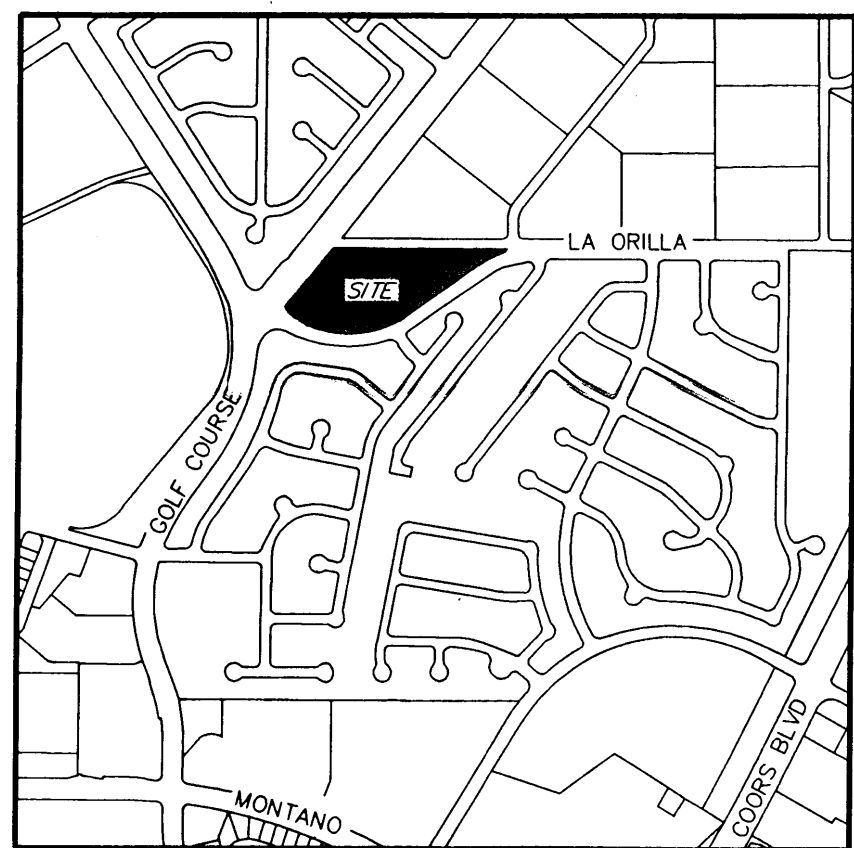
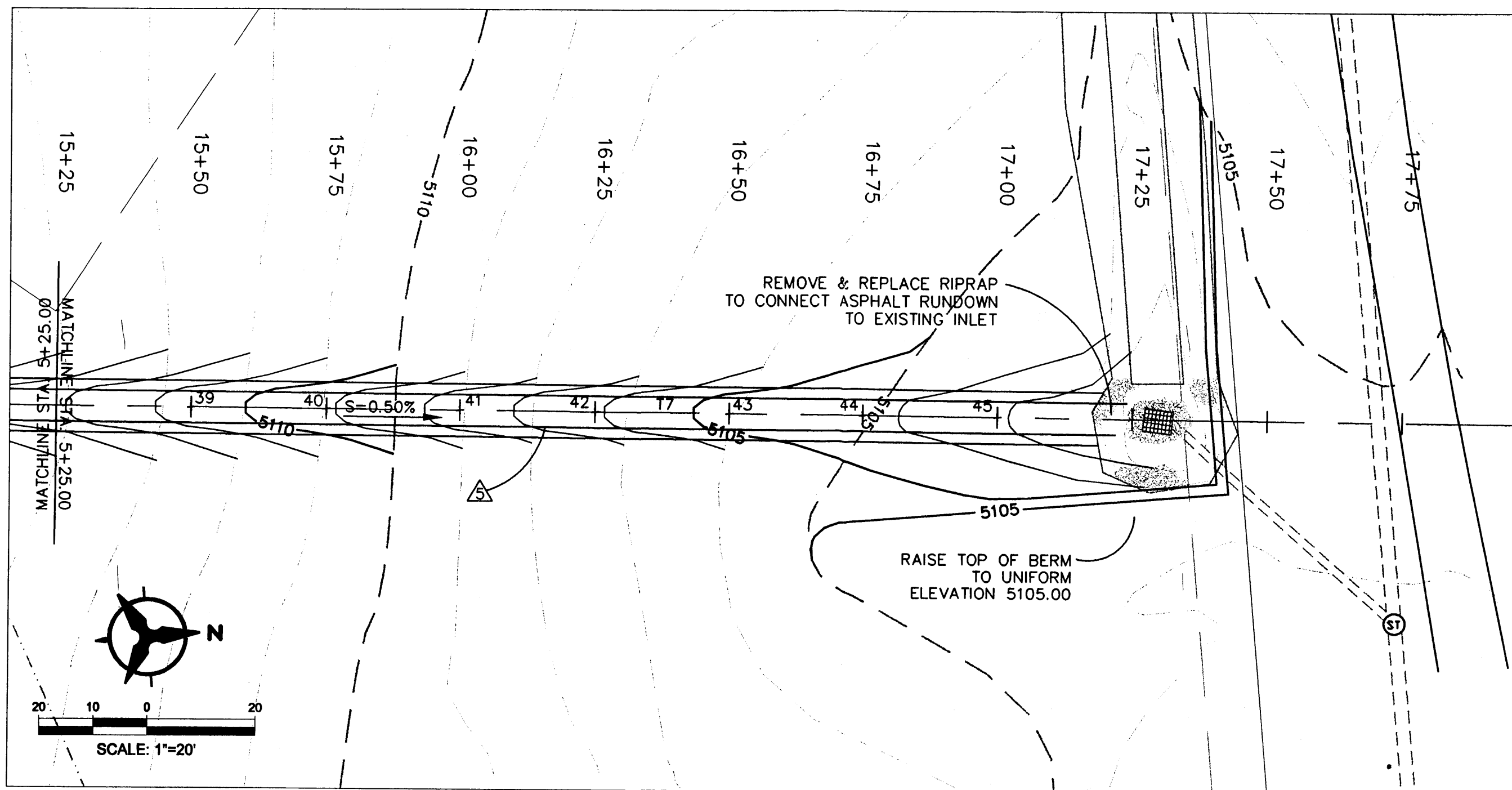
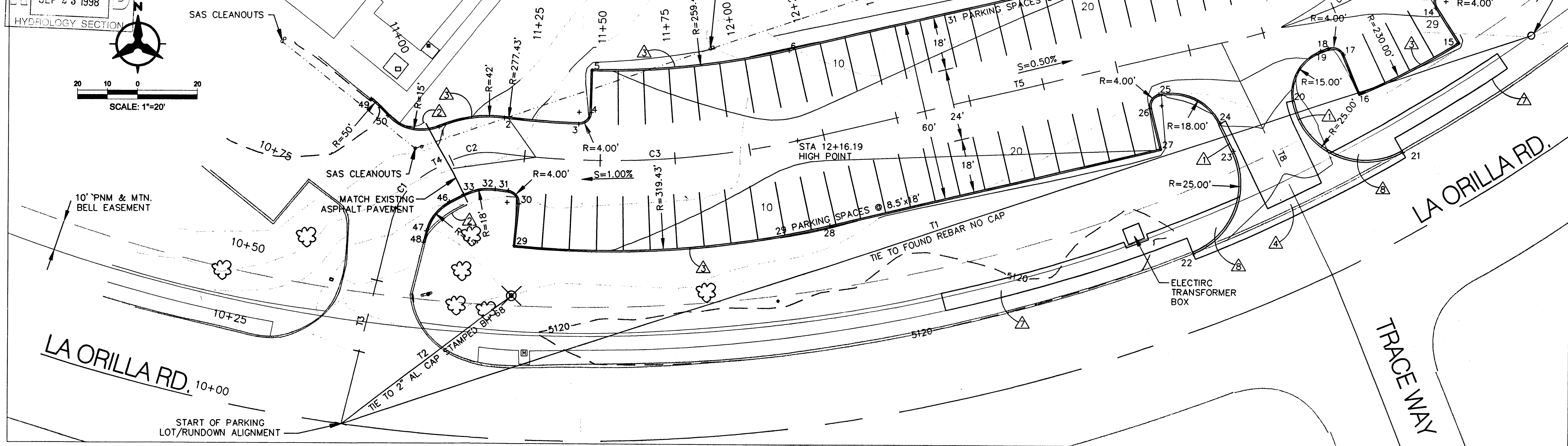
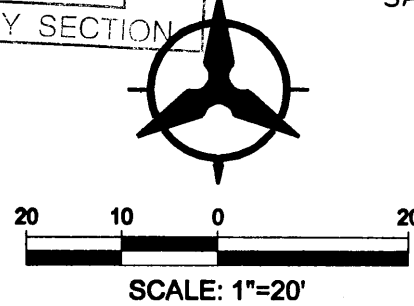
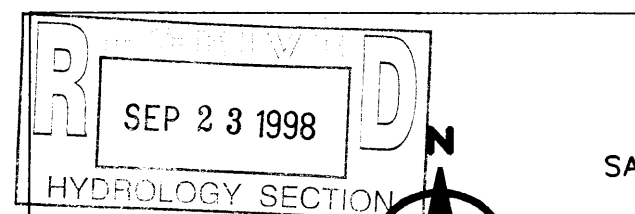


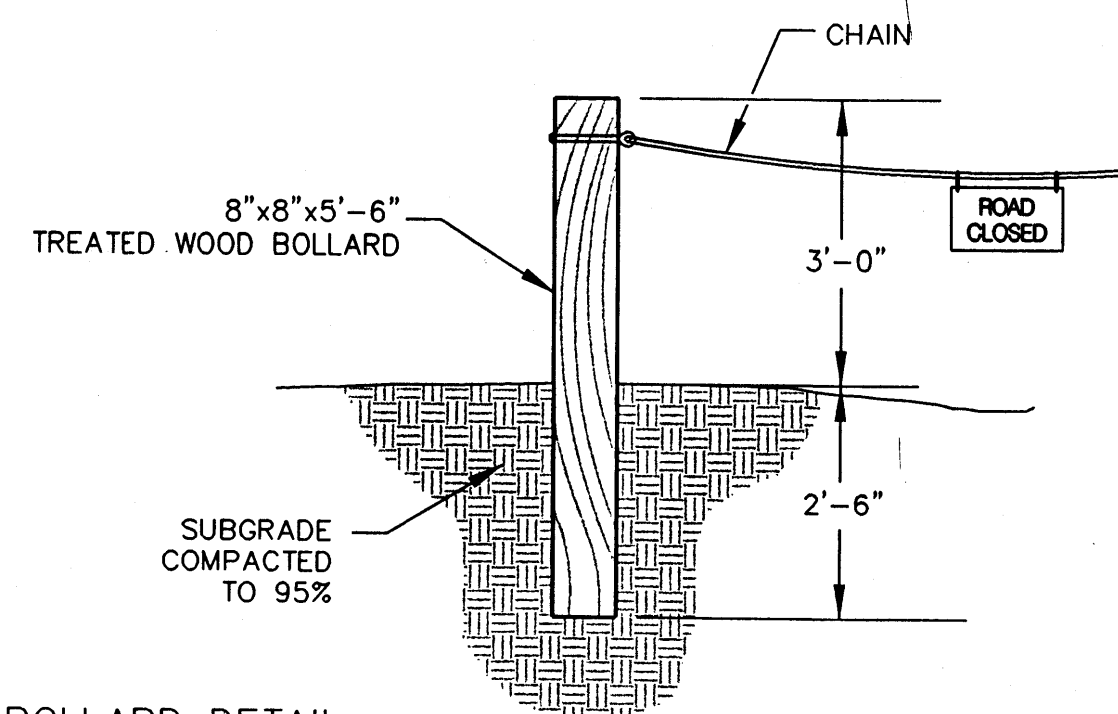


LOCATION MAP
ZONE ATLAS INDEX MAP No. E-12-Z
NOT TO SCALE



NOTES:

1. ALL CONSTRUCTION SHALL CONFORM TO CITY OF ALBUQUERQUE STANDARD SPECIFICATIONS.
2. ALL POINT DATA ELEVATIONS GIVEN TO FACE OF CURB.



BOLLARD DETAIL:

SCALE: 1"=2'-0"

BOLLARD SHALL BE INSTALLED IN A HOLE EXCAVATED TO A MINIMUM SIZE OF 24"x24"x30". BACKFILL AROUND BOLLARD SHALL BE COMPACTED TO 95%.

KEYED NOTES:

- △ INSTALL STANDARD CURB AND GUTTER
- △ REMOVE EXISTING ASPHALT AND CURB & GUTTER
- △ INSTALL STANDARD 6" CONCRETE HEADER CURB
- △ INSTALL STANDARD VALLEY GUTTER
- △ INSTALL ASPHALT RUNDOWN - SEE DETAIL SHT C-2
- △ INSTALL BOLLARD AND CHAIN GATE - SEE DETAIL THIS SHEET
- △ INSTALL 4" THICK, 6' WIDE CONCRETE SIDEWALK
- △ INSTALL WHEELCHAIR RAMP - SEE DETAIL SHT C-1

POINT DATA

No.	NORTHING	EASTING	ELEVATION
1	1513867.4649	368466.7325	5115.95
2	1513870.5404	368488.5633	5116.90
3	1513868.5392	368513.2039	5117.43
4	1513872.4492	368517.3487	5117.59
5	1513886.4166	368517.6538	5118.01
6	1513893.3234	368583.0444	5118.55
7	1513926.4974	368723.2703	5117.83
8	1513946.7221	368772.5319	5117.31
9	1513934.8009	368779.7892	5116.95
10	1513933.5102	368785.3596	5116.76
11	1513936.4336	368789.7954	5117.84
12	1513916.5829	368803.2843	5116.62
13	1513914.0533	368799.4738	5116.73
14	1513908.5834	368798.2541	5116.93
15	1513896.6662	368805.6717	5117.27
16	1513879.7634	368772.9300	5117.69
17	1513892.7121	368767.5107	5117.32
18	1513894.8857	368762.3451	5117.57
19	1513893.9452	368759.9328	5117.25
20	1513877.1811	368750.5513	5119.58
21	1513860.0742	368787.5406	5118.25
22	1513826.2815	368717.9234	5119.18
23	1513860.3539	368731.0555	5119.36
24	1513869.6316	368726.5635	5118.95
25	1513879.3014	368706.2074	5117.52
26	1513874.4312	368703.2523	5118.16
27	1513860.9121	368706.6819	5118.61
28	1513834.9351	368596.8576	5118.55
29	1513827.8739	368492.2034	5117.71
30	1513841.8333	368493.5697	5117.61
31	1513846.1985	368490.0305	5117.50
32	1513846.7295	368485.5566	5117.48
33	1513844.7933	368474.9058	5117.52
34	1513930.0546	368801.5894	5116.15
35	1513931.5879	368803.7025	5116.07
36	1513942.2903	368809.8242	5115.63
37	1513958.5214	368811.3877	5114.94
38	1513983.4062	368813.7849	5113.60
39	1514033.1758	368818.5793	5110.60
40	1514058.0606	368820.9765	5109.10
41	1514082.9454	368823.3736	5107.60
42	1514107.8302	368825.7708	5106.10
43	1514132.7150	368828.1680	5104.60
44	1514157.5998	368830.5652	5103.10
45	1514182.4846	368832.9623	5102.25
46	1513842.3065	368470.1898	5117.95
47	1513832.5978	368462.6148	5118.58
48	1513828.8415	368461.6972	5118.66
49	1513876.6198	368443.9981	5115.42
50	1513871.2328	368449.6485	5115.62

TANGENT DATA

No.	DIRECTION	DISTANCE
T1	S 71° 33' 29" W	417.05
T2	S 52° 35' 52" W	71.55
T3	N 13° 43' 40" E	70.11
T4	N 62° 11' 49" E	5.33
T5	N 76° 41' 24" E	144.10
T6	N 54° 02' 08" E	2.61
T7	N 05° 30' 09" E	341.31
T8	N 25° 50' 05" W	85.60

CURVE DATA

No.	DELTA	TANGENT	ARC	RADIUS	CHORD	CHORD BRG
C1	48° 28' 09"	12.15	22.84	27.00	22.17	N 37° 57' 44" E
C2	35° 00' 00"	9.46	18.33	30.00	18.04	N 79° 41' 49" E
C3	20° 30' 25"	52.35	103.59	289.43	103.04	N 86° 56' 36" E
C4	28° 38' 52"	40.06	79.08	200.00	78.56	N 61° 21' 46" E
C5	48° 31' 59"	6.76	12.71	15.00	12.33	N 29° 46' 08" E

GRADING & CONSTRUCTION PLAN
TAYLOR RANCH BAPTIST CHURCH
ALBUQUERQUE, NEW MEXICO
SEPTEMBER, 1998

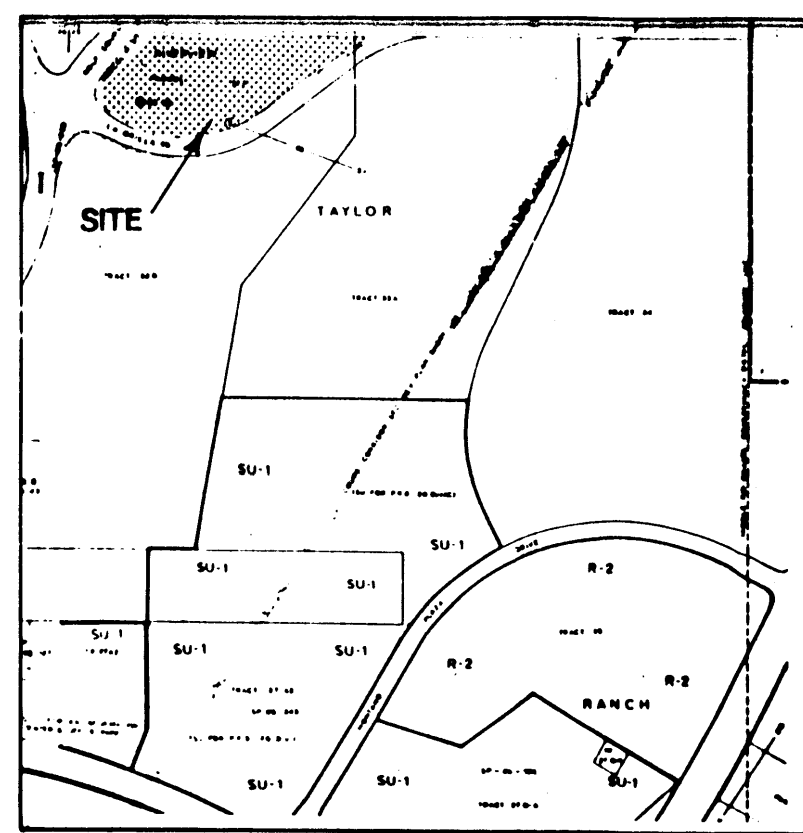
Cohaman & Huston

7500 JEFFERSON NE ALBUQUERQUE NEW MEXICO 87109

ENGINEERS PLANNERS PROGRAMMERS SURVEYORS SOFTWARE DEVELOPERS

JOB No. 98363A.02.3200

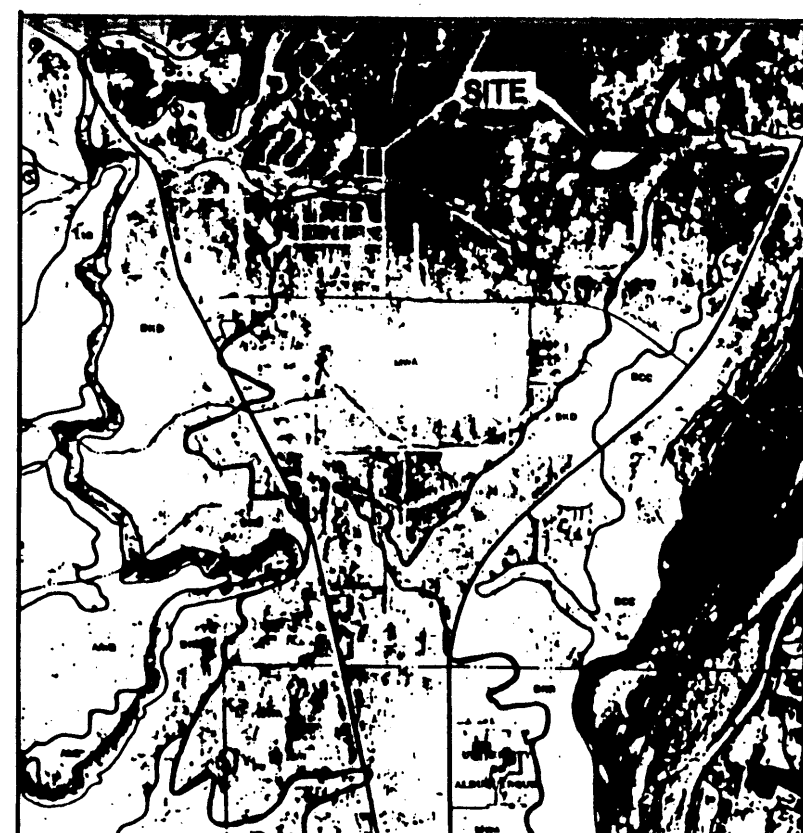
SHEET 1 OF 1



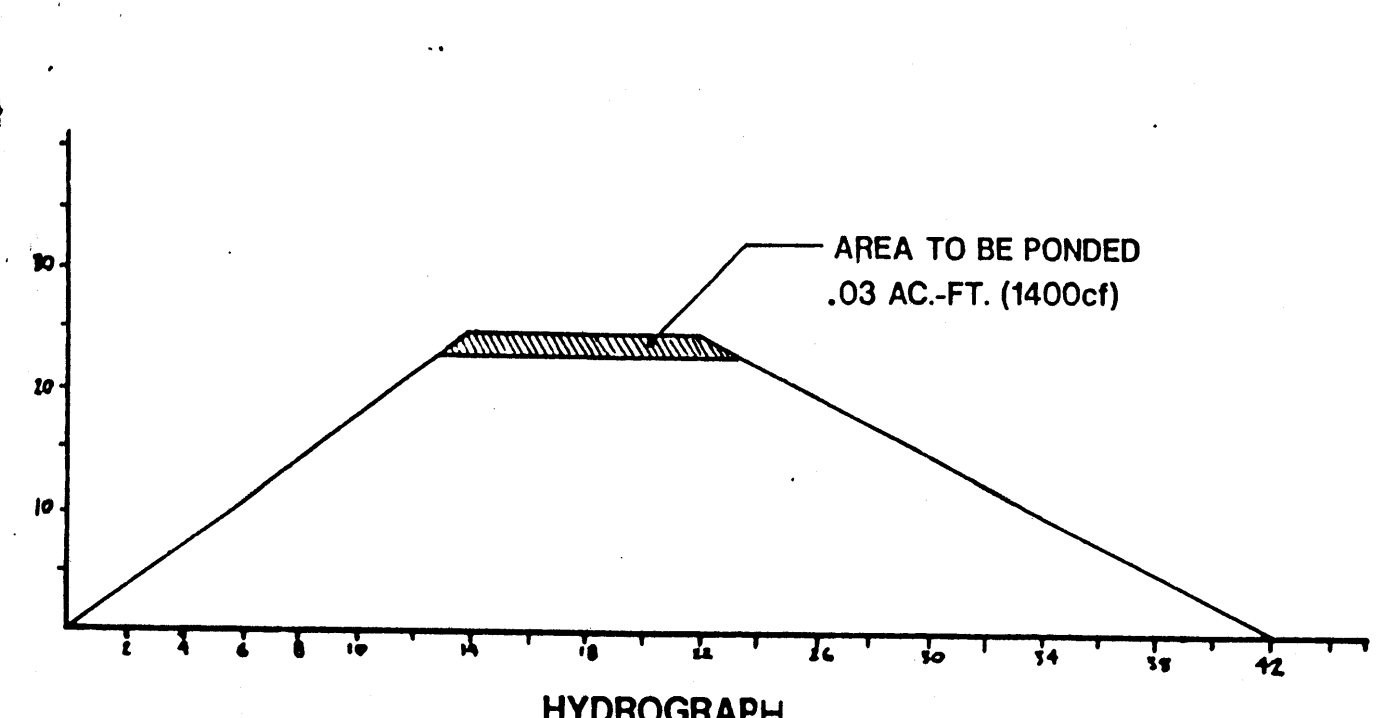
LOCATION MAP
ZONE ATLAS MAP E-12-Z



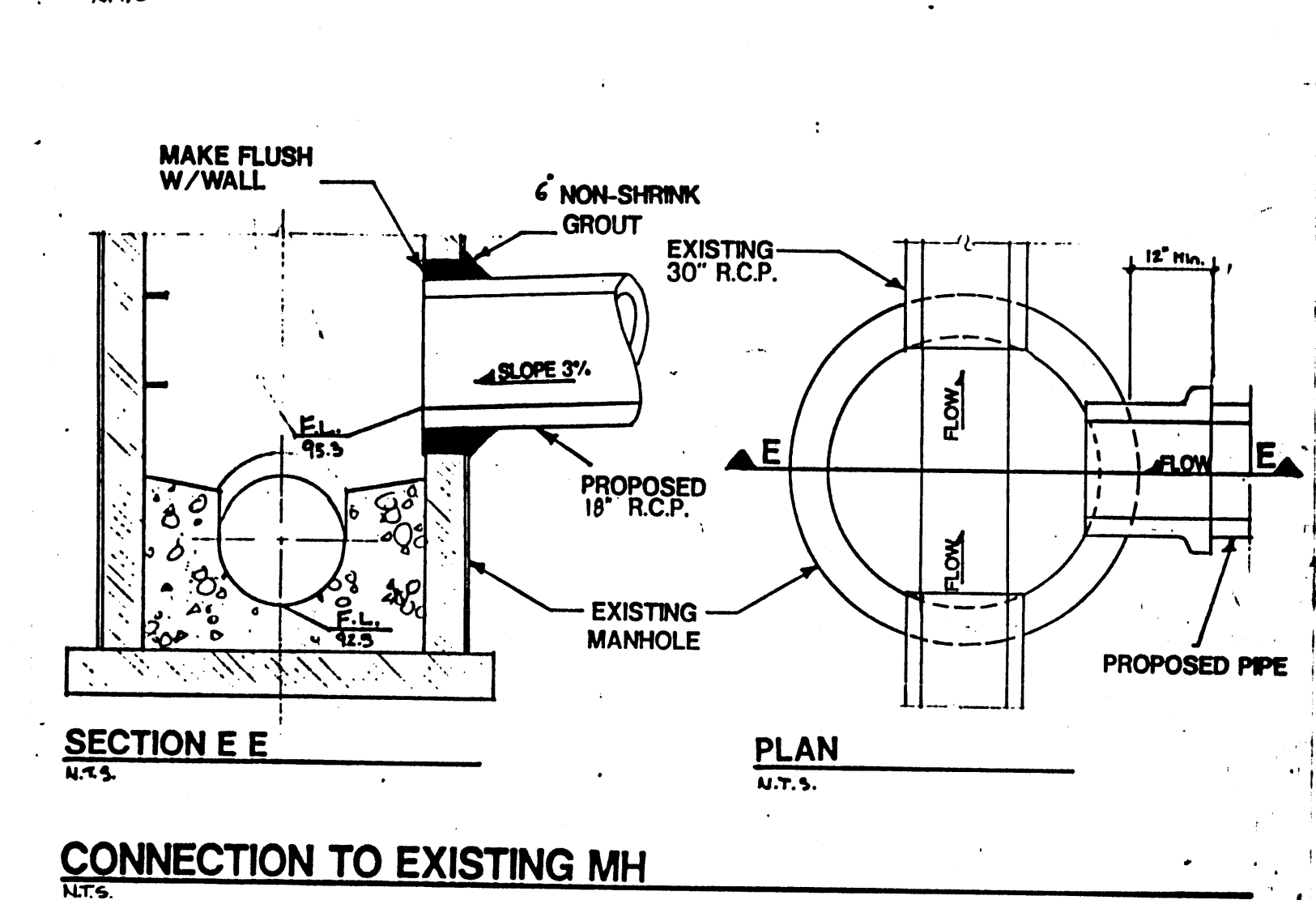
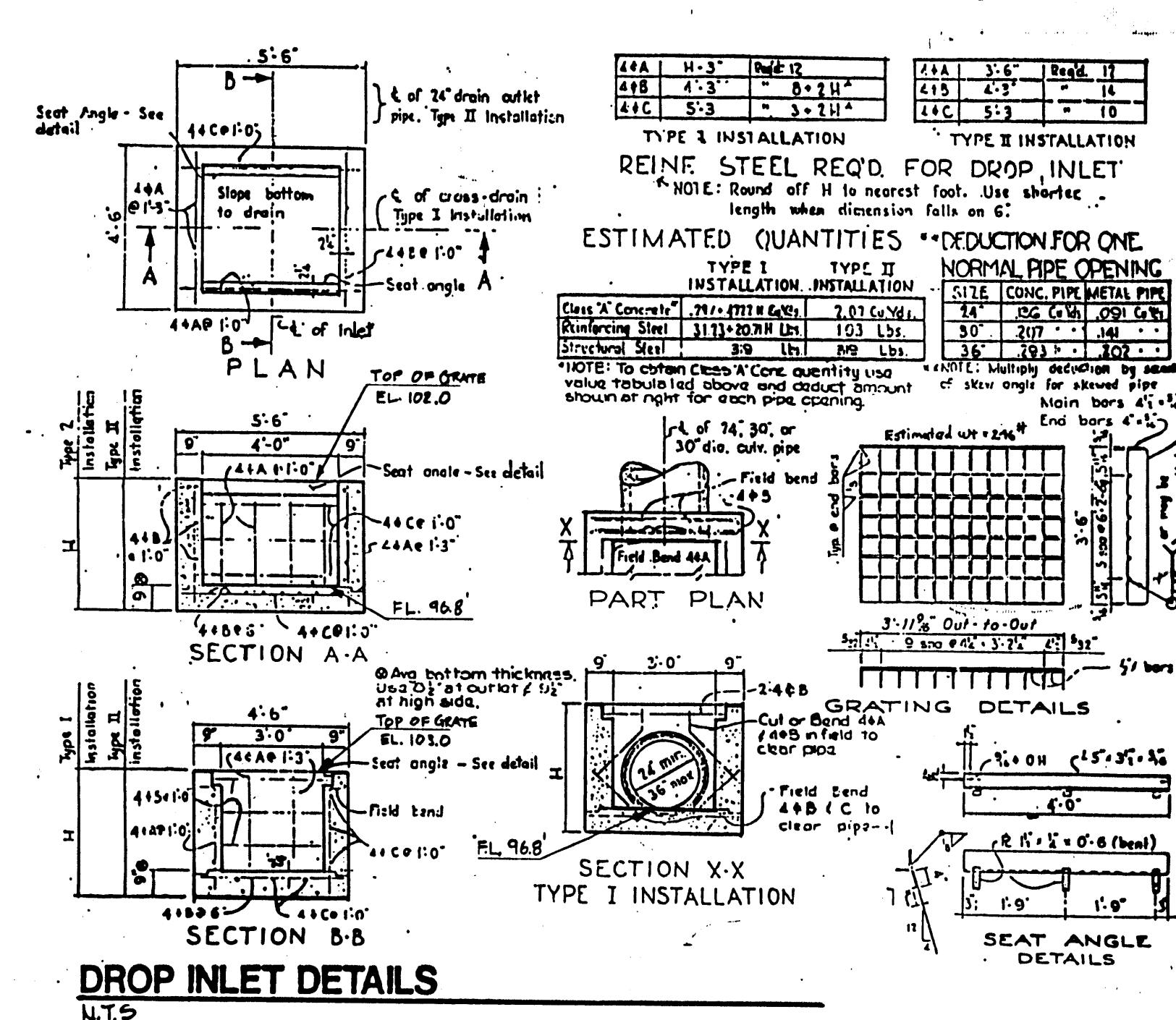
FLOOD ZONE MAP
FLOOD INSURANCE STUDY PANEL 15



SOILS MAP
SCS BERNALILLO COUNTY SOIL SURVEY SHEET 20



ORIFICE EQUATION: $AC\sqrt{2gh}$
MAX WSEL = 103.5
MAX FLOW = 22.9
H = 5.7
C = .67
 $A = 178 \approx DIA = 15 = 18"$



LEGEND
HEAPER CURB
DIRECTION OF FLOW
PROPOSED ASPHALT
PROPOSED CONTOUR
BASIN BOUNDARY
DRAINAGE LOCATION
AS BUILT INFORMATION

GENERAL NOTES
1. Plat & Topography taken from the B.E.A.R. company (registered engineers) drawing dated August 2, 1991.
2. Note: Remove upper site soils to a depth of 12". Excavate soils to a depth of 3'-0" and recompact under floor slabs & footings to 95% density.
3. Scarify soil 8" to 12" and compact under asphalt paving to 95% density.
4. The contractor shall ensure that no soil erodes from the site into public Right of Way or private property.
5. The contractor must obtain a "Topsoil Disturbance Permit" prior to beginning earthwork.
6. I, Steven J. Metro, a Professional Engineer in the state of New Mexico do hereby certify that the topography shown on this plan reflects the conditions on the site based on a site visit made on 12 September 1994. It appears that no grading, filling or excavation has occurred since the contour map was prepared.

DESIGN
SJM/DSA

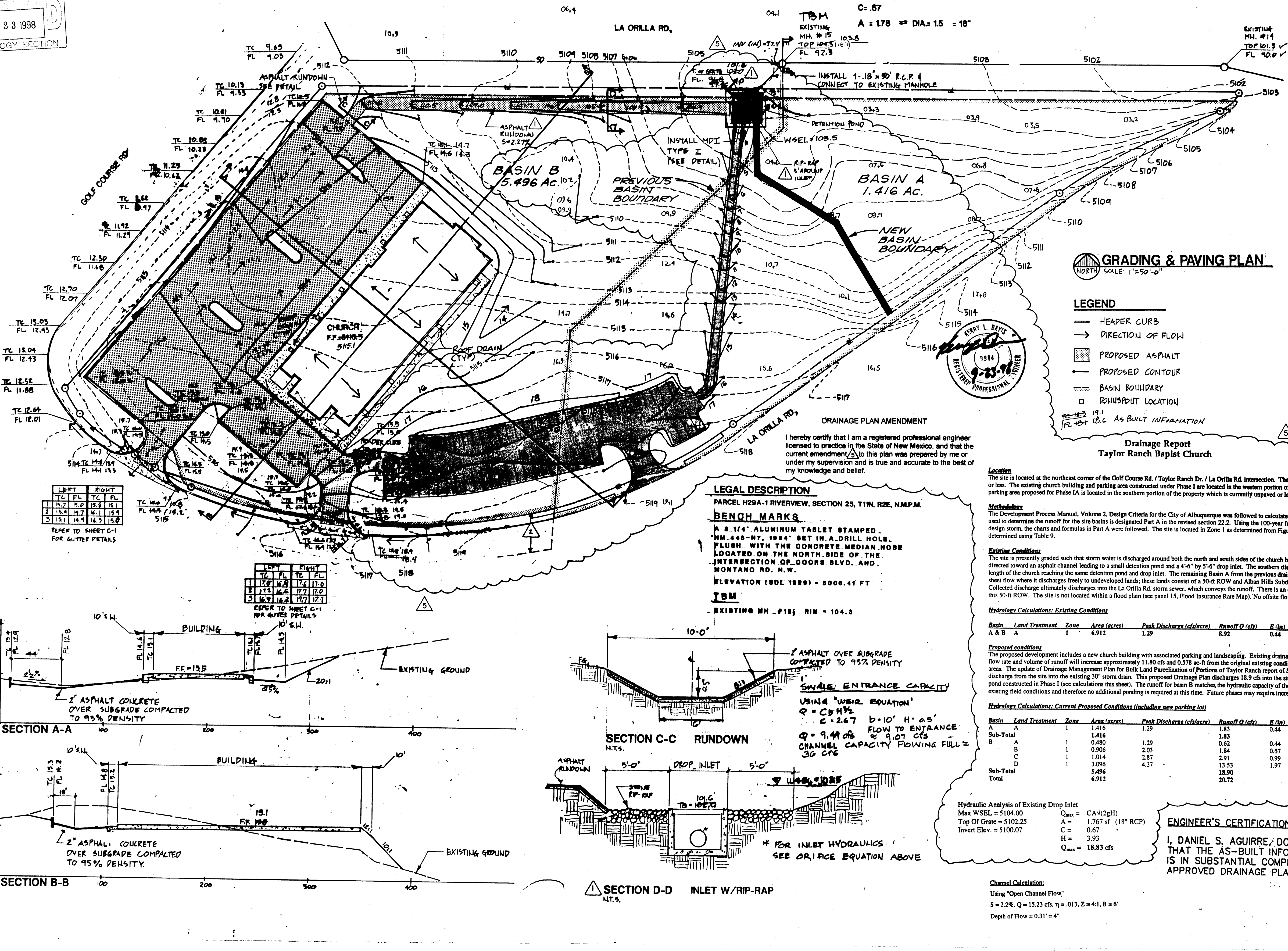
DRAWN
KIS

WILSON & COMPANY
 4775 INDIAN SCHOOL ROAD N.E.
 SUITE 200
 ALBUQUERQUE, NEW MEXICO
 87110
 (505) 254-4000

TAYLOR RANCH BAPTIST CHURCH
 La Orilla & Golf Course Road N.W.
 Albuquerque, New Mexico

GARLAN BRYAN, ARCHITECT
 2403 San Mateo N.E. Suite W-1
 Albuquerque, New Mexico

GRADING & PAVING PLAN, SITE SECTIONS,
 MAPS, INLET & MANHOLE DETAILS



LEGAL DESCRIPTION
PARCEL H29A-1 RIVERVIEW, SECTION 25, T11N, R2E, N.M.P.M.
BENCH MARKS
A 3.174" ALUMINUM TABLET STAMPED
"N 148-17, 1984" SET IN A DRILL HOLE
FLUSH WITH THE CONCRETE MEDIAN MOSE
LOCATED ON THE NORTH SIDE OF THE
INTERSECTION OF GOLF BLVD. AND
MONTANA RD. N.W.
ELEVATION (BOL 1928) = 5008.41 FT
TBM
EXISTING MH #185 RIM = 104.3

Location
The site is located at the northeast corner of the Golf Course Rd. / Taylor Ranch Dr. / La Orilla Rd. intersection. The property encompasses 6.722 acres more or less. The existing church building and parking area constructed under Phase I are located in the western portion of the property. The proposed 60 space parking area proposed for Phase II is located in the southern portion of the property which is currently unpaved or landscaped from previous construction.

Methodology
The Development Process Manual, Volume 2, Design Criteria for the City of Albuquerque was followed to calculate peak runoff for the site. The method used to determine the runoff for the site basins is designated Part A in the revised section 22.2. Using the 100-year frequency 6-hour rainfall volume as the design storm, the charts and formulas in Part A were followed. The site is located in Zone I as determined from Figure A, and the peak discharge was determined using Table 9.

Existing Conditions
The site is presently graded such that storm water is discharged around both the north and south sides of the church building. The northern discharge is directed toward an asphalt channel leading to a small detention pond and a 4'-6" by 5'-6" drop inlet. The southern discharge is directed along the southeast length of the church reaching the same detention pond and drop inlet. The remaining Basin A from the previous drainage report drains to the 50-ft ROW in sheet flow where it discharges freely to undeveloped lands; these lands consist of a 50-ft ROW and Alban Hills Subdivision, Bernalillo County, to the north. Collected discharge ultimately discharges into the La Orilla Rd. storm sewer, which conveys the runoff. There is an existing 30" RCP storm drain located in this 50-ft ROW. The site is not located within a flood plain (see panel 15, Flood Insurance Rate Map). No offsite flows enter the site.

Hydrology Calculations: Existing Conditions

Basin	Land Treatment	Zone	Area (acres)	Peak Discharge (cfs/acre)	Runoff Q (cfs)	E (in)	V (sec-ft)
A & B	A	I	6.912	1.29	8.92	0.44	0.253

Proposed conditions
The proposed development includes a new church building with associated parking and landscaping. Existing drainage patterns will be preserved. The peak flow rate and volume of runoff will increase approximately 11.80 cfs and 0.578 ac-ft from the original existing condition due to the paved and impervious areas. The update of Drainage Management Plan for Bulk Land Parcelization of Portions of Taylor Ranch report of September 1996 allowed 22.5 cfs to discharge from the site into the existing 30" storm drain. This proposed Drainage Plan discharges 18.9 cfs into the storm drain through an inlet and detention pond constructed in Phase I (see calculations this sheet). The runoff for basin B matches the hydraulic capacity of the existing drop inlet as determined by the existing field conditions and therefore no additional ponding is required at this time. Future phases may require increased detention ponding.

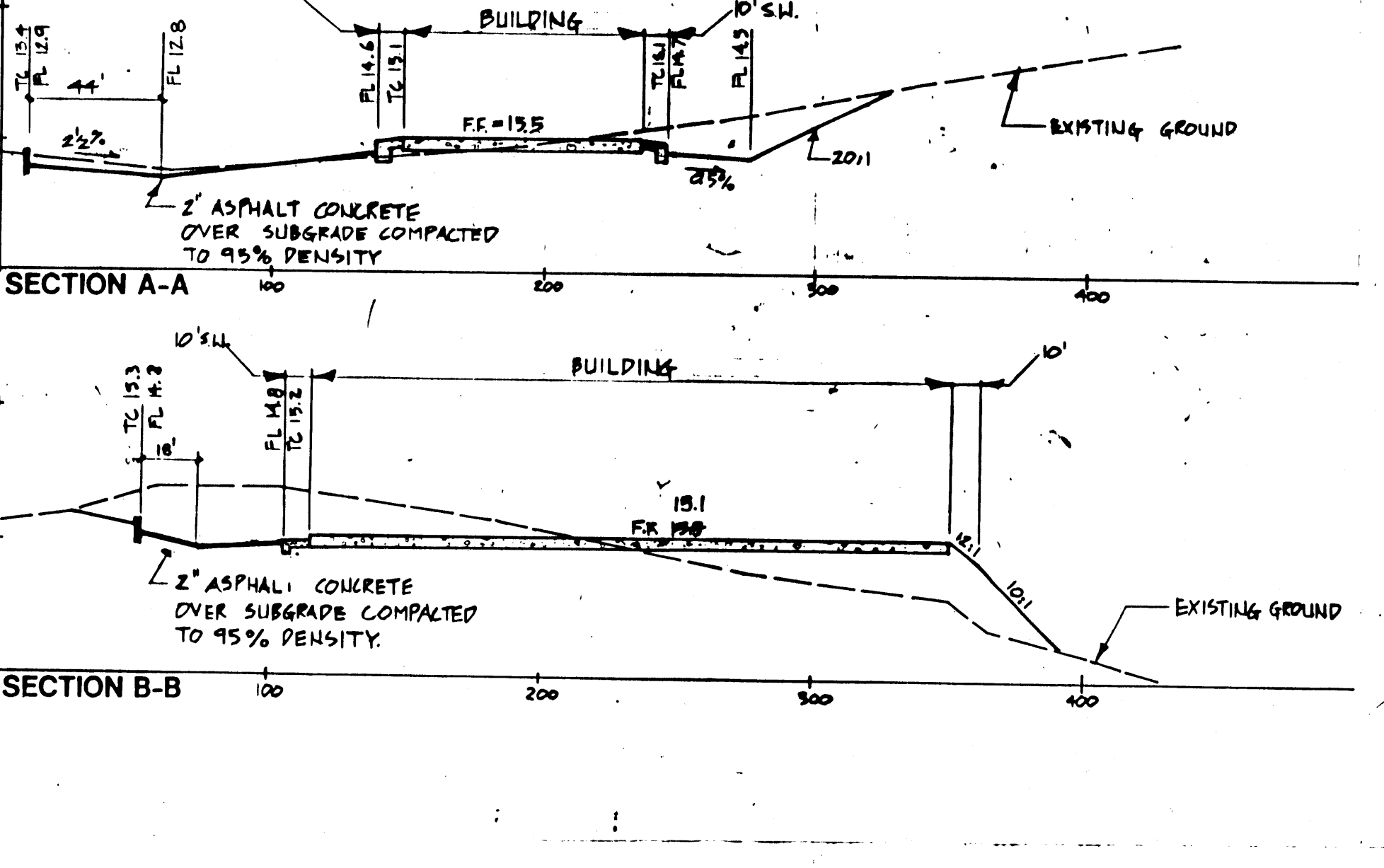
Hydrology Calculations: Current Proposed Conditions (including new parking lot)

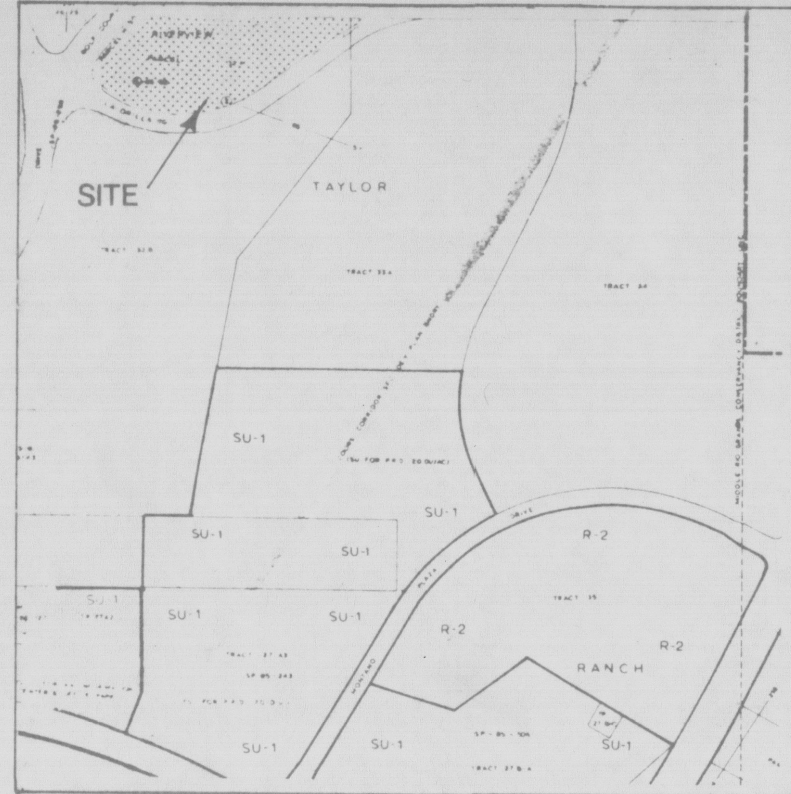
Basin	Land Treatment	Zone	Area (acres)	Peak Discharge (cfs/acre)	Runoff Q (cfs)	E (in)	V (sec-ft)
A	A	I	1.416	1.83	2.60	0.44	0.052
Sub-Total			1.416		2.60		
B	A	I	0.480	1.29	0.62	0.44	
Sub-Total			0.480		0.62		
C	B	I	0.906	2.03	1.84	0.57	
Sub-Total			0.906		1.84		
D	C	I	1.014	2.87	2.91	0.90	
Sub-Total			1.014		2.91		
Sub-Total			5.496	4.37	23.93	1.97	0.779
Total			6.912		28.72		0.831

Hydraulic Analysis of Existing Drop Inlet
Max WSEL = 5104.00
Top of Grate = 5102.25
Invert Elev. = 5100.07
 $Q_{max} = CA\sqrt{2gh}$
 $A = 1.767 \text{ sf (18" RCP)}$
 $C = 0.67$
 $H = 3.93$
 $Q_{max} = 18.83 \text{ cfs}$

Channel Calculation:
Using "Open Channel Flow"
 $S = 2.2\%$, $Q = 15.23 \text{ cfs}$, $n = 0.13$, $Z = 4:1$, $B = 6'$
Depth of Flow = $0.31' \approx 4"$

ENGINEER'S CERTIFICATION
I, DANIEL S. AGUIRRE, DO HEREBY CERTIFY THAT THE AS-BUILT INFORMATION HEREON IS IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED DRAINAGE PLAN.

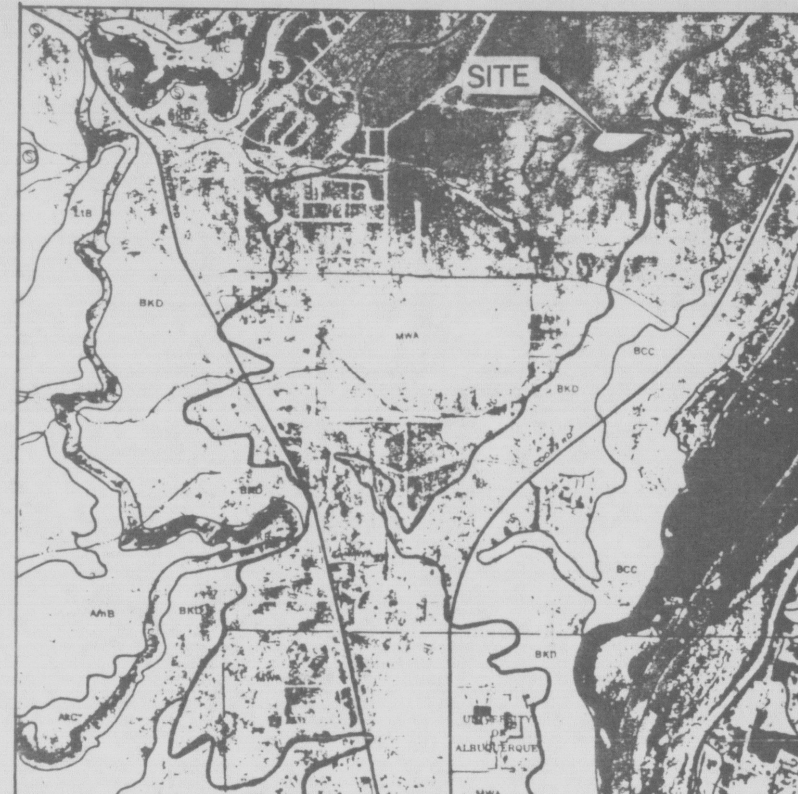




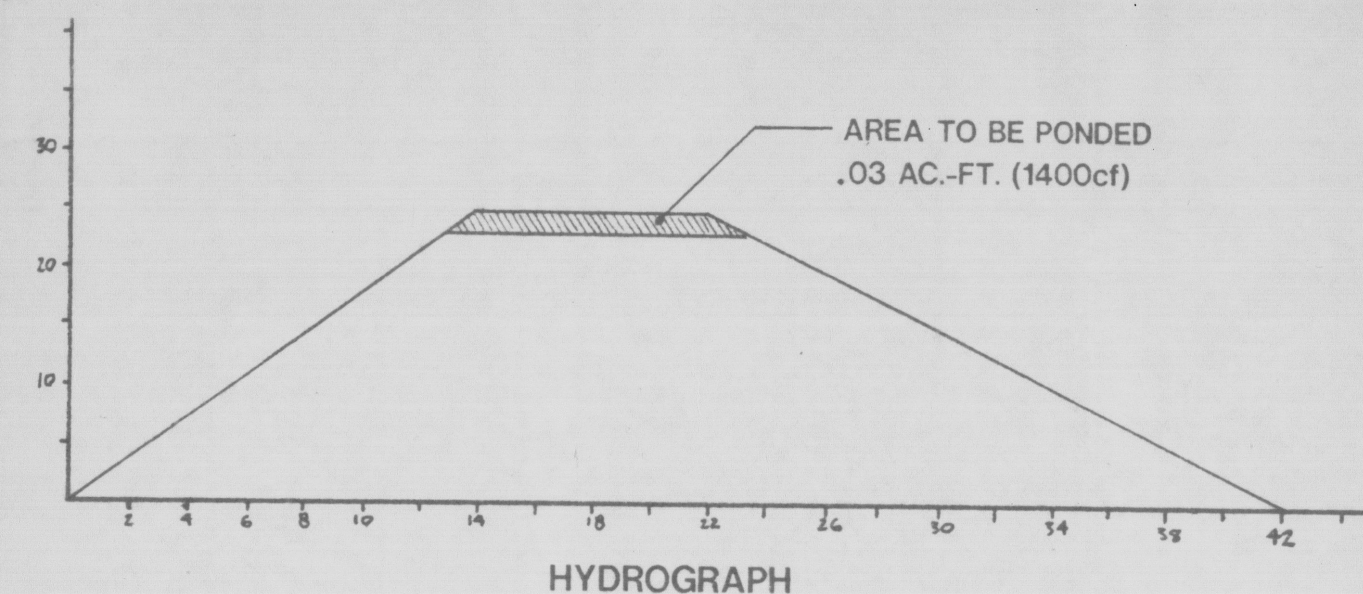
LOCATION MAP
ZONE ATLAS MAP E-12-Z



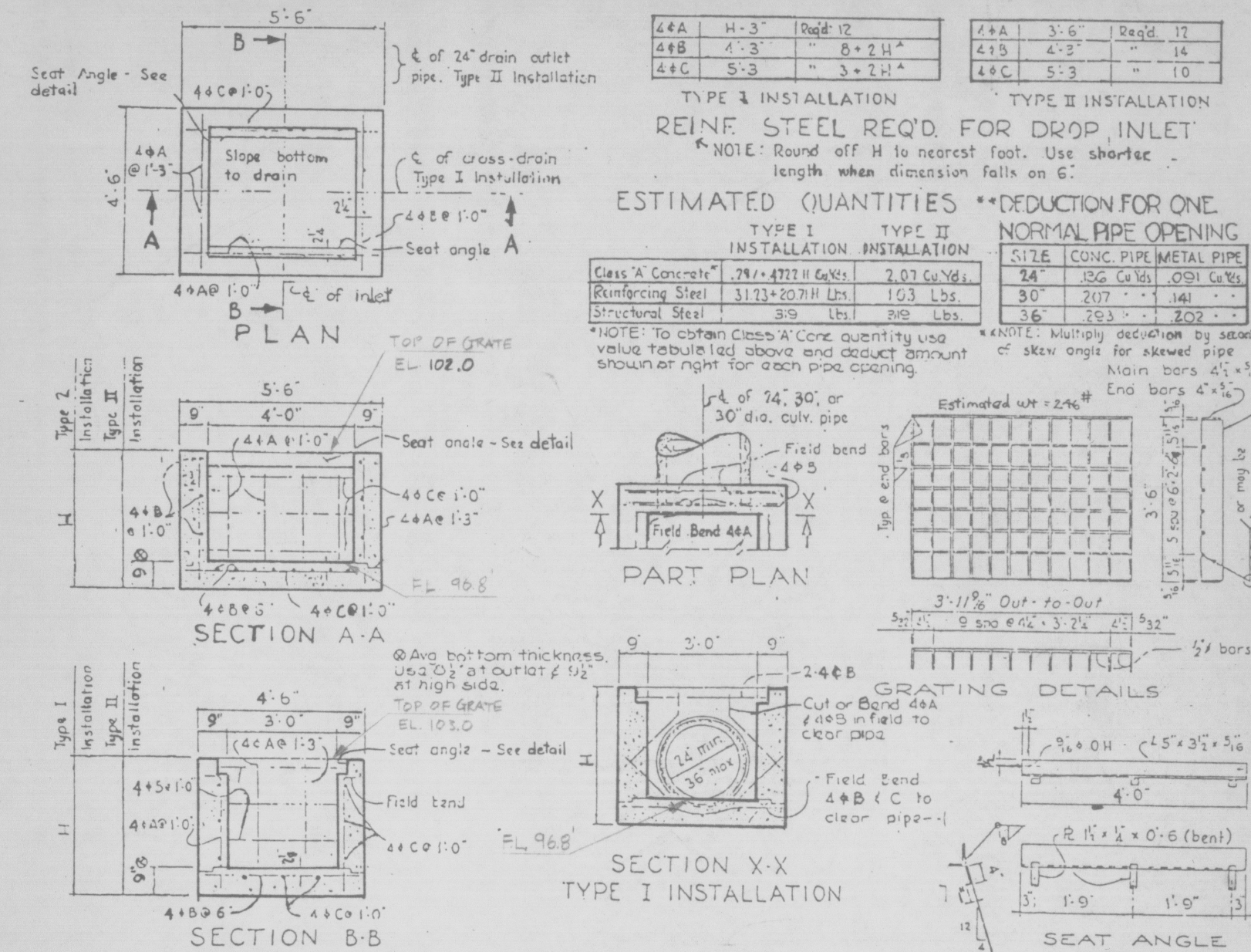
FLOOD ZONE MAP
FLOOD INSURANCE STUDY PANEL 15



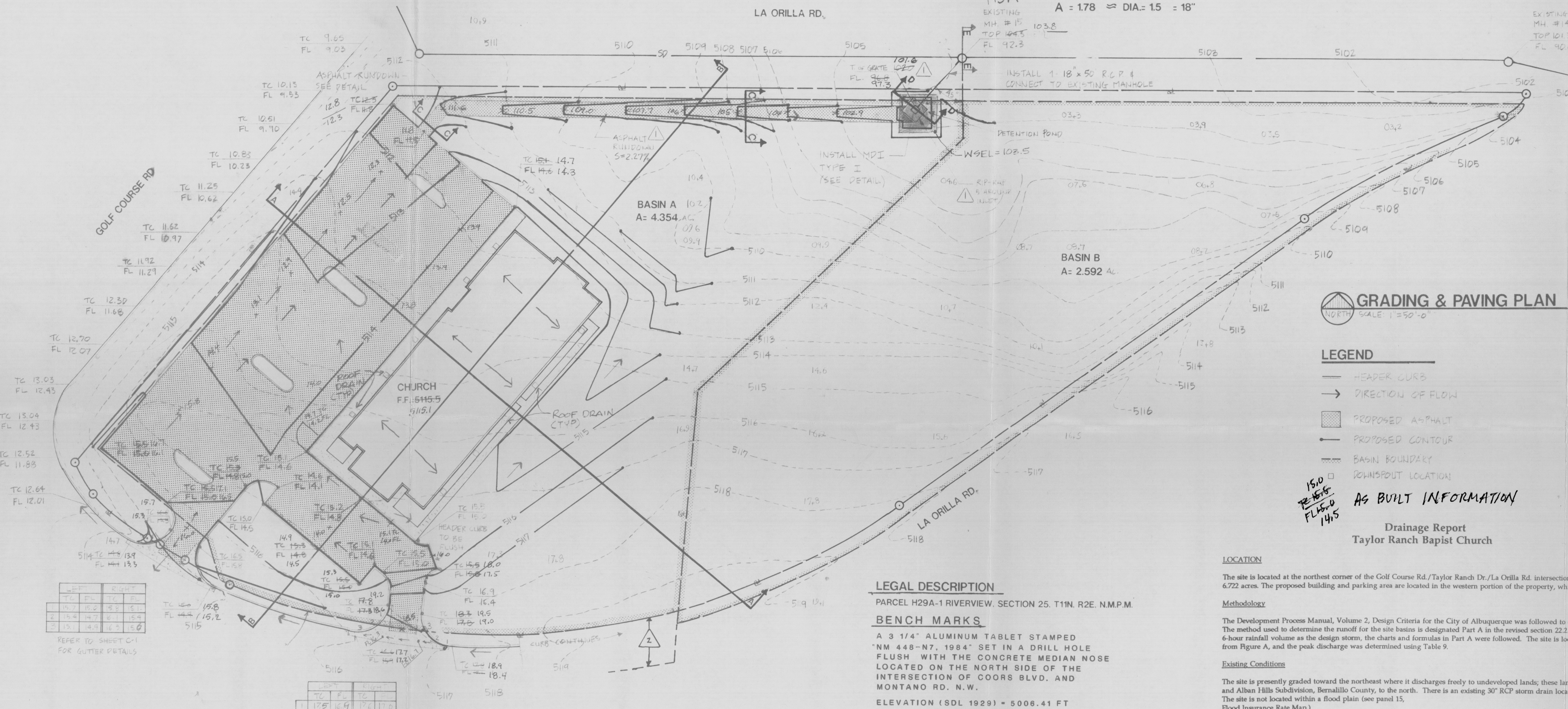
SOILS MAP
SCS BERNALILLO COUNTY SOIL SURVEY SHEET 20



ORIFICE EQUATION: $AC\sqrt{2gh}$
MAX WSEL= 103.5
MAX FLOW= 22.9
H= 5.7
C= .67
 $A = 1.78 \approx \text{DIA.} = 15" = 18"$



DROP INLET DETAILS
N.T.S.



GRADING & PAVING PLAN
SCALE: 1"=50'-0"

LEGEND
— HEADER CURB
→ DIRECTION OF FLOW
[Pattern] PROPOSED ASPHALT
— PROPOSED CONTOUR
[Pattern] BASIN BOUNDARY
[Symbol] DOWNSPOUT LOCATION

AS BUILT INFORMATION
Drainage Report
Taylor Ranch Baptist Church

LEGAL DESCRIPTION
PARCEL H29A-1 RIVERVIEW, SECTION 25, T11N, R2E, N.M.P.M.
BENCH MARKS
A 3 1/4" ALUMINUM TABLET STAMPED
'NM 448-N7, 1984' SET IN A DRILL HOLE
FLUSH WITH THE CONCRETE MEDIAN NOSE
LOCATED ON THE NORTH SIDE OF THE
INTERSECTION OF COORS BLVD. AND
MONTANO RD. N.W.
ELEVATION (SD 1929) = 5008.41 FT
TBM
EXISTING MH #15, RIM = 104.3

LOCATION
The site is located at the northeast corner of the Golf Course Rd./Taylor Ranch Dr./La Orilla Rd. intersection. The property encompasses 6.722 acres. The proposed building and parking area are located in the western portion of the property, which is currently unpaved.
Methodology
The Development Process Manual, Volume 2, Design Criteria for the City of Albuquerque was followed to calculate peak runoff for the site. The method used to determine the runoff for the site basins is designated Part A in the revised section 22.2. Using the 100-year frequency 6-hour rainfall volume as the design storm, the charts and formulas in Part A were followed. The site is located in Zone 1 as determined from Figure A, and the peak discharge was determined using Table 9.
Existing Conditions
The site is presently graded toward the northeast where it discharges freely to undeveloped lands; these lands consist of a 50-ft ROW and Alhambra Subdivision, Bernalillo County, to the north. There is an existing 30" RCP storm drain located in this 50-ft ROW. The site is not located within a flood plain (see panel 15, Flood Insurance Rate Map.)

HYDROLOGY CALCULATIONS: EXISTING CONDITIONS

Basin	Land Treatment	Zone	Area (Acres)	Peak Discharge (cfs/acre)	Runoff Q (cfs)	E (in)	V (ac-ft)
Basin A & B	C	1	6.946	2.87	19.94	0.99	0.570

Proposed Conditions:

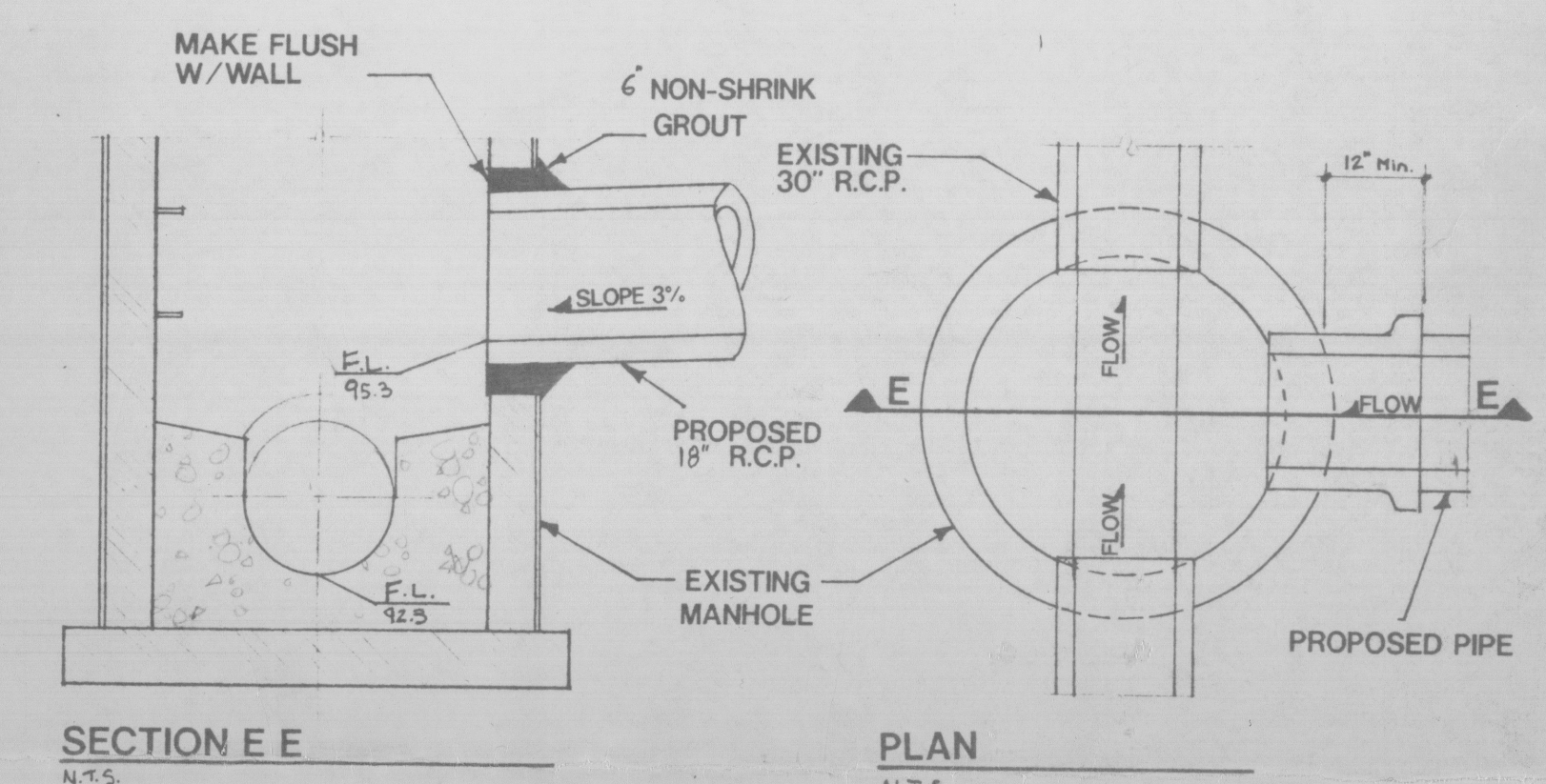
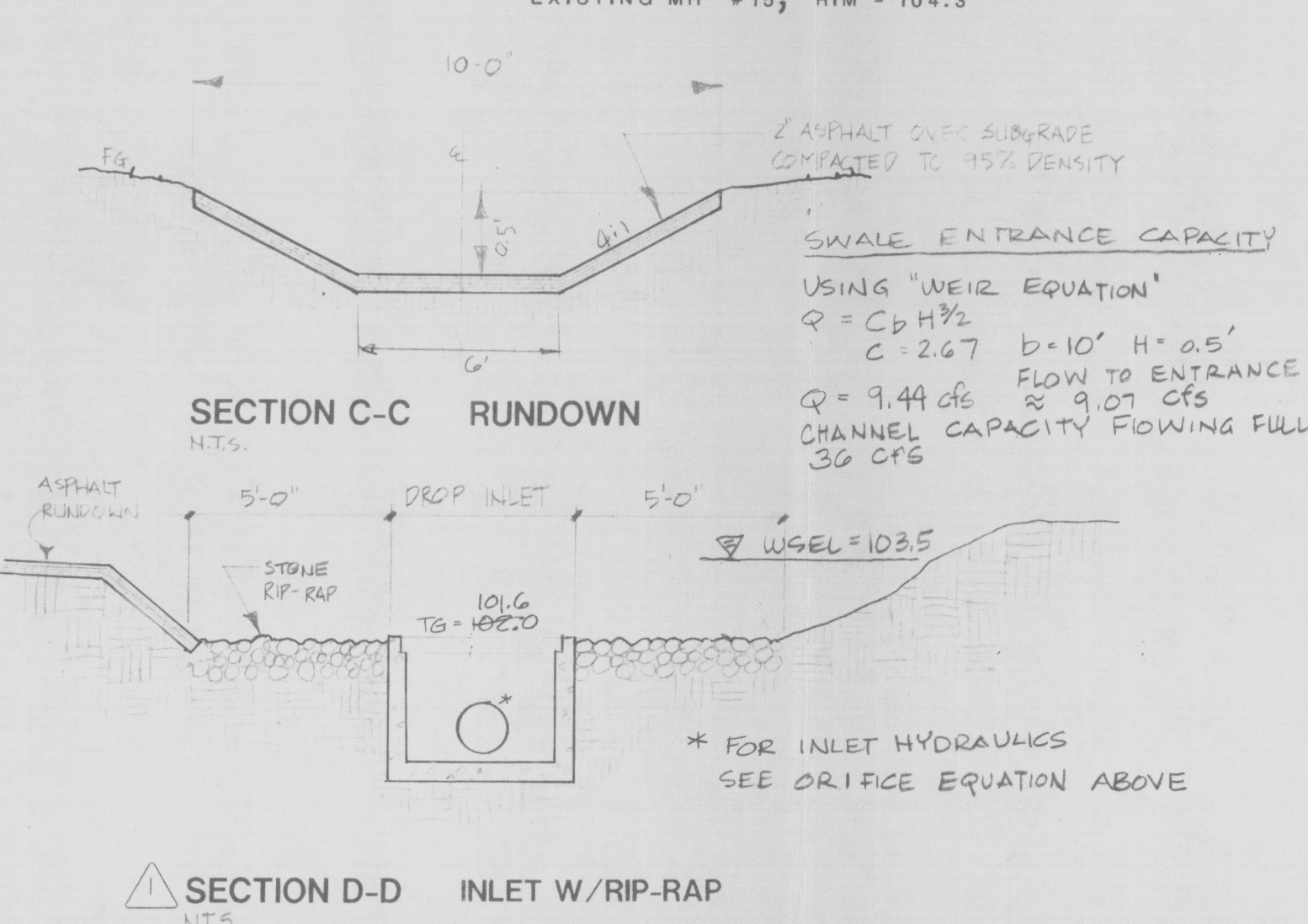
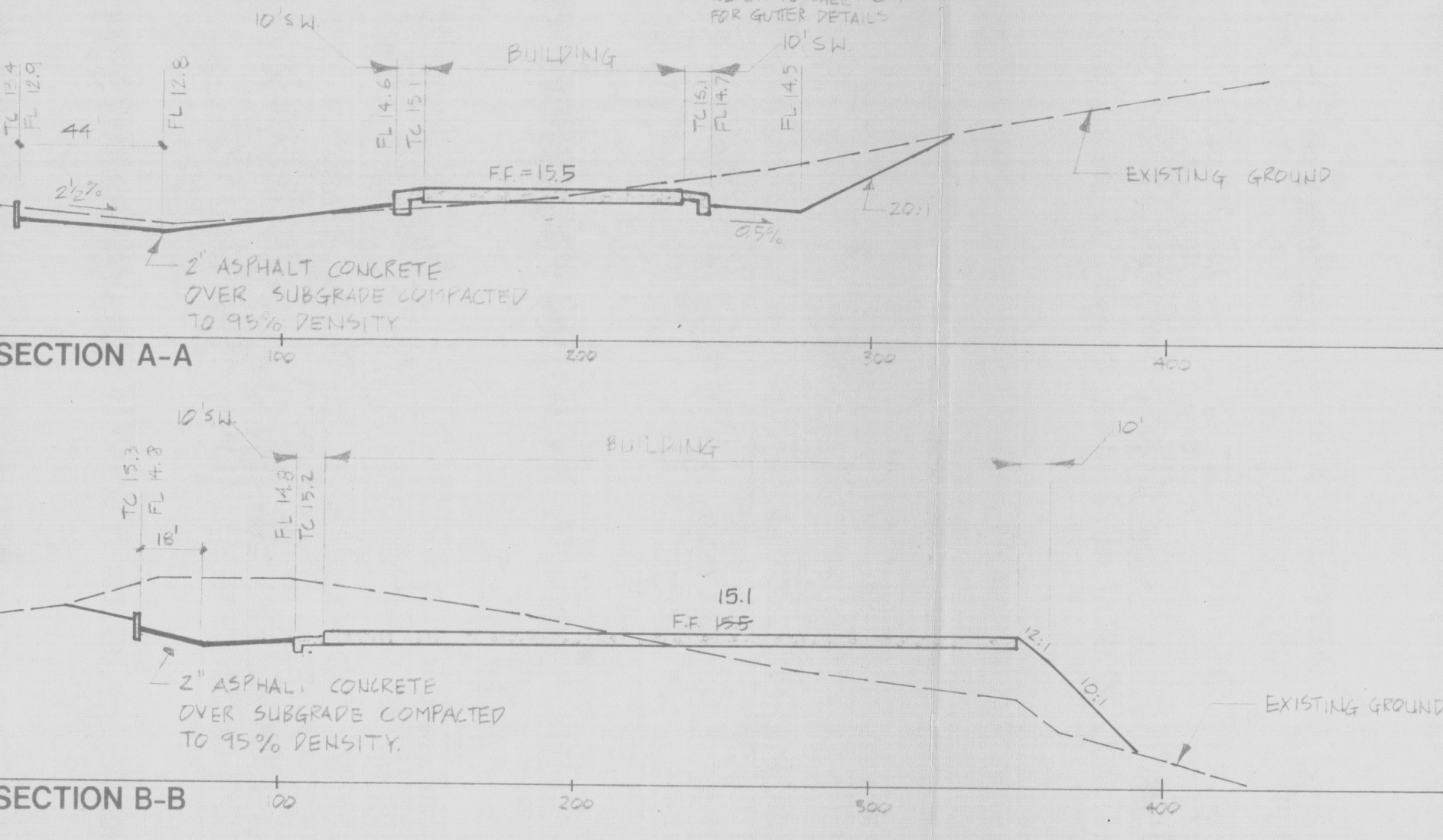
The proposed development includes a new church building with associated parking and landscaping. Existing drainage patterns will be preserved. The peak flow rate and volume of runoff will increase approximately 4.45 cfs and 0.39 ac-ft, respectively, due to the paved and impervious areas. The Update of Drainage Management Plan for Bulk Land Parcelization of Portions of Taylor Ranch report of September 1986 allowed 22.9 cfs to discharge from the site into the existing 30" storm drain. This proposed Drainage Plan discharges 22.9 cfs into the storm drain through a new inlet and detention pond (see calculations this sheet). No off-site flows enter the site.

HYDROLOGY CALCULATIONS: PROPOSED CONDITIONS

Basin	Land Treatment	Zone	Area (Acres)	Peak Discharge (cfs/acre)	Runoff Q (cfs)	E (in)	V (ac-ft)
Basin A	C	1	0.435	0.88	0.67	0.07	0.036
B	C	1	1.810	2.87	5.28	0.99	0.60
C	C	1	2.075	4.37	9.07	1.97	0.60
SUB-TOTAL			4.320	15.23	15.23	0.67	0.60
B	C	1	0.259	2.03	0.52	0.67	0.036
C	C	1	1.03	2.87	2.96	0.99	0.60
D	C	1	1.30	4.37	5.68	1.97	0.60
SUB-TOTAL			2.592	9.16	9.16	0.67	0.60
TOTAL			6.946	24.39	24.39	0.67	0.60

ENGINEER'S CERTIFICATION
I, DANIEL S. AGUIRRE, DO HEREBY CERTIFY THAT THE AS-BUILT INFORMATION HEREON IS IN SUBSTANTIAL COMPLIANCE WITH THE APPROVED DRAINAGE PLAN.

Channel Calculation:
Using "Open Channel Flow"
S = 22%, Q = 15.23 cfs, $\eta = .013$, Z = 41, B = 6'
Depth of Flow = 0.31' 4"



CONNECTION TO EXISTING MH
N.T.S.

GENERAL NOTES

- Plat & Topography taken from the B.E.A.R. company (registered engineers) drawing dated August 2, 1991.
- Note: Remove upper site soils to a depth of 12". Excavate soils to a depth of 3'-0" and recompact under floor slabs & footings to 95% density.
- Scarify soil 9" to 12" and compact under asphalt paving to 95% density.
- The contractor shall ensure that no soil erodes from the site into public Right of Way or private property.
- The contractor must obtain a "Topsoil Disturbance Permit" prior to beginning earthwork.
- I, Steven J. Metro, a Professional Engineer in the state of New Mexico do hereby certify that the topography shown on this plan reflects the conditions on the site based on a site visit made on 12 September 1994. It appears that no grading, filling or excavation has occurred since the contour map was prepared.

DESIGN
SJM/DSA

DRAWN
KIS

WILSON & COMPANY

4775 INDIAN SCHOOL ROAD N.E.
SUITE 200
ALBUQUERQUE, NEW MEXICO
87110
(505) 254-4000

WCEA #94553

REV 1 6-21-95 KIS/SJM

REV 2 5-5-95 GB/KIS/SJM

REV 3 1-9-95 GB/SJM

REV 4 1-2-95 GB/SJM

TAYLOR RANCH BAPTIST CHURCH
La Orilla & Golf Course Road N.W.
Albuquerque, New Mexico

GARLAN BRYAN, ARCHITECT

2403 San Mateo N.E. Suite W-1
Albuquerque, New Mexico