

SHEET INDEX	
NO	DESCRIPTION
1	TITLE SHEET
2	SITE DEVELOPMENT PLAN
3	SITE DEVELOPMENT PLAN
4	SEDIMENT CONTROL PLAN
5	DRAINAGE AREA MAP
6	PROFILES
7	PROFILES
8	PROFILES, NOTES AND DETAILS
9	NOTES AND DETAILS
10	LANDSCAPING PLAN
11	LANDSCAPING PLAN
12	LANDSCAPING DETAILS
13	RETAINING WALL DETAILS

SITE DEVELOPMENT PLAN

TOWN CENTER - SECTION 2, AREA 9

PARCEL A

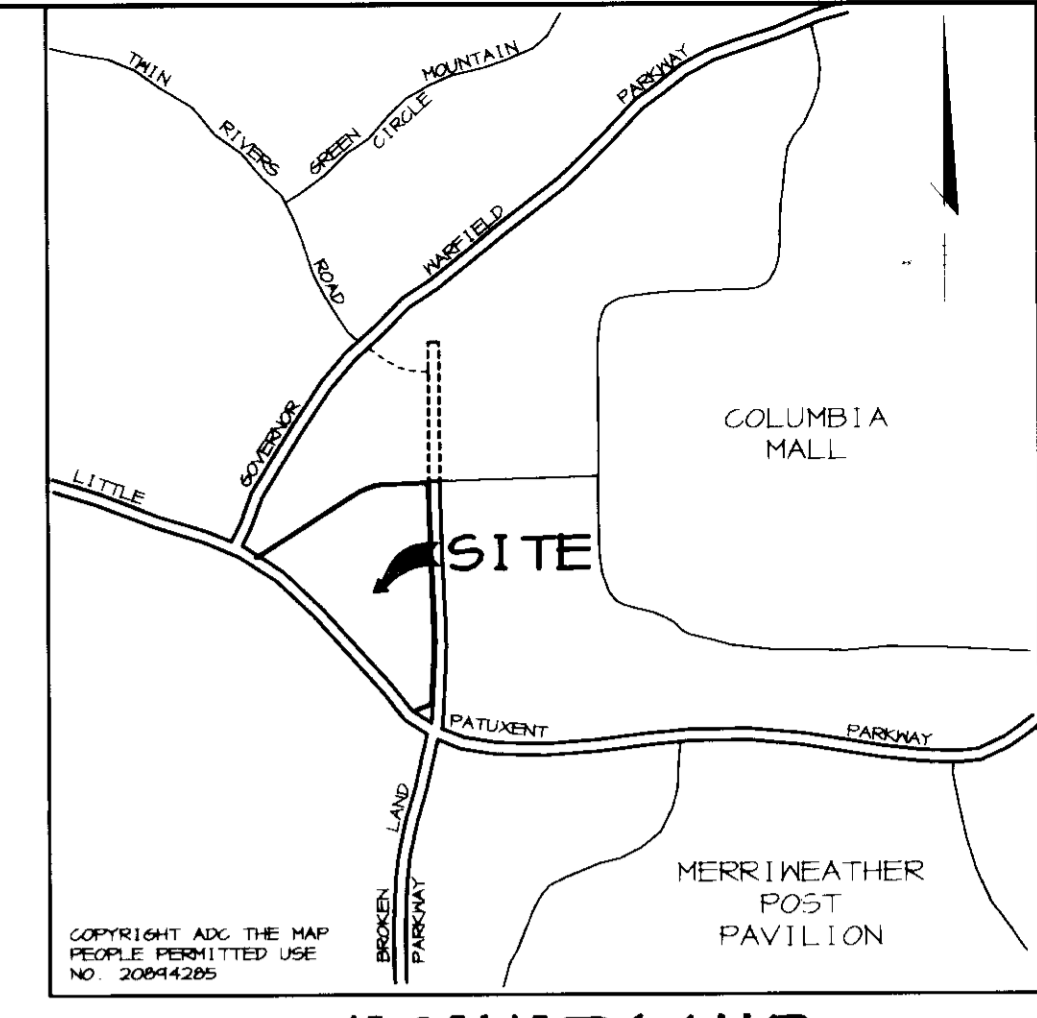
5th ELECTION DISTRICT

HOWARD COUNTY, MARYLAND

GENERAL NOTES

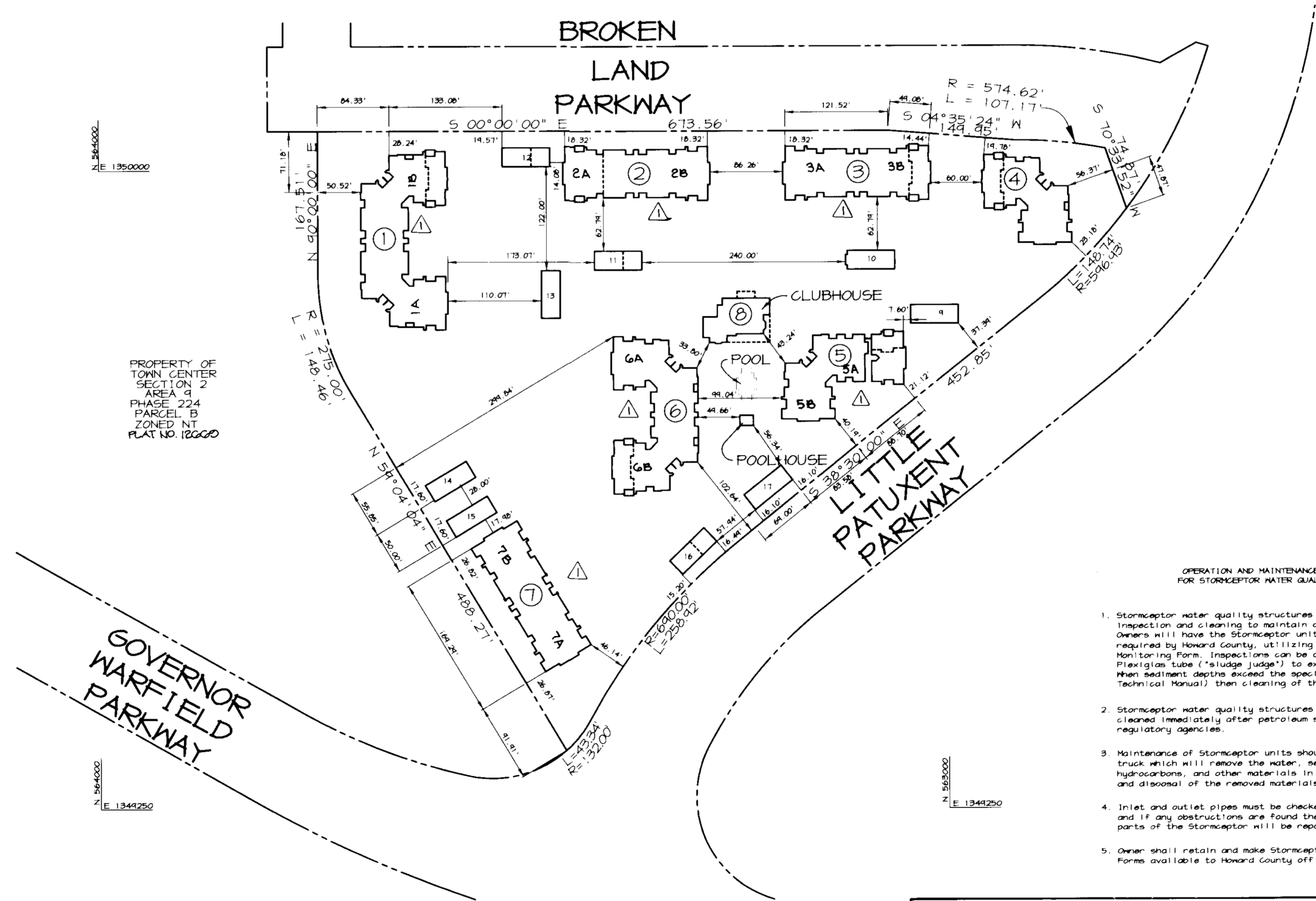
- ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410) 313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
- THE CONTRACTOR SHALL NOTIFY "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
- TRAFFIC CONTROL DEVICES, MARKINGS, AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
- ALL PLAN DIMENSIONS ARE TO FACE OF CURB AND FACE OF BUILDING UNLESS OTHERWISE NOTED.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM FIELD SURVEY WITH MAXIMUM TWO FOOT CONTOUR INTERVALS PREPARED BY SHANABERGER AND LANE DATED MARCH, 1994.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 36AA AND 36DA WERE USED FOR THIS PROJECT.
- WATER IS PUBLIC. CONTRACT NO. 24-3593-D.
- SEWER IS PUBLIC. SEWER DRAINAGE AREA: PATUXENT. TREATMENT PLANT: LITTLE PATUXENT. CONT. 24-3091-D & 24-3221-D.
- THE STORMWATER MANAGEMENT FACILITY IS PROVIDED UNDER F-85-131. WATER QUALITY IS PROVIDED BY ON-SITE, PRIVATELY MAINTAINED STORMCEPTORS.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
- A 100-YEAR FLOODPLAIN STUDY IS NOT REQUIRED FOR THIS PROJECT.
- A TRAFFIC STUDY WAS PREPARED AND APPROVED UNDER F-97-19.
- A NOISE STUDY WAS PREPARED AND APPROVED UNDER F-97-19.
- THE GEOTECHNICAL STUDY FOR THIS PROJECT WAS PREPARED BY ROBERT B. BALTER CO. DATED JULY 1996.
- THE BOUNDARY SURVEY FOR THIS PROJECT IS BASED ON PREVIOUSLY RECORDED PLAT NO. 12660
- SUBJECT PROPERTY ZONED NEW TOWN PER 10-18-93 COMPREHENSIVE ZONING PLAN.
- ALL ELEVATIONS SHOWN ARE BASED ON THE U.S.C. AND G.S. MEAN SEA LEVEL DATUM, 1929.
- SEE DEPARTMENT OF PLANNING AND ZONING FILE NO'S F-91-57, SDP-80-01C, F-93-03, AND F-97-19.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES AT LEAST (5) DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
- CONTRACTOR IS SOLELY RESPONSIBLE FOR CONSTRUCTION MEANS, METHODS, TECHNIQUES, SEQUENCES, PROCEDURES, AND SAFETY PRECAUTIONS AND PROGRAMS.
- PIPE SHALL NOT BE INSTALLED BY THE CONTRACTOR UNTIL THE LENGTH CALLED FOR AT EACH STATION HAS BEEN APPROVED BY THE ENGINEER IN THE FIELD.
- NO PIPE SHALL BE LAID UNTIL LINES OF EXCAVATION HAVE BEEN BROUGHT WITHIN 6" OF FINISHED GRADE.
- ALL STORM DRAIN PIPE BEDDING SHALL BE CLASS 'C' AS SHOWN IN FIG. 11.4, VOLUME 1 OF HOWARD COUNTY DESIGN MANUAL UNLESS OTHERWISE NOTED.
- ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
- STORM DRAIN TRENCHES WITHIN ROAD RIGHT OF WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, I.E., STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION, LATEST AMENDMENTS.
- PROFILES STATIONS SHALL BE ADJUSTED AS NECESSARY TO CONFORM TO PLAN DIMENSIONS.
- ALL FILL AREAS WITHIN ROADWAY AND UNDER STRUCTURES TO BE COMPACTED TO A MINIMUM OF 95% COMPACTION OF AASHTO T98.
- LIGHTING LAYOUT AND DESIGN AND TRANSFORMER LOCATIONS PROVIDED BY: SCHWARTZ ENGINEERING, INCORPORATED, 4600 NORTH PARK AVENUE, LOWER PLAZA, CHEVY CHASE, MARYLAND 20815 PH: 301-215-7740
- RETAINING WALL STRUCTURAL DESIGN BY: CATES DESIGN, 21515 RIDGETOP CIRCLE, SUITE 280, STERLING, VIRGINIA 20166 PH: 703-450-7808
- LANDSCAPE ARCHITECTURE PROVIDED BY: CHK, 1300 SPRING STREET, SUITE 500 SILVER SPRING, MARYLAND 20910 PH: 301-588-4800
- THIS DEVELOPMENT EMPLOYS A WAIVER OF HANDICAP ACCESS BASED ON THE FAIR HOUSING ACCESSIBILITY GUIDELINES, SECTION 5, GUIDELINES (2)(a)(i)(A) AND (B). THE TOTAL BUILDABLE UNDISTURBED SITE AREA WITH LESS THAN 10% SLOPES IS 8.20 AC (90.6% OF THE SITE). THIS WAIVER APPLIES ONLY TO ACCESS TO NORTH END OF BUILDING 2.
- REINFORCED CONCRETE CIRCULAR PIPE (RCCP) MAY BE USED AS AN ALTERNATE TO ADS N-12 PIPING FOR THE STORM DRAIN SYSTEM ONLY. ALL PIPE SHALL BE CONSTRUCTED IN ACCORDANCE WITH SECTION 908 OF VOLUME IV.
- ALL GARAGES ARE TO BE USED FOR PARKING ONLY.

BENCHMARKS
 HO. CO. SURVEY CONTROL STATION: 36AA
 N 562,804.84 E 1,344,906.24
 HO. CO. SURVEY CONTROL STATION: 36DA
 N 560,844.34 E 1,350,037.49



SITE ANALYSIS

AREA OF PARCEL:	9.05 ACRES (394,210 SQ. FT.)
PRESENT ZONING:	NEW TOWN
PROPOSED USE:	APARTMENT COMMUNITY (210 UNITS)
BUILDING COVERAGE:	118,265 SF
ALLOWED (30% OF SITE):	3823 SF
CLUBHOUSE:	192 SF
POOLHOUSE:	696 SF
POOL:	84,055 SF
APARTMENTS:	11,286 SF
FREESTANDING GARAGES:	105,052 SF (<118,265 SF)
TOTAL:	
# OF PARKING SPACES REQ'D.:	
(1/2 BR UNITS): 186 @ 1.7 PER UNIT:	317 SPACES
(3 BR UNITS): 24 @ 2.0 PER UNIT:	48 SPACES
TOTAL:	365 SPACES
# OF PARKING SPACES PROVIDED: **	366 SPACES (INCL. 8 HG)
PAVED AREA:	148,635 SF (00.0% OF SITE)
*AS PER CRITERIA PHASE 224	
**GARAGE:	
FREESTANDING:	45 SPACES
IN BUILDING:	19 SPACES
TANDEM:	19 SPACES
REGULAR:	275 SPACES
HANDICAP:	8 SPACES
TOTAL:	366 SPACES



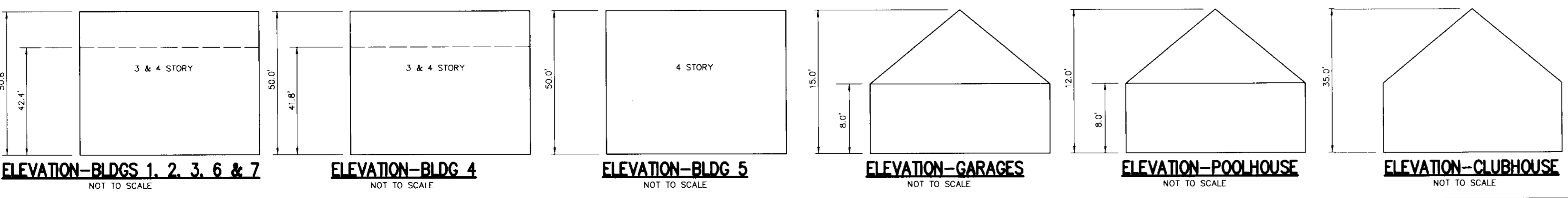
UNIT BREAKDOWN

BUILDING	# OF UNITS
1	42
2	26
3	26
4	15
5	31
6	42
7	28
8	-
TOTAL	210

- #### OPERATION AND MAINTENANCE SCHEDULE FOR STORMCEPTOR WATER QUALITY DEVICE
- Stormceptor water quality structures will require periodic inspection and cleaning to maintain operation and function. Owners will have the Stormceptor unit inspected yearly or as required by Howard County, utilizing the Stormceptor Inspection/Monitoring Form. Inspections can be done by using a clear Plexiglas tube ("sludge judge") to extract a water column sample. When sediment depth exceeds the specified level (Table B of Technical Manual) then cleaning of the unit is required.
 - Stormceptor water quality structures must be checked and cleaned immediately after petroleum spills. Contact appropriate regulatory agencies.
 - Maintenance of Stormceptor units should be done by a vacuum truck which will remove the water, sediment, debris, floating hydrocarbons, and other materials in the unit. The proper cleaning and disposal of the removed materials and liquid must be followed.
 - Inlet and outlet pipes must be checked for any obstructions and if any obstructions are found they must be removed. Structural parts of the Stormceptor will be repaired as needed.
 - Owner shall retain and make Stormceptor inspection/monitoring forms available to Howard County officials upon their request.

ADDRESS CHART

BUILDING	STREET ADDRESS
1A	10661 GRAMERCY PLACE
1B	10665 " " "
2A	10671 " " "
2B	10675 " " "
3A	10611 " " "
3B	10615 " " "
4	10621 " " "
5A	10631 " " "
5B	10635 " " "
6A	10641 " " "
6B	10645 " " "
7A	10651 " " "
7B	10655 " " "
8	10601 " " "



SUBDIVISION NAME: TOWN CENTER	SECT./BLK: 5/2 - A/A	PARCEL: A
PLAT #: 12660	BLOCK #: 1	ZONING: NT
TAX MAP NO.: 36	ELECT. DIST.: 5th	GENUS BRANCH: 6054
WATER CODE: E-31	SEWER CODE: 5521000	

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[Signature] 3/26/97
DIRECTOR DATE

[Signature] 3/26/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 3/28/97
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION
9/27/97	1	REVISED ADDRESS CHART - UPDATED BUILDING ADDRESSES

OWNER
THE HOWARD RESEARCH AND DEVELOPMENT CORP.
THE ROUSE BUILDING
10215 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
(410) 992-6000

DEVELOPER COLUMBIA TOWN CENTER LLC
c/o THE BOZZUTO GROUP
6401 GOLDEN TRIANGLE DRIVE, SUITE 200
GREENBELT, MARYLAND 20710-3203
(301) 220-0100

PROJECT TOWN CENTER TRIANGLE
AN APARTMENT COMMUNITY

AREA TOWN CENTER: SECTION 2, AREA 9, PARCEL A
TAX MAP 36 - BLOCK 1 - ZONED NT
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

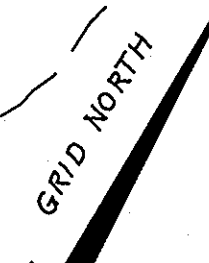
TITLE TITLE SHEET

RIEMER MUEGGE & ASSOCIATES, INC.
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, Maryland 21045
tel 410.997.8900 • fax 410.997.9282

3.13.97
DESIGNED BY: CJR
DRAWN BY: RPP
PROJECT NO: HOC096E2900 SDP1.DWG
DATE: MARCH 13, 1997
SCALE: AS SHOWN
DRAWING NO. 1 OF 13

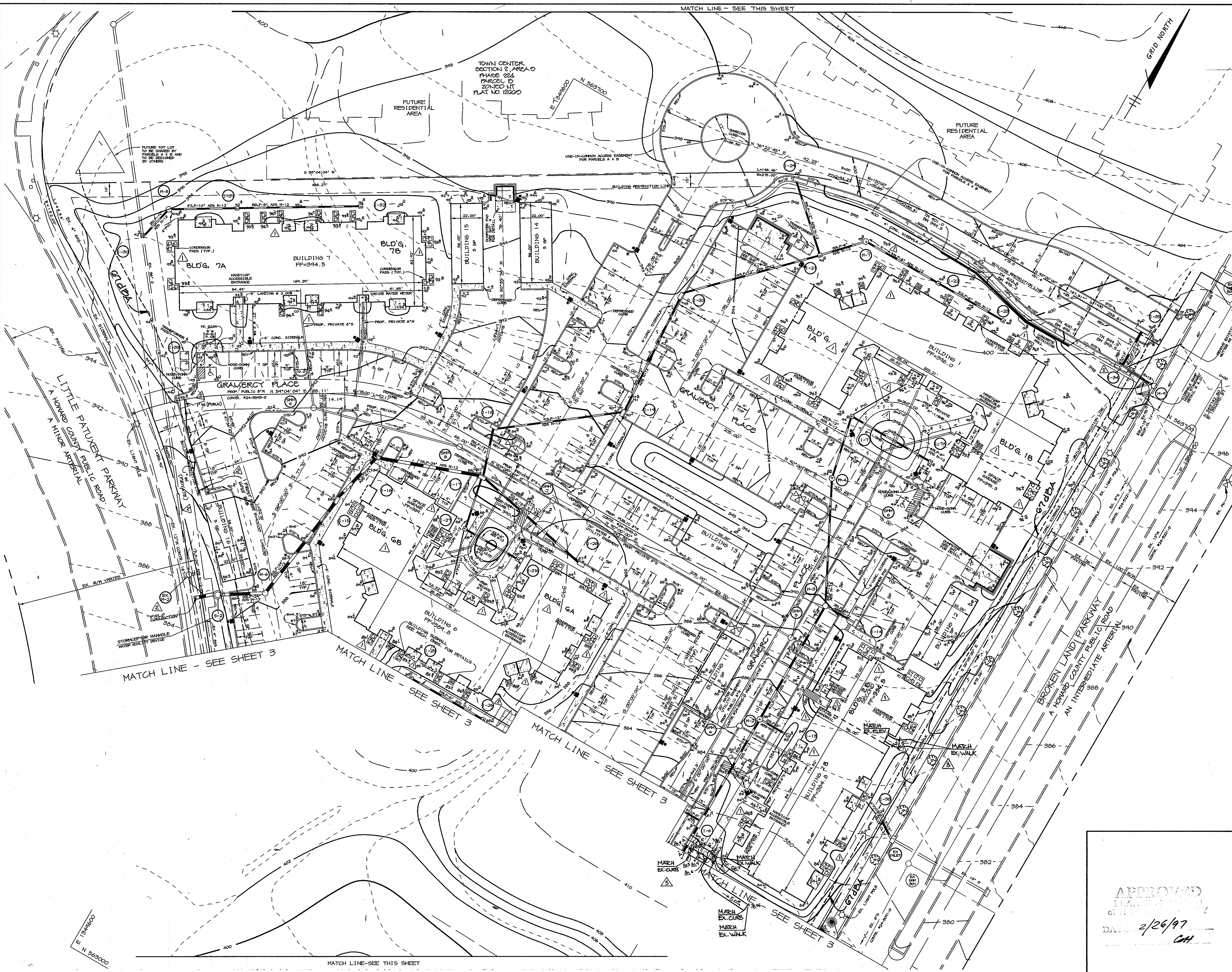
JAYKANT D. PAREKH #19148
SDP-97-67

MATCH LINE - SEE THIS SHEET



7-24-12	3	ADD SIDEWALKS & SPT ELEVATIONS
DATE	NO	REVISION

- NOTES:
1. ALL DUMPSTERS TO BE ENCLOSED AND SCREENED WITH BOARD ON BOARD MATERIAL TO MATCH TYPICAL SITE SCREENING.
 2. ALL LIGHTING SHALL BE DIRECTED/REFLECTED AWAY FROM ADJACENT PUBLIC ROADS AND RESIDENTIALLY ZONED PROPERTIES.
 3. ALL CURB RADIi ARE 5' UNLESS OTHERWISE SHOWN.
 4. ALL PAVING IS TO BE HEAVY DUTY, SEE DETAIL SHEET 9.
 5. * - DENOTES REVERSE/STANDARD CURB TRANSITION.
 6. ● - DENOTES LIGHT FIXTURE.
 7. CONTRACTOR TO COORDINATE WATER AND SEWER CONNECTIONS (LOCATION AND ELEVATION) WITH ARCHITECTURAL DRAWINGS PRIOR TO CONSTRUCTION.
 8. ALL ON-SITE ROADS ARE PRIVATE
 9. ALL DUMPSTER ENCLOSURES TO BE 6' HIGH BLOCK CONSTRUCTION WITH VINYL SIDING.



7-24-12	3	REVISE SIDEWALKS & ADD SPT ELEVATIONS
DATE	NO	REVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

[Signature] 3/26/97
DIRECTOR DATE

[Signature] 3/26/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

[Signature] 3/26/97
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

3-10-98 [Symbol] ADDED 1" x 4" HOSE RIMS, FIELD LOCATED BY M-2 & RELAZATED T-34 & ADDED WHEEL BODYS AT BREAK OF BLDG. II
5/27/97 [Symbol] ADDED SPT ELS TO CONDENSOR TRAPS - UPDATED BLDG. II CALL-OUTS, MODIFIED SOME CONTOURS & ELEV'S.
DATE NO. REVISION

OWNER
THE HOWARD RESEARCH AND DEVELOPMENT CORP.
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
(410) 992-6000

DEVELOPER COLUMBIA TOWN CENTER LLC
c/o THE BOZZUTO GROUP
6401 GOLDEN TRIANGLE DRIVE, SUITE 200
GREENBELT, MARYLAND 20770-3203
(301) 220-0100

PROJECT TOWN CENTER TRIANGLE
AN APARTMENT COMMUNITY

AREA TOWN CENTER: SECTION 2, AREA 9, PARCEL A
TAX MAP 36 BLOCK 1 ZONED NT
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

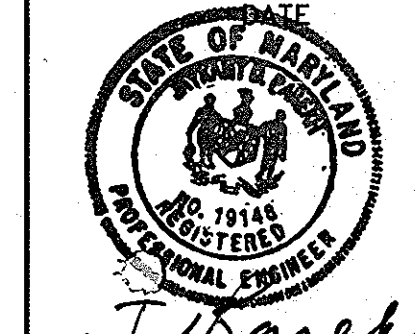
TITLE SITE DEVELOPMENT PLAN

RIEMER MUEGGE & ASSOCIATES, INC.
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, Maryland 21045
tel 410.997.8900 • fax 410.997.9282

3-13-97
DESIGNED BY: CJR
DRAWN BY: RPP
PROJECT NO: HOCO.96E2900
SDP2.DWG
DATE: MARCH 13, 1997
SCALE: 1"=30'
DRAWING NO. 2 OF 13

JAYKANT D. PAREKH #19148
SDP-97-67

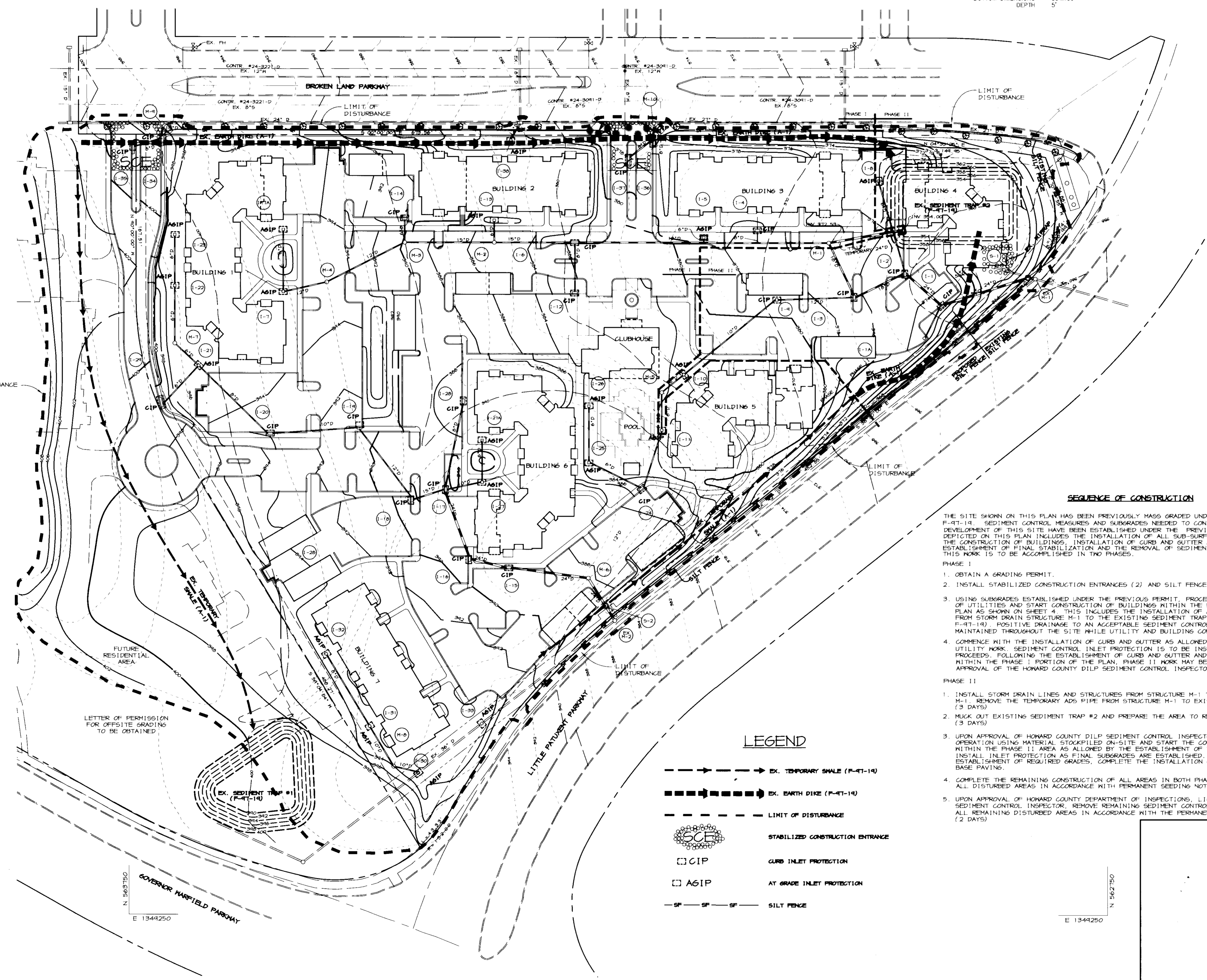
APPROVED
DATE 2/26/97
CH



SDP 97-67

EX. RIPRAP/STONE OUTLET SEDIMENT TRAP NO.2

DRAINAGE AREA	9.6 ACRES
STORAGE VOLUME REQUIRED	34560 CF
STORAGE VOLUME PROVIDED	40950 CF @ EL. 358.0
WEIR ELEVATION	359.0
TOP OF DAM	360.0
BOTTOM ELEVATION	354.0
CLEANOUT ELEVATION	355.25
SIDE SLOPES	2:1
WEIR WIDTH	39'
BOTTOM DIMENSIONS	59'x109'
DEPTH	5'



SEQUENCE OF CONSTRUCTION

- THE SITE SHOWN ON THIS PLAN HAS BEEN PREVIOUSLY MASS GRADED UNDER PERMIT NUMBER F-97-14. SEDIMENT CONTROL MEASURES AND SUBGRADES NEEDED TO CONTINUE WITH THE DEVELOPMENT OF THIS SITE HAVE BEEN ESTABLISHED UNDER THE PREVIOUS PERMIT. THE WORK DEPICTED ON THIS PLAN INCLUDES THE INSTALLATION OF ALL SUB-SURFACE UTILITIES, THE CONSTRUCTION OF BUILDINGS, INSTALLATION OF CURB AND GUTTER AND PAVING, ESTABLISHMENT OF FINAL STABILIZATION AND THE REMOVAL OF SEDIMENT CONTROL MEASURES. THIS WORK IS TO BE ACCOMPLISHED IN TWO PHASES.
- PHASE I**
1. OBTAIN A GRADING PERMIT.
 2. INSTALL STABILIZED CONSTRUCTION ENTRANCES (2) AND SILT FENCE. (1 DAY)
 3. USING SUBGRADES ESTABLISHED UNDER THE PREVIOUS PERMIT, PROCEED WITH THE INSTALLATION OF UTILITIES AND START CONSTRUCTION OF BUILDINGS WITHIN THE PHASE I PORTION OF THIS PLAN AS SHOWN ON SHEET 4. THIS INCLUDES THE INSTALLATION OF A TEMPORARY 24" ADS PIPE FROM STORM DRAIN STRUCTURE M-1 TO THE EXISTING SEDIMENT TRAP #2 (INSTALLED UNDER F-97-14). POSITIVE DRAINAGE TO AN ACCEPTABLE SEDIMENT CONTROL MEASURE IS TO BE MAINTAINED THROUGHOUT THE SITE WHILE UTILITY AND BUILDING CONSTRUCTION PROCEEDS.
 4. COMMENCE WITH THE INSTALLATION OF CURB AND GUTTER AS ALLOWED BY THE PROGRESS OF UTILITY WORK. SEDIMENT CONTROL INLET PROTECTION IS TO BE INSTALLED AS WORK PROCEEDS. FOLLOWING THE ESTABLISHMENT OF CURB AND GUTTER AND ALL INLET PROTECTION WITHIN THE PHASE I PORTION OF THE PLAN, PHASE II WORK MAY BE STARTED WITH THE APPROVAL OF THE HOWARD COUNTY DILP SEDIMENT CONTROL INSPECTOR.
- PHASE II**
1. INSTALL STORM DRAIN LINES AND STRUCTURES FROM STRUCTURE M-1 TO EXISTING STRUCTURE M-1. REMOVE THE TEMPORARY ADS PIPE FROM STRUCTURE M-1 TO EXISTING SEDIMENT TRAP #2. (3 DAYS)
 2. MUCK OUT EXISTING SEDIMENT TRAP #2 AND PREPARE THE AREA TO RECEIVE COMPACTED FILL. (3 DAYS)
 3. UPON APPROVAL OF HOWARD COUNTY DILP SEDIMENT CONTROL INSPECTOR, COMMENCE FILL OPERATION USING MATERIAL STOCKPILED ON-SITE AND START THE CONSTRUCTION OF BUILDINGS WITHIN THE PHASE II AREA AS ALLOWED BY THE ESTABLISHMENT OF THE REQUIRED SUBGRADE. INSTALL INLET PROTECTION AS FINAL SUBGRADES ARE ESTABLISHED. FOLLOWING THE ESTABLISHMENT OF REQUIRED GRADES, COMPLETE THE INSTALLATION OF CURB AND GUTTER AND BASE PAVING.
 4. COMPLETE THE REMAINING CONSTRUCTION OF ALL AREAS IN BOTH PHASES AND STABILIZE ALL DISTURBED AREAS IN ACCORDANCE WITH PERMANENT SEEDING NOTES.
 5. UPON APPROVAL OF HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES, AND PERMITS SEDIMENT CONTROL INSPECTOR, REMOVE REMAINING SEDIMENT CONTROL DEVICES AND STABILIZE ALL REMAINING DISTURBED AREAS IN ACCORDANCE WITH THE PERMANENT SEEDING NOTES. (2 DAYS)

LEGEND

- EX. TEMPORARY SHALE (F-97-14)
- EX. EARTH DIKE (F-97-14)
- LIMIT OF DISTURBANCE
- SCF STABILIZED CONSTRUCTION ENTRANCE
- CIP CURB INLET PROTECTION
- AGIP AT GRADE INLET PROTECTION
- SF-SF-SF SILT FENCE

BY THE DEVELOPER :

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Jim J. Linder 3-12-97
DEVELOPER DATE

BY THE ENGINEER :

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

J. Parekh 3-13-97
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

Michael Blood 3/26/97
HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Paul R. Patten 3/24/97
DIRECTOR DATE

Chris Dammann 3/26/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Michael Blood 3/26/97
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE NO.	REVISION

OWNER
THE HOWARD RESEARCH AND DEVELOPMENT CORP.
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21044
(410) 992-6000

DEVELOPER
COLUMBIA TOWN CENTER LLC
96 THE BOZZUTO GROUP
6401 GOLDEN TRIANGLE DRIVE, SUITE 200
GREENBELT, MARYLAND 20770-3203
(301) 220-0100

PROJECT
TOWN CENTER TRIANGLE
AN APARTMENT COMMUNITY

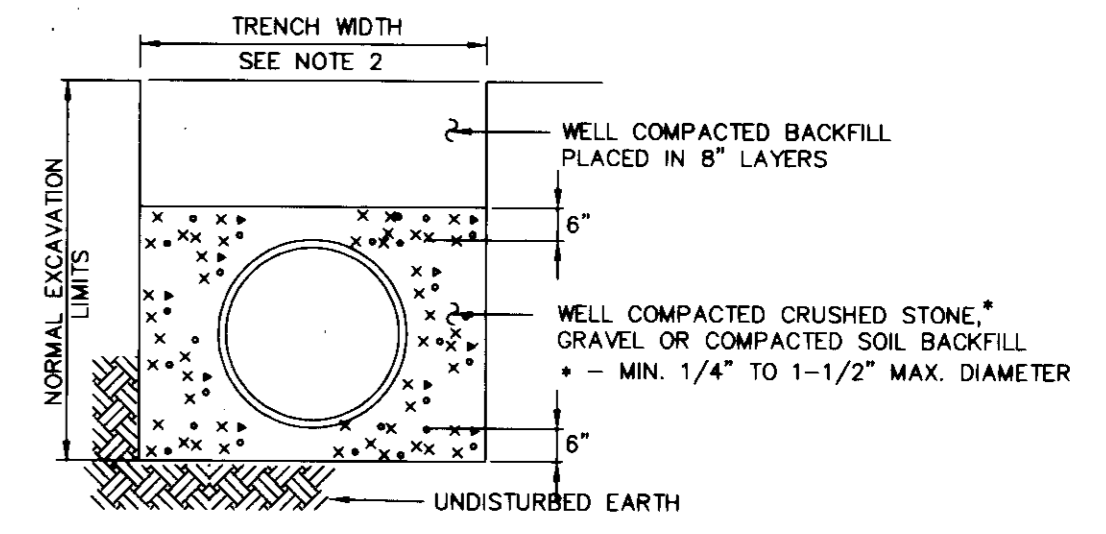
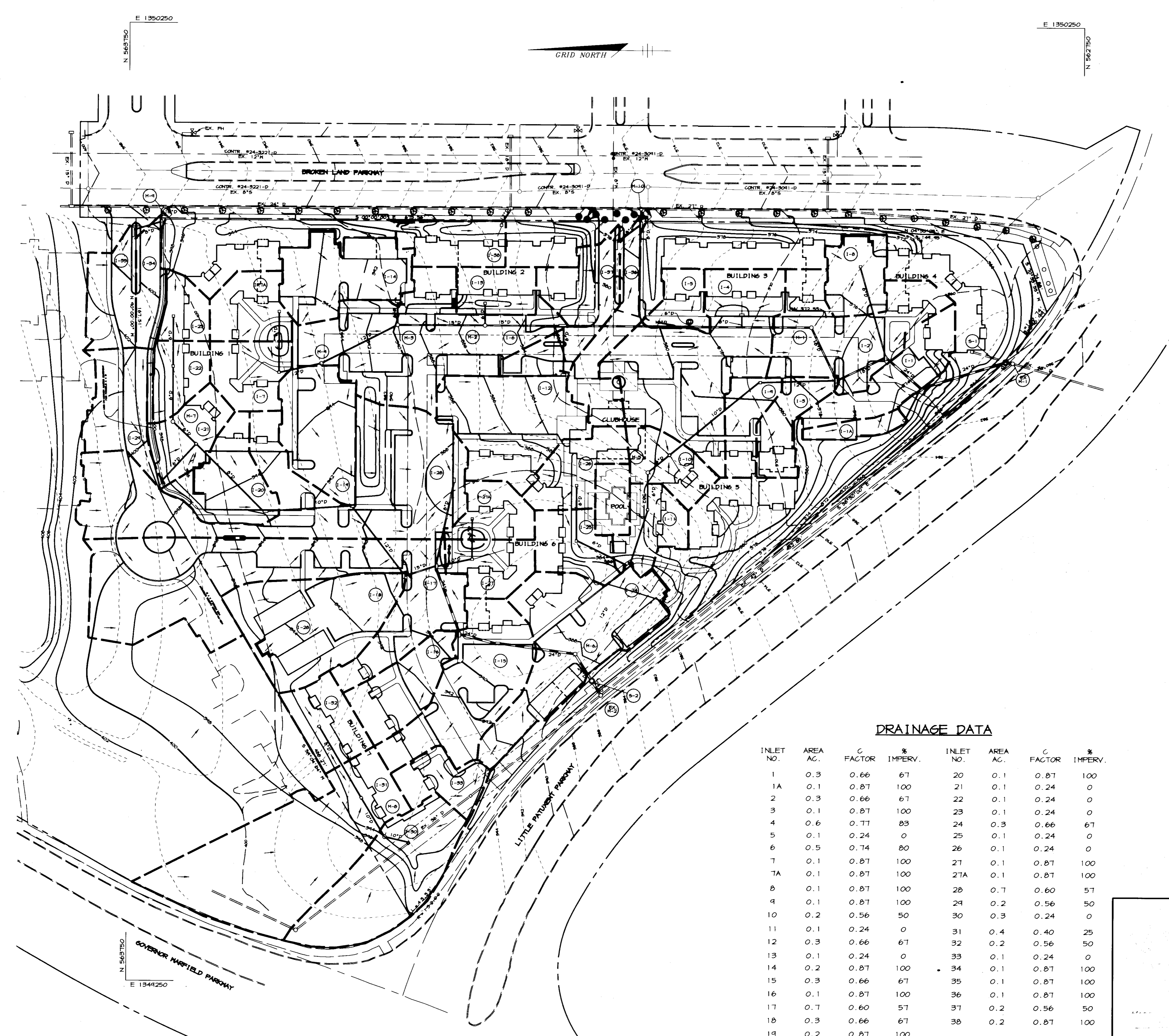
AREA
TOWN CENTER, SECTION 2, AREA 4, PARCEL A
TAX MAP 36 BLOCK 1 ZONED NT
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
SEDIMENT CONTROL PLAN

RIEMER MUEGGE & ASSOCIATES, INC.
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, Maryland 21045
tel 410.997.8900 • fax 410.997.9282

3-13-97 DATE
DESIGNED BY: CJR
DRAWN BY: RPP
PROJECT NO: HOC\96E2900
NEWSDP4.DWG
DATE: MARCH 13, 1997
SCALE: 1"=50'
DRAWING NO. 4 OF 13

JAYKANT D. PAREKH #19148
SDP-97-67



- NOTES:
1. WITHIN ROAD RIGHT OF WAY, TRENCH COMPACTION DENSITY SHALL BE 95% AS DETERMINED BY A.A.S.H.T.O.
 2. FOR PAV WIDTHS SEE DETAIL G 2.02-A, T-180-A.

TRENCH FOR ADS N-12 PIPE
NO SCALE

PIPE CONSTRUCTION TO BE IN ACCORDANCE WITH SECTION 908, HOWARD COUNTY DESIGN MANUAL VOL. IV.

Applicable Specifications and Installation Guidelines

1. ASTM F 405, Standard Specification for Corrugated Polyethylene Pipe and Fittings.
 2. ASTM F 687, Standard Specification for Large Diameter Corrugated Polyethylene Pipe and Fittings.
 3. AASHTO M 252, Standard Specification for Polyethylene Corrugated Drainage Pipe.
 4. AASHTO M 294, Standard Specification for Corrugated Polyethylene Pipe, 12" to 36" Diameter.
 5. ADS Installation Guidelines for Culvert and Other Heavy-Duty Drainage Applications.
- ADS corrugated polyethylene pipe is a semi-rigid conduit. When properly installed, ADS pipe has excellent compressive load bearing strength. It is suitable for use under H20 and S20 live loads or with fill heights in excess of 50 feet. (For fill heights greater than 50 feet, ADS response engineers are available for technical assistance.) To insure maximum performance, ADS pipe should be installed in accordance with the following recommendations.

Installation Recommendations

1. Crushed stone, gravel or compacted soil backfill material should be used as the bedding and envelope material.
2. The corrugated pipe should be laid on grade, on a level of bedding material. If a slope is used as the bedding and backfill material, it should be well compacted in lifts beneath the manholes, around the sides and above the pipe to the recommended minimum height of cover.
3. Either flexible (asphalt or rigid (concrete) pavements may be laid as part of the minimum cover requirements.
4. Site conditions and availability of bedding materials often dictate the type of installation method used.
5. The load bearing capability of flexible conduits is dependent on the type of backfill material used and the degree of compaction achieved. Crushed stone and gravel backfill materials typically reach a compaction level of 90-95% AASHTO standard density without compaction. When native soils are used as backfill material, a compaction level of 85% is required. This is the same minimum compaction that is recommended by all drainage pipe manufacturers and can be achieved by either hand or mechanical tamping. Two types of installations are recommended for H-20 live loads -- the heaviest legal highway loads. These are the trench and open ditch installations. The minimum height of cover recommendations are the same for both conditions.

DRAINAGE DATA

INLET NO.	AREA AC.	C FACTOR	% IMPERV.	INLET NO.	AREA AC.	C FACTOR	% IMPERV.
1	0.3	0.66	67	20	0.1	0.87	100
1A	0.1	0.87	100	21	0.1	0.24	0
2	0.3	0.66	67	22	0.1	0.24	0
3	0.1	0.87	100	23	0.1	0.24	0
4	0.6	0.77	83	24	0.3	0.66	67
5	0.1	0.24	0	25	0.1	0.24	0
6	0.5	0.74	80	26	0.1	0.24	0
7	0.1	0.87	100	27	0.1	0.87	100
7A	0.1	0.87	100	27A	0.1	0.87	100
8	0.1	0.87	100	28	0.7	0.60	57
9	0.1	0.87	100	29	0.2	0.56	50
10	0.2	0.56	50	30	0.3	0.24	0
11	0.1	0.24	0	31	0.4	0.40	25
12	0.3	0.66	67	32	0.2	0.56	50
13	0.1	0.24	0	33	0.1	0.24	0
14	0.2	0.87	100	34	0.1	0.87	100
15	0.3	0.66	67	35	0.1	0.87	100
16	0.1	0.87	100	36	0.1	0.87	100
17	0.7	0.60	57	37	0.2	0.56	50
18	0.3	0.66	67	38	0.2	0.87	100
19	0.2	0.87	100				

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Joseph R. ... 3/26/97
DIRECTOR DATE

William ... 3/26/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Richard ... 3/26/97
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE NO. REVISION

OWNER
THE HOWARD RESEARCH AND DEVELOPMENT CORP.
THE ROUSE BUILDING
10275 LITTLE PAXENT PARKWAY
COLUMBIA, MARYLAND 21044
(410) 992-6000

DEVELOPER
COLUMBIA TOWN CENTER LLC
% THE BOZZUTO GROUP
6401 GOLDEN TRIANGLE DRIVE, SUITE 200
GREENBELT, MARYLAND 20770-3203
(301) 220-0100

PROJECT
TOWN CENTER TRIANGLE
AN APARTMENT COMMUNITY

AREA
TOWN CENTER: SECTION 2, AREA 4, PARCEL A
TAX MAP 36 BLOCK 1 ZONED NT
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE
DRAINAGE AREA MAP

RIEMER MUEGGE & ASSOCIATES, INC.
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, Maryland 21045
tel 410.997.8900 • fax 410.997.9282

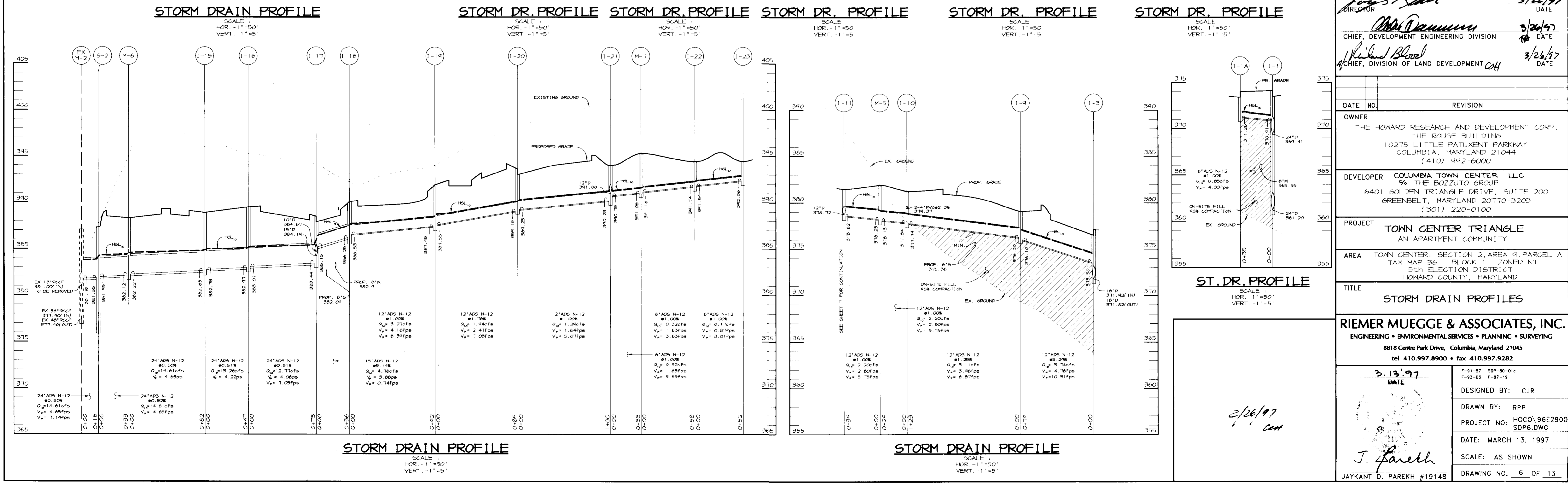
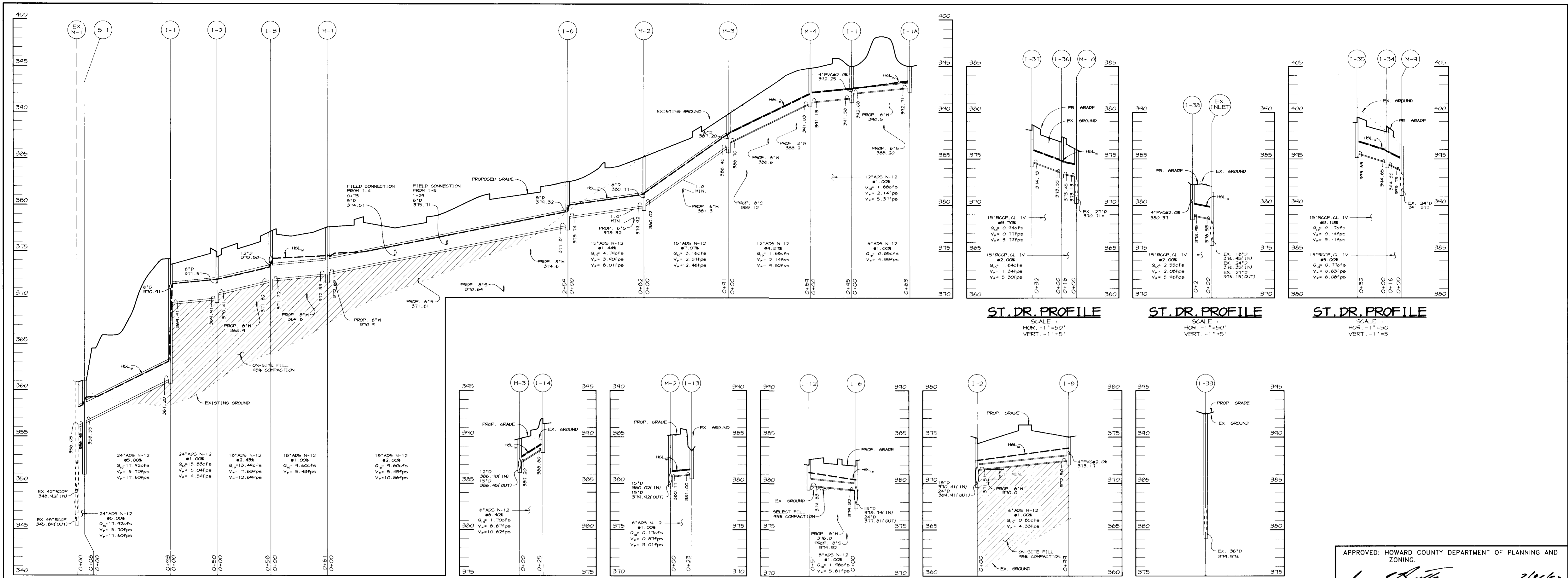
3/13/97
DATE

F-81-57 SDP-80-01a
F-83-03 F-87-18

DESIGNED BY: CJR
DRAWN BY: RPP
PROJECT NO: HOCO 96E2900
NEWSDP5.DWG
DATE: MARCH 13, 1997
SCALE: 1"=50'
DRAWING NO. 5 OF 13

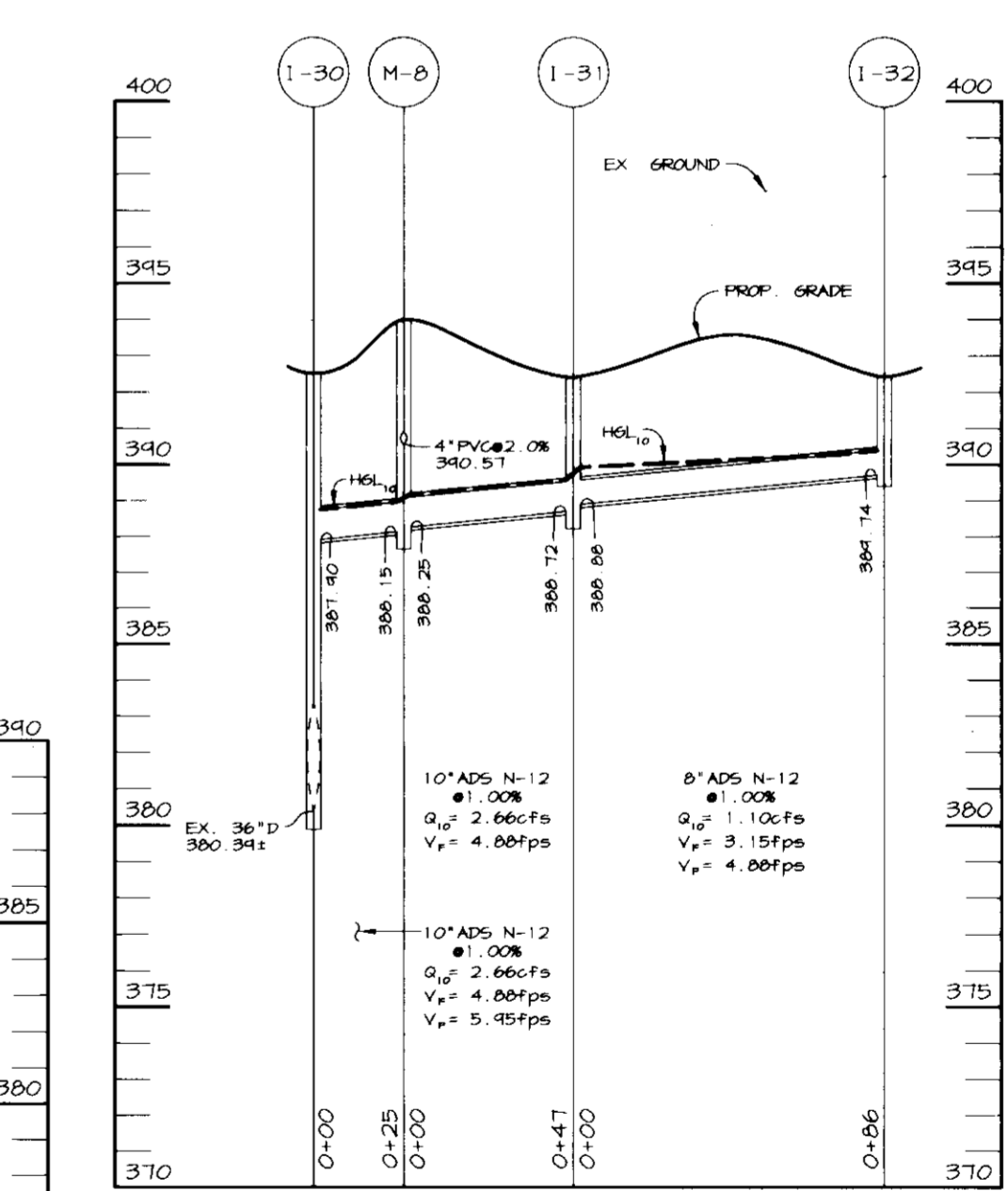
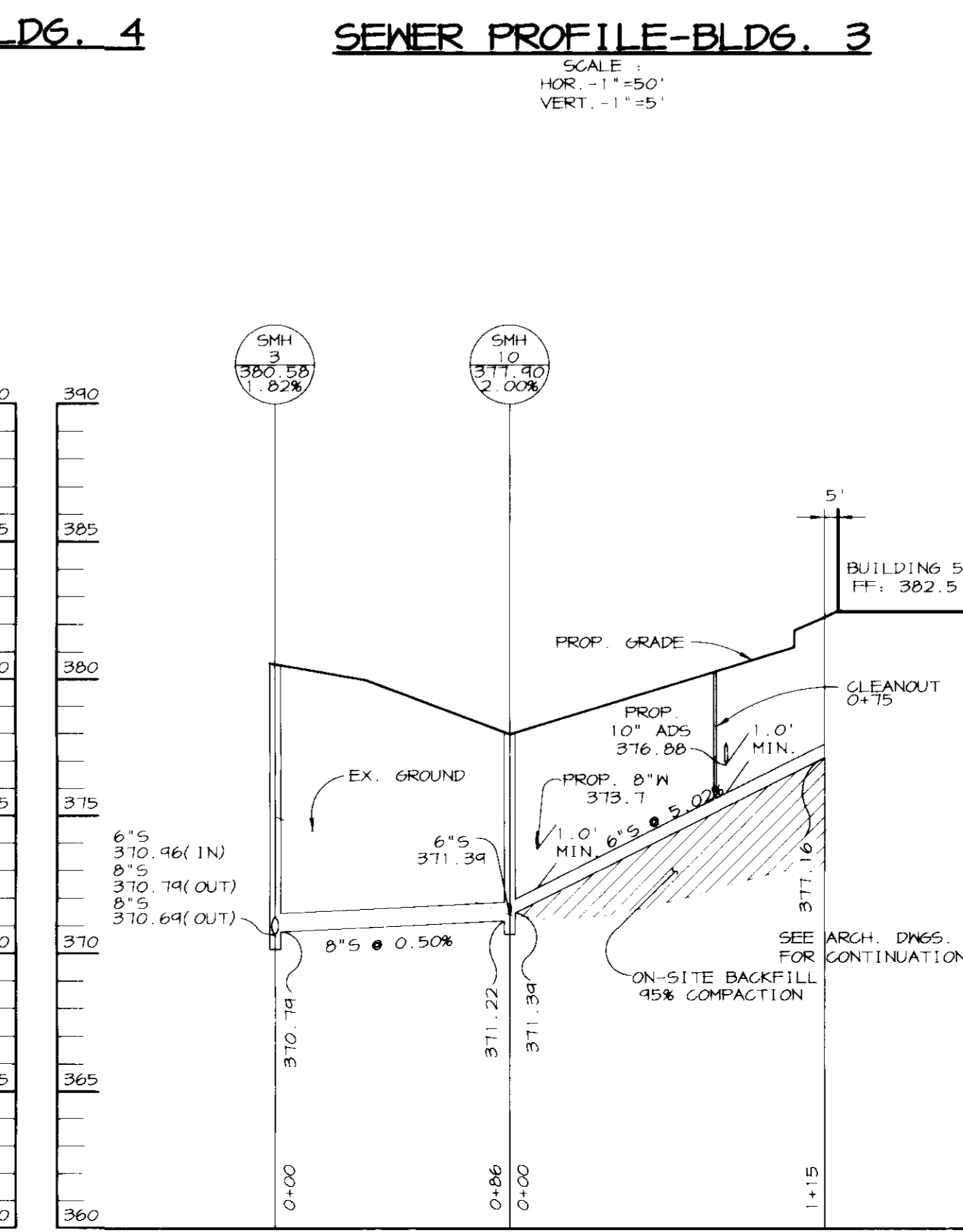
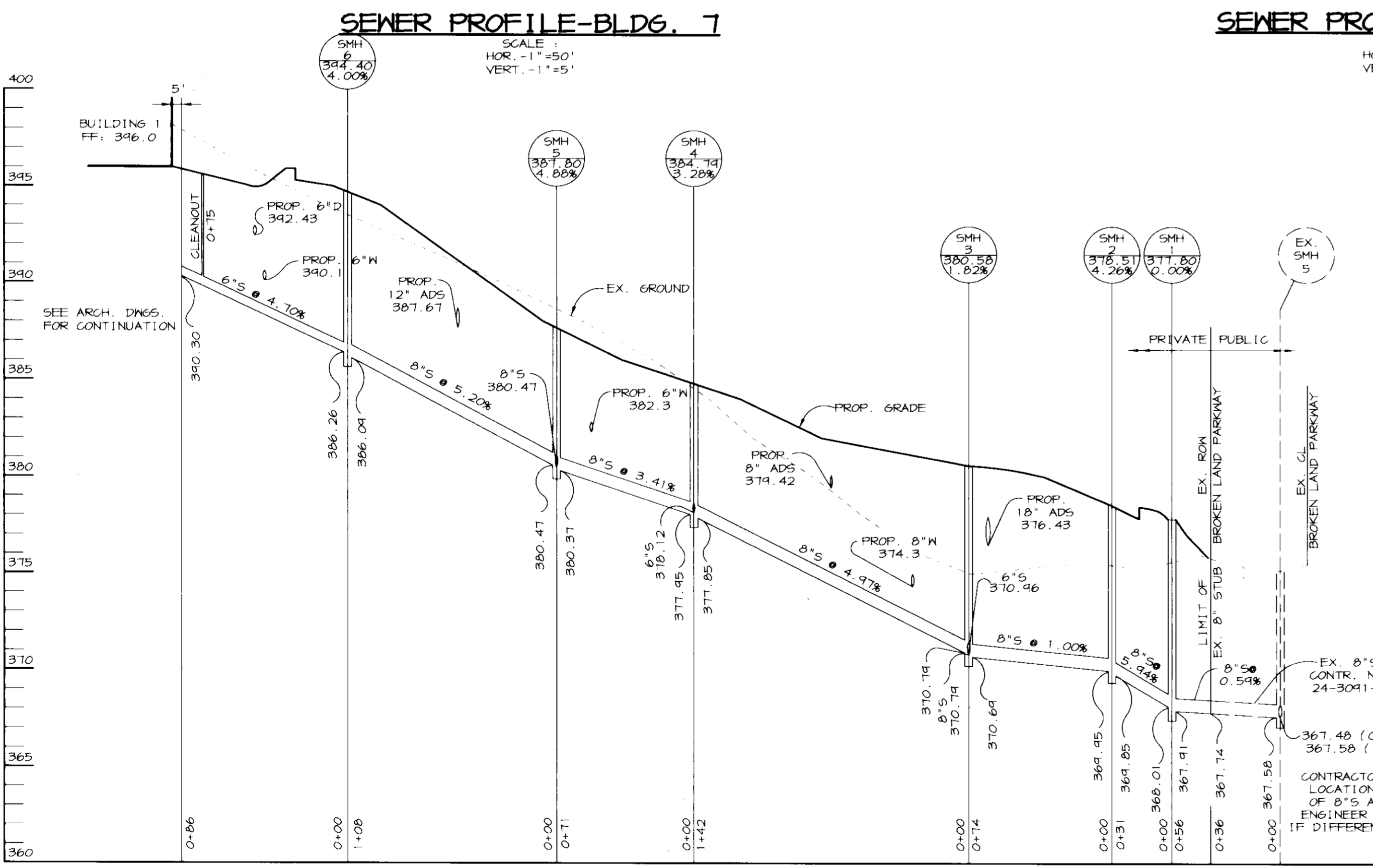
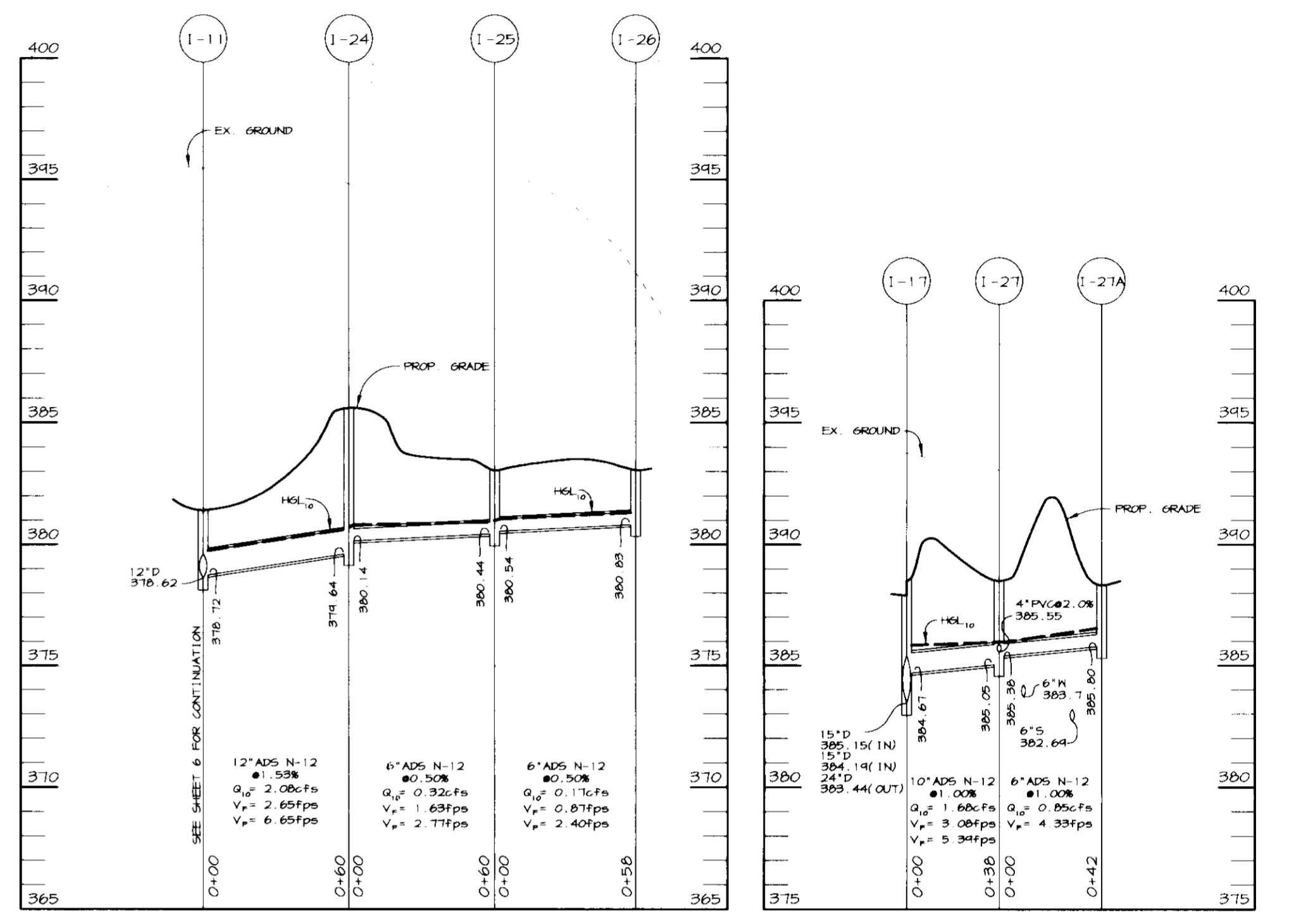
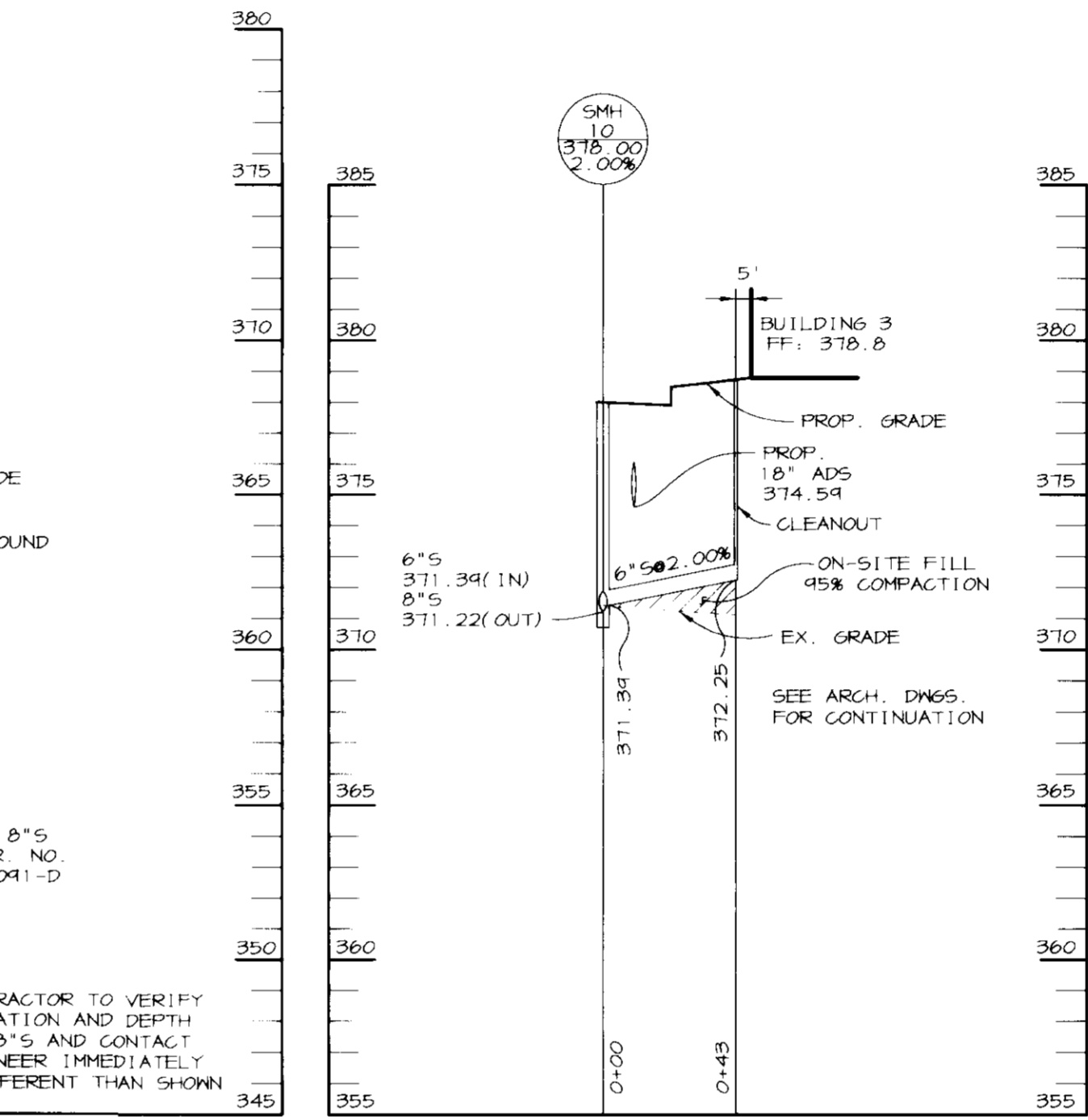
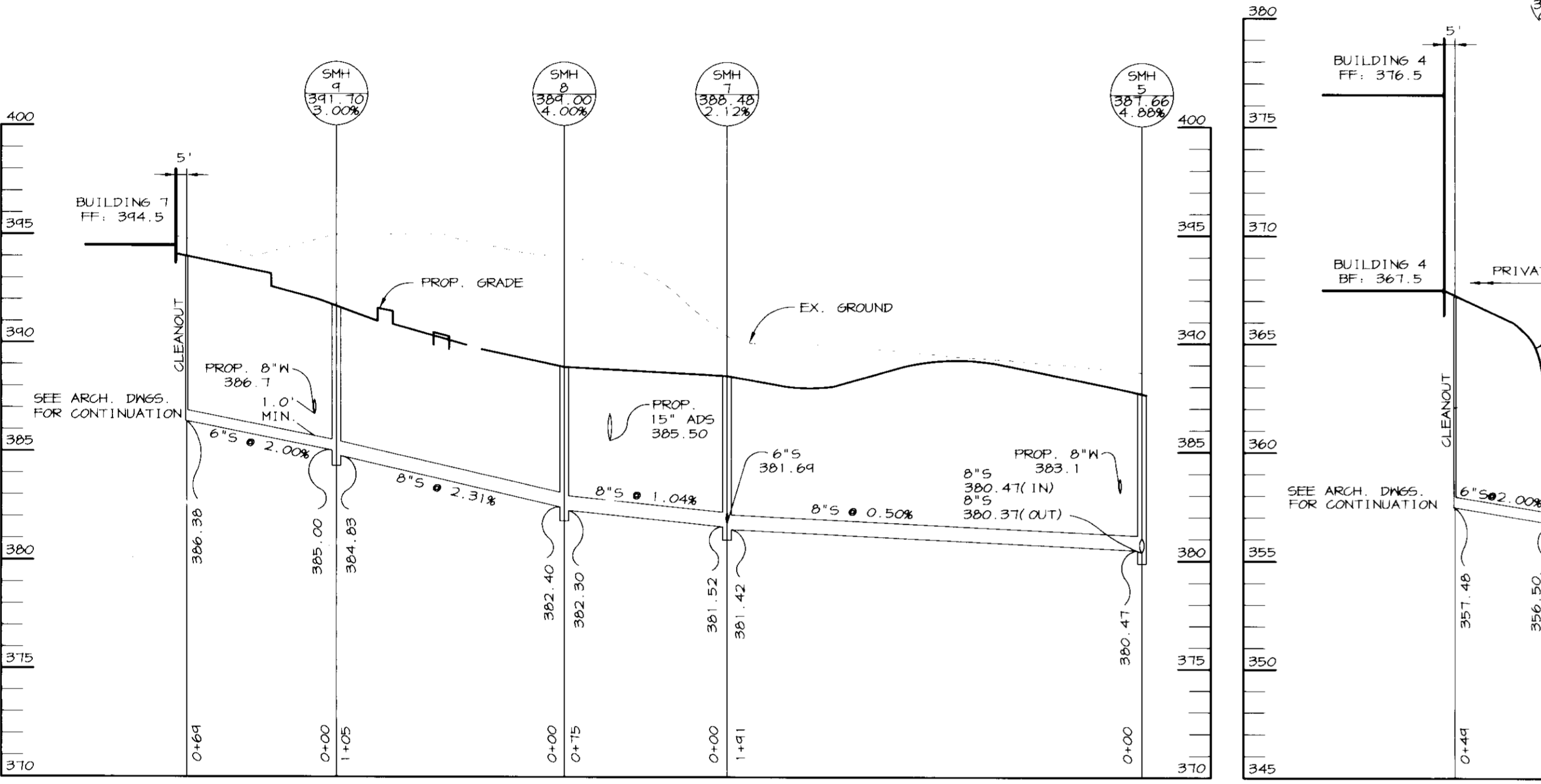
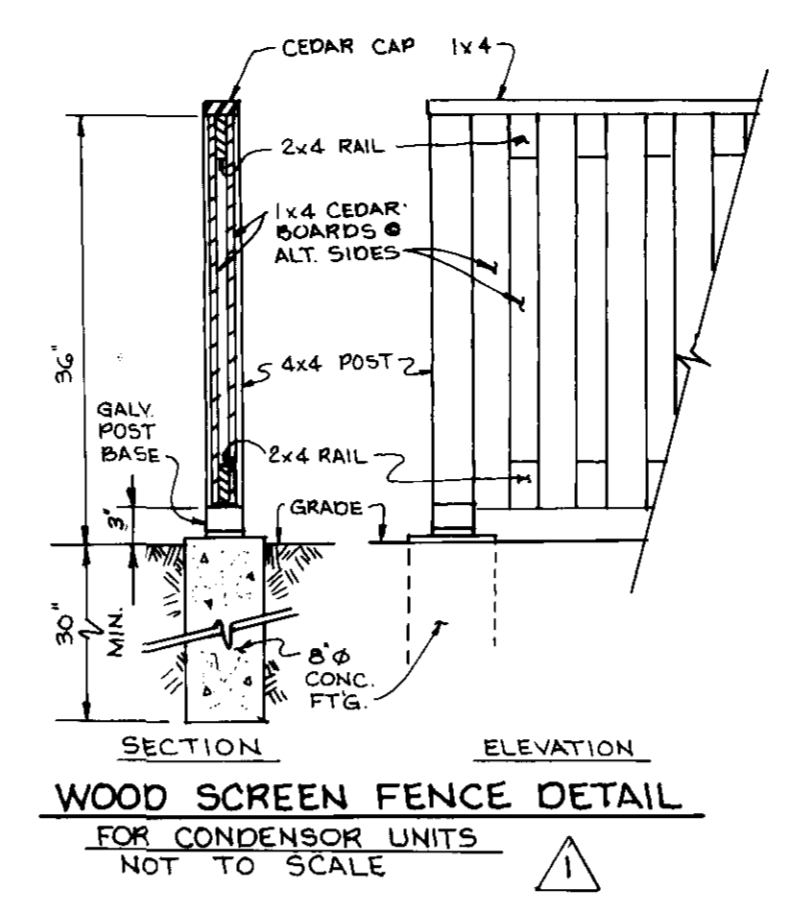
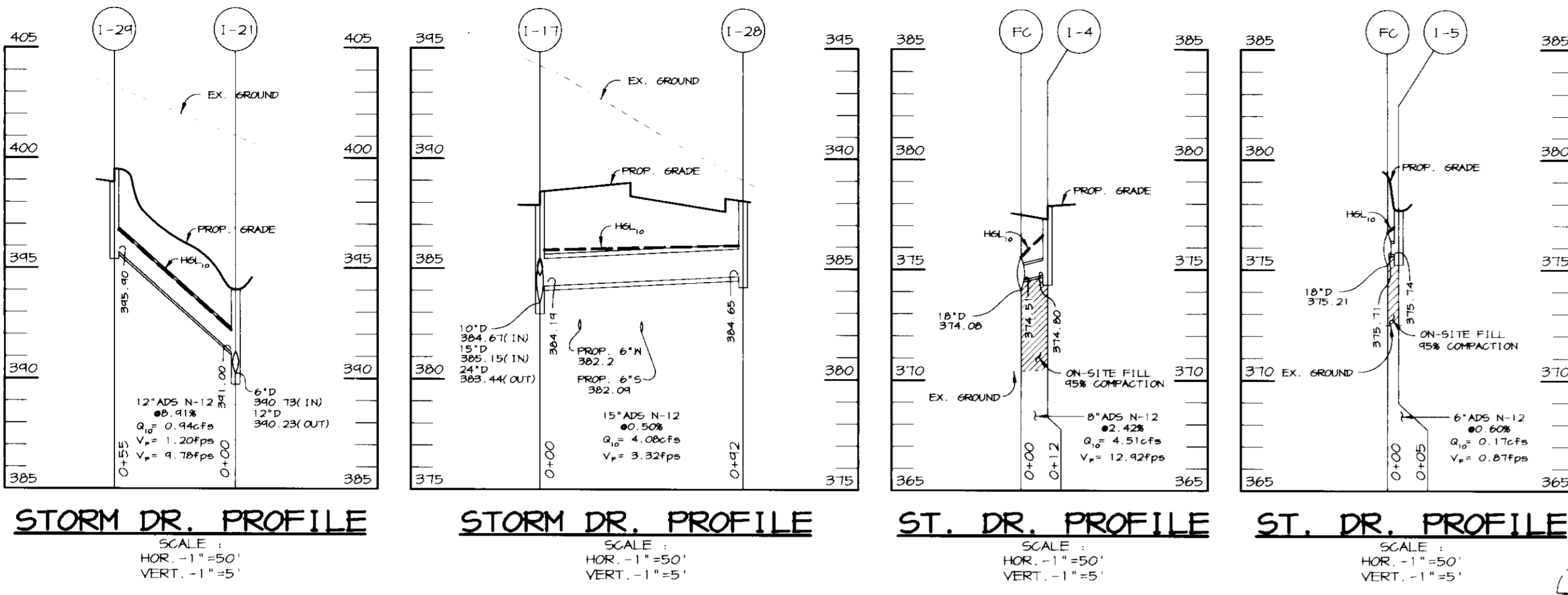
JAYKANT D. PAREKH #19148
SDP-97-67

2/26/97
CH



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING	
<i>[Signature]</i> DIRECTOR	3/26/97 DATE
<i>[Signature]</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	3/26/97 DATE
<i>[Signature]</i> CHIEF, DIVISION OF LAND DEVELOPMENT	3/26/97 DATE
DATE NO.	REVISION
OWNER	THE HOWARD RESEARCH AND DEVELOPMENT CORP. THE ROUSE BUILDING 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044 (410) 992-6000
DEVELOPER	COLUMBIA TOWN CENTER LLC % THE BOZZUTO GROUP 6401 GOLDEN TRIANGLE DRIVE, SUITE 200 GREENBELT, MARYLAND 20770-3203 (301) 220-0100
PROJECT	TOWN CENTER TRIANGLE AN APARTMENT COMMUNITY
AREA	TOWN CENTER; SECTION 2, AREA 9, PARCEL A TAX MAP 36 BLOCK 1 ZONED NT 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE	STORM DRAIN PROFILES
RIEMER MUEGGE & ASSOCIATES, INC. ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING 8818 Centre Park Drive, Columbia, Maryland 21045 tel 410.997.8900 • fax 410.997.9282	
DATE	3.13.97
DESIGNED BY:	CJR
DRAWN BY:	RPP
PROJECT NO.:	HOCO\96E2900 SDP6.DWG
DATE:	MARCH 13, 1997
SCALE:	AS SHOWN
JAYKANT D. PAREKH #19148	DRAWING NO. 6 OF 13
SDP-97-67	

SDP 97.67

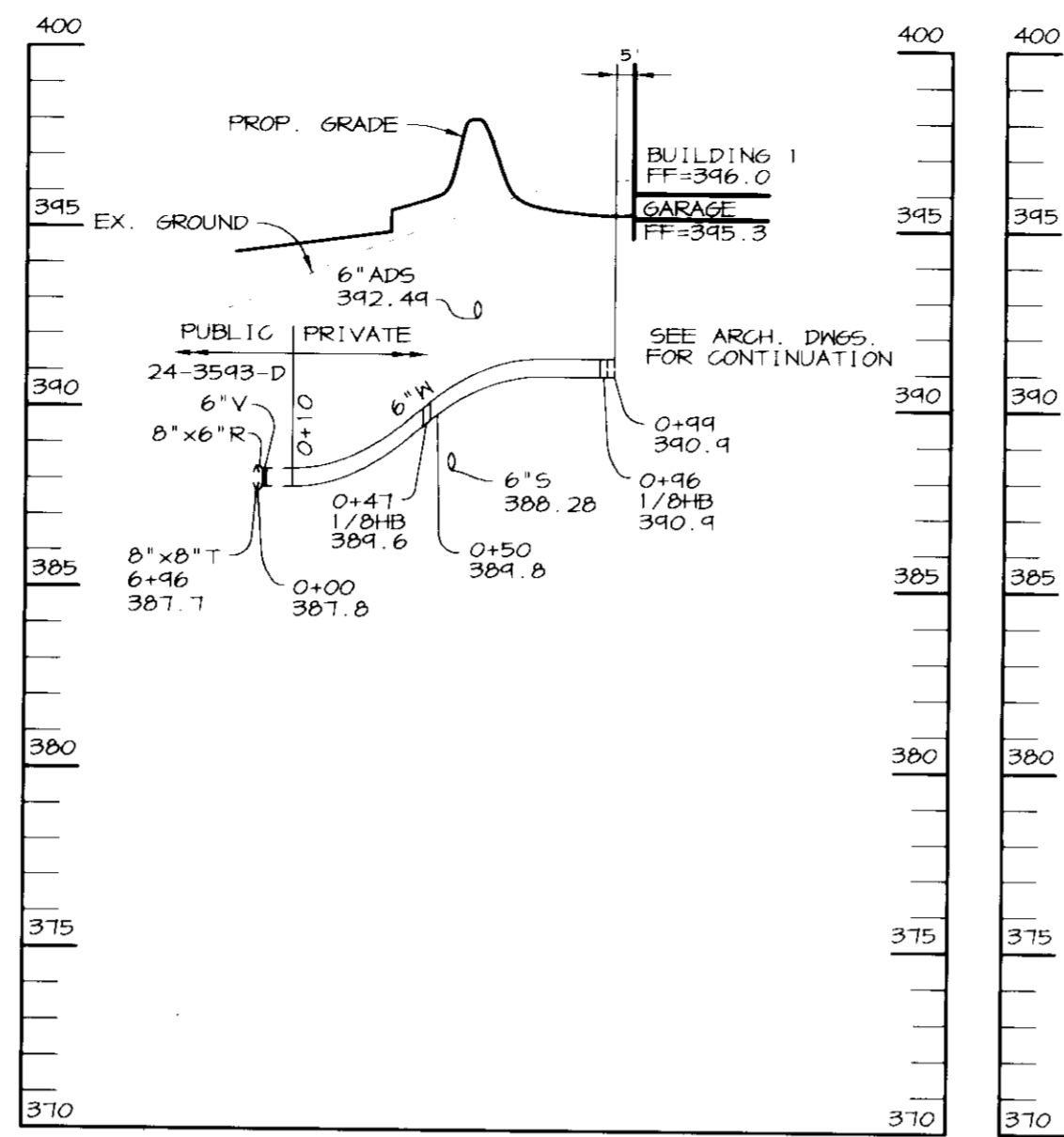


APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.	
<i>Scott Butler</i> DIRECTOR	3/24/97 DATE
<i>Abdi Dammer</i> CHIEF, DEVELOPMENT ENGINEERING DIVISION	3/26/97 DATE
<i>Richard Blood</i> CHIEF, DIVISION OF LAND DEVELOPMENT	3/26/97 DATE
5/27/97	ADDED WOOD SCREEN FENCE DETAIL
DATE NO.	REVISION
OWNER THE HOWARD RESEARCH AND DEVELOPMENT CORP. THE ROUSE BUILDING 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044 (410) 942-6000	
DEVELOPER COLUMBIA TOWN CENTER LLC 96 THE BOZZUTO GROUP 6401 GOLDEN TRIANGLE DRIVE, SUITE 200 GREENBELT, MARYLAND 20770-3203 (301) 220-0100	
PROJECT TOWN CENTER TRIANGLE AN APARTMENT COMMUNITY	
AREA TOWN CENTER, SECTION 2, AREA 9, PARCEL A TAX MAP 36, BLOCK 1, ZONED NT 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND	
TITLE PROFILES	
RIEMER MUEGGE & ASSOCIATES, INC. ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING 8818 Centre Park Drive, Columbia, Maryland 21045 tel 410.997.8900 • fax 410.997.9282	
3.13.97 DATE	DESIGNED BY: CJR
<i>J. Farrell</i>	DRAWN BY: RPP
2/26/97 DATE	PROJECT NO: HOCO\96E2900 SDP7.DWG
	DATE: MARCH 13, 1997
	SCALE: AS SHOWN
JAYKANT D. PAREKH #19148	DRAWING NO. 7 OF 13
SDP-97-67	

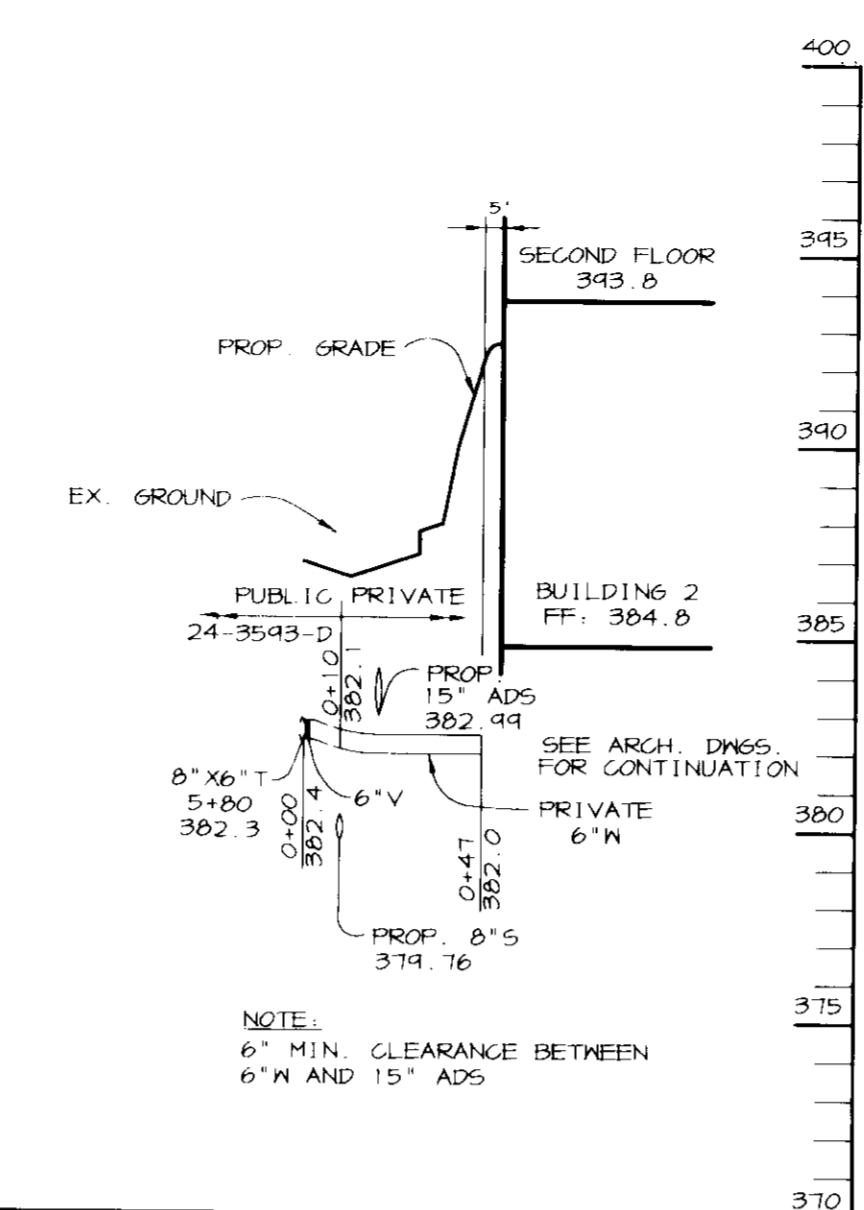
STRUCTURE SCHEDULE

STRUCTURE NO.	TYPE	INV. IN	INV. OUT	TOP CURB/GRATE/RIM	LOCATION	REMARKS
I-1	A-5	310.41(6'") 364.41(24'")	361.20	374.1	N 562,420.10 E 1,344,812.44	HOGO STD DET 50 4.01
I-1A	5 WITH RECTANGULAR GRATE		371.26	373.4	N 562,497.23 E 1,344,834.44	HOGO STD DET 50 4.22 AND 50 4.43
I-2	A-5	311.51(6'") 370.41(18'")	369.41	375.2	N 562,456.80 E 1,344,404.53	HOGO STD DET 50 4.01
I-3	A-5	313.50(12'") 371.42(18'")	371.62	377.1	N 563,010.60 E 1,344,880.74	HOGO STD DET 50 4.01
I-4	A-5		374.60	377.4	N 563,088.30 E 1,344,441.24	HOGO STD DET 50 4.01
I-5	CATCH BASIN		375.14	377.7	N 563,183.94 E 1,344,441.24	NDS 18"x18" C.B. #1800 WITH GRATE #1810
I-6	A-10	314.52(6'") 370.74(18'")	371.61	382.5	N 563,285.40 E 1,344,434.74	HOGO STD DET 50 4.02
I-7	S	342.28(4'") 342.28(6'")	341.58	344.6	N 563,542.62 E 1,344,885.83	HOGO STD DET 50 4.22
I-7A	CATCH BASIN		342.71	344.6	N 563,542.62 E 1,344,444.15	NDS 18"x18" C.B. #1800 WITH GRATE #1810
I-8	5 WITH RECT. GRATE	379.17	372.50	374.7	N 562,483.80 E 1,344,484.64	HOGO STD DET 50 4.22
I-8A	5 WITH RECT. GRATE	376.20	376.10	374.1	N 563,088.57 E 1,344,876.35	HOGO STD DET 50 4.22
I-10	S	374.31(2'") 371.84(12'")	371.74	381.2	N 563,183.48 E 1,344,801.84	HOGO STD DET 50 4.22
I-11	CATCH BASIN		376.72	381.0	N 563,206.55 E 1,344,744.74	NDS 18"x18" C.B. #1800 WITH GRATE #1810
I-12	A-5		374.83	382.6	N 563,295.30 E 1,344,885.24	HOGO STD DET 50 4.01
I-13	CATCH BASIN		381.00	383.5	N 563,371.55 E 1,344,454.06	NDS 18"x18" C.B. #1800 WITH GRATE #1810
I-14	A-5		380.60	382.0	N 563,468.90 E 1,344,862.24	HOGO STD DET 50 4.01
I-15	A-5	382.73	382.63	386.9	N 563,362.62 E 1,344,602.75	HOGO STD DET 50 4.01
I-16	A-5	383.07	382.47	384.5	N 563,404.61 E 1,344,613.25	HOGO STD DET 50 4.01
I-17	A-5	384.67(10'") 385.15(15'") 384.14(15'")	383.44	385.5	N 563,428.80 E 1,344,684.15	HOGO STD DET 50 4.01
I-18	A-5		386.28	380.1	N 563,463.40 E 1,344,679.74	HOGO STD DET 50 4.01
I-18A	A-5	381.55	381.45	381.3	N 563,514.87 E 1,344,748.24	HOGO STD DET 50 4.01
I-20	A-5	384.23	384.13	383.6	N 563,605.90 E 1,344,742.24	HOGO STD DET 50 4.01
I-21	CATCH BASIN	380.73(6'") 381.00(12'")	380.23	384.0	N 563,676.46 E 1,344,810.30	NDS 18"x18" C.B. #1800 WITH GRATE #1810
I-22	CATCH BASIN	381.84	381.74	384.4	N 563,705.30 E 1,344,841.45	NDS 18"x18" C.B. #1800 WITH GRATE #1810
I-23	CATCH BASIN		382.36	384.4	N 563,709.30 E 1,344,443.51	NDS 18"x18" C.B. #1800 WITH GRATE #1810
I-24	A-5	380.14	374.64	385.6	N 563,226.04 E 1,344,685.85	HOGO STD DET 50 4.01
I-25	CATCH BASIN	380.54	380.44	383.0	N 563,281.04 E 1,344,711.54	NDS 18"x18" C.B. #1800 WITH GRATE #1810
I-26	CATCH BASIN		380.83	383.0	N 563,281.04 E 1,344,764.34	NDS 18"x18" C.B. #1800 WITH GRATE #1810
I-27	CATCH BASIN	385.33(4'") 385.33(6'")	386.05	386.2	N 563,384.46 E 1,344,641.64	NDS 18"x18" C.B. #1800 WITH GRATE #1810
I-27A	CATCH BASIN		385.80	386.3	N 563,384.46 E 1,344,734.06	NDS 18"x18" C.B. #1800 WITH GRATE #1810
I-28	A-5		384.65	386.0	N 563,410.80 E 1,344,774.10	HOGO STD DET 50 4.01
I-28A	A-10		381.45	381.5	N 563,714.00 E 1,344,772.00	HOGO STD DET 50 4.02
I-30	S	387.40	380.34	382.5	N 563,455.16 E 1,344,384.81	HOGO STD DET 50 4.22
I-31	S	386.86	386.72	382.4	N 563,504.58 E 1,344,442.25	HOGO STD DET 50 4.22
I-32	CATCH BASIN		384.74	382.4	N 563,548.74 E 1,344,516.08	NDS 18"x18" C.B. #1800 WITH GRATE #1810
I-33	HOG S	374.624	374.524	382.6	N 563,340.30 E 1,344,445.09	HOGO STD DET 50 4.22
I-34	A-10	384.65	384.55	388.3	N 563,711.80 E 1,350,094.10	HOGO STD DET 50 4.02
I-35	A-10		385.65	388.5	N 563,747.80 E 1,350,090.81	HOGO STD DET 50 4.02
I-36	A-10	375.55	375.45	377.2	N 563,216.40 E 1,350,040.12	HOGO STD DET 50 4.02
I-37	A-10		378.8	378.8	N 563,242.40 E 1,350,000.88	HOGO STD DET 50 4.02
I-38	S	380.37	376.45	382.2	N 563,260.74 E 1,350,040.62	HOGO STD DET 50 4.22
M-1	4" HI	372.63	372.53	371.5	N 563,095.08 E 1,344,436.24	HOGO STD DET 6 5.12
M-2	4" HI	380.71(6'") 380.00(15'")	374.42	385.2	N 563,371.93 E 1,344,436.21	HOGO STD DET 6 5.12
M-3	4" HI	387.20(6'") 386.70(12'")	386.45	389.4	N 563,466.40 E 1,344,436.11	HOGO STD DET 6 5.12
M-4	4" HI	381.13	381.03	384.65	N 563,546.40 E 1,344,645.46	HOGO STD DET 6 5.12
M-5	4" HI	378.23	378.13	382.2	N 563,288.99 E 1,344,783.51	HOGO STD DET 6 5.12
M-6	4" HI	382.22	382.12	380.3	N 563,281.64 E 1,344,343.75	HOGO STD DET 6 5.12
M-7	4" HI	381.16	381.06	385.3	N 563,709.30 E 1,344,693.10	HOGO STD DET 6 5.12
M-8	4" HI	380.57(4'") 380.29(10'")	380.15	384.0	N 563,460.15 E 1,344,401.44	HOGO STD DET 6 5.12
M-9	4" HI	383.75	381.574	387.5	N 563,716.30 E 1,350,051.28	HOGO STD DET 6 5.12
M-10	5" HI	375.13	370.714	376.4	N 563,214.40 E 1,350,068.57	HOGO STD DET 6 5.12
S-1	3000 GAL STORMSEPTOR	356.55	356.45	361.0	N 562,831.22 E 1,344,800.66	SEE DETAIL, SHEET 4
S-2	1000 GAL STORMSEPTOR	381.85	381.85	381.8	N 563,264.12 E 1,344,565.64	SEE DETAIL, SHEET 4
SMH-1	4" HI	386.01	387.41	371.6	N 563,207.81 E 1,350,025.87	HOGO STD DET 6 5.12
SMH-2	4" HI	384.85	384.85	378.5	N 563,224.40 E 1,344,484.51	HOGO STD DET 6 5.12
SMH-3	4" HI	370.84(6'") 370.74(2'")	370.64	380.6	N 563,224.40 E 1,344,426.24	HOGO STD DET 6 5.12
SMH-4	4" HI	376.12(6'") 371.81(6'")	371.85	384.6	N 563,366.40 E 1,344,426.24	HOGO STD DET 6 5.12
SMH-5	4" HI	380.47(2'") 371.81(6'")	380.37	387.6	N 563,437.80 E 1,344,426.24	HOGO STD DET 6 5.12
SMH-6	4" HI	386.26	386.04	384.4	N 563,545.40 E 1,344,426.24	HOGO STD DET 6 5.12
SMH-7	4" HI	381.64(6'") 381.52(8'")	381.42	386.5	N 563,437.80 E 1,344,734.12	HOGO STD DET 6 5.12
SMH-8	4" HI	382.40	382.30	384.0	N 563,437.80 E 1,344,684.77	HOGO STD DET 6 5.12
SMH-9	4" HI	385.00	384.83	381.7	N 563,410.46 E 1,344,558.18	HOGO STD DET 6 5.12
SMH-10	4" HI	371.34(2'") 371.22	371.22	377.4	N 563,136.44 E 1,344,426.24	HOGO STD DET 6 5.12

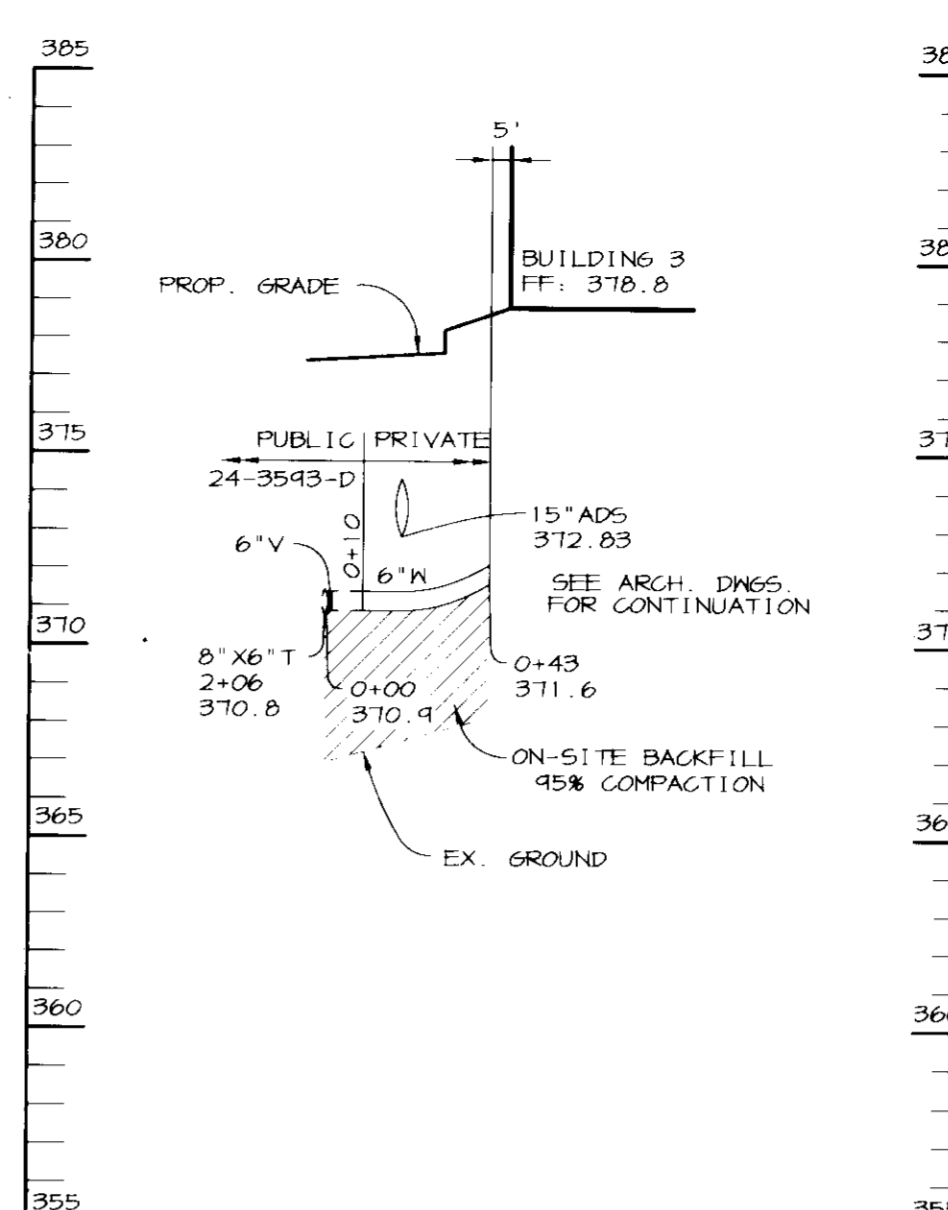
NOTES:
STRUCTURE LOCATION IS AT CENTER OF OPENING FOR GRATE INLETS AND AT CENTER OF STRUCTURE, FACE OF CURB FOR CURB OPENING INLETS.
A-10 INLETS SLOPE WITH ROAD.
ALL MANHOLES TO BE PRECAST.



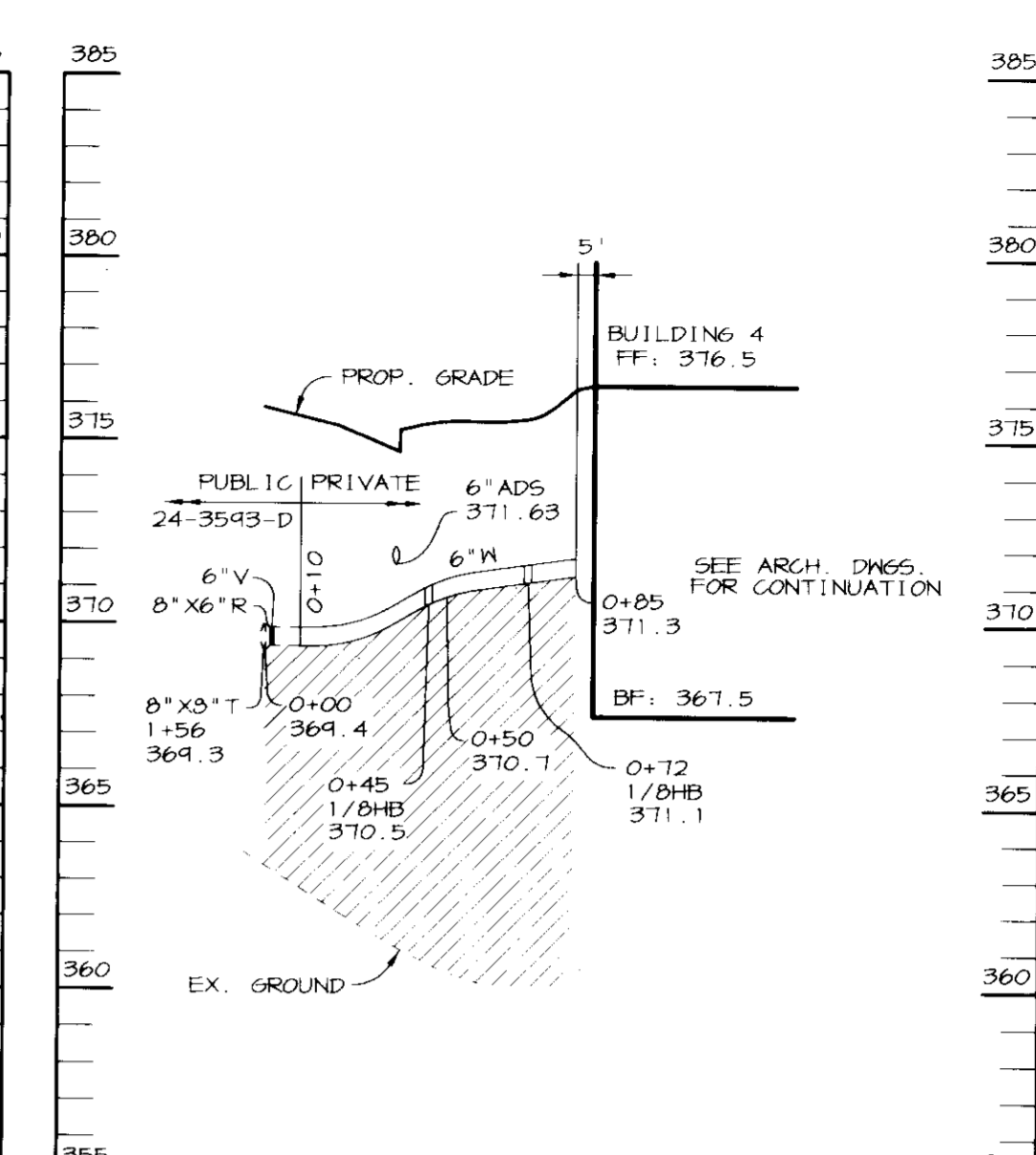
WATER PROFILE-BLDG. 1



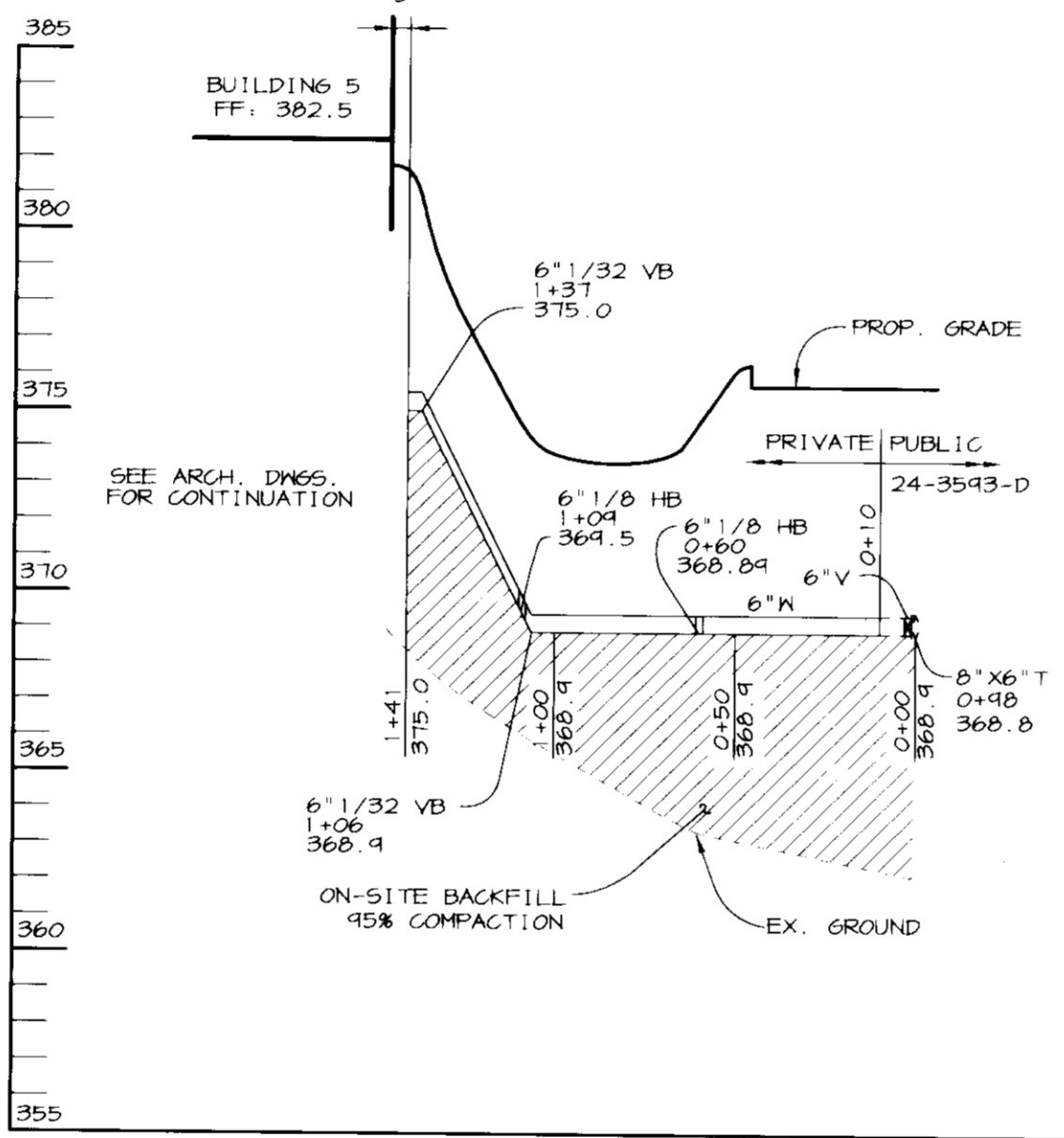
WATER PROFILE-BLDG. 2



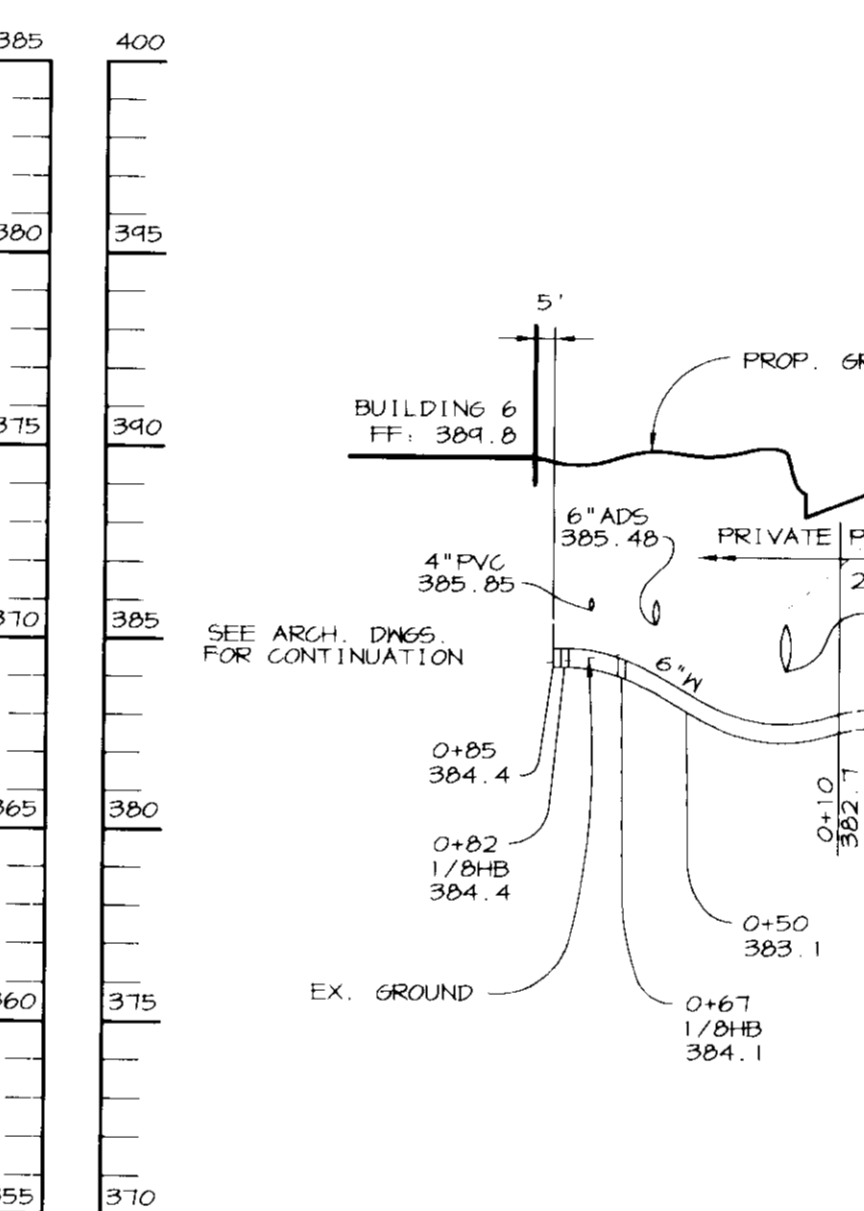
WATER PROFILE-BLDG. 3



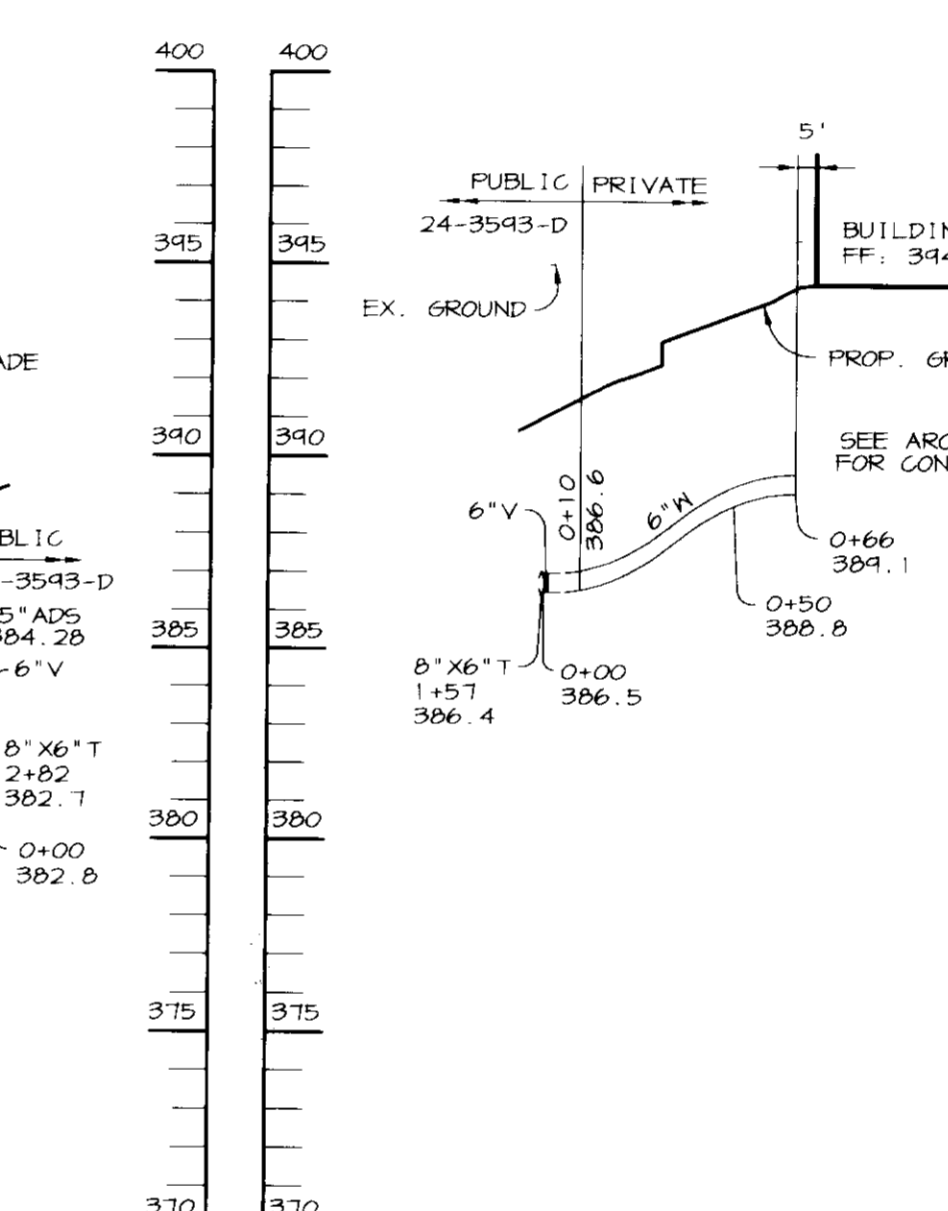
WATER PROFILE-BLDG. 4



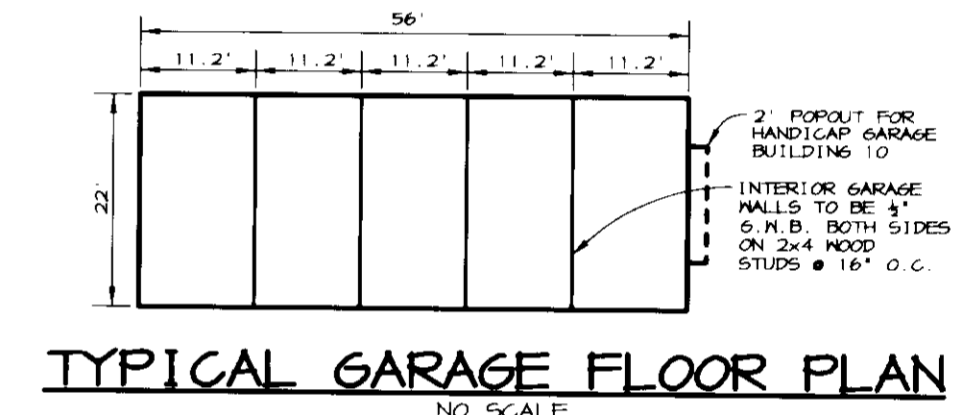
WATER PROFILE-BLDG. 5



WATER PROFILE-BLDG. 6



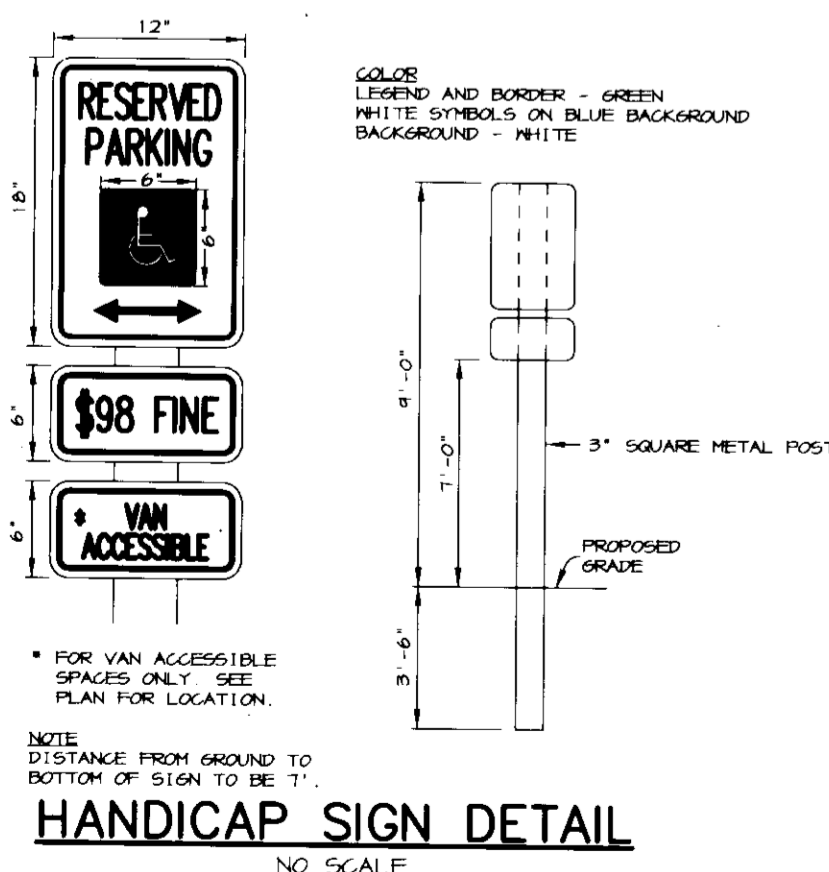
WATER PROFILE-BLDG. 7



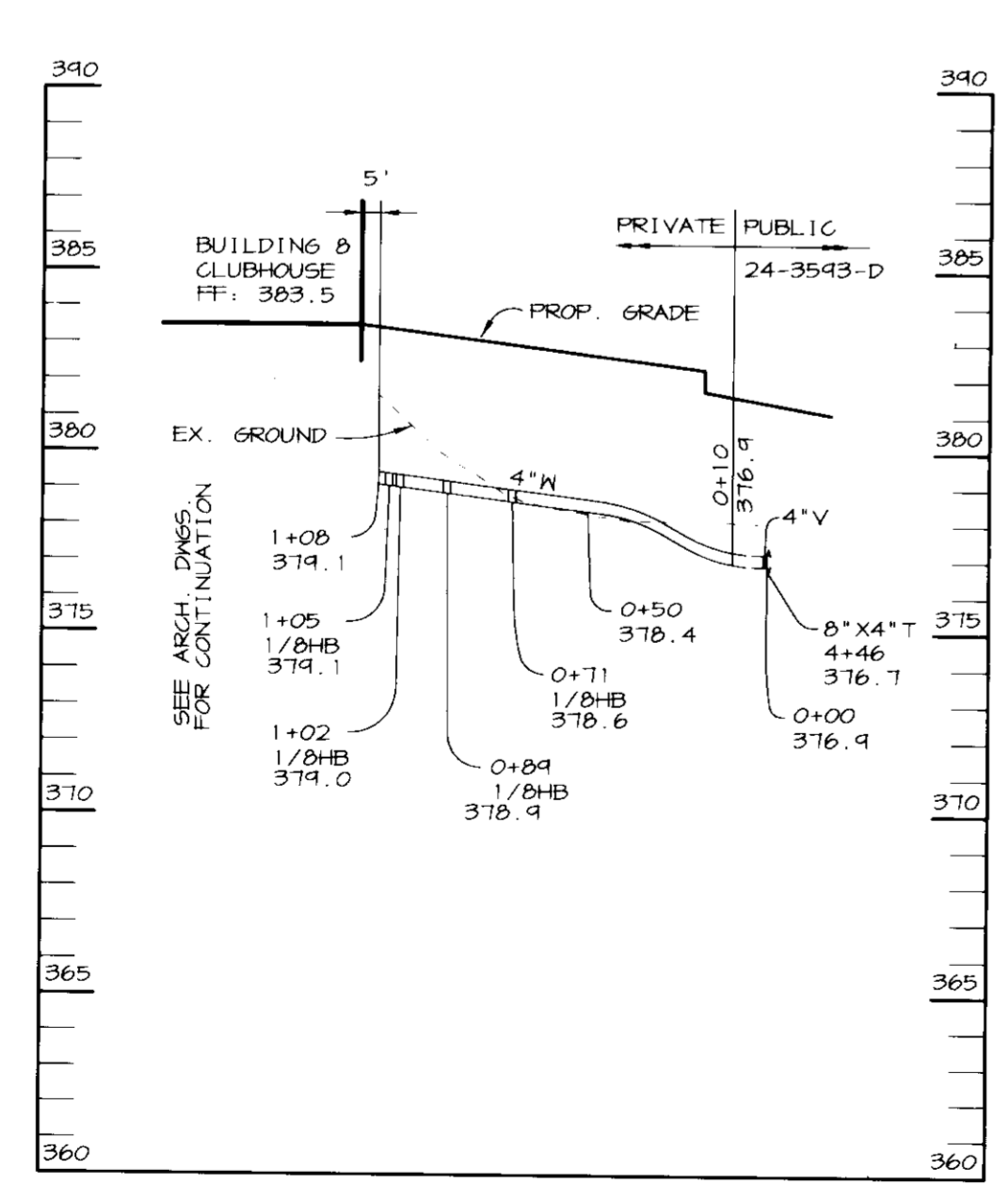
TYPICAL GARAGE FLOOR PLAN

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.
 [Signature] DIRECTOR 3/26/97 DATE
 [Signature] CHIEF, DEVELOPMENT ENGINEERING DIVISION 3/26/97 DATE
 [Signature] CHIEF, DIVISION OF LAND DEVELOPMENT 3/26/97 DATE

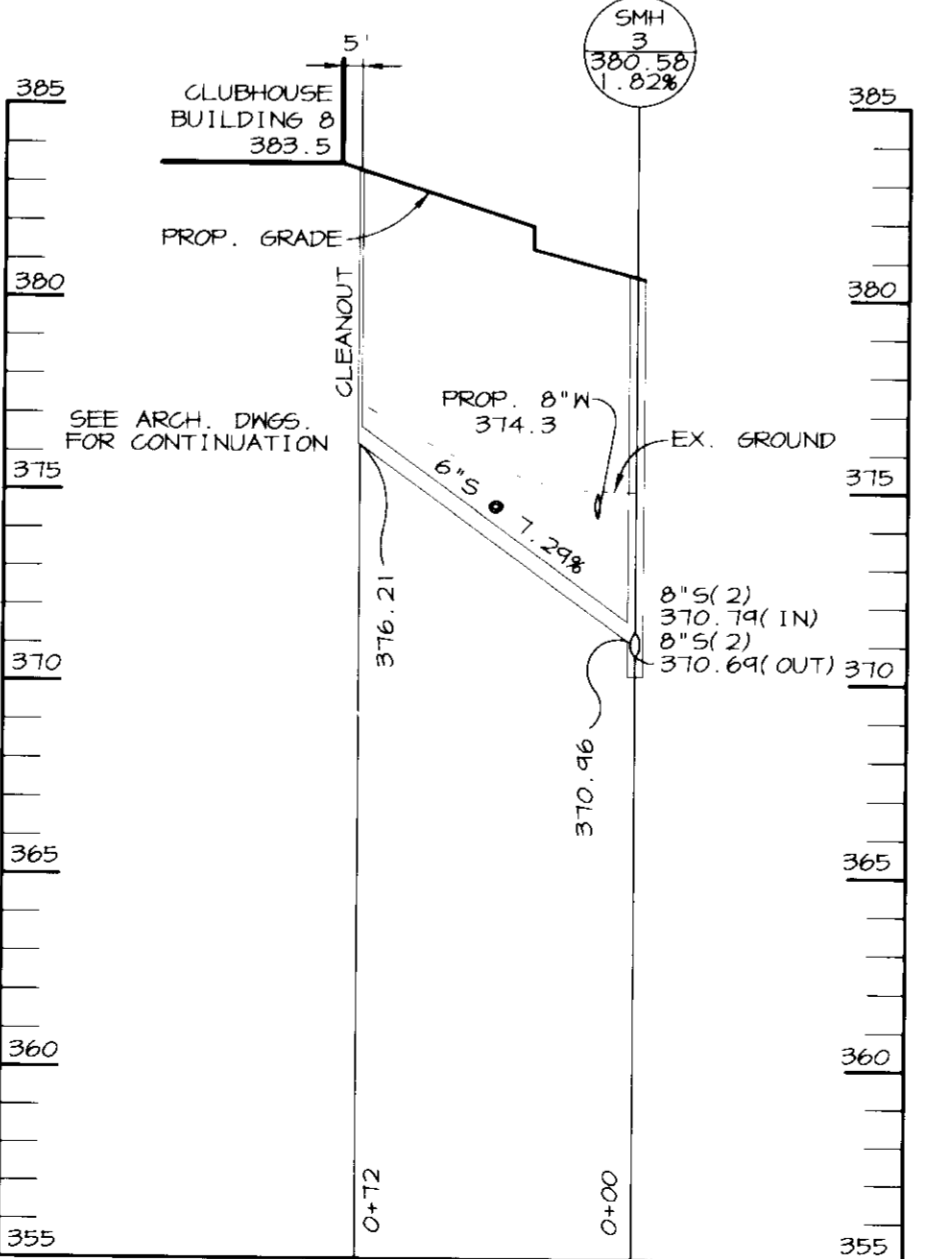
DATE NO.	REVISION
OWNER	THE HOWARD RESEARCH AND DEVELOPMENT CORP. THE ROUSE BUILDING 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21044 (410) 992-6000
DEVELOPER	COLUMBIA TOWN CENTER LLC % THE BOZZO GROUP 6401 GOLDEN TRIANGLE DRIVE, SUITE 200 GREENBELT, MARYLAND 20770-3203 (301) 220-0100
PROJECT	TOWN CENTER TRIANGLE AN APARTMENT COMMUNITY
AREA	TOWN CENTER: SECTION 2, AREA 4, PARCEL A TAX MAP 36 BLOCK 1 ZONED NT 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE	PROFILES, NOTES, AND DETAILS
RIEMER MUEGGE & ASSOCIATES, INC. ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING 8818 Centre Park Drive, Columbia, Maryland 21045 tel 410.997.8900 • fax 410.997.9282	
DATE	3.13.97
DESIGNED BY:	CJR
DRAWN BY:	RPP
PROJECT NO:	HOCO\96E2900 SDPB.DWG
DATE:	MARCH 13, 1997
SCALE:	AS SHOWN
JAYKANT D. PAREKH #19148	DRAWING NO. 8 OF 13



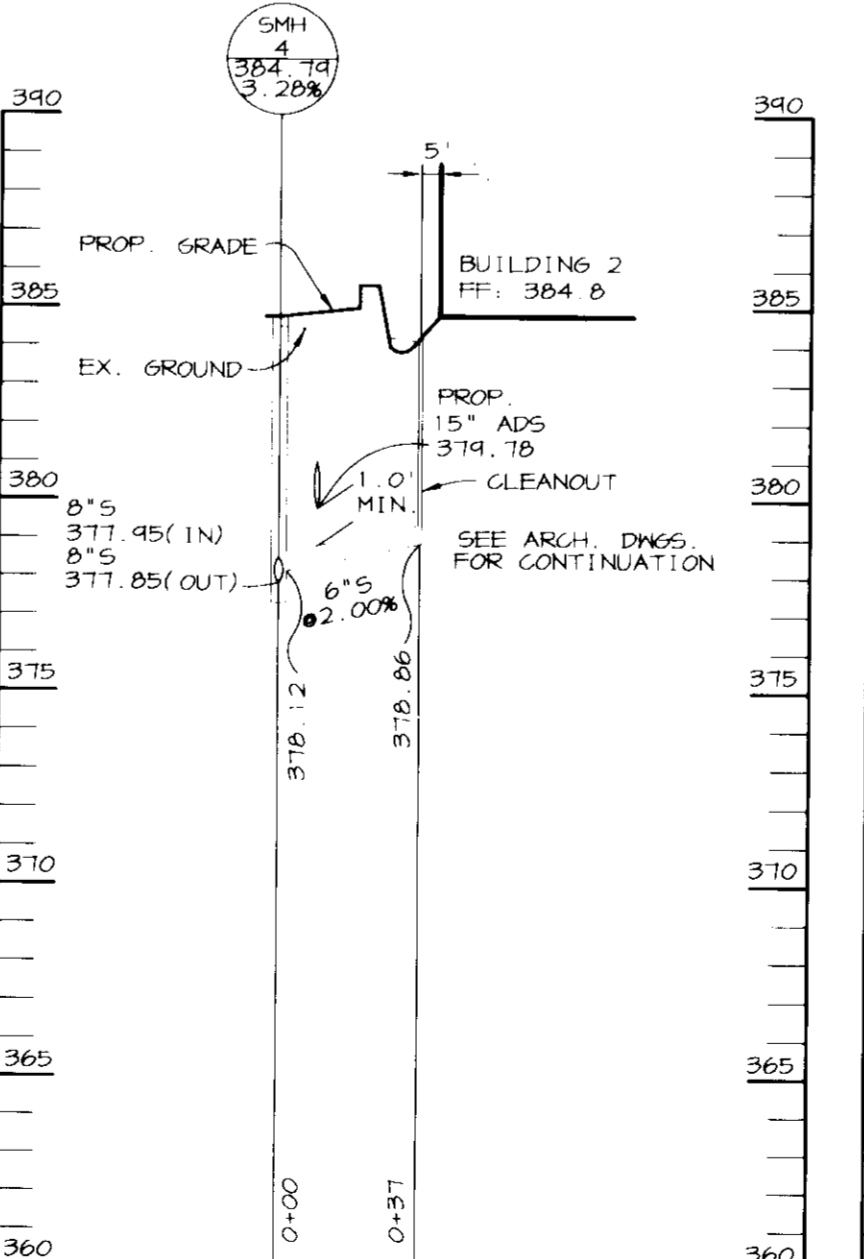
HANDICAP SIGN DETAIL



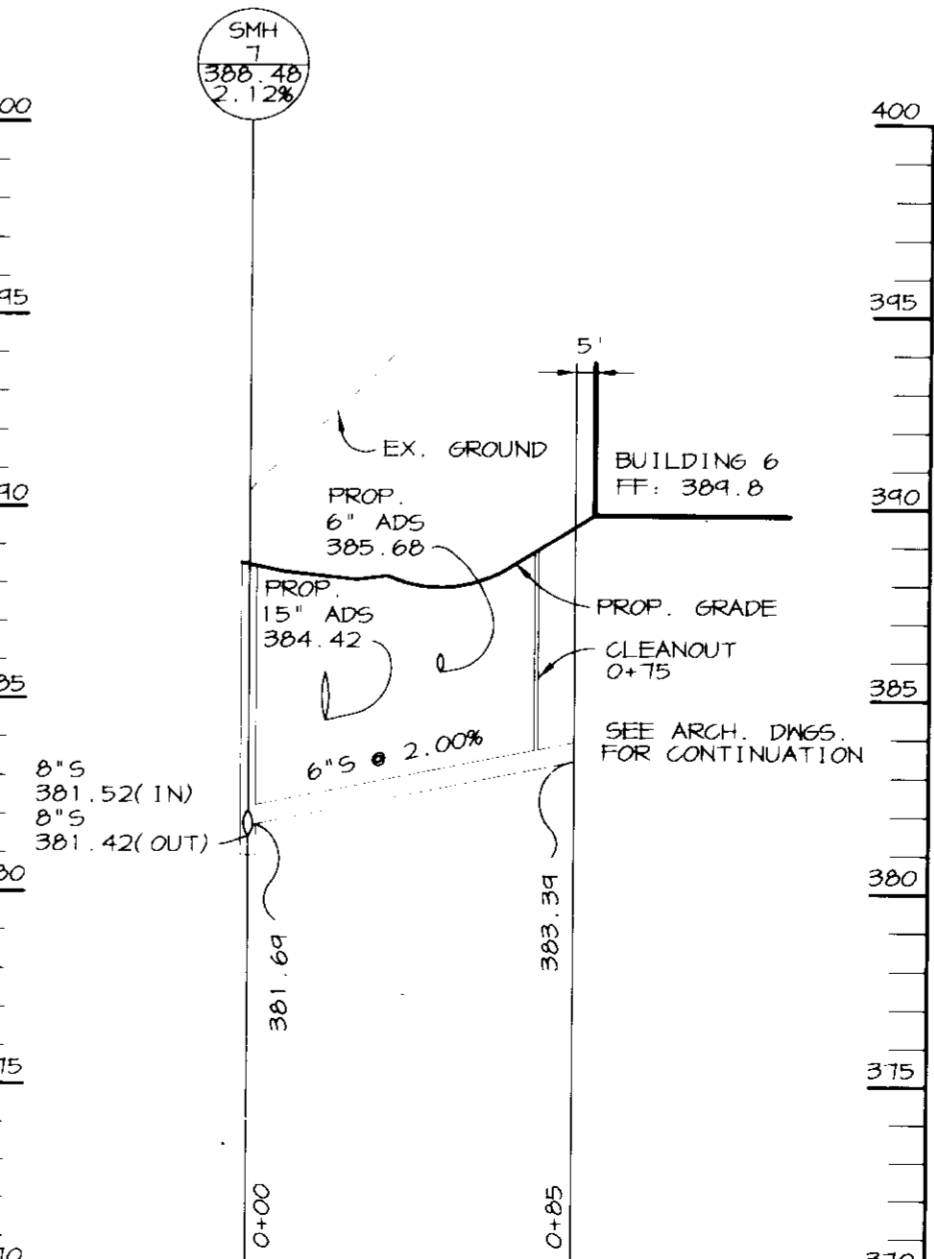
WATER PROFILE-BLDG. 8



SEWER PROFILE-BLDG. 8



SEWER PROFILE-BLDG. 2



SEWER PROFILE-BLDG. 6

DATE 3.13.97
 DESIGNED BY: CJR
 DRAWN BY: RPP
 PROJECT NO: HOCO\96E2900
 SDPB.DWG
 DATE: MARCH 13, 1997
 SCALE: AS SHOWN
 JAYKANT D. PAREKH #19148
 DRAWING NO. 8 OF 13
 SDP-97-67

SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS PRIOR TO THE START OF ANY CONSTRUCTION (313-1855).
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL, AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, Dikes, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THE PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 12, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1991 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL AND EROSION CONTROL FOR PERMANENT SEEDINGS (SEC. 51), SOIL (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONG CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE ANALYSIS:

TOTAL AREA OF SITE	9.05 ACRES
AREA DISTURBED	12.0 ACRES
AREA TO BE ROOFED OR PAVED	9.91 ACRES
AREA TO BE VEGETATIVELY STABILIZED	6.03 ACRES
TOTAL CUT	24,000 CU. YARDS
TOTAL FILL	47,000 CU. YARDS
BORROW SITE	F-97-14
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED ON THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROLS MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- SITE GRADING WILL BEGIN ONLY AFTER ALL PERIMETER SEDIMENT CONTROL MEASURES HAVE BEEN INSTALLED AND ARE IN A FUNCTIONING CONDITION.
- SEDIMENT WILL BE REMOVED FROM TRAPS WHEN 1" DEPTH REACHES CLEAN OUT ELEVATION SHOWN ON PLANS.
- CUT AND FILL QUANTITIES PROVIDED UNDER SITE ANALYSIS DO NOT REPRESENT 910 QUANTITIES. THESE QUANTITIES DO NOT DISTINGUISH BETWEEN TOPSOIL, STRUCTURAL FILL OR ENHANCEMENT MATERIAL. NOR DO THEY REFLECT CONSIDERATION OF UNDERCUTTING OR REMOVAL OF UNSUITABLE MATERIAL. THE CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH SITE CONDITIONS WHICH MAY AFFECT THE WORK.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 AC., APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTOR APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACKFILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.
- BORROW SITE TO BE PRE-APPROVED BY THE SEDIMENT CONTROL INSPECTOR, OR IN CASE OF EXCESS MATERIAL, AN APPROVED SEDIMENT CONTROL PLAN WILL BE NEEDED TO DEPOSIT EXCESS OFF-SITE.

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redisturbed where a short-term vegetative cover is needed.

Seeded Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding. If not previously loosened.

Soil Amendments: Apply 600 lbs. per acre 10-10-10 Fertilizer (14 lbs. per 1000 sq.ft.).

Seeding: For periods March 1 thru April 30 and from August 15 thru November 15, seed with 2-1/2 bushels per acre of annual rye (3-2 lbs. per 1000 sq.ft.). For the period May 1 thru August 14, seed with 3 lbs. per acre of creeping lovegrass (0.07 lbs. per 1000 sq.ft.). For the period November 16 thru February 28, protect site by applying 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 210 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

Refer to the 1983 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seeded Preparation: Loosen upper three inches of soil by raking, discing or other acceptable means before seeding. If not previously loosened.

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- Preferred - Apply 2 tons per acre dolomitic limestone (42 lbs. per 1000 sq.ft.) and 600 lbs. per acre 10-10-10 Fertilizer (14 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil. At time of seeding, apply 400 lbs. per acre 30-0-0 ureaform fertilizer (4 lbs. per 1000 sq.ft.).
- Acceptable - Apply 2 tons per acre dolomitic limestone (42 lbs. per 1000 sq.ft.) and 1000 lbs. per acre 10-10-10 Fertilizer (23 lbs. per 1000 sq.ft.) before seeding. Harrow or disc into upper three inches of soil.

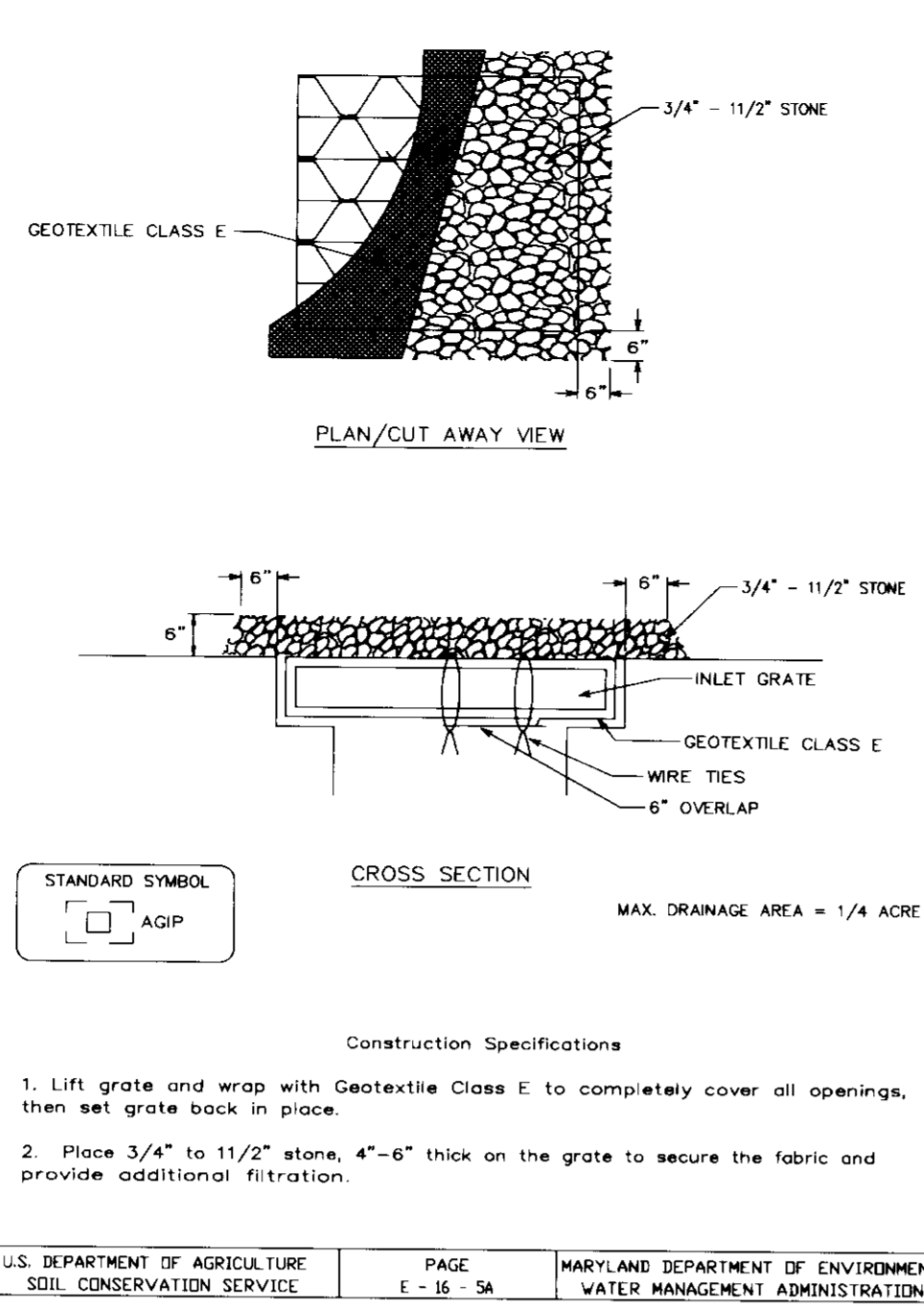
Seeding: For the period March 1 thru April 30 and from August 1 thru October 15, seed with 60 lbs. per acre (1.4 lbs. per 1000 sq.ft.) of Kentucky 31 Tall Fescue. For the period May 1 thru July 31, seed with 60 lbs. Kentucky 31 Tall Fescue per acre and 2 lbs. per acre (0.05 lbs. per 1000 sq.ft.) of creeping lovegrass. During the period October 16 thru February 28, protect site by one of the following options:

- 2 tons per acre of well-anchored mulch straw and seed as soon as possible in the spring.
- Use sod.
- Seed with 60 lbs. per acre Kentucky 31 Tall Fescue and mulch with 2 tons per acre well anchored straw.

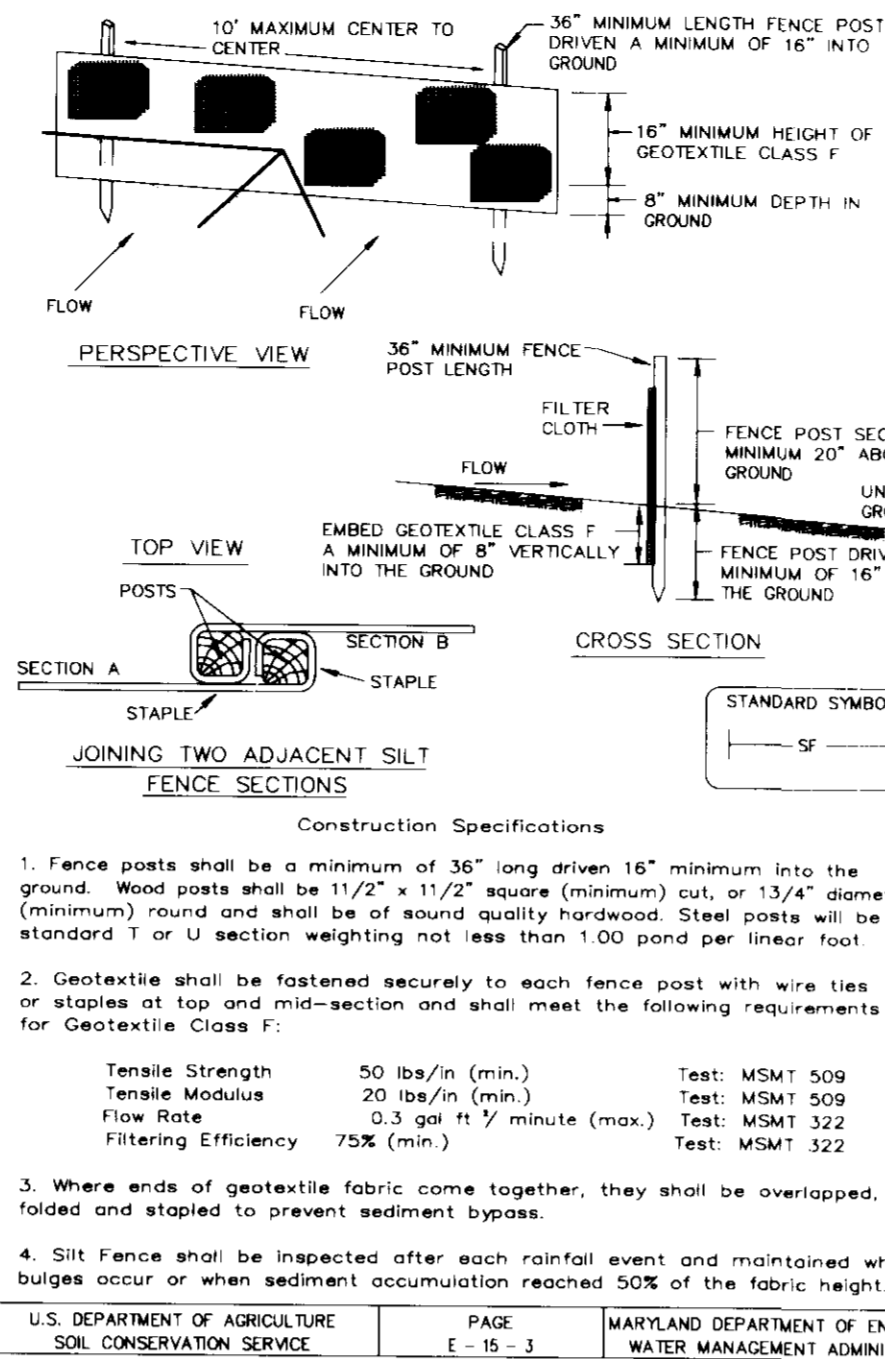
Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs. per 1000 sq.ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 210 gal. per acre (5 gal. per 1000 sq.ft.) of emulsified asphalt on flat areas. On slopes, 8 ft. or higher, use 347 gal. per acre (8 gal. per 1000 sq.ft.) for anchoring.

Maintenance: Inspect all seeded areas and make needed repairs, replacements and reseedings.

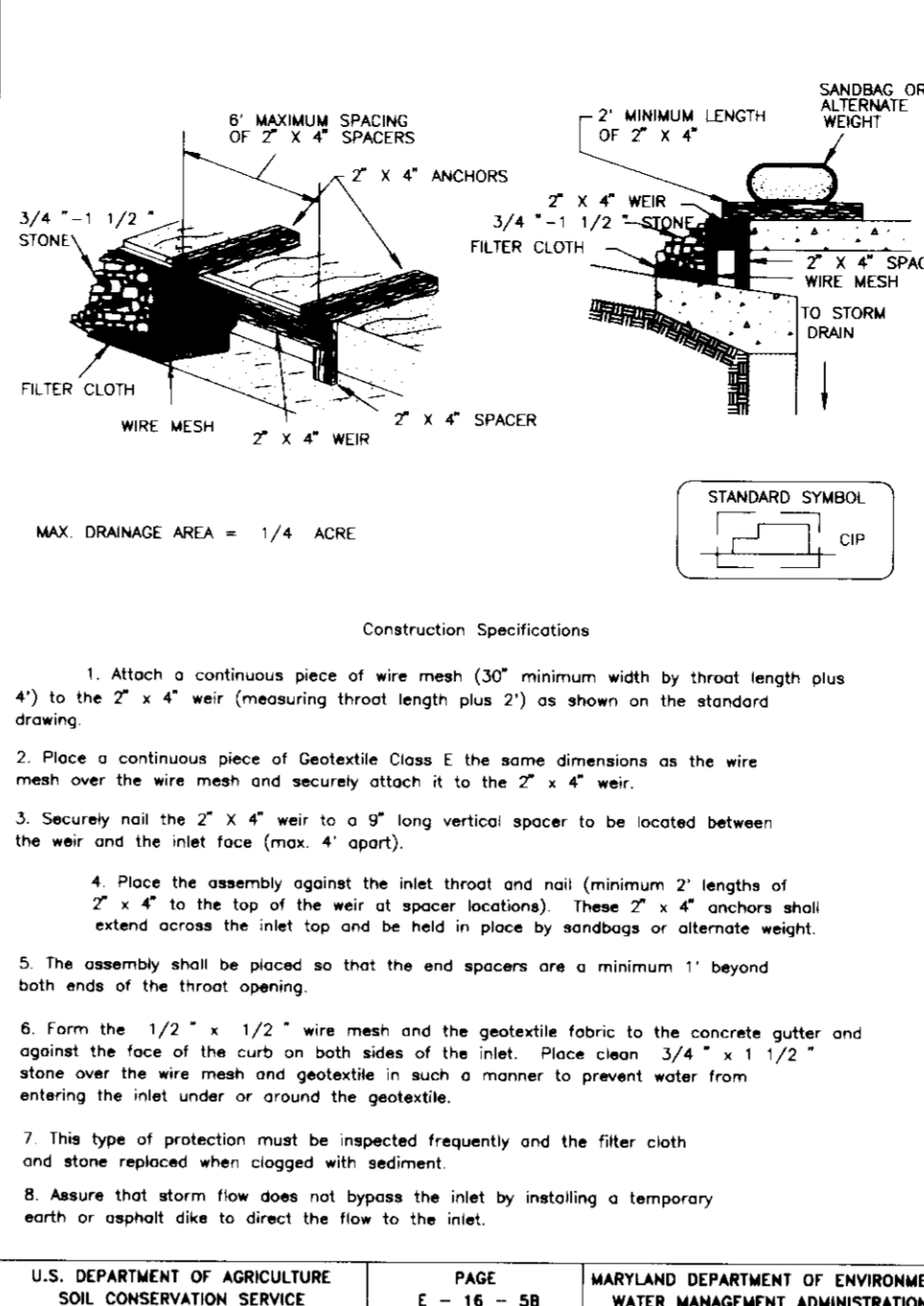
DETAIL 23B - AT GRADE INLET PROTECTION



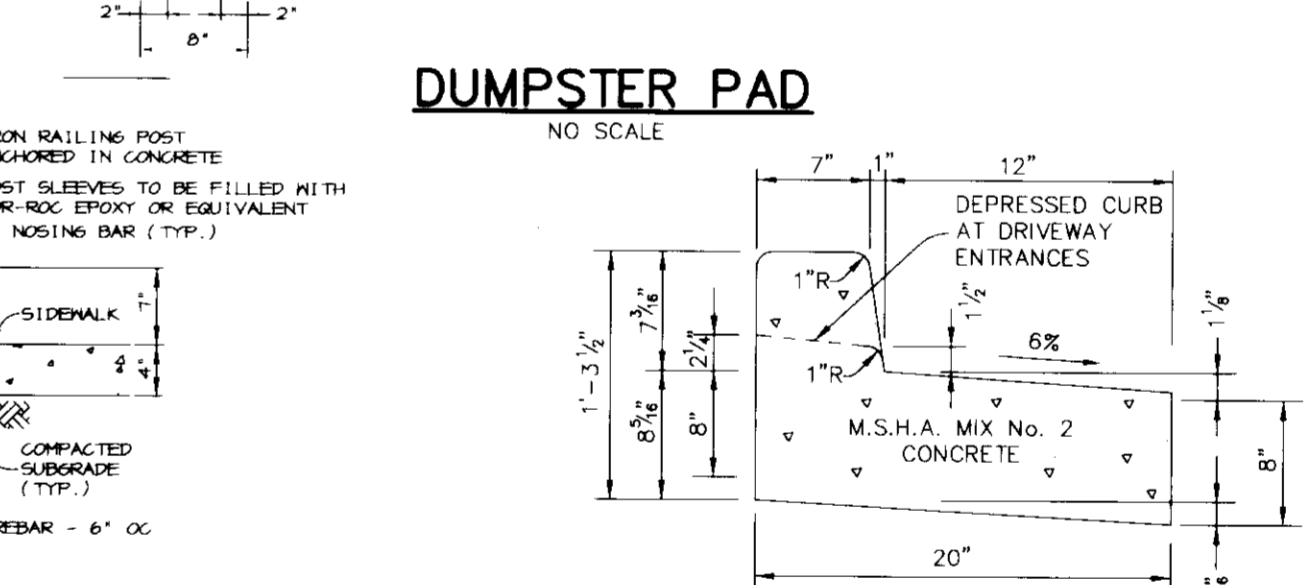
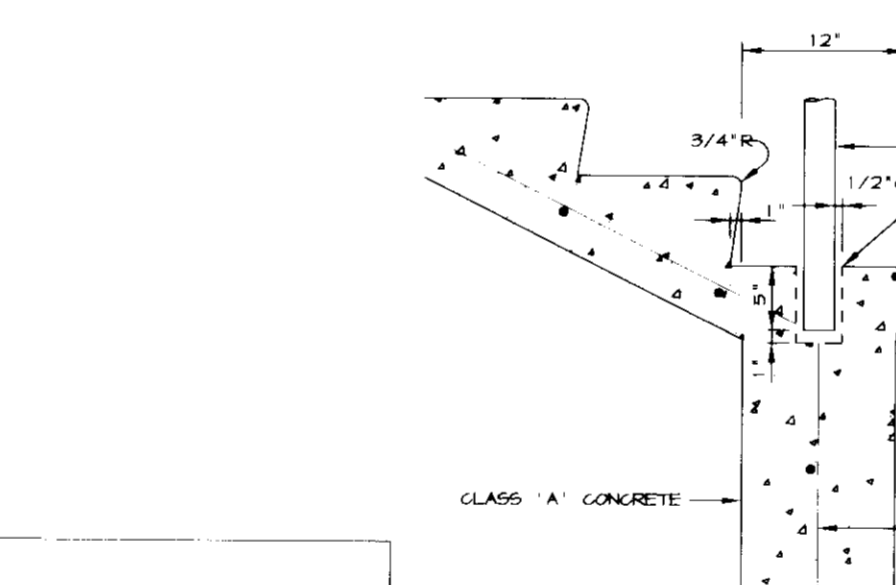
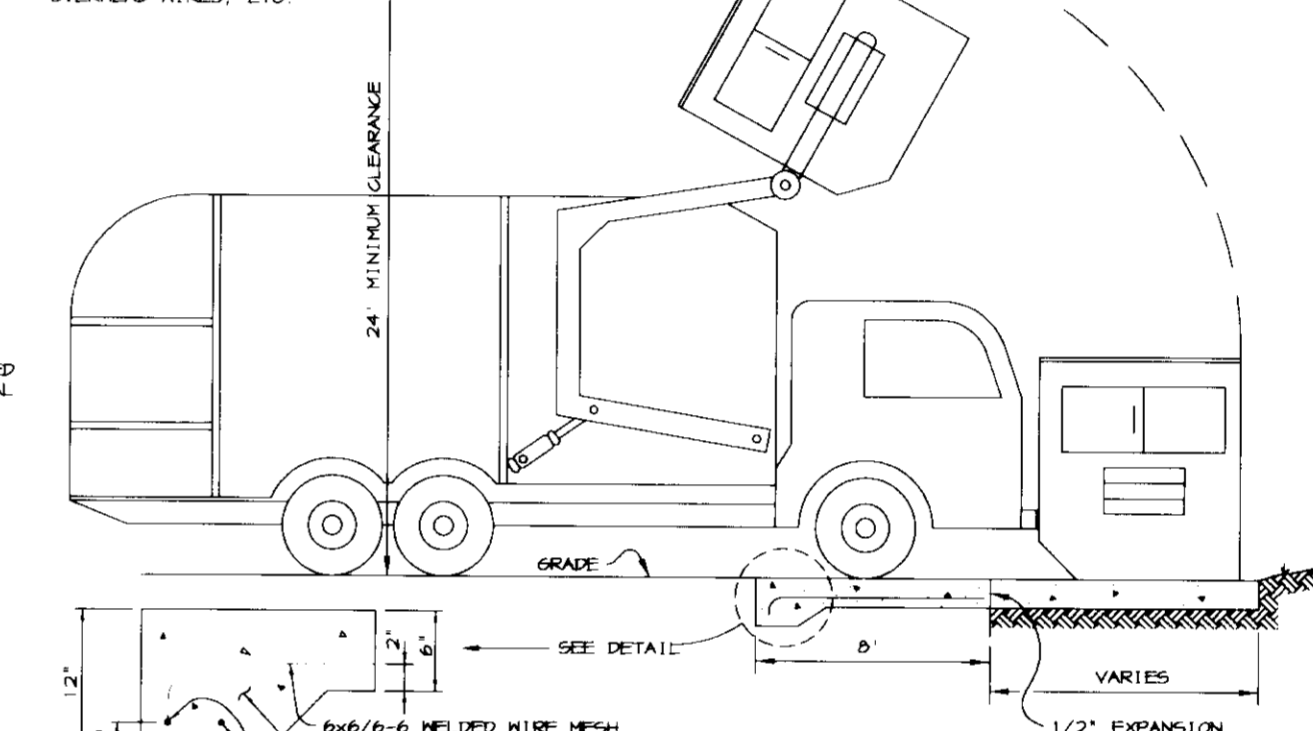
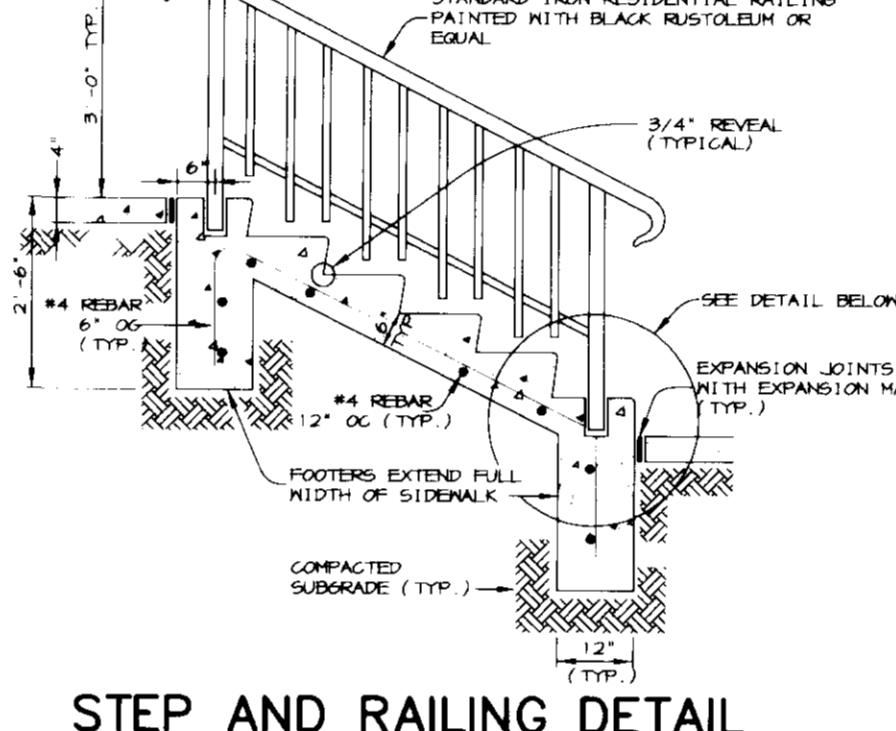
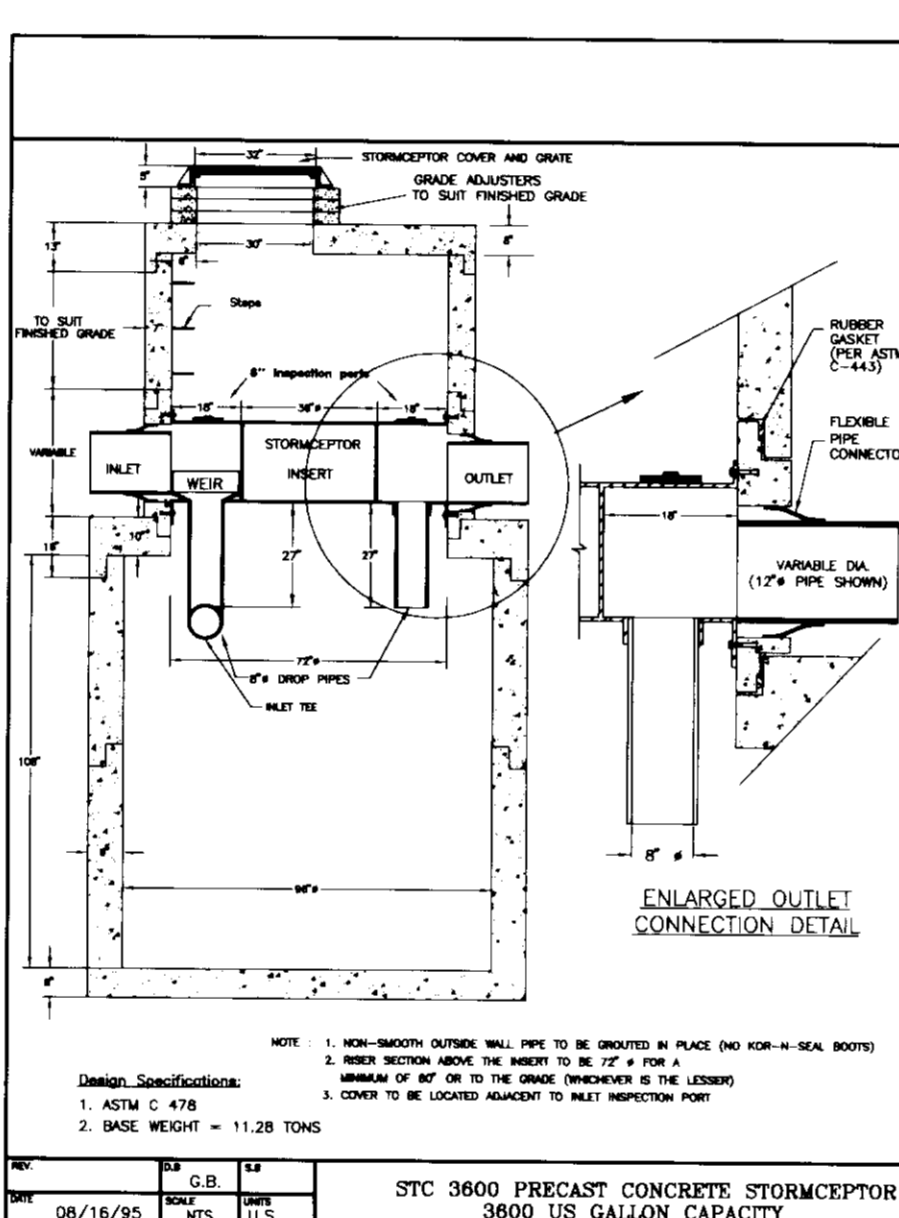
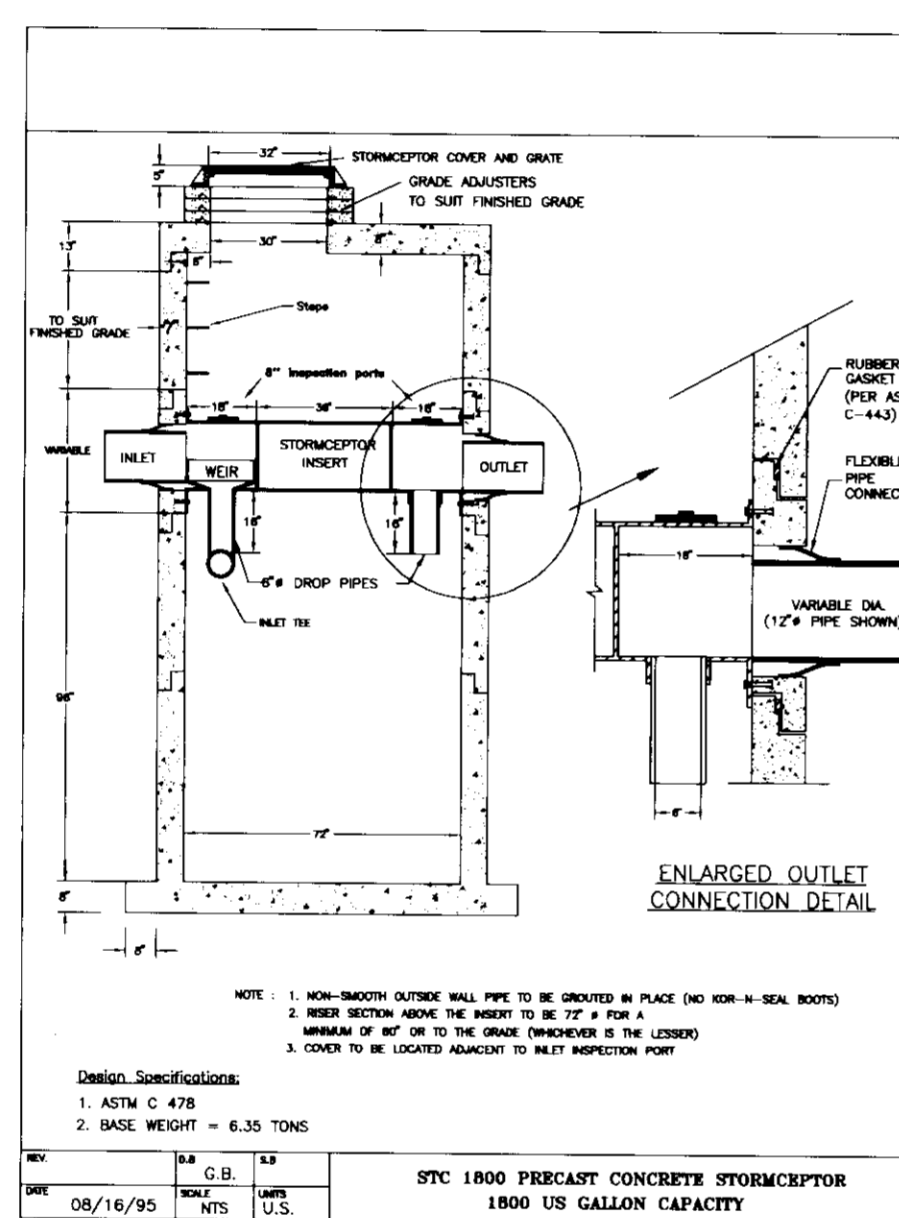
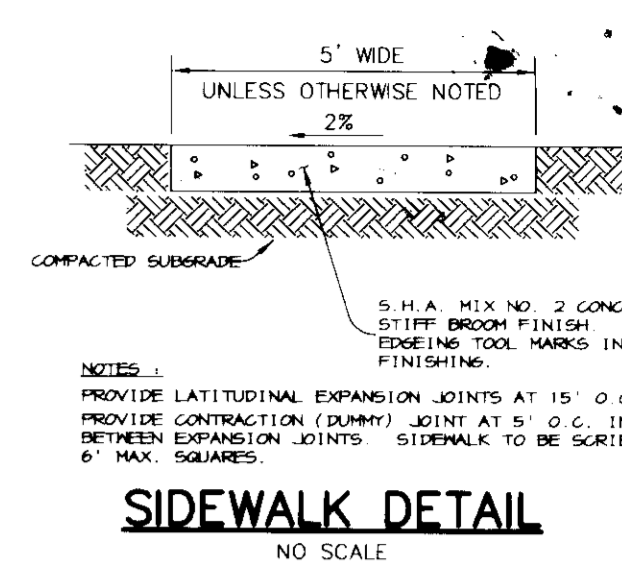
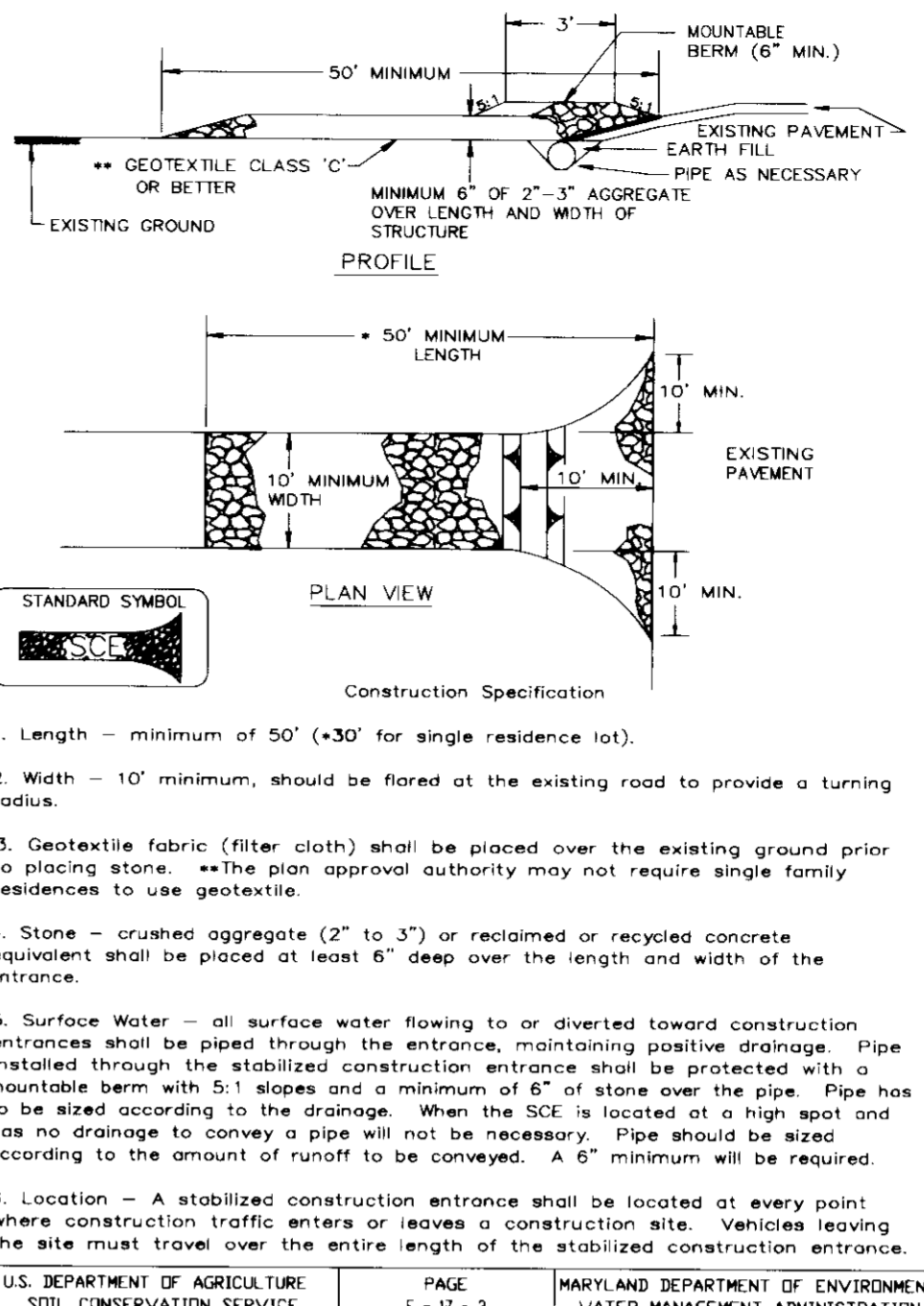
DETAIL 22 - SILT FENCE



DETAIL 23C - CURB INLET PROTECTION



DETAIL 24 - STABILIZED CONSTRUCTION ENTRANCE



Concrete Stormceptor Order Request Form

Contractor Information: Name, Address, City, State, Zip Code, Contact, Phone, Fax.

Owner Information: Name, Address, City, State, Zip Code, Contact, Phone, Fax.

Stormceptor Model: 900, 1200, 1800, 2400. Insert Size: 22\", 32\", 44\", Custom. Manhole Number: 361.2, 366.55, 366.45, 366.85. Inlet Pipe Invert (ft): 366.55, 366.45, 366.85. Outlet Pipe Invert (ft): 366.45, 366.85, 366.3. Pipe Type: ADS, N-12. Pipe Inside Diameter (in) [D]: 24, 36, 48. Pipe Outside Diameter (in) [OD]: 28, 38, 50.

Project Name: TOWN CENTER TRIANGLE. Approximate time frame until required delivery (weeks). Delivery Address: Street, City, State, Zip Code. Designer Company: RIEMER MUEGGE & ASSOCIATES, INC. Designer Contact: CHRIS REID. Phone: (410) 941-8900. Fax: (410) 941-4282.

Please fax this sheet back to Hydro ConduIt/Virginia Precast at (804) 798-3426. Attn: Dave Brinsar/Ed O'Malley (Phone: 1-800-999-2278).

Concrete Stormceptor Order Request Form

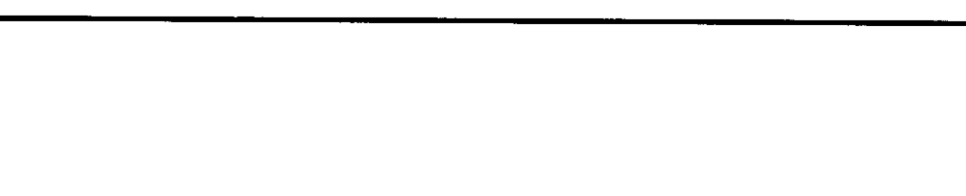
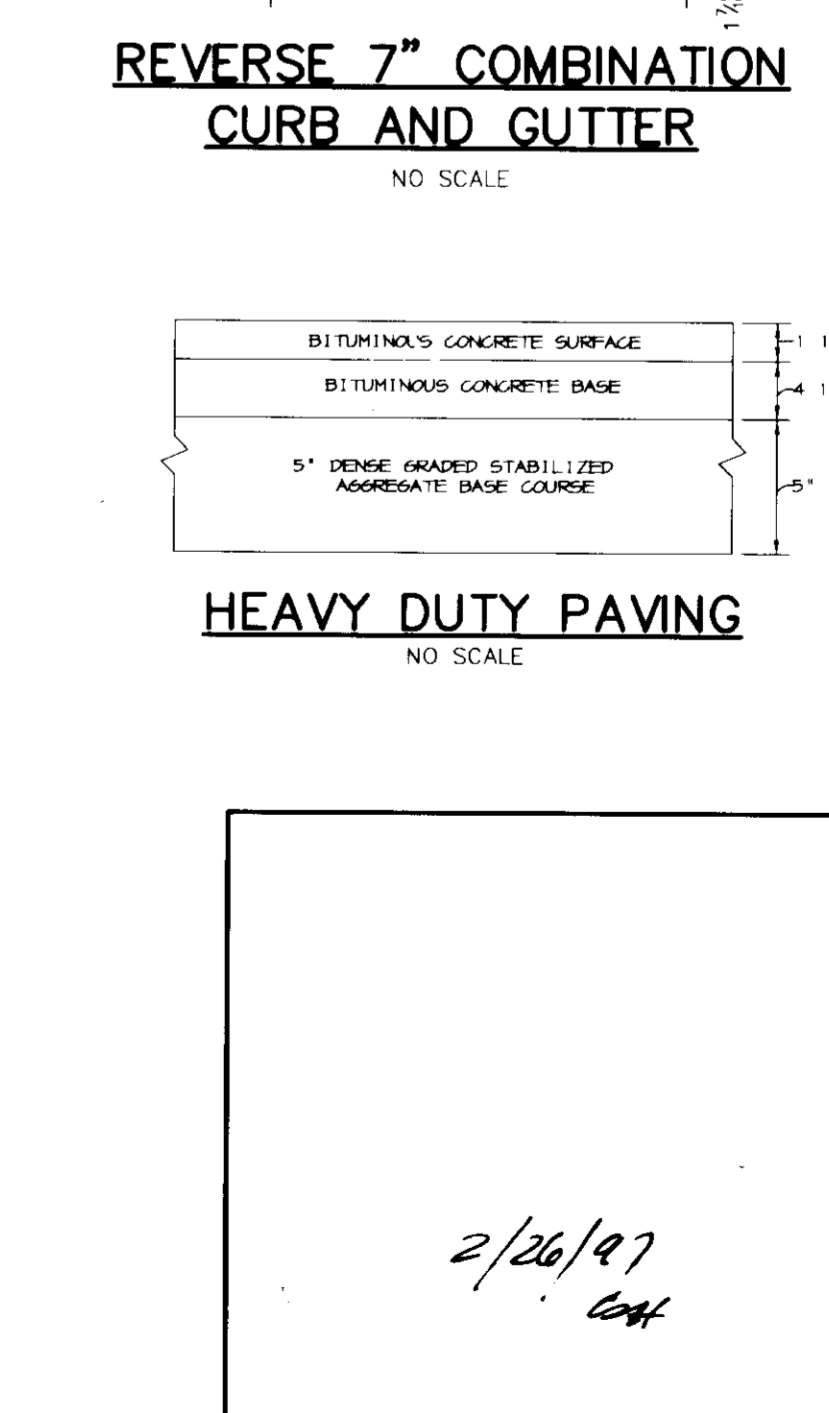
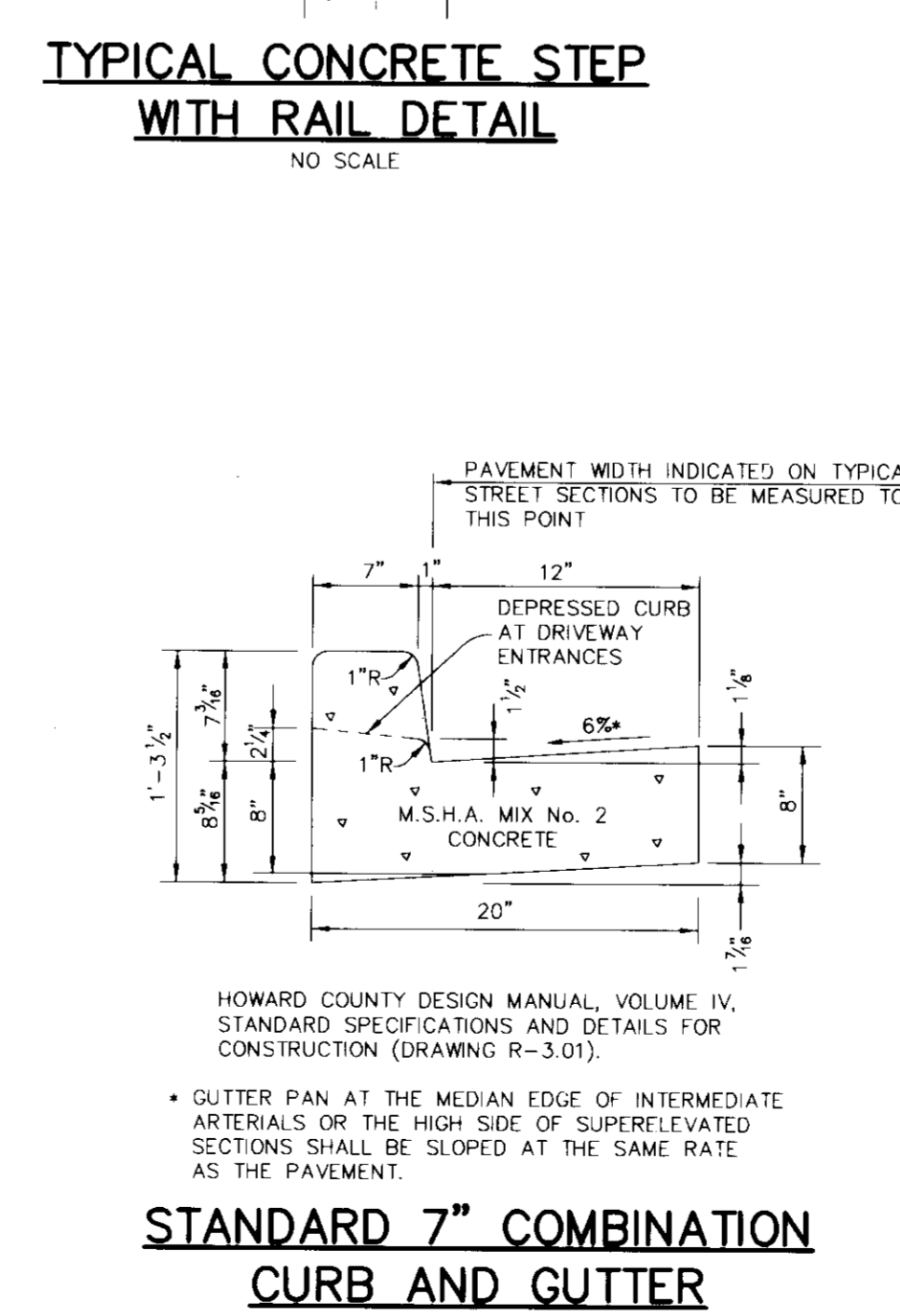
Contractor Information: Name, Address, City, State, Zip Code, Contact, Phone, Fax.

Owner Information: Name, Address, City, State, Zip Code, Contact, Phone, Fax.

Stormceptor Model: 900, 1200, 1800, 2400. Insert Size: 22\", 32\", 44\", Custom. Manhole Number: 361.2, 366.55, 366.45, 366.85. Inlet Pipe Invert (ft): 366.55, 366.45, 366.85. Outlet Pipe Invert (ft): 366.45, 366.85, 366.3. Pipe Type: ADS, N-12. Pipe Inside Diameter (in) [D]: 24, 36, 48. Pipe Outside Diameter (in) [OD]: 28, 38, 50.

Project Name: TOWN CENTER TRIANGLE. Approximate time frame until required delivery (weeks). Delivery Address: Street, City, State, Zip Code. Designer Company: RIEMER MUEGGE & ASSOCIATES, INC. Designer Contact: CHRIS REID. Phone: (410) 941-8900. Fax: (410) 941-4282.

Please fax this sheet back to Hydro ConduIt/Virginia Precast at (804) 798-3426. Attn: Dave Brinsar/Ed O'Malley (Phone: 1-800-999-2278).



BY THE DEVELOPER:

I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.

Smith & Smith 3-12-97
DEVELOPER DATE

BY THE ENGINEER:

I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.

J. Farrell 3.13.97
ENGINEER DATE

THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SOIL EROSION AND SEDIMENT CONTROL.

NATURAL RESOURCES CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.

HOWARD SOIL CONSERVATION DISTRICT DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Richard Blood 3/26/97
DIRECTOR DATE

Chris Brinsar 3/26/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Richard Blood 3/26/97
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

DATE	NO.	REVISION

OWNER: THE HOWARD RESEARCH AND DEVELOPMENT CORP. THE ROUSE BUILDING 10275 LITTLE PATENTERS PARKWAY COLUMBIA, MARYLAND 21044 (410) 942-6000

DEVELOPER: COLUMBIA TOWN CENTER LLC % THE BOZZUTO GROUP 6401 GOLDEN TRIANGLE DRIVE, SUITE 200 GREENBELT, MARYLAND 20710-3203 (301) 220-0100

PROJECT: TOWN CENTER TRIANGLE AN APARTMENT COMMUNITY

AREA: TOWN CENTER: SECTION 2, AREA 9, PARCEL A TAX MAP 36 BLOCK 1 ZONED NT 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: NOTES AND DETAILS

RIEMER MUEGGE & ASSOCIATES, INC. ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING 8818 Centre Park Drive, Columbia, Maryland 21045 tel 410.997.8900 • fax 410.997.9282

DATE: 3-13-97

DESIGNED BY: CJR

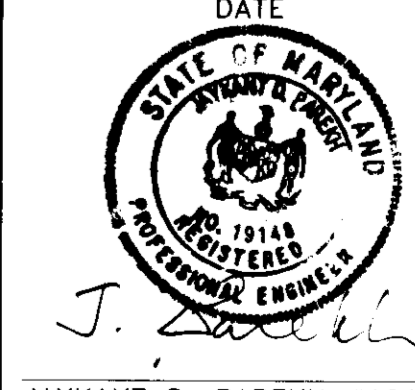
DRAWN BY: RPP

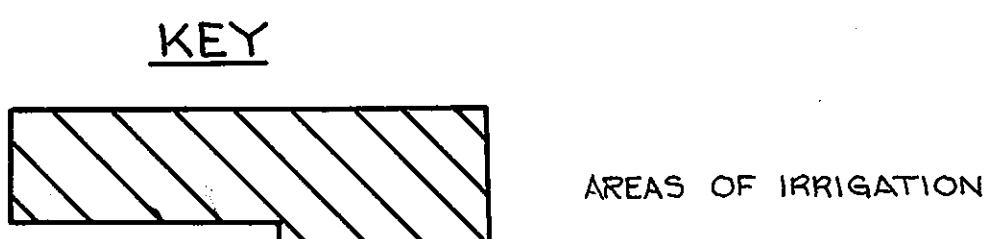
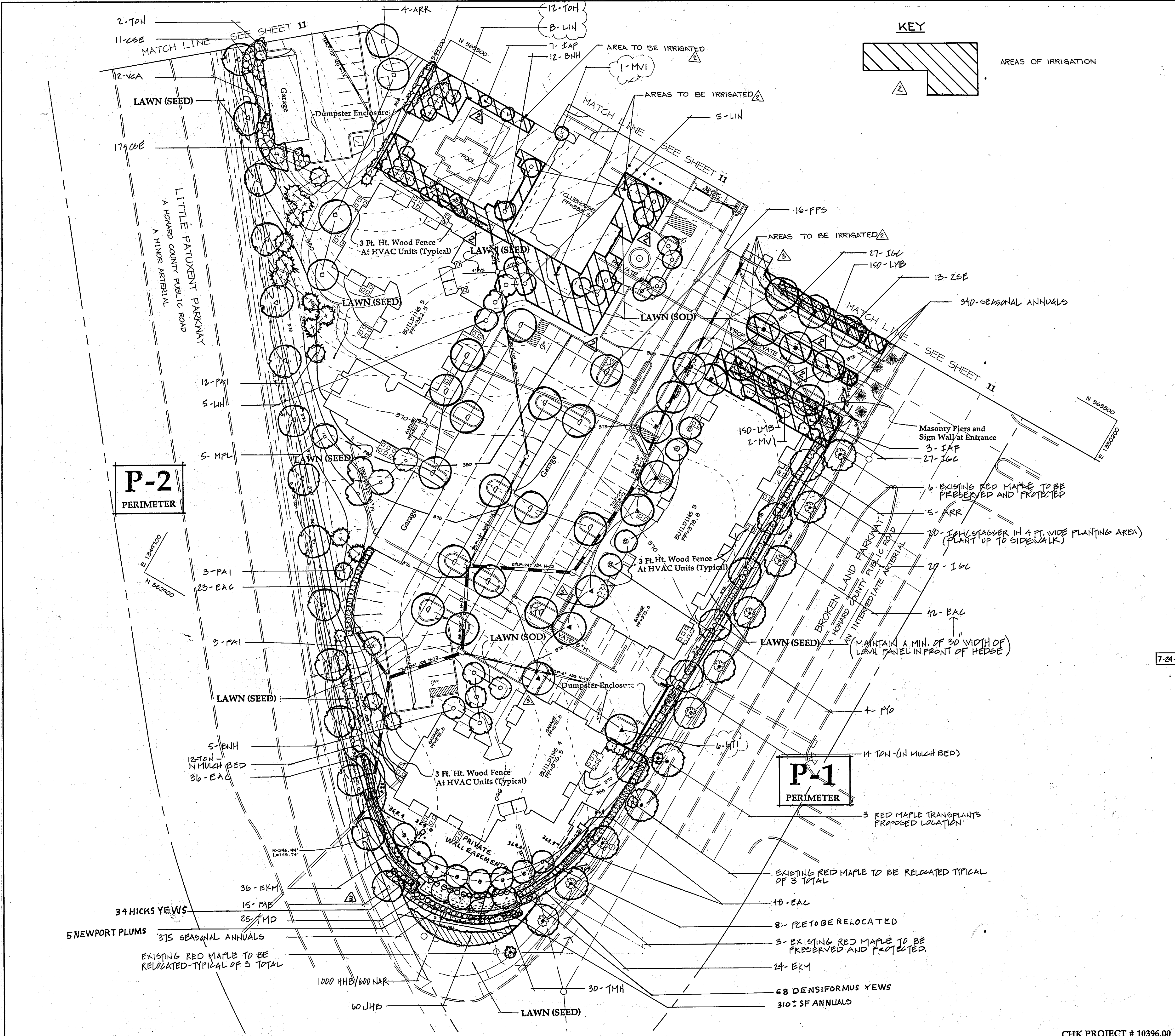
PROJECT NO: HOCO 96E2900 SDPB.DWG

DATE: MARCH 13, 1997

SCALE: AS SHOWN

JAYKANT D. PAREKH #19148 DRAWING NO. 9 OF 13





QTY.	SYMBOL	COMMON/BOTANICAL NAME	SIZE	REMARKS
DECIDUOUS SHADE TREES				
9	ARA	Armstrong Maple	2.5' cal.	B&B, Full
18	ARR	Red Sunset Maple	12-14' ht.	B&B, Full
24	BH4	Heritage Birch (Multiple Stem)	12-14' ht.	B&B, Full
20	PFS	Marshall's Seedless Ash	2.5' cal.	B&B, Full
26	GT1	Skyline Honeylocust	12-14' ht.	B&B, Full
47	PAB	Bloodgood London Planetree	2.5' cal.	B&B, Full
24	OPA	Pin Oak	12-14' ht.	B&B, Full
30	ZSE	Village Green Zelkova	2.5' cal.	B&B, Full
EVERGREEN TREES				
9	CLE	Leyland Cypress	6-8' ht.	B&B, Full
16	IAF	Foster Holly	6-8' ht.	B&B, Full
17	PST	White Pine (Semi-Sheared)	8-10' ht.	B&B, Full
23	PAI	Norway Spruce	6-8' ht.	B&B, Full
84	TON	Teichy Arborvitae	4.5' ht.	B&B, Full
FLOWERING TREES				
23	LIN	Natchez Crape Myrtle	8-10' ht.	B&B, Heavy
5	MVI	Sweetbay Magnolia	8-10' ht.	B&B, Heavy
17	MFL	Japanese Flowering Crabapple	2.5-3' cal.	B&B, Heavy
20	PCE	Thundercloud Plum	2.5-3' cal.	B&B, Heavy
16	PJO	Yoshino Cherry	2.5-3' cal.	B&B, Heavy
EVERGREEN SHRUBS				
60	EM	Manhattan Euonymus	30' ht.	
82	ICH	Holleri Holly	15-18' ht.	Cont.
230	ICG	Isabery Holly	38' ht.	Cont. / Full
16	ICR	China Girl Holly	18-24' spd.	B&B, Full
105	JHB	Blue Pacific Juniper	2-2.5' spd.	Cont.
25	TBR	Densiformis Yew	2-2.5' spd.	B&B
30	TMI	Hicks Yew	2-2.5' spd.	B&B
DECIDUOUS SHRUBS				
98	CSE	Redtwig Dogwood	3-4' ht.	B&B
229	EAC	Compact Burning Bush	38' ht.	B&B, heavy
51	VCA	Korean Spice Viburnum	38' ht.	B&B, heavy
PERENNIAL ANNUALS & GROUND COVERS				
1000	H&B	English Ivy	(in Flats)	8" o.c Spacing
300	LMB	Liriope muscari 'Big Blue'	1 gallon	15" o.c Spacing
975		Seasonal Annuals - General planting	(2-1/4" pots)	12" o.c Spacing
600	NAR	Daffodil		Bulbs 12" o.c Spacing
		Narcissus Specie		

**RELOCATED RETAINING STONE WALL
ADDED LANDSCAPE TREES**

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

James S. Butler 3/26/97
DIRECTOR DATE

William Damman 3/26/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Richard Blount 3/26/97
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

7-24-12-3 REVISE SIDEWALKS

5/28/97 ADDED KEY & AREAS OF IRRIGATION

1/29/97 CLOUDED REVISIONS

DATE	NO.	REVISION
		OWNER
		THE HOWARD RESEARCH AND DEVELOPMENT CORP. THE ROUSE BUILDING 10275 LITTLE PATUXENT PARKWAY COLUMBIA, MARYLAND 21043 (410) 992-6370
		DEVELOPER COLUMBIA TOWN CENTER LLC % THE BOZZUTO GROUP 6401 GOLDEN TRIANGLE DRIVE, SUITE 200 GREENBELT, MARYLAND 20770-3203 (301) 220-0100
		PROJECT TOWN CENTER TRIANGLE AN APARTMENT COMMUNITY
		AREA TOWN CENTER: SECTION 2, AREA 4, PARCEL A TAX MAP 36 - BLOCK 1 ZONED NT 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
		TITLE LANDSCAPE PLAN - SOUTH

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE 2/26/97
cut



ARCHITECTURE
PLANNING
LANDSCAPE ARCHITECTURE
INTERIOR DESIGN

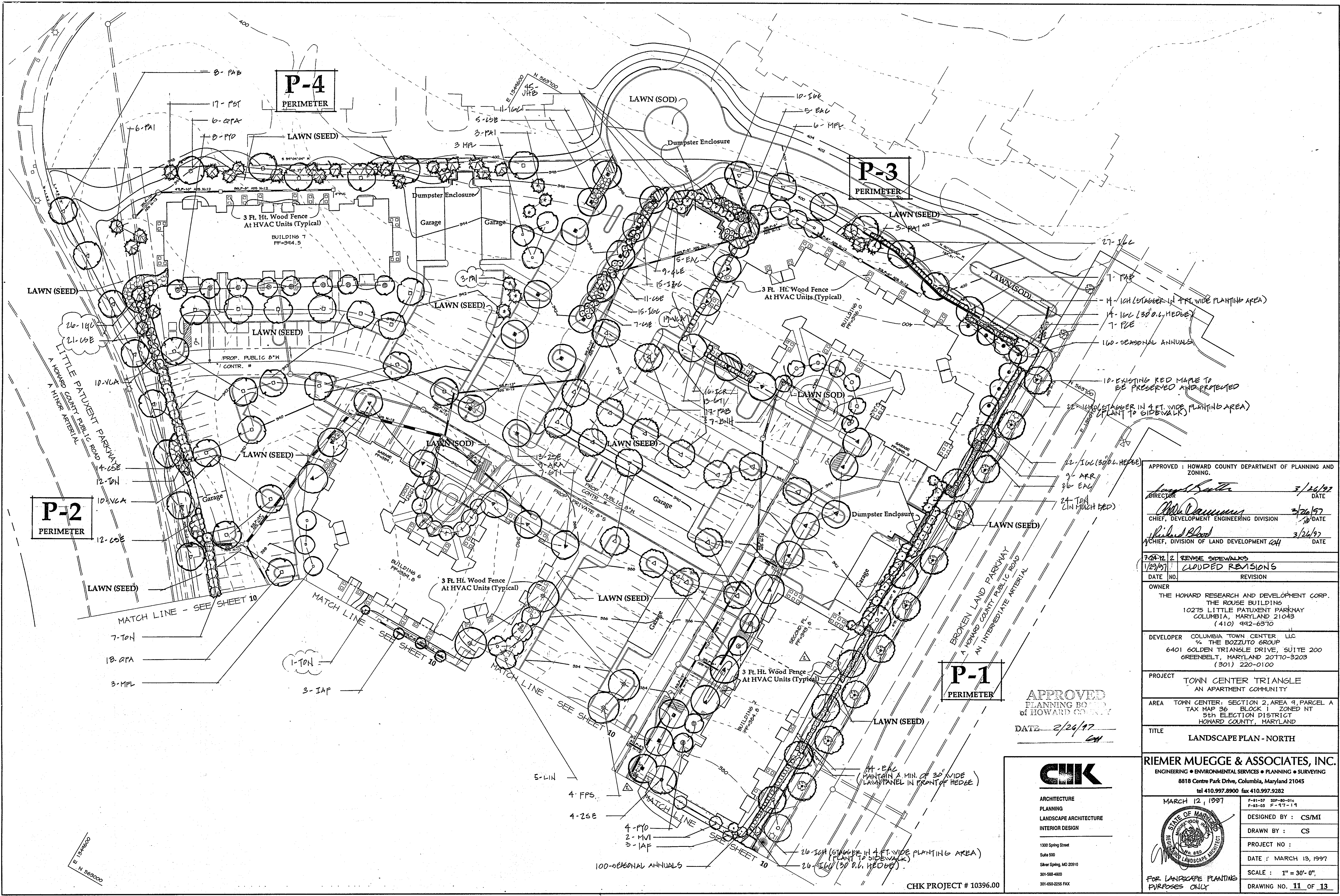
1300 Spring Street
Suite 500
Silver Spring, MD 20910
301-588-4800
301-450-2255 FAX

RIEMER MUEGGE & ASSOCIATES, INC.
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, Maryland 21045
tel 410.997.8900 fax 410.997.9282

MARCH 12, 1997

DESIGNED BY: CS/MI
DRAWN BY: CS
PROJECT NO:
DATE: MARCH 13, 1997
SCALE: 1" = 30'-0"
DRAWING NO. 10 OF 13

CHK PROJECT # 10396.00



APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

James Butler 3/26/97
DIRECTOR DATE

Chris Dammann 3/26/97
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

Richard Blood 3/26/97
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

7-2A-12 2 REVISE SIDEWALKS
1/29/97 1 CLOUDED REVISIONS

DATE NO.	REVISION

OWNER
THE HOWARD RESEARCH AND DEVELOPMENT CORP.
THE ROZZUTO BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21043
(410) 992-6370

DEVELOPER COLUMBIA TOWN CENTER LLC
74 THE BOZZUTO GROUP
6401 GOLDEN TRIANGLE DRIVE, SUITE 200
GREENBELT, MARYLAND 20770-3203
(301) 220-0100

PROJECT TOWN CENTER TRIANGLE
AN APARTMENT COMMUNITY

AREA TOWN CENTER, SECTION 2, AREA 4, PARCEL A
TAX MAP 36 BLOCK 1 ZONED NT
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE LANDSCAPE PLAN - NORTH

RIEMER MUEGGE & ASSOCIATES, INC.
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, Maryland 21045
tel 410.997.8900 fax 410.997.9282

MARCH 12, 1997

DESIGNED BY: CS/MI
DRAWN BY: CS
PROJECT NO:
DATE: MARCH 13, 1997
SCALE: 1" = 30'-0"
DRAWING NO. 11 OF 13

FOR LANDSCAPE PLANNING PURPOSES ONLY

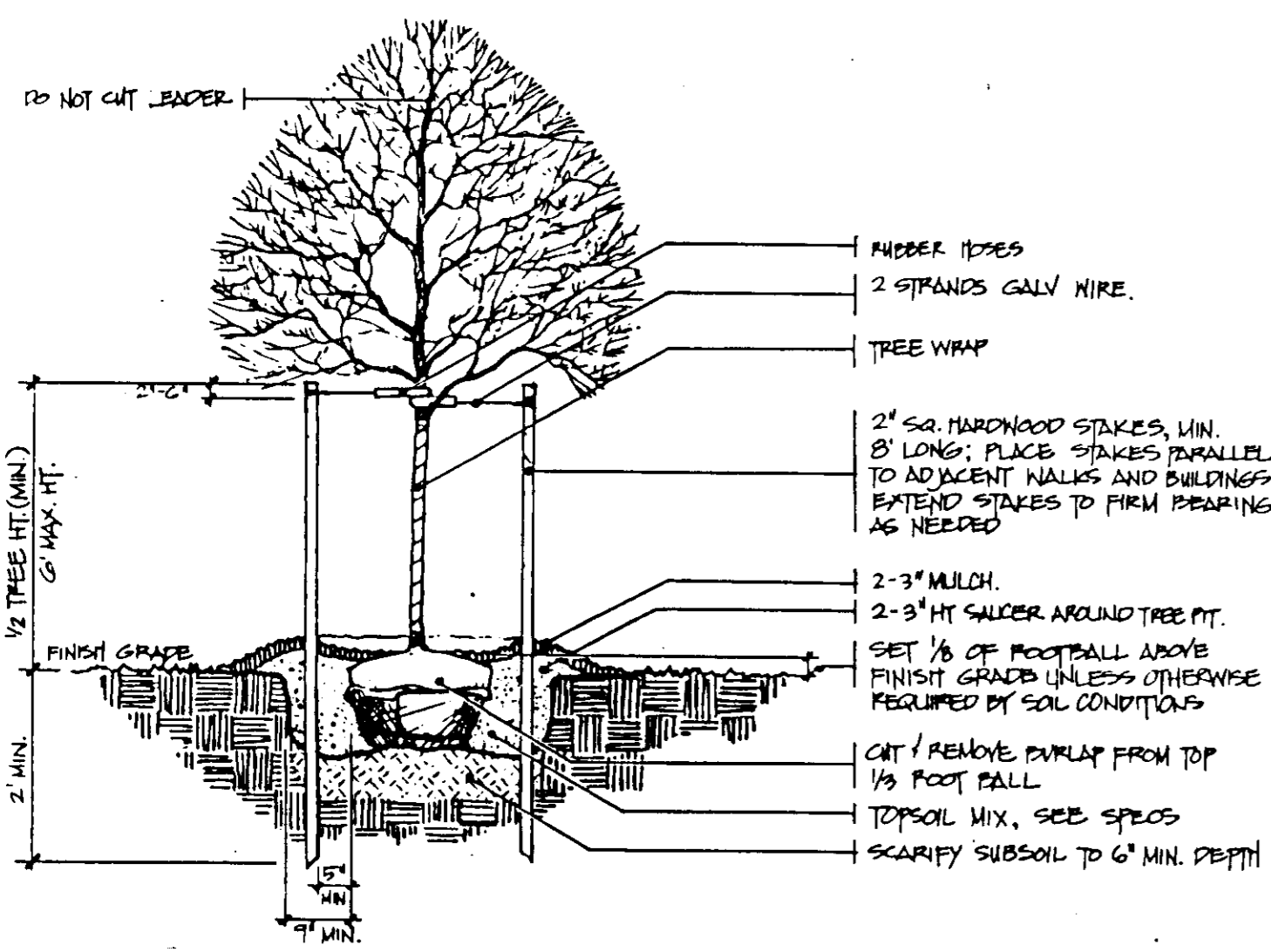
APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 3/26/97

CHK

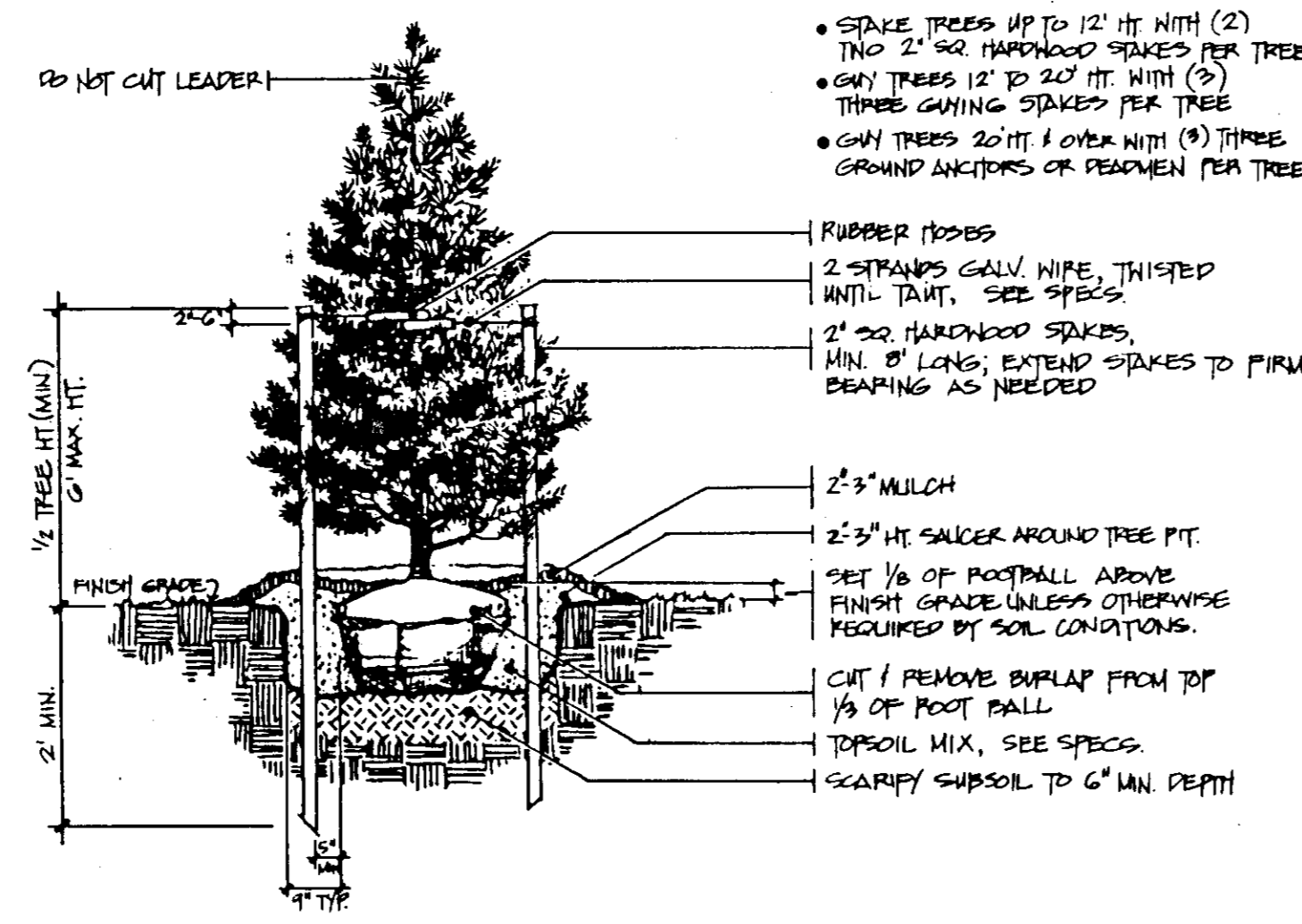
ARCHITECTURE
PLANNING
LANDSCAPE ARCHITECTURE
INTERIOR DESIGN

1300 Spring Street
Suite 500
Silver Spring, MD 20910
301-588-4800
301-650-2255 FAX

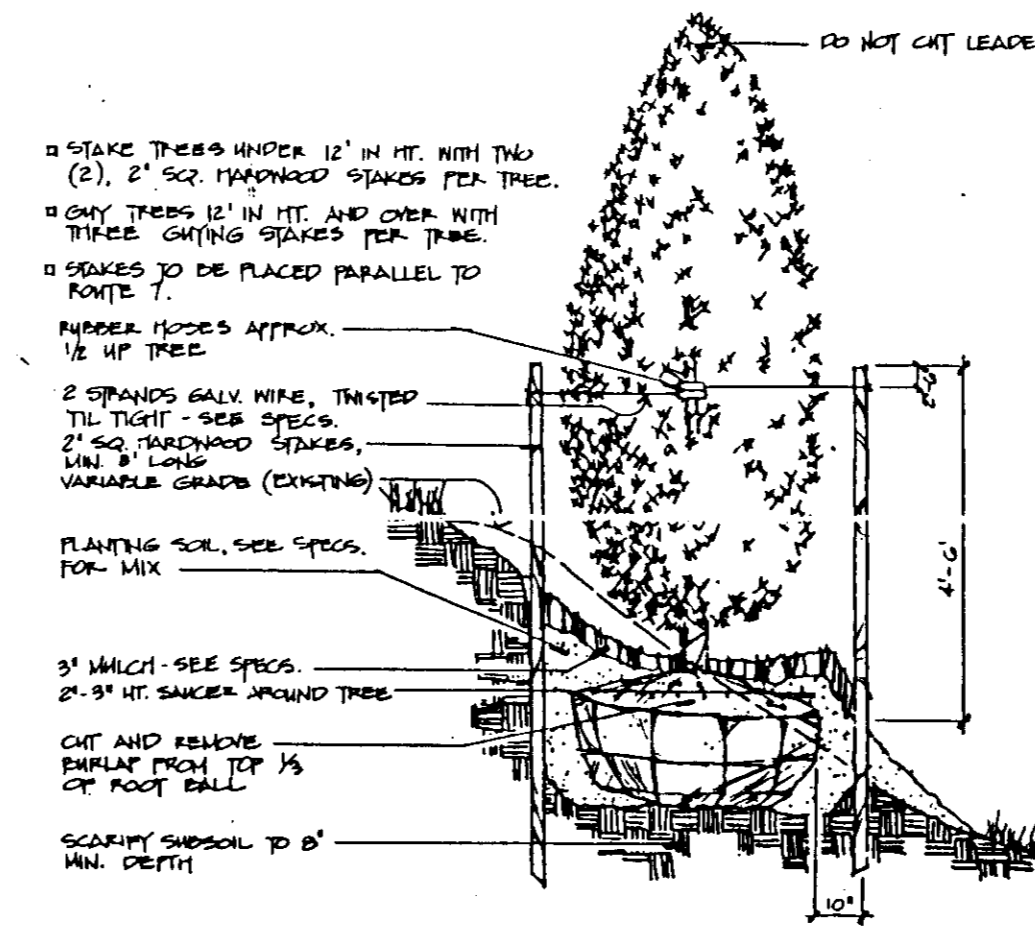
CHK PROJECT # 10396.00



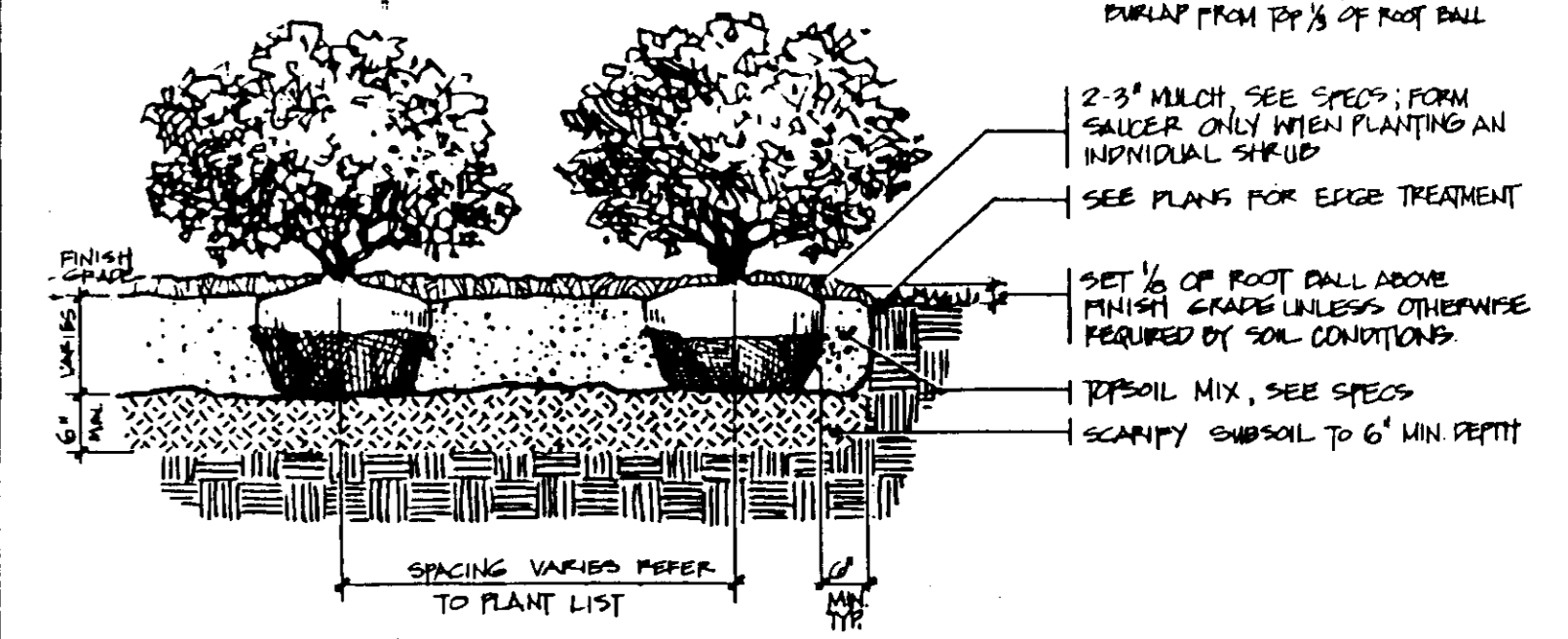
A DECIDUOUS TREE PLANTING



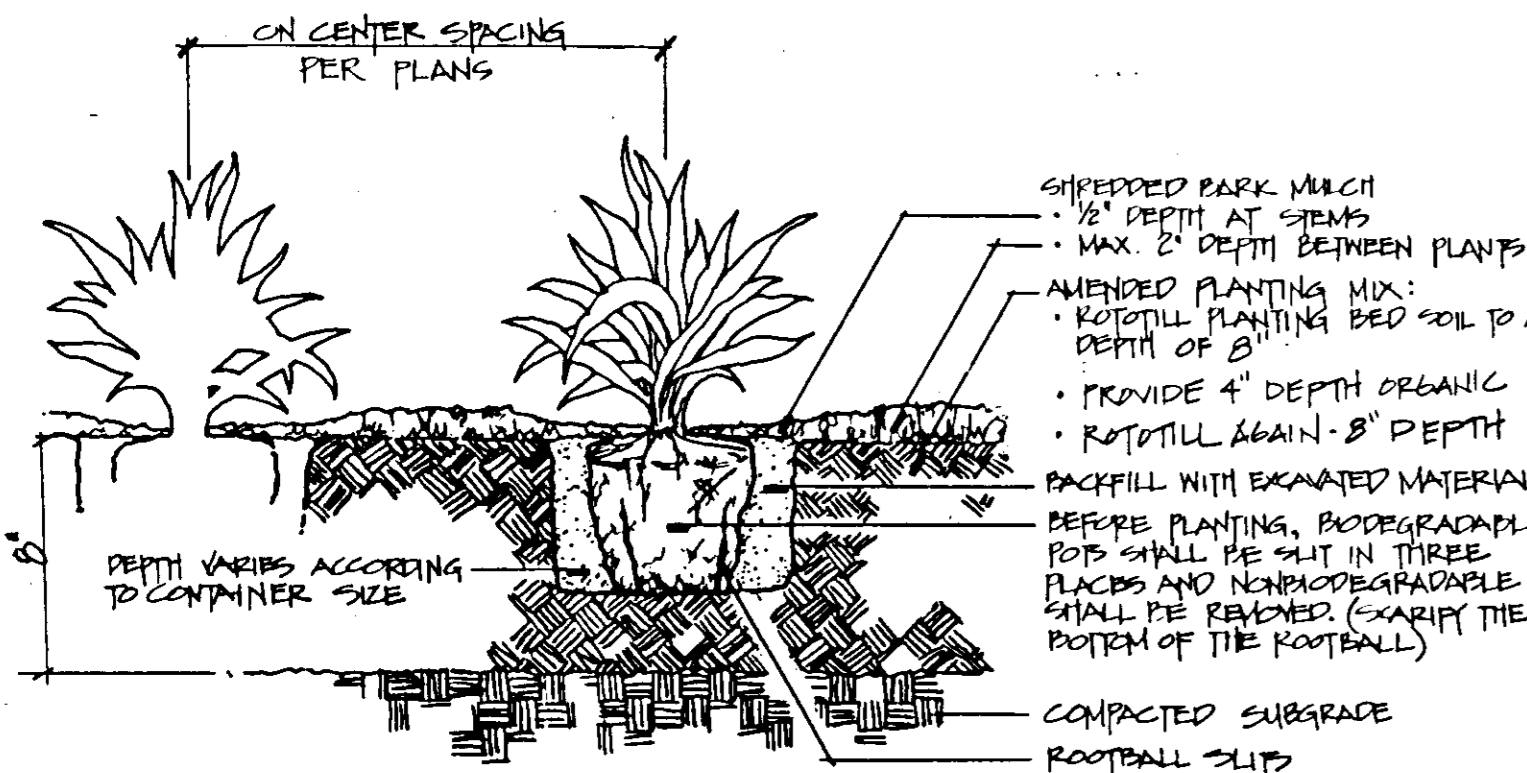
B EVERGREEN TREE PLANTING



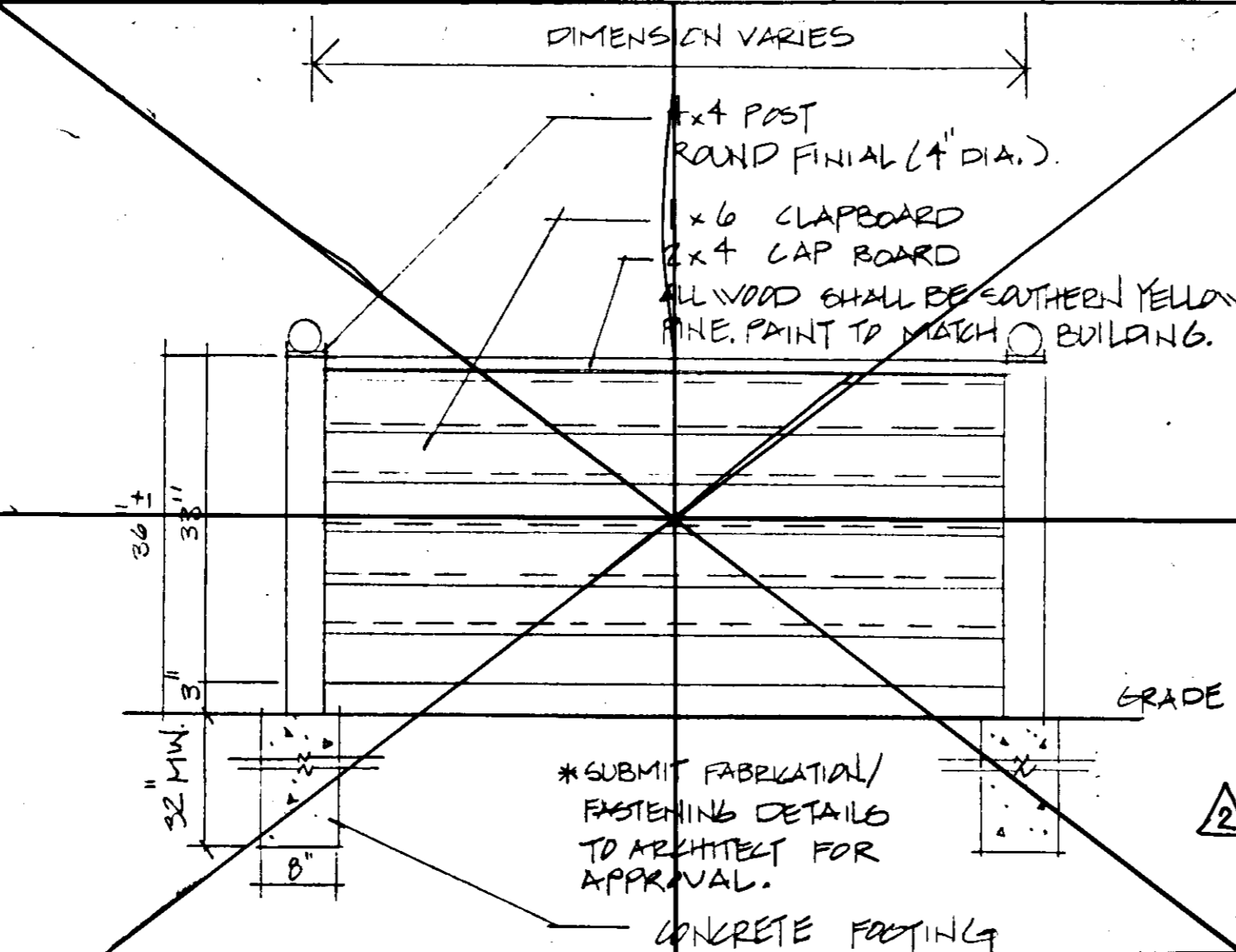
C COLUMNAR EVERGREEN TREE PLANTING



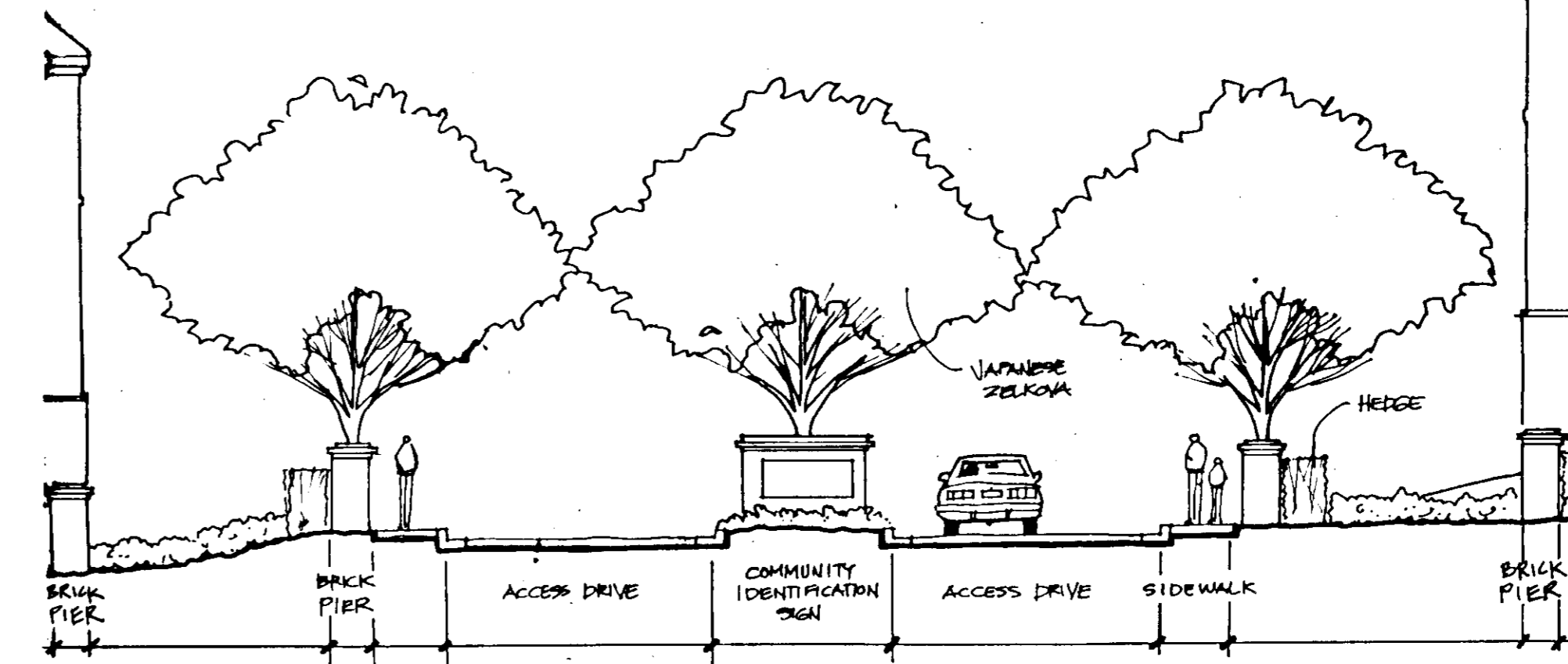
D SHRUB PLANTING AND BED PREPARATION



E GROUND COVER/PERENNIAL BED PREPARATION



F WOOD SCREEN FENCE (FOR HVAC UNITS) DELETED



G COMMUNITY IDENTIFICATION SIGN

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

DIRECTOR: *[Signature]* 3/26/97 DATE

CHIEF, DEVELOPMENT ENGINEERING DIVISION: *[Signature]* 3/26/97 DATE

CHIEF, DIVISION OF LAND DEVELOPMENT: *[Signature]* 3/26/97 DATE

9/28/97 DELETED DETAIL "F" WOOD SCREEN FENCE

1/23/97 CLOUDED REVISIONS

DATE NO. REVISION

SCHEDULE A PERIMETER LANDSCAPING

Category	Adjacent to Roadways			Adjacent to Perimeter Properties
	P1 = B, D	P2 = B, D, E	P3 = B, D	P4 = A, D
Linear Feet of roadway	P1 = 929 l.f. (B), 60 l.f. (D)			P4 = 432 l.f. (A), 18 l.f. (D)
Frontage/Perimeter	P2 = 960 l.f. (B), 10 l.f. (D), 214 l.f. (E)			
		P3 = 280 l.f. (B), 30 l.f. (D)		
Credit for Existing Vegetation (Yes, No, Linear Feet) (Describe below if needed)	P1 - Yes (22 Trees) 110 l.f. *Included in total provided for P1 below			N/A
Credit for Wall, Fence or Barm (Yes, No, Linear Feet) (Describe below, if needed)	N/A			N/A
Number of Plants Required	P1	P2	P3	P4
Shade Trees	19	24	6	7
Evergreen Trees	29	25	10	2
Other Trees (2:1 substitution)				
Shrubs (10:1 substitution)	53			
Number of Plants Provided	P1	P2	P3	P4
Shade Trees	36	23	7	7
Evergreen Trees	44	57	12	17
Other Trees (2:1 substitution)	10	7	7	
Shrubs (10:1 substitution)	378 285 115			

*TYPE D BUFFER IN P1, P2, P3 APPLIES TO DUMPSTER AREAS WHICH ARE ALSO SCREENED BY DUMPSTER ENCLOSURE.

Note: Other trees include evergreen and flowering trees. Actual numbers listed for other trees and shrubs.

22 EXISTING TREES ARE COUNTED IN THE P1 TOTAL. THEREFORE THE TOTAL PROPOSED NUMBER OF TREES LISTED IN SCHEDULES A, B, AND C IS 22 TREES MORE THAN THE TOTAL NUMBER OF TREES SHOWN ON THE PLANT LIST.

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING

Number of Parking Spaces:	301
Number of Shade Trees Required: (@ 1 Tree per 10 Spaces)	30
Number of Shade Trees Provided: Shade Trees	70
Other Trees (@ 2:1 Substitution)	0

* Parking Spaces Include Off - Street and Tandem Spaces Only

SCHEDULE C RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING

Number of Dwelling Units:	210
Number of Shade Trees Required: (@ 1 Tree per 3 DU APTS)	70
Number of Shade Trees Provided: Shade Trees	79
Other Trees (@ 2:1 Substitution)	84

Note: Other trees include evergreen and flowering trees. Actual numbers listed.

LANDSCAPE SURETY

THIS LANDSCAPE PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE NEW TOWN ALTERNATIVE COMPLIANCE PROVISION OF THE COUNTY'S LANDSCAPE MANUAL. LANDSCAPE SURETY FOR THE 222 REQUIRED TREES, IN THE AMOUNT OF \$22,200 HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT.

General Planting Notes

- Bids shall be submitted to Richard Boales of the Bozzuto Group, by the agreed date. Bids shall include unit prices which are comprised of plant material indicated on the plant list, planting, watering and maintenance for one year.
- All plant material shall conform to the sizes given in the plant list and shall be nursery grown in accordance with the American Standard for Nursery Stock (ANSI Z60.1) latest edition.
- All planting and maintenance shall be in accordance with standard procedures and specifications outlined by the Landscape Contractors Association of MD/DC/VA, latest edition.
- Quantities shown on plant list are for the Contractor's convenience only and are not guaranteed to be accurate. In the event of a discrepancy between quantities shown on the plan and quantities shown on the plant list, the quantities on the plan shall apply.
- Obtain approval from Landscape Architect or Owner's Representative before making any substitutions or changes.
- See plan for transplanting requirements of existing street trees along Broken Land Parkway.
- Areas of "existing trees to remain" shall be protected.
- Contractor and Owner's Representative shall verify the correct location of all underground utilities in the field prior to installation of any plant materials.
- Topsoil shall be fertile, agricultural soil taken from an appropriate site, free of subsoil, clay, impurities, plants, weeds, and roots. The minimum pH value of 5.5 and a maximum of 7.0.
- Topsoil to be placed to a minimum depth of 6 inches over the area to be planted.
- Grade topsoil to eliminate rough, low, or soft areas and to insure positive drainage.
- Contractor to verify positive drainage in all areas to be planted.
- Plant material location to be staked in the field and approved by the Landscape Architect prior to planting.
- Place plants for best appearance for review and final orientation by Landscape Architect. Planting shall not be started until final subgrade has been established and approved by the Landscape Architect. Under no condition shall work be done if the weather or soil conditions are not satisfactory.
- See sheet L-3 for planting details and schedules.
- All plant beds and planting areas to be mulched to a depth of 3" unless otherwise noted on drawings or specifications.

2/26/97 *[Signature]*

CHK

ARCHITECTURE
PLANNING
LANDSCAPE ARCHITECTURE
INTERIOR DESIGN

1300 Spring Street
Suite 500
Silver Spring, MD 20910
301-588-4800
301-650-2255 FAX

OWNER
THE HOWARD RESEARCH AND DEVELOPMENT CORP.
THE ROUSE BUILDING
10275 LITTLE PATUXENT PARKWAY
COLUMBIA, MARYLAND 21043
(410) 942-6370

DEVELOPER
COLUMBIA TOWN CENTER LLC
% THE BOZZUTO GROUP
6401 GOLDEN TRIANGLE DRIVE, SUITE 200
GREENBELT, MARYLAND 20770-3203
(301) 220-0100

PROJECT
TOWN CENTER TRIANGLE
AN APARTMENT COMMUNITY

AREA
TOWN CENTER, SECTION 2, AREA 4, PARCEL A
TAX MAP 36, BLOCK 1, ZONED NT
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

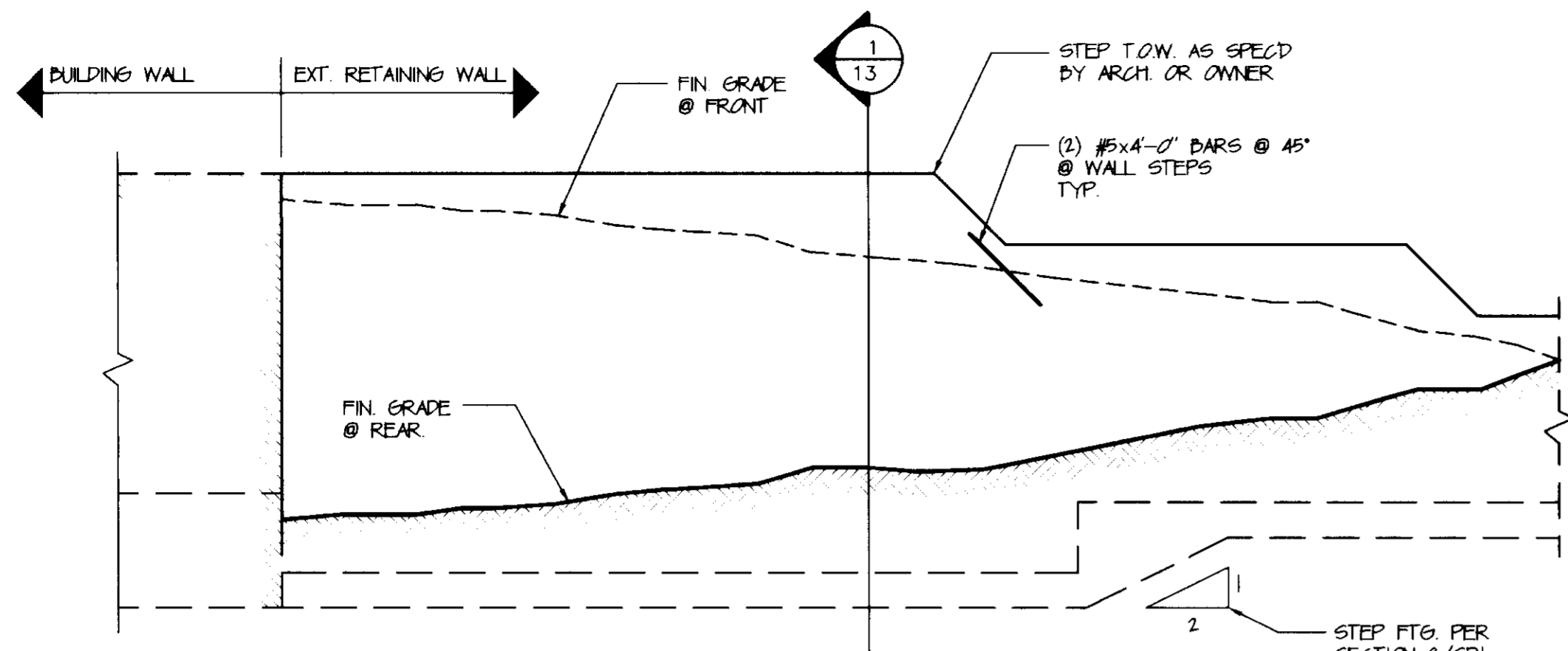
TITLE
PLANTING DETAILS,
SCHEDULES, AND NOTES

RIEMER MUEGGE & ASSOCIATES, INC.
ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
8818 Centre Park Drive, Columbia, Maryland 21045
tel 410.997.8900 fax 410.997.9282

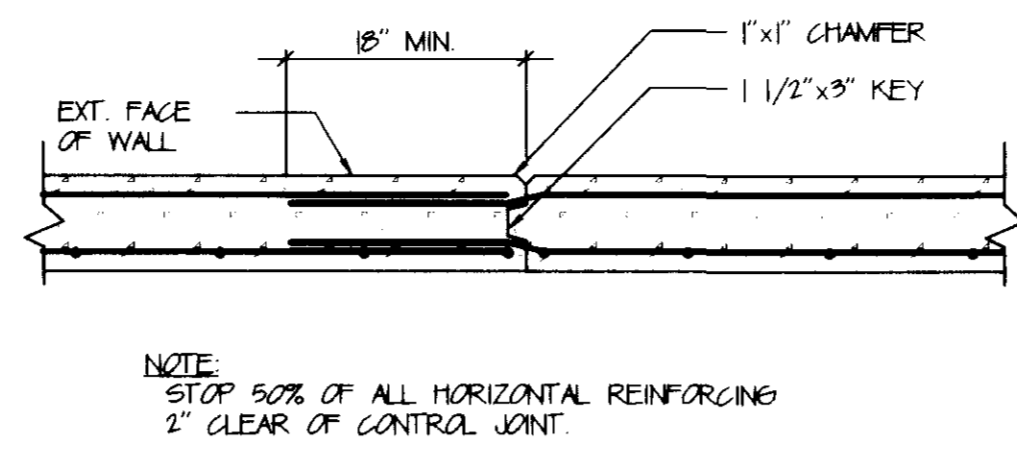
MARCH 12 1997

DESIGNED BY: CS/MI
DRAWN BY: CS
PROJECT NO. HCC096E2900
SDP3.DWG
DATE: MARCH 13, 1997
SCALE: NONE
DRAWING NO. 12 OF 13

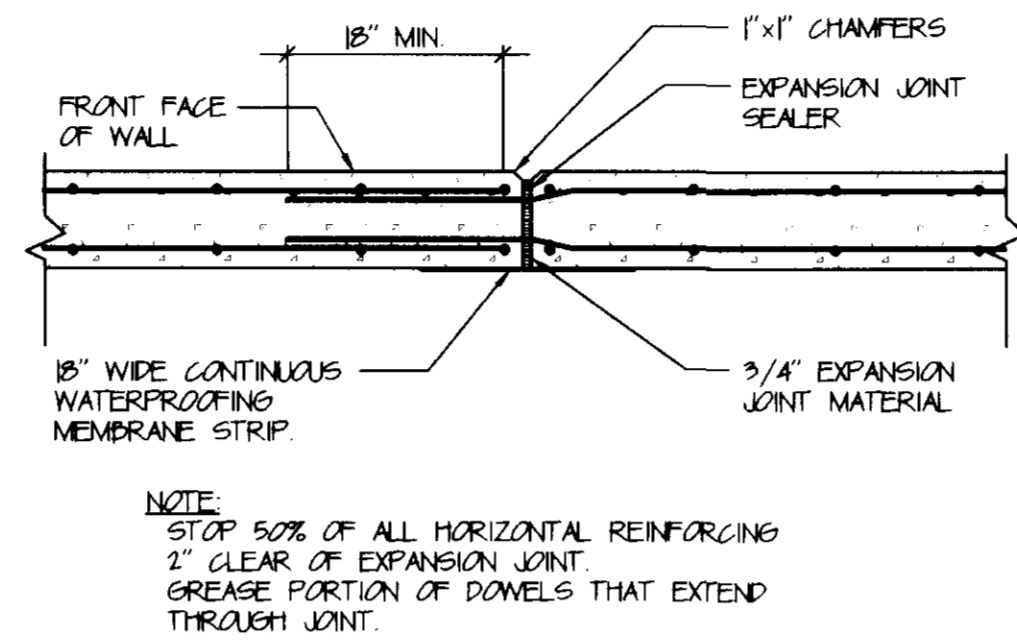
CHK PROJECT # 10396.00



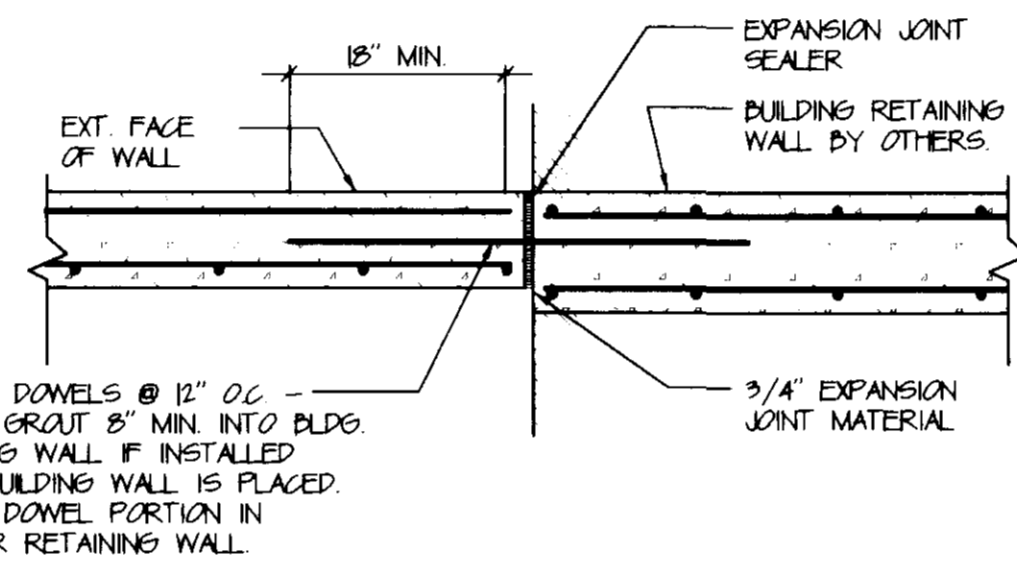
7 TYPICAL WALL ELEVATION
 SCALE: NOT TO SCALE
 REFER TO FINAL SITE PLAN PREPARED BY RIEMER MUEGGE & ASSOC. FOR GRADES AND WALL LOCATIONS.



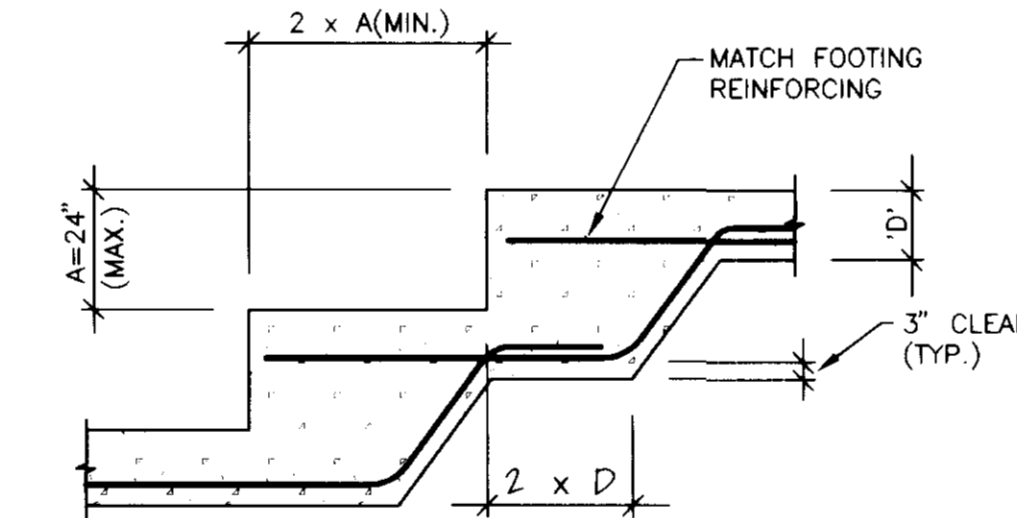
2 DETAIL
 SCALE: 3/4" = 1'-0"
 CONTROL JOINT



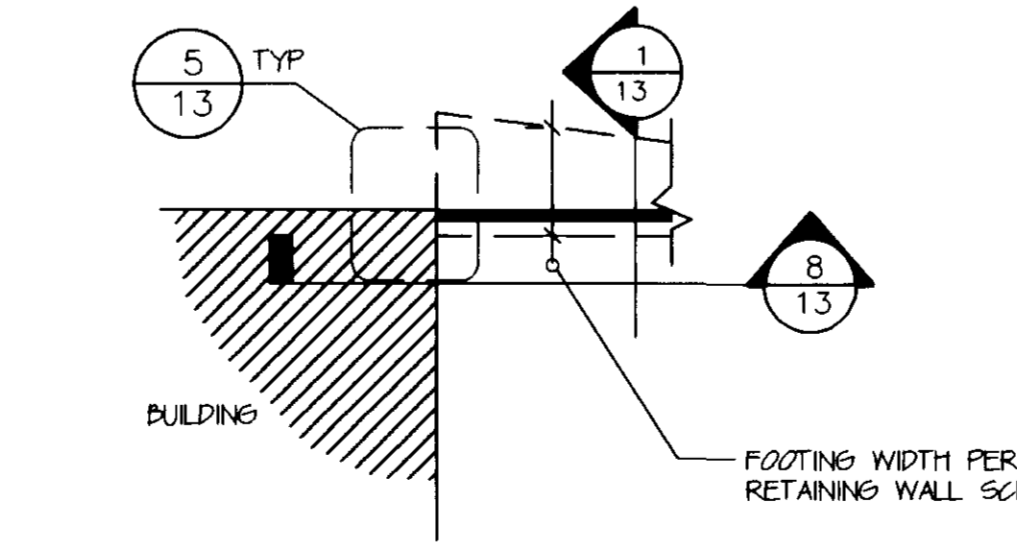
3 SECTION
 SCALE: 3/4" = 1'-0"
 EXPANSION JOINT



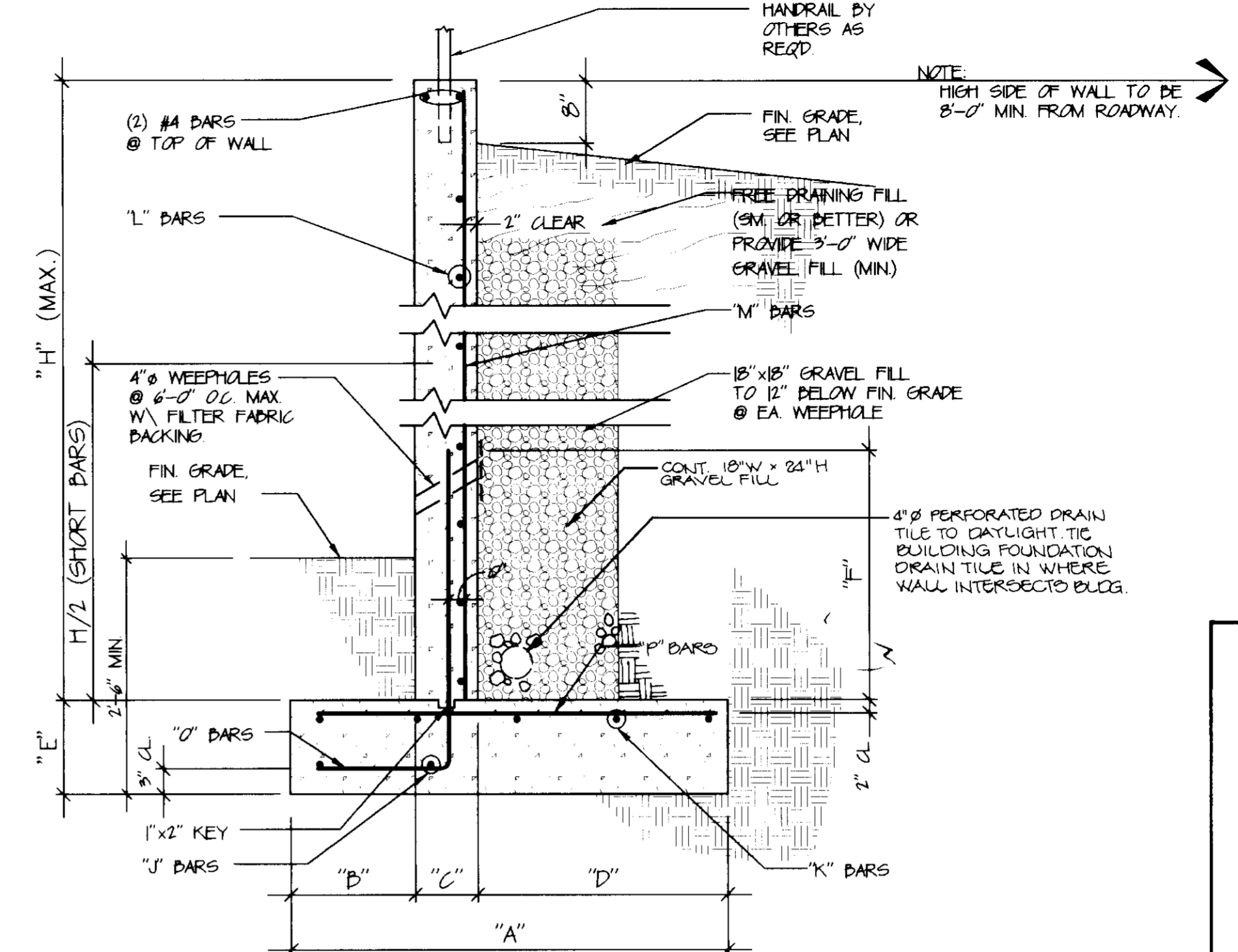
4 DETAIL
 SCALE: 3/4" = 1'-0"
 EXPANSION JOINT @ BLDG.



5 SECTION
 SCALE: 3/4" = 1'-0"
 STEPPED FOOTING



6 RETAINING WALL @ BLDG.
 SCALE: NOT TO SCALE



1 SECTION
 SCALE: 3/4" = 1'-0"
 EXTERIOR BUILDING RETAINING WALL

EXTERIOR RETAINING WALL SCHEDULE							
WALL HEIGHT	DIMENSIONS						
	H	A	B	C	D	E	F
0'-0" TO 4'-0"	2'-2"	8"	5"	10"	1'-0"	TO T.O.W.	-
4'-0" TO 6'-0"	3'-0"	1'-0"	8"	1'-10"	1'-0"	3'-0"	-
6'-0" TO 8'-0"	4'-0"	1'-0"	8"	5'-0"	1'-2"	4'-0"	-

WALL HEIGHT	REINFORCING						
	H	J	K	L	M	N	P
0'-0" TO 4'-0"	2 #4	#5@14"	#4@12"	-	-	#4@16"	#4@16"
4'-0" TO 6'-0"	2 #4	#5@14"	#4@12"	#4@12"	-	#5@16"	#4@16"
6'-0" TO 8'-0"	2 #4	#5@12"	#4@12"	#5@12"	-	#4@16"	#5@16"

* SEE TYPICAL BUILDING PLAN FOR MAXIMUM FOOTING WIDTH REQUIRED.

NOTE: ALL CONSTRUCTION SHALL BE IN CONFORMANCE WITH 1993 DCGA AND THE FOLLOWING CRITERIA:

- FOUNDATIONS
 - THE ALLOWABLE SAFE BEARING PRESSURE IS ASSUMED AS 2500 PSF. TO BE VERIFIED BY AN ON-SITE GEOTECHNICAL ENGINEER.
 - ALL FOOTINGS SHALL PROJECT AT LEAST 1'-0" INTO UNDISTURBED NATURAL SOIL OR COMPACTED STRUCTURAL FILL. FOOTINGS TO BE AT LEAST 2'-6" BELOW FINISHED GRADE. ALL BEARING STRATA SHALL BE ADEQUATELY DRAINED BEFORE PLACING CONCRETE. NO EXCAVATION SHALL BE CLOSER THAN AT LEAST A SLOPE OF TWO HORIZONTAL TO ONE VERTICAL (2 HORIZ:1 VERT) TO UNDERSIDE EDGE OF ANY EXISTING FOOTINGS WITHOUT THE WRITTEN AND CERTIFIED PERMISSION OF A GEOTECHNICAL ENGINEER. STEP FOOTINGS WITH A RATIO OF TWO HORIZ:1 TO ONE VERTICAL.
 - PROVIDE SHORING AND PROTECTION FOR EXCAVATION BANKS AS NECESSARY TO PREVENT CAVING.
 - WALL DESIGNED FOR LEVEL BACKFILL WITH EQUIVALENT ACTIVE FLUID PRESSURES ≤ 45 P.C.F.
- CAST-IN-PLACE CONCRETE
 - ALL CONCRETE TO BE MIXED AND PLACED IN ACCORDANCE WITH ACI 318-89 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE."
 - ALL CONCRETE TO BE NORMAL WEIGHT STONE CONCRETE WITH AGGREGATE CONFORMING TO ASTM C39 AND RANGING FROM 3/8" TO 2" IN SIZE.
 - ALL CONCRETE SHALL HAVE A MINIMUM COMPRESSIVE STRENGTH (F_c) OF 3000 PSI AT AGE 28 DAYS UNLESS NOTED OTHERWISE AND SHALL BE IN ACCORDANCE WITH SECTION 1907.0 DURABILITY REQUIREMENTS AND TABLE 1907.1(1) OF DCGA AND SHALL CONTAIN 5-6% AIR ENTRAINMENT IN ACCORDANCE WITH ACI AND TABLE 1907.1(1) OF DCGA.
 - CONCRETE STRENGTH SHALL BE TESTED IN ACCORDANCE WITH DCGA SECTION 1908.31 AND THE FOLLOWING CONCRETE STRENGTH ACCEPTANCE CRITERIA:
 - THE AVERAGES OF ALL SETS OF THREE CONSECUTIVE STRENGTH TEST RESULTS MUST EQUAL OR EXCEED THE SPECIFIED F_c STRENGTH.
 - NO INDIVIDUAL STRENGTH TEST SHALL BE MORE THAN 500 PSI BELOW THE SPECIFIED F_c STRENGTH.
 - WALL TO HAVE VERTICAL CONTROL JOINTS SPACED AT NO MORE THAN 25'-0" HORIZONTALLY AS REQUIRED. PROVIDE VERTICAL EXPANSION JOINTS @ 75'-0" OC. MAX. SEE DETAILS 2 AND 3 THIS SHEET.
- REINFORCING STEEL
 - REINFORCING BARS SHALL CONFIRM TO ASTM A-45, GRADE 60.
 - ALL REINFORCING SHALL BE DETAILED, FABRICATED AND PLACED IN ACCORDANCE WITH ACI'S MANUAL OF STANDARD PRACTICE FOR DETAILING CONCRETE STRUCTURES" (ACI-318) DETAILS OF REINFORCING SHALL CONFORM TO ACI 318-89, ACI 318-89, AND CRSI STANDARD.
 - CONCRETE COVER FOR BARS SHALL BE UNLESS NOTED OTHERWISE:
 - FOOTINGS AND OTHER CONCRETE PAIRED AGAINST EARTH: 3 INCHES
 - FORMED CONCRETES EXPOSED TO EARTH OR WEATHER: 2 INCHES
 - 50% OF HORIZONTAL REINFORCING BARS SHOWN ON THE DRAWINGS SHALL PASS CONTINUOUSLY THROUGH CONTROL JOINTS PER DETAIL 3/SRI.
 - BARS SHALL BE SECURELY TIED IN PLACE.

CATES DESIGN
 Structural Consulting

21515 Ridgetop Circle, Suite 280
 Sterling, Virginia 20166
 Tel. (703) 450-7808, Fax (703) 450-1965

CATES DESIGN, INC. RESERVES ITS LAWFUL RIGHTS TO THESE DRAWINGS. THESE DRAWINGS ARE PREPARED FOR THIS PROJECT ONLY AND MAY NOT BE USED FOR ANOTHER PROJECT WITHOUT THE WRITTEN CONSENT OF CATES DESIGN, INC. DO NOT SCALE DRAWINGS. USE DIMENSIONS.

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING.

Director: *[Signature]* 3/26/97 DATE
 Chief, Development Engineering Division: *[Signature]* 3/26/97 DATE
 Chief, Division of Land Development: *[Signature]* 3/26/97 DATE

DATE	NO.	REVISION

OWNER: THE HOWARD RESEARCH AND DEVELOPMENT CORP. THE ROUSE BUILDING 10775 LITTLE PATENT PARKWAY COLUMBIA, MARYLAND 21045 (410) 992-6370

DEVELOPER: COLUMBIA TOWN CENTER LLC % THE BOZZUTO GROUP 6601 GOLDEN TRIANGLE DRIVE, SUITE 200 GREENBELT, MARYLAND 20770-9205 (301) 220-0200

PROJECT: TOWN CENTER TRIANGLE AN APARTMENT COMMUNITY

AREA: TOWN CENTER, SECTION 2 AREA 9 PARCEL A TAX MAP % BLOCK 1 ZONED NT 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: EXTERIOR RETAINING WALLS

RIEMER MUEGGE + ASSOCIATES, INC.
 ENGINEERING • ENVIRONMENTAL SERVICES • PLANNING • SURVEYING
 8818 Centre Park Drive, Columbia, Maryland 21045
 tel 410.997.8900 fax 410.997.9282

DATE: 3/26/97
 DESIGNED BY: KCP
 DRAWN BY: KCP
 PROJECT NO: BA98-24-96
 DATE: MARCH 13, 1997
 SCALE: AS NOTED
 DRAWING NO. 13 OF 13

BRIAN L. CATES #16270