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24-6921-81-2011

SCANNED BY
PLANNING

PLANS FOR CONSTRUCTION OF

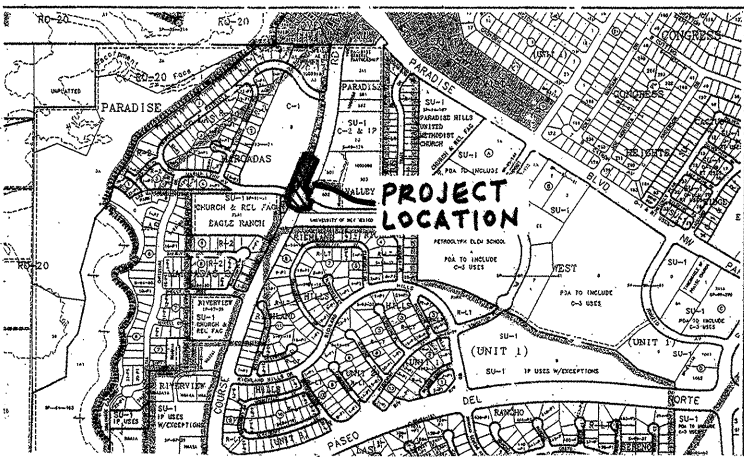
ROBERTS OIL DECELERATION LANE & SIGNALIZATION IMPROVEMENTS

ALBUQUERQUE, NEW MEXICO

AUGUST, 2002

INDEX TO DRAWINGS

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6.	SIGNALIZATION IMPROVEMENTS
7.	TRAFFIC CONTROL PLAN
8.	TRAFFIC CONTROL PLAN

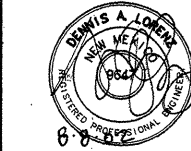


C-12 SCALE: NTS

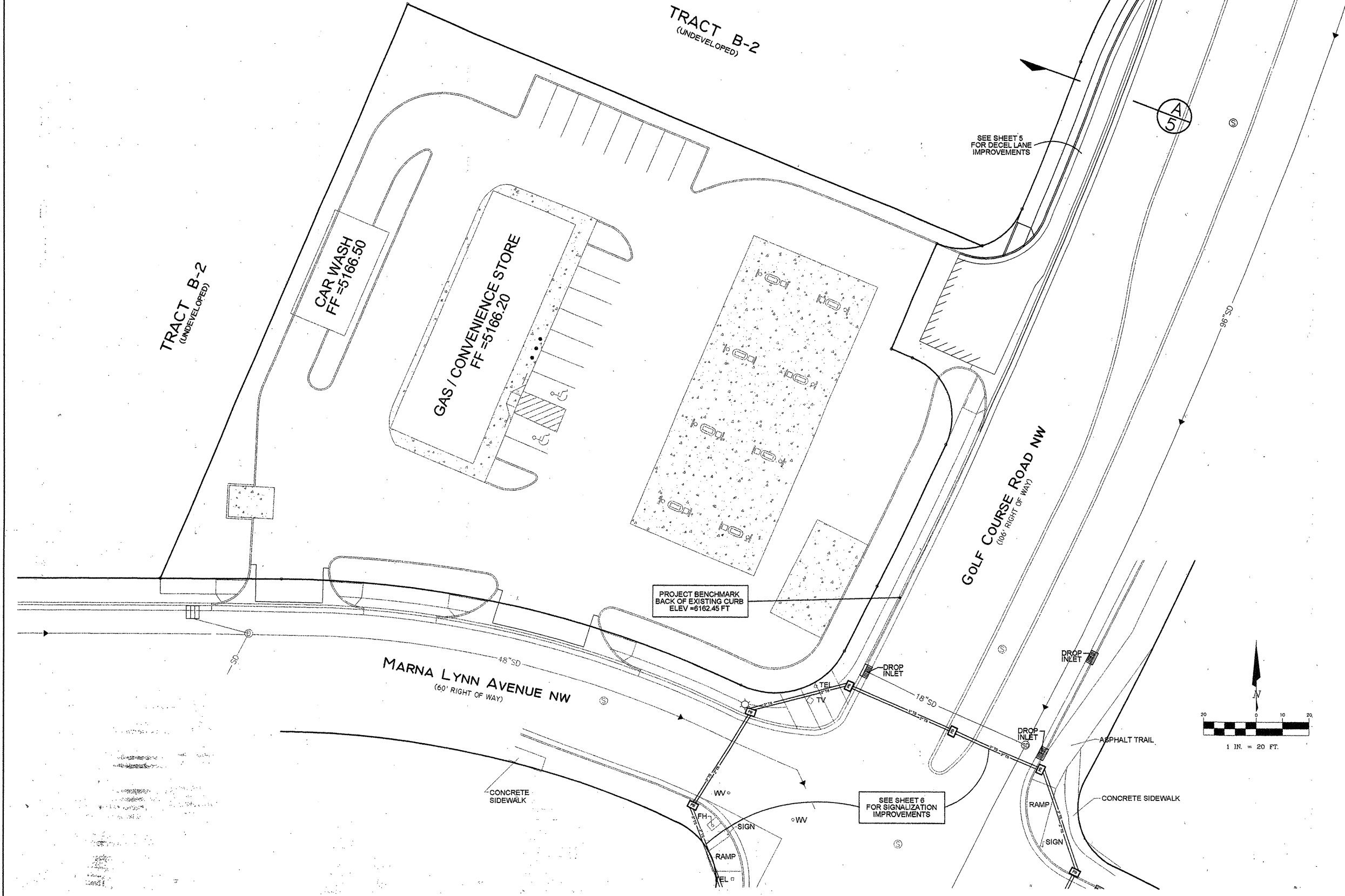
- GENERAL NOTES:**
1. CITY OF ALBUQUERQUE SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION AS AMENDED THROUGH UPDATE 6, WILL BE REFERRED TO HEREIN AS THE "STANDARD SPECIFICATIONS." ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON BE CONSTRUCTED IN ACCORDANCE WITH THE STANDARD SPECIFICATIONS.
 2. THREE WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM (280-1990) AND DETERMINE LOCATION OF EXISTING UTILITIES.
 3. PRIOR TO ANY 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 THE SURVEYOR SO THAT THE CONFLICT CAN BE RESOLVED WITHOUT DELAY.
 4. ALL EXISTING SIGNS, MARKERS, DELINEATORS, ETC., WITHIN THE CONSTRUCTION LIMITS SHALL BE REMOVED, STORED AND RE-SET BY THE CONTRACTOR.
 5. THE CONTRACTOR SHALL NOTIFY THE ENGINEER NOT LESS THAN SEVEN (7) WORKING DAYS PRIOR TO STARTING WORK IN ORDER THAT THE ENGINEER MAY TAKE NECESSARY MEASURES TO INSURE THE PRESERVATION OF SURVEY MONUMENTS. THE CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE ENGINEER AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT 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 MARKER 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 THE GENERAL CONDITIONS OF THE STANDARD SPECIFICATIONS.
 6. 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. CONTRACTOR SHALL NOTIFY BARRICADE ENGINEER (768-2551) PRIOR TO OCCUPYING AN INTERSECTION. REFER TO SECTION 18 OF THE STANDARD SPECIFICATIONS.
 7. ANY WORK OCCURRING WITHIN AN ARTERIAL ROADWAY REQUIRES 24 HOUR CONSTRUCTION.
 8. ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
 9. ALL STREET STRIPING ALTERED OR DESTROYED SHALL BE REPLACED BY THE CONTRACTOR WITH HOT THERMOPLASTIC REFLECTORIZED PAVEMENT MARKING. ALL NEW STRIPING SHALL BE HOT THERMOPLASTIC REFLECTORIZED PAVEMENT MARKING.
 10. THE CONTRACTOR SHALL ASSUME RESPONSIBILITY FOR ANY DAMAGE TO EXISTING PAVEMENTS, PAVEMENT MARKINGS, CURB AND GUTTER, DRIVEPADS, WHEELCHAIR RAMPS AND SIDEWALKS DURING CONSTRUCTION, APART FROM THOSE SECTIONS INDICATED FOR REMOVAL ON THE PLANS AND SHALL REPAIR OR REPLACE PER THE STANDARD SPECIFICATIONS AT HIS OWN EXPENSE.
 11. EXISTING UTILITY LINES AND PIPELINES SHOWN ON THESE DRAWINGS ARE SHOWN IN APPROXIMATE LOCATIONS ONLY. UTILITIES MAY EXIST WHERE NONE ARE SHOWN. THE ENGINEER HAS UNDERTAKEN NO FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE OR TYPE OF EXISTING UTILITY LINES AND PIPELINES. THE CONTRACTOR IS FULLY RESPONSIBLE FOR DAMAGE CAUSED BY FAILURE TO LOCATE AND PRESERVE EXISTING UTILITY LINES AND PIPELINES.
 12. THE CONTRACTOR SHALL SECURE A "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.
 13. THE CONTRACTOR SHALL ASSIST THE ENGINEER/INSPECTOR IN THE RECORDING OF DATA ON ALL UTILITY LINES AND ACCESSORIES AS REQUIRED BY THE OWNERS FOR THE PREPARATION OF "RECORD DRAWINGS." THE CONTRACTOR SHALL NOT COVER UTILITY LINES AND ACCESSORIES UNTIL ALL DATA HAS BEEN RECORDED.
 14. ALL CONSTRUCTION WITHIN CITY RIGHT-OF-WAY OR EASEMENTS MUST BE DONE FROM APPROVED WORK ORDER DOCUMENTS FROM THE CITY AND PREPARED BY BRASHER AND LORENZ, INC.
 15. THE CONTRACTOR SHALL DETERMINE IN ADVANCE OF HIS CONSTRUCTION IF OVERHEAD UTILITY LINES, SUPPORT STRUCTURES, POLES, GUYS, ETC., ARE AN OBSTRUCTION TO CONSTRUCTION OPERATIONS. IF ANY OBSTRUCTION TO CONSTRUCTION OPERATIONS 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.
 16. THE CONTRACTOR IS TO SUPPORT AND MAINTAIN THE INTEGRITY OF ALL UNDERGROUND TELEPHONE, ELECTRIC CABLES AND CABLE TELEVISION UTILITIES AT NO ADDITIONAL COST THE OWNER. CABLE IS TO BE SUPPORTED EVERY 15 FEET (MINIMUM). CONTRACTOR SHALL COORDINATE WITH AND MAKE NECESSARY PAYMENT (IF ANY) TO UTILITY OWNER FOR DE-ENERGIZATION OF CABLES OR SUPPORT OF CABLES BY THE UTILITY OWNER.

DRB PROJECT No. 1002090

BRASHER & LORENZ
CONSULTING ENGINEERS
2201 San Pedro Blvd. NE, Ste. 1, Suite 1200
Albuquerque, New Mexico 87110
Phone: (505) 888-6088 Fax: (505) 888-8168



REV.	SHEETS	CITY	ENGINEER	DATE	USER	DEPARTMENT	DATE	USER	DEPARTMENT	DATE
ENGINEER'S STAMP & SIGNATURE			APPROVALS		ENGINEER		DATE	APPROVED FOR CONSTRUCTION		
			DRC Chair				8-27-02			
			Transportation				8/23/02			
			Water/Wastewater				8/23/02			
			Hydrology				8-23-02			
			CIP				8-23-02			
			Constr. Mgmt.				8-27-02	City Engineer		
			Constr. Coord.				8-27-02	Date		
			City Project No.		692181		Zone Map No.			Sheet of
							C-12			1 8



LEGEND		
ITEM	EXISTING	PROPOSED
WATERLINE	6" W	6" W
SANITARY SEWER	8" SAS	8" SAS
STORM SEWER	36" STS	36" STS
FIRE HYDRANT		
VALVE		
METERED WATER SERVICE		
MANHOLE		
CURB AND GUTTER		
HEADER CURB		
DROP INLET		
OVERHEAD ELEC WITH POWER POLE	OHE	OHE
UNDERGROUND ELEC, GAS, TEL, TV	UGT	UGT
CURB ELEVATIONS	16.7	16.7
SPOT ELEV.		
SEWER SERVICE		
RIGHT OF WAY		
EASEMENT		
POWER POLE (GUYED)	PP	PP
CENTERLINE		
TOP OF ASPHALT ELEV.	TA 16.2	TA 16.2

AS-BUILT INFORMATION		BENCHMARKS		SURVEY INFORMATION		ENGINEER'S SEAL	
CONTRACTOR	DATE	PROJECT BENCHMARK IS A PAINTED BOX	DATE	FIELD NOTES	NO.	BY	DATE
WORK STAGED BY	DATE	AT THE EXISTING BACK OF CURB LOCATED ON	DATE				
ACCEPTANCE BY	DATE	GOLF COURSE ROAD NE APPROXIMATELY 38 FEET	DATE				
FIELD DRAWINGS	DATE	NORTH OF THE NNW CURB RETURN AT MARNA LYNN	DATE				
CORRECTED BY	DATE	AVENUE NW.	DATE				
MICRO-FILM INFORMATION		ELEVATION = 6162.45 FEET	NOV 1929				

REVISIONS	NO.	DATE	BY
DESIGN		8-2002	
DRAWN BY	D.A.L.	8-2002	
CHECKED BY	D.A.L.	8-2002	

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CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

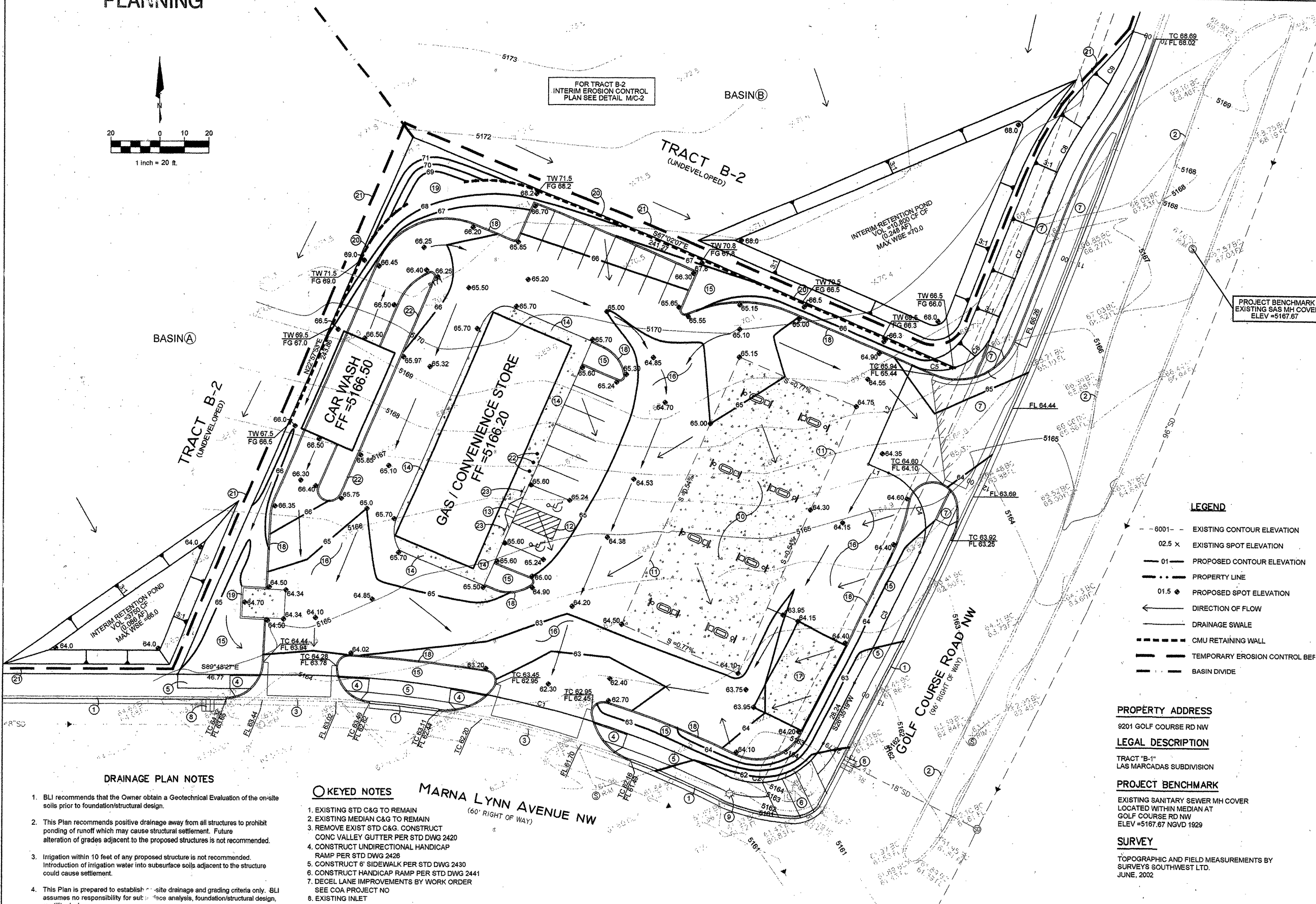
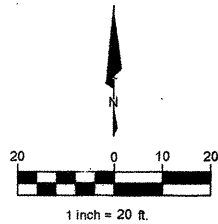
TITLE: **ROBERTS OIL LAYOUT PLAN**

APPROVED
DESIGN REVIEW COMMITTEE
AUG 27 2002

APPROVED
CITY ENGINEER
NOV 22 2002

Mo./Day/Yr.
Mo./Day/Yr.

City Project No. 692181 Zone Map No. C-12 Sheet 3 of 8



DRAINAGE PLAN NOTES

- BLI recommends that the Owner obtain a Geotechnical Evaluation of the on-site soils prior to foundation/structural design.
- This Plan recommends positive drainage away from all structures to prohibit ponding of runoff which may cause structural settlement. Future alteration of grades adjacent to the proposed structures is not recommended.
- Irrigation within 10 feet of any proposed structure is not recommended. Introduction of irrigation water into subsurface soils adjacent to the structure could cause settlement.
- This Plan is prepared to establish site drainage and grading criteria only. BLI assumes no responsibility for subsurface analysis, foundation/structural design, or utility design.
- Local codes may require all footings to be placed in natural undisturbed soil. If the Contractor plans to place footings on engineered fill, a certification by a registered Professional Engineer will be required. If the contractor wishes BLI to prepare the Certification, we must be notified PRIOR to placement of the fill.
- BLI recommends that the Owner obtain the services of a Geotechnical Engineer to test and inspect all earthwork aspects of the project.
- The property boundary shown on this Plan is given for information only to describe the project limits. Property boundary information shown hereon does not constitute a boundary survey. A boundary survey performed by a licensed New Mexico Registered Professional Surveyor is recommended prior to construction.
- All elevations are top of pavement unless noted otherwise.

KEYED NOTES

- EXISTING STD C&G TO REMAIN
- EXISTING MEDIAN C&G TO REMAIN
- REMOVE EXIST STD C&G. CONSTRUCT CONC VALLEY GUTTER PER STD DWG 2420
- CONSTRUCT UNIDIRECTIONAL HANDICAP RAMP PER STD DWG 2426
- CONSTRUCT 6' SIDEWALK PER STD DWG 2430
- CONSTRUCT HANDICAP RAMP PER STD DWG 2441
- DECEL LANE IMPROVEMENTS BY WORK ORDER
- SEE COA PROJECT NO
- EXISTING INLET
- EXISTING LIGHT POLE
- CONCRETE SLAB - SEE DETAIL C/C-2
- CANOPY
- ACCESSIBLE AREA AT 2% SLOPE MAX
- ACCESSIBLE RAMP - SEE DETAIL H/C-2
- 6" TURN DOWN SIDEWALK - SEE DETAIL F/C-2
- LANDSCAPING
- ASPHALT PAVEMENT - SEE DETAIL B/C-2
- CONCRETE SLAB AT UST'S - SEE DETAIL D/C-2
- 6" CONCRETE CURB & GUTTER - SEE DETAIL E/C-2
- REFUSE ENCLOSURE
- CONSTRUCT RETAINING WALL - SEE DETAIL A/C-2
- CONSTRUCT TEMPORARY EROSION CONTROL BERM PER DETAIL L/C-2
- 6" CONCRETE HEADER CURB - SEE DETAIL G/C-2
- INS. 6" HC SIGN ASSEMBLY - SEE DETAIL J/C-2
- INSTALL STATIONARY BOLLARDS (3) CENTER @ ENTRY - 4.5' O.C.

MARNA LYNN AVENUE NW
(60' RIGHT OF WAY)

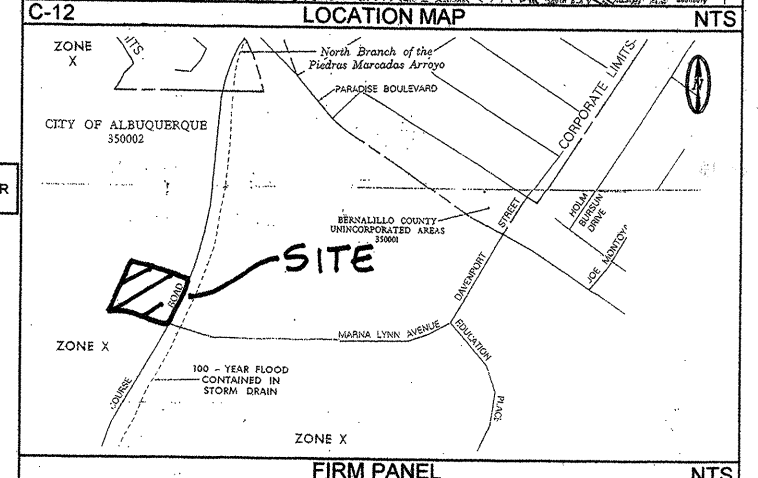
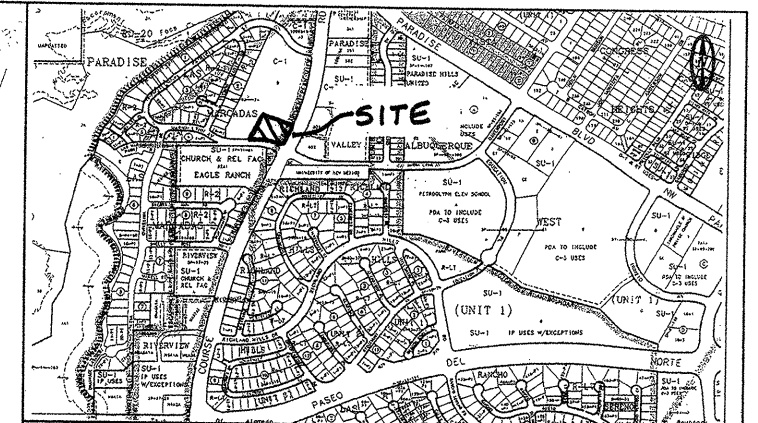
PROJECT HYDROLOGY ROBERT'S OIL

ZONE:	1							
P ^{ER} HOUR:	2.20							
P ^{ER} 10 DAY:	3.67							
UNDEVELOPED:								
BASIN	AREA (ac)	A (ac)	B (ac)	C (ac)	D (ac)	E	Q (cfs)	VOL (ac ft)
SITE	1.22	1.22	0.00	0.00	0.00	0.44	1.6	0.0473
A	1.86	1.86	0.00	0.00	0.00	0.44	2.4	0.0680
B	5.11	5.11	0.00	0.00	0.00	0.44	6.6	0.1874
DEVELOPED (PROPOSED):								
BASIN	AREA (ac)	A (ac)	B (ac)	C (ac)	D (ac)	E	Q (cfs)	VOL (ac ft)
SITE	1.22	0.00	0.06	0.12	1.04	1.81	5.0	0.1840

INTERIM	PONDING	REQUIREMENTS
BASIN	VOL REQ'D	VOL PROVIDED
A	0.0682 AF	0.0680 AF
B	0.1874 AF	0.2480 AF

LINE	BEARING	LENGTH
L1	N87°02'07"W	8.95
L2	N22°57'53"E	45.00

CURVE	RADIUS	LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C1	410.00'	183.75'	25°40'41"	N76°58'07"W	182.21'
C2	30.00'	46.75'	89°16'55"	N71°13'47"E	42.16'
C3	1947.00'	61.19'	1°48'02"	N25°41'18"E	61.18'
C4	25.00'	40.07'	91°49'24"	N21°07'25"W	35.91'
C5	25.00'	17.95'	41°07'54"	S87°38'04"E	17.58'
C6	25.00'	21.77'	49°52'57"	N46°53'31"E	21.08'
C7	1937.37'	62.32'	1°50'34"	N21°01'45"E	62.31'
C8	150.00'	35.29'	13°28'47"	N26°50'51"E	41.00'
C9	150.00'	41.13'	15°42'36"	N25°43'57"E	68.72'



GRADING AND DRAINAGE PLAN

PURPOSE AND SCOPE

Pursuant to the established Drainage Ordinance for the City of Albuquerque and the Development Process Manual, this Grading and Drainage Plan outlines the drainage management criteria for controlling developed runoff from the project site. The project consists of the construction of Robert's Oil Gas/Convenience Store, located on Golf Course NW at Marna Lynn NW. Proposed site improvements include paving, landscaping, utility, grading, and drainage improvements.

EXISTING CONDITIONS

The project site is approximately 1.22 acres in size and is located on Golf Course NW, at Marna Lynn NW. The project site is particularly described as Tract B-1, Las Maradas Subdivision. The site is bounded by undeveloped commercial land on the north and west, Marna Lynn on the south, and Golf Course Road on the east. Site topography slopes from west to east at approximately 3-percent. The site is impacted by sheet flow from undeveloped Tract B-2. All on-site runoff drains southeasterly to existing public storm drains located in Golf Course Road. Portions of the site and Tract B-2 have served as a temporary ponding area pending construction of downstream paving and drainage improvements. Existing downstream improvements will allow for the vacation of all interim drainage easements presently encumbering the properties.

As shown by the attached FIRM Panel, this site is not impacted by a Flood Hazard Zone.

PROPOSED CONDITIONS

As shown by the Plan, the project consists of the construction of Robert's Oil Gas/Convenience Store, with associated site improvements. The Plan shows the contours and elevations required to properly grade and construct the required paving and drainage improvements. Flow arrows give the direction of drainage flows and the project hydrology is tabulated for both existing and proposed conditions.

All drainage flows will be managed on-site by paved swales that discharge to the perimeter streets. Existing drop inlets and storm drains located in Golf Course and Marna Lynn will intercept all flows. In order to control undeveloped off-site flows, temporary erosion control berms and interim retention ponds will be constructed on Tract B-2 to retain all undeveloped runoff. Existing downstream improvements will allow for the vacation of all interim drainage easements presently encumbering the properties.

EROSION CONTROL

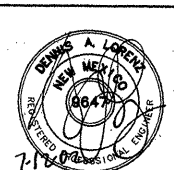
Temporary erosion control will be required during the construction phase to protect downstream property and improvements from sediment and uncontrolled runoff. This Plan recommends the placement of earthen berms or silt fencing along the construction boundaries to mitigate sediment deposition into the adjoining properties and public streets. It is the Contractor's responsibility to properly maintain these facilities during the construction phase of the project.

As stated above, interim erosion control berms and retention ponds will be implemented on undeveloped Tract B-2 to prohibit the discharge of sediment into the public street and storm drainage system.

CALCULATIONS

Calculations are provided which define the 100-year/6 hour design storm falling with the project area under existing and proposed condition. Hydrology is per "Section 22.2, Part A, DPM, Vol 2" updated July 1997.

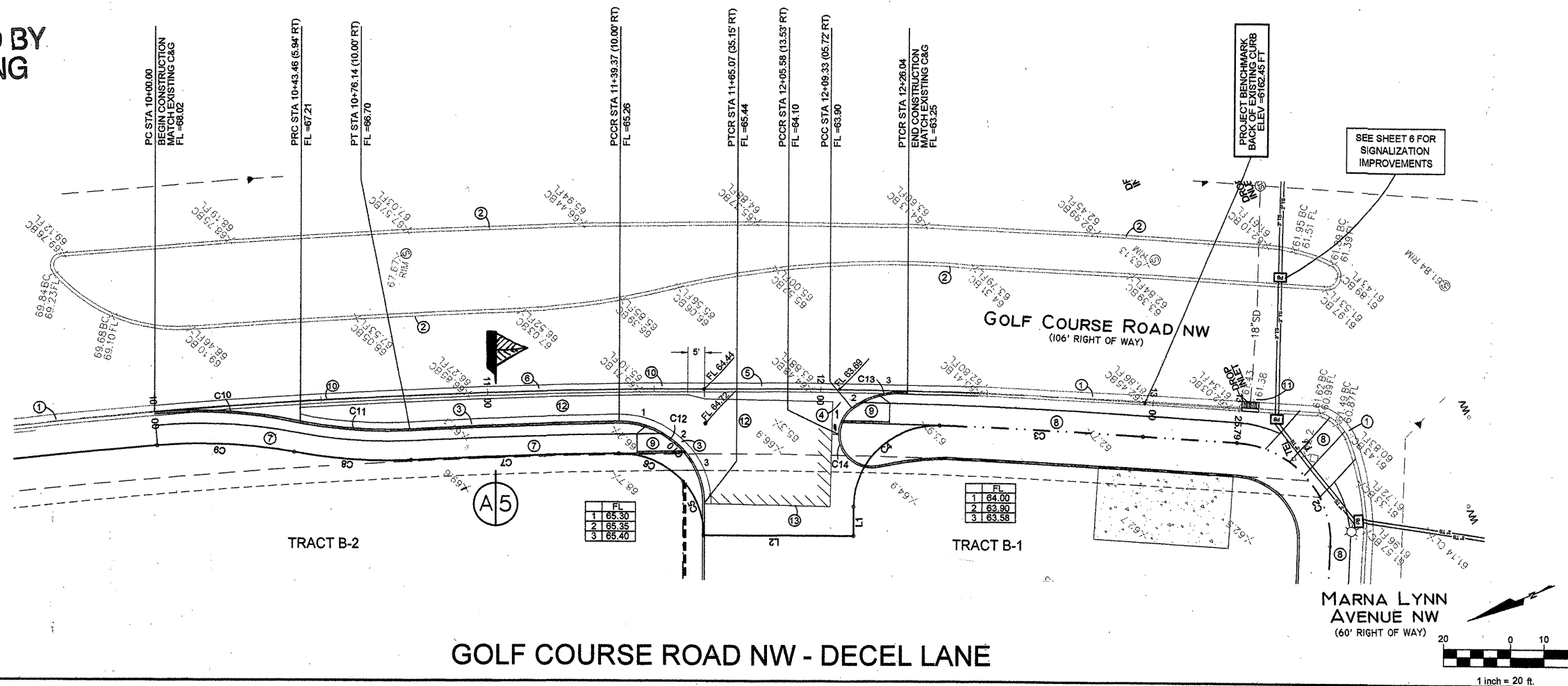
ROBERT OIL GRADING & DRAINAGE PLAN



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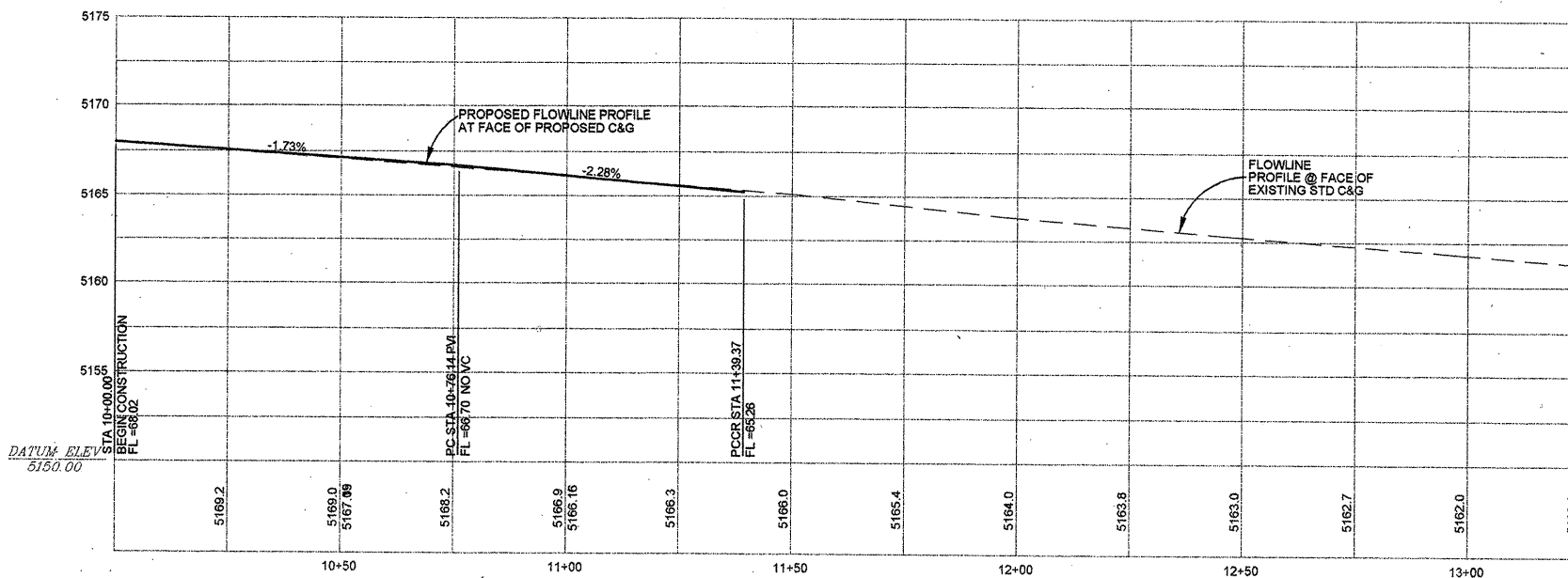
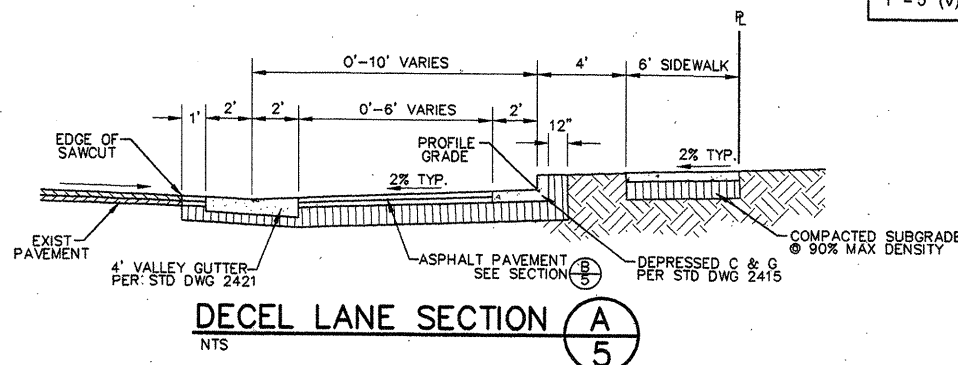
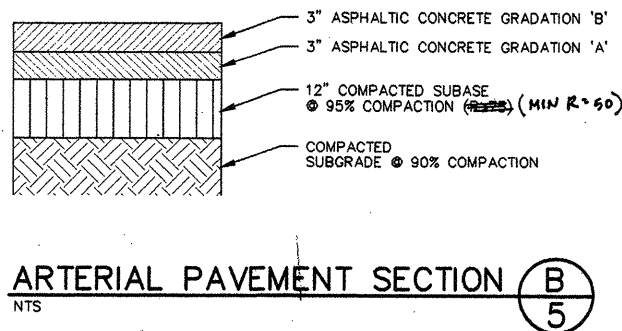
DRAWN BY: RM DATE: JULY 2002
CHECKED BY: D.A.L.
FILE: 2524-BASE.DWG SHEET 4 OF 8

SCANNED BY
PLANNING



LINE TABLE		
LINE	BEARING	LENGTH
L1	N67°02'07"W	8.95'
L2	N22°57'53"E	45.00'

CURVE TABLE					
CURVE	RADIUS	LENGTH	DELTA	CHORD BEARING	CHORD LENGTH
C2	30.00'	46.75'	89°16'55"	N71°13'47"E	42.16'
C3	1947.00'	61.19'	1°48'02"	N25°41'18"E	61.18'
C4	25.00'	40.07'	91°49'24"	N21°07'25"W	35.91'
C5	25.00'	17.95'	41°07'54"	S87°38'04"E	17.56'
C6	25.00'	21.77'	49°52'57"	N46°53'31"E	21.08'
C7	1937.37'	62.32'	1°50'34"	N21°01'45"E	62.31'
C8	150.00'	35.29'	13°28'47"	N26°50'51"E	41.00'
C9	150.00'	41.13'	15°42'36"	N25°43'57"E	48.72'
C10	150.00'	43.96'	16°47'27"	N26°17'46"E	43.80'
C11	149.72'	32.96'	12°34'31"	S26°38'59"W	32.79'
C12	25.00'	39.82'	91°18'08"	N67°21'56"E	35.74'
C13	25.00'	17.96'	41°10'12"	N05°57'51"E	17.58'
C14	10.00'	26.68'	152°51'23"	S88°57'03"W	19.44'



LEGEND

ITEM	EXISTING	PROPOSED
WATERLINE	6" W	6" W
SANITARY SEWER	8" SAS	8" SAS
STORM SEWER	36" STS	36" STS
FIRE HYDRANT VALVE		
METERED WATER SERVICE		
MANHOLE		
CURB AND GUTTER		
HEADER CURB		
DROP INLET		
OVERHEAD ELEC WITH POWER POLE	OHE	OHE
UNDERGROUND ELEC, GAS, TEL, TV	UGT	UGT
CURB ELEVATIONS		
SPOT ELEV.	x 16.7	x 16.7
SEWER SERVICE		
RIGHT OF WAY		
EASEMENT		
POWER POLE (GUYED)	PP	PP
CENTERLINE		
TOP OF ASPHALT ELEV.	TA 16.2	TA 16.2

ALL STATIONING IS BASED ON FACE OF EXISTING STANDARD CURB & GUTTER

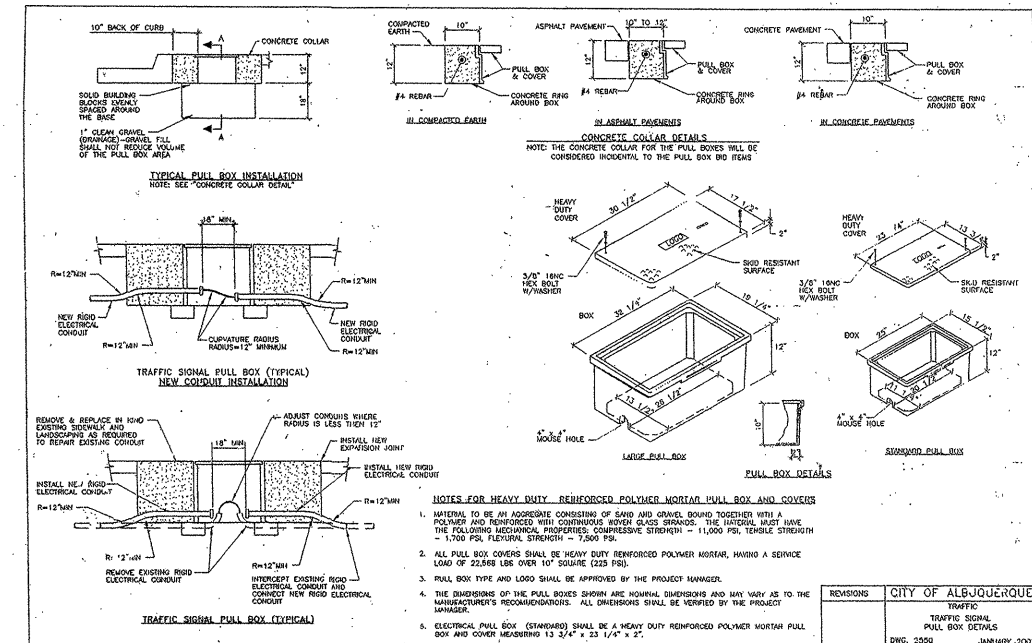
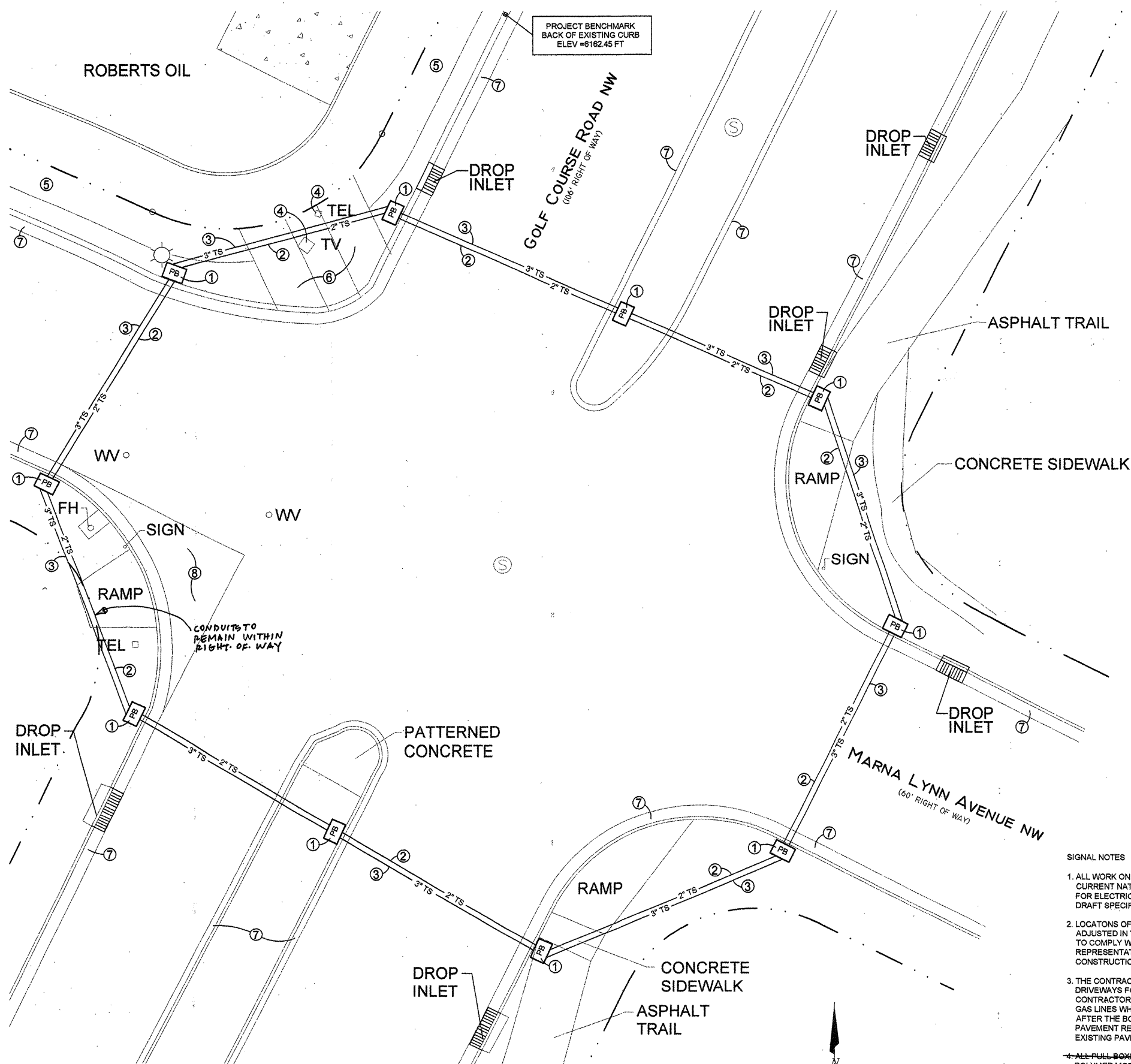
KEYED NOTES

- EXISTING STANDARD C&G TO REMAIN
- EXISTING MEDIAN C&G TO REMAIN
- CONSTRUCT DEPRESSED C&G PER STD DWG 2415
- CONSTRUCT CONCRETE VALLEY GUTTER PER STD DWG 2420
- CONSTRUCT 6" WIDE VALLEY GUTTER PER STD DWG 2420
- CONSTRUCT 4' WIDE VALLEY GUTTER PER STD DWG 2421
- CONSTRUCT 6' SIDEWALK PER STD DWG 2430
- FUTURE SIDEWALK BY BUILDING PERMIT FOR ROBERT'S OIL
- CONSTRUCT UNIDIRECTIONAL HANDICAP RAMP PER STD DWG 2426
- EXISTING STANDARD C&G TO BE REMOVED FROM STA 10+00 TO STA 12+26.04
- EXISTING DROP INLET TO REMAIN
- CONSTRUCT ARTERIAL PAVEMENT PER SECTION A/5 THIS SHEET
- EDGE OF NEW PAVEMENT

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CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP	
TITLE: ROBERTS OIL DECEL LANE PLAN & PROFILE	
DESIGNED BY D.A.L.	CHECKED BY D.A.L.
DRAWN BY R.M.	DATE 8-2002
REVISIONS DESIGN	DATE 8-2002
NO. DATE	BY
REMARKS	
CITY ENGINEER APPROVED AUG 27 2002	
CITY ENGINEER APPROVED NOV 22 2002	
City Project No. 692181	Zone Map No. C-12
Sheet 5	of 8

SCANNED BY
PLANNING



1. INSTALL LARGE PULLBOX PER
COA STD DWG 2650
(SEE DETAIL THIS SHEET)
EXACT LOCATIONS SHALL BE
VERIFIED BY THE FIELD ENGINEER
2. INSTALL 2" TRAFFIC SIGNAL
CONDUIT
3. INSTALL 3" TRAFFIC SIGNAL
CONDUIT
4. EXISTING CATV AND QUEST UTILITY
PIPES TO BE RELOCATED BY EACH
OPERATING UTILITY PRIOR TO
CONSTRUCTION OF SIDEWALKS AND
ACCESSIBLE RAMP - NOT IN THIS CONTRACT
5. FUTURE SIDEWALK BY ROBERTS
OIL BY PERMIT -N/C-
6. FUTURE ACCESSIBLE RAMP BY
ROBERTS OIL BY PERMIT -N/C-
7. EXISTING CONCRETE CURB & GUTTER
8. EXISTING CONCRETE VALLEY GUTTER

ITEM	EXISTING	PROPOSED
WATERLINE	8" W	8" W
SANITARY SEWER	8" SAS	8" SAS
STORM SEWER	36" STS	36" STS
FIRE HYDRANT		
VALVE		
METERED WATER SERVICE		
MANHOLE		
CURB AND GUTTER		
HEADER CURB		
DROP INLET		
OVERHEAD ELEC WITH POWER POLE	OHE	OHE
UNDERGROUND ELEC, GAS, TEL, TV	UGT	UGT
CURB ELEVATIONS	TA 6.00' ASB	TA 6.00' ASB
SPOT ELEV.	x 16.7	x 16.7
SEWER SERVICE		
RIGHT OF WAY EASEMENT		
POWER POLE (GUYED)	PP	PP
CENTERLINE		
TOP OF ASPHALT ELÉV.	TA 16.2	TA 16.2
TRAFFIC SIGNAL PULLBOX		
RIGHT OF WAY		

1. ALL WORK ON THESE PLANS TO BE PERFORMED UNDER THIS CONTRACT SHALL CONFORM TO THE CURRENT NATIONAL ELECTRIC CODE, THE STANDARDS OF THE NATIONAL BOARD OF UNDERWRITERS FOR ELECTRICAL WIRING AND APPARATUS, AND THE CITY'S TRAFFIC ENGINEERING OPERATIONS THIRD DRAFT SPECIFICATIONS (JUNE 1994).
2. LOCATIONS OF CONDUIT AND PULL BOXES SHOWN ON THESE PLANS ARE SCHEMATIC AND SHALL BE ADJUSTED IN THE FIELD TO MAXIMIZE CLEAR SPACE AVAILABLE FOR PEDESTRIANS AND WHEELCHAIRS TO COMPLY WITH THE ADA. CONTRACTOR SHALL MEET WITH THE CITY'S TRAFFIC ENGINEERING REPRESENTATIVE IN THE FIELD AT ALL LOCATIONS TO SPOT EQUIPMENT BEFORE BEGINNING CONSTRUCTION.
3. THE CONTRACTOR SHALL BORE, DRILL, OR PUSH WHEN CROSSING EXISTING PAVEMENTS AND ANY DRIVEWAYS FOR SIDE STREET CROSSLINGS. BEFORE CONDUIT CAN BE BORED, DRILLED OR PUSHED THE CONTRACTOR SHALL LOCATE ALL EXISTING UTILITIES. THE CONTRACTOR SHALL LOCATE AND EXPOSE CONDUITS AND CABLES THAT CROSS ANY PROPOSED WORK. THESE LOCATIONS SHALL BE RECORDED ON THE GAS LINES WHICH CROSS ANY PROPOSED WORK. AFTER THESE LOCATIONS HAVE BEEN RECORDED, AFTER THE BORE IS COMPLETE, CONTRACTOR SHALL REMOVE AND REPLACE IN KIND ANY SIDEWALK OR PAVEMENT REQUIRED TO EXPOSE SUCH LINES. THE CONTRACTOR MAY CUT, TRENCH AND REPLACE EXISTING PAVEMENT ONLY AFTER APPROVAL BY THE PROJECT ENGINEER.

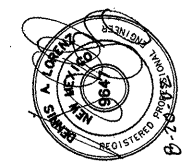
7. ALL PULL BOXES SHALL BE REINFORCED POLYMER MORTAR HEAVY-DUTY TYPE WITH REINFORCED POLYMER MORTAR HEAVY DUTY COVERS. CONCRETE COVERS, STEEL COVERS AND CONCRETE PULL BOXES ARE NOT ACCEPTABLE. OK'D

8. IF TRENCH WIDTHS ARE LESS THAN 42 INCHES AS PROPOSED BY THE CONTRACTOR, APPROVED COMPACTION METHODS SHALL BE USED DURING BACKFILL TO PREVENT LATENT TRENCH FAILURES. THE CONTRACTOR SHALL USE GROUT OR LEAN FILL AS APPROVED BY THE PROJECT ENGINEER IN LIEU OF EARTH BACKFILL.

6. ALL DATA SHOWN HEREIN CONCERNING EXISTING UTILITIES HAS BEEN OBTAINED FROM AS-BUILT DRAWINGS AND FIELD MEASUREMENTS WHICH MAY OR MAY NOT BE ACCURATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FIELD EXPLORATION, IF NECESSARY, TO MORE SPECIFICALLY LOCATED UTILITY LINES. THE COST OF LOCATING EXISTING UTILITY LINES WILL BE CONSIDERED INCIDENTAL TO CONSTRUCTION.

ENGINEER'S SEAL		SURVEY INFORMATION		BENCHMARKS		AS-BUILT INFORMATION	
		FIELD NOTES					
		NO.	BY	DATE	PROJECT BENCHMARK IS A PAINTED BOX <input checked="" type="checkbox"/> AT THE EXISTING BACK OF CURB LOCATED ON GOLF COURSE ROAD NE APPROXIMATELY 38 FEET NORTH OF THE NNW CURB RETURN AT MARNA LYNN AVENUE NW.	CONTRACTOR	
						WORK STAGED BY	DATE
						DESIGNED BY	DATE
						ACCEPTANCE BY	DATE
						FIELD LOCATION BY	DATE
						DRAWINGS	DATE
						CORRECTED BY	DATE
						MICRO-FILM INFORMATION	
						ELEVATION =6162.45 FEET NVD 1979	
						DATE	

DESIGN		DATE 8 - 2002
		D.L.
REVISIONS		DATE 8 - 2002
		D.M.
CHECKED BY		DATE 8 - 2002
		D.A.L.



BRASHER & LORENZ
CONSULTING ENGINEERS

2201 San Pedro Blvd. NE Bldg. 1, Suite 1200
Albuquerque, New Mexico 87110
Phone: (505) 886-6068 Fax: (505) 888-6188

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: **ROBERTS OIL
SIGNALIZATION IMPROVEMENTS**

<p>Design Review Committee</p> <p>APPROVE</p> <p>AUG 27 2002</p> <p>DESIGN REVIEW COMMITTEE</p>	<p>City Engineer Approval</p> <p>APPROVE</p> <p>NOV 22 2002</p> <p>CITY ENGINEER</p>	<p>Mo./Day/Yr.</p> <p>Last Design Update</p>
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City Project No.	692181	Zone Map No.	C-12
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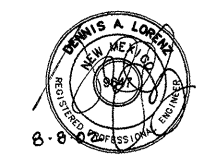
CONSTRUCTION TRAFFIC CONTROL GENERAL NOTES

- 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.
- 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.
- 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.
- CONSTRUCTION SHALL NOT BEGIN UNLESS A TRAFFIC CONTROL PLAN HAS BEEN APPROVED AND VERIFIED BY CONSTRUCTION COORDINATION.
- 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.
- 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.
- 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.
- 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.
- 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.
- 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.
- ALL WORK IN ARTERIAL ROADWAYS SHALL BE ON A CONTINUOUS 24 HOUR PER DAY BASIS UNTIL COMPLETED.
- 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.
- EQUIPMENT OR MATERIALS SHALL NOT BE STORED WITHIN 15 FEET OF A TRAVELED TRAFFIC LANE DURING NON-WORKING HOURS WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION.
- CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFE AND ADEQUATE MEANS OF CHANNELIZING PEDESTRIAN TRAFFIC AROUND AND THROUGH THE CONSTRUCTION AREA.
- CONTRACTOR IS RESPONSIBLE FOR OBLITERATION OF ANY CONFLICTING STRIPING AND RESPONSIBLE FOR ALL TEMPORARY STRIPING.
- CONTRACTOR SHALL MAINTAIN ACCESS TO ALL FACILITIES, BUSINESSES AND/OR RESIDENTS AT ALL TIMES.
- 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.
- 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.
- 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.
- ANY FIELD ADJUSTMENTS SHALL BE APPROVED BY CONSTRUCTION COORDINATION.

- 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.
- 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.
- 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.
- ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN NEW-CLEAN CONDITION, WASHING OF EQUIPMENT IS INCIDENTAL TO ITS PLACEMENT AND MAINTENANCE.
- TRAFFIC CONTROL STANDARDS APPLY ONLY WHERE THE CONSTRUCTION TRAFFIC CONTROL PLANS ARE NOT SPECIFIC.
- 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.
- CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORKSITE. ALL GRAFFITI SHALL BE PROMPTLY REMOVED FROM ALL EQUIPMENT, BOTH PERMANENT AND TEMPORARY.

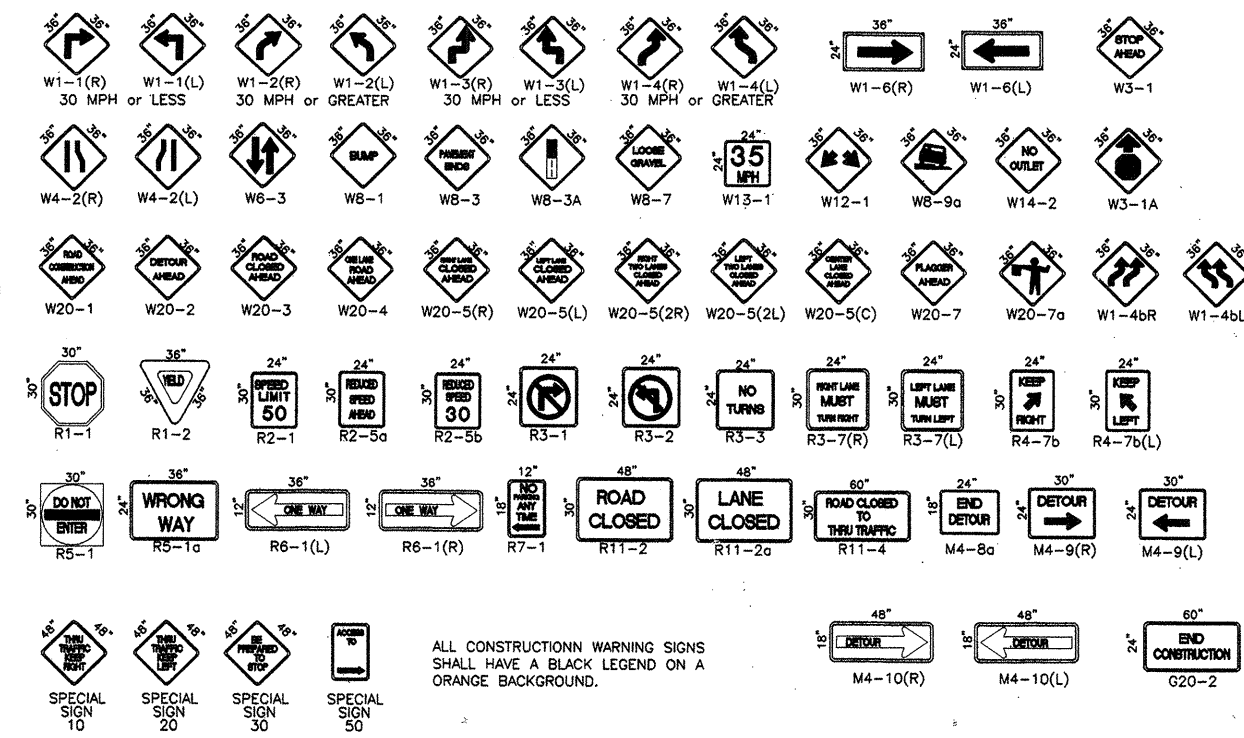
SPECIAL PROJECT TRAFFIC CONTROL NOTES

- CONTRACTOR SHALL PERFORM AS MUCH WORK AS POSSIBLE PRIOR TO AFFECTING TRAFFIC ON GOLF COURSE ROAD.
- DAILY LANE CLOSURES ON SOUTHBOUND GOLF COURSE ROAD SHALL NOT BEGIN EARLIER THAN 9:00 A.M., MONDAY THROUGH FRIDAYS.
- CONTRACTOR SHALL WORK MINIMUM HOURS FROM 7:00 A.M. THROUGH 7:00 P.M. WHEN LANE CLOSURES ON GOLF COURSE ROAD NEED TO REMAIN OVERNIGHT.
- CONTRACTOR IS ALLOWED NO MORE THAN FIVE DAYS OF OVERNIGHT LANE CLOSURE ON GOLF COURSE ROAD.
- ALL LANE CLOSURES ON GOLF COURSE ROAD ARE SUBJECT TO ARTERIAL/ COLLECTOR ROAD USAGE FEES OF \$0.01 PER SQUARE FOOT OF BARRICADED AREA PER DAY.

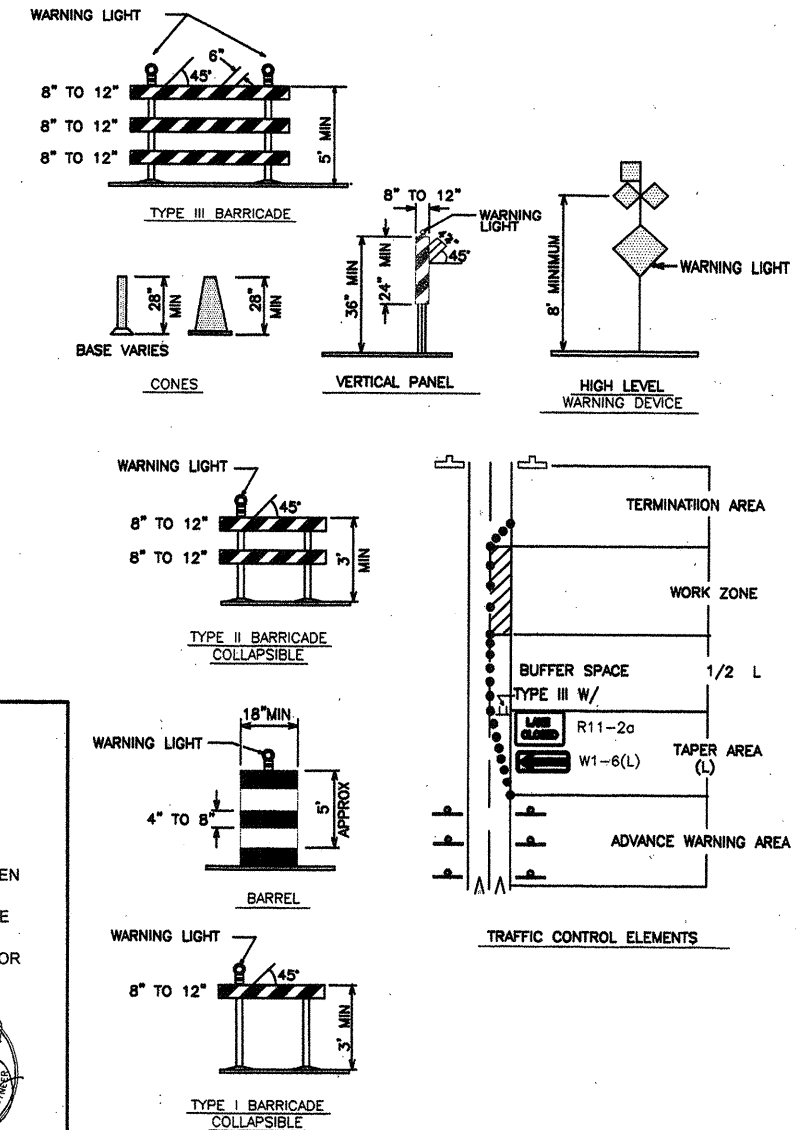


FOR SPECIAL NOTES ONLY

SIGN FACE DETAILS



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



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 STREET LIMIT OF THE STREET
 - TAPER LENGTH - SEE CHART BELOW
- THE TANGENT LENGTH IS EQUAL TO THE TAPER LENGTH FOR A GIVEN STREET.

TAPER REQUIREMENT

SPEED LIMIT (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 LIMIT (MPH)	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 $L = \frac{WS^2}{60}$

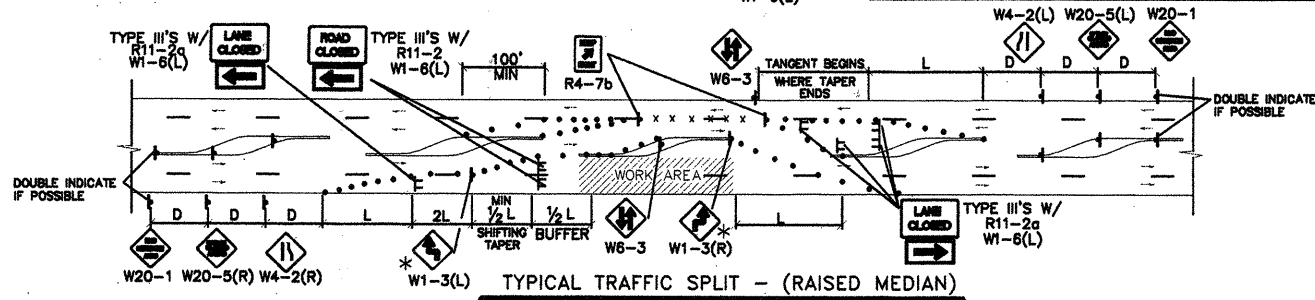
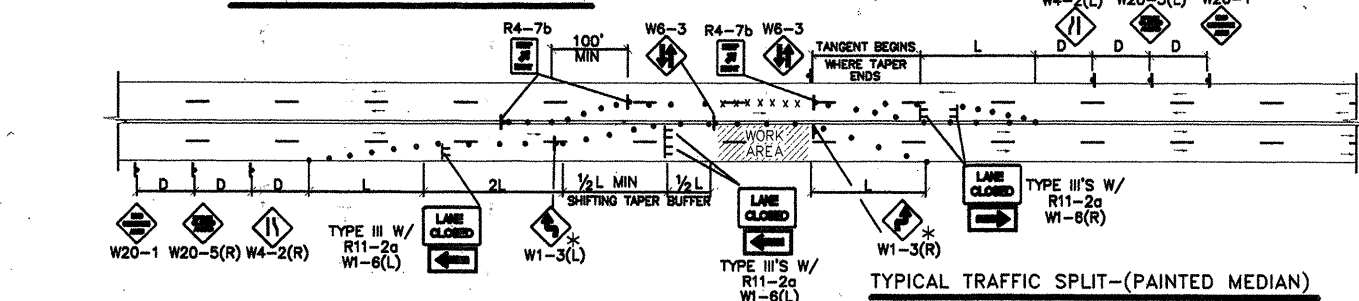
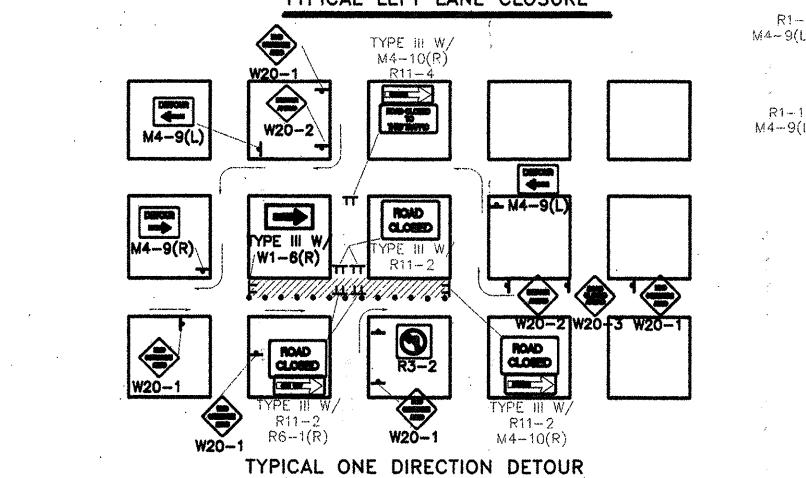
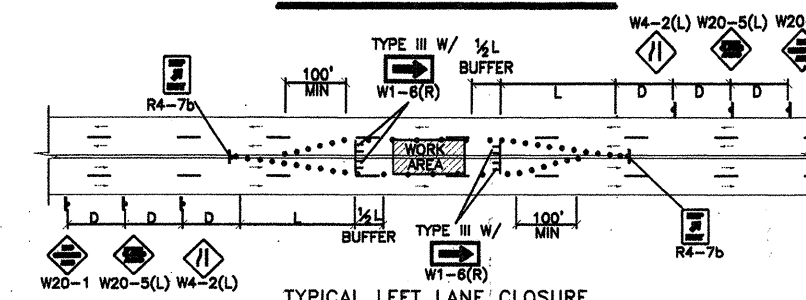
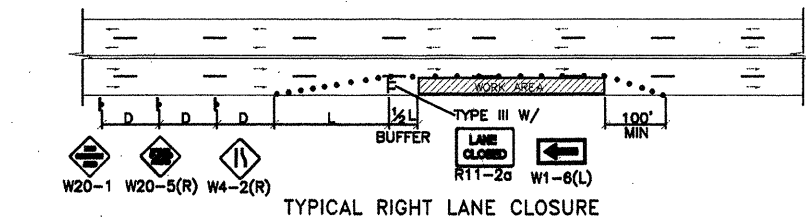
40 MPH OR GREATER $L = W \times S$

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

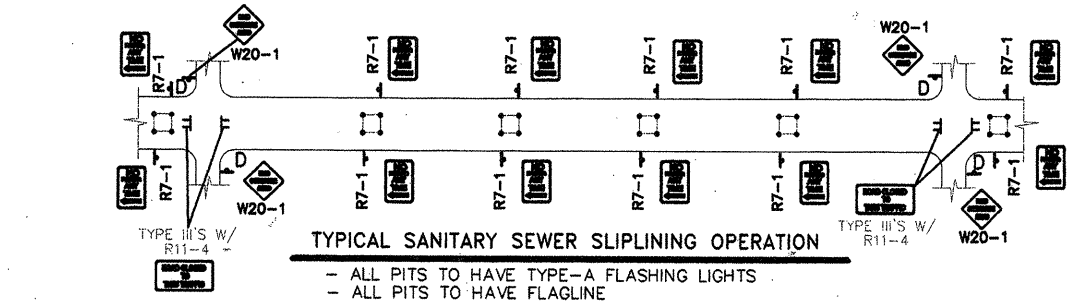
AS-BUILT INFORMATION			
CONTRACTOR	DATE	DATE	DATE
DESIGNED BY	DATE	DATE	DATE
CHECKED BY	DATE	DATE	DATE
APPROVED BY	DATE	DATE	DATE
MICRO-FILM INFORMATION			
RECORDED BY	DATE	DATE	DATE
NO.	DATE	DATE	DATE

ENGINEER'S SEAL	
COA	STD
NO.	DATE
REMARKS	REVISIONS
DESIGNED BY	DATE
DRAWN BY	DATE
CHECKED BY	DATE


CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP	
TITLE: ROBERTS OIL SIGNING AND CONSTRUCTION TRAFFIC CONTROL STANDARDS	
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL
COA STD	COA STD
CITY PROJECT NO.	ZONE MAP NO.
692181	C-12
SHEET	OF
7	8

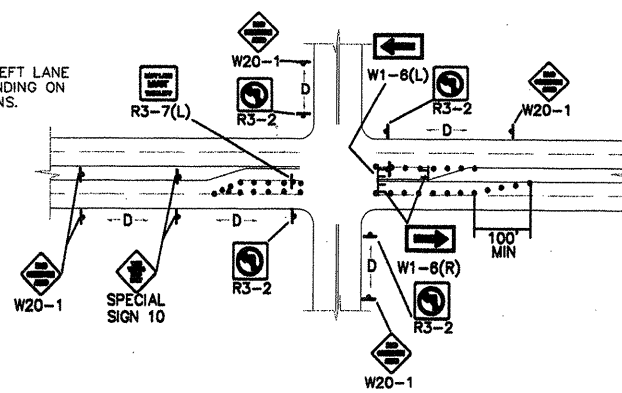


- TRAFFIC SPLIT NOTES:**
1. THE OFFSET DISTANCE MUST BE CALCULATED IN ALL SHIFTING TAPERS. THE OFFSET DISTANCES SHALL INCLUDE LANE WIDTHS PLUS MEDIAN WIDTHS.
 2. 1/2 L IS THE MINIMUM DISTANCE FOR SHIFTING TAPERS.
 3. REVERSE CURVES MAY BE IMPLEMENTED. ALL CURVE DATA SHALL BE CALCULATED.
 4. MEDIAN REMOVAL 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.

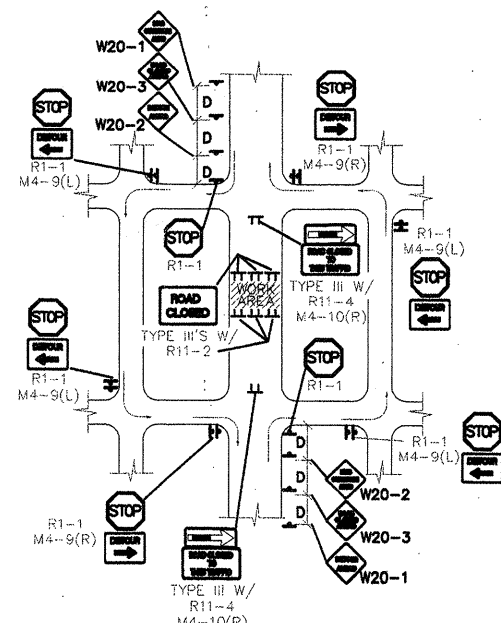


GENERAL NOTE:
ALL CONSTRUCTION WARNING SIGNS SHALL HAVE A BLACK LEGEND ON A ORANGE BACKGROUND.

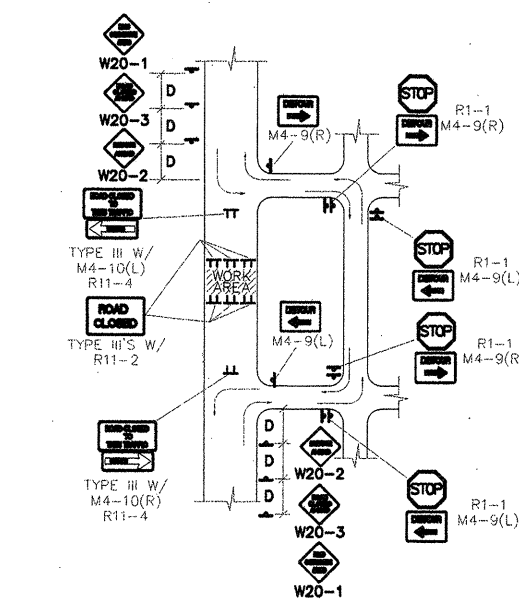
 ALL ADVANCE WARNING SIGNS SHALL BE A MINIMUM OF 36" THIRTY SIX INCHES BY 36" THIRTY SIX INCHES IN SIZE AND SHALL HAVE ONE WARNING LIGHT.



TYPICAL LANE CLOSURE AT INTERSECTION
NOTE: DEPENDING ON WORK ZONE LOCATION.

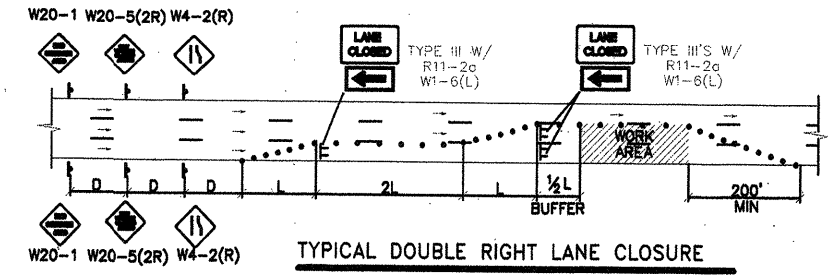


TYPICAL MID-BLOCK CLOSURE
NOTE: (R1-1) BASED ON FIELD CONDITIONS.

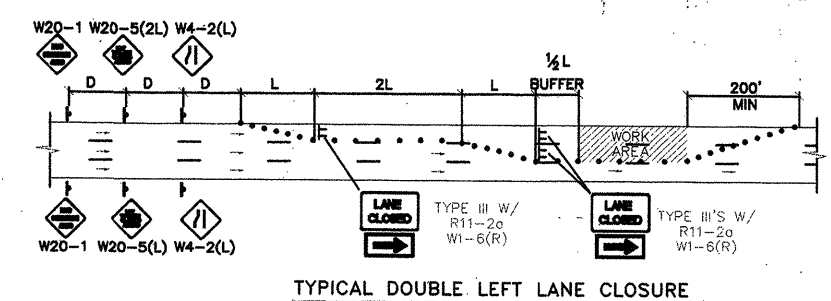


TYPICAL STREET CLOSURE

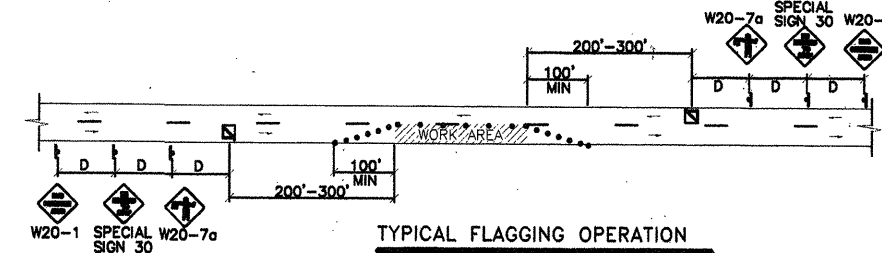
NOTE: (R1-1) BASED ON FIELD CONDITIONS.



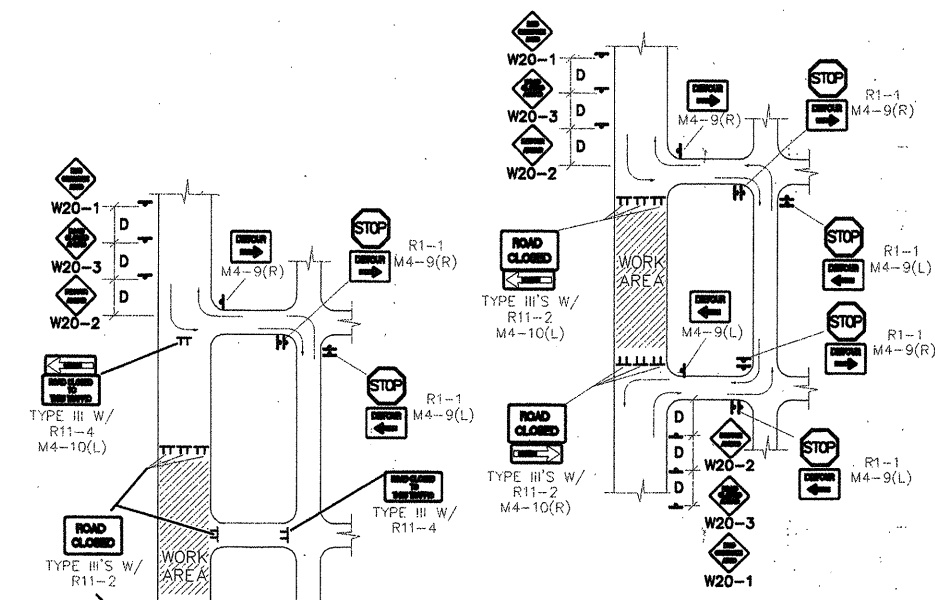
TYPICAL DOUBLE RIGHT LANE CLOSURE



TYPICAL DOUBLE LEFT LANE CLOSURE



TYPICAL FLAGGING OPERATION



TYPICAL STREET CLOSURE
NOTE: (R1-1) BASED ON FIELD CONDITIONS.

