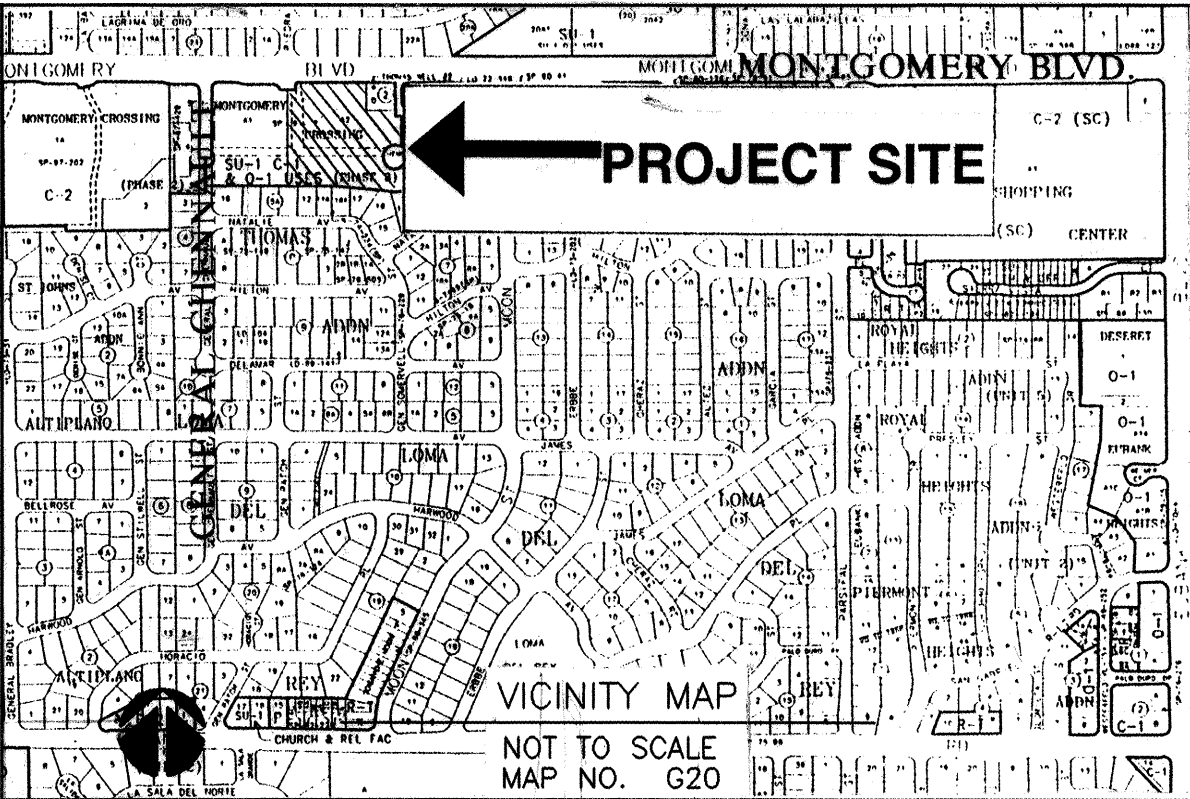
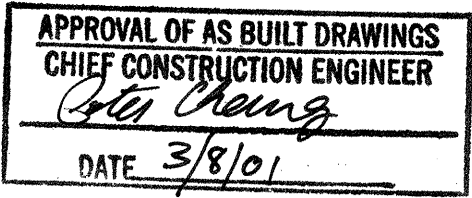


CONSTRUCTION PLANS
FOR
MONTGOMERY CROSSING
WATERLINE AND DRAINAGE FACILITIES
MONTGOMERY ROAD N.E.
ALBUQUERQUE, NEW MEXICO

INDEX

SHEET NUMBER	DESCRIPTION
1	TITLE SHEET
2	PLAT
3	ALIGNMENT 'A' WATERLINE PLAN AND PROFILE
4	ALIGNMENT 'B' WATERLINE PLAN AND PROFILE
5	WATERLINE RESTRAINED JOINT DETAILS
6	STORM DRAINAGE PLAN
7	GRADING AND DRAINAGE PLAN
8	DETENTION POND PLAN AND SECTION
9	STRUCTURAL DETAILS
10	STRUCTURAL DETAILS
11	STRUCTURAL GENERAL NOTES
12	STRUCTURAL GENERAL NOTES
13	TYPICAL TRAFFIC CONTROL & SIGNING EXAMPLES (Ref. M.U.T.C.D.)
14	SIGNING AND CONSTRUCTION TRAFFIC CONTROL STANDARDS



NOTICE TO CONTRACTORS

- ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986 EDITION, AS AMENDED THROUGH UPDATE #6.
- TWO WORKING DAYS PRIOR TO ANY EXCAVATION, THE CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM (260-1990) FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS, SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER OR SURVEYOR IMMEDIATELY SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- FIVE (5) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO CONSTRUCTION COORDINATION DIVISION A DETAILED CONSTRUCTION SCHEDULE. TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN A BARRICADING PERMIT FROM THE CONST. COORDINATION DIVISION. CONTRACTOR SHALL NOTIFY BARRICADE ENGINEER (768-2551) PRIOR TO OCCUPYING AN INTERSECTION. REFER TO SECTION 19 OF THE GENERAL CONDITIONS OF THE STANDARD SPECIFICATIONS.
- CONTRACTOR SHALL NOTIFY THE ENGINEER NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK IN ORDER THAT THE ENGINEER MAY TAKE NECESSARY MEASURES TO INSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE ENGINEER AND SHALL NOTIFY THE ENGINEER AND BEAR THE EXPENSE OF REPLACING ANY MONUMENT THAT MAY BE DISTURBED WITHOUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE CITY SURVEY SECTION. WHEN A CHANGE IS MADE IN THE FINISHED ELEVATIONS OF ANY ROADWAY IN WHICH A PERMANENT SURVEY MONUMENT IS LOCATED, CONTRACTOR SHALL AT HIS OWN EXPENSE, ADJUST THE MONUMENT COVER TO THE NEW GRADE UNLESS OTHERWISE SPECIFIED. REFER TO SECTION 4.4 OF THE GENERAL CONDITIONS OF THE STANDARD SPECIFICATIONS.
- ANY WORK AFFECTING AN ARTERIAL ROADWAY REQUIRES TWENTY-FOUR (24) HOUR CONSTRUCTION.

THE FOLLOWING NOTES ALSO APPLY WHEN CHECKED

- ☒ ALL UTILITIES AND UTILITY SERVICE LINES SHALL BE INSTALLED PRIOR TO PAVING.
- ☒ BACKFILL COMPACTION SHALL BE ACCORDING TO SPECIFIED STREET USE.
- ☐ TACK COAT REQUIREMENTS SHALL BE DETERMINED BY THE CITY ENGINEER.
- ☐ SIDEWALKS AND WHEELCHAIR RAMPS WITHIN THE CURB RETURNS SHALL BE CONSTRUCTED WHEREVER A NEW CURB RETURN IS CONSTRUCTED.
- ☐ IF CURB IS DERESSED FOR A DRIVEPAD, THE DRIVEPAD SHALL BE CONSTRUCTED PRIOR TO ACCEPTANCE OF CURB AND GUTTER.
- ☒ ALL STORM DRAINAGE FACILITIES SHALL BE COMPLETED PRIOR TO FINAL ACCEPTANCE.
- ☒ THE REQUESTER OR DEVELOPER SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ALL CURB AND GUTTER OR SIDEWALK DAMAGED AFTER APPROVAL BY THE CITY ENGINEER OF WORK COMPLETED BY THE CONTRACTOR.

BPLW

Architects & Engineers, Inc.
2400 Louisiana Blvd. NE
Albuquerque, New Mexico 87110
(505) 881-2758
65 East Main Street
Suite 602
Albuquerque, New Mexico 87101
(505) 827-2759
Designing to Shape the Future

REV.	SHEETS	CITY ENGINEER	DATE	USER DEPARTMENT	DATE	USER DEPARTMENT	DATE
ARCHITECTS STAMP & SIGNATURE		APPROVALS		ENGINEER		DATE	
		DRC Chairman		<i>[Signature]</i>		7/26/00	
		Transportation		<i>[Signature]</i>		7/26/00	
		Water/Wastewater		<i>G. S. Reeder</i>		7/3/00	
		Hydrology		<i>Bridley A. Bingham</i>		6/30/00	
		Parks		<i>[Signature]</i>		7/26/00	
Constr. Mngmt.		<i>[Signature]</i>		7/26/00			
Constr. Coord.		<i>[Signature]</i>		7/26/00			
City Project No.		639681		Sheet		1 of 14	

DRB #1000300

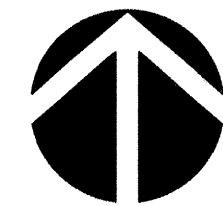
AS-BUILT



SURVEYOR'S CERTIFICATION

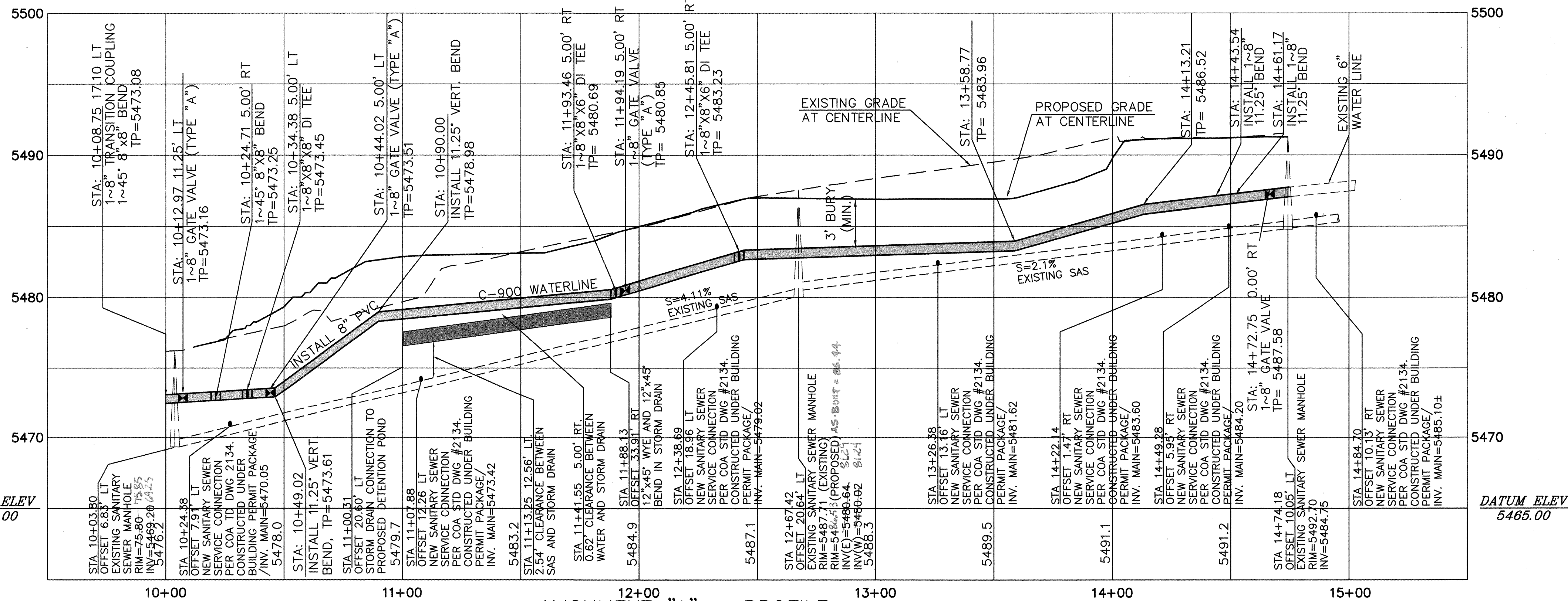
I, Thomas W. Patrick, a duly qualified Registered Professional Land Surveyor under the Laws of the State of New Mexico, do hereby certify that the "as-built" information shown on these drawings was obtained from field construction and "as-built" surveys performed by me, or under my supervision, that the "as-built" information shown on these drawings was added by me, or under my supervision and that this "as-built" information is true and correct to the best of my knowledge and belief. Community Sciences Corporation is not responsible for any of the design concepts, calculations, engineering and/or intent of the record drawings.

Thomas W. Patrick
Date: 16 February 2001



ALIGNMENT "A" - PLAN

SCALE: 1"=30'



ALIGNMENT "A" - PROFILE

SCALE: 1"=30' Horiz.
1"=5' Vert.

GENERAL NOTES

- ALL WATERLINES TO HAVE RESTRAINED JOINTS AS REQUIRED BY SHEET 5 OF THE PLAN SET. DESIGN WATER PRESSURE IS 70 PSI. MINIMUM BURY 3'.
- ALIGNMENT "A" IS REPRESENTED AS THE CONSTRUCTION BASELINE.
- ANY EXISTING VALVES TO BE REMOVED AND DELIVERED TO WATER UTILITIES DIVISION, PINO YARDS.
- SEE SHEET 6 OF 14 FOR STORM SEWER CONSTRUCTION NOTES.
- EXISTING WATER LINE BETWEEN STATION 10+18.76, 17.63' LT. AND STATION 14+64.69, 0.00 RT. IS TO BE CAPPED AND ABANDONED IN PLACE.

KEYED NOTES

- INSTALL 4" CI SAS PIPE @ 2%
- INSTALL 6" CI SAS PIPE @ 2%

KEYED NOTES

- INVERT ELEVATION = 73.91 *
- INVERT ELEVATION = 80.07 *
- INVERT ELEVATION = 86.43 *
- INVERT ELEVATION = 85.79 *
- INVERT ELEVATION = 85.26 *
- INVERT ELEVATION = 82.88 *
- INVERT ELEVATION = 74.67 *
- INVERT ELEVATION = 71.74
- INVERT ELEVATION = 73.03

* NOTE: CALCULATED 5' AWAY FROM BLDG.

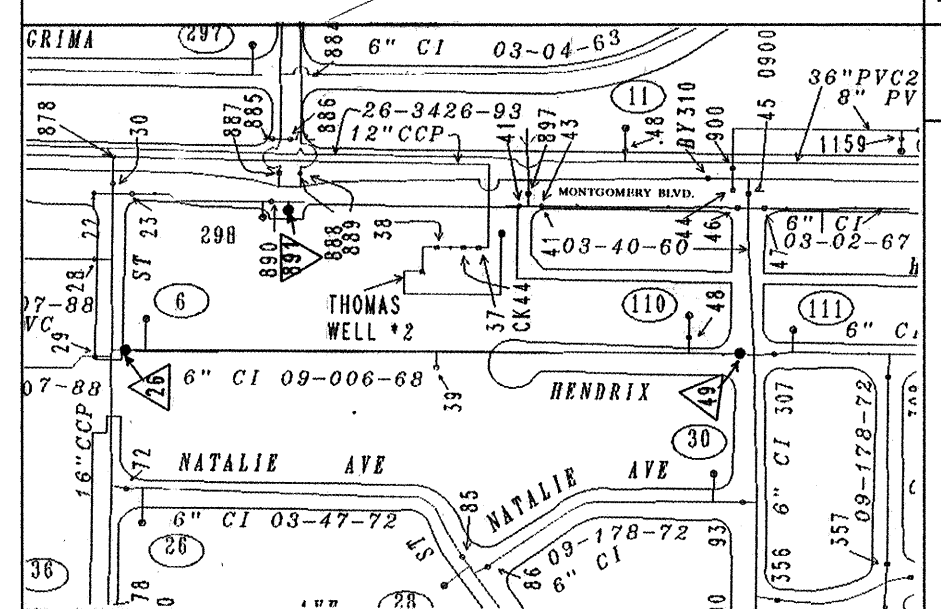
WATER SHUT-OFF REQUIREMENTS

CONTRACTOR WILL BE RESPONSIBLE FOR THE TIMING & COORDINATION OF THE WATER SHUT-OFF REQUIREMENTS IN CONJUNCTION WITH THE COMPLETION OF THE PROJECT. AT LEAST THREE (3) WORKING DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL CONTACT PWD/WATER SYSTEMS DIVISION (857-8800) TO INITIATE IMPLEMENTATION OF THIS WATER SHUT-OFF PLAN.

WATER SHUT-OFF PLAN

LOCATION
260 FT SOUTH OF MONTGOMERY ON GENERAL CHENNAULT ST.
INTERSECTION OF MOON ST. & HENDRIX RD.
SOUTH OF MONTGOMERY BLVD ACROSS FROM PIEDRA NEGRA

CLOSE VALVES
26, ZONE G20
49, ZONE G20
891, ZONE G20



BPLW

Architects & Engineers, Inc.
6500 Uptown Blvd. NE
Suite 400
Albuquerque, New Mexico 87110
(505) 881-2799

49 West First Street
Suite 100
New Mexico 85201
(480) 857-2799

Designing to Shape the Future

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: **MONTGOMERY CROSSING
WATERLINE AND DRAINAGE FACILITIES
ALIGNMENT "A"**

Design Review Committee

City Engineer Approval

City Engineer

City Project No. 639681

Mo./Day/Yr.

Mo./Day/Yr.

Mo./Day/Yr.

Mo./Day/Yr.

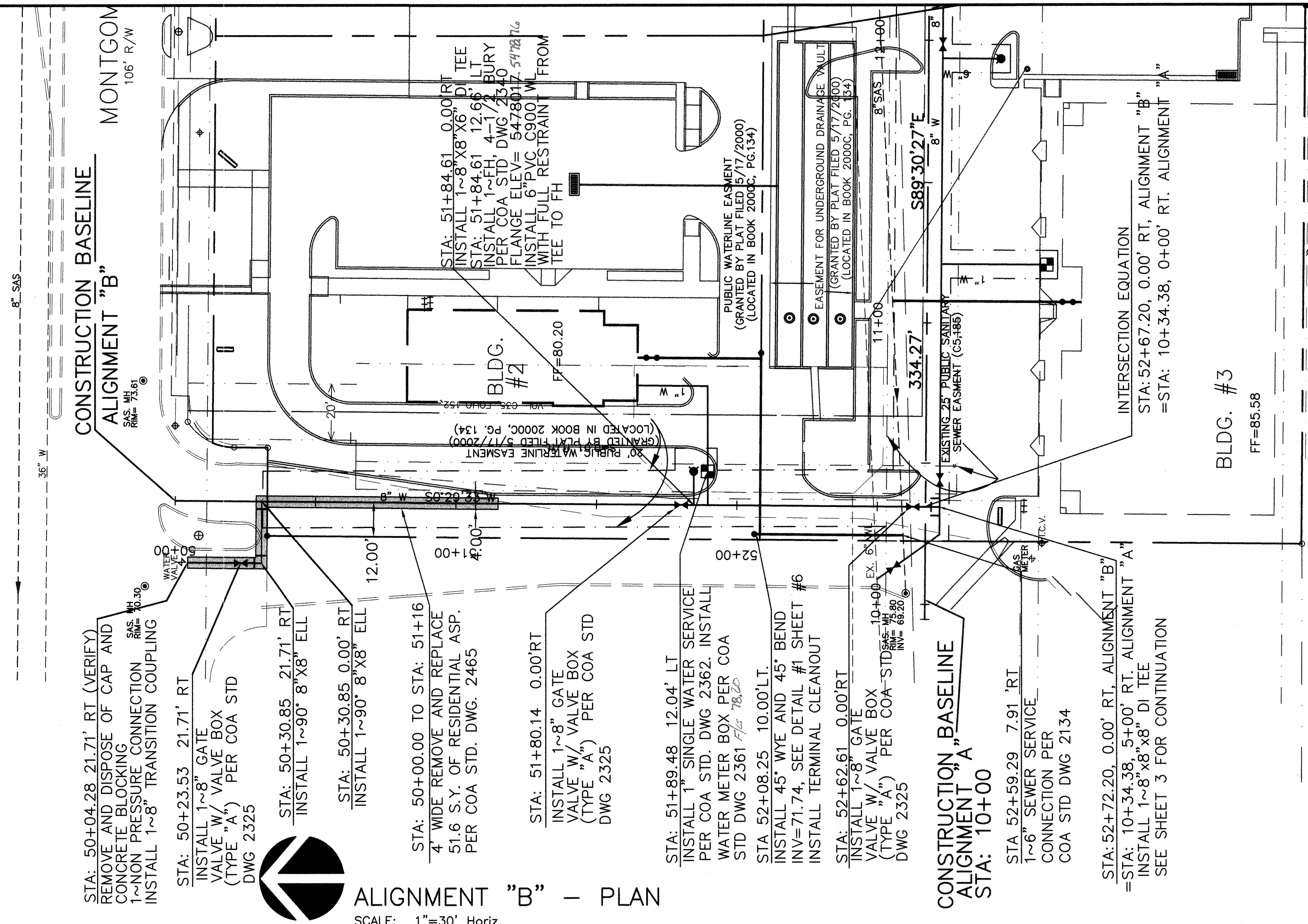
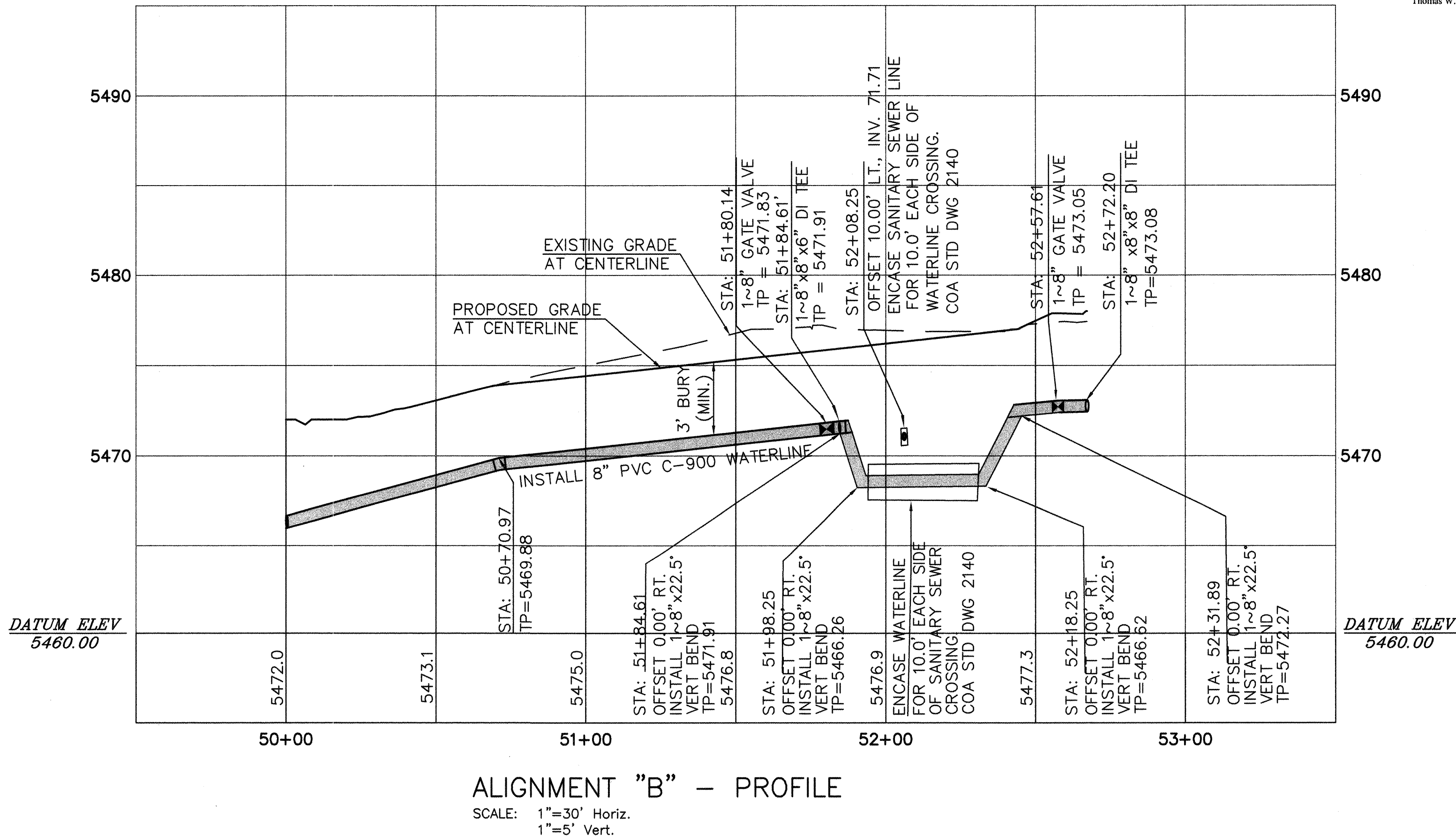
Zone Map No. G-20-Z

Sheet 3

Of 14

AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S STAMP & SIGNATURE	
Contractor	C-C-M	Field Notes	Harris Surveying	No.	Date	No.	Date
Work	City of Albuquerque	By	Harris Surveying	No.	Date	No.	Date
Drawn	City of Albuquerque	By	Harris Surveying	No.	Date	No.	Date
Checked	City of Albuquerque	By	Harris Surveying	No.	Date	No.	Date
Recorded	City of Albuquerque	By	Harris Surveying	No.	Date	No.	Date
Micro-Film	City of Albuquerque	By	Harris Surveying	No.	Date	No.	Date

REVISIONS		DESIGN	
No.	Date	By	Date
1	4/7/00	WFD	4/7/00
2	4/7/00	NML	4/7/00
3	4/7/00	GCJ	4/7/00

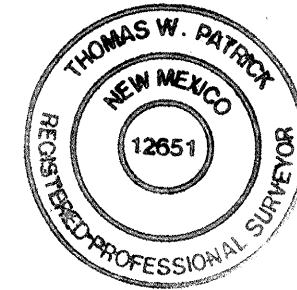


SURVEYOR'S CERTIFICATION

I, Thomas W. Patrick, a duly qualified Registered Professional Land Surveyor under the Laws of the State of New Mexico, do hereby certify that the "as-built" information shown on these drawings was obtained from field construction and "as-built" surveys performed by me, or under my supervision, that the "as-built" information shown on these drawings was added by me, or under my supervision and that this "as-built" information is true and correct to the best of my knowledge and belief." Community Sciences Corporation is not responsible for any of the design concepts, calculations, engineering and/or intent of the record drawings.

Thomas W. Patrick, N.M.P.S. 12651

16 February 2001
Date



GENERAL NOTES

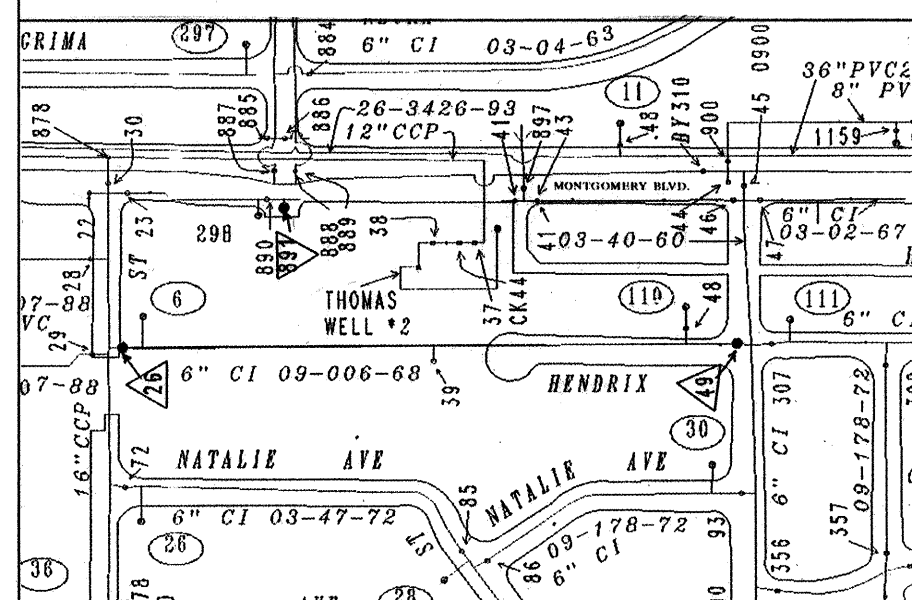
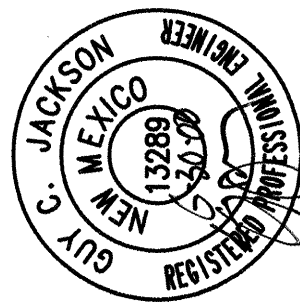
1. ALL WATERLINES TO HAVE RESTRAINED JOINTS AS REQUIRED BY SHEET 5 OF THE PLAN SET. DESIGN WATER PRESSURE IS 70 PSI. MINIMUM BURY 3'.
2. ALIGNMENT "B" IS REPRESENTED AS A CONSTRUCTION BASELINE.
3. ANY EXISTING VALVES TO BE REMOVED AND DELIVERED TO WATER UTILITIES DIVISION, PINO YARDS.
4. SEE SHEET 6 OF 14 FOR STORM SEWER CONSTRUCTION NOTES.

WATER SHUT-OFF REQUIREMENTS

CONTRACTOR WILL BE RESPONSIBLE FOR THE
TIMING & COORDINATION OF THE WATER
SHUT-OFF REQUIREMENTS INCONJUNCTION
WITH THE COMPLETION OF THE PROJECT.
AT LEAST THREE (3) DAYS PRIOR
TO CONSTRUCTION, THE CONTRACTOR SHALL
CONTACT PWD/WATER SYSTEMS DIVISION
(857-8800) TO INITIATE IMPLEMENTATION OF
THIS WATER SHUT-OFF PLAN.

WATER SHUT-OFF PLAN

<u>LOCATION</u>	 <u>CLOSE VALVES</u>
260 FT SOUTH OF MONTGOMERY ON GENERAL CHENNAULT ST.	26, ZONE G-20
INTERSECTION OF MOON ST. & HENDRIX RD.	49, ZONE G-20 F
SOUTH OF MONTGOMERY BLVD ACROSS FROM PIEDRA NEGRA	891, ZONE G-20



BPLW
Architects & Engineers, Inc.
6200 Uptown Blvd. NE
Suite 400
Albuquerque, New Mexico 87110
(505) 881-2759
Designing to Shape

49 West First Street
Suite 100
Mesa, Arizona 85201
(480) 827-2759

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: MONTGOMERY CROSSING
WATERLINE AND DRAINAGE FACILITIES
ALIGNMENT "B"

Design Review Committee  JUL 26 2000 MAYOR		City Engineer Approval  AUG - 1 2000 CITY ENGINEER		Last Design Update	Mo./Day/Yr.		Mo./Day/Yr.	
City Project No.		Zone Map No.		Sheet		Of		
639681		G-20-Z		4		14		

REDUCER

Restraining either L_s or L_l length	(L_s) L small	or	(L_l) L large
Size	Unobstructed Straight Run Length, Feet Restrained		Large Side Restrained Length, Feet
6" x 4"	42		28
8" x 4"	39		30
8" x 6"	39		30
10" x 6"	87		53
10" x 8"	36		29
12" x 8"	81		54
12" x 10"	36		30
14" x 10"	78		55

VERTICAL OFFSETS

Additional Design Parameters Shallow end depth = 3.0' Deep end depth = 6.0'				
Line Size	22" Bend		45" Bend	
	Restrained Length			
	Deep end L _L s, Feet	Shallow end L _H s, Feet	Deep end L _L s, Feet	Shallow end L _H s, Feet
6"	3	11	5	23
8"	3	14	7	30
10"	4	17	8	36
12"	5	20	10	42
14"	5	23	11	48

TEES

Line Size	Branch Size 6"				Branch Size 8"				Branch Size 10"				Branch Size 12"			
	$L_r=5'$	$L_r=10'$	$L_r=15'$	$L_r=20'$	$L_r=5'$	$L_r=10'$	$L_r=15'$	$L_r=20'$	$L_r=5'$	$L_r=10'$	$L_r=15'$	$L_r=20'$	$L_r=5'$	$L_r=10'$	$L_r=15'$	$L_r=20'$
Restrained Length L_b , Feet for a Specified L_r																
6"	36	18	FJO	FJO	58	44	30	16	75	64	53	41	-	-	-	-
8"	30	6	FJO	FJO	53	35	16	FJO	71	56	42	27	-	-	-	-
10"	24	FJO	FJO	FJO	48	24	1	FJO	67	48	29	10	86	70	54	38
12"	17	FJO	FJO	FJO	43	14	FJO	FJO	63	40	17	FJO	83	63	44	25
14"	FJO	FJO	FJO	FJO	21	FJO	FJO	FJO	39	12	FJO	FJO	56	33	11	FJO

FJO: Restraint required at Fitting Joint Only

HORIZONTAL BENDS

Line Size	Bend Angle			
	11"	22"	45"	90"
6"	2	5	10	25
8"	3	6	13	32
10"	4	8	16	38
12"	4	9	19	45
14"	5	10	21	51

GATE VALVES

Line Size	Restrained Length L , Both Sides of Valve, Feet
4"	39
6"	55
8"	72
10"	86
12"	102
14"	116

THESE LENGTHS MAY BE USED WHERE
ENOUGH NEW PIPE EXISTS TO INSTALL
THE RESTRAINT JOINTS ALONG A
STRAIGHT PIPE RUN.

SHALLOW END

DEEP END

THRUST RESTRAINT JOINT LENGTHS NOT TO SCALE

THRUST RESTRAINT GENERAL NOTES

- RESTRAINED PIPE LENGTHS FOR PVC USING EBAA IRON THRUST RESTRAINING SYSTEM.
- LENGTHS MAY OVERLAP TO DETERMINE GREATEST RESTRAINT LENGTH IN ANY ONE DIRECTION.
- CONTRACTOR SHALL MINIMIZE NUMBERS OF RESTRAINED JOINTS REQUIRED BY USING 20' LONG SECTIONS OF PIPE WITHIN THE RESTRAINED LENGTH WHERE POSSIBLE. DIVIDE LENGTH BY 20 AND TRUNCATE DECIMAL PORTION OF NUMBER TO DETERMINE THE NUMBER OF REQUIRED RESTRAINED JOINTS.
- SPECIAL CONSIDERATION MAY BE NEEDED TO MEET CERTAIN FIELD CONDITIONS.
- RESTRAINT LENGTHS MAY EXTEND INTO EXISTING WATER MAINS, REQUIRING RESTRAINED FITTINGS TO BE PLACED AT EXISTING WATERLINE JOINTS FOR THE LENGTH SPECIFIED IN THE TABLES ON THIS SHEET.
- CONCRETE BLOCKING, PER COA STANDARD DRAWING 2320, SHALL BE USED IN LIEU OF RESTRAINED JOINTS AT ALL CAPS.

DESIGN ASSUMPTIONS:

SAFETY FACTOR: 1.5
PRESSURE: 150 psi
SOIL TYPE: GM & SM - SILTY GRAVELS AND SILTY SANDS
PIPE: PVC
TRENCH TYPE: 3 (PIPE BEDDED IN 4 INCHES MINIMUM LOOSE SOIL. BACKFILL LIGHTLY CONSOLIDATED TO TOP OF THE PIPE.)

NOTE: TABLE PROVIDES REQUIRED
 L_b (RESTRAINED LENGTH OF BRANCH)
FOR A GIVEN L_r (RESTRAINED PIPE
LENGTH ON THE TEE RUN) AT
VARIOUS DIAMETERS.



BPLW

Architects & Engineers, Inc.
8200 Uptown Blvd. NE
Suite 400
Albuquerque, New Mexico 87110
(505) 981-2759



48 West First Street
Suite 100
Mesa, Arizona 85201
(480) 827-2759

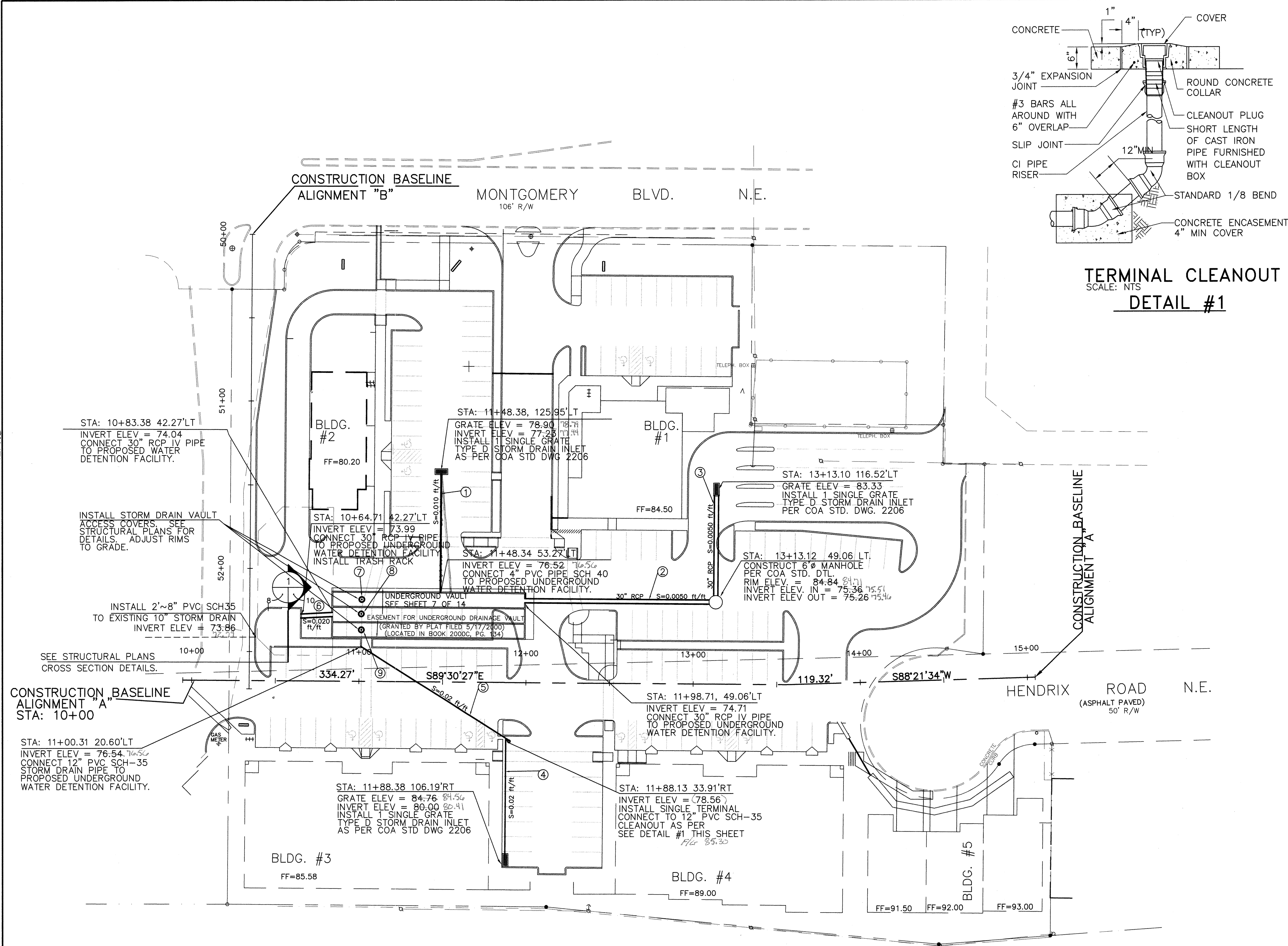
Designing to Shape the Future

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: MONTGOMERY CROSSING
WATERLINE AND DRAINAGE FACILITIES
WATERLINE RESTRAINED JOINT DETAILS

Design Review Committee	City Engineer Approval	Mo./Day/Yr.	Mo./Day/Yr.
JUL 26 2000	AUG - 1 2000		
DESIGN REVIEW COMMITTEE	CITY ENGINEER		

City Project No. 639681 Zone Map No. G-20-Z Sheet 5 of 14

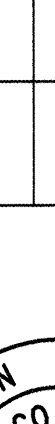


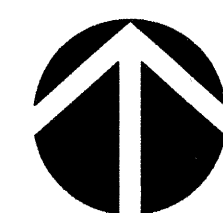
GENERAL NOTE

1. ALIGNMENT "A" IS REPRESENTED AS THE CONSTRUCTION BASE LINE.

KEYED NOTES

1. INSTALL 4" PVC, SCH-35, 71 LF.
2. INSTALL 30" RCP, CL IV, 111 LF.
3. INSTALL 30" RCP, CL IV, 60 LF.
4. INSTALL 12" PVC, SCH-35, 72 LF.
5. INSTALL 12" PVC, SCH-35, 105 LF.
6. INSTALL 30" RCP, CL IV, 19 LF.
7. MANHOLE RIM ELEVATION, 80.65.
8. MANHOLE RIM ELEVATION, 81.15.
9. MANHOLE RIM ELEVATION, 81.65.

ENGINEER'S STAMP & SIGNATURE				No. _____ Date _____	
SURVEY INFORMATION		By: Harris Surveying Date: 8/24/98		No. _____ Date _____	
BENCH MARKS		CITY OF ALBUQUERQUE CONTROL STATION "14-F20", A STANDARD BRASS TABLET SET IN THE CURB AND HAVING AN ELEVATION OF 5390.736 FEET. (MSLD)		No. _____ Date _____	
AS BUILT INFORMATION		Contractor: CSEA Work completed: 8/24/98 Accepted by: R. ORTEGA Date: 3-01 Drawn by: K. ORTEGA Date: 3-01 Checked by: J. ORTEGA Date: 3-01 MICRO-FILM INFORMATION		No. _____ Date _____	



STORM DRAINAGE PLAN

SCALE: 1=30'



SURVEYOR'S CERTIFICATION

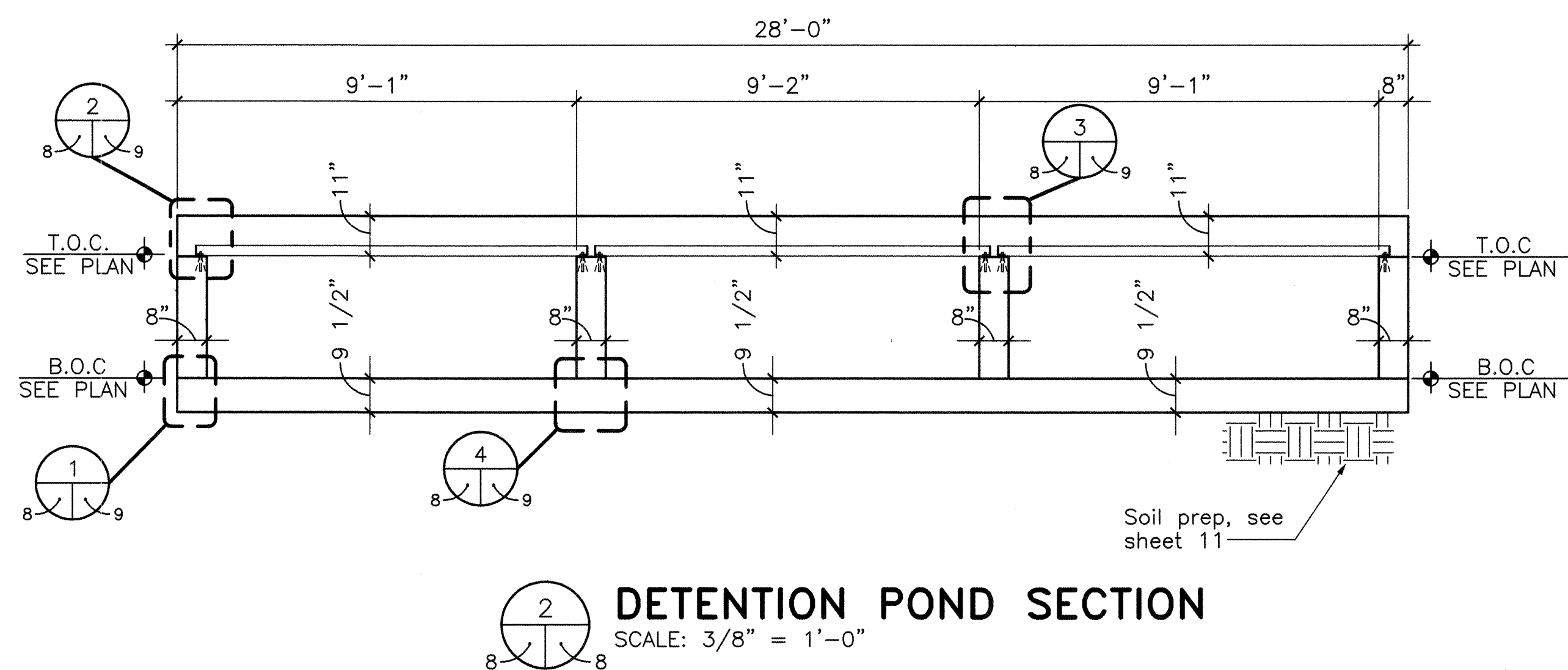
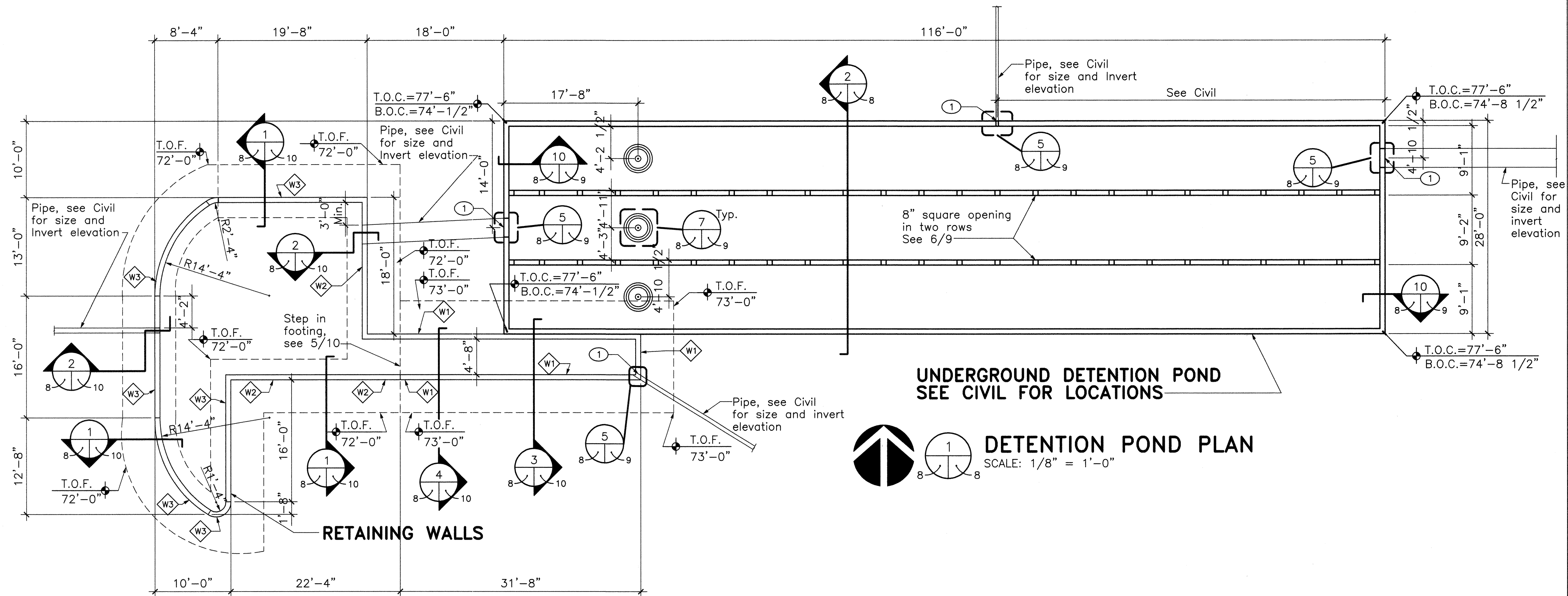
I, Thomas W. Patrick, a duly qualified Registered Professional Land Surveyor under the Laws of the State of New Mexico, do hereby certify that the "as-built" information shown on these drawings was obtained from field construction and "as-built" surveys performed by me, or under my supervision, that the "as-built" information shown on these drawings was added by me, or under my supervision and that this "as-built" information is true and correct to the best of my knowledge and belief." Community Sciences Corporation is not responsible for any of the design concepts, calculations, engineering and/or intent of the second drawings.

Thomas W. Patrick, N.M.P.S. 12651

16 February 2001
Date

AS-BUILT

SCANNED BY
MESA REPRO



GENERAL NOTES:

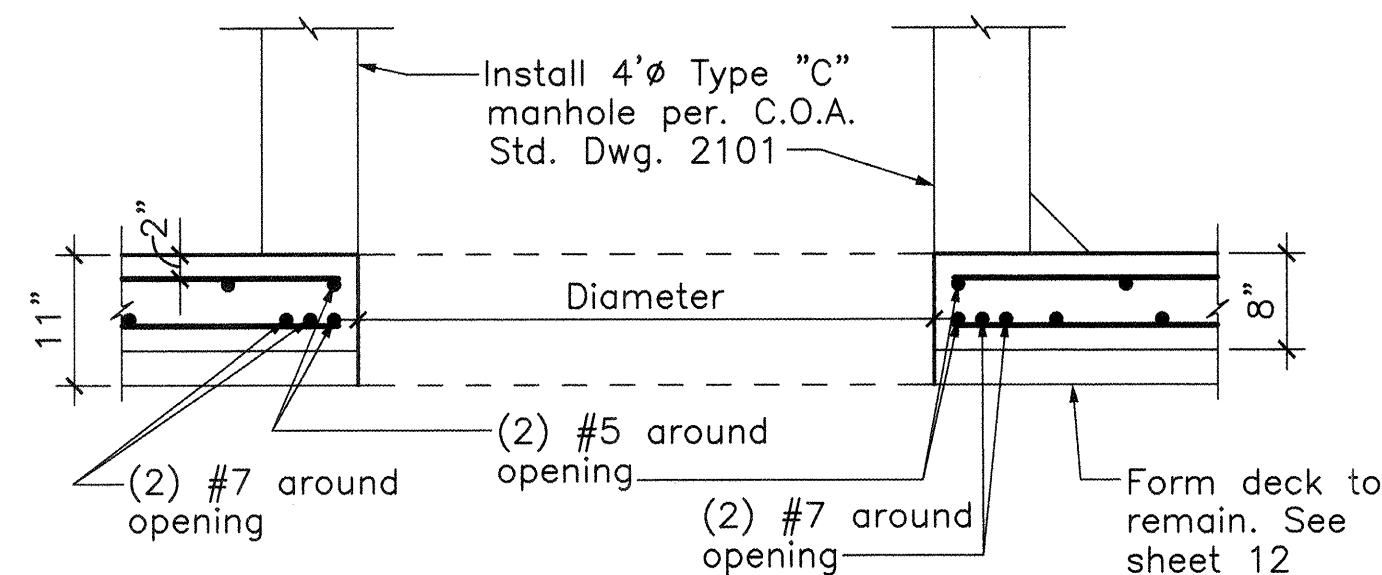
KEYED NOTES:

1. Pipe opening. Coordinate exact size of opening w/ O.D. of pipe. See Civil

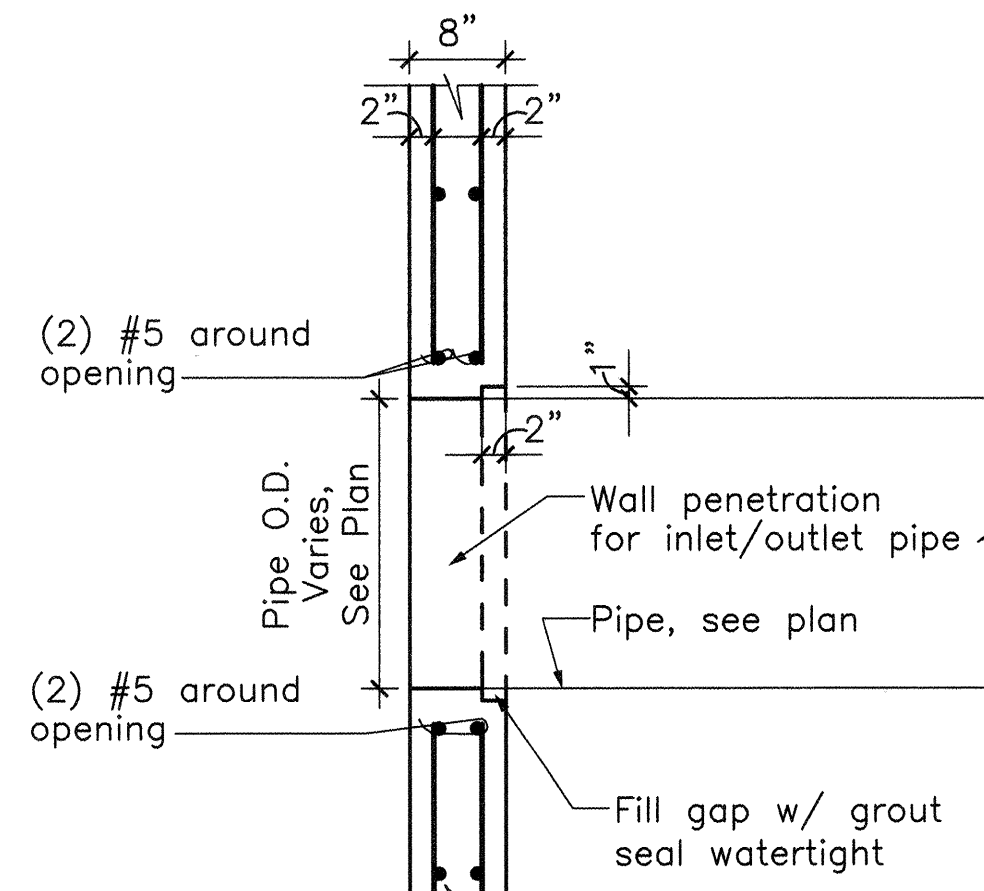
LEGEND:

- Manhole, per C.O.A. standards
- See retaining wall schedule on sheet 10

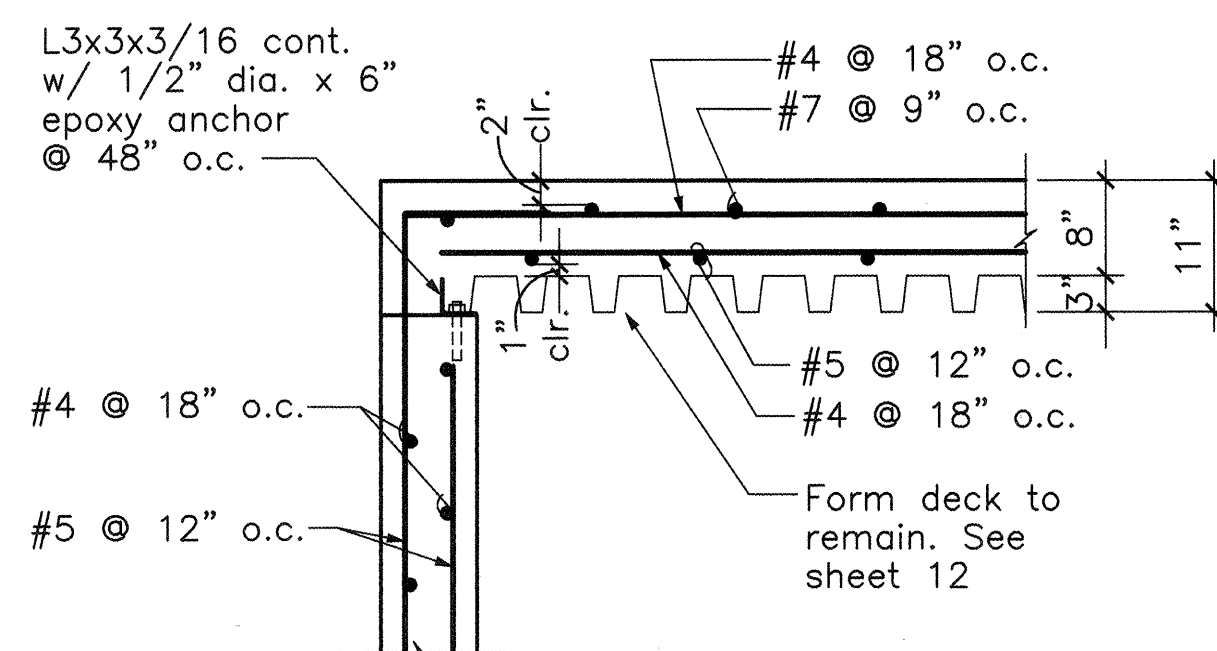
ENGINEER'S STAMP & SIGNATURE		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
		Field Notes					
		No.	By	Date			
			Harris Surveying	8/24/99	CITY OF ALBUQUERQUE CONTROL STATION "14-F20" A STANDARD BRASS TABLET SET IN THE CURB AND HAVING AN ELEVATION OF 5390.736 FEET. (MSLD)		



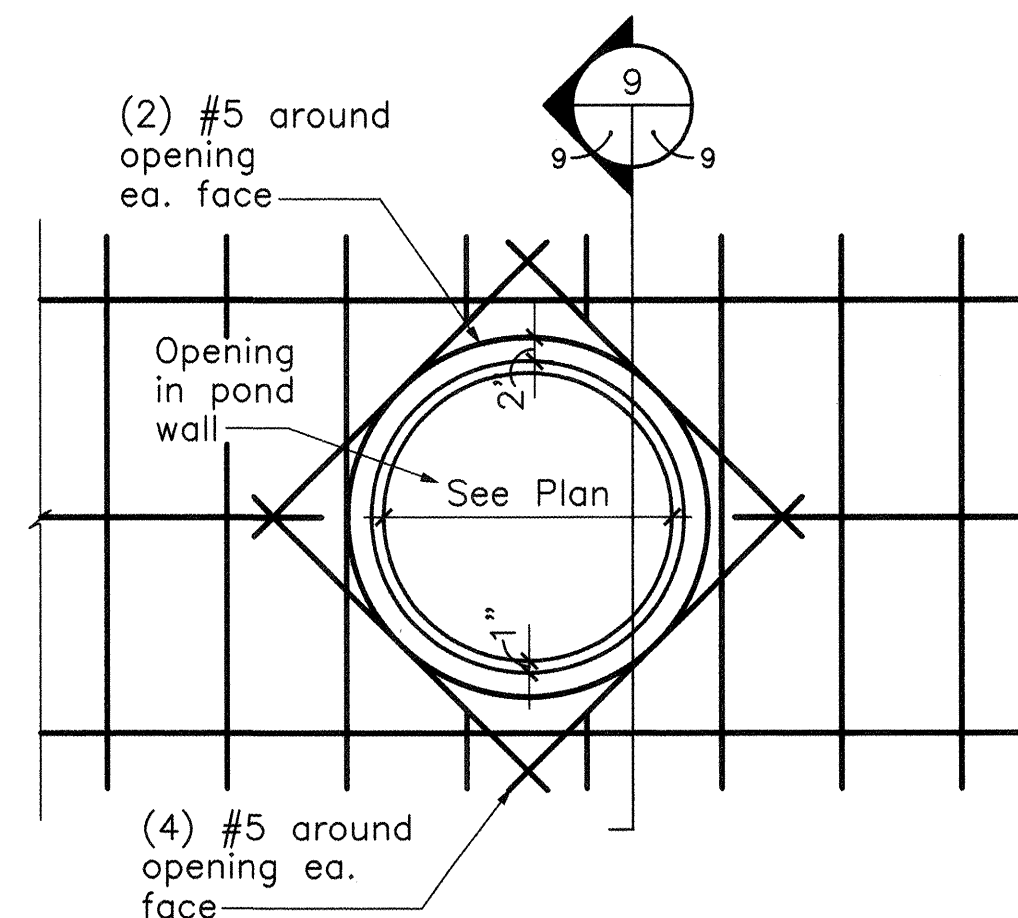
DETAIL 8
SCALE: 3/4" = 1'-0"



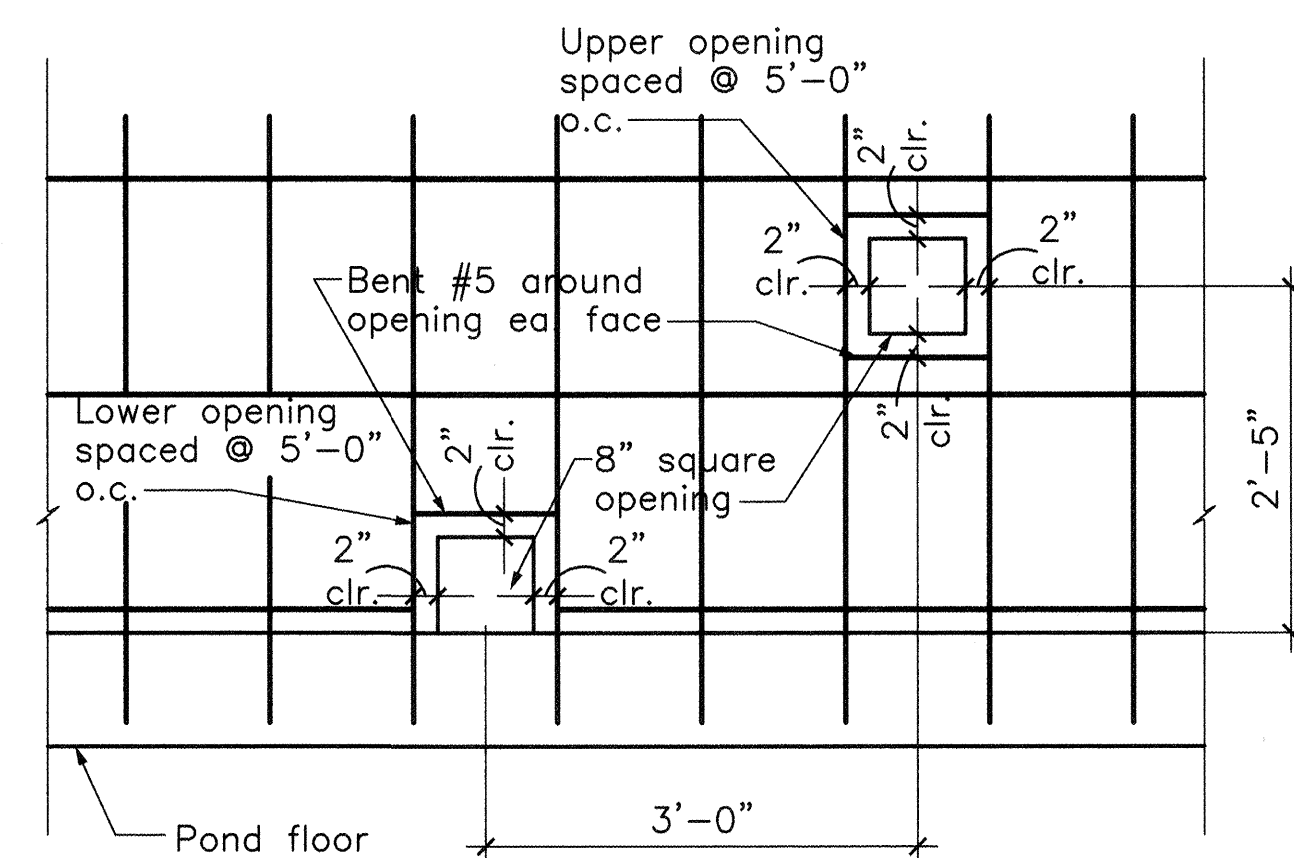
DETAIL 9
SCALE: 3/4" = 1'-0"



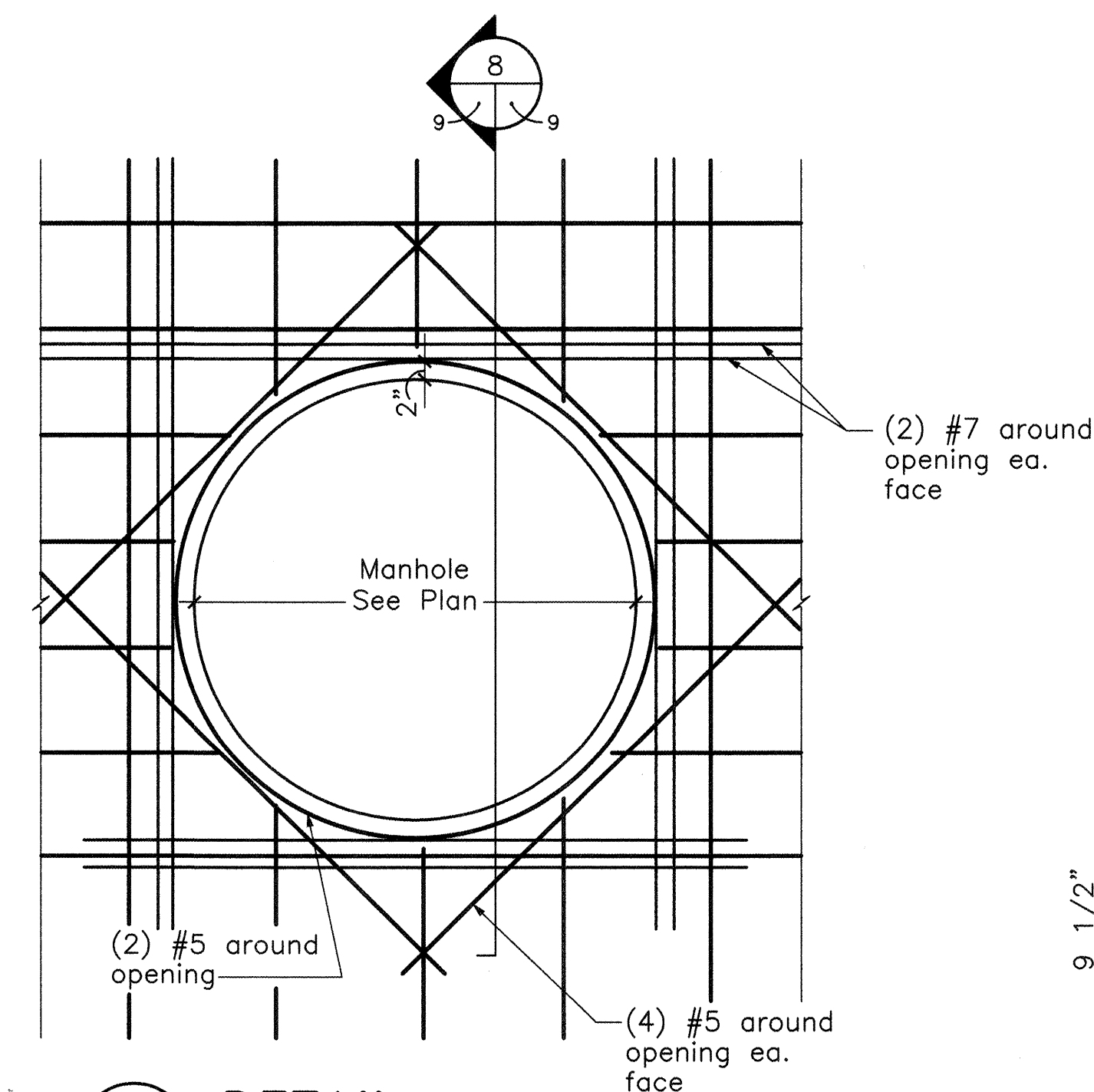
DETAIL 10
SCALE: 3/4" = 1'-0"



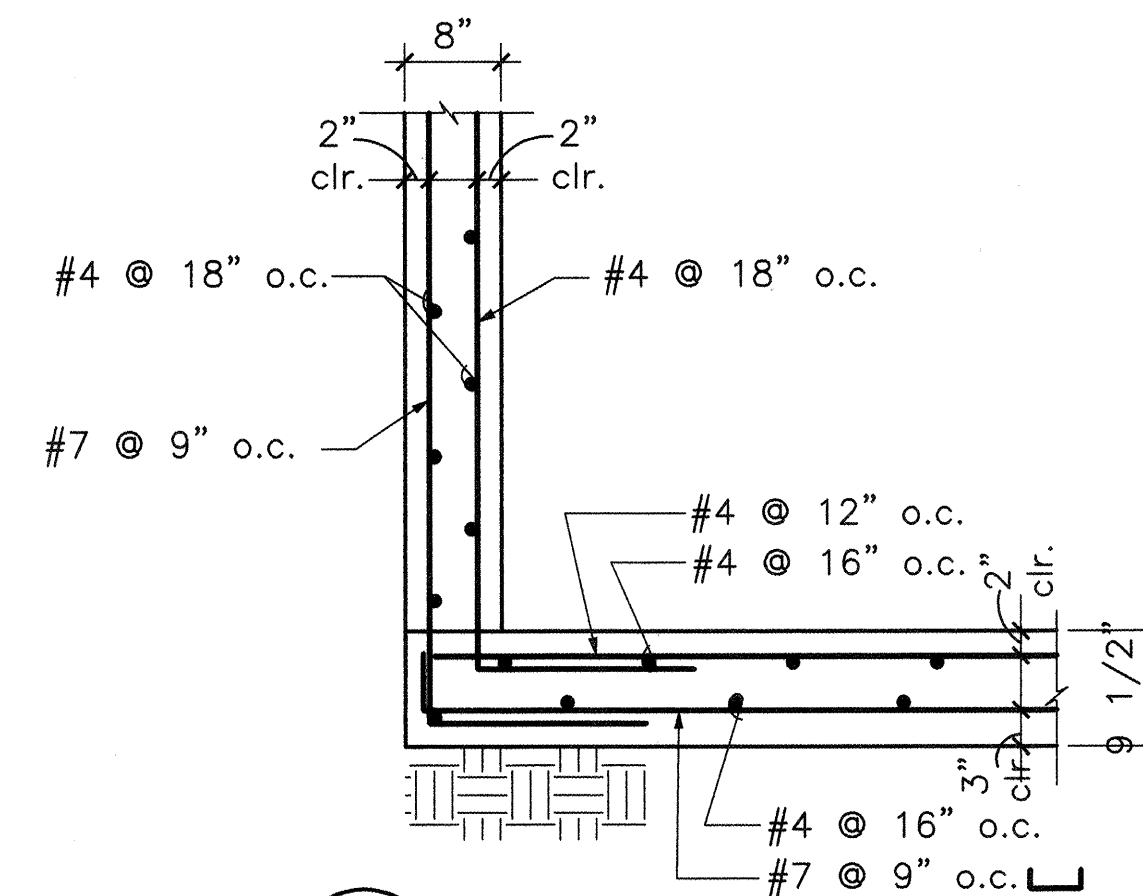
DETAIL 5
SCALE: 3/4" = 1'-0"



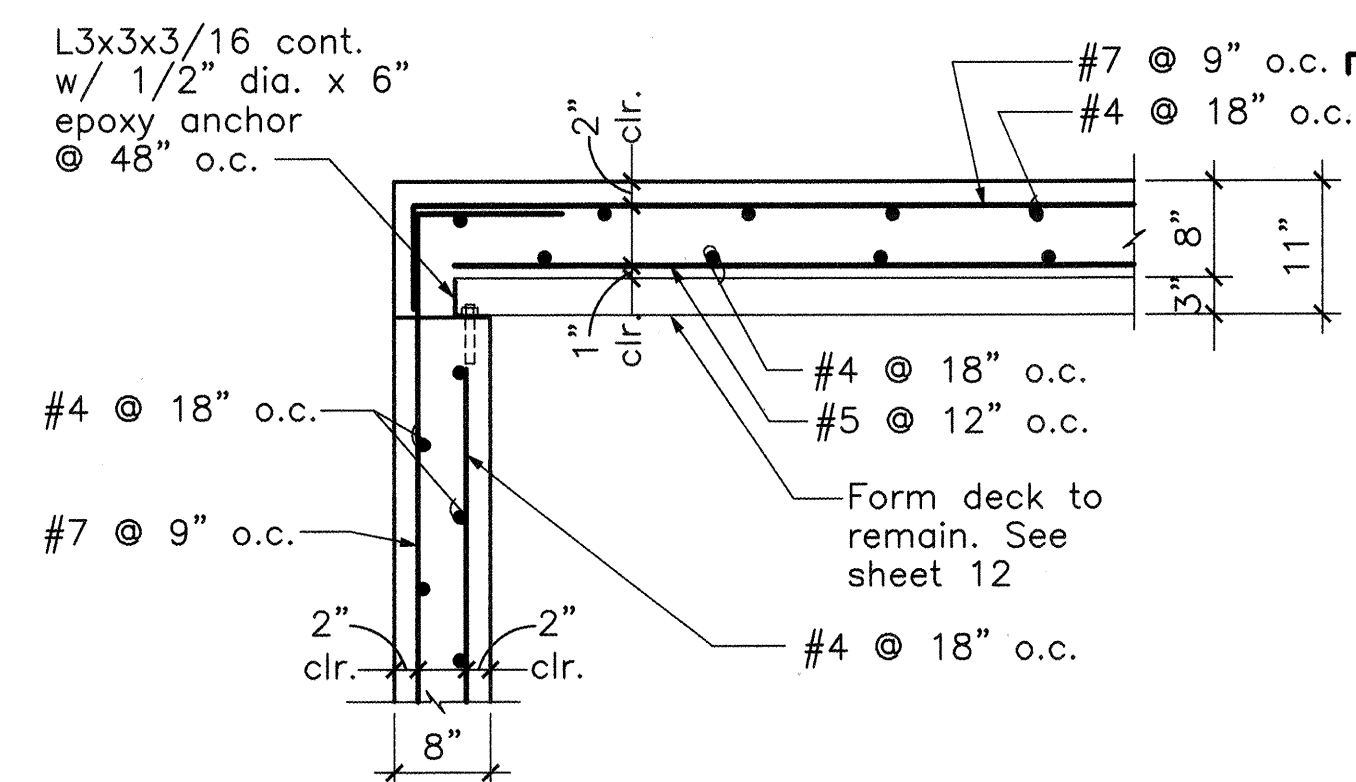
DETAIL 6
SCALE: 3/4" = 1'-0"



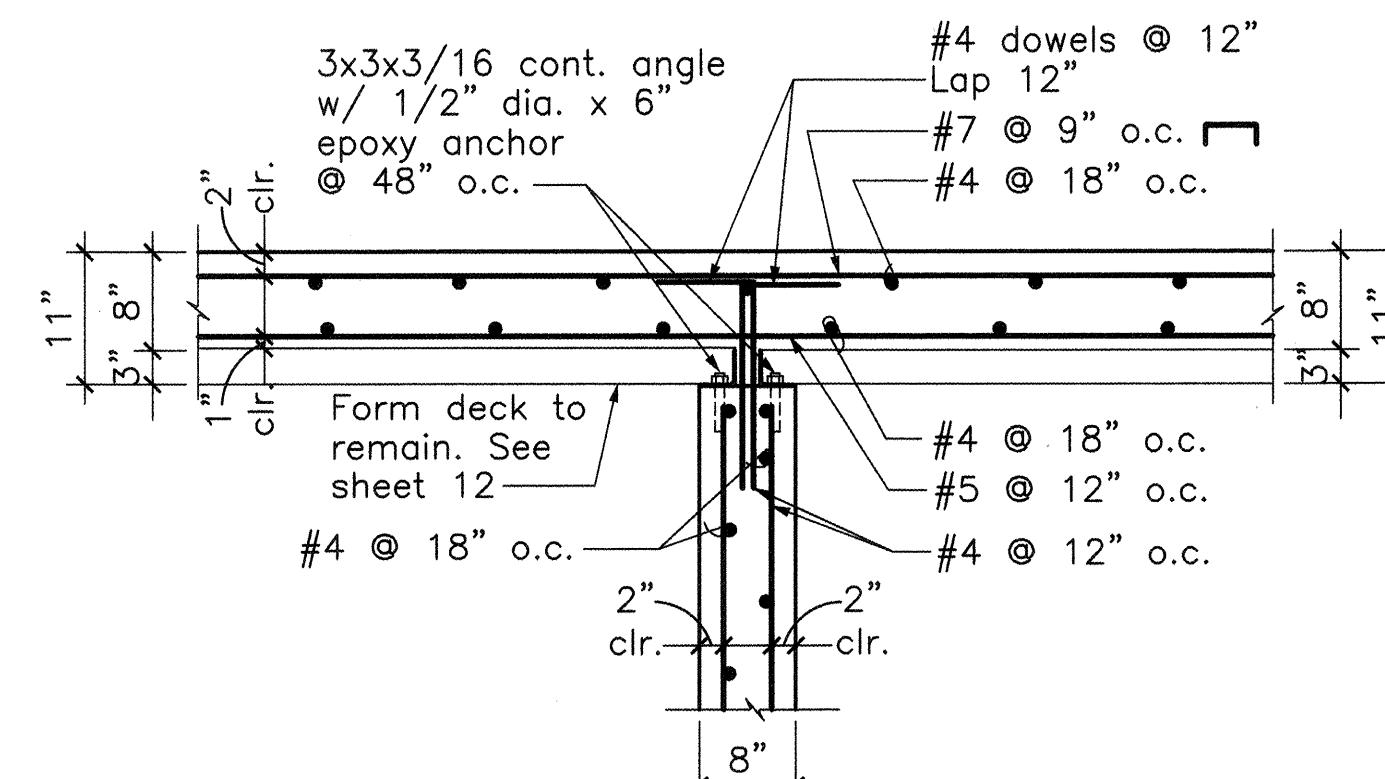
DETAIL 7
SCALE: 3/4" = 1'-0"



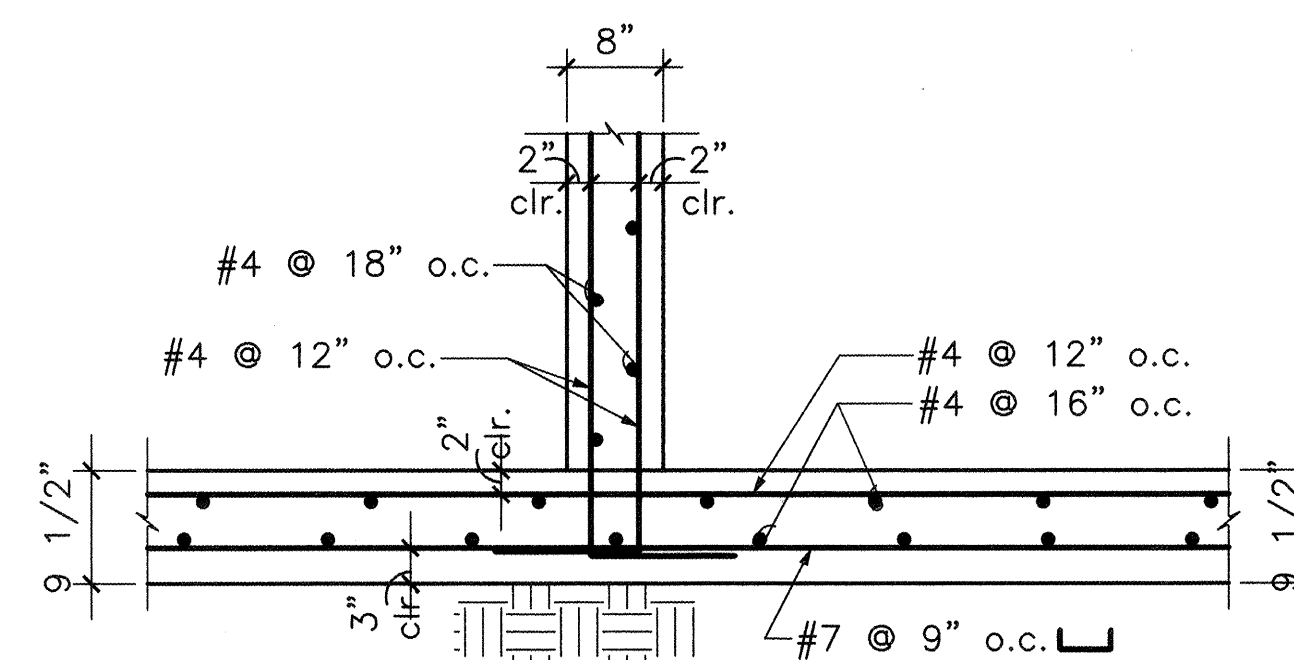
DETAIL 1
SCALE: 3/4" = 1'-0"



DETAIL 2
SCALE: 3/4" = 1'-0"



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



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

ENGINEER'S STAMP & SIGNATURE				SURVEY INFORMATION				BENCH MARKS				AS BUILT INFORMATION			
				Date: 8/24/99 By: Harris Surveying No.: Field Notes:				City of Albuquerque Control Station "14-F20", A STANDARD BRASS TABLET SET IN THE CURB AND HAVING AN ELEVATION OF 5390.236 FEET. (MSLD)				Contractor: Work: Stationed By: Date: Field Acceptance By: Date: Drawings: Date: Micro-film Information: Recorded By: Date:			
No. _____ Date: 4/7/00 Drawn By: BPLW Checked By: BPLW				No. _____ Date: 4/7/00 Drawn By: BPLW Checked By: BPLW				No. _____ Date: 4/7/00 Drawn By: BPLW Checked By: BPLW				No. _____ Date: 4/7/00 Drawn By: BPLW Checked By: BPLW			

BPLW
Architects & Engineers, Inc.
6200 Uptown Blvd. NE
Suite 400
Albuquerque, New Mexico 87110
(505) 881-2759

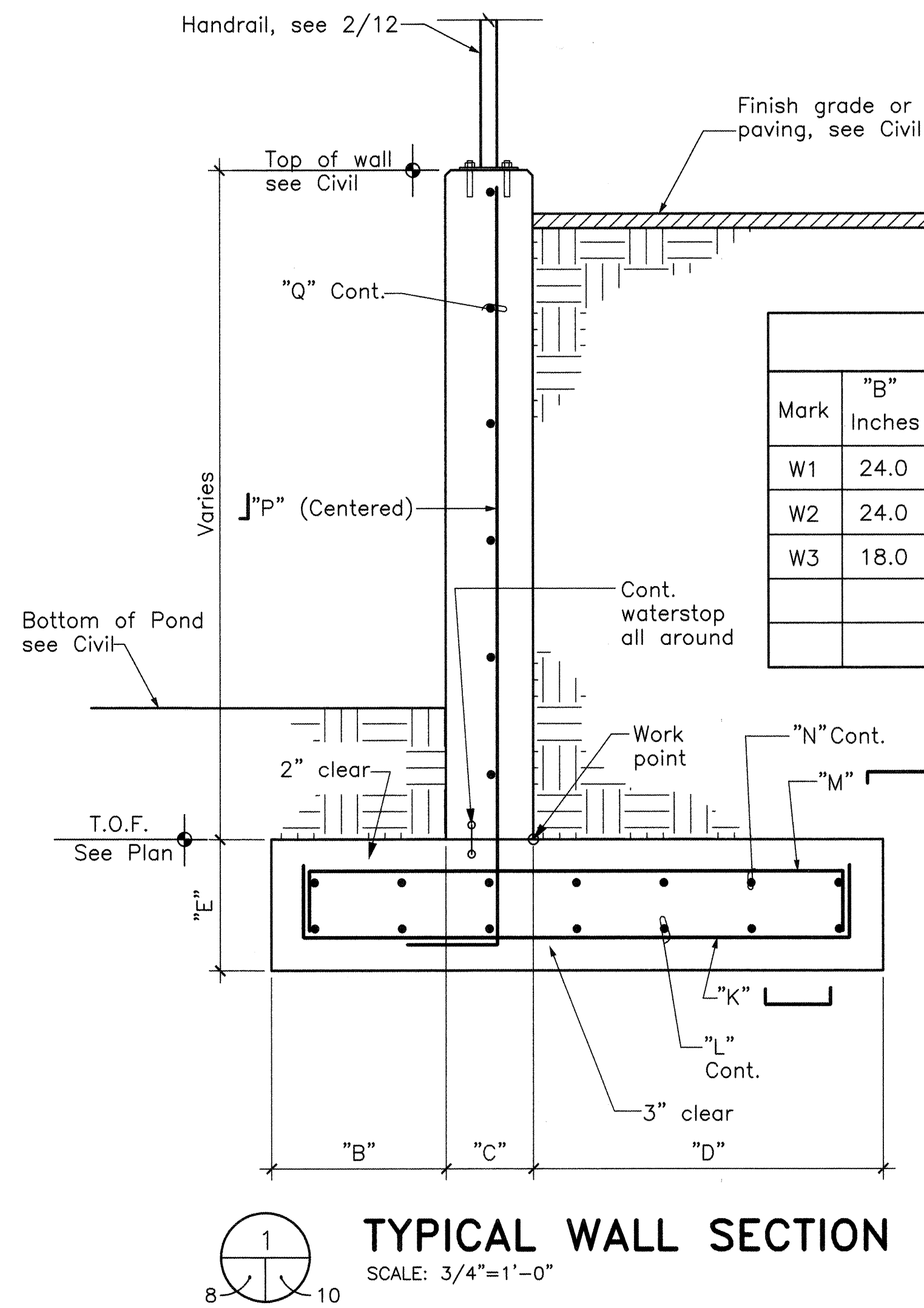
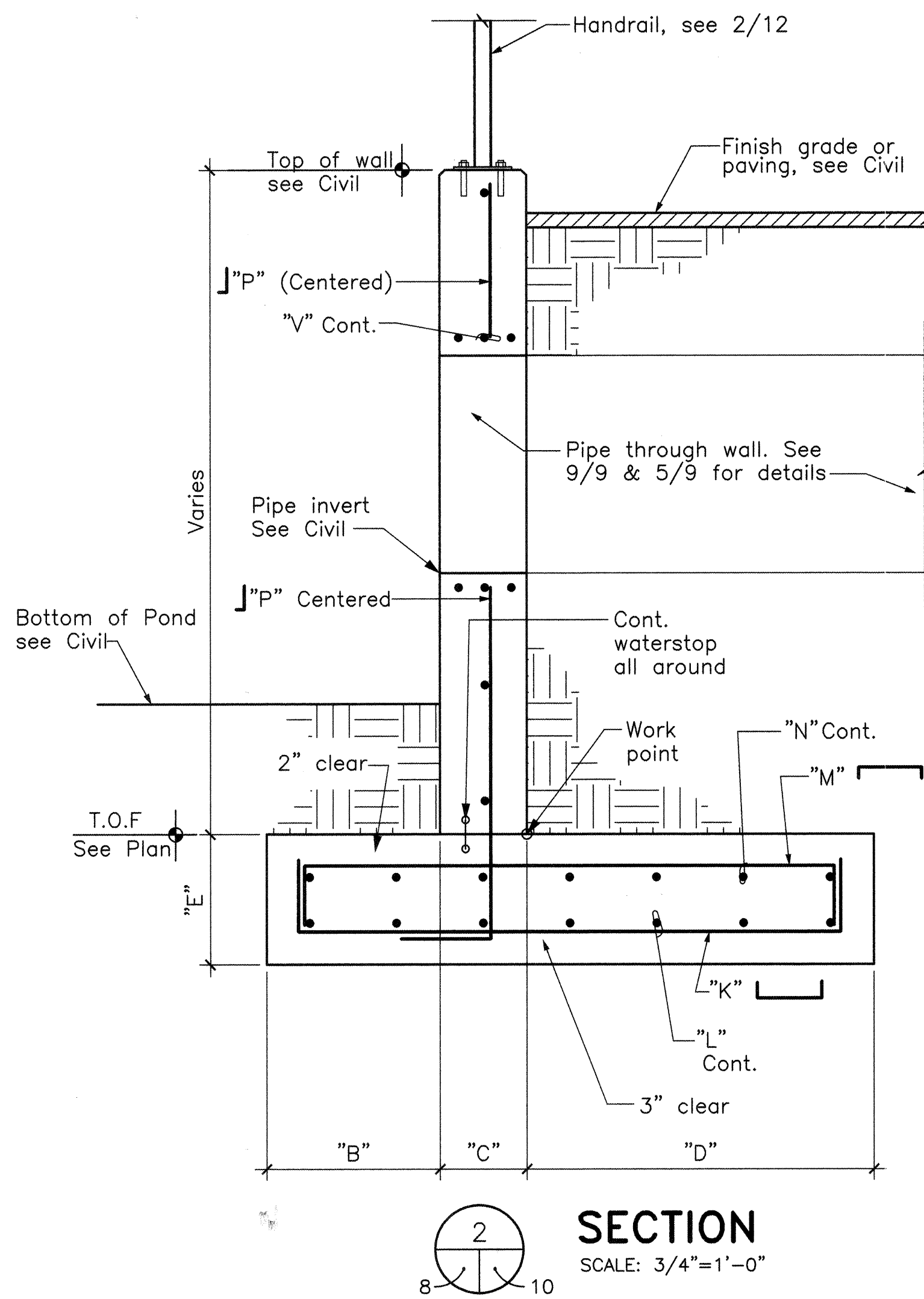
49 West First Street
Suite 100
Albuquerque, New Mexico 87102
(505) 827-2759

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

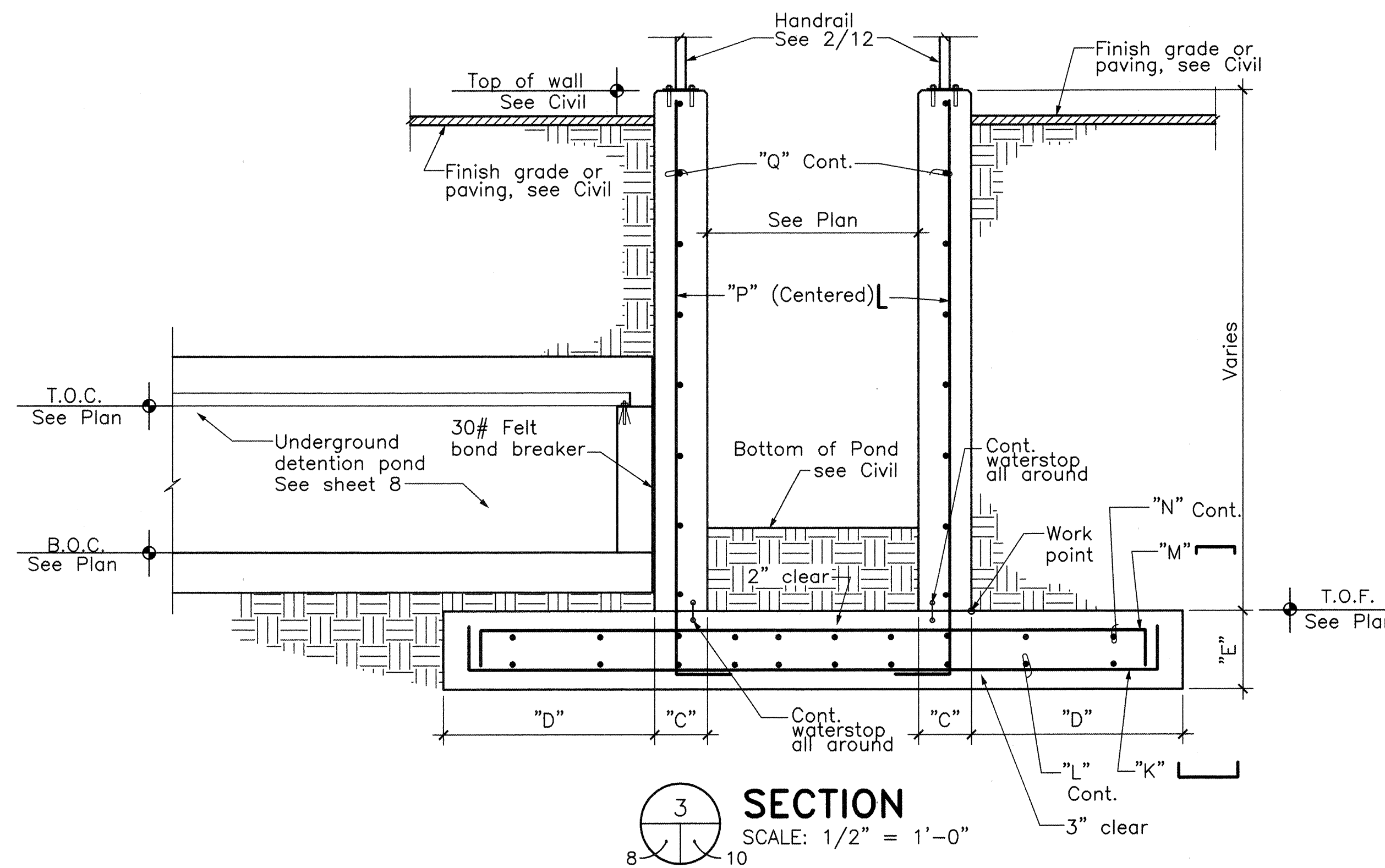
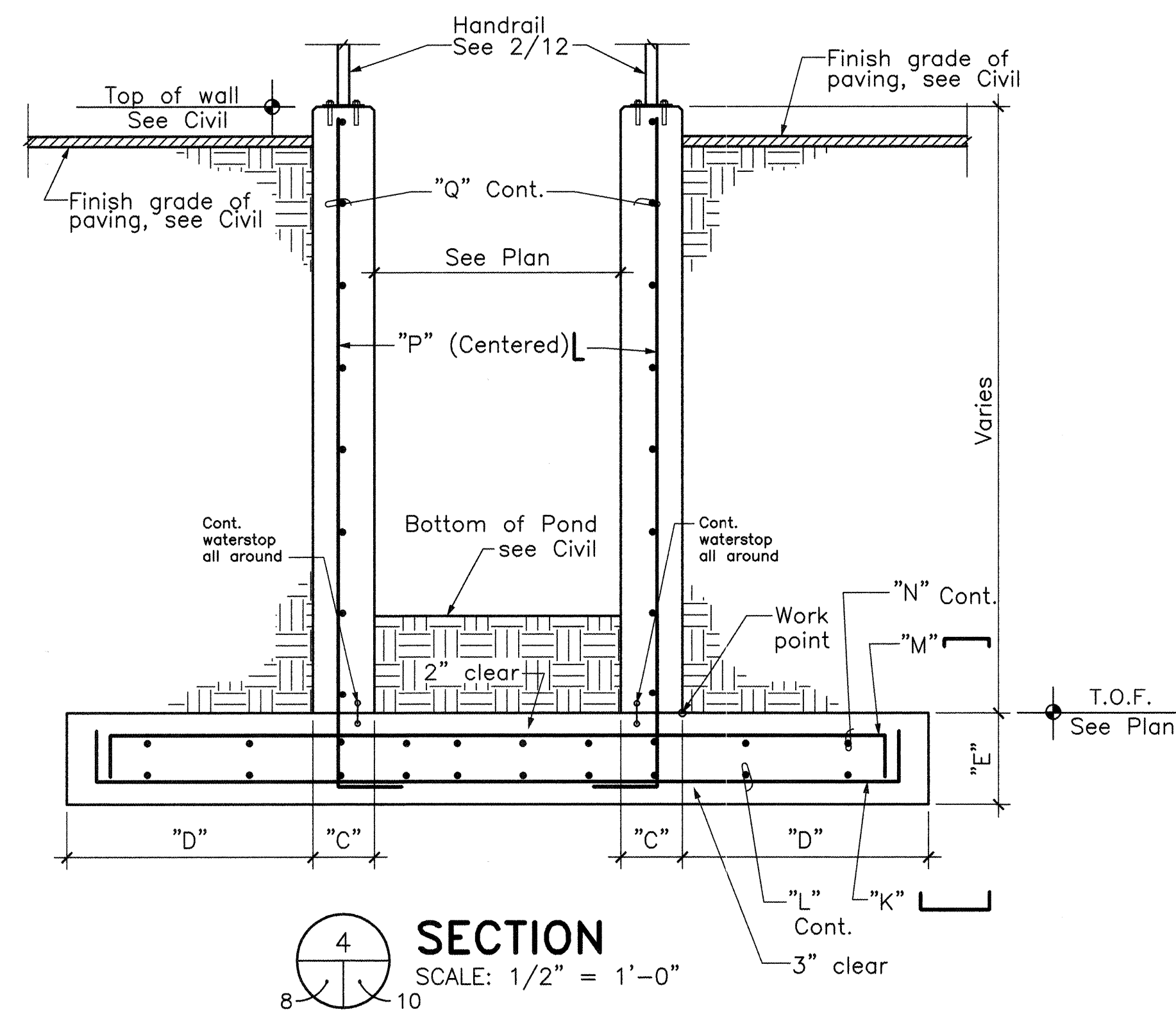
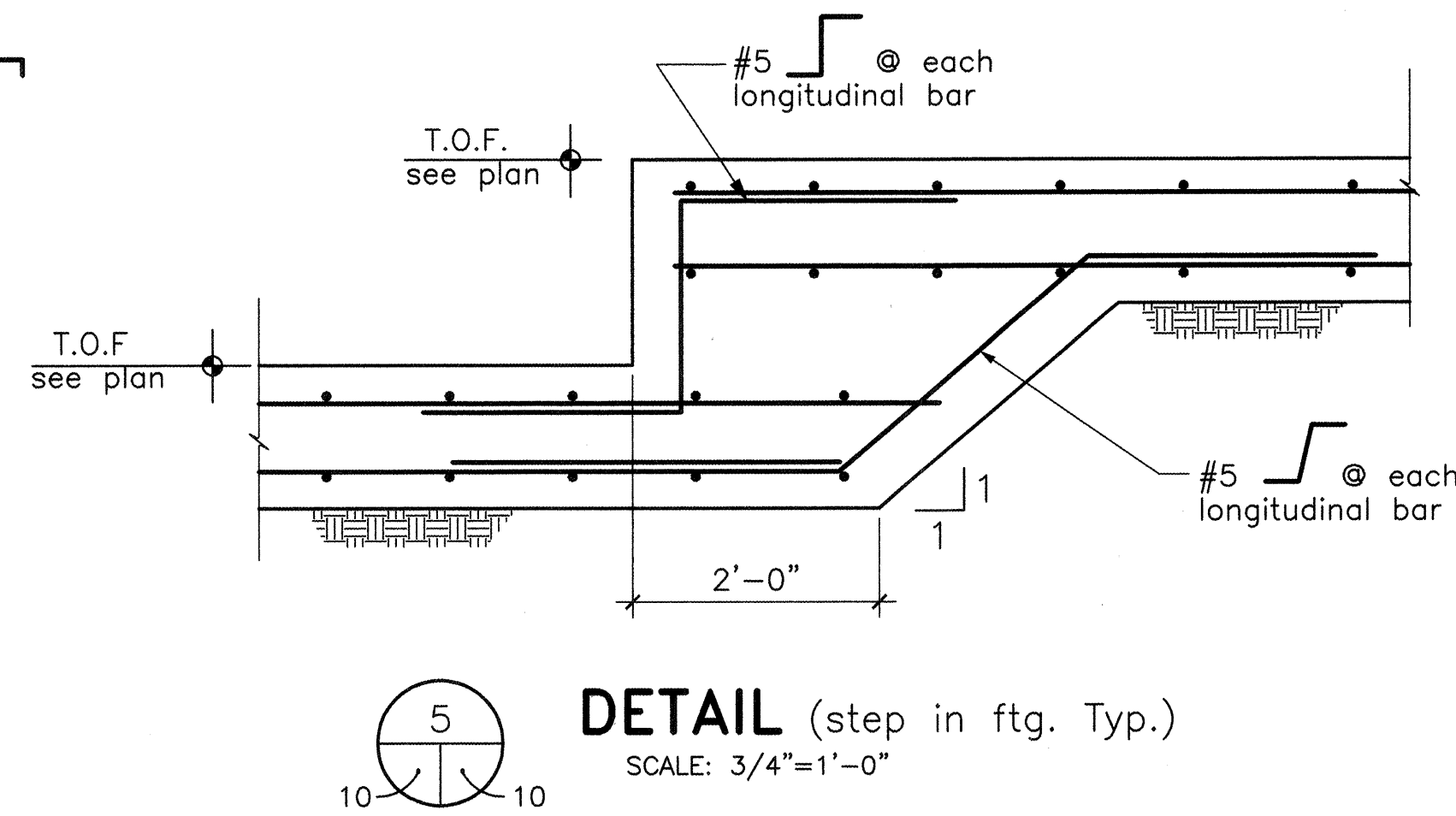
TITLE: MONTGOMERY CROSSING
WATERLINE AND DRAINAGE FACILITIES
STRUCTURAL DETAILS

Design: Review Committee: City Engineer Approval:
JUL 26 2000 AUG - 1 2000
CITY ENGINEER

City Project No. Zone Map No. Sheet 9 Of 14
G-20-Z



RETAINING WALL SCHEDULE										
Mark	"B" Inches	"C" Inches	"D" Inches	"E" Inches	"K" Bottom	"L" Bottom	"M" Top	"N" Top	"P" Vert. dowel	"Q" Horiz.
W1	24.0	10.0	50.0	16.0	#5@12"o.c.	(6)#4	#5@12"o.c.	(6)#4	#7@10"o.c.	#5@16"o.c.
W2	24.0	10.0	44.0	14.0	#5@12"o.c.	(6)#4	#5@12"o.c.	(6)#4	#7@12"o.c.	#5@16"o.c.
W3	18.0	10.0	38.0	14.0	#4@12"o.c.	(5)#5	#4@12"o.c.	(5)#5	#6@12"o.c.	#5@16"o.c.



ENGINEER'S STAMP & SIGNATURE		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
		Field Notes	Date	Control	Date	Work	Date
		By	8/24/99	CITY OF ALBUQUERQUE CONTROL		Staked By	
		Harris Surveying		STATION "14-F20", A STANDARD BRASS		Accepted By	
				TABLET SET IN THE CURB AND		Field	
				HAVING AN ELEVATION OF 5390.736 FEET.		Unrevised By	
				(MSLD)		Corrected By	
						Recorded By	
						No.	

BPLW Architects & Engineers, Inc. 6200 Uptown Blvd. NE Suite 400 Albuquerque, New Mexico 87110 (505) 861-2759		49 West First Street Suite 100 Mesa, Arizona 85201 (480) 827-2759	
CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP			
TITLE: MONTGOMERY CROSSING WATERLINE AND DRAINAGE FACILITIES STRUCTURAL DETAILS			
Design Review Committee	City Engineer Approval	Ms./Day/Yr.	Ms./Day/Yr.
JUL 26 2000	AUG - 1 2000		
City Project No. G-20-Z		Zone Map No.	Sheet 10 of 14

GENERAL STRUCTURAL NOTES

- GENERAL
- Shop Drawings shall be prepared and submitted for review for all structural items. The Contract Drawings may not be reproduced and used as Shop Drawings, without written permission from the Engineer of Record. All items deviating from the Contract Drawings, or from previously submitted Shop Drawings, shall be noted on the Shop Drawings.
 - The details designated as "Typical Details" apply generally to the drawings in all areas where conditions are similar to those described in the details.
 - All dimensions and conditions of existing construction shall be verified at the job site. Differences between existing construction and the contract drawings shall be referred to the Engineer of Record. Differences shall also be indicated in the Shop Drawings.
 - The design and provision of all temporary supports such as guys, braces, shoring, or any other temporary elements required for the execution of the contract shall be the responsibility of the Contractor. Temporary supports shall not result in the overstress or damage of the elements to be braced nor any elements used as brace supports.
 - The Contractor shall verify all dimensions in the field.
 - The Contractor shall thoroughly review all the contract documents and coordinate the work of all trades. Notify the Engineer of any conflicts or discrepancies, and obtain resolution from the owner BEFORE proceeding with the affected work.

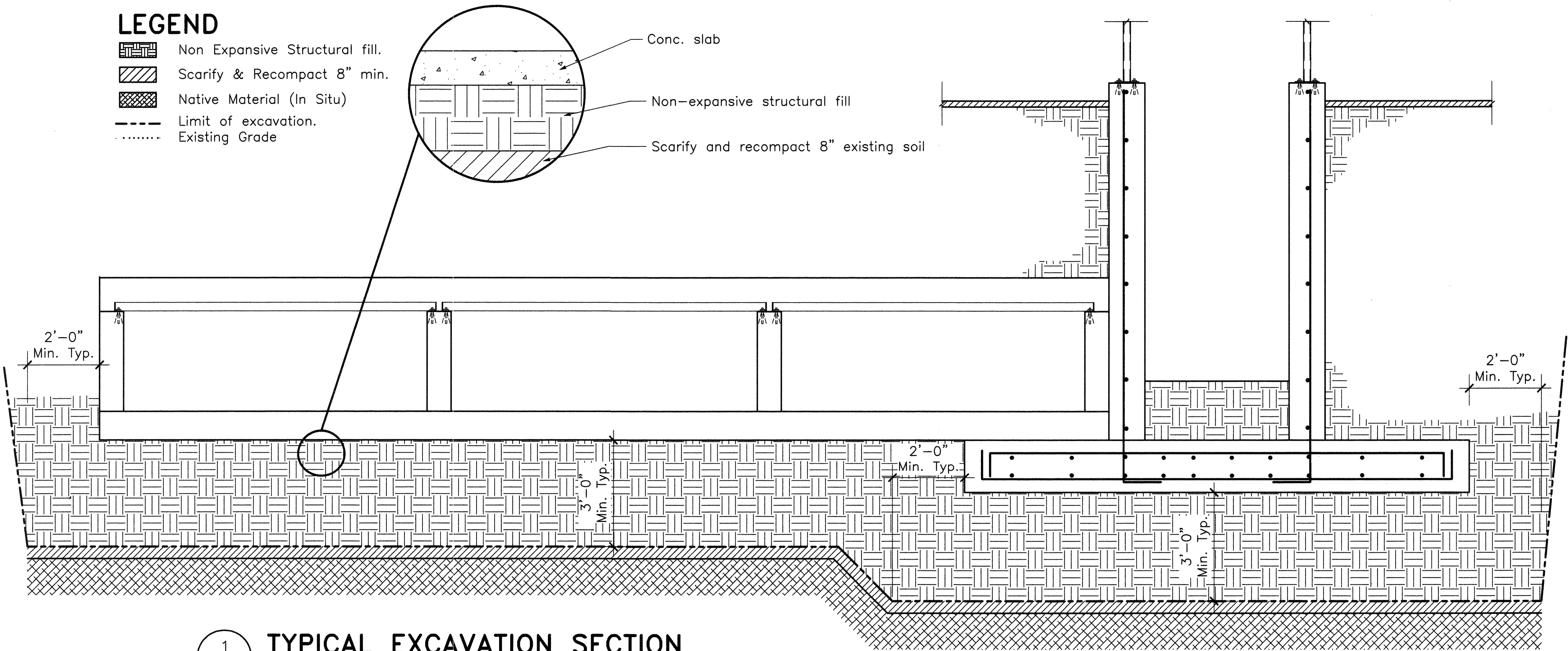
- FOUNDATION NOTES
- Design foundation bearing pressure (net) 1.5 ksf.
 - See typical excavation section for subgrade preparation under slabs on grade.
 - Non-Expansive Structural Fill:
 - All fill placed under building slabs and footings shall be non-expansive and shall be compacted to not less than 95% maximum density according to ASTM D 1557, method D.
 - Fill shall be of satisfactory material with a plasticity index less than or equal to 12.
 - See typical excavation section for limits of new fill material.
 - The contractor shall maintain drainage of the site during construction. The building area of the site shall be maintained in a dewatered condition during the entire construction period. Ponding of water in and around the footing excavation area is not permitted.
 - Subgrade preparation, fill requirements, and allowable soil bearing pressure presented herein are based on the soils report by:

Vinyard & Associates, Inc.
Date: January 20, 2000 File No. 99-1-359

STRUCTURAL ABBREVIATIONS			
A.F.F.	Above finished floor	I.F.W.	Inside face of wall
ALT.	Alternate	IJ	Isolation joint
A.B.	Anchor bolt	JST	Joist
⊙	At (measurement)	K (KIP)	1000 pounds
BM	Beam	KOBB	Knock out bond beam
B.F.F.	Below finished floor	KSI	Kips per square inch
B.O.B.	Bottom of beam	L.L.	Live load
B.O.D.	Bottom of deck	LBS (#)	Pounds (force)
B.O.F.	Bottom of footing	LLH	Long leg horizontal
BRG	Bearing	LLV	Long leg vertical
C.I.P.	Cast in place	MFR('S)	Manufacturer('s)
C.J.P.	Complete joint penetration	MCJ	Masonry control joint
C.L.	Centerline	MECH	Mechanical
C.L.B.	Centerline of beam	N	New
C.L.C.	Centerline of column	N/A	Not applicable
C.L.F.	Centerline of footing	N.T.S.	Not to scale
C.L.W.	Centerline of wall	O.C.	On center
CLR	Clear	OCEW	On center each way
CONC	Concrete	OCEF	On center each face
CJ	Control or construction joint	O.F.W.	Outside face of wall
C.M.U.	Concrete masonry unit	OPP	Opposite
CONN	Connection	P.C.	Precast concrete
CONT	Continuous	PLF	Pounds per linear foot
D.L.	Dead load	PREFAB	Prefabricated
DBL	Double	PSF	Pounds per square foot
Ø OR DIA.	Diameter	PSI	Pounds per square inch
DN	Down	REINF	Reinforcing
DTL	Detail	SIM	Similar
DWG(S)	Drawing(s)	SQ	Square
(E)	Existing	STD	Standard
ELEV. (EL.)	Elevation	SP	Spacing
E.O.S.	Edge of slab	T.L.	Total load
EQ	Equal	T.O.B.	Top of beam
EQUIP	Equipment	T.O.B.P.	Top of bearing plate
EXP. ANC.	Expansion anchor	T.O.C.	Top of concrete
EXP. JT (E.J.)	Expansion joint	T.O.D.	Top of deck
E.W.	Each way	T.O.F.	Top of footing
E.F.	Each face	T.O.L.	Top of ledger
F.F.	Finished floor	T.O.M.	Top of masonry
F.O.S.	Face of steel	T.O.P.	Top of plate
F.O.W.	Face of wall	T.O.S.	Top of steel
GA	Gage	T.O.W.	Top of wall
GALV	Galvanized	TYP	Typical
G.S.N.	General structural notes	U.N.O.	Unless noted otherwise
GLB (Glulam)	Glue-laminated beam	VERT	Vertical
HAS	Welded headed anchor stud	W.W.F.	Welded wire fabric
HORIZ.	Horizontal	W/O	Without
H.S.B.	High-strength bolt (ASTM A325)		

LEGEND

- Non Expansive Structural fill.
- Scarify & Recompact 8" min.
- Native Material (In Situ)
- Limit of excavation.
- Existing Grade



11 11
TYPICAL EXCAVATION SECTION
SCALE: 1/2" = 1'-0"

AS BUILT INFORMATION				BENCH MARKS				SURVEY INFORMATION				ENGINEER'S STAMP & SIGNATURE			
Contractor	Work	Staked By	Date	City of Albuquerque	Control	Station	14-F20"	Date	By	Field Notes	No.	Signature	Stamp	Remarks	By
		Accepted By	Date					8/24/99	Harris						
		Field	Date												
		Accepted By	Date												
		Drawings	Date												
		Corrected By	Date												
		Recorded By	Date												
		No.													

BPLW
Architects & Engineers, Inc.
6200 Uptown Blvd. NE
Suite 400
Albuquerque, New Mexico 87110
(505) 881-2759

49 West First Street
Suite 100
Albuquerque, New Mexico 87101
(480) 827-2759

Designing to Shape the Future

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: MONTGOMERY CROSSING
WATERLINE AND DRAINAGE FACILITIES
STRUCTURAL GENERAL NOTES

Design Review Committee	City Engineer Approval	Mo./Day/Yr.	Mo./Day/Yr.
JUL 26 2000	AUG - 1 2000		
	CITY ENGINEER		

City Project No. G-20-Z Zone Map No. Sheet 11 Of 14

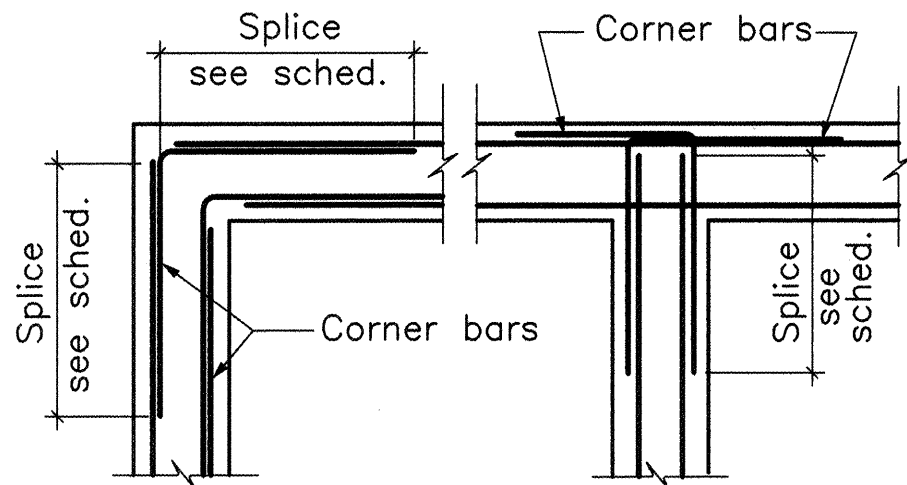
GENERAL STRUCTURAL NOTES (CONT'D.)

CONCRETE

1. Cast in place concrete shall meet the following requirements:
- | | |
|-------------------|----------|
| 28 — day strength | Location |
| 4000 psi | Typical |
2. Provide 5 to 7 percent of entrained air in concrete permanently exposed to the weather and elsewhere at the contractor's option.
3. Horizontal construction joints in concrete pours shall be permitted only where indicated on the drawings. Contractor shall submit proposed locations for any construction joints not shown on the drawings for review by the Engineer of record. Additional construction joints may require additional reinforcing as specified by the S.D.R. which shall be provided by the contractor at no additional cost to the owner. See detail for construction joints in grade beams.

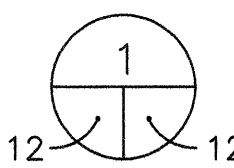
CONCRETE REINFORCING

1. Reinforcing steel shall be deformed steel bars in accordance with ASTM A-615 Grade 60.
2. Detailing and fabrication of reinforcing steel shall conform to the ACI Standard Detailing Manual (ACI-315).
3. Unless noted otherwise, in beams and slabs detail reinforcing as follows:
- A. Lap top reinforcing bars at midspan.
 - B. Lap bottom reinforcing bars at supports.
 - C. Lap reinforcing bars in accordance with the lap splice schedule for a class B lap.
 - D. Provide standard hooks in top bars at the cantilever and discontinuous ends of beams.
 - E. Provide corner bars for all horizontal bars at the inside and outside faces of intersecting beams or walls, corner bars are not required if horizontal bars are hooked.
4. Welding of reinforcement steel is NOT permitted unless specifically required by the drawings or specifications.
5. Heat shall NOT be used in the fabrication or installation of reinforcement.
6. Unless otherwise noted, concrete cover over the steel reinforcements shall conform to ACI 318.
7. Provide bar supports and spacers for rebar in accordance with ACI 315.
8. The contractor shall ensure all the rebar is properly located, aligned and secured in place before placing concrete so that it remains in the required position during the placing operation.
9. All rebar found to be improperly installed shall be removed and replaced at no additional cost to the Owner.
10. All horizontal reinforcing in continuous footings, beams, and walls shall be continuous around corners and intersections or have corner bars of the same size and spacing as the horizontal bars and lapped according to the splice length schedule on this sheet.



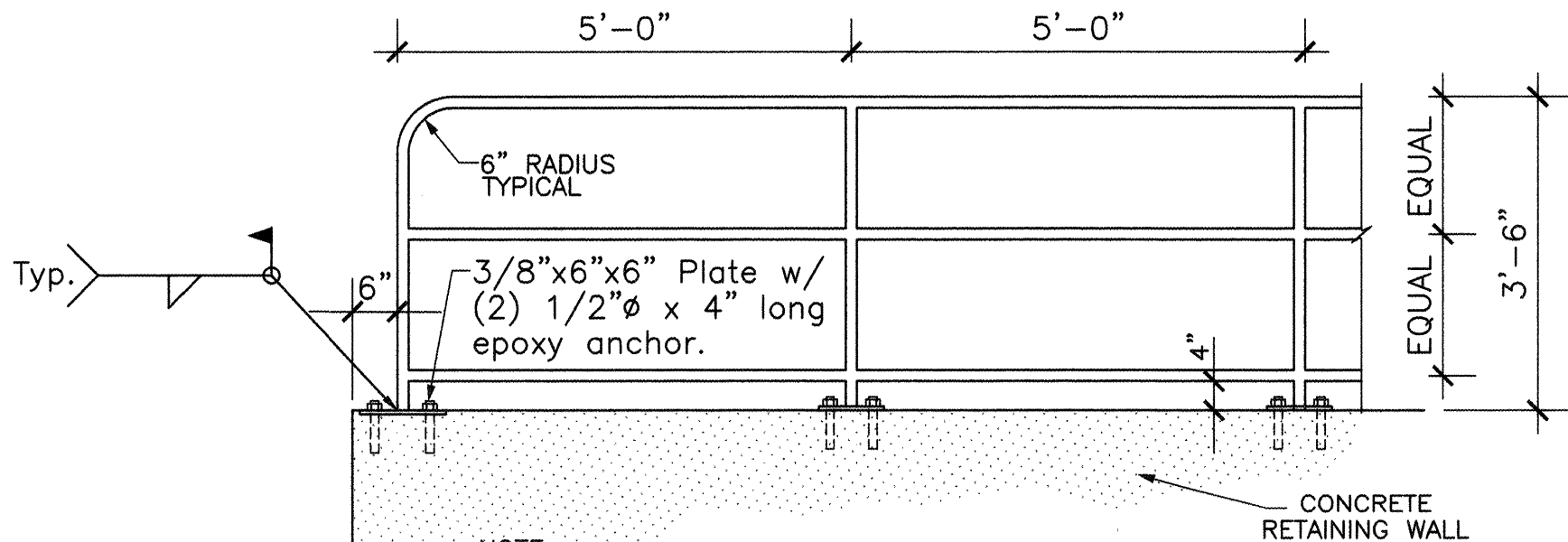
TYPICAL CORNER & INTERSECTION REINFORCING

Note:
Reinforcing shown applies to top, bottom and intermediate bars

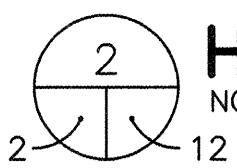


TYP. CONCRETE CORNER REINFORCING

Not To Scale



NOTE:
1. RAIL FABRICATION MUST RESIST 250# HORIZONTAL FORCE.
2. 2" O.D. METAL POSTS EQUALLY SPACED, WELDED TO BASE PLATE, PAINT CAUTION YELLOW.



HAND RAIL DETAIL

NOT TO SCALE

SPLICE LENGTHS FOR REINFORCEMENT IN NORMAL WEIGHT CONCRETE¹

Reinforcing Yield Strength: 60 ksi
Concrete Compressive Strength: 4000 psi

BAR SIZE	AREA (in ²)	DIA. (in)	Clear Spacing to Nearest Adjacent Bar (inches)	Bottom Bars			Top Bars ²		
				Minimum Embedment Length (in)	Class "A" Splice Length (in)	Class "B" Splice Length (in)	Minimum Embedment Length (in)	Class "A" Splice Length (in)	Class "B" Splice Length (in)
#3	0.11	0.375	0.00 to 0.75 0.76 and above	21.35 14.23	22 15	28 19	27.75 18.50	28 19	37 25
#4	0.20	0.500	0.00 to 1.00 1.01 and above	28.46 18.97	29 19	37 25	37.00 24.67	37 25	49 33
#5	0.31	0.625	0.00 to 1.25 1.26 and above	35.58 23.72	36 24	47 31	46.25 30.83	47 31	61 41
#6	0.44	0.750	0.00 to 1.50 1.51 and above	42.69 28.46	43 29	56 37	55.50 37.00	56 37	73 49
#7	0.60	0.875	0.00 to 1.75 1.76 and above	62.26 41.50	63 42	81 54	80.93 53.96	81 54	106 71
#8	0.79	1.000	0.00 to 2.00 2.01 and above	71.15 47.43	72 48	93 62	92.50 61.66	93 62	121 81
#9	1.00	1.128	0.00 to 2.26 2.27 and above	80.26 53.51	81 54	105 70	104.34 69.56	105 70	136 91
#10	1.27	1.270	0.00 to 2.54 2.55 and above	90.36 60.24	91 61	118 79	117.47 78.31	118 79	153 102
#11	1.56	1.410	0.00 to 2.82 2.83 and above	100.32 66.88	101 67	131 87	130.42 86.95	131 87	170 114

1. For splice and embedment lengths in lightweight concrete, multiply the above values by a factor of 1.3.
2. Top Bars are horizontal bars so placed that more than 12 inches of fresh concrete is cast in the member below the bar.

METAL FORM DECK

1. Steel deck shall be designed, fabricated and installed in accordance with the requirements of the Steel Deck Institute.
2. Deck edge closing sections shall be provided at all locations too narrow to accommodate a full width deck unit. The shop drawings shall locate and detail all deck edge closing sections.
3. Steel form deck shall be galvanized.
4. Deck shall have minimum superimposed gravity load capacity for simple span of 125 psf.
5. All steel decking shall be fabricated from steel conforming to the latest edition of the American Iron and Steel Institute. Specifications for the design of cold formed steel structural members.

FORM DECK SCHEDULE

				SECTION PROPERTIES				SDI FASTNER PATTERN	
	Depth	Type	Gage	I	Sp	Sn	Fy	at Supports	at Side Laps
				in ⁴ / ₁₆	in ³ / ₁₆	in ³ / ₁₆	ksi		
FORM DECK	3"	C	18	1.251	0.805		33.0	36/4	@ 12" o.c.

SUPPORT FASTNERS: #12 TEKS or 5/8" puddle weld

SIDE LAP FASTNERS: #12 TEKS

Rebar USA - Metric translation table

USA	-	Metric
#3		10mm Dia.
#4		13
#5		16
#6		19
#7		22
#8		25
#9		29
#10		32
#11		36



BPLW

Architects & Engineers, Inc.
3500 Uptown Blvd. NE
Suite 400
Albuquerque, New Mexico 87110
(505) 881-2759

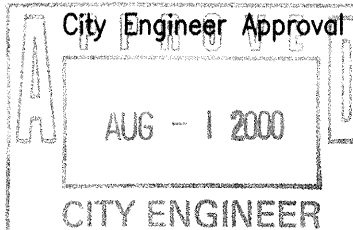
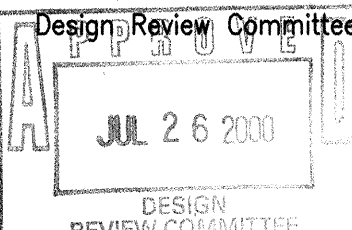


49 West First Street
Suite 100
Mesa, Arizona 85201
(480) 827-2759

Designing to Shape the Future

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: MONTGOMERY CROSSING
WATERLINE AND DRAINAGE FACILITIES
GENERAL STRUCTURAL NOTES



Last Design Update

Mo./Day/Yr.

Mo./Day/Yr.

City Project No.

Zone Map No.

Sheet

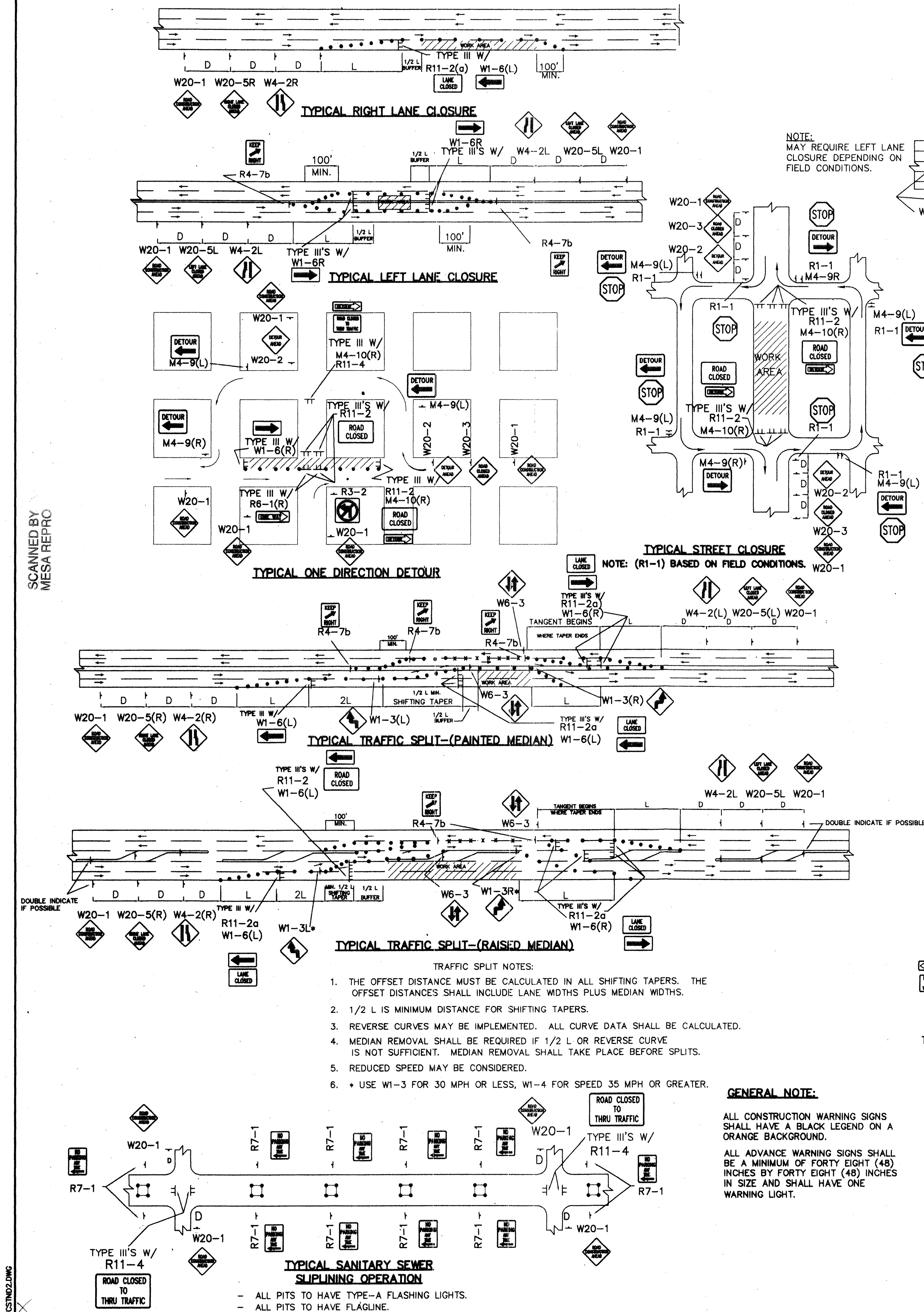
Of

G-20-Z

12

14

SCANNED BY
MESA REPRO

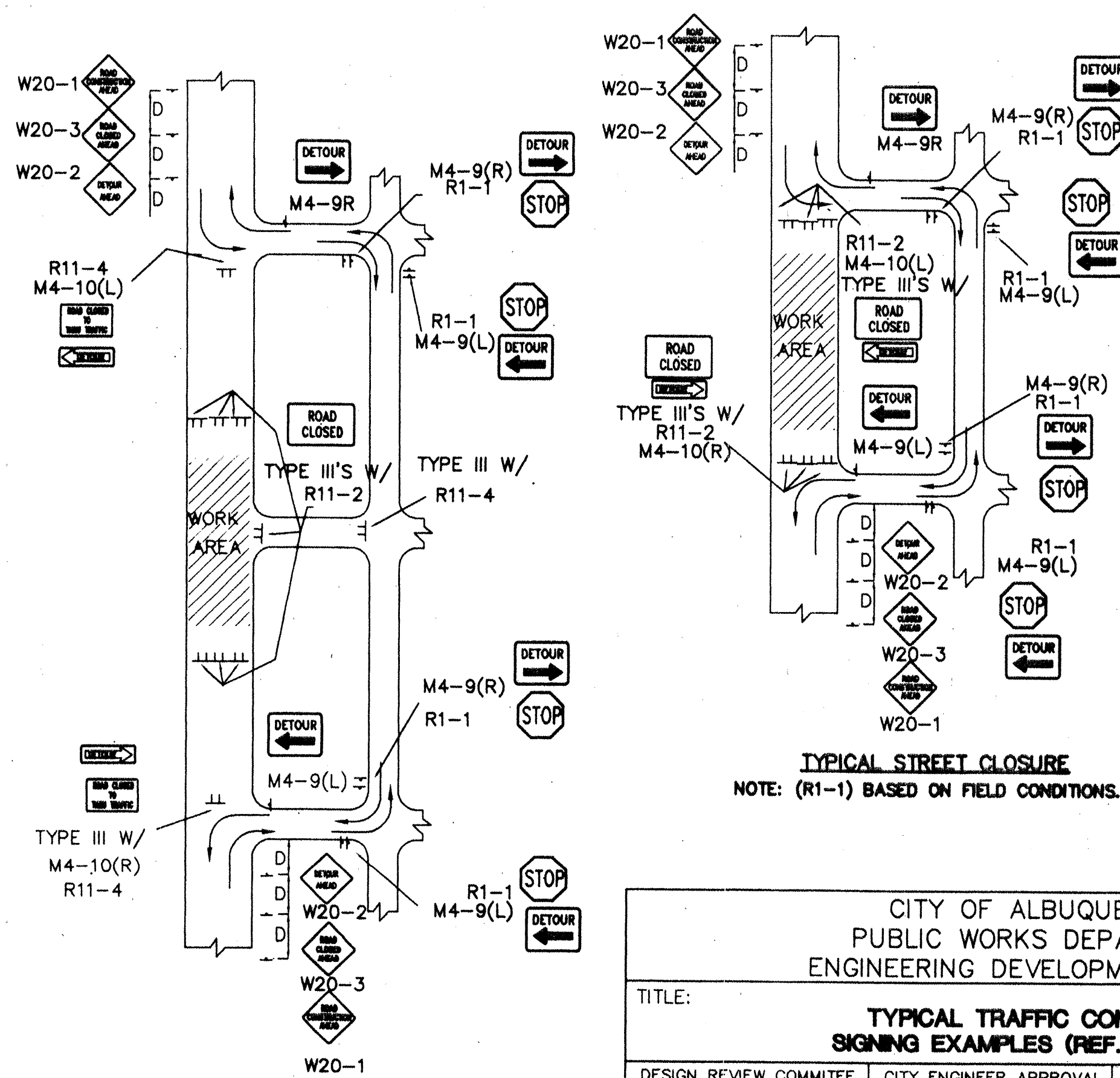
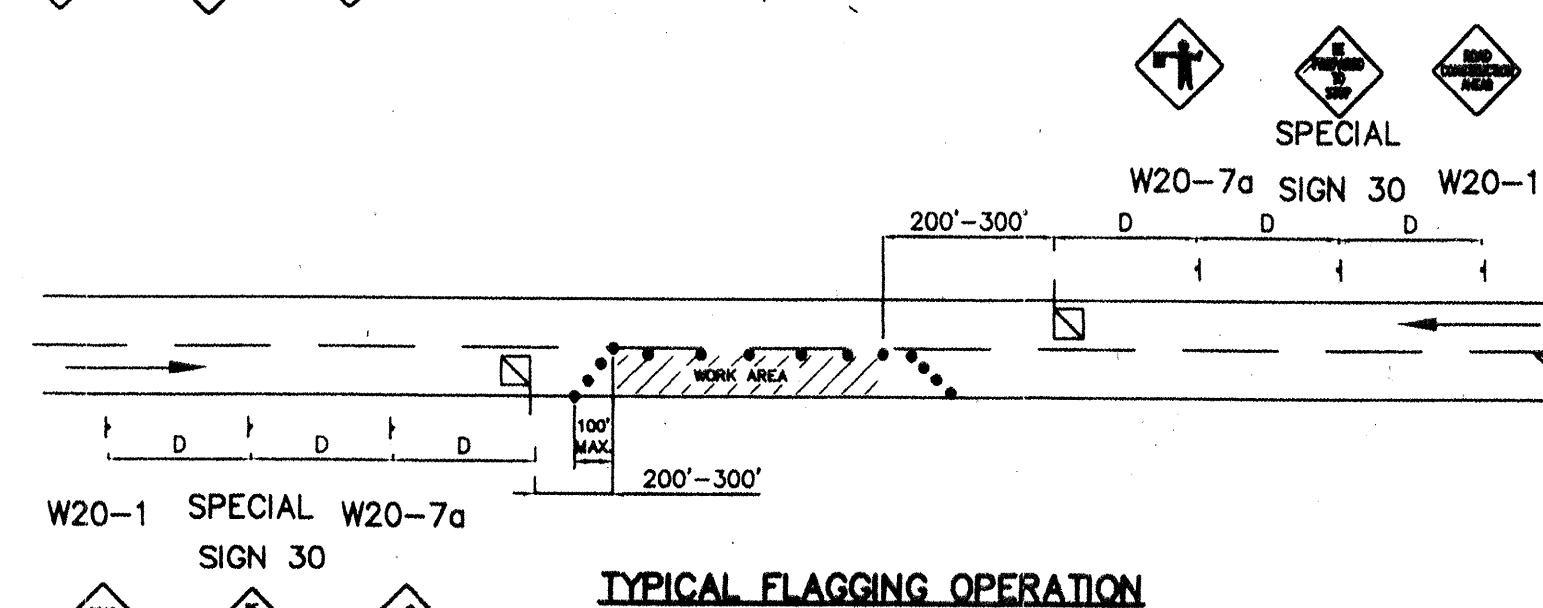
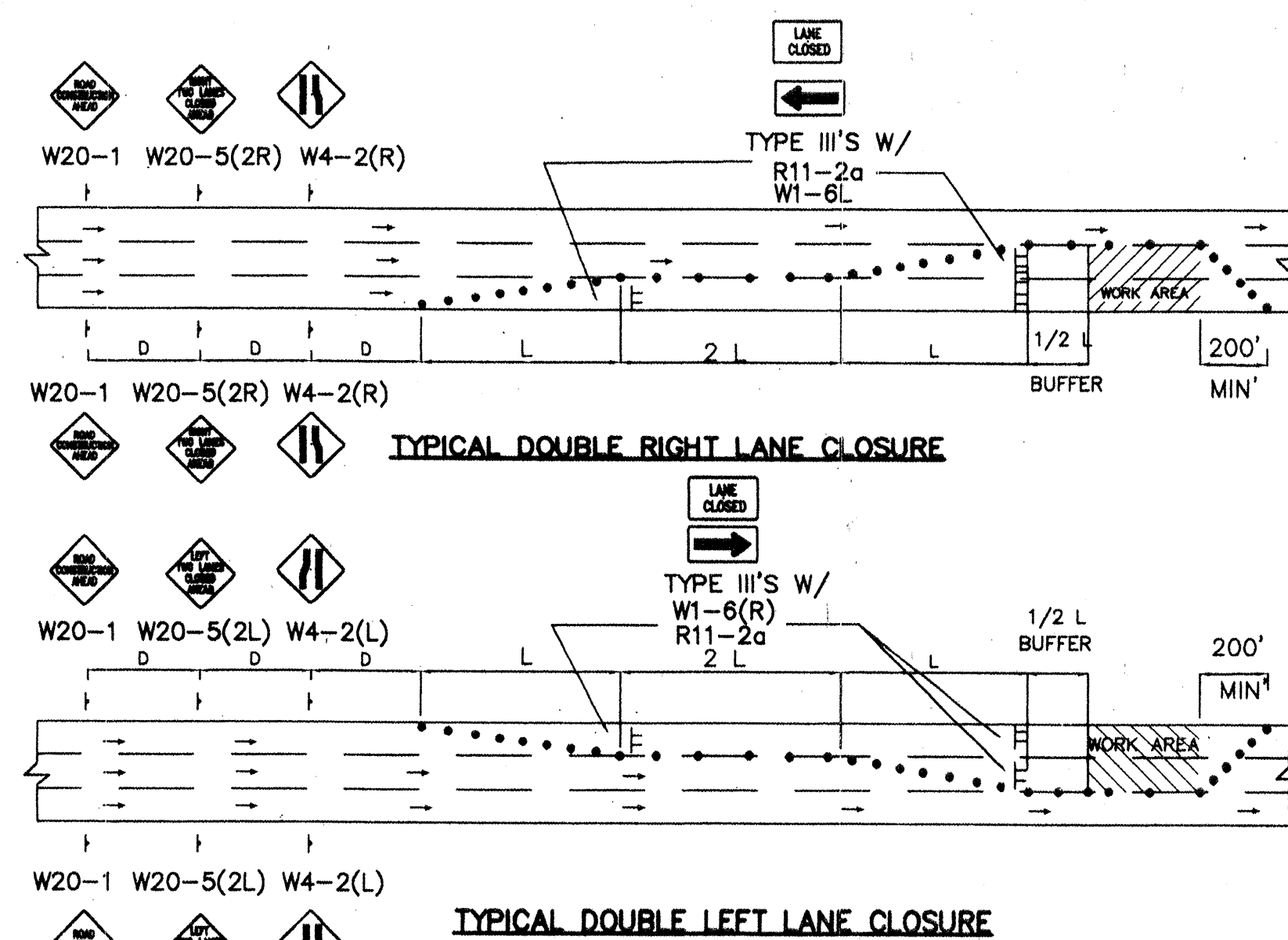
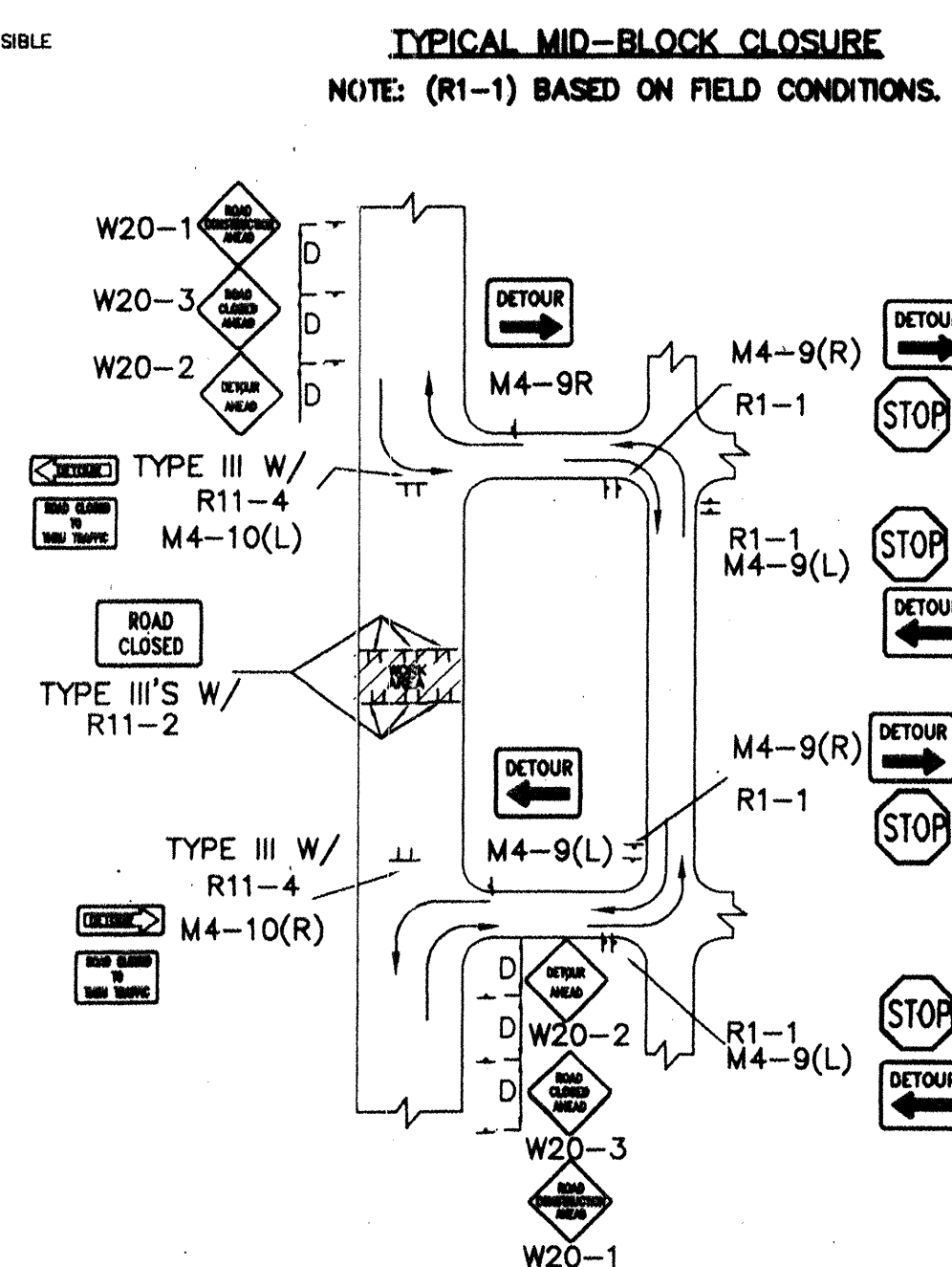
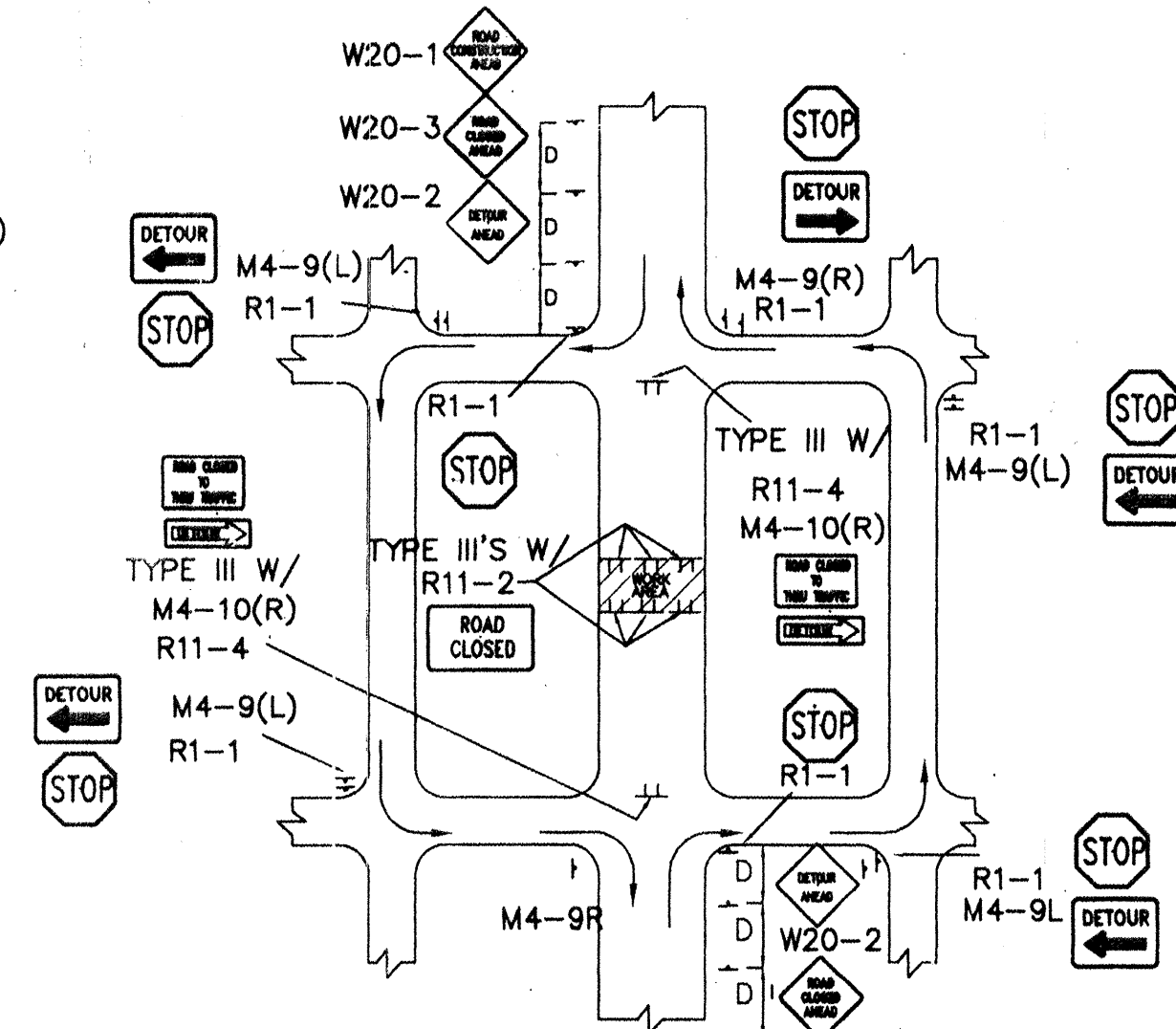
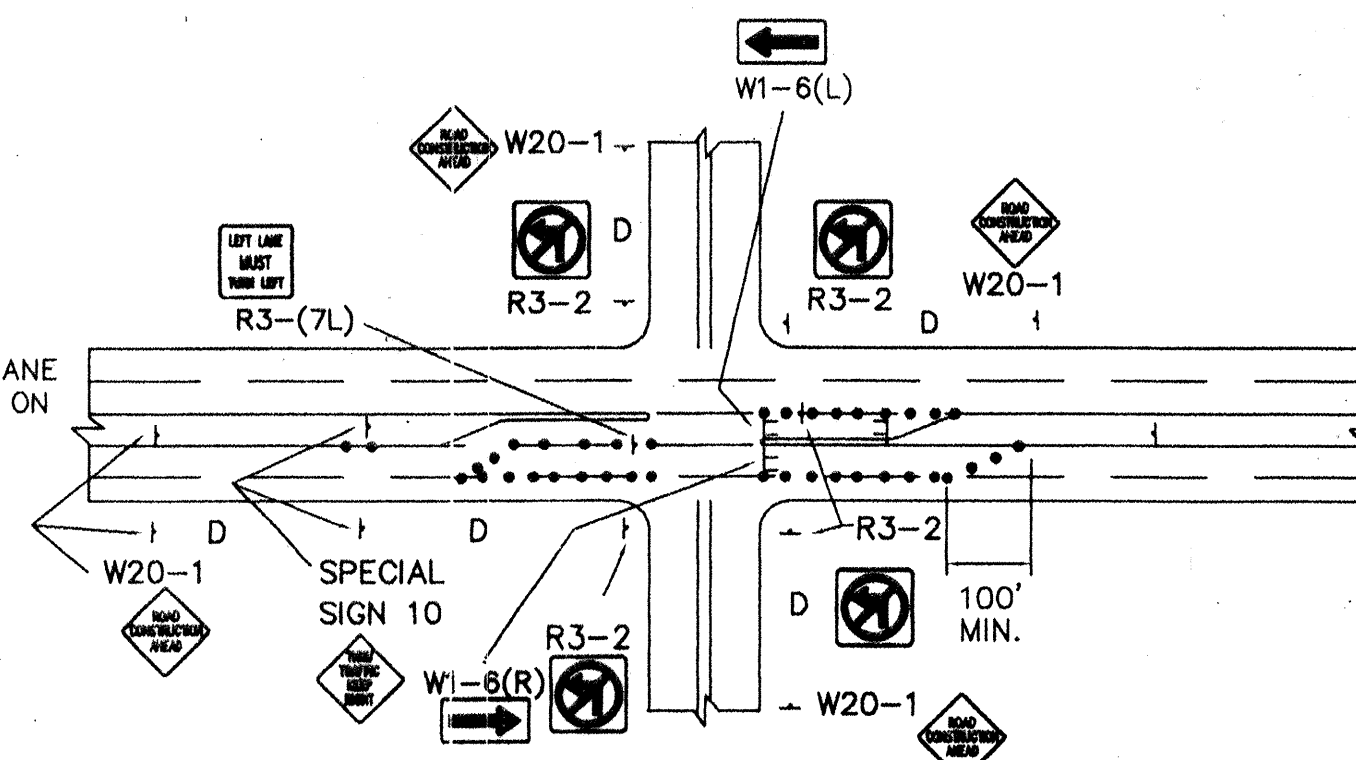


GENERAL NOTE:

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

ALL ADVANCE WARNING SIGNS SHALL BE A MINIMUM OF FORTY EIGHT (48) INCHES BY FORTY EIGHT (48) INCHES IN SIZE AND SHALL HAVE ONE WARNING LIGHT.

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



CITY OF ALBUQUERQUE PUBLIC WORKS DEPARTMENT ENGINEERING DEVELOPMENT GROUP			
TITLE: TYPICAL TRAFFIC CONTROL & SIGNING EXAMPLES (REF. M.U.T.C.D.)			
DESIGN REVIEW COMMITTEE	CITY ENGINEER APPROVAL	LAST UPDATE	
PROJECT NO. 639681		MAP NO. G-20-Z	SHEET 13 OF 14

AS-BUILT

CONSTRUCTION TRAFFIC CONTROL GENERAL NOTES

1. CONTRACTOR MUST OBTAIN FROM CONSTRUCTION COORDINATION AN EXCAVATION/BARRICADING PERMIT BEFORE ENGAGING IN ANY CONSTRUCTION, MAINTENANCE OR REPAIR WORK IN ANY OF THE CITY OF ALBUQUERQUE'S RIGHTS-OF-WAY. EMERGENCY WORK THAT WOULD PRESERVE LIFE OR PROPERTY IS EXCLUDED WITH THE UNDERSTANDING, THAT A PERMIT SHALL BE OBTAINED WITHIN 24 TO 48 HOURS.

2. CONTRACTOR SHALL AT THE TIME OF PERMIT REQUEST, SUBMIT FOR APPROVAL BY CONSTRUCTION COORDINATION, A TRAFFIC CONTROL PLAN DETAILING ALL EXISTING TOPOGRAPHY SUCH AS LANE WIDTHS, DRIVEWAYS, AND BUSINESS/RESIDENTIAL ACCESSES. THE TRAFFIC CONTROL PLAN SHALL INCLUDE ALL PHASES OF WORK AND SCHEDULES INVOLVED IN THE CONSTRUCTION PROJECT. ANY SEPARATE PHASES OF A CONSTRUCTION PROJECT SHALL BE GIVEN AN INDIVIDUAL PERMIT EACH. BLANKET PERMITS WILL NOT BE ISSUED.

3. THESE TYPICAL TRAFFIC CONTROL PLANS DO NOT REFLECT THE EXISTING TOPOGRAPHY SUCH AS DRIVEWAYS, LANE WIDTHS, AND BUSINESS/RESIDENTIAL ACCESSES. EVERY LOCATION THAT REQUIRES CONSTRUCTION TRAFFIC CONTROL SHALL HAVE A DETAILED TRAFFIC CONTROL PLAN SHOWING ALL EXISTING TOPOGRAPHY.

4. CONSTRUCTION SHALL NOT BEGIN UNLESS A TRAFFIC CONTROL PLAN HAS BEEN APPROVED AND VERIFIED BY CONSTRUCTION COORDINATION.

5. CONSTRUCTION COORDINATION SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY TRAFFIC CONTROL CHANGES NEEDED BY CONTRACTOR, THAT WERE NOT PREVIOUSLY APPROVED. THESE TRAFFIC CONTROL CHANGES SHALL BE REQUESTED IN WRITING ACCOMPANIED WITH A TRAFFIC CONTROL PLAN REFLECTING SUCH CHANGES.

6. ALL CONSTRUCTION TRAFFIC CONTROL DEVICES SHALL COMPLY TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL, SERVICE AND MAINTAIN ALL TRAFFIC CONTROL DEVICES. TRAFFIC CONTROL DEVICES SHALL NOT BE REMOVED OR ALTERED IN ANY WAY WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION, PER SECTION 6A-4 OF THE MUTCD, LATEST EDITION.

7. THE CONSTRUCTION TRAFFIC CONTROL INITIAL SET-UP SHALL BE BY AN AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED WORKSITE TRAFFIC SUPERVISOR. THE MAINTENANCE AND SERVICING SHALL ALSO BE DONE BY AN ATSSA CERTIFIED WORKSITE TRAFFIC SUPERVISOR OR EQUIVALENT.

8. CONTRACTOR IS RESPONSIBLE TO MAINTAIN AND SERVICE ALL TRAFFIC CONTROL DEVICES 24 HOURS A DAY, 7 DAYS A WEEK THROUGHOUT LENGTH OF PROJECT. CONTRACTOR IS RESPONSIBLE THAT ALL TRAFFIC CONTROL DEVICES COMPLY WITH THE MUTCD, LATEST EDITION.

9. ALL ADVANCE WARNING SIGNS SHALL BE DOUBLE INDICATED WHENEVER THERE ARE MULTI-LANE TRAFFIC IN ANY ONE GIVEN DIRECTION AND THERE IS SUFFICIENT MEDIAN SPACE.

10. ALL BARRICADES IN ALL TAPERS AND TANGENTS SHALL BE PLACED APART, A DISTANCE MEASURED IN FEET, EQUAL TO THAT OF THE POSTED SPEED LIMIT. NO EXCEPTIONS UNLESS APPROVED BY CONSTRUCTION COORDINATION PER MUTCD SECTION 6A-4.

11. CONTRACTOR SHALL NOT BEGIN WORK BEFORE 7:00 A.M. OR END WORK AFTER 7:00 P.M. WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION.

12. CONTRACTOR IS RESPONSIBLE TO PROVIDE CONSTRUCTION COORDINATION, A WEEKLY LOG OF DAILY INSPECTIONS OF BARRICADE AND MAINTENANCE SCHEDULES ON PROJECTS THAT ARE OVER ONE WEEK DURATION.

13. EQUIPMENT OR MATERIALS SHALL NOT BE STORED WITHIN 15 FEET OF A TRAVELLED TRAFFIC LANE DURING NON-WORKING HOURS WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION.

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

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

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

17. CONTRACTOR SHALL PROVIDE ACCESS SIGNS FOR BUSINESSES LOCATED WITHIN THE CONSTRUCTION AREA UNDER THE SUPERVISION OF CONSTRUCTION COORDINATION. EACH ACCESS SIGN SHALL HAVE 5 INCH, WHITE OPAQUE LETTERING ON BLUE REFLECTORIZED BACKGROUND. ACCESS SIGNS SHALL BE CONSIDERED INCIDENTAL TO THE BID AND NOT PART OF THE CONTRACT UNLESS OTHERWISE STATED. NO MORE THAN 3 BUSINESSES SHALL BE LISTED ON A ACCESS SIGN. SHOPPING CENTERS AND MALLS SHALL BE LISTED AS SUCH.

18. ALL ADVANCE WARNING SIGNS SHALL MEET THE MINIMUM REFLECTIVE INTENSITY REQUIREMENTS SET FORTH BY THE CITY OF ALBUQUERQUE. CONSTRUCTION COORDINATION SHALL DETERMINE ALL REQUIREMENTS AND APPROVE OR DISAPPROVE ANY ADVANCE WARNING SIGN PER SECTION 6A-4 OF THE MUTCD, LATEST EDITION.

19. 24 HOURS PRIOR TO OCCUPANCY OR CLOSING OF A RIGHT-OF-WAY, CONTRACTOR SHALL NOTIFY: POLICE, FIRE DEPARTMENT, SCHOOLS, HOSPITALS, TRANSIT AUTHORITY, BUSINESSES AND/OR RESIDENTS THAT WILL BE AFFECTED BY THE CONSTRUCTION.

20. ANY FIELD ADJUSTMENTS SHALL BE APPROVED BY CONSTRUCTION COORDINATION.

21. EXCAVATIONS SHALL BE PLATED, TEMPORARILY PATCHED OR RESURFACED PRIOR TO OPENING OF TRAFFIC. A MINIMUM OF 11 FEET SHALL BE PROVIDED FOR TRAFFIC IN ANY GIVEN DIRECTION. CONTRACTOR IS RESPONSIBLE FOR ANY WORK INVOLVED IN SATISFYING THESE REQUIREMENTS.

22. CONTRACTOR SHALL AT ALL TIMES COMPLY WITH THE FOLLOWING:
1. STANDARDS AND REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
2. THE CITY OF ALBUQUERQUE TRAFFIC CODE, LATEST EDITION.
3. SECTION 19 OF THE CITY OF ALBUQUERQUE'S STANDARD SPECIFICATIONS FOR PUBLIC WORK CONSTRUCTION, AS WELL AS OTHER SECTIONS.

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

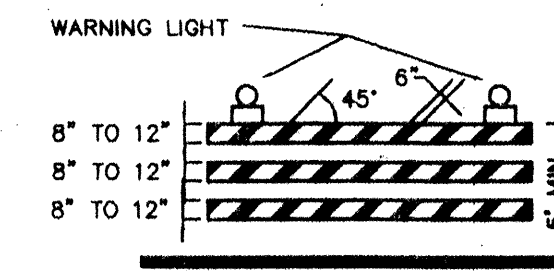
24. ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN NEW-CLEAN CONDITION. WASHING OF EQUIPMENT IS INCIDENTAL TO IT'S PLACEMENT AND MAINTENANCE.

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

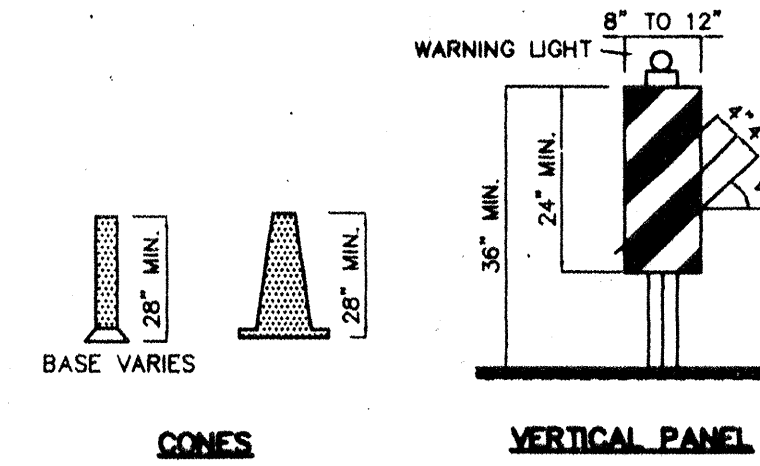
26. ADVANCE WARNING SIGNS SHALL BE 36"x36" WITH SUPER ENGINEERING GRADE SHEETING OR BETTER.

27. Lane closure on Montgomery Blvd. will not be allowed from 6:00 a.m. to 9:00 a.m., and from 3:00 p.m. to 7:00 p.m., Monday through Fridays.

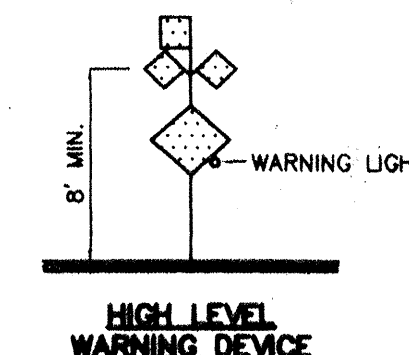
28. Any lane closures on Montgomery Blvd. will be subject to arterial / collector road usage fees of \$0.01 per square foot of barricaded area per day.



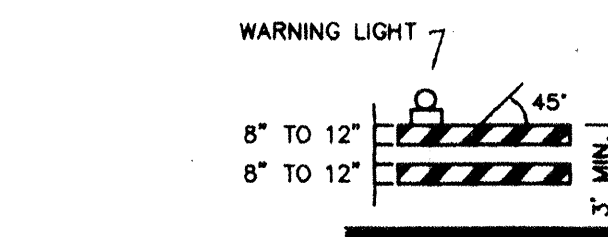
TYPE II BARRICADE



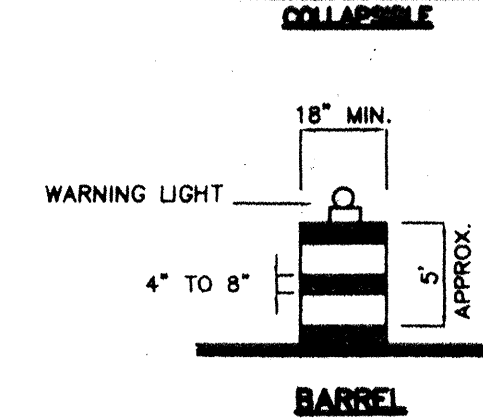
VERTICAL PANEL



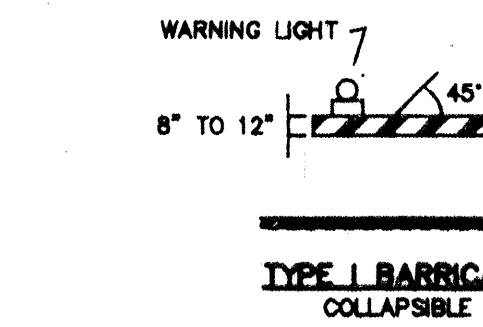
HIGH LEVEL WARNING DEVICE



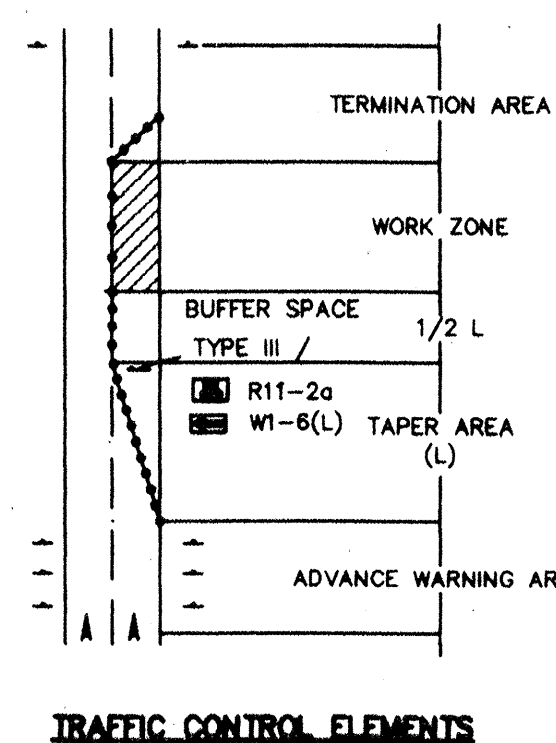
TYPE II BARRICADE



BARREL



TYPE I BARRICADE



TRAFFIC CONTROL ELEMENTS

LEGEND

- WORK AREA
BARRICADE - TYPE I, TYPE II, OR BARREL
BARRICADE - TYPE III
VERTICAL PANEL
WARNING SIGN
DISTANCE BETWEEN SIGNS - A DISTANCE MEASURED IN FEET EQUAL TO A VALUE OF TEN TIMES THE SPEED LIMIT OF THE STREET
FLAGMAN POSITION
SPACING BETWEEN BARRICADES - A DISTANCE MEASURED IN FEET EQUAL TO THE SPEED LIMIT OF THE STREET
TAPER LENGTH - SEE CHART BELOW
THE TANGENT LENGTH IS EQUAL TO THE TAPER LENGTH FOR A GIVEN STREET.

TAPER REQUIREMENTS

SPEED LIMIT (MPH)	TAPER LENGTH (L) (FEET)			MINIMUM NUMBER OF DEVICES FOR TAPER	MAXIMUM DEVICE SPACING IN FEET	
	10' LANE	11' LANE	12' LANE		ALONG TAPER	AFTER TAPER
20	70	75	80	5	20	20
25	105	115	125	6	25	25
30	150	165	180	7	30	30
35	205	225	245	8	35	35
40	270	295	320	9	40	40
45	450	495	540	13	45	45
50	500	550	600	13	50	50
55	550	605	660	13	55	55

RECOMMENDED SIGN SPACING(D) FOR ADVANCE WARNING SIGN SERIES

SPEED LIMIT (MPH)	MINIMUM DISTANCE IN FEET BETWEEN SIGNS	FROM LAST SIGN TO TAPER
0-20	10 X SPEED LIMIT	10 X SPEED LIMIT
25-30	10 X SPEED LIMIT	10 X SPEED LIMIT
30-35	10 X SPEED LIMIT	10 X SPEED LIMIT
40-45	10 X SPEED LIMIT	10 X SPEED LIMIT
50-60	10 X SPEED LIMIT	10 X SPEED LIMIT

TAPER CRITERIA

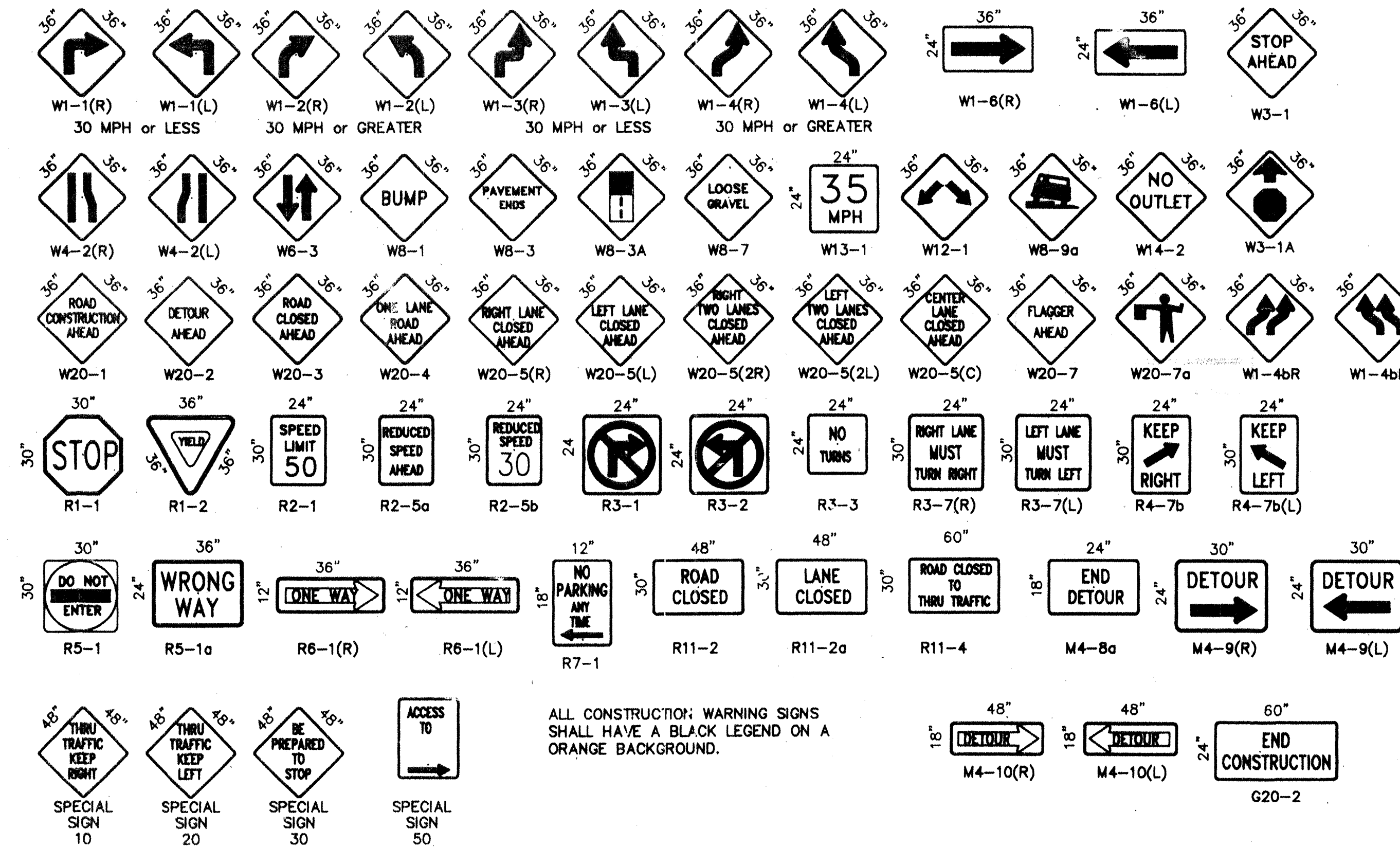
TYPE OF TAPER	TAPER LENGTH
UPSTREAM TAPER:	
MERGING TAPER	L MINIMUM
SHIFTING TAPER	1/2 L MINIMUM
SHOULDER TAPER	1/2 L MINIMUM
TWO-WAY TRAFFIC TAPER	100 FEET MAXIMUM
DOWNSTREAM TAPERS	100 FEET PER LANE

TAPER LENGTH COMPUTATION

SPEED LIMIT	L = W x S
40 MPH OR LESS	L = $\frac{W^2}{60}$
45 MPH OR GREATER	L = W x S

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

SIGN FACE DETAILS



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