

N 46° 08' 26" E
28.18'

BELTLINE ROAD

ROAD

COMMERCE

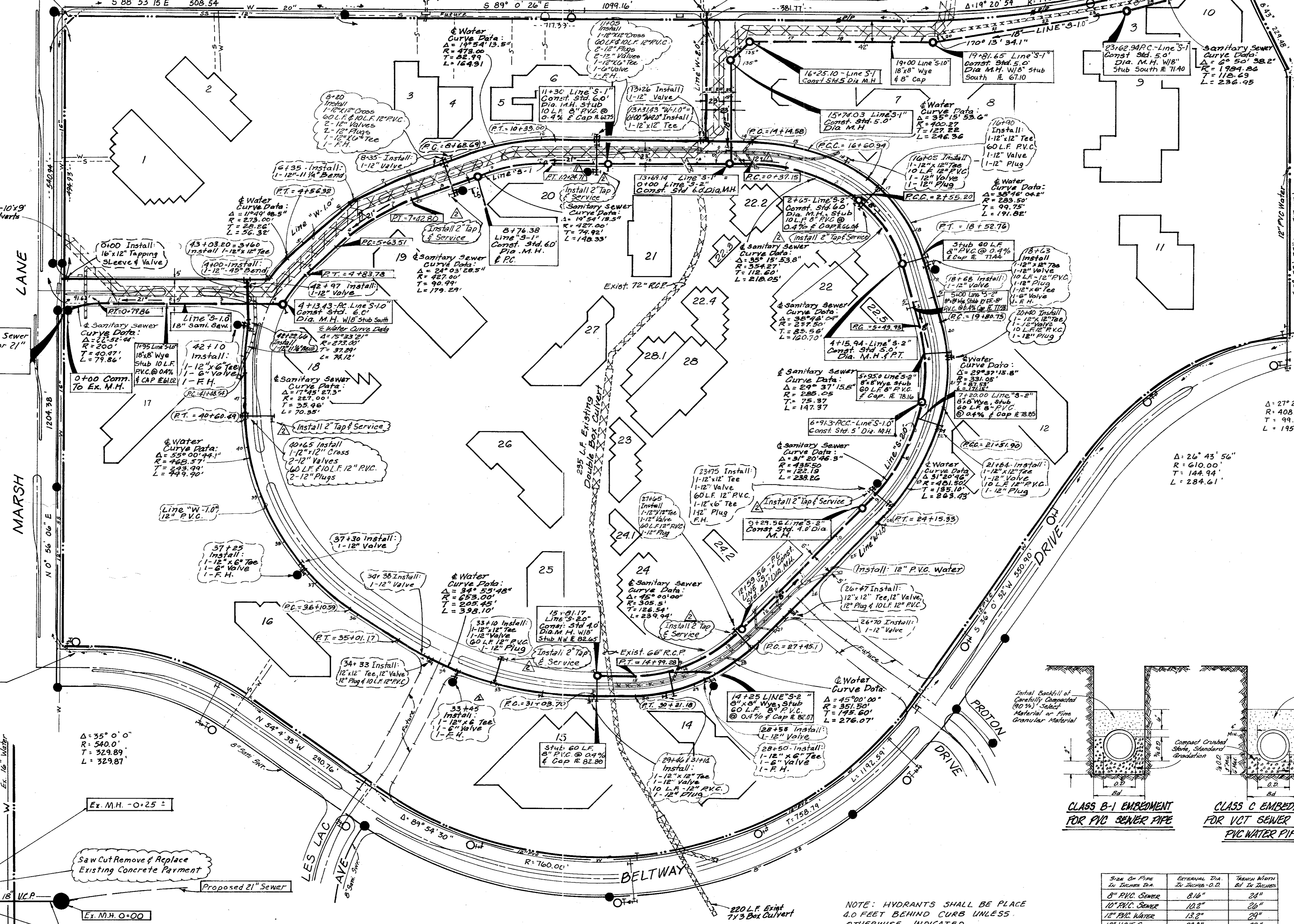
Exist 4-10x9
Box Culverts

Remove Existing 18" V.C.T. Sewer
Pipe & Install 21" P.V.C. or 21"
R.C. Sewer Pipe.
See Detail Below

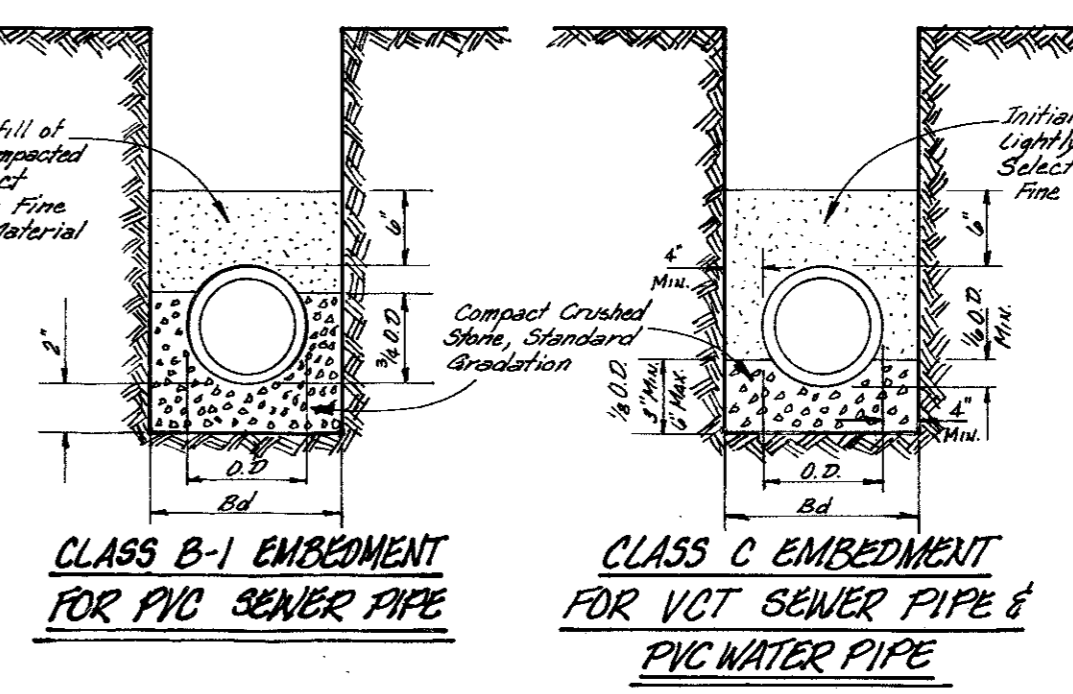
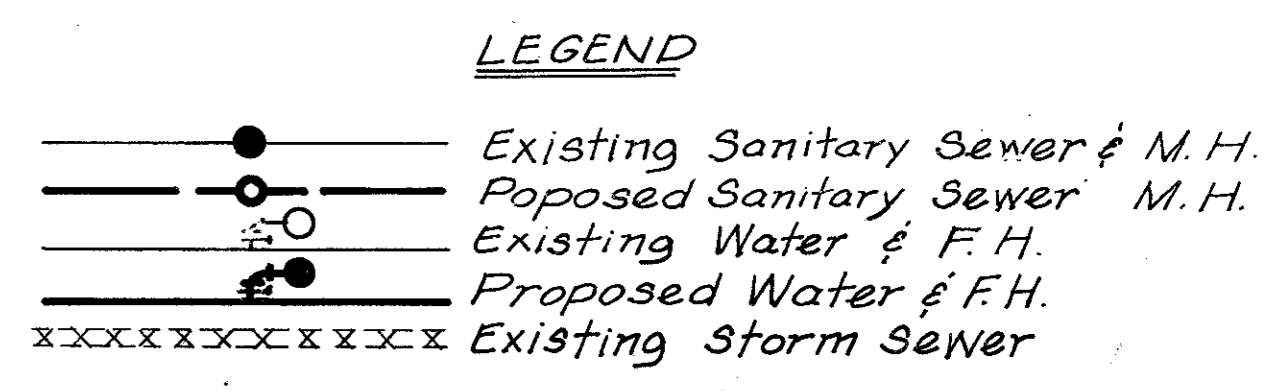
N 89° 4' 38" W
56.88'

Δ = 35° 0' 0"
R = 540.0'
T = 329.89'
L = 329.87'

Remove 25" of Existing 18" V.C.P. Sewer
Pipe and Install 21" P.V.C. Sewer
Pipe or 21" R.C. Pipe.



- GENERAL NOTES
- All water mains shall be PVC Class 150 water pipe.
 - All water mains shall have a minimum cover below finished grades as follows: 6" & 8" - 48", 12" - 60", or as required to clear other utilities.
 - The location of all utilities are taken from existing public records. The exact location must be determined by the Contractor. It is the duty of the Contractor to ascertain whether any other facilities (additional), other than those on the plans may be present.
 - All utility trenches under proposed paving shall be backfilled and compacted to 95% Standard Proctor Density, ASTM Designation D 690.
 - All manholes, cleanouts, valve boxes, fire hydrants, etc., must be adjusted to proper line and grade by the Contractor after placing of permanent paving.
 - All work and materials shall be in accordance with the City of Addison Standard Specifications.
 - Contractor shall be responsible for providing "as-built" plans to the Engineer showing the location of sewer service by distance to the lot lines.



BENCH MARKS

- Top of Curb At The Center of A 10' Inlet And 75' West of Centerline Commercial At The North Side of Beltline Road Elev. 580.83
- Top of Concrete Footing At N.W. Corner Tower #12 N-3W-T268 Elev. 605.20

Size of Pipe in Inches Dia.	Minimum Dia. in Inches - 0.01	Minimum Depth in Inches
6" PVC Sewer	8.16"	24"
10" PVC Sewer	10.9"	26"
12" PVC Water	13.2"	29"
18" V.C.T. Sewer	23.0"	39"

NOTE: HYDRANTS SHALL BE PLACED 4.0 FEET BEHIND CURB UNLESS OTHERWISE INDICATED.

Revised 7-6-83
Revised 7-11-83

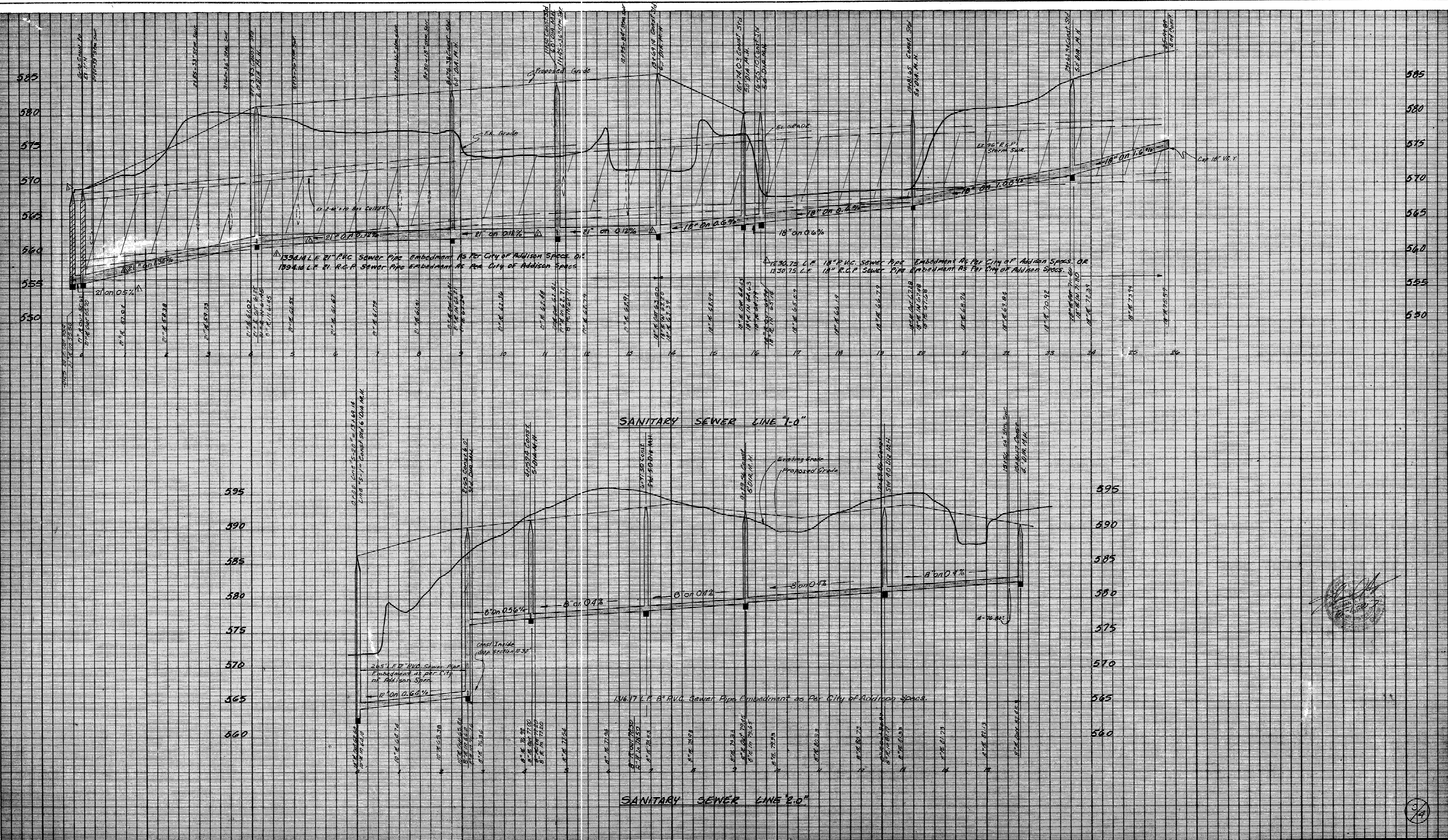
SANITARY SEWER & WATER PLAN
LES LACS PLAZA

CITY OF ADDISON, TEXAS

RAYMOND L. GOODSON JR. INC., ENGINEERS

DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
RLG INC.	RLG INC.	AUGUST 1983	1" = 100'	RLG INC.	80	95

2/4

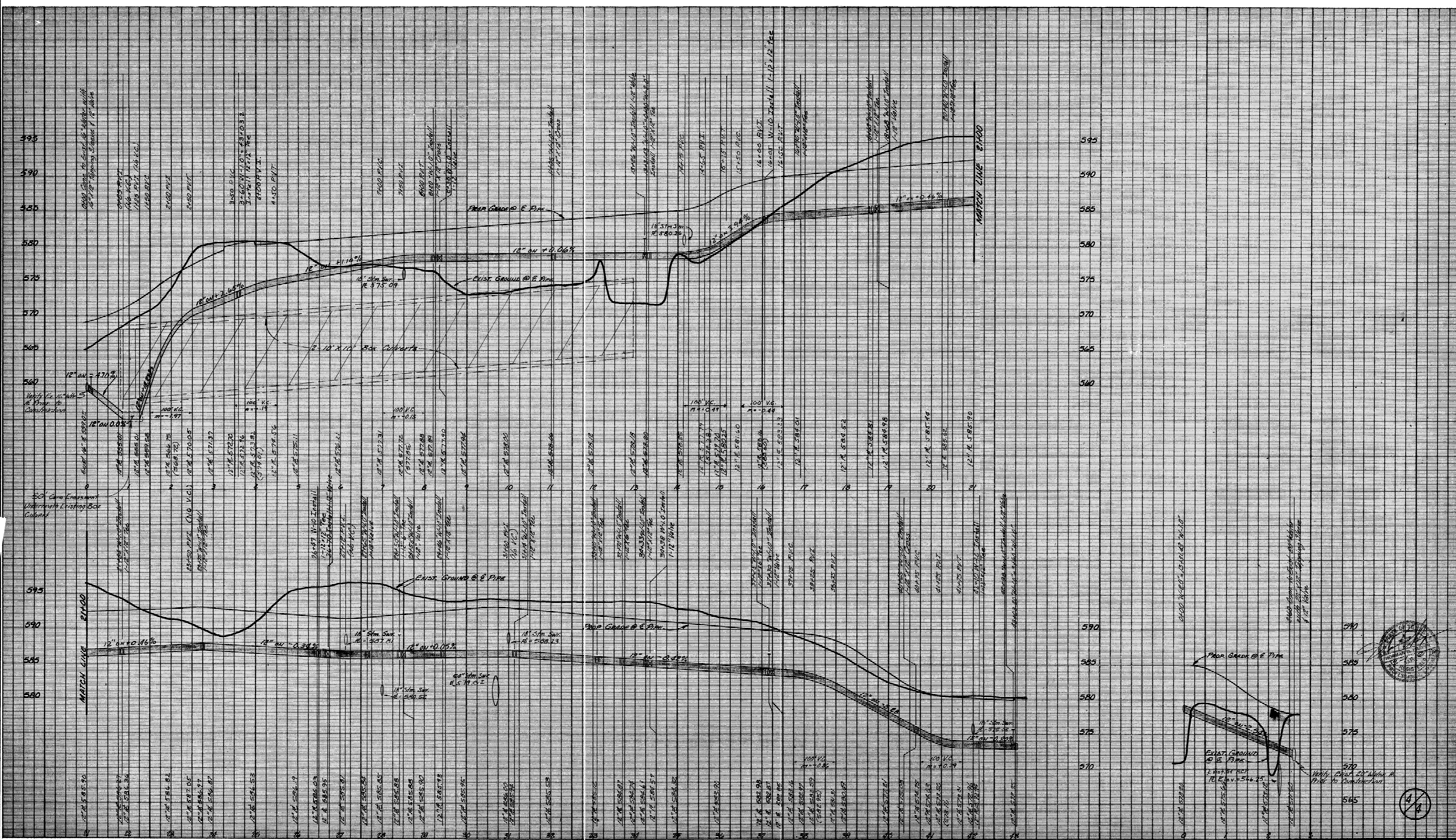


BENCH MARKS
 □ Top of Curb At The Center of A 10' Inlet And 75'± West of Centerline Commercial At The North Side of Beltline Road. Elev. 580.83
 □ Top of Concrete Footing At N.W. Corner Tower #12 N-3W-T238 Elev. 605.20

SANITARY SEWER PROFILE						
LES LACS PLAZA						
CITY OF ADDISON, TEXAS						
RAYMOND L. GOODSON JR INC, ENGINEERS						
DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
RLG INC.	RLG INC.	AUGUST 1983	1" = 100' H 1" = 6' V	RLG INC.	80	95

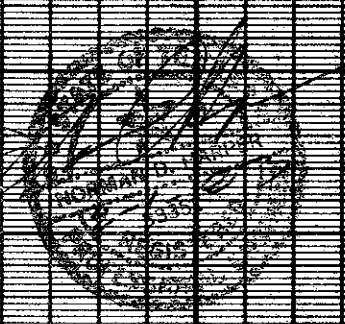
Revised 7-6-83

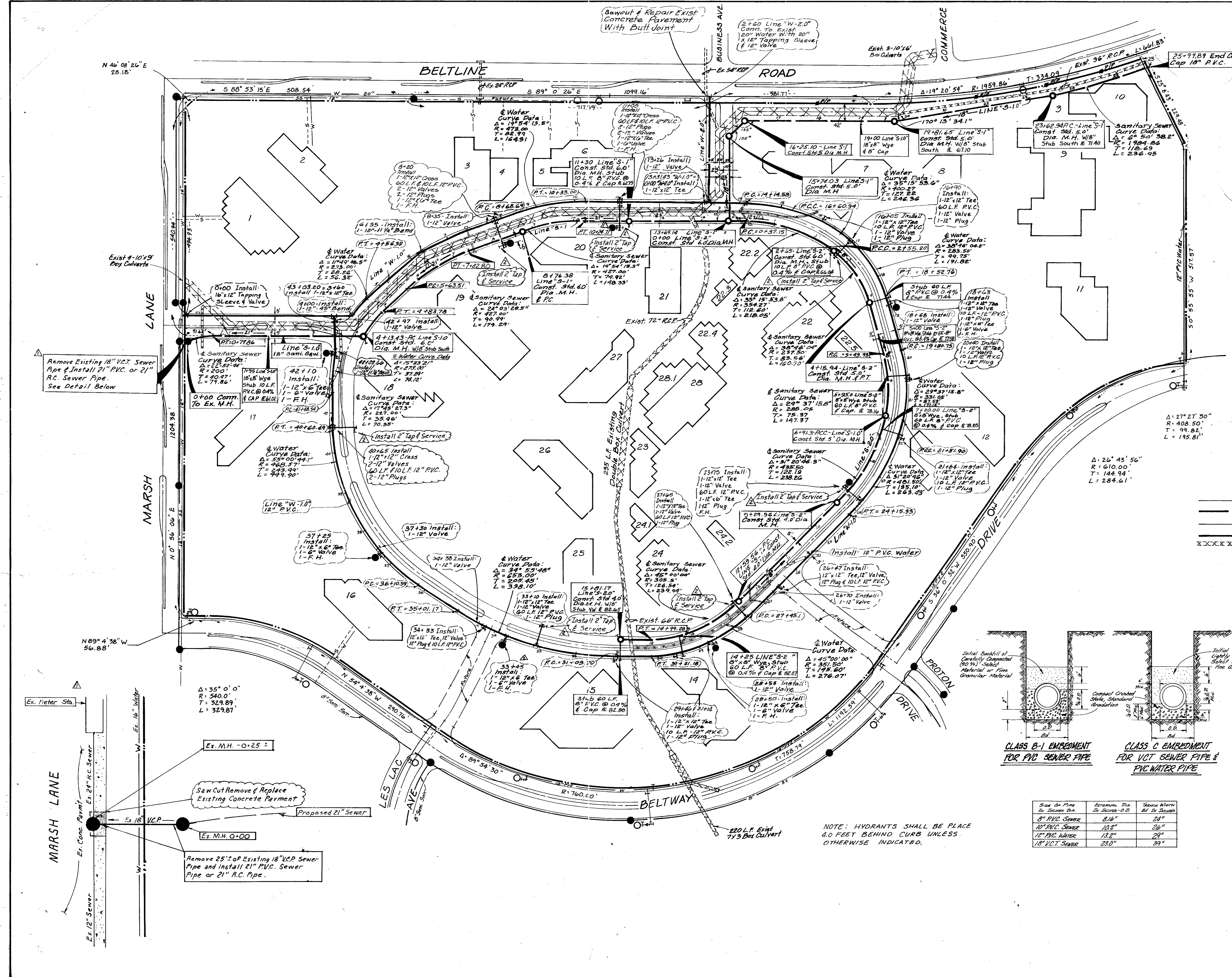
3/4



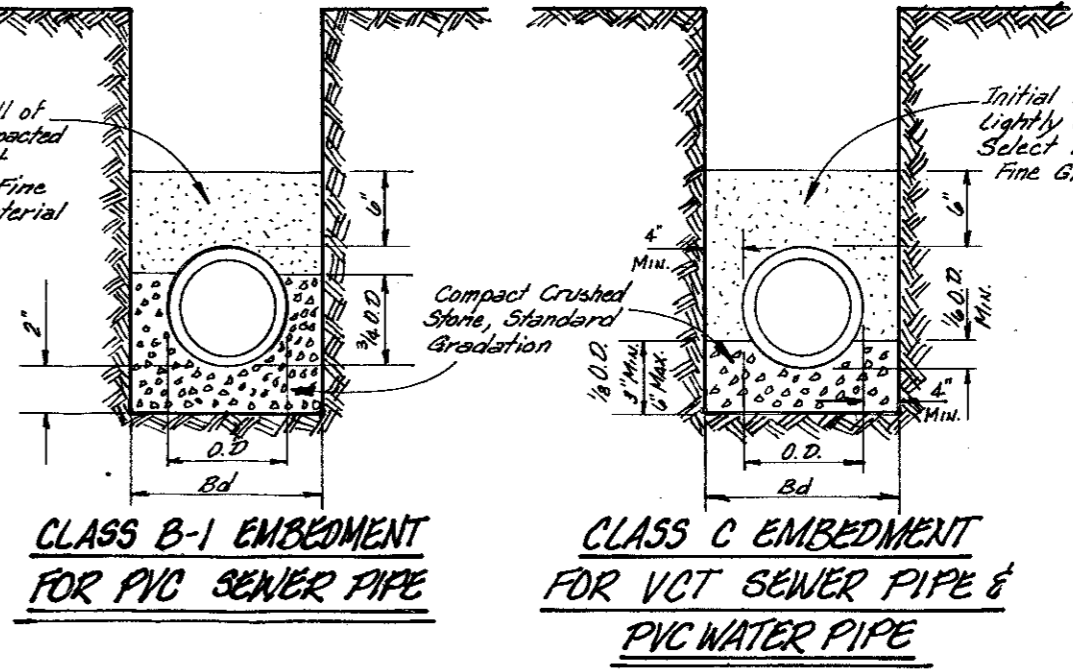
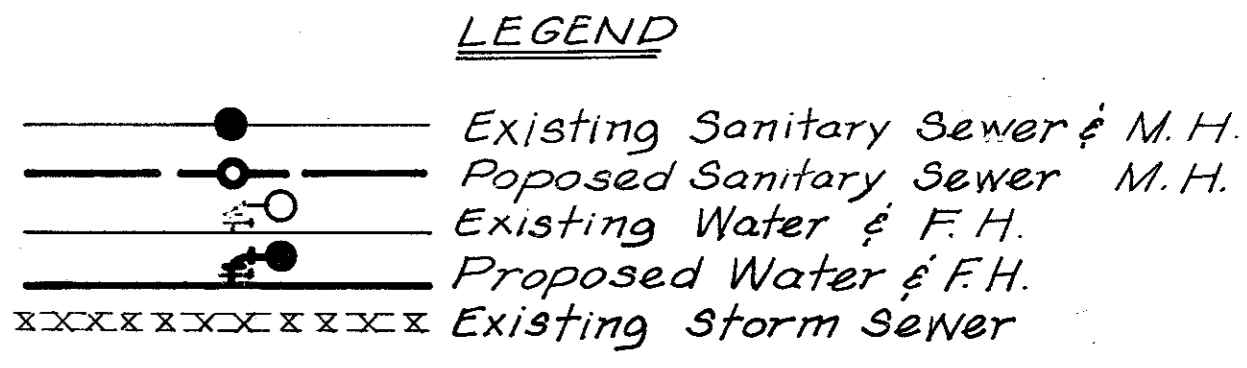
BENCH MARKS
 "17" Top of Curb at the center of 10' Inlet
 75'± West of the centerline of Commercial
 Drive at the North Side of Ballline Road
 Elev. 580.83
 "17" Top of concrete footing at Northwest
 Corner Tower #12 N. 3N-7283
 Elev. 605.20

WATER PROFILES						
LES LACS PLAZA						
CITY OF ADDISON, TEXAS						
RAYMOND L. GOODSON JR. INC., ENGINEERS						
DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
R.L.G. INC.	R.L.G. INC.	AUGUST 1983	1"=100 H 1"=6' V	R.L.G. INC.	80	95





- GENERAL NOTES
- All water mains shall be PVC Class 150 water pipe.
 - All water mains shall have a minimum cover below finished grades as follows: 6" & 8" - 48", 12" - 60", or as required to clear other utilities.
 - The location of all utilities are taken from existing public records. The exact location must be determined by the Contractor. It is the duty of the Contractor to ascertain whether any other facilities (additional), other than those on the plans may be present.
 - All utility trenches under proposed paving shall be backfilled and compacted to 95% Standard Proctor Density, ASTM Designation D 690.
 - All manholes, cleanouts, valve boxes, fire hydrants, etc., must be adjusted to proper line and grade by the Contractor after placing of permanent paving.
 - All work and materials shall be in accordance with the City of Addison Standard Specifications.
 - Contractor shall be responsible for providing "as-built" plans to the Engineer showing the location of sewer service by distance to the lot lines.



Size of Pipe to be Installed	Excavation Dia. to be Done	Trench Width at Bottom
8" PVC Sewer	8 1/2"	24"
10" PVC Sewer	10 1/2"	26"
12" PVC Water	13 1/2"	29"
18" V.C.T. Sewer	23 1/2"	39"

NOTE: HYDRANTS SHALL BE PLACED 4.0 FEET BEHIND CURB UNLESS OTHERWISE INDICATED.

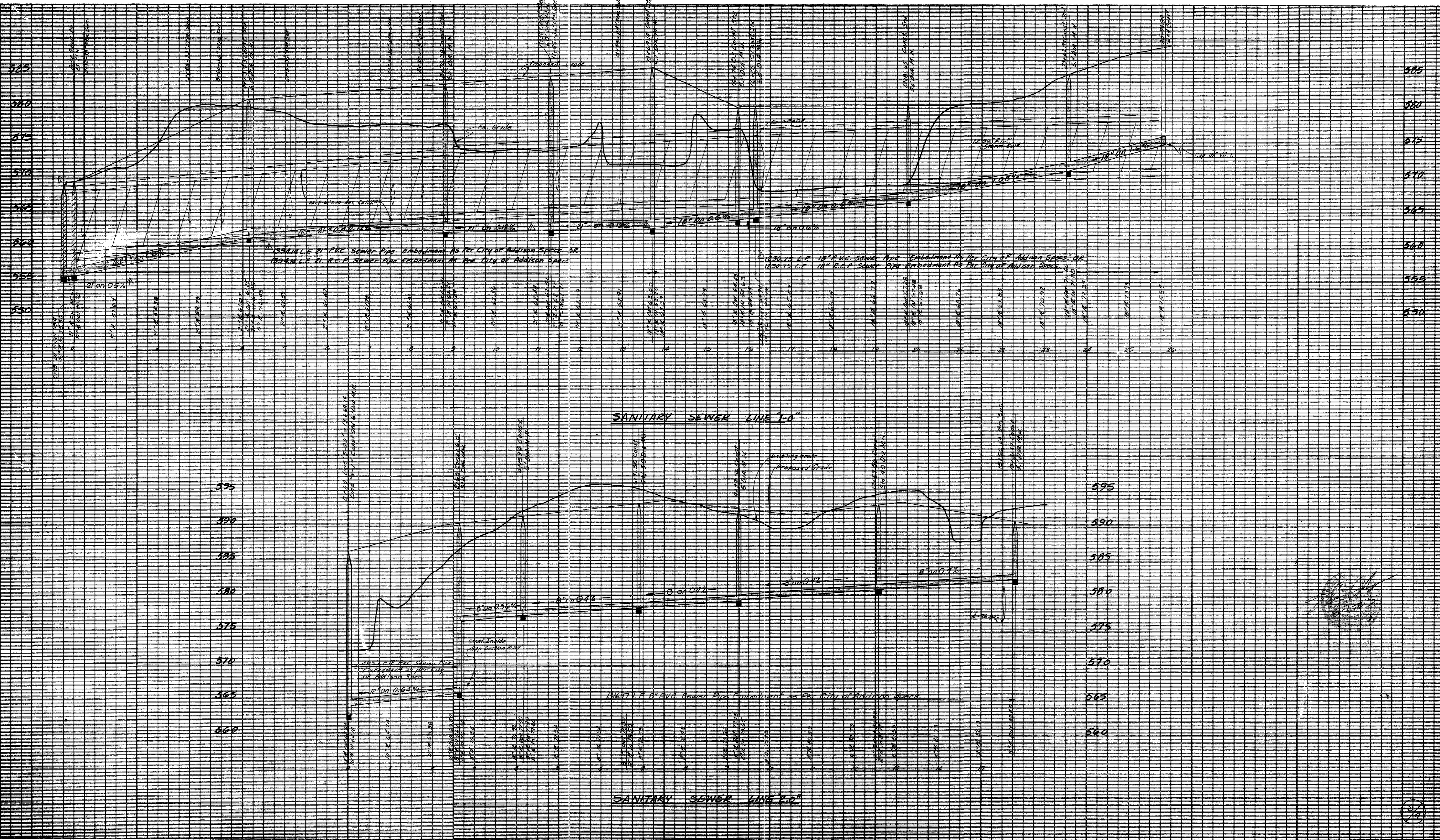
Revised 7-6-83
Revised 7-11-83

SANITARY SEWER & WATER PLAN
LES LACS PLAZA

CITY OF ADDISON, TEXAS

RAYMOND L. GOODSON JR. INC., ENGINEERS

DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
RLG INC.	RLG INC.	AUGUST 1983	1" = 100'	RLG INC.	80	95

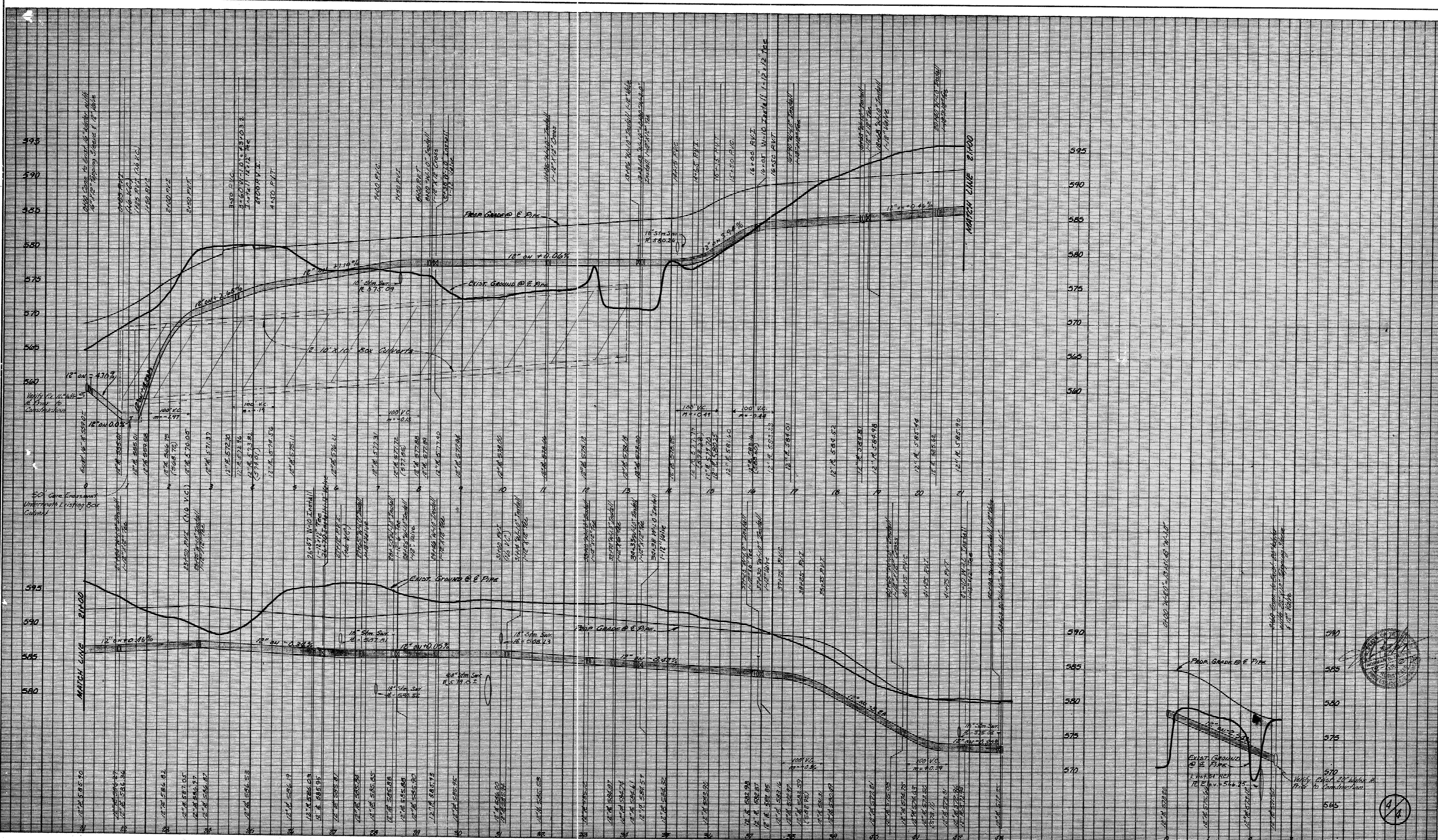


BENCH MARKS
 □ Top of Curb At The Center of A 10' Inlet And 75'± West of Centerline Commercial At The North Side of Beltline Road. Elev. 580.83
 □ Top of Concrete Footing At N.W. Corner Tower #12 N-3W-T288 Elev. 605.20

SANITARY SEWER PROFILE						
LES LACS PLAZA						
CITY OF ADDISON, TEXAS						
RAYMOND L. GOODSON JR INC, ENGINEERS						
DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
RLG INC.	RLG INC.	AUGUST 1983	1"=100H 1"=6'V	RLG INC.	80	95

Revised 7-6-83

3/4



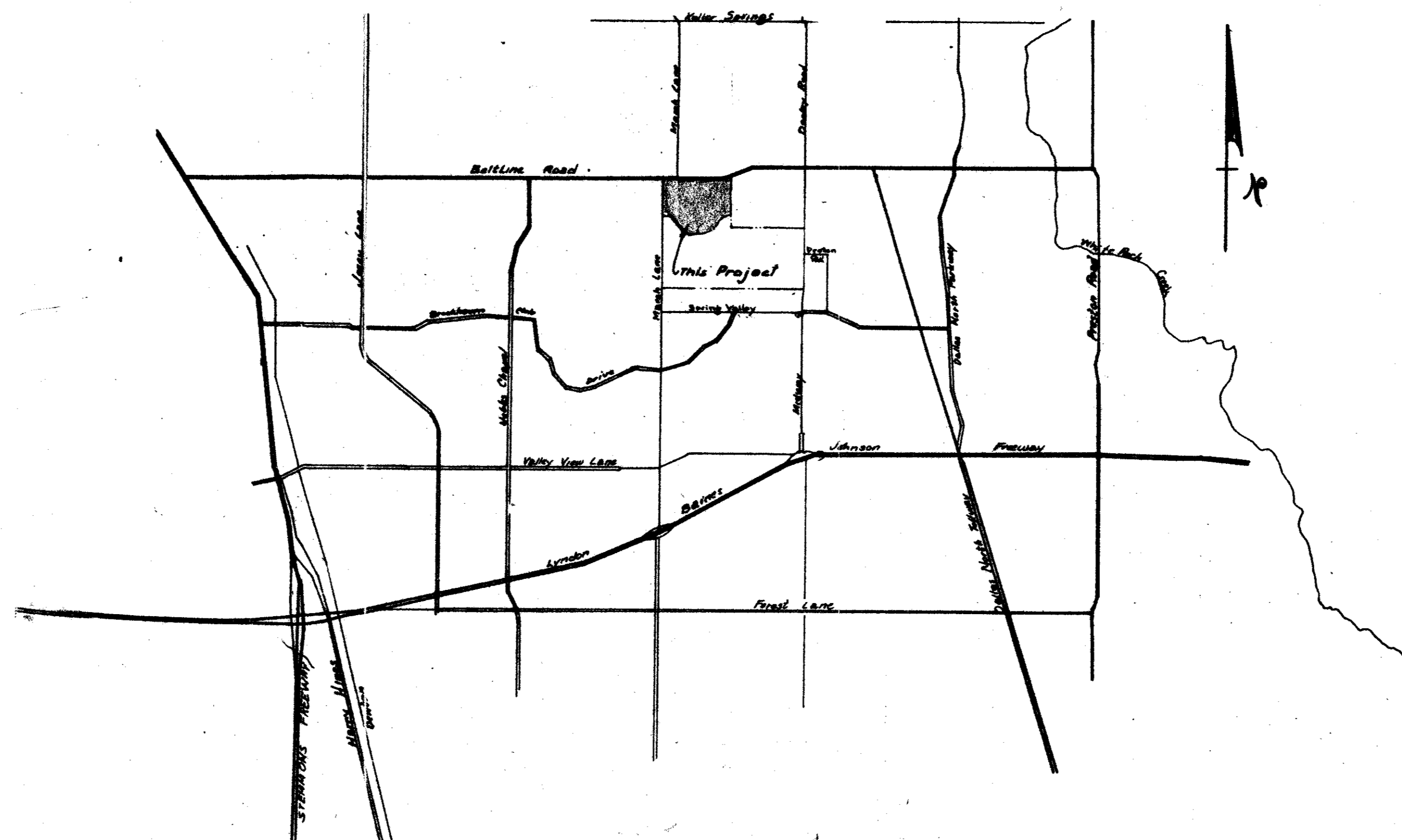
BENCH MARKS
 "1" Top of Curb at the center of 10' Inlet
 75'± West of the centerline of Commercial
 Drive at the North Side of Bellline Road
 Elev. 580.83
 "2" Top of concrete footing at Northwest
 Corner Tower #12 N. 3W - T. 8 S.
 Elev. 605.20

WATER PROFILES						
LES LACS PLAZA						
CITY OF ADDISON, TEXAS						
RAYMOND L. GOODSON JR. INC., ENGINEERS						
DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
R.L.G. INC.	R.L.G. INC.	AUGUST 1983	1"=100 H 1"=6 V	R.L.G. INC.	80	95

LES LACS PLAZA

for

LES LACS PLAZA JOINT VENTURE



VICINITY MAP

DESIGNED BY

RAYMOND L. GOODSON JR., INCORPORATED, CONSULTING ENGINEERS
3409 OAK GROVE
528-2200
DALLAS, TEXAS
75204

CONSTRUCTION SET
2/25/83

CITY OF ADDISON
APPROVED
FOR CONSTRUCTION
R. D. Jones
BUILDING DEPARTMENT
4-15-83

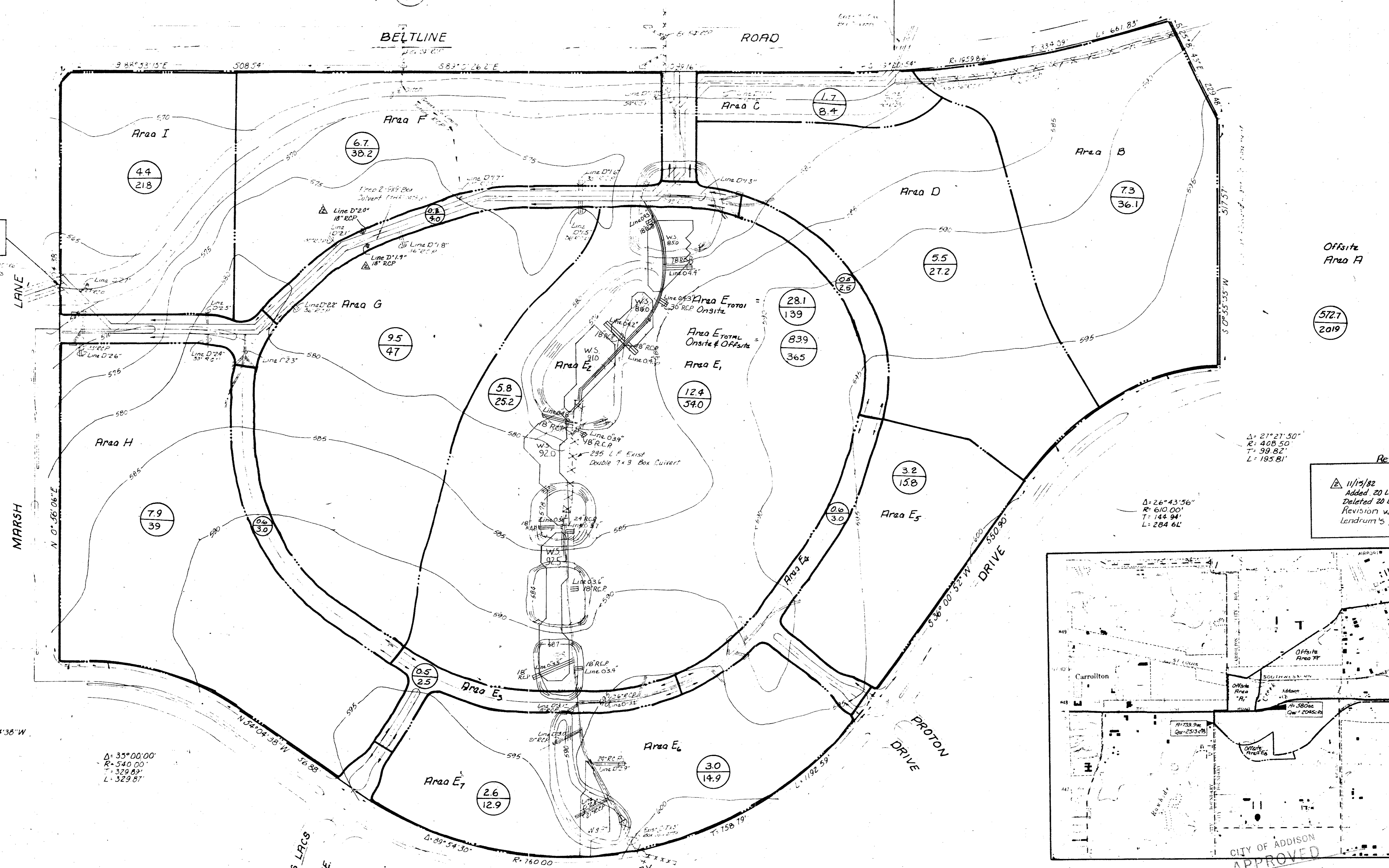
DATE: 4-15-83
NOTE: CONTRACTOR IS HEREBY INSTRUCTED TO EXERCISE CARE IN MEETING OR EXCEEDING ALL REQUIREMENTS OF BOTH NATIONAL AND LOCAL CODES AND/OR ORDINANCES APPLICABLE TO HIS WORK. APPROVAL OF THESE DRAWINGS SHALL NOT BE CONSTRUED TO RELIEVE RESPONSIBILITY OR IMPLY VARIANCE TO SUCH CODES.

Offsite Area A, 38.6 / 191.0

Offsite Area A

Total Area = 580ac
Total Qes = 2045ac

Total Area = 139.9ac
Qes = 2513 cfs



Offsite Area A

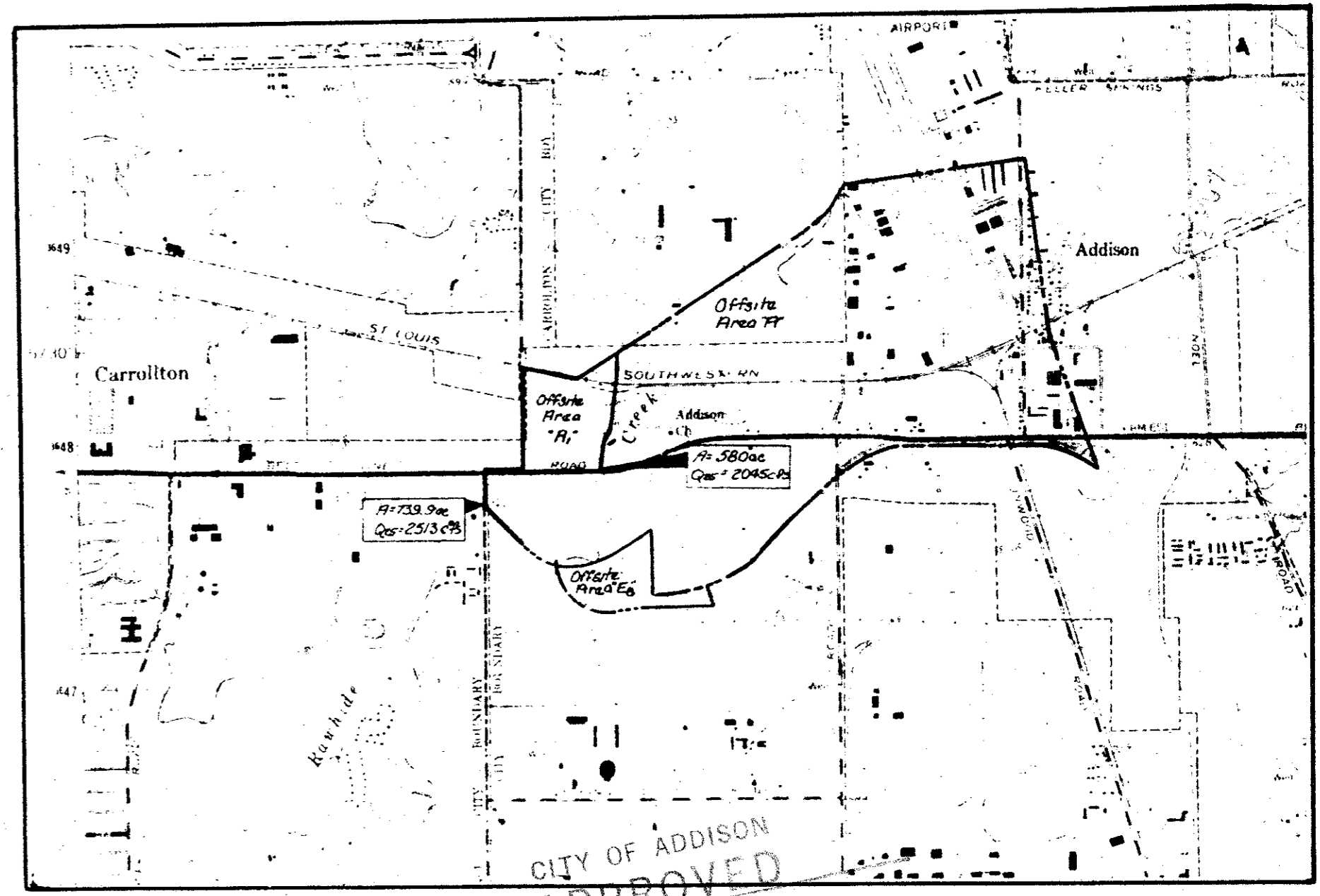
572.7 / 2019

Δ = 21° 21' 30"
R = 408.50'
T = 99.82'
L = 195.81'

Revisions

11/15/82
Added 20 L.F. 18" RCP @ Sta. 7+84'
Deleted 20 L.F. 18" RCP @ Sta. 5+60'
Revision was made to concur with Lendrum's prop. grades.

Δ = 26° 43' 56"
R = 610.00'
T = 144.94'
L = 284.61'



CITY OF ADDISON APPROVED

FOR CONSTRUCTION
Offsite Drainage Area Map
 BUILDING DEPARTMENT
 Scale 1" = 2000'

NOTE: CONTRACTOR IS HEREBY INSTRUCTED TO EXERCISE CARE IN MEETING OR EXCEEDING ALL REQUIREMENTS OF BOTH NATIONAL AND LOCAL CODES AND/OR ORDINANCES APPLICABLE TO HIS WORK. APPROVAL OF THESE DEPARTMENTS SHALL NOT IMPLY STRUED TO RELIEVE RESPONSIBILITY OR IMPLY VARIANCE TO SUCH CODES.

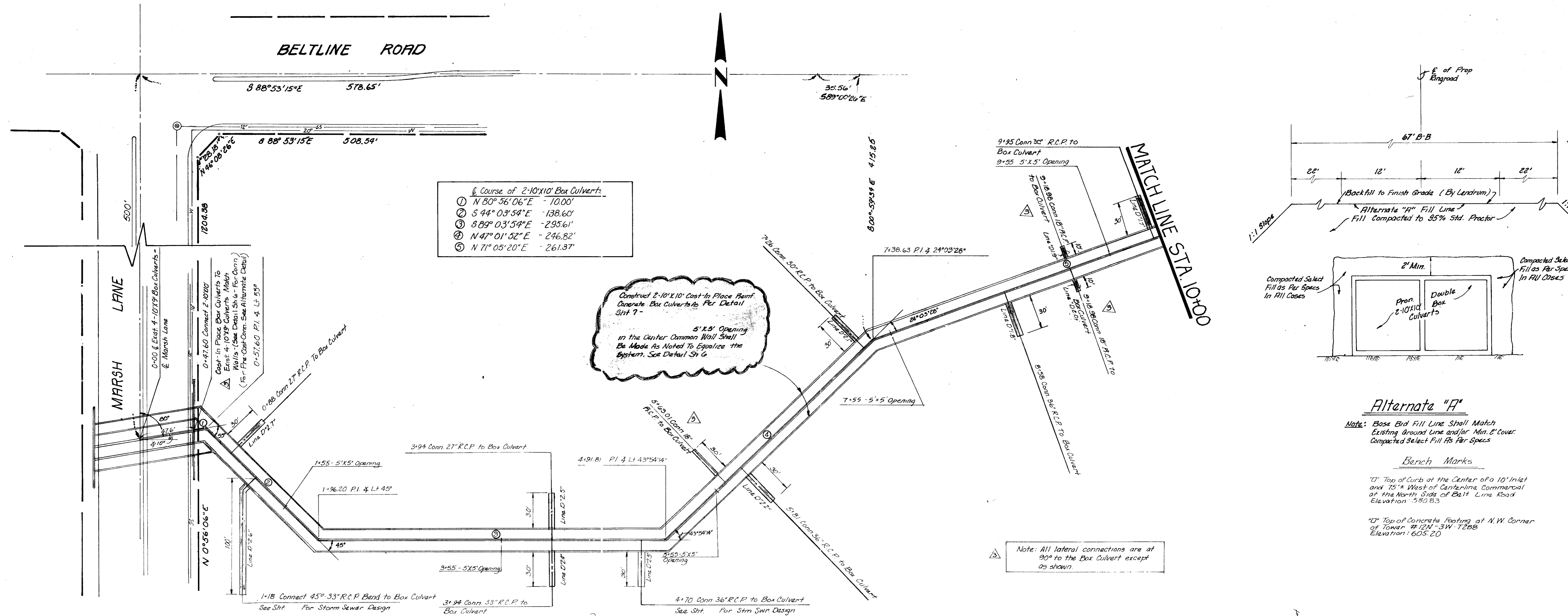
Accepted For Construction By:
 Date: 2-12-82
 m.e. Bennett
 Date: 3-14-83
 Contractor

Existing Offsite Area E8 55.8 / 243

CONSTRUCTION SET
2/25/83

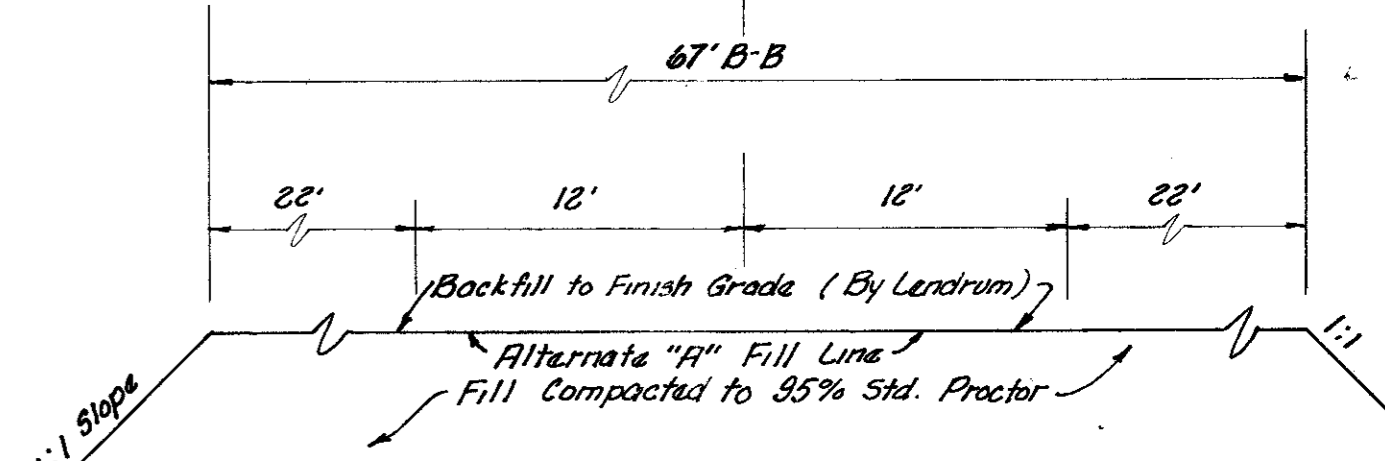
CITY OF ADDISON, TEXAS						
RAYMOND L. GOLDSON JR. INC. ENGINEERS						
DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
		FEB 1983	1"=200'			

BELTLINE ROAD



- Course of 2-10'x10' Box Culverts
- ① N 80° 56' 06" E - 10.00'
 - ② S 44° 03' 54" E - 138.60'
 - ③ S 89° 03' 54" E - 295.61'
 - ④ N 47° 01' 52" E - 246.82'
 - ⑤ N 71° 05' 20" E - 261.37'

Construct 2-10'x10' Cast-In Place Reinforced Concrete Box Culverts Per Detail Sheet 7 -
5'x5' Opening in the Center Common Wall Shall Be Made As Noted To Equalize the System. See Detail Sheet 6



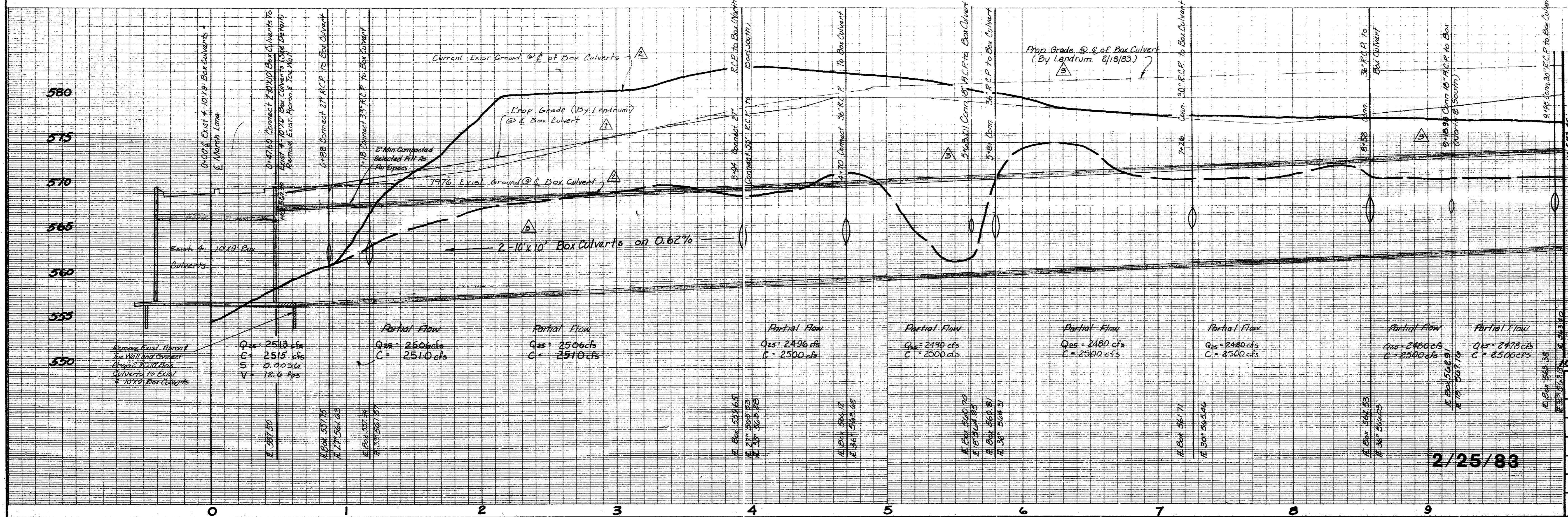
Alternate "A"

Note: Base Bid Fill Line Shall Match Existing Ground Line and/or Min. 8" Cover Compacted Select Fill As Per Specs In All Cases

Bench Marks

"1" Top of Curbs at the Center of a 10' Inlet and 75' West of Centerline Commercial at the North Side of Belt Line Road Elevation: 580.85
"2" Top of Concrete Footing at N.W. Corner of Tower #12N-3W-7288 Elevation: 605.20

Note: All lateral connections are at 90° to the Box Culvert except as shown.



Revised 10/15
11/11/82 Revised: Elevation of Ground @ E. of Box Culvert
11/15/82 Revised: 1976 Existing & Current Existing Ground @ E. of Box Culvert
Added 2" L.F. 18" R.C.P. @ Sta. 7+84 Drilled 24" L.F. 18" R.C.P. @ Sta. 5+40 Revisions were made to corridor with Lendrum's prop. grades.
Revised Box Size & Prop. Grade Line

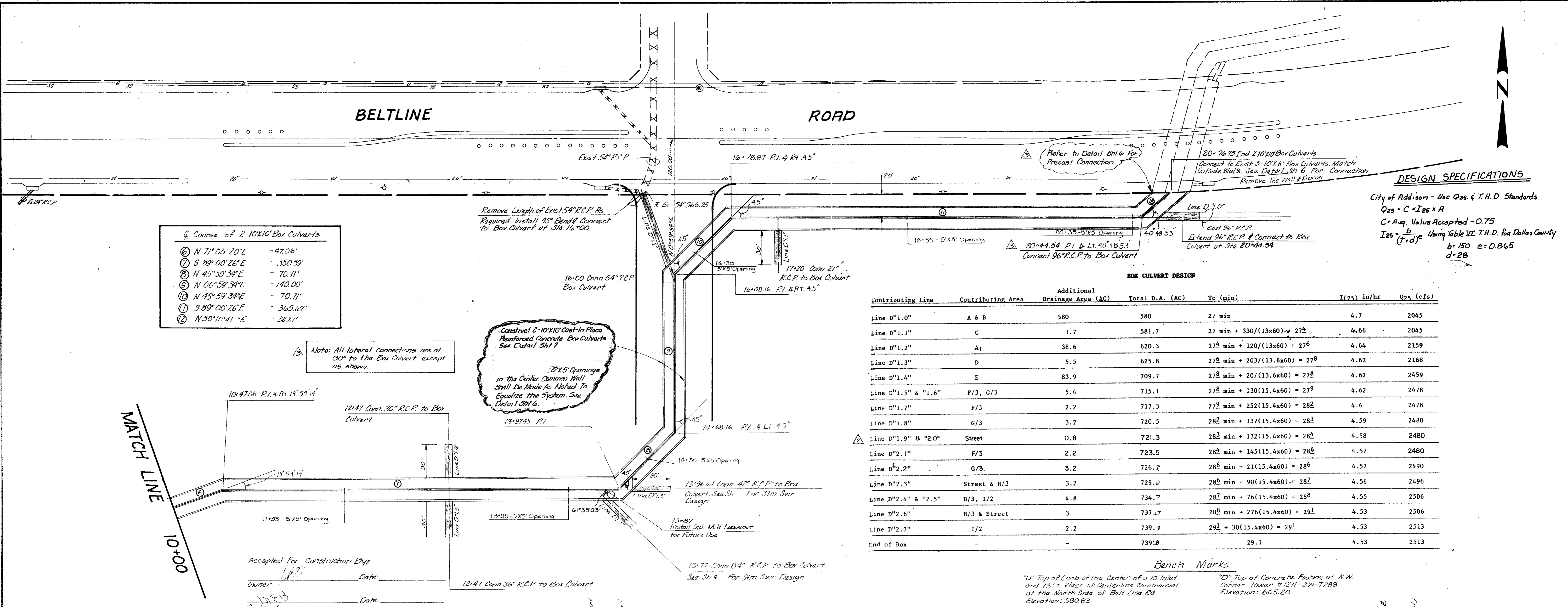
Accepted for Construction By
Owner: [Signature]
Contractor: [Signature]

BOX CULVERT DESIGN
LES LACS PLAZA

CITY OF ADDISON, TEXAS
RAYMOND L. GOODSON JR. INC., ENGINEERS

DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
R.L.G. INC.	R.L.G. INC.	FEB. 1983	1" = 40'H 1" = 6'V	R.L.G. INC.		

2/25/83



Course of 2-10'x10' Box Culverts

①	N 71° 05' 20" E	- 47.06'
②	S 89° 00' 26" E	- 350.39'
③	N 45° 59' 34" E	- 70.71'
④	N 00° 59' 34" E	- 140.00'
⑤	N 45° 59' 34" E	- 70.71'
⑥	S 89° 00' 26" E	- 365.67'
⑦	N 50° 10' 41" E	- 38.21'

Note: All lateral connections are at 90° to the Box Culvert except as shown.

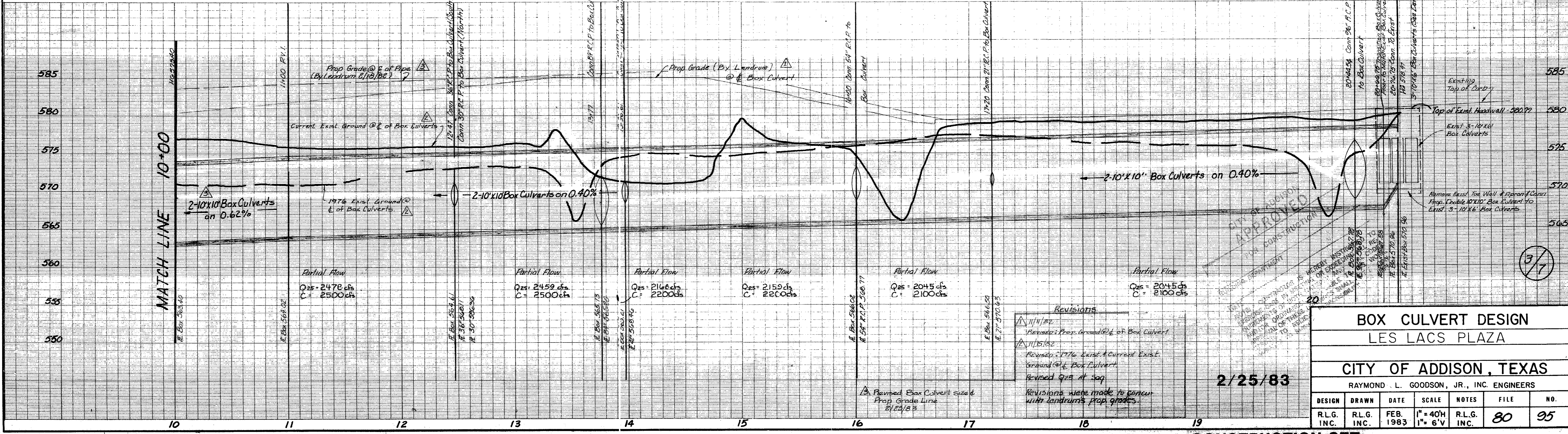
Construct 6-10'x10' Cast-In-Place Reinforced Concrete Box Culverts See Detail Sht 7

DESIGN SPECIFICATIONS
 City of Addison - Use Q25 & T.H.D. Standards
 $Q_{25} = C \times I_{25} \times A$
 $C = \text{Avg. Value Accepted} = 0.75$
 $I_{25} = \frac{b}{(F+d)}$ Using Table VII T.H.D. for Dallas County
 $b = 150$ $c = 0.865$
 $d = 28$

BOX CULVERT DESIGN

Contributing Line	Contributing Area	Additional Drainage Area (AC)	Total D.A. (AC)	Tc (min)	I(25) in/hr	Q ₂₅ (cfs)
Line D"1.0"	A & B	580	580	27 min	4.7	2045
Line D"1.1"	C	1.7	581.7	27 min + 330/(13x60) = 27 $\frac{1}{2}$	4.66	2045
Line D"1.2"	A ₁	38.6	620.3	27 $\frac{1}{2}$ min + 120/(13x60) = 27 $\frac{3}{4}$	4.64	2159
Line D"1.3"	D	5.5	625.8	27 $\frac{3}{4}$ min + 203/(13.6x60) = 27 $\frac{3}{4}$	4.62	2168
Line D"1.4"	E	83.9	709.7	27 $\frac{3}{4}$ min + 20/(13.6x60) = 27 $\frac{3}{4}$	4.62	2459
Line D"1.5" & "1.6"	F/3, G/3	5.4	715.1	27 $\frac{3}{4}$ min + 130/(15.4x60) = 27 $\frac{3}{4}$	4.62	2478
Line D"1.7"	F/3	2.2	717.3	27 $\frac{3}{4}$ min + 252/(15.4x60) = 28 $\frac{1}{2}$	4.6	2478
Line D"1.8"	G/3	3.2	720.5	28 $\frac{1}{2}$ min + 137/(15.4x60) = 28 $\frac{1}{2}$	4.59	2480
Line D"1.9" & "2.0"	Street	0.8	721.3	28 $\frac{1}{2}$ min + 132/(15.4x60) = 28 $\frac{1}{2}$	4.58	2480
Line D"2.1"	F/3	2.2	723.5	28 $\frac{1}{2}$ min + 145/(15.4x60) = 28 $\frac{1}{2}$	4.57	2480
Line D"2.2"	G/3	3.2	726.7	28 $\frac{1}{2}$ min + 21/(15.4x60) = 28 $\frac{1}{2}$	4.57	2490
Line D"2.3"	Street & H/3	3.2	729.9	28 $\frac{1}{2}$ min + 90/(15.4x60) = 28 $\frac{1}{2}$	4.56	2496
Line D"2.4" & "2.5"	H/3, I/2	4.8	734.7	28 $\frac{1}{2}$ min + 76/(15.4x60) = 28 $\frac{1}{2}$	4.55	2506
Line D"2.6"	H/3 & Street	3	737.7	28 $\frac{1}{2}$ min + 276/(15.4x60) = 29 $\frac{1}{2}$	4.53	2506
Line D"2.7"	I/2	2.2	739.9	29 $\frac{1}{2}$ + 30/(15.4x60) = 29 $\frac{1}{2}$	4.53	2513
End of Box	-	-	739.8	29.1	4.53	2513

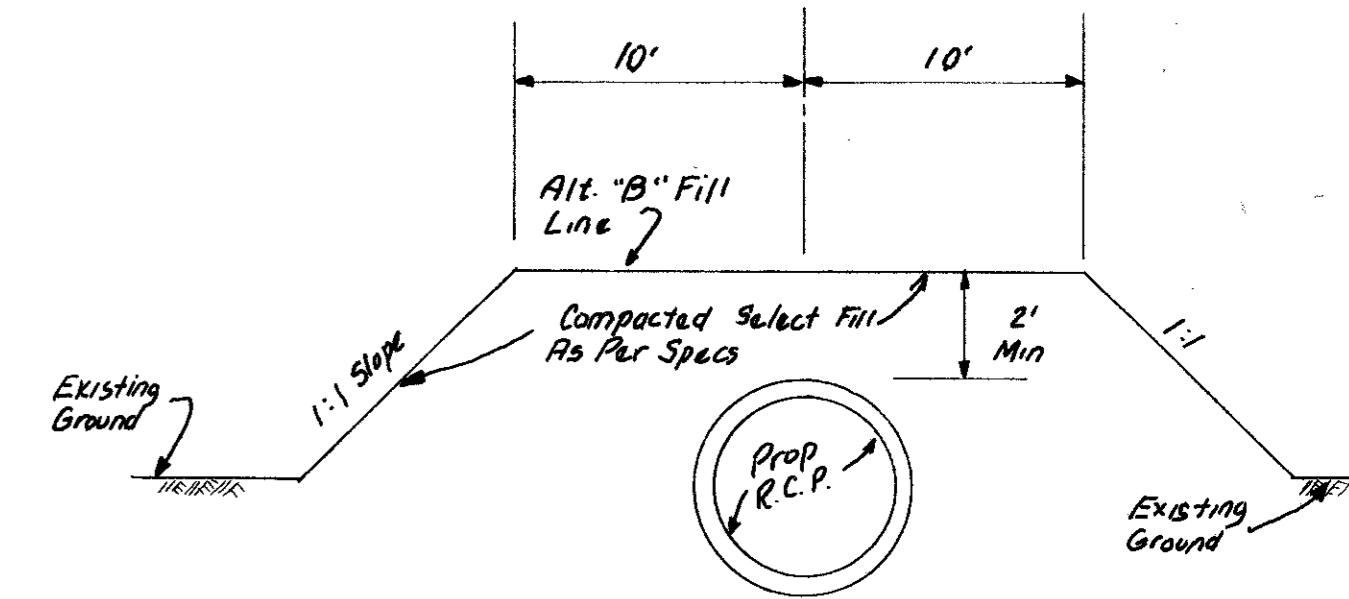
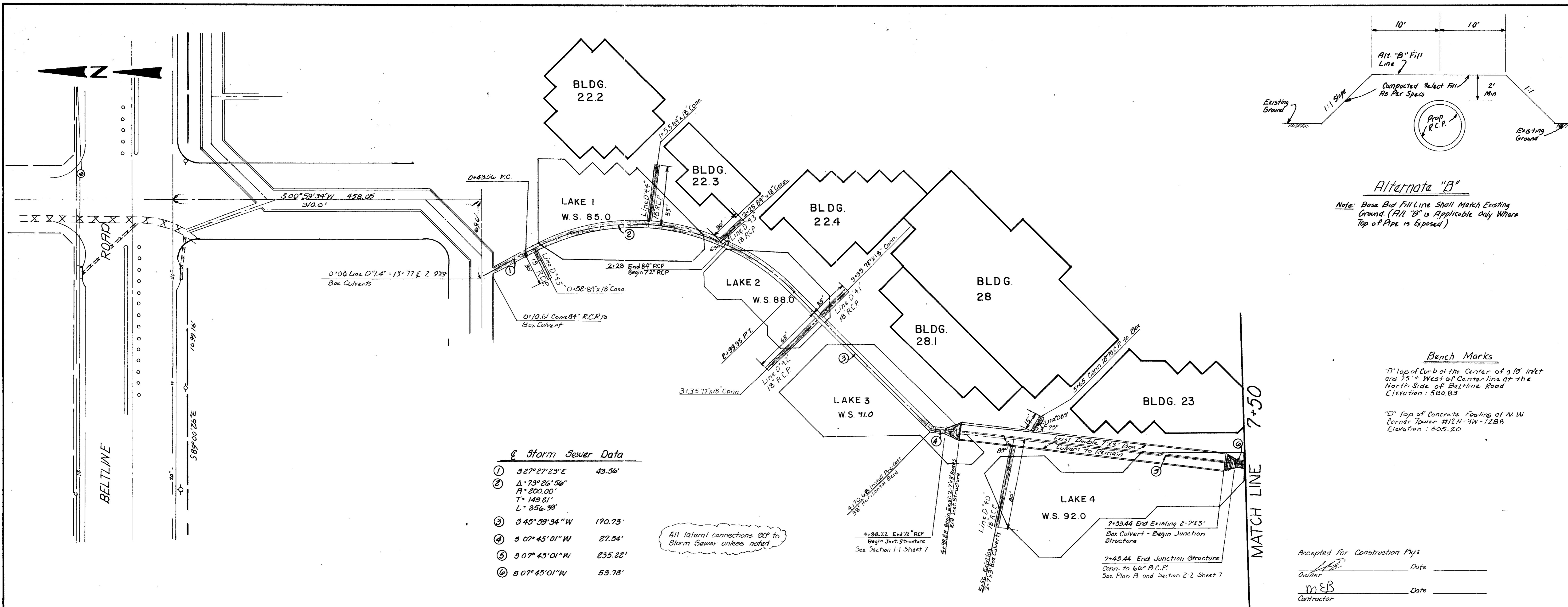
Bench Marks
 "D" Top of Curb at the Center of a 10' Inlet and 75' West of Centerline Commercial at the North Side of Belt Line Rd. Elevation: 580.83
 "D" Top of Concrete Footing at N.W. Corner Tower #12N-3W-7288. Elevation: 605.20



BOX CULVERT DESIGN
 LES LACS PLAZA
 CITY OF ADDISON, TEXAS
 RAYMOND L. GOODSON, JR., INC. ENGINEERS

DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
R.L.G. INC.	R.L.G. INC.	FEB. 1983	1" = 40'H 1" = 6'V		80	95

2/25/83



Alternate "B"
 Note: Base Bid Fill Line Shall Match Existing Ground. (Alt. "B" is Applicable Only Where Top of Pipe is Exposed)

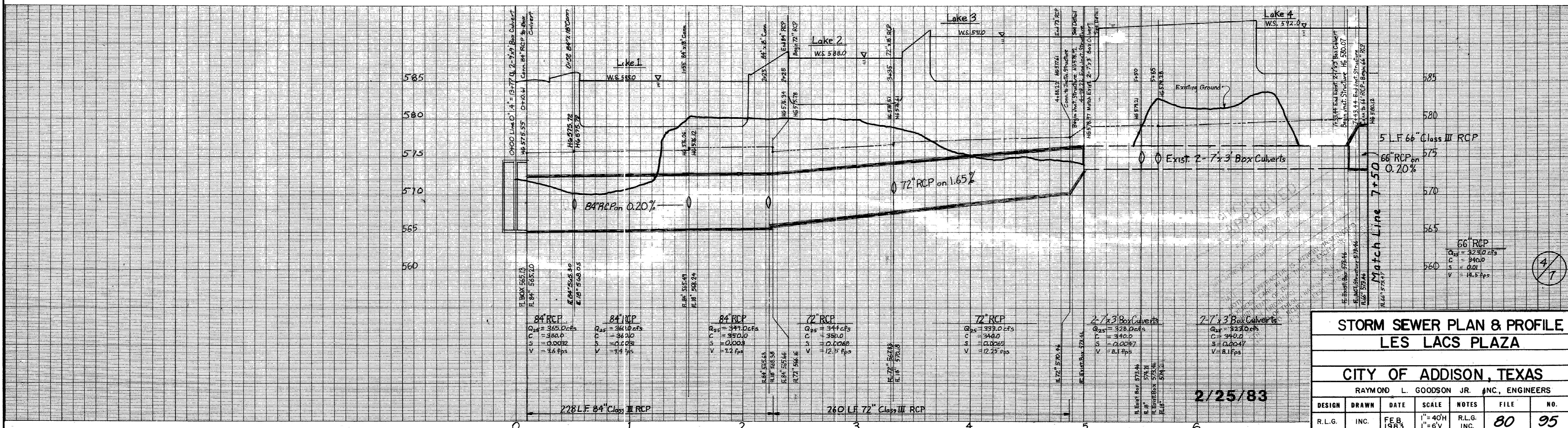
Bench Marks
 "D" Top of Curb at the Center of a 10' Inlet and 15'± West of Center line at the North Side of Beltline Road Elevation: 580.83
 "E" Top of Concrete Footing at N.W. Corner Tower #12.N-3W-72.BB Elevation: 605.20

Storm Sewer Data

1	3 27° 27' 25" E	43.36'
2	Δ = 73° 26' 56"	
	A = 200.00'	
	T = 149.81'	
	L = 256.99'	
3	3 43° 33' 34" W	170.73'
4	3 07° 45' 01" W	27.54'
5	3 07° 45' 01" W	835.22'
6	3 07° 45' 01" W	53.78'

All lateral connections 90° to Storm Sewer unless noted

Accepted For Construction By: _____ Date _____
 Owner: _____
 mEB Contractor: _____ Date _____



STORM SEWER PLAN & PROFILE					
LES LACS PLAZA					
CITY OF ADDISON, TEXAS					
RAYMOND L. GOODSON JR. INC., ENGINEERS					
DESIGN	DRAWN	DATE	SCALE	NOTES	NO.
R.L.G.	INC.	FEB. 1983	1" = 40'H 1" = 6'V	R.L.G. INC.	80 95

2/25/83

CONSTRUCTION SET

Storm Sewer Design

* Use C=0.75 Q_s = 4.35 * A

Contributing Line	Contributing Area	Additional Drainage Area (Ac)	Total D.A. (Ac)	Tc (min)	I ₂₅ (1 ⁱⁿ /hr)	Q ₂₅ (cfs)
Existing 2-7x3 Box Culu	E ₀ (Offsite)	55.8	55.8	15	5.8	293
Line D "2.8"	E _{1/2}	1.3	57.1	"	"	298
Line D "2.9"	E _{1/2}	1.5	58.6	"	"	255
Line D "3.0"	E _{1/2}	1.3	59.9	"	"	261
Line D "3.1"	E _{3/2}	0.25	60.15	"	"	262
Line D "3.2"	E _{1/2} , E _s , E _a , E _{1/10} , E _{1/10}	7.7	67.85	"	"	295
Line D "3.3"	E _{3/2}	0.25	68.10	"	"	296
Line D "3.4"	E _{1/10}	1.24	69.34	"	"	302
Line D "3.5"	E _{1/5}	1.16	70.50	"	"	307
Line D "3.6"	E _{1/10}	1.24	71.74	"	"	312
Line D "3.7"	E _{1/10}	1.24	72.98	"	"	317
Line D "3.8"	E _{1/5}	1.16	74.14	"	"	323
Line D "3.9"	E _{1/10}	1.24	75.38	"	"	328
Line D "4.0"	E _{1/5}	1.24	76.62	"	"	333
Line D "4.1" ± D "4.2"	E _{1/10} , E _{1/5}	2.4	79.02	"	"	344
Line D "4.3"	E _{1/10}	1.24	80.26	"	"	349
Line D "4.4"	E _{1/10} , E _{1/10}	2.48	82.74	"	"	360
Line D "4.5"	E _{1/5}	1.16	83.9	"	"	365

Bench Marks

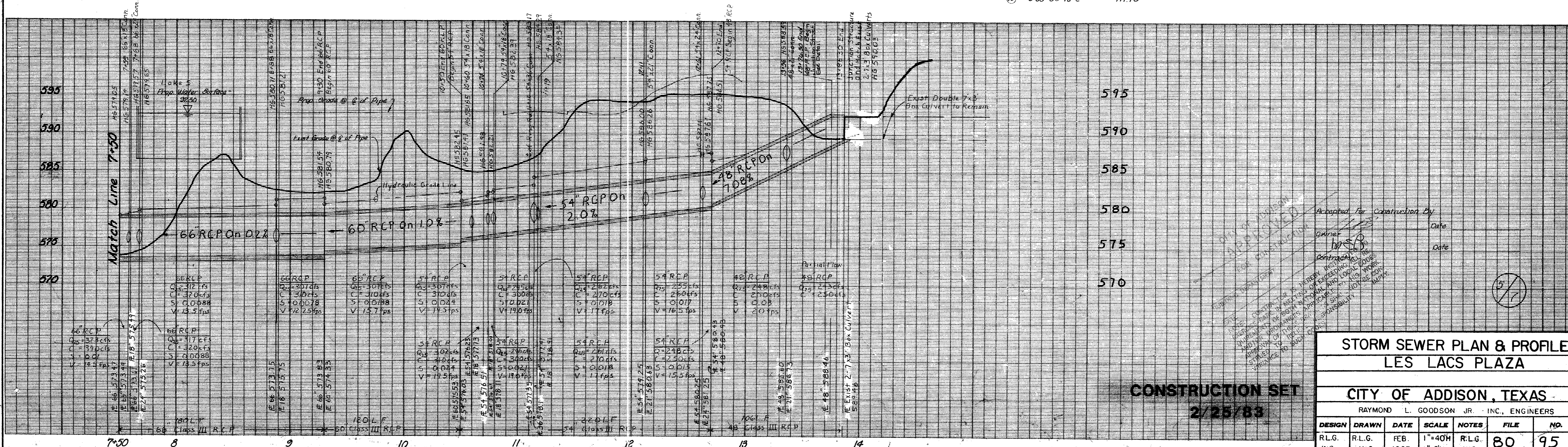
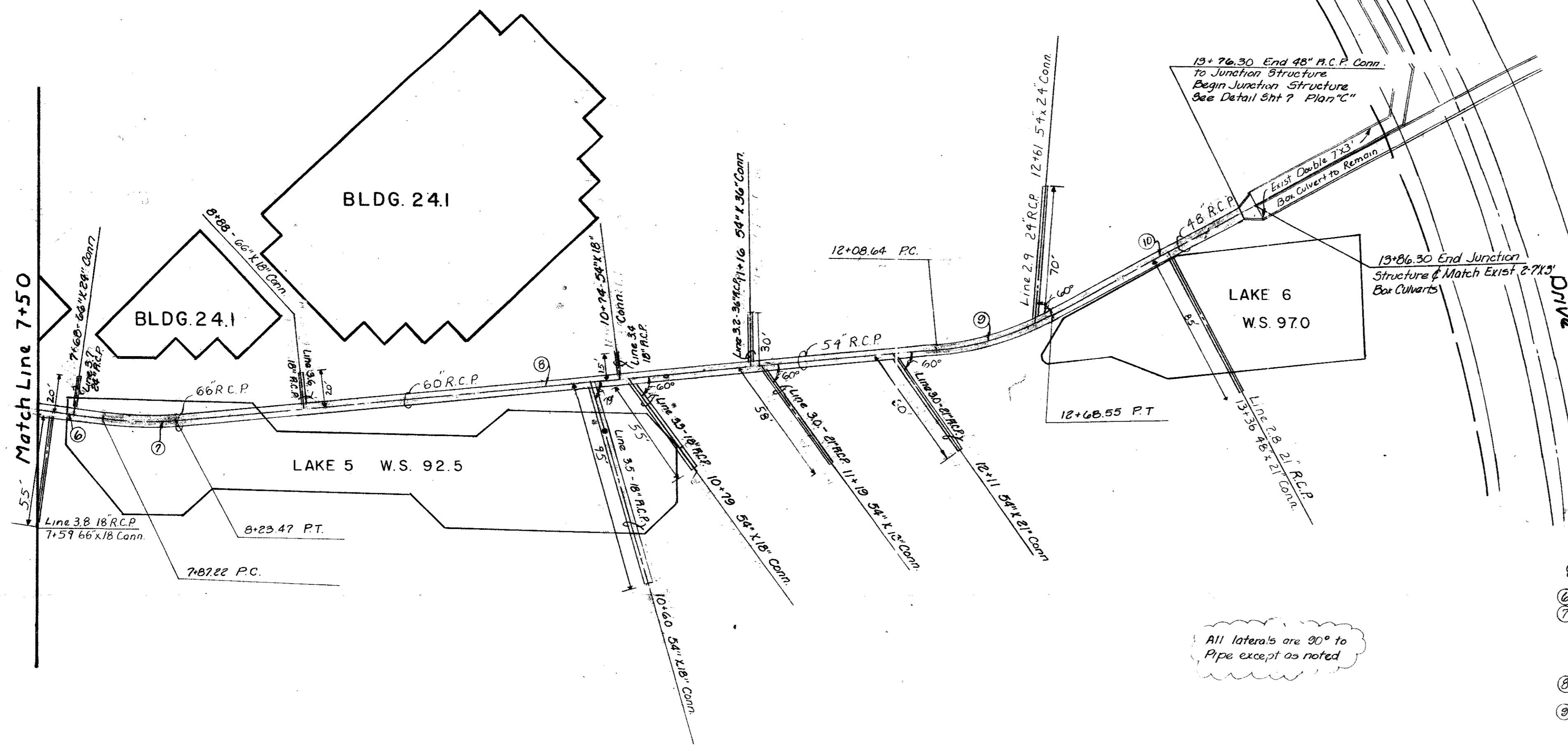
□ Top of Curb at the Center of a 10' Inlet and 75' West of Centerline Commercial at N. Side of Belt Line Road.
Elevation: 580.83

□ Top of Concrete Footing at NW Corner Tower # 12N-3W-T288
Elevation: 605.20

Storm Sewer Data

- ⑥ 307°45'01"W 53.78'
- ⑦ Δ=13°50'40"
R=150.00'
T=18.21'
L=36.25'
- ⑧ 306°05'39"E 385.17'
- ⑨ Δ=28°53'03"
R=150.00'
T=30.36'
L=59.01'
- ⑩ 828°58'42"E 117.25'

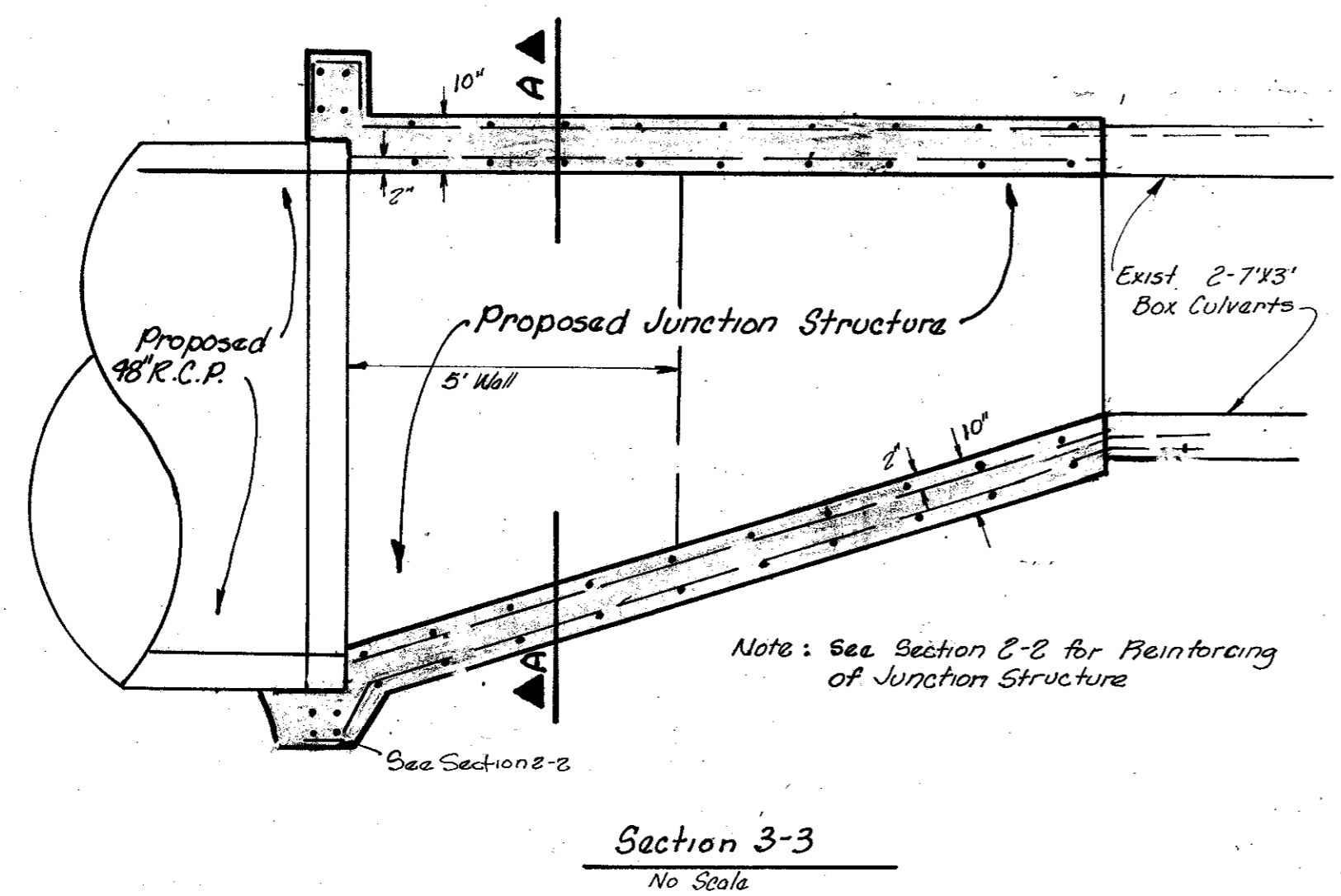
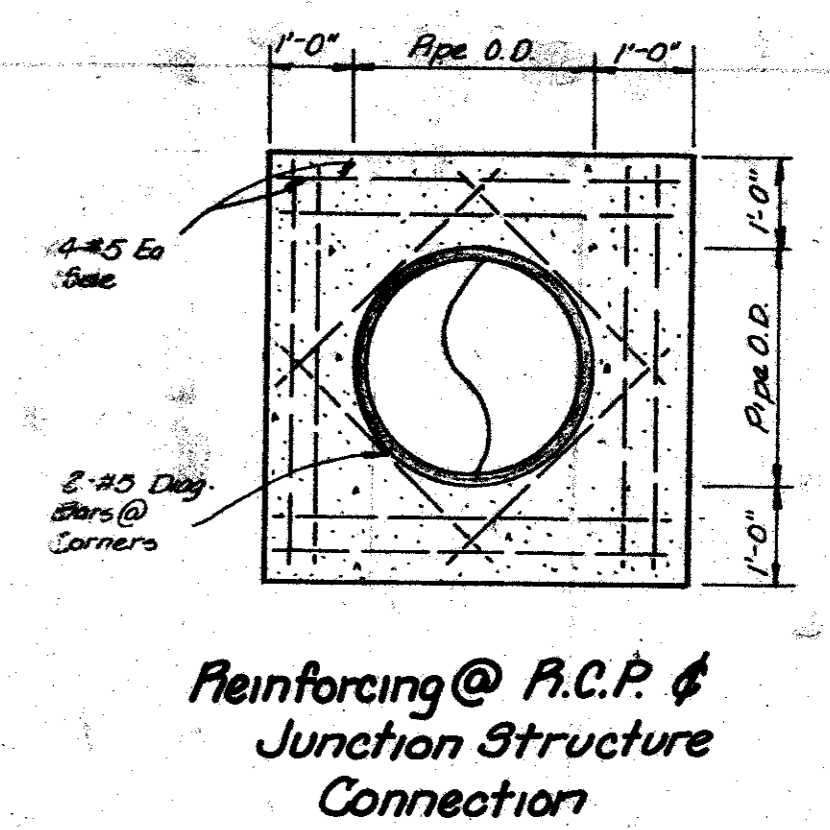
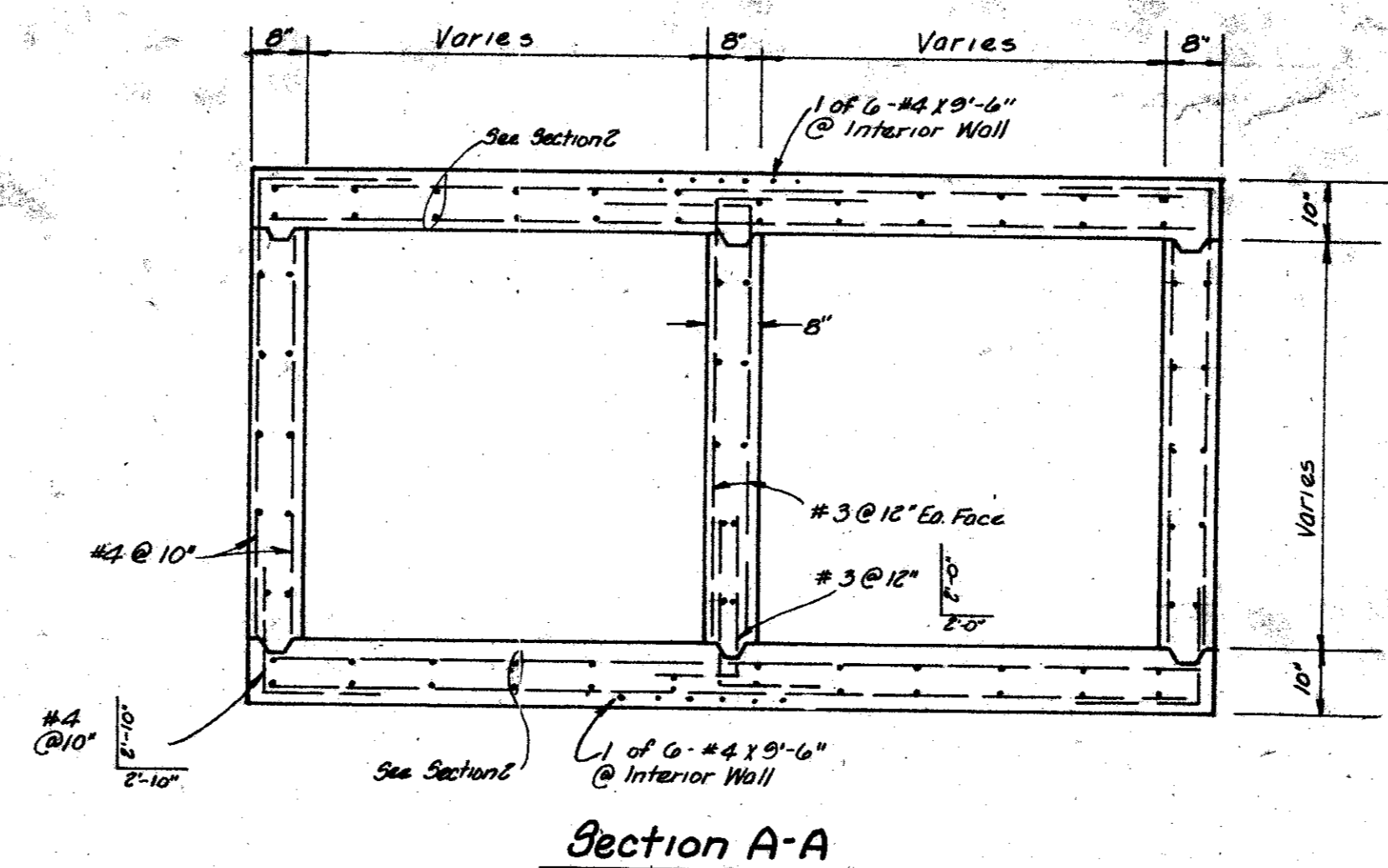
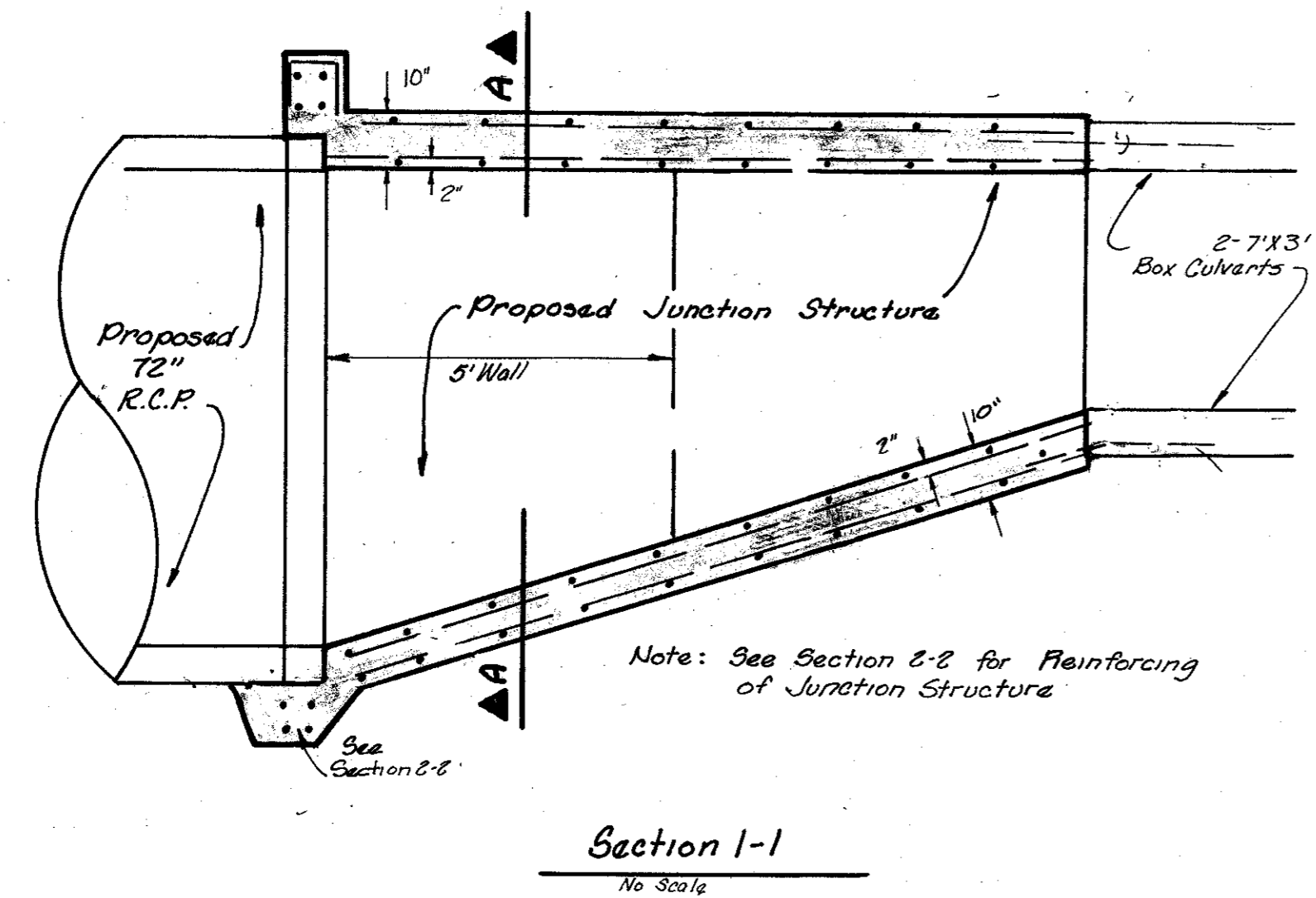
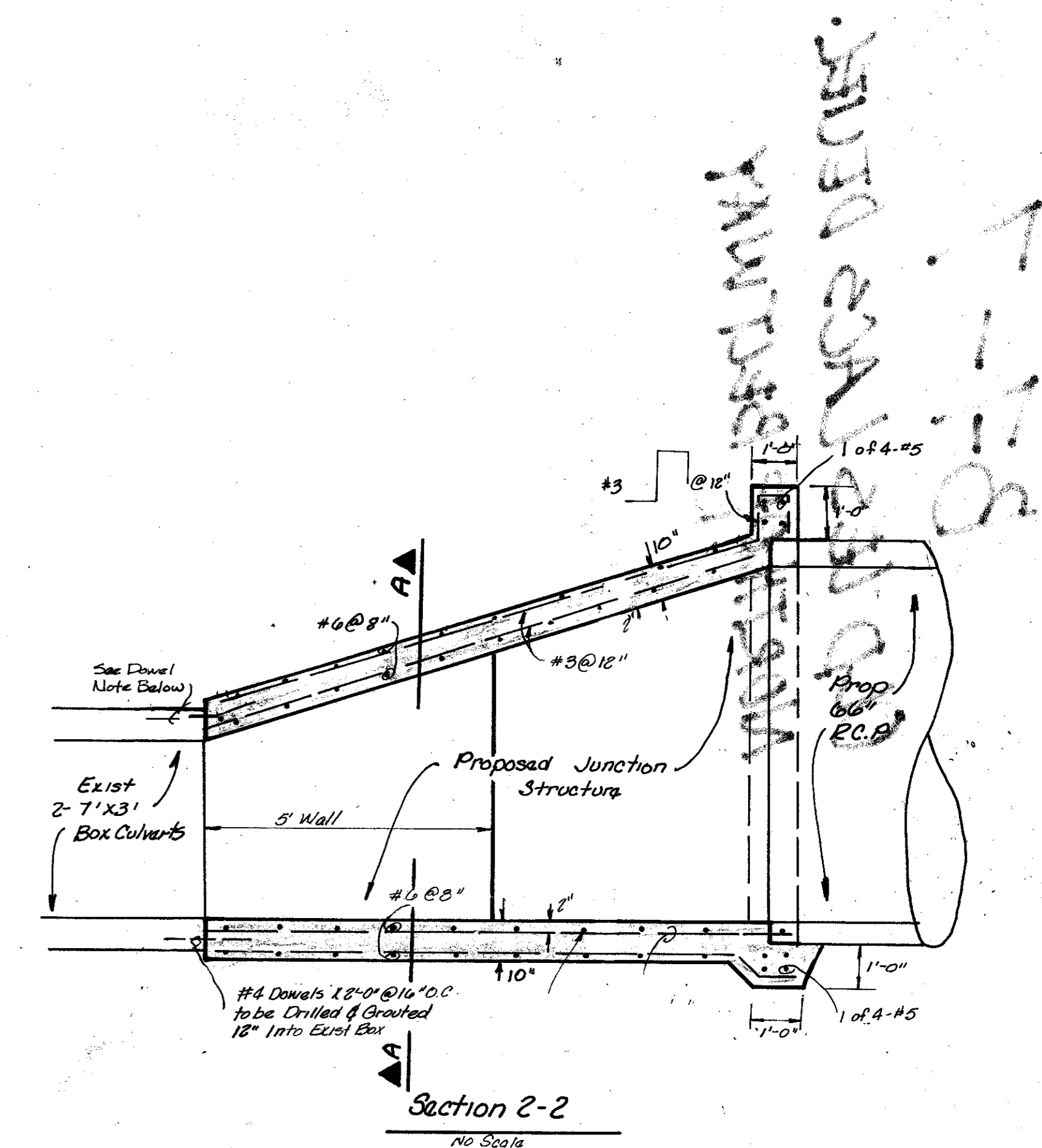
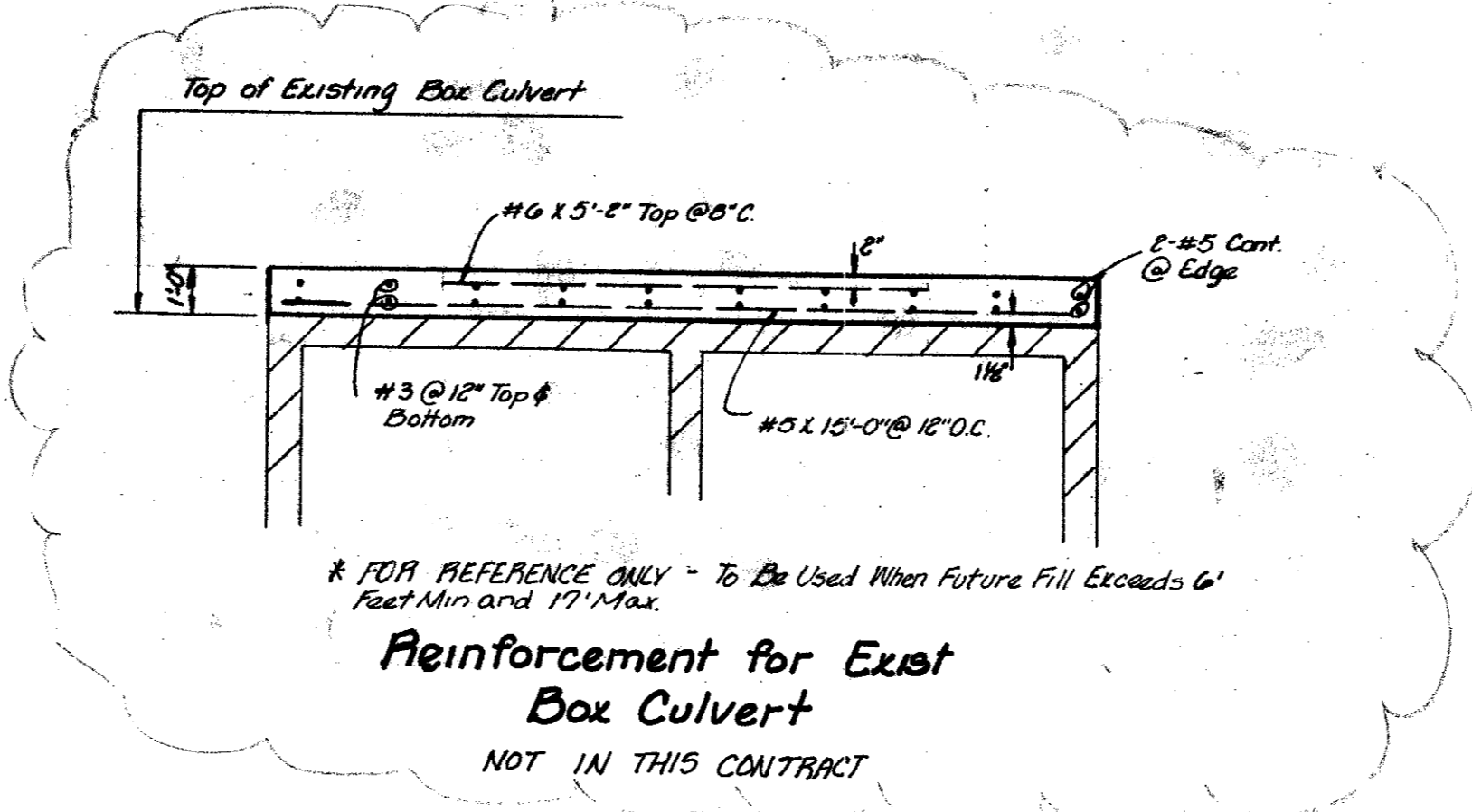
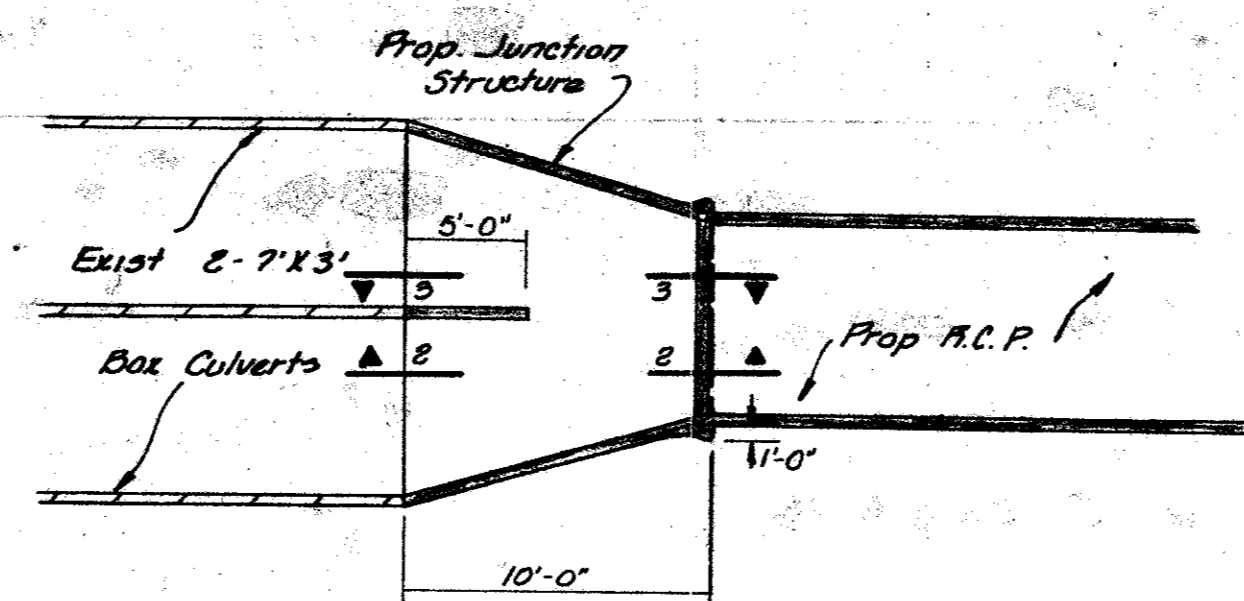
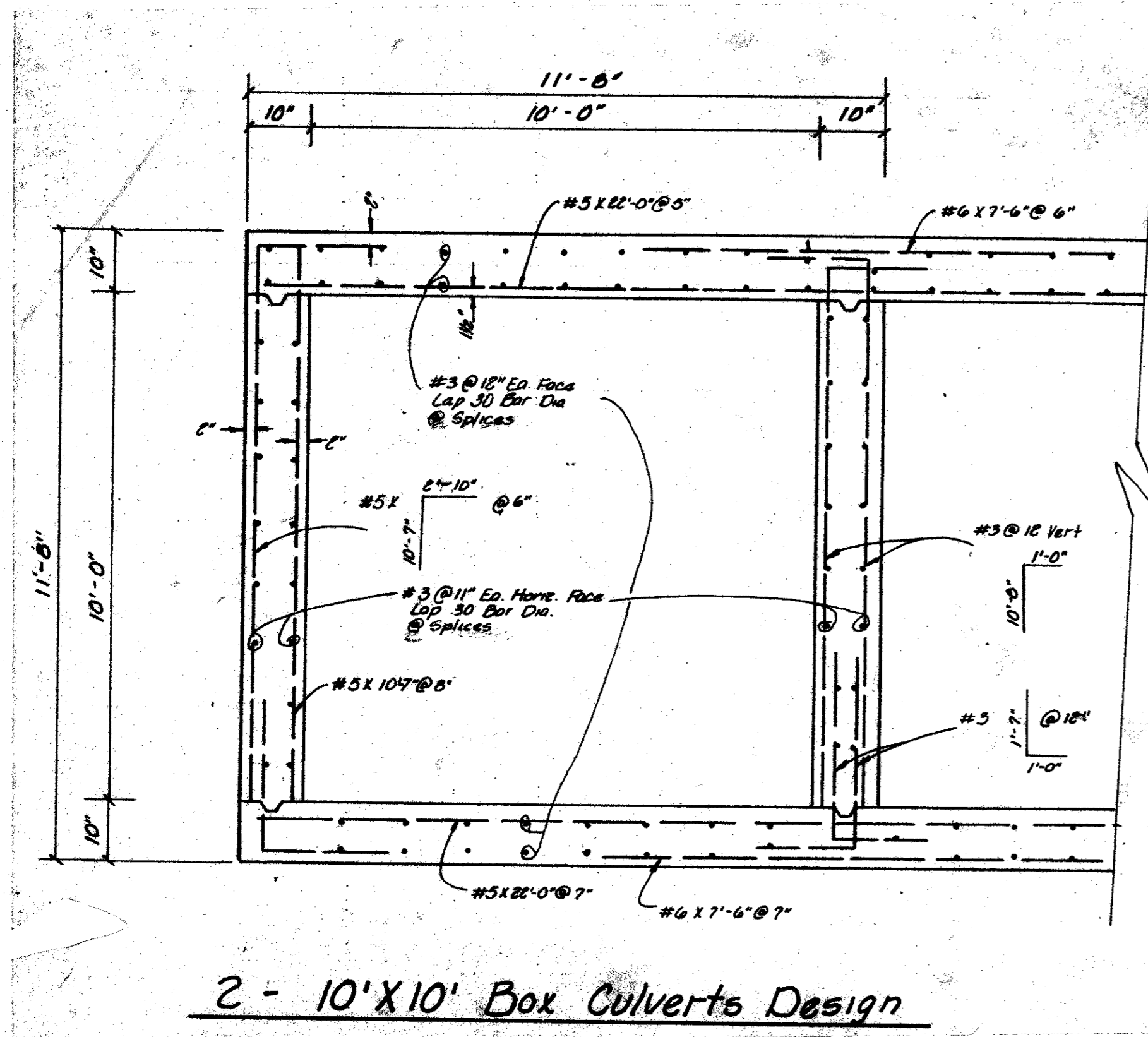
All laterals are 90° to Pipe except as noted



Accepted for Construction By
Date
Owner
Date
Contractor
Date

CONSTRUCTION SET
2/25/83

STORM SEWER PLAN & PROFILE LES LACS PLAZA						
CITY OF ADDISON, TEXAS						
RAYMOND L. GOODSON JR., INC., ENGINEERS						
DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
R.L.G. INC.	R.L.G. INC.	FEB. 1983	1"=40' 1"=6'	R.L.G. INC.	80	95



CITY OF ADDISON APPROVED
FOR CONSTRUCTION

DATE: _____
CONTRACTOR'S NAME: _____
CONTRACTOR'S ADDRESS: _____
CONTRACTOR'S PHONE: _____
CONTRACTOR'S LICENSE NO.: _____
CONTRACTOR'S EXPIRES: _____

NOTE: CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE LOCAL, STATE AND FEDERAL AGENCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS FROM ALL APPLICABLE LOCAL, STATE AND FEDERAL AGENCIES.

CONSTRUCTION SET
2/25/83

BOX CULVERTS DETAILS						
LES LACS PLAZA						
CITY OF ADDISON, TEXAS						
RAYMOND L. GOODSON JR. INC., ENGINEERS						
DESIGN	DRAWN	DATE	SCALE	NOTES	FILE	NO.
RLG INC.	RLG INC.	FEB. 1983		RLG INC.		