D12/D1D1

City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

FEB 1 1992

February 17, 1992

CERTIFICATE OF COMPLETION AND ACCEPTANCE

Mr. Tony Sciarrillo
San-Far Joint Venture
10 Tramway Loop N.E.
Albuquerque, NM 87122

RE: PROJECT NO. 4270.90, PRAIRIE PARK SUBDIVISION, (MAP NO. D-12)

Dear Mr. Sciarrillo:

This is to certify that the City of Albuquerque accepts Project No. 4270.90 as being completed according to approved plans and construction specifications. The City of Albuquerque will accept for continuous maintenance all public infrastructure improvements constructed as part of Project No. 4270.90.

The project is described as follows:

- Extended water, sewer and storm drain lines and constructed curb and gutter and paving to service Lots 1 through 42 in Prairie Park Subdivision.

- The contractor's correction period began February 12, 1992 and will be effective for a period of one (1) year.

Sincerely,

Brian L. Speicher, P.E.
Design/Construction Division
Public Works Department

BLS:kj

STORM SEWER
DESIGN ANALYSIS REPORT
FOR
PRAIRIE PARK SUBDIVISION
(FORMERLY PRAIRIE RIDGE
UNIT 5)

JUNE 7, 1991

I certify that I am a registered professional engineer in the State of New Mexico and that this report was prepared by me or under my supervision.

KERRY L. DAVIS
NEW MEXICO
9984
REGISTERED PROFESSIONAL ENGINEER

Kerry L. Davis, P.E. — 6-12-91
Date

STORM SEWER
DESIGN ANALYSIS REPORT
FOR
PRAIRIE PARK SUBDIVISION
(FORMERLY PRAIRIE RIDGE UNIT 5)

June 7, 1991

Prepared for:

PASEO DEL NORTE JOINT VENTURE
C/O Sandia Joint Venture, Manager
No. 10 Tramway Loop
Albuquerque, NM

Prepared by:

BOHANNAN-HUSTON INC.
7500 Jefferson, N.E.
Courtyard I
Albuquerque, NM 87109

Job No. 91128.02

TABLE OF CONTENTS

STORM SEWER DESIGN ANALYSIS

PURPOSE

The purpose of this report is to supplement the drainage report for the Prairie Park Subdivision that was approved for preliminary plat approval, and to present the calculations and justification for the design of the storm sewer system to be constructed within the project. This report is submitted for the purpose of obtaining work order and final plat approval for the project.

HYDROLOGIC ANALYSIS

The previous hydrologic analysis for the project, prepared for the drainage report approved for preliminary plat approval, provided the runoff rates for each street within the project. These flow rates are included on the revised grading and drainage plan that is included as plate 1 in the appendix.

The flow rates utilized for design of the storm drainage facilities were computed by using the methods identified within the recently adopted update to the city's Development Process Manual (DPM Update). Both the rational method and the hydrologic model HYMO were utilized to identify the peak discharge rates collected within the two streets within the project. These two streets, Calyx Drive and Rosette Drive, intersect at the far northeast corner of the project. It is at this intersection that the storm sewer system for the project collects all of the runoff conveyed within the streets.

HYDRAULIC ANALYSIS

Downstream of the project, the storm sewer system connects into an existing 66" storm sewer that was installed within the South Piedras Marcadas Arroyo under city project 3314, and extended to the Piedras Marcadas Detention Basin under city project 3457. This storm sewer was designed to allow discharge from the project, and was provided with a 24" outlet wye for this purpose, placed within a 30' easement for storm drainage and sanitary sewer. The hydraulic grade line of this existing facility was interpolated in order to obtain a beginning point for the hydraulic design of the on-site storm sewer system.

Three runoff scenarios were evaluated for the purpose of identifying the proposed storm sewer system configuration:

A. 100% of Q100 to be intercepted and conveyed by the storm sewer system, with roll curb utilized to facilitate overflow of excess runoff through the 30' emergency spillway and easement.

B. 125% of Q100 to be intercepted and conveyed by the storm sewer system.

C. 100% of Q100 to be intercepted and conveyed by the storm sewer system, with standard curb utilized to increase its hydraulic efficiency.

Each system configuration is analyzed hydraulically for inlet capacity and storm sewer capacity. Inlet capacity and hydraulic grade line computations are provided in the appendix.

STORM SEWER CONFIGURATION OPTIONS

CASE A:

Under Case A, the storm sewer is designed to intercept and convey 100% of the 100 year storm runoff, with roll curb provided adjacent to the 30' emergency spillway to facilitate the overflow of excess runoff through the easement. Such excess runoff may be caused by sedimentation or other clogging of inlets due to trash collected on the grates.

This case is the least hydraulically efficient system due to the lack of head available on the last set of inlets placed at the emergency spillway entrance to the 30' easement. Such lack of head requires additional inlets placed both upstream of the spillway (an additional type A inlet), and at the spillway location (a triple-D inlet), in order to reduce the runoff reaching the spillway and increase the grate capacity to sufficiently collect 100% of the 100-year storm runoff.

This system configuration also significantly increases the likelihood that the easement will be utilized for emergency overflow due to clogging of the triple-D inlet structure. This situation was specifically prohibited in correspondence from Mr. Gilbert Aldaz dated April 16, 1991. This correspondence, which provided comments and requirements for design of the system, stated that all flows from within the subdivision must by picked up by the storm sewer system. In addition, standard curb and gutter must be placed around the entire cul-de-sac, which forms the emergency spillway.

CASE B:

Design of the underground storm sewer system to intercept 125% of the 100-year storm runoff is a situation that is common is locations where no surface facility is available for excess runoff or emergencies. The additional 25% is utilized as a bulking factor to account for sedimentation or other obstructions to the system. However, in this project, a surface facility is available for emergencies or excess runoff conditions. Therefore, the upsizing of a portion of the storm sewer from 24" to 30" diameter, as well as the additional inlets required in order to collect the additional runoff, is not warranted.

CASE C:

This system configuration is the most efficient of all of the systems due to the additional head available over the grates to the standard curb height as well as accounting for the surface facility available for use in emergencies, and for conveyance of excess runoff in the case of clogging or bulking. However, the curb openings provided with the specially designed type A inlets with double wings reduces the opportunity for clogging of the grates.

Lot grading is detailed and designed to avoid the possibility of runoff being conveyed across the private property on the lots adjacent to the easement, by the use of retaining walls along the easement boundaries. These walls provide additional freeboard as well as allowing the lot to be graded in order to direct runoff toward the street and the emergency spillway rather than across the lot.

CONCLUSIONS

Due to the overall economy of the design caused by the hydraulic efficiency of the curb combined with the availability of the surface easement for emergencies or excess runoff, storm sewer configuration Case C is selected for final design.

what about the 25%

INLET CAPACITY ANALYSIS

CASE A

ROSETTE DRIVE

Q_{TOTAL} = 41.4 cfs (HYMO: ID=10 HYD = ROSETTE DRAINAGE REPORT A - 3.7)

@ 41.4 cfs, d = 0.4'

SLOPE = 0.025 '/ft

INSTALL TYPE 'A' INLET #1

Q_{INLET} = 6 cfs (PLATE 22.3 D-5)

$Q_{REMAINING}$ = 41.4 - 6 = 35.4 cfs

CALYX DRIVE

Q_{TOTAL} = 28.8 cfs (HYMO: ID=9 HYD = CALYX DRAINAGE REPORT A-3.5)

@ 28.8 cfs, d = 0.5'

SLOPE = 0.005 '/ft

INSTALL TYPE 'A' INLET #2

Q_{INLET} = 5 cfs

$Q_{REMAINING}$ = 28.8 - 5 = 23.8 cfs

CALYX & ROSETTE INTERSECTION

$Q_{TOTAL} = 35.4 + 23.8 = \frac{59.2 \text{ cfs}}{2} = 29.6$ CFS

d = 0.32 (to TOP OF CROWN) + .2 = 0.52'

GRATE IN SUMP - USE FIGURE 1

Q_{grates} = (12 cfs)(2) = 24 CFS

CURB OPENING @ LOW POINT - USE FIGURE 6

H = .52'

H/h = .52/.52 = 1.00 } Q = 1.2 cfs/ft

INSTALL DOUBLE 'A' INLET W = (4)(2) + (3)(2) = 14' #3

$Q_{OPENING}$ = 14 (1.2) = 16.8 cfs

DOUBLE A Q_{INLET} = 24 + 16.8 = 40.8 CFS ACTUAL $Q_{Removed}$ = 29.6 CFS

$Q_{REMAINING}$ = 59.2 - 29.6 = 29.6 cfs

CHECK ORIFICE CONTROL

24" PIPE: $Q = CA\sqrt{2gh}$

$29.6 = (0.6)(3.14)\sqrt{64.4h} \Rightarrow h = 3.8'$

30" PIPE: $Q = CA\sqrt{2gh}$

$29.6 = (0.6)(4.91)\sqrt{64.4h} \Rightarrow h = 1.6'$

INLET CAPACITY ANALYSIS

CUL DE SAC — CASE A (CONT.)

$H = 0.667 + .2 = .87'$

INSTALL TYPE 'C' INLET

SINGLE GRATE $Q_{GRATE} = 23$ CFS.

CURB OPENING: $W = 4'$ — $H/h = 0.87/0.52 = 1.67$

FIGURE 6 ⇒ ≈ 2 CFS / FT

$Q_{OPENING} = (4)(2) = 8$ CFS

$Q_{TOTAL} = 31$ CFS ✓

CHECK ORIFICE CONTROL

36" PIPE $Q = CA\sqrt{2gh}$ USE $h = 6'$

$Q = (0.6)(7.07)\sqrt{64.4(6)}$

$Q_{CAPACITY} = 83$ CFS CAPACITY

$Q_{REMAINING} = 29.6$ CFS ✓

CHECK TYPE DOUBLE 'D' INLETS W/ROLL CURB

$H = 0.32'$ (CURB HEIGHT) $+ 0.2'$ (SIDEWALK) $= 0.52'$

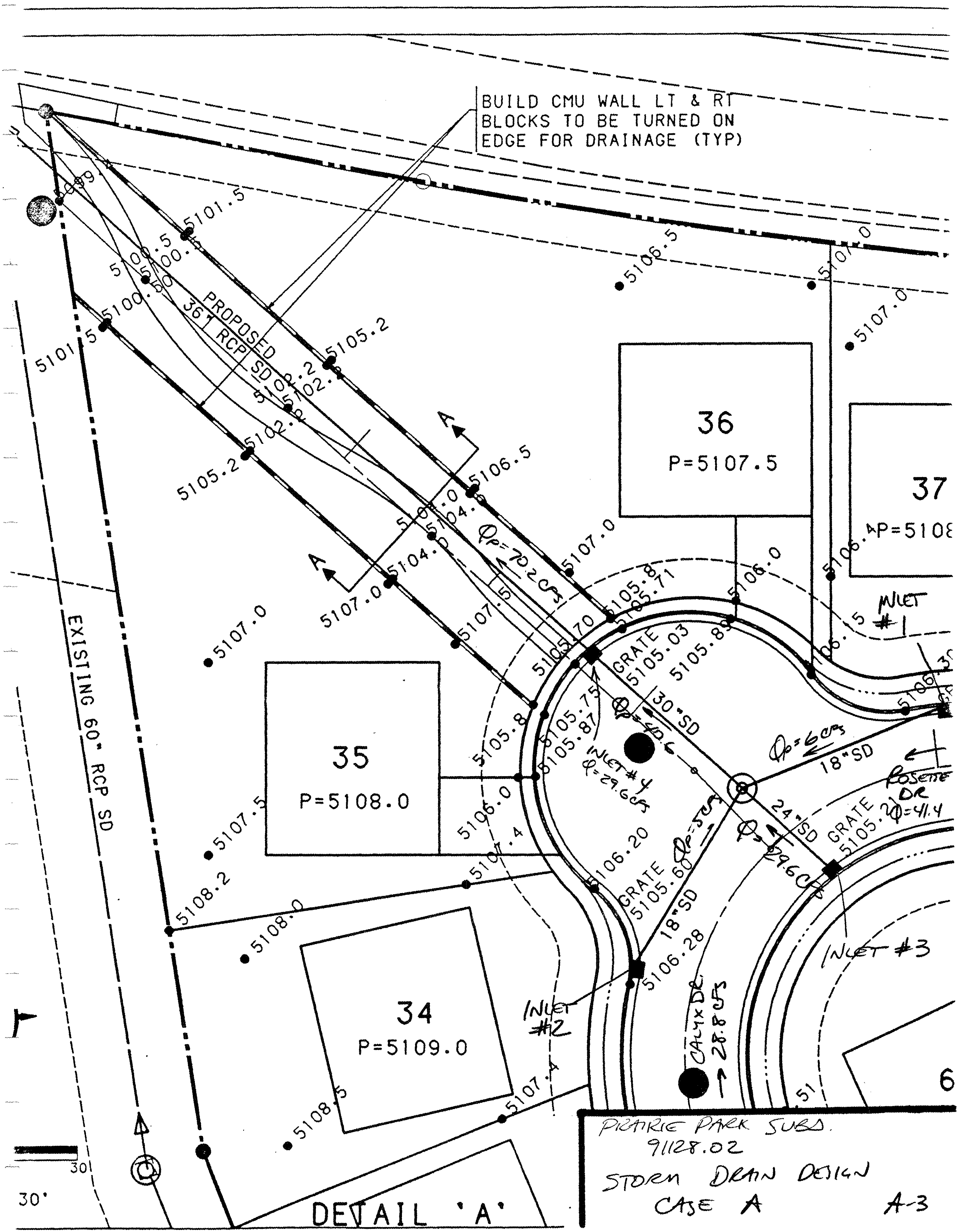
$Q_{GRATES} = 20$ CFS (FIGURE 1)

$Q_{REMAINING} = 29.4$ CFS

∴ TRIPLE D REQUIRED FOR ROLL CURB

BOHANNAN-HUSTON INC.

PROJECT NAME	PRAIRIE PARK	SHEET A-2	OF
PROJECT NO.	91128.02	BY KCD	DATE 6/8/91
SUBJECT	STORM DRAIN DESIGN	CH'D	DATE



BUILD CMU WALL LT & RT
BLOCKS TO BE TURNED ON
EDGE FOR DRAINAGE (TYP)
PROPOSED
36" RCP SD
EXISTING 60" RCP SD
36
P=5107.5
37
P=5108
35
P=5108.0
34
P=5109.0
GRATE
5105.03
30"SD
18"SD
24"SD
GRATE
5105.60
INLET #1
INLET #2
INLET #3
INLET #4
ROSETTE DR
CALYX DR
DETAIL 'A'
PRAIRIE PARK SUBD.
91128.02
STORM DRAIN DESIGN
CASE A
A-3

INLET CAPACITY ANALYSIS

USING 1.25 Q_{TOTAL} — **CASE B**

ROSETTE DR

Q_{TOTAL} (HYMO) = (41.4 CFS)(1.25) = 51.8 CFS

@ STREET SLOPE = 0.025'/FT   d = 0.5'

INSTALL TYPE 'A' INLET #1

$Q_{REMOVED}$ = 8.5 CFS (DPM PLATE 22.2 D-5)

$Q_{REMAINING}$ = 51.8 CFS − 8.5 CFS = 43.3 CFS

CALYX DR.

Q_{TOTAL} (HYMO) = (28.8 CFS)(1.25) = 36.0 CFS

@ STREET SLOPE = 0.005'/FT   d = 0.6'

INSTALL TYPE 'A' INLET #2

$Q_{REMOVED}$ = 7 CFS (DPM PLATE 22.2 D-5)

$Q_{REMAINING}$ = 36.0 CFS − 7 CFS = 29.0 CFS

CALYX & ROSETTE INTERSECTION

$$Q_{TOTAL} = \frac{(51.8 + 36.0) - (8.5 + 7)}{2} = 36.2$$

d = 0.32' (TOP OF CROWN) + 0.2' (GUTTER DEPRESSION) = 0.52'

SUMP GRATES Q_{GRATES} = (2)(12) = 24 CFS (FIGURE 6)

CURB OPENINGS $Q_{OPENINGS}$ = (14)(1.2 CFS/FT) = 16.8 CFS (FIG 6)

INLET CAPACITY $Q_{REMOVED}$ = 24 CFS + 16.8 CFS = 40.8 CFS

ACTUAL $Q_{REMOVED}$ = 36.2 CFS

$Q_{REMAINING}$ = 43.3 + 29.0 − 36.2 = 36.1 CFS

BOHANNAN-HUSTON INC.

PROJECT NAME	PRAIRIE PARK	SHEET	A4 OF
PROJECT NO.	91128.02	BY KLD	DATE 6/8/91
SUBJECT	STORM DRAIN DESIGN	CH'D	DATE

INLET CAPACITY ANALYSIS

CHECK ORIFICE CONTROL

CASE B (CONT.)

30" PIPE $Q = CA\sqrt{2gh}$

$A = 4.91\ FT^2$ $36.2 = (0.6)(4.91)\sqrt{64.4(h)} \Rightarrow h = 2.3'$

24" PIPE

$A = 3.14\ FT^2$ $36.2 = (0.6)(3.14)\sqrt{64.4 h} \Rightarrow h = 5.7'$

CUL DE SAC

$Q_{TOTAL\ REMAINING} = 36.1$ CFS

INSTALL A INLET W/ TWO WINGS

GRATE IN SUMP USE FIGURE 1

$H = 0.67 + 0.2' = 0.87'$

SINGLE GRATE $Q_{GRATE} = 23$ CFS

WIDTH OF OPENING $= 2(3) + (4) = 10'$

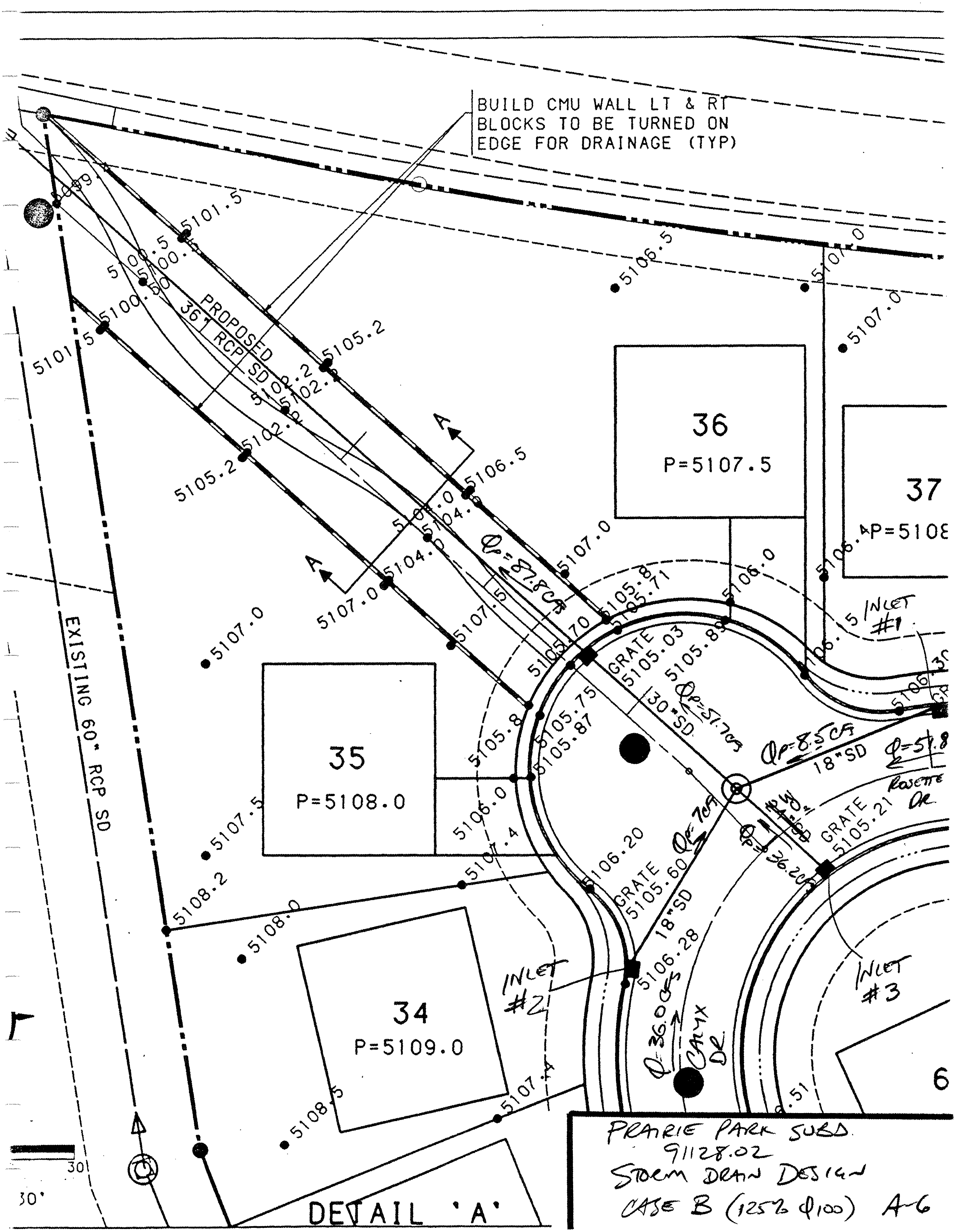
$H/h = 0.87/0.52 = 1.67$ FIGURE 6 $\Rightarrow$ 2.0 CFS/FT

CURB OPENING $Q_{OPENING} = 20$ CFS

INLET CAPACITY $Q_{TOTAL} = 43$ CFS

ORIFICE CONTROL $Q_{TOTAL} = 58$ CFS (30" PIPE)

$Q_{REMAINING} = 36.1$ CFS ✓



BUILD CMU WALL LT & RT
BLOCKS TO BE TURNED ON
EDGE FOR DRAINAGE (TYP)
PROPOSED
36" RCP SD
EXISTING 60" RCP SD
36
P=5107.5
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P=5108
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P=5108.0
34
P=5109.0
GRATE 5105.03
GRATE 5105.21
GRATE 5105.60
30" SD
18" SD
INLET #1
INLET #2
INLET #3
ROSETTE DR
CALYX DR
DETAIL 'A'
PRAIRIE PARK SUBD
9/128.02
STORM DRAIN DESIGN
CASE B (125% Q100) A-6

INLET CAPACITY ANALYSIS

ROSETTE DR. CASE C: 100% Q_{100}

Q_{TOTAL} = 41.4 CFS (FROM HYMO)

@ STREET SLOPE = 0.025'/FT, d = 0.4'

INSTALL TYPE 'A' INLET #1

Q_{INLET} = 6 CFS (DPM PLATE 22.3 D-5)

$Q_{REMAINING}$ = 41.4 − 6 = 35.4 CFS

CALYX DR.

Q_{TOTAL} = 28.8 CFS

@ STREET SLOPE = 0.005'/FT d = 0.5'

INSTALL TYPE 'A' INLET #2

Q_{INLET} = 5 CFS (DPM PLATE 22.3 D-5)

$Q_{REMAINING}$ = 28.8 − 5 = 23.8 CFS

CALYX & ROSETTE INTERSECTION

Q_{TOTAL} = 35.4 + 23.8 = $\frac{59.2}{2}$ CFS = 29.6 CFS

H = 0.32 (TOP OF CROWN) + 0.2 (GUTTER DEPRESSION) = 0.52'

INSTALL TYPE 'A' INLET W/ 2 WINGS #3

GRATE IN SUMP − USE FIGURE 1

Q_{GRATE} = 12 CFS

CURB OPENING @ LOW POINT − USE FIGURE 6

H = 0.52' H/h = 0.52/0.52 = 1.00 ⇒ Q = 1.2 CFS/FT

W = (4')(2) + 3 = 11' ⇒ $Q_{OPENING}$ = (11)(1.2) = 13.2 CFS

Q_{INLET} = 12 + 13.2 = 25.2 CFS

$Q_{REMAINING}$ = 59.2 − 25.2 = 34 CFS

CHECK ORIFICE CONTROL

24" PIPE $Q = CA\sqrt{2gh}$

$25.2 = (0.6)(3.14)\sqrt{64.4h}$ ⇒ h = 2.78' ✓

BOHANNAN-HUSTON INC.

PROJECT NAME PRAIRIE PARK SUBD. SHEET A-7 OF

PROJECT NO. 91128.02 BY DATE

SUBJECT STORM SEWER DESIGN CH'D DATE

INLET CAPACITY ANALYSIS

CUL DE SAC — **CASE C = 100% Q_{100}**

$Q_{REMAINING}$ = 34 CFS

INSTALL TYPE 'A' INLET W/2 WINGS

GRATE IN SUMP - USE FIGURE 1

H = 0.67 (CURB HEIGHT) + 0.2 (GUTTER DEPRESSION) = 0.87'

Q_{GRATE} = 23 CFS

CURB OPENING W = (4)(2) + 3 = 11'

H/h = 0.87/0.52 = 1.67 ⇒ Q = 2 CFS/FT

$Q_{OPENING}$ = (11)(2) = 22 CFS

Q_{INLET} = 23 + 22 = 45 CFS > 34 CFS ✓

CHECK ORIFICE CONTROL

36" PIPE $Q = CA\sqrt{2gh}$

$34 = (0.6)(7.07)\sqrt{64.4h} \Rightarrow h = 1.0'$

ACTUAL h = 6' ✓

CHECK EMERGENCY OVERFLOW

@ 25% Q_{100} = (0.25)(70.2) = 17.55 CFS

$Q = CLH^{3/2}$ C = 3.33

$17.55 = (3.33)(30')H^{3/2}$

$0.18 = \sqrt{H^3}$

$0.0309 = H^3$ H = 0.31'

@ 100% Q_{100} = 70.2 CFS

$Q = CLH^{3/2}$

$70.2 = (3.33)(30')H^{3/2}$

$0.70 = \sqrt{H^3}$

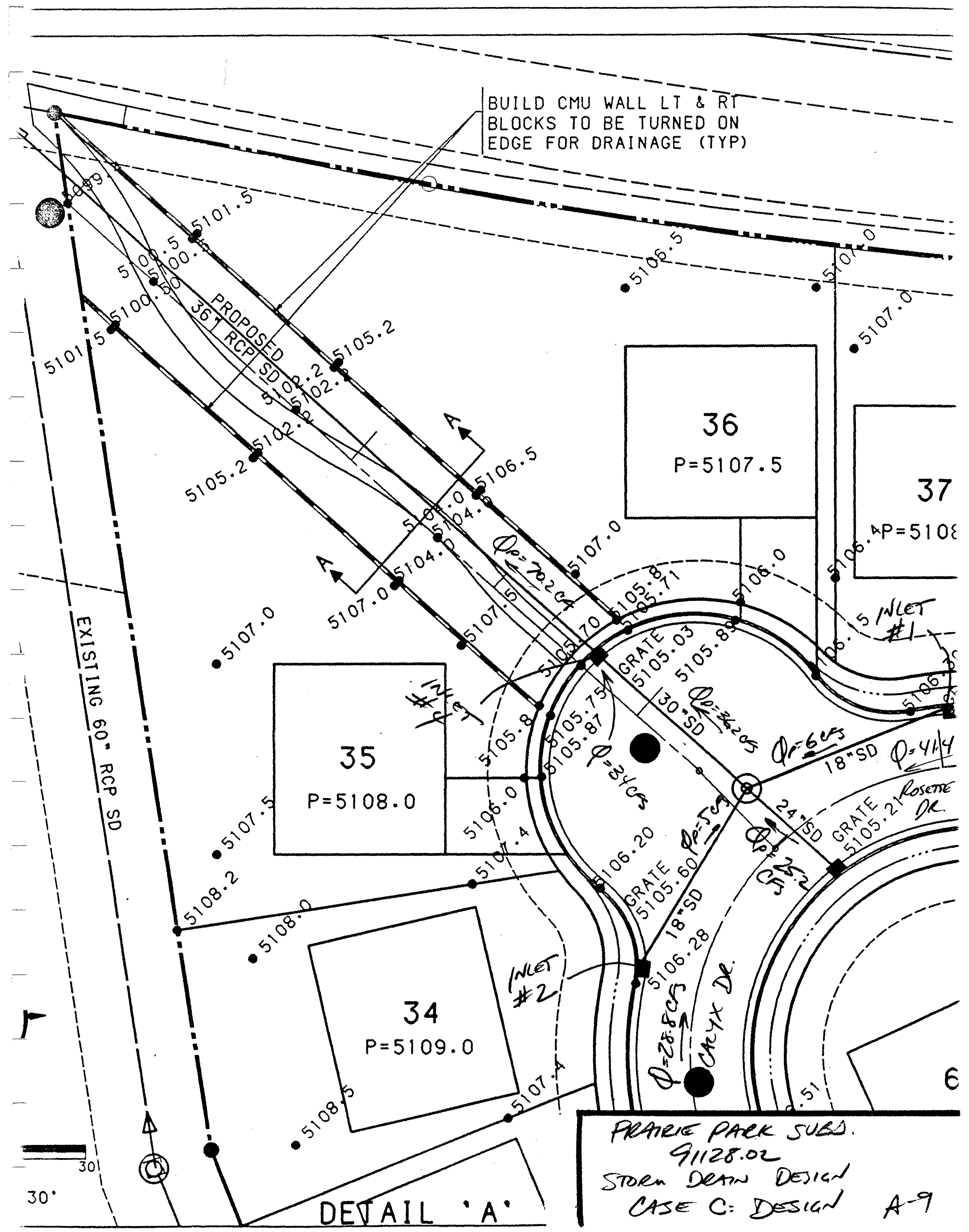
$0.49 = H^3$ H = 0.79'

BOHANNAN-HUSTON INC.

PROJECT NAME PRAIRIE PARK SUBD. SHEET A-8 OF ____

PROJECT NO. 91128.02 BY ____ DATE ____

SUBJECT STORM SEWER DESIGN CH'D ____ DATE ____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GRATE
5105.60
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24"SD
18"SD
18"SD
INLET #1
INLET #2
ROSETTE DR.
CALYX DR.
DETAIL 'A'
PRAIRIE PARK SUBD.
91128.02
STORM DRAIN DESIGN
CASE C: DESIGN
A-9

SUMMARY OF HYDRAULIC CALCULATIONS

CLOSED CONDUIT

PROJECT: PRAIRIE PARK SUBD — LINE: ______

BY: K. DAVIS — DATE: 6/8/91 — SHEET: ___ OF: ___

1 STATION	2 STRUCT	3 D	4 Q	5 A	6 V	7 K	8 S_f	9 L	10 Δ	11 JUNCTION D	12 JUNCTION θ	13 LOSSES h_f	14 h_b	15 h_j	16 h_{mh}	17 h_t	18 h_{misc}	19 Σ	20 E.G.	21 h_v	22 H.G.
CASE	A	100% Q_{100}																			
0+70.32	66" MH																		93.83	1.53	92.30
		36"	70.2	7.07	9.93	666.98	1.11%	210.43				2.33						2.33	101.53	1.53	100.00 ~~98.47~~
2+80.75	INLET									INLET	90°			1.58	0.08			1.65	103.18	1.06	102.12
		30"	40.6	4.91	8.27	410.17	0.98%	53.51				0.52						0.52	103.70	1.06	102.64
3+34.26	MH									2(18")	90°			0.49	0.05			0.54	104.80	0.56	104.24
		30"	29.6	4.91	6.03	410.17	0.52%	33.09				0.17						0.17	104.97	0.56	104.41
3+67.35	INLET																				
CASE	B	125% Q_{100}																			
0+70.32	66" MH																		94.70	2.40	92.30
		36"	87.8	7.07	12.42	666.98	1.73%	210.43				3.65						3.65	102.40	2.40	100.00 ~~95.95~~
2+80.75	INLET									INLET	90°			2.47	0.12			2.59	102.59	1.72	100.87
		30"	57.7	4.91	10.53	410.17	1.59%	53.51				0.85						0.85	103.72	1.72	102.00 ~~101.72~~
3+34.26	MH									2(18)	90°			0.79	0.09			0.88	104.60	0.84	103.76
		30"	36.2	4.91	7.37	410.17	0.78%	33.09				0.26						0.26	104.86	0.84	104.02
3+67.35	INLET																				

REMARKS:

MANNING'S n: ______

SUMMARY OF HYDRAULIC CALCULATIONS

CLOSED CONDUIT

PROJECT: PRAIRIE PARK SUBS.

LINE:

BY: K DAVIS
DATE: 6/10/91
SHEET: ___ OF: ___

1 STATION	2 STRUCT	3 D	4 Q	5 A	6 V	7 K	8 S_f	9 L	10 Δ	11 JUNCTION D	12 JUNCTION θ	13 LOSSES h_f	14 h_b	15 h_j	16 h_{mh}	17 h_t	18 h_{misc}	19 Σ	20 E.G.	21 h_v	22 H.G.
CASE	C:	MAIN LINE																			
0+70.32	66"MH																		93.83	1.53	92.30
		36"	70.2	7.07	9.93	666.98	1.11%	210.43				2.33						2.33	101.53	1.53	100.00 ~~94.63~~
2+80.75	INLET													0.99	0.08			1.07	102.60	0.84	101.76
		30"	36.2	4.91	7.37	410.17	0.78%	53.51				0.42						0.42	103.02	0.84	102.18
3+34.26	MH													0.74	0.04			0.78	103.81	1.00	102.81
		24"	25.2	3.14	8.02	226.22	1.24%	33.09				0.41						0.41	104.22	1.00	103.22
3+67.35	INLET																				
LATERAL	TO	INLET	# 1																		
3+34.26	MH																		102.36	0.18	102.18
		18"	6.0	1.77	3.40	105.04	0.32%	57.55				0.19						0.19	102.55	0.18	102.37
3+91.81	INLET																				
LATERAL	TO	INLET	# 2																		
3+34.26	MH																		102.30	0.12	102.18
		18"	5.0	1.77	2.83	105.04	0.23%	54.86				0.12						0.12	102.42	0.12	102.30
3+89.12	INLET																				

REMARKS:

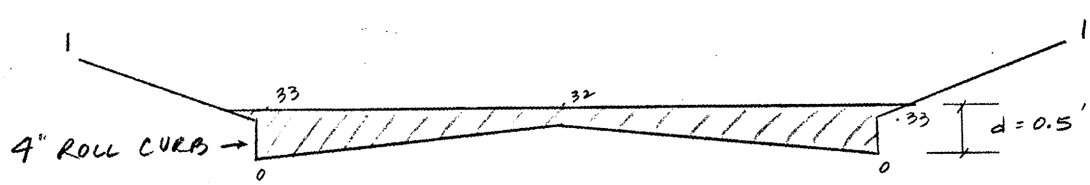
MANNING'S n: 0.013

CALYX DRIVE

MANNING'S N = .0170 SLOPE = .0050

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	1.00	4	25.00	0.32	7	50.00	1.00
2	9.00	0.33	5	41.00	0.00			
3	9.00	0.00	6	41.00	0.33			

WSEL (FT)	DEPTH INC	FLOW AREA (SQ FT)	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOP WID
0.1	0.1	0.1	0.1	5.1	0.5	5.0
0.1	0.1	0.5	0.4	10.2	0.8	10.0
0.2	0.2	1.1	1.2	15.3	1.1	15.0
0.2	0.2	2.0	2.6	20.4	1.3	20.0
0.3	0.3	3.1	4.8	25.5	1.5	25.0
0.3	0.3	4.5	7.7	30.6	1.7	30.0
0.4	0.4	6.1	12.1	33.2	2.0	32.5
0.4	0.4	7.7	17.6	34.7	2.3	33.9
0.5	0.5	9.5	24.0	36.1	2.5	35.2
0.5	0.5	11.3	31.2	37.6	2.8	36.6
0.6	0.6	13.1	39.3	39.0	3.0	37.9
0.6	0.6	15.1	48.1	40.5	3.2	39.3
0.7	0.7	17.1	57.9	41.9	3.4	40.6
0.7	0.7	19.1	68.4	43.4	3.6	41.9
0.8	0.8	21.2	79.9	44.8	3.8	43.3
0.8	0.8	23.4	92.1	46.3	3.9	44.6
0.9	0.9	25.7	105.2	47.7	4.1	46.0
0.9	0.9	28.0	119.2	49.2	4.3	47.3
1.0	1.0	30.4	134.1	50.6	4.4	48.7
1.0	1.0	32.9	149.8	52.1	4.6	50.0

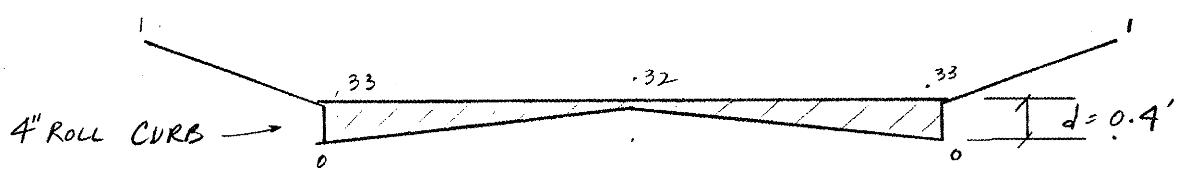


ROSETTE DRIVE

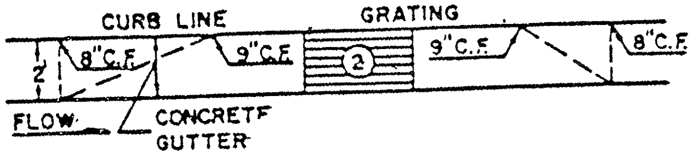
MANNING'S N = .0170 SLOPE = .0250

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	1.00	4	25.00	0.32	7	50.00	1.00
2	9.00	0.33	5	41.00	0.00			
3	9.00	0.00	6	41.00	0.33			

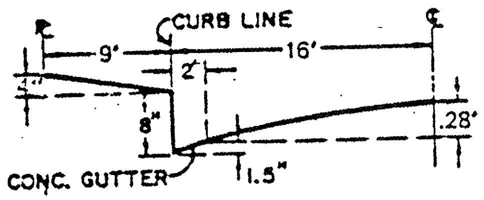
WSEL (FT)	DEPTH INC	FLOW AREA (SQ FT)	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOP WID
0.1	0.1	0.1	0.1	5.1	1.2	5.0
0.1	0.1	0.5	0.9	10.2	1.9	10.0
0.2	0.2	1.1	2.7	15.3	2.4	15.0
0.2	0.2	2.0	5.9	20.4	2.9	20.0
0.3	0.3	3.1	10.7	25.5	3.4	25.0
0.3	0.3	4.5	17.3	30.6	3.9	30.0
0.4	0.4	6.1	27.1	33.2	4.5	32.5
0.4	0.4	7.7	39.4	34.7	5.1	33.9
0.5	0.5	9.5	53.6	36.1	5.7	35.2
0.5	0.5	11.3	69.8	37.6	6.2	36.6
0.6	0.6	13.1	87.8	39.0	6.7	37.9
0.6	0.6	15.1	107.7	40.5	7.1	39.3
0.7	0.7	17.1	129.4	41.9	7.6	40.6
0.7	0.7	19.1	153.0	43.4	8.0	41.9
0.8	0.8	21.2	178.6	44.8	8.4	43.3
0.8	0.8	23.4	206.0	46.3	8.8	44.6
0.9	0.9	25.7	235.3	47.7	9.2	46.0
0.9	0.9	28.0	266.6	49.2	9.5	47.3
1.0	1.0	30.4	299.8	50.6	9.8	48.7
1.0	1.0	32.9	335.0	52.1	10.2	50.0



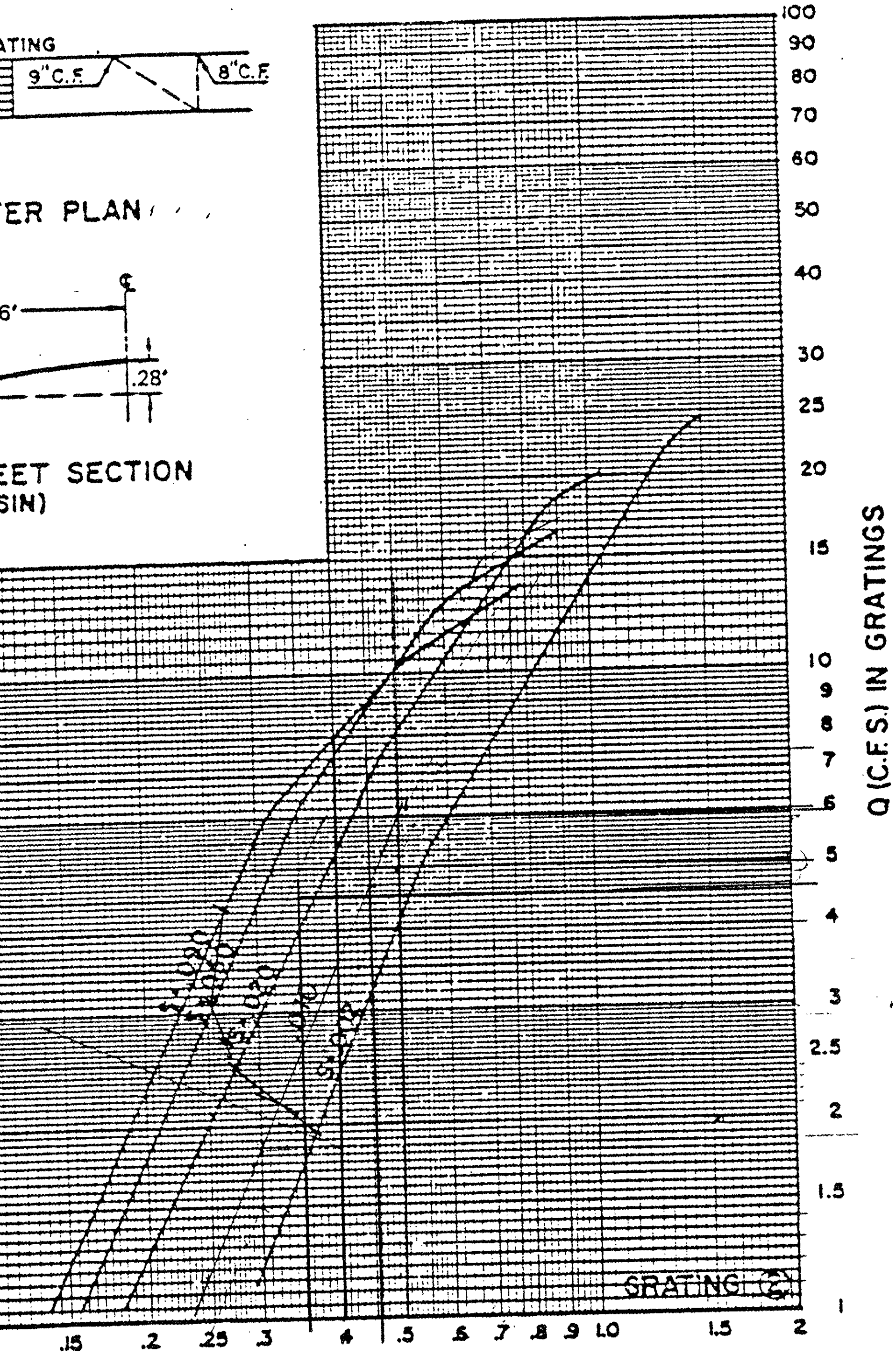
GRATING CAPACITIES FOR TYPE "A", "C" and "D"



GRATING & GUTTER PLAN



TYPICAL HALF STREET SECTION
(ABOVE BASIN)



D=DEPTH OF FLOW (FT.) ABOVE NORMAL GUTTER GRADE

A-14

$Q/A = 5.37H^{1/2}$

$Q/P = 3.0H^{3/2}$

	AREA	Q	PERM.	Q
SINGLE	4.56	$24.9H^{1/2}$	10.5	$31.5H^{3/2}$
DOUBLE	9.12	$49.0H^{1/2}$	17.0	$51.0H^{3/2}$

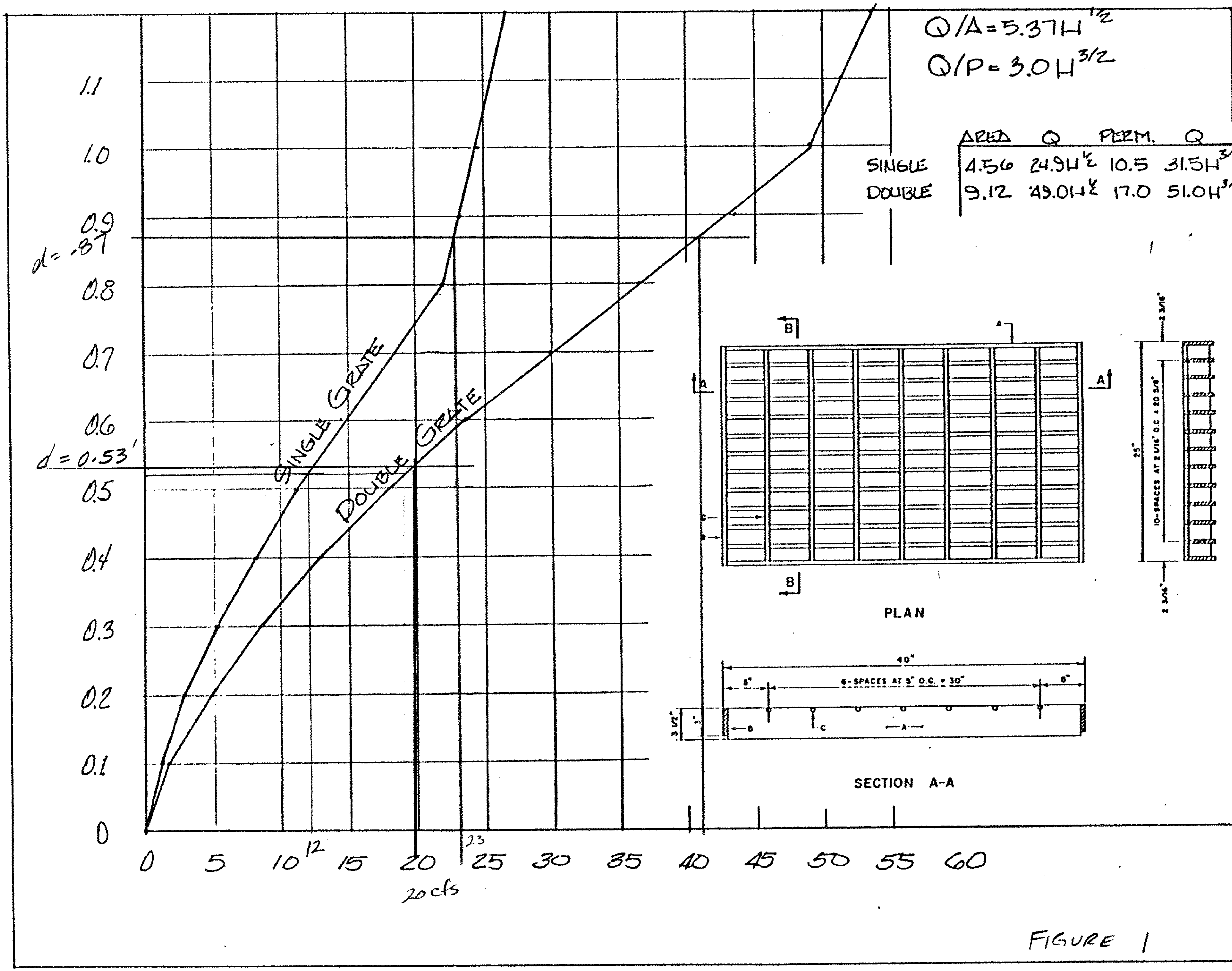
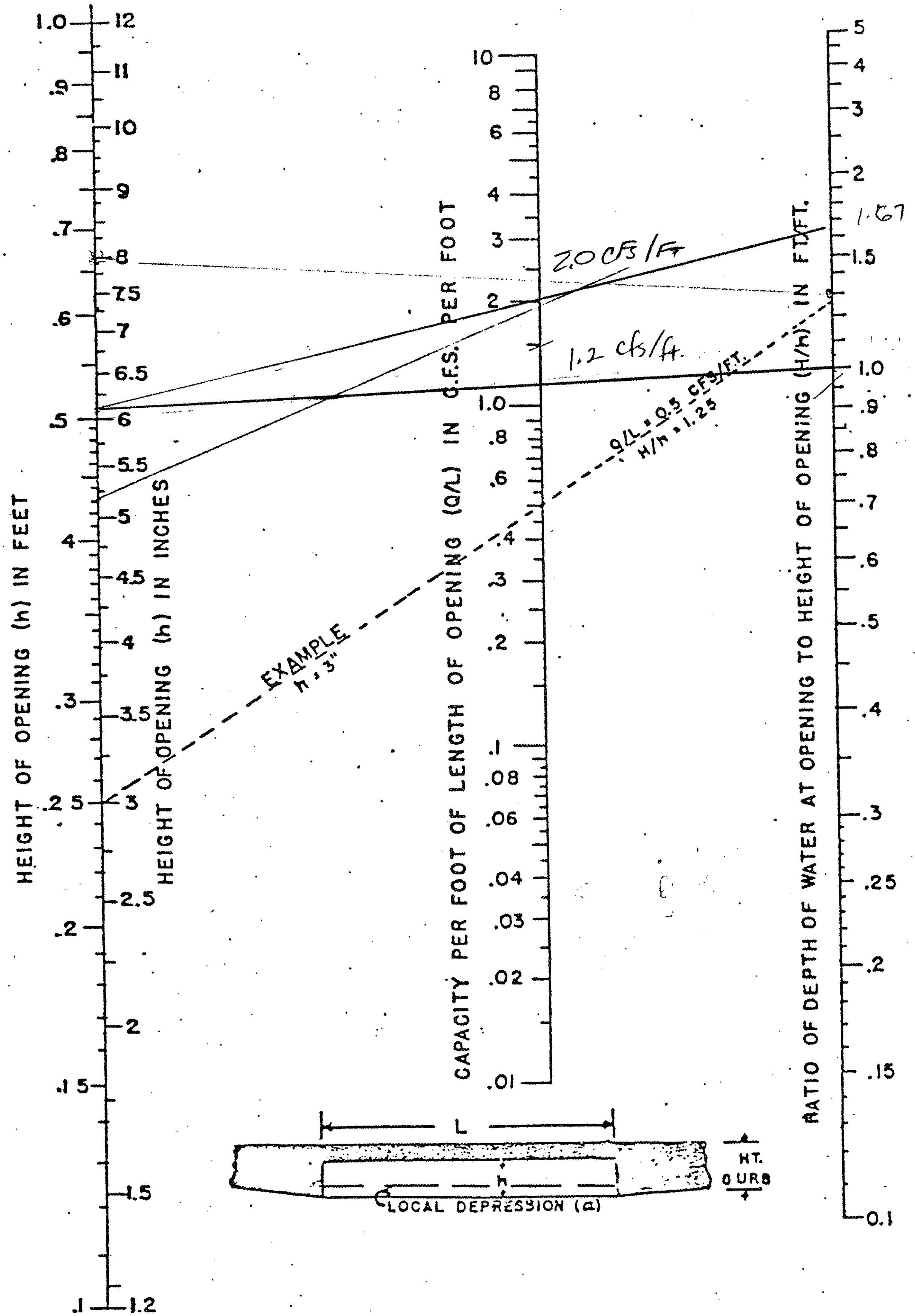


FIGURE 1

PRAIRIE PARK

FIGURE 6



NOMOGRAPH FOR CAPACITY OF CURB OPENING INLETS AT LOW POINTS

MAIN STORM SEWER OUTFALL – MH #1 TO INLET #4

CULVERT RATING TABLE

36. INCH DIAMETER PIPE

N = 0.01300 INCREMENT = 1.00 SLOPE = 0.05300

FLOW DEPTH (IN)	FLOW AREA (SQ FT)	DISCHARGE (CFS)	VELOCITY (FPS)
1.00000	0.05509	0.20923	3.79806
2.00000	0.15449	0.92317	5.97576
3.00000	0.28134	2.18316	7.75976
4.00000	0.42932	3.99853	9.31364
5.00000	0.59457	6.36531	10.70578
6.00000	0.77437	9.27164	11.97318
7.00000	0.96662	12.70011	13.13865
8.00000	1.16962	16.62909	14.21752
9.00000	1.38191	21.03365	15.22068
10.00000	1.60224	25.88598	16.15617
11.00000	1.82946	31.15589	17.03012
12.00000	2.06255	36.81096	17.84731
13.00000	2.30056	42.81678	18.61150
14.00000	2.54258	49.13708	19.32567
15.00000	2.78778	55.73380	19.99221
16.00000	3.03532	62.56711	20.61302
17.00000	3.28442	69.59546	21.18959
18.00000	3.53429	76.77551	21.72304
19.00000	3.78416	84.06212	22.21420
20.00000	4.03326	91.40818	22.66360
21.00000	4.28080	98.76444	23.07148
22.00000	4.52600	106.07942	23.43780
23.00000	4.76802	113.29897	23.76225
24.00000	5.00603	120.36585	24.04417
25.00000	5.23912	127.21932	24.28257
26.00000	5.46634	133.79419	24.47600
27.00000	5.68667	140.01982	24.62248
28.00000	5.89896	145.81828	24.71933
29.00000	6.10196	151.10207	24.76289
30.00000	6.29421	155.76985	24.74812
31.00000	6.47401	159.69962	24.66780
32.00000	6.63926	162.73563	24.51112
33.00000	6.78723	164.66089	24.26039
34.00000	6.91409	165.12608	23.88255
35.00000	7.01349	163.39020	23.29656
36.00000	7.06858	153.55110	21.72305

Q = 70.2
d ≈ 17"

STORM SEWER - INLET #4 TO MH #2

CULVERT RATING TABLE

30. INCH DIAMETER PIPE

N = 0.01300 INCREMENT = 1.00 SLOPE = 0.03900

FLOW DEPTH (IN)	FLOW AREA (SQ FT)	DISCHARGE (CFS)	VELOCITY (FPS)
1.00000	0.05020	0.16328	3.25233
2.00000	0.14054	0.71782	5.10766
3.00000	0.25547	1.69113	6.61972
4.00000	0.38908	3.08515	7.92930
5.00000	0.53776	4.89104	9.09529
6.00000	0.69890	7.09345	10.14950
7.00000	0.87048	9.67239	11.11151
8.00000	1.05085	12.60430	11.99443
9.00000	1.23855	15.86274	12.80751
10.00000	1.43233	19.41876	13.55751
11.00000	1.63102	23.24117	14.24949
12.00000	1.83356	27.29675	14.88730
13.00000	2.03894	31.55031	15.47389
14.00000	2.24619	35.96478	16.01147
15.00000	2.45437	40.50113	16.50166
16.00000	2.66255	45.11835	16.94557
17.00000	2.86980	49.77334	17.34386
18.00000	3.07518	54.42059	17.69674
19.00000	3.27772	59.01197	18.00399
20.00000	3.47641	63.49619	18.26488
21.00000	3.67019	67.81818	18.47814
22.00000	3.85789	71.91800	18.64180
23.00000	4.03825	75.72936	18.75301
24.00000	4.20984	79.17706	18.80762
25.00000	4.37098	82.17275	18.79962
26.00000	4.51965	84.60690	18.71978
27.00000	4.65327	86.33205	18.55300
28.00000	4.76820	87.11982	18.27102
29.00000	4.85853	86.50577	17.80492
30.00000	4.90874	81.00230	16.50166

Q = 36.2 CFS
d ≈ 14"

STORM SEWER - MH #2 TO INLET #3

CULVERT RATING TABLE

24. INCH DIAMETER PIPE

N = 0.01300 INCREMENT = 1.00 SLOPE = 0.01800

FLOW DEPTH (IN)	FLOW AREA (SQ FT)	DISCHARGE (CFS)	VELOCITY (FPS)
1.00000	0.04479	0.09870	2.20365
2.00000	0.12504	0.43153	3.45106
3.00000	0.22665	1.01076	4.45946
4.00000	0.34416	1.83264	5.32493
5.00000	0.47417	2.88655	6.08764
6.00000	0.61418	4.15754	6.76921
7.00000	0.76224	5.62756	7.38288
8.00000	0.91669	7.27610	7.93738
9.00000	1.07605	9.08055	8.43876
10.00000	1.23901	11.01641	8.89129
11.00000	1.40432	13.05742	9.29803
12.00000	1.57079	15.17554	9.66106
13.00000	1.73727	17.34097	9.98174
14.00000	1.90258	19.52190	10.26076
15.00000	2.06554	21.68435	10.49817
16.00000	2.22490	23.79167	10.69336
17.00000	2.37935	25.80387	10.84494
18.00000	2.52741	27.67650	10.95055
19.00000	2.66742	29.35873	11.00639
20.00000	2.79743	30.78967	11.00643
21.00000	2.91494	31.89087	10.94050
22.00000	3.01655	32.54709	10.78951
23.00000	3.09680	32.53799	10.50696
24.00000	3.14159	30.35112	9.66106

Q = 25.2 CFS
d ≈ 17"

STORM SEWER INLET LEGS TO INLETS #1 & #2

CULVERT RATING TABLE

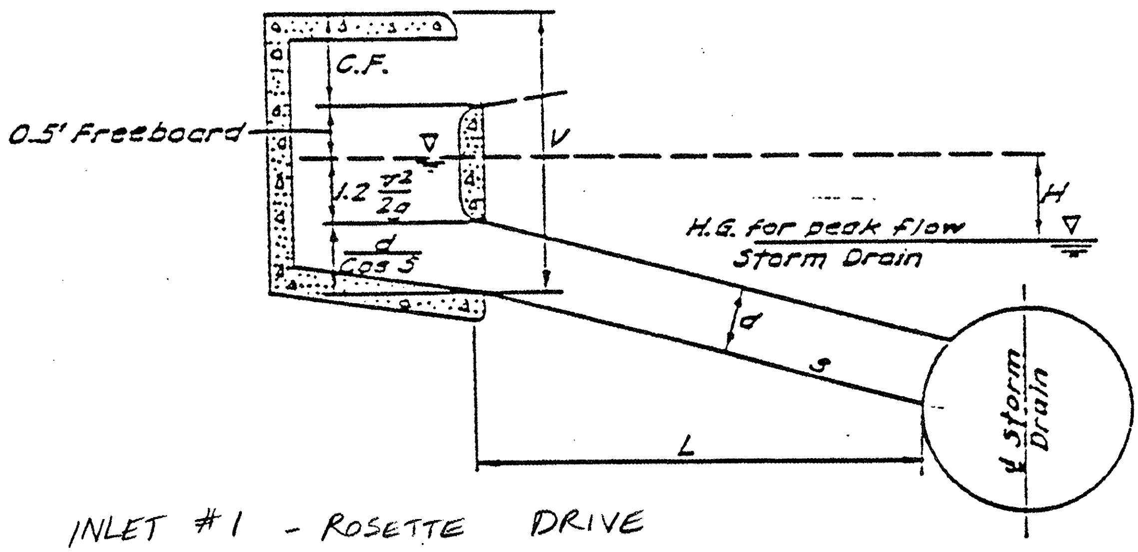
18. INCH DIAMETER PIPE

N = 0.01300 INCREMENT = 1.00 SLOPE = 0.00950

FLOW DEPTH (IN)	FLOW AREA (SQ FT)	DISCHARGE (CFS)	VELOCITY (FPS)
1.00000	0.03862	0.06155	1.59379
2.00000	0.10733	0.26661	2.48403
3.00000	0.19359	0.61821	3.19335
4.00000	0.29241	1.10878	3.79194
5.00000	0.40056	1.72600	4.30899
6.00000	0.51564	2.45445	4.76003
7.00000	0.63565	3.27632	5.15432
8.00000	0.75883	4.17180	5.49767
9.00000	0.88357	5.11917	5.79372
10.00000	1.00831	6.09484	6.04458
11.00000	1.13150	7.07307	6.25107
12.00000	1.25151	8.02565	6.41279
13.00000	1.36659	8.92102	6.52796
14.00000	1.47474	9.72275	6.59286
15.00000	1.57355	10.38629	6.60054
16.00000	1.65981	10.85075	6.53733
17.00000	1.72852	11.01014	6.36968
18.00000	1.76715	10.23835	5.79373

@ Q = 5 CFS, d = 9"

@ Q = 6 CFS, d = 10"



INLET #1 - ROSETTE DRIVE

TYPE 'A' INLET

$Q = 6$ cfs

$d = 18"$

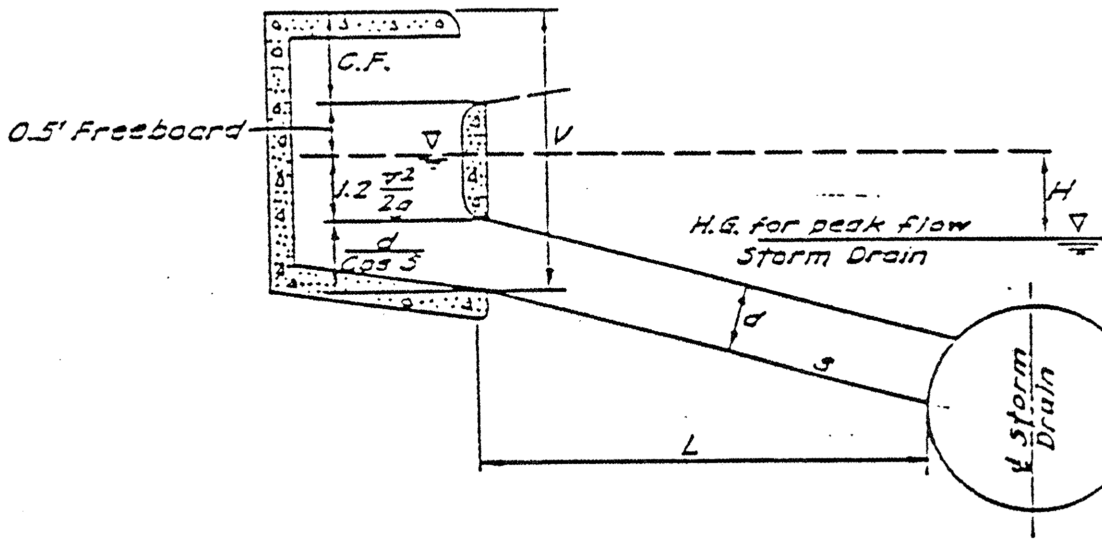
$v = \frac{Q}{A} = \frac{6}{1.767} = 3.4$ ft/s

$$V = 1.33 + 1.2\frac{v^2}{2g} + d$$

$$V = 1.33 + \frac{1.2\,(3.4)^2}{2\,(32.2)} + 1.5 = 3.04'$$

$L \approx 60'$ $H < .5$

$\approx .3'$



INLET #2 - CALYX DRIVE

TYPE 'A' INLET

Q = 5 cfs

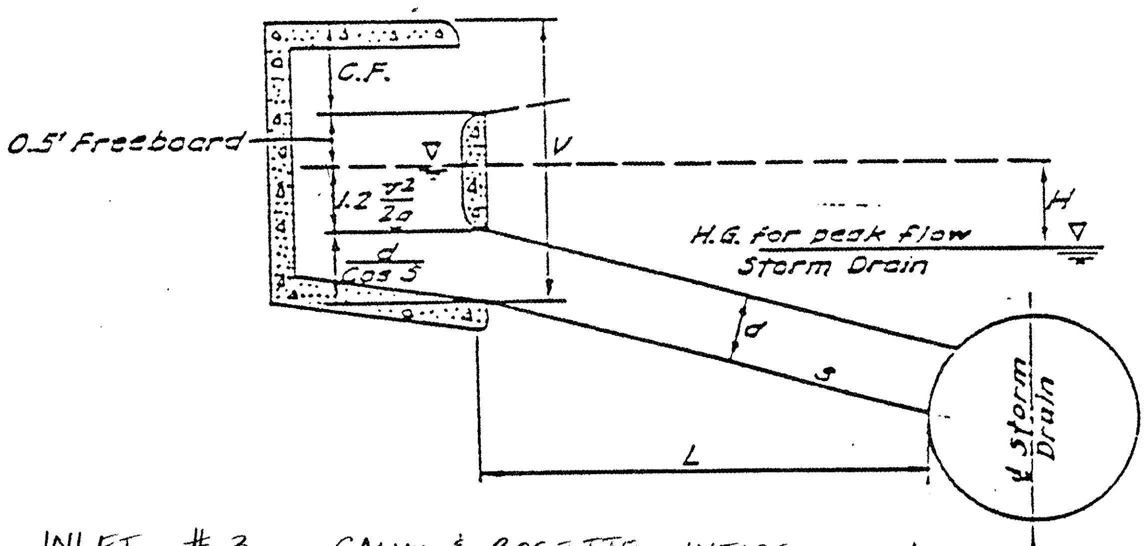
d = 18"

$v = 5/1.767 = 2.8$ ft/s

$$V = 1.33 + 1.2\frac{v^2}{2g} + d = 1.33 + \frac{1.2(2.8)^2}{2(32.2)} + 1.5 = 3'$$

$L \approx 55'$ $H < .5$

$H \approx .3$



INLET # 3 - CALYX & ROSETTE INTERSECTION

DOUBLE 'A' TYPE 'A' INLET w/2 WINGS

$Q = 25.2$ cfs

$d = 24"$

$v = 25.2/3.14 = 8.0$ ft/s

$$V = 1.33 + \frac{1.2\,v^2}{2g} + d = 1.33 + \frac{1.2\,(8.0)^2}{2\,(32.2)} + 2 = 4.5'$$

$L \simeq 35'$

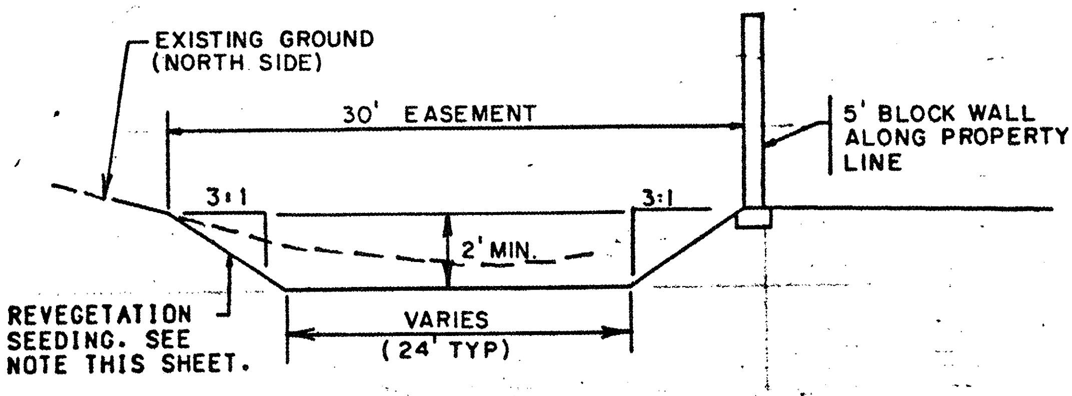
$H = 1.05'$

EARTHEN CHANNEL ALONG SOUTH PIEDRAS MARCADAS

MANNING'S N = .0300 SLOPE = .0050

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	2.00	3	24.00	0.00			
2	6.00	0.00	4	30.00	2.00			

WSEL (FT)	DEPTH INC	FLOW AREA (SQ FT)	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOP WID
0.1	0.1	1.8	1.4	18.6	0.7	18.6
0.2	0.2	3.7	4.4	19.3	1.2	19.2
0.3	0.3	5.7	8.6	19.9	1.5	19.8
0.4	0.4	7.7	14.0	20.5	1.8	20.4
0.5	0.5	9.8	20.4	21.2	2.1	21.0
0.6	0.6	11.9	27.8	21.8	2.3	21.6
0.7	0.7	14.1	36.1	22.4	2.6	22.2
0.8	0.8	16.3	45.4	23.1	2.8	22.8
0.9	0.9	18.6	55.6	23.7	3.0	23.4
1.0	1.0	21.0	66.7	24.3	3.2	24.0
1.1	1.1	23.4	78.7	25.0	3.4	24.6
1.2	1.2	25.9	91.6	25.6	3.5	25.2
1.3	1.3	28.5	105.3	26.2	3.7	25.8
1.4	1.4	31.1	120.0	26.9	3.9	26.4
1.5	1.5	33.8	135.5	27.5	4.0	27.0
1.6	1.6	36.5	152.0	28.1	4.2	27.6
1.7	1.7	39.3	169.3	28.8	4.3	28.2
1.8	1.8	42.1	187.6	29.4	4.5	28.8
1.9	1.9	45.0	206.7	30.0	4.6	29.4
2.0	2.0	48.0	226.7	30.6	4.7	30.0



30' DRAINAGE EASEMENT
SECTION C-C

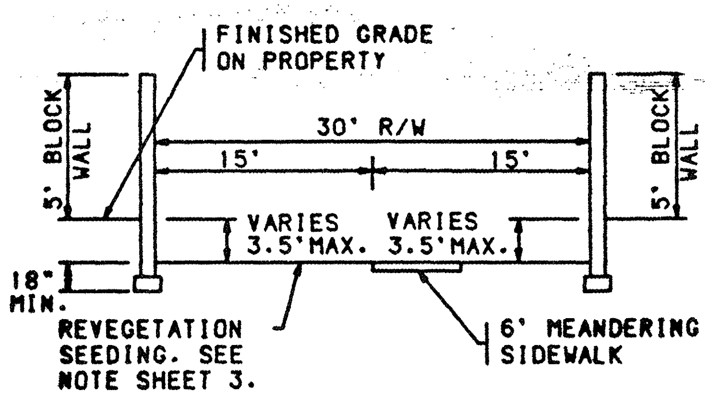
NO SCALE

ACCESS RIGHT-OF-WAY

MANNING'S N = .0300   SLOPE = .0400

POINT	DIST	ELEV	POINT	DIST	ELEV	POINT	DIST	ELEV
1	0.00	1.26	3	15.00	0.00	5	30.00	1.26
2	2.00	0.26	4	28.00	0.26			

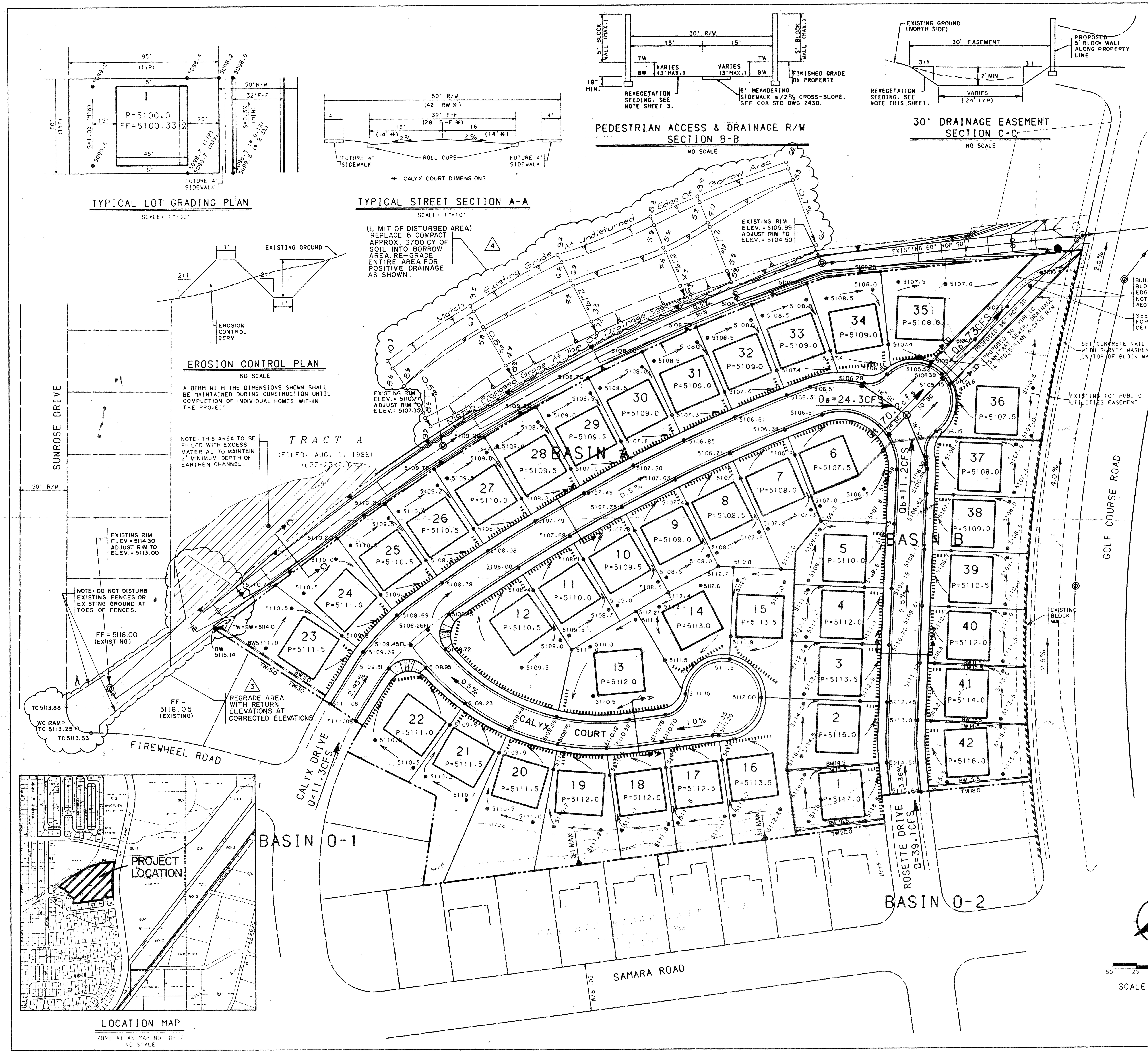
WSEL (FT)	DEPTH INC	FLOW AREA (SQ FT)	FLOW RATE (CFS)	WETTED PER (FT)	FLOW VEL (FPS)	TOP WID
0.1	0.1	0.5	0.7	10.0	1.3	10.0
0.2	0.2	2.0	4.3	20.0	2.1	20.0
0.3	0.3	4.4	13.4	26.2	3.0	26.2
0.4	0.4	7.1	28.9	26.6	4.1	26.6
0.5	0.5	9.7	48.8	27.1	5.0	27.0
0.6	0.6	12.5	72.7	27.5	5.8	27.4
0.7	0.7	15.2	100.4	28.0	6.6	27.8
0.8	0.8	18.0	131.6	28.4	7.3	28.2
0.9	0.9	20.8	166.1	28.9	8.0	28.6
1.0	1.0	23.7	204.0	29.3	8.6	29.0
1.1	1.1	26.6	245.0	29.8	9.2	29.4
1.2	1.2	29.6	289.1	30.2	9.8	29.8
1.3	1.3	31.4	317.0	30.5	10.1	30.0



PEDESTRIAN ACCESS & DRAINAGE R/W

SECTION A-A

NO SCALE



GENERAL NOTES

1. FOR EARTHWORK SPECIFICATIONS, SEE "GEOTECHNICAL INVESTIGATION PRAIRIE PARK SUBDIVISION . FOR ALVARDO REALTY" PREPARED BY VINEYARD AND ASSOCIATES.
2. PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR MUST OBTAIN A TOPSOIL DISTURBANCE PERMIT FROM THE CITY OF ALBUQUERQUE ENVIRONMENTAL HEALTH DEPARTMENT.
3. THE CONTRACTOR SHALL CONFORM TO ALL CITY, COUNTY, STATE AND FEDERAL DUST CONTROL MEASURES AND REQUIREMENTS AND WILL BE RESPONSIBLE FOR PREPARING AND OBTAINING ALL NECESSARY APPLICATIONS AND APPROVALS.
4. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE LOTS INTO PUBLIC RIGHT-OF-WAY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AS PER DETAIL THIS SHEET AND WETTING THE SOIL TO KEEP IT FROM BLOWING.
5. THE 30 FOOT DRAINAGE EASEMENT AND THE PEDESTRIAN ACCESS AND DRAINAGE RIGHT-OF-WAY WILL BE REVEGETATED IN ACCORDANCE WITH THE LANDSCAPE SPECIFICATIONS AND WITH THE REVEGETATION SPECIFICATIONS SHOWN ON THIS PLAN.

LEGEND

- PROJECT BOUNDARY
- EXISTING CONTOUR
- EROSION CONTROL BERM
- PROPOSED RETAINING WALL (BY DEVELOPER)
- EXISTING STORM DRAIN LINE
- EXISTING STORM DRAIN MANHOLE
- EXISTING STORM DRAIN INLET
- PROPOSED STORM DRAIN LINE
- PROPOSED STORM DRAIN MANHOLE
- PROPOSED STORM DRAIN INLET
- 5112.2 • PROPOSED SPOT ELEVATION
- PROPOSED BASIN BOUNDARY
- Qa=24.3 cfs BASIN DISCHARGE
- DIRECTION OF FLOW
- EXISTING CURB
- PROPOSED CURB
- EXISTING BLOCK WALL

PRAIRIE PARK SUBDIVISION RECLAMATION

The following seed mix shall be used as a specification for revegetation and reclamation for the 30 foot Drainage Easement and the Pedestrian Access and Drainage Right-of-way (Section B-B). The seed mix and application rates shall be applied with adherence to the "City of Albuquerque, Standard Specifications for Public Works Construction" latest edition, Section No. 1011 Seeding. Materials and operations for Class A seeding shall be used unless the required operation becomes impossible to conduct safely.

SEED MIX

L.R.S. 263-7497

COMMON NAME	LBS. PLS/ACRE
Grasses	
Galleta Grass	3
Blue Grama Grass 'Hachita'	1
Indian Ricegrass 'Paloma'	6
Sideoats Grama Grass 'Vaughn'	3
Sand Dropseed	1
Shrubs	
Fourwing Saltbush	1
Apache Plume	1

RECEIVED SEP 10 1991

AS BUILT INFORMATION

CONTRACTOR / WORK STAKED BY / INSPECTOR'S ACCEPTANCE BY / DATE / FIELD VERIFICATION BY / DATE / DRAWINGS CORRECTED BY / DATE

MICRO-FILM INFORMATION

RECORDED BY / DATE / NO.

BENCH MARKS

A 2" DIA. ALUMINUM SURVEY CAP SET IN CONCRETE STAMPED "CP 32 LS 6544". BENCH MARK IS LOCATED APPROX. 28 FEET EAST OF THE EAST RIGHT-OF-WAY OF GOLF COURSE ROAD AND IS APPROX. 330 FEET NORTH AND 100 FEET EAST OF THE CENTERLINE INTERSECTION OF SAMARA ROAD AND GOLF COURSE ROAD. ELEVATION = 5115.83'

SURVEY INFORMATION

NO.	FIELD NOTES	BY	DATE

ENGINEER'S SEAL

4-1-91 5-17-91 5-17-91 6-12-91 9-10-91

REVISIONS

NO.	DATE	REMARKS	BY
4	9/91	FILL AND RE-GRADE BORROW AREA	SAR
3	9/91	GRADED CHANNEL TO CORRECTED ELEVATIONS	SAR
2	7/91	REVISED SPOTS IN "KNUCKLE" CUL-DE-SAC ADDED STREET SLOPES	SAR
1	6/91	REVISED SECTIONS, STORM DRAIN, AND EARTHEN CHANNEL.	SAR

DESIGN

DESIGNED BY KLD DATE 4/91
DRAWN BY TSG DATE 4/91
CHECKED BY KLD DATE 4/91

APPROVED FOR ROUGH GRADING (±1')

Gilbert Aldaz 5/17/91
HYDROLOGY ENGINEER DATE

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING GROUP

BOHANNAN HUSTON INC.

TITLE: PRAIRIE PARK SUBDIVISION
GRADING AND DRAINAGE PLAN

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN	[signature]	7-16-91	WATER	NA	
TRANSPORTATION	[signature]	7-15-91	WASTE WATER	NA	
HYDROLOGY	G. Aldaz	7-16-91			

DRAWING NO.	MAP NO.	SHEET OF
4270.90	D-12	3A 11

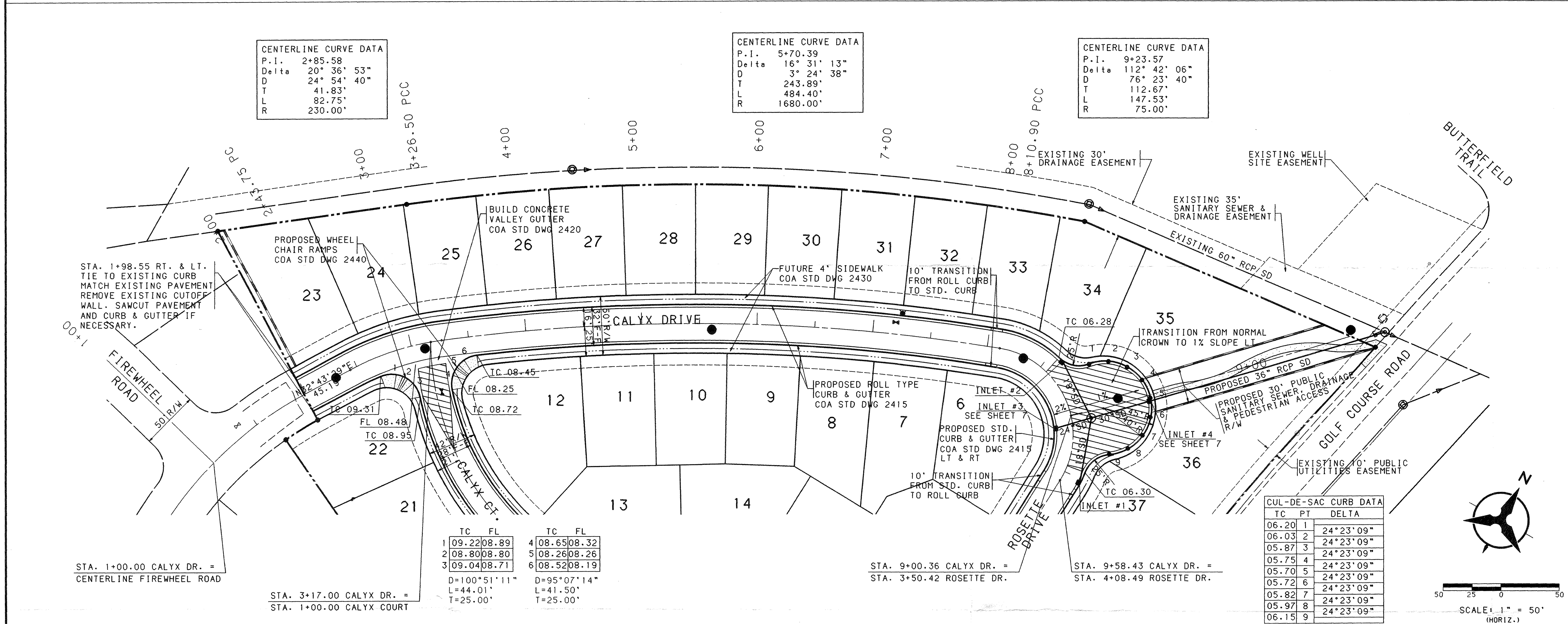
BHI JOB NO. 91128.01

USERNAME: CDP:[C9112801.GRADE]
FILENAME: PPGRADE.GRF

CENTERLINE CURVE DATA	
P.I.	2+85.58
Delta	20° 36' 53"
D	24° 54' 40"
T	41.83'
L	82.75'
R	230.00'

CENTERLINE CURVE DATA	
P.I.	5+70.39
Delta	16° 31' 13"
D	3° 24' 38"
T	243.89'
L	484.40'
R	1680.00'

CENTERLINE CURVE DATA	
P.I.	9+23.57
Delta	112° 42' 06"
D	76° 23' 40"
T	112.67'
L	147.53'
R	75.00'



	TC	FL
1	09.22	08.89
2	08.80	08.80
3	09.04	08.71

D=100°51'11"
L=44.01'
T=25.00'

	TC	FL
4	08.65	08.32
5	08.26	08.26
6	08.52	08.19

D=95°07'14"
L=41.50'
T=25.00'

CUL-DE-SAC CURB DATA		
TC	PT	DELTA
06.20	1	24°23'09"
06.03	2	24°23'09"
05.87	3	24°23'09"
05.75	4	24°23'09"
05.70	5	24°23'09"
05.72	6	24°23'09"
05.82	7	24°23'09"
05.97	8	24°23'09"
06.15	9	24°23'09"

NOTES

1. THE CONTRACTOR SHALL FIELD VERIFY ALL EXISTING UTILITY LOCATIONS AND NOTIFY THE ENGINEER IMMEDIATELY OF ANY DISCREPANCES.
2. ALL CURB RETURN RADII SHALL BE 25' TO FACE OF CURB UNLESS OTHERWISE SPECIFIED.
3. ALL CURVE DATA AND DIMENSIONS REFER TO FACE OF CURB UNLESS OTHERWISE SPECIFIED.
4. GRADE ELEVATIONS, WHERE NOTED, ARE FOR TOP OF ROLL CURB UNLESS OTHERWISE SPECIFIED.
5. CONTRACTOR IS TO INSTALL A 4"x4"x5' POST AT THE END OF EACH SANITARY SEWER SERVICE.
6. CONTRACTOR IS RESPONSIBLE FOR REPAIR AND/OR REPLACEMENT OF ALL UTILITY CONDUITS AND EXISTING LINES.
7. ANY ADDITIONAL GRADING REQUIRED TO MATCH PROPOSED STREET GRADES SHALL BE INCIDENTAL TO PAVING ITEMS.
8. CONTRACTOR SHALL PROVIDE THE INSPECTORS, (CITY AND PRIVATE) WITH THE PROPOSED HYDROSTATIC TESTING PLAN. THE PLAN MUST BE APPROVED BEFORE TESTING OPERATIONS BEGIN.
9. CONTRACTOR SHALL PARK EQUIPMENT AND VEHICLES AS NOT TO INTERFERE WITH NORMAL ACTIVITIES OF RESIDENTS OR OTHER CONTRACTORS ON SITE.
10. RETAINING WALLS BY OTHERS. NOT PART OF THIS CONTRACT.
11. ANY DAMAGE TO THE EXISTING FACILITIES (CURB AND GUTTER, PAVEMENT, CONDUITS, LANDSCAPING, UTILITY LINES, ETC.) DURING CONSTRUCTION SHALL BE REPLACED AT THE CONTRACTORS EXPENSE.

AS-BUILT INFORMATION: CONTRACTOR / WORK STARTED BY / DATE / INSPECTOR'S ACCEPTANCE BY / DATE / FIELD VERIFICATION BY / DRAWINGS CORRECTED BY / DATE

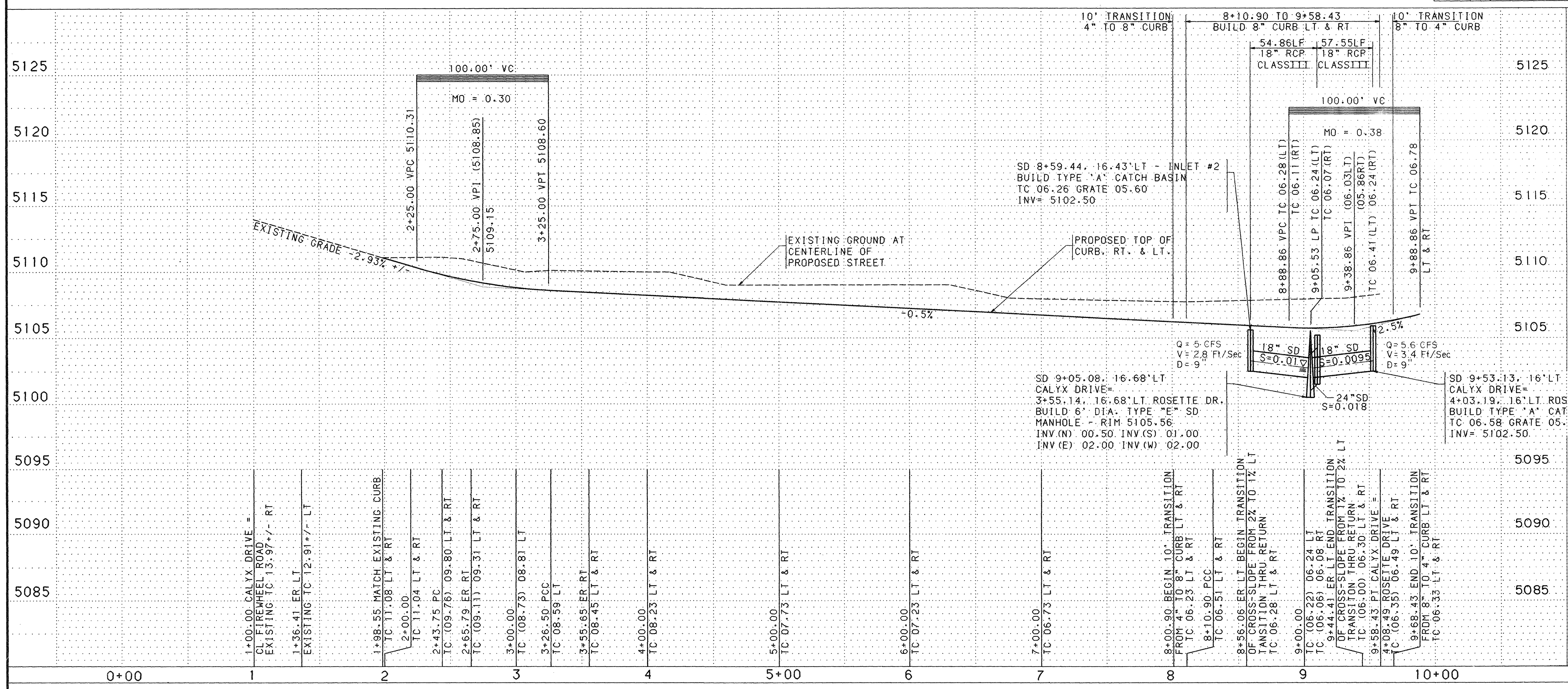
MICRO-FILM INFORMATION: RECORDED BY / DATE / NO.

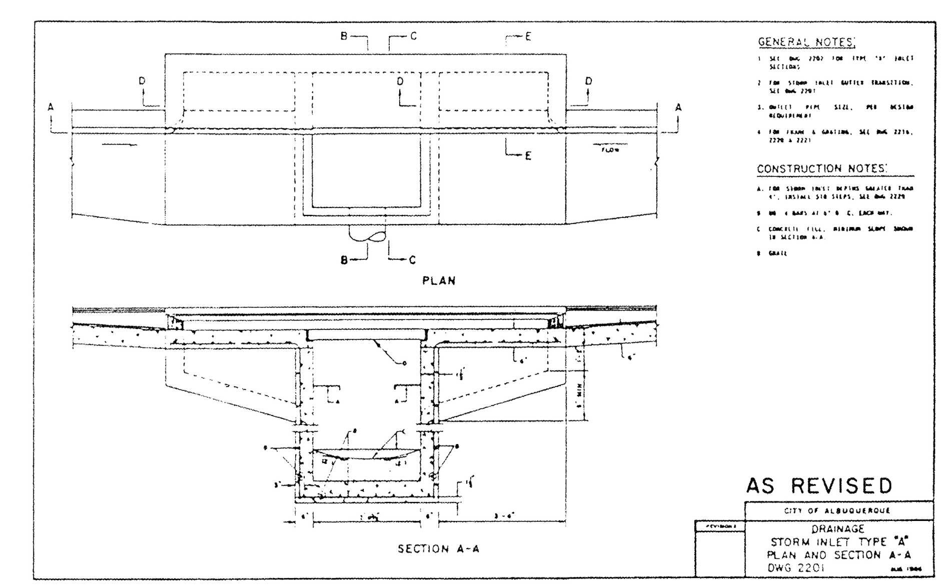
BENCH MARKS: A 2" DIA. ALUMINUM SURVEY CAP SET IN CONCRETE STAMPED "CP 32 LS 6544". BENCH MARK IS LOCATED APPROX. 28 FEET EAST OF THE EAST RIGHT-OF-WAY OF GOLF COURSE ROAD AND IS APPROX. 330 FEET NORTH AND 100 FEET EAST OF THE CENTERLINE INTERSECTION OF SAMARA ROAD AND GOLF COURSE ROAD. ELEVATION = 5115.83'

SURVEY INFORMATION: FIELD NOTES / NO. / BY / DATE

ENGINEER'S SEAL

6-12-91





GENERAL NOTES:

1. SEE DWG 2202 FOR TYPE "A" INLET SECTIONS.
2. FOR STORM INLET GUTTER TRANSITION, SEE DWG 2201.
3. OUTLET PIPE SIZE, PER DESIGN REQUIREMENT.
4. FOR FRAME & GRATING, SEE DWG 2216, 2220 & 2221.

CONSTRUCTION NOTES:

A. FOR STORM INLET DEPTHS GREATER THAN 4', INSTALL STD STEPS, SEE DWG 2229.
B. NO. 4 BARS AT 6" O. C. EACH WAY.
C. CONCRETE FILL, MINIMUM SLOPE SHOWN IN SECTION A-A.
D. GRATE

NOTE: THIS DETAIL WILL BE USED FOR STORM DRAIN INLETS 3 AND 4 AS SHOWN ON SHEET 7.

STORM INLET TYPE "A"
REVISED INLET DETAIL

NO SCALE

NO.	DATE	REMARKS	BY
		REVISIONS	

DESIGNED BY	KLD	DATE 6/91
DRAWN BY	SAR	DATE 6/91
CHECKED BY	KLD	DATE 6/91

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING

PRAIRIE PARK SUBDIVISION
PAVING PLAN & PROFILE
CALYX DRIVE - STA. 1+00.00 TO STA. 9+58.43

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION			WASTE WATER		
HYDROLOGY					

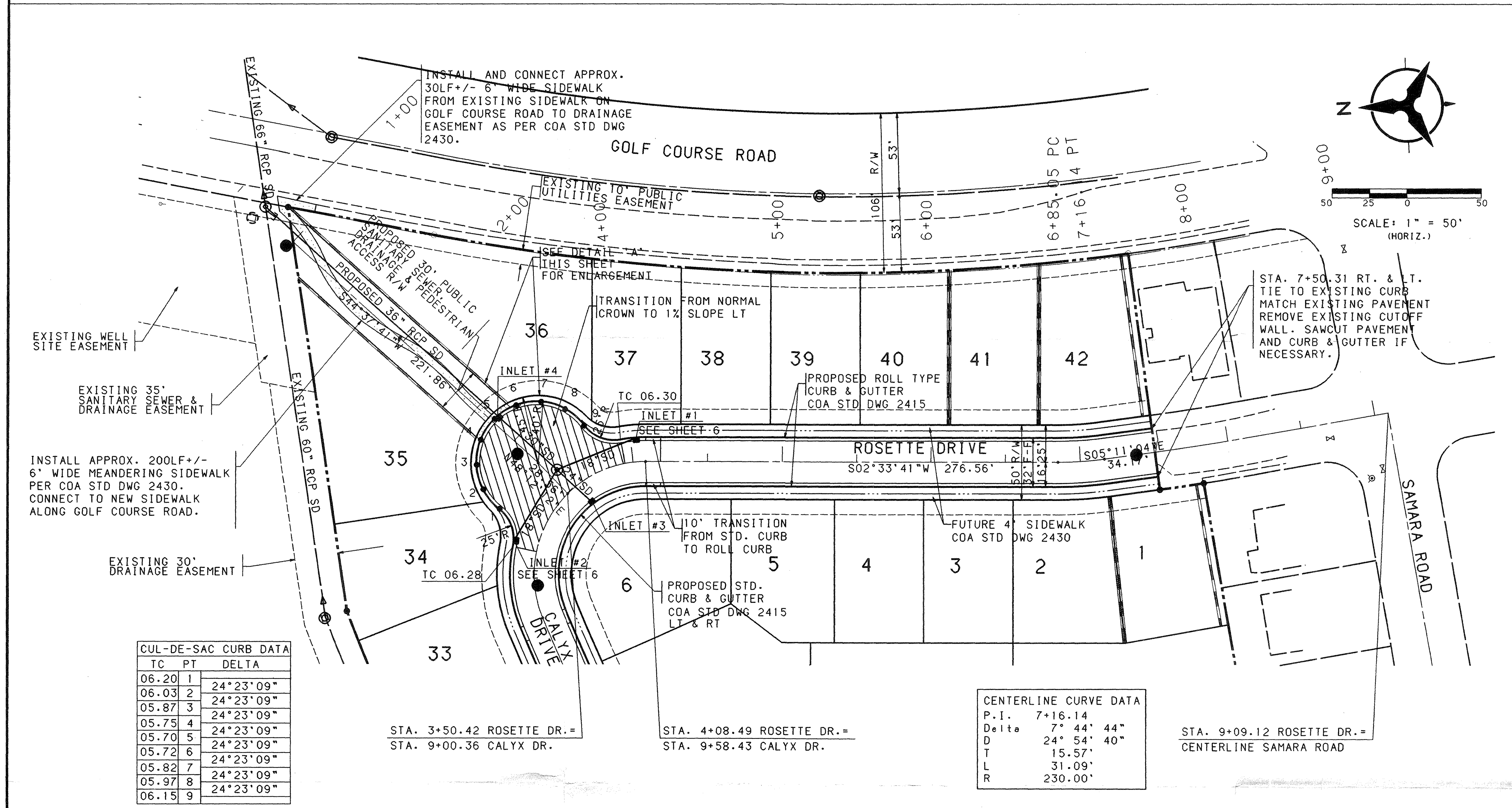
BHI JOB NO. 91128.01

USERNAME: CDP:[C9112801.PNP]
FILENAME: CALYX.GRF

SCALE: 1" = 50' (HORIZ.) 1" = 5' (VERT.)

DRAWING NO. 4270.90 | MAP NO. D-12 | SHEET 6 OF 11

PLATE 2



CUL-DE-SAC CURB DATA		
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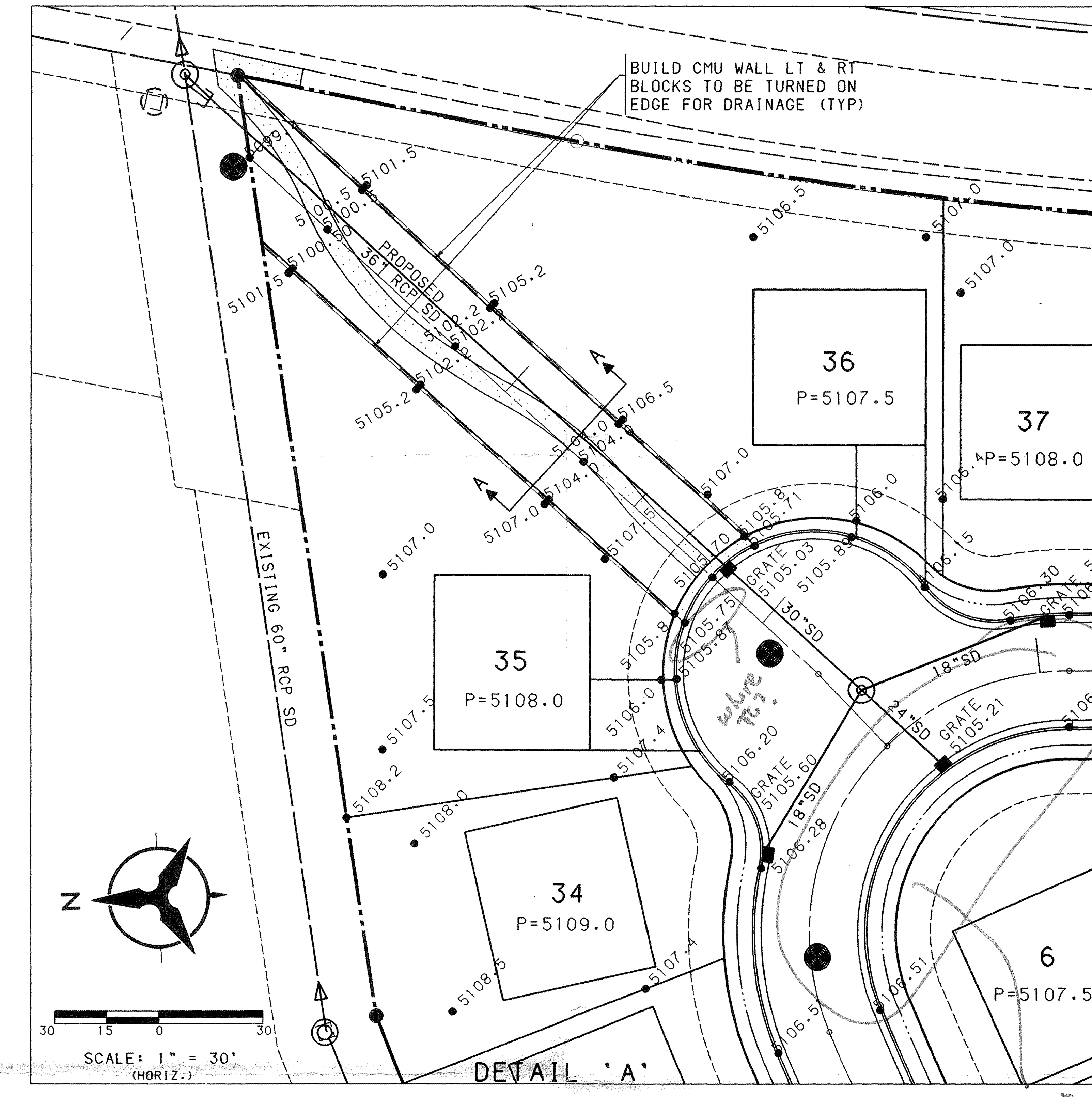
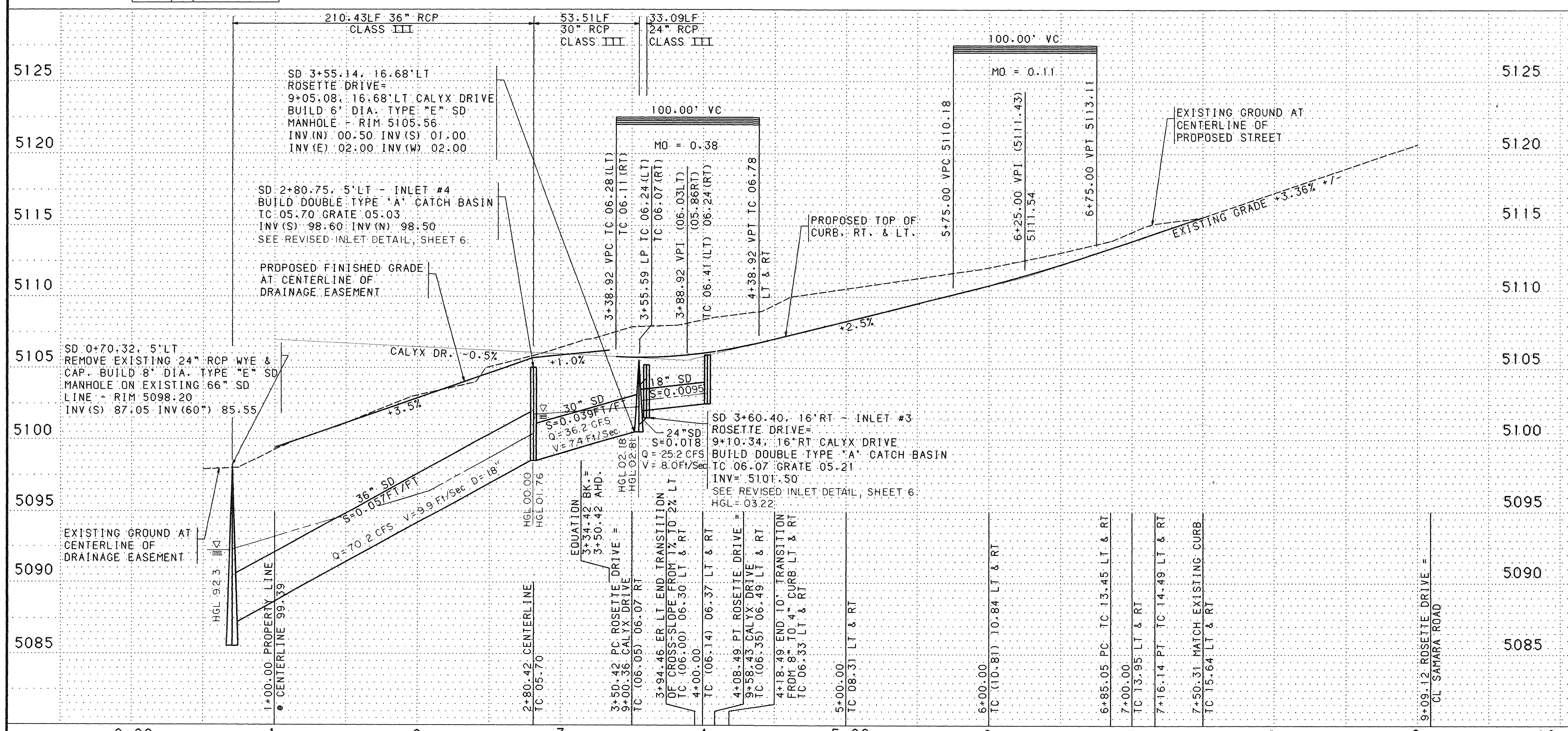
05.82	7	24°23'09"
05.97	8	24°23'09"
06.15	9	24°23'09"

CENTERLINE CURVE DATA	
P.I.	7+16.14
Delta	7° 44' 44"
D	24° 54' 40"
T	15.57'
L	31.09'
R	230.00'





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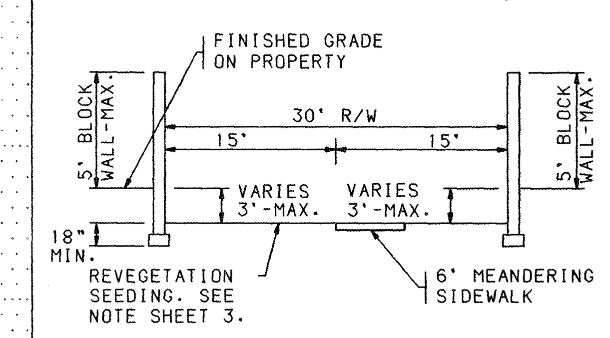

PEDESTRIAN ACCESS & DRAINAGE R/W
SECTION A-A
NO SCALE

AS-BUILT INFORMATION: CONTRACTOR; WORK STAKED BY; INSPECTOR'S ACCEPTANCE BY; FIELD VERIFICATION BY; DRAWINGS CORRECTED BY; DATE

MICRO-FILM INFORMATION: RECORDED BY; DATE; NO.

BENCH MARKS: A 2" DIA. ALUMINUM SURVEY CAP SET IN CONCRETE STAMPED "CP 32 LS 6544". BENCH MARK IS LOCATED APPROX. 28 FEET EAST OF THE EAST RIGHT-OF-WAY OF GOLF COURSE ROAD AND IS APPROX. 330 FEET NORTH AND 100 FEET EAST OF THE CENTERLINE INTERSECTION OF SAMARA ROAD AND GOLF COURSE ROAD. ELEVATION = 5115.83'

SURVEY INFORMATION: NO. FIELD NOTES BY DATE

ENGINEER'S SEAL

REVISIONS: NO. DATE REMARKS BY — DESIGN; DESIGNED BY KLD DATE 6/91; DRAWN BY SAR DATE 6/91; CHECKED BY KLD DATE 6/91

BHI JOB NO. 91128.01

USERNAME: CDP:[C9112801.PNP]
FILENAME: ROSETTE.GRF

SCALE: 1" = 50' (HORIZ.) 1" = 5' (VERT.)

CITY OF ALBUQUERQUE
PUBLIC WORKS DEPARTMENT
ENGINEERING

PRAIRIE PARK SUBDIVISION
PAVING PLAN & PROFILE
ROSETTE DRIVE - STA. 1+00.00 TO STA. 7+50.31

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN			WATER		
TRANSPORTATION			WASTE WATER		
HYDROLOGY					

DRAWING NO. 4270.90 | MAP NO. D-12 | SHEET 7 OF 11

PLATE 3