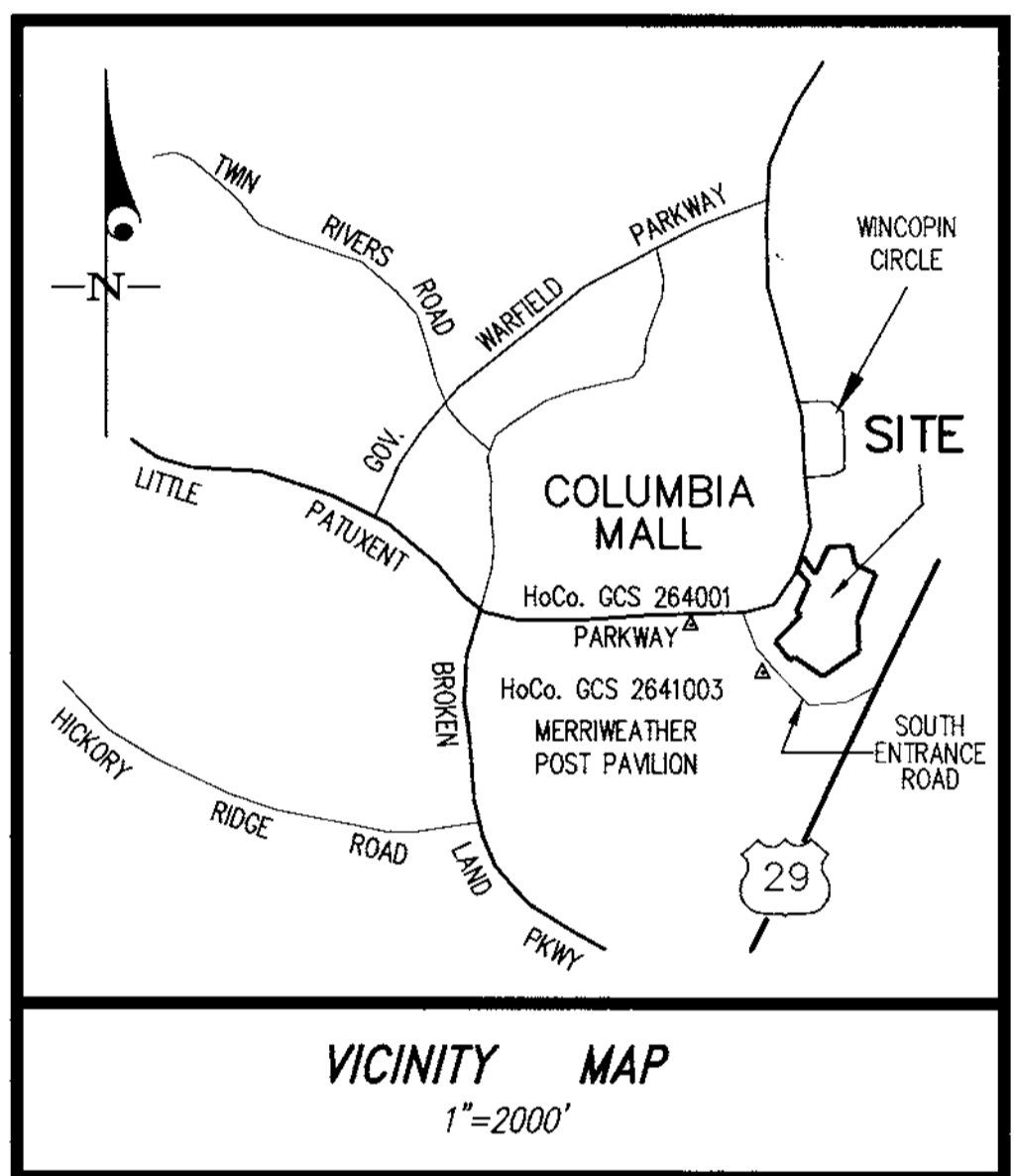


GENERAL NOTES

- 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 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.
- PROJECT BACKGROUND:
LOCATION: TAX MAP #36, GRID 2, PARCEL A-1
COLUMBIA TOWN CENTER, SECTION 1, AREA 3
ZONING: NT
ELECTION DISTRICT: 5TH
SITE AREA: 11.77± AC
REC. REF.: PLAT NO. 7989
- 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 THE FACE OF CURB OR FACE OF BUILDING UNLESS OTHERWISE NOTED. DIMENSIONS ARE MEASURED PERPENDICULAR OR RADIIALLY BETWEEN ITEMS UNLESS OTHERWISE NOTED.
- ON-SITE EXISTING TOPOGRAPHY AND FEATURES ARE FROM SURVEY BY GUTSCHICK, LITTLE & WEBER, P.A. DONE IN 10/98.
- COORDINATES ARE BASED ON RECORDED PLAT #7989 WHICH USES HOWARD COUNTY GEODETIC CONTROL STA. NOS. 2640001 AND 2641003.
- PUBLIC WATER AND SEWER IS TO BE UTILIZED (LITTLE PATUXENT DRAINAGE AREA). CONTRACT NOS. 169-S, 286 W&S, 167-W AND 24-3779-D.
- STORMWATER MANAGEMENT IS PROVIDED BY ON-SITE PRIVATE FACILITY.
- ALL STORM DRAINS PROPOSED UNDER THIS SDP ARE PRIVATE.
- INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM A SURVEY BY DMK, INC. (2/97) AND CONTRACT NOS. 169-S, 286 W&S, 167-W AND 24-3779-D BUT THE CONTRACTOR MUST DETERMINE THAT EXACT LOCATION BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF CONSTRUCTION.
- ALL PROPOSED RAMPS SHALL BE IN ACCORDANCE WITH CURRENT A.D.A. STANDARDS. MAXIMUM SIDEWALK CROSS SLOPE SHALL BE (2%) TWO PERCENT. PROVIDE A MIN. OF (5'X5') FIVE FOOT BY FIVE FOOT LEVEL (2% MAX.) LANDING AT THE TOP AND BOTTOM OF ALL RAMPS AND BUILDING ENTRANCES AND EXITS.
- ALL DRIVEWAYS AND PARKING TO BE PRIVATELY OWNED AND MAINTAINED.
- ANY DAMAGE TO COUNTY OWNED RIGHT-OF-WAY TO BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- TRENCH BEDDING FOR STORM DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH HOWARD COUNTY STANDARD G2.01. CLASS "C" BEDDING, UNLESS OTHERWISE NOTED.
- GUTTER OF CURBS SHALL BE PITCHED TO CONFORM TO ADJACENT DRAINAGE PATTERNS FOR ASPHALT PAVING.
- WATER METERS ARE LOCATED IN UNDERGROUND VAULTS FOR A COMBINATION DOMESTIC AND FIRE SERVICES. EACH BUILDING IS EQUIPPED WITH AN AUTOMATIC FIRE PREVENTION SPRINKLER SYSTEM.
- ALL CURB FILLETS ARE 5' RADIUS UNLESS NOTED OTHERWISE. CURB SPOT ELEVATIONS ARE AT THE FLOW LINE, UNLESS NOTED OTHERWISE.
- THERE ARE NO KNOWN GRAVE SITES OR CEMETERIES ON THIS SITE.
- ALL DOWNSPOUT DRAINS SHALL BE CONNECTED TO THE SITE'S PRIVATE STORM DRAIN SYSTEM.
- WETLAND DELINEATION WAS PERFORMED BY MORRIS ENVIRONMENTAL ASSOCIATES, INC. (OCT., 1998) AND VERIFIED BY THE COE. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE WETLAND BUFFER EXCEPT AREAS PERMITTED FOR DISTURBANCE BY THE DEPARTMENT OF THE ENVIRONMENT AND THE HCOEPZ.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALLS.
- ALL WATER HOUSE CONNECTIONS SHALL BE BUILT WITH 48" OF MIN. COVER TO PROPOSED GRADES.
- ALL OUTDOOR LIGHTING SHALL COMPLY WITH ZONING SECTION 134. POLE LOCATIONS ARE SHOWN ON THESE PLANS. SEE ELECTRICAL PLAN TO BE SUBMITTED WITH ARCHITECTURAL DRAWINGS FOR POLE HEIGHTS, TYPES, WATTAGE, ETC.
- OTHER HOWARD COUNTY FILES RELATED TO THIS SITE:
PLAT NO. 7989, AMENDED FINAL DEVELOPMENT PLAN PHASE 139A-III RECORDED AS PLAT NO. 3054-A-1591 THROUGH 1594; PLAT 27, FOLIO 64; AND WP-99-105.
- CONSTRUCTION SHALL BE PHASED AS FOLLOWS:
A. PHASE I - GARAGE 'B'
- BUILDING WING NO. S 1-7 & THEIR COURTYARDS
- SWIMMING POOL
- CENTRAL PROMENADE
- ALL UTILITIES EXCEPT THOSE LOOPING AROUND GARAGE 'A'
- ALL DRIVEWAYS & SURFACE PARKING EXCEPT THE PORTION LEADING TO GARAGE 'A'
- PERIMETER RETAINING WALLS.
B. PHASE II - GARAGE 'A' & ITS UTILITY LOOP
- BUILDING WING NO. S 8-14 & THEIR COURTYARDS.

- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING (IN ACCORDANCE WITH CHAPTER IV. OF THE HOWARD COUNTY LANDSCAPE MANUAL) IS POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$94,350 FOR:
296 SHADE TREES AT \$300 EA. = \$88,800
25 EVERGREEN TREES AT \$150 EA. = \$3,750
60 SHRUBS AT \$30 EA. = \$1,800
(SEE TABULATION ON SHEET 4 FOR BREAKDOWN OF LANDSCAPING REQUIRED).
- WP-99-105, APPROVED ON 8/04/99 TO WAIVE SECTION 16.116(G)(II). ALLOWS DISTURBANCE WITHIN THE 75' STREAM BUFFER, SUBJECT TO:
A. THE IMPACT TO THE BUFFER SHALL BE LIMITED TO THE AREA SHOWN ON SDP-99-135 AND SAID AREA SHALL BE IMMEDIATELY STABILIZED.
B. AN EQUIVALENT AREA WITHIN THE STREAM BUFFER ON OPEN SPACE LOT 2 SHALL BE REPLANTED (SEE SHEET NO. 4) IN ACCORDANCE WITH SECTION 16.116(G).



Best Management Practices for Working in Nontidal Wetlands, Wetland Buffers, Waterways and 100-year Floodplains

- No excess fill, construction materials, or debris shall be stockpiled or stored in nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- Place materials in a location and manner which does not adversely impact surface or subsurface water flow into or out of nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- Do not use the excavated material as backfill if it contains waste metal products, unsightly debris, toxic materials, or any other deleterious substance. If additional backfill is required, use clean material free of waste metal products, unsightly debris, toxic materials, or any other deleterious substance.
- Place heavy equipment mats or suitably space the equipment to prevent damage to nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- Repair and maintain any serviceable structure or fill so there is no permanent loss of nontidal wetlands, nontidal wetland buffers, or waterways, or permanent modification to the 100-year floodplain in excess of that lost under the originally authorized structure or fill.
- Rectify any nontidal wetlands, wetland buffer, waterways, or 100-year floodplain temporarily impeded by any construction.
- All stabilization in the nontidal wetland and nontidal wetland buffer shall consist of the following species: Annual Ryegrass (*Lolium multiflorum*), Millet (*Pennisetum glaucum*), Barley (*Hordeum sp.*), Oats (*Avena sp.*), and/or Rye (*Secale cereale*). These species will allow for stabilization of the whole site while also allowing for the voluntary reestablishment of natural wetland species. Other non-persistent vegetation may be acceptable, but must be approved by the Nontidal Wetlands and Waterways Division. Kentucky 31 species shall not be utilized in wetland or buffer areas. The area shall be seeded and mulched to reduce erosion after construction activities have been completed.
- After installation has been completed, make post-construction grades and elevations the same as the original grades and elevations in temporarily impacted areas.
- To protect aquatic species, in-stream work is prohibited as determined by the classification of the stream.
Use class I waters: In-stream work shall not be conducted during the period March 1 through June 15, inclusive, during any year.
- Stormwater runoff from impervious surfaces shall be controlled to prevent the washing of debris into the waterway.
- Culverts shall be constructed and any riprap placed so as not to obstruct the movement of aquatic species, unless the purpose of the activity is to impound water.

| SHEET INDEX | |
|-------------|--|
| NO. | DESCRIPTION |
| 1 | Cover Sheet |
| 2 | Ex. Conditions, Vegetation, Soils & Slopes |
| 3 | Site Plan |
| 4 | Landscape Plan |
| 5 | Landscape Notes & Plant List |
| 6 | Landscape Details |
| 7 | Typical Courtyard Details |
| 8 | Dumpster & Site Details |
| 9 | Site Details |
| 10 | Building Outline, Location & Dimensions |
| 11 | Detailed Utility Location Plan |
| 12 | Storm Drainage Drainage Area Map |
| 13 | Utility Profiles & Structure Schedules |
| 14 | Utility Profiles |
| 15 | Utility Profiles |
| 16 | Utility Profiles |
| 17 | Utility Profiles |
| 18 | Storm Water Management |
| 19 | Sediment & Erosion Control Plan - Initial |
| 20 | Sediment & Erosion Control Plan - Final |
| 21 | Sediment & Erosion Control - Notes, Specifications and Details |
| 22 | Retaining Wall Details |
| 23 | Intermediate Retaining Wall Details |
| 24 | South Entrance Road Striping Plan and Details |

DATE:

DRAWINGS ISSUED TO:

ASN DEVELOPMENT OFFICE

ASN PRODUCTION OFFICE

GENERAL CONTRACTOR

| SITE ANALYSIS | |
|---------------|---|
| 1. | Site Area: 11.77Ac.± >10% slope: 5.50 Ac. (47%) <10% slope: 6.27 Ac. (53%) |
| 2. | Area of plan submission: 12.50± Ac. |
| 3. | Limit of Disturbed Area: 12.50± Ac. |
| 4. | Zoning: NT |
| 5. | Proposed Use: Rental Apartments |
| 6. | Proposed Number of Units: 531 Units Allowed (per FDP): 550 |
| 7. | Parking Required per FDP criteria: 797 (1.5 per unit) Parking Provided (includes Handicap spaces): Garages: 868 spaces Surface: 28 spaces TOTAL: 944 spaces Handicap Parking Required: 19 spaces (2% of total) Handicap Parking Provided: Garages: 18 (1 is "Van Accessible") Surface: 4 (2 are "Van Accessible") TOTAL: 22 spaces |

OWNER
Archstone Communities Trust
6631-A Old Dominion Drive, Suite 201
McLean, Virginia 22101
(703) 883-3545
Attn: Jeff Harris

ARCHITECT
Kaufman Meeks & Partners
16000 Memorial Drive, Suite 100
Houston, Texas 77079
(281) 759-4110
Attn: Jon Prejean

CIVIL ENGINEER
Gutschick, Little & Weber, P.A.
3909 National Drive, Suite 250
Burlington, Maryland 20866
(410) 880-1820
Attn: Carl Gutschick

PLANNER/LANDSCAPE ARCHITECT
Land Design, Inc.
1414 Prince Street, Suite 400
Alexandria, Virginia 22314
(703) 549-7784
Attn: Stephen Jordan

NOISE CONSULTANT
Phoenix Engineering, Inc.
813 Maiden Choice Lane
Baltimore, Maryland 21228
(410) 247-8833
Attn: John Heinrichs

MECH/ELEC/PLUMBING ENGINEER
Schwartz Engineering, Inc.
4600 North Park Avenue, Lower Plaza
Chevy Chase, Maryland 20815
(301) 215-7740
Attn: Andy Schwartz

GAS/ELECTRIC/PHONE/CABLE ENGINEER
Richter & Associates, Inc.
15865 Crabbs Branch Way
Rockville, Maryland 20855
(301) 548-7475
Attn: Butch Thayer

GEOTECHNICAL ENGINEER
Robert B. Baller Co.
18 Music Fair Road
Owings Mills, Maryland 21117
(410) 363-1555
Attn: Bob Miller

TRAFFIC ENGINEER
Wells & Assoc.
1420 Spring Hill Road, Suite 600
McLean, Virginia 22102
(703) 917-6620
Attn: Marty Wells

STRUCTURAL ENGINEER
SCA Consulting Engineers
10101 Southwest Freeway, Suite 600
Houston, Texas 77074
(713) 779-7252
Attn: Mark Shepard

| ADDRESS CHART | |
|-------------------------------|-------------------------|
| MAIN ENTRANCE: | |
| 10365 LITTLE PATUXENT PARKWAY | |
| NO. | BUILDING ADDRESS |
| Garage A | 10450 Swiftstream Place |
| 14 | 10440 Swiftstream Place |
| 13 | 10430 Swiftstream Place |
| 12 | 10420 Swiftstream Place |
| 11 | 10410 Swiftstream Place |
| 10 | 10400 Swiftstream Place |
| 9 | 10390 Swiftstream Place |
| 8 | 10380 Swiftstream Place |
| 7 | 10370 Swiftstream Place |
| 6 | 10360 Swiftstream Place |
| 5 | 10350 Swiftstream Place |
| 4 | 10340 Swiftstream Place |
| 3 | 10330 Swiftstream Place |
| 2 | 10320 Swiftstream Place |
| 1 | 10310 Swiftstream Place |
| Garage B | 10300 Swiftstream Place |

| PERMIT INFORMATION | | | | | |
|----------------------|----------------------|--------------|---------|-------------------|------|
| SUBDIVISION NAME | COLUMBIA TOWN CENTER | SECTION/AREA | 1/3 | PARCEL # | A-1 |
| PLAT # OR L.P. BLOCK | 7989 | ZONE | 2 | ELECTION DISTRICT | 5 |
| WATER CODE | E-31 | TAX | 36 | CENSUS TRACT | 6054 |
| | | SEWER CODE | 5530000 | | |

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE SEPT. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Dina M. Hester 3/28/00
County Health Officer HR Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Joseph R. Smith 9/15/00
Director Date
Cindy Hamilton 4/10/00
Chief, Division of Land Development Date
Michael J. ... 3/22/00
Chief, Development Engineering Division MK Date



GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURLINGTON OFFICE PARK
BURLINGTON, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

OWNER:
ARCHSTONE COMMUNITIES TRUST
6631-A OLD DOMINION DRIVE
SUITE 201
MCLEAN, VA 22101
703-883-3545

COVER SHEET
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT NO. 7989

| SCALE | ZONING | G. L. W. FILE No. |
|-----------|----------------|-------------------|
| AS SHOWN | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| 3-03-2000 | 36 - 2 | 1 OF 24 |

| SYMBOL | NAME |
|--------|--|
| BrB2 | Brandywine loam 3-8 percent slopes, moderately eroded |
| BrC2 | Brandywine loam 6-15 percent slopes, moderately eroded |
| BrD3 | Brandywine loam 8-15 percent slopes, severely eroded |
| Co | Codorus silt loam |
| GnB | Glenora silt loam |
| Ha | Hollers silt loam |

| LEGEND | |
|--------|--------------------|
| | ≥ 25% SLOPES |
| | ≥ 15% < 25% SLOPES |
| | EXISTING TREE |
| | SOIL TYPE |

APPROVED
PLANNING BOARD
of HOWARD COUNTY
 DATE: SEPT. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT
Dina M. [Signature] 3/28/00
 County Health Officer: MR Date

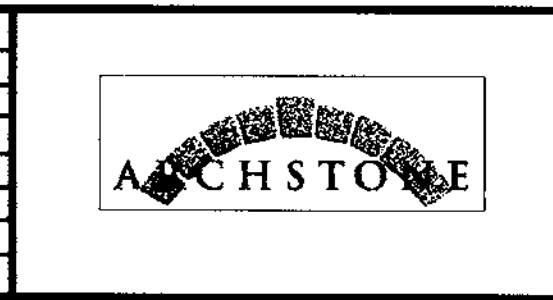
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Logan [Signature] 4/15/00
 Chief, Division of Planning & Zoning Date

Cindy [Signature] 4/4/00
 Chief, Division of Planning & Zoning Date

Mark [Signature] 3/21/00
 Chief, Development Engineering Division MK Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3908 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-980-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

| DATE | REVISION | BY | APP'R. |
|------|----------|----|--------|
| | | | |
| | | | |
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OWNER:
 ARCHSTONE COMMUNITIES TRUST
 6631-A OLD DOMINION DRIVE
 SUITE 201
 MCLEAN, VA 22101
 703-883-3546

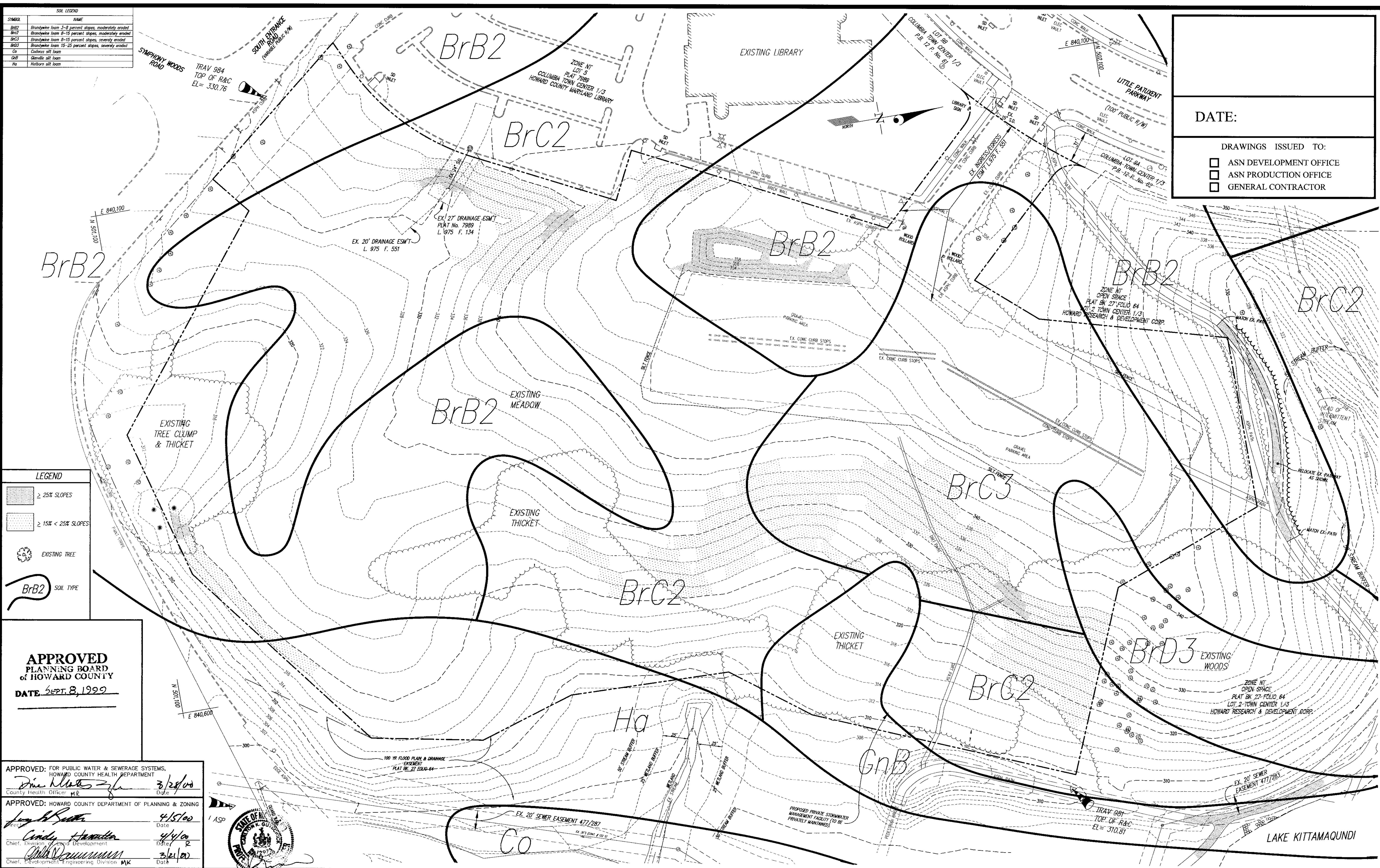
EXISTING CONDITIONS, VEGETATION, SOILS & SLOPES
COLUMBIA TOWN CENTER
 SECTION 1 AREA 3
 PARCEL "A-1"
 PLAT No. 7989

| SCALE | ZONING | G. L. W. FILE No. |
|-----------|----------------|-------------------|
| 1"=40' | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| 3/03/2000 | 36 - 2 | 2 OF 24 |

DATE:

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR



| STATION | TYPE | COMMENTS |
|---------|--------|----------------------|
| 1 | 322.00 | DETAIL 11/9 & SHI 22 |
| 2 | 328.50 | DETAIL 11/9 & SHI 22 |
| 3 | 328.00 | DETAIL 11/9 & SHI 22 |
| 4 | 327.00 | DETAIL 11/9 & SHI 22 |
| 5 | 328.00 | DETAIL 11/9 & SHI 22 |
| 6 | 325.00 | DETAIL 11/9 & SHI 22 |
| 7 | 323.00 | DETAIL 11/9 & SHI 22 |
| 8 | 322.00 | DETAIL 11/9 & SHI 22 |
| 9 | 315.50 | DETAIL 11/9 & SHI 22 |
| 10 | 317.50 | DETAIL 11/9 & SHI 22 |
| 11 | 318.70 | DETAIL 11/9 & SHI 22 |
| 12 | 318.00 | DETAIL 11/9 & SHI 22 |
| 13 | 318.50 | DETAIL 11/9 & SHI 22 |
| 14 | 318.50 | DETAIL 11/9 & SHI 22 |
| 15 | 317.50 | DETAIL 11/9 & SHI 22 |
| 16 | 318.50 | DETAIL 11/9 & SHI 22 |
| 17 | 319.00 | DETAIL 11/9 & SHI 22 |
| 18 | 318.50 | DETAIL 11/9 & SHI 22 |
| 19 | 319.50 | DETAIL 11/9 & SHI 22 |
| 20 | 319.50 | DETAIL 11/9 & SHI 22 |
| 21 | 319.00 | DETAIL 11/9 & SHI 22 |

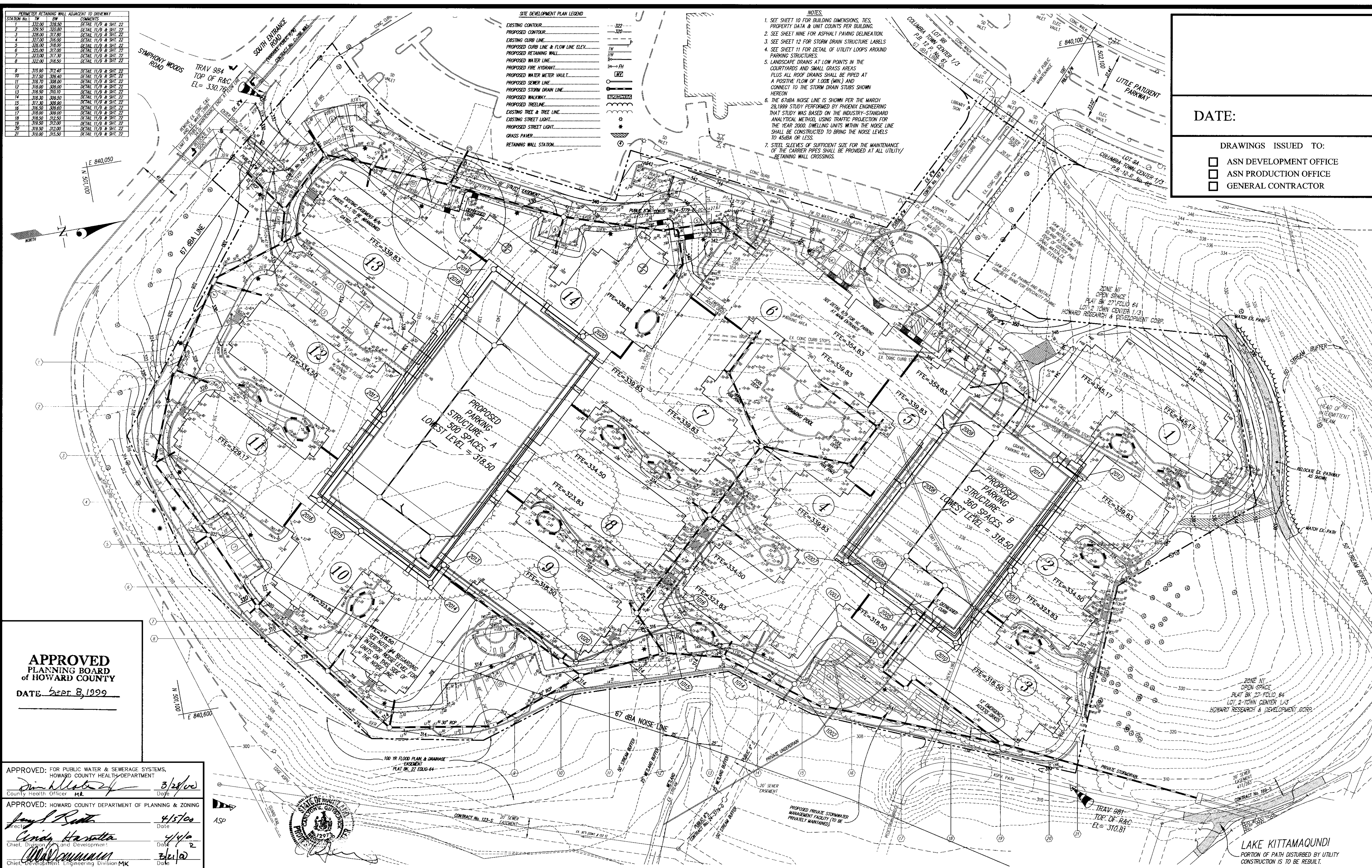
- SITE DEVELOPMENT PLAN LEGEND**
- EXISTING CONTOUR
 - PROPOSED CONTOUR
 - EXISTING CURB LINE
 - PROPOSED CURB LINE & FLOW LINE ELEV.
 - PROPOSED RETAINING WALL
 - PROPOSED WATER LINE
 - PROPOSED FIRE HYDRANT
 - PROPOSED WATER METER VAULT
 - PROPOSED SEWER LINE
 - PROPOSED STORM DRAIN LINE
 - PROPOSED WALKWAY
 - PROPOSED TREELINE
 - EXISTING TREE & TREE LINE
 - EXISTING STREET LIGHT
 - PROPOSED STREET LIGHT
 - GRASS PAVEMENT
 - RETAINING WALL STATION

- NOTES**
- SEE SHEET 10 FOR BUILDING DIMENSIONS, TIES, PROPERTY DATA & UNIT COUNTS PER BUILDING.
 - SEE SHEET NINE FOR ASPHALT PAVING DELINEATION.
 - SEE SHEET 12 FOR STORM DRAIN STRUCTURE LABELS.
 - SEE SHEET 11 FOR DETAIL OF UTILITY LOOPS AROUND PARKING STRUCTURES.
 - LANDSCAPE DRAINS AT LOW POINTS IN THE COURTYARDS AND SMALL GRASS AREAS PLUS ALL ROOF DRAINS SHALL BE PIPED AT A POSITIVE FLOW OF 1.00X (MIN.) AND CONNECT TO THE STORM DRAIN STUBS SHOWN HEREON.
 - THE 67DBA NOISE LINE IS SHOWN PER THE MARCH 28, 1999 STUDY PERFORMED BY PHOENIX ENGINEERING THAT STUDY WAS BASED ON THE INDUSTRY-STANDARD ANALYTICAL METHOD, USING TRAFFIC PROJECTION FOR THE YEAR 2000. DWELLING UNITS WITHIN THE NOISE LINE SHALL BE CONSTRUCTED TO BRING THE NOISE LEVELS TO 45DBA OR LESS.
 - STEEL SLEEVES OF SUFFICIENT SIZE FOR THE MAINTENANCE OF THE CARRIER PIPES SHALL BE PROVIDED AT ALL UTILITY/RETAINING WALL CROSSINGS.

DATE:

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR



APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE SEPT. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT
 County Health Officer *Jim M. [Signature]* 3/23/00
 Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
[Signature] 4/15/00
 Date

[Signature] 4/14/00
 Date

[Signature] 3/21/00
 Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
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 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

| DATE | REVISION | BY | APPR. |
|------|----------|----|-------|
| | | | |
| | | | |
| | | | |



OWNER:
 ARCHSTONE COMMUNITIES TRUST
 6631-A OLD DOMINION DRIVE
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 703-883-3545

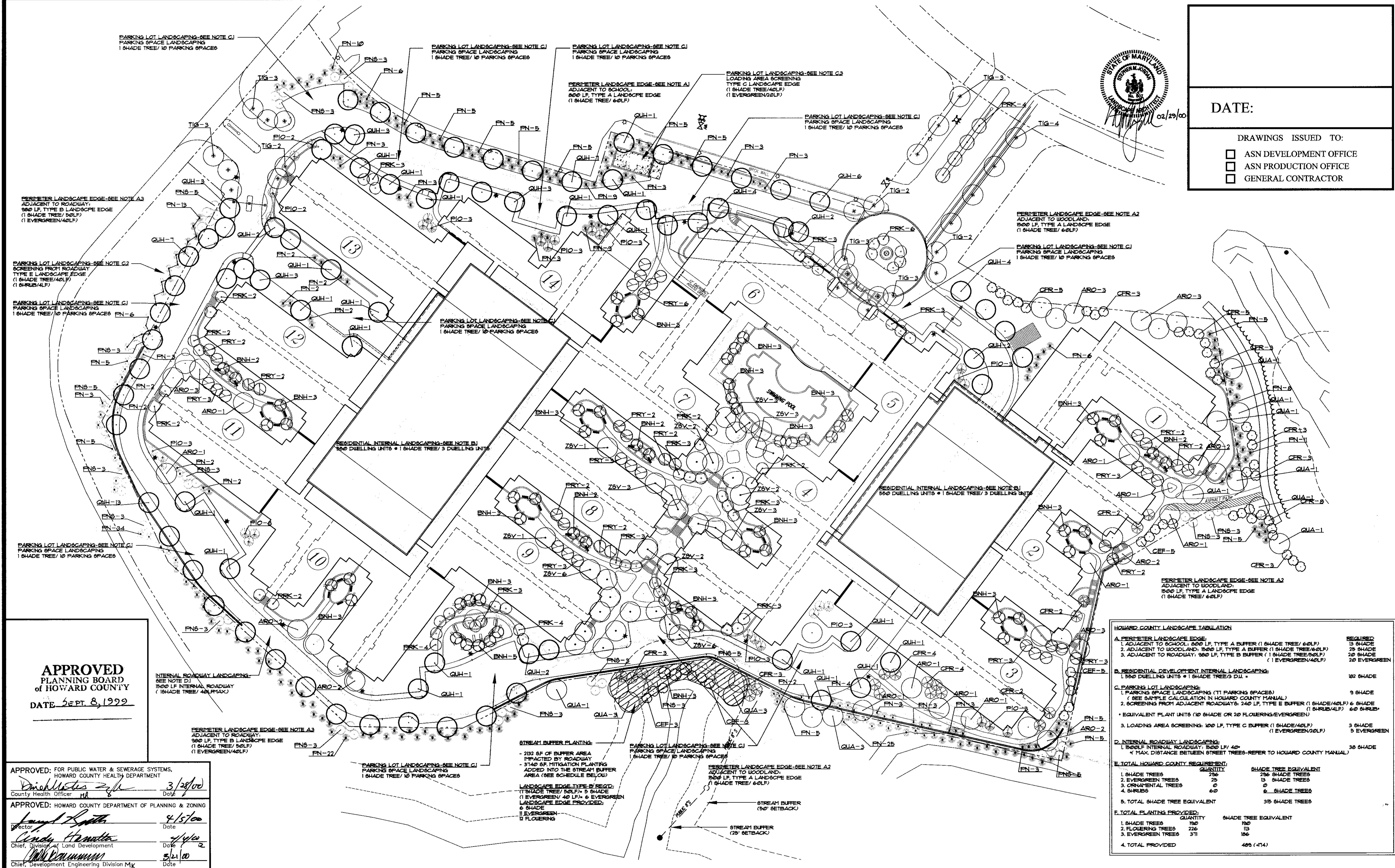
SITE DEVELOPMENT PLAN
COLUMBIA TOWN CENTER
 SECTION 1 AREA 3
 PARCEL "A-1"
 PLAT No. 7989

| SCALE | ZONING | G. L. W. FILE No. |
|-----------|----------------|-------------------|
| 1"=40' | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| 3/03/2000 | 36 - 2 | 3 OF 24 |



DATE: 02/29/00

- DRAWINGS ISSUED TO:
- ASN DEVELOPMENT OFFICE
 - ASN PRODUCTION OFFICE
 - GENERAL CONTRACTOR



PERIMETER LANDSCAPE EDGE-SEE NOTE A2
ADJACENT TO ROADWAY:
500 LF. TYPE B LANDSCAPE EDGE
(1 SHADE TREE/50LF)
(1 EVERGREEN/40LF)

PARKING LOT LANDSCAPING-SEE NOTE C2
SCREENING FROM ROADWAY
TYPE E LANDSCAPE EDGE
(1 SHADE TREE/40LF)
(1 SHRUB/4LF)

PARKING LOT LANDSCAPING-SEE NOTE C1
PARKING SPACE LANDSCAPING
1 SHADE TREE/10 PARKING SPACES

PARKING LOT LANDSCAPING-SEE NOTE C1
PARKING SPACE LANDSCAPING
1 SHADE TREE/10 PARKING SPACES

INTERNAL ROADWAY LANDSCAPING-
SEE NOTE D1
5000 LF. INTERNAL ROADWAY
(1 SHADE TREE/40LF MAX)

PERIMETER LANDSCAPE EDGE-SEE NOTE A3
ADJACENT TO ROADWAY:
500 LF. TYPE B LANDSCAPE EDGE
(1 SHADE TREE/50LF)
(1 EVERGREEN/40LF)

PARKING LOT LANDSCAPING-SEE NOTE C1
PARKING SPACE LANDSCAPING
1 SHADE TREE/10 PARKING SPACES

LANDSCAPE EDGE TYPE B REQ'D/
(1 SHADE TREE/50LF) 5 SHADE
(1 EVERGREEN/40 LF) 6 EVERGREEN
LANDSCAPE EDGE PROVIDED:
6 SHADE
11 EVERGREEN
12 FLOWERING

PARKING LOT LANDSCAPING-SEE NOTE C1
PARKING SPACE LANDSCAPING
1 SHADE TREE/10 PARKING SPACES

PERIMETER LANDSCAPE EDGE-SEE NOTE A2
ADJACENT TO WOODLAND:
500 LF. TYPE A LANDSCAPE EDGE
(1 SHADE TREE/60LF)

STREAM BUFFER
(50' SETBACK)

STREAM BUFFER
(20' SETBACK)

PERIMETER LANDSCAPE EDGE-SEE NOTE A2
ADJACENT TO WOODLAND:
500 LF. TYPE A LANDSCAPE EDGE
(1 SHADE TREE/60LF)

PARKING LOT LANDSCAPING-SEE NOTE C1
PARKING SPACE LANDSCAPING
1 SHADE TREE/10 PARKING SPACES

HOWARD COUNTY LANDSCAPE TABULATION

| | | | |
|--|-------------|-----------------|-----------------|
| A. PERIMETER LANDSCAPE EDGE: | | | REQUIRED |
| 1. ADJACENT TO SCHOOL: 800 LF. TYPE A BUFFER (1 SHADE TREE/60LF) | 13 SHADE | | |
| 2. ADJACENT TO WOODLAND: 1500 LF. TYPE A BUFFER (1 SHADE TREE/60LF) | 25 SHADE | | |
| 3. ADJACENT TO ROADWAY: 900 LF. TYPE B BUFFER (1 SHADE TREE/50LF) (1 EVERGREEN/40LF) | 18 SHADE | | |
| B. RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING: | | | REQUIRED |
| 1. 550 DUELLING UNITS * 1 SHADE TREE/3 DU. | 182 SHADE | | |
| C. PARKING LOT LANDSCAPING: | | | REQUIRED |
| 1. PARKING SPACE LANDSCAPING (11 PARKING SPACES) (SEE SAMPLE CALCULATION IN HOWARD COUNTY MANUAL) | 9 SHADE | | |
| 2. SCREENING FROM ADJACENT ROADWAYS: 240 LF. TYPE E BUFFER (1 SHADE TREE/40LF) (1 SHRUB/4LF) 60 SHRUB | 6 SHADE | 60 SHRUB | |
| 3. EQUIVALENT PLANT UNITS (10 SHADE OR 20 FLOWERING/EVERGREEN) | | | |
| 4. LOADING AREA SCREENING: 1200 LF. TYPE C BUFFER (1 SHADE/40LF) (1 EVERGREEN/20LF) | 3 SHADE | | |
| | 5 EVERGREEN | | |
| D. INTERNAL ROADWAY LANDSCAPING: | | | REQUIRED |
| 1. 5000 LF. INTERNAL ROADWAY: 5000 LF/40' | 125 SHADE | | |
| 4' MAX. DISTANCE BETWEEN STREET TREES-REFER TO HOWARD COUNTY MANUAL) | | | |
| E. TOTAL HOWARD COUNTY REQUIREMENT: | | | REQUIRED |
| 1. SHADE TREES | 256 | 256 SHADE TREES | |
| 2. EVERGREEN TREES | 25 | 13 SHADE TREES | |
| 3. ORNAMENTAL TREES | 0 | 60 SHRUBS | |
| 4. SHRUBS | 60 | 6 SHADE TREES | |
| F. TOTAL PLANTING PROVIDED: | | | PROVIDED |
| 1. SHADE TREES | 190 | 190 | |
| 2. FLOWERING TREES | 226 | 113 | |
| 3. EVERGREEN TREES | 371 | 186 | |
| 4. TOTAL PROVIDED | 487 | 487 (474) | |

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE: SEPT. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Dick Matus 3/28/00
County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
James H. Smith 4/5/00
Director Date

Candy Hamilton 4/4/00
Chief, Division of Land Development Date

John Williamson 5/21/00
Chief, Development Engineering Division Date

| | | | | | | | | | | | | | |
|--------------------------------------|------|-----------|----------------|------|----------|---------|-------------------------------------|---|--|--|-----------------|--------------|----------------------------|
| DRAWINGS: 98087.DESIGN: 98087SP2.DWG | DES. | DRN. | CHK. | DATE | REVISION | BY | APPR. | OWNER: ARCHSTONE COMMUNITIES TRUST 6631-A OLD DOMINION DRIVE SUITE 201 MCLEAN, VA 22101 703-883-3545 | DEVELOPER/CONTRACT PURCHASER: ARCHSTONE COMMUNITIES 6631-A OLD DOMINION DRIVE SUITE 201 MCLEAN, VA 22101 703-883-3540 | LANDSCAPE PLAN COLUMBIA TOWN CENTER SECTION 1 AREA 3 PARCEL "A-1" PLAT No. 7989 | SCALE 1"=40' | ZONING NT | G. L. W. FILE No. 98087 |
| | DATE | 3-03-2000 | TAX MAP - GRID | 36-2 | SHEET | 4 OF 24 | CLARKSVILLE ELECTION DISTRICT No. 5 | HOWARD COUNTY, MARYLAND | | | | | |

| KEY | QTY | BOTANICAL NAME | COMMON NAME | HEIGHT | CALIPER | REMARKS |
|-----|-----|-----------------------------------|------------------------|-----------|-------------|------------------------------|
| ARO | 32 | ACER RUBRUM OCTOBER GLORY | OCTOBER GLORY MAPLE | 12' - 14' | 2-1/2" - 3" | B4B, FULL |
| BNH | 61 | BETULA NIGRA HERITAGE | HERITAGE RIVER BIRC. H | 12' - 14' | 2-1/2" - 3" | 3 STEM MIN, MIN 2-1/2" CAL. |
| CEF | 16 | CERC'S CANADENSIS FOREST PANSY | FOREST PANSY REDBUD | 8' - 10' | 2" - 2-1/2" | PINK-LAVENDER BLOOM:B4B |
| CFR | 63 | CORNUS FLORIDA RUBRA | FLOWERING RED DOGWOOD | 8' - 10' | 2" - 2-1/2" | PINK FLOWERS: B4B |
| PIO | 31 | PICEA OMORCA | SERBIAN SPRUCE | 6' - 8' | | B4B: SPECIMEN |
| FN | 281 | PINUS NIGRA | AUSTRIAN PINE | 6' - 8' | | B4B |
| FNS | 59 | PINUS STROBUS | WHITE PINE | 6' - 8' | | B4B |
| FRK | 51 | FRUNUS GERRULATA KIWANZAN' | KIWANZAN CHERRY | 8' - 10' | 2" - 2-1/2" | PINK FLOWERS: B4B |
| FRY | 42 | FRUNUS YEDOENSIS | YOSHINO CHERRY | 8' - 10' | 2" - 2-1/2" | VERY LIGHT PINK FLOWERS: B4B |
| QUA | 17 | QUERCUS ALBA | WHITE OAK | 12' - 14' | 2-1/2" - 3" | B4B |
| QUH | 81 | QUERCUS PHELLOS | WILLOW OAK | 12' - 14' | 2-1/2" - 3" | B4B |
| TIG | 25 | TILIA CORDATA GREENSPIRE | GREENSPIRE LINDEN | 12' - 14' | 2-1/2" - 3" | BLOOMS IN JUNE: B4B |
| Z6V | 32 | ZELKOVA SERRATA VILLAGE GREEN' | VILLAGE GREEN ZELKOVA | 12' - 14' | 2-1/2" - 3" | B4B |

HRD LANDSCAPE TABULATION

SITE CLASSIFICATION: UNWOODED
UNIT TYPE: APARTMENT (550 DU)
SHADE TREE REQUIREMENT: 15 SHADE TREES /DU
15 SHADE TREE X 550 DU = 825 SHADE TREES

NOTE: SUBSTITUTION OF TWO FLOWERING OR TWO EVERGREEN TREES FOR EACH SHADE TREE UP TO 50% OF REQUIRED AMOUNT (825 X 50% = 413)

| | QUANTITY | SHADE TREE EQUIVALENT |
|-----------------|----------|------------------------------|
| SHADE TREES | 190 | 190 |
| FLOWERING TREES | 226 | 113 |
| EVERGREEN TREES | 311 | 156 |
| TOTAL PROVIDED | | 459 (56% OF REQUIRED AMOUNT) |
| TOTAL REQUIRED | | 825 |
| DIFFERENCE | | -336 |



DATE:

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR

MASTER PLANT NOTES:

- THIS PLAN FOR PLANTING LOCATIONS ONLY. THE LANDSCAPE CONTRACTOR SHALL FURNISH AND INSTALL ALL OF THE PLANT MATERIALS CALLED FOR ON LANDSCAPE PLANS AND/OR LISTED IN THE PLANT LIST.
- PLANTING SEASONS:
DECIDUOUS TREES, SHRUBS AND VINES: MARCH 1 TO JUNE 15 AND SEPTEMBER 15 TO DECEMBER 15.
PLANTING MAY BE CONTINUED DURING THE WINTER MONTHS PROVIDING THERE IS NO FROST IN THE GROUND AND FROST FREE TOP SOIL PLANTING MIXES ARE USED.
- EVERGREEN TREES: MARCH 15 TO JUNE 15 AND FROM AUGUST 15 TO DECEMBER 1. NO PLANTING SHALL BE DONE WHEN GROUND IS FROZEN OR EXCESSIVELY MOIST. NO FROZEN OR WET TOPSOIL SHALL BE USED AT ANY TIME.
- CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR ALL PLANT MAINTENANCE, INCLUDING SHRUBS AND GROUNDCOVER, AND SHALL MAINTAIN AREA IN A WEED AND DEBRIS FREE CONDITION, THROUGHOUT THE ONE YEAR GUARANTEE PERIOD.
- ALL DIMENSIONS TO BE TAKEN FROM BACK OF CURB.
- CONTRACTOR SHALL LAY OUT AND CLEARLY STAKE ALL PROPOSED IMPROVEMENTS INCLUDED ON THIS PLAN.
- CONTRACTOR IS RESPONSIBLE FOR CONTACTING MISS UTILITY PRIOR TO BEGINNING CONSTRUCTION FOR LOCATION OF ALL UTILITY LINES. TREES SHALL BE LOCATED A MINIMUM OF 5 FEET FROM SEWER/WATER CONNECTIONS. CONTRACTOR SHALL BE LIABLE FOR DAMAGE TO ANY AND ALL PUBLIC OR PRIVATE UTILITIES.

20. STAKING, GUYING AND WRAPPING:

- STAKES: SHALL BE SOUND WOOD 2"x2" ROUGH SAWN OAK OR SIMILAR DURABLE WOOD. MINIMUM 1'-0" LENGTH FOR MAJOR TREES AND 5'-0" LENGTH FOR MINOR TREES
- WIRE AND CABLE: SHALL BE #10 GALVANIZED OR BETHANIZED ANNEALED STEEL WIRE. FOR TREES OVER 3" CAL. PROVIDE 5/16" TURNBUCKLES, EYE AND EYE WITH 4" TAKE-UP. FOR TREES OVER 5" CAL. PROVIDE 3/16" 1 STRAND CABLE CADMIUM PLATED STEEL, WITH GALVANIZED "EYE" THIMBLES AND GALVANIZED CABLE CLAMPS.
- HOSE: SHALL BE NEW, 2 PLY REINFORCED RUBBER HOSE, MIN. 1" ID, "PLASTIC LOCK TIES" OR "PAUL'S TREE BRACES" MAY BE USED IN PLACE OF WIRE AND HOSE ON TREES UP TO 3" CAL.

21. PLANT PRUNING, EDGING AND MULCHING:

- BROKEN OR BRUISED BRANCHES SHALL BE REMOVED WITH CLEAN CUTS FLUSH WITH THE ADJACENT TRUNK OR BRANCH. ALL CUTS OVER 1" DIA. SHALL BE PAINTED WITH AN APPROVED TREE WOUND DRESSING.
- ALL TRENCHES AND SHRUB BEDS SHALL BE EDGED AND CULTIVATED TO THE LINES SHOWN ON THE PLAN. AREAS AROUND ISOLATED PLANTS SHALL BE EDGED TO THE FULL DIA. OF THE PIT. SOIL WHICH HAS BEEN REMOVED AND STACKED SHALL BE USED TO TRIM THE EDGES OF ALL EXCAVATED AREAS TO THE NEAT LINES OF THE PLANT PIT SAUCERS, THE EDGES OF SHRUB AREAS, HEDGE TRENCHES AND VINE POCKETS.
- AFTER CULTIVATION, ALL PLANT MATERIALS SHALL BE MULCHED WITH A 4" LAYER OF BARK, PEAT MOSS OR ANOTHER APPROVED MATERIAL OVER THE ENTIRE AREA OF THE BED OR SAUCER.

22. ALL TREE PITS, SHRUB BEDS AND PREPARED PLANTING BEDS ARE TO BE COMPLETELY EXCAVATED IN ACCORDANCE WITH THE PLANTING DETAILS. ALL PITS SHALL BE GENERALLY CIRCULAR IN OUTLINE. VERTICAL SIDES: DEPTH SHALL NOT BE LESS THAN 6" DEEPER THAN THE ROOT BALL. DIAMETER SHALL NOT BE LESS THAN TWO TIMES THE DIAMETER OF THE ROOT BALL AS SET FORTH IN THE FOLLOWING SCHEDULE:

| PLANT SIZE | ROOT BALL | PIT DIA. | PIT DEPTH |
|------------------|-----------|----------|-----------|
| 2-1/2" - 3" CAL. | 28" | 56" | 24" |
| 3" - 3-1/2" CAL. | 32" | 64" | 28" |
| 3-1/2" - 4" CAL. | 36" | 72" | 32" |
| 4" - 4-1/2" CAL. | 40" | 80" | 36" |
| 4-1/2" - 5" CAL. | 44" | 88" | 40" |
| 5" - 5-1/2" CAL. | 48" | 96" | 44" |
| 5-1/2" - 6" CAL. | 52" | 104" | 48" |

23. MULCH IS TO BE DOUBLE SHREDDED HARDWOOD BARK FOR TREES AND SHRUBS. FINE GROUND BARK MULCH SUCH AS NATURE'S HELPER OR APPROVED EQUAL IS TO BE USED FOR PERENNIAL BEDS. DOUBLE SHREDDED HARDWOOD BARK OR APPROVED EQUAL IS TO BE USED AT "EXISTING TREES TO REMAIN". MULCH SHALL EXTEND INWARD INTO TREE SAVE AREAS A MINIMUM OF 10" FROM EDGE OF TREE SAVE.

24. CROWN OF ROOTBALL SHALL BE HIGHER (AFTER SETTLING) THAN ADJACENT SOIL.

25. TAGS AND TUINE ARE TO BE REMOVED AND BURLAP IS TO BE ROLLED BACK ONE-THIRD ON ALL B4B PLANT MATERIAL.

26. SHRUBS, BULBS AND GROUNDCOVERS SHALL BE TRIANGULARLY SPACED AT SPACING SHOWN ON PLANTING PLANS.

27. SHADE TREES: HEIGHT SHALL BE MEASURED FROM THE CROWN OF THE ROOT BALL TO THE TOP OF MATURE GROWTH. SPREAD SHALL BE MEASURED TO THE END OF BRANCHING EQUALLY AROUND THE CROWN FROM THE CENTER OF THE TRUNK. MEASUREMENTS ARE NOT TO INCLUDE ANY TERMINAL GROWTH. SINGLE TRUNK TREES SHALL BE FREE OF "Y" CROTCHES THAT COULD BE POINTS OF WEAK LIMB STRUCTURE OR DISEASE INFESTATION. MINIMUM BRANCHING HEIGHT FOR ALL TREES SHALL BE SIX(6') MAXIMUM EIGHT FEET (8') - SEE NOTE 32 FOR AMERICANS WITH DISABILITIES REQUIREMENTS. MINIMUM SIZE FOR PLANTING SHADE TREES 2-1/2" - 3" CAL. 12'-14" HEIGHT. MINIMUM SIZE FOR PLANTING MINOR OR INTERMEDIATE FOCUS TREES (PINES, CRABAPPLES, ETC.) 2-1/2" - 3" CAL., 8'-10" HEIGHT. ALL PLANT MATERIAL SHALL GENERALLY AVERAGE THE MEDIAN FOR THE PLANT SIZES AS INDICATED IN THE "AAN STANDARDS."

SHRUBS: HEIGHT SHALL BE MEASURED FROM THE GROUND TO THE AVERAGE HEIGHT OF THE TOP OF THE PLANT. SPREAD SHALL BE MEASURED TO THE END OF BRANCHING EQUALLY AROUND THE SHRUB MASS. MEASUREMENTS ARE NOT TO INCLUDE ANY TERMINAL GROWTH.

28. ALL SUBSTITUTIONS OF PLANT MATERIAL ARE TO BE REQUESTED IN WRITING TO THE LANDSCAPE ARCHITECT AND APPROVED IN WRITING BY THE OWNER. FAILURE TO OBTAIN SUBSTITUTION APPROVAL IN WRITING MAY RESULT IN LIABILITY TO THE CONTRACTOR.

29. ALL CONTRACTORS SHALL BE REQUIRED TO COMPLETELY REMOVE ALL TRASH, DEBRIS AND EXCESS MATERIALS FROM THE WORK AREA AND THE PROPERTY (ESPECIALLY AT ALL CURB, GUTTERS AND SIDEWALKS) DAILY DURING INSTALLATION.

30. DEAD PLANTS ARE TO BE REMOVED FROM THE JOB BY THE CONTRACTOR WEEKLY. CONTRACTOR SHALL MAINTAIN AN UPDATED, COMPREHENSIVE LIST OF ALL DEAD MATERIALS REMOVED AND PRESENT A COPY OF THE LIST TO THE OWNER AT THE END OF EVERY MONTH DURING THE CONTRACT PERIOD.

31. ALL SEEDING AND SODDING SHALL BE AS PER "STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN URBANIZING AREAS" AS PUBLISHED BY THE MARYLAND DEPARTMENT OF NATURAL RESOURCES.

32. THE AMERICANS WITH DISABILITIES ACT (ADA) STANDARDS REQUIRE THAT A 1.00' VERTICAL CLEARANCE BE MAINTAINED FROM TREE BRANCHES TO FINISHED GRADE WHERE PEDESTRIAN SIDEWALKS AND OR TRAILS ARE LOCATED. ADJUST TREE PLANTINGS IN FIELD SLIGHTLY TO MINIMIZE BRANCH OVERHANG. THE HOMEOWNERS ASSOCIATION SHALL BE RESPONSIBLE TO MAINTAIN CLEAR ACCESS OF PEDESTRIAN WAYS IN ACCORDANCE WITH THE ADA REQUIREMENTS.

HOWARD COUNTY LANDSCAPE TABULATION

| REQUIREMENT | REQUIRED | |
|--|--------------|-----------------------|
| A. PERIMETER LANDSCAPE EDGE: | | |
| 1. ADJACENT TO SCHOOL: 800 LF, TYPE A BUFFER (1 SHADE TREE/60LF) | 13 SHADE | |
| 2. ADJACENT TO WOODLAND: 1500 LF, TYPE A BUFFER (1 SHADE TREE/60LF) | 25 SHADE | |
| 3. ADJACENT TO ROADWAY: 980 LF, TYPE B BUFFER (1 SHADE TREE/50LF) | 20 SHADE | |
| (1 EVERGREEN/40LF) | 20 EVERGREEN | |
| B. RESIDENTIAL DEVELOPMENT INTERNAL LANDSCAPING: | | |
| 1. 550 DWELLING UNITS @ 1 SHADE TREE/5 DU | 182 SHADE | |
| C. PARKING LOT LANDSCAPING: | | |
| 1. PARKING SPACE LANDSCAPING (77 PARKING SPACES) (SEE SAMPLE CALCULATION IN HOWARD COUNTY MANUAL) | 9 SHADE | |
| 2. SCREENING FROM ADJACENT ROADWAYS: 240 LF, TYPE E BUFFER (1 SHADE/40LF) | 6 SHADE | |
| (1 SHRUB/4LF) | 60 SHRUBS | |
| 3. LOADING AREA SCREENING: 100 LF, TYPE C BUFFER (1 SHADE/40LF) | 3 SHADE | |
| (1 EVERGREEN/20LF) | 5 EVERGREEN | |
| D. INTERNAL ROADWAY LANDSCAPING: | | |
| 1. 1500LF INTERNAL ROADWAY: 1500 LF/ 40' | 38 SHADE | |
| (1 MAX. DISTANCE BETWEEN STREET TREES-REFER TO HOWARD COUNTY MANUAL) | | |
| E. TOTAL HOWARD COUNTY REQUIREMENT: | | |
| | QUANTITY | SHADE TREE EQUIVALENT |
| 1. SHADE TREES | 296 | 296 SHADE TREES |
| 2. EVERGREEN TREES | 25 | 13 SHADE TREES |
| 3. ORNAMENTAL TREES | 0 | 0 |
| 4. SHRUBS | 60 | 6 SHADE TREES |
| 5. TOTAL SHADE TREE EQUIVALENT | | 315 SHADE TREES |
| F. TOTAL PLANTING PROVIDED: | | |
| | QUANTITY | SHADE TREE EQUIVALENT |
| 1. SHADE TREES | 190 | 190 |
| 2. FLOWERING TREES | 226 | 113 |
| 3. EVERGREEN TREES | 311 | 156 |
| 4. TOTAL PROVIDED | | 459 (41%) |

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE: SEPT. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Dani M. ... 3/28/00
County Health Officer MR Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Janet ... 4/15/00
Date

Cindy Harriott 4/14/00
Chief, Division of Land Development Date R

Blak ... 3/21/00
Chief, Development Engineering Division MK Date

| | | | | | | | |
|---|------|------|------|------|----------|----|-------|
| Land Design Inc. Landscaping Architecture Urban Design Geographic Information Systems 1414 Prince Street, Suite 400 • 703-549-1794 Alexandria, VA 22314-2815 • Fax: 703-549-4984 | DES. | DRN. | CHK. | DATE | REVISION | BY | APPR. |
| | | | | | | | |

OWNER:
ARCHSTONE COMMUNITIES TRUST
6631-A OLD DOMINION DRIVE
SUITE 201
MCLEAN, VA 22101
703-883-3545



DEVELOPER/CONTRACT PURCHASER:
ARCHSTONE COMMUNITIES
6631-A OLD DOMINION DRIVE
SUITE 201
MCLEAN, VA 22101
703-883-3540

LANDSCAPE NOTES AND PLANT LIST

COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989

| | | |
|-----------|----------------|-------------------|
| SCALE | ZONING | G. L. W. FILE No. |
| N/A | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| 3-03-2000 | 36 - 2 | 5 OF 24 |



DATE:

- DRAWINGS ISSUED TO:
- ASN DEVELOPMENT OFFICE
 - ASN PRODUCTION OFFICE
 - GENERAL CONTRACTOR

NOTE:

- CONTRACTOR TO REGRADE SOD OR HYDROSEED AND STRAW MULCH ALL AREAS DISTURBED AS A RESULT OF HIS OR HER WORK.
- UPRIGHT STAKES TO BE USED ON TREES UP TO 12' IN HEIGHT. LARGER TREES MUST BE GUYED.
- 1/8 OF ROOT BALL TO BE ABOVE FINISHED GRADE.
- DO NOT COVER CROWN OF ROOT BALL. EVERGREEN TREES WHICH ARE TIGHTLY SPACED SHALL BE TIED TOGETHER IN ONE CONTINUOUS BED. (CONTRACTOR TO INCLUDE THIS MULCHING IN HIS BID.)
- TREES WHICH ARE LOCATED WITHIN 4 FEET OF AN ADJACENT SHRUB BED SHALL HAVE THEIR MULCHED AREA CONNECTED WITH THE MULCHED BED OF THE SHRUBS.

TREE WRAP MAIN TRUNK
RUBBER HOSE
2" X 2" HARDWOOD STAKE SEE HRD AND HOWARD COUNTY LANDSCAPE SPECIFICATION GUIDELINES FOR TREE SUPPORT SCHEDULE
GALVANIZED WIRE, DOUBLE STRAND TWISTED. SEE HRD AND HOWARD COUNTY LANDSCAPE SPECIFICATION GUIDELINES FOR TREE SUPPORT SCHEDULE
12" BLACK CORRUGATED PLASTIC PIPE
4" MULCH
SOIL MIX: 2/3 TOPSOIL 4 1/3 ORGANIC MATTER
6" DIAMETER SAUCER AROUND TREE
EXISTING GRADE
ADD TO PLANTER MIX 10-6-4 FERTILIZER AT THE RATE OF 1/2 LBS. PER 1" OF TRUNK DIAMETER
REMOVE TOP 1/3 OF ALL BURLAP FABRIC AROUND ROOT BALL
MIN. 6" HT. COMPACTED SOIL MOUND
UPRIGHT STAKES EXTENDED TO FIRM BEARING SOIL

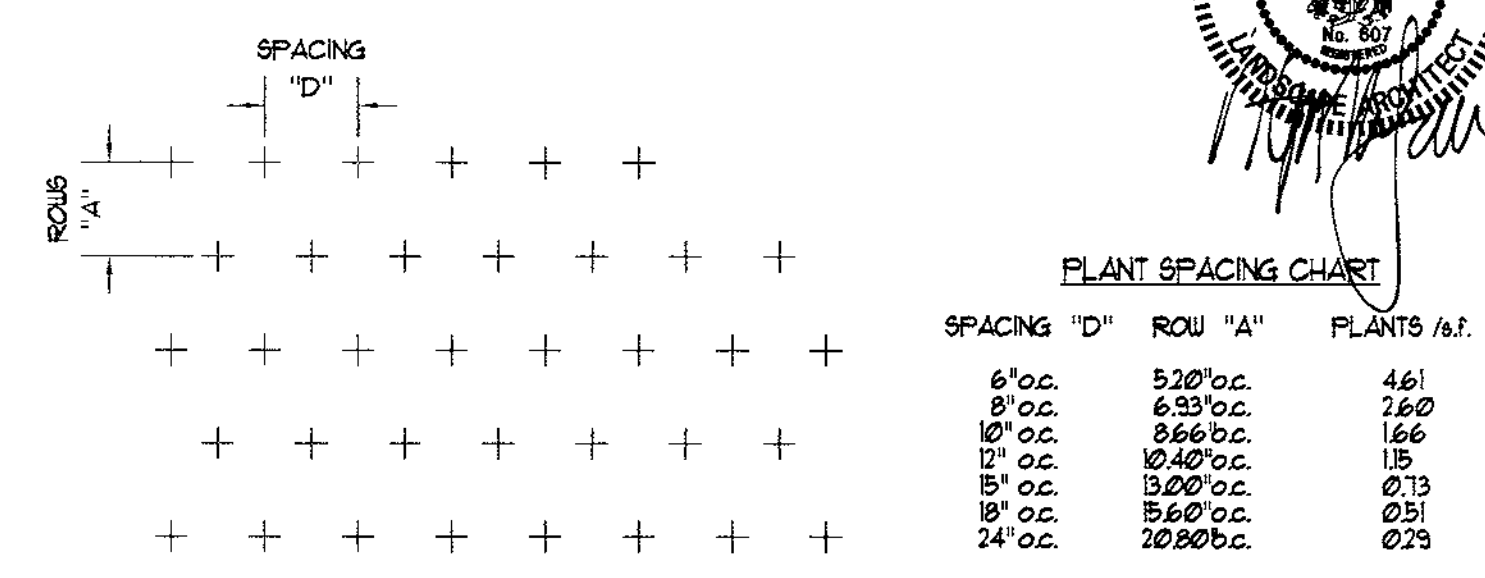
1 TREE PLANTING SECTION 8A-1 NTS

NOTE:

- CONTRACTOR TO REGRADE SOD OR HYDROSEED AND STRAW MULCH ALL AREAS DISTURBED AS A RESULT OF HIS OR HER WORK.
- UPRIGHT STAKES TO BE USED ON TREES UP TO 12' IN HEIGHT. LARGER TREES MUST BE GUYED.
- 1/8 OF ROOT BALL TO BE ABOVE FINISHED GRADE.
- DO NOT COVER CROWN OF ROOT BALL. EVERGREEN TREES WHICH ARE TIGHTLY SPACED SHALL BE TIED TOGETHER IN ONE CONTINUOUS BED. (CONTRACTOR TO INCLUDE THIS MULCHING IN HIS BID.)
- TREES WHICH ARE LOCATED WITHIN 4 FEET OF AN ADJACENT SHRUB BED SHALL HAVE THEIR MULCHED AREA CONNECTED WITH THE MULCHED BED OF THE SHRUBS.

TREE WRAP MAIN TRUNKS
RUBBER HOSE 4 WIRE - TIE MAIN TRUNKS TOGETHER
2" X 2" HARDWOOD STAKE SEE HRD AND HOWARD COUNTY LANDSCAPE SPECIFICATION GUIDELINES FOR TREE SUPPORT SCHEDULE
GALVANIZED WIRE, DOUBLE STRAND TWISTED. SEE BALTIMORE-WASHINGTON LANDSCAPE SPECIFICATION GUIDELINES FOR TREE SUPPORT SCHEDULE
12" BLACK CORRUGATED PLASTIC PIPE
4" MULCH
REMOVE TOP 1/3 OF ALL BURLAP FABRIC AROUND ROOT BALL
EXISTING GRADE
ADD TO PLANTER MIX 10-6-4 FERTILIZER AT THE RATE OF 1/2 LBS. PER 1" OF TRUNK DIAMETER
6" DIAMETER SAUCER AROUND TREE
SOIL MIX: 2/3 TOPSOIL 4 1/3 ORGANIC MATTER
MIN. 6" HT. COMPACTED SOIL MOUND
UPRIGHT STAKES EXTENDED TO FIRM BEARING SOIL

4 MULTI-TRUNK TREE PLANTING SECTION 8A-4A NTS



7 TRIANGULAR SPACING FOR SHRUBS AND GROUNDCOVERS PLAN 8A-7 NTS

NOTE:

- CONTRACTOR TO REGRADE SOD OR HYDROSEED AND STRAW MULCH ALL AREAS DISTURBED AS A RESULT OF HIS OR HER WORK.
- UPRIGHT STAKES TO BE USED ON TREES UP TO 12' IN HEIGHT. LARGER TREES MUST BE GUYED.
- 1/8 OF ROOT BALL TO BE ABOVE FINISHED GRADE.
- DO NOT COVER CROWN OF ROOT BALL. EVERGREEN TREES WHICH ARE TIGHTLY SPACED SHALL BE TIED TOGETHER IN ONE CONTINUOUS BED. (CONTRACTOR TO INCLUDE THIS MULCHING IN HIS BID.)
- TREES WHICH ARE LOCATED WITHIN 4 FEET OF AN ADJACENT SHRUB BED SHALL HAVE THEIR MULCHED AREA CONNECTED WITH THE MULCHED BED OF THE SHRUBS.

TREE WRAP MAIN TRUNK
RUBBER HOSE
2" X 2" HARDWOOD STAKE SEE BALTIMORE-WASHINGTON LANDSCAPE SPECIFICATION GUIDELINES FOR TREE SUPPORT SCHEDULE
GALVANIZED WIRE, DOUBLE STRAND TWISTED. SEE HRD AND HOWARD COUNTY LANDSCAPE SPECIFICATION GUIDELINES FOR TREE SUPPORT SCHEDULE
12" BLACK CORRUGATED PLASTIC PIPE
4" MULCH
SOIL MIX: 2/3 TOPSOIL 4 1/3 ORGANIC MATTER
6" DIAMETER SAUCER AROUND TREE
3:1 MAXIMUM GRASSED SLOPE
EXISTING GRADE
ADD TO PLANTER MIX 10-6-4 FERTILIZER AT THE RATE OF 1/2 LBS. PER 1" OF TRUNK DIAMETER
MIN. 6" HT. COMPACTED SOIL MOUND
UPRIGHT STAKES EXTENDED TO FIRM BEARING SOIL

2 TREE PLANTING ON A SLOPE SECTION 8A-2 NTS

NOTE:

- BEDS TO HAVE SMOOTHLY CONTOURED AND CLEANLY DEFINED EDGES. BEDS SHALL BE CURVILINEAR EXCEPT AS NOTED ON PLAN.
- PROPOSED BEDS MUST BE LAID OUT ON SITE AND APPROVED BY OWNER, IF REQUESTED BY OWNER.
- REMOVE TOP 1/3 OF ALL BURLAP FABRIC AROUND ROOT BALL.
- COMPLETELY REMOVE ALL STRINGS, RIBBONS, AND TAGS FROM THE PLANT.
- SCARRY ROOTS ON POT BOUND PLANTS.
- PLANT SPACING VARIES - (SEE PLAN)
- ALL SHRUBS TO BE PLANTED IN MULCHED BEDS.
- PRUNE ALL BROKEN, DISEASED, AND WEAK BRANCHES.
- ALL SHRUB BEDS TO BE COMPLETELY EXCAVATED OF ALL EXISTING SOIL TO REQUIRED DEPTH AND BACKFILLED WITH REQUIRED SOIL MIX.
- SOIL MIX: 2/3 TOPSOIL 4 1/3 ORGANIC MATTER.
- TOP DRESS BED WITH 10-6-4 FERTILIZER AT THE RATE OF 5 LBS. PER 100 SF. OF BED AREA.

4" HARDWOOD MULCH EXISTING GRADE
SOIL MIX
ROTOTILL ENTIRE BED 3-4" DEEP COMPACT SOIL TO 85% AT OPTIMUM MOISTURE CONTENT

5 SHRUB PLANTING BED SECTION 8A-12 NTS

NOTE:

MULCH BEDS SHALL BE SET BACK FROM WALKS AND CURBS THE WIDTH OF ONE MOWING STRIP OF GRASS UNLESS NOTED OTHERWISE.

SHRUBS SHALL BE PLANTED 1" - 2" ABOVE FINISHED GRADE
SOIL MIX: 2/3 TOPSOIL 4 1/3 ORGANIC MATTER
4" HARDWOOD MULCHED PLANTING BED
EDGE OF PLANTING BED
LAWN
FINISHED GRADE

8 SHRUB PLANTED IN A RAISED BED SECTION 8A-8 NTS

NOTE:

- CONTRACTOR TO REGRADE SOD OR HYDROSEED AND STRAW MULCH ALL AREAS DISTURBED AS A RESULT OF HIS OR HER WORK.
- UPRIGHT STAKES TO BE USED ON TREES UP TO 12' IN HEIGHT. LARGER TREES MUST BE GUYED.
- 1/8 OF ROOT BALL TO BE ABOVE FINISHED GRADE.
- DO NOT COVER CROWN OF ROOT BALL. EVERGREEN TREES WHICH ARE TIGHTLY SPACED SHALL BE TIED TOGETHER IN ONE CONTINUOUS BED. (CONTRACTOR TO INCLUDE THIS MULCHING IN HIS BID.)
- TREES WHICH ARE LOCATED WITHIN 4 FEET OF AN ADJACENT SHRUB BED SHALL HAVE THEIR MULCHED AREA CONNECTED WITH THE MULCHED BED OF THE SHRUBS.

TREE WRAP MAIN TRUNK
RUBBER HOSE
GALVANIZED WIRE, DOUBLE STRAND TWISTED. SEE HRD AND HOWARD COUNTY LANDSCAPE SPECIFICATION GUIDELINES FOR TREE SUPPORT SCHEDULE
12" BLACK CORRUGATED PLASTIC PIPE
4" MULCH
2" X 2" HARDWOOD STAKE SEE BALTIMORE-WASHINGTON LANDSCAPE SPECIFICATION GUIDELINES FOR TREE SUPPORT SCHEDULE
6" DIAMETER SAUCER AROUND TREE
REMOVE TOP 1/3 OF ALL BURLAP FABRIC AROUND ROOT BALL
EXISTING GRADE
ADD TO PLANTER MIX 10-6-4 FERTILIZER AT THE RATE OF 1/2 LBS. PER 1" OF TRUNK DIAMETER
SOIL MIX: 2/3 TOPSOIL 4 1/3 ORGANIC MATTER
MIN. 6" HT. COMPACTED SOIL MOUND

3 GUYING FOR LARGE TREES (12' PLUS) SECTION 8A-3 NTS

NOTE:

PERENNIAL BEDS SHALL BE MULCHED WITH VERY FINE BARK MULCH TO DISTINGUISH THEM FROM OTHER BEDS.
PERENNIAL BED WITH FINE PINE BARK MULCH. MOUND PERENNIAL BED 2" - 3" HIGHER THAN SURROUNDING BED.

SHRUB BED WITH TYPICAL HARDWOOD BARK MULCH.
LAWN

6 MULCHING OF PERENNIAL BEDS SECTION 8A-6 NTS

NOTE:

MIX IN BONE MEAL AT BOTTOM OF BULB WHEN PLANTED

TREAT THE ENTIRE MULCHED AND PLANTED PERENNIAL BED WITH PRE-EMERGENT
3" MULCH
SOIL MIX USE:
1/3 PINE FINES (GROUND) OR ORGANIC MATTER
1/6 PERLITE
1/2 TOPSOIL
COVER MULCHED BED EDGE 1/2" - 4" OF SOIL (FINISHED GRADE)
BULB DEPTH 6" - 8"
FERTILIZER AND CHEMICAL ADDITIVES 6" - 8" DEPTH (AT THE ROOT ZONE)
SLOPE BOTTOM OF ALL PREPARED BEDS 1/4" / FOOT MIN. TO NATURAL LOW POINT.

9 PLANTING BED FOR ANNUALS AND PERENNIALS SECTION 8A-10 NTS

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE: SEPT. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
County Health Officer *Mike Z...* Date: 3/28/00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Director *Frank St...* Date: 4/15/00
Chief, Division of Land Development *Chinda Hametta* Date: 4/4/02
Chief, Development Engineering Division *Bill Dawkins* Date: 3/21/00

Land Design Inc.
Landscape Architecture Land Planning
Urban Design Geographic Information Systems
4114 Prince Street Suite 400 703-549-1784
Alexandria, VA 22314-2815 Fax: 703-549-4984

| DES. | DRN. | CHK. | DATE | REVISION | BY | APPR. |
|------|------|------|------|----------|----|-------|
| | | | | | | |

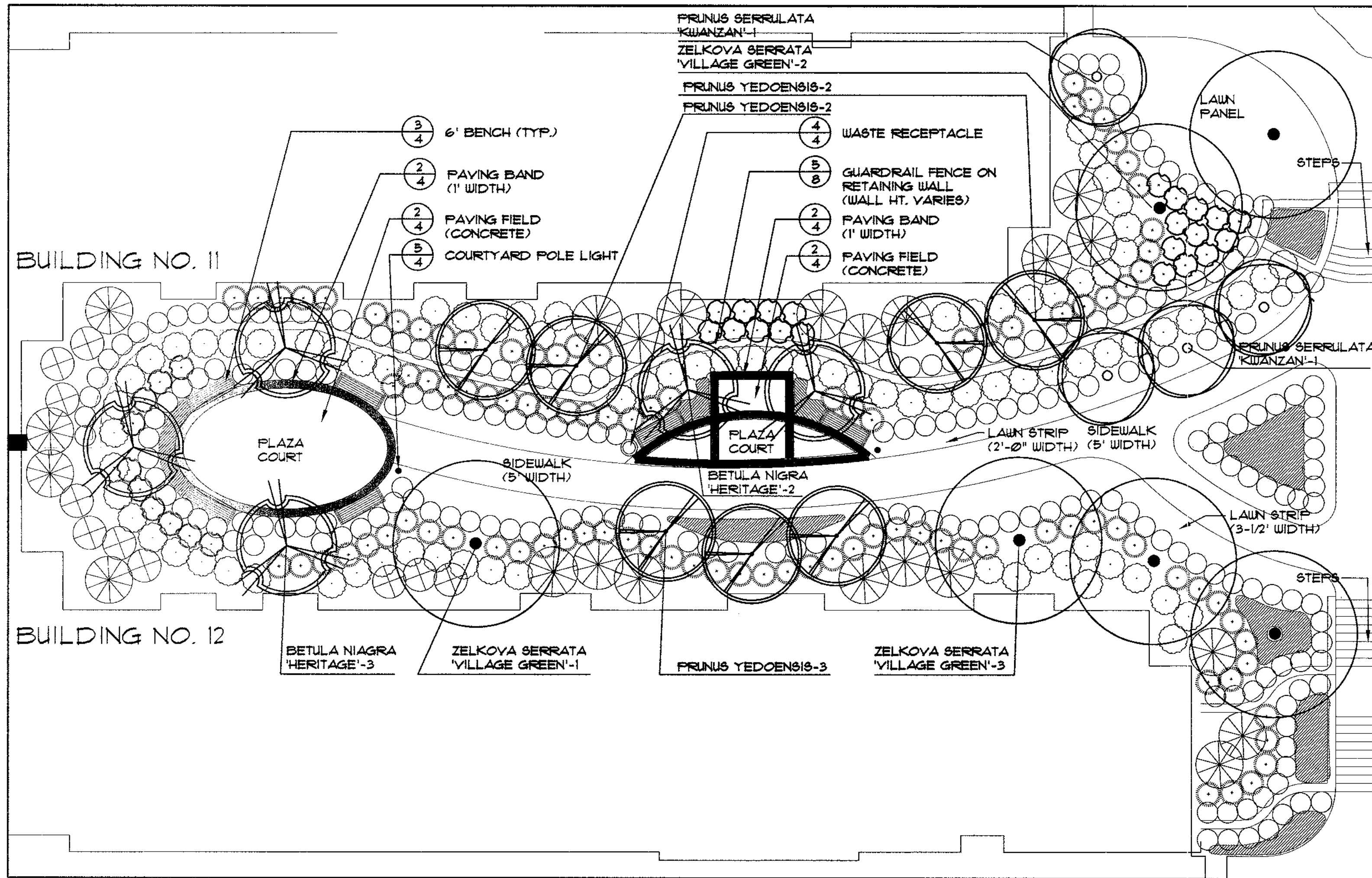
OWNER:
ARCHSTONE COMMUNITIES TRUST
6631-A OLD DOMINION DRIVE
SUITE 201
MCLEAN, VA 22101
703-883-3545



DEVELOPER/CONTRACT PURCHASER:
ARCHSTONE COMMUNITIES
6631-A OLD DOMINION DRIVE
SUITE 201
MCLEAN, VA 22101
703-883-3540

LANDSCAPE DETAILS
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989
CLARKSVILLE ELECTION DISTRICT No. 5
HOWARD COUNTY, MARYLAND

| SCALE | ZONING | G. L. W. FILE No. |
|-----------|----------------|-------------------|
| N/A | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| 3-03-2000 | 36 - 2 | 6 OF 24 |



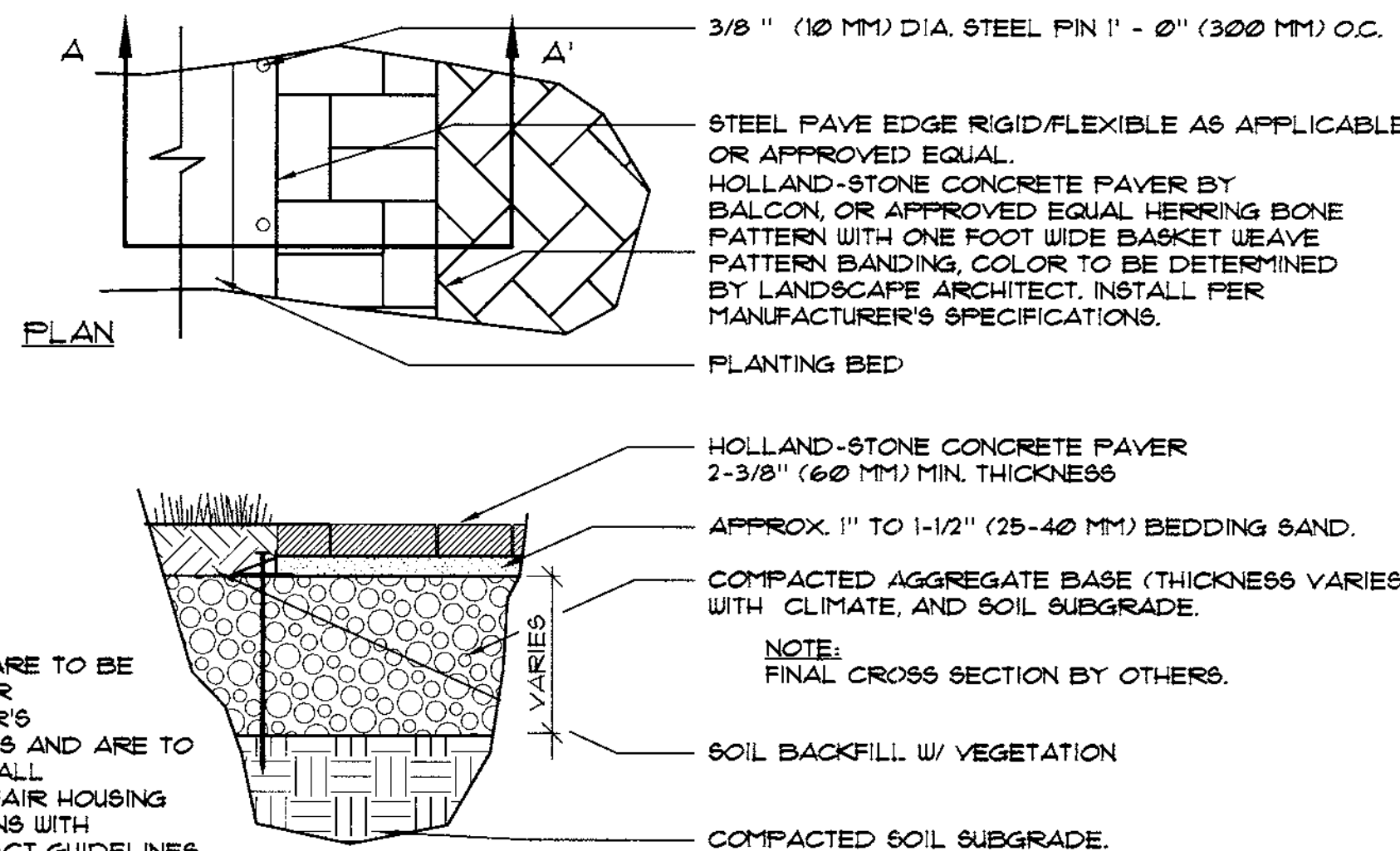
1 CONCEPT COURTYARD LANDSCAPE/HARDSCAPE (TYP)
7 PLAN

SCALE: 1" = 10'

POTENTIAL PLANT SELECTIONS

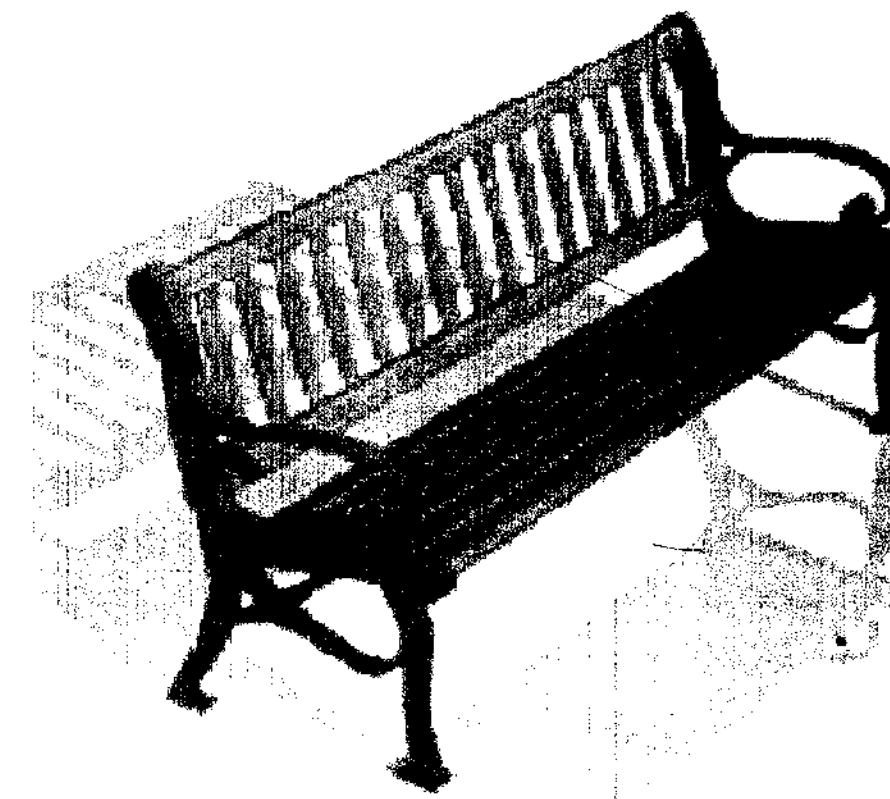
- MEDIUM EVERGREEN TREE
 - FOSTER'S HOLLY
 - NELLIE STEVEN'S HOLLY
 - AMERICAN HOLLY
 - ARBORVITAE
- LARGE DECIDUOUS SHRUB
 - VIBURNUM
 - MAGNOLIA
 - RED TWIG DOGWOOD
- MEDIUM DECIDUOUS SHRUB
 - HYDRANGEA
 - BURNING BUSH
 - FORSYTHIA
 - SPIRAEA
- LARGE EVERGREEN SHRUB
 - MANHATTAN EUONYMUS
 - HOLLY
 - RHODODENDRON
 - CHERRY LAUREL
- MEDIUM EVERGREEN SHRUB
 - JUNIPER
 - AZALEA
 - YEW
 - NANDINA
- SMALL EVERGREEN SHRUB
 - JUNIPER
 - COTONEASTER
 - HOLLY
- PERENNIALS AND GROUNDCOVERS
 - DAYLILY
 - FOUNTAIN GRASS
 - SPREADING EUONYMUS
 - BROWN-EYED SUSAN

NOTE:
ALL PAVERS ARE TO BE
INSTALLED PER
MANUFACTURER'S
SPECIFICATIONS AND ARE TO
COMPLY WITH ALL
APPLICABLE FAIR HOUSING
AND AMERICANS WITH
DISABILITIES ACT GUIDELINES.



2 CONCRETE PAVEMENT/
WALKWAY (SCHEMATIC)
7 PLAN/SECTION

HOLLAND-STONE CONCRETE PAVEMENT AVAILABLE FROM BALCON INC., P.O. BOX 3388, CROFTON, MD. 21114, (410)-721-1900, OR APPROVED EQUAL.



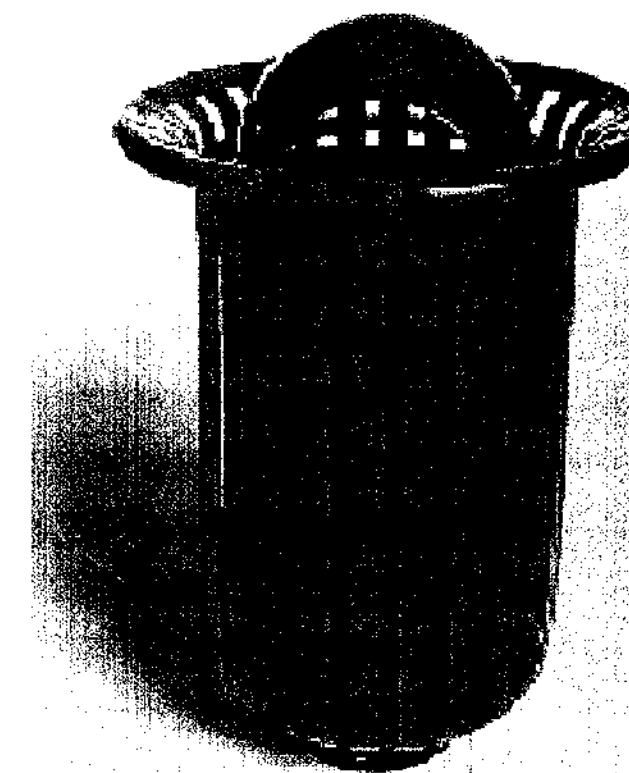
THE CLASSIC SERIES BENCH:
QUANTITY: 10
MODEL: CL 38, OR APPROVED EQUAL.
DIMENSIONS: 6' LONG X 32" HT.
MATERIALS: IPE (SOUTH AMERICAN HARDWOOD)
COLOR: METAL PAINTED BLACK
OR APPROVED EQUAL.

NOTE:
BENCH SHALL BE PERMANENTLY SURFACE MOUNTED ON A CONCRETE PAD, PER MANUFACTURER'S INSTRUCTIONS.

AVAILABLE FROM:
VICTOR STANLEY, INC.
P.O. DRAWER 330
DUNKIRK, MD 20754
(800) 368-2513

3 BENCH
7 PICTORIAL

05A-18
NTS



LITTER CONTAINER WITH DOME TOP:

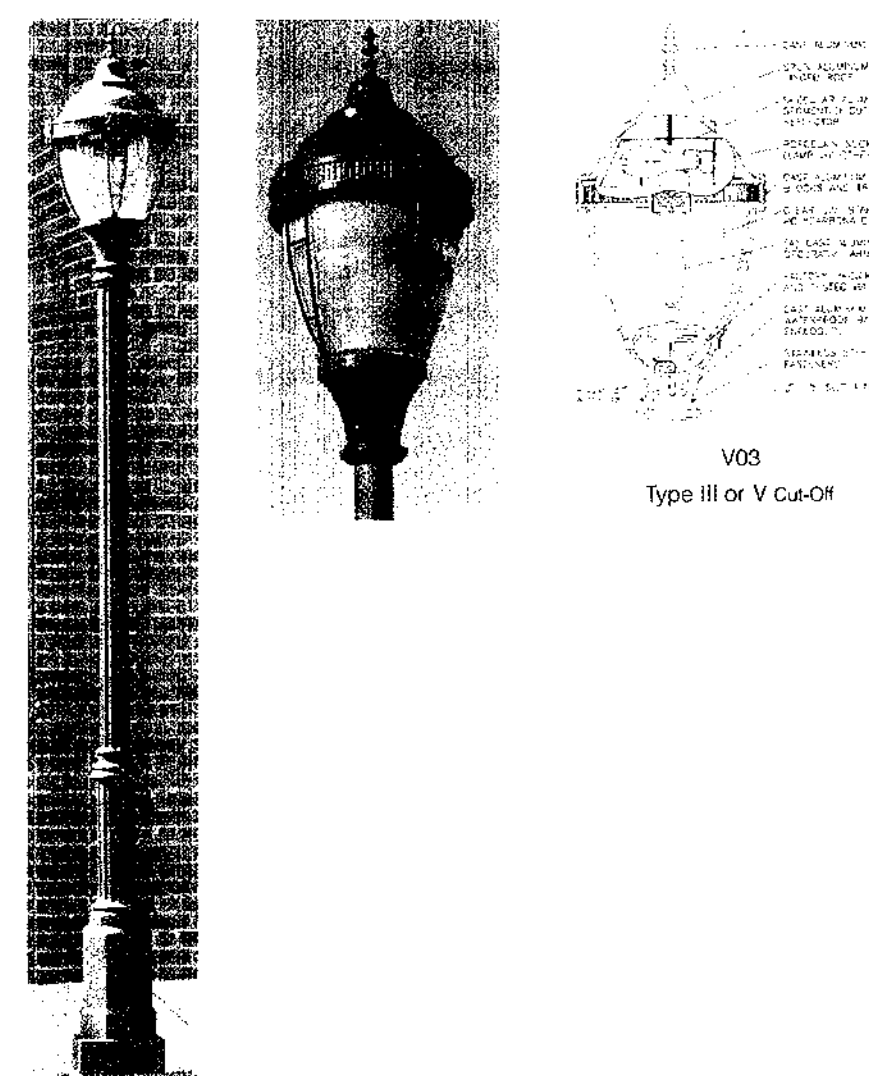
QUANTITY: 2
MODEL: TIMBERFORM RENAISSANCE #201-DT
DIMENSIONS: 22" DIAM. X 3'3" HT.
COLOR: BLACK
OR APPROVED EQUAL.

NOTE:
TRASH RECEPTACLE SHALL BE PERMANENTLY SURFACE MOUNTED VIA FIXED PEDESTAL SURFACE MOUNTING PER MANUFACTURER'S INSTRUCTIONS.

AVAILABLE FROM:
COLUMBIA CASCADE
1915 S.W. FIFTH AVENUE
PORTLAND, OR 97201
(800) 541-1940

4 TRASH RECEPTACLE
7 PICTORIAL

05F-08
NTS



LAMP:
HAGERSTOWN SERIES
MODEL NUMBER V03
TYPE III CUT-OFF GLOBE
FINISH: TYPE A - BLACK

POST:
MODEL NUMBER - P1130
HEIGHT - 12'
COLOR - BLACK
MANUFACTURER:
HADCO
P.O. BOX 128
100 CRAFTWAY
LITTLESTOWN, PA 17340
717-359-7131

SUPPLIER:
LIGHTOLIER
15 COLUMBIA GATEWAY DRIVE
SUITE A
COLUMBIA, MD 21046
301-621-8156
NOTE:
10' POLE LIGHT TO BE USED IN COURTYARDS AND ALONG GREENWAY ONLY.
PARKING AREA LIGHTS ARE TO BE PER HHD AND HOWARD COUNTY SPECIFICATIONS.

5 LIGHT POLE (COURTYARD)
7 PICTORIAL

05B-43
NTS

DATE:

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR



NOTE:
THIS SHEET FOR INFORMATIONAL PURPOSES ONLY.
SUBJECT TO HHD REVIEW AND APPROVAL.
LANDSCAPE AND HARDSCAPE DESIGN AND SITE SELECTIONS ON THIS SHEET ARE PRELIMINARY AND SUBJECT TO CHANGE/MODIFICATION AT TIME OF FINAL DETAILED DESIGN.

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE SEPT. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Director: *Dave Miller* 8/28/00
County Health Officer: MR Date
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Director: *James S. Keith* 8/10/00
Date
Chief, Division of Land Development: *Cindy Hamilton* 7/11/00
Date
Chief, Development Engineering Division: *Mike* 8/21/00
Date

LandDesign Inc.
Landscape Architecture Land Planning
Urban Design Geographic Information Systems
1114 Prince Street, Suite 400 703/548-7784
Alexandria, VA 22314-2815 Fax: 703/548-4184

OWNER:
ARCHSTONE COMMUNITIES TRUST
6631-A OLD DOMINION DRIVE
SUITE 201
McLEAN, VA 22101
703-883-3545

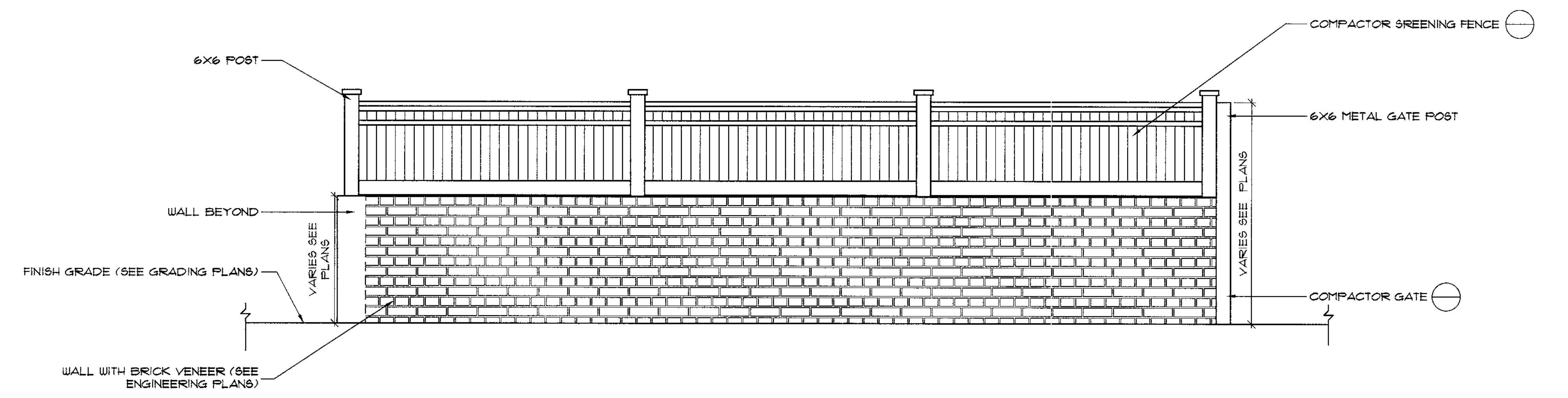
DEVELOPER/CONTRACT PURCHASER:
ARCHSTONE COMMUNITIES
6631-A OLD DOMINION DRIVE
SUITE 201
McLEAN, VA 22101
703-883-3540

TYPICAL COURTYARD DETAILS
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989

| | | |
|-----------|----------------|-------------------|
| SCALE | ZONING | G. L. W. FILE No. |
| AS NOTED | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| 3-03-2000 | 36 - 2 | 7 OF 24 |

CLARKSVILLE ELECTION DISTRICT No. 5

HOWARD COUNTY, MARYLAND



1 TRASH COMPACTOR
8 ELEVATION B
3/8" = 1'-0"



NOTE:
THIS SHEET FOR INFORMATIONAL PURPOSES ONLY. SUBJECT TO H&D REVIEW AND APPROVAL. LANDSCAPE AND HARDSCAPE DESIGN AND SITE SELECTIONS ON THIS SHEET ARE PRELIMINARY AND SUBJECT TO CHANGE/MODIFICATION AT TIME OF FINAL DETAILED DESIGN.

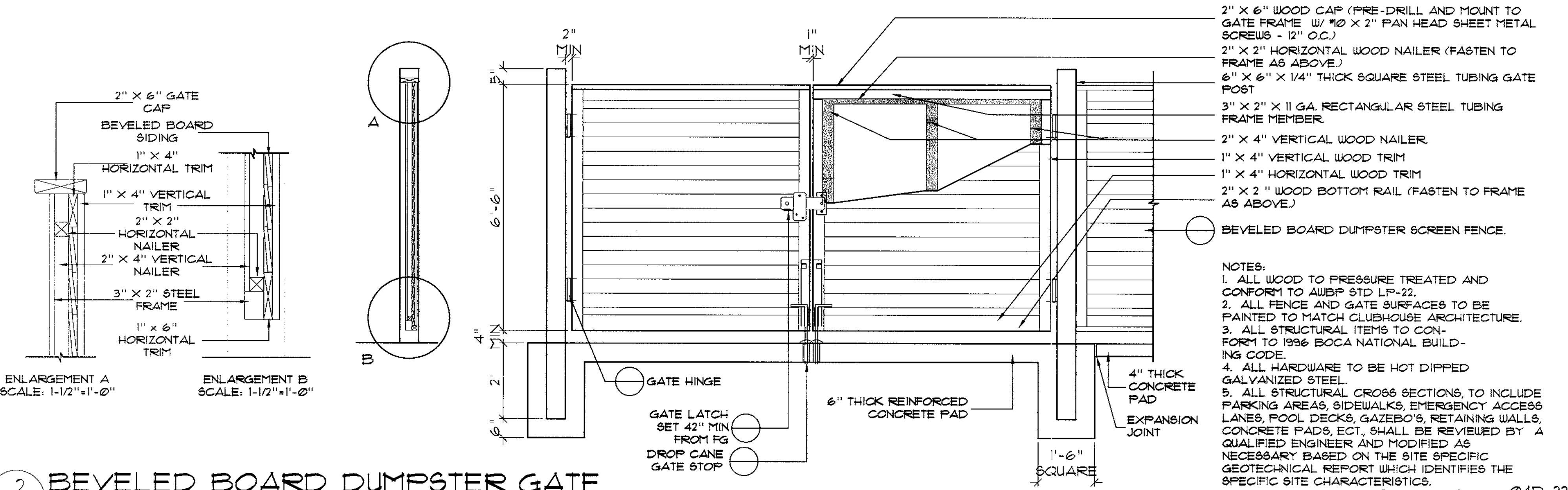
DATE: _____

DRAWINGS ISSUED TO:

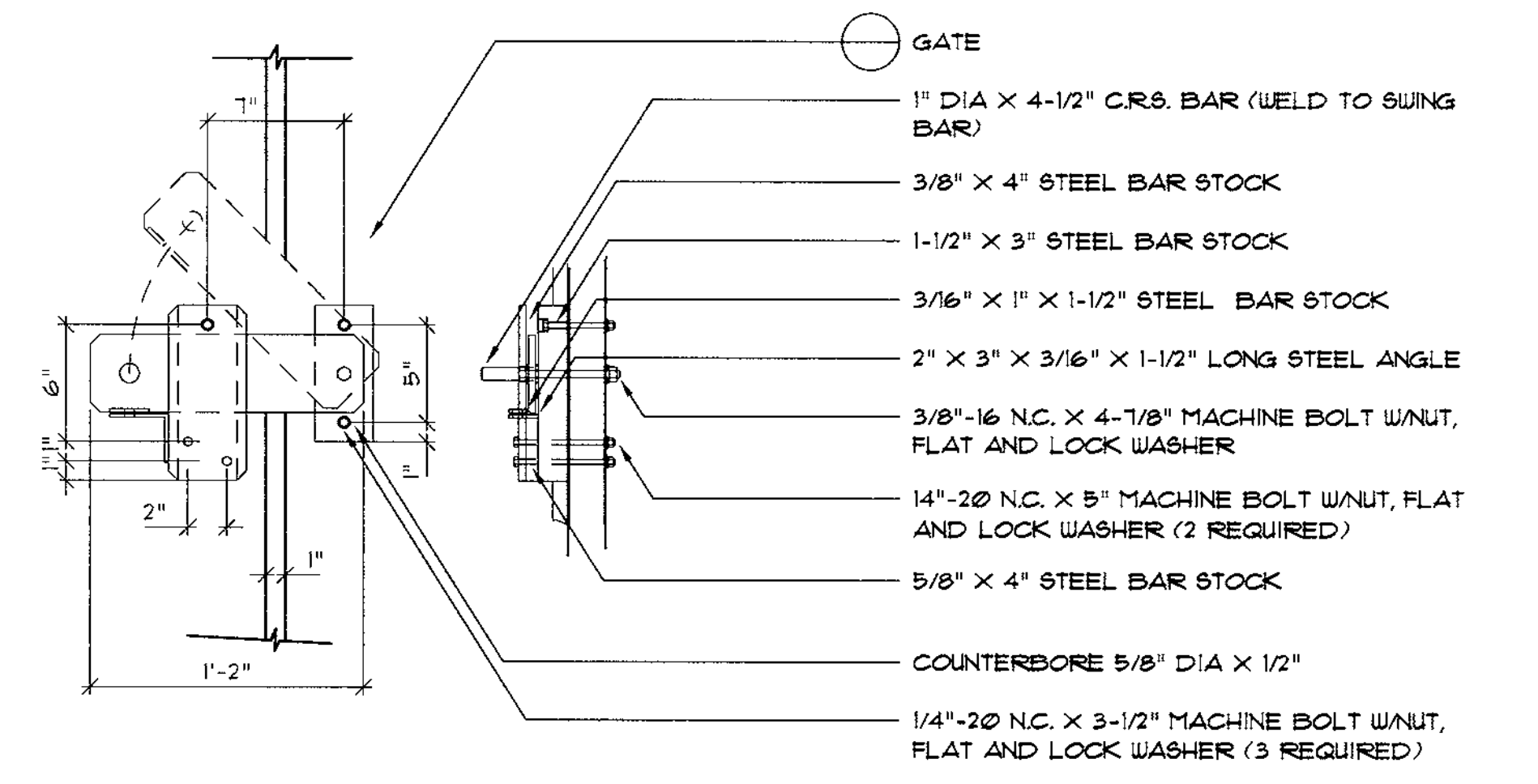
ASN DEVELOPMENT OFFICE

ASN PRODUCTION OFFICE

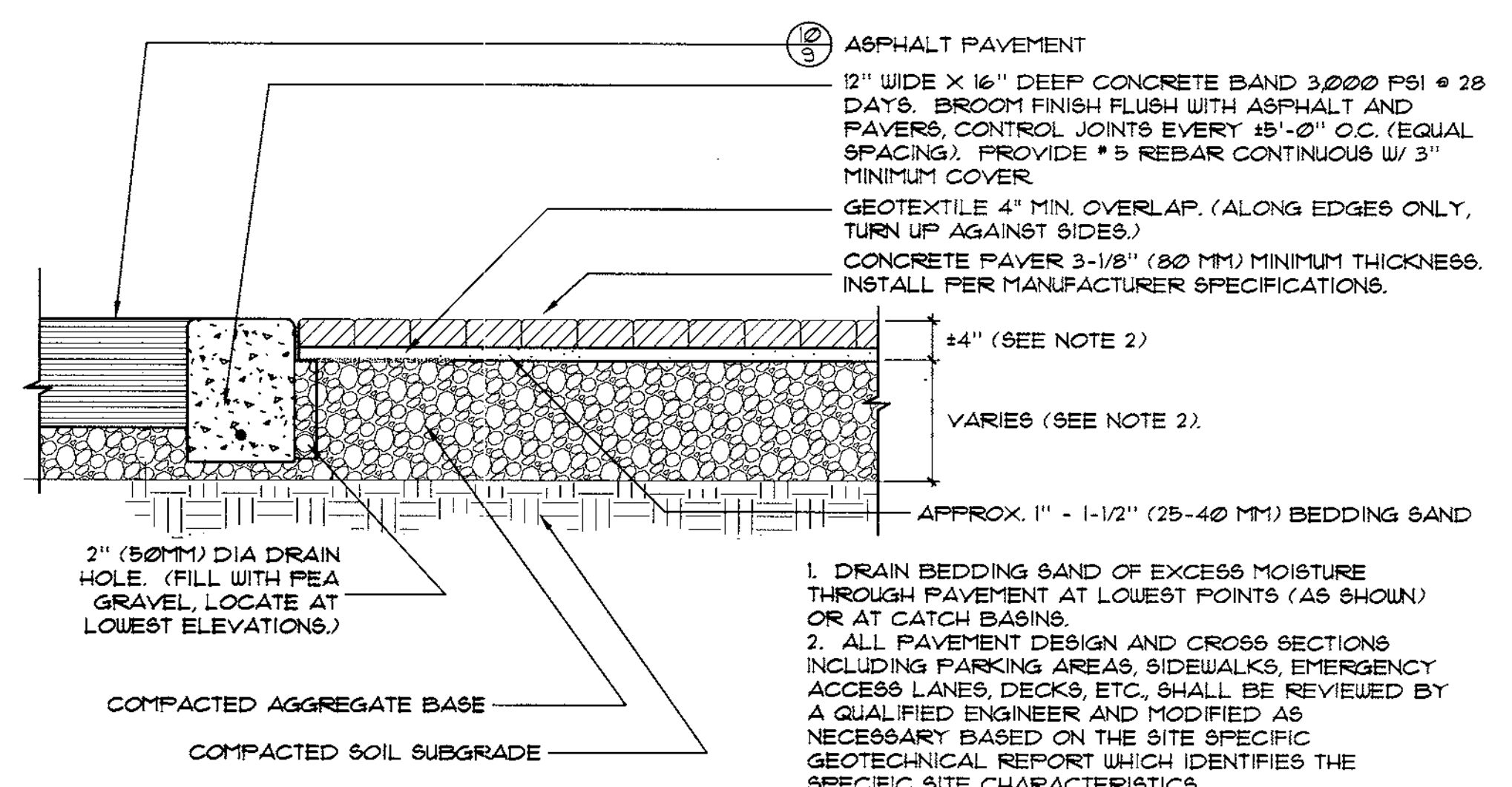
GENERAL CONTRACTOR



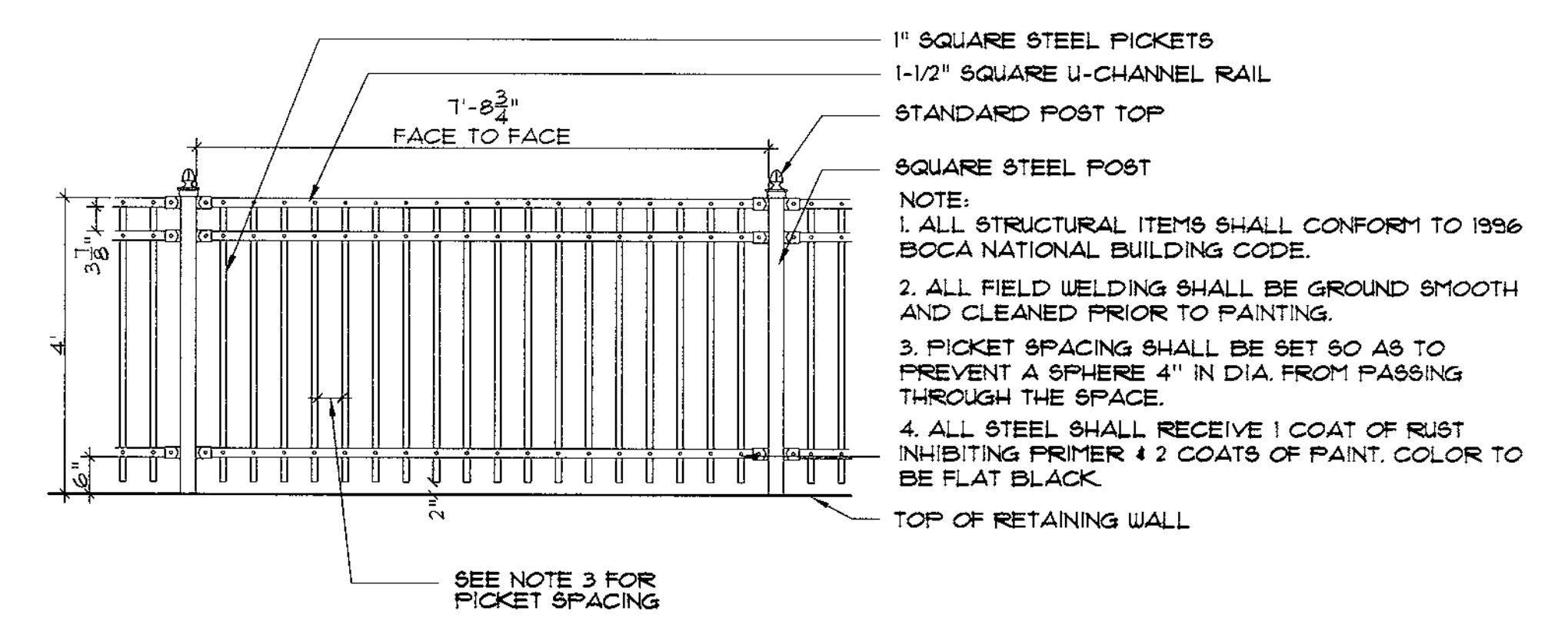
2 BEVELED BOARD DUMPSTER GATE
8 ELEVATION/SECTION
1/2" = 1'-0"



3 DUMPSTER / COMPACTOR GATE LATCH
8 ELEVATION
1-1/2" = 1'-0"



4 SPECIAL PAVING AT TURNAROUND
8 SECTION
3/4" = 1'-0"



5 COURTYARD GUARDRAIL
8 ELEVATION
1/2" = 1'-0"

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE SEPT. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Dore M. Miller 3/23/00
County Health Officer Date

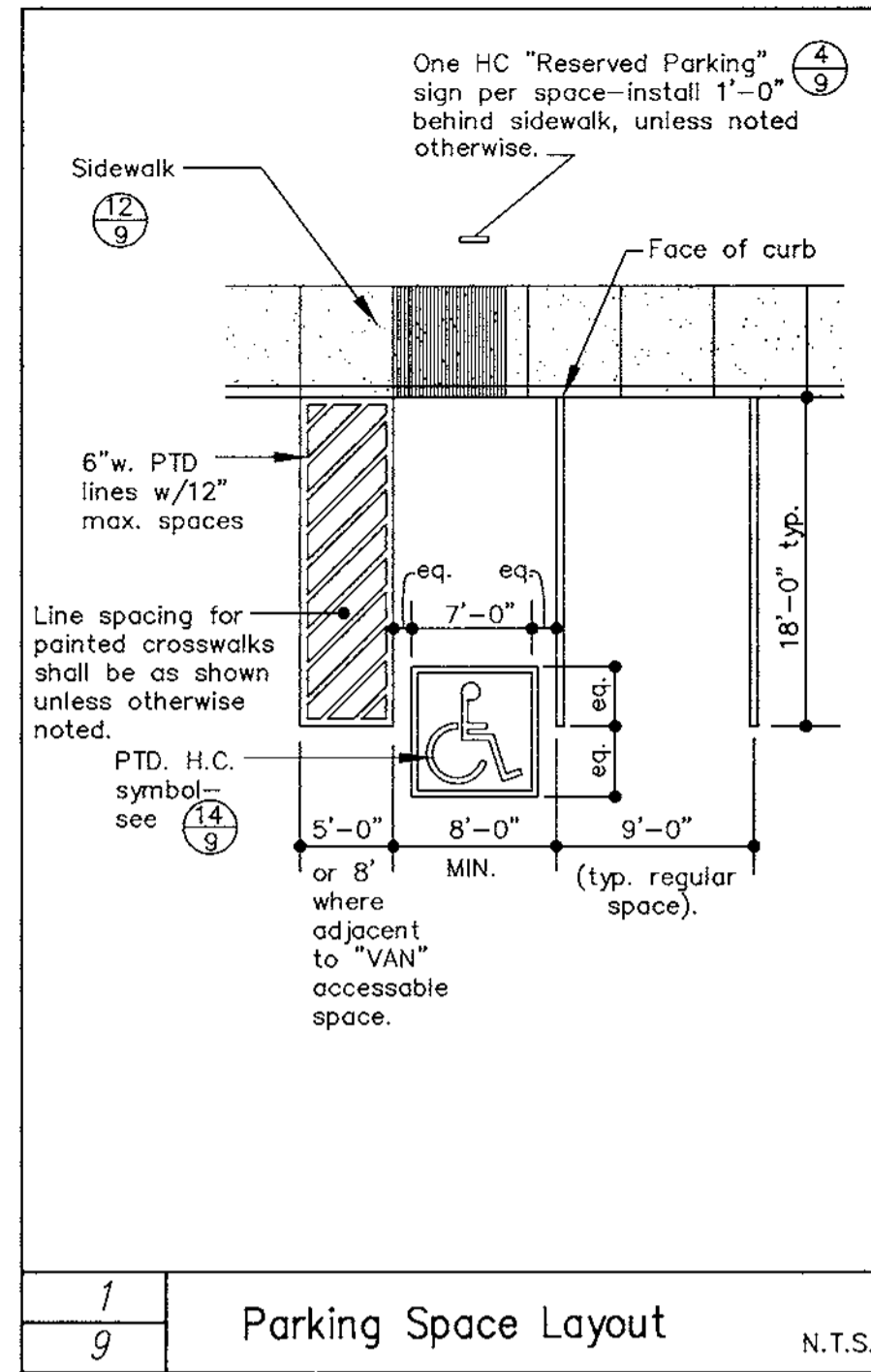
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Joseph B. Smith 4/15/00
Director Date

Conita Hamilton 4/4/00
Chief, Division of Land Development Date

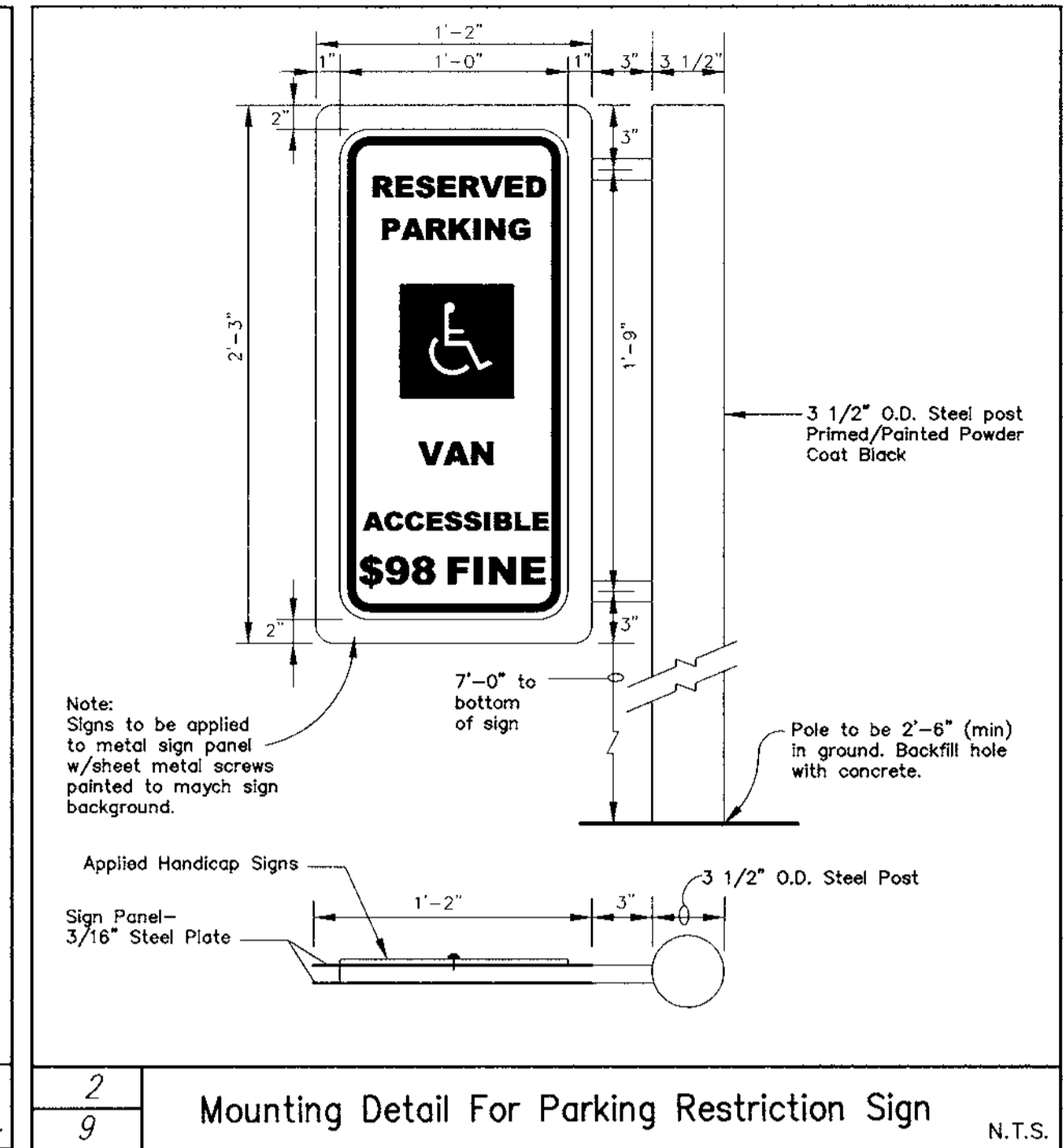
William J. ... 5/2/00
Chief, Development Engineering Division Date

Land Design Inc.
Landscape Architecture Land Planning
Urban Design Geographic Information Systems
1114 Prince Street, Suite 400 703/549-7784
Alexandria, VA 22314-2815 Fax: 703/549-4984

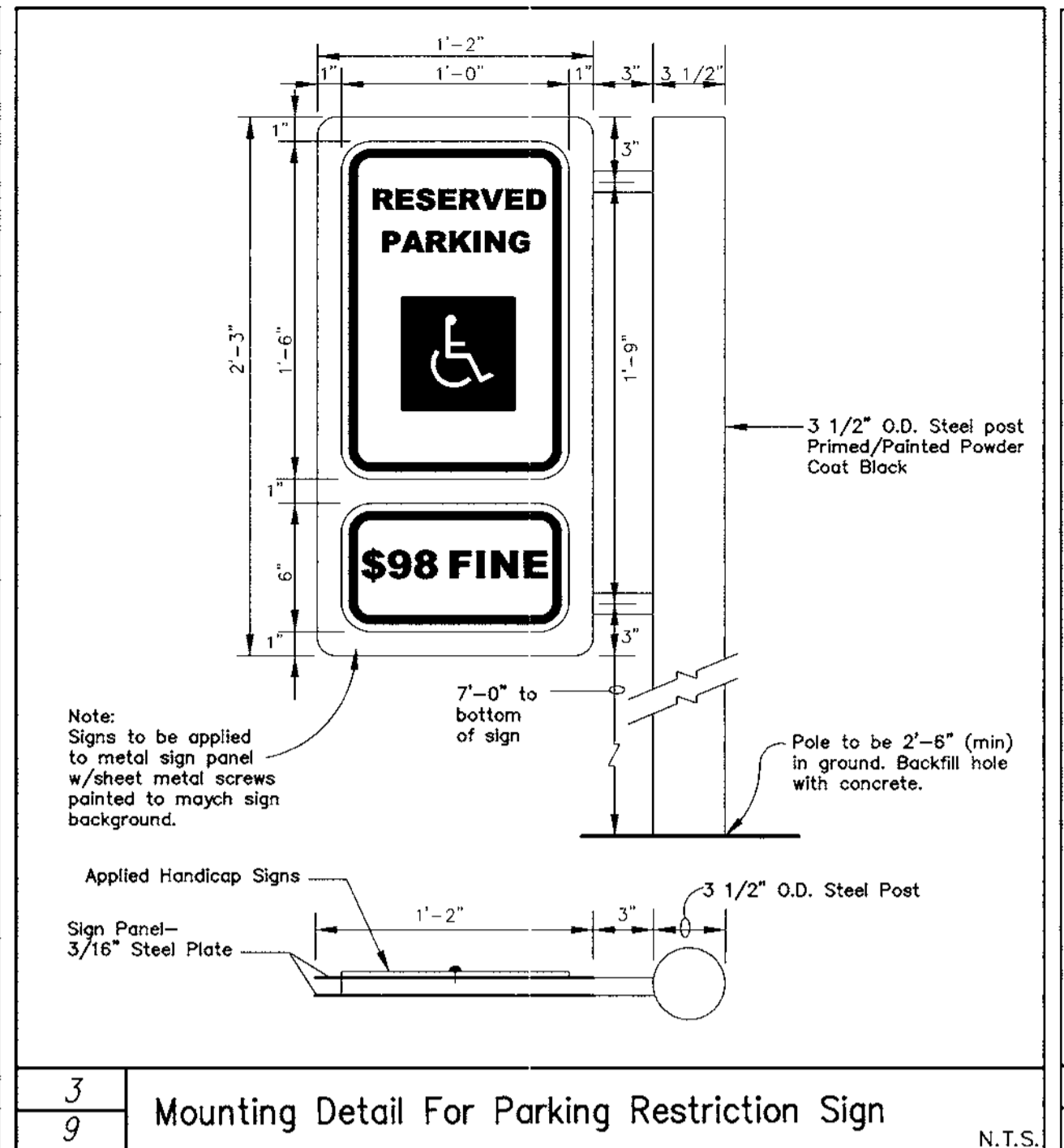
| | | | | | |
|---|--|---|-------------------|--------------|----------------------------|
| OWNER: ARCHSTONE COMMUNITIES TRUST 6631-A OLD DOMINION DRIVE SUITE 201 MCLEAN, VA 22101 703-883-3545 | DEVELOPER/CONTRACT PURCHASER: ARCHSTONE COMMUNITIES 6631-A OLD DOMINION DRIVE SUITE 201 MCLEAN, VA 22101 703-883-3540 | DUMPSTER AND SITE DETAILS COLUMBIA TOWN CENTER SECTION 1 AREA 3 PARCEL "A-1" PLAT No. 7989 | SCALE AS NOTED | ZONING NT | G. L. W. FILE No. 98087 |
| DATE 3-03-2000 | TAX MAP - GRID 36 - 2 | SHEET 8 OF 24 | | | |



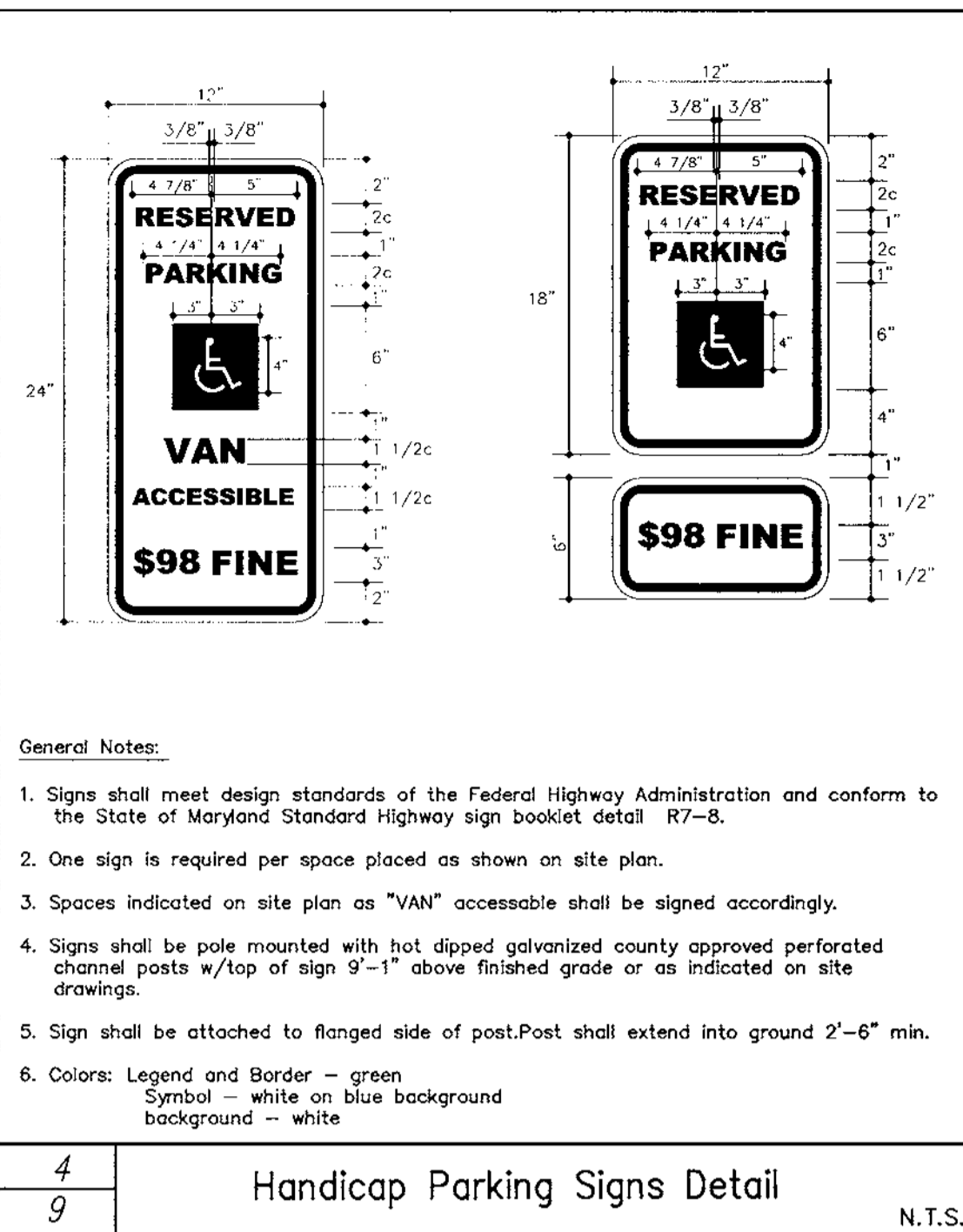
1
9 Parking Space Layout N.T.S.



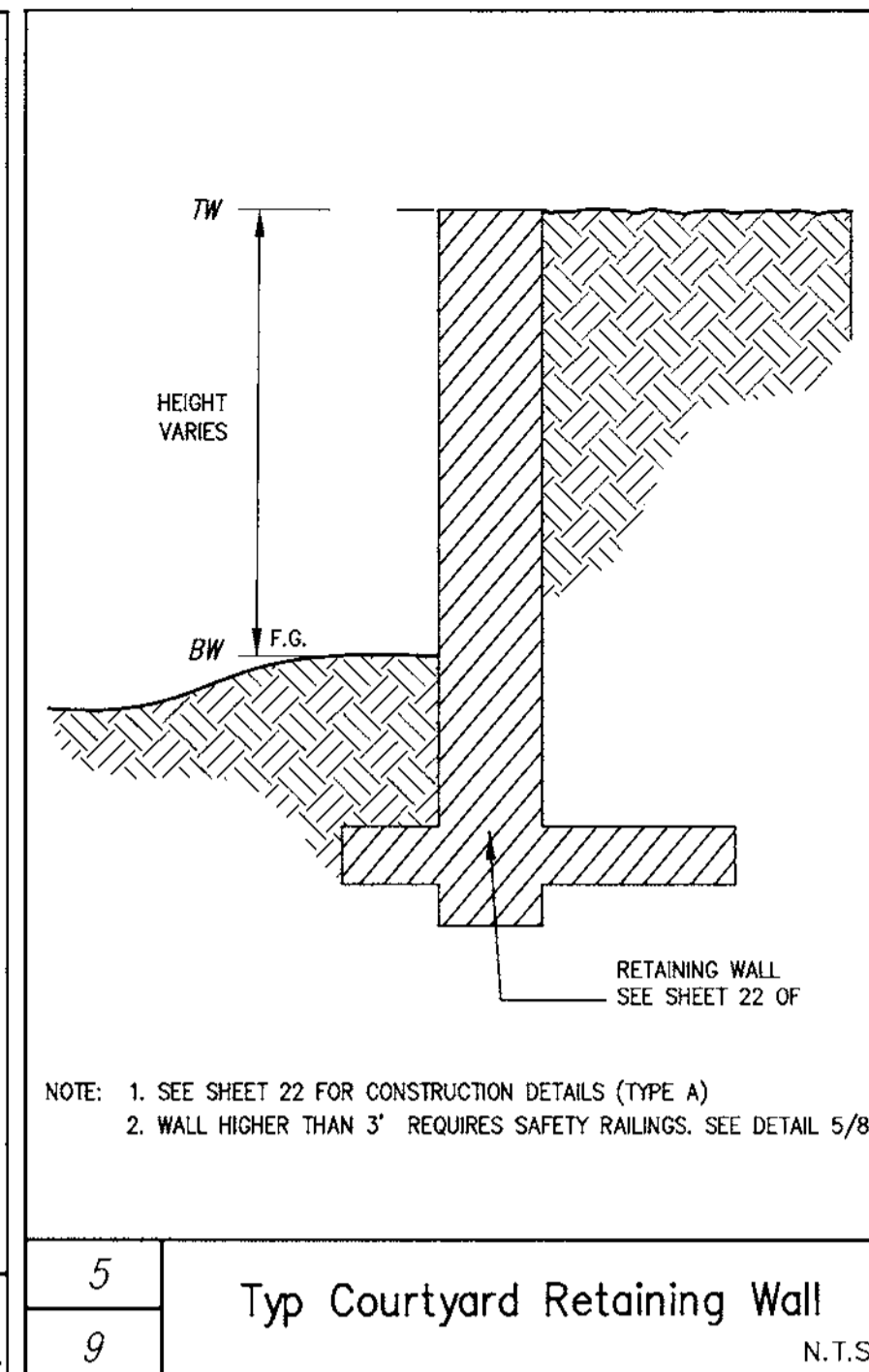
2
9 Mounting Detail For Parking Restriction Sign N.T.S.



3
9 Mounting Detail For Parking Restriction Sign N.T.S.



4
9 Handicap Parking Signs Detail N.T.S.

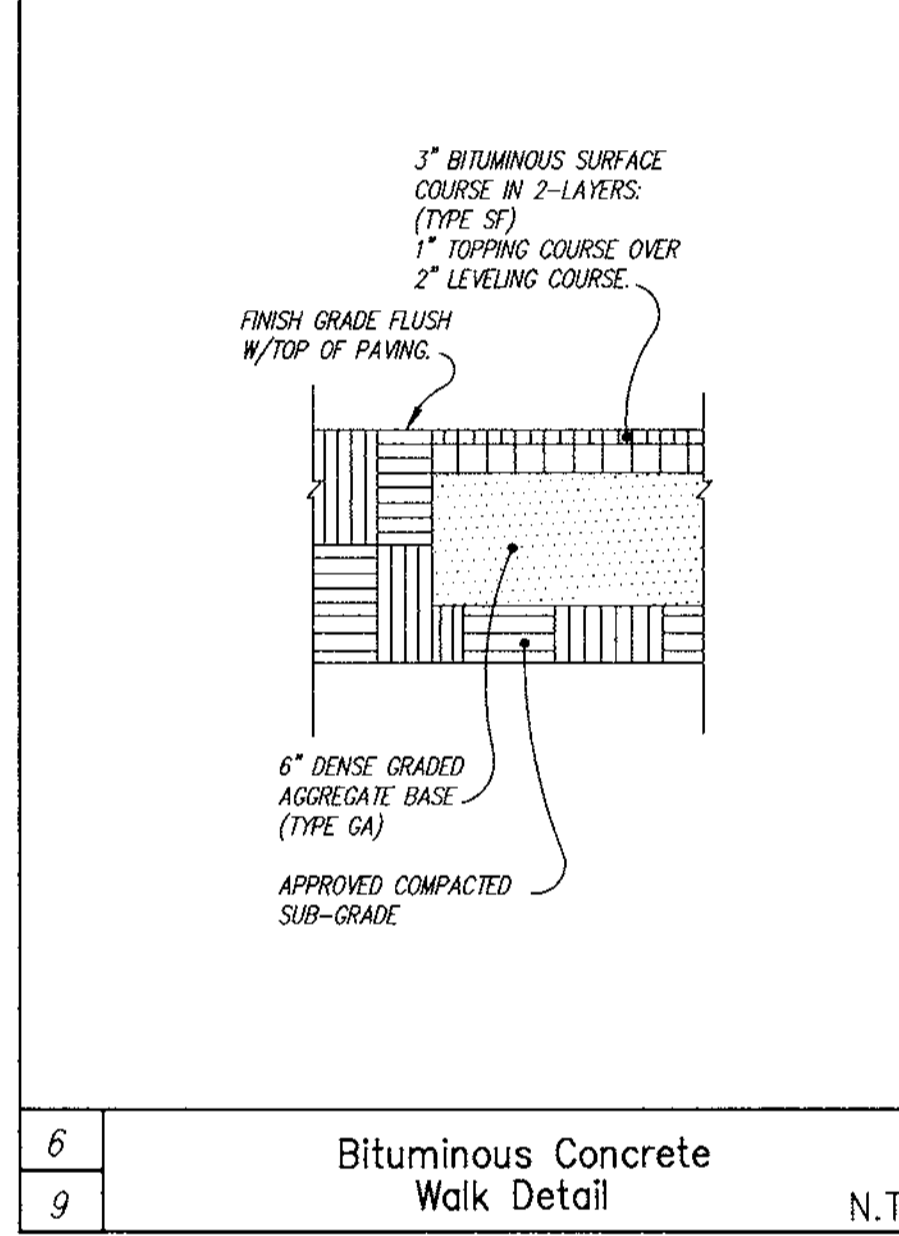


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9 Typ Courtyard Retaining Wall N.T.S.

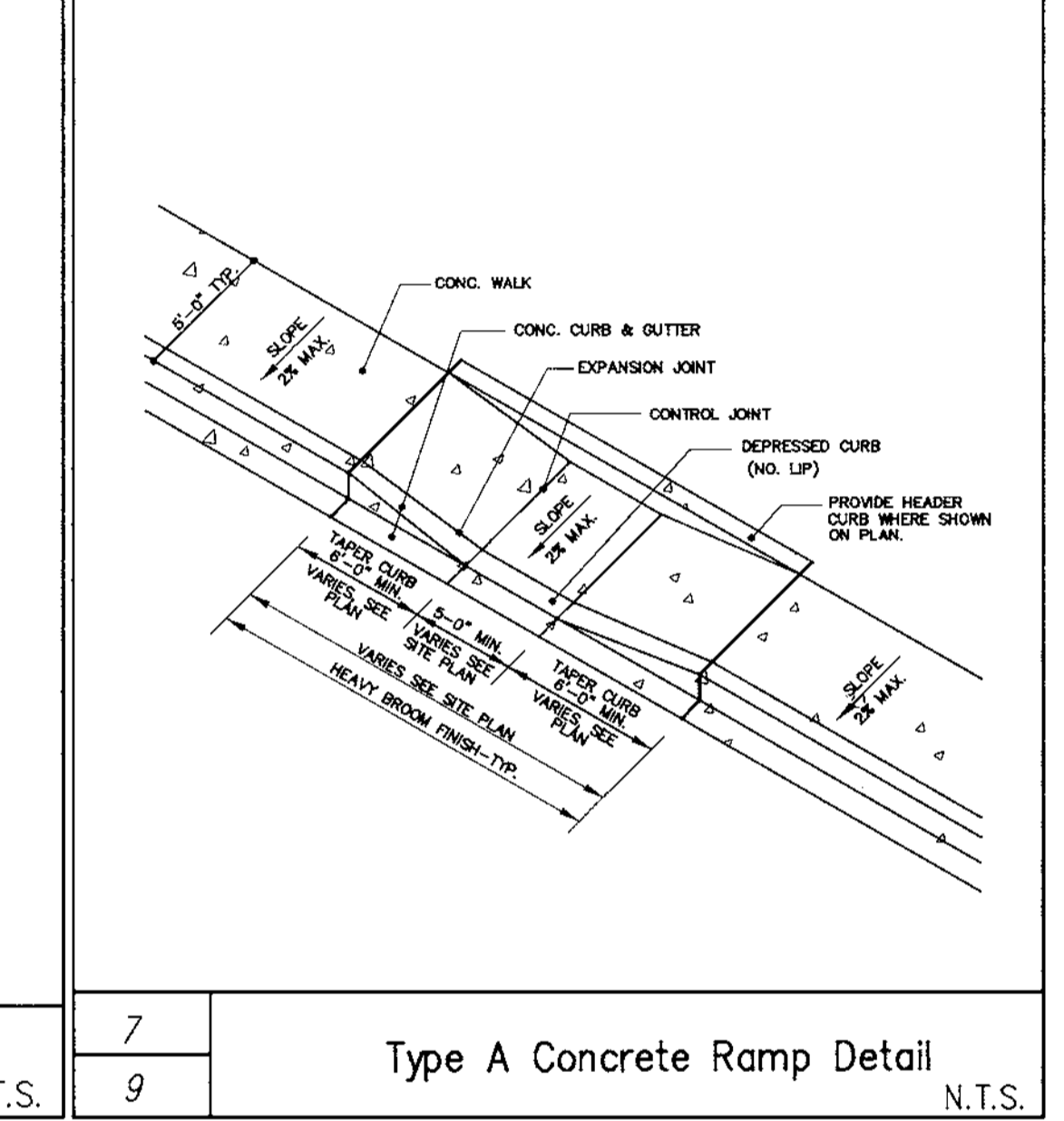
DATE:

DRAWINGS ISSUED TO:

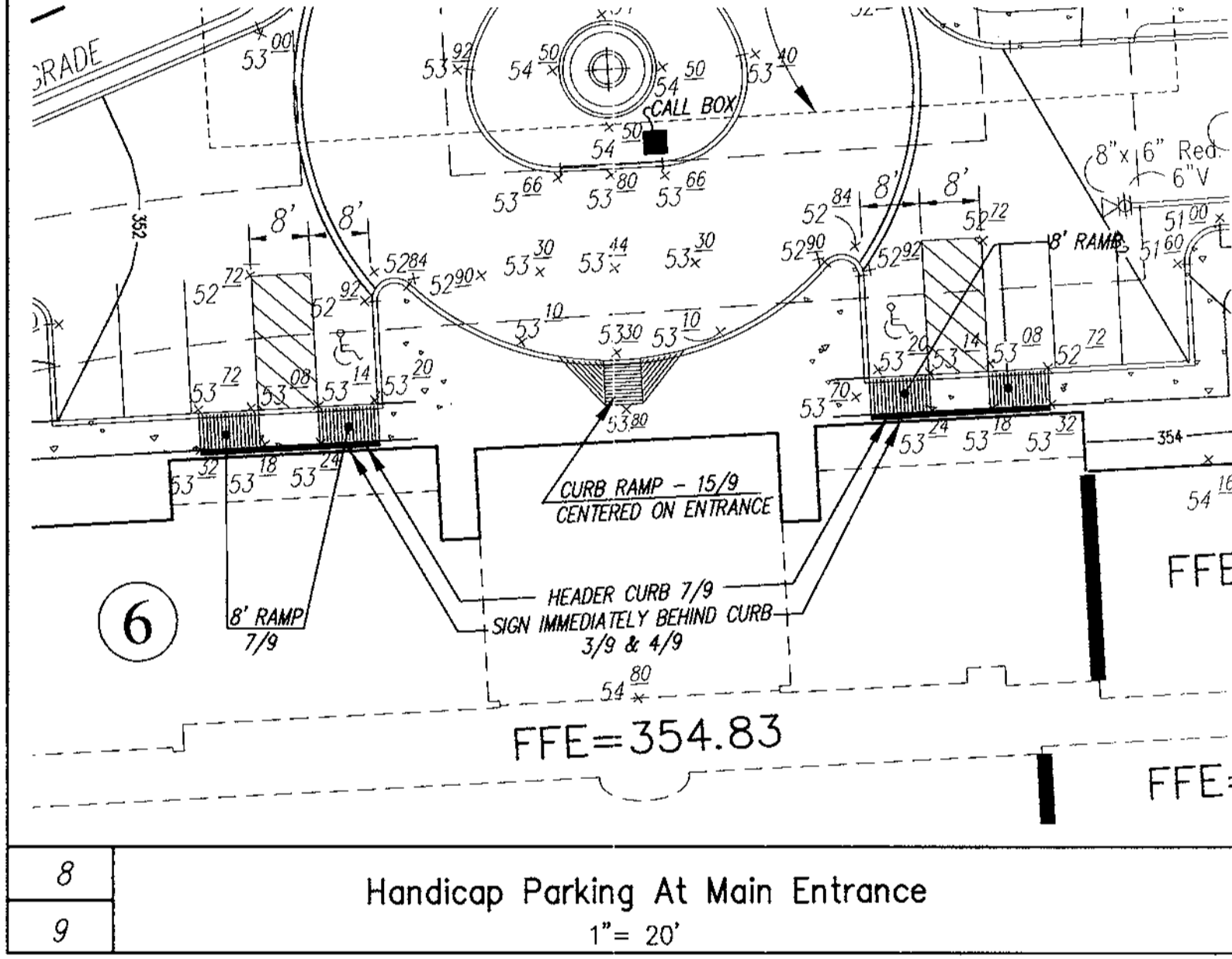
- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR



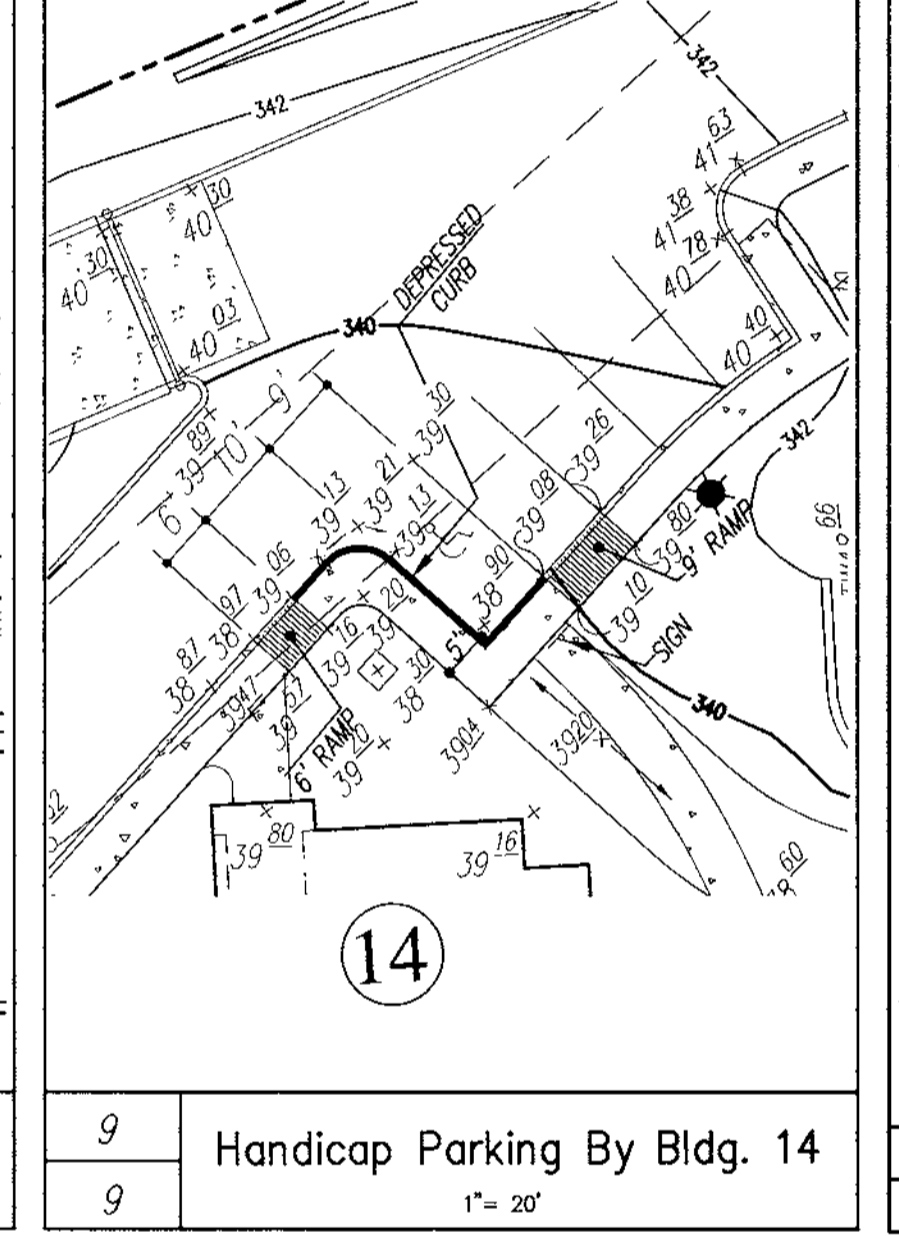
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9 Bituminous Concrete Walk Detail N.T.S.



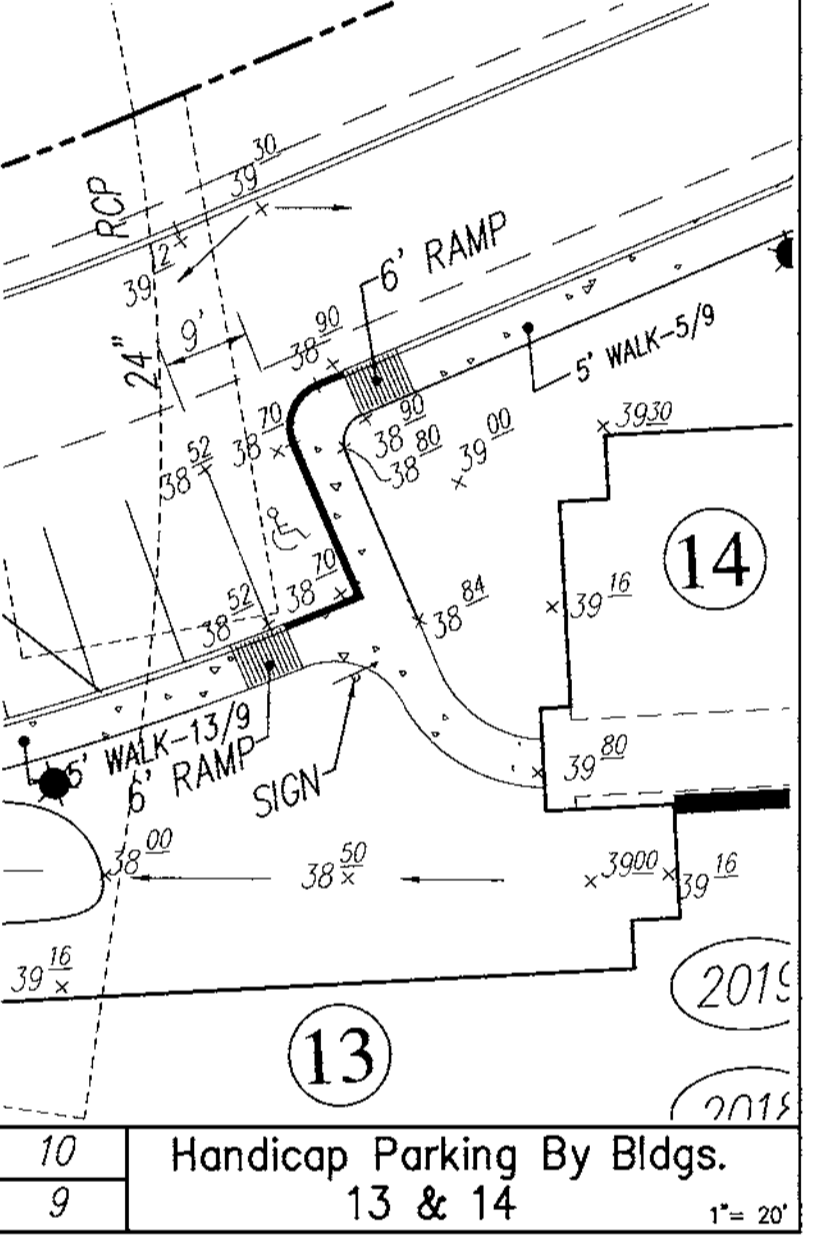
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9 Type A Concrete Ramp Detail N.T.S.



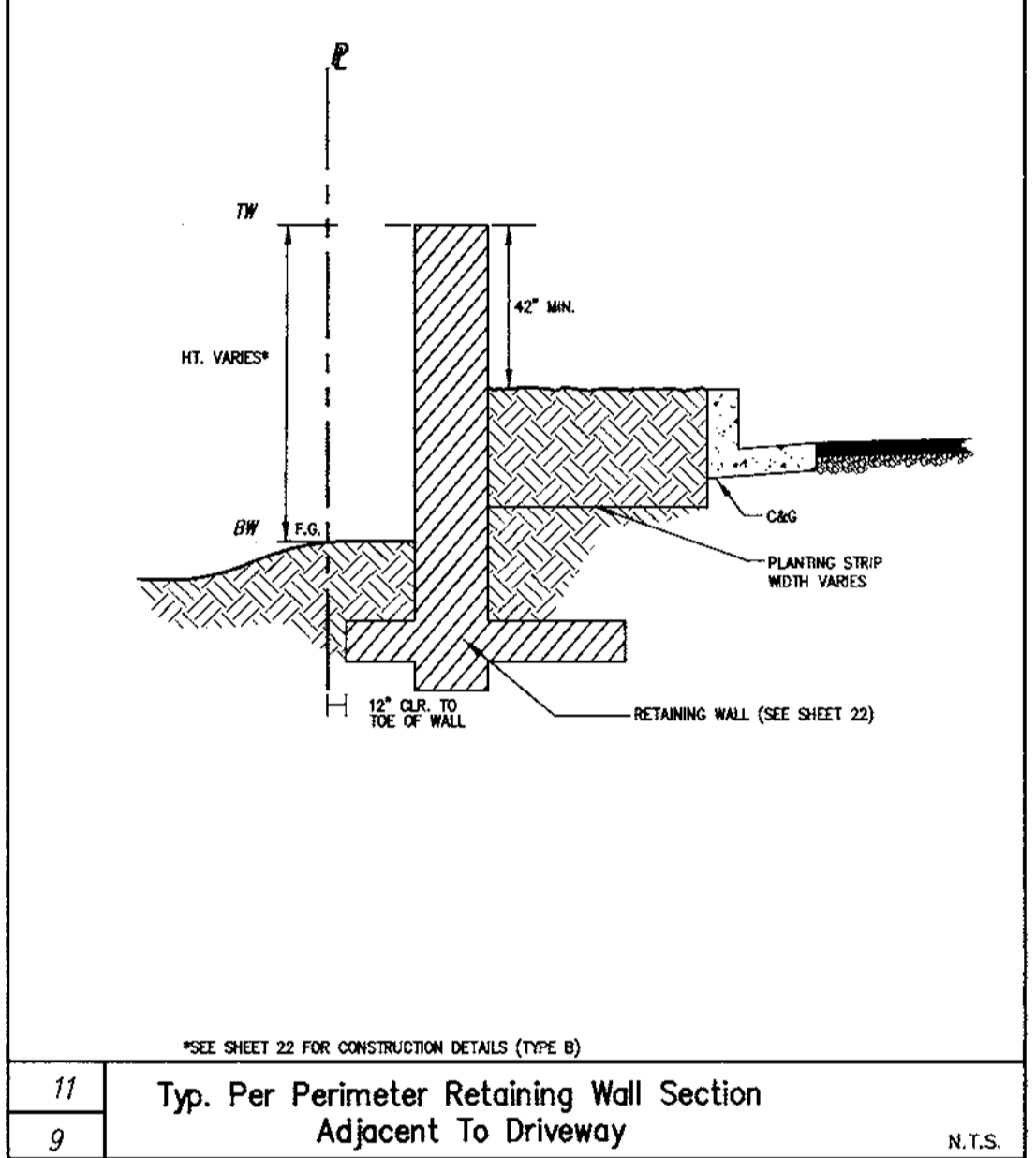
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9 Handicap Parking At Main Entrance 1" = 20' N.T.S.



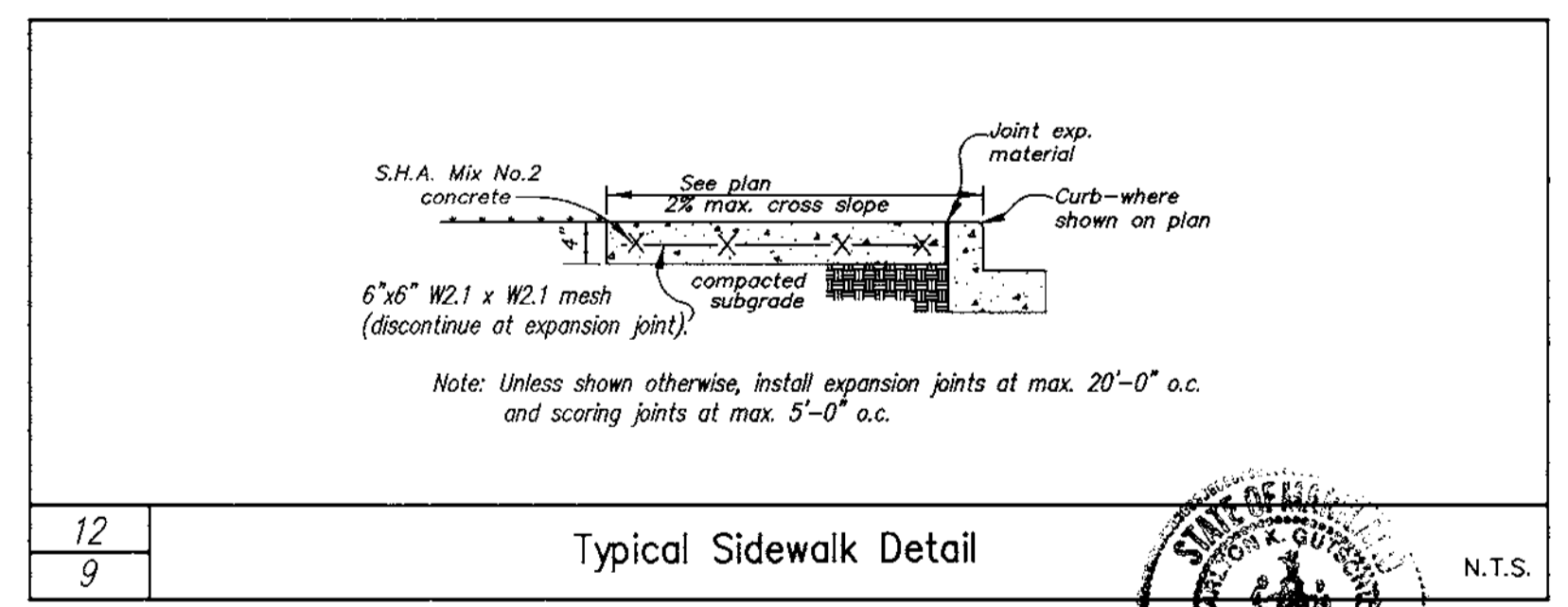
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9 Handicap Parking By Bldg. 14 1" = 20' N.T.S.



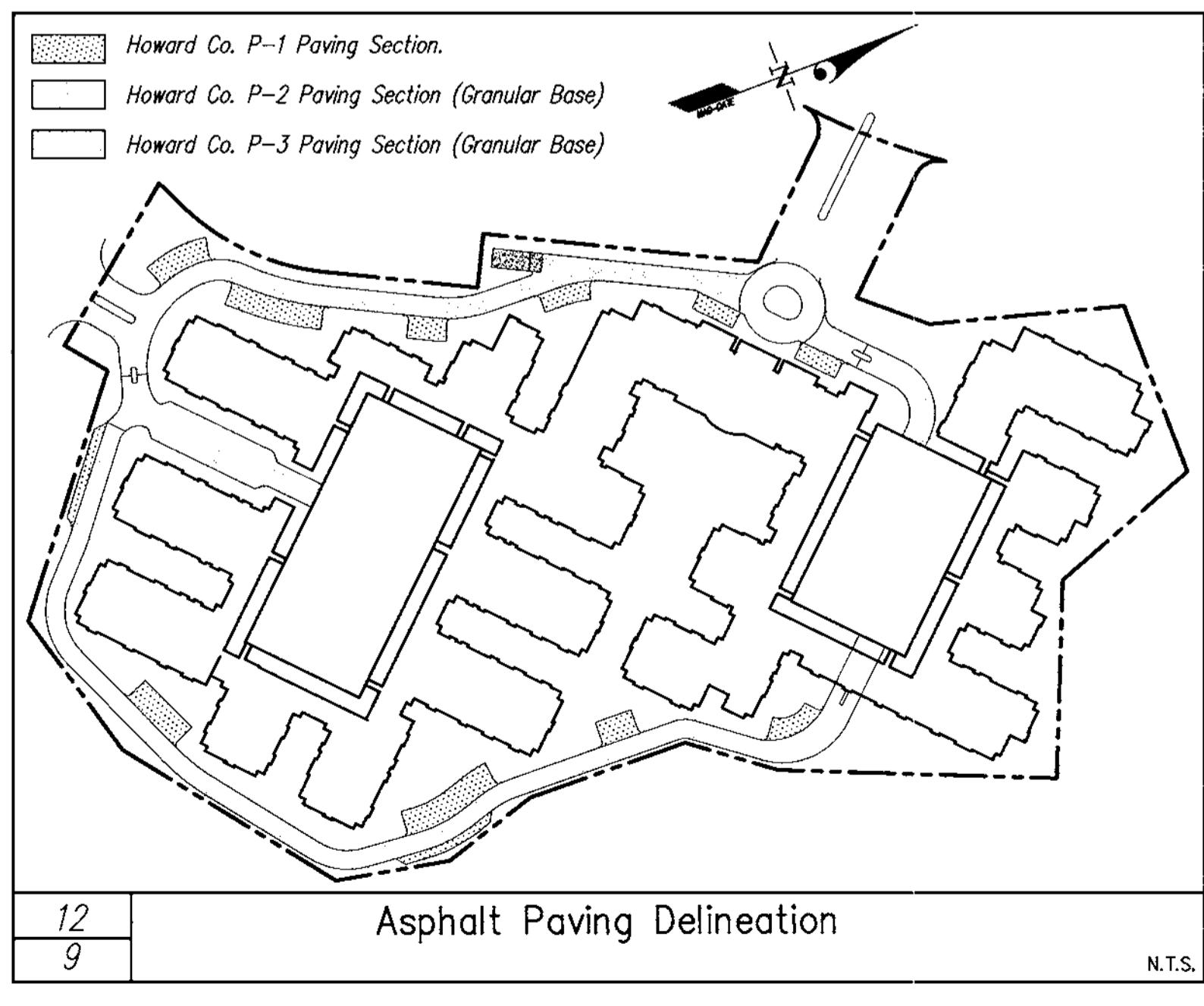
10
9 Handicap Parking By Bldgs. 13 & 14 1" = 20' N.T.S.



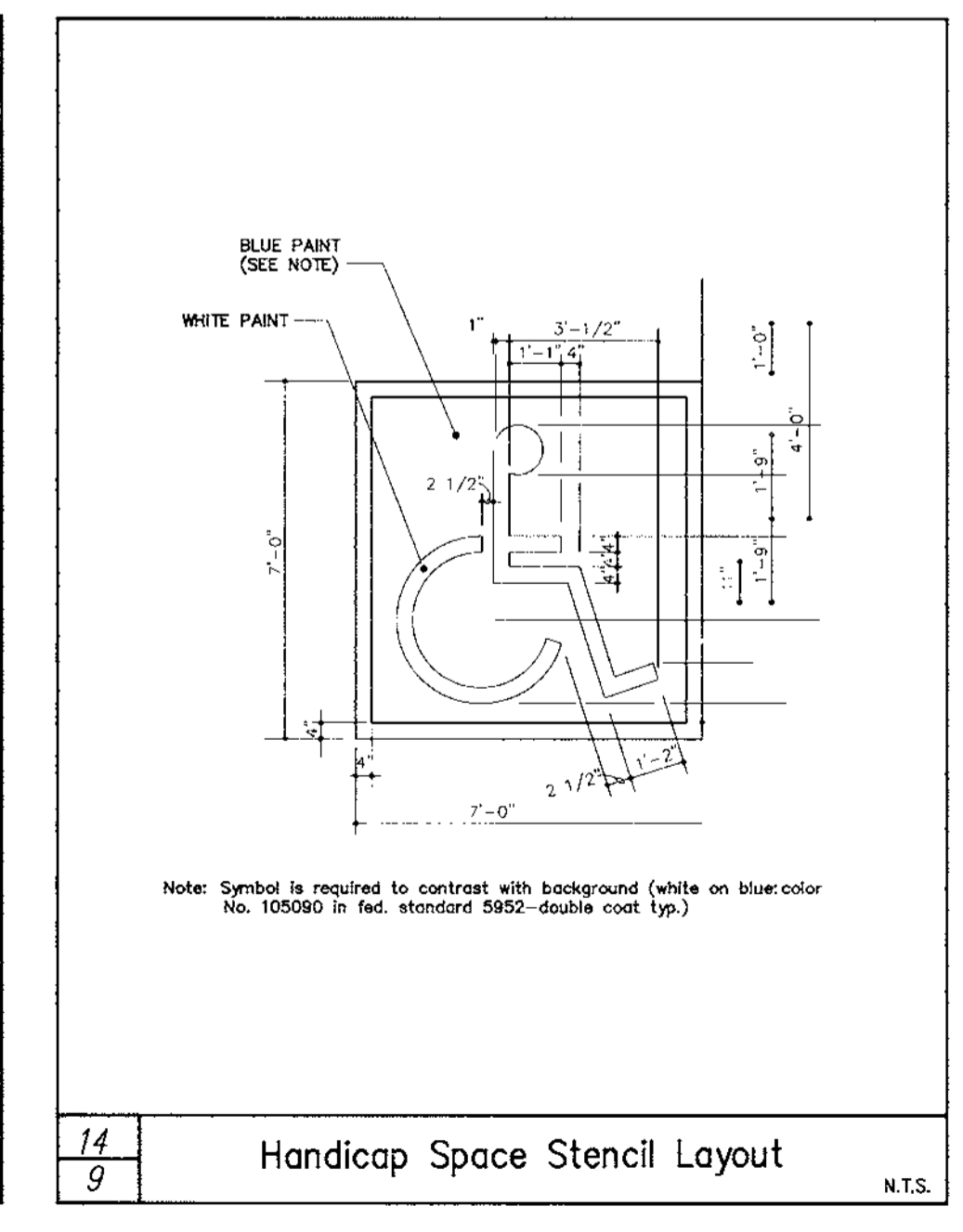
11
9 Typ. Per Perimeter Retaining Wall Section Adjacent To Driveway N.T.S.



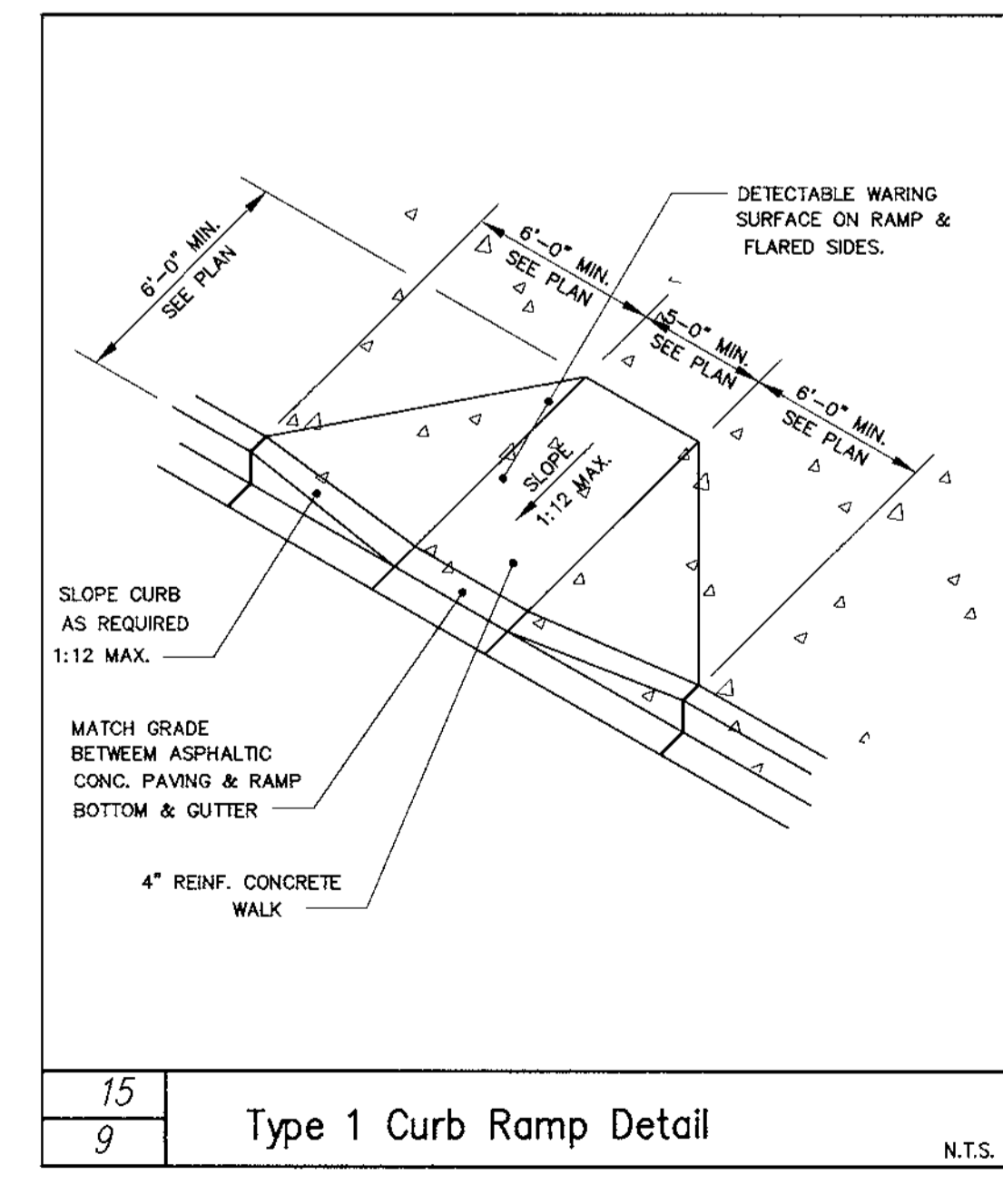
12
9 Typical Sidewalk Detail N.T.S.



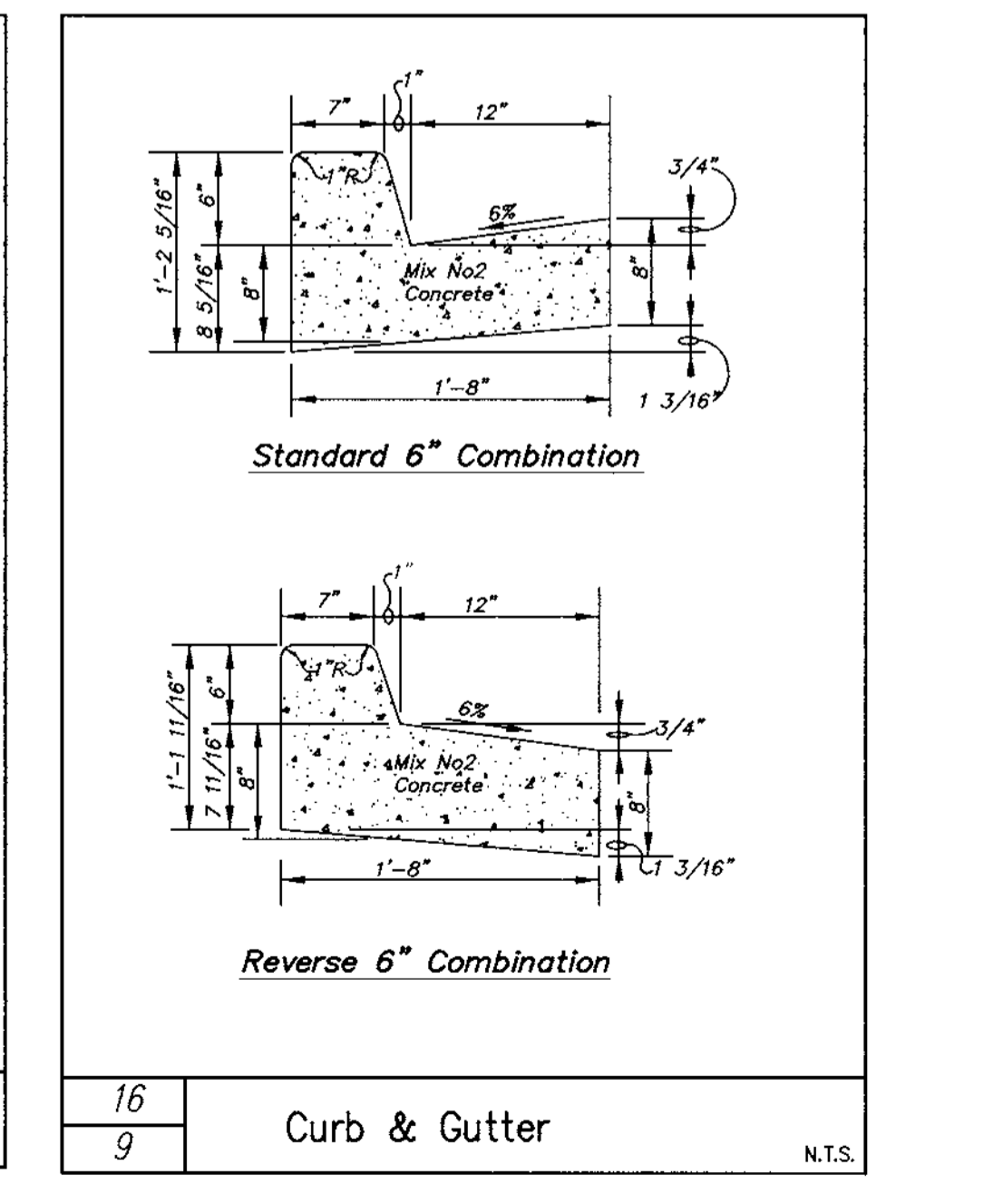
13
9 Asphalt Paving Delineation N.T.S.



14
9 Handicap Space Stencil Layout N.T.S.



15
9 Type 1 Curb Ramp Detail N.T.S.



16
9 Curb & Gutter N.T.S.

APPROVED
PLANNING BOARD
of HOWARD COUNTY

DATE: SEPT 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Dore M. Hester 3/24/00
County Health Officer MK Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
David Hamilton 4/15/00
Chief, Division of Land Development Date

David Hamilton 4/14/00
Chief, Development Engineering Division MK Date

| | | | | | | |
|------|------|------|------|----------|----|-------|
| DES. | DRN. | CHK. | DATE | REVISION | BY | APPR. |
| | | | | | | |

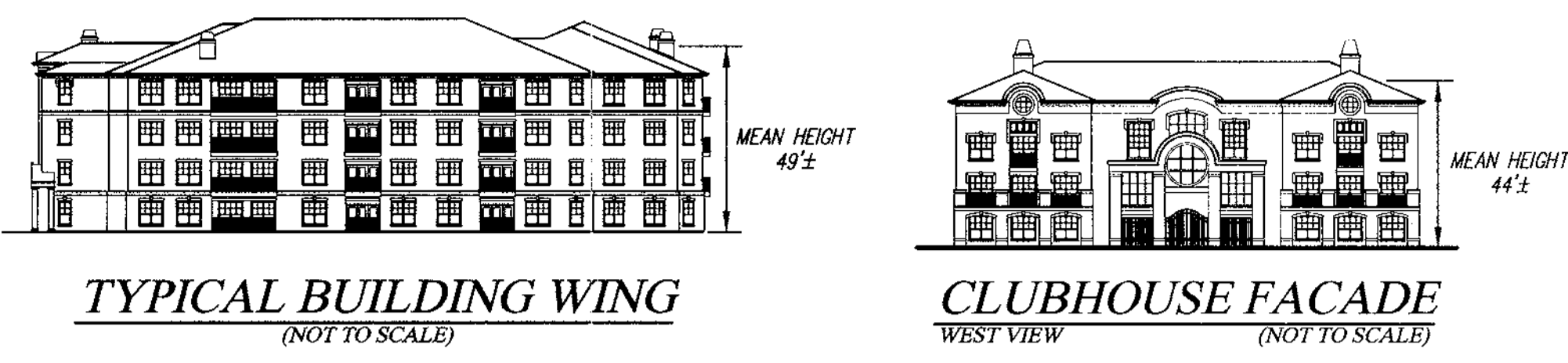
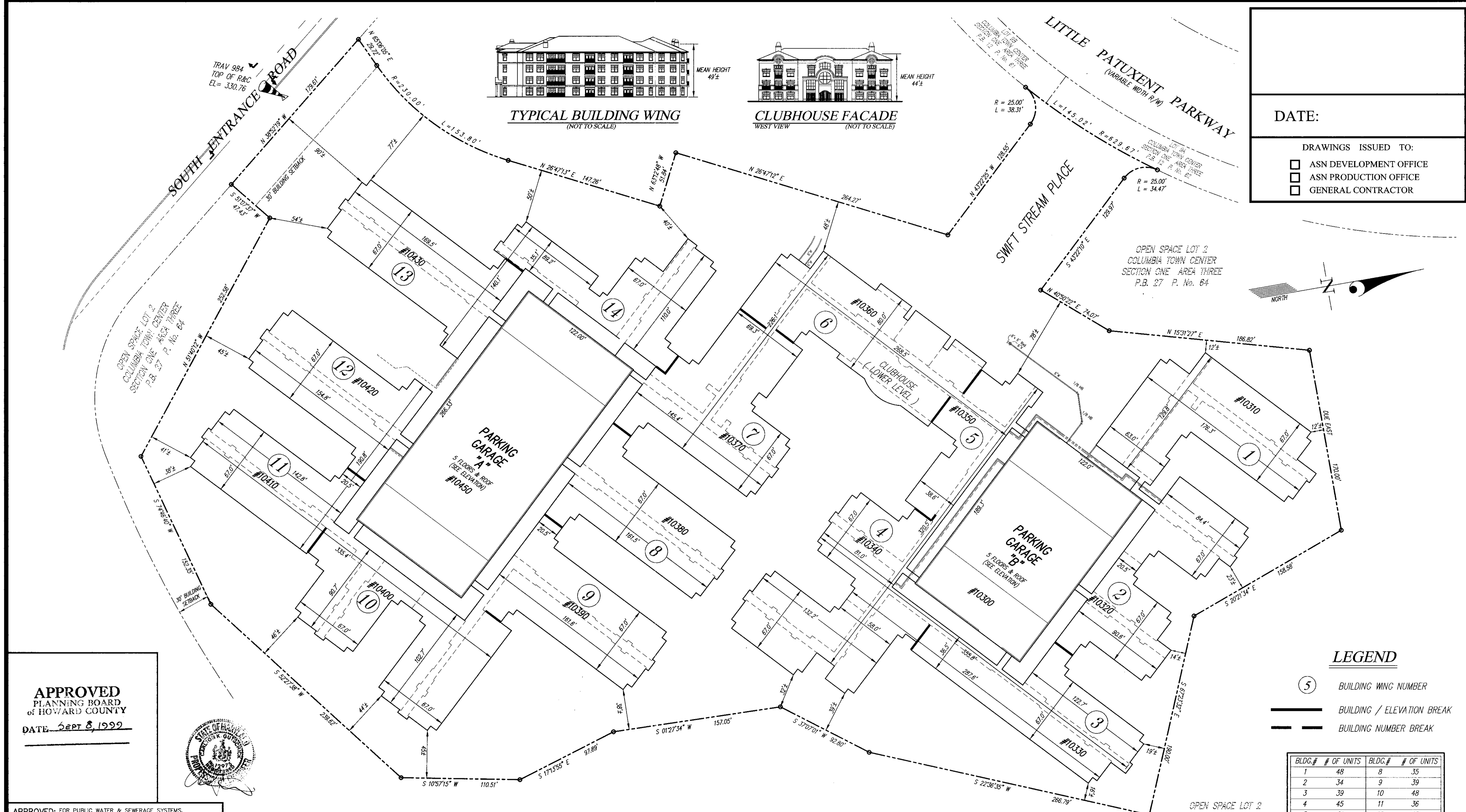
| | | |
|---------|----------------------------|--------|
| 12 9 | ASPHALT PAVING DELINEATION | N.T.S. |
|---------|----------------------------|--------|

| | | |
|---------|-------------------------------|--------|
| 14 9 | HANDICAP SPACE STENCIL LAYOUT | N.T.S. |
|---------|-------------------------------|--------|

| | | |
|---------|-------------------------|--------|
| 15 9 | TYPE 1 CURB RAMP DETAIL | N.T.S. |
|---------|-------------------------|--------|

| | | |
|---------|---------------|--------|
| 16 9 | CURB & GUTTER | N.T.S. |
|---------|---------------|--------|

| | | | | | | | |
|---|--|--|---|--------------------------|-------------------|--------------|-----------------------------------|
| GLW GUTSCHICK LITTLE & WEBER, P.A. CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK BURTONSVILLE, MARYLAND 20866 TEL: 301-421-4024 BALT. 410-890-1820 DC/VA: 301-989-2524 FAX: 301-421-4166 \DRAWINGS\9808\DESIGN\9808\SP9.DWG | | OWNER: ARCHSTONE COMMUNITIES TRUST 6631-A OLD DOMINION DRIVE SUITE 201 MCLEAN, VA 22101 703-883-3545 | SITE DETAILS COLUMBIA TOWN CENTER SECTION 1 AREA 3 PARCEL "A-1" PLAT No. 7989 | | SCALE AS SHOWN | ZONING NT | G. L. W. FILE No. 98087 |
| | | | DATE 3-03-2000 | TAX MAP - GRID 36 - 2 | SHEET 9 OF 24 | | |



DATE: _____

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR



APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE: Sept 8, 1999

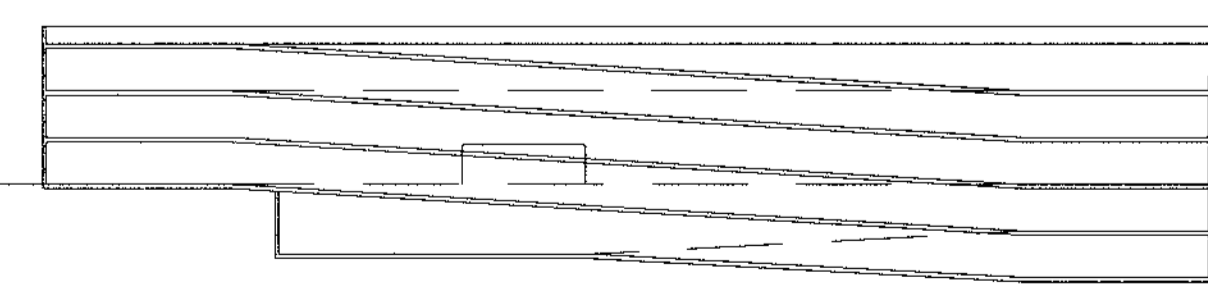


APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Marie M. Matusz 3/28/02
County Health Officer Date

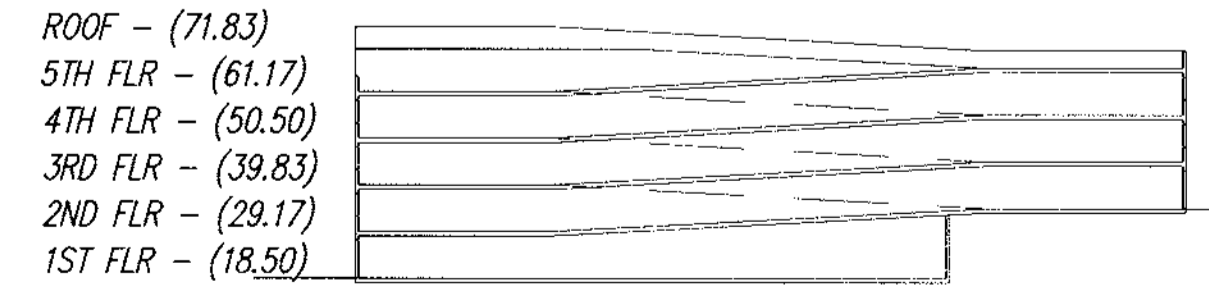
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Joseph R. Kauter 4/15/00
Director Date

Cindy Hamstra 4/14/00
Chief, Division of Land Development Date

William J. Damsch 3/2/00
Chief, Development Engineering Division Date



PARKING STRUCTURE - A
SOUTHWEST ELEVATION (NOT TO SCALE)



PARKING STRUCTURE - B
NORTHEAST ELEVATION (NOT TO SCALE)

LEGEND

- (5) BUILDING WING NUMBER
- BUILDING / ELEVATION BREAK
- - - BUILDING NUMBER BREAK

| BLDG.# | # OF UNITS | BLDG.# | # OF UNITS |
|---|------------|--------------------|------------|
| 1 | 48 | 8 | 35 |
| 2 | 34 | 9 | 39 |
| 3 | 39 | 10 | 48 |
| 4 | 45 | 11 | 36 |
| 5 | 21 | 12 | 40 |
| 6 | 30 | 13 | 40 |
| 7 | 44 | 14 | 32 |
| PH.1 SUB-TOTAL=261 | | PH.2 SUB-TOTAL=270 | |
| TOTAL = 531 UNITS | | | |
| GARAGE "A" = 503 SPACES & GARAGE "B" = 365 SPACES | | | |

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20886
TEL: 301-421-4024 BALG: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

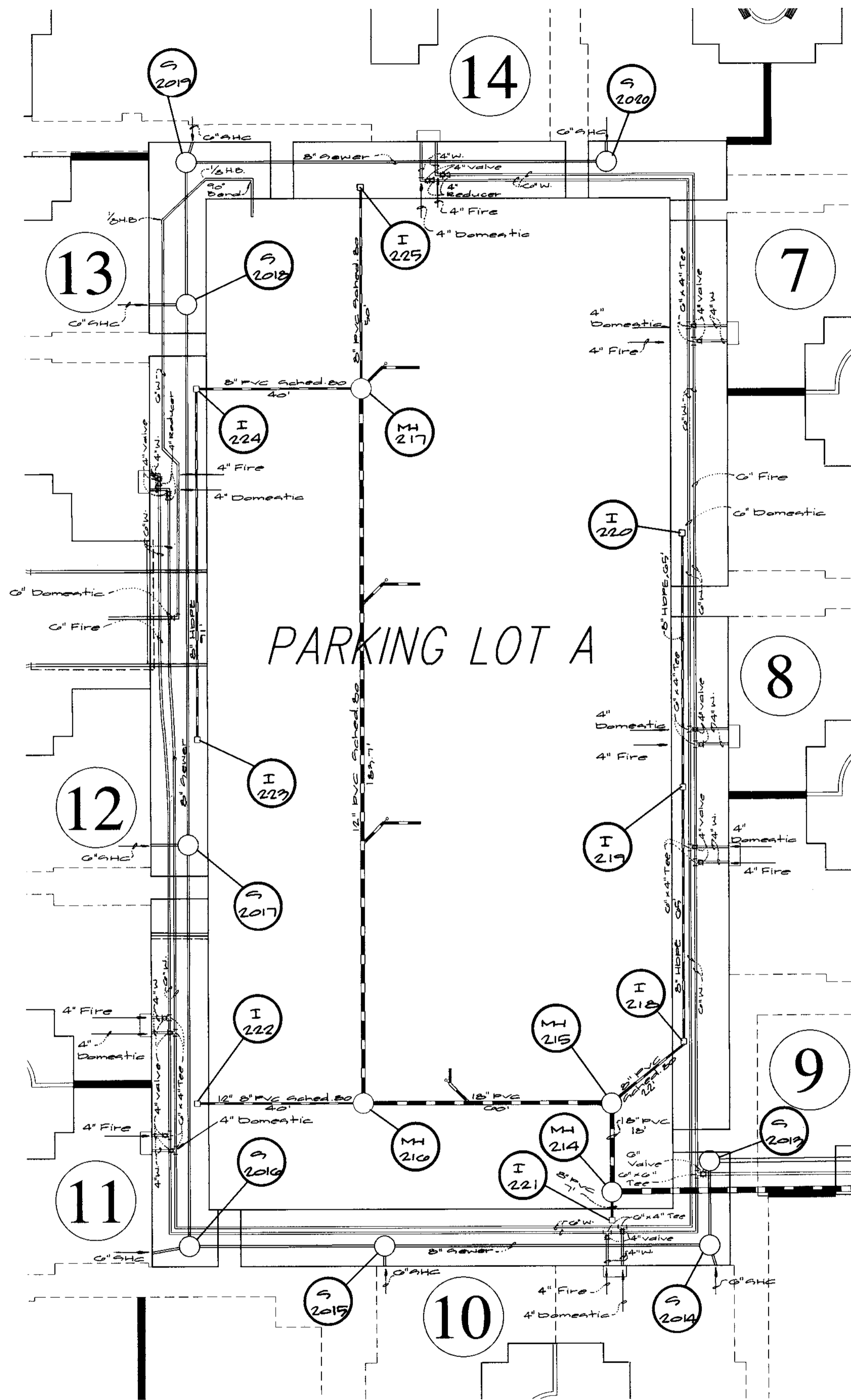
| DATE | REVISION | BY | APP'R. |
|------|----------|----|--------|
| | | | |
| | | | |
| | | | |
| | | | |

OWNER:
ARCHSTONE COMMUNITIES TRUST
6631-A OLD DOMINION DRIVE
SUITE 201
MCLEAN, VA 22101
703-883-3545



BUILDING OUTLINE, LOCATION & DIMENSIONS
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989

| SCALE | ZONING | G. L. W. FILE No. |
|-----------|----------------|-------------------|
| 1"=40' | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| 3/03/2000 | 36 - 2 | 10 OF 24 |

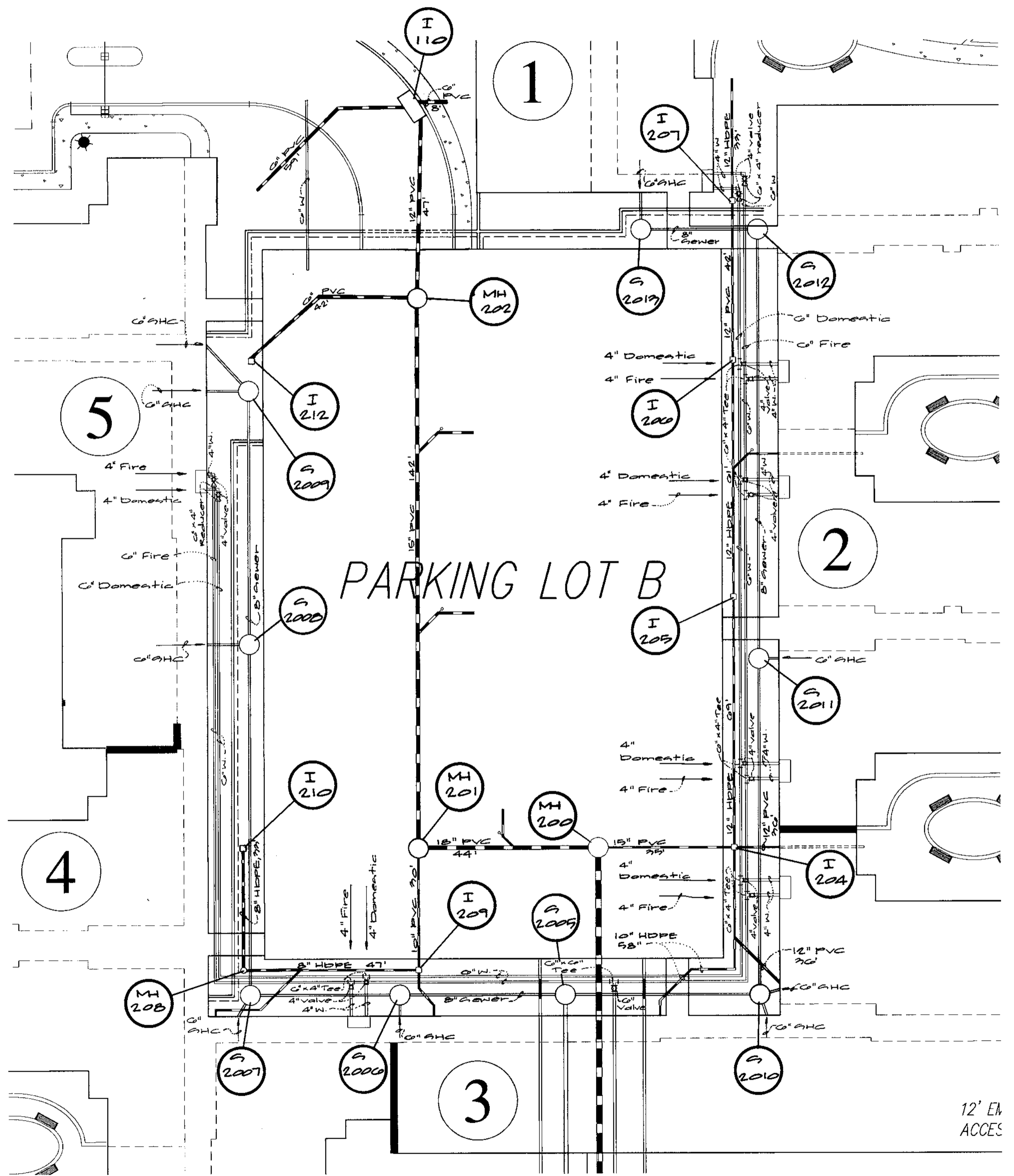


All fittings and next two joints in either direction of fittings for water lines shown on this sheet (domestic and fire) shall be restrained with Megalugs or approved equal in accordance with Howard County Standards and Specifications.

DATE:

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR



APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE SEPT. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Dir. M. [Signature] 3/28/00
County Health Officer MK Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
James [Signature] 4/15/00
Director Date

Cindy [Signature] 4/4/00
Chief, Division of Land Development Date

Chuck [Signature] 3/21/00
Chief, Development Engineering Division MK Date



GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3929 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

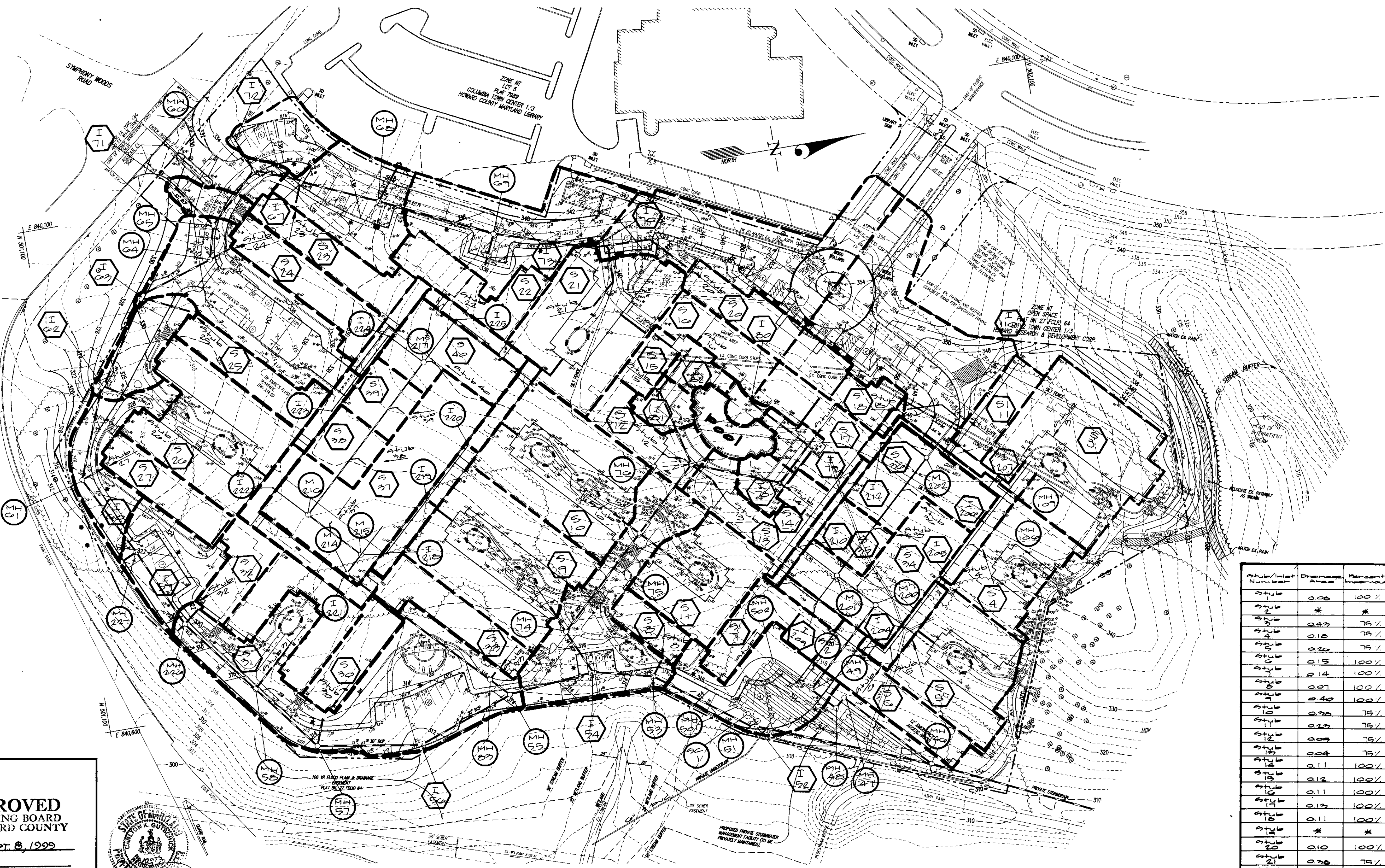
| DATE | REVISION | BY | APP'R. |
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OWNER:
ARCHSTONE COMMUNITIES TRUST
8631-A OLD DOMINION DRIVE
SUITE 201
MCLEAN, VA 22101
703-883-3545

DETAILED UTILITY LOCATION PLAN
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989
CLARKSVILLE ELECTION DISTRICT No. 5
HOWARD COUNTY, MARYLAND

| SCALE | ZONING | G. L. W. FILE No. |
|---------------|----------------|-------------------|
| 1" = 20' | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| March 8, 2000 | 36 - 2 | 11 OF 24 |



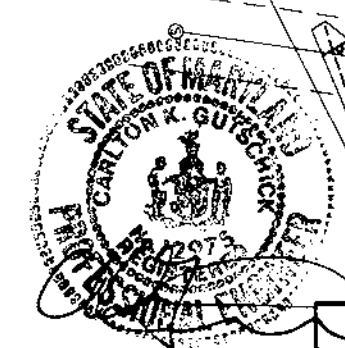
DATE:

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR

APPROVED
PLANNING BOARD
 of HOWARD COUNTY

DATE SEPT 8, 1999



APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT

Dino M. Matarzo 3/24/00
 County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Joseph R. Roth 4/15/00
 Date

Condy Hamilton 4/4/00
 Chief, Division of Land Development Date

David D. ... 3/21/00
 Chief, Development Engineering Division MK Date

Storm Drain Tabulation

| From | To | Type | Length | From | To | Type | Length | From | To | Type | Length | From | To | Type | Length | From | To | Type | Length | | | |
|-------|--------|---------|--------|-------|--------|------|--------|-------|---------|------|--------|-------|----------|------|--------|-------|----------|------|--------|-------|----------|----|
| I 225 | MH 217 | 8" HOPE | 50' | I 110 | 0" PVE | 50' | MH 200 | MH 49 | 21" PVE | 107' | MH 76 | MH 75 | 12" HOPE | 7' | MH 76 | MH 75 | 12" HOPE | 7' | MH 76 | MH 75 | 12" HOPE | 7' |

| Sublot Number | Drainage Area | Percent Impervious | C.V. Value | Inlet Number | Drainage Area | Percent Impervious | C.V. Value |
|---------------|---------------|--------------------|------------|--------------|---------------|--------------------|------------|
| Sublot 1 | 0.06 | 100% | 0.07 | Inlet 22 | 0.25 | 75% | 0.71 |
| Sublot 2 | * | * | * | Inlet 22 | 0.75 | 75% | 0.71 |
| Sublot 3 | 0.43 | 75% | 0.71 | Inlet 22 | 0.61 | 75% | 0.71 |
| Sublot 4 | 0.10 | 75% | 0.71 | Inlet 22 | 0.18 | 75% | 0.71 |
| Sublot 5 | 0.25 | 75% | 0.71 | Inlet 22 | 0.17 | 75% | 0.71 |
| Sublot 6 | 0.15 | 100% | 0.07 | Inlet 22 | 0.13 | 75% | 0.71 |
| Sublot 7 | 0.14 | 100% | 0.07 | Inlet 22 | 0.20 | 75% | 0.71 |
| Sublot 8 | 0.07 | 100% | 0.07 | Inlet 22 | 0.23 | 75% | 0.71 |
| Sublot 9 | 0.40 | 100% | 0.07 | Inlet 22 | 0.44 | 75% | 0.71 |
| Sublot 10 | 0.20 | 75% | 0.71 | Inlet 22 | 0.09 | 75% | 0.71 |
| Sublot 11 | 0.20 | 75% | 0.71 | Inlet 22 | 0.11 | 75% | 0.71 |
| Sublot 12 | 0.09 | 75% | 0.71 | Inlet 22 | 0.08 | 75% | 0.71 |
| Sublot 13 | 0.04 | 75% | 0.71 | Inlet 22 | 0.05 | 75% | 0.71 |
| Sublot 14 | 0.11 | 100% | 0.07 | Inlet 22 | 0.08 | 75% | 0.71 |
| Sublot 15 | 0.12 | 100% | 0.07 | Inlet 22 | 0.03 | 100% | 0.07 |
| Sublot 16 | 0.11 | 100% | 0.07 | Inlet 22 | 0.08 | 75% | 0.71 |
| Sublot 17 | 0.13 | 100% | 0.07 | Inlet 22 | 0.08 | 100% | 0.07 |
| Sublot 18 | 0.11 | 100% | 0.07 | Inlet 22 | 0.50 | 75% | 0.71 |
| Sublot 19 | * | * | * | Inlet 22 | 0.04 | 0% | 0.24 |
| Sublot 20 | 0.10 | 100% | 0.07 | Inlet 22 | 0.02 | 0% | 0.24 |
| Sublot 21 | 0.20 | 75% | 0.71 | Inlet 22 | 0.02 | 0% | 0.24 |
| Sublot 22 | 0.14 | 100% | 0.07 | Inlet 22 | 0.02 | 0% | 0.24 |
| Sublot 23 | 0.14 | 100% | 0.07 | Inlet 22 | 0.03 | 0% | 0.24 |
| Sublot 24 | 0.15 | 100% | 0.07 | Inlet 22 | 0.03 | 0% | 0.24 |
| Sublot 25 | 0.13 | 100% | 0.07 | Inlet 22 | 0.02 | 0% | 0.24 |
| Sublot 26 | 0.22 | 100% | 0.07 | Inlet 22 | 0.02 | 0% | 0.24 |
| Sublot 27 | 0.22 | 100% | 0.07 | Inlet 22 | 0.02 | 0% | 0.24 |
| Sublot 28 | 0.12 | 100% | 0.07 | Inlet 22 | 0.02 | 0% | 0.24 |
| Sublot 29 | * | * | * | Inlet 22 | 0.04 | 0% | 0.24 |
| Sublot 30 | * | * | * | Inlet 22 | 0.04 | 75% | 0.71 |
| Sublot 31 | 0.10 | 75% | 0.71 | Inlet 22 | 0.04 | 0% | 0.24 |
| Sublot 32 | 0.17 | 100% | 0.07 | Inlet 22 | 0.02 | 0% | 0.24 |
| Sublot 33 | 0.09 | 100% | 0.07 | Inlet 22 | 0.04 | 0% | 0.24 |
| Sublot 34 | 0.14 | 100% | 0.07 | Inlet 22 | 0.04 | 0% | 0.24 |
| Sublot 35 | | | | Inlet 22 | 0.09 | 100% | 0.07 |
| Sublot 36 | | | | Inlet 22 | 0.02 | 75% | 0.71 |

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 BURTNSVILLE, MARYLAND 20898
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4108

| DATE | REVISION | BY | APP'R |
|------|----------|----|-------|
| | | | |
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| | | | |

OWNER:
ARCHSTONE
 ARCHSTONE COMMUNITIES TRUST
 6631-A OLD DOMINION DRIVE
 SUITE 201
 McLEAN, VA 22101
 703-883-3545

STORM DRAIN DRAINAGE AREA MAP
COLUMBIA TOWN CENTER
 SECTION 1 AREA 3
 PARCEL "A-1"
 PLAT No. 7989

CLARKSVILLE ELECTION DISTRICT No. 5
 HOWARD COUNTY, MARYLAND
 March 3, 2000

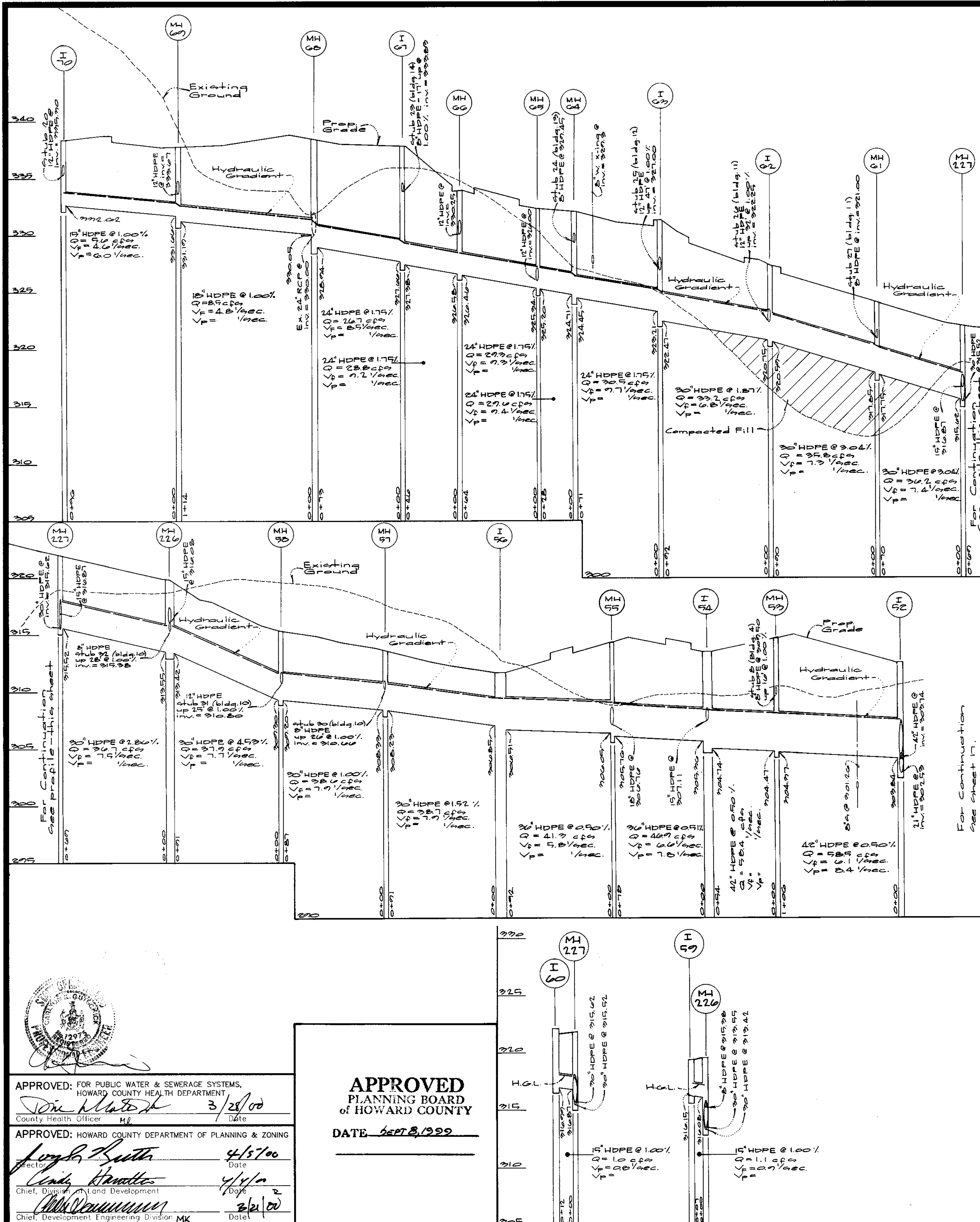
SCALE: 1"=50'

ZONING: NT

G. L. W. FILE No. 98087

DATE: TAX MAP - GRID SHEET

36 - 2 12 OF 24



| Structure Schedule | | | | | | | | | |
|--------------------|---------------------|-------------|---------------|-----------------|-----------------|-----------------|---------------|-----------|---------|
| No. | Type | Width (ft.) | Top Elevation | Lower Elevation | Upper Elevation | Lower Elevation | Std. Detail | Locations | Remarks |
| MH 45 | A-10 Base | 4'-0" | 302.50 | --- | 301.50 | 301.40 | SD 441 | See Plan | |
| MH 46 | Std. Manhole | 4'-0" | 310.00 | --- | 309.10 | 308.05 | SMA MD 304.05 | | |
| MH 47 | " | 4'-0" | 310.00 | --- | 307.07 | 306.07 | G 5.12 | | |
| MH 48 | " | 4'-0" | 315.50 | --- | 307.27 | 307.17 | G 5.12 | | |
| MH 49 | " | 3'-0" | 314.75 | --- | 307.05 | 306.04 | G 5.12 | | |
| MH 50 | " | 4'-0" | 312.30 | --- | 302.45 | 302.43 | G 5.12 | See Plan | |
| MH 51 | Double 's' | --- | 312.75 | 312.75 | 309.84 | 302.54 | SD 434 | | |
| MH 52 | Std. Manhole | 6'-0" | 314.45 | --- | 307.50 | 304.37 | SMA MD 304.05 | | |
| MH 53 | Double 's' | --- | 319.20 | --- | 307.11 | 304.74 | SD 434 | | |
| MH 54 | Std. Manhole | 6'-0" | 314.24 | --- | 306.76 | 305.70 | SMA MD 304.05 | | |
| MH 55 | Double 's' | --- | 311.50 | --- | 306.85 | 306.51 | SD 434 | | |
| MH 56 | Std. Manhole | 5'-0" | 312.50 | --- | 310.00 | 308.83 | G 5.12 | | |
| MH 57 | " | 5'-0" | 315.50 | --- | 310.80 | 309.80 | G 5.12 | | |
| MH 58 | Double 's' | --- | 320.10 | 319.80 | 315.38 | 313.42 | SD 434 | | |
| I 50 | A-10 | 5'-0" | 322.20 | 322.02 | --- | 310.00 | SD 441 | | |
| I 51 | Std. Manhole | 5'-0" | 323.30 | --- | 321.00 | 317.75 | G 5.12 | | |
| I 52 | A-10 | 5'-0" | 321.02 | 321.22 | 322.25 | 320.50 | SD 441 | | |
| I 53 | A-10 | 5'-0" | 320.09 | 320.09 | 327.00 | 322.47 | SD 441 | | |
| MH 54 | Std. Manhole | 4'-0" | 322.00 | --- | 320.15 | 324.45 | G 5.12 | | |
| MH 55 | " | 4'-0" | 322.10 | --- | 320.00 | 325.20 | G 5.12 | | |
| MH 56 | " | 4'-0" | 324.00 | --- | 320.25 | 320.40 | G 5.12 | | |
| I 57 | Single 's' | --- | 321.00 | 320.70 | 323.83 | 321.38 | SD 434 | | |
| MH 58 | Std. Manhole | 4'-0" | 320.50 | --- | 320.05 | 322.04 | G 5.12 | | |
| MH 59 | Std. Manhole | 4'-0" | 323.30 | --- | 323.07 | 321.10 | G 5.12 | | |
| I 60 | Single WK | --- | 320.30 | 320.30 | 325.30 | 322.02 | SD 437 | | |
| I 61 | A-10 | 4'-0" | 320.59 | 323.00 | --- | 310.50 | SD 441 | | |
| I 62 | A-5 | 4'-0" | 324.21 | 324.10 | --- | 320.50 | SD 440 | | |
| I 63 | Double 's' | --- | 322.30 | --- | 323.85 | 324.34 | SD 434 | | |
| MH 64 | Std. Manhole | 4'-0" | 310.00 | --- | 312.00 | 309.40 | G 5.12 | | |
| MH 65 | " | " | 325.50 | --- | 322.00 | 323.25 | G 5.12 | | |
| MH 66 | " | " | 328.70 | --- | 324.50 | 321.00 | G 5.12 | | |
| I 67 | 24" In-line Drain | 2'-0" | 320.25 | --- | 324.00 | 323.47 | * | | |
| I 68 | " | " | 322.00 | --- | 324.50 | 324.07 | * | | |
| I 69 | " | " | 322.50 | --- | 324.50 | 323.71 | * | | |
| I 70 | " | " | 322.75 | --- | 324.50 | 324.17 | * | | |
| MH 170 | Std. Manhole | 4'-0" | 315.50 | --- | 309.99 | 306.89 | G 5.12 | | |
| MH 171 | Double 's' Comb. | --- | 344.70 | --- | 329.50 | 328.00 | SD 434 | | |
| MH 200 | Std. Manhole | 4'-0" | 318.00 | --- | 310.30 | 308.05 | G 5.12 | | |
| MH 201 | " | " | 318.00 | --- | 311.55 | 311.02 | " | | |
| MH 202 | " | " | 329.33 | --- | 310.97 | 313.40 | " | | |
| I 203 | 24" in-line drain | 2'-0" | 317.58 | --- | 312.94 | 309.25 | * | | |
| I 204 | 18" in-line drain | 1'-0" | 329.00 | --- | 310.00 | 310.50 | * | | |
| I 205 | " | " | 329.33 | --- | 320.00 | 319.80 | * | | |
| I 206 | " | " | 324.30 | --- | 329.30 | 321.49 | * | | |
| I 207 | " | " | 317.42 | --- | 313.14 | 311.02 | * | | |
| I 208 | " | " | 325.45 | --- | --- | 315.90 | * | | |
| MH 210 | Std. Manhole | 4'-0" | 318.00 | --- | 308.20 | 308.10 | G 5.12 | | |
| MH 215 | " | " | 318.00 | --- | 308.92 | 308.32 | " | | |
| MH 216 | " | " | 318.00 | --- | 311.07 | 308.81 | " | | |
| MH 217 | " | " | 328.07 | --- | 317.93 | 317.50 | " | | |
| I 218 | 18" in-line drain | 1'-0" | 317.70 | --- | 309.24 | 309.14 | * | | |
| I 219 | " | " | 317.80 | --- | 309.79 | 309.89 | * | | |
| I 220 | " | " | 322.40 | --- | --- | 313.20 | * | | |
| I 221 | " | " | --- | --- | --- | --- | * | | |
| I 222 | " | " | 321.00 | --- | --- | 329.83 | * | | |
| I 223 | " | " | 329.17 | --- | --- | 319.34 | * | | |
| I 224 | " | " | 329.17 | --- | 318.49 | 318.33 | * | | |
| I 225 | " | " | 329.17 | --- | --- | 318.43 | * | | |
| MH 226 | 18" in-line manhole | 1'-0" | 318.33 | --- | 313.35 | 313.25 | ** | | |
| MH 227 | Std. Manhole | 4'-0" | 322.00 | --- | 310.87 | 315.52 | " | | |
| MH 228 | " | " | 310.00 | --- | 310.08 | 313.47 | " | | |
| MH 501 | Std. Manhole | 6'-0" | 319.25 | --- | 302.19 | 302.19 | SMA MD 304.05 | | |
| MH 502 | " | 6'-0" | 310.00 | --- | 300.37 | 302.19 | SMA MD 304.05 | | |

DATE: _____

DRAWINGS ISSUED TO:

ASN DEVELOPMENT OFFICE

ASN PRODUCTION OFFICE

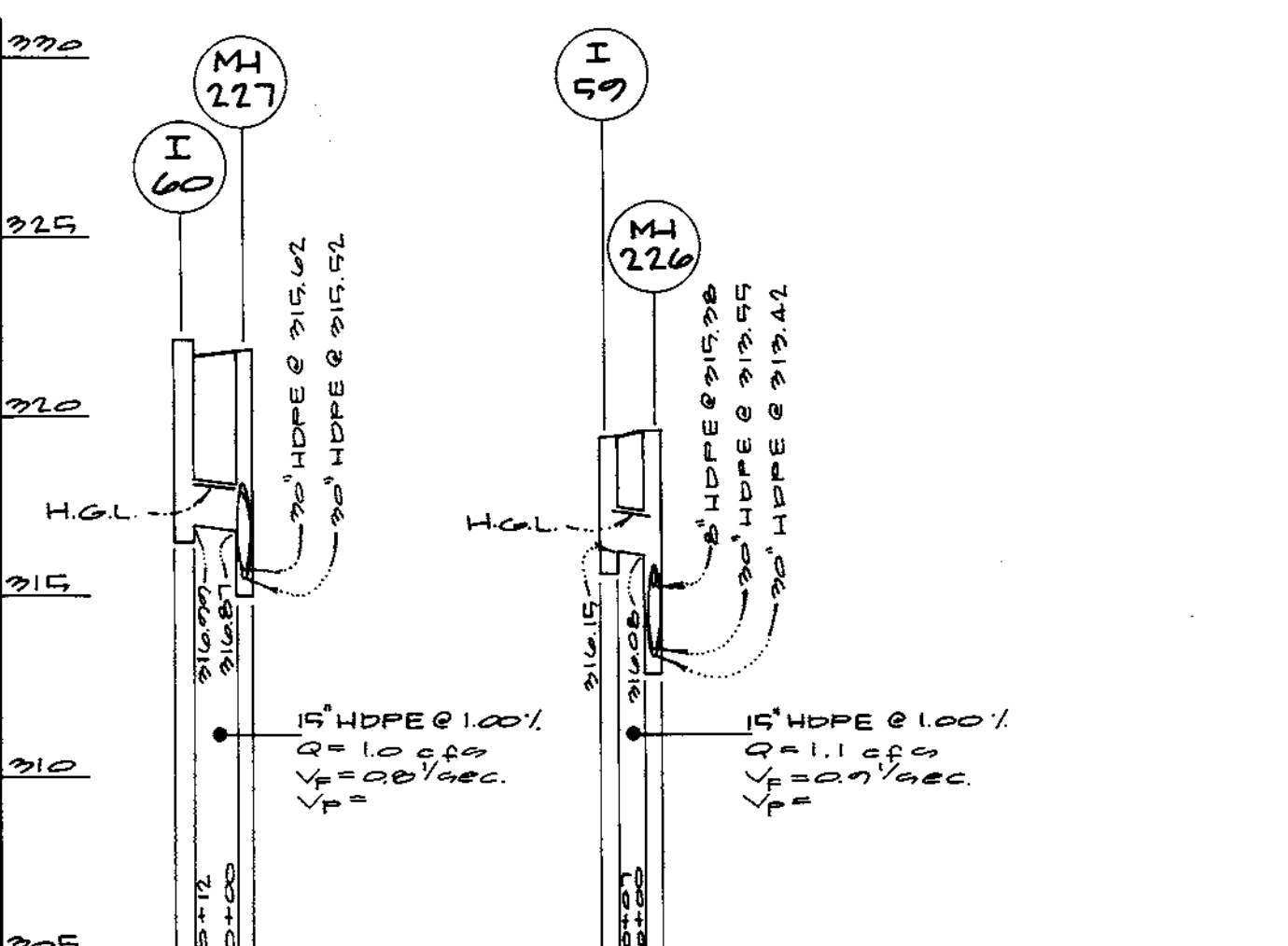
GENERAL CONTRACTOR

| Pipe Schedule | | | |
|---------------|-------|----------|---------|
| Size | Type | Quantity | Remarks |
| 8" | HDPE | 644 | |
| 10" | HDPE | 20 | |
| 12" | HDPE | 1125 | |
| 15" | HDPE | 177 | |
| 18" | HDPE | 134 | |
| 24" | HDPE | 410 | |
| 30" | HDPE | 590 | |
| 36" | HDPE | 170 | |
| 42" | HDPE | 528 | |
| 24" x 36" | EKCCP | 110 | |
| 6" | PVC | 103 | |
| 8" | PVC | 88 | |
| 10" | PVC | 230 | |
| 12" | PVC | 177 | |
| 15" | PVC | 292 | |
| 18" | PVC | 190 | |
| 21" | PVC | 107 | |

- Notes
- HDPE indicates High Density Polyethylene Pipe (see Howard County Standard Specifications).
 - Quantities for the water and sewer mains, water and sewer house connections and underground storm-water Management Facility are not reflected in Pipe Schedule.
 - An asterisk (*) indicates 18"/24" in-line drain by Nyoplast or equal.
 - A double asterisk (**) indicates an inline 24" Manhole by Nyoplast or equal.

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
 County Health Officer: *[Signature]* 3/28/00
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: *[Signature]* 4/15/00
 Chief, Division of Land Development: *[Signature]* 4/14/00
 Chief, Development Engineering Division: *[Signature]* 3/21/00

APPROVED PLANNING BOARD OF HOWARD COUNTY
 DATE: 6/27/00



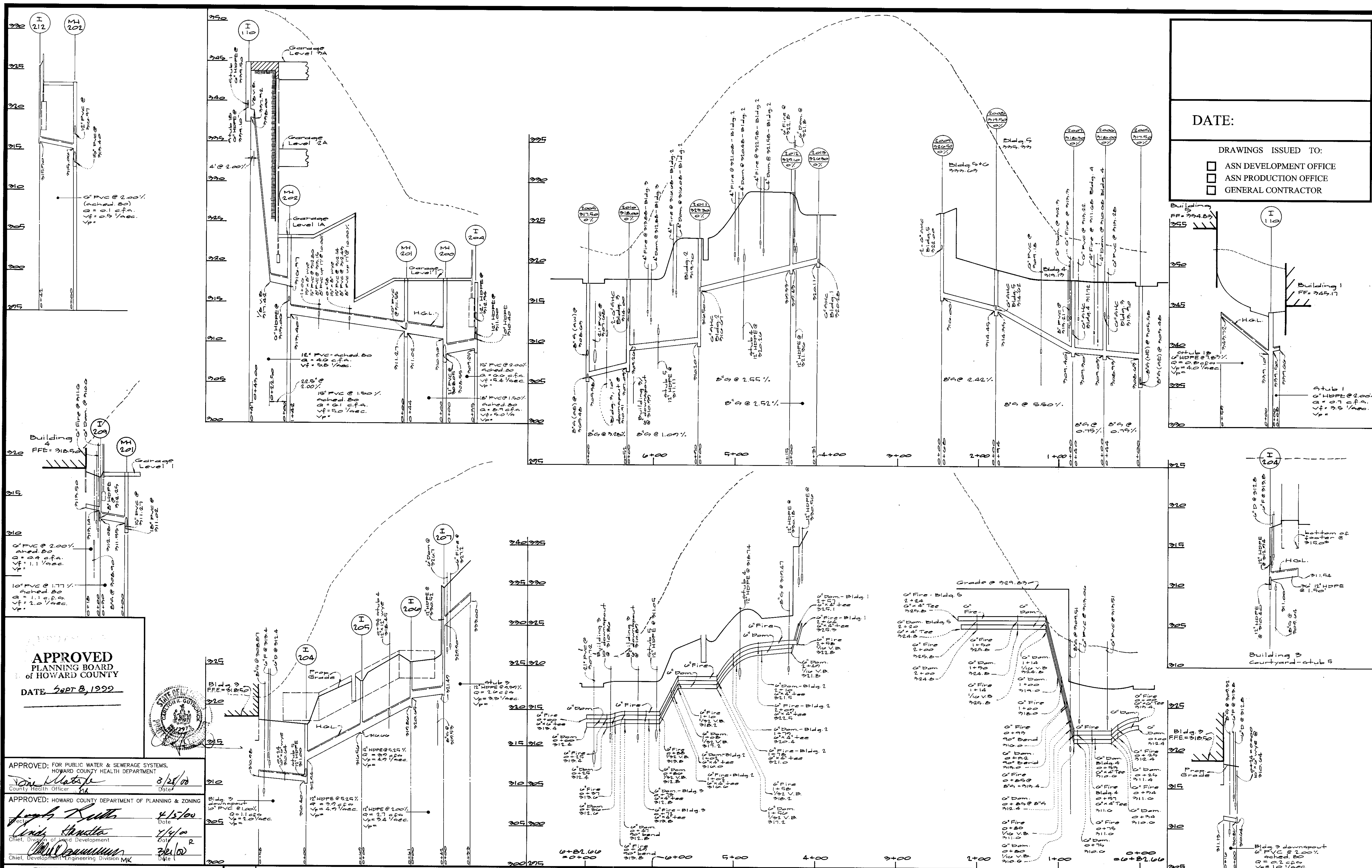
GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20886
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-589-2524 FAX: 301-421-4186

| DATE | REVISION | BY | APP'R. |
|------|----------|----|--------|
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Owner: Archatone Communities Trust
 6031-A Old Dominion Drive
 Suite 201
 McLean, VA. 22101
 703-883-3545

UTILITY PROFILES & STRUCTURE SCHEDULES
COLUMBIA TOWN CENTER
 SECTION 1 AREA 3
 PARCEL "A-1"
 PLAT No. 7989
 CLARKSVILLE ELECTION DISTRICT No. 5
 HOWARD COUNTY, MARYLAND

| SCALE | ZONING | G. L. W. FILE No. |
|----------|----------------|-------------------|
| AS SHOWN | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| 3/2/2000 | 36 - 2 | 13 OF 24 |



DATE: _____

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE SEPT 8, 1999



APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Don Matyske 8/25/00
County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Joseph K. Kutt 4/13/00
Chief, Division of Land Development Date

Chris Hanrahan 4/4/00
Chief, Development Engineering Division Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-889-2524 FAX: 301-421-4188

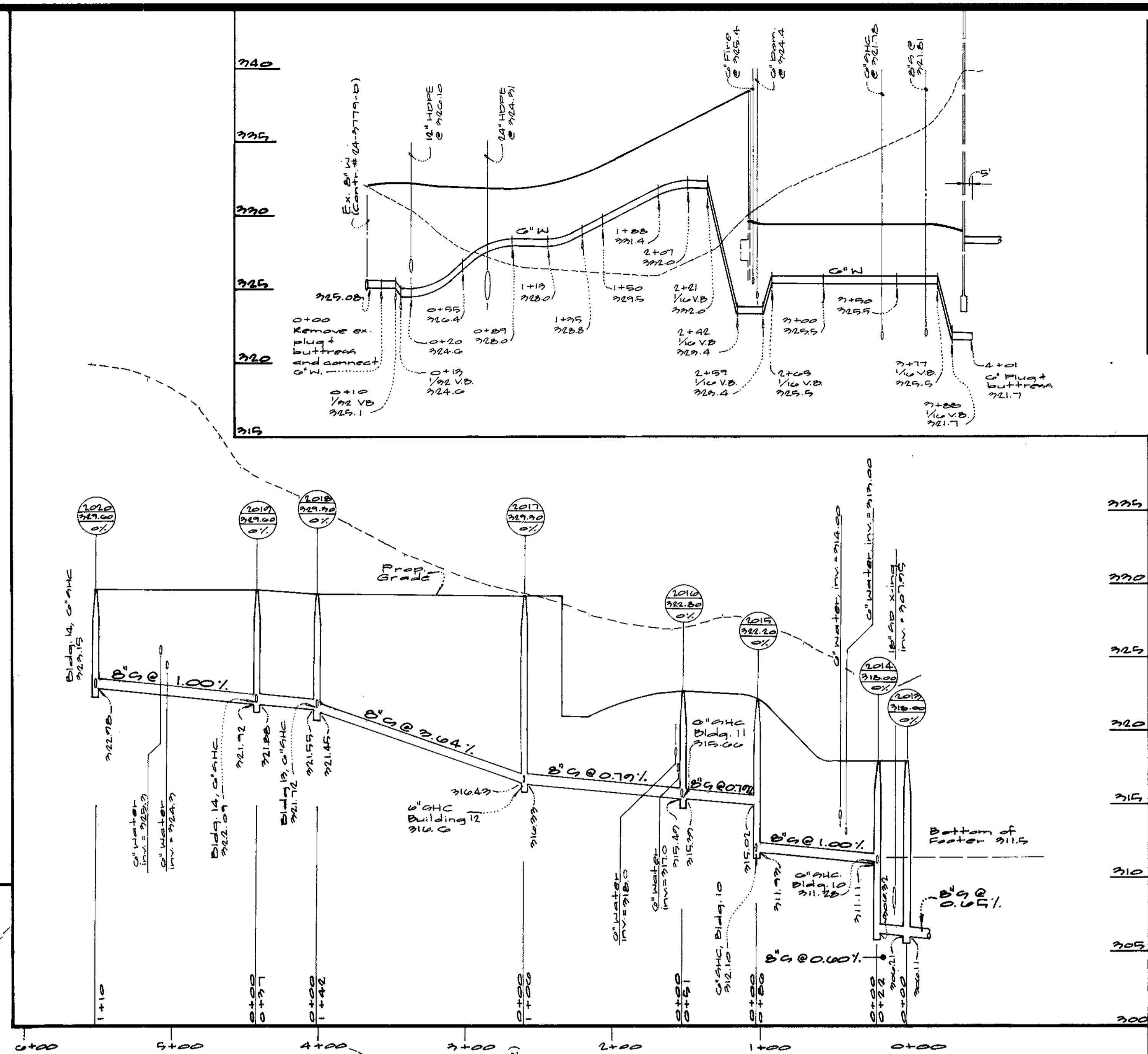
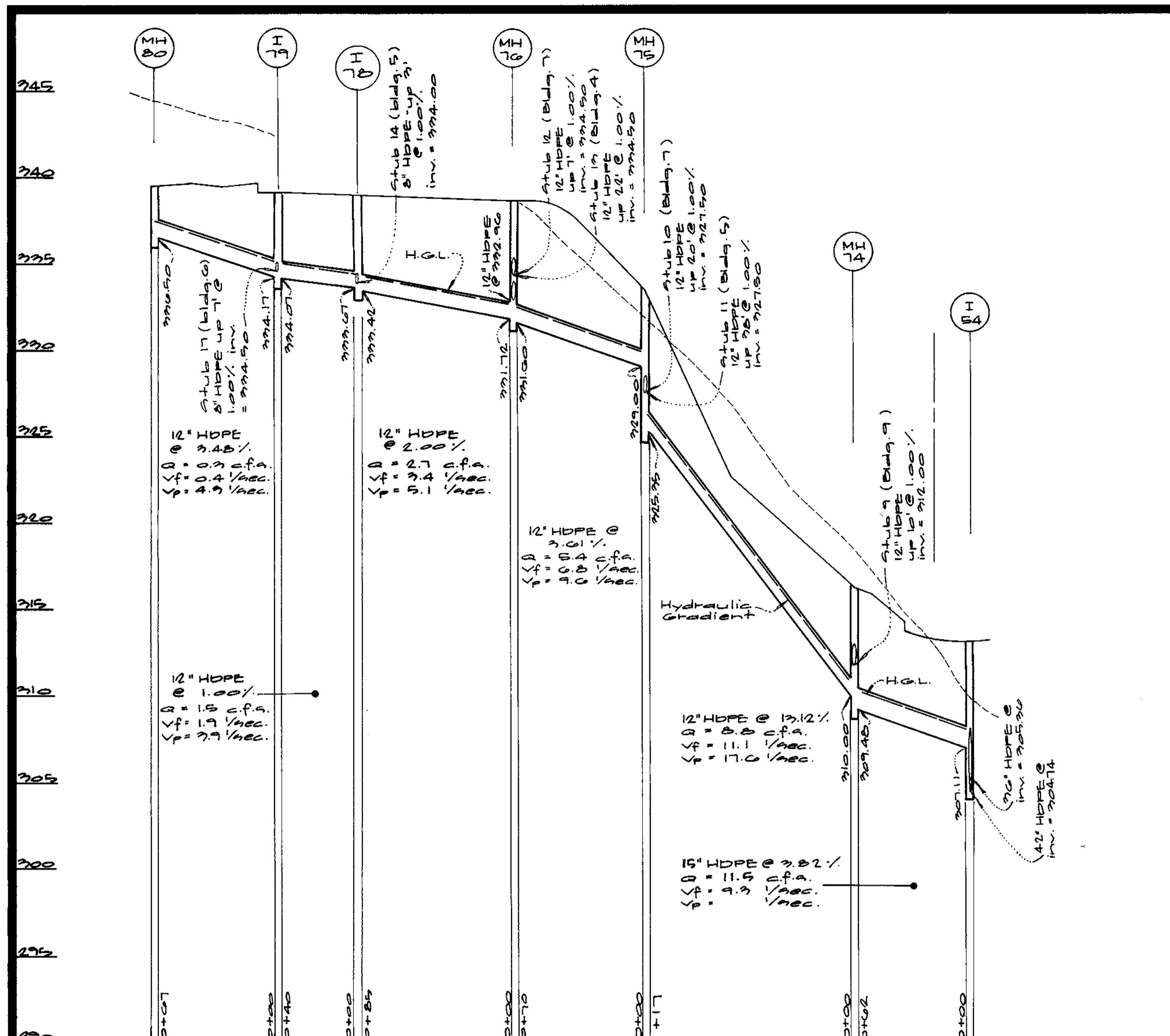
| DATE | REVISION | BY | APPR. |
|------|----------|----|-------|
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OWNER:
ARCHSTONE COMMUNITIES TRUST
6631-A OLD DOMINION DRIVE
SUITE 201
MCLEAN, VA 22101
703-883-3545

UTILITY PROFILES
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989

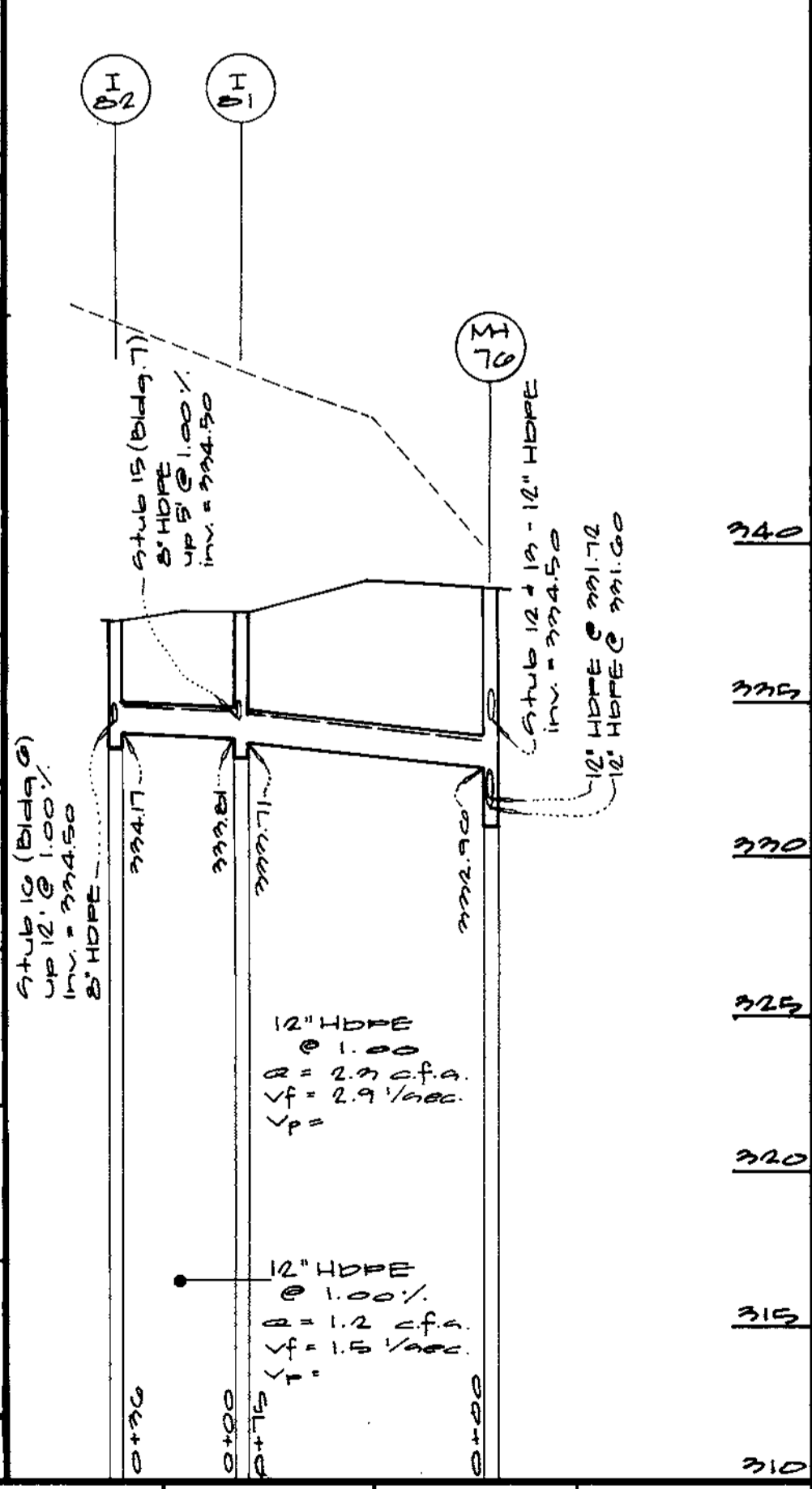
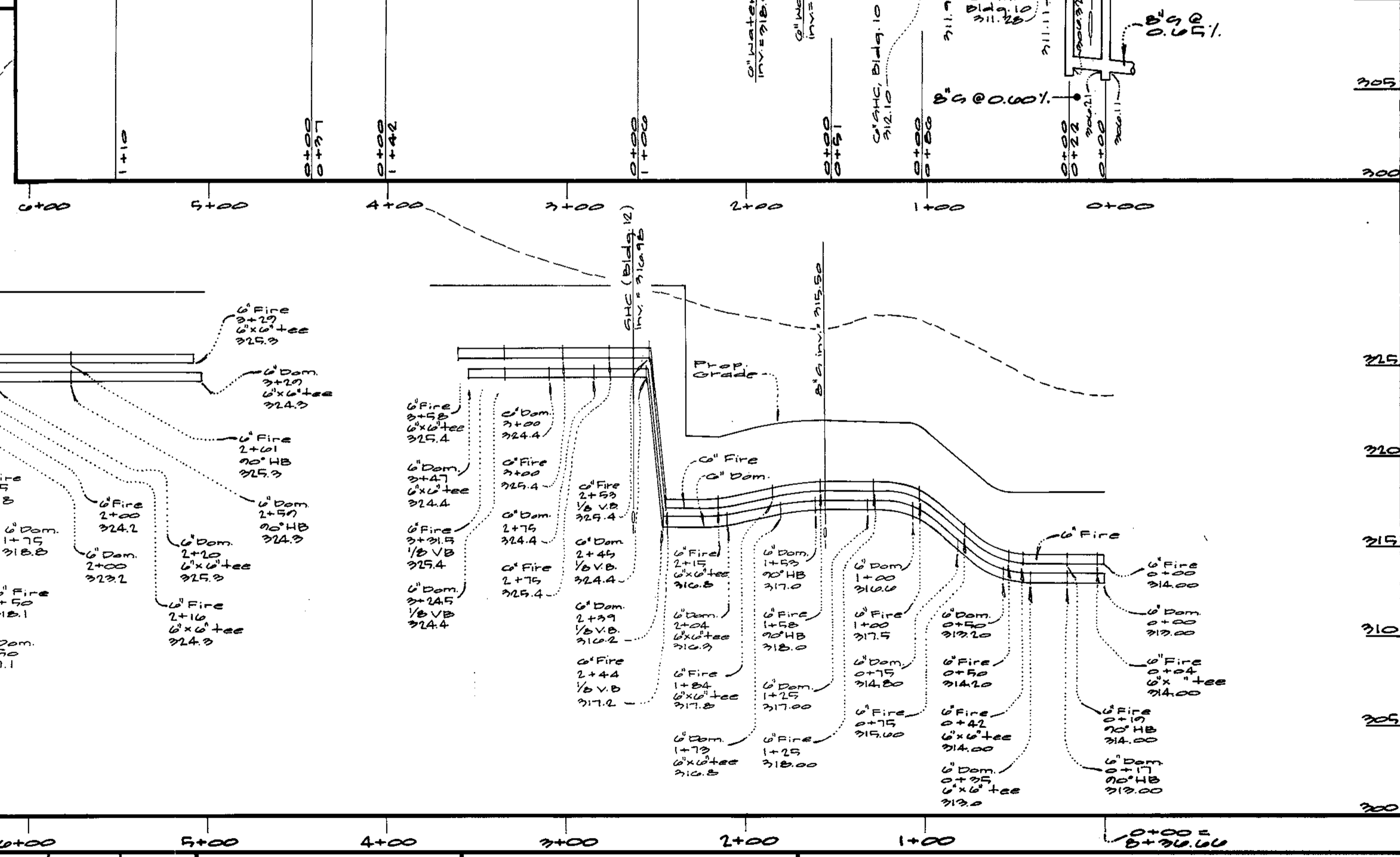
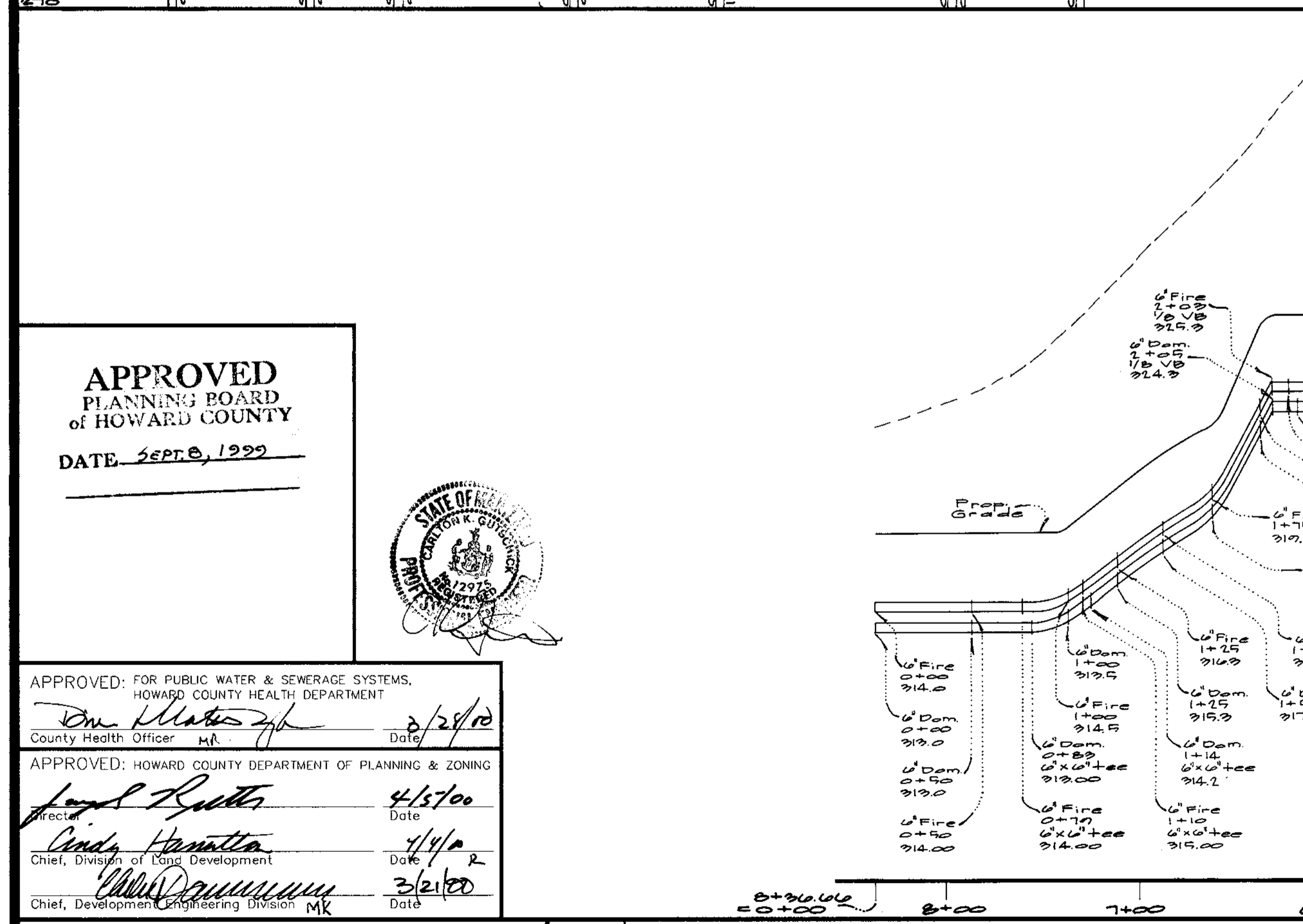
| SCALE | ZONING | G. L. W. FILE No. |
|-----------------------|--------------------------|-------------------|
| AS SHOWN | NT | 98087 |
| DATE March 3, 2000 | TAX MAP - GRID 36 - 2 | SHEET 14 OF 24 |



DATE:

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR



APPROVED
PLANNING BOARD
OF HOWARD COUNTY

DATE: SEPT. 8, 1999



APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT

County Health Officer: *Don Klatis* Date: 2/24/00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: *Paul Butler* Date: 4/5/00

Chief, Division of Land Development: *Andy Hamilton* Date: 4/4/00

Chief, Development Engineering Division: *Chris Dammann* Date: 3/21/00

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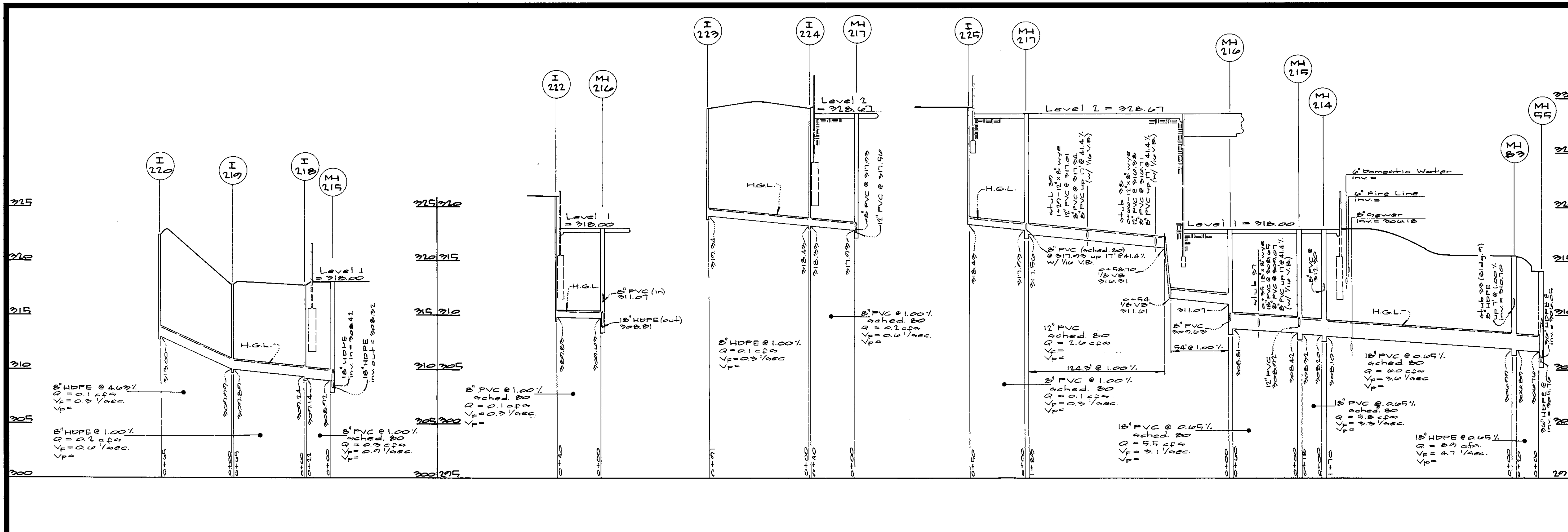
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|------|----------|----|-------|
| DATE | REVISION | BY | APPR. |
| | | | |
| | | | |
| | | | |



OWNER:
ARCHSTONE COMMUNITIES TRUST
6831-A OLD DOMINION DRIVE
SUITE 201
MCLEAN, VA 22101
703-883-3545

UTILITY PROFILES
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989

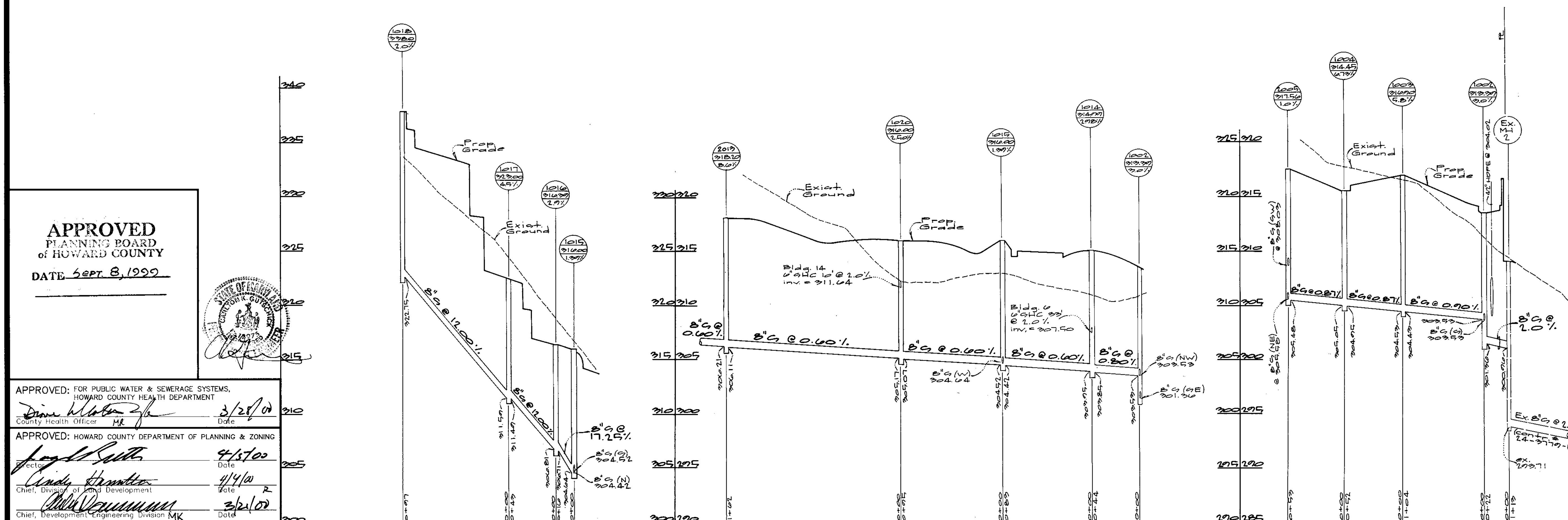
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| SCALE | ZONING | G. L. W. FILE No. |
| AS SHOWN | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| March 2, 2000 | 36 - 2 | 15 OF 24 |



DATE: _____

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR



APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE SEPT. 8, 1999

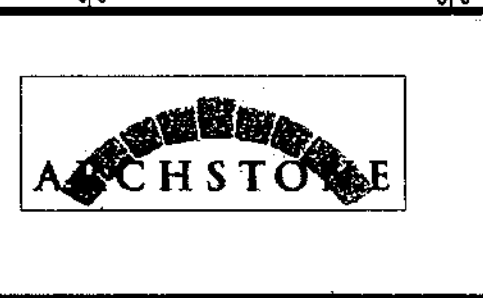


APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT
 County Health Officer: HR Date: 3/28/00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Dept: 4/15/00 Date: 4/15/00
 Chief, Division of Land Development
 Date: 4/14/00
 Chief, Development Engineering Division MK Date: 3/2/00

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
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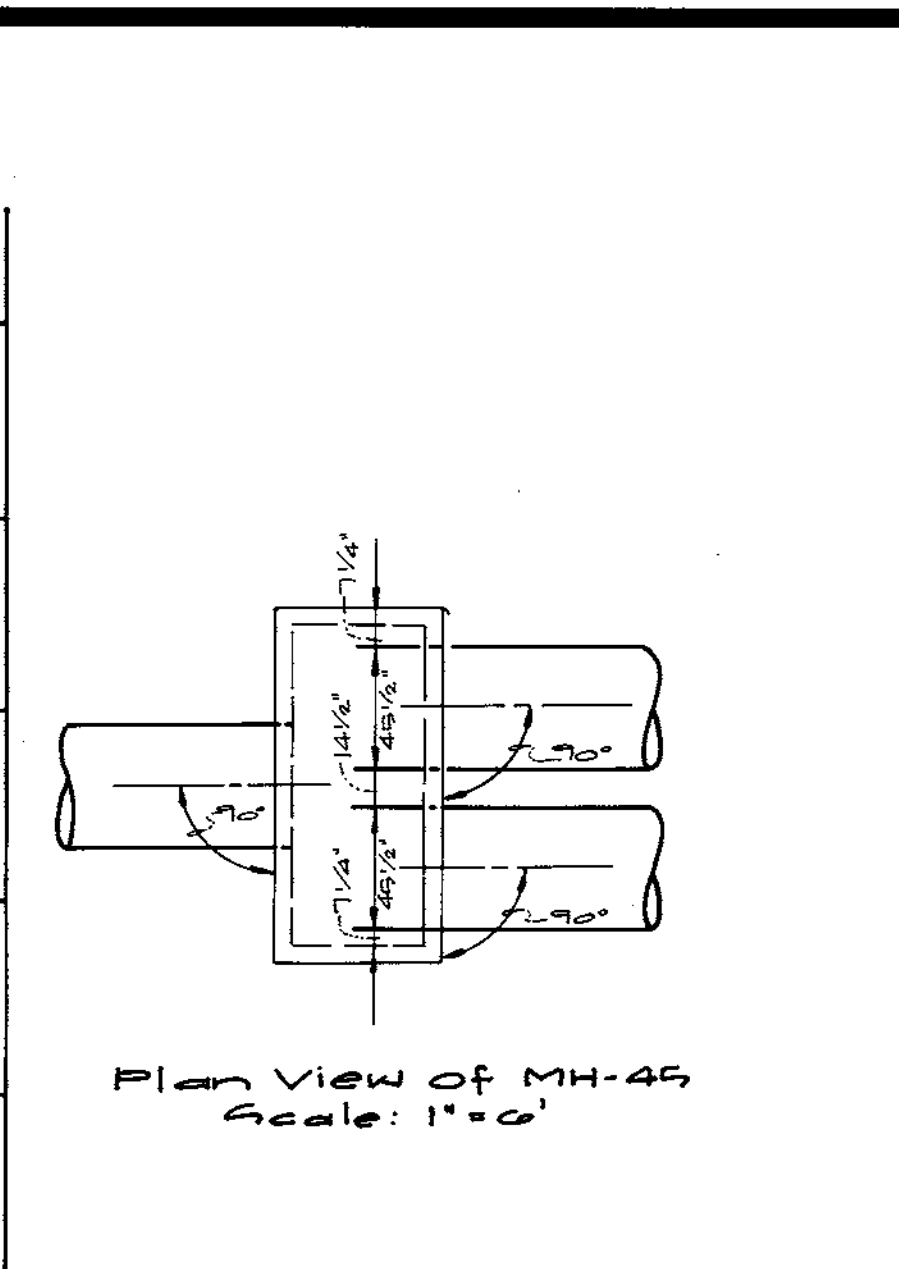
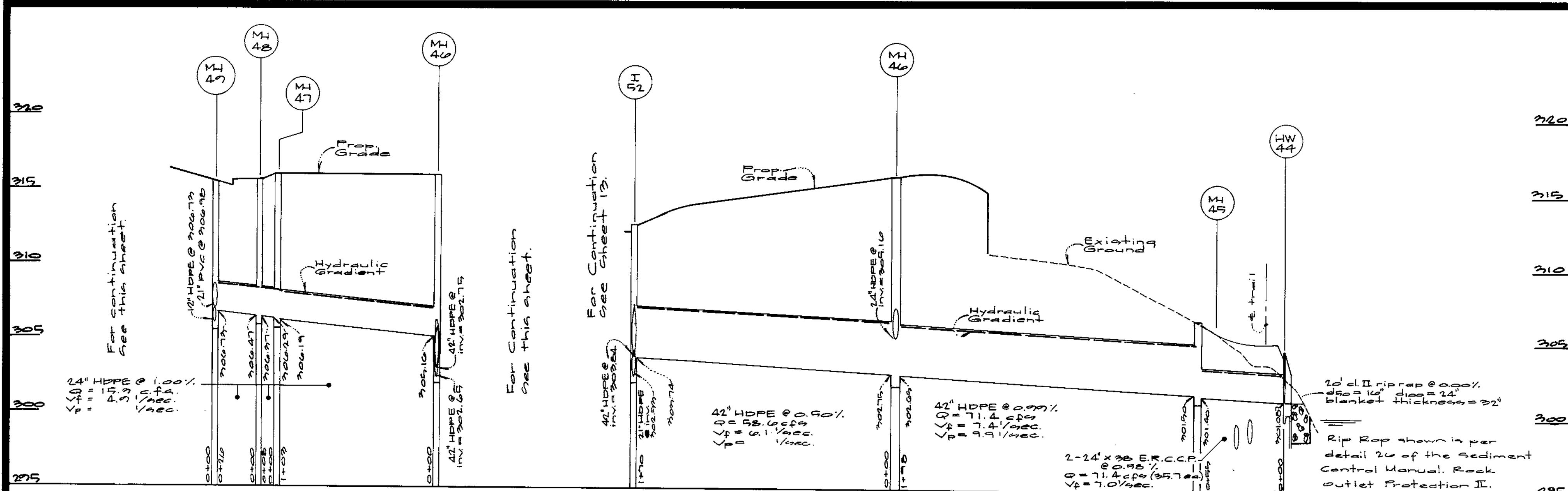
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|------|----------|----|-------|
| | | | |
| | | | |
| | | | |



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UTILITY PROFILES
COLUMBIA TOWN CENTER
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 PLAT No. 7989
 CLARKSVILLE ELECTION DISTRICT No. 5
 HOWARD COUNTY, MARYLAND

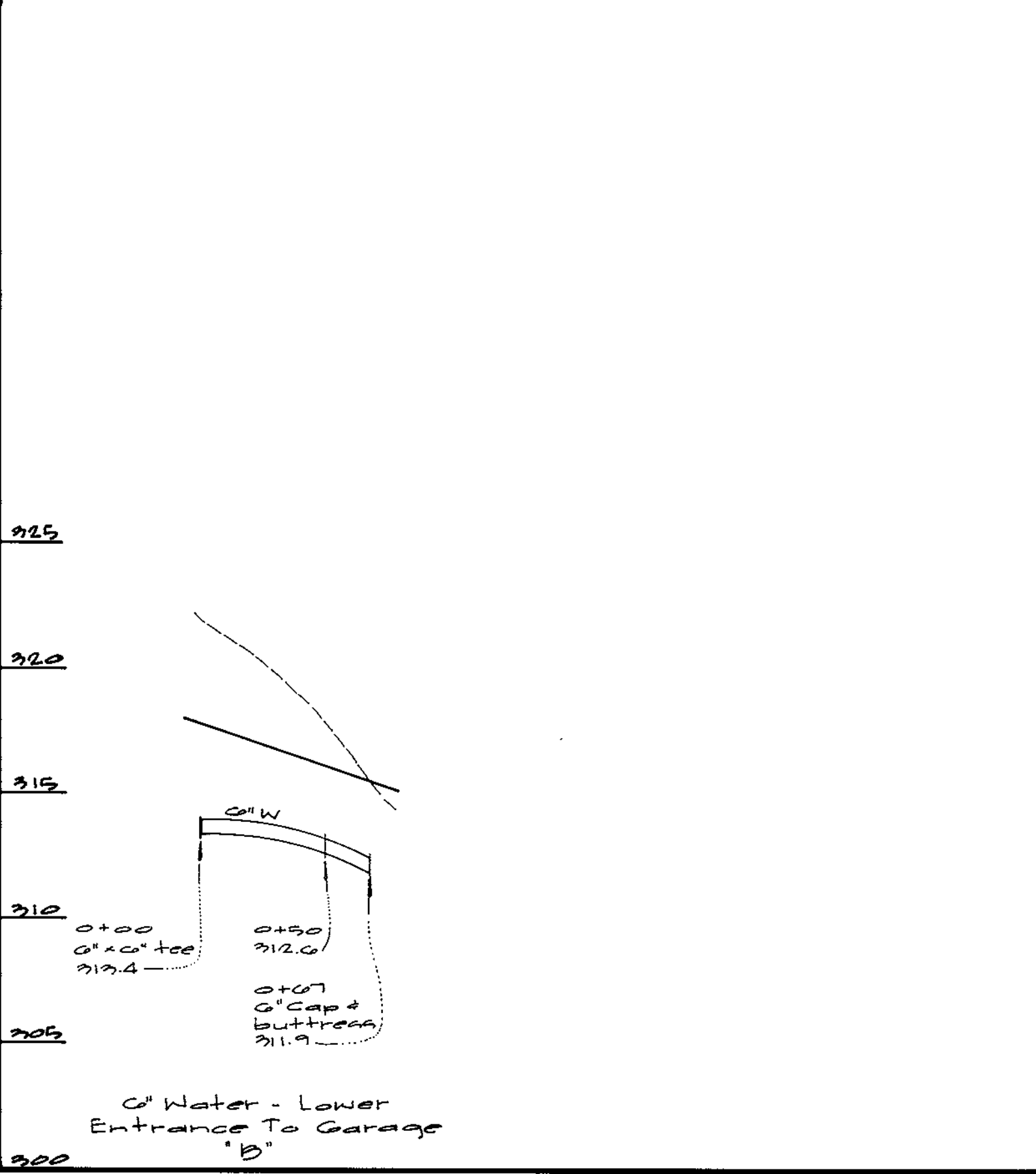
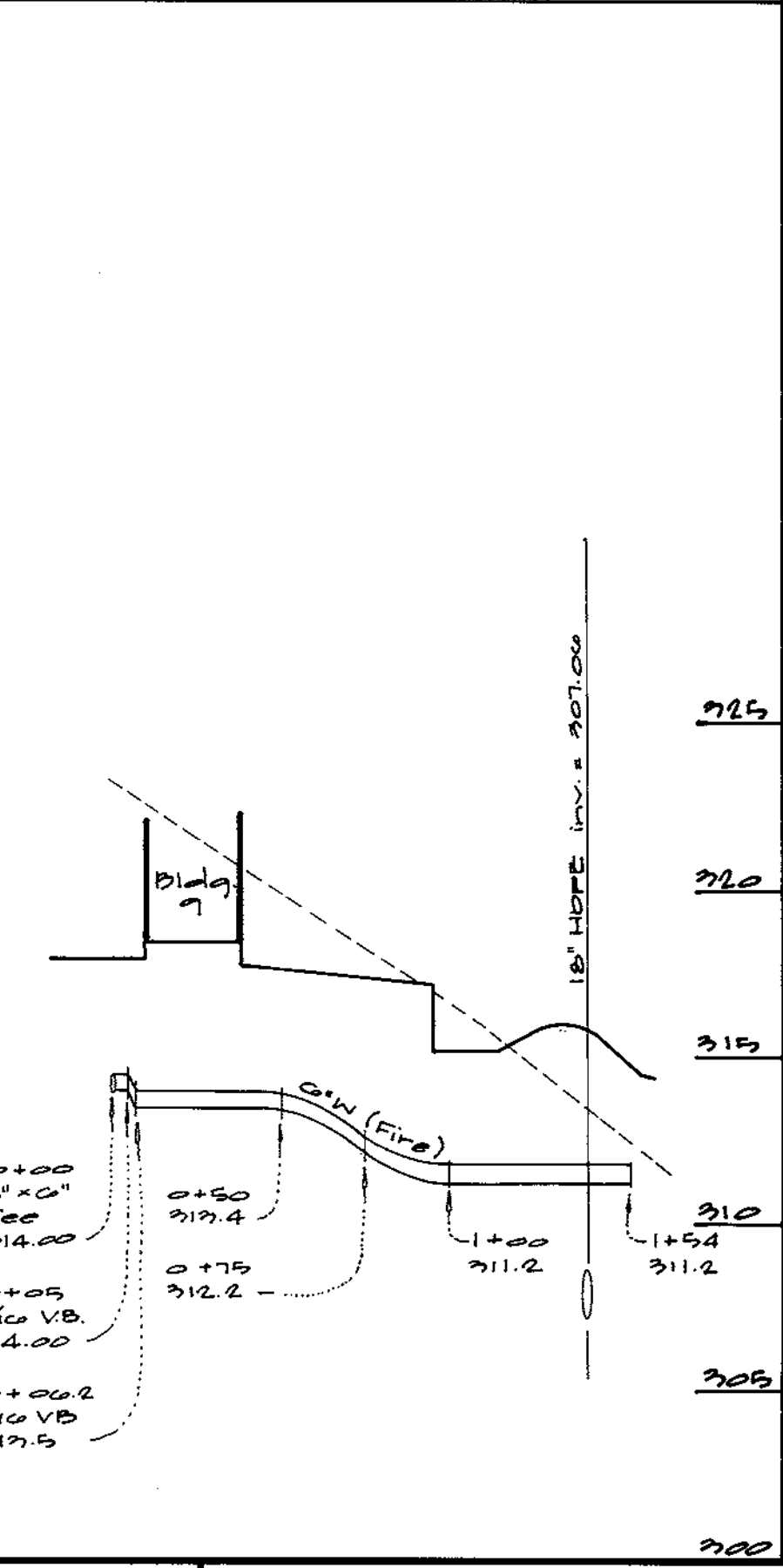
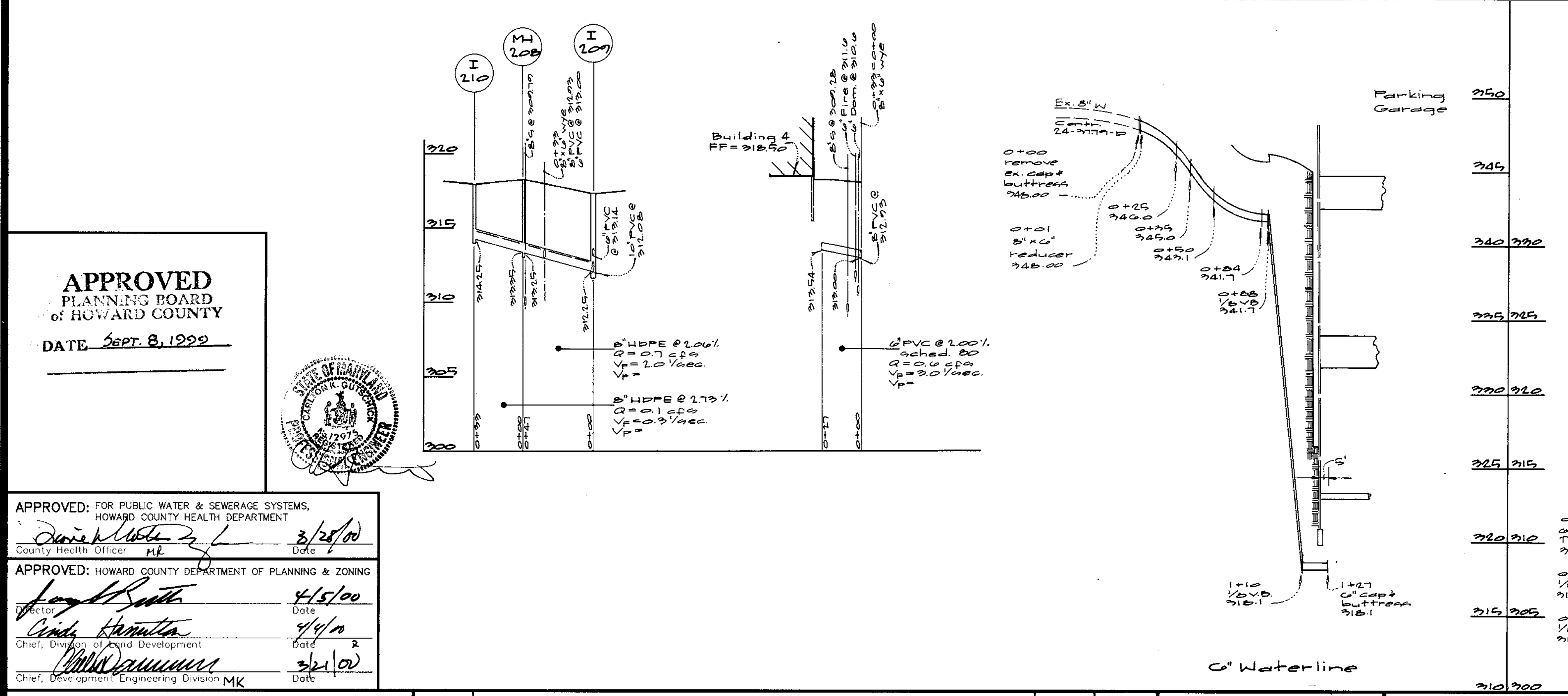
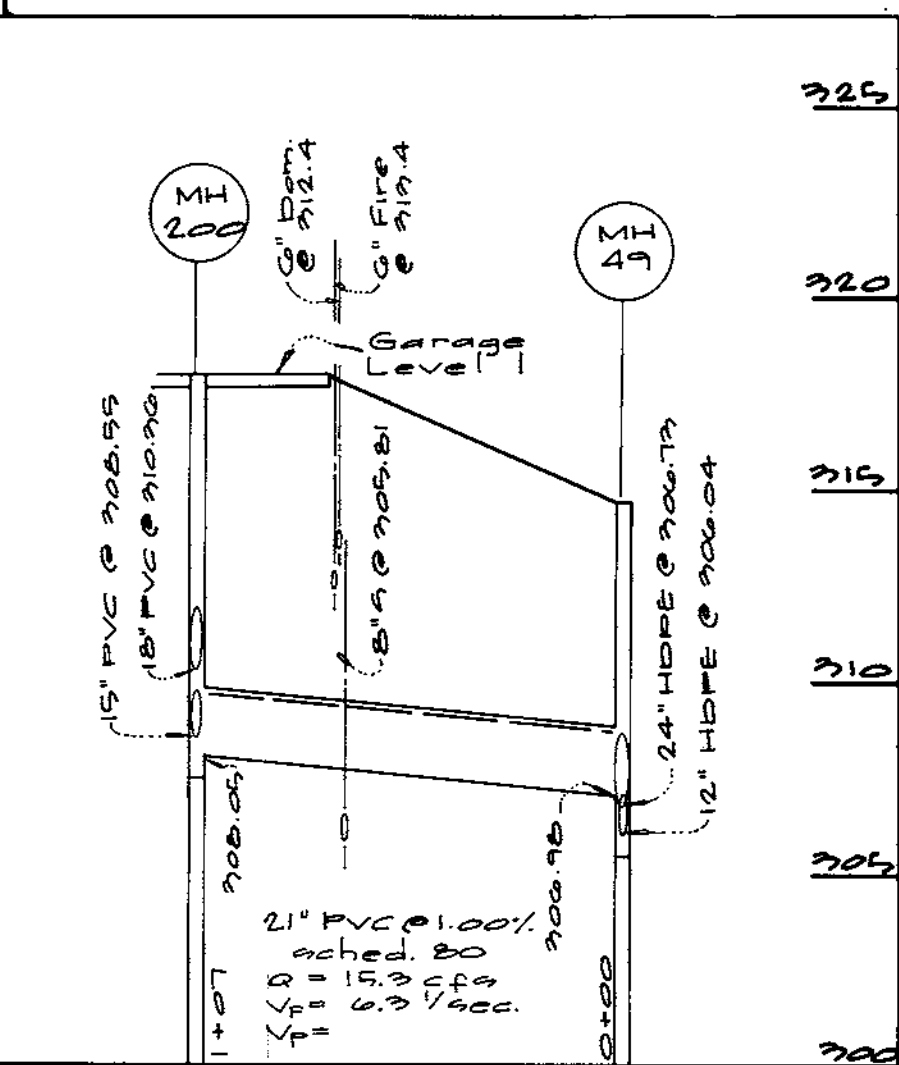
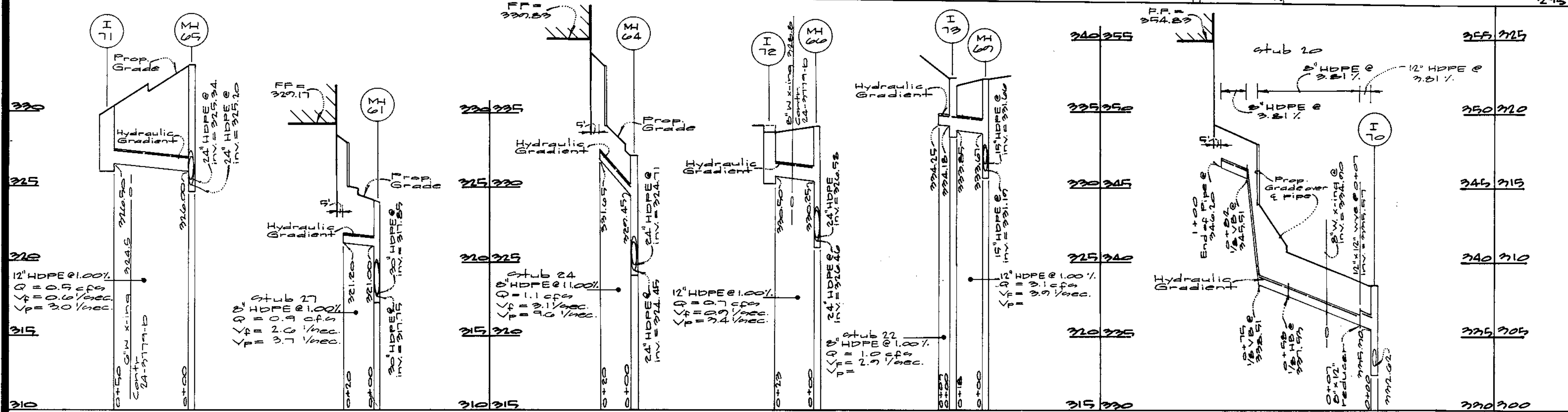
| SCALE | ZONING | G. L. W. FILE No. |
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| AS SHOWN | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| March 2, 2000 | 36 - 2 | 16 OF 24 |



DATE:

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR



APPROVED
PLANNING BOARD
OF HOWARD COUNTY

DATE: SEPT. 8, 1992



APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT

County Health Officer: *[Signature]* Date: 3/28/00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Director: *[Signature]* Date: 4/15/00

Chief, Division of Land Development: *[Signature]* Date: 4/4/00

Chief, Development Engineering, Division MK: *[Signature]* Date: 3/21/02

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 FAX: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

| DATE | REVISION | BY | APPR. |
|------|----------|----|-------|
| | | | |
| | | | |
| | | | |



Owner:
Archstone Communities Trust
6091-A Old Dominion Drive
Suite 201
McLean, VA 22101
703-889-3545

UTILITY PROFILES

COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989

CLARKSVILLE ELECTION DISTRICT No. 5

HOWARD COUNTY, MARYLAND

| SCALE | ZONING | G. L. W. FILE No. |
|----------|----------------|-------------------|
| AS SHOWN | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| 3/3/2000 | 36 - 2 | 17 OF 24 |

STRUCTURAL NOTES FOR STORMFILTER VAULT

GENERAL NOTES:

- THE FOLLOWING SPECIFICATIONS ARE AN OUTLINE OF MINIMUM MATERIAL REQUIREMENTS AND THEIR APPLICATION. MANUFACTURER SPECIFICATION AND LOCAL CODE REQUIREMENTS WHEN IN EXCESS OF MINIMUM SPECIFICATION SHALL CONTROL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW AND SUBMIT ALL SHOP DRAWINGS AND REPORT ALL DOCUMENT DISCREPANCIES TO THE STRUCTURAL ENGINEER PRIOR TO FABRICATION OR ERECTION.
- AT CONSTRUCTION ISSUE, THESE DRAWINGS REPRESENT STRUCTURAL COMPONENTS IN THEIR FINAL AND FINISHED STATE. CONSTRUCTION PROCEDURES, METHODS, SAFETY PRECAUTIONS OR MECHANICAL REQUIREMENTS USED TO ERECT THEM ARE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR OR SUBCONTRACTOR DURING THE WORK.

CONCRETE NOTES AND SPECIFICATIONS:

- ALL CONCRETE WORK SHALL CONFORM TO THE "A.C.I. BUILDING CODE", ACI 318 AND ACI 301, LATEST EDITION.
- DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 315-90, "ACI DETAILING MANUAL - 1990".
- UNLESS OTHERWISE NOTED, ALL REINFORCING BARS #4 AND LARGER SHALL CONFORM TO ASTM A-615 GRADE 60 (60,000 P.S.I. YIELD) AND ALL #3 AND #1 BARS SHALL CONFORM TO GRADE 40 (40,000 P.S.I. YIELD). REINFORCING SHALL BE FREE FROM OIL, RUST AND OTHER MATERIALS THAT WOULD INTERFERE WITH THE BOND WITH CONCRETE.
- WELDED WIRE MESH (WWM) SHALL CONFORM TO ASTM A-185.
- UNLESS OTHERWISE NOTED, CONCRETE PROTECTION FOR REINFORCING SHALL BE AS SPECIFIED IN THE "A.C.I. BUILDING CODE", (ACI 318 LATEST EDITION).
- CONCRETE STRENGTH AND PROTECTION FOR REINFORCEMENT OF POURED-IN-PLACE MEMBERS: SEE SECTION 7.7 AND 318 LATEST EDITION.

REINFORCING SPLICE SCHEDULE

| CLASS A REINFORCING SPLICES | | | | | CLASS B REINFORCING SPLICES | | | | |
|-----------------------------|-------------------------|-------------------------|-------------------------|-------------------------|-----------------------------|-------------------------|-------------------------|-------------------------|-------------------------|
| BAR SIZE | CONCRETE STRENGTH (PSI) | CONCRETE STRENGTH (PSI) | CONCRETE STRENGTH (PSI) | CONCRETE STRENGTH (PSI) | BAR SIZE | CONCRETE STRENGTH (PSI) | CONCRETE STRENGTH (PSI) | CONCRETE STRENGTH (PSI) | CONCRETE STRENGTH (PSI) |
| #3 | 3000 | 4000 | 5000 | 7000 | #3 | 3000 | 4000 | 5000 | 7000 |
| #4 | 17" | 17" | 17" | 17" | #4 | 23" | 17" | 17" | 15" |
| #5 | 23" | 17" | 17" | 17" | #5 | 23" | 25" | 23" | 21" |
| #6 | 29" | 23" | 23" | 23" | #6 | 29" | 31" | 29" | 27" |
| #7 | 35" | 29" | 29" | 29" | #7 | 35" | 37" | 35" | 33" |
| #8 | 41" | 35" | 35" | 35" | #8 | 41" | 43" | 41" | 39" |
| #9 | 47" | 41" | 41" | 41" | #9 | 47" | 49" | 47" | 45" |
| #10 | 53" | 47" | 47" | 47" | #10 | 53" | 55" | 53" | 51" |
| #11 | 59" | 53" | 53" | 53" | #11 | 59" | 61" | 59" | 57" |

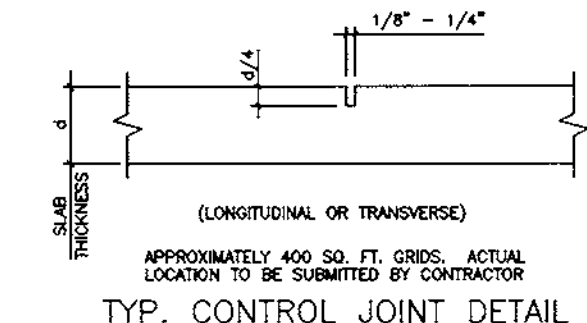
NOTE: LAP SPLICES OF REINFORCED BARS IN TENSION SHALL BE CLASS B SPLICES EXCEPT THAT CLASS A SPLICES MAY BE USED WHEN:

- THE AREA OF REINFORCEMENT PROVIDED IS AT LEAST TWICE THAT REQUIRED BY DESIGN OVER THE ENTIRE LENGTH OF THE SPLICE AND
- ONE HALF OR LESS OF THE TOTAL REINFORCEMENT IS SPACED WITHIN THE REQUIRED LAP LENGTH.

- REFER TO ARCHITECTURAL, MECHANICAL, ELECTRICAL AND PLUMBING DRAWINGS FOR ANY OTHER ADDITIONAL SLEEVES, ANCHORS, VENT OPENINGS, ETC., NOT SHOWN ON STRUCTURAL PLANS THAT MUST BE MAINTAINED.
- PLACE CONCRETE IN A MANNER SO AS TO PREVENT SEGREGATION OF THE MIX. DELAY FLOATING AND TROWELING OPERATIONS UNTIL CONCRETE HAS LOSE SURFACE WATER SHEEN OR ALL FREE WATER. DO NOT SPRINKLE FREE CEMENT ON THE SLAB SURFACE. FINISHING OF SLAB SURFACES SHALL COMPLY WITH THE RECOMMENDATIONS OF ACI 302.1 AND 304.
- UNLESS NOTED OTHERWISE ON FINAL CONTROL JOINTS TO BE LOCATED AT APPROXIMATELY 400 SQ. FT. GRIDS. ACTUAL LOCATION TO BE DETERMINED BY OWNER OR CONTRACTOR. CONTROL JOINT TO BE 2" STRIP OR EQUAL.



All piping, filters and appurtenances in stormfilter vault to be supplied by: STORMWATER MANAGEMENT
2035 N.E. COLUMBIA BLVD.
PORTLAND, OR. 97211
(503) 240-3393 - FAX: 240-9553



- PROVIDE 7 DAY CURING OF SLAB IMMEDIATELY AFTER FINISHING USING ONE OF THE FOLLOWING METHODS:
 - CONTINUOUSLY WATERED BURLAP
 - WATERPROOF MEMBRANES
 - SPRAYED-ON LIQUID MEMBRANE
- PROTECT THE CONCRETE SURFACE BETWEEN FINISHING OPERATIONS ON HOT, DRY DAYS OR ANY OTHER TIME THAT PLASTIC SHRINKAGE CRACKS COULD DEVELOP BY USING WET BURLAP, PLASTIC MEMBRANE OR FOAMING. PROTECT CONCRETE SLAB AT ALL TIMES FROM RAIN, HAIL OR OTHER UNDESIRABLE EFFECTS.
- UNLESS SPECIFIED, CONCRETE MUST REACH THE FOLLOWING PERCENTAGES OF ITS 28-DAY COMPRESSIVE STRENGTH (F_c), BEFORE FORMS MAY BE REMOVED:

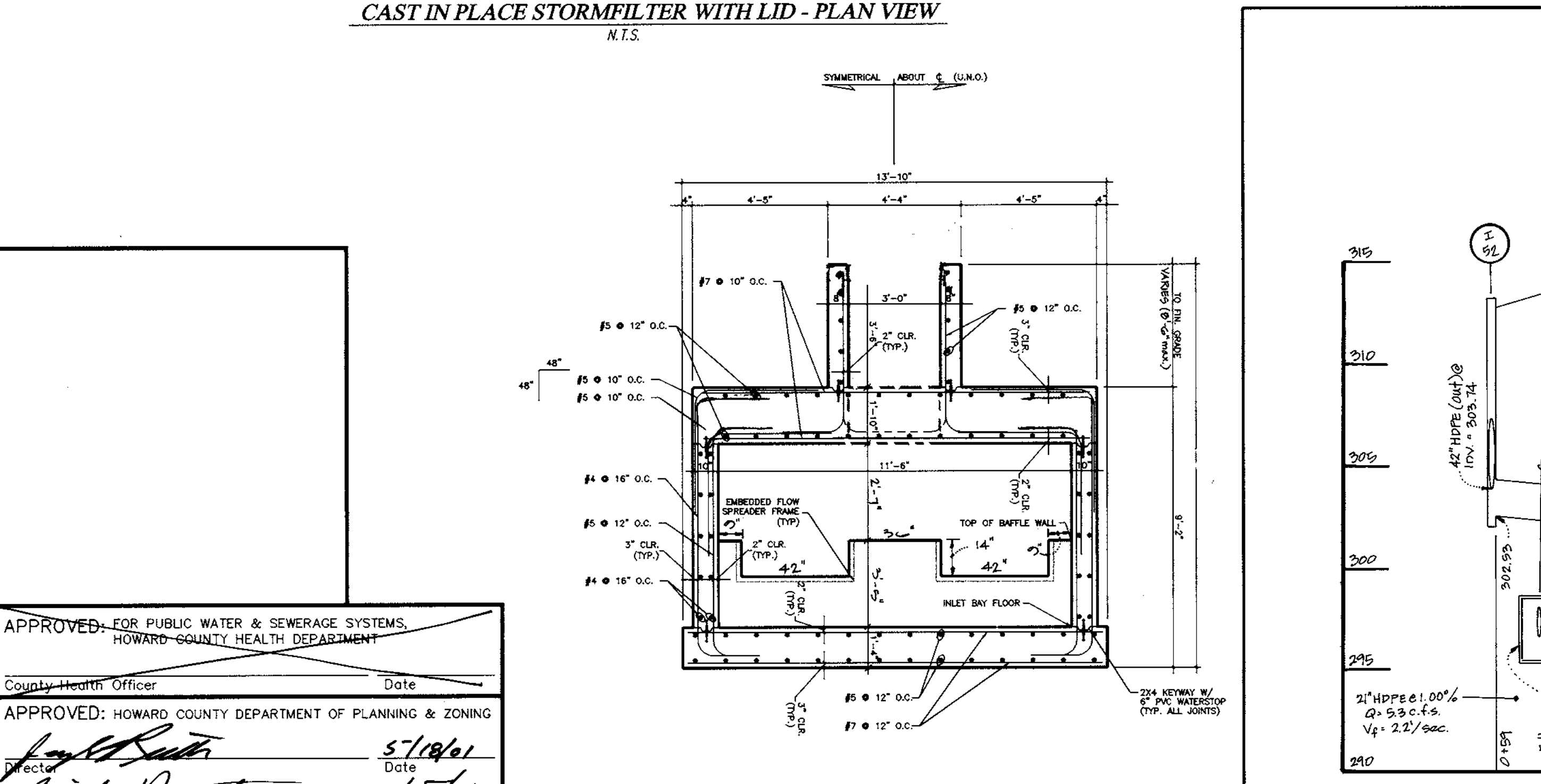
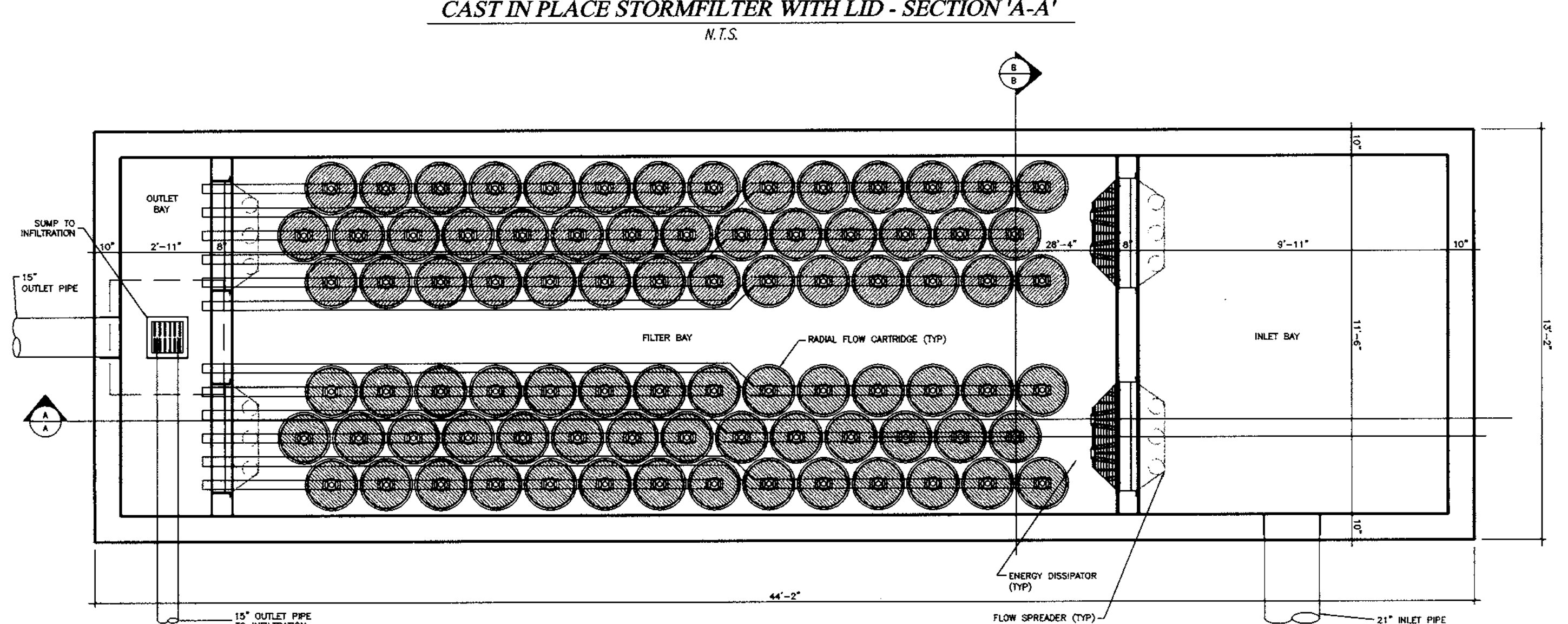
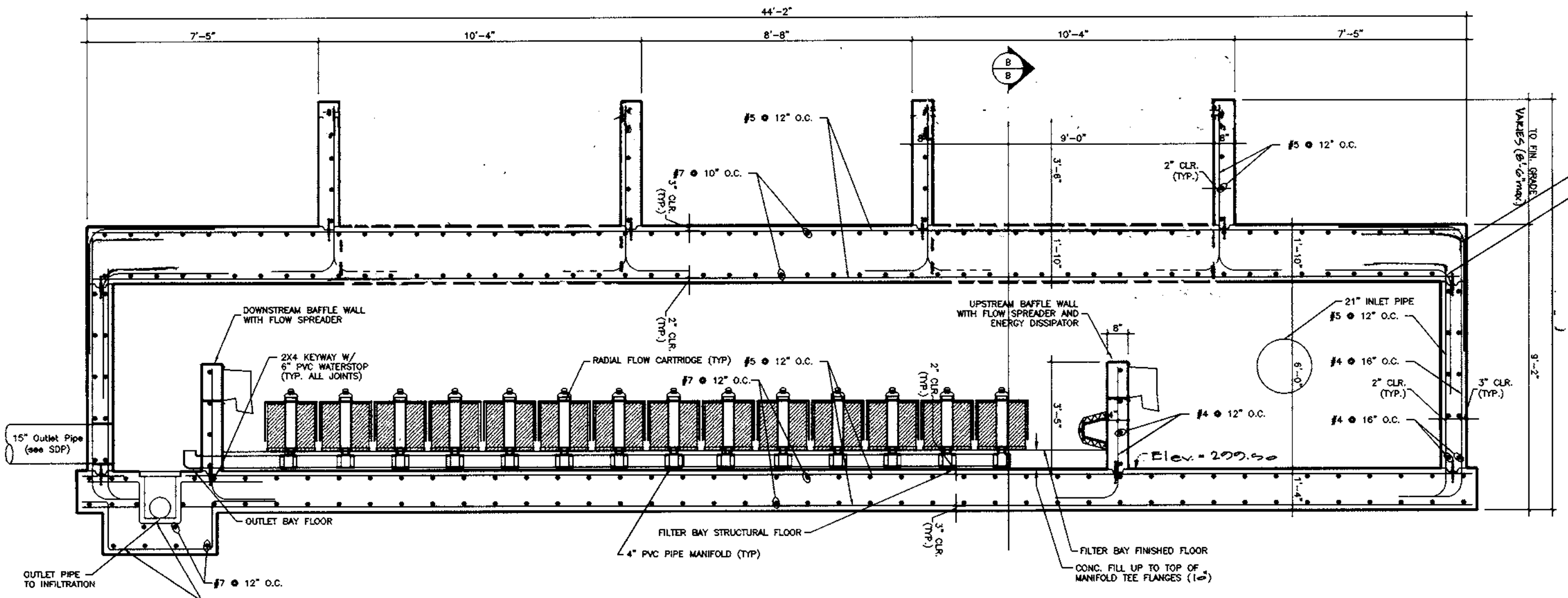
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|--|-----|
| WALLS, COLUMNS, & BEAM SIDES | 40% |
| JOIST PANES & BEAM BOTTOMS (IF REINFORCED) | 70% |
| SHORING FOR BEAM SYSTEMS (IF NOT REINFORCED) | 85% |
- REINFORMING WHEN REQUIRED, TO EXTEND AT LEAST TWO FLOORS BELOW FLOOR SUPPORTING FLEEBORDS (OR GROUND FLOOR). LAYOUT AND PROCEDURES TO BE SUBMITTED TO STRUCTURAL ENGINEER FOR APPROVAL.
- AN INDEPENDENT CERTIFIED TESTING LABORATORY SHALL VERIFY AND PROVIDE REPORTS CERTIFYING THE FOLLOWING:
 - CONCRETE PLANT BATCH TICKETS FOR EACH TRUCK VEHICLE THAT THE CONCRETE MATCHES THE APPROVED DESIGN MIX.
 - CONCRETE SLUMP IS IN ACCORDANCE WITH APPROVED DESIGN MIX.
 - CONCRETE PLACEMENT OPERATIONS ARE IN ACCORDANCE WITH ACI SPECIFICATIONS.
 - CONTROL JOINTS ARE INSTALLED WITHIN THE ACT TIME ALLOWANCE.
 - PROPER CURING METHODS ARE BEING UTILIZED.
- NO CONCRETE SHALL BE PLACED OUTSIDE OF THESE SPECIFICATIONS WITHOUT THE OWNER'S PRIOR APPROVAL. ANY ITEMS NOT IN CONFORMANCE WITH THE SPECIFICATIONS SHALL BE REPORTED TO THE OWNER AND STRUCTURAL ENGINEER WITHIN 24 HOURS.
- CONSTRUCTION VEHICLE LOADS SHALL NOT BE PERMITTED ON ELEVATED SLABS AT ANY TIME.

FOUNDATION NOTES:

- FOOTINGS SHALL BE ON SOIL SUITABLE FOR SUPPORTING 2500 P.S.F. NET ALLOWABLE BEARING. IF QUESTIONABLE SOIL IS ENCOUNTERED, THE STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY. HE REPORT # 157890 BY THE ROBERT B. BALTER CO. ALL RECOMMENDATIONS THEREIN THAT RELATE TO THE WORK SHOWN ON THESE DRAWINGS MUST BE FOLLOWED.
- EXCAVATION FOR FOOTINGS SHALL BE NEAT.
- FOOTINGS SHALL BE POURED IMMEDIATELY AFTER EXCAVATION.
- ALL REINFORCING STEEL, MARKED "CONTINUOUS" SHALL BE LAPPED PER THE "REINFORCING SPLICE SCHEDULE" AT SPLICES AND ANCHOR CORNERS OR SHALL BE WELDED WITH A STANDARD 90 DEGREE BEND ON CORNER BARS. LAP WELDED WIRE MESH ONE FULL MESH AT SIDE AND END LAPS.
- LAP TOP BARS AT CENTER OF SPAN. LAP BOTTOM BARS AT SUPPORTS.

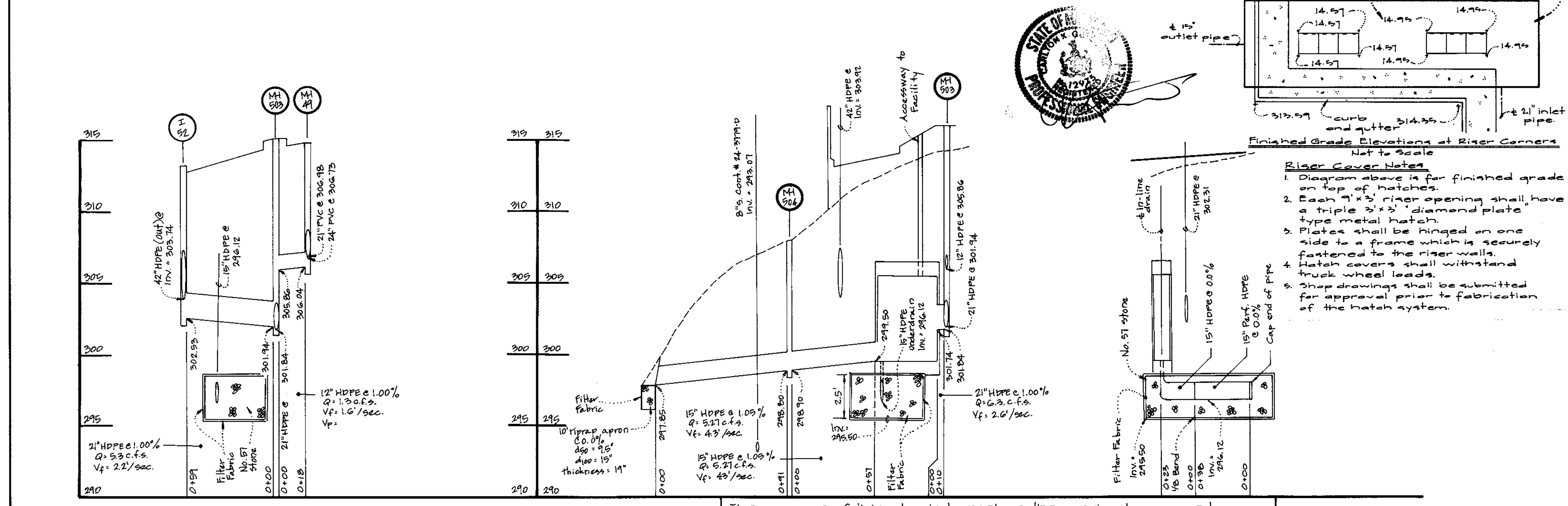
OPERATING AND MAINTENANCE SCHEDULE

| Facility Component Requiring Maintenance | Maintenance Activity | When Maintenance Activity Is Required | Expected Facility Performance After Maintaining |
|--|--|--|---|
| StormFilter Cartridges and Containment Structure | Trash and debris removal | Floatable objects or other trash is present in the filter. Remove to avoid hindrance of filtration | Filtration capacity is maximized |
| | Cartridge replacement and sediment removal | Media has been contaminated by high levels of pollutants, usually after one year of operation or after a spill | StormFilter effectively treats stormwater |
| Drainage System Piping | Flushing With Water | Drainage system is obstructed by debris or sediment | System flows freely |



APPROVED FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
County Health Officer _____ Date _____
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Director _____ Date 5/18/01
Chief, Division of Land Development _____ Date 5/18/01
Chief, Development Engineering Division MK _____ Date 5/17/01

DETAILS/PROFILES in this box by G.L.W.



GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONVILLE OFFICE PARK
BURTONVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

| DATE | REVISION | BY | APP'R. |
|------|----------|----|--------|
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OWNER:
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION
10275 LITTLE PATENT PKWY.
COLUMBIA, MD. 21044
ATTN: MR. AL EDWARDS
410-992-6027



DEVELOPER/CONTRACT PURCHASER:
ARCHSTONE COMMUNITIES
6637-A OLD DOMINION DRIVE
SUITE 201
MCLEAN, VA 22101
703-883-3545

"Revised Site Development Plan"
STORM WATER MANAGEMENT DETAILS
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989
CLARKSVILLE ELECTION DISTRICT No. 5
HOWARD COUNTY, MARYLAND

| SCALE | ZONING | G. L. W. FILE No. |
|-----------|----------------|-------------------|
| AS SHOWN | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| May, 2001 | 36 - 2 | 18 OF 24 |

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/We certify that all development and/or 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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the HSCD."

Jeffrey W. Hill
Signature of Developer/Builder
2/28/00
Date

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

John K. Roberts 3-15-00
Howard S.C.D. Date

ENGINEER'S CERTIFICATE

"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."

Clayton G. ...
Date 2/25/00

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.

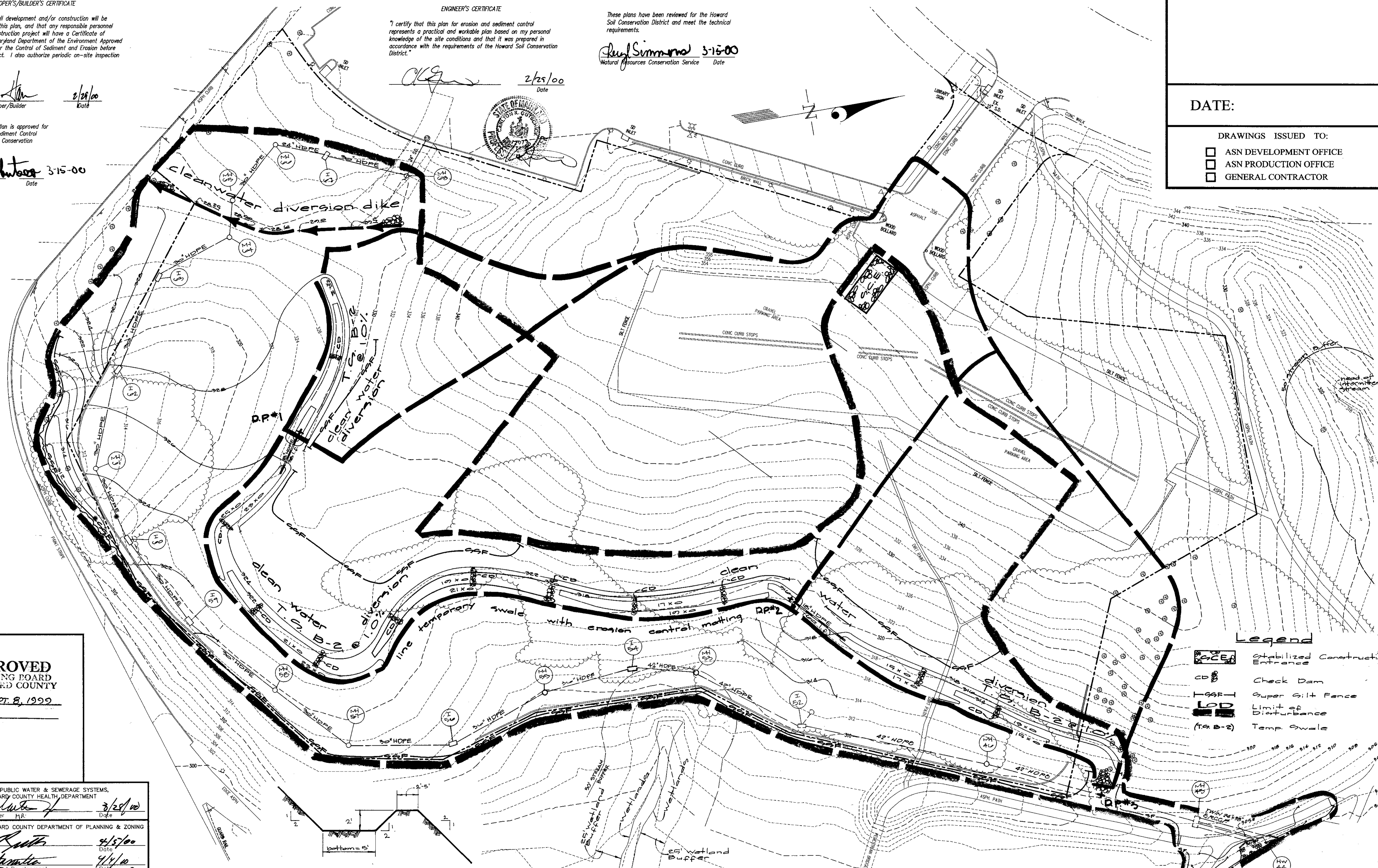
Royal Simmons 3-15-00
Natural Resources Conservation Service Date



DATE:

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR



Legend

- Stabilized Construction Entrance
- Check Dam
- Super Silt Fence
- Limit of Disturbance
- Temp Swale

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE: SEPT. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Dore White 3/28/00
County Health Officer HR Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
John K. Roberts 4/15/00
Director Date

Clayton G. ... 4/1/00
Chief, Division of Land Development Date

Clayton G. ... 3/21/00
Chief, Development Engineering Division MK Date



For Initial Sediment Control Only

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

| DATE | REVISION | BY | APP'R. |
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OWNER:
ARCHSTONE COMMUNITIES TRUST
6631-A OLD DOMINION DRIVE
SUITE 201
MCLEAN, VA 22101
703-883-3545

SEDIMENT & EROSION CONTROL PLAN - INITIAL
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989
CLARKSVILLE ELECTION DISTRICT No. 5
HOWARD COUNTY, MARYLAND

| SCALE | ZONING | G. L. W. FILE No. |
|-----------|----------------|-------------------|
| 1"=40' | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| 3/03/2000 | 36 - 2 | 17 OF 24 |

DEVELOPER'S/BUILDER'S CERTIFICATE

"I/we certify that all development and/or 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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the HSCD."

[Signature]
Signature of Developer/Builder
Date 2/28/00

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

[Signature]
Howard S.C.D.
Date 3/15/00

ENGINEER'S CERTIFICATE

"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."

[Signature]
Date 2/29/00



These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.

[Signature] 3-15-00
Natural Resources Conservation Service Date

DATE:

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR

APPROVED
PLANNING BOARD
of HOWARD COUNTY

DATE SEPT. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT

[Signature] 3/28/00
County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

[Signature] 4/15/00
Director Date

[Signature] 4/11/00
Chief, Division of Land Development Date

[Signature] 3/21/00
Chief, Development Engineering Division Date

Trap #1
Pipe Outlet Gt-I

| | |
|----------------------|------------|
| Before Dev DA | 22,800 cfs |
| After Dev DA | 24,480 cfs |
| Volume Required | 24,480 cfs |
| Riser Diam. | 24" |
| Trap Riser Diam. | 24" |
| Bottom Elev. | 310.00 |
| Top of Dam | 314.00 |
| Cleanout Elev. | 310.00 |
| Limit of Wet Storage | 312.88 |
| Limit of Dry Storage | 312.98 |

Legend

| | |
|--|-----------------------------|
| | Earth Dike |
| | Stone Construction Entrance |
| | Inlet Blocking |
| | Curb Inlet Protection |
| | Rip Rap Inflow Protection |
| | Removable Pumping Station |
| | Super Silt Fence |
| | Silt Fence |
| | Limit of Disturbance |

Trap #2
Pipe Outlet Gt-I

| | |
|----------------------|---------------------|
| Before Dev DA | 273 ac |
| After Dev DA | 2,000 ac |
| Volume Required | 13,450 cfs |
| Volume Provided | 13,450 cfs @ 312.98 |
| Barrel Diam. | 24" |
| Riser Diam. | 24" |
| Trash Rack Diam. | 24" |
| Bottom Elev. | 310.00 |
| Top of Dam | 314.00 |
| Cleanout Elev. | 310.00 |
| Limit of Wet Storage | 312.88 |
| Limit of Dry Storage | 312.98 |

For Final Sediment Control Only!

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 200 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20886
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

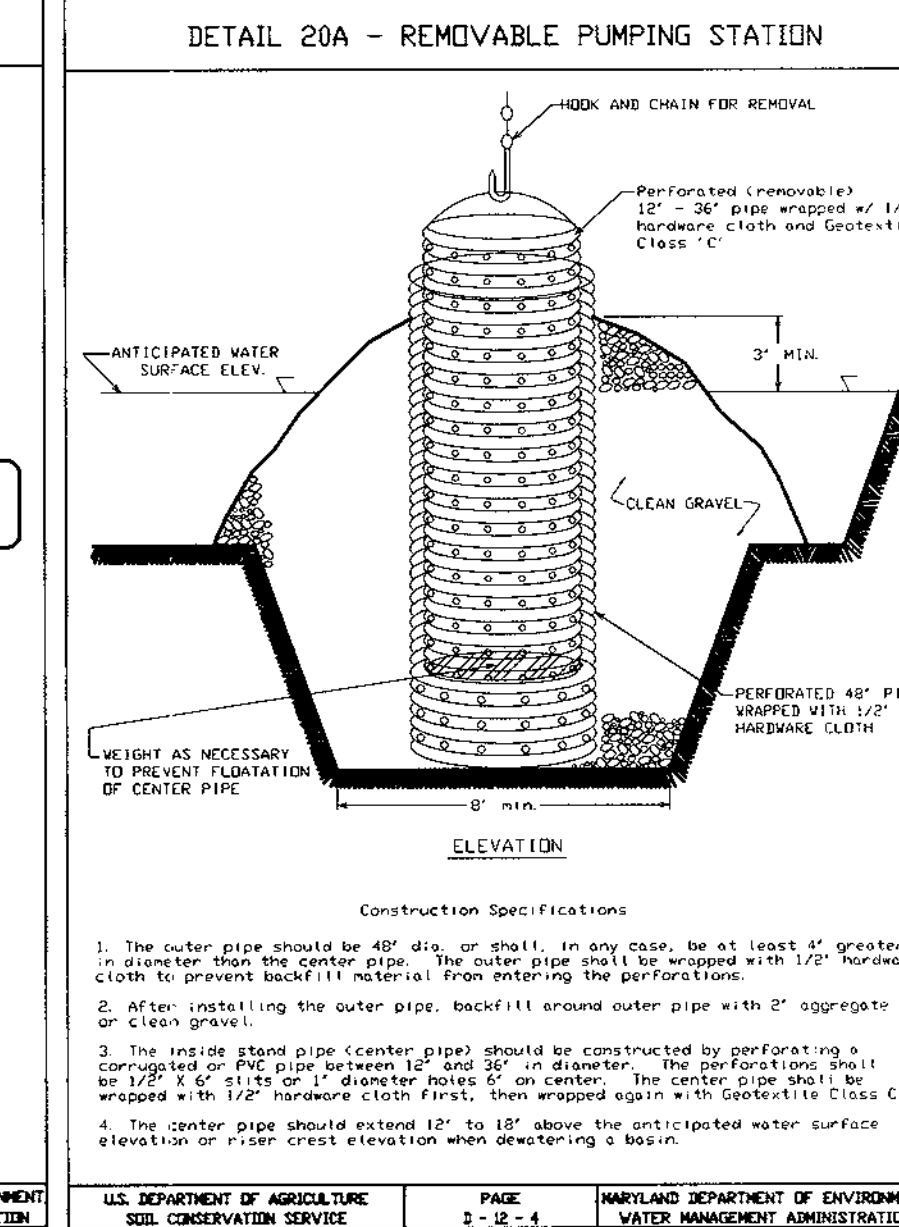
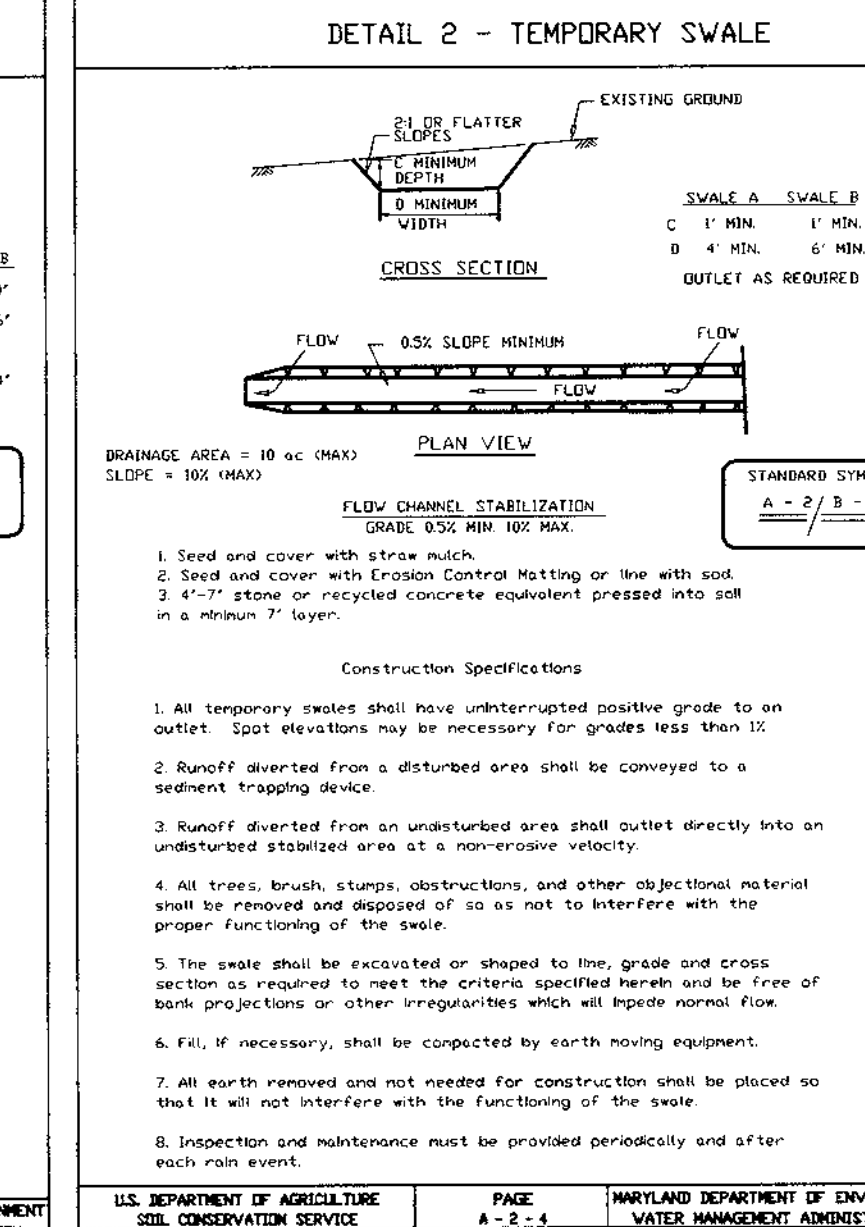
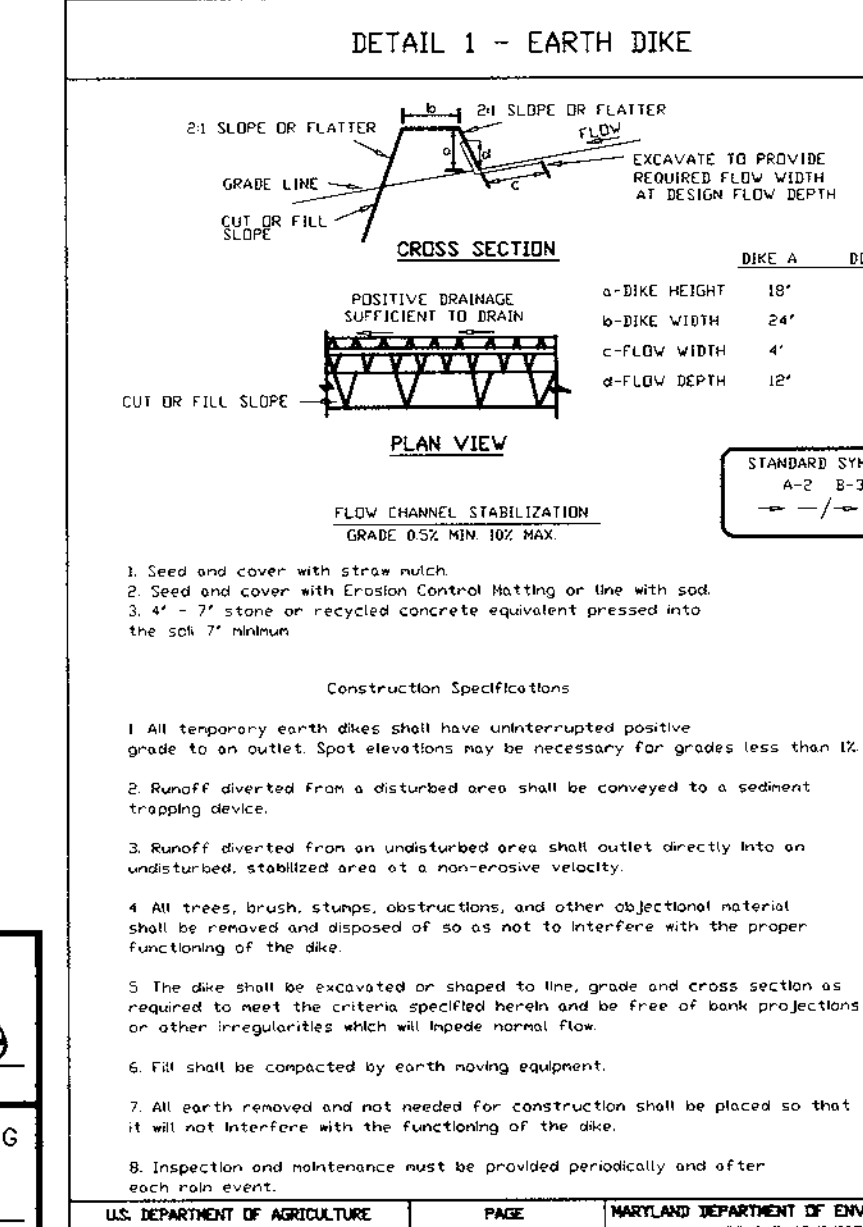
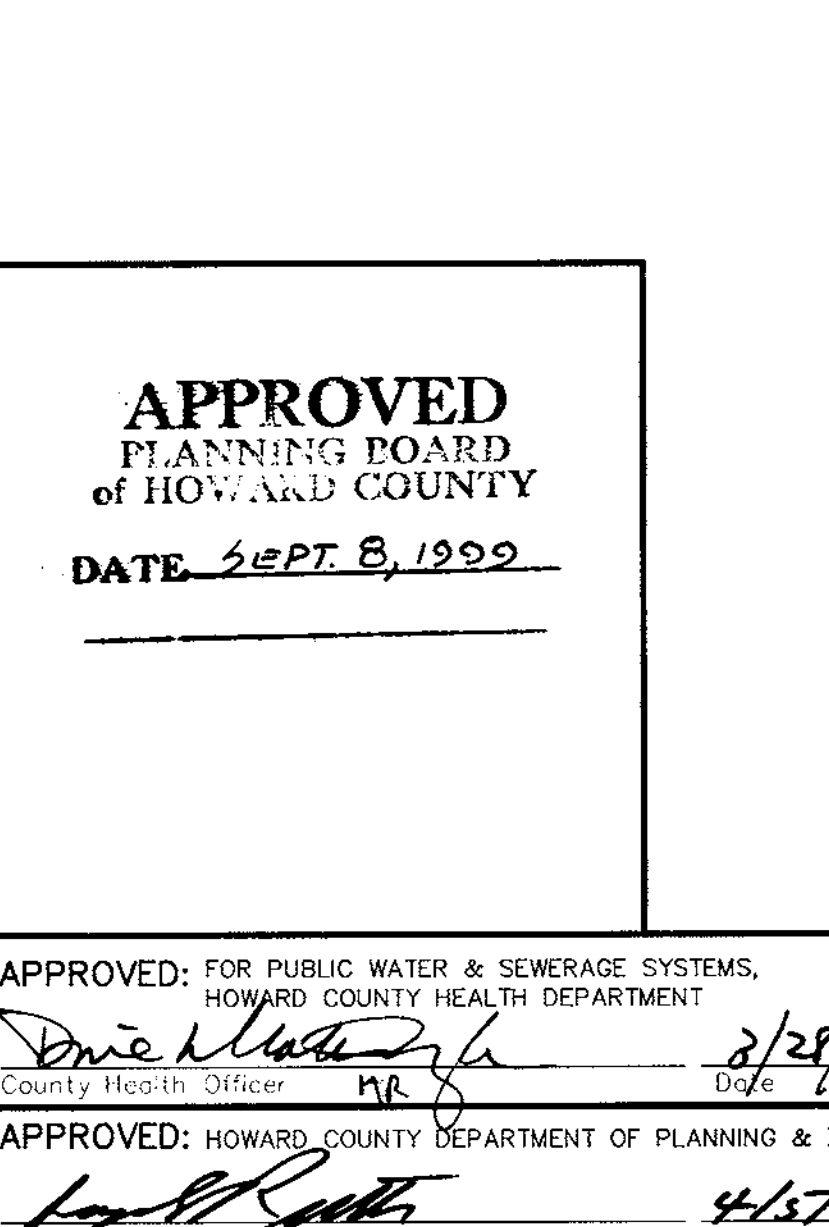
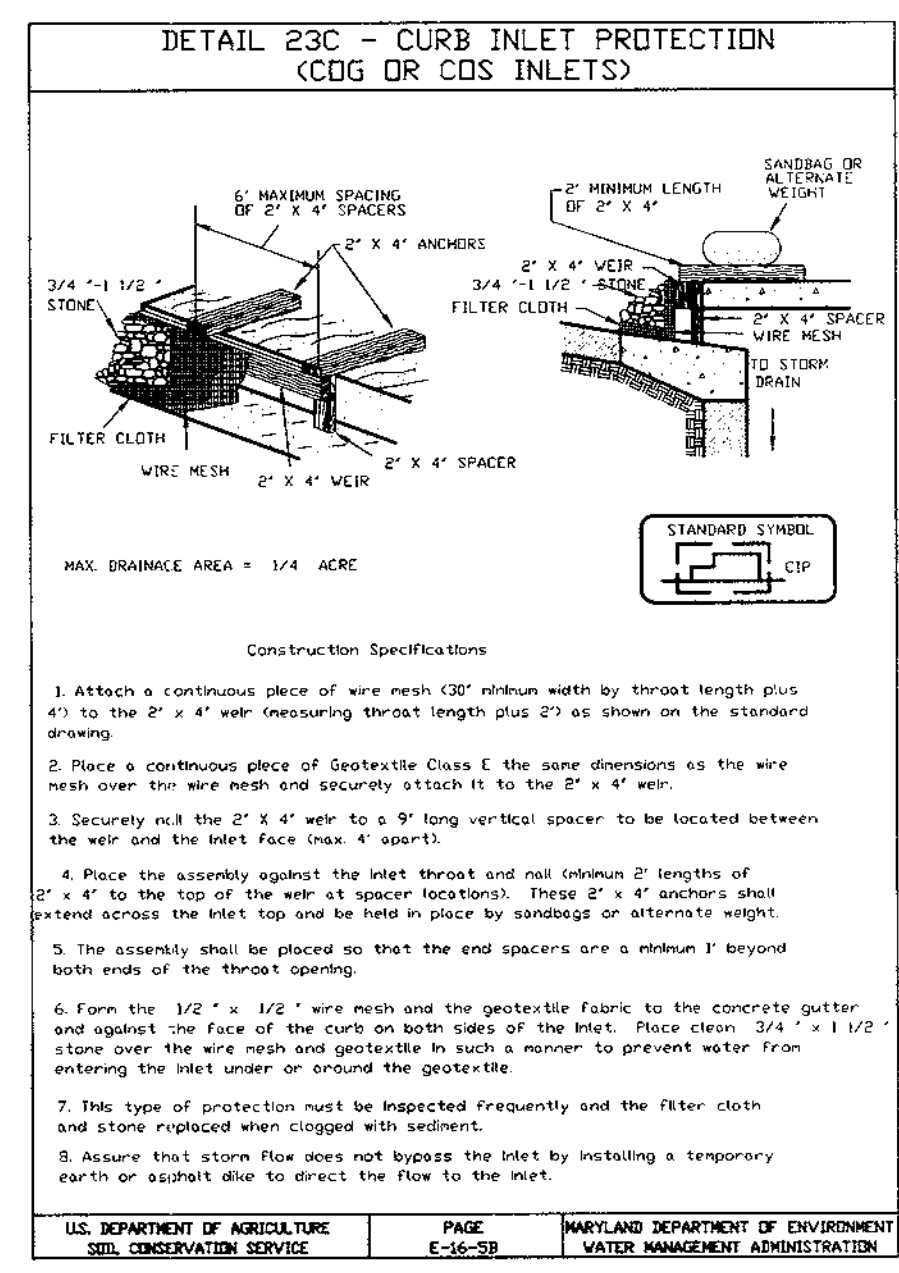
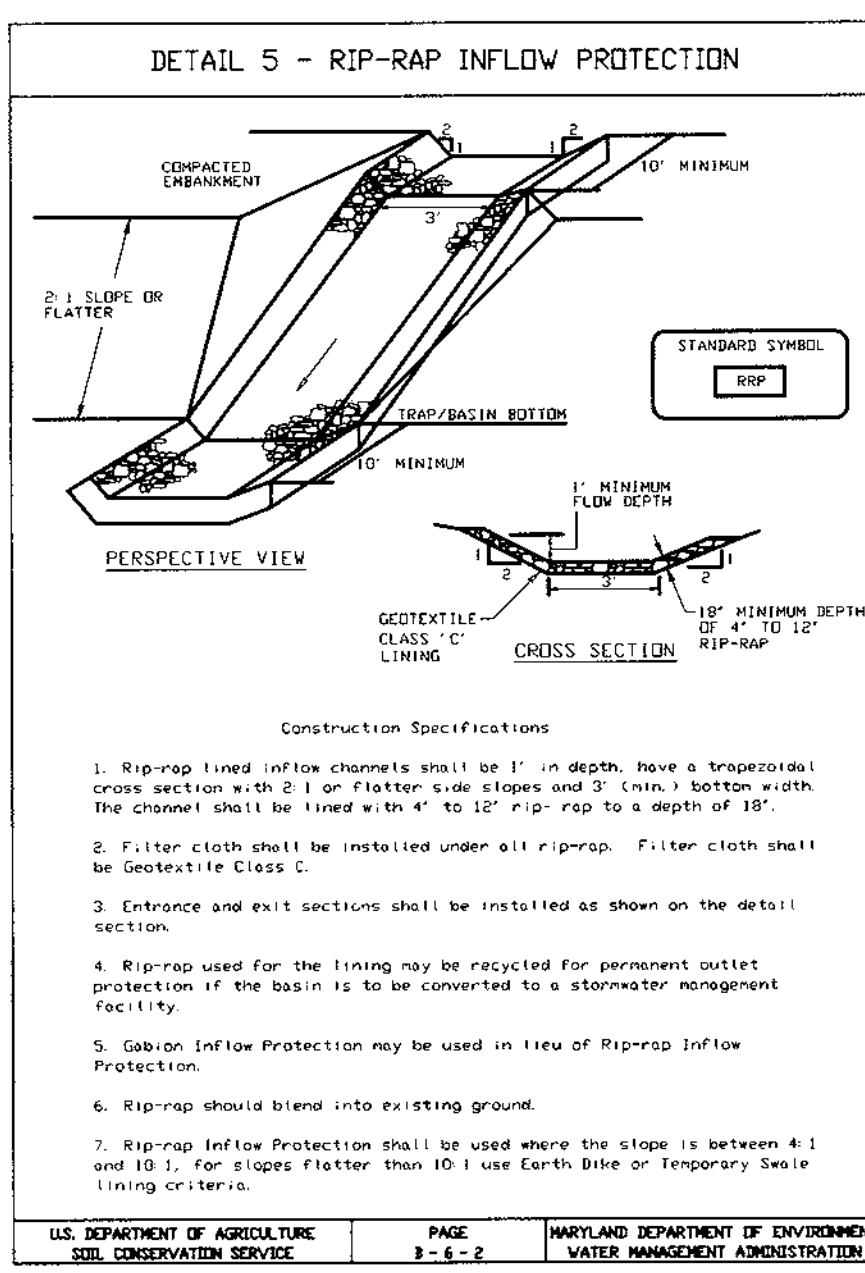
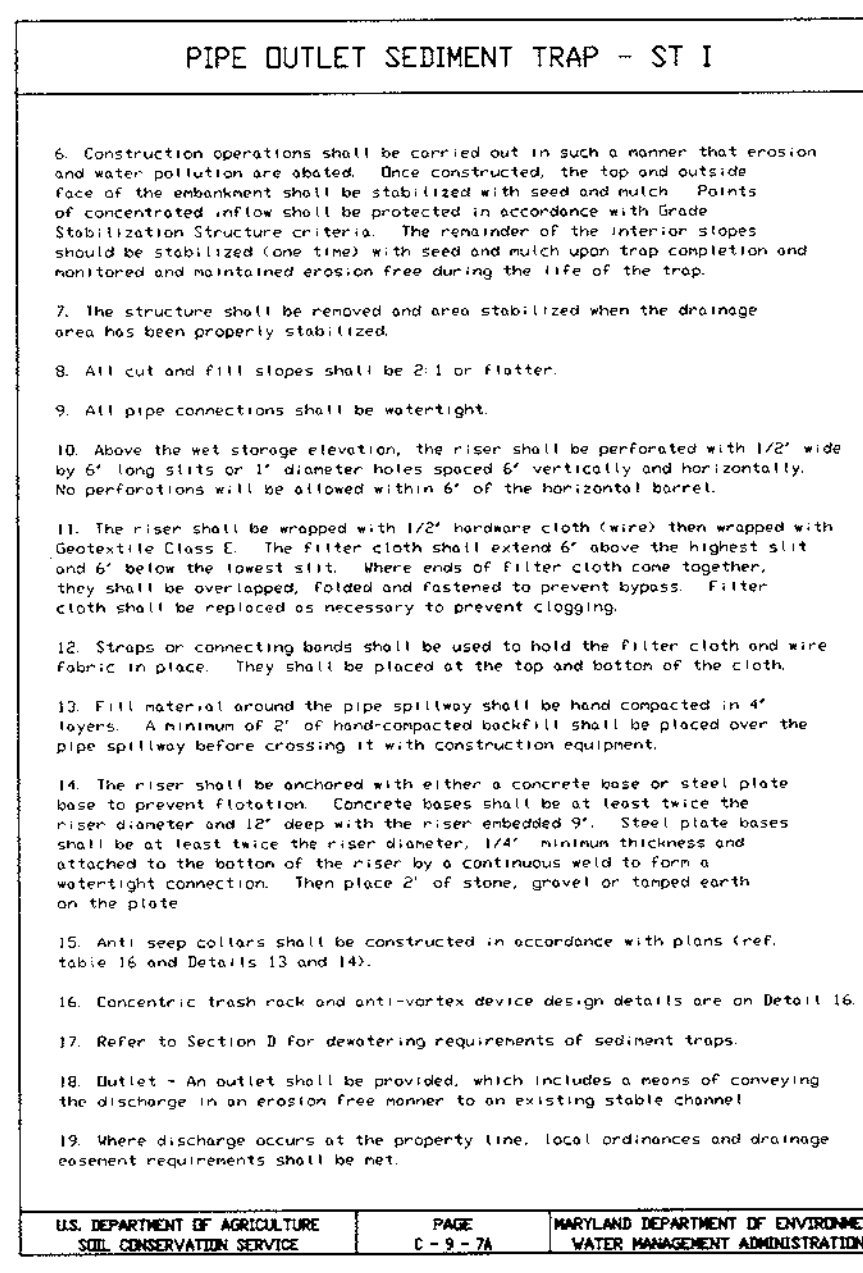
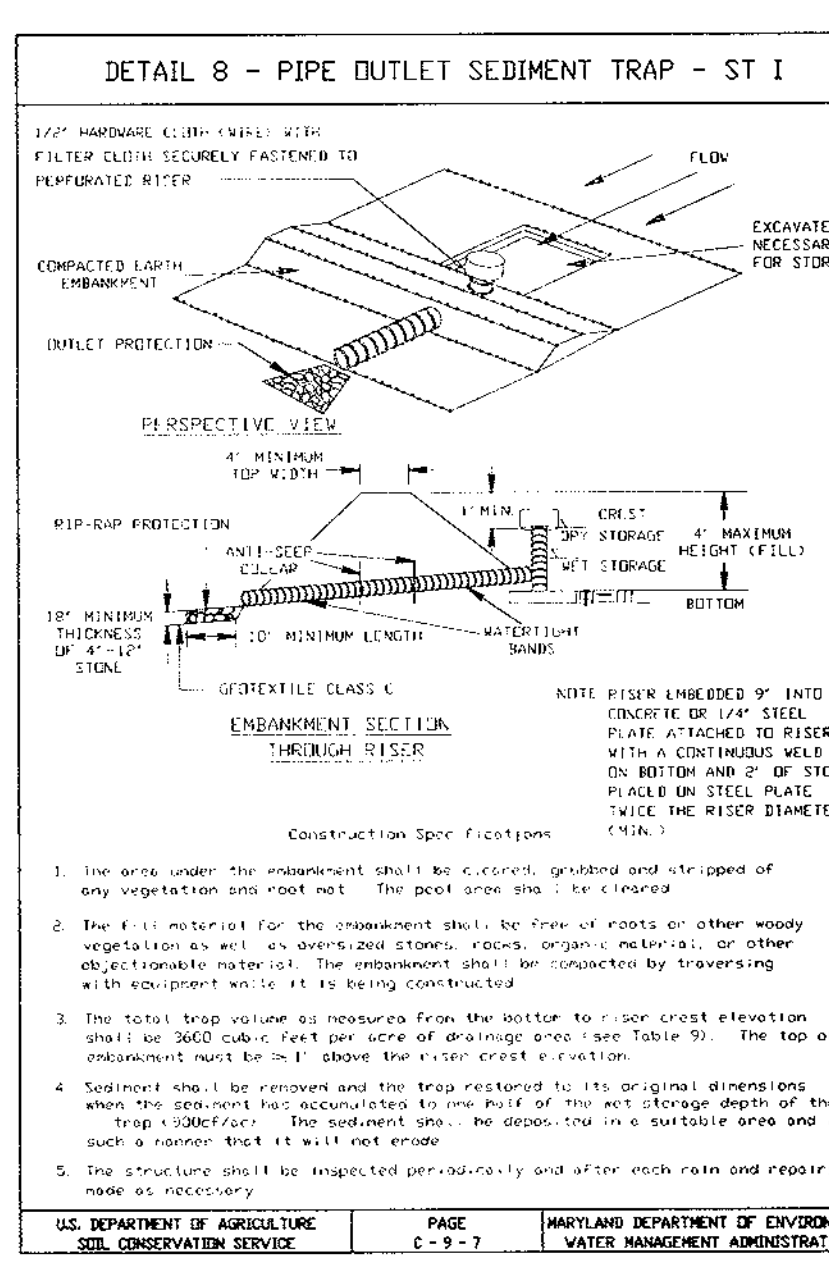
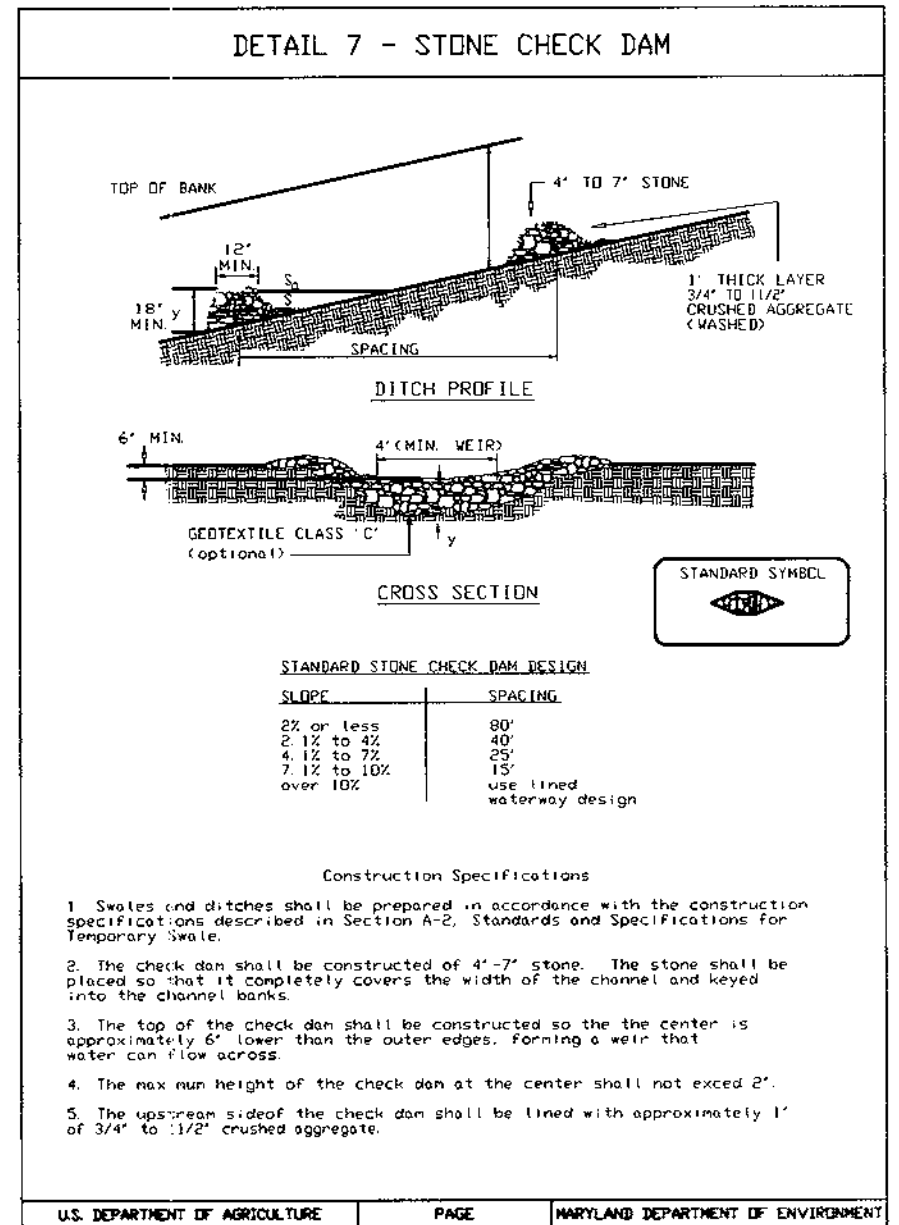
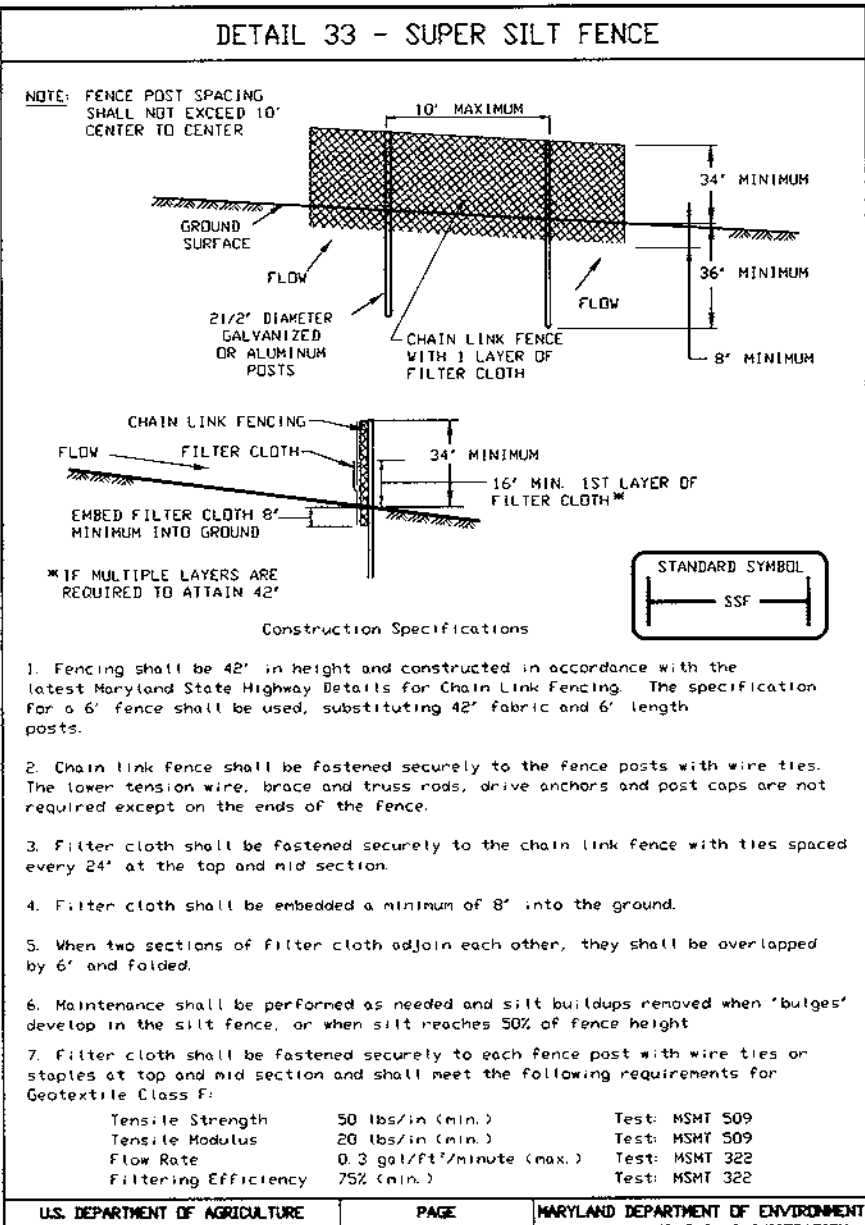
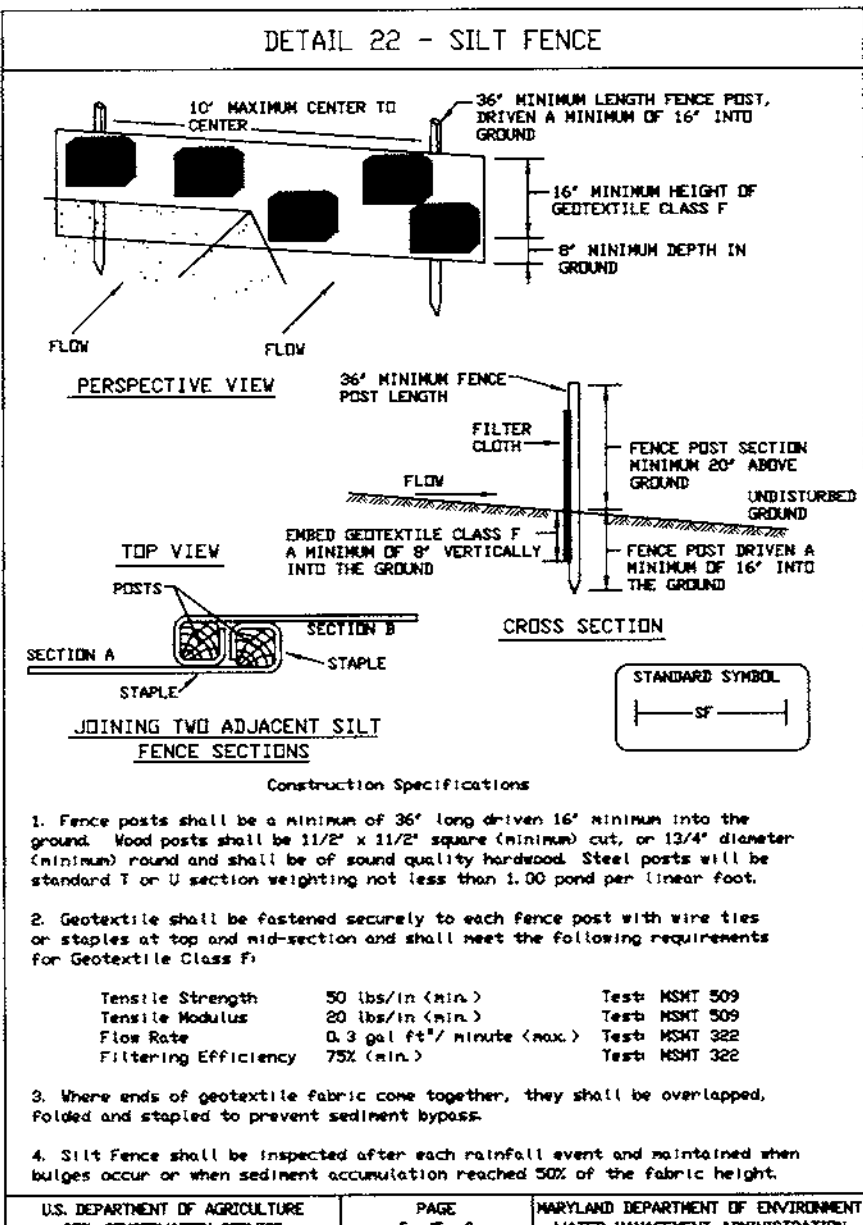
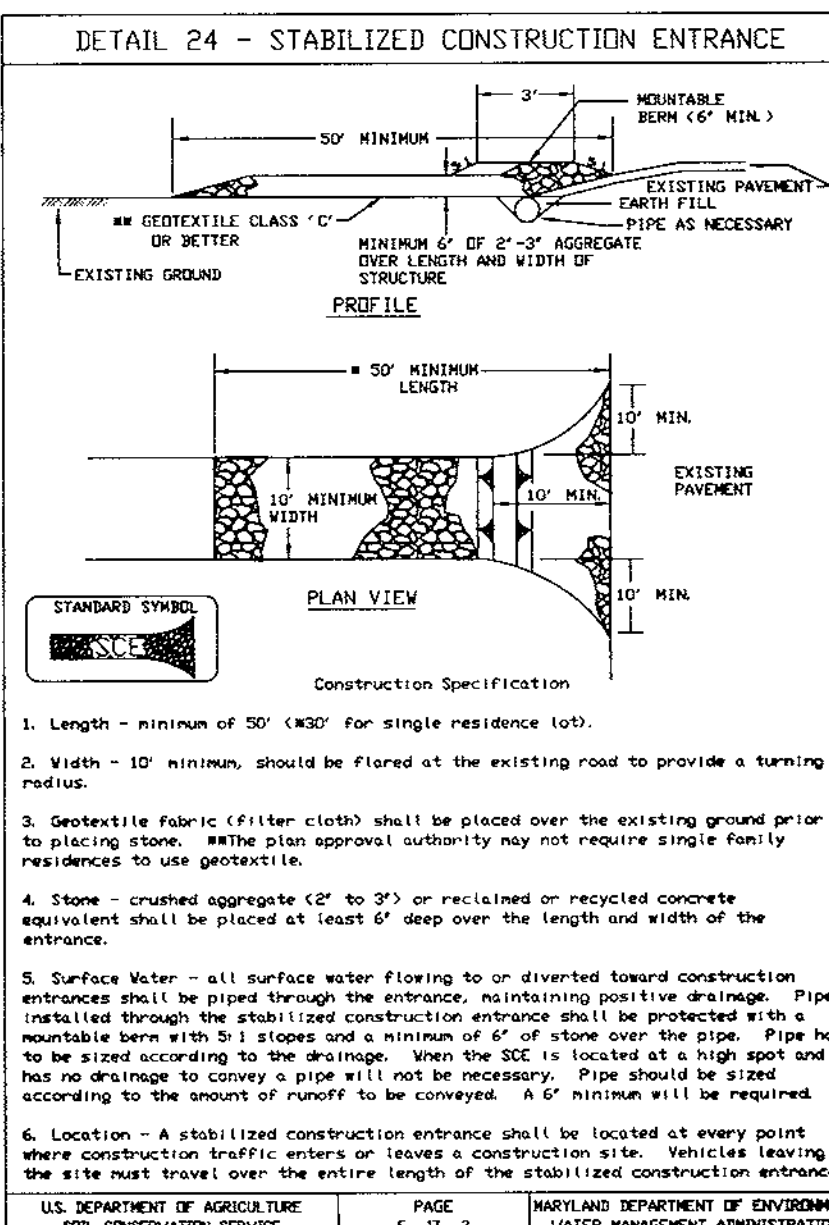


OWNER:
ARCHSTONE COMMUNITIES TRUST
6631-A OLD DOMINION DRIVE
SUITE 201
McLEAN, VA 22101
703-883-3545

SEDIMENT & EROSION PLAN - FINAL
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989

| | | |
|-----------|----------------|-------------------|
| SCALE | ZONING | G. L. W. FILE No. |
| 1"=40' | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| 3/03/2000 | 36-2 | 20 OF 24 |

| | | | |
|------|----------|----|-------|
| DATE | REVISION | BY | APPR. |
| | | | |



SEDIMENT CONTROL NOTES

- Apply for grading permit and arrange for on-site pre-construction meeting.
- Stabilize limits of disturbance based on initial Sediment Control Plan and install sediment control devices for initial construction.
- After initial sediment control devices have been installed, the contractor may begin construction of perimeter retaining walls and temporary retaining walls up to rough grade.
- As full progress, construct storm drain from HW-44 at Lake Road to HW-88 and connect to storm drain outlet from library site block at HW-88.
- No other construction is permitted until storm drain is constructed and clean runoff from library site is diverted to the lake.
- Once path is installed, relocate silt fence to uphill side of path and proceed with further grading.
- Clear and grade entire site to appropriate subgrade for roadways and buildings.
- Obtain building permits for Buildings 1 through 7. Begin installation of storm drain system, sidewalks, concrete curb and gutter, then install base paving.
- No sediment control devices are required by the installation of sidewalks and storm drains.
- Stabilize all disturbed areas in accordance with Temporary Seeding Notes that are not to be bare ground or undergoing building construction.
- Stabilize all disturbed areas in accordance with Temporary Seeding Notes that are not to be bare ground or undergoing building construction.
- Building 1 through 7 and Parking Garage 1, one shown as Phase II construction. Sediment control devices called out as Phase II will be implemented when work begins.
- Install the sidewalks and necessary retaining walls in the areas of Building 1 through 7. All retaining areas, including construction activities, but not retaining walls, paved or installed shall be stabilized in accordance with the Permanent Seeding Notes.
- After stabilization has taken place, construct underground water quality facilities along with appropriate storm drains and connect to storm drain system.
- Contractor is to insure that no construction activities take place until stabilization or underground water quality facilities.
- Once permission is granted by the Sediment Control Inspector, remove any remaining sediment control devices no longer needed.
- Install surface course paving and landscaping.

SEDIMENT CONTROL NOTES

- A minimum of 24 hours notice must be given to the Howard County Office of Inspection and Permits prior to the start of any construction. (410) 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 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL.
- Following initial soil disturbance or redistribution, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes and perimeter slopes and all slopes greater than 3:1, b) 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, sod, temporary seeding and mulching (Sec. 6).
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 permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:

| | |
|------------------------------------|-----------------|
| Total Area of Site | 11.77 Acres |
| Area Disturbed | 12.50 Acres |
| Area to be roofed or paved | 9.38 Acres |
| Area to be vegetatively stabilized | 3.12 Acres |
| Total Cut | 57,000 Cu. Yds. |
| Total Fill | 57,000 Cu. Yds. |

 Off-site waste/borrow area location: N/A
- 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 control must be provided, if deemed necessary by the Howard County DPW Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, 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 inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Trenches for the construction of utilities is limited to 3 pipe lengths or that which shall be backfilled and stabilized within one working day, whichever is shorter.

DATE:

DRAWINGS ISSUED TO:

ASN DEVELOPMENT OFFICE
 ASN PRODUCTION OFFICE
 GENERAL CONTRACTOR

PERMANENT SEEDING NOTES

Apply to graded or cleared area 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 (unless previously loosened).

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

- Preferred - Apply 2 tons per acre dolomitic limestone (92 lbs/1000 square feet) 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 ureaform fertilizer (9 lbs/1000 sq ft).
- Acceptable - Apply 2 tons per acre dolomitic 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 thru April 30, and August 1 thru October 15, seed with 60 lbs per acre (1.4 lbs/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 (.05 lbs/1000 sq ft) of weeping lovegrass. During the period of October 16 thru February 28, protect site by Option (1) 2 tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option (2) Use sod. Option (3) Seed with 60 lbs/acre Kentucky 31 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq ft) of unrotted, weed-free, small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 ft 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.

APPROVED PLANNING BOARD OF HOWARD COUNTY

DATE: SEPT. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

David M. Smith 2/28/00
County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

John W. Smith 4/15/00
Date

Andy Hamilton 4/14/00
Date

Chris Williams 3/21/00
Date

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT

David M. Smith 2/28/00
County Health Officer Date

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APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

John W. Smith 4/15/00
Date

Andy Hamilton 4/14/00
Date

Chris Williams 3/21/00
Date

ENGINEER'S CERTIFICATE

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.

John W. Smith 2/28/00
Date

DEVELOPER'S/BUILDER'S CERTIFICATE

"We certify that all development and/or 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 Maryland Department of the Environment Approval Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the HSCD."

John W. Smith 2/28/00
Date

TEMPORARY SEEDING NOTES

Apply to graded or cleared areas likely to be redistributed 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 (unless previously loosened).

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

Seeding: For periods March 1 thru April 30 and from August 15 thru October 15, seed with 2-1/2 bushel per acre of annual ryegrass (3.2 lbs./1000 sq ft.). For the period May 1 thru August 14, seed with 3 lbs per acre of weeping lovegrass (.07 lbs/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/1000 sq ft) of unrotted, weed-free, small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal per acre (5 gal/1000 sq ft) of emulsified asphalt on flat areas. On slopes 8 ft or higher, use 348 gal per acre (8 gal/1000 sq ft) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

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

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Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for rate and methods not covered.

GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 FAX: 301-889-1820 DC/MV: 301-989-2524 FAX: 301-421-4186

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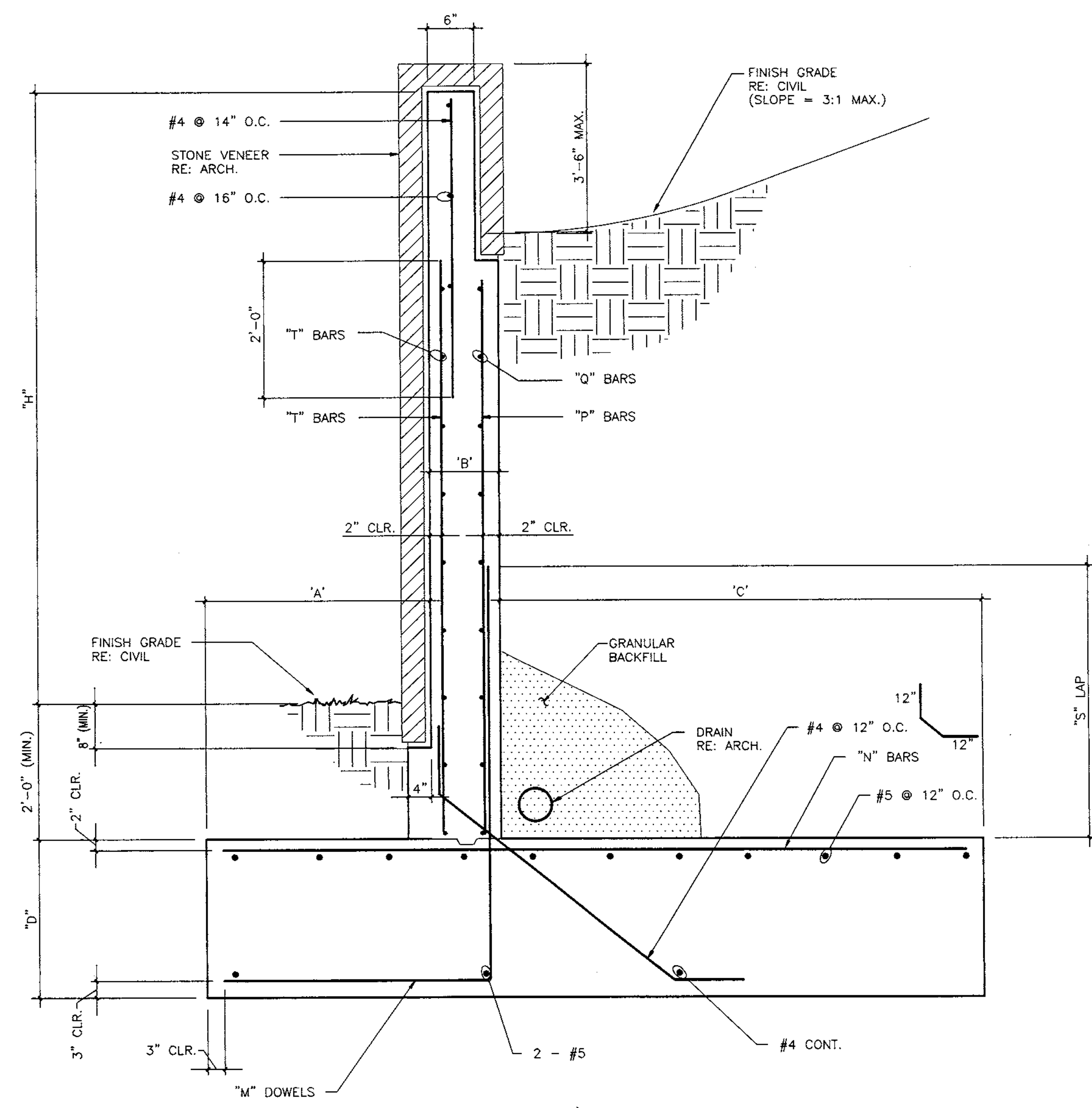
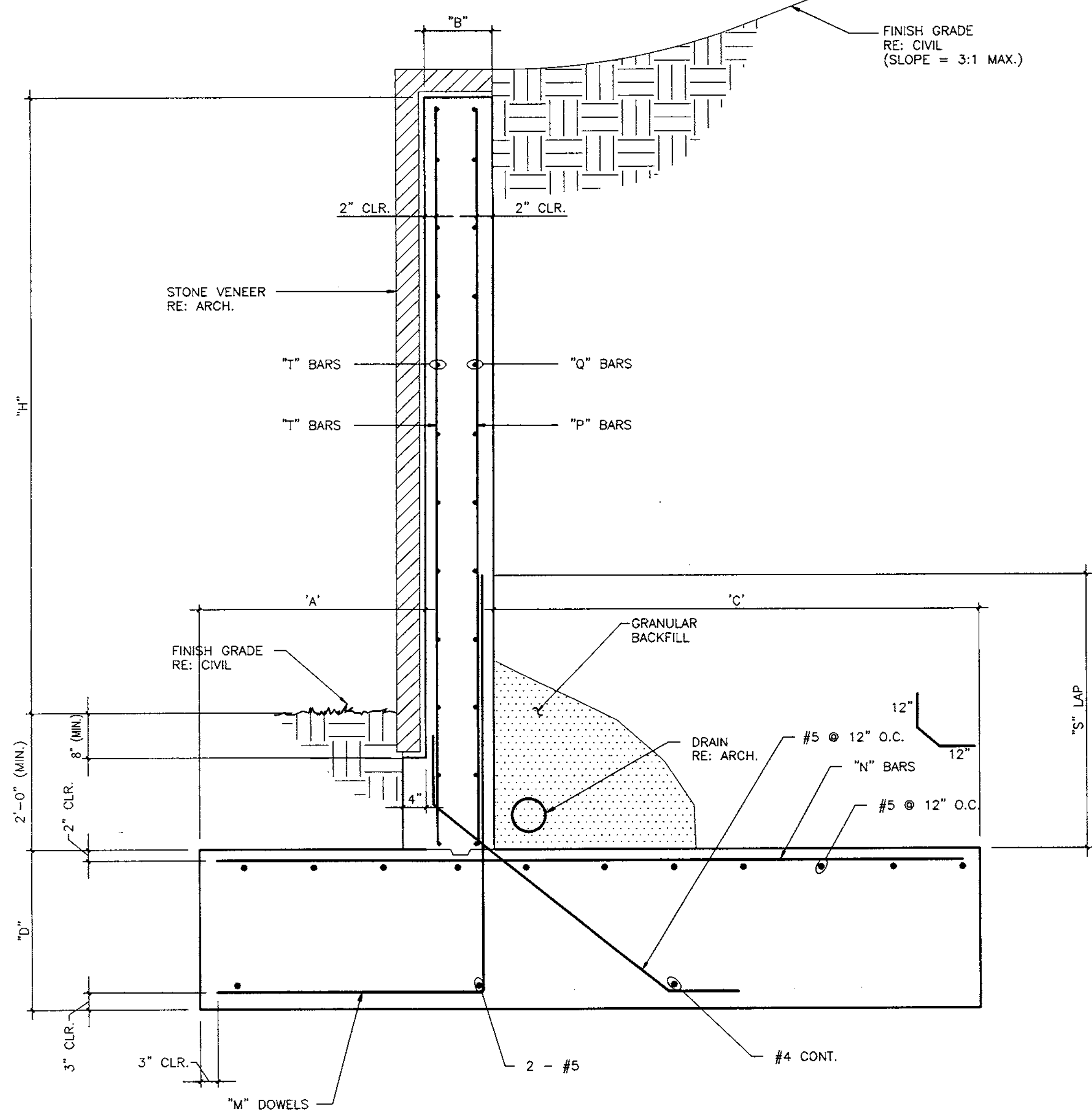
OWNER:

ARCHSTONE COMMUNITIES TRUST
6631-A OLD DOMINION DRIVE
SUITE 201
MCLEAN, VA 22101
703-883-3545

SEDIMENT & EROSION CONTROL - NOTES, SPECIFICATIONS & DETAILS

COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989

SCALE: AS SHOWN
ZONING: NT
G. L. W. FILE No.: 98087
DATE: 3-03-2000
TAX MAP - GRID: 36 - 2
SHEET: 21 OF 24



SECTION at RETAINING WALL (2)

SECTION at RETAINING WALL (1)

DESIGN CRITERIA BUILDING CODE BOCA 1996
LATERAL EARTH PRESSURE 45 PCF

CONCRETE SPECIFICATIONS:

1. CONCRETE PROTECTION FOR REINFORCEMENT OF POURED-IN-PLACE MEMBERS; (SEE SECTION 7.7 ACI 318 LATEST EDITION).
2. PORTLAND CEMENT SHALL CONFORM TO ASTM C150, TYPE I. WATER/CEMENT RATIO = .52 MAXIMUM. MINIMUM OF FIVE SACK PORTLAND CEMENT PER CUBIC YARD.
3. NO CONCRETE ADMIXTURES SUCH AS FLYASH OR "NU-CEM" SHALL BE PERMITTED.

A. SLAB ON GRADE:

| STRUCTURAL ELEMENT | MINIMUM COVER (INCHES) | CONCRETE STRENGTH (PSI) AT 28 DAYS |
|--------------------|------------------------|------------------------------------|
| FOOTINGS | 3" ALL SURFACES | 3000 |
| RETAINING WALLS | 1" TOP | 3000 |

2. ALL RETAINING WALLS TO BE SHORED UNTIL WALL HAS REACHED 100% OF ITS DESIGN STRENGTH.

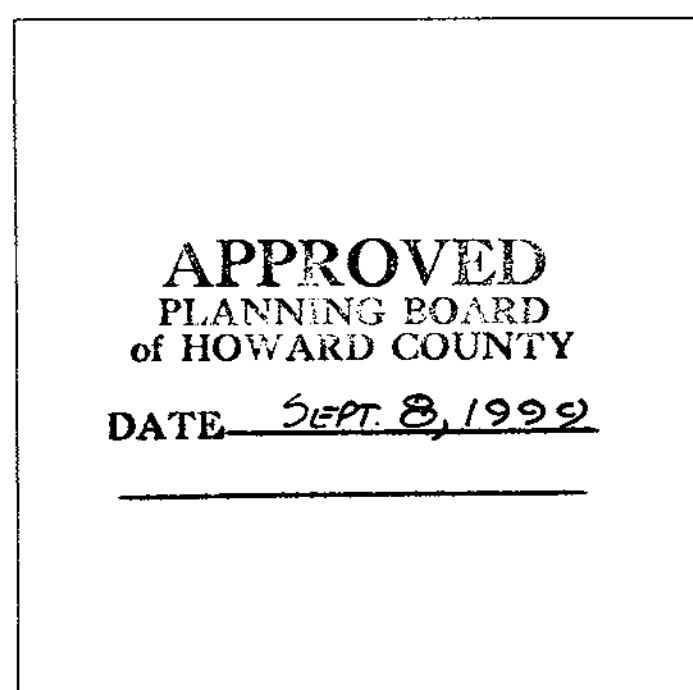
GENERAL NOTES:

1. THE FOLLOWING SPECIFICATIONS ARE AN OUTLINE OF MINIMUM REQUIREMENTS AND THEIR APPLICATION. MANUFACTURER SPECIFICATION AND LOCAL CODE REQUIREMENTS, WHEN IN EXCESS OF MINIMUM SPECIFICATION, SHALL CONTROL. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REVIEW AND SUBMIT ALL SHOP DRAWINGS AND REPORT ALL DOCUMENT DISCREPANCIES TO THE STRUCTURAL ENGINEER PRIOR TO FABRICATION OR ERECTION.
 2. AT CONSTRUCTION ISSUE, THESE DRAWINGS REPRESENT STRUCTURAL COMPONENTS IN THEIR FINAL AND FINISHED STATE. CONSTRUCTION PROCEDURES, METHODS, SAFETY PRECAUTIONS OR MECHANICAL REQUIREMENTS USED TO ERECT THEM ARE THE SOLE RESPONSIBILITY OF THE GENERAL CONTRACTOR OR SUBCONTRACTOR DOING THE WORK.
- CONCRETE NOTES:
1. FOOTINGS SHALL BEAR ON SOIL SUITABLE FOR SUPPORTING 2000 P.S.F. NET ALLOWABLE BEARING. IF QUESTIONABLE SOIL IS ENCOUNTERED, THE STRUCTURAL ENGINEER SHALL BE NOTIFIED IMMEDIATELY. RE: REPORT # 1376MD DATED NOV. 2, 1998 BY ROBERT B. HALTER ALL RECOMMENDATIONS THEREIN THAT RELATE TO THE WORK SHOWN ON THESE DRAWINGS MUST BE FOLLOWED.
 2. DETAILING, FABRICATION AND PLACING OF REINFORCING STEEL SHALL BE IN ACCORDANCE WITH ACI 315-90, "ACI DETAILING MANUAL - 1990".
 3. UNLESS OTHERWISE NOTED, ALL REINFORCING BARS #4 AND LARGER SHALL CONFORM TO ASTM A-615 GRADE 60 (60,000 PSI YIELD) AND ALL #2 AND #3 BARS SHALL CONFORM TO GRADE 40 (40,000 PSI YIELD).
 4. ALL CONCRETE WORK SHALL CONFORM TO THE "A.C.I. BUILDING CODE", ACI 318 LATEST EDITION.
 5. UNLESS OTHERWISE NOTED, CONCRETE PROTECTION FOR REINFORCING SHALL BE AS SPECIFIED IN THE "A.C.I. BUILDING CODE", (ACI 318 LATEST EDITION).
 6. EXCAVATION FOR FOOTINGS SHALL BE NEAT.
 7. FOOTINGS SHALL BE POURED IMMEDIATELY AFTER EXCAVATION.
 8. ALL REINFORCING STEEL MARKED "CONTINUOUS" SHALL BE LAPPED PER THE "REINFORCING SPLICE SCHEDULE" AT SPLICES AND AROUND CORNERS OR INTERSECTIONS WITH A STANDARD 90 DEGREE BEND ON CORNER BARS. LAP WELDED WIRE MESH ONE FULL MESH AT SIDE AND END LAPS.
 9. REFER TO ARCHITECTURAL, ELECTRICAL AND MECHANICAL DRAWINGS FOR ANY OTHER ADDITIONAL SLEEVES, ANCHORS, VENT OPENINGS, ETC., NOT SHOWN ON STRUCTURAL PLANS THAT MIGHT BE REQUIRED.
 10. UNLESS NOTED OTHERWISE ON PLAN, CONTROL JOINTS TO BE LOCATED AT APPROXIMATELY 400 SQ. FT. GRIDS. ACTUAL LOCATION TO BE DETERMINED BY OWNER OR CONTRACTOR. CONTROL JOINT TO BE ZIP STRIP OR EQUAL.

RETAINING WALL SCHEDULE

TYPICAL FOR BOTH WALL TYPES

| 'H' | 'A' | 'B' | 'C' | 'D' | REINFORCING | | | | | |
|--------|-------|-----|--------|-----|---------------|---------------|---------------|---------------|---------|---------------|
| | | | | | "M" DOWELS | "N" BARS | "P" BARS | "O" BARS | "S" LAP | "T" BARS |
| 3'-0" | 1'-0" | 8" | 2'-4" | 12" | #5 @ 18" O.C. | #5 @ 18" O.C. | #5 @ 18" O.C. | #4 @ 12" O.C. | 1'-11" | - |
| 5'-0" | 1'-3" | 8" | 3'-4" | 12" | #5 @ 12" O.C. | #5 @ 12" O.C. | #5 @ 12" O.C. | #4 @ 12" O.C. | 1'-11" | - |
| 7'-0" | 1'-6" | 12" | 5'-5" | 12" | #5 @ 12" O.C. | #5 @ 12" O.C. | #5 @ 12" O.C. | #5 @ 12" O.C. | 1'-11" | #4 @ 18" O.C. |
| 9'-0" | 2'-0" | 13" | 7'-5" | 13" | #6 @ 9" O.C. | #5 @ 9" O.C. | #6 @ 9" O.C. | #6 @ 12" O.C. | 2'-6" | #4 @ 18" O.C. |
| 11'-0" | 3'-3" | 15" | 8'-10" | 15" | #7 @ 9" O.C. | #6 @ 9" O.C. | #7 @ 9" O.C. | #6 @ 11" O.C. | 3'-0" | #4 @ 18" O.C. |



APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS, HOWARD COUNTY HEALTH DEPARTMENT
County Health Officer MK Date 3/28/00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Director Date 4/15/00
Chief, Division of Land Development Date 5/14/00
Chief, Development Engineering Division MK Date 3/21/00

DATE: _____

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR

OWNER
ARCHSTONE COMMUNITIES TRUST
6631-A OLD DOMINION DRIVE
SUITE 201
MCLEAN, VA 22101
703-883-3545

Project
ARCHSTONE COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989
HOWARD COUNTY, MARYLAND
CLARKSVILLE ELECTION DISTRICT No. 5
ARCHSTONE COMMUNITIES

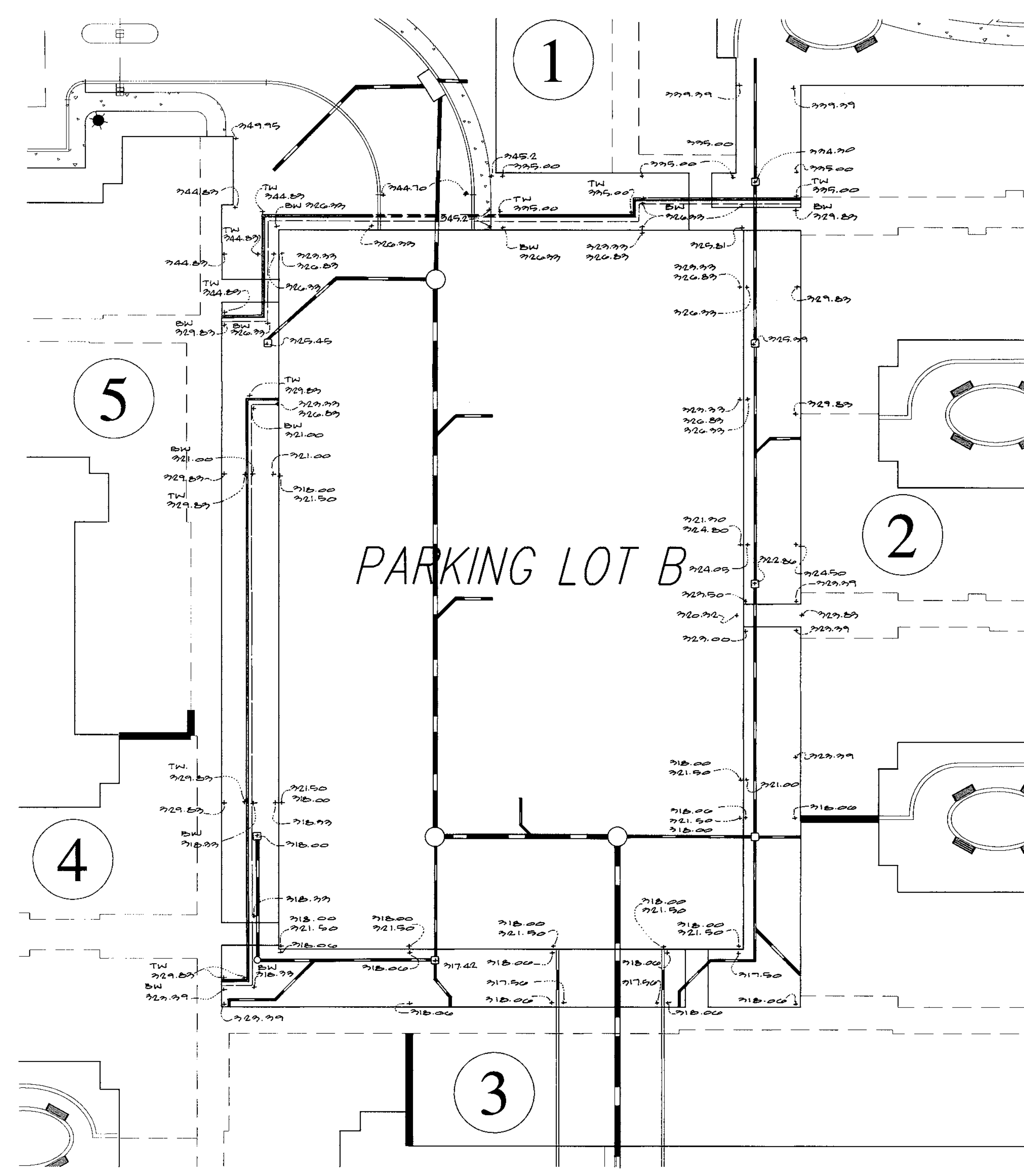
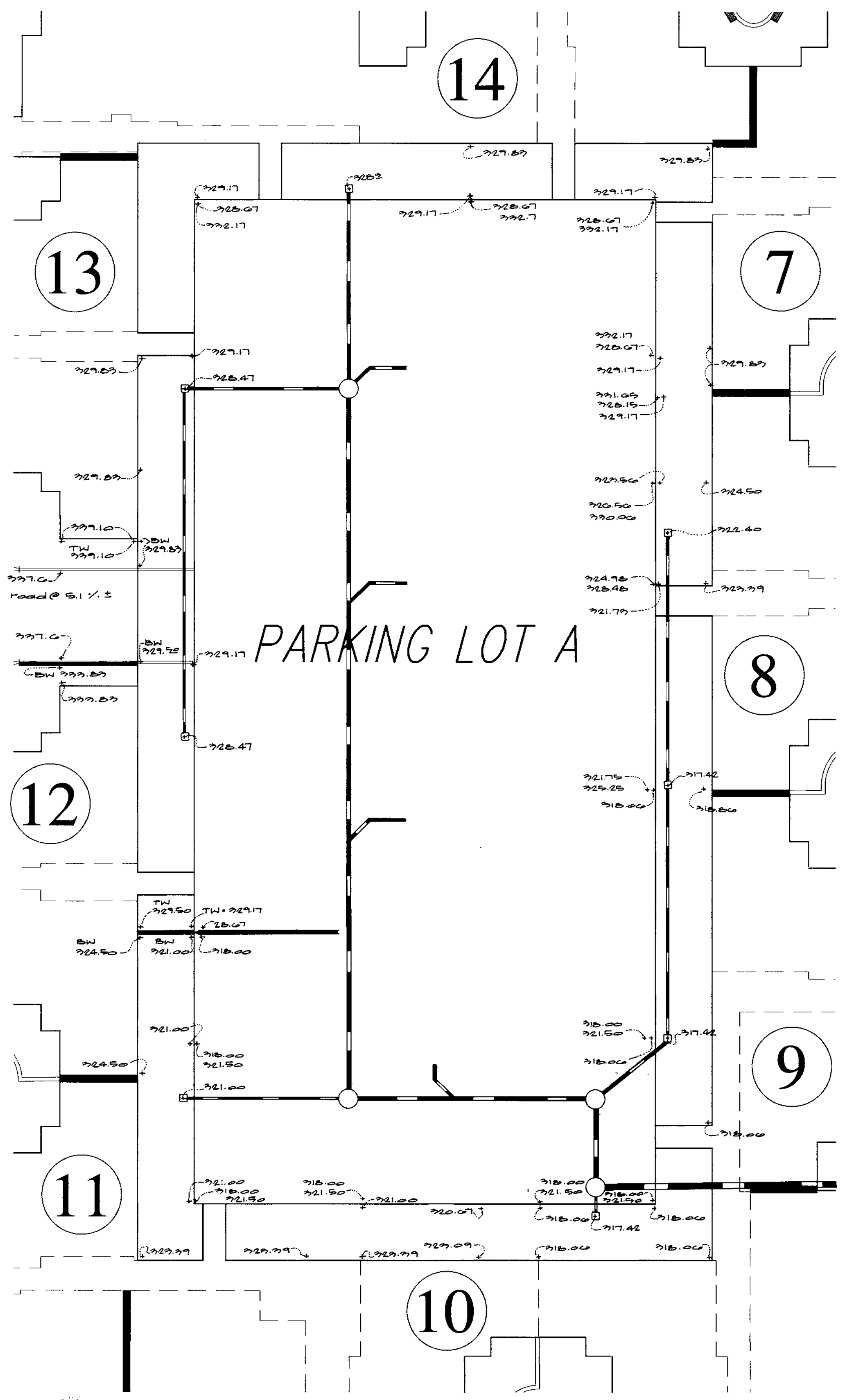
SCA
CONSULTING ENGINEERS
CORPORATE OFFICE
10101 SOUTHWEST FREEMAN, SUITE 600
HOUSTON, TEXAS 77074-1126
713/779-7252 * 1-800-427-7252 * FAX: 713/779-1173
LOUISVILLE, KENTUCKY (502) 426-6789 ORLANDO, FLORIDA (407) 893-6200

ISSUE DATES
Bid Issue 03-02-00
Permit Issue 03-02-00
Construction Issue XXXXX

Revisions

Drawn RJC
Check
Date 3-03-2000

Project 19529
Sheet 22 OF 24



DATE:

DRAWINGS ISSUED TO:

ASN DEVELOPMENT OFFICE
 ASN PRODUCTION OFFICE
 GENERAL CONTRACTOR

APPROVED
 PLANNING BOARD
 of HOWARD COUNTY
 DATE SEPT. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT

Dirk M. ... 3/28/00
 County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

... 4/13/00
 Director Date

... 4/4/00
 Chief, Division of Land Development Date

... 2/21/00
 Chief, Development Engineering Division Date



GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE, SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 22866
 TEL: 301-421-4024 BALT: 410-980-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

| DATE | REVISION | BY | APP'R. |
|------|----------|----|--------|
| | | | |

DES. DEV. DRN. GPM. CHK. DEV.



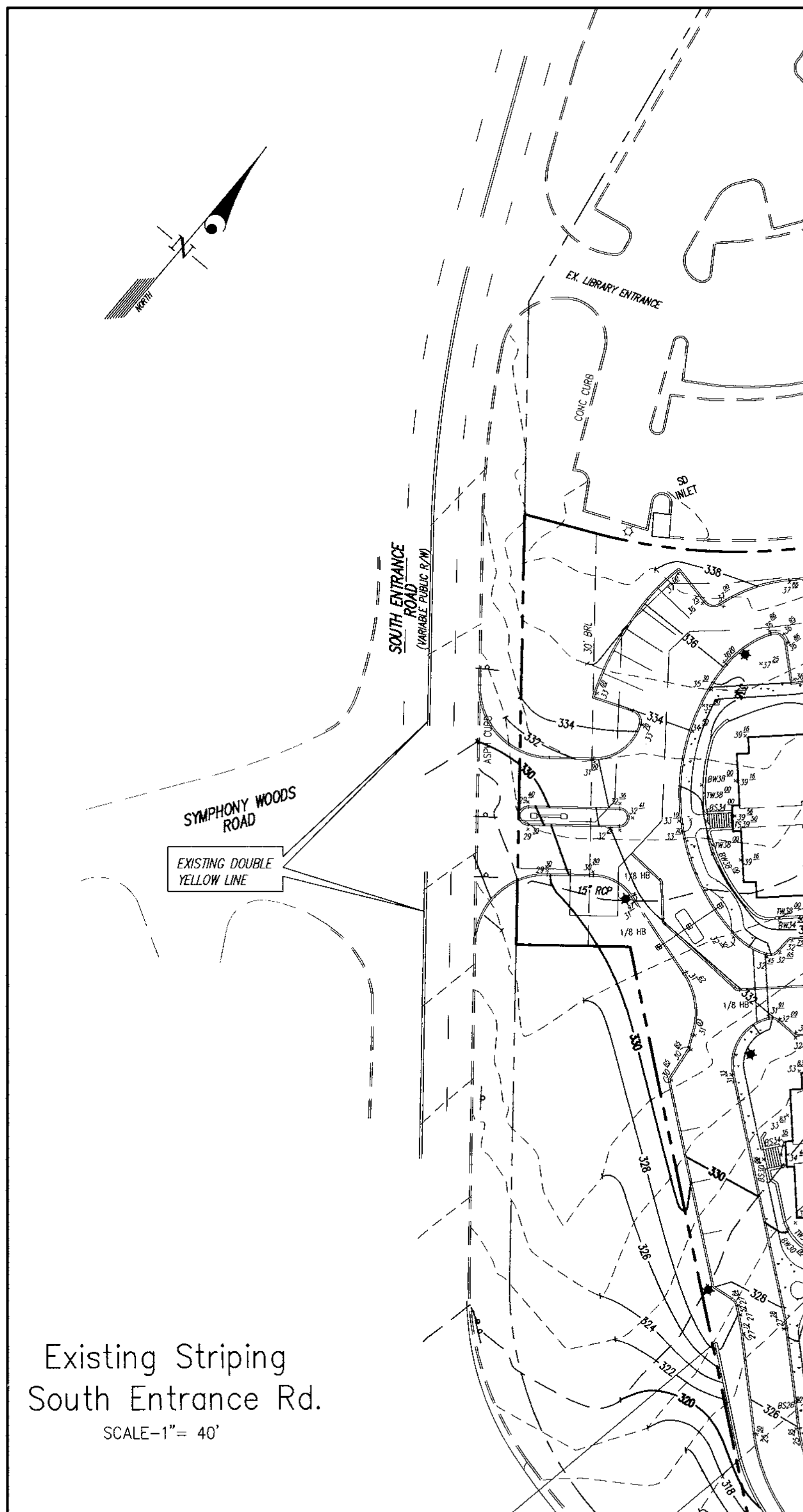
OWNER:
 ARCHSTONE COMMUNITIES TRUST
 6631-A OLD DOMINION DRIVE
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INTERMEDIATE RETAINING WALL DETAILS
COLUMBIA TOWN CENTER
 SECTION 1 AREA 3
 PARCEL "A-1"
 PLAT No. 7989

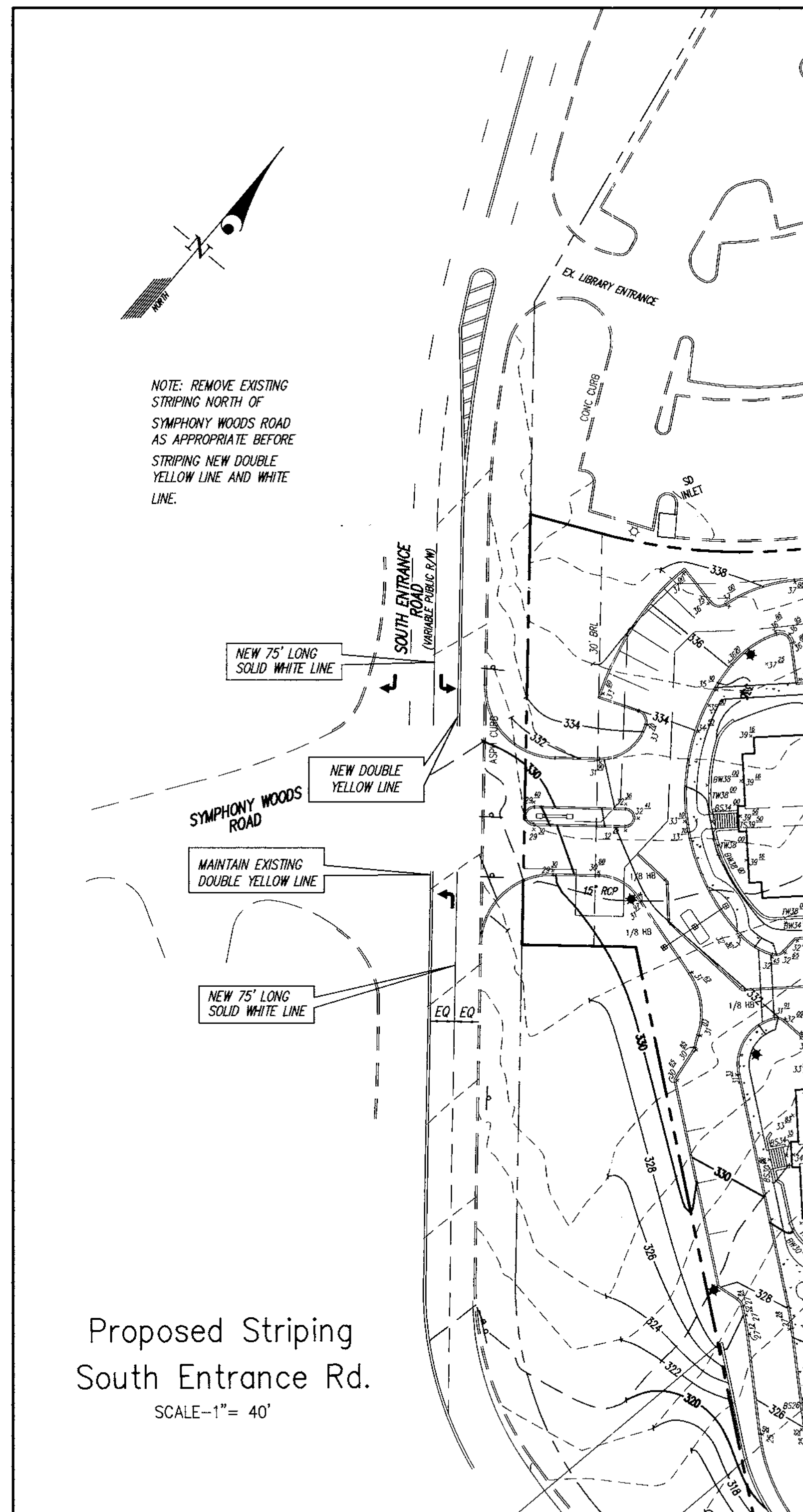
CLARKSVILLE ELECTION DISTRICT No. 5

| | | |
|----------------------|--------------------------|----------------------------|
| SCALE 1" = 20' | ZONING NT | G. L. W. FILE NO. 98087 |
| DATE MAR. 3, 2000 | TAX MAP - GRID 36 - 2 | SHEET 23 OF 24 |

HOWARD COUNTY, MARYLAND



Existing Striping
South Entrance Rd.
SCALE-1"= 40'



Proposed Striping
South Entrance Rd.
SCALE-1"= 40'

DATE:

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE SEPT. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Dina M. R. [Signature] 3/25/00
County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
[Signature] 4/5/00
Date
[Signature] 4/4/00
Chief, Division of Land Development Date
[Signature] 3/21/00
Chief, Development Engineering Division Date



GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 FAX: 301-421-4186

| DATE | REVISION | BY | APP'R. |
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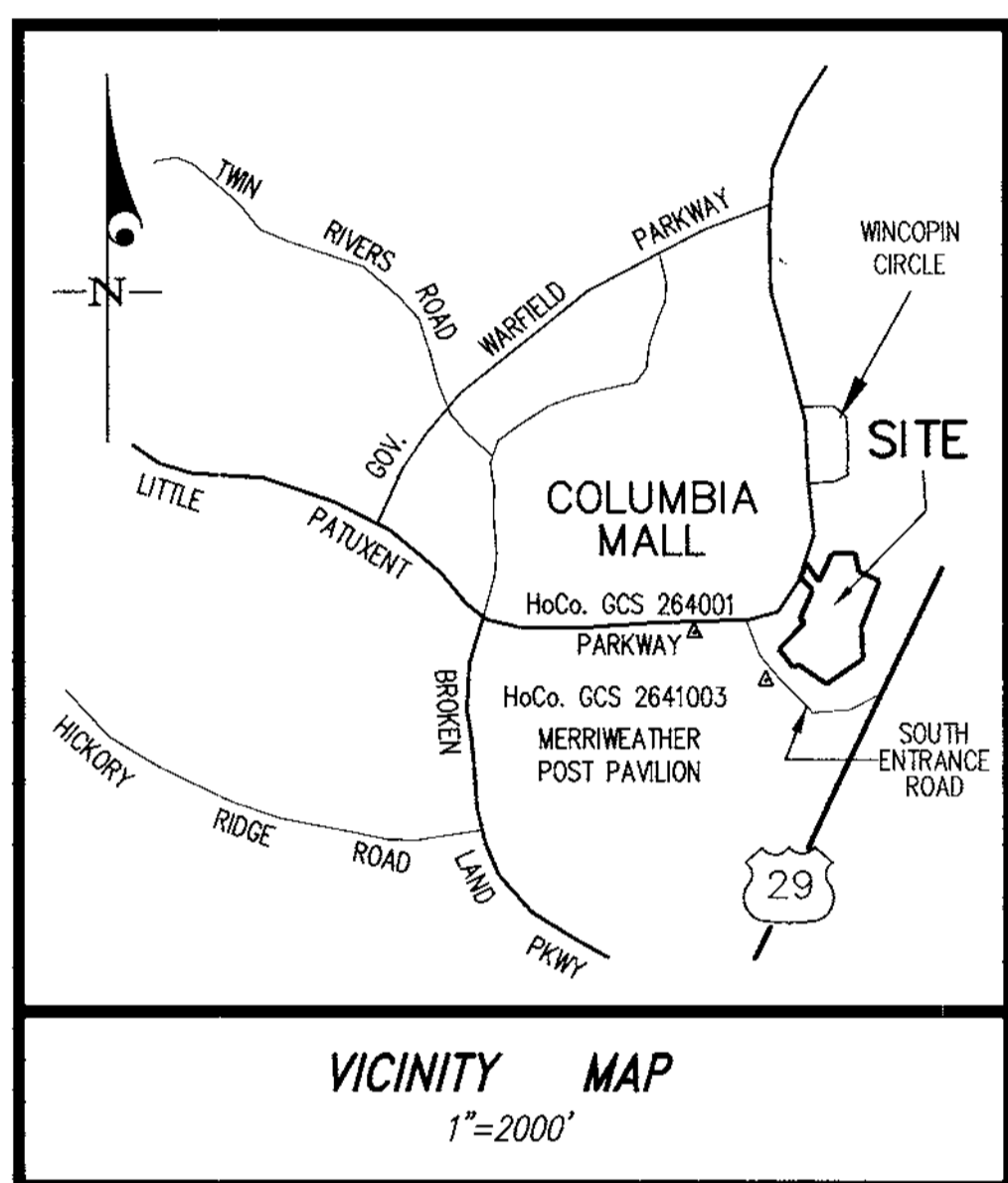
OWNER:
ARCHSTONE COMMUNITIES TRUST
6631-A OLD DOMINION DRIVE
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MCLEAN, VA 22101
703-883-3545

SOUTH ENTRANCE ROAD STRIPING PLAN AND DETAILS
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989
CLARKSVILLE ELECTION DISTRICT No. 5
HOWARD COUNTY, MARYLAND

| SCALE | ZONING | G. L. W. FILE No. |
|-----------|----------------|-------------------|
| AS SHOWN | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| 3-03-2000 | 36 - 2 | 24 OF 24 |

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 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.
- PROJECT BACKGROUND:
 LOCATION: TAX MAP #36, GRID 2, PARCEL A-1
 COLUMBIA TOWN CENTER, SECTION 1, AREA 3
 ZONING: NT
 ELECTION DISTRICT: 5TH
 SITE AREA: 11.77± AC
 REC. REF.: PLAT NO. 7989
- 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 THE FACE OF CURB OR FACE OF BUILDING UNLESS OTHERWISE NOTED. DIMENSIONS ARE MEASURED PERPENDICULAR OR RADially BETWEEN ITEMS UNLESS OTHERWISE NOTED.
- ON-SITE EXISTING TOPOGRAPHY AND FEATURES ARE FROM SURVEY BY GUTSCHICK, LITTLE & WEBER, P.A. DONE IN 10/98.
- COORDINATES ARE BASED ON RECORDED PLAT #7989 WHICH USES HOWARD COUNTY GEODETIC CONTROL STA. NOS. 2640001 AND 2641003.
- PUBLIC WATER AND SEWER IS TO BE UTILIZED (LITTLE PATUXENT DRAINAGE AREA). CONTRACT NOS. 169-S, 286 W&S, 167-W AND 24-3779-D.
- STORMWATER MANAGEMENT IS PROVIDED BY ON-SITE PRIVATE FACILITY.
- ALL STORM DRAINS PROPOSED UNDER THIS SDP ARE PRIVATE.
- INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM A SURVEY BY DMW, INC. (2/97) AND CONTRACT NOS. 169-S, 286 W&S, 167-W AND 24-3779-D BUT THE CONTRACTOR MUST DETERMINE THAT EXACT LOCATION BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS WELL IN ADVANCE OF CONSTRUCTION.
- ALL PROPOSED RAMPS SHALL BE IN ACCORDANCE WITH CURRENT A.D.A. STANDARDS. MAXIMUM SIDEWALK CROSS SLOPE SHALL BE (2%) TWO PERCENT. PROVIDE A MIN. OF (5'x5') FIVE FOOT BY FIVE FOOT LEVEL (2% MAX.) LANDING AT THE TOP AND BOTTOM OF ALL RAMPS AND BUILDING ENTRANCES AND EXITS.
- ALL DRIVEWAYS AND PARKING TO BE PRIVATELY OWNED AND MAINTAINED.
- ANY DAMAGE TO COUNTY OWNED RIGHT-OF-WAY TO BE CORRECTED AT THE CONTRACTOR'S EXPENSE.
- TRENCH BEDDING FOR STORM DRAINAGE STRUCTURES SHALL BE IN ACCORDANCE WITH HOWARD COUNTY STANDARD GZ.D1. CLASS "C" BEDDING, UNLESS OTHERWISE NOTED.
- CUTTER OF CURBS SHALL BE PITCHED TO CONFORM TO ADJACENT DRAINAGE PATTERNS FOR ASPHALT PAVING.
- ALL CURB FILLETS ARE 5' RADIUS UNLESS NOTED OTHERWISE. CURB SPOT ELEVATIONS ARE AT THE FLOW LINE, UNLESS NOTED OTHERWISE.
- THERE ARE NO KNOWN GRAVE SITES OR CEMETERIES ON THIS SITE.
- ALL DOWNSPOUT DRAINS SHALL BE CONNECTED TO THE SITE'S PRIVATE STORM DRAIN SYSTEM.
- WETLAND DELINEATION WAS PERFORMED BY MORRIS ENVIRONMENTAL ASSOCIATES, INC. (OCT, 1998) AND VERIFIED BY THE COE. NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE WETLAND BUFFER EXCEPT AREAS PERMITTED FOR DISTURBANCE BY THE DEPARTMENT OF THE ENVIRONMENT AND THE HCOFZ.
- THE CONTRACTOR SHALL PROVIDE A JOINT IN ALL SEWER MAINS WITHIN 2'-0" OF EXTERIOR MANHOLE WALLS.
- ALL WATER HOUSE CONNECTIONS SHALL BE BUILT WITH 48" OF MIN. COVER TO PROPOSED GRADES.
- ALL OUTDOOR LIGHTING SHALL COMPLY WITH ZONING SECTION 134. POLE LOCATIONS ARE SHOWN ON THESE PLANS. SEE ELECTRICAL PLAN TO BE SUBMITTED WITH ARCHITECTURAL DRAWINGS FOR POLE HEIGHTS, TYPES, WATTAGE, ETC.
- OTHER HOWARD COUNTY FILES RELATED TO THIS SITE:
 PLAT NO. 7989, AMENDED FINAL DEVELOPMENT PLAN PHASE 139A-III RECORDED AS PLAT NO. 3054-A-1591 THROUGH 1594; PLAT 27, FOLIO 64; AND WP-99-105.
- CONSTRUCTION SHALL BE PHASED AS FOLLOWS:
 A. PHASE I - GARAGE 'B'
 - BUILDING WING NO.'S 1-7 & THEIR COURTYARDS
 - SWIMMING POOL
 - CENTRAL PROMENADE
 - ALL UTILITIES EXCEPT THOSE LOOPING AROUND GARAGE 'A'
 - ALL DRIVEWAYS & SURFACE PARKING EXCEPT THE PORTION LEADING TO GARAGE 'A'
 - PERIMETER RETAINING WALLS.
 B. PHASE II - GARAGE 'A' & ITS UTILITY LOOP
 - BUILDING WING NO.'S 8-14 & THEIR COURTYARDS.



Best Management Practices for Working in Nontidal Wetlands, Wetland Buffers, Waterways, and 100-year Floodplains

- No excess fill, construction materials, or debris shall be stockpiled or stored in nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- Place materials in a location and manner which does not adversely impact surface or subsurface water flow into or out of nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- Do not use the excavated material as backfill if it contains waste metal products, unsightly debris, toxic materials, or any other deleterious substance. If additional backfill is required, use clean material free of waste metal products, unsightly debris, toxic materials, or any other deleterious substance.
- Place heavy equipment on mats or suitably operate the equipment to prevent damage to nontidal wetlands, nontidal wetland buffers, waterways, or the 100-year floodplain.
- Repair and maintain any serviceable structure or fill so there is no permanent loss of nontidal wetlands, nontidal wetland buffers, or waterways, or permanent modification to the 100-year floodplain in excess of that lost under the originally authorized structure or fill.
- Rectify any nontidal wetlands, wetland buffer, waterways, or 100-year floodplain temporarily impacted by any construction.
- All stabilization in the nontidal wetland and nontidal wetland buffer shall consist of the following species: Annual Ryegrass (*Lolium multiflorum*), Millet (*Pectaria italica*), Barley (*Hordeum sp.*), Oats (*Avena sp.*), and/or Rye (*Secale cereale*). These species will allow for stabilization of the whole site while also allowing for the voluntary revegetation of nontidal wetland species. Other non-permanent vegetation may be acceptable, but must be approved by the Nontidal Wetlands and Waterways Division. Kentucky 31 fescue shall not be utilized in wetland or buffer areas. The area should be seeded and mulched to reduce erosion after construction activities have been completed.
- After installation has been completed, make post-construction grades and elevations the same as the original grades and elevations in temporarily impacted areas.
- To protect aquatic species, in-stream work is prohibited as determined by the classification of the stream.
 Use class I waters: In-stream work shall not be conducted during the period March 1 through June 15, inclusive, during any year.
- Stormwater runoff from impervious surfaces shall be controlled to prevent the washing of debris into the waterway.
- Culverts shall be constructed and any riprap placed so as not to obstruct the movement of aquatic species, unless the purpose of the activity is to impound water.

28. FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING (IN ACCORDANCE WITH CHAPTER IV. OF THE HOWARD COUNTY LANDSCAPE MANUAL) IS POSTED AS PART OF THE DPW DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$94,350 FOR:
 296 SHADE TREES AT \$300 EA. = \$88,800
 25 EVERGREEN TREES AT \$150 EA. = \$3,750
 60 SHRUBS AT \$30 EA. = \$1,800
 (SEE TABULATION ON SHEET 4 FOR BREAKDOWN OF LANDSCAPING REQUIRED).

29. WP-99-105, APPROVED ON 8/04/99 TO WAIVE SECTION 16.116(a)(ii), ALLOWS DISTURBANCE WITHIN THE 75' STREAM BUFFER, SUBJECT TO:
 A. THE IMPACT TO THE BUFFER SHALL BE LIMITED TO THE AREA SHOWN ON SDP-99-135 AND SAID AREA SHALL BE IMMEDIATELY STABILIZED.
 B. AN EQUIVALENT AREA WITHIN THE STREAM BUFFER ON OPEN SPACE LOT 2 SHALL BE REPLANTED (SEE SHEET NO. 4) IN ACCORDANCE WITH SECTION 16.116(c).

| SHEET INDEX | |
|-------------|--|
| NO. | DESCRIPTION |
| 1 | Cover Sheet |
| 2 | Ex. Conditions, Vegetation, Soils & Slopes |
| 3 | Site Plan |
| 4 | Landscape Plan |
| 5 | Landscape Notes & Plant List |
| 6 | Landscape Details |
| 7 | Typical Courtyard Details |
| 8 | Dumpster & Site Details |
| 9 | Site Details |
| 10 | Building Outline, Location & Dimensions |
| 11 | Detailed Utility Location Plan |
| 12 | Storm Drainage Drainage Area Map |
| 13 | Utility Profiles & Structure Schedules |
| 14 | Utility Profiles |
| 15 | Utility Profiles |
| 16 | Utility Profiles |
| 17 | Utility Profiles |
| 18 | Storm Water Management |
| 19 | Sediment & Erosion Control Plan - Initial |
| 20 | Sediment & Erosion Control Plan - Final |
| 21 | Sediment & Erosion Control - Notes, Specifications and Details |
| 22 | Retaining Wall Details |
| 23 | Intermediate Retaining Wall Details |
| 24 | South Entrance Road Striping Plan and Details |

DATE:

DRAWINGS ISSUED TO:

ASN DEVELOPMENT OFFICE

ASN PRODUCTION OFFICE

GENERAL CONTRACTOR

| SITE ANALYSIS | |
|---------------|--|
| 1. | Site Area: 11.77Ac.± >10% slope: 5.50 Ac. (47%) <10% slope: 6.27 Ac. (53%) |
| 2. | Area of plan submission: 12.50± Ac. |
| 3. | Limit of Disturbed Area: 12.50± Ac. |
| 4. | Zoning: NT |
| 5. | Proposed Use: Rental Apartments |
| 6. | Proposed Number of Units: 531 Units Allowed (per FDP): 550 |
| 7. | Parking Required per FDP criteria: 797 (1.5 per unit) Parking Provided (includes Handicap spaces): Garages: 868 spaces Surface: 76 spaces TOTAL: 944 spaces |
| | Handicap Parking Required: 19 spaces (2% of total) Handicap Parking Provided: Garages: 18 (1 is "Van Accessible") Surface: 4 (2 are "Van Accessible") TOTAL: 22 spaces |

OWNER
 Archstone Communities Trust
 6631-A Old Dominion Drive, Suite 201
 McLean, Virginia 22101
 (703) 883-3545
 Attn: Jeff Harris

ARCHITECT
 Kaufman Meeks & Partners
 16000 Memorial Drive, Suite 100
 Houston, Texas 77079
 (281) 759-4110
 Attn: Jon Prejean

CIVIL ENGINEER
 Gutschick, Little & Weber, P.A.
 3909 National Drive, Suite 250
 Burtonsville, Maryland 20886
 (410) 880-1820
 Attn: Carl Gutschick

PLANNER/LANDSCAPE ARCHITECT
 Land Design, Inc.
 1414 Prince Street, Suite 400
 Alexandria, Virginia 22314
 (703) 549-7784
 Attn: Stephen Jordan

NOISE CONSULTANT
 Phoenix Engineering, Inc.
 813 Maiden Choice Lane
 Baltimore, Maryland 21228
 (410) 247-8833
 Attn: John Heinrichs

MECH/ELEC/PLUMBING ENGINEER
 Schwartz Engineering, Inc.
 4600 North Park Avenue, Lower Plaza
 Chevy Chase, Maryland 20815
 (301) 215-7740
 Attn: Andy Schwartz

GAS/ELECTRIC/PHONE/CABLE ENGINEER
 Richter & Associates, Inc.
 15865 Crabbs Branch Way
 Rockville, Maryland 20855
 (301) 549-7475
 Attn: Butch Thayer

GEOTECHNICAL ENGINEER
 Robert B. Balter Co.
 18 Music Fair Road
 Owings Mills, Maryland 21117
 (410) 363-1555
 Attn: Bob Miller

TRAFFIC ENGINEER
 Wells & Assoc.
 1420 Spring Hill Road, Suite 600
 McLean, Virginia 22102
 (703) 917-6620
 Attn: Marty Wells

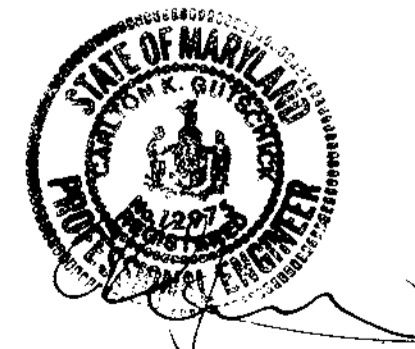
STRUCTURAL ENGINEER
 SCA Consulting Engineers
 10101 Southwest Freeway, Suite 600
 Houston, Texas 77074
 (713) 729-7252
 Attn: Mark Shepard

| ADDRESS CHART | |
|---|-------------------------|
| MAIN ENTRANCE: 10365 LITTLE PATUXENT PARKWAY | |
| NO. | BUILDING ADDRESS |
| Garage A | 10450 Swiftstream Place |
| 14 | 10440 Swiftstream Place |
| 13 | 10430 Swiftstream Place |
| 12 | 10420 Swiftstream Place |
| 11 | 10410 Swiftstream Place |
| 10 | 10400 Swiftstream Place |
| 9 | 10390 Swiftstream Place |
| 8 | 10380 Swiftstream Place |
| 7 | 10370 Swiftstream Place |
| 6 | 10360 Swiftstream Place |
| 5 | 10350 Swiftstream Place |
| 4 | 10340 Swiftstream Place |
| 3 | 10330 Swiftstream Place |
| 2 | 10320 Swiftstream Place |
| 1 | 10310 Swiftstream Place |
| Garage B | 10300 Swiftstream Place |

APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE: Sept. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT
 County Health Officer: [Signature] Date: 3/28/00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: [Signature] Date: 9/15/00
 Chief, Division of Land Development: [Signature] Date: 4/4/00
 Chief, Development Engineering Division: [Signature] Date: 3/28/00



GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20886
 TEL: 301-421-4024 FAX: 301-989-2524

OWNER:
 ARCHSTONE COMMUNITIES TRUST
 6631-A OLD DOMINION DRIVE
 SUITE 201
 McLEAN, VA 22101
 703-883-3545

COVER SHEET
 COLUMBIA TOWN CENTER
 SECTION 1 AREA 3
 PARCEL "A-1"
 PLAT No. 7989

| SCALE | ZONING | G. L. W. FILE No. |
|-----------|----------------|-------------------|
| AS SHOWN | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| 3-03-2000 | 36 - 2 | 1 OF 24 |

| STATION No. | TW | BW | COMMENTS |
|-------------|--------|--------|-----------------------|
| 1 | 332.00 | 338.50 | DETAIL 11/9 & SHIT 22 |
| 2 | 329.50 | 336.00 | DETAIL 11/9 & SHIT 22 |
| 3 | 327.00 | 333.50 | DETAIL 11/9 & SHIT 22 |
| 4 | 324.50 | 331.00 | DETAIL 11/9 & SHIT 22 |
| 5 | 322.00 | 328.50 | DETAIL 11/9 & SHIT 22 |
| 6 | 319.50 | 326.00 | DETAIL 11/9 & SHIT 22 |
| 7 | 317.00 | 323.50 | DETAIL 11/9 & SHIT 22 |
| 8 | 314.50 | 321.00 | DETAIL 11/9 & SHIT 22 |
| 9 | 312.00 | 318.50 | DETAIL 11/9 & SHIT 22 |
| 10 | 309.50 | 316.00 | DETAIL 11/9 & SHIT 22 |
| 11 | 307.00 | 313.50 | DETAIL 11/9 & SHIT 22 |
| 12 | 304.50 | 311.00 | DETAIL 11/9 & SHIT 22 |
| 13 | 302.00 | 308.50 | DETAIL 11/9 & SHIT 22 |
| 14 | 299.50 | 306.00 | DETAIL 11/9 & SHIT 22 |
| 15 | 297.00 | 303.50 | DETAIL 11/9 & SHIT 22 |
| 16 | 294.50 | 301.00 | DETAIL 11/9 & SHIT 22 |
| 17 | 292.00 | 298.50 | DETAIL 11/9 & SHIT 22 |
| 18 | 289.50 | 296.00 | DETAIL 11/9 & SHIT 22 |
| 19 | 287.00 | 293.50 | DETAIL 11/9 & SHIT 22 |
| 20 | 284.50 | 291.00 | DETAIL 11/9 & SHIT 22 |
| 21 | 282.00 | 288.50 | DETAIL 11/9 & SHIT 22 |

SITE DEVELOPMENT PLAN LEGEND

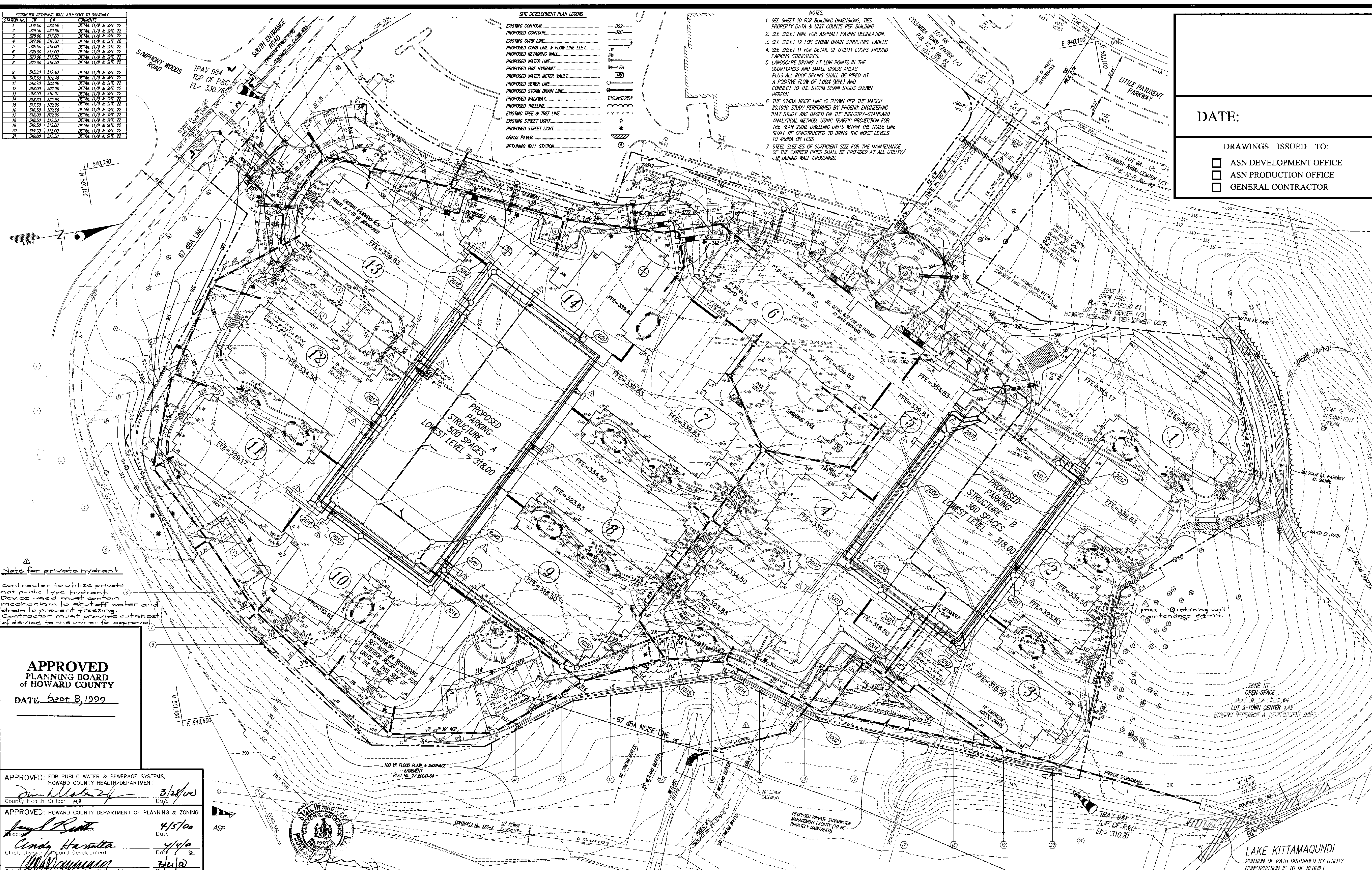
- EXISTING CONTOUR..... 322
- PROPOSED CONTOUR..... 320
- EXISTING CURB LINE.....
- PROPOSED CURB LINE & FLOW LINE ELEV.....
- PROPOSED RETAINING WALL.....
- PROPOSED WATER LINE.....
- PROPOSED FIRE HYDRANT.....
- PROPOSED WATER METER VAULT.....
- PROPOSED SEWER LINE.....
- PROPOSED STORM DRAIN LINE.....
- PROPOSED WALKWAY.....
- PROPOSED TREELINE.....
- EXISTING TREE & TREE LINE.....
- EXISTING STREET LIGHT.....
- PROPOSED STREET LIGHT.....
- GRASS PAVEN.....
- RETAINING WALL STATION.....

- NOTES**
- SEE SHEET 10 FOR BUILDING DIMENSIONS, TIES, PROPERTY DATA & UNIT COUNTS PER BUILDING.
 - SEE SHEET NINE FOR ASPHALT PAVING DELINEATION.
 - SEE SHEET 12 FOR STORM DRAIN STRUCTURE LABELS.
 - SEE SHEET 11 FOR DETAIL OF UTILITY LOOPS AROUND PARKING STRUCTURES.
 - LANDSCAPE DRAINS AT LOW POINTS IN THE COURTYARDS AND SMALL GRASS AREAS PLUS ALL ROOF DRAINS SHALL BE PIPED AT A POSITIVE FLOW OF 1.00% (MIN) AND CONNECT TO THE STORM DRAIN STUBS SHOWN HEREON.
 - THE 67DBA NOISE LINE IS SHOWN PER THE MARCH 20 1990 STUDY PERFORMED BY PHOENIX ENGINEERING THAT STUDY WAS BASED ON THE INDUSTRY-STANDARD ANALYTICAL METHOD, USING TRAFFIC PROJECTION FOR THE YEAR 2000. DWELLING UNITS WITHIN THE NOISE LINE SHALL BE CONSTRUCTED TO BRING THE NOISE LEVELS TO 45DBA OR LESS.
 - STEEL SLEEVES OF SUFFICIENT SIZE FOR THE MAINTENANCE OF THE CARRIER PIPES SHALL BE PROVIDED AT ALL UTILITY/RETAINING WALL CROSSINGS.

DATE:

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR



Note for private hydrant

Contractor to utilize private not public type hydrant. Device used must contain mechanism to shut off water and drain to prevent freezing. Contractor must provide outsheet of device to the owner for approval.

APPROVED
PLANNING BOARD
OF HOWARD COUNTY

DATE: SEPT 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT

Don H. Hester 3/28/00
County Health Officer H.E. Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Angela R. Roth 4/15/00
Date

Cindy Harvatta 4/4/00
Date

William J. ... 3/21/00
Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-969-2524 FAX: 301-421-4186

| DATE | REVISION | BY | APPR. |
|----------|---|----|-------|
| 10/10/00 | rev. lower level elev. in Gar. A+B, rev. utilities in maps for Gar. A+B, add conduits under roadway, rev. retaining wall @ Bldg #2, private FH note | | McF |
| | rev. underground SWM facility, rev. limits of public water add FH @ Bldg #2 | | |

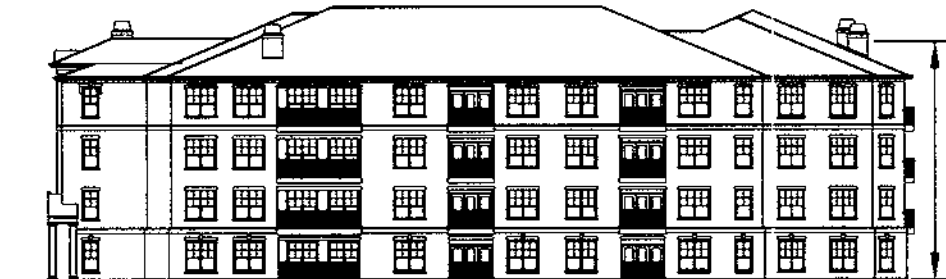
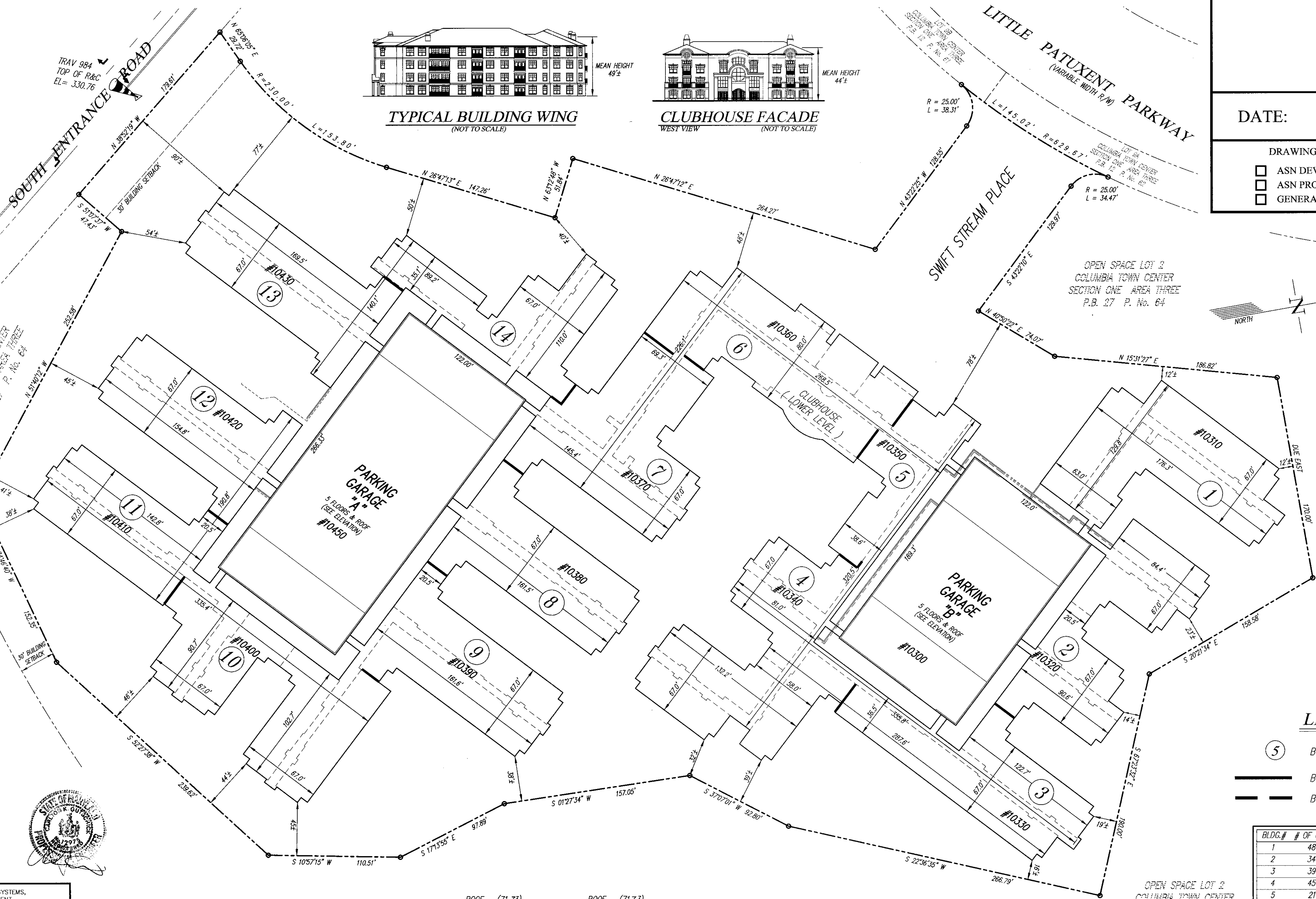


OWNER:
ARCHSTONE COMMUNITIES TRUST
6631-A OLD DOMINION DRIVE
SUITE 201
MCLEAN, VA 22101
703-883-3545

SITE DEVELOPMENT PLAN
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989

CLARKSVILLE ELECTION DISTRICT No. 5
HOWARD COUNTY, MARYLAND

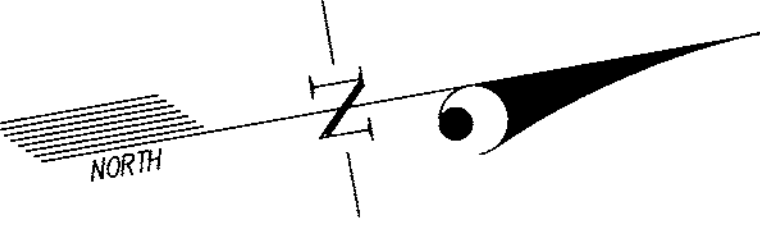
| SCALE | ZONING | G. L. W. FILE No. |
|-----------|----------------|-------------------|
| 1"=40' | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| 3/03/2000 | 36 - 2 | 3 OF 24 |



DATE: _____

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR



APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE Sept 8, 1999

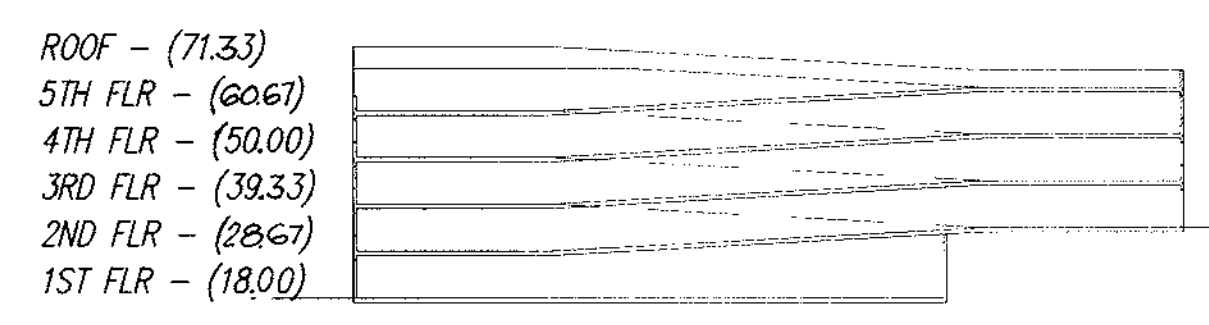
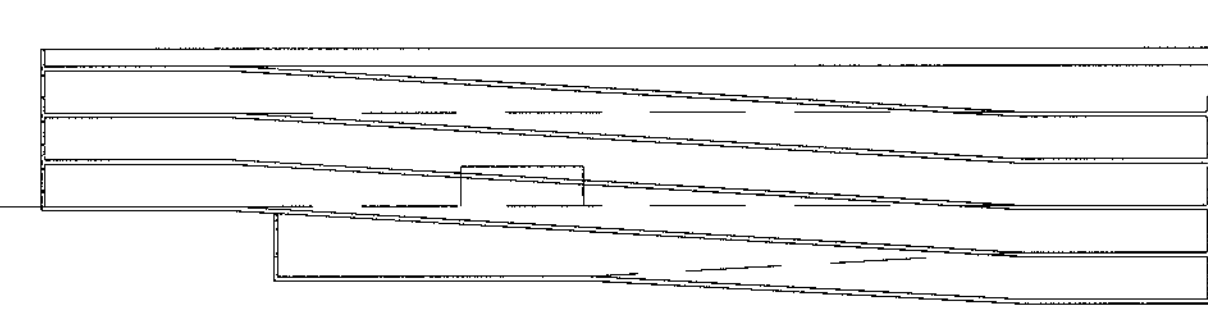


APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Marie M. ... 3/28/00
County Health Officer

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Janet ... 4/15/00
Director

Cindy ... 4/14/00
Chief, Division of Land Development

Mike ... 3/21/00
Chief, Department of Engineering Division



LEGEND

- ⑤ BUILDING WING NUMBER
- BUILDING / ELEVATION BREAK
- - - BUILDING NUMBER BREAK

| BLDG.# | # OF UNITS | BLDG.# | # OF UNITS |
|---|------------|--------------------|------------|
| 1 | 48 | 8 | 35 |
| 2 | 34 | 9 | 39 |
| 3 | 39 | 10 | 48 |
| 4 | 45 | 11 | 36 |
| 5 | 21 | 12 | 40 |
| 6 | 30 | 13 | 40 |
| 7 | 44 | 14 | 32 |
| PH.1 SUB-TOTAL=261 | | PH.2 SUB-TOTAL=270 | |
| TOTAL = 531 UNITS | | | |
| GARAGE "A" = 503 SPACES & GARAGE "B" = 365 SPACES | | | |

OPEN SPACE LOT 2
COLUMBIA TOWN CENTER
SECTION ONE AREA THREE
P.B. 27 P. No. 64

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3609 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 FAX: 301-421-4188

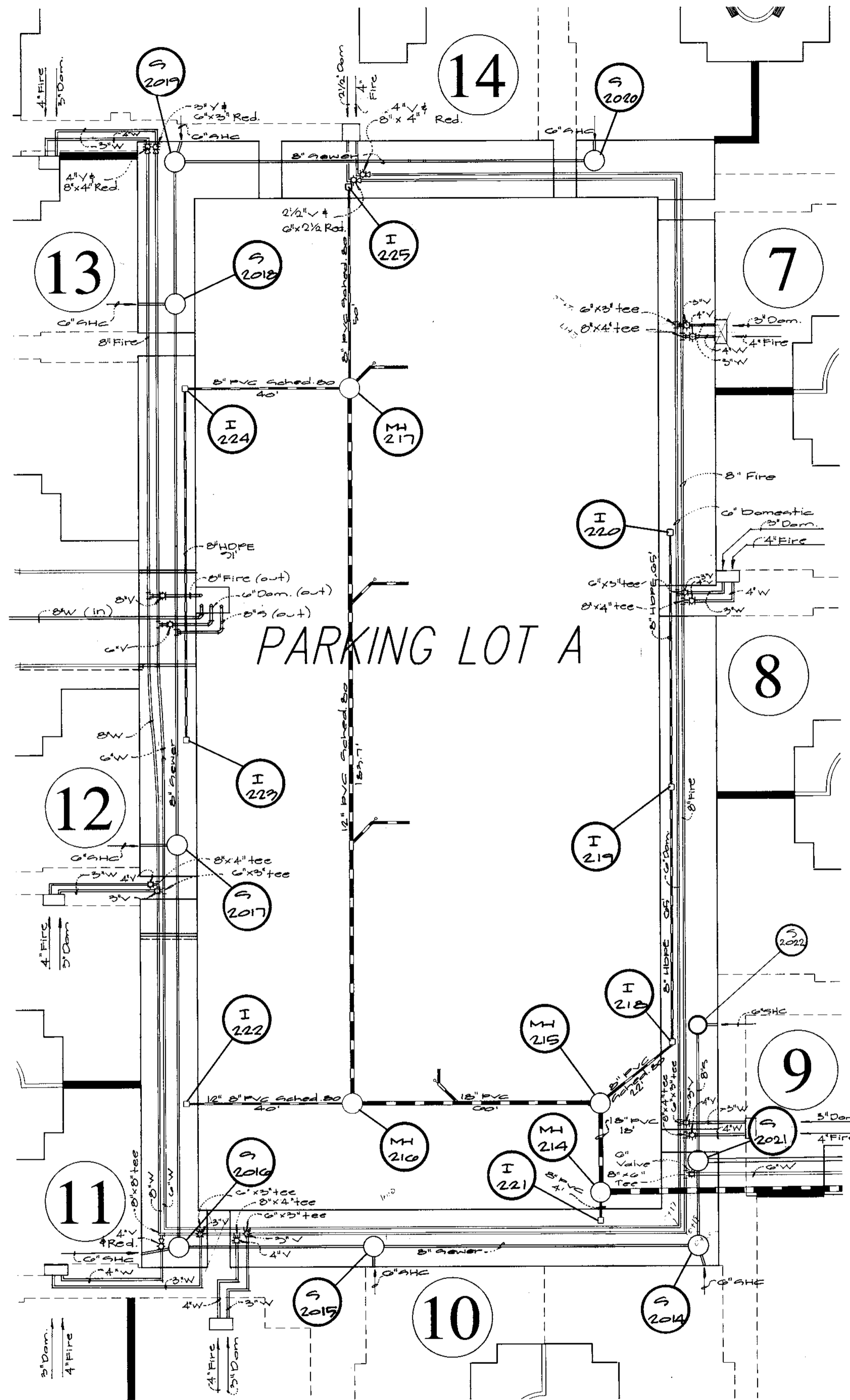


OWNER:
ARCHSTONE COMMUNITIES TRUST
6631-A OLD DOMINION DRIVE
SUITE 201
MCLEAN, VA 22101
703-883-3545

BUILDING OUTLINE, LOCATION & DIMENSIONS
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989

| SCALE | ZONING | G. L. W. FILE No. |
|-----------|----------------|-------------------|
| 1"=40' | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| 3/03/2000 | 36 - 2 | 10 OF 24 |

| DATE | REVISION | DES. | DRN. | CHK. | DATE | REVISION | DES. | DRN. | CHK. |
|----------|-----------------------|------|------|------|------|----------|------|------|------|
| 10-10-00 | rev Garage A+B elevs. | | | | | | | | |

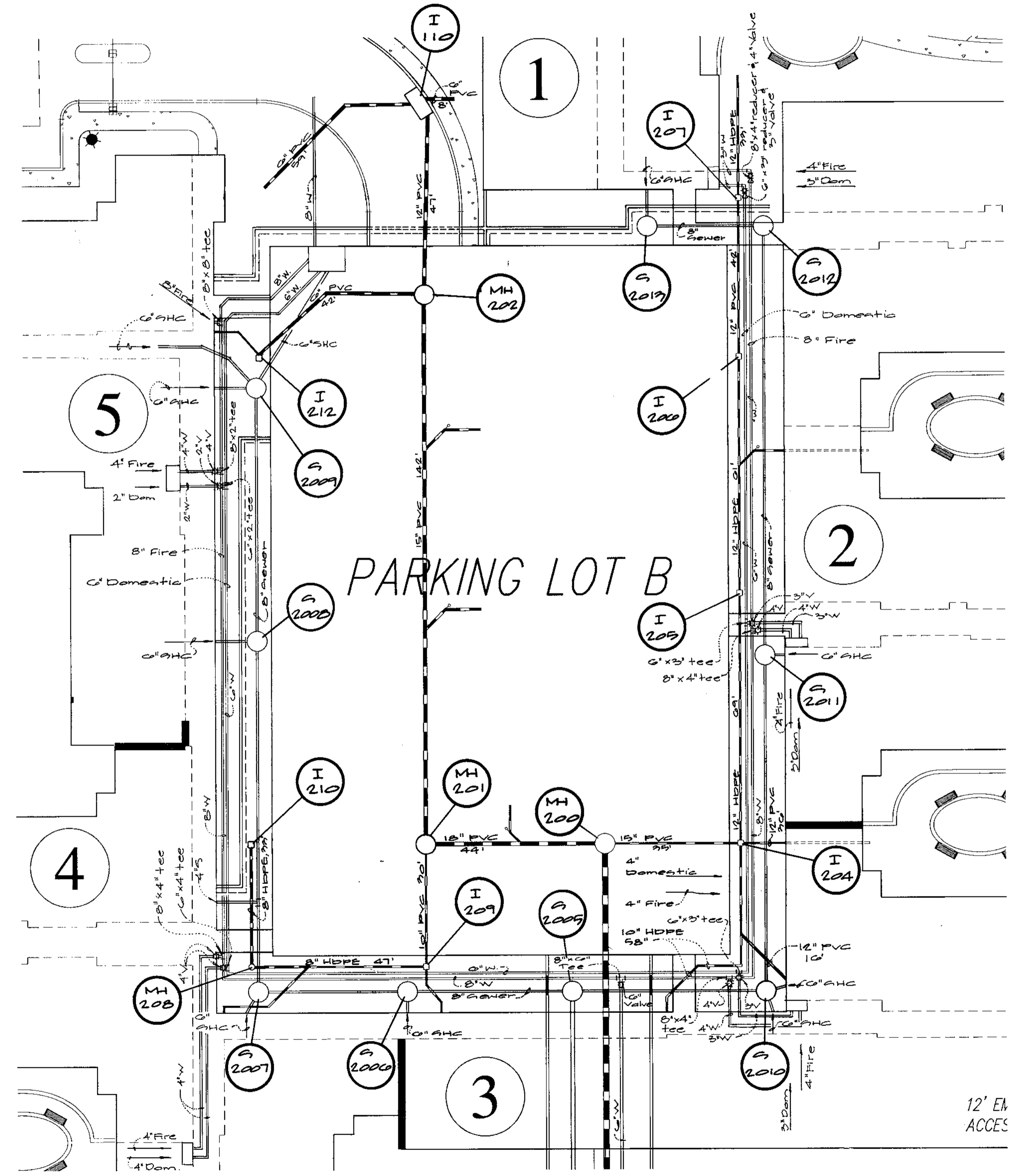


All fittings and next two joints in either direction of fittings for water lines shown on this sheet (domestic and fire) shall be restrained with Megalugs or approved equal in accordance with Howard County Standards and Specifications.

DATE:

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR



APPROVED
 PLANNING BOARD
 of HOWARD COUNTY
 DATE SEPT. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT
Dir. [Signature] 3/28/00
 County Health Officer MK Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Dir. [Signature] 4/15/00
 Director Date

Chief [Signature] 4/4/00
 Chief, Division of Planning & Zoning Date

Chief [Signature] 3/2/00
 Chief, Development Engineering Division MK Date



GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

| DATE | REVISION | BY | APP'R |
|----------|---|-----|-------|
| 10/15/00 | rev. W/C & S/C in moths for garages 2A & 1B | MCF | |



OWNER:
 ARCHSTONE COMMUNITIES TRUST
 6631-A OLD DOMINION DRIVE
 SUITE 201
 MCLEAN, VA 22101
 703-883-3545

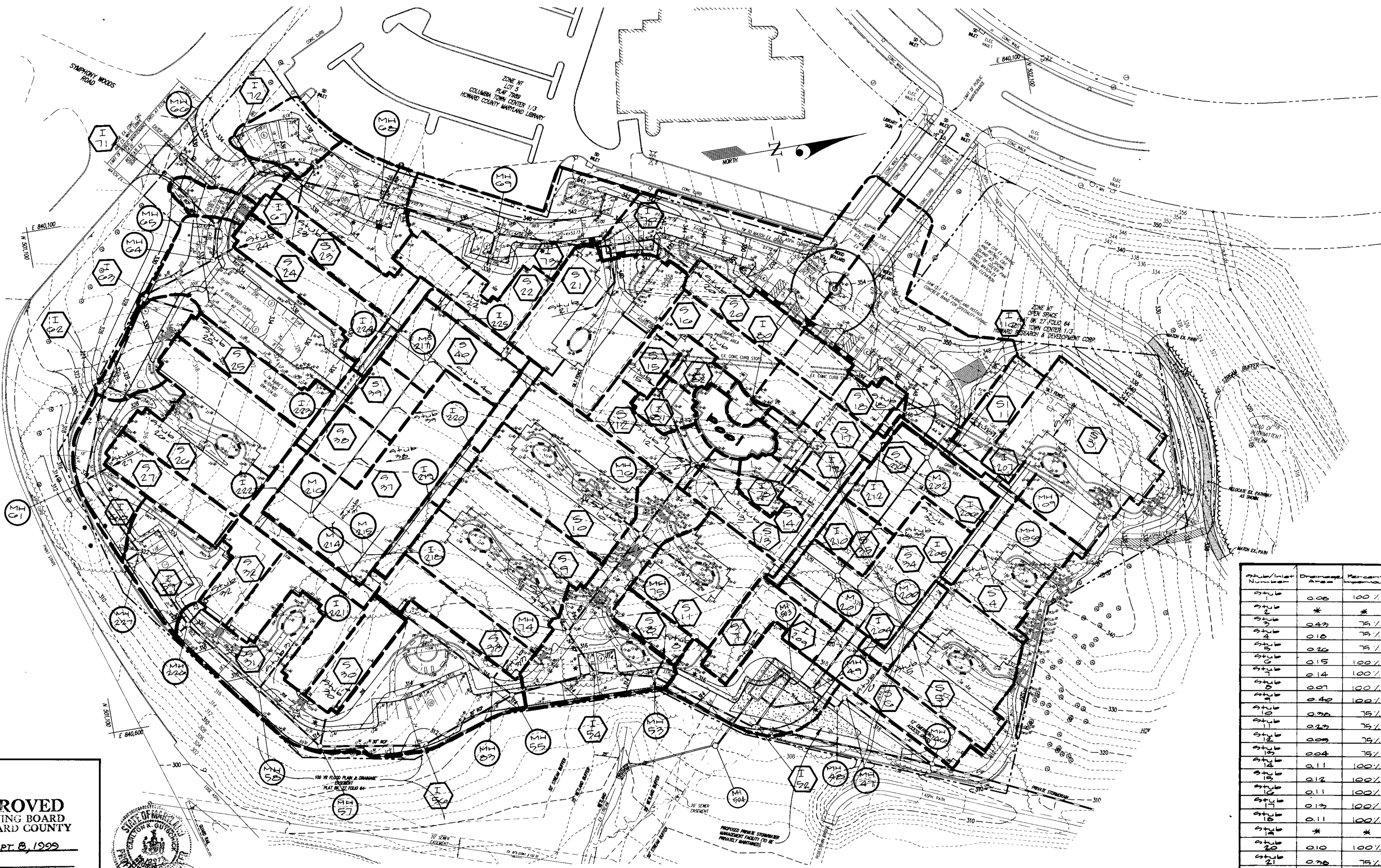
DETAILED UTILITY LOCATION PLAN
COLUMBIA TOWN CENTER
 SECTION 1 AREA 3
 PARCEL "A-1"
 PLAT No. 7989
 CLARKSVILLE ELECTION DISTRICT No. 5
 HOWARD COUNTY, MARYLAND

| SCALE | ZONING | G. L. W. FILE No. |
|---------------|----------------|-------------------|
| 1" = 20' | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| March 2, 2000 | 36 - 2 | 11 OF 24 |

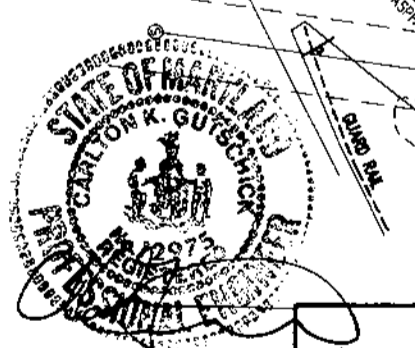
DATE:

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR



APPROVED
PLANNING BOARD
 of HOWARD COUNTY
 DATE SEPT 8, 1999



APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT
Dino Matera County Health Officer MK 3/28/00
 APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Joseph P. Butler 4/15/00
Cecilia Hamilton 4/4/00
William J. ... 3/21/00
 Chief, Development Engineering Division MK

Storm Drain Tabulation

| From | To | Type | Length | From | To | Type | Length | From | To | Type | Length | From | To | Type | Length | From | To | Type | Length | From | To | Type | Length | | | | |
|--------|--------|---------|--------|--------|----------|----------|--------|-------|----------|----------|--------|----------|----------|----------|--------|----------|----------|----------|--------|----------|-------|----------|--------|--|--|--|--|
| I 225 | MH 217 | 8" HDPE | 50' | I 110 | 0" PVC | 54' | MH 200 | MH 44 | 21" PVC | 101' | MH 76 | 12" HDPE | 22' | MH 60 | MH 65 | 24" HDPE | 64' | MH 51 | I 50 | 30" HDPE | 41' | | | | | | |
| I 225 | I 224 | 8" HDPE | 91' | MH 76 | 12" HDPE | 70' | I 11 | MH 75 | 12" HDPE | 50' | I 50 | MH 55 | 30" HDPE | 42' | | | | | | | | | | | | | |
| I 224 | MH 217 | 8" HDPE | 42' | I 110 | MH 200 | 12" PVC | 47' | MH 76 | 12" HDPE | 20' | MH 65 | MH 64 | 24" HDPE | 20' | MH 55 | I 54 | 30" HDPE | 76' | | | | | | | | | |
| MH 217 | MH 218 | 8" HDPE | 183' | MH 200 | MH 201 | 15" PVC | 182' | MH 75 | 12" HDPE | 30' | MH 64 | 8" HDPE | 20' | I 54 | MH 53 | 42" HDPE | 96' | | | | | | | | | | |
| I 222 | MH 218 | 8" HDPE | 42' | I 210 | MH 200 | 8" HDPE | 39' | MH 75 | 12" HDPE | 117' | MH 64 | I 63 | 24" HDPE | 71' | MH 53 | MH 52 | 8" HDPE | 10" | | | | | | | | | |
| MH 218 | MH 219 | 8" HDPE | 60' | I 209 | MH 201 | 10" PVC | 30' | MH 74 | 12" HDPE | 10' | MH 63 | I 62 | 42" HDPE | 100' | MH 52 | I 52 | 42" HDPE | 100' | | | | | | | | | |
| I 220 | I 219 | 8" HDPE | 25' | MH 200 | I 210 | 0" PVC | 42' | I 02 | I 01 | 12" HDPE | 20' | MH 74 | I 74 | 15" HDPE | 32' | I 63 | I 62 | 30" HDPE | 72' | I 52 | MH 46 | 42" HDPE | 170' | | | | |
| I 219 | I 218 | 8" HDPE | 25' | MH 200 | I 209 | 8" HDPE | 47' | I 02 | I 01 | 12" HDPE | 20' | I 70 | I 70 | 8" HDPE | 5' | I 62 | I 62 | 12" HDPE | 32' | MH 46 | MH 45 | 42" HDPE | 49' | | | | |
| MH 219 | MH 218 | 8" HDPE | 22' | I 207 | I 207 | 12" HDPE | 39' | I 01 | MH 70 | 12" HDPE | 75' | I 70 | MH 67 | 15" HDPE | 70' | MH 45 | MH 44 | 42" HDPE | 55' | | | | | | | | |
| MH 218 | MH 219 | 8" HDPE | 18' | I 207 | I 200 | 12" HDPE | 42' | MH 70 | 12" HDPE | 61' | I 70 | MH 67 | 15" HDPE | 14' | MH 45 | MH 44 | 42" HDPE | 55' | | | | | | | | | |
| MH 218 | MH 219 | 8" HDPE | 4' | MH 200 | MH 200 | 12" HDPE | 34' | I 70 | I 70 | 8" HDPE | 7' | MH 67 | MH 66 | 15" HDPE | 14' | MH 44 | MH 43 | 24" HDPE | 100' | | | | | | | | |
| MH 214 | MH 219 | 8" HDPE | 170' | I 200 | I 200 | 12" HDPE | 01' | I 70 | I 70 | 8" HDPE | 9' | E 6 | MH 66 | 24" RCP | — | MH 43 | MH 42 | 24" HDPE | 70' | | | | | | | | |
| MH 219 | MH 218 | 8" HDPE | 20' | I 200 | I 200 | 12" HDPE | 01' | I 70 | I 70 | 8" HDPE | 9' | MH 66 | I 67 | 24" HDPE | 73' | MH 42 | MH 41 | 24" HDPE | 20' | | | | | | | | |
| | | | | I 200 | I 200 | 10" HDPE | 50' | I 70 | MH 70 | 12" HDPE | 55' | I 67 | I 67 | 12" HDPE | 17' | MH 41 | MH 40 | 24" HDPE | 20' | | | | | | | | |
| | | | | I 200 | I 200 | 10" HDPE | 50' | MH 70 | I 72 | 12" HDPE | 7' | I 67 | MH 66 | 24" HDPE | 40' | MH 40 | MH 39 | 24" HDPE | 61' | | | | | | | | |
| | | | | I 204 | MH 200 | 15" PVC | 35' | MH 70 | I 72 | 12" HDPE | 7' | I 67 | MH 66 | 24" HDPE | 40' | MH 39 | MH 38 | 30" HDPE | 91' | | | | | | | | |

| Station/Manhole Number | Drainage Area | Percent Impervious | C.V. Value | Inlet Number | Drainage Area | Percent Impervious | C.V. Value |
|------------------------|---------------|--------------------|------------|--------------|---------------|--------------------|------------|
| Station 1 | 0.08 | 100% | 0.27 | Inlet 52 | 0.23 | 75% | 0.71 |
| Station 2 | * | * | * | Inlet 52+ | 0.38 | 75% | 0.71 |
| Station 3 | 0.43 | 75% | 0.71 | Inlet 52+ | 0.61 | 75% | 0.71 |
| Station 4 | 0.18 | 75% | 0.71 | Inlet 52+ | 0.18 | 75% | 0.71 |
| Station 5 | 0.26 | 75% | 0.71 | Inlet 52+ | 0.17 | 75% | 0.71 |
| Station 6 | 0.15 | 100% | 0.27 | Inlet 52+ | 0.13 | 75% | 0.71 |
| Station 7 | 0.14 | 100% | 0.27 | Inlet 52+ | 0.36 | 75% | 0.71 |
| Station 8 | 0.27 | 100% | 0.27 | Inlet 52+ | 0.23 | 75% | 0.71 |
| Station 9 | 0.40 | 100% | 0.27 | Inlet 52+ | 0.44 | 75% | 0.71 |
| Station 10 | 0.38 | 75% | 0.71 | Inlet 52+ | 0.09 | 75% | 0.71 |
| Station 11 | 0.23 | 75% | 0.71 | Inlet 52+ | 0.11 | 75% | 0.71 |
| Station 12 | 0.09 | 75% | 0.71 | Inlet 52+ | 0.33 | 75% | 0.71 |
| Station 13 | 0.04 | 75% | 0.71 | Inlet 52+ | 0.05 | 75% | 0.71 |
| Station 14 | 0.11 | 100% | 0.27 | Inlet 52+ | 0.05 | 75% | 0.71 |
| Station 15 | 0.12 | 100% | 0.27 | Inlet 52+ | 0.03 | 100% | 0.27 |
| Station 16 | 0.11 | 100% | 0.27 | Inlet 52+ | 0.08 | 75% | 0.71 |
| Station 17 | 0.13 | 100% | 0.27 | Inlet 52+ | 0.05 | 100% | 0.27 |
| Station 18 | 0.11 | 100% | 0.27 | Inlet 52+ | 0.50 | 75% | 0.71 |
| Station 19 | * | * | * | Inlet 204 | 0.04 | 0% | 0.24 |
| Station 20 | 0.10 | 100% | 0.27 | Inlet 204 | 0.02 | 0% | 0.24 |
| Station 21 | 0.26 | 75% | 0.71 | Inlet 204 | 0.02 | 0% | 0.24 |
| Station 22 | 0.14 | 100% | 0.27 | Inlet 204 | 0.02 | 0% | 0.24 |
| Station 23 | 0.16 | 100% | 0.27 | Inlet 204 | 0.02 | 0% | 0.24 |
| Station 24 | 0.15 | 100% | 0.27 | Inlet 210 | 0.03 | 0% | 0.24 |
| Station 25 | 0.19 | 100% | 0.27 | Inlet 210 | 0.02 | 0% | 0.24 |
| Station 26 | 0.33 | 100% | 0.27 | Inlet 210 | 0.03 | 0% | 0.24 |
| Station 27 | 0.12 | 100% | 0.27 | Inlet 210 | 0.02 | 0% | 0.24 |
| Station 28 | * | * | * | Inlet 220 | 0.04 | 0% | 0.24 |
| Station 29 | * | * | * | Inlet 221 | 0.04 | 75% | 0.71 |
| Station 30 | 0.10 | 75% | 0.71 | Inlet 222 | 0.04 | 0% | 0.24 |
| Station 31 | 0.17 | 100% | 0.27 | Inlet 223 | 0.02 | 0% | 0.24 |
| Station 32 | 0.09 | 100% | 0.27 | Inlet 223 | 0.04 | 0% | 0.24 |
| Station 33 | 0.14 | 100% | 0.27 | Inlet 223 | 0.04 | 0% | 0.24 |
| Inlet 100 | 0.03 | 100% | 0.27 | | | | |
| Inlet 110 | 0.00 | 75% | 0.71 | | | | |

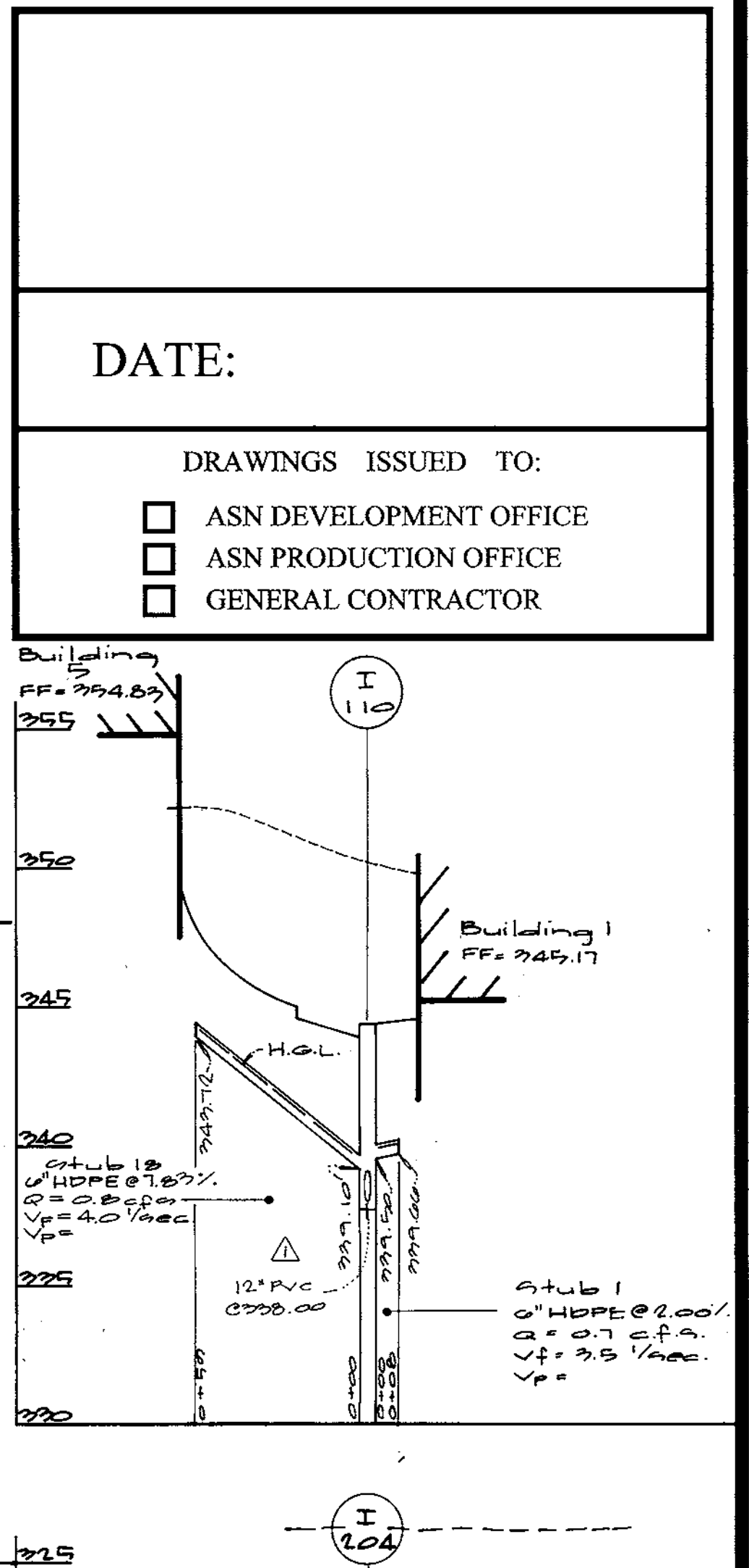
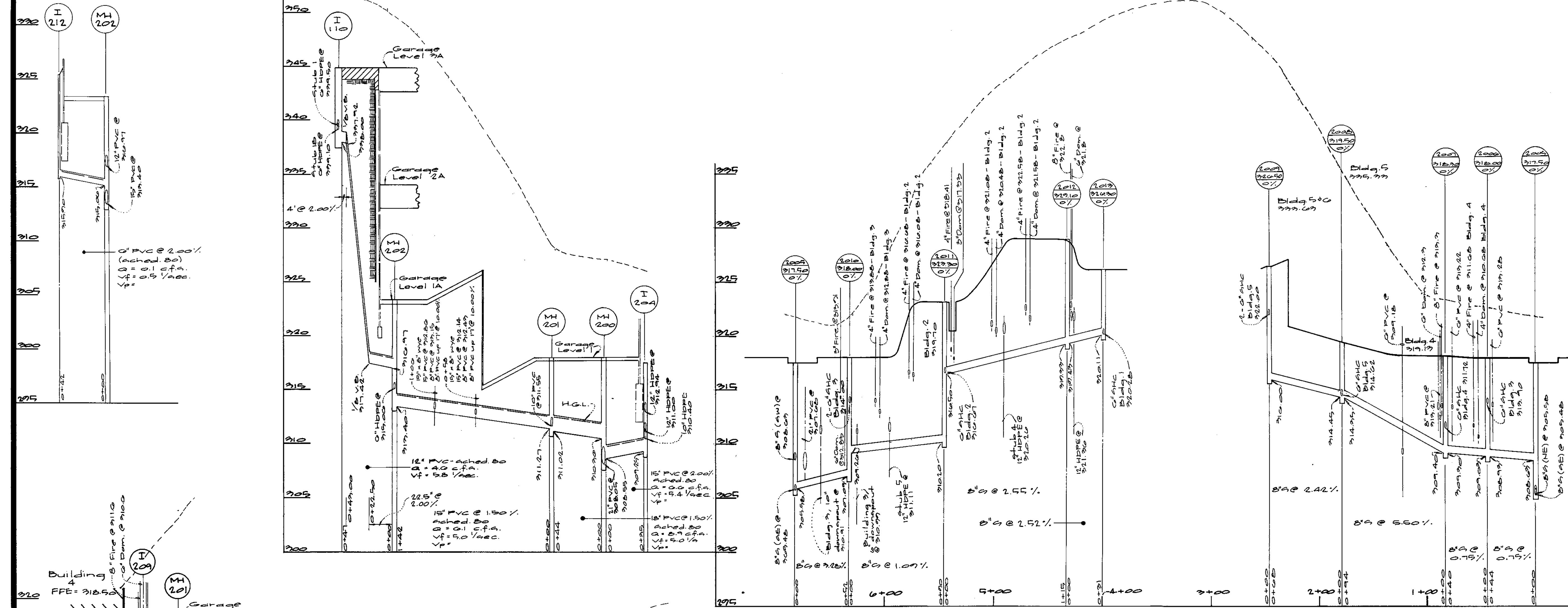
GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK
 BURTNSVILLE, MARYLAND 20866
 TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-998-2524 FAX: 301-421-4186

| DATE | REV. | DESCRIPTION | BY | APP'R. |
|----------|------|-----------------------------|-----|--------|
| 10/11/00 | 1 | rev. storm drain tabulation | JAW | |

OWNER:
ARCHSTONE COMMUNITIES TRUST
 6631-A OLD DOMINION DRIVE
 SUITE 201
 McLEAN, VA 22101
 703-883-3545

STORM DRAIN DRAINAGE AREA MAP
COLUMBIA TOWN CENTER
 SECTION 1 AREA 3
 PARCEL "A-1"
 PLAT No. 7989

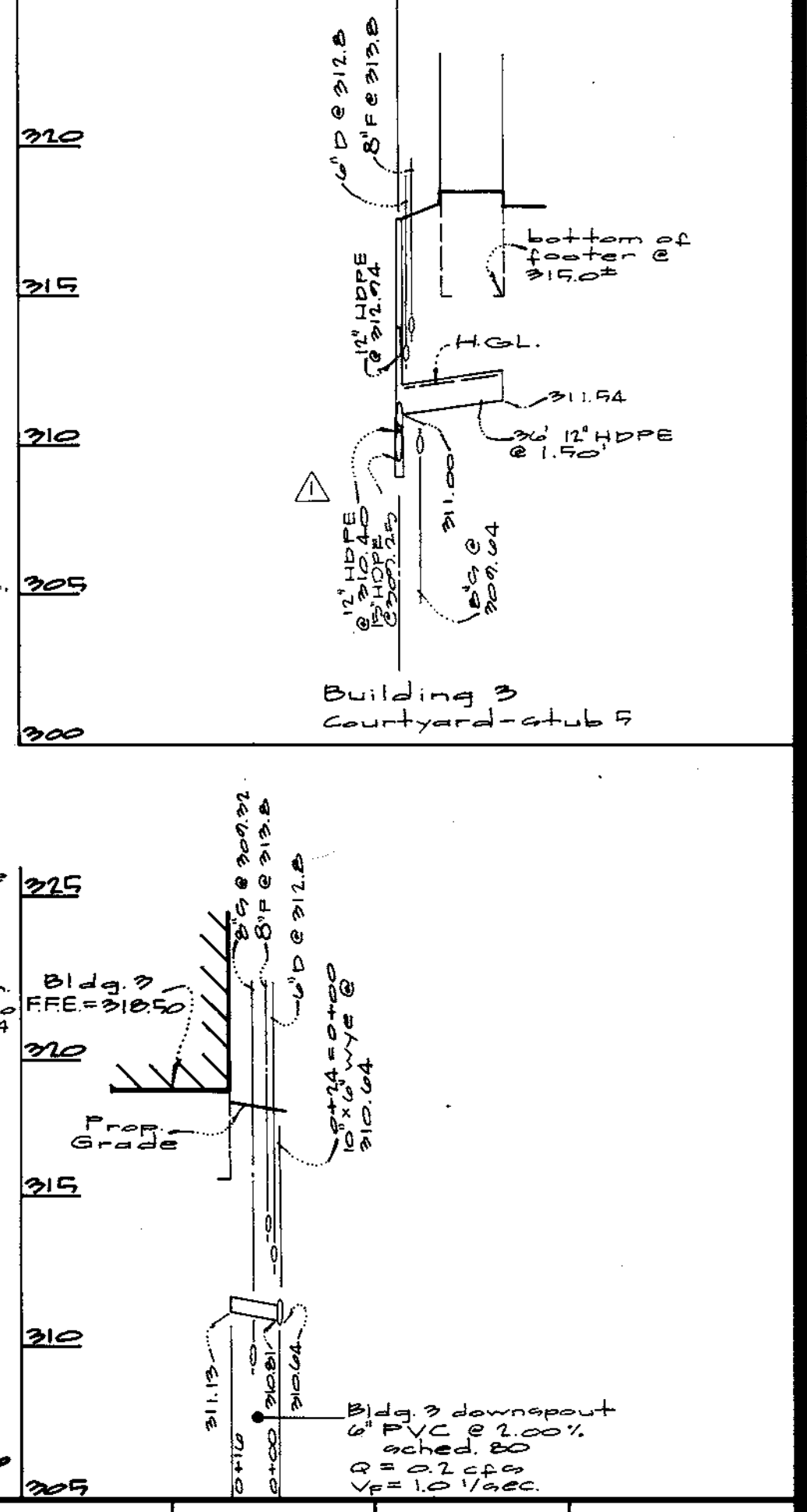
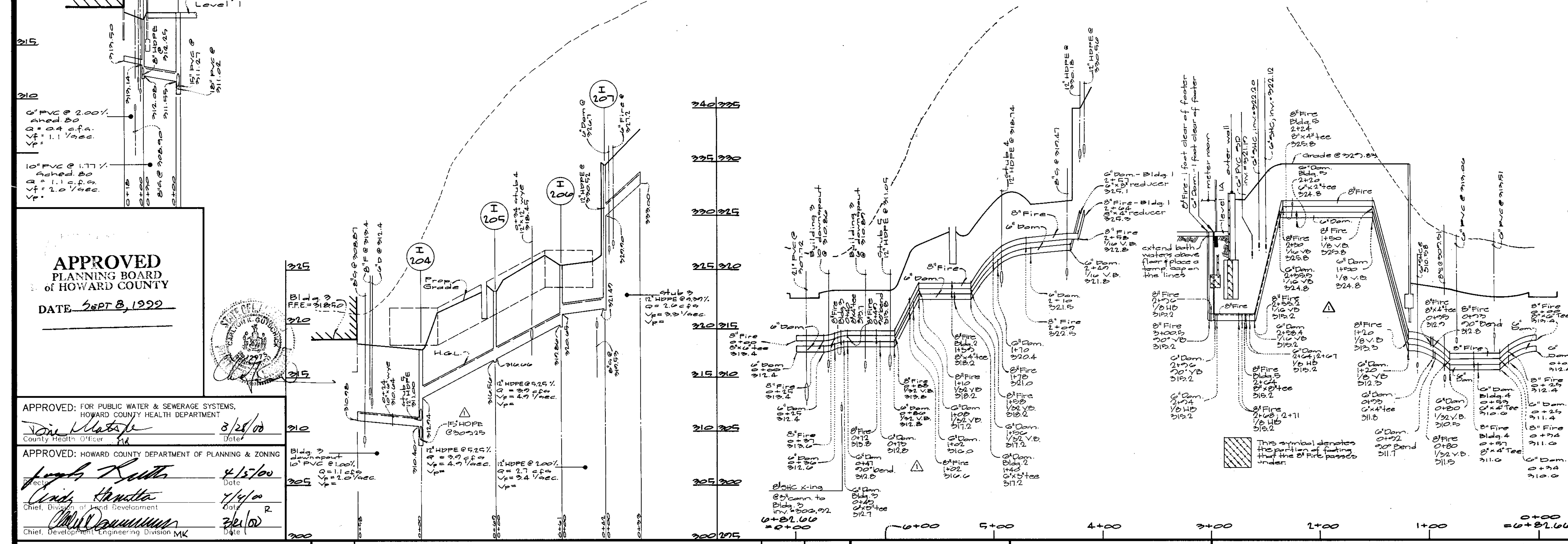
SCALE: 1"=50'
 ZONING: NT
 DATE: March 3, 2000
 TAX MAP - GRID: 36 - 2
 SHEET: 12 OF 24
 G. L. W. FILE No. 98087



DATE:

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR



APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE: SEPT 8, 1992



APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Date: 8/25/00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Date: 4/13/00

APPROVED: DATE: 7/14/00

APPROVED: DATE: 3/21/00

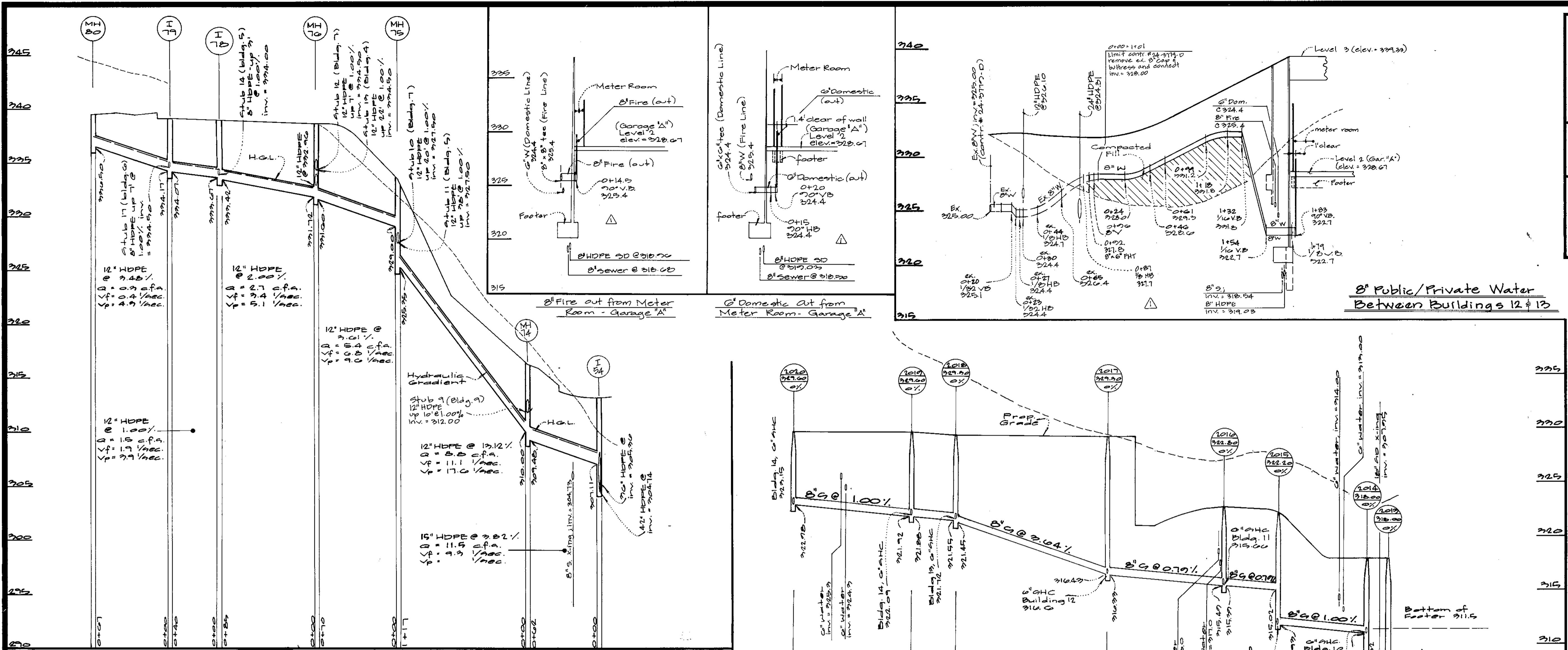
GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3009 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 FAX: 301-989-2524

| | | | |
|----------|---|-----|-------|
| DATE | REVISION | BY | APPR. |
| 12-11-00 | Rev water profile, and correct Storm Drain Profiles | MEF | |

OWNER:
ARCHSTONE COMMUNITIES TRUST
6631-A OLD DOMINION DRIVE
SUITE 201
MCLEAN, VA 22101
703-883-3545

UTILITY PROFILES
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989

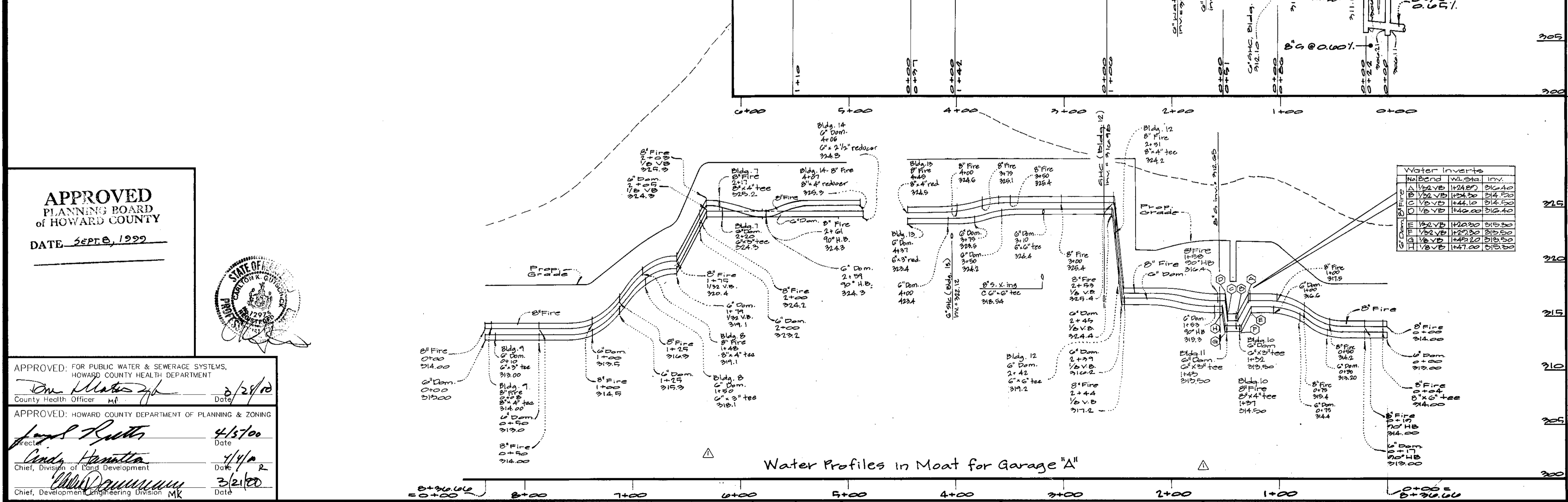
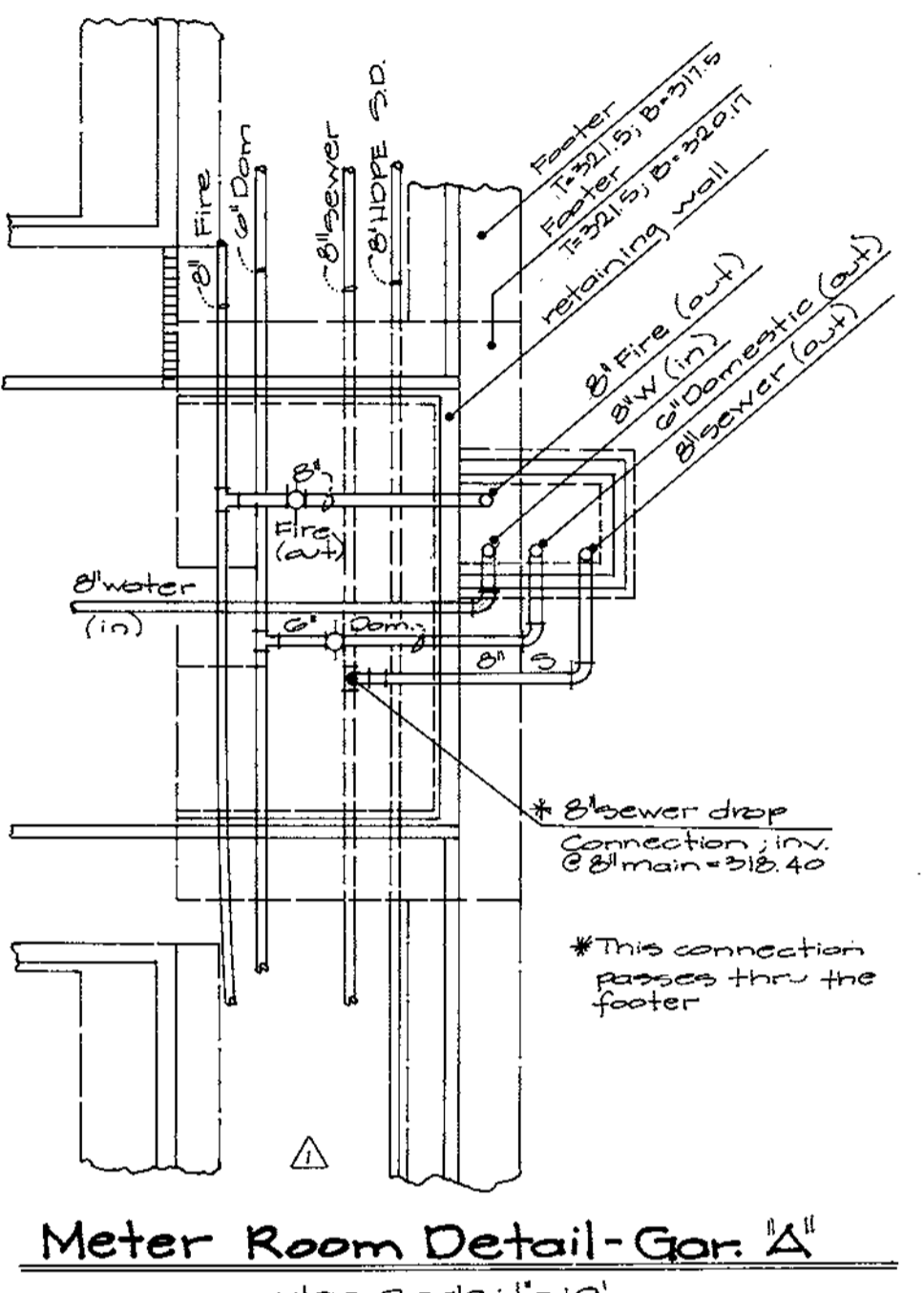
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|---------------|----------------|-------------------|
| SCALE | ZONING | G. L. W. FILE No. |
| AS SHOWN | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| March 3, 2000 | 36 - 2 | 14 OF 24 |



DATE: _____

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR



APPROVED
PLANNING BOARD
of HOWARD COUNTY

DATE: Sept. 8, 1999



APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT

Don Klutts 2/24/00
County Health Officer MK Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Frank Smith 4/13/00
Director Date

Andy Hamilton 4/14/00
Chief, Division of Land Development Date

William Dammann 3/21/00
Chief, Development Engineering Division MK Date



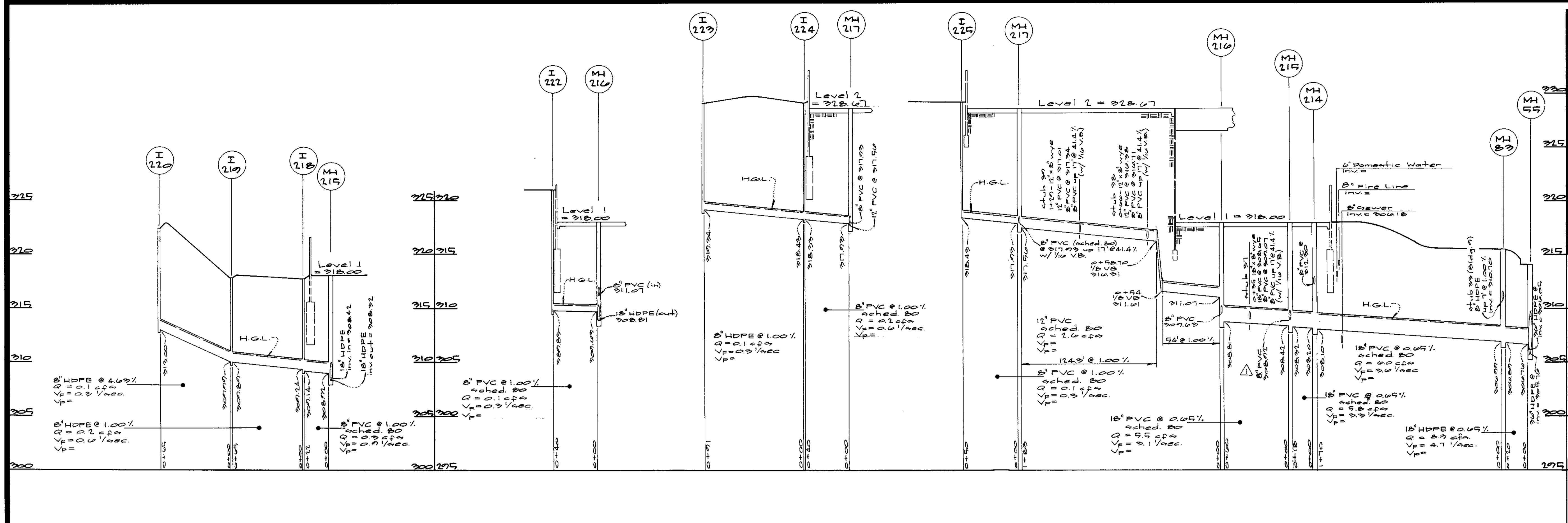
OWNER:
ARCHSTONE COMMUNITIES TRUST
6631-A OLD DOMINION DRIVE
SUITE 201
McLEANS, VA 22101
703-883-3545

UTILITY PROFILES
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989

| | | |
|---------------|----------------|-------------------|
| SCALE | ZONING | G. L. W. FILE No. |
| AS SHOWN | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| March 3, 2000 | 36 - 2 | 15 OF 24 |

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3809 NATIONAL DRIVE - SUITE 250 - BERTHLEMSVILLE OFFICE PARK
BETHLEMSVILLE, MARYLAND 20866
TEL: 301-421-0224 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

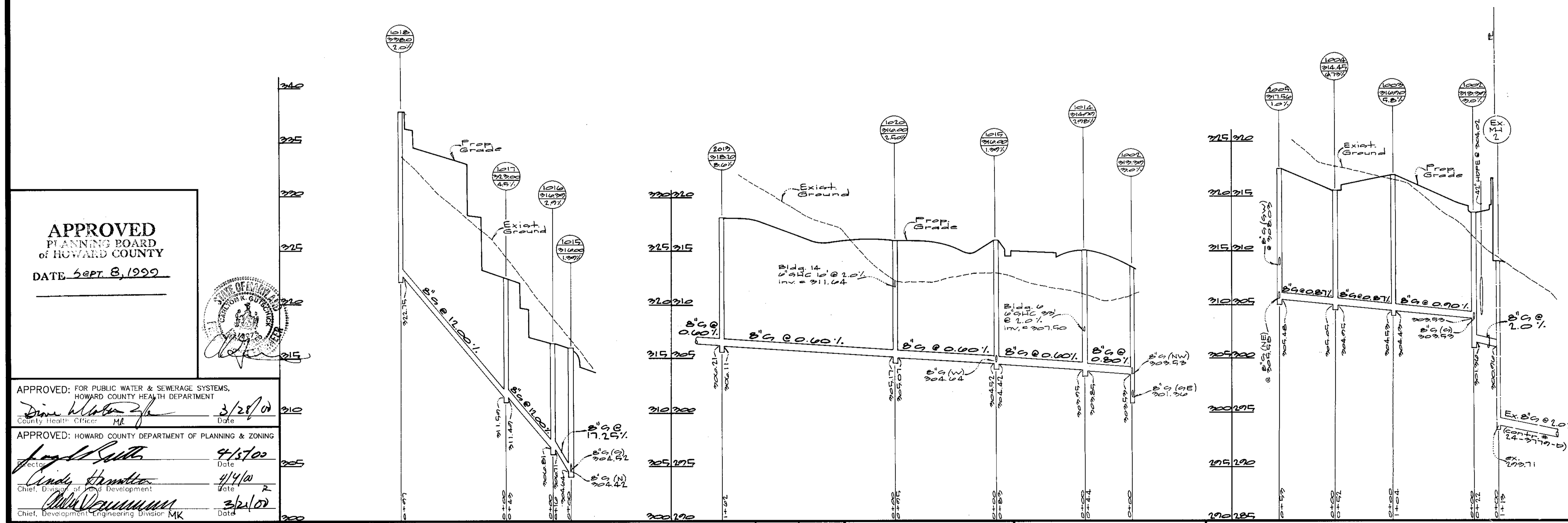
| DATE | REVISION | BY | APPR. |
|----------|---|----|-------|
| 10/11/00 | Add meter room detail - Garage 'A', Add/rev. utility profiles due to relos. of mtr rm | | |
| | Rev. water size from 6" to an 8" rev. limits of public/private water | | |



DATE: _____

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR



APPROVED
 PLANNING BOARD
 OF HOWARD COUNTY
 DATE SEPT 8, 1999



APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT
 County Health Officer: Mike Zyl Date: 3/28/00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Director: Paul Smith Date: 4/5/00
 Chief, Division of Land Development: Linda Hamilton Date: 4/4/00
 Chief, Development Engineering Division: Mike Date: 3/21/00

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK
 BURTNSVILLE, MARYLAND 20886
 TEL: 301-421-4024 FAX: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

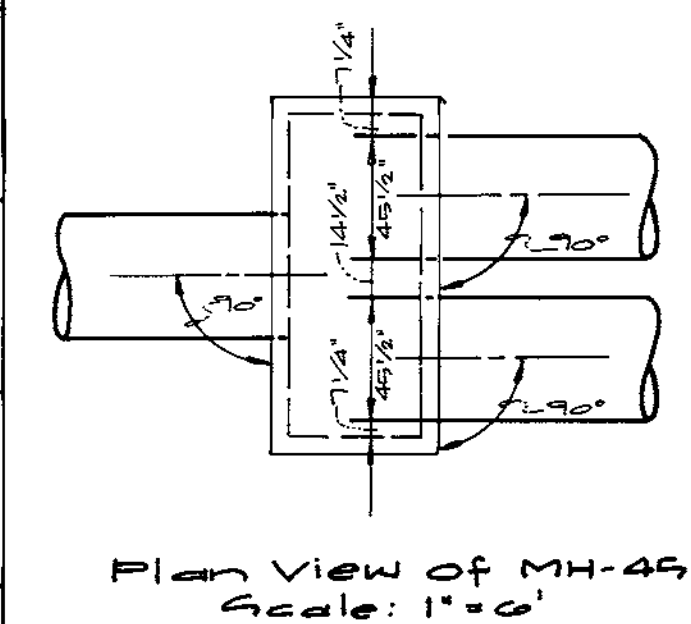
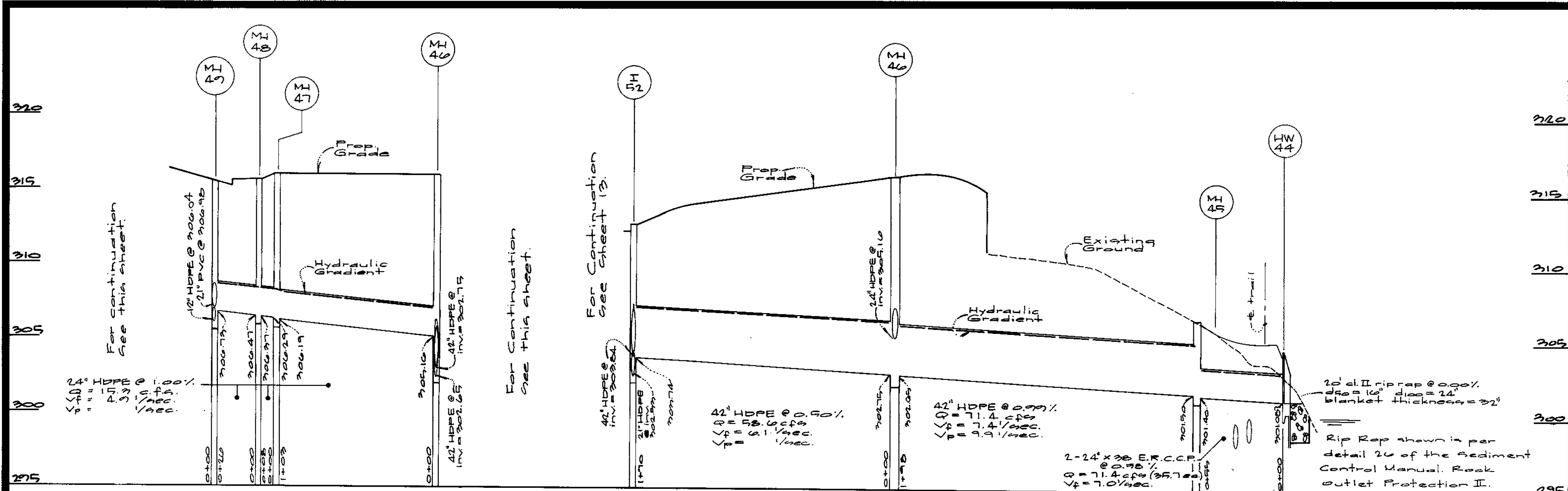
| DATE | REVISION | BY | APPR. |
|----------|--|-----|-------|
| 10/11/00 | Rev. structure number & pipe size for continuity | MCF | |



OWNER:
 ARCHSTONE COMMUNITIES TRUST
 6631-A OLD DOMINION DRIVE
 SUITE 201
 MCLEAN, VA 22101
 703-883-3545

UTILITY PROFILES
COLUMBIA TOWN CENTER
 SECTION 1 AREA 3
 PARCEL "A-1"
 PLAT No. 7989
 CLARKSVILLE ELECTION DISTRICT No. 5
 HOWARD COUNTY, MARYLAND
 March 2, 2000

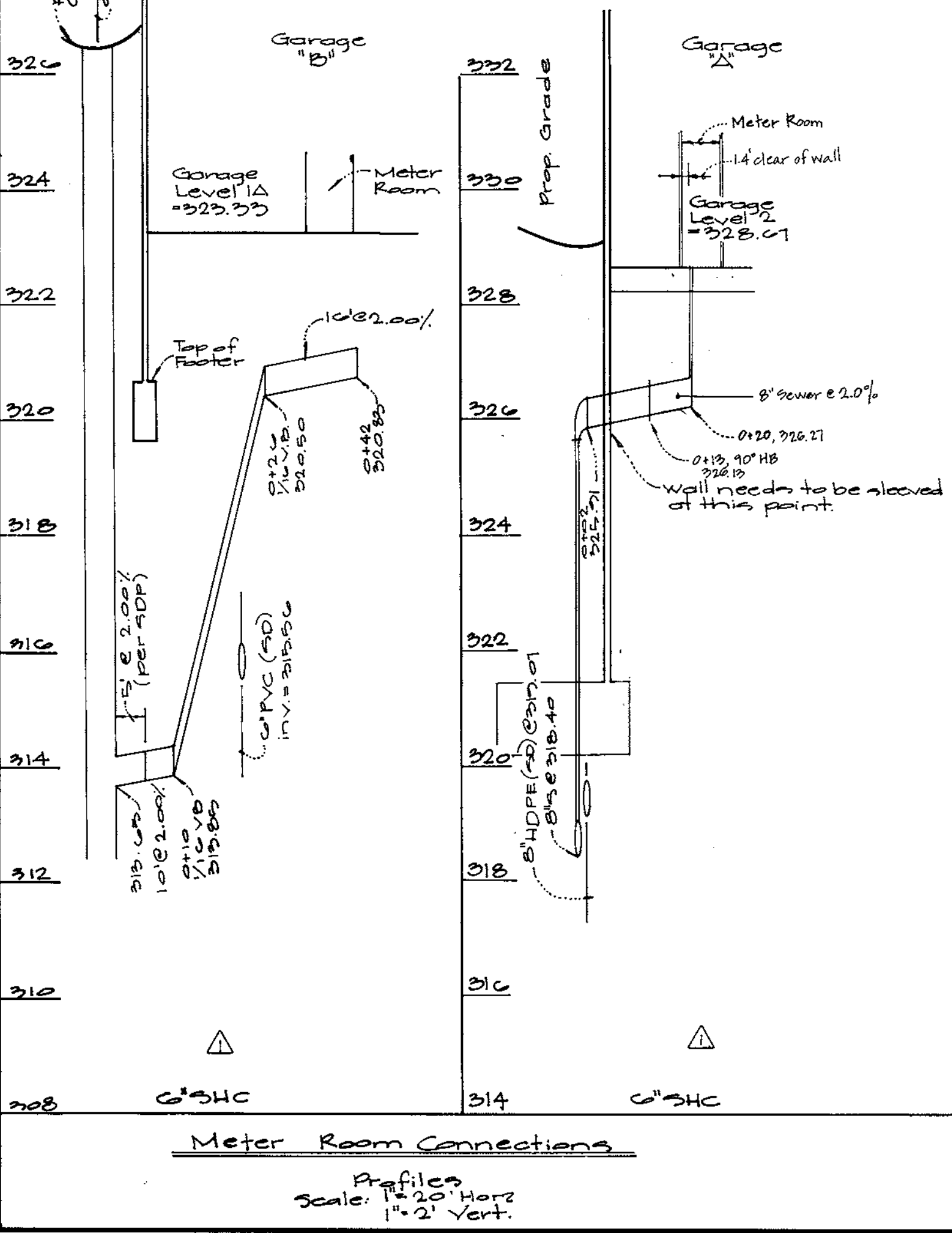
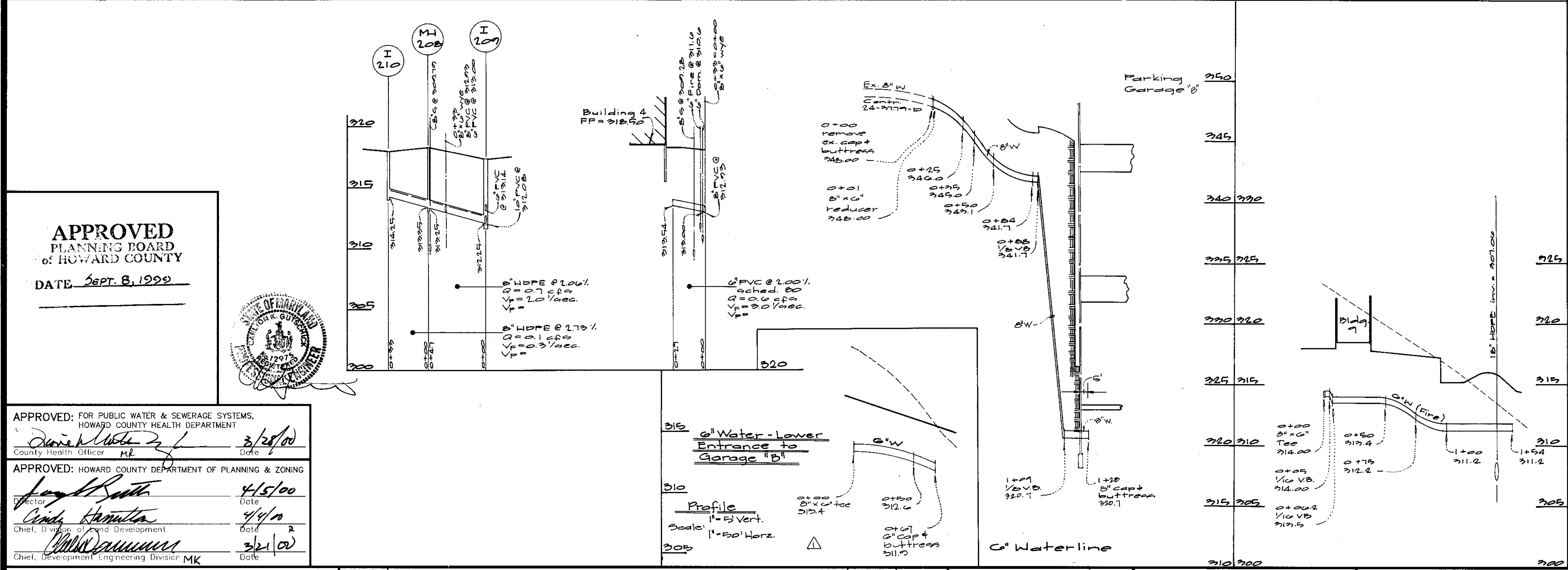
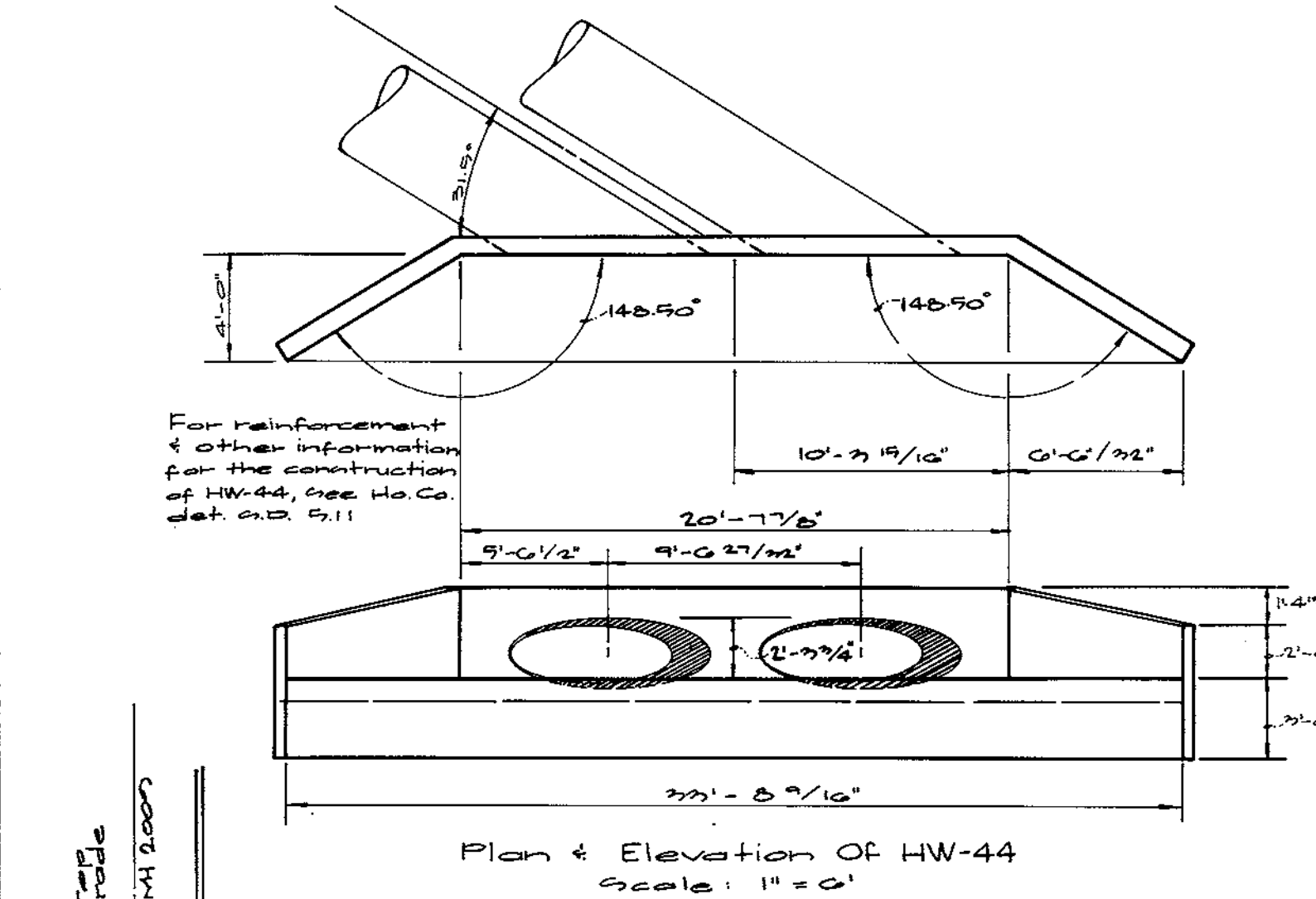
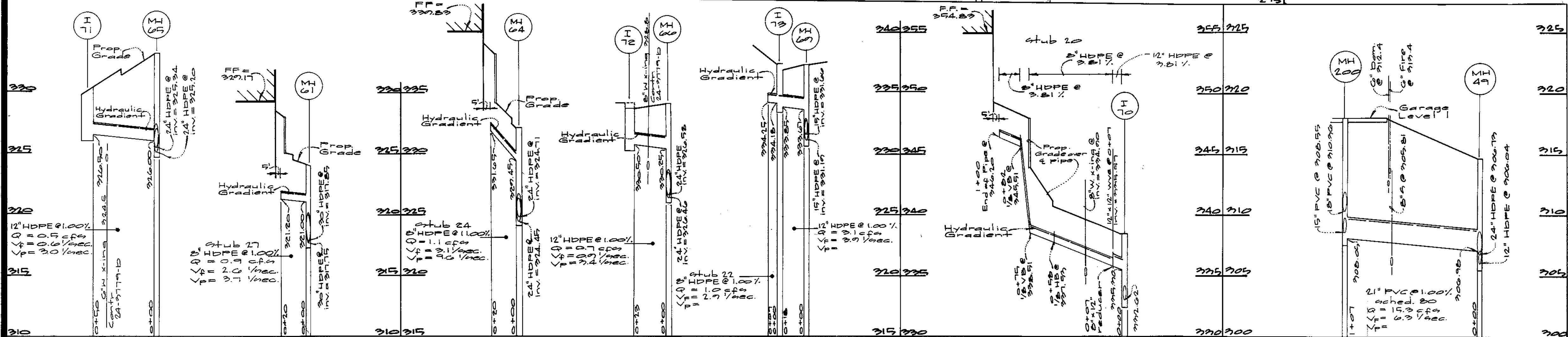
| SCALE | ZONING | G. L. W. FILE No. |
|---------------|----------------|-------------------|
| AS SHOWN | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| March 2, 2000 | 36 - 2 | 16 OF 24 |



DATE: _____

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR

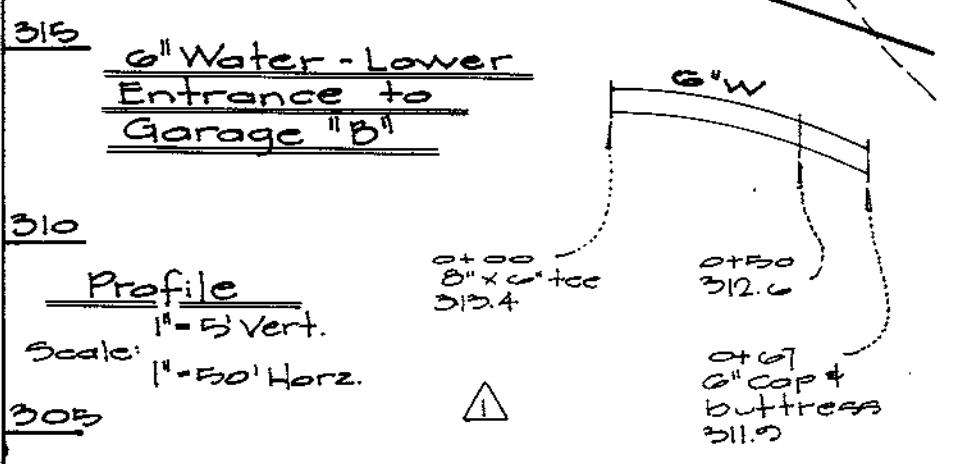


APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE: SEPT. 8, 1999



APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
County Health Officer: [Signature] Date: 3/28/00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Director: [Signature] Date: 4/15/00
Chief, Division of Land Development: [Signature] Date: 4/4/00
Chief, Development Engineering Division: [Signature] Date: 3/21/00



GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3609 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4188

| DATE | REVISION | BY | APPR. |
|---------|--|-----|-------|
| 10/1/00 | Add profiles for meter room connections. | McP | |



OWNER:
Archstone Communities Trust
6001-A Old Dominion Drive
Suite 201
McLean, VA 22101
703-822-3545

UTILITY PROFILES
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989
CLARKSVILLE ELECTION DISTRICT No. 5
HOWARD COUNTY, MARYLAND

| SCALE | ZONING | G. L. W. FILE No. |
|----------|----------------|-------------------|
| AS SHOWN | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| 3/3/00 | 36 - 2 | 17 OF 24 |

DEVELOPER'S/BUILDER'S CERTIFICATE
 I/We certify that all development and/or 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 Maryland Department of the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the HSCD.

[Signature]
 Date: 2/28/00
 2/28/00
 2014

This Development Plan is approved for Soil Erosion and Sediment Control by the Howard Soil Conservation District.

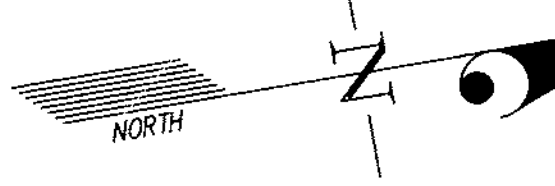
[Signature]
 Date: 2/15/00

ENGINEER'S CERTIFICATE

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.

These plans have been reviewed for the Howard Soil Conservation District and meet the technical requirements.
[Signature] 3-15-00
 Natural Resources Conservation Service Date

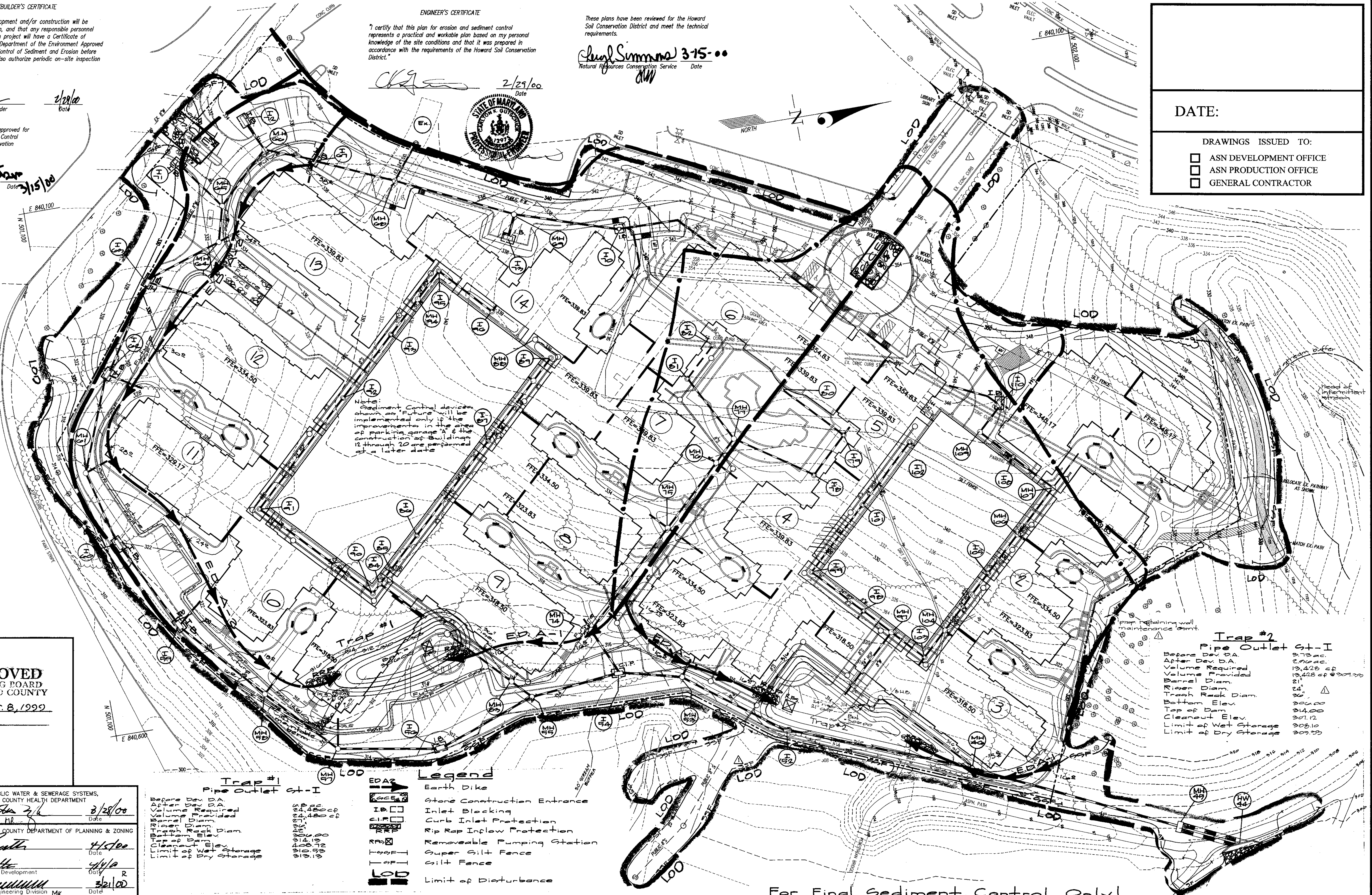
[Signature] 2/29/00
 Date



DATE:

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR



Note: Sediment Control devices shown as future improvements only in the area of parking garage 'A' & the construction of Buildings 12 through 20 are performed at a later date.

Trap #2
Pipe Outlet St-I

| | |
|----------------------|--------------|
| Before Dev. DA | 373 ac. |
| After Dev. DA | 200 ac. |
| Volume Required | 13,428 cu ft |
| Barrel Diameter | 24" |
| Riser Diam. | 24" |
| Trash Rack Diam. | 30" |
| Bottom Elev. | 300.00 |
| Top of Dam | 314.00 |
| Cleanout Elev. | 307.12 |
| Limit of Wet Storage | 308.10 |
| Limit of Dry Storage | 309.33 |

Legend

- Earth Dike
- Stone Construction Entrance
- Inlet Blocking
- Curb Inlet Protection
- Rip Rap Inflow Protection
- Removeable Pumping Station
- Super Silt Fence
- Silt Fence
- Limit of Disturbance

APPROVED
 PLANNING BOARD
 of HOWARD COUNTY
 DATE: SEPT. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT
[Signature] 3/1/00
 County Health Officer Date

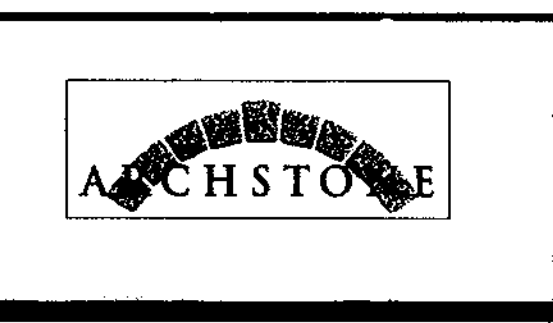
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
[Signature] 4/15/00
 Director Date

[Signature] 4/14/00
 Chief, Division of Land Development Date

[Signature] 3/21/00
 Chief, Development Engineering Division Date

GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK
 BURTNSVILLE, MARYLAND 20866
 TEL: 301-421-4624 BAL: 410-880-1820 DC/Va: 301-989-2524 FAX: 301-421-4186

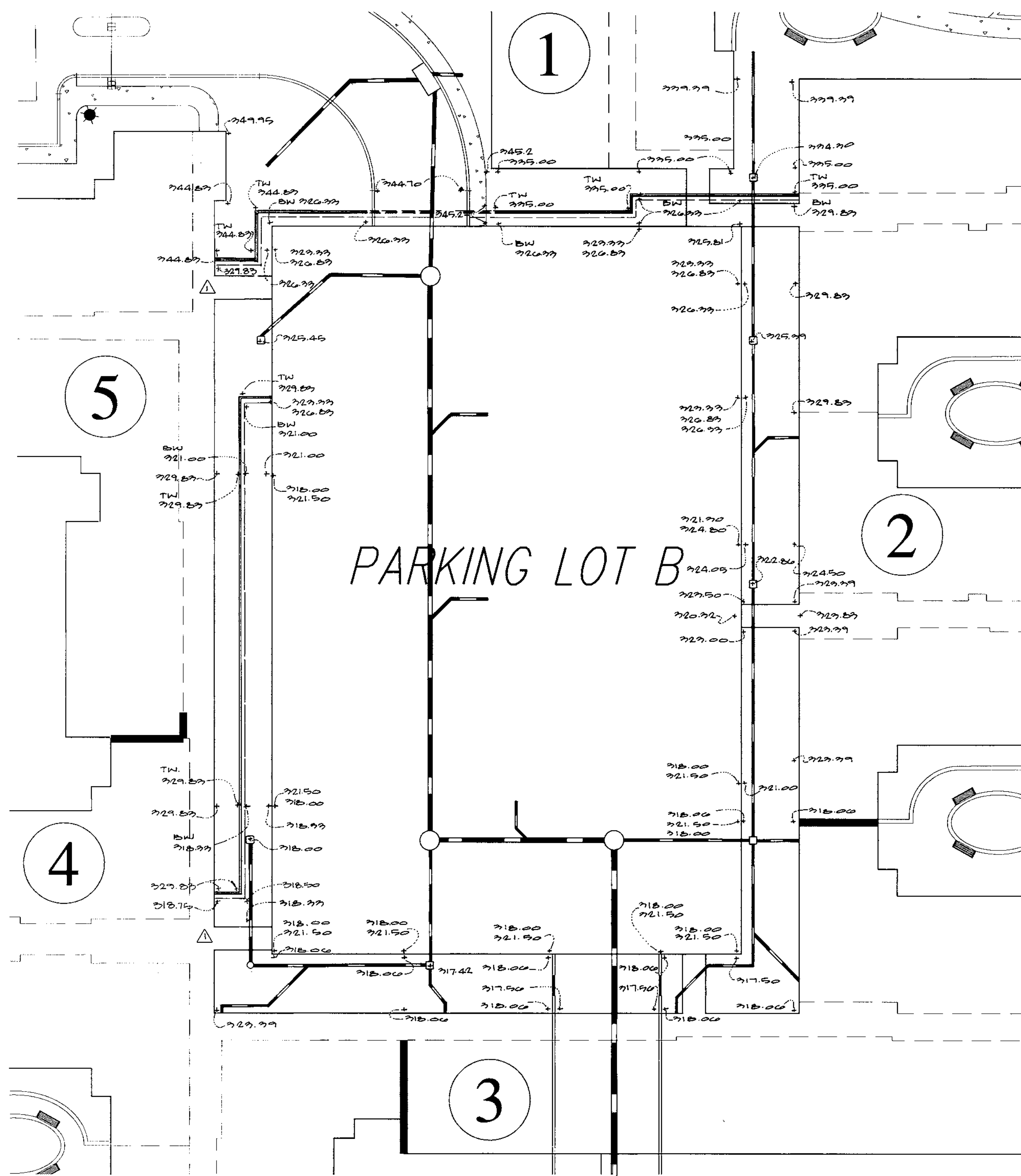
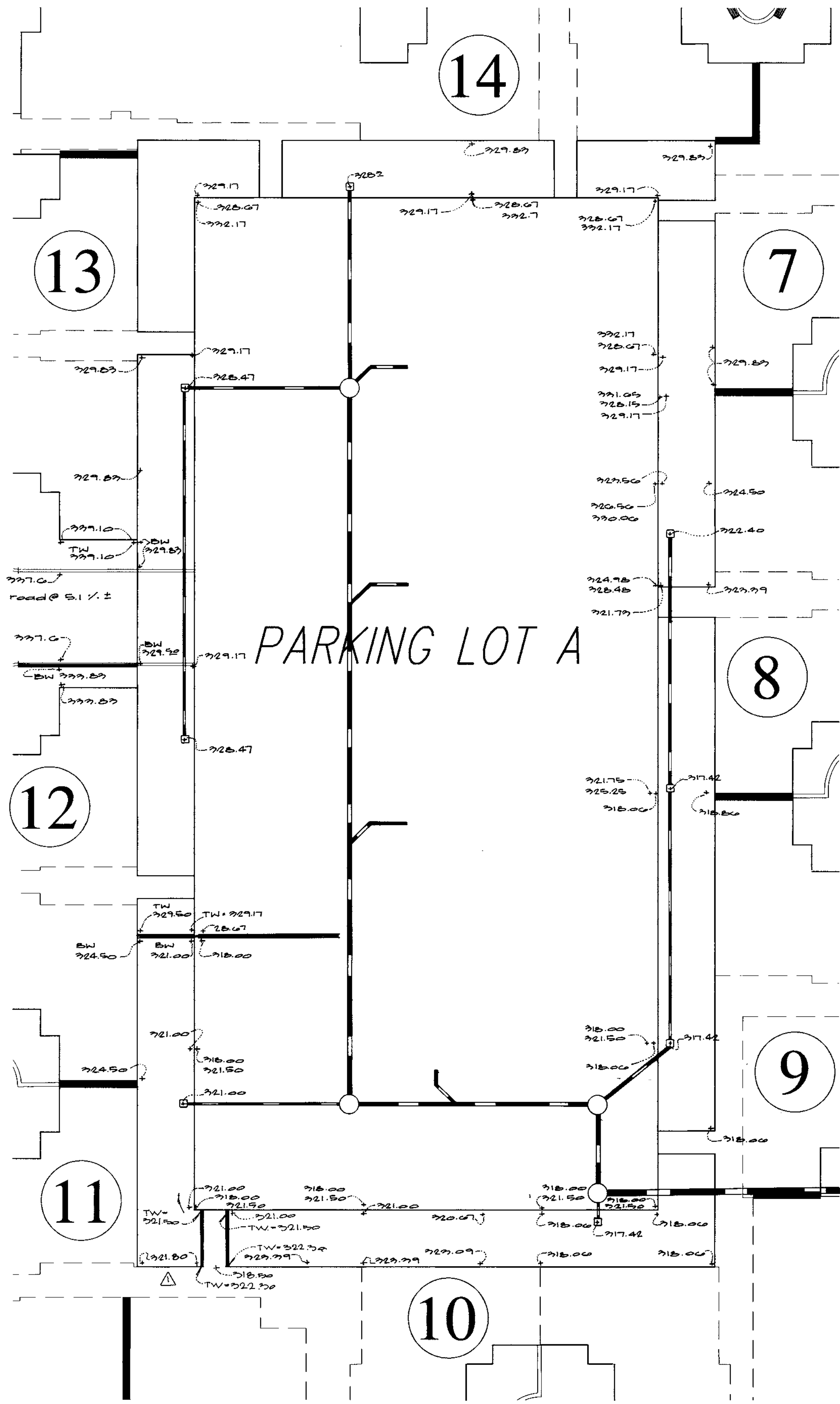
| DATE | REVISION | BY | APP'R. |
|----------|---|-----|--------|
| 10/11/00 | Rev. LOD, Trap #2, Trap Data, rev. retaining wall @ Bldg #2 | MCE | |



OWNER:
 ARCHSTONE COMMUNITIES TRUST
 6631-A OLD DOMINION DRIVE
 SUITE 201
 McLEAN, VA 22101
 703-883-3545

SEDIMENT & EROSION PLAN - FINAL
COLUMBIA TOWN CENTER
 SECTION 1 AREA 3
 PARCEL "A-1"
 PLAT No. 7989

| | | |
|-----------|----------------|-------------------|
| SCALE | ZONING | G. L. W. FILE No. |
| 1"=40' | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| 3/23/2000 | 36 - 2 | 20 OF 24 |



DATE:

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR

APPROVED
PLANNING BOARD
of HOWARD COUNTY
 DATE SEPT. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT
[Signature] 3/28/00
 County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
[Signature] 4/15/00
 Director Date

[Signature] 4/14/00
 Chief, Division of Land Development Date

[Signature] 3/21/00
 Chief, Development Engineering Division Date



GLW GUTSCHICK LITTLE & WEBER, P.A.

CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BIRTONSVILLE OFFICE PARK
 BIRTONSVILLE, MARYLAND 21086
 TEL: 301-421-4024 BALT. 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

DES. DEV. DRN. OPM. CHK. DEV.

| DATE | REVISION | BY | APPR. |
|----------|--------------------------|-----|-------|
| 10/11/00 | rev retaining walls elev | MCJ | |



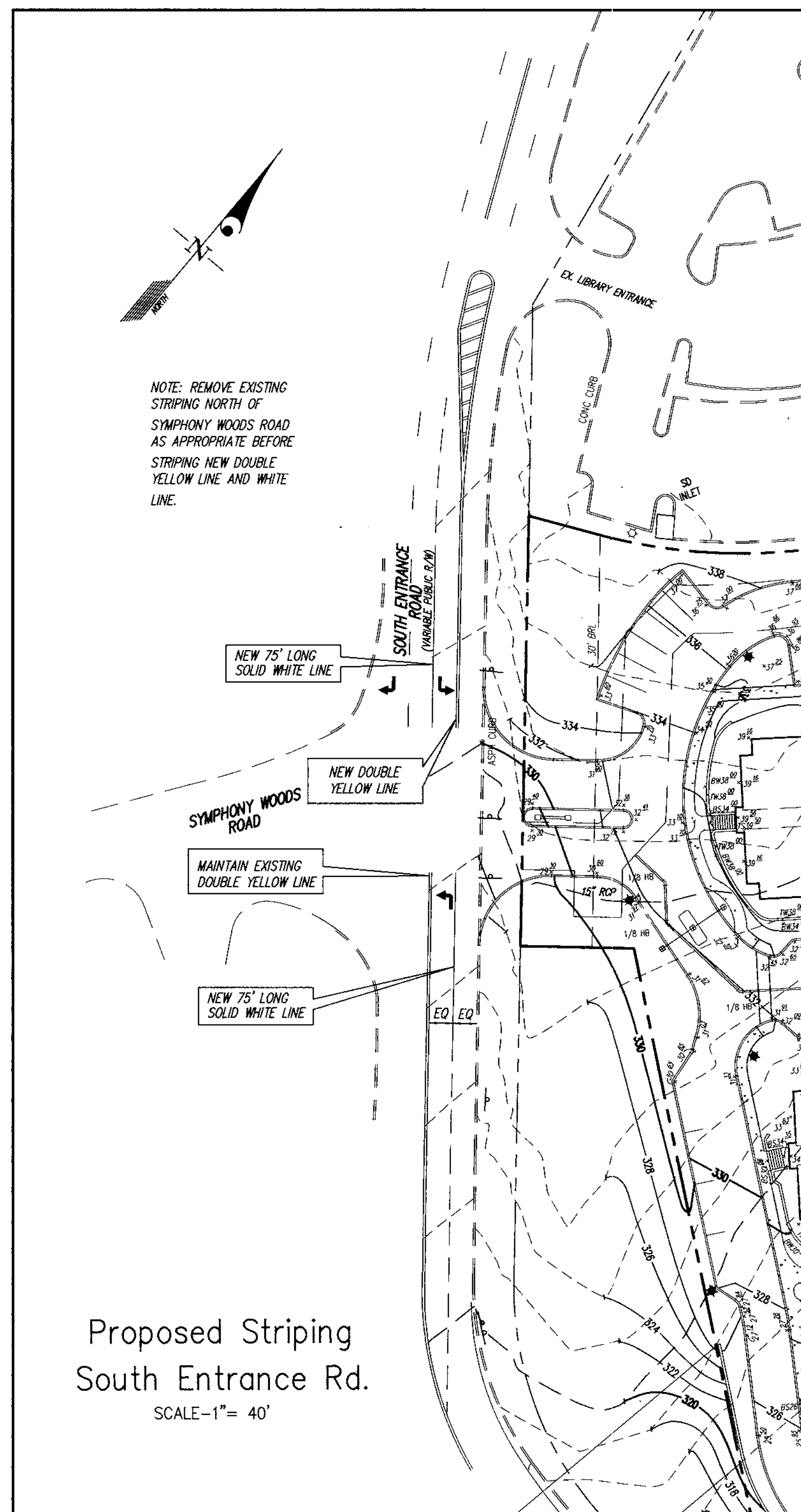
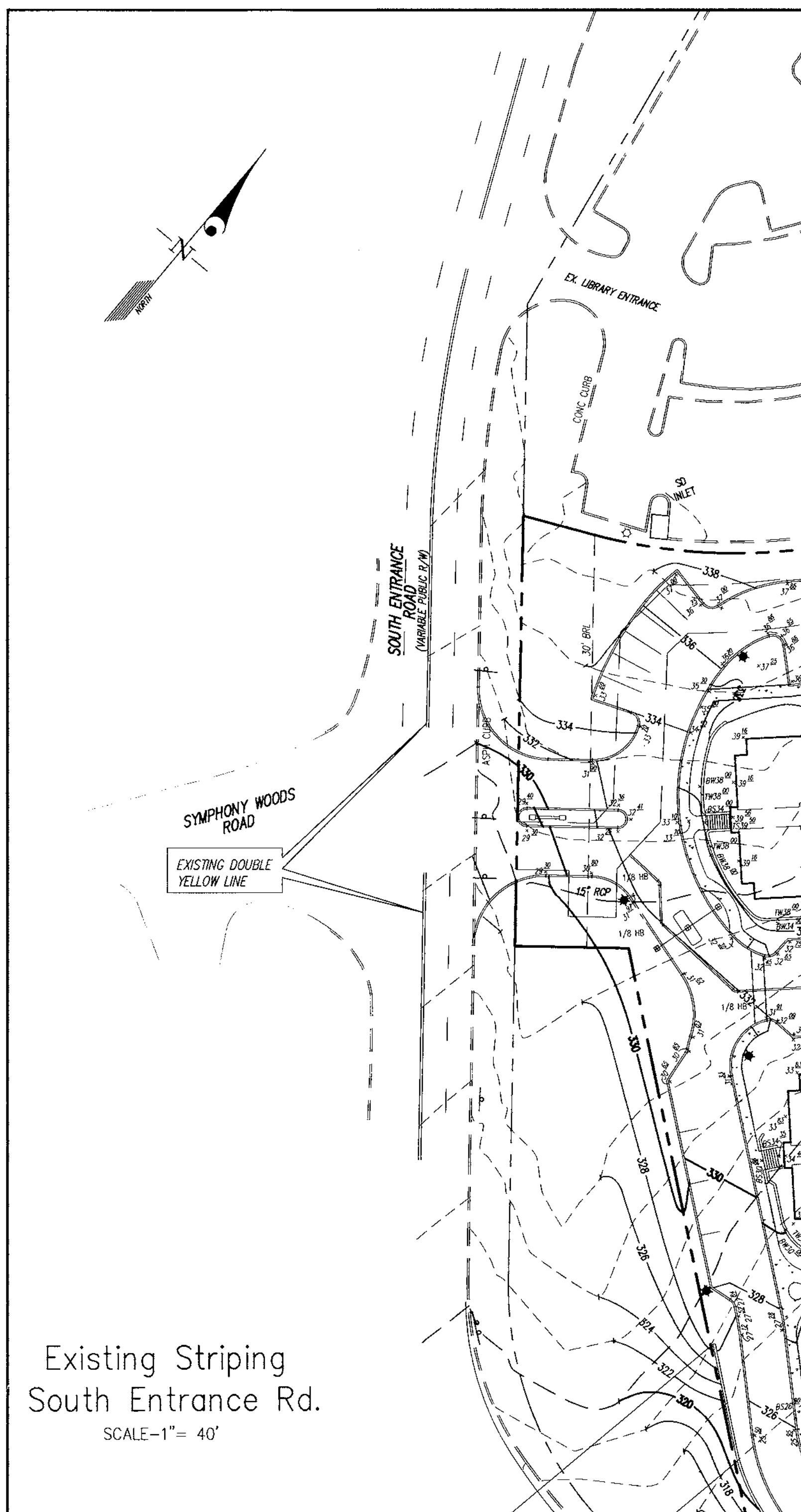
OWNER:
 ARCHSTONE COMMUNITIES TRUST
 6631-A OLD DOMINION DRIVE
 SUITE 201
 McLEAN, VA 22101
 703-883-3545

INTERMEDIATE RETAINING WALL DETAILS
COLUMBIA TOWN CENTER
 SECTION 1 AREA 3
 PARCEL "A-1"
 PLAT No. 7989

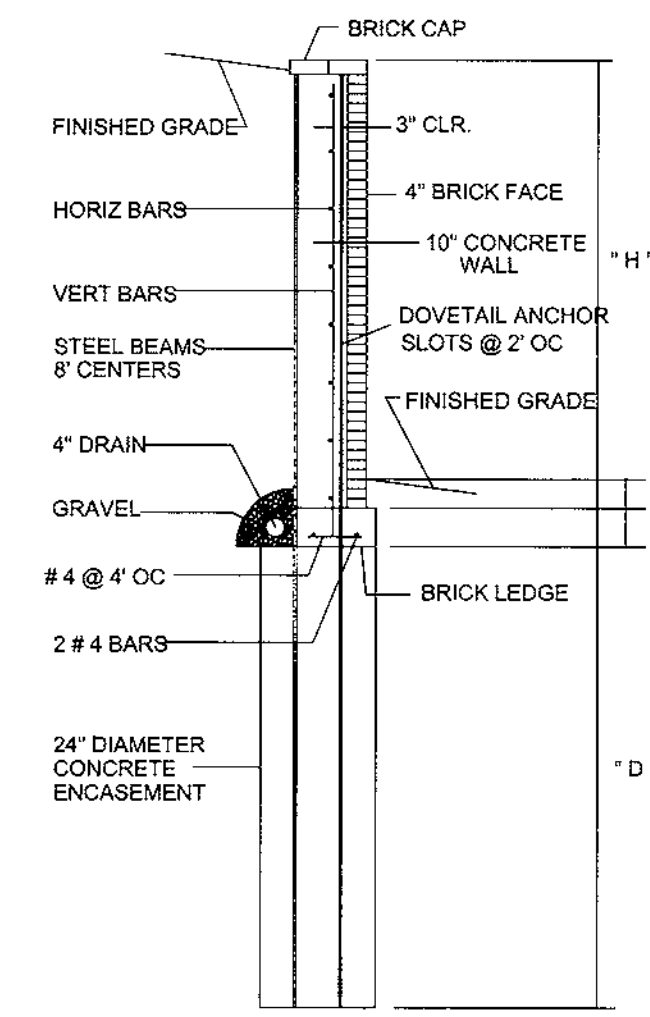
CLARKVILLE ELECTION DISTRICT No. 5

HOWARD COUNTY, MARYLAND

| SCALE | ZONING | G. L. W. FILE No. |
|--------------|----------------|-------------------|
| 1" = 20' | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| MAR. 3, 2000 | 36 - 2 | 23 OF 24 |

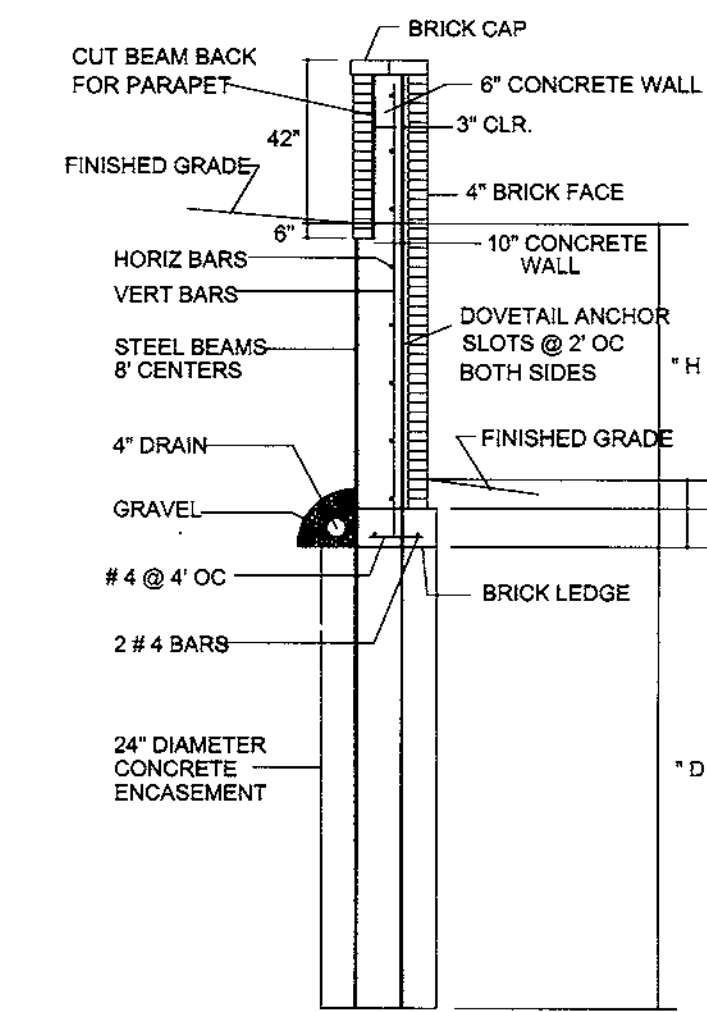


BEAM & CONCRETE WALL
BRICK FACED & CAPPED



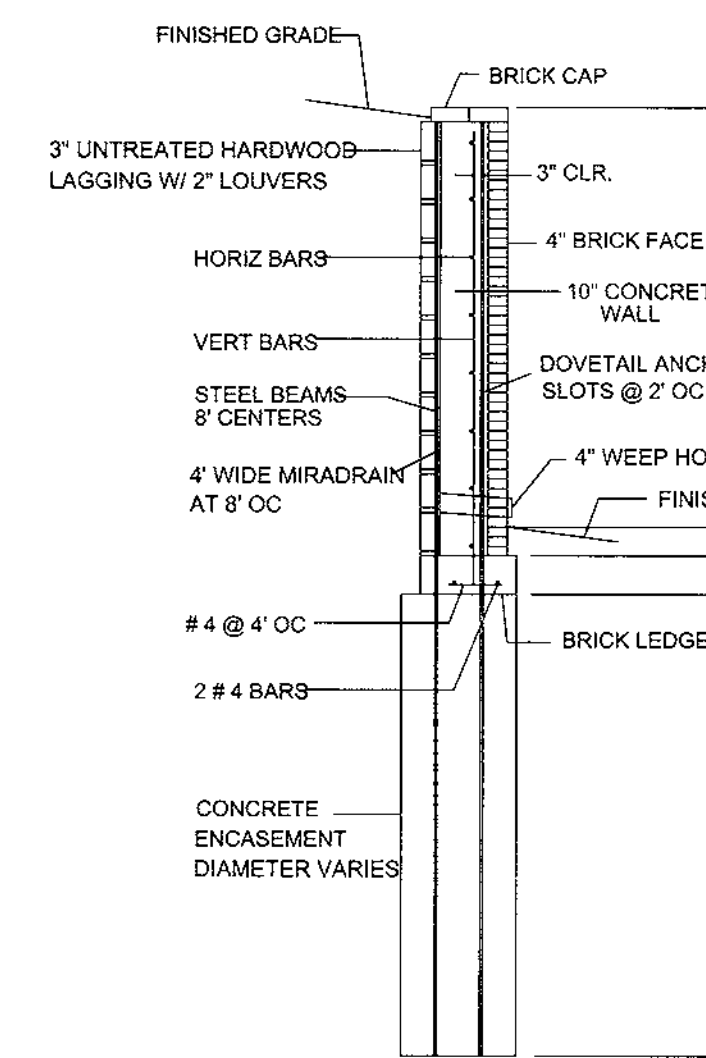
TYPICAL SECTION NTS

BEAM & CONCRETE WALL
BRICK FACED & CAPPED
WITH PARAPET



TYPICAL SECTION NTS

BEAM & CONCRETE WALL
BRICK FACED & CAPPED
& SHORING WALL



TYPICAL SECTION NTS

BEAM & CONCRETE WALL ALTERNATE

"FOUNDATIONS UNLIMITED, INC. 301-854-6660"

| H DESIGN HEIGHT FEET | DRILL HOLE DIAMETER INCHES | STEEL BEAM TYPE 50 KSI | D TOE DEPTH FEET | HORIZ BARS SIZE & SPACING | VERT BARS SIZE & SPACING |
|-------------------------------|-------------------------------------|---------------------------------|---------------------------|------------------------------------|-----------------------------------|
| UP TO 4' | 24 | W10X22 | 7.0 | # 4 @ 12" | # 4 @ 12" |
| UP TO 5' | 24 | W10X22 | 8.5 | # 4 @ 12" | # 4 @ 12" |
| UP TO 6' | 24 | W10X22 | 10.0 | # 4 @ 12" | # 4 @ 12" |
| UP TO 7' | 24 | W10X30 | 11.0 | # 4 @ 12" | # 4 @ 12" |
| UP TO 8' | 24 | W10X45 | 12.5 | # 4 @ 12" | # 4 @ 12" |
| UP TO 9' | 24 | W14X43 | 13.5 | # 4 @ 12" | # 4 @ 12" |
| UP TO 10' | 24 | W14X53 | 15.0 | # 5 @ 12" | # 4 @ 12" |
| UP TO 11' | 30 | W18X55 | 14.5 | # 5 @ 12" | # 4 @ 12" |
| UP TO 12' | 30 | W18X65 | 16.0 | # 5 @ 12" | # 4 @ 12" |
| UP TO 13' | 30 | W18X76 | 17.0 | # 5 @ 12" | # 4 @ 12" |
| UP TO 14' | 36 | W24X76 | 16.5 | # 5 @ 12" | # 4 @ 12" |
| UP TO 15' | 36 | W24X94 | 17.5 | # 5 @ 12" | # 4 @ 12" |
| UP TO 16' | 36 | W24X103 | 18.5 | # 5 @ 12" | # 4 @ 12" |
| UP TO 17' | 36 | W24X117 | 20.0 | # 6 @ 12" | # 4 @ 12" |
| UP TO 18' | 36 | W24X131 | 20.5 | # 6 @ 12" | # 4 @ 12" |
| UP TO 19' | 42 | W24X146 | 20.5 | # 6 @ 12" | # 4 @ 12" |
| UP TO 20' | 42 | W24X176 | 21.5 | # 6 @ 12" | # 4 @ 12" |

CONSTRUCTION NOTES:

ALL STEEL BEAMS TO BE GRADE 50
ALL CONCRETE TO BE 3000 PSI AT 28 DAYS - 5" SLUMP
ALL REINFORCING TO BE GRADE 60
1/2" EXPANSION JOINTS TO BE AT 40' ON CENTER MAXIMUM
REFER TO CIVIL DRAWINGS FOR WALL LAYOUT & ELEVATIONS
DRAIN PIPE TO BE 4" DIAMETER PERFORATED
GRAVEL FOR DRAINAGE TO BE # 57 STONE

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE SEPT. 8, 1999

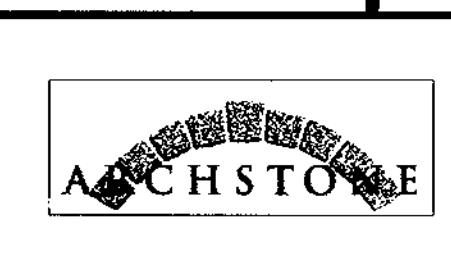
APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Dina M. Blaylock 3/28/00
County Health Officer F.R. Dyle
APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Frank J. Smith 4/15/00
Date
Linda H. Smith 4/14/00
Chief, Division of Land Development R.
Michael J. Smith 3/21/00
Chief, Development Engineering Division MK Date



Details shown on this side of page are the responsibility of Gutschick, Little & Weber, P.A.

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

| DATE | REVISION | BY | APP'R. |
|----------|----------------------------|-----|--------|
| 10/11/00 | add retaining wall details | MCF | |



OWNER:
ARCHSTONE COMMUNITIES TRUST
6631-A OLD DOMINION DRIVE
SUITE 201
McLEAN, VA 22101
703-883-3545

SOUTH ENTRANCE ROAD STRIPING PLAN AND DETAILS
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989
CLARKSVILLE ELECTION DISTRICT No. 5
HOWARD COUNTY, MARYLAND

| SCALE | ZONING | G. L. W. FILE No. |
|-----------|----------------|-------------------|
| AS SHOWN | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| 3-03-2000 | 36 - 2 | 24 OF 24 |

DATE:
DRAWINGS ISSUED TO:
 ASN DEVELOPMENT OFFICE
 ASN PRODUCTION OFFICE
 GENERAL CONTRACTOR

Details for Alternative Retaining Wall are the responsibility of:
Foundations Unlimited, Inc.
14008 Misty Knoll Court
Woodbine, MD 21791
(410) 854-0660

| STATION | TRV | COMMENTS |
|---------|--------|-----------------------|
| 1 | 332.00 | DETAIL 11/9 & SHT. 22 |
| 2 | 329.50 | DETAIL 11/9 & SHT. 22 |
| 3 | 328.00 | DETAIL 11/9 & SHT. 22 |
| 4 | 327.00 | DETAIL 11/9 & SHT. 22 |
| 5 | 326.00 | DETAIL 11/9 & SHT. 22 |
| 6 | 325.00 | DETAIL 11/9 & SHT. 22 |
| 7 | 324.00 | DETAIL 11/9 & SHT. 22 |
| 8 | 323.00 | DETAIL 11/9 & SHT. 22 |
| 9 | 319.00 | DETAIL 11/9 & SHT. 22 |
| 10 | 317.50 | DETAIL 11/9 & SHT. 22 |
| 11 | 316.70 | DETAIL 11/9 & SHT. 22 |
| 12 | 316.00 | DETAIL 11/9 & SHT. 22 |
| 13 | 316.50 | DETAIL 11/9 & SHT. 22 |
| 14 | 316.30 | DETAIL 11/9 & SHT. 22 |
| 15 | 317.30 | DETAIL 11/9 & SHT. 22 |
| 16 | 316.50 | DETAIL 11/9 & SHT. 22 |
| 17 | 316.00 | DETAIL 11/9 & SHT. 22 |
| 18 | 316.50 | DETAIL 11/9 & SHT. 22 |
| 19 | 316.50 | DETAIL 11/9 & SHT. 22 |
| 20 | 316.50 | DETAIL 11/9 & SHT. 22 |
| 21 | 316.50 | DETAIL 11/9 & SHT. 22 |
| 22 | 316.50 | DETAIL 11/9 & SHT. 22 |

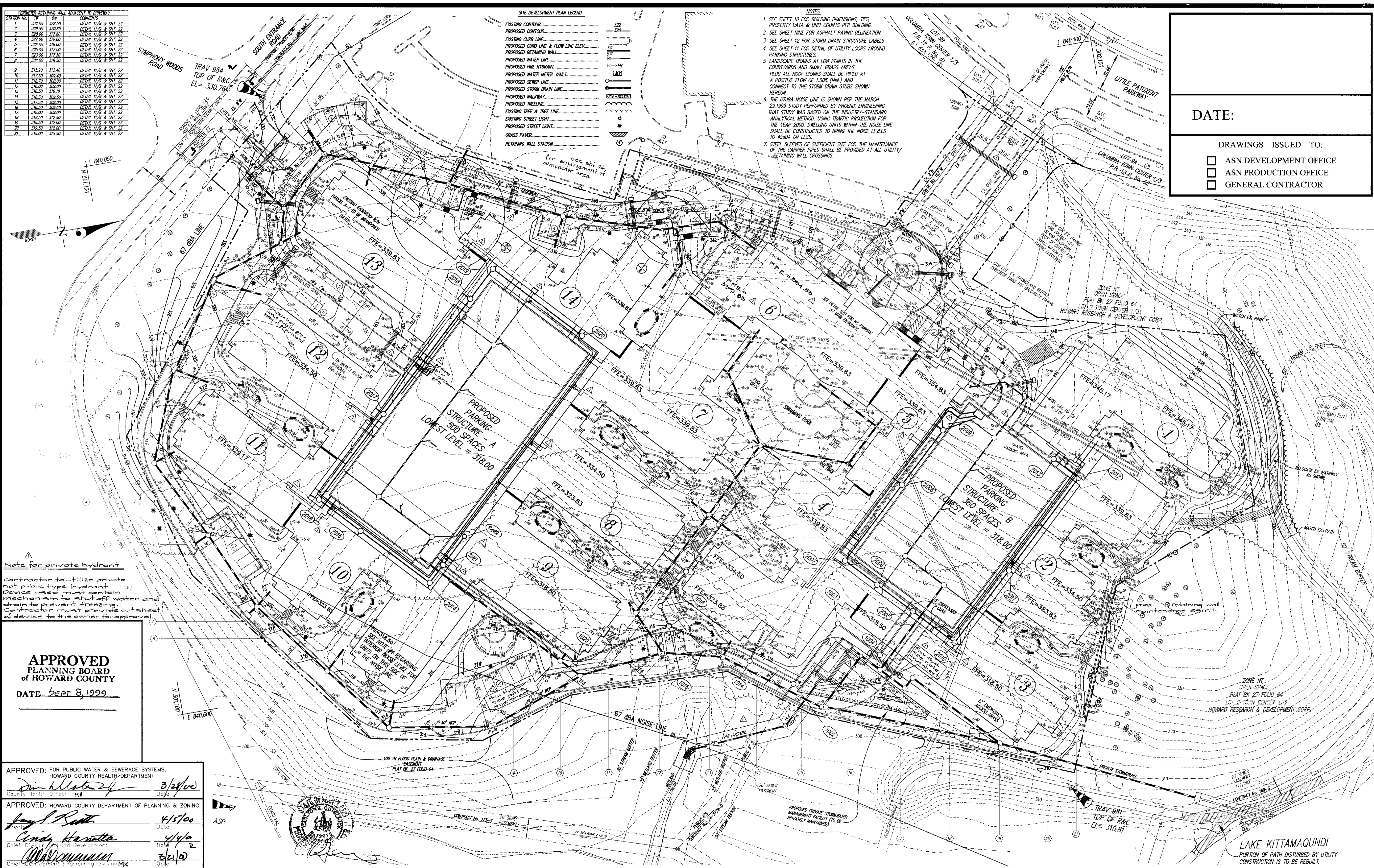
| SITE DEVELOPMENT PLAN LEGEND | |
|--------------------------------------|-----|
| EXISTING CONTOUR | --- |
| PROPOSED CONTOUR | --- |
| EXISTING CURB LINE | --- |
| PROPOSED CURB LINE & FLOW LINE ELEV. | --- |
| PROPOSED RETAINING WALL | --- |
| PROPOSED WATER LINE | --- |
| PROPOSED FIRE HYDRANT | --- |
| PROPOSED WATER METER VAULT | --- |
| PROPOSED SEWER LINE | --- |
| PROPOSED STORM DRAIN LINE | --- |
| PROPOSED WALKWAY | --- |
| PROPOSED TREELINE | --- |
| EXISTING TREE & TREE LINE | --- |
| EXISTING STREET LIGHT | --- |
| PROPOSED STREET LIGHT | --- |
| GRASS PAVEMENT | --- |
| RETAINING WALL STATION | --- |

- NOTES:
- SEE SHEET 10 FOR BUILDING DIMENSIONS, TIES, PROPERTY DATA & UNIT COUNTS PER BUILDING.
 - SEE SHEET NINE FOR ASPHALT PAVING DELINEATION.
 - SEE SHEET 12 FOR STORM DRAIN STRUCTURE LABELS.
 - SEE SHEET 11 FOR DETAIL OF UTILITY LOOPS AROUND PARKING STRUCTURES.
 - LANDSCAPE DRAINS AT LOW POINTS IN THE COURTYARDS AND SMALL GRASS AREAS PLUS ALL ROOF DRAINS SHALL BE PIPED AT A POSITIVE FLOW OF 1.00% (MIN.) AND CONNECT TO THE STORM DRAIN STUBS SHOWN HEREON.
 - THE 67dBA NOISE LINE IS SHOWN PER THE MARCH 28, 1999 STUDY PERFORMED BY PHOENIX ENGINEERING THAT STUDY WAS BASED ON THE INDUSTRY-STANDARD ANALYTICAL METHOD, USING TRAFFIC PROTECTION FOR THE YEAR 2000. DWELLING UNITS WITHIN THE NOISE LINE SHALL BE CONSTRUCTED TO BRING THE NOISE LEVELS TO 45dBA OR LESS.
 - STEEL SLEEVES OF SUFFICIENT SIZE FOR THE MAINTENANCE OF THE CARRIER PIPES SHALL BE PROVIDED AT ALL UTILITY/RETAINING WALL CROSSINGS.

DATE: _____

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR



Note for private hydrant
 Contractor to utilize private not public type hydrant. Device used must contain mechanism to shut off water and drain to prevent freezing. Contractor must provide cut sheet of device to the owner for approval.

APPROVED
 PLANNING BOARD
 of HOWARD COUNTY
 DATE: Sept 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT
 Date: 3/28/00

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
 Date: 4/15/00

Chief, Development Engineering: MK
 Date: 3/21/00

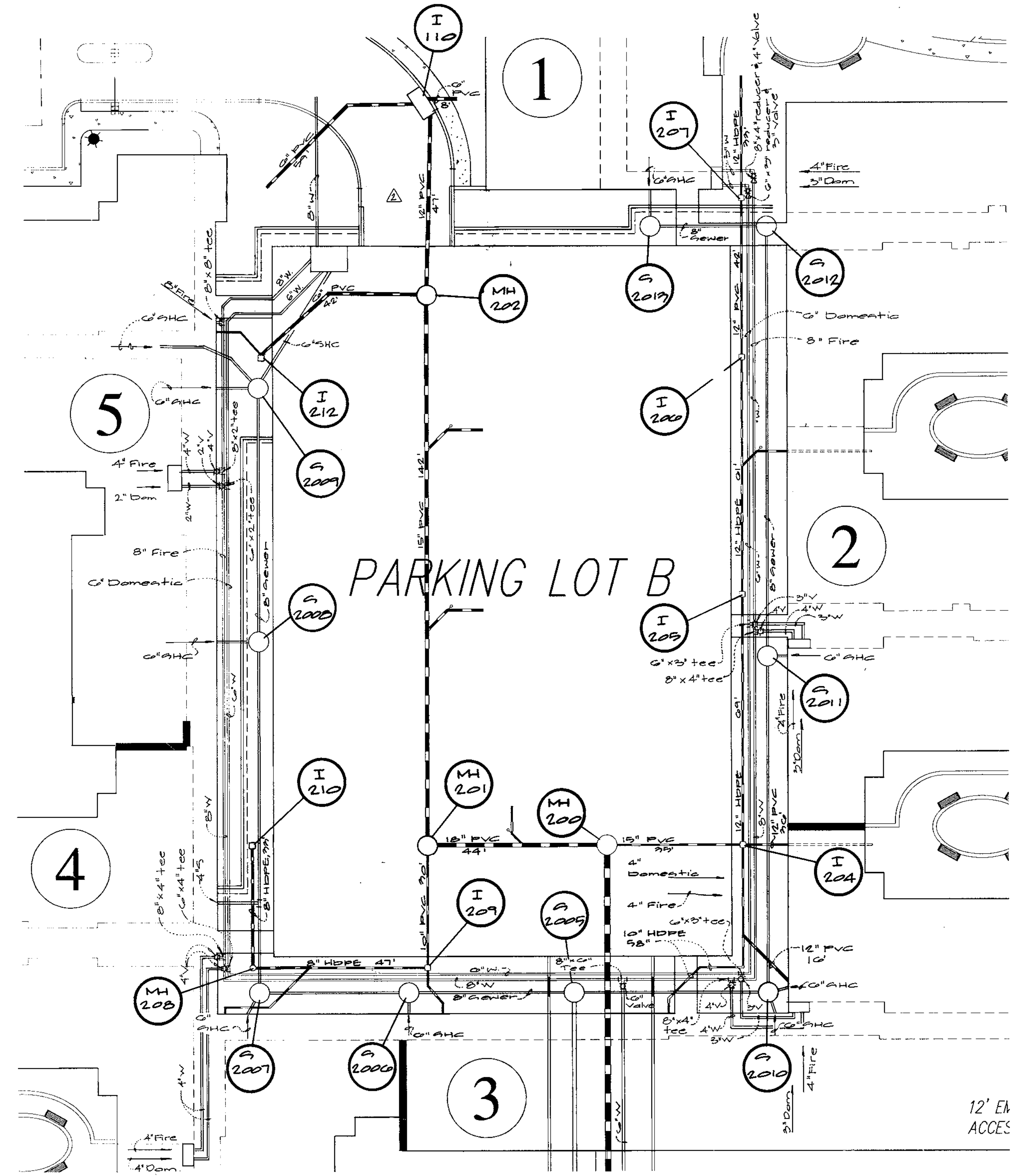
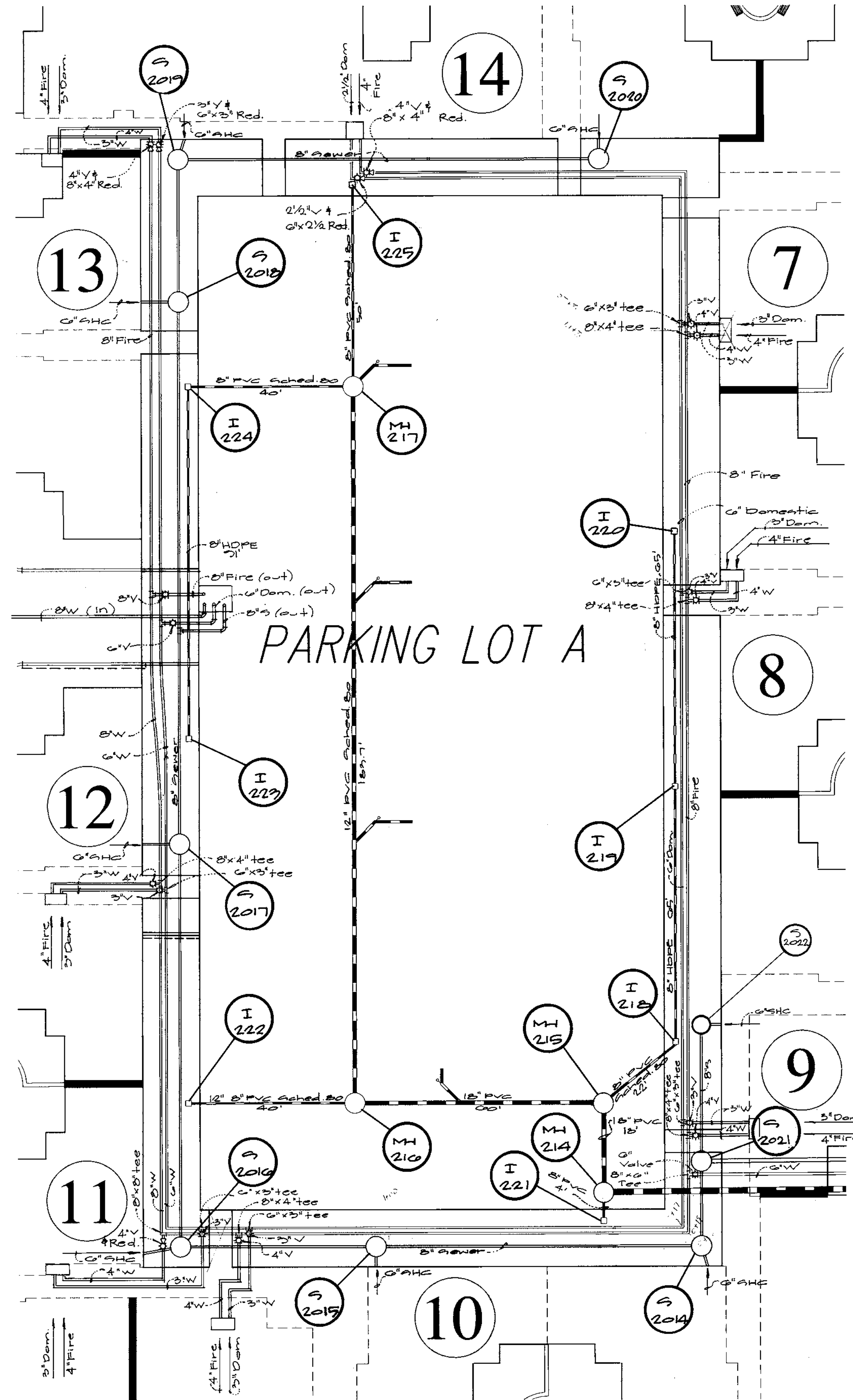
GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3009 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
 BURTONSVILLE, MARYLAND 20866
 TEL: 301-421-4024 FAX: 301-989-2524

| DATE | REVISION | BY | APPR. |
|----------|---|-----|-------|
| 2/13/01 | revise compactor area, clear up grading around SW corner of building and revise parking to accommodate access to W.R. devices and revise entrance road on high end of garage 'B' | JAL | |
| 10/10/00 | rev lower level elev in Gar. A & D, rev utilities in mats for Gar. A & D, add conduits under roadway, rev retaining wall @ Bldg #2, private FH note rev underground SWM facility, rev limits of public water add FH @ Bldg #2 | MAF | |

OWNER:
ARCHSTONE COMMUNITIES TRUST
 6631-A OLD DOMINION DRIVE
 SUITE 201
 McLEAN, VA 22101
 703-883-3545

SITE DEVELOPMENT PLAN
COLUMBIA TOWN CENTER
 SECTION 1 AREA 3
 PARCEL "A-1"
 PLAT No. 7989

| SCALE | ZONING | G. L. W. FILE No. |
|-----------|----------------|-------------------|
| 1"=40' | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| 3/03/2000 | 36 - 2 | 3 OF 24 |



All fittings and next two joints in either direction of fittings for water lines shown on this sheet (domestic and fire) shall be restrained with Megalugs or approved equal in accordance with Howard County Standards and Specifications.

DATE: _____

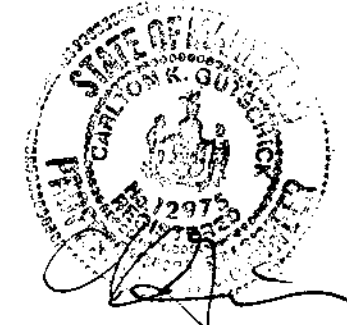
DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE SEPT. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Donie M. [Signature] 3/28/00
County Health Officer, MK Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
James [Signature] 4/15/00
Director Date
Linda [Signature] 4/14/00
Chief, Development Date
Chad [Signature] 3/21/00
Chief, Development Engineering Station MK Date



GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONVILLE OFFICE PARK
BURTONVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

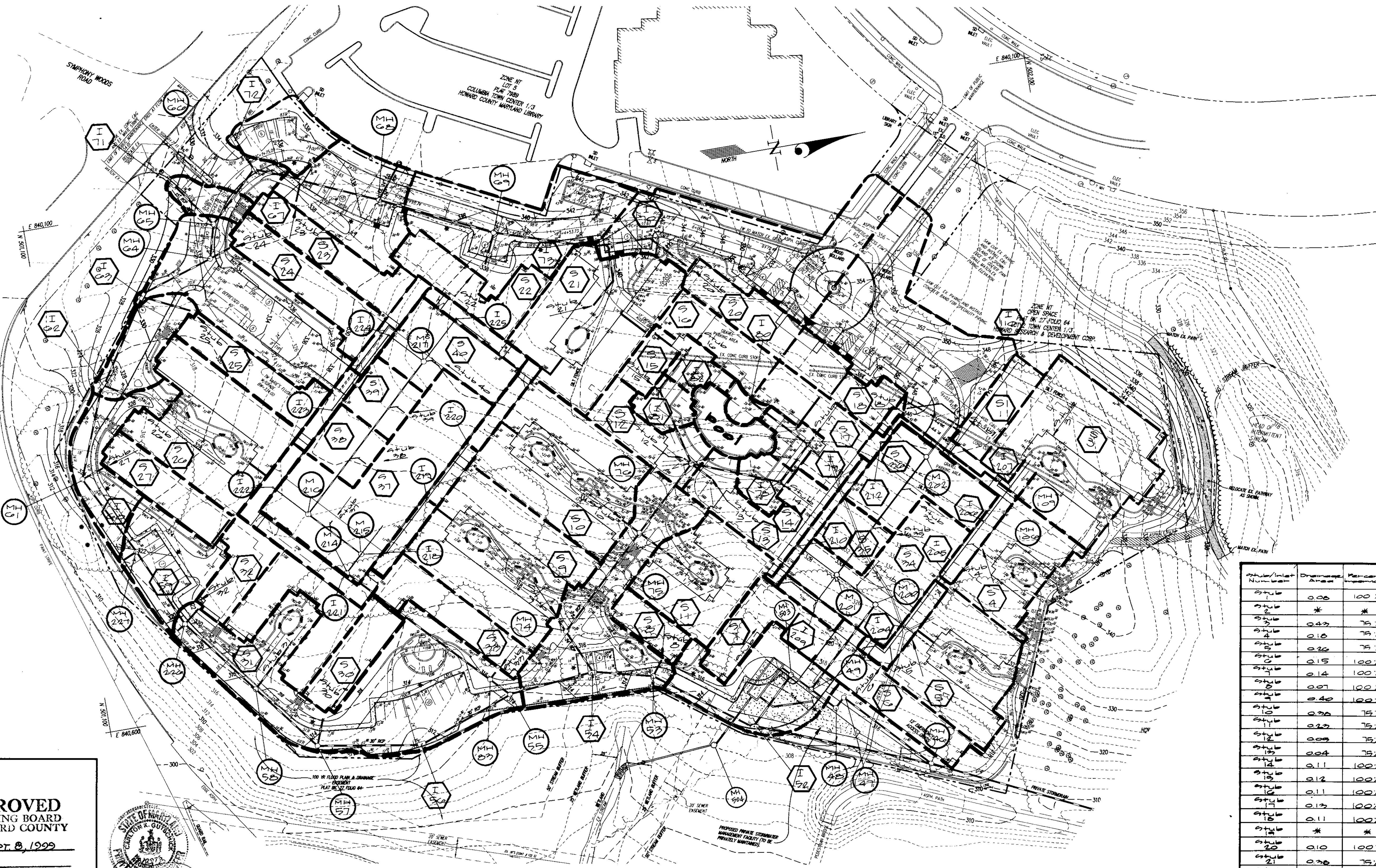
| DATE | REVISION | BY | APP'R. |
|---------|--|-----|--------|
| 3/13/01 | Δ revise location of entrance road to garage 'B' | JAL | |
| 10/1/00 | rev. MHC & SHC in manholes for garages 'A' & 'B' | MJE | |



OWNER:
ARCHSTONE COMMUNITIES TRUST
8631-A OLD DOMINION DRIVE
SUITE 201
MELLEN, VA 22101
703-883-3345

DETAILED UTILITY LOCATION PLAN
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989
CLARKVILLE ELECTION DISTRICT No. 5
HOWARD COUNTY, MARYLAND

| SCALE | ZONING | G. L. W. FILE No. |
|---------------|----------------|-------------------|
| 1" = 20' | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| March 3, 2000 | 36 - 2 | 11 OF 24 |



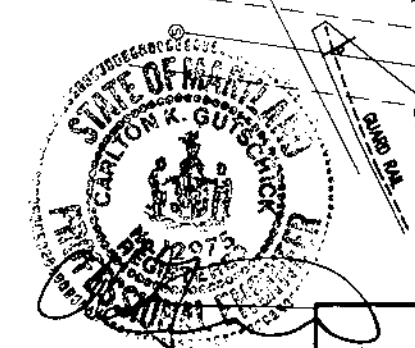
DATE:

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR

APPROVED
PLANNING BOARD
 of HOWARD COUNTY

DATE SEPT. 8, 1999



APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
 HOWARD COUNTY HEALTH DEPARTMENT

Dino Mlatkovic 3/24/00
 County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING

Joseph R. Butler 4/15/00
 Date

Leidy Hamilton 4/14/00
 Chief, Division of Land Development Date

William M. ... 3/21/00
 Chief, Development Engineering Division MK Date

Storm Drain Tabulation

| From | To | Type | Length | From | To | Type | Length | From | To | Type | Length | From | To | Type | Length | From | To | Type | Length | From | To | Type | Length | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------|--------|---------|--------|-------|---------|------|--------|-------|----------|------|--------|-------|----------|------|--------|-------|----------|------|--------|-------|----------|------|--------|-------|----------|----|-------|-------|----------|----|-------|-------|----------|----|-------|-------|----------|----|-------|-------|----------|----|-------|-------|----------|----|-------|-------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|--------|--------|----------|----|---------|---------|----------|----|
| I 225 | MH 217 | 8" HDPE | 50' | I 110 | 0" HDPE | 45' | MH 200 | MH 44 | 12" HDPE | 10' | MH 70 | MH 75 | 12" HDPE | 5' | MH 10 | MH 15 | 12" HDPE | 5' | MH 20 | MH 25 | 12" HDPE | 5' | MH 30 | MH 35 | 12" HDPE | 5' | MH 40 | MH 45 | 12" HDPE | 5' | MH 50 | MH 55 | 12" HDPE | 5' | MH 60 | MH 65 | 12" HDPE | 5' | MH 70 | MH 75 | 12" HDPE | 5' | MH 80 | MH 85 | 12" HDPE | 5' | MH 90 | MH 95 | 12" HDPE | 5' | MH 100 | MH 105 | 12" HDPE | 5' | MH 110 | MH 115 | 12" HDPE | 5' | MH 120 | MH 125 | 12" HDPE | 5' | MH 130 | MH 135 | 12" HDPE | 5' | MH 140 | MH 145 | 12" HDPE | 5' | MH 150 | MH 155 | 12" HDPE | 5' | MH 160 | MH 165 | 12" HDPE | 5' | MH 170 | MH 175 | 12" HDPE | 5' | MH 180 | MH 185 | 12" HDPE | 5' | MH 190 | MH 195 | 12" HDPE | 5' | MH 200 | MH 205 | 12" HDPE | 5' | MH 210 | MH 215 | 12" HDPE | 5' | MH 220 | MH 225 | 12" HDPE | 5' | MH 230 | MH 235 | 12" HDPE | 5' | MH 240 | MH 245 | 12" HDPE | 5' | MH 250 | MH 255 | 12" HDPE | 5' | MH 260 | MH 265 | 12" HDPE | 5' | MH 270 | MH 275 | 12" HDPE | 5' | MH 280 | MH 285 | 12" HDPE | 5' | MH 290 | MH 295 | 12" HDPE | 5' | MH 300 | MH 305 | 12" HDPE | 5' | MH 310 | MH 315 | 12" HDPE | 5' | MH 320 | MH 325 | 12" HDPE | 5' | MH 330 | MH 335 | 12" HDPE | 5' | MH 340 | MH 345 | 12" HDPE | 5' | MH 350 | MH 355 | 12" HDPE | 5' | MH 360 | MH 365 | 12" HDPE | 5' | MH 370 | MH 375 | 12" HDPE | 5' | MH 380 | MH 385 | 12" HDPE | 5' | MH 390 | MH 395 | 12" HDPE | 5' | MH 400 | MH 405 | 12" HDPE | 5' | MH 410 | MH 415 | 12" HDPE | 5' | MH 420 | MH 425 | 12" HDPE | 5' | MH 430 | MH 435 | 12" HDPE | 5' | MH 440 | MH 445 | 12" HDPE | 5' | MH 450 | MH 455 | 12" HDPE | 5' | MH 460 | MH 465 | 12" HDPE | 5' | MH 470 | MH 475 | 12" HDPE | 5' | MH 480 | MH 485 | 12" HDPE | 5' | MH 490 | MH 495 | 12" HDPE | 5' | MH 500 | MH 505 | 12" HDPE | 5' | MH 510 | MH 515 | 12" HDPE | 5' | MH 520 | MH 525 | 12" HDPE | 5' | MH 530 | MH 535 | 12" HDPE | 5' | MH 540 | MH 545 | 12" HDPE | 5' | MH 550 | MH 555 | 12" HDPE | 5' | MH 560 | MH 565 | 12" HDPE | 5' | MH 570 | MH 575 | 12" HDPE | 5' | MH 580 | MH 585 | 12" HDPE | 5' | MH 590 | MH 595 | 12" HDPE | 5' | MH 600 | MH 605 | 12" HDPE | 5' | MH 610 | MH 615 | 12" HDPE | 5' | MH 620 | MH 625 | 12" HDPE | 5' | MH 630 | MH 635 | 12" HDPE | 5' | MH 640 | MH 645 | 12" HDPE | 5' | MH 650 | MH 655 | 12" HDPE | 5' | MH 660 | MH 665 | 12" HDPE | 5' | MH 670 | MH 675 | 12" HDPE | 5' | MH 680 | MH 685 | 12" HDPE | 5' | MH 690 | MH 695 | 12" HDPE | 5' | MH 700 | MH 705 | 12" HDPE | 5' | MH 710 | MH 715 | 12" HDPE | 5' | MH 720 | MH 725 | 12" HDPE | 5' | MH 730 | MH 735 | 12" HDPE | 5' | MH 740 | MH 745 | 12" HDPE | 5' | MH 750 | MH 755 | 12" HDPE | 5' | MH 760 | MH 765 | 12" HDPE | 5' | MH 770 | MH 775 | 12" HDPE | 5' | MH 780 | MH 785 | 12" HDPE | 5' | MH 790 | MH 795 | 12" HDPE | 5' | MH 800 | MH 805 | 12" HDPE | 5' | MH 810 | MH 815 | 12" HDPE | 5' | MH 820 | MH 825 | 12" HDPE | 5' | MH 830 | MH 835 | 12" HDPE | 5' | MH 840 | MH 845 | 12" HDPE | 5' | MH 850 | MH 855 | 12" HDPE | 5' | MH 860 | MH 865 | 12" HDPE | 5' | MH 870 | MH 875 | 12" HDPE | 5' | MH 880 | MH 885 | 12" HDPE | 5' | MH 890 | MH 895 | 12" HDPE | 5' | MH 900 | MH 905 | 12" HDPE | 5' | MH 910 | MH 915 | 12" HDPE | 5' | MH 920 | MH 925 | 12" HDPE | 5' | MH 930 | MH 935 | 12" HDPE | 5' | MH 940 | MH 945 | 12" HDPE | 5' | MH 950 | MH 955 | 12" HDPE | 5' | MH 960 | MH 965 | 12" HDPE | 5' | MH 970 | MH 975 | 12" HDPE | 5' | MH 980 | MH 985 | 12" HDPE | 5' | MH 990 | MH 995 | 12" HDPE | 5' | MH 1000 | MH 1005 | 12" HDPE | 5' |

| Style | Drainage Area | Percent Impervious | C Value | Inlet Number | Drainage Area | Percent Impervious | C Value |
|-----------|---------------|--------------------|---------|--------------|---------------|--------------------|---------|
| Style 1 | 0.06 | 100% | 0.07 | Inlet 22 | 0.23 | 75% | 0.71 |
| Style 2 | * | * | * | Inlet 23 | 0.78 | 75% | 0.71 |
| Style 3 | 0.43 | 75% | 0.71 | Inlet 24 | 0.61 | 75% | 0.71 |
| Style 4 | 0.18 | 75% | 0.71 | Inlet 25 | 0.18 | 75% | 0.71 |
| Style 5 | 0.28 | 75% | 0.71 | Inlet 26 | 0.17 | 75% | 0.71 |
| Style 6 | 0.15 | 100% | 0.07 | Inlet 27 | 0.13 | 75% | 0.71 |
| Style 7 | 0.14 | 100% | 0.07 | Inlet 28 | 0.28 | 75% | 0.71 |
| Style 8 | 0.07 | 100% | 0.07 | Inlet 29 | 0.23 | 75% | 0.71 |
| Style 9 | 0.40 | 100% | 0.07 | Inlet 30 | 0.44 | 75% | 0.71 |
| Style 10 | 0.38 | 75% | 0.71 | Inlet 31 | 0.09 | 75% | 0.71 |
| Style 11 | 0.38 | 75% | 0.71 | Inlet 32 | 0.11 | 75% | 0.71 |
| Style 12 | 0.09 | 75% | 0.71 | Inlet 33 | 0.25 | 75% | 0.71 |
| Style 13 | 0.04 | 75% | 0.71 | Inlet 34 | 0.05 | 75% | 0.71 |
| Style 14 | 0.11 | 100% | 0.07 | Inlet 35 | 0.05 | 75% | 0.71 |
| Style 15 | 0.12 | 100% | 0.07 | Inlet 36 | 0.05 | 100% | 0.07 |
| Style 16 | 0.11 | 100% | 0.07 | Inlet 37 | 0.05 | 75% | 0.71 |
| Style 17 | 0.13 | 100% | 0.07 | Inlet 38 | 0.05 | 100% | 0.07 |
| Style 18 | 0.11 | 100% | 0.07 | Inlet 39 | 0.50 | 75% | 0.71 |
| Style 19 | * | * | * | Inlet 40 | 0.24 | 0% | 0.24 |
| Style 20 | 0.10 | 100% | 0.07 | Inlet 41 | 0.22 | 0% | 0.24 |
| Style 21 | 0.38 | 75% | 0.71 | Inlet 42 | 0.27 | 0% | 0.24 |
| Style 22 | 0.14 | 100% | 0.07 | Inlet 43 | 0.22 | 0% | 0.24 |
| Style 23 | 0.14 | 100% | 0.07 | Inlet 44 | 0.23 | 0% | 0.24 |
| Style 24 | 0.15 | 100% | 0.07 | Inlet 45 | 0.23 | 0% | 0.24 |
| Style 25 | 0.13 | 100% | 0.07 | Inlet 46 | 0.22 | 0% | 0.24 |
| Style 26 | 0.33 | 100% | 0.07 | Inlet 47 | 0.27 | 0% | 0.24 |
| Style 27 | 0.12 | 100% | 0.07 | Inlet 48 | 0.22 | 0% | 0.24 |
| Style 28 | * | * | * | Inlet 49 | 0.24 | 0% | 0.24 |
| Style 29 | * | * | * | Inlet 50 | 0.24 | 75% | 0.71 |
| Style 30 | 0.10 | 75% | 0.71 | Inlet 51 | 0.24 | 0% | 0.24 |
| Style 31 | 0.17 | 100% | 0.07 | Inlet 52 | 0.27 | 0% | 0.24 |
| Style 32 | 0.09 | 100% | 0.07 | Inlet 53 | 0.24 | 0% | 0.24 |
| Style 33 | 0.14 | 100% | 0.07 | Inlet 54 | 0.24 | 0% | 0.24 |
| Inlet 100 | 0.05 | 100% | 0.07 | Inlet 101 | 0.05 | 75% | 0.71 |

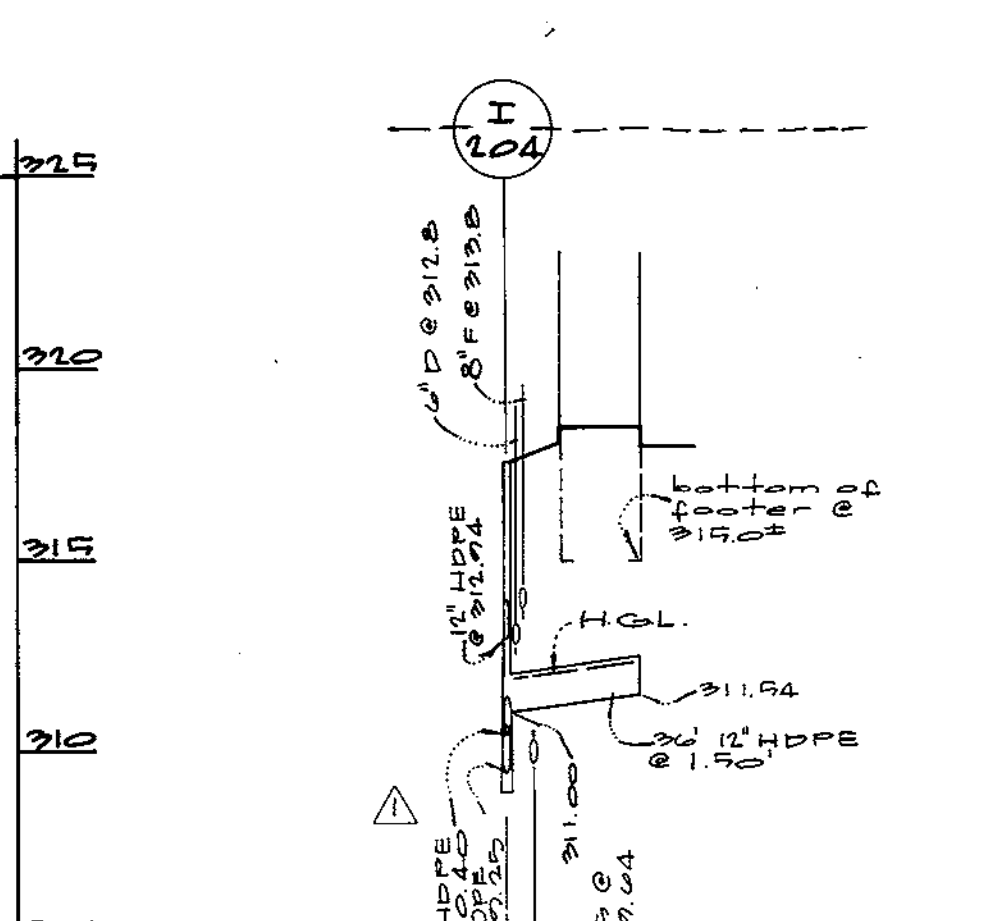
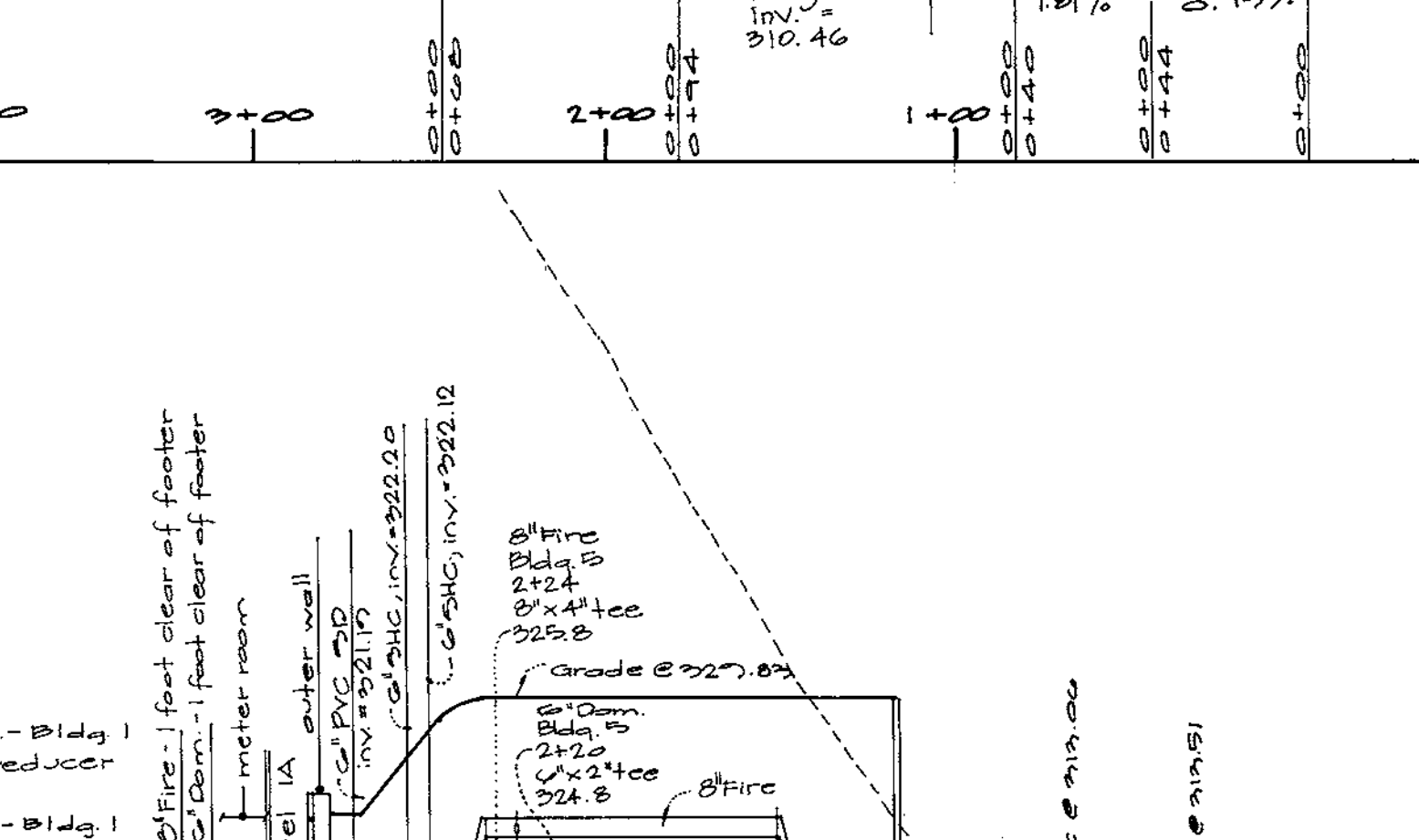
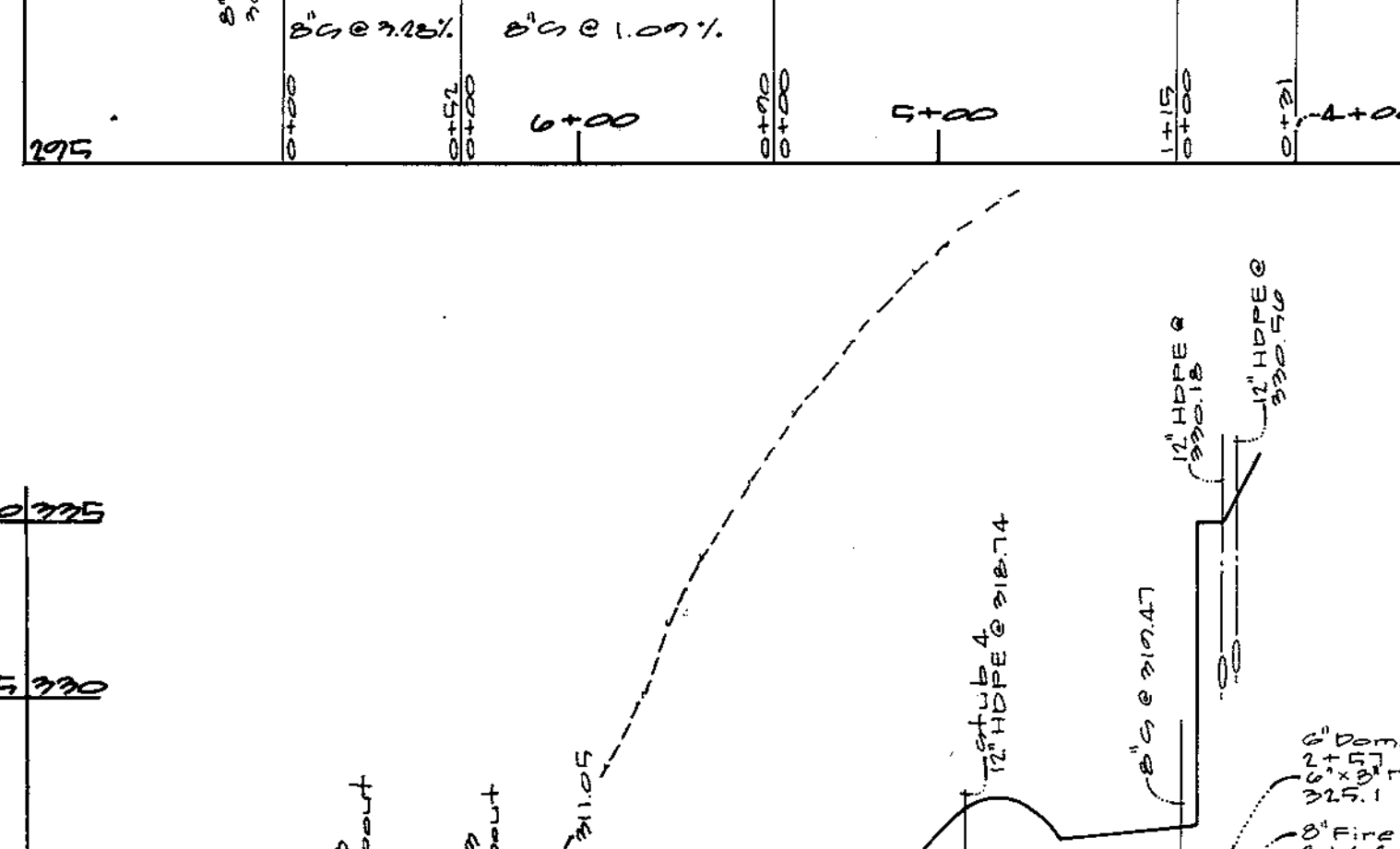
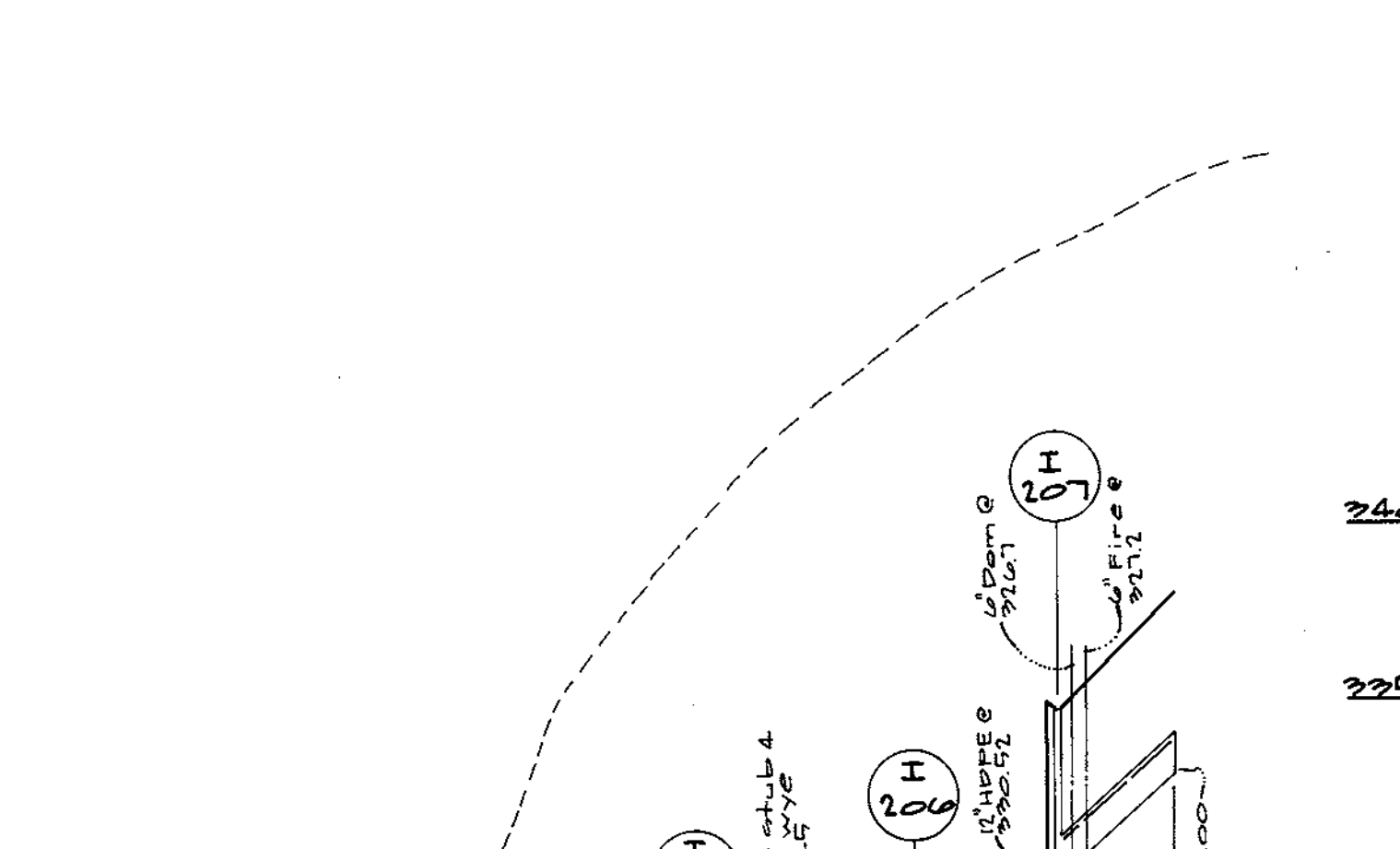
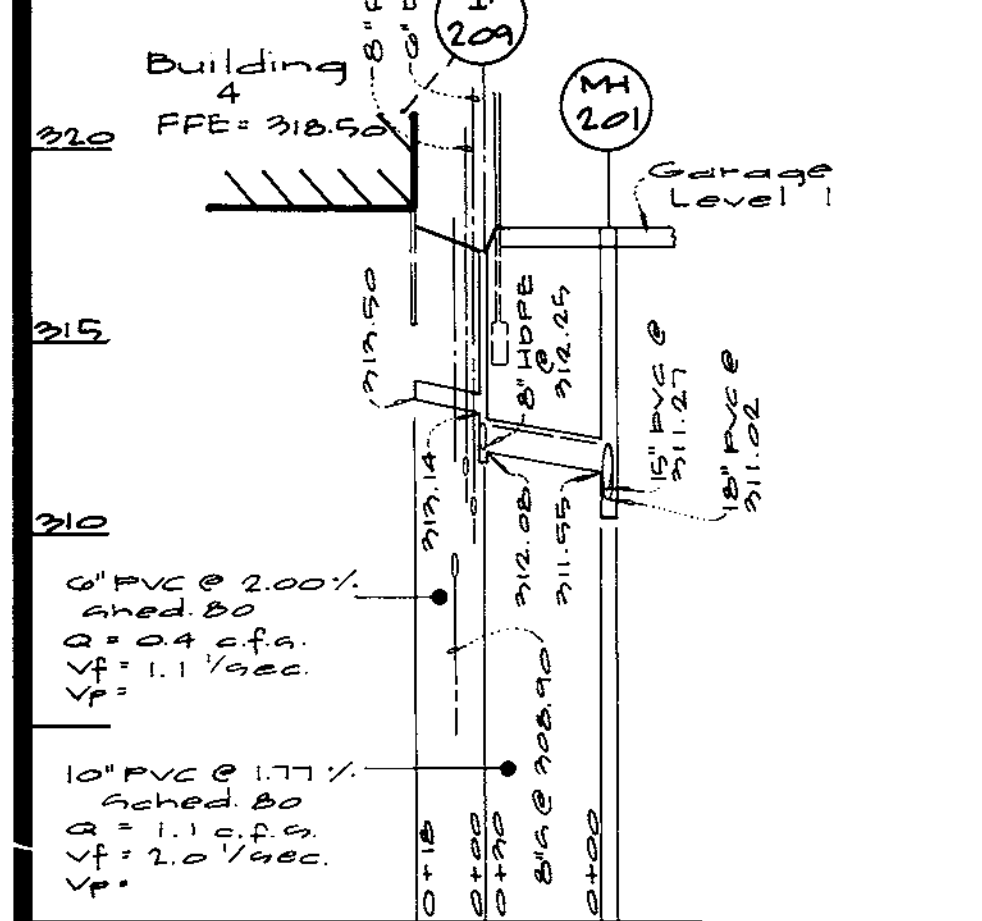
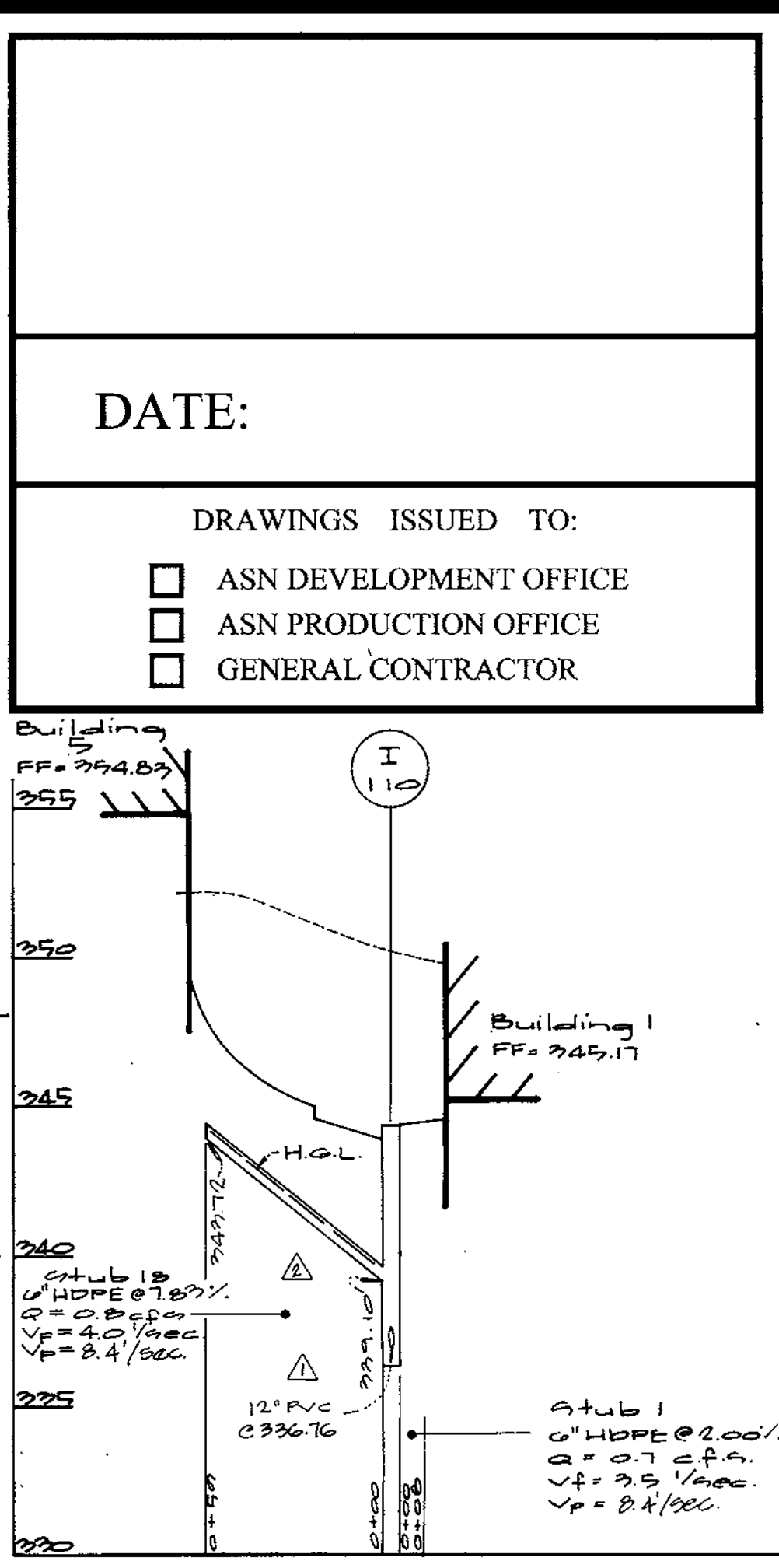
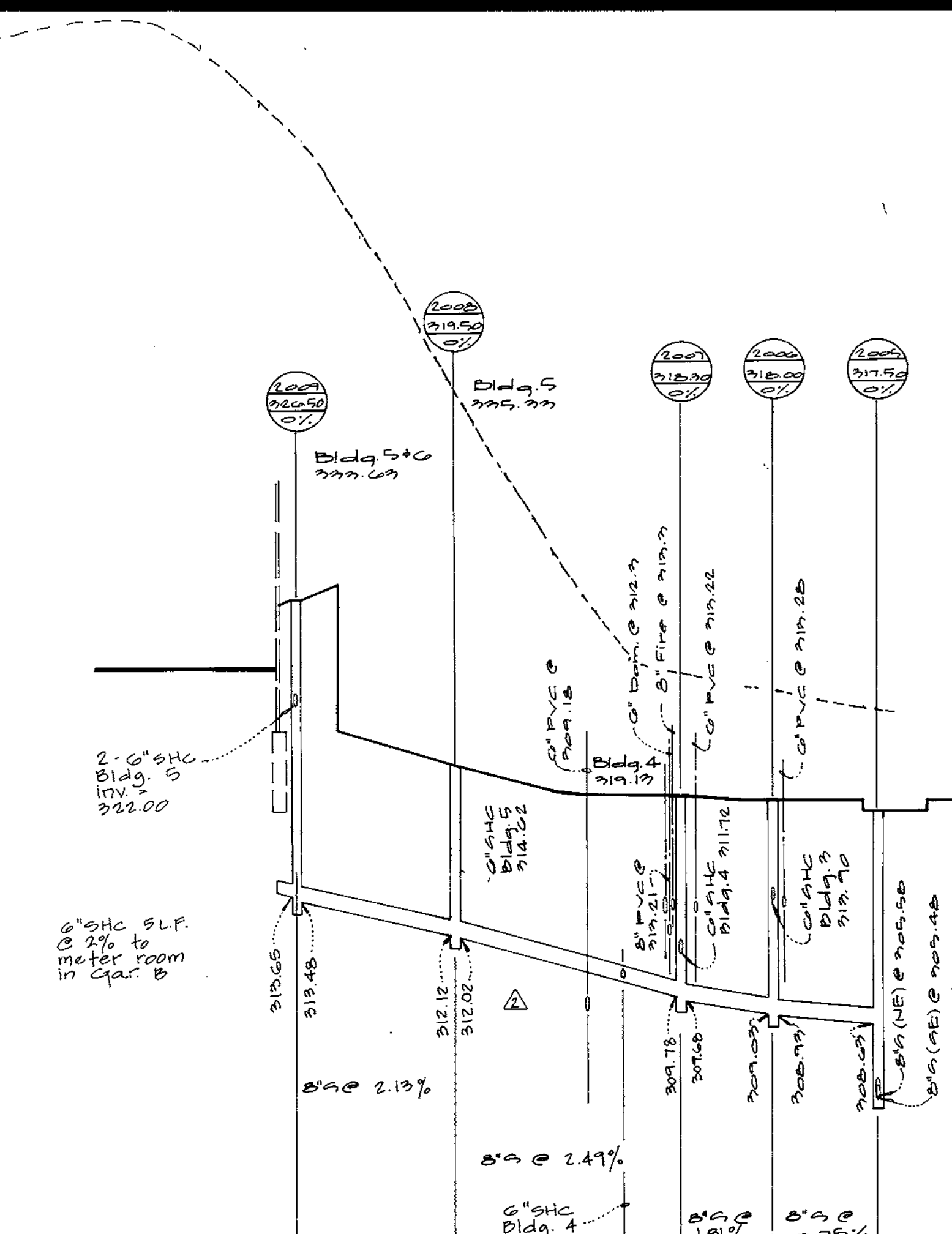
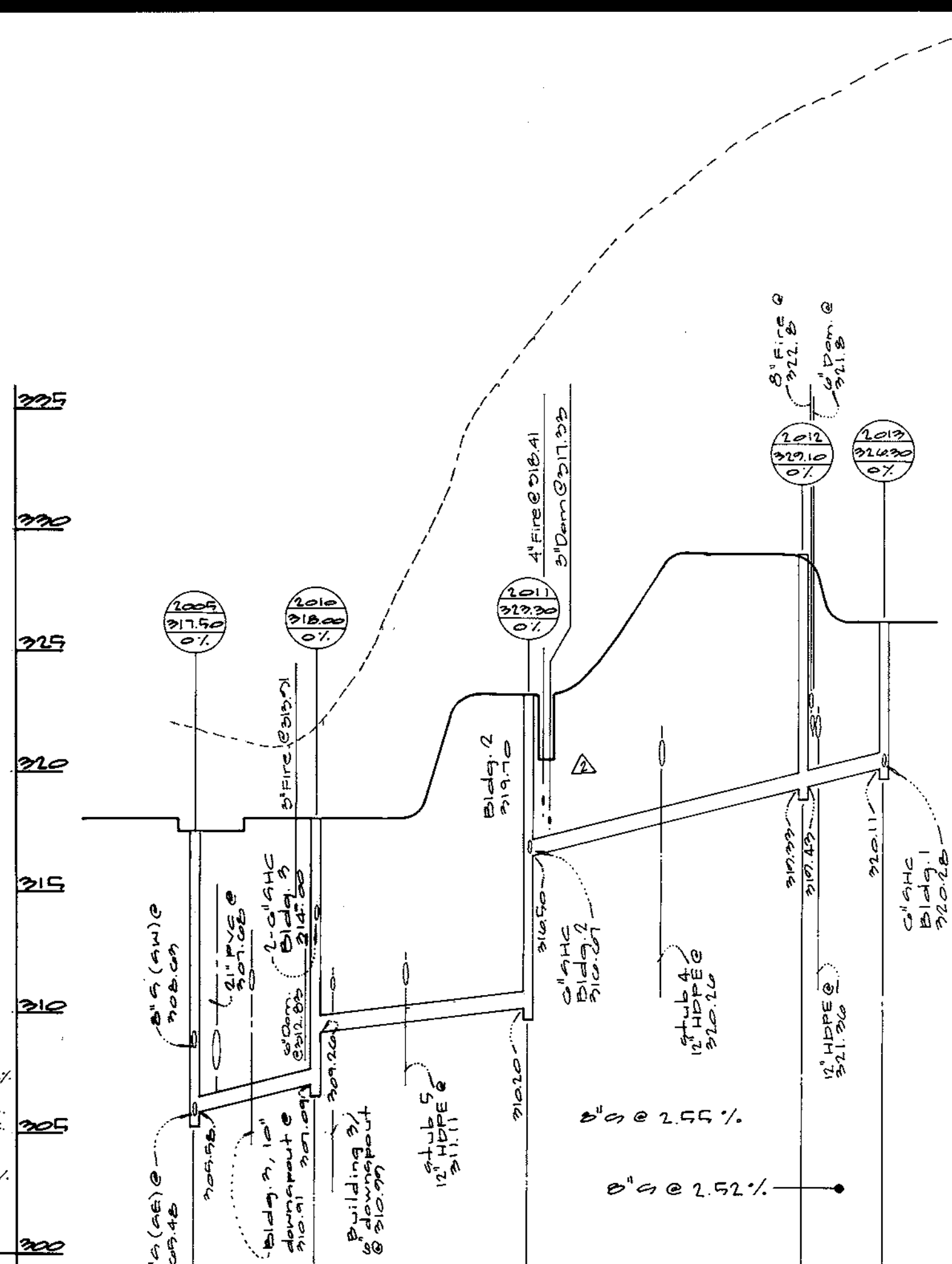
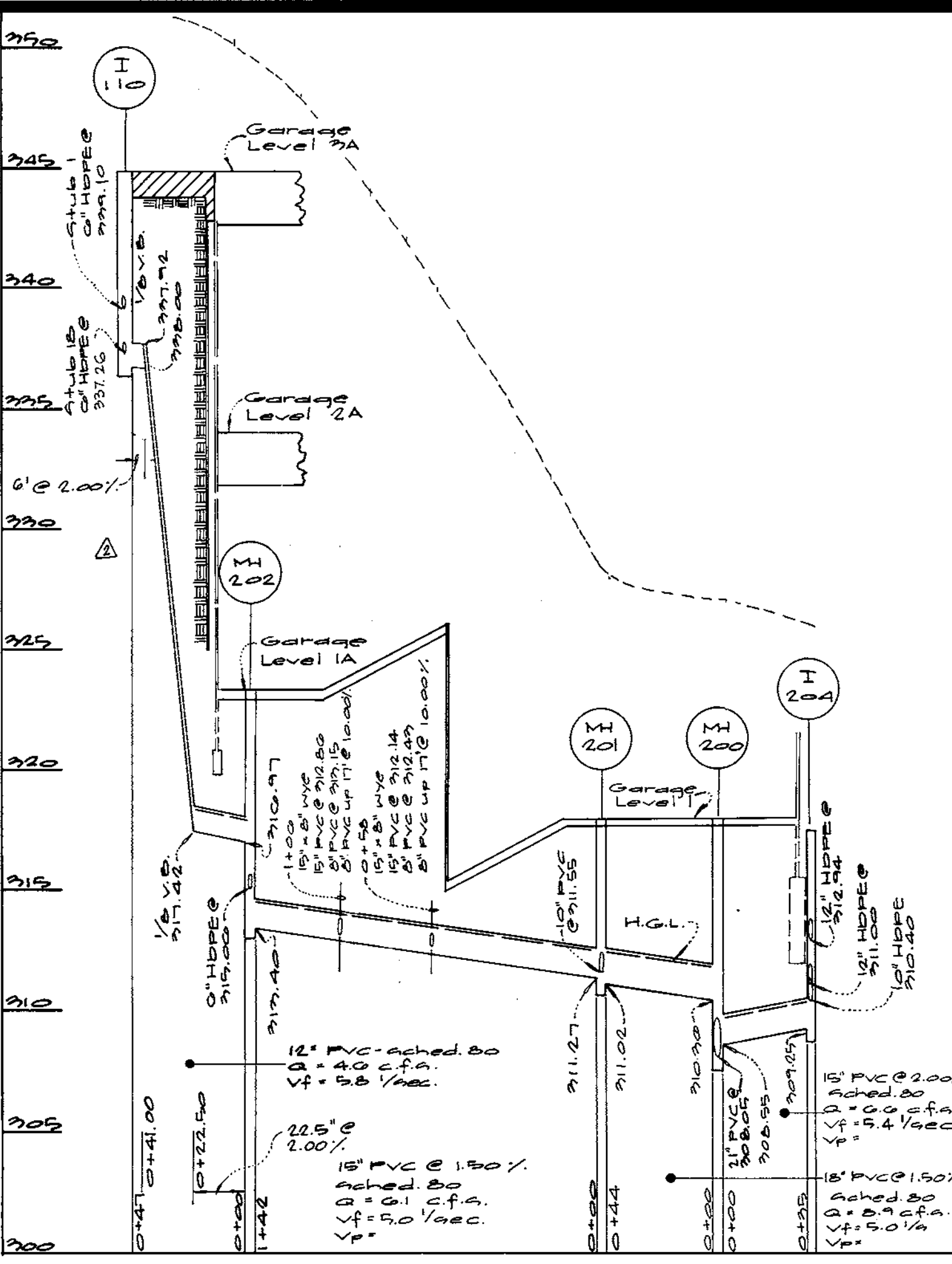
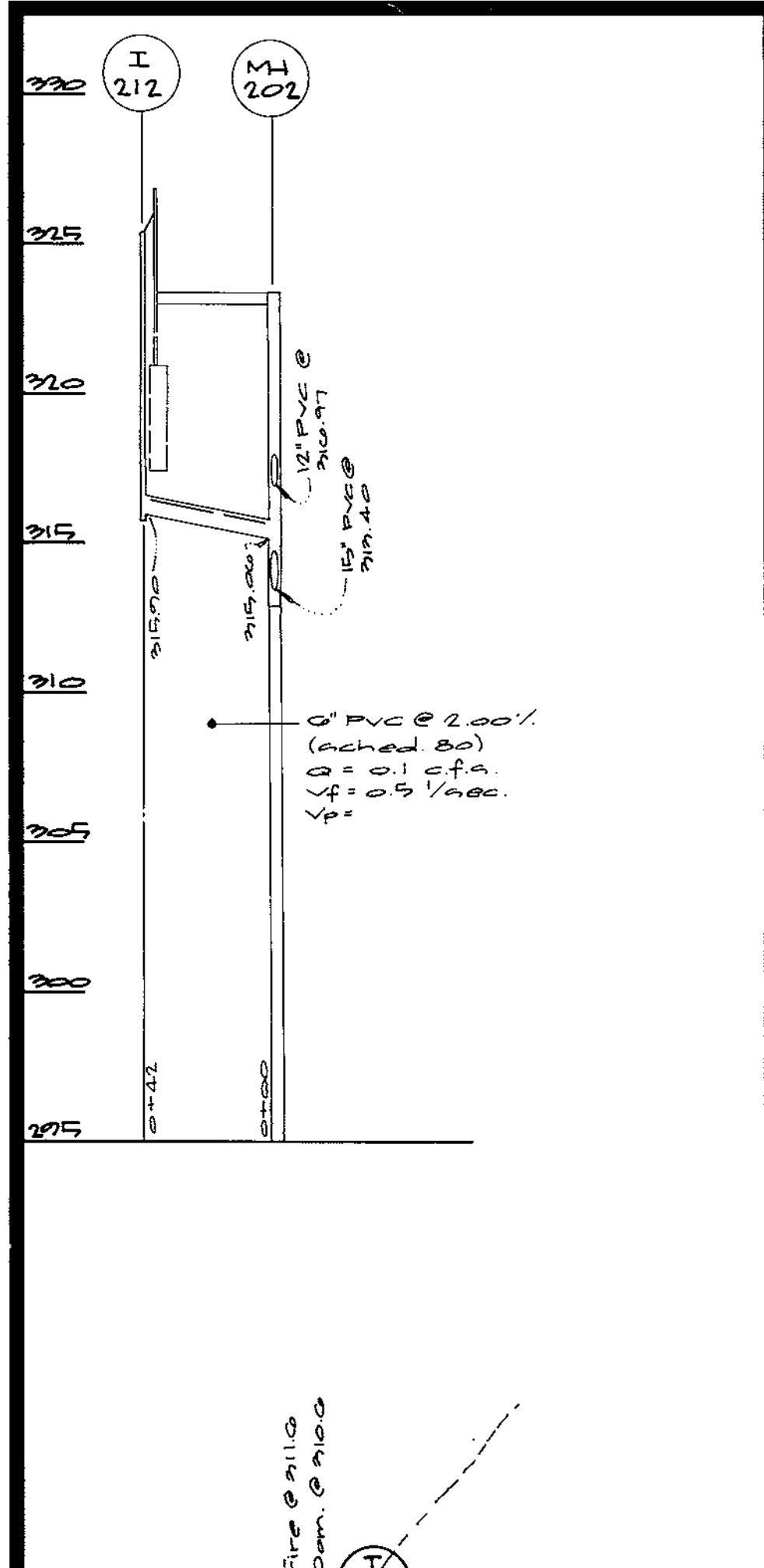
GLW GUTSCHICK LITTLE & WEBER, P.A.
 CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
 3909 NATIONAL DRIVE - SUITE 250 - BURTOWNSVILLE OFFICE PARK
 BURTOWNSVILLE, MARYLAND 20885
 TEL: 301-421-4024 FAX: 301-421-4186

| DATE | REVISION | BY | APPR. |
|----------|--|-----|-------|
| 10/11/00 | rev storm drain tabulation for continuity b/w plan & profile | JAW | |
| 10/11/00 | rev storm drain tabulation | JAW | |

OWNER:
ARCHSTONE COMMUNITIES TRUST
 6631-A OLD DOMINION DRIVE
 SUITE 201
 McLEAN, VA 22101
 703-883-3545

STORM DRAIN DRAINAGE AREA MAP
COLUMBIA TOWN CENTER
 SECTION 1 AREA 3
 PARCEL "A-1"
 PLAT No. 7989

SCALE: 1"=50'
 ZONING: NT
 DATE: March 3, 2000
 TAX MAP - GRID: 36-2
 SHEET: 12 OF 24
 G. L. W. FILE No. 98087
 HOWARD COUNTY, MARYLAND



APPROVED
PLANNING BOARD
of HOWARD COUNTY

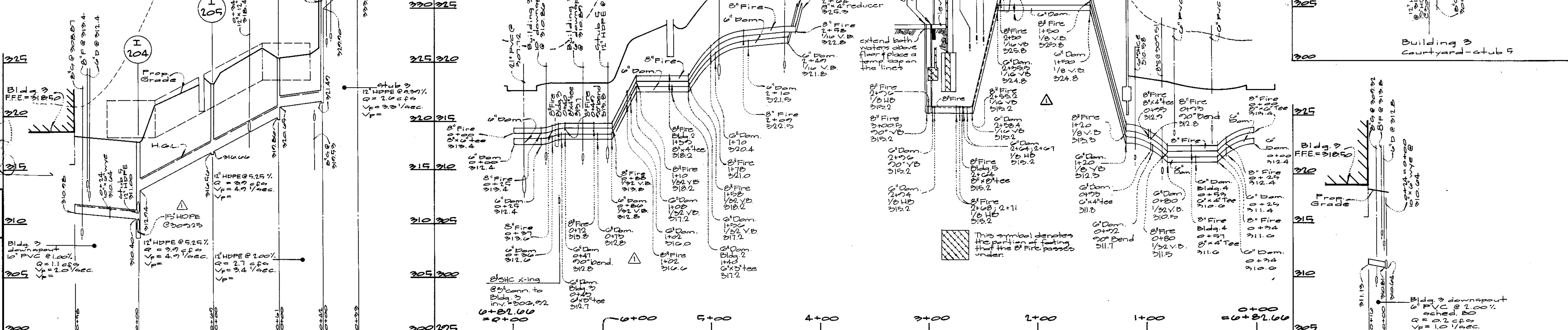
DATE: SEPT 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Don Matyske 8/25/00
County Health Officer

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Joseph R. Keith 4/13/00
Chief, Department of Planning & Zoning

Andy Hamilton 4/4/00
Chief, Department of Public Development

Bill Cummings 3/21/00
Chief, Department of Engineering



DATE:

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR

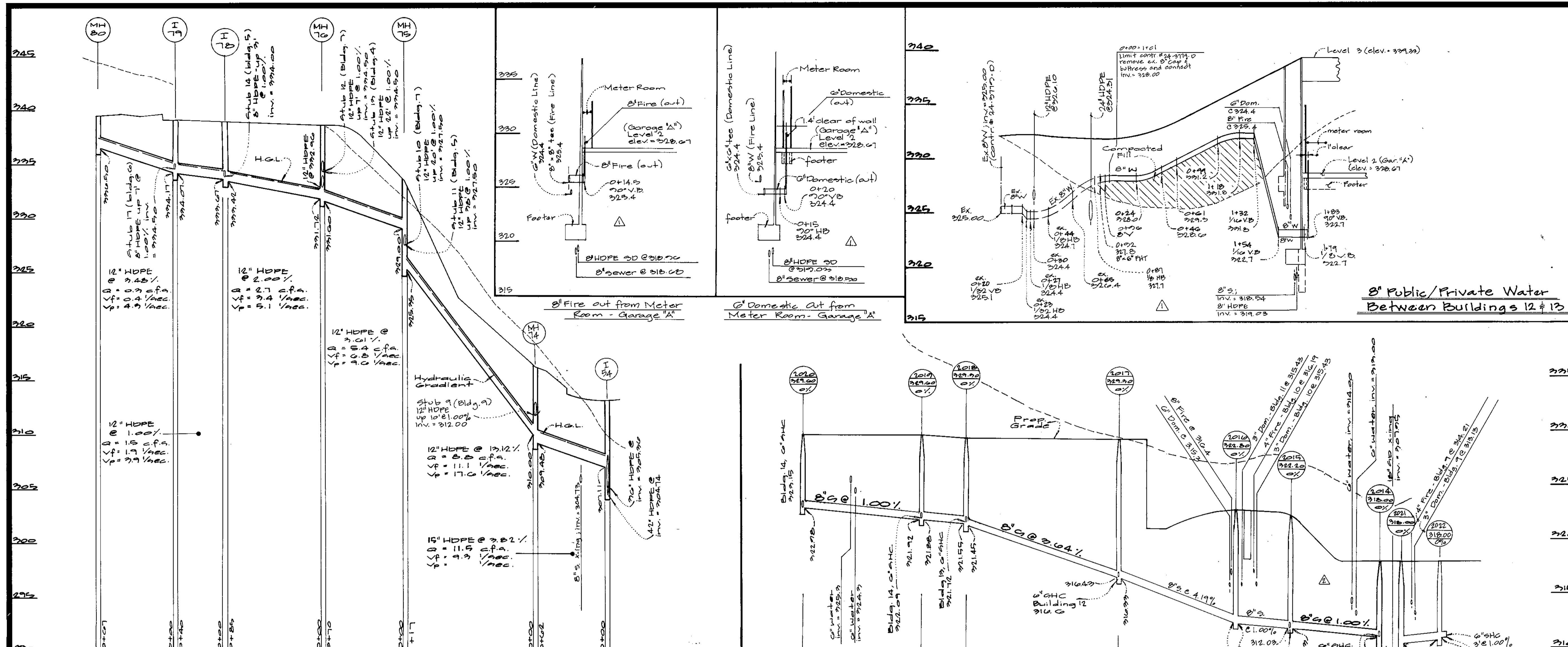
GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3509 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20886
TEL: 301-421-4024 FAX: 301-421-4188

| DATE | REVISION | BY | APP. |
|----------|--|-----|------|
| 1/19/01 | rev. sewer and storm drain profiles. | JAU | |
| 12/11/00 | rev. water profile, and correct storm drain profiles | MCF | |

OWNER:
ARCHSTONE COMMUNITIES TRUST
6631-A OLD DOMINION DRIVE, SUITE 201
MCLEAN, VA 22101
703-883-3545

UTILITY PROFILES
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989

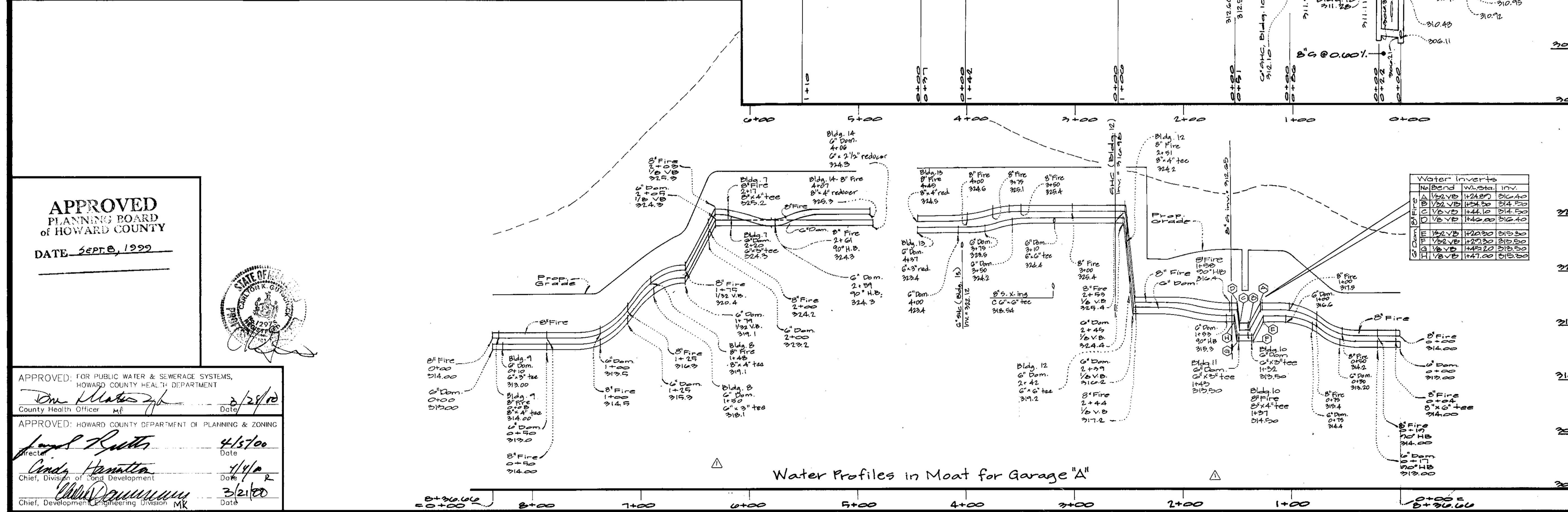
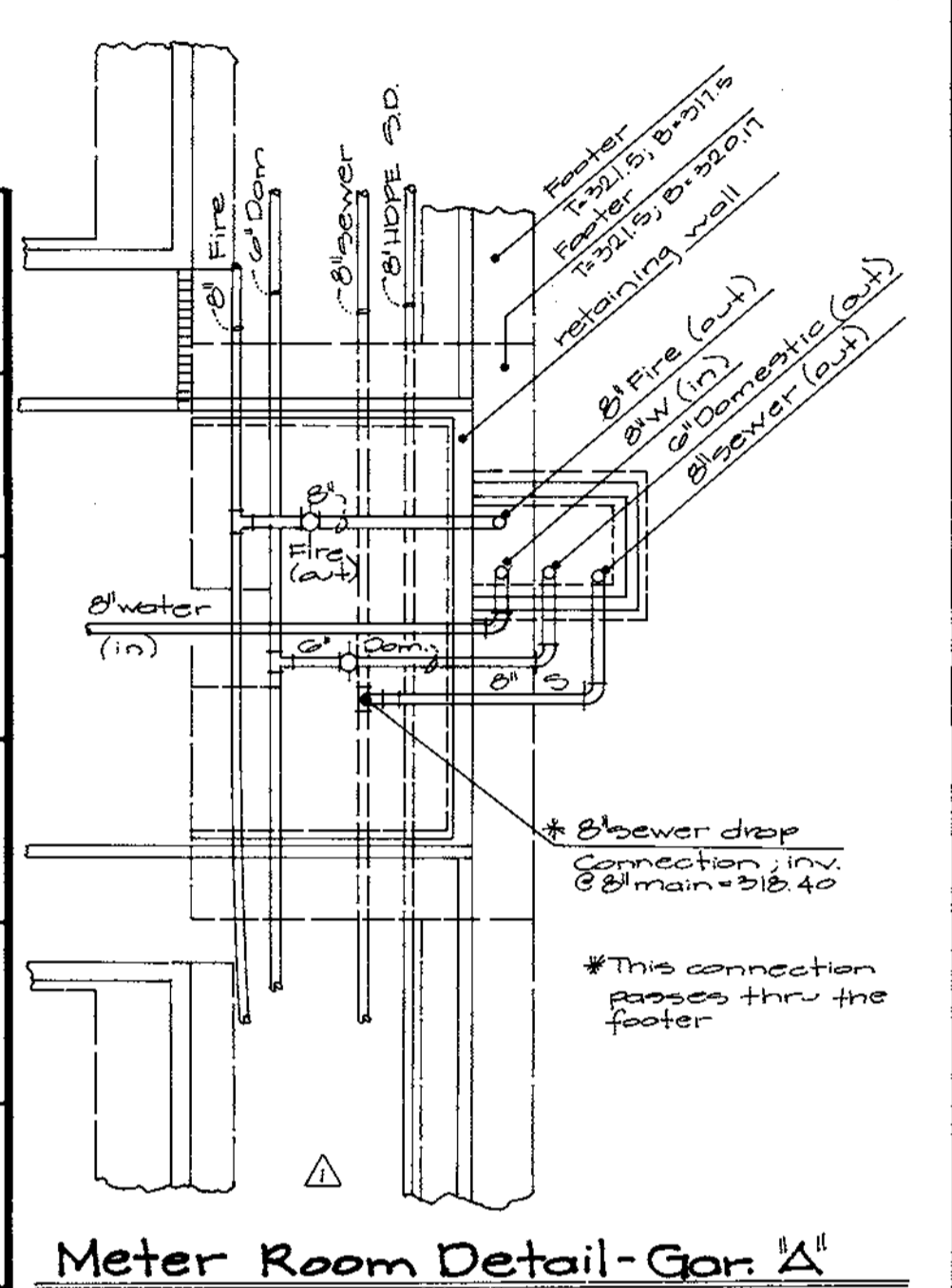
| SCALE | ZONING | G. L. W. FILE No. |
|-----------------------|--------------------------|-------------------|
| AS SHOWN | NT | 98087 |
| DATE March 2, 2000 | TAX MAP - GRID 36 - 2 | SHEET 14 OF 24 |



DATE: _____

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR



APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE: SEPT. 8, 1999



APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
One Matusz 2/28/00
County Health Officer

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
James R. Butler 4/15/00
Director

Andy Hamilton 4/4/00
Chief, Division of Land Development

Mark Downum 3/21/00
Chief, Development Engineering Division

GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE, SUITE 250, BURTNSVILLE OFFICE PARK
BURTNSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

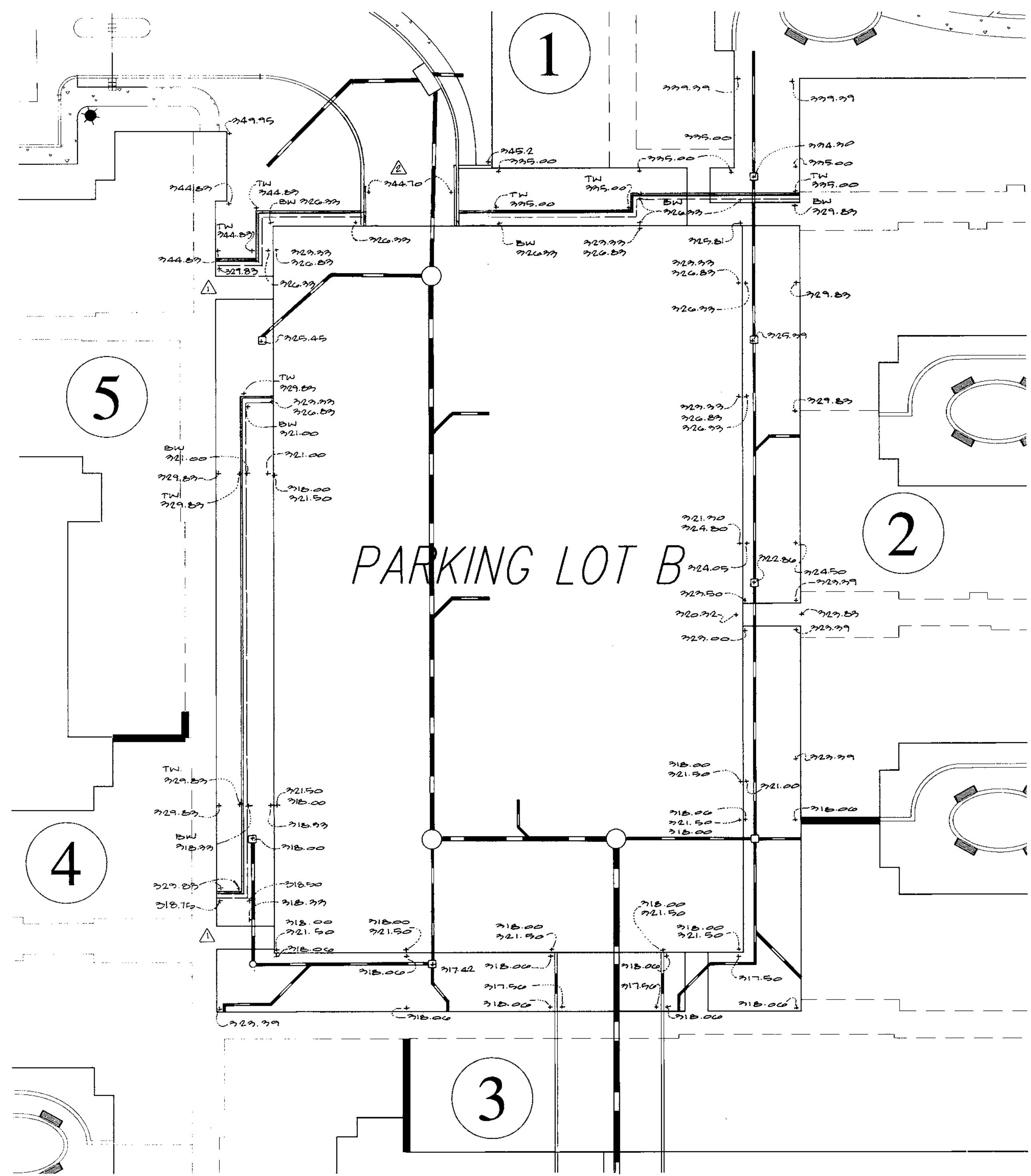
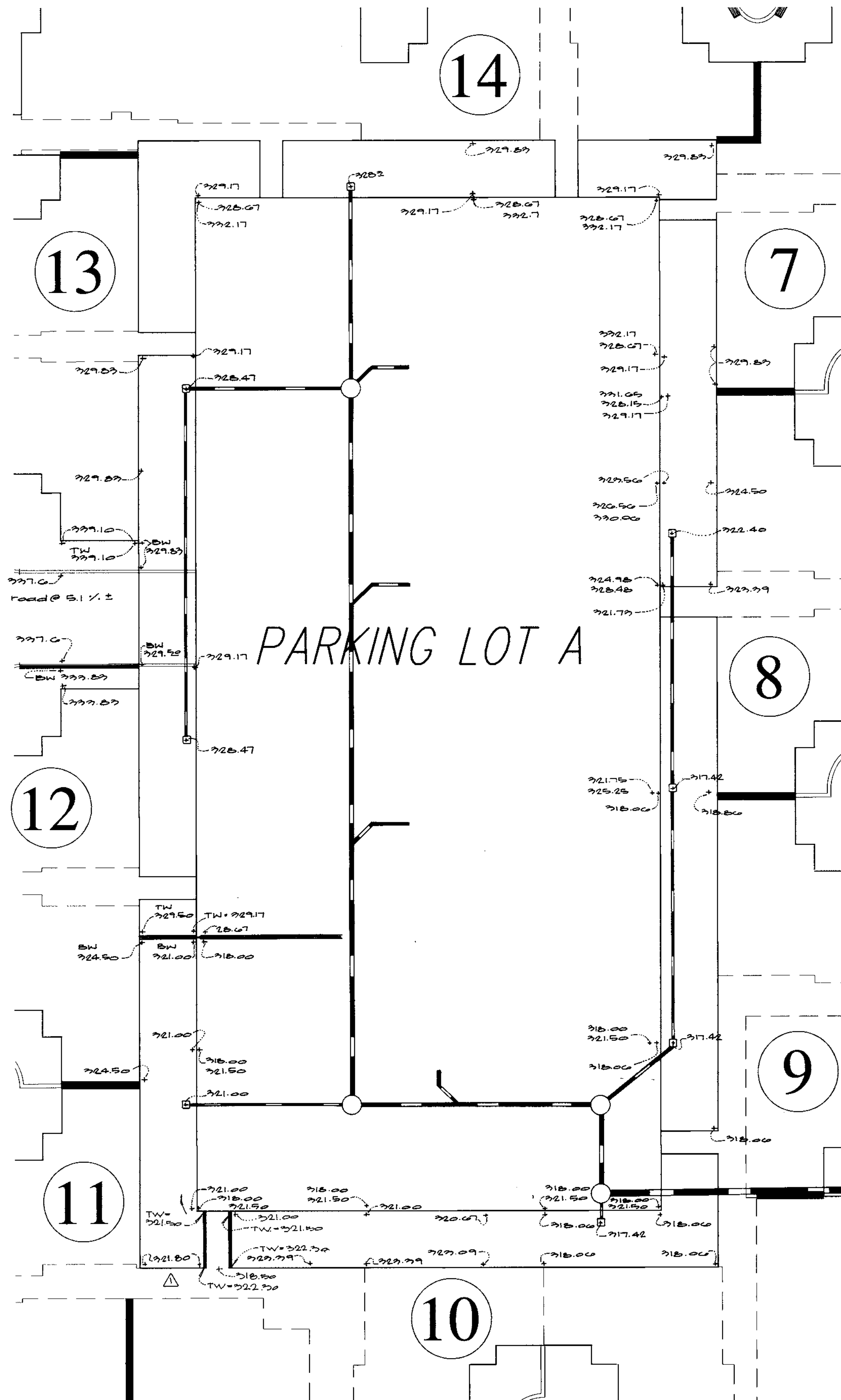
| DATE | REVISION | BY | APP'R |
|----------|---|----|-------|
| 3/13/01 | Revise sewer profile. | | |
| 10/11/00 | Add meter room detail - Garage 'A', Add/rev. utility profiles due to reloc. of mtr. rm. | | |
| 10/11/00 | Rev. water size from 6" to 8" on 8" rev. limits of public/private 8" water | | |



OWNER:
ARCHSTONE COMMUNITIES TRUST
6631-A OLD DOMINION DRIVE
SUITE 201
MCLEAN, VA 22101
703-883-3545

UTILITY PROFILES
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989
CLARKSVILLE ELECTION DISTRICT No. 5
HOWARD COUNTY, MARYLAND

| SCALE | ZONING | G. L. W. FILE No. |
|---------------|----------------|-------------------|
| AS SHOWN | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| March 2, 2000 | 36 - 2 | 15 OF 24 |



DATE:

DRAWINGS ISSUED TO:

- ASN DEVELOPMENT OFFICE
- ASN PRODUCTION OFFICE
- GENERAL CONTRACTOR

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE SEPT. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
[Signature] 3/28/00
County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
[Signature] 4/15/00
Date

[Signature] 4/4/00
Chief of Planning & Zoning Department Date

[Signature] 5/21/00
Chief Development Engineering Division Date



GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTNSVILLE OFFICE PARK
BURTNSVILLE, MARYLAND 20856
TEL: 301-421-4024 BAL: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

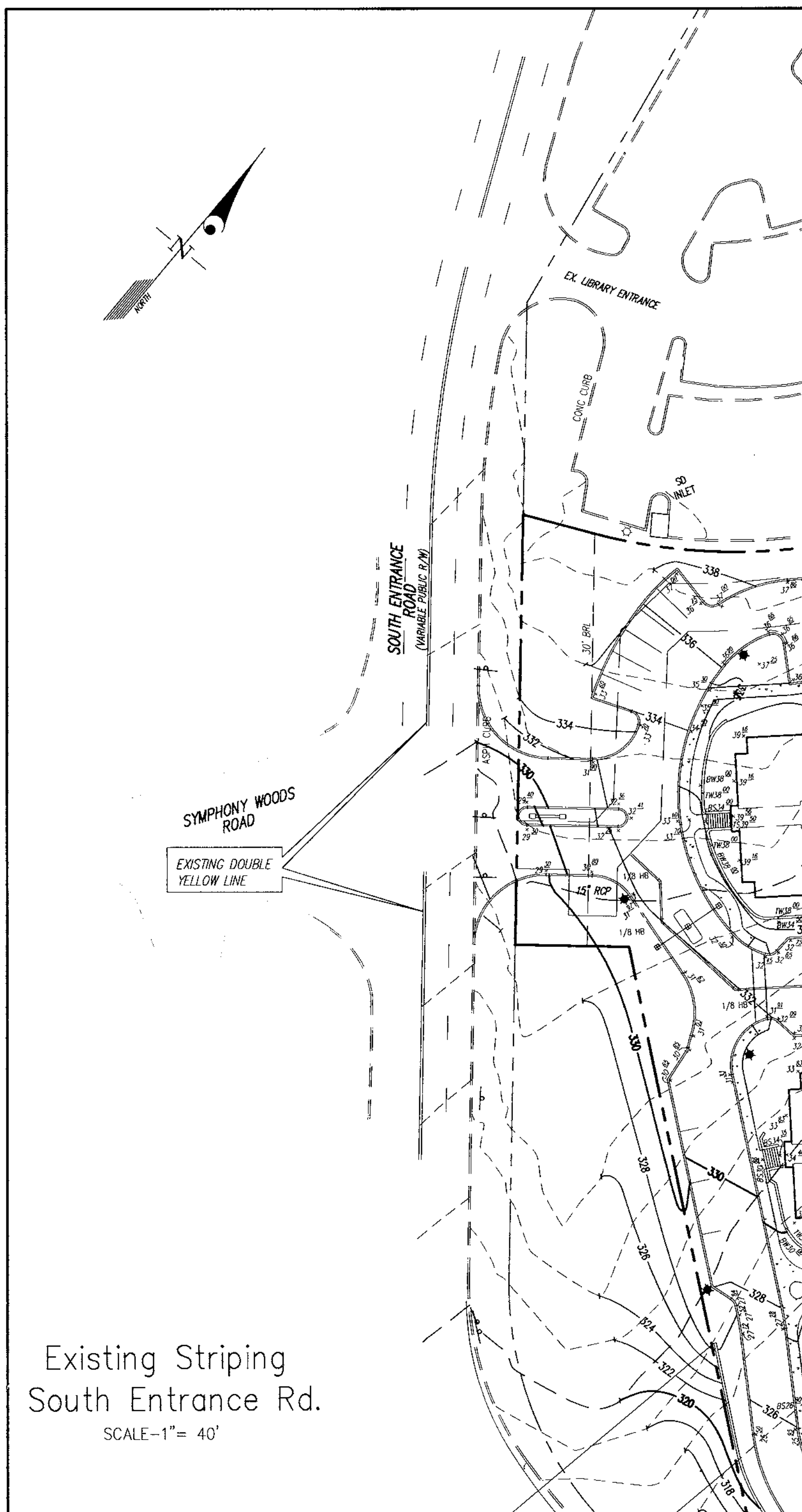
| DATE | REVISION | BY | APP'R. |
|----------|---|-----|--------|
| 2/19/01 | revise roadway into upper end of Garage "B" | JAL | |
| 10/11/00 | rev retaining walls below | MCP | |



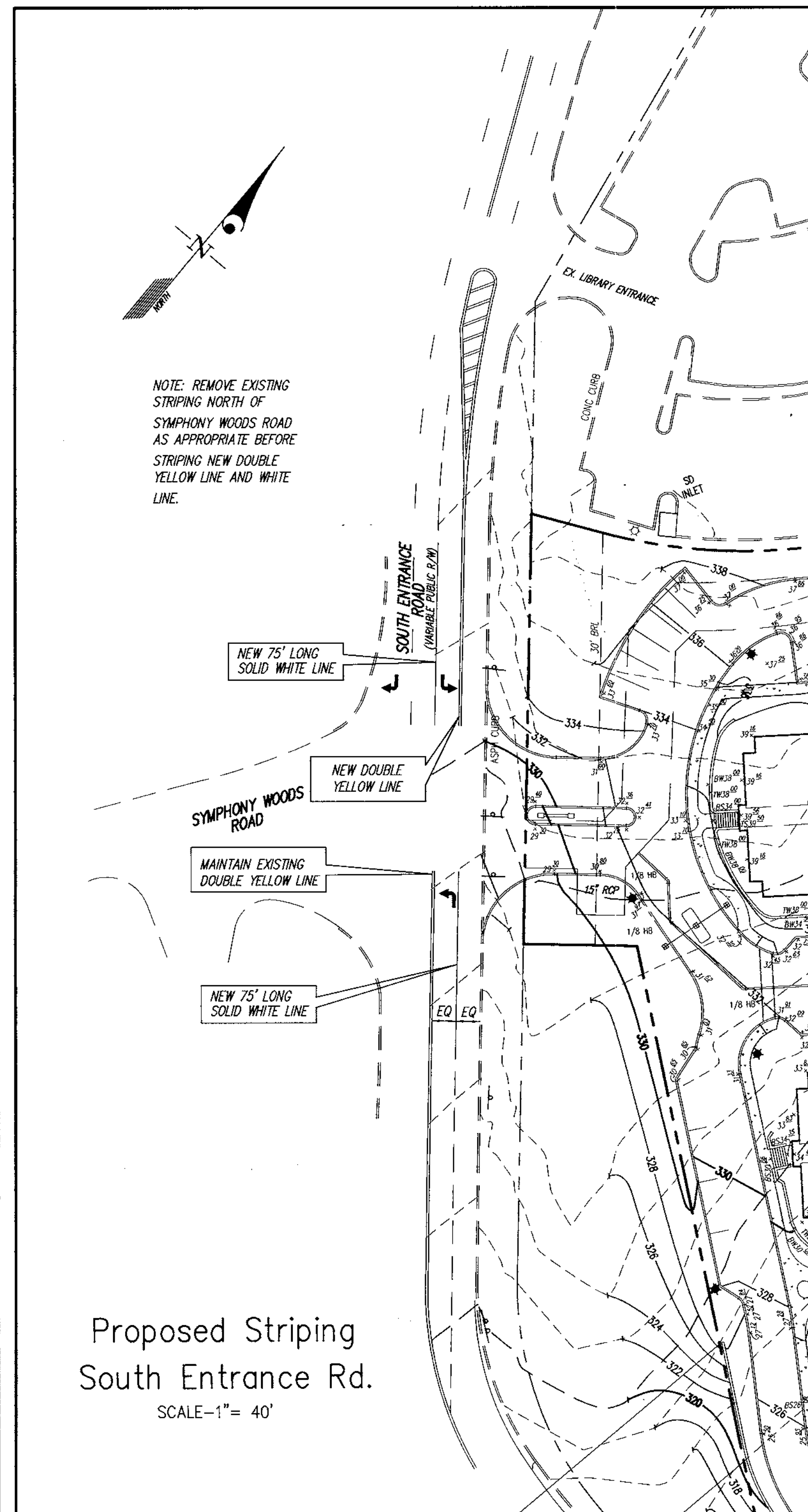
OWNER:
ARCHSTONE COMMUNITIES TRUST
6631-A OLD DOMINION DRIVE
SUITE 201
MCLEAN, VA 22101
703-883-3545

INTERMEDIATE RETAINING WALL DETAILS
COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989
CLARKSVILLE ELECTION DISTRICT No. 5
HOWARD COUNTY, MARYLAND

| | | |
|----------------------|--------------------------|----------------------------|
| SCALE 1" = 20' | ZONING NT | G. L. W. FILE No. 98087 |
| DATE MAR. 3, 2000 | TAX MAP - GRID 36 - 2 | SHEET 23 OF 24 |

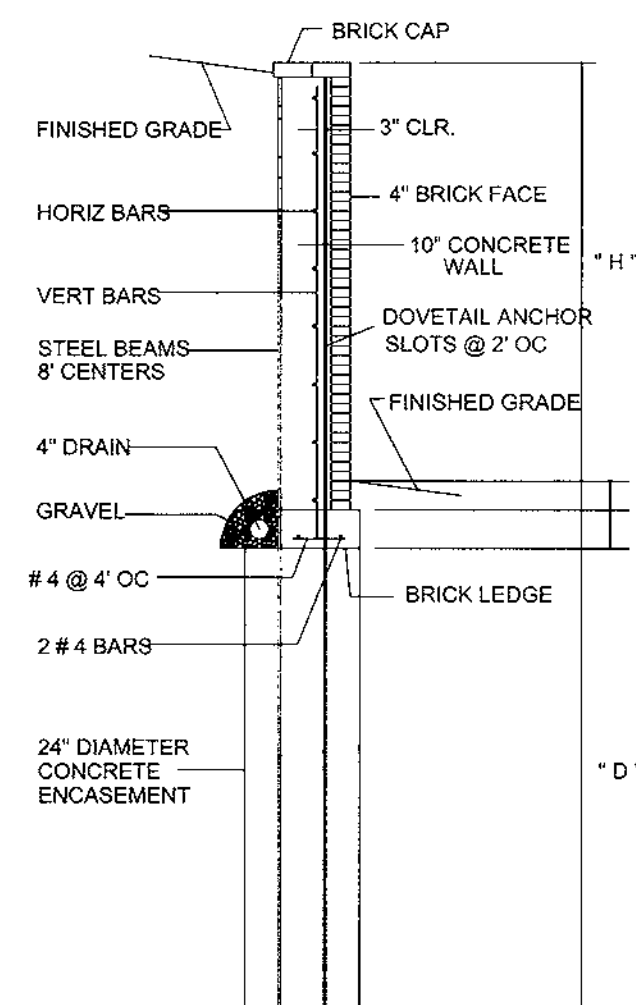


Existing Striping
South Entrance Rd.
SCALE-1"= 40'



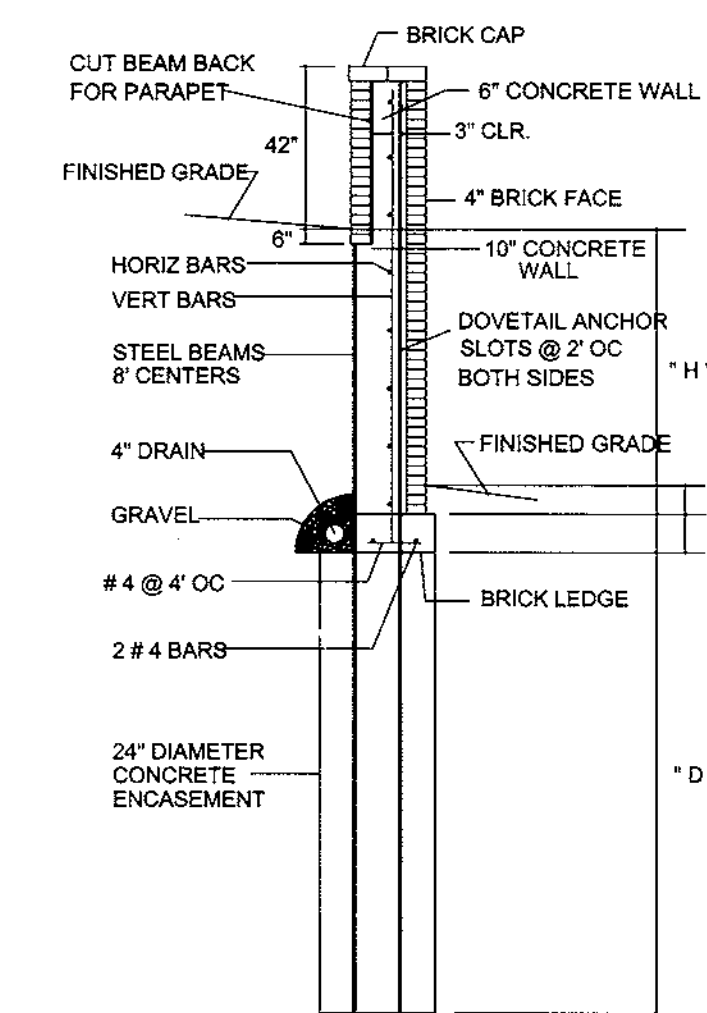
Proposed Striping
South Entrance Rd.
SCALE-1"= 40'

BEAM & CONCRETE WALL
BRICK FACED & CAPPED



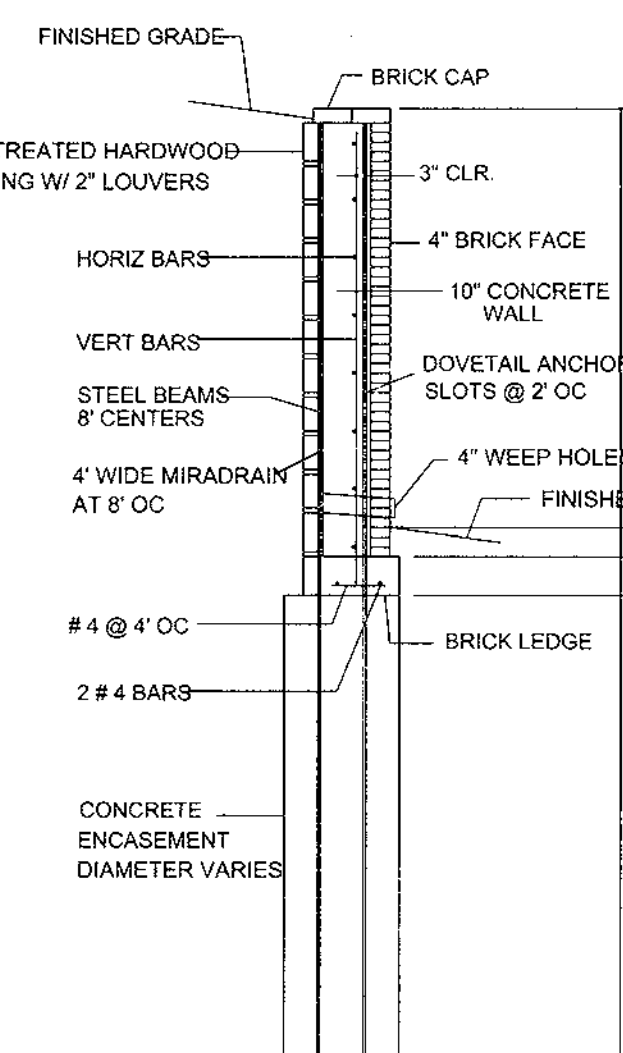
TYPICAL SECTION NTS

BEAM & CONCRETE WALL
BRICK FACED & CAPPED
WITH PARAPET



TYPICAL SECTION NTS

BEAM & CONCRETE WALL
BRICK FACED & CAPPED
& SHORING WALL



TYPICAL SECTION NTS

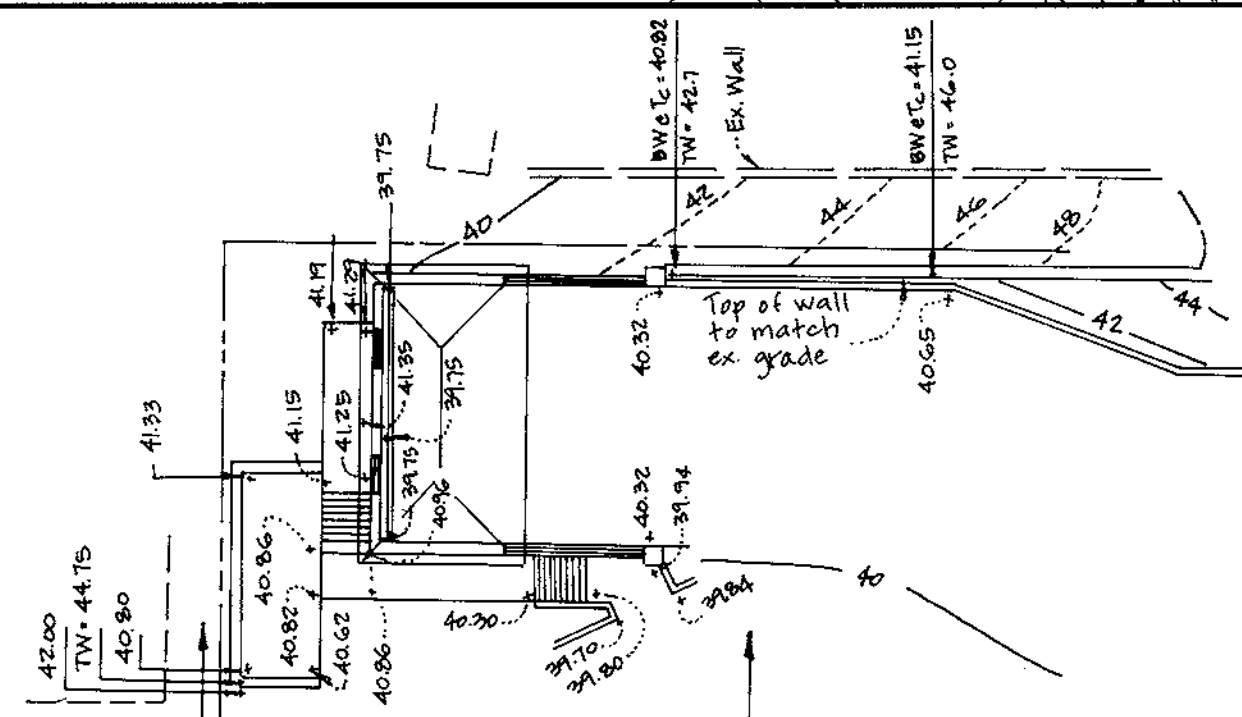
BEAM & CONCRETE WALL ALTERNATE

FOUNDATIONS UNLIMITED, INC. 301-854-6660

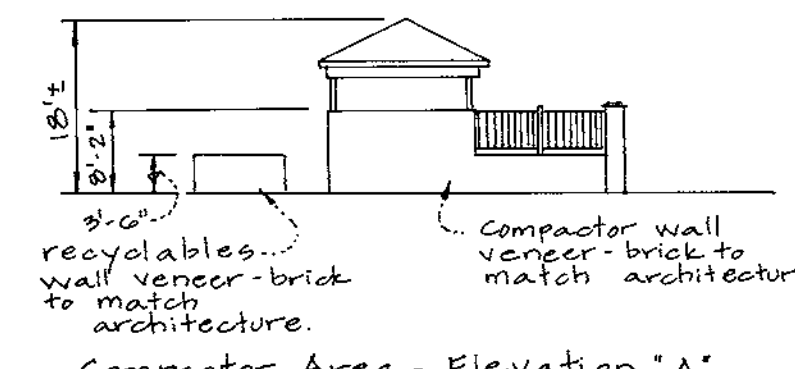
| H DESIGN HEIGHT FEET | DRILL HOLE DIAMETER INCHES | STEEL BEAM TYPE 50 KSI | D TOE DEPTH FEET | HORIZ BARS SIZE & SPACING | VERT BARS SIZE & SPACING |
|-------------------------------|-------------------------------------|---------------------------------|---------------------------|------------------------------------|-----------------------------------|
| UP TO 4' | 24 | W10X22 | 7.0 | # 4 @ 12" | # 4 @ 12" |
| UP TO 5' | 24 | W10X22 | 8.5 | # 4 @ 12" | # 4 @ 12" |
| UP TO 6' | 24 | W10X22 | 10.0 | # 4 @ 12" | # 4 @ 12" |
| UP TO 7' | 24 | W10X30 | 11.0 | # 4 @ 12" | # 4 @ 12" |
| UP TO 8' | 24 | W10X45 | 12.5 | # 4 @ 12" | # 4 @ 12" |
| UP TO 9' | 24 | W14X43 | 13.5 | # 4 @ 12" | # 4 @ 12" |
| UP TO 10' | 24 | W14X53 | 15.0 | # 5 @ 12" | # 4 @ 12" |
| UP TO 11' | 30 | W18X55 | 14.5 | # 5 @ 12" | # 4 @ 12" |
| UP TO 12' | 30 | W18X65 | 16.0 | # 5 @ 12" | # 4 @ 12" |
| UP TO 13' | 30 | W18X76 | 17.0 | # 5 @ 12" | # 4 @ 12" |
| UP TO 14' | 36 | W24X76 | 16.5 | # 5 @ 12" | # 4 @ 12" |
| UP TO 15' | 36 | W24X94 | 17.5 | # 5 @ 12" | # 4 @ 12" |
| UP TO 16' | 36 | W24X103 | 18.5 | # 5 @ 12" | # 4 @ 12" |
| UP TO 17' | 36 | W24X117 | 20.0 | # 6 @ 12" | # 4 @ 12" |
| UP TO 18' | 36 | W24X131 | 20.5 | # 6 @ 12" | # 4 @ 12" |
| UP TO 19' | 42 | W24X146 | 20.5 | # 6 @ 12" | # 4 @ 12" |
| UP TO 20' | 42 | W24X176 | 21.5 | # 6 @ 12" | # 4 @ 12" |

CONSTRUCTION NOTES:

ALL STEEL BEAMS TO BE GRADE 50
ALL CONCRETE TO BE 3000 PSI AT 28 DAYS - 5" SLUMP"
ALL REINFORCING TO BE GRADE 60
1/2" EXPANSION JOINTS TO BE AT 40' ON CENTER MAXIMUM
REFER TO CIVIL DRAWINGS FOR WALL LAYOUT & ELEVATIONS
DRAIN PIPE TO BE 4" DIAMETER PERFORATED
GRAVEL FOR DRAINAGE TO BE # 57 STONE



Elevation "A"
Details shown on this side of
page are the responsibility of
Gutschick, Little & Weber, P.A.



Compactor Area - Elevation "A"

DATE:

- DRAWINGS ISSUED TO:
- ASN DEVELOPMENT OFFICE
 - ASN PRODUCTION OFFICE
 - GENERAL CONTRACTOR

APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE: SEPT. 8, 1999

APPROVED: FOR PUBLIC WATER & SEWERAGE SYSTEMS,
HOWARD COUNTY HEALTH DEPARTMENT
Dina M. Kelly 3/25/00
County Health Officer Date

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING & ZONING
Frank J. Smith 4/15/00
Chief, Division of Land Development Date

Charles J. Williams 3/21/00
Chief, Development Engineering Division Date



GLW GUTSCHICK LITTLE & WEBER, P.A.
CIVIL ENGINEERS, LAND SURVEYORS, LAND PLANNERS, LANDSCAPE ARCHITECTS
3909 NATIONAL DRIVE - SUITE 250 - BURTONSVILLE OFFICE PARK
BURTONSVILLE, MARYLAND 20866
TEL: 301-421-4024 BALT: 410-880-1820 DC/VA: 301-989-2524 FAX: 301-421-4186

| DES. | DRN. | CHK. | DATE | REVISION | BY | APPR. |
|------|------|------|----------|--|-----|-------|
| | | | 2/19/01 | add detail and elevation for compactor area. | JAL | |
| | | | 10/11/00 | add retaining wall details | MCP | |

OWNER:
ARCHSTONE COMMUNITIES TRUST
6631-A OLD DOMINION DRIVE
SUITE 201
McLEAN, VA 22101
703-883-3545

ARCHSTONE

SOUTH ENTRANCE ROAD STRIPING PLAN AND DETAILS

COLUMBIA TOWN CENTER
SECTION 1 AREA 3
PARCEL "A-1"
PLAT No. 7989

CLARKSVILLE ELECTION DISTRICT No. 5

| SCALE | ZONING | G. L. W. FILE No. |
|-----------|----------------|-------------------|
| AS SHOWN | NT | 98087 |
| DATE | TAX MAP - GRID | SHEET |
| 3-03-2000 | 36 - 2 | 24 OF 24 |

Details for Alternative Retaining
Wall are the responsibility of:
Foundations Unlimited, Inc.
16008 Misty Knoll Court
Woodbine, MD 21777
(301) 854-0000