



City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

July 28, 2000

Jeff Mortensen, P.E.
Jeff Mortensen & Associates
6010-B Midway Park Blvd. NE
Albuquerque, NM 87109

Attn: C.J. Sholtis

***RE: CHELWOOD PARK FOURSQUARE CHURCH (J22-D12C). DRAINAGE PLAN
FOR BUILDING PERMIT AND SO#19 PERMIT APPROVALS. . ENGINEER'S
STAMP DATED JULY 14, 2000.***

Dear Mr. Mortensen:

Based on the information provided on your submittal of July 14, 2000, the above referenced project is approved for Building Permit and SO#19 Permit.

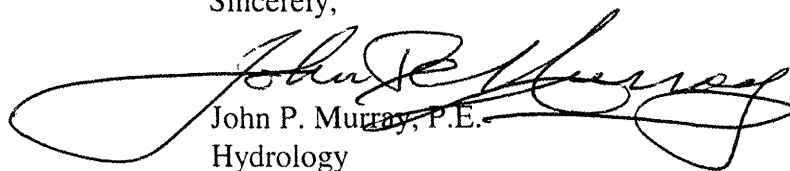
Please attach a copy of this approved plan to the construction sets prior to sign-off by Hydrology.

A separate permit is required for construction within the City right-of-way. A copy of this approval letter must be on hand when applying for the excavation permit.

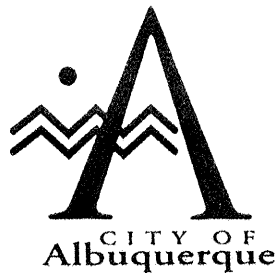
Prior to Certificate of Occupancy approval, an Engineer's Certification per the DPM will be required.

If I can be of further assistance, please feel free to contact me at 924-3984.

Sincerely,


John P. Murray, P.E.
Hydrology

c: Pam Lujan
Whitney Reiersen
✓ File



Martin J. Chávez, Mayor

April 3, 1997

Jeff Mortensen
Jeff Mortensen & Associates
6010-B Midway Park Blvd. NE
Albuquerque, New Mexico 87109

RE: DRAINAGE PLAN FOR CHELWOOD PARK FOURSQUARE CHURCH (J22-D12C)
ENGINEER'S STAMP DATED 3/28/97

Dear Mr. Mortensen:

Based on the information provided on your March 31, 1997 submittal, the above referenced site is approved for SO19.

Please be advised that a separate permit is required for construction within City R/W. A copy of this approval letter must be on hand when applying for the excavation permit.

Also, once the proposed improvements are completed, Engineer Certification per the DPM checklist will be required.

If I can be of further assistance, please feel free to contact me at 924-3986.

C: Andrew Garcia
Arlene Portillo
File

Sincerely


Bernie J. Montoya CE
Engineering Associate





City of Albuquerque

P.O. BOX 1293 ALBUQUERQUE, NEW MEXICO 87103

September 3, 1991

Jeff Mortensen, P.E.
Jeff Mortensen & Associates, Inc.
6010-B Midway Park Boulevard, NE
Albuquerque, New Mexico 87109

RE: REVISED DRAINAGE PLAN FOR CHELWOOD PARK FOURSQUARE CHURCH
(J-22/D12C) ENGINEER'S STAMP DATED AUGUST 21, 1991

Dear Mr. Mortensen:

Based on the information provided on your resubmittal of August 22, 1991, the above referenced plan is approved for Site Plan and Building Permit.

Please attach a copy of this plan to the construction sets prior to sign-off by Hydrology.

Also, prior to Certificate of Occupancy release, Engineer's Certification per the DPM Checklist is required.

If I can be of further assistance, please feel free to call me at 768-2650.

Cordially,

Bernie J. Montoya
Bernie J. Montoya, C.E.
Engineering Assistant

xc: Alan Martinez

BJM/bsj
(WP+810)

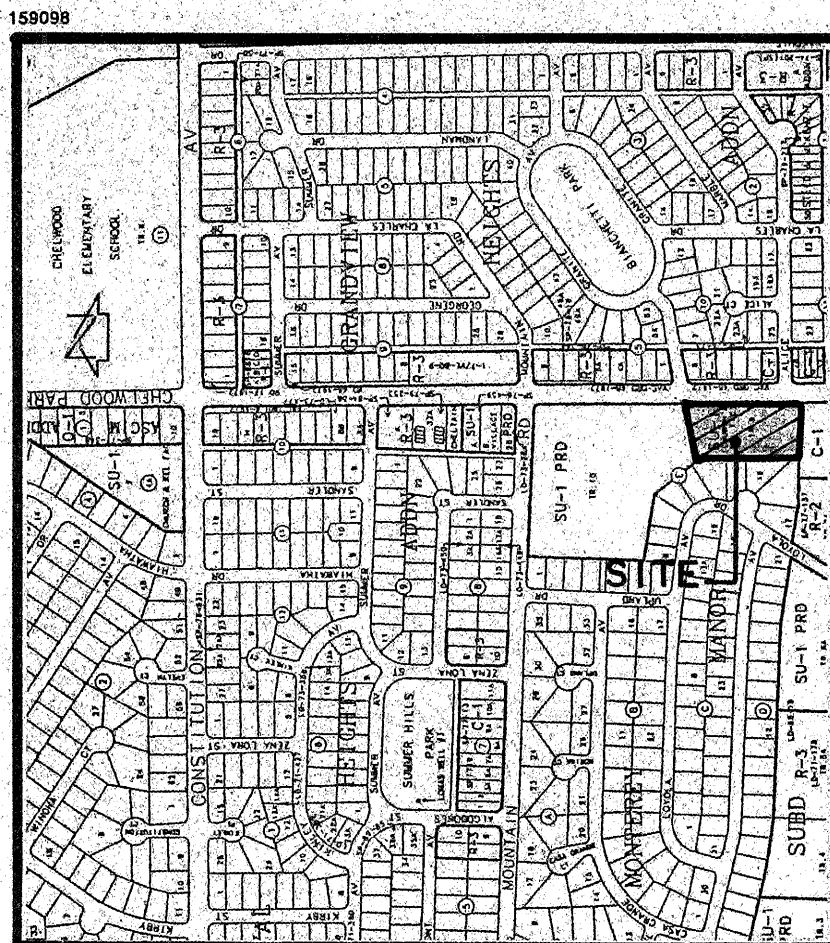
PUBLIC WORKS DEPARTMENT

Walter H. Nickerson, Jr., P.E.
Assistant Director Public Works

ENGINEERING GROUP

Telephone (505) 768-2500

AN EQUAL OPPORTUNITY EMPLOYER



VICINITY MAP
SCALE: 1" = 80' ±

PROJECT BENCHMARK

CITY OF ALBUQUERQUE BRASS CAP
MONUMENT STATION "3-1-22", LOCATED
ON TOP OF CURB AT THE N.E. INTER-
SECTION OF LOMAS BLVD. N.E. AND
CHELWOOD BLVD. N.E.
ELEVATION = 5664.77 (M.S.L.D.)

LEGAL DESCRIPTION

TRACT 9
MONTEPEY MANOR SUBDIVISION

T.B.M.

A SCRIBE "1" CHISELED ON TOP OF
CONCRETE CURB ADJACENT TO
SOUTHEAST PROPERTY CORNER, AS
SHOWN ON DRAWING BELOW.
ELEVATION = 5666.80 FEET (M.S.L.D.)

LEGEND

- ◆ EXIST. SPOT ELEVATION
- ◆ PROPOSED SPOT ELEVATION
- 61 — EXIST. CONTOUR
- 61 — PROPOSED CONTOUR
- — — EXIST. FLOW LINE
- — — PROPOSED FLOW LINE
- TA TOP OF ASPHALT
- TC TOP OF CURB
- — — HIGH POINT
- — — EXIST. BASIN BOUNDARY
- — — NEW BASIN BOUNDARY
- — — TOP OF RAILROAD TIE
- — — EXIST. SIDE SLOPE

This plan is submitted in response to outstanding issues for the issuance of a Permanent Certificate of Occupancy for this project. Phase II has been put on indefinite hold, therefore, an alternate method has been investigated to divert the developed roof runoff, created as part of Phase I, away from Basin B and into Chelwood Park N.E. In lieu of a sump pump and associated forced main, the roof runoff will be guttered to the approximate northeast corner of the overall building footprint where it will discharge downward into an 8" storm drain riser. From this point, the runoff will be conveyed by an 8" storm drain to an existing public storm inlet located at the northeast corner of the site. This will constitute a private drainage facility within public right-of-way.

The last outstanding item is the drain line located at the southwest corner of the building which was discharging to Basin B. That drain line has been plugged at the face of wall within Basin B. The discharge of roof drainage is now intercepted by an existing concrete rundown which outlets to the existing Basin A parking lot.

The Calculations which appear hereon analyze both the existing and developed (future) conditions for the 100-year, 6-hour rainfall event for Subbasin A-1. Subbasin A-1 is that portion of the site where developed roof runoff is currently draining into Basin B. This sub-area will now be diverted to Basin A which outfalls to Chelwood Park N.E. The Procedure for 40-acre and Smaller Basins, as set forth in the Revision of Section 22.2, Hydrology of the Development Process Manual, Volume 2, Design Criteria, dated January, 1993, has been used to quantify the peak rate of discharge and volume of runoff generated by this subbasin. Both development scenarios have been evaluated in order that the new storm drain be sized to accommodate future developed flows from this portion of the site. The Field's Hydraulic Calculator for Gravity Flow in Pipes has been used to determine the capacity of the new underground storm drain. As shown by these Calculations, the proposed storm drain will have adequate capacity to handle the discharge from Subbasin A-1.

CALCULATIONS

Site Characteristics

- Precipitation Zone = 4
- $P_{100} = P_{100} = 2.90$
- Existing Land Treatment

Treatment	Area (sf/ac)	%
D	5,290/0.12	100%

Developed Land Treatment

Treatment	Area (sf/ac)	%
D	7,040/0.16	100%

Existing Condition

1. Volume

$$E_p = E_o = 2.64$$

$$V_{100} = (E_p/12)A_t = 1160 \text{ cf}$$

2. Peak Discharge

$$Q_p = Q_{pA_1} + Q_{pA_2} + Q_{pA_3} + Q_{pA_4}$$

$$Q_p = Q_{100} = 5.25(0.12) = 0.6 \text{ cfs}$$

Developed Condition (Includes Future Addition)

1. Volume

$$E_p = E_o = 2.64$$

$$V_{100} = (E_p/12)A_t = 1550 \text{ cfs}$$

2. Peak Discharge

$$Q_p = Q_{pA_1} + Q_{pA_2} + Q_{pA_3} + Q_{pA_4}$$

$$Q_p = Q_{100} = 5.25(0.16) = 0.8 \text{ cfs}$$

Comparison

- $\Delta V_{100} = 1550 - 1160 = 390 \text{ cf (increase)}$
- $\Delta Q_{100} = 0.8 - 0.6 = 0.2 \text{ cfs (increase)}$

Pipe Hydraulics

Using Field's Hydraulics Calculator for Gravity Flow in Pipes,
 $Q_{capacity} = 0.86 \text{ cfs} > Q_{100}$

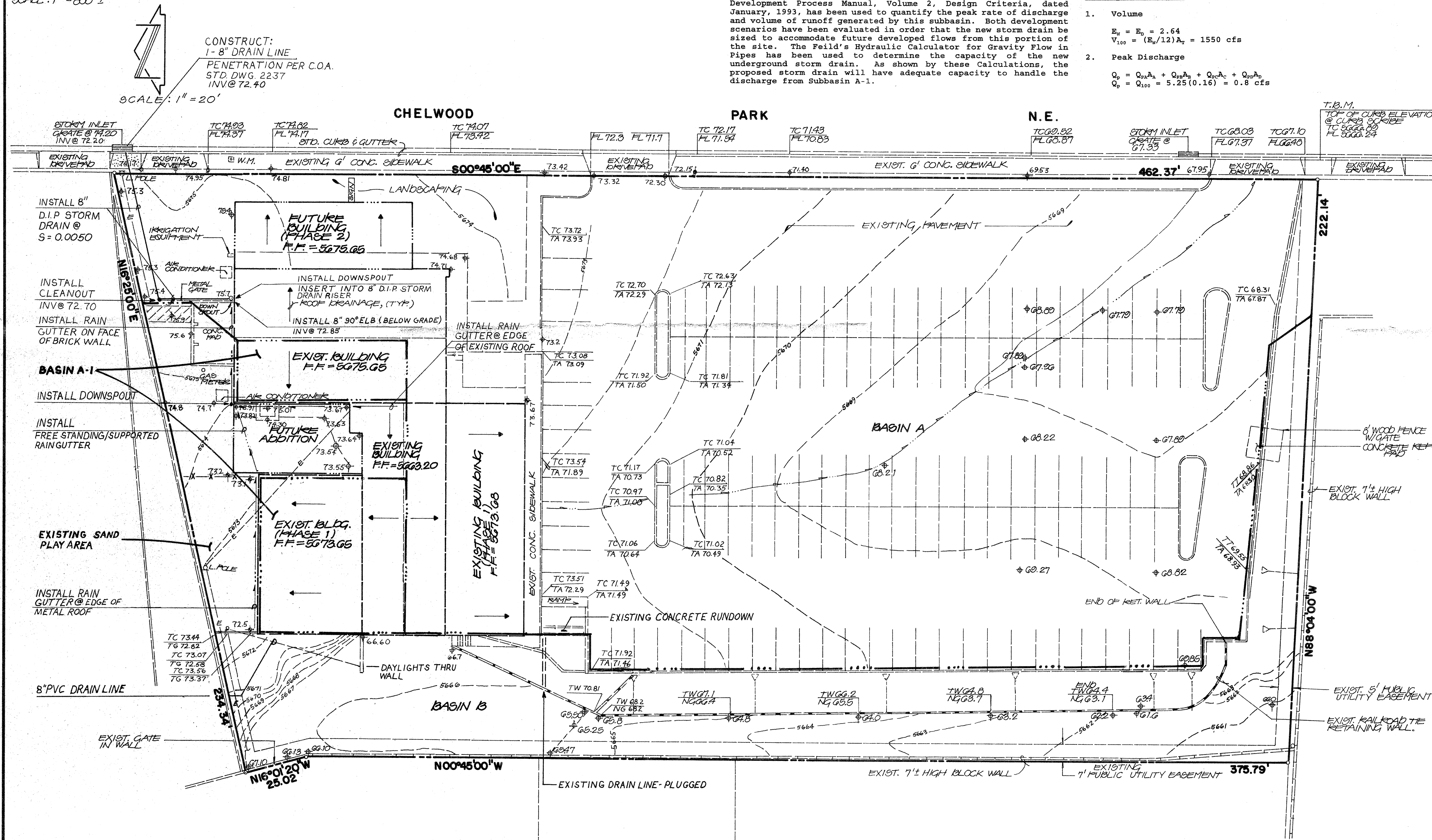
Let: $d = 8"$
 $n = 0.013$
 $s = 0.0050$
 $Q_{100} = 0.8 \text{ cfs (future condition)}$

Construction Notes:

- Two (2) working days prior to any excavation, contractor must contact New Mexico One Call System 260-1990 (Albuquerque Area), 1-800-321-ALERT(2537) (Statewide), for location of existing utilities.
- Prior to construction, the contractor shall excavate and verify the horizontal and vertical location of all potential obstructions. Should a conflict exist, the contractor shall notify the engineer in writing so that the conflict can be resolved with a minimum amount of delay. The Contractor shall be responsible for all interpretations it makes without first contacting the Engineer as required above.
- All work on this project shall be performed in accordance with applicable federal, state and local laws, rules and regulations concerning construction safety and health.
- All construction within public right-of-way shall be performed in accordance with applicable City of Albuquerque Standards and Procedures.
- If any utility lines, pipelines, or underground utility lines are shown on these drawings, they are shown in an approximate manner only, and such lines may exist where none are shown. If any such existing lines are shown, the location is based upon information provided by the owner of said utility, and the information may be incomplete, or may be obsolete by the time construction commences. The engineer has conducted only preliminary investigation of the location, depth, size, or type of existing utility lines, pipelines, or underground utility lines. This investigation is not conclusive, and may not be complete, therefore, makes no representation pertaining thereto, and assumes no responsibility or liability therefor. The contractor shall inform itself of the location of any utility line, pipeline, or underground 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, pipelines, and underground utility lines. In planning and conducting excavation, the contractor shall comply with state statutes, municipal and local ordinances, rules and regulations, if any, pertaining to the location of these lines and facilities.
- An Excavation/Construction Permit will be required before beginning any work within City right-of-way. An approved copy of these plans must be submitted at the time of application for this permit.
- Backfill compaction shall be according to residential street use.
- Maintenance of these facilities shall be the responsibility of the owner of the property served.
- The design of planters and landscaped areas is not part of this plan. All planters and landscaped areas adjacent to the building(s) shall be provided with positive drainage to avoid any ponding adjacent to the structure. For construction details, refer to landscaping plan.

Erosion Control Measures:

- The contractor shall ensure that no soil erodes from the site into public right-of-way or onto private property.
- The contractor shall promptly clean up any material excavated within the public right-of-way so that the excavated material is not susceptible to being washed down the street.
- The contractor shall secure "Topsoil Disturbance Permit" prior to beginning construction.
- Any areas of excess disturbance (traffic access, storage yard excavated material, etc.) shall be re-seeded according to C.O.A. Specification 1012 "Native Grass Seeding". This will be considered incidental to construction, therefore, no separate payment will be made.

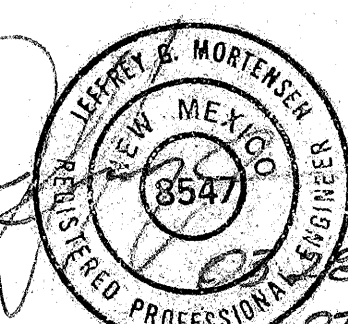
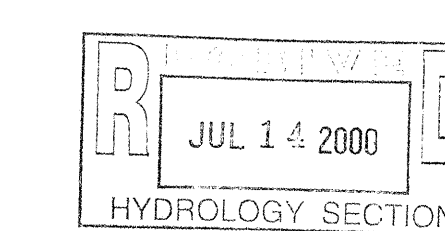


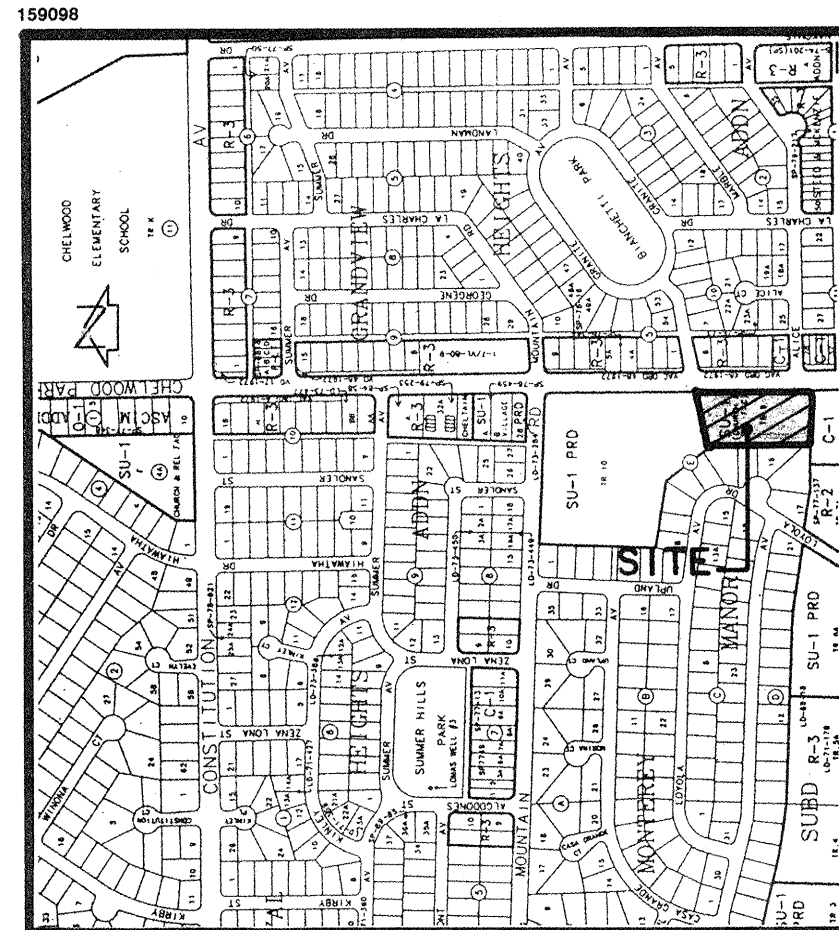
APPROVALS	NAME	DATE
A.C.E./DESIGN	N/A	
INSPECTOR		
A.C.E./FIELD	N/A	

DESIGNED BY	J.G.M.
DRAWN BY	J.M.A.
APPROVED BY	J.G.M.

NO.	DATE	BY	REVISIONS
1	07/00	J.G.M.	RESUBMIT, PRIOR APPROVAL > 1-YEAR OLD

JOB NO.	910464
DATE	03/97
SHEET	1 OF 1





VICINITY MAP
SCALE: 1" = 800'

PROJECT BENCHMARK
CITY OF ALBUQUERQUE BRASS CAP
MONUMENT STATION "3-J-22", LOCATED
ON TOP OF CURB AT THE N.E. INTER-
SECTION OF LOMAS BLVD. N.E. AND
CHELWOOD BLVD. N.E.
ELEVATION = 5664.77 (M.S.L.D.)

LEGAL DESCRIPTION
TRACT 9
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T.B.M.
A SCRIBE "1" CHISELED ON TOP OF
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LEGEND

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- EXIST. CONTOUR
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- EXIST. FLOW LINE
- PROPOSED FLOW LINE
- TA TOP OF ASPHALT
- TC TOP OF CURB
- HIGH POINT
- EXIST. BASIN BOUNDARY
- NEW BASIN BOUNDARY
- TOP OF RAILROAD TIE
- EXIST. SIDE SLOPE

DRAINAGE PLAN

This plan is submitted in response to outstanding issues for the issuance of a Permanent Certificate of Occupancy for this project. Phase II has been put on indefinite hold, therefore, an alternate method has been investigated to divert the developed roof runoff, created as part of Phase I, away from Basin B and into Chelwood Park N.E. In lieu of a sump pump and associated forced main, the roof runoff will be guttered to the approximate northeast corner of the overall building footprint where it will discharge downward into an 8" storm drain riser. From this point, the runoff will be conveyed by an 8" storm drain to an existing public storm inlet located at the northeast corner of the site. This will constitute a private drainage facility within public right-of-way.

The last outstanding item is the drain line located at the southwest corner of the building which was discharging to Basin B. That drain line has been plugged at the face of wall within Basin B. The discharge of roof drainage is now intercepted by an existing concrete rundown which outlets to the existing Basin A parking lot.

The Calculations which appear hereon analyze both the existing and developed (future) conditions for the 100-year, 6-hour rainfall event for Subbasin A-1. Subbasin A-1 is that portion of the site where developed roof runoff is currently draining into Basin B. This sub-area will now be diverted to Basin A which outfalls to Chelwood Park N.E. The Procedure for 40-acre and Smaller Basins, as set forth in the Revision of Section 22.2, Hydrology of the Development Process Manual, Volume 2, Design Criteria, dated January, 1993, has been used to quantify the peak rate of discharge and volume of runoff generated by this subbasin. Both development scenarios have been evaluated in order that the new storm drain be sized to accommodate future developed flows from this portion of the site. The Feild's Hydraulic Calculator for Gravity Flow in Pipes has been used to determine the capacity of the new underground storm drain. As shown by these Calculations, the proposed storm drain will have adequate capacity to handle the discharge from Subbasin A-1.

CALCULATIONS		
Site Characteristics		
1. Precipitation Zone =	4	
2. $P_{100} = P_{30} =$	2.90	
3. Existing Land Treatment		
Treatment	Area (sf/ac)	%
D	5,290/0.12	100%
4. Developed Land Treatment		
Treatment	Area (sf/ac)	%
D	7,040/0.16	100%

Existing Condition

- Volume
 $E_w = E_p = 2.64$
 $V_{100} = (E_w/12)A_r = 1160 \text{ cf}$
- Peak Discharge
 $Q_p = Q_{pA} + Q_{pB} + Q_{pC} + Q_{pD}$
 $Q_p = Q_{100} = 5.25(0.12) = 0.6 \text{ cfs}$

Developed Condition (Includes Future Addition)

Developed Condition (Includes Future Addition)

- Volume
 $E_w = E_p = 2.64$
 $V_{100} = (E_w/12)A_r = 1550 \text{ cfs}$
- Peak Discharge
 $Q_p = Q_{pA} + Q_{pB} + Q_{pC} + Q_{pD}$
 $Q_p = Q_{100} = 5.25(0.16) = 0.8 \text{ cfs}$

Comparison

- $\Delta V_{100} = 1550 - 1160 = 390 \text{ cf (increase)}$
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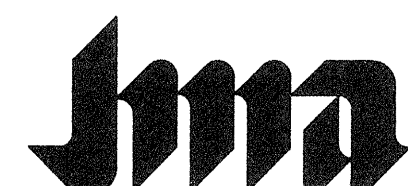
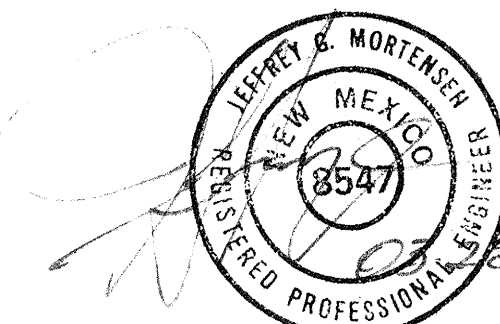
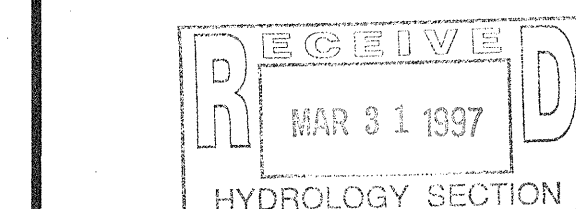
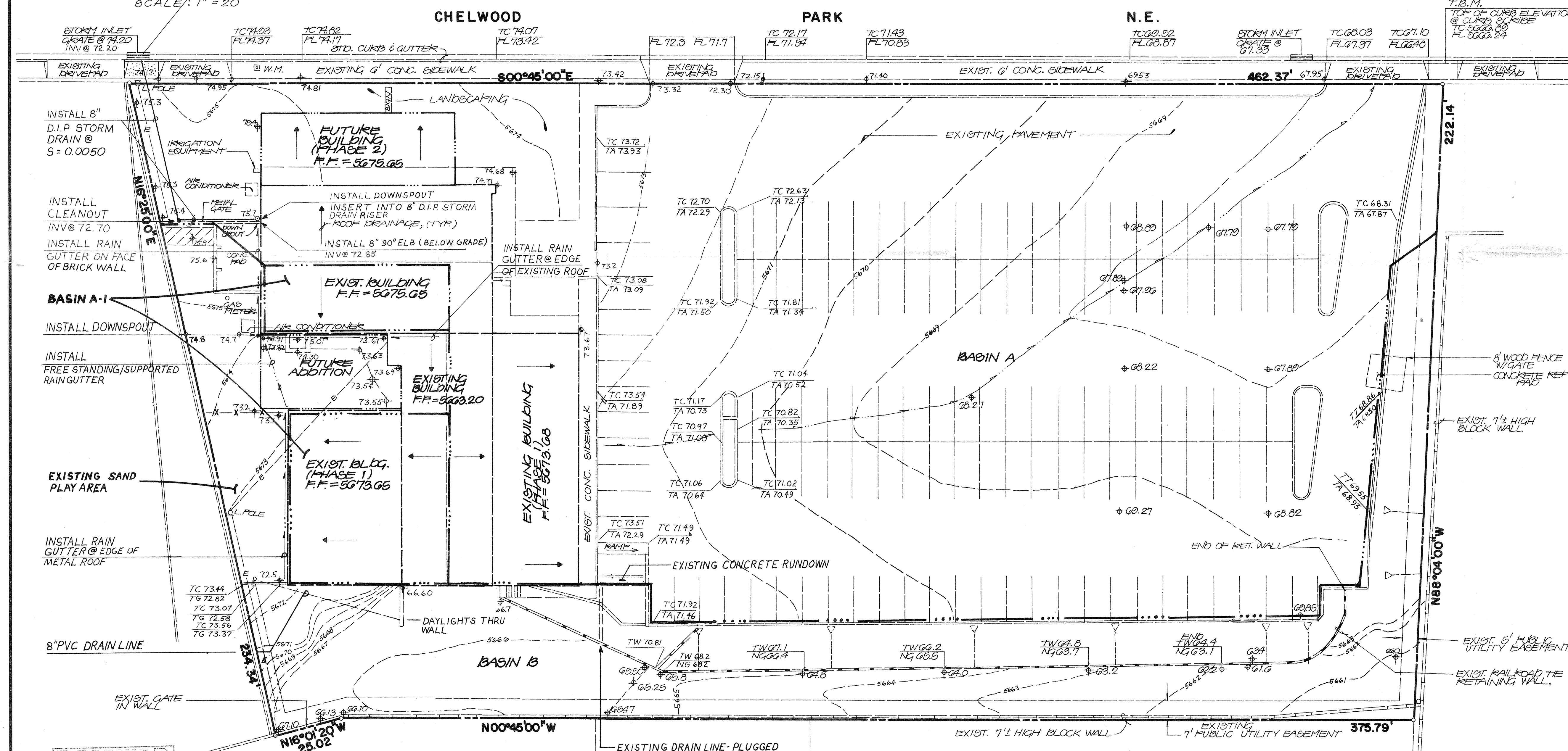
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JEFF MORTENSEN & ASSOCIATES, INC.
6010-B MIDWAY PARK BLVD. N.E.
ALBUQUERQUE, NEW MEXICO 87109
ENGINEERS & SURVEYORS (505)345-4250

GRADING AND DRAINAGE PLAN
CHELWOOD PARK FOURSQUARE CHURCH

APPROVALS	NAME	DATE
A.C.E./DESIGN	B. Montoya	4/3/97
INSPECTOR		
A.C.E./FIELD		

DESIGNED BY J.G.M.
DRAWN BY J.M.A.
APPROVED BY J.G.M.

NO.	DATE	BY	REVISIONS	JOB NO.
				910464
				DATE
				03/97
				SHEET
				OF
				1