

ORO REAL STORM DRAIN

PUBLIC WORKS DEPARTMENT CITY OF ALBUQUERQUE

STORM DRAINAGE IMPROVEMENTS AND CHANNEL REHABILITATION

MARCH 1991

PREPARED BY:

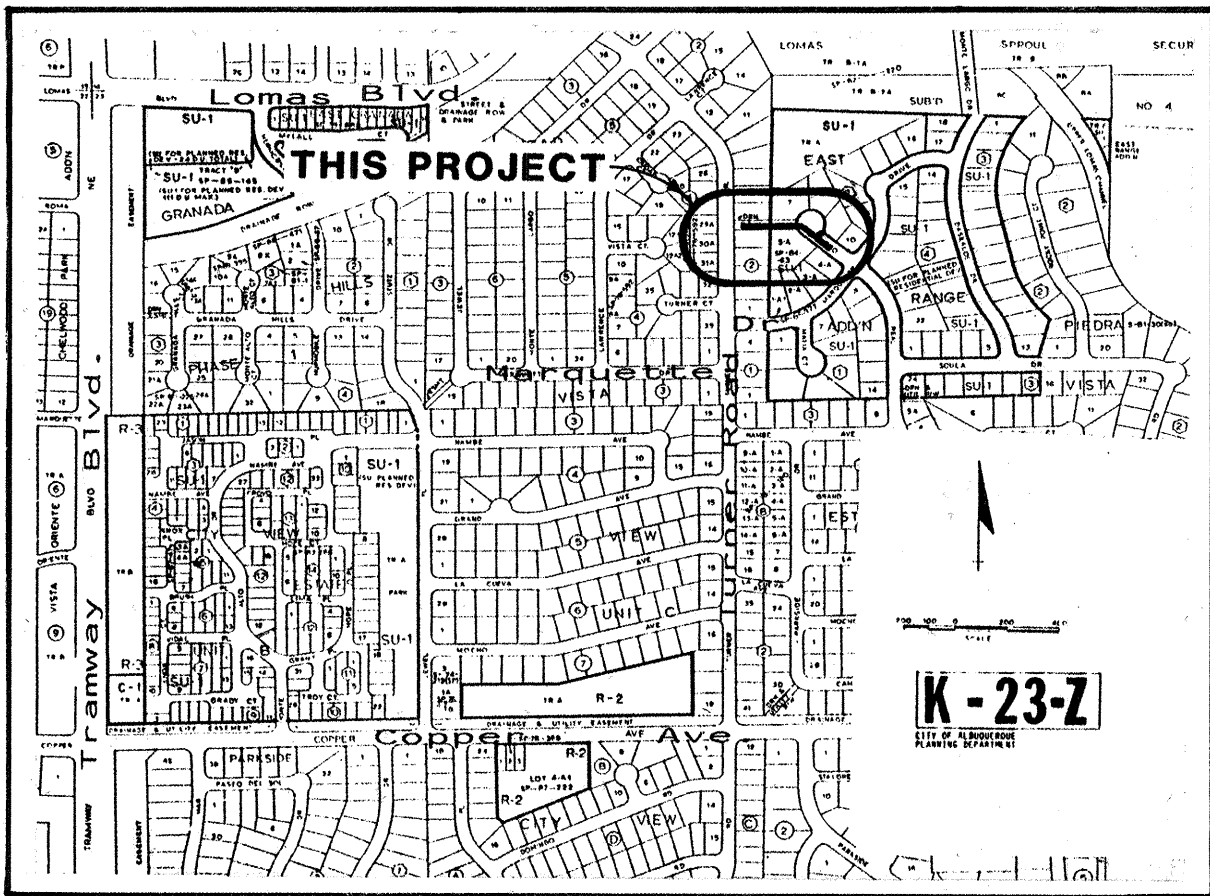
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GENERAL NOTES

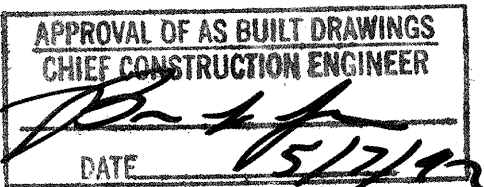
1. ALL WORK DETAILED ON THESE PLANS TO BE PERFORMED UNDER CONTRACT SHALL, EXCEPT AS OTHERWISE STATED OR PROVIDED FOR HEREON, BE CONSTRUCTED IN ACCORDANCE WITH THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION 1986.
2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE & VERIFY THE HORIZONTAL AND VERTICAL LOCATIONS OF ALL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER SO THAT THE CONFLICT CAN BE RESOLVED WITH MINIMUM DELAY.
3. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE @ 260-1990 FOR LOCATION OF EXISTING UTILITIES.
4. WATER SYSTEMS SHALL BE CONTACTED @ 857-8200, 2 WEEKS PRIOR TO ANY SHUT-OFFS. ALL SHUT-OFFS SHALL BE AS PER SECTION 18.3 OF THE GENERAL CONDITIONS.
5. CONTRACTOR SHALL SUPPORT ALL EXISTING, UNDERGROUND UTILITY LINES AND SERVICES WHICH BECOME EXPOSED DURING CONSTRUCTION. PAYMENT FOR SUPPORTING WORK OR REPLACING AT THE CONTRACTOR'S OPTION SHALL BE INCIDENTAL TO CONSTRUCTION.
6. ALL STORM DRAIN STATIONING REFERS TO THE SURVEY CENTER-LINE STATIONING WITH STA. 1+00 AT THE CENTERLINE OF TURNER DRIVE N.E.
7. CONTRACTOR SHALL CONDUCT HIS OPERATIONS IN A MANNER WHICH WILL MINIMIZE INTERFERENCE WITH LOCAL TRAFFIC. CONTRACTOR SHALL COMPLY WITH ALL APPLICABLE LAWS, ORDINANCES, RULES, REGULATIONS, AND ORDERS OF ANY PUBLIC BODY HAVING JURISDICTION FOR THE SAFETY OF PERSONS OR PROPERTY, AND TO PROTECT THEM FROM DAMAGE, INJURY, OR LOSS. CONTRACTOR SHALL ERECT AND MAINTAIN, AS REQUIRED BY THE CONDITIONS AND PROGRESS OF THE WORK, ALL NECESSARY SAFEGUARDS FOR SAFETY CONTINUOUSLY AND NOT LIMITED TO NORMAL WORKING HOURS, THROUGHOUT THE DURATION OF THE PROJECT. CONTRACTOR SHALL ADHERE TO SECTION 19 OF THE GENERAL CONDITIONS OF THE CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS FOR PUBLIC WORKS CONSTRUCTION, 1986.
8. THE CONTRACTOR AGREES THAT HE SHALL ASSUME THE SOLE AND COMPLETE RESPONSIBILITY FOR THE JOB SITE CONDITIONS DURING THE COURSE OF CONSTRUCTION OF THIS PROJECT, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY; THAT THIS REQUIREMENT SHALL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS; AND THAT THE CONTRACTOR SHALL DEFEND, INDEMNIFY, AND HOLD HARMLESS THE OWNER & ENGINEER FROM ANY AND ALL LIABILITY REAL OR ALLEGED, IN CONNECTION WITH THE PERFORMANCE OF WORK ON THIS PROJECT, EXCEPTING LIABILITY ARISING FROM THE SOLE NEGLIGENCE OF THE OWNER OR ENGINEER.
9. TRENCH WIDTHS FROM THE BOTTOM OF THE PIPE TO A POINT 12" ABOVE THE PIPE SHALL BE A MINIMUM OF THE PIPE OUTSIDE DIAMETER PLUS 16 INCHES AND A MAXIMUM OF THE PIPE OUTSIDE DIAMETER PLUS 24 INCHES. ALL TRENCHES TO CONFORM TO O.S.H.A. REQUIREMENTS FOR CLASS "C" SOIL.
10. THE BEDDING CLASS FOR STORM DRAIN LINES SHALL BE CLASS B.
11. GRADED ACCESS TO RESIDENTS ACROSS CONSTRUCTION ZONE SHALL BE MAINTAINED DURING CONSTRUCTION. THE MAXIMUM DURATION OF IMPASSE TO ANY RESIDENCE SHALL BE TWO DAYS.
12. ALL CONCRETE USED FOR EXPOSED SURFACE (CURB & GUTTER, SIDEWALKS, DRIVEPADS, ETC.) SHALL MEET THE REQUIREMENTS OF SECTION 602 OF THE SPECIFICATIONS.
13. DEPTHS SHOWN ON PROFILE FOR EXISTING UTILITIES ARE ASSUMED AND ACTUAL DEPTHS MAY VARY SUBSTANTIALLY.
14. TWO (2) WORKING DAYS PRIOR TO THE COMMENCEMENT OF EACH PHASE OF CONSTRUCTION, CONTRACTOR SHALL OBTAIN A BARRICADING PERMIT FOR THE NEXT PHASE FROM THE CONSTRUCTION COORDINATOR.
15. PAVING REPLACEMENT FOR PAVEMENT CUTS FOR UTILITIES AND STORM DRAINS SHALL CONFORM TO STANDARD DRAWING NO. 2465 FOR RESIDENTIAL STREETS WITH THE PAVING SECTION CONSISTING OF A $4\frac{1}{2}$ " THICKNESS OF 1500 LB. STABILITY ASPHALTIC CONCRETE BASE COURSE AND A $1\frac{1}{2}$ " THICKNESS OF 1800 LB. ASPHALTIC CONCRETE SURFACE COURSE.
16. CONSTRUCTION ACCESS TO ALL WORK ON THE ORO REAL DRAINAGE CHANNEL/STORM DRAIN IS LIMITED TO THE AREAS INSIDE THE EXISTING CHANNEL SIDEWALLS FOR THAT PORTION ADJACENT TO LOTS 5-A AND 7, BLOCK 2, EAST RANGE SUBDIVISION AND LIMITED TO THE 40' DRAINAGE & UTILITY R.O.W. ADJACENT TO LOTS 5 & 6, BLOCK 2, CIUDAD VISTA SUBDIVISION.



VICINITY MAP

WARNING-EXISTING UTILITY LINE LOCATIONS ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. THE LOCATION OF ANY SUCH EXISTING LINES IS BASED UPON INFORMATION PROVIDED BY THE UTILITY COMPANY, THE OWNER, OR BY OTHERS, AND THE INFORMATION MAY BE INCOMPLETE OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES.

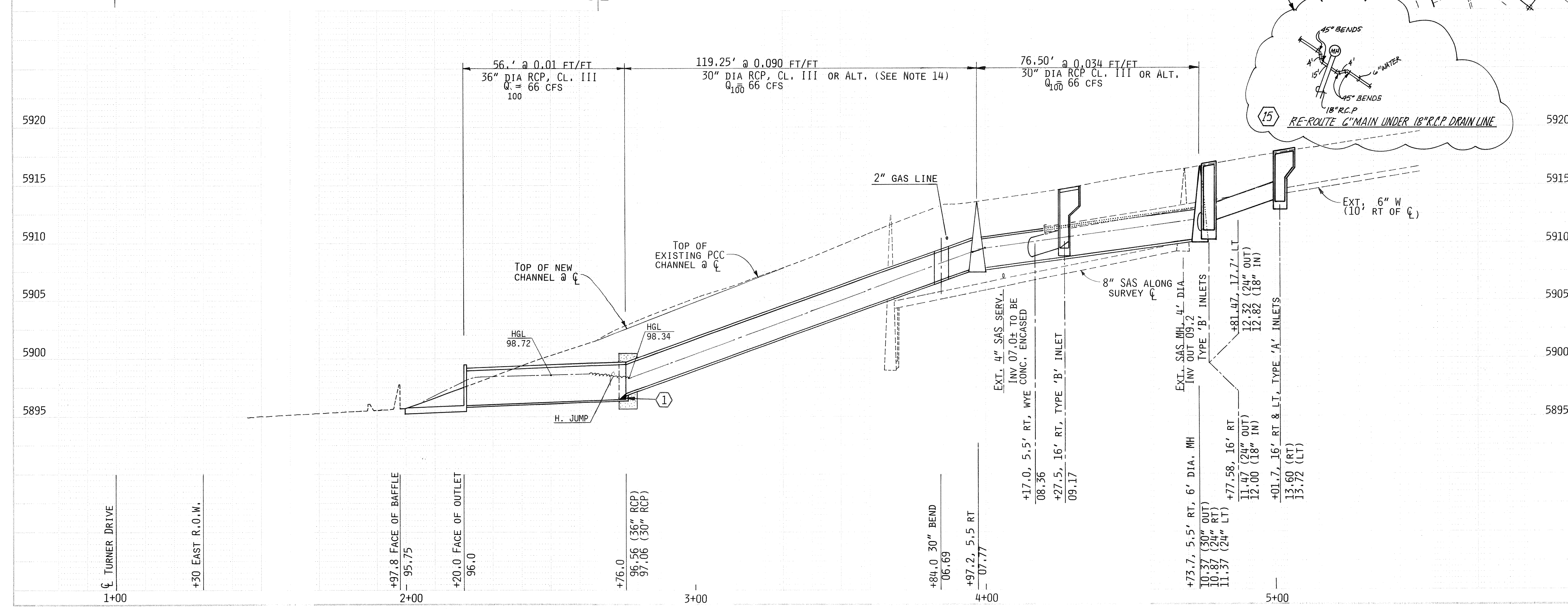
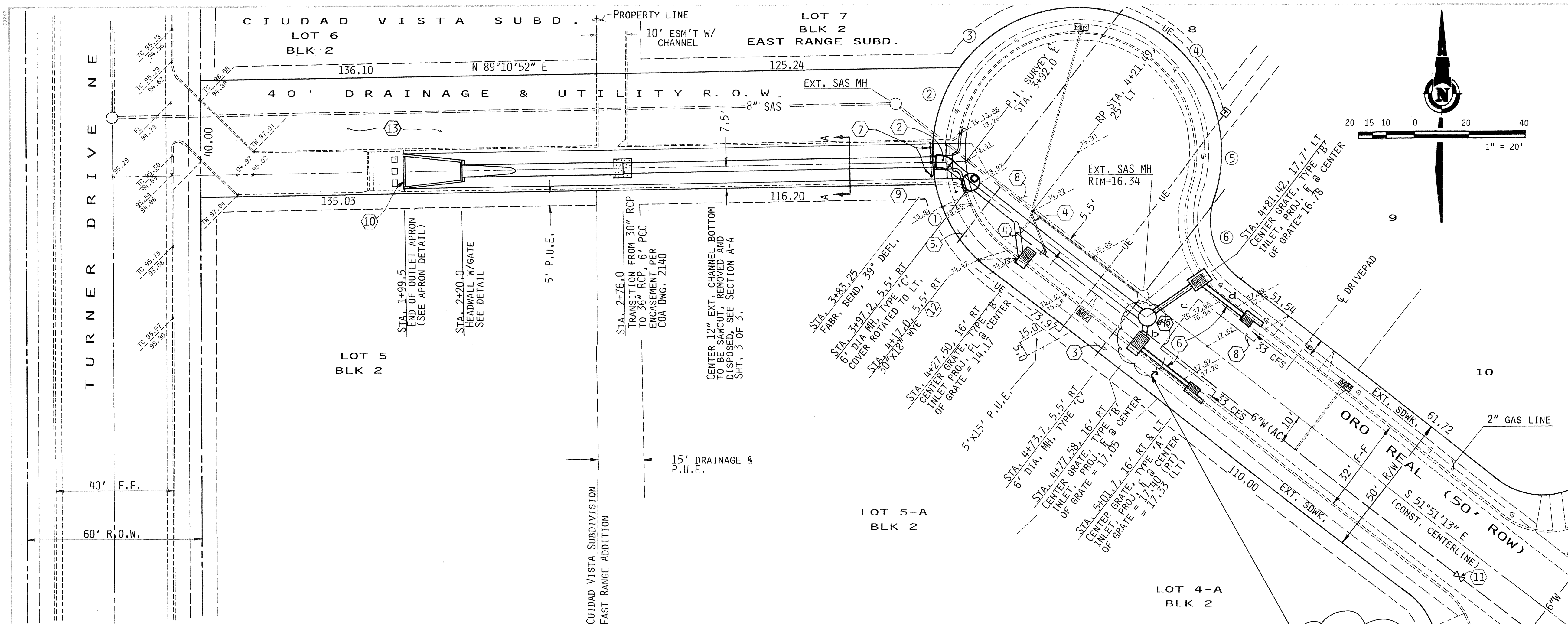
THE ENGINEER HAS UNDERTAKEN NO FIELD VERIFICATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UNDERGROUND UTILITY LINES, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY, AND PRESERVE ANY AND ALL EXISTING UTILITIES. THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS 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.



1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
2	6	4	2	6	3	9	0	0	1	9	2			

REV.	SHEETS	CITY ENGR.	DATE	USER DEPT.	DATE	USER DEPT.	DATE
APPROVAL OF REVISIONS							

	Isaacson & Arfman, P.A. CONSULTING ENGINEERING ASSOCIATES Albuquerque, New Mexico	APPROVED FOR CONSTRUCTION <i>David J. Smith</i> 5-3-91
DRAWING NO. 4263.90		SHEET 1 OF 3



CURVE TABLE

1. $\Delta = 41^{\circ}19'56''$ R = 50.00 L = 36.07	2. $\Delta = 48^{\circ}51'17''$ R = 50.00 L = 42.63
3. $\Delta = 51^{\circ}22'40''$ R = 50.00 L = 44.84	4. $\Delta = 76^{\circ}08'34''$ R = 50.00 L = 68.45
5. $\Delta = 32^{\circ}48'55''$ R = 50.00 L = 26.64	6. $\Delta = 70^{\circ}31'48''$ R = 25.00 L = 30.73

CONSTRUCTION NOTES

- MISALIGNED INSIDE JOINT TO BE GROUT FILLED WITH 2:1 TRANSITION SLOPES BETWEEN INSIDE PIPE SURFACES.
- RECONSTRUCT SW TWIN CULVERT WITH STEEL PLATE TOP PER COA DWG. 2236. SEE DETAIL SHT. 1 OF 3.
- CONFIRM THAT 4" SAS SERVICE LINE IS ABANDONED BEFORE REMOVING AND DISPOSING SECTION WITHIN STORM DRAIN TRENCH.
- REMOVE ONE LENGTH OF WATER LINE (MIN.) AND BLOCKING. PROVIDE NEW BLOCKING AND RECONNECT TWO SERVICES FOR LOTS 3 & 4.
- EXISTING (ACTIVE) SAS SERVICE LINE.
- REMOVE, DISPOSE AND REPLACE STD. CURB & GUTTER AS NECESSARY.
- THREE (3) REMOVABLE POSTS, 5 FEET RT & LT OF CENTERLINE AND AT CENTERLINE W/ 1/4" DIA. GALV. PIPE HAND-RAIL THROUGH EACH W/ LOCK ASSEMBLY. (PER STD. DWG. 2250).
- LIMITS OF PAVEMENT REMOVAL AND REPLACEMENT.
- REMOVE AND REPLACE CURB & GUTTER, CONCRETE FILLET AND DRIVEPAD AS NECESSARY.
- EXISTING CONC. ENERGY DISSIPATOR TO REMAIN IN PLACE.
- CLOSE VALVE NO. 352 (K-23) TO ISOLATE 6" DIA. MAIN IN CUL-DE-SAC. SEE NOTE 4, SHT. 1 OF 3.
- WYE SHALL BE INCLUDED IN COST OF THE 18" & 30" DIA. RCP.
- NORTHERLY 25' OF DRAINAGE & UTILITY RIGHT-OF-WAY ADJ. TO LOT 6, CIUDAD VISTA SUBD. SHALL BE RESTORED (RE-SEEDING ACCORDING TO AMAFCA REVEGETATION SPECIFICATIONS) IF USED BY CONTRACTOR TO ACCESS DRAINAGE CHANNEL IMPROVEMENTS.
- ALTERNATE PIPE MATERIAL FOR 30" DIA. OR LESS: SMOOTH INTERIOR POLYETHYLENE WITH POLYETHYLENE SLEEVE JOINTS WITH TWO (2) ELASTOMERIC GASKETS MEETING THE REQUIREMENTS OF AASHTO M-294, HANGOR TITELINE OR APPROVED EQUAL. THIS IS AN AMENDMENT OF SECTION 910.31 OF THE SPECIFICATIONS.
- RE-ROUTE 6" WATERMAIN UNDER

CONNECTOR PIPE TABLE

PIPE	DIA.	LENGTH	SLOPE
a	18"	20'	8%
b	24"	6'*	10%
c	24"	19'*	5%
d	18"	17'	5%

*DISTANCES FROM INSIDE FACE OF INLET TO CENTER OF MANHOLE.

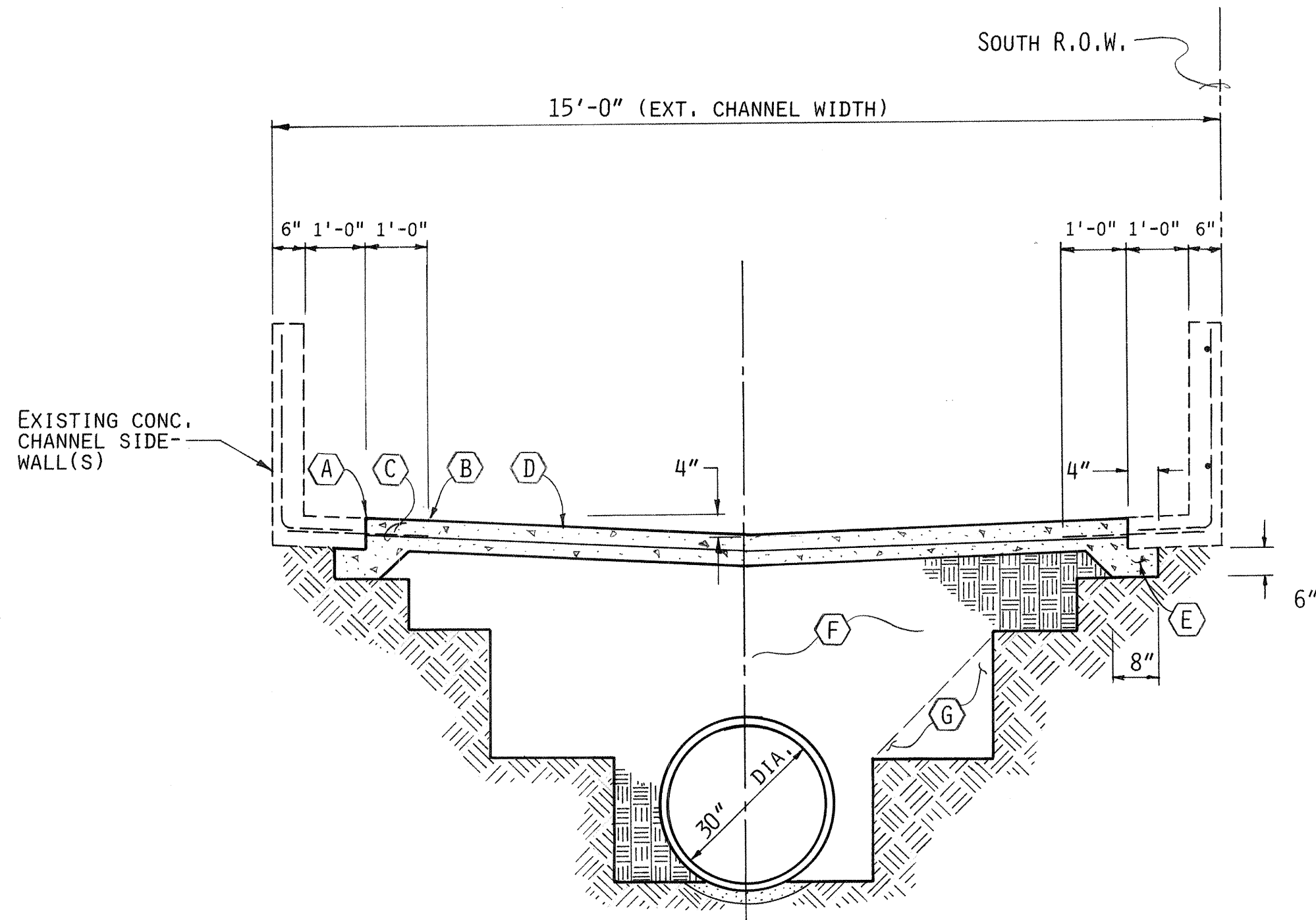
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26	42	63	9	0	0	2	9	2						

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

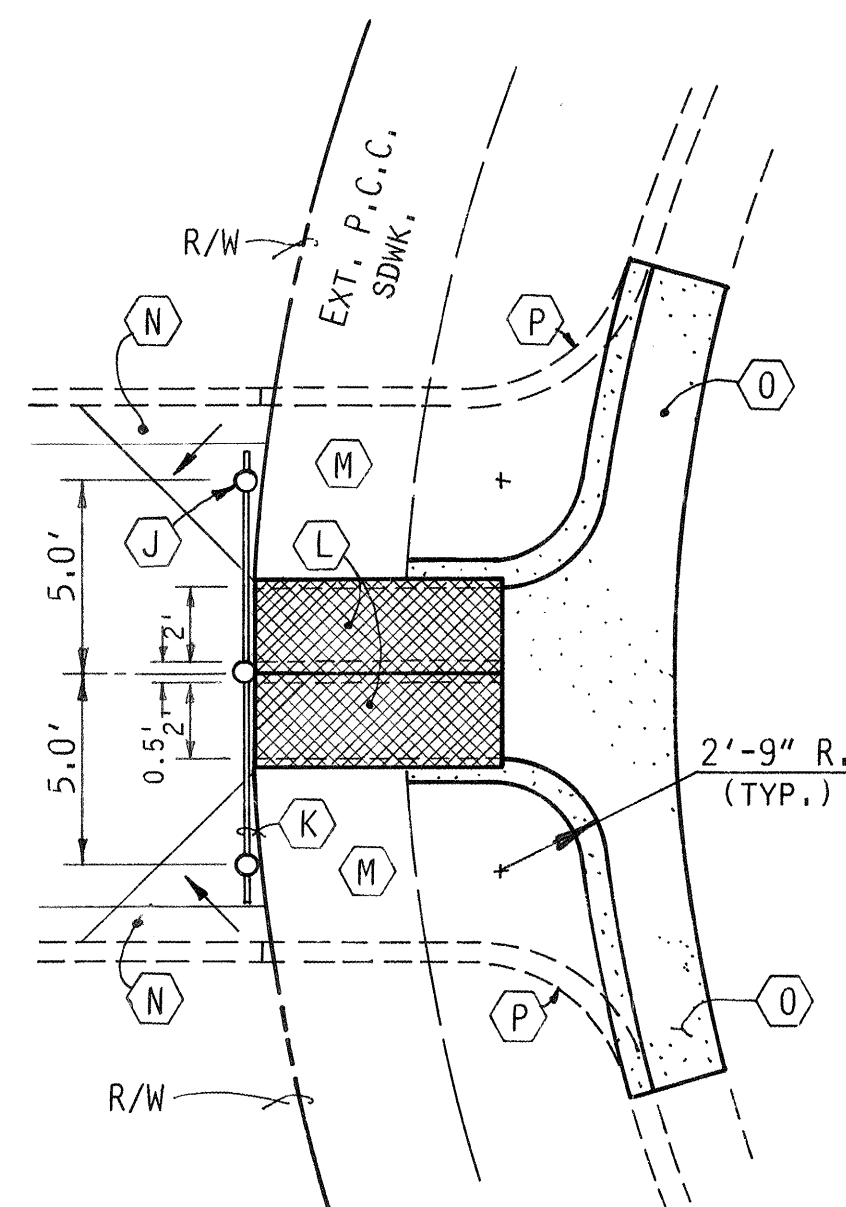
TITLE: ORO REAL STORM DRAIN AND DRAINAGE CHANNEL IMPROVEMENTS

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
D.R.C. Chair	Rogel Rios	5-2-91	Water	H.C. Chen	4-25-91
Trans. Dev.	Blank	4-26-91	Wastewater	NCO	"
Hydrology	Blank	5-1-91			

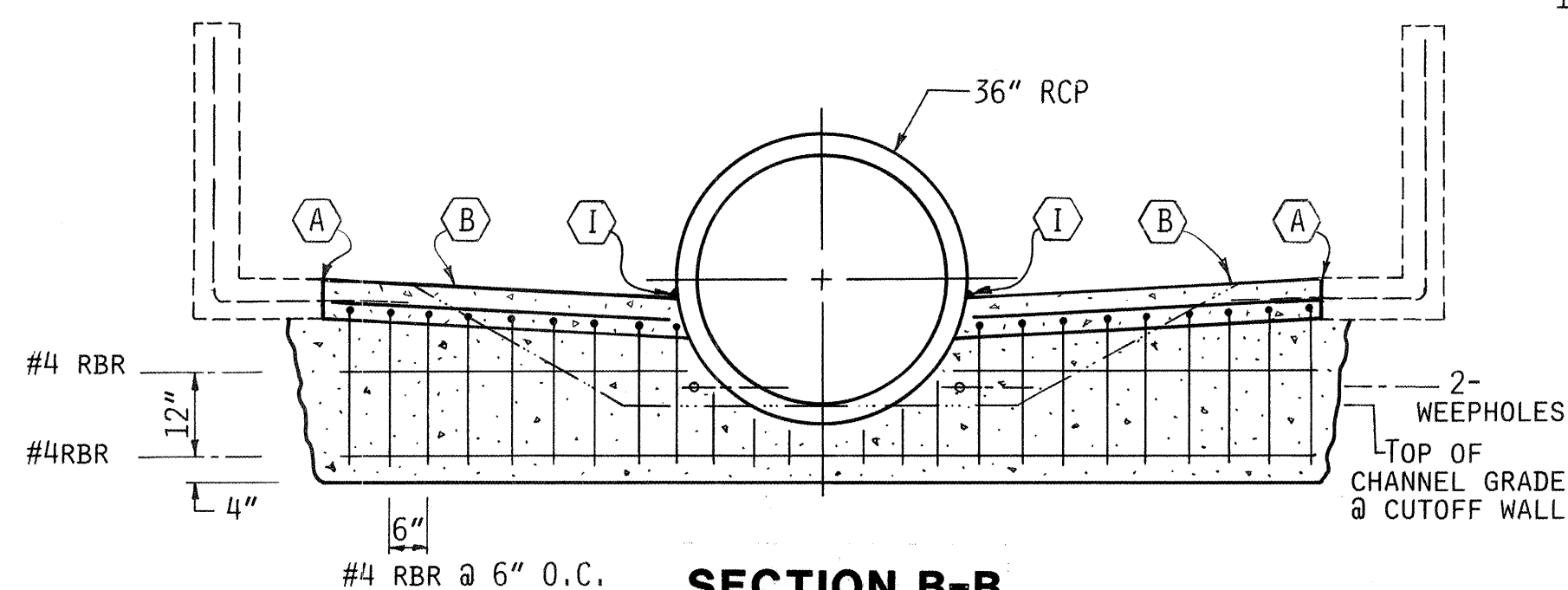
DRAWING NO. **4263.90** MAP NO. **K-23** SHEET **2** OF **3**



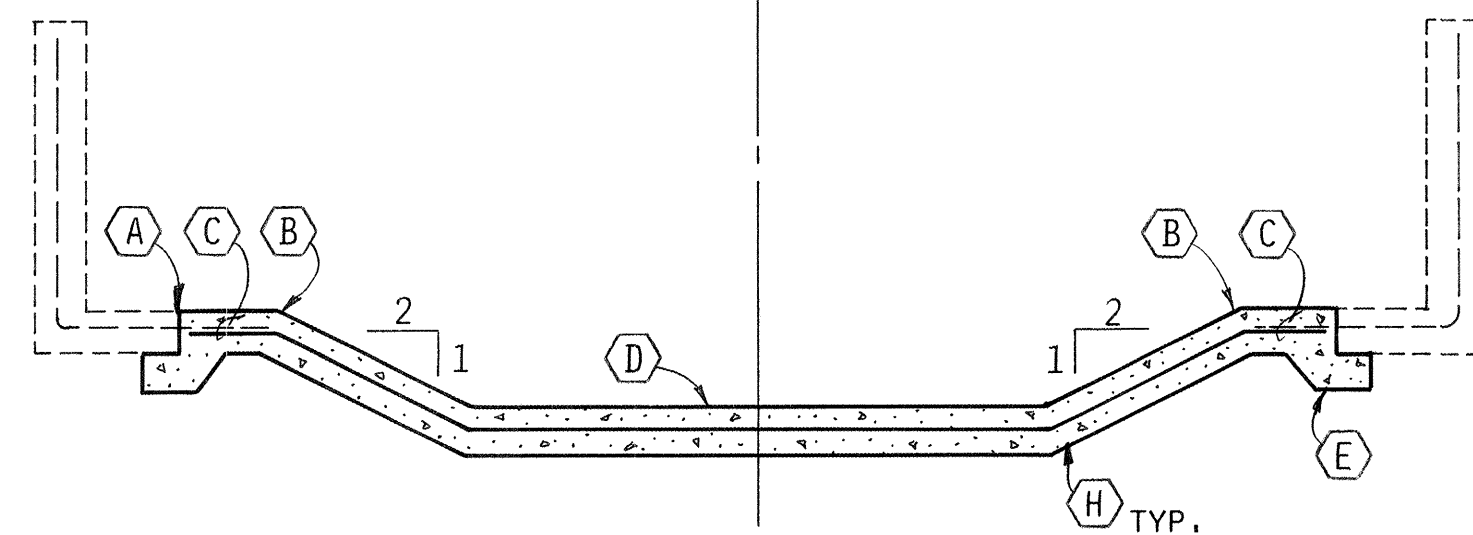
**SECTION A-A
CHANNEL RECONSTRUCTION
AND RCP PLACEMENT**
1"=2'-0"



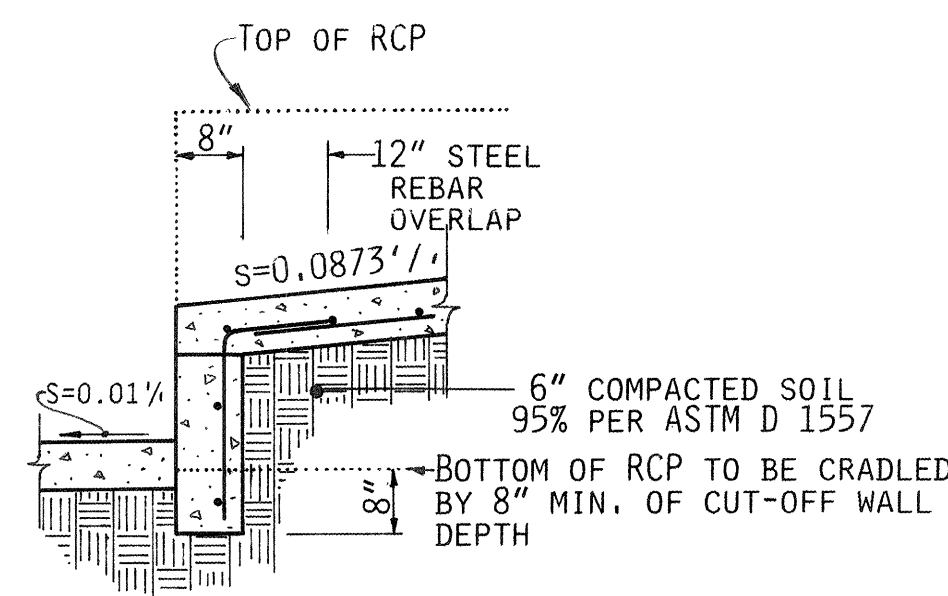
**CHANNEL ENTRANCE/SIDEWALK
CULVERT REPLACEMENT**
1"=5'-0"



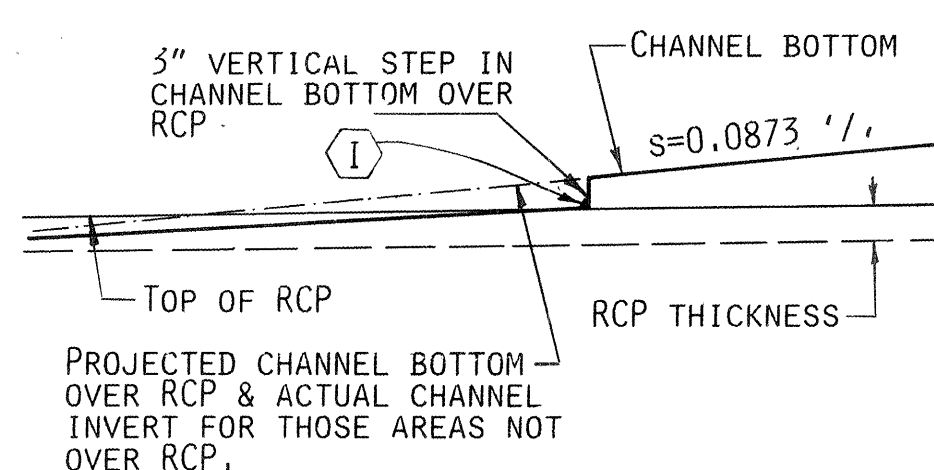
SECTION B-B
1"=2'-0"



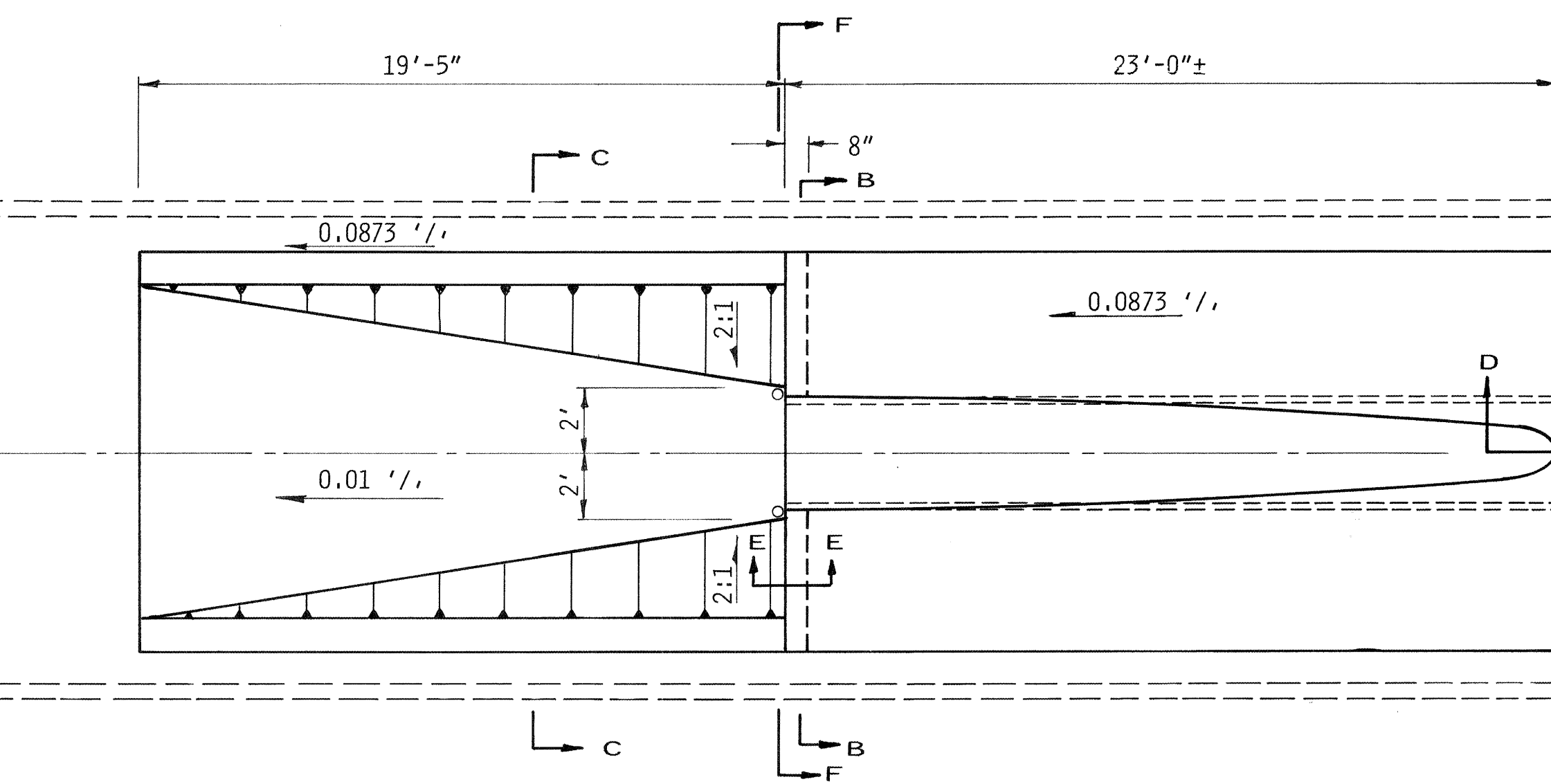
SECTION C-C
1"=2'-0"



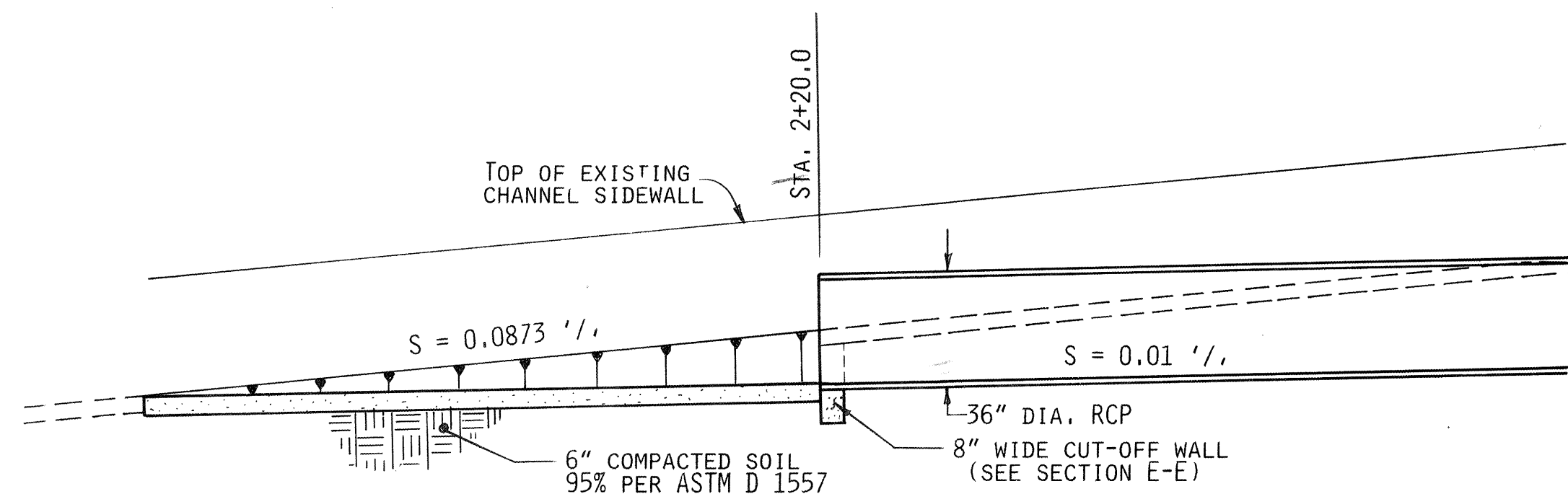
SECTION E-E



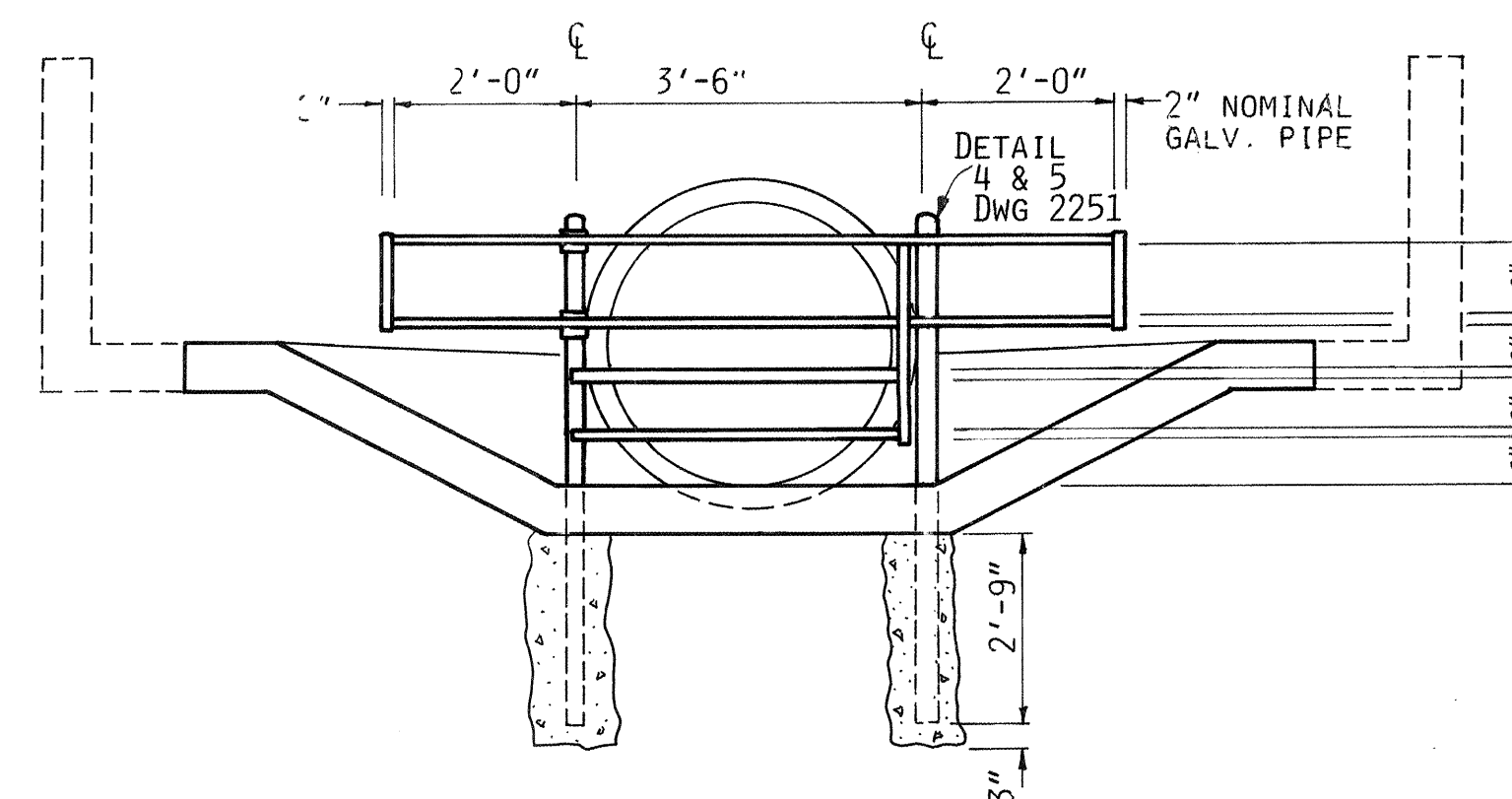
SECTION D-D



36" RCP OUTLET - PLAN
1"=4'-0"



PROFILE VIEW
1"=4'-0" (H. & V.)



**SECTION F-F
OUTLET WORKS ACCESS CONTROL GATE**

NOTE: MODIFIED PIPE GATE SHALL BE CONSTRUCTED AS SHOWN ABOVE IN ACCORDANCE WITH THE GENERAL AND CONSTRUCTION NOTES AS FOUND ON C.O.A. DWG. 2251.

KEYED NOTES

- SAW CUT TO A DEPTH ABOVE STEEL REINFORCING.
- SAW CUT AND REMOVE INTERIOR PORTION OF CHANNEL BOTTOM.
- REMOVE CONCRETE FROM AROUND REINFORCEMENT AND BEND BARS DOWN (TEMPORARY) OR WRAP FOR SAFETY REASONS.
- RECONSTRUCT CHANNEL BOTTOM PER COA DWG. 2260, TYPE B, REALIGN EXISTING REINFORCEMENT AND TIE TO NEW NO. 4 REBARS.
- THICKENED CONCRETE SLAB AT JUNCTURE.
- CLASS B TRENCH BEDDING & BACKFILL.
- TRENCH PER CURRENT OSHA REGULATIONS.
- CHANNEL INVERT - SIDE SLOPE INTERSECTION PER COA DWG. 2261.
- 3/4" X 3/4" URETHANE PRIMER & SEALANT ALONG ENTIRE JOINT OF RCP AND PCC CHANNEL LINING.

CHANNEL ENTRANCE & SDWK. CULV. DETAIL

- REMOVABLE POST PER C.O.A. DWG. 2250 (3 EACH) MODIFIED TO ACCEPT HANDRAIL (SEE NOTE K) AND RAISE TO A HEIGHT 3'-6" ABOVE ADJACENT TOP OF SIDEWALK.
- 1 1/2" DIA. GALV. PIPE WITH LOCKING ASSEMBLY TO SERVE AS A HANDRAIL AT A HEIGHT 5 FEET ABOVE ADJACENT SIDEWALK.
- 2 - DRAINAGE SIDEWALK CULVERT WITH STEEL PLATE TOP (24" WIDTH X 6'-6" EA.) PER C.O.A. DWG. 2236.
- EXTEND P.C.C. SIDEWALKS (LT. & RT.) TO DRNG. SDWK. CULVERT.
- SLOPED P.C.C. FROM TOP OF SIDEWALK AT CHANNEL WALK TO CHANNEL BOTTOM.
- STANDARD CURB & GUTTER W/ FILLET TO TRANSITION INTO CHANNEL ENTRANCE AT SIDEWALK CULVERTS.
- REMOVE AND DISPOSE EXISTING SIDEWALK CULVERTS AND CURBING.

						ENGINEER'S SEAL		SURVEY INFORMATION		BENCH MARKS		AS BUILT INFORMATION	
								FIELD NOTES				CONTRACTOR <i>MCC</i>	
								BY				STANDARD BY <i>COA</i>	
								NO.				INSPECTOR'S DATE <i>4/17/92</i>	
												FIELD MADE BY <i>MERY NEPHEW</i>	
												VERIFICATION BY <i>M NEPHEW</i>	
												DATE <i>4/17/92</i>	
												CONDUCTED BY <i>M NEPHEW</i>	
												DATE <i>4/17/92</i>	
												MICRO-FILM INFORMATION	
												RECORDED BY	
												DATE	
												NO.	