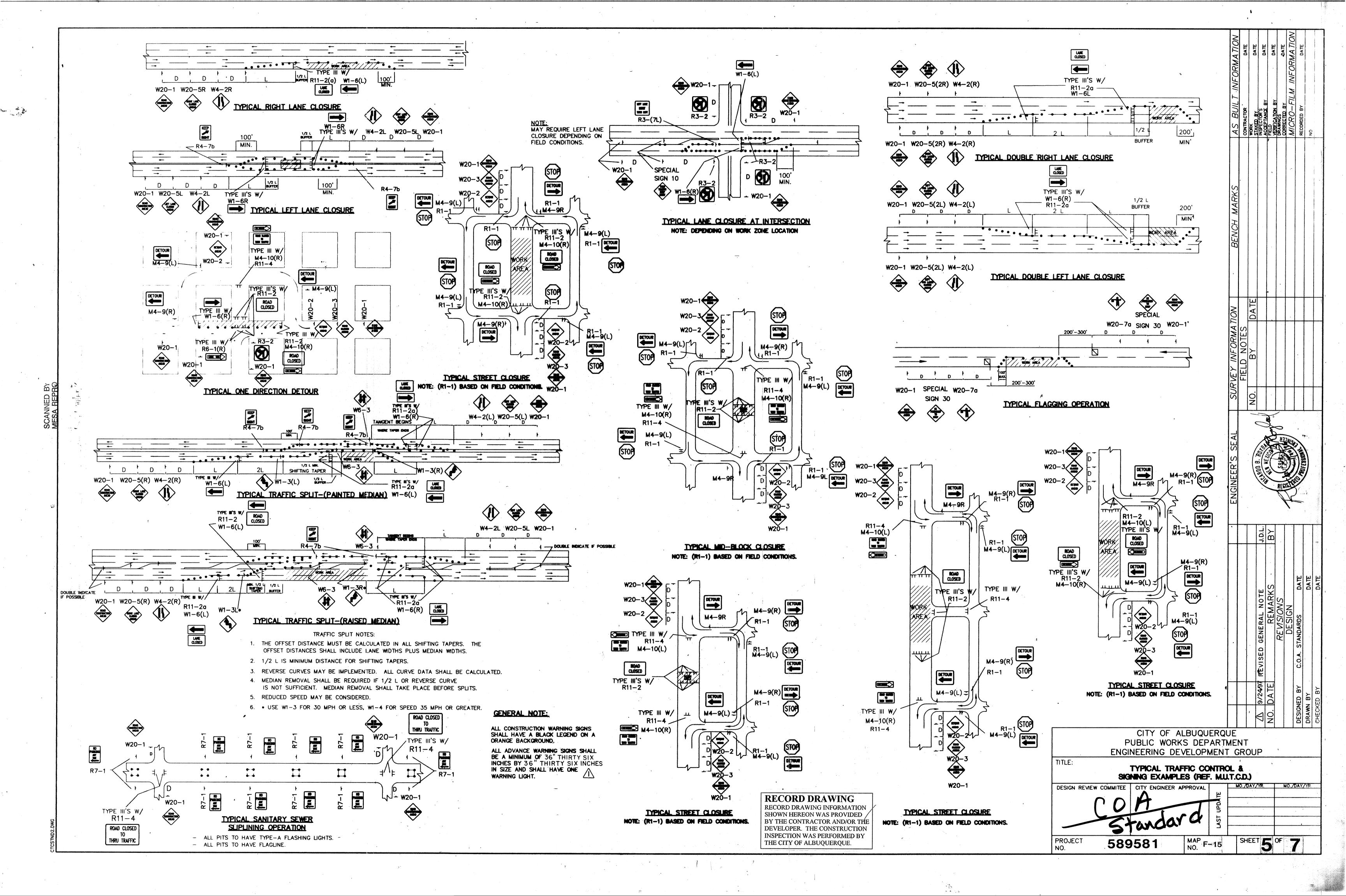
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KEMPER-VAUGHAN

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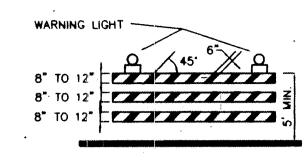


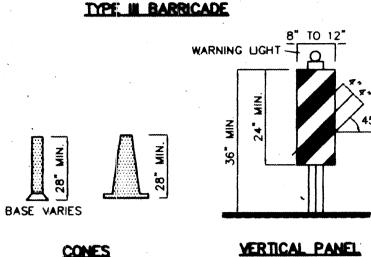
- 2 CONTRACTOR SHALL AT THE TIME OF PERMIT REQUEST, SUBMIT FOR APPROVAL BY CONSTRUCTION COORDINATION, A TRAFFIC CONTROL PLAN DETAILING ALL EXISTING TOPOGRAPHY SUCH AS LANE WIDTHS, DRIVEWAYS, AND BUSINESS/RESIDENTIAL ACCESSES. THE TRAFFIC CONTROL PLAN SHALL INCLUDE ALL PHASES OF WORK AND SCHEDULES INVOLVED 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
- 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 FACILITIE ... 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 MUTCH, LATEST EDITION
- **~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.

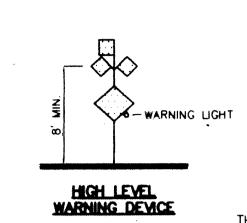
- 21. EXCAVATIONS SHALL BE PLATED, TEMPORARILY PATCHED OR RESURFACED PRIOR TO OPENING OF TRAFFIC. A MINIMUM OF 11 FEET SHALL BE PROVIDED FOR TRAFFIC IN ANY GIVEN DIRECTION. CONTRACTOR IS RESPONSIBLE FOR ANY WORK INVOLVED IN SATISFYING THESE REQUIREMENTS.
- 22. CONTRACTOR SHALL AT ALL TIMES COMPLY WITH THE FOLLOWING: STANDARDS AND REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION. 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.
- 27 CONTRACTOR SHALL MAINTAIN A GRAFFITI FREE WORKSITE, ALL GRAFFITI SHALL BE PROMPTLY REMOVED FROM ALL EQUIPMENT, BOTH PERMANENT AND TEMPORARY. 4

28. CONTRACTOR TO SETUP TYPICAL TRAFFIC SPLIT (RAISED MEDIAN) FOR THE CONNECTION TO EXISTING UTILITIES. ONCE INITIATED, WORK ON THE UTILITIES. AND ROADWAY REQUIRES 24 HOUR CONSTRUCTION UNTIL TRAFFIC SPLIT CAN BE REMOVED

29. FOR WORK ON MEDIAN, CONTRACTOR TO SETUP LEFT LANE CLOSURE FOR BOTH MORTH AND SOUTH BOUND LANES. WORK SHALL NOT BEGIN ANY EARLIER THAN 9:00 A.M. AND NOR SHALL PROCEED PAST 3:00 P.M.







**LEGEND** 

WORK AREA BARRICADE - TYPE I, TYPE II, OR BARREL

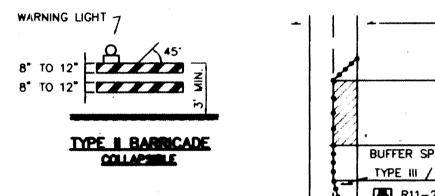
BARRICADE - TYPE III VERTICAL PANEL

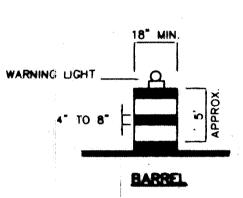
WARNING SIGN DISTANCE BETWEEN SIGNS - A DISTANCE MEASURED IN FEET EQUAL TO A VALUE OF TEN TIMES THE SPEED LIMIT OF THE STREE

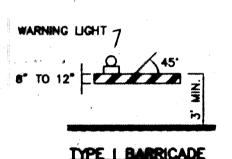
FLAGMAN POSITION SPACING BETWEEN BARRICADES A DISTANCE MEASURED IN FEET EQUAL TO THE SPEEL LIMIT OF THE STREET

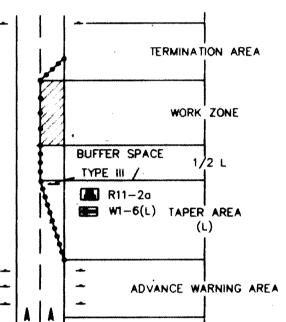
TAPER LENGTH SEE CHART BELOW

THE TANGENT LENGTH IS EQUAL TO THE TAPER LENGTH FOR A GIVEN STREET









TRAFFIC CONTROL ELEMENTS

#### TAPER REQUIREMENTS

SPEED LIMIT	TAP	ER LENGT (FEET)	H (L).	MINIMUM NUMBER OF DEVICES FOR TAPER	MAXIMUM DEVICE SPACING IN FEET	
(MPH)	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	<b>18</b> 0	. 7	30	30
35	205	225	245	8	35	35
40	270	295	320	9	40	<b>4</b> 0
<b>4</b> 5	<b>4</b> 50	495	540	13	45	<b>4</b> 5
50	500	550	<b>6</b> 00	13	50	50
55	550	605	660	13	55	55

#### RECOMMENDED SIGN SPACING(D) FOR ADVANCE WARNING CICK CEDIES

AUYA	NCE WAL	KNING S	SIGN S	<u>ERIES</u>				
SPEED	. N	MINIMUM DISTANCE IN FEET						
MILES PER HOU		WEEN SNS		OM LAST TO TAPER				
0-20	10 X SF	PEED LIMIT	10 X	SPEED LIMIT				
25-30	10 X SP	PEED LIMIT	10 X	SPEED LIMIT				
30-35	10 X SF	PEED LIMIT	10 X	SPEED LIMIT				
40-45	10 X SF	PEED LIMIT	10 X	SPEED LIMIT				
50-60	10 X SP	PEED LIMIT	10 X	SPEED LIMIT				

IAPER CRITERIA						
TYPE OF TAPER	TAPER LENGTH					
UPSTREAM TAPER:	,					
MERGING TAPER	L MINIMUM					
CHIETING TADED	1 /2 ! AAINHAALIAA					

SHIFTING TAPER 1/2 L MINIMUM SHOULDER TAPER 1/2 L MINIMUM TWO-WAY TRAFFIC TAPER 100 FEET MAXIMUM 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

J.D.L J.D.L J.D.L BY

CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP

SIGNING AND CONSTRUCTION TRAFFIC CONTROL STANDARDS

CITY ENGINEER APPROVAL DESIGN REVIEW COMMITEE PROJECT NO. F-15 589581

KEEP KEEP TURN LEFT RIGHT LEFT R4-7b(L)

W20-7a

W1-6(L)

R3-7(R) R3 - 7(L)ROAD CLOSED

W20 - 7

END DETOUR

M4-9(L)

DETOUR ) M4-10(R)

CDETOUR M4-10(L)

G20-2

RECORD DRAWING

SHOWN HEREON WAS PROVIDED

ROAD CLOSED

AHEAD

W20-3

ONE WAY

R6-1(R)

BE PREPARED

SPECIAL

W20-4

REDUCED

SPEED

AHEAD

R2-5a

ACCESS TO

SPECIAL SIGN

AHEAD

W20-2

THRU
TRAFFIC
KEEP
LEFT

SPECIAL

ROAD CONSTRUCTION AHEAD

W20 - 1

ENTER

THRU
TRAFFIC
KEEP
RIGHT

SPECIAL

CLOSED AMEAD

NO

PARKING

ROAD

CLOSED

ALL CONSTRUCTION WARNING SIGNS, SHALL HAVE A BLACK LEGEND ON A

ORANGE BACKGROUND.

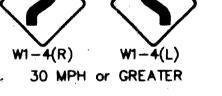
W20-5(R)

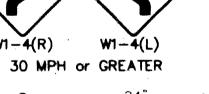
SPEED 30

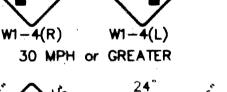
ONE WAY

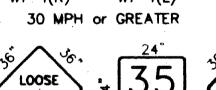
SIGN FACE DETAILS

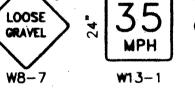


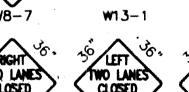










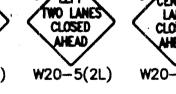


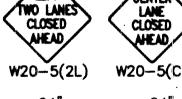


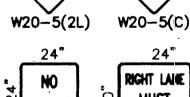
LANE

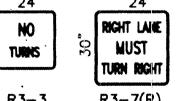
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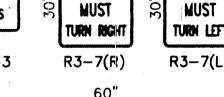
R11-2a

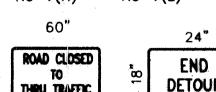




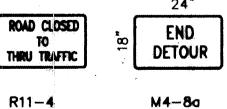




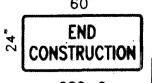




W1 - 6(R)

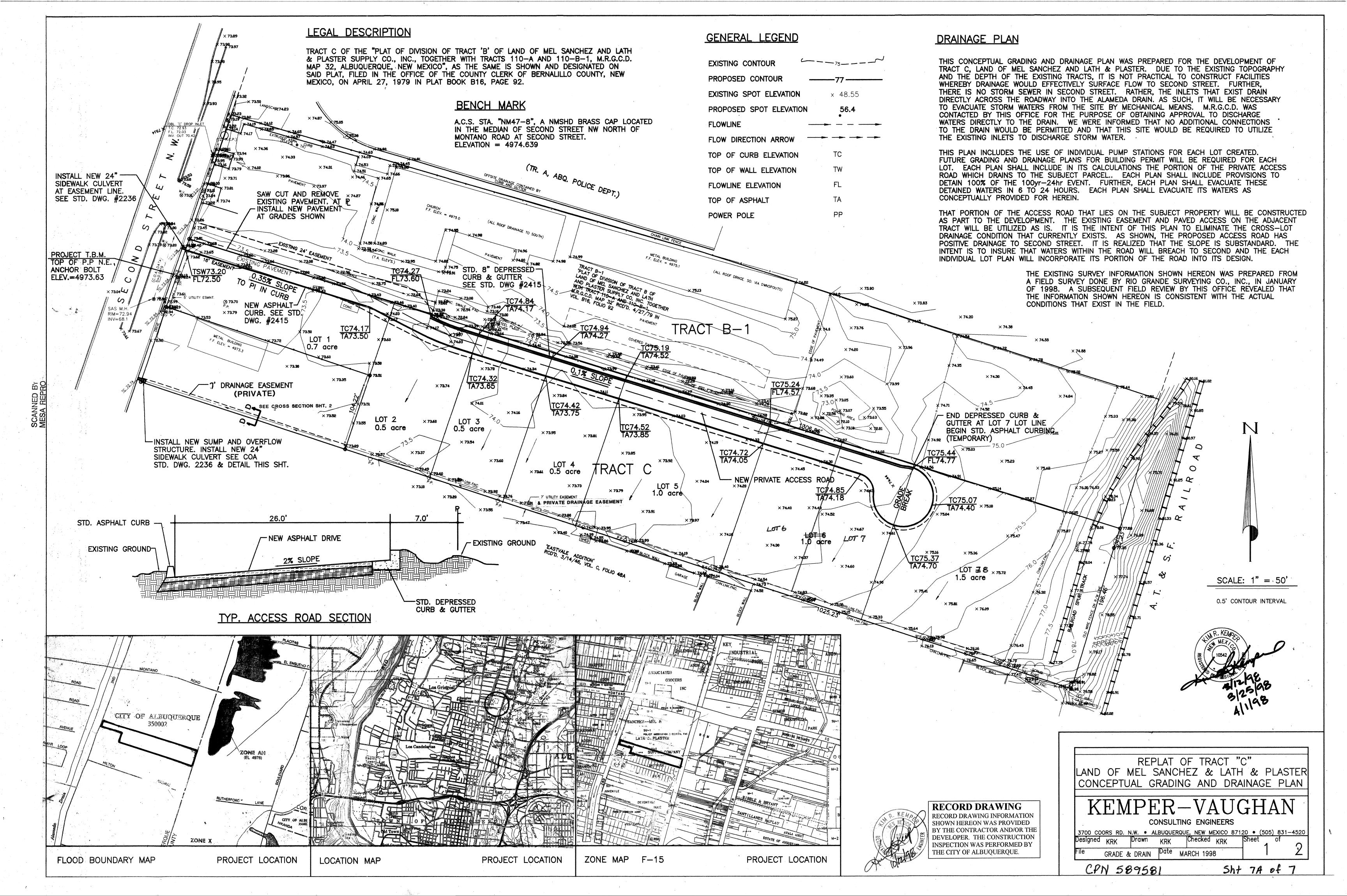






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RECORD DRAWING INFORMATION BY THE CONTRACTOR AND/OR THE DEVELOPER. THE CONSTRUCTION INSPECTION WAS PERFORMED BY THE CITY OF ALBUQUERQUE.



#### CALCULATIONS

THE FOLLOWING CALCULATIONS WERE DEVELOPED USING THE CITY OF ALBUQUERQUE DPM SECTION 22.2 THEY WERE PREPARED BASED ON AN ASSUMPTION OF A DEVELOPED CONDITION OF 85% IMPERVIOUS AND 15% LANDSCAPE.

SITE CHARACTERISTICS:
SITE LOCATION: ZONE 2
PRECIPITATION: P360= 2.35 inches
PRECIPITATION: P1440 = 2.75 inches

LAND TREATMENT:

UNCOMPACTED SOIL — TREATMENT A

LANDSCAPE — TREATMENT B

COMPACTED SOIL — TREATMENT C

BUILDINGS & PAVING — TREATMENT D

EXCESS PRECIPITATION:

TREATMENT A E=0.53 inches

TREATMENT B E=0.78 inches

TREATMENT C E=1.13 inches

TREATMENT D E=2.12 inches

TREATMENT D E=2.12 inches

TREATMENT D E=4.70 cfs/acre

TREATMENT D E=4.70 cfs/acre

EXISTING

PROPOSED

EXCESS PRECIPITATION & VOLUMETRIC RUNOFF: EXISTING RUNOFF:

V100-6hr = (0.53)(5.70)/12 = 0.252acre ft = 10,970 cf

DEVELOPED RUNOFF: WEIGHTED E=[(0.53)(0.00)+(0.78)(0.86)+(1.13)(0.00)+(2.12)(4.84)]/5.70= 1.92 inches

V100-6hr = (1.92)(5.70)/12 = 0.912 acre ft = 39,730 cf

PEAK DISCHARGE:

EXISTING DISCHARGE:

Q100 = (1.56)(5.70) = 8.9 cfs

DEVELOPED DISCHARGE:

Q100 = (1.56)(0.00) + (2.28)(0.86) + (3.14)(0.00) + (4.70)(4.84) = 24.7 cfs

RESULTS:

DEVELOPED VOLUMETRIC RUNOFF:

39,730 - 10,970 = 28,760 cf INCREASE IN RUNOFF VOLUME

DEVELOPED PEAK DISCHARGE:

24.7 - 8.9 = 15.8 cfs INCREASE IN PEAK DISCHARGE

THE FOLLOWING CALCULATIONS ARE PROVIDED FOR A TYPICAL DEVELOPED LOT WITHIN THE PROPOSED SUBDIVISION. A 1/2 ACRE LOT WAS USED.

EXISTING

PROPOSED

0.42 AC. = 85.0%

EXCESS PRECIPITATION & VOLUMETRIC RUNOFF:

EXISTING RUNOFF: V100-6hr = (0.53)(0.50)/12 = 0.022acre ft = 960 cf

= 0.00 AC. = 0.0%

DEVELOPED RUNOFF:

TREATMENT D

WEIGHTED E=[(0.53)(0.00)+(0.78)(0.08)+(1.13)(0.00)+(2.12)(0.42)]/0.50

= 1.92 inches

V100-6hr = (1.92)(0.50)/12 = 0.080 acre ft = 3,480 cf V100-24hr = 0.080 + 0.42(2.75 - 2.35)/12 = 0.094 acre ft = 4,090 cf

PEAK DISCHARGE:

EXISTING DISCHARGE:

Q100 = (1.56)(0.50) = 0.8 cfs

0.000 = (1.56)(0.50) = 0.8 c

Q100 = (1.56)(0.00)+(2.28)(0.08)+(3.14)(0.00)+(4.70)(0.42) = 2.2 cfs RESULTS:

DEVELOPED VOLUMETRIC RUNOFF: 4,090 - 960 = 3,130 cf INCREASE IN RUNOFF VOLUME

DEVELOPED PEAK DISCHARGE:

2.2 - 0.8 = 1.4 cfs INCREASE IN PEAK DISCHARGE

AS STATED EARLIER IN THIS PLAN, EACH LOT WILL BE REQUIRED TO DETAIN 100% OF ITS 100yr-24hr VOLUME. FURTHER, EACH DEVELOPED PARCEL WILL REQUIRE A SUMP AND STORM WATER PUMP TO EVACUATE EACH SITE

IT IS PROPOSED IN THIS CONCEPTUAL PLAN THAT EACH PARCELS TOTAL STORM WATER RUNOFF BE EVACUATED IN A 6 HOUR PERIOD. THEREFORE, THE PROPOSED DEVELOPED DISCHARGE FROM EACH 1/2 ACRE SITE IS AS FOLLOWS:

TOTAL VOLUME = 4,090 cf = 30,590 gal 6 HOURS = 360 min. (30,590/360) = 85 gpm = 0.19 cfs

EFFECTIVELY, THE PEAK DISCHARGE WILL BE REDUCED BY APPROXIMATELY 75% DURING THE DESIGN EVENT POST DEVELOPMENT.

#### OFFSITE CONDITIONS

THERE ARE NO OTHER FLOWS THAT ENTER TRACT B-1 OR TRACT C. THE PARCEL TO THE NORTH CONTAINS/CONTROLS ITS STORM WATER AND THE PARCEL TO THE SOUTH FLOWS SOUTH. THE SMALL AREA TO THE EAST IS CONTAINED WITHIN THE DEPRESSION BETWEEN THE ATSF MAIN TRACT AND THE SPUR THAT ENTERS LOT 7.

#### PUMP SYSTEMS

EACH PROPOSED LOT WILL REQUIRE AN INDIVIDUAL PUMP SYSTEM TO CONTROL STORM WATER. DISCHARGE PIPE SHALL BE PLACED WITHIN THE DRAINAGE EASEMENTS PROVIDED AND SHALL TERMINATE AS SHOWN HEREON. FOR PURPOSES OF THIS CONCEPTUAL PLAN THE ANTICIPATED FLOW RATES WILL BE AS FOLLOWS:

IOT 1

TOTAL VOLUME = 5,730 cf = 42,860 gal 6 HOURS TO DRAIN POND= 360 min. PUMPING RATE (42,860 gal/360 min) = 119 gpm = 0.27 cfs

LOTS 2 THROUGH 4,6 47

TOTAL VOLUME = 4,090 cf = 30,590 gal 6 HOURS TO DRAIN POND= 360 min. PUMPING RATE (30,590 gal/360 min) = 85 gpm = 0.19 cfs

LOTS 5 AND 6

TOTAL VOLUME = 8,180 cf = 61,180 gal 6 HOURS TO DRAIN POND= 360 min. PUMPING RATE (61,180 gal/360 min) = 170 gpm = 0.38 cfs

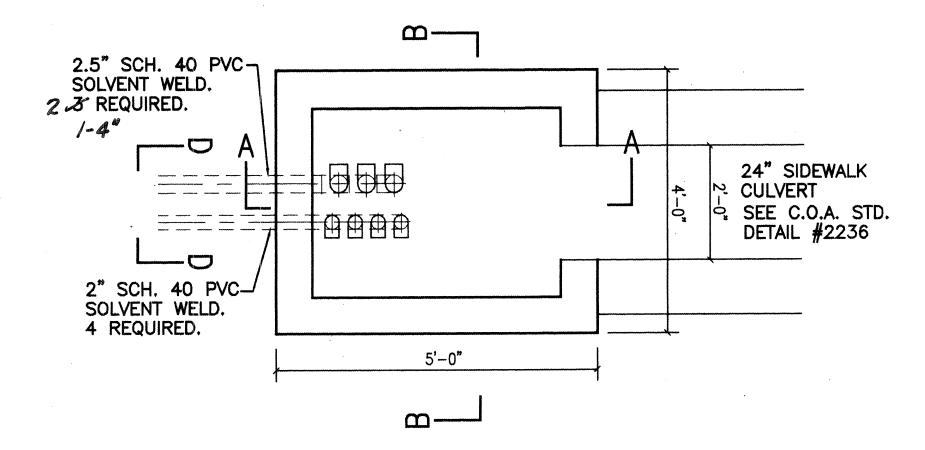
LOTS 7 8

TOTAL VOLUME = 12,270 cf = 91,180 gal 6 HOURS TO DRAIN POND= 360 min. PUMPING RATE (91,880 gal/360 min) = 255 gpm = 0.57 cfs

THESE VALUES ARE PROVIDED AS A MAXIMUM ALLOWABLE DISCHARGE FROM THE FUTURE DEVELOPMENT OF THESE LOTS. (USING A 6-hour EVACUATION TIME). WHEN INDIVIDUAL PLANS FOR BUILDING PERMIT ARE SUBMITTED THEY MAY INCLUDE PROVISIONS FOR A 24-hour EVACUATION; THEREBY, REDUCING THE TOTAL DISCHARGE RATE.

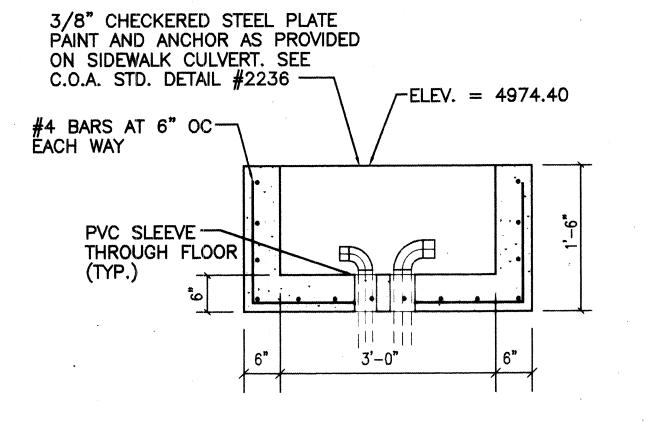
#### REQUIREMENTS FOR LOT DEVELOPMENT PLANS

- 1. ALL LOTS SHALL DETAIN 100% OF THE 100yr-24hr VOLUME.
- 2. ALL LOTS SHALL HAVE A PUMP SYSTEM TO EVACUATE THE SITE IN A MINIMUM OF 6-hours AND A MAXIMUM OF 24-hours
- 3. IT IS RECOMMENDED THAT ALL STRUCTURES HAVE A MINIMUM FINISHED FLOOR OF 4974.5
- 4. ALL LOTS MUST INCLUDE AND CONTROL STORM WATERS THAT ENTER THE LOT FROM THE ACCESS ROAD.
- 5. THE ASPHALT CURB IS TO BE REMOVED AT THE TIME OF SITE DEVELOPMENT.

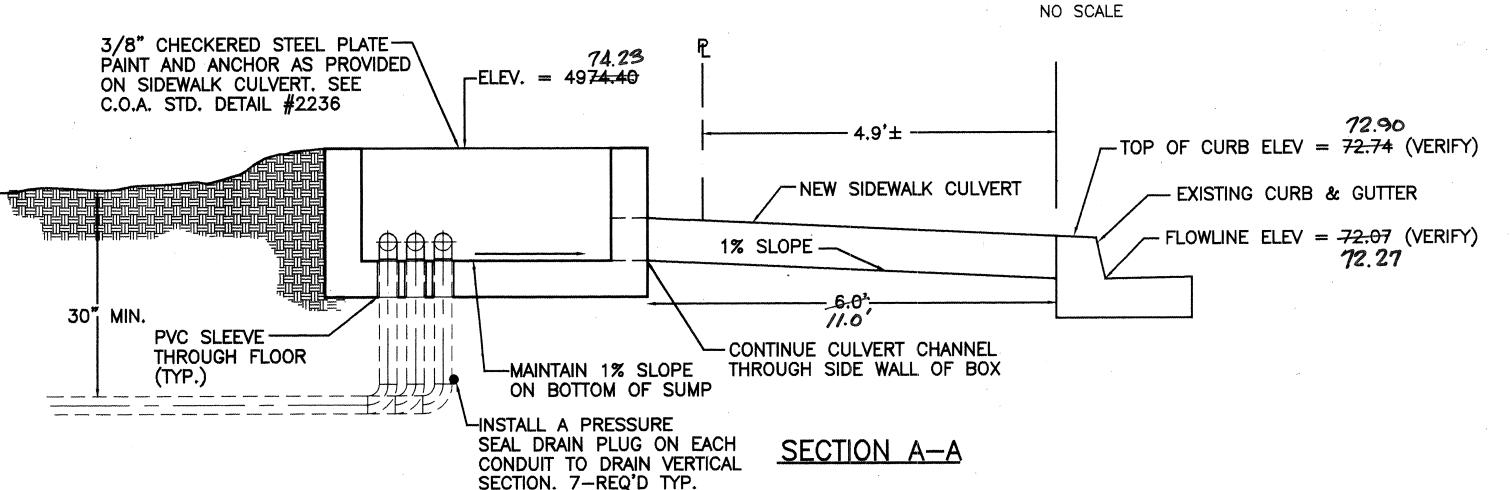


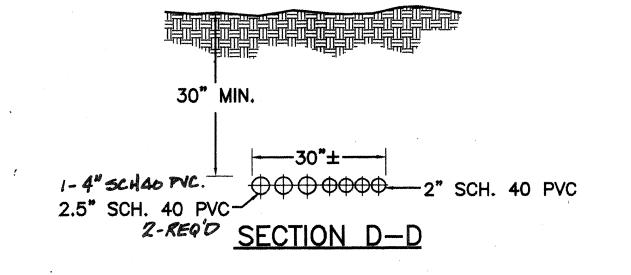
SUMP STRUCTURE PLAN

NO SCALE



### SECTION B-B



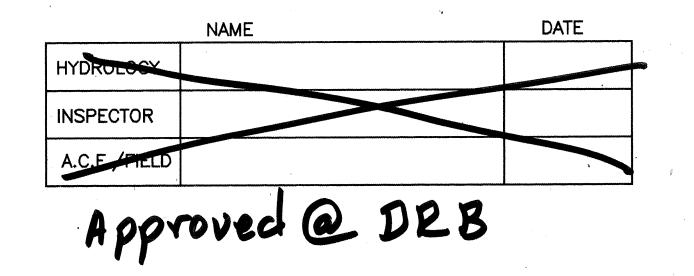


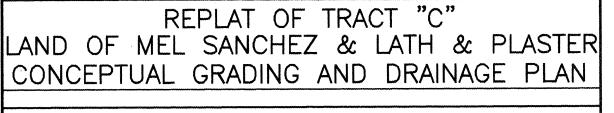
RECORD DRAWING
RECORD DRAWING INFORMATION
SHOWN HEREON WAS PROVIDED
BY THE CONTRACTOR AND/OR THE
DEVELOPER. THE CONSTRUCTION
INSPECTION WAS PERFORMED BY
THE CITY OF ALBUQUERQUE.



#### GENERAL NOTES

- 1. PRIOR TO ANY CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER AS SOON AS POSSIBLE TO RESOLVE THE CONFLICT WITH A MINIMUM AMOUNT OF DELAY.
- ALL WORK ON THIS PLAN SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE LOCATION ONLY, AND LINES MAY EXIST WHERE NONE ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE UTILITY OWNER OR FROM EXISTING PLANS, AND THIS INFORMATION MAY BE INCOMPLETE, OR OBSOLETE AT THE TIME OF CONSTRUCTION. THE ENGINEER HAS NOT UNDERTAKEN ANY FIELD VERIFICATION OF THESE LOCATIONS, LINE SIZES OR MATERIAL TYPE, MAKES NO REPRESENTATION THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE OR UNDERGROUND INSTALLATION IN OR NEAR THE AREA IN ADVANCE OF AND DURING ANY EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES AND UNDERGROUND FACILITIES. IN PLANNING AND CONDUCTING EXCAVATIONS, THE CONTRACTOR SHALL COMPLY WITH ALL STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
- THE CONTRACTOR SHALL INSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHTS—OF—WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AND BY WETTING THE SOIL TO KEEP IT FROM BLOWING.
- THE CONTRACTOR SHALL OBTAIN ANY AND ALL PERMITS REQUIRED BY THE CITY OF ALB. FOR THE COMPLETION OF THE WORK PRIOR TO BEGINNING CONSTRUCTION.
- 6. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AND ALL CURRENT UPDATES.
- 7. AN EXCAVATION/CONSTRUCTION PERMIT WILL BE REQUIRED BEFORE BEGINNING WORK WITHIN CITY RIGHT—OF—WAY. AN APPROVED COPY OF THESE PLANS MUST BE SUBMITTED AT THE TIME OF APPLICATION FOR PERMIT.
- 8. TWO WORKING DAYS PRIOR TO AN EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE A 260-1990 FOR LOCATION OF EXISTING UTILITIES.
- 9. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL CONSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- 10. BACKFILL COMPACTION SHALL BE ACCORDING TO COLLECTOR STREET USE.
- 11. MAINTENANCE OF THESE FACILITIES SHALL BE THE RESPONSIBILITY OF THE OWNER OF THE PROPERTY SERVED.





# KEMPER-VAUGHAN

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Designed KRK Drawn KRK Checked KRK Sheet of Price of Price

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