

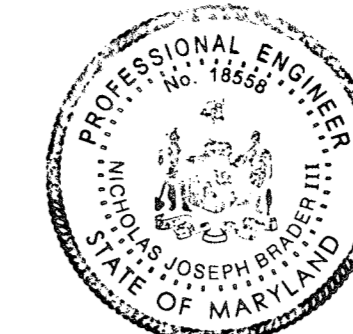
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 25. VT01 PARTIAL TOPOGRAPHIC SURVEY

# SITE DEVELOPMENT PLAN OF PROLOGIS PARK

## 1st ELECTION DISTRICT HOWARD COUNTY, MARYLAND



REDLINE DESIGN PROFESSIONAL  
 (2/20/20 REVISIONS)  
 NJB ENGINEERING INC.  
 810 GLENAGLES COURT - SUITE 311  
 TOWSON, MARYLAND 21286  
 (410) 832-7691

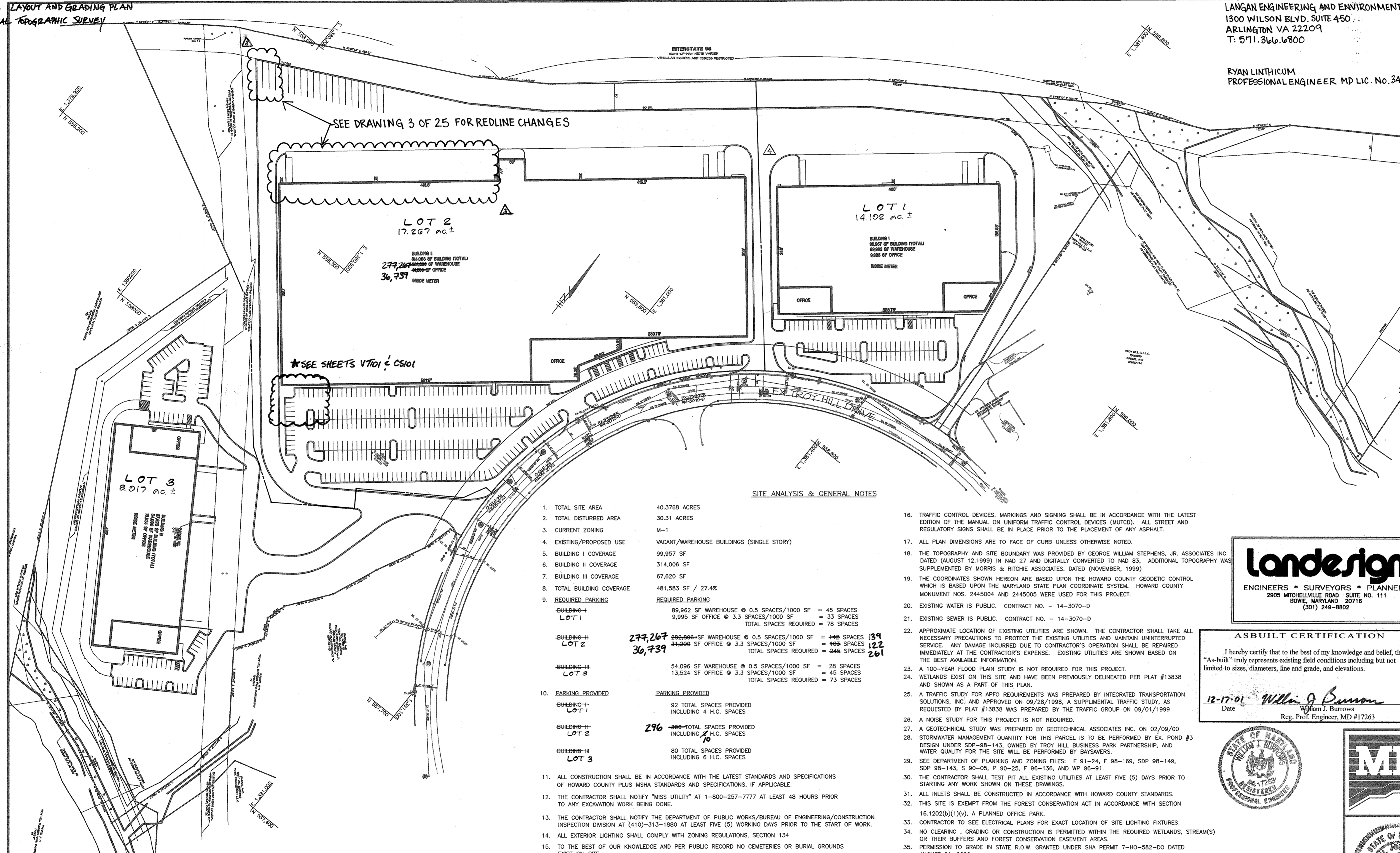
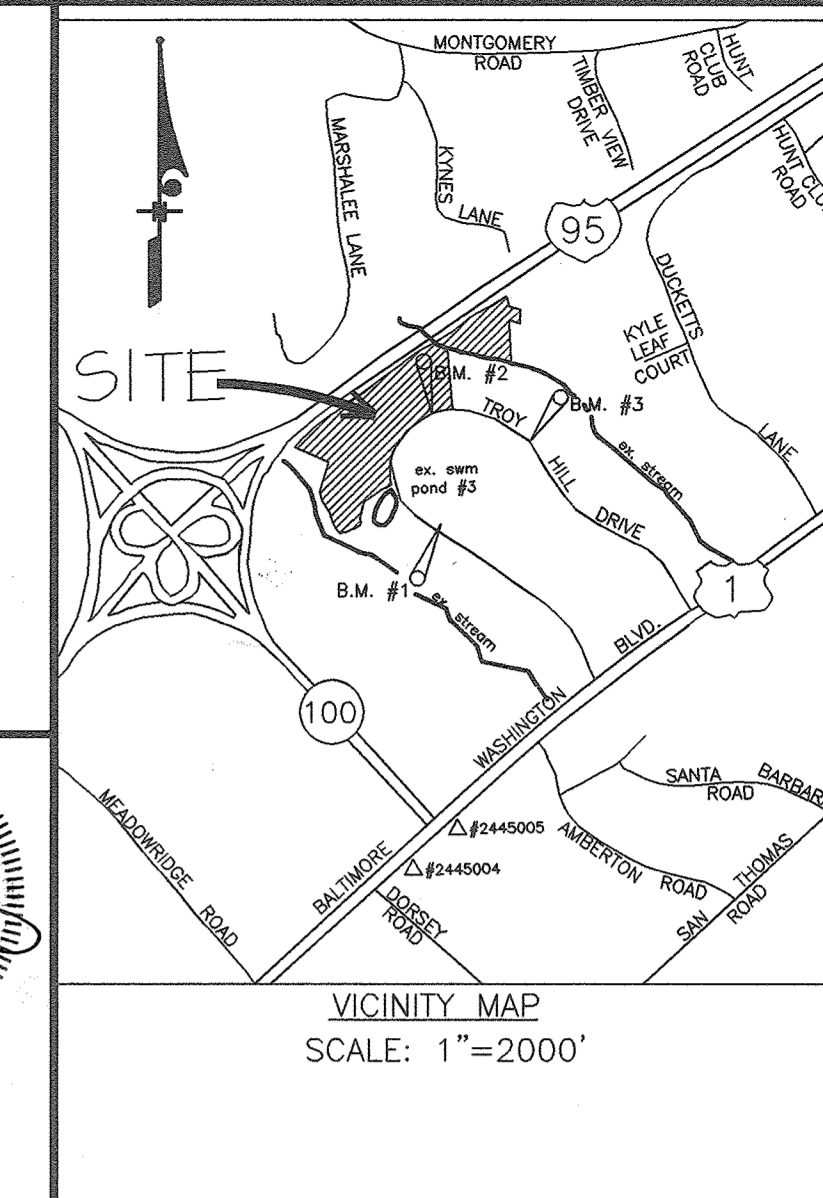
NICHOLAS J. BRADER III  
 PROFESSIONAL ENGINEER MD LIC. #18558

REDLINE DESIGN PROFESSIONAL (6/19/19 REVISIONS)

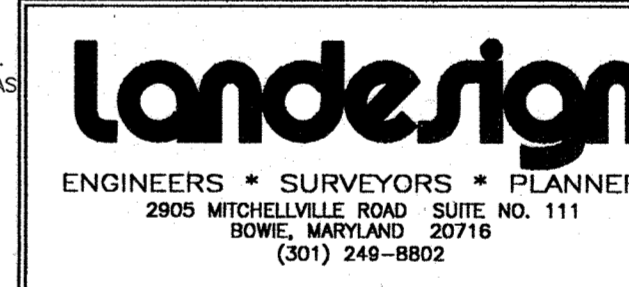
LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES  
 1300 WILSON BLVD. SUITE 450  
 ARLINGTON VA 22209  
 T: 571.366.6800

RYAN LINTHICUM  
 PROFESSIONAL ENGINEER, MD LIC. No. 34091

**BENCHMARKS**  
 BENCHMARK #1  
 IRON PIN @ TRAVERSE #1066 (GWS)  
 N 496,501.3597 E 869,134.4576  
 ELEVATION=175.92'  
 BENCHMARK #2  
 IRON PIN @ TRAVERSE #1061 (GWS)  
 N 498,036.6945 E 868,791.1502  
 ELEVATION=242.49'  
 BENCHMARK #3  
 IRON PIN @ TRAVERSE #1034 (GWS)  
 N 497,636.7437 E 869,835.6586  
 ELEVATION=214.85'  
 COORDINATES BASED ON NAD 27  
 AS PROJECTED BY HOWARD COUNTY  
 GEODETIC CONTROL STATIONS  
 #2445004, #2445005



- SITE ANALYSIS & GENERAL NOTES**
- TOTAL SITE AREA: 40.3768 ACRES
  - TOTAL DISTURBED AREA: 30.31 ACRES
  - CURRENT ZONING: M-1
  - EXISTING/PROPOSED USE: VACANT/WAREHOUSE BUILDINGS (SINGLE STORY)
  - BUILDING I COVERAGE: 99,957 SF
  - BUILDING II COVERAGE: 314,006 SF
  - BUILDING III COVERAGE: 67,620 SF
  - TOTAL BUILDING COVERAGE: 481,583 SF / 27.4%
  - REQUIRED PARKING: 89,862 SF WAREHOUSE @ 0.5 SPACES/1000 SF = 45 SPACES  
9,995 SF OFFICE @ 3.3 SPACES/1000 SF = 33 SPACES  
TOTAL SPACES REQUIRED = 78 SPACES
  - PARKING PROVIDED: 92 TOTAL SPACES PROVIDED INCLUDING 4 H.C. SPACES
  - 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 "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO ANY EXCAVATION WORK BEING DONE.
  - THE CONTRACTOR SHALL NOTIFY THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING/CONSTRUCTION INSPECTION DIVISION AT (410)-313-1880 AT LEAST FIVE (5) WORKING DAYS PRIOR TO THE START OF WORK.
  - ALL EXTERIOR LIGHTING SHALL COMPLY WITH ZONING REGULATIONS, SECTION 134
  - TO THE BEST OF OUR KNOWLEDGE AND PER PUBLIC RECORD NO CEMETERIES OR BURIAL GROUNDS EXIST ON-SITE.
  - TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
  - ALL PLAN DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
  - THE TOPOGRAPHY AND SITE BOUNDARY WAS PROVIDED BY GEORGE WILLIAM STEPHENS, JR. ASSOCIATES INC. DATED AUGUST 12, 1999 IN NAD 27 AND DIGITALLY CONVERTED TO NAD 83. ADDITIONAL TOPOGRAPHY WAS SUPPLEMENTED BY MORRIS & RITCHE ASSOCIATES, DATED (NOVEMBER, 1999).
  - THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL WHICH IS BASED UPON THE MARYLAND STATE PLAN COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 2445004 AND 2445005 WERE USED FOR THIS PROJECT.
  - EXISTING WATER IS PUBLIC. CONTRACT NO. - 14-3070-D
  - EXISTING SEWER IS PUBLIC. CONTRACT NO. - 14-3070-D
  - APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATION SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. EXISTING UTILITIES ARE SHOWN BASED ON THE BEST AVAILABLE INFORMATION.
  - A 100-YEAR FLOOD PLAIN STUDY IS NOT REQUIRED FOR THIS PROJECT.
  - WETLANDS EXIST ON THIS SITE AND HAVE BEEN PREVIOUSLY DELINEATED PER PLAT #13838 AND SHOWN AS A PART OF THIS PLAN.
  - A TRAFFIC STUDY FOR APFO REQUIREMENTS WAS PREPARED BY INTEGRATED TRANSPORTATION SOLUTIONS, INC. AND APPROVED ON 09/28/1998. A SUPPLEMENTAL TRAFFIC STUDY, AS REQUESTED BY PLAT #13838 WAS PREPARED BY THE TRAFFIC GROUP ON 09/01/1999
  - A NOISE STUDY FOR THIS PROJECT IS NOT REQUIRED.
  - A GEOTECHNICAL STUDY WAS PREPARED BY GEOTECHNICAL ASSOCIATES INC. ON 02/09/00
  - STORMWATER MANAGEMENT QUANTITY FOR THIS PARCEL IS TO BE PERFORMED BY EX. POND #3 DESIGN UNDER SDP-98-143. OWNED BY TROY HILL BUSINESS PARK PARTNERSHIP, AND WATER QUALITY FOR THE SITE WILL BE PERFORMED BY BUSINESS.
  - SEE DEPARTMENT OF PLANNING AND ZONING FILES: F 91-24, F 98-169, SDP 98-149, SDP 98-143, S 90-05, P 90-25, F 96-136, AND WP 96-91.
  - THE CONTRACTOR SHALL TEST PIT ALL EXISTING UTILITIES AT LEAST FIVE (5) DAYS PRIOR TO STARTING ANY WORK SHOWN ON THESE DRAWINGS.
  - ALL INLETS SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS.
  - THIS SITE IS EXEMPT FROM THE FOREST CONSERVATION ACT IN ACCORDANCE WITH SECTION 16.1202(b)(1)(A). A PLANNED OFFICE PARK.
  - CONTRACTOR TO SEE ELECTRICAL PLANS FOR EXACT LOCATION OF SITE LIGHTING FIXTURES.
  - NO CLEARING, GRADING OR CONSTRUCTION IS PERMITTED WITHIN THE REQUIRED WETLANDS, STREAM(S) OR THEIR BUFFERS AND FOREST CONSERVATION EASEMENT AREAS.
  - PERMISSION TO GRADE IN STATE R.O.W. GRANTED UNDER SHA PERMIT 7-10-582-DO DATED AUGUST 21, 2000.



**ASBUILT CERTIFICATION**  
 I hereby certify that to the best of my knowledge and belief, this "As-built" truly represents existing field conditions including but not limited to sizes, diameters, line and grade, and elevations.  
 12-17-01 *William J. Burrows*  
 Date: William J. Burrows  
 Reg. Prof. Engineer, MD #17263

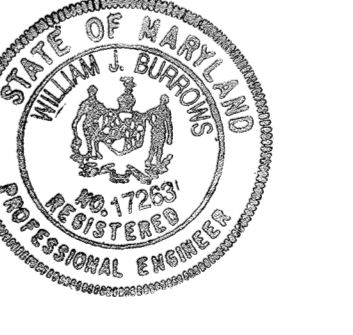
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Chad Dummer* 12/18/00  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*Andy Hamble* 12/20/00  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*Joseph J. Sutt* 12/20/00  
 DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

**ADDRESS CHART**

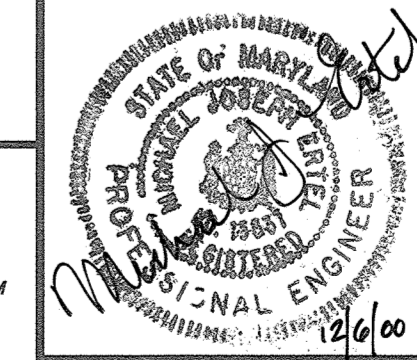
LOT/PARCEL#	STREET ADDRESS
BUILDING-I LOT 1	7091 TROY HILL DRIVE
BUILDING-II LOT 2	7101 TROY HILL DRIVE
BUILDING-III LOT 3	7111 TROY HILL DRIVE

**PERMIT INFORMATION CHART**

Subdivision Name	TROY HILL	Section/Area	Lot/Parcel#
CORPORATE CENTER		40.3768 ACRES	PARCEL A-14
PLAT#	13844 to 13846	Zoning	M-1
		Tax Map	37
		Elect. Distr.	1
		Census Tract	6011.02
Water Code	CO4	Sewer Code	4020000

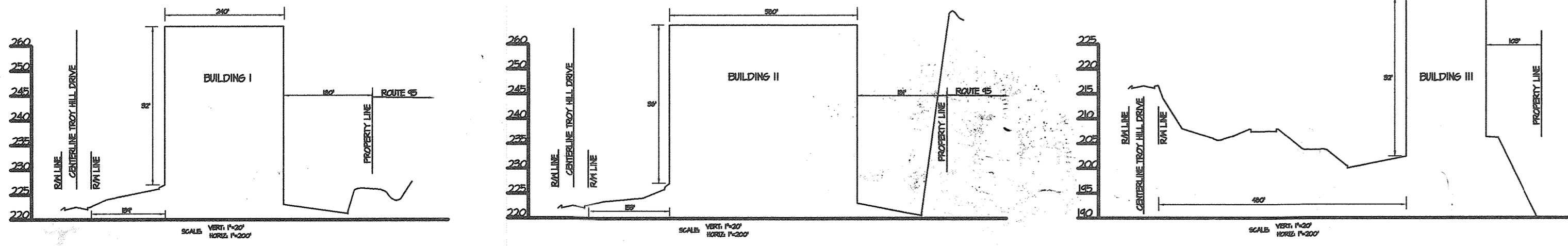


**MORRIS & RITCHE ASSOCIATES, INC.**  
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
 9090 JUNCTION DRIVE SUITE 9  
 ANNAPOLIS JUNCTION, MARYLAND 20701  
 (410) 792-9792 or (301) 776-1690  
 FAX (410) 792-7395



**PROLOGIS PARK I-95**  
**PARCEL A-14**  
**SITE DEVELOPMENT PLAN**  
 ZONED M-1  
 TAX MAP 37 GRID 18  
 ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND

**LOCATION MAP**  
 SCALE: 1"=100'



REMOVE MECHANICAL BUILDING, CHILLER YARD & TANK TRUCK LOADING STATION FROM LOT 1

DATE	REVISIONS
02/02/20	REMOVE MECHANICAL BUILDING, CHILLER YARD & TANK TRUCK LOADING STATION FROM LOT 1
03/24/03	ADDED MECH BLDG., CHILLER YARD, UNLOADING STATION
02/15/19	REVISED PARKING LOT 2, ADDED SHEETS CS101 & VT01
09/19/19	REVISED NORTHWEST CORNER OF BUILDING II

OWNER/DEVELOPER: DANIEL VIGNOLA FAX NO.: 703-751-0787  
 A. NAME: Wayne Rhotel B. DAYTIME TELEPHONE: 703-751-0292  
 C. COMPANY: ProLogis 201-528-9587  
 D. ADDRESS: 5200 Eisenhower Avenue, 2nd Floor ONE MEADOWLANDS PLAZA  
 E. CITY: Alexandria STATE: VA ZIP: 22304  
 EAST WITHERSPOON 07073

**ProLogis**  
 The Global Distribution Solution  
 Development Services  
 Incorporated  
 5200 Eisenhower Avenue  
 Second Floor  
 Alexandria, Virginia 22304  
 Phone: 703.751.9292  
 Fax: 703.751.0787

DATE	REVISIONS	JOB NO.:
07/24/00	REVISED LOCATION OF STORM DRAIN AND SEWER	11354
08/15/00	REVISED PER COUNTY COMMENTS	SCALE: AS NOTED
11/03/00	REVISED FOR FINAL SUBMISSION TO COUNTY	DATE: 06/23/00
11/10/00	RAISED BLDG 1 6" PER PROLOGIS	DESIGN BY: GLC
11/16/01	Lower Bldg 16", Spoil Area Grading Parcel	REVIEW BY: TFM
12-18-01	Change drawing to show "asbuilt" condition	SHEET: 1 OF 25

MATCHLINE  
SHT 3 OF 23

E 1,381,400 N 559,600

**INTERSTATE 95**  
RIGHT-OF-WAY WIDTH VARIES  
VEHICULAR INGRESS AND EGRESS RESTRICTED

THIS SLOPE MUST BE INSTALLED UNDER THE SUPERVISION OF A GEOTECHNICAL ENGINEER. THE ENGINEER MUST CERTIFY TO THE STABILITY OF THE SLOPE.  
PROVIDE TEMP. FENCE DURING CONSTRUCTION. REPLACE FENCE IN KIND AFTER GRADING IS COMPLETE.  
N 50°36'18" E 604.28'

CONTRACTOR TO USE CAUTION WHEN INSTALLING LIGHT POLE BASE SO AS TO NOT DAMAGE STORM DRAIN

EXISTING WETLANDS AS SHOWN ON PLAT 11816

CONTRACTOR TO USE CAUTION WHEN INSTALLING LIGHT POLE BASE SO AS TO NOT DAMAGE STORM DRAIN

CONTRACTOR TO USE CAUTION WHEN INSTALLING LIGHT POLE BASE SO AS TO NOT DAMAGE STORM DRAIN

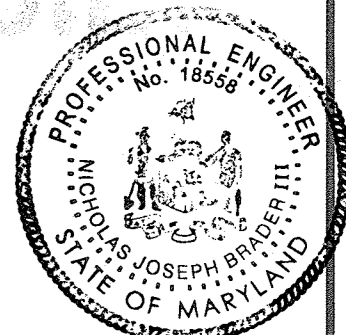
CONTRACTOR TO USE CAUTION WHEN INSTALLING LIGHT POLE BASE SO AS TO NOT DAMAGE STORM DRAIN

**LOT 2**  
17.267 ac ±

**BUILDING II**  
314,006 SF BUILDING (TOTAL)  
282,806 SF WAREHOUSE  
31,200 SF OFFICE  
SLAB ELEVATION - 227'<sup>00</sup>  
INSIDE METER

**LOT 1**  
14.102 ac ±

**BUILDING I**  
99,957 SF BUILDING (TOTAL)  
89,962 SF WAREHOUSE  
9,995 SF OFFICE  
SLAB ELEVATION - 227'<sup>00</sup>  
INSIDE METER



02/20/20

ADDRESS CHART	
LOT/PARCEL#	STREET ADDRESS
BUILDING I LOT 1	7091 TROY HILL DRIVE

PERMIT INFORMATION CHART				
Subdivision Name	TROY HILL CORPORATE CENTER	Section/Area	40.3768 ACRES	Lot/Parcel#
PLAT#	12428	Zoning	M-1	Parcel A-14
Water Code	CO4	Tax Map	37	Elect. Distr.
		Sewer Code	4020000	Census Tract
				6011.02

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*William J. Burrows* 12/20/20  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*Clara Hanula* 12/20/20  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Paul Smith* 12/20/20  
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

C-1



**MRA**  
**MORRIS & RITCHIE ASSOCIATES, INC.**  
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS

9800 JUNCTION DRIVE, SUITE 9  
ANNAPOLIS JUNCTION, MARYLAND 20701  
(410) 792-9792 or (301) 776-1890  
FAX (410) 792-7395

**PROLOGIS PARK I-95**  
PARCEL A-14  
**SITE DEVELOPMENT PLAN**

ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
08/15/00	REVISED PER COUNTY COMMENTS	11354
11/03/00	REVISED FOR FINAL SUBMISSION TO COUNTY	SCALE: 1" = 40'
11/10/00	RAISED BLDG 1 6" PER PROLOGIS	DATE: 06/23/00
12/20/00	REV. HANDOFF CRADERS PER COUNTY COMMENTS	DRAWN BY: GLC/CAO
2-16-01	Lower Bldg 16" Spoil Area Grading Parcel	DESIGN BY: GLC/CAO
12-18-01	Change drawing to show "as-built" condition	REVIEW BY: MRA
		SHEET: 2 OF 25

**ProLogis™**  
The Global Distribution Solution  
Development Services  
Incorporated

5200 Eisenhower Avenue  
Second Floor  
Alexandria, Virginia 22304  
Phone: 703.751.9292  
Fax: 703.751.0787

**landesign**  
ENGINEERS • SURVEYORS • PLANNERS  
2905 MITCHELLVILLE ROAD SUITE NO. 111  
BOWIE, MARYLAND 20716  
(301) 248-8802

**ASBUILT CERTIFICATION**

I hereby certify that to the best of my knowledge and belief, this "As-built" truly represents existing field conditions including but not limited to sizes, diameters, line and grade, and elevations.

12-17-01 *William J. Burrows*  
Date *William J. Burrows*  
Reg. Prof. Engineer, MD #17263

- LEGEND**
- 26' EX. CONTOUR
  - 218' PR. CONTOUR
  - 23.0' PR. SPOT ELEV.
  - HEAVY DUTY PAVING
  - LIGHT DUTY PAVING
  - CONCRETE PAVING
  - POLE LIGHT
  - BUILDING LIGHT
  - FIRE HYDRANT
  - STORM DRAIN INLET

DATE	REVISIONS
03/24/13	ADDED MECH BLDG, CHILLER YARD, UNLOADING STATION
02/20/20	REMOVE MECH BUILDING CHILLER YARD & TRUCK TRUCK LOADING STATION FROM LOT 1

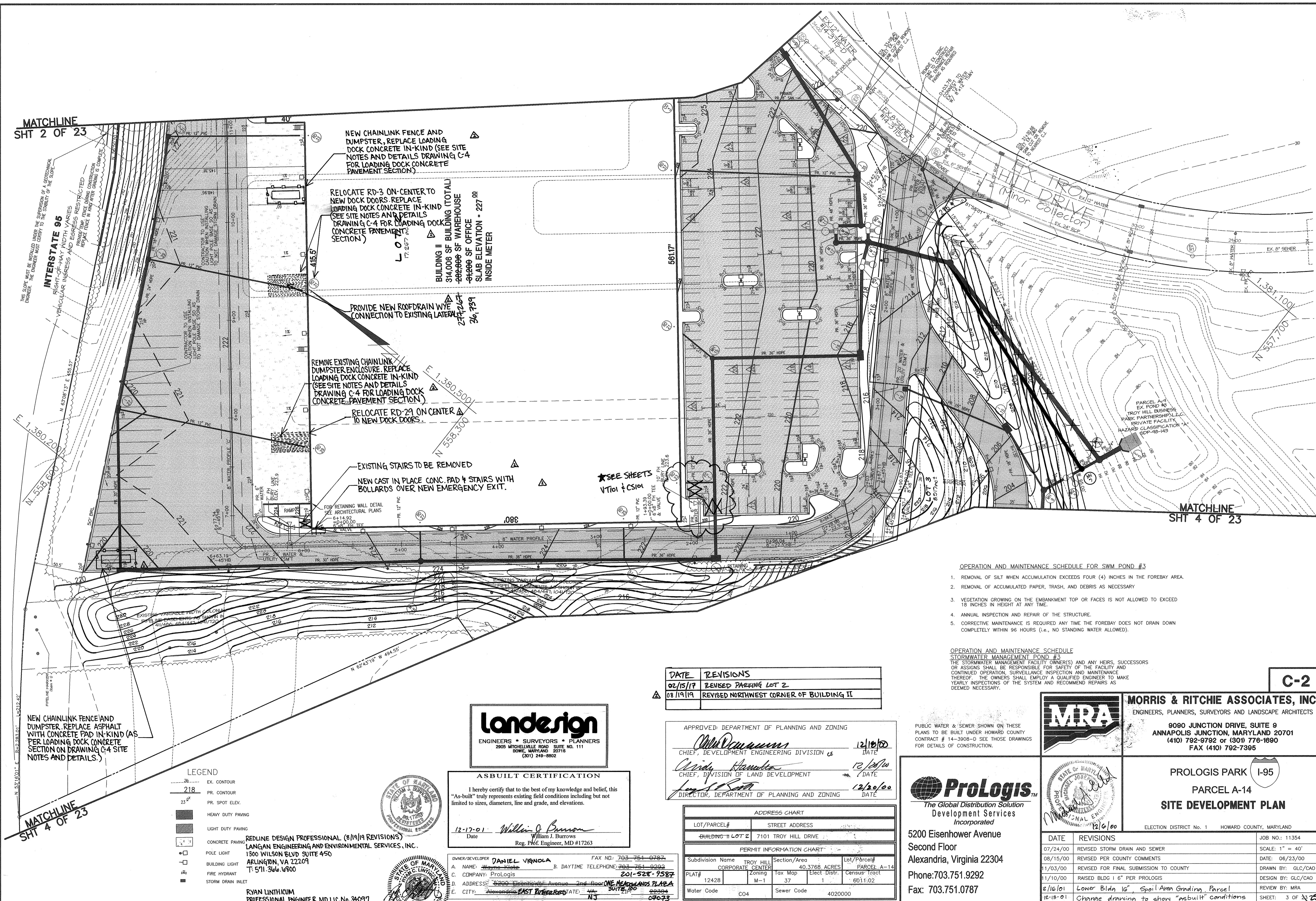
OWNER/DEVELOPER  
A. NAME: Wayne Klotz B. DAYTIME TELEPHONE: 703-751-9292  
C. COMPANY: ProLogis  
D. ADDRESS: 5200 Eisenhower Avenue 2nd floor  
E. CITY: Alexandria STATE: VA. ZIP: 22304

PUBLIC WATER & SEWER SHOWN ON THESE PLANS TO BE BUILT UNDER HOWARD COUNTY CONTRACT # 14-3908-D SEE THESE DRAWINGS FOR DETAILS OF CONSTRUCTION.

MATCHLINE  
SHT 3 OF 23

ASBUILT

SDP-01-10



MATCHLINE  
SHT 2 OF 23

MATCHLINE  
SHT 4 OF 23

INTERSTATE 95  
RIGHT-OF-WAY WIDTH VARIES  
VEHICULAR INGRESS AND EGRESS RESTRICTED  
CONTRACTOR TO USE CAUTION WHEN INSTALLING FENCE TO NOT DAMAGE STORM DRAIN

NEW CHAINLINK FENCE AND DUMPSTER, REPLACE LOADING DOCK CONCRETE IN-KIND (SEE SITE NOTES AND DETAILS DRAWING C-4 FOR LOADING DOCK CONCRETE PAVEMENT SECTION)

RELOCATE RD-3 ON-CENTER TO NEW DOCK DOORS. REPLACE LOADING DOCK CONCRETE IN-KIND (SEE SITE NOTES AND DETAILS DRAWING C-4 FOR LOADING DOCK CONCRETE PAVEMENT SECTION)

BUILDING II  
314,006 SF BUILDING (TOTAL)  
202,800 SF WAREHOUSE  
111,206 SF OFFICE  
SLAB ELEVATION = 227.00  
INSIDE METER

PROVIDE NEW ROOF DRAIN WYE CONNECTION TO EXISTING LATERAL

REMOVE EXISTING CHAINLINK DUMPSTER ENCLOSURE. REPLACE LOADING DOCK CONCRETE IN-KIND (SEE SITE NOTES AND DETAILS DRAWING C-4 FOR LOADING DOCK CONCRETE PAVEMENT SECTION)

RELOCATE RD-29 ON CENTER TO NEW DOCK DOORS

EXISTING STAIRS TO BE REMOVED  
NEW CAST IN PLACE CONC. PAD & STAIRS WITH BOLLARDS OVER NEW EMERGENCY EXIT.

\*SEE SHEETS  
V101 & C101

NEW CHAINLINK FENCE AND DUMPSTER. REPLACE ASPHALT WITH CONCRETE PAD IN-KIND (AS PER LOADING DOCK CONCRETE SECTION ON DRAWING C-4 SITE NOTES AND DETAILS.)

LEGEND

EX. CONTOUR
PR. CONTOUR
PR. SPOT ELEV.
HEAVY DUTY PAVING
LIGHT DUTY PAVING
CONCRETE PAVING
POLE LIGHT
BUILDING LIGHT
FIRE HYDRANT
STORM DRAIN INLET

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1300 WILSON BLVD SUITE 450  
ARLINGTON, VA 22204  
T: 571.366.6800

RYAN LINTHICUM  
PROFESSIONAL ENGINEER MD LIC. No. 34097

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ASBUILT CERTIFICATION  
I hereby certify that to the best of my knowledge and belief, this "As-built" truly represents existing field conditions including but not limited to sizes, diameters, line and grade, and elevations.  
Date: 12-17-01  
Signature: William J. Burrows  
Reg. Prof. Engineer, MD #17263

DRAWER/DEVELOPER: DANIEL VIGNOLA FAX NO: 703-751-0787  
A. NAME: Wayne Klotz B. DAYTIME TELEPHONE: 703-751-0292  
C. COMPANY: ProLogis 201-528-9587  
D. ADDRESS: 5200 Eisenhower Avenue 2nd Floor ONE NEARBYLANDS PLAZA SUITE 100  
E. CITY: Alexandria, VA STATE: VA ZIP: 22304

DATE	REVISIONS
02/15/17	REVISED PARKING LOT 2
08/19/19	REVISED NORTHWEST CORNER OF BUILDING II

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Signature: [Name] DATE: 12/18/00  
Signature: [Name] DATE: 12/20/00  
Signature: [Name] DATE: 12/20/00

ADDRESS CHART

LOT/PARCEL#	STREET ADDRESS
BUILDING II LOT 2	7101 TROY HILL DRIVE

PERMIT INFORMATION CHART

Subdivision Name	TROY HILL CORPORATE CENTER	Section/Area	40.3768 ACRES	Lot/Parcel#	PARCEL A-14				
PLAT#	12428	Zoning	M-1	Tax Map	37	Elect. Distr.	1	Census Tract	6011.02
Water Code	C04	Sewer Code	4020000						

- OPERATION AND MAINTENANCE SCHEDULE FOR SWM POND #3
- REMOVAL OF SILT WHEN ACCUMULATION EXCEEDS FOUR (4) INCHES IN THE FOREBAY AREA.
  - REMOVAL OF ACCUMULATED PAPER, TRASH, AND DEBRIS AS NECESSARY.
  - VEGETATION GROWING ON THE EMBANKMENT TOP OR FACES IS NOT ALLOWED TO EXCEED 18 INCHES IN HEIGHT AT ANY TIME.
  - ANNUAL INSPECTION AND REPAIR OF THE STRUCTURE.
  - CORRECTIVE MAINTENANCE IS REQUIRED ANY TIME THE FOREBAY DOES NOT DRAIN DOWN COMPLETELY WITHIN 96 HOURS (i.e., NO STANDING WATER ALLOWED).

OPERATION AND MAINTENANCE SCHEDULE  
STORMWATER MANAGEMENT POND #3  
THE STORMWATER MANAGEMENT FACILITY OWNER(S) AND ANY HEIRS, SUCCESSORS OR ASSIGNS SHALL BE RESPONSIBLE FOR SAFETY OF THE FACILITY AND CONTINUED OPERATION, SURVEILLANCE INSPECTION AND MAINTENANCE THEREOF. THE OWNERS SHALL EMPLOY A QUALIFIED ENGINEER TO MAKE YEARLY INSPECTIONS OF THE SYSTEM AND RECOMMEND REPAIRS AS DEEMED NECESSARY.

PUBLIC WATER & SEWER SHOWN ON THESE PLANS TO BE BUILT UNDER HOWARD COUNTY CONTRACT # 14-3908-D SEE THOSE DRAWINGS FOR DETAILS OF CONSTRUCTION.

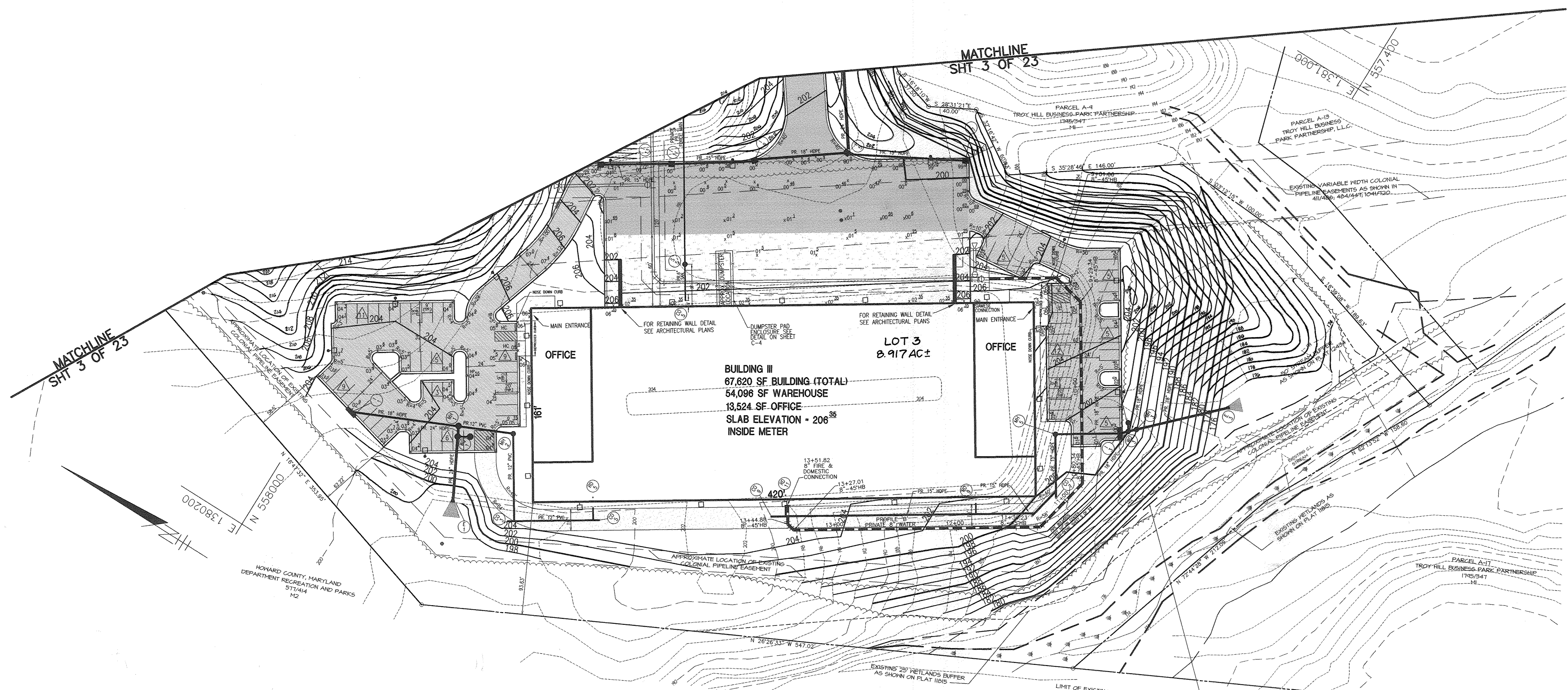
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FAX (410) 792-7395

**PROLOGIS PARK I-95**  
PARCEL A-14  
SITE DEVELOPMENT PLAN  
ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
07/24/00	REVISED STORM DRAIN AND SEWER	11354
08/15/00	REVISED PER COUNTY COMMENTS	SCALE: 1" = 40'
11/03/00	REVISED FOR FINAL SUBMISSION TO COUNTY	DATE: 06/23/00
11/10/00	RAISED BLDG 1 6" PER PROLOGIS	DRAWN BY: GLC/CAO
2/16/01	Lower Bldg 16" Spoil Area Grading Parcel	DESIGN BY: GLC/CAO
12-18-01	Change drawing to show "asbuilt" conditions	REVIEW BY: MRA
		SHEET: 3 OF 25



**LOT 3**  
0.917 AC±

**BUILDING III**  
67,820 SF BUILDING (TOTAL)  
54,096 SF WAREHOUSE  
13,524 SF OFFICE  
SLAB ELEVATION - 206'<sup>35</sup>  
INSIDE METER

- LEGEND**
- EX. CONTOUR
  - 218 PR. CONTOUR
  - 23 PR. SPOT ELEV.
  - HEAVY DUTY PAVING
  - LIGHT DUTY PAVING
  - FIRE TRUCK ACCESS
  - CONCRETE PAVING
  - POLE LIGHT
  - BUILDING LIGHT
  - FIRE HYDRANT
  - STORM DRAIN INLET

**Landesign**  
ENGINEERS • SURVEYORS • PLANNERS  
2805 MITCHELLVILLE ROAD SUITE NO. 111  
BOWIE, MARYLAND 20716  
(301) 246-8802

**ASBUILT CERTIFICATION**

I hereby certify that to the best of my knowledge and belief, this "As-built" truly represents existing field conditions including but not limited to sizes, diameters, line and grade, and elevations.

12-17-01 *William J. Burrows*  
Date William J. Burrows  
Reg. Prof. Engineer, MD #17263

PUBLIC WATER & SEWER SHOWN ON THESE PLANS TO BE BUILT UNDER HOWARD COUNTY CONTRACT # 14-3908-D SEE THOSE DRAWINGS FOR DETAILS OF CONSTRUCTION.

OWNER/DEVELOPER FAX NO: 703-751-0787

A. NAME: Wayne Klotz B. DAYTIME TELEPHONE: 703-751-9292

C. COMPANY: ProLogis

D. ADDRESS: 5200 Eisenhower Avenue 2nd floor

E. CITY: Alexandria STATE: VA. ZIP: 22304

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*William J. Burrows* 12/18/00  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE

*Cindy Hamilton* 12/20/00  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Joseph R. Burt* 12/20/00  
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

ADDRESS CHART	
LOT/PARCEL#	STREET ADDRESS
BUILDING III LOT 3	7111 TROY HILL DRIVE

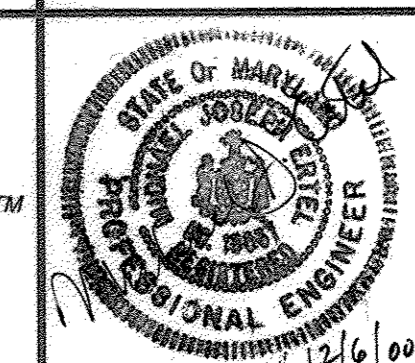
  

PERMIT INFORMATION CHART				
Subdivision Name	Tax Map	Section/Area	Elect. Distr.	Lot/Parcel#
TROY HILL CORPORATE CENTER	M-1	40.3768 ACRES	1	PARCEL A-14
PLAT# 12428		37		6011.02
Water Code		Sewer Code		
C04		4020000		

**ASBUILT**

**ProLogis**  
The Global Distribution Solution  
Development Services  
Incorporated

5200 Eisenhower Avenue  
Second Floor  
Alexandria, Virginia 22304  
Phone: 703.751.9292  
Fax: 703.751.0787



**MORRIS & RITCHIE ASSOCIATES, INC.**  
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS

9090 JUNCTION DRIVE, SUITE 9  
ANNAPOLIS JUNCTION, MARYLAND 20701  
(410) 792-9792 or (301) 776-1890  
FAX (410) 792-7395

PROLOGIS PARK I-95  
PARCEL A-14  
**SITE DEVELOPMENT PLAN**  
ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
07/24/00	REVISED STORM DRAIN AND SEWER	11354
08/15/00	REVISED PER COUNTY COMMENTS	SCALE: 1" = 40'
09/19/00	REVISED PER COUNTY COMMENTS	DATE: 06/23/00
11/03/00	REVISED FOR FINAL SUBMISSION TO COUNTY	DRAWN BY: GLC/CAO
11/10/00	RAISED BLDG 1 6" PER PROLOGIS	DESIGN BY: GLC/CAO
02/16/01	LOWER BLDG 1 G, SPOIL AREA GRADING, PARCEL	REVIEW BY: MRA
12/14/01	AS-BUILT DRAWING	SHEET: 4 OF 25

**C-3**

### LIGHTING FIXTURE SCHEDULE (SITE ONLY)

ITEM NO.	MANUFACTURER	CATALOG NO.	LAMPS	MOUNTING	REMARKS
POLES	THOMAS EMCO	GTS-25-II-DI-BRP GTS-25-II-D2-BRP		ON POLE BASE	SINGLE LUMINAIRE DOUBLE LUMINAIRE
□	THOMAS EMCO	ECA-181-QV-40214-BRP-480-FCT	1-400W METAL HALIDE	POLE	CONTROLLED BY PHOTOCELL SEE POLE BASE DETAIL
□	THOMAS EMCO	ECA-182-QV-40214-BRP-480-FCT	2-400W METAL HALIDE	POLE	CONTROLLED BY PHOTOCELL SEE POLE BASE DETAIL
□	DAYRITE	FLM-5-PCR-BTM-4021-MT-FUB	1-400W METAL HALIDE	BLDG. WALL	PROVIDE TIGHT LOCK PHOTO CONTROL

### GENERAL SITWORK NOTES

- The correctness or completeness of existing information shown on the Drawings is not warranted or guaranteed. The Contractor shall verify the location of utilities and underground facilities, by test pits or other methods approved by the Owner's Representative, as required to verify exact locations and depths within the Limit of Disturbance (LOD). All discrepancies between information shown on the Drawings and that verified in the field shall be reported to the Owner's Representative prior to beginning work.
- The Contractor shall notify "Miss Utility" (1-800-257-7777) a minimum of three (3) working days prior to beginning layout and construction, and again prior to the beginning of planting operations.
- Existing utilities are to remain and shall be adjusted to proposed finish grade unless noted otherwise on the Drawings. The Contractor is responsible for all costs and work required to adjust the existing and to install the proposed utilities to finish grade within the Limit of Disturbance (LOD), including off-site easements and public rights-of-way, as applicable.
- Refer to construction documents prepared by the Mechanical or Electrical Engineer for disposition of existing and construction of new lighting, communication, and electrical services, unless noted otherwise on the Drawings.
- Existing curb and gutter, paving and base, walkways, steps, and other existing surfaces and features within the Limit of Disturbance (LOD) shall be removed unless noted otherwise on the Drawings, or as specified by the applicable Special Construction Notes.
- Existing trees and plant material within the Limit of Disturbance (LOD) shall be removed unless noted otherwise on the Drawings. Trees and plant material located outside of the LOD and those designated to remain shall be protected throughout the construction period, in accordance with the applicable notes and details if shown on the Drawings.
- Construction shall be in accordance with applicable federal, state, county and local regulations, standards and specifications. Refer to the Drawings if part of the contract documents, for designated modifications and additional information. Contractor shall comply with applicable Occupational Safety & Health Administration (OSHA) laws and regulations for work on this project.
- The Contractor shall be responsible for obtaining all permits, not obtained and furnished to the Contractor by the Owner, and paying related fees required to complete the work on this project.
- The Contractor shall replace at no additional cost to the Owner, existing curb and gutter, paving, sidewalks, trees, plant material and other items designated to remain on the site and within the public rights-of-way which are damaged during construction. Areas disturbed, but not designated for paving or planting areas, shall be permanently stabilized by seeding or sodding in accordance with the vegetative stabilization notes on the Drawings, and specifications in the when applicable.
- Curb and gutter shall be constructed with "regular cross slope" or "reverse cross slope" as required to reflect the direction of slope on adjacent paving. Refer to the Drawings for curb and gutter details. Curb and gutter shall be constructed with smooth vertical curve transitions at all high point, low point and inlet locations.
- Sanitary sewer and storm drain pipe elevations are to the invert unless noted otherwise on the Drawings. Utility manholes and storm drain structure frames, grates, and inlet headpieces shall be adjusted and installed at the same line, grade and cross slope of proposed finish grade in adjacent lawn and paved areas.
- Water lines shall be installed with a minimum cover of three feet six inches (3'-6") above the top of pipe unless otherwise noted otherwise on the Drawings.
- Sanitary sewer, roof and storm drain cleanouts located within paved areas shall be a "flush type" installed at the same elevation as the surrounding pavement. Refer to the Drawings for additional information.
- Areas adjacent to buildings, unless otherwise noted on the Drawings, shall be graded to divert water away at the following minimum gradients:  
Concrete and impervious surfaces: 1% minimum  
Lawn and pervious surfaces: 2% minimum
- Where new curb and gutter meets existing curb and gutter, the existing shall be removed to the nearest joint, or saw cut to provide a clean, uniform joint with the new curb and gutter.
- Proposed spot elevations shown in driveways, service and parking areas are the top of paved surfaces and bottom of curbs unless noted otherwise on the Drawings.
- Where new curb is installed adjacent to existing pavement which is to receive an overlay, the overlay thickness may vary as required (minimum of 1-inch) in order to maintain the specified curb reveal as shown on the details. It is anticipated that minor field adjustment to the top of curb elevations noted on the Drawings may be necessary in order to provide a uniform curb reveal. Provide smooth transition of the finished surface and maintain flow along the curbline into drainage structures. Contact the Owner's Representative for approval of adjustments prior to installing new curb.
- Refer to construction documents prepared by the Mechanical or Electrical Engineer for disposition of existing and construction of new lighting, communication, and electrical services, unless noted otherwise on the Drawings.

### I. Materials

- Pipe Bedding Material - pipe bedding material shall consist of well graded sand, or graded aggregate (GAB). Open graded stone (#57) can be used if it is wrapped in geo-textile filter material.
- Backfill Materials - The backfill shall consist of on-site or off-site soils conforming to the requirement of the geotechnical report and County specifications. No stones larger than 2 inches should be allowed within 2 feet of the utility. Larger stones, up to 8 inches in the largest dimension can be used in lifts 2 feet above the utility. No organic material shall be allowed. For granular soils (less than 35% passing #200 sieve), the soil moisture should be within 3 percentage points of optimum unless otherwise dictated by project engineer or County specifications. For fine-grained soils (greater than 35% passing #200 sieve), the soil moisture should be within 0 to plus 4 percent of optimum unless otherwise dictated by engineer or County specifications.

The compaction requirement shall be 92 percent of the Modified Proctor (ASTM D-1557) maximum dry density for below the top 12-inches of roadway subgrade. The top 12 inches should be compacted to 97% unless otherwise recommended by the geotechnical engineer. The top 12 to 24 inches of soil may be required to meet certain material properties for subgrade support for pavements.

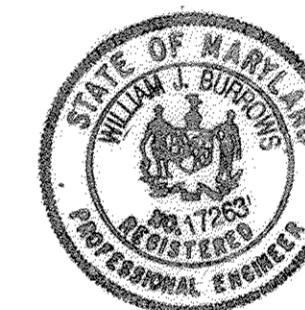
### II. Backfilling Procedures

- Contractor shall place level lifts of soil adjacent and above the utility. The lift thickness shall be dependent upon the type of equipment being used for compaction and the materials. The following shall be used as a guide:
  - Fine-Grained Materials - fine-grained materials (materials with more than 35% passing #200 sieve) should be compacted with sheeps-foot type roller. The lift thickness should not exceed 4 inches if hand operated equipment is used. Hand equipment will be required for compaction around manholes, structures and adjacent to and over the utility. If heavy construction sheeps-foot compaction equipment is used, a maximum loose lift thickness should be no greater than the length of the sheeps-foot or a maximum of eight inches. Each lift should be uniformly compacted with a sufficient number of passes to obtain the required degree of compaction.
  - Granular Soils - granular soils (materials with less than 35% passing #200 sieve) should be compacted with a vibratory type compaction equipment. The loose lift thickness should not exceed 4 inches for hand operated equipment. Hand equipment will be required around manholes, structures and adjacent to and above the utility. If heavy vibratory compaction equipment is used, then the loose lift thickness can be increased to 8 inches. Each lift should be uniformly compacted with a sufficient number of passes to obtain the recommended degree of compaction.

If a lift fails to meet the required compaction, then the lift should be re-compacted and retested. If the material is too wet or too dry, the moisture should be adjusted to within the required range prior to re-compaction.

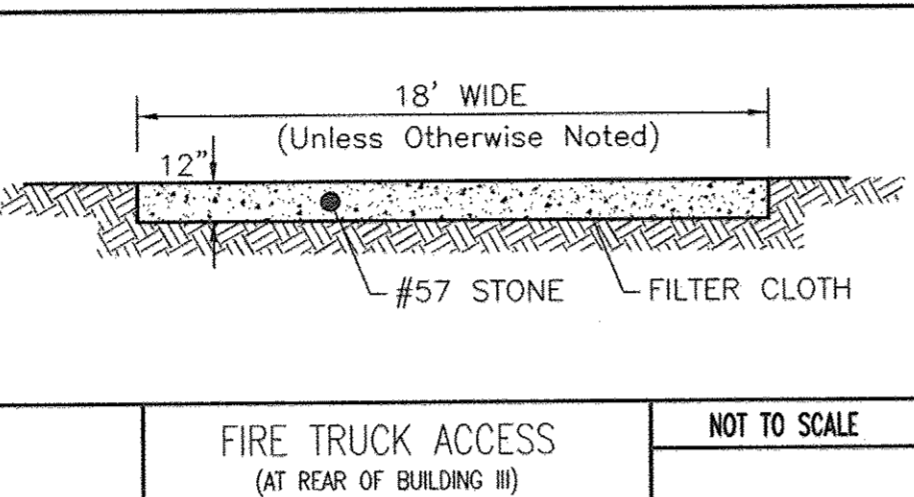
### III. Testing

Each lift of fill should be monitored for stability, lift thickness and compactive effort. A density test should be performed for each lift of fill placed per every 150 feet of trench. This requirement includes the utility lateral connections. The test procedure should be the sand cone method (ASTM D-1556) or the nuclear gauge method (ASTM D-2922). The test results should be made available to the contractor upon the completion of the test. For each test, the technician should record the following: Date; test location; test elevation; material type; degree of compaction; one-point results; lift thickness; and moisture content.

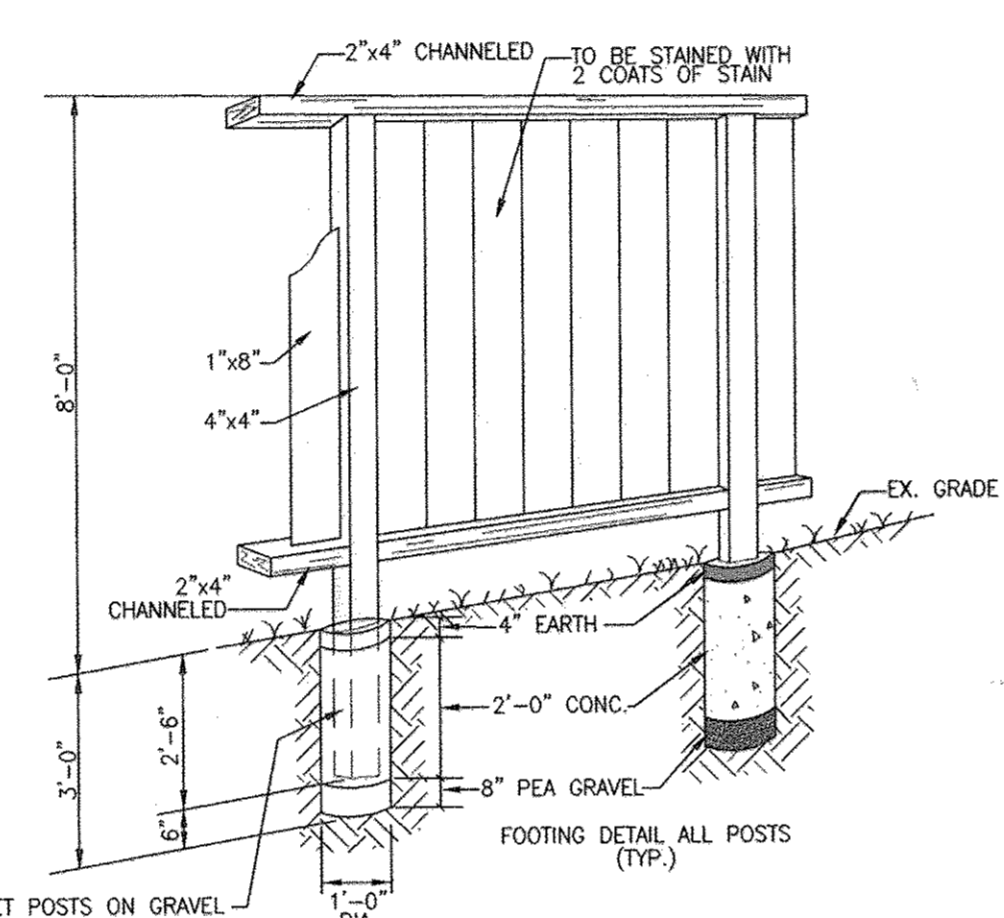


**ASBUILT CERTIFICATION**  
I hereby certify that to the best of my knowledge and belief, this "As-Built" truly represents existing field conditions including but not limited to sizes, diameters, line and grade, and elevations.  
Date: 12-17-01  
William J. Burrows  
Reg. Prof. Engineer, MD #127263

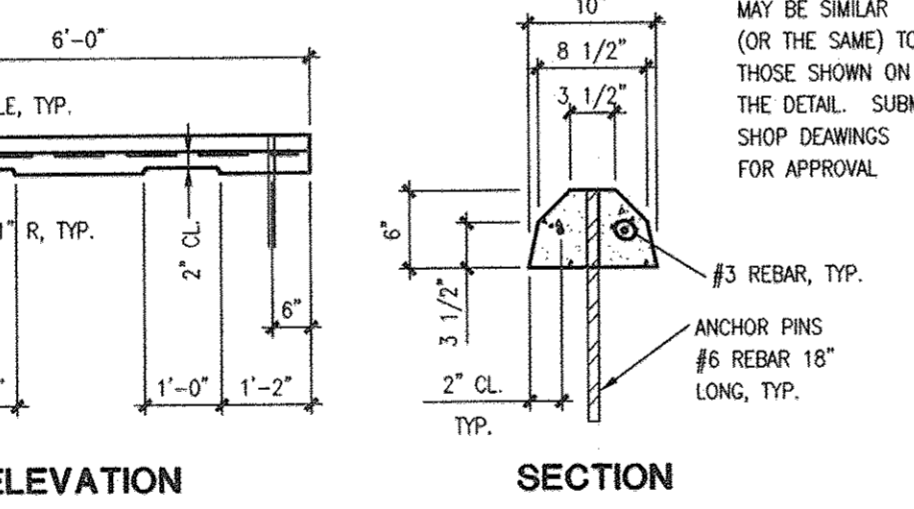
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
Chief, Development Engineering Division: 12/18/01  
Chief, Division of Land Development: 12/20/01  
Director, Department of Planning and Zoning: 12/20/01



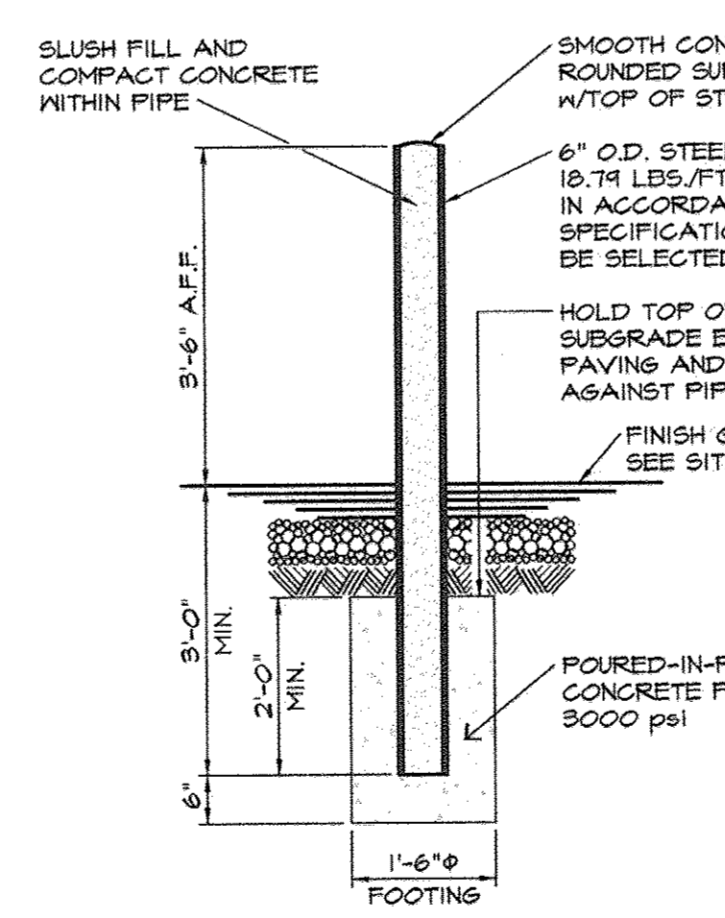
FIRE TRUCK ACCESS (AT REAR OF BUILDING #3) NOT TO SCALE



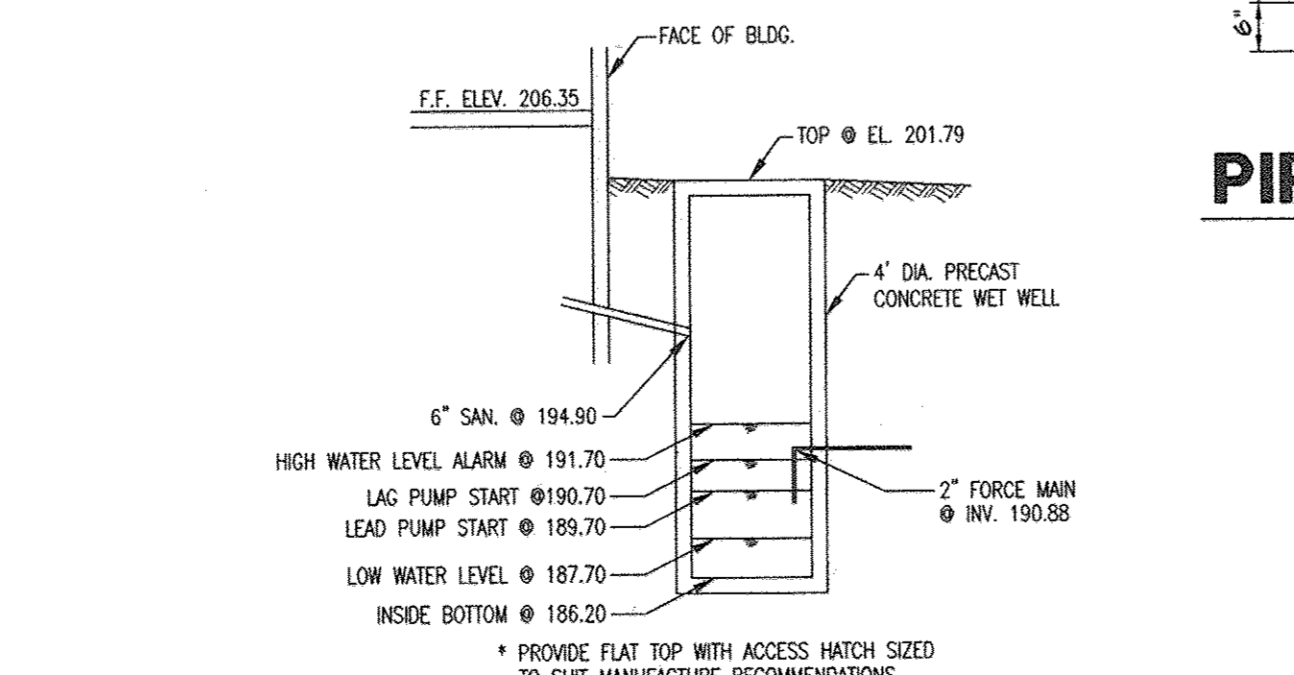
SOLID BOARD FENCE DETAIL NOT TO SCALE



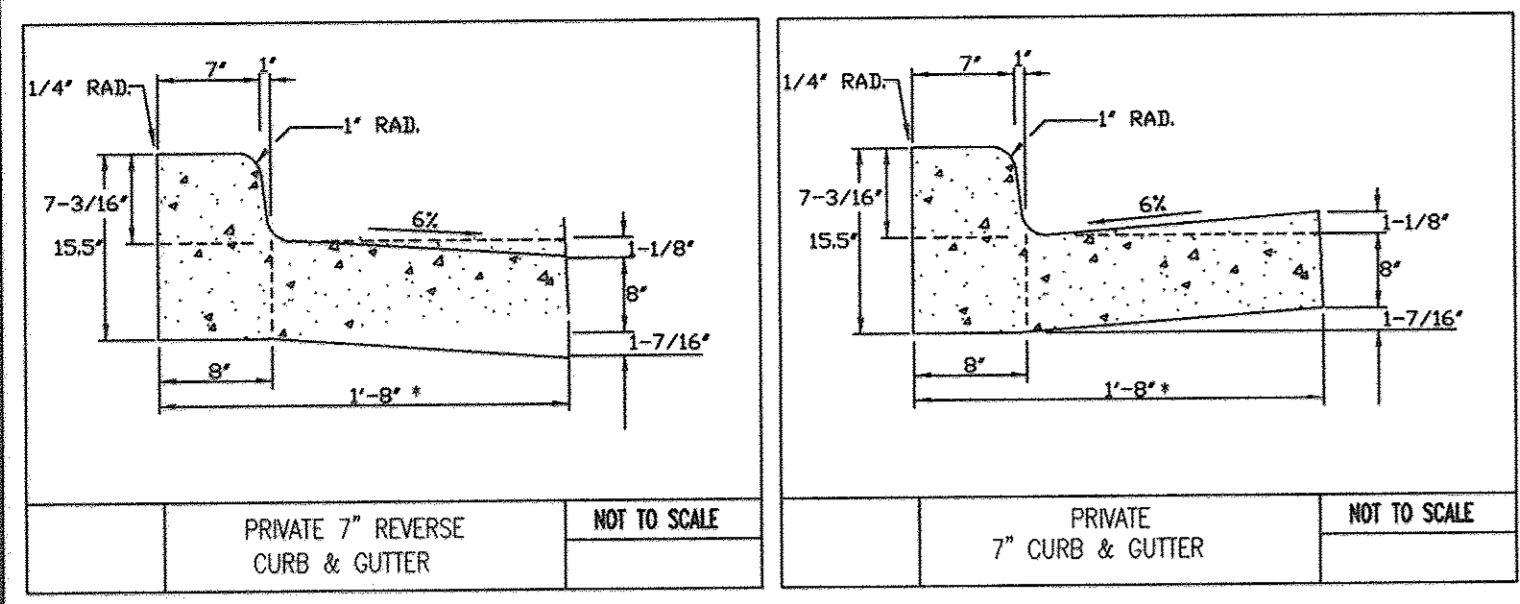
WHEELSTOP DETAIL NOT TO SCALE



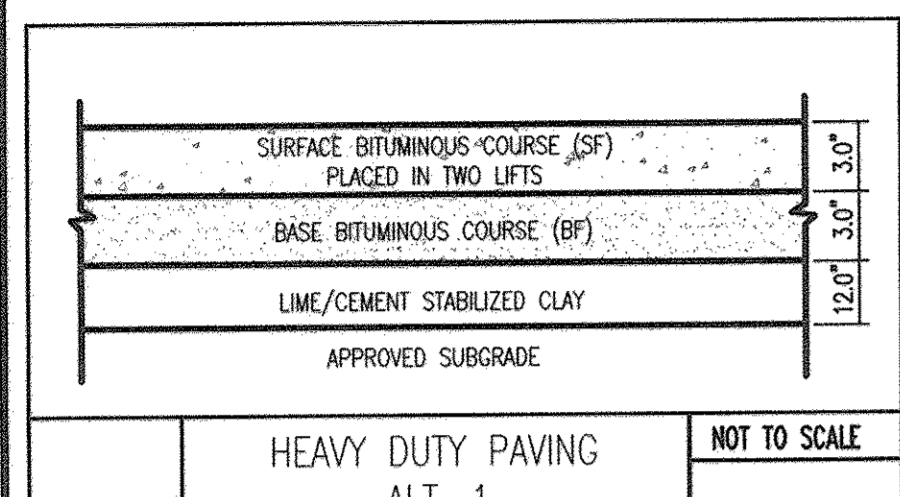
PIPE BOLLARD NOT TO SCALE



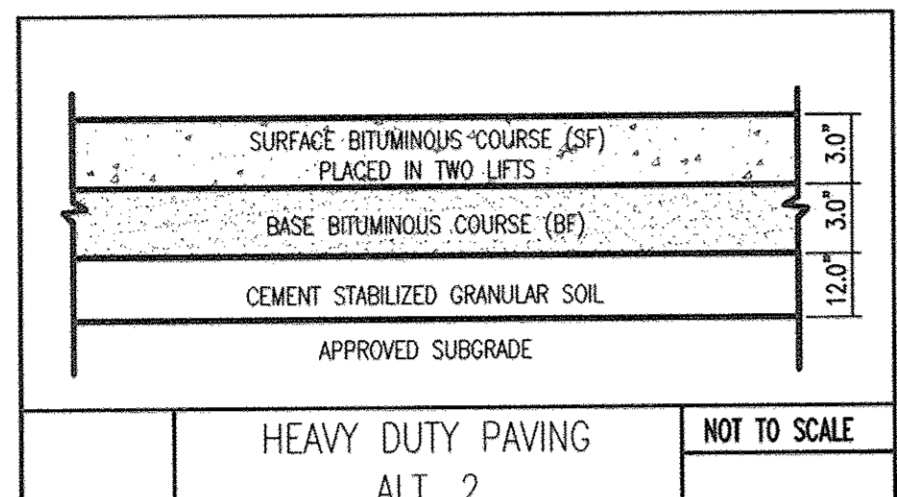
SANITARY WET WELL DETAIL NOT TO SCALE



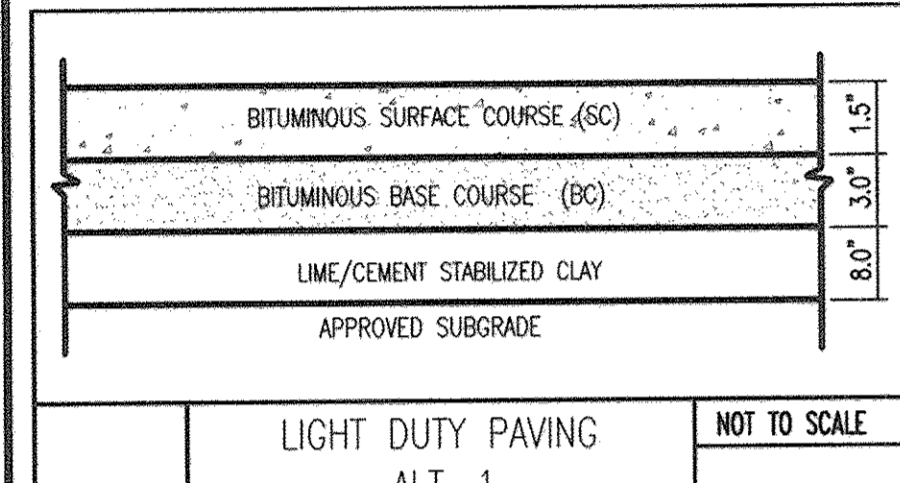
PRIVATE 7" REVERSE CURB & GUTTER NOT TO SCALE



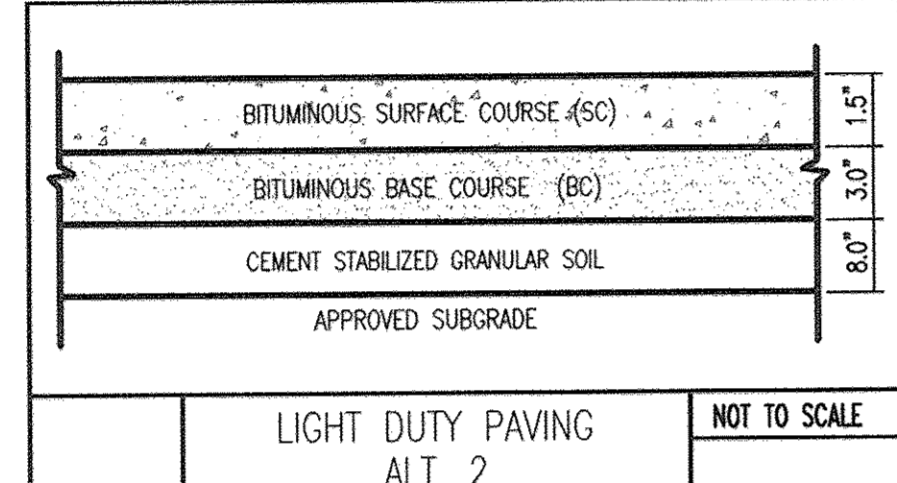
HEAVY DUTY PAVING ALT. 1 NOT TO SCALE



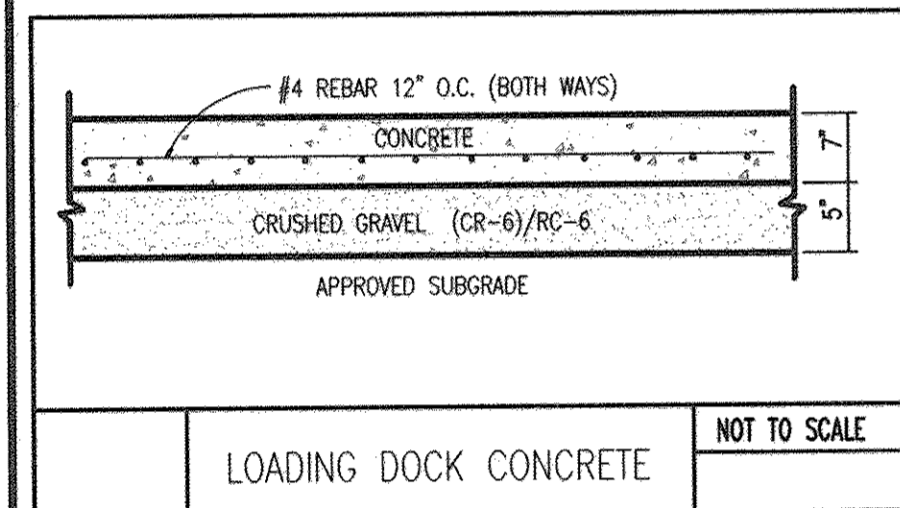
HEAVY DUTY PAVING ALT. 2 NOT TO SCALE



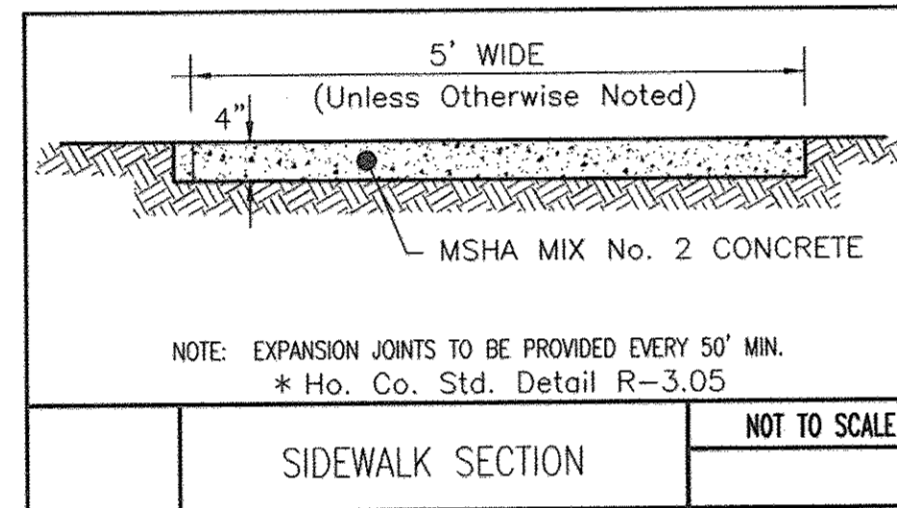
LIGHT DUTY PAVING ALT. 1 NOT TO SCALE



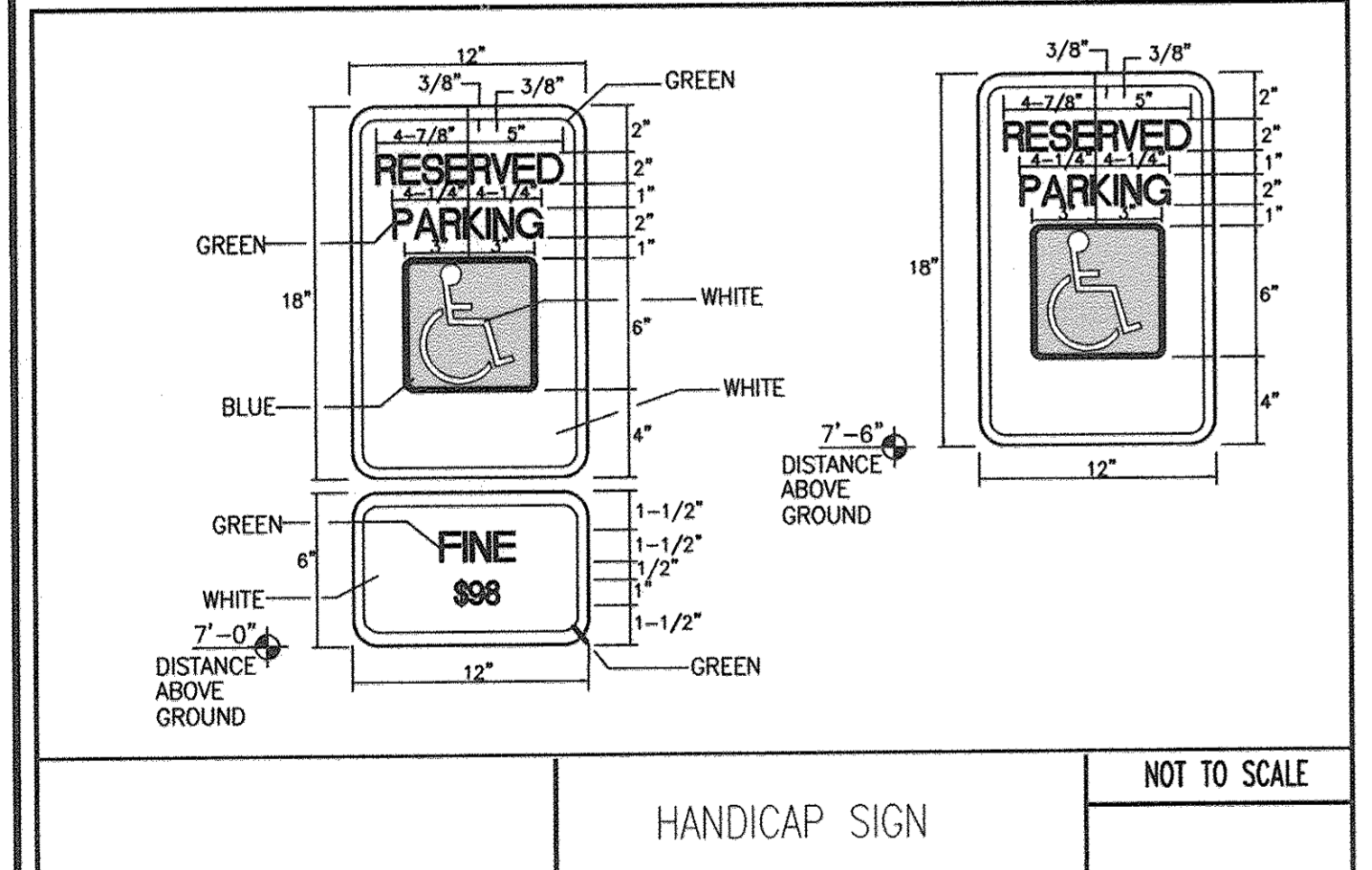
LIGHT DUTY PAVING ALT. 2 NOT TO SCALE



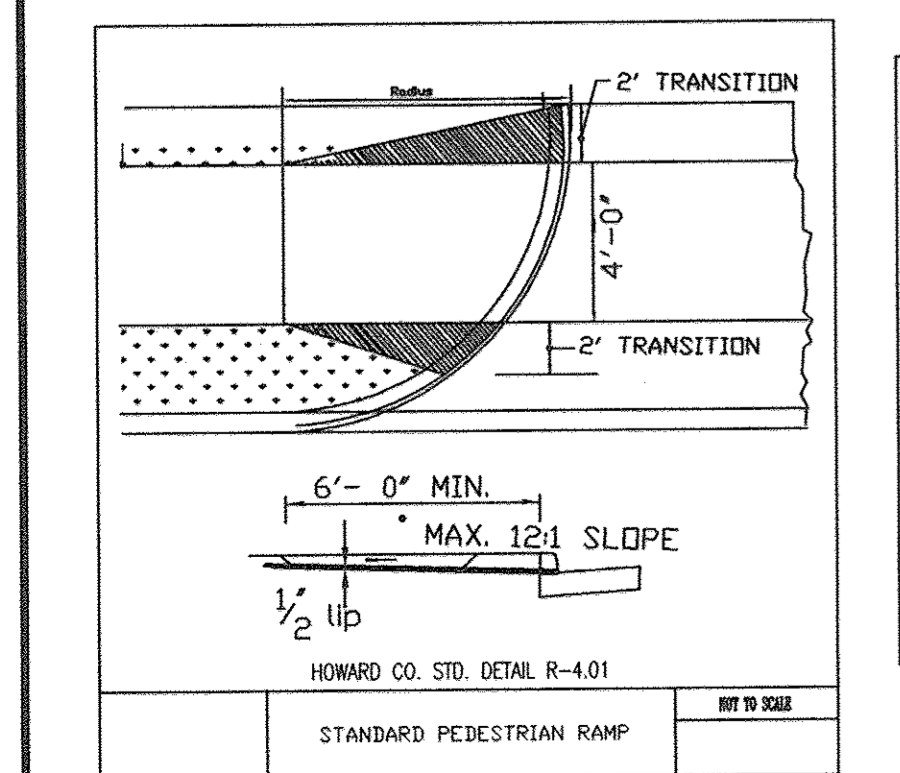
LOADING DOCK CONCRETE NOT TO SCALE



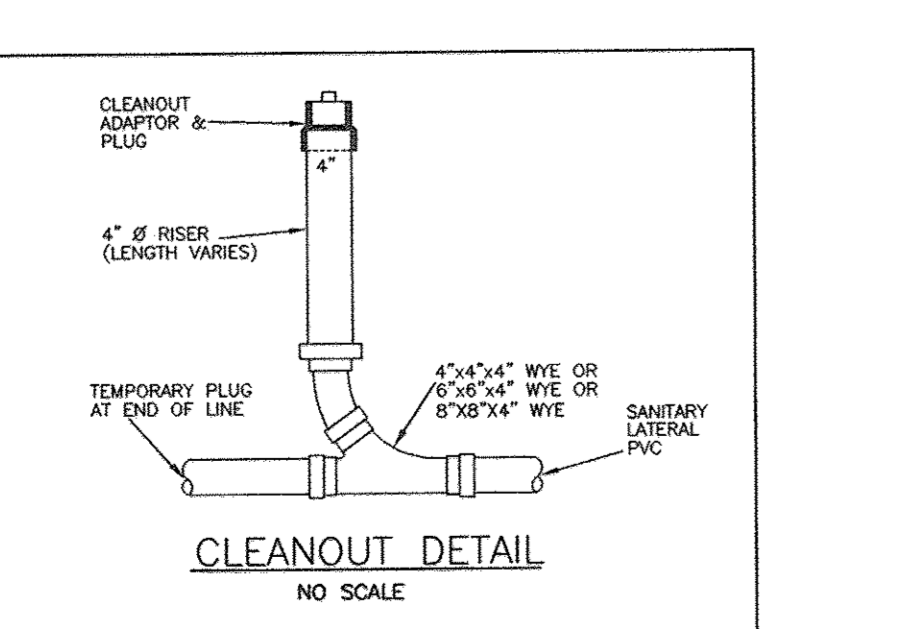
SIDEWALK SECTION NOT TO SCALE



HANDICAP SIGN NOT TO SCALE



STANDARD PEDESTRIAN RAMP NOT TO SCALE



CLEANOUT DETAIL NO SCALE

**Landesign**  
ENGINEERS • SURVEYORS • PLANNERS  
2905 MITCHELLVILLE ROAD SUITE NO. 111  
BOWIE, MARYLAND 20716  
(301) 248-8929

**ProLogis**  
The Global Distribution Solution  
Development Services  
Incorporated

OWNER	FAX NO: 703-751-0787
A. NAME: Wayne Klotz	B. DAYTIME TELEPHONE: 703-751-9292
C. COMPANY: ProLogis	
D. ADDRESS: 5200 Eisenhower Avenue 2nd floor	
E. CITY: Alexandria STATE: VA ZIP: 22304	
DEVELOPER	FAX NO: 703-751-0787
A. NAME: Wayne Klotz	B. DAYTIME TELEPHONE: 703-751-9292
C. COMPANY: ProLogis	
D. ADDRESS: 5200 Eisenhower Avenue 2nd floor	
E. CITY: Alexandria STATE: VA ZIP: 22304	

5200 Eisenhower Avenue  
Second Floor  
Alexandria, Virginia 22304  
Phone: 703.751.9292  
Fax: 703.751.0787

ADDRESS CHART	
LOT/PARCEL #	STREET ADDRESS
LOT 1	7091 TROY HILL DRIVE
LOT 2	7101 TROY HILL DRIVE
LOT 3	7111 TROY HILL DRIVE

PERMIT INFORMATION CHART			
Subdivision Name	TROY HILL CENTER	Section/Area	40.3768 ACRES
PLAT #	12428	Parcel #	PARCEL A-14
Water Code	C04	Sewer Code	4020000

**MORRIS & RITCHE ASSOCIATES, INC.**  
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
9090 JUNCTION DRIVE SUITE 9  
ANNAPOLIS JUNCTION, MARYLAND 20701  
(410) 792-9792 or (301) 776-1690  
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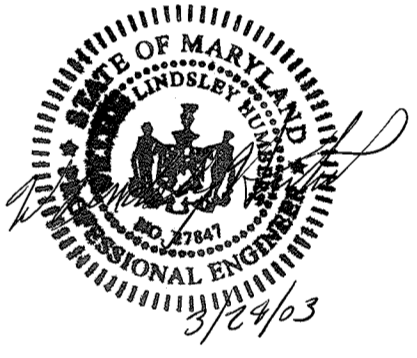
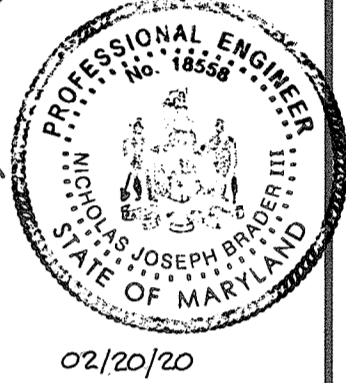
**PROLOGIS PARK I-95**  
PARCEL A-14  
SITE NOTES AND DETAILS  
ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
08/15/00	REVISED	11354
09/19/00	REVISED PER HOWARD COUNTY COMMENT	SCALE: AS SHOWN
11/03/00	REVISED FOR FINAL SUBMISSION TO COUNTY	DATE: 06/23/00
11/10/00	RAISED BLDG 1 6" PER PROLOGIS	DRAWN BY: GLC/CAO
2/16/01	LOWER BLDG 1 G, SPOIL AREA GRADING, PARCEL	DESIGN BY: GLC/TFM
12/12/01	AS-BUILT DRAWING	REVIEW BY: GLC/TFM

OWNER/DEVELOPER FAX NO: 703-751-0787  
 A. NAME: Wayne Klotz B. DAYTIME TELEPHONE: 703-751-9292  
 C. COMPANY: ProLogis  
 D. ADDRESS: 5200 Eisenhower Avenue 2nd floor  
 E. CITY: Alexandria STATE: VA. ZIP: 22304

N 559,600  
 E 1,381,400

BY THE DEVELOPER  
 I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 Wayne P. Klotz (Wayne P. Klotz) 07/21/00  
 SIGNATURE OF DEVELOPER DATE  
 PRINT NAME BELOW SIGNATURE



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division CE 12/18/00 DATE  
 Linda Hamilton 12/18/00 DATE  
 Chief, Division of Land Development  
 Director, Department of Planning and Zoning 12/20/00 DATE

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.  
 J.G. Walsh / cs. 12/15/00 DATE  
 U.S.D.A.-NATURAL RESOURCES CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
 12/15/00 /DATE  
 HOWARD S.C.D.

C-5

**MRA**  
**MORRIS & RITCHIE ASSOCIATES, INC.**  
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
 9080 JUNCTION DRIVE, SUITE 9  
 ANNAPOLIS JUNCTION, MARYLAND 20701  
 (410) 792-9792 or (301) 776-1890  
 FAX (410) 792-7395

**PROLOGIS PARK I-95**  
 PARCEL A-14  
**SEDIMENT AND EROSION CONTROL PLAN**  
 ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND

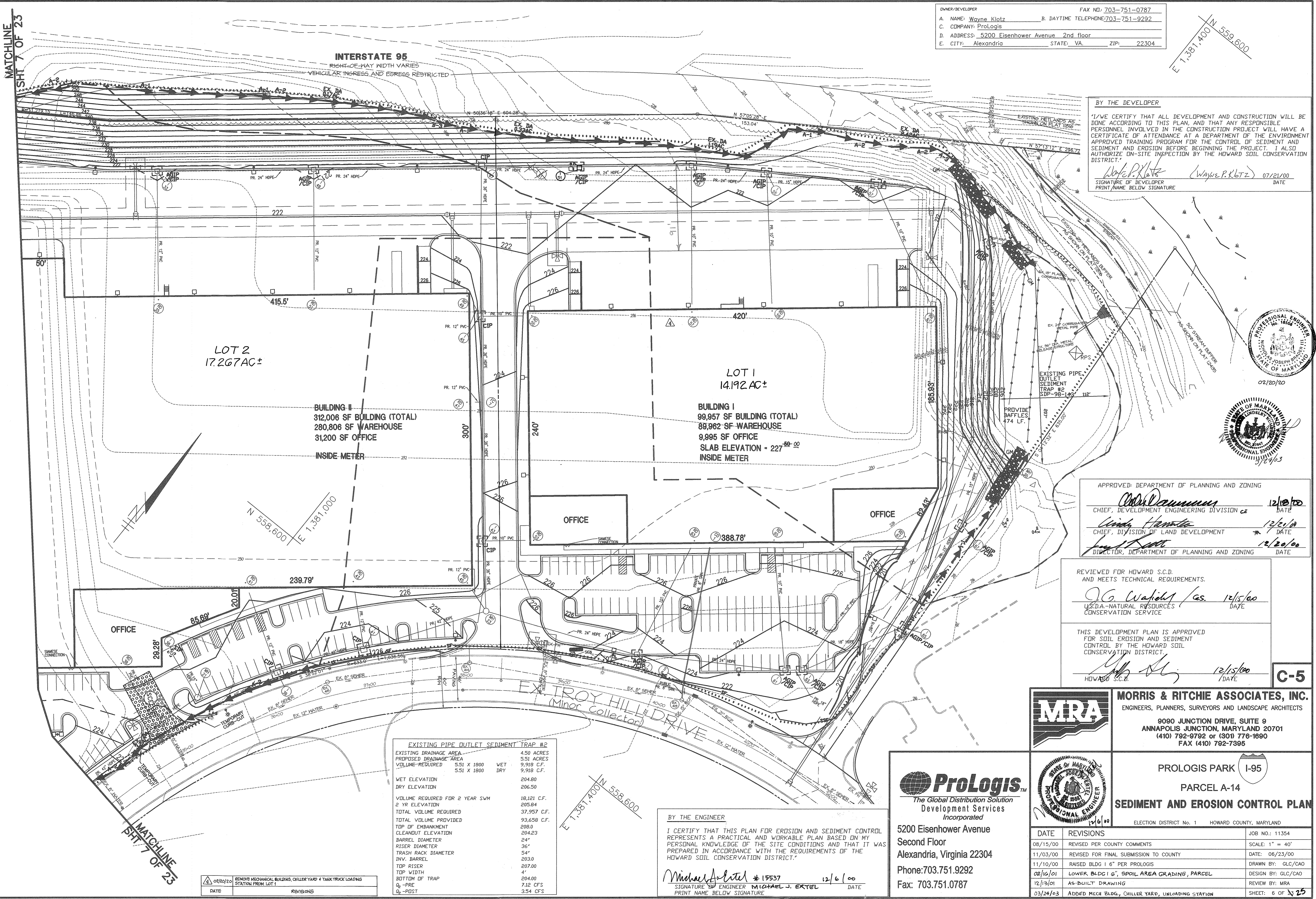
**ProLogis™**  
 The Global Distribution Solution  
 Development Services  
 Incorporated  
 5200 Eisenhower Avenue  
 Second Floor  
 Alexandria, Virginia 22304  
 Phone: 703.751.9292  
 Fax: 703.751.0787

BY THE ENGINEER  
 I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT.  
 Michael J. Eitel # 15537 12/6/00 DATE  
 SIGNATURE OF ENGINEER MICHAEL J. EITEL  
 PRINT NAME BELOW SIGNATURE

EXISTING PIPE OUTLET SEDIMENT TRAP #2

EXISTING DRAINAGE AREA	4.50 ACRES
PROPOSED DRAINAGE AREA	5.51 ACRES
VOLUME REQUIRED 5.51 X 1800 WET	9,918 CF.
5.51 X 1800 DRY	9,918 CF.
WET ELEVATION	204.80
DRY ELEVATION	206.50
VOLUME REQUIRED FOR 2 YEAR SWM	18,121 CF.
2 YR ELEVATION	205.84
TOTAL VOLUME REQUIRED	37,975 CF.
TOTAL VOLUME PROVIDED	93,658 CF.
TOP OF EMBANKMENT	208.0
CLEANDUT ELEVATION	204.23
BARREL DIAMETER	24"
RISER DIAMETER	36"
TRASH RACK DIAMETER	54"
INV. BARREL	203.0
TOP RISER	207.00
TOP WIDTH	4'
BOTTOM OF TRAP	204.00
Q <sub>2</sub> -PRE	7.12 CFS
Q <sub>2</sub> -POST	3.54 CFS

02/20/00	REMOVE MECHANICAL BUILDING, CHILLER YARD + TANK TRUCK LOADING STATION FROM LOT 1
DATE	REVISIONS



MATCHLINE  
 SHIT 7 OF 23

MATCHLINE  
 SHIT 7 OF 23

EXISTING SEDIMENT BASIN #3			
EXISTING DRAINAGE AREA	8.59 ACRES		
PROPOSED DRAINAGE AREA	23.51 ACRES		
VOLUME REQUIRED	23.51 X 1800	WET	22,158 CF.
	23.51 X 1800	DRY	22,158 CF.
WET ELEVATION			184.00
DRY ELEVATION			187.14
VOLUME REQUIRED FOR 2 YEAR SWM	90.875 CF.		
2 YR ELEVATION	190.82		
TOTAL VOLUME REQUIRED	135,191 CF.		
TOTAL VOLUME PROVIDED	260,924 CF.		
TOP OF EMBANKMENT	193.50		
TOP WIDTH	12.0'		
CLEANDOUT ELEV.	182.15		
BARREL DIAMETER	3.5'		
INV. BARREL	179.50		
TOP RISER	192.69		
BOTTOM	180.00		
Q <sub>1</sub> -PRE	22.41 CFS		
Q <sub>2</sub> -POST	21.57 CFS		

BY THE DEVELOPER

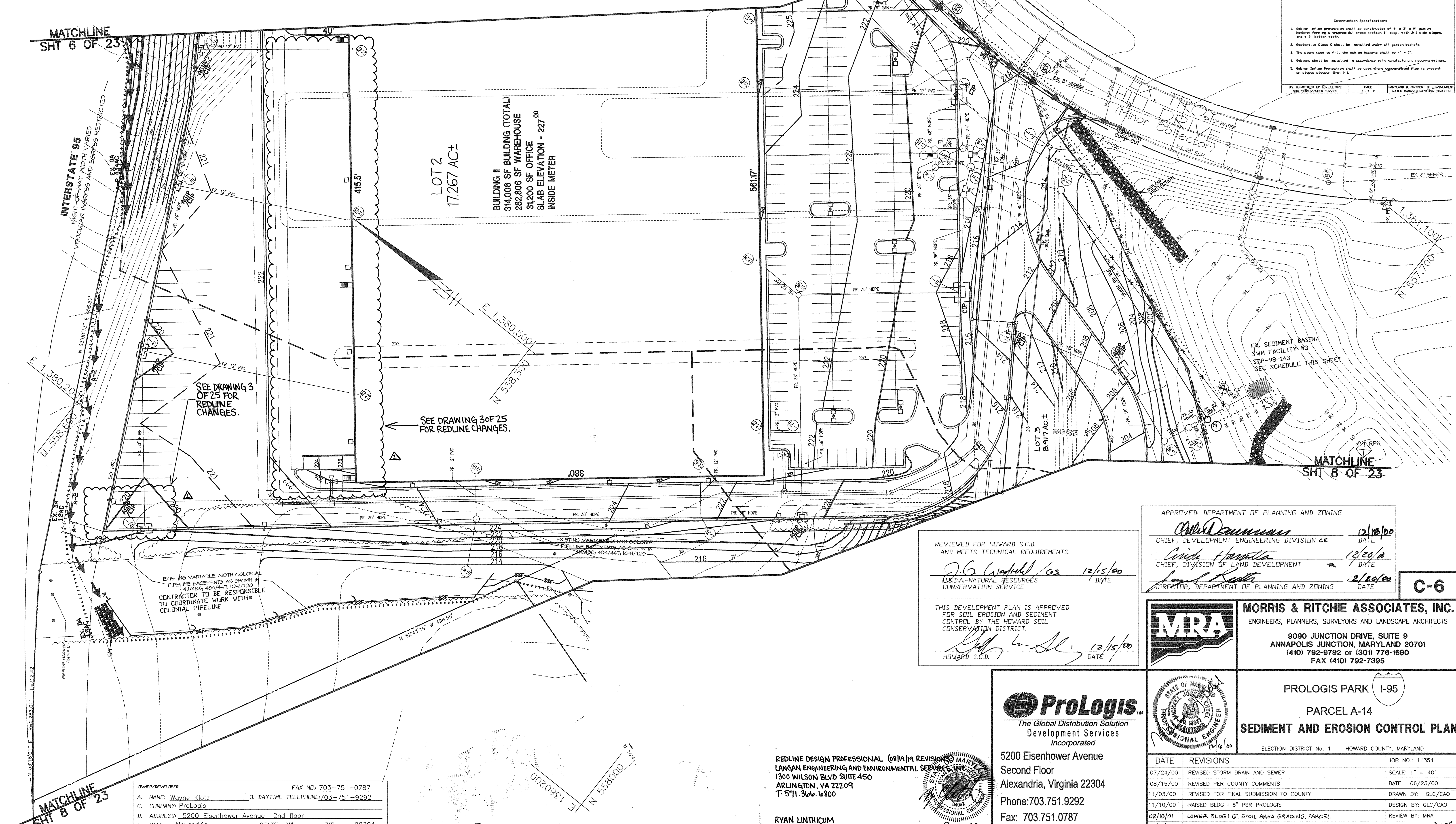
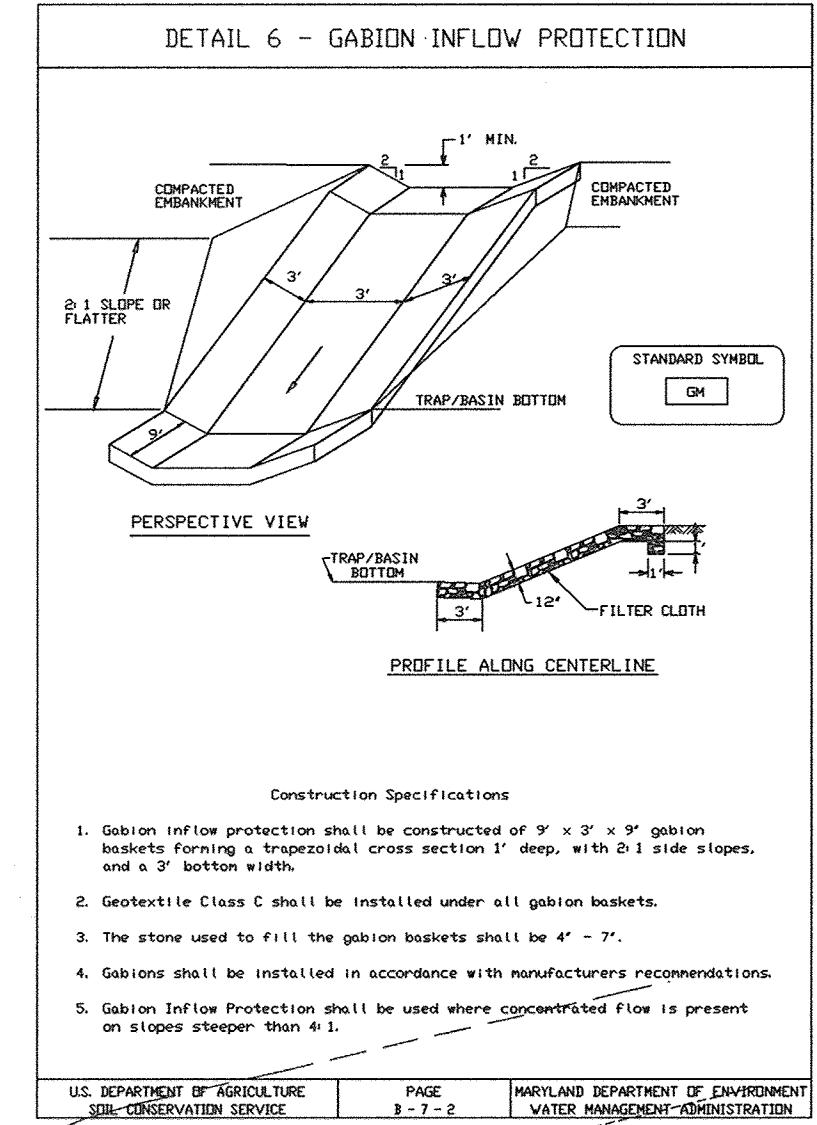
I HAVE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION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

*Wayne P. Klotz* (Wayne P. Klotz) 07/21/00  
 SIGNATURE OF DEVELOPER DATE  
 PRINT NAME BELOW SIGNATURE

BY THE ENGINEER

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

*Michael J. Ertel* #15537 12/6/00  
 SIGNATURE OF ENGINEER DATE  
 PRINT NAME BELOW SIGNATURE



SEE DRAWING 3 OF 25 FOR REDLINE CHANGES.

SEE DRAWING 3 OF 25 FOR REDLINE CHANGES.

EXISTING VARIABLE WIDTH COLONIAL PIPELINE EASEMENTS AS SHOWN IN 4/14/00; 4/9/44; 10/1/720 CONTRACTOR TO BE RESPONSIBLE TO COORDINATE WORK WITH COLONIAL PIPELINE

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

*J.G. Waples/GS* 12/15/00  
 U.S.D.A.-NATURAL RESOURCES CONSERVATION SERVICE DATE

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

*John L. St...* 12/15/00  
 HOWARD S.C.D. DATE

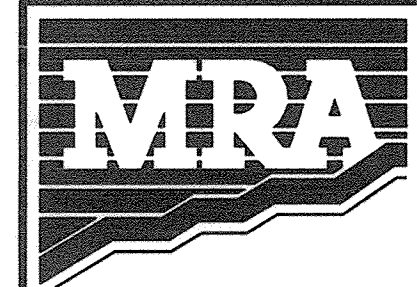
APPROVED: DEPARTMENT OF PLANNING AND ZONING

*William D...* 12/10/00  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION ce DATE

*Chris H...* 12/20/00  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Joseph S...* 12/20/00  
 DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

C-6



**MORRIS & RITCHIE ASSOCIATES, INC.**  
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS

9090 JUNCTION DRIVE, SUITE 9  
 ANNAPOLIS JUNCTION, MARYLAND 20701  
 (410) 792-9792 or (301) 776-1690  
 FAX (410) 792-7395



5200 Eisenhower Avenue  
 Second Floor  
 Alexandria, Virginia 22304  
 Phone: 703.751.9292  
 Fax: 703.751.0787



PROLOGIS PARK I-95  
 PARCEL A-14  
**SEDIMENT AND EROSION CONTROL PLAN**  
 ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND

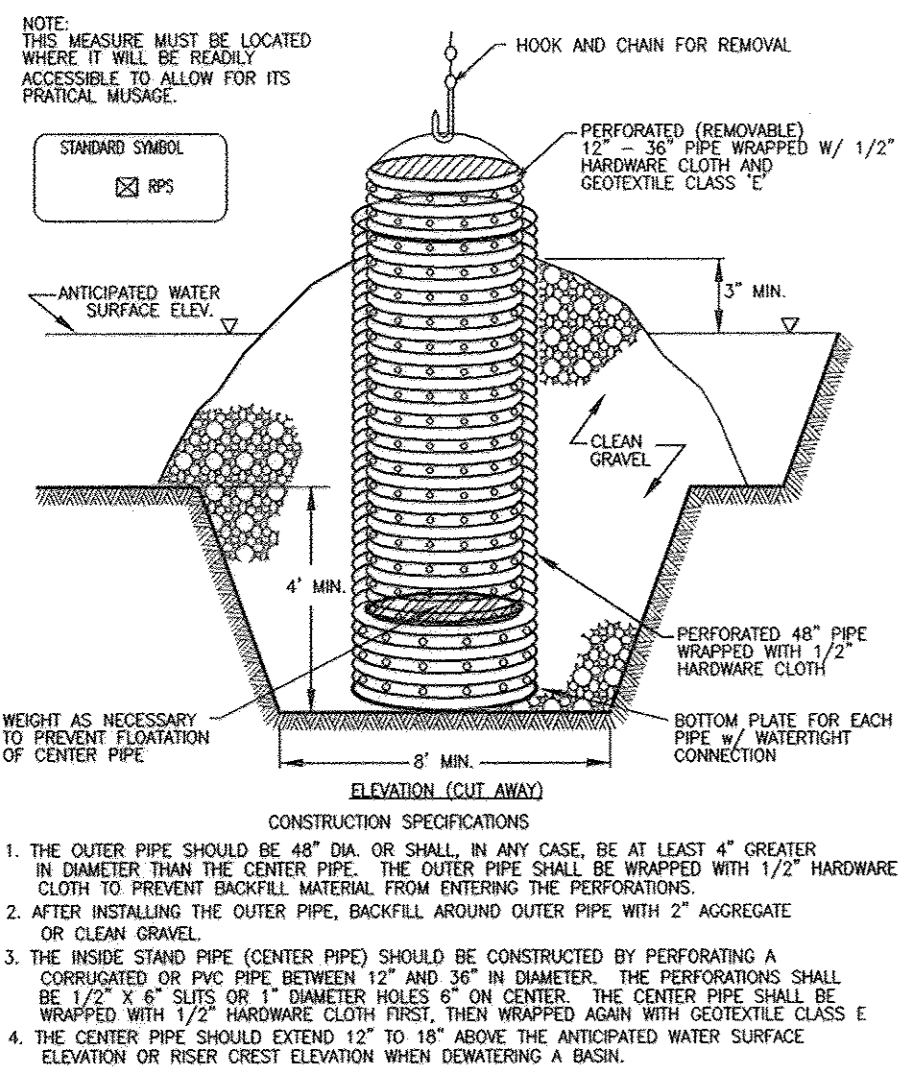
DATE	REVISIONS	JOB NO.:
07/24/00	REVISED STORM DRAIN AND SEWER	11354
08/15/00	REVISED PER COUNTY COMMENTS	SCALE: 1" = 40'
11/03/00	REVISED FOR FINAL SUBMISSION TO COUNTY	DATE: 06/23/00
11/10/00	RAISED BLDG 1 6" PER PROLOGIS	DRAWN BY: GLC/CAO
02/10/01	LOWER BLDG 1 G, SPOIL AREA GRADING, PARCEL	DESIGN BY: GLC/CAO
12/12/01	AS-BUILT DRAWING	REVIEW BY: MRA
		SHEET: 7 OF 25

OWNER/DEVELOPER

A. NAME: Wayne Klotz B. DAYTIME TELEPHONE: 703-751-9292  
 C. COMPANY: ProLogis  
 D. ADDRESS: 5200 Eisenhower Avenue 2nd floor  
 E. CITY: Alexandria STATE: VA. ZIP: 22304

REDLINE DESIGN PROFESSIONAL (08/19/19 REVISIONS)  
 LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
 1300 WILSON BLVD SUITE 450  
 ARLINGTON, VA 22209  
 T: 571.366.6800

RYAN LINTICUM  
 PROFESSIONAL ENGINEER MD LIC. NO. 34097 8-19-19



**REMOVABLE PUMPING STATION**  
NOT TO SCALE

- CONSTRUCTION SPECIFICATIONS**
1. THE OUTER PIPE SHOULD BE 48" DIA. OR SMALLER IN ANY CASE, BE AT LEAST 4" GREATER IN DIAMETER THAN THE CENTER PIPE. THE OUTER PIPE SHALL BE WRAPPED WITH 1/2" HAWTHORNE CLOTH TO PREVENT BACKFILL MATERIAL FROM ENTERING THE PERFORATIONS.
  2. AFTER INSTALLING THE OUTER PIPE, BACKFILL AROUND OUTER PIPE WITH 2" AGGREGATE OR CLEAN GRAVEL.
  3. THE INSIDE STAND PIPE (CENTER PIPE) SHOULD BE CONSTRUCTED BY PERFORATING A CORRUGATED OR PVC PIPE BETWEEN 12" AND 36" IN DIAMETER. THE PERFORATIONS SHALL BE 1/2" X 6" SLOTS OR 1" DIAMETER HOLES 6" ON CENTER. THE CENTER PIPE SHALL BE WRAPPED WITH 1/2" HAWTHORNE CLOTH FIRST, THEN WRAPPED AGAIN WITH GEOTEXTILE CLASS E.
  4. THE CENTER PIPE SHOULD EXTEND 12" TO 18" ABOVE THE ANTICIPATED WATER SURFACE ELEVATION OR RISER CREST ELEVATION WHEN DOWNGRADES A BASIN.

**SOIL DUST CONTROL**

**Definition**  
Controlling dust blowing and movement on construction sites and roads.

**Purpose**  
To prevent blowing and movement of dust from exposed soil surfaces, reduce on and off-site damage, health hazards, and improve traffic safety.

**Conditions Where Practice Applies**  
This practice is applicable to areas subject to dust blowing and movement where on and off-site damage is likely without treatment.

**Specifications**

**Temporary Methods**

1. Mulches - See standards for vegetative stabilization with mulches only. Mulch should be crimped or tacked to prevent blowing.
2. Vegetative Cover - See standards for temporary vegetative cover.
3. Tillage - To roughen surface and bring clods to the surface. This is an emergency measure which should be used before soil blowing starts. Drag plowing on windward side of site. Chisel-type plows spaced about 12' apart, spring-toothed harrows, and similar plows are examples of equipment which may produce the desired effect.
4. Irrigation - This is generally done as an emergency treatment. Site is sprinkled with water until the surface is moist. Repeat as needed. At no time should the site be irrigated to the point that runoff begins to flow.
5. Barriers - Solid board fences, slit fences, snow fences, burlap fences, straw bales, and similar materials can be used to control air currents and soil blowing. Barriers placed at right angles to prevailing currents at intervals of about 10 times their height are effective in controlling soil blowing.
6. Calcium Chloride - Apply at rates that will keep surface moist. May need retreatment.

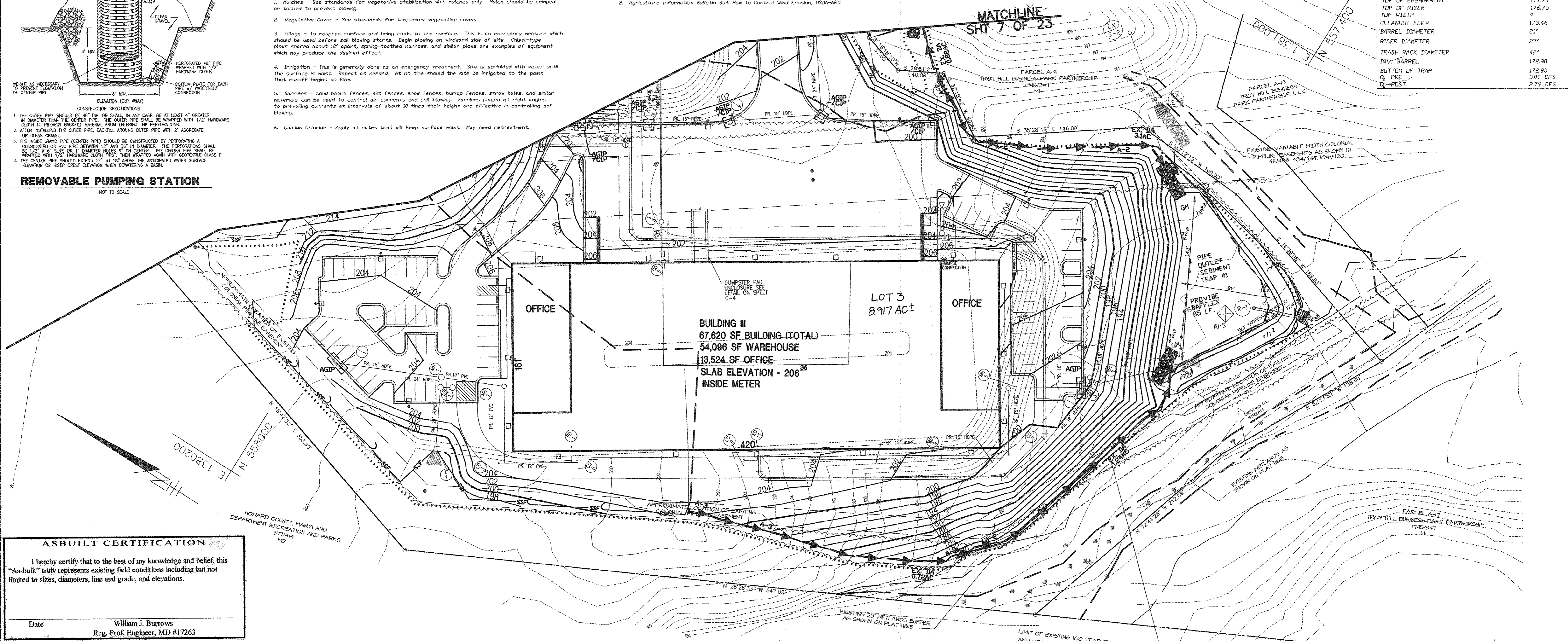
**Permanent Methods**

1. Permanent Vegetation - See standards for permanent vegetative cover, and permanent stabilization with sod. Existing trees or large shrubs may afford valuable protection if left in place.
2. Toppingsoil - Covering with less erosive soil materials. See standards for toppingsoil.
3. Stone - Cover surface with crushed stone or coarse gravel.

**References**

1. Agriculture Handbook 346. Wind Erosion Forces in the United States and Their Use in Predicting Soil Loss.
2. Agriculture Information Bulletin 354. How to Control Wind Erosion, USDA-ARS.

PIPE OUTLET TRAP #1	
EXISTING DRAINAGE AREA	5.0 ACRES
PROPOSED DRAINAGE AREA	2.8 ACRES
VOLUME REQUIRED	5.0 X 1800 WET 5.0 X 1800 DRY
WET ELEVATION	9,000 C.F.
DRY ELEVATION	174.02
VOLUME REQUIRED FOR 2 YEAR SWM	176.70
2 YR ELEVATION	17,302 C.F.
TOTAL VOLUME REQUIRED	176.13
TOTAL VOLUME PROVIDED	35,302 C.F.
TOP OF EMBANKMENT	46,307 C.F.
TOP OF RISER	177.70
TOP WIDTH	176.75
CLEANDOUT ELEV.	4'
BARREL DIAMETER	173.46
RISER DIAMETER	21"
TRASH RACK DIAMETER	27"
INVERT BARREL	42"
BOTTOM OF TRAP	172.90
Q-PRE	178.90
Q-POST	3.09 CFS
	2.79 CFS



**AS-BUILT CERTIFICATION**

I hereby certify that to the best of my knowledge and belief, this "As-built" truly represents existing field conditions including but not limited to sizes, diameters, line and grade, and elevations.

Date: \_\_\_\_\_  
William J. Burrows  
Reg. Prof. Engineer, MD #17263

- CONSTRUCTION SEQUENCE**
1. SET UP PRE-CONSTRUCTION MEETING WITH SEDIMENT CONTROL INSPECTOR (410) 313-1855 A MINIMUM OF 24 HOURS PRIOR TO THE START OF ANY WORK. 1 DAY
  - NOTE: THE CONTRACTOR MUST BE IN RECEIPT OF THE SITE GRADING PERMIT PRIOR TO SETTING UP THE PRE-CONSTRUCTION MEETING.
  - NOTE: THE CONTRACTOR WILL HAVE A CERTIFICATE OF ATTENDANCE FROM A MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.
  2. BRING EXISTING PIPE OUTLET SEDIMENT TRAP AND EXISTING SWM FACILITY BACK TO ORIGINAL SEDIMENT TRAP DESIGN SPECIFICATIONS PER SDP-98-143. INSTALL PIPE OUTLET SEDIMENT TRAP #2. 1 WEEK
  3. INSTALL STABILIZED CONSTRUCTION ENTRANCE, SUPER SILT FENCE, SILT FENCE AND EARTHEN BERMS AS DIRECTED BY THE SEDIMENT CONTROL INSPECTOR. 3 WEEKS
  4. BEGIN CLEARING, GRADING, TREE REMOVAL, BUILDING, PAVING, RETAINING WALL, AND UTILITY CONST. PROVIDE DUST CONTROL MEASURES AS REQUIRED. 3 MONTHS
  - NOTE: AS STORM DRAIN INLETS ARE CONSTRUCTED, INSTALL INLET PROTECTION.
  5. WHEN THE BUILDING PAD IS STABILIZED AND THE SURROUNDING AREA IS STABILIZED AND WITH THE WRITTEN PERMISSION OF THE SEDIMENT CONTROL INSPECTOR, INSTALL SUPER SILT FENCE DOWNSTREAM OF THE STONE OUTLET SEDIMENT AND REMOVE THE PIPE OUTLET SEDIMENT TRAP AS SHOWN ON INSET A-A. BEGIN CONSTRUCTION OF NORTHERN ENTRANCE AND UTILITIES. 3 WEEKS
  6. WHEN CONSTRUCTION IS COMPLETE STABILIZE SITE. 3 WEEKS
  7. WITH WRITTEN PERMISSION FROM SEDIMENT CONTROL INSPECTOR, REMOVE ALL SEDIMENT CONTROL DEVICES. 3 DAYS
  - NOTE: THE SWM FACILITY AND STORM DRAIN PIPES FOR SDP-98-129 MUST BE BUILT AND IN OPERATION PRIOR TO THE CONSTRUCTION OF STORM DRAIN FOR THIS SITE.
  - NOTE: THE SWM FACILITY SHALL BE BROUGHT BACK TO ORIGINAL DESIGN SPECIFICATIONS PER SDP-98-143.

**STANDARD SEDIMENT CONTROL NOTES**

1. A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313-1855).
2. All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the most current MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL and revisions thereto.
3. Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes greater than 3:1, b) 14 days as to all other disturbed or graded areas on the project site.
4. 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 BEST MANAGEMENT, Storm Drainage.
5. 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 seeding (Sec. 51), sod (Sec. 34), temporary seeding (Sec. 50) and mulching (Sec. 52). Temporary stabilization with mulch alone can only be done when recommended seeding dates do not allow for proper germination and establishment of grasses.
6. 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.
7. Site Analysis:  
Total Area of Site: 40,3768 Acres  
Area Disturbed: 30,31 Acres  
Area to be roofed or paved: 21,72 Acres  
Area to be vegetatively stabilized: 8,59 Acres  
Total Cut: 239,209 CU. YDS.  
Total Fill: 239,209 CU. YDS.  
Office waste/borrow area location
8. Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
9. Additional sediment control must be provided, if deemed necessary by the Howard County Sediment Control Inspector.
10. 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.
11. Trenches for the construction of utilities is limited to three pipe lengths or that which shall be back-filled and stabilized by the end of each work day, whichever is shorter.

**OWNER/DEVELOPER** FAX NO: 703-751-0787

A. NAME: Wayne Klotz B. DAYTIME TELEPHONE: 703-751-9292

C. COMPANY: ProLogis

D. ADDRESS: 5200 Eisenhower Avenue, 2nd floor

E. CITY: Alexandria STATE: VA. ZIP: 22304

**BY THE ENGINEER**

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

Signature: Michael J. Ertel #15537 DATE: 12/6/00

Signature: Michael J. Ertel PRINT NAME BELOW SIGNATURE

**BY THE DEVELOPER**

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

Signature: Wayne P. Klotz DATE: 07/21/00

Signature: Wayne P. Klotz PRINT NAME BELOW SIGNATURE

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Signature: [Signature] DATE: 12/10/02

Signature: [Signature] DATE: 12/20/00

Signature: [Signature] DATE: 12/22/00

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.

Signature: J.G. Waffel/G.S. DATE: 12/13/00

U.S.D.A.-NATURAL RESOURCES CONSERVATION SERVICE

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

Signature: [Signature] DATE: 12/15/00

HOWARD S.C.D.

**ProLogis**  
The Global Distribution Solution  
Development Services  
Incorporated

5200 Eisenhower Avenue  
Second Floor  
Alexandria, Virginia 22304  
Phone: 703.751.9292  
Fax: 703.751.0787

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FAX (410) 792-7395

**PROLOGIS PARK I-95**

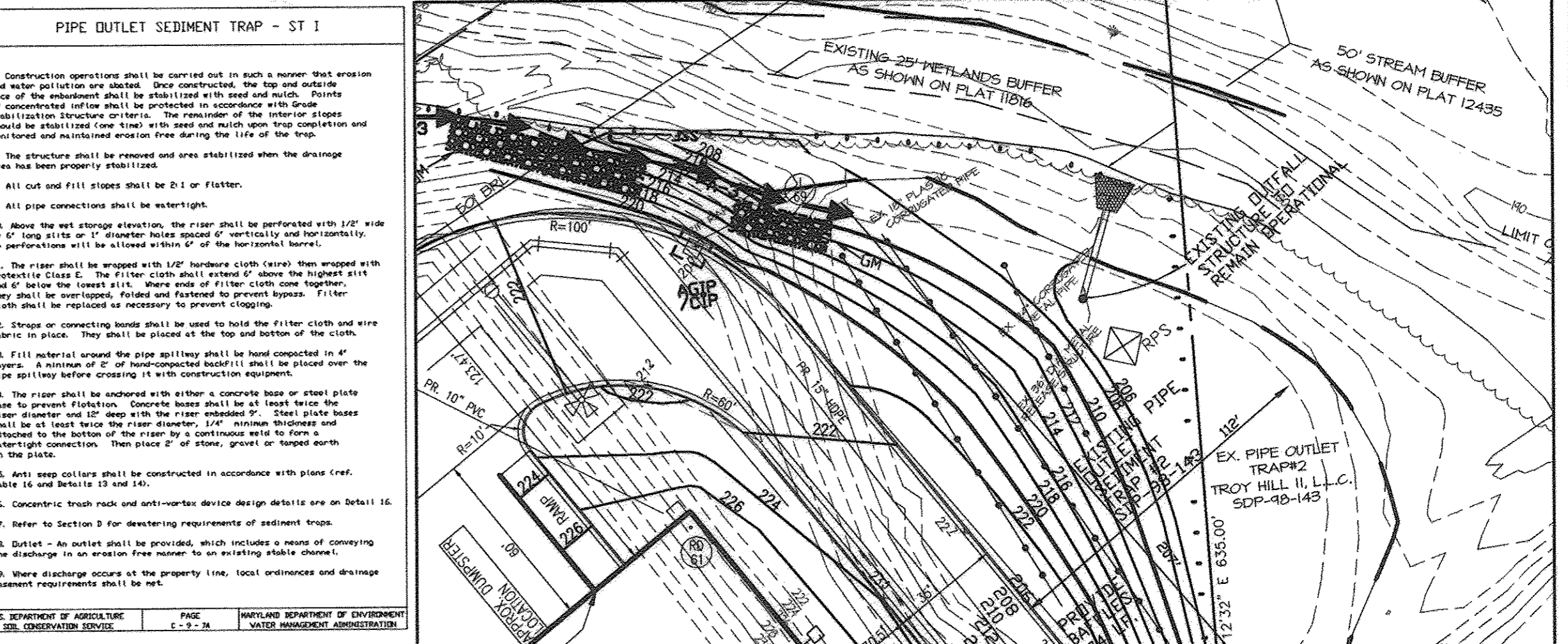
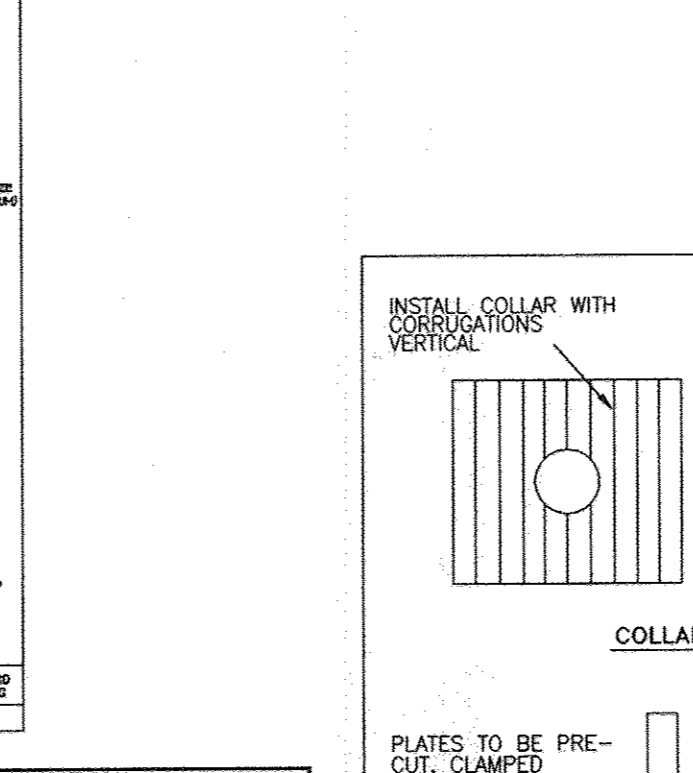
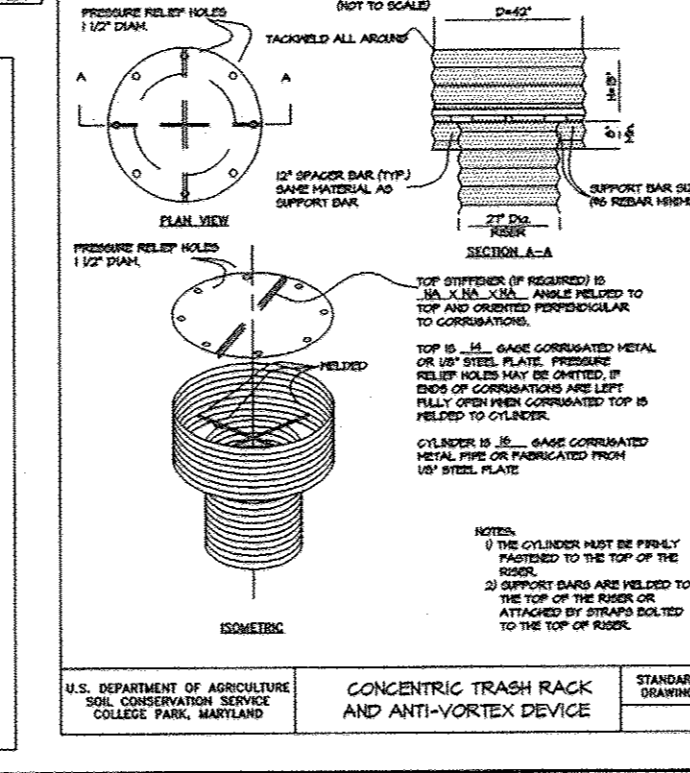
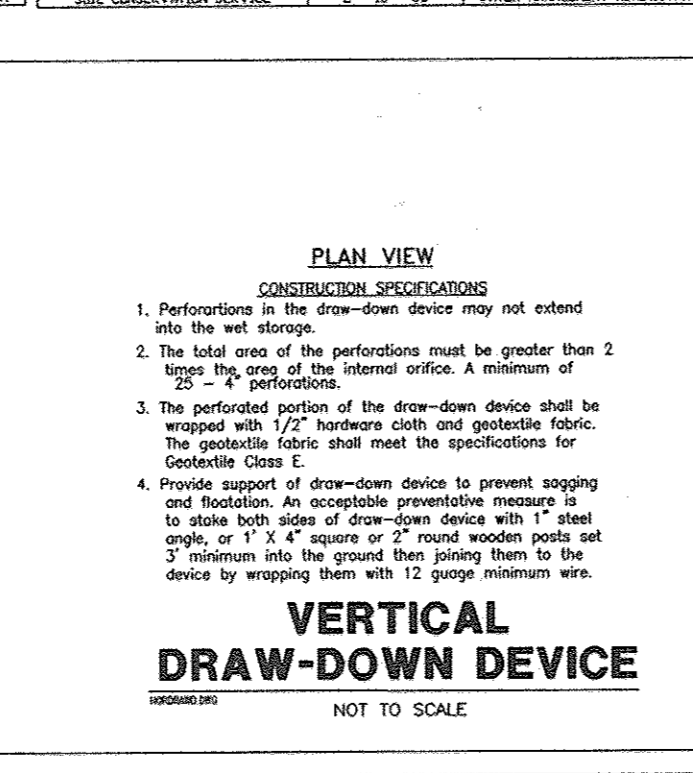
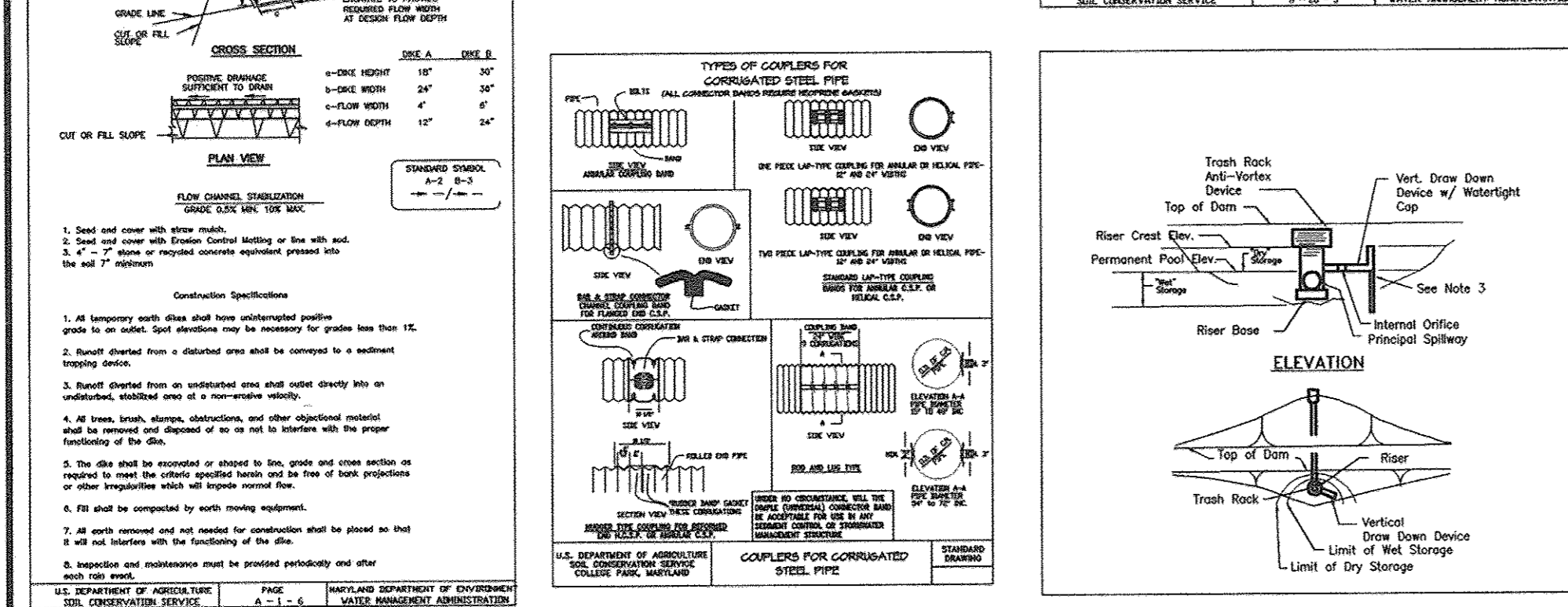
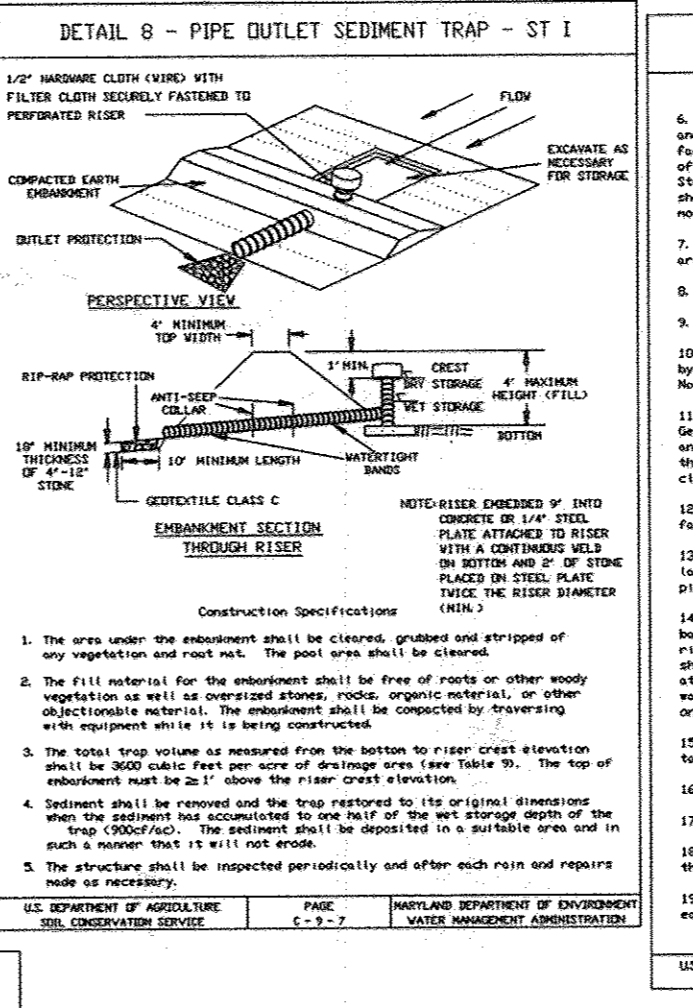
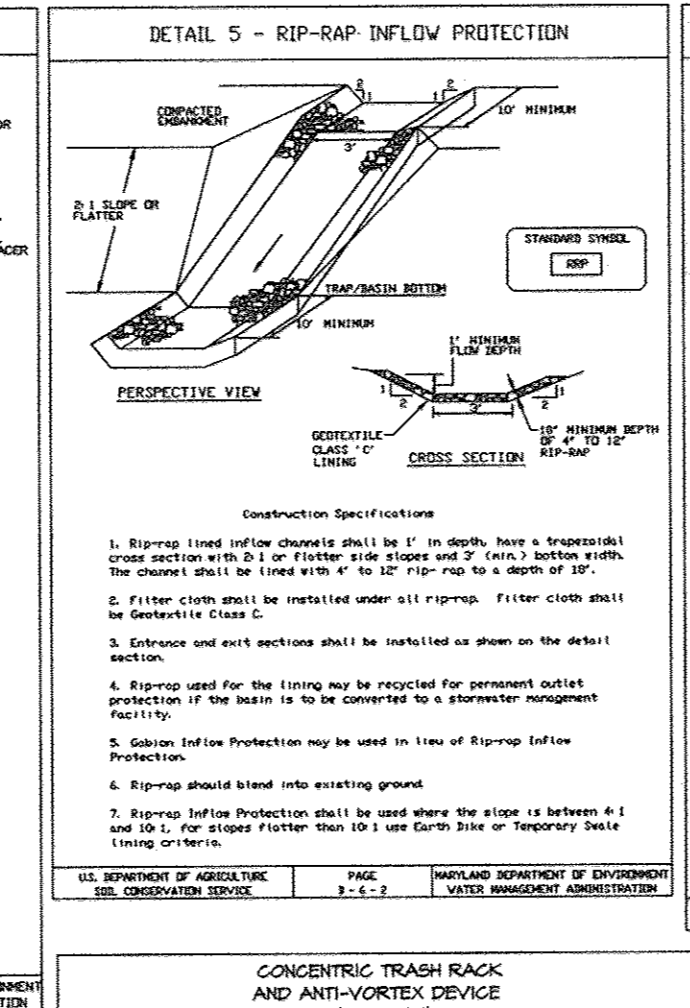
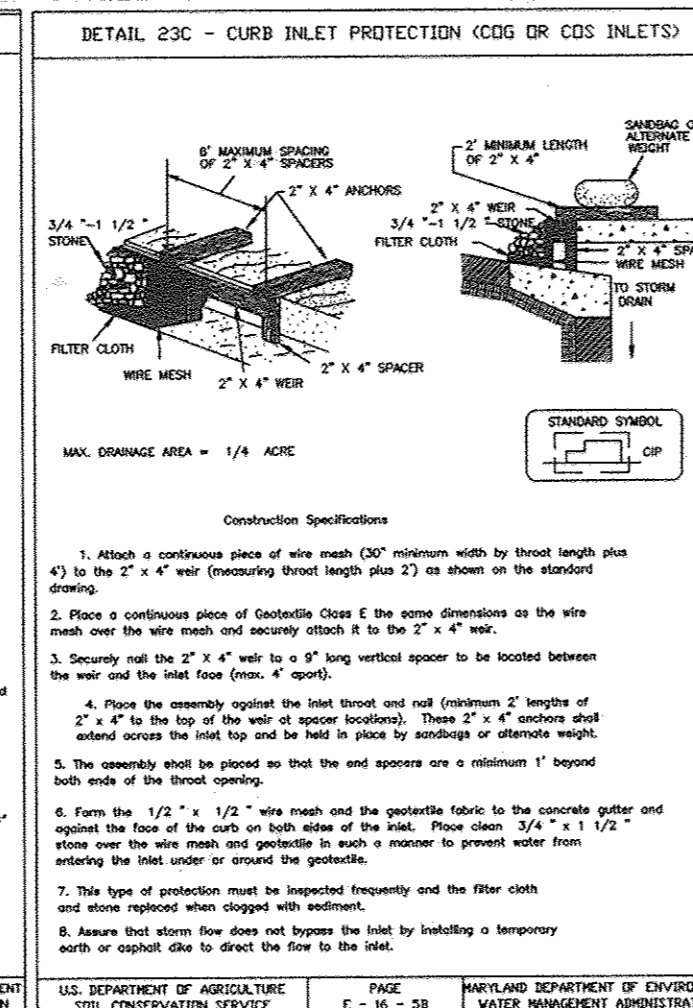
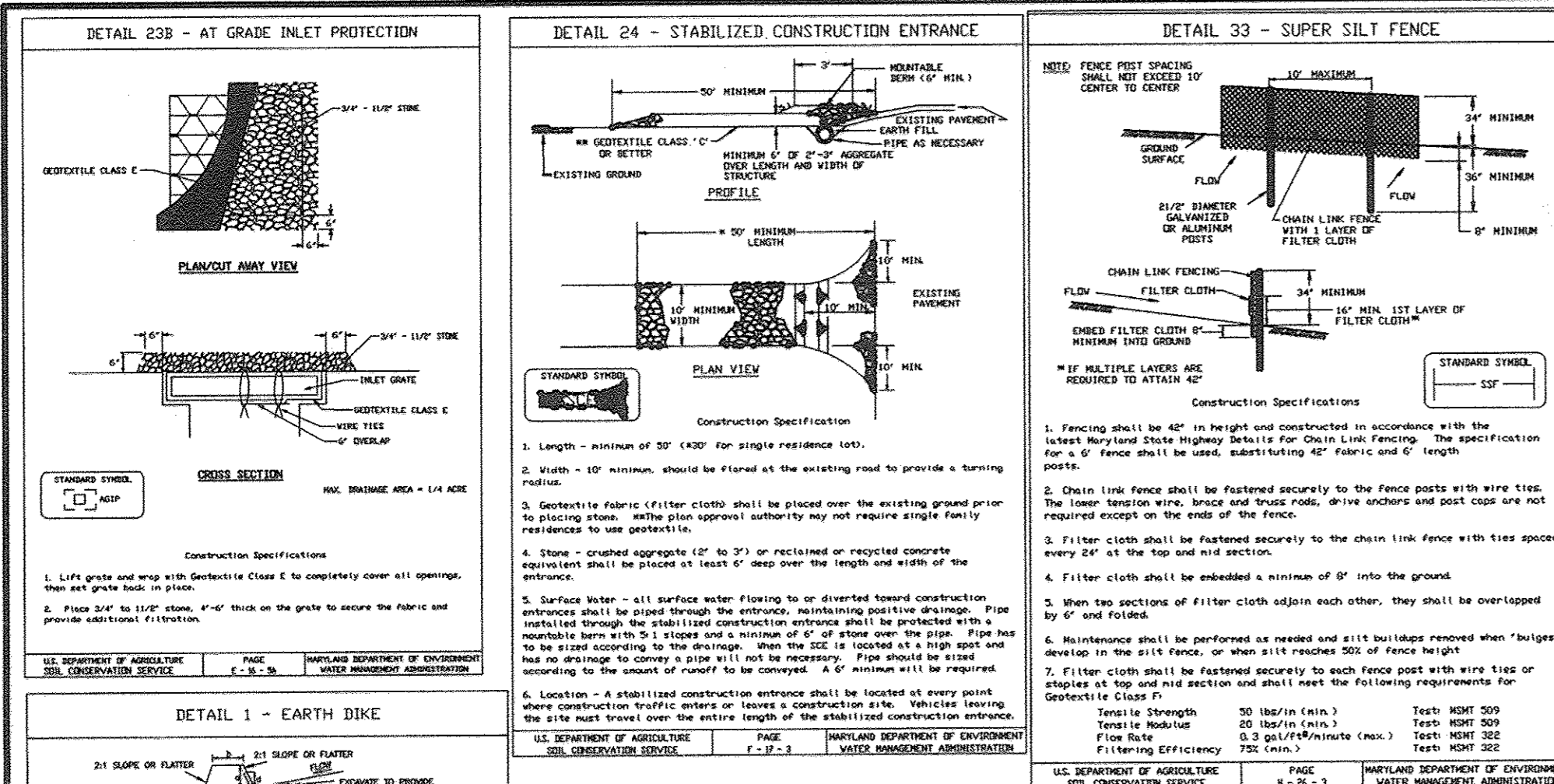
PARCEL A-14

SEDIMENT AND EROSION CONTROL PLAN

ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
07/24/00	REVISED STORM DRAIN AND SEWER	11354
08/15/00	REVISED PER COUNTY COMMENTS	SCALE: 1" = 40'
11/03/00	REVISED FOR FINAL SUBMISSION TO COUNTY	DATE: 06/23/00
11/10/00	RAISED BLDG 1 6" PER PROLOGIS	DRAWN BY: GLC/CAO
2/16/01	LOWER BLDG 1 G, SPOIL AREA GRADING, PARCEL	DESIGN BY: GLC/CAO
12/12/01	AS-BUILT DRAWING	REVIEW BY: MRA
		SHEET: 8 OF 25





VEGETATIVE STABILIZATION  
PERMANENT AND TEMPORARY SEEDING, SOODING AND MULCHING

**I. SITE PREPARATION**  
PERMANENT OR TEMPORARY VEGETATION SHALL BE ESTABLISHED WITHIN SEVEN (7) DAYS OF THE SURFACE OF ALL SEDIMENT CONTROL STRUCTURES, BARRIERS, WATERWAYS, SEDIMENT CONTROL BASINS, AND ALL SLOPES GREATER THAN 3 HORIZONTAL TO 1 VERTICAL (3:1) AND WITHIN 14 DAYS FOR ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE. MULCHING MAY ONLY BE USED ON DISTURBED AREAS AS TEMPORARY COVER WHERE VEGETATION IS NOT FEASIBLE OR WHERE SEEDING CAN NOT BE COMPLETED BECAUSE OF WEATHER.

**II. SEEDING PREPARATION AND SEEDING APPLICATION**  
LOOSEN THE TOP LAYER OF THE SOIL TO A DEPTH OF 3 TO 5 INCHES BY MEANS OF SUITABLE AGRICULTURAL OR CONSTRUCTION EQUIPMENT. SUCH AS DISC HARROWS, CHISEL PLAYS OR RIPPERS MOUNTED ON CONSTRUCTION EQUIPMENT. INCORPORATE THE LIME AND FERTILIZER INTO THE TOP 3 TO 5 INCHES OF THE SOIL BY DISCING OR BY OTHER SUITABLE MEANS. ROUGH AREAS SHOULD NOT BE ROLLED OR BRAGGED SMOOTH, BUT LEFT IN A ROUGHENED CONDITION. STEEP SLOPES GREATER THAN 3:1 SHOULD BE TRACKED BY A ROZER, LEAVING THE SOIL IN AN IRREGULAR CONDITION WITH RIDGES RUNNING PARALLEL TO THE SLOPE. SEEDS AND FERTILIZER PERMANENT COVER MAY REQUIRE AN APPLICATION OF TOPSOIL. IF IT MUST MEET THE REQUIREMENTS SET FORTH IN SECTION 21.18 STANDARDS AND SPECIFICATIONS FOR TOPSOIL FROM THE 1994 STANDARDS AND SPECIFICATIONS.

**III. SOIL AMENDMENTS**  
SOIL TESTS SHALL BE MADE ON SITES OVER FIVE ACRES TO DETERMINE THE EXISTING REQUIREMENTS FOR BOTH LIME AND FERTILIZER. FOR SITES UNDER 5 ACRES, IN LIEU OF A SOIL TEST, APPLY THE FOLLOWING:

FERTILIZER	NITROGEN	2 LBS/1000 SF (90 LBS/AC)
ROZES	4 LBS/1000 SF (175 LBS/AC)	
R2D	4 LBS/1000 SF (175 LBS/AC)	

GROUND LIMESTONE 2 TONS/AC

**IV. SEDIMENT CONTROL PRACTICE SEEDINGS**  
SELECT A SEEDING MIXTURE FROM TABLE 25 OR 26 IN SECTION 21 OF THE 1994 STANDARDS AND SPECIFICATIONS. DOCUMENT SEEDING ON THE EROSION AND SEDIMENT CONTROL PLAN USING APPROPRIATE CHART BOLD.

**V. TEMPORARY/PERMANENT SEEDING MIXTURES AND RATES**  
SELECT A SEEDING MIXTURE FROM APPROPRIATE TABLE 25 OR 26 IN SECTION 21 OF THE 1994 STANDARDS AND SPECIFICATIONS. DOCUMENT SEEDING ON THE EROSION AND SEDIMENT CONTROL PLAN USING APPROPRIATE CHART BOLD.

**III. WHERE THE SUBSOIL IS EITHER HEAVILY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1000 SF) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.**

**II. FOR SITE HAVING DISTURBED AREAS UNDER 5 ACRES**

- PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN SOIL VEGETATIVE STABILIZATION-SECTION I-VEGETATIVE STABILIZATION METHODS AND MATERIALS.
- GRADES ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALTHOUGH 4"-8" HIGHER IN ELEVATION.
- TOPSOIL SHALL BE UNIFORMLY DISTRIBUTED IN A 4"-8" LAYER AND LIGHTLY COMPACTED TO A MINIMUM THICKNESS OF 4". SPREADING SHALL BE PERFORMED IN SUCH A MANNER THAT SOIL LOSS DURING AND AFTER APPLICATION SHALL BE A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE. ANY INEQUALITIES IN THE SURFACE RESULTING FROM THE TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OR WATER POCKETS.
- TOPSOIL SHALL NOT BE PLACED WHILE THE TOPSOIL OR SUBSOIL IS IN A FROZEN OR MUDDY CONDITION. WHEN THE SUBSOIL IS EXCESSIVELY WET OR IN A CONDITION THAT MAY OTHERWISE BE DETRIMENTAL TO PROPER GRADING AND SEEDING PREPARATION.

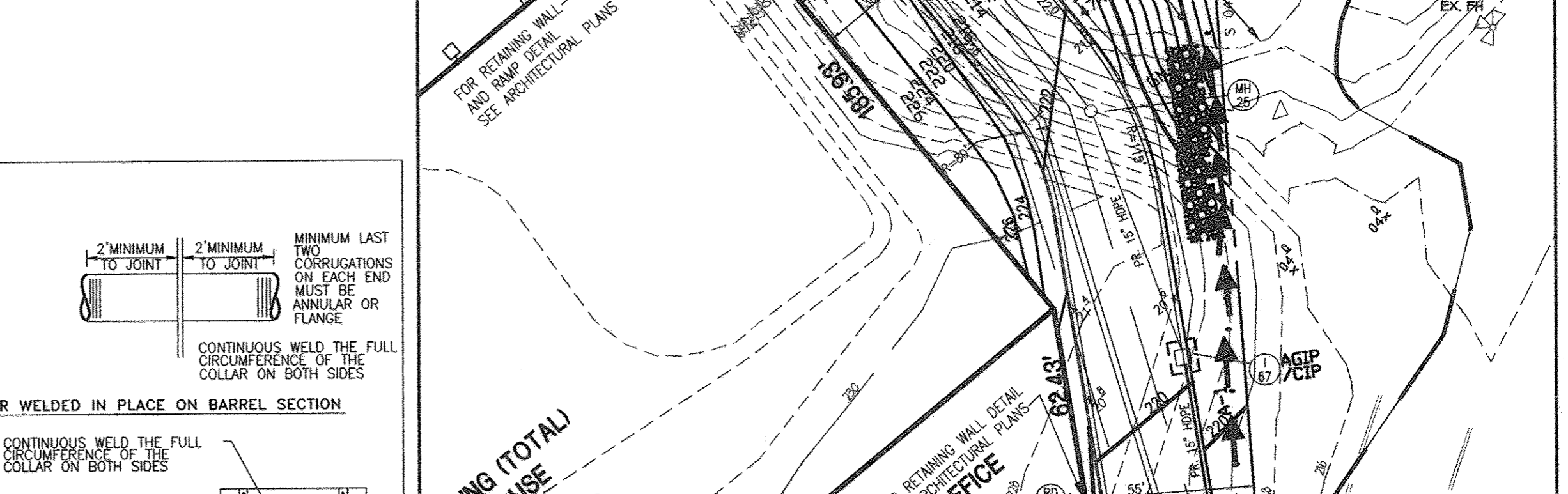
**VI. ALTERNATIVE FOR PERMANENT SEEDING- INSTEAD OF APPLYING THE FULL AMOUNTS OF LIME AND COMMERCIAL FERTILIZERS, COMPOSTED SLUDGE AND AMENDMENTS MAY BE APPLIED AS SPECIFIED BELOW:**

- COMPOSTED SLUDGE MATERIAL FOR USE AS A SOIL CONDITIONER FOR SITES HAVING DISTURBED AREAS OVER 5 ACRES SHALL BE TESTED TO DETERMINE AMENDMENTS AND FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES SHALL CONFORM TO THE FOLLOWING REQUIREMENTS:
  - COMPOSTED SLUDGE SHALL BE SUPPLIED BY, OR ORIGINATED FROM, A PERSON OR PERSONS THAT ARE PERMITTED AT THE TIME OF ACQUISITION OF THE COMPOSTS BY THE MARYLAND DEPARTMENT OF THE ENVIRONMENT UNDER COMAR 26.04.06.
  - COMPOSTED SLUDGE SHALL CONTAIN AT LEAST 1 PERCENT NITROGEN AND 1 PERCENT PHOSPHORUS AND A PH OF 7.0 TO 8.0.
  - PERCENT POTASSIUM AND HAVE A PH OF 7.0 TO 8.0.
  - PERCENT POTASSIUM AND HAVE A PH OF 7.0 TO 8.0.
  - PERCENT POTASSIUM AND HAVE A PH OF 7.0 TO 8.0.
- COMPOSTED SLUDGE SHALL BE AMENDED WITH A POTASSIUM FERTILIZER APPLIED AT THE RATE OF 4 LB/1000 SF, AND 1/3 THE NORMAL LIME APPLICATION RATE.

**REFERENCES: GUYLNE SPECIFICATIONS, SOIL PREPARATION AND SEEDING, MD-VA, PUB. #1 COOPERATIVE EXTENSION SERVICE, UNIVERSITY OF MARYLAND AND VIRGINIA POLYTECHNIC INSTITUTE, REVISED 1993.**

**CONSTRUCTION AND MATERIAL SPECIFICATIONS**

- TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE CALICATED FOR GIVEN SOIL TYPE CAN BE FOUND IN REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USGS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.
- TOPSOIL SPECIFICATIONS-SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:
  - TOPSOIL SHALL BE A LOW, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND, OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGREEMENT OR SOIL SCIENTIST APPROVED BY THE HOWARD COUNTY ENGINEER. TOPSOIL SHALL BE IRRESPECTIVE OF SOIL TYPE, BUT SHALL BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS FRAGMENTED TEXTURE OF CINDERS, STONES, SLAG, COARSE FRAGMENTS, GRAVELS, STECKS, ROOTS, TRASH, OR OTHER MATERIAL LARGER THAN 1 1/2" IN DIAMETER.
  - TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUICKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.



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

*Michael J. Ertel* #15537 12/6/00  
SIGNATURE OF ENGINEER MICHAEL J. ERTTEL DATE  
PRINT NAME BELOW SIGNATURE

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

*Wayne P. Klotz* (Wayne P. Klotz) 07/21/00  
SIGNATURE OF DEVELOPER DATE  
PRINT NAME BELOW SIGNATURE

REVIEWED FOR HOWARD S.C.D. AND MEETS TECHNICAL REQUIREMENTS.  
*D.G. Walden* 12/15/00  
U.S.D.A.-NATURAL RESOURCES CONSERVATION SERVICE DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*John P. ...* 12/18/00  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*...* 12/20/00  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*...* 12/20/00  
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

TEMPORARY SEEDING SUMMARY					
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATE	SEEDING DEPTH	SEED MIXTURE/HARDNESS ZONE 1(a)
					FERTILIZER RATE (10-10-10)
1	BARLEY OR RYE PLUS FOXTAIL MILLET	8/15-11/30	8/15-11/30	1/4"-1/2"	600 LB/AC (15 LB/1000 SF) 2 TONS/AC (1000 SF)

PERMANENT SEEDING SUMMARY					
NO.	SPECIES	APPLICATION RATE (LB/AC)	SEEDING DATE	SEEDING DEPTH	SEED MIXTURE/HARDNESS ZONE 1(a)
					FERTILIZER RATE (20-20-20)
3	TALL FESCUE (85%) CHEWINGS KENTUCKY BLUE GRASS (15%)	8/15-11/30	8/15-11/30	1/4"-1/2"	2 LB/ 4 LB/ 4 LB/ 1000 SF (1000 SF) 1000 SF) 1000 SF) 2 TONS/AC (1000 SF) 1000 SF) 1000 SF)

**PROLOGIS PARK I-95**  
**PARCEL A-14**  
**SEDIMENT AND EROSION CONTROL NOTES AND DETAILS**  
ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND

DATE REVISIONS JOB NO.: 11354  
08/15/00 REVISED PER COUNTY COMMENTS SCALE: AS SHOWN  
11/03/00 REVISED FOR FINAL SUBMISSION TO COUNTY DATE: 06/23/00  
11/10/00 REVISED BLDG 1 6" PER PROLOGIS DRAWN BY: GLC/CAO  
2/16/01 LOWER BLDG 1 G, SPOIL AREA GRADING, PARCEL DESIGN BY: GLC/CAO  
12/12/01 ASBUILT DRAWING REVIEW BY: GLC/TFM  
SHEET: 9 OF 25

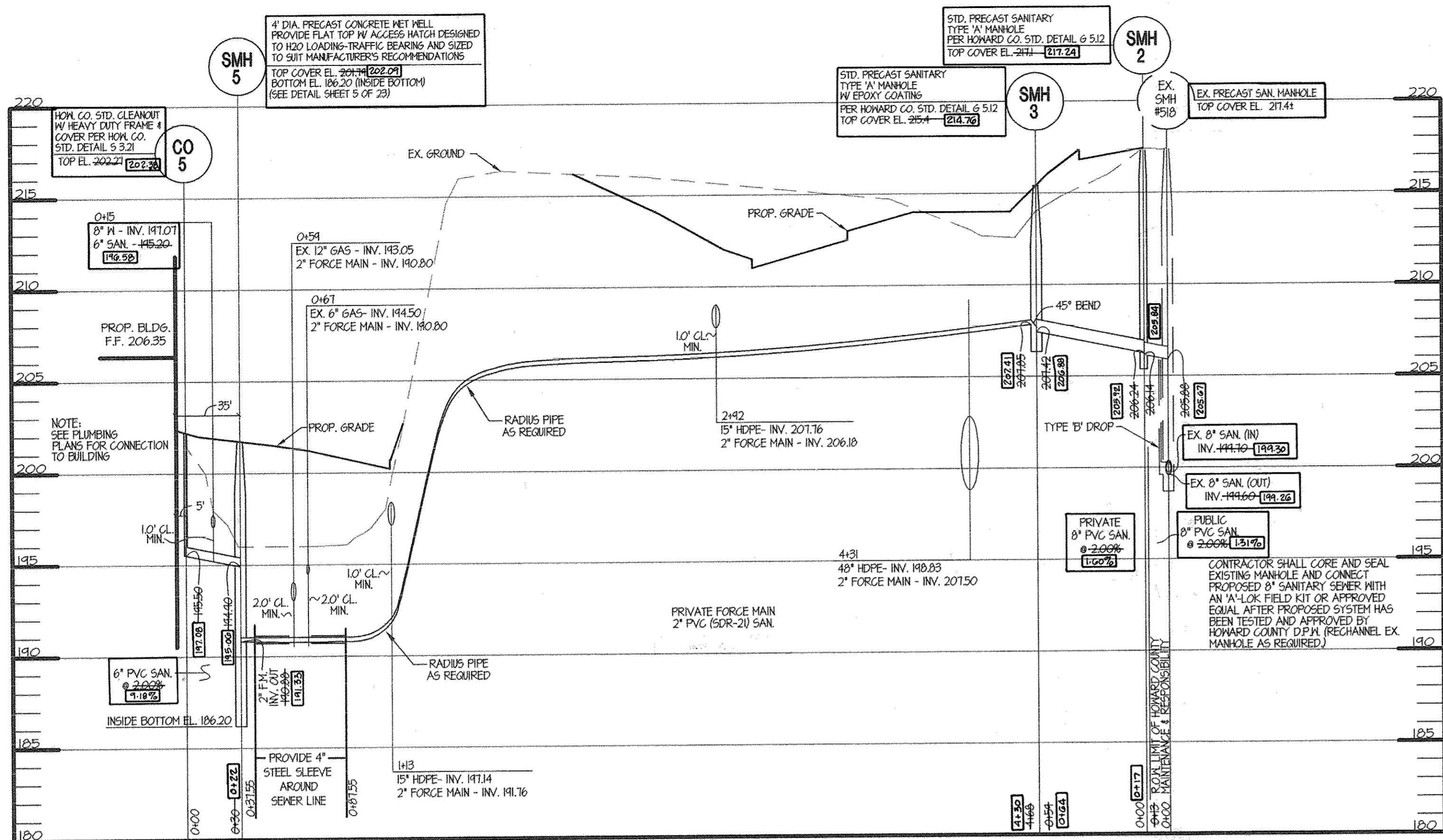
**MORRIS & RITCHIE ASSOCIATES, INC.**  
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
9090 JUNCTION DRIVE SUITE 9  
ANNAPOLIS JUNCTION, MARYLAND 20701  
(410) 792-9792 or (301) 776-1690  
FAX (410) 792-7395

**PROLOGIS PARK I-95**  
**PARCEL A-14**  
**SEDIMENT AND EROSION CONTROL NOTES AND DETAILS**  
ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND

**MIRA**  
MARYLAND REGISTERED PROFESSIONAL ENGINEER  
STATE OF MARYLAND  
PROFESSIONAL ENGINEER

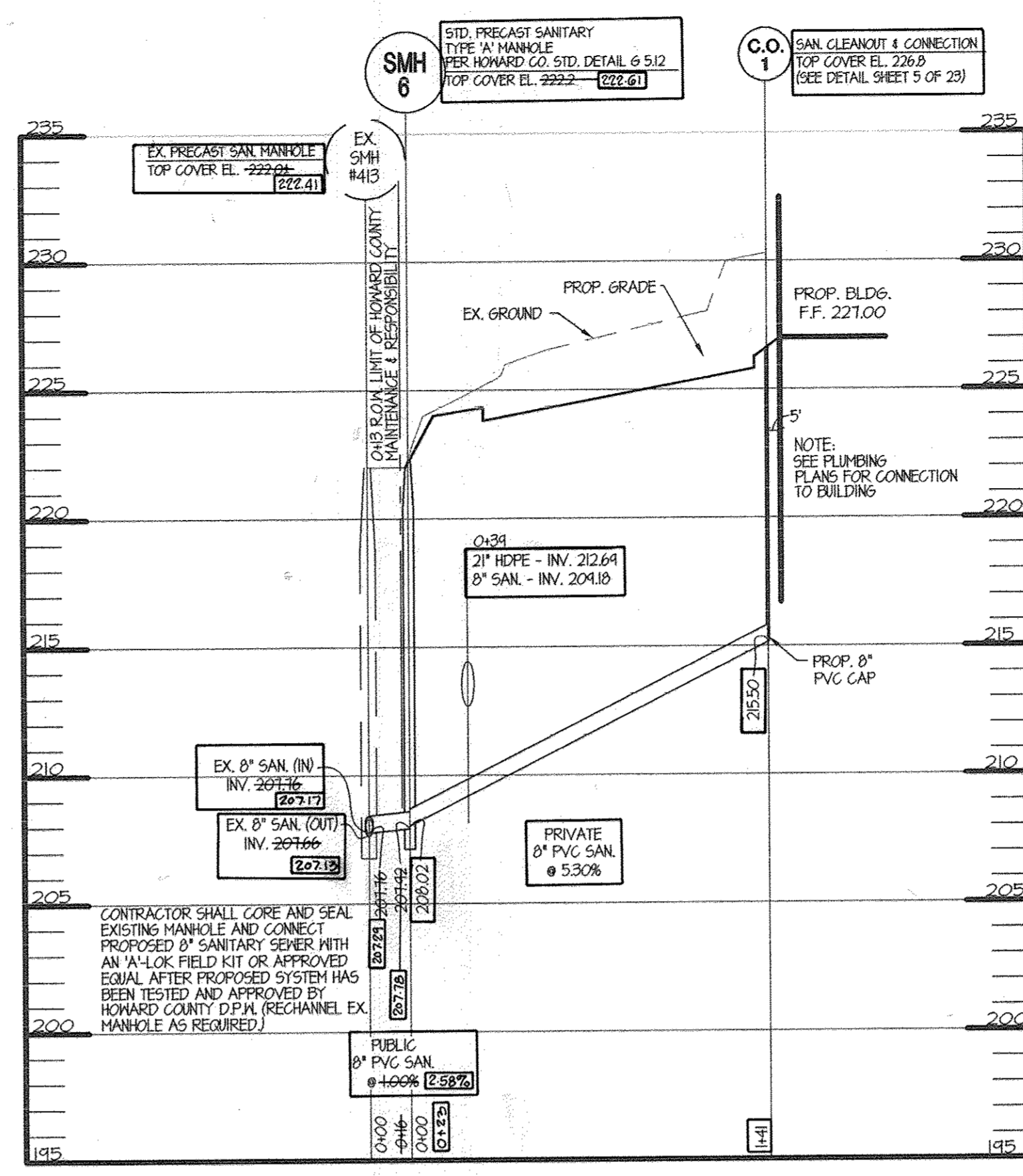
DATE REVISIONS JOB NO.: 11354  
08/15/00 REVISED PER COUNTY COMMENTS SCALE: AS SHOWN  
11/03/00 REVISED FOR FINAL SUBMISSION TO COUNTY DATE: 06/23/00  
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12/12/01 ASBUILT DRAWING REVIEW BY: GLC/TFM  
SHEET: 9 OF 25

DATE REVISIONS JOB NO.: 11354  
08/15/00 REVISED PER COUNTY COMMENTS SCALE: AS SHOWN  
11/03/00 REVISED FOR FINAL SUBMISSION TO COUNTY DATE: 06/23/00  
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2/16/01 LOWER BLDG 1 G, SPOIL AREA GRADING, PARCEL DESIGN BY: GLC/CAO  
12/12/01 ASBUILT DRAWING REVIEW BY: GLC/TFM  
SHEET: 9 OF 25



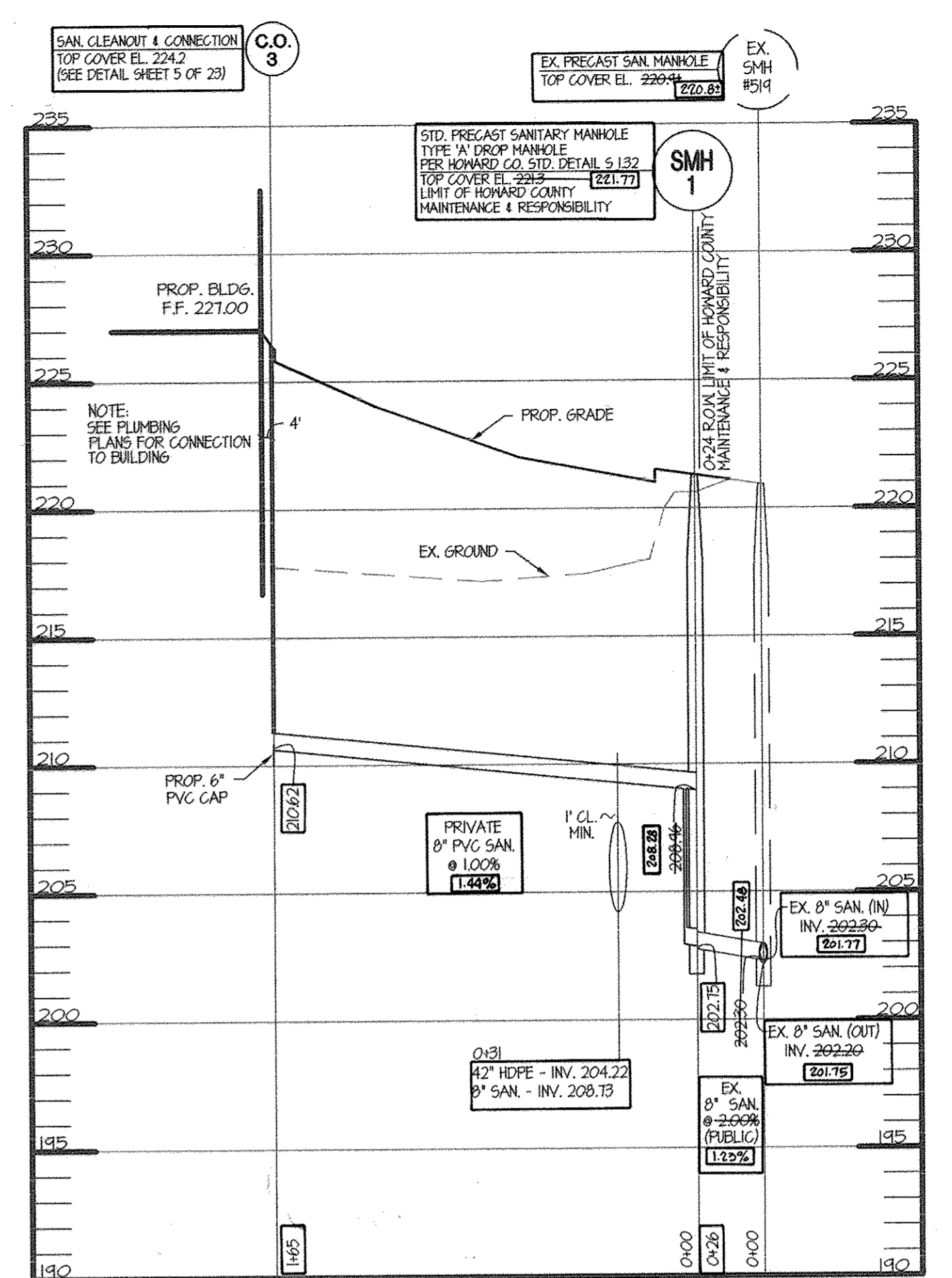
**SANITARY SEWER PROFILE**

SCALE: HOR. 1" = 50'  
VERT. 1" = 5'



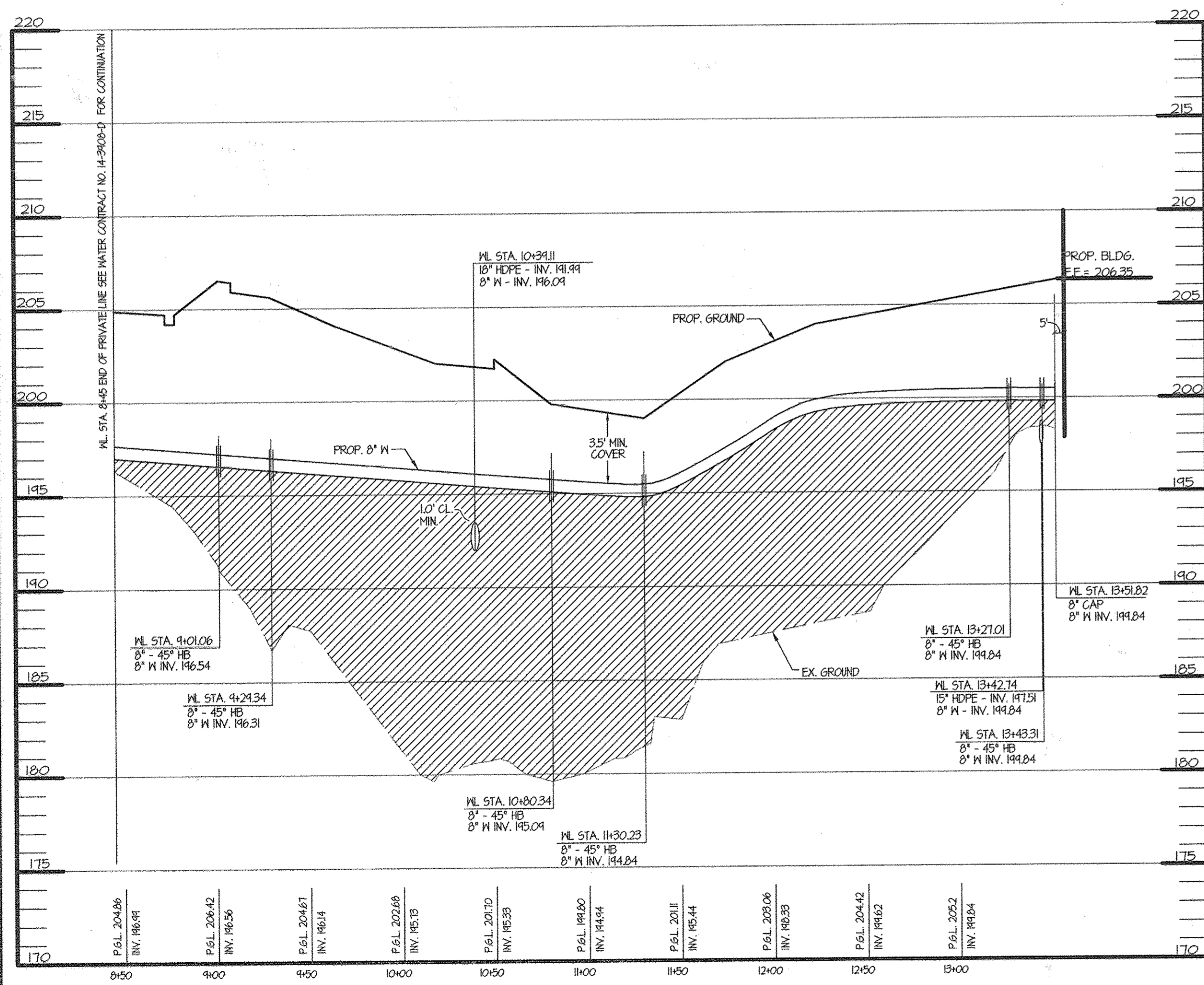
**SANITARY SEWER PROFILE**

SCALE: HOR. 1" = 50'  
VERT. 1" = 5'



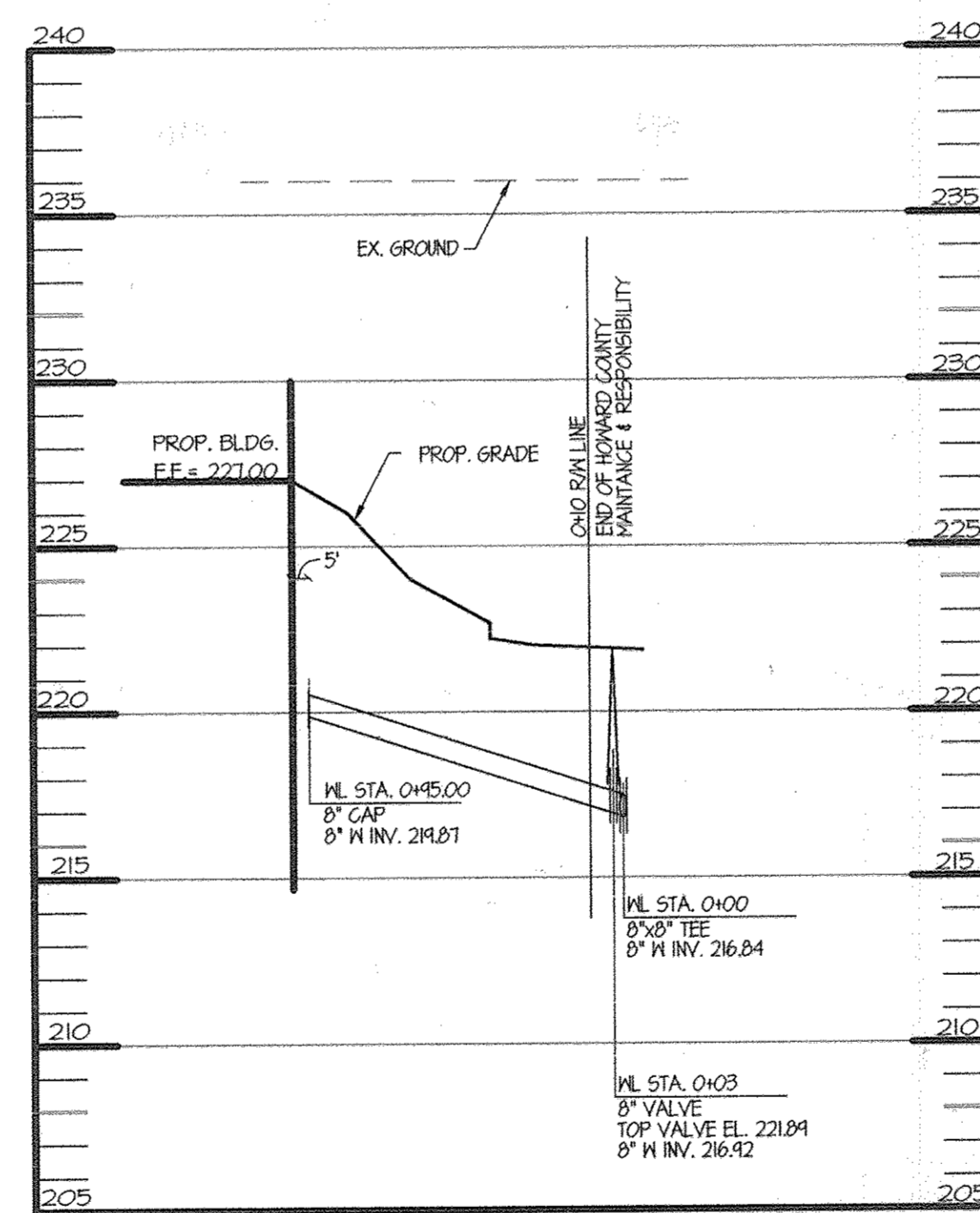
**SANITARY SEWER PROFILE**

SCALE: HOR. 1" = 50'  
VERT. 1" = 5'



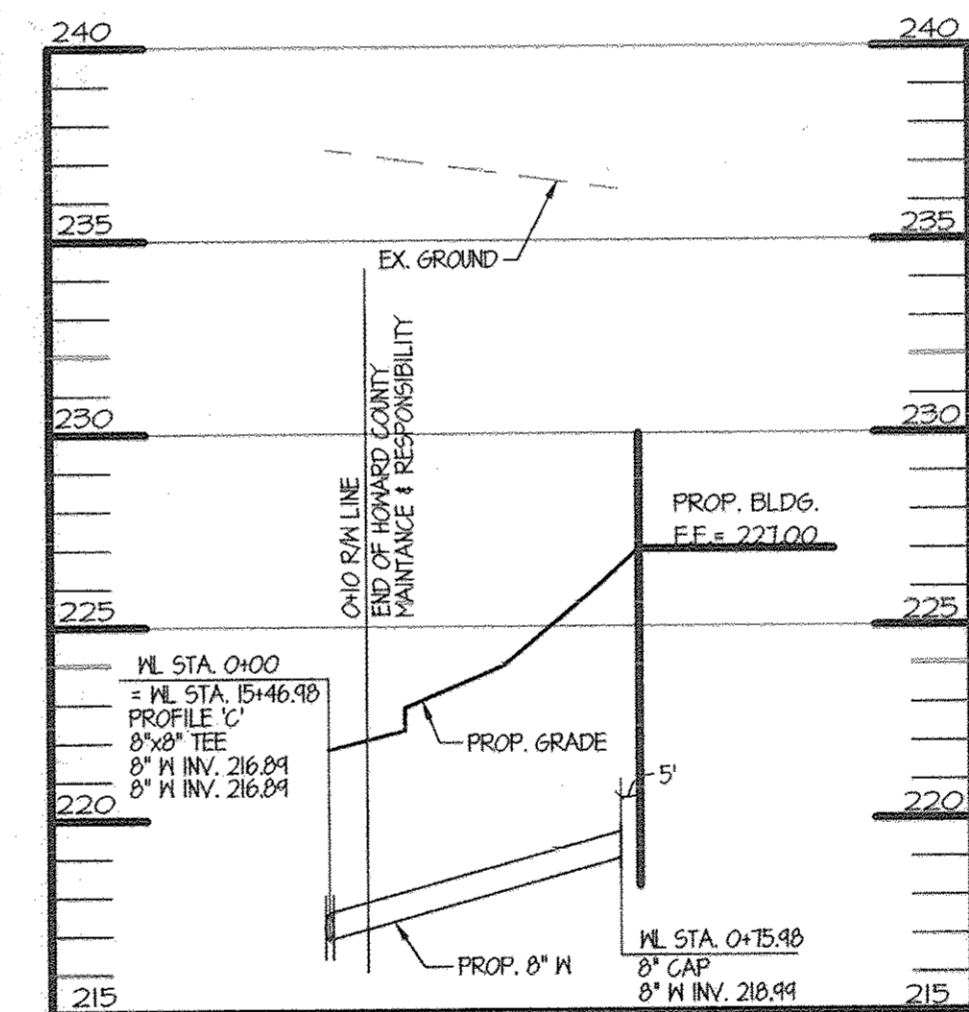
**PRIVATE WATER PROFILE 'B'**

SCALE: HOR. 1" = 50'  
VERT. 1" = 5'



**PRIVATE WATER PROFILE 'O'**

SCALE: HOR. 1" = 50'  
VERT. 1" = 5'



**PRIVATE WATER PROFILE 'I'**

SCALE: HOR. 1" = 50'  
VERT. 1" = 5'

**WATER & SEWER STRUCTURE SCHEDULE**

ITEM	QUANTITY
<b>SEWER</b>	
SANITARY CLEANOUT	3
SANITARY MANHOLE	3
4" DIA. PRECAST CONCRETE WET WELL W/ ACCESS HATCH	1
STD. HEAVY TRAFFIC MANHOLE FRAME & COVER	4
DROP MANHOLE	1
8" SANITARY	365'
2" SANITARY FORCE MAIN	468'
<b>WATER</b>	
8" WATERLINE	678'
8" CAP	3
8" -45° HB	6

OWNER/DEVELOPER: Wayne Klotz FAX NO.: 703-751-0787  
 A. NAME: Wayne Klotz B. DAYTIME TELEPHONE: 703-751-9292  
 C. COMPANY: ProLogis  
 D. ADDRESS: 5200 Eisenhower Avenue 2nd floor  
 E. CITY: Alexandria STATE: VA. ZIP: 22304

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
William J. Burrows 12/10/00  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
Chris Hamula 12/10/00  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
William J. Burrows 12/20/00  
 DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

**ASBUILT CERTIFICATION**  
 I hereby certify that to the best of my knowledge and belief, this "As-built" truly represents existing field conditions including but not limited to sizes, diameters, line and grade, and elevations.  
 12-17-01 Date William J. Burrows  
 William J. Burrows  
 Reg. Prof. Engineer, MD #17263



ADDRESS CHART	
LOT/PARCEL#	STREET ADDRESS
LOT 1	7091 TROY HILL DRIVE
LOT 2	7101 TROY HILL DRIVE
LOT 3	7111 TROY HILL DRIVE

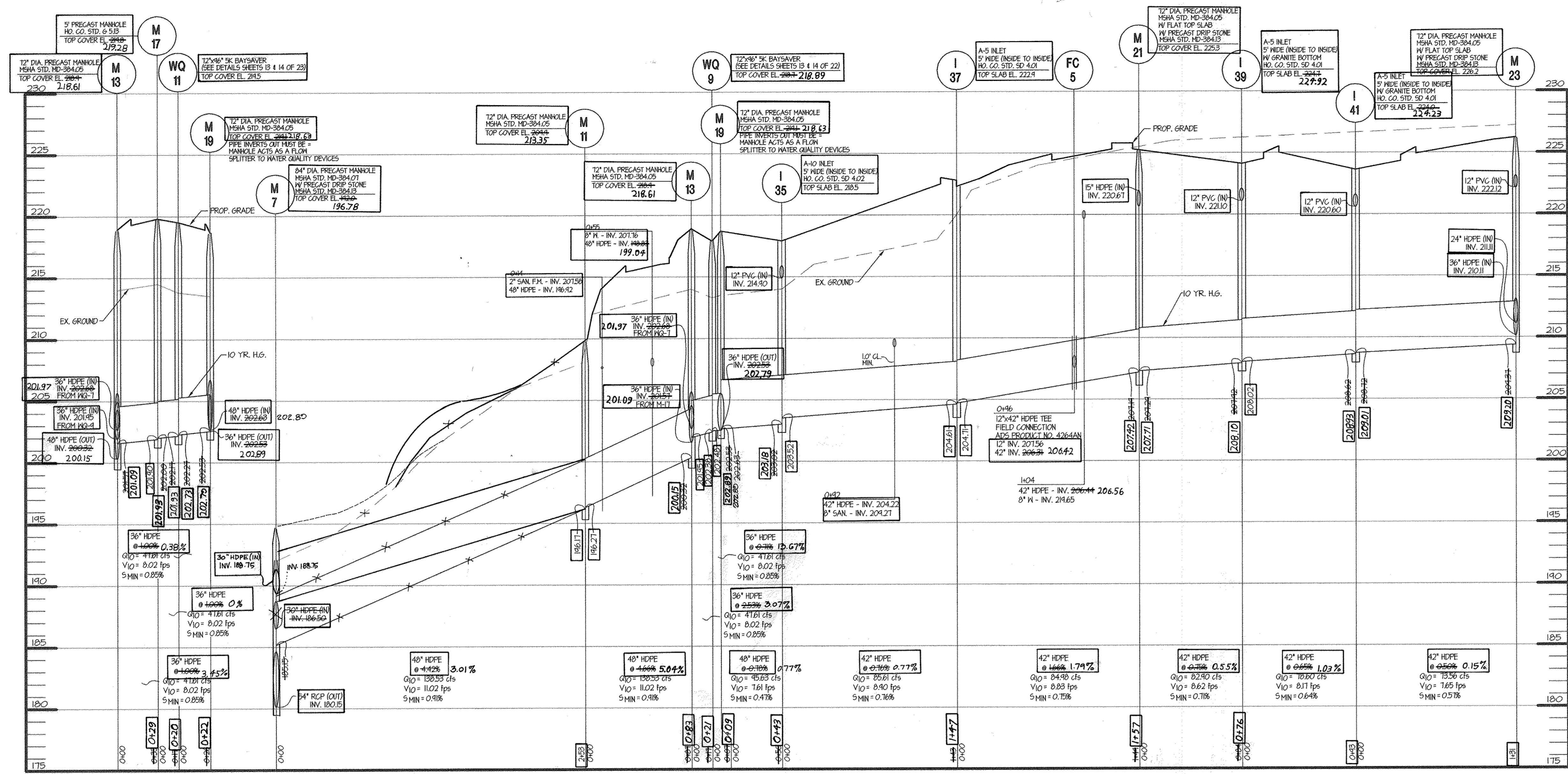
PERMIT INFORMATION CHART			
Subdivision Name	TROY HILL CORPORATE CENTER	Section/Area	40.3768 ACRES
PLAT#	12428	Lot/Parcel#	PARCEL A-14
Water Code	C04	Tax Map	M-1
Sewer Code	14020000	Elect. Distr.	37
		Census Tract	6011.02

**C-9**

**MORRIS & RITCHE ASSOCIATES, INC.**  
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
 9090 JUNCTION DRIVE SUITE 9  
 ANNAPOLIS JUNCTION, MARYLAND 20701  
 (410) 792-9792 or (301) 776-1690  
 FAX (410) 792-7395

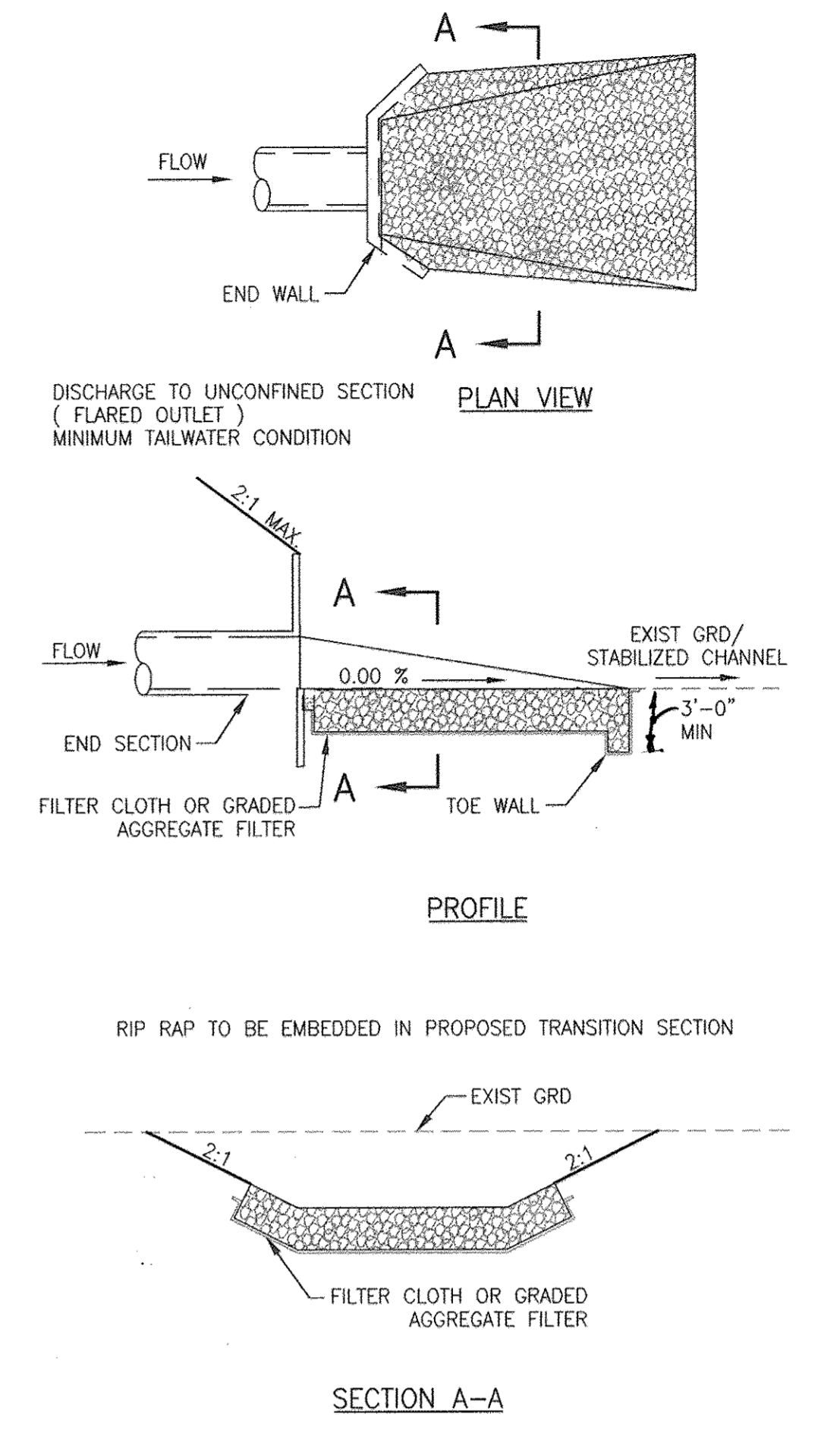
**PROLOGIS PARK I-95**  
**PARCEL A-14**  
**WATER & SEWER PROFILES**  
 ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
07/24/00	REVISED SEWER	11354
08/15/00	REVISED PER COUNTY COMMENTS	SCALE: AS NOTED
11/03/00	REVISED FOR FINAL SUBMISSION TO COUNTY	DATE: 06/23/00
11/10/00	RAISED BLDG 1 6" PER PROLOGIS	DRAWN BY: GLC/CAO
2/16/01	LOWER BLDG 1 0", SPILL AREA GRADING, PARCEL	DESIGN BY: GLC/CAO
12/12/01	ASBUILT DRAWING	REVIEW BY: TFM



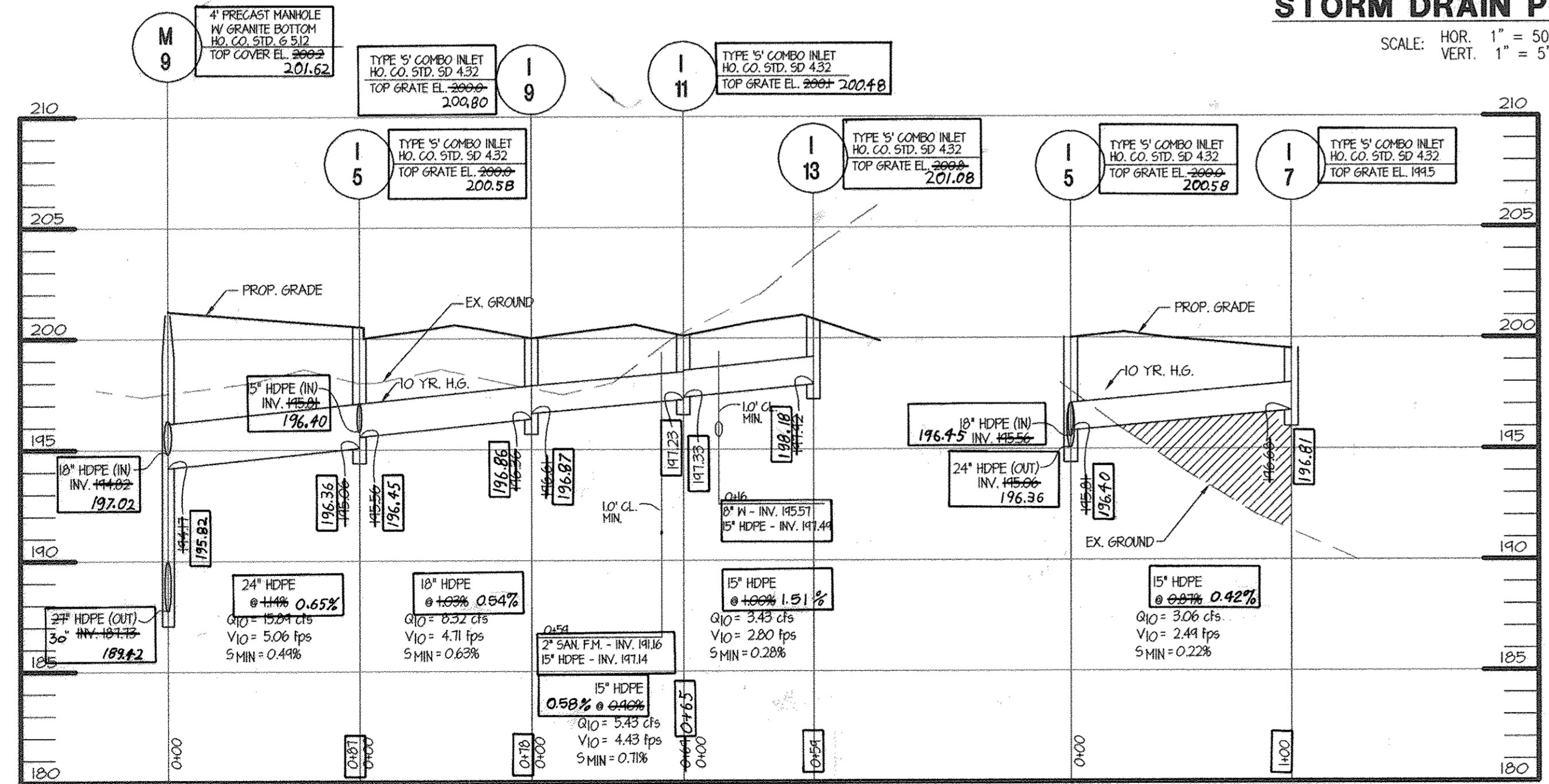
**STORM DRAIN PROFILE**

SCALE: HOR. 1" = 50'  
VERT. 1" = 5'



**RIP RAP OUTFALL**

NOT TO SCALE



**STORM DRAIN PROFILE**

SCALE: HOR. 1" = 50'  
VERT. 1" = 5'

CONTROLLED AND COMPACTED FILL AS DIRECTED BY AN APPROVED SOILS ENGINEER.

RIP RAP OUTFALL SIZE					
OUTFALL	LENGTH	WIDTH	CLASS	d <sub>50</sub>	d THICKNESS
E-1	12'	14'	I	9.5"	15" 19"
E-3	10'	12'	I	9.5"	15" 19"
E-5	30'	35'	I	9.5"	15" 19"

PERMIT INFORMATION CHART					
Subdivision Name	Section/Area	Lot/Parcel#			
TROY HILL CORPORATE CENTER	40.3768 ACRES	PARCEL A-14			
PLAT# 12428	Zoning M-1	Tax Map 37	Elect. Distr. 1	Census Tract 6011.02	
Water Code C04	Sewer Code 4020000				

ADDRESS CHART	
LOT/PARCEL#	STREET ADDRESS
BUILDING I	7091 TROY HILL DRIVE
BUILDING II	7101 TROY HILL DRIVE
BUILDING III	7111 TROY HILL DRIVE

**landesign**  
ENGINEERS \* SURVEYORS \* PLANNERS  
2905 MITCHELLVILLE ROAD SUITE NO. 111  
BOWIE, MARYLAND 20715  
(301) 240-8802

**ASBUILT CERTIFICATION**  
I hereby certify that to the best of my knowledge and belief, this "As-built" truly represents existing field conditions including but not limited to sizes, diameters, line and grade, and elevations.  
Date 12-17-01  
Signature: *William J. Burrows*  
William J. Burrows  
Reg. Prof. Engineer, MD #17263

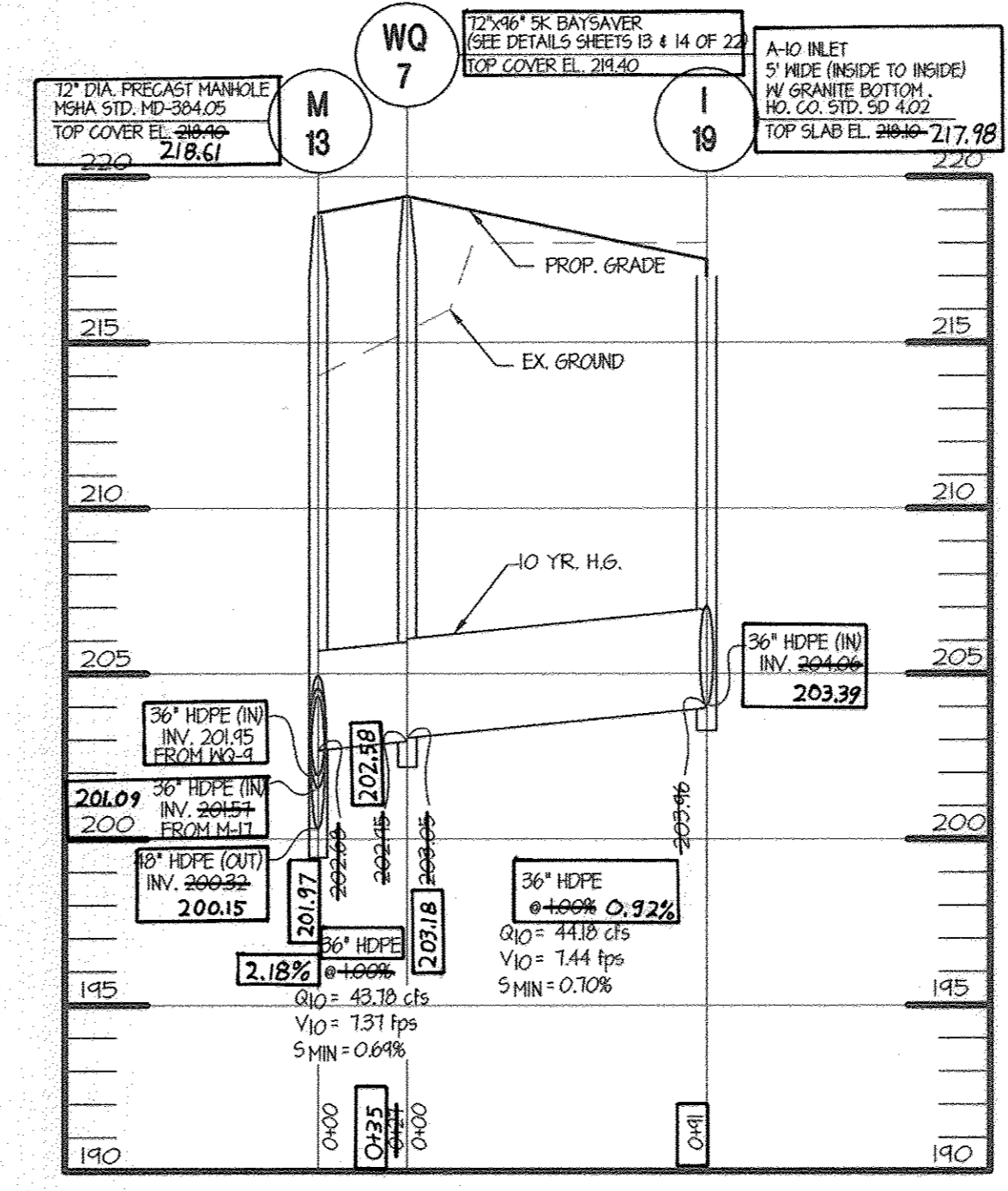
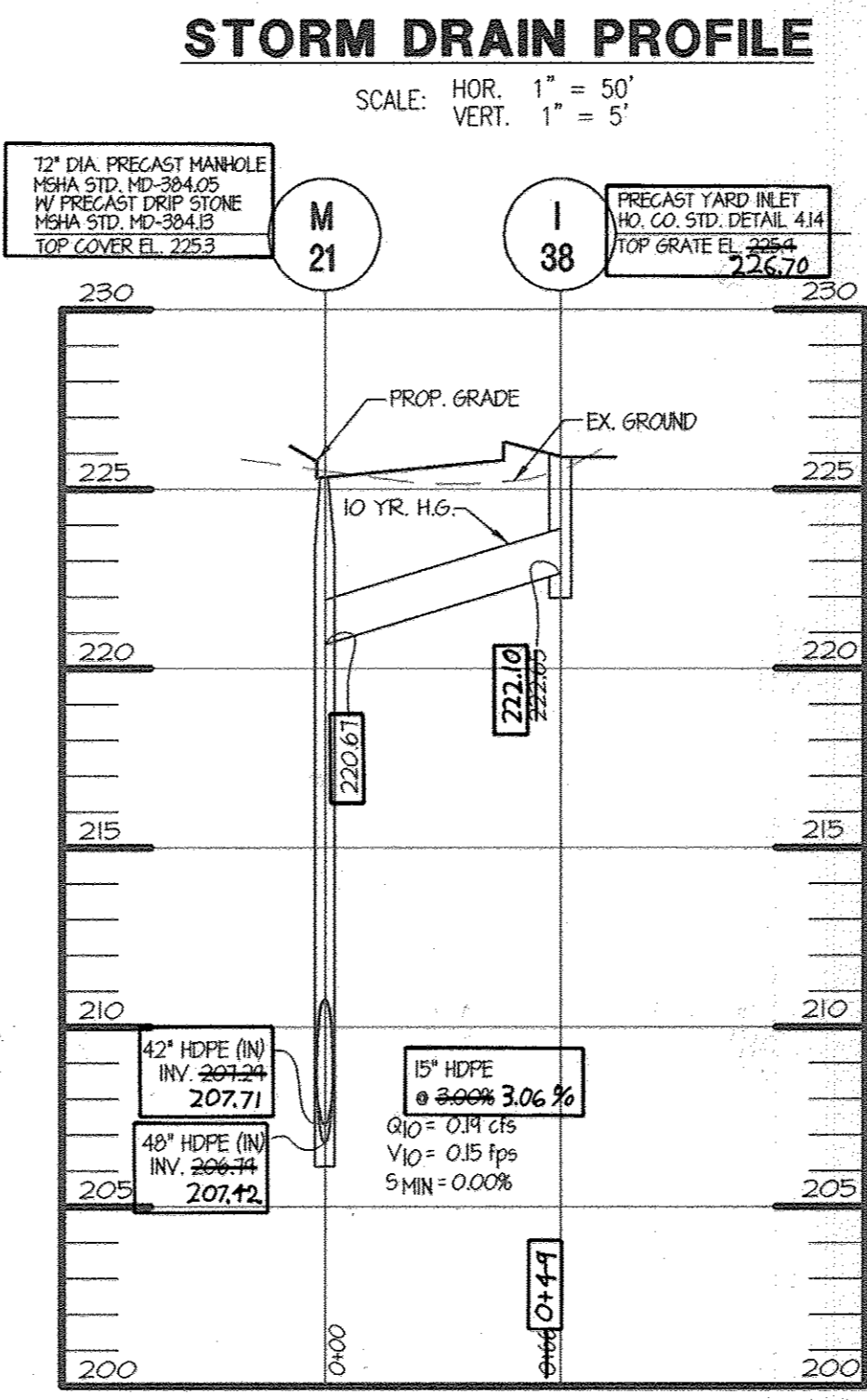
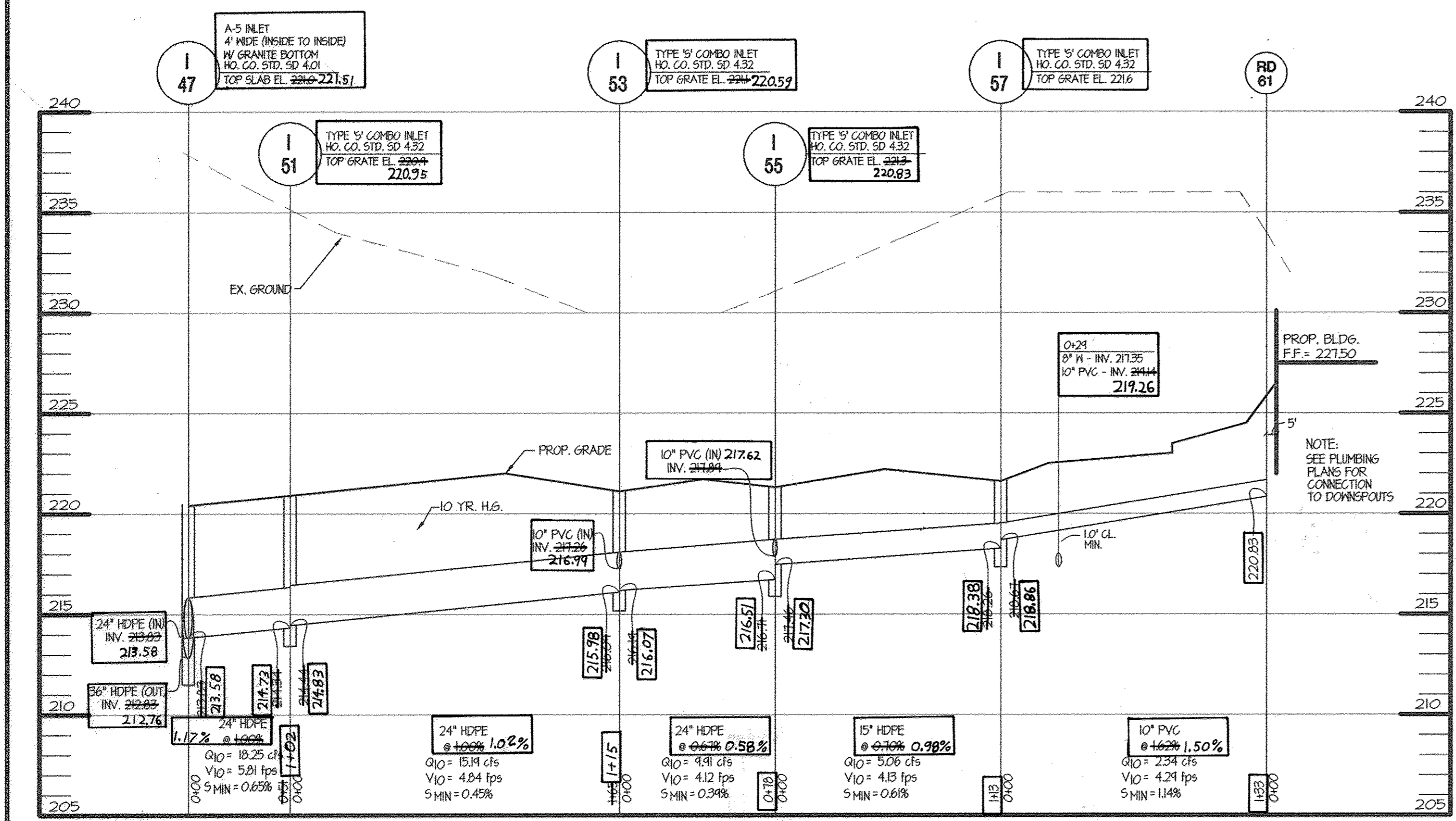
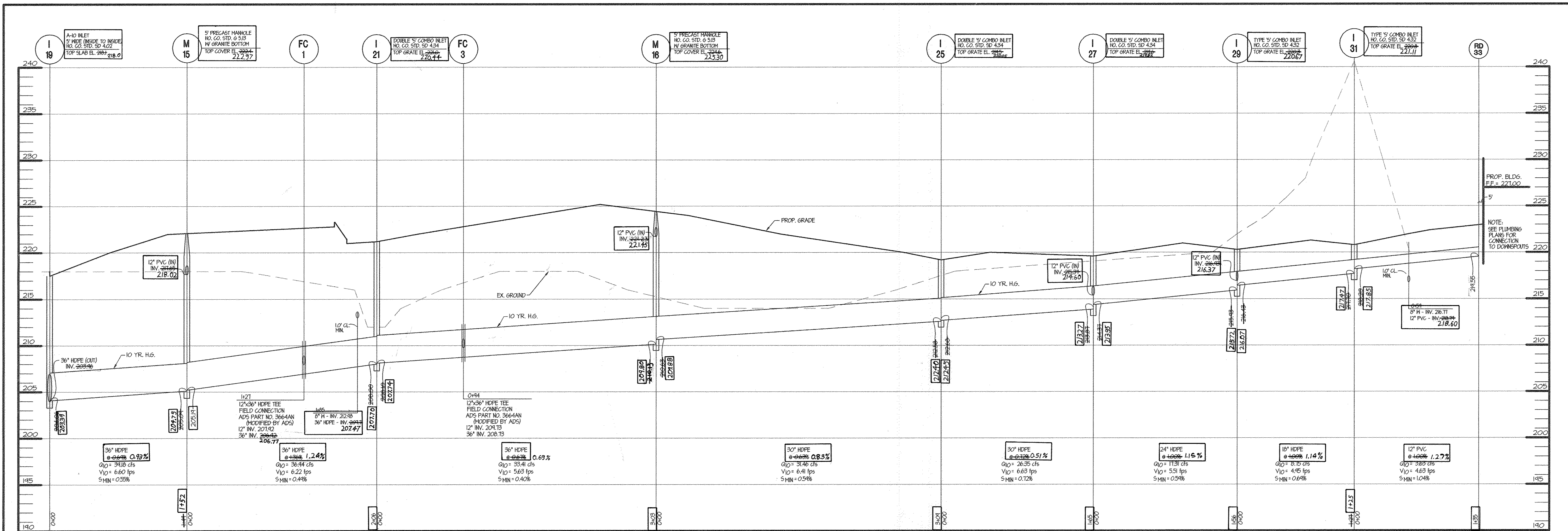
**ProLogis**  
The Global Distribution Solution  
Development Services  
Incorporated  
5200 Eisenhower Avenue  
Second Floor  
Alexandria, Virginia 22304  
Phone: 703.751.9292  
Fax: 703.751.0787

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division: *Wayne Klotz* 12/19/00  
 Chief, Division of Land Development: *Cindy Hamilton* 12/21/00  
 Director, Department of Planning and Zoning: *James S. Smith* 12/20/00  
 FAX NO: 703-751-0787  
 A. NAME: Wayne Klotz B. DAYTIME TELEPHONE: 703-751-9292  
 C. COMPANY: ProLogis  
 D. ADDRESS: 5200 Eisenhower Avenue 2nd floor  
 E. CITY: Alexandria STATE: VA. ZIP: 22304

**MORRIS & RITCHIE ASSOCIATES, INC.**  
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
9090 JUNCTION DRIVE SUITE 9  
ANNAPOLIS JUNCTION, MARYLAND 20701  
(410) 792-9792 or (301) 776-1690  
FAX (410) 792-7395

**PROLOGIS PARK I-95**  
PARCEL A-14  
**STORM DRAIN PROFILES**  
ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND  
 DATE REVISIONS JOB NO.: 11354  
 07/24/00 REVISED STORM DRAIN SCALE: AS SHOWN  
 08/15/00 REVISED PER COUNTY COMMENTS DATE: 06/23/00  
 11/03/00 REVISED FOR FINAL SUBMISSION TO COUNTY DRAWN BY: GLC/CAO  
 11/10/00 RAISED BLDG I 6" PER PROLOGIS DESIGN BY: GLC/CAO  
 2/16/01 Lower Bldg 10" Spoil Area Grading. REVIEW BY: GLC/TFM  
 12-14-01 Change drawing to show "asbuilt" conditions. SHEET: 11 OF 12

**ASBUILT**



APPROVED: DEPARTMENT OF PLANNING AND ZONING

*William J. Burrows* 12/20/00  
CHIEF, DEVELOPMENT ENGINEERING DIVISION ca DATE

*Andy Hamilton* 12/20/00  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE

*Paul Smith* 12/20/00  
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

ADDRESS CHART	
LOT/PARCEL#	STREET ADDRESS
BUILDING-I LOT 1	7091 TROY HILL DRIVE
BUILDING-II LOT 2	7101 TROY HILL DRIVE
BUILDING-III LOT 3	7111 TROY HILL DRIVE

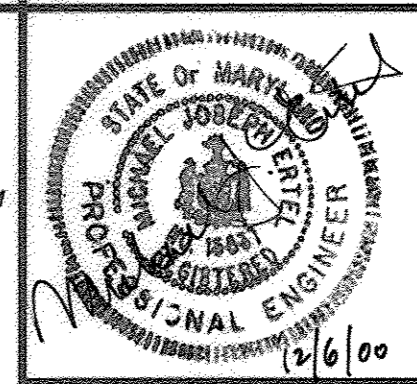
PERMIT INFORMATION CHART			
Subdivision Name	Section/Area	Lot/Parcel#	Parcel A-14
TROY HILL CORPORATE CENTER	40.3768 ACRES		
PLAT# 12428	Zoning M-1	Tox Map 37	Elect Distr. 1
Water Code C04	Sewer Code 4020000	Census Tract 6011.02	

**C-11**

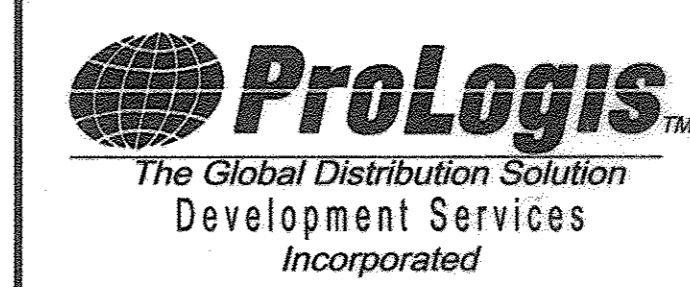


**MORRIS & RITCHIE ASSOCIATES, INC.**  
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS

9090 JUNCTION DRIVE SUITE 9  
ANNAPOLIS JUNCTION, MARYLAND 20701  
(410) 792-9792 or (301) 776-1690  
FAX (410) 792-7395



**PROLOGIS PARK I-95**  
PARCEL A-14  
**STORM DRAIN PROFILES**  
ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND



5200 Eisenhower Avenue  
Second Floor  
Alexandria, Virginia 22304  
Phone: 703.751.9292  
Fax: 703.751.0787

DATE	REVISIONS	JOB NO.: 11354
07/24/00	REVISED STORM DRAIN	SCALE: AS SHOWN
08/15/00	REVISED PER COUNTY COMMENTS	DATE: 06/23/00
11/03/00	REVISED PER MRA COMMENTS	DRAWN BY: GLC/CAO
11/10/00	RAISED BLDG 1 6" PER PROLOGIS	DESIGN BY: GLC/CAO
2/16/01	Lower Bldg 10" Spoil Area Grading Parcel	REVIEW BY: GLC/TFM
12-18-01	Change drawing to show "as-built" condition	SHEET: 12 OF 12

**Landesign**  
ENGINEERS • SURVEYORS • PLANNERS  
2008 MITCHELLVILLE ROAD SUITE NO. 111  
BOWIE, MARYLAND 20716  
(301) 248-8802



**ASBUILT CERTIFICATION**

I hereby certify that to the best of my knowledge and belief, this "As-built" truly represents existing field conditions including but not limited to sizes, diameters, line and grade, and elevations.

12-17-01 *William J. Burrows*  
Date *William J. Burrows*  
Reg. Prof. Engineer, MD #17263

DRAWER/DEVELOPER FAX NO: 703-751-0787

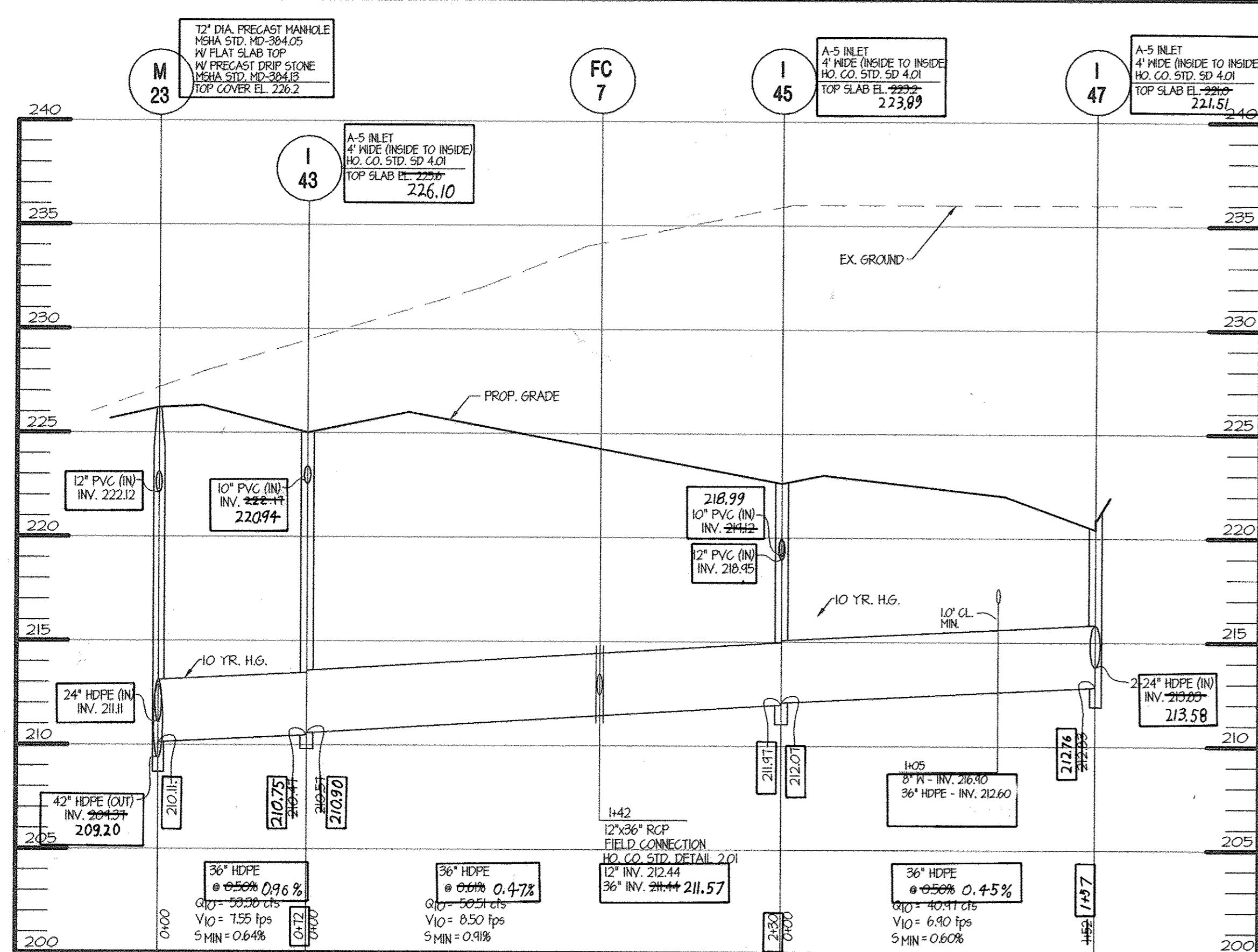
A. NAME: Wayne Klotz B. DAYTIME TELEPHONE: 703-751-9292

C. COMPANY: ProLogis

D. ADDRESS: 5200 Eisenhower Avenue 2nd floor

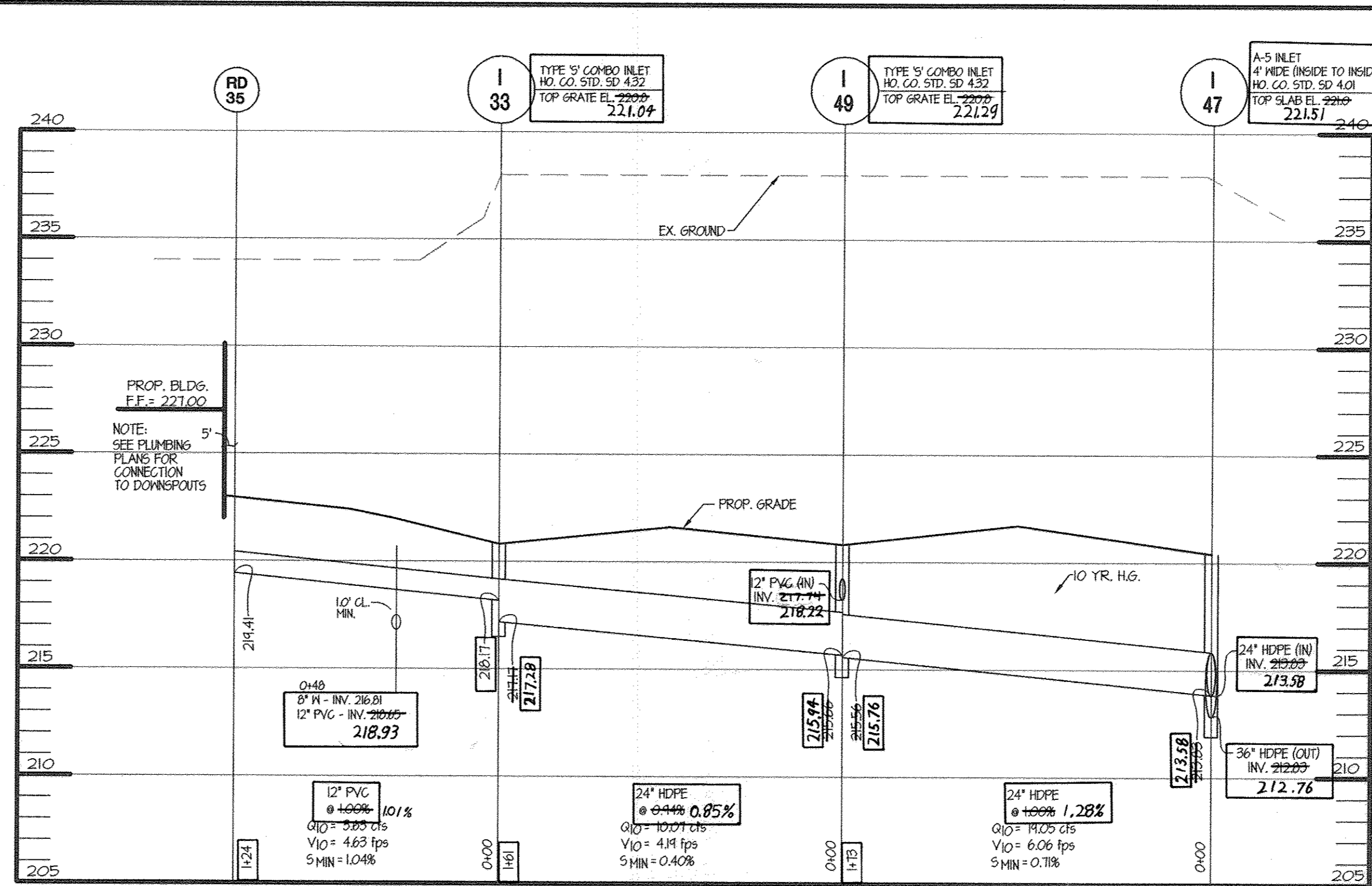
E. CITY: Alexandria STATE: VA ZIP: 22304

**ASBUILT**



**STORM DRAIN PROFILE**

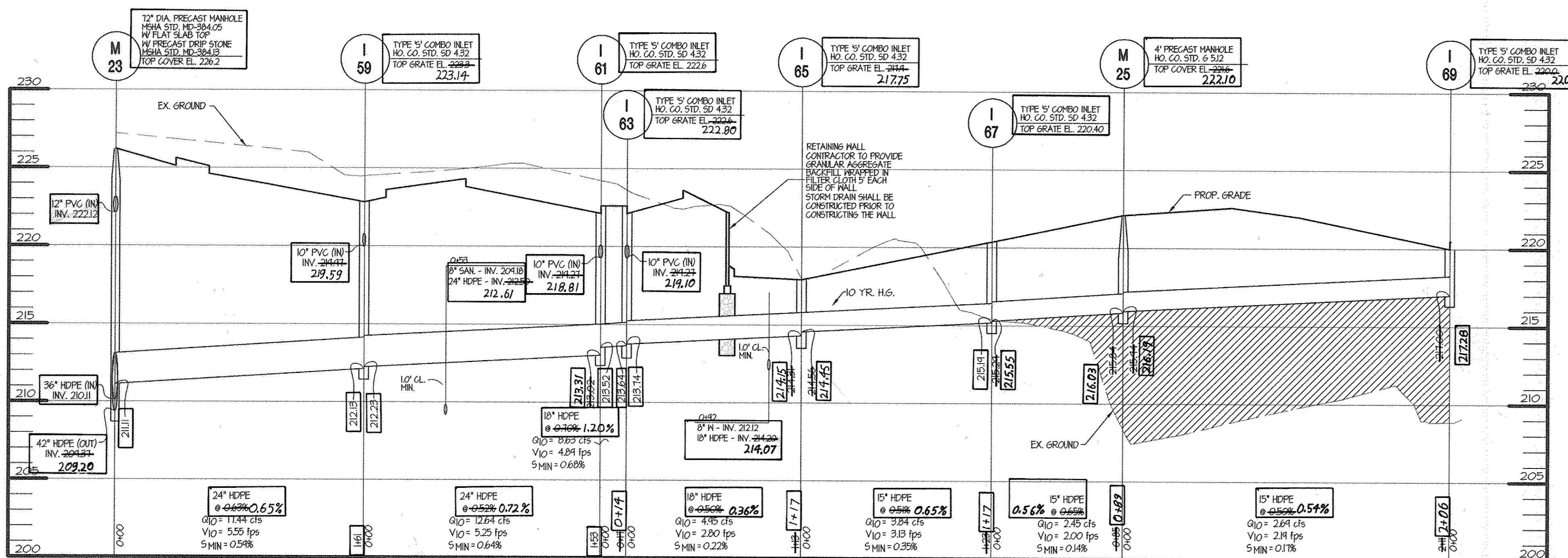
SCALE: HOR. 1" = 50'  
VERT. 1" = 5'



**STORM DRAIN PROFILE**

SCALE: HOR. 1" = 50'  
VERT. 1" = 5'

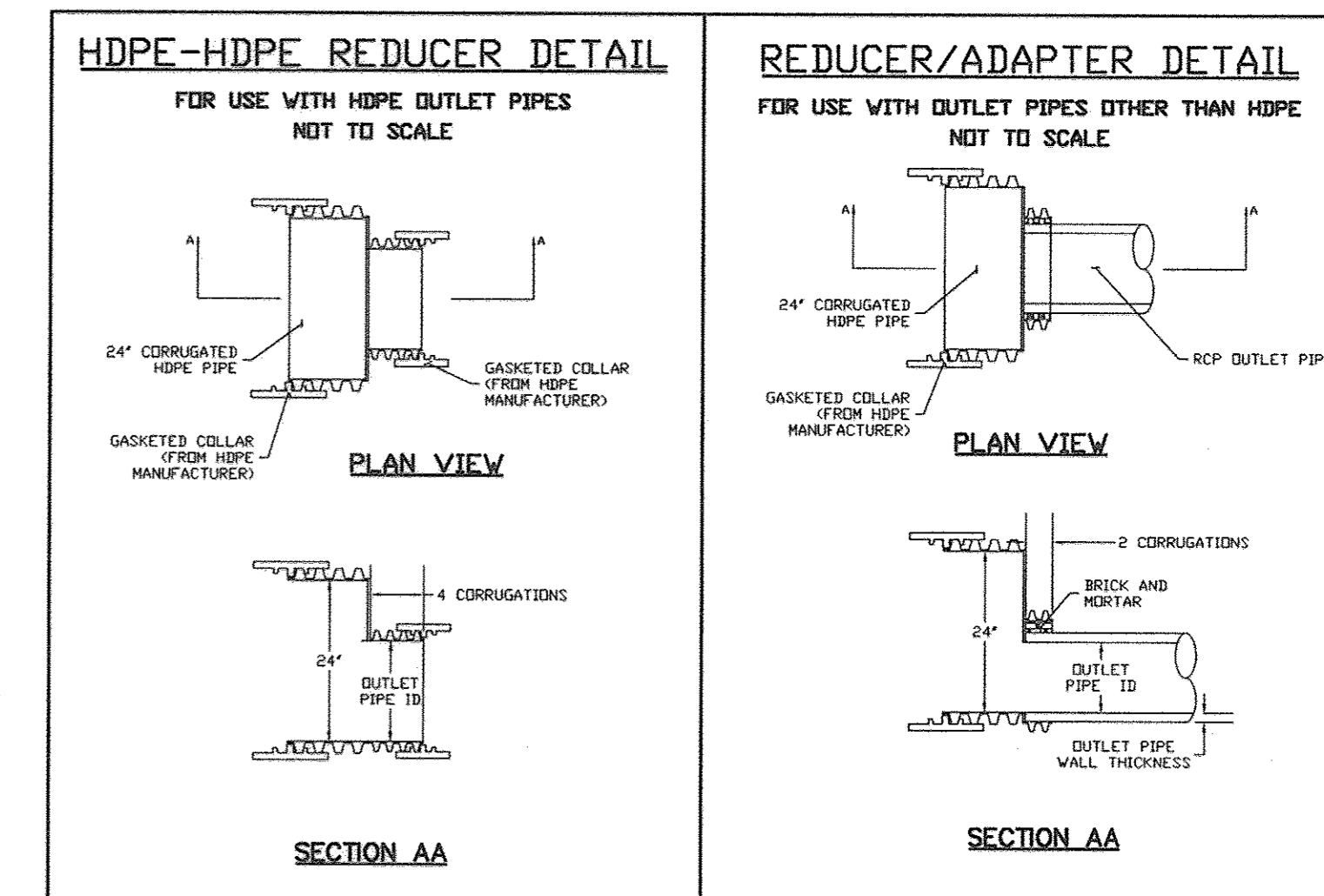
BAYSAYER SYSTEM DIMENSIONS			
DESCRIPTION	1K SYSTEM	3K SYSTEM	5K SYSTEM
SEPARATOR MANHOLE DIMENSIONS			
A PRIMARY MANHOLE DIAMETER	48"	60"	72"
B MANHOLE DEPTH BELOW OUTLET	8' - 0"	8' - 0"	8' - 0"
C MINIMUM FLUID DEPTH	8' - 3"	8' - 4 1/2"	8' - 6"
STANDARD SEPARATOR UNIT DIMENSIONS			
D SEPARATOR UNIT ID	24"	36"	48"
E SEPARATOR UNIT LENGTH	60"	78.2"	75.4"
F BYPASS PLATE LENGTH	34"	45"	45"
G WEIR/BYPASS PLATE THICKNESS	3/4"	3/4"	3/4"
H ELBOW AND CONNECTING PIPE OD	7.125"	10.75"	12.75"
I ELBOW LENGTH	48"	48"	48"
J WEIR HEIGHT ABOVE INVERT	3"	4"	6"
K BYPASS PLATE HEIGHT ABOVE INVERT	12"	18"	24"
L WIDTH OF WEIR AT BASE	3"	4 1/2"	6"
M OUTLET PIPE DIAMETER	M	M	M
N ELBOW INVERT HEIGHT ABOVE UNIT INVERT	4 1/2"	7 1/2"	11"
O ELBOW PIPE OVERHANG	12"	18"	24"
STORAGE MANHOLE DIMENSIONS			
P STORAGE MANHOLE DIAMETER	48"	60"	72"
Q MANHOLE DEPTH BELOW INLET/OUTLET	48"	48"	48"
R FLUID DEPTH	8' - 0"	8' - 0"	8' - 0"
S TOTAL STORAGE VOLUME	200 CF	300 CF	450 CF
SYSTEM DIMENSIONS AND ELEVATIONS			
T SEPARATOR MANHOLE COVER ELEVATION	T	T	T
U STORAGE MANHOLE COVER ELEVATION	U	U	U
V SEPARATOR MANHOLE FLOOR ELEVATION	V	V	V
W STORAGE MANHOLE FLOOR ELEVATION	W	W	W
X INLET PIPE ID AND MATERIAL	X1 X2	X1 X2	X1 X2
Y INLET PIPE INVERT	Y1 Y2	Y1 Y2	Y1 Y2
Z SEPARATOR UNIT INVERT	Z	Z	Z
AA OUTLET PIPE ID AND MATERIAL	AA	AA	AA
AB ELBOW INVERT ELEVATION	AB	AB	AB
AC CONNECTING PIPE INVERT ELEVATION	AC	AC	AC
AD CONNECTION PIPE SPACING	20"	24"	24"
AE STORAGE MANHOLE SIDE OFFSET	72 ± 6"	72 ± 6"	72 ± 6"
AF STORAGE MANHOLE DOWNSTREAM OFFSET	23"	31"	25"



**STORM DRAIN PROFILE**

SCALE: HOR. 1" = 50'  
VERT. 1" = 5'

CONTROLLED AND COMPACTED FILL AS DIRECTED BY AN APPROVED SOILS ENGINEER.



**C-12**

**Landesign**  
ENGINEERS • SURVEYORS • PLANNERS  
2905 MITCHELLVILLE ROAD SUITE NO. 111  
BOWE, MARYLAND 20718  
(301) 249-8802

**ASBUILT CERTIFICATION**  
I hereby certify that to the best of my knowledge and belief, this "As-built" truly represents existing field conditions including but not limited to sizes, diameters, line and grade, and elevations.  
Date: 12-17-01  
William J. Burrows  
Reg. Prof. Engineer, MD #17263

ADDRESS CHART			
LOT/PARCEL #	STREET ADDRESS		
BUILDING I	7091 TROY HILL DRIVE		
BUILDING II	7101 TROY HILL DRIVE		
BUILDING III	7111 TROY HILL DRIVE		
PERMIT INFORMATION CHART			
Subdivision Name	TROY HILL CORPORATE CENTER	Section/Area	40.3768 ACRES
PLAT #	12428	Tax Map	M-1
Water Code	C04	Sewer Code	4020000

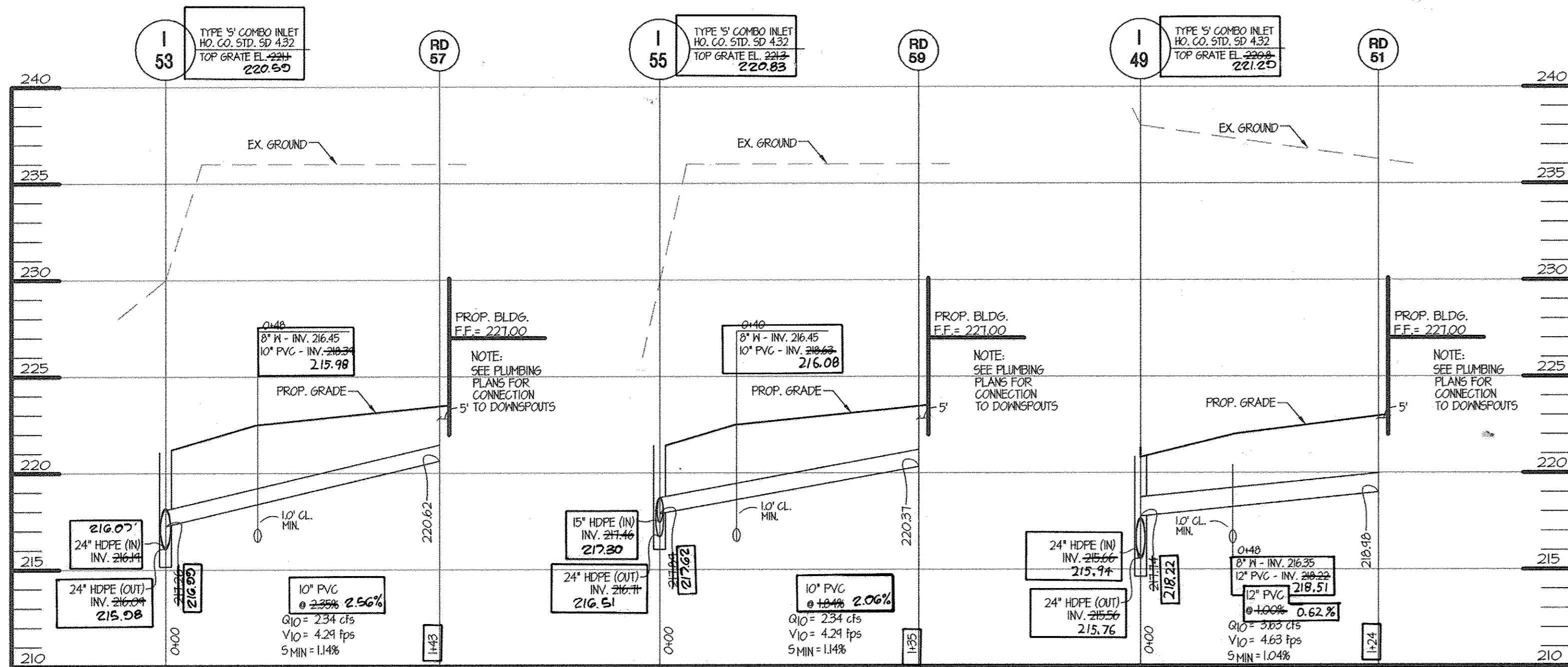
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division: *William J. Burrows* 12/17/00  
 Chief, Division of Land Development: *Cindy Hamilton* 12/24/00  
 Director, Department of Planning and Zoning: *Paul Keith* 12/24/00  
 OWNER/DEVELOPER: A. NAME: Wayne Klotz B. DAYTIME TELEPHONE: 703-751-0787  
 C. COMPANY: ProLogis  
 D. ADDRESS: 5200 Eisenhower Avenue 2nd floor  
 E. CITY: Alexandria STATE: VA, ZIP: 22304

**ProLogis**  
The Global Distribution Solution  
Development Services  
Incorporated  
5200 Eisenhower Avenue  
Second Floor  
Alexandria, Virginia 22304  
Phone: 703.751.9292  
Fax: 703.751.0787

**MRA**  
MORRIS & RITCHIE ASSOCIATES, INC.  
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
9090 JUNCTION DRIVE SUITE 9  
ANNAPOLIS JUNCTION, MARYLAND 20701  
(410) 792-9792 or (301) 776-1690  
FAX (410) 792-7395

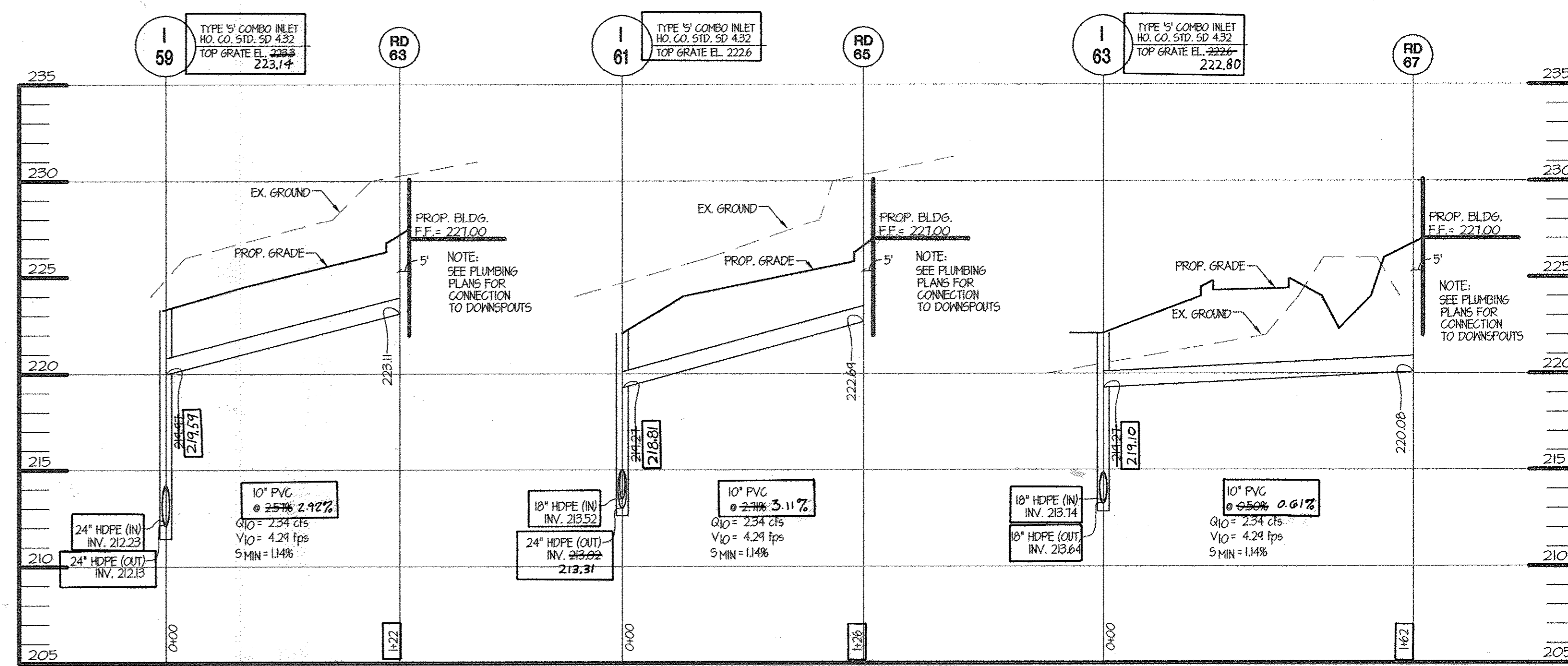
PROLOGIS PARK I-95  
PARCEL A-14  
**STORM DRAIN PROFILES**  
ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
07/24/00	REVISED STORM DRAIN	11354
08/15/00	REVISED PER COUNTY COMMENTS	SCALE: AS SHOWN
11/03/00	REVISED FOR FINAL SUBMISSION TO COUNTY	DATE: 06/23/00
11/10/00	RAISED BLDG 1 6" PER PROLOGIS	DRAWN BY: GLC/CAO
		DESIGN BY: GLC/CAO
		REVIEW BY: GLC/TFM
		SHEET: 13 OF 127



**ROOF DRAIN PROFILE**

SCALE: HOR. 1" = 50'  
VERT. 1" = 5'



**ROOF DRAIN PROFILE**

SCALE: HOR. 1" = 50'  
VERT. 1" = 5'

**SEQUENCE OF CONSTRUCTION AND INSPECTOR'S CHECK-OFF LIST FOR DUAL MANHOLE SEPARATORS**

Stage (X = Approval Required)	Developer's/Engineer Approval		Inspector		Geotechnical Engineer	
	Initials	Date	Initials	Date	Initials	Date
1. Pre-Construction Meeting.	X		X		X	
2. Install Manholes and associated storm drainage: a. Obtain approval of subgrade from Geotechnical Engineer. (Subgrade to have a minimum of 95% compaction)					X	
b. Installation of precast base, lower tank and lower piping.	X		X			
c. Backfill and min. 95% compaction around lower tank and lower piping.					X	
d. Installation of precast middle section(s) with separator unit and remaining piping.	X		X			
e. Installation of precast top slab.	X		X			
f. Installation of adjustment rings and frame and cover.	X		X			
g. Installation of flowable fill or concrete backfill.					X	
3. Backfilling operation and compaction.					X	
4. Site is permanently stabilized. Sediment control measures removed and all sediment and debris removed from dual manhole separators.			X			
5. Final inspection.			X			

**NOTE:**

BAYSAVERS ARE TO BE INSTALLED WITH THE STORM DRAIN SYSTEM AND WILL FUNCTION AS SECONDARY SEDIMENT CONTROL DEVICES. UPON COMPLETION OF SITE STABILIZATION, EACH BAYSAVER SYSTEM SHALL BE FLUSHED CLEAN & THE MANHOLES CLEANED OUT AND REFILLED WITH CLEAN WATER.

**BAYSAVER MAINTENANCE**

BAYSAVER SYSTEMS MUST BE INSPECTED AND MAINTAINED PERIODICALLY. INSPECTION IS MADE BY CHECKING THE DEPTH OF SEDIMENT IN EACH MANHOLE WITH A GRADE STICK OR SIMILAR DEVICE. MAINTENANCE IS REQUIRED WHEN THE SEDIMENT DEPTH IN EITHER MANHOLE EXCEEDS 2 FEET. MINIMUM INSPECTION IS REQUIRED TWICE A YEAR TO MAINTAIN OPERATION AND FUNCTION OF BAYSAVER.

**MAINTENANCE CONSISTS OF THE FOLLOWING:**

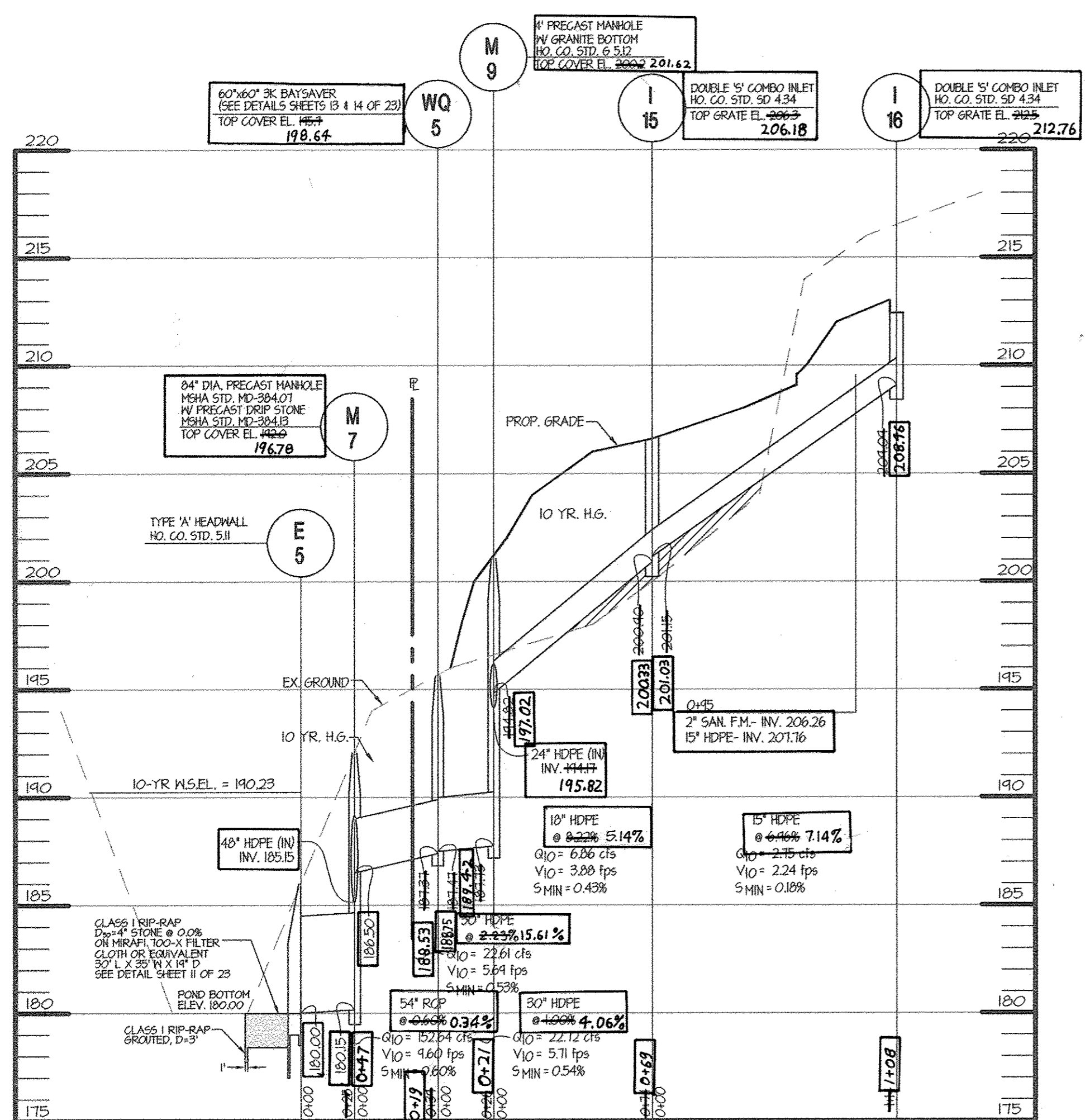
- A. CONTAMINANT STORAGE MANHOLE**
  - REMOVE THE ENTIRE VOLUME OF THE CONTAMINATED WATER BY VACUUM TRUCK.
  - CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER BY VACUUM TRUCK. MAKE CERTAIN MANHOLE IS CLEAN.
- B. PRIMARY SEPARATION MANHOLE**
  - USING A SUBMERSIBLE PUMP, PUMP THE CLEAN WATER FROM THE CENTER OF THE MANHOLE DIRECTLY INTO THE EMPTY STORAGE MANHOLE UNTIL THE WATER LEVEL FALLS TO 1 FOOT ABOVE THE SEDIMENT LAYER.
  - REMOVE THE SETTLED SEDIMENT AND REMAINING WATER BY VACUUM TRUCK.
  - CLEAN THE MANHOLE WALLS AND FLUSH OUT THE MANHOLE USING A HIGH PRESSURE HOSE AND REMOVE FLUSHING WATER BY VACUUM TRUCK. MAKE CERTAIN MANHOLE IS CLEAN.
  - CONTAMINATED MATERIAL REMOVED FROM THE MANHOLES MUST BE DISPOSED OF RESPONSIBLY AND LEGALLY BY THE OPERATOR OF THE VACUUM TRUCK.

**GENERAL CONSTRUCTION NOTES**

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

**BAYSAVER INSTALLATION INSTRUCTIONS**

- EXCAVATION MUST PROVIDE ADEQUATE SPACE TO CONNECT INLET AND OUTLET PIPES TO SEPARATOR MANHOLE AND BAYSAVER UNIT. INSTALL PRECAST DROP STRUCTURES ON SOLID GROUND AS VERIFIED BY A GEOTECHNICAL ENGINEER.
- VERIFY THE SUBGRADE ELEVATION AGAINST THE MANHOLE DIMENSIONS AND CONNECTING STORM DRAIN INVERTS.
- MAKING SURE THE BASES ARE LEVEL AND THE STORAGE MANHOLE OPENINGS ARE ALIGNED WITH THE SEPARATOR UNIT. INSTALL PRIMARY AND STORAGE MANHOLES. INSTALL RUBBER GASKETS ON BASE UNITS AND COAT WITH LUBRICATING GREASE. INSTALL ADDITIONAL MANHOLE SECTIONS AS REQUIRED. SEAL LIFT HOLES WITH NON-SHRINK GROUT.
- BACKFILL BASE SECTIONS OF MANHOLES TO INVERT OF STORAGE MANHOLE CONNECTING PIPES. USING APPROVED BACKFILL MATERIAL, BACKFILL AND COMPACT IN 6 INCH LIFTS. BACKFILL AND COMPACTION SHOULD BE MONITORED BY A GEOTECHNICAL ENGINEER.
- INSTALL BAYSAVER SEPARATOR UNIT AND CONNECTING PIPES. SEAL ALL CONNECTING JOINTS AND INSTALL SEPARATOR UNIT/STORM DRAIN JOINT COLLAR. CUT EXCESS LENGTH OFF CONNECTING PIPES INSIDE STORAGE MANHOLE.
- BACKFILL SEPARATOR UNIT AND MANHOLES. AREAS NOT ACCESSIBLE TO COMPACTION EQUIPMENT MUST BE BACKFILLED WITH LEAN CONCRETE OR FLOWABLE FILL.
- INSTALL AND SET MANHOLE COVER GRADE ADJUSTMENT RINGS AS NECESSARY.
- INSTALL AND SET MANHOLE FRAME AND COVER UNITS.



**STORM DRAIN PROFILE**

SCALE: HOR. 1" = 50'  
VERT. 1" = 5'

CONTROLLED AND COMPACTED FILL AS DIRECTED BY AN APPROVED SOILS ENGINEER.

ADDRESS CHART	
LOT/PARCEL#	STREET ADDRESS
BUILDING-I LOT 1	7091 TROY HILL DRIVE
BUILDING-II LOT 2	7101 TROY HILL DRIVE
BUILDING-III LOT 3	7111 TROY HILL DRIVE

PERMIT INFORMATION CHART			
Subdivision Name	TROY HILL CORPORATE CENTER	Section/Area	40.3768 ACRES
Lot/Parcel#	Parcel A-14	PLAT#	12428
Zoning	M-1	Tax Map	37
Elect. Distr.	1	Census Tract	8011.02
Water Code	C04	Sewer Code	4020000

**C-13**

**Landesign**  
ENGINEERS • SURVEYORS • PLANNERS  
2905 MITCHELLVILLE ROAD SUITE NO. 111  
BOWIE, MARYLAND 20716  
(301) 248-8802

**ASBUILT CERTIFICATION**

I hereby certify that to the best of my knowledge and belief, this "As-built" truly represents existing field conditions including but not limited to sizes, diameters, line and grade, and elevations.

12-17-01 *William J. Burrows*  
Date *William J. Burrows*  
Reg. Prof. Engineer, MD #17263

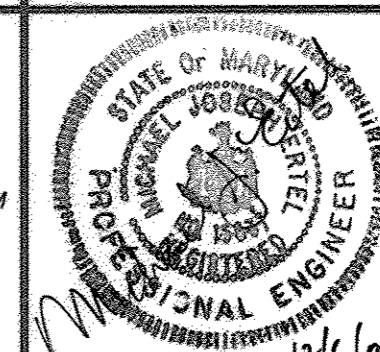


APPROVED: DEPARTMENT OF PLANNING AND ZONING  
CHIEF, DEVELOPMENT ENGINEERING DIVISION  
*W. Damm* 12/18/00  
CHIEF, DIVISION OF LAND DEVELOPMENT  
*C. Strasser* 12/19/00  
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING  
*L. S. Smith* 12/20/00

DOWNER/DEVELOPER: *Wayne Klotz* FAX NO. 703-751-0787  
A. NAME: *Wayne Klotz* B. DAYTIME TELEPHONE: 703-751-9292  
C. COMPANY: ProLogis  
D. ADDRESS: 5200 Eisenhower Avenue 2nd floor  
E. CITY: Alexandria STATE, VA. ZIP: 22304



5200 Eisenhower Avenue  
Second Floor  
Alexandria, Virginia 22304  
Phone: 703.751.9292  
Fax: 703.751.0787



**MORRIS & RITCHIE ASSOCIATES, INC.**  
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS

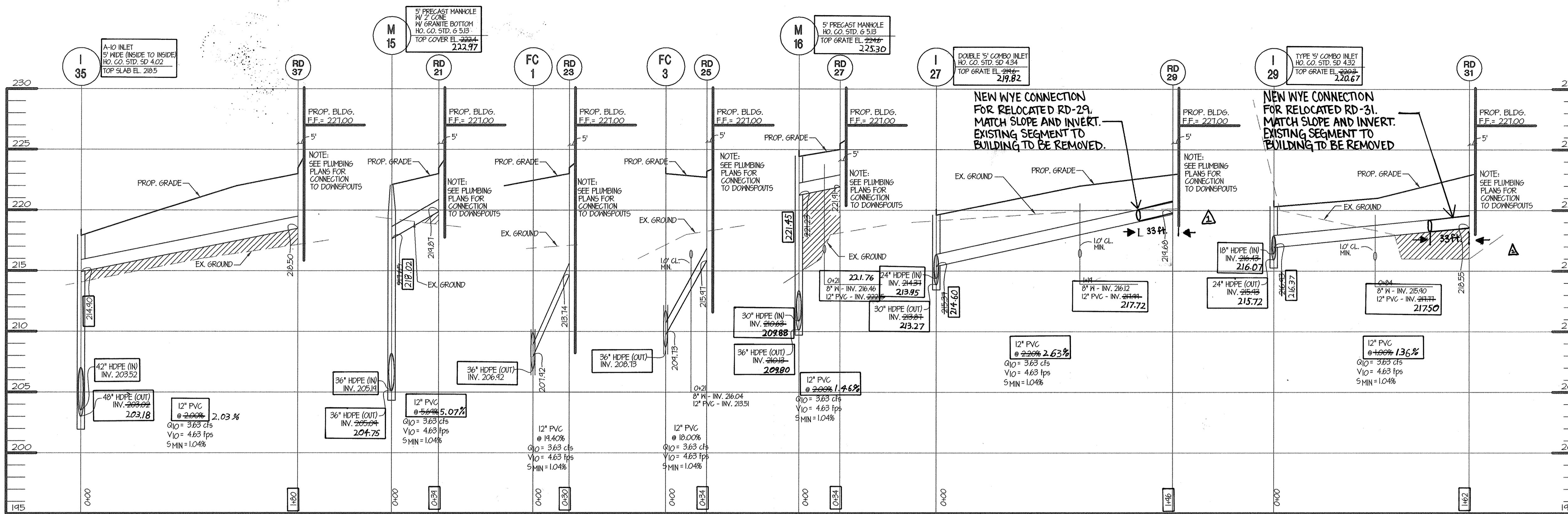
9090 JUNCTION DRIVE SUITE 9  
ANNAPOLIS JUNCTION, MARYLAND 20701  
(410) 792-9792 or (301) 776-1690  
FAX (410) 792-7395

PROLOGIS PARK I-95  
PARCEL A-14  
**STORM DRAIN PROFILES**

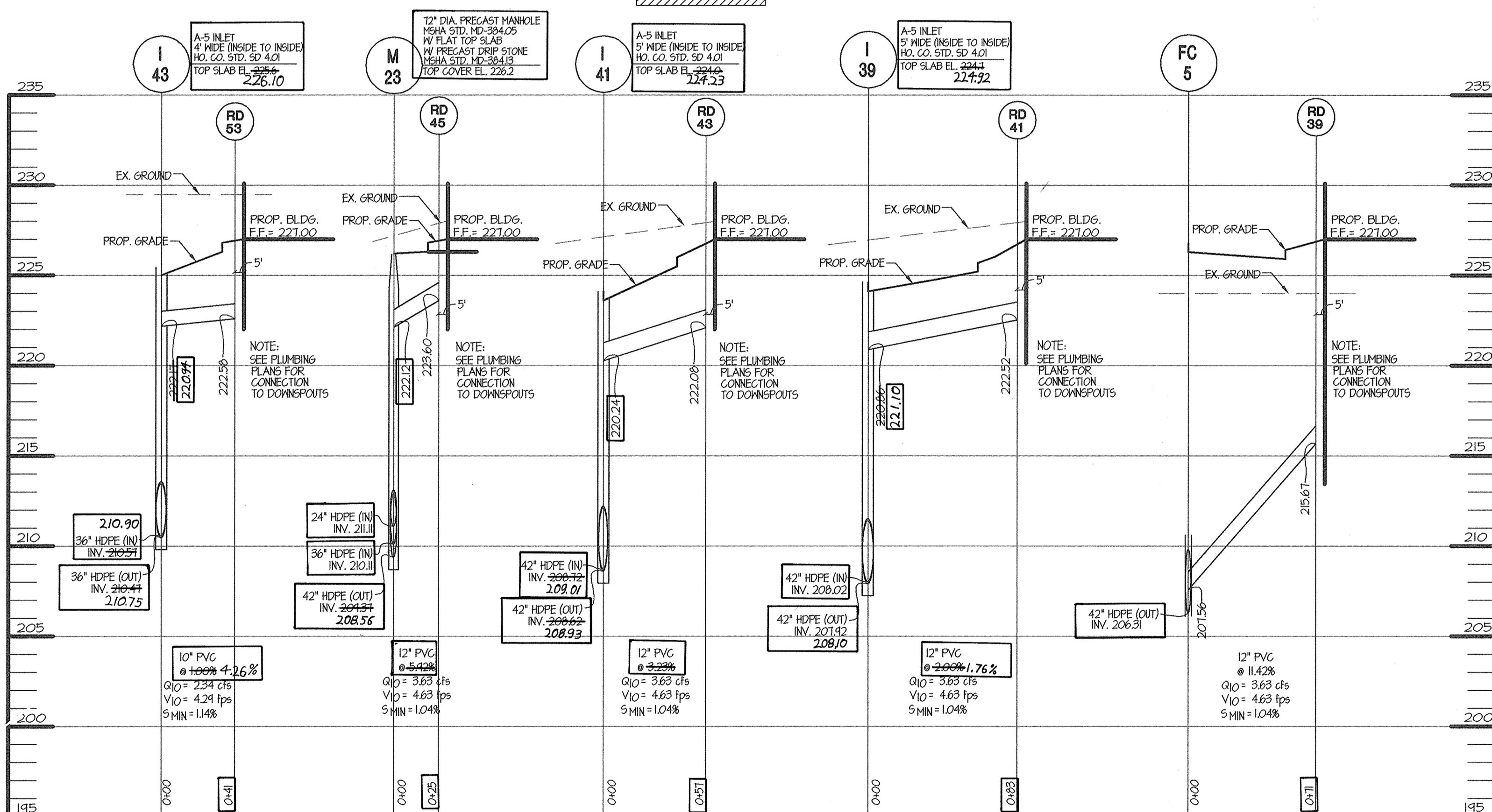
ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.: 11354
07/24/00	REVISED STORM DRAIN	SCALE: AS SHOWN
08/15/00	REVISED PER COUNTY COMMENTS	DATE: 06/23/00
11/03/00	REVISED FOR FINAL SUBMISSION TO COUNTY	DRAWN BY: GLC/CAO
11/10/00	RAISED BLDG 1 6" PER PROLOGIS	DESIGN BY: GLC/CAO
2/16/01	Lower Bldg. 16", Spoil Area Grading.	REVIEW BY: GLC/TFM
12-14-01	Change drawings to show "asbuilt" conditions	SHEET: 14 OF 24

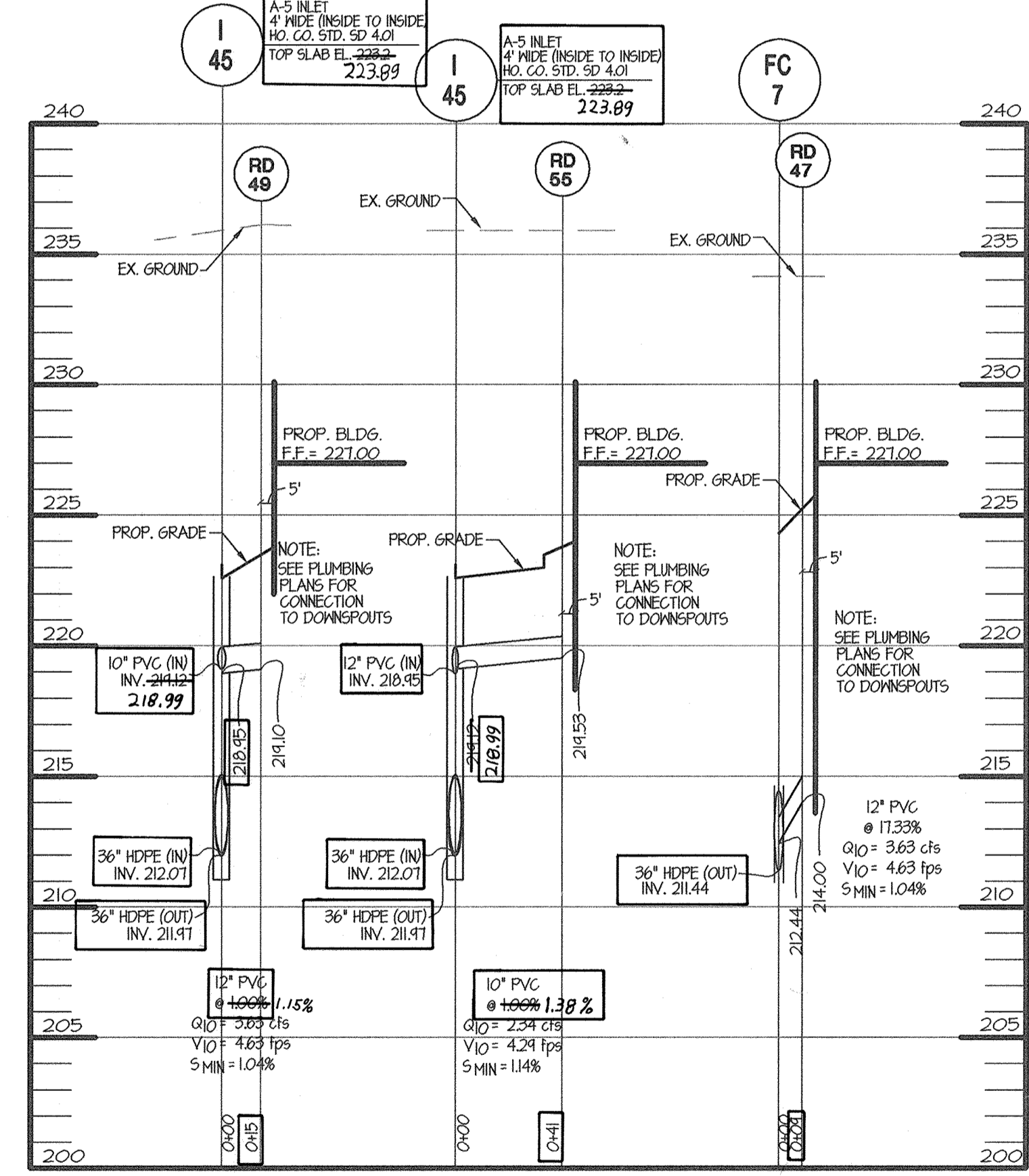
**ASBUILT**



**ROOF DRAIN PROFILE**  
 SCALE: HOR. 1" = 50'  
 VERT. 1" = 5'



**ROOF DRAIN PROFILE**  
 SCALE: HOR. 1" = 50'  
 VERT. 1" = 5'



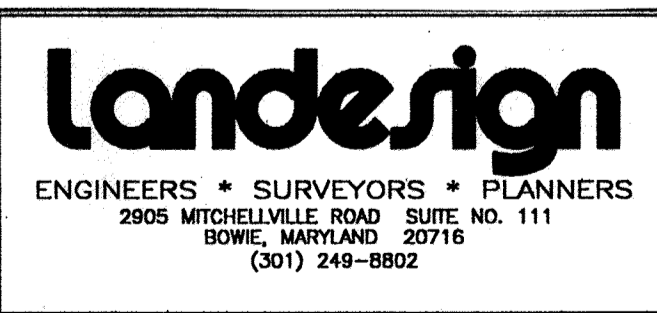
**ROOF DRAIN PROFILE**  
 SCALE: HOR. 1" = 50'  
 VERT. 1" = 5'

ADDRESS CHART	
LOT/PARCEL#	STREET ADDRESS
BUILDING-I Lot 1	7091 TROY HILL DRIVE
BUILDING-II Lot 2	7101 TROY HILL DRIVE
BUILDING-III Lot 3	7111 TROY HILL DRIVE

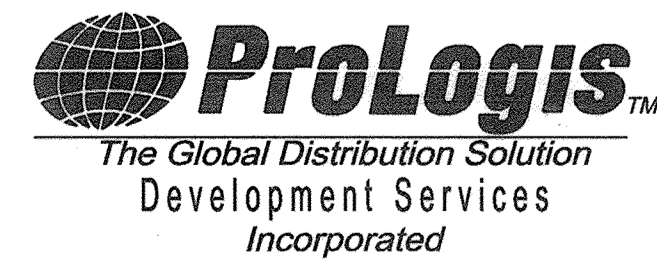
  

PERMIT INFORMATION CHART			
Subdivision Name	TROY HILL CORPORATE CENTER	Section/Area	Parcel A-14
PLAT#	12428	Zoning	M-1
Water Code	G04	Sewer Code	4020000

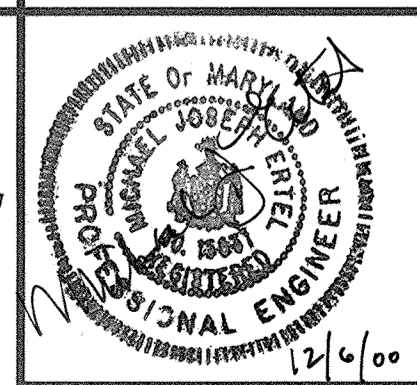
**C-14**



**ASBUILT CERTIFICATION**  
 I hereby certify that to the best of my knowledge and belief, this "As-built" truly represents existing field conditions including but not limited to sizes, diameters, line and grade, and elevations.  
 Date: 12-17-01  
 Signature: William J. Burrows  
 Reg. Prof. Engineer, MD #17263



5200 Eisenhower Avenue  
 Second Floor  
 Alexandria, Virginia 22304  
 Phone: 703.751.9292  
 Fax: 703.751.0787



**MORRIS & RITCHIE ASSOCIATES, INC.**  
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
 9090 JUNCTION DRIVE SUITE 9  
 ANNAPOLIS JUNCTION, MARYLAND 20701  
 (410) 792-9792 or (301) 776-1690  
 FAX (410) 792-7395

**PROLOGIS PARK I-95**  
 PARCEL A-14  
**STORM DRAIN PROFILES**  
 ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND

DATE	REVISIONS
09/19/09	REVISED NORTHWEST CORNER OF BUILDING II

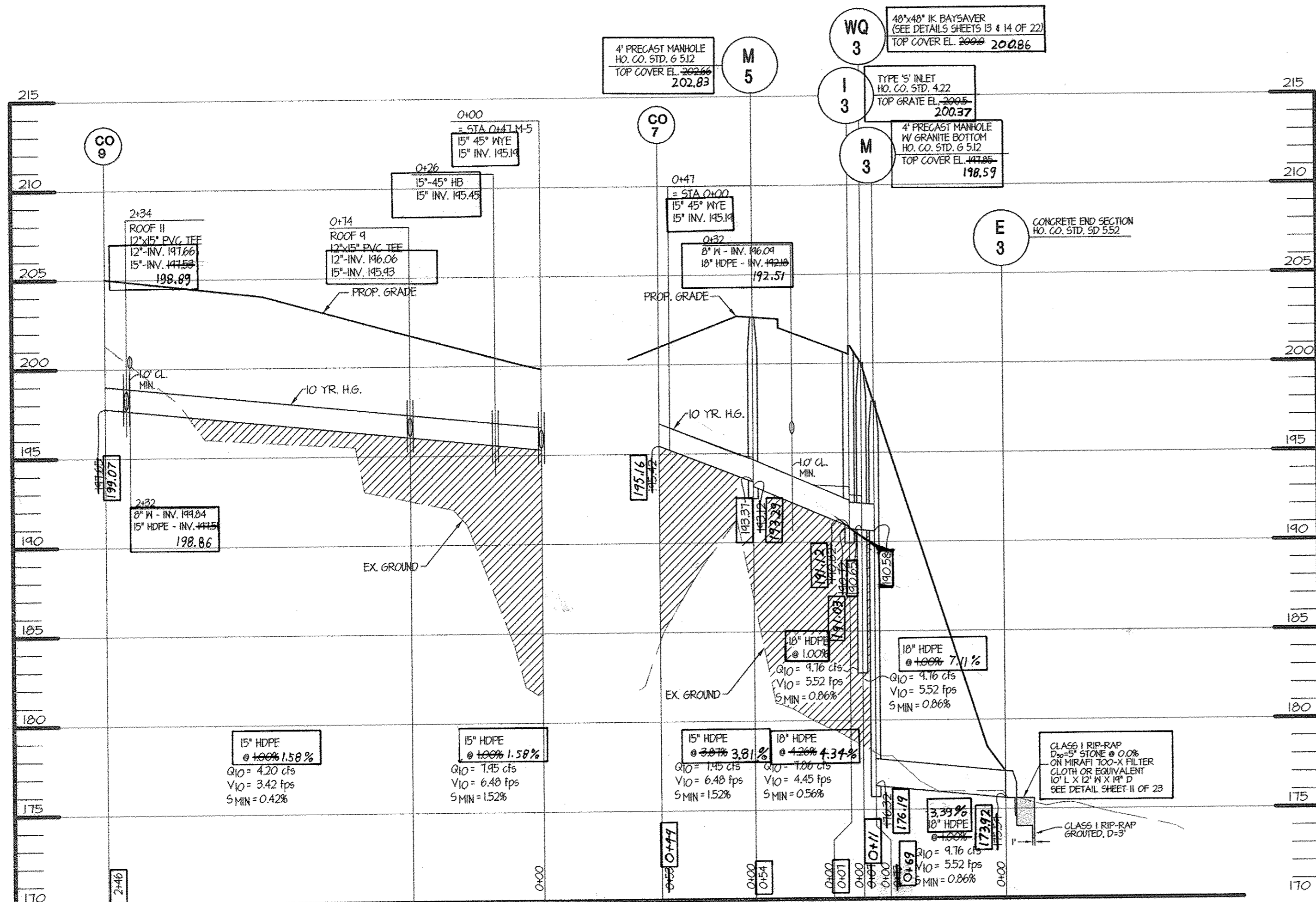
REDLINE DESIGN PROFESSIONAL (01/19/09 REVISED)  
 LANGAN ENGINEERING AND ENVIRONMENTAL SERVICES, INC.  
 1300 WILSON BLVD., SUITE 450  
 ARLINGTON, VA 22209  
 T: 571.366.4800

RYAN LINTHICUM  
 PROFESSIONAL ENGINEER MD LIC. NO. 34091

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Signature: [Signature]  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION cc 12/18/00  
 Signature: [Signature]  
 CHIEF, DIVISION OF LAND DEVELOPMENT 12/28/00  
 Signature: [Signature]  
 DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE 12/28/00

DATE	REVISIONS	JOB NO.:
07/24/00	REVISED STORM DRAIN	11354
08/15/00	REVISED PER COUNTY COMMENTS	SCALE: AS SHOWN
11/03/00	REVISED FOR FINAL SUBMISSION TO COUNTY	DATE: 06/23/00
11/10/00	RAISED BLDG 1 6" PER PROLOGIS	DRAWN BY: GLC/CAO
2/10/01	Lower Bldg. 10', Spoil Area Grading.	DESIGN BY: GLC/CAO
12-14-01	Change drawings to show "asbuilt" condition.	REVIEW BY: GLC/TFM

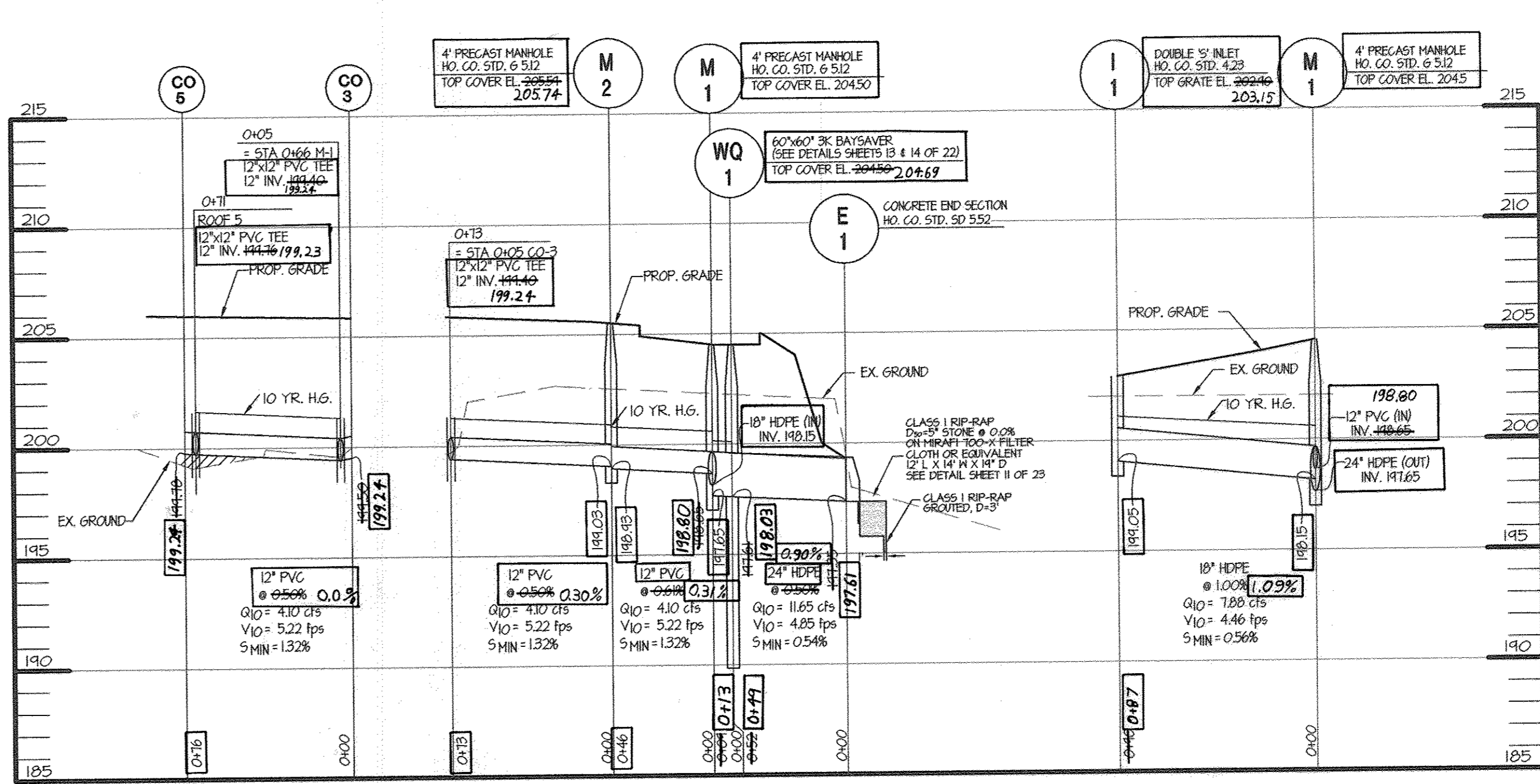
**ASBUILT**



**STORM DRAIN & ROOF DRAIN PROFILE**

CONTROLLED AND COMPACTED FILL AS DIRECTED BY AN APPROVED SOILS ENGINEER.

SCALE: HOR. 1" = 50'  
VERT. 1" = 5'



**STORM DRAIN & ROOF DRAIN PROFILE**

SCALE: HOR. 1" = 50'  
VERT. 1" = 5'

STR. NO.	TOP ELEV.	INV. IN	INV. IN	INV. IN	INV. OUT	REMARKS	NORTHING	EASTING
E-1	-	-	-	-	173.92	CONCRETE END SECTION HO. CO. STD. SD 5.52	557,862.76	1,380,313.87
E-3	-	-	-	-	180.00	CONCRETE END SECTION HO. CO. STD. SD 5.52	557,862.76	1,380,313.87
M-1	204.50	198.80	198.15	-	197.65	4\"/>		

• COORDINATES TO CENTERLINE OF STRUCTURE  
• INDICATES TOP OF SLAB ELEVATION

**STORM DRAIN PIPE SCHEDULE**

ITEM	QUANTITY	NOTE
15" HDPE - A.D.S. N-12	1,205'	
18" HDPE - A.D.S. N-12	654'	
24" HDPE - A.D.S. N-12	1,248'	
30" HDPE - A.D.S. N-12	530'	
36" HDPE - A.D.S. N-12	1,347'	
42" HDPE - A.D.S. N-12	604'	
48" HDPE - A.D.S. N-12	379'	
54" RCP - CLASS IV	47'	

**ROOF DRAIN SCHEDULE**

ITEM	QUANTITY	NOTE
12" CLEANOUT	2	
12"x12" TEE	3	
12"x15" TEE	2	
12"x33" TEE	2	FC-1, FC-3
12"x42" TEE	1	FC-5
12"-45" WYE	1	
12"-45" HB	1	
10" PVC SCH 40	901'	
12" PVC SCH 40	1,520'	
15" PVC SCH 40	279'	

**S.D. STRUCTURE "ASBUILT" ELEVATIONS**

STR. NO.	TOP ELEV.	INV. IN	INV. IN	INV. IN	INV. OUT
E-1	-	-	-	-	173.92
E-3	-	-	-	-	180.00
M-1	204.50	198.80	198.15	-	197.65
M-2	205.74	199.03	-	-	198.93
M-3	198.59	190.85	-	-	193.28
M-5	202.83	193.37	-	-	198.15
M-7	196.78	188.50	185.15	-	189.42
M-9	201.62	197.02	195.82	-	196.17
M-11	213.35	196.27	-	-	200.15
M-13	218.81	201.97	201.09	201.95	204.75
M-15	222.97	205.19	218.02	-	209.80
M-16	225.30	209.88	221.45	-	201.90
M-17	219.28	201.93	-	-	202.79
M-19	218.63	202.99	-	-	207.42
M-21	225.30	207.71	220.67	-	208.58
M-23	226.20	222.12	211.11	210.11	216.03
M-25	222.10	216.19	-	-	198.81
I-1	203.15	-	-	-	198.36
I-3	200.37	191.12	-	-	198.86
I-5	200.58	196.45	196.40	-	197.23
I-7	199.50	-	-	-	198.18
I-9	200.80	196.87	-	-	197.23
I-11	200.48	197.33	-	-	198.18
I-13	201.08	-	-	-	200.33
I-15	206.18	201.03	-	-	208.46
I-16	212.76	-	-	-	203.30
I-19	218.10	203.39	-	-	212.40
I-21	220.44	207.74	-	-	213.27
I-25	220.05	212.45	-	-	215.72
I-27	219.92	207.11	214.60	-	217.47
I-29	220.87	216.07	218.37	-	217.38
I-31	221.11	217.85	-	-	217.38
I-33	221.04	218.17	-	-	204.61
I-35	218.50	214.90	203.52	-	222.10
I-37	222.00	204.71	-	-	208.93
I-38	228.70	-	-	-	210.75
I-39	224.92	221.10	208.02	-	212.76
I-41	224.23	220.24	208.01	-	215.78
I-43	228.10	220.94	210.80	-	212.13
I-45	223.89	218.95	219.99	212.07	213.31
I-47	221.51	213.58	213.58	-	214.73
I-49	221.29	218.22	215.94	-	215.78
I-51	220.95	214.83	-	-	215.89
I-53	220.59	216.99	216.07	-	218.38
I-55	220.83	217.62	217.30	-	212.31
I-57	221.60	218.96	-	-	213.64
I-59	223.14	219.59	212.23	-	213.31
I-61	222.60	218.81	213.52	-	213.64
I-63	222.80	219.10	213.74	-	214.15
I-65	217.75	214.45	-	-	215.19
I-67	220.40	215.55	-	-	217.28
I-69	220.18	-	-	-	198.03
WQ-1	204.69	198.03	-	-	198.65
WQ-3	200.86	190.65	-	-	188.63
WQ-5	198.64	188.75	-	-	202.58
WQ-7	219.40	203.18	-	-	202.38
WQ-9	218.89	202.23	202.48	-	201.93
WQ-11	219.50	202.73	-	-	

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 [Signature] 12/10/00  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION CE  
 [Signature] 12/01/00  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 [Signature] 12/24/00  
 DIRECTOR, DEPARTMENT OF PLANNING AND ZONING

OWNER/DEVELOPER: WAYNE KLOTZ  
 FAX NO: 703-751-0787  
 A. NAME: Wayne Klotz B. DAYTIME TELEPHONE: 703-751-9292  
 C. COMPANY: ProLogis  
 D. ADDRESS: 5200 Eisenhower Avenue 2nd floor  
 E. CITY: Alexandria STATE: VA ZIP: 22304

LOT/PARCEL #	STREET ADDRESS
BUILDING - Lot 1	7091 TROY HILL DRIVE
BUILDING - Lot 2	7101 TROY HILL DRIVE
BUILDING - Lot 5	7111 TROY HILL DRIVE

Subdivision Name	TROY HILL	Section/Area	Lot/Parcel #
CORPORATE CENTER	40.3768 ACRES	PARCEL A-14	

**MORRIS & RITCHE ASSOCIATES, INC.**  
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
 9090 JUNCTION DRIVE SUITE 9  
 ANNAPOLIS JUNCTION, MARYLAND 20701  
 (410) 792-9792 or (301) 776-1690  
 FAX (410) 792-7395

**Landesign**  
 ENGINEERS • SURVEYORS • PLANNERS  
 2905 MITCHELLVILLE ROAD SUITE NO. 111  
 BOWIE, MARYLAND 20716  
 (301) 249-8822

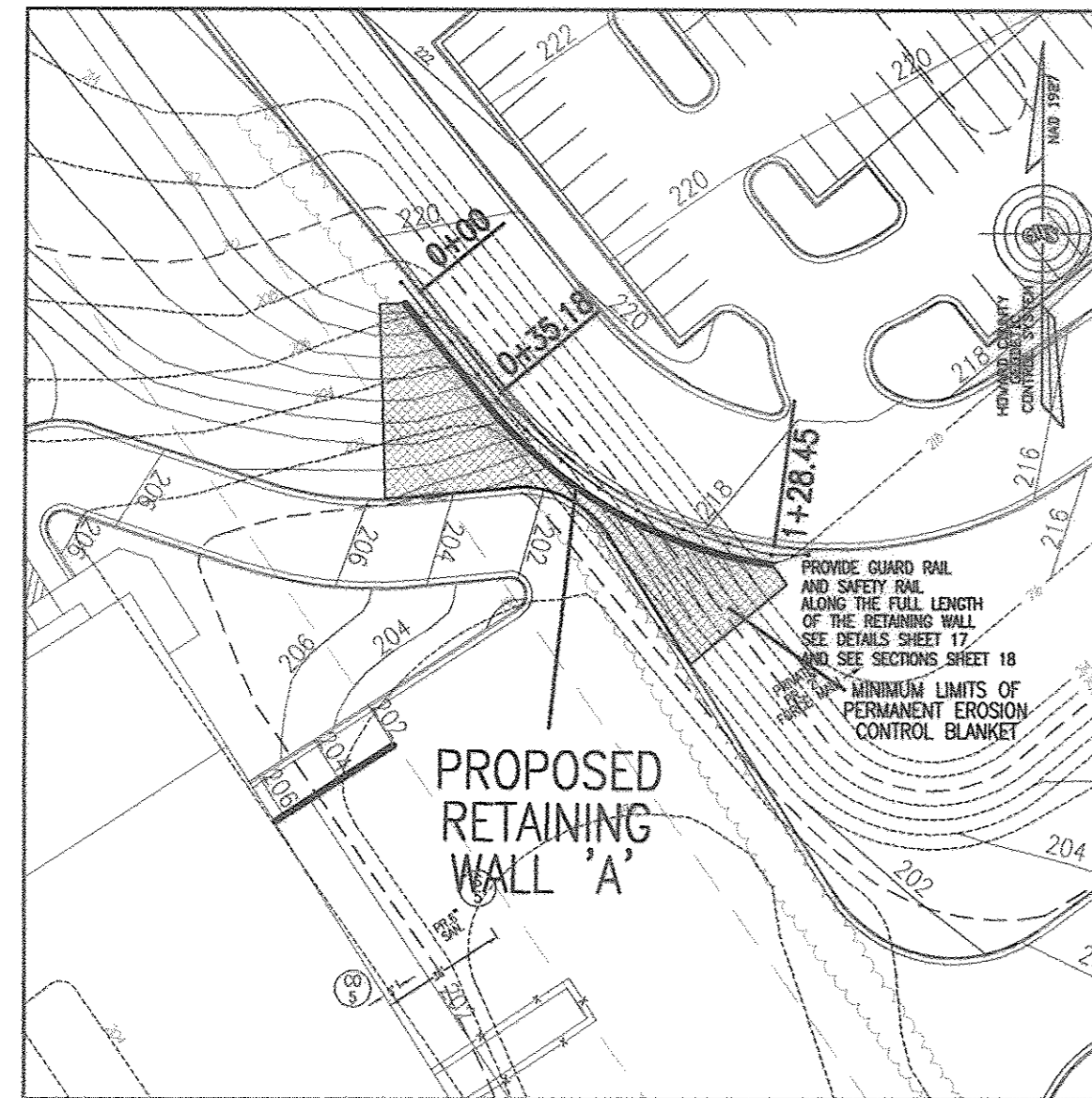
**ProLogis**  
 The Global Distribution Solution  
 Development Services  
 Incorporated  
 5200 Eisenhower Avenue  
 Second Floor  
 Alexandria, Virginia 22304  
 Phone: 703.751.9292  
 Fax: 703.751.0787

**ASBUILT CERTIFICATION**  
 I hereby certify that to the best of my knowledge and belief, this "As-built" truly represents existing field conditions including but not limited to sizes, diameters, line and grade, and elevations.  
 Date: 12-17-01  
 [Signature] William J. Burrows  
 Reg. Prof. Engineer, MD #17263

**PROLOGIS PARK I-95**  
 PARCEL A-14  
**STORM DRAIN PROFILES**  
 ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND

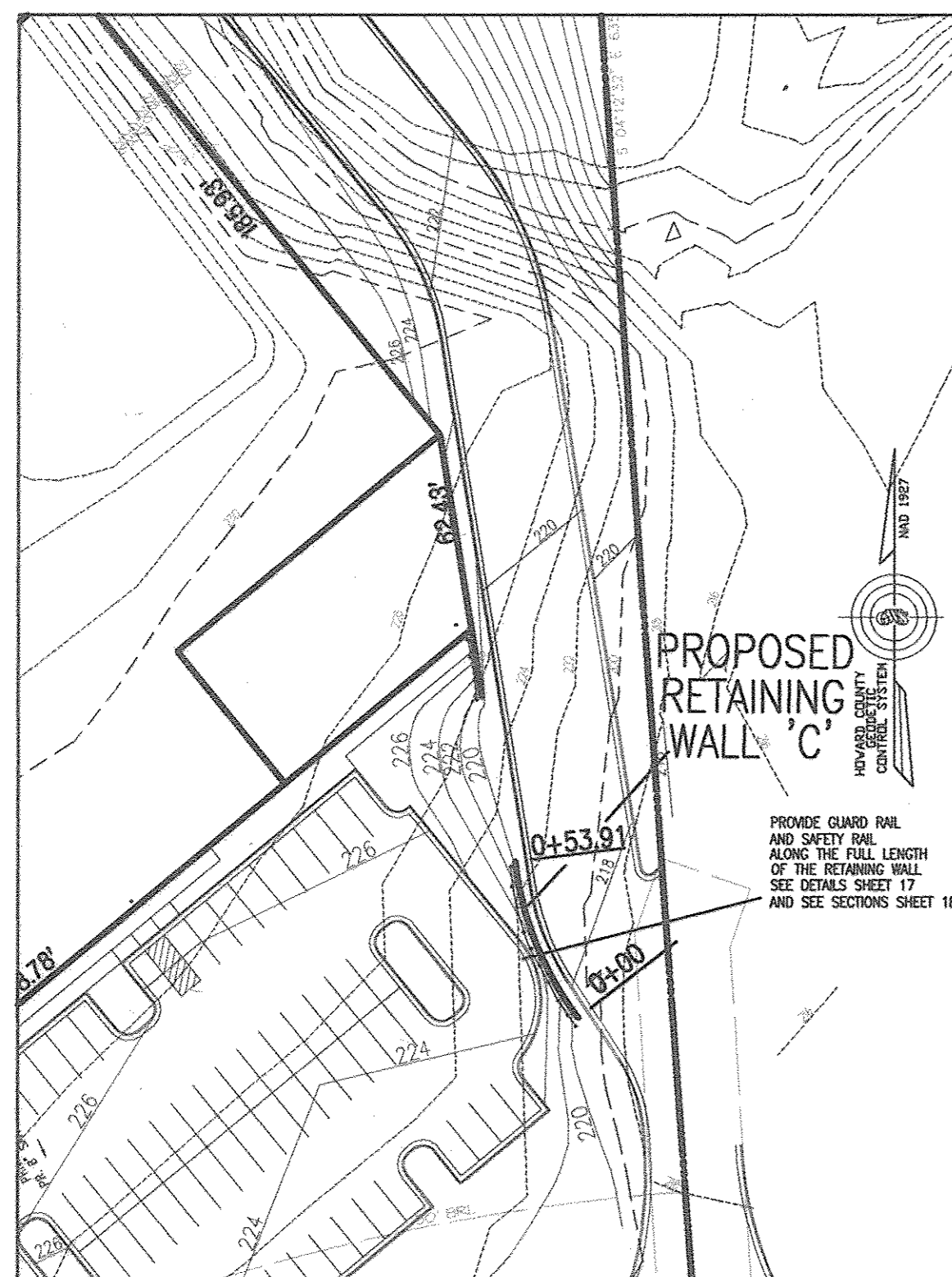
DATE	REVISIONS	JOB NO.:
07/24/00	REVISED STORM DRAIN	11354
08/15/00	REVISED PER COUNTY COMMENTS	SCALE: 06/23/00
11/03/00	REVISED FOR FINAL SUBMISSION TO COUNTY	DRAWN BY: GLC/CAO
11/10/00	RAISED BLDG 1 6" PER PROLOGIS	DESIGN BY: GLC/CAO
2-10-01	Lower Bldg. 10", Spoil Area Grading.	REVIEW BY: GLC/TFM
12-14-01	Change drawing to show "asbuilt" condition.	SHEET: 16 OF 23





### RETAINING WALL A LOCATION PLAN

SCALE: 1" = 50'



### RETAINING WALLS B & C LOCATION PLAN

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*Michael J. ...*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION  
 DATE: 12/10/00

*James ...*  
 CHIEF, DIVISION OF LAND DEVELOPMENT  
 DATE: 12/10/00

*Frank ...*  
 DIRECTOR, DEPARTMENT OF PLANNING AND ZONING  
 DATE: 12/20/00

## SEGMENTAL RETAINING WALL SPECIFICATIONS

### PART 1 - GENERAL

- 1.1 Work includes furnishing and installing segmental retaining wall units, geogrid reinforcement, wall fill, and backfill to the lines and grades shown on the construction drawings and as specified herein. The contract also includes the furnishing and installing of all appurtenant materials, equipment, and labor required for construction of the geogrid reinforced, segmental retaining wall.
- 1.2 REFERENCE STANDARDS
  - A. ASTM C90-75 (1981 rev) - Hollow Load Bearing Masonry Units
  - B. ASTM C140-75 (1981 rev) - Sampling and Testing Concrete Masonry Units
  - C. ASTM C145-75 (1981 rev) - Solid Load Bearing Concrete Masonry Units
  - D. Geosynthetic Research Institute (GRI), GRI-GG4 - Determination of Long Term Design Strength of Geogrids.
  - E. ASTM D 638 - Test Method for Tensile Properties of Plastic
  - F. ASTM D 1248 - Specification of Polyethylene Plastics Molding and Extrusion Materials
  - G. ASTM D 4218 - Test Method for Carbon Black Content in Polyethylene Compounds by the Muffle Furnace Technique
  - H. ASTM D 3034 - Specification for Polyvinyl Chloride (PVC) Pipe
- 1.3 DELIVERY, STORAGE AND HANDLING
  - A. Contractor should check the materials upon delivery to assure that proper material has been received.
  - B. Contractor should prevent excessive mud, wet cement, epoxy, and like materials which may affix themselves, from coming in contact with the materials.
  - C. Geogrids should be stored above -20 degrees F.
  - D. Contractor should protect the materials from damage. Damaged material should not be incorporated into the reinforced retaining wall.

### PART 2 - PRODUCTS

#### 2.1 DEFINITIONS

- A. Geogrid is a high density polyethylene grid, specifically fabricated for use as a soil reinforcement.
- B. Concrete retaining wall units are as detailed on the drawings and as specified herein.
- C. Geosynthetic Drainage Composites are polyethylene net structure with non-woven geotextiles bonded to both sides.
- D. Erosion Control Blankets consist of a web of polyolefin fibers securely bounded by polyolefin threads between two high strength polyolefin nets.
- E. Backfill is the soil which is used as fill for the reinforced soil mass.
- F. Foundation soil is the in-situ soil or controlled compacted fill placed below the bottom of the retaining wall and geogrid zone.

#### 2.2 MATERIALS

The contractor should submit manufacturer's catalog and samples of the proposed materials for approval by the project geotechnical engineer a minimum of seven days before the start of construction. Materials should be transported to the site only after approval of the proposed materials by the project geotechnical engineer.

#### A. Concrete Units

1. Masonry units should be Keystone Standard Retaining Wall Units. Substitution of other concrete units including Mesa Standard Units may be allowed with the prior approval of the Geotechnical Engineer.
2. Concrete wall units should have a minimum 28 day compressive strength of 3000 psi, in accordance with ASTM C-90. The concrete should have adequate freeze/thaw protection with a maximum moisture absorption of 6 to 8 percent.
3. Exterior dimensions may vary. Units are required to have a minimum of one square foot of face area each.
4. Units should have angled sides and capable of attaining concave and convex alignment curves in accordance with manufacturer's recommendations.
5. Units should be interlocked with non-corrosive reinforced fiberglass pins.
6. Units should be interlocked to provide a maximum of 1-1/4 inch of setback per block.

#### B. Leveling Pad

Material for leveling pad/footing should consist of compacted free-draining coarse aggregates meeting the requirements of ASTM #57 Graded Aggregate Base (GAB) per Maryland State Highway Administration Standard Specifications for Construction and Materials. A minimum of 6 inches deep and 36 inches wide compacted leveling pad is required.

#### C. Fiberglass Connecting Pins

1. Thermoset isophthalic polyester resin pultruded fiberglass reinforcements rods, minimum one-half inch in diameter.
2. Pins should have a minimum flexural strength of 128,000 psi and short beam shear of 6400 psi.
3. For substitute concrete units, use of other compatible connector system may be allowed with the prior approval of the Geotechnical Engineer.

#### D. Geogrid

Geogrid should be Tensor UX 1,400 and UX 1,500 or equivalent as approved by the geotechnical engineer. The geogrid should have a long term design strength of 1,333 pounds/foot for UX 1,400 and 2,190 pounds/foot for UX 1,500 geogrid.

#### E. Reinforced Backfill

Reinforced backfill soils should be non-plastic, controlled fill meeting the requirements of AASHTO A-2-4 or more granular. Use of on-site material with AASHTO Class A-4 may be allowed with the prior approval of the project geotechnical engineer. The AASHTO Class A-5, A-6 or A-7 materials must be stabilized with five percent lime for use as Reinforced Backfill.

#### F. Controlled Fill

Controlled Fill soils to be placed outside the Reinforced Backfill area and where specified should be soils meeting the requirements of AASHTO A-2-4 or more granular. Use of on-site material with AASHTO Class A-4 may be allowed with the prior approval of the project geotechnical engineer. The AASHTO Class A-5, A-6 or A-7 materials must be stabilized with five percent lime for use as Controlled Fill.

#### G. Drainage Pipe

The drainage pipes should be perforated or slotted PVC pipe manufactured in accordance with ASTM D-3034.

#### H. Drainage Composite

Drainage Composite should be Tensor 4205 as manufactured by The Tensor Corporation or Miraflex 5000 manufactured by Miraflex Geosynthetic Products or other drainage composites approved by the project geotechnical engineer.

#### I. Erosion Control Blanket

Erosion Control Blanket should be Tensor TB 1000 manufactured by The Tensor Corporation or approved equivalent.

#### J. Filter Fabric

Filter Fabric should be non-woven, polypropylene geotextile, 140 N manufactured by Nicolon Miraflex Group or approved equivalent.

### PART 3 - EXECUTION

#### A. Excavation

1. The contractor should excavate to the lines and grades shown on the construction drawings. Under no circumstances should the excavation lines and grades be exceeded, except with owner's approval. The contractor should protect the excavation from sloughing by placing a membrane over the face of the excavation.
2. Excavations should be sloped or otherwise supported in accordance with Occupational Safety and Health Administration (OSHA) and other local and state regulations.

#### B. Foundation Subgrade Preparation

1. Foundation soil should be excavated as required for installation of leveling pad, geogrid and other elements and as shown on the construction drawings.
2. Foundation soil should be examined by the Engineer to assure that the actual foundation soil strength meets or exceeds assumed design strength. Soils not meeting required strength should be removed and replaced with controlled, compacted material.
3. Over-excavated areas should be filled with select and approved material and compacted to 92 percent of maximum dry density in accordance with the Modified Proctor, ASTM D-1557.
4. Allowable bearing pressure for natural and controlled, compacted fill soils should be at least 3,500 psf for the retaining wall.
5. The exposed foundation subgrade should be proofrolled with a loaded dump truck. Any soft or unstable areas identified during proofrolling should be overexcavated and backfilled with Controlled Fill.
6. The existing fill within the bearing zone of the retaining walls (including the Concrete Unit, Leveling Pad, and the Reinforced Backfill) should be evaluated by a Maryland Registered Geotechnical Engineer to verify their competency. The existing fill determined to be unsuitable should be excavated and replaced with approved Controlled Fill.
7. Fill required to establish the sloping surface in front of the wall should consist of Controlled Fill and should be placed, compacted and field tested in accordance with the requirements specified herein.

#### C. Leveling Pad

1. The leveling pad should be placed as shown on the construction drawings with a minimum thickness of 6 inches.
2. Leveling pad materials should be installed upon undisturbed in-situ soils or controlled, compacted backfill.
3. Leveling Pad should be prepared to insure complete contact of retaining wall unit with base. Gaps should not be allowed.

#### D. Unit Installation

1. First course of concrete wall units should be placed on the footing. The units should be checked for level and alignment. The first course is the most important to insure accurate and acceptable results.
2. Insure that units are in full contact with base.
3. Units are placed side by side for full length of wall alignment. Alignment may be done by means of a string line or offset from base line.
4. Install fiberglass connecting pin.
5. Lay up each course insuring that the connecting pins are inserted through front slot of the unit, and into the receiving slot in the course beneath. Repeat procedure to the extent of wall height.
6. At the end of each course where the wall changes elevation, units should be turned into the backfill. Units should be laid as to create the minimum radius possible. Unless otherwise shown on the drawings, a minimum of one unit should be installed into the grade. Only the front face of the units should be visible from the side of the wall.
7. Standard Units should be used to make convex and concave curves in accordance with manufacturer's recommendations.
8. Cap units should be installed and bonded with construction adhesive or epoxy cement as required by manufacturer.
9. Contractor should provide positive drainage for the back of the retaining wall during construction.

#### E. Geogrid Installation

1. All utilities in the vicinity of any retaining wall or geogrid reinforcement must be installed and properly backfilled prior to placing the geogrid soil reinforcement or constructing the wall.
2. The geogrid soil reinforcement should be laid horizontally on compacted backfill, connected to the concrete wall units. Hook grid over the fiberglass connecting pin, pull taut, and anchor before backfill is placed on the geogrid.
3. Slack in the geogrid at the wall unit connections should be removed in a manner, and to such a degree, as approved by the Engineer.
4. Geogrid should be laid at the proper elevation and orientation as shown on the construction drawings or as directed by the Engineer.
5. Correct orientation (roll direction) of the geogrid should be verified by the Contractor.
6. Geogrid should be secured in-place with staples, pins, sand bags, or backfill as required by fill properties, fill placement procedures, or weather conditions, or as directed by the Engineer.
7. Overlaps
  - a. Uniaxial geogrid does not need to be overlapped in the across the roll direction, except to contain the fill at the slope face when wrap-around facing is used. Uniaxial grid should be overlapped 48" in the rolled direction.
  - b. A layer of soil a minimum of 4 inches in thickness should be spread between uniaxial geogrid layers in the area to be overlapped, or as directed.
8. Fill Placement
  1. All backfill material should be placed in no more than 8-inch lifts and compacted to 92 percent of the Modified Proctor (ASTM D-1557).
  2. Backfill should be placed, spread, and compacted in such a manner that minimizes the development of wrinkles in and/or movement of the geogrid.
  3. Only hand-operated compaction equipment should be allowed within 4 feet of the wall face.
  4. Backfill should be placed from the wall outward to insure that the geogrid remains taut.
  5. Tracked construction equipment should not be operated behind or above the wall.
  6. Rubber-tired equipment may pass over the geogrid reinforcement at slow speeds, less than 10 MPH. Sudden braking and sharp turning should be avoided.
  7. Place filter fabric between the unit core fill and the reinforced backfill as shown on plans. The filter fabric should be embedded a minimum of two feet into the reinforced fill.
  8. The finished sloping surface on the toe side of Retaining Walls A and B should be protected by installing the permanent erosion control blanket and seeding in accordance with project requirements.

#### G. DRAINAGE

1. Drainage fill should be placed behind the wall to the limits shown. The drainage fill should be a minimum of 12-inches thick. The drainage fill should be ASTM #57 stone. The drainage fill should be wrapped in filter fabric (Miraflex 140N or equal) as shown on the drawings.
2. Positive drainage should be maintained during and after construction. Soils within the reinforced zone that become wet during construction should be dried to optimum moisture or removed.
3. Back drainage is required to prevent the soil backfill from becoming saturated. THIS WALL WAS NOT DESIGNED TO RESIST HYDROSTATIC PRESSURE.
4. Install the drainage composite, perforated drainage pipes, lateral drainage pipes incrementally along with installation of concrete units and placement of fill.

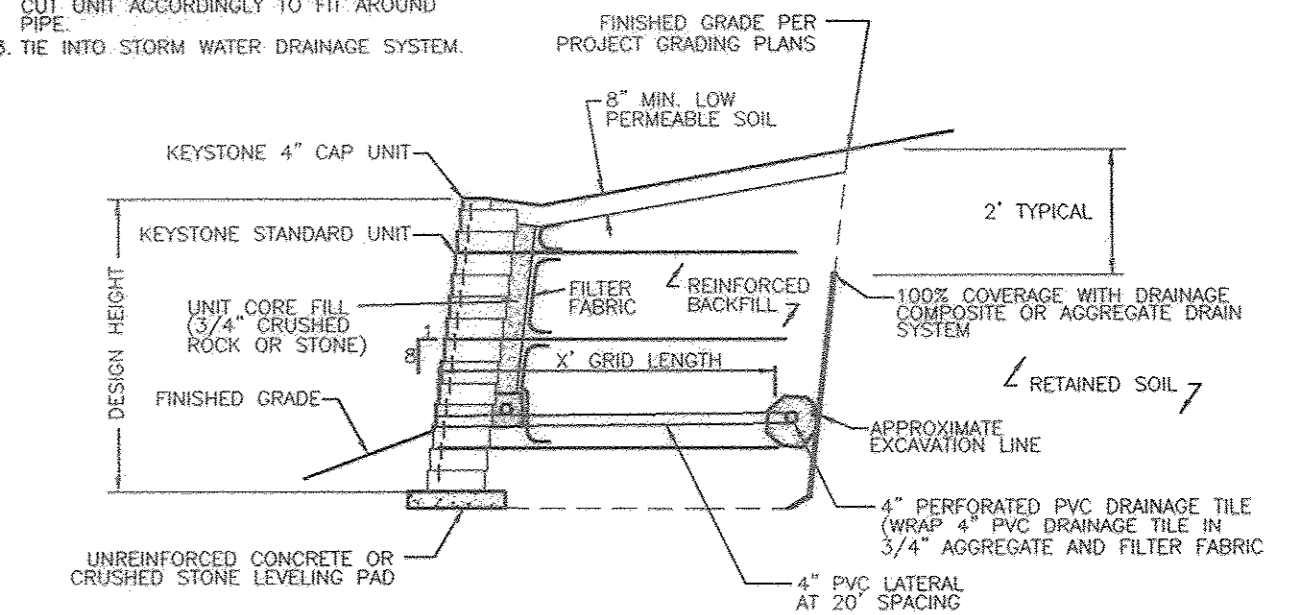
### PART 4 - CONSTRUCTION OBSERVATION AND TESTING

- A. The required leveling pad subgrade bearing capacity should be certified by a Maryland Registered Professional Geotechnical Engineer prior to footing placement.
- B. Construction of retaining wall should be performed under the observations of a Maryland Professional Engineer. Continuous testing should be performed to verify material engineering properties. Upon completion of the work, the engineer should submit a signed and sealed report stating that the retaining wall was constructed in accordance with the plans, specifications, and accepted modifications (if applicable).

### PART 5 - DESIGN CRITERIA

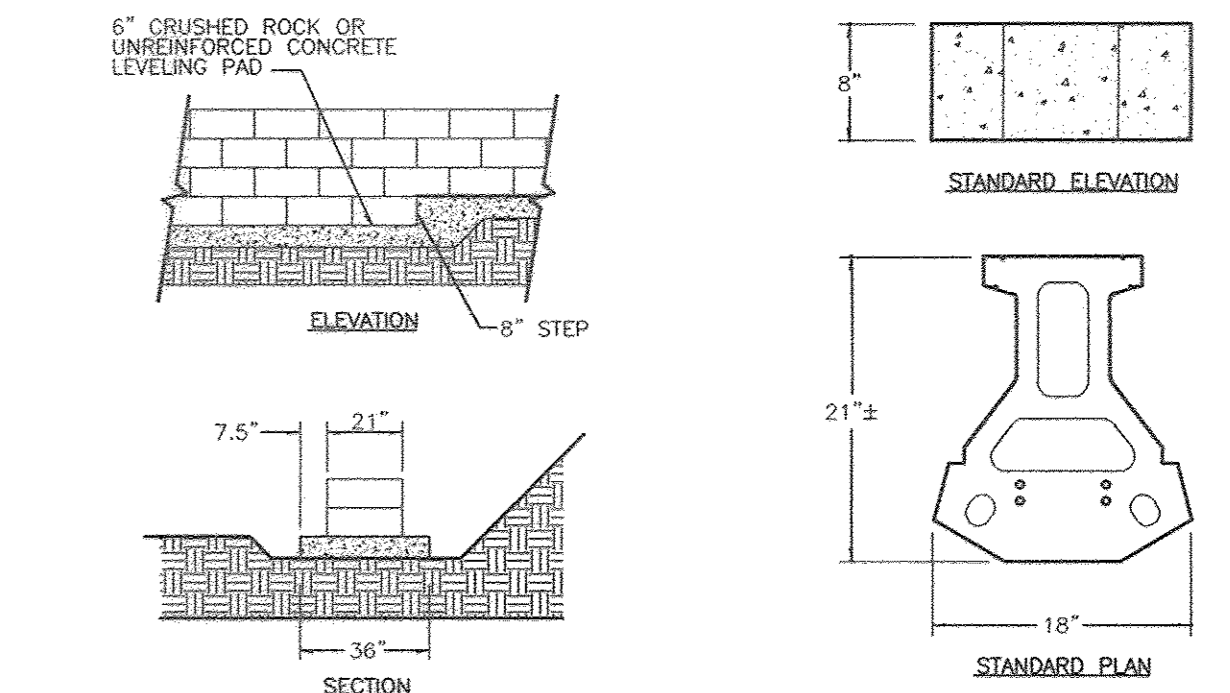
1. Required minimum allowable foundation bearing pressure is 3,500 psf.
2. Design internal friction angle = 30 degrees.
3. Design moist unit weight = 130 pcf.
4. Retaining walls area not designed to resist hydrostatic pressure.
5. The design includes a traffic surcharge of 250 psf on the top of the wall.
6. Foundation soil internal friction angle = 30 degrees and cohesion = 0 psf for Wall A.
7. Foundation soil internal friction angle = 13 degrees and cohesion = 150 psf for Walls B and C.

**DRAIN TILE OUTLET:**  
 1. DAYLIGHT AT ENDS OF WALLS.  
 2. DAYLIGHT THROUGH WALL AT 20' O.C.;  
 CUT UNIT ACCORDINGLY TO FIT AROUND PIPE.  
 3. TIE INTO STORM WATER DRAINAGE SYSTEM.



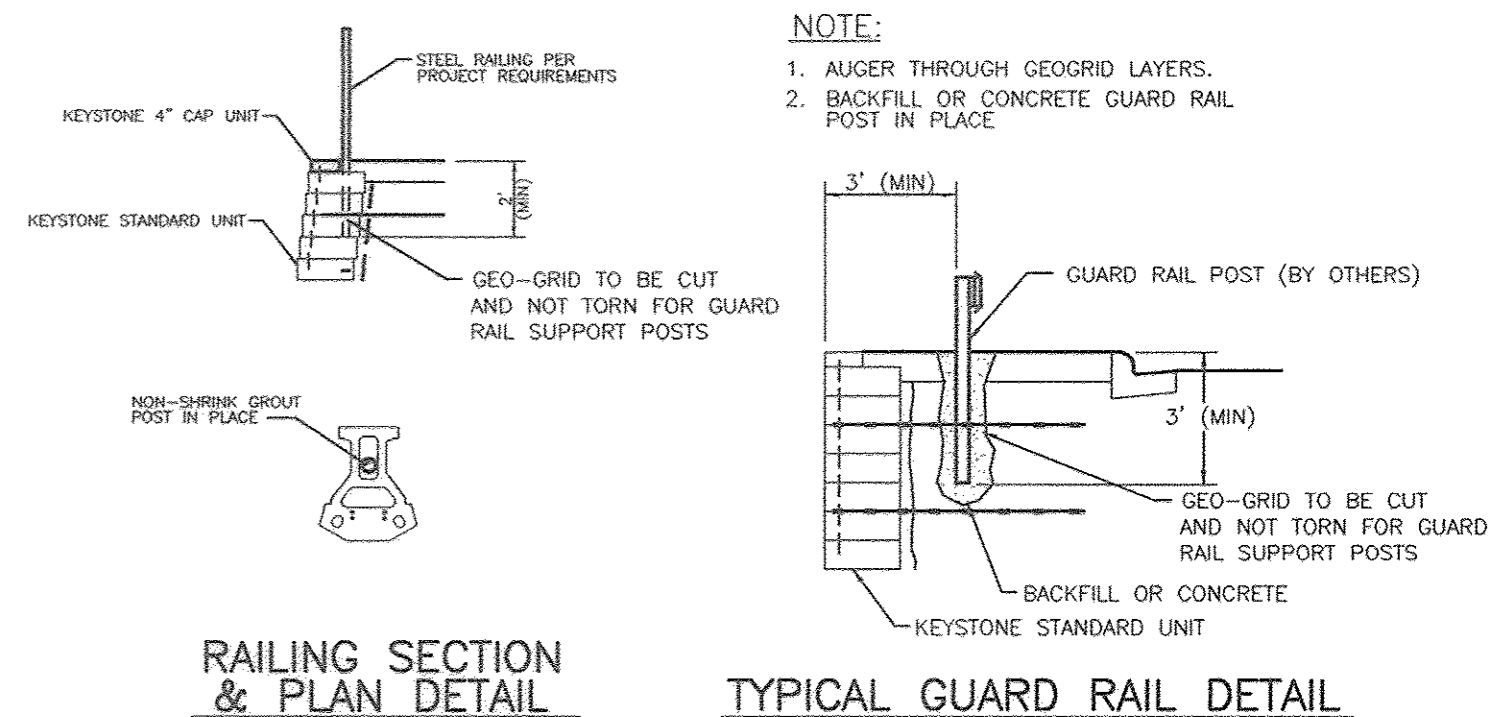
### TYPICAL WALL SECTION

STANDARD UNIT - NEAR VERTICAL SETBACK



### LEVELING PAD DETAIL

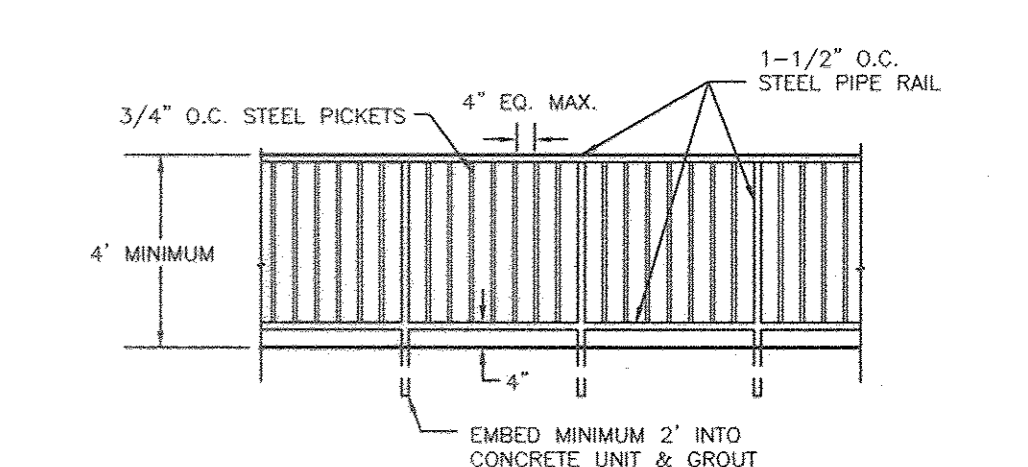
### STANDARD UNIT



### RAILING SECTION & PLAN DETAIL

STANDARD UNIT - 1\"/>

### TYPICAL GUARD RAIL DETAIL

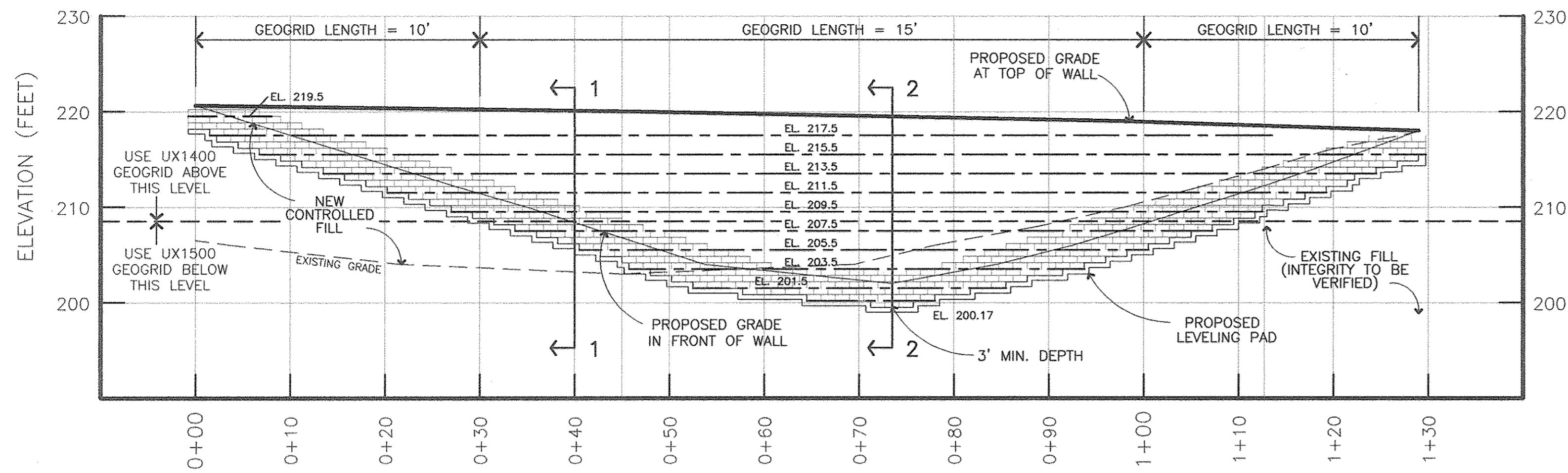


### SAFETY RAIL

Notes:  
 1. Safety rail to be primed with 1 coat of Koppers 622 rust penetrating primer, or approved equal, then painted with 2 coats of Duron New Balance Modified Black (or approved equal). Paint to be applied at min. 1.5 mil. per coat.

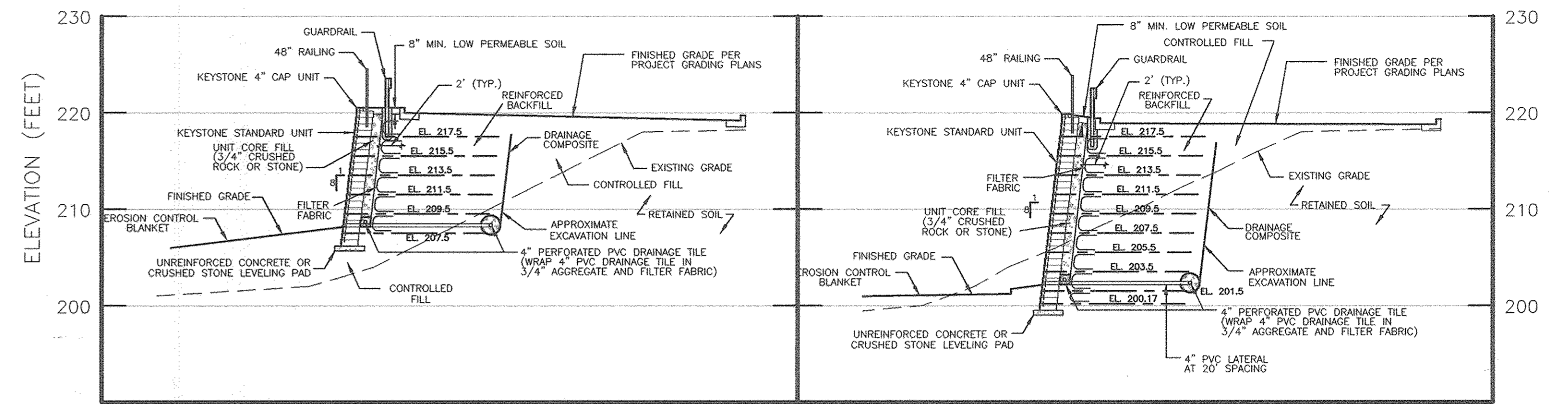
**C-16**

		<b>GEO-TECHNOLOGY ASSOCIATES, INC.</b> GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS 9090 Junction Drive, Suite 9 Annapolis Junction, Maryland 20701 (410) 792-9446 or (301) 470-4470 FAX (410) 792-7395	
		<b>TROY HILL CORPORATE CENTER</b> <b>RETAINING WALLS A, B &amp; C</b> <b>PLANS, NOTES &amp; DETAILS</b> PARCEL A-14 HOWARD COUNTY, MARYLAND	
DATE	REVISIONS	DATE	REVISIONS
11/03/00	REVISED FOR FINAL SUBMISSION TO COUNTY	11/10/00	RAISED BLDG 1 6\"/>
12/10/00	AS-BUILT DRAWING		



**RETAINING WALL A PROFILE**

HORIZONTAL SCALE: 1" = 10'  
VERTICAL SCALE: 1" = 10'

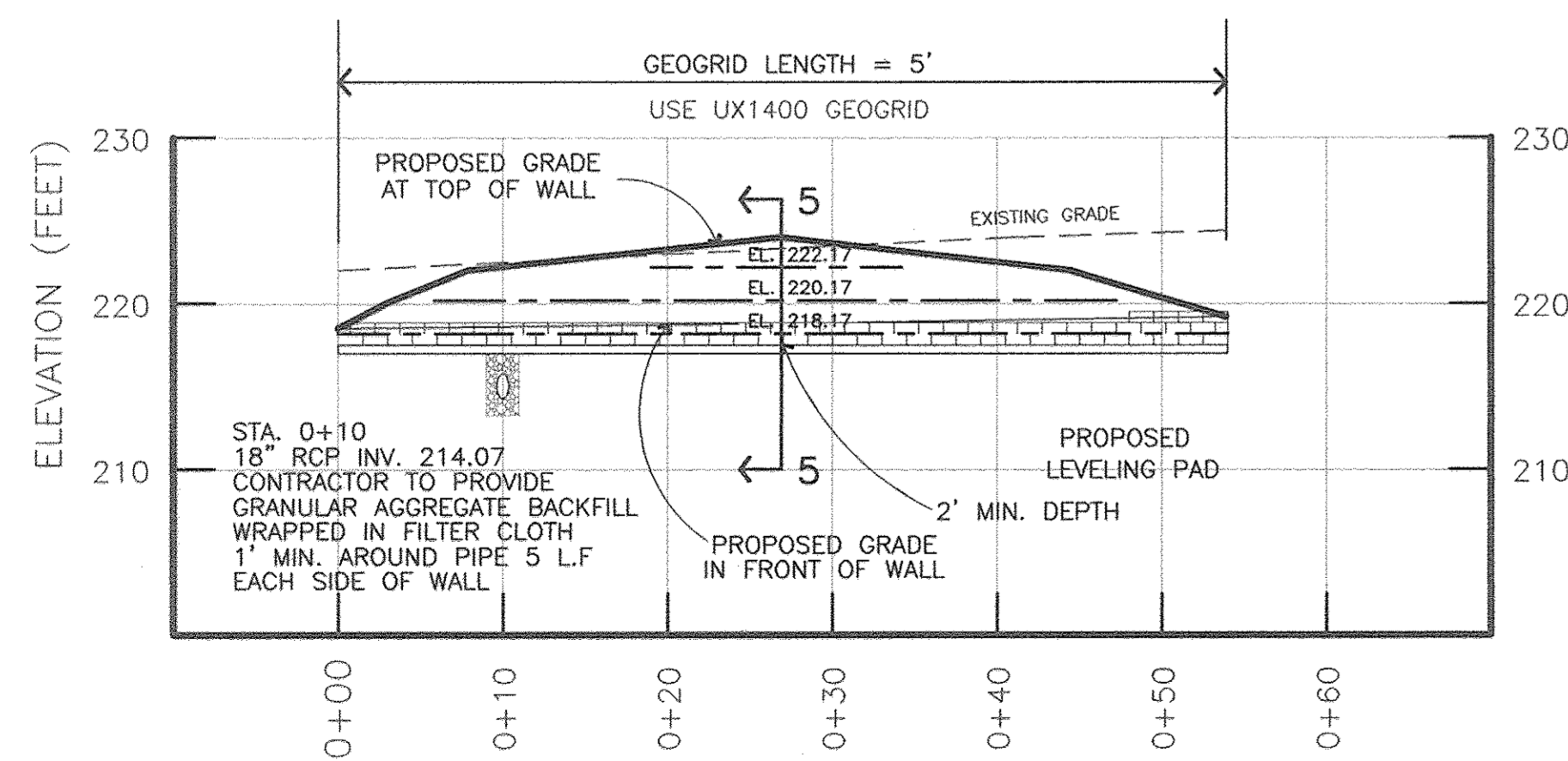


**SECTION 1**

HORIZONTAL SCALE: 1" = 10'  
VERTICAL SCALE: 1" = 10'

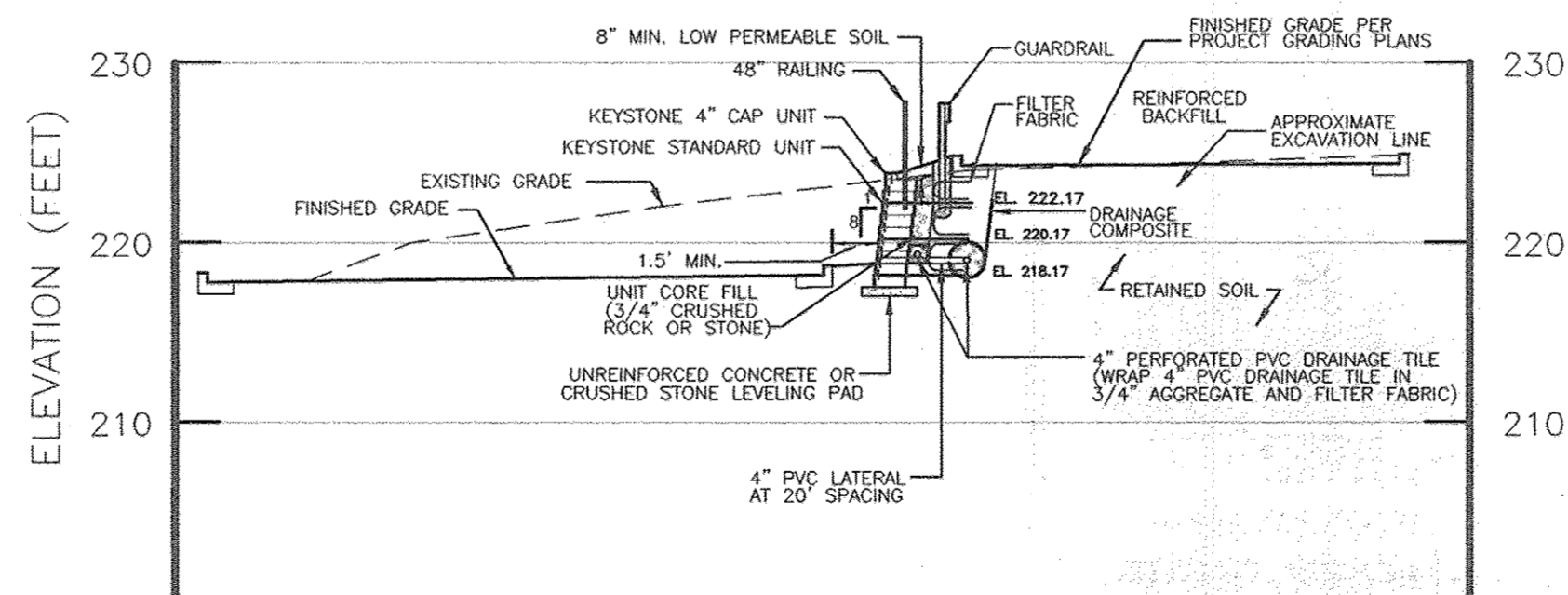
**SECTION 2**

HORIZONTAL SCALE: 1" = 10'  
VERTICAL SCALE: 1" = 10'



**RETAINING WALL C PROFILE**

HORIZONTAL SCALE: 1" = 10'  
VERTICAL SCALE: 1" = 10'



**SECTION 5**

HORIZONTAL SCALE: 1" = 10'  
VERTICAL SCALE: 1" = 10'

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Carol Dammann* 12/18/00  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION CE DATE  
*Wanda Tomala* 12/21/00  
 CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*James J. Smith* 12/20/00  
 DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

**C-17**



**GEO-TECHNOLOGY ASSOCIATES, INC.**

GEOTECHNICAL AND ENVIRONMENTAL CONSULTANTS  
 9090 Junction Drive, Suite 9  
 Annapolis Junction, Maryland 20701  
 (410) 792-9446 or (301) 470-4470  
 FAX (410) 792-7395



**TROY HILL  
CORPORATE CENTER  
RETAINING WALLS A, B & C  
PROFILES & SECTIONS**

PARCEL A-14 HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.: 11354
11/03/00	REVISED FOR FINAL SUBMISSION TO COUNTY	SCALE: AS SHOWN
11/10/00	RAISED BLDG 1 6" PER PROLOGIS	DATE: 6-30-00
2/10/01	LOWER BLDG 10", SPOIL AREA GRADING, PARCEL	DRAWN BY: TSZ
12/12/01	AS-BUILT DRAWING	DESIGN BY: RPM
		REVIEW BY: MG
		SHEET: 18 OF 25

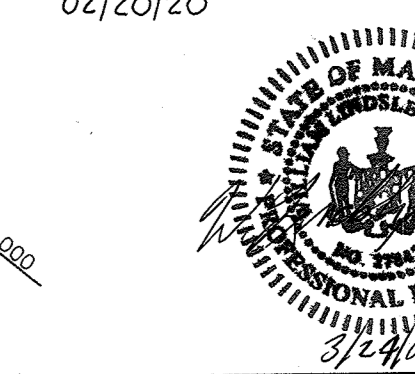
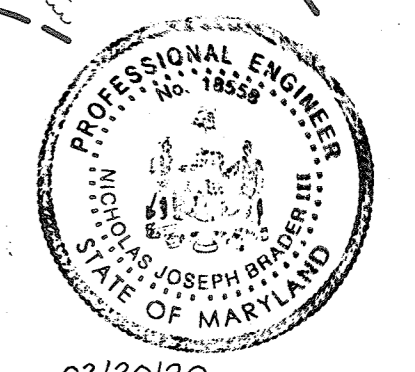
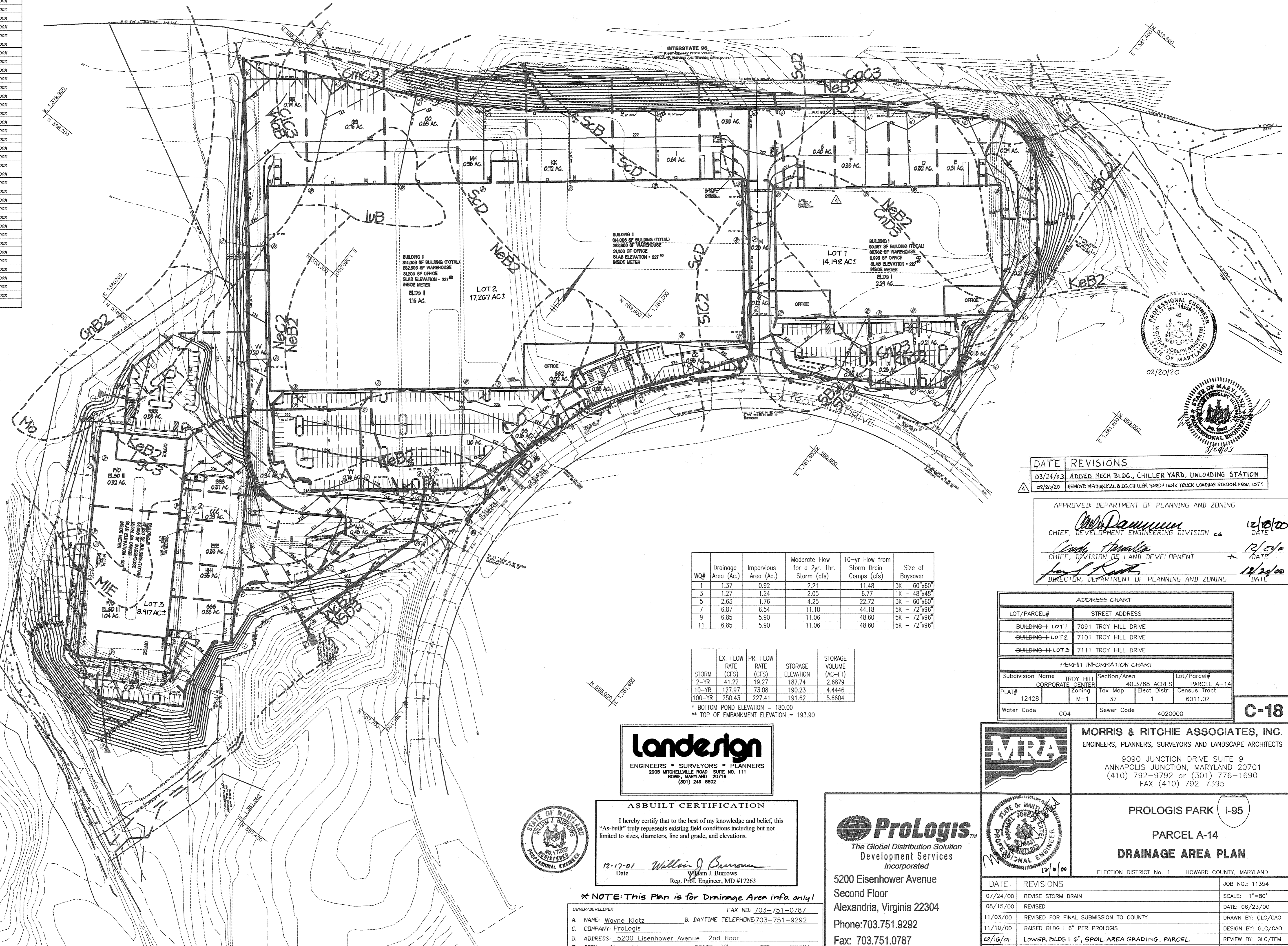
**ASBUILT**

SDP-01-10

AREA AND "C" FACTOR TABULATION

INLET #	ZONING	SUBAREA	AREA	"C" FACTOR	% IMPERVIOUS
1	M-1	RRR	0.85	0.95	100%
3	M-1	MMM	0.23	0.95	100%
5	M-1	HHH	0.55	0.95	100%
7	M-1	QQQ	0.33	0.95	100%
9	M-1	EEE	0.33	0.95	100%
11	M-1	CCC	0.23	0.95	100%
13	M-1	BBB	0.37	0.95	100%
15	M-1	AAA	0.48	0.95	100%
16	M-1	XX	0.34	0.95	100%
19	M-1	YY	0.76	0.95	100%
21	M-1	VV	0.20	0.95	100%
25	M-1	RR	0.79	0.95	100%
27	M-1	OO	0.76	0.95	100%
29	M-1	DD	0.63	0.95	100%
31	M-1	MM	0.58	0.95	100%
33	M-1	KK	0.72	0.95	100%
35	M-1	II	1.10	0.95	100%
37	M-1	GG	0.18	0.95	100%
38	M-1	GG2	0.02	0.95	100%
39	M-1	EE	0.25	0.95	100%
41	M-1	CC	0.33	0.95	100%
43	M-1	DD	0.12	0.95	100%
45	M-1	MM	0.28	0.95	100%
47	M-1	JJ	0.58	0.95	100%
49	M-1	II	0.69	0.95	100%
51	M-1	GG	0.4	0.95	100%
53	M-1	FF	0.38	0.95	100%
55	M-1	DD	0.32	0.95	100%
57	M-1	BB	0.31	0.95	100%
59	M-1	ZZ	0.43	0.95	100%
61	M-1	XX	0.28	0.95	100%
63	M-1	VV	0.25	0.95	100%
65	M-1	TT	0.18	0.95	100%
67	M-1	SS	0.21	0.95	100%
69	M-1	RR	0.29	0.95	100%

\* ASSUMED WORST CASE "C" 0.95 AND 100% IMPERVIOUS



DATE	REVISIONS
03/24/03	ADDED MECH BLDG., CHILLER YARD, UNLOADING STATION
02/20/20	REMOVE MECHANICAL BLDG., CHILLER YARD TANK TRUCK LOADING STATION FROM LOT 1

APPROVED: DEPARTMENT OF PLANNING AND ZONING

*William J. Burrows* 12/10/00  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION cc DATE

*Joseph B. Smith* 12/10/00  
 CHIEF, DIVISION OF LAND DEVELOPMENT cc DATE

*Paul R. Smith* 12/24/00  
 DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

WQ#	Drainage Area (Ac.)	Impervious Area (Ac.)	Moderate Flow for a 2yr. 1hr. Storm (cfs)	10-yr Flow from Storm Drain Comps (cfs)	Size of Baysaver
1	1.37	0.92	2.21	11.48	3K - 60"x60"
3	1.27	1.24	2.05	6.77	1K - 48"x48"
5	2.63	1.76	4.25	22.72	3K - 60"x60"
7	6.87	6.54	11.10	44.18	5K - 72"x96"
9	6.85	5.90	11.06	48.60	5K - 72"x96"
11	6.85	5.90	11.06	48.60	5K - 72"x96"

STORM	EX. FLOW RATE (CFS)	PR. FLOW RATE (CFS)	STORAGE ELEVATION	STORAGE VOLUME (AC-FT)
2-YR	41.22	19.27	187.74	2.6879
10-YR	127.97	73.08	190.23	4.4446
100-YR	250.43	227.41	191.62	5.6604

\* BOTTOM POND ELEVATION = 180.00  
 \*\* TOP OF EMBANKMENT ELEVATION = 193.90

ADDRESS CHART	
LOT/PARCEL#	STREET ADDRESS
-BUILDING I LOT 1	7091 TROY HILL DRIVE
-BUILDING II LOT 2	7101 TROY HILL DRIVE
-BUILDING III LOT 3	7111 TROY HILL DRIVE

PERMIT INFORMATION CHART				
Subdivision Name	TROY HILL CORPORATE CENTER	Section/Area	40.3768 ACRES	Lot/Parcel#
PLAT#	12428	Zoning	M-1	Parcel A-14
Water Code	CO4	Tax Map	37	Census Tract
		Elect. Distr.	1	6011.02
		Sewer Code	4020000	

C-18

**Landesign**  
 ENGINEERS • SURVEYORS • PLANNERS  
 2905 MITCHELLVILLE ROAD SUITE NO. 111  
 BOWIE, MARYLAND 20716  
 (301) 249-8802



ASBUILT CERTIFICATION

I hereby certify that to the best of my knowledge and belief, this "As-built" truly represents existing field conditions including but not limited to sizes, diameters, line and grade, and elevations.

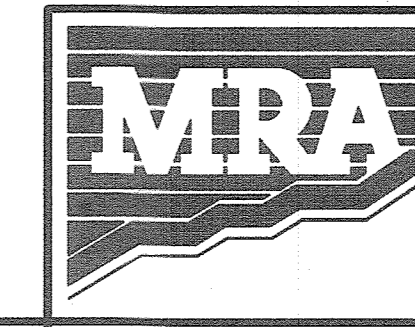
12-17-01 *William J. Burrows*  
 Date *William J. Burrows*  
 Reg. Prof. Engineer, MD #17263

\* NOTE: This Plan is for Drainage Area info only!

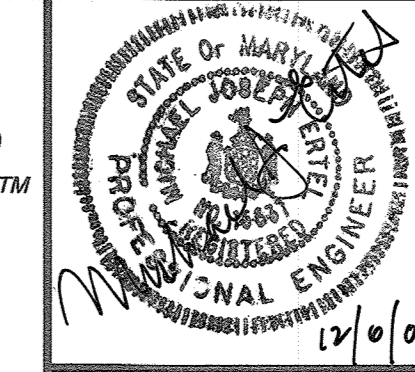
OWNER/DEVELOPER	FAX NO: 703-751-0787
A. NAME: Wayne Klotz	B. DAYTIME TELEPHONE: 703-751-9292
C. COMPANY: ProLogis	
D. ADDRESS: 5200 Eisenhower Avenue 2nd floor	
E. CITY: Alexandria STATE: VA. ZIP: 22304	

**ProLogis**  
 The Global Distribution Solution  
 Development Services  
 Incorporated

5200 Eisenhower Avenue  
 Second Floor  
 Alexandria, Virginia 22304  
 Phone: 703.751.9292  
 Fax: 703.751.0787



**MORRIS & RITCHIE ASSOCIATES, INC.**  
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
 9090 JUNCTION DRIVE SUITE 9  
 ANNAPOLIS JUNCTION, MARYLAND 20701  
 (410) 792-9792 or (301) 776-1690  
 FAX (410) 792-7395



**PROLOGIS PARK I-95**  
 PARCEL A-14  
**DRAINAGE AREA PLAN**  
 ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.: 11354
07/24/00	REVISE STORM DRAIN	SCALE: 1"=80'
08/15/00	REVISED	DATE: 06/23/00
11/03/00	REVISED FOR FINAL SUBMISSION TO COUNTY	DRAWN BY: GLC/CAO
11/10/00	RAISED BLDG I 6" PER PROLOGIS	DESIGN BY: GLC/CAO
02/16/01	LOWER BLDG I 6", SPOIL AREA GRADING, PARCEL	REVIEW BY: GLC/TFM
12/12/01	AS-BUILT DRAWING	SHEET: 19 of 25

ASBUILT

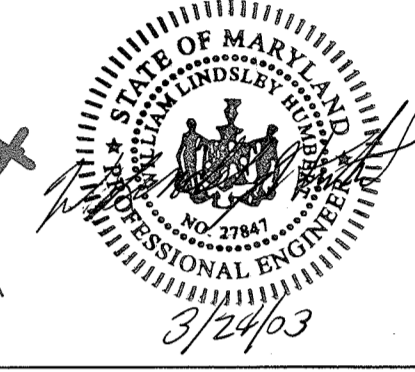
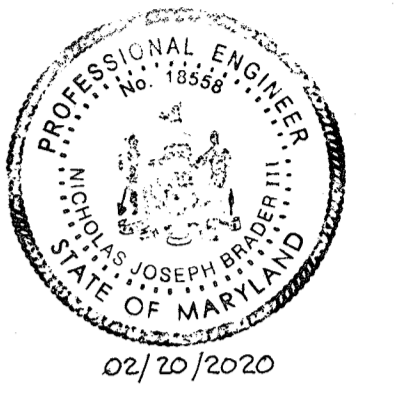
SDP-01-10

1005' LOADING ADJACENT TO R/W  
SUBJECT TO SHADE TREE REQ'T.  
ONLY DUE TO TOPOGRAPHY TYPE 'D'

**LANDSCAPING AS-BUILT CERTIFICATION**  
I hereby certify that to the best of my knowledge and belief, this "As-built" truly represents existing field conditions including but not limited to size, species and location.  
Date: 11/22/00  
Michael Nagy  
Reg. Prof. Landscape Architect, MD #

**LEGEND**

- DECIDUOUS TREES
- FLOWERING TREES
- EVERGREEN TREES
- SHRUBS



**3b** 245' LOADING ADJACENT TO R/W TYPE 'D' SCREENING

205' NON-RES. TO R/W TYPE 'B' SCREENING **3a**

MATCHLINE SHT 21 OF 23

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*John DeWitt* 12/10/00  
CHIEF, DEVELOPMENT ENGINEERING DIVISION DATE  
*Cinda Hamilton* 12/10/00  
CHIEF, DIVISION OF LAND DEVELOPMENT DATE  
*John DeWitt* 12/20/00  
DIRECTOR, DEPARTMENT OF PLANNING AND ZONING DATE

KEY	QTY	BOTANICAL NAME	COMMON NAME	REMARKS
T-1	21	Fraxinus pennsylvanica 'Marshall's'	Marshall's Seedless Green Ash	2 1/2" - 3" cal.
T-2	6	Acerous canadensis	Sweetgum	2 1/2" - 3" cal.
T-3	4	Acerous palmistris	Pin Oak	2 1/2" - 3" cal.
F-1	5	Cercis canadensis	Eastern Redbud	6' - 7' hgt.
F-3	2	Koeleruteria paniculata	Golden Raintree	1 3/4" - 2" cal.
E-1	22	Juniperus virginiana	Eastern Red Cedar	5' - 6' B & B
E-2	11	Pinus strobus	Eastern White Pine	6' - 7' B & B
S-1	18	Euonymus alatus 'Compactus'	Dwarf Winged Euonymus	2 1/2" - 3 1/2" B & B
S-2	9	Ilex glabra 'COMPICTA'	Dwarf Inkberry	2 1/2" - 3 1/2" B & B
S-3	45	Nanomia aquifolium	Oregon Grapeholly	2 1/2" - 3 1/2" cal.
F-2	1	Cornus crassifolia inermis	Thornless Cockspear Hawthorn	6'-10' ht.

DATE	REVISIONS	LOT
02/20/00	REMOVE MECHANICAL BUILDING, CHILLER YARD & TANK TRUCK LOADING STATION FROM	LOT 1

**MORRIS & RITCHIE ASSOCIATES, INC.**  
ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
9090 JUNCTION DRIVE, SUITE 9  
ANNAPOLIS JUNCTION, MARYLAND 20701  
(410) 792-9792 or (301) 776-1690  
FAX (410) 792-7395

**PROLOGIS**  
The Global Distribution Solution  
Development Services  
Incorporated  
5200 Eisenhower Avenue  
Second Floor  
Alexandria, Virginia 22304  
Phone: 703.751.9292  
Fax: 703.751.0787

DATE	REVISIONS	JOB NO.
8/15/00	REV. PER COUNTY COMMENTS	SCALE: 1" = 40'
11/03/00	REVISED FOR FINAL SUBMISSION TO COUNTY	DATE: 06/23/00
11/10/00	RAISED BLDG 1 6" PER PROLOGIS	DRAWN BY: GLC/CAO
02/10/01	LOWER BLDG 1 6", SPILL AREA GRADING, PARCEL	DESIGN BY: GLC/CAO
12/12/01	AS-BUILT DRAWING	REVIEW BY: MRA
03/24/03	ADDED MECH BLDG., CHILLER YARD, UNLOADING STATION	SHEET 2030 OF 23 25

OWNER: Wayne Klotz FAX NO: 703-751-0787  
A. NAME: Wayne Klotz B. DAYTIME TELEPHONE: 703-751-9292  
C. COMPANY: ProLogis  
D. ADDRESS: 5200 Eisenhower Avenue 2nd floor  
E. CITY: Alexandria STATE: VA. ZIP: 22304  
DEVELOPER: Wayne Klotz FAX NO: 703-751-0787  
A. NAME: Wayne Klotz B. DAYTIME TELEPHONE: 703-751-9292  
C. COMPANY: ProLogis  
D. ADDRESS: 5200 Eisenhower Avenue 2nd floor  
E. CITY: Alexandria STATE: VA. ZIP: 22304

**Developer's/Builder's Certificate**  
I / We certify that the landscaping shown on this plan will be done according to the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.  
*Denis P. Burt* 11/22/00  
Name Date

The owner, tenant, and / or their agents shall be responsible for maintenance of the required landscaping, including both plant materials and berms, fences and walls. All plant materials shall be maintained in good growing condition, and when necessary, replaced with new materials to ensure continued compliance with applicable regulations. All other required landscaping shall be permanently maintained in good condition, and when necessary, repaired or replaced.

635' INTERIOR PROPERTY LINE SCREENING REQUIREMENT N/A

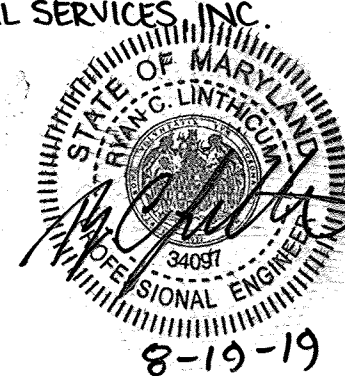
890' PARKING ADJACENT TO R/W TYPE 'E' SCREENING

LOT 2  
17267 AC±

BUILDING II  
314,006 SF BUILDING (TOTAL)  
282,806 SF WAREHOUSE  
31,200 SF OFFICE  
SLAB ELEVATION = 227.00  
INSIDE METER

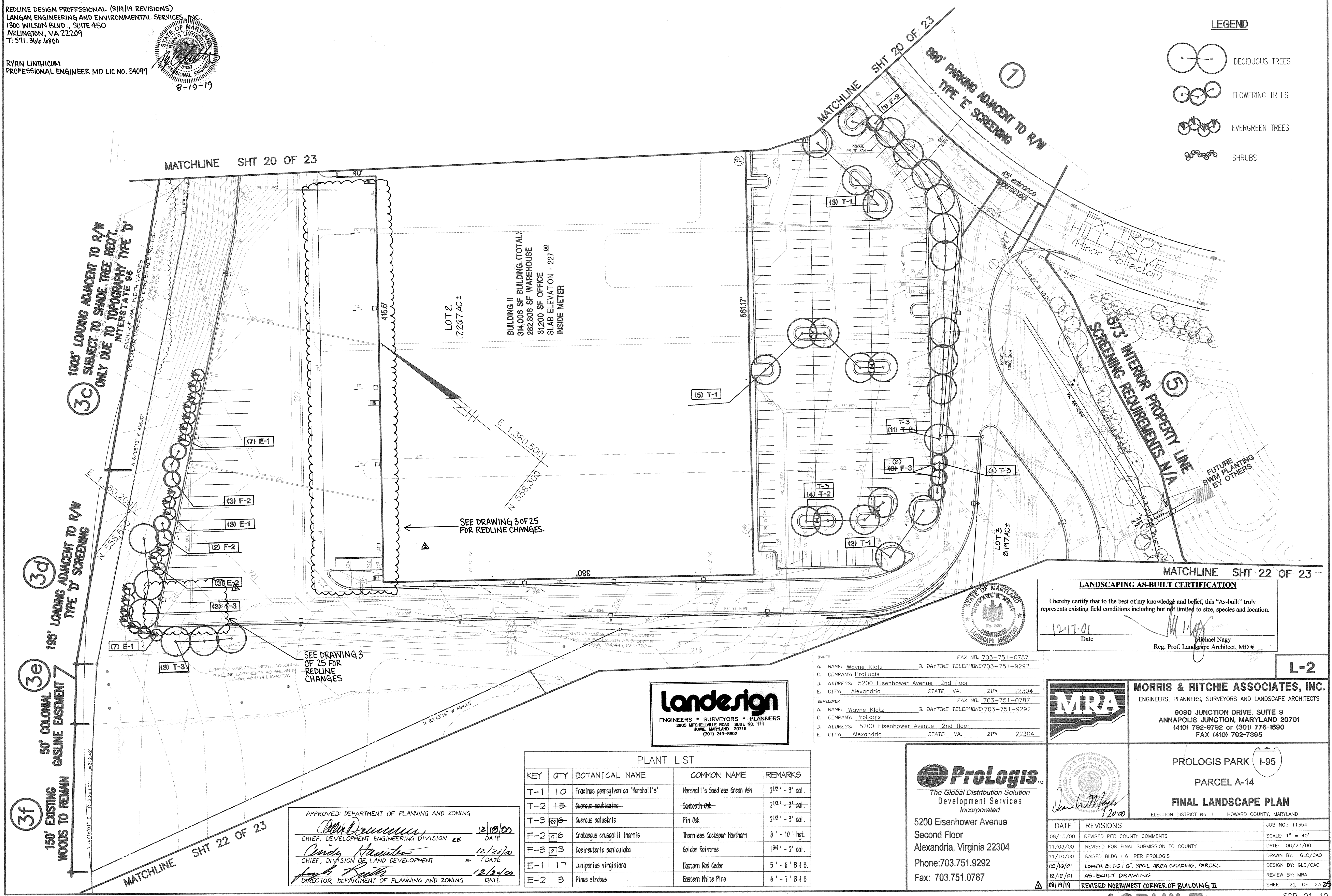
LOT 1  
14,192 AC±

BUILDING I  
99,957 SF BUILDING (TOTAL)  
89,962 SF WAREHOUSE  
9,995 SF OFFICE  
SLAB ELEVATION = 227.00  
INSIDE METER



**LEGEND**

- DECIDUOUS TREES
- FLOWERING TREES
- EVERGREEN TREES
- SHRUBS



**3c** 1005' LOADING ADJACENT TO R/W  
 SUBJECT TO SHADE TREE REOT.  
 ONLY DUE TO TOPOGRAPHY TYPE 'D'  
 INTERSTATE 95  
 VERTICAL CLEARANCE AND WIDTH VARIES

**3d** 195' LOADING ADJACENT TO R/W  
 TYPE 'D' SCREENING

**3e** 50' COLONIAL  
 GASLINE EASEMENT

**3f** 150' EXISTING  
 WOODS TO REMAIN

LOT 2  
 17,267 AC±  
 BUILDING II  
 314,006 SF BUILDING (TOTAL)  
 282,806 SF WAREHOUSE  
 31,200 SF OFFICE  
 SLAB ELEVATION = 227'  
 INSIDE METER

SEE DRAWING 3 OF 25  
 FOR REDLINE CHANGES.

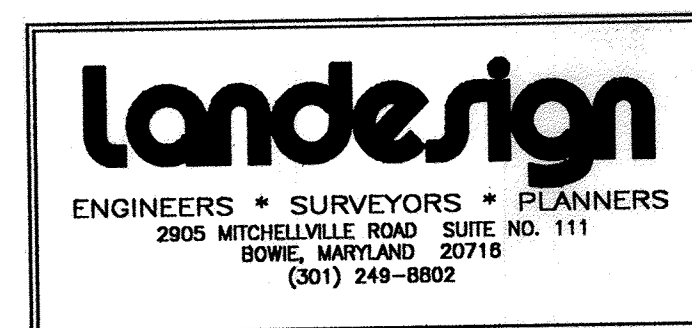
SEE DRAWING 3  
 OF 25 FOR  
 REDLINE  
 CHANGES

**LANDSCAPING AS-BUILT CERTIFICATION**  
 I hereby certify that to the best of my knowledge and belief, this "As-built" truly represents existing field conditions including but not limited to size, species and location.  
 12/17/01  
 Date  
 Michael Nagy  
 Reg. Prof. Landscape Architect, MD #

DIVISION OF LANDSCAPE ARCHITECTURE  
 STATE OF MARYLAND  
 No. 830  
 LANDSCAPE ARCHITECT  
 12/17/01

OWNER  
 A. NAME: Wayne Klotz B. DAYTIME TELEPHONE: 703-751-0787  
 C. COMPANY: ProLogis  
 D. ADDRESS: 5200 Eisenhower Avenue 2nd floor  
 E. CITY: Alexandria STATE: VA ZIP: 22304

DEVELOPER  
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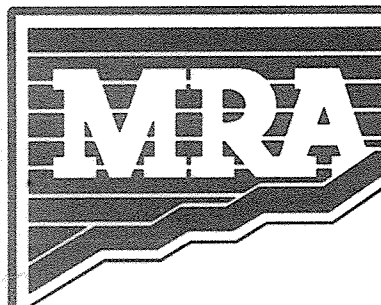


**PLANT LIST**

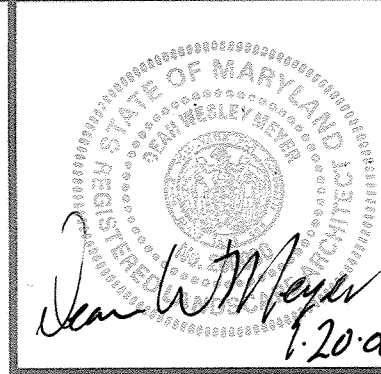
KEY	QTY	BOTANICAL NAME	COMMON NAME	REMARKS
T-1	10	Fraxinus pennsylvanica 'Marshall's'	Marshall's Seedless Green Ash	2 1/2' - 3' cal.
T-2	15	Quercus acutissima	Sawtooth Oak	2 1/2' - 3' cal.
T-3	22	Quercus palustris	Pin Oak	2 1/2' - 3' cal.
F-2	5	Crataegus crusgalli inermis	Thornless Cockspur Hawthorn	8' - 10' hgt.
F-3	2	Koeleria paniculata	Golden Raintree	1 3/4" - 2" cal.
E-1	17	Juniperus virginiana	Eastern Red Cedar	5' - 6' B & B.
E-2	3	Pinus strobus	Eastern White Pine	6' - 7' B & B.

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION 12/18/00 DATE  
  
 CHIEF, DIVISION OF LAND DEVELOPMENT 12/20/00 DATE  
  
 DIRECTOR, DEPARTMENT OF PLANNING AND ZONING 12/20/00 DATE

**ProLogis**  
 The Global Distribution Solution  
 Development Services  
 Incorporated  
 5200 Eisenhower Avenue  
 Second Floor  
 Alexandria, Virginia 22304  
 Phone: 703.751.9292  
 Fax: 703.751.0787

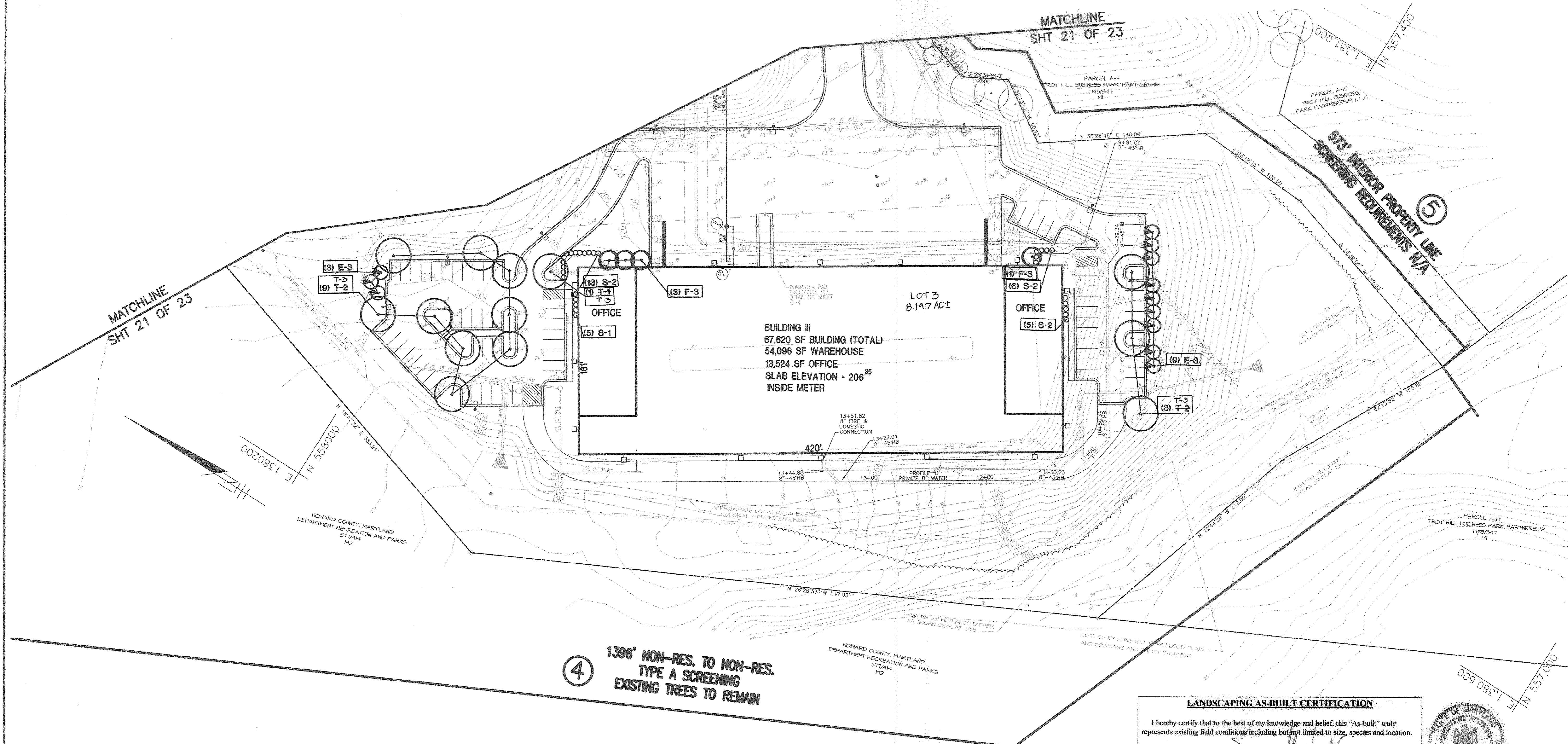


**MORRIS & RITCHIE ASSOCIATES, INC.**  
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
 9090 JUNCTION DRIVE, SUITE 9  
 ANNAPOLIS JUNCTION, MARYLAND 20701  
 (410) 792-9792 or (301) 776-1690  
 FAX (410) 792-7395



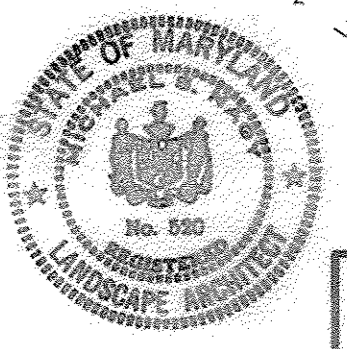
**PROLOGIS PARK I-95**  
 PARCEL A-14  
**FINAL LANDSCAPE PLAN**  
 ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
08/15/00	REVISED PER COUNTY COMMENTS	11354
11/03/00	REVISED FOR FINAL SUBMISSION TO COUNTY	SCALE: 1" = 40'
11/10/00	RAISED BLDG 1 6" PER PROLOGIS	DATE: 06/23/00
02/10/01	LOWER BLDG 1 G', SPOIL AREA GRADING, PARCEL	DRAWN BY: GLC/CAO
12/12/01	AS-BUILT DRAWING	DESIGN BY: GLC/CAO
08/19/19	REVISED NORTHWEST CORNER OF BUILDING II	REVIEW BY: MRA



④ 1396' NON-RES. TO NON-RES. TYPE A SCREENING EXISTING TREES TO REMAIN

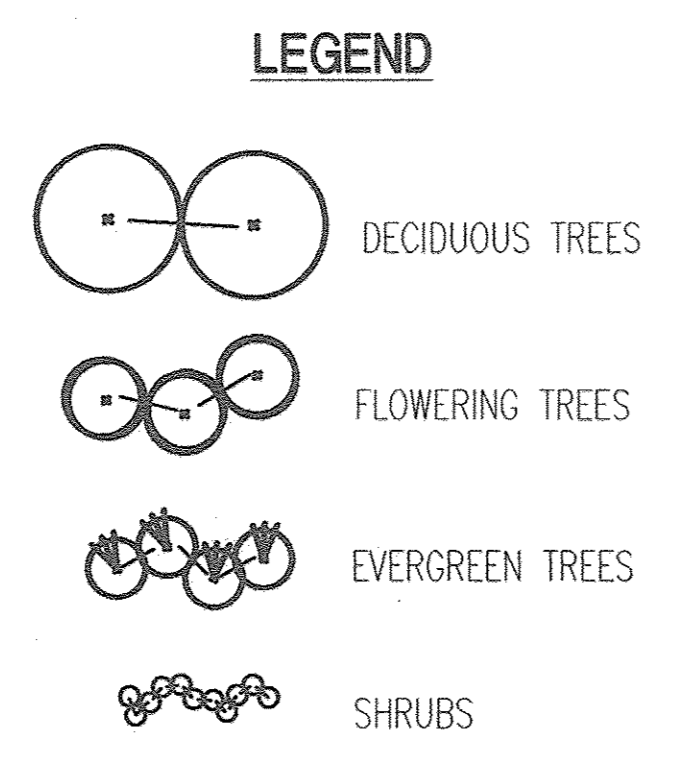
**LANDSCAPING AS-BUILT CERTIFICATION**  
 I hereby certify that to the best of my knowledge and belief, this "As-built" truly represents existing field conditions including but not limited to size, species and location.  
 12-17-01 Date  
 Michael Nagy  
 Reg. Prof. Landscape Architect, MD #



L-3

**PLANT LIST**

KEY	QTY	BOTANICAL NAME	COMMON NAME	REMARKS
T-3	13	Quercus palustris	Pin Oak	2 1/2" - 3" cal.
T-2	14	Quercus dentata	Sawtooth Oak	
F-3	4	Koeleria paniculata	Golden Raintree	1 3/4" - 2" cal.
E-3	12	Tsuga canadensis	Canadian Hemlock	5' - 6' B & B
S-1	5	Euonymus alatus 'Compactus'	Dwarf Winged Euonymus	24" - 36" B & B
S-2	24	Ilex glabra 'COMPACTA'	Dwarf Inkberry	24" - 36" B & B



APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*W. D. ...*  
 CHIEF, DEVELOPMENT ENGINEERING DIVISION CE 12/16/00 DATE  
*C. Hamata*  
 CHIEF, DIVISION OF LAND DEVELOPMENT 1/2/01 DATE  
*J. ...*  
 DIRECTOR, DEPARTMENT OF PLANNING AND ZONING 1/2/01 DATE

DIVISION OF PLANNING AND ZONING  
 A. NAME: Wayne Klotz B. DAYTIME TELEPHONE: 703-751-9292  
 C. COMPANY: ProLogis  
 D. ADDRESS: 5200 Eisenhower Avenue 2nd floor  
 E. CITY: Alexandria STATE: VA. ZIP: 22304  
 DEVELOPER  
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 C. COMPANY: ProLogis  
 D. ADDRESS: 5200 Eisenhower Avenue 2nd floor  
 E. CITY: Alexandria STATE: VA. ZIP: 22304

**Landesign**  
 ENGINEERS \* SURVEYORS \* PLANNERS  
 2905 MITCHELLVILLE ROAD SUITE NO. 111  
 BOWIE, MARYLAND 20718  
 (301) 249-8802

**MRA**  
 MORRIS & RITCHIE ASSOCIATES, INC.  
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS

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STATE OF MARYLAND  
 PROFESSIONAL LANDSCAPE ARCHITECT  
 No. 520  
 Michael Nagy  
 1-20-00

**PROLOGIS PARK I-95**  
 PARCEL A-14  
**FINAL LANDSCAPE PLAN**  
 ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND

DATE	REVISIONS	JOB NO.:
08/15/00	REVISED PER COUNTY COMMENTS	11354
11/03/00	REVISED FOR FINAL SUBMISSION TO COUNTY	SCALE: 1" = 40'
11/10/00	RAISED BLDG 1 6" PER PROLOGIS	DATE: 06/23/00
02/19/01	LOWER BLDG 1 6" SPOIL AREA GRADING - PARCEL	DRAWN BY: GLC/CAO
12/13/01	AS-BUILT DRAWING	DESIGN BY: GLC/CAO
		REVIEW BY: MRA
		SHEET: 22 OF 25

SCHEDULE 'A' PERIMETER LANDSCAPE EDGE			
PERIMETER	PLANTS REQUIRED	PLANTS PROVIDED	EDGE TYPE
① 890 L.F. PARKING ADJACENT TO R/M	1/40 L.F. SHADE = 22.3 1/4 L.F. SHRUBS = 222.5	7.0 SHADE TREES 2.0 FLOWERING TREES 11.0 EVERGREEN TREES	(E)
② 635 L.F. INTERNAL PROPERTY LINE	N/A	no plantings provided	N/A
③a 205 L.F. NON RES. TO R/M	1/50 L.F. SHADE = 4.1 1/40 L.F. EVERGREEN = 5.1	2.0 SHADE TREES 8.0 EVERGREEN TREES	(B)
③b 245' LOADING ADJACENT TO R/M	1/60 L.F. SHADE = 4.1 1/10 L.F. EVERGREEN = 24.5	4.0 SHADE TREES 14.0 EVERGREEN TREES	(D)
③c 1005' LOADING ADJACENT TO R/M	1/60 L.F. SHADE = 16.8 TOPO MEETS EVERGREEN REQ'T.	no plantings provided TOPOGRAPHY MEETS REQ'T.	(D)
③d 145' LOADING ADJACENT TO R/M	1/60 L.F. SHADE = 3.3 1/10 L.F. EVERGREEN = 19.5	6.0 SHADE TREES 20.0 EVERGREEN TREES 5.0 FLOWERING TREES	(D)
③e 50' COLONIAL GAS LINE EASEMENT	N/A	NONE DUE TO UTILITY EASEMENT	(B)
③f 150 L.F. NON-RES. TO R / M	EXIST. TREES FULFILL REQ'TS.	EXISTING TREES TO REMAIN	(B)
④ 1346 L.F. NON-RES. TO NON- RES.	EXIST. TREES FULFILL REQ'TS.	EXISTING TREES TO REMAIN	(A)
⑤ 573 L.F. INTERNAL PROPERTY LINE	N/A	N/A	N/A
TOTALS	SHADES = 50.6 EVERGREENS = 44.1 SHRUBS = 222.5	19.0 SHADE TREES 7.0 FLOWERING TREES 53.0 EVERGREEN TREES	

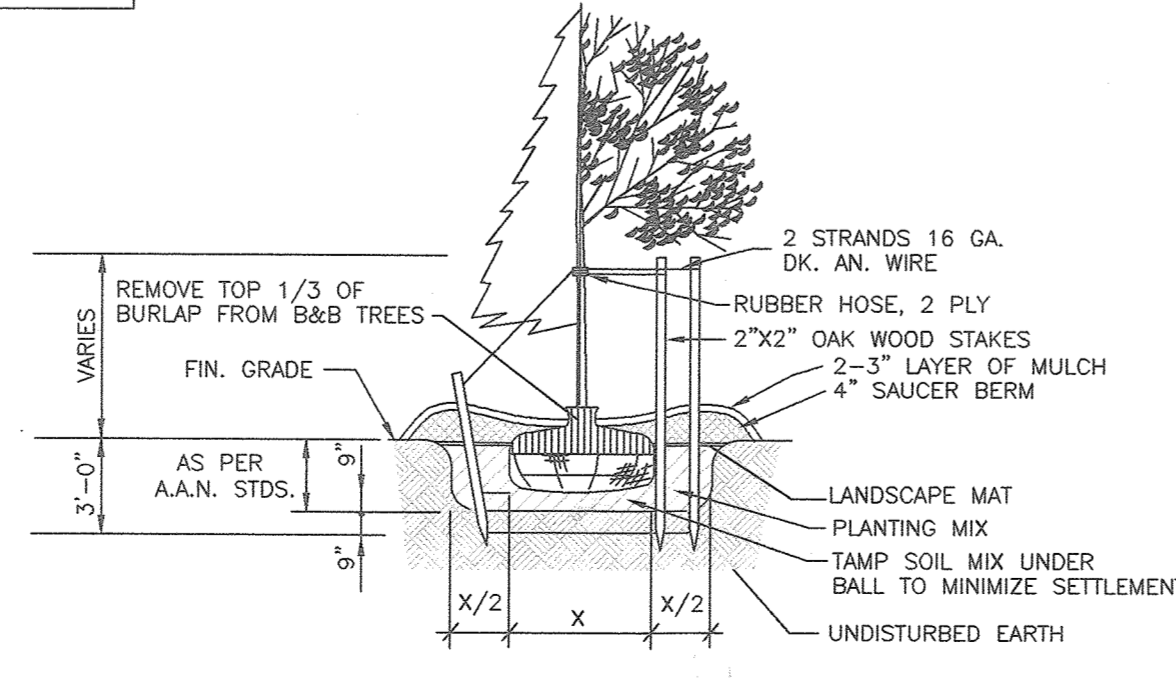
PLANT LIST				
KEY	QTY	BOTANICAL NAME	COMMON NAME	REMARKS
T-1	24	<i>Fraxinus pennsylvanica</i> 'Marshall's'	Marshall's Seedless Green Ash	2 1/2" - 3" cal.
T-2	35	<i>Quercus acutissima</i>	Sawtooth Oak	2 1/2" - 3" cal.
T-3	16	<i>Quercus palustris</i>	Pin Oak	2 1/2" - 3" cal.
F-1	5	<i>Cercis canadensis</i>	Eastern Redbud	6' - 7' hgt.
F-2	6	<i>Crataegus arvensis</i>	Thornless Cockspur Hawthorn	8' - 10' hgt.
F-3	4	<i>Koeleria paniculata</i>	Golden Raintree	1 3/4" - 2" cal.
E-1	39	<i>Juniperus virginiana</i>	Eastern Red Cedar	5' - 6' B & B
E-2	14	<i>Pinus strobus</i>	Eastern White Pine	6' - 7' B & B
E-3	12	<i>Tsuga canadensis</i>	Canadian Hemlock	5' - 6' B & B
S-1	23	<i>Euonymus alatus</i> 'Compactus'	Dwarf Winged Euonymus	24" - 36" B & B
S-2	33	<i>Ilex glabra</i> 'COMPACTA'	Dwarf Inkberry	24" - 36" B & B
S-3	45	<i>Nahonia aquifolium</i>	Oregon Grapeholly	24" - 36" cont.

**LANDSCAPING AS-BUILT CERTIFICATION**  
 I hereby certify that to the best of my knowledge and belief, this "As-Built" truly represents existing field conditions including but not limited to size, species and location.  
 Date: 12-17-01  
 Michael Neagy  
 Reg. Prof. Landscape Architect, MD #

COMPOSITE PLANT CHART			
REQUIRED		PROVIDED	
SHADE TREES 50.6 PERIMETER + 23.9 PARKING =	75 SHADE TREES	SHADE TREES 19 =	64 SHADE TREES
EVERGREENS 44.1 PERIMETER + 44 / 2 =	25.0 SHADE TREES	FLOWERING TREES 20 / 2 =	10.0 SHADE TREES
SHRUBS 222.5 PERIMETER = 226.0 / 10 =	22.0 SHADE TREES	EVERGREEN TREES 65 / 2 =	32.5 SHADE TREES
TOTAL =	122 SHADE TREES	SHRUBS 101 / 10 =	10.1 SHADE TREES
		TOTAL =	122.0 SHADE TREES

SCHEDULE 'B' PARKING LOT INTERNAL LANDSCAPING	
NUMBER OF PARKING SPACES	470
NUMBER OF TREES REQUIRED	23.9
NUMBER OF TREES PROVIDED	21.0 SHADE TREES 3.0 FLOWERING TREES 9.0 EVERGREENS

**SCHEDULE 'D' STORMWATER MANAGEMENT LANDSCAPING**  
 ALL STORMWATER MANAGEMENT FACILITIES UTILIZED BY THIS DEVELOPMENT HAVE THEIR OWN APPROVED LANDSCAPE PLANS ASSOCIATED WITH THE CONSTRUCTION OF SAID FACILITIES.



**LANDSCAPE PLAN AND PLANTING SPECIFICATIONS**  
**PART 1 GENERAL:**  
**1.01 DESCRIPTION:**  
 A. Work consists of all labor, materials, equipment and services necessary for and incidental to the execution and completion of the FINAL LANDSCAPE PLAN as indicated on the Drawings and specified herein.  
 B. Include:  
 1. Layout.  
 2. Furnishing of tree protection and planting materials.  
 3. Preparation, planting operations, mulching and staking.  
 4. Maintenance.  
**1.02 REFERENCES AND QUALITY ASSURANCE:**  
 A. Landscape Contractors Association MD-DC-VA (LCA), Landscape Specification Guidelines, latest edition except where superseded by specific requirements herein.  
 B. American Association of Nurserymen (A.A.N.): American Standard for Nursery Stock, ANSI Z60.1, latest edition.  
 C. Nomenclature: In accordance with Hortus Third, latest edition, by the staff of the L. H. Bailey Herbarium, Cornell University.  
 D. Federal Specifications: O-P-166a as applicable to Pest Moss.  
 E. National Arborist Association, Standard for Pruning of Shade Trees, Guying of Shade Trees, Fertilizing Shade and Ornamental Trees and Pesticide Application Operations, latest edition.  
 F. Maryland Department of Transportation, State Highway Administration (MSHA) Standard Specifications for Construction and Materials, October 1993, as amended to date. Cite references to "Measurement and Payment."  
**1.03 STANDARD OF COMPARISON:**  
 A. When requested by the Owner's Representative, the Contractor shall obtain approval of a standard of comparison, prior to the delivery of plant material to the site.  
 1. Contact the Owner's Representative to schedule an inspection for approval of the standards for plant material to be installed at the project site.  
 2. Standards shall be assembled at the project site for review and approval, or at the Contractor's principal business location, as determined by the Owner's Representative. Approved standards may be planted at the project site.  
**1.04 SUBMITTALS:**  
 A. Source: Notify the Owner's Representative, in writing, of the source of all material at least ten (10) working days prior to delivery at the project site.  
 B. Samples and Certifications:  
 1. If requested, a match sample shall be provided at the site for approval by the Owner's Representative (8 C.F. minimum).  
 2. Submit certification of pest moss compliance with referenced specifications.  
**1.05 DELIVERY, STORAGE AND HANDLING:**  
 A. Store plants that cannot be planted within 8 hours in a sheltered place. Water and maintain as required until planted.  
 B. Transport and handle plants so that foliage and roots are protected from breakage, sun and wind. Tops or roots of plants allowed to dry out or which have been damaged or disturbed root systems may be rejected.  
 C. B & B (balled and burlapped) plants: Firm, natural balls of soil, with size and depth of ball in accordance with A.A.N. Standards.  
**1.06 QUANTITIES AND SUBSTITUTIONS:**  
 A. Quantities of plant material are based upon the plant lists shown on the Drawings.  
 B. Substitutions  
 1. Bidders shall notify the Owner's Representative if specified plants are not available from sources within 100 miles of the project site, giving the names of all sources contacted.  
 2. If an acceptable source cannot be located for the specified plants, the Owner's Representative will select a substitute and notify the Bidders of the approved substitution for the Bid to be based upon, or provide a source for the originally specified plant.  
 3. Substituted plants shall be of the same size and condition as the original plant specified.  
**1.07 PROJECT CONDITIONS:**  
 A. Planting Season:  
 1. Primary planting season: September 15 to May 15.  
 2. Other periods with written approval from the Owner's Representative.  
 B. Existing Conditions: Notify Miss Utility (1-800-257-7777), and the Owner's Representative prior to planting operations. Verify the location of underground utilities.  
**1.08 DEFINITIONS:**  
 A. Diameter at Breast Height (DBH): The diameter of a tree measured at a point on the trunk 4.5 feet above the ground.  
 B. Initial Acceptance: Occurs when all plant material is in place in accordance with the specifications and approved by the Owner's Representative.  
 C. Maintenance Period: From initial acceptance of the plantings, and continuing thereafter for a period of 12 months.  
 D. Owner's Representative: The Landscape Architect or other Qualified Professional designated by the Owner or Developer of the Project.  
 E. Retention: The deliberate holding and protecting of existing trees, shrubs or herbaceous plants on the site.  
 F. Specimen Tree: A tree which exists on the project site prior to construction or planting having a 30 inch or greater DBH, or tree having 75 percent or more of the diameter of the current stem or canopy champion tree of that same species.  
 G. Start of Planting: Installation of plant material into excavated pits or beds.  
 H. Final Acceptance: Occurs after Contractor has completed all outstanding items, as determined by the Owner's Representative, at the end of the maintenance period.  
**1.09 SURVIVAL REQUIREMENT AND REPLACEMENTS:**  
 A. The minimum survival rate shall be 100 percent of the total number of trees and shrubs planted at the end of the 12-month maintenance period.  
 B. Replacement materials shall be the same size as the original plant material taking into account any growth that has occurred since original installation.  
 C. Methods of installation shall be identical to the original.  
**1.10 PENALTY FOR VIOLATION:**  
 A. Immediately following the completion of construction and installation of the plantings, the owner or owner's representative will be notified for an inspection of the entire project site.  
 B. If, upon Final Acceptance inspection, trees and other vegetation designated as retention plant material are found to be damaged or dead due to mechanical intrusion or related construction activities associated with the landscape contractor installation and maintenance of the said plan, then replacement equivalent will be required.

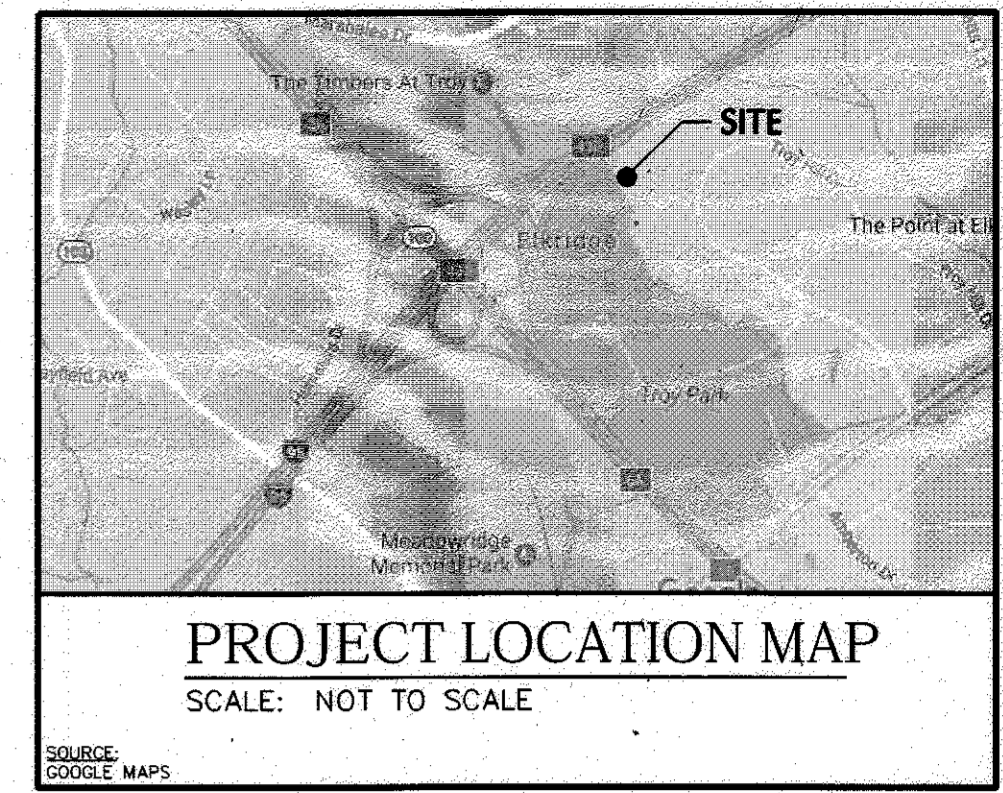
**PART 2 PRODUCTS:**  
**2.01 PLANTS:**  
 A. Plant materials shall meet or exceed the requirements of A.A.N. standards, or as amended herein.  
 B. Plants shall be typical of the species and variety, and have a normal habit of growth with well established root systems.  
 C. Sound, healthy, vigorous, free from plant diseases, insect pests or their eggs and without suckers or evidence of suckering.  
 D. Plants cut back from larger sizes or pruned prior to delivery will not be accepted.  
 E. Measurements: The caliper of deciduous trees (except seedlings and whips) shall be measured 6-inches above ground level for trees up to and including 4 inch caliper and 12 inches above ground level for material larger than 4 inch caliper. Seedlings and whips shall be measured at the root collar.  
**2.02 DECIDUOUS STREET TREES:**  
 A. Single straight leader, well branched, and symmetrical, without suckers or evidence of suckering, according to their normal habit.  
 B. Trees planted within five (5) feet of pedestrian ways, parking lots or roads shall be free from branches up to eight (8) feet in height from finish grade.  
**2.03 EVERGREENS:** Sheared evergreen plant material shall not be acceptable.  
**2.04 SHRUBS:** At least 75% of the individual branches or canes of a shrub shall be to the height specified.  
**2.05 HERBICIDES:**  
 A. Contact herbicide shall be "Round-up" or approved equal.  
 B. Pre-emergence herbicide shall be "Snapshot" or approved equal.  
**2.06 TOPSOIL FOR AMENDING EXISTING SOIL:**  
 A. General Requirements (only where required by details on the Drawings):  
 1. Natural, friable sand loam topsoil which is free of subsoil, clay lumps, stones, slumps, roots or similar objects larger than 1-inch.  
 2. Free of brush, objectionable weeds and litter or other substance which is harmful to plant growth.  
 B. In accordance with M.S.H.A. Item 520.01.02 for Fertilized Topsoil if borrow topsoil is required from an off-site location.  
**2.07 FERTILIZER FOR POST PLANTING:**  
 A. 5-10-5 (Plant food by minimum percentages)  
 (N) Total Nitrogen 5  
 (P2O5) Available Phosphoric Acid 10  
 (K2O) Soluble Potash 5  
 B. Fertilizer shall be slow release over a minimum 3 year period. Fertilizer shall be delivered to the site with formulas attached.  
**2.08 PEAT MOSS:** Baled sphagnum peat moss, Type I-A, conforming to Federal Specification O-P-166a.  
**2.09 MULCH:**  
 A. Mulch shall be the following as indicated on the Drawings:  
 1. Shredded hardwood.  
 2. Pine Straw.  
 B. Mulch shall have been prepared within the last four (4) months.  
**2.10 WATER:** Potable; if not available at the site from a public water supply, the Contractor shall provide water at no additional cost to the Owner.  
**2.11 ANTI-TRANSPARENT:** Shall be the following or approved equal:  
 "Will-Pruf"  
 Will-Pruf Products Inc.  
 P. O. Box 469  
 Essex, CT 06426  
 (203) 767-7033  
 or approved equal.  
**2.12 ACCESSORIES:**  
 A. Tree Guying:  
 1. Stakes: 2 inch x 2 inch rough sawn oak stakes, notched to hold wire, length as required to secure the tree.  
 2. Wire: Galvanized steel wire, doubled.  
 3. Sleeves: Nylon reinforced green vinyl hose.  
 B. Tree shelters, netting and stakes: Extruded twin-walled polypropylene with ultra-violet stabilizer and anti-abrasion rim as manufactured by:  
 Taber  
 P.O. Box 7097  
 Saint Paul, MN 55107  
 (612) 228-0535  
 or approved equal.  
 1. Stake shall be oak, pointed, 1 inch x 1 inch x 3 feet nominal.  
 2. Protective netting: Flexible plastic mesh capable of covering the top opening of the tube to prevent entry by birds.  
**PART 3 EXECUTION:**  
**3.01 INITIAL INSPECTIONS:**  
 A. Pre-construction meeting:  
 1. Prior to the beginning of any clearing, grading or disturbance of the site, a meeting at the project site shall be held with the Contractor and Owner's Representative.  
 2. The following items, and others as deemed necessary, will be reviewed as applicable to the Project:  
 a) Staked limits of required retention areas and protection fencing, proposed limits of clearing and grubbing, the proposed location of sediment control devices, and the sequence of operations.  
 b) Staking and flagging shall be completed by the Contractor prior to the pre-construction meeting.  
 3. Designated adjustments to the proposed limits and locations of items reviewed in the field during the pre-construction meeting shall be incorporated prior to beginning construction.  
 B. Pre-planting meeting:  
 1. Prior to the beginning of planting operations, a meeting shall be held at the project site with the Contractor and Owner's Representative to review the following, as applicable to the project:  
 a) Staked limits, of proposed planting areas, completed prior to the meeting.  
 b) Areas to receive selective application of herbicides prior to planting, if applicable.  
**3.02 PREPARATION:**  
 A. Tree protection fencing, signage and other pre-construction activities noted on the Drawings for retention areas shall be installed prior to any on-site clearing or grading operations.  
 B. Additional temporary, and permanent fencing, shall be installed in conjunction with or prior to planting operations as shown on the Drawings.  
 C. Plant Locations: As shown on the Drawings, to dimensions if shown, or as detailed if not specifically labeled. Locations subject to review by the Owner's Representative prior to planting.  
 D. Utilities: The Contractor shall locate existing and proposed utilities prior to excavation of planting holes.  
 1. If a conflict is identified between the location of utilities and proposed planting locations, the Owner's Representative shall establish an alternate location for plants as required to avoid the conflict.  
 2. Bidders shall notify the Owner's Representative of potential conflicts identified prior to submission of a Bid.  
 E. No plant material shall be installed until the Owner's Representative has approved the final grade of areas to receive planting.  
**3.03 EXCAVATION:**  
 A. Undersized: Excavate and remove surplus materials encountered, without additional cost to the Owner. Retain only sufficient soil to form soil wells as shown on the Drawings. Deposit of surplus material may be on-site if approved by the Owner's Representative.  
 B. Underground obstructions, rock or other obstructions too massive to remove: Notify Owner's Representative for further direction. Alternate locations will be selected. Make such relocations without additional compensation.  
**3.04 PLANTING PROCEDURES:**  
 A. Do not plant when ground is frozen or excessively wet.  
 B. Set plants straight and plumb and of such a level, that after settlement the first lateral root is flush with the adjacent ground surface.  
 C. When B&B or container plants are set, planting soil shall be carefully tamped around the base of the balls to prevent voids. All burlap, rope, wires, etc., shall be removed from the tops of balls. Plastic/nylon cords or cloth shall not be left in place on balled materials.  
 D. Backfill plants and tamp to two-thirds depth of pit and thoroughly water before bringing backfill up to proper grade. Thoroughly water the plant again after the soil well has been completely formed in-place.  
 E. Walk Around Trees and Shrubs: After planting is complete, form a soil well around designated plants, extending to the outer limit of the plant pit in accordance with the planting details shown on the Drawings.  
 F. Designated Planting Beds: All vegetative growth shall be removed to a sufficient depth to insure a weed-free bed. Till the existing soil to a depth of 8-inches throughout the designated bed areas. The edge of all planting beds shall be cut vertically and the soil recessed within 1-foot of the bed edge so that the mulch is flush with adjacent grade when the installation has been completed.  
**3.05 MULCHING:** Plants and beds shall receive a 2 to 4 inch cover of mulch. Mulch shall be installed within 8 hours after planting has been completed.  
**3.06 STAKING, WRAPPING AND GUYING:**  
 A. Stake trees, which require staking as shown on the Drawings, during the same day as planting.  
 B. Guying:  
 1. Guying shall be in accordance with the Details.  
 2. Stakes shall be securely driven in ground and plants guyed to provide and maintain adequate support.  
**3.07 PRUNING AND ANTI-TRANSPARENT APPLICATION:**  
 A. Pruning: Any broken or damaged branches shall be removed. Damage, removal or pruning of tree leaders shall be cause for rejection.  
 B. Anti-transparent: Deciduous plants, installed from May 1st to September 15th shall receive application in accordance with the manufacturer's recommendations.  
**3.08 POST-PLANTING FERTILIZATION:**  
 A. Notify Owner's Representative prior to fertilizing operations.  
 B. Approximately 1 year after planting, but prior to the maintenance agreement's expiration, the Contractor shall fertilize all plant material. Plant foliage shall be completely dry at the time of application. Fertilizer adhering to plant foliage after application shall be removed. Water thoroughly after application.  
 C. Rate of application shall be in accordance with the fertilizer manufacturer's recommendations or the following:  
 1. Shrubs: 4 pounds of 5-10-5 per 100 square feet.  
 2. Trees: 2 pounds of 5-10-5 per inch of caliper distributed uniformly in planting well.  
**3.09 CLEAN-UP:**  
 A. Excess and waste materials shall be removed from the site before or upon completion of planting operations, or daily if required by the Owner's Representative.  
 B. Repair turf areas and other existing conditions damaged during planting operations, including regrading, seeding and mulching to the satisfaction of the Owner's Representative.  
**3.10 MAINTENANCE:**  
 A. Contractor shall inspect and provide necessary services throughout the 12-month maintenance period.  
 1. Watering as required for local conditions.  
 2. Inspection for pests and disease shall be performed a minimum of two (2) times within the initial year, after spring leaf-out and at mid-summer, or more frequently if necessary to control problems.  
 3. Weeding and removal of invasive plants shall be performed a minimum of four (4) times per year, during the first two weeks of the months of May, June, July and August.  
 4. Plant material shall be re-mulched, just prior to the maintenance agreement's expiration, with a minimum 1-inch depth of new mulch.  
 5. Fencing, signs, stakes and guys shall be lightened, repaired or replaced as necessary throughout the maintenance period in accordance with original details and installation requirements.  
 B. Remove and replace dead or damaged plant material to comply with the Minimal Survival requirement in accordance with Item 1.09 above.  
 C. Notify Owner's Representative prior to initiating maintenance operations.

**ProLogis**  
 The Global Distribution Solution  
 Development Services  
 Incorporated  
 5200 Eisenhower Avenue  
 Second Floor  
 Alexandria, Virginia 22304  
 Phone: 703.751.9292  
 Fax: 703.751.0787

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Development Engineering Division: 12/10/01  
 Chief, Division of Land Development: 12/6/01  
 Director, Department of Planning and Zoning: 12/20/01

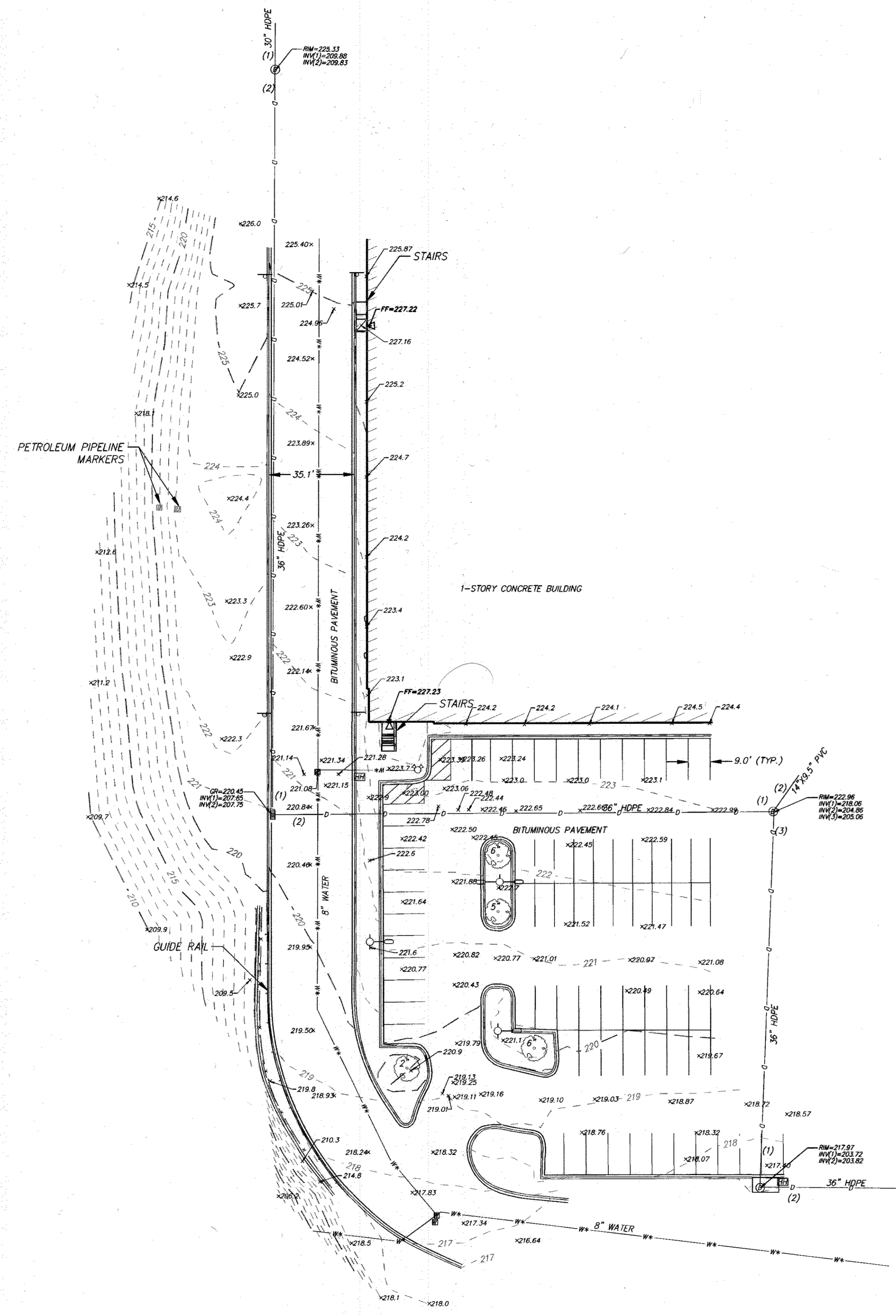
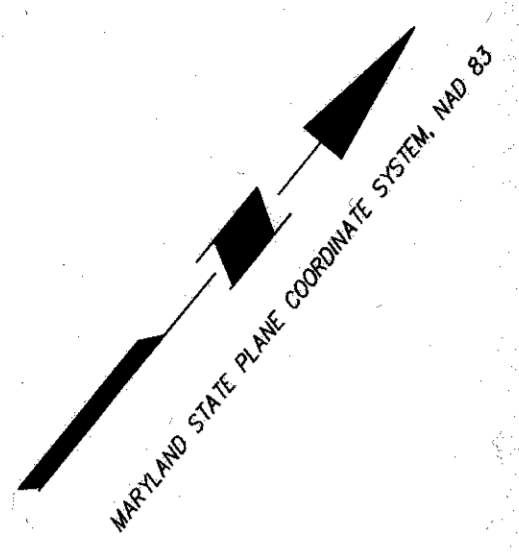
**MORRIS & RITCHIE ASSOCIATES, INC.**  
 ENGINEERS, PLANNERS, SURVEYORS AND LANDSCAPE ARCHITECTS  
 9090 JUNCTION DRIVE, SUITE 8  
 ANNAPOLIS JUNCTION, MARYLAND 20701  
 (410) 792-9792 or (301) 776-1690  
 FAX (410) 792-7395

PROLOGIS PARK I-95		
PARCEL A-14		
FINAL LANDSCAPE NOTES & DETAILS		
ELECTION DISTRICT No. 1 HOWARD COUNTY, MARYLAND		
DATE	REVISIONS	JOB NO.
08/15/00	REV. PER COUNTY COMMENTS	SCALE: 1" = 40'
09/08/00	REV. PER COUNTY COMMENTS	DATE: 06/23/00
11/03/00	REVISED FOR FINAL SUBMISSION TO COUNTY	DRAWN BY: GLC/CAO
11/10/00	RAISED BLDG 1 6" PER PROLOGIS	DESIGN BY: GLC/CAO
02/16/01	LOWER BLDG 1 6", 5' PAVL AREA GRADING, PARCEL	REVIEW BY: MRA
12/12/01	AS-BUILT DRAWING	SHEET: 23 OF 25



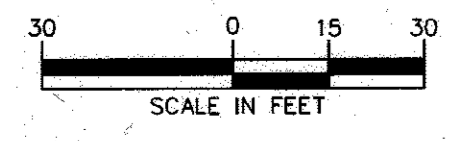
NOTES

- TOPOGRAPHIC INFORMATION SHOWN BASED ON A FIELD SURVEY PERFORMED BY LANGAN ENGINEERING & ENVIRONMENTAL SERVICES DURING DECEMBER, 2016
- THIS PLAN WAS PREPARED WITH RESPECT TO THE FOLLOWING REFERENCES:  
1. A PLAN ENTITLED, "SITE DEVELOPMENT PLAN OF PROLOGIS PARK" PREPARED BY MORRIS & RITCHE' ASSOCIATES, INC., LAST REVISED 12-18-01
- MERIDIAN IS REFERENCED TO MARYLAND STATE PLANE COORDINATE SYSTEM, NAD 83
- VERTICAL DATUM IS BASED ON REFERENCE #1. ELEVATIONS WERE MATCHED TOT ELEVATIONS LABELED ON STORM SEWER STRUCTURES.
- OFFSETS (IF SHOWN) ARE FOR SURVEY REFERENCES ONLY AND ARE NOT TO BE USED FOR CONSTRUCTION OF ANY TYPE.
- WETLANDS, ENVIRONMENTAL AND/OR HAZARDOUS MATERIALS LOCATION, IF ANY, NOT COVERED UNDER THIS CONTRACT.
- BASED ON FEMA FLOOD INSURANCE RATE MAP(FIRM), COMMUNITY PANEL NO. 24027C01600, EFFECTIVE DATE NOVEMBER 06, 2013 FOR HOWARD COUNTY UNINCORPORATED AREAS, MARYLAND, THE SUBJECT PROPERTY IS LOCATED WITHIN ZONE X; AREAS DETERMINED TO BE OUTSIDE THE 0.2% ANNUAL CHANCE FLOODPLAIN.
- UNLESS SPECIFICALLY NOTED HEREON, STORM AND SANITARY SEWER INFORMATION (INCLUDING PIPE INVERT, PIPE MATERIAL, AND PIPE SIZE) WAS OBSERVED AND MEASURED AT FIELD LOCATED STRUCTURES (MANHOLES/CATCH BASINS, ETC.). CONDITIONS CAN VARY FROM THOSE ENCOUNTERED AT THE TIMES WHEN AND LOCATIONS WHERE DATA IS OBTAINED. DESPITE MEETING THE REQUIRED STANDARD OF CARE THE SURVEYOR CANNOT AND DOES NOT WARRANT THAT PIPE MATERIAL AND/OR PIPE SIZE THROUGHOUT THE PIPE RUN ARE THE SAME AS THOSE OBSERVED AT EACH STRUCTURE, OR THAT THE PIPE RUN IS STRAIGHT BETWEEN THE LOCATED STRUCTURES. ADDITIONAL UTILITY (WATER, GAS, ELECTRIC ETC) DATA MAY BE SHOWN FROM FIELD LOCATED SURFACE MARKINGS (BY OTHERS), EXISTING STRUCTURES, AND/OR FROM EXISTING DRAWINGS, UNLESS SPECIFICALLY NOTED HERE-ON THE SURVEYOR HAS NOT EXCAVATED TO PHYSICALLY LOCATE THE UNDERGROUND UTILITIES. THE SURVEYOR MAKES NO GUARANTEES THAT THE SHOWN UNDERGROUND UTILITIES ARE EITHER IN SERVICE, ABANDONED OR SUITABLE FOR USE, NOR ARE IN THE EXACT LOCATION OR CONFIGURATION INDICATED HEREON. PRIOR TO ANY DESIGN OR CONSTRUCTION THE PROPER UTILITY AGENCIES MUST BE CONTACTED FOR VERIFICATION OF UTILITY TYPE AND FOR FIELD LOCATIONS.
- THIS PLAN IS NOT VALID UNLESS STAMPED WITH THE SEAL OF THE UNDERSIGNED PROFESSIONAL(S).



LEGEND (NOT SHOWN TO SCALE)

	HYDRANT		STORM DRAIN
	STREET LIGHT		SANITARY LINE
	AREA LIGHT		GAS LINE
	SIGNAL POLE		WATER LINE
	POLE		ELECTRIC LINE
	ANCHOR POLE		TELEPHONE LINE
	MANHOLE (TYPE AS LABELED)		COMBINED SEWER LINE
	WATER VALVE		CABLE TV LINE
	GAS VALVE		STEAM LINE
	UNKNOWN VALVE		UNKNOWN UTILITY LINE
	CATCH BASIN		OVERHEAD WIRE
	SPOT ELEVATION		GUIDE RAIL (TYPE AS NOTED)
	CLEAN OUT		FENCE (TYPE AS NOTED)
	TREE		TREE LINE
	BENCH MARK		PROPERTY/RIGHT-OF-WAY LINE
	SIGN		CONTOUR LINE
	BOLLARD		REFERENCED UTILITY LINE (TYPE AS NOTED) - PLOTTED FROM EXISTING MAPPING
	METAL COVER		
	ELECTRIC BOX		
	DOOR		
	DOUBLE DOOR		
	GARAGE DOOR		



APPROVED: DEPARTMENT OF PLANNING AND ZONING

	NY	3-10-17
Chief, Development Engineering Division		Date
	KB	3-13-17
Chief, Division of Land Development		Date
		3-15-17
Director		Date

Date	Description	No.
REVISIONS		
 1-16-2017 DATE SIGNED FIDEL GONZALEZ PROFESSIONAL LAND SURVEYOR MARYLAND LIC. No. 21590		
<b>LANGAN</b> 1300 Wilson Boulevard, Suite 450, Arlington, VA 22209 T: 571.366.8800 F: 571.366.8801 www.langan.com Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. S.A. Langan Engineering, Environmental, Surveying and Landscape Architecture, D.P.C. Langan Engineering and Environmental Services, Inc. Langan CI, Inc. Langan International LLC Collectively known as Langan		
Project <b>Prologis Park I-95</b> <b>7101 TROY HILL DRIVE</b>		
ELKBRIDGE HOWARD COUNTY MARYLAND		
Drawing Title <b>PARTIAL TOPOGRAPHIC SURVEY</b>		
Project No.	Drawing No.	
270052901	VT-101	
Date	Scale	
02/15/2017	1"=30'	
Drawn By	Checked By	Submission Date
ASB	SFH	
Sheet 24 of 25		



