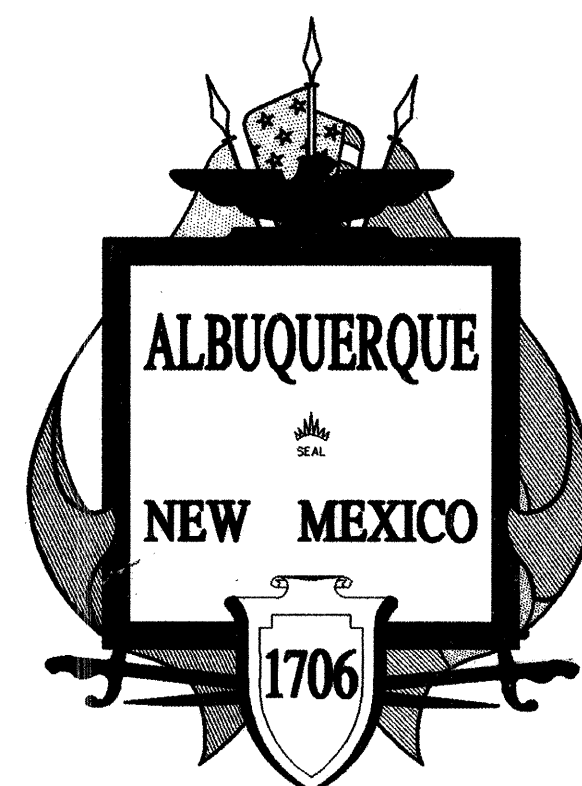


# HARTLINE DRAINAGE IMPROVEMENTS

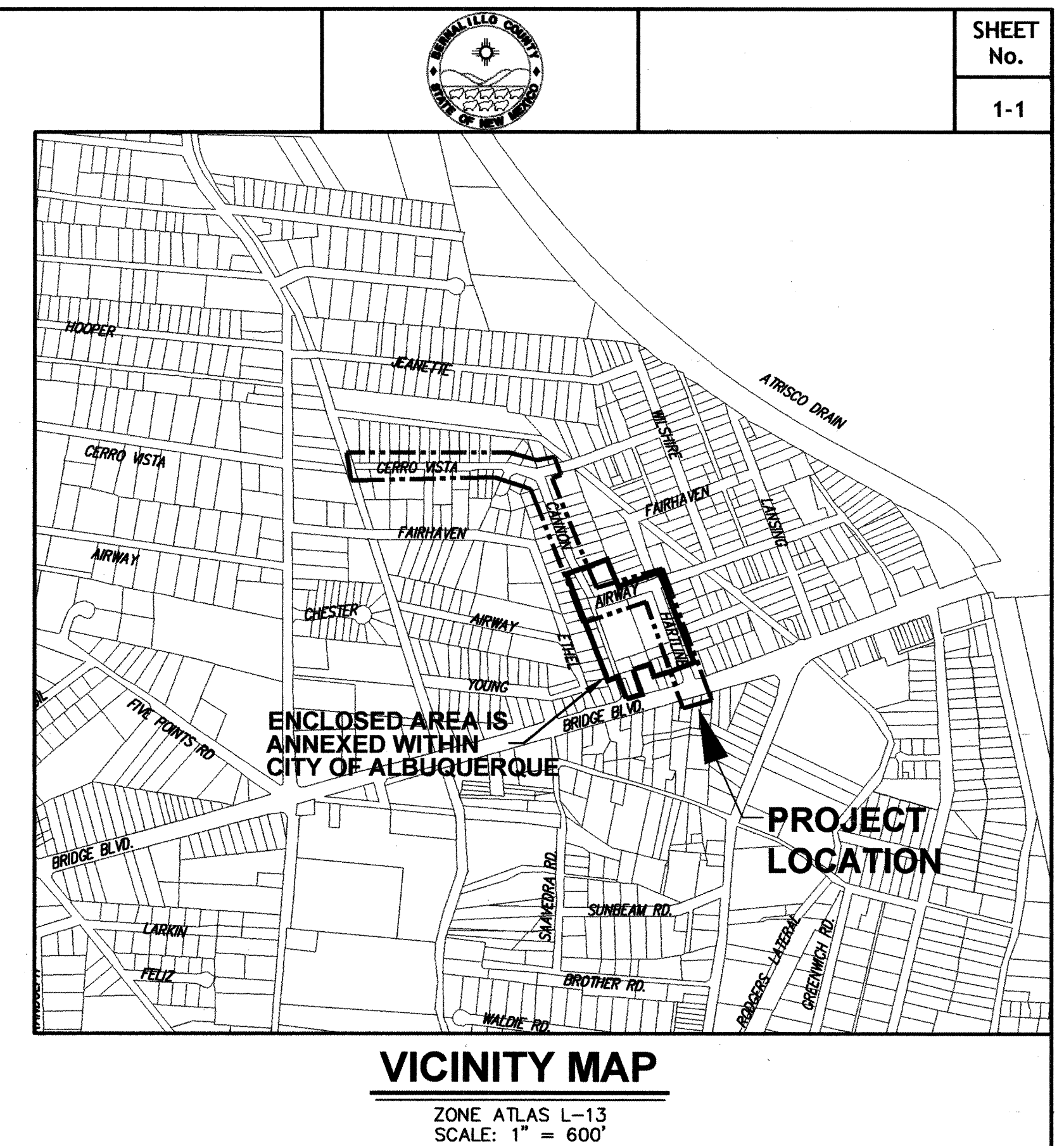
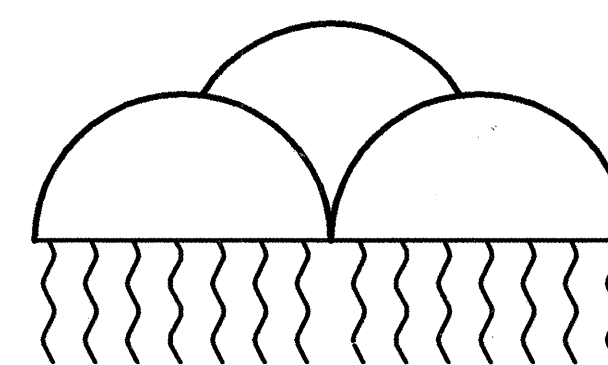
PUBLIC WORKS DIVISION  
COUNTY OF BERNALILLO, NEW MEXICO



CITY OF  
ALBUQUERQUE



AMAFCA



PWCO 40030

APPROVED

*[Signature]*

ROGER PAUL, P.E., TECHNICAL SERVICES DIRECTOR  
PUBLIC WORKS DIVISION, BERNALILLO COUNTY

*6/9/06*

DATE

APPROVED FOR BIDDING:

*John P Kelly*

JOHN P. KELLY, P.E., EXECUTIVE ENGINEER  
ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY

*June 2, 2006*

DATE

APPROVED FOR CONSTRUCTION:

*John P Kelly*

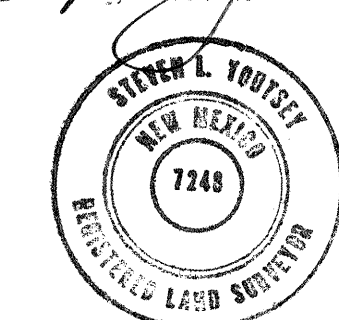
JOHN P. KELLY, P.E., EXECUTIVE ENGINEER  
ALBUQUERQUE METROPOLITAN ARROYO FLOOD CONTROL AUTHORITY

*7-31-06*

DATE

I hereby certify that the as-built data I have shown hereon is true and correct to the best of my knowledge and belief.

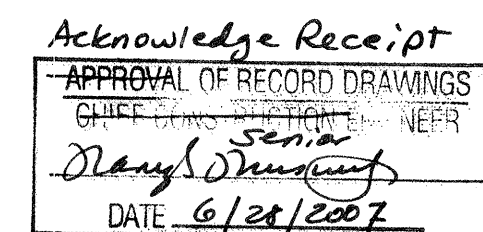
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DATE *03/05/2007*

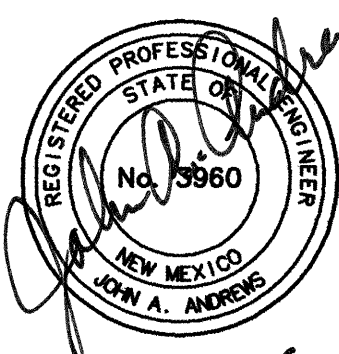


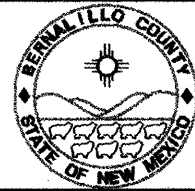
RECORD DRAWINGS WERE PREPARED FROM INFORMATION PROVIDED BY THE CONTRACTOR

RECORD DRAWING  
FEBRUARY 2007

SET NUMBER



REV.	SHEETS	CITY	ENGINEER	DATE	USER	DEPARTMENT	DATE	USER	DEPARTMENT	DATE
ENGINEER'S STAMP & SIGNATURE			APPROVALS	ENGINEER		DATE	*****			
			DRC Chairman	<i>[Signature]</i>		<i>July 24, 2006</i>	APPROVED FOR CONSTRUCTION			
			Transportation	<i>[Signature]</i>		<i>5/22/06</i>				
			Water/Wastewater	<i>[Signature]</i>		<i>4/18/06</i>				
			Hydrology	<i>Bradley A. Bynum</i>		<i>7/14/06</i>				
			Parks							
			Constr. Coord.							
			City Project No.				Sheet			
			746381				1-1			



INDEX OF SHEETS

SHEET NO.	DESCRIPTION	D.R.C. SHEET
1-1	TITLE SHEET	1 OF 22
1-2	INDEX OF SHEETS, ABBREVIATIONS, AND LEGEND	2 OF 22
1-3 TO 1-4	GENERAL NOTES	3,4 OF 22
	STORM DRAIN AND UTILITY PLAN & PROFILE SHEETS	
2-1 TO 2-2	HARTLINE ROAD	5,6 OF 22
2-3	AIRWAY ROAD	7 OF 22
2-4	CANNON DRIVE	8 OF 22
2-5	CANNON DRIVE AND CERRO VISTA ROAD	9 OF 22
	TYPICAL ROADWAY SECTION AND STORM DRAIN DETAILS	10 OF 22
3-2	WATER SHUTOFF PLAN	11 OF 22
	APS SURGE POND PLANS	
4-1	APS SURGE POND PLAN	12 OF 22
4-2	POND DEMOLITION & REPLACEMENT DETAILS	13 OF 22
4-3 TO 4-4	MISCELLANEOUS POND DETAILS	14,15 OF 22
4-5	CONCRETE STEP DETAILS	16 OF 22
	LANDSCAPING	
5-1	IRRIGATION PLAN	17 OF 22
5-2	PLANTING PLAN	18 OF 22
5-3	LANDSCAPING DETAILS	19 OF 22
5-4	ELECTRICAL PLAN	20 OF 22
6-1 TO 6-2	TRAFFIC CONTROL STANDARDS	21,22 OF 22

- \*1A

PLAN & PROFILE HARTLINE ROAD
- \*2A

PLAN & PROFILE AIRWAY ROAD AND CANNON DRIVE
- \*3A

DRIVEPAD AND CURB & GUTTER DETAILS
- \*4A

STORM DRAIN DETAILS
- \* SHEETS ADDED BY CHANGE ORDER

LIST OF ABBREVIATIONS

APS	ALBUQUERQUE PUBLIC SCHOOLS	℄	CONSTRUCTION BASELINE	FPS	FEET PER SECOND
SD	STORM DRAIN	℄	CENTERLINE	PI	POINT OF INTERSECTION
SAS	SANITARY SEWER	STA.	STATION	R	RADIUS
RCP	REINFORCED CONCRETE PIPE	DIA.	DIAMETER	L	LENGTH
CMP	CORRUGATED METAL PIPE	INV.	INVERT	C	CHORD
AC	ASBESTOS CONCRETE	EL., ELEV.	ELEVATION	TW	TOP OF WALL
PVC	POLYVINYL CHLORIDE	LF	LINEAR FOOT	FG	FINISHED GRADE
STL	STEEL	UP	UTILITY POLE		
AC	ASBESTOS CONCRETE	CATV	CABLE TV		
WL	WATERLINE	COMM.	COMMUNICATIONS/ TELEPHONE		
BOP	BEGINNING OF PROJECT	CONC.	CONCRETE		
EOP	END OF PROJECT	OHE	OVERHEAD ELECTRIC		
EP	EDGE OF PAVEMENT	DI	DUCTILE IRON		
ROW	RIGHT-OF-WAY	FL	FLOWLINE		
MH	MANHOLE	BC	BACK OF CURB		
PH	POTHOLE	HGL	HYDRAULIC GRADE LINE		
TP	TOP OF PIPE	Q100	100-YEAR STORM FLOW		
LF	LINEAR FEET	V100	100-YEAR STORM VELOCITY		
EXIST.	EXISTING	CFS	CUBIC FEET PER SECOND		

LEGEND

EXIST. BUILDING	
EXIST. CONTOURS	
NEW CONTOURS	
EXIST. GATE	
EXIST. DRIVEWAY	
EXIST. BRICK WALL	
EXIST. IRON FENCE	
EXIST. CHAINLINK FENCE	
EXIST. EDGE OF PAVEMENT	
EXIST. CURB AND GUTTER	
EXIST. SAS W/ MH	
EXIST. SD W/ MH	
EXIST. WATERLINE W/ HYDRANT METER & VALVE	
EXIST. GAS LINE	
EXIST. COMM UTILITIES	
EXIST. OVERHEAD ELECTRIC W/ UTILITY POLE	
NEW STORM DRAIN	
NEW SD INLET	
NEW WATERLINE W/ GATE VALVE & FIRE HYDRANT	
CONSTRUCTION BASELINE	
PAVEMENT REMOVAL LIMITS	
POTHOLE LOCATIONS	
EXIST. SIGN	
EXIST. TREES	
NEW CONCRETE	

RECORD DRAWING  
FEBRUARY 2007

BENCHMARK INFORMATION		
ACS ALUMINUM CAP STAMPED "10-L-13, 1987", INTERSECTION BRIDGE BLVD. & ISLETA BLVD. GEO POSITION (NAD 1927), IN FEET, NM STATE PLANE COORDINATES (CENTRAL ZONE): X=375,554.44, Y=480,336.54, ELEV.=4944.55 NGDV29, FT.		
ENGINEER'S SEAL		
3.		
2.		
1.		
REVISION	DATE	DESCRIPTION
REVISIONS (OR CHANGE NOTICES)		
BERNALILLO COUNTY, PUBLIC WORKS DIV.		
HARTLINE DRAINAGE IMPROVEMENTS		
INDEX OF SHEETS, ABBREVIATIONS, AND LEGEND		
LARKIN GROUP NM, INC.		
CONSULTING ENGINEERS		
FILE NO.	DRAWN	CHECKED
01-0002	AB/GC/SH	JW
DATE	APR 2005	
SHEET	1-2	







GENERAL NOTES CONTINUED:

ENVIRONMENTAL NOTES

1. DISPOSAL OF UNSUITABLE MATERIALS & DEBRIS: THE CONTRACTOR SHALL NOTIFY THE PROJECT MANAGER, IN WRITING, OF THE DETAILS OF THE DISPOSAL OPERATIONS. BORROW, MATERIALS, ROCK WASTE, VEGETATIVE DEBRIS, ETC., SHALL NOT BE PLACED IN WETLAND AREAS OR AREAS WHICH MAY IMPACT ENDANGERED SPECIES OR ARCHAEOLOGICAL RESOURCES. AN ARCHAEOLOGICAL SURVEY AND ENVIRONMENTAL CLEARANCE SHALL BE OBTAINED BY THE CONTRACTOR BEFORE DISPOSAL SITES ARE ACCEPTED IN ACCORDANCE WITH SECTION 107.14.
2. DISPOSAL SITE FOR ALL EXCESS EXCAVATION MATERIAL, ASPHALT PAVING, CONCRETE PAVING, CURB & GUTTER, SIDEWALKS, DRIVEWAYS AND OTHER REMOVAL ITEMS SHALL BE LOCATED BY THE CONTRACTOR. ALL COSTS INCURRED IN OBTAINING A DISPOSAL SITE AND HAUL THERETO SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO DIRECT PAYMENT WILL BE MADE THEREFOR. THE DISPOSAL SITE SHALL BE ENVIRONMENTALLY ACCEPTABLE AND APPROVED BY THE PROJECT MANAGER. ALSO, A PERMITTED FACILITY FOR DISPOSABLE HAZARDOUS WASTE SHALL BE LOCATED AND APPROVED BY THE PROJECT MANAGER.
3. THE CONTRACTOR SHALL ENSURE THAT DAMAGE TO OR REMOVAL OF VEGETATION WILL BE KEPT TO A MINIMUM AND THAT NO EXTRANEOUS CLEARING, GRUBBING, LAND DISTURBANCE OR EXCAVATIONS WILL TAKE PLACE. CONSISTENT WITH THE REQUIREMENTS OF THE DEPARTMENT'S STANDARD SPECIFICATIONS SECTION 107.28 PROTECTION & RESTORATION OF PROPERTY & LANDSCAPING, SECTION 201. CLEARING & GRUBBING, AND SUBSECTION 603.32 CONTRACTOR'S OPERATIONS, THE CONTRACTOR SHALL SEE TO IT THAT TREES AND SHRUBS WITHIN THE RIGHT OF WAY AND ALONG THE FENCE LINES ARE NOT OVERRUN OR DAMAGED BY CONSTRUCTION EQUIPMENT UNNECESSARILY. ALL AREAS DISTURBED BY THE CONTRACTOR SHALL HAVE TEMPORARY AND PERMANENT EROSION CONTROL MEASURES IMPLEMENTED BY THE CONTRACTOR IN ACCORDANCE WITH THE NPDES REGULATIONS. THE CONTRACTOR IS AT ALL TIMES RESPONSIBLE FOR COMPLIANCE WITH THE NEW MEXICO WATER QUALITY ACT AND APPLICABLE CLEAN WATER ACT PERMITS AND REGULATIONS. THE CONTRACTOR SHALL BEAR THE FULL COST OF IMPLEMENTATION OF EROSION CONTROL MEASURES AND VEGETATION REMEDIATION NECESSARY DUE TO THE CONTRACTOR'S NEGLIGENCE AS DETERMINED BY THE PROJECT MANAGER AND THE ENVIRONMENTAL PROGRAM MANAGER'S REPRESENTATIVE. THIS WORK WILL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO MEASUREMENT OR PAYMENT WILL BE MADE.
4. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING AN NPDES PERMIT DURING CONSTRUCTION, FILLING OUT THE NOTICE OF INTENT (NOI) APPLICATION, NOTICE OF TERMINATION APPLICATION, AND FULFILLING ALL OTHER NECESSARY NPDES REQUIREMENTS. THE CONTRACTOR SHALL ALSO BE RESPONSIBLE FOR THE SUBMITTAL OF A POLLUTION PREVENTION PLAN AND INSPECTION REPORTS. THESE ITEMS SHALL BE PAID FOR UNDER THE BID ITEM FOR "NPDES STORM WATER PERMITTING AND SWPPP".
- ANY CHECK DAMS OR SILT FENCES THAT ARE CALLED FOR ON THE REQUIRED POLLUTION PREVENTION PLAN SHALL BE PAID UNDER THE BID ITEM FOR "NPDES STORM WATER PERMITTING AND SWPPP", AND ANY ADDITIONAL MEASURES NEEDED FOR THE POLLUTION PREVENTION PLAN SHALL BE PAID FOR UNDER THE BID ITEM FOR "PROTECTION OF PROJECT FROM WATER DURING CONSTRUCTION".
5. THE CONTRACTOR SHALL PROPERLY HANDLE AND DISPOSE OF ALL CLEAN ASPHALT PAVEMENT AND CONCRETE MATERIAL TO BE REMOVED ACCORDING TO THE PLANS. CLEAN ASPHALT IS CLASSIFIED AS FILL MATERIAL AND IS NOT SUBJECT TO THE SOLID WASTE MANAGEMENT REGULATIONS OF THE NEW MEXICO ENVIRONMENTAL DEPARTMENT. CLEAN IS DEFINED AS BEING FREE OF SOLID WASTE OR CONTAMINANTS WHICH HAVE THE POTENTIAL OF MIGRATE INTO SURFACE OR GROUND WATER. THE MATERIAL SHALL BE COVERED WITH TWO (2) FEET OF CLEAN EARTH IMMEDIATELY AFTER DEPOSITION. THE MATERIAL CANNOT BE PLACED IN A WATERCOURSE, ARROYO OR WITHIN TEN (10) FEET OF GROUNDWATER. IF THE ASPHALT AND CONCRETE MATERIAL IS NOT CLEAN IT IS SUBJECT TO THE SOLID WASTE ACT AND MUST BE PLACED IN AN APPROVED LANDFILL. ALL DISPOSAL SITES ARE SUBJECT TO THE APPROVAL OF THE RESPECTIVE LANDOWNER AND THE PROJECT MANAGER.
6. WATERING, FOR DUST CONTROL, AS REQUIRED, SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION AND NO MEASUREMENT OR SEPARATE PAYMENT SHALL BE MADE THEREFOR. CONSTRUCTION AREAS SHALL BE WATERED OR OTHERWISE KEPT DUST FREE. THE CONTRACTOR SHALL USE WATERING EQUIPMENT FOR DUST POLLUTION ABATEMENT AS DIRECTED BY THE PROJECT MANAGER.

ASBESTOS CEMENT PIPE REMOVAL AND DISPOSAL

1. DESCRIPTION OF WORK: REMOVE, TRANSPORT AND DISPOSE OF ALL ASBESTOS CEMENT (AC) PIPE, IN ACCORDANCE WITH THE PROJECT SPECIFICATIONS. THE WORK SPECIFIED HEREIN SHALL BE THE REMOVAL OF ALL AC PIPE BY COMPETENT PERSONS IN COMPLIANCE WITH ALL APPLICABLE FEDERAL, STATE AND LOCAL REGULATIONS. THE CONTRACTOR SHALL VERIFY THE EXISTENCE AND LOCATION OF ASBESTOS PIPELINE BEFORE PROCEEDING WITH THE WORK. IT SHALL BE THE RESPONSIBILITY OF THE SUCCESSFUL CONTRACTOR TO MAKE PROPER ARRANGEMENT WITH AUTHORIZED AGENCY FOR HANDLING BUT NOT LIMITED TO REMOVAL, TRANSPORT AND DISPOSAL OF ALL ASBESTOS PIPES.
2. SUBMITTALS: PROOF, SATISFACTORY TO THE ENGINEER, THAT REQUIRED PERMITS HAVE BEEN OBTAINED AND THE ARRANGEMENTS FOR TRANSPORT AND DISPOSAL OF ASBESTOS CONTAINING WASTE MATERIALS HAVE BEEN MADE. ALL DUMP RECEIPTS, TRIP TICKETS, TRANSPORTATION MANIFESTS OR OTHER DOCUMENTATION OF DISPOSAL SHALL BE DELIVERED TO THE PROJECT ENGINEER FOR HIS/HER RECORDS. USE A RECORD KEEPING FORMAT THAT UTILIZES A CHAIN OF CUSTODY FORM WHICH INCLUDES THE NAMES AND ADDRESSES OF THE GENERATOR (OWNER), CONTRACTOR, PICKUP SITE, AND DISPOSAL SITE, THE ESTIMATED QUANTITY OF THE ASBESTOS WASTE AND TYPE OF CONTAINER, AND THE DISPOSAL SITE OPERATOR, AS THE RESPONSIBILITY FOR THE MATERIAL CHANGES HANDS. IF A SEPARATE HAULER IS EMPLOYED, HIS NAME, ADDRESS, TELEPHONE NUMBER AND SIGNATURE MUST BE ALSO APPEAR ON THE FORM. EACH COPY OF THE WASTE MANIFEST IS TO BE SIGNED BY ALL PERSONS INVOLVED IN THE CHAIN OF CUSTODY OF THE ASBESTOS WASTE.
3. MEASUREMENT AND PAYMENT: THE ASBESTOS PIPES SHALL BE REMOVED, TRANSPORTED AND DISPOSED OF BY AN AUTHORIZED AND REGISTERED AGENCY. IF THE CONTRACTOR IS NOT AUTHORIZED TO HANDLE ASBESTOS PIPES, HE/SHE SHALL MAKE ARRANGEMENT WITH AUTHORIZED AND REGISTERED AGENCY FOR HANDLING ASBESTOS PIPES. THE PAYMENT FOR REMOVAL, TRANSPORTATION AND DISPOSAL SHALL BE MADE ON A UNIT PRICE PER LINEAR FOOT.

RELEVANT NEW MEXICO REGULATIONS AND OFFICE:

NEW MEXICO/SOLID WASTE MANAGEMENT REGULATIONS/TITLE 20-CHAPTER 9-PART 1  
WEB SITE ADDRESS - [www.nmenv.state.nm.us](http://www.nmenv.state.nm.us)

ROADWAY PAVEMENT REMOVAL AND REPLACEMENT

1. AS A PART OF THIS PROJECT, THE ROADWAY PAVEMENT WITHIN THE PROJECT AREA SHALL BE REMOVED AND REPLACED TO THE FULL WIDTH OF EXISTING PAVEMENT REPLACEMENT SHALL BE AT THE SAME WIDTH, ELEVATION AND GRADE OF THE EXISTING PAVEMENT.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR SURVEYING THE EXISTING ROADWAY PAVEMENT, INCLUDING OBTAINING AND RECORDING OF PAVEMENT WIDTHS, RADII AND SURFACE ELEVATIONS. CONTRACTOR SHALL RECORD AND RETAIN THIS INFORMATION FOR USE IN CONSTRUCTION STARTING THE NEW PAVEMENT TO MATCH EXISTING CONDITIONS. PAVEMENT SHALL BE REPLACED IN ACCORDANCE WITH "TYPICAL ROADWAY PAVEMENT SECTION", SHOWN ON SHEET 3-1.

AS BUILT NOTE: SEE SHEETS 1A THRU 4A

WATERLINES - REMOVAL AND REPLACEMENT

1. AS A PART OF THIS PROJECT, WATERLINES WITHIN THE PROJECT SHALL BE REMOVED AND REPLACED TO THE LIMITS SHOWN ON THE PLAN AND PROFILE SHEETS. EXISTING WATERLINES ARE ASBESTOS CEMENT PIPE, WHICH SHALL BE REMOVED AND DISPOSED OF AS DESCRIBED IN THE GENERAL NOTES, SHEET 1-4, TITLED "ASBESTOS CEMENT PIPE REMOVAL AND DISPOSAL". NEW WATERLINES SHALL BE INSTALLED IN ACCORDANCE WITH SECTION 801 OF THE COA SPECIFICATIONS. ALL SERVICE LINES WITHIN THE PROJECT AREA SHALL BE REMOVED AND REPLACED WITH COPPER TUBING. SEE GENERAL NOTE NO. 11 AND GENERAL NOTE NO. 12, SHEET 1-3.


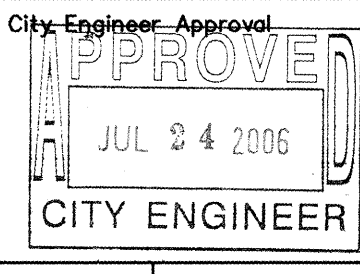
RECORD DRAWINGS WERE PREPARED FROM INFORMATION PROVIDED BY THE CONTRACTOR

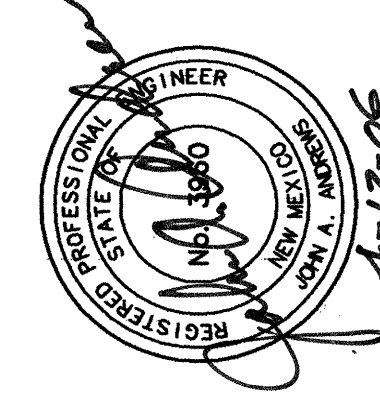
RECORD DRAWING  
FEBRUARY 2007

**LARKIN GROUP, INC.**  
CONSULTING ENGINEERS AND SURVEYORS  
8500 MENAUL BLVD., NE A-440 (505) 275-7500

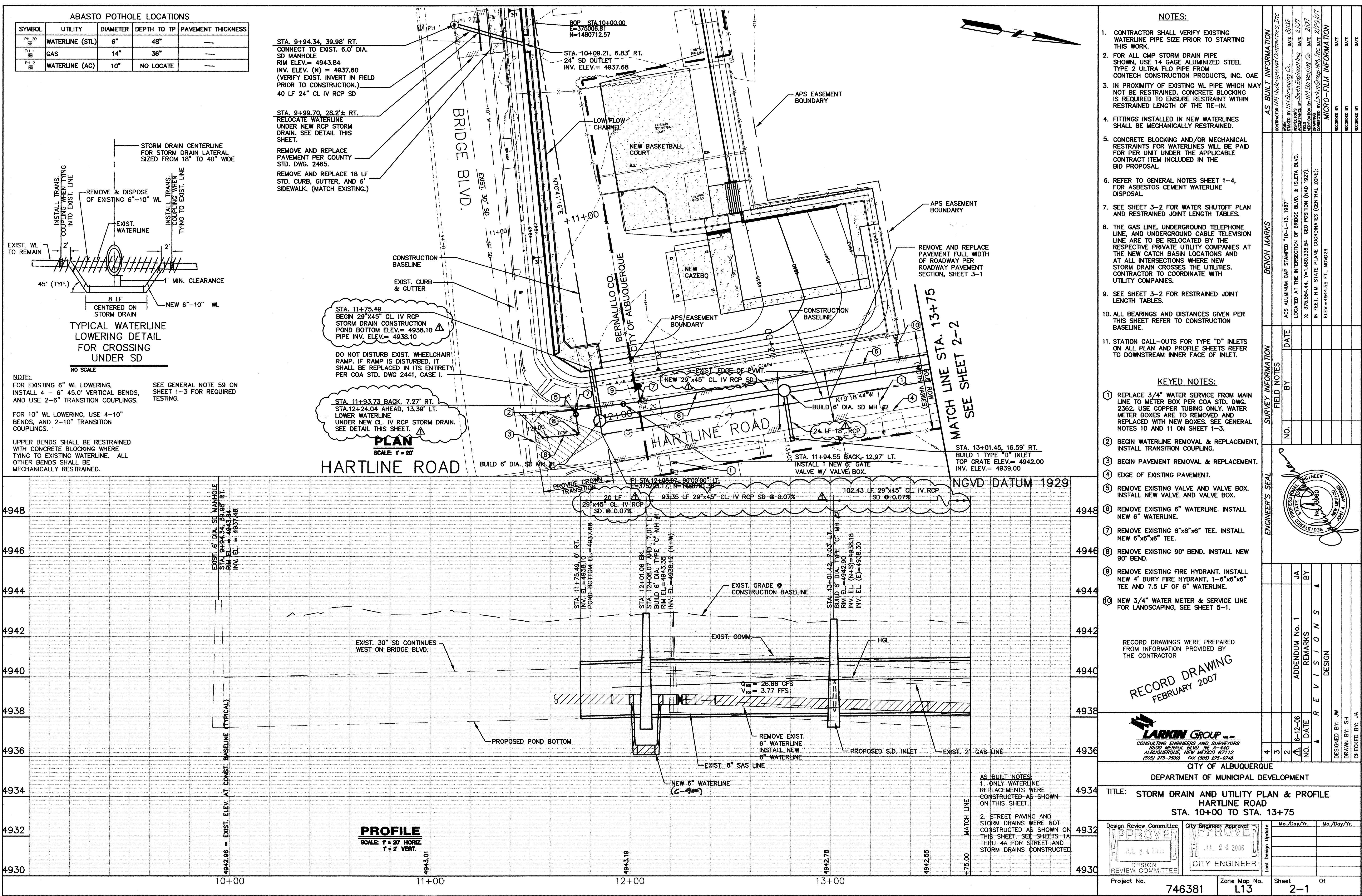
CITY OF ALBUQUERQUE  
DEPARTMENT OF MUNICIPAL DEVELOPMENT

TITLE: HARTLINE DRAINAGE IMPROVEMENTS  
GENERAL NOTES

Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.
				
Project No.	Zone Map No.	Sheet		
746381	L-13	1-4		

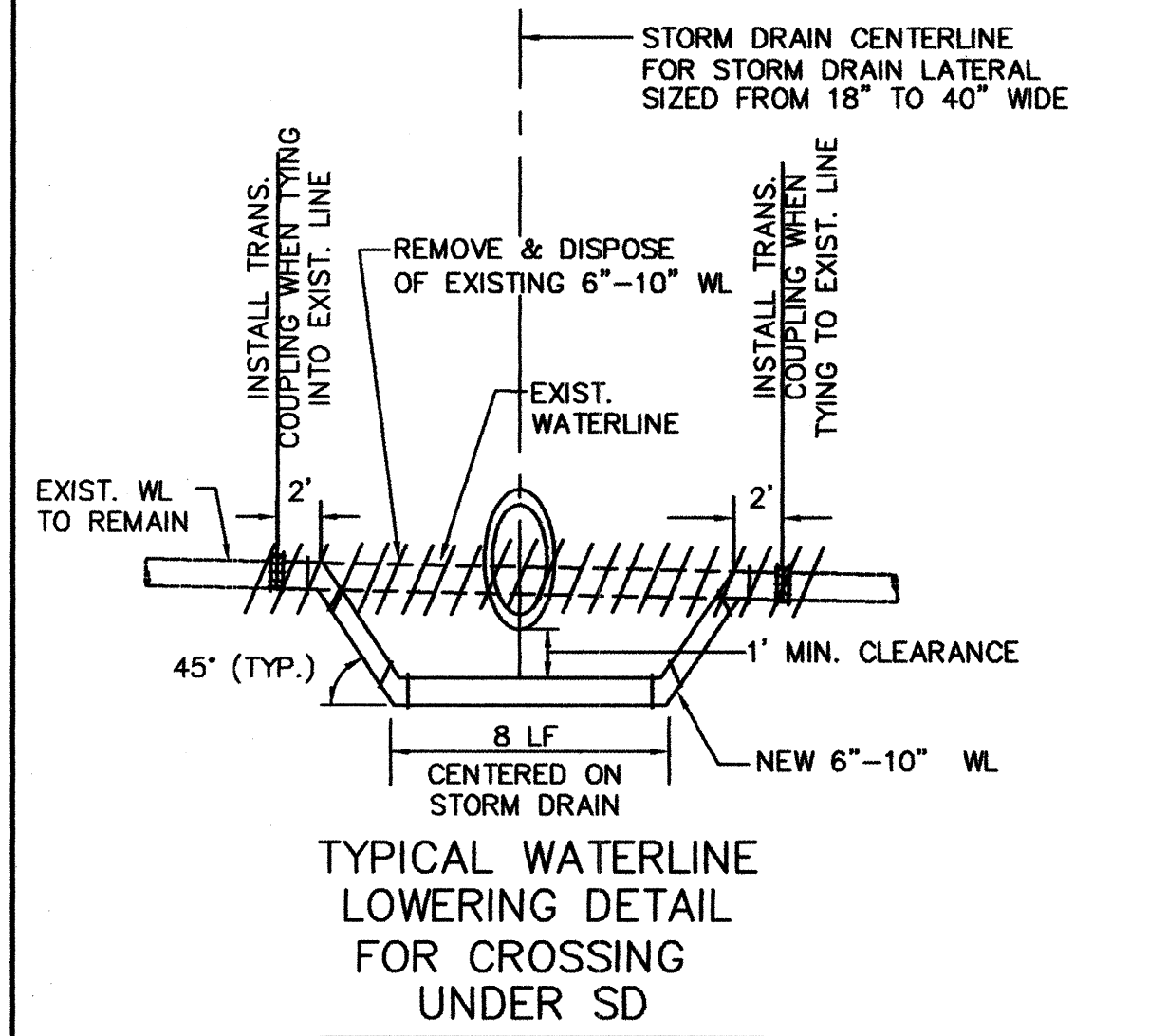
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STARTED BY	MM Engineering Co.	DATE	8/06	BY	1		
ACCEPTANCE BY	Smith Engineering Co.	DATE	2/07		2		
FIELD	CONTRACTOR BY MM Engineering Co.	DATE	2/07		3		
DRAWINGS	CONTRACTOR BY Larkin Group, Inc.	DATE	2/26/07		4		
CHECKED BY	CONTRACTOR BY Larkin Group, Inc.	DATE	2/26/07		5		
RECORDED BY	CONTRACTOR BY Larkin Group, Inc.	DATE	2/26/07		6		
RECORDED BY	CONTRACTOR BY Larkin Group, Inc.	DATE	2/26/07		7		





ABASTO POTHOLE LOCATIONS

SYMBOL	UTILITY	DIAMETER	DEPTH TO TP	PAVEMENT THICKNESS
PH 20	WATERLINE (STL)	6"	48"	---
PH 1	GAS	14"	36"	---
PH 2	WATERLINE (AC)	10"	NO LOCATE	---

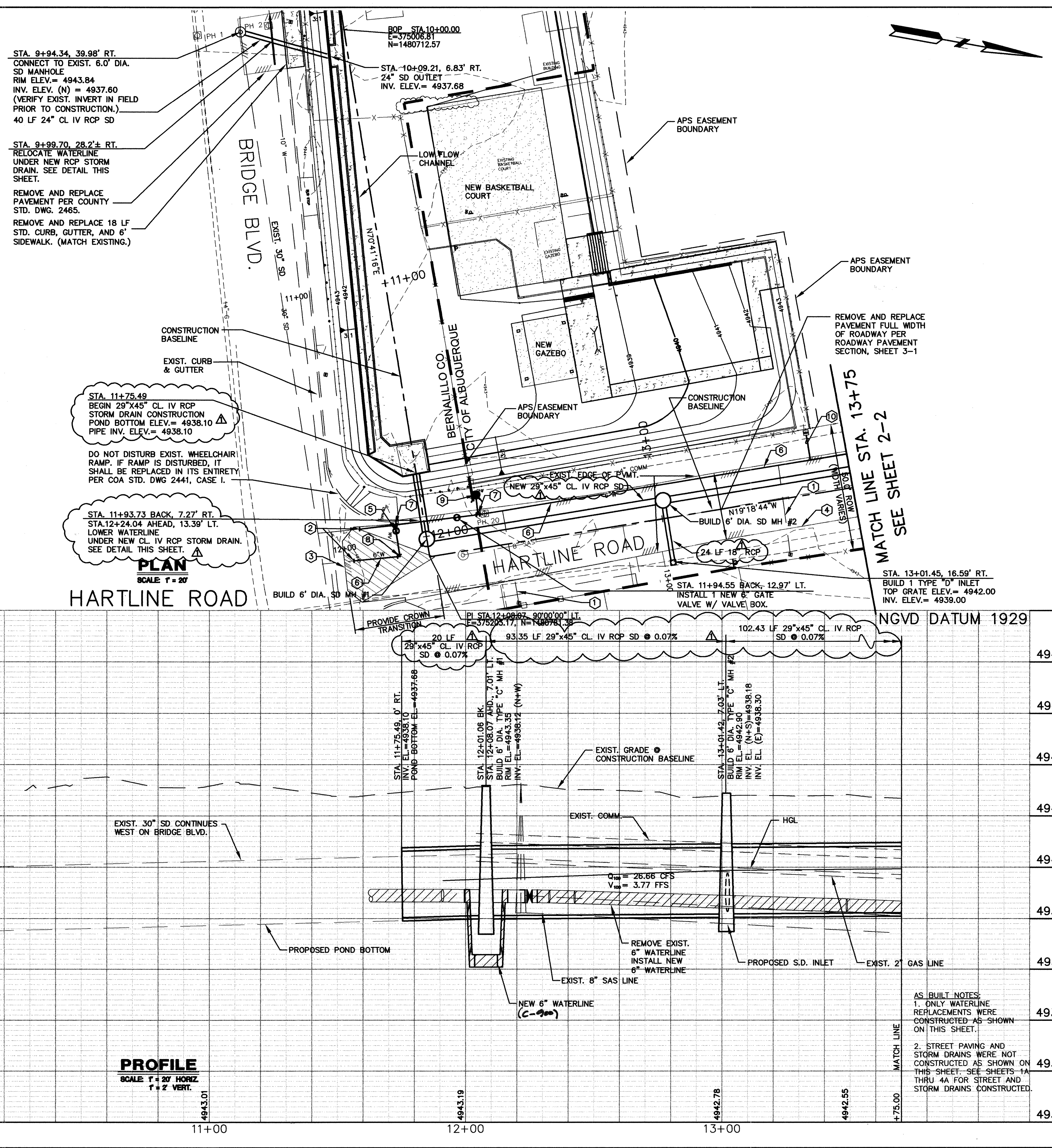


NOTE:  
FOR EXISTING 6" WL LOWERING, INSTALL 4 - 6" 45.0° VERTICAL BENDS, AND USE 2-6" TRANSITION COUPLINGS.

SEE GENERAL NOTE 59 ON SHEET 1-3 FOR REQUIRED TESTING.

FOR 10" WL LOWERING, USE 4-10" BENDS, AND 2-10" TRANSITION COUPLINGS.

UPPER BENDS SHALL BE RESTRAINED WITH CONCRETE BLOCKING WHERE TYING TO EXISTING WATERLINE. ALL OTHER BENDS SHALL BE MECHANICALLY RESTRAINED.



NOTES:

- CONTRACTOR SHALL VERIFY EXISTING WATERLINE PIPE SIZE PRIOR TO STARTING THIS WORK.
- FOR ALL CMP STORM DRAIN PIPE SHOWING, USE 14 GAGE ALUMINIZED STEEL TYPE 2 ULTRA FLO PIPE FROM CONTECH CONSTRUCTION PRODUCTS, INC. OAE
- IN PROXIMITY OF EXISTING WL PIPE WHICH MAY NOT BE RESTRAINED, CONCRETE BLOCKING IS REQUIRED TO ENSURE RESTRAINT WITHIN RESTRAINED LENGTH OF THE TIE-IN.
- FITTINGS INSTALLED IN NEW WATERLINES SHALL BE MECHANICALLY RESTRAINED.
- CONCRETE BLOCKING AND/OR MECHANICAL RESTRAINTS FOR WATERLINES WILL BE PAID FOR PER UNIT UNDER THE APPLICABLE CONTRACT ITEM INCLUDED IN THE BID PROPOSAL.
- REFER TO GENERAL NOTES SHEET 1-4, FOR ASBESTOS CEMENT WATERLINE DISPOSAL.
- SEE SHEET 3-2 FOR WATER SHUTOFF PLAN AND RESTRAINED JOINT LENGTH TABLES.
- THE GAS LINE, UNDERGROUND TELEPHONE LINE, AND UNDERGROUND CABLE TELEVISION LINE ARE TO BE RELOCATED BY THE RESPECTIVE PRIVATE UTILITY COMPANIES AT THE NEW CATCH BASIN LOCATIONS AND AT ALL INTERSECTIONS WHERE NEW STORM DRAIN CROSSES THE UTILITIES. CONTRACTOR TO COORDINATE WITH UTILITY COMPANIES.
- SEE SHEET 3-2 FOR RESTRAINED JOINT LENGTH TABLES.
- ALL BEARINGS AND DISTANCES GIVEN PER THIS SHEET REFER TO CONSTRUCTION BASELINE.
- STATION CALL-OUTS FOR TYPE "D" INLETS ON ALL PLAN AND PROFILE SHEETS REFER TO DOWNSTREAM INNER FACE OF INLET.

KEYED NOTES:

- REPLACE 3/4" WATER SERVICE FROM MAIN LINE TO METER BOX PER COA STD. DWG. 2362. USE COPPER TUBING ONLY. WATER METER BOXES ARE TO BE REMOVED AND REPLACED WITH NEW BOXES. SEE GENERAL NOTES 10 AND 11 ON SHEET 1-3.
- BEGIN WATERLINE REMOVAL & REPLACEMENT, INSTALL TRANSITION COUPLING.
- BEGIN PAVEMENT REMOVAL & REPLACEMENT.
- EDGE OF EXISTING PAVEMENT.
- REMOVE EXISTING VALVE AND VALVE BOX. INSTALL NEW VALVE AND VALVE BOX.
- REMOVE EXISTING 6" WATERLINE. INSTALL NEW 6" WATERLINE.
- REMOVE EXISTING 6"x6"x6" TEE. INSTALL NEW 6"x6"x6" TEE.
- REMOVE EXISTING 90° BEND. INSTALL NEW 90° BEND.
- REMOVE EXISTING FIRE HYDRANT. INSTALL NEW 4" BURY FIRE HYDRANT, 1-6"x6"x6" TEE AND 7.5 LF OF 6" WATERLINE.
- NEW 3/4" WATER METER & SERVICE LINE FOR LANDSCAPING, SEE SHEET 5-1.

RECORD DRAWING  
FEBRUARY 2007

LARKIN GROUP INC.  
CONSULTING ENGINEERS AND SURVEYORS  
3500 MENAUL BLVD., NE #1440  
ALBUQUERQUE, NEW MEXICO 87112  
(505) 275-7500 FAX (505) 275-0748

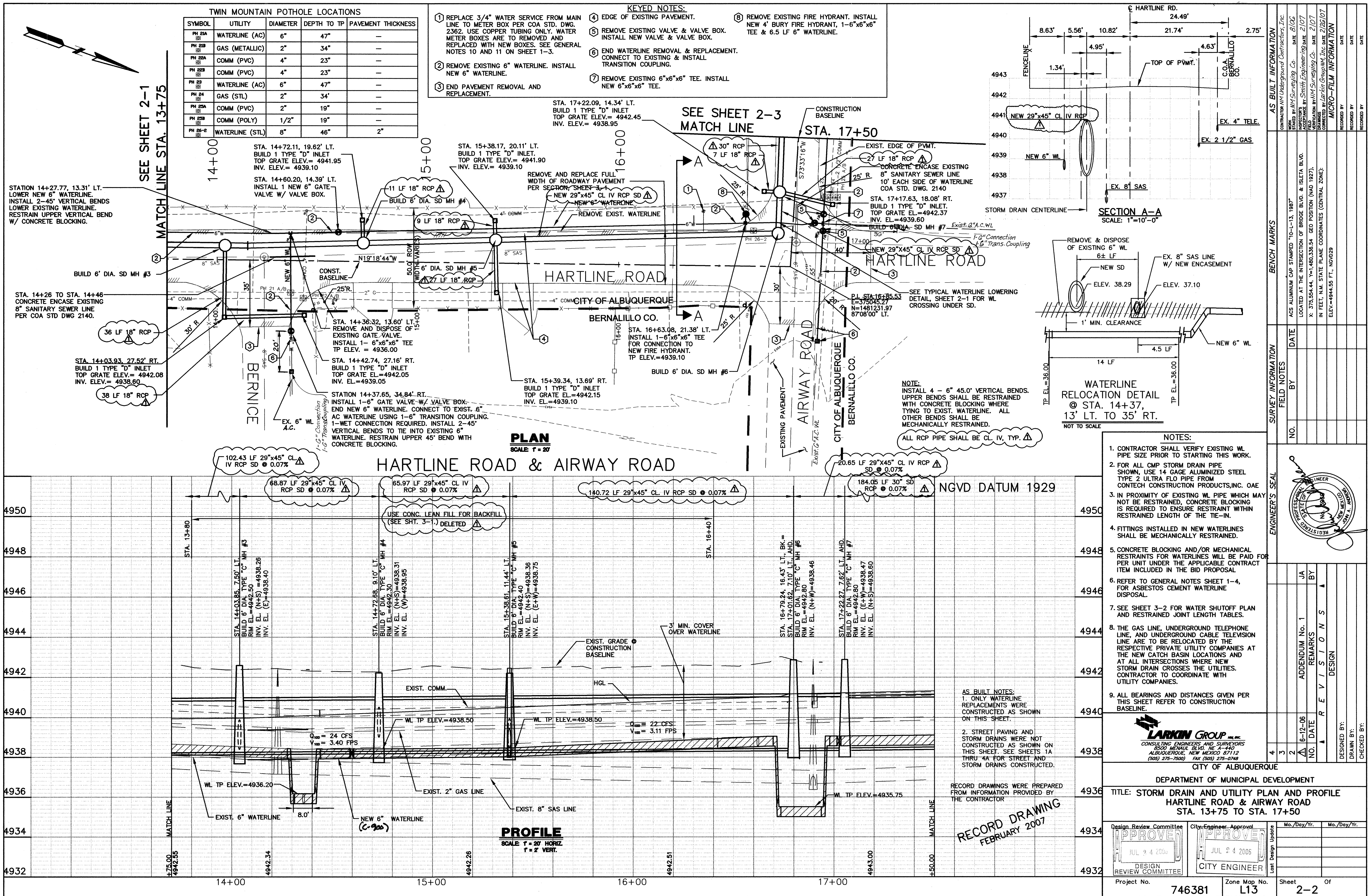
CITY OF ALBUQUERQUE  
DEPARTMENT OF MUNICIPAL DEVELOPMENT

TITLE: STORM DRAIN AND UTILITY PLAN & PROFILE  
HARTLINE ROAD  
STA. 10+00 TO STA. 13+75

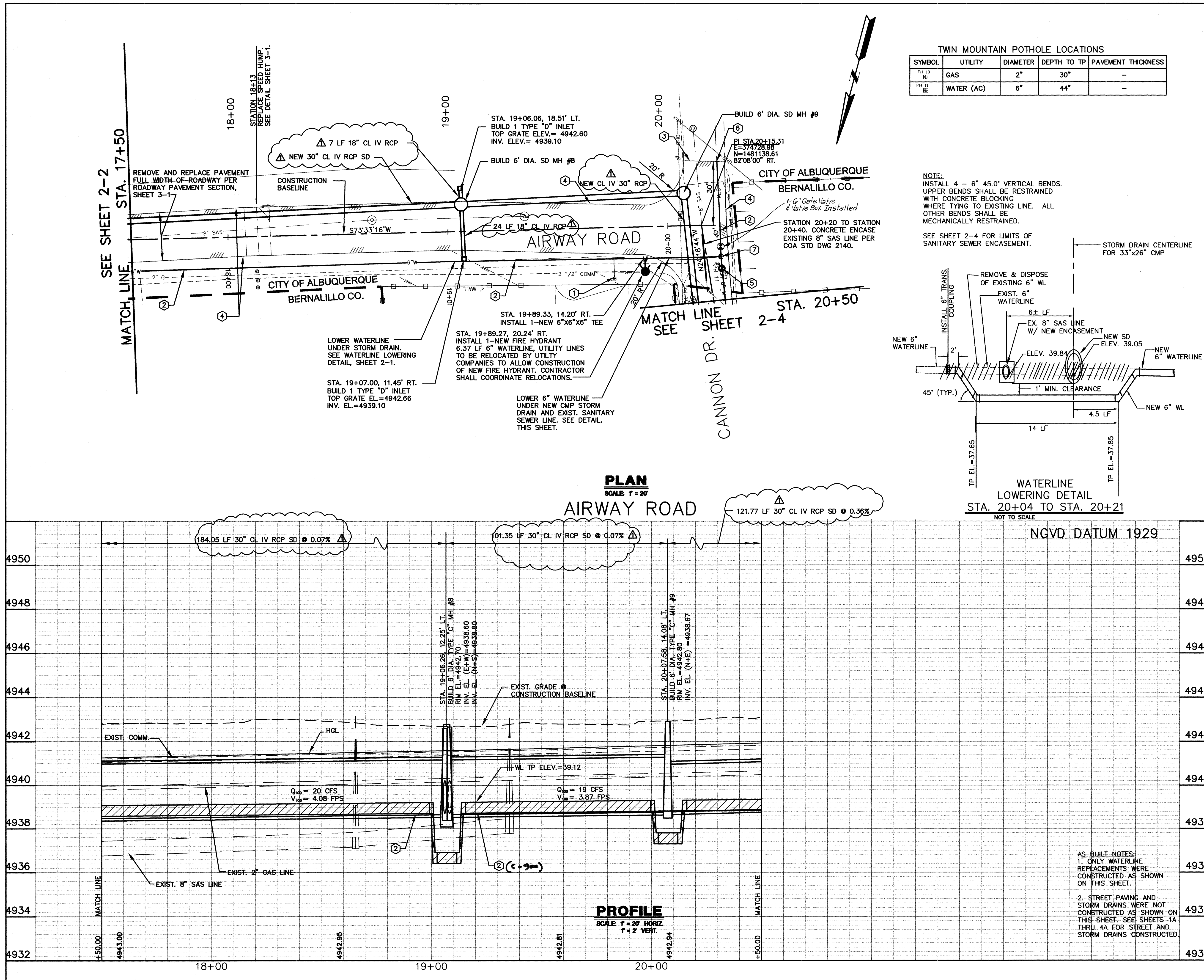
DESIGN REVIEW COMMITTEE: APPROVED JUL 2 4 2006  
CITY ENGINEER: APPROVED JUL 2 4 2006

Project No. 746381 Zone Map No. L13 Sheet 2-1 of 5 OF 22





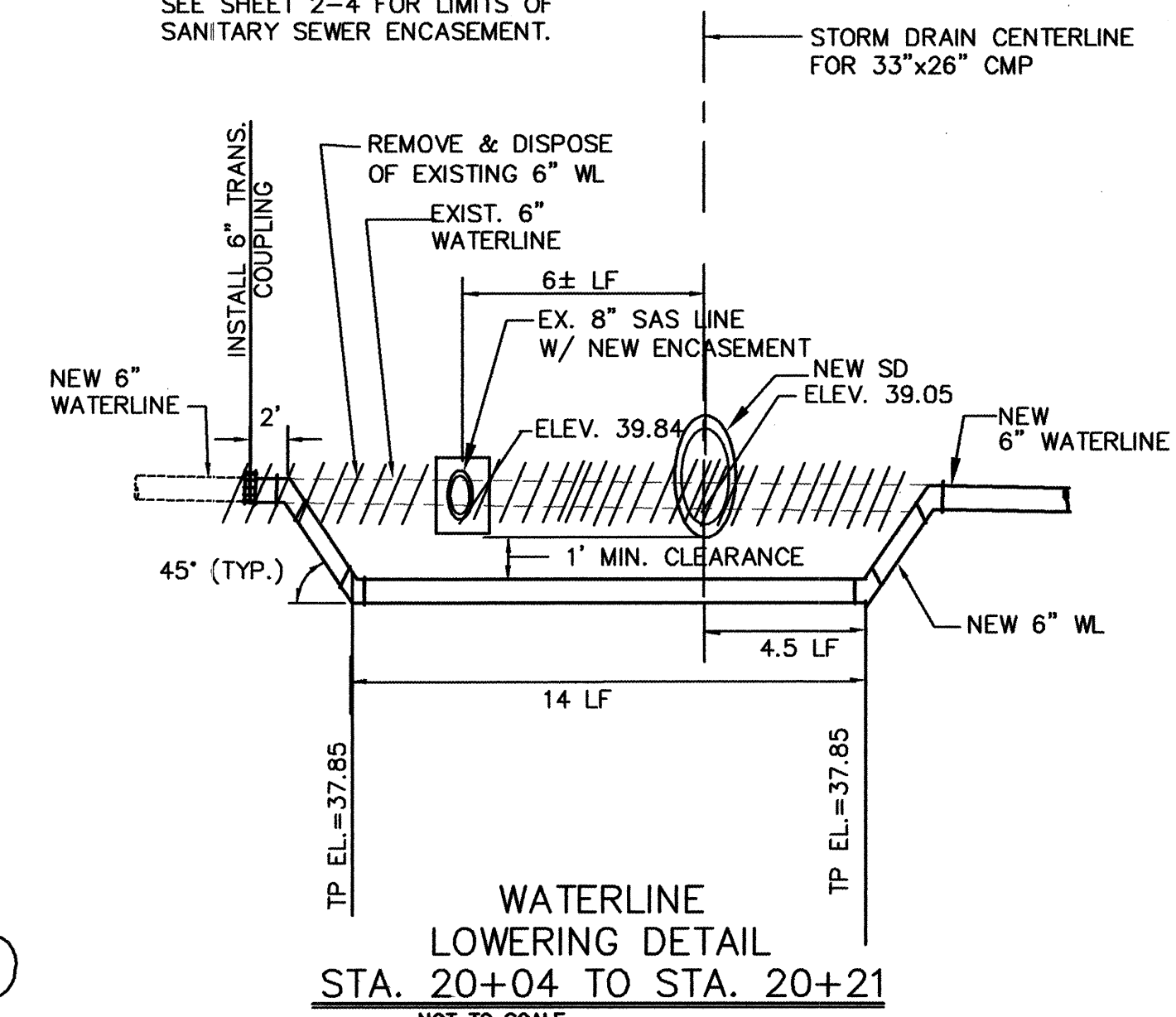




TWIN MOUNTAIN POTHOLE LOCATIONS				
SYMBOL	UTILITY	DIAMETER	DEPTH TO TP	PAVEMENT THICKNESS
PH 10	GAS	2"	30"	-
PH 11	WATER (AC)	6"	44"	-

NOTE:  
INSTALL 4 - 6" 45.0' VERTICAL BENDS.  
UPPER BENDS SHALL BE RESTRAINED  
WITH CONCRETE BLOCKING  
WHERE TYING TO EXISTING LINE. ALL  
OTHER BENDS SHALL BE  
MECHANICALLY RESTRAINED.

SEE SHEET 2-4 FOR LIMITS OF  
SANITARY SEWER ENCASEMENT.



NOTES:

- CONTRACTOR SHALL VERIFY EXISTING WATERLINE PIPE SIZE PRIOR TO STARTING THIS WORK.
- FOR ALL CMP STORM DRAIN PIPE SHOWN, USE 14 GAGE ALUMINIZED STEEL TYPE 2 ULTRA FLO PIPE FROM CONTECH CONSTRUCTION PRODUCTS, INC. OAE
- IN PROXIMITY OF EXISTING WL PIPE WHICH MAY NOT BE RESTRAINED, CONCRETE BLOCKING IS REQUIRED TO ENSURE RESTRAINT WITHIN RESTRAINED LENGTH OF THE TIE-IN.
- FITTINGS INSTALLED IN NEW WATERLINES SHALL BE MECHANICALLY RESTRAINED.
- CONCRETE BLOCKING AND/OR MECHANICAL RESTRAINTS FOR WATERLINES WILL BE PAID FOR PER UNIT UNDER THE APPLICABLE CONTRACT ITEM INCLUDED IN THE BID PROPOSAL.
- REFER TO GENERAL NOTES SHEET 1-4, FOR ASBESTOS CEMENT WATERLINE DISPOSAL.
- SEE SHEET 3-2 FOR WATER SHUTOFF PLAN AND RESTRAINED JOINT LENGTH TABLES.
- THE GAS LINE, UNDERGROUND TELEPHONE LINE, AND UNDERGROUND CABLE TELEVISION LINE ARE TO BE RELOCATED BY THE RESPECTIVE PRIVATE UTILITY COMPANIES AT THE NEW CATCH BASIN LOCATIONS AND AT ALL INTERSECTIONS WHERE NEW STORM DRAIN CROSSES THE UTILITIES. CONTRACTOR TO COORDINATE WITH UTILITY COMPANIES.
- ALL BEARINGS AND DISTANCES GIVEN PER THIS SHEET REFER TO CONSTRUCTION BASELINE.

KEYED NOTES:

- REPLACE 3/4" WATER SERVICE FROM MAIN LINE TO METER BOX PER COA STD. DWG. 2362. USE COPPER TUBING ONLY. WATER METER BOXES ARE TO BE REMOVED AND REPLACED WITH NEW BOXES. SEE GENERAL NOTES 10 AND 11 ON SHEET 1-3.
- REMOVE EXISTING 6" WATERLINE. INSTALL NEW 6" WATERLINE.
- END PAVEMENT REMOVAL AND REPLACEMENT.
- EDGE OF EXISTING PAVEMENT.
- REMOVE EXISTING VALVE & VALVE BOX. INSTALL NEW VALVE & VALVE BOX.
- END WATERLINE REMOVAL & REPLACEMENT. CONNECT TO EXISTING & INSTALL TRANSITION COUPLING.
- REMOVE EXISTING 6"x6"x6" TEE. INSTALL NEW 6"x6"x6" TEE.

RECORD DRAWING  
FEBRUARY 2007

**LARKIN GROUP, INC.**  
CONSULTING ENGINEERS AND SURVEYORS  
2500 MENLO BLVD., N.E.  
ALBUQUERQUE, NEW MEXICO 87112  
(505) 275-7500 FAX (505) 275-0749

CITY OF ALBUQUERQUE  
DEPARTMENT OF MUNICIPAL DEVELOPMENT

TITLE: STORM DRAIN AND UTILITY PLAN & PROFILE  
AIRWAY ROAD  
STA. 17+50 TO STA. 20+50

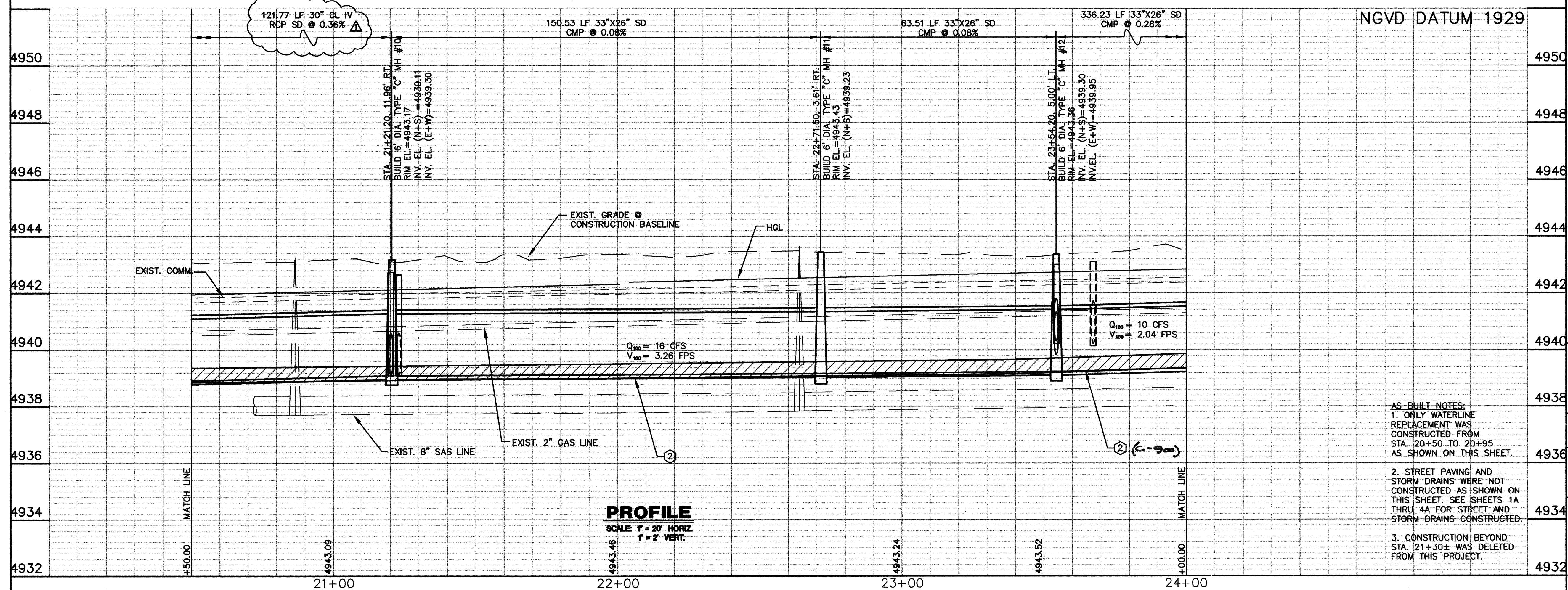
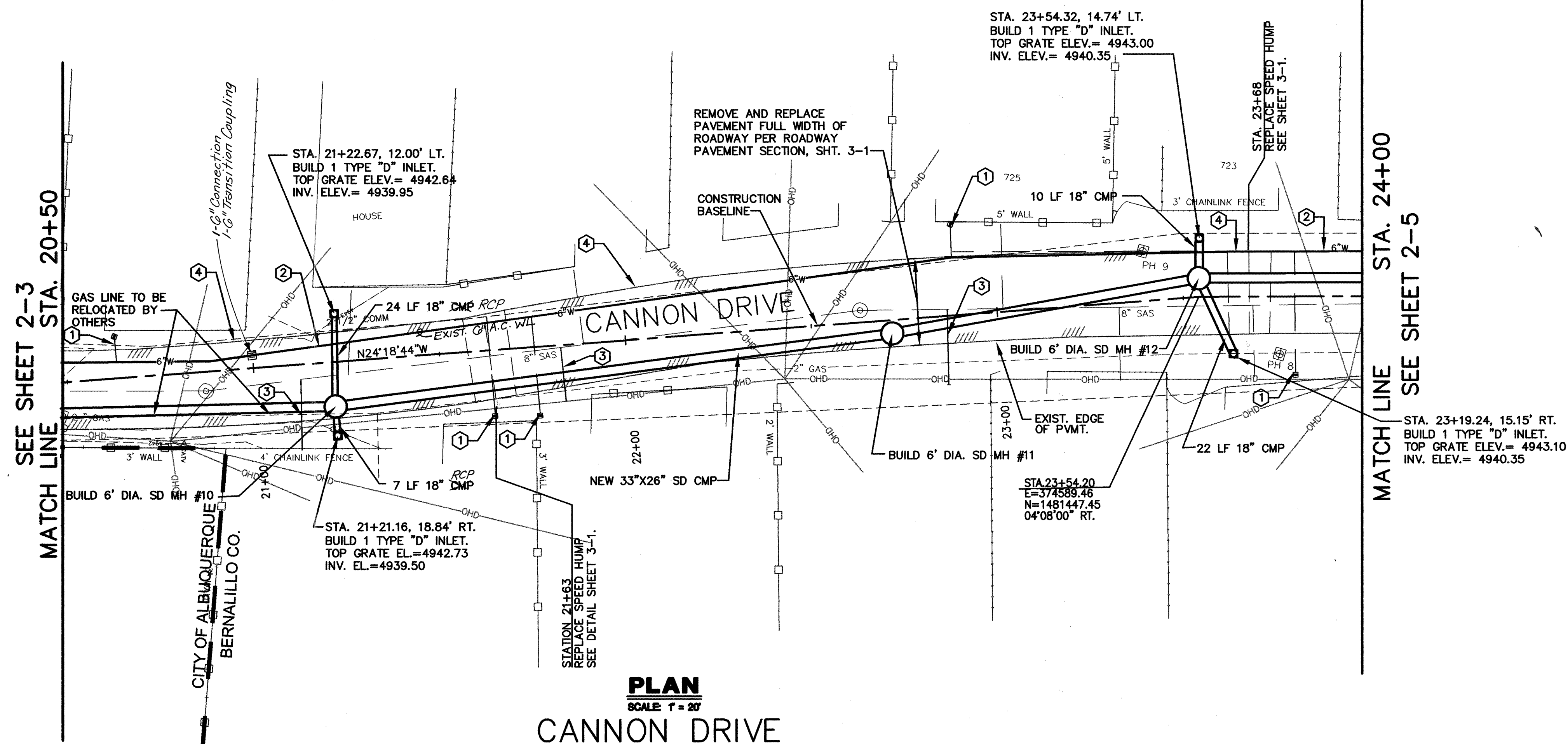
Design Review Committee	City Engineer Approval	Mo./Day/Yr.	Mo./Day/Yr.
APPROVED JUL 24 2006	APPROVED JUL 24 2006		
DESIGN REVIEW COMMITTEE	CITY ENGINEER		

Project No. 746381 Zone Map No. L13 Sheet 2-3 of 7 OF 22  
ADDENDUM No. 1

AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL	
CONTRACTOR	DATE	ACCS ALUMINUM CAP STAMPED "10-L-13, 1987"	DATE	NO.	BY	NO.	BY
INSPECTED BY: NM Surveying Co.	DATE: 8/06	LOCATED AT THE INTERSECTION OF BRIDGE BLVD. & ISLETA BLVD.	DATE: 2/07				
INSPECTED BY: Smith Engineering	DATE: 2/07	X: 375,554.44, Y: 1480,338.54 GEO POSITION (NAD 1927).	DATE: 2/07				
INSPECTED BY: NM Surveying	DATE: 2/07	IN FEET, N.M. STATE PLANE COORDINATES (CENTRAL ZONE):	DATE: 2/07				
INSPECTED BY: Larkin Group Inc.	DATE: 2/07	ELEV.=4944.55 FT., NGVD29	DATE: 2/07				
MICRO-FILM INFORMATION		RECORDED BY		DESIGNED BY:		DRAWN BY:	
		DATE					
		RECORDED BY					
		DATE					



TWIN MOUNTAIN POTHOLE LOCATIONS				
SYMBOL	UTILITY	DIAMETER	DEPTH TO TP	PAVEMENT THICKNESS
PH 8 ⊗	GAS	2"	32"	—
PH 9 ⊗	WATER (AC)	6"	42"	—



**AS BUILT NOTES:**

1. ONLY WATERLINE REPLACEMENT WAS CONSTRUCTED FROM STA. 20+50 TO 20+95 AS SHOWN ON THIS SHEET.
2. STREET PAVING AND STORM DRAINS WERE NOT CONSTRUCTED AS SHOWN ON THIS SHEET. SEE SHEETS 1A THRU 4A FOR STREET AND STORM DRAINS CONSTRUCTED
3. CONSTRUCTION BEYOND STA. 21+30± WAS DELETED FROM THIS PROJECT.

- NOTES:
1. CONTRACTOR SHALL VERIFY EXISTING WATERLINE PIPE SIZE PRIOR TO STARTING THIS WORK.
  2. FOR ALL CMP STORM DRAIN PIPE SHOWING USE 14 GAGE ALUMINIZED STEEL TYPE 2 ULTRA FLO PIPE FROM CONTECH CONSTRUCTION PRODUCTS, INC. OAE
  3. IN PROXIMITY OF EXISTING WL PIPE WHICH MAY NOT BE RESTRAINED, CONCRETE BLOCKING IS REQUIRED TO ENSURE RESTRAINT WITHIN RESTRAINED LENGTH OF THE TIE-IN.
  4. FITTINGS INSTALLED IN NEW WATERLINES SHALL BE MECHANICALLY RESTRAINED.
  5. CONCRETE BLOCKING AND/OR MECHANICAL RESTRAINTS FOR WATERLINES WILL BE PAID FOR PER UNIT UNDER THE APPLICABLE CONTRACT ITEM INCLUDED IN THE BID PROPOSAL
  6. REFER TO GENERAL NOTES SHEET 1-4, FOR ASBESTOS CEMENT WATERLINE DISPOSAL.
  7. SEE SHEET 3-2 FOR WATER SHUTOFF PLAN AND RESTRAINED JOINT LENGTH TABLES.
  8. THE GAS LINE, UNDERGROUND TELEPHONE LINE, AND UNDERGROUND CABLE TELEVISION LINE TO BE RELOCATED BY THE RESPECTIVE PRIVATE UTILITY COMPANIES AT THE NEW CATCH BASIN LOCATIONS AND ALL INTERSECTIONS WHERE NEW STORM DRAIN CROSSES THE UTILITIES. CONTRACTOR TO COORDINATE WITH UTILITY COMPANIES.
  9. ALL BEARINGS AND DISTANCES GIVEN PER THIS SHEET REFER TO CONSTRUCTION BASELINE.

**KEYED NOTES**

- ① REPLACE 3/4" WATER SERVICE FROM MAIN LINE TO METER BOX PER COA STD. DWG. 2362. USE COPPER TUBING ONLY. WATER METER BOXES ARE TO REMOVED AND REPLACED WITH NEW BOXES.  
SEE GENERAL NOTES 10 AND 11 ON SHEET 1-3.
- ② REMOVE EXISTING 6" WATERLINE. INSTALL NEW 6" WATERLINE.
- ③ REPLACE SANITARY SEWER SERVICE FROM MAIN LINE TO PROPERTY LINE PER COA STD. DWG 2134. LOCATION OF EXISTING SANITARY SEWER SERVICES IS OBTAINED FROM EXISTING AS-BUILT INFORMATION, AND CONTRACTOR SHALL VERIFY EXACT LOCATION OF SERVICES.
- ④ EDGE OF EXISTING PAVEMENT.

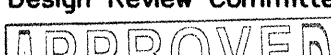

RECORD DRAWINGS WERE PREPARED  
FROM INFORMATION PROVIDED BY  
THE CONTRACTOR

RECORD DRAWING  
FEBRUARY 2007

 **LARKIN GROUP** ASA, INC.  
CONSULTING ENGINEERS AND SURVEYORS  
8500 MENAUL BLVD, NE A-440  
ALBUQUERQUE, NEW MEXICO 87112  
(505) 275-7500 FAX (505) 275-0748

CITY OF ALBUQUERQUE  
DEPARTMENT OF MUNICIPAL DEVELOPMENT

TITLE: STORM DRAIN AND UTILITY PLAN AND PROFILE  
CANNON DRIVE  
STA. 20+50 TO STA. 24+00

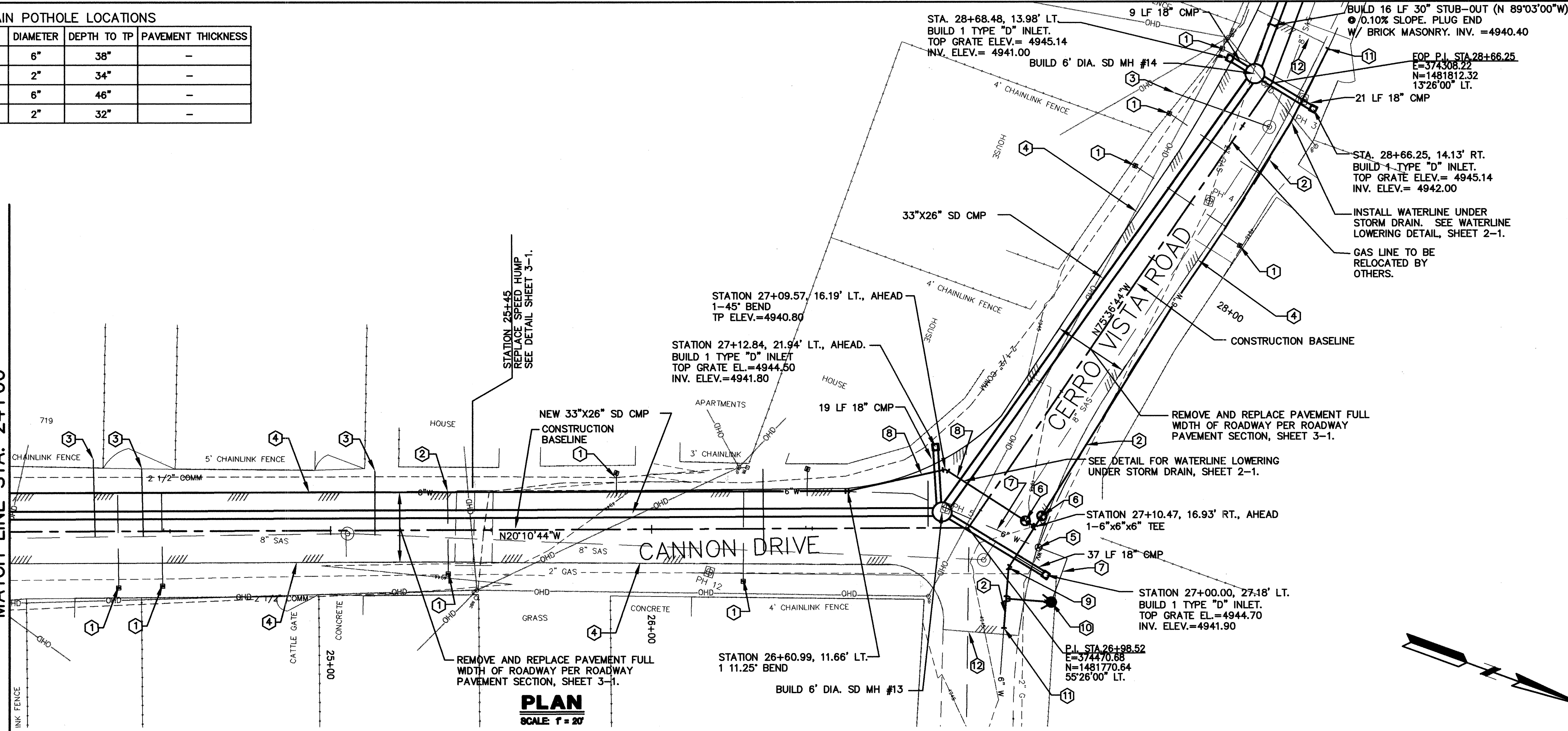
4	Design Review Committee	City Engineer Approval	Mo./Day/Yr.	Mo./Day/Yr.
			Last Design Update	
2	Project No.	Zone Map No.		Sheet

ADDENDUM No. 1 8 OF 22

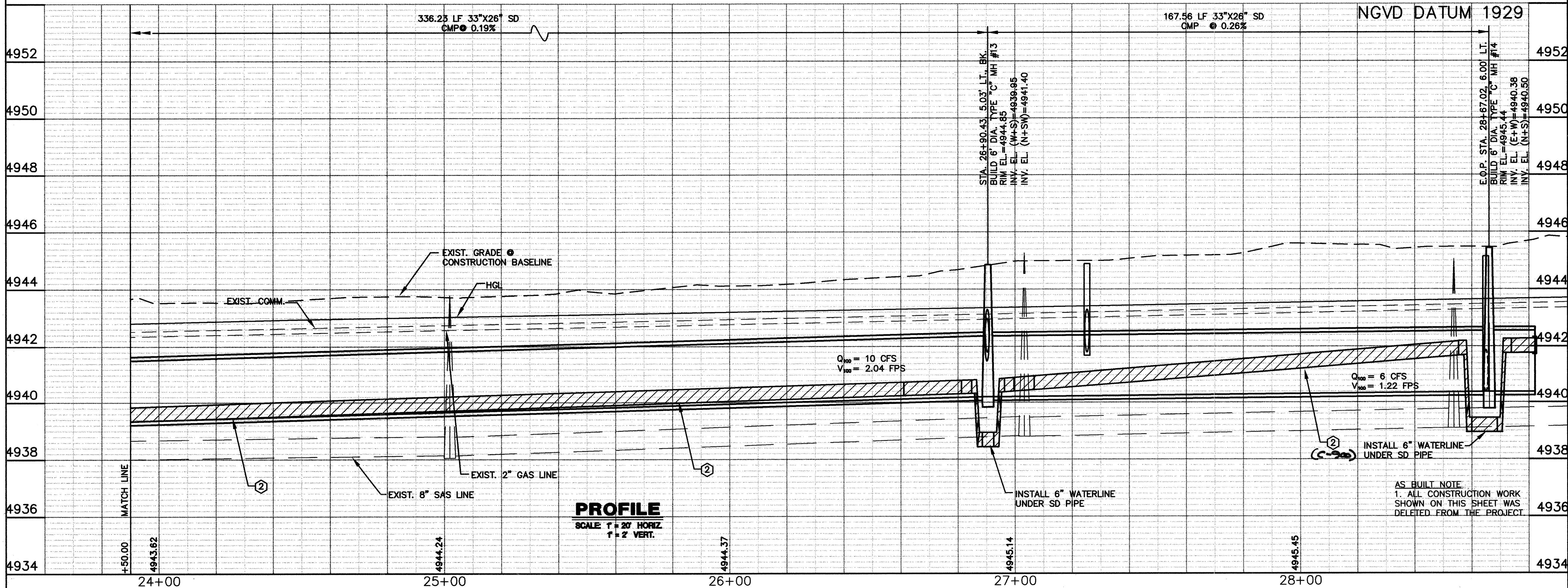


TWIN MOUNTAIN POTHOLE LOCATIONS				
SYMBOL	UTILITY	DIAMETER	DEPTH TO TP	PAVEMENT THICKNESS
PH 3	WATER (AC)	6"	38"	-
PH 4	GAS	2"	34"	-
PH 5	WATER (AC)	6"	46"	-
PH 10	GAS	2"	32"	-

SEE SHEET 2-4  
MATCH LINE STA. 24+00



CANNON DRIVE



RECORD DRAWING  
FEBRUARY 2007

**LARKIN GROUP, INC.**  
CONSULTING ENGINEERS AND SURVEYORS  
2500 NEWPORT BLVD., N.E. 4-140  
ALBUQUERQUE, NEW MEXICO 87112  
(505) 275-7500 FAX (505) 275-0748

CITY OF ALBUQUERQUE

DEPARTMENT OF MUNICIPAL DEVELOPMENT


TITLE: STORM DRAIN AND UTILITY PLAN & PROFILE  
CANNON DRIVE & CERRO VISTA RD.  
STA. 24+00 TO STA. 28+66.25

Design Review Committee City Engineer Approval  
APPROVED JUL 24 2006  
DESIGN REVIEW COMMITTEE CITY ENGINEER

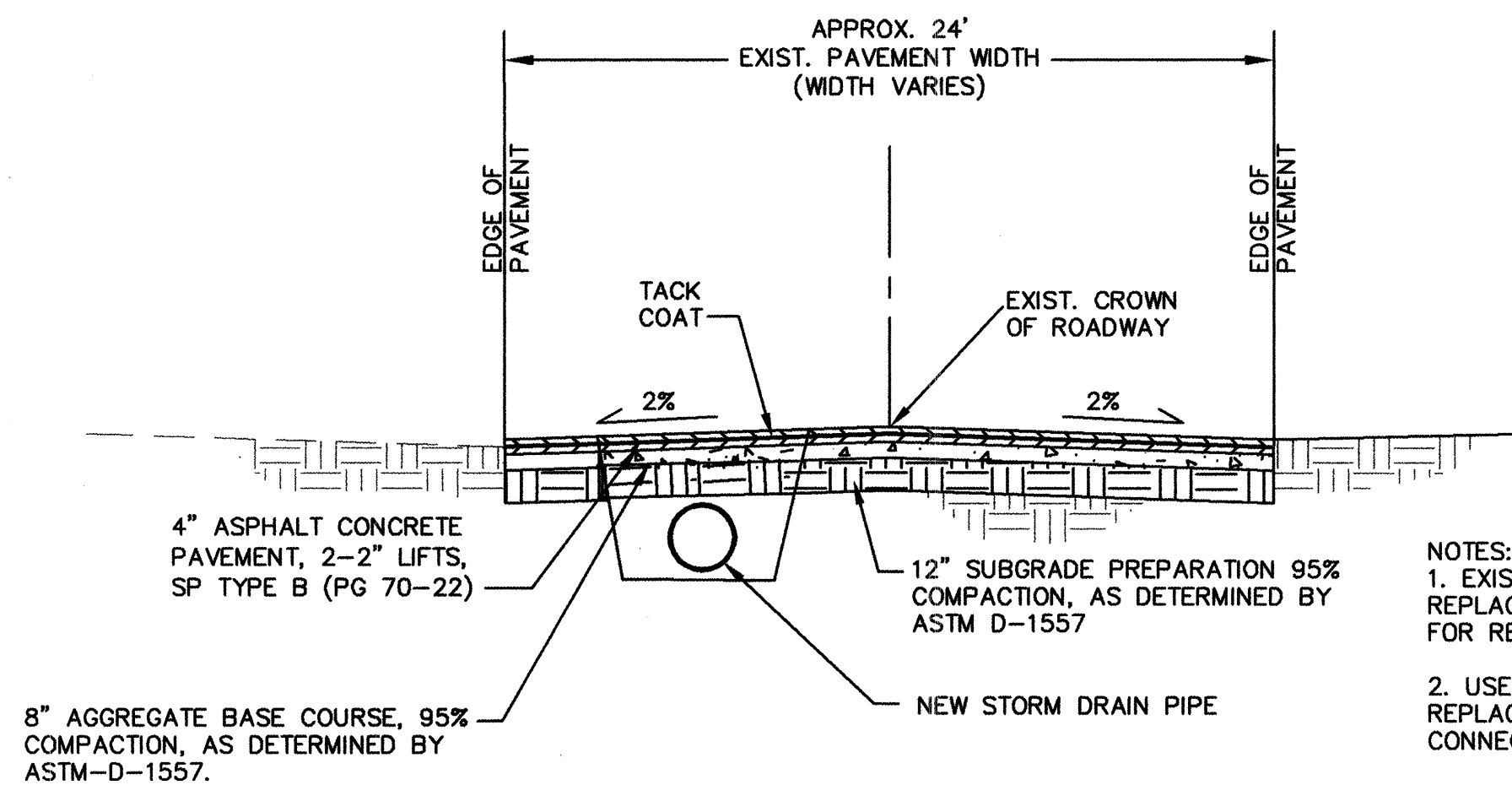
Project No. 746381 Zone Map No. L13 Sheet 2-5 of 9

- NOTES:
- CONTRACTOR SHALL VERIFY EXISTING WATERLINE PIPE SIZE PRIOR TO STARTING THIS WORK.
  - FOR ALL CMP STORM DRAIN PIPE SHOWN, USE 14 GAGE ALUMINIZED STEEL TYPE 2 ULTRA FLO PIPE FROM CONTECH CONSTRUCTION PRODUCTS, INC. OAE
  - IN PROXIMITY OF EXISTING WL PIPE WHICH MAY NOT BE RESTRAINED, CONCRETE BLOCKING IS REQUIRED TO ENSURE RESTRAINT WITHIN RESTRAINED LENGTH OF THE TIE-IN.
  - FITTINGS INSTALLED IN NEW WATERLINES SHALL BE MECHANICALLY RESTRAINED.
  - CONCRETE BLOCKING AND/OR MECHANICAL RESTRAINTS FOR WATERLINES WILL BE PAID FOR PER UNIT UNDER THE APPLICABLE CONTRACT ITEM INCLUDED IN THE BID PROPOSAL.
  - REFER TO GENERAL NOTES SHEET 1-4, FOR ASBESTOS CEMENT WATERLINE DISPOSAL.
  - SEE SHEET 3-2 FOR WATER SHUTOFF PLAN AND RESTRAINED JOINT LENGTH TABLES.
  - THE GAS LINE, UNDERGROUND TELEPHONE LINE, AND UNDERGROUND CABLE TELEVISION LINE ARE TO BE RELOCATED BY THE RESPECTIVE PRIVATE UTILITY COMPANIES AT THE NEW CATCH BASIN LOCATIONS AND AT ALL INTERSECTIONS WHERE NEW STORM DRAIN CROSSES THE UTILITIES. CONTRACTOR TO COORDINATE WITH UTILITY COMPANIES.
  - ALL BEARINGS AND DISTANCES GIVEN PER THIS SHEET REFER TO CONSTRUCTION BASELINE.

- KEYED NOTES:
- REPLACE 3/4" WATER SERVICE FROM MAIN LINE TO METER BOX PER COA STD. DWG. 2362. USE COPPER TUBING ONLY. WATER METER BOXES ARE TO BE REMOVED AND REPLACED WITH NEW BOXES. SEE GENERAL NOTES 10 AND 11 ON SHEET 1-3.
  - REMOVE EXISTING 6" WATERLINE. INSTALL NEW 6" WATERLINE.
  - REPLACE SANITARY SEWER SERVICE FROM MAIN LINE TO PROPERTY LINE PER COA STD. DWG. 2134. LOCATION OF EXISTING SANITARY SEWER SERVICES ARE OBTAINED FROM AS-BUILT INFORMATION. CONTRACTOR IS TO VERIFY EXACT LOCATION OF SERVICES.
  - EDGE OF EXISTING PAVEMENT.
  - REMOVE EXISTING VALVE AND VALVE BOX.
  - INSTALL NEW 6" VALVE AND VALVE BOX.
  - REMOVE EXISTING 6" WATERLINE.
  - INSTALL NEW 6" WATERLINE.
  - INSTALL NEW 22.5' BEND.
  - REMOVE EXISTING FIRE HYDRANT. INSTALL NEW 4" BURY FIRE HYDRANT, 1-6"x6"x6" TEE AND 14 LF OF 6" WATERLINE.
  - END WATERLINE REMOVAL & REPLACEMENT. INSTALL TRANSITION COUPLING.
  - END PAVEMENT REMOVAL & REPLACEMENT.

ENGINEER'S SEAL										SURVEY INFORMATION				BENCH MARKS				AS BUILT INFORMATION											
										NO.		BY		DATE		ACS ALUMINUM CAP STAMPED "10-L-13, 1987"				CONTRACTOR: NM Underground Contractors, Inc. VENUE: STANLEY BY NM Surveying Co. DATE: 8/06									
										1						LOCATED AT THE INTERSECTION OF BRIDGE BLVD. & ISLETA BLVD.				INSPECTOR'S: E. Smith Engineering Inc. DATE: 2/07									
																X: 375,554.44, Y: 1480,336.54 GEO POSITION (NAD 1927).				FIELD: JAMES E. Smith Engineering Co. DATE: 2/07									
																IN FEET, N.M. STATE PLANE COORDINATES (CENTRAL ZONE):				VERIFICATION BY: NM Surveying Co. DATE: 2/07									
DESIGNED BY: DRAWN BY: CHECKED BY:										▲		R E V I S I O N S		DESIGN		CORRECTED BY: Lark-kin Group Wkt. Inc. DATE: 2/23/07				MICRO-FILM INFORMATION									
																ELEV.= 6944.55 FT., NGVD29				RECORDED BY: DATE:									
																				RECORDED BY: DATE:									
																				RECORDED BY: DATE:									
DEVELOPMENT										PLAN & PROFILE																			
VISTA RD.										28+66.25																			
Last Design Update										Mo./Day/Yr.										Mo./Day/Yr.									
Sheet										2-5										Of									

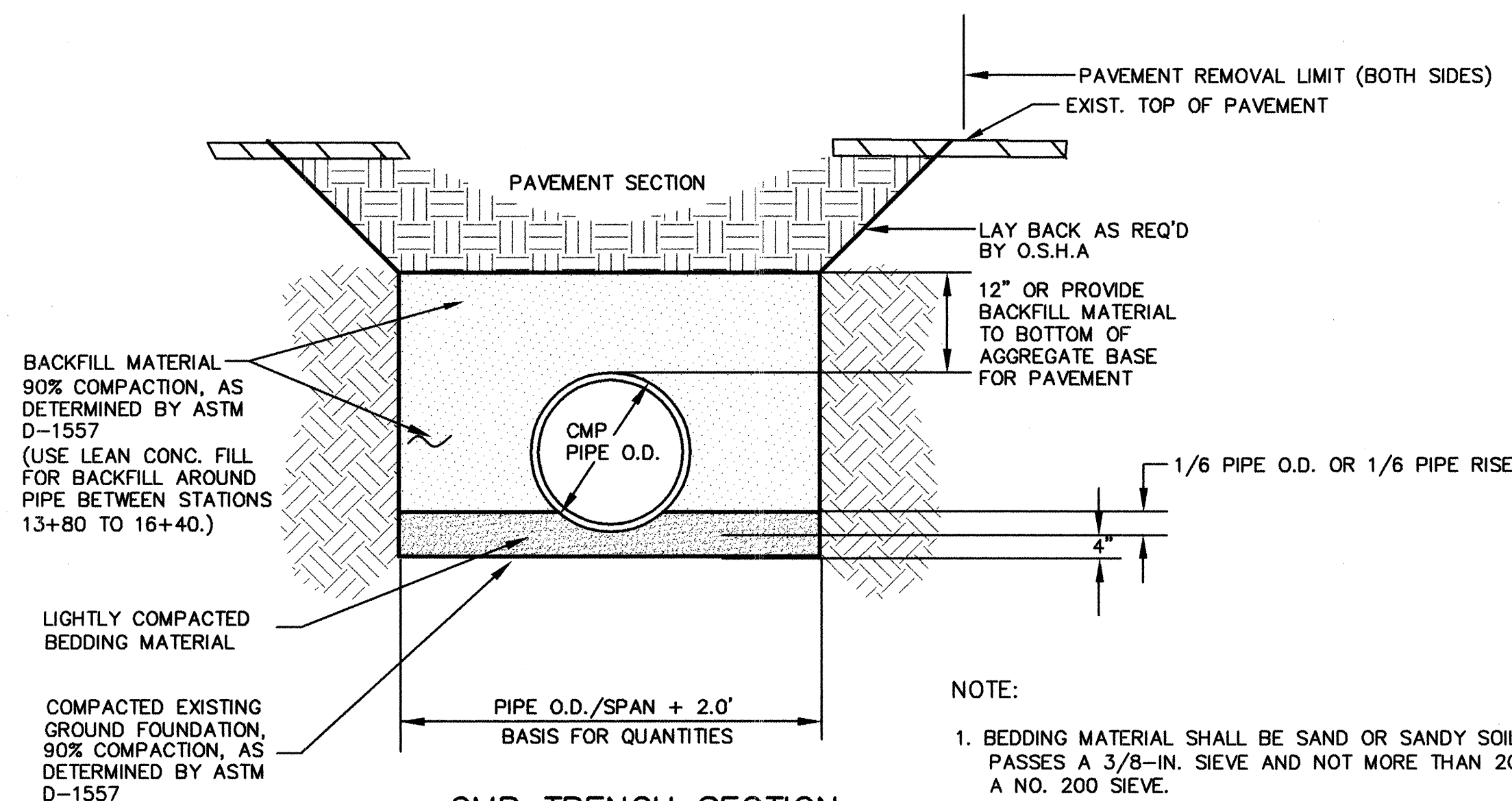




TYPICAL ROADWAY PAVEMENT SECTION  
SCALE: 1"=5'-0"

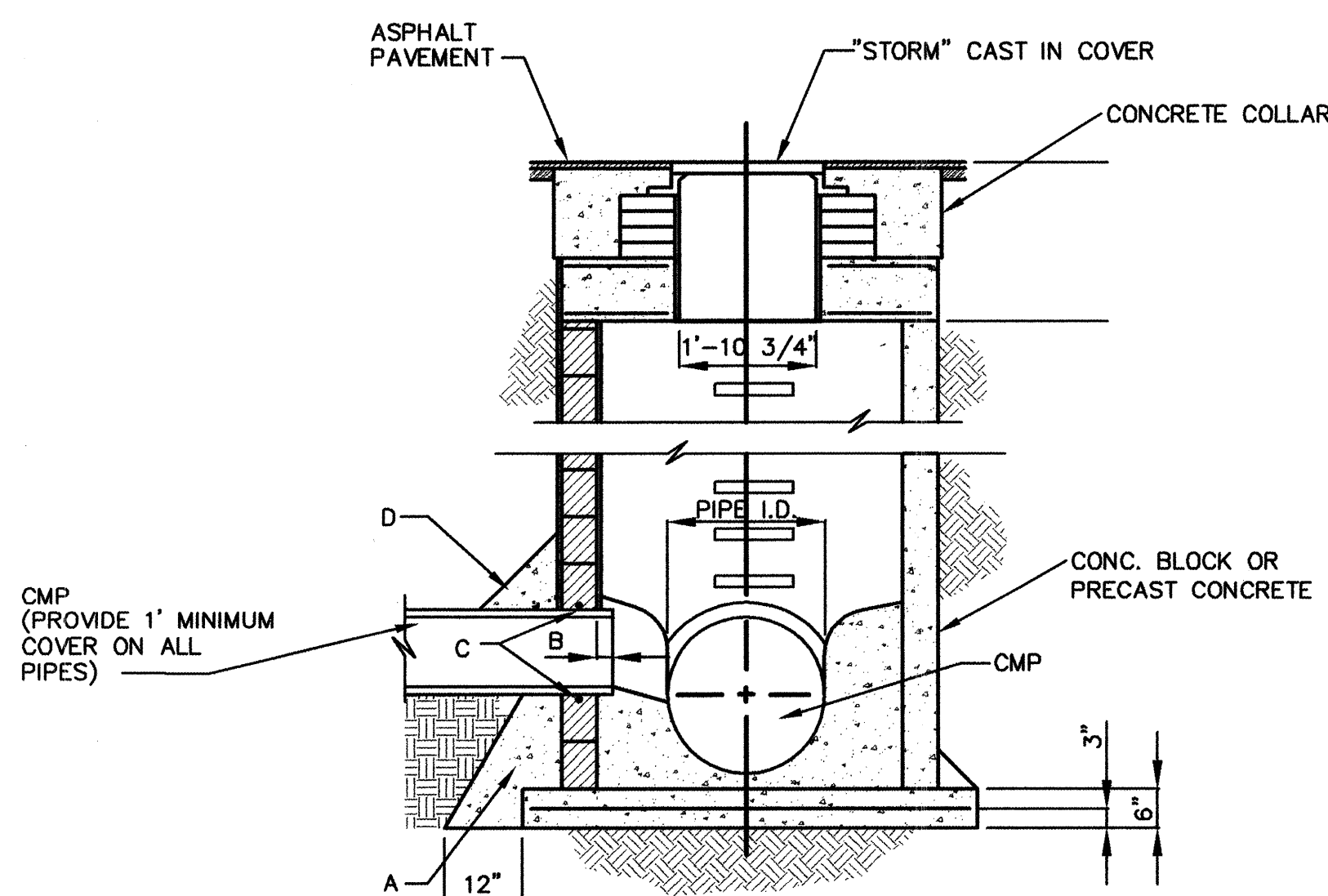
AS BUILT NOTE:  
THIS TYPICAL ROADWAY SECTION  
APPLYS ONLY TO CANNON ROAD

- NOTES:
1. EXISTING PAVEMENT SHALL BE REMOVED & REPLACED FULL PAVEMENT WIDTH. (SEE PLANS FOR REMOVAL AND REPLACEMENT LIMITS.)
  2. USE 2% CROSS-SLOPE (CROWN) FOR ALL REPLACEMENT OF PAVEMENT. USE SMOOTH RIDING CONNECTION TO MATCH EXISTING PAVEMENT.



CMP TRENCH SECTION  
PIPE BEDDING

SCALE: 1" = 2'-0"

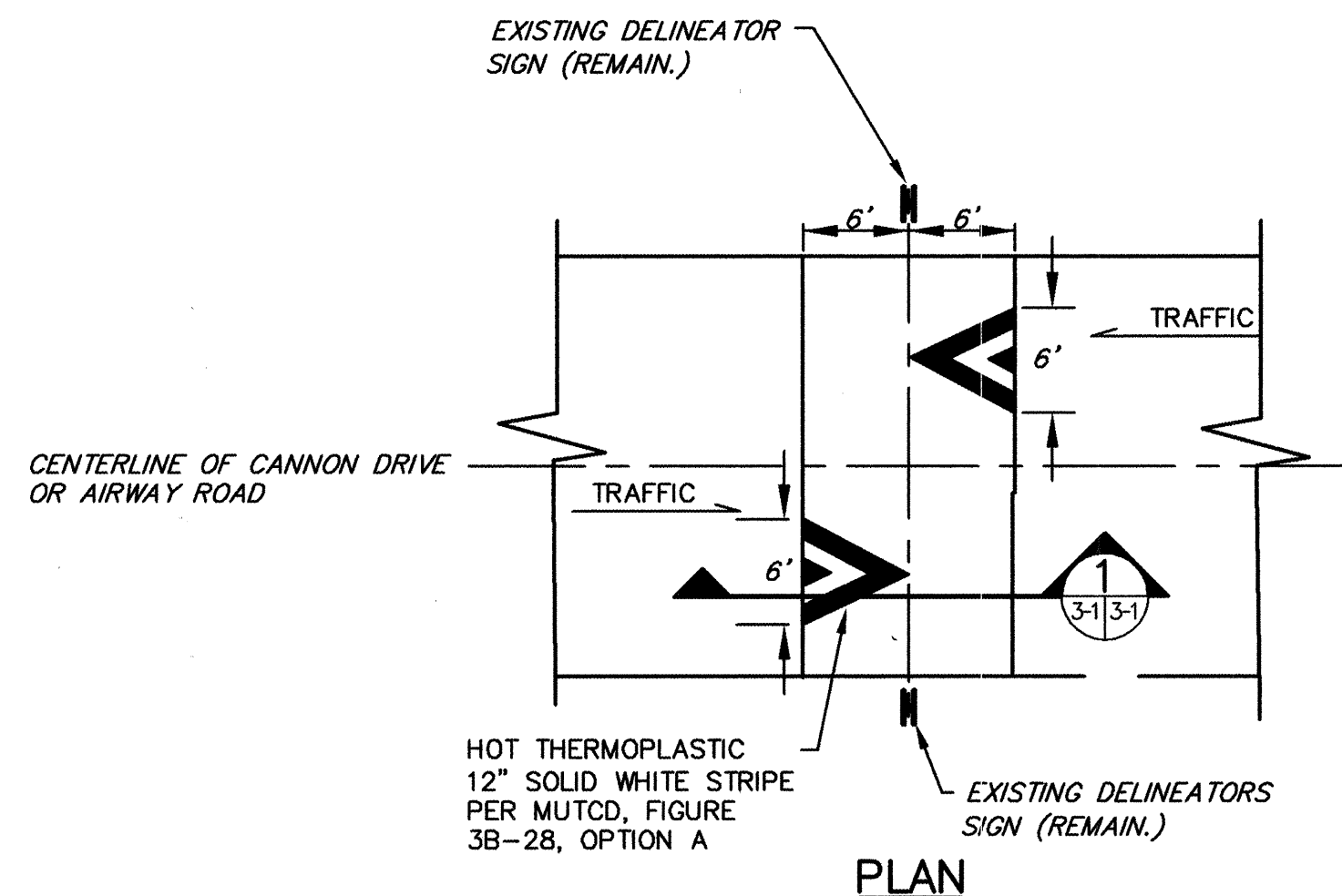


MANHOLE  
CROSS SECTION A-A

TAKEN FROM COA STD. DWG. 2101  
NO SCALE

### TYPE C MANHOLE CONSTRUCTION NOTES: (SEE COA STD DWG 2101)

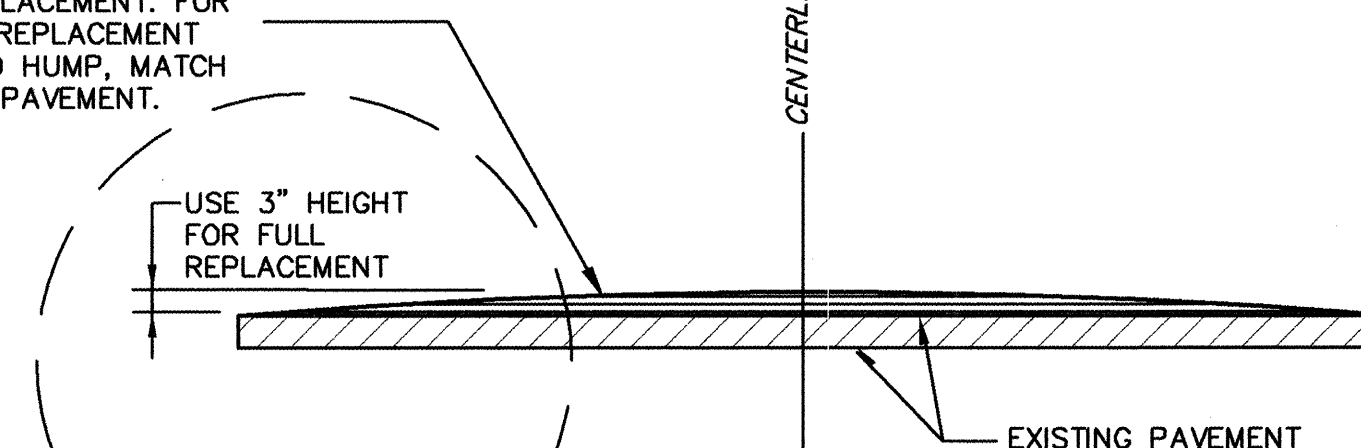
- CONCRETE PIPE SUPPORT TO EXTEND 8" OUTSIDE OF MANHOLE AND SHALL CRADLE PIPE TO SPRING LINE.
- PIPE PENETRATION INTO MANHOLE SHALL BE FLUSH TO 2" MAX, MEASURED AT SPRINGLINE OF PIPE.
- APPROVED WATERSTOP TO BE COMPATIBLE WITH TYPE OF PIPE
- 8" GROUT FILLET ON UPPER HALF OF PIPE AND AROUND BASE.



PLAN

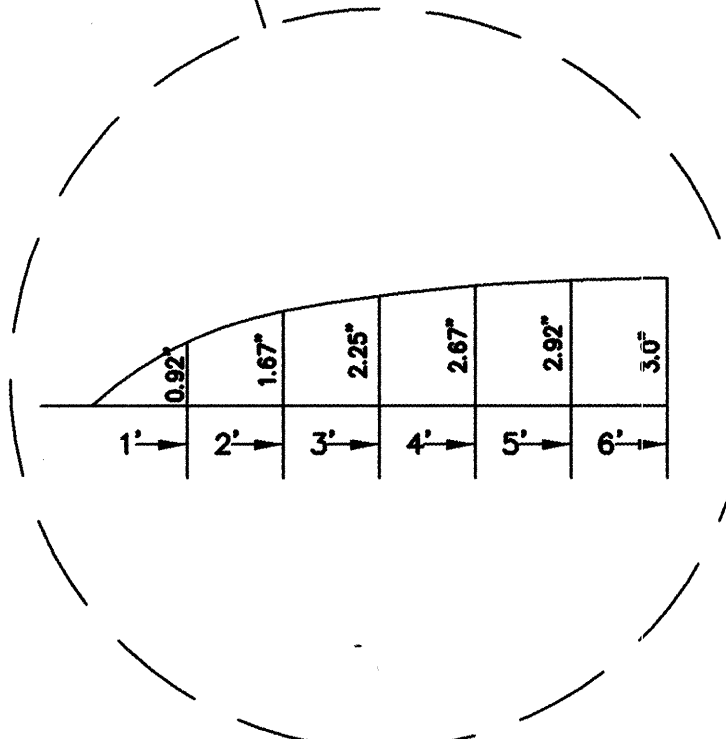
### SPEED HUMP REPLACEMENT CANNON DRIVE & AIRWAY ROAD STATIONS: 18+13, 21+63, 23+68 & 25+45 NO SCALE (25 MPH)

APPROACH ARCH RADIUS  
=72.125' (TYP.) FOR  
FULL REPLACEMENT. FOR  
PARTIAL REPLACEMENT  
OF SPEED HUMP, MATCH  
EXISTING PAVEMENT.



SECTION  
NO SCALE

### SPEED HUMP APPROACH DETAIL NO SCALE



### NOTES:

1. WATT'S PROFILE SPEED HUMPS RESULTS IN VEHICLE SPEEDS OF APPROXIMATELY 25 M.P.H.
2. PLACEMENT OF SPEED HUMPS SHALL BE DONE TOWARD END OF CONSTRUCTION AFTER ALL EXCAVATED DIRT HAS BEEN HAULED OFF-SITE AND ALL ASPHALT PAVEMENT HAS BEEN PLACED TO REDUCE AMOUNT OF VIBRATION CAUSED BY HEAVY TRUCK TRAFFIC.
3. EXISTING SIGNAGE FOR SPEED HUMPS INCLUDING "SPEED HUMP AHEAD" SIGNS AND "OBJECT MARKER" SIGNS ARE TO REMAIN.

AS BUILT INFORMATION				BENCH MARKS				SURVEY INFORMATION				ENGINEER'S SEAL			
CONTRACTOR	DATE	BY	NO.	CONTRACTOR	DATE	BY	NO.	CONTRACTOR	DATE	BY	NO.	CONTRACTOR	DATE	BY	NO.
WATT'S PROFILE	8/06	WATT'S PROFILE	1	WATT'S PROFILE	8/06	WATT'S PROFILE	1	WATT'S PROFILE	8/06	WATT'S PROFILE	1	WATT'S PROFILE	8/06	WATT'S PROFILE	1
WATT'S PROFILE	8/06	WATT'S PROFILE	2	WATT'S PROFILE	8/06	WATT'S PROFILE	2	WATT'S PROFILE	8/06	WATT'S PROFILE	2	WATT'S PROFILE	8/06	WATT'S PROFILE	2
WATT'S PROFILE	8/06	WATT'S PROFILE	3	WATT'S PROFILE	8/06	WATT'S PROFILE	3	WATT'S PROFILE	8/06	WATT'S PROFILE	3	WATT'S PROFILE	8/06	WATT'S PROFILE	3
WATT'S PROFILE	8/06	WATT'S PROFILE	4	WATT'S PROFILE	8/06	WATT'S PROFILE	4	WATT'S PROFILE	8/06	WATT'S PROFILE	4	WATT'S PROFILE	8/06	WATT'S PROFILE	4
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WATT'S PROFILE	8/06	WATT'S PROFILE	6	WATT'S PROFILE	8/06	WATT'S PROFILE	6	WATT'S PROFILE	8/06	WATT'S PROFILE	6	WATT'S PROFILE	8/06	WATT'S PROFILE	6
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RECORD DRAWING  
FEBRUARY 2007

**LARKIN GROUP, INC.**  
CONSULTING ENGINEERS AND SURVEYORS  
8500 MENAUL BLVD. NE A-140 (505) 275-7500

CITY OF ALBUQUERQUE

DEPARTMENT OF MUNICIPAL DEVELOPMENT

TITLE: HARTLINE DRAINAGE IMPROVEMENTS  
TYPICAL ROADWAY SECTION  
AND STORM DRAIN DETAILS

Design Review Committee	City Engineer Approval	Mo./Day/Yr.	Mo./Day/Yr.
JUL 24 2006 DESIGN REVIEW COMMITTEE	JUL 24 2006 CITY ENGINEER		

Project No.	Zone Map No.	Sheet
746381	L-13	3-1



WATER SHUTOFF PLAN

THE PURPOSE OF THIS WORK IS TO ALLOW FOR REPLACEMENT OF THE WATERLINE IN THIS PROJECT AS REQUIRED. TEN (10) DAYS BEFORE ANY VALVES ARE CLOSED, THE CONTRACTOR SHALL CONTACT THE BERNALILLO COUNTY FIRE DEPARTMENT AND CITY OF ALBUQUERQUE FIRE DEPARTMENT.

NOTES:

- 1. CLOSE VALVES "L-13-192", "L-13-193", "L-13-1A", "L-13-221" & "L-13-232" FOR WATERLINE REPLACEMENT ON BRIDGE BOULEVARD BETWEEN CANNON DRIVE AND HARTLINE ROAD AND ON HARTLINE ROAD BETWEEN BRIDGE BOULEVARD AND BERNICE AVENUE.
- 2. CLOSE VALVES "L-13-181", "L-13-182", "L-13-231", AND NEW VALVE FOR WATERLINE REPLACEMENT ON HARTLINE ROAD BETWEEN BERNICE AVENUE AND AIRWAY.
- 3. CLOSE VALVES "L-13-181", "L-13-73", AND "L-13-232" FOR WATERLINE REPLACEMENT AT THE INTERSECTION OF CANNON DRIVE AND AIRWAY.
- 4. CLOSE VALVES "L-13-82", "L-13-72", "L-13-173" AND "L-13-181" FOR WATERLINE REPLACEMENT AT INTERSECTION OF CERRO VISTA DRIVE AND CANNON DRIVE.
- 5. CLOSE VALVES "L-13-72", AND "L-13-62" FOR WATERLINE REPLACEMENT ON CERRO VISTA DRIVE BETWEEN SHELBOURN DRIVE AND AND CANNON DRIVE.

UTILITY SERVICE REPLACEMENT RECORD FOR WATER SERVICES

ADDRESS	WATER SERVICE & SIZE
210 Cannon Dr.	
212 Cannon Dr.	
224 Cannon Dr.	
230 Cannon Dr.	
232 Cannon Dr.	
238 Cannon Dr.	
248 Cannon Dr.	
249 Cerro Vista Road	
251 Cerro Vista Road	

UTILITY SERVICE REPLACEMENT RECORD FOR SEWER SERVICES

ADDRESS	SANITARY SEWER SERVICE & SIZE
713 Cannon Dr.	
717 Cannon Dr.	
717 Cannon Dr.	
719 Cannon Dr.	
723 Cannon Dr.	
222 Cannon Dr.	
220 Cannon Dr.	
212 Cannon Dr.	
210 Cannon Dr.	
249 Cerro Vista Road	
251 Cerro Vista Road	

RECORD DRAWINGS WERE PREPARED FROM INFORMATION PROVIDED BY THE CONTRACTOR

RECORD DRAWING  
FEBRUARY 2007



CITY OF ALBUQUERQUE  
DEPARTMENT OF MUNICIPAL DEVELOPMENT

TITLE: HARTLINE DRAINAGE IMPROVEMENTS  
WATER SHUTOFF PLAN

Design Review Committee	City Engineer Approval	Mo./Day/Yr.	Mo./Day/Yr.
APPROVED JUL 2 4 2006	APPROVED JUL 2 4 2006 CITY ENGINEER		
Project No. 746381	Zone Map No. L-13	Sheet 3-2	

AS BUILT INFORMATION

CONTRACTOR: M.H. Underground Contractors, Inc.

WORK: M.H. Surveying Co. DATE: 8/06

ACCEPTANCE: Smith Engineering Co. DATE: 2/07

VERIFICATION: M.H. Surveying Co. DATE: 2/07

DRAWINGS: M.H. Surveying Co. DATE: 2/07

CHECKED: M.H. Surveying Co. DATE: 2/07

RECORDED BY: DATE

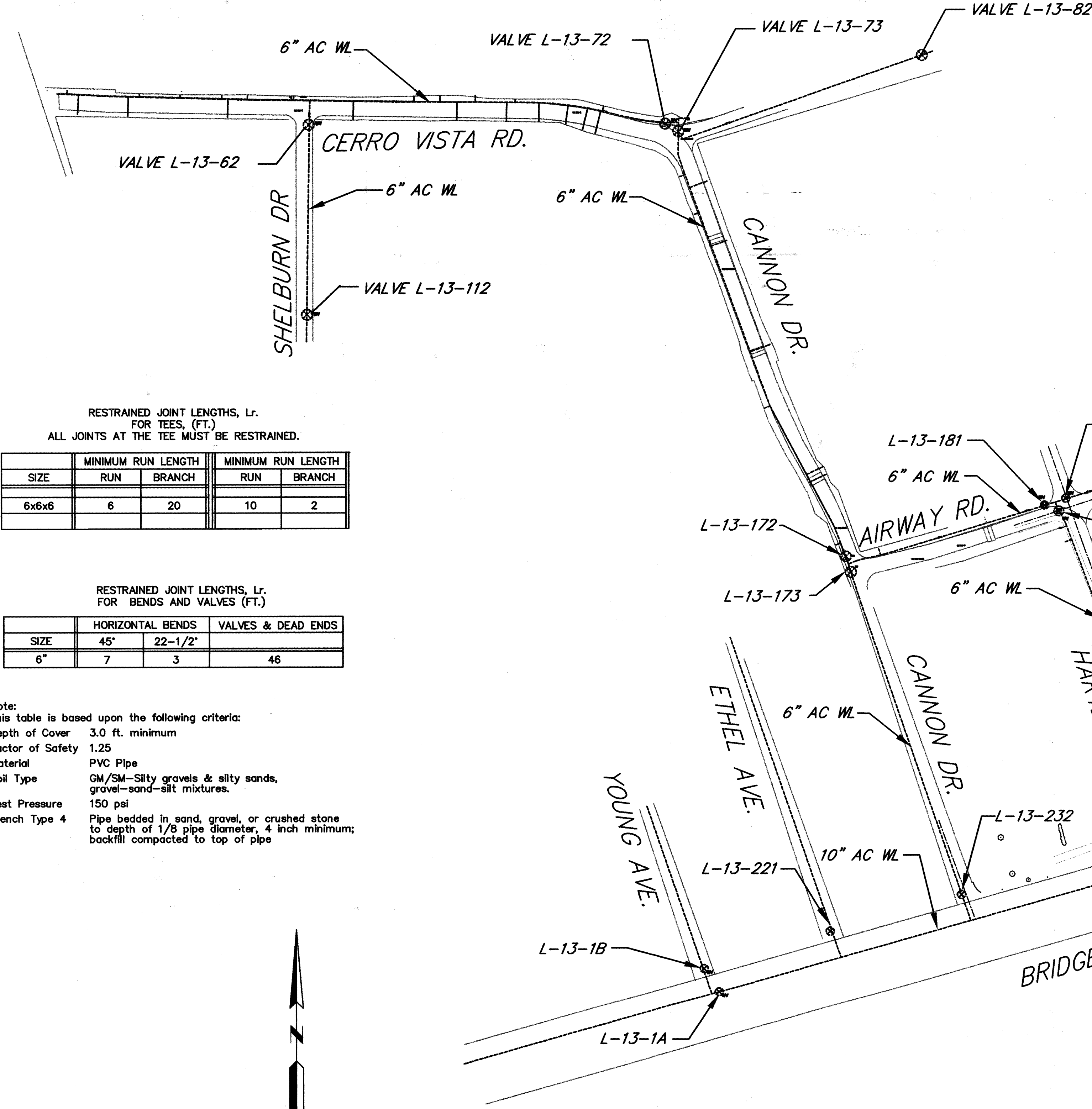
RECORDED BY: DATE

ENGINEER'S SEAL

4-12-06

REVISIONS

NO.	DATE	REMARKS	BY
1			
2			
3			
4			
5			
6			
7			



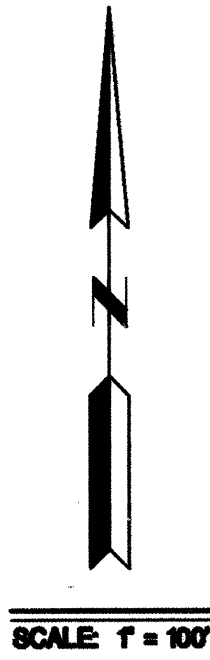
RESTRAINED JOINT LENGTHS, Lr.  
FOR TEES, (FT.)  
ALL JOINTS AT THE TEE MUST BE RESTRAINED.

SIZE	MINIMUM RUN LENGTH RUN	MINIMUM RUN LENGTH BRANCH	MINIMUM RUN LENGTH RUN	MINIMUM RUN LENGTH BRANCH
6x6x6	6	20	10	2

RESTRAINED JOINT LENGTHS, Lr.  
FOR BENDS AND VALVES (FT.)

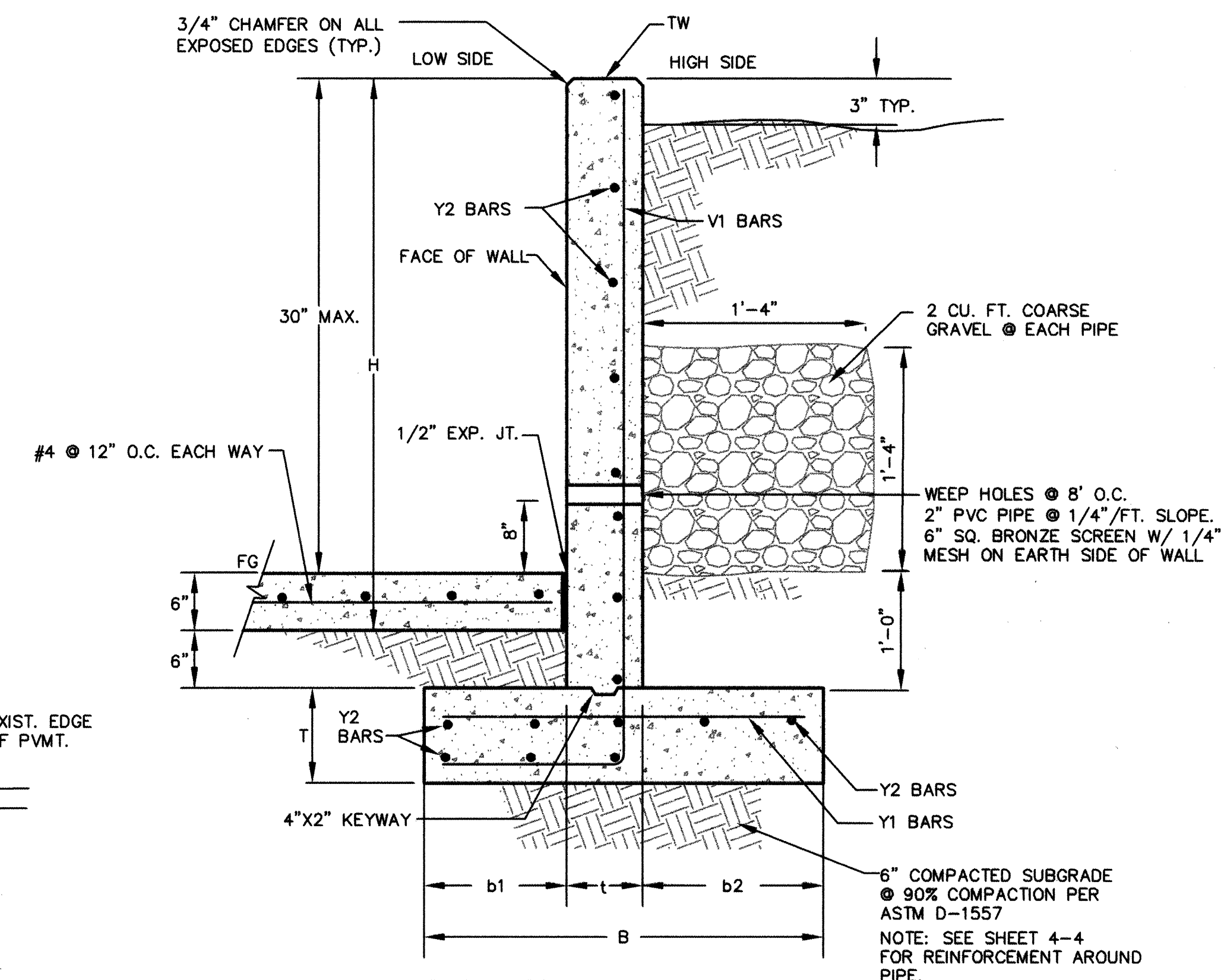
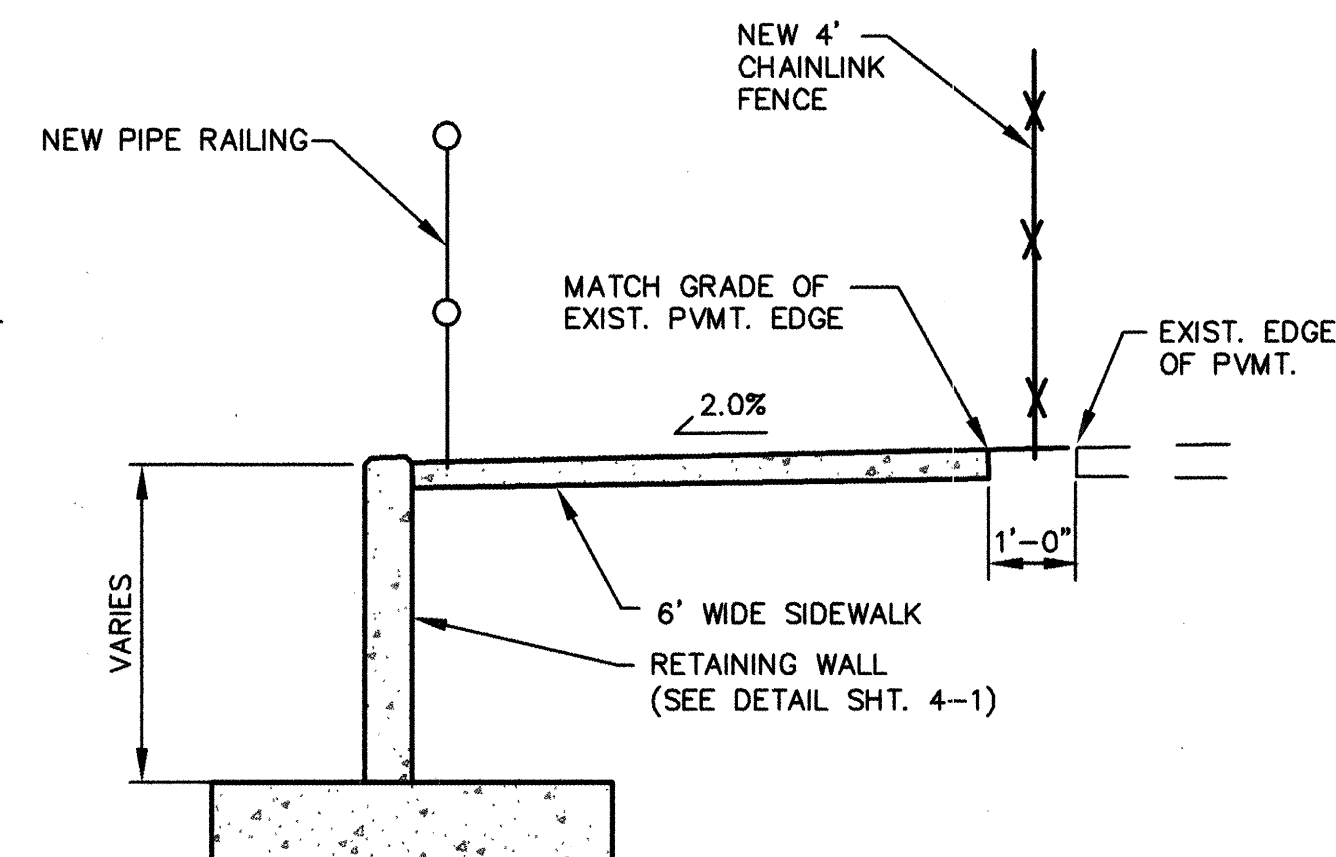
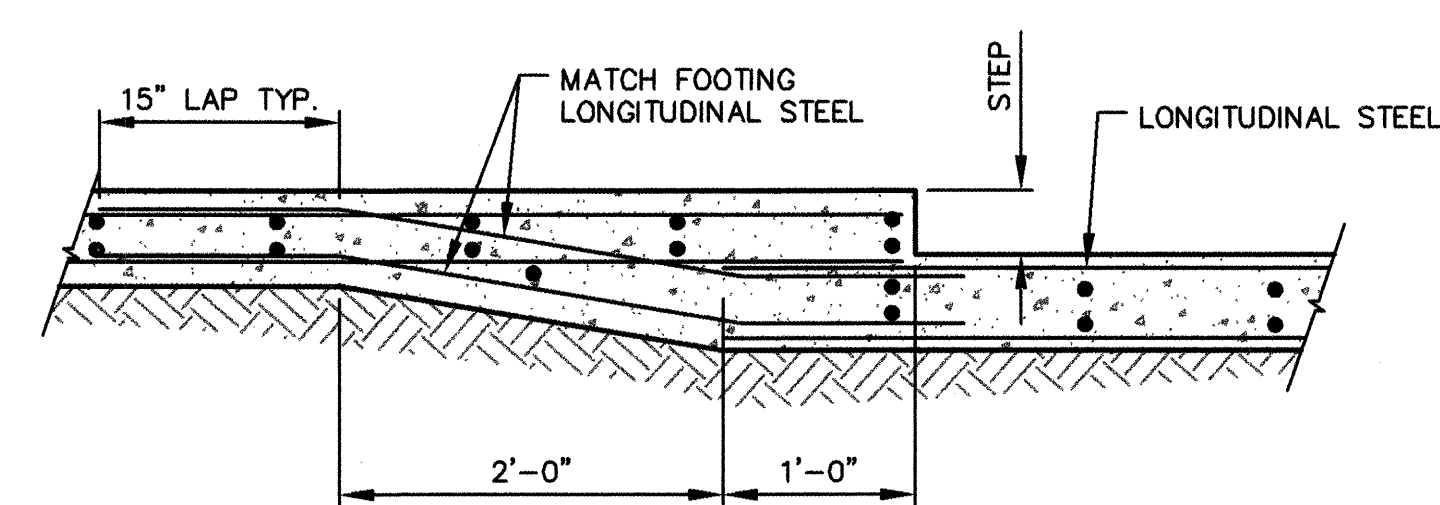
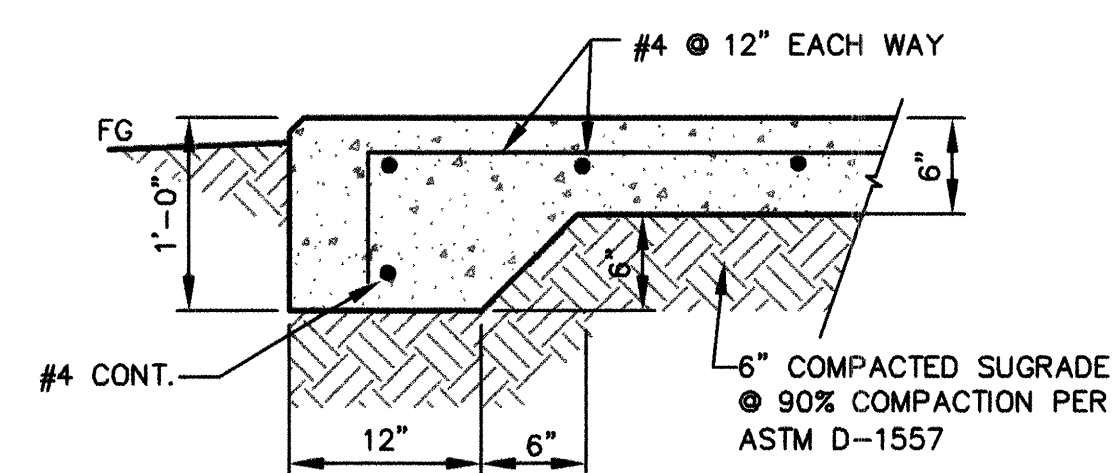
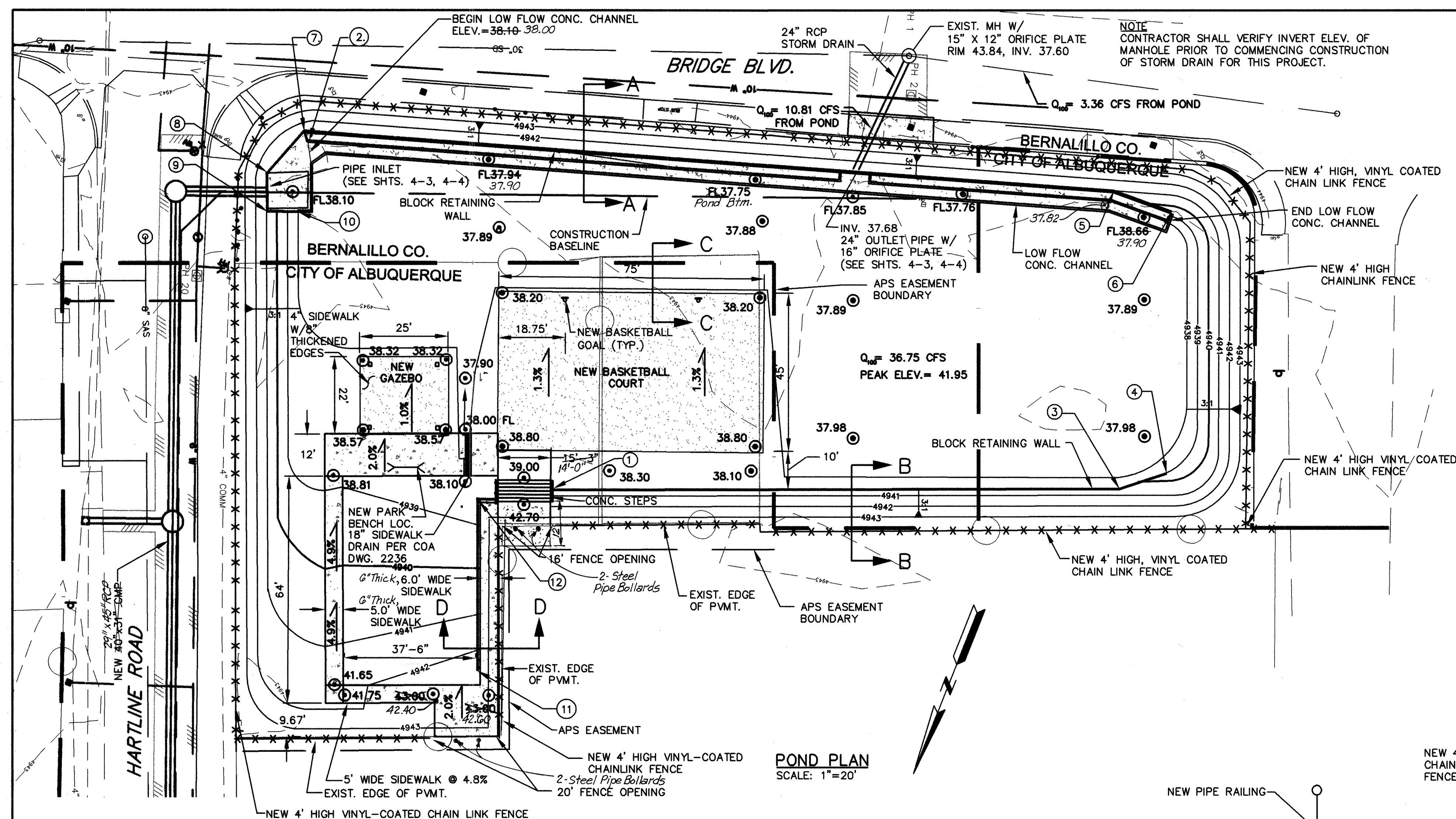
SIZE	HORIZONTAL BENDS	VALVES & DEAD ENDS
6"	45'	22-1/2'
6"	7	3
6"		46

Note:  
This table is based upon the following criteria:  
Depth of Cover 3.0 ft. minimum  
Factor of Safety 1.25  
Material PVC Pipe  
Soil Type GM/SM-Silty gravels & silty sands,  
gravel-sand-silt mixtures.  
Test Pressure 150 psi  
Trench Type 4 Pipe bedded in sand, gravel, or crushed stone  
to depth of 1/8 pipe diameter, 4 inch minimum;  
backfill compacted to top of pipe

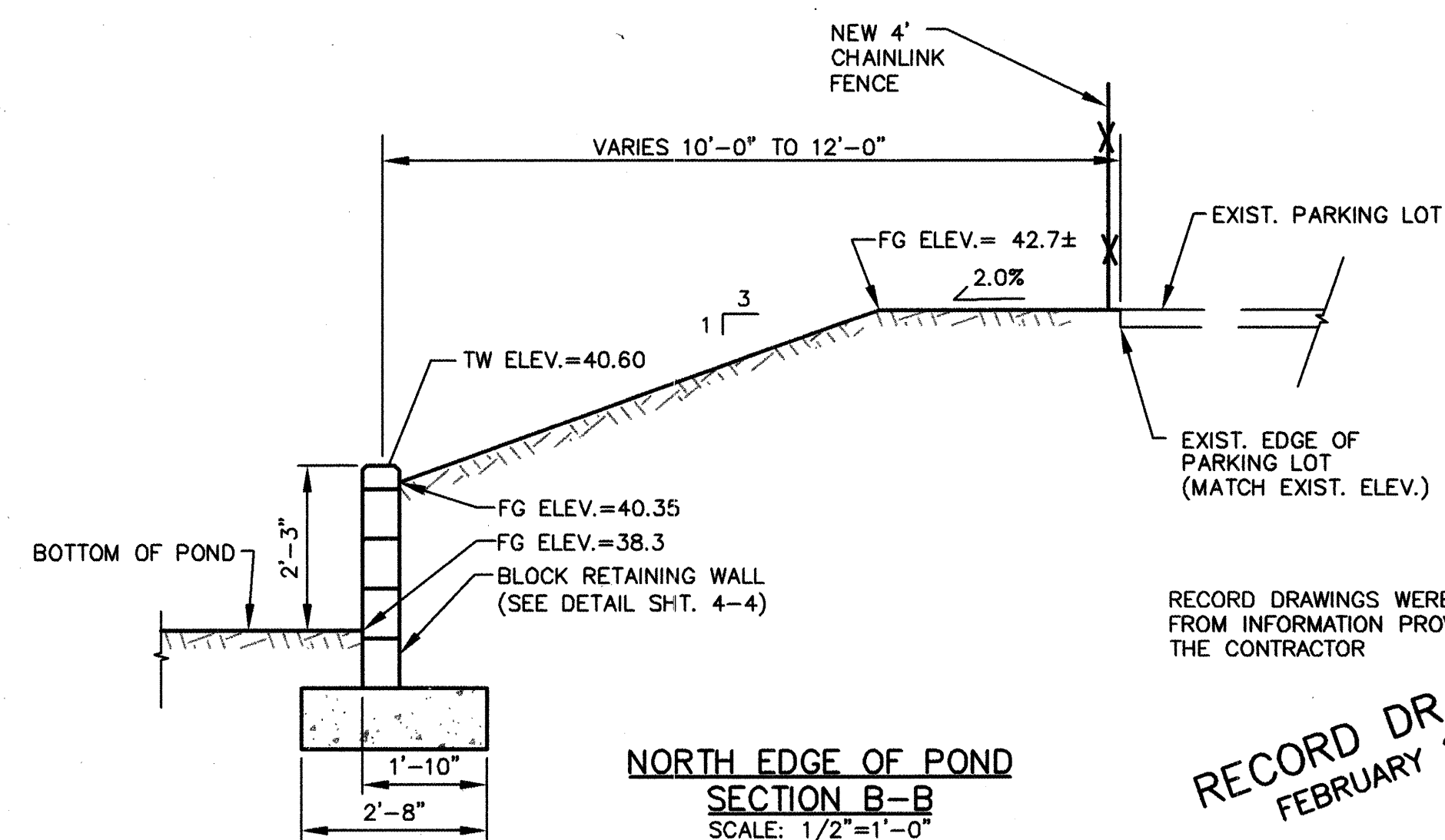
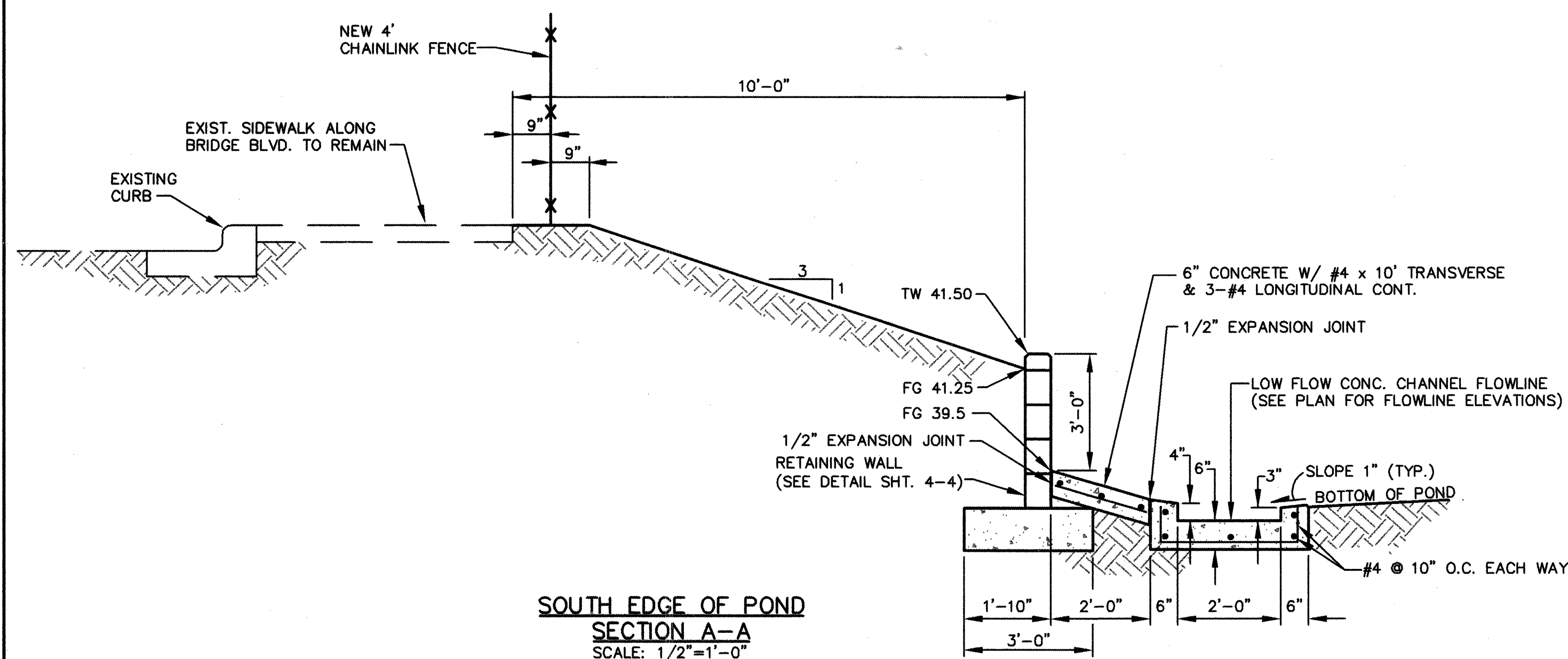


ZONE "L-13"





CONCRETE RETAINING WALL DIMENSIONS								
H	B	b1	t	T	b2	V1	Y1	Y2
3'-0" TO 4'-0"	3'-0"	1'-2"	8"	10"	1'-2"	#4@12"	#4x2'-6"@12"	#4@12"
4'-0" TO 5'-4"	3'-6"	1'-3"	8"	10"	1'-7"	#4@12"	#4x3'-0"@12"	#4@12"



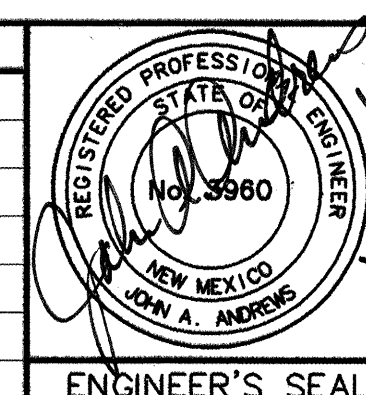
## RETAINING WALL TABLE

PT.	DESCRIPTION	NORTHING	EASTING	TW ELEV.	FG ELEV.	TF ELEV.
(1)	WALL CORNER	1480822.47	3750677.79	40.60	37.30	37.60
(2)	WALL END	1480753.34	375166.17	40.50	37.10	37.83
(3)	WALL CORNER	1480767.66	374917.23	40.60	37.30	37.60
(4)	WALL END	1480759.08	374906.19	39.27	39.00	37.60
(5)	WALL CORNER	1480688.92	374947.38	41.50	39.50	37.83
(6)	WALL END	1480688.90	374930.06	39.50	39.00	37.83
(7)	WALL CORNER	1480750.74	375168.20	41.50	38.10	37.83
(8)	WALL CORNER	1480765.54	375174.07	42.20	38.10	37.20
(9)	WALL CORNER	1480775.56	375170.33	42.20	38.10	37.20
(10)	WALL END	1480772.68	375162.05	39.00	38.10	37.20
(11)	WALL END	1480877.49	375070.43	42.70	42.40	41.60
(12)	WALL CORNER	1480832.04	375086.77	42.50	38.40	38.00

TW ELEV. = ELEVATION AT TOP OF WALL  
FG ELEV. = ELEVATION AT FINISHED GRADE AT FACE OF WALL  
TF ELEV. = ELEVATION AT TOP OF WALL FOOTING

NOTES:

1. FOR DEMOLITION WITHIN DESIGNATED POND AREA AND FOR DETAILS ON THE BASKETBALL COURT, GAZEBO, AND PARK BENCH RELOCATION AND FOR STRIPING OF BASKETBALL COURT, SEE SHEET 4-2.
2. FOR DETAILS OF INLET AND OUTLET LOCATIONS, CONCRETE DETAILS AND PIPE RAILING DETAILS, SEE SHEET 4-3.
3. FOR TRASH RACK AND ORIFICE PLATE DETAILS, SEE SHEET 4-4.
4. FOR CONCRETE STEP DETAILS, SEE SHT. 4-5.
5. NEW 4' HIGH CHAINLINK FENCE SHALL BE BUILT AT RIGHT-OF-WAY LINE ALONG STREETS AND WITHIN 1' OUTSIDE OF EXISTING EDGE OF PAVEMENT FOR APS PARKING LOT.
6. THE CONTRACTOR SHALL FURNISH AND INSTALL 4' BLACK VINYL-COATED CHAIN LINK FENCE PER COA DRAWING 2252. MESH SHALL BE 9 GAUGE VINYL-COATED, WITH KNUCKLE TO KNUCKLE AT THE TOP AND BOTTOM OF THE MESH. THE POSTS' TENSIONS BARS, CAPS, BRACING RAILS, AND ALL OTHER FENCING COMPONENTS SHALL BE VINYL-COATED.
7. CONCRETE FINISH NOTES:  
EXPOSED WALL SURFACES (TOP & SIDES), TO A MINIMUM OF 6" BELOW FINISHED GRADE, SHALL BE FINISHED WITH "THORO ROADER" MIXED STANDARD SPECIFICATIONS FOR ROAD & BRIDGE CONSTRUCTION, EDITION 2000, SECTION 511.383.



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1.			
REVISION	DATE	DESCRIPTION	BY

RECORD DRAWINGS WERE PREPARED  
FROM INFORMATION PROVIDED BY  
THE CONTRACTOR

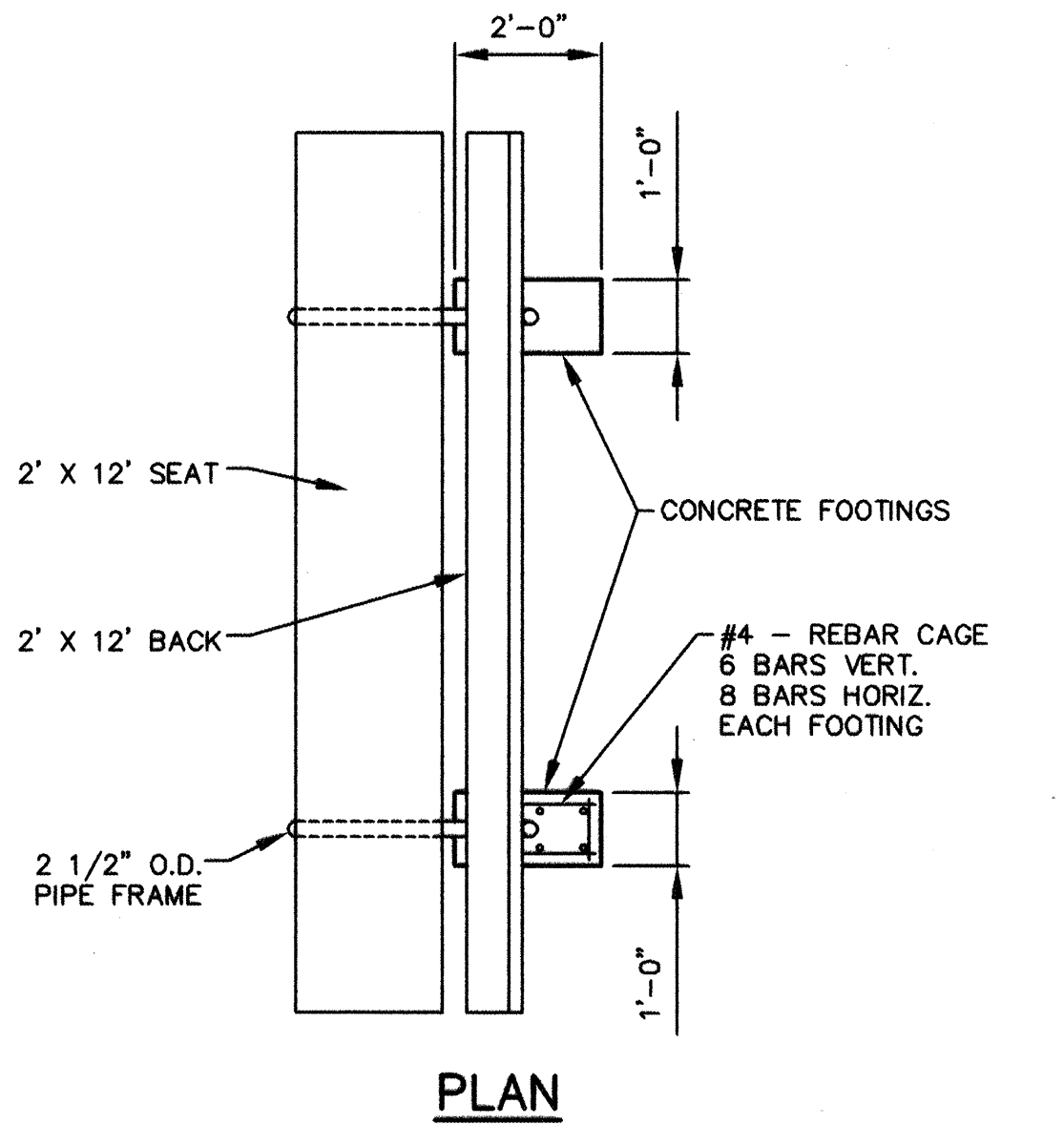
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FEBRUARY 2007



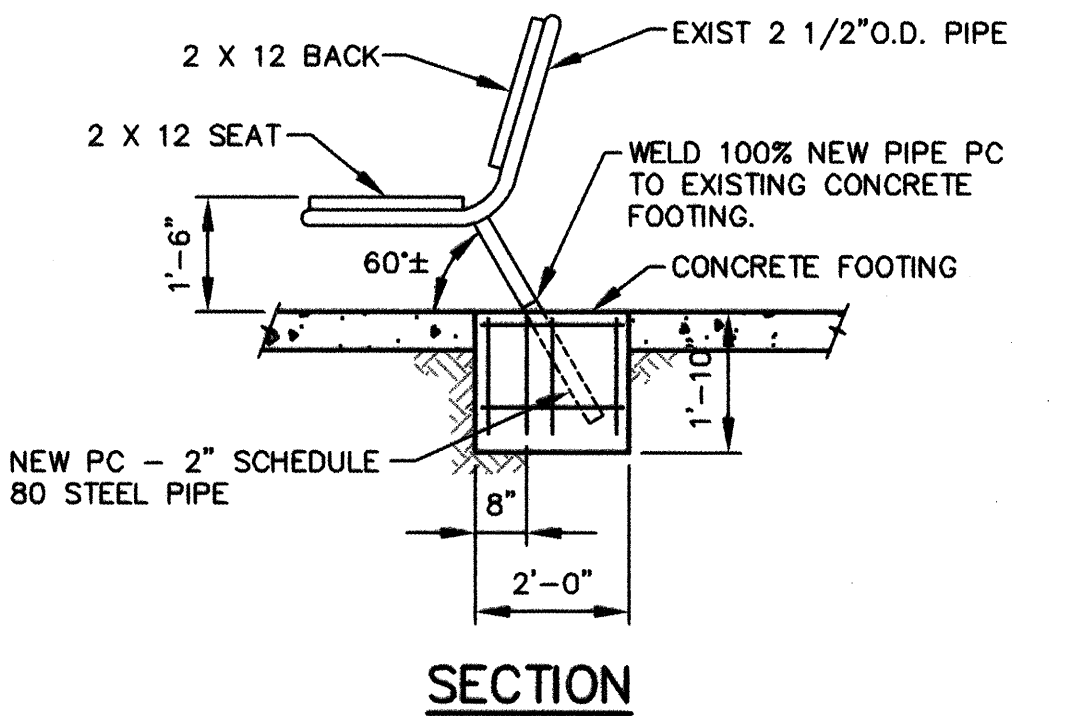


### UTILITY REMOVAL NOTES:

- FOR BUILDINGS DESIGNATED TO BE DEMOLISHED, CONTRACTOR SHALL REMOVE EXISTING WATER AND SEWER UTILITIES TO RIGHT-OF-WAY LINE AND CAP THESE SERVICES AT THE RIGHT-OF-WAY LINE. CONTACT AND COORDINATE WITH CITY OF ALBUQUERQUE CUSTOMER SERVICE PRIOR TO REMOVAL.
- CONTRACTOR SHALL CONTACT PNM FOR REMOVAL OF ANY EXISTING ELECTRICAL AND GAS SERVICES TO EXISTING BUILDINGS WITHIN NEW POND AREA.



PLAN



SECTION

### PARK BENCH RELOCATION DETAIL (NORTH OF GAZEBO)

SCALE: NTS

NOTE: SEE SHEET 4-1 FOR PARK BENCH LOCATION.

BENCHMARK INFORMATION		
ACS ALUMINUM CAP STAMPED "10-L-13, 1987", INTERSECTION BRIDGE BLVD. & ISLETA BLVD. GEO POSITION (NAD 1927), IN FEET, NM STATE PLANE COORDINATES (CENTRAL ZONE): X=375,554.44, Y=480,336.54, ELEV.=4944.55 NGVD29, FT.		
ENGINEER'S SEAL		

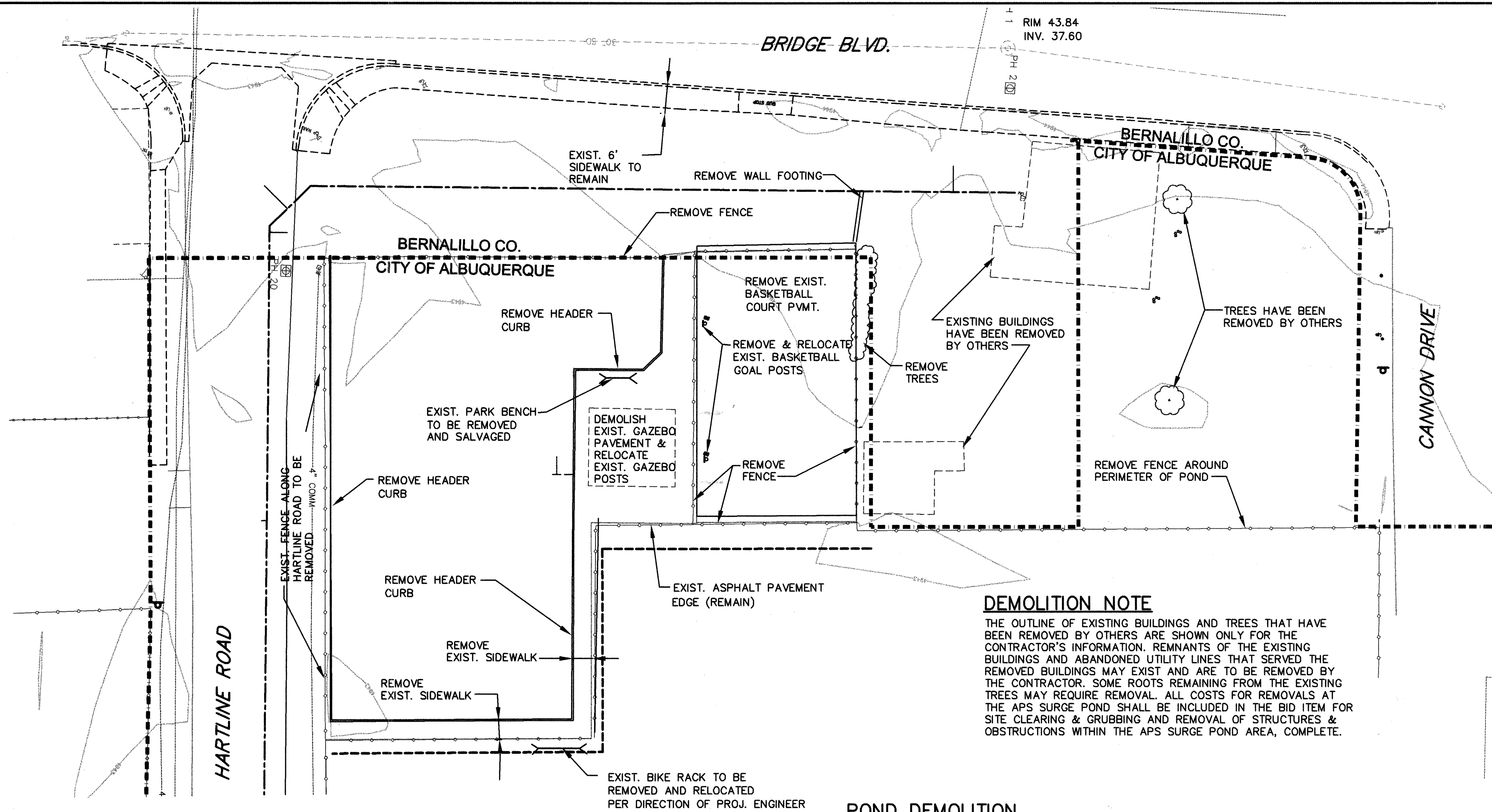
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REVISION	DATE	DESCRIPTION

REVISIONS (OR CHANGE NOTICES)  
BERNALILLO COUNTY, PUBLIC WORKS DIV.

HARTLINE DRAINAGE IMPROVEMENTS

### POND DEMOLITION & REPLACEMENT DETAILS

LARKIN GROUP, NM, INC.		
CONSULTING ENGINEERS		
FILE NO.	DRAWN BY	CHECKED BY
01-0002	AB/GC/SH	JW
DATE	DATE	DATE
APR 2005	APR 2005	APR 2005
SHEET		4-2

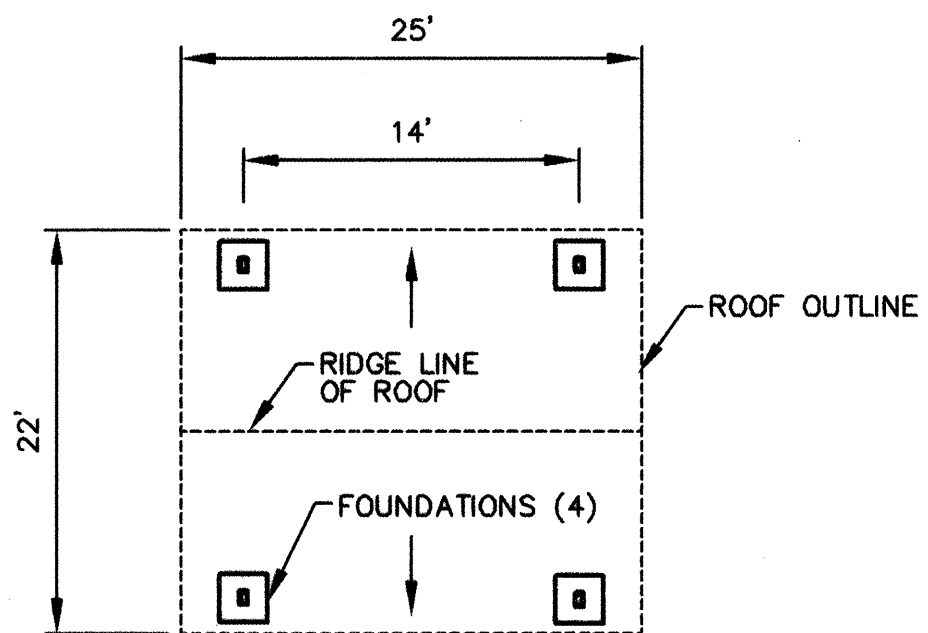


### DEMOLITION NOTE

THE OUTLINE OF EXISTING BUILDINGS AND TREES THAT HAVE BEEN REMOVED BY OTHERS ARE SHOWN ONLY FOR THE CONTRACTOR'S INFORMATION. REMNANTS OF THE EXISTING BUILDINGS AND ABANDONED UTILITY LINES THAT SERVED THE REMOVED BUILDINGS MAY EXIST AND ARE TO BE REMOVED BY THE CONTRACTOR. SOME ROOTS REMAINING FROM THE EXISTING TREES MAY REQUIRE REMOVAL. ALL COSTS FOR REMOVALS AT THE APS SURGE POND SHALL BE INCLUDED IN THE BID ITEM FOR SITE CLEARING & GRUBBING AND REMOVAL OF STRUCTURES & OBSTRUCTIONS WITHIN THE APS SURGE POND AREA, COMPLETE.

### POND DEMOLITION PLAN VIEW

SCALE: 1"=20'

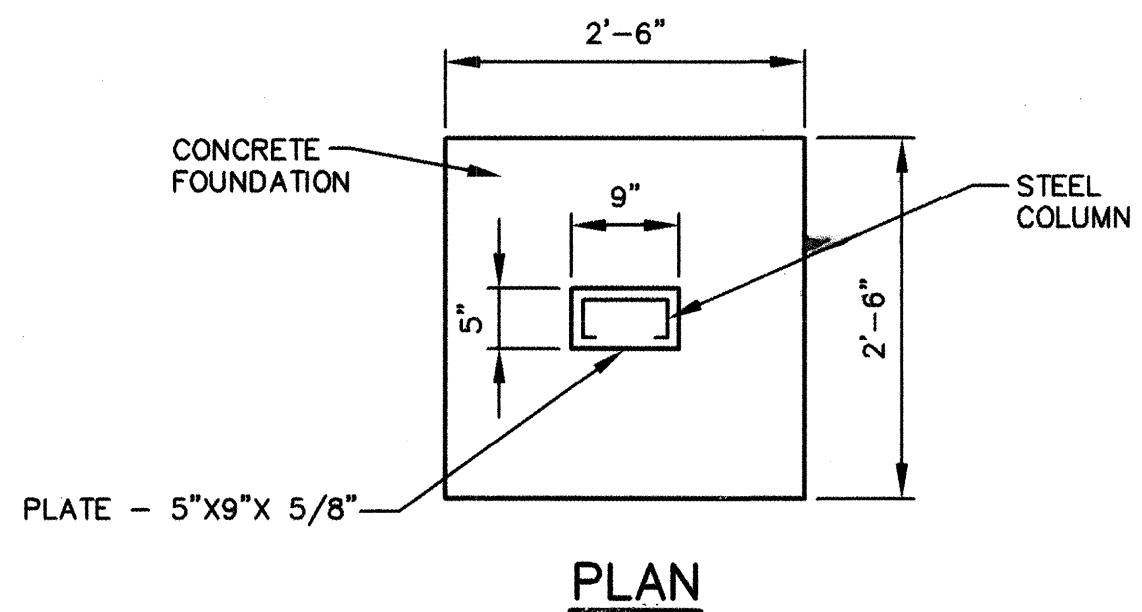


GAZEBO PLAN

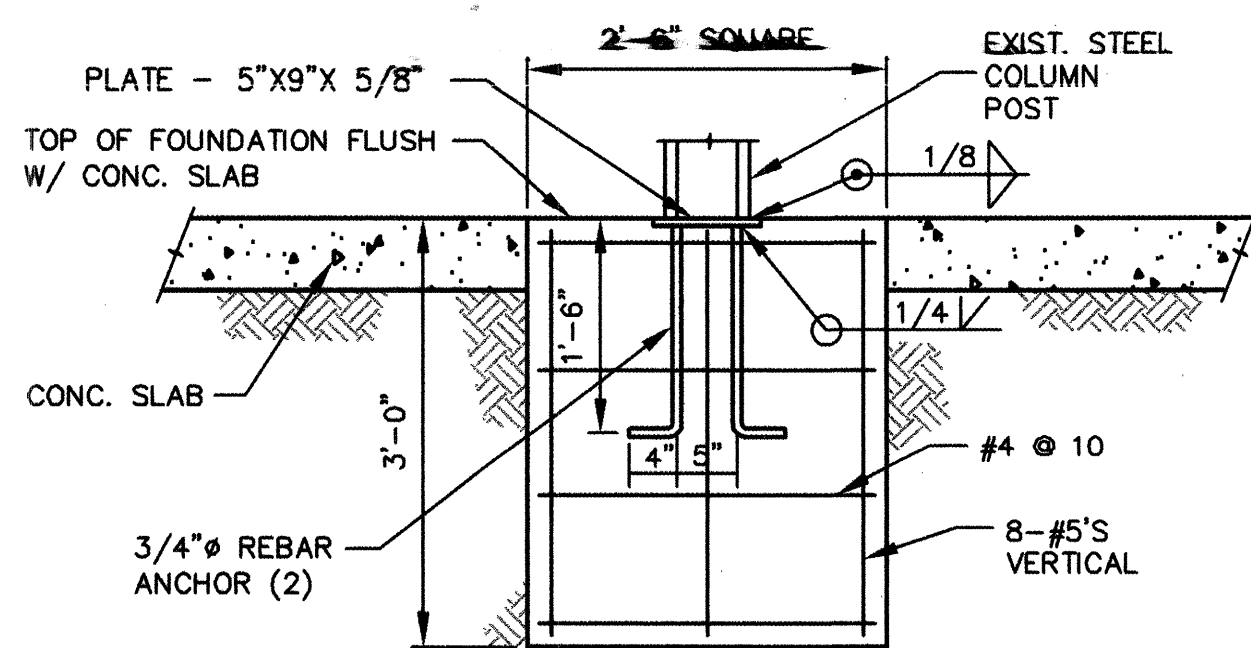
SCALE: 1"=10'

### GAZEBO/ BASKETBALL POST RELOCATION NOTES:

- GAZEBO POSTS, BASKETBALL GOAL POSTS, AND SHELTER SHALL BE REMOVED, STORED AND REINSTALLED AT LOCATION SHOWN ON PLAN SHEET 4-1.
- CONTRACTOR SHALL CUT THE STEEL POSTS AT THE SURFACE OF THE EXISTING CONCRETE WHEN REMOVING THE STRUCTURE. WHEN REINSTALLING ON THE NEW FOUNDATION COLUMNS SHALL BE WELDED TO THE PLATE IN THE NEW FOUNDATIONS AS SHOWN. CONTRACTOR IS RESPONSIBLE FOR PLACING THE NEW FOUNDATIONS AT THE CORRECT DIMENSIONS AND LOCATIONS.
- ANY DAMAGE TO THE STRUCTURE DURING REMOVAL, STORAGE AND REINSTALLATION SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.
- CONTRACTOR SHALL REPAINT STRUCTURE AFTER REINSTALLATION - COLOR SHALL MATCH EXISTING.



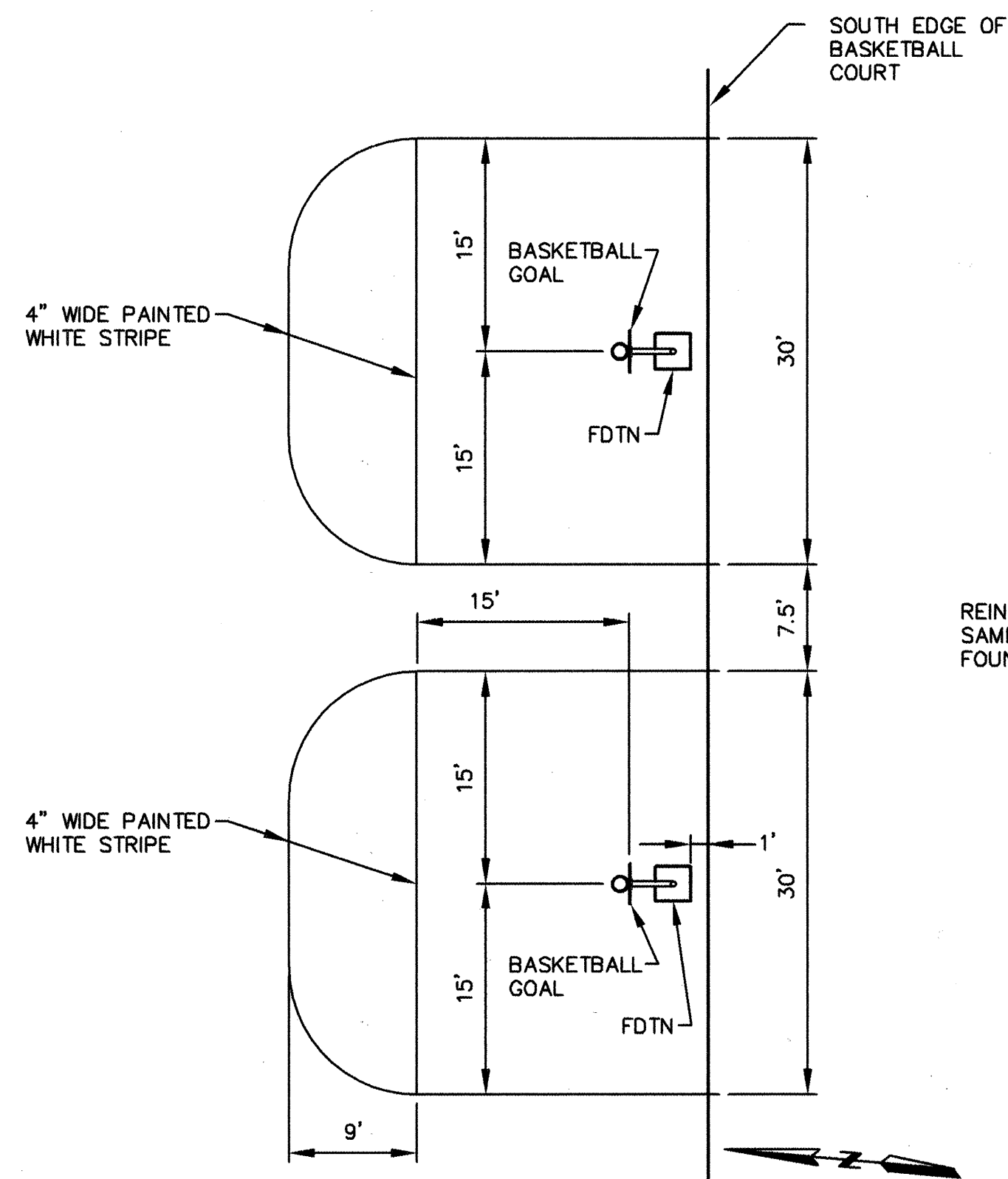
PLAN



SECTION

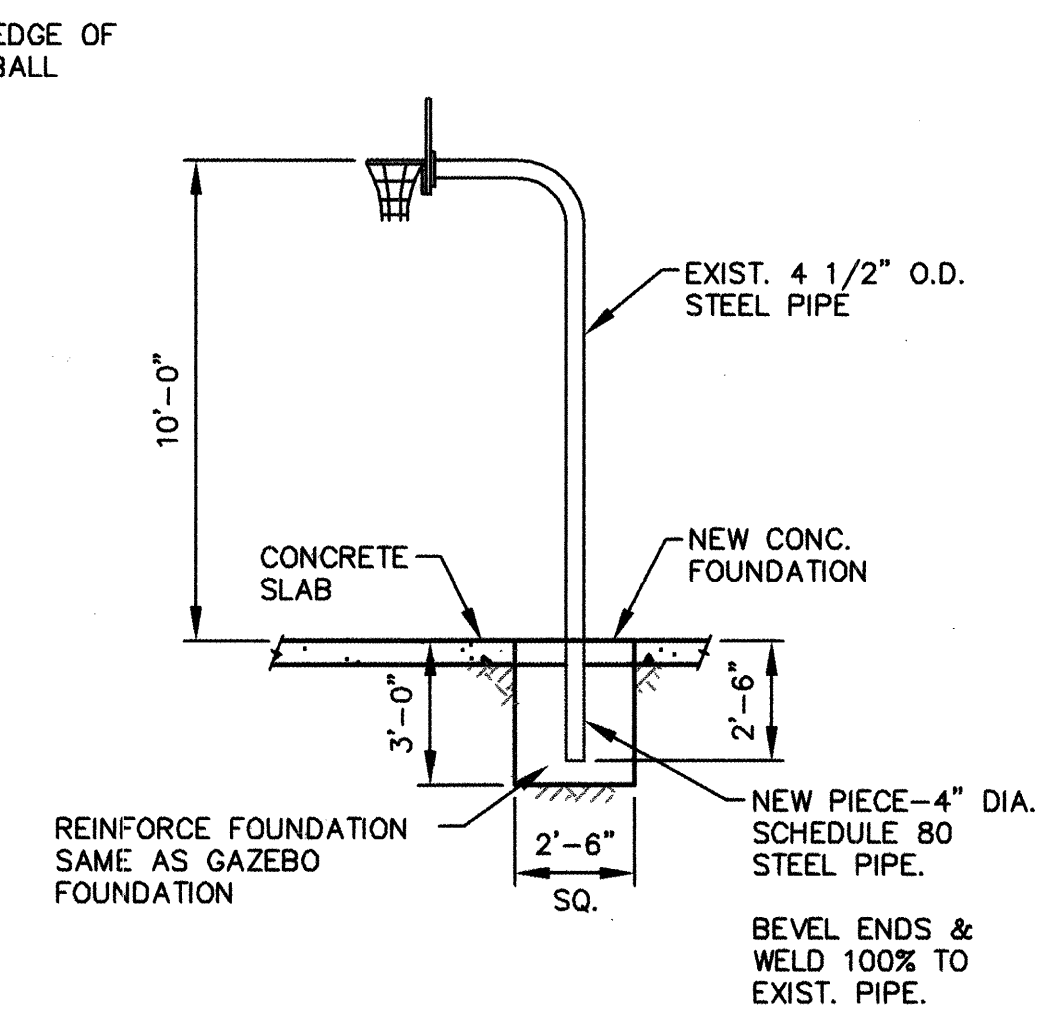
### GAZEBO FOUNDATION DETAIL (4 REQ'D)

SCALE: 3/4"=1'-0"



### BASKETBALL COURT REPLACEMENT

SCALE: 1"=10'



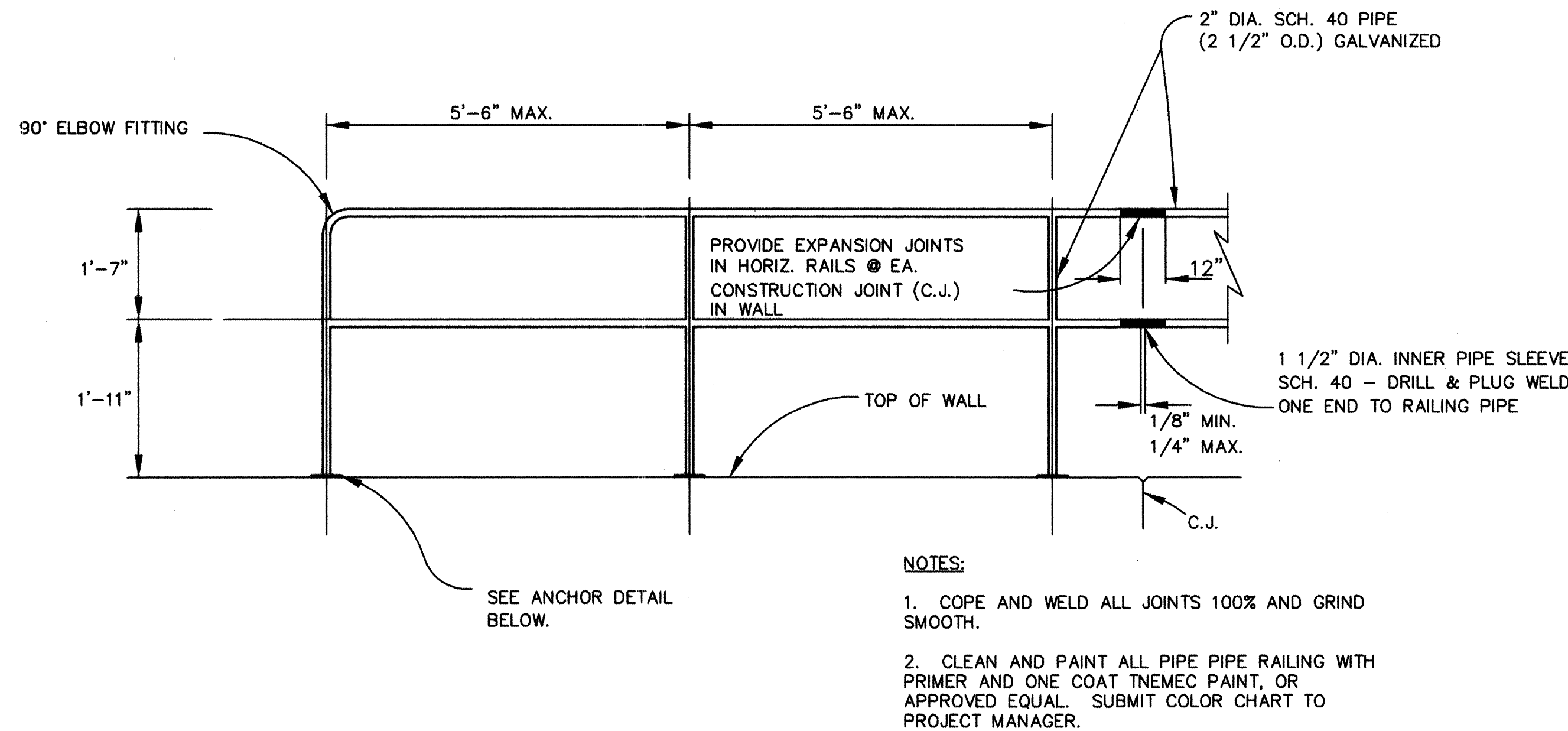
### BASKETBALL GOAL RELOCATION (2 REQ'D)

SCALE: 1/4"=1'-0"

RECORD DRAWINGS WERE PREPARED FROM INFORMATION PROVIDED BY THE CONTRACTOR

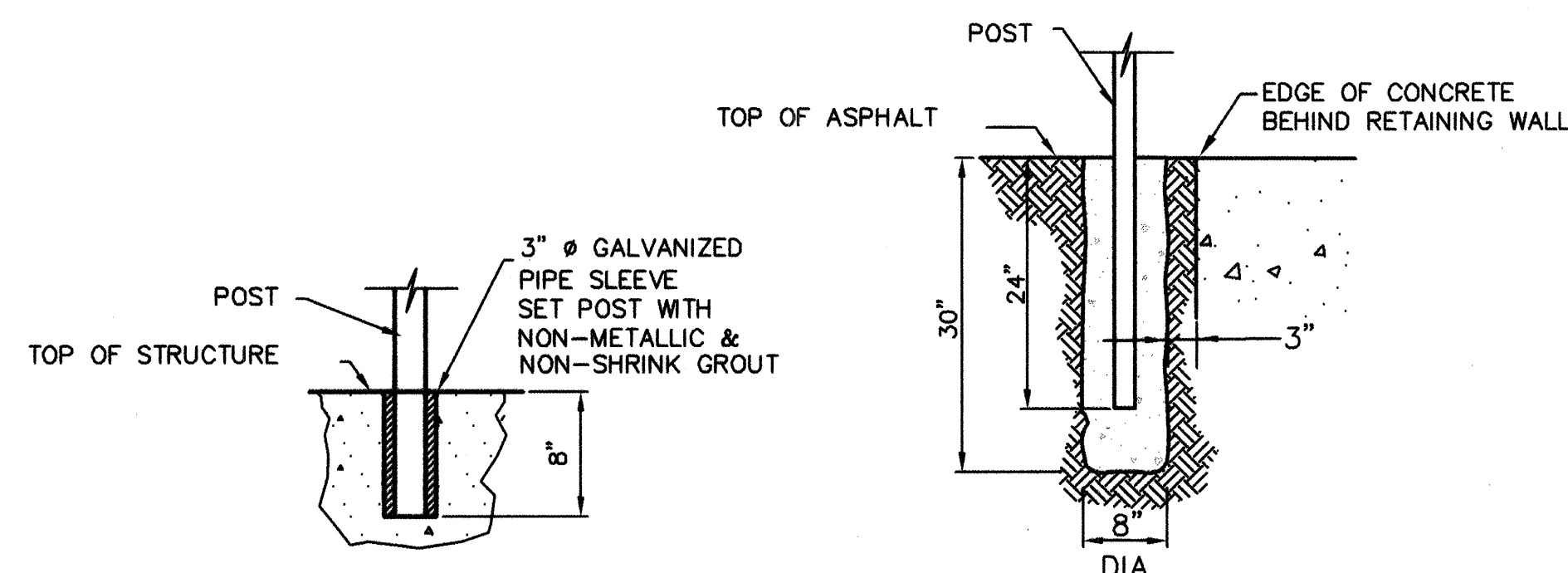
RECORD DRAWING  
FEBRUARY 2007





PIPE RAILING DETAIL

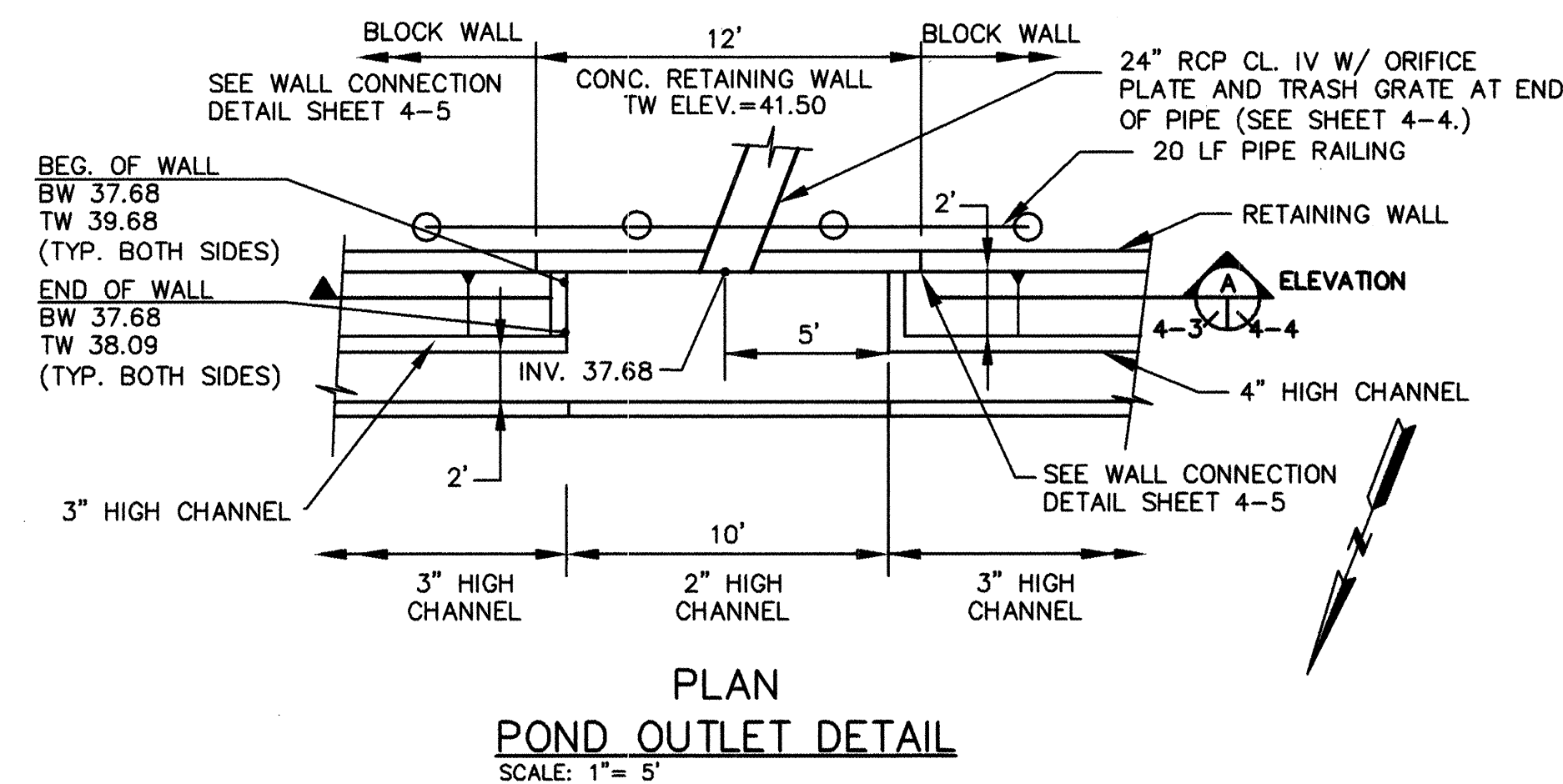
N.T.S.



STRUCTURE ANCHOR  
FOR CONC. WALLS

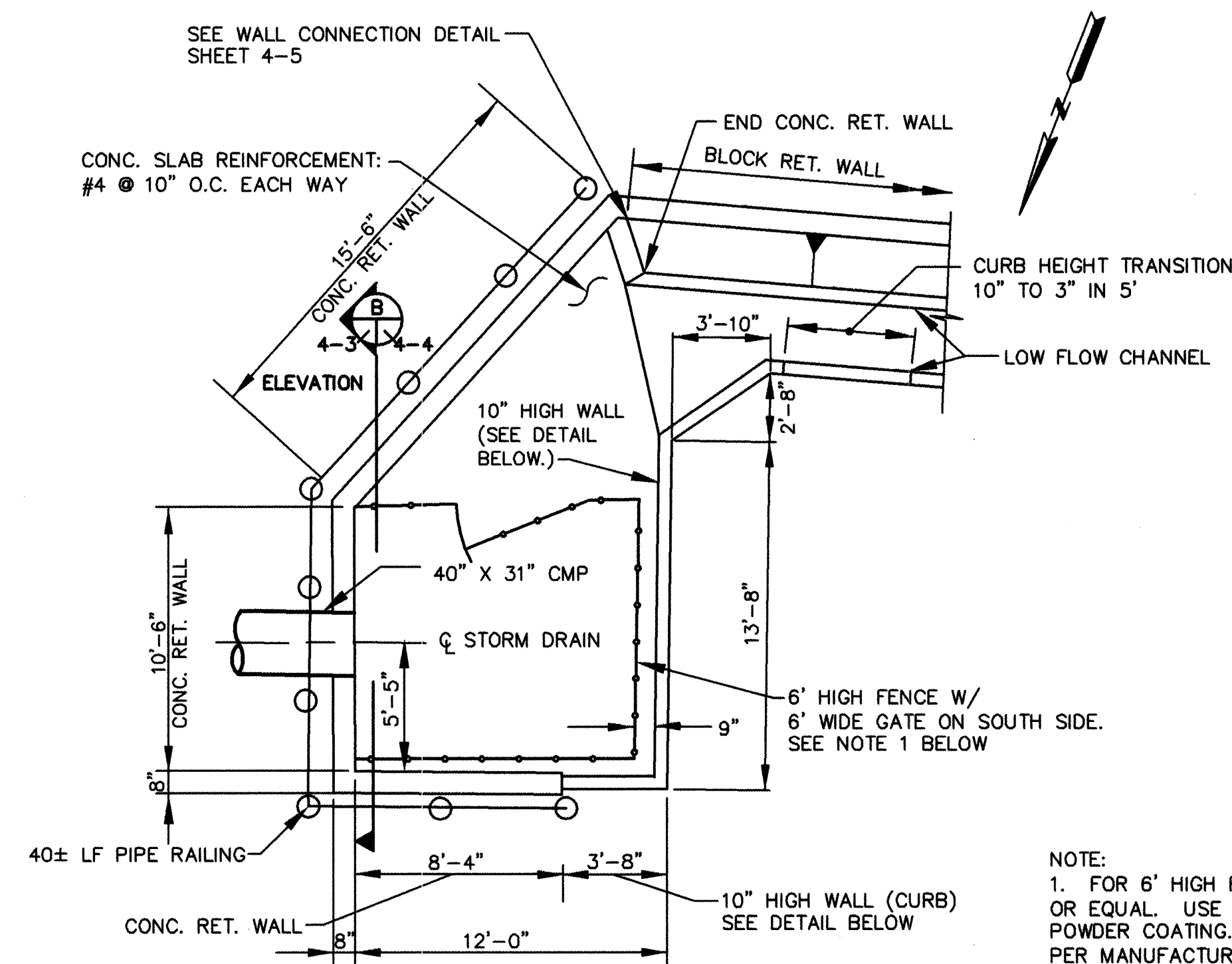
PIPE RAILING POST ANCHOR DETAILS

N.T.S.



PLAN  
POND OUTLET DETAIL

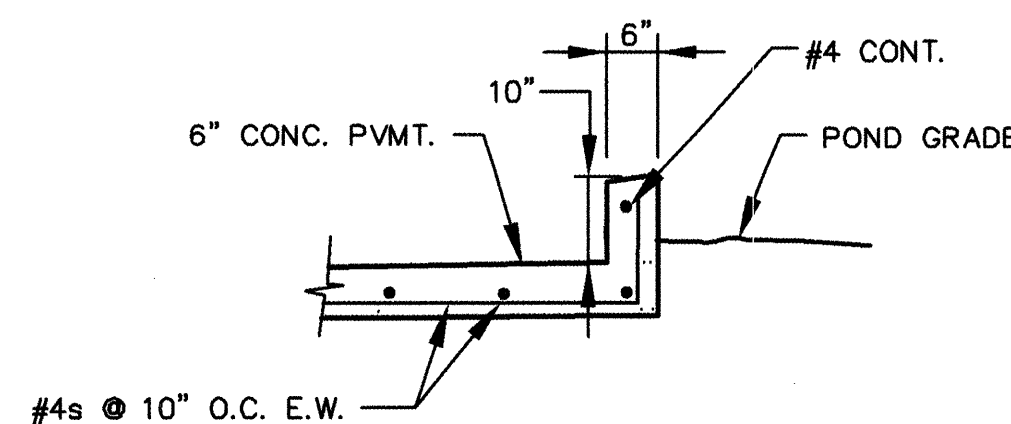
SCALE: 1"= 5'



PLAN  
POND INLET DETAIL

SCALE: 1"= 5'

NOTE:  
1. FOR 6' HIGH FENCE, USE AEGIS, 2-RAIL FENCE OR EQUAL. USE 3" AEGIS II POSTS. COLOR: BLACK POWDER COATING. INSTALL IN CONCRETE FOOTINGS PER MANUFACTURER'S SPECIFICATIONS. AVAILABLE FROM AMERISTAR 800-321-8724.



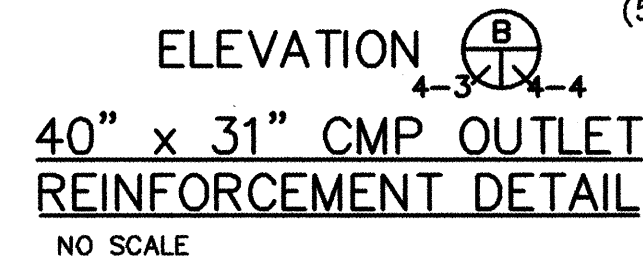
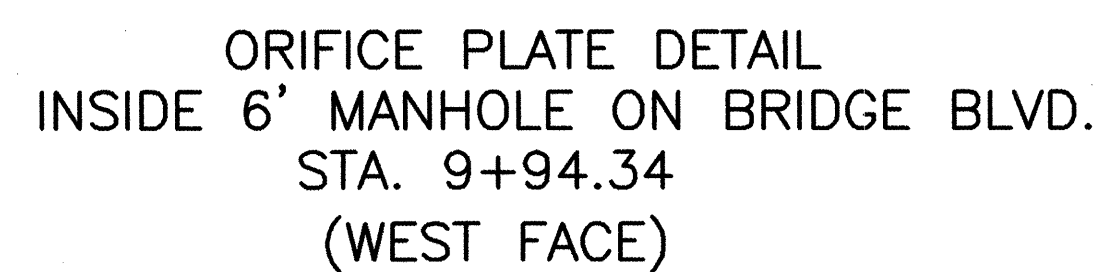
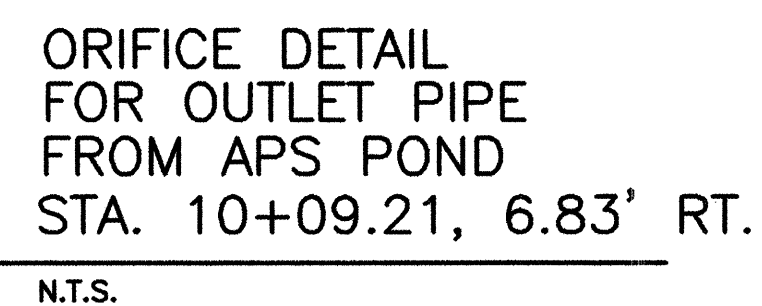
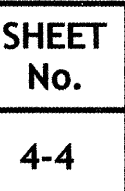
10" HIGH WALL AT INLET

N.T.S.

RECORD DRAWING  
FEBRUARY 2007

BENCHMARK INFORMATION			
ACS ALUMINUM CAP STAMPED "10-L-13, 1987",			
INTERSECTION BRIDGE BLVD. & ISLETA BLVD.			
GEO POSITION (NAD 1927), IN FEET, NM STATE			
PLANE COORDINATES (CENTRAL ZONE):			
X=375,554.44, Y=480,336.54, ELEV.=4944.55			
NGDV29, FT.			
ENGINEER'S SEAL			
3.			
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REVISION	DATE	DESCRIPTION	BY
REVISIONS (OR CHANGE NOTICES)			
BERNALILLO COUNTY, PUBLIC WORKS DIV.			
HARTLINE DRAINAGE IMPROVEMENTS			
MISCELLANEOUS POND DETAILS			
LARKIN GROUP NM, INC.			
CONSULTING ENGINEERS			
FILE No.	DRAWN	CHECKED	DATE
01-0002	AB/GC/SH	JW	APR 2005
SHEET			4-3





H	B	b1	t	T	b2	V1	Y1	Y2
2'-0" TO 3'-0"	2'-6"	10"	8"	10"	1'-2"	#4@16"	#4x2'-0"@18"	#4@10'
3'-0" TO 4'-0"	3'-0"	1'-2"	8"	10"	1'-2"	#5@16"	#4x2'-6"@18"	#4@10'
4'-0" TO 5'-4"	3'-6"	1'-3"	8"	10"	1'-7"	#5@16"	#4x3'-0"@18"	#4@10'

BLOCK RETAINING WALL DETAIL

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N.T.S.

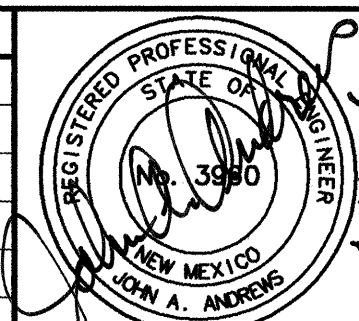


TRASH RACK DETAIL  
FOR 24" SD OUTLET  
(INSTALL OVER ORIFICE PLATE)

SCALE: NTS

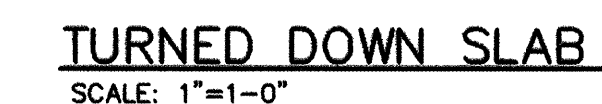
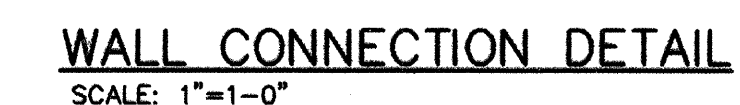
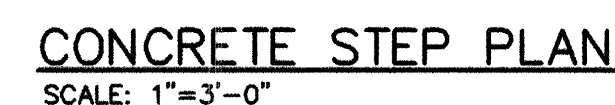
RECORD DRAWINGS WERE PREPARED  
FROM INFORMATION PROVIDED BY  
THE CONTRACTOR

RECORD DRAWING  
FEBRUARY 2007

BENCHMARK INFORMATION				
ACS ALUMINUM CAP STAMPED "10-L-13, 1987",				
INTERSECTION BRIDGE BLVD. & ISLETA BLVD.				
GEO POSITION (NAD 1927), IN FEET, NM STATE				
PLANE COORDINATES (CENTRAL ZONE):				
X=375,554.44, Y=480,336.54, ELEV.=4944.55				
NGDV29, FT.				
				ENGINEER'S SEAL
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REVISION	DATE	DESCRIPTION		BY
REVISIONS (OR CHANGE NOTICES)				
BERNALILLO COUNTY, PUBLIC WORKS DIV.				
HIGHLIGHTED DRAINAGE IMPROVEMENTS				
MISCELLANEOUS POND DETAILS				
LARKIN GROUP NM, INC.				
CONSULTING ENGINEERS				
FILE No.	ALBUQUERQUE	CHECKED:	DATE	NEW MEXICO
01-0002	AB/GC/SH	JW	APR 2005	SHEET 4-4

\* NOTE: DESIGN FOR WALLS 3'-0" TO 5'-0" TALL ONLY TO BE USED EAST OF CONCRETE STAIRWAY.

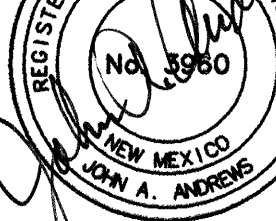
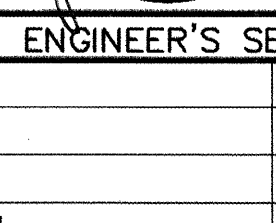




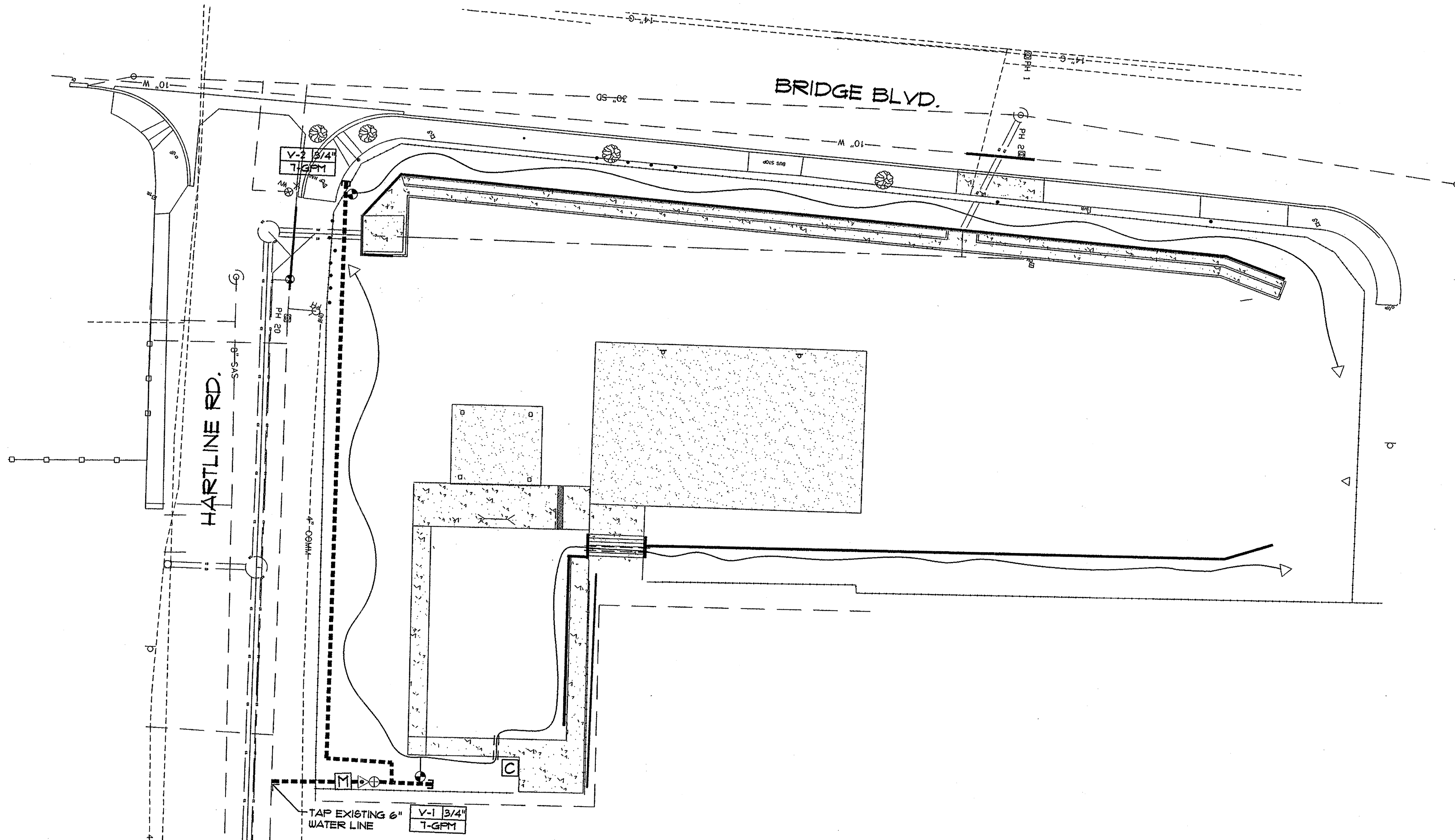
FROM INFORMATION PROVIDED BY  
THE CONTRACTOR

RECORD DRAWING  
FEBRUARY 2007



BENCHMARK INFORMATION		
ACS ALUMINUM CAP STAMPED "10-L-13, 1987",		
INTERSECTION BRIDGE BLVD. & ISLETA BLVD.		
GEO POSITION (NAD 1927), IN FEET, NM STATE		
PLANE COORDINATES (CENTRAL ZONE):		
X=375,554.44, Y=480,336.54, ELEV.=4944.55		
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REVISION	DATE	DESCRIPTION
REVISIONS (OR CHANGE NOTICES)		
BERNALILLO COUNTY, PUBLIC WORKS DIV.		
HARTLINE DRAINAGE IMPROVEMENTS		
CONCRETE STEP DETAILS		
LARKIN GROUP NM, INC.		
CONSULTING ENGINEERS		
ALBUQUERQUE	NEW MEXICO	
FILE No.	DRAWN:	CHECKED:
01-0002	AB/GC/SH	JW
		DATE
		APR 2005
SHEET		4-5





### IRRIGATION NOTES

1. THE CONTRACTOR SHALL COORDINATE THE INSTALLATION OF SLEEVE PIPING WITH ALL TRADES TO INSURE THAT SLEEVES ARE INSTALLED PROPERLY PRIOR TO INSTALLATION OF CURB AND GUTTER, ASPHALT PAVING, SIDEWALKS, CONCRETE PADS, ETC.
2. THIS SYSTEM WAS DESIGNED AT A MINIMUM STATIC PRESSURE OF 60 PSI AT THE POINT OF CONNECTION. CONTRACTOR SHALL VERIFY ACTUAL PSI AND DELIVER RESULTS TO LANDSCAPE ARCHITECT PRIOR TO CONSTRUCTION. IN THE EVENT THE ACTUAL PSI IS LESS THAN 60 PSI THE CONTRACTOR SHALL RECEIVE DIRECTION FROM LANDSCAPE ARCHITECT REGARDING DESIGN MODIFICATIONS IF NECESSARY.
3. THE CONTRACTOR SHALL PROVIDE TWO 120-VOLT, 20 AMP CIRCUITS FROM ELECTRICAL SOURCE TO IRRIGATION CONTROLLER AND BACKFLOW PREVENTER ENCLOSURE (ONE TO EACH). ALL WORK AND MATERIALS SHALL MEET LOCAL CODES AND THE NATIONAL ELECTRIC CODE (N.E.C.). SEE ELECTRICAL PLAN SHEET 5-4.
4. THE IRRIGATION SYSTEM SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 1986 WITH UPDATES 1-7, SECTION 1021 AND REFERENCED DETAILS.

### DRIP EMITTER TO PLANT RATIO

THE CONTRACTOR SHALL INSTALL 6 EA. RAINBIRD PC-25 PRESSURE COMPENSATING DRIP EMITTERS AT EACH TREE. INSTALL 1/4" TRANSFER BARBS ON 3/4" DRIP TUBING AND 1/4" DRIP TUBING FROM TRANSFER BARBS TO PLANT. EMITTERS SHALL BE INSTALLED 2" BELOW FINISHED GRADE. DEPTH OF BURY FOR 1/4" TUBING SHALL BE 4". SPACE EMITTERS EVENLY AROUND THE DRIPLINE OF PLANT.

### IRRIGATION LEGEND

- [M] 3/4" WATER METER PER C.O.A. DWG. # 2362. SEE SHEET 2-1 FOR METER LOCATION.
- == SLEEVE PIPING, CLASS 200, SDR-21, BELL-END, SOLVENT WELD PVC, SEE IRRIGATION NOTE NO. 2.
- IRRIGATION MAIN LINE, SCH. 40, BELL-END, SOLVENT WELD PVC, SIZE 3/4". DEPTH OF BURY 28" FOR CONTINUOUS PRESSURE IRRIGATION MAIN AND 18" FOR NON-CONTINUOUS.
- ~~~~~ 3/4" POLY DRIP TUBING, DEPTH OF BURY 12".
- [B] BACKFLOW PREVENTER AND MASTER VALVE ASSEMBLY, FEBCO 825YA, 3/4" REDUCED PRESSURE PRINCIPLE BACKFLOW PREVENTER WITH BALL VALVES AND RAINBIRD FEB SERIES MASTER VALVE, SIZE 3/4". INSTALLED IN HOT BOX MODEL NO. 1 HEATED AND INSULATED BACKFLOW ENCLOSURE PER DETAIL D/3.
- [R] REMOTE CONTROL VALVE ASSEMBLY, RAINBIRD CONTROL ZONE KIT WITH PLASTIC BODY 24-VOLT AUTOMATIC VALVE, SIZE AS SHOWN ON PLAN. INSTALL PER DETAIL A/3.
- [C] SOLVENT WELD CAP, SCH. 40 PVC, LINE SIZE.
- [A] FLUSH CAP ASSEMBLY, INSTALL PER DETAIL B/3.
- [I] IRRIGATION CONTROLLER, IRRITROL DIAL SERIES, SEVEN STATION PEDESTAL MOUNT CONTROLLER MODEL # DIAL-P-1B. INSTALL PER DETAIL F/3. CONTROLLER SHALL BE GROUNDED PER DETAIL C/3.

RECORD DRAWINGS WERE PREPARED FROM INFORMATION PROVIDED BY THE CONTRACTOR

RECORD DRAWING  
FEBRUARY 2007

**MORROW REARDON WILKINSON, LTD., LANDSCAPE ARCHITECTS**  
210 La Veta No. Albuquerque, NM 87108  
505.261.2269 FAX 505.265.9857  
mrw@mrwam.com

**BENCHMARK INFORMATION**  
ALBUQUERQUE CONTROL SURVEY B.M. NO. 9-M12  
LOCATED IN THE SOUTHWEST CORNER OF THE INTERSECTION OF ISLETA BLVD. AND ARENAL RD.  
AN ACS 1 3/4" ALUMINUM DISK STAMPED "ACS BM, 9-M12", EPOXIED TO TOP OF CONCRETE CURB, AT THE WSW CURB RETURN, ELEV.=4940.97



ENGINEER'S SEAL

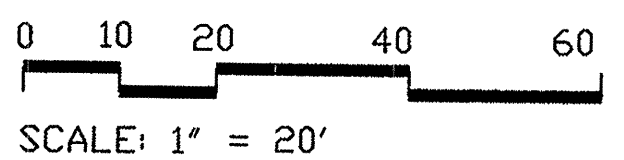
REVISION	DATE	DESCRIPTION	BY
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REVISIONS (OR CHANGE NOTICES)  
BERNALILLO COUNTY, PUBLIC WORKS DIV.  
HARTLINE DRAINAGE IMPROVEMENTS

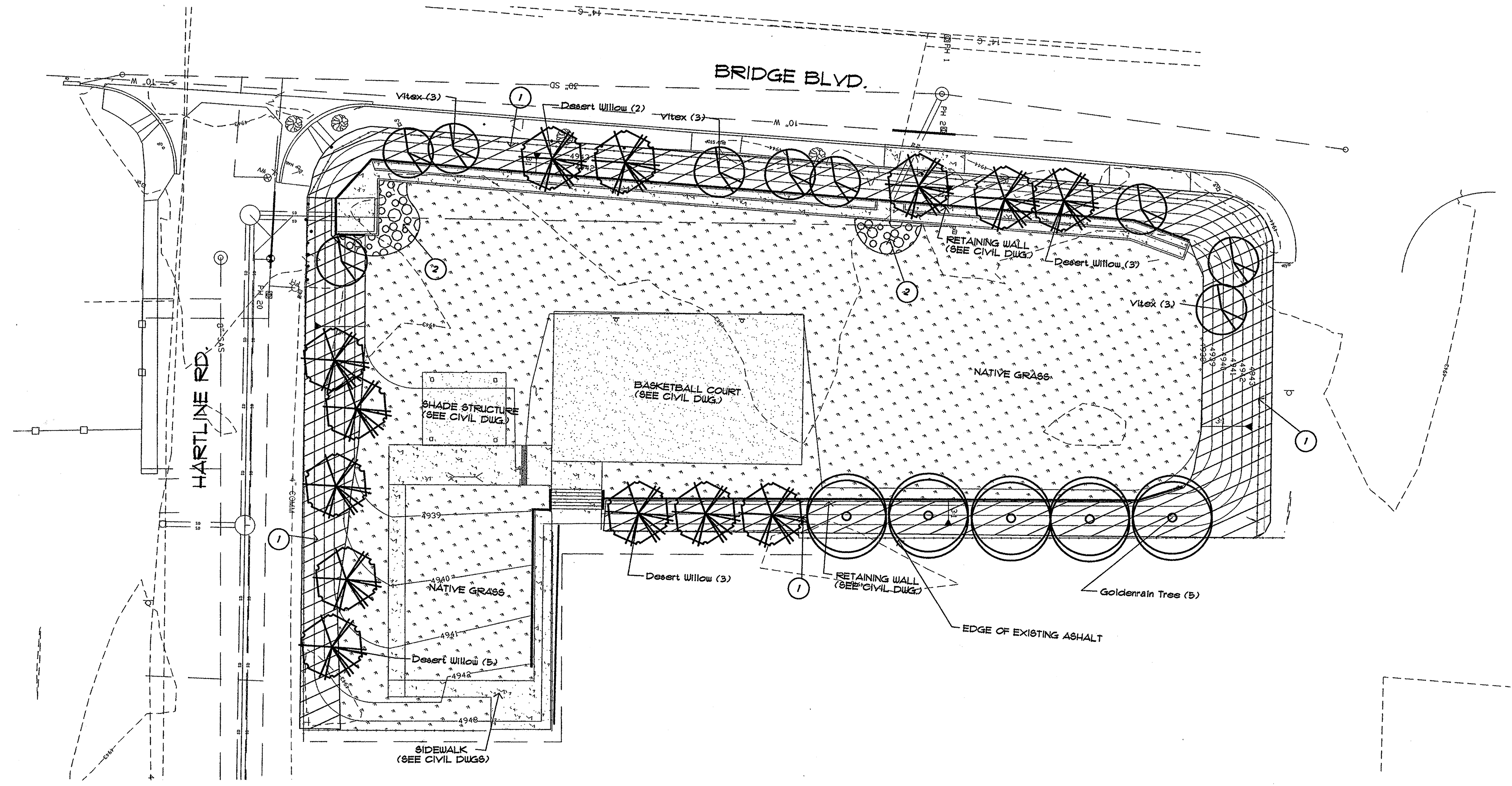
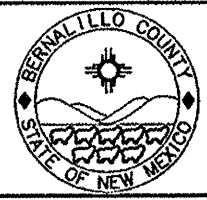
### IRRIGATION PLAN

LARKIN GROUP NM, INC.  
CONSULTING ENGINEERS

FILE No.	DRAWN	CHECKED	DATE	SHEET
01-0002	JSP	ECR	APRIL 2005	5-1







- PLANTING NOTES**
- IN CASE OF DISCREPANCY IN PLANT QUANTITIES SHOWN ON THE PLANT LIST AND THOSE SHOWN ON THE PLANTING PLAN, THE QUANTITIES SHOWN ON THE PLAN SHALL GOVERN. CONTRACTOR SHALL VERIFY ALL QUANTITIES PRIOR TO BID AND INSTALLATION. NO ADDITIONAL PAYMENT WILL BE MADE FOR DISCREPANCIES IN QUANTITIES BETWEEN THE PLANTING PLAN AND THE PLANT LIST.
  - THE CONTRACTOR SHALL PRUNE LOWER BRANCHES OF DECIDUOUS TREES TO 6 FEET ABOVE FINISH GRADE, EXCEPT FOR DESERT WILLOW AND VITEX.
  - TREES SHALL BE PLANTED PER C.O.A. DRAWING # 2714. (SIMILAR: MULCH SHALL BE 4"-6" SUBANGULAR GRAVEL). TREES ON 3:1 SLOPES SHALL BE INSTALLED PER DETAIL E/ 3.
  - WEED BARRIER FABRIC SHALL BE MINIMUM OF 3.5 OZ. WOVEN, NEEDLE PUNCHED POLYPROPYLENE (DEWITT OR EQUAL). OVERLAY END 3", TURN DOWN PERIMETER EDGE 6". TOP OF GRAVEL SHALL 1" BELOW TOP OF ADJACENT CONCRETE SURFACES.
  - PLANTING SHALL BE INSTALLED IN ACCORDANCE WITH CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 1986, UPDATED 1-7, SECTION 1025 AND REFERENCE DETAILS.

- CONSTRUCTION KEYED NOTES**
- CONTRACTOR SHALL INSTALL A 4" DEPTH OF 4"-6" SUBANGULAR SANTA ANA TAN GRAVEL OVER WEED BARRIER FABRIC ON 3:1 SLOPES. WEED BARRIER FABRIC AND MULCH SHALL BE INSTALL PER PLANTING NOTE # 4.
  - CONTRACTOR SHALL INSTALL A 4" DEPTH OF 4"-6" COBBLE OVER WEED BARRIER FABRIC. THE WEED BARRIER FABRIC AND MULCH SHALL BE INSTALLED PER PLANTING NOTE # 4.

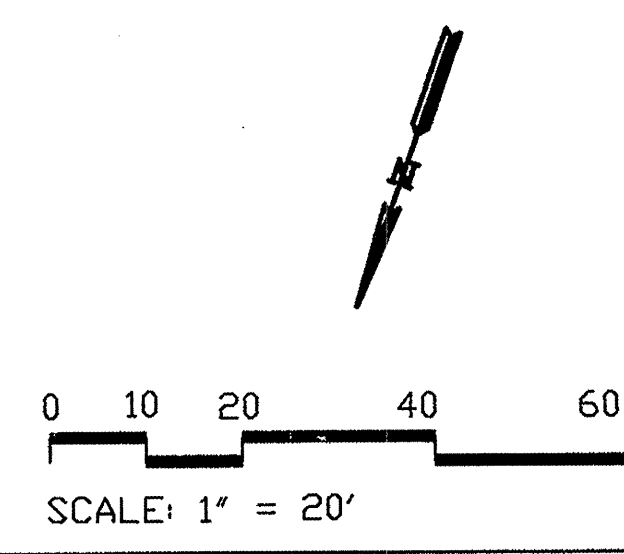
PLANT LEGEND					
COMMON NAME	BOTANICAL NAME	QUANTITY	SIZE		COMMENTS
			INSTALLED	MATURE	
<u>TREES</u>					
Desert Willow	Chilopsis linearis 'Art's Seedless'	13	8'-10' ht.	20'-30' ht. 4 spd.	multi-trunk
Goldenrain Tree	Koeleruteria paniculata	5	2-1/2" cal.	20'-25' ht. 4 spd.	
Vitex	Vitex angue-caetue	9	15 gal.	15' ht. 4 spd.	multi-trunk
<u>NATIVE GRASS</u>					
'PIONEER'S PRIDE' NATIVE GRASS BLEND SEED MIX, AVAILABLE FROM CURTIS & CURTIS (505) 762-4159		13,150 S.F.			1 lb. PLS/PER 1000 S.F.

RECORD DRAWING  
FEBRUARY 2007

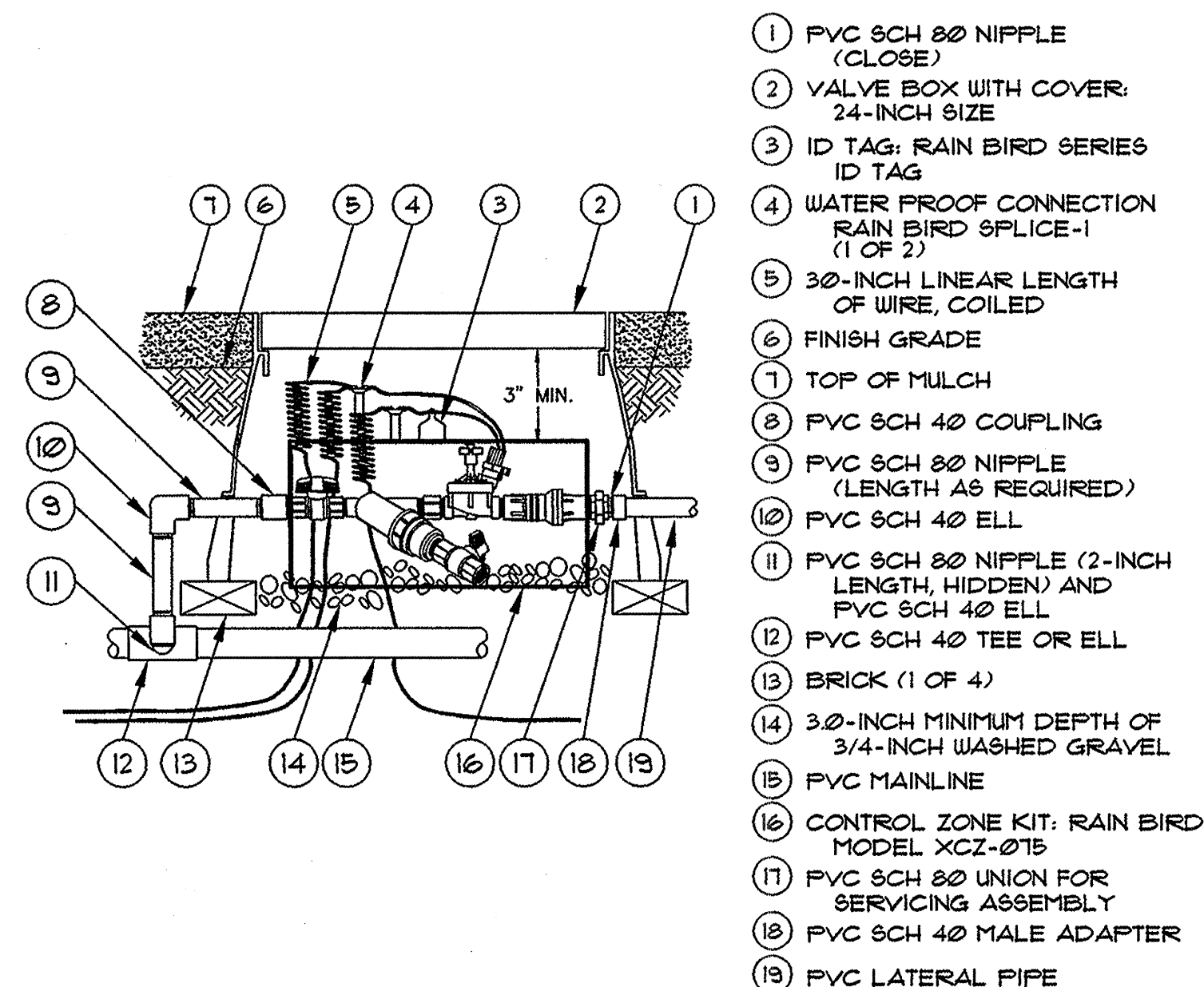
RECORD DRAWINGS WERE PREPARED FROM INFORMATION PROVIDED BY THE CONTRACTOR

**MORROW REARDON WILKINSON, LTD. LANDSCAPE ARCHITECTS**  
210 La Veta NE, Albuquerque, NM 87108  
505.268.2288 FAX 505.265.9637  
mrw@mrwm.com

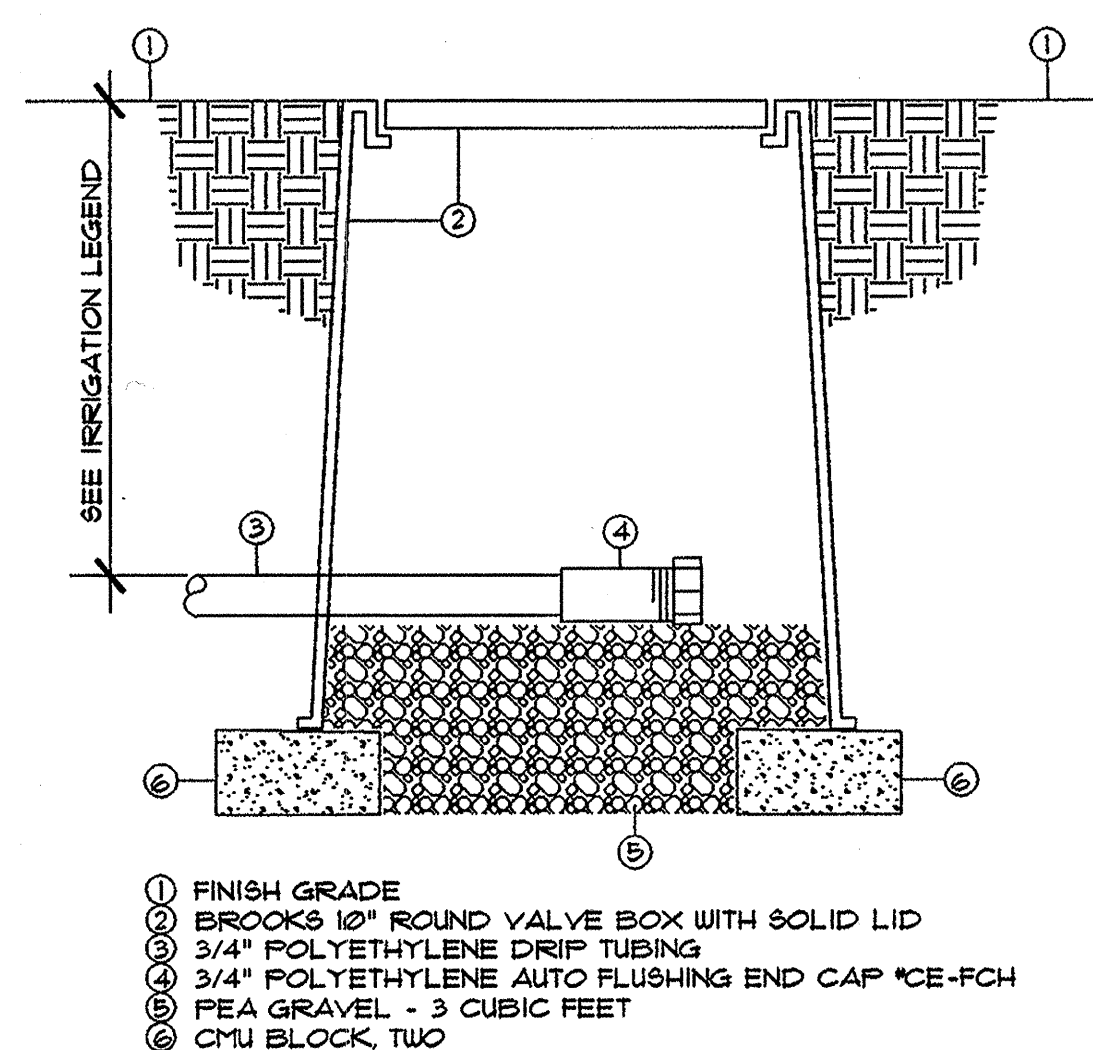
BENCHMARK INFORMATION	
ALBUQUERQUE CONTROL SURVEY B.M. NO. 9-M12	
LOCATED IN THE SOUTHWEST CORNER OF THE	
INTERSECTION OF ISLETA BLVD. AND ARENAL RD.	
AN ACS 1 3/4" ALUMINUM DISK STAMPED "ACS"	
BM, 9-M12", EPOXIED TO TOP OF CONCRETE	
CURB, AT THE WSW CURB RETURN, ELEV.=4940.91	
ENGINEER'S SEAL	
3.	
2.	
1.	
REVISION	DATE
DESCRIPTION	
BY	
REVISIONS (OR CHANGE NOTICES)	
BERNALILLO COUNTY, PUBLIC WORKS DIV.	
HARTLINE DRAINAGE IMPROVEMENTS	
PLANTING PLAN	
LARKIN GROUP NM, INC.	
CONSULTING ENGINEERS	
FILE NO.	01-0002
DRAWN	JSP
CHECKED	ECR
DATE	APRIL 2005
SHEET	5-2



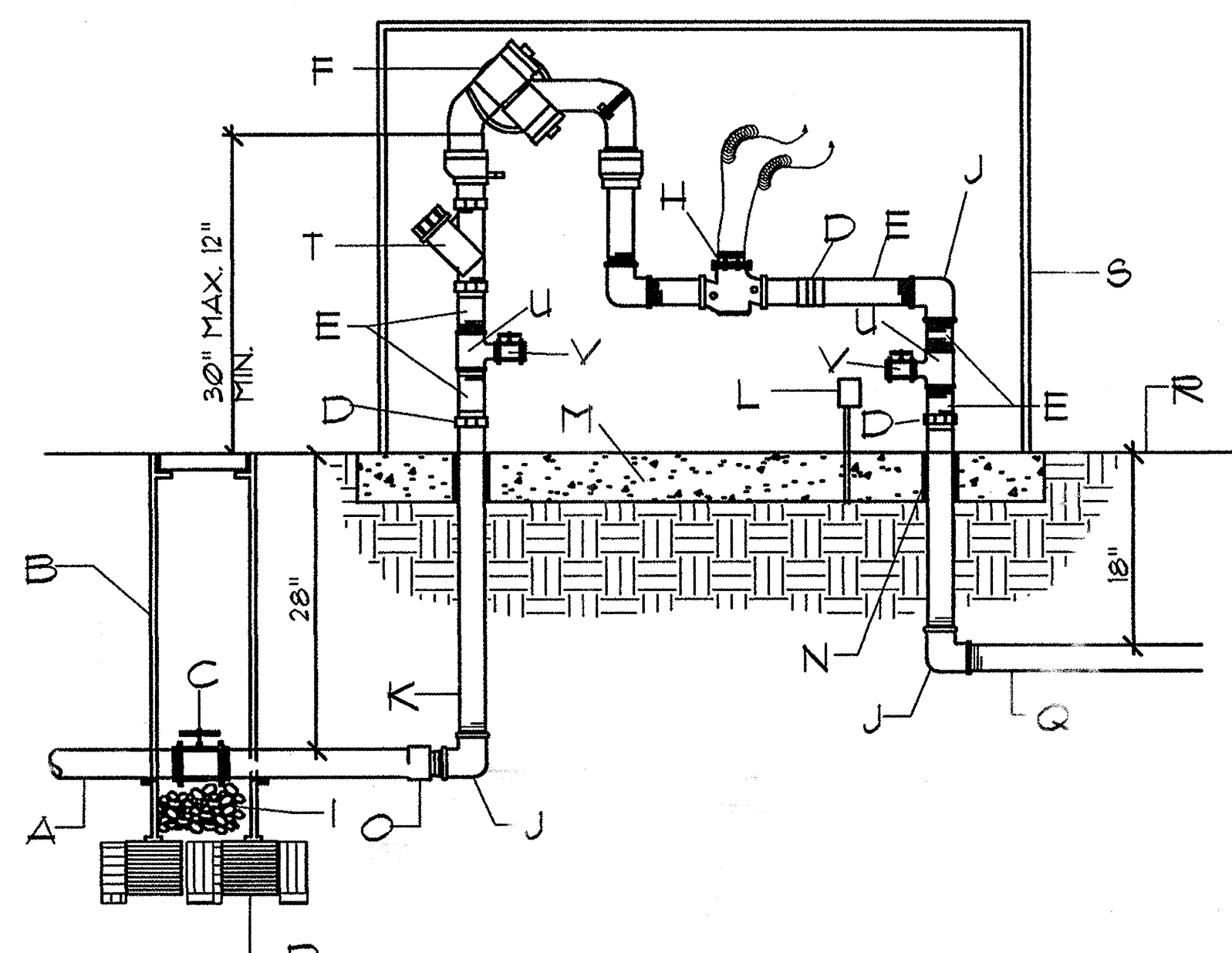




**A**  
**3** CONTROL ZONE KIT  
DRIP-VALVE 81824 NTS



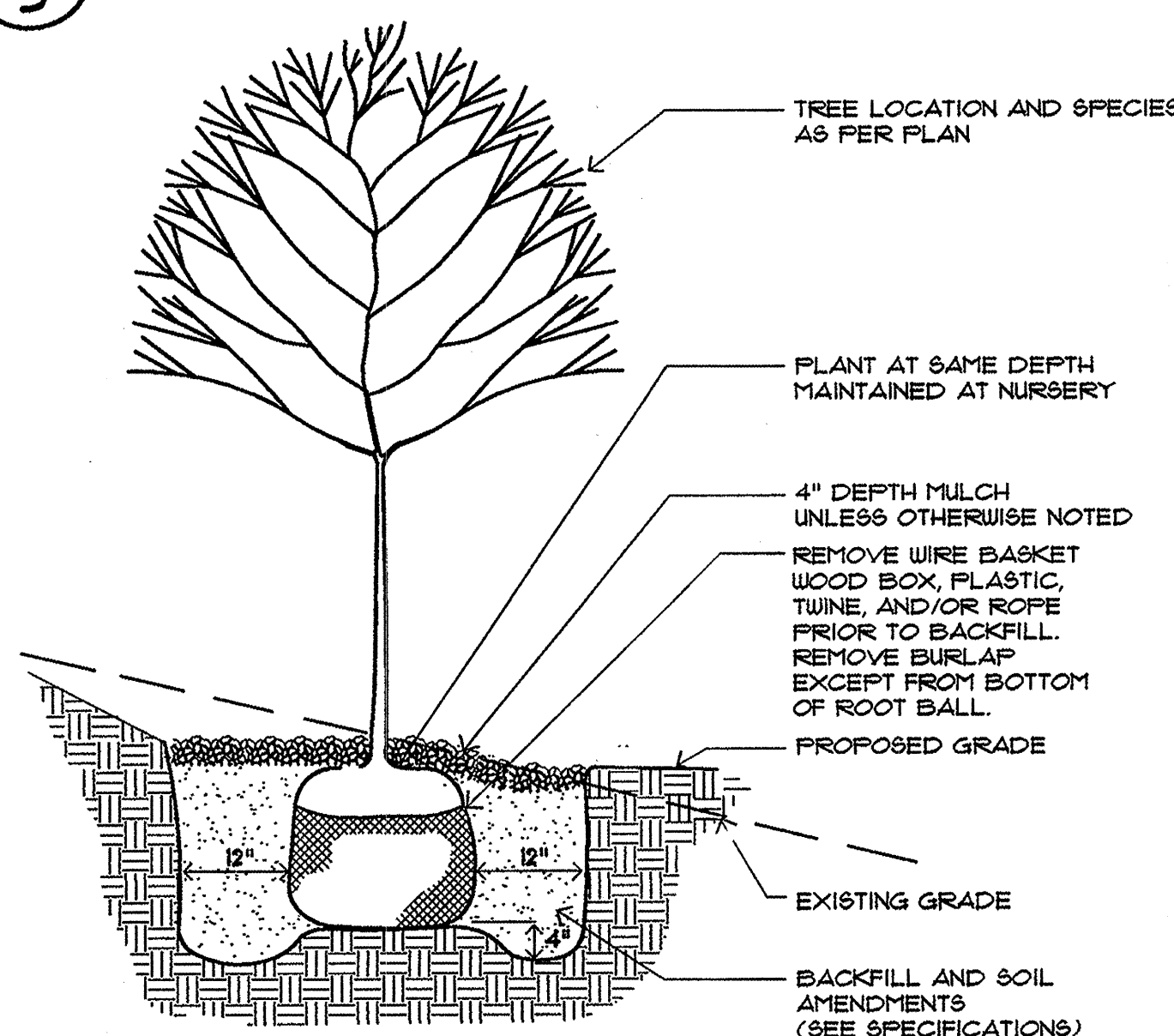
**B**  
**3** FLUSH CAP ASSEMBLY NTS



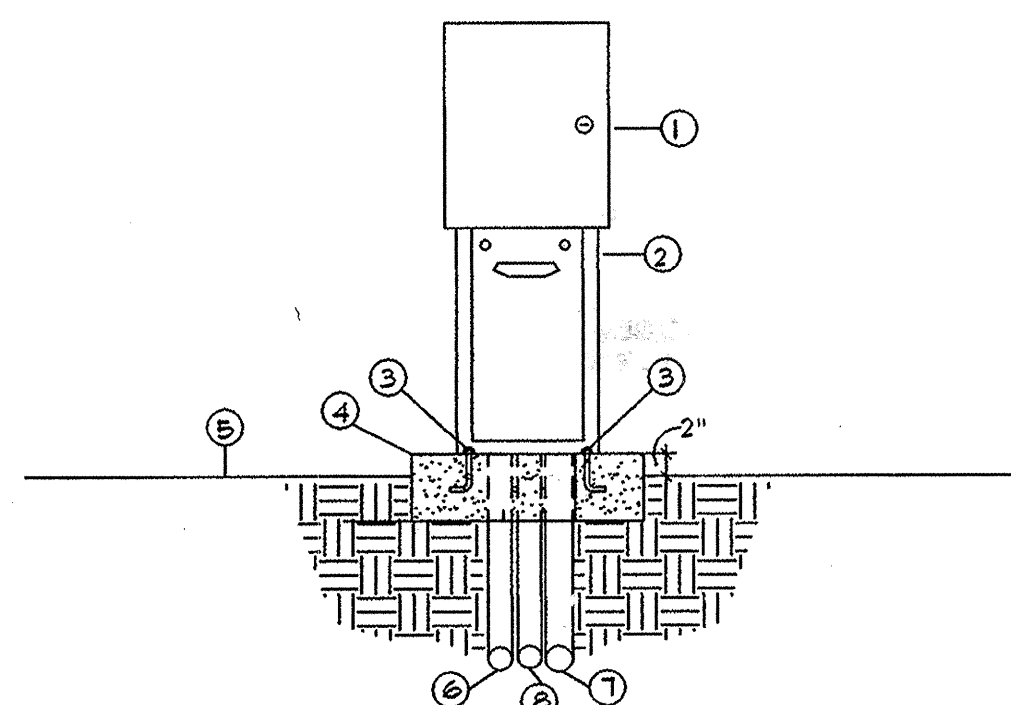
**CONSTRUCTION NOTES:**

- |  |  |
|--|--|
| A. SERVICE LINE TO WATER METER   | L. 110V ELECTRICAL OUTLET FOR HEATED PROTECTIVE ENCLOSURE. PLACE AWAY FROM RELIEF VALVE. |
| B. BROOKS PRODUCTS INC. 1730 FB-18 BODY (ABS) VALVE BOX W/ BOLT DOWN COVER (1/30) AND ONE 8" EXTENSION | M. MIN. 4" 4000 PSI CONCRETE SLAB.   |
| C. TRUE UNION SCHEDULE 80 PVC BALL VALVE   | N. PVC SLEEVING & INSULATION (MIN. 1" THICK).  |
| D. GALVANIZED UNION (min. 4" above grade)  | O. PVC MIP ADAPTER   |
| E. GALVANIZED NIPPLE   | P. 8" x 8" x 16" SOLID CMU BLOCK.  |
| F. FEBCO MODEL 862U RPB BACKFLOW PREVENTER   | Q. NON-CONSTANT PRESSURE IRRIGATION MAINLINE.  |
| H. RAINBIRD PEB SERIES MASTER VALVE.   | R. FINISH GRADE.   |
| I. PEA GRAVEL.   | S. PROTECTIVE ENCLOSURE SEE CITY STANDARD DUG. 2383 FOR CRITERIA.                        |
| J. GALVANIZED FLL  | T. W/F STRAINER.   |
| K. GALVANIZED RISER  | U. GALVANIZED T.   |
|  | V. 1/2" BRASS BALL VALVE.  |

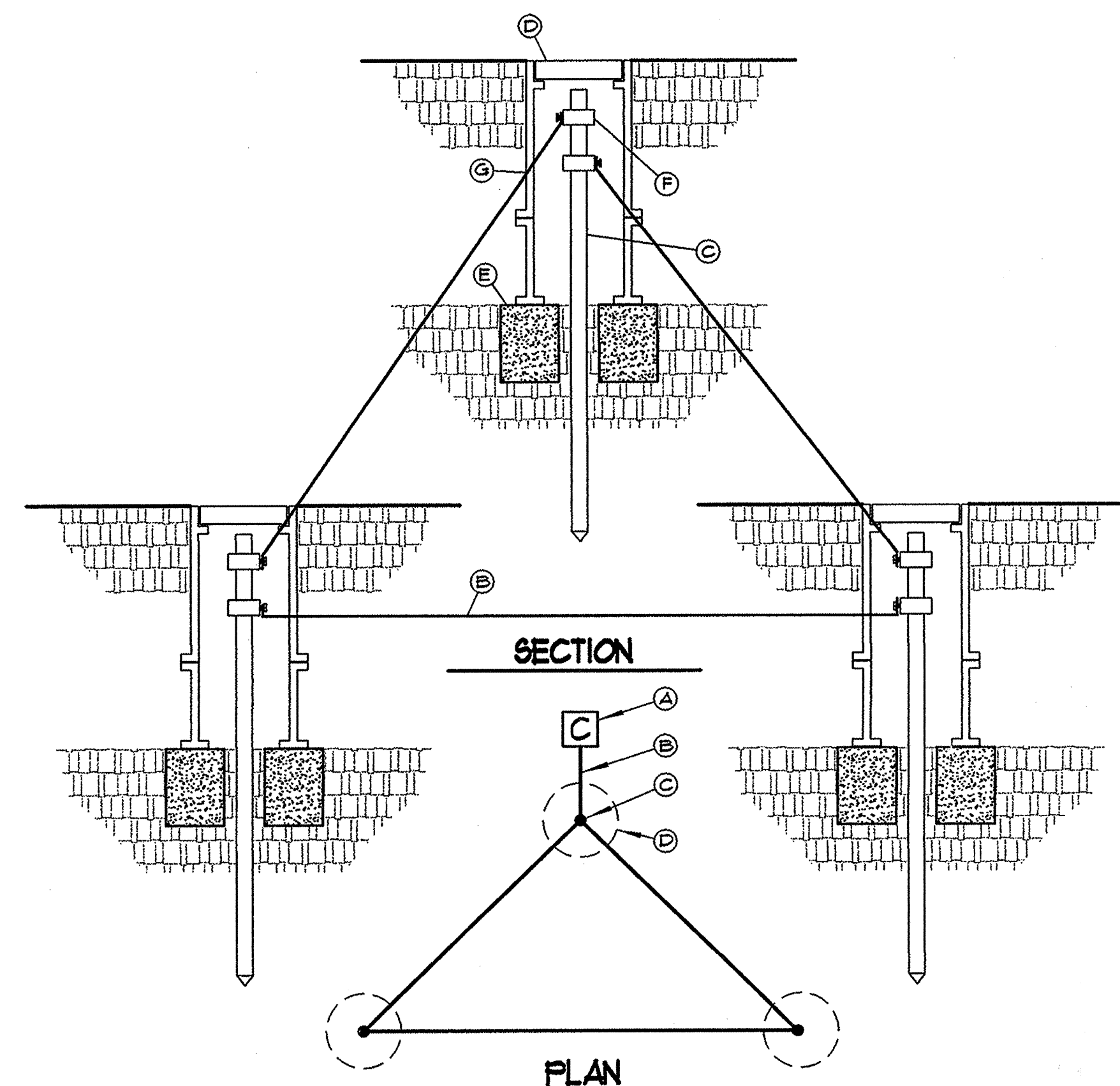
**D**  
**3** RPBA WITH MASTER VALVE  
MCD-2101-B 8/02 NTS



**E**  
**3** TREE PLANTING DETAIL - ON SLOPE  
MCD-0023 11/01/95 NTS



**F**  
**3** AUTOMATIC CONTROLLER NTS



**KEY (TYPICAL)**

- A. IRRIGATION CONTROLLER. SEE IRRIGATION LEGEND.
- B. 1/2" AUG WIRE FROM IRRIGATION CONTROLLER TO GROUND ROD CLAMP. WIRE SHALL BE INSTALLED STRAIGHT AND TAUT.
- C. 8' LENGTH GROUND ROD. PLACE IN IRRIGATED AREA A MINIMUM OF 16' FROM ONE ANOTHER W/ ONE ROD A MIN. OF 12' FROM CONTROLLER. (OPTION: REPLACE GROUNDING RODS W/ 1 EA. 1/2" x 12" x 18" COPPER PLATE, BURIED @ 12" DEPTH. SOLDER 1/2 BARE COPPER WIRE TO PLATE.)
- D. 1" DIAMETER x 9" DEEP BROOKS 100 SERIES VALVE BOX WITH COVER.
- E. 8"x8"x16" SOLID CMU BLOCK.
- F. GROUND ROD CLAMP.
- G. DRILL A SMALL OPENING IN VALVE BOX TO MAINTAIN WIRE TAUTNESS.

**C**  
**3** CONTROLLER GROUNDING DETAIL NTS

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RECORD DRAWING  
FEBRUARY 2007

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LANDSCAPE ARCHITECTS  
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BENCHMARK INFORMATION	
ALBUQUERQUE CONTROL SURVEY B.M. NO. 9-M12 LOCATED IN THE SOUTHWEST CORNER OF THE INTERSECTION OF ISLETA BLVD. AND ARENAL RD. AN ACS 1 3/4" ALUMINUM DISK STAMPED "ACS BM, 9-M12", EX-OXID TO TOP OF CONCRETE CURB, AT THE WSW CURB RETURN, ELEV.=4940.91	
ENGINEER'S SEAL	
3.	
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REVISION DATE:	DESCRIPTION BY
REVISIONS (OR CHANGE NOTICES)	
BERNALILLO COUNTY, PUBLIC WORKS DIV.	
HARTLINE DRAINAGE IMPROVEMENTS	
DETAILS	
LARKIN GROUP NM, INC.	
CONSULTING ENGINEERS NEW MEXICO	
FILE NO. 01-0002	DATE APRIL 2005
DRAWN: JSP	CHECKED: ECR
SHEET 5-3	





### KEYED NOTES

- 120/240 VOLT SINGLE PHASE 100 AMP METERING PEDESTAL WITH A 100A-2P MAIN BREAKER AND A MINIMUM OF FOUR 20A-1P BRANCH CIRCUIT BREAKERS. REFER TO DETAIL THIS SHEET FOR MOUNTING. COORDINATE EXACT REQUIREMENTS WITH PNM.
- EXTEND CIRCUIT TO 20A-1P CIRCUIT BREAKERS LOCATED IN METERING PEDESTAL.
- (3) #2 THWN AND (1) #8 THWN GROUND IN 2" CONDUIT.
- RISER UP POLE PER PNM REQUIREMENTS.
- CONTRACTOR SHALL COORDINATE ALL WORK WITH PNM.
- REMOVAL AND REPLACEMENT OF ASPHALT PER BERNALILLO COUNTY PUBLIC WORKS DIVISION STANDARD DRAWINGS.
- BORE UNDER EXISTING WALK, CURB, AND GUTTER.
- INSTALL CONDUIT UNDERNEATH PAVEMENT.

### WARNING

IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE UTILITY OR PIPELINE COMPANY, THE OWNER OR BY OTHERS, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES.

THE ENGINEER HAS UNDERTAKEN NO FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFORE. THE CONTRACTOR SHALL INFORM ITSELF TO THE LOCATION OF ANY UTILITY LINE, PIPELINE OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE OF ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES, AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES IN PLANNING AND CONDUCTING EXCAVATION, WHETHER BY CALLING OR NOTIFYING THE UTILITIES, COMPLYING WITH "BLUE STAKES" PROCEDURES, OR OTHERWISE.

### ELECTRICAL SPECIFICATIONS

- THE ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL ALL ELECTRICAL FACILITIES IN ACCORDANCE WITH THE FOLLOWING SPECIFICATIONS, PLANS AND ASSOCIATED NOTES. NATIONAL ELECTRICAL CODE, STATE & LOCAL CODES, AND IN A WORKMANLIKE MANNER.
- CONTRACTOR SHALL BECOME FAMILIAR WITH EXISTING CONDITIONS AT JOB SITE.
- THE ELECTRICAL CONTRACTOR SHALL INCLUDE IN HIS BID THE COSTS OF ALL PERMITS, TESTS AND INSPECTIONS, AND VISIT THE SITE OF WORK BEFORE SUBMITTING BID.
- THE ELECTRICAL CONTRACTOR SHALL COORDINATE HIS WORK WITH THE OTHER TRADES.
- THE ELECTRICAL CONTRACTOR SHALL GUARANTEE ALL WORK AND MATERIAL FOR A PERIOD OF ONE YEAR AFTER DATE OF ACCEPTANCE.
- A SET OF MARKED UP PRINTS SHALL BE PREPARED SHOWING ALL CHANGES MADE DURING CONSTRUCTION AND TURN IT OVER TO THE OWNER AT THE END OF THE JOB. ALL CHANGES MUST HAVE THE OWNERS APPROVAL.
- ANY DISCREPANCY BETWEEN MATERIAL DESCRIPTION AND CATALOG NO. SHALL BE BROUGHT TO THE ARCHITECTS, ENGINEERS, OR OWNERS ATTENTION IMMEDIATELY.
- ALL CONDUCTORS TO BE #12 AWG THWN EXCEPT WHERE OTHERWISE SHOWN OR NOTED IT IS PERMISSIBLE FOR THE CONTRACTOR TO USE THHN WIRING IN EXISTING CONDUITS.
- 120 VOLT BRANCH CIRCUIT RUNS WHICH EXCEED ONE HUNDRED FEET IN LENGTH SHALL BE #10 THWN.
- ALL CONDUIT WHICH COMES IN CONTACT WITH EARTH SHALL BE WRAPPED IN SCOTCH WRAP #51 OR PLASTIC COATED. ALL FEEDERS AND HOMERUNS SHALL BE 1" MINIMUM UNLESS OTHERWISE NOTED.

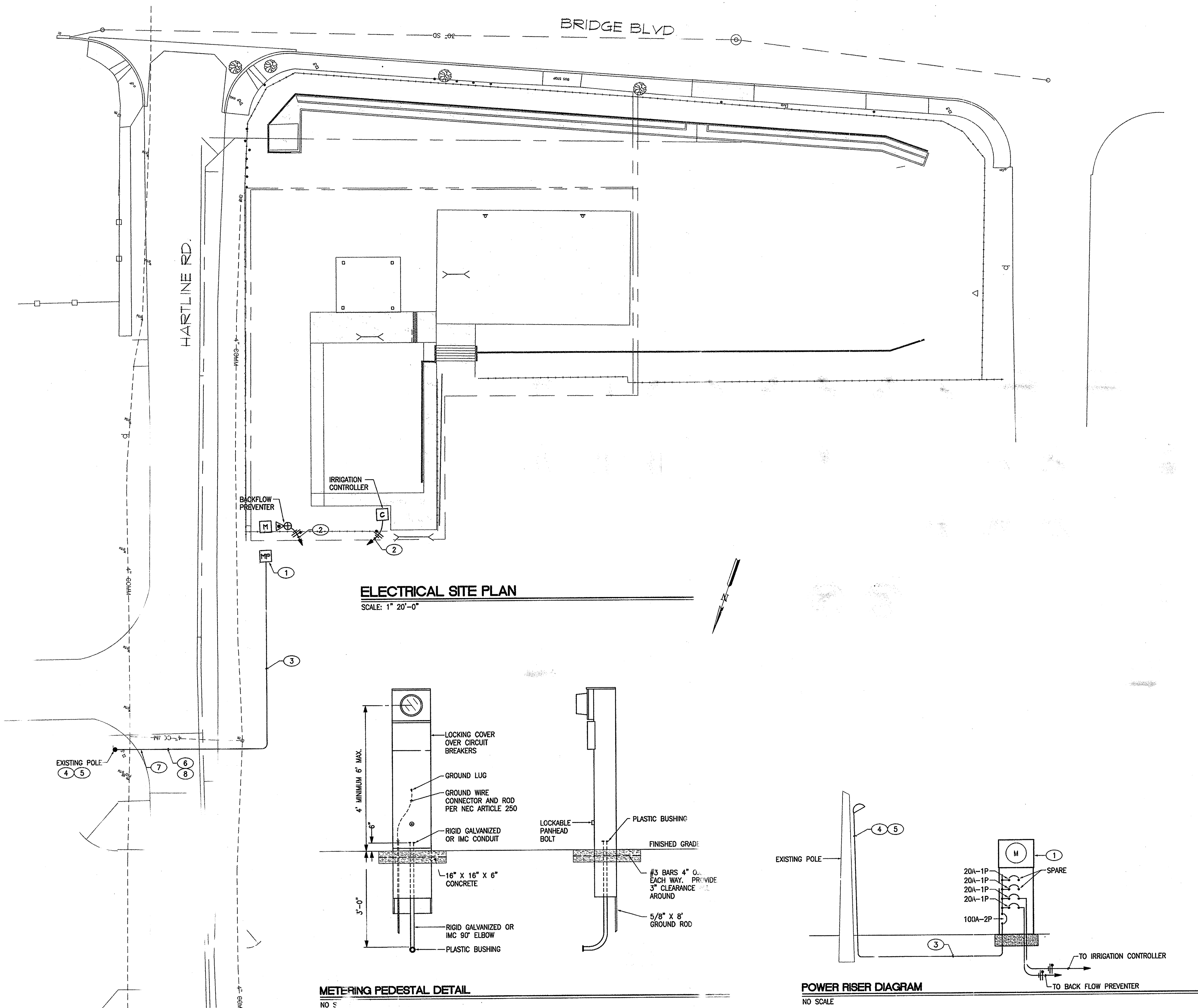
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RECORD DRAWING  
FEBRUARY 2007

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BM, 9-M12", EPOXY TO TOP OF CONCRETE	
CURB, AT THE WSW CURB RETURN, ELEV.=4940.9'	
ENGINEER'S SEAL	

3.			
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REVISION	DATE	DESCRIPTION	BY
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BERNALILLO COUNTY, PUBLIC WORKS DIV.			
HARTLINE DRAINAGE IMPROVEMENTS			
ELECTRICAL PLAN			
LARKIN GROUP NM, INC.			
CONSULTING ENGINEERS			
FILE NO.	ALBUQUERQUE	DATE	NEW MEXICO
01-0002	TRG	DDR	APRIL 2005 SHEET 5-4





## CONSTRUCTION TRAFFIC CONTROL GENERAL NOTES

1. PROJECT IS SUBJECT TO THE REQUIREMENTS OF COUNTY ORDINANCE NO. 95-12 AND COUNTY ORDINANCE NO. 96-3. THE CONTRACTOR IS RESPONSIBLE FOR ACQUIRING ALL PERMITS NECESSARY. CONTRACTOR SHALL CALL 848-1504 FOR MORE INFORMATION.

2. THE CONTRACTOR SHALL SUBMIT A TRAFFIC CONTROL PLAN TO THE COUNTY TRAFFIC CONTROL ADMINISTRATOR AT LEAST 72 HOURS PRIOR TO COMMENCEMENT OF WORK. TRAFFIC CONTROL PLANS SHALL BE PREPARED IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION AND BY CERTIFIED PERSONNEL AND MUST BE APPROVED PRIOR TO COMMENCEMENT OF WORK ON THE PROJECT. CALL 848-1504 FOR FURTHER INFORMATION.

3. A DAILY TRAFFIC CONTROL LOG SHALL BE MAINTAINED BY THE CONTRACTOR REFLECTING THE TYPES AND LOCATIONS OF ALL TRAFFIC CONTROL DEVICES, SIGNS, BARRICADES, ETC. BEING USED ON THE PROJECT IN COMPLIANCE WITH THE APPROVED TRAFFIC CONTROL PLAN. THIS LOG SHALL BE SUBMITTED TO THE BERNALILLO COUNTY TRAFFIC CONTROL ADMINISTRATOR UPON COMPLETION OF THE PROJECT CONSTRUCTION OR WHEN SO REQUESTED BY THE PROJECT MANAGER OR THE BERNALILLO COUNTY TRAFFIC CONTROL ADMINISTRATOR.

4. CONTRACTOR SHALL PROVIDE A WEEKLY CONSTRUCTION ACTIVITY SCHEDULE TO BERNALILLO COUNTY PUBLIC WORKS DIVISION ATTN: PROJECT MANAGER

5. THE CONTRACTOR SHALL FILE A WEEKLY WRITTEN REPORT TO THE TRAFFIC CONTROL ADMINISTRATOR DESCRIBING THE TRAFFIC CONTROL PLAN THAT WILL BE IN EFFECT FOR THE FOLLOWING WEEK.

6. SUBJECT TO THE APPROVED TRAFFIC CONTROL PLAN, AT LEAST ONE LANE SHALL BE OPEN TO TRAFFIC AT ALL TIMES. CONTRACTOR SHALL PROVIDE PROPER SIGNAGE AND FLAGMAN TO MAINTAIN THE TRAFFIC LANE IN SUCH A MANNER AS TO ASSURE PROPER SAFETY TO THE TRAVELING PUBLIC AT ALL TIMES, EXCEPT WHEN GRADING, EXCAVATION AND BACKFILL OPERATIONS ARE BEING CONDUCTED IMMEDIATELY IN FRONT OF THE PROPERTY, IN WHICH CASE ACCESS WILL NOT BE DENIED FOR MORE THAN 4 HOURS WITHOUT APPROVAL BY THE COUNTY.

7. TRAFFIC LANES PROVIDED DURING CONSTRUCTION SHALL BE MAINTAINED, IN SUCH A CONDITION UNDER ALL WEATHER CONDITIONS, SO AS TO PERMIT THE REASONABLE PASSAGE OF PASSENGER VEHICLES, AND SHALL BE KEPT GRADED AND SMOOTH, AND WATERED SEVERAL TIMES DAILY TO CONTROL DUST.

8. 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.

9. CONSTRUCTION SHALL NOT BEGIN UNLESS A TRAFFIC CONTROL PLAN HAS BEEN APPROVED AND VERIFIED BY BERNALILLO COUNTY TRAFFIC ENGINEERING.

10. ALL CONSTRUCTION TRAFFIC CONTROL DEVICES SHALL COMPLY WITH 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 THE COUNTY TRAFFIC CONTROL ADMINISTRATOR, PER SECTION 6A-4 OF THE MUTCD, LATEST EDITION.

11. THE CONSTRUCTION TRAFFIC CONTROL INITIAL SET-UP FOR EACH PHASE 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.

12. 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.

13. 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.

14. 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 BERNALILLO COUNTY TRAFFIC ENGINEERING PER MUTCD SECTION 6A-4.

15. ALL WORK IN ARTERIAL ROADWAYS SHALL BE ON A CONTINUOUS 24 HOUR PER DAY BASIS UNTIL COMPLETED.

16. EQUIPMENT OR MATERIALS SHALL NOT BE STORED WITHIN 15 FEET OF A TRAVELED TRAFFIC LANE DURING NON-WORKING HOURS WITHOUT THE APPROVAL OF BERNALILLO COUNTY TRAFFIC ENGINEERING.

17. CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFE AND ADEQUATE MEANS OF CHANNELIZING PEDESTRIAN TRAFFIC AROUND AND THROUGH THE CONSTRUCTION AREA.

18. CONTRACTOR IS RESPONSIBLE FOR OBLITERATION OF ANY CONFLICTING STRIPING AND RESPONSIBLE FOR ALL TEMPORARY STRIPING.

19. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL FACILITIES, BUSINESSES AND/OR RESIDENTS AT ALL TIMES.

20. CONTRACTOR SHALL PROVIDE ACCESS SIGNS FOR BUSINESSES LOCATED WITHIN THE CONSTRUCTION AREA UNDER THE SUPERVISION OF BERNALILLO COUNTY TRAFFIC ENGINEERING. EACH ACCESS SIGN SHALL HAVE 5 INCH, WHITE LETTERING ON BLUE BACKGROUND. SHOPPING CENTERS AND MALLS SHALL BE LISTED AS SUCH.

21. 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.

22. ANY FIELD ADJUSTMENTS SHALL BE APPROVED BY BERNALILLO COUNTY TRAFFIC ENGINEERING.

23. 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.

24. THE CONTRACTOR SHALL CONTACT BERNALILLO COUNTY TRAFFIC ENGINEER (848-1575) BEFORE REMOVING AND/OR INSTALLING ANY TRAFFIC SIGNS OR PERMANENT STRIPING AND MARKINGS. ALL STRIPING, PAVEMENT MARKINGS INCLUDING CROSSWALKS, LEGENDS AND SYMBOLS ARE TO BE CONSTRUCTED OF INTERSECTION GRADE COLD PLASTIC AND LINE MARKINGS ARE TO BE CONSTRUCTED OF DURABLE PAINT IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) LATEST EDITION. ANY PAVEMENT MARKINGS AND SIGNS REMOVED OR DAMAGED DURING CONSTRUCTION SHALL BE REPLACED AT EXISTING LOCATIONS. SUCH WORK SHALL BE CONSIDERED INCIDENTAL TO CONSTRUCTION OF THE PROJECT.

## RECOMMENDED SIGN SPACING(D) FOR ADVANCE WARNING SIGN SERIES

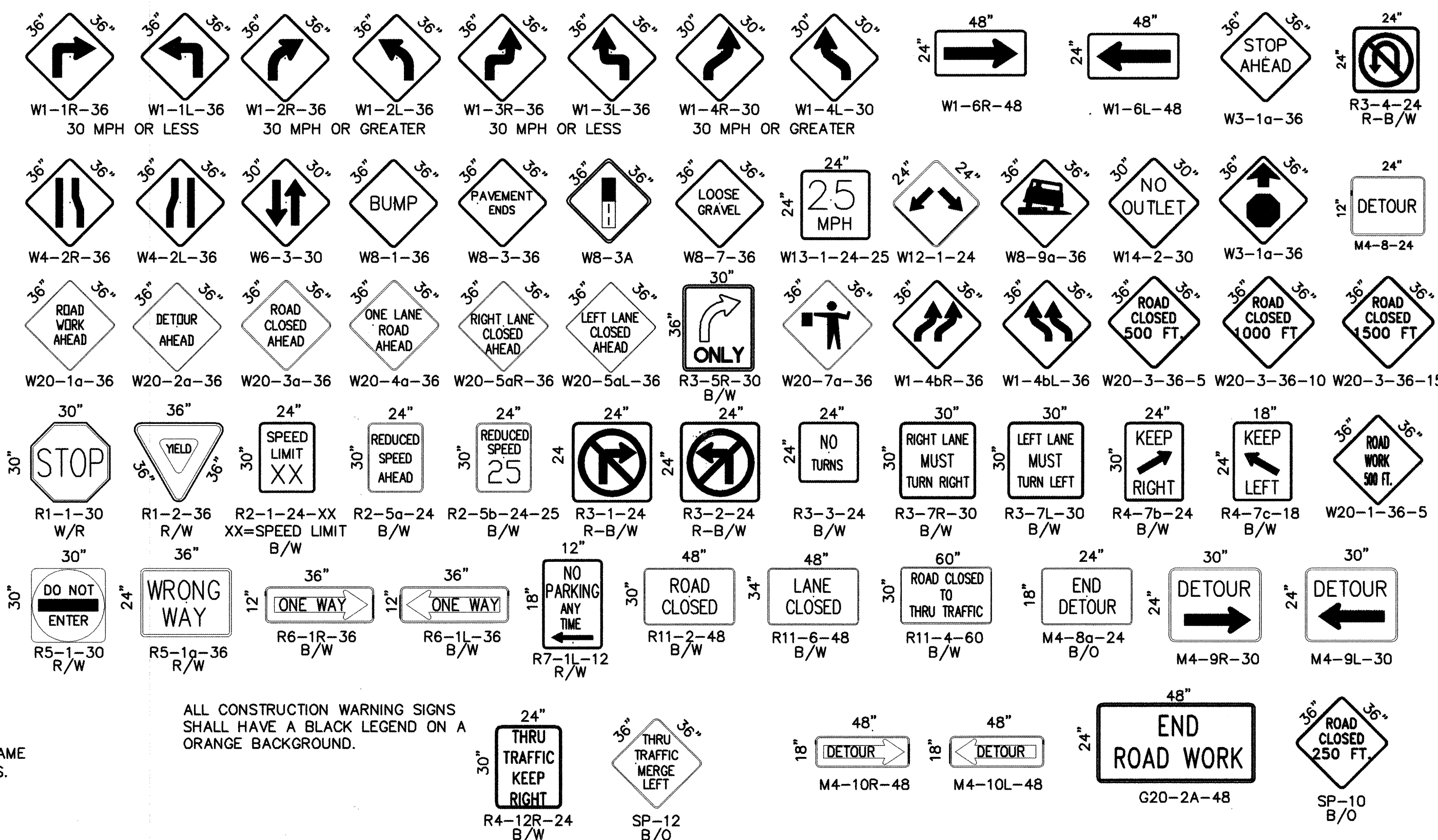
SPEED MILES PER HOUR	MINIMUM DISTANCE BETWEEN SIGNS	FROM LAST SIGN TO TAPER
0-20	10 X SPEED LIMIT	10 X SPEED LIMIT
25-30	10 X SPEED LIMIT	10 X SPEED LIMIT
30-35	10 X SPEED LIMIT	10 X SPEED LIMIT
40-45	10 X SPEED LIMIT	10 X SPEED LIMIT
50-60	10 X SPEED LIMIT	10 X SPEED LIMIT

## LEGEND

	WORK AREA
•	BARRICADE - TYPE I, TYPE II, OR TYPE "H" DRUM W/ REFLECTIVITY III-A SHEETING
	BARRICADE - TYPE III
X	VERTICAL PANEL
	WARNING SIGN
D	DISTANCE BETWEEN SIGNS - A DISTANCE MEASURED IN FEET EQUAL TO A VALUE OF TEN TIMES THE SPEED LIMIT OF THE STREET
	FLAGMAN POSITION
S	SPACING BETWEEN BARRICADES- A DISTANCE MEASURED IN FEET EQUAL TO THE SPEED LIMIT OF THE STREET
L	TAPER LENGTH - SEE CHART BELOW

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

## SIGN FACE DETAILS



## 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

## 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

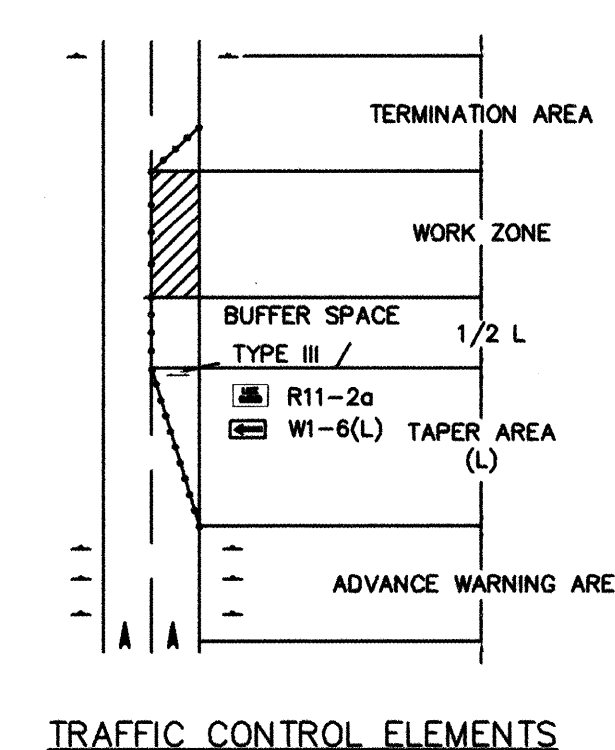
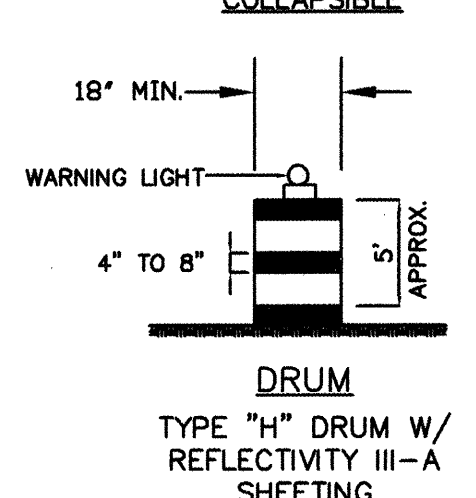
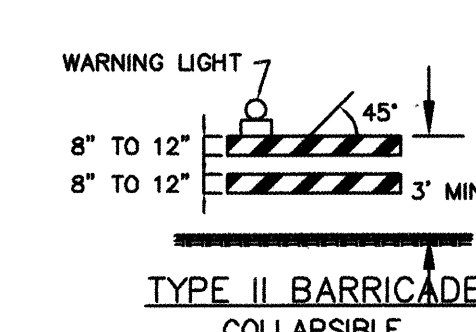
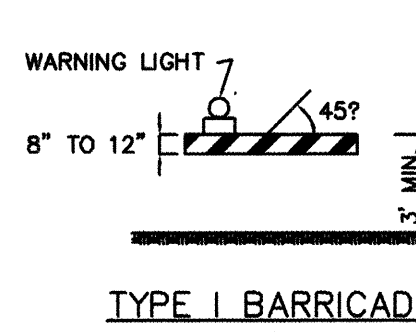
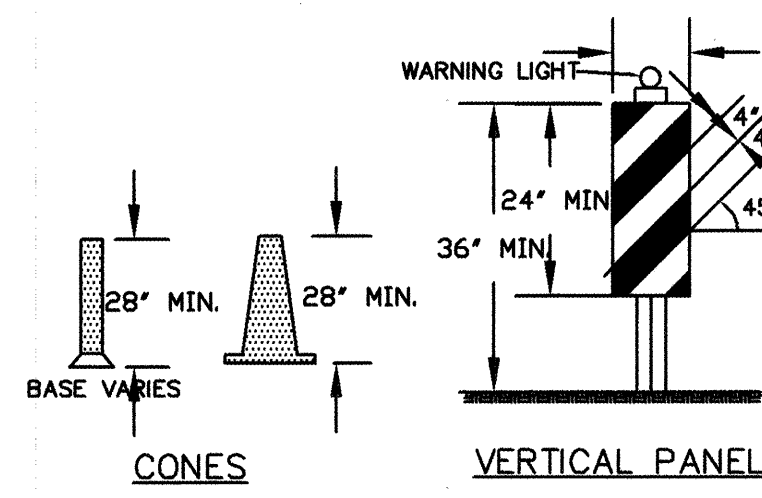
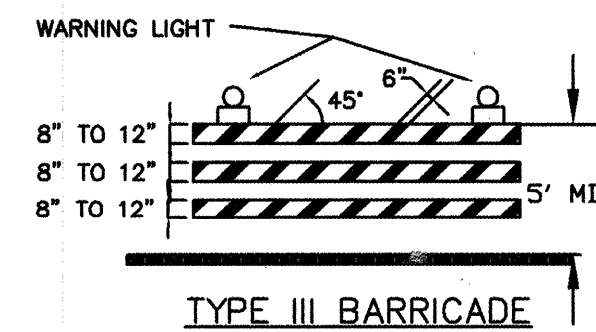
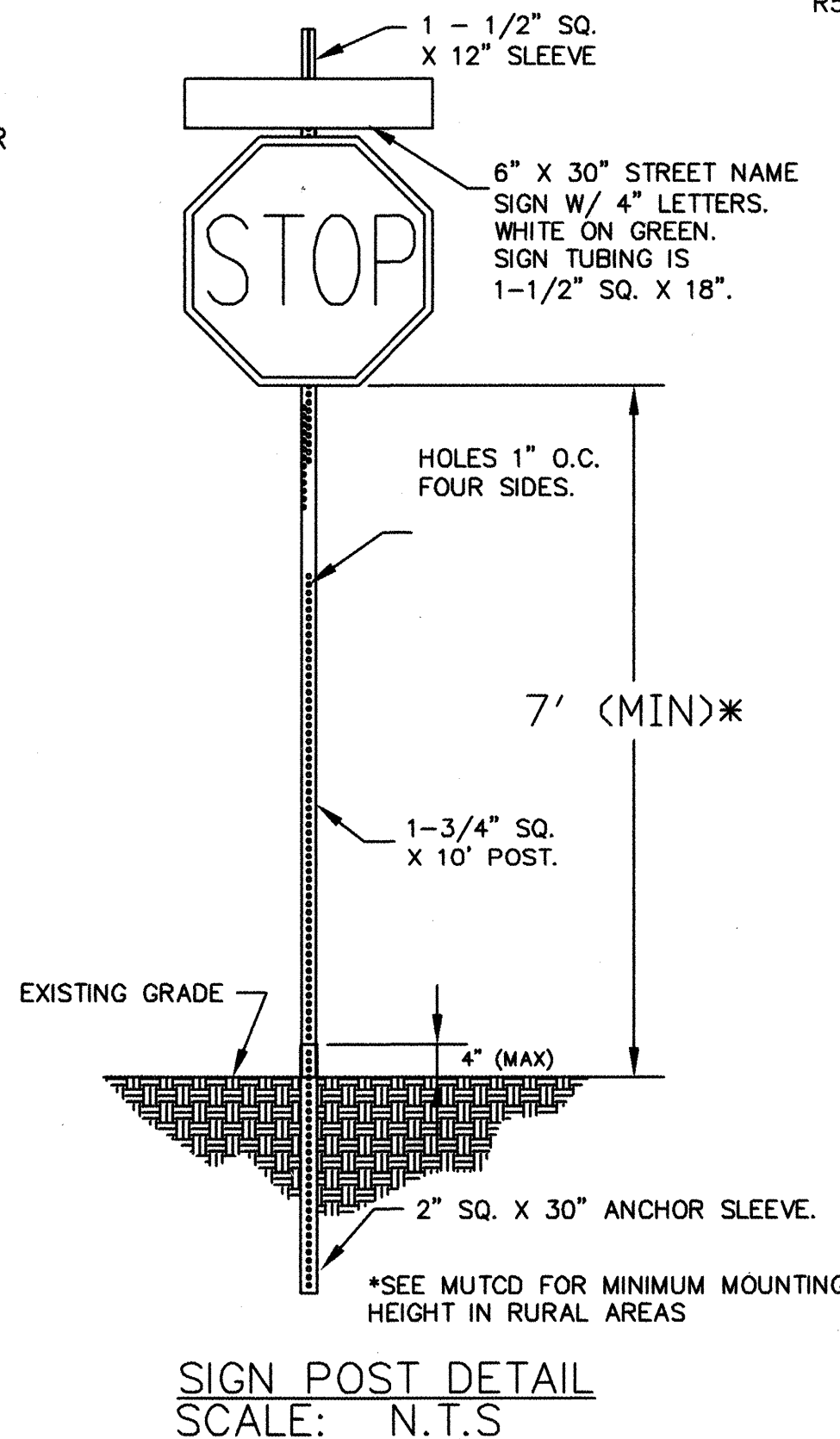
## TAPER LENGTH COMPUTATION

SPEED LIMIT	L =
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

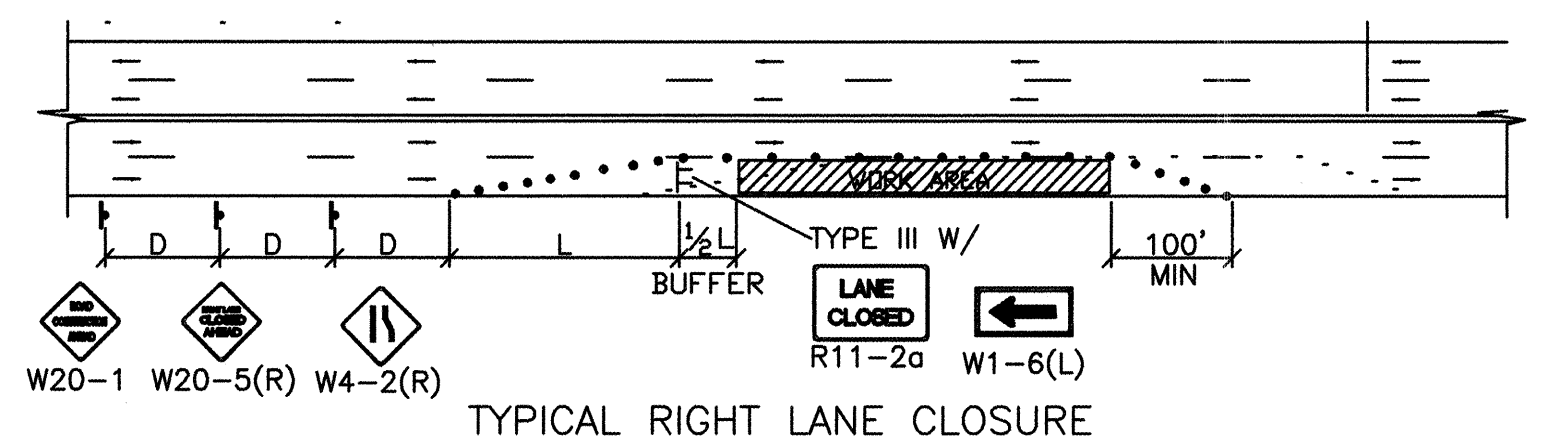
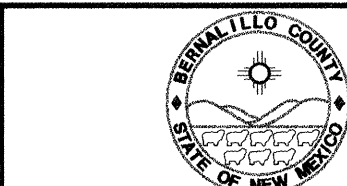
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RECORD DRAWING  
FEBRUARY 2007

# OF POSTS	MAXIMUM SIGN SQUARE FOOTAGE
1	6
2	12
3	18

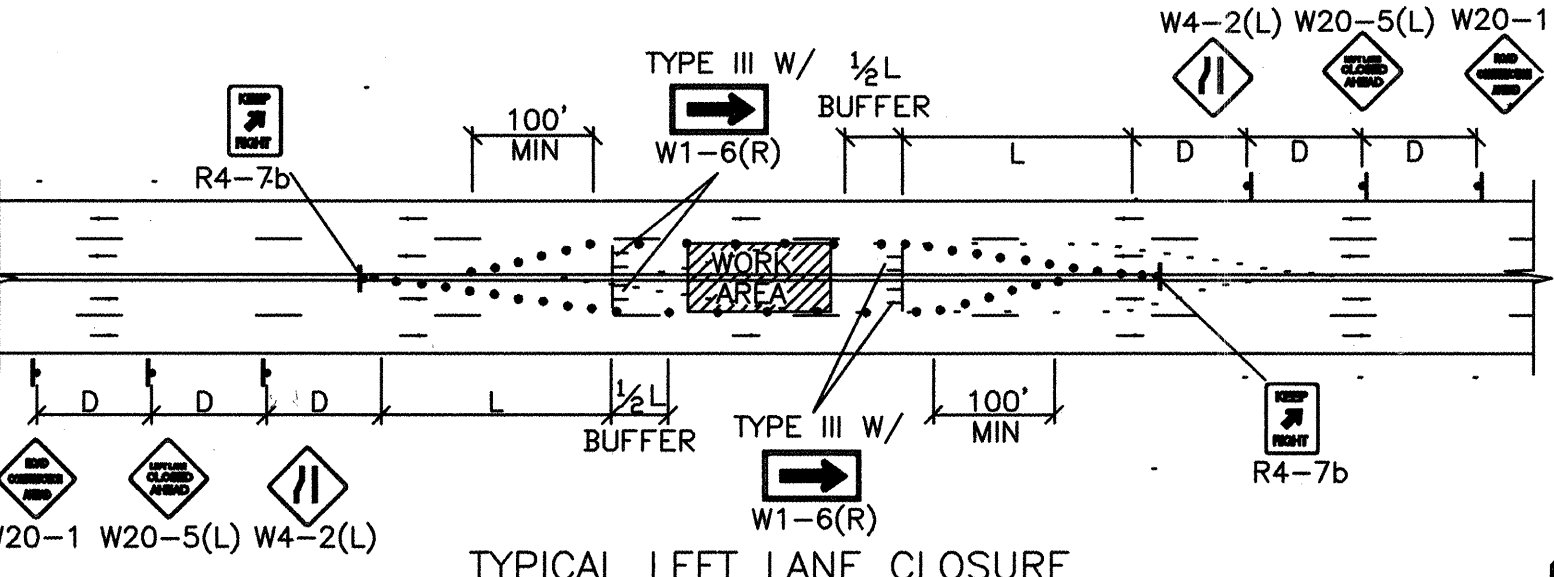


BENCHMARK INFORMATION		
ACS ALUMINUM CAP STAMPED "10-L-13, 1987", INTERSECTION BRIDGE BLVD. & ISLETA BLVD.		
GEO POSITION (NAD 1927), IN FEET, NM STATE		
PLANE COORDINATES (CENTRAL ZONE): X=375,554.44, Y=480,336.54, ELEV.=4944.55		
NGDV29, FT.		
ENGINEER'S SEAL		
3.		
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1.		
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TRAFFIC CONTROL STANDARDS, SIGNING & CONSTRUCTION		
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CONSULTING ENGINEERS		
FILE NO.	DRAWN	CHECKED
01-0002	AB/GC/SH	JW
DATE	APR 2005	
SHEET	6-1	

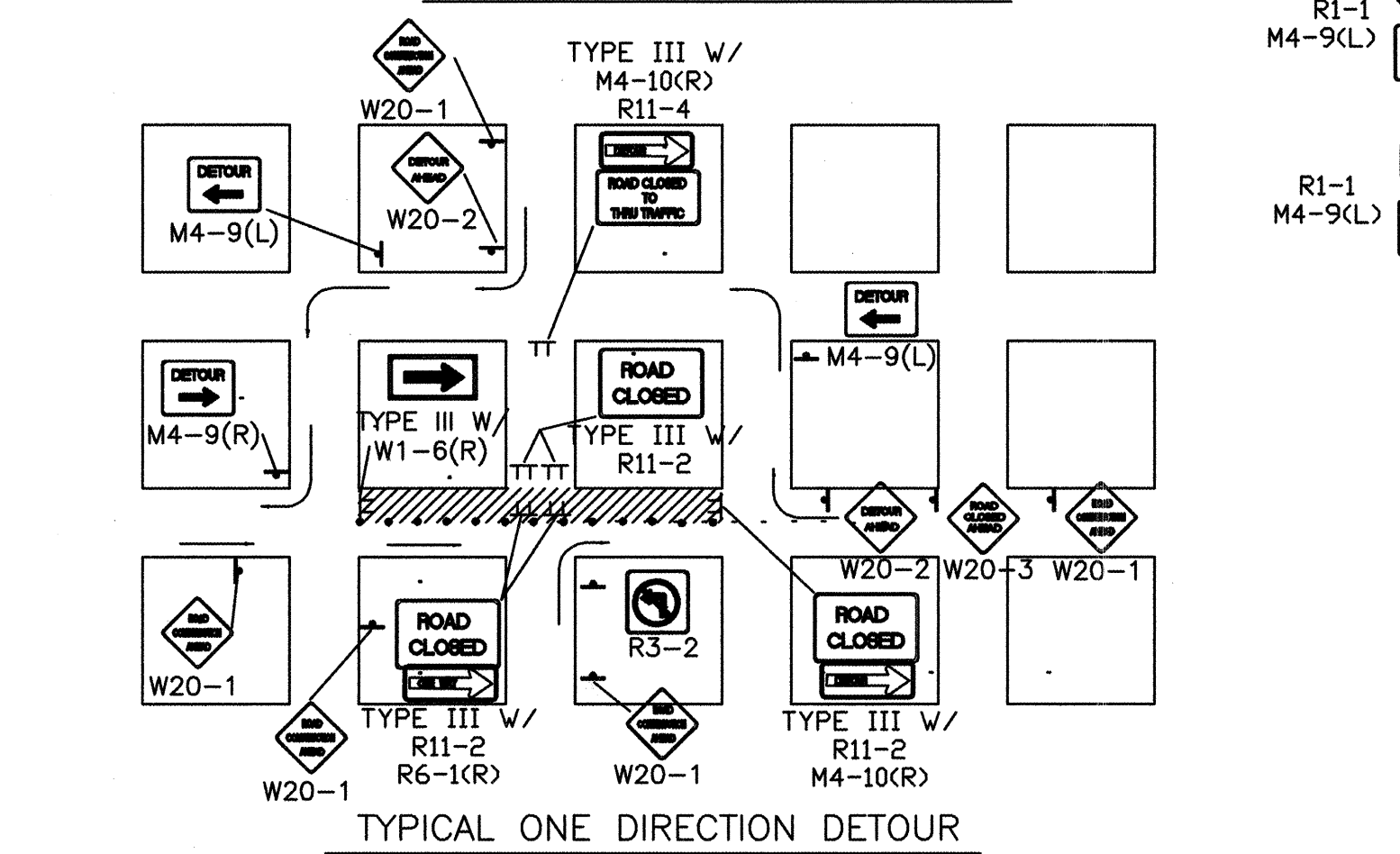




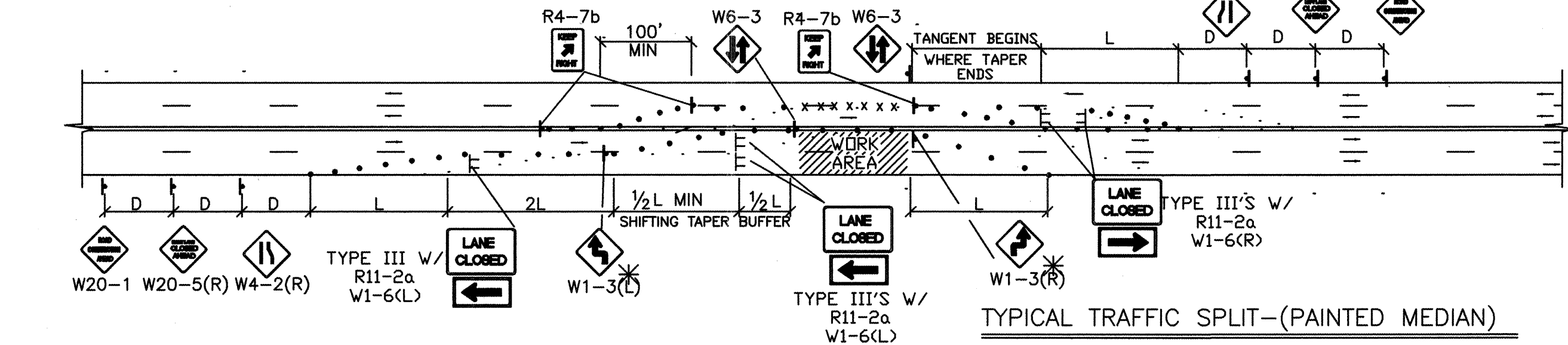
TYPICAL RIGHT LANE CLOSURE



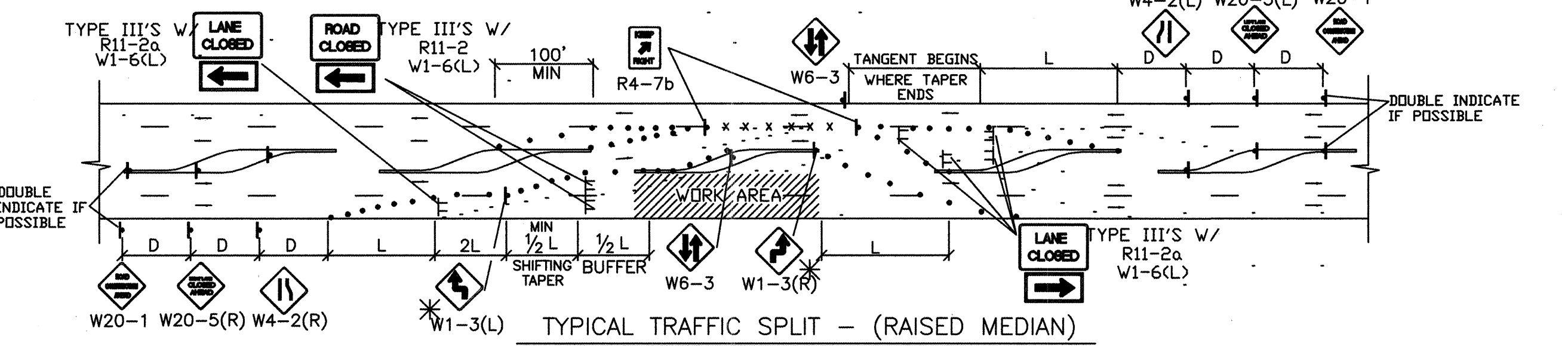
TYPICAL LEFT LANE CLOSURE



TYPICAL ONE DIRECTION DETOUR

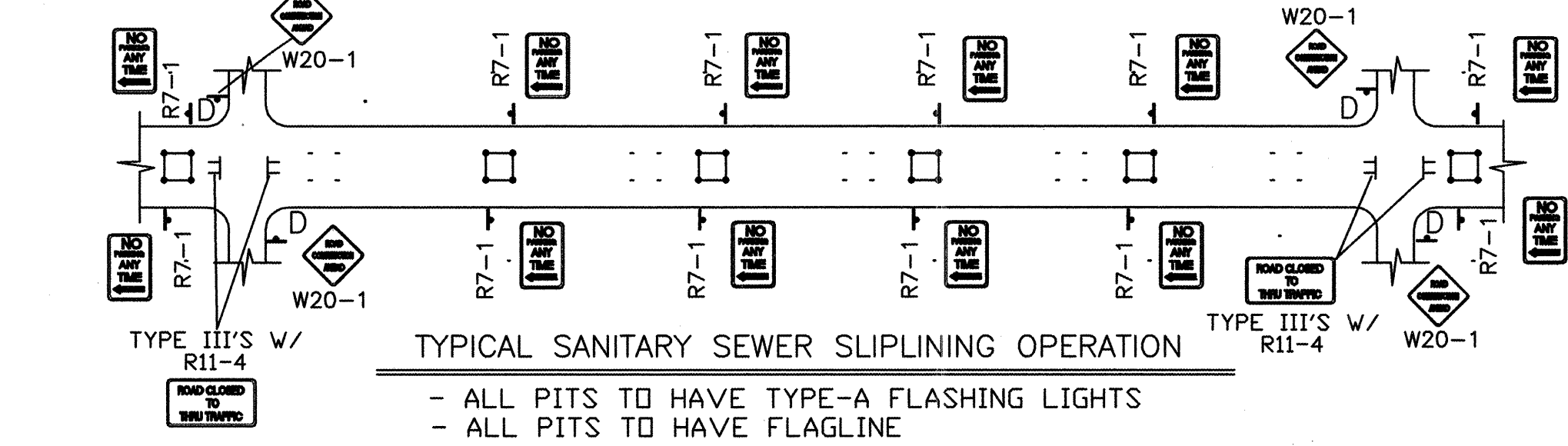


TYPICAL TRAFFIC SPLIT - (PAINTED MEDIAN)



TYPICAL TRAFFIC SPLIT - (RAISED MEDIAN)

- 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.



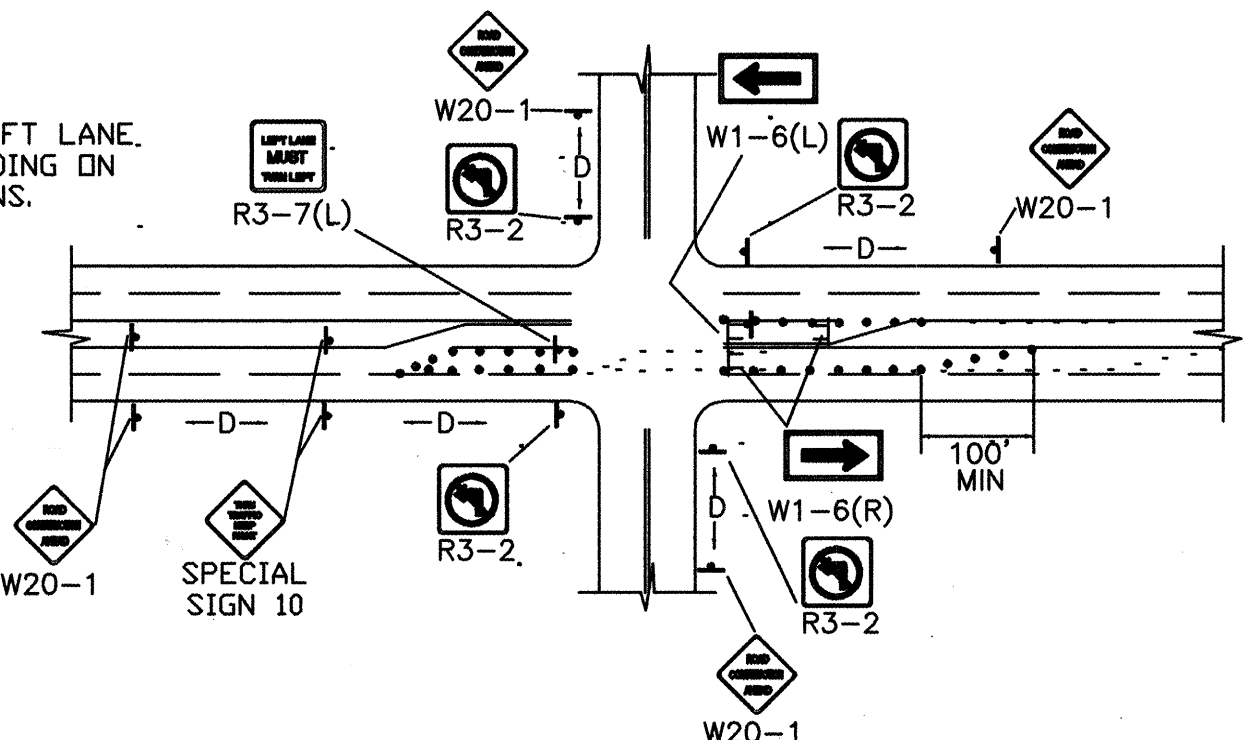
TYPICAL SANITARY SEWER SLIPLINING OPERATION

- ALL PITS TO HAVE TYPE-A FLASHING LIGHTS
- ALL PITS TO HAVE FLAGLINE

GENERAL NOTE:

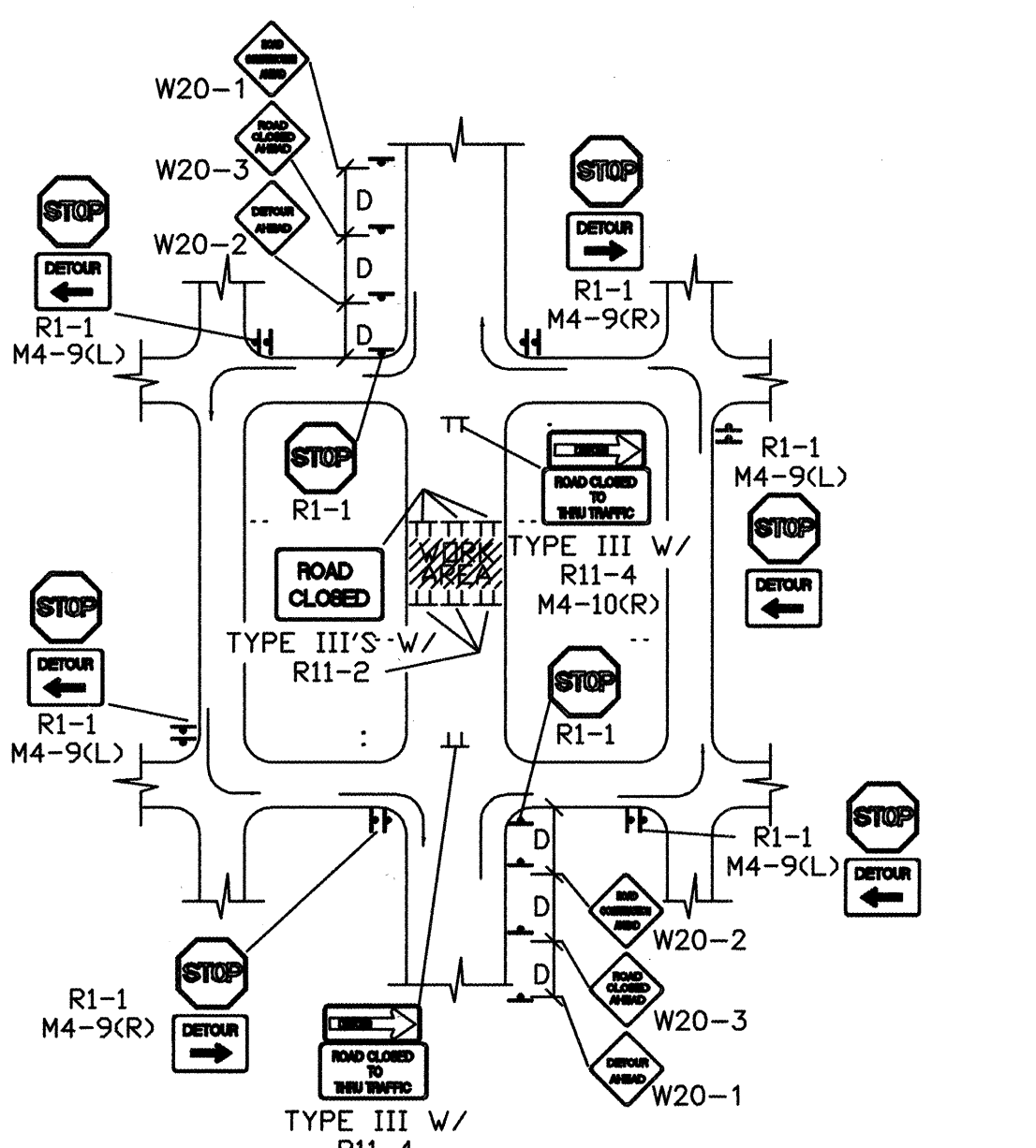
- ALL CONSTRUCTION WARNING SIGNS SHALL HAVE A BLACK LEGEND ON AN ORANGE BACKGROUND.
- ALL ADVANCE WARNING SIGNS SHALL BE A MINIMUM OF 36" THIRTY SIX INCHES BY 36" THIRTY SIX INCHES IN SIZE AND SHALL HAVE ONE WARNING LIGHT.

NOTE:  
MAY REQUIRE LEFT LANE CLOSURE DEPENDING ON FIELD CONDITIONS.



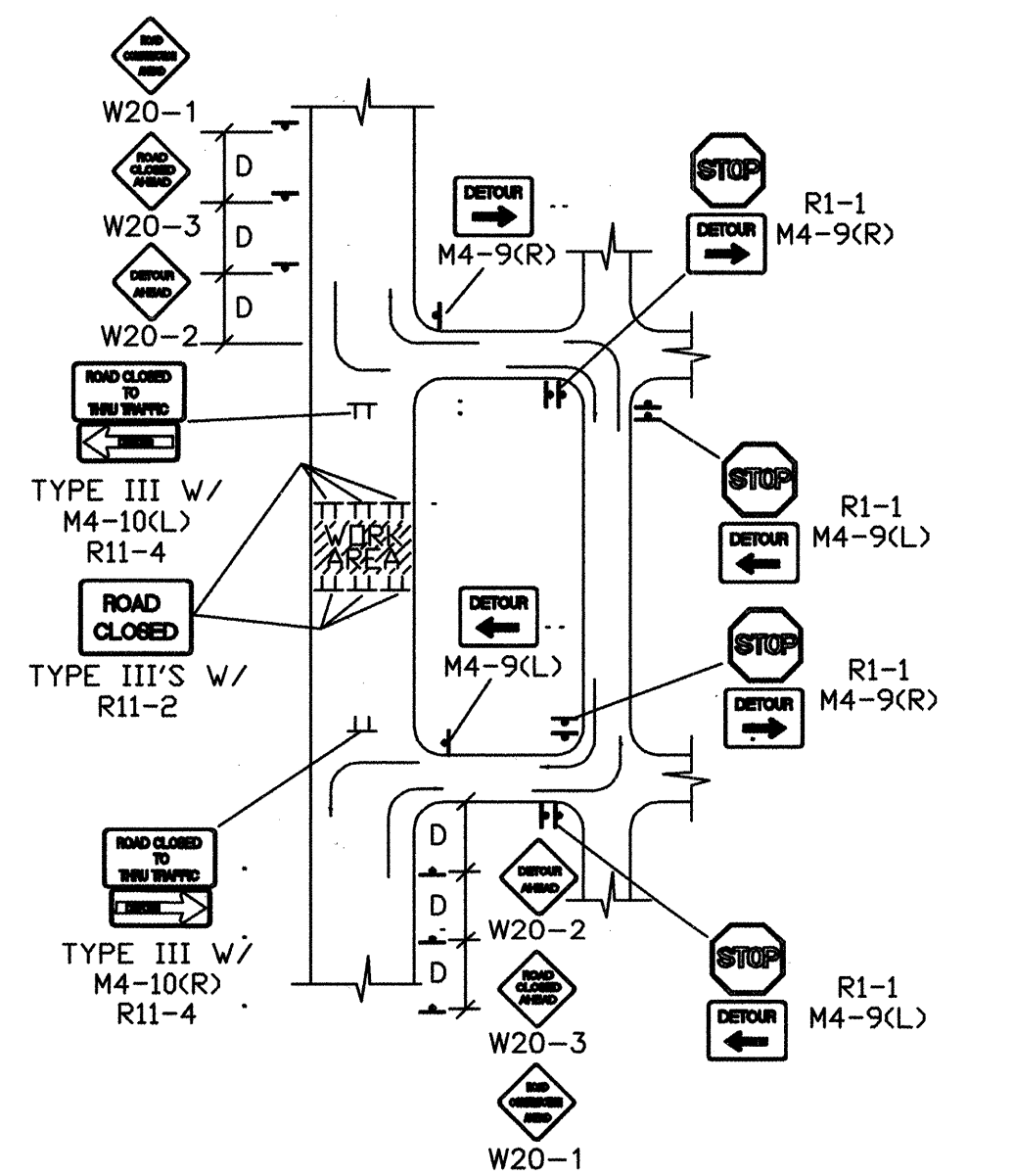
TYPICAL LANE CLOSURE AT INTERSECTION

NOTE: DEPENDING ON WORK ZONE LOCATION.



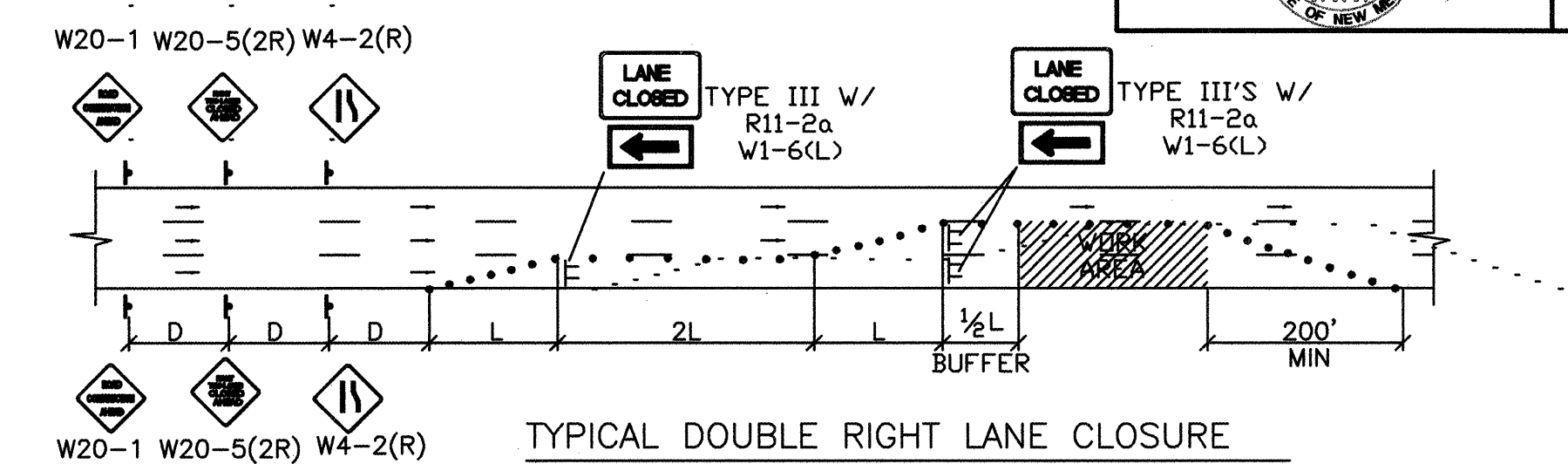
TYPICAL MID-BLOCK CLOSURE

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

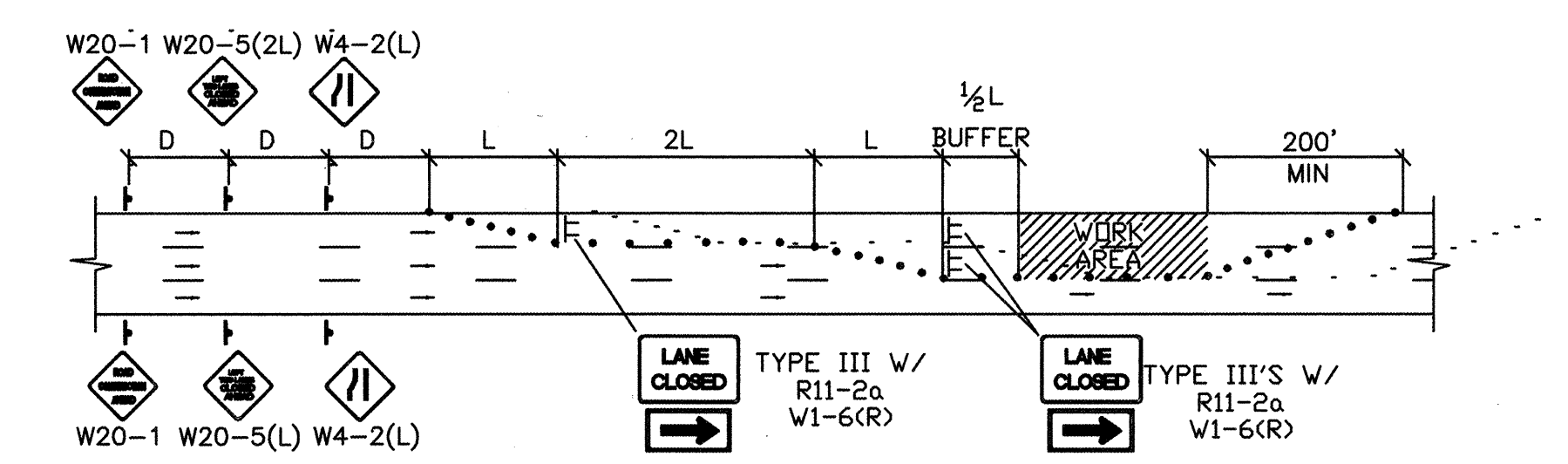


TYPICAL STREET CLOSURE

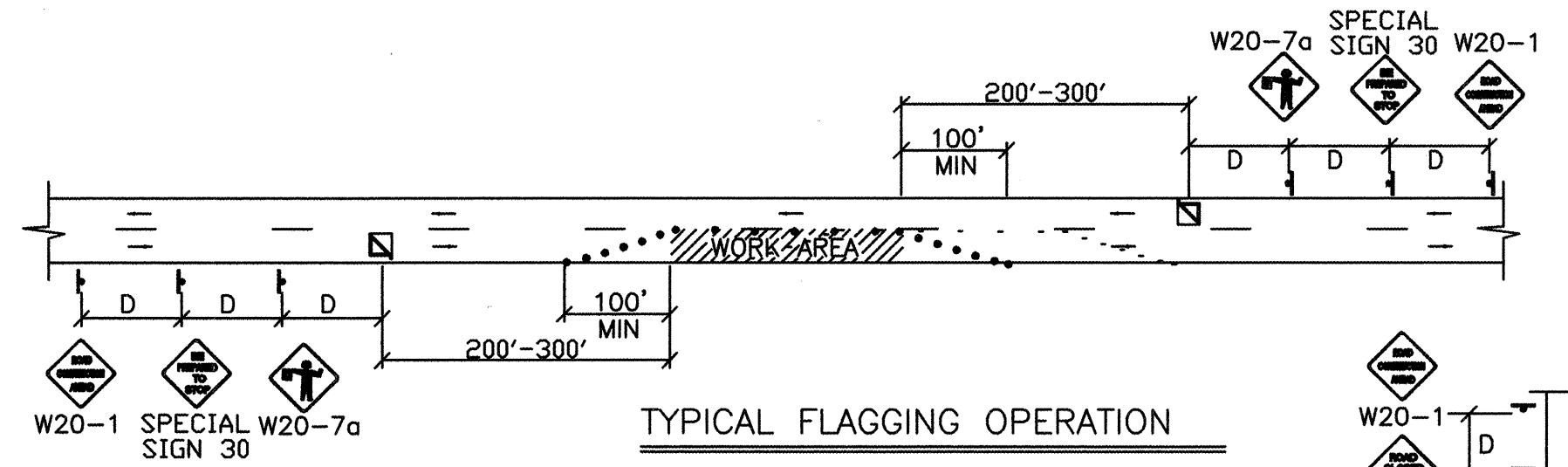
NOTE: (R1-1) BASED ON FIELD CONDITIONS.



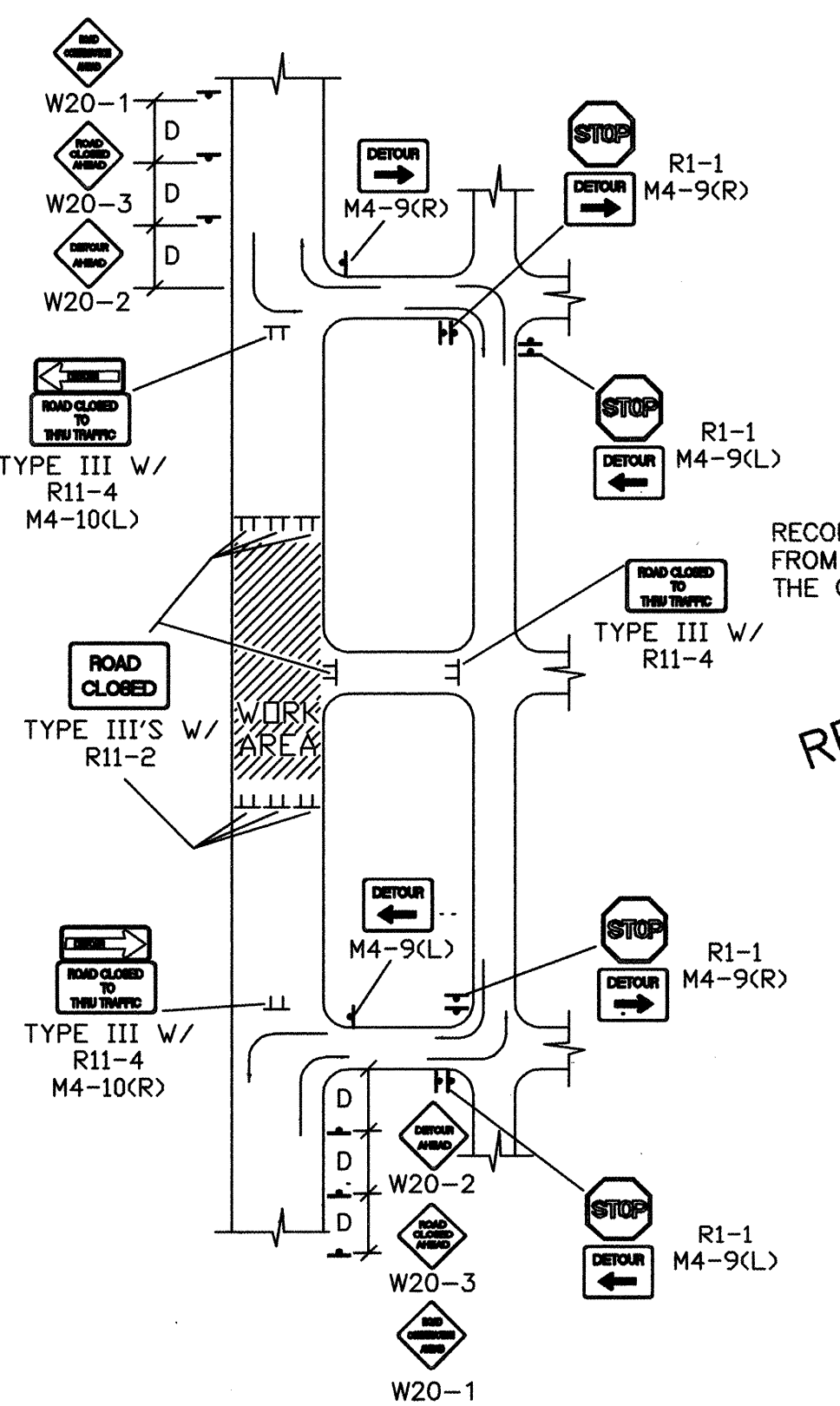
TYPICAL DOUBLE RIGHT LANE CLOSURE



TYPICAL DOUBLE LEFT LANE CLOSURE

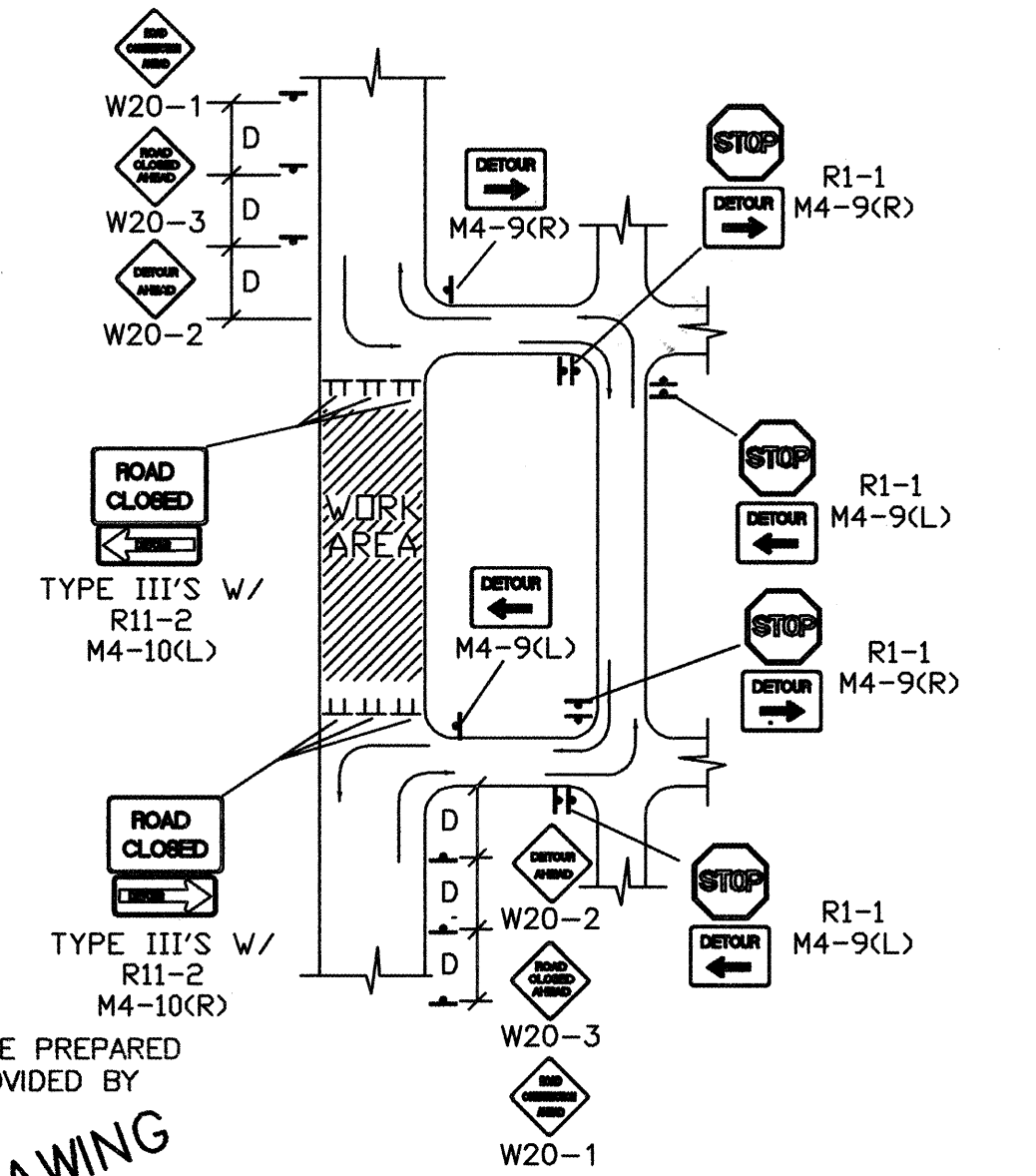


TYPICAL FLAGGING OPERATION



TYPICAL STREET CLOSURE

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



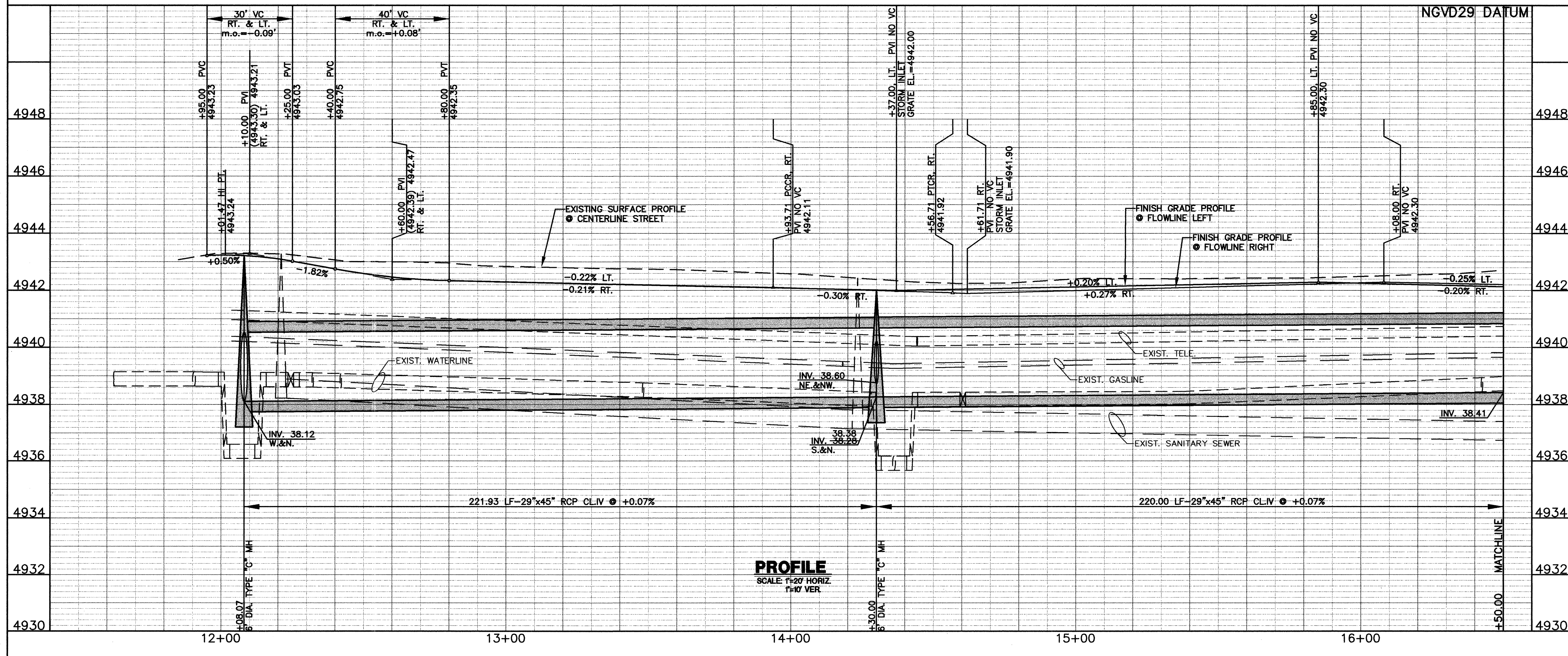
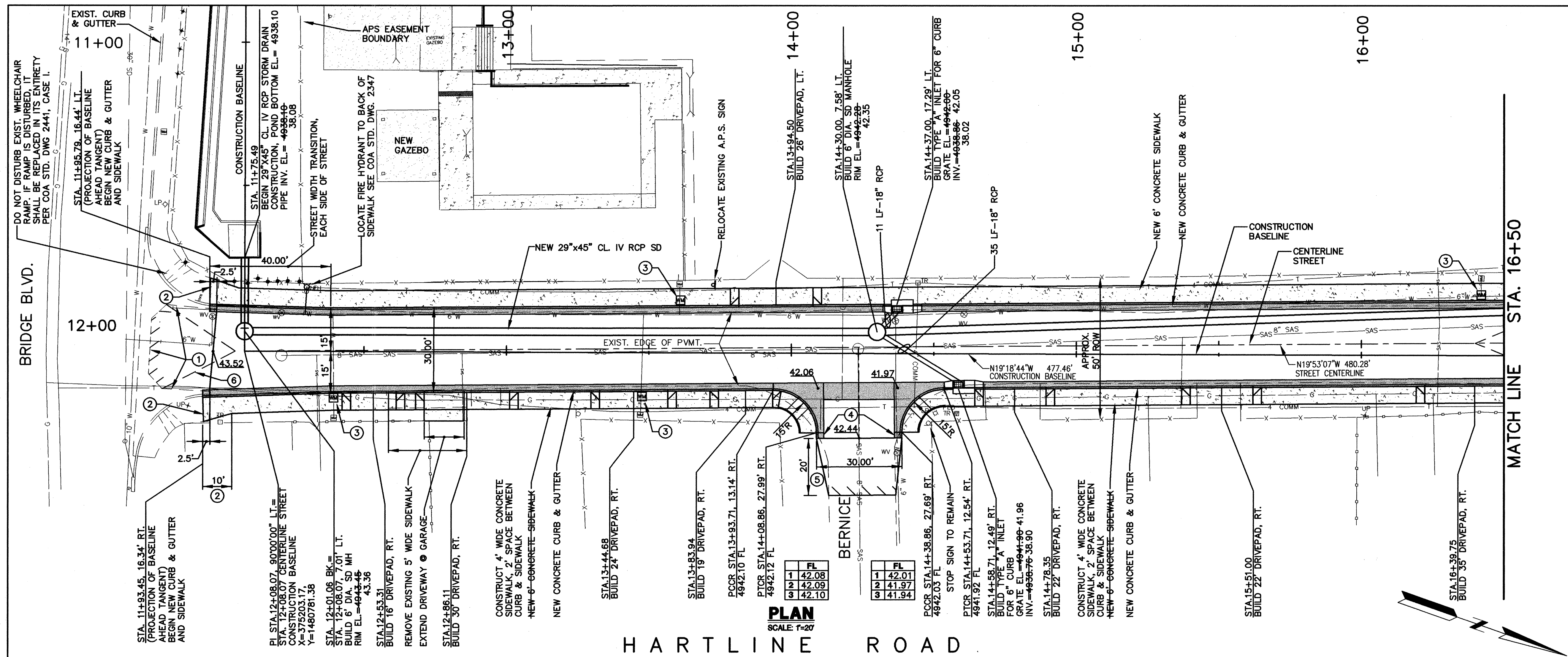
TYPICAL STREET CLOSURE

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

RECORD DRAWING  
FEBRUARY 2007

BENCHMARK INFORMATION		
ACS ALUMINUM CAP STAMPED "10-L-13, 1987",		
INTERSECTION BRIDGE BLVD. & ISLETA BLVD.		
GEO POSITION (NAD 1927), IN FEET, NM STATE		
PLANE COORDINATES (CENTRAL ZONE):		
X=375,554.44, Y=480,336.54, ELEV.=4944.55		
NGDV29, FT.		
ENGINEER'S SEAL		
3.		
2.		
1.		
REVISION	DATE	DESCRIPTION
REVISIONS (OR CHANGE NOTICES)		
BERNALILLO COUNTY, PUBLIC WORKS DIV.		
HARTLINE DRAINAGE IMPROVEMENTS		
TYPICAL TRAFFIC CONTROL & SIGNING EXAMPLES (REF. MUTCD)		
LARKIN GROUP NM, INC.		
CONSULTING ENGINEERS		
FILE No.	ALBUQUERQUE	DATE
01-0002	AB/GC/SH	JW
APR 2005		SHEET 6-2

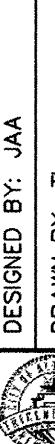




**NOTE**  
USE CASE 1 WHEEL CHAIR RAMP @ CURB  
RETURNS PER C.O.A. STD. DWG. 2441.

- ## KEYED NOTES
- 1) REMOVE AND REPLACE PAVEMENT IN TURNOUT.
  - 2) CUT BACK EXISTING SIDEWALK AND CURB & GUTTER 2.5' AND REMOVE. CONSTRUCT TRANSITION FROM EXISTING TO NEW SIDEWALK, BOTH SIDES OF STREET.
  - 3) INSTALL NEW METER BOX IN SIDEWALK PER C.O.A. STD. DWG.
  - 4) INSTALL 2 LF OF CURB & GUTTER WITH BEVELED CURB @ END OF CURB RETURN.
  - 5) REMOVE AND REPLACE PAVEMENT TO PROVIDE TRANSITION TO NEW TURNOUT.
  - 6) 30' CROWN TRANSITION

Last Design Update		Mo./Day/Yr.		Mo./Day/Yr.	
No.		Sheet		of	
CO		1A		4	



**PROPOSED IMPROVEMENTS**

**SECTION DIVISION**

**REVISIONS**

NO.	DATE	REMARKS	BY
1			

DESIGNED BY: JAA

DRAWN BY: TL

CHECKED BY: JAA

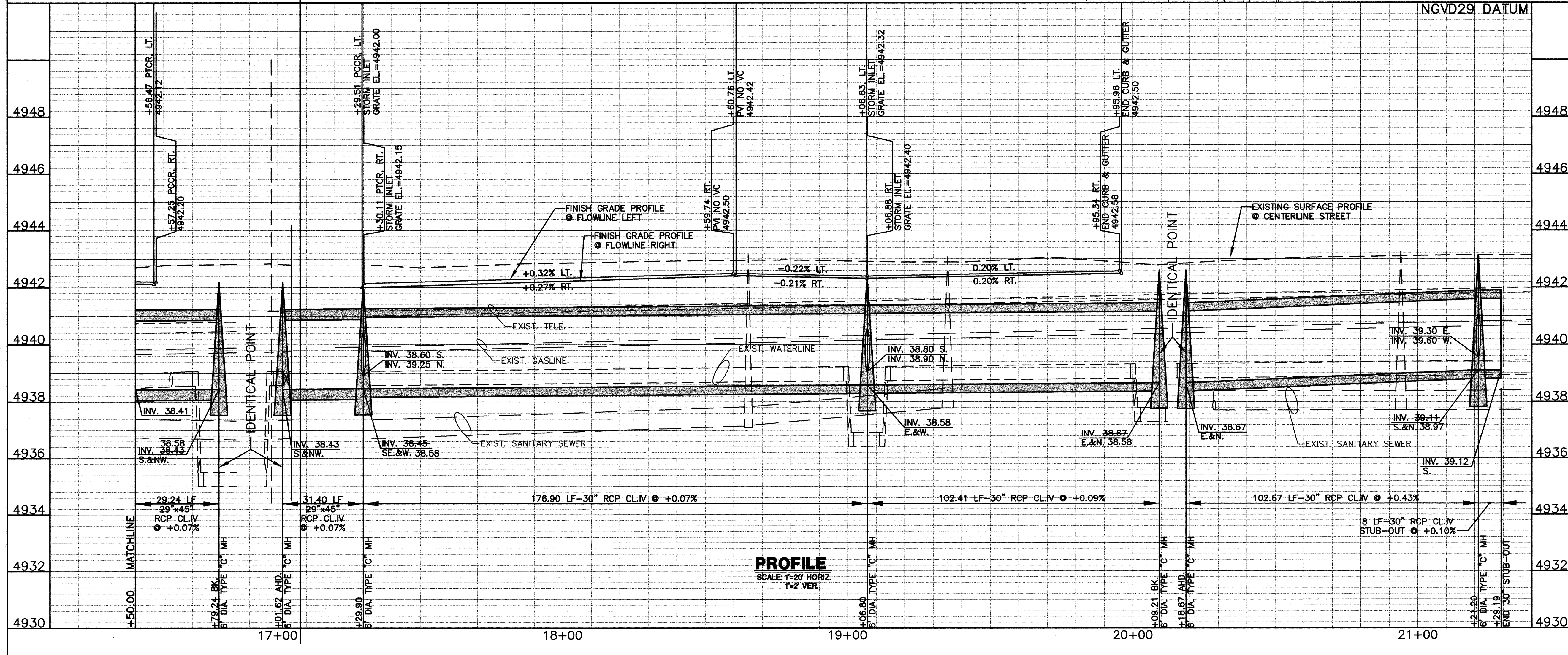
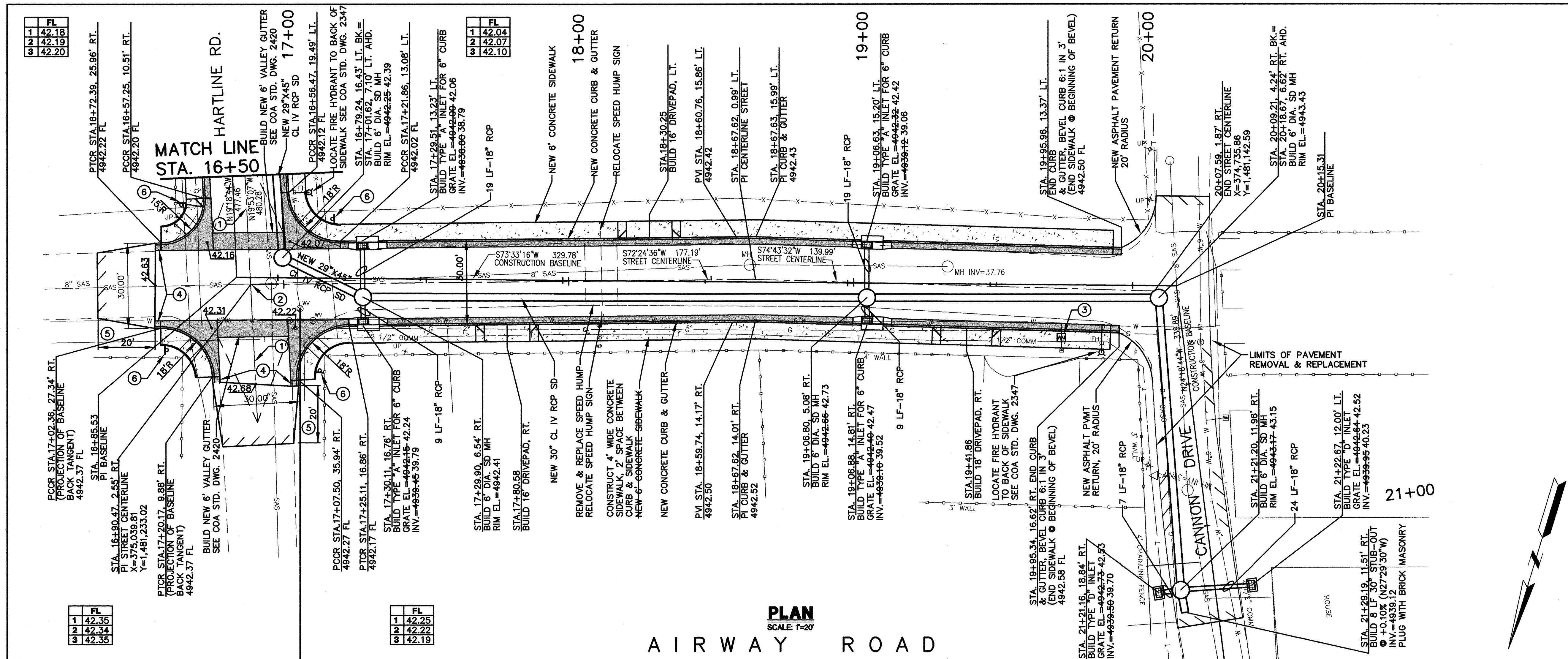
DATE: SEPT. 2006

DATE: SEPT. 2006

DATE: SEPT. 2006

ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
		FIELD NOTES					
		NO.	BY	DATE			
		1			ACS ALUMINUM CAP STAMPED "10-L-13, 1987"		CONTRACTOR <i>NM Underground Contractors, Inc.</i>
					LOCATED AT THE INTERSECTION OF BRIDGE BLVD & ISLETA BLVD.		WORK STAGED BY <i>NM Surveying Co.</i> DATE <i>8/06</i>
					X: 375,554.44, Y=1,480,336.54 GEO POSITION (NAD 1927).		INSPECTOR'S FIELD MEASURE BY <i>Smith Engineering</i> DATE <i>2/07</i>
					IN FEET, N.M. STATE PLANE COORDINATES (CENTRAL ZONE):		CERTIFICATION BY <i>NM Surveying Co.</i> DATE <i>2/07</i>
					ELEV=494.55 FT., NGVD29		WORK CORRECTED BY <i>Larkin Group NM, Inc.</i> DATE <i>2/06/07</i>
							<b>MICRO-FILM INFORMATION</b>
							RECORDED BY
							RECORDED BY
							RECORDED BY
							DATE





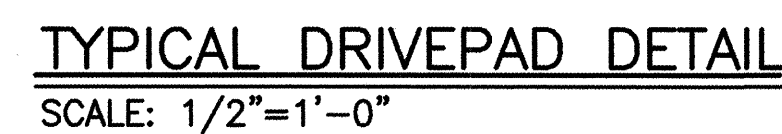
**NOTE**  
USE CASE 1 WHEEL CHAIR RAMP @ CURE  
RETURNS PER C.O.A. STD. DWG. 2441.

### KEYED NOTES

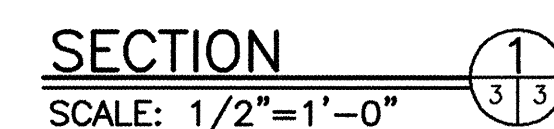
- ① PROVIDE 30' CROWN TRANSITION FROM BACK OF VALLEY GUTTER.
- ② PROVIDE FULL CROWN THROUGH INTERSECTION PARALLEL TO VALLEY GUTTERS.
- ③ INSTALL NEW METER BOX IN SIDEWALK PER C.O.A. STD. DWG.
- ④ INSTALL 2 LF OF CURB & GUTTER WITH BEVELED CURB @ END OF CURB RETURN.
- ⑤ REMOVE AND REPLACE PAVEMENT TO PROVIDE TRANSITION TO NEW TURNOUT.
- ⑥ RELOCATED STOP SIGN

[illegible]





NOTE:  
1. SEE COA STD. DRAWINGS 2425 FOR  
ADDITIONAL DRIVEPAD DETAILS.



STD. CURB & GUTTER DETAIL

SCALE: 1"=1'-0"

AS BUILT NOTE

STREET CURB & GUTTER, PAVING AND  
STORM DRAINS WERE CONSTRUCTED IN  
ACCORDANCE WITH SHEETS 1A THRU 4A  
WHICH WERE ADDED BY CHANGE ORDER.

RECORD DRAWINGS WERE PREPARED  
FROM INFORMATION PROVIDED BY  
THE CONTRACTOR

**RECORD DRAWING**  
**FEBRUARY 2007**

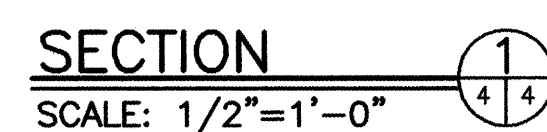
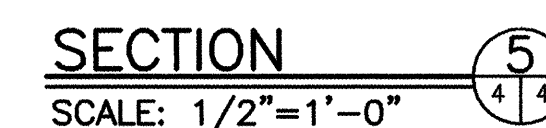
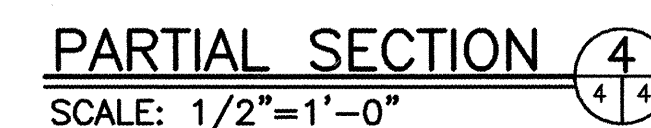
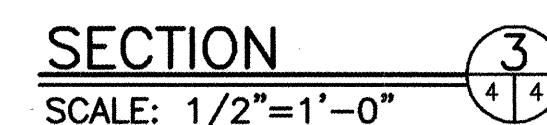
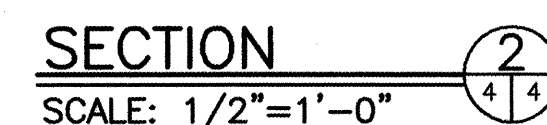


CITY OF ALBUQUERQUE  
DEPARTMENT OF MUNICIPAL DEVELOPMENT  
TRANSPORTATION DIVISION

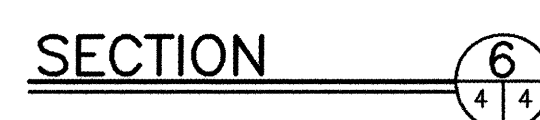
TITLE:	HARTLINE DRAINAGE IMPROVEMENTS DRIVEPAD AND CURB & GUTTER DETAILS
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Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.
Project No.		Zone Map No.	Sheet	of
746381		L-13	CO 3A	4





(BASED ON COA DWG. 2201 & 2202)



**NOTE:**  
1. SEE COA STD. DRAWING 2107 FOR FURTHER DETAILS OF PRECAST COVER.  
2. GROUT FRAME INTO RECESS, ALL AROUND.

SCALE: 1/2"=1'-0"

R. POINT OF MEASUREMENT FOR STATION AND  
OFFSET IS PROJECTION OF BACK OF CURB.

RECORD DRAWINGS WERE PREPARED  
FROM INFORMATION PROVIDED BY  
THE CONTRACTOR

**RECORD DRAWING**  
**FEBRUARY 2007**



Design Review Committee	City Engineer Approval	Last Design Update	Mo./Day/Yr.	Mo./Day/Yr.
Project No.	Zone Map	No.	Sheet	of
746381	L-13		CO 4A	4

ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
		FIELD NOTES					
NO.	DATE	BY	DATE				
1				ACS ALUMINUM CAP STAMPED "10-L-13, 1987"		CONTRACTOR: <i>NM Underground Contractors, Inc.</i>	
				LOCATED AT THE INTERSECTION OF BRIDGE BLVD		WORK STAGED BY: <i>NM Surveying Co.</i> DATE: <i>8/06</i>	
				& ISLETA BLVD.		INSPECTORS: <i>Smith Engineering Co.</i> DATE: <i>2/07</i>	
				X: 375,554.44, Y=1,480,336.54 GEO POSITION (NAD 1927),		FIELD VERIFICATION BY: <i>Smith Engineering Co.</i> DATE: <i>2/07</i>	
				IN FEET, N.M. STATE PLANE COORDINATES (CENTRAL ZONE):		VERIFICATION BY: <i>NM Surveying Co.</i> DATE: <i>2/07</i>	
				ELEV.=4944.55 FT., NGVD29		APPROVED BY: <i>Lair-Kin Group, Inc.</i> DATE: <i>2/26/07</i>	
DESIGNED BY: JAA				MICRO-FILM INFORMATION			
				RECORDED BY:	DATE:		
DATE: SEPT. 2006				RECORDED BY:	DATE:		
DRAWN BY: TL				RECORDED BY:	DATE:		
DATE: SEPT. 2006				RECORDED BY:	DATE:		