

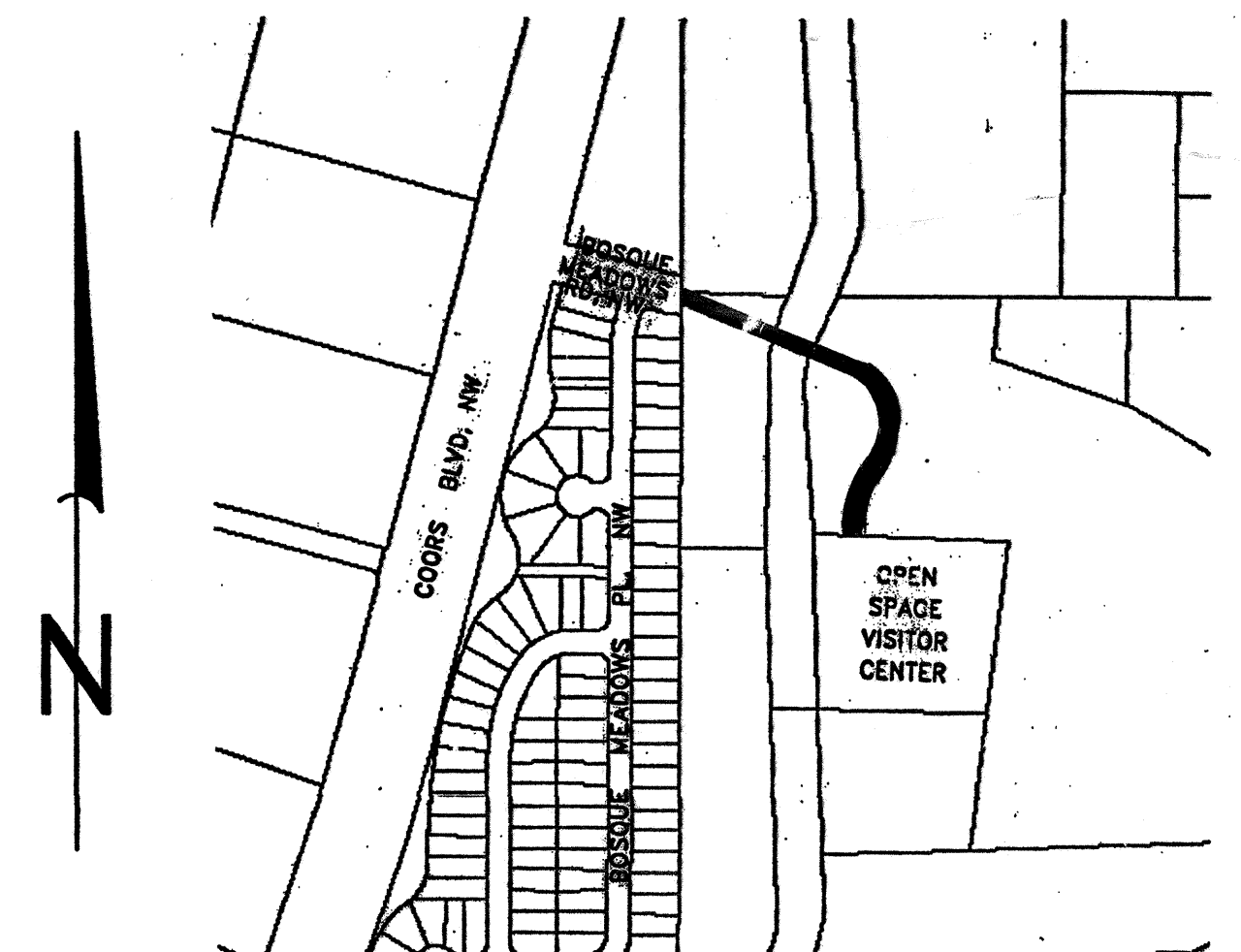


CITY OF ALBUQUERQUE
PARKS AND RECREATION DEPARTMENT
OPEN SPACE DIVISION

OPEN SPACE VISITOR CENTER ACCESS ROAD BRIDGE, PHASE II

DRAWING LIST

- 1 TITLE SHEET
- 2 SURVEY
- 3 GENERAL NOTES, LEGEND
- 4 PLAN AND PROFILE SHEET
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- 6 SECTIONS AND DETAILS
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- 8 CONCRETE BOX CULVERT BARRELS SINGLE OPENING - NORMAL 1 OF 4
- 9 WINGWALLS FOR NORMAL CONCRETE BOX CULVERTS 1 OF 2
- 10 WINGWALLS FOR NORMAL CONCRETE BOX CULVERTS 2 OF 2
- 11 SIGNING AND CONSTRUCTION TRAFFIC CONTROL STANDARDS
- 12 TYPICAL TRAFFIC CONTROL & SIGNING EXAMPLES (REF. M.U.T.C.D.)



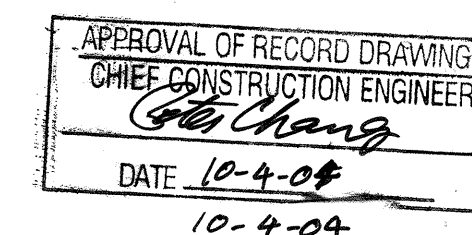
VICINITY MAP
MAP NO. D13

APPROVED FOR CONSTRUCTION:

John P. Kelly 2-7-01
EXECUTIVE ENGINEER, AMAFCA DATE

APPROVED FOR CONSTRUCTION:

SKS 2-9-01
MIDDLE RIO GRANDE CONSERVANCY DISTRICT DATE



H&N
Holmes & Narver, Inc.
6501 AMERICAS PARKWAY, NE
SUITE 700 (505)889-4100
ALBUQUERQUE, NM 87110

REV.	SHEETS	CITY ENGINEER	DATE	USER DEPARTMENT	DATE	USER DEPARTMENT	DATE
ENGINEERS STAMP & SIGNATURE		APPROVALS	ENGINEER	DATE	*****		
		DRC Chairman	<u>[Signature]</u>	12-10-01	APPROVED FOR CONSTRUCTION		
		Transportation	<u>[Signature]</u>	12/3/01			
		Water/Wastewater	<u>N/A</u>	12/10/2001			
		Hydrology	<u>[Signature]</u>	1/13/01			
		Parks	<u>[Signature]</u>	12-10-01			
		Constr. Mngmt.	<u>[Signature]</u>	12-10-01			
		Constr. Coord.	<u>[Signature]</u>	12-10-01			
		City Project No.	612002		Sheet	1	Of 12

NOTES:

1. BEARINGS SHOWN ARE NEW MEXICO STATE PLANE GRID BEARINGS (CENTRAL ZONE).
2. DISTANCES ARE GROUND DISTANCES.
3. ELEVATIONS ARE SLD 29 DATUM VALUES BASED ON C.O.A. BENCH MARK "8-012", ELEV. = 4,987.44.
4. COORDINATES ARE PROJECT (GROUND) VALUES BASED ON NM STATE PLANE COORDINATE SYSTEM, CENTRAL ZONE (NAD 27). USE GROUND-TO-GRID FACTOR = 0.9998778 TO OBTAIN GRID COORDINATES.
5. LOCATION OF UNDERGROUND UTILITY LINES IS BASED ON LOCATION OF SURFACE ACCESSIBLE APPURTENANCES (RISERS, MANHOLES, POLES ETC.) AND UNDERGROUND UTILITY SPOTS. OTHER LINES MAY EXIST THAT ARE NOT SHOWN ON THIS SURVEY.
6. THIS IS A SURVEY OF EXISTING PROPERTY LINES AND RIGHT-OF-WAY LINES IN THE VICINITY OF THE PROJECT, AS SHOWN ON RECORD PLATS AND MAPS.
7. ORIGINAL SURVEY DATED 10/13/2000 WAS REVISED TO SHOW FIELD SURVEYED ELEVATIONS AT THE BOTTOM OF CORRALES MAIN CANAL CONCRETE CHANNEL.

CONTROL POINT TABLE

CONTROL POINT	NORTHING	EASTING	ELEVATION	DESCRIPTION
CP-1	1514.204.24	371.898.35	5,040.83	NMS "HUBBARD"
CP-2	1515.328.20	372.844.29	5,018.92	NMS "HUBBARD"
CP-13	1516.548.19	373.754.97	4,984.97	
CP-14	1516.602.14	373.833.23	4,987.14	
CP-15	1516.885.23	373.933.92	5,004.28	
CP-16	1515.953.73	373.882.88	4,987.39	
CP-58	1,520,632.81	373,633.55		ACS "RAJAMENDI BLVD"

LEGEND

- FOUND CORNER
- ◻ WATER VALVE
- EM □ ELECTRICAL METER
- EB □ ELECTRICAL BOX
- CONTOUR MAJOR
- CONTOUR MINOR
- CP-16 ▲ CONTROL POINT (ASC)
- FIRE HYDRANT
- WM WATER METER
- ✕ LT LIGHT POLE
- POWER LINE
- △ GM GAS METER
- TR TELEPHONE RISER
- 4999.50x SPOT ELEVATION
- BUILDING
- TOE OF CANAL (APPROXIMATE LOCATION)
- DECIDUOUS TREE
- EVERGREEN TREE
- * Y YUCCA TREE

SCALE: 1" = 40'

TOPOGRAPHIC AND BOUNDARY SURVEY
ACCESS ROAD TO TRACT R1-A
ROBERSON RANCH SUBDIVISION
ALBUQUERQUE, BERNALILLO COUNTY, NEW MEXICO
AUGUST 2000

LINE TABLE:

LINE	BEARING	DISTANCE
L1	S 14°38'40" W	30.02
L2	N 14°38'40" E	30.02
L3	S 79°21'20" E	31.01
L4	N 00°08'20" E	43.00
L5	N 00°18'16" E	43.00

CURVE TABLE:

CURVE	LENGTH	DELTA	RADIUS	CHORD BEG	CHORD END
C1	39.27	90°00'00"	25.00	S 30°21'20" E	35.36
C4	39.27	90°00'00"	25.00	S 58°38'40" W	35.36
C5	31.25	142°25'00"	124.20	S 82°33'52" E	31.17
C6	9.81	142°25'00"	38.20	N 82°33'41" W	9.58
C7	91.84	21°49'33"	241.09	N 02°23'28" E	91.29
C8	58.18	21°49'33"	140.80	N 02°21'58" E	58.75
C9	101.22	21°49'33"	240.80	N 02°21'58" E	100.47
C10	53.75	21°49'33"	141.09	N 02°23'28" E	53.42

Plat & Survey By:
ALBUQUERQUE SURVEYING CO., INC., 2119 Menaul Blvd. N.E., Albuquerque, New Mexico 87107 Ph. (505) 884-2036

SURVEYOR'S CERTIFICATION

I, VLADIMIR JIRIC, A DULY QUALIFIED PROFESSIONAL SURVEYOR REGISTERED UNDER THE LAWS OF THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT THIS PLAT WAS PREPARED BY ME OR UNDER MY DIRECT SUPERVISION, THAT THE SURVEY MEETS THE MINIMUM STANDARDS FOR LAND SURVEYING IN THE STATE OF NEW MEXICO, AND THAT THE SAME ARE TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF.

VLADIMIR JIRIC, R.M.P. NO. 10464

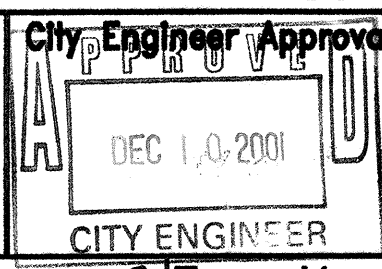
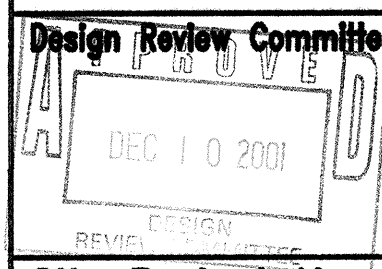
DATE

SHEET 1 OF 1

CITY OF ALBUQUERQUE
PARKS AND RECREATION DEPARTMENT
OPEN SPACE DIVISION

TITLE: OPEN SPACE VISITOR CENTER ACCESS BRIDGE, PHASE II

SURVEY



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

City Project No. 612004

Zone Map No. D-13

Sheet 2 of 12

AS BUILT INFORMATION	
CONTRACTOR	Condor Cast.
WORK	By G. Walker
DATE	DATE
ACCEPTANCE BY	DATE
REVISIONS	DATE
DATE	DATE
MICRO-FILM INFORMATION	
REPRODUCED BY	DATE
DATE	DATE

BENCH MARKS	
NO.	DATE
BY	DATE
NO.	DATE
BY	DATE

SURVEY INFORMATION	
NO.	DATE
BY	DATE
NO.	DATE
BY	DATE

ENGINEER'S SEAL	
NO.	DATE
BY	DATE
NO.	DATE
BY	DATE

REVISIONS

NO.	DATE	REVISIONS
DESIGNED BY:	NOV 2001	
DRAWN BY:	NOV 2001	
CHECKED BY:	NOV 2001	

GENERAL NOTES

- ALL WORK DETAILED ON THESE DRAWINGS TO BE PERFORMED UNDER THIS CONTRACT SHALL, EXCEPT AS OTHERWISE STATED, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986, AS AMENDED THROUGH UPDATES NO. 6, HEREBY REFERRED TO AS THE SPECIFICATIONS. REFERENCES MADE TO STANDARD DRAWINGS IMPLY THAT SECTION OF THE SPECIFICATIONS, WHICH INCLUDES MISCELLANEOUS STANDARD DETAILS.
- LOCATION OF UTILITIES ARE APPROXIMATE. IT IS THE CONTRACTOR'S RESPONSIBILITY TO LOCATE ALL PERTINENT UTILITIES IN THE FIELD. CALL ONE CALL SYSTEM, INC. AT 260-1990 TWO WORKING DAYS BEFORE ANY EXCAVATION.
- IT IS THE CONTRACTOR'S RESPONSIBILITY TO SUPPORT ALL UTILITIES EXPOSED DURING CONSTRUCTION. CONTRACTOR WILL BE RESPONSIBLE FOR DAMAGE TO ALL UTILITIES, INCLUDING SERVICE LINES.
- 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 PUBLIC WORKS DEPARTMENT SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMUM AMOUNT OF DELAY.
- ALL STREET STRIPING ALTERED OR DESTROYED SHALL BE REPLACED WITH PLASTIC REFLECTORIZED PAVEMENT MARKING BY CONTRACTOR TO LOCATION AS EXISTING OR AS INDICATED BY THIS PLAN SET, AS PER COA STANDARDS.
- ALL PAVEMENT MARKINGS OR OTHER TRAFFIC CONTROL DEVICES INCLUDING TRAFFIC SIGNAL CONDUIT, ADVERSELY AFFECTED BY CONSTRUCTION SHALL BE REPLACED IN PRE-CONSTRUCTION CONDITION. THESE COSTS SHALL BE INCIDENTAL TO THE PROJECT UNLESS OTHERWISE INCLUDED IN BID ITEMS.
- CONTRACTOR SHALL COORDINATE WITH PNM (JIM VANN - 848-3426) WHERE LIP OF TRENCH IS LESS THAN 5' TO POWER POLE. COSTS ASSOCIATED WITH SUPPORT OF EXISTING POLES SHALL BE INCIDENTAL TO THE PROJECT.
- CONTRACTOR SHALL BE CHARGED BY PNM FOR ANY DAMAGE TO PNM CABLES AND FOR SUPPORTING OR MINOR RELOCATIONS OF CABLES DURING CONSTRUCTION. THESE COSTS SHALL BE INCIDENTAL TO THE PROJECT.
- THE CONTRACTOR SHALL PROVIDE TWO PROJECT CONSTRUCTION SIGNS PER THE REQUIREMENTS OF SPECIAL PROVISIONS.
- CONTRACTOR SHALL COORDINATE WITH THE GAS COMPANY OF NEW MEXICO (241-7752) TWO WEEKS PRIOR TO NEEDING A GAS LINE SEGMENT RELOCATED.
- CONTRACTOR SHALL NOTIFY THE CITY SURVEYOR NOT LESS THAN SEVEN (7) DAYS PRIOR TO STARTING WORK IN ORDER THAT THE CITY SURVEYOR MAY TAKE NECESSARY MEASURES TO INSURE THE PRESERVATION OF SURVEY MONUMENTS. CONTRACTOR SHALL NOT DISTURB PERMANENT SURVEY MONUMENTS WITHOUT THE CONSENT OF THE CITY SURVEYOR AND SHALL NOTIFY THE CITY SURVEYOR AND BEAR THE EXPENSE OF REPLACING ANY THAT MAY BE DISTURBED WITHOUT PERMISSION. REPLACEMENT SHALL BE DONE ONLY BY THE CITY SURVEYOR SECTION. WHEN A CHANGE IS MADE IN THE FINISHED ELEVATION OF THE PAVEMENT OF ANY ROADWAY IN WHICH A PERMANENT SURVEY MONUMENT IS LOCATED, THE 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.
- FIVE (5) WORKING DAYS PRIOR TO BEGINNING CONSTRUCTION, THE CONTRACTOR SHALL SUBMIT TO THE CONSTRUCTION COORDINATION DIVISION A DETAILED CONSTRUCTION SCHEDULE. TWO (2) WORKING DAYS PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL OBTAIN A BARRICADE PERMIT FROM THE CONSTRUCTION COORDINATION DIVISION. CONTRACTOR SHALL NOTIFY BARRICADE ENGINEER (768-2551) PRIOR TO OCCUPYING AN INTERSECTION. SEE SECTION 19 OF THE SPECIFICATIONS.
- THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ACCESS TO ALL ADJACENT PROPERTIES.
- ALL EXCAVATION, TRENCHING, AND SHORING ACTIVITIES MUST BE CARRIED OUT IN ACCORDANCE WITH OSHA 29CFR 1926.650 SUBPART P.

- CONTRACTOR IS ADVISED TO VISIT THE PROJECT SITE PRIOR TO BIDDING AND FAMILIARIZE THEMSELVES WITH FIELD CONDITIONS INCLUDING THE LOCATION OF UTILITIES SHOWN ON THE PLANS AND OTHER UTILITIES/OBSTACLES CLEARLY VISIBLE IN THE FIELD. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PLAN THEIR CONSTRUCTION METHODS TO ADEQUATELY SUPPORT AND/OR AVOID ALL UTILITIES SHOWN ON THE PLANS AND ALL UTILITIES/OBSTACLES CLEARLY VISIBLE IN THE FIELD. ANY RELOCATION OF UTILITIES/OBSTACLES SHOWN ON THE PLANS OR VISIBLE IN THE FIELD IN ORDER TO COMPLETE THE REQUIRED WORK WILL BE CONSIDERED TO BE CONTRACTOR CONVENIENCE AND BE THE RESPONSIBILITY OF THE CONTRACTOR, UNLESS THE UTILITY/OBSTRUCTION IS IDENTIFIED ON THE PLANS AS BEING RELOCATABLE AS PART OF THE PROJECT. IT WILL BE THE RESPONSIBILITY OF THE CONTRACTOR TO COORDINATE ALL REQUIRED RELOCATIONS WITH APPROPRIATE UTILITIES/ INDIVIDUALS.

MRGCD
GENERAL CONSTRUCTION NOTES

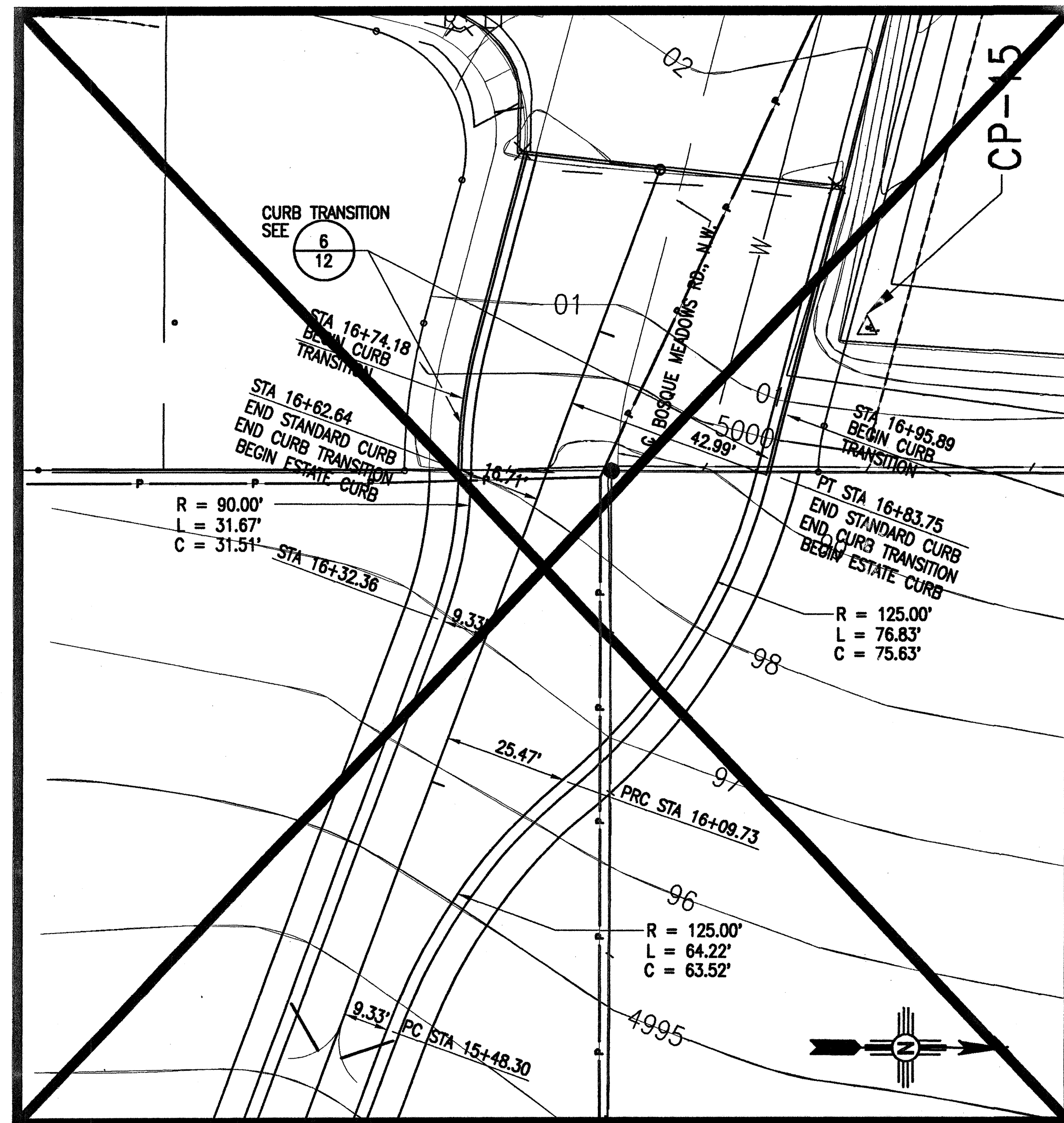
- ANY WORK TO BE PERFORMED WITHIN THE MIDDLE RIO GRANDE CONSERVANCY DISTRICT (M.R.G.C.D.) RIGHT-OF-WAY SHALL BE CLOSELY COORDINATED WITH THE M.R.G.C.D. ENGINEERING DEPARTMENT AND APPROPRIATE FIELD OFFICE. PHONE: (505)247-0234.
- NO WORK IS TO BE DONE ON FACILITIES OR STRUCTURES BELONGING TO, OR OPERATED BY, THE M.R.G.C.D. BETWEEN MARCH 1 AND OCTOBER 31 INCLUSIVE. HOWEVER, WORK MAY BE PERMITTED BY THE M.R.G.C.D. IF IT CAN BE SHOWN THAT THE WORK WILL NOT INTERFERE WITH OPERATIONS OF THE M.R.G.C.D. FACILITY. ALL WORK TO BE DONE WITHIN THE M.R.G.C.D. FACILITIES MUST BE APPROVED BY THE M.R.G.C.D. ENGINEER PRIOR TO COMMENCING WORK.
- THE CONTRACTOR SHALL NOT STORE EQUIPMENT, NEW MATERIALS OR DEBRIS WITHIN DISTRICT RIGHT-OF-WAY WHICH MAY INTERFERE WITH OPERATIONS AND MAINTENANCE OF THE M.R.G.C.D. FACILITY.
- THE CONTRACTOR SHALL NOT SERVICE VEHICLES OR EQUIPMENT WITHIN M.R.G.C.D. RIGHT-OF-WAY.
- SEEDING OF DISTURBED AREAS WITHIN M.R.G.C.D. RIGHT-OF-WAY IS REQUIRED PER THE M.R.G.C.D. SEEDING SPECIFICATIONS.
- THE CONTRACTOR MUST MAINTAIN A MINIMUM COVER OF 3' OVER ALL CULVERT CROSSINGS USED FOR ACCESS TO THE PROJECT SITE.
- THE CONTRACTOR IS RESPONSIBLE FOR REPAIRING AND/OR REPLACEMENT OF ANY STRUCTURES REMOVED AND/OR DAMAGED DUE TO THE CONTRACTOR'S ACTIVITIES WITHIN THE DISTRICT'S RIGHT-OF-WAY. SHOULD ANY TURNOUTS, CULVERT PIPES AND/OR STRUCTURES REQUIRE REPLACEMENT DUE TO LEAKAGE AND/OR DAMAGE BY THE CONTRACTOR, NEW TURNOUTS, AND NEW CULVERT PIPES AND/OR NEW STRUCTURES SHALL REPLACE THE DAMAGED ITEM. REPAIRS AND/OR REPLACEMENT WITHIN THE DISTRICT'S RIGHT-OF-WAY MUST COMPLY WITH THE DISTRICT'S SPECIFICATIONS.
- ALL DAMAGED CULVERT CROSSINGS AND CULVERT CROSSINGS REMOVED AND/OR DISTURBED MUST BE RESTORED AND/OR REPLACED TO THE SATISFACTION OF THE M.R.G.C.D., AND COMPLY WITH THE M.R.G.C.D. SPECIFICATIONS.
- ALL SALVAGEABLE CULVERTS, IRRIGATION GATES, ETC. MUST BE RETURNED TO THE M.R.G.C.D.
- THE CONTRACTOR IS RESPONSIBLE FOR EXECUTING A "SPECIAL USE LICENSE AGREEMENT" WITH THE M.R.G.C.D. PRIOR TO CONSTRUCTION.

LEGEND

PROPOSED EXISTING

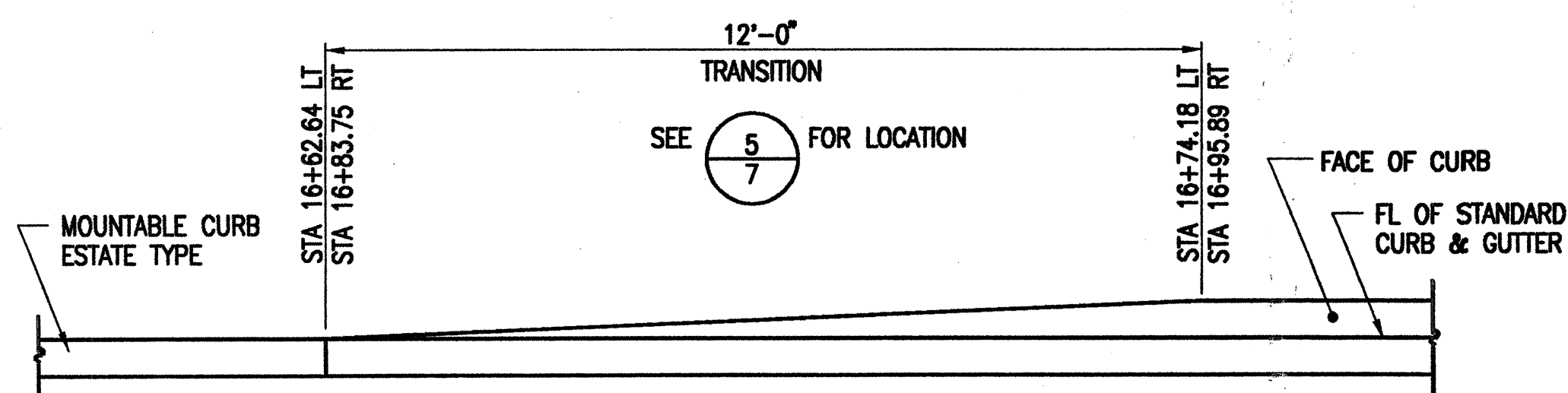
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| ○ | FOUND CORNER |
| ⊗ | WATER VALVE |
| EM □ | ELECTRICAL METER |
| EB □ | ELECTRICAL BOX |
| — | CONTOUR |
| CP-16 Δ | CONTROL POINT (ASCI) |
| ⬆ | FIRE HYDRANT |
| ○ WM | WATER METER |
| ⊗ LT | LIGHT POLE |
| — P — | POWER LINE |
| Δ GM | GAS METER |
| ■ TR | TELEPHONE RISER |
| 4999.50x | SPOT ELEVATION |
| — — — | BUILDING |
| ⊙ | TOE OF CANAL (APPROXIMATE LOCATION) |
| ⊙ | DECIDUOUS TREE |
| ⊙ | EVERGREEN TREE |
| * Y | YUCCA TREE |
| //// | PAVEMENT LIMITS |
| T.C. | TOP OF CURB |
| T.A. | TOP OF ASPHALT |
| T.W. | TOP OF SIDEWALK |

AS BUILT INFORMATION		BENCH MARKS		SURVEY INFORMATION		ENGINEER'S SEAL		REVISIONS		DESIGN		CITY PROJECT NO.		ZONE MAP NO.		SHEET		OF	
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CONTRACTOR	DATE	MARK	DATE	FIELD	DATE	NO.	BY	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE
CONTRACTOR	DATE	MARK	DATE	FIELD	DATE	NO.	BY	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE
CONTRACTOR	DATE	MARK	DATE	FIELD	DATE	NO.	BY	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE
CONTRACTOR	DATE	MARK	DATE	FIELD	DATE	NO.	BY	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE
CONTRACTOR	DATE	MARK	DATE	FIELD	DATE	NO.	BY	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE
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CONTRACTOR	DATE	MARK	DATE	FIELD	DATE	NO.	BY	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE
CONTRACTOR	DATE	MARK	DATE	FIELD	DATE	NO.	BY	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE
CONTRACTOR	DATE	MARK	DATE	FIELD	DATE	NO.	BY	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE
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CONTRACTOR	DATE	MARK	DATE	FIELD	DATE	NO.	BY	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE	NO.	DATE
CONTRACTOR	DATE	MARK	DATE	FIELD	DATE	NO.	BY	NO.	DATE	NO.	DATE	NO.	DATE						



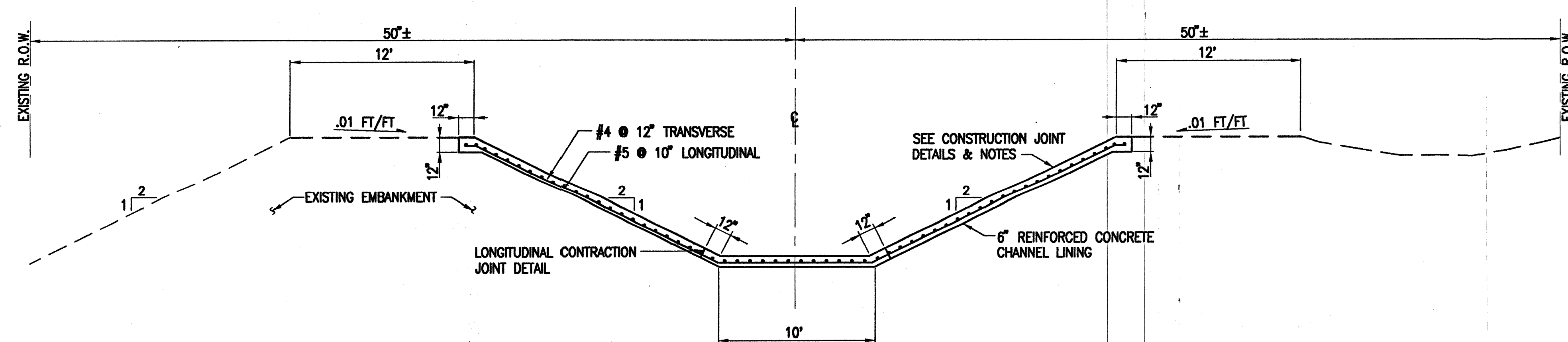
DETAIL PLAN

SCALE: 1" = 20'



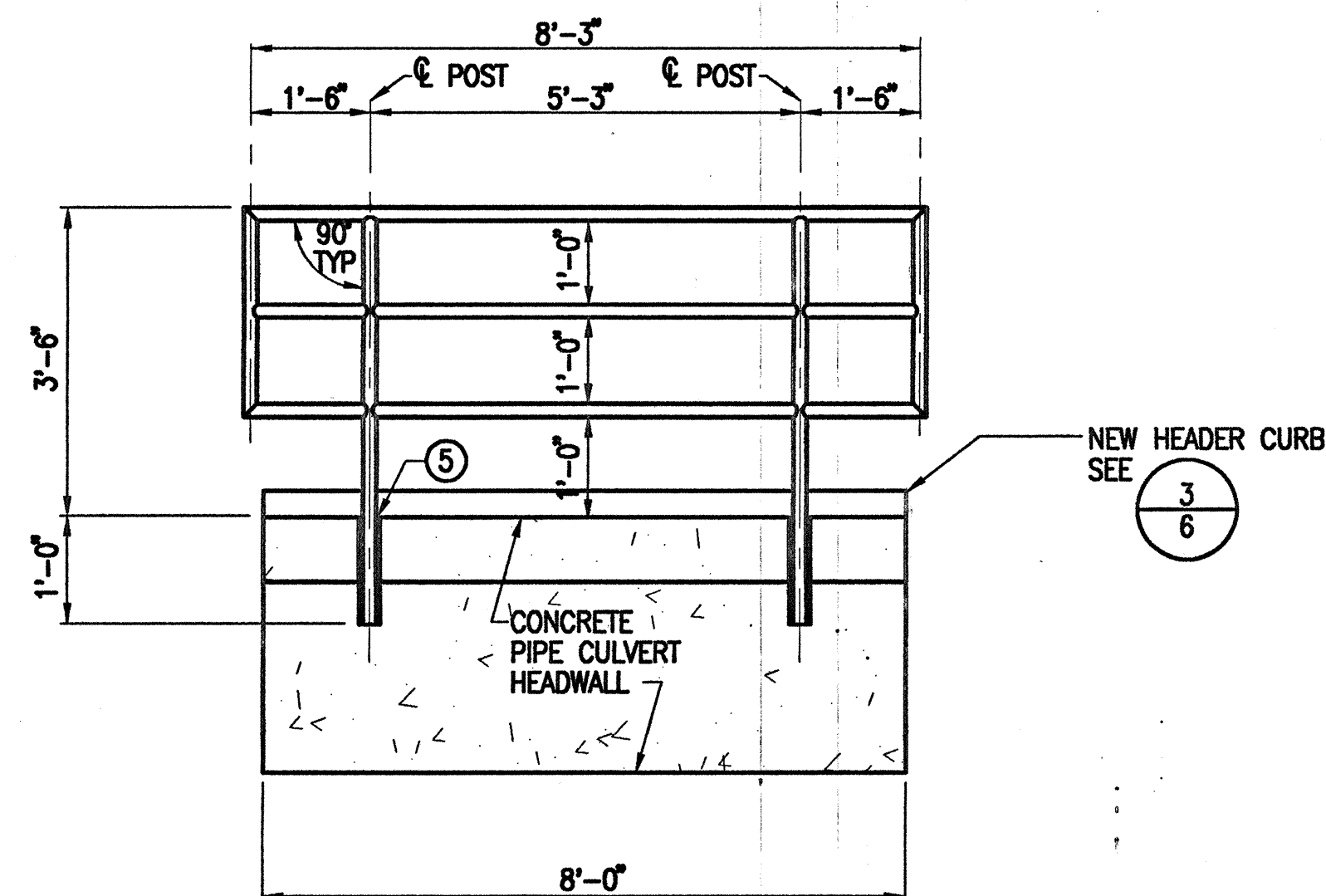
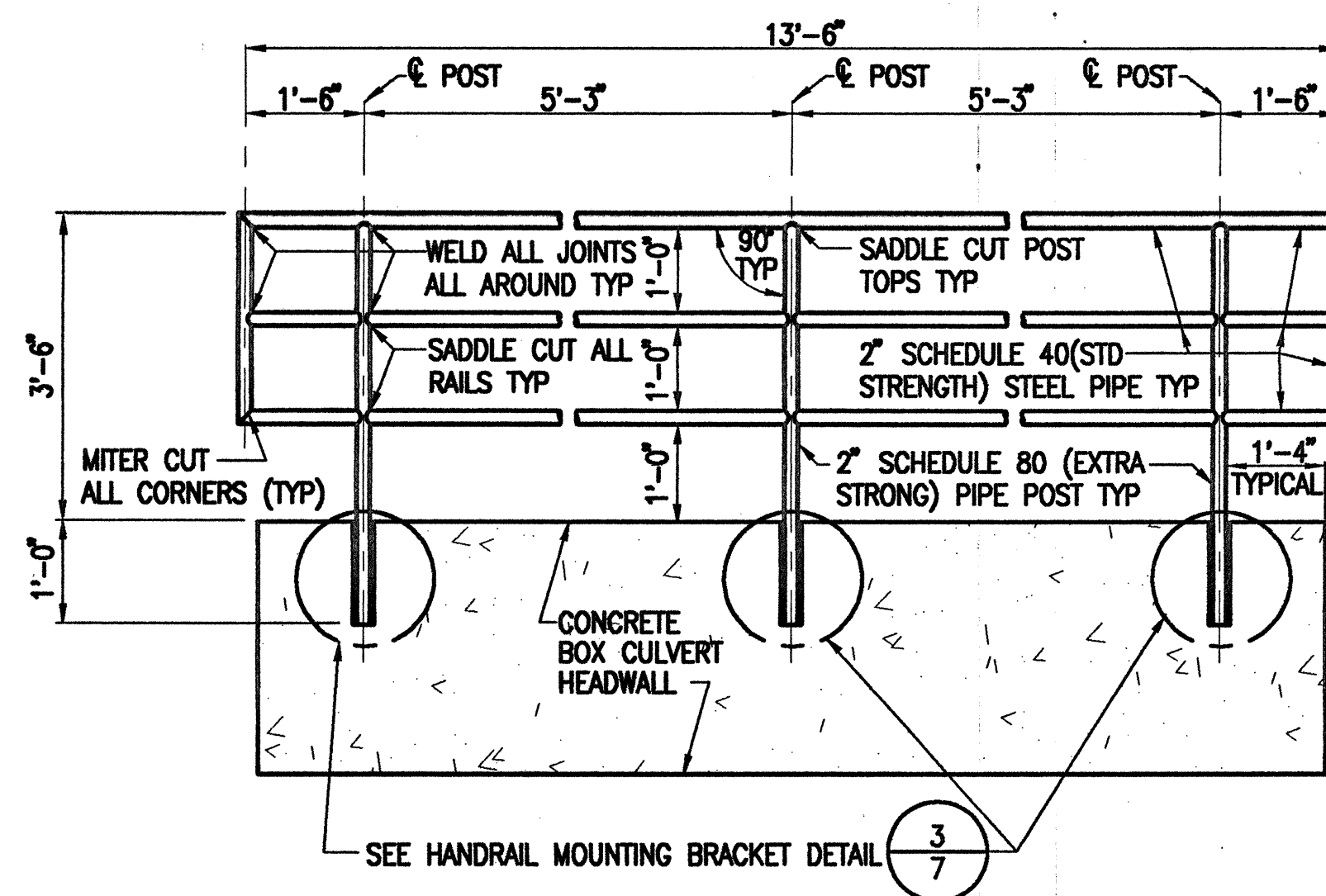
CURB TRANSITION DETAIL

SCALE: NONE



CHANNEL SECTION

SCALE: 1" = 5'

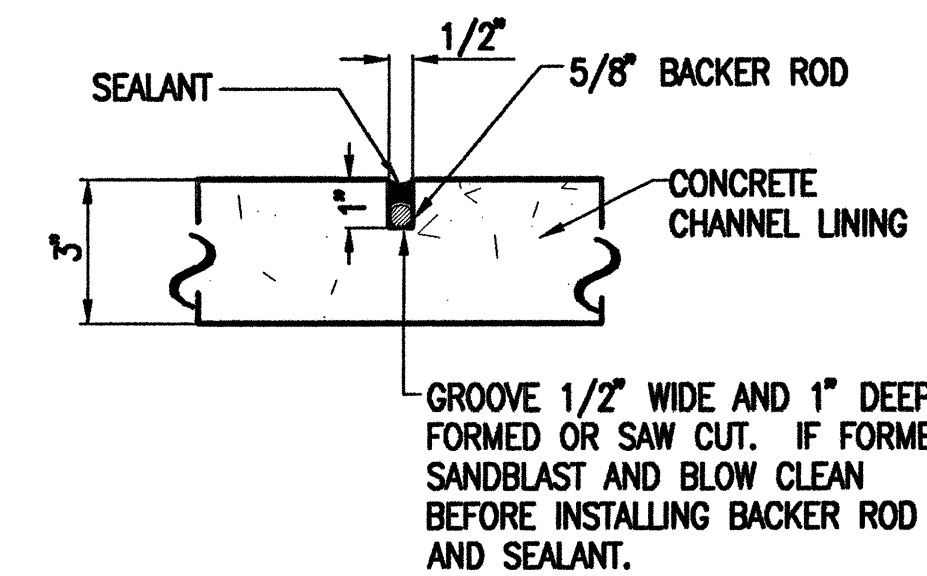


WELDED PIPE HANDRAIL

SCALE: NONE

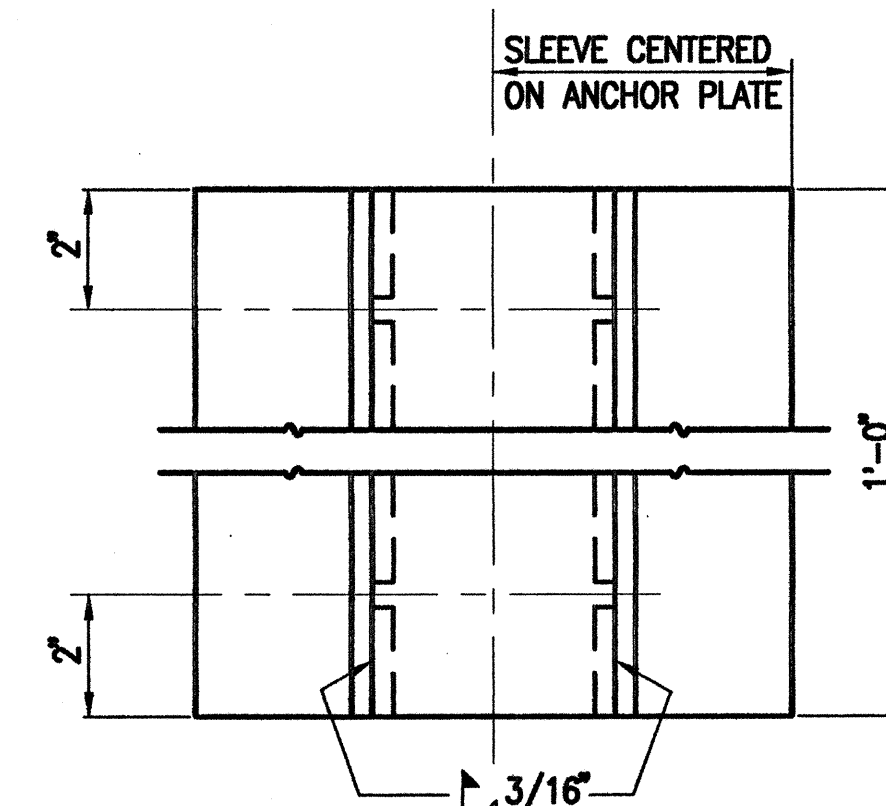
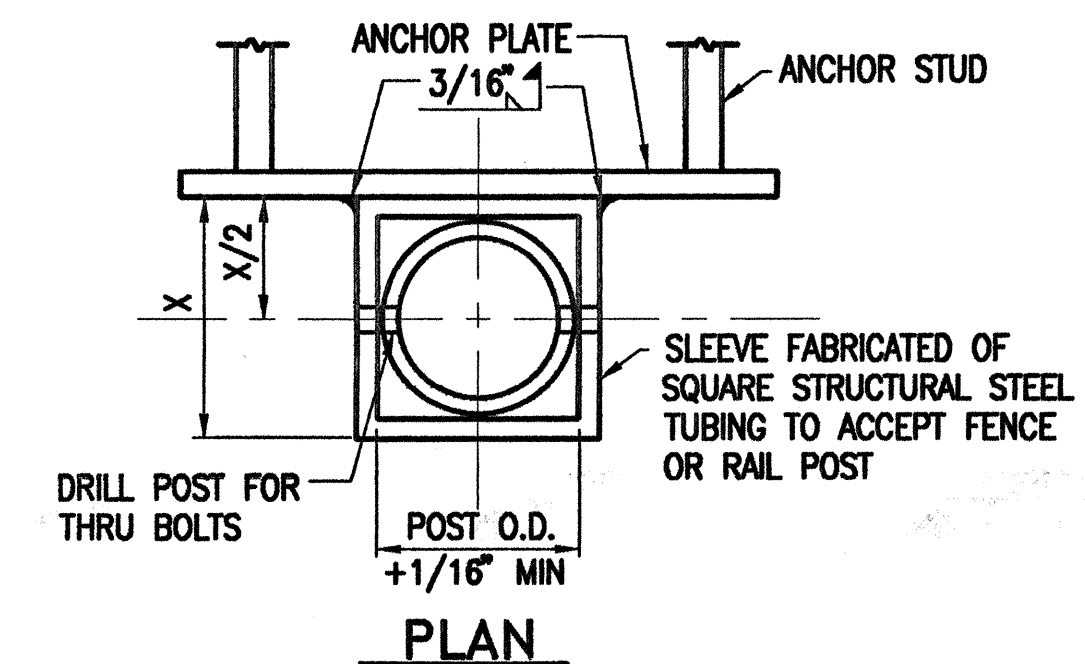


1. WELDED PIPE HANDRAIL SHALL BE COMPLETELY SHOP FABRICATED INCLUDING POSTS, RAILS, ANCHOR PLATE, AND MOUNTING BRACKETS.
2. THE FABRICATED HANDRAIL SHALL BE THOROUGHLY CLEANED AND ALL WELDS SHALL BE SMOOTHED AND CLEANED IN THE SHOP.
3. THE FABRICATED HANDRAIL INCLUDING ATTACHMENT BOLTS, WASHERS, AND NUTS, SHALL RECEIVE A SHOP APPLIED PRIME COAT AND A SHOP APPLIED FINISH COAT OF A COLOR TO BE SELECTED BY THE OWNER.
4. AFTER INSTALLATION WELDED PIPE HANDRAIL SHALL RECEIVE A TOUCHUP OF THE SAME COLOR AS THE FIRST FINISH COAT AND A SECOND FINISH COAT OF A COLOR TO BE SELECTED BY THE OWNER.
5. EMBED PIPE SLEEVE IN CONCRETE HEADWALL TO RECEIVE HANDRAIL TACK WELD HANDRAIL TO SLEEVE.



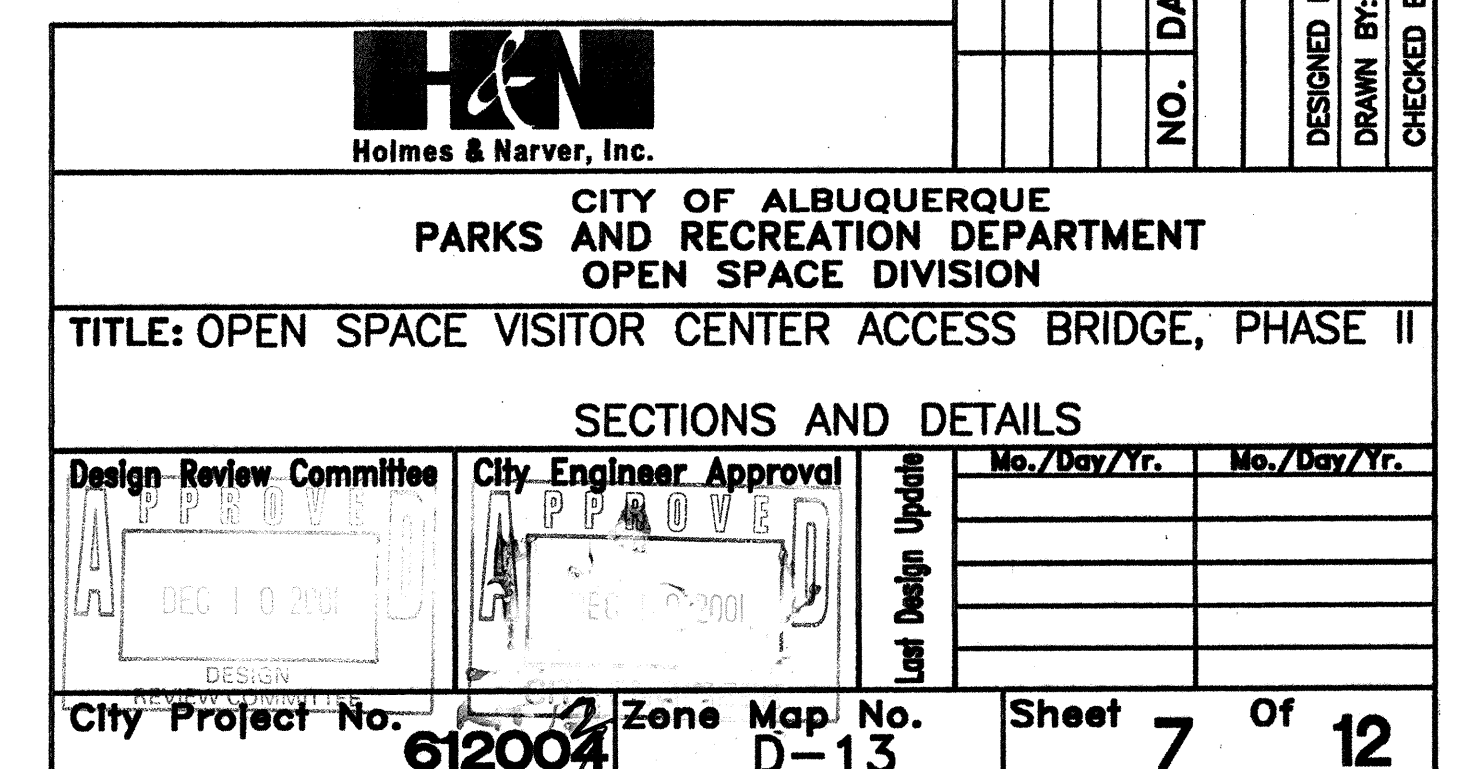
CONTRACTION JOINT DETAIL

SCALE: NONE

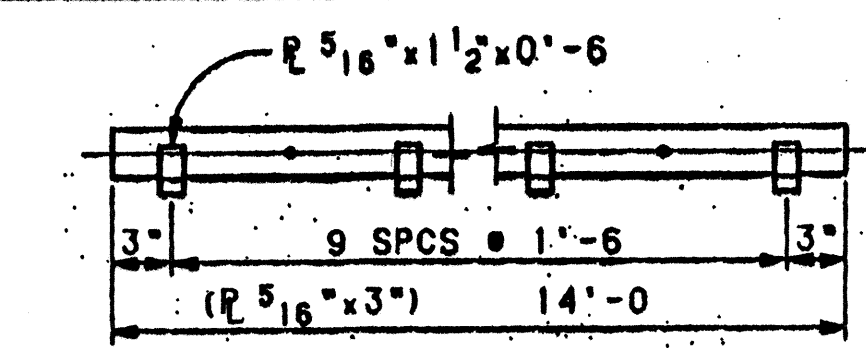


HANDRAIL MOUNTING BRACKET

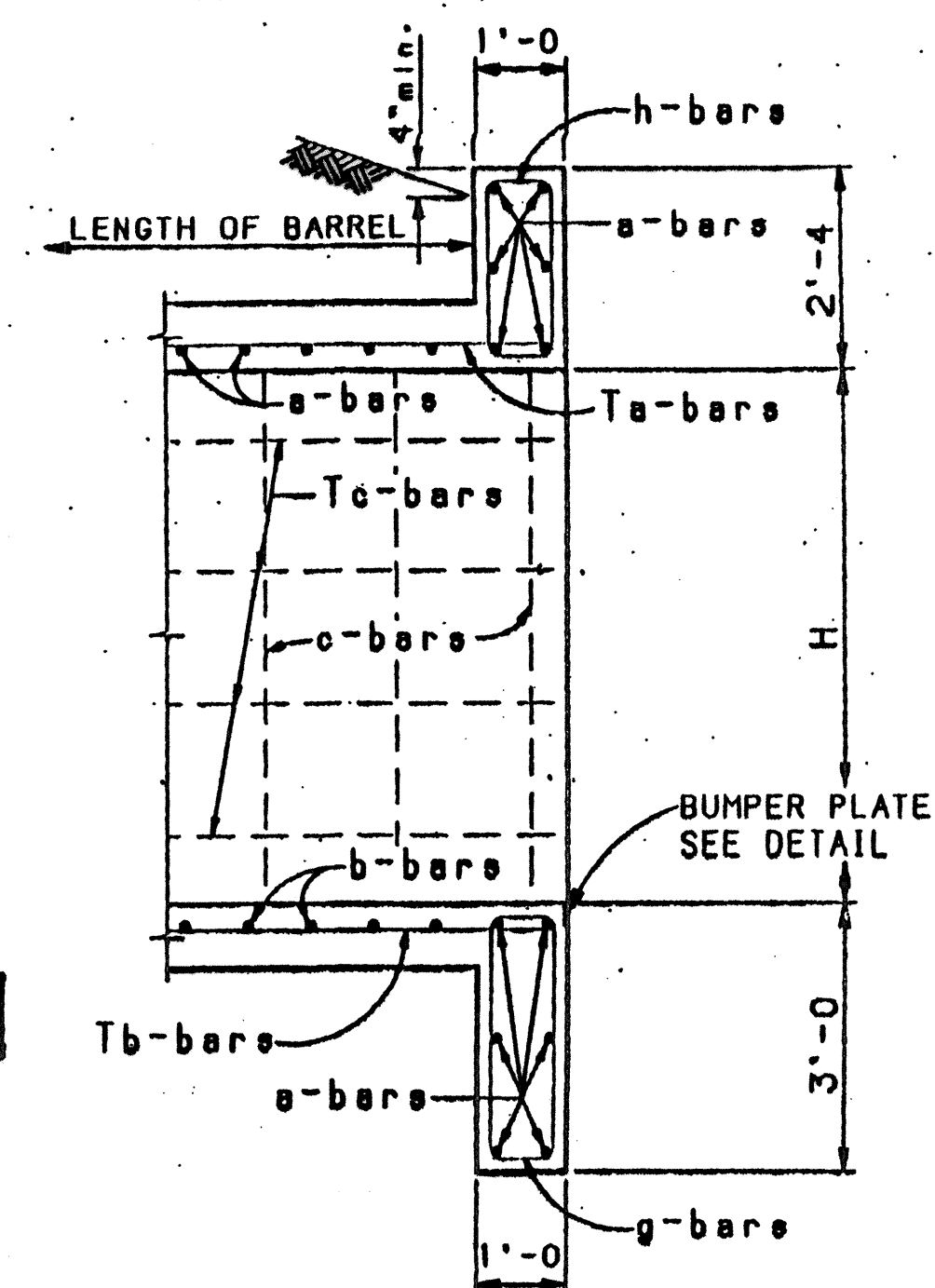
SCALE: NONE



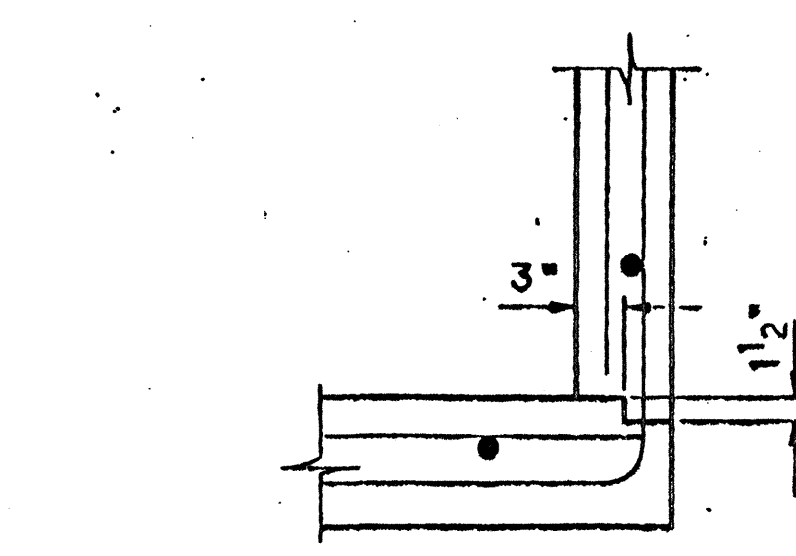
DESIGN NO.	CLEAR SPAN	CLEAR HEIGHT	REINFORCING BARS																								DIMENSIONS					QUANTITIES							
			a			b			c			d			e			f			g			h			TT	TS	TB	SO	HO	PER L.F. OF BARREL		AT ONE END *					
			SIZE	LENGTH	SPACING	SIZE	LENGTH	SPACING	SIZE	LENGTH	SPACING	SIZE	LENGTH	"X"	SPACING	SIZE	LENGTH	"X"	SPACING	NO.	SIZE	SPACING	NO.	SIZE	SPACING	NO.						SIZE	SPACING	NO. OF EA. AT 1 END	REIN. STEEL POUNDS PER L.F.	CONCRETE CU. YDS. PER L.F.	REIN. STEEL POUNDS PER L.F.	CONCRETE CU. YDS. PER L.F.	
DESIGN NO. 1	0 TO 5' COVER	4	2	#6	4'-9	7"	#4	4'-9	7"	--	NONE	--	#5	4'-6	2'-8	10 1/2"	#5	4'-6	2'-8	10 1/2"	9	#4	12"	7	#4	16"	4	#4	18"	3	6 1/2"	6"	6 1/2"	5'-0	3'-1	52.5	0.275	189	1.06
			3	#5	4'-9	6"	#5	4'-9	12"	--	NONE	--	#5	5'-0	2'-8	12"	#5	5'-0	2'-8	12"	7	#4	18"	7	#4	16"	6	#4	15"	3	7"	6"	6 1/2"	5'-0	4'-1 1/2	49.1	0.319	156	1.10
			4	#6	4'-9	8 1/2"	#5	4'-9	10 1/2"	--	NONE	--	#4	5'-6	2'-7	8 1/2"	#4	5'-6	2'-7	8 1/2"	8	#4	12"	7	#4	16"	6	#4	18"	3	7"	6"	6 1/2"	5'-0	5'-1 1/2	50.5	0.356	192	1.14
		5	7	#7	6'-0	11"	#6	6'-0	11"	#4	6'-9	18"	#5	7'-9	2'-0	11"	#5	5'-3	2'-0	11"	9	#4	12"	8	#4	16"	14	#4	12"	4	7 1/2"	7"	7"	6'-2	8'-2 1/2	79.5	0.578	325	1.53
			2	#6	6'-9	7"	#5	6'-9	7"	--	NONE	--	#6	4'-3	1'-10	10 1/2"	#5	3'-6	1'-9	10 1/2"	10	#4	14"	9	#4	18"	4	#4	18"	4	7 1/2"	6"	7"	7'-0	3'-2 1/2	67.7	0.387	236	1.46
			3	#6	6'-9	6"	#5	6'-9	6"	--	NONE	--	#6	4'-3	1'-10	12"	#5	4'-6	1'-10	12"	12	#4	11"	9	#4	18"	6	#4	15"	4	7 1/2"	6"	7"	7'-0	4'-2 1/2	74.6	0.424	244	1.51
		6	4	#6	6'-9	7"	#5	6'-9	7"	--	NONE	--	#6	6'-6	1'-10	13"	#6	3'-6	1'-10	13"	10	#4	14"	9	#4	18"	8	#4	15"	4	8"	6"	7"	7'-0	5'-3	75.2	0.472	263	1.53
			5	#6	6'-9	7"	#5	6'-9	7"	--	NONE	--	#5	6'-6	2'-0	10 1/2"	#5	4'-6	2'-0	10 1/2"	11	#4	12"	9	#4	18"	8	#4	18"	4	8"	6"	7"	7'-0	6'-3	74.4	0.509	257	1.57
			6	#6	6'-9	7"	#5	6'-9	7"	--	NONE	--	#6	7'-6	2'-2	14"	#6	5'-3	2'-2	14"	11	#4	12"	9	#4	18"	10	#4	15"	4	8"	6"	7 1/2"	7'-0	7'-3 1/2	82.3	0.557	277	1.61
		8	4	#7	8'-9	8 1/2"	#7	8'-9	10 1/2"	--	NONE	--	#6	5'-9	2'-3	12"	#5	4'-9	2'-3	10 1/2"	12	#4	13"	10	#4	17"	6	#4	18"	5	9"	6"	8 1/2"	9'-0	5'-5 1/2	93.0	0.634	370	1.93
			5	#7	8'-9	8 1/2"	#7	8'-9	10 1/2"	--	NONE	--	#6	6'-9	2'-6	11"	#6	5'-6	2'-6	11"	12	#4	13"	10	#4	17"	8	#4	17"	5	9"	6"	8 1/2"	9'-0	6'-5 1/2	105.9	0.671	392	1.97
			6	#7	8'-9	8 1/2"	#7	8'-9	11"	--	NONE	--	#6	7'-6	2'-9	11"	#6	6'-3	2'-9	11"	12	#4	13"	10	#4	17"	8	#4	18"	5	9"	6"	8 1/2"	9'-0	7'-5 1/2	109.9	0.708	400	2.01
		10	7	#7	9'-0	8"	#7	9'-0	10 1/2"	#4	6'-9	18"	#6	8'-3	2'-9	11 1/2"	#6	6'-9	2'-9	11 1/2"	12	#4	13"	10	#4	17"	12	#4	15"	5	8 1/2"	7"	8 1/2"	9'-2	8'-5	124.4	0.783	426	2.12
			8	#7	9'-0	8"	#6	9'-0	8"	#4	7'-9	18"	#5	8'-9	3'-0	8 1/2"	#5	7'-3	3'-0	8 1/2"	12	#4	13"	10	#4	17"	14	#4	15"	5	8 1/2"	8"	8 1/2"	9'-4	9'-5	125.9	0.885	420	2.25
4	#8		10'-9	9"	#7	10'-9	8 1/2"	--	NONE	--	#6	7'-6	3'-0	9"	#5	5'-6	3'-0	9"	13	#5	17"	13	#5	17"	6	#4	18"	7	9 1/2"	6 1/2"	10"	11'-1	5'-7 1/2	145.8	0.828	550	2.35		
12	5	#8	10'-9	9"	#7	10'-9	8 1/2"	--	NONE	--	#7	8'-3	3'-0	11"	#6	5'-9	3'-0	11"	11	#5	18"	11	#5	18"	8	#4	18"	7	9 1/2"	6 1/2"	10"	11'-1	6'-7 1/2	153.2	0.868	570	2.39		
	6	#8	11'-0	10"	#8	11'-0	10 1/2"	--	NONE	--	#7	9'-3	3'-0	10 1/2"	#7	5'-9	3'-1 1/2	10 1/2"	13	#5	17"	13	#5	17"	8	#4	18"	7	9"	7 1/2"	9"	11'-3	7'-6	171.4	0.903	607	2.50		
	7	#8	11'-0	10 1/2"	#8	11'-0	10 1/2"	--	NONE	--	#7	9'-3	3'-0	10 1/2"	#7	6'-9	3'-1	10 1/2"	13	#5	17"	13	#5	17"	10	#4	18"	7	9"	7 1/2"	9"	11'-3	8'-6	175.7	0.949	619	2.55		
14	8	#8	11'-0	10 1/2"	#8	11'-0	10"	--	NONE	--	#7	9'-3	3'-0	10 1/2"	#7	7'-9	3'-1 1/2	10 1/2"	16	#4	12"	18	#4	10"	12	#4	18"	7	9"	8"	9"	11'-4	9'-6	179.0	1.025	627	2.65		
	9	#8	11'-0	10"	#8	11'-0	11"	#4	8'-9	18"	#7	10'-9	3'-2	11"	#7	7'-9	3'-4	11"	16	#4	12"	16	#4	12"	14	#4	15"	7	9"	8"	9 1/2"	11'-4	10'-6 1/2	188.3	1.092	644	2.71		
	10	#8	11'-3	10"	#8	11'-3	12"	#4	9'-9	18"	#7	12'-6	3'-3	11 1/2"	#7	7'-3	3'-7	11 1/2"	18	#4	10"	16	#4	12"	14	#4	18"	7	9"	9"	9 1/2"	11'-6	11'-6 1/2	191.1	1.212	665	2.86		
16	11	#8	11'-3	10"	#8	11'-3	11 1/2"	#4	10'-9	12"	#7	13'-9	3'-6	11 1/2"	#8	7'-3	3'-7	11 1/2"	13	#5	17"	13	#5	17"	18	#4	15"	7	9"	9"	9 1/2"	11'-6	12'-6 1/2	220.0	1.268	704	2.96		
	12	#8	11'-3	10"	#8	11'-3	11"	#5	11'-9	13"	#7	15'-0	3'-8	11"	#8	7'-3	3'-8	11"	13	#5	17"	13	#5	17"	18	#4	16"	7	9"	9"	9 1/2"	11'-6	13'-6 1/2	239.7	1.323	721	3.09		
	6	#8	13'-0	7 1/2"	#8	13'-0	8"	--	NONE	--	#7	7'-9	3'-3	11 1/2"	#7	7'-9	3'-3	11 1/2"	18	#5	12"	16	#5	15"	10	#4	18"	8	10 1/2"	7"	11"	13'-2	7'-9 1/2	215.9	1.133	689	2.86		
18	8	#8	13'-0	9"	#8	13'-0	9 1/2"	--	NONE	--	#7	10'-3	3'-6	10"	#7	7'-9	3'-6	10"	15	#5	17"	15	#5	17"	12	#4	18"	8	10 1/2"	8"	11"	13'-4	9'-9 1/2	217.7	1.280	708	3.04		
	10	#8	13'-3	8 1/2"	#8	13'-3	9 1/2"	#4	9'-9	18"	#8	13'-0	3'-9	13"	#8	8'-0	3'-9	13"	16	#5	15"	14	#5	18"	18	#4	15"	8	10"	9"	11"	13'-6	11'-9	250.0	1.431	765	3.26		
	12	#8	13'-3	9"	#8	13'-3	9"	#4	11'-9	12"	#8	15'-3	4'-0	12"	#8	8'-3	4'-0	12"	16	#5	15"	15	#5	16"	20	#4	15"	8	10 1/2"	9"	11"	13'-6	13'-9 1/2	281.2	1.563	795	3.48		
20	8	#9	15'-3	9 1/2"	#9	15'-3	10 1/2"	--	NONE	--	#8	11'-0	4'-0	9 1/2"	#8	8'-6	4'-0	9 1/2"	20	#5	12"	19	#5	13"	14	#4	15"	10	11 1/2"	8 1/2"	12"	15'-5	9'-11 1/2	306.3	1.538	993	3.47		
	10	#9	15'-3	9 1/2"	#9	15'-3	10"	#4	9'-9	18"	#8	13'-0	4'-3	11"	#8	8'-9	4'-3	11"	20	#5	12"	20	#5	12"	16	#4	15"	10	11 1/2"	9"	12"	15'-6	11'-11 1/2	315.5	1.680	1030	3.65		
	12	#9	15'-3	9 1/2"	#9	15'-3	10"	#4	11'-9	11 1/2"	#9	15'-3	4'-6	11 1/2"	#9	8'-9	4'-6	11 1/2"	20	#5	12"	20	#5	12"	20	#4	15"	10	11 1/2"	9"	12"	15'-6	13'-11 1/2	373.0	1.791	1086	3.88		
22	14	#9	15'-6	9 1/2"	#9	15'-6	10 1/2"	#5	13'-9	15"	#9	17'-6	5'-0	11 1/2"	#9	9'-9	5'-0	11 1/2"	16	#6	17"	16	#6	17"	24	#4	15"	10	11"	10"	12"	15'-8	15'-11	407.2	1.976	1137	4.23		



BUMPER PLATE DETAIL
 NOTE: USE ONLY WHEN 14'x14' CBC IS TO BE USED AS A VEHICULAR UNDERPASS. COST TO BE INCLUDED IN THE UNIT PRICE FOR CONCRETE. FIELD BEND PLATE INTO FRONT FACE OF WING FOOTING.
 (EST. WEIGHT OF ONE PLATE = 53 LBS.)

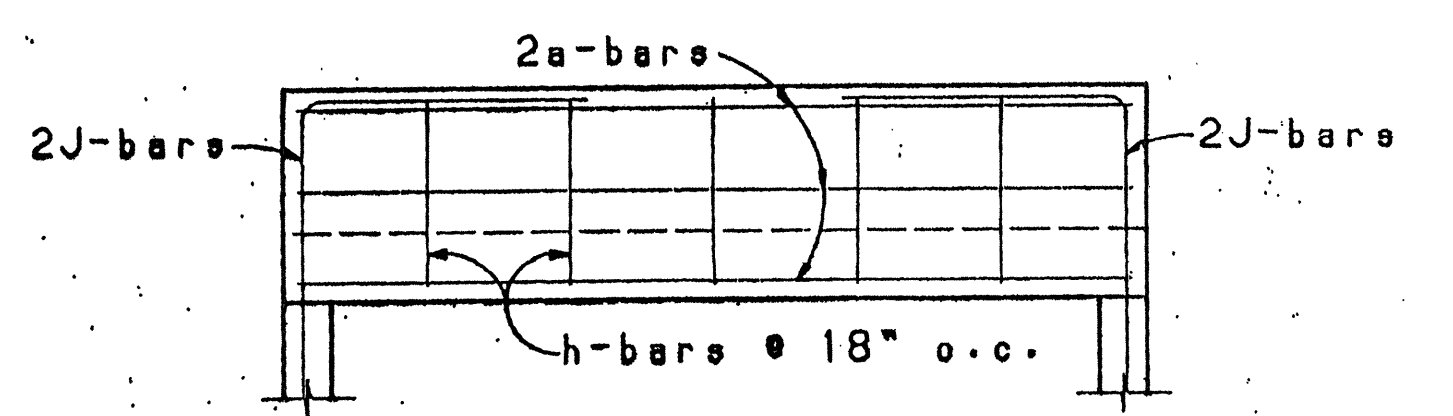


PART SECTION A-A

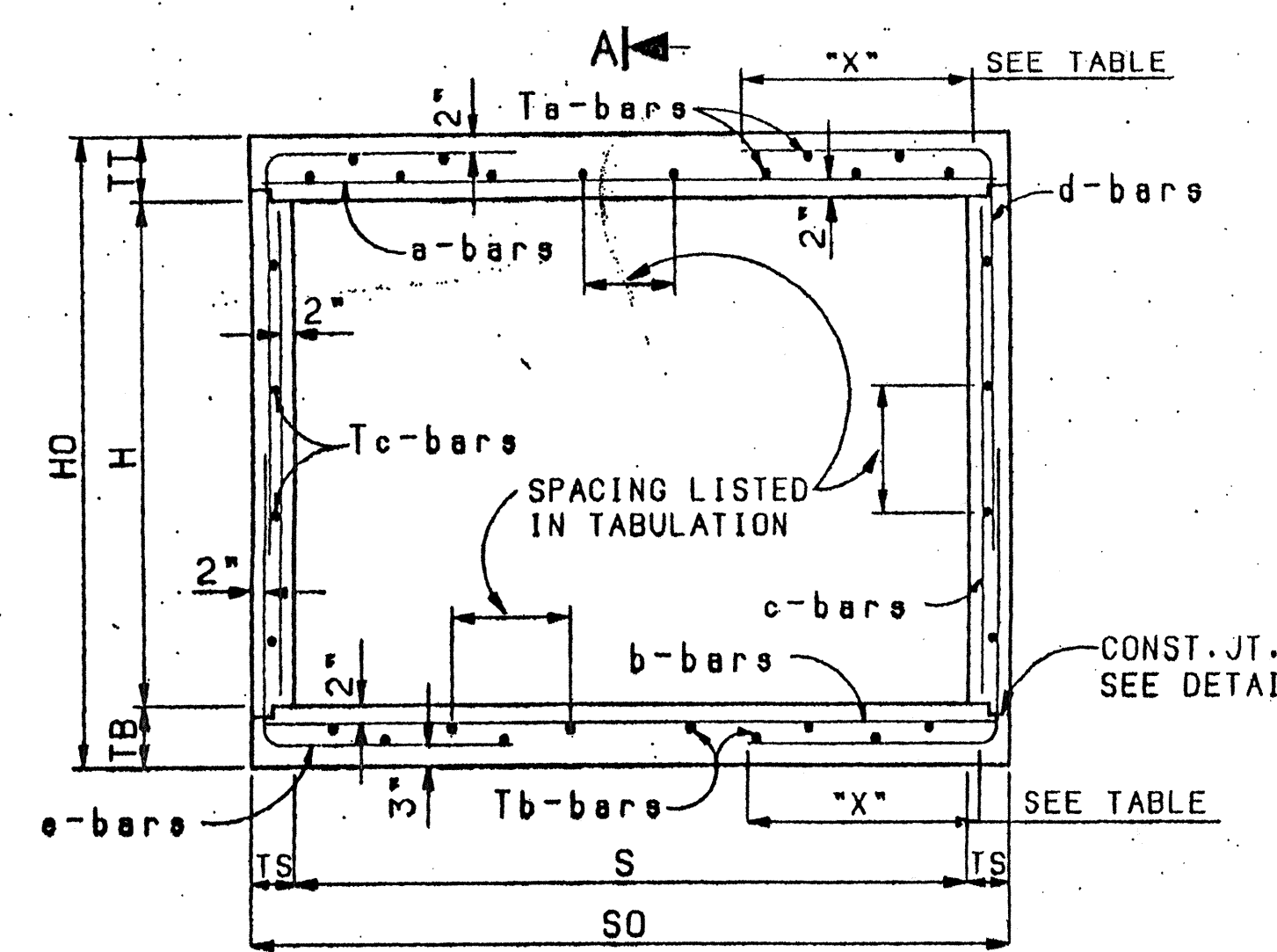


CONSTRUCTION JOINT DETAIL

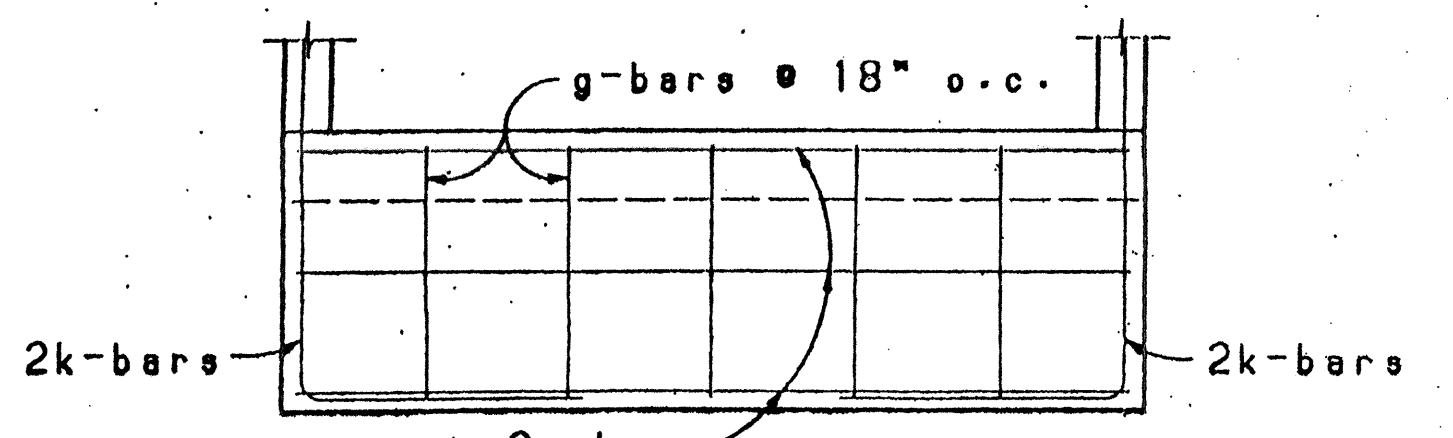
DESIGN DATA
 DESIGN ACCORDING TO A.A.S.H.O. SPECIFICATIONS, 1957.
 LIVE LOAD: H20-S16-44 & INTERSTATE ALTERNATE LOADING
 WEIGHT OF FILL ON TOP OF BOX: 84#/CU.FT.
 HORIZONTAL EARTH PRESSURE: 30#/CU.FT., 2' SURCHARGE
 DESIGN STRESSES: $f'_c = 3000 \text{ psi}$, $f_s = 1200 \text{ psi}$,
 $f_s = 20,000 \text{ psi}$, $n = 10$.



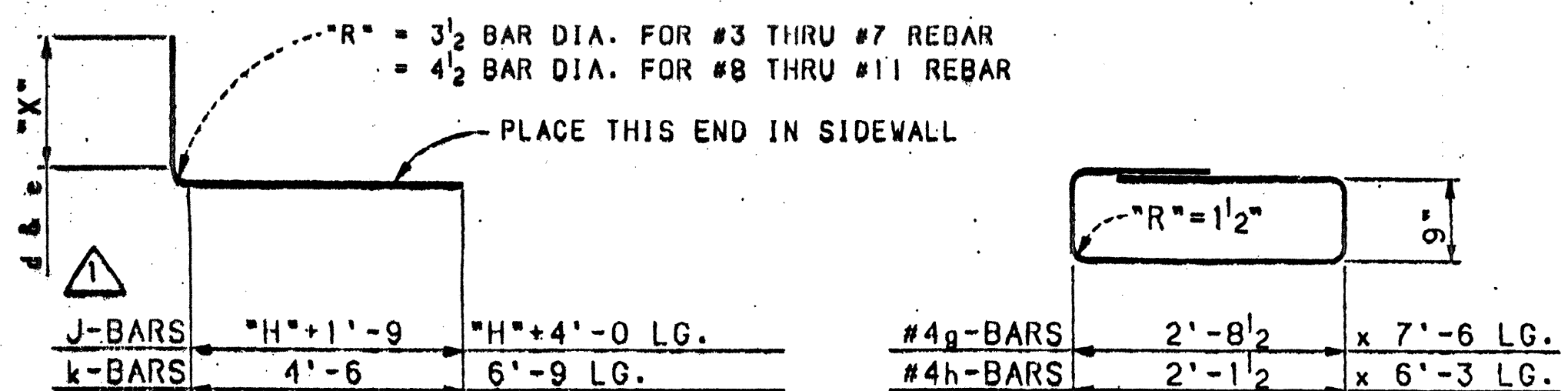
ELEVATION OF PARAPET



SECTION ACROSS BARREL



ELEVATION OF CUT-OFF WALL



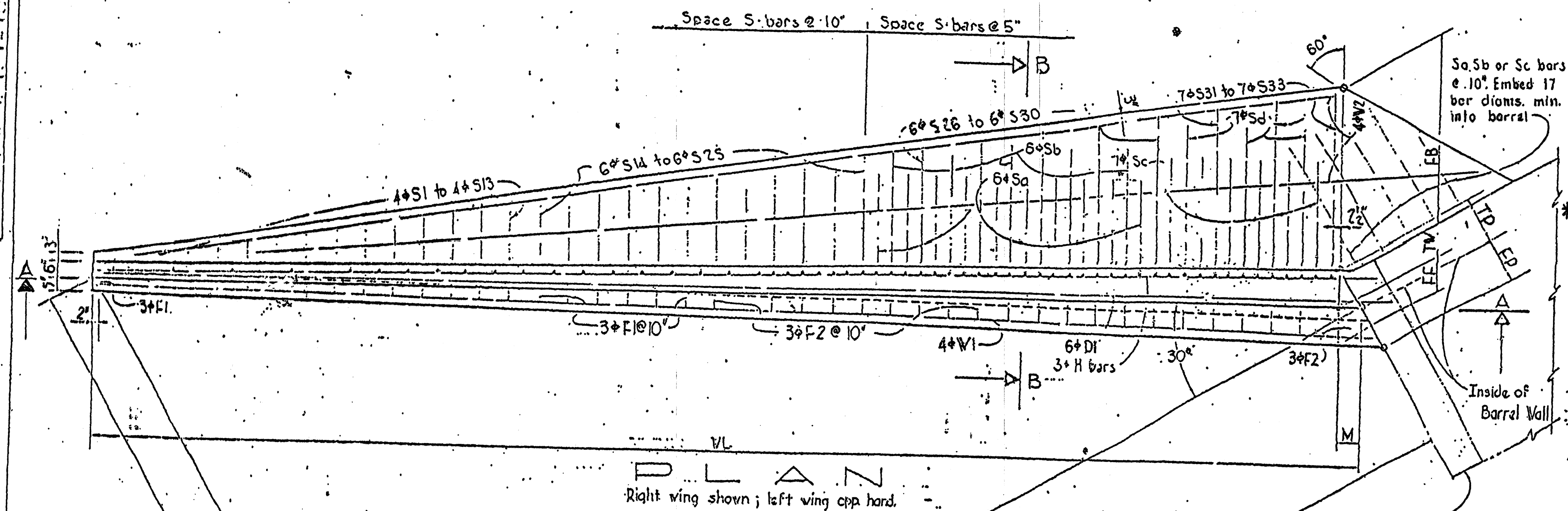
REINFORCING STEEL DIAGRAM

NUMBER OF BARS REQUIRED
 a-BARS, & b-BARS: 12L + SPACING
 PLUS 12 a-BARS AT EACH END
 c-BARS: 2(12L + E) + SPACING
 d-BARS, & e-BARS: 24L + SPACING
 J-BARS, & K-BARS: 4 OF EACH AT EACH END
 OTHER BARS: SEE TABLE
 "L" = LENGTH OF BARREL IN FEET
 "E" = 10' FOR EACH END
 NUMBER OF BARS REQUIRED FOR SKEWED BOXES
 IS GIVEN ON SERIAL CB-31-S.

- GENERAL NOTES**
- ALL CONCRETE SHALL BE CLASS "A". CHAMFER ALL EXPOSED EDGES 3/4".
 - ALL REINFORCING STEEL SHALL CONFORM TO AASHTO SPECIFICATION M-31 GRADE 60. ALL DIMENSIONS REFER TO THE CENTERLINE OF BAR.
 - Ta, Tb, AND Tc BARS MAY BE SPLICED WHEN NECESSARY BY LAPPING AT LEAST 20 BAR DIAMETERS. PAY WEIGHT FOR REINFORCING STEEL DOES NOT INCLUDE SPLICES. COST OF SPLICE MATERIAL TO BE INCLUDED IN UNIT PRICE BID FOR REINFORCING STEEL.
 - VOLUME OF CONCRETE = (L) x (CONCRETE QUANTITY/LIN. FT.) PLUS CONCRETE AT ENDS.
 - WEIGHT OF REINFORCING STEEL = (L) x (WEIGHT OF REINF./LIN.FT.) PLUS WEIGHT AT ENDS.
 - PLACE Ta-BARS ON a-BARS AND Tb-BARS UNDER b-BARS. SPACED AS SHOWN IN THE TABLE. THE REMAINING Ta-BARS, AND Tb-BARS ARE TO BE PLACED ADJACENT TO THE J-BARS, AND c-BARS AS INDICATED IN "SECTION ACROSS BARREL".
 - "COVER" IS HEIGHT OF FILL FROM TOP OF BOX TO FINISHED GRADE.
- * NOTE: "QUANTITIES AT ONE END" INCLUDE PARAPET, CUT-OFF WALL, AND BARREL BEYOND LENGTH "L". WINGWALL QUANTITIES ARE NOT INCLUDED.

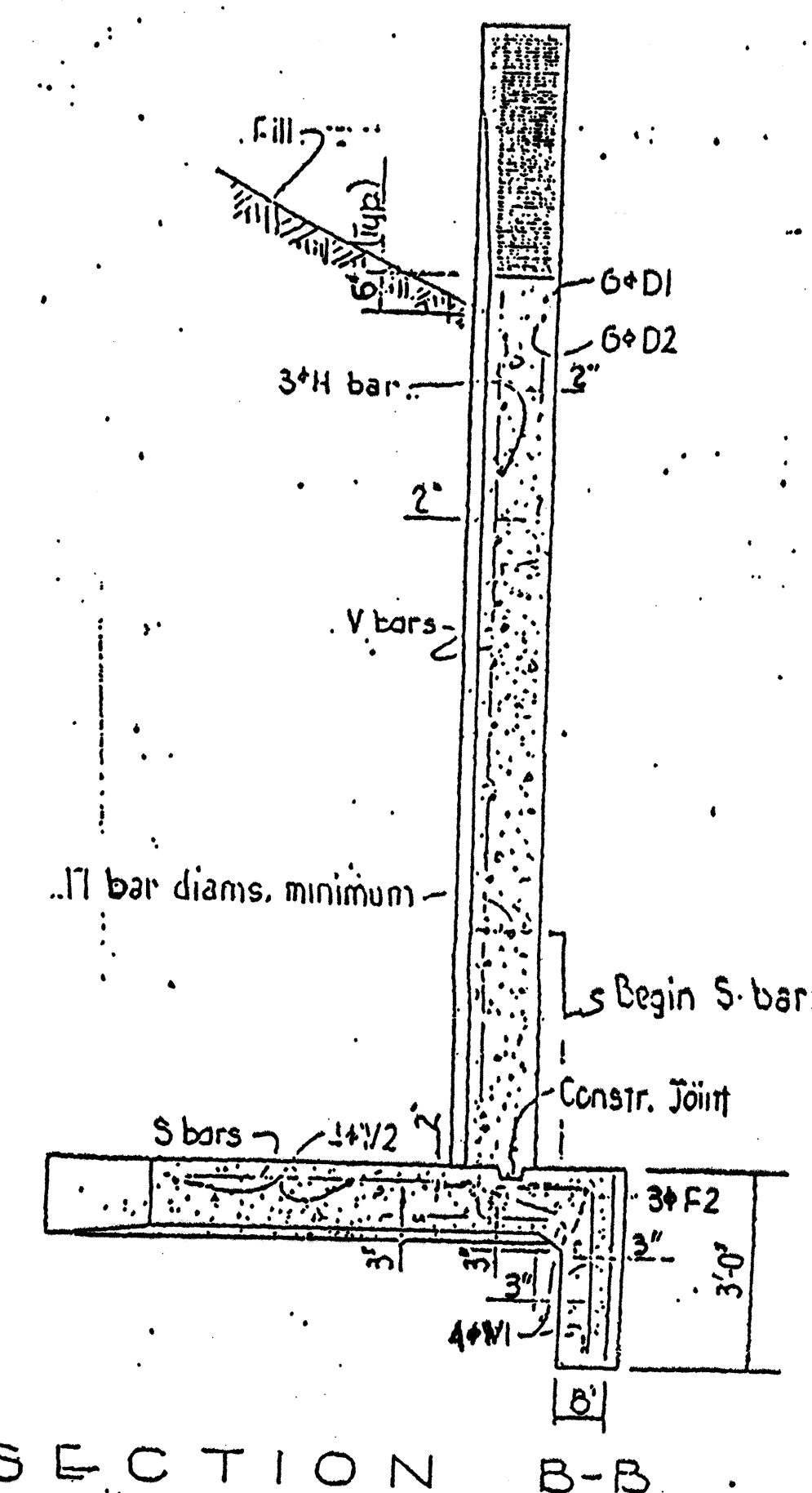
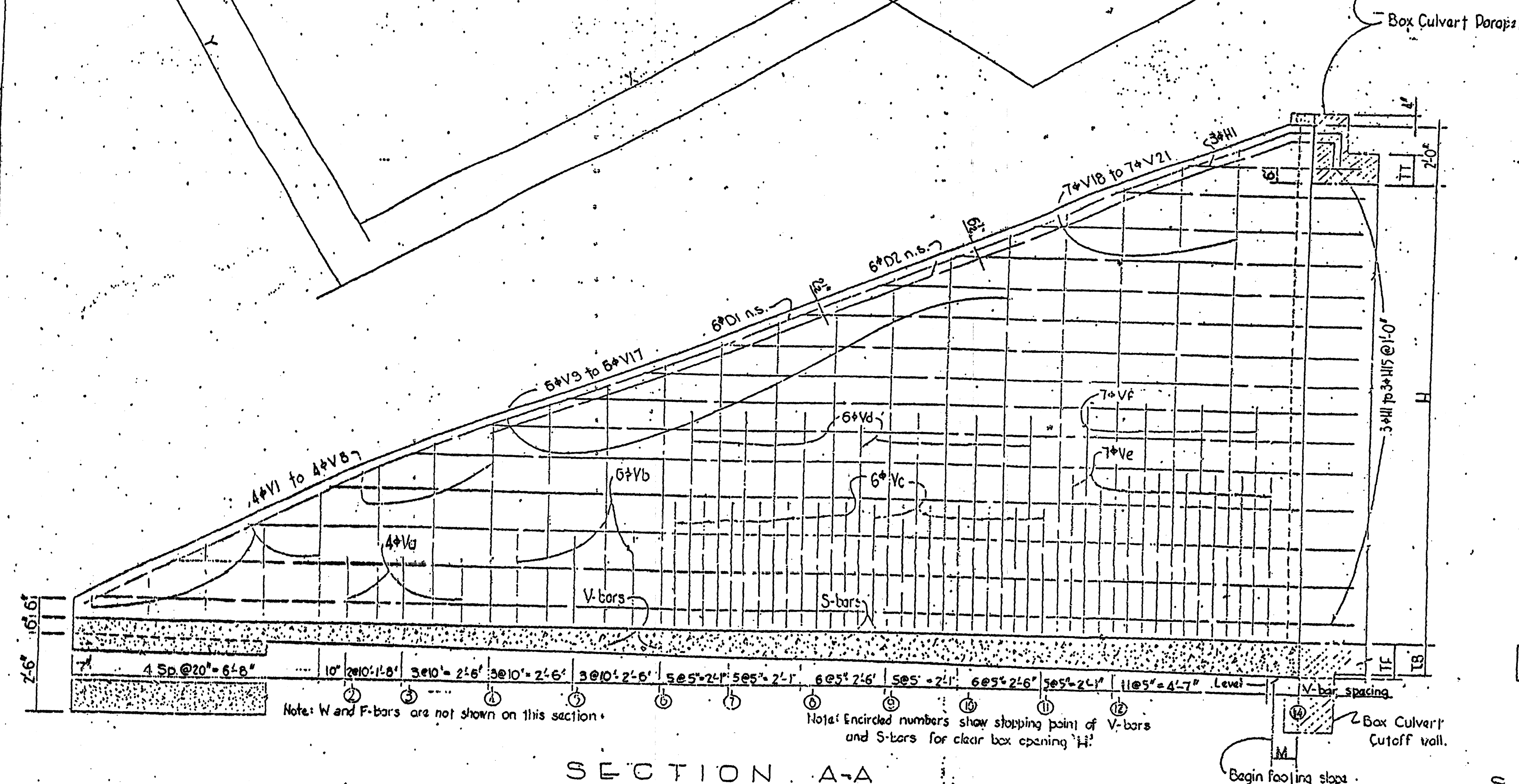
6					
5					
4					
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2	REVISED NOTE #2	6-6-94	PH		
1	REVISE REBAR DETAIL d-BAR, x-BAR	7/20/93	SJM		
NO.	DESCRIPTION	DATE	BY		
REVISIONS (OR CHANGE NOTICES)					
NEW MEXICO STATE HIGHWAY AND TRANSPORTATION DEPARTMENT					
CONCRETE BOX CULVERT BARRELS SINGLE OPENING - NORMAL DESIGN No. 1 0 TO 5' COVER					
LAYOUT BY	APPROVAL	RECORDED	ENGINEER	DATE	
DRAWN BY	APPROVAL	RECORDED	ENGINEER	DATE	
CHECKED BY	APPROVAL	RECORDED	ENGINEER	DATE	
SERIAL CB-31 SHEET 1 OF 4					

FED AID NO. 10.	STATE		FISCAL YEAR	SOURCE NO.	TOTAL SHEET
9	NEW MEXICO				



	1	2	3	4	5	6	7	8	9	10	11	12	14
WL	8'-4 1/2"	10'-8 3/8"	12'-1 1/8"	15'-3 3/8"	17'-7 1/4"	19'-11 1/4"	22'-2 3/4"	24'-6 1/4"	26'-10 1/8"	29'-1 1/8"	31'-5 3/8"	36'-1"	
X	7'-3"	9'-3"	11'-3"	13'-3"	15'-3"	17'-3"	19'-3"	21'-3"	23'-3"	25'-3"	27'-3"	31'-3"	
Y	4'-2 1/2"	5'-4 1/8"	6'-6"	7'-7 1/4"	8'-9 3/8"	9'-11 1/4"	11'-1 1/8"	12'-3 1/4"	13'-5 1/8"	14'-7"	15'-8 3/8"	18'-0"	
TV	6"	6"	6"	6"	6 1/2"	7 1/2"	8 1/2"	9"	10"	11"	12'-0"	1'-2"	
FF	5"	10"	11"	1'-0"	1'-1 1/2"	1'-2 1/2"	1'-3 1/2"	1'-4 1/2"	1'-6"	1'-7"	1'-8"	1'-10"	
FCB	1'-4 1/2"	1'-8 1/2"	2'-0 1/2"	2'-4 1/2"	2'-7 1/2"	2'-10 1/2"	3'-1 1/2"	3'-5"	3'-7 1/2"	3'-10 1/2"	4'-1 1/2"	4'-7 1/2"	
TF	7 1/2"	8"	8 1/2"	9"	9 1/2"	10"	10 1/2"	11"	11 1/2"	1'-0"	1'-0 1/2"	1'-1 1/2"	
IM	3 1/8"	3 1/8"	3 1/8"	3 1/8"	3 3/4"	4 1/8"	4 1/8"	5 3/8"	5 3/4"	6 3/8"	6 1/2"	8 1/8"	
TP	6 1/8"	6 1/8"	6 1/8"	6 1/8"	7 1/2"	8 1/8"	9 1/8"	10 3/4"	11 1/8"	1'-0 1/8"	1'-1 1/8"	1'-1 4/8"	
FP	10 1/2"	1'-0"	1'-1 1/8"	1'-2 1/8"	1'-4 1/8"	1'-5 1/8"	1'-6 1/8"	1'-7 1/4"	1'-9 1/8"	1'-10 1/8"	1'-11 1/8"	2'-2 1/8"	

* NOTE: Wingwalls may be built with a uniform thickness of "TW" throughout their entire length, providing vertical reinforcing in back face is kept 2" from back face of the concrete and the back of the footing is kept at least wide enough to prevent the wall from projecting beyond the footing, and providing this modification is made at no additional cost to the state. Pay quantities to remain the same as shown on the standard plans.



DETAIL OF
CONSTR. JOINT

THIS SERIAL REVISED: 11-29-67

NEW MEXICO
STATE HIGHWAY DEPARTMENT

WINGWALLS
FOR
NORMAL CONCRETE BOX CULVERTS

SHEET 1 OF 2
SERIAL WCB

APPROVED: Charles E. Cook II. 11-1-62
BRIDGE ENGINEER

61200² - 9 - SHEET NO. 12

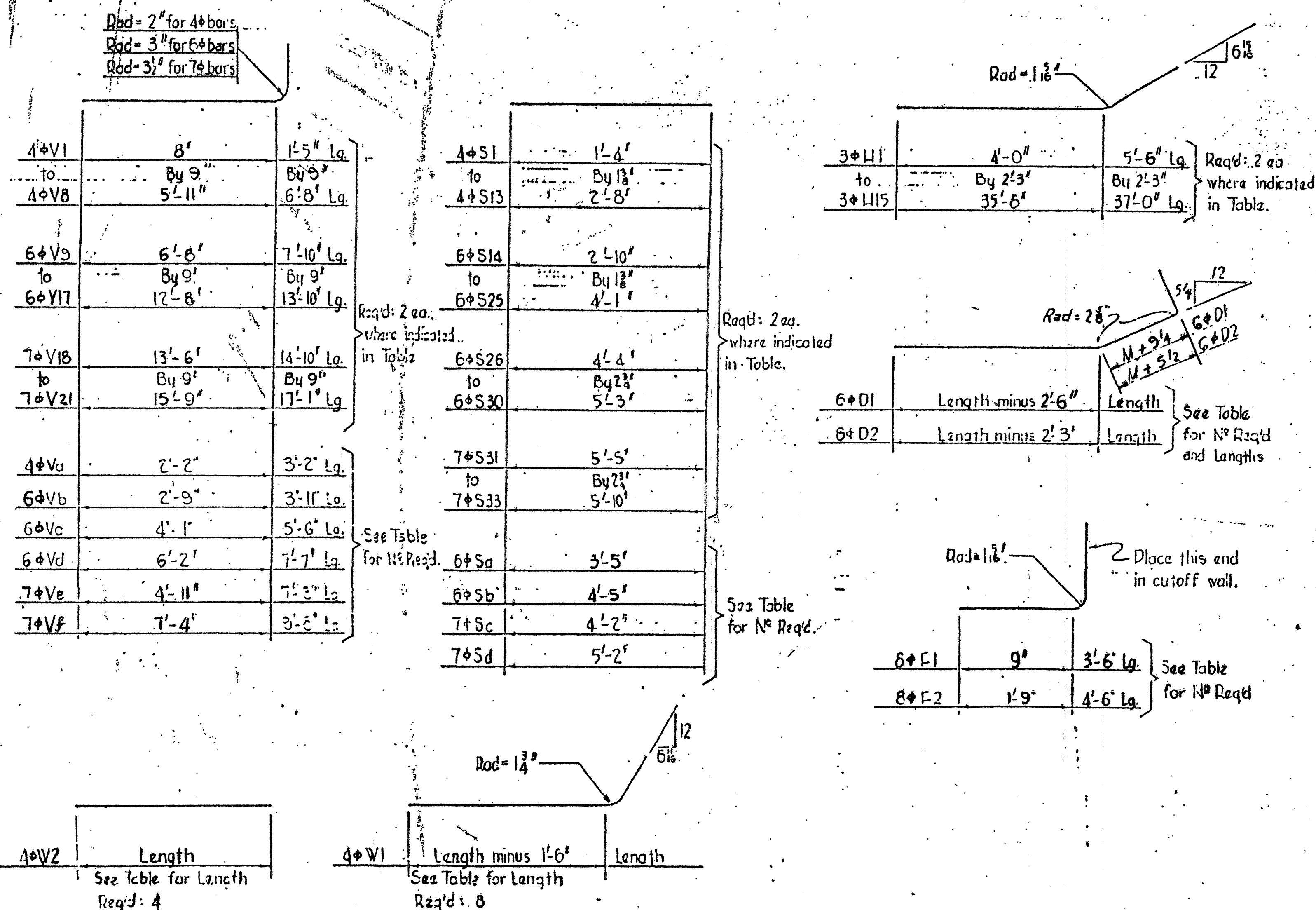
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REINFORCING STEEL REQUIREMENTS																				QUANTITIES								
H	V1		V2	V3	V4	V5	V6	V7	4 to 10		6+D1		6+D2		8 to 10		Sa	Sb	Sc	Sd	Se	F1	F2	V1	V2	Concrete	Rein. Steel	H
	Sars	N ²	N ³	N ⁴	N ⁵	N ⁶	N ⁷	N ⁸	Bors	N ²	Lqth. Ea	N ²	Lqth. Ea	Bors	N ²	N ²	N ²	N ²	N ²	N ²	N ²	N ²	Lqth. Ea	Lqth. Ea	Cu. Yd.	Lbs.		
2	1 to 5	2							1 to 3	2	10' 9"			1 to 8							20			10' 9"	7' 9"	2.46	196	2
3	1 to 6	4							1 to 4	2	13' 3"			1 to 11							26			13' 3"	10' 0"	3.48	261	3
4	1 to 8	6							1 to 5	2	15' 9"			1 to 14	20						32			15' 6"	12' 6"	4.65	352	4
5	1 to 9	6	4						1 to 6	2	18' 3"			1 to 16	20						36			18' 0"	14' 9"	6.00	462	5
6	1 to 11	6	6						1 to 7	2	20' 9"	2	16' 3"	1 to 19	40						42			20' 3"	17' 0"	7.65	664	6
7	1 to 12	6	6	6	2				1 to 8	2	23' 3"	2	18' 0"	1 to 22	40						42	6		22' 9"	19' 3"	9.76	858	7
8	1 to 13	6	6	10	6				1 to 9	2	25' 9"	2	20' 0"	1 to 25	60						42	12		25' 0"	21' 6"	12.22	1074	8
9	1 to 15	6	6	16	8				1 to 10	2	28' 3"	2	21' 9"	1 to 26	60	60					42	15		27' 6"	23' 9"	14.83	1346	9
10	1 to 16	6	6	22	10				1 to 11	2	30' 9"	2	23' 9"	1 to 27	60	60					42	22		29' 9"	26' 0"	18.08	1579	10
11	1 to 17	6	6	28	14				1 to 12	2	33' 3"	2	25' 6"	1 to 29	60	60					42	25		32' 0"	28' 3"	21.80	1852	11
12	1 to 19	6	6	34	18	4	2		1 to 13	2	35' 9"	2	27' 6"	1 to 30	60	60	10	10	10	10	42	34		34' 6"	30' 6"	26.04	2235	12
14	1 to 21	6	6	40	22	14	16	6	1 to 15	2	40' 9"	2	31' 3"	1 to 33	60	60	10	10	10	10	42	46	6	39' 3"	35' 0"	36.19	3044	14

Note: Reinforcing steel requirements and quantities in the above table are tabulated for the two wings of one end of the culvert.

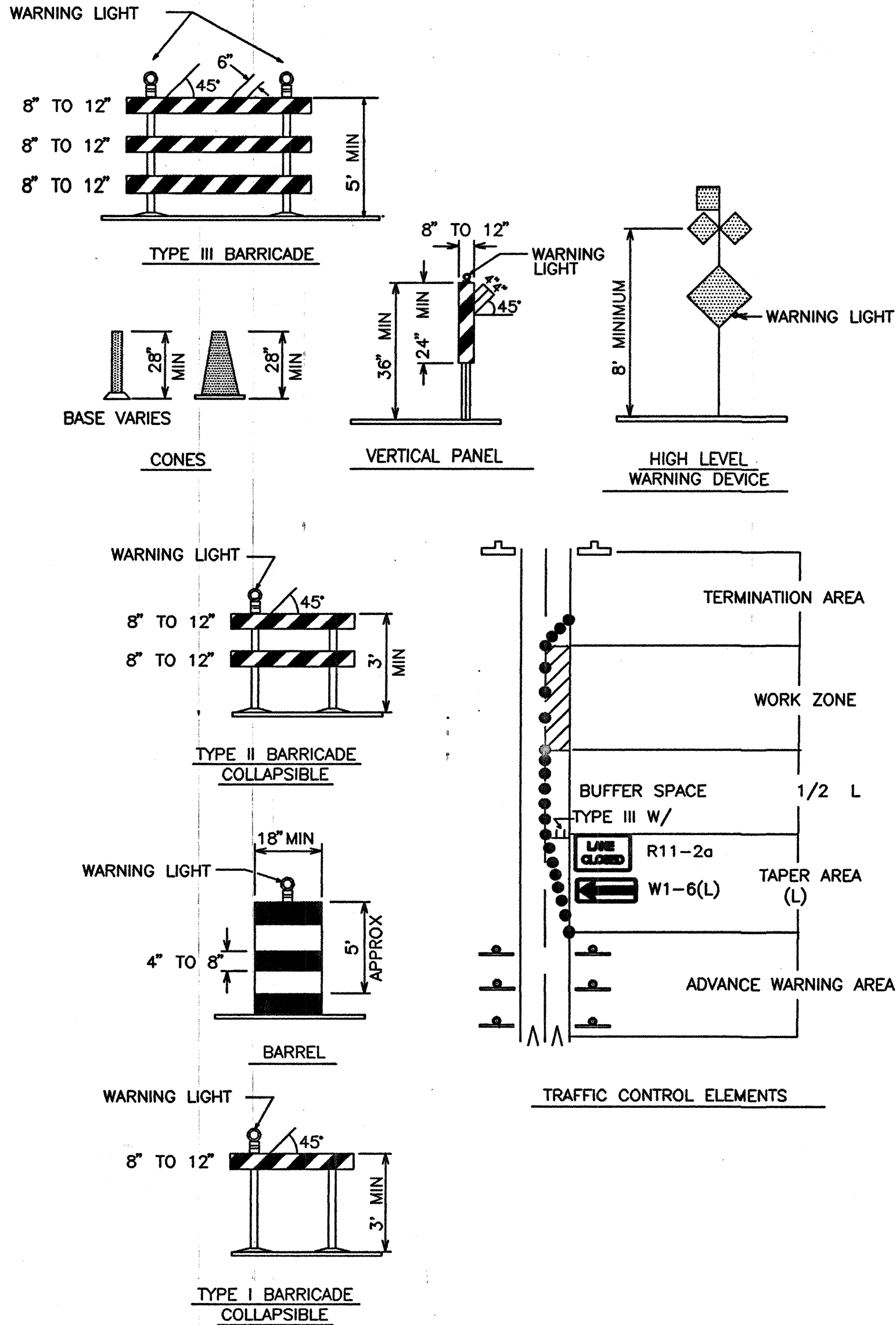
Note: The number of Sa, Sb, Sc bars shown in the upper portion of tabulation are to be placed in footing adjacent to barrel. Number shown in the lower portion of tabulation are to be placed adjacent to wing.

BAR BENDING DIAGRAMS



CONSTRUCTION TRAFFIC CONTROL GENERAL NOTES

1. CONTRACTOR MUST OBTAIN FROM CONSTRUCTION COORDINATION AN EXCAVATION/BARRICADE PERMIT BEFORE ENGAGING IN ANY CONSTRUCTION, MAINTENANCE OR REPAIR WORK IN ANY OF THE CITY OF ALBUQUERQUE'S RIGHTS-OF-WAY. EMERGENCY WORK THAT WOULD PRESERVE LIFE OR PROPERTY IS EXCLUDED WITH THE UNDERSTANDING, THAT A PERMIT SHALL BE OBTAINED WITHIN 24 TO 48 HOURS.
2. CONTRACTOR SHALL AT THE TIME OF PERMIT REQUEST, SUBMIT FOR APPROVAL BY CONSTRUCTION COORDINATION, A TRAFFIC CONTROL PLAN DETAILING ALL EXISTING TOPOGRAPHY SUCH AS LANE WIDTHS, DRIVEWAYS, AND BUSINESS/RESIDENTIAL ACCESSES. THE TRAFFIC CONTROL PLAN SHALL INCLUDE ALL PHASES OF WORK AND SCHEDULES INVOLVED IN THE CONSTRUCTION PROJECT. ANY SEPARATE PHASES OF A CONSTRUCTION PROJECT SHALL BE GIVEN AN INDIVIDUAL PERMIT EACH. BLANKET PERMITS WILL NOT BE ISSUED.
3. THESE TYPICAL TRAFFIC CONTROL PLANS DO NOT REFLECT THE EXISTING TOPOGRAPHY SUCH AS DRIVEWAYS, LANE WIDTHS, AND BUSINESS/RESIDENTIAL ACCESSES. EVERY LOCATION THAT REQUIRES CONSTRUCTION TRAFFIC CONTROL SHALL HAVE A DETAILED TRAFFIC CONTROL PLAN SHOWING ALL EXISTING TOPOGRAPHY.
4. CONSTRUCTION SHALL NOT BEGIN UNLESS A TRAFFIC CONTROL PLAN HAS BEEN APPROVED AND VERIFIED BY CONSTRUCTION COORDINATION.
5. CONSTRUCTION COORDINATION SHALL BE NOTIFIED 48 HOURS PRIOR TO ANY TRAFFIC CONTROL CHANGES NEEDED BY CONTRACTOR, THAT WERE NOT PREVIOUSLY APPROVED. THESE TRAFFIC CONTROL CHANGES SHALL BE REQUESTED IN WRITING ACCOMPANIED WITH A TRAFFIC CONTROL PLAN REFLECTING SUCH CHANGES.
6. ALL CONSTRUCTION TRAFFIC CONTROL DEVICES SHALL COMPLY TO THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD), LATEST EDITION. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO INSTALL, SERVICE AND MAINTAIN ALL TRAFFIC CONTROL DEVICES. TRAFFIC CONTROL DEVICES SHALL NOT BE REMOVED OR ALTERED IN ANY WAY WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION, PER SECTION 6A-4 OF THE MUTCD, LATEST EDITION.
7. THE CONSTRUCTION TRAFFIC CONTROL INITIAL SET-UP SHALL BE BY AN AMERICAN TRAFFIC SAFETY SERVICES ASSOCIATION (ATSSA) CERTIFIED WORKSITE TRAFFIC SUPERVISOR. THE MAINTENANCE AND SERVICING SHALL ALSO BE DONE BY AN ATSSA CERTIFIED WORKSITE TRAFFIC SUPERVISOR OR EQUIVALENT.
8. CONTRACTOR IS RESPONSIBLE TO MAINTAIN AND SERVICE ALL TRAFFIC CONTROL DEVICES 24 HOURS A DAY, 7 DAYS A WEEK THROUGHOUT LENGTH OF PROJECT. CONTRACTOR IS RESPONSIBLE THAT ALL TRAFFIC CONTROL DEVICES COMPLY WITH THE MUTCD, LATEST EDITION.
9. ALL ADVANCE WARNING SIGNS SHALL BE DOUBLE INDICATED WHENEVER THERE ARE MULTI-LANE TRAFFIC IN ANY ONE GIVEN DIRECTION AND THERE IS SUFFICIENT MEDIAN SPACE.
10. ALL BARRICADES IN ALL TAPERS AND TANGENTS SHALL BE PLACED APART, A DISTANCE MEASURED IN FEET, EQUAL TO THAT OF THE POSTED SPEED LIMIT. NO EXCEPTIONS UNLESS APPROVED BY CONSTRUCTION COORDINATION PER MUTCD SECTION 6A-4.
11. ALL WORK IN ARTERIAL ROADWAYS SHALL BE ON A CONTINUOUS 24 HOUR PER DAY BASIS UNTIL COMPLETED.
12. CONTRACTOR IS RESPONSIBLE TO PROVIDE CONSTRUCTION COORDINATION, A WEEKLY LOG OF DAILY INSPECTIONS OF BARRICADE AND MAINTENANCE SCHEDULES ON PROJECTS THAT ARE OVER ONE WEEK DURATION.
13. EQUIPMENT OR MATERIALS SHALL NOT BE STORED WITHIN 15 FEET OF A TRAVELED TRAFFIC LANE DURING NON-WORKING HOURS WITHOUT THE APPROVAL OF CONSTRUCTION COORDINATION.
14. CONTRACTOR SHALL PROVIDE AND MAINTAIN A SAFE AND ADEQUATE MEANS OF CHANNELIZING PEDESTRIAN TRAFFIC AROUND AND THROUGH THE CONSTRUCTION AREA.
15. CONTRACTOR IS RESPONSIBLE FOR OBLITERATION OF ANY CONFLICTING STRIPING AND RESPONSIBLE FOR ALL TEMPORARY STRIPING.
16. CONTRACTOR SHALL MAINTAIN ACCESS TO ALL FACILITIES, BUSINESSES AND/OR RESIDENTS AT ALL TIMES.
17. CONTRACTOR SHALL PROVIDE ACCESS SIGNS FOR BUSINESSES LOCATED WITHIN THE CONSTRUCTION AREA UNDER THE SUPERVISION OF CONSTRUCTION COORDINATION. EACH ACCESS SIGN SHALL HAVE 5 INCH, WHITE OPAQUE LETTERING ON BLUE REFLECTORIZED BACKGROUND. ACCESS SIGNS SHALL BE CONSIDERED INCIDENTAL TO THE BID AND NOT PART OF THE CONTRACT UNLESS OTHERWISE STATED. NO MORE THAN 3 BUSINESSES SHALL BE LISTED ON A ACCESS SIGN. SHOPPING CENTERS AND MALLS SHALL BE LISTED AS SUCH.
18. ALL ADVANCE WARNING SIGNS SHALL MEET THE MINIMUM REFLECTIVE INTENSITY REQUIREMENTS SET FORTH BY THE CITY OF ALBUQUERQUE. CONSTRUCTION COORDINATION SHALL DETERMINE ALL REQUIREMENTS AND APPROVE OR DISAPPROVE ANY ADVANCE WARNING SIGN PER SECTION 6A-4 OF THE MUTCD, LATEST EDITION.
19. 48 HOURS PRIOR TO OCCUPYING OR CLOSING OF A RIGHT-OF-WAY, CONTRACTOR SHALL NOTIFY: POLICE, FIRE DEPARTMENT, SCHOOLS, HOSPITALS, TRANSIT AUTHORITY, BUSINESSES AND/OR RESIDENTS THAT WILL BE AFFECTED BY THE CONSTRUCTION.
20. ANY FIELD ADJUSTMENTS SHALL BE APPROVED BY CONSTRUCTION COORDINATION.
21. EXCAVATIONS SHALL BE PLATED, TEMPORARILY PATCHED OR RESURFACED PRIOR TO OPENING OF TRAFFIC. A MINIMUM OF 11 FEET SHALL BE PROVIDED FOR TRAFFIC IN ANY GIVEN DIRECTION. CONTRACTOR IS RESPONSIBLE FOR ANY WORK INVOLVED IN SATISFYING THESE REQUIREMENTS.
22. CONTRACTOR SHALL AT ALL TIMES COMPLY WITH THE FOLLOWING:
1. STANDARDS AND REQUIREMENTS SET FORTH IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION.
2. THE CITY OF ALBUQUERQUE TRAFFIC CODE, LATEST EDITION.
3. SECTION 19 OF THE CITY OF ALBUQUERQUE'S STANDARD SPECIFICATIONS FOR PUBLIC WORK CONSTRUCTION, AS WELL AS OTHER SECTIONS.
23. FAILURE TO COMPLY WITH ANY OF THE ABOVE MENTIONED, WILL BE ADEQUATE CAUSE TO CEASE ALL WORK ON ANY CONSTRUCTION PROJECT. WORK WILL NOT RESUME UNTIL ALL REQUIREMENTS ARE ADDRESSED AND APPROVED BY CONSTRUCTION COORDINATION.
24. ALL TRAFFIC CONTROL DEVICES SHALL BE KEPT IN NEW-CLEAN CONDITION, WASHING OF EQUIPMENT IS INCIDENTAL TO ITS PLACEMENT AND MAINTENANCE.
25. TRAFFIC CONTROL STANDARDS APPLY ONLY WHERE THE CONSTRUCTION TRAFFIC CONTROL PLANS ARE NOT SPECIFIC.
26. ADVANCE WARNING SIGNS SHALL BE 36"x36" MIN. WITH SUPER ENGINEERING GRADE SHEETING OR BETTER. MOUNTING HEIGHT AT TOP OF SIGN SHALL BE THE SAME AS FOR A 48" SIGN AS INDICATED IN THE M.U.T.C.D.
27. CONTRACTOR SHALL MAINTAIN A GRAFFITI-FREE WORKSITE. ALL GRAFFITI SHALL BE PROMPTLY REMOVED FROM ALL EQUIPMENT, BOTH PERMANENT AND TEMPORARY.



LEGEND

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

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

TAPER REQUIREMENT

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

RECOMMENDED SIGN SPACING(D) FOR ADVANCE WARNING SIGN SERIES

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

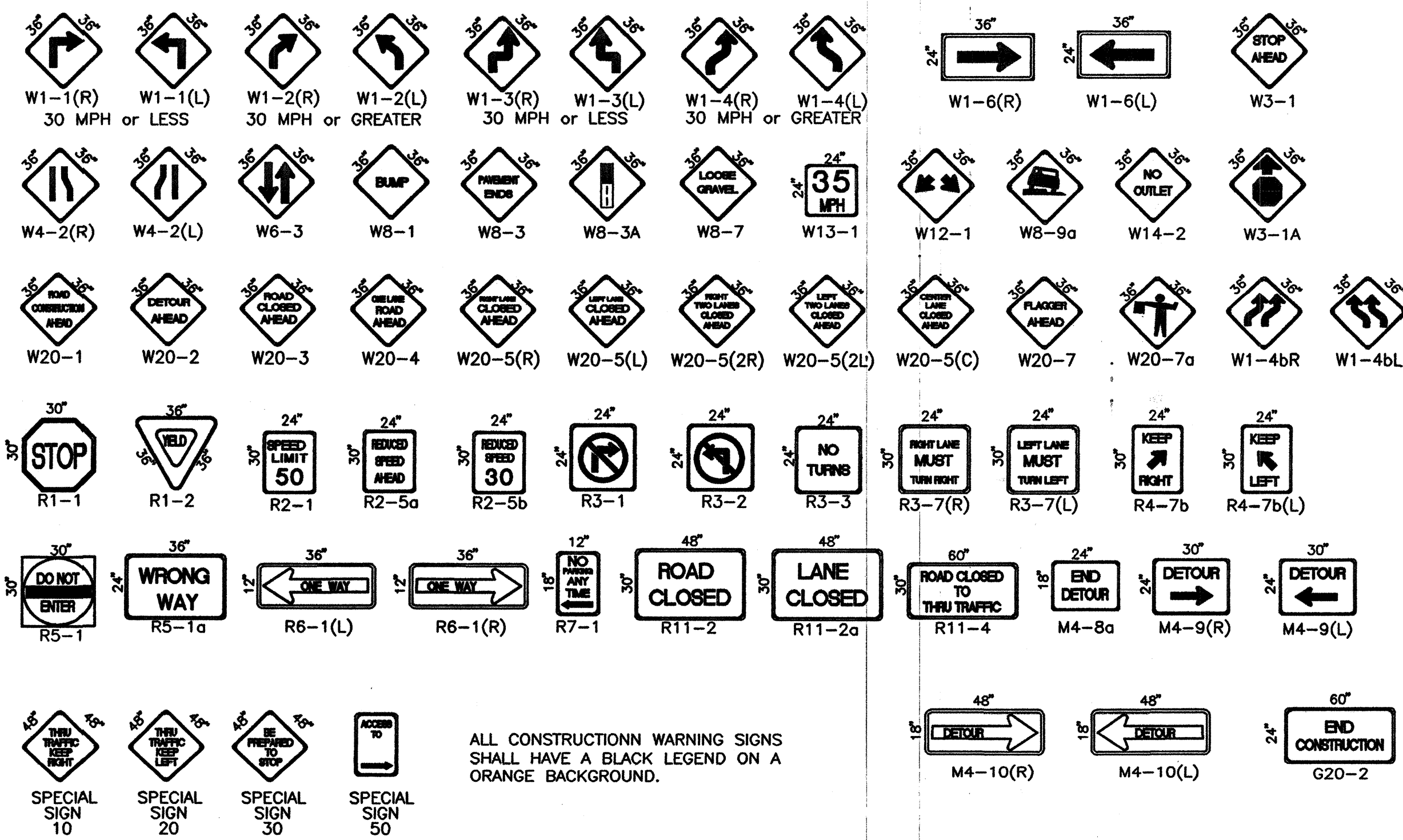
TAPER CRITERIA

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

TAPER LENGTH COMPUTATION

SPEED LIMIT	
40 MPH OR LESS	$L = \frac{WS^2}{60}$
40 MPH OR GREATER	$L = W \times S$
L = TAPER LENGTH	
W = WIDTH OF OFFSET IN FEET	
S = POSTED SPEED OR OFF-PEAK 85-PERCENTILE SPEED IN MPH	

SIGN FACE DETAILS



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

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING DEVELOPMENT GROUP

TITLE: OPEN SPACE VISITOR CENTER ACCESS BRIDGE, PHASE II
TRAFFIC CONTROL
SIGNING AND CONSTRUCTION TRAFFIC CONTROL STANDARDS

DESIGN REVIEW COMMITTEE

CITY ENGINEER APPROVAL

MO./DAY/YR.

MO./DAY/YR.

CITY PROJECT NO. 61200

ZONE MAP NO. D-13

SHEET 11 OF 12

