

SHEET INDEX	
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CLARKSVILLE SQUARE SHOPPING CENTER AND PARCEL A-2 OF THE FOSTER PROPERTY

5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

SITE DEVELOPMENT PLAN

LINE	BEARING	LENGTH
FC1	N89°55'17"E	415.84'
FC2	S82°21'02"E	28.24'
FC3	S82°13'33"E	28.73'
FC4	S79°48'37"E	41.28'
FC5	S67°08'19"E	17.18'
FC6	S81°14'19"E	33.35'
FC7	S82°22'27"E	12.47'
FC8	S38°44'32"E	46.17'
FC9	S89°53'35"E	24.73'
FC10	S14°08'08"E	24.49'
FC11	S29°54'45"W	23.60'
FC12	S89°29'41"W	17.69'
FC13	S09°42'15"E	36.27'
FC14	S87°42'44"E	17.24'
FC15	N84°44'25"E	33.80'
FC16	S49°01'11"E	44.12'

Building No.	Use	Parking Required	SHARED PARKING TABULATION			
			Weekend day (non-Open)	Weekend day (non-Open)	Weekend day (non-Open)	Night (2am-6am)
1	Fast Food	46	46 x 100% = 46	46 x 100% = 46	46 x 100% = 46	46 x 100% = 46
2	Office	25	25 x 100% = 25	25 x 100% = 25	25 x 100% = 25	25 x 100% = 25
3	Office	25	25 x 100% = 25	25 x 100% = 25	25 x 100% = 25	25 x 100% = 25
4	Bank	13	13 x 100% = 13	13 x 100% = 13	13 x 100% = 13	13 x 100% = 13
5	Retail	259	259 x 100% = 259	259 x 100% = 259	259 x 100% = 259	259 x 100% = 259
6	Vehicle Service	15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15
7	Car Wash	3	3	3	3	3
8	Restaurant	20	20 x 100% = 20	20 x 100% = 20	20 x 100% = 20	20 x 100% = 20
9	Restaurant	15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15
10	Restaurant	15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15
11	Restaurant	15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15
12	Restaurant	15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15
13	Restaurant	15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15
14	Restaurant	15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15
15	Restaurant	15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15
16	Restaurant	15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15
17	Restaurant	15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15
18	Restaurant	15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15
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99	Restaurant	15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15
100	Restaurant	15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15	15 x 100% = 15

SITE DATA TABULATION

- GENERAL SITE DATA
- PRESENT ZONING: B-2
 - APPLICABLE DPZ FILE REFERENCES: WP-95-117, WP-96-08, F-82-19, F-82-141, F-90-35, SDP-96-28(PARCELS 20, 21 & 22) F-94-113, SDP-83-47, SDP-96-76, F-99-137(PARCEL 214), F-11-078

3.) PROPOSED USE OF SITE: COMMERCIAL

4.) PROPOSED WATER: PUBLIC
PROPOSED SEWER: PUBLIC

AREA TABULATION

- TOTAL PROJECT AREA: 11.32 AC.
- AREA OF 100 YR. FLOODPLAIN: 0.21 AC.
- NET AREA OF SITE: 11.01 AC.
- AREA OF THIS PLAN SUBMISSION: 11.32 AC.
- APPROXIMATE LIMIT OF DISTURBANCE: 8.19 AC.
- BUILDING COVERAGE OF SITE (PERMITTED): N/A
- BUILDING COVERAGE OF SITE (PROPOSED): 15,681 s.f. (1.27%)
7,420 s.f. (1.08%)
(EXISTING)

OPEN SPACE DATA

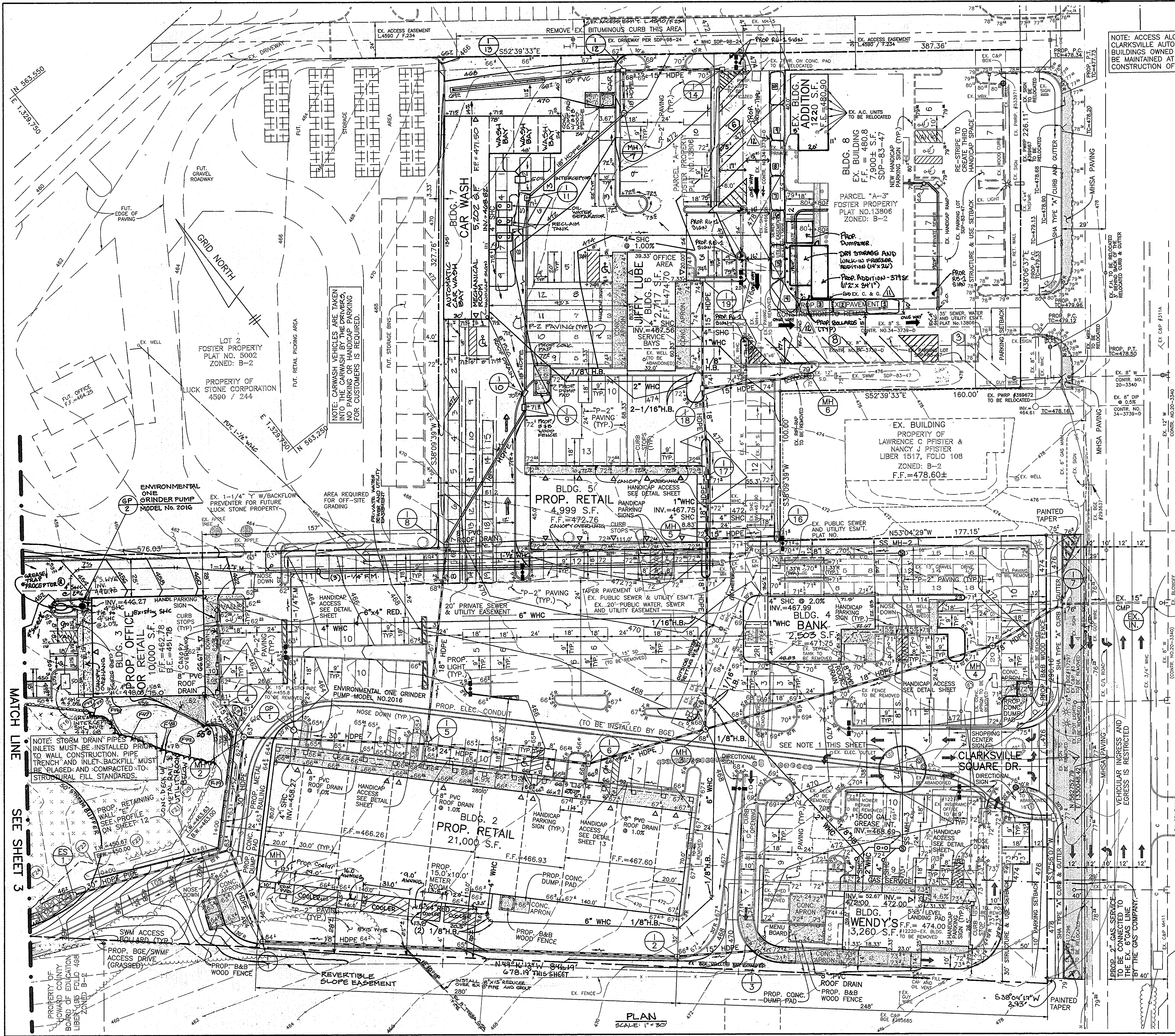
- OPEN SPACE ON SITE (0.0%): N/A
- AREA OF RECREATION OPEN SPACE REQUIRED BY SUBDIVISION AND LAND DEVELOPMENT REGULATIONS: N/A
- ACRES REQUIRED: N/A
- ACRES PROVIDED: N/A

PARKING SPACE DATA

- FLOOR SPACE ON EACH LEVEL PER BUILDING(S) PER USE:
 - * BLDG. NO. 3: 5000 s.f. 1st FLOOR
 - 5000 s.f. 2nd FLOOR
 - (ALL OTHER BLDGS. ARE 1-STORY)
- MAXIMUM NUMBER OF EMPLOYEES, TENANTS ON-SITE PER USE: N/A
- NUMBER OF PARKING SPACES REQUIRED BY ZONING REGULATIONS AND/OR FDP CRITERIA: 292
- TOTAL NUMBER OF PARKING SPACES PROVIDED ON-SITE: 305
- TOTAL NUMBER OF SERVICE PARKING SPACES PROVIDED ON-SITE: 70
- NUMBER OF HANDICAPPED PARKING SPACES PROVIDED ON-SITE: 13

OVERALL PARKING TABULATION

BUILDING NO.	PROPOSED USE	BUILDING AREA	PARKING REQUIRED	HANDICAP SPACES REQUIRED	HANDICAP SPACES PROVIDED
1	FAST FOOD RESTAURANT	3,260 sf.	3,260 x 14/1000 = 46	2	2
2	RETAIL & COOLER	2,523 sf.	2,523 x 5/1000 = 108	5	5
3	OFFICE OR RETAIL	10,000 sf.	10,000 x 5/1000 = 50	2	2
4	BANK	2,503 sf.	2,503 x 5/1000 = 13	1	2
5	RETAIL	4,999 sf.	4,999 x 5/1000 = 25	1	2
6	VEHICLE SERVICE	4 SERVICE BAYS	3 + (4 BAYS) = 15	1	1
7	CAR WASH		= 3	0*	1
8	RETAIL	2,379 s.f. RESTAURANT/DRY-OUT	6/1000 = 15	4	3



NOTE: ACCESS ALONG EX. DRIVEWAY SERVING CLARKVILLE AUTO BODY AND THE RETAIL BUILDINGS OWNED BY SDMC & ASSOC. SHALL BE MAINTAINED AT ALL TIMES DURING CONSTRUCTION OF THIS SITE.

- EXISTING CONTOUR
 PROPOSED CONTOUR
 LIMIT OF WETLANDS
 EXISTING WOODS
 PROPOSED WOODS LINE
 EXISTING STRUCTURE
 PROPOSED STRUCTURE
 EX. 15% - 25% SLOPES
 MAIN ENTRANCE TO BLDG.

NOTES

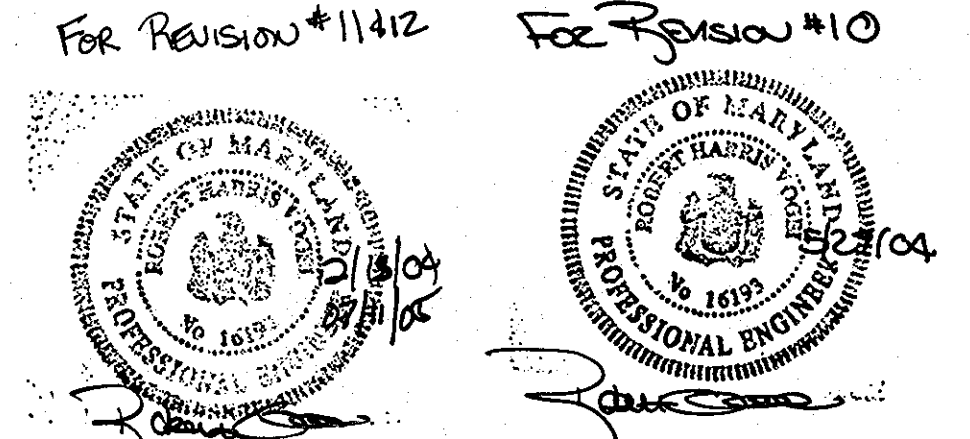
- 1) THE BGE CONDUIT IN THIS AREA IS TO BE DROPPED 12" MIN. CLEARANCE BELOW 8" SAN. SEWER.
- 2) UNLESS OTHERWISE SHOWN, ALL PAVING ON THIS PLAN IS TO BE HO. CO. STD. R-2.01 "P-2"
- 3) BUILDINGS SHOWN ON THIS PLAN SHALL UTILIZE INSIDE WATER METER SETTINGS.
- 4) FOR CURB AND GUTTER TYPE LIMITS SEE KEY MAP ON SHEET NO. 10.

16	12-22-11	SHOW GREASE TRAP @ BLDG. 3
15	6-14-11	RAISE LOT LINE, STREAM BUFFER & FENCE
14	8-4-08	REVISE BLDG. #2 TO SHOW ALL COOLERS AND ADD PERMIT APPLICATION NOTE TO PLAN
13	10-13-05	COOLER ADDITIONS & CONCRETE PAD
12	07-07-05	REVISE PARKING TO ANGULAR ADT. TO BLDG.#8

NOTE: A BUILDING PERMIT APPLICATION FOR THE COOLER ADDITIONS SHALL BE APPLIED FOR AT D.L.P WITH IN ONE YEAR OF THE APPROVAL DATE OF THIS REDLINE REVISION

NOTE: UNLESS OTHERWISE SHOWN ALL PAVING ON THIS PLAN IS TO BE HO. CO. STD. R-2.01 "P-2"

NOTE: BUILDINGS SHOWN ON THIS PLAN SHALL UTILIZE INSIDE WATER METER SETTINGS.



11	12-13-04	REVISE PARKING TO PARALLEL SPACES ADJACENT TO BLDG. NO. 8 AND A REDUCTION OF 16 PARKING SPACES TO ADD A DRIVE THRU LANE FOR BLDG. NO. 8
10	05-21-04	REVISE COOLER DUMPS
9	10-1-03	REVISE COOLER DUMP NO 2
8	4-24-02	ADD COOLER TO BLDG 2
7	1-08-02	ADD GREASE INTERCEPTOR @ BLDG. 3 REV. RET. WALL AND DECK @ BLDG. 3
6	7-26-00	ADDED CANOPIES, COLUMNS, WOOD DECK CURB STOPS TO BLDG.
5	5-10-00	REV. WATER SELLER TO BLDG. NO. 8 FROM EXISTING TO PROPOSED
4	4-14-00	REV. BLDG. 3 AND PARKING FOR BLDG. 3 REV. HANDICAP LAYOUT FOR BLDG. 2
3	2-23-00	RELOCATE PUMPER BLDG. 7; REVISE BLDG. 7; ADD HANDICAP SPACE EXIST. TRAP RECLAIM TANKS
No.		REVISION

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature] 2/2/15 DATE
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 [Signature] 9/17/09 DATE
 CHIEF, DIVISION OF LAND DEVELOPMENT
 [Signature] 9/20/05 DATE
 DIRECTOR

MARYLAND ROUTE 108
 (MINOR ARTERIAL)
 (R/W VARIES - ULTIMATE 80')

2	01-28-00	ADD ROOF OVERHANG AND DOOR LOCATIONS TO BUILDING 5
1	11-03-99	REV. BLDG. #7, UTILITIES, PARKING, GRADING; REMOVE RET. WALLS A & B
NO.	DATE	REVISION

BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS
 8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6644

OWNER/DEVELOPER: CLARKVILLE SQUARE, LLC
 P.O. BOX 417
 ELLICOTT CITY, MD 21041
 PHONE: 410-465-4244

PROJECT: CLARKVILLE SQUARE SHOPPING CENTER
 AND PARCELS A-3 & A-4 OF THE FOSTER PROPERTY

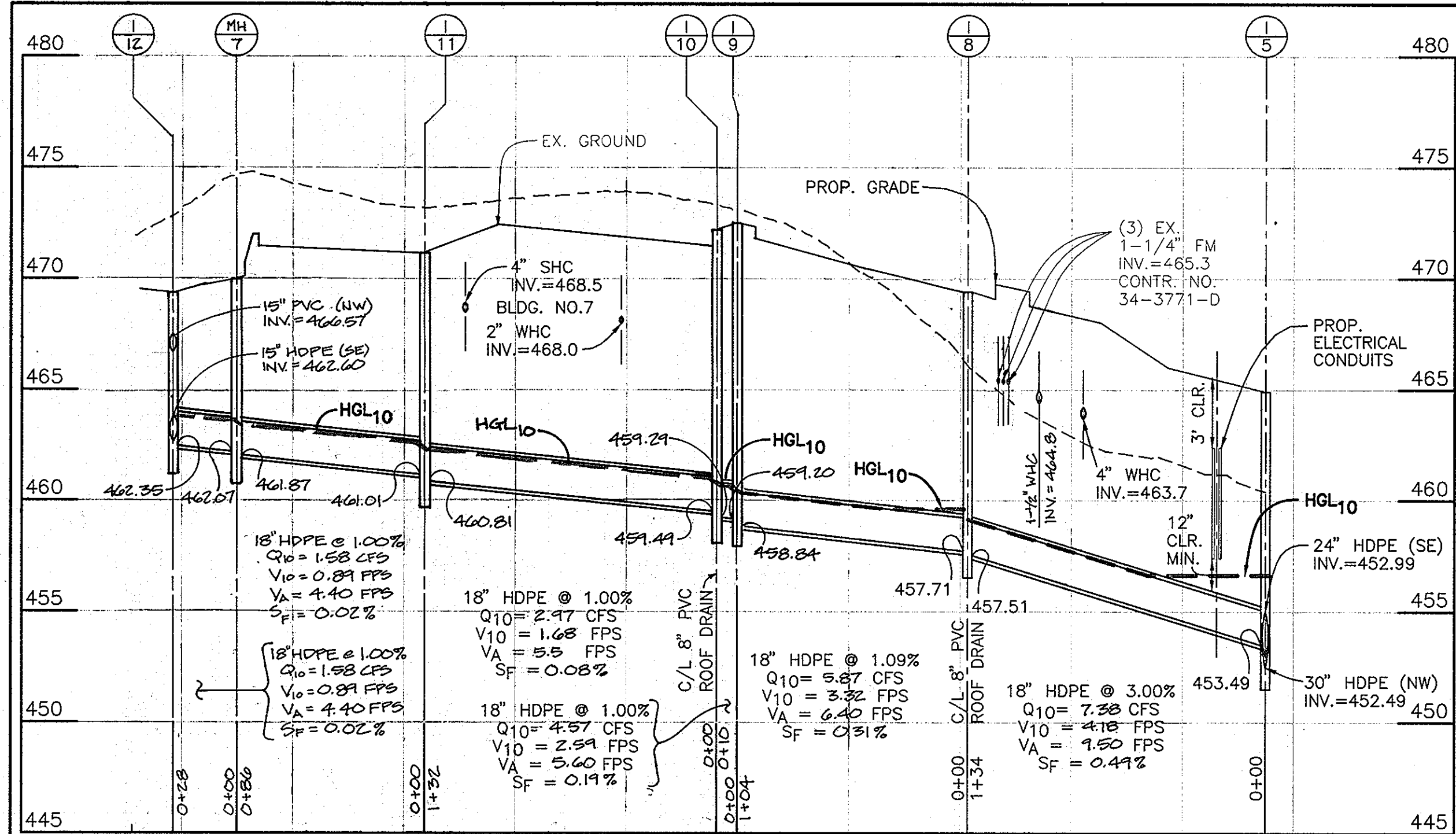
LOCATION: TAX MAP 34 - BLOCK 6
 PARCELS 20, 21, 22, p/0214
 5th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: SITE DEVELOPMENT PLAN

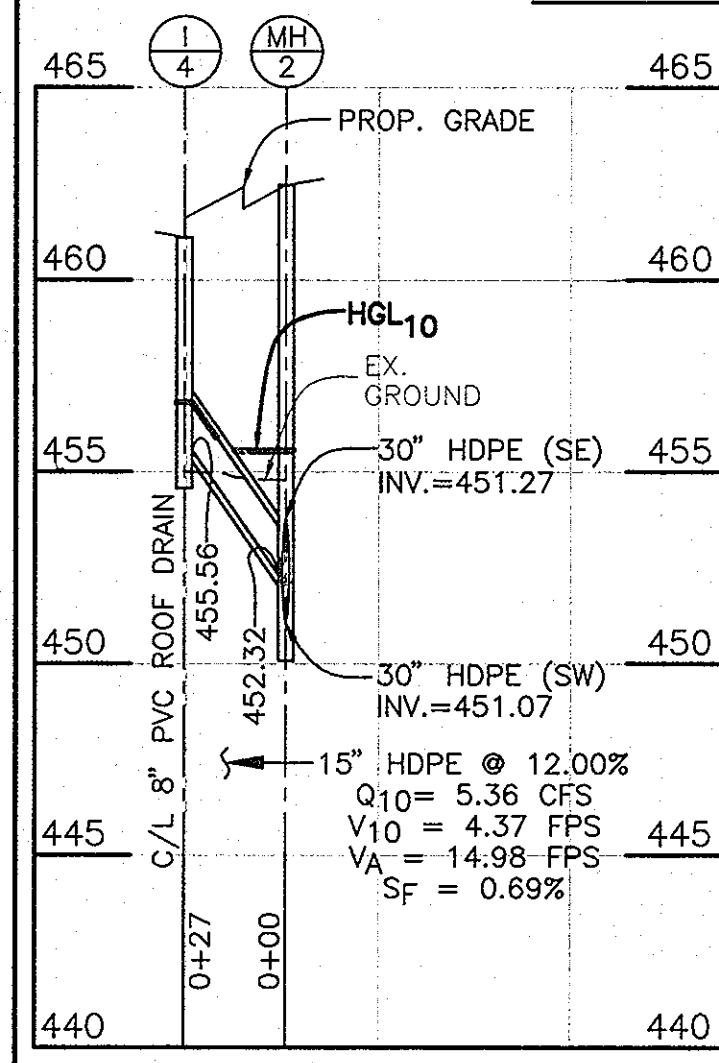
DATE: JANUARY, 1999 PROJECT NO. 1162
 AUGUST, 1999

SCALE: AS SHOWN DRAWING 2 OF 14

Design: DAM Draft: MCR



STORM DRAIN PROFILE ALONG CAR WASH ACCESS



STORM DRAIN PROFILE BLDG. 3 TO BLDG. 2

HORIZONTAL SCALE: 1" = 50'
VERTICAL SCALE: 1" = 5'

YEAR	EX. RUNOFF (CFS)	PROP. DISCHARGE AND RUNOFF (CFS)	WSEL	STORAGE (AC.-FT.)
2	28.92	18.50	431.3	0.64
10	62.93	57.70	432.2	1.02
100	108.11	103.81	432.8	1.44

TYPE OF SWMP: HAZARD CLASS: RETENTION: *

OPERATION AND MAINTENANCE SCHEDULE OF PRIVATELY OWNED AND MAINTAINED STORMWATER MANAGEMENT FACILITY RETENTION (WET) POND

ROUTINE MAINTENANCE

- 1) Facility shall be inspected annually and after major storms. Inspections should be performed during wet weather to determine if pond is functioning properly.
- 2) Top and side slopes of the embankment shall be mowed a minimum of two(2) times a year, once in June and once in September. Other side slopes, the bottom of the pond, and maintenance access should be mowed as needed.
- 3) Debris and litter next to the outlet structure shall be removed during regular mowing operations as needed.
- 4) Visible signs of erosion in the pond as well as riprap outlet area shall be repaired as soon as it is noticed.

NON-ROUTINE MAINTENANCE

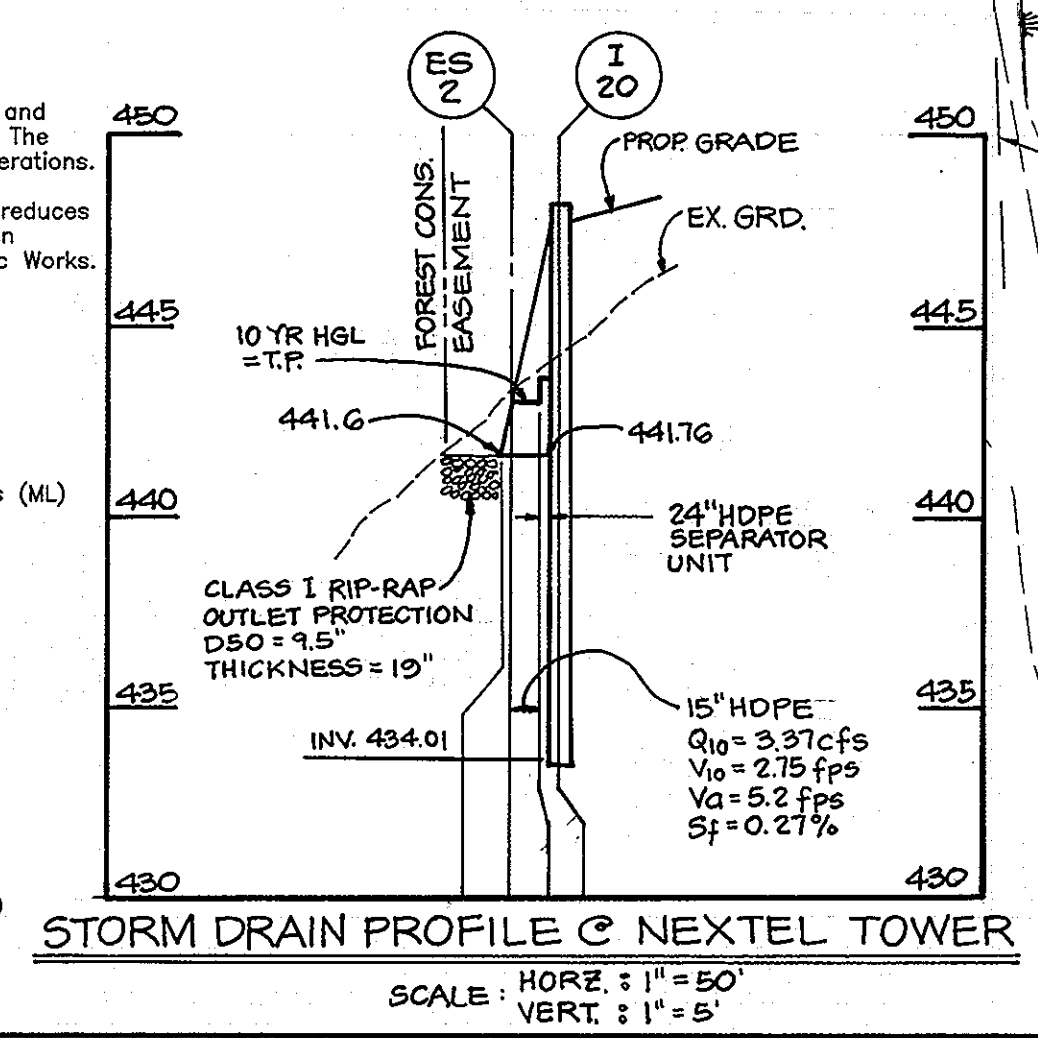
- 1) Structural components of the pond such as the dam, the riser, and the pipes shall be repaired upon the detection of any damage. The components should be inspected during routine maintenance operations.
- 2) Sediment should be removed when its accumulation significantly reduces the design storage, interfere with the function of the riser, when deemed necessary by the Howard County's Department of Public Works.

TEST PIT LOGS

TP-1 Elevation 427.5
0.0' - 0.75' Topsoil and root matter.
0.75' - 6.0' Light gray to light brown micaceous fine Sandy SILT, trace Clay (M)
6.0' - 12.0' Brown and white micaceous fine Sandy SILT, trace Clay and some rock fragments (ML)
12.0' Bottom of pit
Water encountered at 6.5 feet below grade.

TP-2 Elevation 436.0
0.0' - 0.5' Topsoil and root matter
0.5' - 8.0' Light brown to reddish brown Silty fine SAND (SM)
8.0' - 10.0' Grayish brown micaceous fine Sandy SILT (ML)
10.0' Bottom of pit
Water encountered at 7 feet below grade.

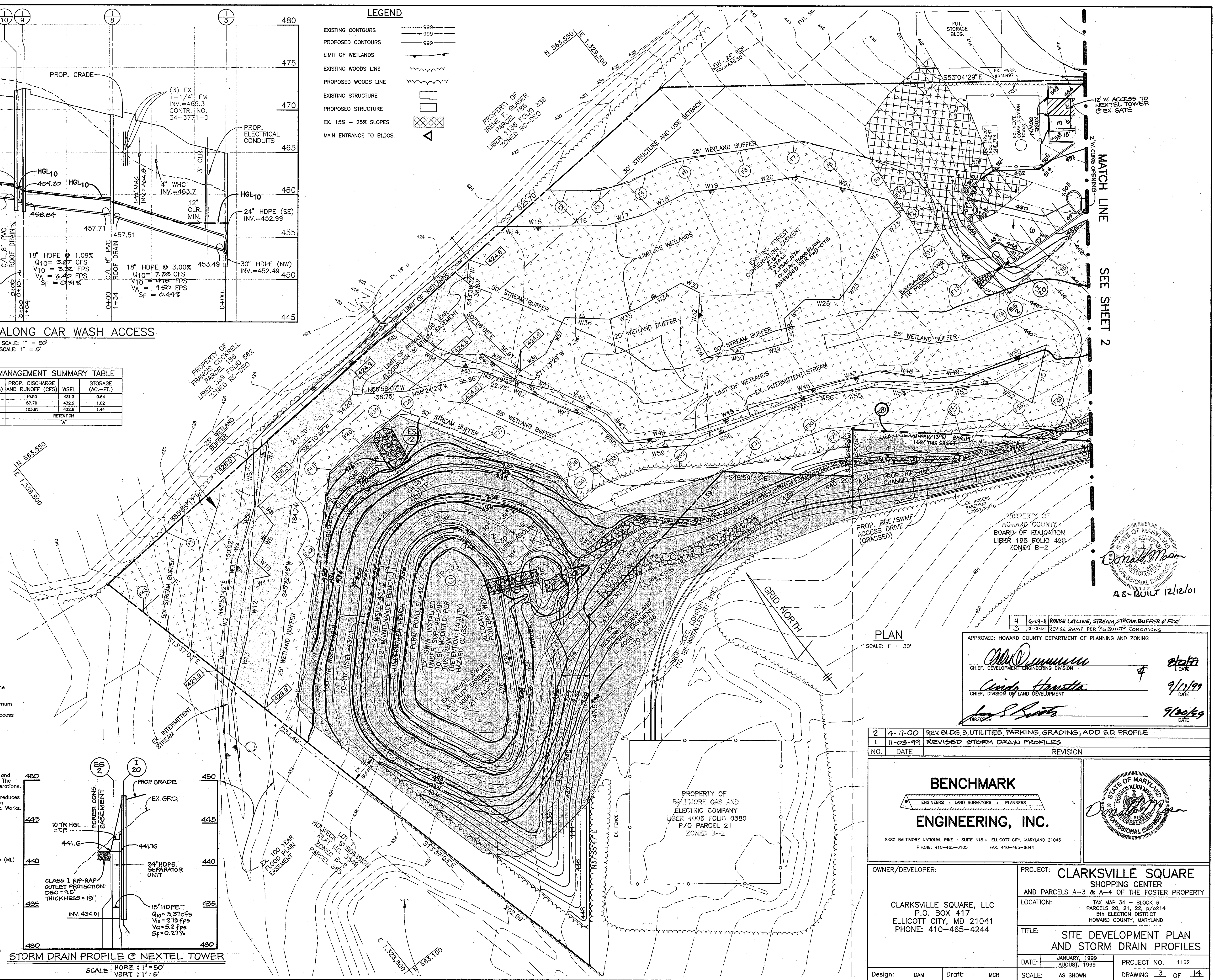
TP-3 Elevation 431.0
0.0' - 0.5' Topsoil and root matter
0.5' - 3.0' Light brown micaceous fine Sandy SILT, trace Clay (ML)
3.0' - 6.0' Reddish brown micaceous fine Sandy SILT, trace Clay (ML)
6.0' - 8.0' Brown and white micaceous fine Silty SAND, trace Clay, some rock fragments (SM)
8.0' - 10.0' Brown and white micaceous fine Sandy SILT, some rock fragments (ML)
10.0' Bottom of pit
Water encountered at 7 feet below grade.



STORM DRAIN PROFILE @ NEXTEL TOWER

LEGEND

- EXISTING CONTOURS: --- 999
- PROPOSED CONTOURS: - - - 999
- LIMIT OF WETLANDS: --- 999
- EXISTING WOODS LINE: --- 999
- PROPOSED WOODS LINE: --- 999
- EXISTING STRUCTURE: [Symbol]
- PROPOSED STRUCTURE: [Symbol]
- EX. 15% - 25% SLOPES: [Symbol]
- MAIN ENTRANCE TO BLDGS.: [Symbol]



PLAN
SCALE: 1" = 30'

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION

[Signature]
CHIEF, DIVISION OF LAND DEVELOPMENT

[Signature]
DIRECTOR

DATE: 9/12/99
DATE: 9/20/99

4 6-14-00 REV. BLDG. 3, UTILITIES, PARKING, GRADING; ADD S.D. PROFILE
3 12-12-01 REVISE SWMP PER "AS BUILT" CONDITIONS

NO.	DATE	REVISION
2	4-17-00	REV. BLDG. 3, UTILITIES, PARKING, GRADING; ADD S.D. PROFILE
1	11-03-99	REVISED STORM DRAIN PROFILES

BENCHMARK ENGINEERING, INC.
ENGINEERS • LAND SURVEYORS • PLANNERS

8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-8644

OWNER/DEVELOPER: CLARKSVILLE SQUARE, LLC
P.O. BOX 417
ELLICOTT CITY, MD 21041
PHONE: 410-465-4244

PROJECT: CLARKSVILLE SQUARE SHOPPING CENTER AND PARCELS A-3 & A-4 OF THE FOSTER PROPERTY

LOCATION: TAX MAP 34 - BLOCK 6
PARCELS 20, 21, 22, p/0214
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

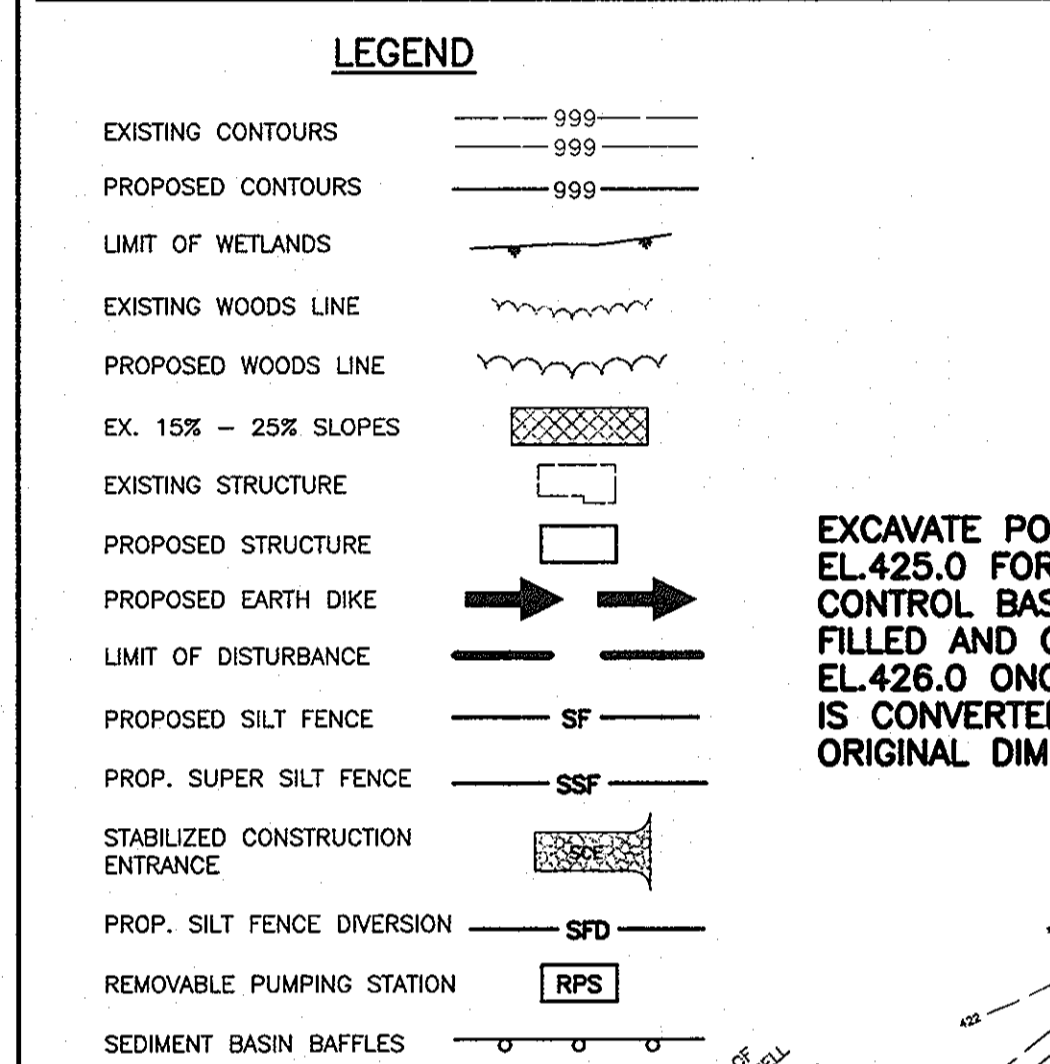
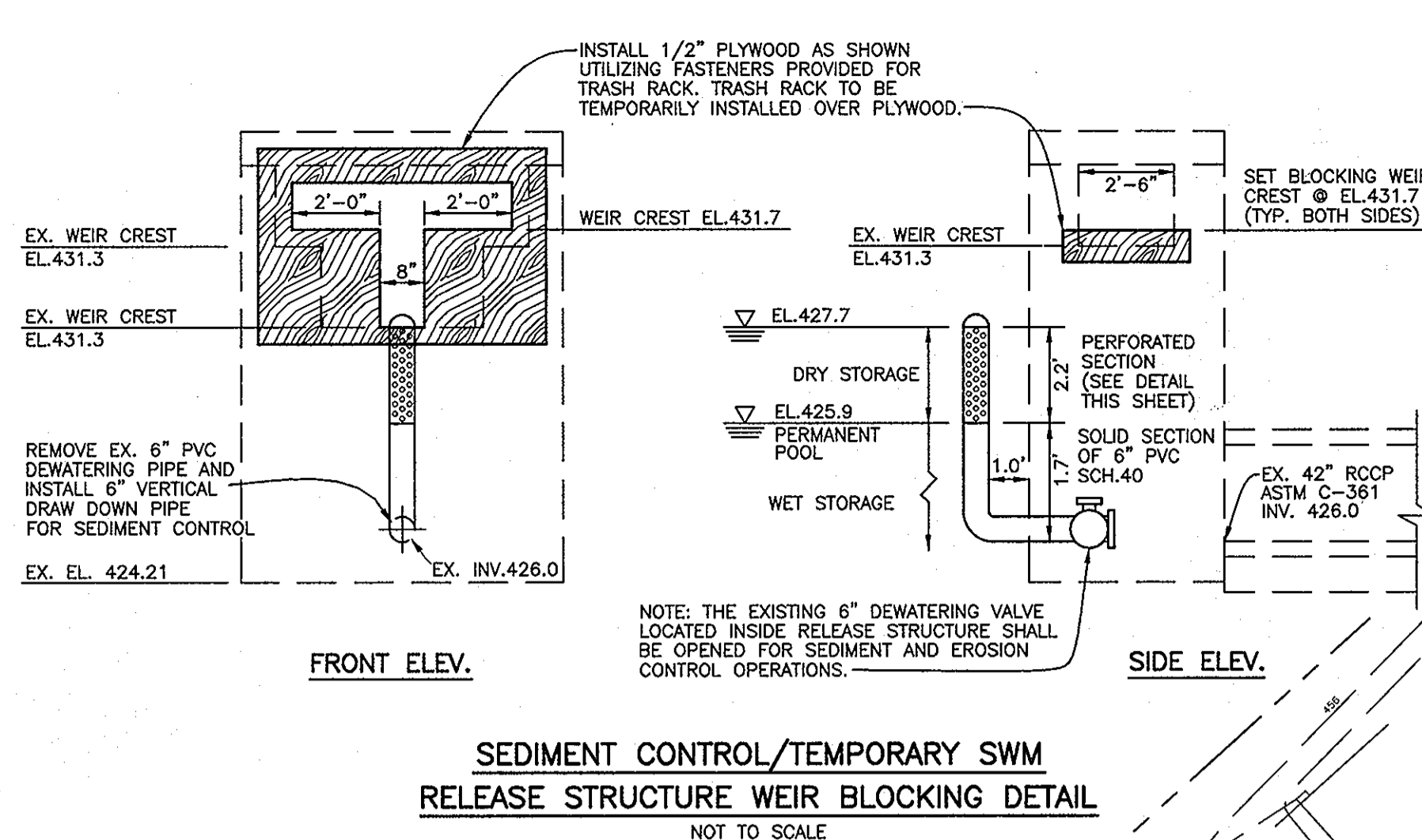
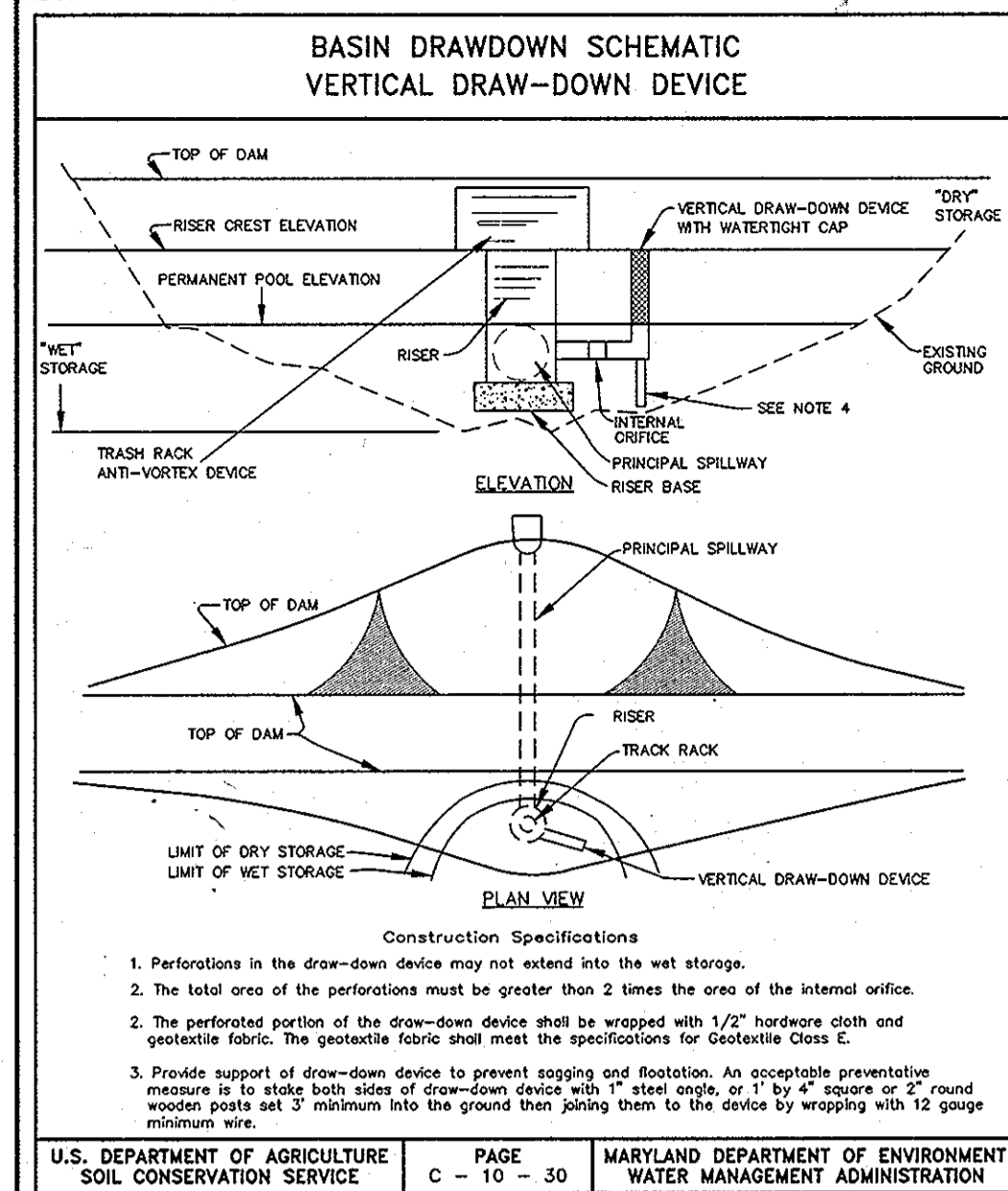
TITLE: SITE DEVELOPMENT PLAN AND STORM DRAIN PROFILES

DATE: JANUARY, 1999
AUGUST, 1999

PROJECT NO. 1162

Design: DAM Draft: MCR SCALE: AS SHOWN DRAWING 3 OF 14

SDP-99-69



NO.	DATE	REVISION
13	6-14-11	REVISE LOT LINE, STREAM, STREAM BUFFER & PCE
12	7-07-05	REVISE PARKING TO ANGULAR ADJ TO BLDG. NO. 8.
11	12-13-04	REVISE PARKING TO PARALLEL ADJ TO BLDG. NO. 8 AND A REDUCTION OF 16 PARKING SPACES TO ADD A DRIVE-THRU LANE FOR BLDG. NO. 8.
10	08-27-04	REV. BLDG. 8; RELOCATE PARKING
2	4-17-00	REV. BLDG. 3; UTILITIES, PARKING, GRADING
1	11-03-99	REV. BLDGS. & PARKING LAYOUT, STORM DRAINS AND GRADING

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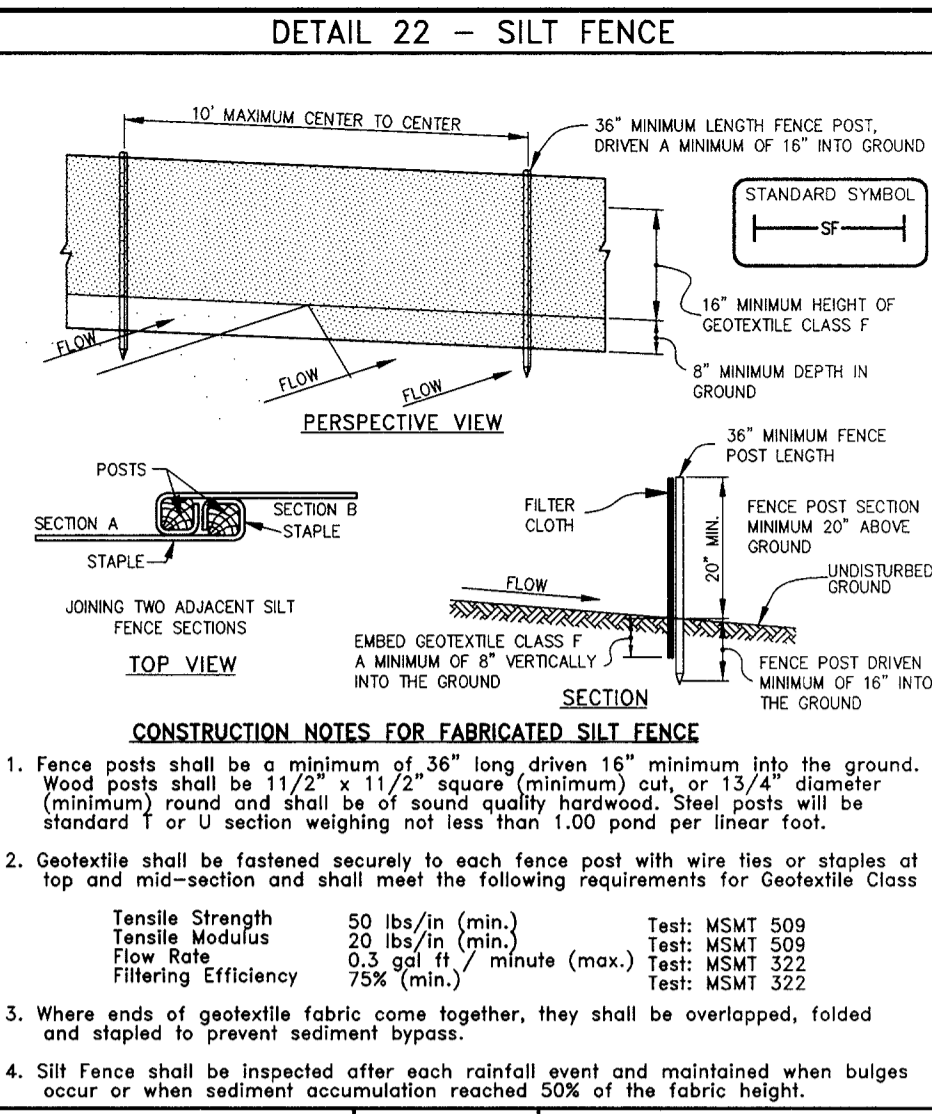
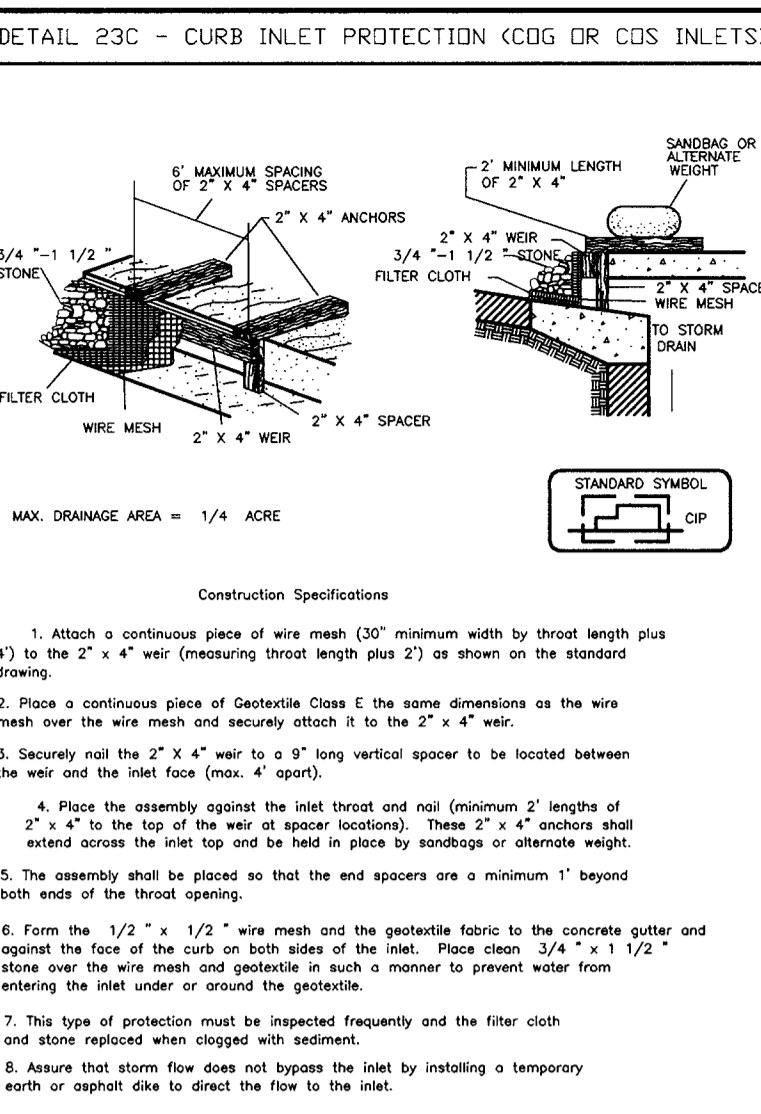
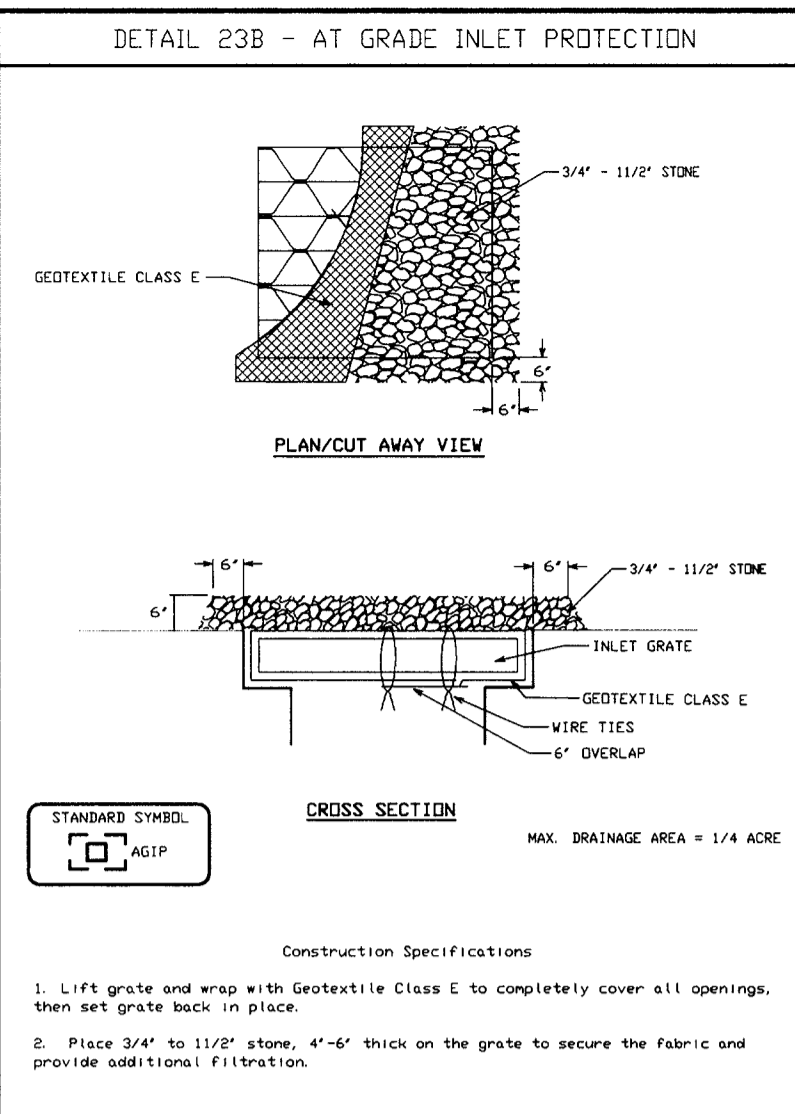
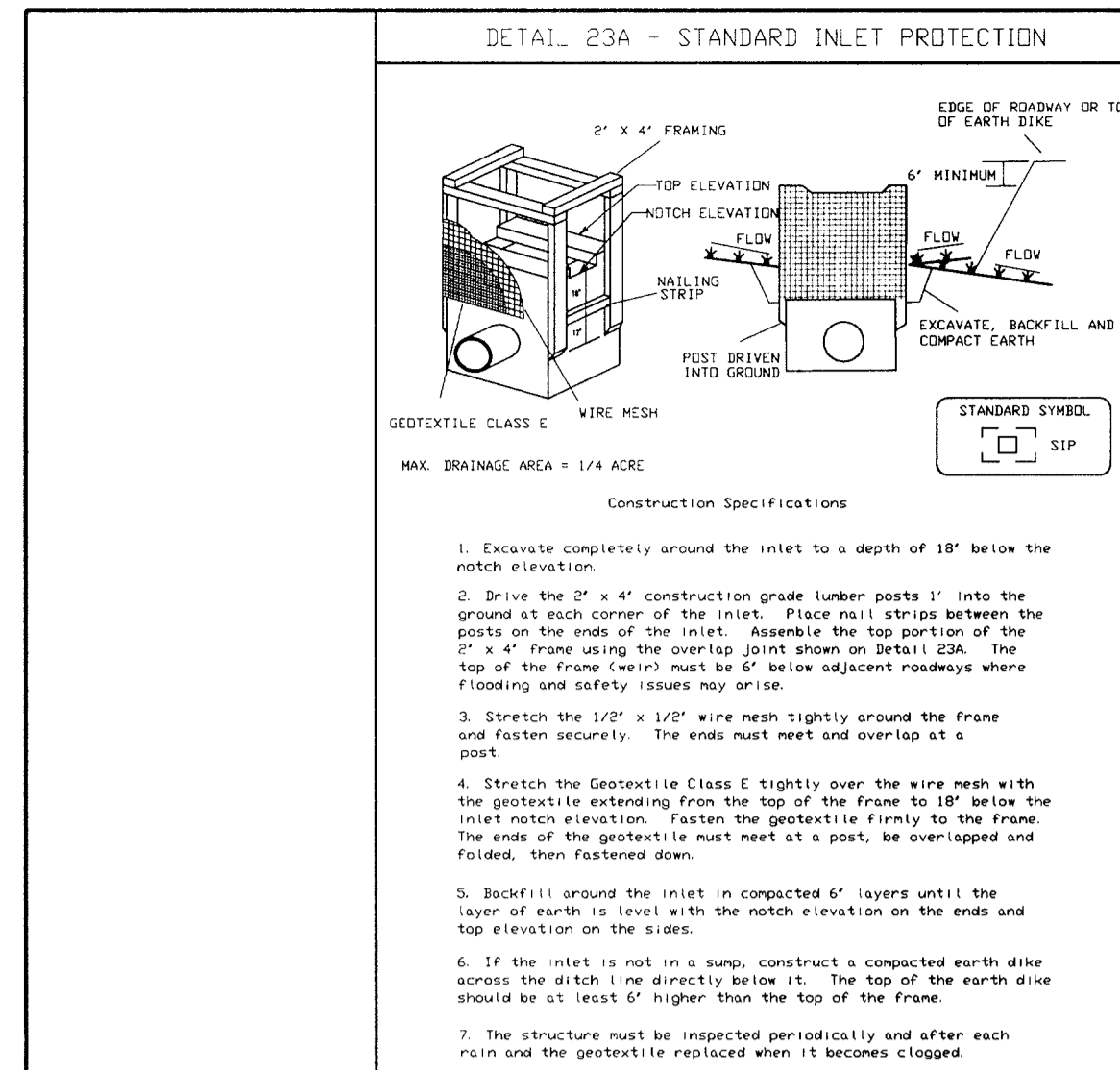
PROJECT: CLARKSVILLE SQUARE SHOPPING CENTER AND PARCELS A-3 & A-4 OF THE FOSTER PROPERTY

LOCATION: TAX MAP 34 - BLOCK 6 PARCELS 20, 21, 22, p/214 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

TITLE: SEDIMENT AND EROSION CONTROL PLAN

DATE: JANUARY, 1999 PROJECT NO. 1162
AUGUST, 1999

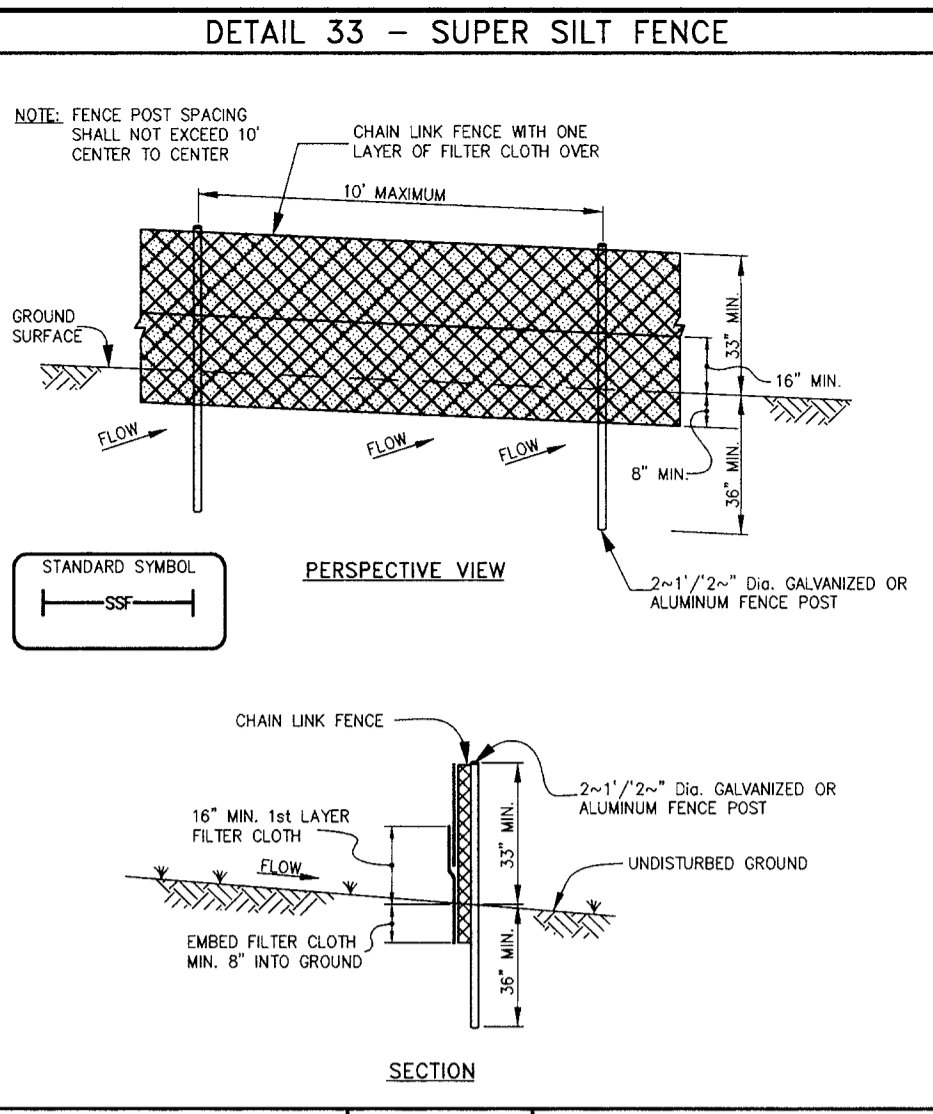
Design: DAM Draft: MCR SCALE: AS SHOWN DRAWING 4 OF 14



SILT FENCE DESIGN CRITERIA

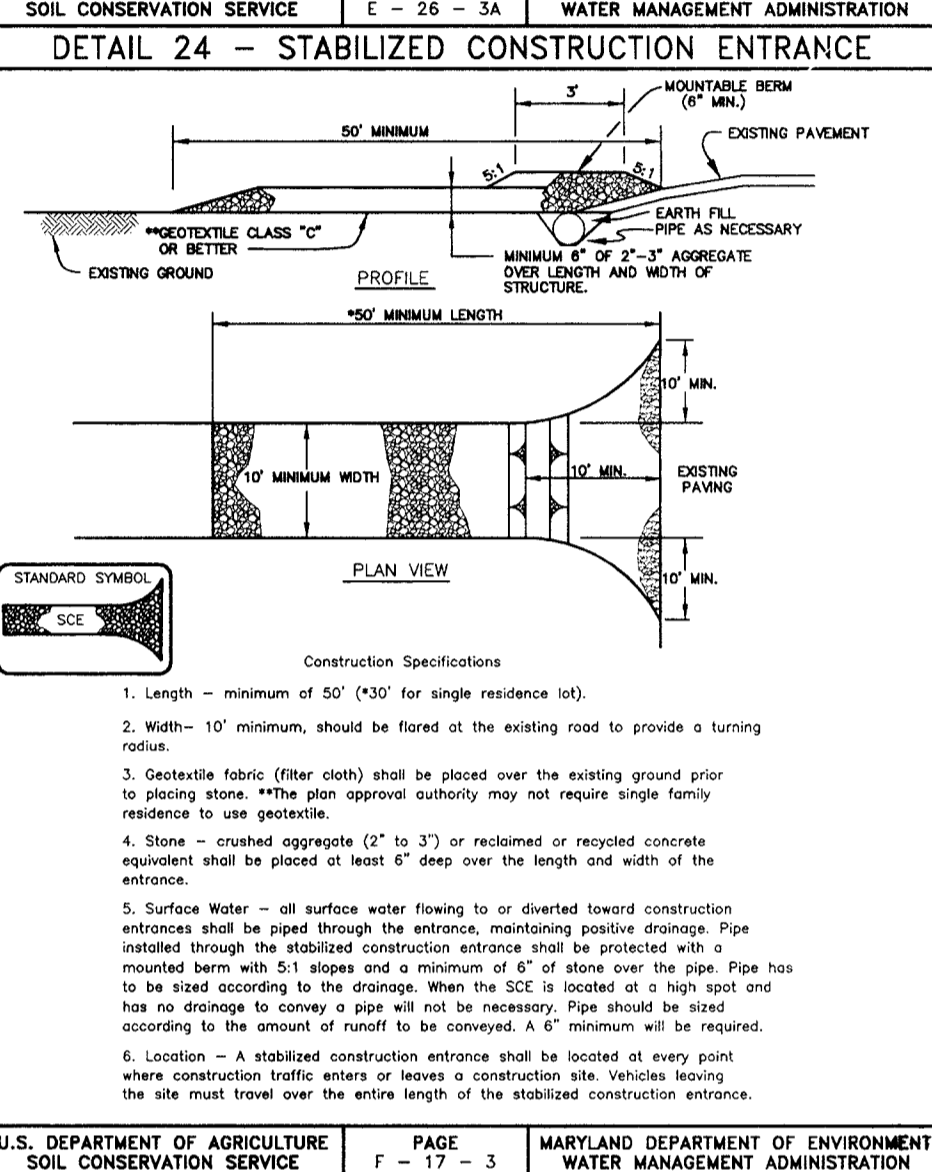
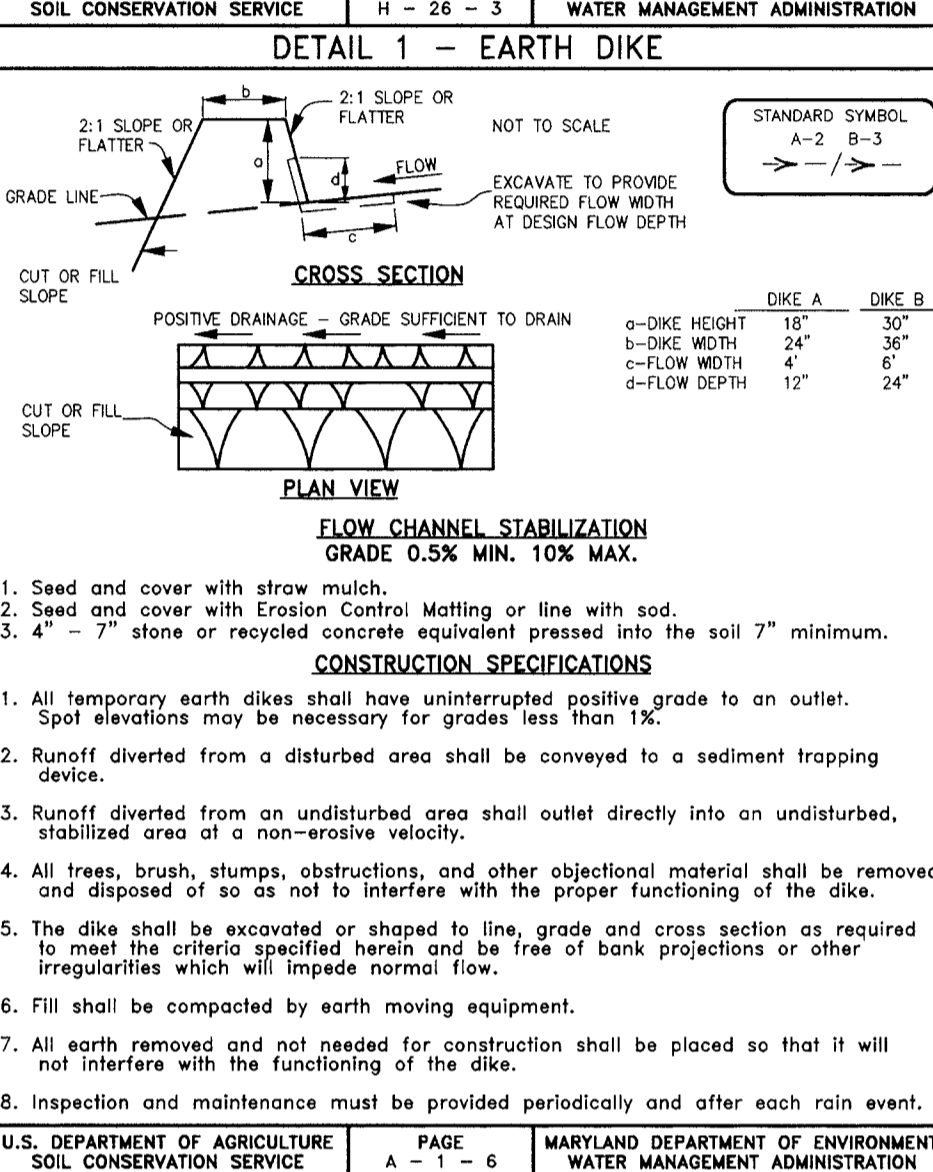
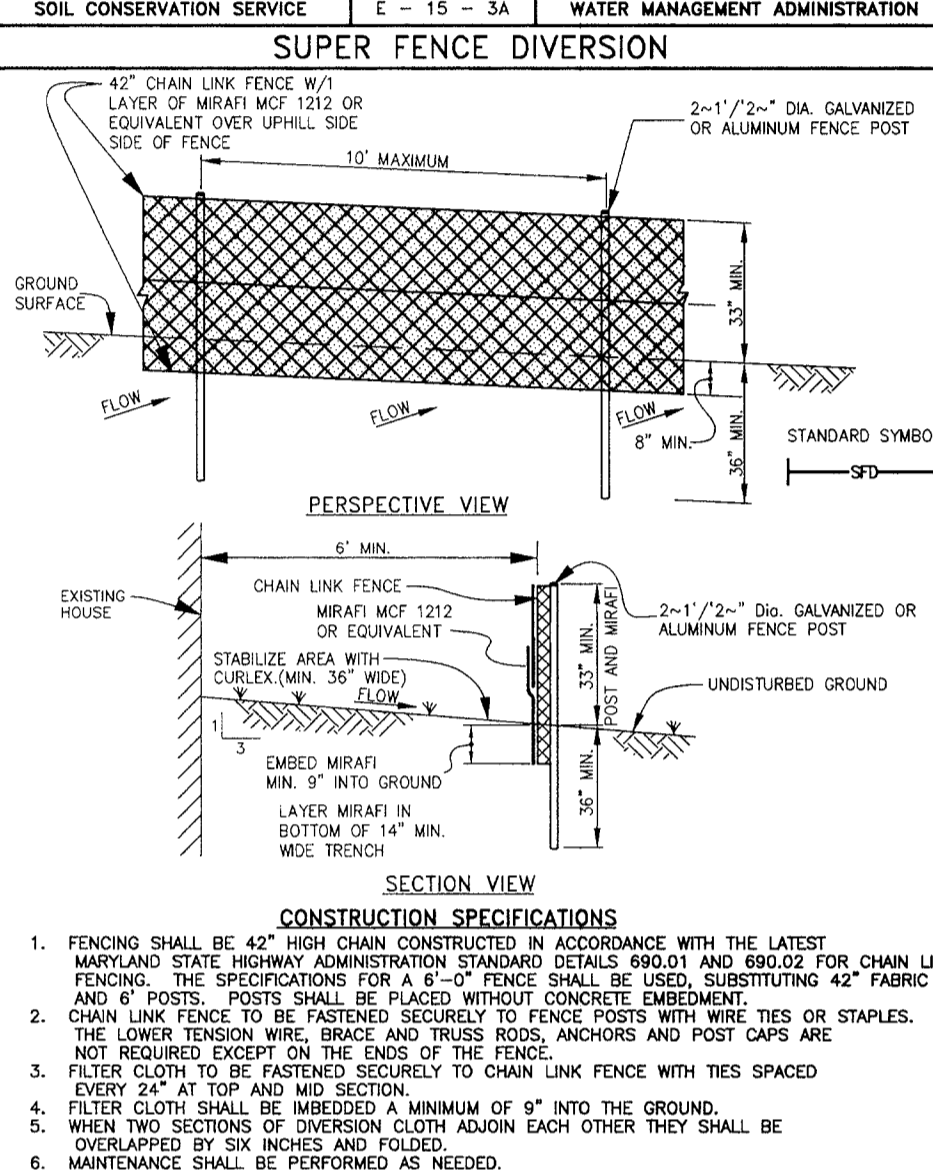
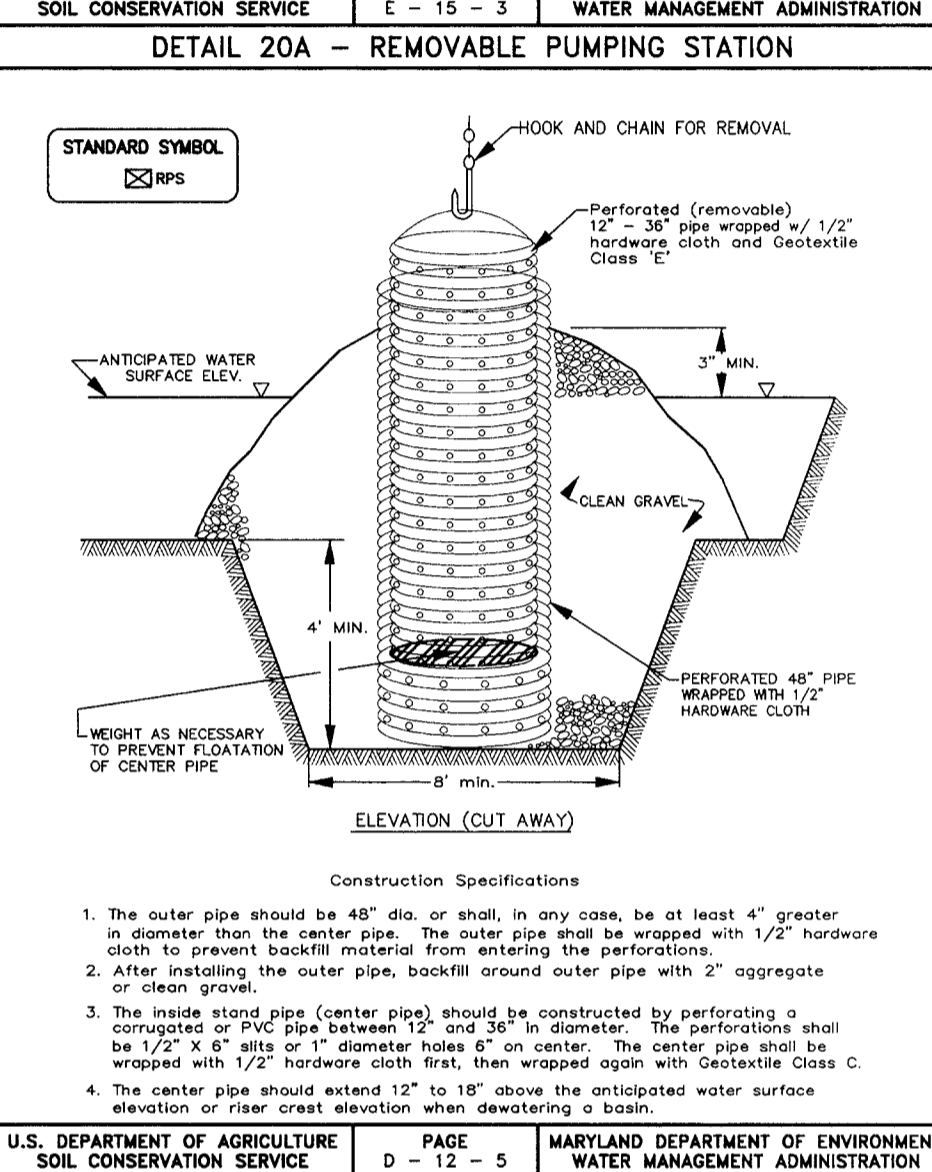
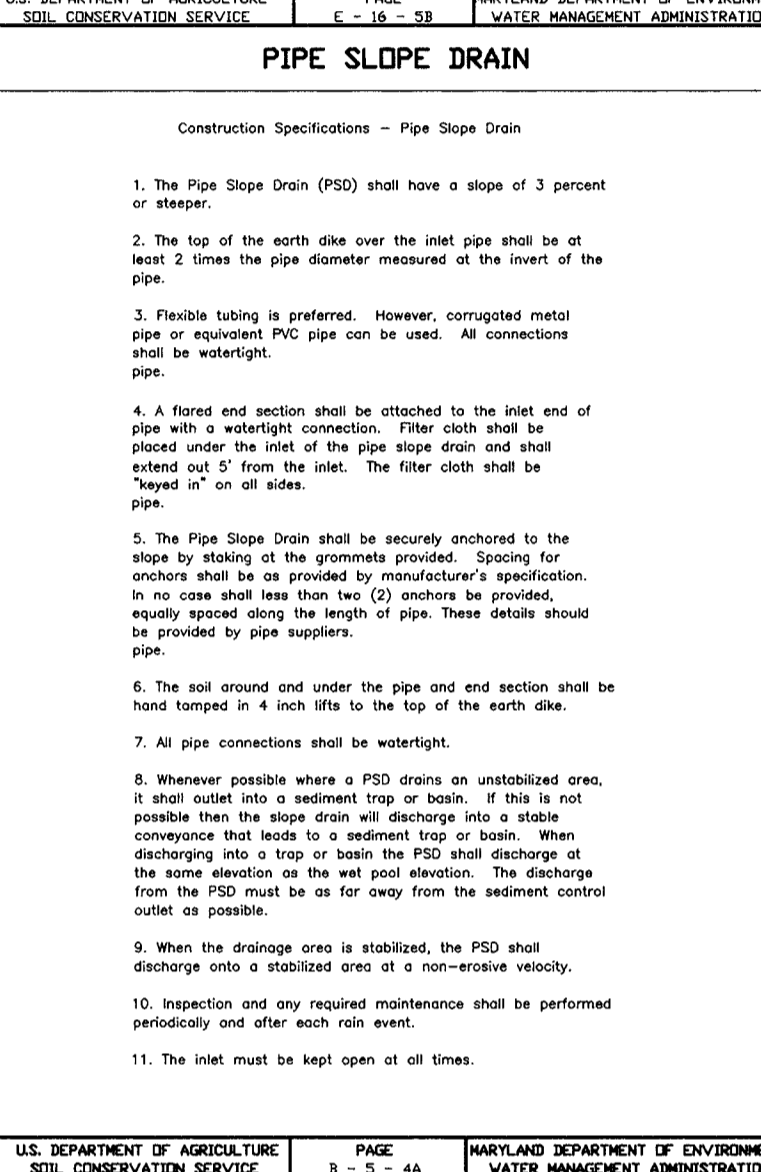
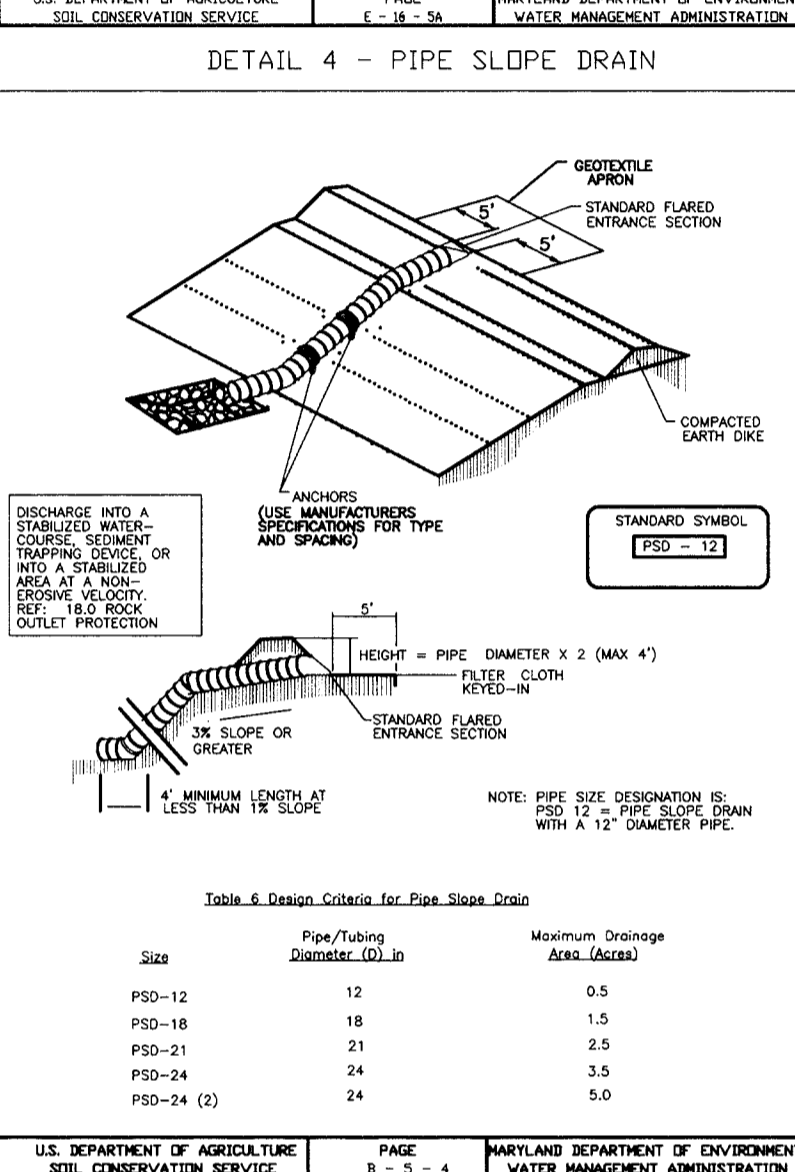
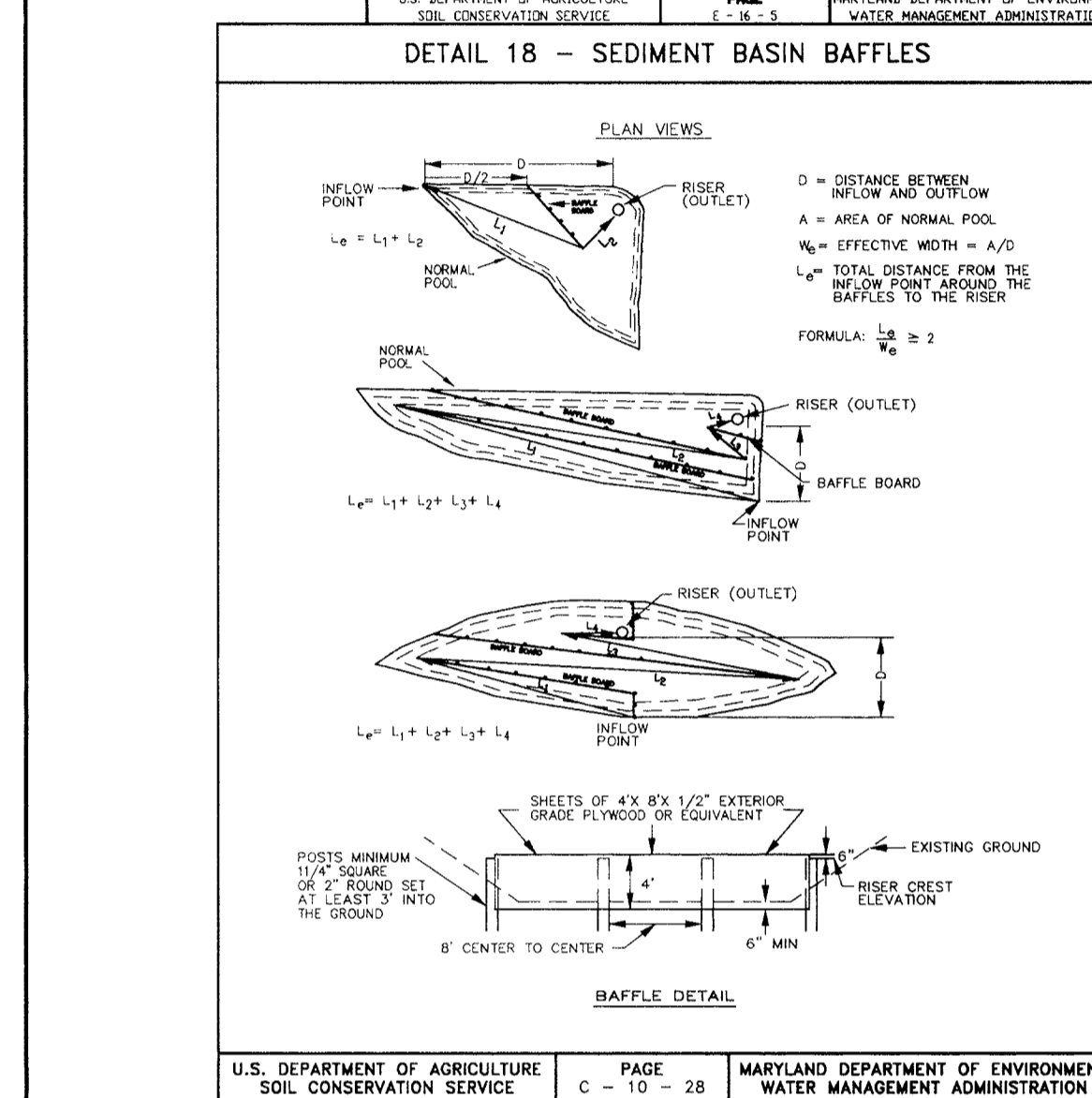
Slope Steepness	(Maximum) Slope Length	(Maximum) Silt Fence Length
Flatter than 50:1	unlimited	unlimited
50:1 to 10:1	125 feet	1,000 feet
10:1 to 5:1	100 feet	750 feet
5:1 to 3:1	60 feet	500 feet
3:1 to 2:1	40 feet	250 feet
2:1 and steeper	20 feet	125 feet

Note: In areas of less than 2% slope and sandy soils (USDA general classification system, soil class A) maximum slope length and silt fence length will be unlimited. In areas a silt fence may be the only perimeter control required.



SUPER SILT FENCE DESIGN CRITERIA

Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited
10 - 20%	10:1 - 5:1	200 feet
20 - 33%	5:1 - 3:1	100 feet
33 - 50%	3:1 - 2:1	100 feet
50% +	2:1 +	50 feet



SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS SEDIMENT CONTROL DIVISION PRIOR TO THE START OF ANY CONSTRUCTION.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL DISTURBANCE OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, BUT 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR 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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDINGS (SEC. 51) SOU (SEC. 54), TEMPORARY SEEDING (SEC. 50) AND MULCHING (SEC. 52). TEMPORARY STABILIZATION WITH MULCH ALONE 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	11.48 ACRES
TOTAL AREA DISTURBED	8.13 ACRES
AREA TO BE REVEGETATED OR PAVED	2.98 ACRES
AREA TO BE VEGETATIVELY STABILIZED	11.185 CU. YDS.
TOTAL CUT	18,138 CU. YDS.
OFFSITE BORROW	18,138
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERMETER EROSION AND SEDIMENT CONTROL, BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS INITIAL APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES ARE LIMITED TO THREE PIPE LENGTHS OR THAT WHICH CAN BE BACK FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

APPLY TO GRADED OR CLEARED AREAS LIKELY TO BE REDISTURBED WHERE THE SHORT-TERM VEGETATIVE COVER IS NEEDED.

SEEDING 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/1000 SQ FT).

SEEDING: FOR PERIOD MARCH 1 THROUGH APRIL 30 AND FROM AUGUST 15 THROUGH NOVEMBER 15, SEED WITH 2-1/2 BUSHELS PER ACRE OF ANNUAL RYE (2 LBS/1000 SQ FT) FOR THE PERIOD MAY 1 THROUGH AUGUST 31, SEED WITH 3 LBS PER ACRE OF WEEPING LOVEGRASS (0.7 LBS/1000 SQ FT). FOR THE PERIOD NOVEMBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY OPTION (2) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (3) USE SOU. OPTION (3) SEED WITH 40 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW.

MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROOTED SMALL DRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (9 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.

MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

CONSTRUCTION and Material Specifications

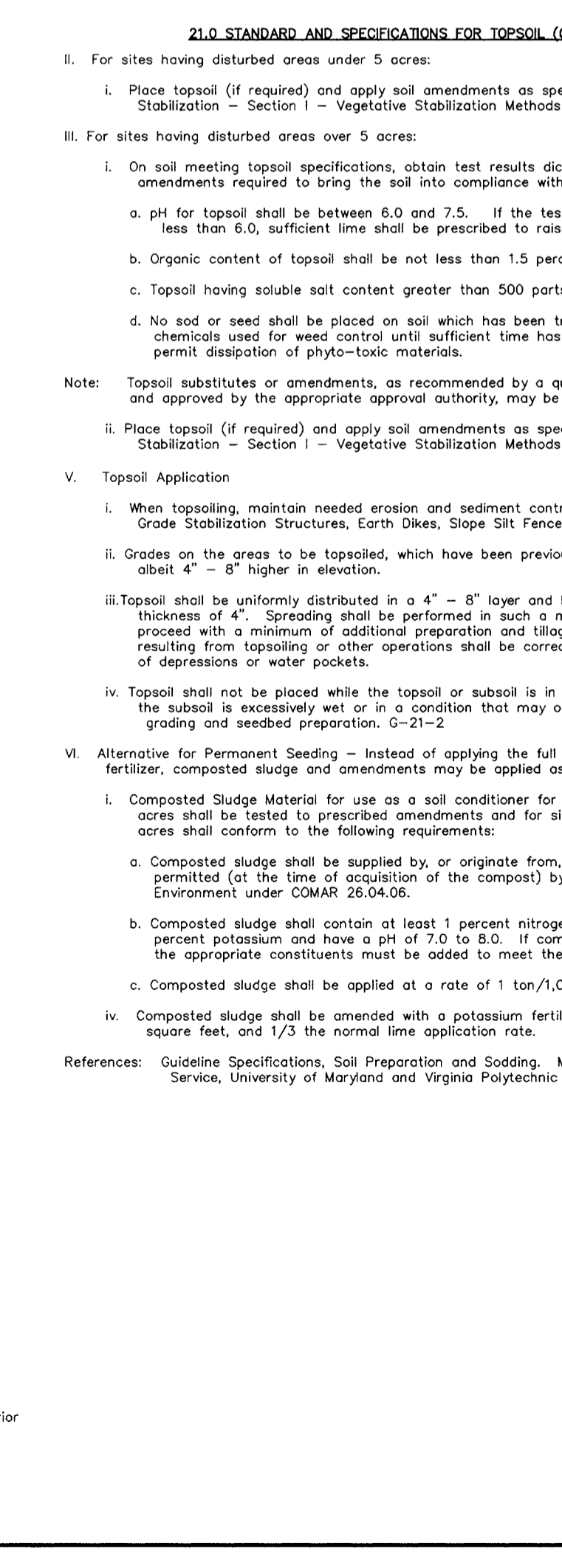
- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-GRS in cooperation with Maryland Agricultural Experiment Station.
- Topsoil Specifications - Soil to be used as topsoil must meet the following:
 - Topsoil shall be a loam, sandy loam, clay loam, silt loam, sandy clay loam, loamy sand, or silty loam. Other soils may be used as recommended by an agronomist or soil scientist and approved by the appropriate approved authority. Regardless, topsoil shall not be a mixture of contrasting textured subsoils and shall contain less than 3% by volume of cinders, stones, shells, coarse fragments, gravel, clasts, roots, trash, or other materials larger than 1/8\"/>
- Topsoil must be free of plants or plant parts such as Bermuda grass, quack grass, johnsongrass, nutgrass, poison ivy, thistle, or others as specified.
- Where the subsoil is either highly acidic or composed of heavy clay, ground limestone shall be spread at the rate of 4-8 tons/acre (200-400 pounds per 1,000 square feet) prior to the placement of topsoil. Limestone shall be distributed uniformly over designated areas and worked into the soil in conjunction with tillage operations as described in the following procedures.
 - When topsoil is placed, it shall be placed in a 4\"/>

21.0 STANDARD AND SPECIFICATIONS FOR TOPSOIL (CONT.)

- For sites having disturbed areas under 5 acres:
 - Place topsoil (if required) and apply soil amendments as specified in 21.0 Vegetative Stabilization - Section 1 - Vegetative Stabilization Methods and Materials.
- For sites having disturbed areas over 5 acres:
 - On soil meeting topsoil specifications, obtain test results dictating fertilizer and lime amendments required to bring the soil into compliance with the following:
 - a. pH for topsoil shall be between 6.0 and 7.5. If the tested soil demonstrates a pH of less than 6.0, sufficient lime shall be prescribed to raise the pH to 6.5 or higher.
 - Organic content of topsoil shall be not less than 1.5 percent by weight.
 - Topsoil having soluble salt content greater than 500 parts per million shall not be used.
 - No soil or seed shall be placed on soil which has been treated with soil sterilants or chemicals used for weed control until sufficient time has elapsed (14 days min.) to permit dissipation of phytotoxic materials.
 - The seeds and/or fertilizers shall be constructed by performing a composite or PVC pipe between 12\"/>
- Topsoil shall be uniformly distributed in a 4\"/>
- Topsoil shall not be placed while the topsoil or subsoil is in a frozen or muddy condition, when the subsoil is excessively wet or in a condition that may otherwise be detrimental to proper grading and seedling preparation. G-21-2

- Alternative for Permanent Seeding - Instead of applying the full amounts of lime and commercial fertilizer, composted sludge and amendments may be applied as specified below:
- Composted Sludge Material for use as a soil conditioner for sites having disturbed areas over 5 acres shall be tested to prescribed amendments and for sites having disturbed areas over 5 acres shall conform to the following requirements:
 - Composted sludge shall be supplied by, or originate from, a person or persons that are permitted (at the time of acquisition of the compost) by the Maryland Department of the Environment under COMAR 26.04.06.
 - Composted sludge shall contain at least 1 percent nitrogen, 1.5 percent phosphorus, and 0.2 percent potassium and have a pH of 7.0 to 8.0. If compost does not meet these requirements, the appropriate constituents must be added to meet the requirements prior to use.
 - Composted sludge shall be applied at a rate of 1 ton/1,000 square feet.
- Composted sludge shall be amended with a potassium fertilizer applied at the rate of 4 lb/1,000 square feet, and 1/3 the normal lime application rate.

References: Guidelines Specifications, Soil Preparation and Sowing, MD-Va. Pub. #1, Cooperative Extension Service, University of Maryland and Virginia Polytechnic Institution, Revised 1973.



SEQUENCE OF CONSTRUCTION

DATE	ACTIVITY	DATE	ACTIVITY
DAY 1	OBTAIN GRADING PERMIT.	DAY 21	INSTALL SUPER SILT FENCE ALONG TOP OF WALL AS SHOWN AND STABILIZE SLOPE BELOW WALL.
DAY 2-3	INSTALL SEDIMENT CONTROL DEVICES, EXCAVATE POND BOTTOM TO EL. 42.5, AS INDICATED FOR SEDIMENT CONTROL STORAGE. REMOVE AND RETAIN EX. 6\"/>	*DAY 22-35	COMMENCE WITH PARKING LOTS, PRIVATE DRIVE AND BUILDING PAD GRADING.
DAY 4-9	CLEAR AND GRUB SITE. CONTRACTOR TO CONTACT THE HEALTH DEPARTMENT FOR PROPER ABANDONMENT OF EX. WELL AND SEPTIC SYSTEM PRIOR TO EX. BLDG. DEMOLITION.	DAY 36-55	CONSTRUCT STORM DRAIN, WATER QUALITY AND STORM WATER MANAGEMENT SYSTEMS AND UTILITIES. REMOVE EX. 15\"/>
DAY 10-20	BUILD KEYSTONE RETAINING WALL (SEE SHEET 12 FOR WALL CONSTRUCTION SEQUENCE. INSTALL STORM DRAIN SIMULTANEOUSLY WITH THE WALL CONSTRUCTION DUE TO POTENTIAL CONFLICT WITH THE WALL'S GEODRIC).	DAY 56-57	INSTALL INLET PROTECTION MEASURES.
		DAY 58-63	CONSTRUCT CURB AND GUTTER.
		DAY 64-72	CONSTRUCT PAVING FOR PRIVATE DRIVE AND PARKING LOTS.
		DAY 73-75	FINAL GRADE SITE AND PERMANENTLY STABILIZE.
		DAY 76-78	INSTALL REQUIRED LANDSCAPING AS SPECIFIED ON THE PLAN.
		DAY 79-80	UPON APPROVAL OF HOWARD COUNTY SEDIMENT CONTROL INSPECTOR, REMOVE ACCUMULATED SEDIMENT IN SWMF. FILL AND COMPACT SWMF BOTTOM TO EL. 42.6. REMOVE RELEASE STRUCTURE WEIR BLOCKING AND VERTICAL DRAWDOWN DEVICE. REINSTALL 6\"/>

SEDIMENT CONTROL NOTES (CONT.)

- SEEDING 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 OF THE FOLLOWING SCHEDULES:
 - PREFERRED - APPLY 2 TONS PER ACRE DELOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 600 LBS PER ACRE 10-10-10 FERTILIZER (14 LBS/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 UREA-FORM FERTILIZER (9 LBS/1000 SQ FT).
 - ACCEPTABLE - APPLY 2 TONS PER ACRE DELOMITIC LIMESTONE (92 LBS/1000 SQ FT) AND 1000 LBS PER ACRE 10-10-10 FERTILIZER (23 LBS/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL.
- SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30 AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 60 LBS PER ACRE (1.4 LBS/1000 SQ FT) OF KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (0.5 LBS/1000 SQ FT) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROTECT SITE BY OPTION (2) 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (3) USE SOU. OPTION (3) SEED WITH 40 LBS PER ACRE OF KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS PER ACRE OF WELL ANCHORED STRAW.
- MULCHING: APPLY 1-1/2 TO 2 TONS PER ACRE (70 TO 90 LBS/1000 SQ FT) OF UNROOTED SMALL GRASS STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (9 GAL/1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS, ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GAL/1000 SQ FT) FOR ANCHORING.
- MAINTENANCE: INSPECT ALL SEEDED AREAS AND MAKE NEEDED REPAIRS, REPLACEMENTS AND RESEEDINGS.

Definition

Placement of topsoil over a prepared subsoil prior to establishment of permanent vegetation.

Purposes

To provide a suitable medium for vegetative growth. Sites of concern have low moisture content, low nutrient levels, low pH, materials toxic to plants, and/or unacceptable soil gradation.

Conditions Where Practice Applies

- This practice is limited to areas having 2:1 or flatter slopes where:
 - the texture of the exposed subsoil/parent material is not adequate to produce vegetative growth.
 - the soil material is so shallow that the rooting zone is not deep enough to support plants or furnish continuing supplies of moisture and plant nutrients.
 - the original soil to be vegetated contains material toxic to plant growth.
 - the soil is so acidic that treatment with limestone is not feasible. If, for the purpose of these Specifications, areas having slopes steeper than 2:1 require special consideration and design for adequate stabilization. Areas having slopes steeper than 2:1 shall have the appropriate stabilization shown on the plans.

Construction and Material Specifications

- Topsoil salvaged from the existing site may be used provided that it meets the standards as set forth in these specifications. Typically, the depth of topsoil to be salvaged for a given soil type can be found in the representative soil profile section in the Soil Survey published by USDA-GRS in cooperation with Maryland Agricultural Experiment Station.
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OWNER/DEVELOPER: CLARKSVILLE SQUARE, LLC
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LOCATION: TAX MAP 34 - BLOCK 6 PARCELS 20, 21, 22, p/2/21, 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND

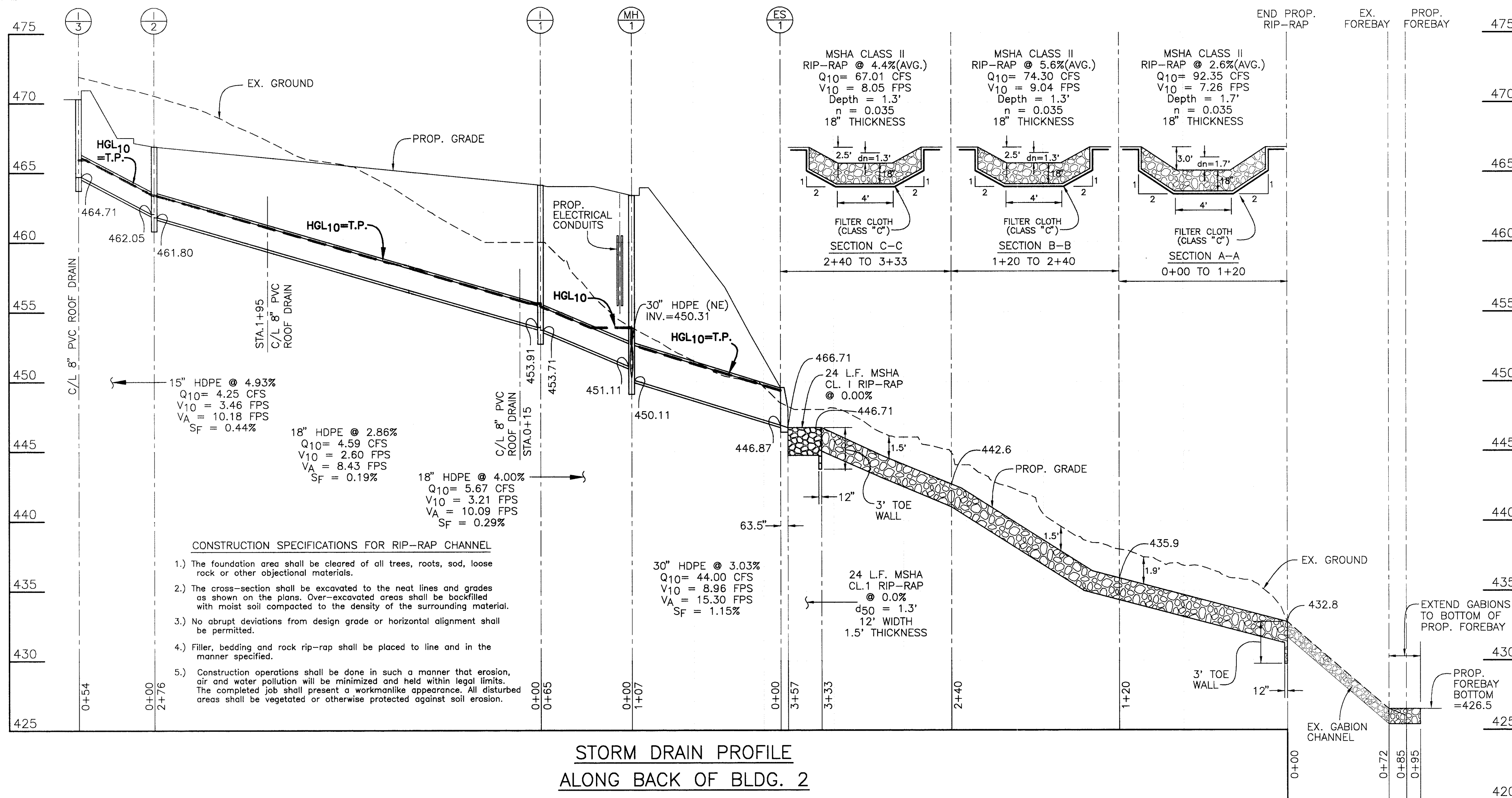
TITLE: SEDIMENT AND EROSION CONTROL NOTES & DETAILS

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AUGUST, 1999

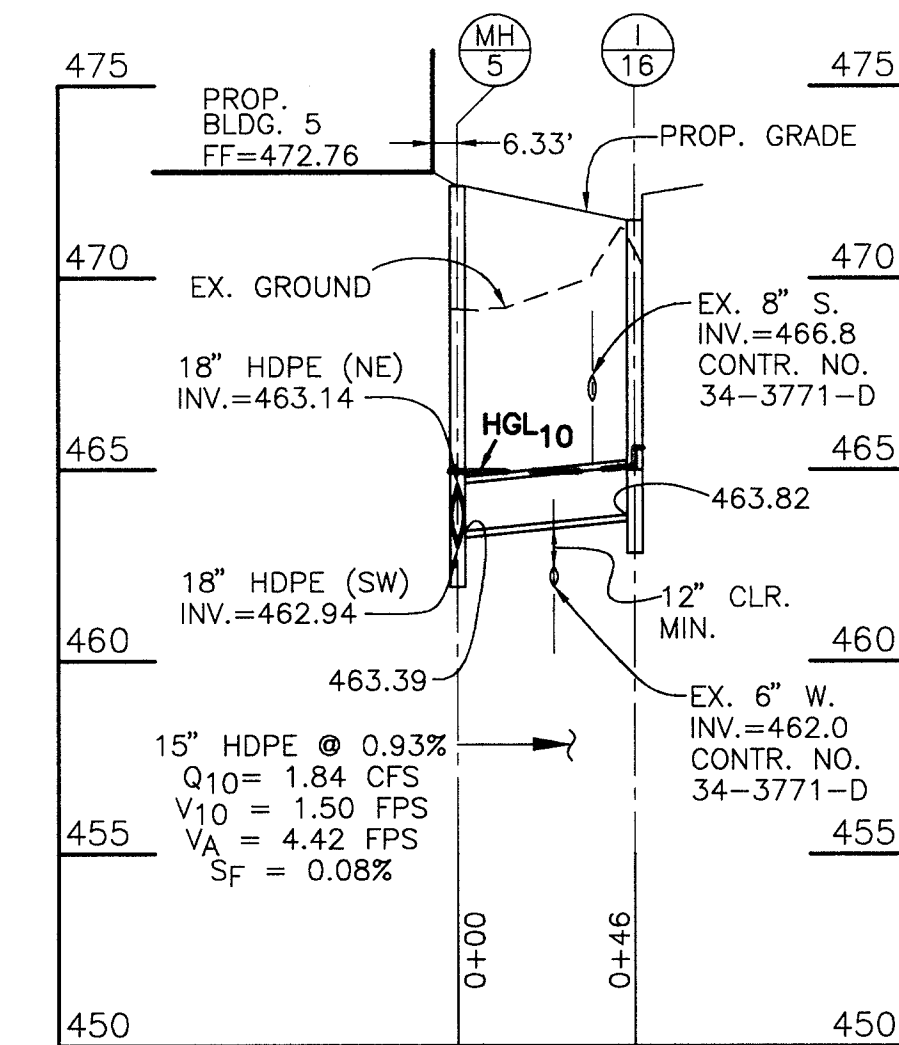
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SCALE: AS SHOWN DRAWING 5 OF 13

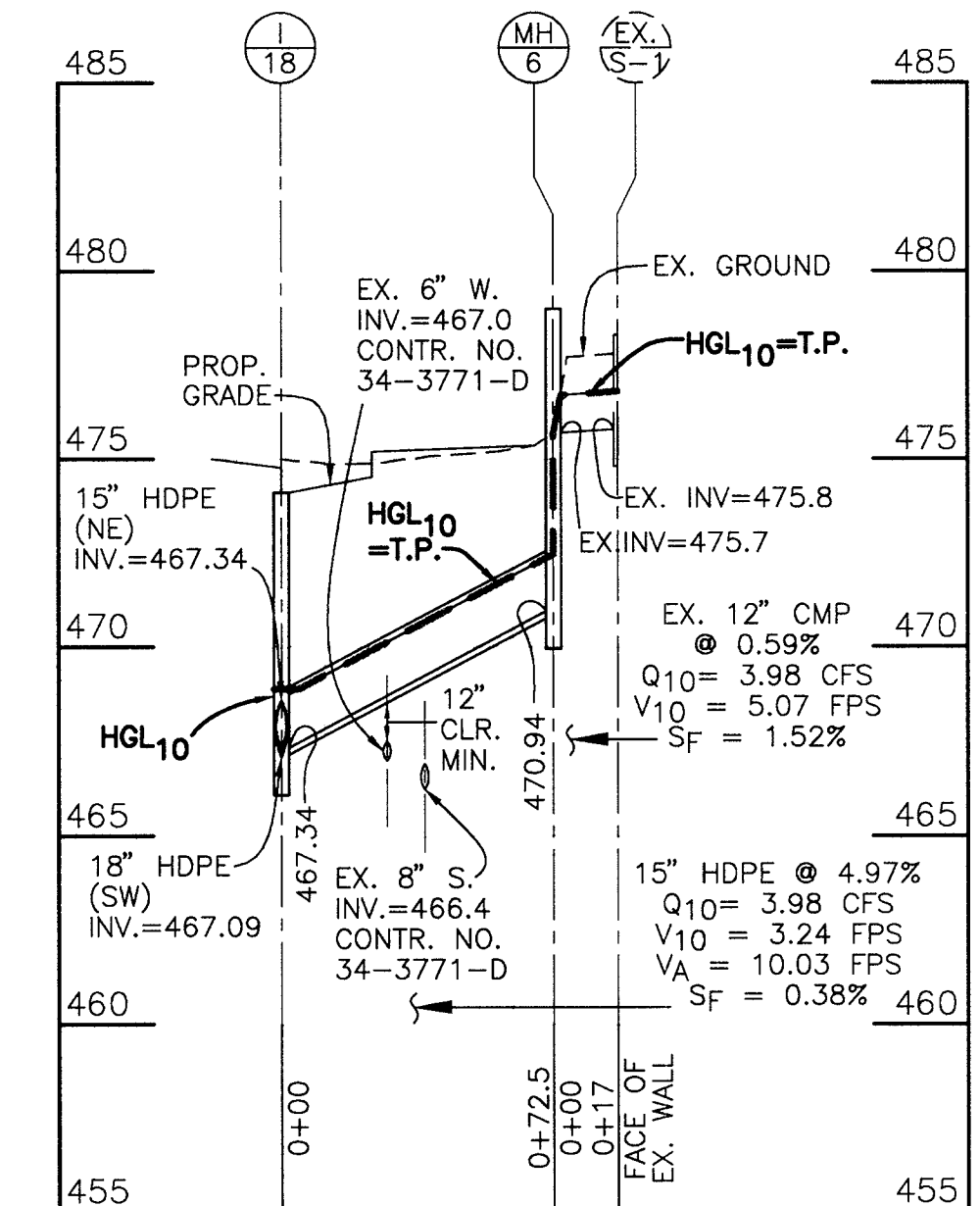
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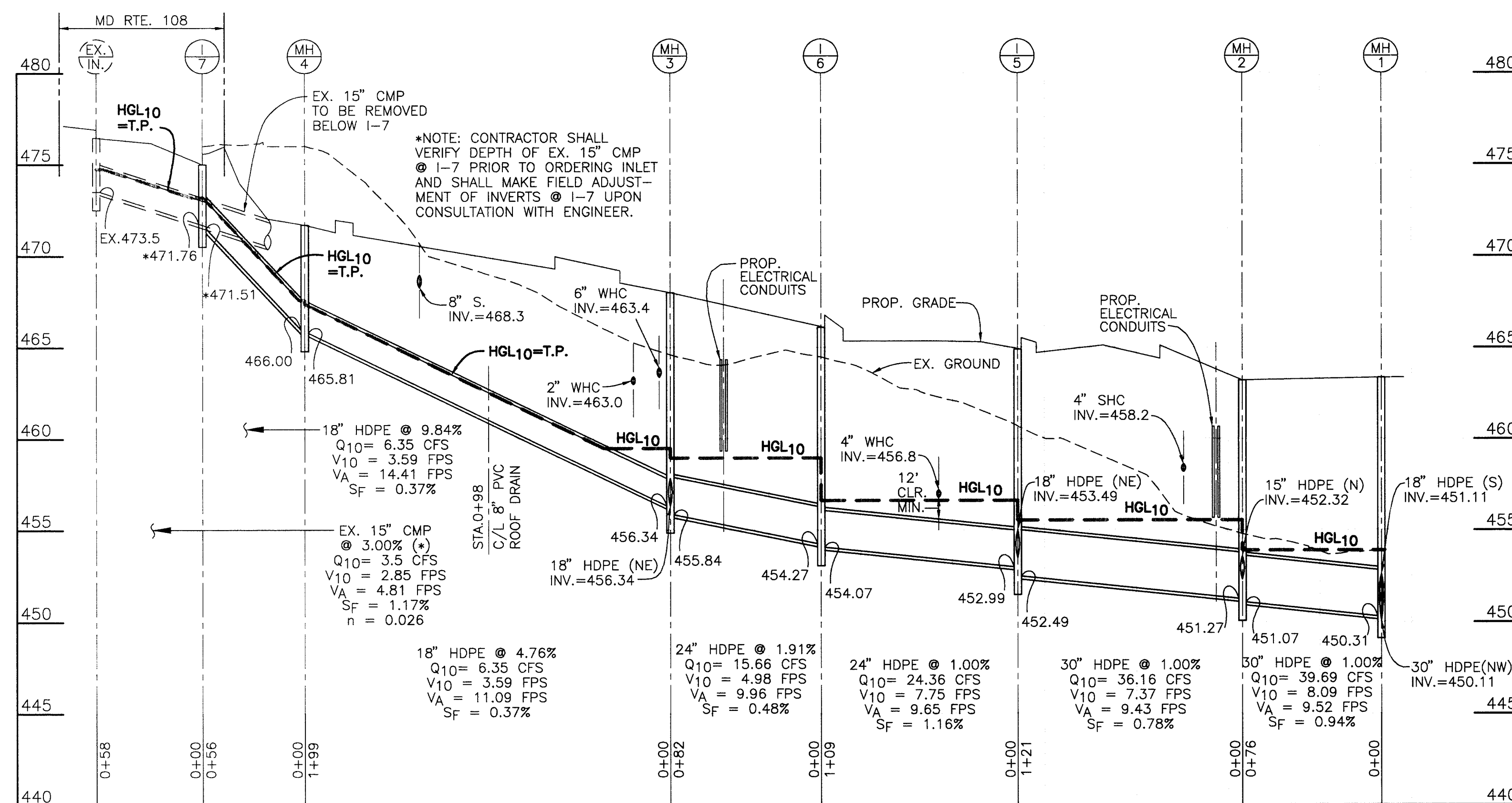
**STORM DRAIN PROFILE
ALONG BACK OF BLDG. 2**



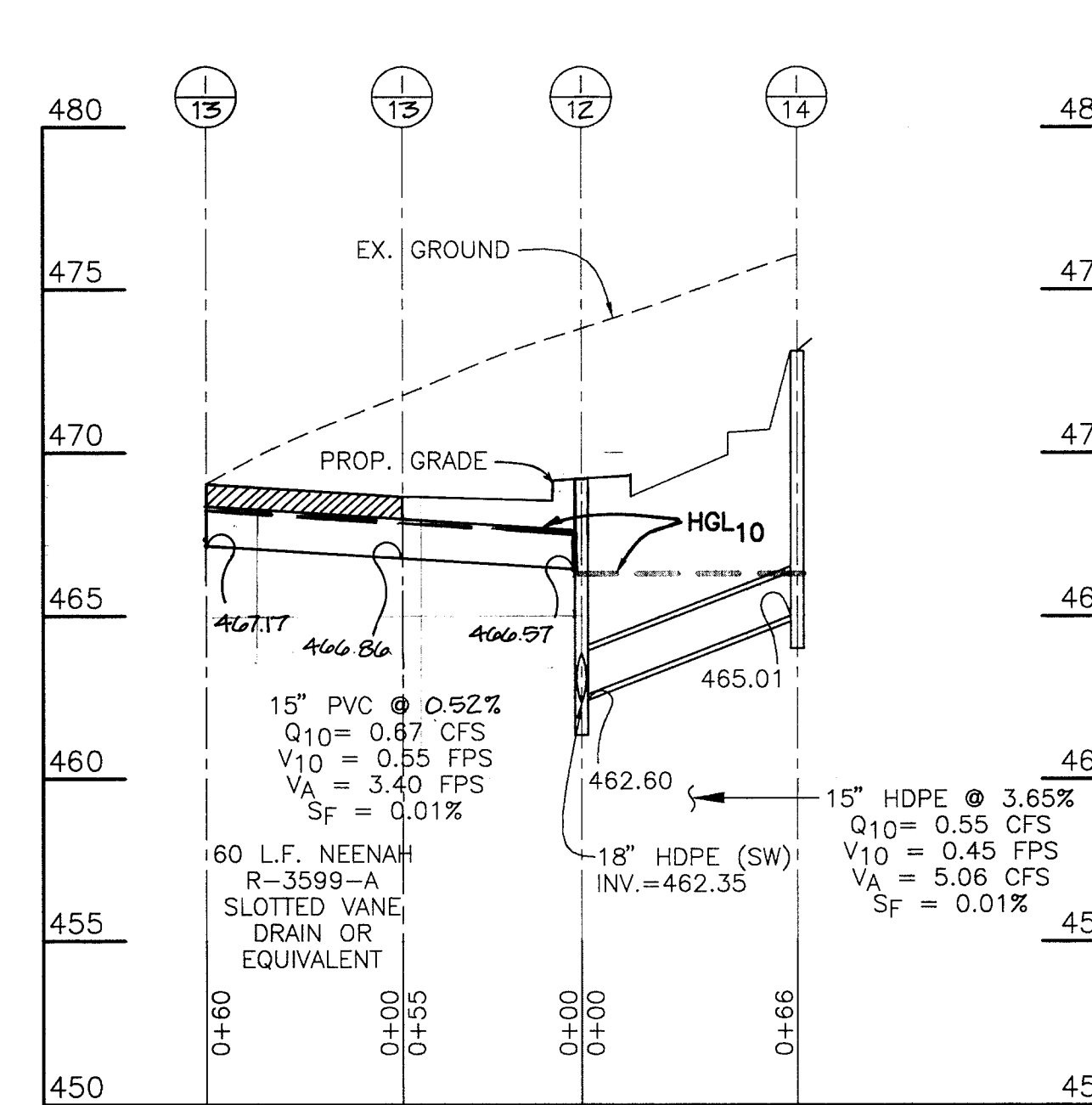
**STORM DRAIN PROFILE
FROM MH-5 TO I-16**



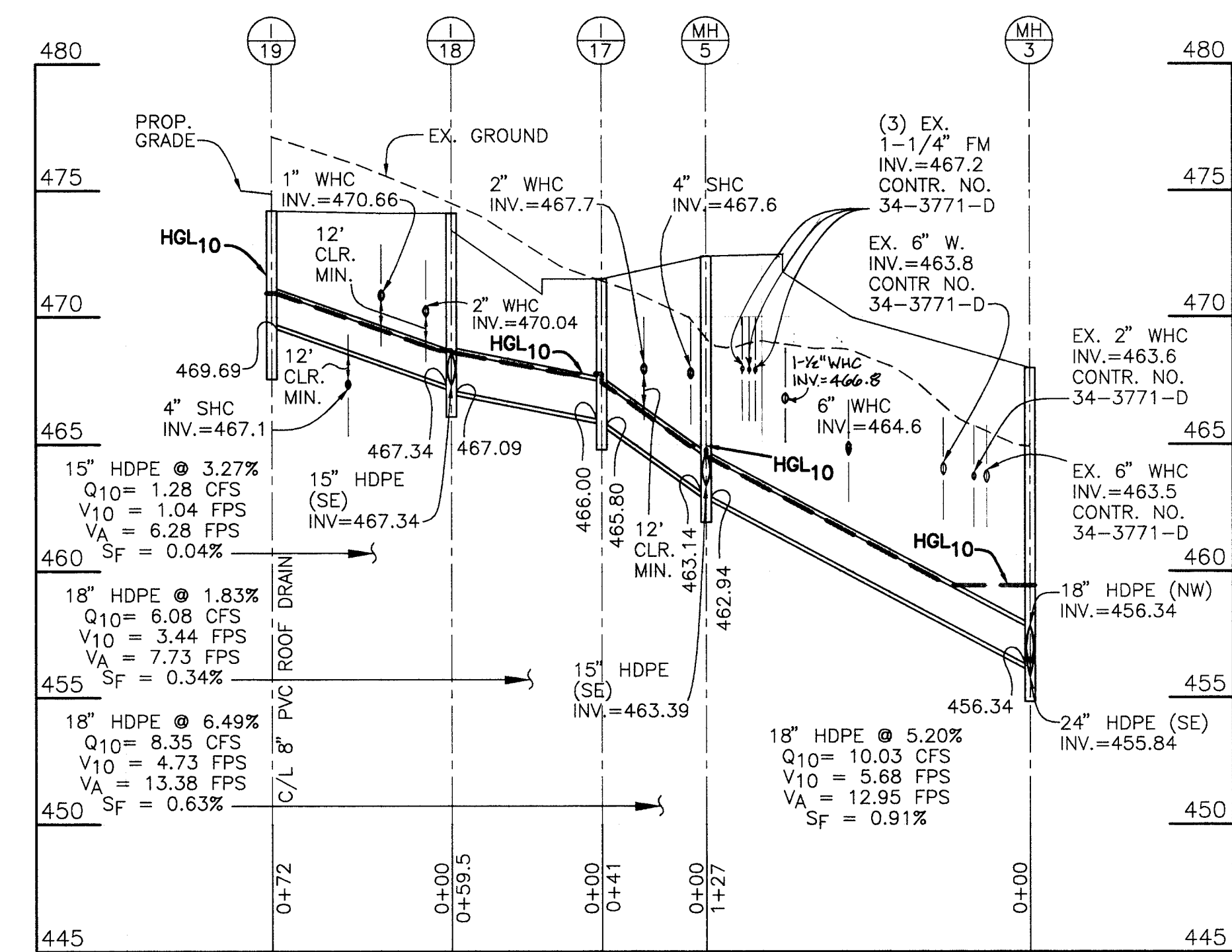
**STORM DRAIN PROFILE
FROM I-18 TO EX. CMP**



**STORM DRAIN PROFILE
ALONG MAIN ACCESS**



**STORM DRAIN PROFILE
AT END OF CAR WASH**



**STORM DRAIN PROFILE
ALONG NE ACCESS**

NO.	DATE	REVISION
1	11-23-99	REVISED STORM DRAIN PROFILES

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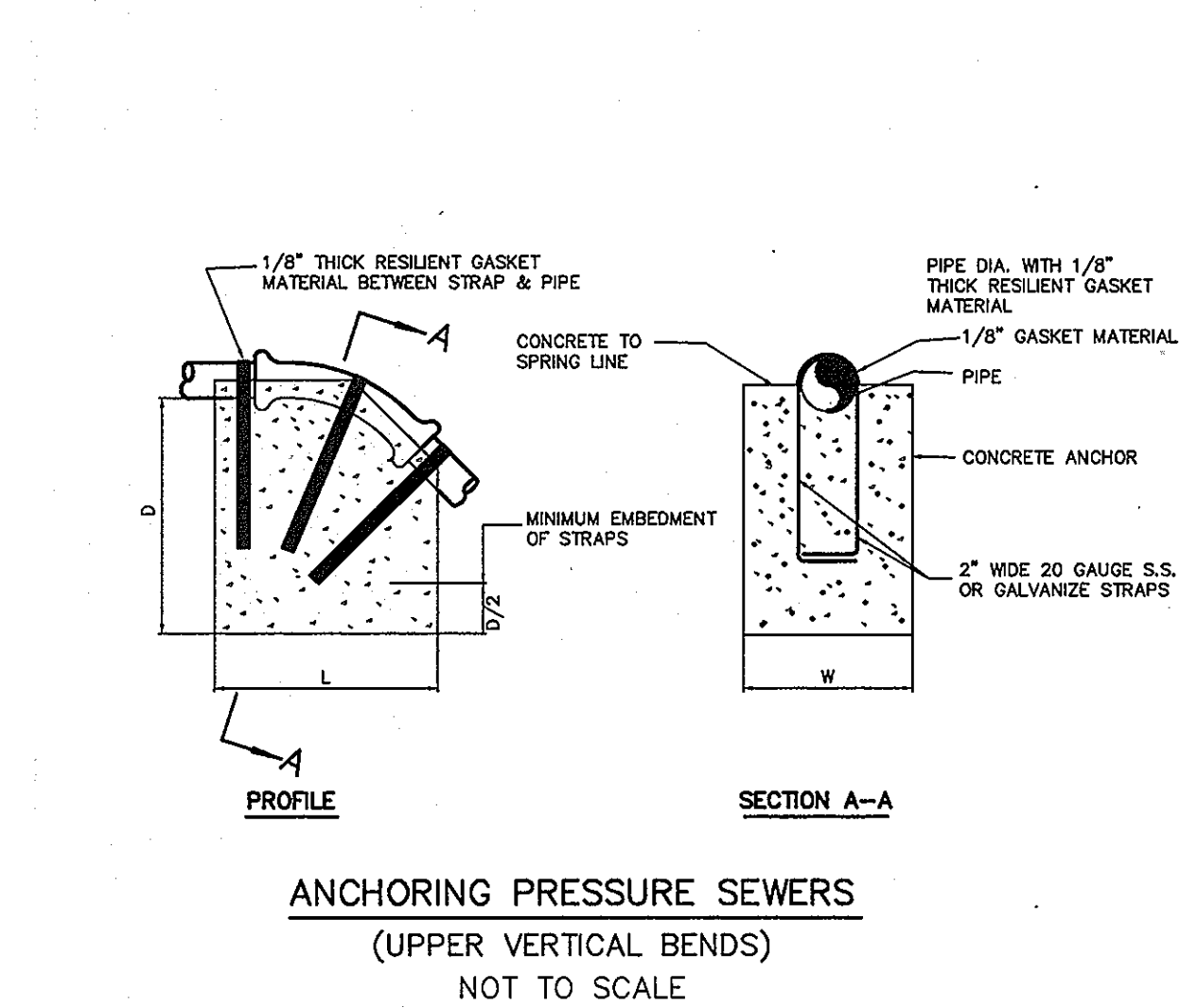
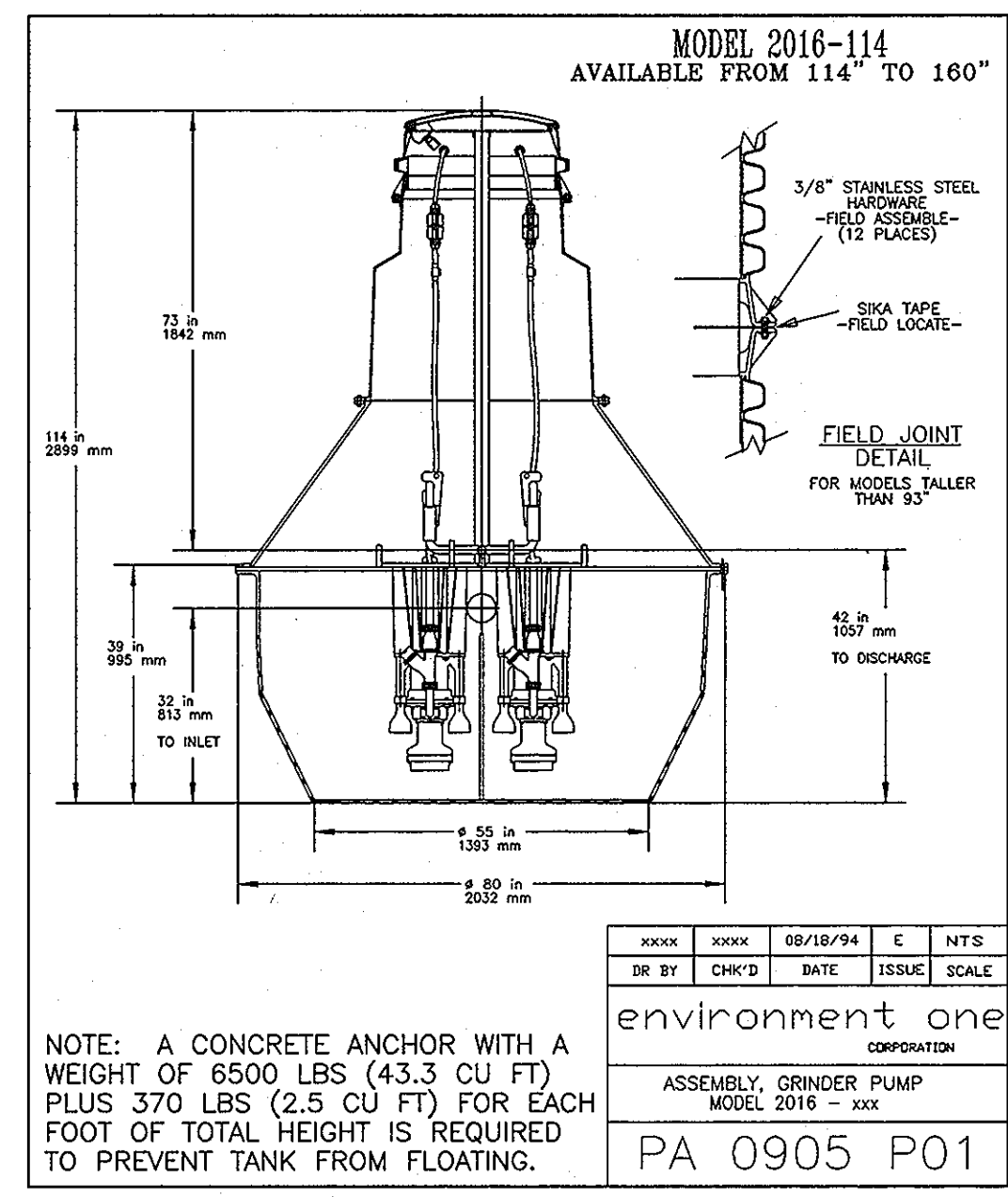
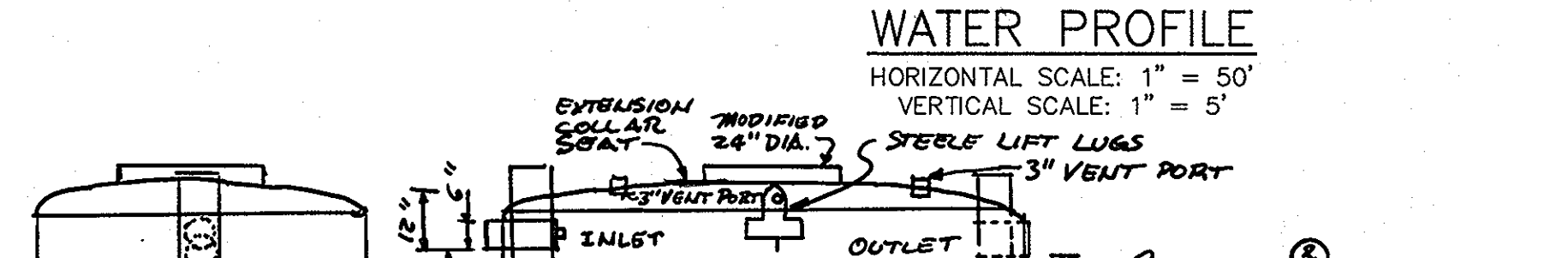
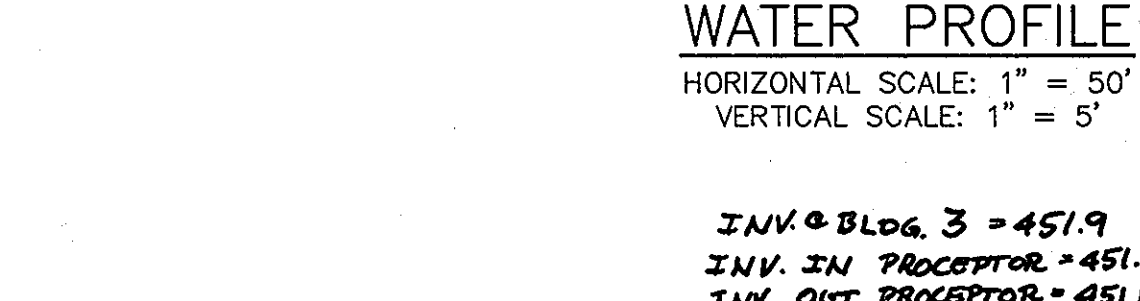
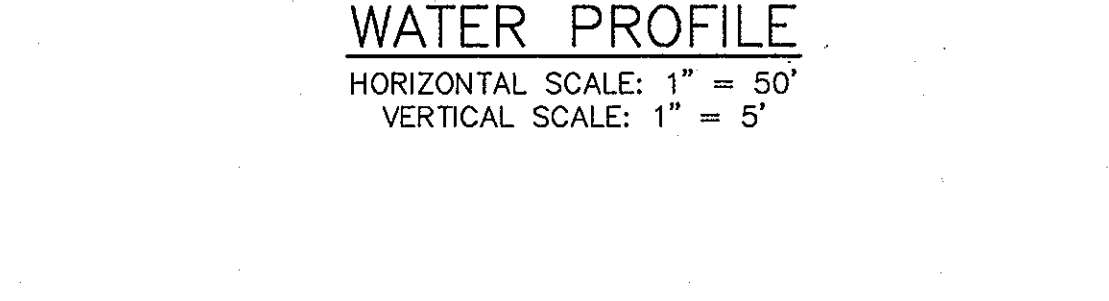
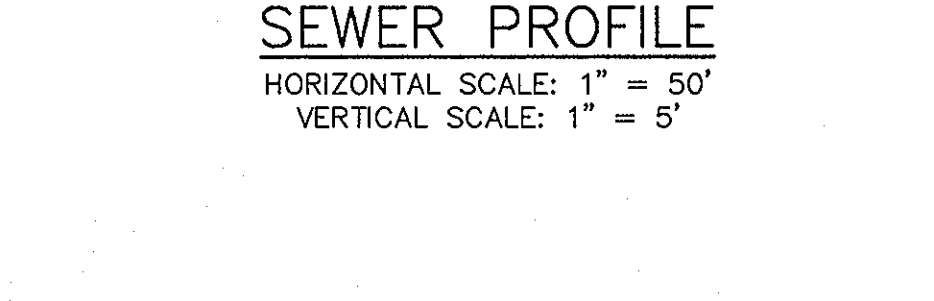
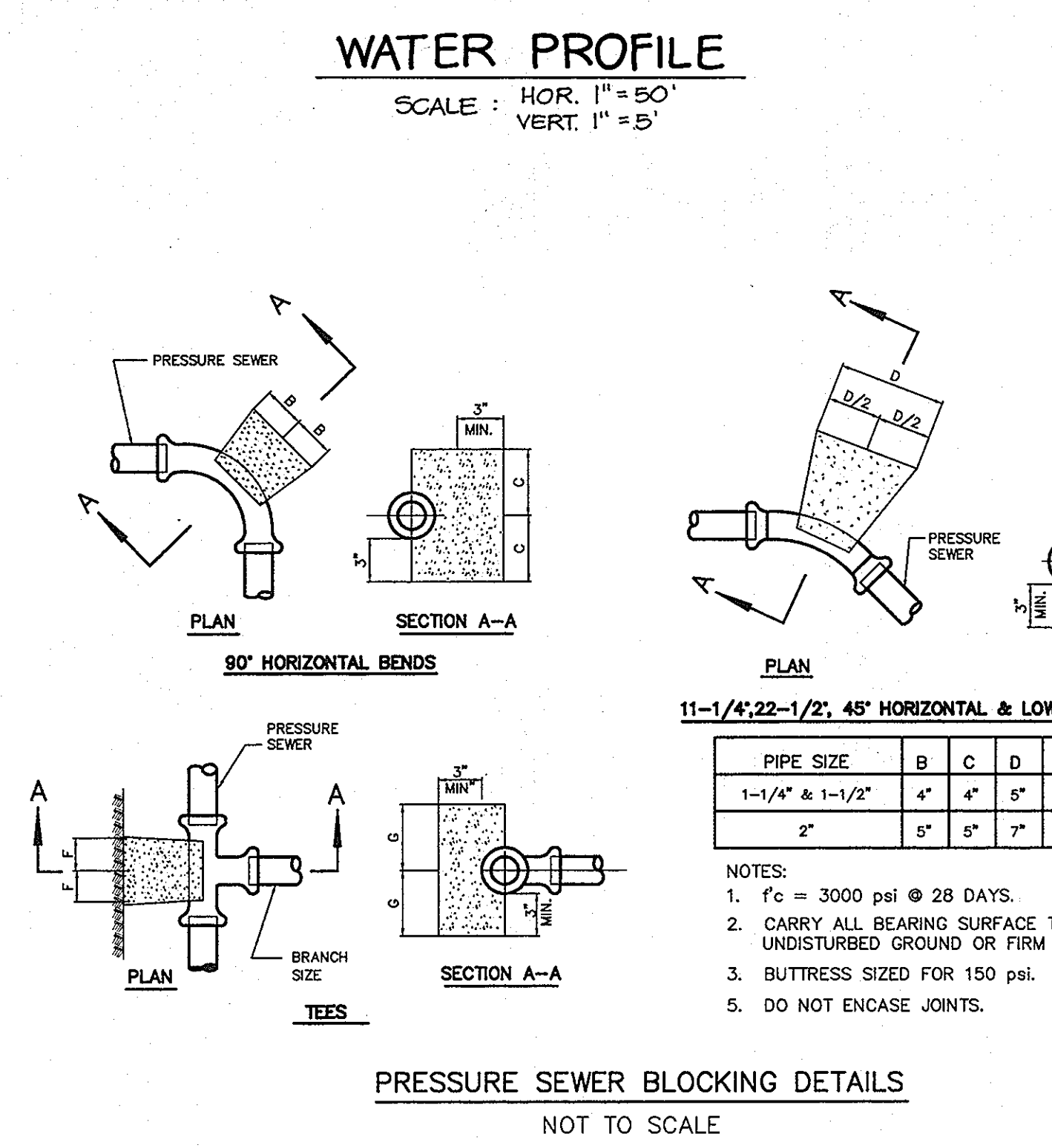
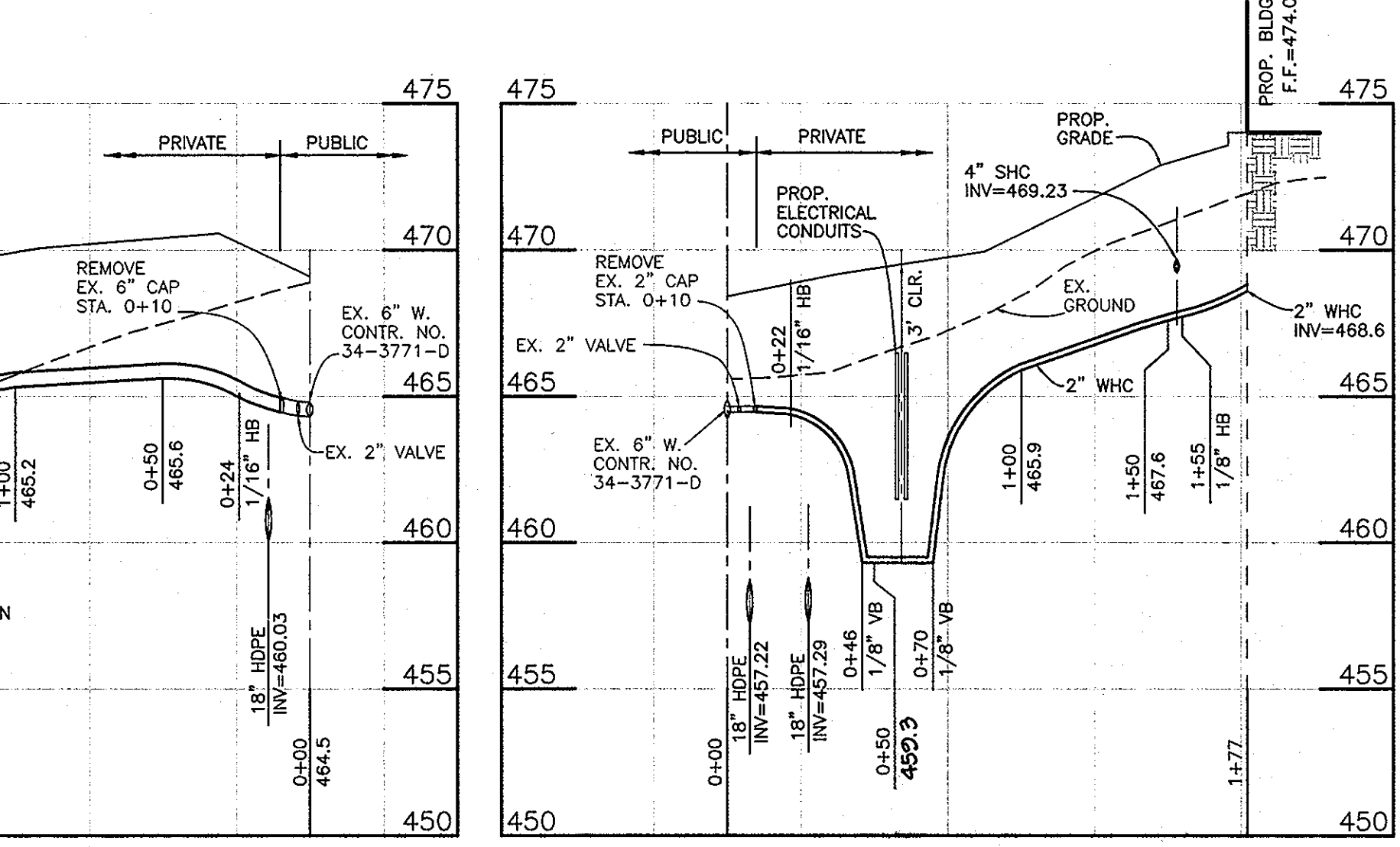
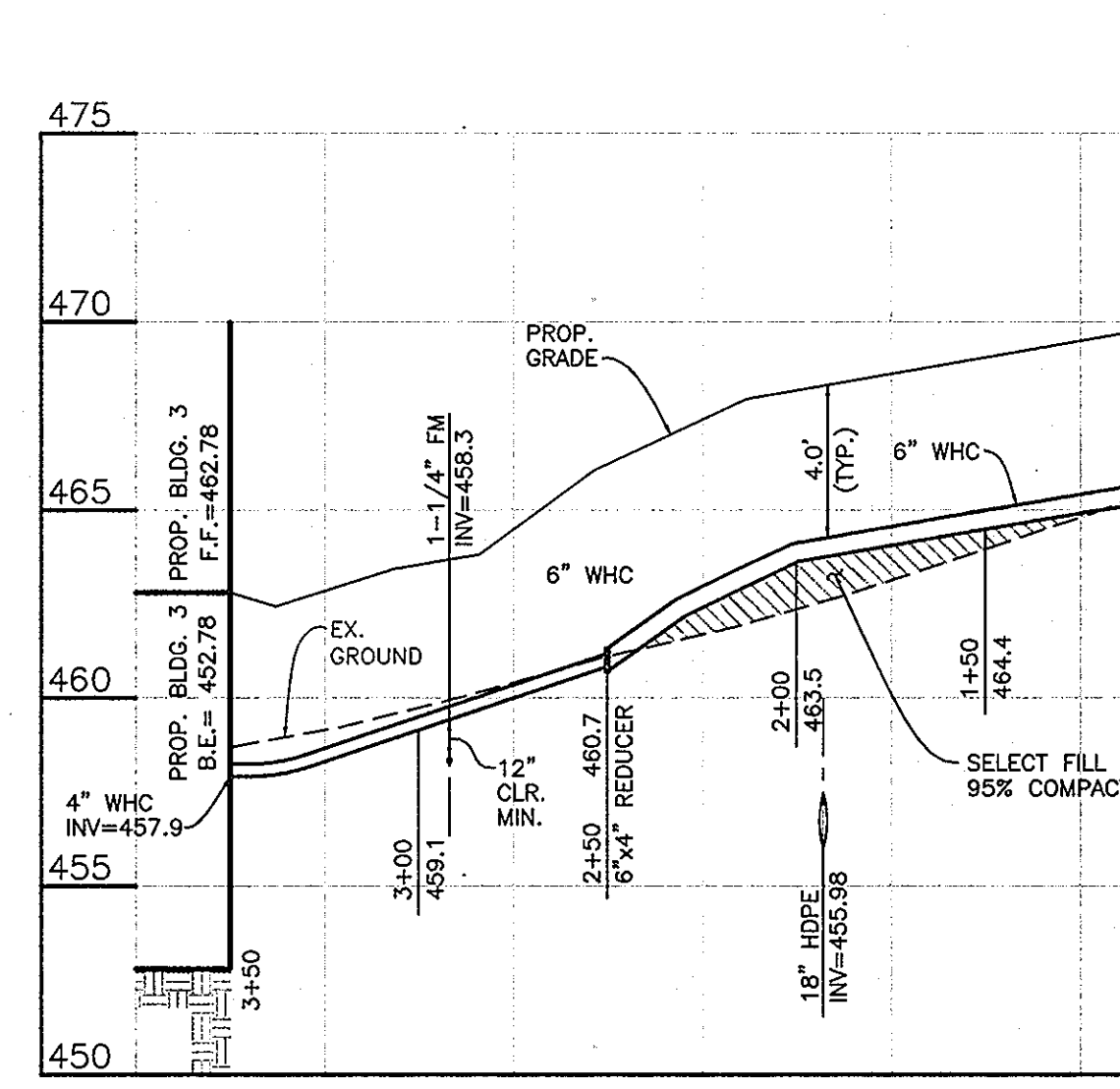
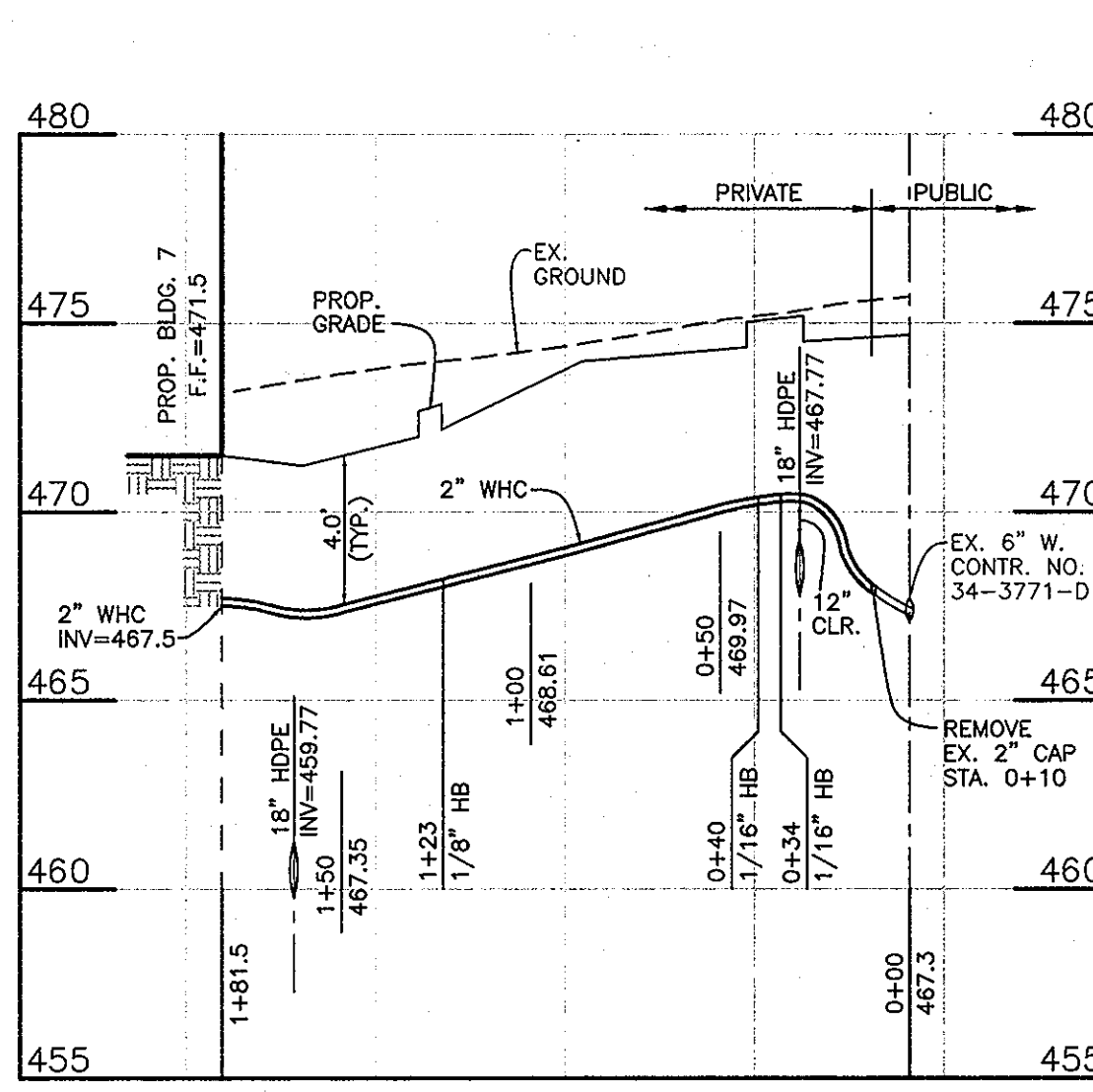
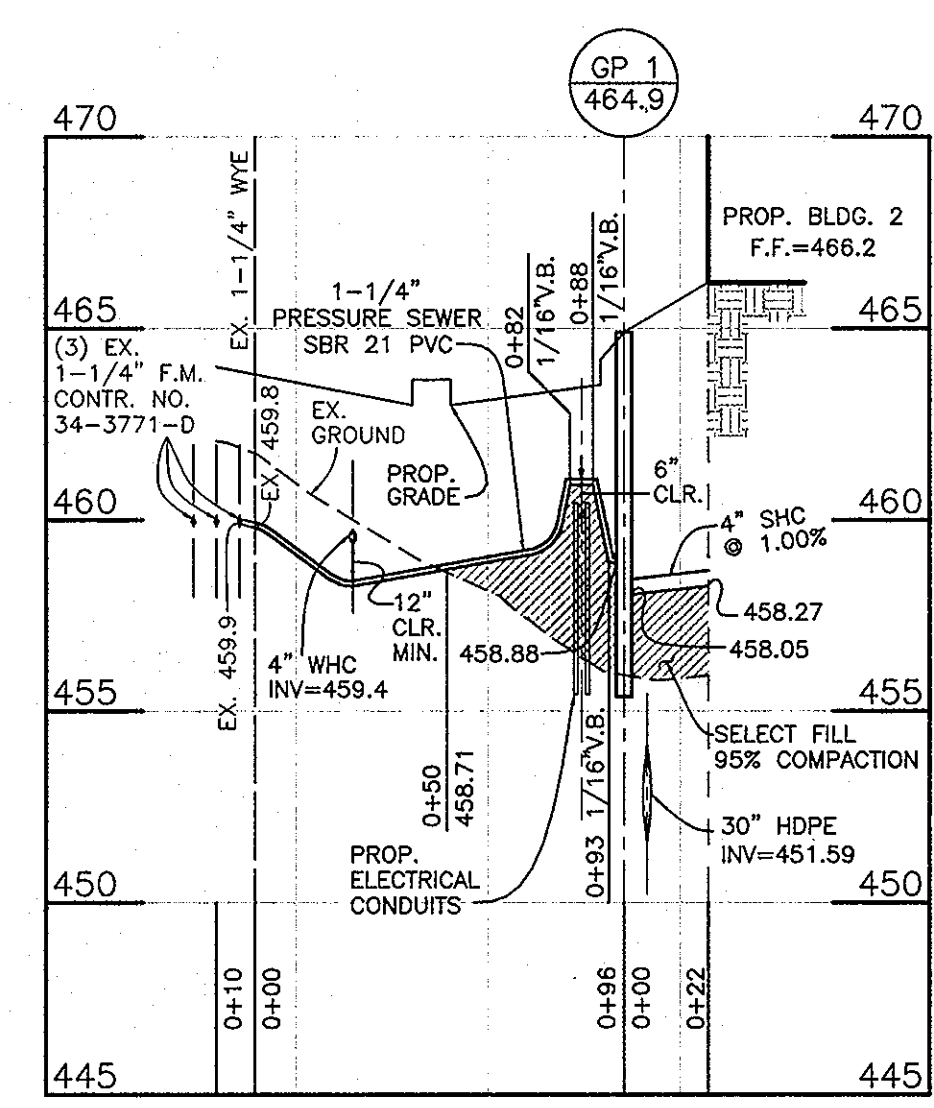
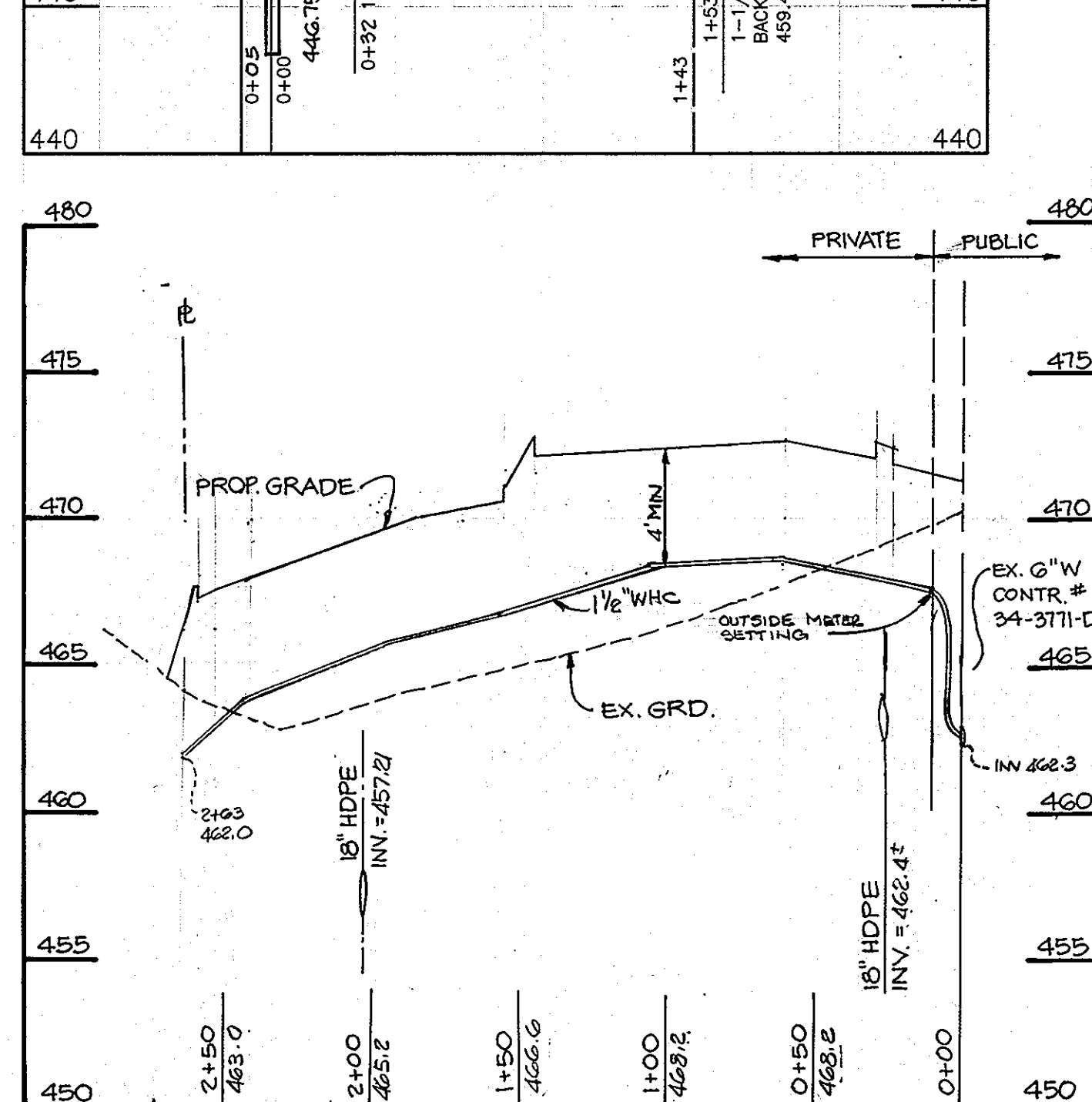
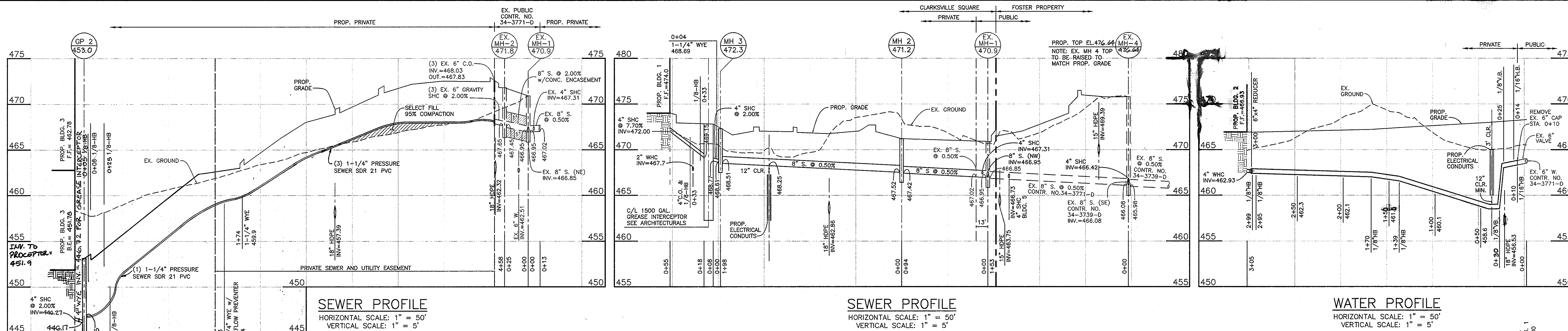
OWNER/DEVELOPER:	CLARKSVILLE SQUARE, LLC P.O. BOX 417 ELLCOTT CITY, MD 21041 PHONE: 410-465-4244
PROJECT:	CLARKSVILLE SQUARE SHOPPING CENTER AND PARCELS A-3 & A-4 OF THE FOSTER PROPERTY
LOCATION:	TAX MAP 34 - BLOCK 6 PARCELS 20, 21, 22, p/a214 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE:	STORM DRAIN PROFILES
DATE:	JANUARY, 1999 AUGUST, 1999
PROJECT NO.:	1162
SCALE:	AS SHOWN
DRAWING	6 OF 13

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Howard Hamilton
 CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 8/20/99

Cindy Hamilton
 CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 9/15/99

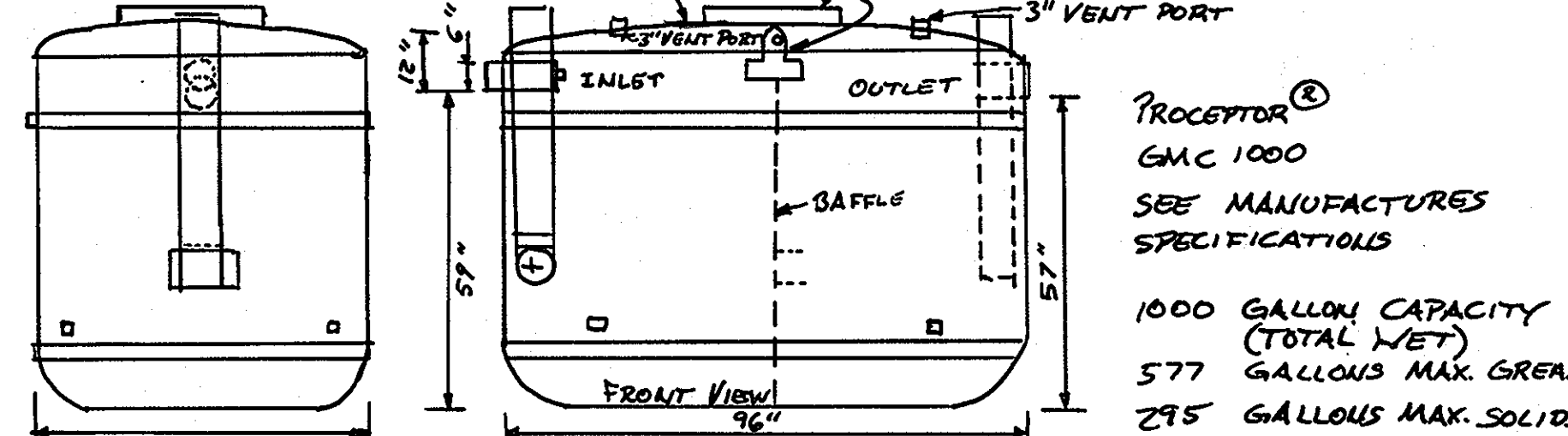
James P. Sauter
 DIRECTOR
 DATE: 9/20/99



INV. IN PROCEPTOR = 451.3
 INV. OUT PROCEPTOR = 451.1
 TOP PROCEPTOR = 452.3
 INV. TO 4" SHC BEFORE GRINDER PUMP = 446.3

BEND	L	1-1/4"	1-1/2"
11-1/4"	L	12"	12"
	D	10"	10"
22-1/2"	L	15"	15"
	D	15"	15"
45"	L	12"	12"
	D	20"	20"
	D	12"	12"

- NOTES:
1. PAINT EXPOSED GALVANIZE STRAPS WITH TWO(2) COATS OF BITUMINOUS PAINT.
 2. f'c = 3000 psi AT 28 DAYS.
 3. CARRY ALL BEARING SURFACE TO UNDISTURBED EARTH OR FIRM SUBGRADE.
 4. CONCRETE ANCHORAGE DIMENSIONS ARE BASED ON TOTAL PRESSURE OF 150 PSI.



NO.	DATE	REVISION
3	1-08-02	ADD GREASE INTERCEPTOR BLDG 3; REV. RET. WALL & DECK AT BLDG 3
2	4-17-00	REVISE SEWER PROFILE TO BLDG 3 AND GRINDER PUMP ELEV.
1	11-3-99	ADD WATER PROFILE AND REV. SEWER PROFILE

BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS
 8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6844

OWNER/DEVELOPER: CLARKSVILLE SQUARE, LLC
 PROJECT: CLARKSVILLE SQUARE SHOPPING CENTER AND PARCELS A-3 & A-4 OF THE FOSTER PROPERTY
 LOCATION: TAX MAP 34 - BLOCK 6 PARCELS 20, 21, 22, p/214 5TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 TITLE: WATER AND SEWER PROFILES & DETAILS
 DATE: JANUARY, 1999 PROJECT NO. 1162
 AUGUST, 1999
 SCALE: AS SHOWN DRAWING 7 OF 14

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 Chief, Division of Land Development

ENVIRONMENT ONE GRINDER PUMP DATA TABLE

BLDG. NO.	TOP ELEVATION	BOTTOM ELEVATION	TOTAL LENGTH	INLET ELEVATION	DISCHARGE ELEVATION	VOLUME OF CONCRETE FOR CONCRETE ANCHOR	REMARK
1	464.9	455.38	9.52'	458.05	458.88	67.1 C.F.	MODEL NO. 2016 (DUPEX)
2	453.0	443.5	9.5'	446.17	446.75	67.1 C.F.	MODEL NO. 2016 (DUPEX)

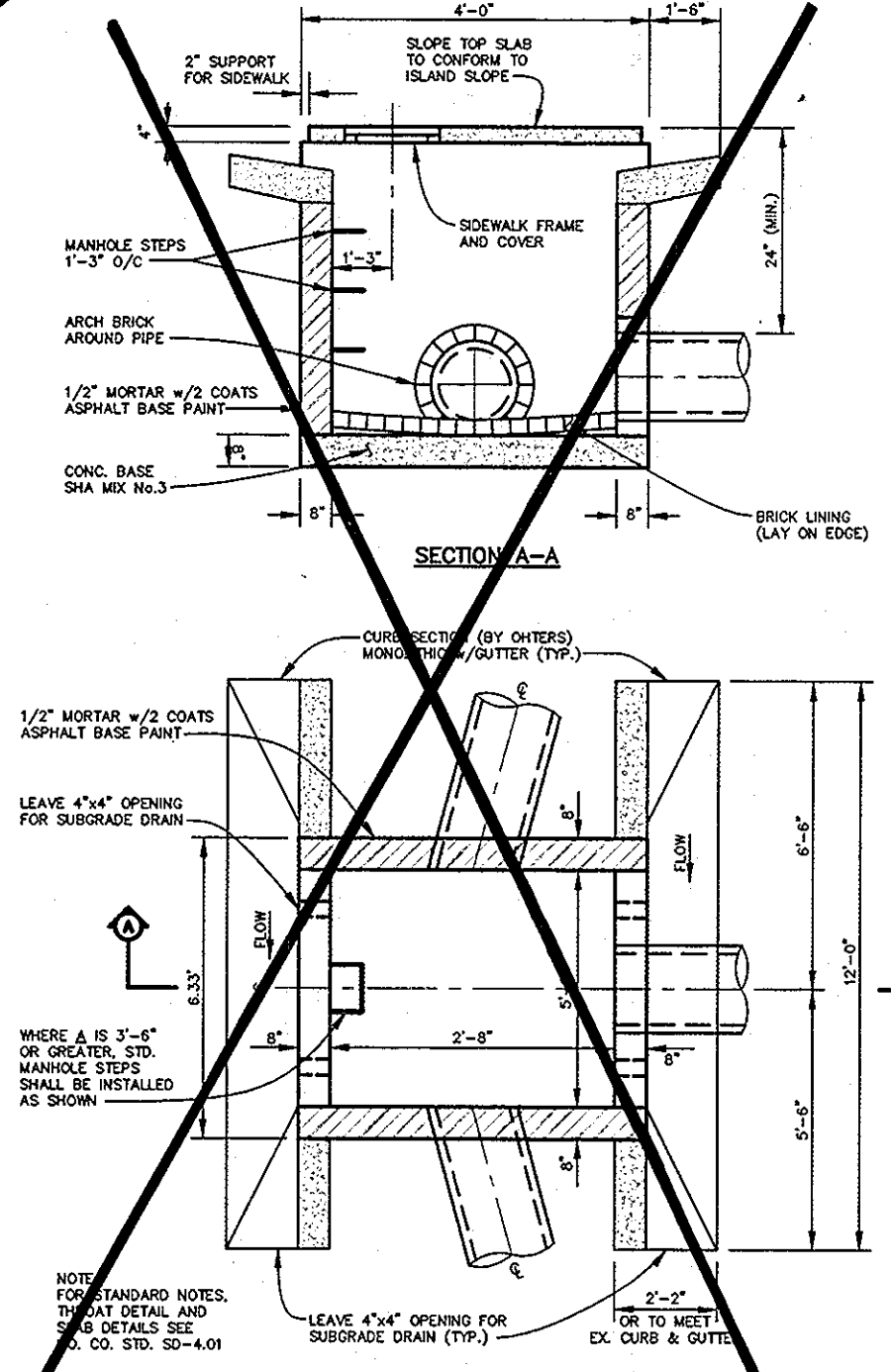
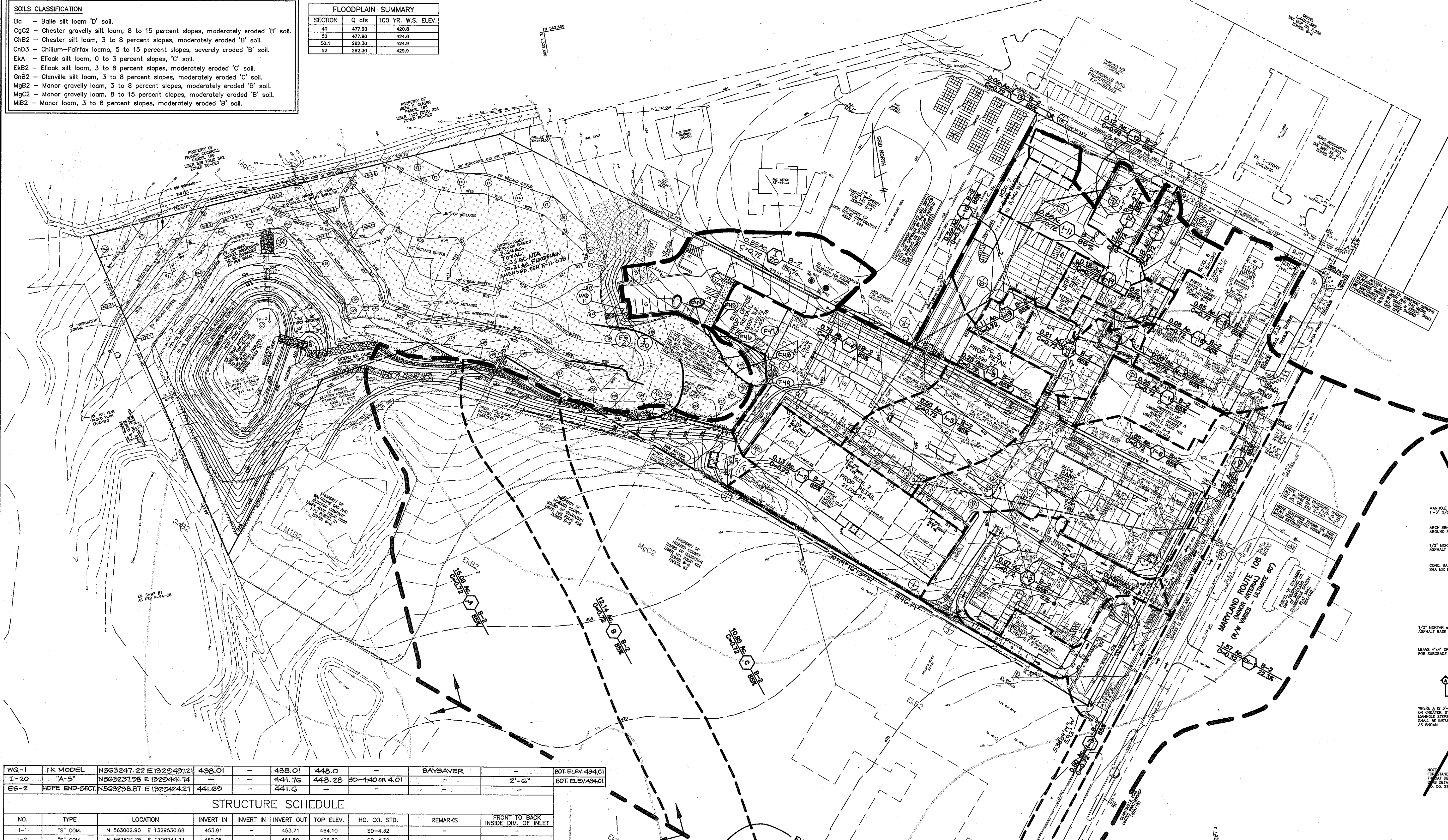
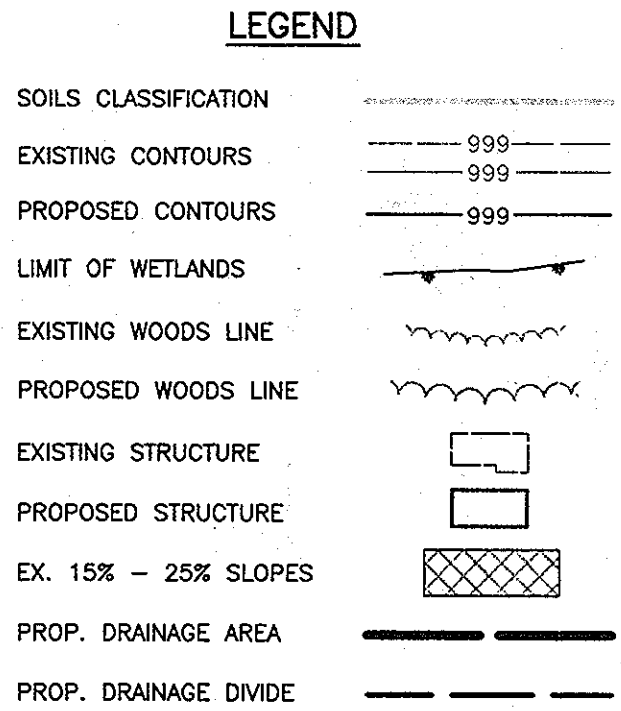
NOTE: SEE MANUFACTURER'S MANUAL FOR GRINDER PUMP INSTALLATION REQUIREMENT, PROCEDURE, AND ELECTRICAL CONNECTION.

SOILS CLASSIFICATION

Ba - Baile silt loam 'D' soil.
 CgC2 - Chester gravelly silt loam, 8 to 15 percent slopes, moderately eroded 'B' soil.
 ChB2 - Chester silt loam, 3 to 8 percent slopes, moderately eroded 'B' soil.
 CnD3 - Chillum-Fairfax loams, 5 to 15 percent slopes, severely eroded 'B' soil.
 EKA - Elick silt loam, 0 to 3 percent slopes, 'C' soil.
 EKB2 - Elick silt loam, 3 to 8 percent slopes, moderately eroded 'C' soil.
 GNB2 - Glenville silt loam, 3 to 8 percent slopes, moderately eroded 'C' soil.
 MgB2 - Manor gravelly loam, 3 to 8 percent slopes, moderately eroded 'B' soil.
 MgC2 - Manor gravelly loam, 8 to 15 percent slopes, moderately eroded 'B' soil.
 MIB2 - Manor loam, 3 to 8 percent slopes, moderately eroded 'B' soil.

FLOODPLAIN SUMMARY

SECTION	Q cfs	100 YR. W.S. ELEV.
40	477.90	420.8
50	477.90	424.6
50.1	282.30	424.9
52	282.30	429.9



WG-1	IK MODEL	N563247.22 E 1320431.2	438.01	448.0	448.0	SD-4.40 OR 4.01	BAYSAYER			BOT. ELEV. 434.01
I-20	"A-5"	N563237.98 E 1320441.74	441.76	448.28	448.28	SD-4.40 OR 4.01				BOT. ELEV. 434.01
ES-2	HOPE END-SECTION	N563238.87 E 1320424.27	441.60	441.6	441.6					

STRUCTURE SCHEDULE

NO.	TYPE	LOCATION	INVERT IN	INVERT OUT	TOP ELEV.	HO. CO. STD.	REMARKS	FRONT TO BACK INSIDE DIM. OF INLET
I-1	"S" COM.	N 563002.90 E 1329530.68	453.91	453.71	464.10	SD-4.32		
I-2	"S" COM.	N 562824.75 E 1329741.31	462.05	461.80	466.89	SD-4.32		
I-3	"S" COM.	N 562793.53 E 1329785.37	462.05	464.71	471.60	SD-4.32		
I-4	DOUBLE "S" COMB.	N 563144.26 E 1329609.19	453.49	452.99	461.10	SD-4.34		
I-5	"S" COM.	N 563039.49 E 1329697.44	454.27	454.07	466.10	SD-4.32		
I-6	"S" COM.	N 562862.53 E 1329774.17	454.27	454.07	466.10	SD-4.32		
I-7	C.O.S. 15	N 562851.06 E 1330089.32	471.76	471.51	476.77	MHSA MD 374.63		2'-0" THROAT
I-8	"S" COM.	N 563136.20 E 1329790.20	457.71	457.51	469.40	SD-4.32		
I-9	"A-5"	N 563176.87 E 1329886.91	459.20	458.84	472.4	SD-4.40 or SD-4.01		2'-6"
I-10	"A-5"	N 563182.40 E 1329892.78	459.41	459.21	471.08	SD-4.40 or SD-4.01		2'-6"
I-11	"6"	N 563286.66 E 1329976.26	461.01	460.81	471.00			2'-8"
MH-7	STD. PRE-CAST	N 563240.16 E 1330062.16	462.07	461.87	469.70	Gr-5.12		
I-12	"A-5"	N 563312.81 E 1330078.32	462.60	462.35	468.88	SD-4.40 or SD-4.01		2'-6"
I-14	"A-5"	N 563272.75 E 1330130.78	462.60	462.35	473.68	SD-4.40 or SD-4.01		2'-6"
I-13	SLOT VANE DRAIN	(W) N 563372.99 E 1329980.90 (E) N 563341.98 E 1330031.61	467.17	466.86	469.00	N/A		
I-16	"A-5"	N 563004.76 E 1329966.71	463.00	463.82	471.50	SD-4.40 or SD-4.01		2'-6"
I-17	"A-5"	N 563063.95 E 1329955.29	466.00	465.80	472.08	SD-4.40 or SD-4.01		2'-6"
I-18	"A-5"	N 563113.10 E 1329988.83	467.34	467.34	467.09	SD-4.40 or SD-4.01		2'-6"
I-19	"A-5"	N 563170.03 E 1330033.57	467.34	470.39	474.78	SD-4.40 or SD-4.01		2'-6"
EX-INLET		N 562816.25 E 1330135.43	467.34	473.5	476.46			
MH-1	STD. PRE-CAST	N 563084.60 E 1329551.32	451.11	450.31	463.40	0-5.12		
MH-2	STD. PRE-CAST	N 563118.08 E 1329604.96	452.32	451.27	451.07	0-5.12		
MH-3	STD. PRE-CAST	N 562932.57 E 1329849.87	456.34	456.34	455.84	0-5.12		
MH-4	STD. PRE-CAST	N 562858.56 E 1330034.51	466.00	465.81	471.70	0-5.12		
MH-5	STD. PRE-CAST	N 563032.00 E 1329929.28	463.14	463.39	472.40	0-5.12		
MH-6	STD. PRE-CAST	N 563075.09 E 1330050.74	475.70	470.94	473.00	0-5.12		
ES-1	HOPE END-SECTION	N 563104.39 E 1329452.44	448.10	448.05	448.05			

REVISION

NO.	DATE	REVISION
3	6-14-11	REVISE LOT LINE, STREAM, STREAM BUFFER & FCE
4	4-17-00	REV. BLDG. 3, UTILITIES, PARKING, GRADING, ADD I-20, ES-2 & WG-1 TO STRUCTURE SCHEDULE
1	11-3-99	REV. BLDGS., PARKING, STORM DRAINS & DRAINAGE AREAS, STRUCT. SCHEDULE

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chris Hanter
 CHIEF, DIVISION LAND DEVELOPMENT

Paul Rutter
 DIRECTOR

8/20/99
 9/10/99
 9/20/99

BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS

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 PHONE: 410-465-6105 FAX: 410-465-6844

OWNER/DEVELOPER: CLARKSVILLE SQUARE, LLC
 P.O. BOX 417
 ELLICOTT CITY, MD 21041
 PHONE: 410-465-4244

PROJECT: CLARKSVILLE SQUARE SHOPPING CENTER AND PARCELS A-3 & A-4 OF THE FOSTER PROPERTY

LOCATION: TAX MAP 34 - BLOCK 6
 PARCELS 20, 21, 22, 1/0214
 5th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE: STORM DRAIN DRAINAGE AREA MAP

DATE: JANUARY, 1999
 AUGUST, 1999

PROJECT NO. 1162

Design: MLV/DAM Draft: MGR

SCALE: AS SHOWN DRAWING 8 OF 14

SDP-99-69

POND CONSTRUCTION SPECIFICATIONS

Site Preparation
 Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed and stripped of topsoil. All trees, vegetation, roots and other objectionable material shall be removed. Channel banks and sharp breaks shall be sloped to no steeper than 1:1.
 Areas to be covered by the reservoir will be cleared of all trees, brush, logs, fences, rubbish and other objectionable material unless otherwise designated on the plans. Trees, brush and stumps shall be cut approximately level with the ground surface. For dry stormwater management ponds, a minimum of a 50 foot radius around the inlet structure shall be cleared.
 All cleared and grubbed material shall be disposed of outside and below the limits of the dam and reservoir as directed by the owner or his representative. When specified, a sufficient quantity of topsoil will be stockpiled in a suitable location for use on the embankment and other designated areas.

Earth Fill
 Material - The fill material shall be taken from approved designated borrow areas. It shall be free of roots, stumps, wood, rubbish, stones greater than 6", trees or other objectionable materials. Fill material for the center of the embankment and cut-off trench shall conform to Unified Soil Classification CC, SC, CK or CL. Consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.
 Placement - Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 5 inch thick (before compaction) layers which are to be continuous over the entire length of the fill. The most permeable borrow material shall be placed in the downstream portions of the embankment. The principal spillway must be installed concurrently with fill placement and not excavated into the embankment.
 Compaction - The movement of the hauling and spreading equipment over the fill shall be controlled so that the entire surface of each lift shall be traversed by not less than one tread track of the equipment or compaction shall be achieved by a minimum of four complete passes of a sheepsfoot, rubber lined or vibratory roller. Fill material shall contain sufficient moisture such that the required degree of compaction will be obtained with the equipment used. The fill material shall contain sufficient moisture so that if formed into a ball it will not crumble yet not be so wet that water can be squeezed out.
 Where a minimum required density is specified, it shall not be less than 95% of maximum dry density with a moisture content within +/- 2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and it is to be certified by the Engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99.

Cut Off Trench - The cutoff trench shall be excavated into impervious material along or parallel to the centerline of the embankment as shown on the plans. The bottom width of the trench shall be governed by the equipment used for excavation. The minimum width being four feet. The depth shall be at least four feet below existing grade or as shown on the plans. The bottom of the trench shall be 1 to 1 or flatter. The backfill shall be compacted with construction equipment, rollers, or hand tampers to assure maximum density and minimum permeability.
Structure Backfill
 Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not to exceed four inches in thickness and compacted by hand tampers or other manually directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24" or greater over the structure or pipe.

Pipe Conduits
 All pipes shall be circular in cross section.
 Corrugated Metal Pipe - All of the following criteria shall apply for corrugated metal pipe:
 1. Materials - (Steel Pipe) - This pipe and its appurtenances shall be galvanized and fully bituminous coated and shall conform to the requirements of AASHTO Specification M-196 or M-211 with watertight coupling bands. Any bituminous coating damaged or otherwise removed shall be replaced with cold applied bituminous coating compound. Steel pipes with polymeric coatings shall have a minimum coating thickness of 0.010 inch (10 mil) on the inside and 0.015 inch (15 mil) on the outside. The following coatings or an approved equal may be used: Nexon, Plasticoat, Blue-Klad, and Beth-Dur-Loy. Coated corrugated steel pipe shall meet the requirements of AASHTO M-245 and M-246.
 2. Coupling bands, anti-seep collars, end sections, etc. must be insulated from dissimilar materials with use of rubber or plastic insulating materials of at least 24 mils in thickness.
 3. Connections - All connections with pipes must be completely watertight. The drain pipe or barrel connection to the riser shall be welded all around when the pipe and riser are metal. Anti-seep collars shall be connected to the pipe in such a manner as to be completely watertight. Dimple bands are not considered to be watertight.
 All connections shall use a rubber or neoprene gasket when joining pipe sections. The end of each pipe shall be rolled on an adequate number of corrugations to accommodate the band width. The following type connections are acceptable for pipes less than 48" in diameter: flanges on both ends of the pipe, a 12" wide standard lap type band with 12" wide by 3/8" thick closed cell circular neoprene gaskets, and a 12" wide rubber type band with O-ring gaskets having a minimum diameter of 1/2" greater than the corrugation depth. Pipes 48" in diameter and larger shall be connected by a 24" long conical corrugated band with 12" wide by 3/8" thick closed cell circular neoprene gasket will be installed on the end of each pipe for a total of 24". Helically corrugated pipe shall have either continuously welded seams or have lock seams.
 4. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
 5. Backfilling shall conform to "Structure Backfill".
 6. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Reinforced Concrete Pipe - All of the following criteria shall apply for reinforced concrete pipe:
 1. Materials - Reinforced concrete pipe shall have bell and spigot joints with rubber gaskets and shall equal or exceed ASTM designation C-361. An approved equivalent is ANCA Specification C-302.
 2. Bedding - All reinforced concrete pipe conduits shall be laid in a concrete bedding for their entire length. This bedding shall consist of high strength concrete placed under the pipe and up the sides of the pipe at least 10% of its outside diameter with a minimum thickness of 3 inches, or as shown on the drawings.
 3. Laying pipe - Bell and spigot pipe shall be placed with the bell end upstream. Joints shall be made in accordance with the recommendations of the manufacturer. The stone for rip-rap or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
 4. Backfilling shall conform to "Structure Backfill".
 5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.
 Polyvinyl Chloride (PVC) Pipe - All of the following criteria shall apply for polyvinyl chloride (PVC) pipe:
 1. Materials - PVC pipe shall be PVC-1120 or PVC-1220 conforming to ASTM D-1785 or ASTM D-2241.
 2. Joints and connections to anti-seep collars shall be completely watertight.
 3. Bedding - The pipe shall be firmly and uniformly bedded throughout its entire length. Where rock or soft, spongy or other unstable soil is encountered, all such material shall be removed and replaced with suitable earth compacted to provide adequate support.
 4. Backfilling shall conform to "Structure Backfill".
 5. Other details (anti-seep collars, valves, etc.) shall be as shown on the drawings.

Concrete
 Concrete shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standards Specifications for Construction and Materials, Section 608, Mix No. 3.
Rock Riprap
 All rock shall be dense, sound, and free from cracks, seams, and other defects conducive to accelerated weathering. The rock fragments shall be angular to subangular in shape. The least dimension of an individual rock fragment shall be not less than one third the greatest dimension of the fragment.
 The rock shall have the following properties:
 1. Bulk specific gravity (saturated surface-dry basis) not less than 2.5.
 2. Absorption not more than three percent.
 3. Soundness: Weight loss in five cycles not more than 20 percent when sodium sulfate is used.
 Bulk specific gravity and absorption shall be determined according to ASTM C 127. The test for soundness shall be performed according to ASTM C 88.
 The riprap shall be placed to the required thickness in one operation. The rock shall be delivered and placed in a manner that will insure the riprap in place shall be reasonably homogeneous with the larger rocks uniformly distributed and firmly in contact one to another with the smaller rocks filling the voids between the larger rocks. Filter cloth shall be placed under all riprap and shall meet the requirements of Maryland Department of Transportation, State Highway Administration Standards Specifications for Construction and Materials, Section 519.12.
Cure of Water during Construction
 All work on permanent structures shall be carried out in areas free from water. The Contractor shall construct and maintain all temporary dikes, levees, cofferdams, drainage channels, and stream complete passes or other structures necessary to protect the area to be occupied by the permanent works. The Contractor shall also furnish, install, operate and maintain all necessary pumping and other equipment required for removal of water from the various parts of the work and for maintaining the excavations, foundation, and other parts of the work free from water as required or directed by the engineer for constructing each part of the work. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction in any degree whatsoever of the flow of water to the spillway or outlet works and so as not to interfere in any way with the operation or maintenance of the structure. Stream diversions shall be maintained until the full flow can be passed through the permanent works. The removal of water from the required excavation and the foundation shall be accomplished in a manner and to the extent that will maintain stability of the excavated slopes and bottom of required excavations and will allow satisfactory performance of all construction operations. During the dewatering and compacting of material in required excavations, the water level at the locations being refilled shall be maintained below the bottom of the excavation at such locations which may require draining the water to pumps from which the water shall be pumped.
Stabilization
 All borrow areas shall be graded to provide proper drainage and left in a slightly condition. All exposed surfaces of the embankment, spillway, spoil or borrow areas, and berms shall be stabilized by seeding, liming, fertilizing and mulching in accordance with the Maryland Soil Conservation Service Standards and Specifications for Critical Area Planting (MD-342) or as shown on the accompanying drawings.
Erosion and Sediment Control
 Construction operations will be carried out in such a manner that erosion will be controlled and water and air pollution minimized. State and local laws concerning pollution abatement will be followed. Construction plans shall detail erosion and sediment control measures to be employed during the construction process.

Embankment and Cut-off Trench Construction
 The site should be stripped of topsoil and any other unsuitable materials from the embankment or structure area in accordance with Soil Conservation Guidelines. After stripping operations have been completed, the exposed subgrade materials should be profiled with a loaded dumptruck or similar equipment in the presence of a geotechnical engineer or his representative. For areas that are not accessible to a dump truck, the exposed materials should be observed and tested by a geotechnical engineer or his representative utilizing a Dynamic Cone Penetrometer. Any excessively soft or loose materials identified by proofrolling or penetrometer testing should be excavated to suitable firm soil, and then grades re-established by backfilling with suitable soil.
 A representative of the geotechnical Engineer should be present to monitor placement and compaction of fill for each embankment and cut-off trench in accordance with Maryland Soil Conservation Specification 378, soils considered suitable for the center of embankment and cut-off trench shall conform to Unified Soil Classification CC, SC, CK or Per SC3 378, consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

Forebay Stone Weir
 The site should be stripped of topsoil and any other unsuitable materials from the embankment or structure area in accordance with Soil Conservation Guidelines. After stripping operations have been completed, the exposed subgrade materials should be profiled with a loaded dumptruck or similar equipment in the presence of a geotechnical engineer or his representative. For areas that are not accessible to a dump truck, the exposed materials should be observed and tested by a geotechnical engineer or his representative utilizing a Dynamic Cone Penetrometer. Any excessively soft or loose materials identified by proofrolling or penetrometer testing should be excavated to suitable firm soil, and then grades re-established by backfilling with suitable soil.
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6" Dewatering Pipe Detail
 The site should be stripped of topsoil and any other unsuitable materials from the embankment or structure area in accordance with Soil Conservation Guidelines. After stripping operations have been completed, the exposed subgrade materials should be profiled with a loaded dumptruck or similar equipment in the presence of a geotechnical engineer or his representative. For areas that are not accessible to a dump truck, the exposed materials should be observed and tested by a geotechnical engineer or his representative utilizing a Dynamic Cone Penetrometer. Any excessively soft or loose materials identified by proofrolling or penetrometer testing should be excavated to suitable firm soil, and then grades re-established by backfilling with suitable soil.
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Revised Trash Rack Detail
 The site should be stripped of topsoil and any other unsuitable materials from the embankment or structure area in accordance with Soil Conservation Guidelines. After stripping operations have been completed, the exposed subgrade materials should be profiled with a loaded dumptruck or similar equipment in the presence of a geotechnical engineer or his representative. For areas that are not accessible to a dump truck, the exposed materials should be observed and tested by a geotechnical engineer or his representative utilizing a Dynamic Cone Penetrometer. Any excessively soft or loose materials identified by proofrolling or penetrometer testing should be excavated to suitable firm soil, and then grades re-established by backfilling with suitable soil.
 A representative of the geotechnical Engineer should be present to monitor placement and compaction of fill for each embankment and cut-off trench in accordance with Maryland Soil Conservation Specification 378, soils considered suitable for the center of embankment and cut-off trench shall conform to Unified Soil Classification CC, SC, CK or Per SC3 378, consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

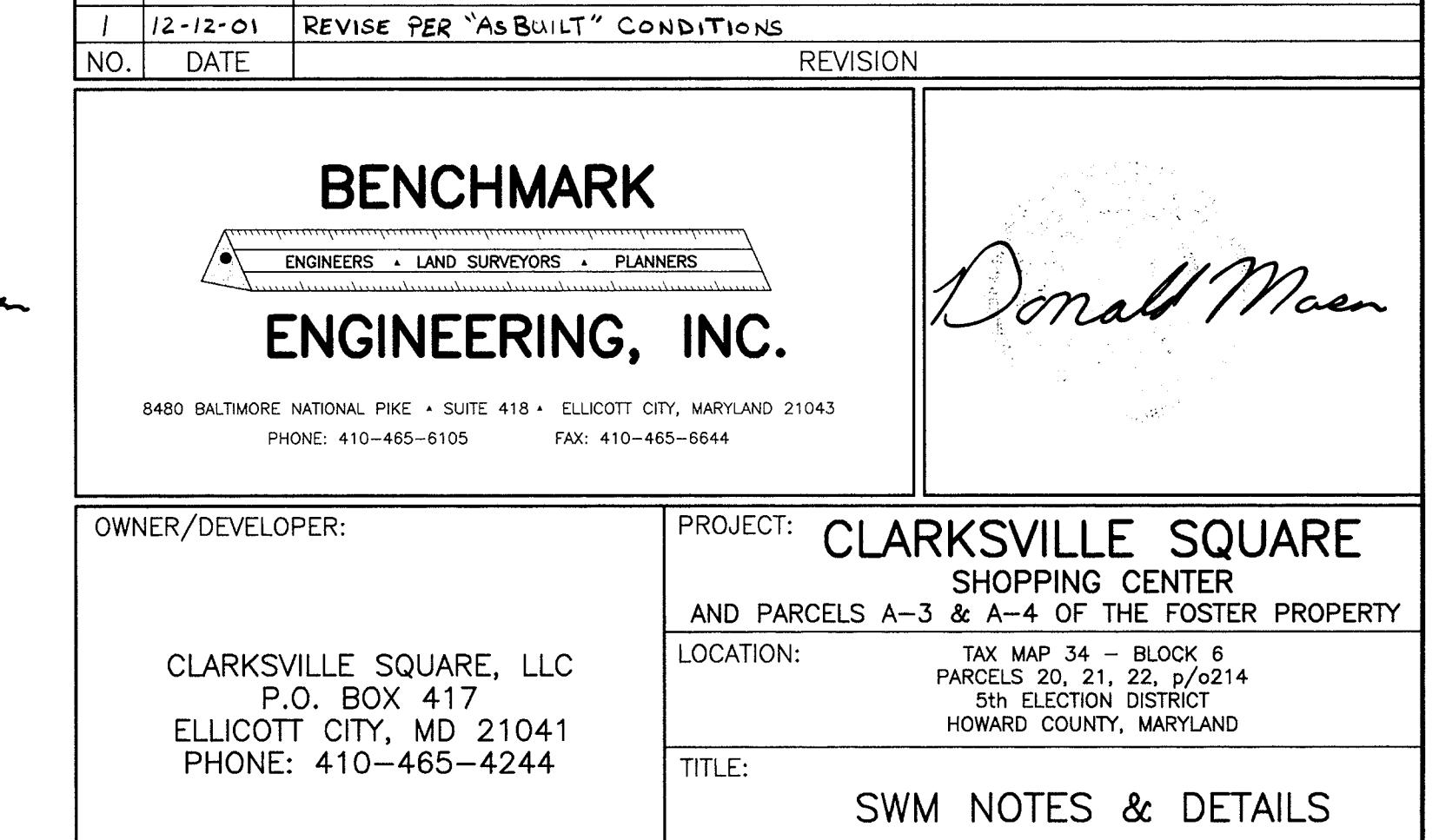
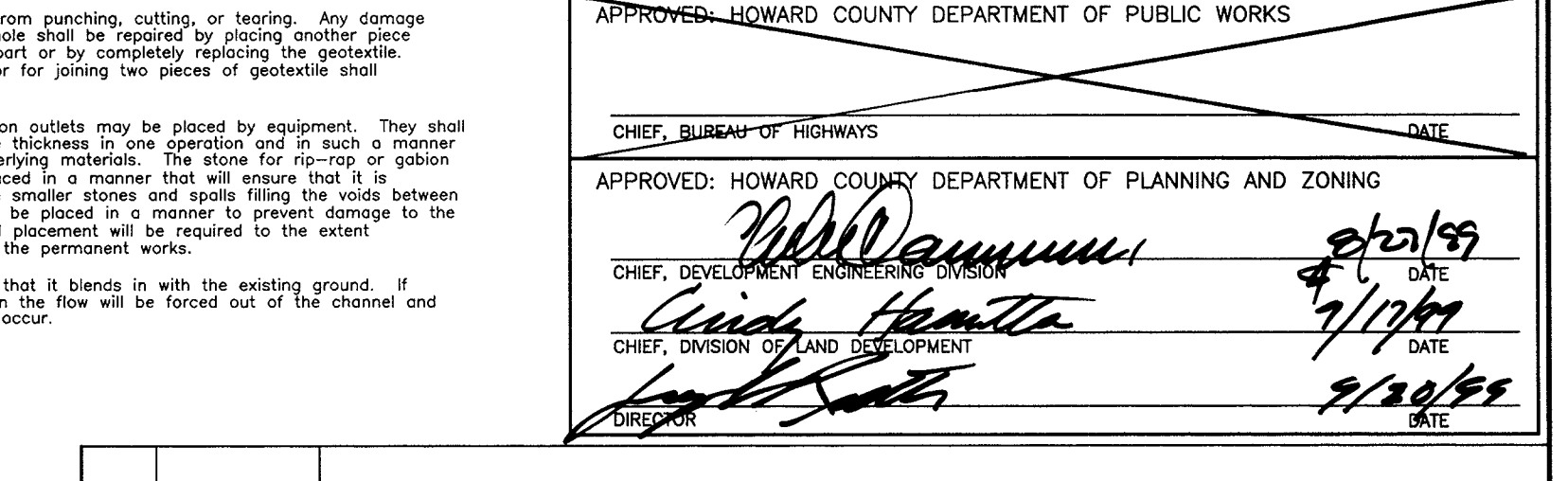
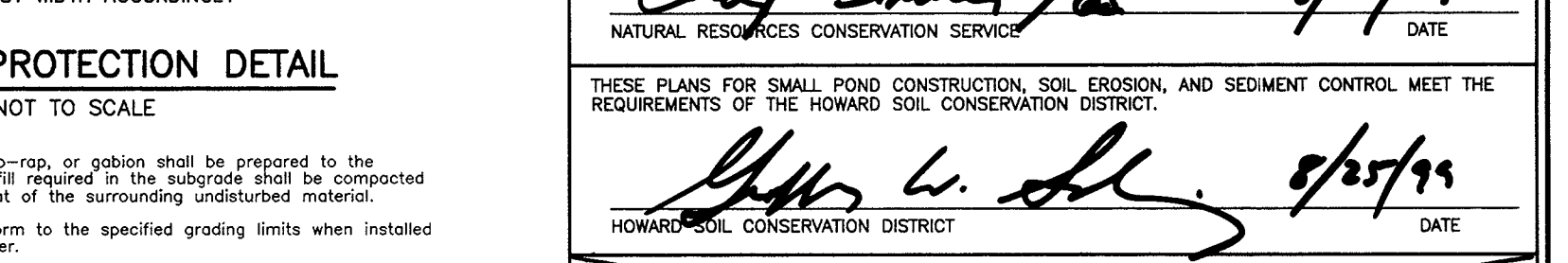
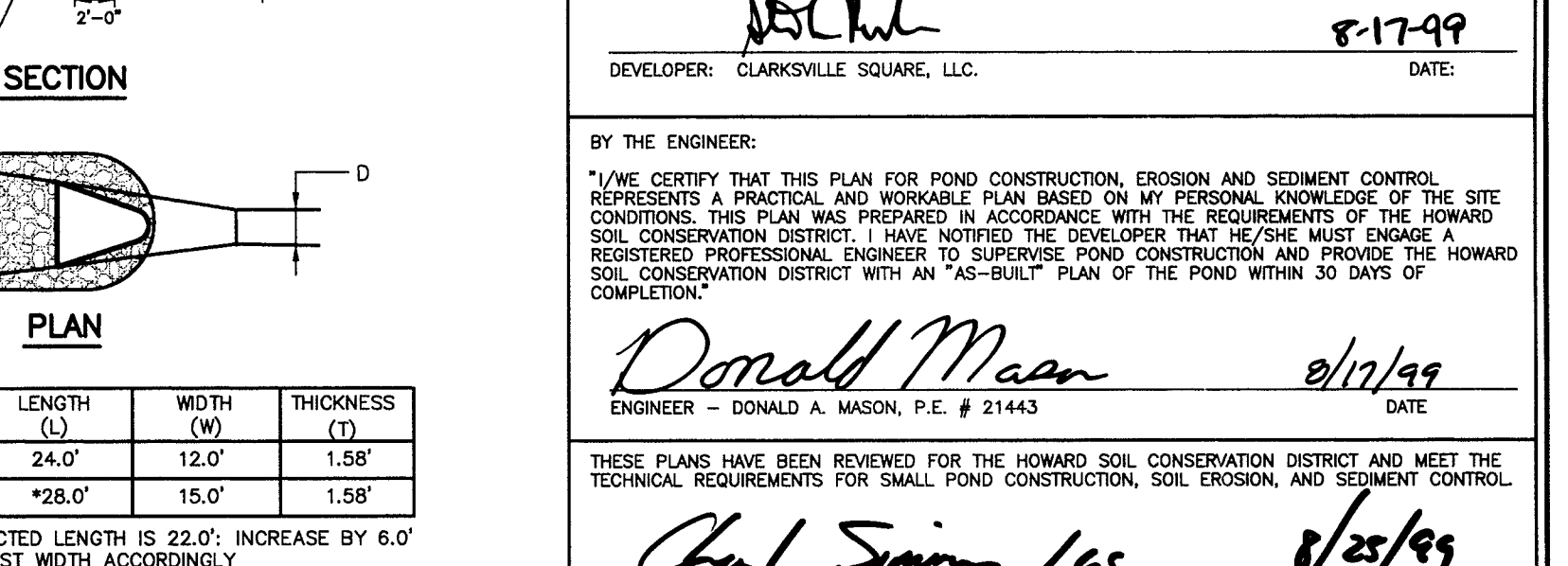
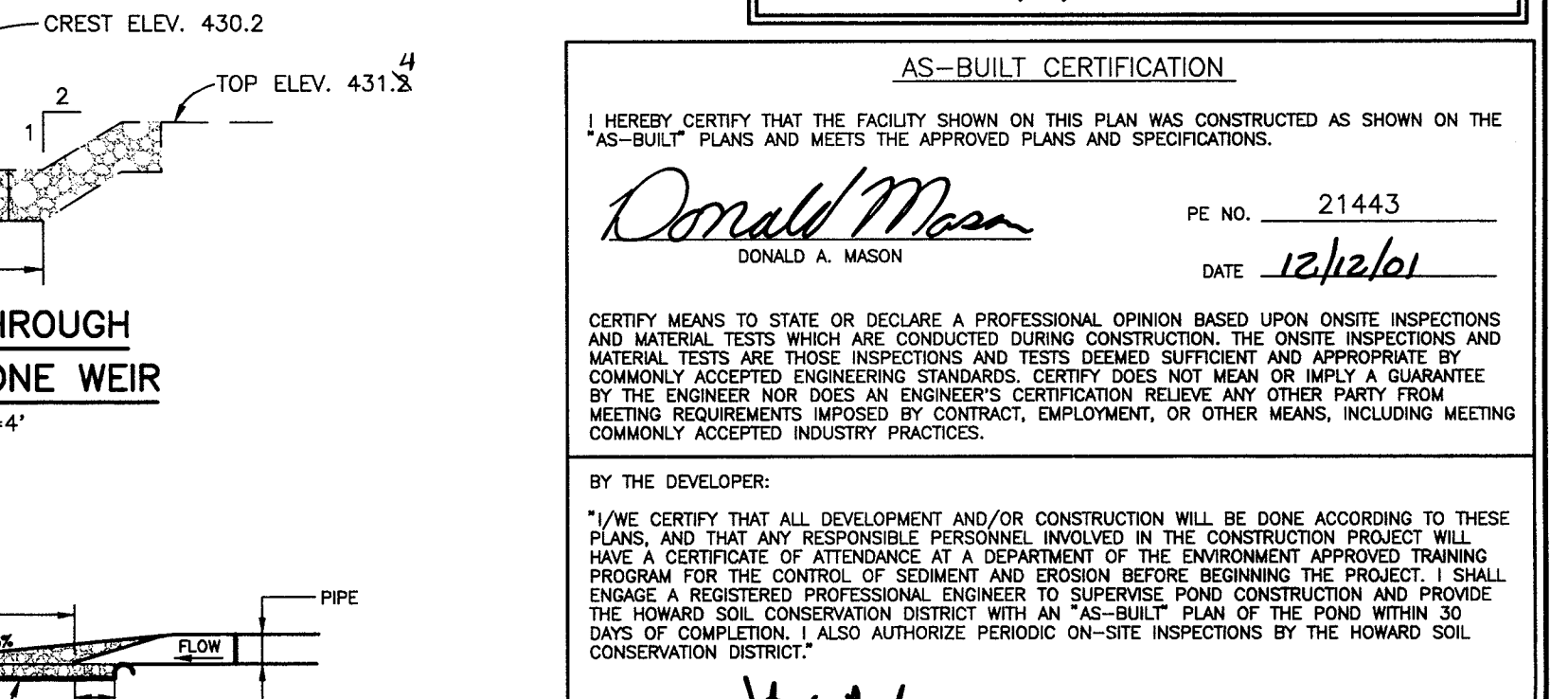
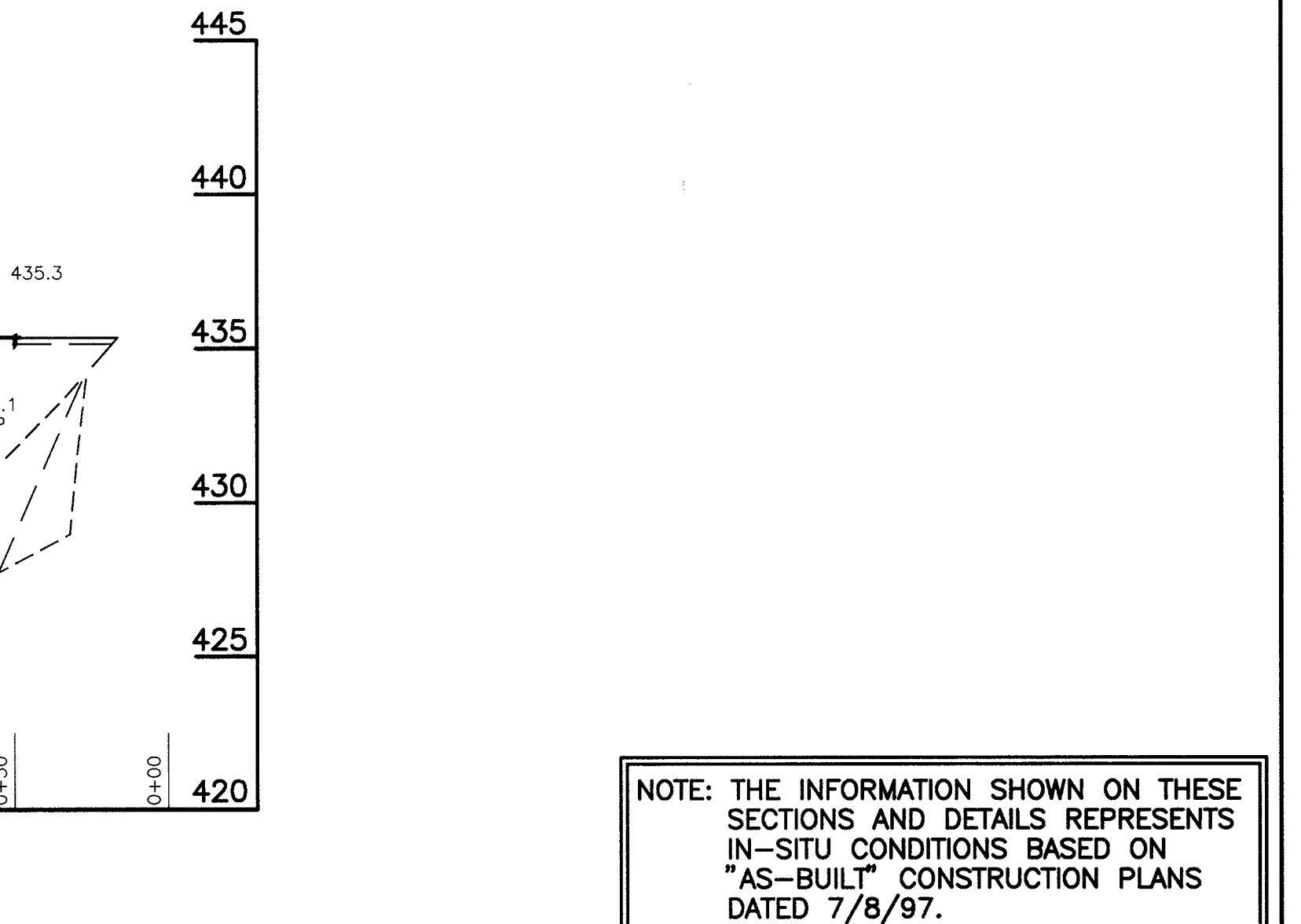
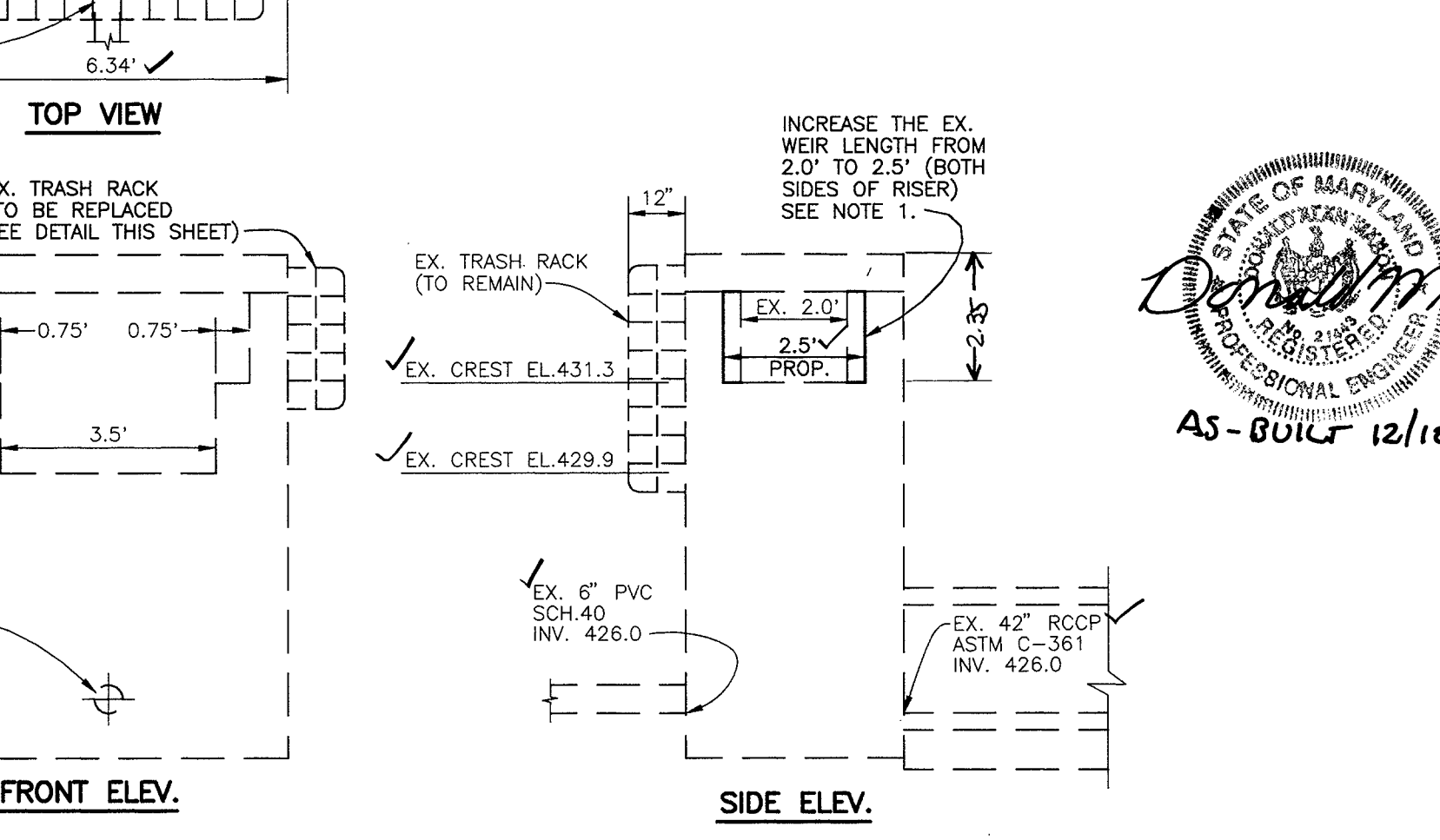
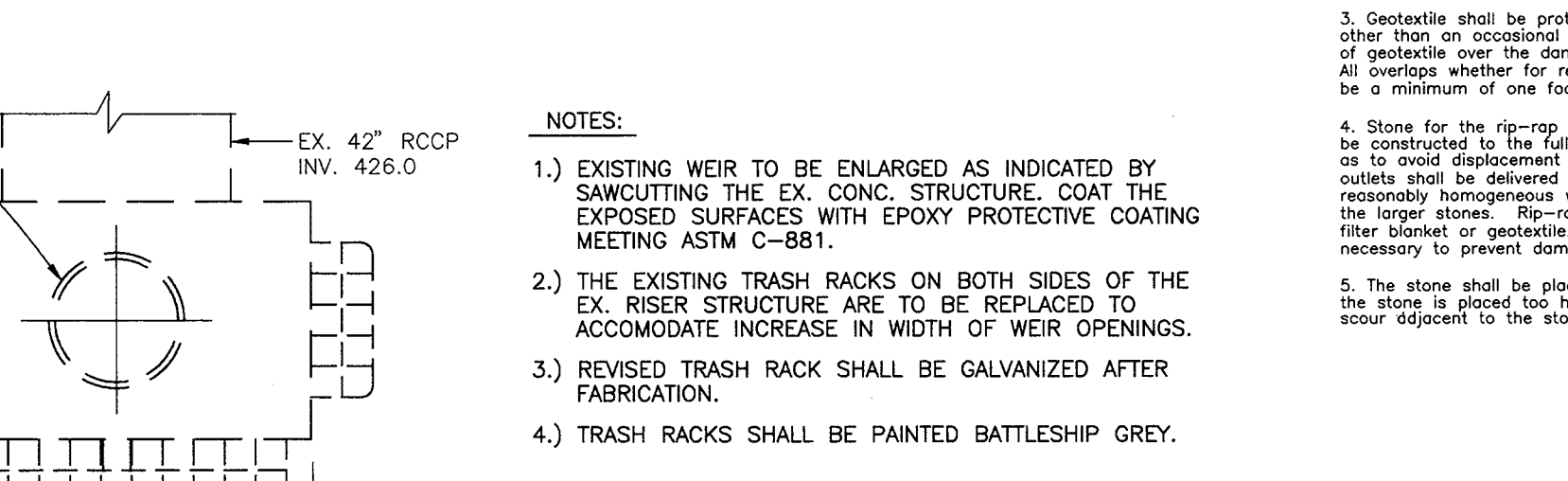
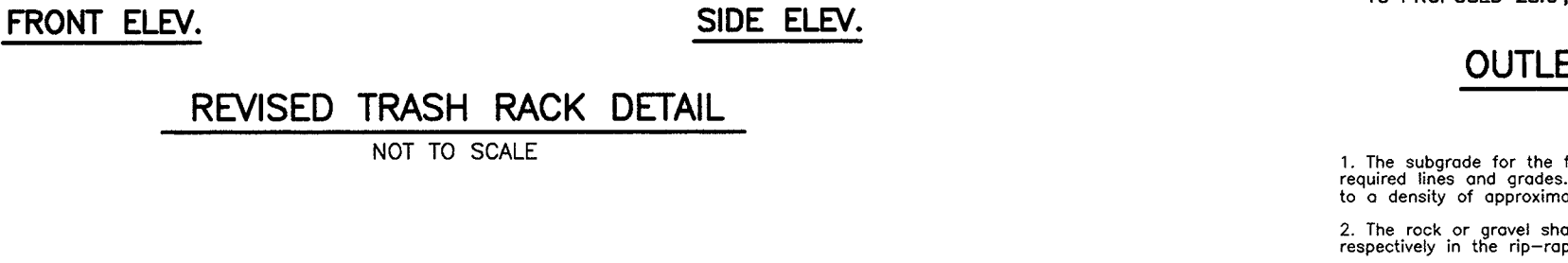
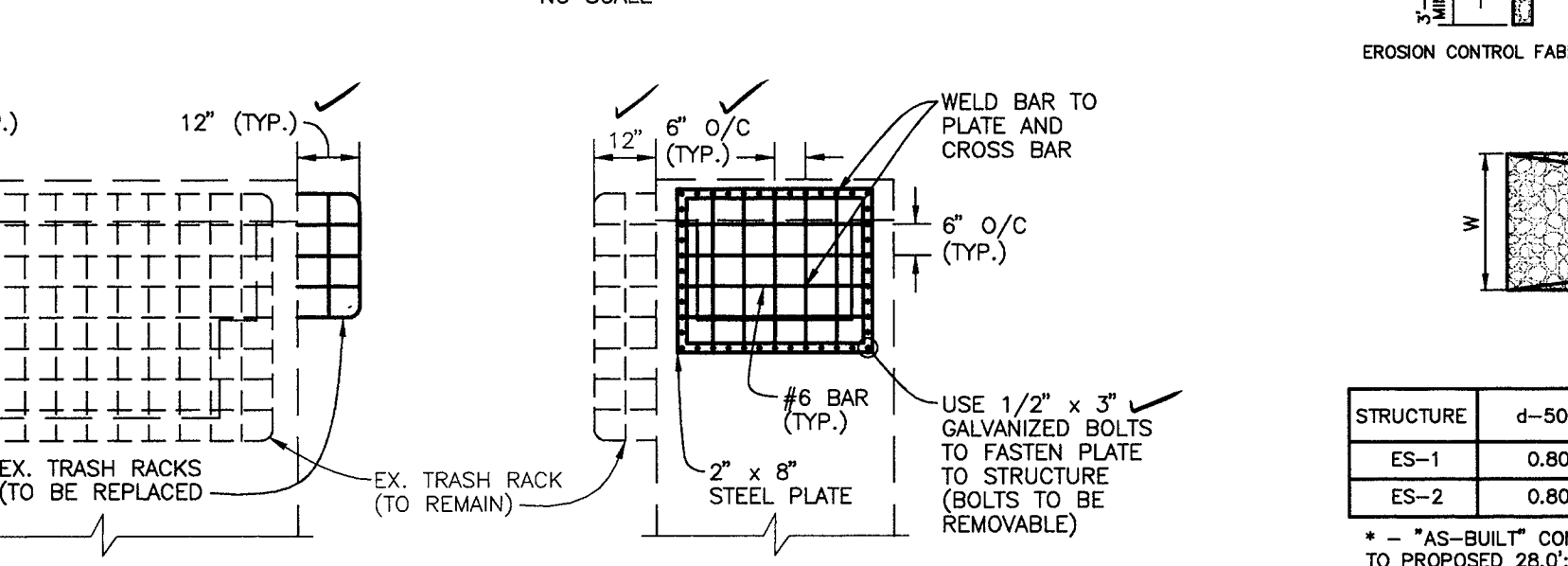
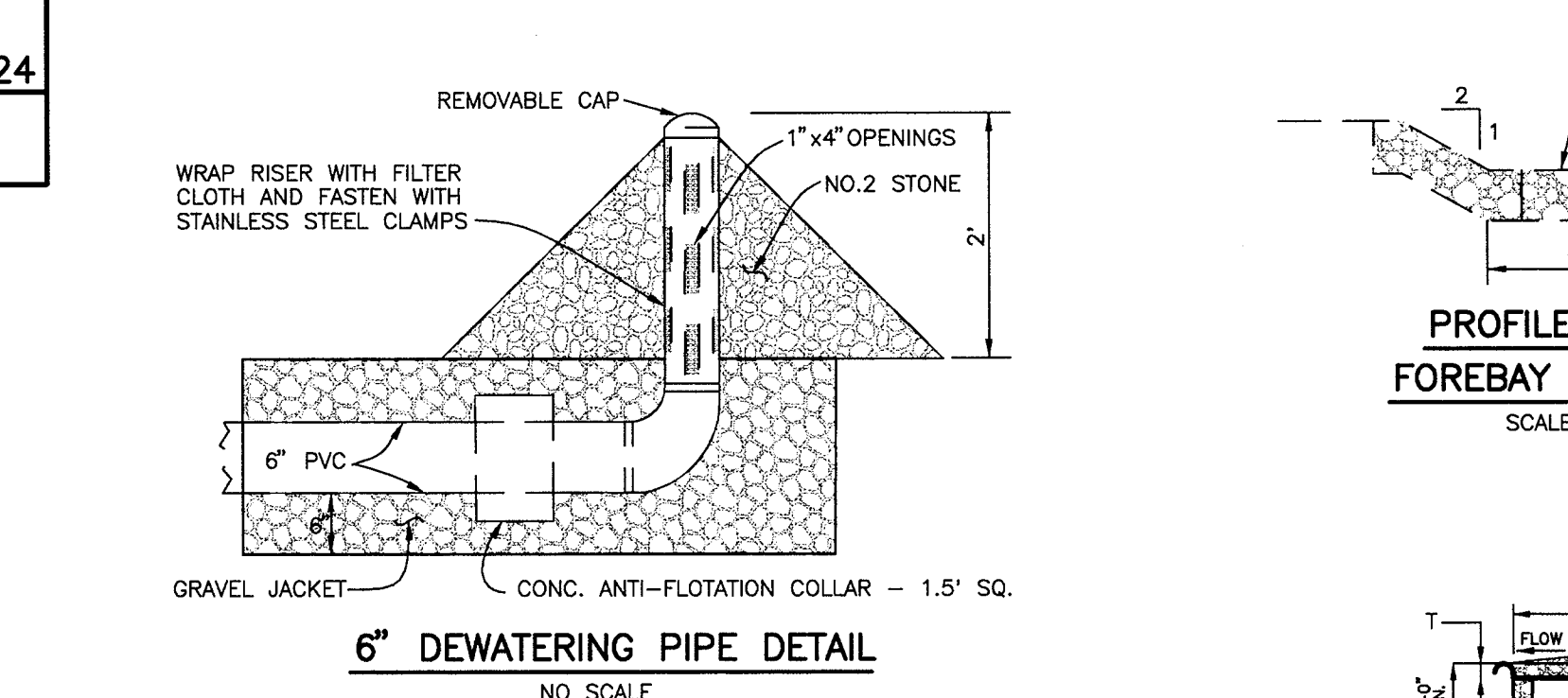
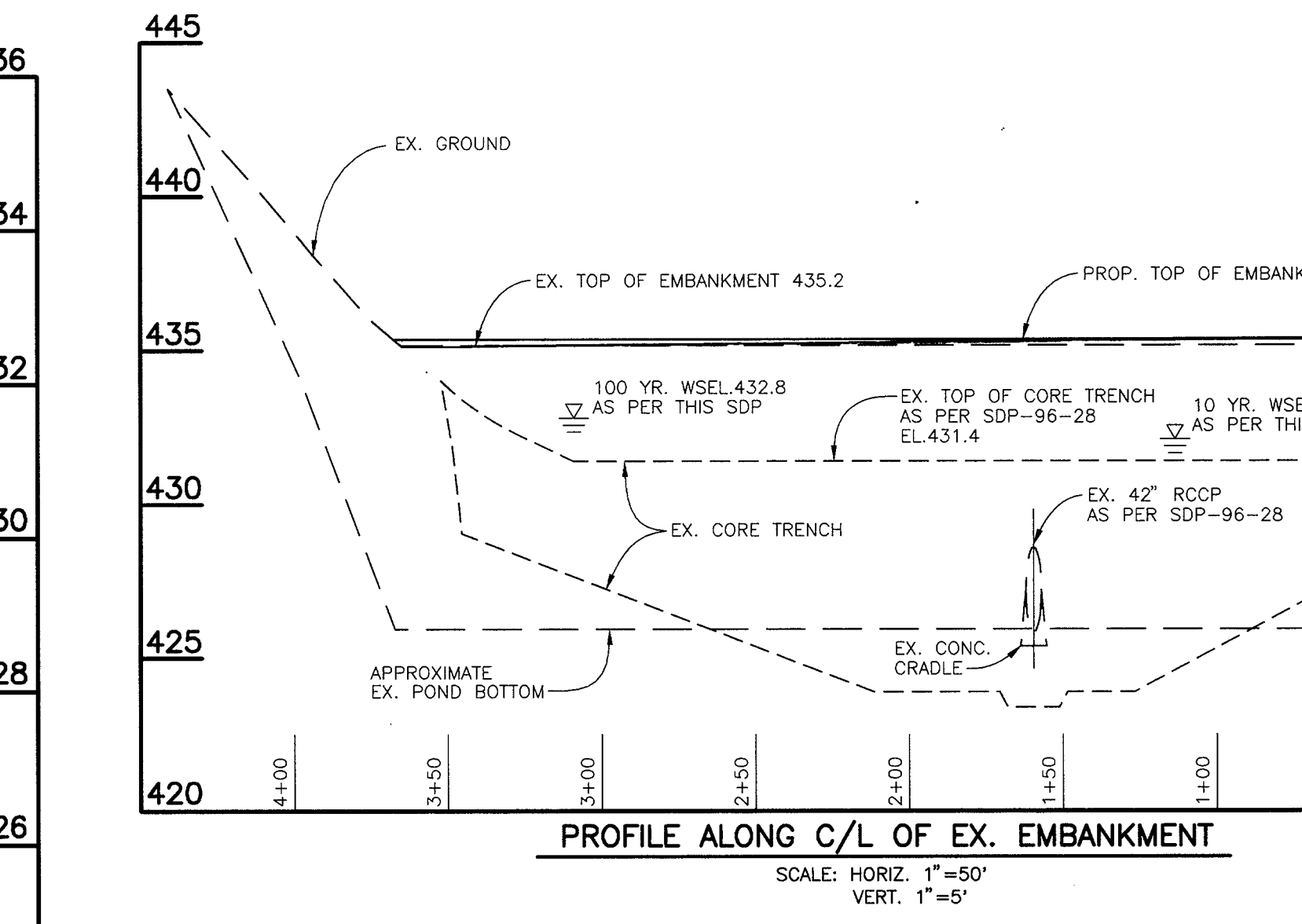
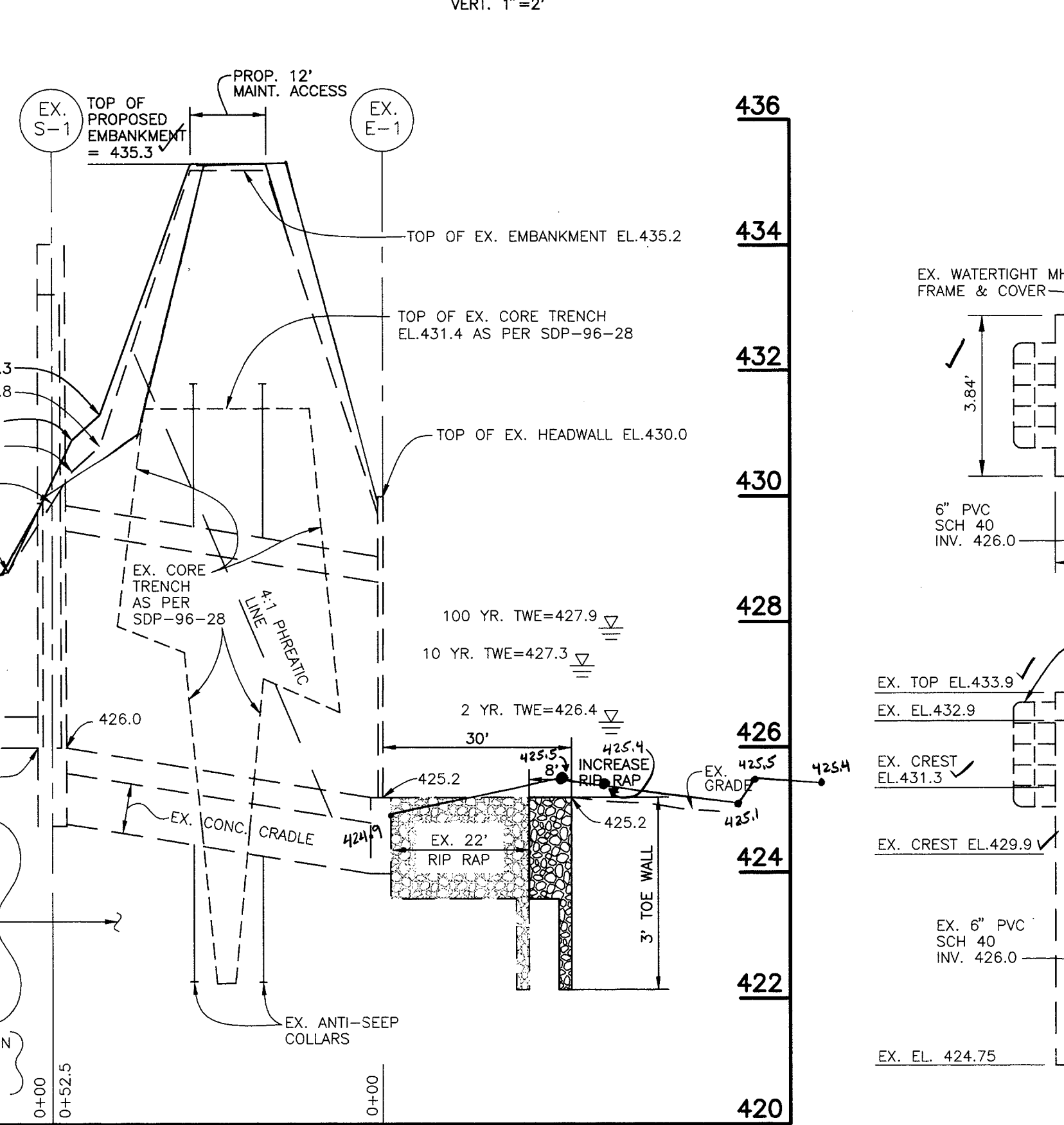
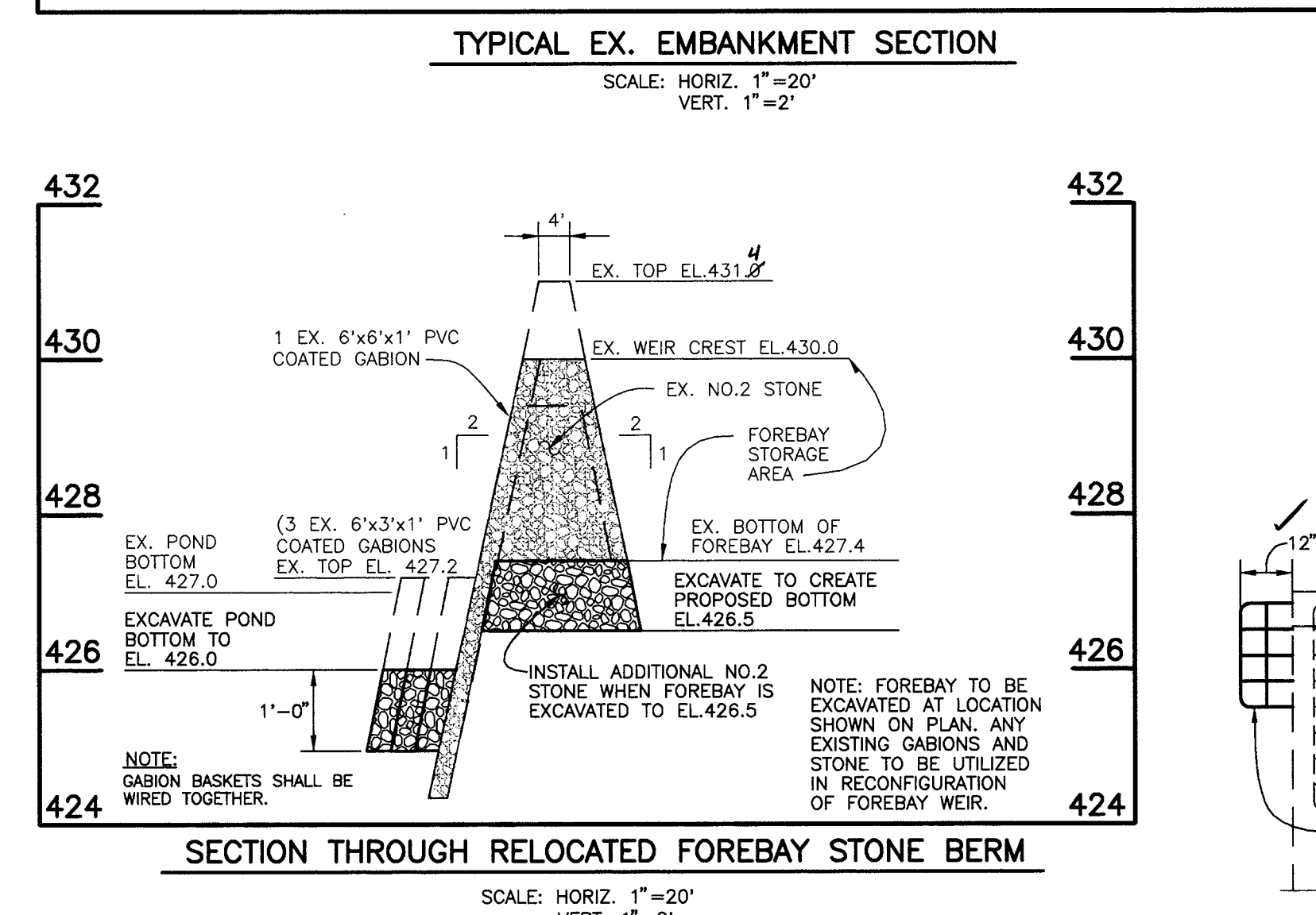
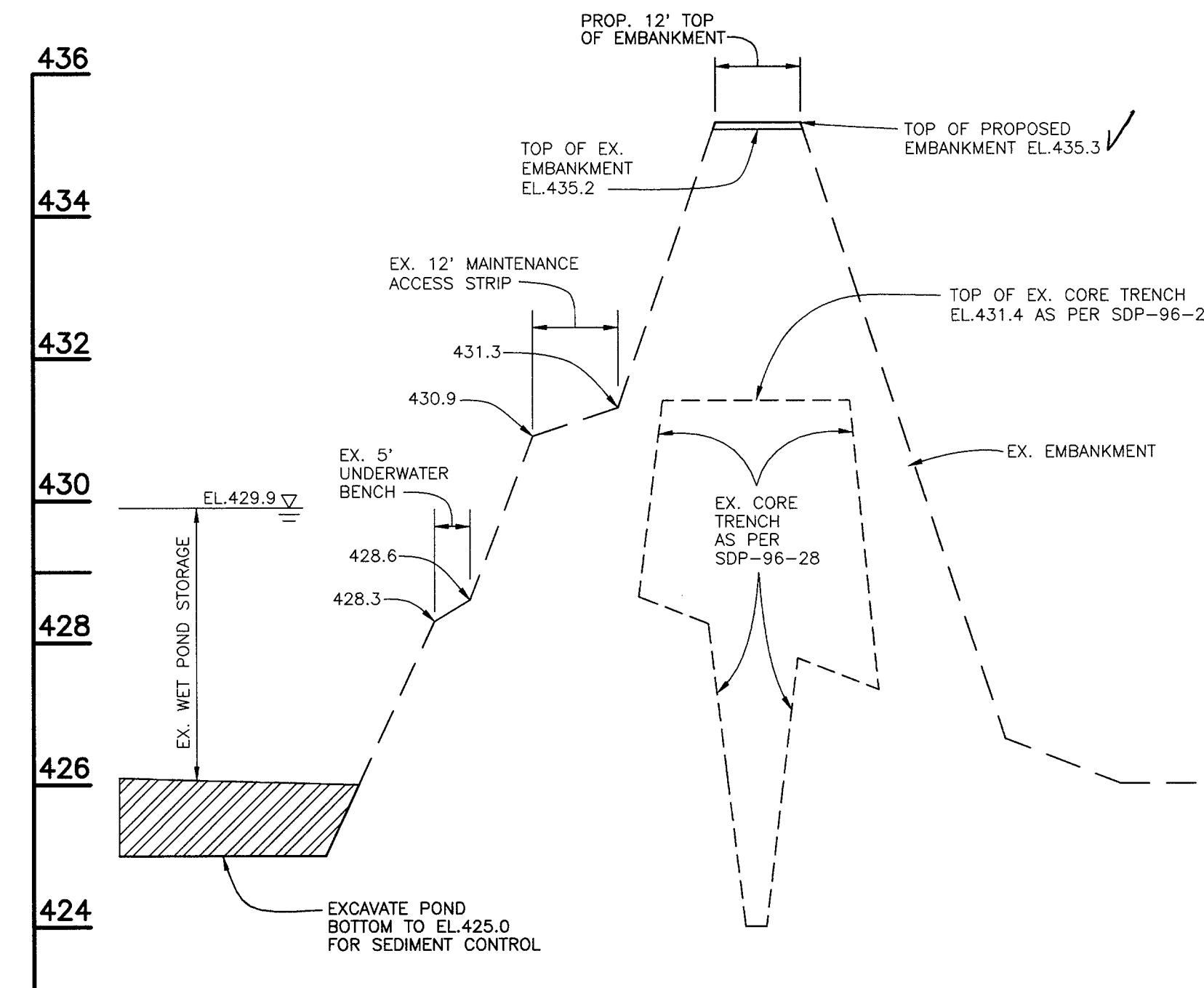
Outlet Protection Detail
 The site should be stripped of topsoil and any other unsuitable materials from the embankment or structure area in accordance with Soil Conservation Guidelines. After stripping operations have been completed, the exposed subgrade materials should be profiled with a loaded dumptruck or similar equipment in the presence of a geotechnical engineer or his representative. For areas that are not accessible to a dump truck, the exposed materials should be observed and tested by a geotechnical engineer or his representative utilizing a Dynamic Cone Penetrometer. Any excessively soft or loose materials identified by proofrolling or penetrometer testing should be excavated to suitable firm soil, and then grades re-established by backfilling with suitable soil.
 A representative of the geotechnical Engineer should be present to monitor placement and compaction of fill for each embankment and cut-off trench in accordance with Maryland Soil Conservation Specification 378, soils considered suitable for the center of embankment and cut-off trench shall conform to Unified Soil Classification CC, SC, CK or Per SC3 378, consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

Profile Through Existing Principal Spillway
 The site should be stripped of topsoil and any other unsuitable materials from the embankment or structure area in accordance with Soil Conservation Guidelines. After stripping operations have been completed, the exposed subgrade materials should be profiled with a loaded dumptruck or similar equipment in the presence of a geotechnical engineer or his representative. For areas that are not accessible to a dump truck, the exposed materials should be observed and tested by a geotechnical engineer or his representative utilizing a Dynamic Cone Penetrometer. Any excessively soft or loose materials identified by proofrolling or penetrometer testing should be excavated to suitable firm soil, and then grades re-established by backfilling with suitable soil.
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EX. RELEASE STRUCTURE MODIFICATION DETAIL
 The site should be stripped of topsoil and any other unsuitable materials from the embankment or structure area in accordance with Soil Conservation Guidelines. After stripping operations have been completed, the exposed subgrade materials should be profiled with a loaded dumptruck or similar equipment in the presence of a geotechnical engineer or his representative. For areas that are not accessible to a dump truck, the exposed materials should be observed and tested by a geotechnical engineer or his representative utilizing a Dynamic Cone Penetrometer. Any excessively soft or loose materials identified by proofrolling or penetrometer testing should be excavated to suitable firm soil, and then grades re-established by backfilling with suitable soil.
 A representative of the geotechnical Engineer should be present to monitor placement and compaction of fill for each embankment and cut-off trench in accordance with Maryland Soil Conservation Specification 378, soils considered suitable for the center of embankment and cut-off trench shall conform to Unified Soil Classification CC, SC, CK or Per SC3 378, consideration may be given to the use of other materials in the embankment if design and construction are supervised by a geotechnical engineer.

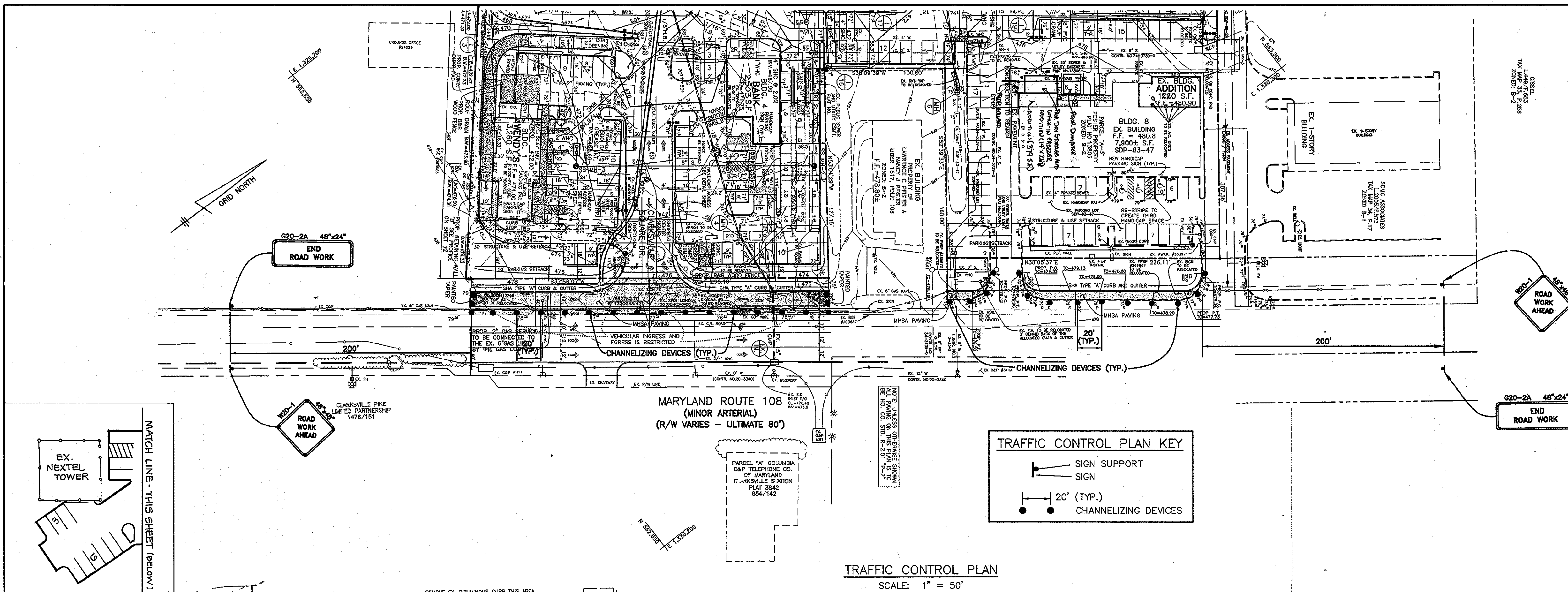
AS-BUILT CERTIFICATION
 I HEREBY CERTIFY THAT THE FACILITY SHOWN ON THIS PLAN WAS CONSTRUCTED AS SHOWN ON THE "AS-BUILT" PLANS AND MEETS THE APPROVED PLANS AND SPECIFICATIONS.
 Donald A. Mason
 DONALD A. MASON
 PE NO. 21443
 DATE 12/16/01

AS-BUILT CERTIFICATION
 I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE ACCORDING TO THESE PLANS 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 EROSION AND SEDIMENT BEFORE BEGINNING THE PROJECT. I SHALL ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOWARD SOIL CONSERVATION DISTRICT WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTIONS BY THE HOWARD SOIL CONSERVATION DISTRICT.
 DEVELOPER: CLARKSVILLE SQUARE, LLC. DATE: 8-17-99
 BY THE ENGINEER: DONALD A. MASON, P.E. # 21443 DATE: 8/25/99
 THESE PLANS HAVE BEEN REVIEWED FOR THE HOWARD SOIL CONSERVATION DISTRICT AND MEET THE TECHNICAL REQUIREMENTS FOR SMALL POND CONSTRUCTION, SOIL EROSION, AND SEDIMENT CONTROL.
 APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS DATE: 8/25/99
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING DATE: 8/25/99
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE: 9/20/99

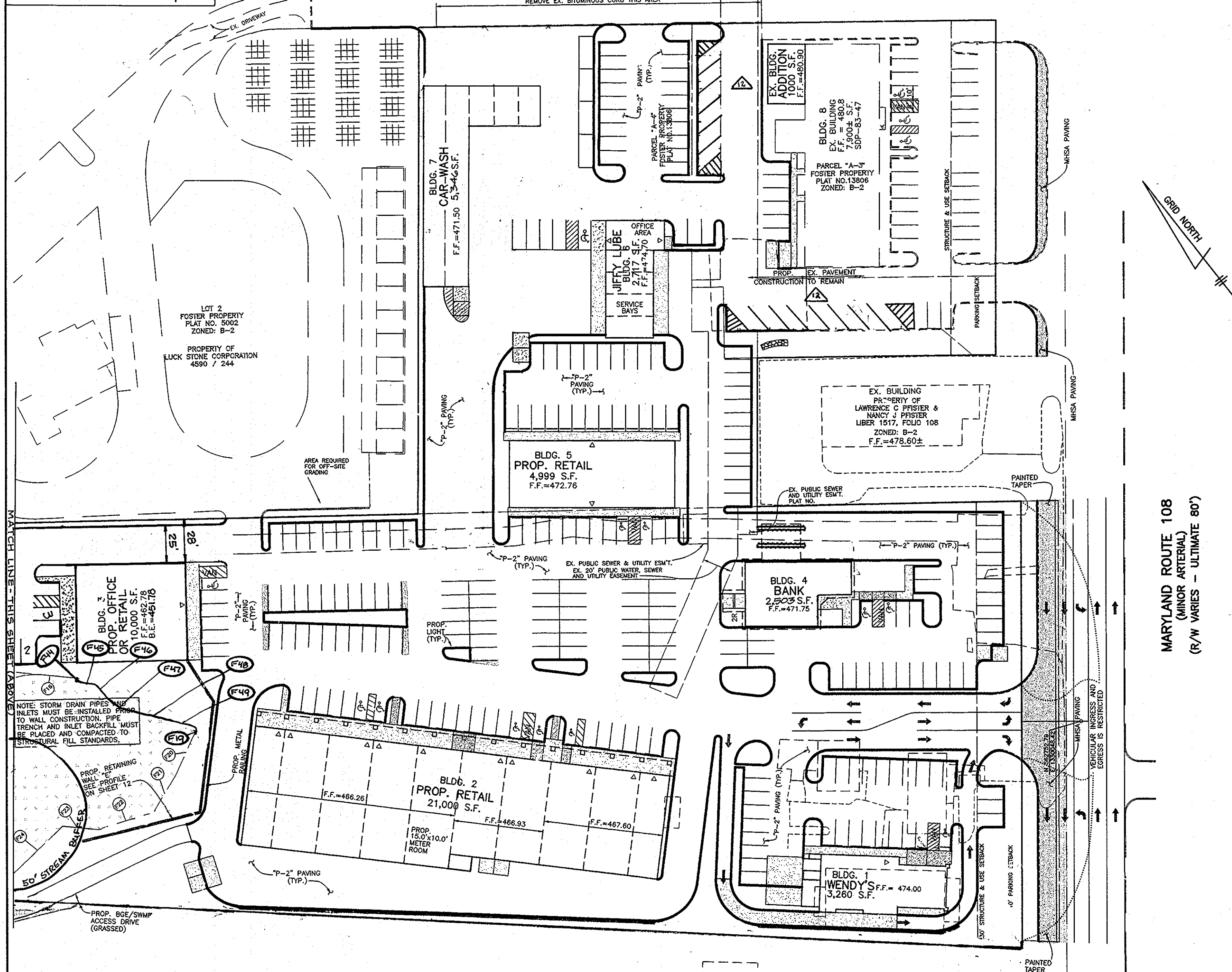


BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS
 8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6644

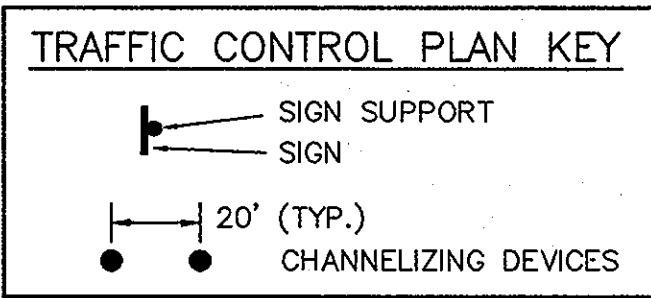
OWNER/DEVELOPER: CLARKSVILLE SQUARE SHOPPING CENTER AND PARCELS A-3 & A-4 OF THE FOSTER PROPERTY
LOCATION: TAX MAP 34 - BLOCK 6 PARCELS 20, 21, 22, p/0214 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
TITLE: SWM NOTES & DETAILS
DATE: JANUARY, 1999 PROJECT NO. 1162
 AUGUST, 1999
Design: DAM **Draft:** MCR **SCALE:** AS SHOWN **DRAWING** 9 OF 14



TRAFFIC CONTROL PLAN
SCALE: 1" = 50'

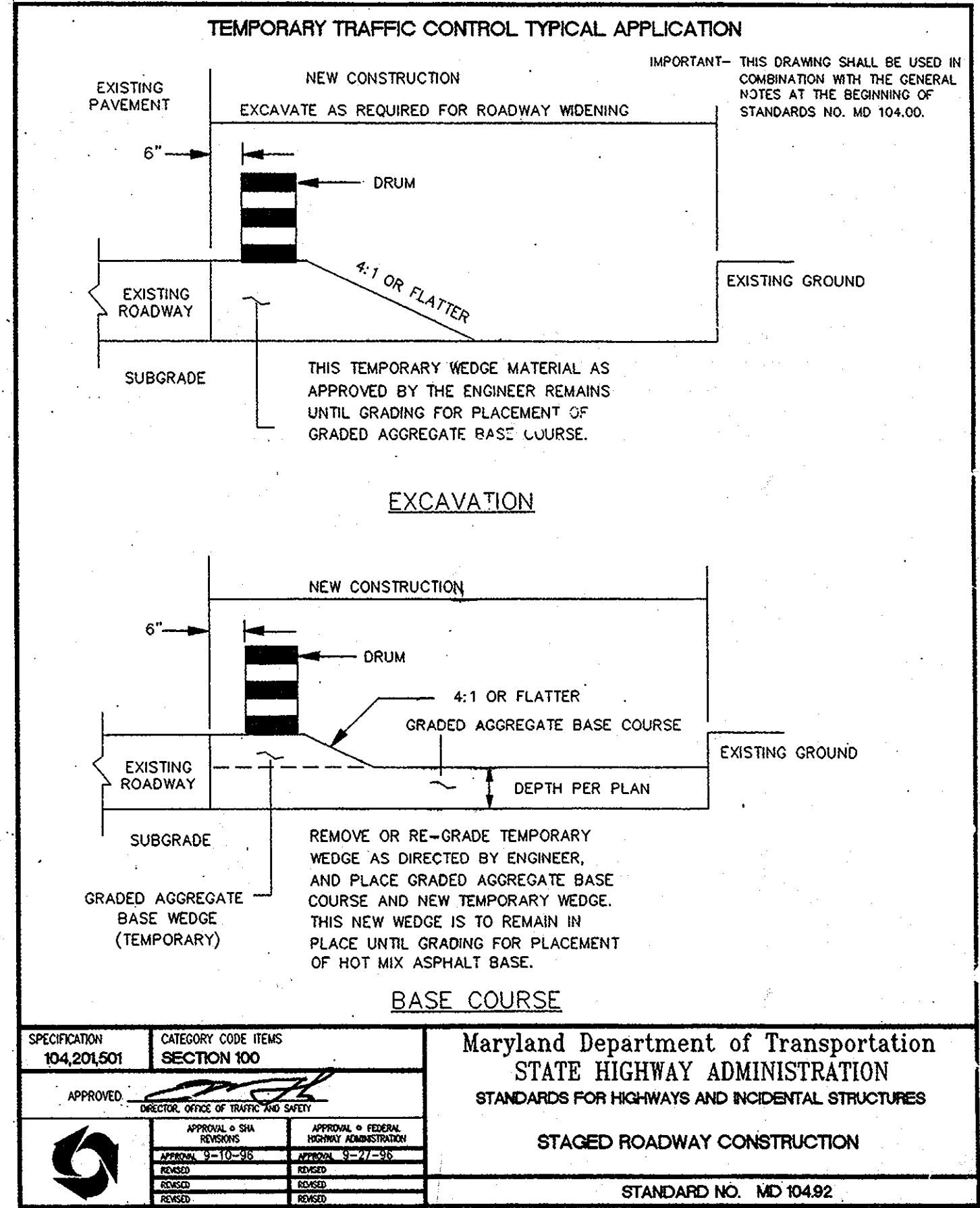


TRAFFIC CONTROL PLAN
SCALE: 1" = 50'

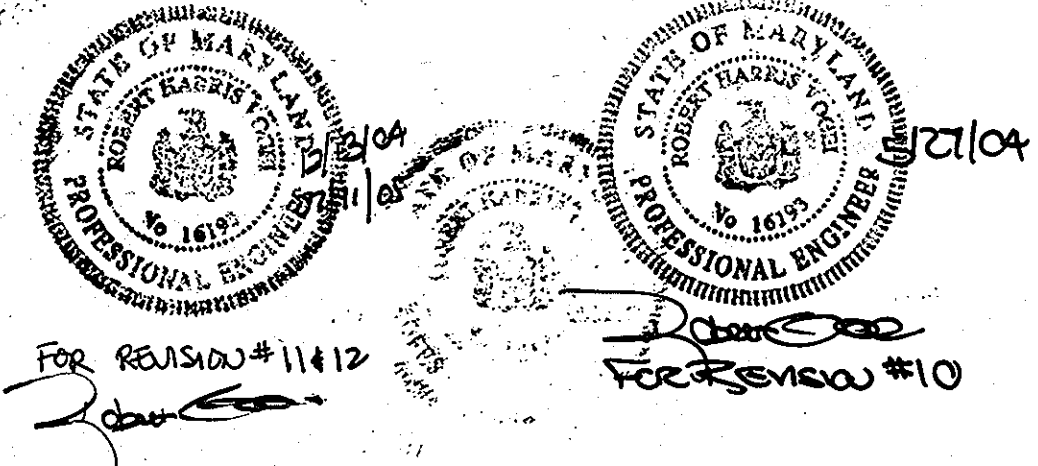


CURB AND GUTTER - KEY MAP
SCALE: 1" = 50'

- MONOLITHIC CURB & SIDEWALK
HO. CO. STD. R-3.07
- STD. COMBINATION CURB & GUTTER
HO. CO. STD. R-3.01
- MSHA TYPE "A" CURB & GUTTER
- STANDARD BARRIER CURB
HO. CO. STD. R-3.03



NO.	DATE	REVISION
13	6-14-11	REVISE LOT LINE, STREAM BUFFER & FCE
12	07-07-05	REVISE PARKING TO ANGULAR ADJ. TO BLDG NO. 8.
11	12-13-04	REVISE PARKING TO PARALLEL ADJACENT TO BLDG. 100. 3 ADD A REDUCTION OF 10 PARKING SPACES TO ADD A DRIVE-THRU LANE FOR BLDG. 8.



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PHONE: 410-465-6105 FAX: 410-465-6844

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division: *[Signature]* DATE: 6/22/11

Chief, Division of Land Development: *[Signature]* DATE: 9/13/11

Director: *[Signature]* DATE: 9/20/11

OWNER/DEVELOPER: CLARKSVILLE SQUARE, LLC
P.O. BOX 417
ELLICOTT CITY, MD 21041
PHONE: 410-465-4244

PROJECT: CLARKSVILLE SQUARE SHOPPING CENTER AND PARCELS A-3 & A-4 OF THE FOSTER PROPERTY

LOCATION: TAX MAP 34 - BLOCK 6
PARCELS 20, 21, 22, p/214
5th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: TRAFFIC CONTROL PLAN

DATE: JANUARY, 1999 PROJECT NO. 162
AUGUST, 1999

Design: DAM Draft: MCR SCALE: AS SHOWN DRAWING 10 OF 14

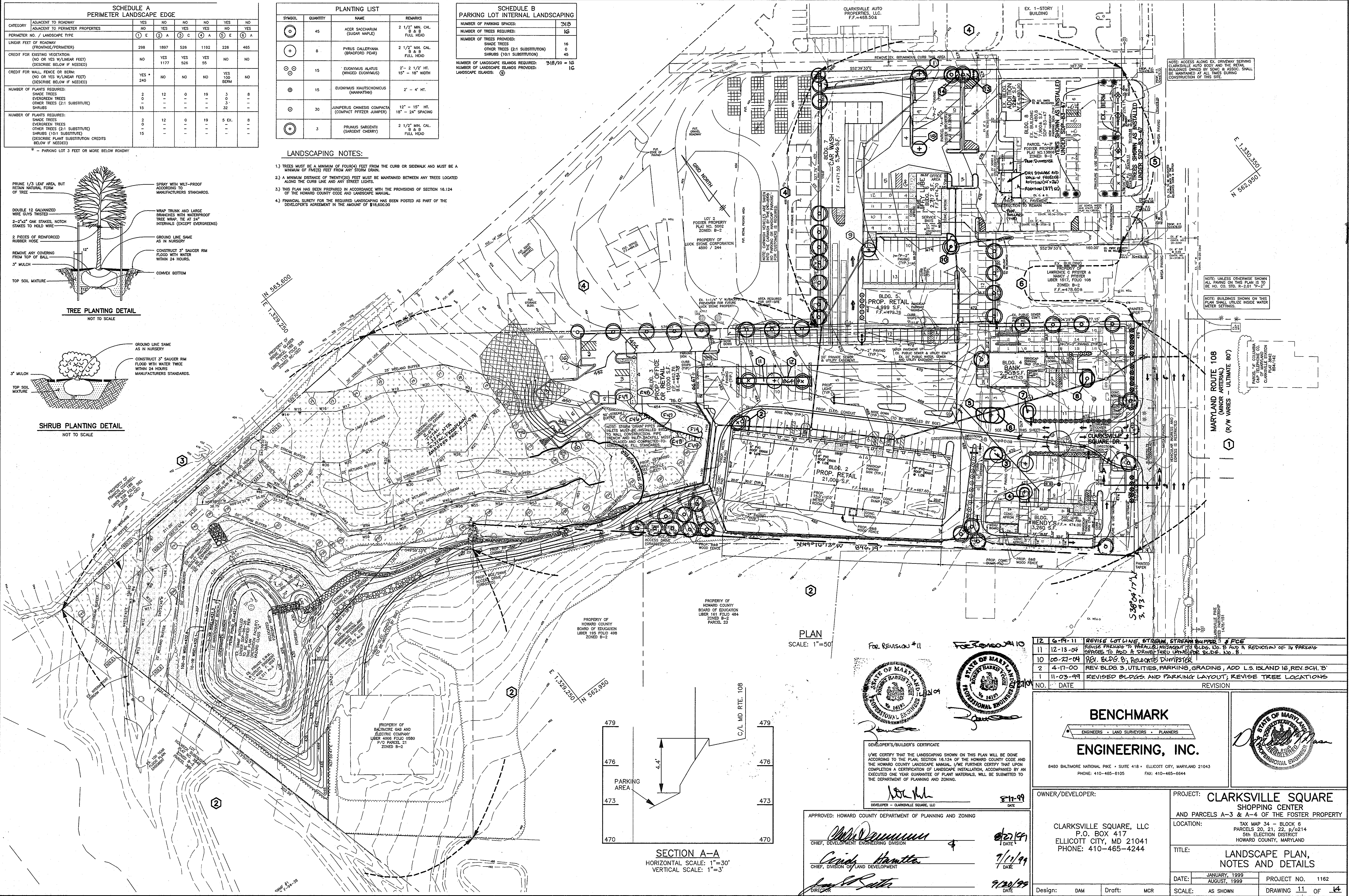
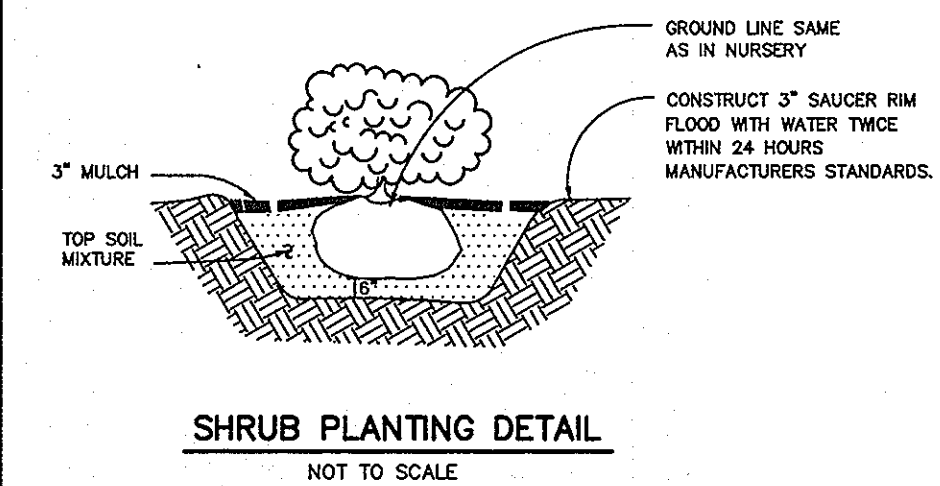
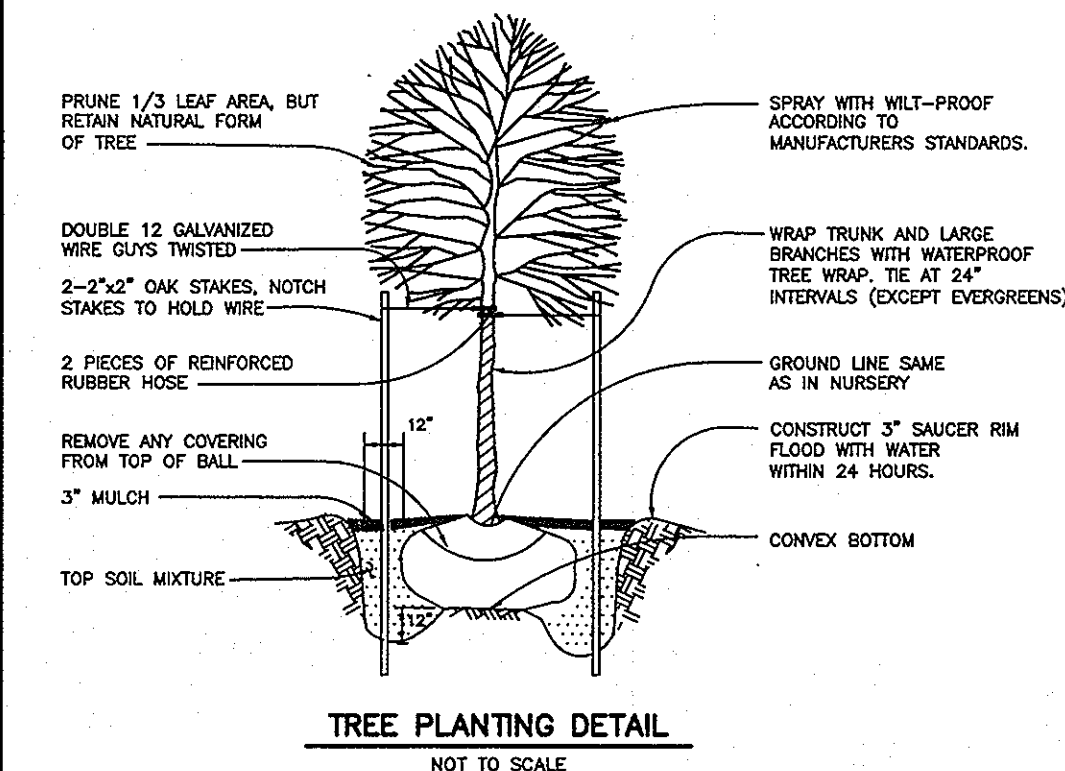
SCHEDULE A PERIMETER LANDSCAPE EDGE						
CATEGORY	ADJACENT TO ROADWAY	YES	NO	NO	NO	NO
ADJACENT TO PERIMETER PROPERTIES		NO	YES	YES	YES	NO
PERIMETER NO. / LANDSCAPE TYPE		(1) E	(2) A	(3) C	(4) A	(5) E
LINEAR FEET OF ROADWAY (FRONTAGE/PERIMETER)		298	1897	526	1192	226
CREDIT FOR EXISTING VEGETATION (NO OR YES W/LINEAR FEET) (DESCRIBE BELOW IF NEEDED)		NO	YES 1177	YES 526	YES 55	NO
CREDIT FOR WALL, FENCE OR BERM (NO OR YES W/LINEAR FEET) (DESCRIBE BELOW IF NEEDED)		YES 240	NO	NO	NO	YES 100 BERM
NUMBER OF PLANTS REQUIRED:						
SHADE TREES	2	0	12	0	19	3
EVERGREEN TREES	1	0	1	1	1	0
OTHER TREES (2:1 SUBSTITUTE)	15	1	1	1	1	32
SHRUBS	15	1	1	1	1	1
NUMBER OF PLANTS REQUIRED:						
SHADE TREES	2	0	12	0	19	5 EX.
EVERGREEN TREES	1	0	1	1	1	1
OTHER TREES (2:1 SUBSTITUTE)	15	1	1	1	1	1
SHRUBS (10:1 SUBSTITUTE)	15	1	1	1	1	1
(DESCRIBE PLANT SUBSTITUTION CREDITS BELOW IF NEEDED)						

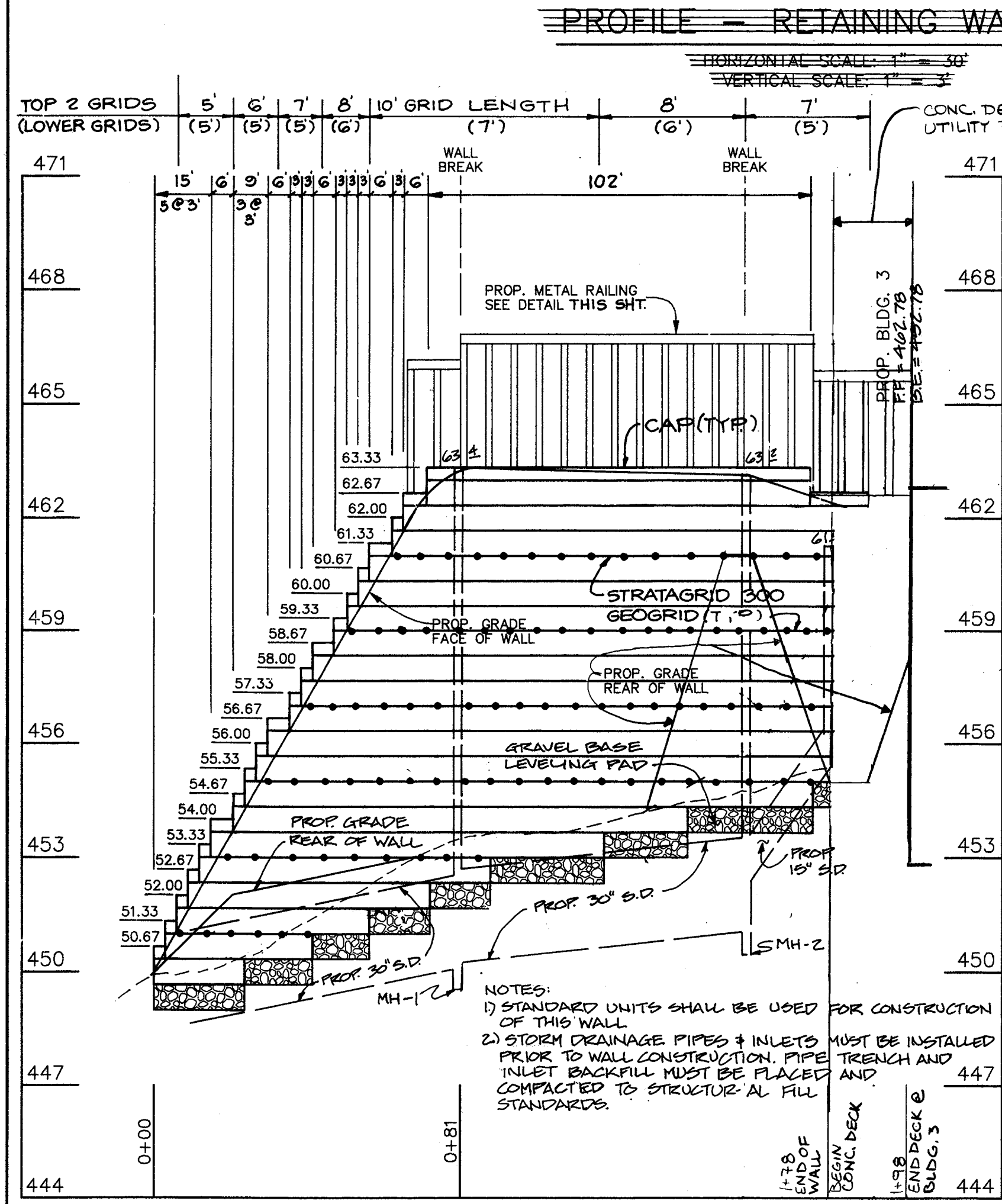
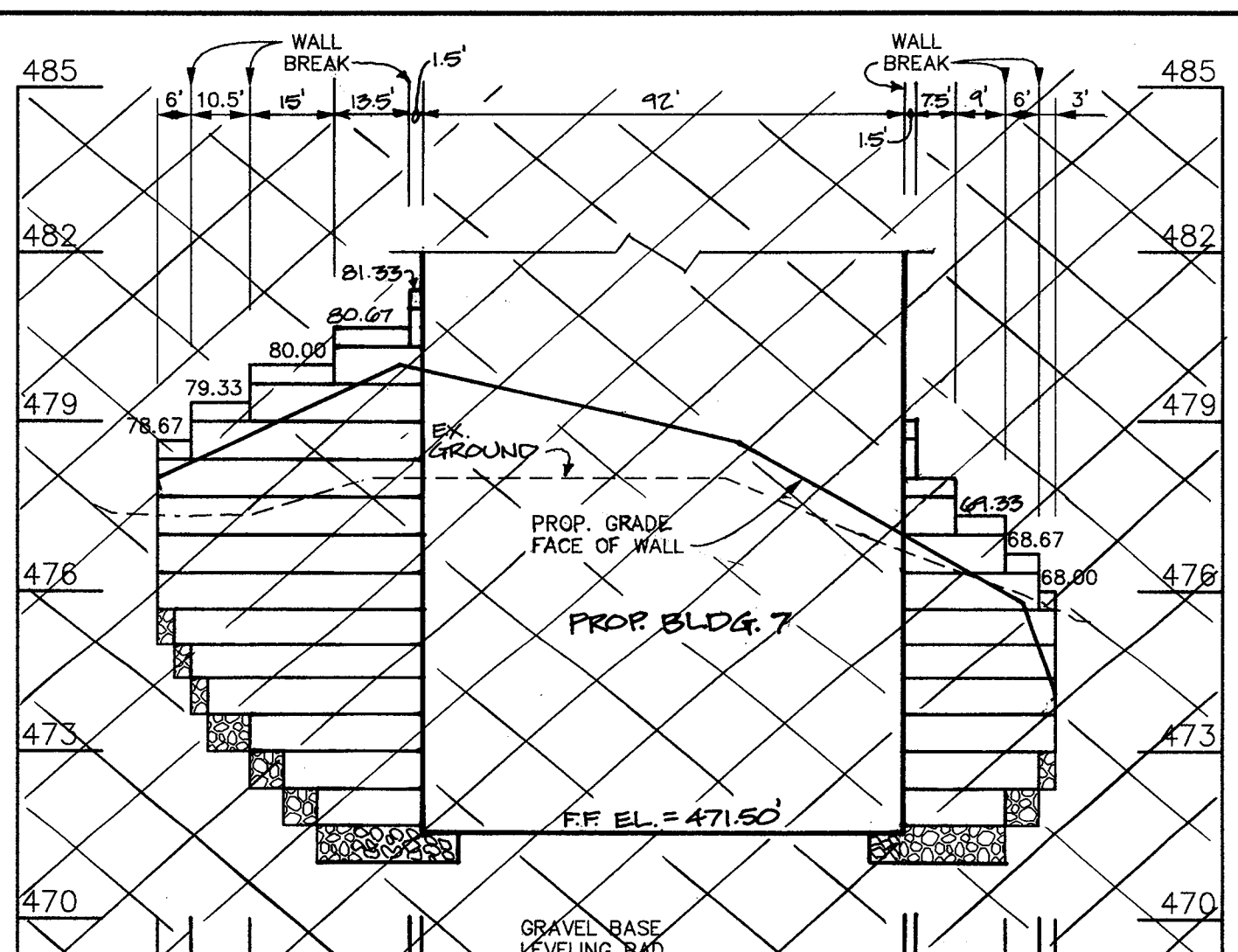
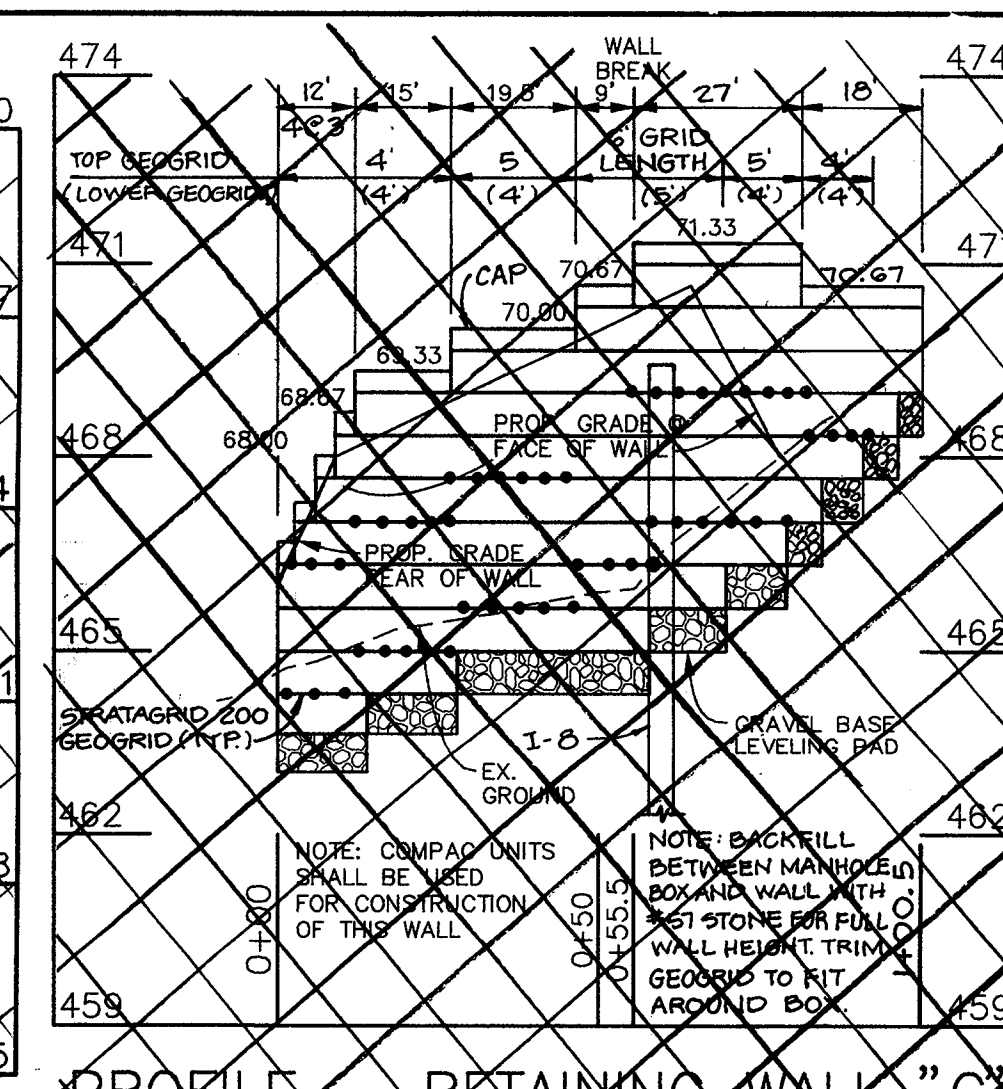
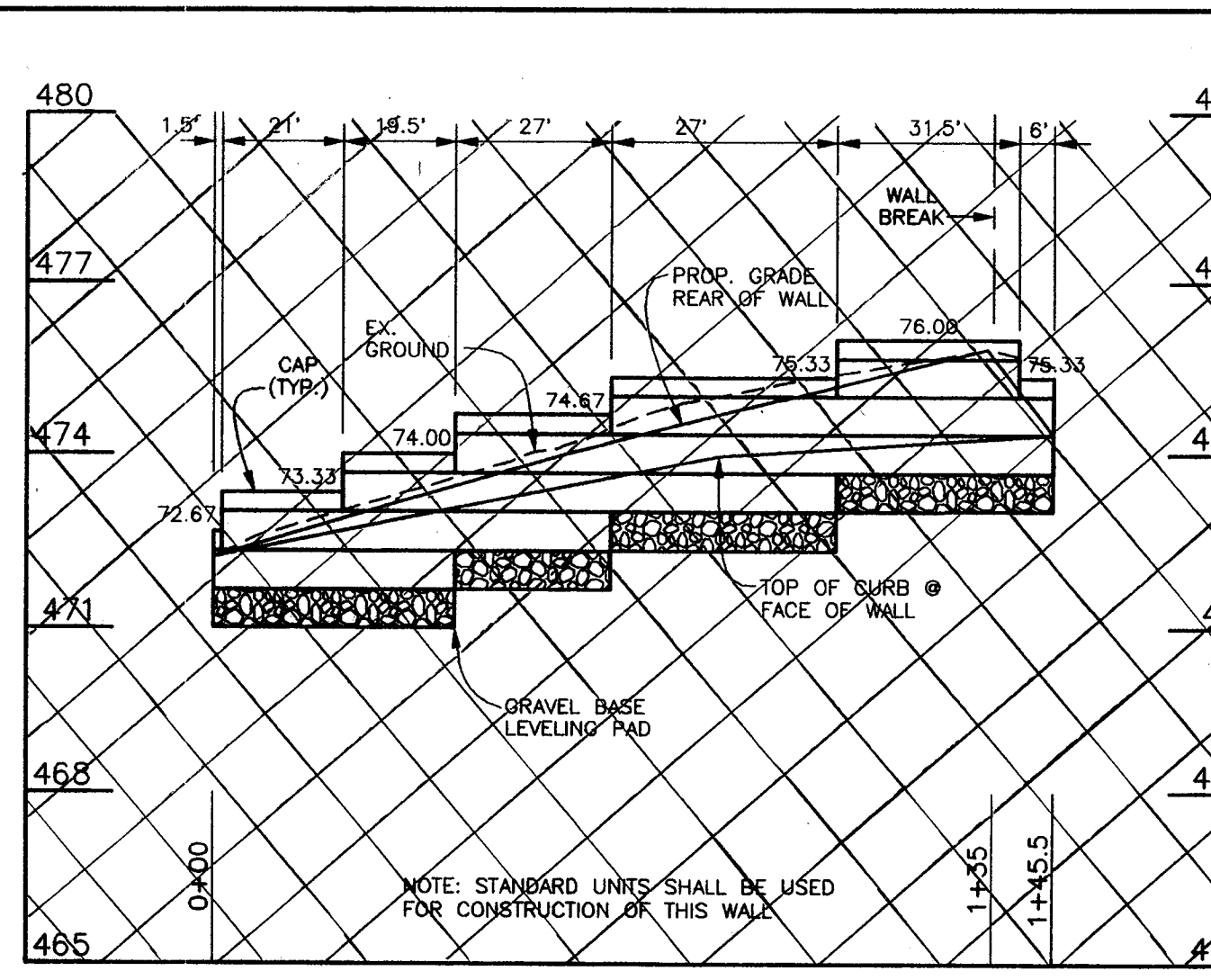
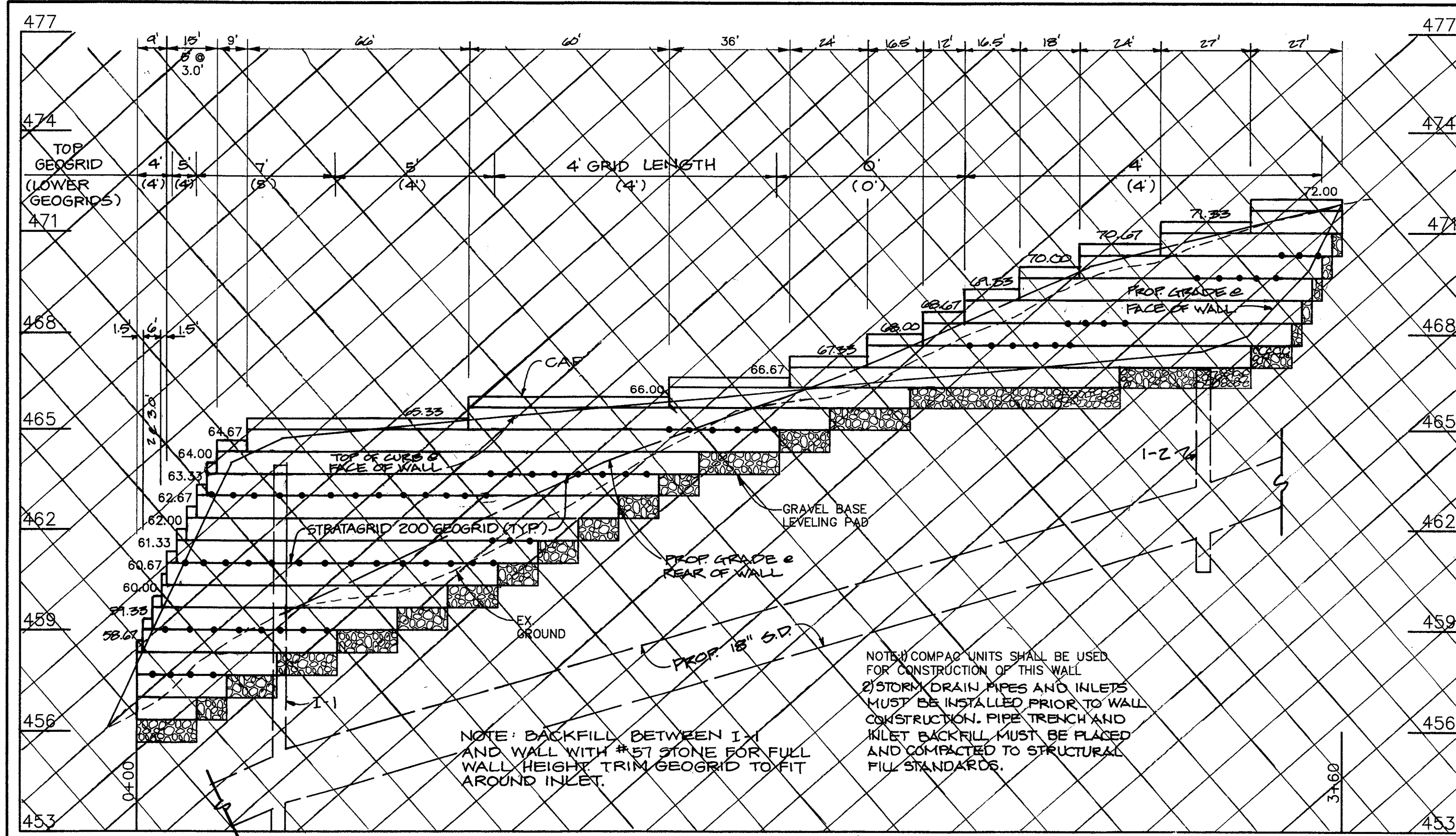
PLANTING LIST			
SYMBOL	QUANTITY	NAME	REMARKS
(1)	45	ACER SACCHARUM (SUGAR MAPLE)	2 1/2" MIN. CAL. B & B FULL HEAD
(2)	8	PYRUS CALLERYANA (BRADFORD PEAR)	2 1/2" MIN. CAL. B & B FULL HEAD
(3)	15	EUONYMUS ALATUS (WINGED EUONYMUS)	2' - 2 1/2" HT. 15" - 15" WIDTH
(4)	15	EUONYMUS KAUSCHONICUS (MANHATTAN)	2' - 4" HT.
(5)	30	JUNIPERUS CHINENSIS COMPACTA (COMPACT PYRETH JUNIPER)	12" - 15" HT. 15" - 24" SPACING
(6)	3	PRUNUS SARGENTII (SARGENT CHERRY)	2 1/2" MIN. CAL. B & B FULL HEAD

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING	
NUMBER OF PARKING SPACES:	318
NUMBER OF TREES REQUIRED:	16
NUMBER OF TREES PROVIDED:	16
SHADE TREES	0
OTHER TREES (2:1 SUBSTITUTE)	16
SHRUBS (10:1 SUBSTITUTE)	45
NUMBER OF LANDSCAPE ISLANDS REQUIRED:	318/20 = 16
NUMBER OF LANDSCAPE ISLANDS PROVIDED:	16
LANDSCAPE ISLANDS:	(6)

LANDSCAPING NOTES:

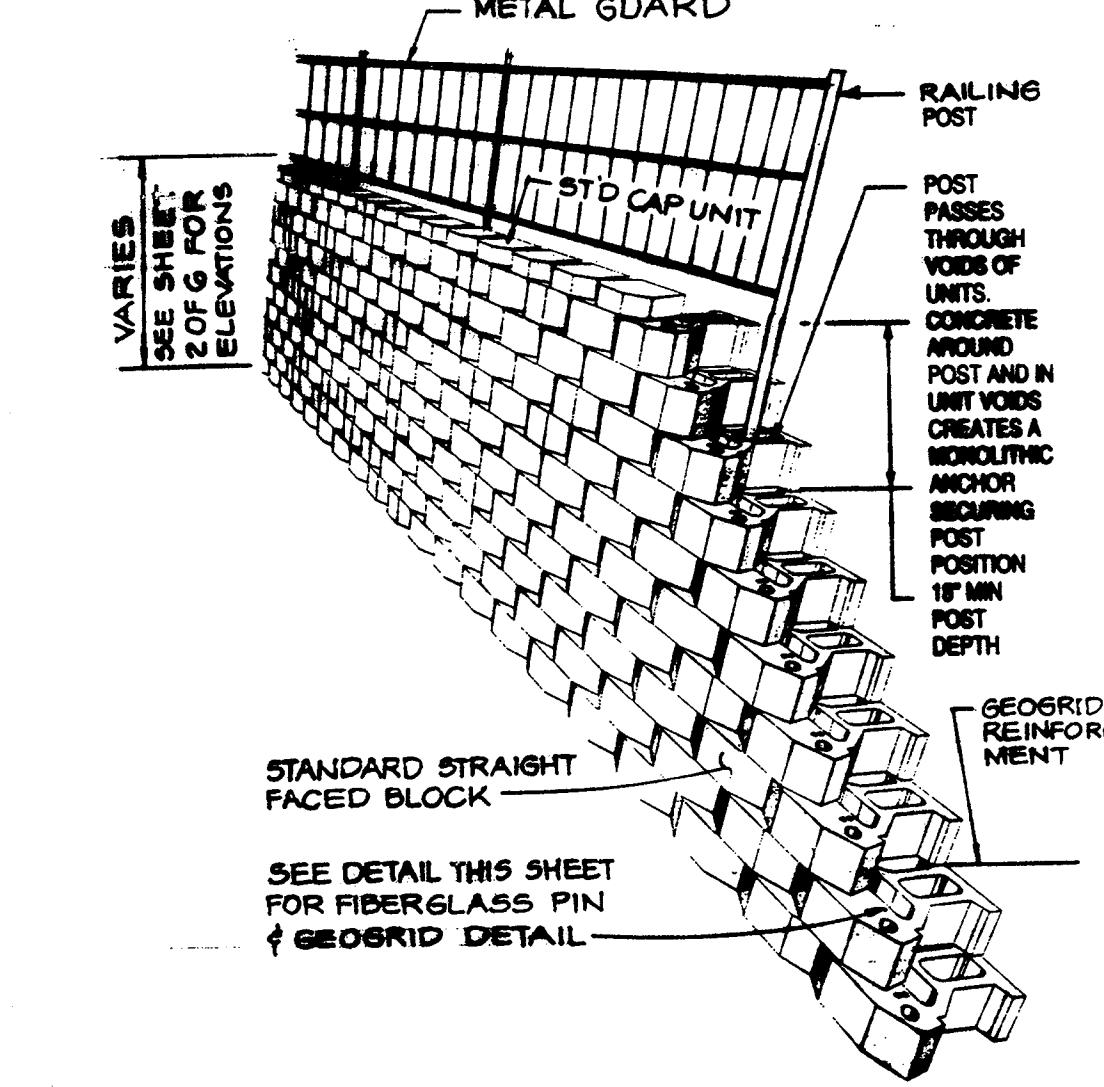
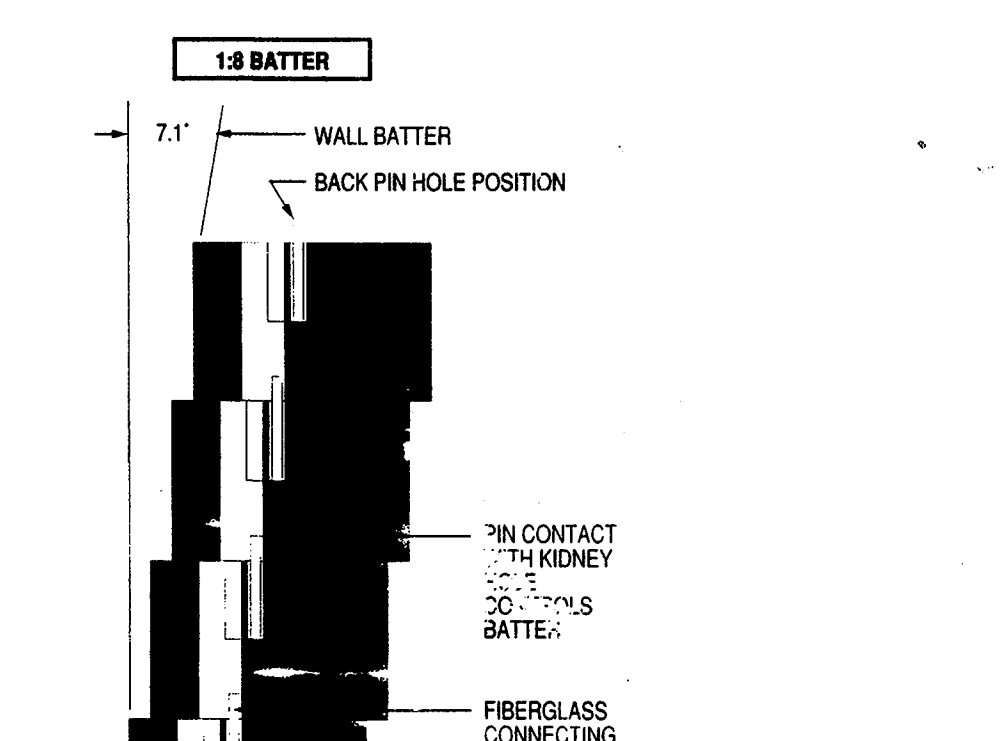
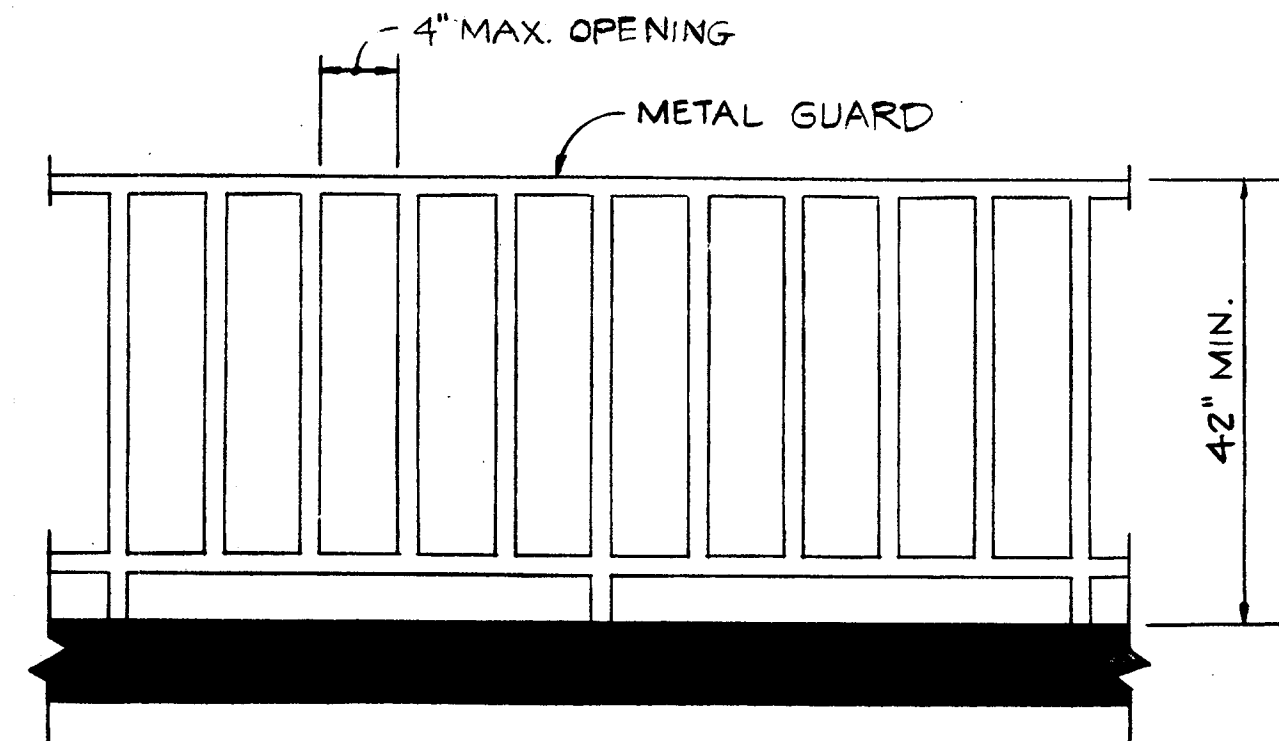
- TREES MUST BE A MINIMUM OF FOUR(4) FEET FROM THE CURB OR SIDEWALK AND MUST BE A MINIMUM OF FIVE(5) FEET FROM ANY STORM DRAIN.
- A MINIMUM DISTANCE OF TWENTY(20) FEET MUST BE MAINTAINED BETWEEN ANY TREES LOCATED ALONG THE CURB LINE AND ANY STREET LIGHTS.
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND LANDSCAPE MANUAL.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$18,600.00.





NOTE: COMPACT UNITS SHALL BE USED FOR CONSTRUCTION OF THIS WALL. STORM DRAIN PIPES & INLETS MUST BE INSTALLED PRIOR TO WALL CONSTRUCTION. PIPE TRENCH AND INLET BACKFILL MUST BE PLACED AND COMPACTED TO STRUCTURAL FILL STANDARDS.

NOTE: BACKFILL BETWEEN IN AND WALL WITH #5 STONE FOR FULL WALL HEIGHT. TRIM GEOGRID TO FIT AROUND INLET.



SECTION 1021.0 GUARDS

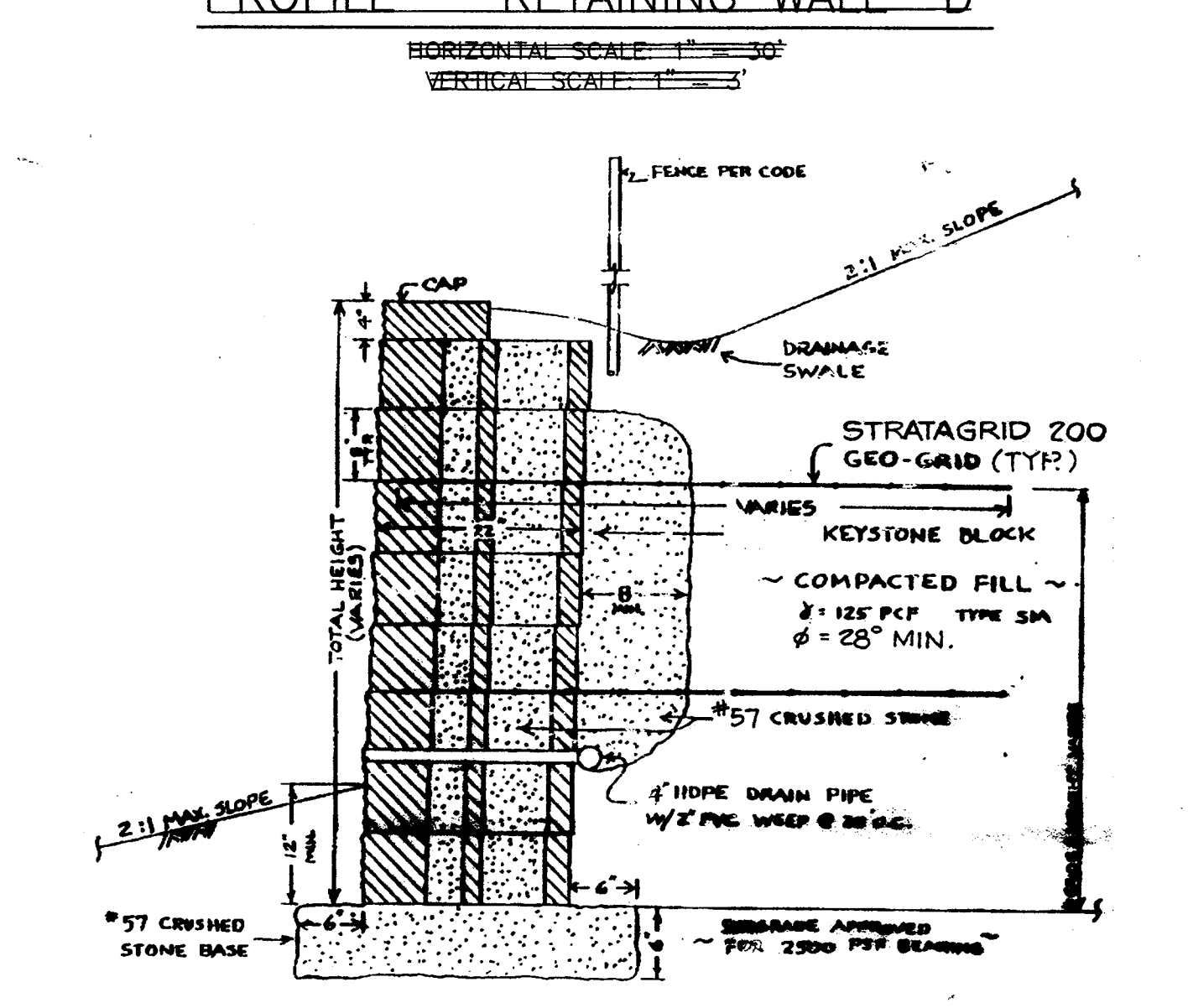
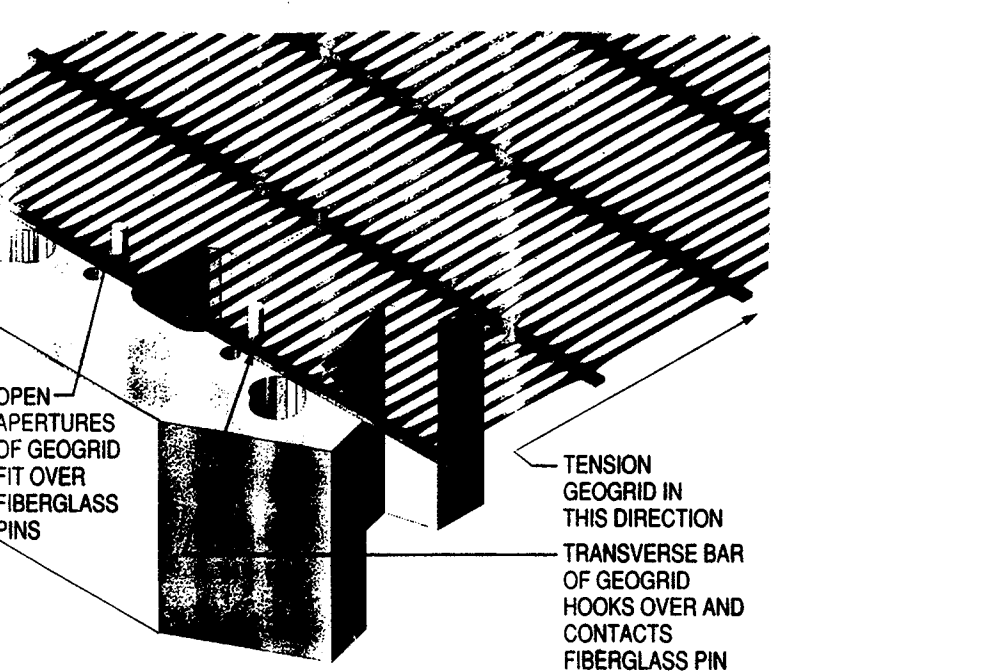
1021.1 General: Where required by the provisions of Sections 406.5, 408.3.2, 1005.5, 1014.7, 1016.5 and 1825.5, guards shall be designed and constructed in accordance with the requirements of this section and Section 1615.8. A guardrail system is a system of building components located near the open sides of elevated walking surfaces for the purpose of minimizing the possibility of an accidental fall from the walking surface to the lower level.

1021.2 Height: The guards shall be at least 42 inches (1067 mm) in height measured vertically above the leading edge of the tread or adjacent walking surface.

Exceptions:

- In other than occupancies in Use Group E, guards shall not be less than 34 inches (864 mm) in height above the leading edge of the tread along stairs which are not more than 20 feet (6096 mm) in height or which reverse direction at an intermediate landing with 12 inches (305 mm) or less measured horizontally between successive flights.
- Guards along open-sided floor areas, mezzanines and landings in occupancies in Use Group R-3 shall not be less than 36 inches (914 mm) in height.

1021.3 Opening Limitations: In occupancies in Use Groups A, B, E, H-4, I-1, I-2, M and R, and in public garages and open parking structures, open guards shall have balusters or be of solid material such that a sphere with a diameter of 4 inches (102 mm) cannot pass through any opening. Guards shall not have an ornamental pattern that would provide a ladder effect.



- NOTE:**
- PROVIDE RAILING ON TOP OF RETAINING WALL ALONG PROPOSED SIDEWALK.
 - THE WALL BATTER (VERTICAL TILT) SHALL BE 7:1 OR 1:8 BATTER (SEE DETAIL THIS SHEET).

- SEQUENCE OF CONSTRUCTION FOR KEYSTONE RETAINING WALL**
- REMOVE ALL SURFACE VEGETATION AND DEBRIS
 - EXCAVATE BASE TRENCH TO ALLOW FOR BASE LEVELING PAD AND FIRST COURSE OF KEYSTONE UNIT.
 - PLACE AND COMPACT BASE LEVELING PAD.
 - SET AND ALIGN BASE COURSE.
 - INSERT FIBERGLASS CONNECTING PINS.
 - PLACE UNIT/DRAINAGE MATERIAL. DRAINAGE MATERIAL SHALL BE NUMBER 57 CRUSHED STONE OR AS DIRECTED BY THE KEYSTONE MANUFACTURER. DO NOT OPERATE COMPACTION EQUIPMENT DIRECTLY OVER THE KEYSTONE UNIT. INSTALL GEOGRID REINFORCEMENT AT INTERVALS INDICATED ON WALL DETAIL.
 - BACKFILL AND COMPACT ALL SOILS PLACED BETWEEN THE UNIT/DRAINAGE MATERIAL AND THE RETAINED BACKFILL.
 - SWEEP TOP OF UNITS CLEAN PRIOR TO PLACEMENT OF THE NEXT COURSE.
 - INSTALL ADDITIONAL COURSES OF KEYSTONE UNIT AS INDICATED IN ABOVE STEPS 5-9.
 - INSTALL RAILING.
 - POSITION AND INSTALL CAP UNITS.
 - FINISH GRADING.

GENERAL NOTES (CONT.)

7. A CERTIFICATION LETTER FROM A GEOTECHNICAL ENGINEER SHALL BE OBTAINED BY THE OWNER CERTIFYING THE MONITORING AND PLACEMENT OF FILL FOR THE RETAINING WALLS.

- GENERAL NOTES**
- THE EARTH WORK AND CONSTRUCTION OF THE RETAINING WALLS SHALL BE PERFORMED UNDER THE OBSERVATION OF A MARYLAND REGISTERED PROFESSIONAL ENGINEER.
 - THE BEARING CAPACITY OF THE SOIL MUST BE VERIFIED IN THE FIELD PRIOR TO WALL CONSTRUCTION. THE FOLLOWING SOIL PROPERTIES WERE ASSUMED FOR DESIGN:
 GRANULAR FILL - SOIL FRICTION ANGLE = 20° MIN.
 UNIT WEIGHT = 110 OR 125 LB/C.F.
 - BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR WITH THE PROPER EQUIPMENT (ASTM D-690)
 MINIMUM ALLOWABLE BEARING PRESSURE IS 2500 PSF. IF BEARING IS FOUND TO BE INADEQUATE, AREA UNDER WALL AND REINFORCED BACKFILL MUST BE UNDERCUT AND REPLACED W/APPROPRIATE MATERIAL AT THE DIRECTION OF THE GEOTECHNICAL ENGINEER.
 - BASE LEVELING PAD AND UNIT/DRAINAGE MATERIAL SHALL BE COMPACTED 3/4" MIN. CRUSHED STONE.
 - WALLS SHALL BE KEYSTONE UNITS AND PINS. CORNER UNITS SHALL BE SET CUTS. CAPS AND CORNER UNITS SHALL BE SECURED W/FLEXIBLE EPOXY BASED ADHESIVE SUCH AS KEYSTONE KAPSEAL
 - GEOGRID SHALL BE TENSAR UX1400S.
 - WORK SHALL BE PERFORMED PER KEYNOTES CONSTRUCTION MANUAL BY A QUALIFIED CONTRACTOR.

NO.	DATE	REVISION
2	1-08-02	ADD GREASE INTERCEPTOR BLDG. 3; REVISE RETAINING WALL & DECK AT BLDG. 3
1	11-3-99	CROSS OUT WALL 'A' & 'B' PROFILES

BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS

8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-8644

Donald Moser

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Howard County
 CHIEF, DEVELOPMENT ENGINEERING DIVISION

Cinda Hamlett
 CHIEF, DIVISION OF LAND DEVELOPMENT

Jack Rutter
 DIRECTOR

DATE: 7/2/99
 DATE: 9/20/99

OWNER/DEVELOPER:
 CLARKSVILLE SQUARE, LLC
 P.O. BOX 417
 ELLICOTT CITY, MD 21041
 PHONE: 410-465-4244

PROJECT:
CLARKSVILLE SQUARE SHOPPING CENTER
 AND PARCELS A-3 & 4 OF THE FOSTER PROPERTY

LOCATION:
 TAX MAP 34 - BLOCK 8
 PARCELS 20, 21, 22, 9/214
 5th ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND

TITLE:
RETAINING WALL PROFILES, DETAILS AND NOTES SHEET
 SDP-99-28, WP-98-08, WP-95-117

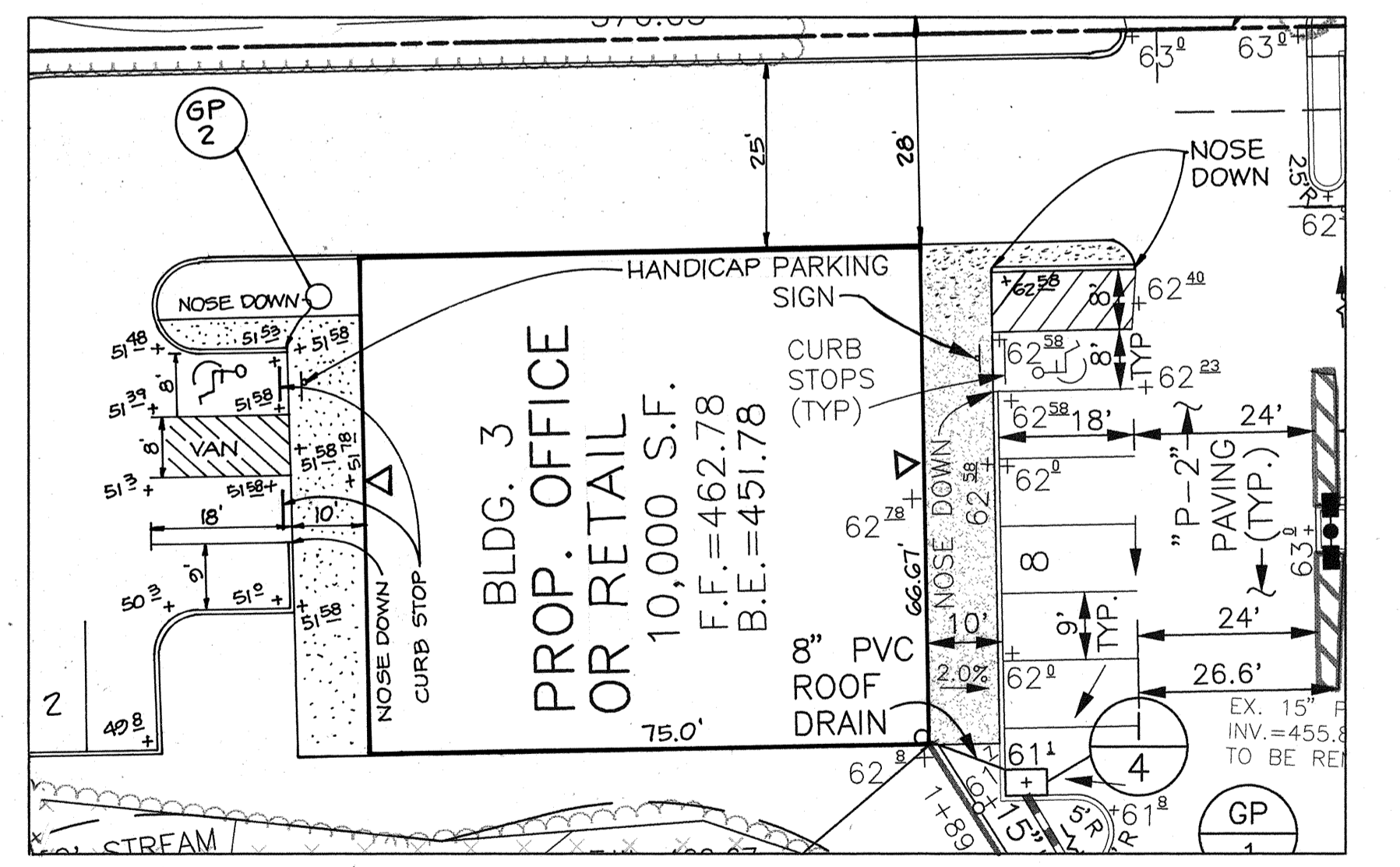
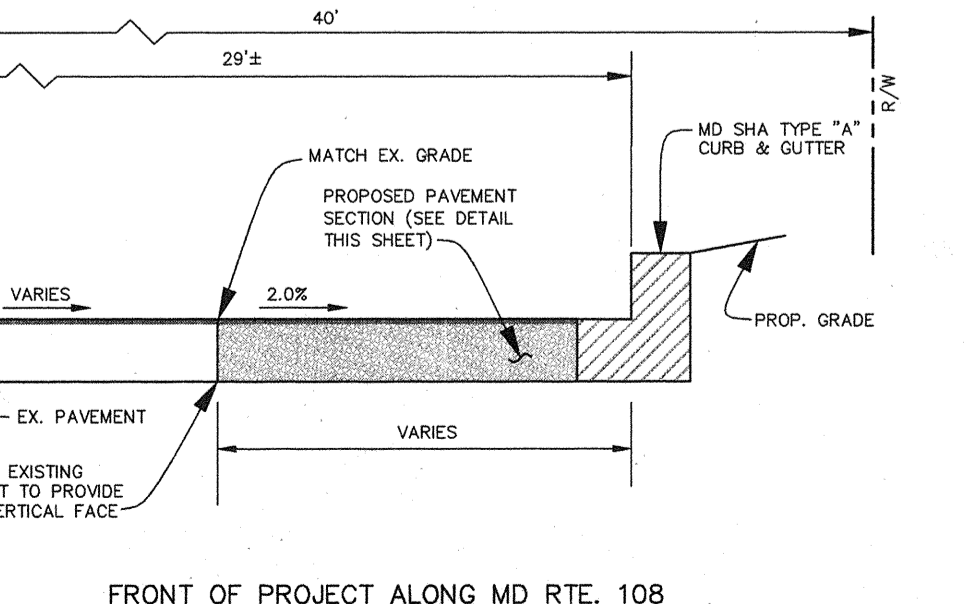
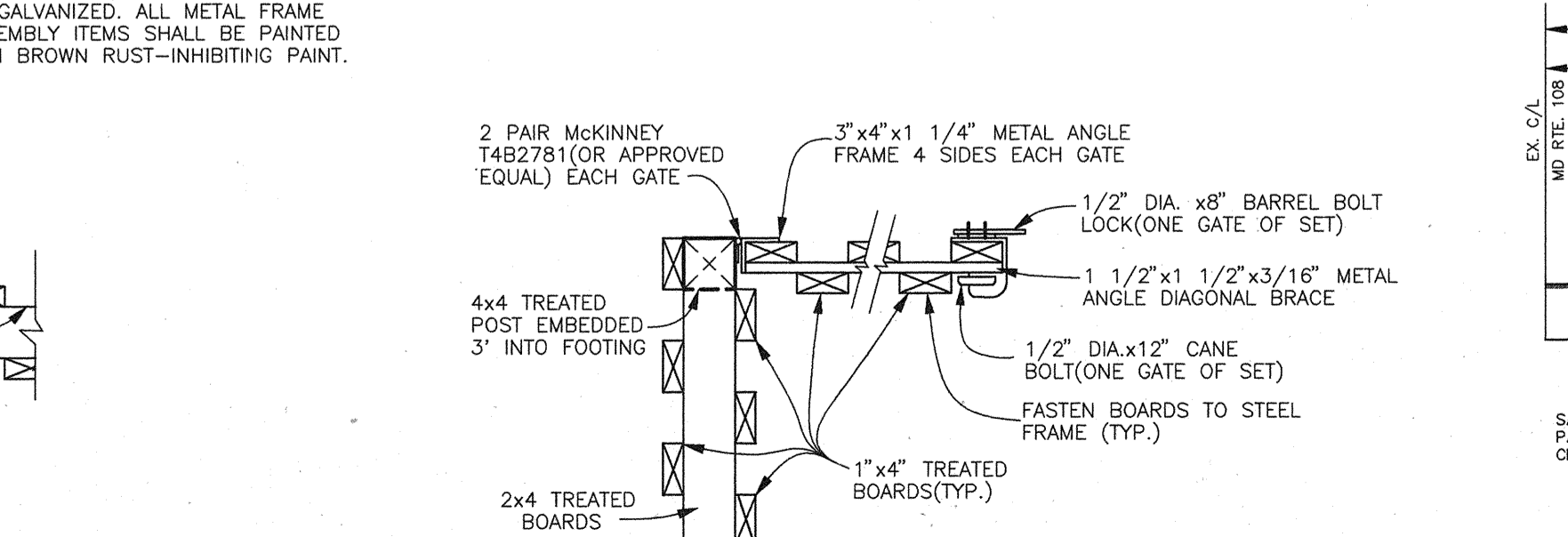
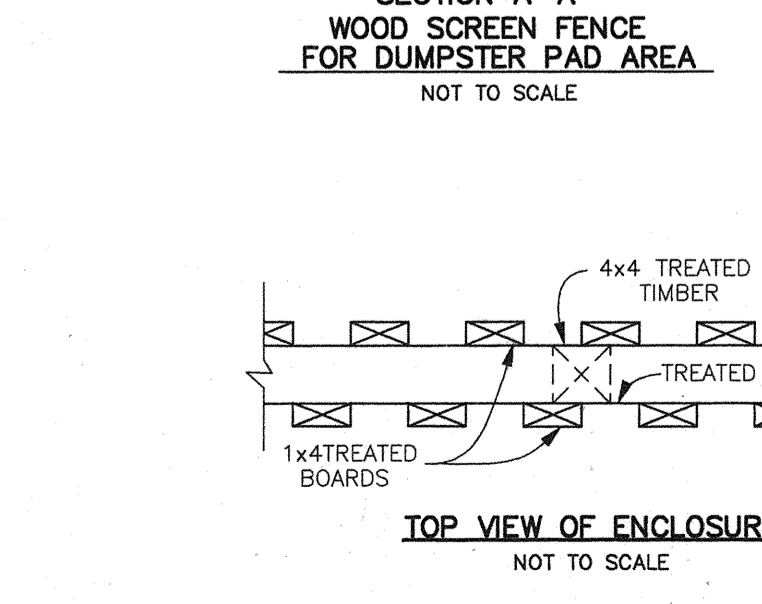
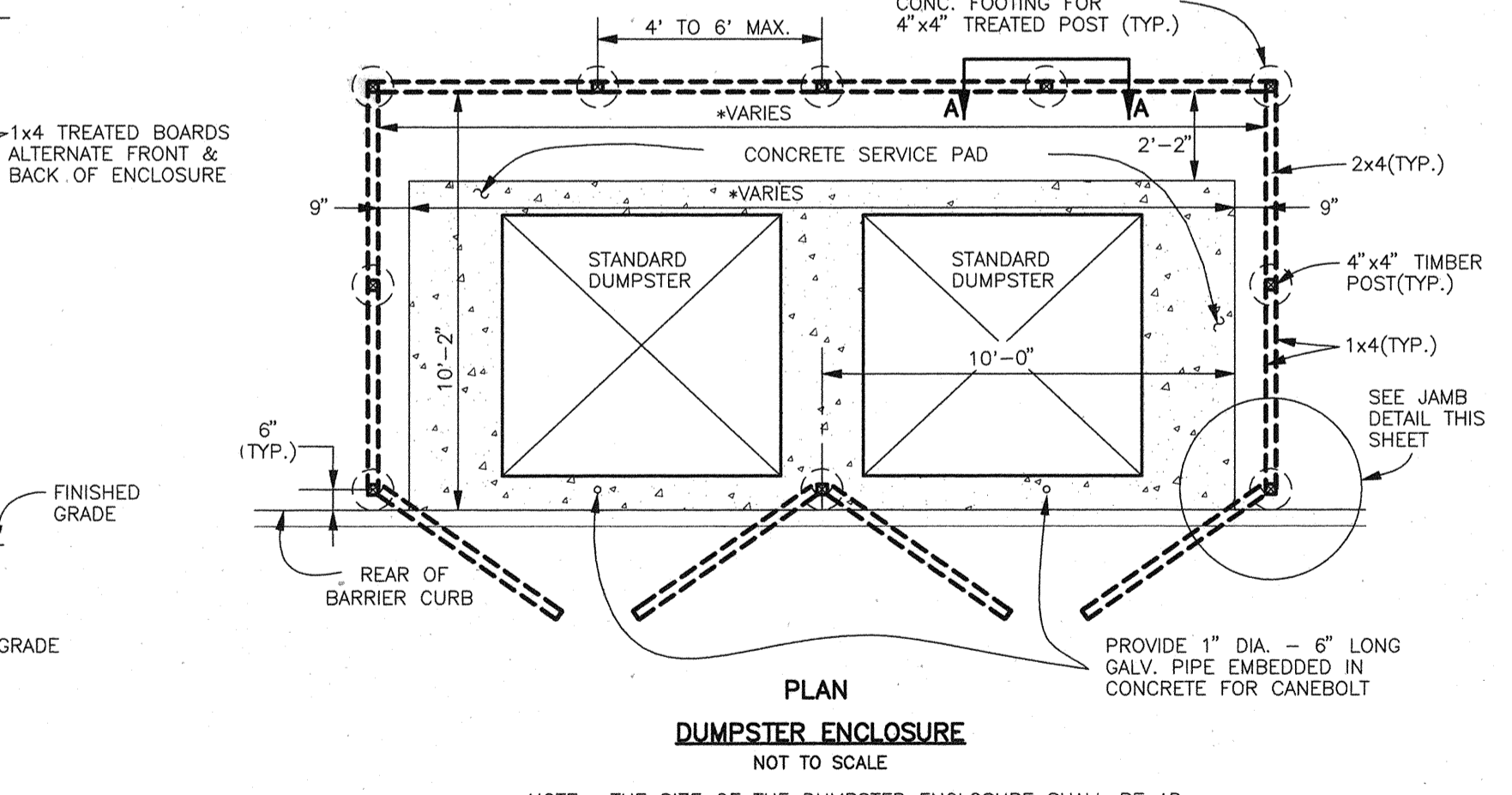
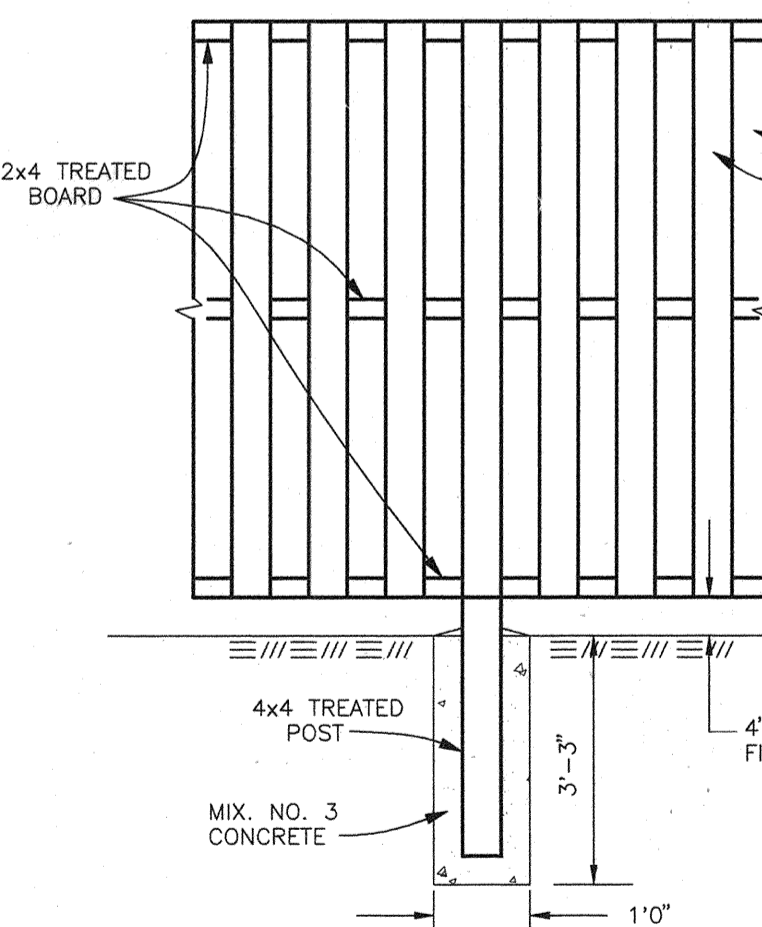
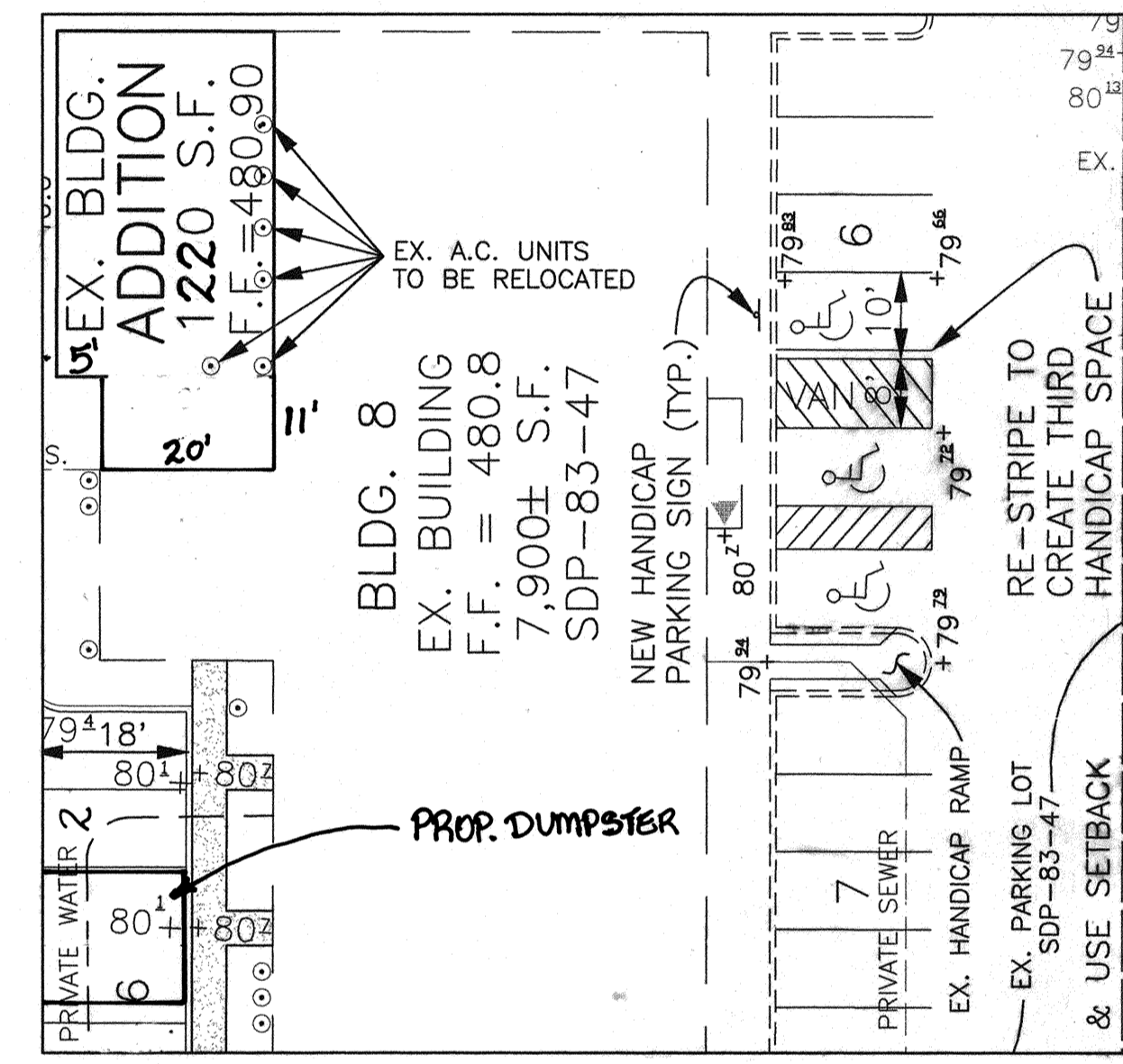
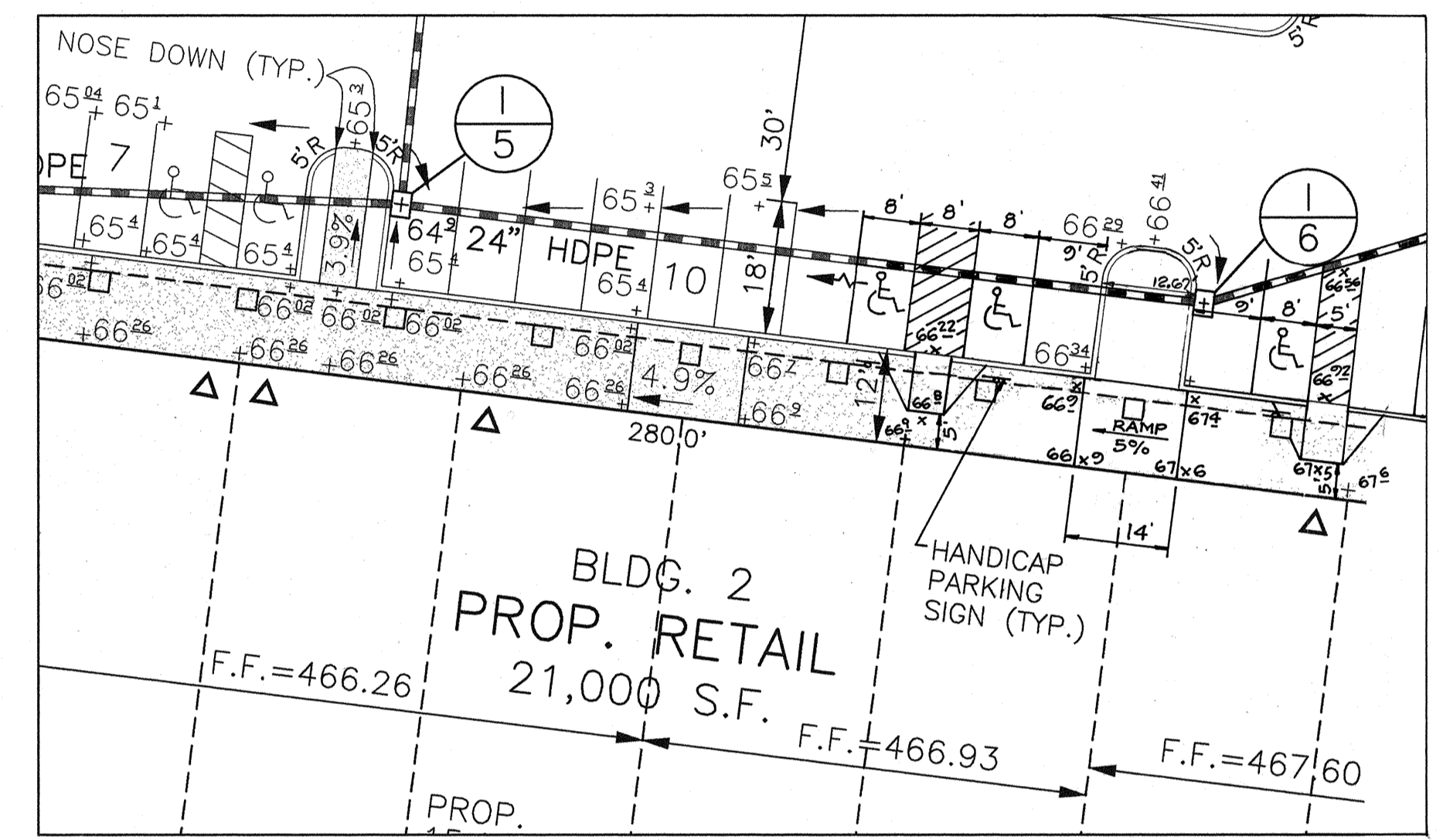
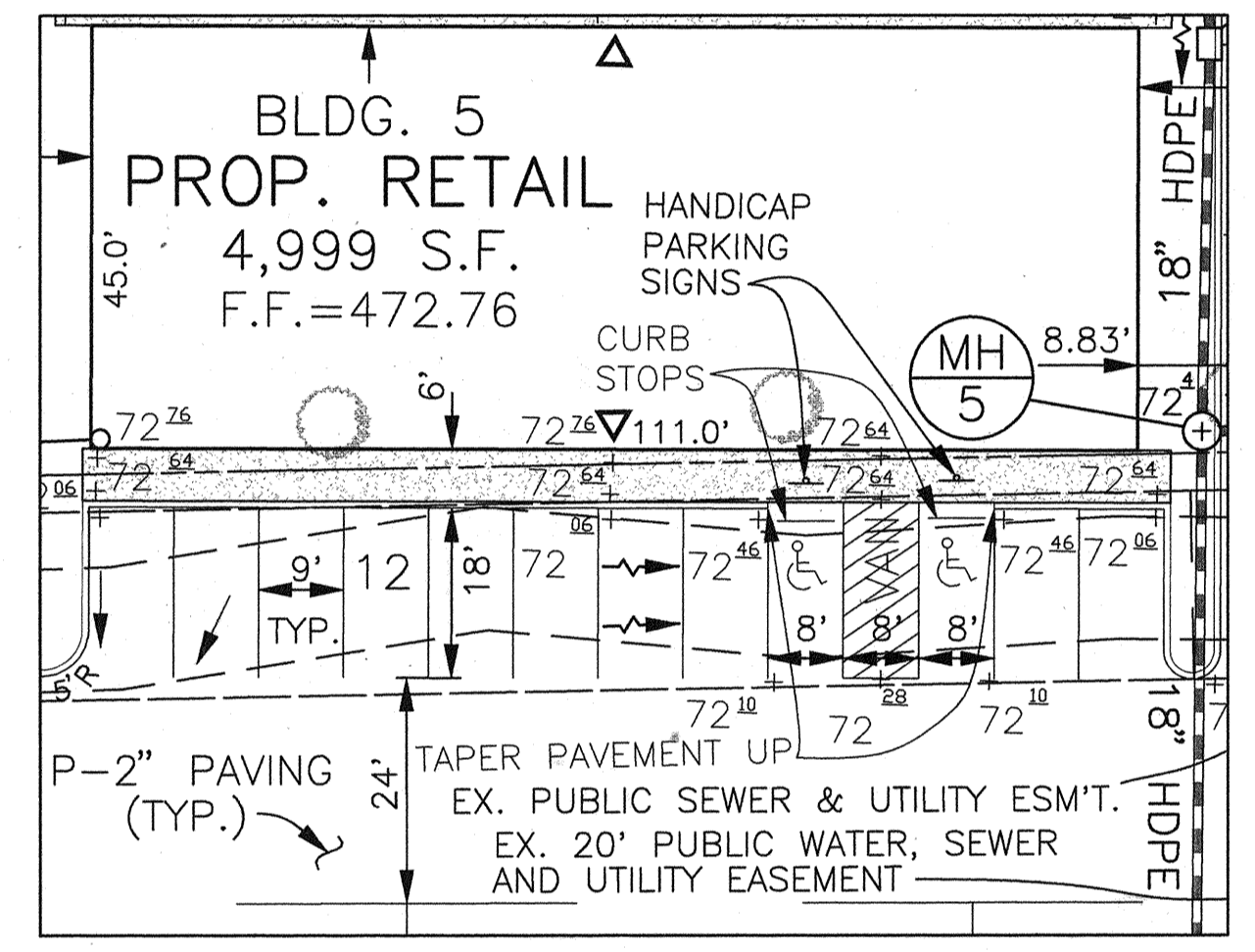
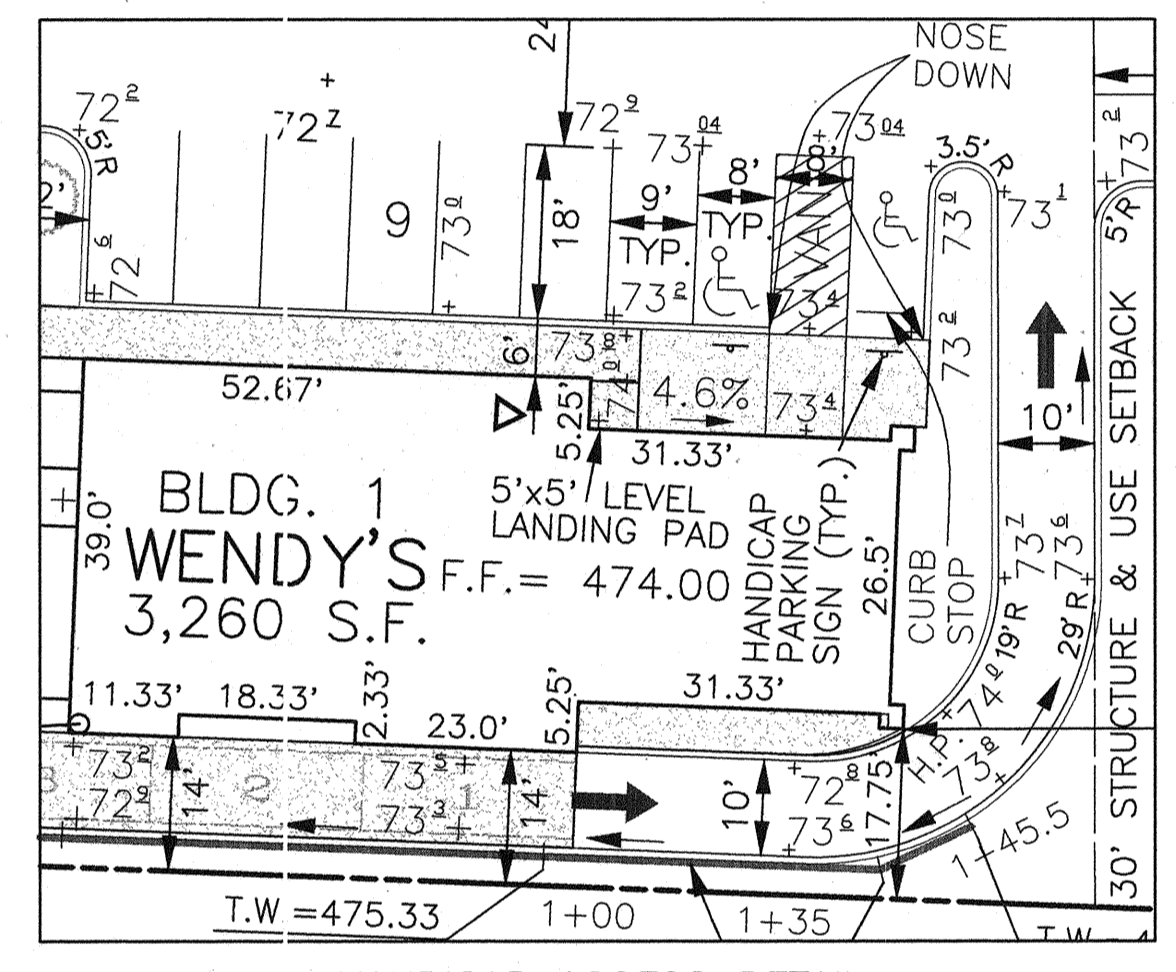
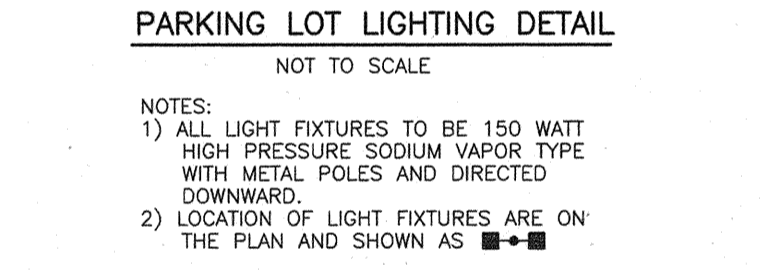
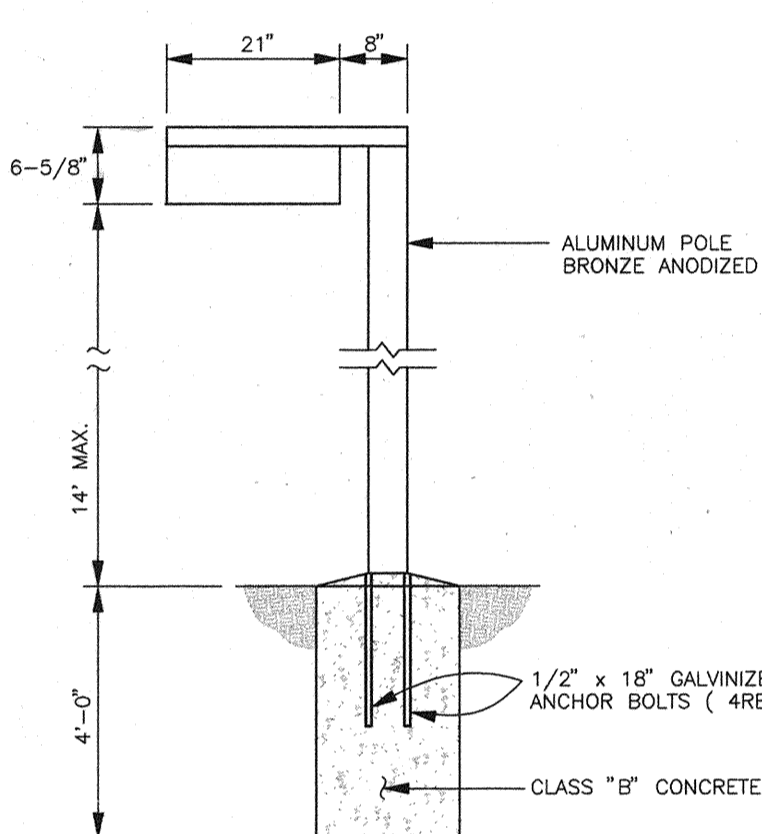
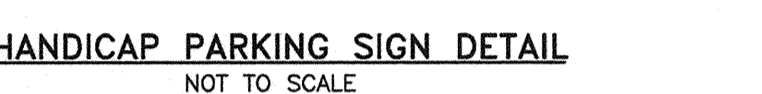
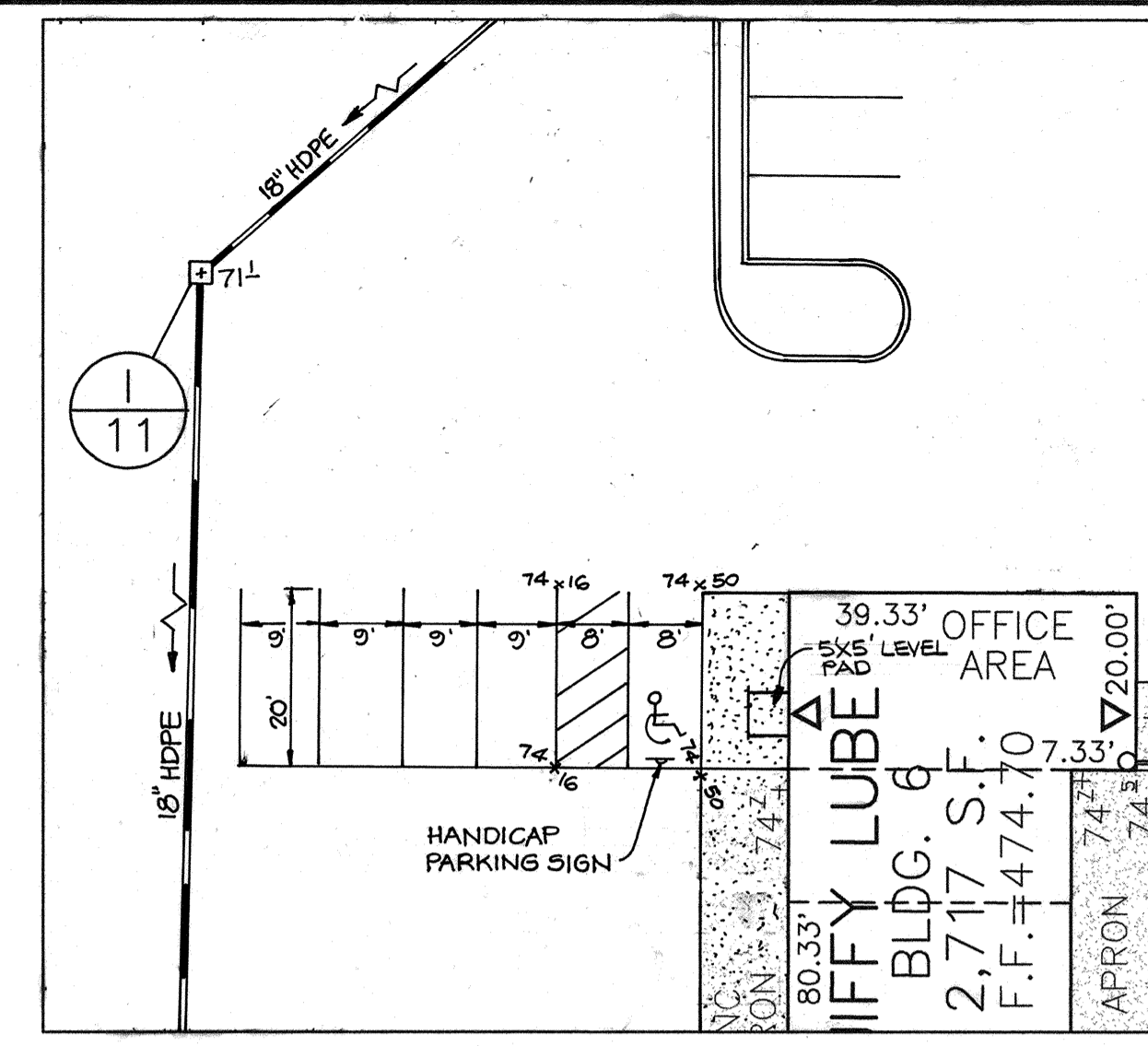
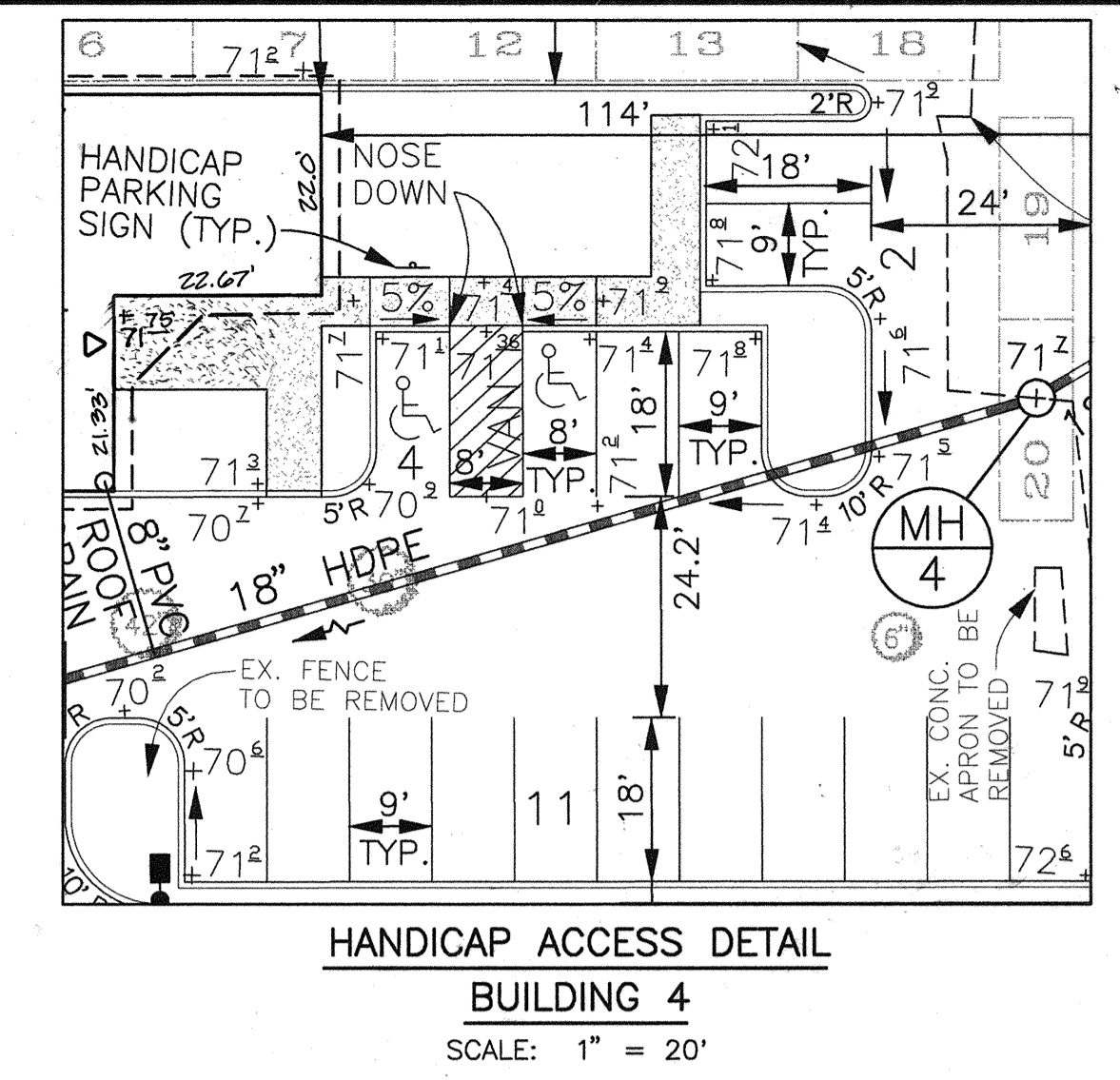
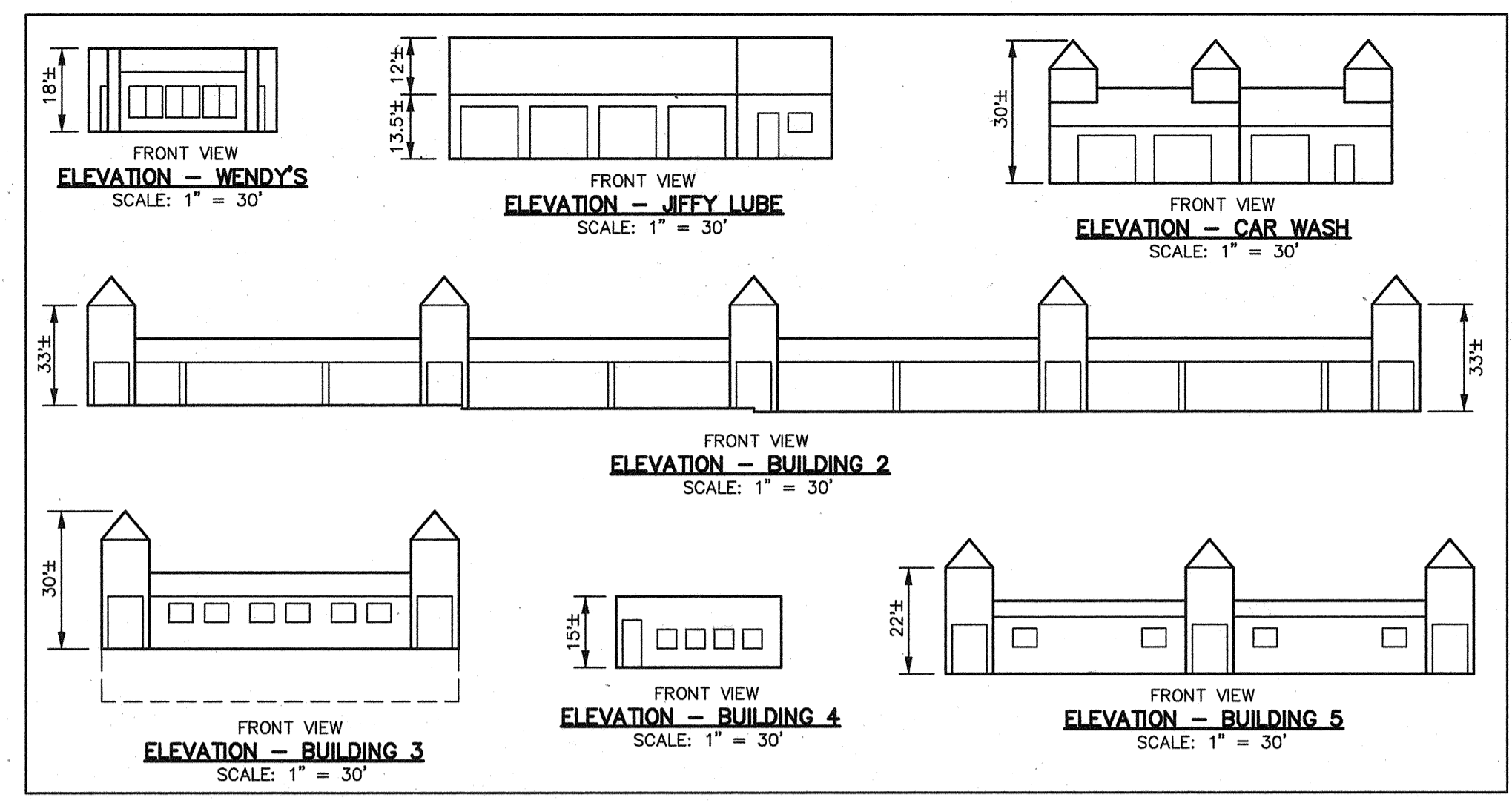
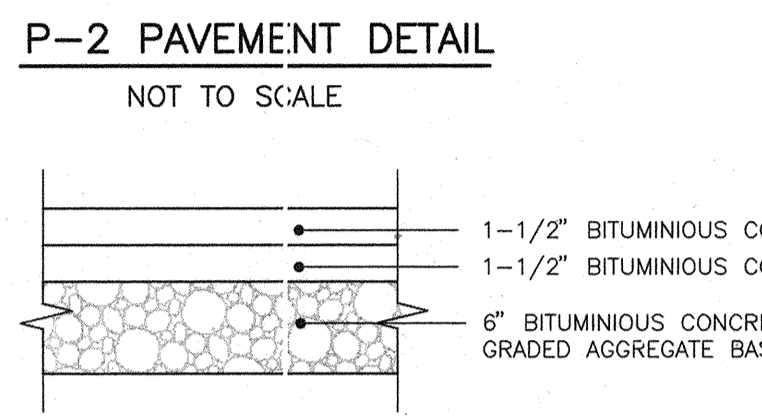
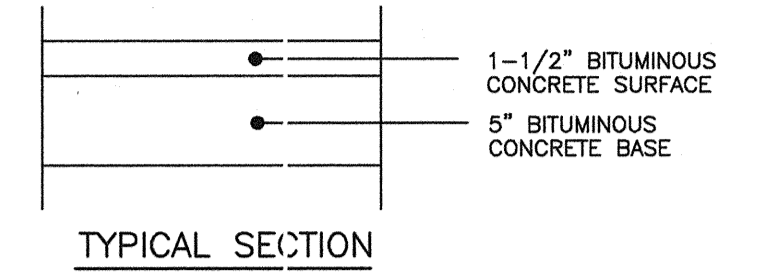
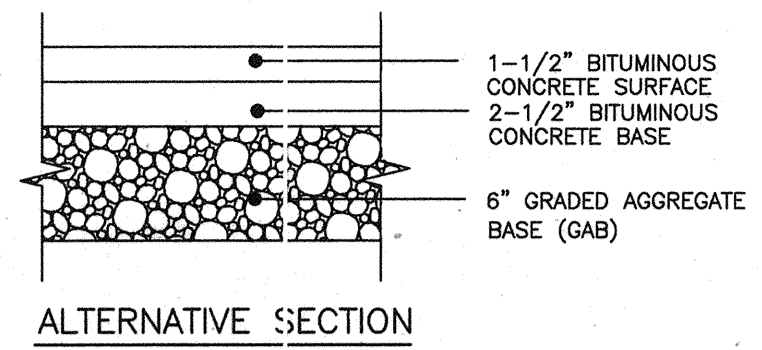
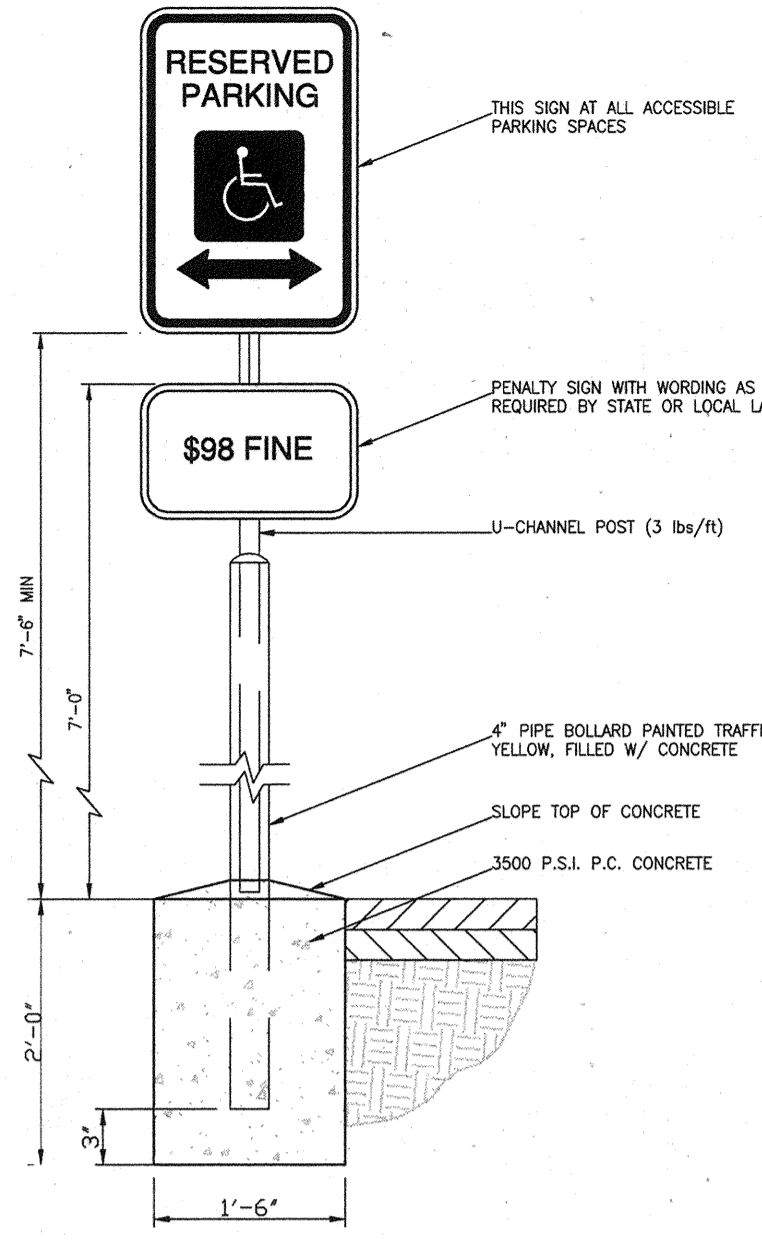
DATE: JANUARY 11, 1999
 AUGUST, 1999

PROJECT NO. 1162

SCALE: AS SHOWN

Design: DAM Draft: MCR

SDP-99-69



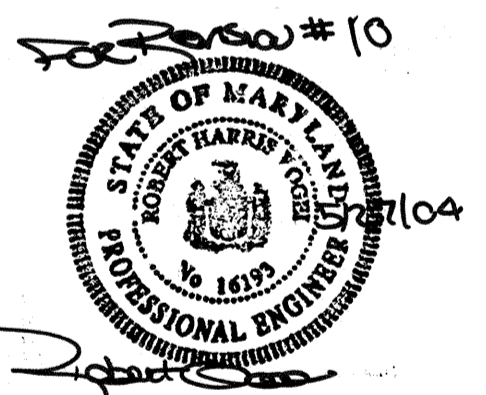
NO.	DATE	REVISION
10	05-21-04	REV. BLDG. 8; RELOCATE DUMPSTER
2	4-17-00	REV. BLDG. 3, PARKING, GRADING, HANDICAP ACCESS
1	11-3-99	REV. BUILDING 6 HANDICAP PARKING & BUILDING 4

BENCHMARK ENGINEERING, INC.
 ENGINEERS • LAND SURVEYORS • PLANNERS
 8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
 PHONE: 410-465-6105 FAX: 410-465-6644

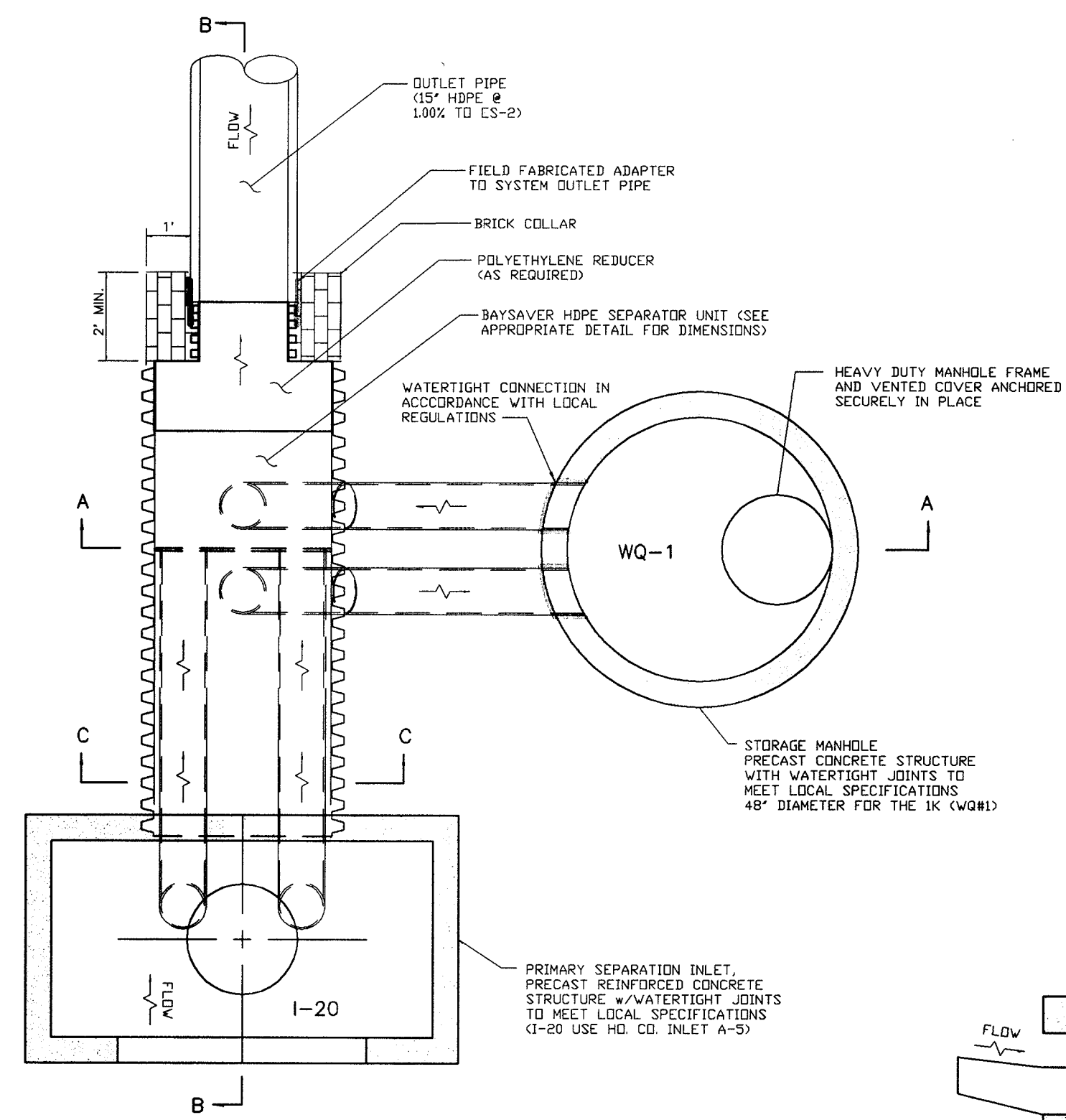
OWNER/DEVELOPER: CLARKSVILLE SQUARE, LLC
 P.O. BOX 417
 ELLICOTT CITY, MD 21041
 PHONE: 410-465-4244

PROJECT: CLARKSVILLE SQUARE SHOPPING CENTER AND PARCELS A-3 & A-4 OF THE FOSTER PROPERTY
 LOCATION: TAX MAP 34 - BLOCK 6 PARCELS 20, 21, 22, p/0214 5th ELECTION DISTRICT HOWARD COUNTY, MARYLAND
 TITLE: MISCELLANEOUS SITE DETAILS AND NOTES SHEET
 DATE: JANUARY, 1999 PROJECT NO. 1162
 AUGUST, 1999
 SCALE: AS SHOWN DRAWING 13 OF 14
 Design: DAM Draft: MCR

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division
 Chief, Division of Land Development
 Date: 9/12/99
 Date: 9/29/99



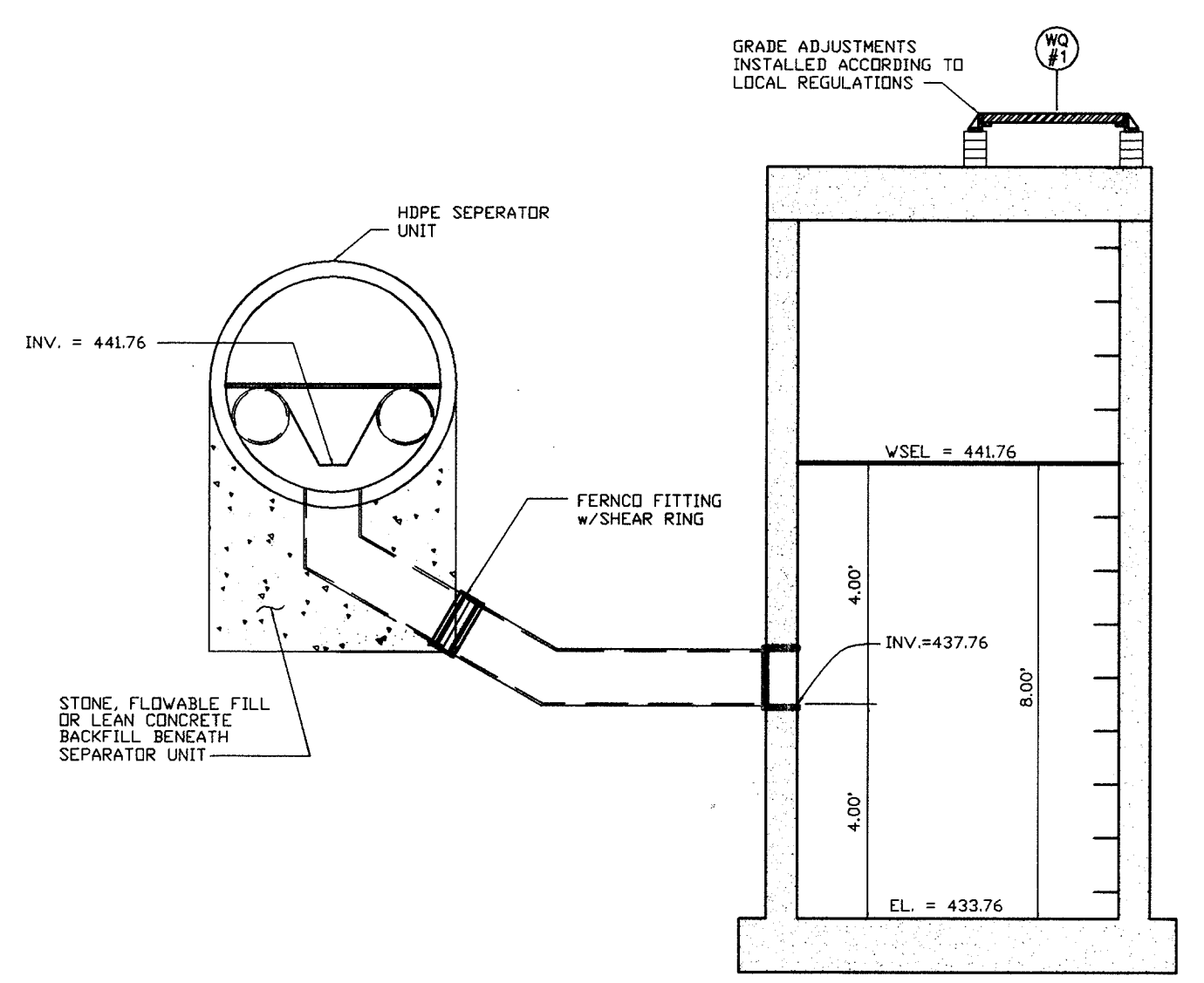
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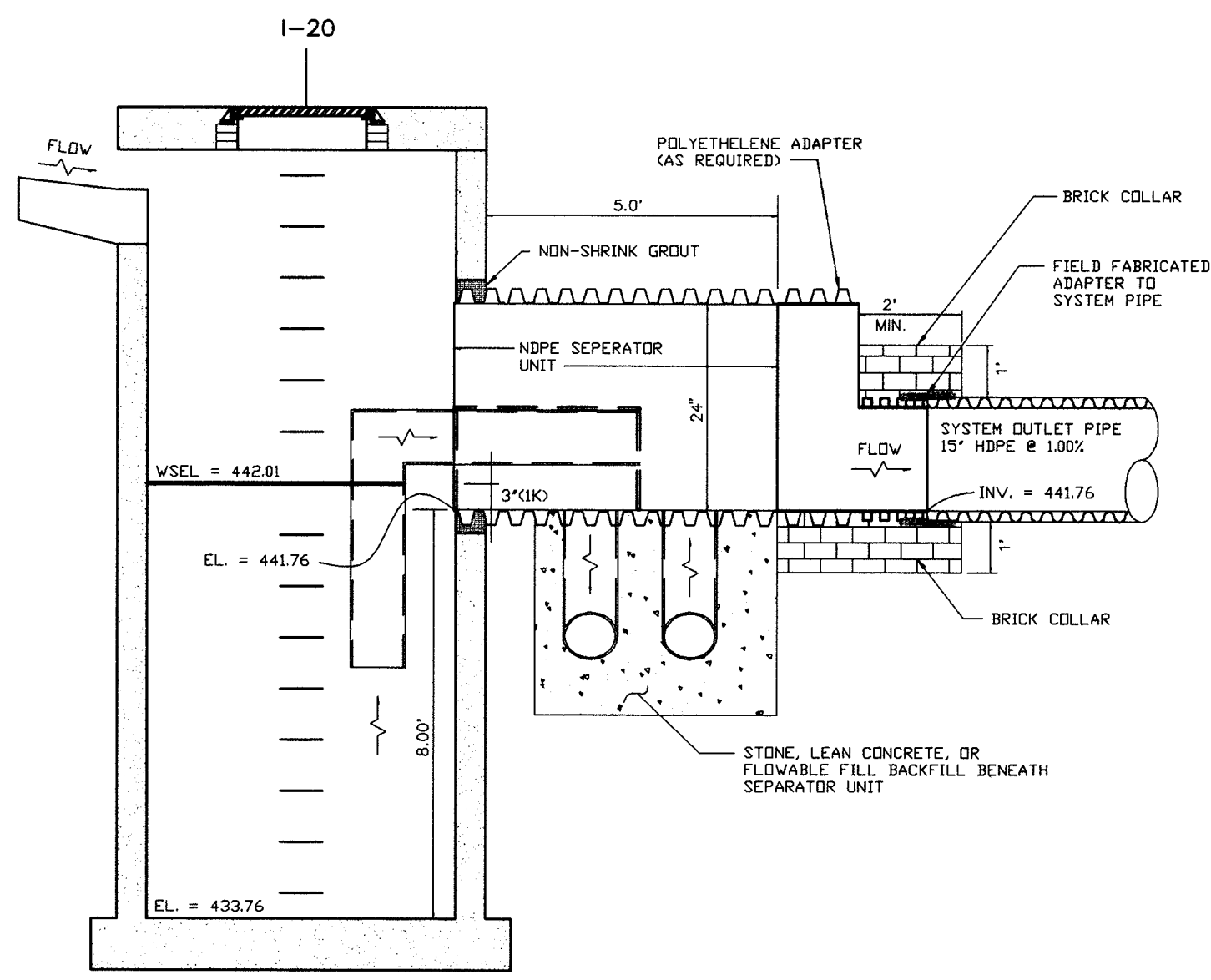
PLAN VIEW
NOT TO SCALE

1K BAYSAVER UNIT
PRIVATELY OWNED AND MAINTAINED

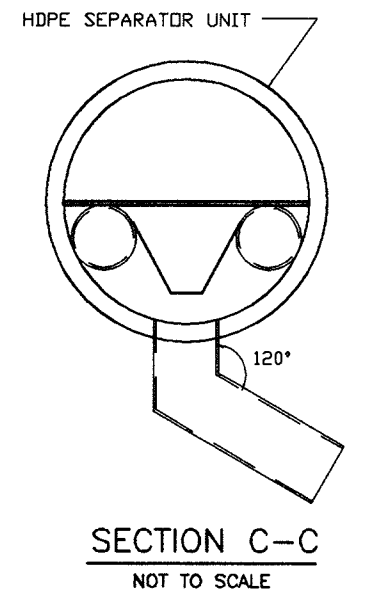
BAYSAVER, INC.
1010 DEER HOLLOW DR.
MOUNT AIRY, MD 21771
(PH) 301-829-6470
(TOLL) 1-800-BAYSAVER
(FAX) 301-829-3747
WWW.BAYSAVER.COM



SECTION A-A
NOT TO SCALE



SECTION B-B
NOT TO SCALE



SECTION C-C
NOT TO SCALE

BAYSAVER INSTALLATION INSTRUCTIONS

- EXCAVATION MUST PROVIDE ADEQUATE SPACE TO CONNECT INLET AND OUTLET PIPES TO SEPARATOR MANHOLE AND BAYSAVER UNIT. INSTALL PRECAST DRIP STRUCTURES ON SOLID GROUND AS VERIFIED BY A GEOTECHNICAL ENGINEER.
- VERIFY THE SUBGRADE ELEVATION AGAINST THE MANHOLE DIMENSIONS AND CONNECTING STORM DRAIN INVERTS.
- MAKING SURE THE BASES ARE LEVEL AND THE STORAGE MANHOLE OPENINGS ARE ALIGNED WITH THE SEPARATOR UNIT, INSTALL PRIMARY AND STORAGE MANHOLES. INSTALL RUBBER GASKETS ON BASE UNITS AND COAT WITH LUBRICATING GREASE. INSTALL ADDITIONAL MANHOLE SECTION AS REQUIRED.
- BACKFILL BASE SECTIONS OF MANHOLES TO INVERT OF STORAGE MANHOLE CONNECTING PIPES. USING APPROVED BACKFILL MATERIAL, BACKFILL AND COMPACT IN 8 INCH LIFTS. BACKFILL AND COMPACTION SHOULD BE MONITORED BY A GEOTECHNICAL ENGINEER.
- INSTALL BAYSAVER SEPARATOR UNIT AND CONNECTING PIPES. SEAL ALL CONNECTING JOINTS AND INSTALL SEPARATOR UNIT/STORM DRAIN JOINT COLLAR. CUT EXCESS LENGTH OFF CONNECTING PIPES INSIDE STORAGE MANHOLE.
- BACKFILL SEPARATOR UNIT AND MANHOLES AREAS NOT ACCESSIBLE TO COMPACTION EQUIPMENT MUST BE BACKFILLED WITH LEAN CONCRETE OR FLOWABLE FILL.
- INSTALL AND SET MANHOLE COVER GRADE ADJUSTMENTS AS NECESSARY.
- INSTALL AND SET MANHOLE FRAME AND COVER UNITS.

GENERAL CONSTRUCTION NOTES

- ALL WORK MUST BE DONE WITH REGARD FOR THE SAFETY OF THE CONSTRUCTION CREW.
- ALL WORK AND MATERIALS MUST COMPLY WITH APPLICABLE STATE AND LOCAL REGULATIONS.
- CONTRACTOR SHALL VERIFY THE LOCATION AND DEPTH OF ANY UNDERGROUND UTILITIES BEFORE EXCAVATION BEGINS.

BAYSAVER MAINTENANCE

BAYSAVER SYSTEMS MUST BE INSPECTED ANNUALLY AND MAINTAINED AS NEEDED. INSPECTION IS MADE BY CHECKING THE DEPTH OF SEDIMENT IN EACH MANHOLE WITH A GRADE STICK OR SIMILAR DEVICE. MAINTENANCE IS REQUIRED WHEN THE SEDIMENT DEPTH IN EITHER MANHOLE EXCEEDS 2 FEET.

MAINTENANCE CONSISTS OF THE FOLLOWING:

- PRIMARY MANHOLE**
 - PUMP THE CLEAN WATER FROM THE CENTER OF THE MANHOLE DIRECTLY TO THE SYSTEM OUTFALL UNTIL THE WATER LEVEL FALLS TO 1 FOOT ABOVE THE SEDIMENT LAYER.
 - REMOVE THE SETTLED SEDIMENT AND REMAINING WATER BY VACUUM TRUCK.
 - CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER BY VACUUM TRUCK. MAKE CERTAIN MANHOLE IS CLEAN.
- STORAGE MANHOLE**
 - REMOVE THE TOP 12 INCHES OF OIL, DEBRIS, AND WATER BY VACUUM TRUCK.
 - PUMP THE CLEAN WATER FROM THE CENTER OF THE MANHOLE DIRECTLY TO THE SYSTEM OUTFALL UNTIL THE WATER LEVEL FALLS TO 1 FOOT ABOVE THE SEDIMENT LAYER.
 - REMOVE THE SETTLED SEDIMENT AND REMAINING WATER BY VACUUM TRUCK.
 - CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER BY VACUUM TRUCK. MAKE CERTAIN MANHOLE IS CLEAN.

CONTAMINATED MATERIAL REMOVED FROM THE MANHOLES MUST BE DISPOSED OF RESPONSIBLY AND LEGALLY BY THE OPERATOR OF THE VACUUM TRUCK.

THE PURPOSE OF THIS SUPPLEMENTAL SHEET IS TO ADD BAYSAVER NOTES AND DETAILS TO SDP-99-09

NO.	DATE	REVISION

BENCHMARK
ENGINEERS • LAND SURVEYORS • PLANNERS
ENGINEERING, INC.

8480 BALTIMORE NATIONAL PIKE • SUITE 418 • ELLICOTT CITY, MARYLAND 21043
PHONE: 410-465-6105 FAX: 410-465-6644

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

[Signature]
CHIEF, DEVELOPMENT ENGINEERING DIVISION
5/3/02 DATE

[Signature]
CHIEF, DIVISION OF LAND DEVELOPMENT
5/9/02 DATE

[Signature]
DIRECTOR
5/14/02 DATE

OWNER/DEVELOPER:
CLARKSVILLE SQUARE, LLC
P.O. BOX 417
ELLICOTT CITY, MD 21041
PHONE: 410-465-4244

PROJECT: **CLARKSVILLE SQUARE SHOPPING CENTER**
AND PARCELS A-3 & A-4 OF THE FOSTER PROPERTY

LOCATION: TAX MAP 34 - BLOCK 6
PARCELS 20, 21, 22, p/214
9th ELECTION DISTRICT
HOWARD COUNTY, MARYLAND

TITLE: **"BAYSAVER" NOTES & DETAILS**

DATE: MARCH, 2000 PROJECT NO. 1162
SCALE: AS SHOWN DRAWING 14 OF 14

Design: DAM Draft: MCR