

## DRAINAGE PLAN

### I. INTRODUCTION AND EXECUTIVE SUMMARY

THIS PROJECT, LOCATED ALONG THE NORTH 1-25 CORRIDOR IN THE NORTHEAST HEIGHTS OF THE ALBUQUERQUE METROPOLITAN AREA, REPRESENTS A MODIFICATION TO AN EXISTING SITE WITHIN AN INFILL AREA. THE PURPOSE OF THIS PROJECT IS TO EXPAND AND MODIFY THE EXISTING PARKING AVAILABLE TO THE PRESBYTERIAN NORTHSIDE MEDICAL COMPLEX.

THIS SUBMITTAL IS MADE IN SUPPORT OF A GRADING AND PAVING PERMIT APPROVALS WITHIN THE JURISDICTION OF THE CITY OF ALBUQUERQUE.

### II. PROJECT DESCRIPTION

AS SHOWN BY THE VICINITY MAP, THE SCHOOL SITE IS LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF THE I-25 EAST FRONTAGE ROAD AND HARPER AVENUE NE. THE CURRENT LEGAL DESCRIPTION IS TRACT B-5-A-1-A, ACADEMY ACRES, UNIT 5. AS SHOWN BY PANEL 139 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY FEMA FOR BERNALILLO COUNTY, NEW MEXICO, SEPTEMBER 26, 2008, THIS SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE. THE SITE DOES, HOWEVER, LIE SOUTH OF A ZONE A THAT COINCIDES WITH A FORMER ARROYO THAT DOES NOT IMPACT THE PROPOSED PARKING LOT SITE, AND EAST OF A ZONE AO (DEPTH 1) THAT LIES ALONG THE EAST EMBANKMENT OF I-25. THE SITE WILL CONTRIBUTE RUNOFF TO THE ZONE AO (DEPTH 1) DESIGNATED FLOOD HAZARD ZONE.

### III. BACKGROUND DOCUMENTS

THE PREPARATION OF THIS PLAN RELIED UPON THE FOLLOWING DOCUMENTS AND ACTIVITIES:

- TOPOGRAPHIC SURVEY PREPARED BY HIGH MESA CONSULTING GROUP (NMP 11184) DATED 11-05-2010. THIS REFERENCED SURVEY PROVIDES THE BASIS FOR THE EXISTING CONDITIONS OF THE PROJECT SITE.
- CITY OF ALBUQUERQUE HYDROLOGY FILE NO. E18/0005A. REVIEW OF THE CITY FILE INDICATES THAT THERE ARE NO REQUIREMENTS IMPOSED UPON PRIOR SUBMITTALS TO DETAIN RUNOFF AND THAT FREE DISCHARGE IS ALLOWABLE BASED UPON THE LOCATION OF SITE AT THE BOTTOM OF THE WATERSHED
- VISUAL SITE INSPECTION ON DECEMBER 01, 2010 TO CONFIRM DOWNSTREAM FLOW PATH AND OUTFALL

### IV. EXISTING CONDITIONS

THE SITE PRESENTLY CONSISTS OF A PORTION OF AN EXISTING PARKING LOT AND EXISTING LANDSCAPING THAT LIE AT THE NORTHWEST CORNER OF THE EXISTING NORTHSIDE HOSPITAL. AT PRESENT, THE PROJECT SITE RECEIVES ONSITE RUNOFF FROM EXISTING PARKING AREAS SITUATED UPSTREAM AND TO THE EAST. OFFSITE FLOWS DO NOT ENTER THE PROJECT SITE. INSTEAD, OFFSITE FLOWS ARE CONVEYED WITHIN THE ZONE A REFERENCED ABOVE AND THEREFORE BYPASS THE PROJECT SITE TO THE NORTH ENROUTE TO THE EAST FRONTAGE ROAD DOWNSTREAM AND WEST OF THE SITE.

THE RUNOFF GENERATED BY THIS AREA GENERALLY FLOWS FROM EAST TO WEST AND IS INTERCEPTED BY A GRASS-LINED DITCH THAT PARALLELS AN INTERNAL PRIVATE LOOP ROAD. AT THIS POINT, THE RUNOFF FLOWS SOUTH TO EVENTUALLY CROSS THE INTERNAL PRIVATE LOOP ROAD OVERFLOWING TO THE WEST. THE OVERFLOW THEN PROCEEDS WEST VIA SHEETFLOW ACROSS PAVED SURFACES TO REACH THE I-25 EAST FRONTAGE ROAD. FROM THIS POINT, THE RUNOFF FLOWS NORTH WITHIN A BROAD GRASS-LINED BAR DITCH ALONG THE EAST EDGE OF THE FRONTAGE ROAD TO ENTER A SERIES OF CULVERTS THAT COINCIDE WITH THE AFOREMENTIONED ZONE A DESIGNATED FLOOD HAZARD ZONE. FROM THIS POINT, THE RUNOFF PASSES BENEATH THE FRONTAGE ROAD AND ENTERS THE AO (DEPTH 1) DESIGNATED FLOOD HAZARD ZONE THAT LIES BETWEEN THE I-25 EMBANKMENT AND THE EAST FRONTAGE ROAD. THE RUNOFF THAT ACCUMULATES AT I-25 EVENTUALLY MIGRATES SOUTH TO ENTER THE BOREALIS CHANNEL THAT FLOWS WEST TO JOIN THE SOUTH PINO ARROYO.

### V. DEVELOPED CONDITIONS

THE PROPOSED CONSTRUCTION CONSISTS OF THE EXPANSION AND MODIFICATION OF THE EXISTING PARKING LOT. THE EXPANSION REQUIRES THE DEMOLITION OF A PORTION OF THE EXISTING LANDSCAPING. RUNOFF FROM THE UPSTREAM ONSITE CONTRIBUTING AREA WILL BE INTERCEPTED BY A NEW PRIVATE STORM INLET THAT WILL PIPE THE FLOWS BENEATH THE PARKING LOT EXPANSION TO DISCHARGE TO THE EXISTING GRASS-LINED DITCH SOUTH AND WEST OF THE PROJECT SITE. RUNOFF GENERATED BY THE NEW PAVING WILL ALSO BE COLLECTED BY PRIVATE STORM INLETS AND CONVEYED BY PRIVATE STORM DRAIN PIPING TO THE DOWNSTREAM GRASS-LINED DITCH. FROM THIS POINT, THE RUNOFF WILL FOLLOW ITS HISTORIC PATH OF CROSSING OVER THE INTERNAL PRIVATE LOOP ROAD AND SHEET DRAINING ACROSS EXISTING PAVING TO EVENTUALLY ENTER THE AO (DEPTH 1) DESIGNATED FLOOD HAZARD ZONE THAT LIES ALONG THE EAST EDGE OF I-25. THIS PROPOSED PATTERN OF DRAINAGE IS CONSISTENT WITH THE EXISTING DRAINAGE PATTERN AND PREVIOUSLY APPROVED PLANS FOR THE COMPLEX.

### VI. GRADING PLAN

THE GRADING PLAN SHOWS 1.) EXISTING AND PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1'-0" INTERVALS, 2.) THE LIMIT AND CHARACTER OF THE EXISTING AND PROPOSED IMPROVEMENTS, AND 3.) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES. AS SHOWN BY THIS PLAN, THE PROPOSED GRADING WILL CONTINUE THE CURRENT DRAINAGE PATTERN OF DISCHARGE TO THE EXISTING GRASS-LINED DITCH AND ULTIMATE DISCHARGE TO THE BOREALIS CHANNEL THAT FLOWS WEST TO JOIN THE SOUTH PINO ARROYO.

### VII. CALCULATIONS

THE CALCULATIONS CONTAINED HEREON ANALYZE 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 DEMONSTRATED BY THESE CALCULATIONS, THE PROPOSED PROJECT WILL RESULT IN A MINOR INCREASE IN THE RUNOFF GENERATED BY THE OVERALL SITE. THIS WILL HAVE A NEGLIGIBLE IMPACT ON THE DOWNSTREAM CONDITIONS DESCRIBED ABOVE.

CALCULATIONS FOR THE PRIVATE STORM DRAIN CAPACITY HAVE NOT BEEN INCORPORATED INTO THIS SUBMITTAL. THIS IS DUE TO THE FACT THAT THE STORM DRAIN DESIGN IS BASED UPON MINIMUM COVER, LIMITED DEPTH OF BURY, AND LIMITED FALL FROM THE UPPER POINT OF COLLECTION TO THE DOWNSTREAM POINT OF DISCHARGE. TO ENHANCE THE CAPACITY OF THE NEW PRIVATE STORM DRAIN, DOUBLE GRATED INLETS HAVE BEEN PROPOSED ALONG WITH PARALLEL DISCHARGE PIPES. EXCESS RUNOFF WILL SIMPLY POOL BEING DETAINED IN THE RESPECTIVE PARKING LOTS AND DISCHARGE AT A CONTROLLED RATE TO THE GRASS-LINED DITCH.

### VIII. CONCLUSIONS

THE FOLLOWING CONCLUSIONS HAVE BEEN ESTABLISHED AS A RESULT OF THE EVALUATIONS CONTAINED HEREIN:

- THE PROPOSED IMPROVEMENTS WILL MAINTAIN THE EXISTING DRAINAGE PATTERNS OF THIS PORTION OF THE EXISTING MEDICAL COMPLEX
- THE PROPOSED DRAINAGE PATTERNS ARE CONSISTENT WITH THE PREVIOUSLY APPROVED DRAINAGE PLANS FOR THIS SITE
- THE PROPOSED IMPROVEMENTS WILL CREATE A NEGLIGIBLE INCREASE IN RUNOFF GENERATED BY THE SITE
- THE PROPOSED IMPROVEMENTS WILL NOT ADVERSELY IMPACT DOWNSTREAM PROPERTIES OR DOWNSTREAM DRAINAGE CONDITIONS

## CALCULATIONS

### I. SITE CHARACTERISTICS

- A. PRECIPITATION ZONE = 3
- B.  $P_{0.100} = P_{300} = 2.60$
- C. TOTAL PROJECT AREA ( $A_T$ ) = 45,820 SF  
1.05 AC

### D. EXISTING LAND TREATMENT

TREATMENT	AREA (SF/AC)	%
B	29,800 / 0.68	65
C	3,310 / 0.08	7
D	12,700 / 0.29	28

2. BASIN B (CONTRIBUTING ONSITE BASIN)  
AREA = 131,000 SF = 3.01 AC

TREATMENT	AREA (SF/AC)	%
B	13,100 / 0.30	10
D	117,900 / 2.71	90

### E. DEVELOPED LAND TREATMENT

TREATMENT	AREA (SF/AC)	%
B	14,000 / 0.32	31
D	31,820 / 0.73	69

2. BASIN B (CONTRIBUTING ONSITE BASIN) - NO CHANGE

### II. HYDROLOGY

#### A. EXISTING CONDITIONS

##### 1. BASIN A

a. VOLUME  
 $E_w = (E_p A_A + E_p A_B + E_c A_C + E_c A_D) A_T$   
 $E_w = ((0.92 \times 0.68) + (1.29 \times 0.08) + (2.36 \times 0.29)) / 1.05 = 1.35 \text{ IN}$   
 $V_{100} = (E_w / 12) A_T = (1.35 / 12) 1.05 = 0.1183 \text{ AC-FT} = 5,150 \text{ CF}$

b. PEAK DISCHARGE  
 $Q_p = Q_{pA} A_A + Q_{pB} A_B + Q_{pC} A_C + Q_{pD} A_D$   
 $Q_p = Q_{100} = ((2.60 \times 0.68) + (3.45 \times 0.08) + (5.02 \times 0.29)) = 3.5 \text{ CFS}$

##### 2. BASIN B

a. VOLUME  
 $E_w = (E_p A_A + E_p A_B + E_c A_C + E_c A_D) A_T$   
 $E_w = ((0.92 \times 0.30) + (2.36 \times 2.71) / 3.01 = 2.22 \text{ IN}$   
 $V_{100} = (E_w / 12) A_T = (2.22 / 12) 3.01 = 0.5584 \text{ AC-FT} = 24,240 \text{ CF}$

b. PEAK DISCHARGE  
 $Q_p = Q_{pA} A_A + Q_{pB} A_B + Q_{pC} A_C + Q_{pD} A_D$   
 $Q_p = Q_{100} = ((2.60 \times 0.30) + (5.02 \times 2.71)) = 14.4 \text{ CFS}$

#### B. DEVELOPED CONDITIONS

##### 1. BASIN A

a. VOLUME  
 $E_w = (E_p A_A + E_p A_B + E_c A_C + E_c A_D) A_T$   
 $E_w = ((0.92 \times 0.32) + (2.36 \times 0.73)) / 1.05 = 1.92 \text{ IN}$   
 $V_{100} = (E_w / 12) A_T = (1.92 / 12) 1.05 = 0.1683 \text{ AC-FT} = 7,330 \text{ CF}$

b. PEAK DISCHARGE  
 $Q_p = Q_{pA} A_A + Q_{pB} A_B + Q_{pC} A_C + Q_{pD} A_D$   
 $Q_p = Q_{100} = ((2.60 \times 0.32) + (5.02 \times 0.73)) = 4.5 \text{ CFS}$

##### 2. BASIN B - NO CHANGE

#### C. COMPARISON

##### 1. BASIN A

a. VOLUME	$\Delta V_{100}$	7330 - 5150 =	2,180 CF	(INCREASE)
b. PEAK DISCHARGE	$\Delta Q_{100}$	4.5 - 3.5 =	1.0 CFS	(INCREASE)

##### 2. BASIN B - NO CHANGE

### ENGINEER'S DRAINAGE CERTIFICATION

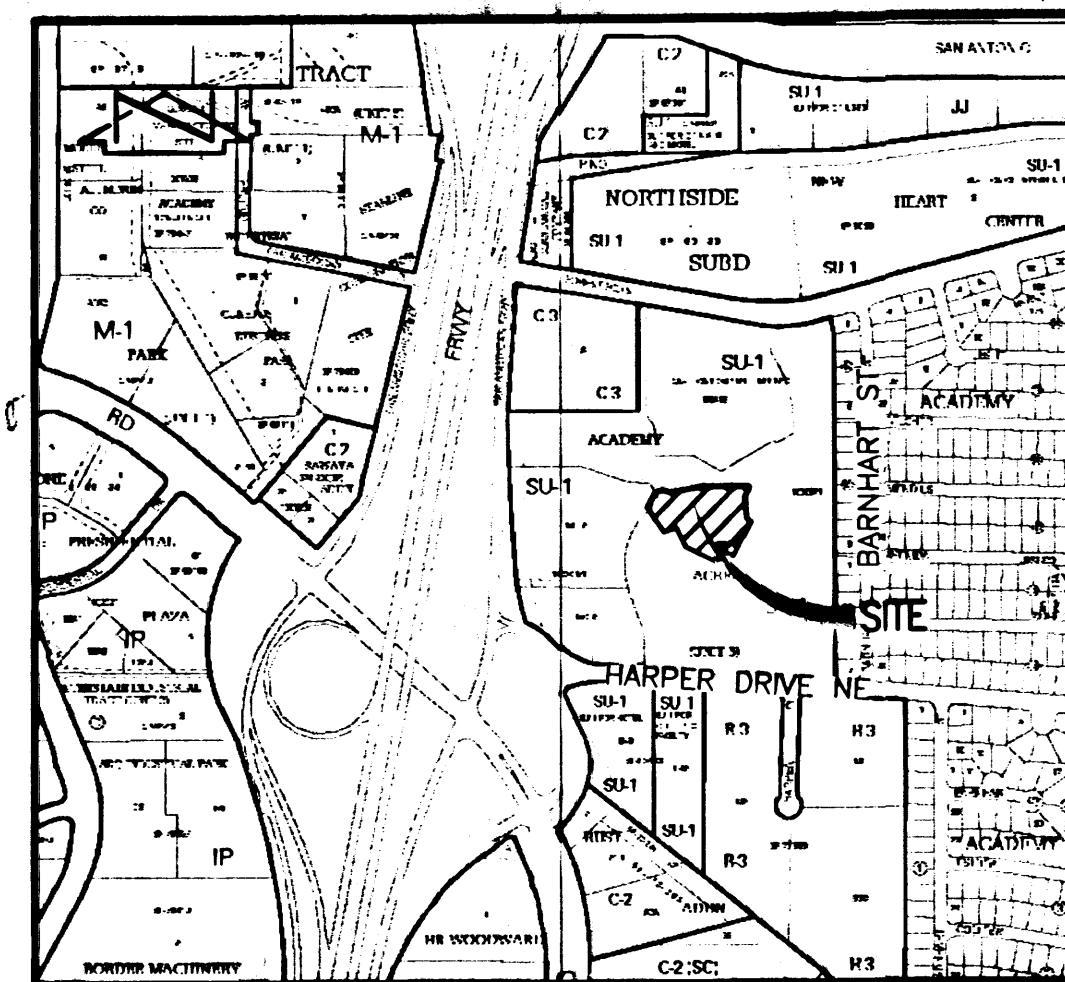
I, JEFFREY G. MORTENSEN, NMPE 8547, OF THE FIRM HIGH MESA CONSULTING GROUP, HEREBY CERTIFY THAT THIS PROJECT HAS BEEN GRADED AND DRAINED IN SUBSTANTIAL COMPLIANCE WITH AND IN ACCORDANCE WITH THE DESIGN INTENT OF THE APPROVED PLAN DATED 12-20-2010. THE RECORD INFORMATION EDITED ONTO THE ORIGINAL DESIGN DOCUMENT HAS BEEN OBTAINED FROM THE VERIFICATION SURVEY CONDUCTED 06-23-2011 UNDER THE DIRECT SUPERVISION OF CHARLES G. CALA, JR., NMPS 11184, OF THE FIRM HIGH MESA CONSULTING GROUP, ALONG WITH DATA OBTAINED BY THE UNDERSIGNED ENGINEER, BY VISUAL SITE INSPECTION TO VERIFY THE COMPLETION OF THE REQUIRED DRAINAGE IMPROVEMENTS, AND IS TRUE AND CORRECT TO THE BEST OF MY KNOWLEDGE AND BELIEF. THIS CERTIFICATION IS SUBMITTED TO DOCUMENT COMPLETION OF THE PROJECT AND TO SATISFY CONDITIONS OF GRADING PLAN APPROVAL.

THE RECORD INFORMATION PRESENTED HEREON IS NOT NECESSARILY COMPLETE AND INTENDED ONLY TO VERIFY SUBSTANTIAL COMPLIANCE OF THE GRADING AND DRAINAGE ASPECTS OF THIS PROJECT. THIS CERTIFICATION DOES NOT ADDRESS ADA COMPLIANCE WHICH IS BEYOND THE SCOPE OF GRADING AND DRAINAGE. THOSE RELYING ON THIS RECORD DOCUMENT ARE ADVISED TO OBTAIN INDEPENDENT VERIFICATION OF ITS ACCURACY BEFORE USING IT FOR ANY OTHER PURPOSE.

JEFFREY G. MORTENSEN, NMPE 8547

12/20/2010

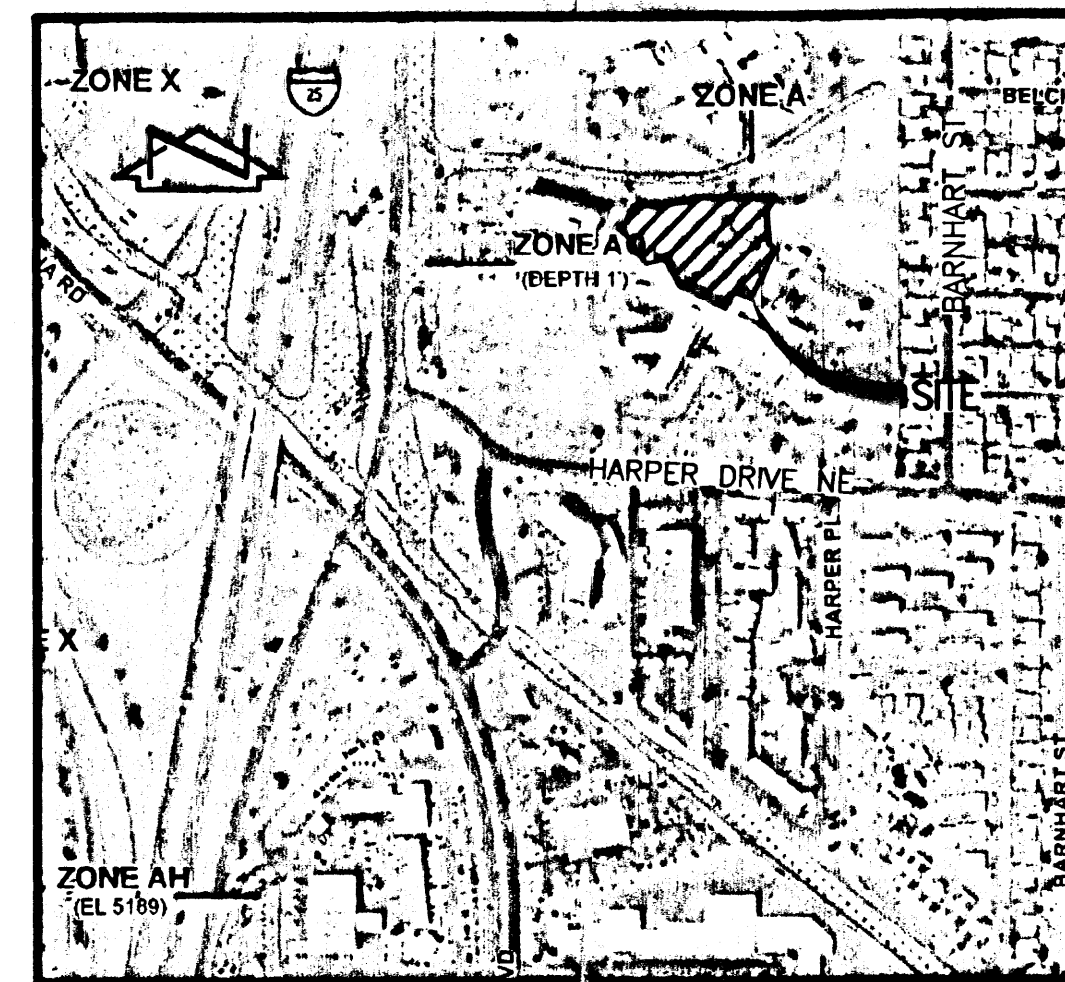
DATE



VICINITY MAP

SCALE: 1" = 750'

E-17/E-18



F.I.R.M.

SCALE: 1" = 500'

PANEL 139 OF 825

DATE: 9-26-2008



CONTRIBUTING BASIN MAP

SCALE: 1" = 1000'

### LEGAL DESCRIPTION

TRACT B-5-A-1-A, ACADEMY ACRES, UNIT 5.

### BENCHMARKS

#### PROJECT BENCHMARK

AGRS 1 3/4" ALUMINUM DISK STAMPED "ACS BM, 15-E17", EPOXYED TO THE TOP OF CONCRETE CURB AT THE NNW QUADRANT OF THE INTERSECTION OF SAN MATEO BLVD. AND ACADEMY ROAD N.E.  
ELEVATION = 5208.108 FEET (NAVD 88)

#### TEMPORARY BENCHMARK (T.B.M.) #1

#5 REBAR W/CAP STAMPED "HMCC CONTROL NMPS 11184", AS SHOWN ON THIS SHEET.  
ELEVATION = 5202.00 FEET (NAVD 88)

#### TEMPORARY BENCHMARK (T.B.M.) #2

#5 REBAR W/CAP STAMPED "HMCC CONTROL NMPS 11184", AS SHOWN ON THIS SHEET.  
ELEVATION = 5196.97 FEET (NAVD 88)

## DRAINAGE PLAN & CALCULATIONS



## CONSTRUCTION NOTES:

- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM 260-1990 (ALBUQUERQUE AREA), 1-800-321-ALERT(2537) (STATEWIDE), FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
- IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE, THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREFOR. THE CONTRACTOR SHALL INFORM ITSELF OF THE LOCATION OF ANY UTILITY LINE, PIPELINE, OR UNDERGROUND UTILITY LINE IN OR NEAR THE AREA OF THE WORK IN ADVANCE OF AND DURING EXCAVATION WORK. THE CONTRACTOR IS FULLY RESPONSIBLE FOR ANY AND ALL DAMAGE CAUSED BY ITS FAILURE TO LOCATE, IDENTIFY AND PRESERVE ANY AND ALL EXISTING UTILITIES, PIPELINES, AND UNDERGROUND UTILITY LINES. IN PLANNING AND CONDUCTING EXCAVATION, THE CONTRACTOR SHALL COMPLY WITH STATE STATUTES, MUNICIPAL AND LOCAL ORDINANCES, RULES AND REGULATIONS, IF ANY, PERTAINING TO THE LOCATION OF THESE LINES AND FACILITIES.
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- ALL PLANTER AREAS WITHIN THE PARKING LOT SHALL BE GENTLY DEPRESSED TO CONTAIN THE RAINFALL THAT FALLS UPON THAT SURFACE.

### 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.
- WHEN APPLICABLE, CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" FROM THE CITY AND/OR FILE A NOTICE OF INTENT (N.O.I.) WITH THE EPA PRIOR TO BEGINNING CONSTRUCTION.

## HIGH MESA Consulting Group

6010-B MIDWAY PARK BLVD. NE • ALBUQUERQUE, NEW MEXICO 87109  
PHONE: 505.345.4250 • FAX: 505.345.4254 • www.highmesacg.com

## Parking Lot Expansion

5901 Harper Drive NE  
Albuquerque, New Mexico  
Presbyterian Project No.

### Project Title

Drawn By J.Y.R. Checked By J.G.M.

Proj. No. 2010.0432.4 Date 12/20/2010

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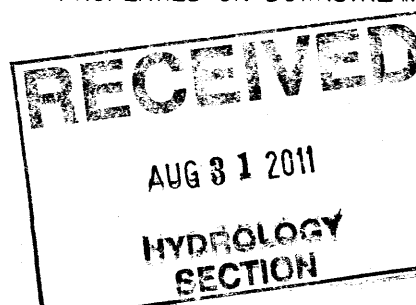
RECORD DRAWINGS & CERTIFICATION

Revisions

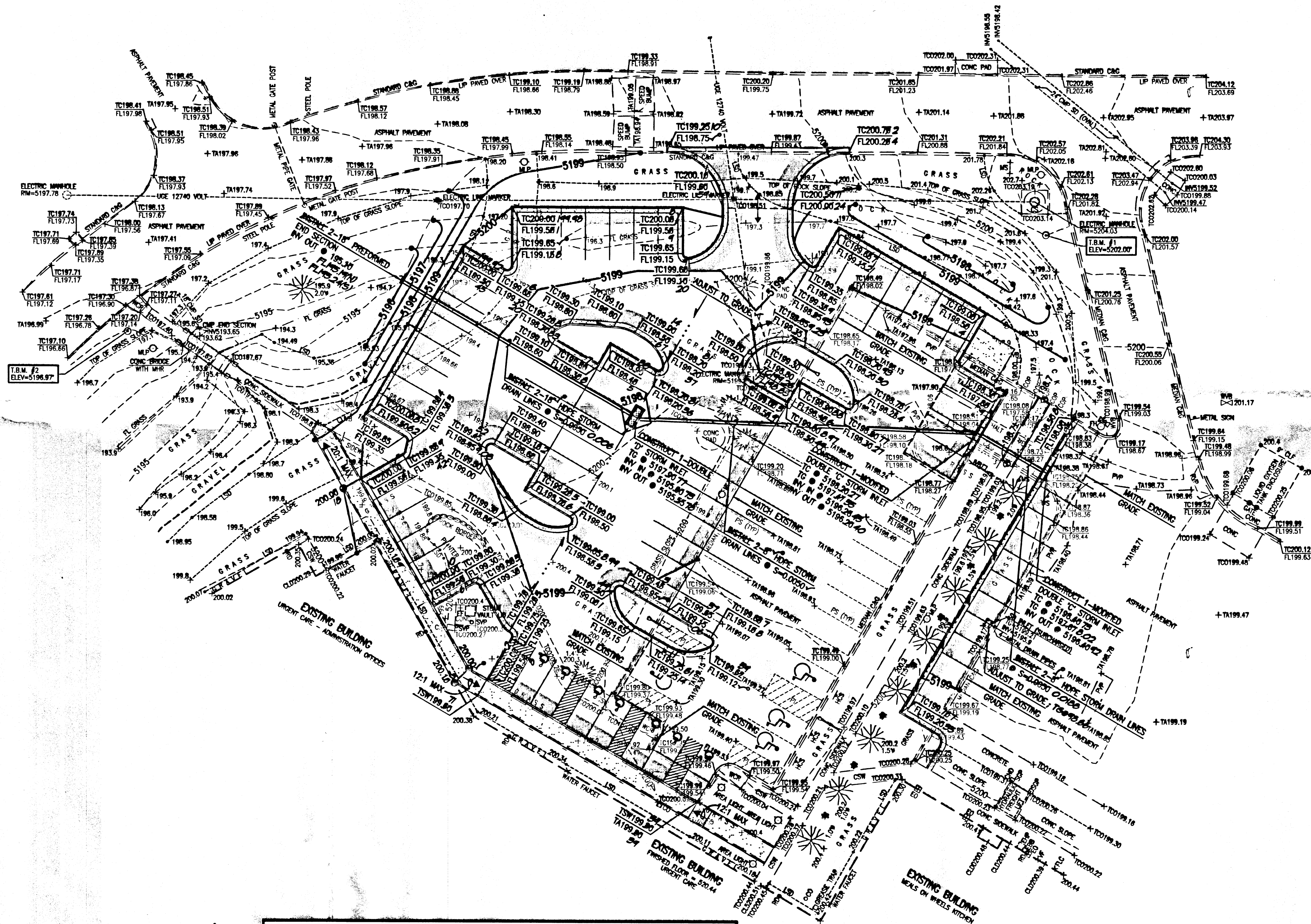
C3

DRAINAGE PLAN + CALCULATIONS

Sheet Title Sheet - of -







RECORD INFORMATION LEGEND	
CONSTRUCT	RECORD INFORMATION (VERIFIED BY ENGINEER)
✓	AS-CONSTRUCTED = AS-DESIGNED (VERIFIED BY ENGINEER)
3/8" 42"	RECORD INFORMATION (VERIFIED BY ENGINEER)
+MB.75	RECORD INFORMATION (VERIFIED BY ENGINEER)
⊙ 198.7.25	RECORD INFORMATION (VERIFIED BY ENGINEER)
✓	AS-CONSTRUCTED = AS-DESIGNED (VERIFIED BY AS-BUILT SURVEY)
3/8" 31.8	RECORD INFORMATION FROM AS-BUILT SURVEY
+198.4	RECORD INFORMATION FROM AS-BUILT SURVEY
⊙ 200.18	RECORD INFORMATION FROM AS-BUILT SURVEY

DESIGN GRADING LEGEND:

TC	TOP OF CURB
FL	FLOWLINE
⊙ 200.10	PROPOSED SPOT ELEVATION
---	EXISTING FLOWLINE
---	PROPOSED FLOWLINE
---	PROPOSED CONTOUR
---	EXISTING DIRECTION OF FLOW
---	PROPOSED DIRECTION OF FLOW
---	HIGH POINT / DIVIDE
---	PROPOSED CONCRETE
---	PROPOSED ASPHALT PAVING

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 A MINIMUM AMOUNT OF DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
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Parking Lot Expansion

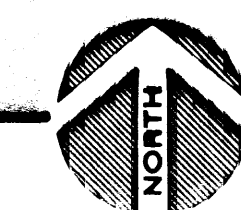
5901 Harper Drive NE  
Albuquerque, New Mexico  
Presbyterian Project No.

Project Title	
Drawn J.Y.R. Checked J.G.M.	
By	By
Proj. No. 2010.0434	Date 12/20/2010
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RECORD DRAWING & CERTIFICATION 12-20-2010	
Revisions	12-20-2010/Engineer



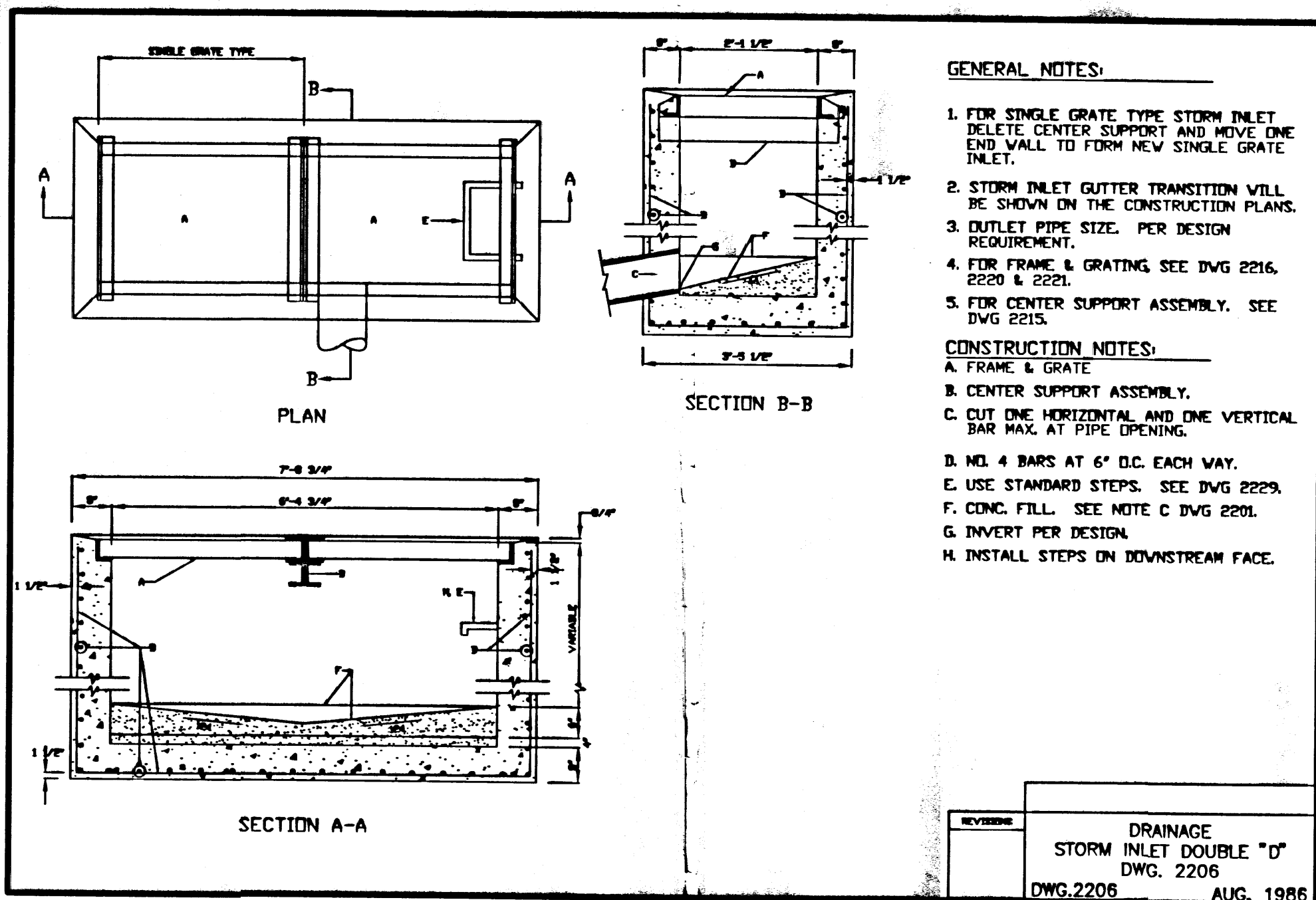
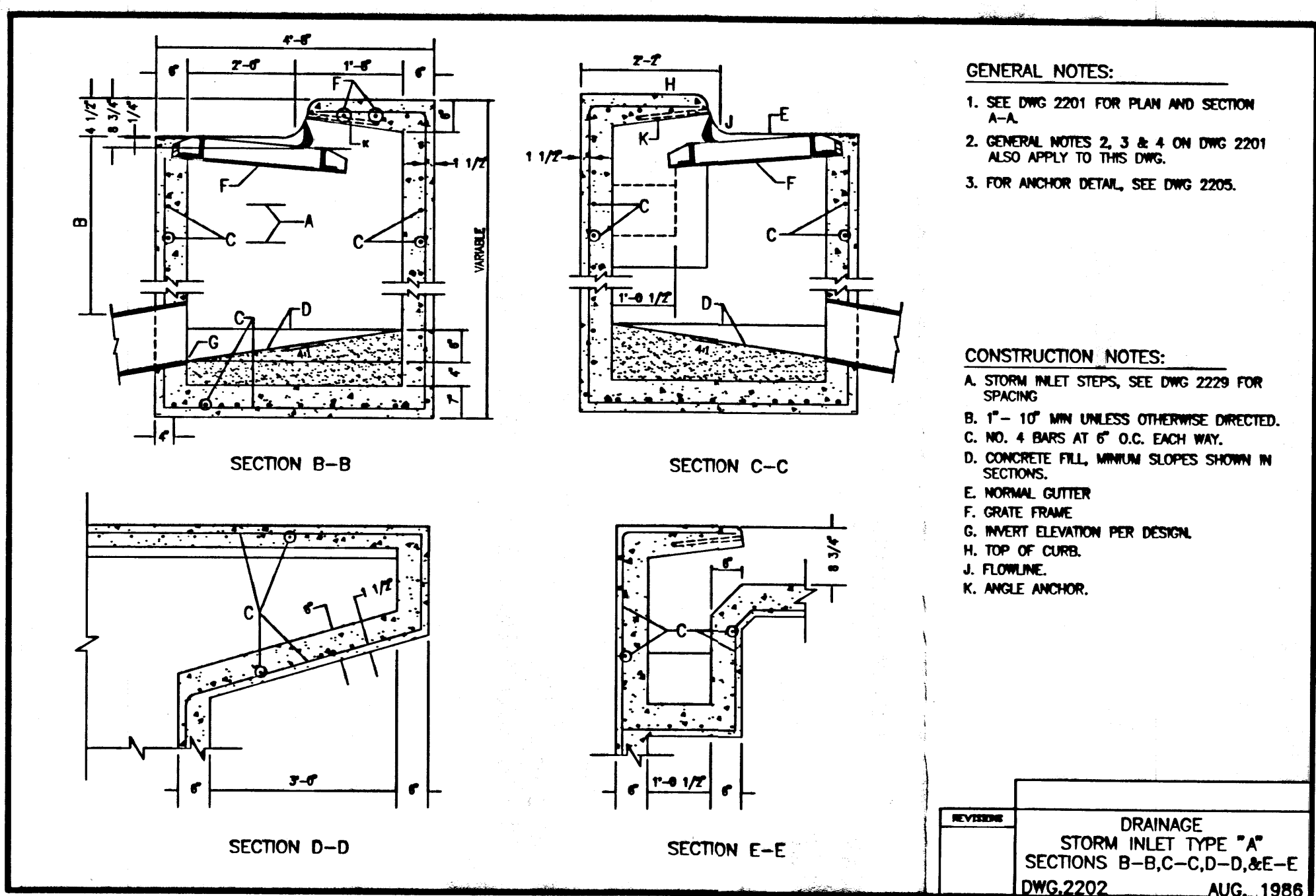
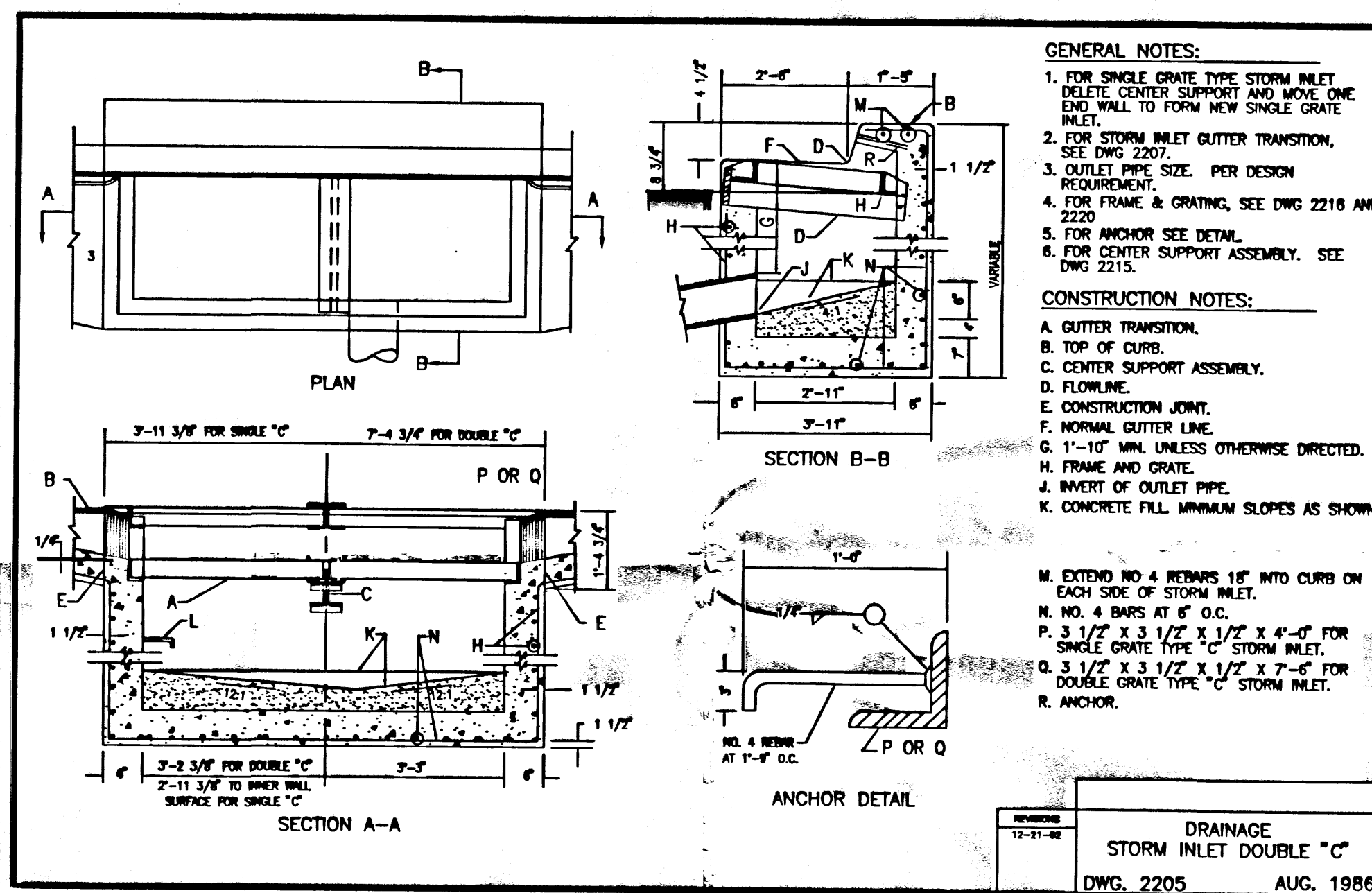
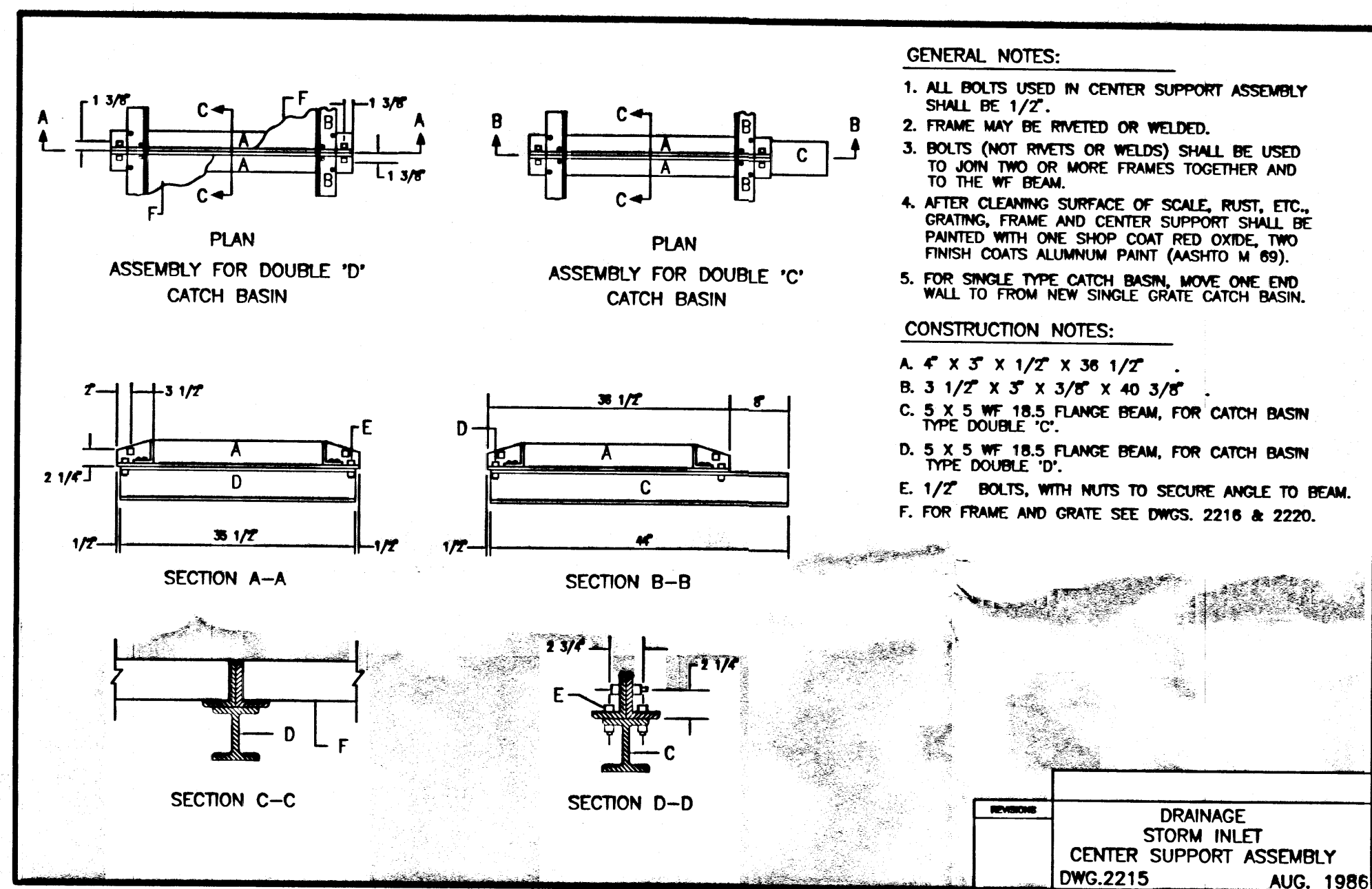
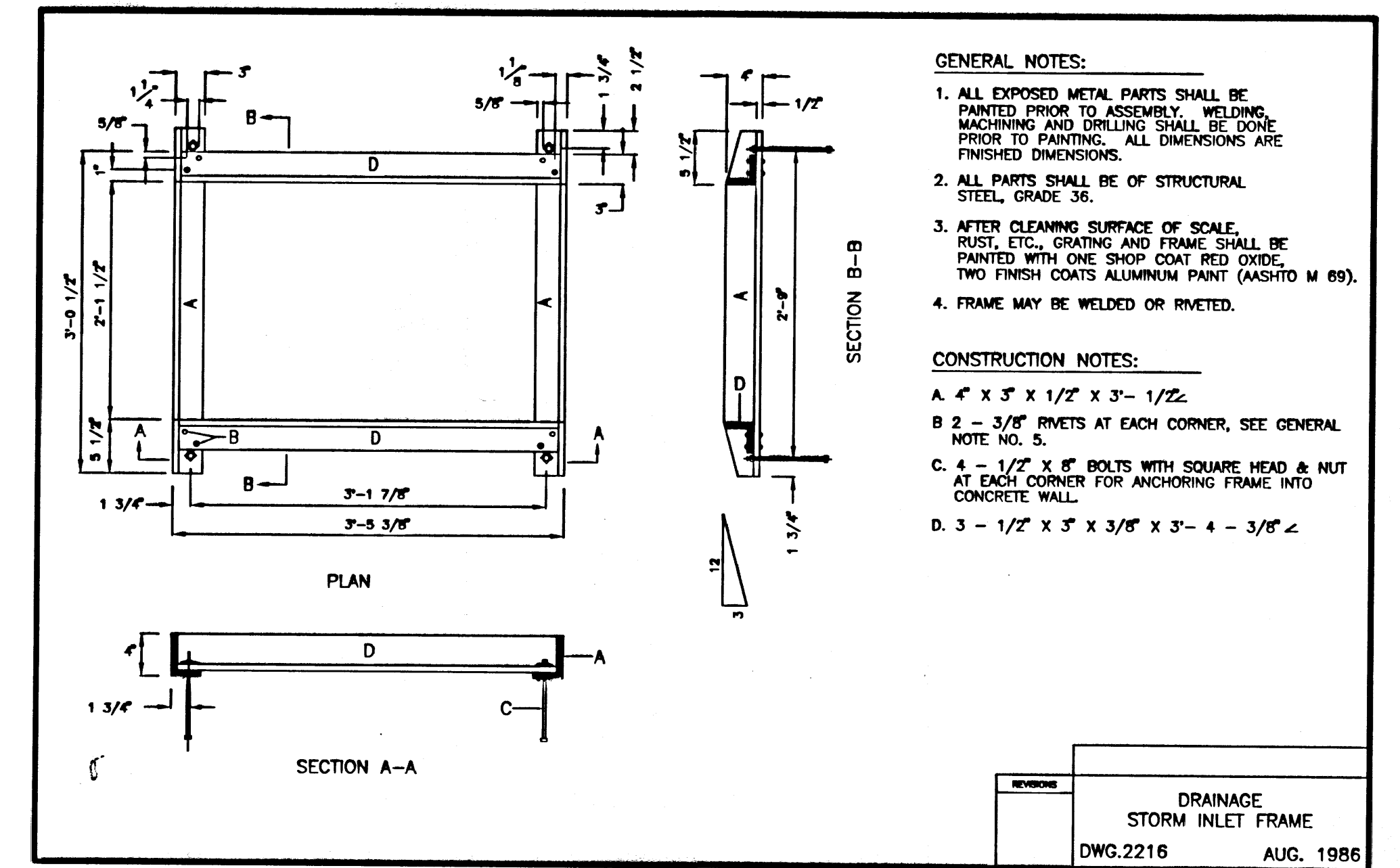
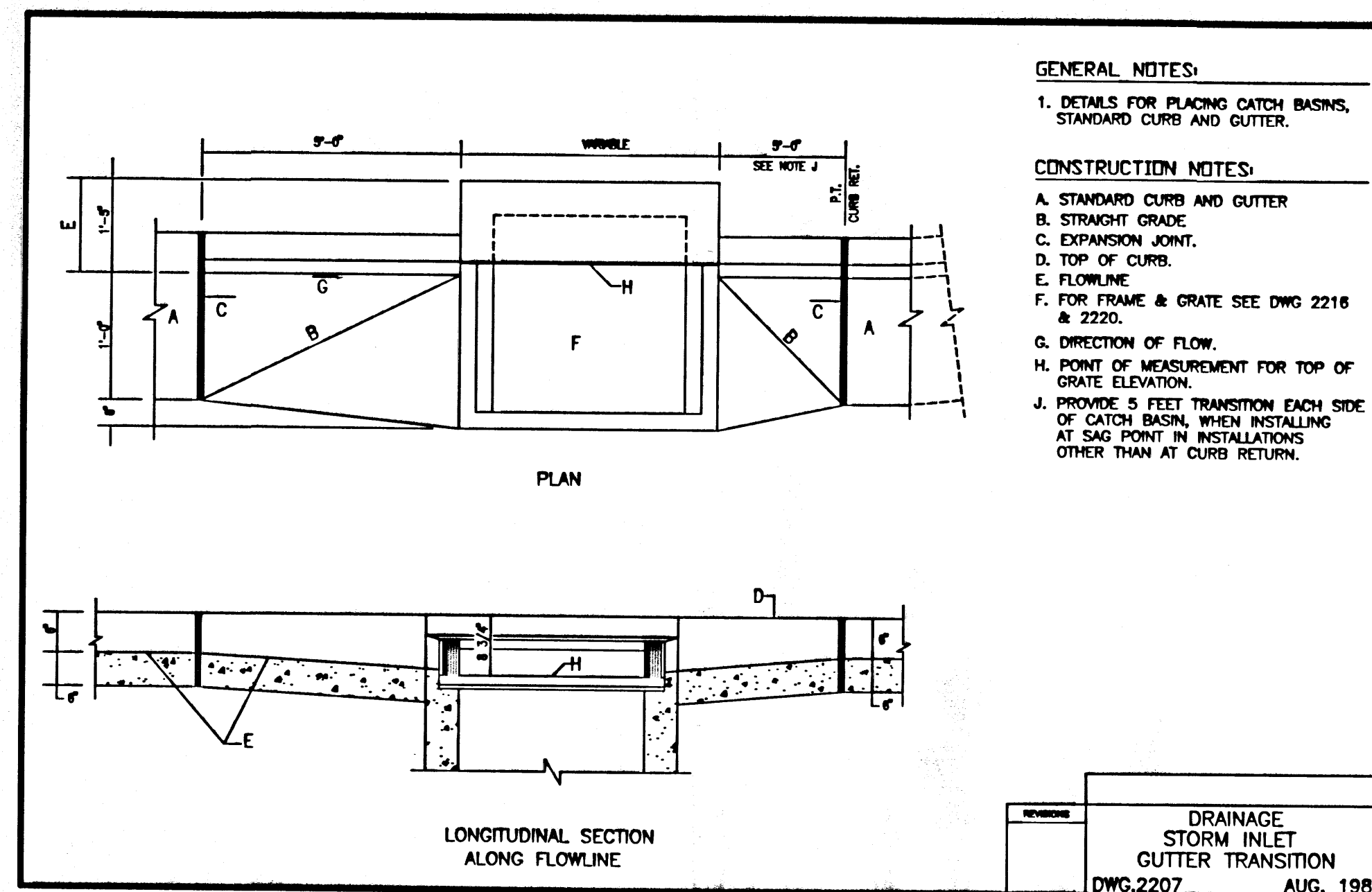
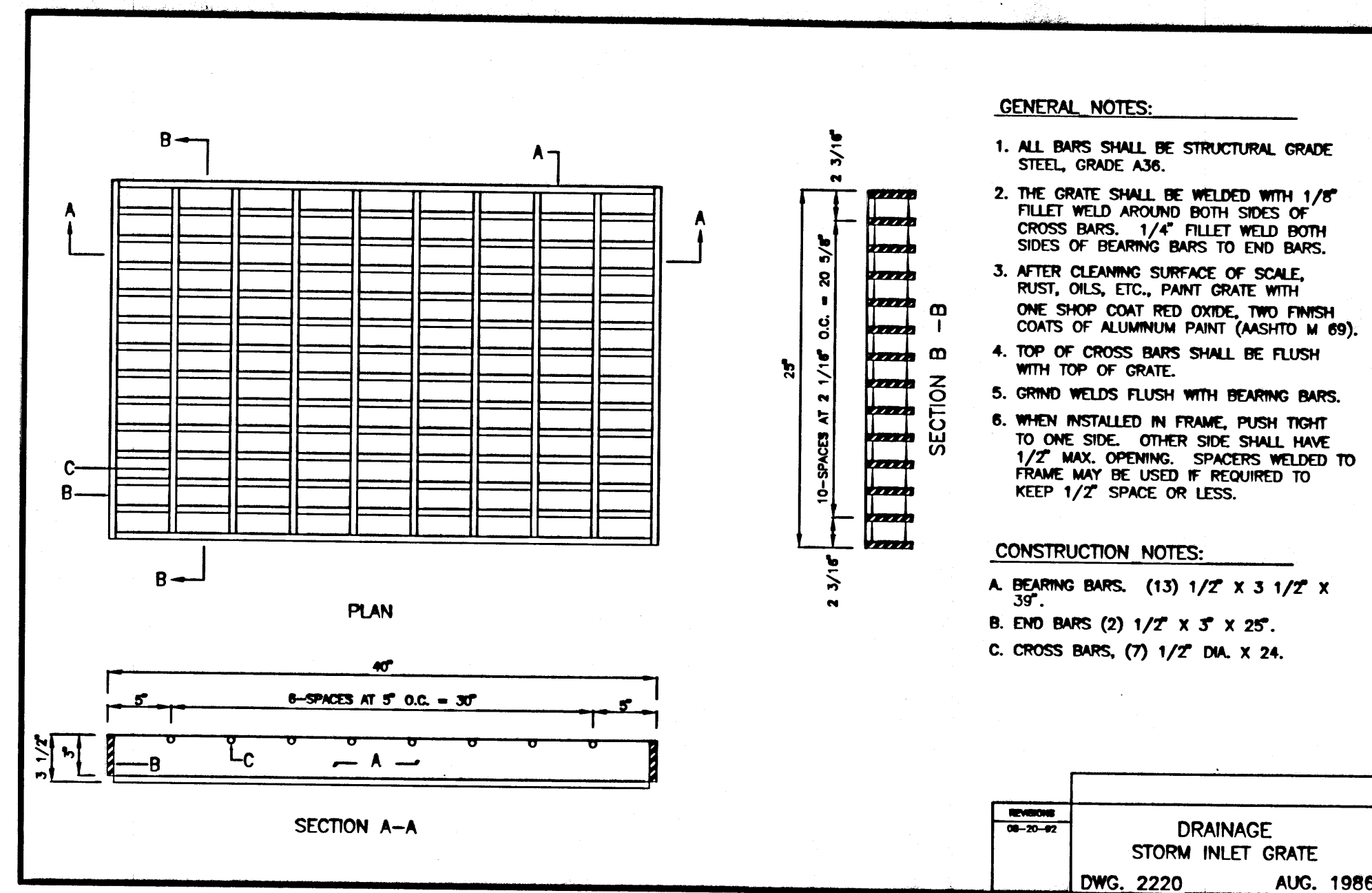
**RECORD DRAWING**  
FOR CERTIFICATION, SEE SHEET C3

Grading Plan  
1"=20'



**C4**





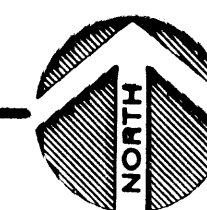
**RECORD DRAWING**

**HIGH MESA Consulting Group**  
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PHONE: 505.345.4250 • FAX: 505.345.4254 • www.highmesacg.com

**Parking Lot Expansion**  
5901 Harper Drive NE  
Albuquerque, New Mexico  
Presbyterian Project No.

**Project Title**  
Drawn By **J.Y.R.** Checked By **J.G.M.**  
Proj. No. **2010.043.2** Date **12/20/2010**  
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- RECORD DRAWING  
Revisions  
08-30-2010  
12-20-2010  
Engineer

**STORM INLET SECTIONS & DETAILS**



**STORM INLET SECTIONS + DETAILS**  
Sheet Title Sheet - of -

**C5**



## DRAINAGE PLAN

### DRAINAGE PLAN

#### I. INTRODUCTION AND EXECUTIVE SUMMARY

THIS PROJECT, LOCATED ALONG THE NORTH I-25 CORRIDOR IN THE NORTHEAST HEIGHTS OF THE ALBUQUERQUE METROPOLITAN AREA, REPRESENTS A MODIFICATION TO AN EXISTING SITE WITHIN AN INFILL AREA. THE PURPOSE OF THIS PROJECT IS TO EXPAND AND MODIFY THE EXISTING PARKING AVAILABLE TO THE PRESBYTERIAN NORTHSIDE MEDICAL COMPLEX.

THIS SUBMITTAL IS MADE IN SUPPORT OF A GRADING AND PAVING PERMIT APPROVALS WITHIN THE JURISDICTION OF THE CITY OF ALBUQUERQUE.

#### II. PROJECT DESCRIPTION

AS SHOWN BY THE VICINITY MAP, THE SCHOOL SITE IS LOCATED AT THE NORTHEAST CORNER OF THE INTERSECTION OF THE I-25 EAST FRONTAGE ROAD AND HARPER AVENUE NE. THE CURRENT LEGAL DESCRIPTION IS TRACT B-5-A-1-A, ACADEMY ACRES, UNIT 5. AS SHOWN BY PANEL 139 OF 825 OF THE NATIONAL FLOOD INSURANCE PROGRAM FLOOD INSURANCE RATE MAPS PUBLISHED BY FEMA FOR BERNALILLO COUNTY, NEW MEXICO, SEPTEMBER 26, 2008, THIS SITE DOES NOT LIE WITHIN A DESIGNATED FLOOD HAZARD ZONE. THE SITE DOES, HOWEVER, LIE SOUTH OF A ZONE A THAT COINCIDES WITH A FORMER ARROYO THAT DOES NOT IMPACT THE PROPOSED PARKING LOT SITE, AND EAST OF A ZONE AO (DEPTH 1) THAT LIES ALONG THE EAST EMBANKMENT OF I-25. THE SITE WILL CONTRIBUTE RUNOFF TO THE ZONE AO (DEPTH 1) DESIGNATED FLOOD HAZARD ZONE.

#### III. BACKGROUND DOCUMENTS

THE PREPARATION OF THIS PLAN RELIED UPON THE FOLLOWING DOCUMENTS AND ACTIVITIES:

- TOPOGRAPHIC SURVEY PREPARED BY HIGH MESA CONSULTING GROUP (NMPS 11184) DATED 11-05-2010. THIS REFERENCED SURVEY PROVIDES THE BASIS FOR THE EXISTING CONDITIONS OF THE PROJECT SITE.
- CITY OF ALBUQUERQUE HYDROLOGY FILE NO. E18/D005A. REVIEW OF THE CITY FILE INDICATES THAT THERE ARE NO REQUIREMENTS IMPOSED UPON PRIOR SUBMITTALS TO DETAIN RUNOFF AND THAT FREE DISCHARGE IS ALLOWABLE BASED UPON THE LOCATION OF SITE AT THE BOTTOM OF THE WATERSHED.
- VISUAL SITE INSPECTION ON DECEMBER 01, 2010 TO CONFIRM DOWNSTREAM FLOW PATH AND OUTFALL.

#### IV. EXISTING CONDITIONS

THE SITE PRESENTLY CONSISTS OF A PORTION OF AN EXISTING PARKING LOT AND EXISTING LANDSCAPING THAT LIE AT THE NORTHWEST CORNER OF THE EXISTING NORTHSIDE HOSPITAL. AT PRESENT, THE PROJECT SITE RECEIVES ONSITE RUNOFF FROM EXISTING PARKING AREAS SITUATED UPSTREAM AND TO THE EAST. OFFSITE FLOWS DO NOT ENTER THE PROJECT SITE. INSTEAD, OFFSITE FLOWS ARE CONVEYED WITHIN THE ZONE A REFERENCED ABOVE AND THEREFORE BYPASS THE PROJECT SITE TO THE NORTH ENROUTE TO THE EAST FRONTAGE ROAD DOWNSTREAM AND WEST OF THE SITE.

THE RUNOFF GENERATED BY THIS AREA GENERALLY FLOWS FROM EAST TO WEST AND IS INTERCEPTED BY A GRASS-LINED DITCH THAT PARALLELS AN INTERNAL PRIVATE LOOP ROAD. AT THIS POINT, THE RUNOFF FLOWS SOUTH TO EVENTUALLY CROSS THE INTERNAL PRIVATE LOOP ROAD OVERFLOWING TO THE WEST. THE OVERFLOW THEN PROCEEDS WEST VIA SHEETFLOW ACROSS PAVED SURFACES TO REACH THE I-25 EAST FRONTAGE ROAD. FROM THIS POINT, THE RUNOFF FLOWS NORTH WITHIN A BROAD GRASS-LINED BAR DITCH ALONG THE EAST EDGE OF THE FRONTAGE ROAD TO ENTER A SERIES OF CULVERTS THAT COINCIDE WITH THE AFOREMENTIONED ZONE A DESIGNATED FLOOD HAZARD ZONE. FROM THIS POINT, THE RUNOFF PASSES BENEATH THE FRONTAGE ROAD AND ENTERS THE AO (DEPTH 1) DESIGNATED FLOOD HAZARD ZONE THAT LIES BETWEEN THE I-25 EMBANKMENT AND THE EAST FRONTAGE ROAD. THE RUNOFF THAT ACCUMULATES AT I-25 EVENTUALLY MIGRATES SOUTH TO ENTER THE BOREALIS CHANNEL THAT FLOWS WEST TO JOIN THE SOUTH PINO ARROYO.

#### V. DEVELOPED CONDITIONS

THE PROPOSED CONSTRUCTION CONSISTS OF THE EXPANSION AND MODIFICATION OF THE EXISTING PARKING LOT. THE EXPANSION REQUIRES THE DEMOLITION OF A PORTION OF THE EXISTING LANDSCAPING. RUNOFF FROM THE UPSTREAM ONSITE CONTRIBUTING AREA WILL BE INTERCEPTED BY A NEW PRIVATE STORM INLET THAT WILL PIPE THE FLOWS BENEATH THE PARKING LOT EXPANSION TO DISCHARGE TO THE EXISTING GRASS-LINED DITCH SOUTH AND WEST OF THE PROJECT SITE. RUNOFF GENERATED BY THE NEW PAVING WILL ALSO BE COLLECTED BY PRIVATE STORM INLETS AND CONVEYED BY PRIVATE STORM DRAIN PIPING TO THE DOWNSTREAM GRASS-LINED DITCH. FROM THIS POINT, THE RUNOFF WILL FOLLOW ITS HISTORIC PATH OF CROSSING OVER THE INTERNAL PRIVATE LOOP ROAD AND SHEET DRAINING ACROSS EXISTING PAVING TO EVENTUALLY ENTER THE AO (DEPTH 1) DESIGNATED FLOOD HAZARD ZONE THAT LIES ALONG THE EAST EDGE OF I-25. THIS PROPOSED PATTERN OF DRAINAGE IS CONSISTENT WITH THE EXISTING DRAINAGE PATTERN AND PREVIOUSLY APPROVED PLANS FOR THE COMPLEX.

#### VI. GRADING PLAN

THE GRADING PLAN SHOWS 1.) EXISTING AND PROPOSED GRADES INDICATED BY SPOT ELEVATIONS AND CONTOURS AT 1'-0" INTERVALS, 2.) THE LIMIT AND CHARACTER OF THE EXISTING AND PROPOSED IMPROVEMENTS, AND 3.) CONTINUITY BETWEEN EXISTING AND PROPOSED GRADES. AS SHOWN BY THIS PLAN, THE PROPOSED GRADING WILL CONTINUE THE CURRENT DRAINAGE PATTERN OF DISCHARGE TO THE EXISTING GRASS-LINED DITCH AND ULTIMATE DISCHARGE TO THE BOREALIS CHANNEL THAT FLOWS WEST TO JOIN THE SOUTH PINO ARROYO.

#### VII. CALCULATIONS

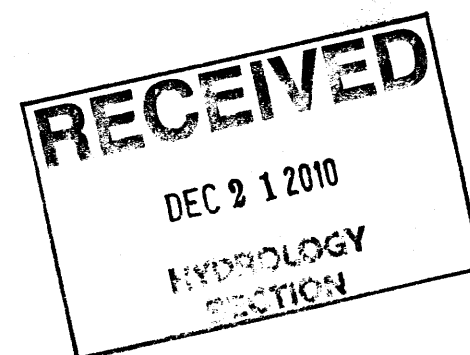
THE CALCULATIONS CONTAINED HEREON ANALYZE THE EXISTING AND DEVELOPED CONDITIONS FOR THE 100-YEAR, 6-HOUR RAINFALL EVENT. THE PROCEDURE FOR 40 ACRE AND SMALLER BASINS, AS SET FORTH IN THE REVISION OF SECTION 22.2, HYDROLOGY OF THE DEVELOPMENT PROCESS MANUAL, VOLUME 2, DESIGN CRITERIA, DATED JANUARY 1993, HAS BEEN USED TO QUANTIFY THE PEAK RATE OF DISCHARGE AND VOLUME OF RUNOFF GENERATED. AS DEMONSTRATED BY THESE CALCULATIONS, THE PROPOSED PROJECT WILL RESULT IN A MINOR INCREASE IN THE RUNOFF GENERATED BY THE OVERALL SITE. THIS WILL HAVE A NEGLIGIBLE IMPACT ON THE DOWNSTREAM CONDITIONS DESCRIBED ABOVE.

CALCULATIONS FOR THE PRIVATE STORM DRAIN CAPACITY HAVE NOT BEEN INCORPORATED INTO THIS SUBMITTAL. THIS IS DUE TO THE FACT THAT THE STORM DRAIN DESIGN IS BASED UPON MINIMUM COVER, LIMITED DEPTH OF BURY, AND LIMITED FALL FROM THE UPPER POINT OF COLLECTION TO THE DOWNSTREAM POINT OF DISCHARGE. TO ENHANCE THE CAPACITY OF THE NEW PRIVATE STORM DRAIN, DOUBLE GRATED INLETS HAVE BEEN PROPOSED ALONG WITH PARALLEL DISCHARGE PIPES. EXCESS RUNOFF WILL SIMPLY POOL BEING DETAINED IN THE RESPECTIVE PARKING LOTS AND DISCHARGE AT A CONTROLLED RATE TO THE GRASS-LINED DITCH.

#### VIII. CONCLUSIONS

THE FOLLOWING CONCLUSIONS HAVE BEEN ESTABLISHED AS A RESULT OF THE EVALUATIONS CONTAINED HEREIN:

- THE PROPOSED IMPROVEMENTS WILL MAINTAIN THE EXISTING DRAINAGE PATTERNS OF THIS PORTION OF THE EXISTING MEDICAL COMPLEX.
- THE PROPOSED DRAINAGE PATTERNS ARE CONSISTENT WITH THE PREVIOUSLY APPROVED DRAINAGE PLANS FOR THIS SITE.
- THE PROPOSED IMPROVEMENTS WILL CREATE A NEGLIGIBLE INCREASE IN RUNOFF GENERATED BY THE SITE.
- THE PROPOSED IMPROVEMENTS WILL NOT ADVERSELY IMPACT DOWNSTREAM PROPERTIES OR DOWNSTREAM DRAINAGE CONDITIONS.



## CALCULATIONS

### I. SITE CHARACTERISTICS

- A. PRECIPITATION ZONE = 3
- B.  $P_{0.100} = P_{300} = 2.60$
- C. TOTAL PROJECT AREA ( $A_T$ ) = 45,820 SF  
1.05 AC

### D. EXISTING LAND TREATMENT

1. BASIN A (PROJECT SITE)  
AREA = 45,820 SF = 1.05 AC

TREATMENT	AREA (SF/AC)	%
B	29,800 / 0.68	65
C	3,310 / 0.08	7
D	12,700 / 0.29	28

2. BASIN B (CONTRIBUTING ONSITE BASIN)  
AREA = 131,000 SF = 3.01 AC

TREATMENT	AREA (SF/AC)	%
B	13,100 / 0.30	10
D	117,900 / 2.71	90

### E. DEVELOPED LAND TREATMENT

TREATMENT	AREA (SF/AC)	%
B	14,000 / 0.32	31
D	31,820 / 0.73	69

2. BASIN B (CONTRIBUTING ONSITE BASIN) - NO CHANGE

### II. HYDROLOGY

#### A. EXISTING CONDITIONS

##### 1. BASIN A

##### a. VOLUME

$$E_w = (E_p A_p + E_p A_b + E_p A_c + E_p A_d) / A_T$$

$$E_w = ((0.92 \times 0.68) + (1.29 \times 0.08) + (2.36 \times 0.29)) / 1.05 = 1.35 \text{ IN}$$

$$V_{100} = (E_w / 12) A_T = (1.35 / 12) \times 45,820 = 5,150 \text{ AC-FT} = 5,150 \text{ CF}$$

##### b. PEAK DISCHARGE

$$Q_p = Q_p A_p + Q_p A_b + Q_p A_c + Q_p A_d$$

$$Q_p = Q_{100} = ((2.60 \times 0.68) + (3.45 \times 0.08) + (5.02 \times 0.29)) = 3.5 \text{ CFS}$$

##### 2. BASIN B

##### a. VOLUME

$$E_w = (E_p A_p + E_p A_b + E_p A_c + E_p A_d) / A_T$$

$$E_w = ((0.92 \times 0.30) + (2.36 \times 2.71)) / 3.01 = 2.22 \text{ IN}$$

$$V_{100} = (E_w / 12) A_T = (2.22 / 12) \times 131,000 = 24,240 \text{ AC-FT} = 24,240 \text{ CF}$$

##### b. PEAK DISCHARGE

$$Q_p = Q_p A_p + Q_p A_b + Q_p A_c + Q_p A_d$$

$$Q_p = Q_{100} = ((2.60 \times 0.30) + (5.02 \times 2.71)) = 14.4 \text{ CFS}$$

#### B. DEVELOPED CONDITIONS

##### 1. BASIN A

##### a. VOLUME

$$E_w = (E_p A_p + E_p A_b + E_p A_c + E_p A_d) / A_T$$

$$E_w = ((0.92 \times 0.32) + (2.36 \times 0.73)) / 1.05 = 1.92 \text{ IN}$$

$$V_{100} = (E_w / 12) A_T = (1.92 / 12) \times 45,820 = 7,330 \text{ AC-FT} = 7,330 \text{ CF}$$

##### b. PEAK DISCHARGE

$$Q_p = Q_p A_p + Q_p A_b + Q_p A_c + Q_p A_d$$

$$Q_p = Q_{100} = ((2.60 \times 0.32) + (5.02 \times 0.73)) = 4.5 \text{ CFS}$$

##### 2. BASIN B - NO CHANGE

#### C. COMPARISON

##### 1. BASIN A

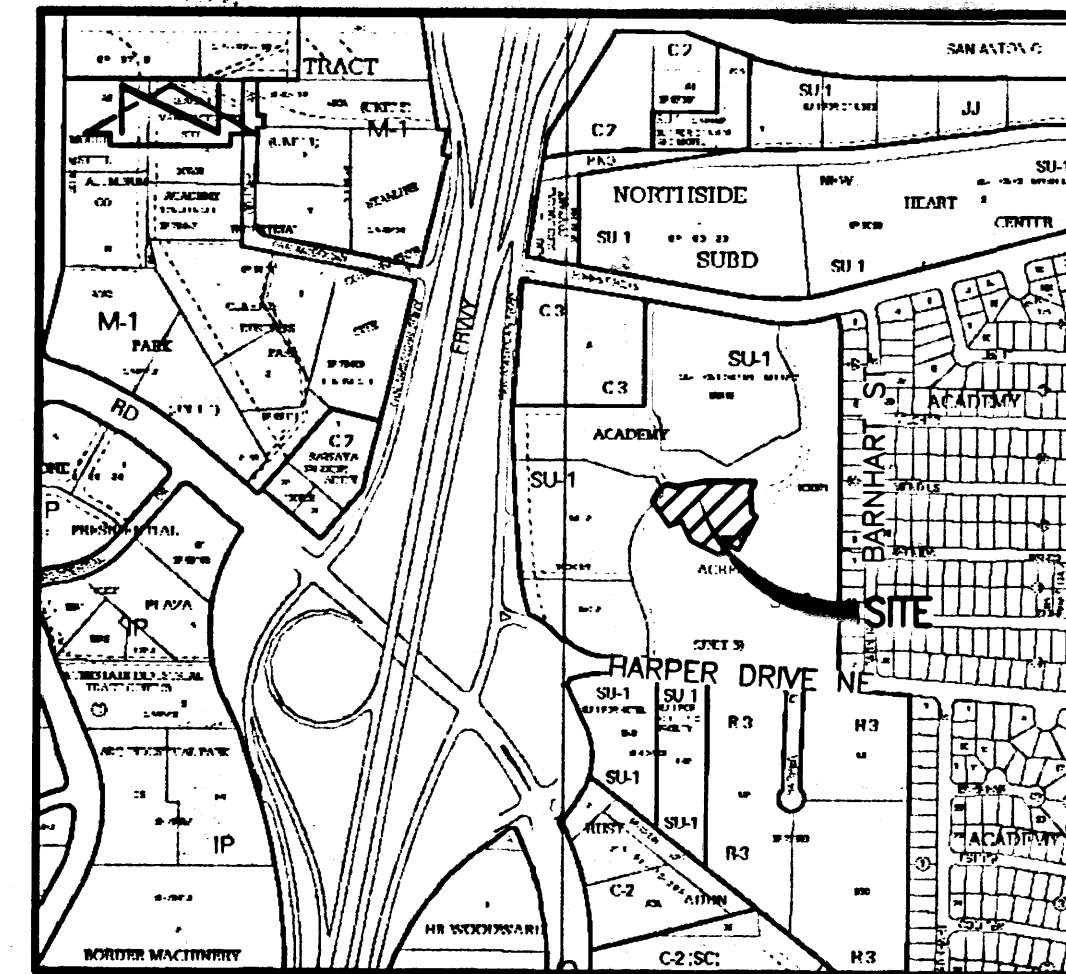
##### a. VOLUME

$$\Delta V_{100} = 7330 - 5150 = 2,180 \text{ CF (INCREASE)}$$

##### b. PEAK DISCHARGE

$$\Delta Q_{100} = 4.5 - 3.5 = 1.0 \text{ CFS (INCREASE)}$$

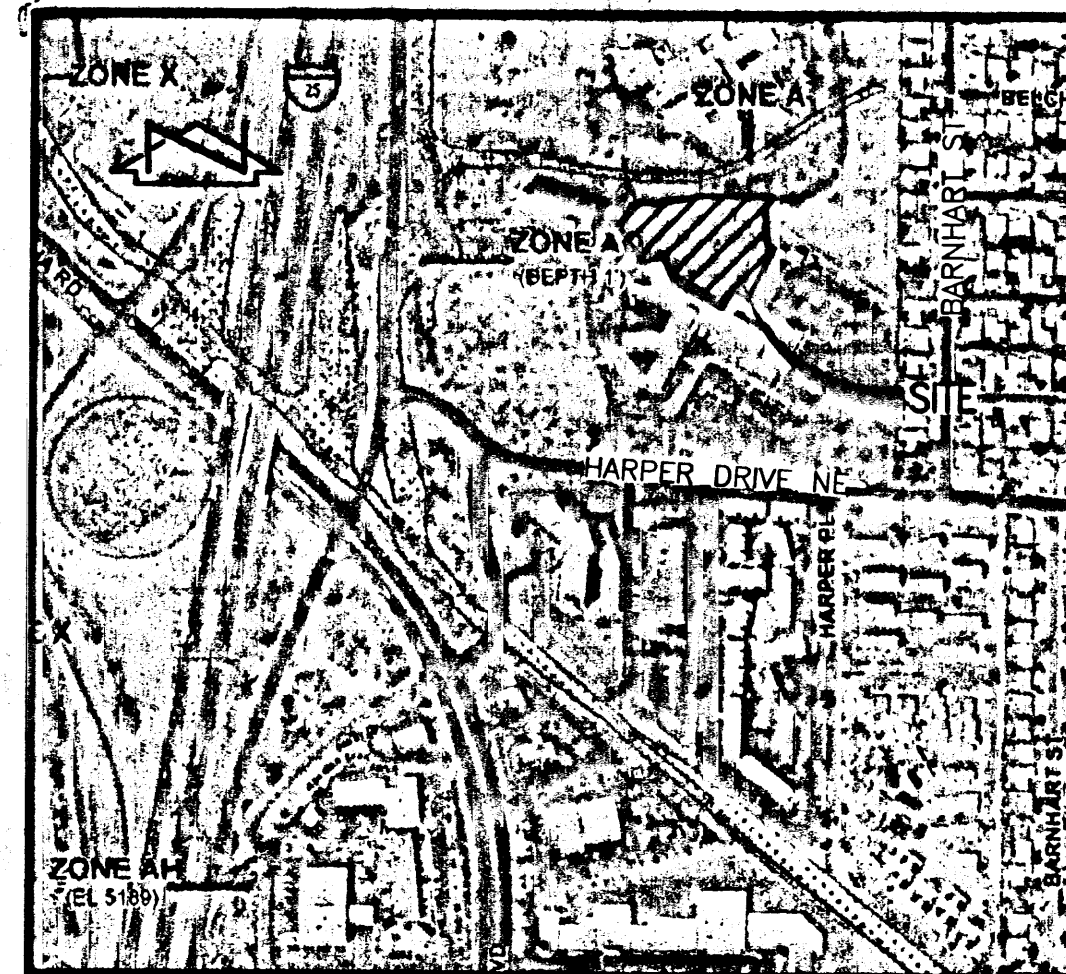
##### 2. BASIN B - NO CHANGE



VICINITY MAP

SCALE: 1" = 750'

E-17/E-18

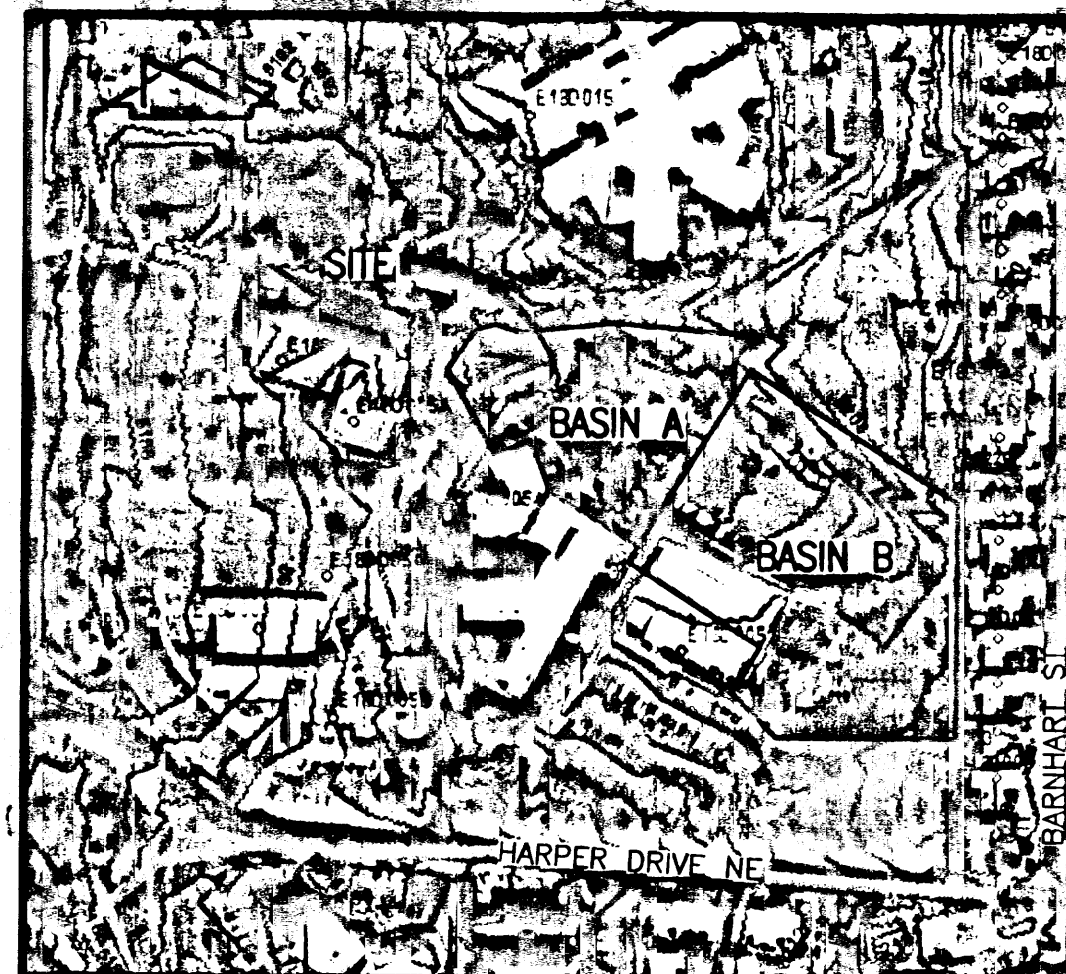


F.I.R.M.

SCALE: 1" = 500'

PANEL 139 OF 825

DATE: 9-26-2008



CONTRIBUTING BASIN MAP

SCALE: 1" = 1000'

### LEGAL DESCRIPTION

TRACT B-5-A-1-A, ACADEMY ACRES, UNIT 5.

### BENCHMARKS

#### PROJECT BENCHMARK

AGRS 1 3/4" ALUMINUM DISK STAMPED "ACS BM, 15-E17", EPOXIED TO THE TOP OF CONCRETE CURB AT THE NNW QUADRANT OF THE INTERSECTION OF SAN MATEO BLVD. AND ACADEMY ROAD N.E.  
ELEVATION = 5208.108 FEET (NAVD 88)

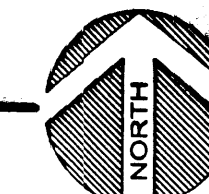
#### TEMPORARY BENCHMARK (T.B.M.) #1

#5 REBAR W/CAP STAMPED "HMC CONTROL NMPS 11184", AS SHOWN ON THIS SHEET.  
ELEVATION = 5202.00 FEET (NAVD 88)

#### TEMPORARY BENCHMARK (T.B.M.) #2

#5 REBAR W/CAP STAMPED "HMC CONTROL NMPS 11184", AS SHOWN ON THIS SHEET.  
ELEVATION = 5196.97 FEET (NAVD 88)

## DRAINAGE PLAN & CALCULATIONS



## CONSTRUCTION NOTES:

- TWO (2) WORKING DAYS PRIOR TO ANY EXCAVATION, CONTRACTOR MUST CONTACT NEW MEXICO ONE CALL SYSTEM 260-1990 (ALBUQUERQUE AREA), 1-800-321-ALERT(2537) (STATEWIDE), FOR LOCATION OF EXISTING UTILITIES.
- PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL EXCAVATE AND VERIFY THE HORIZONTAL AND VERTICAL LOCATION OF ALL POTENTIAL OBSTRUCTIONS. SHOULD A CONFLICT EXIST, THE CONTRACTOR SHALL NOTIFY THE ENGINEER IN WRITING SO THAT THE CONFLICT CAN BE RESOLVED WITH A MINIMUM AMOUNT OF DELAY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL INTERPRETATIONS IT MAKES WITHOUT FIRST CONTACTING THE ENGINEER AS REQUIRED ABOVE.
- ALL WORK ON THIS PROJECT SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE FEDERAL, STATE AND LOCAL LAWS, RULES AND REGULATIONS CONCERNING CONSTRUCTION SAFETY AND HEALTH.
- ALL CONSTRUCTION WITHIN PUBLIC RIGHT-OF-WAY SHALL BE PERFORMED IN ACCORDANCE WITH APPLICABLE CITY OF ALBUQUERQUE STANDARDS AND PROCEDURES.
- IF ANY UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES ARE SHOWN ON THESE DRAWINGS, THEY ARE SHOWN IN AN APPROXIMATE MANNER ONLY, AND SUCH LINES MAY EXIST WHERE NONE ARE SHOWN. IF ANY SUCH EXISTING LINES ARE SHOWN, THE LOCATION IS BASED UPON INFORMATION PROVIDED BY THE OWNER OF SAID UTILITY, AND THE INFORMATION MAY BE INCOMPLETE, OR MAY BE OBSOLETE BY THE TIME CONSTRUCTION COMMENCES. THE ENGINEER HAS CONDUCTED ONLY PRELIMINARY INVESTIGATION OF THE LOCATION, DEPTH, SIZE, OR TYPE OF EXISTING UTILITY LINES, PIPELINES, OR UNDERGROUND UTILITY LINES. THIS INVESTIGATION IS NOT CONCLUSIVE, AND MAY NOT BE COMPLETE. THEREFORE, MAKES NO REPRESENTATION PERTAINING THERETO, AND ASSUMES NO RESPONSIBILITY OR LIABILITY THEREOF. 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.
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- ALL PLANTER AREAS WITHIN THE PARKING LOT SHALL BE GENTLY DEPRESSED TO CONTAIN THE RAINFALL THAT FALLS UPON THAT SURFACE.

### 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.
- WHEN APPLICABLE, CONTRACTOR SHALL SECURE "TOPSOIL DISTURBANCE PERMIT" FROM THE CITY AND/OR FILE A NOTICE OF INTENT (N.O.I.) WITH THE EPA PRIOR TO BEGINNING CONSTRUCTION.

## Parking Lot Expansion 5901 Harper Drive NE Albuquerque, New Mexico

Presbyterian Project No.

### Project Title

Drawn By J.Y.R. Checked By J.G.M.

Proj. No. 2010.043.2 Date 12/20/2010

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### Revisions

12-20-2010 Engineer

C3

DRAINAGE PLAN & CALCULATIONS

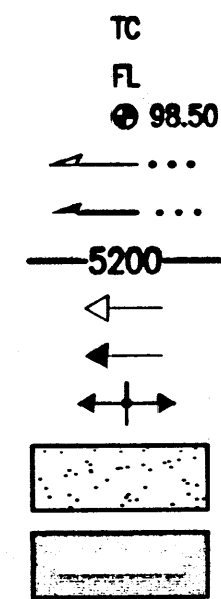
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Plot Time: 1:58 pm

# DESIGN GRADING LEGEND:



TOP OF CURB  
FLOWLINE  
PROPOSED SPOT ELEVATION  
EXISTING FLOWLINE  
PROPOSED FLOWLINE  
PROPOSED CONTOUR  
EXISTING DIRECTION OF FLOW  
PROPOSED DIRECTION OF FLOW  
HIGH POINT / DIVIDE  
PROPOSED CONCRETE  
PROPOSED ASPHALT PAVING

## CONSTRUCTION NOTES:

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## HIGH MESA Consulting Group

6010-B MIDWAY PARK BLVD. NE • ALBUQUERQUE, NEW MEXICO 87109  
PHONE: 505.345.4250 • FAX: 505.345.4254 • www.highmesacg.com

## Parking Lot Expansion

5901 Harper Drive NE  
Albuquerque, New Mexico  
Presbyterian Project No.

### Project Title

Drawn By J.Y.R. Checked By J.G.M.

Proj. No. 2010.043.2 Date 12/20/2010

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### Revisions

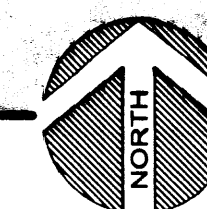
12-20-2010 Engineer

Grading Plan

Sheet Title

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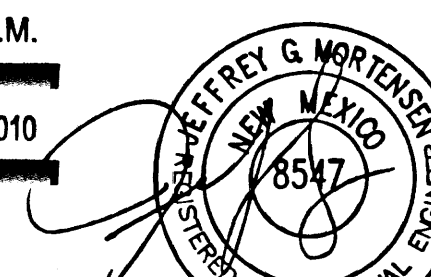
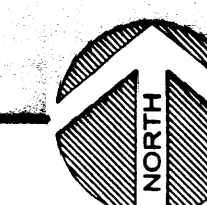
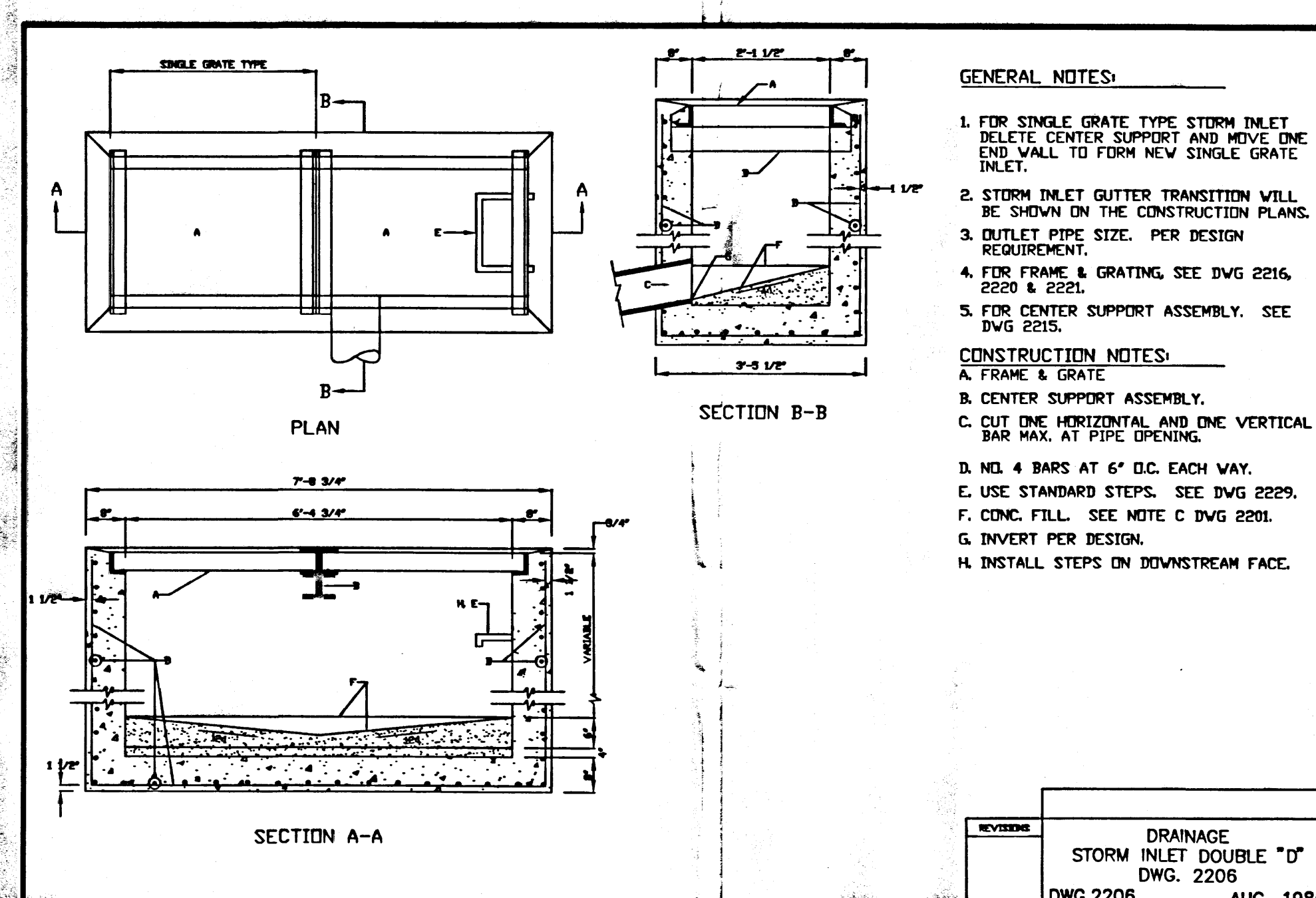
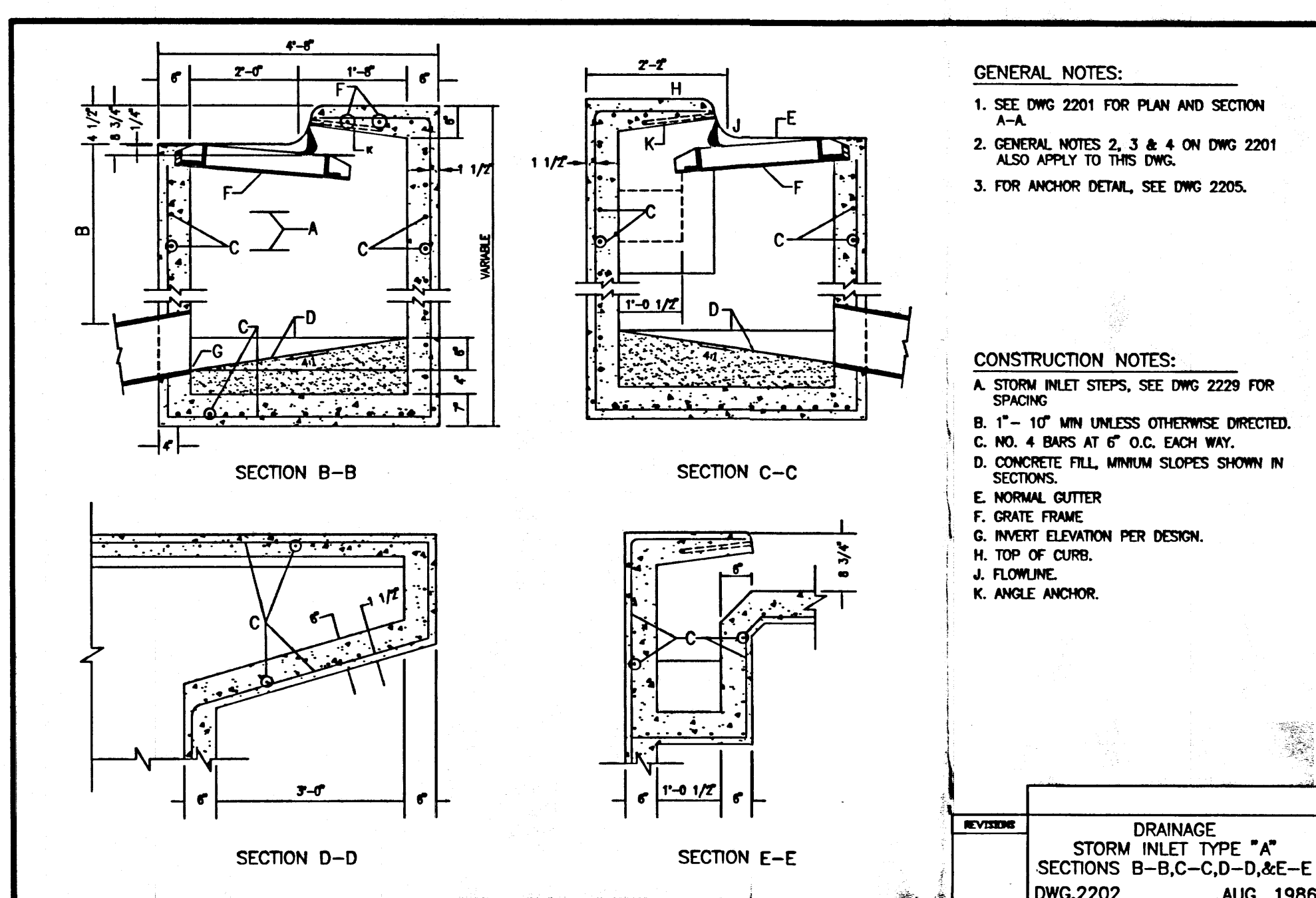
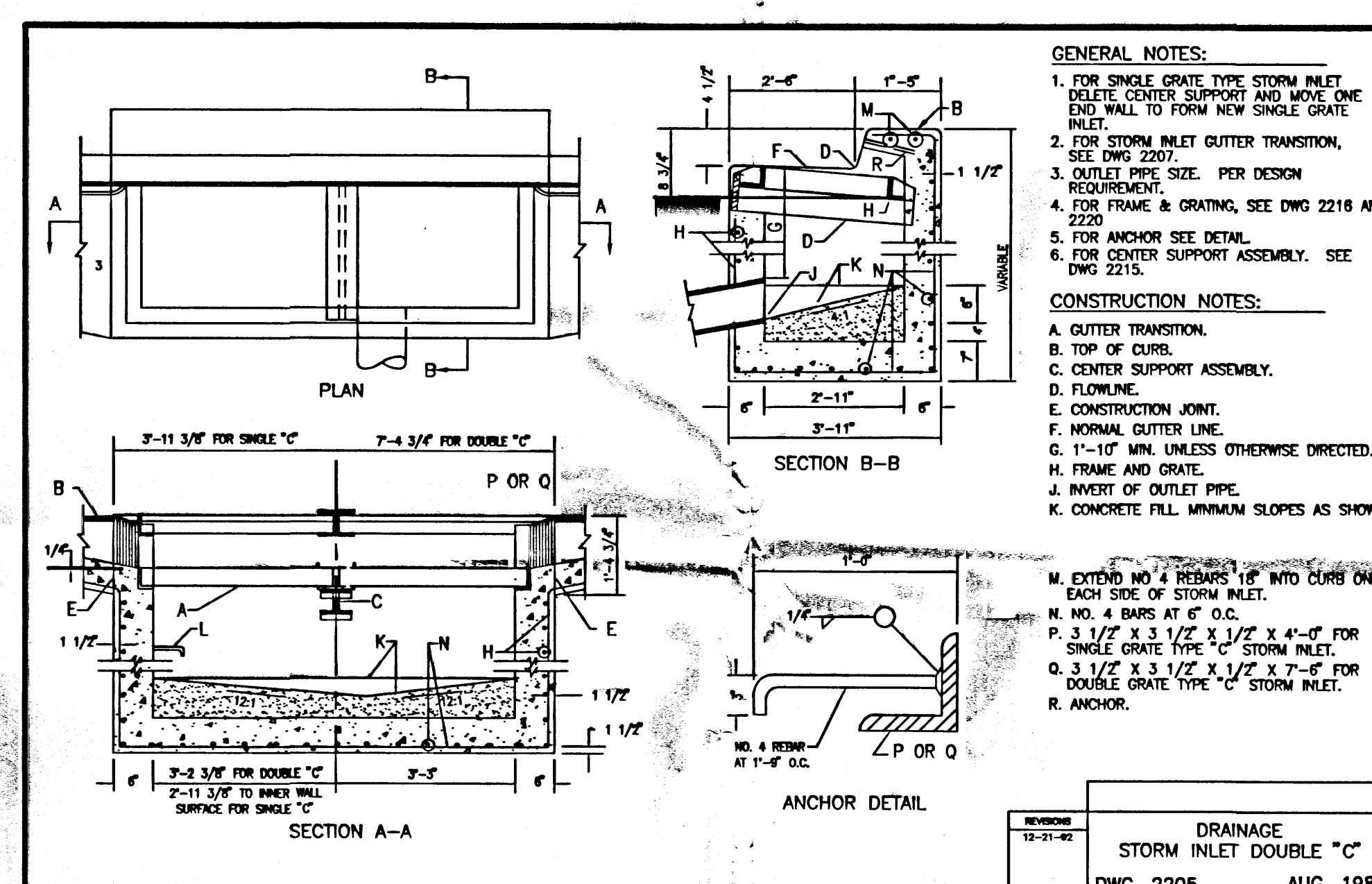
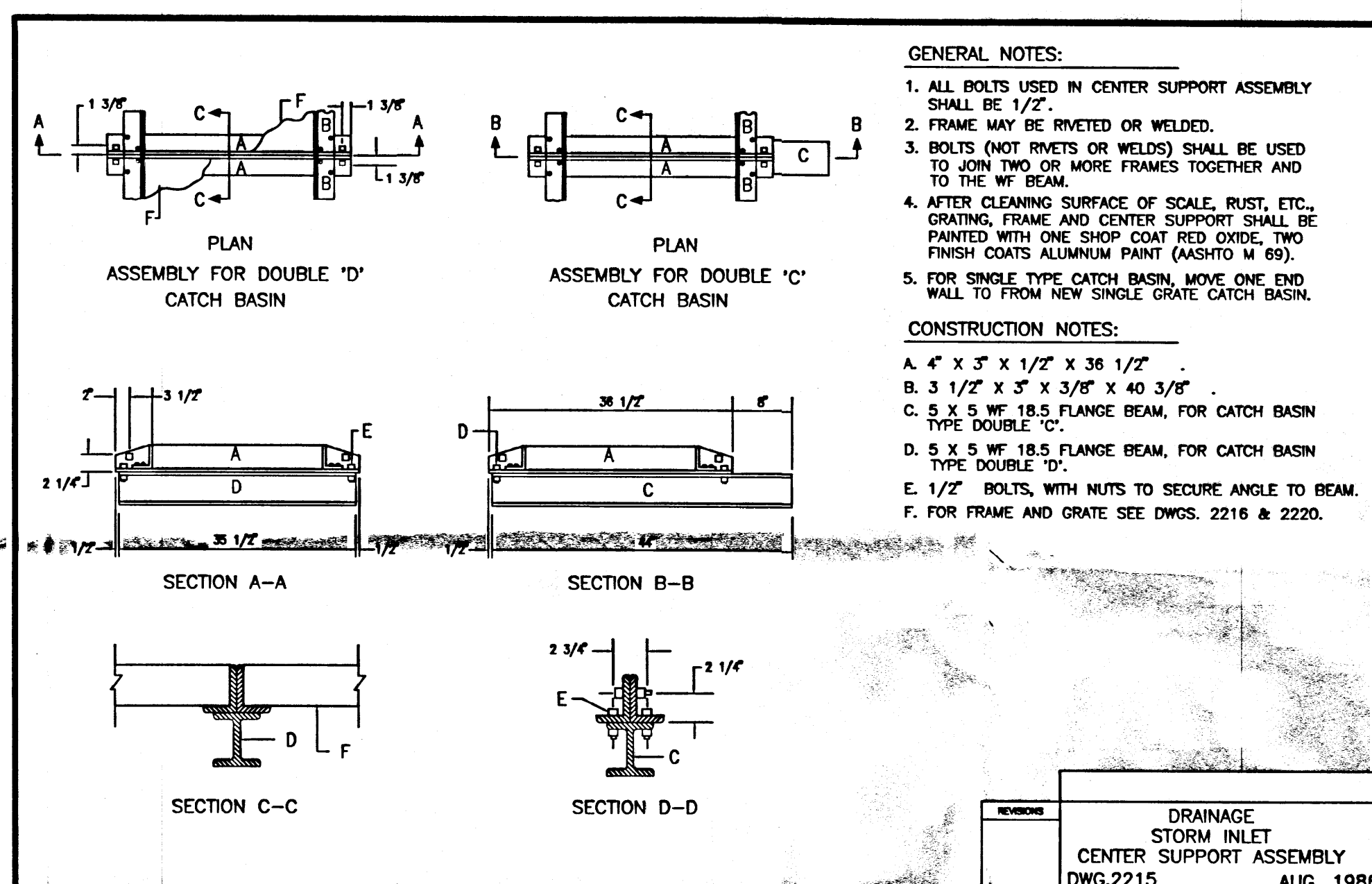
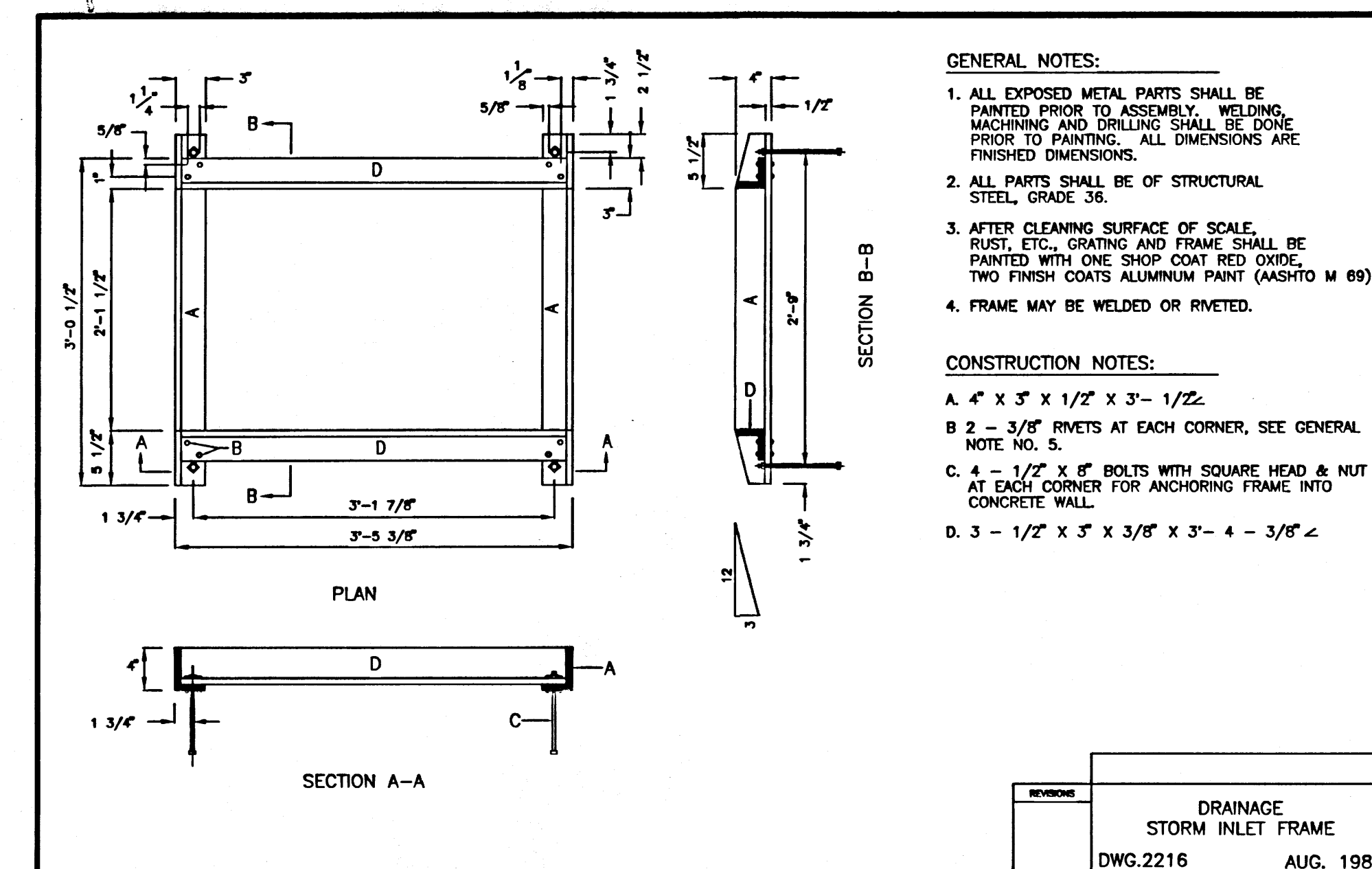
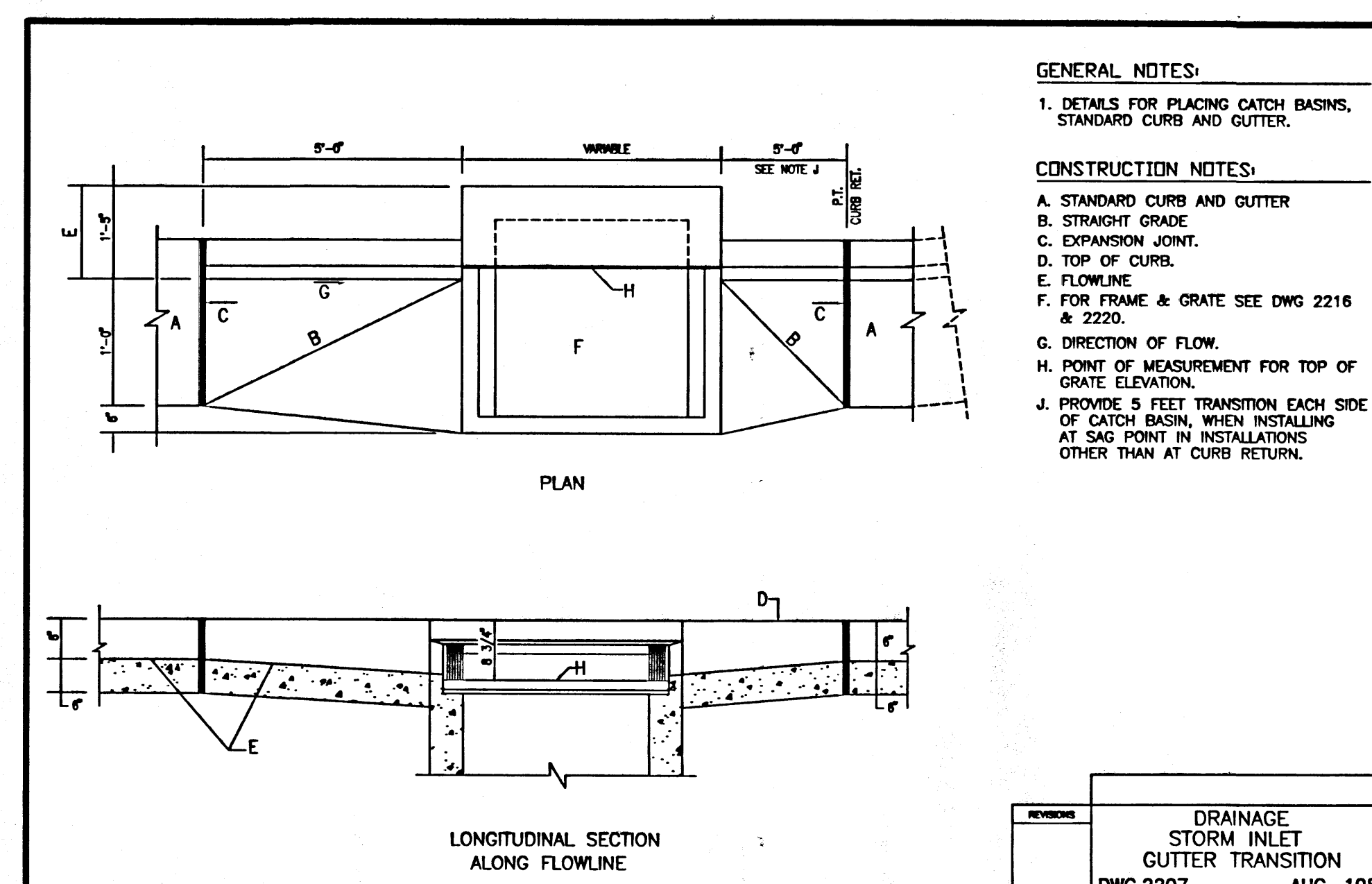
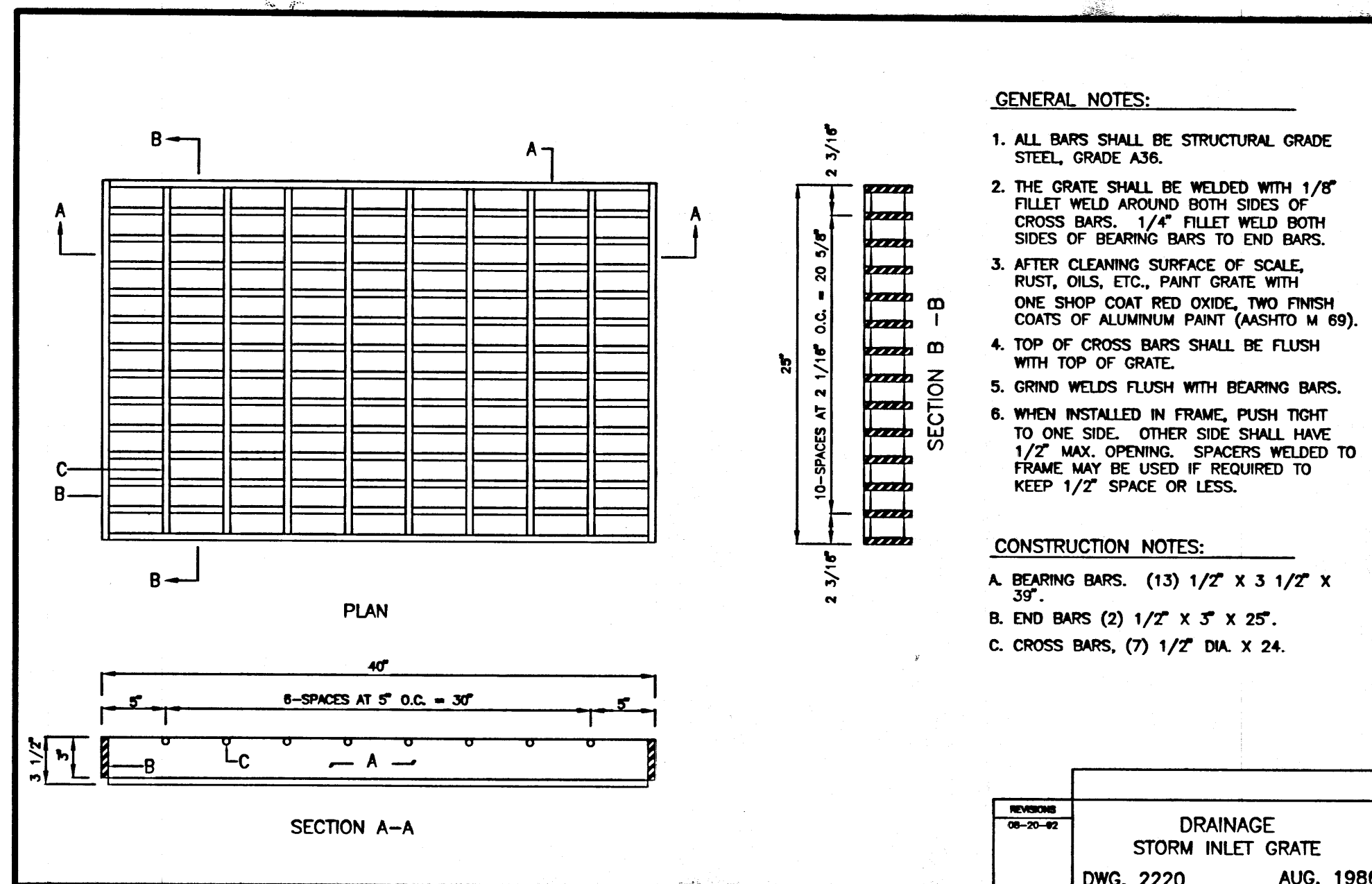
Grading Plan  
1"=20'



C4









# LEGEND

- + 5183.6 EXISTING SPOT ELEVATION
- - - EXISTING CONTOUR
- - - EXISTING SANITARY SEWER LINE
- - - EXISTING OVERHEAD POWER LINE
- CONTROL POINT
- ⊙ EXISTING CONIFEROUS TREE W/TRUNK DIA (INCH)
- ⊙ EXISTING DECIDUOUS TREE W/TRUNK DIA (INCH)
- ⊙ EXISTING LIGHT POLE
- ⊙ MANHOLE
- ⊙ SIGN
- ⊙ 85.75 PROPOSED SPOT ELEVATION
- - - 85 PROPOSED CONTOUR
- - - PROPOSED FLOWLINE
- - - HIGHPOINT
- - - PROPOSED DRY STREAMBED
- TC TOP OF CURB
- TA TOP OF ASPHALT
- FL FLOWLINE
- PROPOSED ASPHALT PAVEMENT

## PROJECT BENCHMARK

STATION IS A STANDARD ACS BRASS TABLE STAMPED "1-E18A-1978" SET IN TOP OF A CONCRETE POST FLUSH WITH THE GROUND. STATION IS LOCATED IN THE NOSE OF A TRAFFIC ISLAND IN ACADEMY ROAD N.E. APPROXIMATELY 0.1 MILE EAST OF THE INTERSECTION OF SAN MATEO BLVD. N.E. AND ACADEMY ROAD N.E. ELEVATION = 5222.426 FEET (NGVD 1929)

## T.B.M.

CONTROL POINT CP-3001-A #4 REBAR LOCATED ON THE WEST SIDE OF THE PRIVATE DRIVE WHICH INTERSECTS HARPER AVENUE N.E. AND SOUTH OF THE EXISTING PARKING LOT OF THE NORTHSIDE MEDICAL BUILDING AS SHOWN ON SHEET C2. ELEVATION = 5194.29 FEET

## LEGAL DESCRIPTION

TRACT B-5-C-1, ACADEMY ACRES, UNIT 5

NOTE:  
THIS IS NOT A BOUNDARY SURVEY. APPARENT PROPERTY CORNERS ARE SHOWN FOR ORIENTATION ONLY. BOUNDARY AND TOPOGRAPHIC INFORMATION SHOWN HEREON IS BASED UPON THE "TOPOGRAPHIC SURVEY TRACT B-5-C-1 ACADEMY ACRES, UNIT 5" CONDUCTED BY ALBUQUERQUE SURVEYING CO., INC. IN JULY, 2003.

JMA JOB # 95.018.8

JEFF MORTENSEN & ASSOCIATES, INC.  
6010-B MIDWAY PARK BLVD. N.E.  
ALBUQUERQUE, N.M. 87109  
ENGINEERS & SURVEYORS (505) 345-4250  
FAX: (505) 345-4254 E-mail: jma@jma-inc.com

Parking Lot Expansion  
Northside Medical Building  
6100 Pan American Freeway NE  
Albuquerque, New Mexico  
Presbyterian Project No. MR03002

Project Title

Drawn By S.G.H. Checked By J.G.M.

Proj. No. 2003.24 Date 08/29/03

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Revisions Architect Engineer

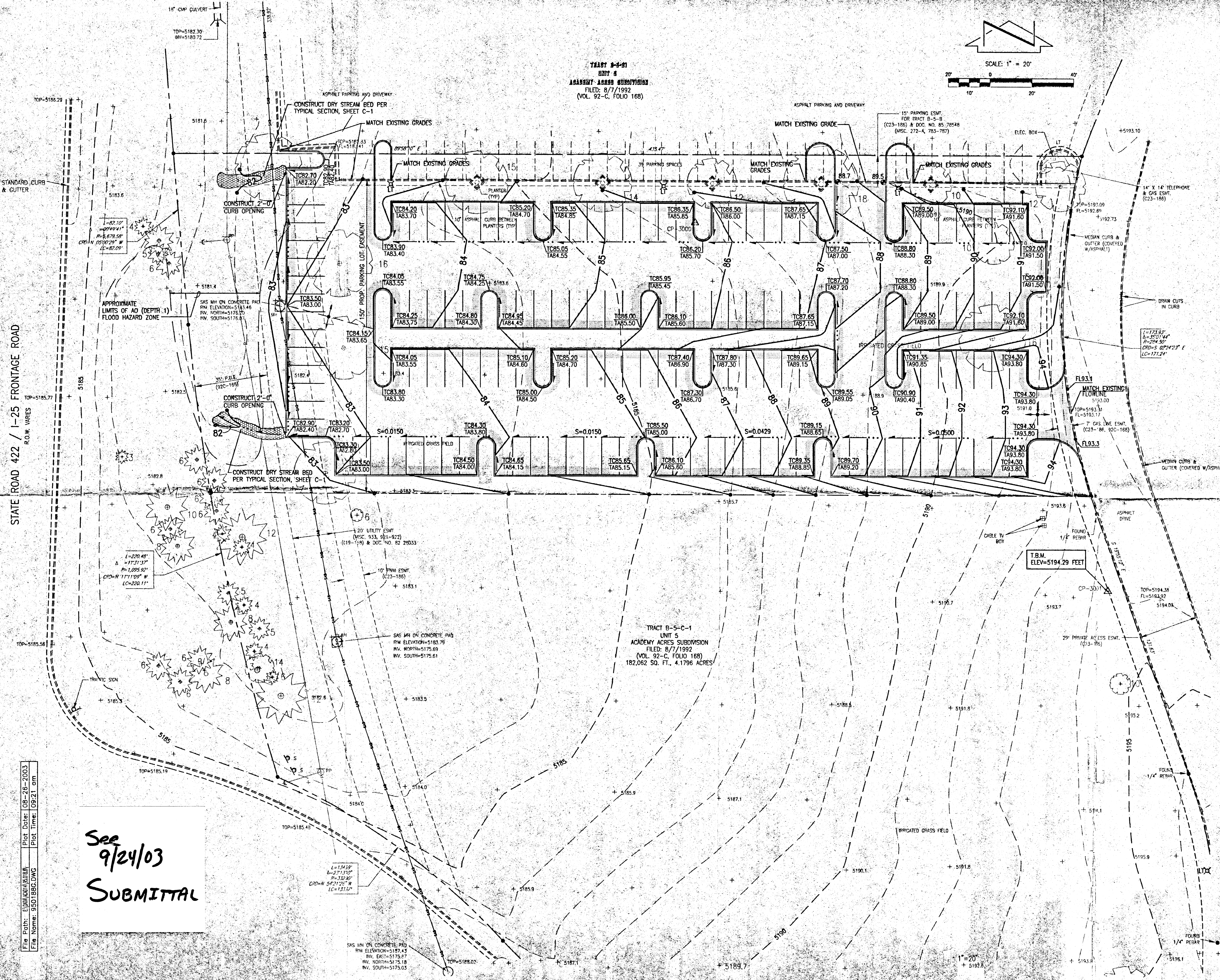
GRADING PLAN

Sheet Title Sheet 6 of 7

C4

TRACT B-5-C-1  
UNIT 5  
ACADEMY ACRES SUBDIVISION  
FILED: 8/7/1992  
(VOL. 92-C, FOLIO 168)

SCALE: 1" = 20'  
10' 20' 40'



See  
9/24/03  
SUBMITTAL

File Path: E:\WORK\1001A\1001A.dwg Plot Date: 08-26-2003 Plot Time: 09:21 am  
File Name: 9501886.DWG



**LEGEND**

- + 5183.6 EXISTING SPOT ELEVATION
- - - EXISTING CONTOUR
- - - EXISTING SANITARY SEWER LINE
- - - EXISTING OVERHEAD POWER LINE
- △ CONTROL POINT
- ⊗ EXISTING CONIFEROUS TREE W/TRUNK DIA.(INCH)
- ⊗ EXISTING DECIDUOUS TREE W/TRUNK DIA.(INCH)
- ⊗ EXISTING LIGHT POLE
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TRACT B-5-C-1, ACADEMY ACRES, UNIT 5

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Drawn By S.G.H. Checked By J.G.M.

Proj No. 2003.24 Date 08/29/03

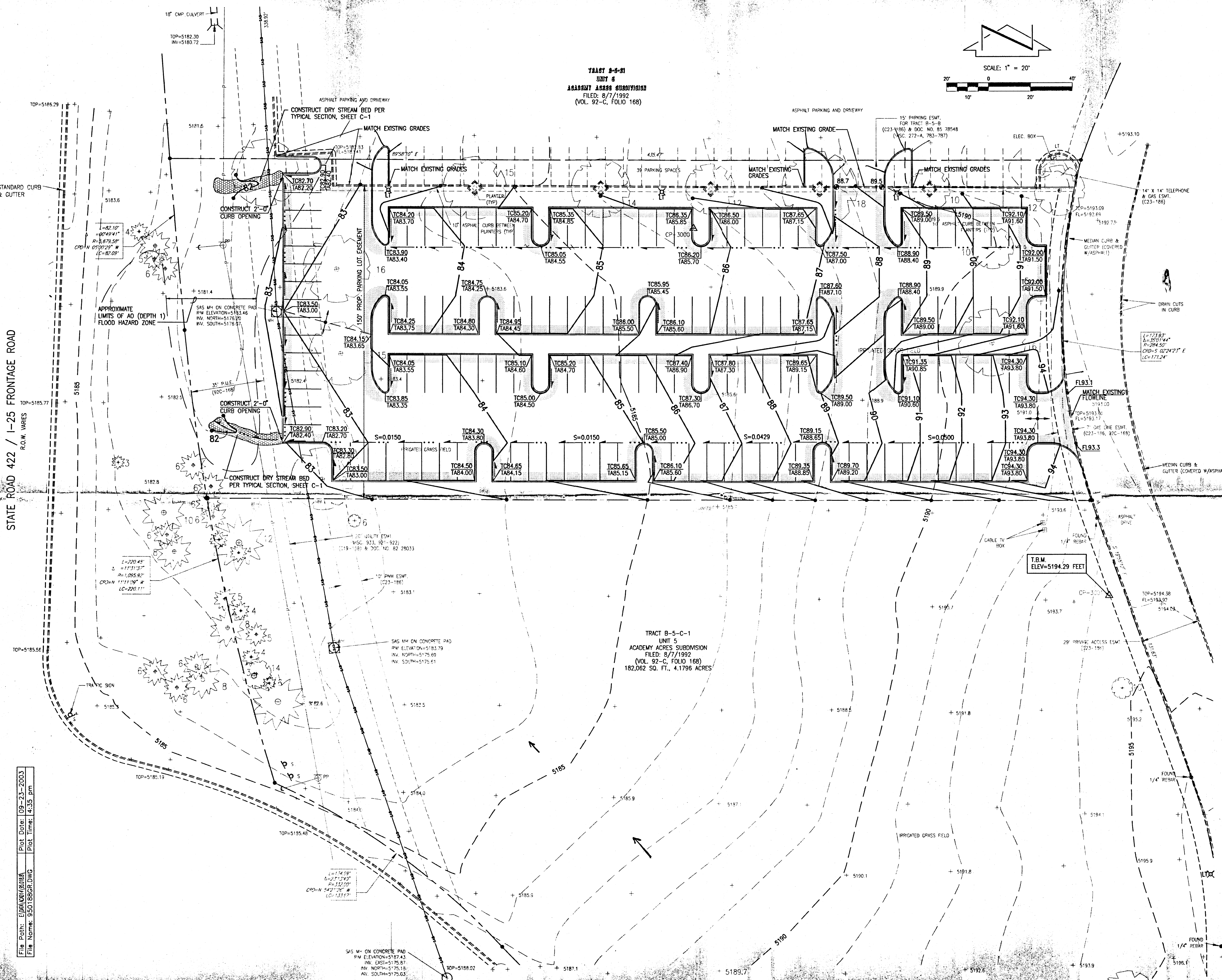
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Revisions Architect Engineer

Grading Plan

Sheet Title Sheet 6 of 7

**C4**



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