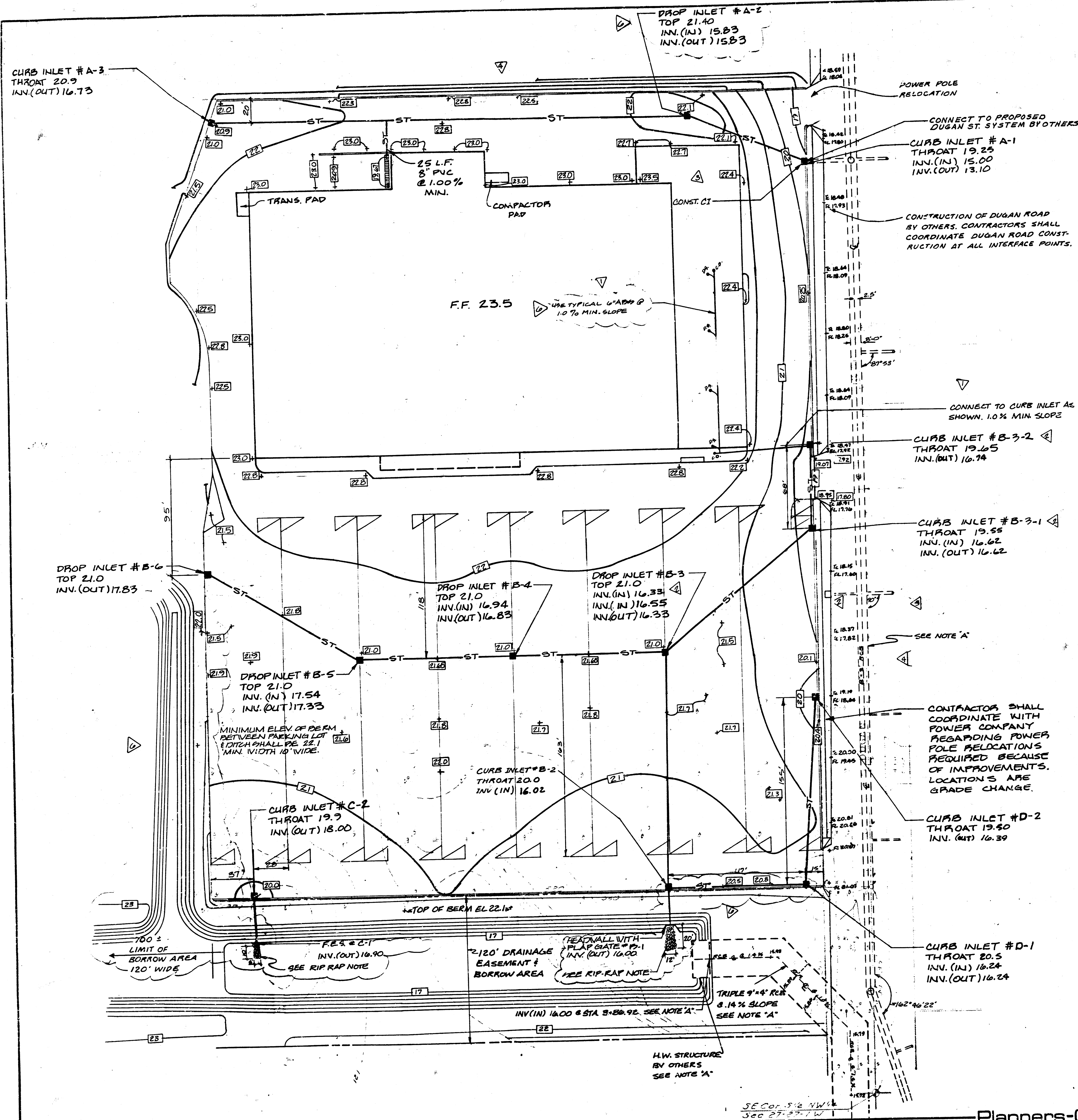




GRADING AND DRAINAGE PLAN NOTES

- Existing topography, utilities, and roadway configurations shown are based upon a topographic survey prepared by:
Baughman Company, P.A.
330 Laura Street
Wichita, Kansas 67211
(316) 262-7271
Dated: May 1986
- Contractor shall verify existing topographic data, locations of existing utilities, and other site conditions prior to construction.
- For site dimensional layout, see Drawing C-1, Staking Plan.
- For utility information, see Drawing C-4, Utility Plan.
- All construction within the Dugan Road and highway rights-of-way shall be coordinated with Dugan Road improvement plans prepared by Baughman Company.
- All disturbed areas that are not proposed to be covered by blacktop or asphalt shall be grassed as soon as grading operations are completed. Areas shall be seeded with a mix of Kentucky 31 tall fescue and adelphi bluegrass. The mix shall be 90% fescue and 10% bluegrass by volume, sown at a rate of 5 lb/1000 s.f.
- Borrow material will be required in order to bring the project site to the elevations shown. Borrow can be obtained from the 120' Ditch Easement at the South property line of the project. Limits of borrow would be Dugan Street to the east and 1300' to the west. The section and elevation of the drainage ditch in the easement shall be left as close as possible to the design of that ditch by:
Baughman Company, P.A.
330 Laura Street
Wichita, Kansas 67211
(316) 262-7271
Dated: May 1986
- Entire site shall be stripped of topsoil and organic matter prior to commencing filling operations. All fill should be placed in 8\" maximum lifts at a minimum compaction of 98% of the modified proctor test. (ASTM)

NOTE 'A'

SEE BAUGHMAN COMPANY
STORM WATER SEWER PLAN
PROJ. # 468-76-245-81589
000-000-001 FOR STORM
SANITARY SEWER SEE PROJ. #
412-76-245-81488-000-000-001
FOR DUGAN ROAD & TRIPLE
9'-4\" BOX CULVERT.

RIP RAP NOTE

USE MINI 420-6\" MINI THICKNESS OF
THE RIP RAP - 12\". USE PLASTIC FILTER
CLOTH UNDER THE RIP RAP TO CONFORM
TO ASTM D-1777 & ASTM D-1682
SEE DETAIL ON DRAWING C-5

NOTE TO CONTRACTOR

This project will be constructed under the supervision of the CITY ENGINEER and conforming to the SPECIFICATIONS of the CITY OF WICHITA. The CONTRACTOR will pay the City of Wichita for all costs of plan review, inspection and booking per contract.

APPROVED AS NOTED

By CITY ENGINEER OF WICHITA

Sanitary Sewers

Storm Sewers

Driveways; Approaches

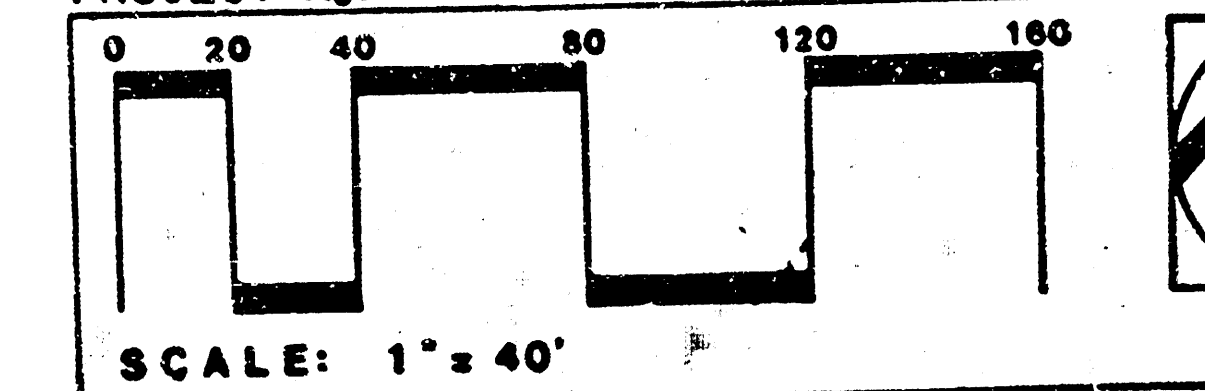
Water Mains

Paving

Other

Booked 8/8/87 MCG

PROJECT No. 468-76-245-80001-000-000-084



SCALE: 1\" = 40'

Columbia
Engineering &
Services, Inc.

5775A Glenridge Drive
Suite 202
Atlanta, Georgia 30328
404 256-9088



Project
U.S. HWY. 54 & DUGAN STREET

WICHITA, KANSAS

Developer
TERRA VENTURE INC.
OVERLAND PARK, KANSAS

This drawing and design are the property of Columbia Engineering and Services, Inc. They are submitted on the condition that they are not to be used, reproduced, or copied, in whole or in part, or used for furnishing information to others, without the prior written consent of Columbia Engineering and Services, Inc. All common law rights of copyright and otherwise are hereby specifically reserved.

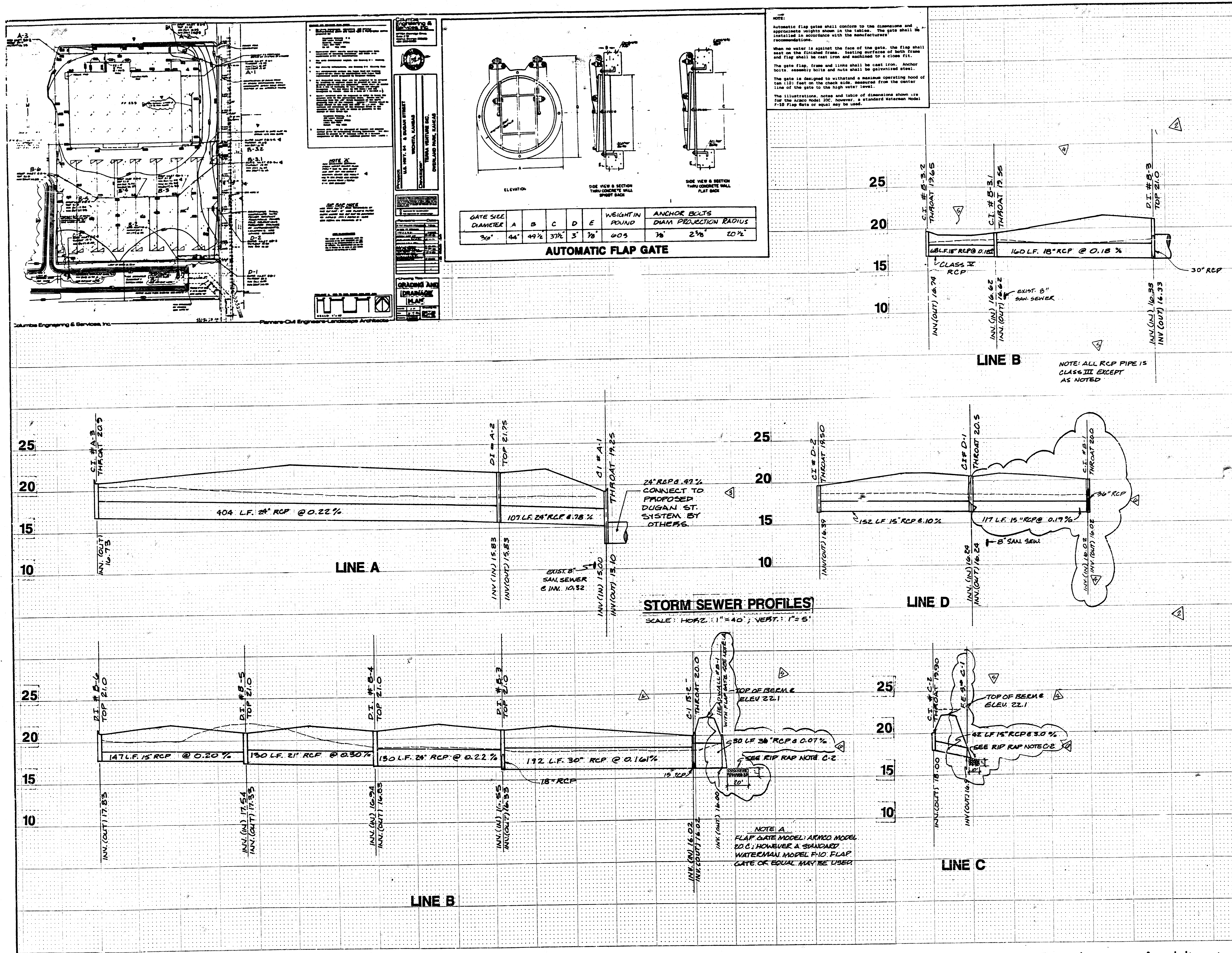
☒ Approved for construction
☐ Not approved for construction

Revisions	Date
15' PLAT SHOULDER DITCH GRADING	7-12-86
DUGAN RD GRADING	
LINE 8-3 TO 8-1	7-30-86
GARDEN SHOP DS	8-25-86
PIPE LENGTH 82 TO 8-1	9-11-86
GRADING & CT 8-3-1	
A-2 ALL ELEVATIONS	9-12-86
ROAD ELEV REVISIONS	9-30-86
GRADING BETWEEN A-1 & A-2	
ROAD CHANGES AND STORM	10-3-86
STRUCTURES THE DOWN	
NOTE A & PIPE LENGTHS	
C-2 TO C-1 & 8-2 TO 8-1	
PIPE LENGTHS & ELEVATIONS OF	
THE DRAIN & TOP OF A-2	10-19-86

Drawing Title
**GRADING AND
DRAINAGE
PLAN** 1/3
Drawn By J. H.
Date 6-12-86
Project No. 1065
Drawing No. C-2

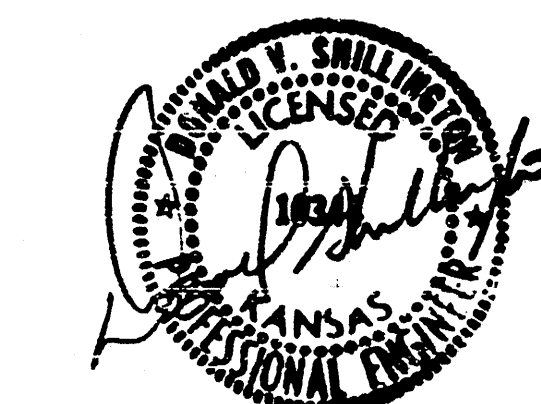
Columbia Engineering & Services, Inc.

Planners-Civil Engineers-Landscape Architects



Columbia Engineering & Services, Inc.

5775A Glenridge Drive,
Suite 202
Atlanta, Georgia 30328
404 258-9088



Project
U.S. HWY. 54 & DUGAN STREET
WICHITA, KANSAS

Developer
TERRA VENTURE INC.
OVERLAND PARK, KANSAS

This drawing and design are the property of Columbia Engineering and Services, Inc. They are submitted on the condition that they are not to be used, reproduced or copied, in whole or in part, or used for furnishing information to others without the prior written consent of Columbia Engineering and Services, Inc. All common law rights of copyright and otherwise are hereby specifically reserved.

☒ Approved for construction
☐ Not approved for construction

Revisions	Date
LINE B 12" TO 15" TO BOX CONNECTION	7-22-86
LINE B 15" TO 24" RCP INFO.	7-30-86
PIPE MATERIAL FROM 15" TO 24" RCP	7-31-86
PIPE LENGTH 15" TO 24" RCP	7-31-86
NEW THROAT ELEV. @ B-3-1	7-31-86
LINE A-2 TO A-1	7-31-86
SAN SEWER REMOVAL	7-31-86
LINE B & C REVISIONS	7-31-86
LINE B & C REVISIONS	7-31-86
LINE D REV.	7-31-86
CONNECT D-1 TO B-2, 1" RCP REV. TO HW. ON B-1 C-1	10-19-86

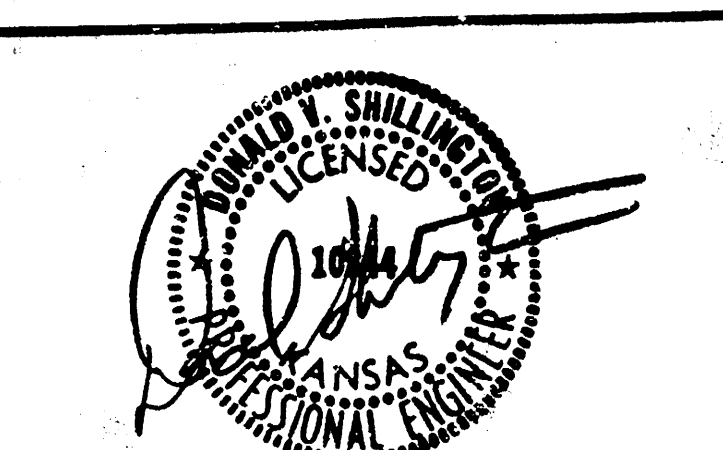
Drawing Title

PROFILES

2/3

Drawn By: A.M.
Date: 6-12-86
Project No.: 1065
Drawing No.: C-4

Columbia Engineering & Services, Inc.
 5775A Glenridge Drive,
 Suite 202
 Atlanta, Georgia 30328
 404 256-9088



Project
 U.S. HWY. 54 & DUGAN STREET
 WICHITA, KANSAS

Developer
 TERRA VENTURE INC.
 OVERLAND PARK, KANSAS

This drawing and design are the property of Columbia Engineering and Services, Inc. They are submitted on the condition that they are not to be used, reproduced, or copied in whole or in part, or used for furnishing information to others, without the prior written consent of Columbia Engineering and Services, Inc. All common law rights of copyright and otherwise are hereby specifically reserved.

☒ Approved for construction
☐ Not approved for construction

Revisions	Date
CAST-IN-PLACE AND BRICK SANITARY MANHOLES DETAIL	7-12-80
CONC. P.S. DETAIL	7-30-84
RIP RAP	10-3-86

Drawing Title
DETAILS

Drawn By: J.H.
 Date: 10-12-86
 Project No: 1065

Drawing No: **C-5**

1. ALL CONCRETE TO BE PUMPED PLACED, CURED, AND FINISHED WITH A 2" MIN. APPROVED SURFACE MEMBRANE SEAL.

2. MINIMUM VERTICAL GRADE 0.01%.

3. MAXIMUM VERTICAL GRADE 0.03%.

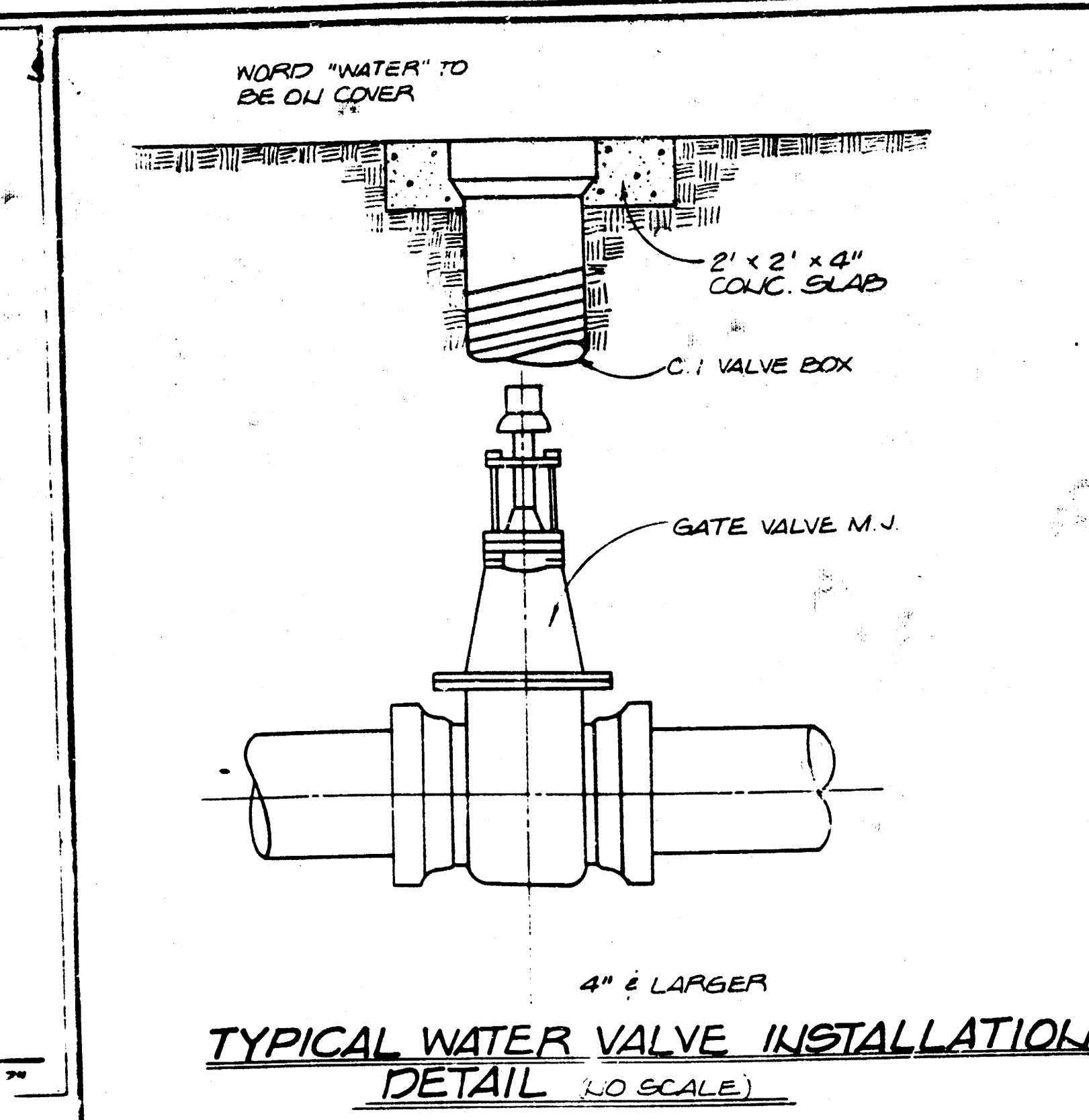
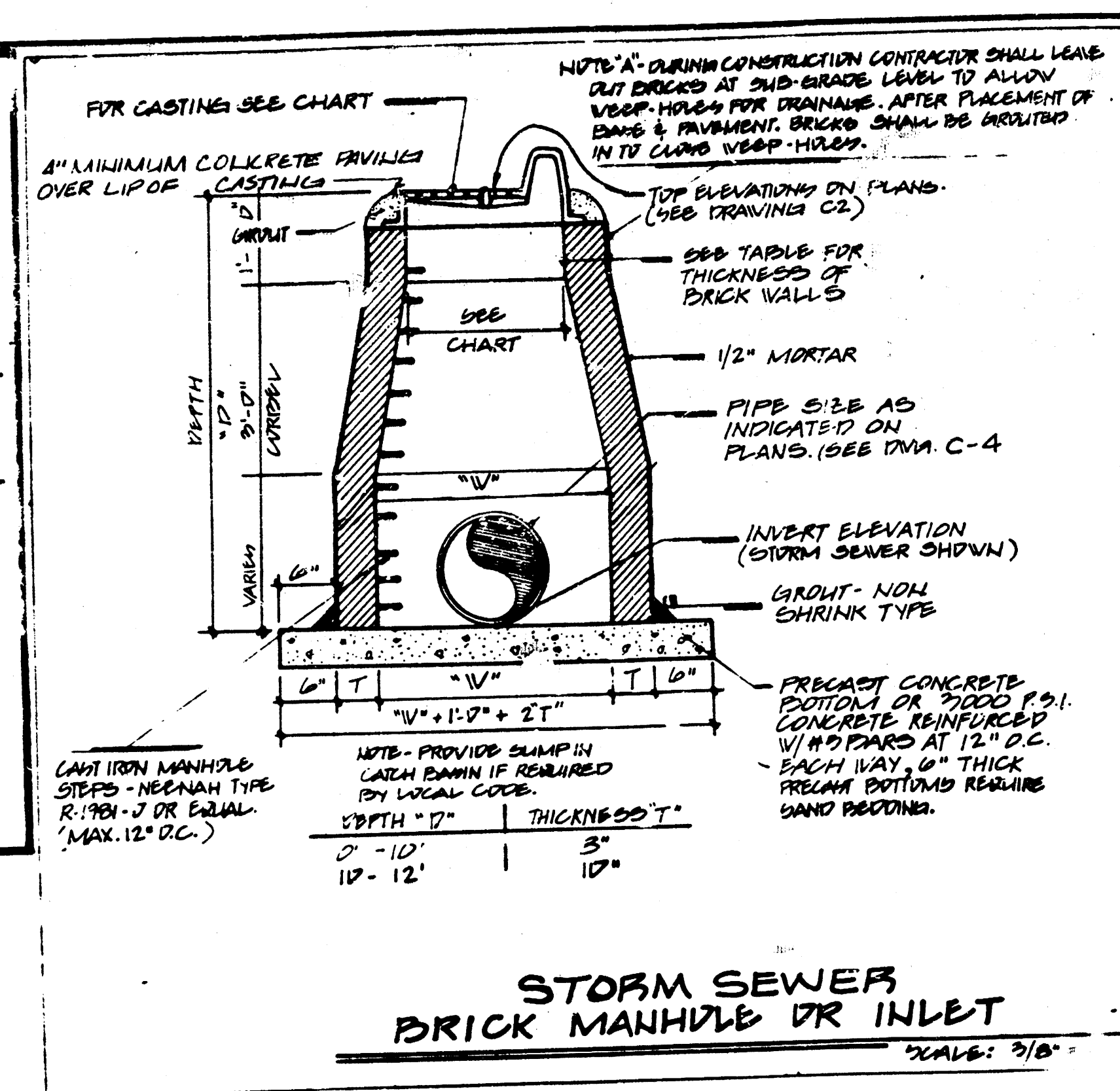
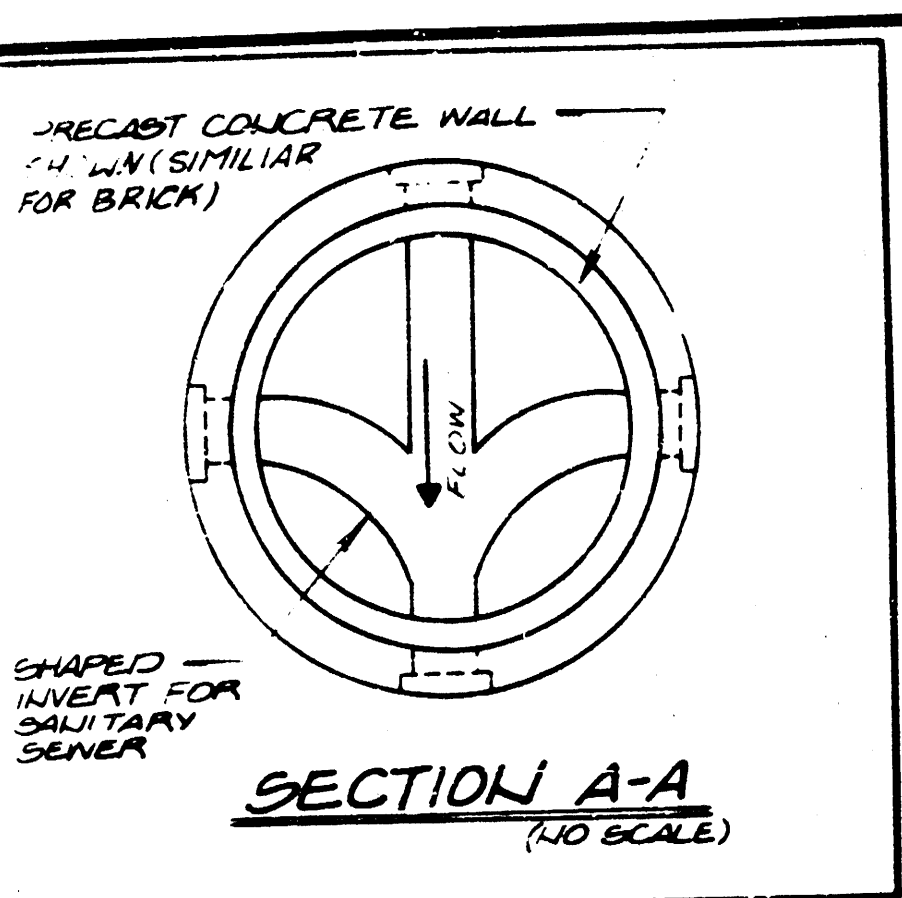
4. PROVIDE REINFORCING AT ALL EXPANSION JOINTS, COLD JOINTS AND WHERE CURBS & GUTTERS WILL NOT BE POURED MONOLITHIC BY EITHER OF THE FOLLOWING METHODS:

a. 1" DIA. SMOOTH DOVEL BARS (3) BY 1'-0" LONG IN EXPANSION JOINTS.

b. 1" DIA. SMOOTH DOVEL BARS (3) BY 1'-0" LONG, CAST ONE END OF DOVEL IN BITUMINOUS COATING.

5. A COLD JOINT WILL BE DEFINED AS A 24" MINIMUM OR LONGER PAUSE IN POURING BETWEEN POURS.

CURB & GUTTER SECTION
 NO SCALE



CASTING CHART FOR BRICK OR PRECAST MANHOLE OR INLET

Castings	Inside Top Dimension	Application
R-1755	27" Circular	Sanitary Manhole
R-1750	27" Circular	Storm Manhole
R-3015	25" x 24"	Curb Inlet
R-3335	26" x 26"	Drop Inlet
R-3457	36 3/8" x 48 5/8"	Double Grate Drop Inlet
R-4343	21" x 24"	Drop Inlet (Ditch or Non-pavement)

Depth "H"
 0' to 4' Same as inside top dimensions for grate
 4' and up (excluding double grate drop inlet) 4' Min. up to 36" dia. pipe
 5' Min. up to 48" dia. pipe
 Greater than 10' and double grate drop inlet than 48" *

*For pipe arches use span dimension instead of diameter.

**Use round to rectangular adapter section when using precast manhole sections.

***Heeneh Foundry (or equal)

