

SCANNED BY
PLANNING

BREEZE AT MOUNTAIN GATE 30" STORM DRAIN IN I-40 NMSH 333 RIGHT OF WAY AT INTERSECTION OF FOUR HILLS ROAD NMSH 333

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(FROM APPROVED GRADING AND DRAINAGE PLAN)
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FOR 30" STORM DRAIN IN I-40-NMSH 333
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(REF. M.U.T.C.D.)

THIS SHEET 1 OF 5 IS A RECORD COPY OF THE SUB-SURFACE STORM DRAIN
BY WORK ORDER # 655982 AT THE INTERSECTION OF FOUR HILLS ROAD AND
CENTRAL AVENUE/I-40 EAST BOUND ON-RAMP. I CERTIFY THAT THE CONSTRUCTION
COMPLETED IS SUBSTANTIALLY AS SHOWN ON SHEET 3.

Marvin R. Kortum
MARVIN R. KORTUM
NMPE 6519

JANUARY 31, 2005

MY JULY 8, 2011 INSPECTION FOUND THE SYSTEM
STRUCTURE AND SITE DRAINAGE ARE GOOD.

BY LETTER AUGUST 2, 2011, NMSDT ACCEPTED
THE SYSTEM.

Marvin R. Kortum
MARVIN R. KORTUM

AUGUST 8, 2011

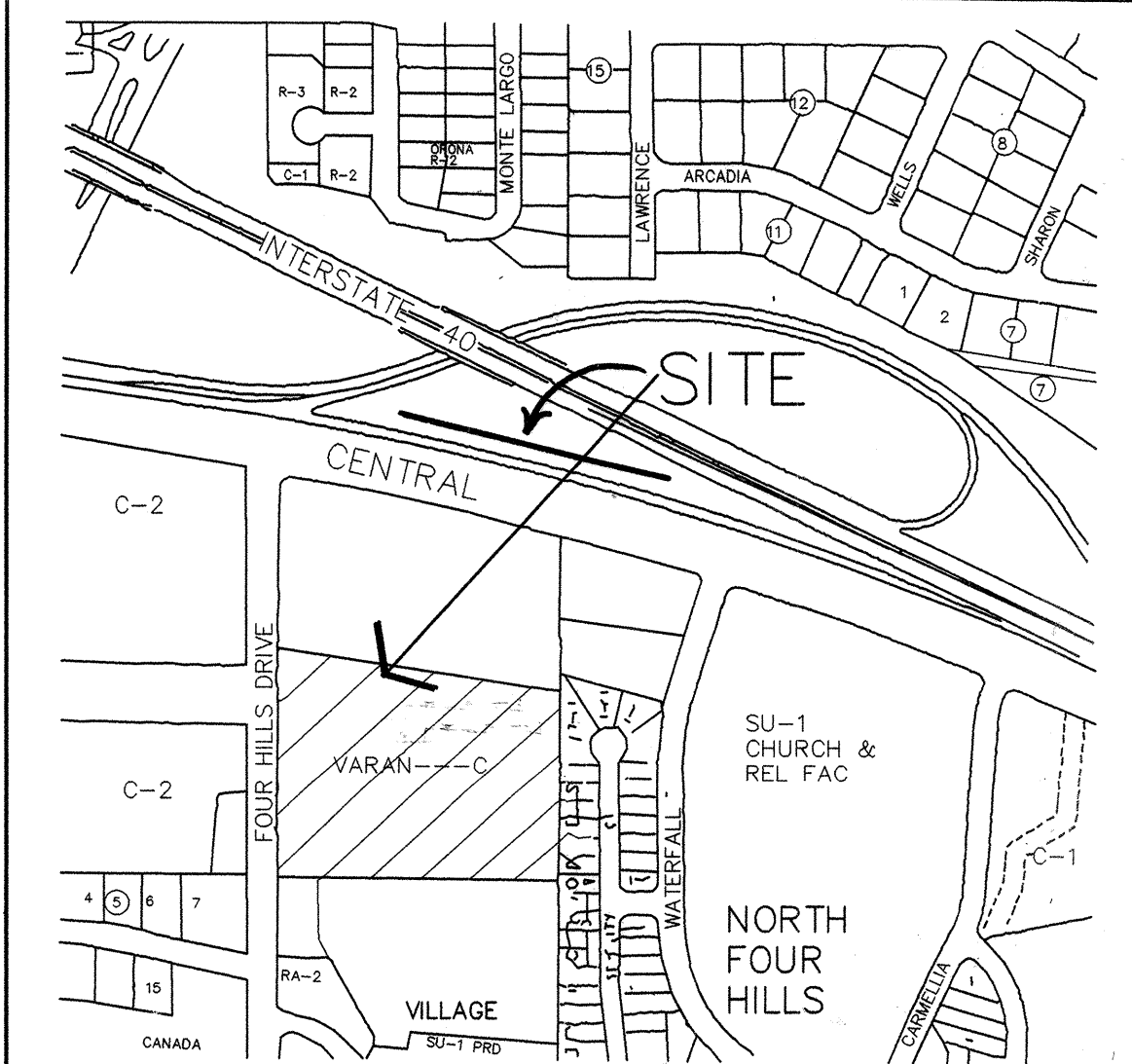


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Civil Engineer
NM PE 6519

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(505) 299-0774

DRB - 98 - 45

(PLANNING DEPT> PROJECT # 1000849)



L-23-Z

NOTICE TO CONTRACTORS

1. 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 THROUGH AMENDMENT 6.
2. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE-CALL SYSTEMS, 280-1990, FOR LOCATION OF EXISTING UTILITIES.
3. 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 OR SURVEYOR SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
4. 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 INSURE THE PRESERVATION OF SURVEY MONUMENTS. 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 WITHOUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE CITY SURVEY SECTION. WHEN A CHANGE IS MADE IN THE FINISHED ELEVATION OF THE PAVEMENT OF ANY ROADWAY IN WHICH A PERMANENT SURVEY MONUMENT IS LOCATED, CONTRACTOR SHALL, AT HIS OWN EXPENSE, ADJUST THE MONUMENT COVER TO THE NEW GRADE UNLESS OTHERWISE SPECIFIED. REFER TO SECTION 4.4 OF GENERAL CONDITIONS OF STANDARD SPECIFICATIONS.
5. FIVE (5) WORKING DAYS PRIOR TO CONSTRUCTION, CONTRACTOR SHALL SUBMIT TO THE CONSTRUCTION COORDINATING DIVISION, A DETAILED CONSTRUCTION SCHEDULE. TWO (2) DAYS PRIOR TO CONSTRUCTION THE CONTRACTOR SHALL OBTAIN A BARRICADING PERMIT FROM THE CONSTRUCTION COORDINATING DIVISION. CONTRACTOR SHALL NOTIFY THE BARRICADING ENGINEER (768-2551) PRIOR TO OCCUPYING AN INTERSECTION. SEE SECTION 19 OF THE SPECIFICATION.
6. ALL STREET STRIPING ALTERED OR DESTROYED SHALL BE REPLACED WITH PLASTIC REFLECTORIZED PAVEMENT MARKINGS BY THE CONTRACTOR TO LOCATION AS EXISTED OR INDICATED BY THIS PLAN SET.

- ☐ ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
- ☐ BACKFILL COMPACTION SHALL BE ACCORDING TO SPECIFIED STREET USE.
- ☐ TACK COAT REQUIREMENTS SHALL BE DETERMINED BY THE CITY ENGINEER.
- ☐ SIDEWALKS AND WHEEL CHAIR RAMPS WITHIN THE CURB RETURNS SHALL BE CONSTRUCTED WHEREVER A NEW CURB RETURN IS CONSTRUCTED.
- ☐ IF CURB IS DEPRESSIONED FOR A DRIVEPAD OR A HANDICAP RAMP, THE DRIVEPAD OR RAMP SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF THE CURB AND GUTTER.
- ☐ ALL STORM DRAINAGE FACILITIES SHALL BE COMPLETED PRIOR TO FINAL ACCEPTANCE.

APPROVED AS RECORD DRAWINGS
DESIGN REVIEW SECTION
CITY ENGINEER
Anthony J. [Signature]
DATE: 01/21/11

REV.	SHEETS	CITY ENGINEER	DATE	USER DEPARTMENT	DATE	USER DEPARTMENT	DATE
ENGINEERS STAMP, SIGNATURE	APPROVALS	ENGINEER	DATE	APPROVED FOR CONSTRUCTION			
	DRC Chairman	<i>K. B. [Signature]</i>	2/8/01	<i>[Signature]</i> 5/12/02 City Engineer Date			
	Transportation	<i>N/A [Signature]</i>	2/8/01				
	Water/Wastewater	<i>N/A [Signature]</i>	2/8/01				
	Hydrology	<i>[Signature]</i>	2/8/01				
	Parks						
	Constr. Mngmnt.						
	CONST. COORD.	<i>K. B. [Signature]</i>	2/8/01				
	City Project No.	655982		Sheet	Of		
				1	5		



PURPOSE:
The purpose of this grading and drainage plan is to obtain approval for a site development plan for a new subdivision of townhouses.

DISCUSSION:
A. The new subdivision, THE BREEZE AT MOUNTAIN GATE, is to be located on the east mesa, about four hundred feet south of the intersection of the Interstate 40 frontage road (Central Avenue, historic route 66) and Four Hills Road, in the southeast quadrant.
B. The area is presently vacant and unimproved. Past development on the site appears limited to two separate events which disturbed portions of the site from its natural condition. The first event occurred 40 to 50 years ago when an embankment was constructed through the mid portion of the site, crossing from the northwest corner to the south side. The embankment was used for a railroad which was part of the Little Beaver theme park in the vicinity. The embankment produced a 15 foot high dam across the one of the arroyos crossing the site. The dam has never been hazard due to water being ponded, but the minor water storage has resulted in the growth of some trees near the storage area. The second event was the construction of the "Serenity at Four Hills Subdivision" immediately adjacent to the east. The earthwork for the Serenity Subdivision included placing up to 40 feet thick fill within an existing arroyo, with the toe of the slope extending about 100 feet to the west, into the Mountain Gate subdivision area. This earthwork was done around 1990. The rest of the site appears undisturbed except for a number of vehicle trails used by motor vehicles. The site is presently covered with a moderate to thick growth of native grass, cactus and woody brush, with a few native juniper and oak trees.

SOILS:
A. Soils on the subdivision are identified by reference C as Tesajo-Millet stony sandy loams (Te). This mapping unit is about 40 percent a Tesajo stony sandy loam that has 3 to 20 percent slopes and 400 percent a Millet stony sandy loam that has 3 to 15 percent slopes. The Millet soil is on ridges of alluvial fans. The Tesajo soil is in swales adjacent and parallel to the intermittent streams and is subject to flooding. Runoff is medium, and the hazard of water erosion is moderate. Included in this unit are arroyo channels and rock outcrop. The soils formed on granite alluvium of old alluvial fans. The Millet soils have moderate shrink-swell potential, and the Tesajo soils have severe limitations for buildings if slopes are more than 15 percent. The soils are suited for residential buildings and associated infrastructure, but will require adequate design by a qualified geotechnical engineer, and strict supervision and inspection during construction of the deep fills required for the site. Soils may be susceptible to consolidation, particularly when wetted, so care must be taken to direct runoff and landscape watering away from building foundations.

B. Granite bedrock is visible in the arroyo bottom along the northeast corner, about 15 feet below the design finished surface. Reports from the construction of the Four Hills Road bridge over Tijeras Arroyo indicate that there is a fault line crossing the site, generally from the northeast corner toward the southwest corner. The rock outcrop along the east side of this line are visible on adjacent properties to the south. Borings for the bridge project indicate that the bedrock is ten to hundreds of feet lower west of the fault line. This information is of geological interest, but should not have any adverse impact on the proposed subdivision.
C. The two areas which have disturbed soil consisting of fill on which there are existing structures will require detailed study and recommendations. The railroad embankment should probably be removed to a stable surface before overall build-up to the design level (this recommendation is made due to the lack of information on the original placement). The fill for the Serenity subdivision will require attention so that there will be no adverse effect on the existing subdivision placed on this fill. There is evidence of minor differential movement of the garden wall placed on top of the fill, on the west edge of the Serenity subdivision. Prior to any construction activities in the area the wall and adjacent buildings should be inspected and any evidence of soils structure movement recorded.

DRAINAGE CONSIDERATIONS:
A. The site is not located within the limits of the 100-year flood, see Flood Insurance Rate Map, panel 386 of 825, effective date, September 20, 1996.
B. At the present time, runoff within the site north of the RR embankment is ponded north of the embankment. Runoff from south of the embankment flows through natural channels toward the ditch along the east side of Four Hills Road. The runoff from this ditch flows onto Four Hills Road over the existing curb about 200 feet south of the southwest corner of the subdivision, from there it runs along the east gutter of Four Hills Road, entering a drain inlet at the intersection of Pinon Creek Road with Four Hills Road, and overflow continuing south to the sump inlet near the bridge across the Tijeras Arroyo. The proposed development will channel runoff to catch new basins into a new sub-surface storm drain which will be connected to a new 42" RCP culvert flowing under Four Hills Road into the existing 14' wide by 12' high concrete lined channel west of Four Hills Road.
C. Some off-site flows currently enter the site north of the north. Some of this off-site flow originates on the 5+ acre unplatted site adjacent to the north. There is also currently a vacant lot east of the unplatted site which contributes flows. Flow is also generated by the I-40 access ramp and frontage road, this flow being channelled under the frontage road by a culvert which empties into the main arroyo which is presently blocked by the RR embankment. It is proposed that these flows be treated as follows:
1. Runoff from the I-40 access ramps and frontage road is from three basins, presently with three constructed outlets. It is proposed that the outlets be re-directed, as discussed below:

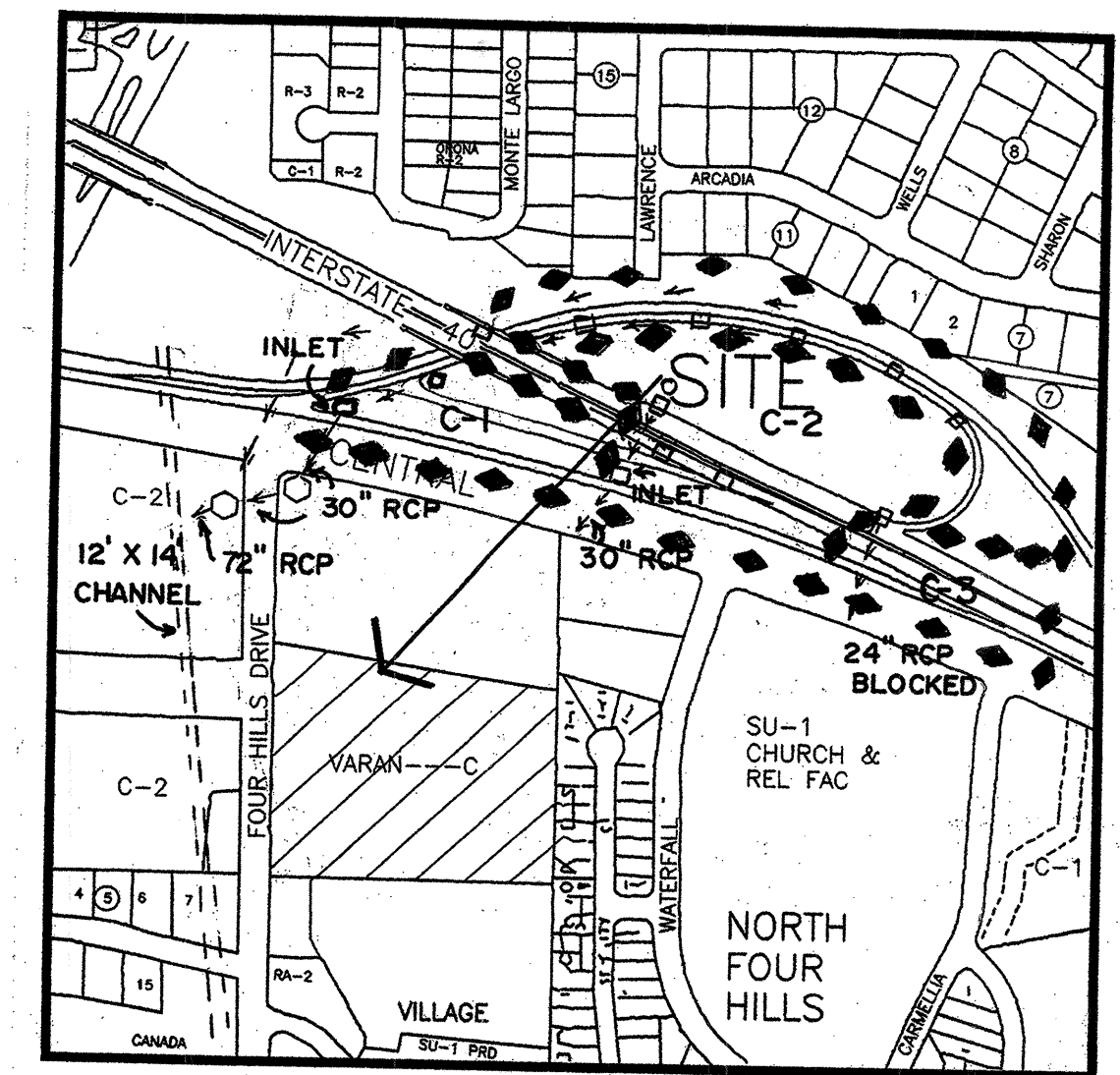
a. Basin C-1 includes the west end of the I-40 access ramp area, to include the west bound on and off ramps to the north of I-40. The area is about 6.4 acres, with a 100 year peak flow estimated as 28.12 CFS. The runoff is collected by sub-surface systems and surface runoff directed to an inlet located at the northeast corner of the intersection of the frontage road and the north leg of the access ramps. The runoff then flows south through a 30" RCP under the frontage road to a manhole, then to the west through a 30" RCP under Four Hills Road to a manhole, then into a 72" RCP which empties into the 12' by 14' concrete channel.
b. Basin C-2 includes a part of I-40, the access ramps and the frontage road which is east of basin C-1. Basin C-2 also includes the area enclosed by the west bound on and off ramps which is at a higher elevation, and drains to a pipe under the I-40 berm. The runoff from basin C-2 is collected by sub-surface pipes and surface runoff into an inlet located between the frontage road and the I-40 east bound on ramp, northeast of the northeast corner of the 5+ acres unplatted site north of the new subdivision. Outflow from this inlet is directed through a 30" RCP under the frontage road to a channel across the 5+ acres unplatted site. Presently this runoff is ponded north of the RR embankment as discussed above. The 100 year peak flow from this 6.4 acres basin C-2 is estimated as 25.28 CFS.

c. Basin C-3 is that area east of basin C-2, and includes runoff from inlets on I-40 and the ramps. The outflow from this basin is directed toward a 24" RCP under the frontage road which directs flow to a previously existing natural channel. This natural channel is now filled and the site occupied by the Believers Center Church. As a result there is no flow under the frontage road, all flow from basin C-3 is directed to basin C-2, entering the inlet by surface flow along the ditch north of the frontage road. The 100 year peak flow from this 2.7 acres basin C-3 is estimated as 11.3 CFS.
d. It is proposed that the flow from basin C-2 be re-directed to the inlet for basin C-1 by constructing a 30" pipe from the basin C-2 inlet to the basin C-1 inlet, and plugging the existing 30" RCP under the frontage road at the basin C-2 inlet. The resulting peak flow from basins C-1 and C-2 will be 53.40 CFS (28.12+25.28). The estimated capacity of the 30" RCP from the inlet at basin C-1 is 68 CFS, based on a headwater depth of 8 feet at the basin C-1 inlet.
e. The issue of the plugged 24" RCP for basin C-3 has been addressed to the District Engineer, New Mexico State Highway and Transportation Department, District 3 by my letter of August 4, 1999. Mr. Harris' reply of September 14, 1999, acknowledge the plug, and stated, "It was also determined that an additional structure was blocked at a site identified as the Believers Center. By copy of this letter, I am requesting that the City of Albuquerque review the drainage plan for the City permitted development and take appropriate action. To date (January 4, 2000) I have observed no corrective action. I do note that the capacity of the 30" RCP from inlet C-1 to the 72" RCP does have the capacity to accept the basin C-3 runoff (53.4 CFS, basins C-1 and C-2, plus 11.3 CFS from basin C-3 is 64.7 CFS, still below the estimated capacity of 68 CFS for the 30" RCP).

f. For catastrophic flooding or overflow due to blocked outlets, the overflow from basins C-1 and C-2 (and presently C-3) will be over the street surface at the intersection of Four Hills Road and the frontage road. During a heavy thunderstorm in the summer of 1999, this overflow was observed. The overflow was due to a clogged grate on the basin C-1 inlet, the clogging due to the accumulation of straw from the recently placed surface erosion control planting on the newly constructed ramp area. The overflow crossed the intersection from northeast to southwest, then flowing down Four Hills Road on the east side of the raised median, crossing to the west side of Four Hills Road at the median cut at Winona Avenue, then continuing south on Four Hills Road, eventually entering Tijeras Arroyo. During this period of overflow there was no cessation of traffic on Four Hills Road, the street surface being passable for both vehicle and pedestrian traffic.
2. Runoff from the 5+ acres unplatted site and the 1.5 acre vacant lot (Tract E-1, North Four Hills Subdivision) will be routed to the existing 24" RCP crossing under Four Hills Road near the northwest corner of the proposed subdivision. This will require the construction of a new inlet on the east side of the existing curb to access to the existing 24" RCP. The estimated capacity of the 24" RCP with a headwater of 6 feet is 37 CFS. The peak 100 year runoff from the two sites, 5+ acres and 1.5 acres, when developed, is estimated to be 19.94 CFS. By agreement with the owner of the property to the north, these off-site flows will be diverted within the unplatted property toward the existing ditch along the east side of Four Hills Road, where the new catch basin will be constructed to connect to the existing pipe under Four Hills Road just north of the Winona Avenue line. Overflow from this catch basin would flow into Four Hills Road, entering the new storm drain near the southwest corner of the subdivision.
D. Very minor runoff could come through cracks in the wall from the Serenity subdivision. These flows would be those developed within the back yards of the adjacent lots. The subdivision itself is drained by a paved and guttered street which directs flows to the east and then to Tijeras Arroyo. The flows through these existing walls could be caused by someone leaving a garden hose running, or similar nuisance runoff, and can be accepted within the subdivision.
E. The church property north of the Serenity subdivision has a sump and powered pump to force runoff within that lot uphill to the east. A breakdown or other cause for the system not to work could also add runoff from the north onto the 5+ acres commercial property.
F. To the west, Four Hills Road has a standard 8" curb along the east side of the street surface. The 7+ slope on this street creates shallow, high velocity flows, which, along with the curb, would indicate that there is very little possibility of the flow entering the Mountain Gate subdivision. The properties to the south are lower so no flows would enter from that direction.
G. Estimates of the runoff from the site and adjacent properties are shown on the tables and on the aerial photos.

CONCLUSIONS:
A. The proposed construction is not within a designated 100 year floodplain.
B. Construction as proposed will not increase the hazard from flooding to downstream facilities.
C. The proposed grading and construction will protect the property from any off-site or on-site runoff.

REFERENCES:
A. Standard Specifications for Public Works Construction, City of Albuquerque.
B. Section 22.2, Hydrology, of the Development Process Manual, Volume 2, Design Criteria, for the City of Albuquerque...Bernalillo County...AMAFCA, as amended December, 1999.
C. Soil Survey of Bernalillo County and Parts of Sandoval and Valencia Counties, New Mexico, USDA-SCS.
D. Flood Insurance Rate Map, City of Albuquerque, Bernalillo County, Federal Emergency Management Agency, Panel 378 of 825, effective date: September 20, 1996.



REVISION TO ENTRANCE	M.R.K.	JAN 3, 2000
PRELIMINARY	M.R.K.	AUG. 11, 1999
PRELIMINARY		
APPROVALS/ REVISIONS	BY:	DATE:
		MARVIN R. KORTUM, P.E. Civil Engineer NM PE 6519 1605 Speckman Drive, S.E. Albuquerque, New Mexico 87123 (505) 299-0774
GRADING AND DRAINAGE PLAN THE BREEZE AT MOUNTAIN GATE MAPS & DISCUSSION		
PROJECT NUMBER	MAP#	Sheet Of
L-23/D-14A	L-23	4 11

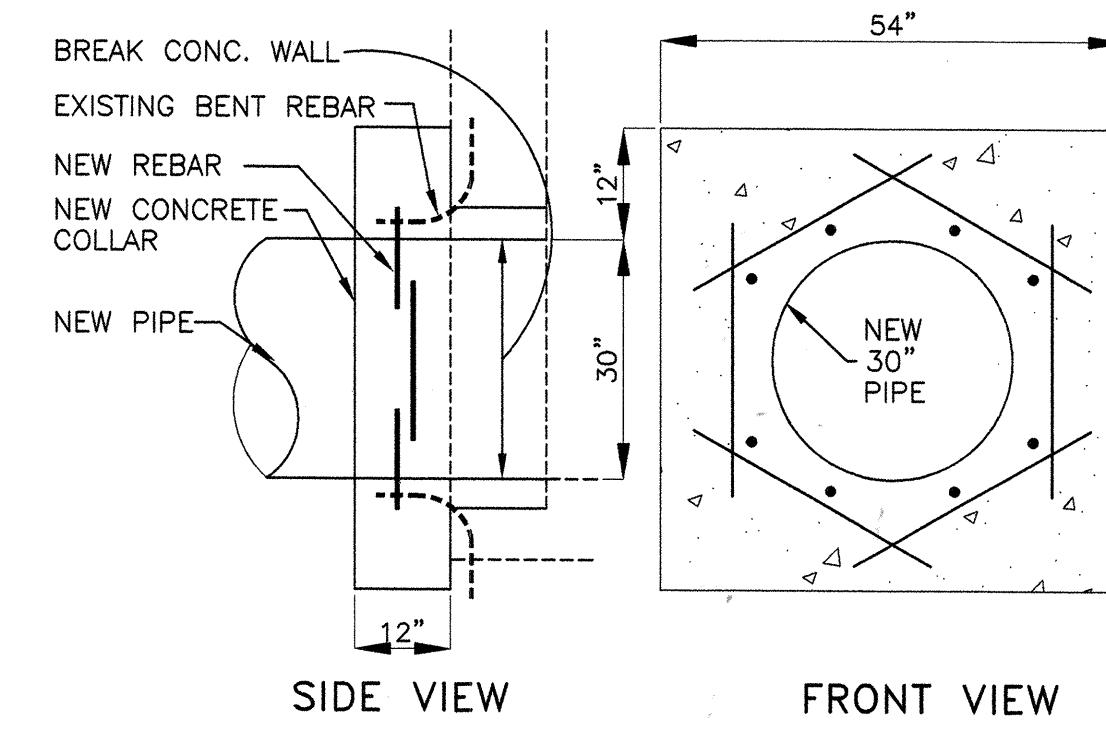
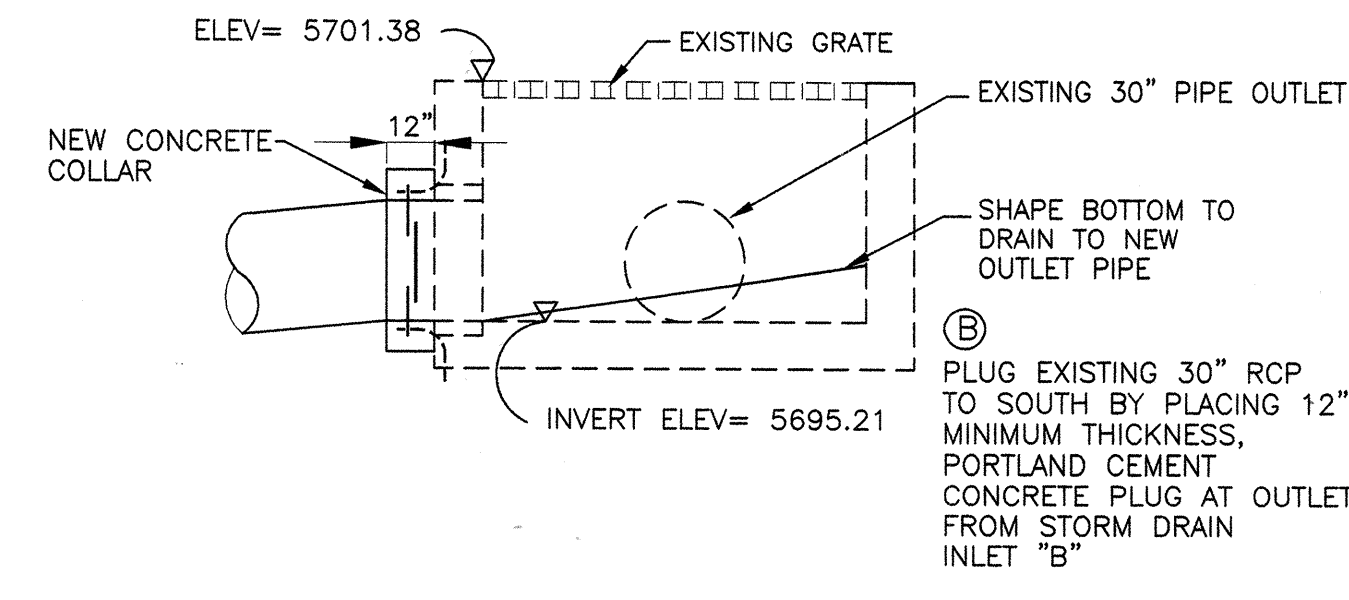
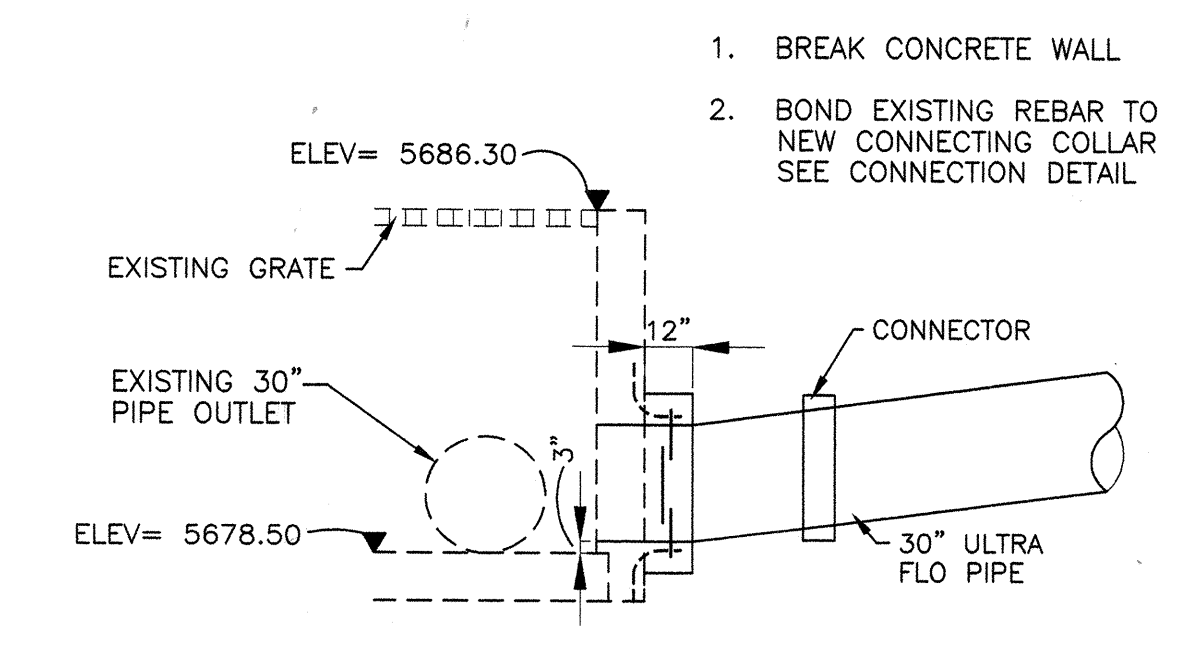
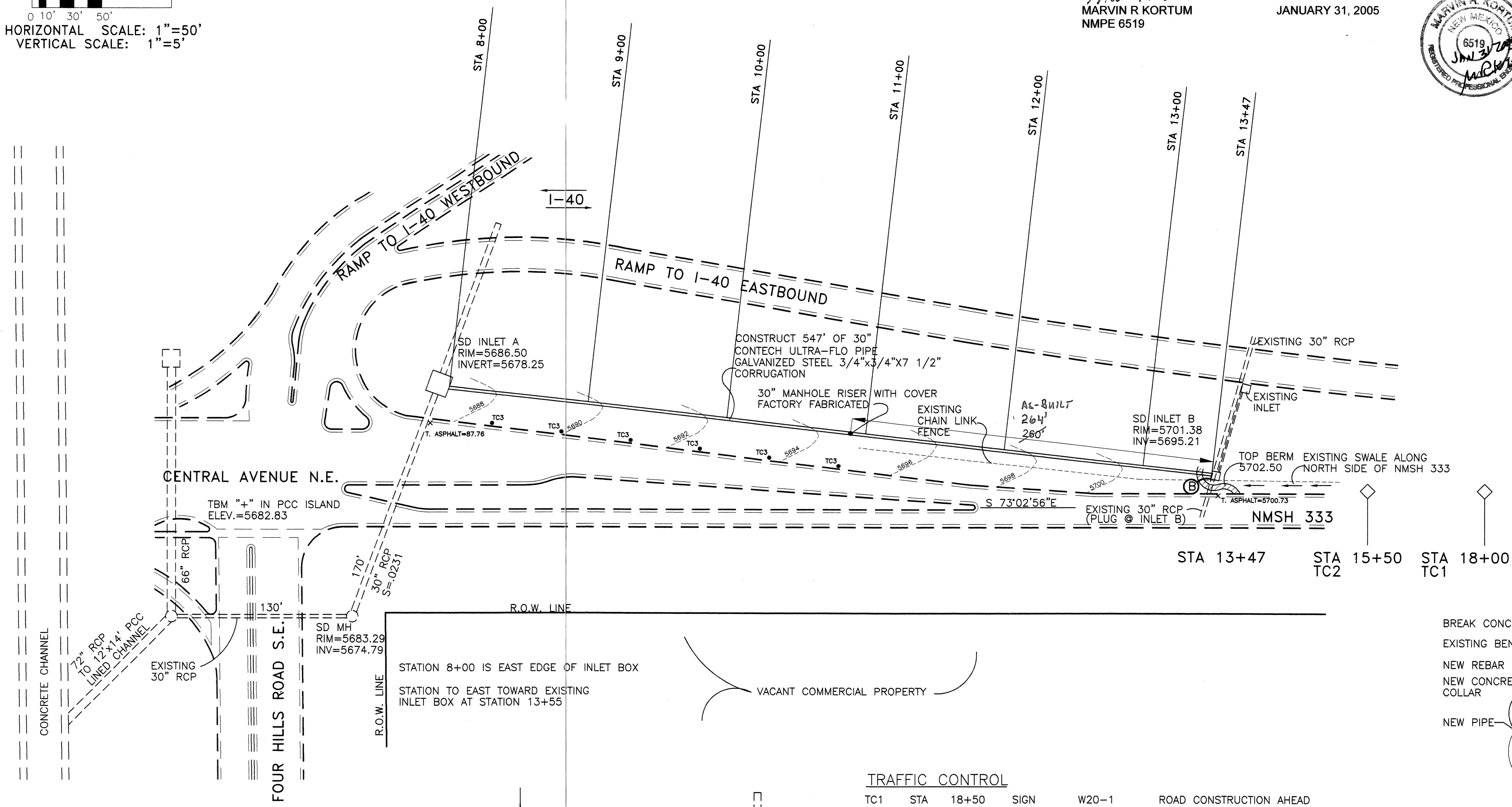
WORK ORDER 655982 2 5

5' 20' 40' 100'
0 10' 30' 50'
HORIZONTAL SCALE: 1"=50'
VERTICAL SCALE: 1"=5'

THIS SHEET 3 OF 5 IS A RECORD COPY OF THE SUB-SURFACE STORM DRAIN
BY WORK ORDER # 655982 AT THE INTERSECTION OF FOUR HILLS ROAD AND
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COMPLETED IS SUBSTANTIALLY AS SHOWN ON SHEET 3.

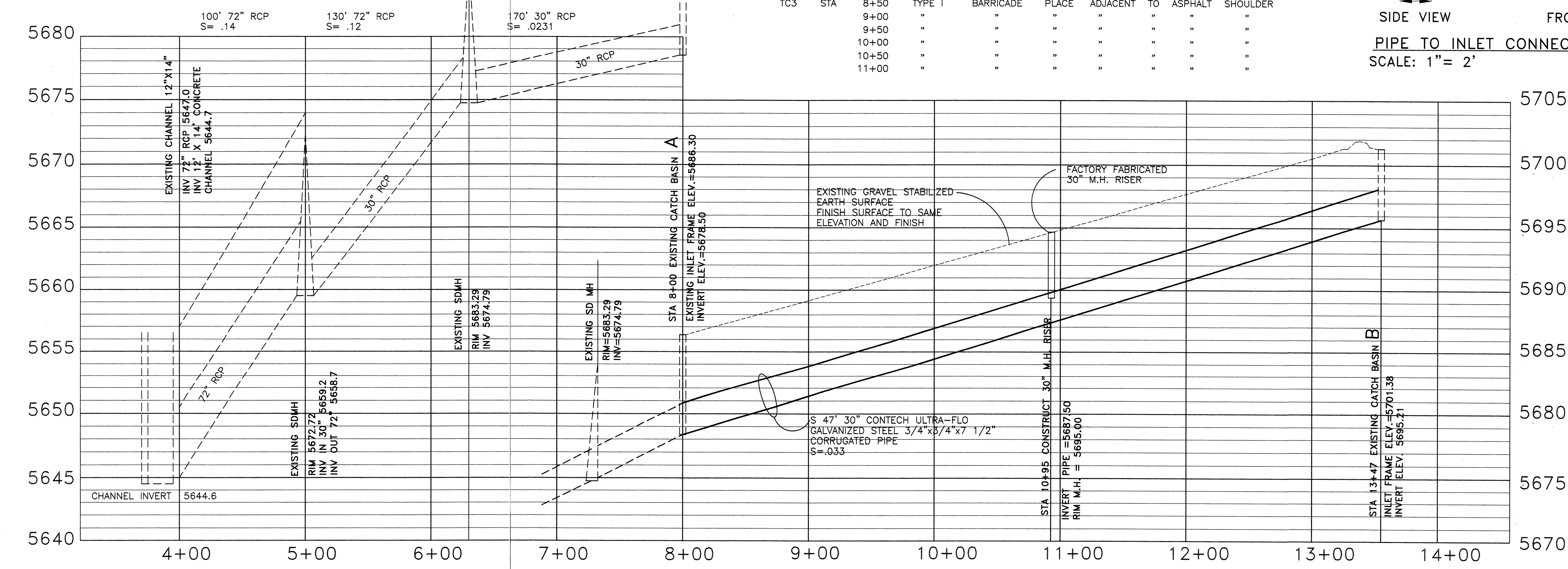
MARVIN R. KORTUM
NMPE 6519

JANUARY 31, 2005



TRAFFIC CONTROL

TC1	STA 18+50	SIGN	W20-1	ROAD CONSTRUCTION AHEAD
TC2	STA 15+50	SIGN		SHOULDER WORK
TC3	STA 8+50	TYPE I	BARRICADE	PLACE ADJACENT TO ASPHALT SHOULDER
	9+00	"	"	"
	9+50	"	"	"
	10+00	"	"	"
	10+50	"	"	"
	11+00	"	"	"



1. BREAK CONCRETE WALL
2. BEND EXISTING REBAR TO NEW CONNECTING COLLAR
3. PLACE #4 REBAR, TIE TO EXISTING BENT REBAR
4. PLACE NEW CONCRETE AROUND NEW PIPE

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1605 Speakman Drive, S.E.
Albuquerque, New Mexico 87123
(505) 299-0774

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: BREEZE AT MOUNTAIN GATE
PLAN AND PROFILE AND TRAFFIC CONTROL FOR
30" STORM DRAIN IN I-40 - NMSH 333
RIGHT OF WAY

DESIGN REVIEW COMMITTEE
APPROVE
DESIGN REVIEW COMMITTEE

CITY ENGINEER
APPROVE
CITY ENGINEER

Mo./Day/Yr. Mo./Day/Yr.
DESIGNED BY: MARVIN R. KORTUM DATE: 1/8/2001
DRAWN BY: CHRIS MULLINS DATE: 1/8/2001
CHECKED BY: MARVIN R. KORTUM DATE: 1/8/2001

City Project No. 655982 Zone Map No. L-23 Sheet 3 Of 5

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.

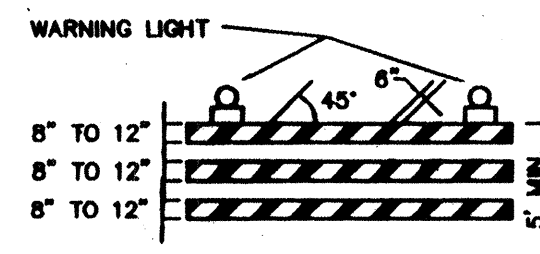
23. FAILURE TO COMPLY WITH ANY OF THE ABOVE MENTIONED, WILL BE ADEQUATE CAUSE TO CEASE ALL WORK ON ANY CONSTRUCTION PROJECT. WORK WILL NOT RESUME UNTIL ALL REQUIREMENTS ARE ADDRESSED AND APPROVED BY CONSTRUCTION COORDINATION.

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

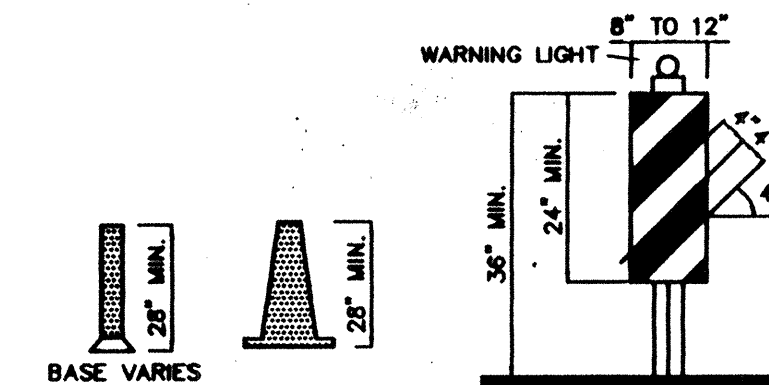
25. TRAFFIC CONTROL STANDARDS APPLY ONLY WHERE THE CONSTRUCTION TRAFFIC CONTROL PLANS ARE NOT SPECIFIC.

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

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



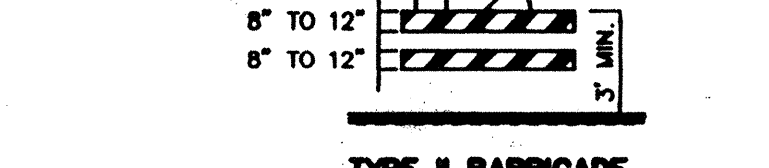
TYPE III BARRICADE



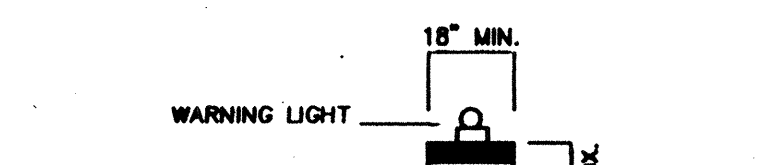
TYPE I BARRICADE



TYPE II BARRICADE



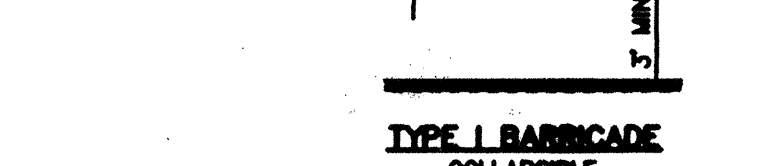
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TYPE I BARRICADE



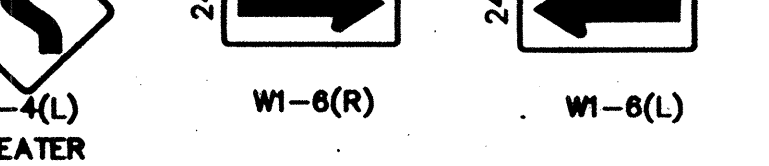
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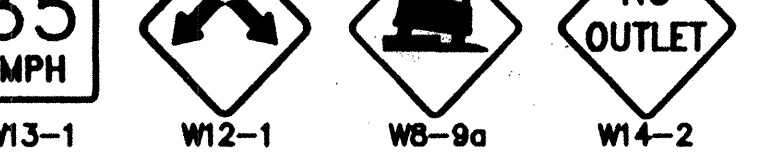
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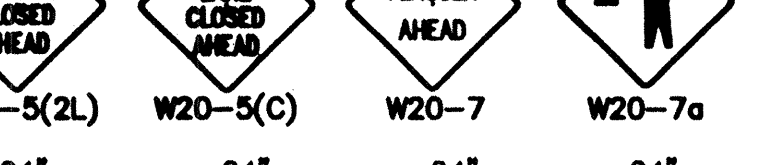
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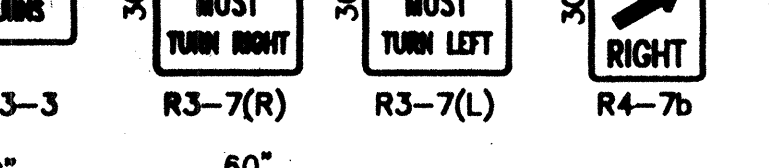
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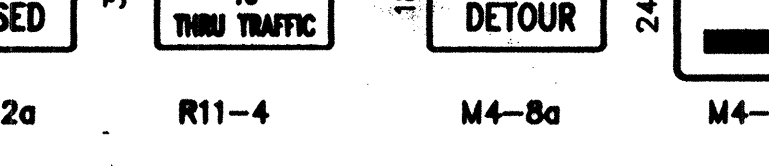
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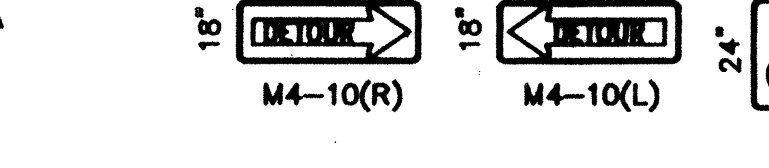
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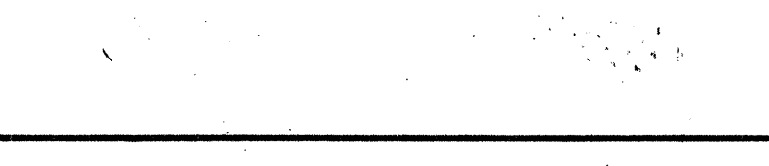
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TYPE III BARRICADE



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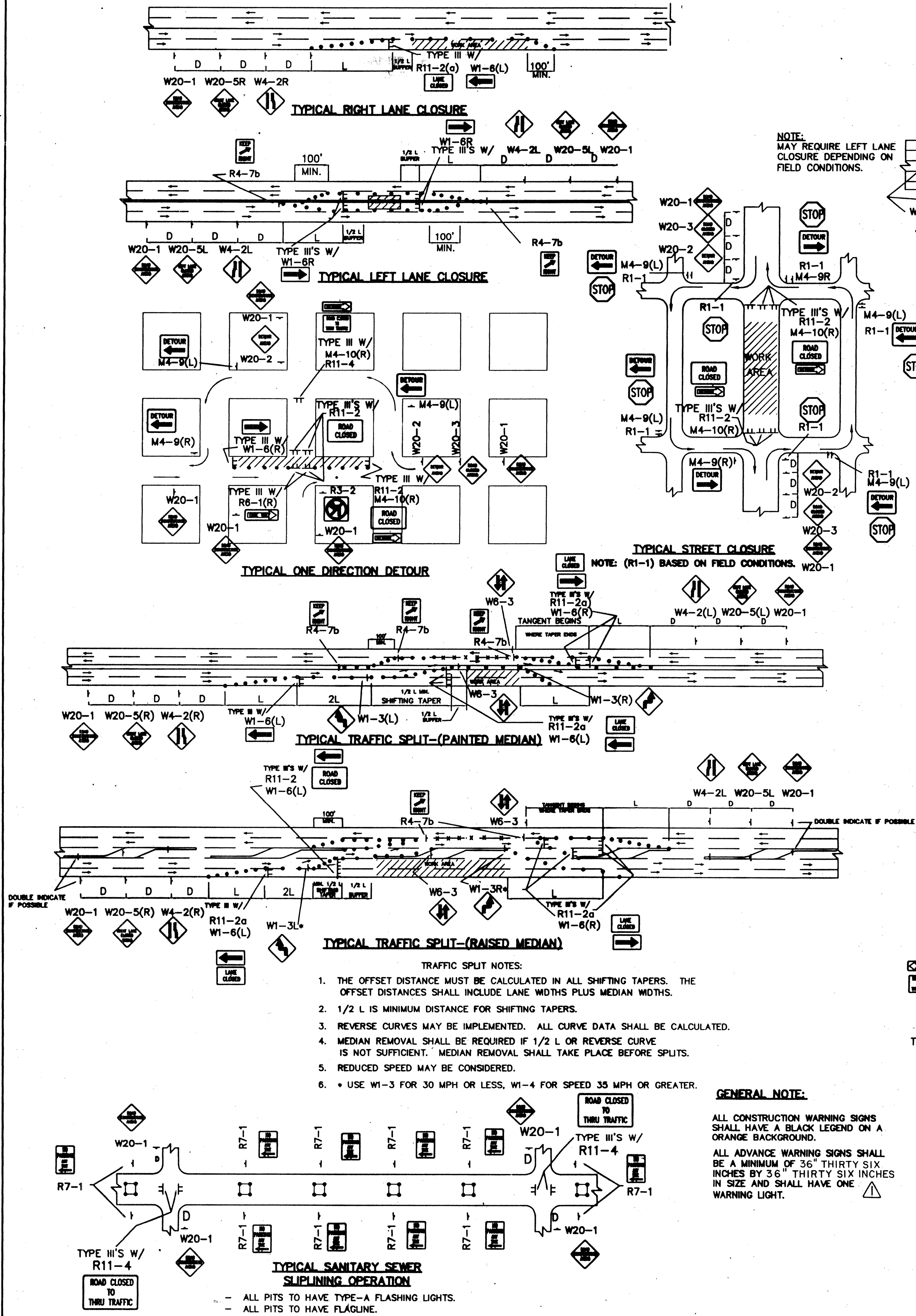
TYPE III BARRICADE

TYPE I BARRICADE

TYPE II BARRICADE

TYPE III BARRICADE

TYPE I BARRICADE



- TRAFFIC SPLIT NOTES:**
1. THE OFFSET DISTANCE MUST BE CALCULATED IN ALL SHIFTING TAPERS. THE OFFSET DISTANCES SHALL INCLUDE LANE WIDTHS PLUS MEDIAN WIDTHS.
 2. 1/2 L IS MINIMUM DISTANCE FOR SHIFTING TAPERS.
 3. REVERSE CURVES MAY BE IMPLEMENTED. ALL CURVE DATA SHALL BE CALCULATED.
 4. MEDIAN REMOVAL SHALL BE REQUIRED IF 1/2 L OR REVERSE CURVE IS NOT SUFFICIENT. MEDIAN REMOVAL SHALL TAKE PLACE BEFORE SPLITS.
 5. REDUCED SPEED MAY BE CONSIDERED.
 6. * USE W1-3 FOR 30 MPH OR LESS, W1-4 FOR SPEED 35 MPH OR GREATER.

GENERAL NOTE:

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

ALL ADVANCE WARNING SIGNS SHALL BE A MINIMUM OF 36" THIRTY SIX INCHES BY 36" THIRTY SIX INCHES IN SIZE AND SHALL HAVE ONE WARNING LIGHT.

AS BUILT INFORMATION

CONTRACTOR	DATE
STANDARD BY	DATE
INSPECTOR BY	DATE
FIELD BY	DATE
DESIGNED BY	DATE
CHECKED BY	DATE

BENCH MARKS

NO.	DATE

SURVEY INFORMATION

NO.	DATE

ENGINEER'S SEAL

SEAL OF THE CITY OF ALBUQUERQUE

REGISTERED PROFESSIONAL ENGINEER

NO. 12345

DATE 12/31/2023

REVISIONS

NO.	DATE	REVISIONS

DESIGNED BY

DRAWN BY

CHECKED BY

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE:

TYPICAL TRAFFIC CONTROL & SIGNING EXAMPLES (REF. MUT.C.D.)

DESIGN REVIEW COMMITTEE

COP

CITY ENGINEER APPROVAL

STD

PROJECT NO. **655982** MAP NO. **L-23** SHEET **5** OF **5**