

VICINITY MAP K-21  
SCALE: 1" = 750'

**LEGAL DESCRIPTION**  
A PORTION OF TRACT 22, CORONADO VILLAGE ADDITION

**PROJECT BENCHMARK**  
A.C.S. BRASS TABLE STAMPED "5-K21, 1979", SET FLUSH WITH THE CURB LOCATED IN THE SOUTHWEST QUADRANT OF THE INTERSECTION OF TOMASITA STREET, N.E. AND LOMAS BOULEVARD, N.E.  
ELEVATION = 5498.805 FEET (M.S.L.D.)

**T.B.M.**  
TOP OF MANHOLE RIM LOCATED AT THE INTERSECTION OF FREEWAY PLACE, N.E. AND TOMASITA STREET N.E. AS SHOWN ON THE DRAWING  
ELEVATION = 5485.48 FEET (M.S.L.D.)

**STREET ADDRESS:**  
701 TOMASITA STREET N.E.

**NOTES:**  
1. A TOPOGRAPHIC SURVEY WAS PERFORMED BY JEFF MORTENSEN AND ASSOCIATES IN APRIL, 1998.  
2. WATER, STORM DRAIN AND SANITARY SEWER LINES ARE SHOWN IN AN APPROXIMATE MANNER ONLY. SIZE AND LOCATION DATA WAS OBTAINED FROM THE CITY OF ALBUQUERQUE DISTRIBUTION MAPS.

**LEGEND**

TC	TOP OF CURB
FL	FLOWLINE
TCO	TOP OF CONCRETE
TSW	TOP OF SIDEWALK
TC	TOP OF GRADE
W.V.	WATER VALVE
SD	STORM DRAIN WATERLINE
SAS	SANITARY SEWER OVERHEAD ELECTRIC (NO. OF LINES)
O.V.H. E (2)	TRAFFIC SIGN
S.G.P.	STEEL GUARD POST
TCU	TOP OF CURB
S.V.B.	SPRINKLER VALVE BOX
TOH	TOP OF CONCRETE CHANNEL
P.P.	POWER POLE
C.L.F.	CHAINLINK FENCE
+ 83.49	EXISTING SPOT ELEVATION
35.16	PROPOSED SPOT ELEVATION
80	PROPOSED CONTOUR
---	EXISTING BASIN BOUNDARY
---	PROPOSED BASIN BOUNDARY
TW	PROPOSED TOP OF WALL (RELOCATED RAILROAD TIES)
NG	PROPOSED NATURAL GRADE ELEVATION
---	PROPOSED FLOWLINE
---	FUTURE BLDG.

**CONSTRUCTION NOTES:**

- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM 280-1990 (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 THE 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 ANY 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 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.

**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-SEEDING ACCORDING TO C.O.A. SPECIFICATION 1012 "NATIVE GRASS SEEDING". THIS WILL BE CONSIDERED INCIDENTAL TO CONSTRUCTION, THEREFORE, NO SEPARATE PAYMENT WILL BE MADE.

**GYMNASIUM FACILITY**  
**TOMASITA ELEMENTARY SCHOOL**  
701 TOMASITA ST NE  
ALBUQUERQUE NEW MEXICO

**ALBUQUERQUE PUBLIC SCHOOLS**

**PATRICK McCLERNON ARCHITECTS P.A.**  
1401 FIFTH ST NW  
ALBUQUERQUE, NM 805 248 2808

**CIVIL ENGINEER**  
**JEFF MORTENSEN AND ASSOCIATES**  
600-B MIDWAY PARK NE  
ALBUQUERQUE, NM 805 248 4500

**GEOTECHNICAL ENGINEER**  
**RANDY HOLT ENGINEERS**  
PO BOX 8888  
ALBUQUERQUE, NM 805 265 8200

**MECHANICAL ENGINEER**  
**THOMPSON HELLER ENGINEERS INC**  
3400 SAN MATEO NE  
ALBUQUERQUE, NM 805 265 8200

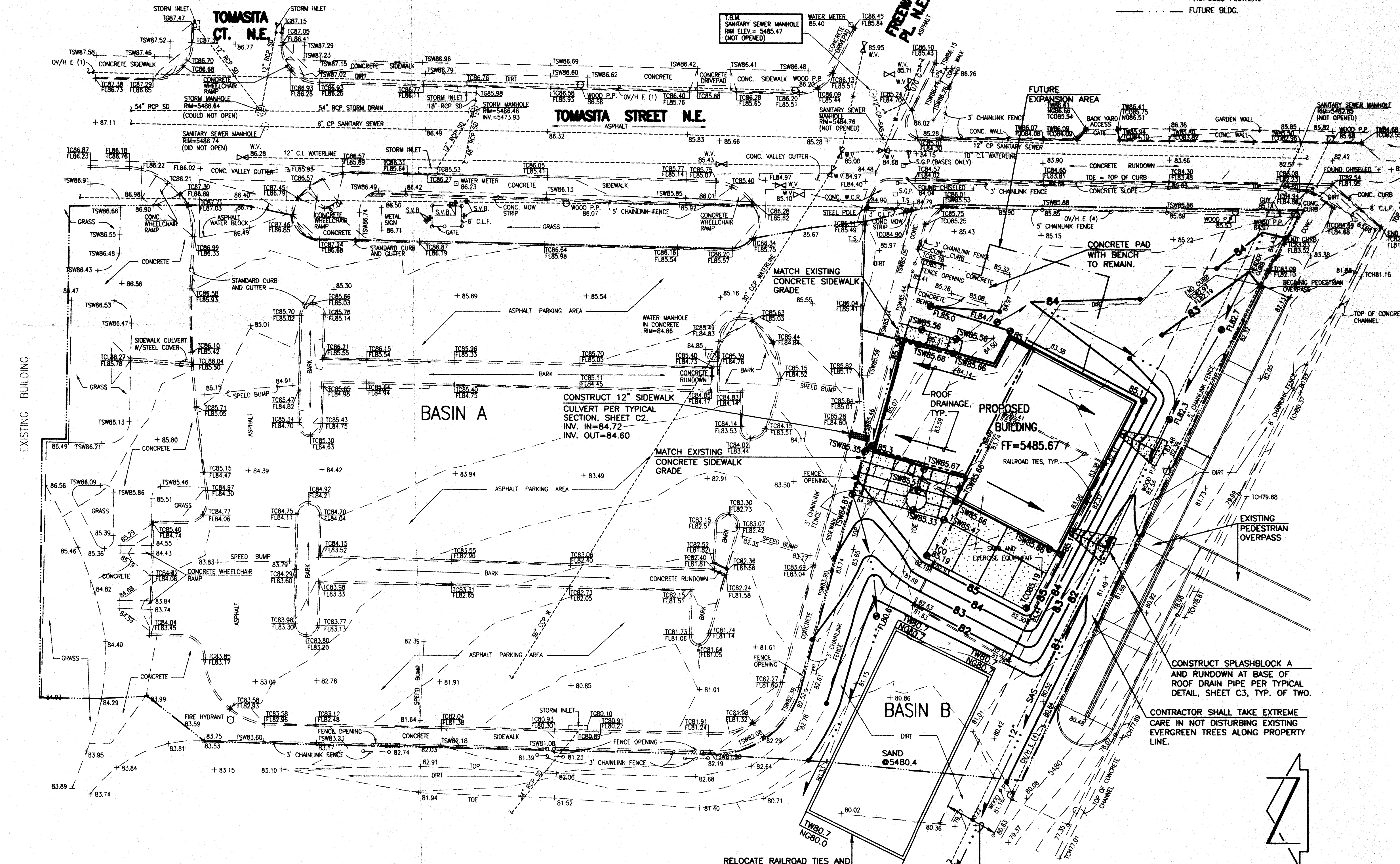
**ELECTRICAL ENGINEER**  
**TELCON ENGINEERING, INC**  
4800 JUAN TABO NE  
ALBUQUERQUE, NM 805 282 3302

**SHEET NO.**  
**GRADING & DRAINAGE PLAN**  
**MULTI-PURPOSE BUILDING**  
**DATE**  
06/22/98



06-25-98

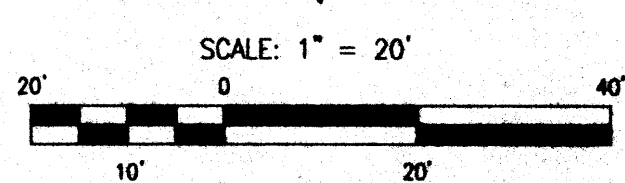
**SHEET NO.**  
**C2**



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Plot Date: 06-22-1998  
Plot Time: 07:42 am

**RECEIVED**  
JUN 26 1998  
HYDROLOGY SECTION

**Jma** JEFF MORTENSEN & ASSOCIATES, INC.  
600-B MIDWAY PARK NE  
ALBUQUERQUE, NM 87109  
ENGINEERS & SURVEYORS (505) 248-4500





CALCULATIONS

SITE CHARACTERISTICS

- I. PRECIPITATION ZONE = 4
- II.  $P_{6,100} = P_{360} = 2.90$  IN.
- III. TOTAL AREA ( $A_T$ )
  - A. EXISTING
    - BASIN A = 54,030 SF/1.24 AC
    - BASIN B = 24,270 SF/0.56 AC
  - B. DEVELOPED
    - BASIN A = 56,480 SF/1.30 AC
    - BASIN B = 26,720 SF/0.50 AC

IV. EXISTING LAND TREATMENT

A. BASIN A

TREATMENT	AREA (SF/AC)	%
B	7,500/0.17	13.7
D	46,530/1.07	86.3

B. BASIN B

TREATMENT	AREA (SF/AC)	%
A	3,240/0.07	12.5
C	20,020/0.47	83.9
D	1,010/0.02	3.6

V. DEVELOPED LAND TREATMENT

A. BASIN A

TREATMENT	AREA (SF/AC)	%
B	7,630/0.18	13.8
D	48,850/1.12	86.2

B. BASIN B

TREATMENT	AREA (SF/AC)	%
A	3,240/0.07	14.0
C	13,145/0.31	62.0

VI. EXISTING CONDITIONS

A. BASIN A

1. VOLUME

$$E_w = (E_{A^A} + E_{B^B} + E_{C^C} + E_{D^D}) / A_T$$

$$E_w = [(1.08)(0.17) + (2.64)(1.07)] / 1.24 = 2.43 \text{ IN.}$$

$$V_{100} = (E_w / 12) A_T$$

$$V_{100} = (2.43 / 12) 1.24 = 0.2507 \text{ AC.FT.}; 10,920 \text{ CF.}$$

2. PEAK DISCHARGE

$$Q_p = Q_{pA^A} + Q_{pB^B} + Q_{pC^C} + Q_{pD^D}$$

$$Q_p = Q_{100} = (2.92)(0.17) + (5.25)(1.07) = 6.1 \text{ CFS.}$$

B. BASIN B

1. VOLUME

$$E_w = (E_{A^A} + E_{B^B} + E_{C^C} + E_{D^D}) / A_T$$

$$E_w = [(0.80)(0.07) + (1.46)(0.47) + (2.64)(0.02)] / 0.56 = 1.42 \text{ IN.}$$

$$V_{100} = (E_w / 12) A_T$$

$$V_{100} = (1.42 / 12) 0.56 = 0.0662 \text{ AC.FT.}; 2,890 \text{ CF.}$$

2. PEAK DISCHARGE

$$Q_p = Q_{pA^A} + Q_{pB^B} + Q_{pC^C} + Q_{pD^D}$$

$$Q_p = Q_{100} = (2.20)(0.07) + (3.73)(0.47) + (5.25)(0.02) = 2.0 \text{ CFS.}$$

VII. DEVELOPED CONDITIONS

A. BASIN A

1. VOLUME

$$E_w = (E_{A^A} + E_{B^B} + E_{C^C} + E_{D^D}) / A_T$$

$$E_w = [(1.80)(0.18) + (2.64)(1.12)] / 1.30 = 2.42 \text{ IN.}$$

$$V_{100} = (E_w / 12) A_T$$

$$V_{100} = (2.42 / 12) 1.30 = 0.2622 \text{ AC. FT.} = 11,420 \text{ CF.}$$

2. PEAK DISCHARGE

$$Q_p = Q_{pA^A} + Q_{pB^B} + Q_{pC^C} + Q_{pD^D}$$

$$Q_p = Q_{100} = (2.92)(0.18) + (5.25)(1.12) = 6.4 \text{ CFS.}$$

B. BASIN B

1. VOLUME

$$E_w = (E_{A^A} + E_{B^B} + E_{C^C} + E_{D^D}) / A_T$$

$$E_w = [(0.80)(0.07) + (1.46)(0.31) + (2.64)(0.12)] / 0.50 = 1.65 \text{ IN.}$$

$$V_{100} = (E_w / 12) A_T$$

$$V_{100} = (1.65 / 12) 0.50 = 0.0688 \text{ AC.FT.}; 3,000 \text{ CF.}$$

2. PEAK DISCHARGE

$$Q_p = Q_{pA^A} + Q_{pB^B} + Q_{pC^C} + Q_{pD^D}$$

$$Q_p = Q_{100} = (2.20)(0.07) + (3.73)(0.31) + (5.25)(0.12) = 1.9 \text{ CFS.}$$

VIII. COMPARISON

A. BASIN A

- 1.  $\Delta V_{100} = 11,420 - 10,920 = 500 \text{ CF (INCREASE)}$
- 2.  $\Delta Q_{100} = 6.4 - 6.1 = 0.3 \text{ CFS (INCREASE)}$

B. BASIN B

- 1.  $\Delta V_{100} = 3,000 - 2,890 = 110 \text{ CF (INCREASE)}$
- 2.  $\Delta Q_{100} = 2.0 - 1.9 = 0.1 \text{ CFS (DECREASE)}$

C. NET

- 1.  $\Delta V_{100} = 11,420 + 3,000 - 10,920 - 2,890 = 610 \text{ CF (INCREASE)}$
- 2.  $\Delta Q_{100} = 6.4 + 2.0 - 6.1 - 1.9 = 0.2 \text{ CFS (INCREASE)}$

DRAINAGE PLAN

THE FOLLOWING ITEMS CONCERNING THE TOMASITA ELEMENTARY SCHOOL GYMNASIUM FACILITY DRAINAGE PLAN ARE CONTAINED HEREON:

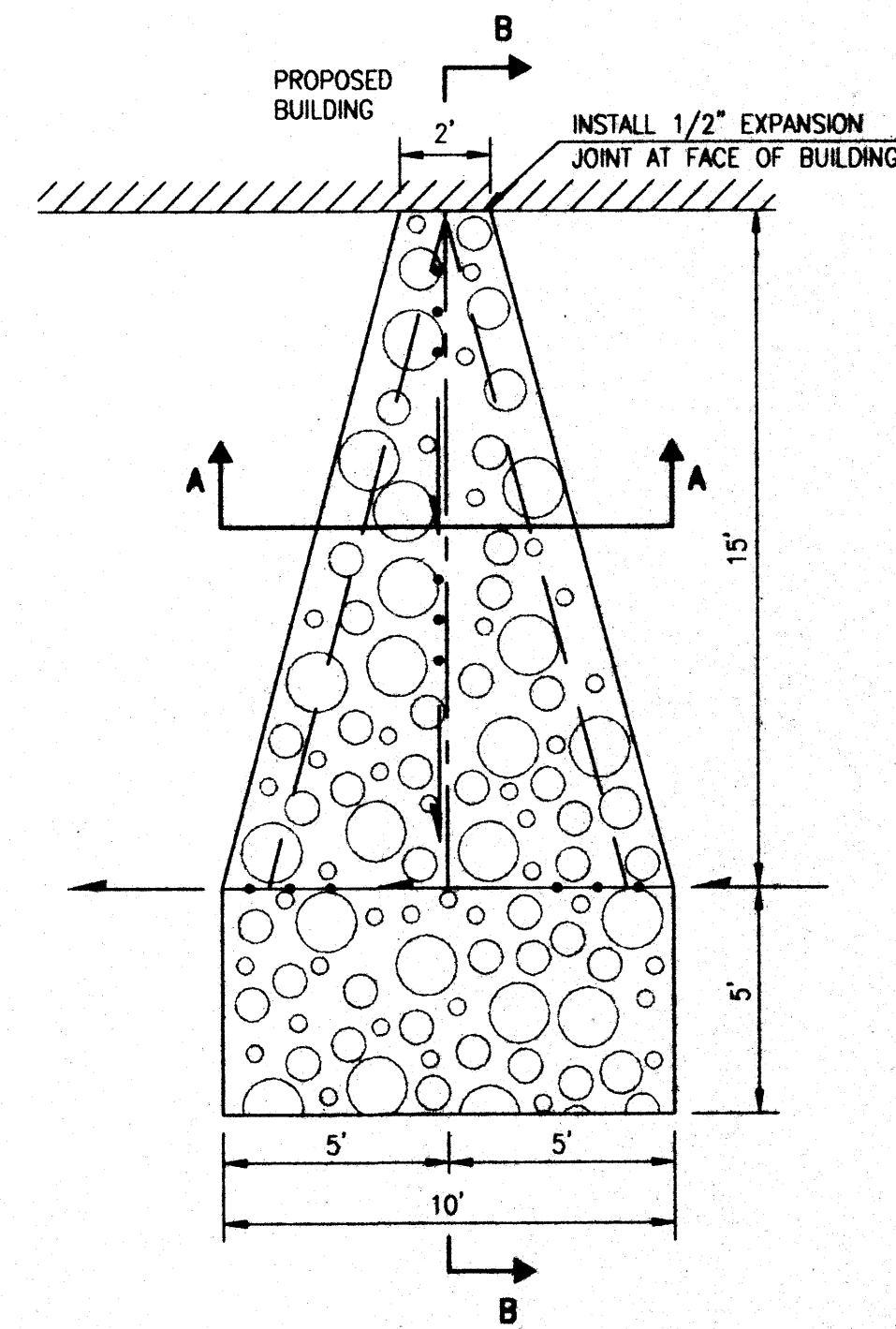
- 1. VICINITY MAP
- 2. GRADING PLAN
- 3. CALCULATIONS

AS SHOWN BY THE VICINITY MAP, THE SITE IS LOCATED ON THE WEST SIDE OF TOMASITA STREET N.E., ADJACENT TO THE I-40 R.O.W. THE SITE IS CURRENTLY DEVELOPED AS AN ELEMENTARY SCHOOL INCLUDING SCHOOL BUILDINGS, PARKING LOT, PLAYGROUND EQUIPMENT, ATHLETIC FIELDS, AND ASSOCIATED LANDSCAPING. STORM RUNOFF MANAGEMENT FOR THIS SITE IS GOVERNED BY A PREVIOUSLY APPROVED COMPREHENSIVE PLAN PREPARED BY ISSACSON & ARFMAN DATED FEBRUARY, 1992 (HYDROLOGY FILE K21/D23). THE DEVELOPMENT OF THIS SMALL PORTION OF THE SITE (7% OF TOTAL SCHOOL AREA) CONFORMS WITH THE DRAINAGE CONCEPTS ESTABLISHED WITH THE PREVIOUSLY APPROVED PLAN. THE GYMNASIUM FACILITY IS PROPOSED TO BE AT THE SOUTHEAST CORNER OF THE SITE. THE PROPOSED BUILDING IS BOUNDED BY PUBLIC DRAINAGE CHANNELS ON THE EAST AND SOUTH, BY THE SCHOOL PARKING LOT ON THE NORTH, AND THE PLAYGROUND ON THE WEST. THIS PORTION OF THE SITE DRAINS WESTERLY TOWARD THE DOWNSTREAM PLAYGROUND AND ATHLETIC FIELDS. OFFSITE FLOWS DO NOT IMPACT THE SITE BECAUSE THE DRAINAGE CHANNEL AND PARKING LOT CURBS CONTAIN THEIR RESPECTIVE RUNOFF FLOWS, AND THE NORTH DIVERSION CHANNEL TO THE SOUTH IS TOPOGRAPHICALLY LOWER.

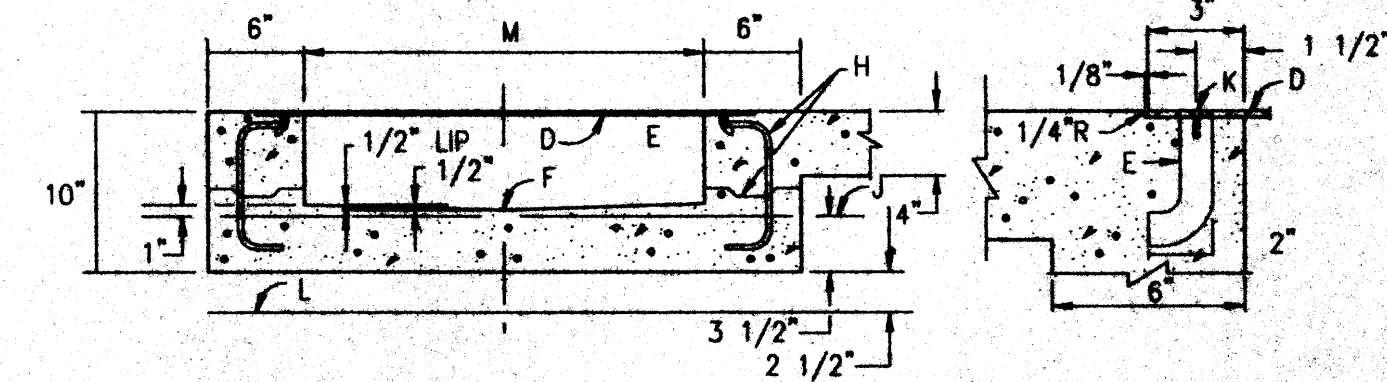
AS INDICATED BY PANEL 359 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS FOR BERNALILLO COUNTY, NEW MEXICO AND INCORPORATED AND EFFECTIVE SEPTEMBER 20, 1986 PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, THIS SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE. THIS SITE DOES LIE UPSTREAM OF FLOOD HAZARD ZONE 'A' WHICH IS CONFINED WITHIN THE NORTH DIVERSION CHANNEL LYING WITHIN THE NEW MEXICO STATE HIGHWAY AND TRANSPORTATION RIGHT-OF-WAY ALONG THE SOUTHERN BOUNDARY OF THE SCHOOL AND REPRESENTS THE OUTFALL FOR THIS SITE.

THE GRADING PLAN SHOWS: 1) EXISTING AND PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 10' INTERVALS, 2) THE LIMIT AND CHARACTER OF THE EXISTING IMPROVEMENTS, 3) THE LIMIT AND CHARACTER OF THE PROPOSED IMPROVEMENTS, AND 4) CONTINUITY BETWEEN THE EXISTING AND PROPOSED GRADES. AS SHOWN BY THE GRADING PLAN, IMPROVEMENTS CONSIST OF A NEW GYMNASIUM BUILDING. THE NEW BUILDING REQUIRES AN EXISTING EXERCISE EQUIPMENT AREA TO BE RELOCATED WEST OF THE PROPOSED BUILDING. TWO DRAINAGE BASINS, A AND B, DEFINE THIS AREA OF THE SITE. DRAINAGE BASIN A GENERALLY CONSISTS OF THE PARKING LOT, AND BASIN B ENCOMPASSES THE AREA SOUTH OF THE PARKING LOT ALONG THE SOUTHERN PROPERTY LINE. BASIN A FREELY DISCHARGES TO A STORM INLET ALONG THE WESTERLY CURB OF THE PARKING LOT WHERE AN EXISTING PRIVATE STORM DRAIN TIES INTO A PUBLIC STORM DRAIN WHICH WAS CONSTRUCTED IN 1993 BY THE ABOVE REFERENCED PROJECT. THE PUBLIC STORM DRAIN PASSES THROUGH THE SITE WITHIN A PUBLIC STORM DRAIN EASEMENT, AND EVENTUALLY DAYLIGHTS INTO THE NORTH DIVERSION CHANNEL. BASIN B FREELY DISCHARGES WESTERLY TO AN ASPHALT RUNDOWN AND EVENTUALLY TO A BEEHIVE GRATE SET INTO THE TOP OF A DISTRIBUTION BOX IN THE PUBLIC STORM DRAIN SYSTEM. DEVELOPMENT WILL SHIFT THE BASIN BOUNDARIES SLIGHTLY AS THE ROOF DRAINAGE FOR APPROXIMATELY ONE-HALF OF THE BUILDING WILL FLOW TO THE PARKING LOT BY ROOF DRAIN PIPING AND SIDEWALK CULVERT. THE REMAINING DEVELOPED RUNOFF WILL LIE WITHIN BASIN B, WHICH WILL CONTINUE TO FLOW WESTERLY TO THE PAVED ASPHALT RUNDOWN. THE IMPACT OF THIS DEVELOPMENT ALLOWS A HIGHER PEAK RATE OF DISCHARGE TO ENTER THE PRIVATE AND PUBLIC STORM DRAIN SYSTEMS. A SLIGHTLY LOWER PEAK RATE OF DISCHARGE WILL FLOW WESTERLY ACROSS THE PLAYGROUND AND ATHLETIC FIELDS.

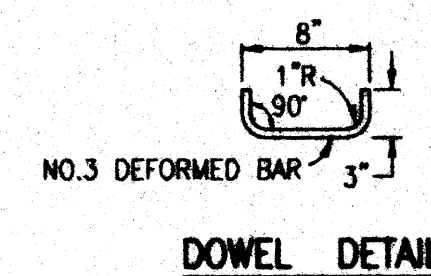
THE CALCULATIONS, WHICH APPEAR HEREON, ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT. THE PROCEDURE FOR 40-ACRE AND SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY, 1993 HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED. AS SHOWN BY THESE CALCULATIONS, AN INCREASE OF RUNOFF VOLUME OF 500 CF AND PEAK RATE OF DISCHARGE OF 0.3 CFS IS ANTICIPATED FOR BASIN A. BASIN B WILL GENERATE AN INCREASE OF 110 CF OF RUNOFF VOLUME, BUT A DECREASE OF 0.1 CFS OF PEAK RATE OF DISCHARGE WILL BE OBSERVED. THE NET INCREASE GENERATED BY THIS DEVELOPMENT IS 610 CF OF RUNOFF VOLUME AND 0.2 CFS IN THE PEAK RATE OF DISCHARGE. BECAUSE THIS PLAN IS CONSISTENT WITH THE PREVIOUSLY APPROVED PLAN, HAS A NEGLIGIBLE INCREASE IN DEVELOPED RUNOFF, SLIGHTLY MORE RUNOFF IS BEING DISCHARGED DIRECTLY INTO THE ONSITE PUBLIC STORM DRAIN SYSTEM AND THE SITE LIES AT THE BOTTOM OF THE WATERSHED AREA, THE CONTINUED FREE DISCHARGE OF STORM RUNOFF IS APPROPRIATE.



TYPICAL SPLASHBLOCK AND RUNDOWN DETAIL  
SCALE 1"=4'



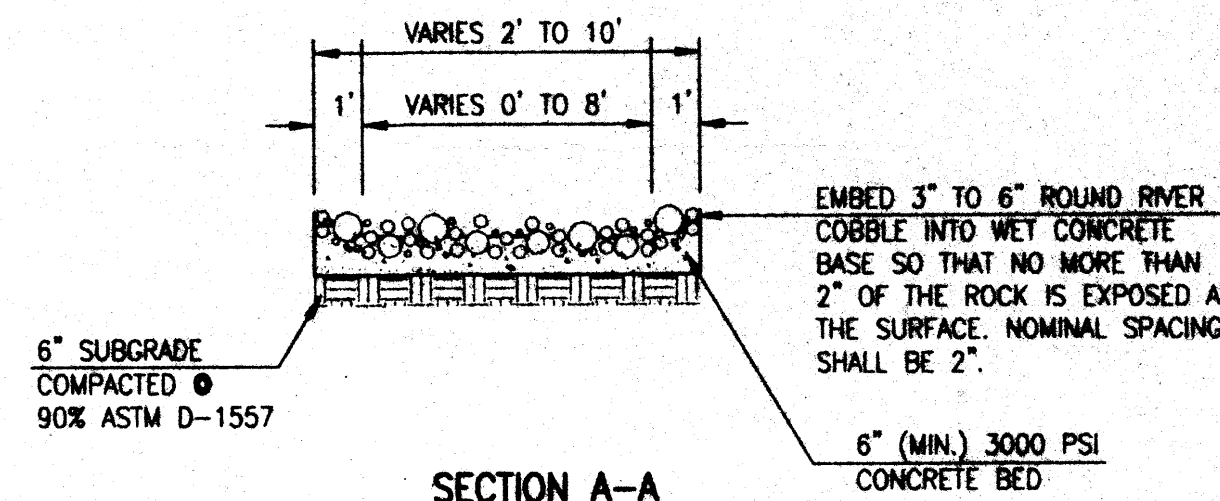
TYPICAL SIDEWALK CULVERT SECTION  
NOT TO SCALE



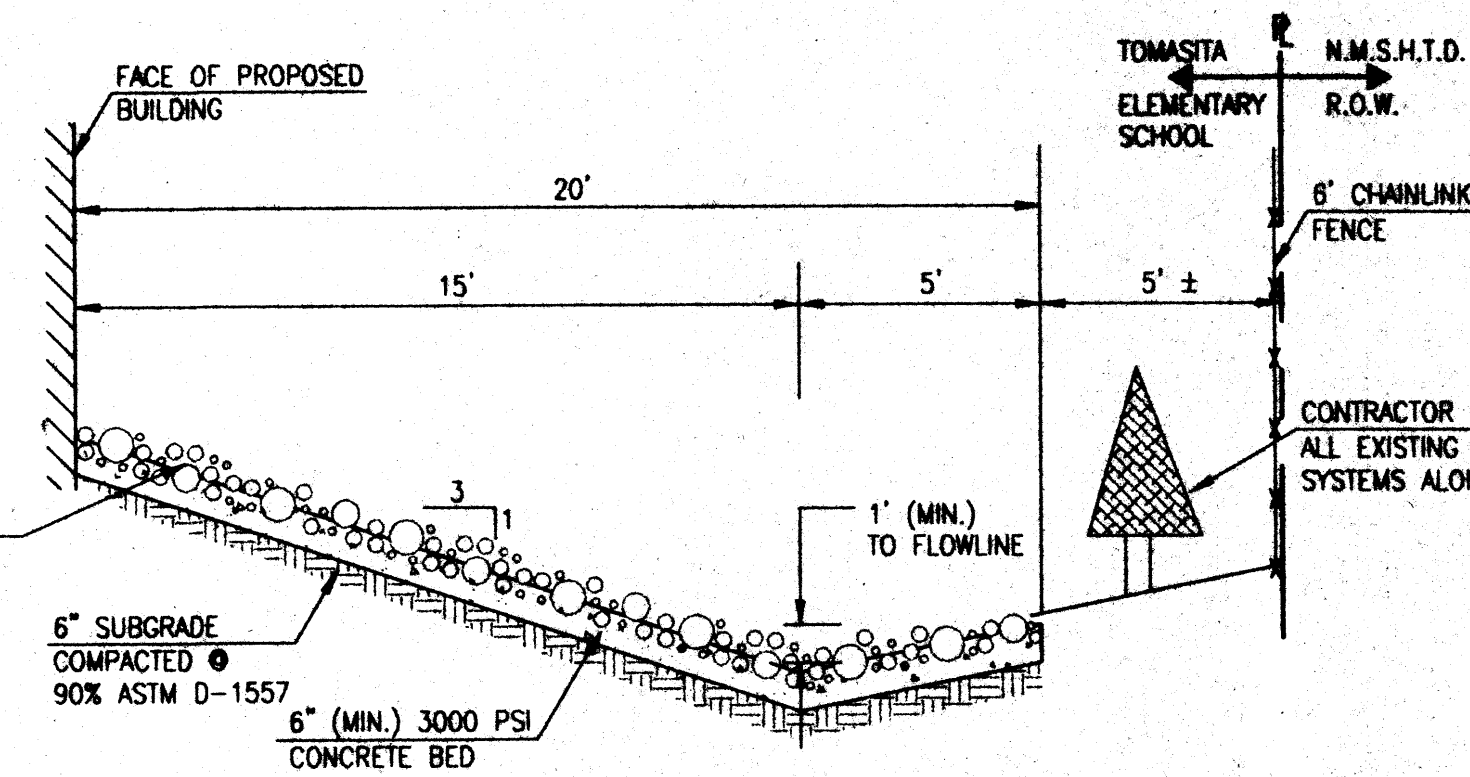
DOWEL DETAIL

CONSTRUCTION NOTES:

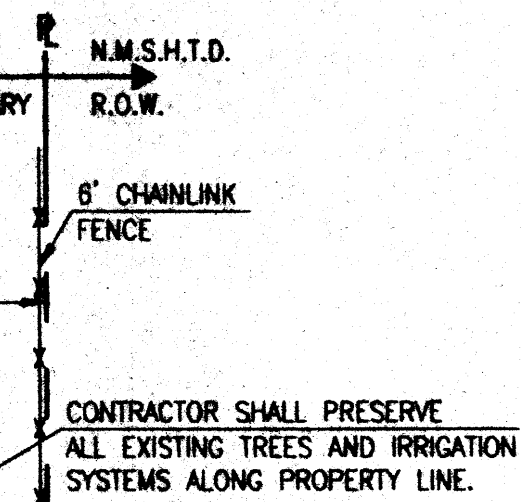
- A. JOIN NEAREST SCORE LINE OR WEAKENED PLANE JOINT.
- B. PLACE 1/2" EXPANSION JOINT MATERIAL.
- C. 3" RADIUS, (TYPICAL).
- D. 3/8" CHECKERED STEEL PLATE.
- E. ROD ANCHOR 1" x 5"
- F. "Y" INVERT
- G. SIDEWALK GRADE
- H. GUTTER AND JOINT, (OPTIONAL).
- J. GUTTER FLOWLINE ELEV.
- K. 3/8" x 1" F.H. C/SUNK STAINLESS STEEL MACHINE SCREW.
- L. BOTTOM OF GUTTER
- M. DRAIN WIDTH, 24" MAX. 12" MIN.
- N. SLOPE 1/4" PER FT. MIN.



SECTION A-A  
SCALE 1"=4'



SECTION B-B  
SCALE 1"=4'



CONTRACTOR SHALL PRESERVE ALL EXISTING TREES AND IRRIGATION SYSTEMS ALONG PROPERTY LINE.

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Plot Date: 06-25-1998  
Plot Time: 08:43 am

GYMNASIUM FACILITY  
TOMASITA ELEMENTARY SCHOOL  
701 TOMASITA ST NE  
ALBUQUERQUE  
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PATRICK McCLERNON ARCHITECTS PLANNERS P.A.

1401 FIFTH ST NW  
ALBUQUERQUE, NM  
805 242 8288

CIVIL ENGINEERING  
JEFF MORTENSEN AND ASSOCIATES  
6810-B MENWAY PARK NE  
ALBUQUERQUE, NM  
805 242 4285

STRUCTURAL ENGINEERING  
RANDY HOLT ENGINEERS  
PO BOX 9800  
ALBUQUERQUE, NM  
805 242 0281

MECHANICAL ENGINEERING  
THOMPSON WELLES ENGINEERS, INC  
2808 SAN ANTONIO NE  
ALBUQUERQUE, NM  
805 242 2289

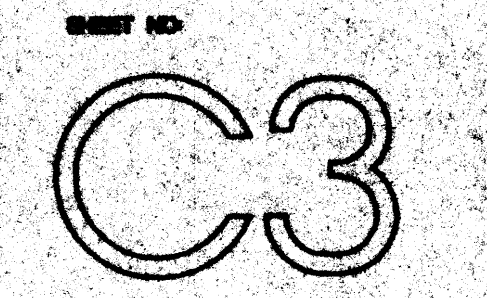
ELECTRICAL ENGINEERING  
TELCON ENGINEERING, INC  
4800 JUAN TABO NE  
ALBUQUERQUE, NM  
805 242 3282

DRAWN BY  
DRAINAGE PLAN, CALCULATIONS, SECTIONS & DETAILS

DATE  
05/11/98



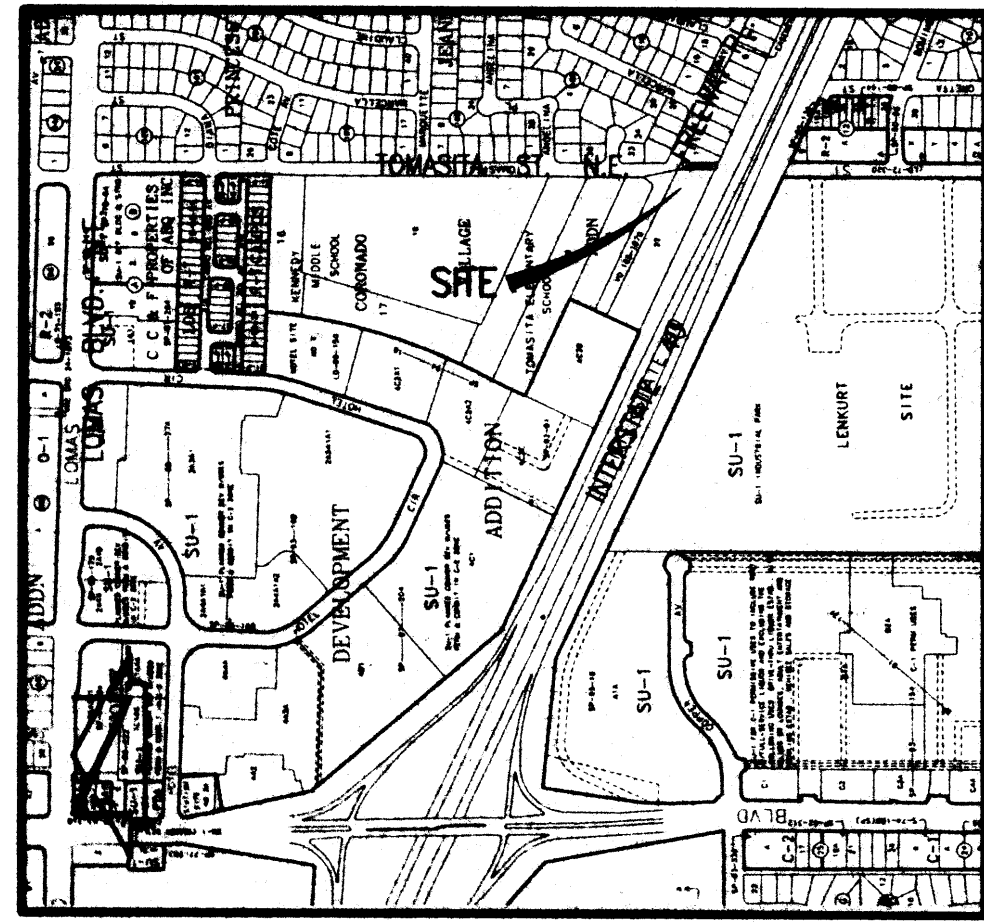
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980252

JMA  
JEFF MORTENSEN & ASSOCIATES, INC.  
6810-B MENWAY PARK BLVD. NE  
ALBUQUERQUE, NM 87110  
ENGINEERS & SURVEYORS (980) 242-4285





VICINITY MAP  
SCALE: 1" = 750'

**LEGAL DESCRIPTION**

A PORTION OF TRACT 22, CORONADO VILLAGE ADDITION

**PROJECT BENCHMARK**

A.C.S. BRASS TABLET STAMPED "5-K21, 1979", SET FLUSH WITH THE CURB LOCATED IN THE SOUTHWEST QUADRANT OF THE INTERSECTION OF TOMASITA STREET, N.E. AND LOMAS BOULEVARD, N.E.  
ELEVATION = 5498.805 FEET (M.S.L.D.)

**T.B.M.**

TOP OF MANHOLE RIM LOCATED AT THE INTERSECTION OF FREEWAY PLACE, N.E. AND TOMASITA STREET N.E. AS SHOWN ON THE DRAWING  
ELEVATION = 5485.48 FEET (M.S.L.D.)

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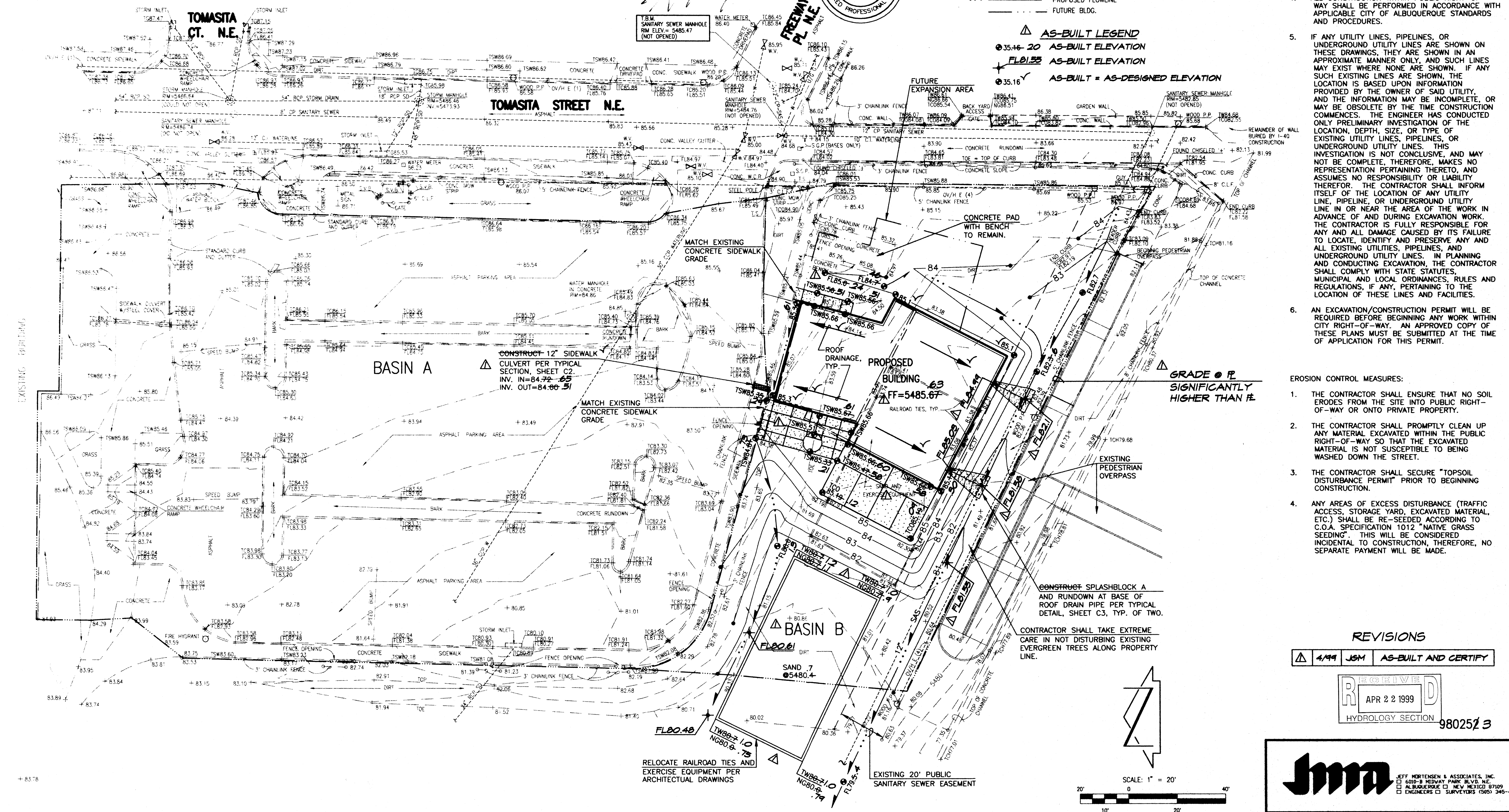
As indicated by the as-built information shown hereon, this project has been graded and drained in substantial compliance with the approved Plan. It is based upon this evaluation of as-constructed conditions that this issuance of a Permanent Certificate of Occupancy is hereby recommended. The as-built information shown hereon has been obtained by me or under my direct supervision and is true and correct to the best of my knowledge and belief.

Jeffrey G. Mortensen, NMPE 8547  
Date 04-22-99

**LEGEND**

- TC TOP OF CURB
- FL FLOWLINE
- TCO TOP OF CONCRETE
- TSW TOP OF SIDEWALK
- TC TOP OF GRADE
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- SD STORM DRAIN
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- NG PROPOSED NATURAL GRADE ELEVATION
- PROPOSED FLOWLINE
- FUTURE BLDG.

**AS-BUILT LEGEND**  
 35.46-20 AS-BUILT ELEVATION  
 FLB.55 AS-BUILT ELEVATION  
 35.16 AS-BUILT = AS-DESIGNED ELEVATION



**CONSTRUCTION NOTES:**

1. TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM 240-1990 (ALBUQUERQUE AREA), 1-800-321-ALERT(2537) (STATEWIDE), 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 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.
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.
5. 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.
6. 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.

**EROSION CONTROL MEASURES:**

1. THE CONTRACTOR SHALL ENSURE THAT NO SOIL ERODES FROM THE SITE INTO PUBLIC RIGHT-OF-WAY OR ONTO PRIVATE PROPERTY.
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.
3. THE CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" PRIOR TO BEGINNING CONSTRUCTION.
4. 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.

**REVISIONS**

4/99 JSM AS-BUILT AND CERTIFY

RECEIVED  
APR 22 1999  
HYDROLOGY SECTION  
9802523

**Jma** JEFF MORTENSEN & ASSOCIATES, INC.  
 600-B MIDWAY PARK BLVD. N.E.  
 ALBUQUERQUE, NEW MEXICO 87109  
 ENGINEERS & SURVEYORS (S)5 245-4250

**GYMNASIUM FACILITY**  
**TOMASITA ELEMENTARY SCHOOL**  
 701 TOMASITA ST NE  
 ALBUQUERQUE  
 NEW MEXICO

**ALBUQUERQUE PUBLIC SCHOOLS**

**PATRICK McCLERNON ARCHITECTS PLANNERS P.A.**  
 1401 FIFTH ST NW  
 ALBUQUERQUE, NM  
 805 242 5210

**CIVIL ENGINEERING**  
**JEFF MORTENSEN AND ASSOCIATES**  
 600-B MIDWAY PARK NE  
 ALBUQUERQUE, NM  
 505 245 4250

**STRUCTURAL ENGINEERING**  
**RANDY HOLT ENGINEERS**  
 PO BOX 6846  
 ALBUQUERQUE, NM  
 505 838 0031

**MECHANICAL ENGINEERING**  
**THOMPSON NELLES ENGINEERS, INC**  
 2400 SAN MATEO NE  
 ALBUQUERQUE, NM  
 505 896 8808

**ELECTRICAL ENGINEERING**  
**TELCON ENGINEERING, INC**  
 4800 JUAN TABO NE  
 ALBUQUERQUE, NM  
 505 292 3202

**SHEET TITLE**  
**GRADING & DRAINAGE PLAN**  
**MULTI-PURPOSE BUILDING**  
 DATE  
 06/22/98

06-25-98

**SHEET NO**  
**C2**



**CALCULATIONS**

**SITE CHARACTERISTICS**

- I. PRECIPITATION ZONE = 4
- II.  $P_{6,100} = P_{360} = 2.90$  IN.
- III. TOTAL AREA ( $A_T$ )
- A. EXISTING
- BASIN A = 54,030 SF/1.24 AC  
 BASIN B = 24,270 SF/0.56 AC
- B. DEVELOPED
- BASIN A = 56,480 SF/1.30 AC  
 BASIN B = 26,720 SF/0.50 AC
- IV. EXISTING LAND TREATMENT
- A. BASIN A
- | TREATMENT | AREA (SF/AC) | %    |
|-----------|--------------|------|
| B         | 7,500/0.17   | 13.7 |
| D         | 46,530/1.07  | 86.3 |
- B. BASIN B
- | TREATMENT | AREA (SF/AC) | %    |
|-----------|--------------|------|
| A         | 3,240/0.07   | 12.5 |
| C         | 20,020/0.47  | 83.9 |
| D         | 1,010/0.02   | 3.6  |
- V. DEVELOPED LAND TREATMENT
- A. BASIN A
- | TREATMENT | AREA (SF/AC) | %    |
|-----------|--------------|------|
| B         | 7,630/0.18   | 13.8 |
| D         | 48,850/1.12  | 86.2 |
- B. BASIN B
- | TREATMENT | AREA (SF/AC) | %    |
|-----------|--------------|------|
| A         | 3,240/0.07   | 14.0 |
| C         | 13,145/0.31  | 62.0 |
- VI. EXISTING CONDITIONS
- A. BASIN A
1. VOLUME
- $$E_w = (E_{A_A} + E_{B_B} + E_{C_C} + E_{D_D}) / A_T$$
- $$E_w = [(1.08)(0.17) + (2.64)(1.07)] / 1.24 = 2.43$$
- $$V_{100} = (E_w / 12) A_T$$
- $$V_{100} = (2.43 / 12) 1.24 = 0.2507$$
- AC.FT.; 10,920 CF
2. PEAK DISCHARGE
- $$Q_p = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$$
- $$Q_p = Q_{100} = (2.92)(0.17) + (5.25)(1.07) = 6.1$$
- CFS
- B. BASIN B
1. VOLUME
- $$E_w = (E_{A_A} + E_{B_B} + E_{C_C} + E_{D_D}) / A_T$$
- $$E_w = [(0.80)(0.07) + (1.46)(0.47) + (2.64)(0.02)] / 0.56 = 1.42$$
- $$V_{100} = (E_w / 12) A_T$$
- $$V_{100} = (1.42 / 12) 0.56 = 0.0662$$
- AC.FT.; 2,890 CF
2. PEAK DISCHARGE
- $$Q_p = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$$
- $$Q_p = Q_{100} = (2.20)(0.07) + (3.73)(0.47) + (5.25)(0.02) = 2.0$$
- CFS
- VII. DEVELOPED CONDITIONS
- A. BASIN A
1. VOLUME
- $$E_w = (E_{A_A} + E_{B_B} + E_{C_C} + E_{D_D}) / A_T$$
- $$E_w = [(1.80)(0.18) + (2.64)(1.12)] / 1.30 = 2.42$$
- $$V_{100} = (E_w / 12) A_T$$
- $$V_{100} = (2.42 / 12) 1.30 = 0.2622$$
- AC. FT. = 11,420 CF
2. PEAK DISCHARGE
- $$Q_p = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$$
- $$Q_p = Q_{100} = (2.92)(0.18) + (5.25)(1.12) = 6.4$$
- CFS
- B. BASIN B
1. VOLUME
- $$E_w = (E_{A_A} + E_{B_B} + E_{C_C} + E_{D_D}) / A_T$$
- $$E_w = [(0.80)(0.07) + (1.46)(0.31) + (2.64)(0.12)] / 0.50 = 1.65$$
- $$V_{100} = (E_w / 12) A_T$$
- $$V_{100} = (1.65 / 12) 0.50 = 0.0688$$
- AC.FT.; 3,000 CF
2. PEAK DISCHARGE
- $$Q_p = Q_{PA} A_A + Q_{PB} A_B + Q_{PC} A_C + Q_{PD} A_D$$
- $$Q_p = Q_{100} = (2.20)(0.07) + (3.73)(0.31) + (5.25)(0.12) = 1.9$$
- CFS

**VIII. COMPARISON**

- A. BASIN A
1.  $\Delta V_{100} = 11,420 - 10,920 = 500$  CF (INCREASE)
2.  $\Delta Q_{100} = 6.4 - 6.1 = 0.3$  CFS (INCREASE)
- B. BASIN B
1.  $\Delta V_{100} = 3,000 - 2,890 = 110$  CF (INCREASE)
2.  $\Delta Q_{100} = 2.0 - 1.9 = 0.1$  CFS (DECREASE)
- C. NET
1.  $\Delta V_{100} = 11,420 + 3,000 - 10,920 - 2,890 = 610$  CF (INCREASE)
2.  $\Delta Q_{100} = 6.4 + 2.0 - 6.1 - 1.9 = 0.2$  CFS (INCREASE)

**DRAINAGE PLAN**

THE FOLLOWING ITEMS CONCERNING THE TOMASITA ELEMENTARY SCHOOL GYMNASIUM FACILITY DRAINAGE PLAN ARE CONTAINED HEREON:

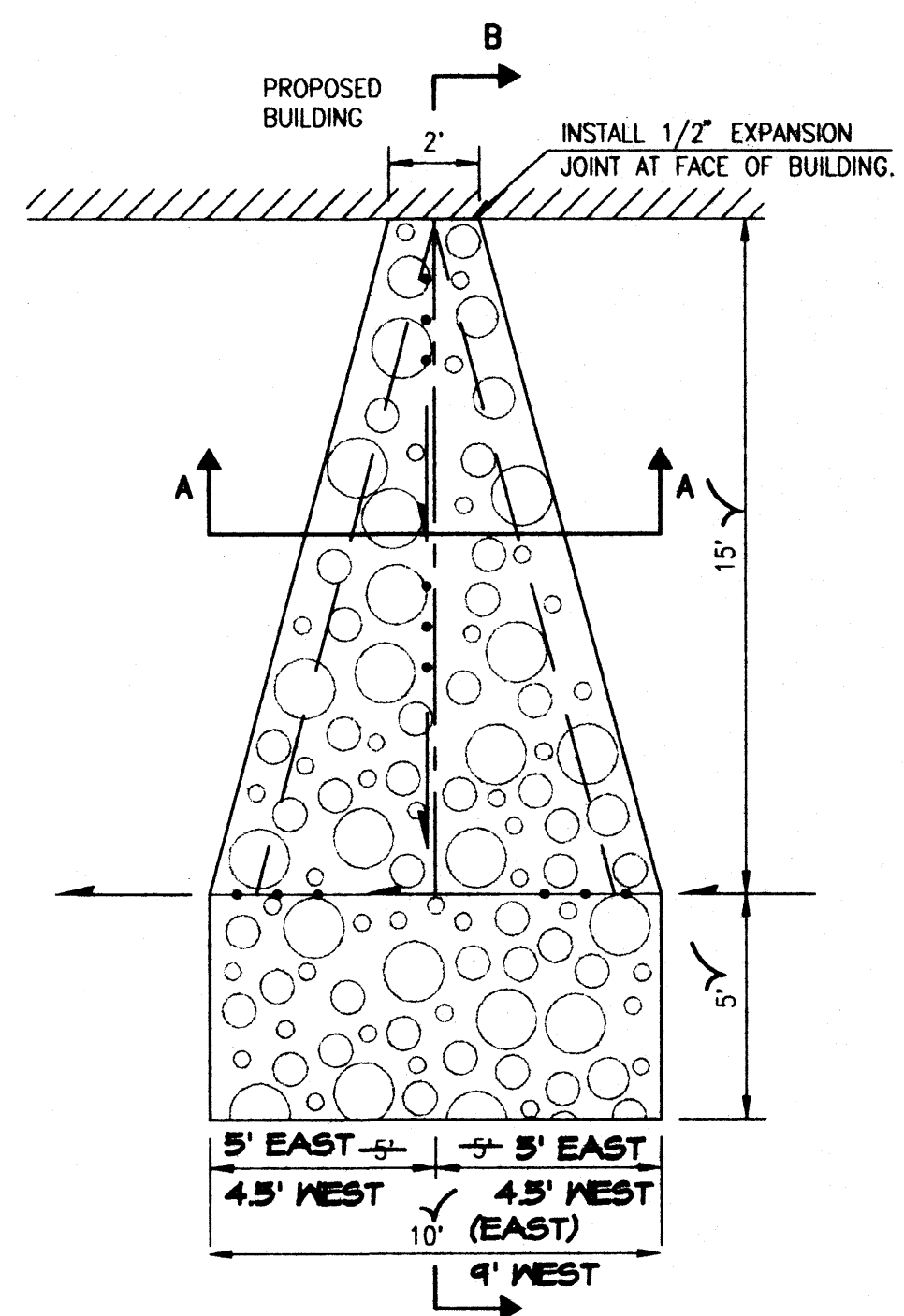
- VICINITY MAP
- GRADING PLAN
- CALCULATIONS

AS SHOWN BY THE VICINITY MAP, THE SITE IS LOCATED ON THE WEST SIDE OF TOMASITA STREET N.E., ADJACENT TO THE I-40 R.O.W. THE SITE IS CURRENTLY DEVELOPED AS AN ELEMENTARY SCHOOL INCLUDING SCHOOL BUILDINGS, PARKING LOT, PLAYGROUND EQUIPMENT, ATHLETIC FIELDS, AND ASSOCIATED LANDSCAPING. STORM RUNOFF MANAGEMENT FOR THIS SITE IS GOVERNED BY A PREVIOUSLY APPROVED COMPREHENSIVE PLAN PREPARED BY ISSACSON & ARFMAN DATED FEBRUARY, 1992 (HYDROLOGY FILE K21/D23). THE DEVELOPMENT OF THIS SMALL PORTION OF THE SITE (7% OF TOTAL SCHOOL AREA) CONFORMS WITH THE DRAINAGE CONCEPTS ESTABLISHED WITH THE PREVIOUSLY APPROVED PLAN. THE GYMNASIUM FACILITY IS PROPOSED TO BE AT THE SOUTHEAST CORNER OF THE SITE. THE PROPOSED BUILDING IS BOUNDED BY PUBLIC DRAINAGE CHANNELS ON THE EAST AND SOUTH, BY THE SCHOOL PARKING LOT ON THE NORTH, AND THE PLAYGROUND ON THE WEST. THIS PORTION OF THE SITE DRAINS WESTERLY TOWARD THE DOWNSTREAM PLAYGROUND AND ATHLETIC FIELDS. OFFSITE FLOWS DO NOT IMPACT THE SITE BECAUSE THE DRAINAGE CHANNEL AND PARKING LOT CURBS CONTAIN THEIR RESPECTIVE RUNOFF FLOWS, AND THE NORTH DIVERSION CHANNEL TO THE SOUTH IS TOPOGRAPHICALLY LOWER.

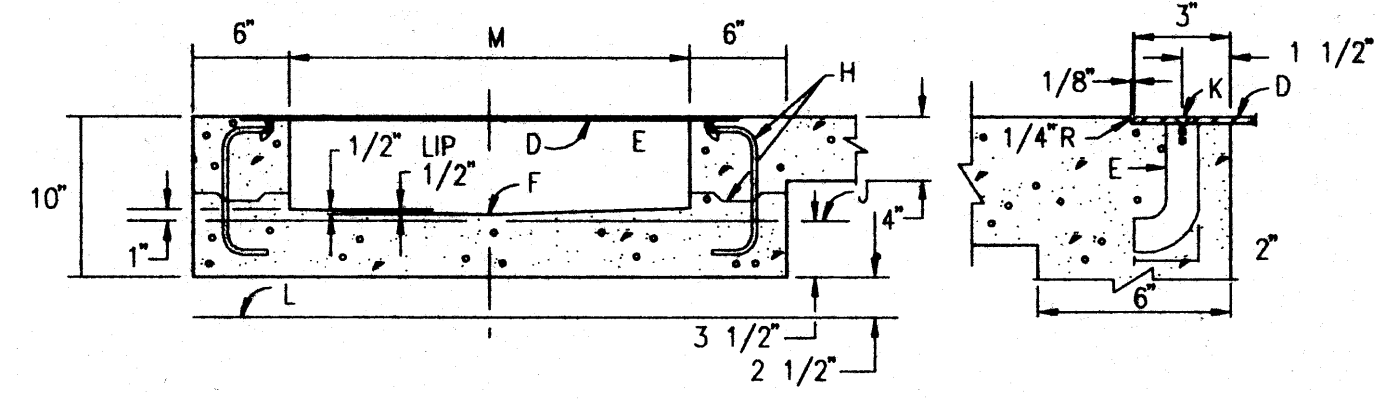
AS INDICATED BY PANEL 359 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS FOR BERNALILLO COUNTY, NEW MEXICO AND INCORPORATED AREAS EFFECTIVE SEPTEMBER 20, 1996 PUBLISHED BY THE FEDERAL EMERGENCY MANAGEMENT AGENCY, THIS SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE. THIS SITE DOES LIE UPSTREAM OF FLOOD HAZARD ZONE 'A' WHICH IS CONFINED WITHIN THE NORTH DIVERSION CHANNEL LYING WITHIN THE NEW MEXICO STATE HIGHWAY AND TRANSPORTATION RIGHT-OF-WAY ALONG THE SOUTHERN BOUNDARY OF THE SCHOOL AND REPRESENTS THE OUTFALL FOR THIS SITE.

THE GRADING PLAN SHOWS: 1) EXISTING AND PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 10' INTERVALS, 2) THE LIMIT AND CHARACTER OF THE EXISTING IMPROVEMENTS, 3) THE LIMIT AND CHARACTER OF THE PROPOSED IMPROVEMENTS, AND 4) CONTINUITY BETWEEN THE EXISTING AND PROPOSED GRADES. AS SHOWN BY THE GRADING PLAN, IMPROVEMENTS CONSIST OF A NEW GYMNASIUM BUILDING. THE NEW BUILDING REQUIRES AN EXISTING EXERCISE EQUIPMENT AREA TO BE RELOCATED WEST OF THE PROPOSED BUILDING. TWO DRAINAGE BASINS, A AND B, DEFINE THIS AREA OF THE SITE. DRAINAGE BASIN A GENERALLY CONSISTS OF THE PARKING LOT, AND BASIN B ENCOMPASSES THE AREA SOUTH OF THE PARKING LOT ALONG THE SOUTHERN PROPERTY LINE. BASIN A FREELY DISCHARGES TO A STORM INLET ALONG THE WESTERLY CURB OF THE PARKING LOT WHERE AN EXISTING PRIVATE STORM DRAIN TIES INTO A PUBLIC STORM DRAIN WHICH WAS CONSTRUCTED IN 1993 BY THE ABOVE REFERENCED PROJECT. THE PUBLIC STORM DRAIN PASSES THROUGH THE SITE WITHIN A PUBLIC STORM DRAIN EASEMENT, AND EVENTUALLY DAYLIGHTS INTO THE NORTH DIVERSION CHANNEL. BASIN B FREELY DISCHARGES WESTERLY TO AN ASPHALT RUNDOWN AND EVENTUALLY TO A BEEHIVE GRATE SET INTO THE TOP OF A DISTRIBUTION BOX IN THE PUBLIC STORM DRAIN SYSTEM. DEVELOPMENT WILL SHIFT THE BASIN BOUNDARIES SLIGHTLY AS THE ROOF DRAINAGE FOR APPROXIMATELY ONE-HALF OF THE BUILDING WILL FLOW TO THE PARKING LOT BY ROOF DRAIN PIPING AND SIDEWALK CULVERT. THE REMAINING DEVELOPED RUNOFF WILL LIE WITHIN BASIN B, WHICH WILL CONTINUE TO FLOW WESTERLY TO THE PAVED ASPHALT RUNDOWN. THE IMPACT OF THIS DEVELOPMENT ALLOWS A HIGHER PEAK RATE OF DISCHARGE TO ENTER THE PRIVATE AND PUBLIC STORM DRAIN SYSTEMS. A SLIGHTLY LOWER PEAK RATE OF DISCHARGE WILL FLOW WESTERLY ACROSS THE PLAYGROUND AND ATHLETIC FIELDS.

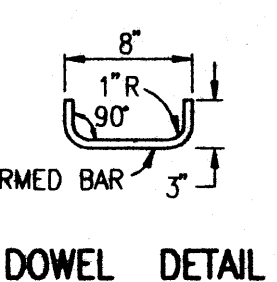
THE CALCULATIONS, WHICH APPEAR HEREON, ANALYZE BOTH THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT. THE PROCEDURE FOR 40-ACRE AND SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY, 1993 HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED. AS SHOWN BY THESE CALCULATIONS, AN INCREASE OF RUNOFF VOLUME OF 500 CF AND PEAK RATE OF DISCHARGE OF 0.3 CFS IS ANTICIPATED FOR BASIN A. BASIN B WILL GENERATE AN INCREASE OF 110 CF OF RUNOFF VOLUME, BUT A DECREASE OF 0.1 CFS OF PEAK RATE OF DISCHARGE WILL BE OBSERVED. THE NET INCREASE GENERATED BY THIS DEVELOPMENT IS 610 CF OF RUNOFF VOLUME AND 0.2 CFS IN THE PEAK RATE OF DISCHARGE. BECAUSE THIS PLAN IS CONSISTENT WITH THE PREVIOUSLY APPROVED PLAN, HAS A NEGLIGIBLE INCREASE IN DEVELOPED RUNOFF, SLIGHTLY MORE RUNOFF IS BEING DISCHARGED DIRECTLY INTO THE ONSITE PUBLIC STORM DRAIN SYSTEM AND THE SITE LIES AT THE BOTTOM OF THE WATERSHED AREA, THE CONTINUED FREE DISCHARGE OF STORM RUNOFF IS APPROPRIATE.



**TYPICAL SPLASHBLOCK AND RUNDOWN DETAIL**  
 SCALE 1"=4"



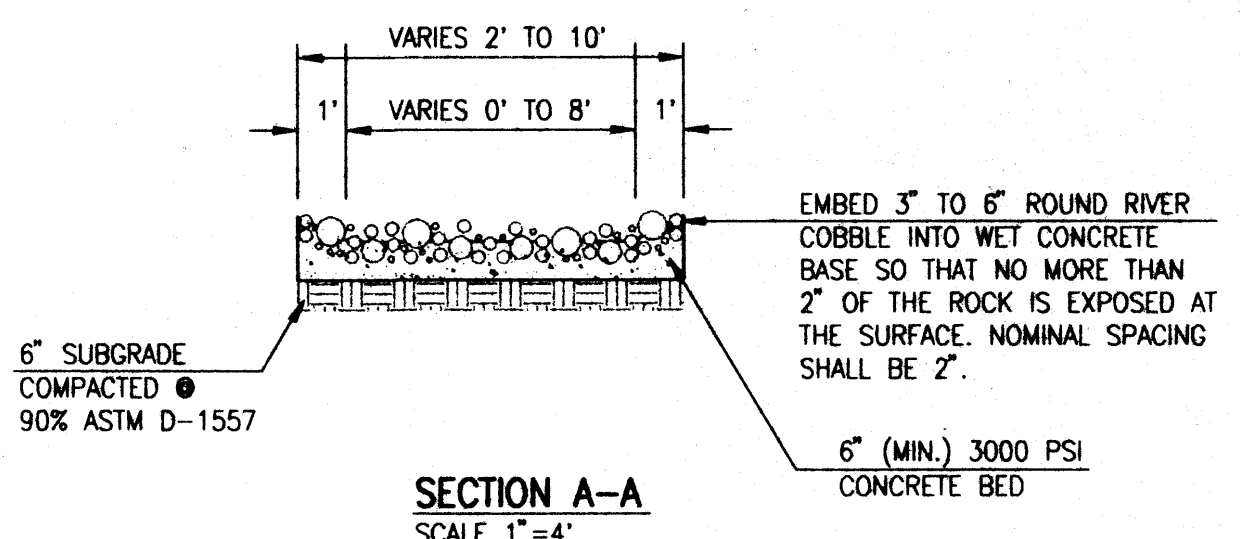
**TYPICAL SIDEWALK CULVERT SECTION**  
 NOT TO SCALE



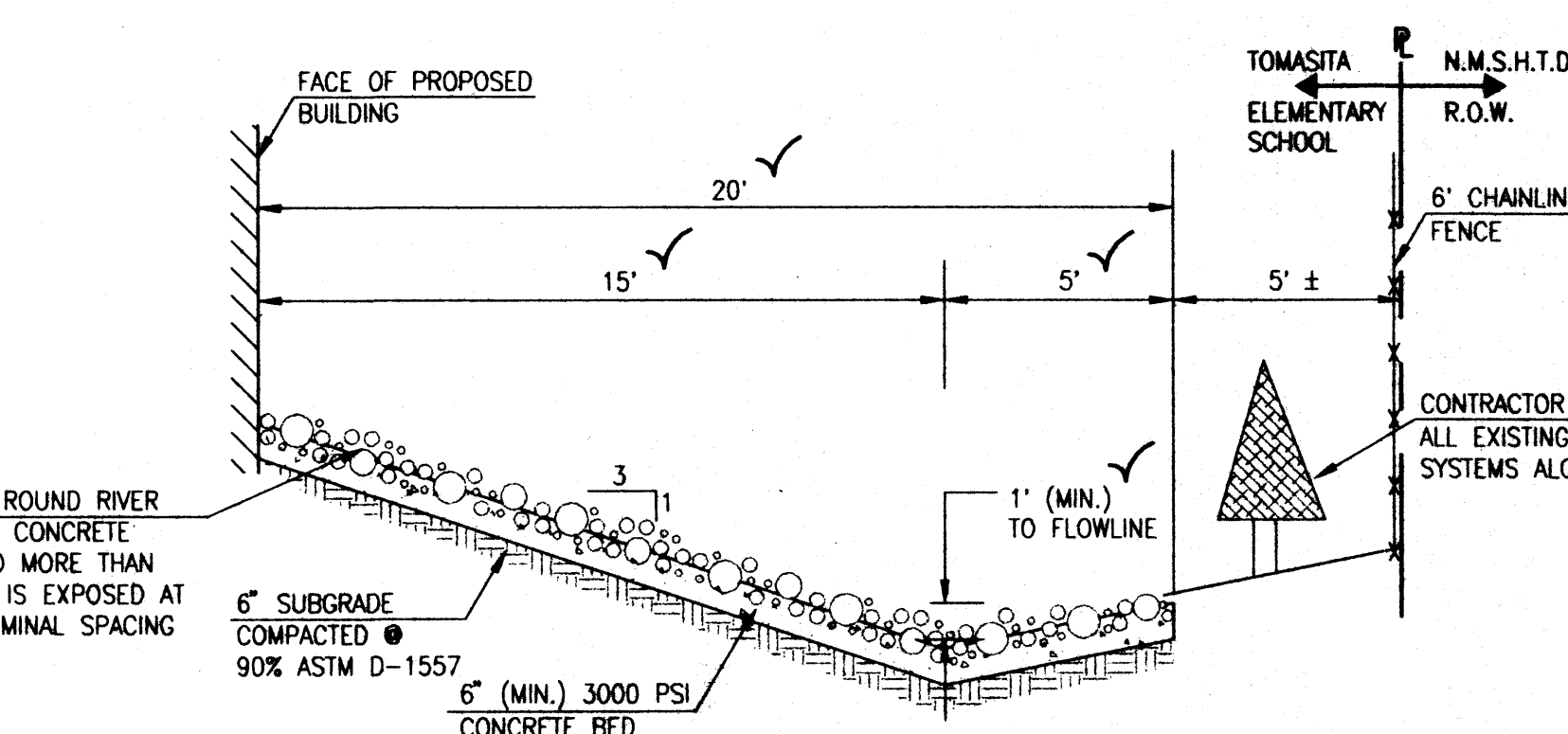
**DOWEL DETAIL**

**CONSTRUCTION NOTES:**

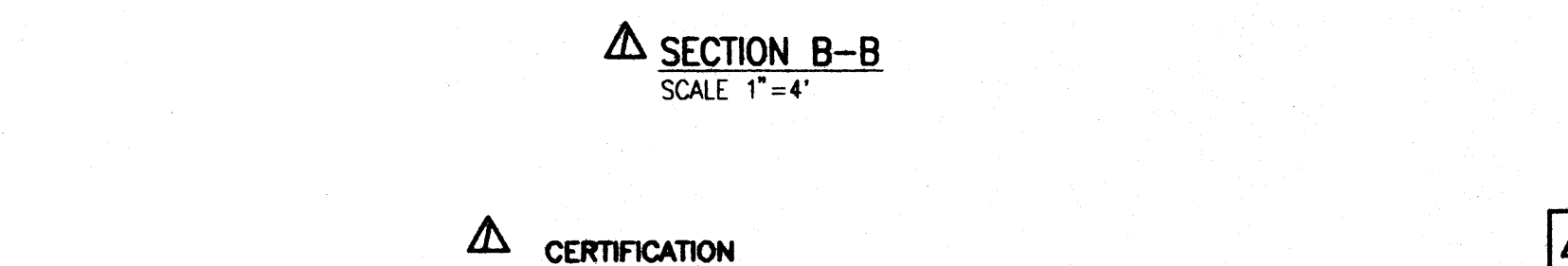
- JOIN NEAREST SCORE LINE OR WEAKENED PLANE JOINT. PLACE 1/2" EXPANSION JOINT MATERIAL.
- SIDEWALK OR SETBACK (VARIABLE).
- 3" RADIUS, (TYPICAL).
- 3/8" CHECKERED STEEL PLATE.
- ROD ANCHOR 1" x 5"
- 1/4" INVERT
- SIDEWALK GRADE
- DOWEL AND JOINT, (OPTIONAL).
- GUTTER FLOWLINE ELEV.
- 3/8" x 1" F.H. C/SUNK STAINLESS STEEL MACHINE SCREW.
- BOTTOM OF GUTTER
- DRAIN WIDTH, 24" MAX. 12" MIN.
- SLOPE 1/4" PER FT. MIN.



**SECTION A-A**  
 SCALE 1"=4"



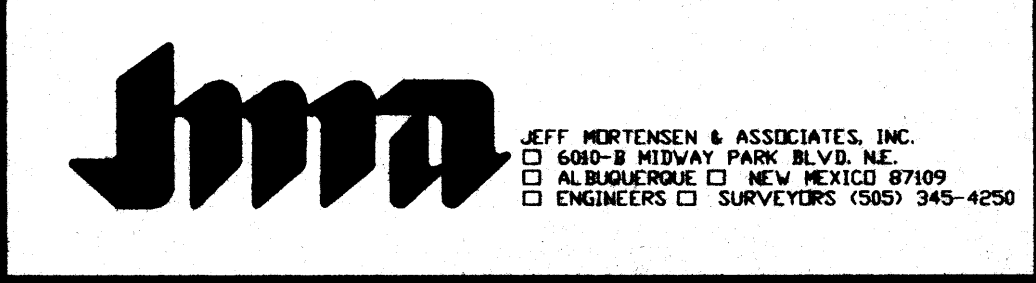
**SECTION B-B**  
 SCALE 1"=4"



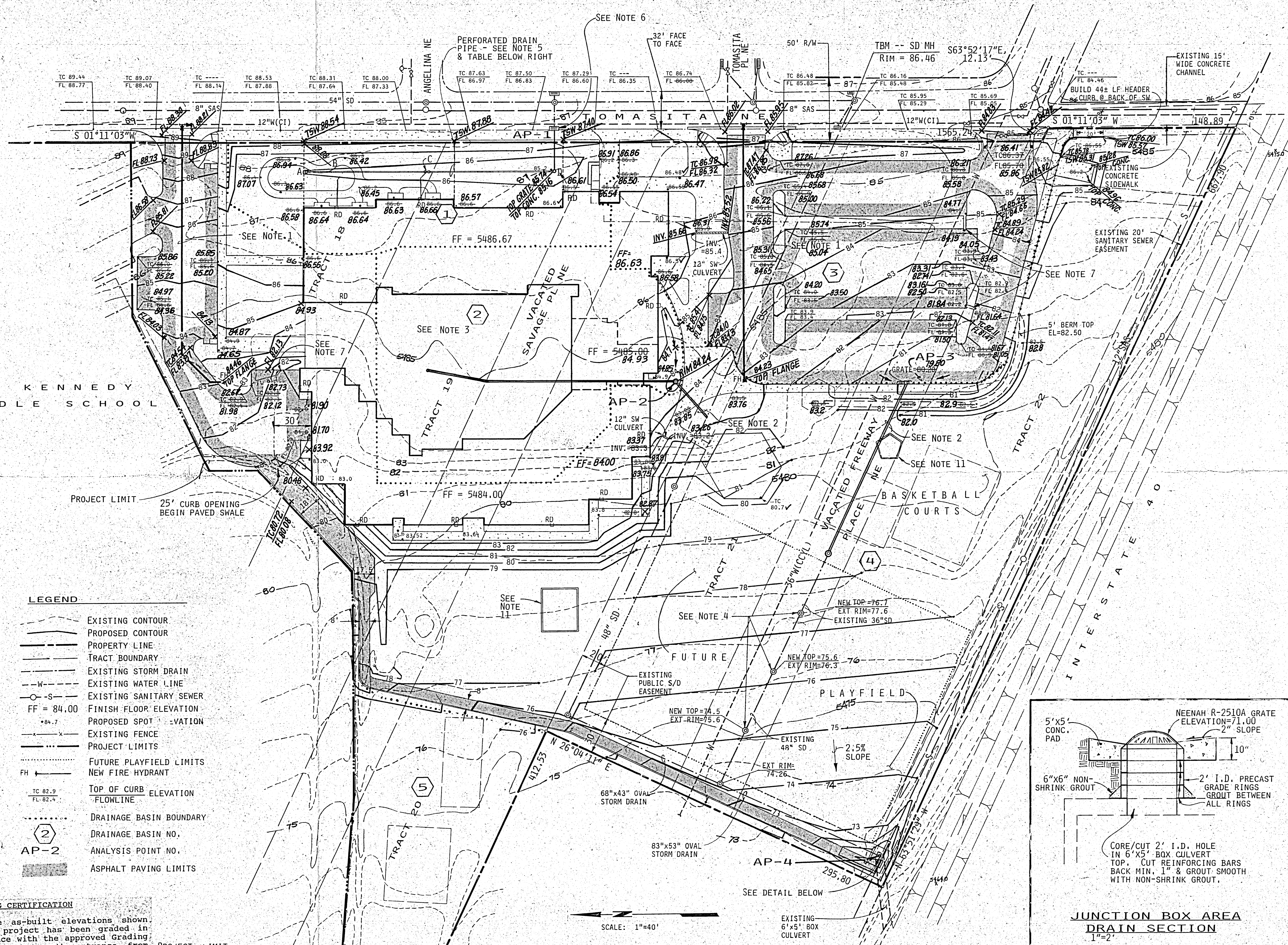
**CERTIFICATION**

As indicated by the as-built information shown hereon, this project has been graded and drained in substantial compliance with the approved Plan. It is based upon this evaluation of as-constructed conditions that this issuance of a Permanent Certificate of Occupancy is hereby recommended. The as-built information shown hereon has been obtained by me or under my direct supervision and is true and correct to the best of my knowledge and belief.

Jeffrey G. Mortensen, NMPE 8547  
 Date 04-22-99







**LEGEND**

- EXISTING CONTOUR
- PROPOSED CONTOUR
- PROPERTY LINE
- TRACT BOUNDARY
- EXISTING STORM DRAIN
- EXISTING WATER LINE
- EXISTING SANITARY SEWER
- FF = 84.00 FINISH FLOOR ELEVATION
- +84.7 PROPOSED SPOT ELEVATION
- EXISTING FENCE
- PROJECT LIMITS
- FUTURE PLAYFIELD LIMITS
- NEW FIRE HYDRANT
- FH
- TC 82.9 FL 82.9 TOP OF CURB ELEVATION
- FLOWLINE
- DRAINAGE BASIN BOUNDARY
- DRAINAGE BASIN NO.
- ANALYSIS POINT NO.
- ASPHALT PAVING LIMITS

**GRADING CERTIFICATION**

As indicated by the as-built elevations shown hereon, the subject project has been graded in substantial conformance with the approved Grading and Drainage Plan. The north entrance from Tomasita N.E. and the center entrance from Tomasita N.E. require additional information for conformance with City standards for private entrance construction. Because of this, this submittal is presented to satisfy requirements for issuance of a Temporary Certificate of Occupancy. Upon further evaluation of the as-built entrance construction conditions, a final certification will be prepared and submitted to satisfy the requirements for issuance of a Permanent Certificate of Occupancy.

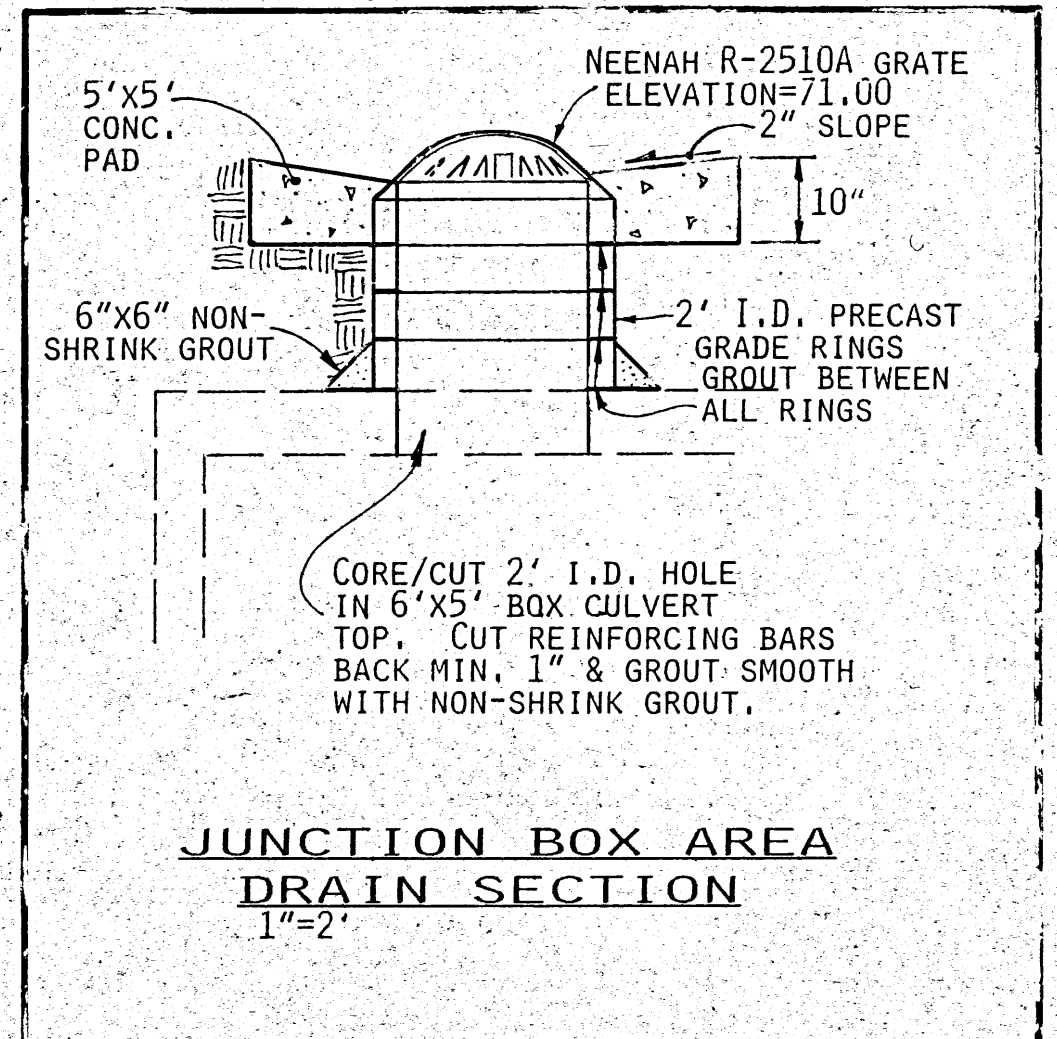
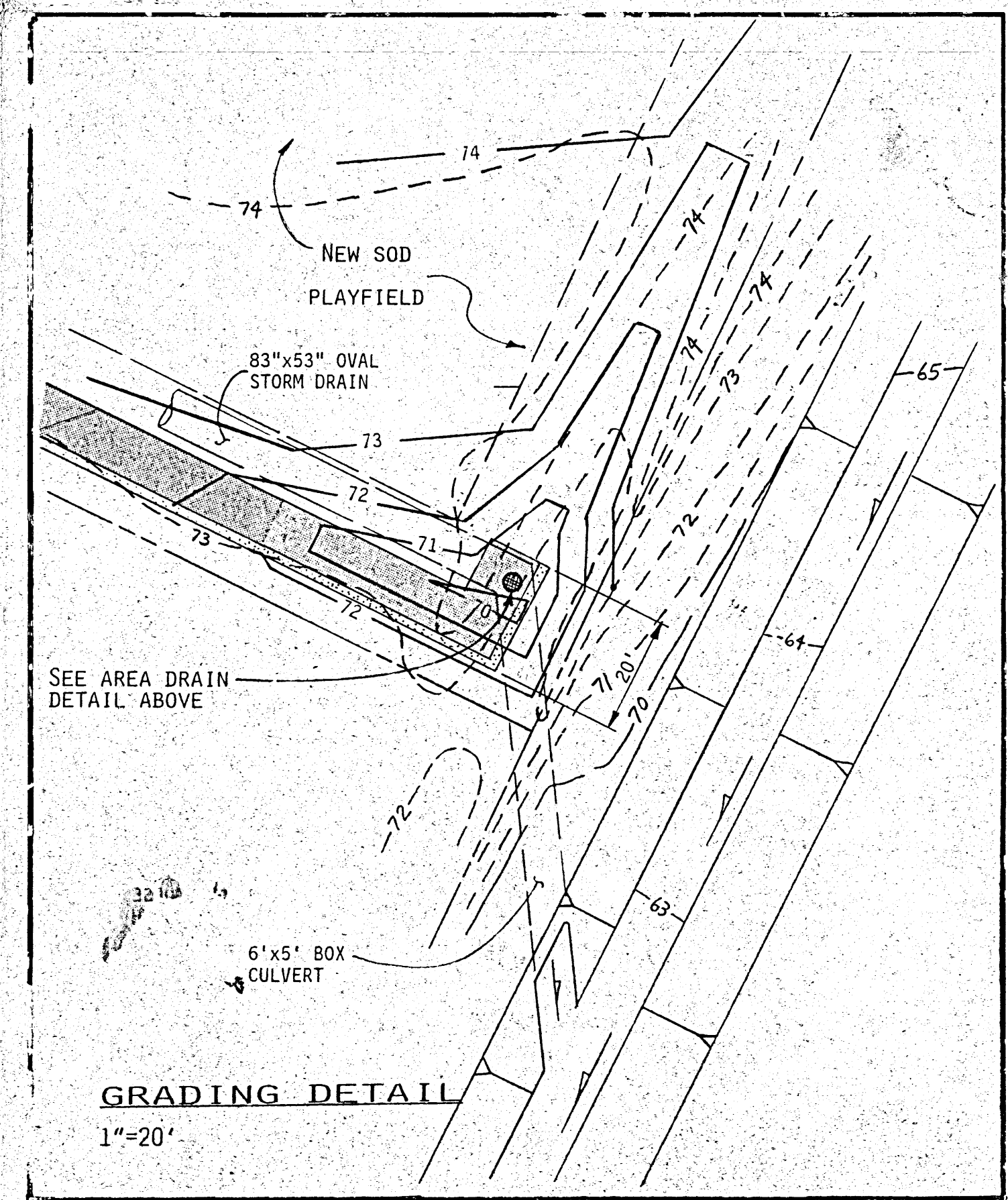
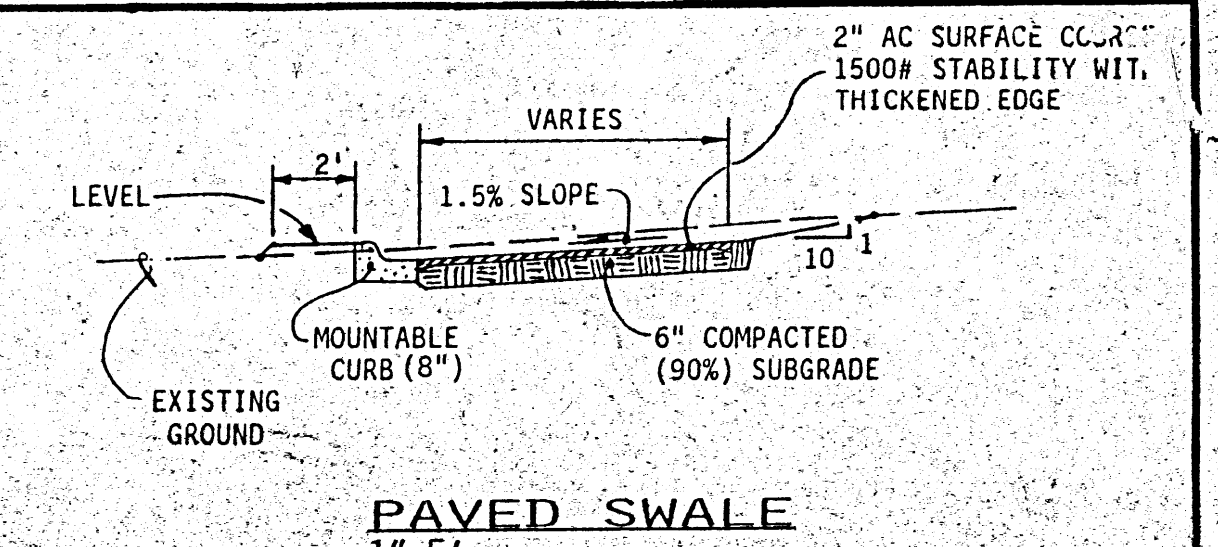
*Joseph G. Mortenson*  
 REGISTERED PROFESSIONAL ENGINEER  
 NEW MEXICO  
 8547  
 08-13-93 Date

- GENERAL NOTES**
- Site information: Data indicating subsurface conditions including utility lines, etc. is provided for the convenience of the Contractor. The data representations shall not be construed as a warranty of accurate locations, sizes, existence, or absence of subsurface conditions. It is expressly understood that the Owner and/or Architect will not be responsible for interpretations or conclusions drawn therefrom by the Contractor. See Site Survey, Grading Plans, Site Plans, Plumbing Plans, Mechanical Plans, and Electrical Plans for utility information.
  - Prior to beginning construction, the Contractor shall secure the assistance of the various utility companies (electric, gas, telephone, water, and sewer) in locating all existing underground utility lines on the project site.
  - During the operations under this contract the Contractor shall take appropriate measures to protect any existing improvements that are to remain. The Contractor shall repair or replace any and all items damaged during the course of work under this contract at no additional cost to the Owner.
  - The Contractor shall field verify all dimensions and equipment affecting the work under this Contract.

**WORK ORDER NO. 4385.90**

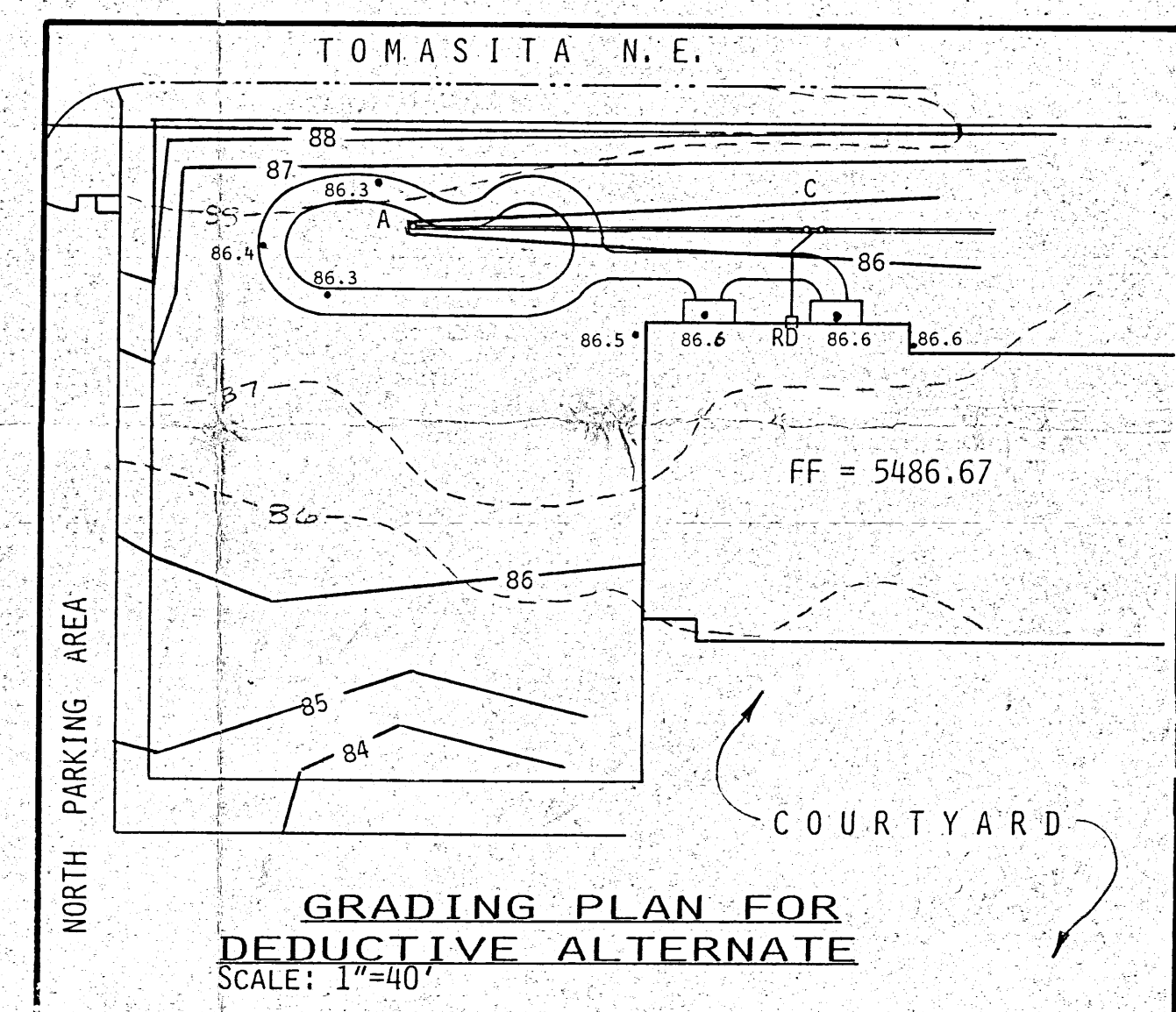
PUBLIC IMPROVEMENTS CONSIST OF TWO FIRE HYDRANT LINE EXTENSIONS, STORM DRAIN EXTENSION TO THE SOUTH PARKING LOT INCLUDING THE DOUBLE 'A' INLET & EARTH BERM, THE CONNECTION TO THE EXISTING INLET IN TOMASITA ST., & THE JUNCTION BOX AREA DRAIN MODIFICATION.

- NOTES**
- SEE SHEET C-2 FOR FIRE LINE EXTENSIONS.
  - SEE SHEET C-2 FOR STORM DRAIN EXTENSIONS.
  - SEE SHEET C-3 FOR COURTYARD GRADING.
  - MH FRAME, LID, GRADE RINGS, & CONE SHALL BE REMOVED AS NEEDED, ON THREE EXISTING MANHOLES IN PLAYFIELD AREA, AND REPLACED WITH SOLID REINFORCED CONCRETE MANHOLE COVERS A MINIMUM OF 8" BELOW THE PROPOSED PLAYFIELD GRADE. PLACE ELECTRONIC MARKER DISKS (EMD'S ARE CONSIDERED INCIDENTAL COST) ABOVE MANHOLES.
  - SEE SHEET C-4 FOR PERFORATED DRAIN PIPE DETAILS.
  - TIE 10" DRAIN LINE INTO EXISTING INLET PER CITY STD. DWG. NO. 2257 AT INVERT SHOWN IN DRAIN LINE TABLE AT RIGHT.
  - SEE SHEET C-4 FOR 2' CURB OPENING DETAIL.
  - SEE ARCHITECTURAL SHEETS FOR PARKING LAYOUTS.
  - SHEETS C-4 THROUGH C-13 PERTAIN TO CONCURRENT APS SITE CONSTRUCTION & ARE NOT INCLUDED IN WORK ORDER #4385.90.
  - SEE SHEETS C-7 & C-8 FOR DRIVEPAD LOCATIONS AND GRADES (NOT PART OF WORK ORDER).
  - CONCRETE CURB FOR SAND BED; SEE ARCHITECTURAL PLANS FOR DETAILS.



**BASIN 1 DRAIN LINE TABLE**

POINT	FEATURE	INVERT	COMMENTS
A	4" CAP	84.80	SINGLE CLEAN OUT (CO)
B	30" PERFORATED PE OR PVC PIPE	84.50	ROOF DRAIN TIE-IN
C	70" PERFORATED PE OR PVC PIPE	84.00	RD TIE-IN & DOUBLE CO
D	10" PERFORATED PE OR PVC PIPE	83.20(83.10 OUT)	NEENAH R-2510A GRATE (ELEV = 85.10)
E	30" 10" SOLID WALL SCHEDULE 40 PVC PIPE	82.52	EXISTING DBL. C INLET



**BENCHMARKS**

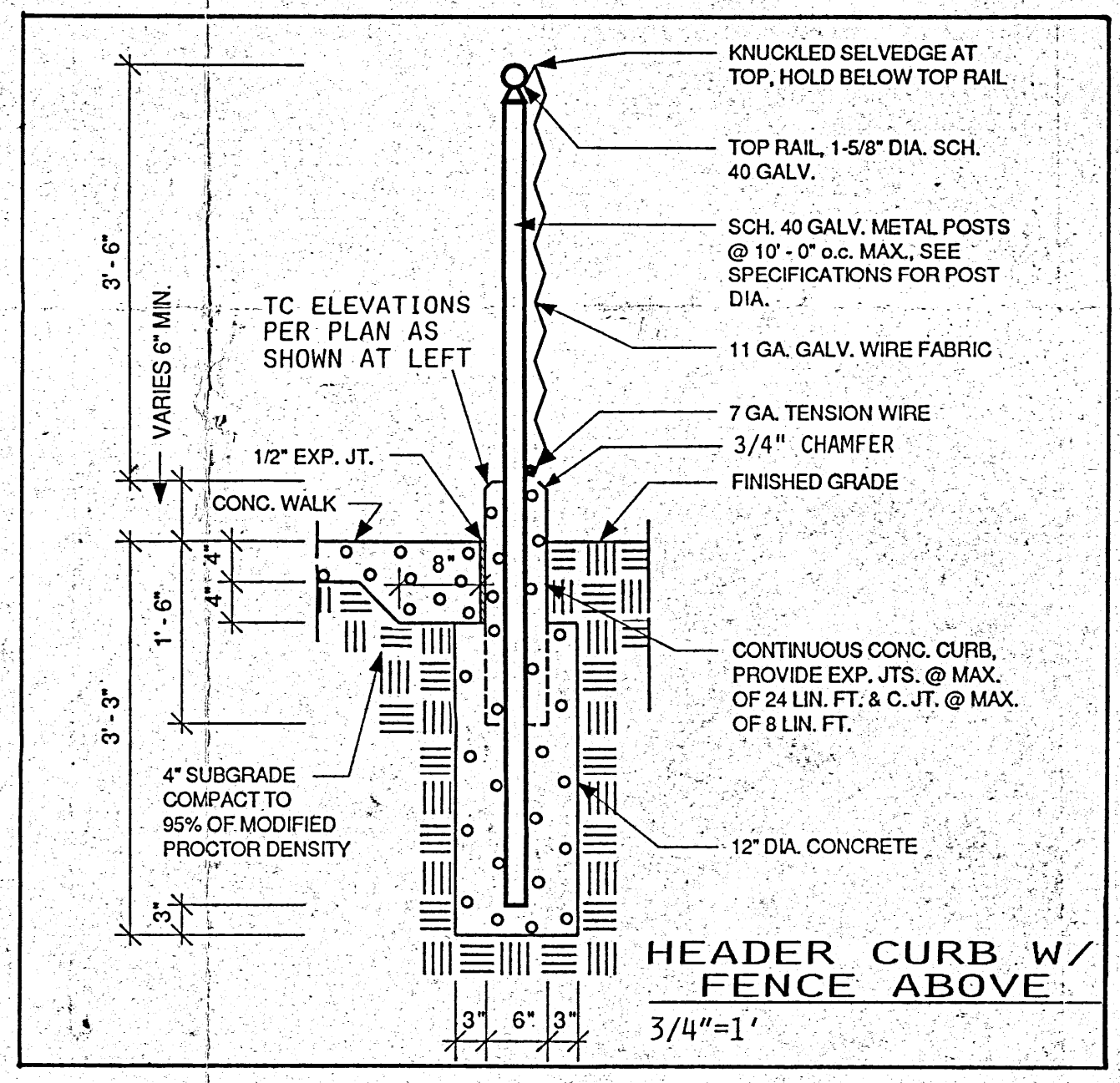
ACS BRASS CAP "5-K21" SET FLUSH WITH THE CURB AT THE SOUTHWEST CURB RETURN AT LOMAS BLVD. NE & TOMASITA STREET NE.  
 ELEVATION: 5498.83

TEMPORARY BENCHMARK: STORM DRAIN MANHOLE RIM LOCATED 80 FEET SOUTH OF THE INTERSECTION OF TOMASITA STREET NE AND TOMASITA PLACE NE.  
 ELEVATION: 5486.46

**TITLE:** TOMASITA ELEMENTARY SCHOOL GRADING & DRAINAGE PLAN

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRG CHAIRMAN	<i>Ray</i>	3-6-92	WATER	<i>W.D.</i>	2-22-92
TRANSPORTATION	<i>W.D.</i>	2-27-92	WASTE WATER	<i>W.D.</i>	
HYDROLOGY	<i>W.D.</i>	3-05-92			

PROJECT NO. 4385.90 MAP NO. K-21 SHEET 2 OF



**HEADER CURB W/ FENCE ABOVE**

KNUCKLED BELLEVUE AT TOP, HOLD BELOW TOP RAIL

TOP RAIL 1.5" DIA. SCH. 40 GALV.

SCH. 40 GALV. METAL POSTS @ 19'-0" o.c. MAX. SEE SPECIFICATIONS FOR POST DIA.

11 GA. GALV. WIRE FABRIC

7 GA. TENSION WIRE

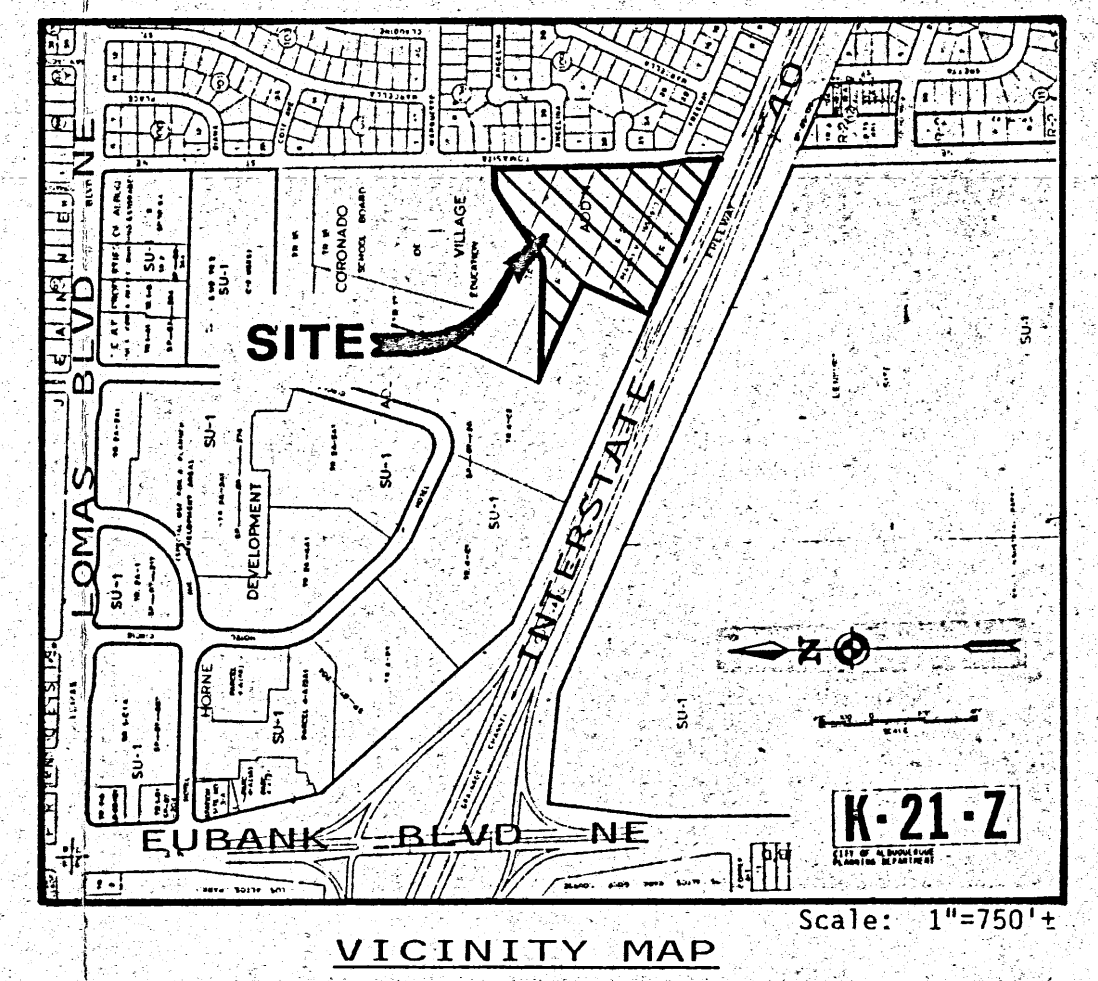
3/4" CHAMFER

FINISHED GRADE

CONTINUOUS CONC. CURB, PROVIDE EXP. JTS. @ MAX. OF 8' LIFT & C-JT. @ MAX. OF 8' LIFT.

12" DIA. CONCRETE

3/4"=1'



**Title of Sheet**  
GRADING & DRAINAGE PLAN

**Architect**  
Edith Cherry • D. James See Architects  
220A Gold Ave. SW, Albuquerque, New Mexico, 87102

**Engineer**  
Joseph G. Mortenson  
REGISTERED PROFESSIONAL ENGINEER  
NEW MEXICO  
8547  
08-13-93 Date

**Sheet Number**  
K-21  
of  
27

**Date**  
MARCH 9, 1992

**Revisions**

**TOMASITA ELEMENTARY SCHOOL**  
701 Tomasita Street NE  
Albuquerque, New Mexico

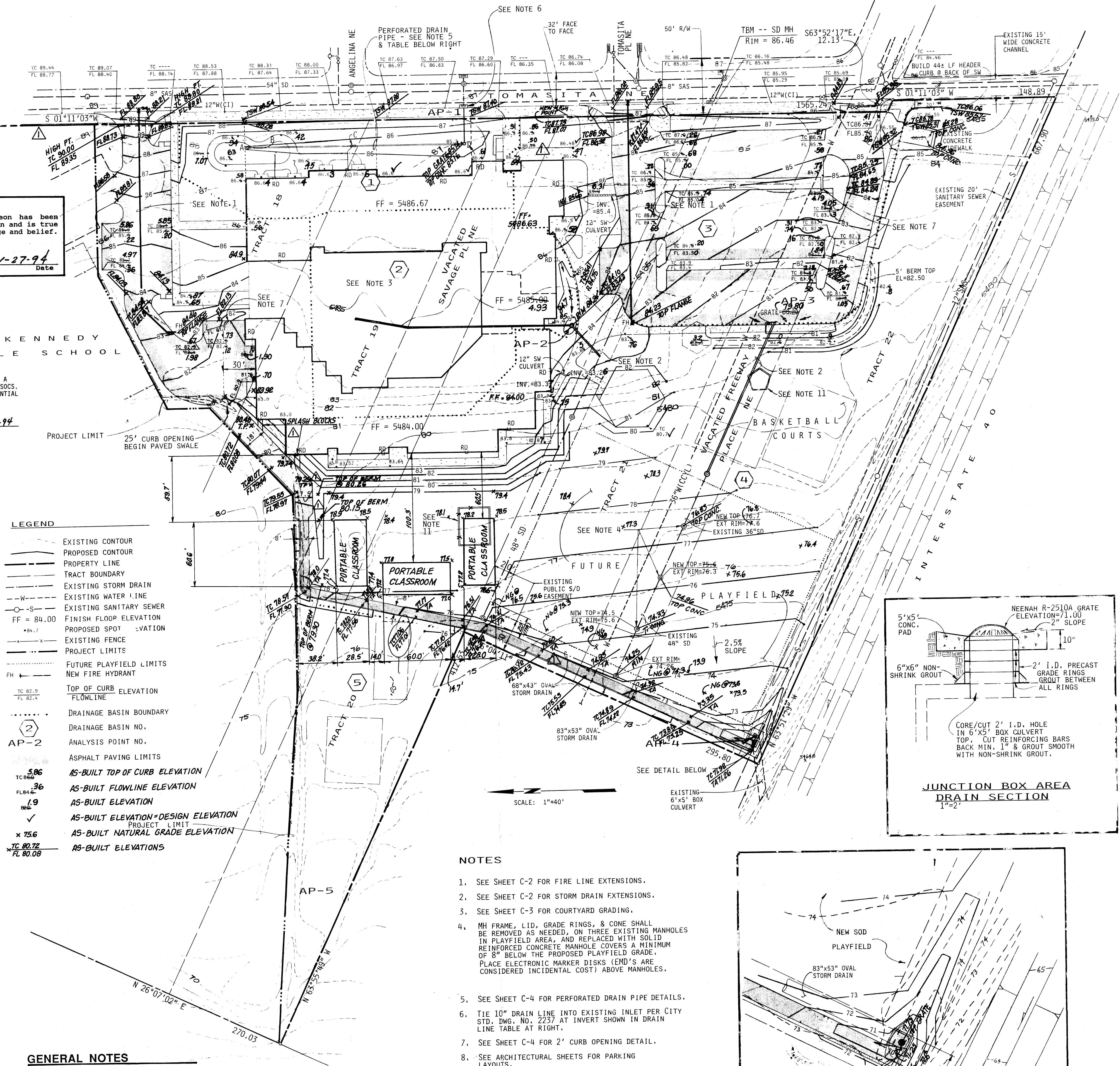


**GRADING CERTIFICATION**  
 The as-built information shown hereon has been obtained by me or under my supervision and is true and correct to the best of my knowledge and belief.

*Jeffrey A. Horvath*  
 PROFESSIONAL ENGINEER  
 STATE OF NEW MEXICO  
 01-27-94 Date

**ENGINEERS CERTIFICATION:**  
 THE AS-BUILT ELEVATIONS SHOWN HEREON ARE FROM A FIELD SURVEY PERFORMED BY JEFF MORTENSEN & ASSOC'S. THE SUBJECT PROJECT HAS BEEN GRADED IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED GRADING PLAN.

*Scott M. McGehee*  
 PROFESSIONAL ENGINEER  
 STATE OF NEW MEXICO  
 2-1-94 Date

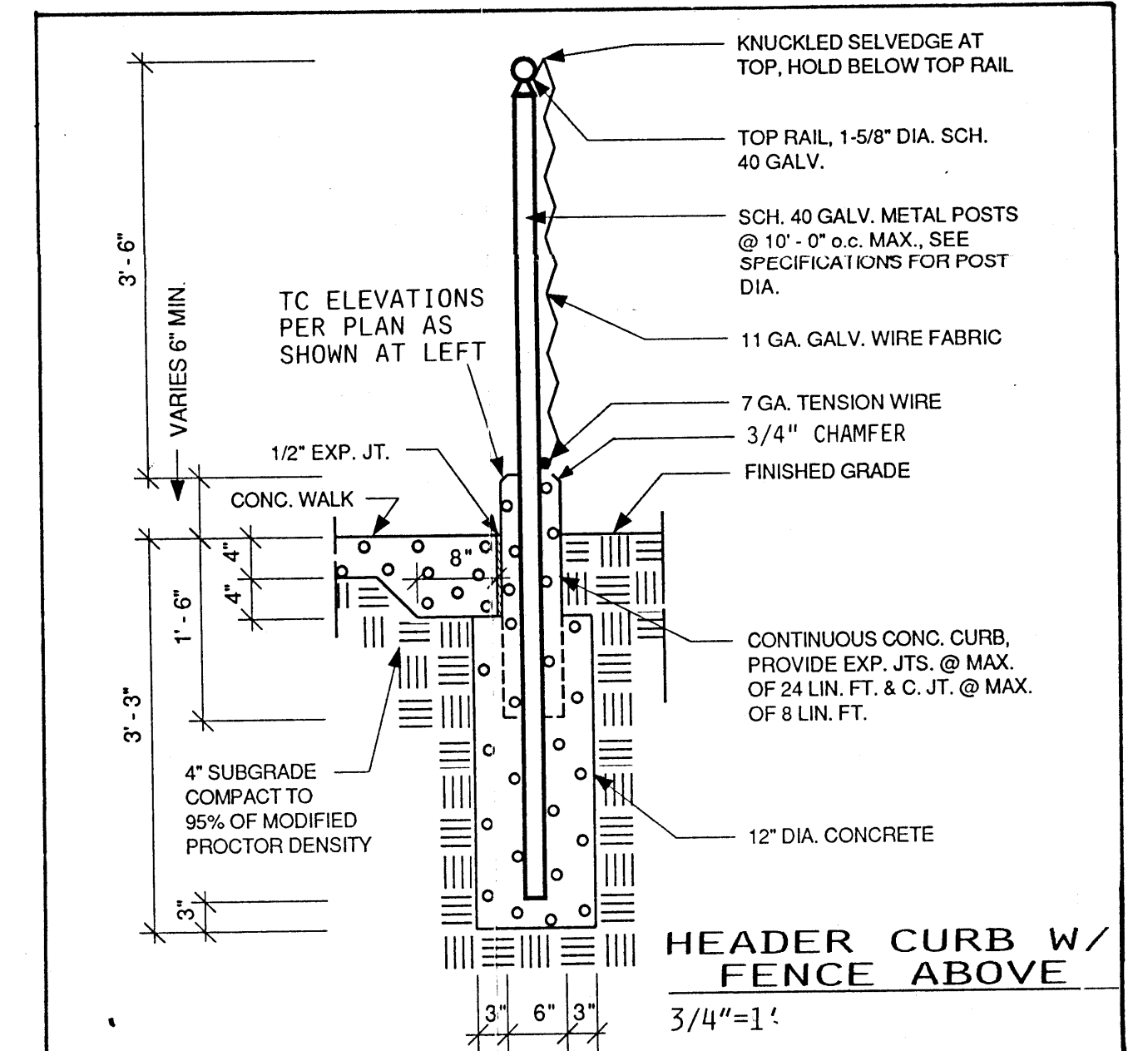
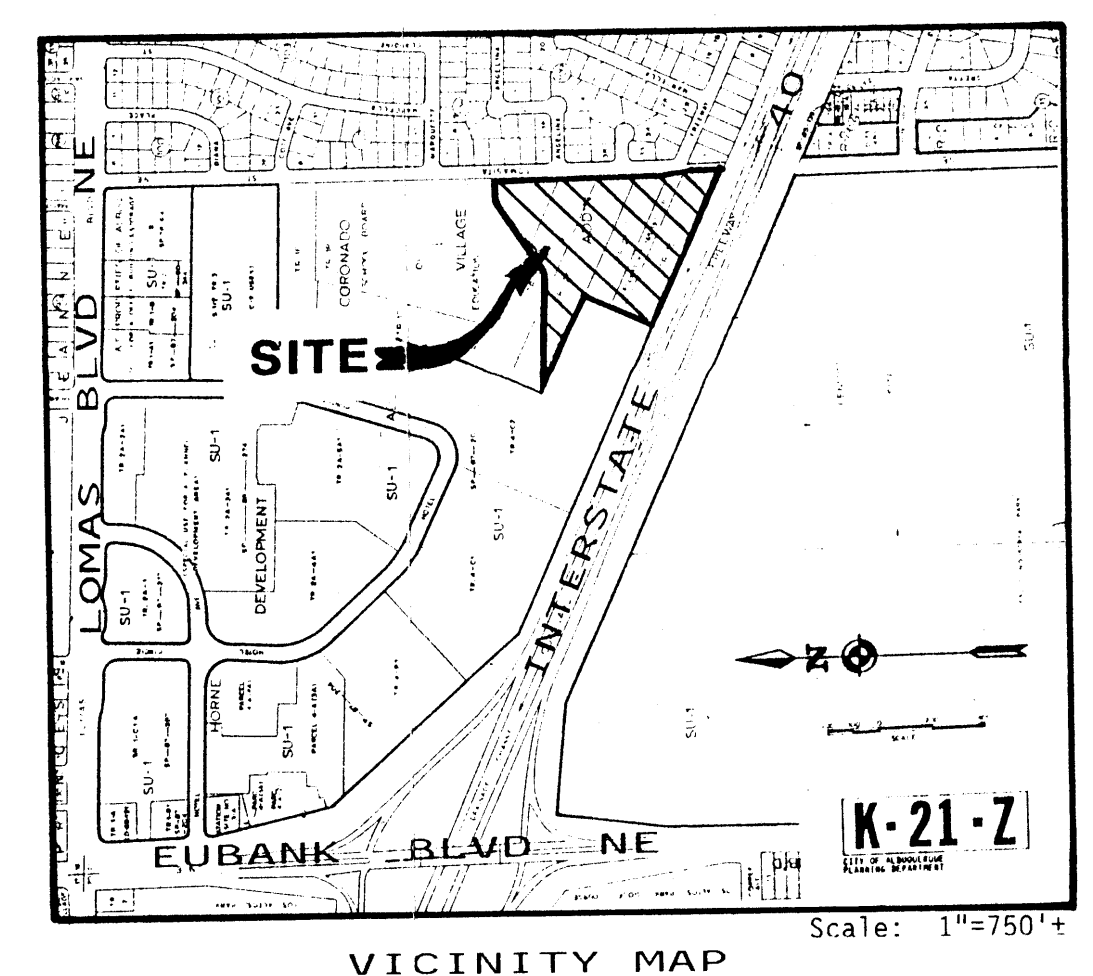
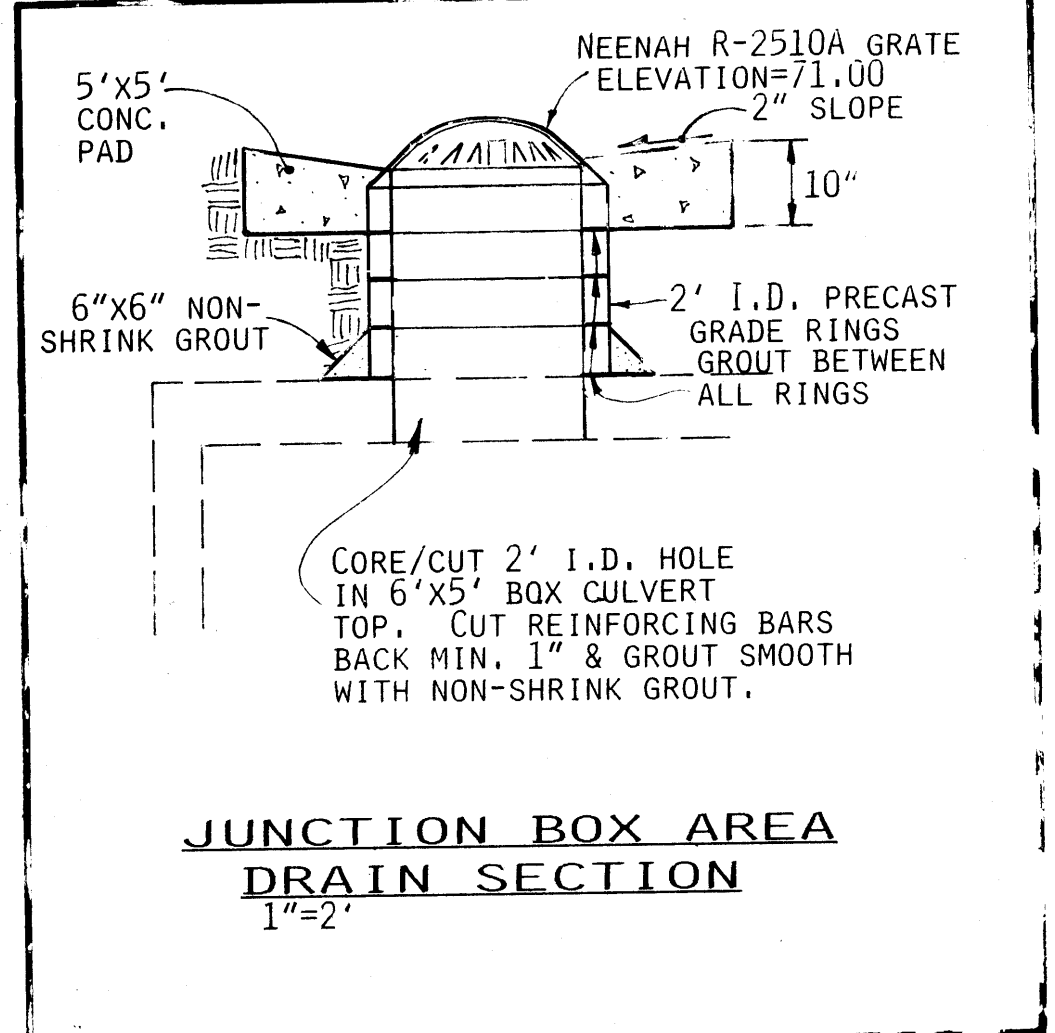
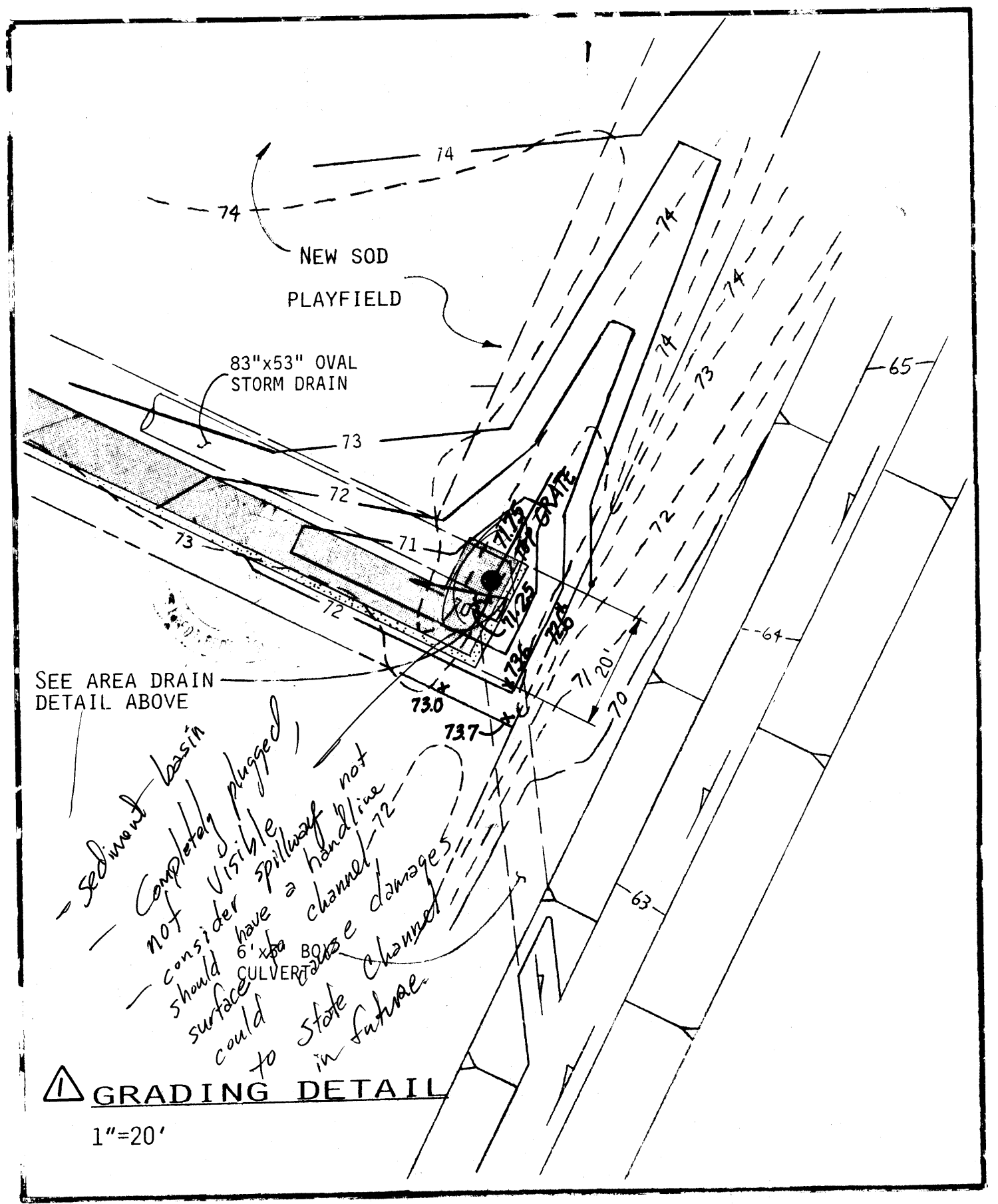
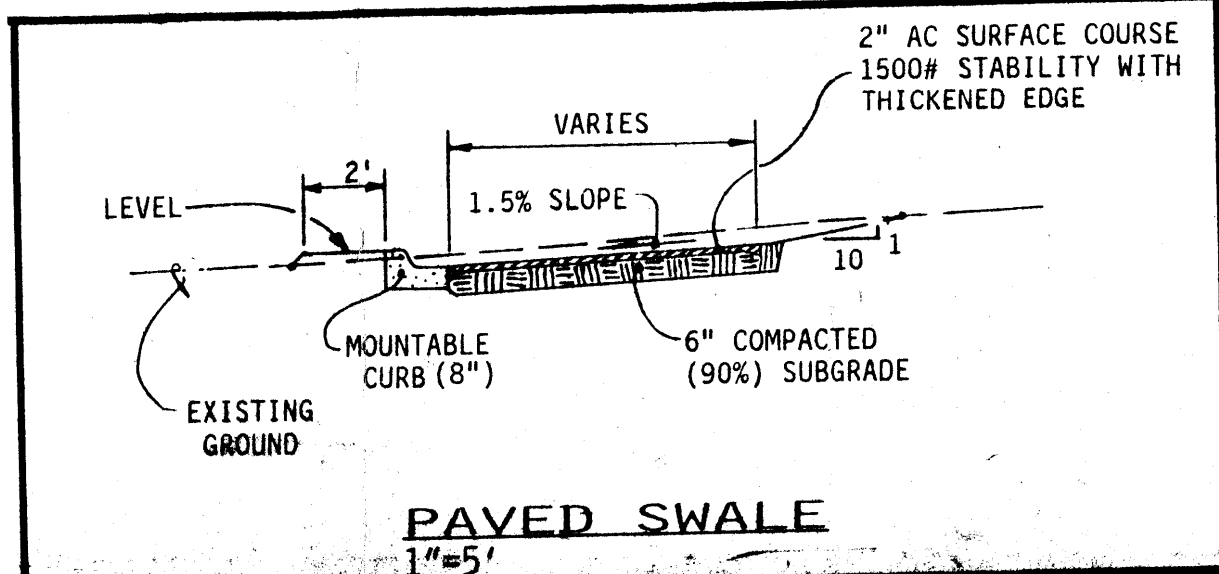


**GENERAL NOTES**

- Site information: Data indicating subsurface conditions including utility lines, etc. is provided for the convenience of the Contractor. The data representations shall not be construed as a warranty of accurate locations, sizes, existence, or absence of subsurface conditions. It is expressly understood that the Owner and/or Architect will not be responsible for interpretations or conclusions drawn therefrom by the Contractor. See Site Survey, Grading Plans, Site Plans, Plumbing Plans, Mechanical Plans, and Electrical Plans for utility information.
- Prior to beginning construction, the Contractor shall secure the assistance of the various utility companies (electric, gas, telephone, water, and sewer) in locating all existing underground utility lines on the project site.
- During the operations under this contract the Contractor shall take appropriate measures to protect any existing improvements that are to remain. The Contractor shall repair or replace any and all items damaged during the course of work under this contract at no additional cost to the Owner.
- The Contractor shall field verify all dimensions and equipment affecting the work under this Contract.

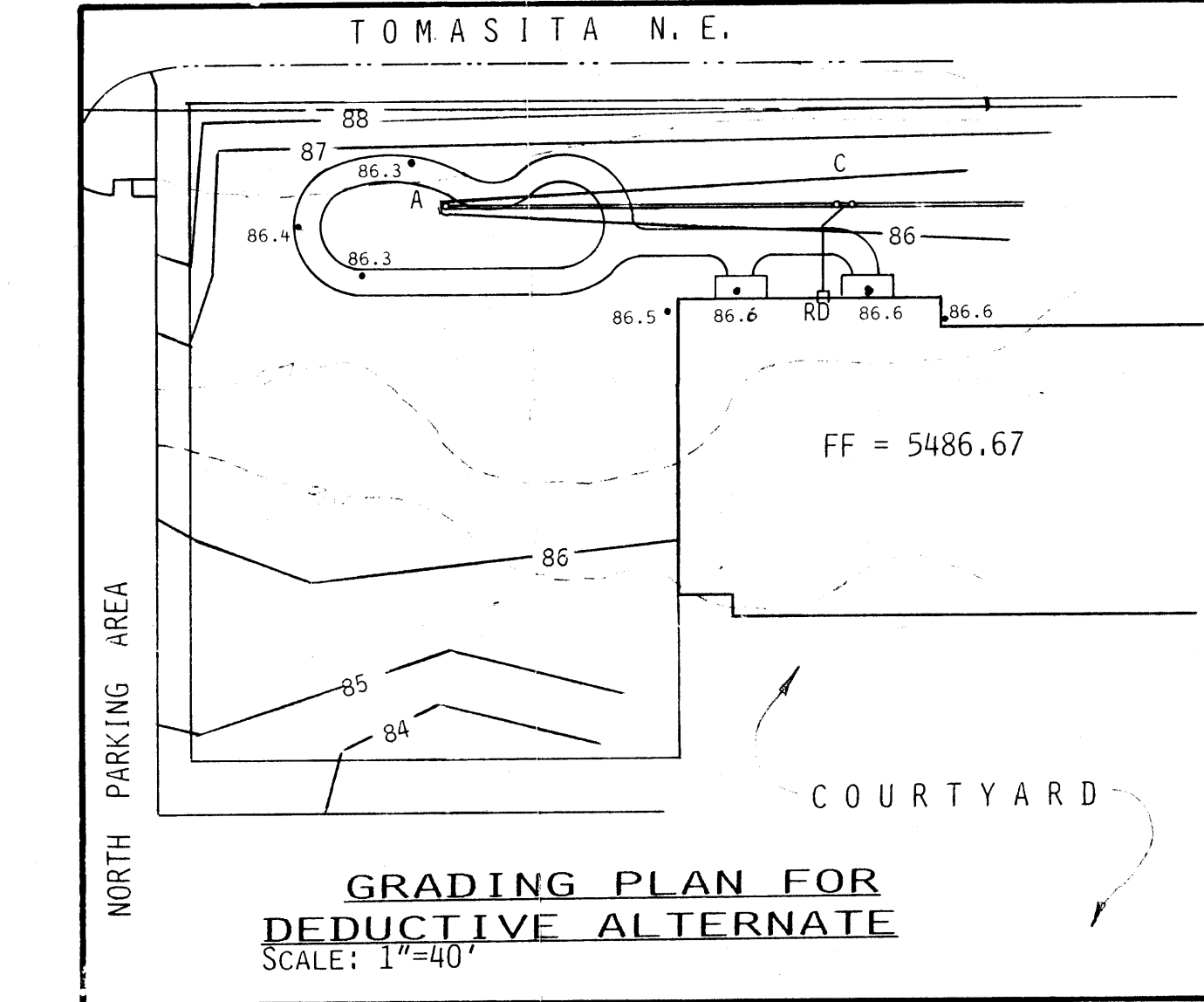
**WORK ORDER NO. 4385.90**  
 PUBLIC IMPROVEMENTS CONSIST OF TWO FIRE HYDRANT LINE EXTENSIONS, STORM DRAIN EXTENSION TO THE SOUTH PARKING LOT INCLUDING THE DOUBLE '4' INLET & EARTH BERM, THE CONNECTION TO THE EXISTING INLET IN TOMASITA ST., & THE JUNCTION BOX AREA DRAIN MODIFICATION.

- NOTES**
- SEE SHEET C-2 FOR FIRE LINE EXTENSIONS.
  - SEE SHEET C-2 FOR STORM DRAIN EXTENSIONS.
  - SEE SHEET C-3 FOR COURTYARD GRADING.
  - MH FRAME, LID, GRADE RINGS, & CONE SHALL BE REMOVED AS NEEDED, ON THREE EXISTING MANHOLES IN PLAYFIELD AREA, AND REPLACED WITH SOLID REINFORCED CONCRETE MANHOLE COVERS A MINIMUM OF 8" BELOW THE PROPOSED PLAYFIELD GRADE. PLACE ELECTRONIC MARKER DISKS (EMD'S ARE CONSIDERED INCIDENTAL COST) ABOVE MANHOLES.
  - SEE SHEET C-4 FOR PERFORATED DRAIN PIPE DETAILS.
  - TIE 10" DRAIN LINE INTO EXISTING INLET PER CITY STD. DWG. NO. 2237 AT INVERT SHOWN IN DRAIN LINE TABLE AT RIGHT.
  - SEE SHEET C-4 FOR 2' CURB OPENING DETAIL.
  - SEE ARCHITECTURAL SHEETS FOR PARKING LAYOUTS.
  - SHEETS C-4 THROUGH C-13 PERTAIN TO CONCURRENT APS SITE CONSTRUCTION & ARE NOT INCLUDED IN WORK ORDER #4385.90.
  - SEE SHEETS C-7 & C-8 FOR DRIVEPAVED LOCATIONS AND GRADES (NOT PART OF WORK ORDER).
  - CONCRETE CURB FOR SAND BED. SEE ARCHITECTURAL PLANS FOR DETAILS.



**BASIN 1 DRAIN LINE TABLE**

POINT	FEATURE	INVERT	COMMENTS
A	4" CAP	84.80	SINGLE CLEAN OUT (CO)
B	30" PERFORATED PE OR PVC PIPE	84.80	ROOF DRAIN TIE-IN
C	7" PERFORATED PE OR PVC PIPE	84.35	RD TIE-IN & DOUBLE CO
D	6" PERFORATED PE OR PVC PIPE	84.00	NEENAH R-2510A GRATE (ELEV = 83.10)
E	100" PERFORATED PE OR PVC PIPE	83.20	EXISTING DBL. C INLET



**BENCHMARKS**

ACS BRASS CAP "5-K21" SET FLUSH WITH THE CURB AT THE SOUTHWEST CURB RETURN AT LOMAS BLVD. NE & TOMASITA STREET NE.  
 ELEVATION: 5498.83

TEMPORARY BENCHMARK: STORM DRAIN MANHOLE RIM LOCATED 90 FEET SOUTH OF THE INTERSECTION OF TOMASITA STREET NE AND TOMASITA PLACE NE.  
 ELEVATION: 5486.46

**01/26/94 JMA AS-BUILT**

**TITLE:** TOMASITA ELEMENTARY SCHOOL GRADING & DRAINAGE PLAN

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DRC CHAIRMAN	Scott M. McGehee	2-6-92	WATER	Jeffrey A. Horvath	2-27-92
TRANSPORTATION	Scott M. McGehee	2-27-92	WASTE WATER	Jeffrey A. Horvath	2-27-92
HYDROLOGY	Scott M. McGehee	2-27-92			

**PROJECT NO.** 4385.90 **MAP NO.** K-21 **SHEET 2 OF**

**Title of Sheet**  
 GRADING & DRAINAGE PLAN

**Architect**  
**Engineer**

**TOMASITA ELEMENTARY SCHOOL**  
 Albuquerque, New Mexico

**Edith Cherry • D. James See Architects**  
 220A Gold Ave. SW, Albuquerque, New Mexico, 87102

**Date**  
 MARCH 9, 1992

**Revisions**

**Sheet Number**  
 of

**01/94 TPH** **931.806**





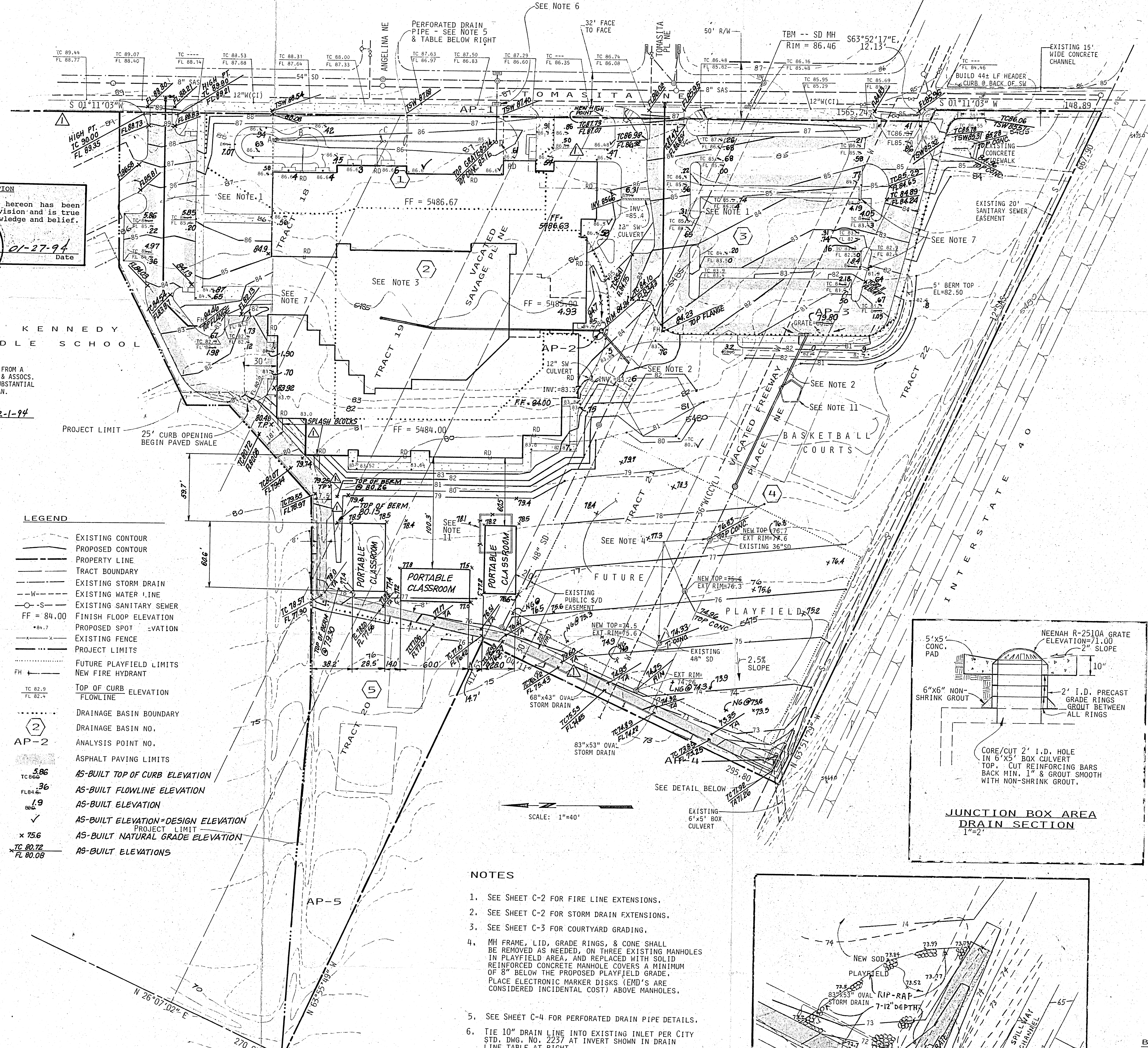






**GRADING CERTIFICATION**  
 The as-built information shown hereon has been obtained by me or under my supervision and is true and correct to the best of my knowledge and belief.  
 Scott M. McGehee  
 NEW MEXICO PROFESSIONAL ENGINEER  
 No. 10519  
 Date: 01-27-94

**ENGINEERS CERTIFICATION:**  
 THE AS-BUILT ELEVATIONS SHOWN HEREON ARE FROM A FIELD SURVEY PERFORMED BY JEFF MORTENSEN & ASSOC. THE SUBJECT PROJECT HAS BEEN GRADED IN SUBSTANTIAL CONFORMANCE WITH THE APPROVED GRADING PLAN.  
 Scott M. McGehee  
 NEW MEXICO PROFESSIONAL ENGINEER  
 No. 10519  
 Date: 2-1-94



**LEGEND**

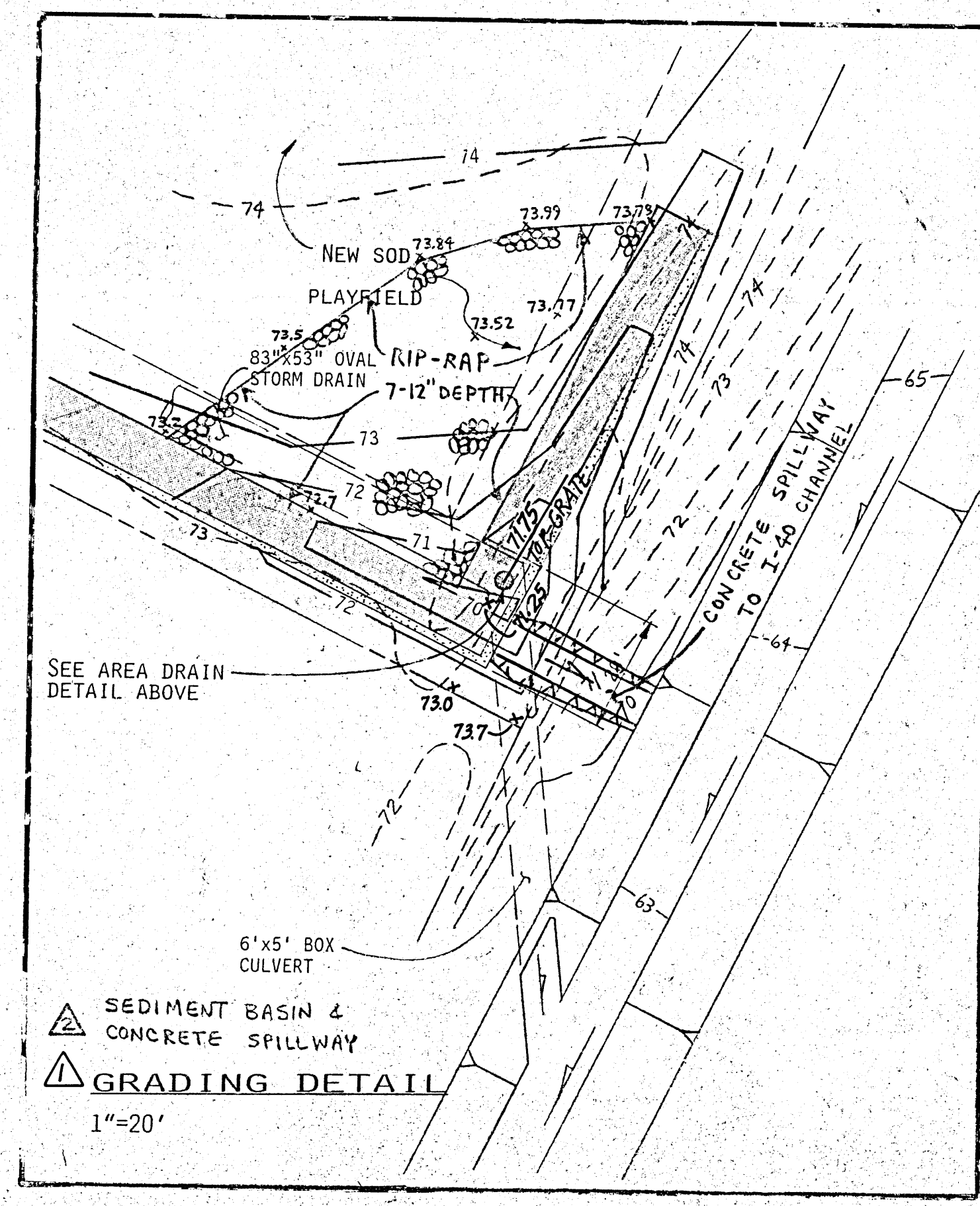
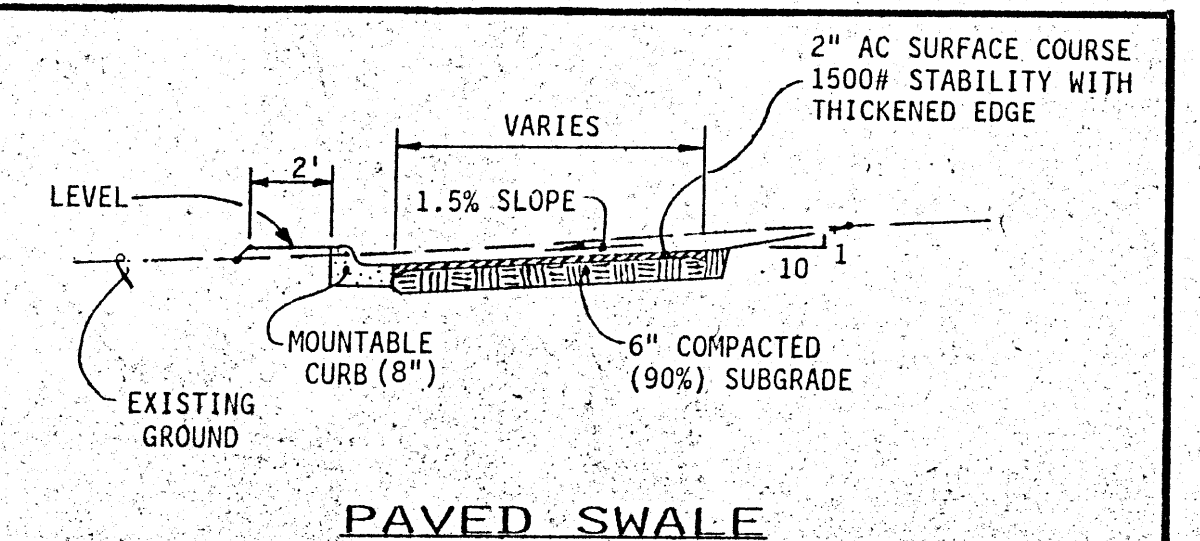
---	EXISTING CONTOUR
- - - -	PROPOSED CONTOUR
---	PROPERTY LINE
---	TRACT BOUNDARY
---	EXISTING STORM DRAIN
---	EXISTING WATER LINE
---	EXISTING SANITARY SEWER
FF = 84.00	FINISH FLOOR ELEVATION
---+---	PROPOSED SPOT ELEVATION
---	EXISTING FENCE
---	PROJECT LIMITS
---	FUTURE PLAYFIELD LIMITS
---	NEW FIRE HYDRANT
TC 82.9 FL 82.4	TOP OF CURB ELEVATION FLOWLINE
---	DRAINAGE BASIN BOUNDARY
(2)	DRAINAGE BASIN NO.
AP-2	ANALYSIS POINT NO.
---	ASPHALT PAVING LIMITS
TC 86 FL 84.6	AS-BUILT TOP OF CURB ELEVATION
TC 86 FL 84.6	AS-BUILT FLOWLINE ELEVATION
TC 86 FL 84.6	AS-BUILT ELEVATION
✓	AS-BUILT ELEVATION = DESIGN ELEVATION
× 75.6	AS-BUILT NATURAL GRADE ELEVATION
TC 80.72 FL 80.06	AS-BUILT ELEVATIONS

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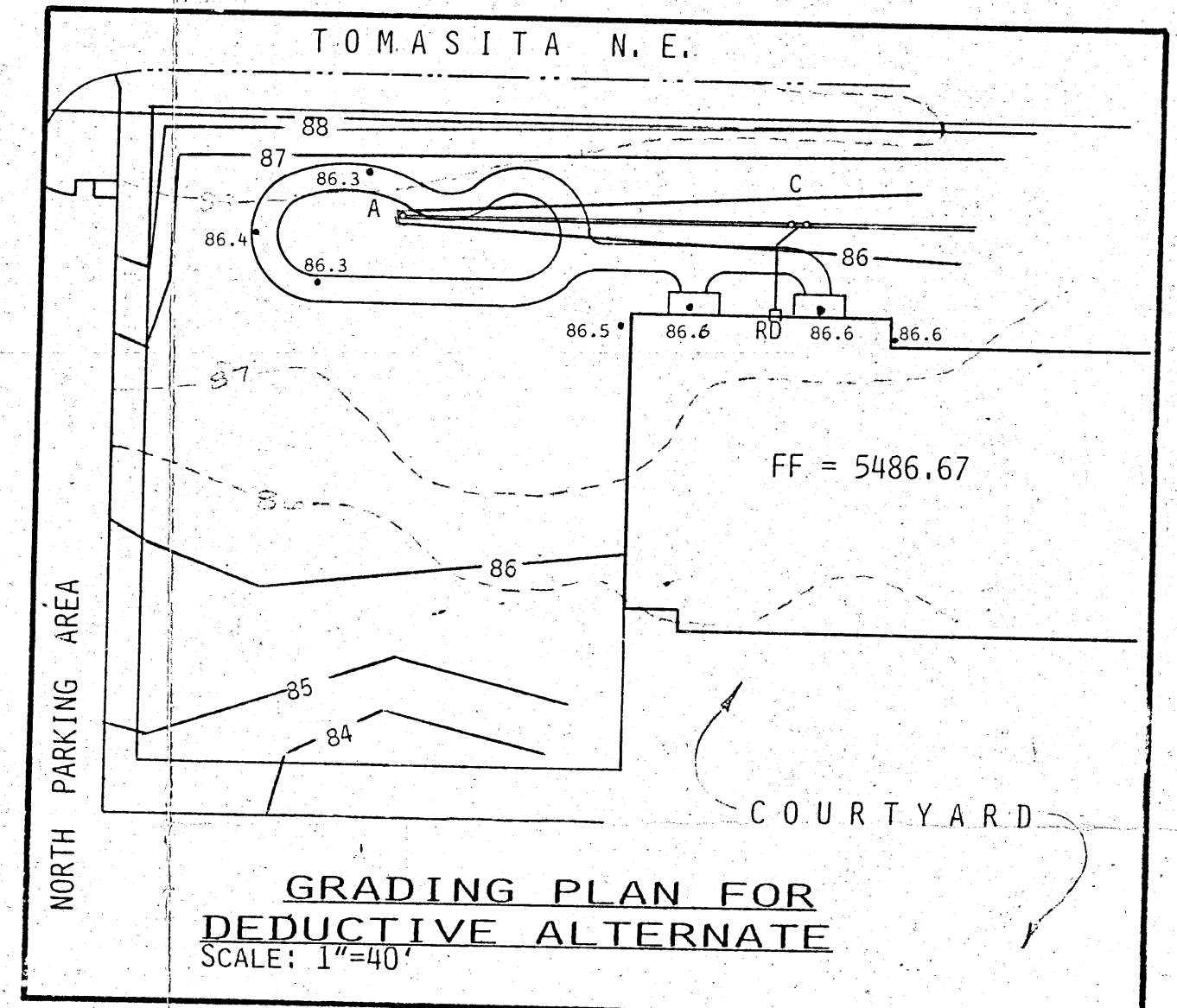
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B	30" PERFORATED PE OR PVC PIPE	84.55	ROOF DRAIN TIE-IN
C	70" REDUCER	84.00	RD TIE-IN & DOUBLE CO
D	100' PERFORATED PE OR PVC PIPE	83.20/83.12 (OUT)	NEENAH R-2510A GRATE
E	30" SOLID WALL SCHEDULE 40 PVC PIPE	82.52	EXISTING DBL. C INLET



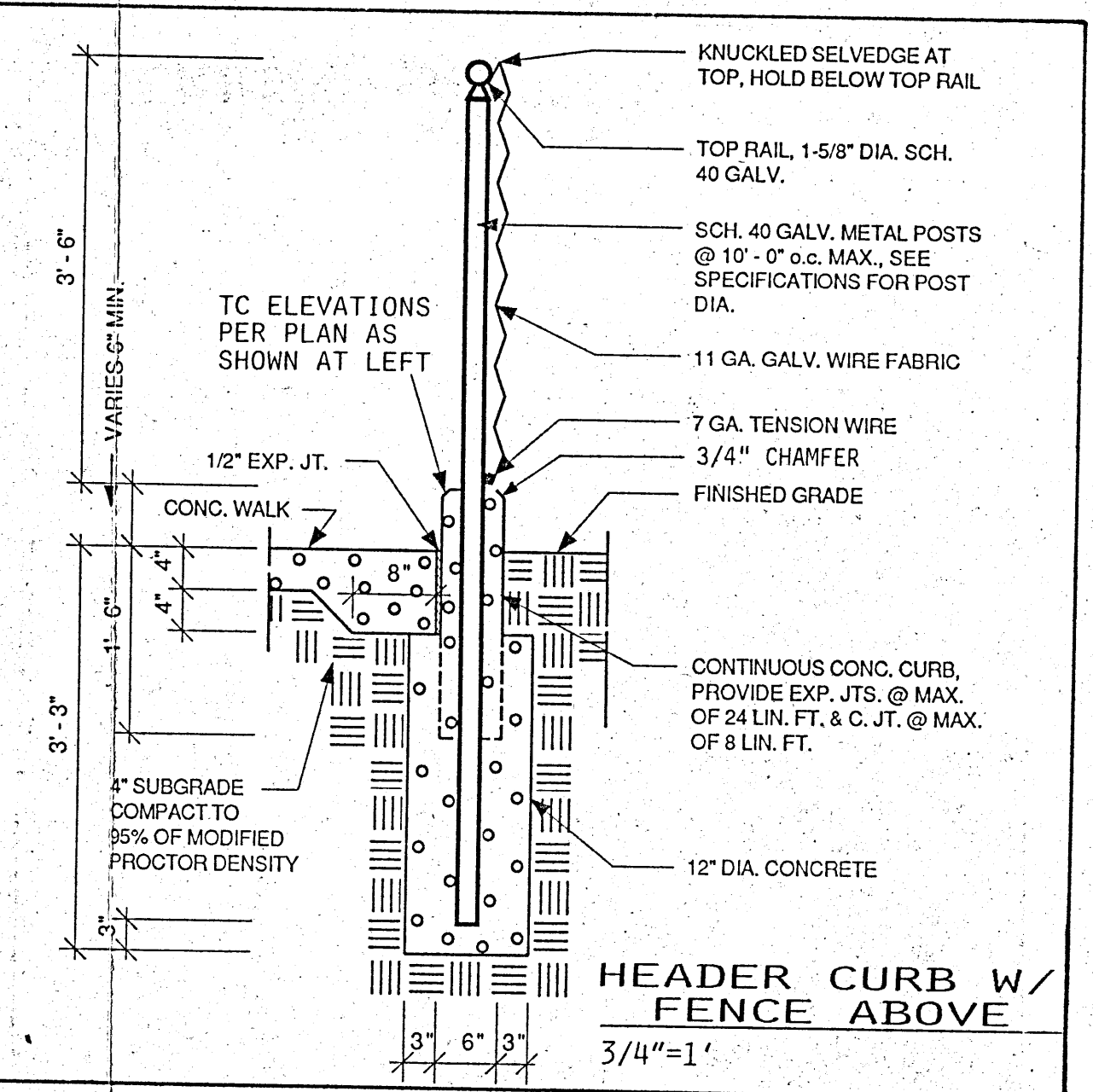
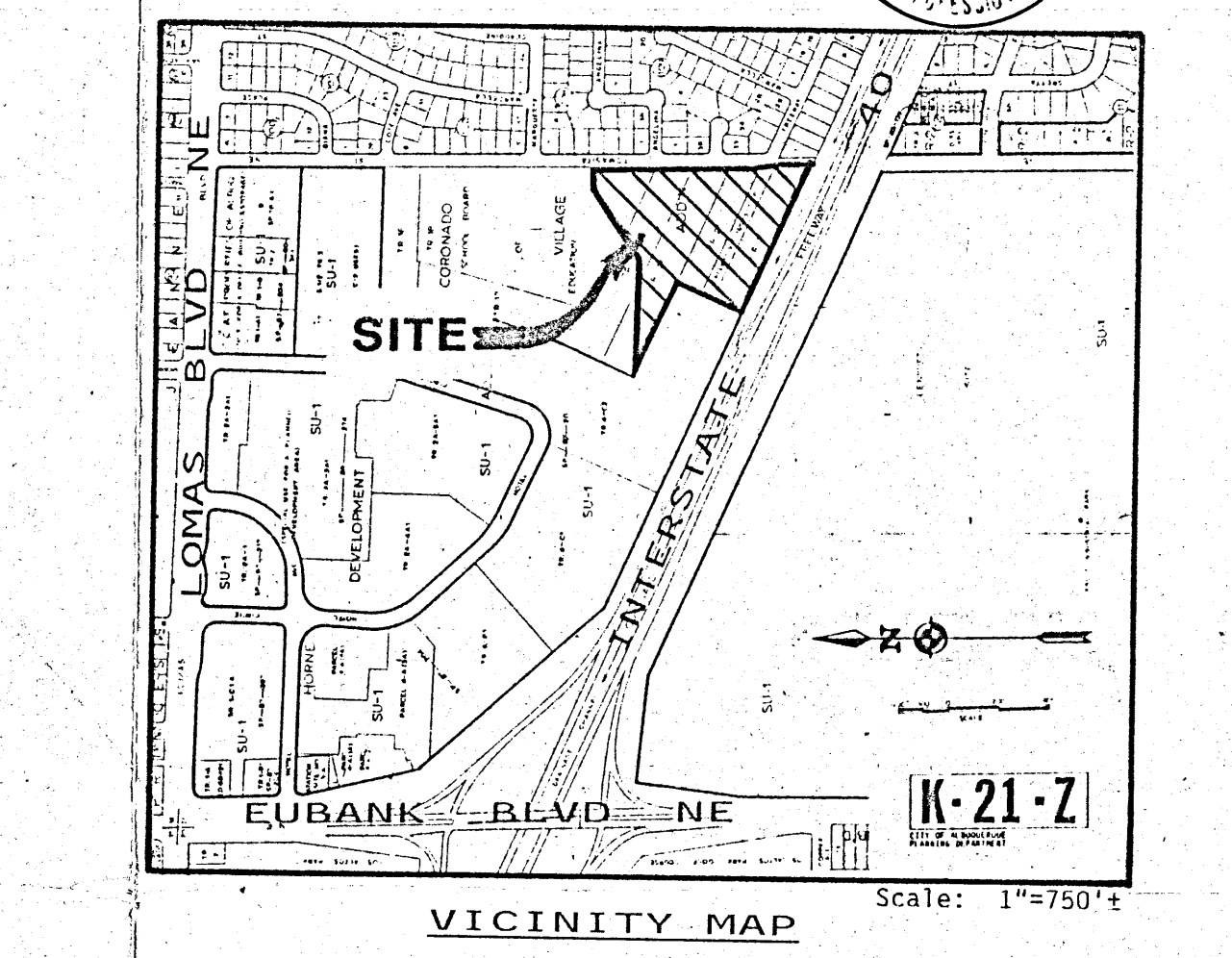
**BENCHMARKS**  
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 ELEVATION: 5486.46

**APPROVALS**

APPROVALS	ENGINEER	DATE	APPROVALS	ENGINEER	DATE
DIC CHAIRMAN	Reg. H. H.	7-6-92	WATER	Wilson	2-27-94
TRANSPORTATION	Reg. H. H.	2-27-94	WASTE WATER	ADD	"
HYDROLOGY	Reg. H. H.	3-25-92			

PROJECT NO. 4385.90 MAP NO. K-21 SHEET 2 OF 7

**ENGINEER'S CERTIFICATION:** SEDIMENTATION BASIN & CONCRETE SPILLWAY  
 I, SCOTT M. MCGEE, LICENSED UNDER THE LAWS OF THE STATE OF NEW MEXICO, DO HEREBY CERTIFY THAT THE NOTED PORTION OF THIS PROJECT WAS CONSTRUCTED IN SUBSTANTIAL COMPLIANCE WITH THE SUPPLEMENTAL PLAN PREPARED BY WILSON & COMPANY 07/25/94 (ADDRESSING 02/15/94 HYDROLOGY CONCERNS) AS FIELD VERIFIED BY WILSON & COMPANY, NMLS NO. 10855 ON 11/09/95 IN ACCORDANCE WITH THE 'NEW MEXICO ENGINEERING AND SURVEYING ACT' SECTION 61-23-1 THROUGH 61-23-32 NMSD (1978).  
 Scott M. McGehee  
 NEW MEXICO PROFESSIONAL ENGINEER  
 No. 10519  
 Date: 1/10/96



**Title of Sheet**  
 GRADING & DRAINAGE PLAN

**Architect**  
 Edith Cherry  
 D. James See Architects  
 220A Gold Ave. SW, Albuquerque, New Mexico, 87102

**TOMASITA ELEMENTARY SCHOOL**  
 Albuquerque, New Mexico  
 701 Tomasita Street NE

**Date**  
 MARCH 9, 1992

**Revisions**

**Sheet Number**  
 2 of 7