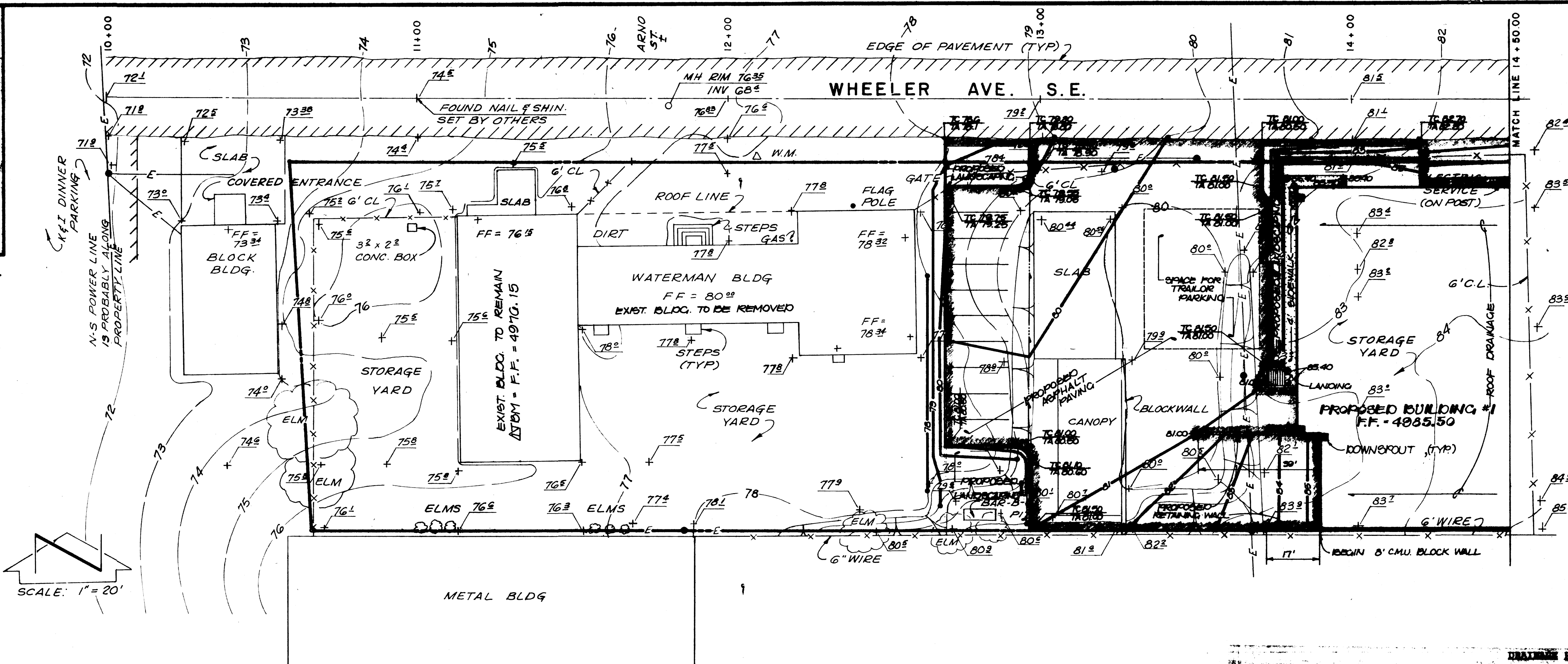


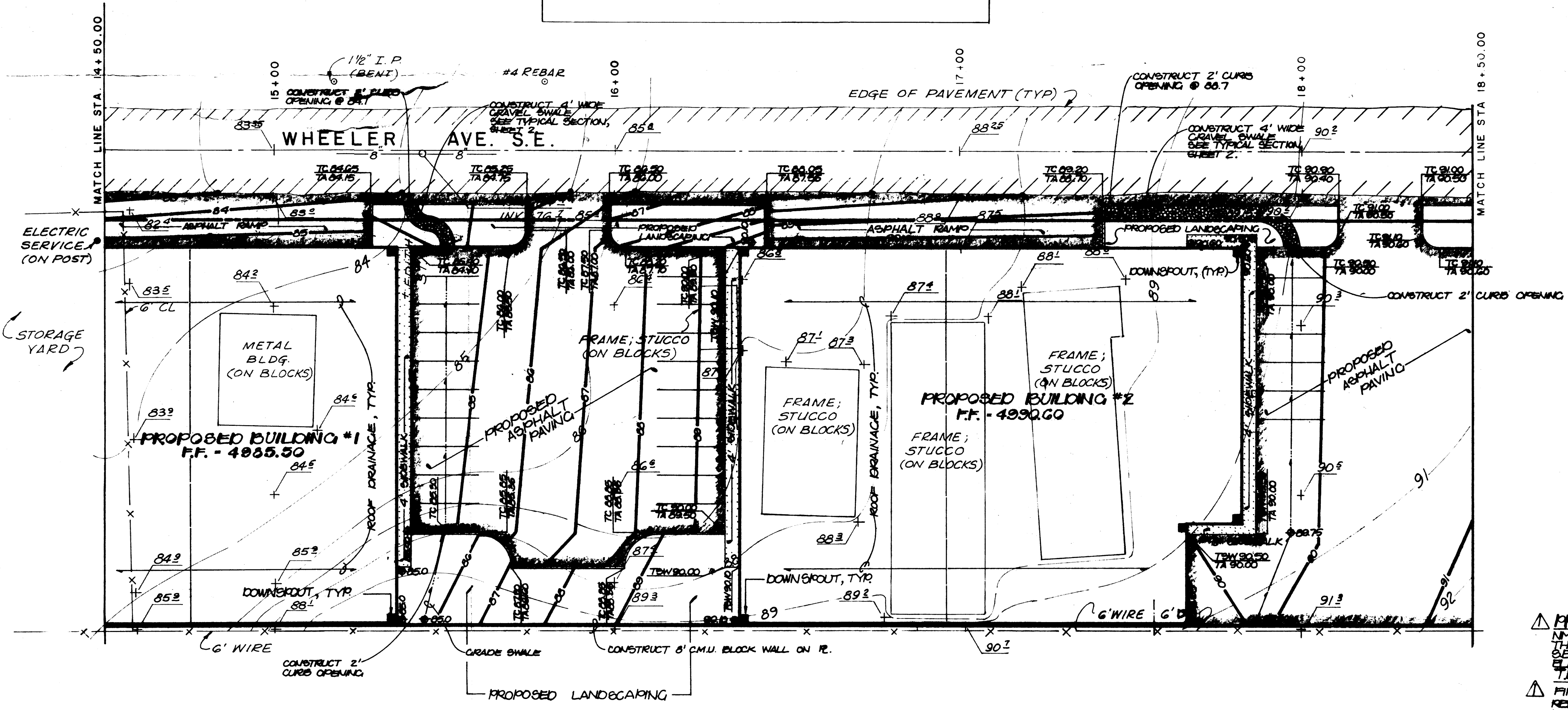
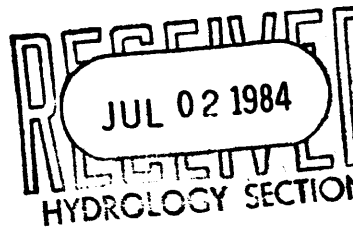
VICINITY MAP  
SCALE: 1" = 600'

- LEGEND**
- EXISTING SPOT ELEVATION
  - PROPOSED SPOT ELEVATION
  - EXISTING CONTOUR
  - PROPOSED CONTOUR
  - PROPOSED CONCRETE
  - EXISTING TREE
  - EXISTING FENCE
  - PROPERTY LINE
  - EXISTING ASPHALT PAVING
  - PROPOSED ASPHALT PAVING
  - FLOWLINE



- CONSTRUCTION NOTES**
1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR SHALL NOTIFY THE CITY ENGINEER, ALBUQUERQUE, NEW MEXICO, LINE 100-1104, FOR LOCATION OF EXISTING UTILITIES.
  2. 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 SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
  3. 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.
  4. ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.

- EROSION CONTROL MEASURES**
1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR OTHER PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BARRIERS AT THE PROPERTY LINES AND WETTING THE SOIL TO KEEP IT FROM BLOWING.
  2. 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 following items concerning the Waterman Inc. Drainage Plan are contained hereon and on the following sheet:

1. Vicinity Map
2. Watershed Map
3. Storm Drain System Map
4. Grading Plan
5. Calculations

The proposed improvements, as shown by the Vicinity Map, are located on the south side of Wheeler Avenue S.E. just east of the intersection with Broadway Boulevard S.E. The site is currently developed as a storage and construction yard.

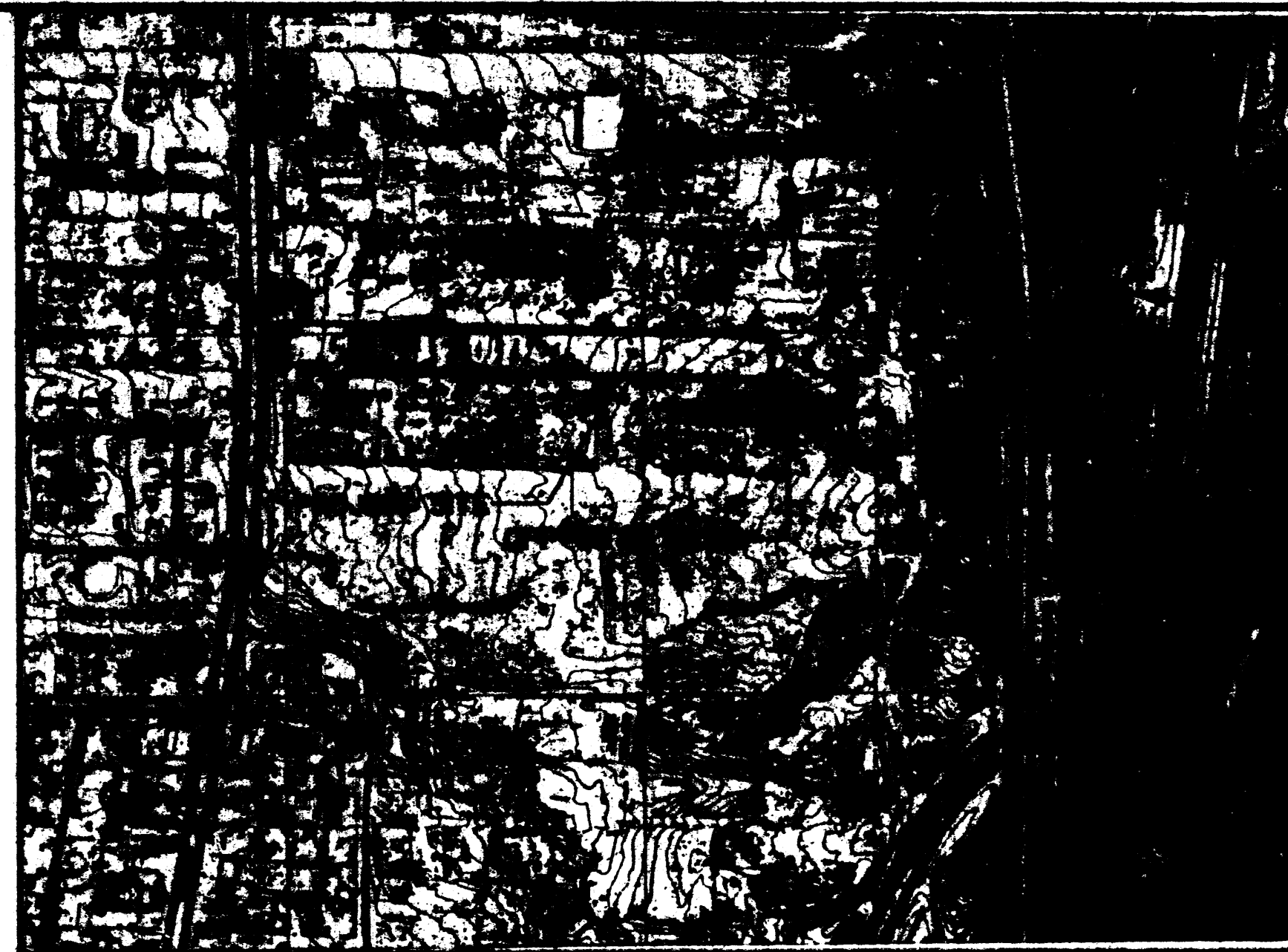
As shown by Plate M14, of the Albuquerque Master Drainage Study, the site does not lie within a Designated Flood Hazard Zone. As shown by Plate 1 (Areas 1 and 6) of the Albuquerque Master Drainage Study, the site contributes runoff to Storm Drain System 132. The adjacent portion of this storm drain system is a 72-inch diameter closed conduit within Broadway Boulevard S.E. As shown by the Plate on Sheet 2, the site is located low enough within this contributing area to warrant the free discharge of runoff. This conclusion has been drawn based upon the fact that the runoff from this site will have entered the storm drain system and discharged into the San Juan River before the peak discharge of the area will occur. This statement is made based upon the terms of Plate 1 from the Albuquerque Master Drainage Study and discussion with Mr. Jim Pitt, Drainage Engineer.

The Grading Plan shows 1) existing and proposed grades indicated by spot elevations and contours at 1' intervals, 2) continuity between existing and proposed grades, 3) the limit and character of the existing improvements, and 4) the limit and character of the proposed improvements. As shown by this plan, the proposed improvements include the construction of two new buildings, existing and proposed paving and landscaping. In addition to the proposed construction of the new buildings, the existing building will be removed. The only building to remain is the west portion of the "waterman building". It should be noted that the proposed improvements will not alter the existing pattern of runoff from the site. The present pattern of runoff is one in which runoff flows from west to east to Broadway Boulevard where it is intercepted by the aforementioned storm drain system. Finally, it should be noted that Wheeler Avenue S.E. adjacent to this site is being vacated based upon the recommendation of the Development Review Board on May 1, 1984.

The Calculations which appear below analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Rational Method has been used for this analysis in accordance with the City of Albuquerque Development Process Manual, Volume II. As shown by these calculations, the proposed improvements will result in a net increase in runoff from this site. This increase, however, will have a negligible impact on the overall watershed. Also quantified by the calculations is the offsite flow. The runoff from this area will be accepted and conveyed through the site and ultimately will discharge to Broadway Boulevard S.E.

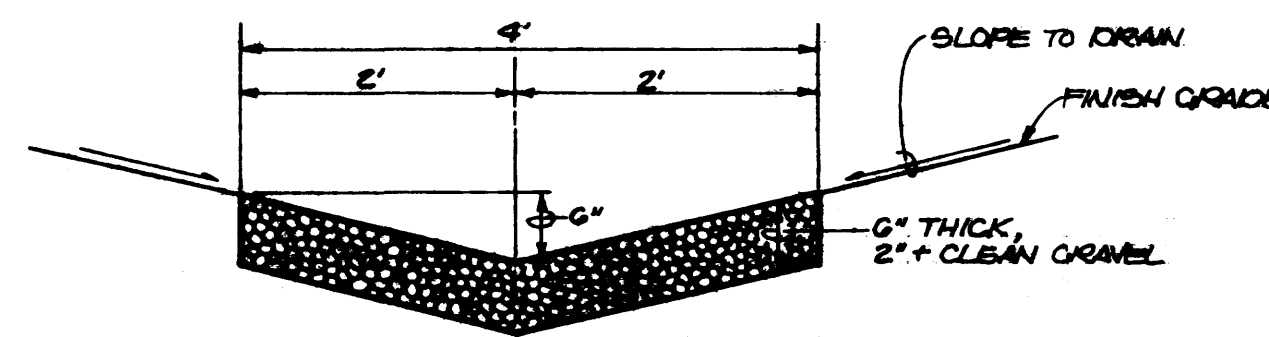
- PROJECT BENCHMARK:**
- 1. 1/2" I.P. (BENT) CONSTRUCT 2' CURB OPENING @ 66.7'
  - 2. CONSTRUCT 4' WIDE GRAVEL SWALE SEE TYPICAL SECTION SHEET 2.
  - 3. CONSTRUCT 2' CURB OPENING @ 66.7'
  - 4. CONSTRUCT 2' CURB OPENING @ 66.7'
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  - 99. CONSTRUCT 2' CURB OPENING @ 66.7'
  - 100. CONSTRUCT 2' CURB OPENING @ 66.7'





AMDS PLATES M-14 & M-15

SCALE: 1" = 400'



TYPICAL GRAVEL SWALE SECTION

SCALE: 1" = 1 1/3'

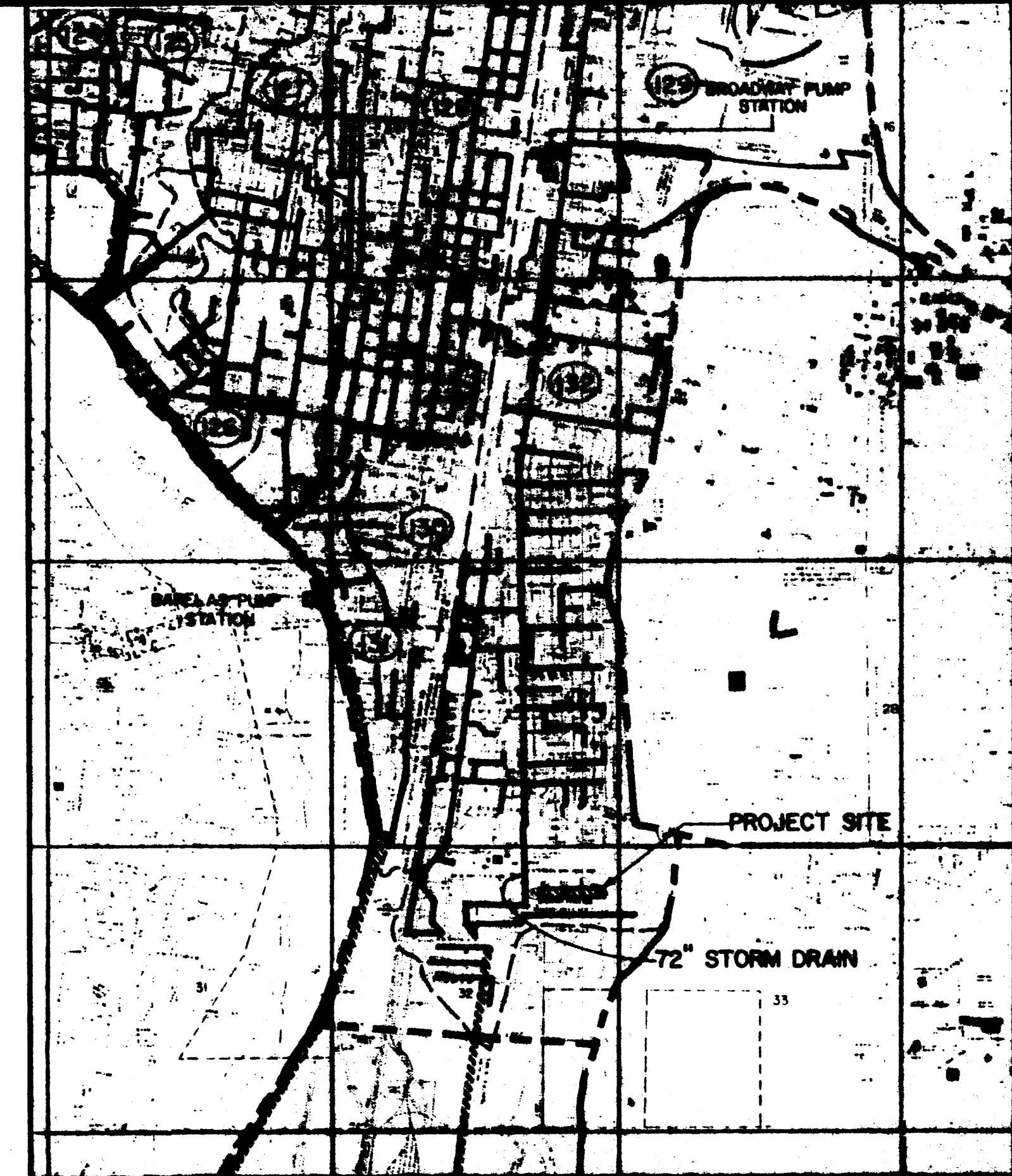
- PROJECT BENCHMARK:**  
 1. BENCHMARK SET BY T.M.A. - 5' LOCATED IN  
 N.E. CORNER OF LOT 1, BLOCK 6, SW 1/4, SEC. 16, T.1N, R.1E, S.4E.  
 ELEV. = 4888.00 FEET (MOLD)
- FINISH FLOOR OF EXISTING BUILDING TO  
 REMAIN AS BENCHMARK**  
 ELEV. = 4876.15 FEET (MOLD)

#### CONSTRUCTION NOTES:

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, FOR LOCATION OF EXISTING UTILITIES.
2. 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 SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
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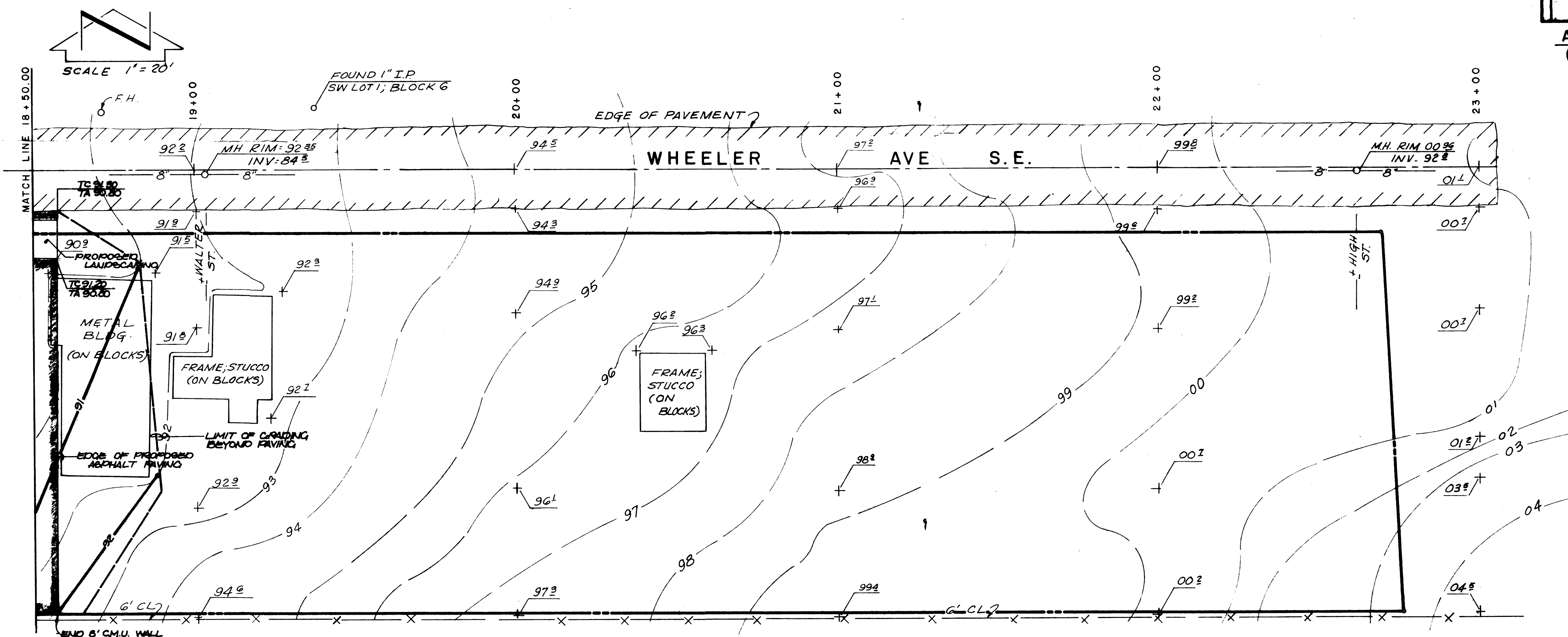
#### EROSION CONTROL MEASURES

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERRS AT THE PROPERTY LINES AND WETTING THE SOIL TO KEEP IT FROM BLOWING.
2. 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.



AMDS PLATE I  
(AREAS 1 & 6)

SCALE: 1" = 2250'



#### CALCULATIONS

##### Storm Water Information

From SCS Bernalillo County Soil Survey, Plate 30:  
 Bcc bluepoint loamy fine sand  
 Hydrologic Soil Group A

##### Rational Method

Discharge:  $Q = CIA$   
 where C varies  
 $i = 2.2$  in (DPH Plate 22.2D-1)  
 $T_c = 10$  min (minimum)  
 $A =$  area, acres

Volume:  $V = CQ_p A (1/12)$   
 where C varies  
 $Q_p = 2.2$  in (DPH Plate 22.2D-1)  
 $A =$  area, sf

##### Routing Condition

$A_{total} = 143,380$  sf = 3.29 Ac  
 $A_{imp} = 20,980$  sf; % impervious = 15%  
 $C_{imp} = 0.23$  (DPH Plate 22.2C-1)  
 $Q_{100} = CIA = 0.23 (4.65) (3.29) = 3.5$  cfs  
 $V_{100} = CQ_p A = 0.23 (2.2/12) (143,380) = 6050$  cf

##### Developed Condition

$A_{total} = 143,380$  sf = 3.29 Ac  
 $A_{imp} = 67,660$  sf; % impervious = 47%  
 $C_{imp} = 0.41$  (DPH Plate 22.2C-1)  
 $Q_{100} = CIA = 0.41 (4.65) (3.29) = 6.3$  cfs  
 $V_{100} = CQ_p A = 0.41 (2.2/12) (143,380) = 10,780$  cf

##### Comparison

$\Delta Q_{100} = 3.5 - 6.3 = 2.8$  cfs (increase)  
 $\Delta V_{100} = 6050 - 10,780 = 4730$  cf (increase)

##### Offsite Flow

$A_{total} = 22,500$  sf = 0.5 Ac  
 $A_{imp} = 0$ ; % impervious = 0%  
 $C_{imp} = 0.16$  (DPH Plate 22.2C-1)  
 $Q_{100} = CIA = 0.16 (4.65) (0.5) = 0.4$  cfs (Sheetflow)



811 DALLAS N.E. • ALBUQUERQUE • NEW MEXICO • 87110  
 ENGINEERS

NO.	DATE	BY	REVISIONS
1	6/04	T.M.A.	ADD DOWNGROUTS & BENCHMARKS.

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

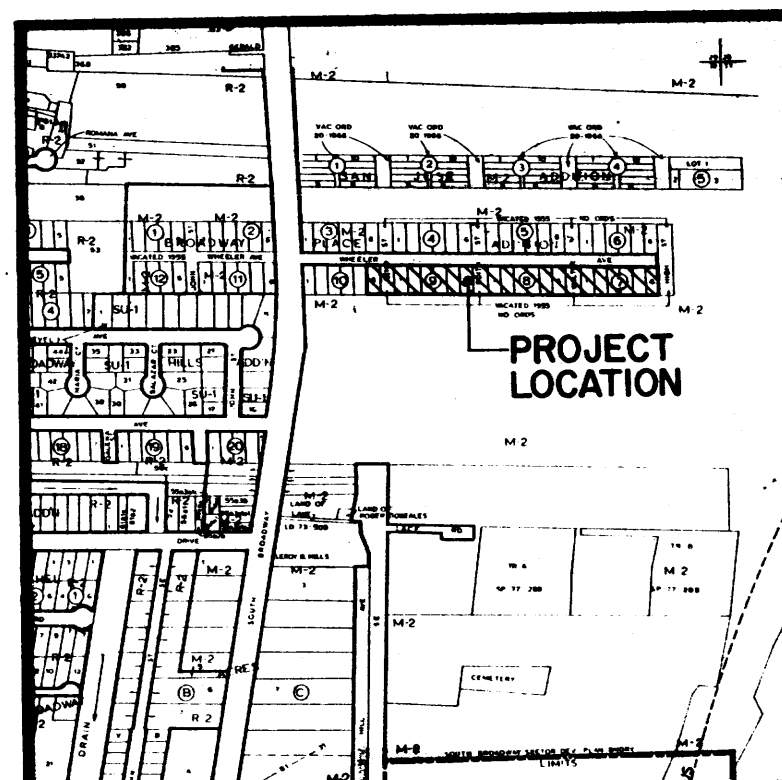
JOB NO.  
**40571**  
 DATE  
**5-84**

GRADING & DRAINAGE PLAN  
 WATERMAN, INC.

FILE NO.

SHEET **2** OF **2**

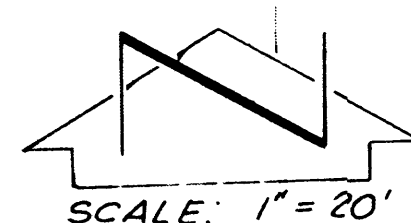




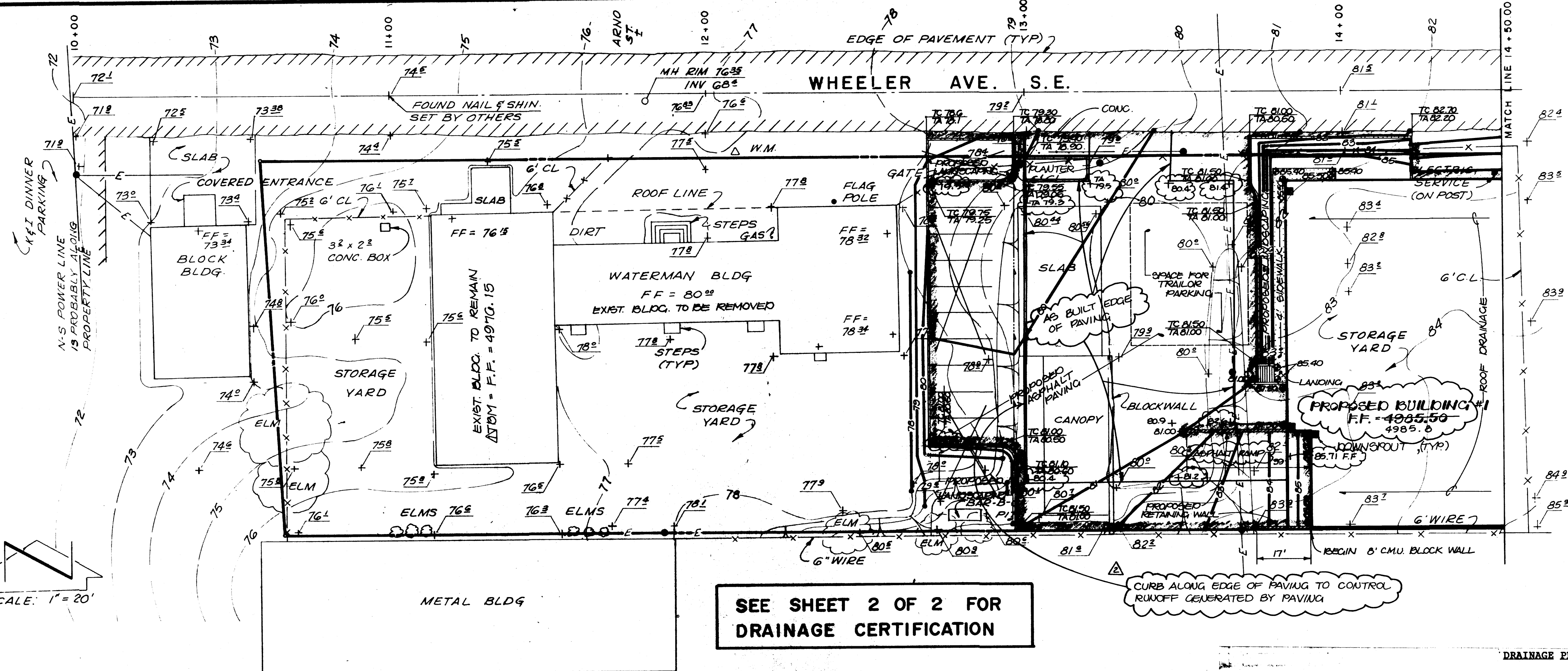
VICINITY MAP  
SCALE: 1" = 800'

# LEGEND

- EXISTING SPOT ELEVATION
- PROPOSED SPOT ELEVATION
- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPOSED CONCRETE
- EXISTING TREE
- EXISTING FENCE
- PROPERTY LINE
- EXISTING ASPHALT PAVING
- PROPOSED ASPHALT PAVING
- FLOWLINE
- AS BUILT DATA



SCALE: 1" = 20'



## CONSTRUCTION NOTES:

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## EROSION CONTROL MEASURES

- THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERM AT THE PROPERTY LINES AND WETTING THE SOIL TO KEEP IT FROM BLOWING.
- 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.

## DRAINAGE PLAN

The following items concerning the Waterman Inc. Drainage Plan are contained hereon and on the following sheet:

- Vicinity Map
- Watershed Map
- Storm Drain System Map
- Grading Plan
- Calculations

The proposed improvements, as shown by the Vicinity Map, are located on the south side of Wheeler Avenue S.E. just east of the intersection with Broadway Boulevard S.E. The site is currently developed as a storage and construction yard.

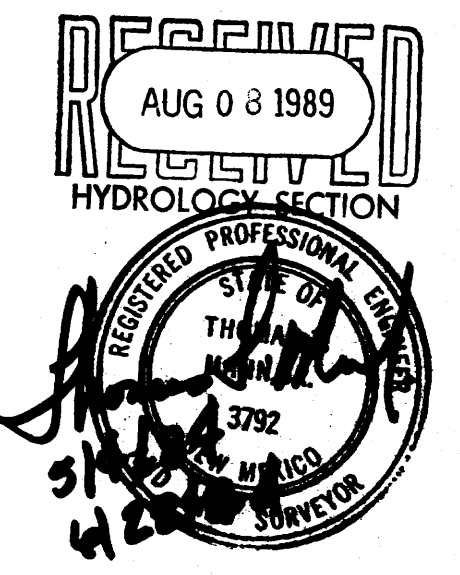
As shown by Plate M14, of the Albuquerque Master Drainage Study, the site does not lie within a designated Flood Hazard Zone. As shown by Plate 1 (Areas 1 and 6) of the Albuquerque Master Drainage Study, the site contributes runoff to Storm Drain System 132. The adjacent portion of this storm drain system is a 72-inch diameter closed conduit within Broadway Boulevard S.E. As shown by the Plate on Sheet 2, the site is located low enough within this contributing area to warrant the free discharge of runoff. This conclusion has been drawn based upon the fact that the peak runoff from this site will have entered the storm drain system and discharged into the San Jose Drain long before the peak discharge of the area will occur. This statement is made based upon the review of Plate 1 from the Albuquerque Master Drainage Study and discussion with Mr. Jim Fink, Hydrology Section.

The Grading Plan shows 1) existing and proposed grades indicated by spot elevations and contours at 1' 0" intervals, 2) continuity between existing and proposed grades, 3) the limit and character of the existing improvements, and 4) the limit and character of the proposed improvements. As shown by this plan, the proposed improvements include the construction of two warehouse buildings along with adjacent paving and landscaping. In addition to the proposed construction, most of the existing buildings will be removed. The only building to remain is the west portion of the "Waterman Building". It should be noted that the proposed improvements will not alter the existing pattern of runoff present on the site. The present pattern of runoff is one in which runoff flows from east to west to Broadway Boulevard where it is intercepted by the aforementioned storm drain system. Lastly, it should be noted that Wheeler Avenue S.E. adjacent to this site is being vacated based upon the recommendation of the Development Review Board on May 1, 1984.

The Calculations which appear below analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Rational Method has been used for this analysis in accordance with the City of Albuquerque Development Process Manual, Volume II. As shown by these calculations, the proposed improvements will result in a net increase in runoff from this site. This increase, however, will have a negligible impact on the overall watershed. Also quantified by the calculations is the offsite flows. The offsite contributing area has been mapped on Plate M14 of the Albuquerque Master Drainage Study on Sheet 2. The runoff from this area will be accepted and conveyed through the site and ultimately will discharge to Broadway Boulevard S.E.

- PROJECT BENCHMARK:  
N.M.H.C. BRASS CAP STAMPED "M 301-3" LOCATED IN THE MIDDLE OF THE CENTER OF BROADWAY BLVD. S.E. 1/4 SECTION 16, T14N, R10E, S10E. ELEV. = 4985.00 FEET (MSL).
- FINISH FLOOR OF EXISTING BUILDING TO REMAIN AS SHOWN. ELEV. = 4976.15 FEET (MSL)

Occupation -  
10:12  
1/10/89  
Chambers



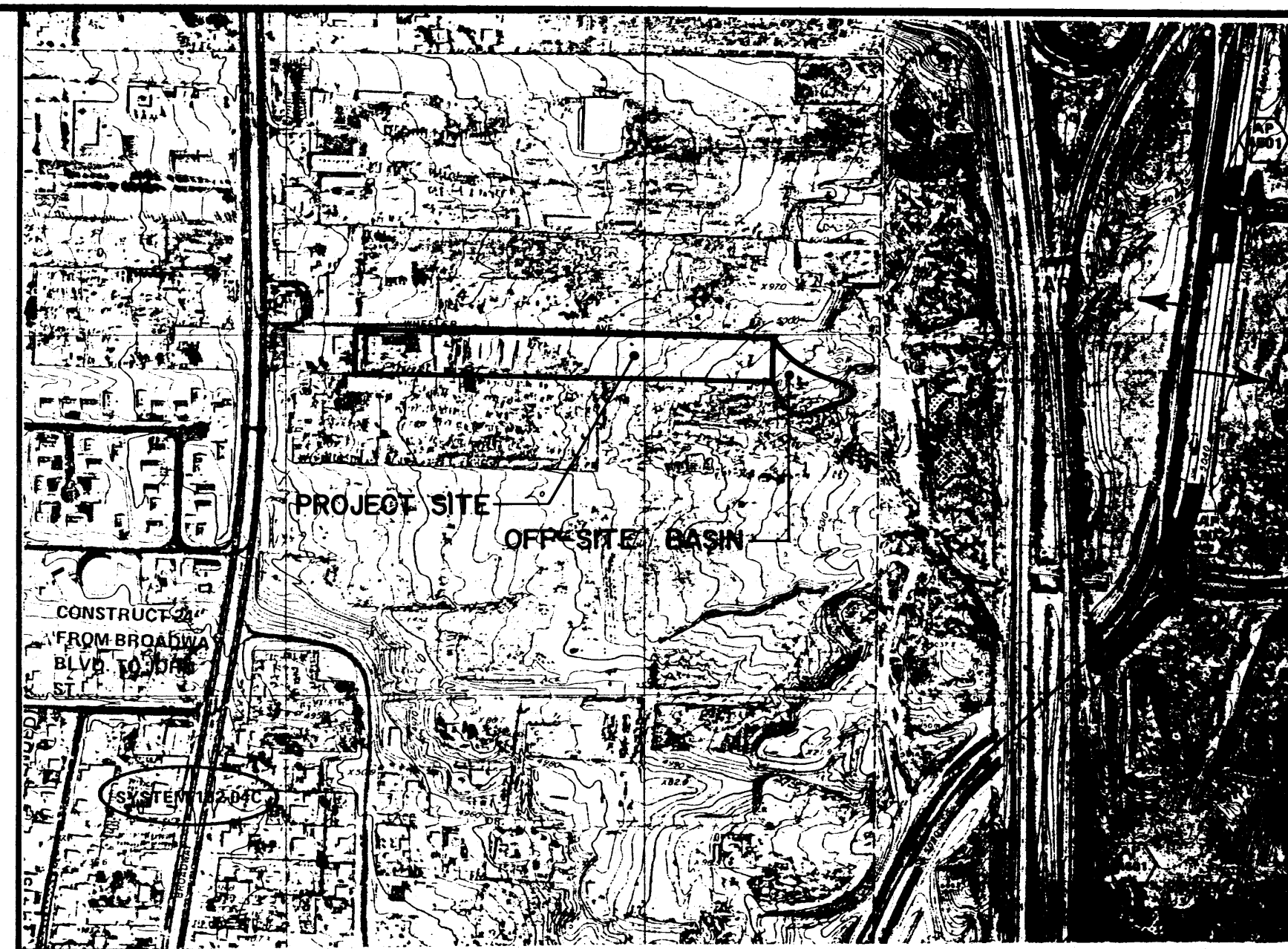
JEFF MORTENSEN & ASSOCIATES, INC.  
811 DALLAS, N.E. ALBUQUERQUE, NM 87110  
ENGINEERS & ARCHITECTS (505) 265-5611

NO.	DATE	BY	REVISIONS
1	6-24-88	LM	ADD DOWNGROUTS AND BENCHMARKS.
2	8-20-88	LM	ADD CURB ALONG EDGE OF PAVING.

DESIGNED BY: J.M.M.  
DRAWN BY: J.M.M.  
CHECKED BY: J.M.M.  
JOB NO. 40575  
4-88

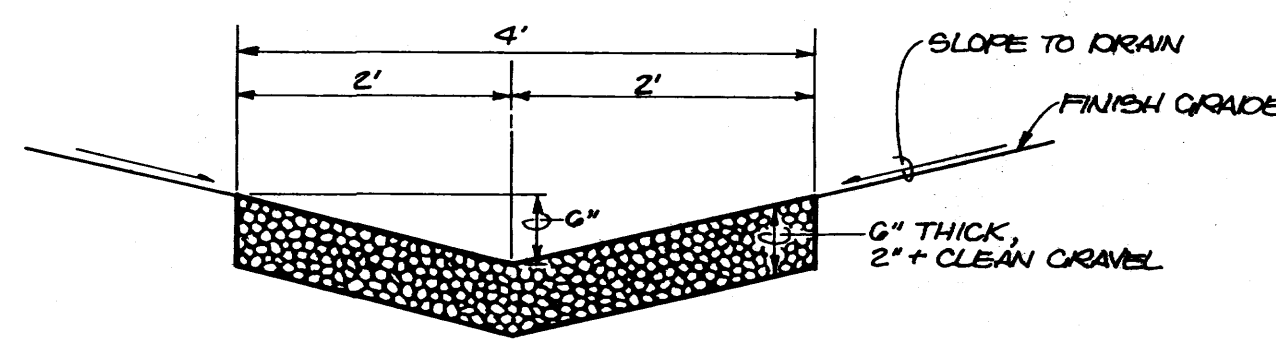
## GRADING & DRAINAGE PLAN WATERMAN, INC.





AMDS PLATES M-14 & M-15

SCALE: 1" = 400'



TYPICAL GRAVEL SWALE SECTION  
SCALE: 1" = 1 1/3'

- PROJECT BENCHMARK:**  
NAD83 BENCH MARK STATIONED IN 301-3' LOCATED IN THE MIDDLE OF THE CENTER OF BROADWAY BLVD. IS APPROXIMATELY 0.5 MILES SOUTH OF DOWNTOWN. ELEV. = 4900.00 FEET (MSLD)
- FINISH FLOOR OF EXISTING BUILDING TO REMAIN AS SHOWN.**  
ELEV. = 4916.15 FEET (MSLD)

**DRAINAGE CERTIFICATION**

The as-built data shown hereon indicates that the subject project has been constructed in accordance with the concept established by the approved grading and drainage plan. The as-built paving limits are less than designed, hence the runoff generated by this project will be less than anticipated. The paving drains onto Wheeler Avenue S.E. as intended by the approved plan. Although the gravel runoffs were not constructed, no erosion of unpaved areas is occurring. Based upon the as-built data shown hereon, this project has been constructed in accordance with the intent of the approved grading and drainage plan.

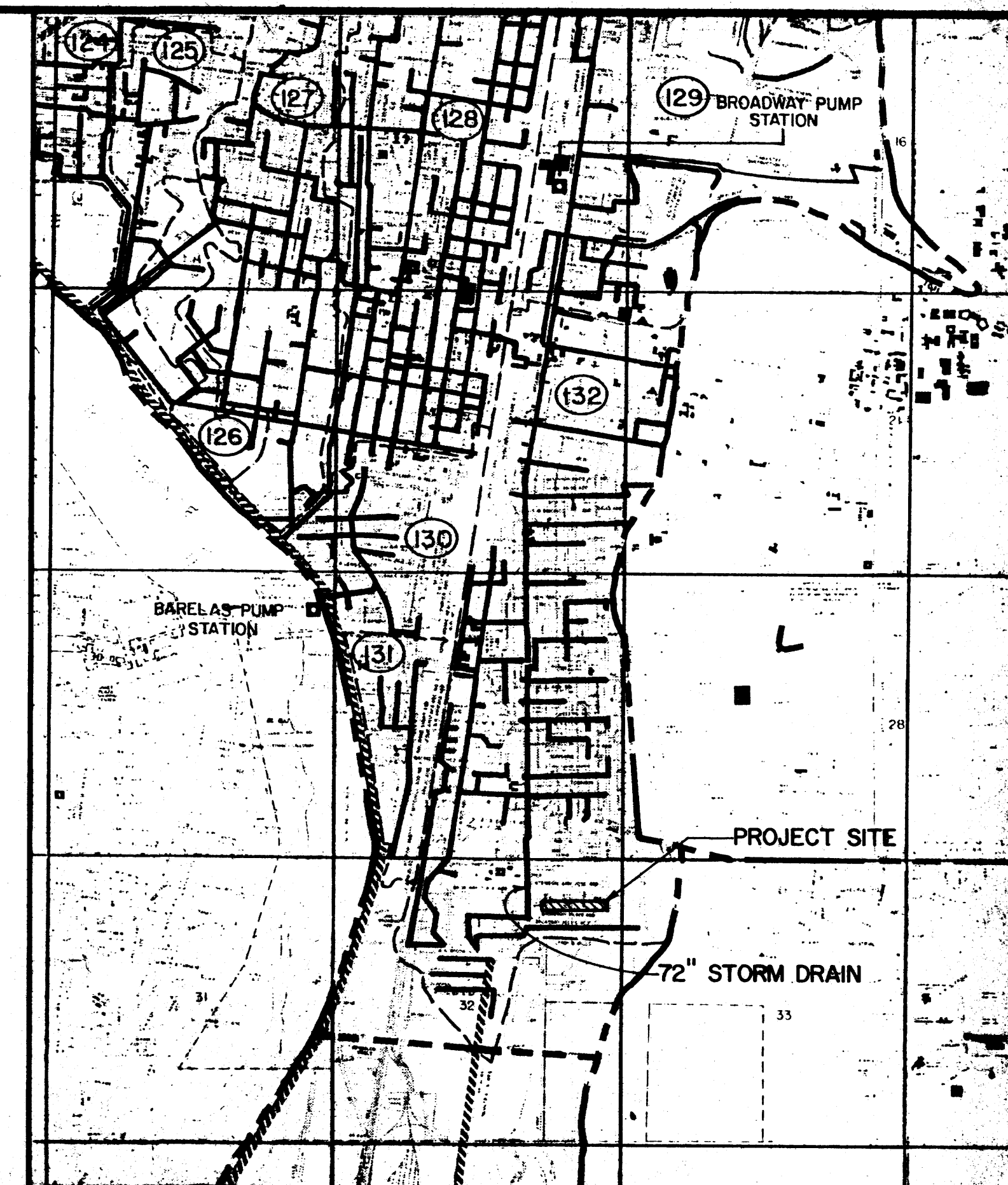
Jeffrey S. Mortensen  
Professional Engineer  
04/11/88  
0825-89

**CONSTRUCTION NOTES:**

- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, FOR LOCATION OF EXISTING UTILITIES.
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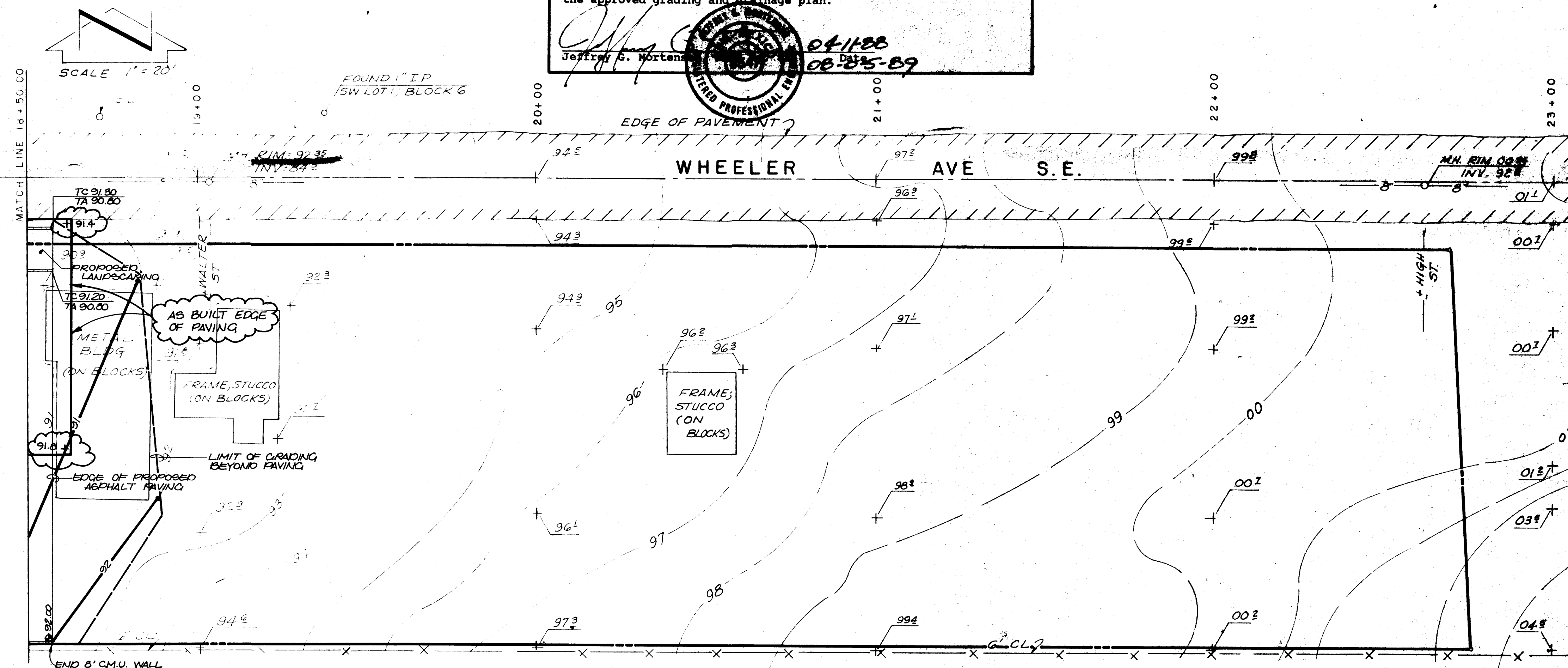
**EROSION CONTROL MEASURES**

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- 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.



AMDS PLATE I  
(AREAS 1 & 6)

SCALE: 1" = 2250'



**CALCULATIONS**

**Graded Center Information**  
From SCS Bernalillo County Soil Survey, Plate 30:  
Soc Blueprint loamy fine sand  
Hydrologic Soil Group A

**Rational Method**  
Discharge:  $Q = CIA$   
where  $C$  varies  
 $i = P_2 (6.84) T^{-0.51} = 4.65 \text{ in/hr}$   
 $P_2 = 2.2 \text{ in (DPM Plate 22.2D-1)}$   
 $T = 10 \text{ min (minimum)}$   
 $A = \text{area, acres}$   
Volume:  $V = CP_2 A (1/12)$   
where  $C$  varies  
 $P_2 = 2.2 \text{ in (DPM Plate 22.2D-1)}$   
 $A = \text{area, sf}$

**Existing Condition**  
 $A_{\text{total}} = 143,380 \text{ sf} = 3.29 \text{ Ac}$   
 $A_{\text{imp}} = 20,980 \text{ sf}; \% \text{ impervious} = 15\%$   
 $C = 0.23 \text{ (DPM Plate 22.2C-1)}$   
 $Q_{100} = CIA = 0.23 (4.65) (3.29) = 3.5 \text{ cfs}$   
 $V_{100} = CP_2 A = 0.23 (2.2/12) (143,380) = 6050 \text{ cf}$

**Developed Condition**  
 $A_{\text{total}} = 143,380 \text{ sf} = 3.29 \text{ Ac}$   
 $A_{\text{imp}} = 67,660 \text{ sf}; \% \text{ impervious} = 47\%$   
 $C = 0.41 \text{ (DPM Plate 22.2C-1)}$   
 $Q_{100} = CIA = (0.41) (4.65) (3.29) = 6.3 \text{ cfs}$   
 $V_{100} = CP_2 A = (0.41) (2.2/12) (143,380) = 10,780 \text{ cf}$

**Comparison**  
 $\Delta Q_{100} = 3.5 - 6.3 = 2.8 \text{ cfs (increase)}$   
 $\Delta V_{100} = 6050 - 10,780 = 4730 \text{ cf (increase)}$

**Off-site Flows**  
 $A_{\text{total}} = 22,500 \text{ sf} = 0.5 \text{ Ac}$   
 $A_{\text{imp}} = 0; \% \text{ impervious} = 0\%$   
 $C = 0.16 \text{ (DPM Plate 22.2C-1)}$   
 $Q_{100} = CIA = 0.16 (4.65) (0.5) = 0.4 \text{ cfs}$



JEFF MORTENSEN & ASSOCIATES, INC.  
811 DALLAS AVE. DALLAS, TEXAS 75201  
PHYSICIANS & TELEPHONE 265-2940

NO.	DATE	BY	REVISIONS
1	6/84	J.M.	ADD DOWNPOUTS & BENCHMARKS.
2	8/89	J.M.	REDATE FOR REVISION SHEET 1 OF 2

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

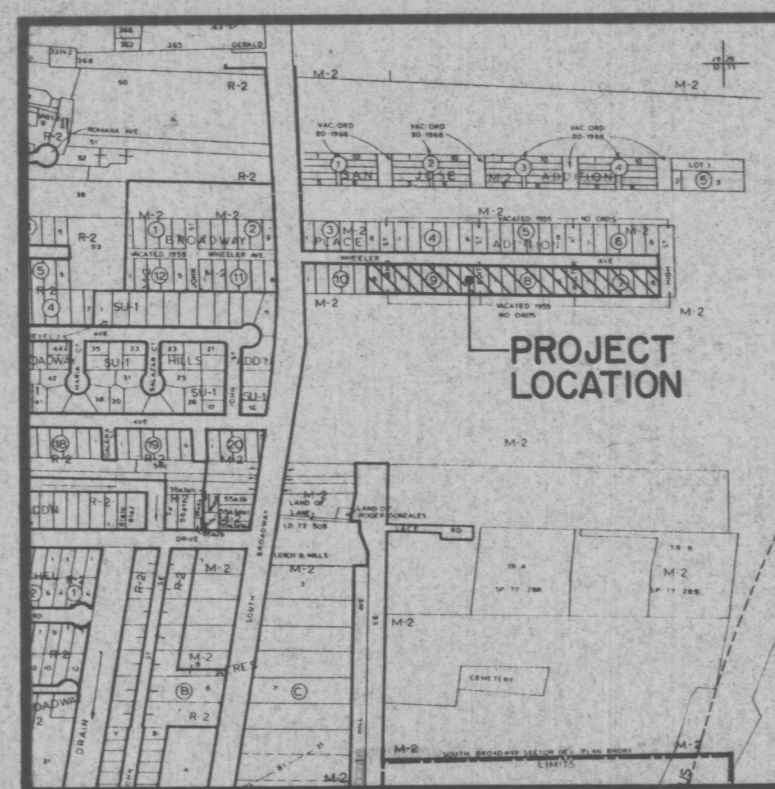
JOB NO.  
**40575**  
DATE  
**4-88**

GRADING & DRAINAGE PLAN  
WATERMAN, INC.

FILE NO.

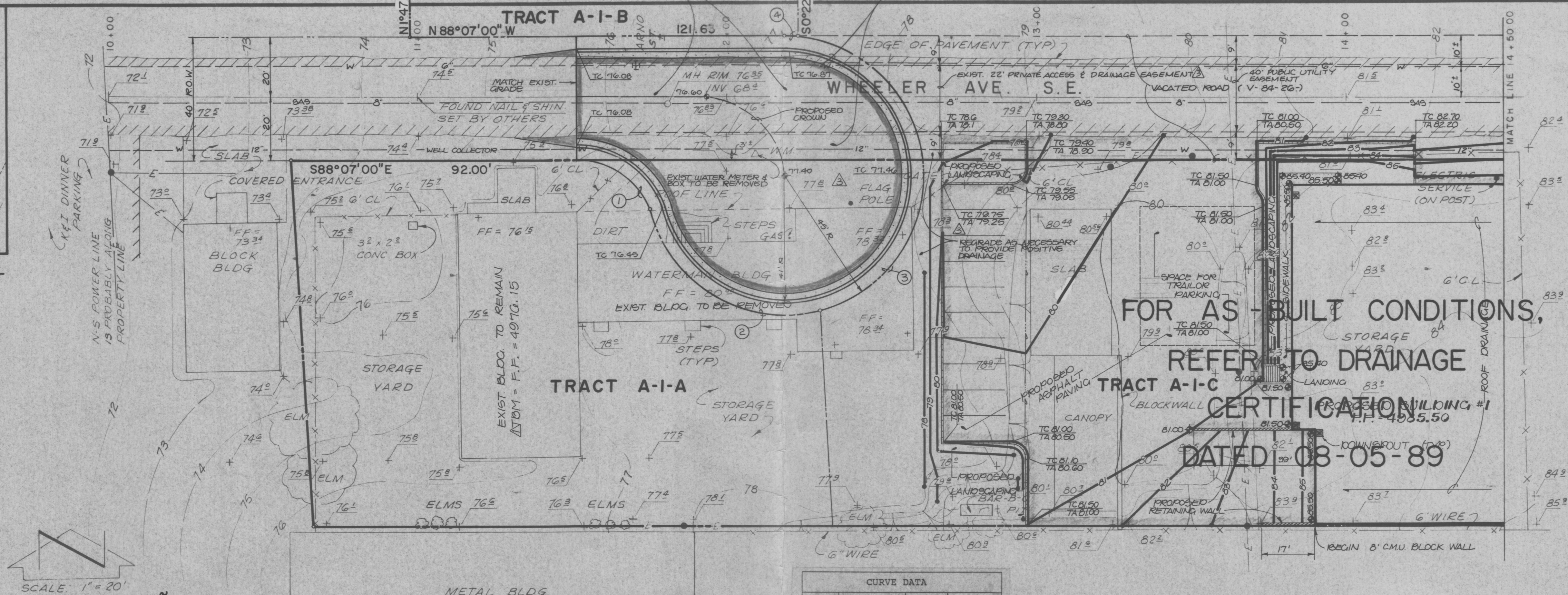
SHEET 2 OF 2





VICINITY MAP  
SCALE: 1" = 800'

- LEGEND**
- EXISTING SPOT ELEVATION
  - PROPOSED SPOT ELEVATION
  - EXISTING CONTOUR
  - PROPOSED CONTOUR
  - PROPOSED CONCRETE
  - EXISTING TREE
  - EXISTING FENCE
  - PROPERTY LINE
  - EXISTING ASPHALT PAVING
  - PROPOSED ASPHALT PAVING
  - FLOWLINE



CURVE DATA			
CURVE	Δ	R	L
①	73°25'02"	25.00'	32.03'
②	89°40'46"	45.00'	70.43'
③	157°58'40"	45.00'	199.03'
④	05°45'36"	45.00'	4.52'

- CONSTRUCTION NOTES:**
- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, 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 SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
  - 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.

- EROSION CONTROL MEASURES**
- THE CONTRACTOR SHALL ENSURE THAT NO SOIL PRODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AT THE PROPERTY LINES AND WETTING THE SOIL TO KEEP IT FROM BLOWING.
  - 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.

**DRAINAGE PLAN**

The following items concerning the Waterman Inc. Drainage Plan are contained hereon and on the following sheet:

- Vicinity Map
- Watershed Map
- Storm Drain System Map
- Grading Plan
- Calculations

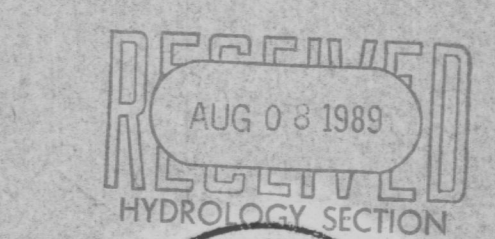
The proposed improvements, as shown by the Vicinity Map, are located on the south side of Wheeler Avenue S.E. just east of the intersection with Broadway Boulevard S.E. The site is currently developed as a storage and construction yard.

As shown by Plate M14, of the Albuquerque Master Drainage Study, the site does not lie within a designated Flood Hazard Zone. As shown by Plate 1 (Areas 1 and 6) of the Albuquerque Master Drainage Study, the site contributes runoff to Storm Drain System 132. The adjacent portion of this storm drain system is a 72-inch diameter closed conduit within Broadway Boulevard S.E. As shown by the Plate on Sheet 2, the site is located low enough within this contributing area to warrant the free discharge of runoff. This conclusion has been drawn based upon the fact that the peak runoff from this site will have entered the storm drain system and discharged into the San Jose Drain long before the peak discharge of the area will occur. This statement is made based upon the review of Plate 1 from the Albuquerque Master Drainage Study and discussion with Mr. Jim Fink, Hydrology Section.

The Grading Plan shows 1) existing and proposed grades indicated by spot elevations and contours at 1' 0" intervals, 2) continuity between existing and proposed grades, 3) the limit and character of the existing improvements, and 4) the limit and character of the proposed improvements. As shown by this plan, the proposed improvements include the construction of two warehouse buildings along with adjacent paving and landscaping. In addition to the proposed construction, most of the existing buildings will be removed. The only building to remain is the west portion of the "Waterman Building". It should be noted that the proposed improvements will not alter the existing pattern of runoff present on the site. The present pattern of runoff is one in which runoff flows from east to west to Broadway Boulevard where it is intercepted by the aforementioned storm drain system. Lastly, it should be noted that Wheeler Avenue S.E. adjacent to this site is being vacated based upon the recommendation of the Development Review Board on May 1, 1984.

The Calculations which appear below analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Rational Method has been used for this analysis in accordance with the City of Albuquerque Development Process Manual, Volume II. As shown by these calculations, the proposed improvements will result in a net increase in runoff from this site. This increase, however, will have a negligible impact on the overall watershed. Also quantified by the calculations is the offsite flows. The offsite contributing area has been mapped on Plate M14 of the Albuquerque Master Drainage Study on Sheet 2. The runoff from this area will be accepted and conveyed through the site and ultimately will discharge to Broadway Boulevard S.E.

- PROJECT BENCHMARK:**  
N.M.H.C. BRASS CAP STAMPED N.M. 301-2" LOCATED IN THE MEDIAN IN THE CENTER OF BROADWAY BLVD. SE. APPROXIMATELY 2 MILES SOUTH OF DOWNTOWN. ELEV. = 4900.00 FEET (MSLD).
- FINISH FLOOR OF EXISTING BUILDING TO REMAIN AS SHOWN. ELEV. = 4916.15 FEET (MSLD).**
- LEGAL DESCRIPTION**  
TRACTS A-1-A, A-1-B & A-1-C  
LANDS OF BROADWAY DEVELOPMENT CO.



**JMA**  
JEFF MORTENSEN & ASSOCIATES, INC.  
811 DALLAS, N.E. ALBUQUERQUE, NM 87110  
ENGINEERS © TELEPHONE (505) 265-5611

NO.	DATE	BY	REVISIONS
1	6/84	JCM	ADD DOWNSPOUTS AND BENCHMARKS.
2	9/85	JCM	ADD EXISTING UTILITY DATA
3	6/89	JCM	ADD CUL-DE-SAC; REVISE TITLE; ADD EASEMENTS

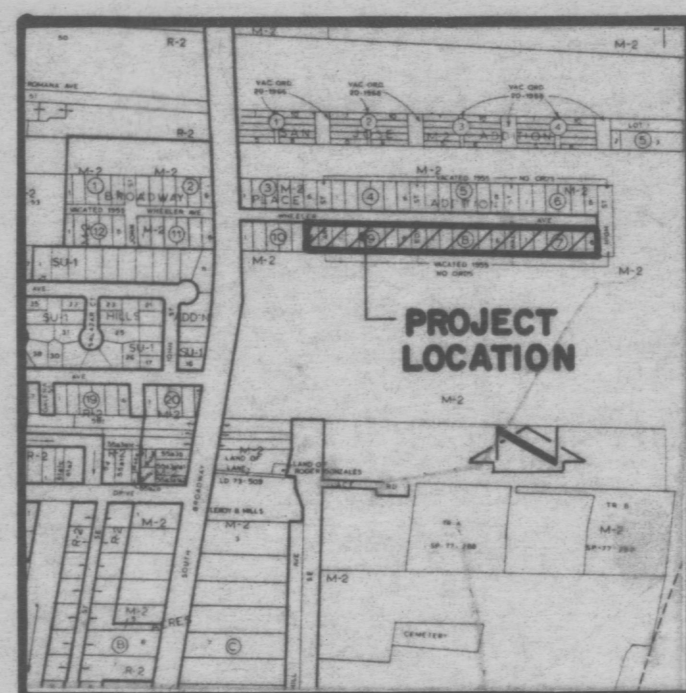
DESIGNED BY: J.G.M.  
DRAWN BY: T.M.A.  
APPROVED: J.T.M.

JOB NO.  
**40579**  
DATE  
**5-84**

**GRADING & DRAINAGE PLAN**  
**LANDS OF BROADWAY DEVELOPMENT COMPANY**

FILE NO.  
SHEET **1** OF **2**





VICINITY MAP

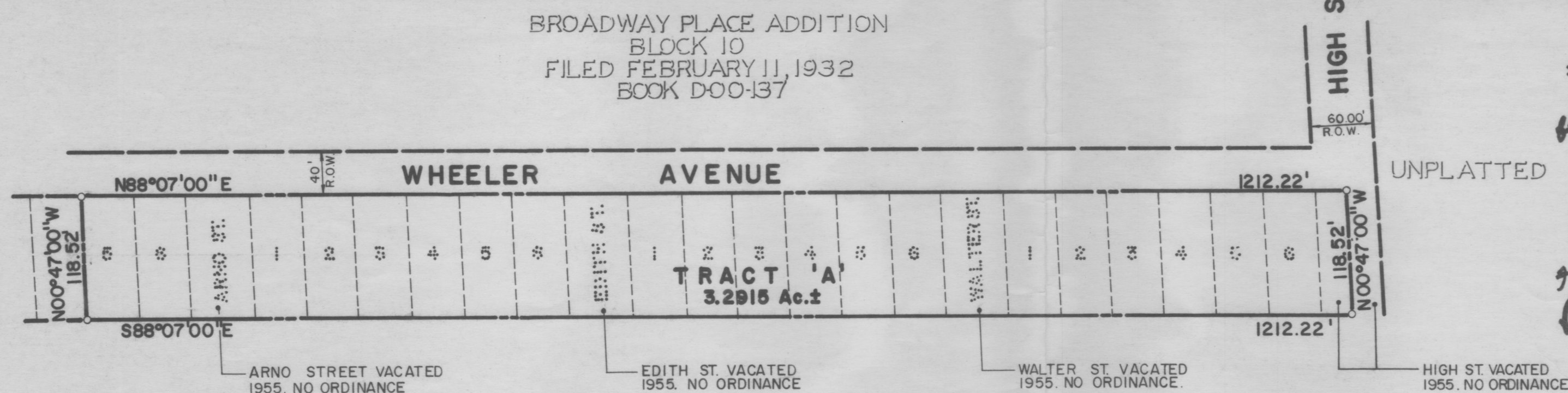
M-14



## NOTES

1. Bearing base is plat of Broadway Place, filed February 11, 1932, Book D-00, Page 137.
2. All distances are ground distances.
3. No property corners have been found or set; a field survey has not been performed.
4. No street mileage created.
5. Site located within Section 10, T 10 N, R 3 E, N.M.P.M.
6. Former lot lines indicated by dashed lines.

BROADWAY PLACE ADDITION  
BLOCK 10  
FILED FEBRUARY 11, 1932  
BOOK D-00-137



UNPLATTED

## DESCRIPTION

84-28519

A certain tract of land located within the Corporate limits of the City of Albuquerque comprising Lots 1 through 6, Blocks 7 through 9, and Lots 5 and 6, Block 10, Broadway Place as shown on the plat filed in the Office of the County Clerk of Bernalillo, New Mexico, on February 11, 1932, Book D-00, Page 137, and being more particularly described as follows:

Beginning at the northwest corner of the parcel herein described, being the northwest corner of the former Lot 5, Block 10 and also being a point along the south right-of-way line of Wheeler Avenue S.E.; thence N 88°07'00" E a distance of 1212.22 feet along the south right-of-way line of Wheeler Avenue S.W.; thence S 00°47'00" E a distance of 118.52 feet along the center line of vacated High Street S.E.; thence N 88°07'00" W a distance of 1212.22 feet; thence N 00°47'00" W a distance of 118.52 feet to the point of beginning and containing 3.2915 acres more or less.

State of New Mexico } SS  
County of Bernalillo }  
This instrument was filed for record  
on APR 9 1984  
At 8:05 A.M. Recorded in Vol. 162  
of records of said County Folio 162  
Clerk & Recorder  
Dorothy Welch

SUMMARY PLAT OF  
TRACT 'A'  
(FORMERLY  
LOTS 1-6 BLOCK 7,  
LOTS 1-6 BLOCK 8,  
LOTS 1-6 BLOCK 9,  
LOTS 5,6, BLOCK 10)  
BROADWAY PLACE ADDITION  
ALBUQUERQUE, N. MEXICO  
APRIL 1984

## FREE CONSENT:

The undersigned owners of the land shown hereon do hereby consent to the platting of said land in the manner shown hereon.

*Ted Waterman* 4/5/84  
TED WATERMAN DATE

## ACKNOWLEDGEMENT

STATE OF NEW MEXICO )  
COUNTY OF BERNALILLO )



OFFICIAL SEAL  
JOHN TATMAN  
NOTARY PUBLIC - STATE OF NEW MEXICO  
Notary Bond Filed with Secretary of State  
My Commission Expires: 05/03/87

The foregoing instrument was acknowledge before me this  
4th day of April, 1984

*John Tatman*  
JOHN TATMAN  
NOTARY PUBLIC

## APPROVALS

*Robert A. Jantz* 4-17-84  
Traffic Engineer, City of Albuquerque, N.M. Date

*Eugene Mikes* 4/17/84  
Planning Director, City of Albuquerque, N.M. Date

*Frank J. Aguirre* 4/17/84  
City Engineer, City of Albuquerque, N.M. Date

*O. Val Vallen* 4-17-84  
Property Manager, City of Albuquerque, N.M. Date

*W. J. Shoups* 4-17-84  
Water Resources, City of Albuquerque, N.M. Date

*Marta Vally* 4-17-84  
Parks and Recreation, City of Albuquerque, N.M. Date

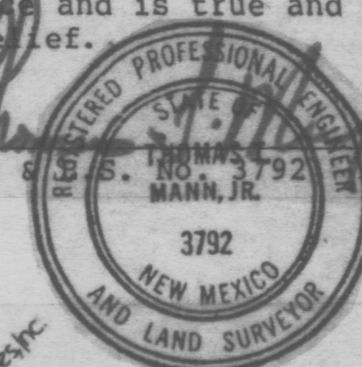
*N.A.M.*  
N.A.M. Date

*W.C. Mann* 04/18/84  
Chief City Surveyor, Engineering Division Date

## CERTIFICATION

I, Thomas T. Mann, Jr., do hereby certify that I am a Registered Land Surveyor under to laws of the State of New Mexico and that this plat was prepared by me or under my supervision; shows all easements made known to me by the Owner, utility companies or other interested parties; meets the minimum requirements of monumentation and surveys of the Albuquerque Subdivision Ordinance and is true and correct to the best of my knowledge and belief.

Thomas T. Mann, Jr., P.E. & S.



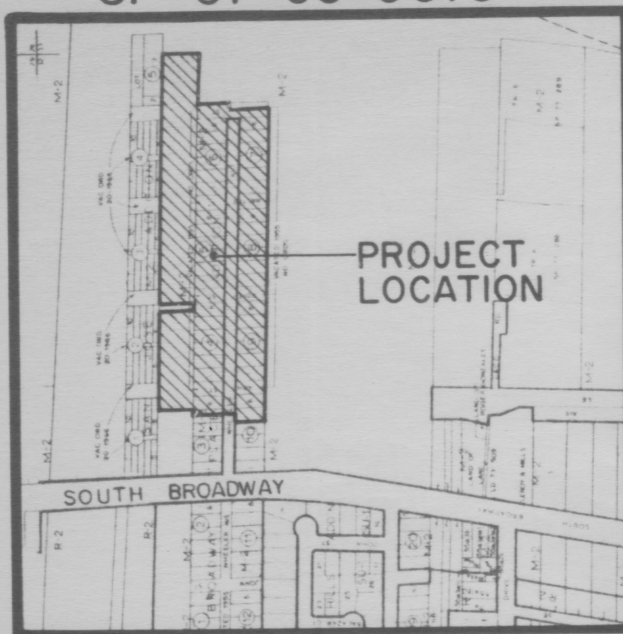
SP-84-160

JOB NO. 40571

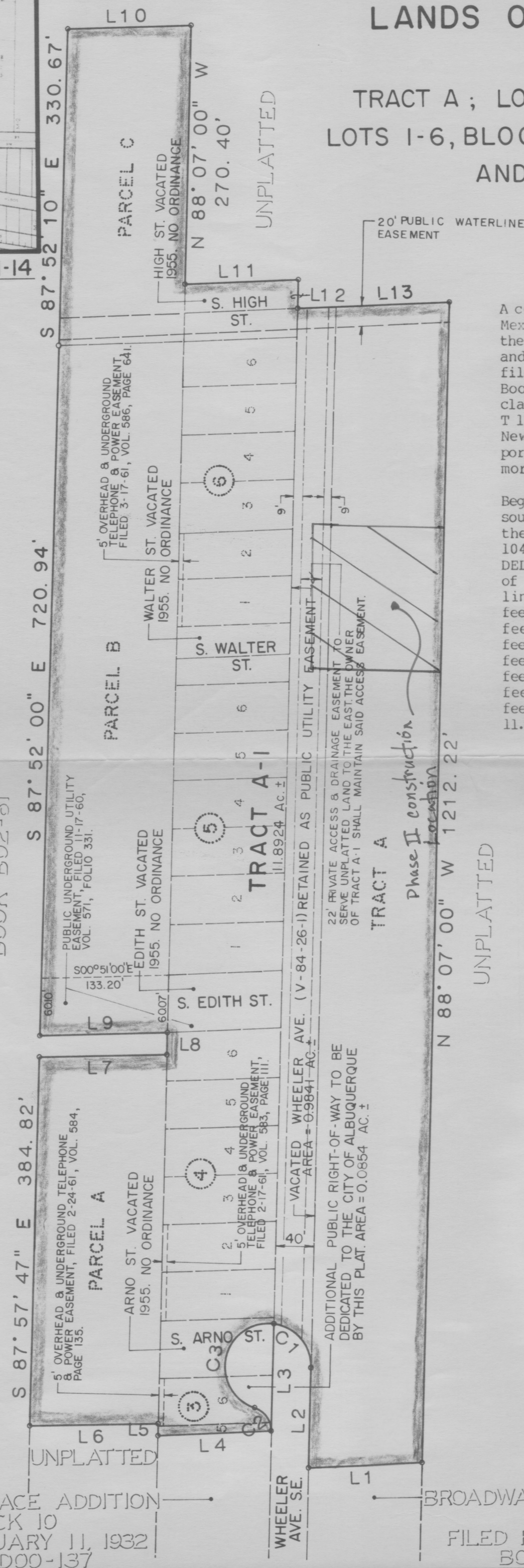


811 DALLAS, N.E. • ALBUQUERQUE • NEW MEXICO • 87110  
ENGINEERS



VICINITY MAP  
SCALE: 1" = 800'

M-14

SAN JOSE ADDITION  
FILED MAY 16, 1924  
BOOK B02-81BROADWAY PLACE ADDITION  
BLOCK 10  
FILED FEBRUARY 11, 1932  
BOOK D00-137BROADWAY PLACE ADDITION  
BLOCK 3  
FILED FEBRUARY 11, 1932  
BOOK D00-137

A PLAT OF  
TRACT A-1 85 80426  
LANDS OF BROADWAY DEVELOPMENT COMPANY  
A REPLAT OF  
TRACT A; LOTS 5 AND 6, BLOCK 3; LOTS 1-6, BLOCK 4;  
LOTS 1-6, BLOCK 5; LOTS 1-6, BLOCK 6, BROADWAY PLACE ADDITION  
AND PORTIONS OF PRIVATE CLAIM 1892 LOT 1  
ALBUQUERQUE, NEW MEXICO  
JANUARY, 1985

## DESCRIPTION

A certain tract of land located within the Corporate limits of the City of Albuquerque, New Mexico, comprising Tract A, Broadway Place Addition, as shown on the plat filed in the Office of the County Clerk of Bernalillo County, New Mexico, on July 10, 1984 Book C-24, Page 110; Lots 5 and 6, Block 3 and Lots 1-6, Blocks 4, 5, and 6, Broadway Place Addition, as shown on the plat filed in the Office of the County Clerk of Bernalillo County, New Mexico, on February 11, 1932 Book D, Page 137; and three previously unplatted portions of Private Claim 1892 Lot 1, said claim being previously shown on the "Plat of Small Holding Claims in Sections 29, 32, and 33 in T 10 N, R 4 E, N.M.P.B.&M.", as filed with the Register of the Land Office at Santa Fe, New Mexico, on December 5, 1895 including portions of vacated Wheeler Avenue (V84-26-I) and portions of Arno, Edith, Walter, and High Streets, as vacated in 1955 (no ordinance), and being more particularly described as follows:

Beginning at the southwest corner of the parcel herein described, being a point common with the southwest corner of said Tract A; thence N 01°47'00" W a distance of 118.62 feet to a point on the south right-of-way line of Wheeler Avenue S.E.; thence S 88°07'00" E a distance of 104.56 feet along said right-of-way line; thence along the arc of a curve to the left with DELTA = 83°35'33", L = 65.65 feet, and R = 45.00 feet to a point on the north right-of-way line of Wheeler Avenue S.E.; thence N 88°07'00" W a distance of 111.81 feet along said right-of-way line; thence N 01°47'00" W a distance of 118.62 feet; thence S 88°07'00" E a distance of 12.54 feet; thence N 00°21'32" W a distance of 134.42 feet; thence S 87°57'47" E a distance of 384.82 feet; thence S 00°28'52" E a distance of 133.40 feet; thence S 88°07'00" E a distance of 23.09 feet; thence N 00°52'00" W a distance of 133.52 feet; thence S 87°52'00" E a distance of 720.94 feet; thence S 87°52'10" E a distance of 330.67 feet; thence S 01°07'36" E a distance of 128.97 feet; thence N 88°07'00" W a distance of 270.40 feet; thence S 01°47'00" E a distance of 118.62 feet; thence N 88°07'00" W a distance of 30.06 feet; thence S 01°47'00" E a distance of 158.68 feet; thence N 88°07'00" W a distance of 1,212.22 feet to the point of beginning and containing 11.8924 acres more or less.

## NOTES

- Bearing base is plat of Broadway Place, filed February 11, 1932, Book D-00, Page 137.
- Parcels A through C are portions of Private Claim No. 1892, and are previously unplatted.
- All distances are ground distances.
- No property corners have been found or set; a field survey has not been performed.
- No new street mileage created.
- Site located within Section 32, T 9 N, R 3 E, N.M.P.M.
- Former lot lines indicated by dashed lines.
- City of Albuquerque Water and Sanitary Sewer Service to Tract A-1 must be verified and coordinated with the Water Resources Department, City of Albuquerque, prior to development.

LINE	BEARING	DISTANCE
L1	N 1°47'00" W	118.62
L2	S 88°07'00" E	104.56
L3	N 88°07'00" W	111.81
L4	N 1°47'00" W	118.62
L5	S 88°07'00" E	12.54
L6	N 0°21'32" W	134.42
L7	S 0°28'52" E	133.40
L8	S 88°07'00" E	23.09
L9	N 0°52'00" W	133.52
L10	S 1°07'36" E	128.97
L11	S 1°47'00" E	118.62
L12	N 88°07'00" W	30.06
L13	S 1°47'00" E	158.68

CURVE	ARC	DELTA	RADIUS
C1	65.65	83°35'33"	45.00
C2	32.03	73°25'02"	25.00
C3	133.38	169°49'29"	45.00

State of New Mexico  
County of Bernalillo  
This instrument was filed for record on  
SEP 26 1985  
8:39 A.M. Recorded in Vol. ...  
of records of said County Folio ...  
Clark & Rector  
Deputy Clerk

## DEDICATION

The undersigned owners of the land shown hereon do hereby consent to the subdivision of said land in the manner shown on this plat and do hereby dedicate all public rights-of-way, drainage way and utility easements including the right of ingress and egress and the right to trim interfering trees.

*Ted A. Waterman*  
Ted A. Waterman, Partner, Broadway Development Co.

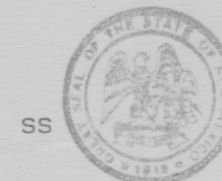
6-21-85  
Date

*Kent D. Boyer*  
Kent D. Boyer, Partner, Broadway Development Co.

6-21-85  
Date

## ACKNOWLEDGEMENT

STATE OF NEW MEXICO )  
COUNTY OF BERNALILLO )



OFFICIAL SEAL  
RUTH A. ARNAUD  
NOTARY PUBLIC, STATE OF NEW MEXICO  
Notary Bond Filed with Secretary of State  
My Commission Expires 6-27-88

The foregoing instrument was acknowledged before me this  
21st day of June, 1985.

*Ruth A. Arnaud*  
Notary Public

## APPROVALS:

*O. Valverde*  
Property Manager, City of Albuquerque

8-28-85  
Date

*Neil Chitt*  
Chief City Surveyor, City of Albuquerque

06/30/85  
Date

*Janet Sairo*  
Park and Recreation, City of Albuquerque

8-20-85  
Date

*Theresa J. Saught*  
Water Resources, City of Albuquerque

8-22-85  
Date

*Thomas W. Kennedy*  
Traffic Engineer, City of Albuquerque

8/20/85  
Date

*Paul J. Giguere*  
A.M.A.F.C.A.

8-20-85  
Date

*Paul J. Giguere*  
City Engineer, City of Albuquerque

8-20-85  
Date

*Richard Orman*  
Planning Director, City of Albuquerque

8-30-85  
Date

DRB - 85-57

SP. 85-373

## CERTIFICATION

I, Thomas T. Mann, Jr., do hereby certify that I am a registered Land Surveyor under the laws of the State of New Mexico, and that this plat was prepared by me or under my supervision; shows all easements noted in easement search reports prepared by First American Title Co. on March 6, 1985 & June 26, 1985; meets the minimum requirements of monumentation and surveys of the Albuquerque Subdivision Ordinance, and is true and correct to the best of my knowledge and belief.

*Thomas T. Mann, Jr.*  
Thomas T. Mann, Jr., N.M.P.E.



1/14/85  
Date

## ACKNOWLEDGEMENT

STATE OF NEW MEXICO )  
COUNTY OF BERNALILLO )

SS

OFFICIAL SEAL  
RUTH A. ARNAUD  
NOTARY PUBLIC, STATE OF NEW MEXICO  
Notary Bond Filed with Secretary of State  
My Commission Expires 1-27-88

The foregoing instrument was acknowledged before me on this  
14th day of January, 1985.

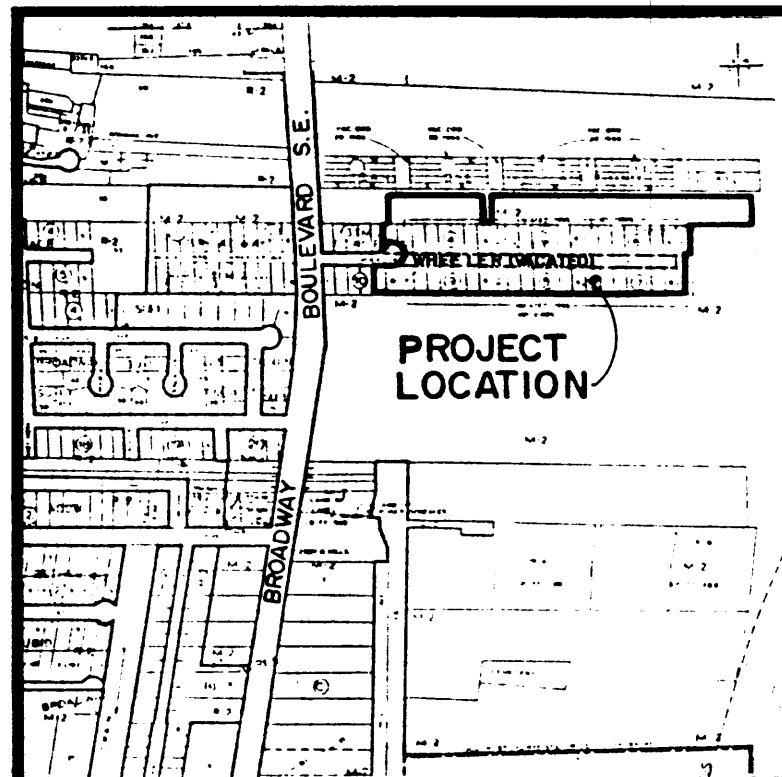
*Ruth A. Arnaud*  
Notary Public



811 DALLAS, N.E. • ALBUQUERQUE • NEW MEXICO • 87110  
ENGINEERS

JOB No. 40571





SCALE: 1" = 800'

### PROJECT BENCHMARK

NM SHC BRASS CAP STAMPED "NM 361-3"  
LOCATED IN THE MEDIAN IN THE CENTER OF  
BROADWAY BLVD. S.E. APPROXIMATELY 2  
MILES SOUTH OF DOWNTOWN ALBUQUERQUE.  
ELEVATION = 4992.06 FEET (M.S.L.D.)

### TBM

TOP OF RM ELEVATION OF SANITARY SEWER  
MANHOLE. MANHOLE LOCATED NORTH OF  
PROPOSED BUILDING IN VACATED WHEELER  
AVE. S.E. AS SHOWN ON DRAWING BELOW.  
ELEVATION = 4992.35 FEET (M.S.L.D.)

### LEGAL DESCRIPTION

PORTION OF TRACT A-1, LANDS OF BROADWAY  
DEVELOPMENT

### LEGEND

- PROPOSED SPOT ELEVATION
- EXISTING SPOT ELEVATION
- PROPOSED CONTOUR
- EXISTING CONTOUR
- SWALE
- PROPERTY LINE
- CONCRETE
- PROPOSED ASPHALT
- PROPOSED FENCE
- EXISTING FENCE
- TOP OF CURB
- FLOW LINE

### CONSTRUCTION NOTES

- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT LINE LOCATING SERVICE 765-1234, 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 SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY.
- 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.

### EROSION CONTROL MEASURES

- THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY. THIS CAN BE ACHIEVED BY CONSTRUCTING TEMPORARY BERMS AT THE PROPERTY LINES AND WETTING THE SOIL TO KEEP IT FROM BLOWING.
- 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.

### DRAINAGE PLAN

The following items concerning the Broadway Development Phase II Drainage Plan are contained hereon:

- Vicinity Map
- Grading Plan
- Calculations

The proposed improvements, as shown by the Vicinity Map, are located on the south side of vacated Wheeler Avenue S.E. just east of the intersection with Broadway Boulevard S.E. The site is currently undergoing development.

As shown by Plate M14 of the Albuquerque Master Drainage Study (AMDS), the site does not lie within a designated Flood Hazard Zone. As shown by Plate 1 (Areas 1 and 6) of the AMDS, the site contributes runoff to Storm Drain System 132. The adjacent portion of this storm drain system is a 72-inch diameter closed conduit within Broadway Boulevard S.E. As shown by Plate 1 on Sheet 2 of the previously approved drainage plan for Waterman, Inc. (M14-D8), the site is located low enough within this contributing area to warrant the free discharge of runoff. This conclusion has been drawn based upon the fact that the peak runoff from this site will have entered the storm drain system and discharged into the San Jose Drain long before the peak discharge of the area will occur. This statement is made based upon the review of Plate 1 from the Albuquerque Master Drainage Study and past discussion with Mr. Jim Fink, Hydrology Section, during the preparation of the Phase I portion of this project which was undertaken as "Waterman Inc" (M14-D8).

The Grading Plan shows 1) existing and proposed grades indicated by spot elevations and contours at 1' 0" intervals; 2) continuity between existing and proposed grades; 3) the limit and character of the existing improvements; and 4) the limit and character of the proposed improvements. As shown by this plan, the proposed improvements include the construction of a warehouse along with adjacent paving and landscaping. It should be noted that the proposed improvements will not alter the existing pattern of runoff present on the site. The present pattern of runoff is one in which runoff flows from east to west to Broadway Boulevard S.E. where it is intercepted by the aforementioned storm drain system. Lastly, it should be noted that Wheeler Avenue S.E. adjacent to this site has been vacated based upon the recommendation of the Development Review Board on May 1, 1984, and a subsequent replat filed September 26, 1985.

The Calculations which appear hereon analyze both the existing and developed conditions for the 100-year, 6-hour rainfall event. The Rational Method has been used for this analysis in accordance with the City of Albuquerque Development Process Manual, Volume II. As shown by these calculations, the proposed improvements will result in a net increase in runoff from this site. This increase, however, will have a negligible impact on the overall watershed. Also quantified by the calculations is the offsite flows. The offsite contributing area has been mapped on Plate M14 of the Albuquerque Master Drainage Study on Sheet 2 of the previously approved drainage plan for Waterman, Inc. (M14-D8). The runoff from this area will be accepted and conveyed through the site and ultimately will discharge to Broadway Boulevard S.E.

### CALCULATIONS

#### Ground Cover Information

From SCS Bernalillo County Soil Survey, Plate 40:  
BCC - Bluepoint loamy fine sand  
Hydrologic Soil Group A

#### Rational Method

Discharge:  $Q = C_i A$   
where C varies  
 $i = P_6 (6.84) T_c^{-0.51} = 4.65 \text{ in./hr}$   
 $P_6 = 2.2 \text{ in (DPM Plate 22.2 D-1)}$   
 $T_c = 10 \text{ min (minimum)}$   
A = area, acres

Volume:  $V = C P_6 A (1/12)$   
where C varies  
 $P_6 = 2.2 \text{ in (DPM Plate 22.2 D-1)}$   
A = area, acres

#### Existing Condition

$A_{\text{total}} = 20,250 \text{ sf} = 0.46 \text{ Ac}$   
 $A_{\text{imp}} = 2,600 \text{ sf}; \% \text{ impervious} = 13\%$   
 $C_{\text{imp}} = 0.22 \text{ (DPM Plate 22.2 C-1)}$   
 $Q_{100} = C_i A = 0.22(4.65)(0.46) = 0.5 \text{ cfs}$   
 $V_{100} = C P_6 A = 0.22(2.2/12)(20,250) = 815 \text{ cf}$

#### Developed Condition

Basin A  
 $A_{\text{total}} = 7,460 \text{ sf} = 0.17 \text{ Ac}$   
 $A_{\text{imp}} = 1,300 \text{ sf}; \% \text{ impervious} = 17\%$   
 $C_{\text{imp}} = 0.24 \text{ (DPM Plate 22.2 C-1)}$   
 $Q_{100} = C_i A = 0.24(4.65)(0.17) = 0.2 \text{ cfs}$   
 $V_{100} = C P_6 A = 0.24(2.2/12)(7,460) = 330 \text{ cf}$

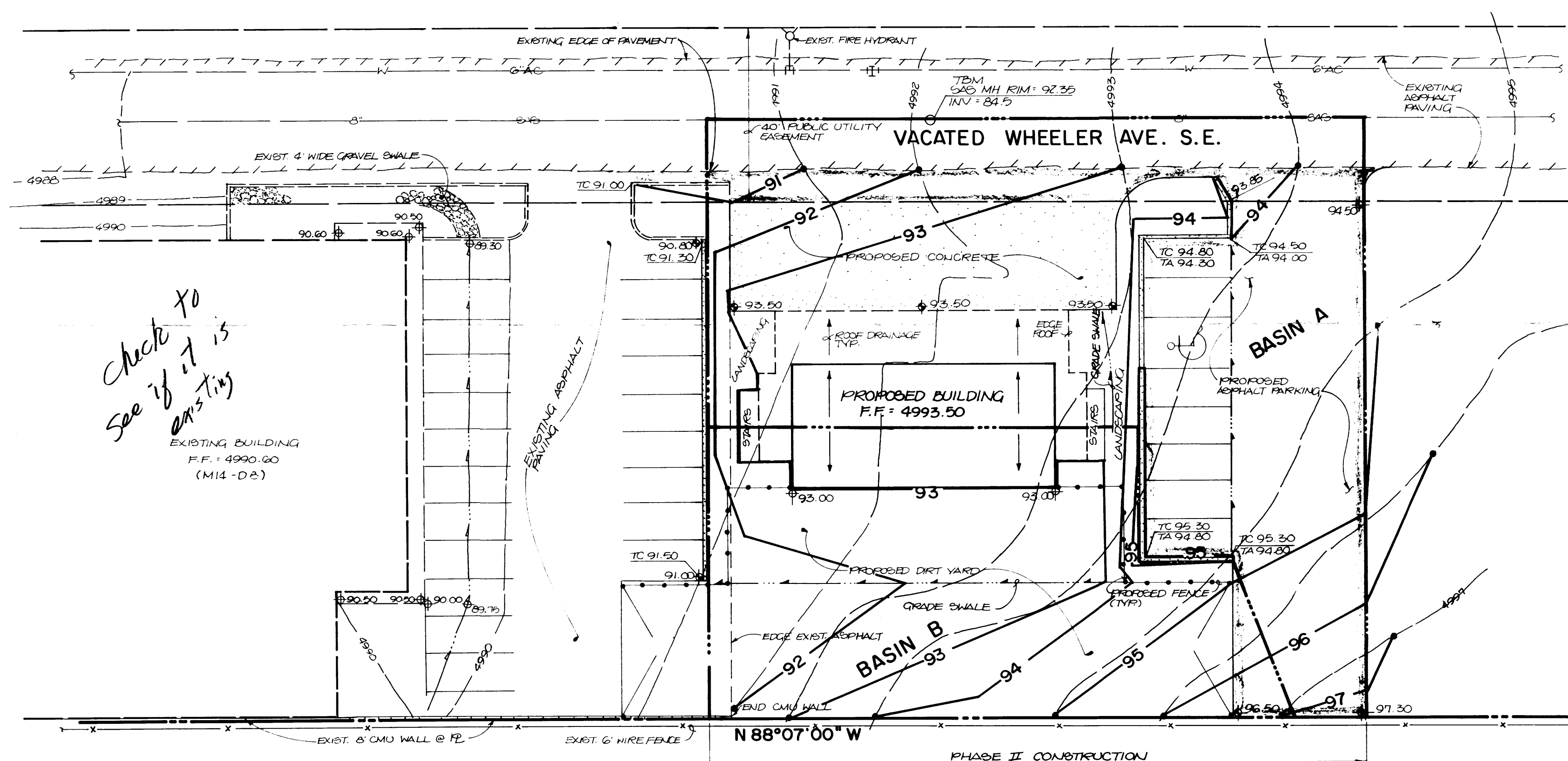
Basin B  
 $A_{\text{total}} = 12,790 \text{ sf} = 0.29 \text{ Ac}$   
 $A_{\text{imp}} = 11,500 \text{ sf}; \% \text{ impervious} = 90\%$   
 $C_{\text{imp}} = 0.76 \text{ (DPM Plate 22.2 C-1)}$   
 $Q_{100} = C_i A = 0.76(4.65)(0.29) = 1.0 \text{ cfs}$   
 $V_{100} = C P_6 A = 0.76(2.2/12)(12,790) = 1,780 \text{ cf}$

#### Comparison

$\Delta Q_{100} = (0.2 + 1.0) - 0.5 = 0.7 \text{ cfs (increase)}$   
 $\Delta V_{100} = (330 + 1,780) - 815 = 1,295 \text{ cf (increase)}$

#### Offsite Flows

$A_{\text{total}} = 22,500 \text{ sf} = 0.50 \text{ Ac}$   
 $A_{\text{imp}} = 0 \text{ sf}; \% \text{ impervious} = 0\%$   
 $C_{\text{imp}} = 0.16 \text{ (DPM Plate 22.2 C-1)}$   
 $Q_{100} = C_i A = 0.16(4.65)(0.50) = 0.4 \text{ cfs (Sheetflow)}$



811 DALLAS, N.E. • ALBUQUERQUE • NEW MEXICO • 87110  
ENGINEERS

NO.	DATE	BY	REVISIONS

DESIGNED BY: J.G.M.

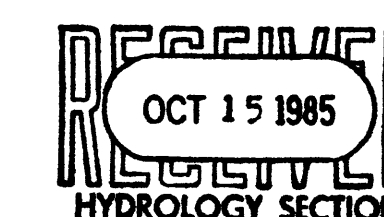
DRAWN BY: S.G.H.

APPROVED: J.G.M.

JOB NO.  
40572

DATE  
10-85

## GRADING AND DRAINAGE PLAN BROADWAY DEVELOPMENT - PHASE II



FILE NO.

SHEET 1 OF 1