

TRAFFIC CONTROL NOTES

1. ALL ROAD WORK SHALL BE IN ACCORDANCE WITH MARYLAND SHA STANDARDS 104.04 AND 104.31 FOR TRAFFIC CONTROL.
2. PAVEMENT MARKINGS IN RED BRANCH ROAD SHALL BE MODIFIED OR INSTALLED AS DIRECTED BY THE INSPECTOR.
3. DUE TO THE LIMITED DISTANCE FROM THE INTERSECTION OF RED BRANCH AND OLD ANNAPOLIS ROADS, THE ADVANCE WARNING SIGNAGE WILL BE MODIFIED FROM THE STANDARD DETAIL PROVIDED TO THAT SHOWN ON THE PLAN.

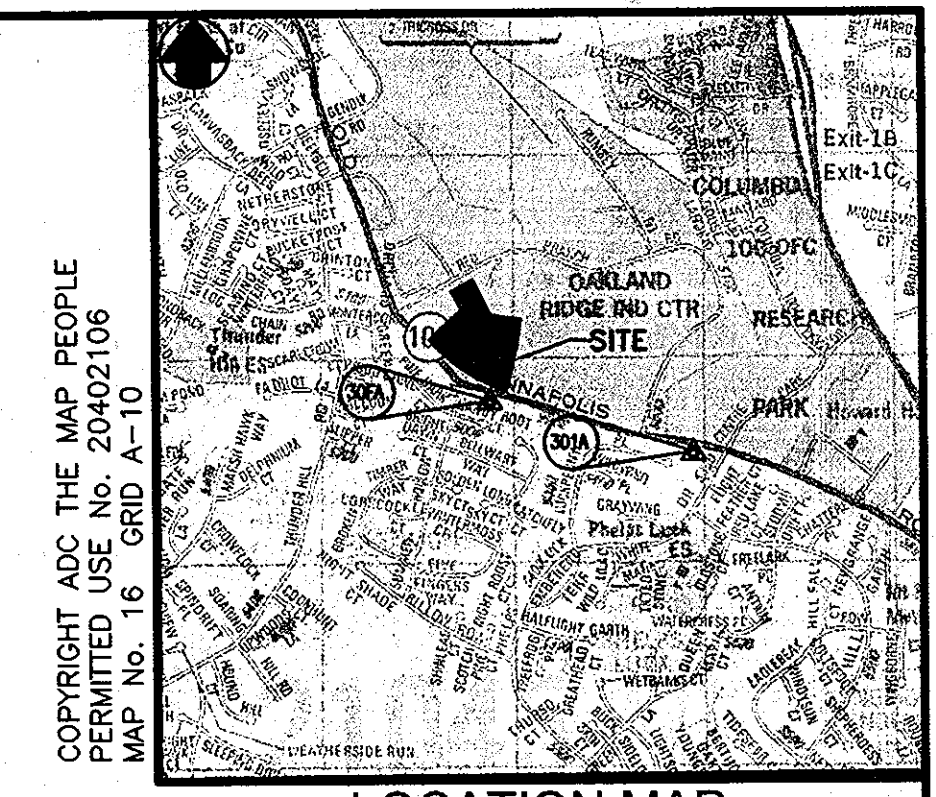
NOTES:

1. THE EXISTING FEATURES WITHIN THE DEVELOPMENT ENVELOPE ON THIS DRAWING WERE GENERATED FROM FIELD TOPOGRAPHY COMPLETED BY THOMPSON & McCORD 12/2005 AND GERHOLD, CROSS & ETZEL DATED 1/2000.
2. BOUNDARY INFORMATION PROVIDED BY LDE, INC DATED 6/1999.

BENCH MARKS

30FA BRASS DISC IN CONC. N 568,621.329 E 1,361,563.983 ELEV. 441.619
 301A BRASS DISC IN CONC. N 567,750.958 E 1,364,842.598 ELEV. 499.814

DESIGN AND DRAWINGS ARE BASED ON MARYLAND COORDINATE SYSTEM (MCS). HORIZONTAL - NAD 83/91 VERTICAL - NAVD 88



GENERAL NOTES

1. BEFORE THE START OF CONSTRUCTION, THE CONTRACTOR IS TO VERIFY THE LOCATION OF EXISTING UTILITIES BY CONTACTING "MISS UTILITY" (1-800-257-7777).
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO AND MAINTENANCE AND PROTECTION OF EXISTING UTILITIES AND STRUCTURES.
3. WHERE REQUIRED BY ENCOUNTERED SPRINGS OR OTHER SEEPAGE CONDITIONS, UNDERDRAIN LINES SHALL BE INSTALLED USING 6-INCH DIAMETER PERFORATED UNDERDRAIN PIPE MEETING HOWARD COUNTY STANDARD SPECIFICATIONS.
4. ALL DISTURBED AREAS AS A RESULT OF ROADWAY AND STORM DRAIN CONSTRUCTION SHALL BE SEEDED AND MULCHED WITHIN FOURTEEN (14) DAYS AFTER COMPLETION.
5. AN EASEMENT WILL BE RECORDED FOR THE CONSTRUCTION OF THE PARKING LOT ACROSS PROPERTY LINES.
6. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL THAT IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 30FA AND 301A WERE USED FOR THIS PROJECT.
7. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
8. 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.
9. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
10. ALL PLAN DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
11. WATER IS PUBLIC 16S W&S.
12. SEWER IS PUBLIC 16S W&S.
13. WATER QUALITY ON THE SITE IS PROVIDED BY AN UNDERGROUND SAND-FILTER AND AN OPEN CHANNEL. THE FACILITIES ARE PRIVATE AND WILL BE MAINTAINED BY THE OWNER.
14. THE EXISTING UTILITIES ARE BASED ON FIELD RUN TOPOGRAPHY. THE LOCATION AND ELEVATION OF ALL UTILITIES SHALL BE TEST PITTED PRIOR TO CONSTRUCTION.
15. THERE IS NO FLOODPLAIN ON THIS SITE.
16. THERE ARE NO WETLANDS ON THE SITE.
17. THIS PLAN IS SUBJECT TO THE REQUIREMENTS OF THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
18. PREVIOUS DEPARTMENT OF PLANNING AND ZONING REFERENCES ARE SDP-00-134, GP-02-59, FDP-3-A PLAT, F-66-37, SDP-89-17, SDP-75-23.
19. A LANDSCAPE SURETY IN THE AMOUNT OF \$4,950 HAS BEEN INCLUDED WITH THE DEVELOPER'S AGREEMENT.

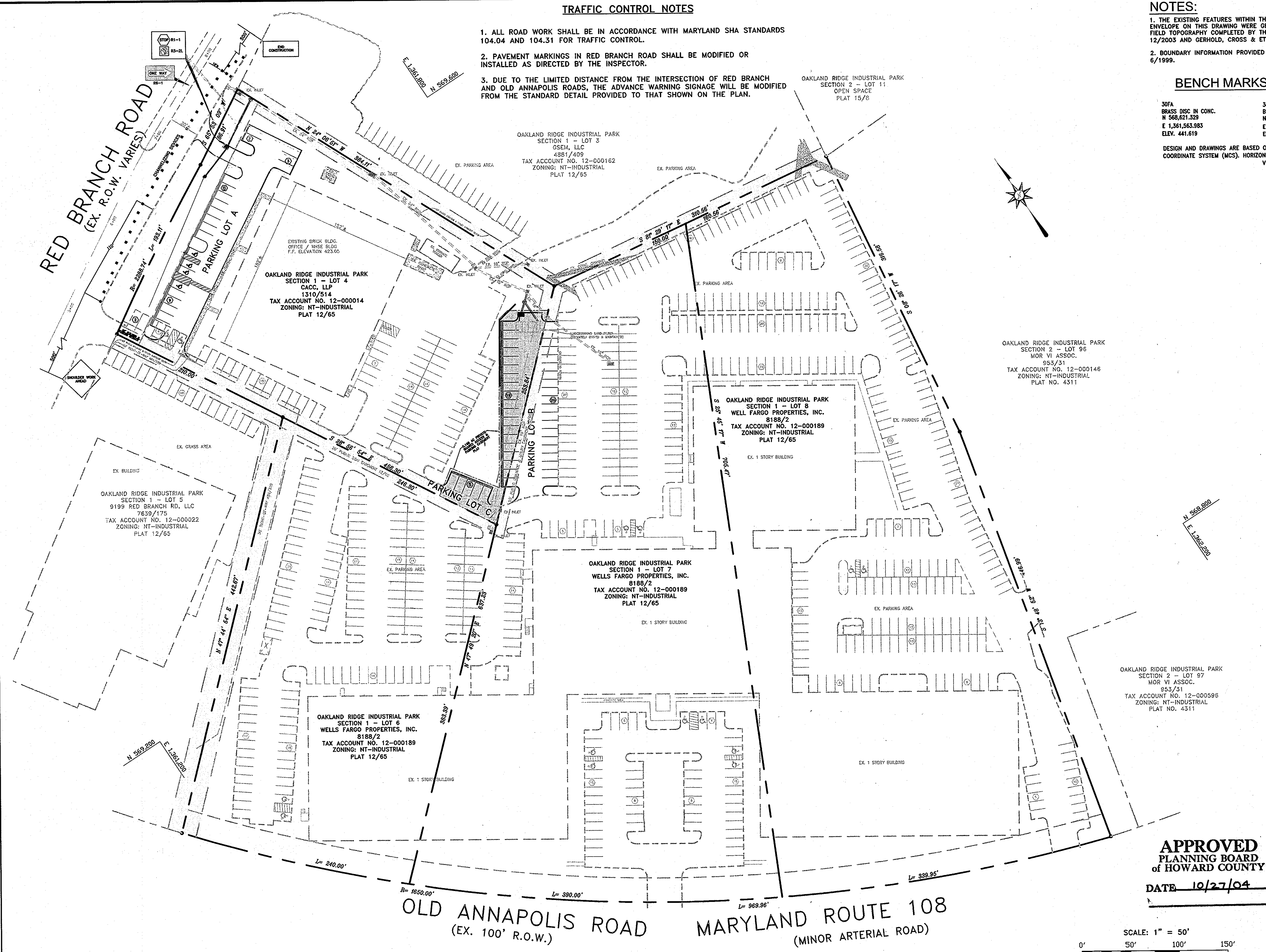
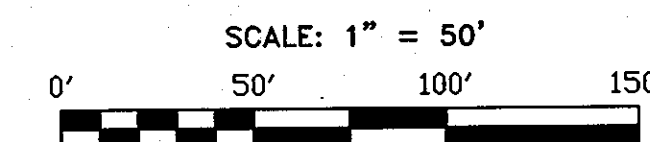
SITE ANALYSIS DATA CHART

1. TOTAL PROJECT AREA: LOT 4: 2.542 ACRES LOT 7: 6.260 ACRES
2. AREA OF PLAN SUBMISSION: 0.87± ACRES
3. EXISTING USE: OFFICE/WAREHOUSE
4. PROPOSED USE: OFFICE/WAREHOUSE
5. EXISTING BUILDING COVERAGE: LOT 4: 27,680 S.F. (25.0% COVERAGE) LOT 7: 56,633 S.F. (20.7% COVERAGE)
6. PARKING COMPUTATIONS: NUMBER OF PARKING SPACES REQUIRED: LOT 4: 27,680 S.F. @ 2.5 PS/1,000 S.F. = 69 PS W/3 HC SPACES LOT 7: 56,633 S.F. @ 2.5 PS/1,000 S.F. = 69 PS W/5 HC SPACES
7. EXISTING PARKING SPACES: LOT 4: 70 PS W/ 2 HC SPACES LOT 7: 169 PS W/8 HC SPACES
8. NUMBER OF PARKING SPACES TO BE REMOVED: LOT 4: 4 SPACES LOT 7: 0
9. PROPOSED PARKING SPACES: LOT 4: 107 PS LOT 7: 189 PS
10. LIMIT OF DISTURBED AREA: 0.87± ACRES
11. EXISTING ZONING: NT - INDUSTRIAL, FDP 3-A
12. ADDITIONAL IMPERVIOUS AREA: 20,909± S.F.

INDEX OF DRAWINGS

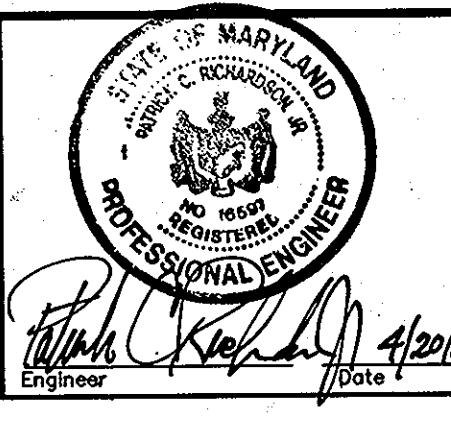
SHT. NO.	DESCRIPTION
1	SITE MAP & TRAFFIC CONTROL PLAN
2	SITE PLAN, PROFILES & DETAILS
3	SWM PLAN AND DRAINAGE AREA MAP
4	STORMWATER MANAGEMENT NOTES & DETAILS
5	SEDIMENT & EROSION CONTROL PLAN & DETAILS
6	SEDIMENT AND EROSION CONTROL NOTES & RETAINING WALL DETAILS
7	LANDSCAPING PLAN

APPROVED PLANNING BOARD OF HOWARD COUNTY
 DATE 10/27/04



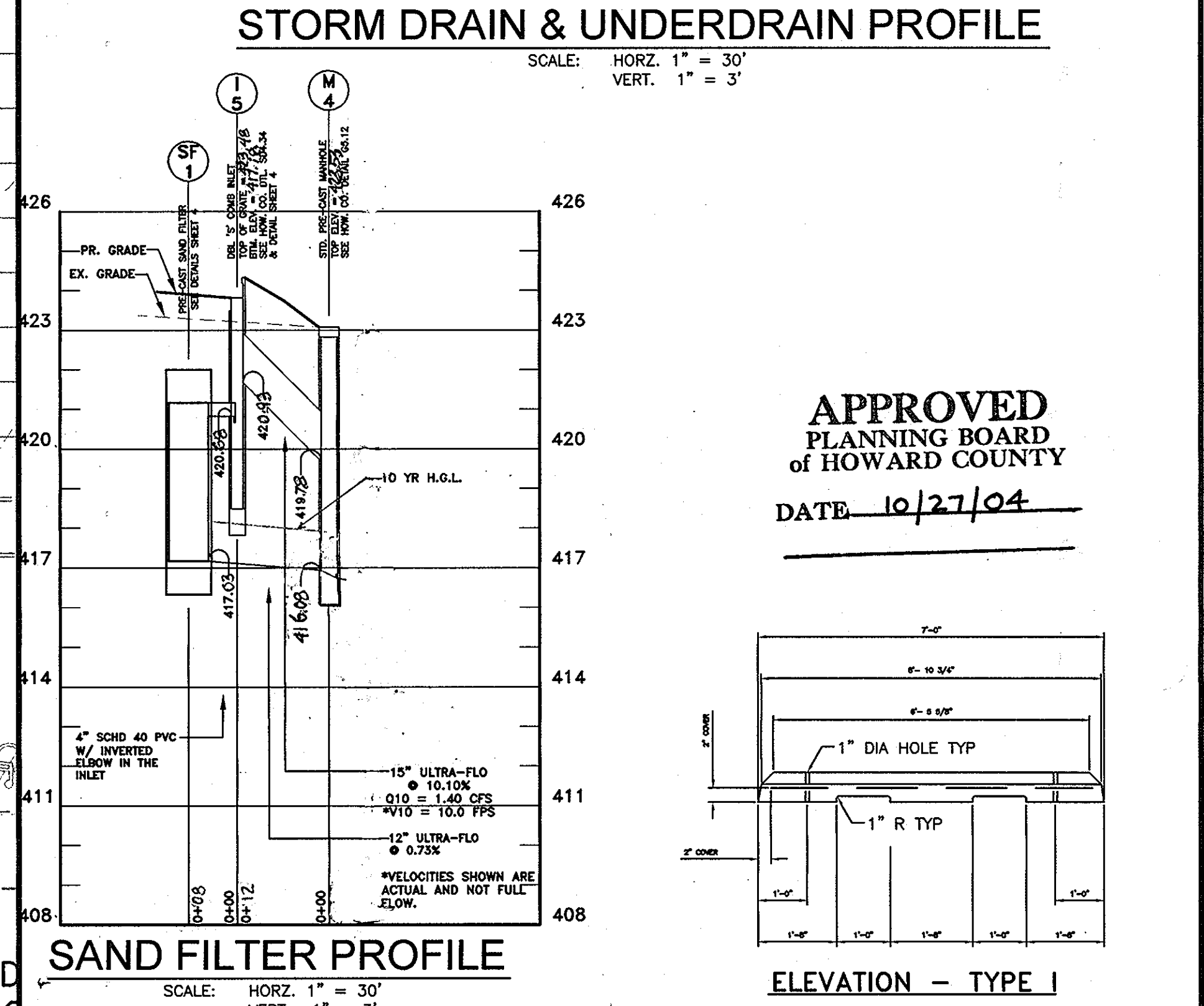
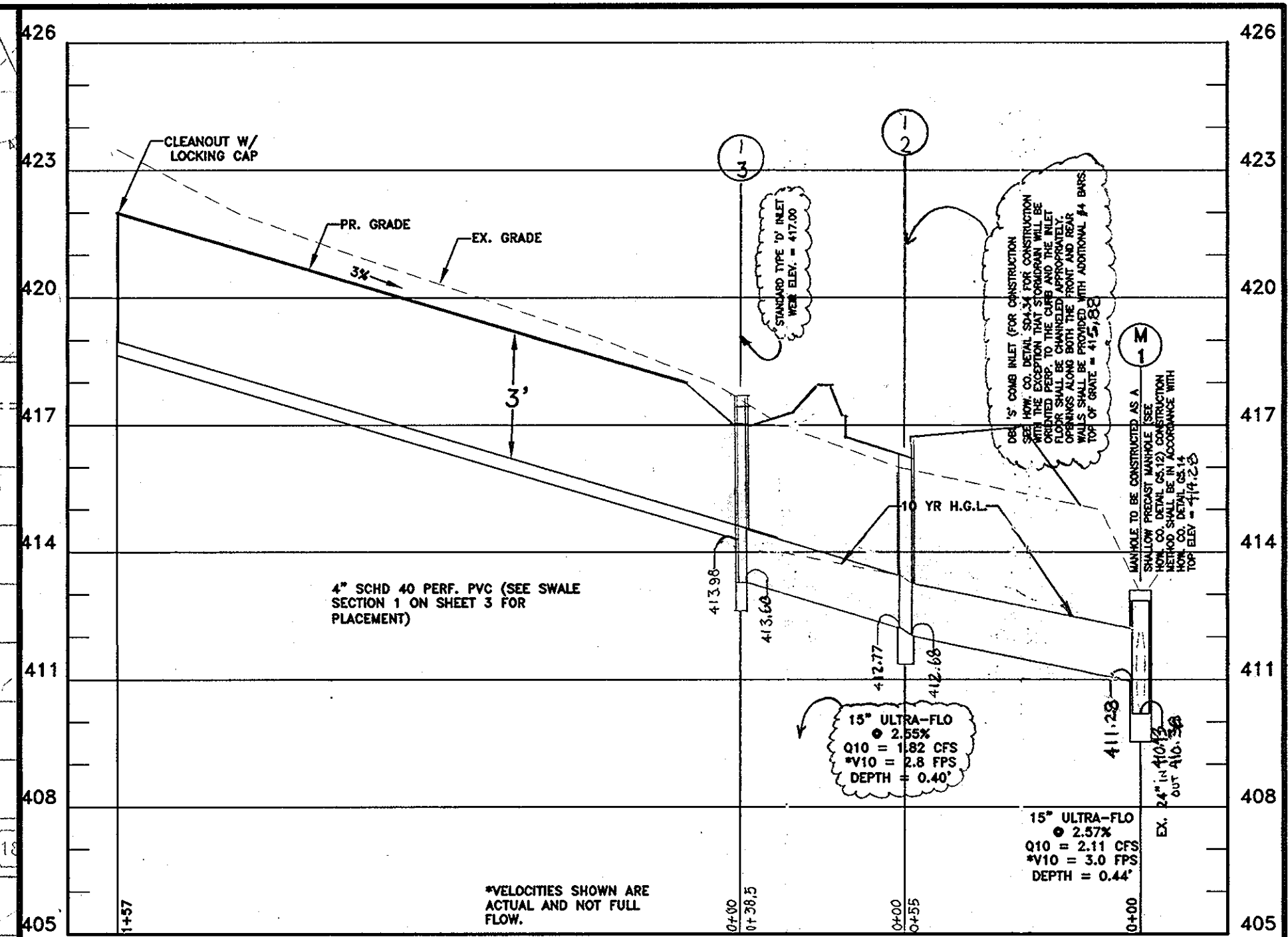
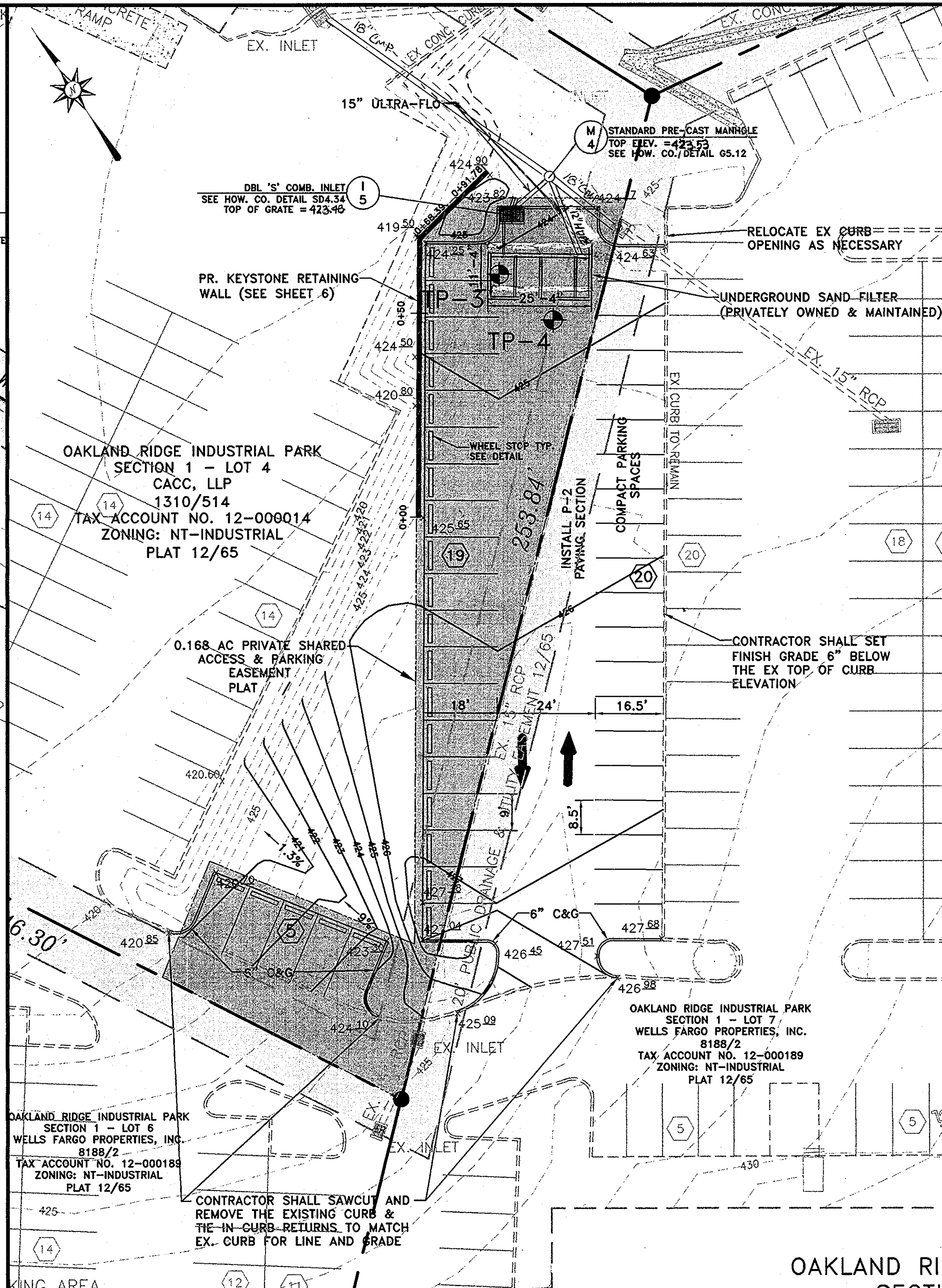
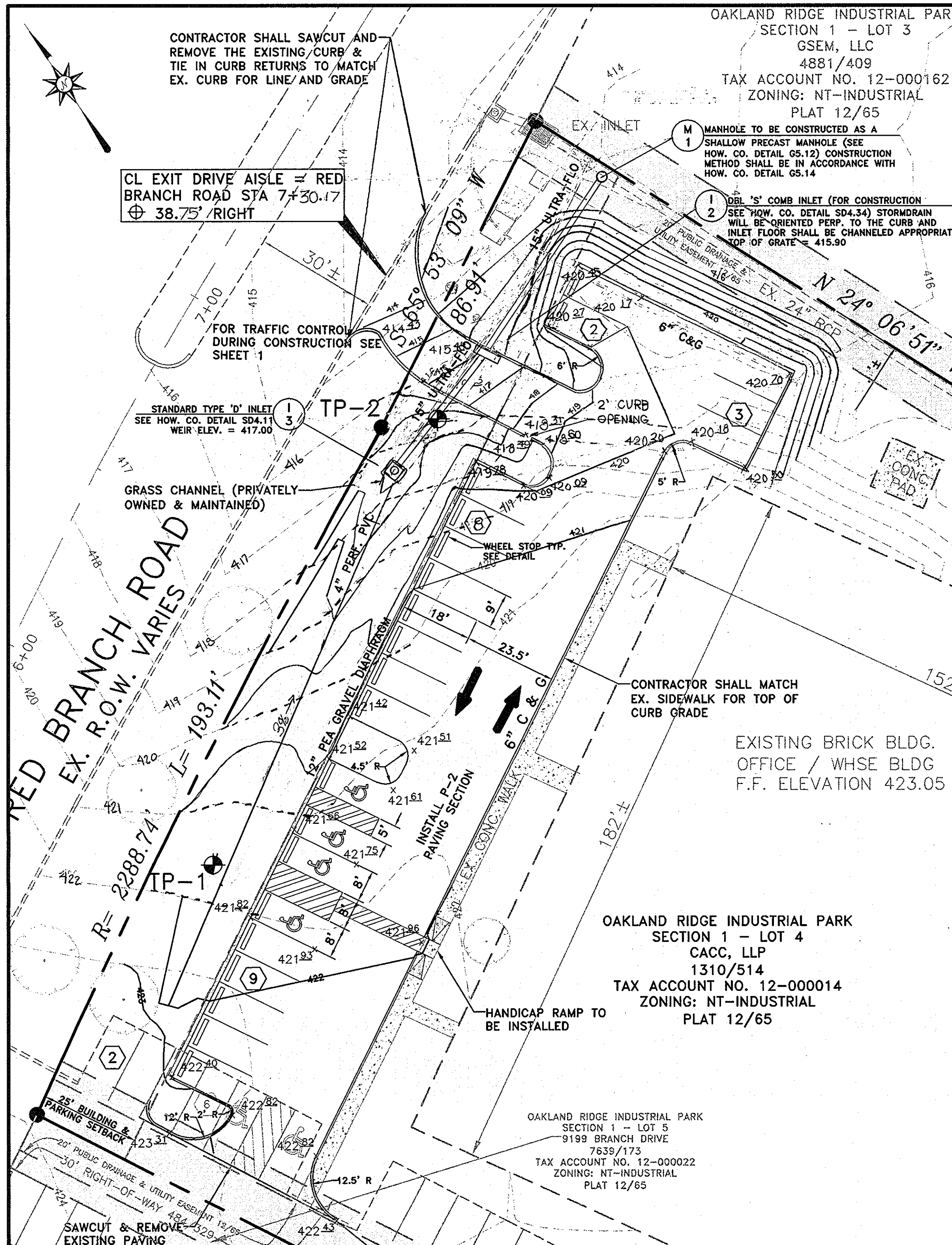
APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division Date 4/2/05
 Chief, Division of Land Development Date 4/2/05
 Director Date 4/6/05

Richardson Engineering, LLC
 730 W. Padonia Road, Suite 101
 Cockeysville, Maryland 21030
 Phone: 410-560-1502 Fax: 410-560-0827

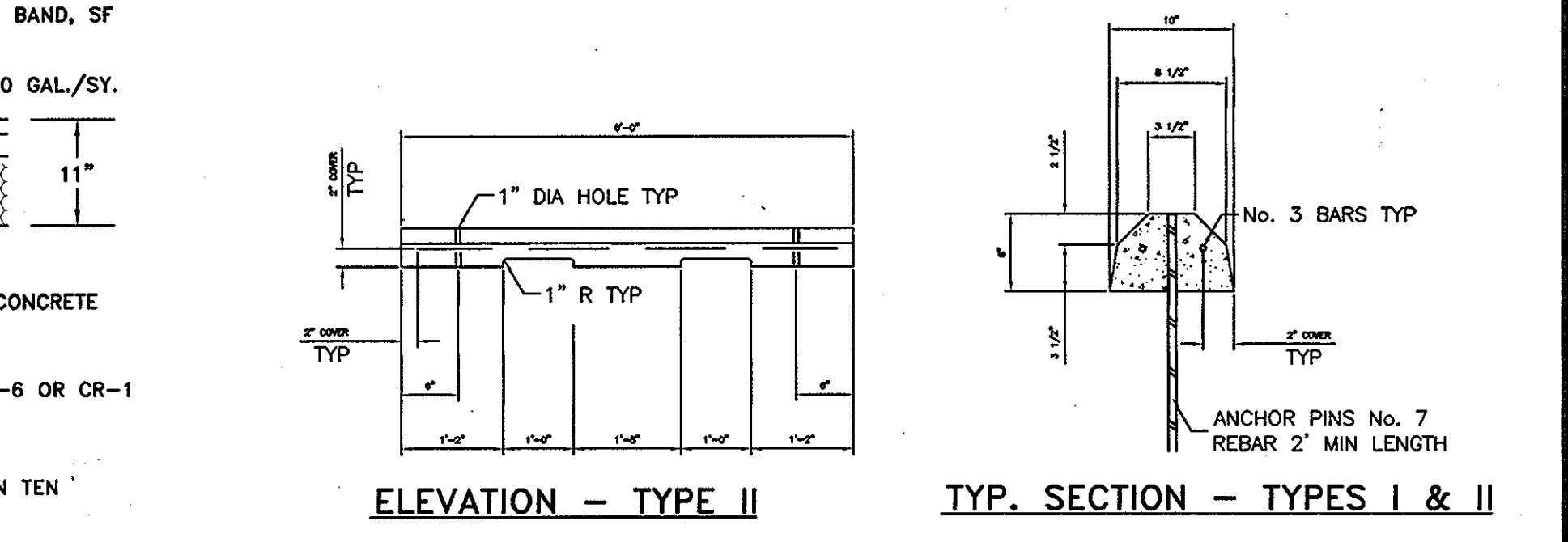
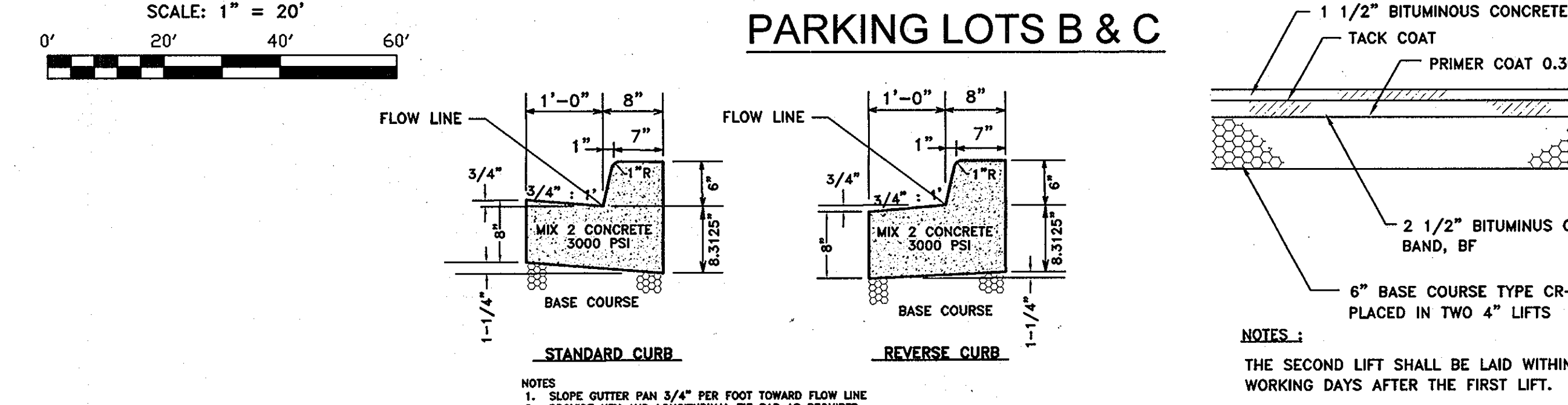
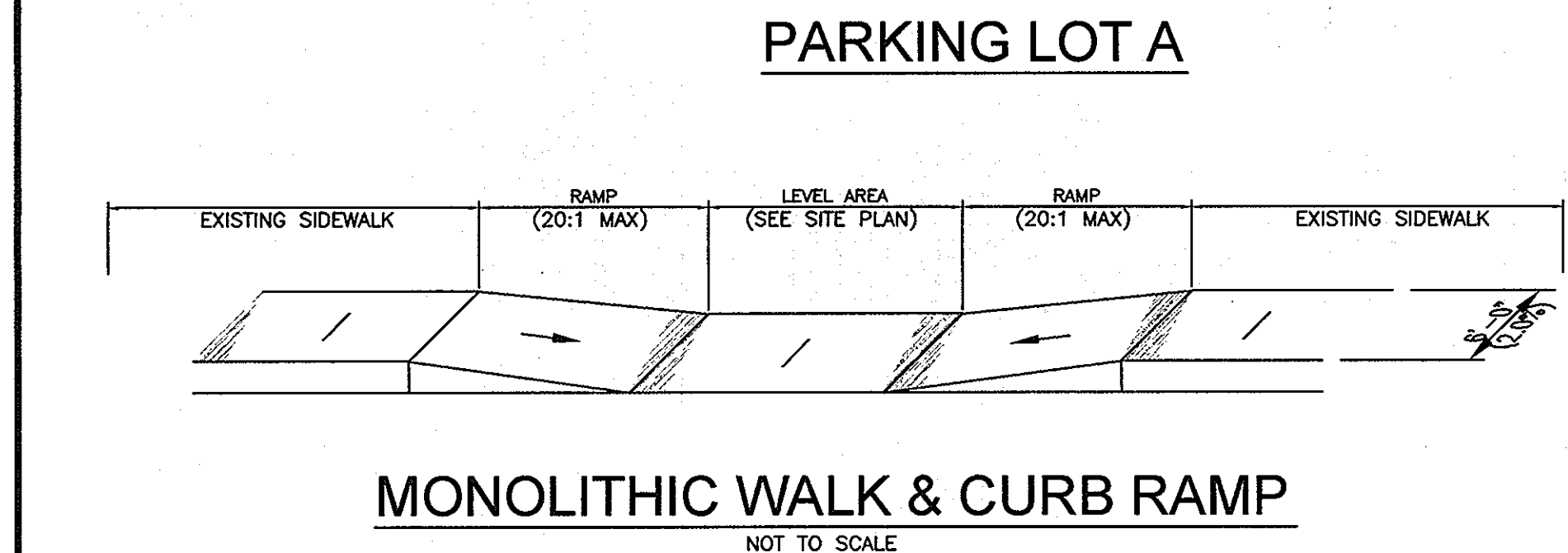
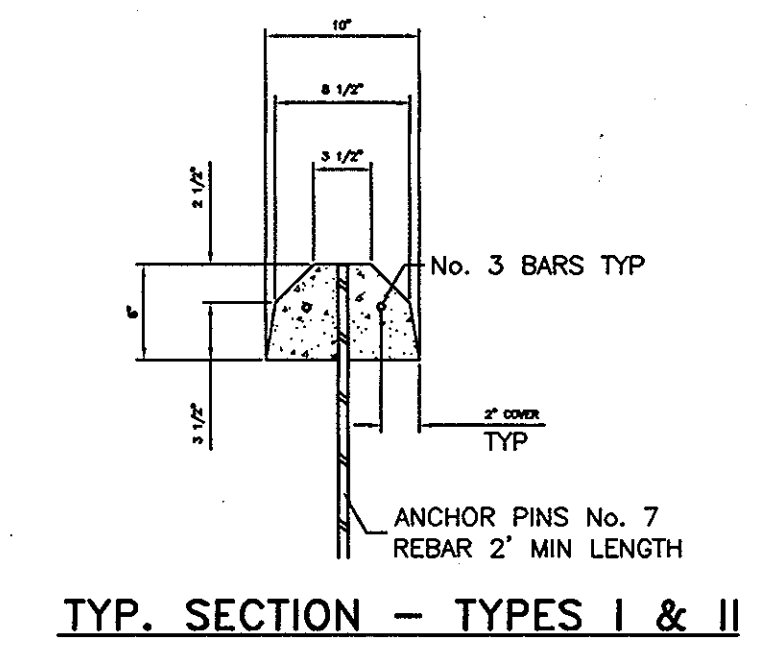
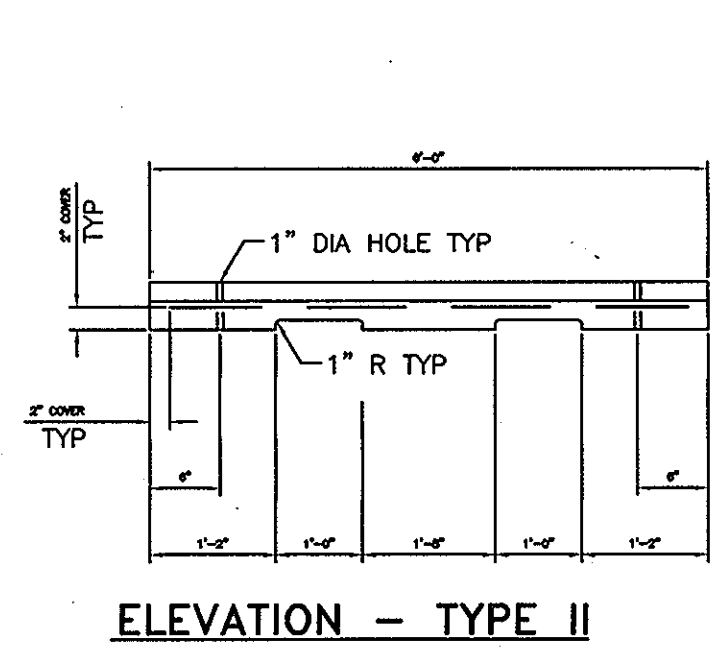
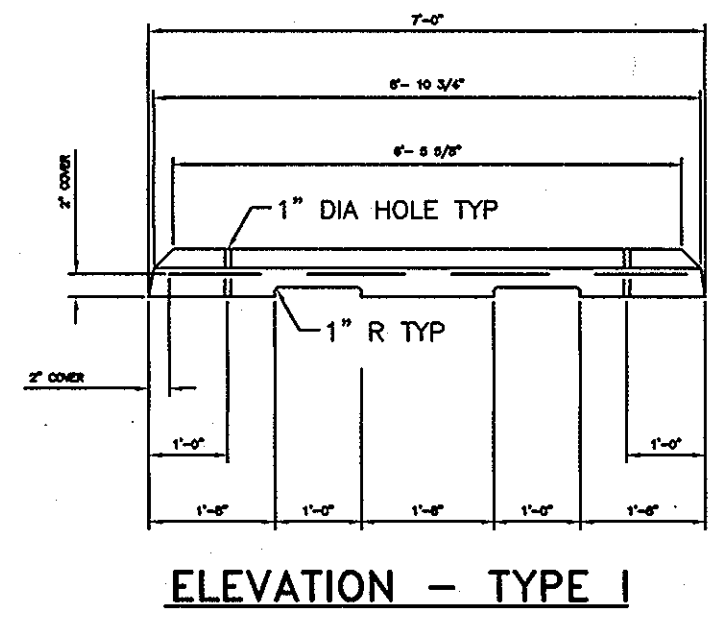


OWNERS/DEVELOPERS
 WELLS FARGO PROPERTIES, INC.
 2329 CENTRAL AVENUE NE
 MINNEAPOLIS, MINNESOTA 55479
 ATTN: CARRIE JOHNSON
 PHONE: 612-667-8714
 CACC, LLP
 9195 RED BRANCH ROAD
 COLUMBIA, MARYLAND 21045
 ATTN: STEPHEN SMITH
 PHONE: 410-992-9570

ADDRESS CHART		
Lot/Parcel #	Street Addresses	
LOT 4	9195 RED BRANCH ROAD	
LOT 7	9052 OLD ANNAPOLIS ROAD	
PERMIT INFORMATION CHART		
Subdivision Name	Section/Area	Lot/Parcel No.
OAKLAND RIDGE INDUSTRIAL PARK	SECTION 1	LOTS 4 & 7
Plat #	Grid #	Zoning
12/65	17	NT
Tax Map No.	Election District	Census Tract
30	2	6023.02
Water Code	Sewer Code	
604	5657400	
DESIGNED BY	SCALE	TAX MAP
J.P.D.	AS SHOWN	30
DRAWN BY	DEED REF.	GRID
J.P.D.	1310514	17
CHECKED BY	DATE	PLAT REF.
J.P.D.	8/18/02	12/65
DRAWING COMPLETED		DATE
4-20-05		03053
JOB #		SHEET
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		7



APPROVED
PLANNING BOARD
of HOWARD COUNTY
DATE 10/27/04

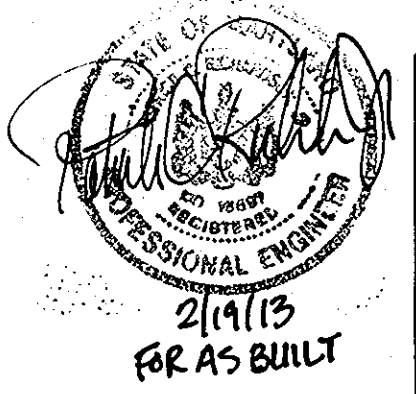


APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division
Date 4/3/05

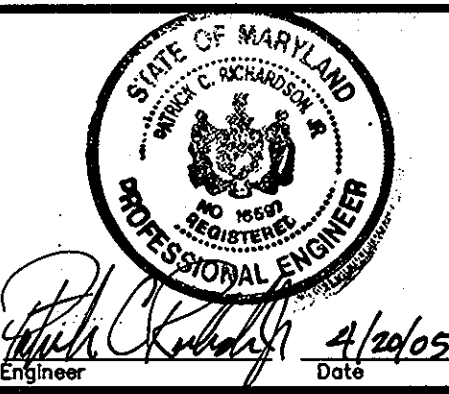
Chief, Division of Land Development
Date 6/2/05

Director
Date 6/8/05



Richardson Engineering, LLC

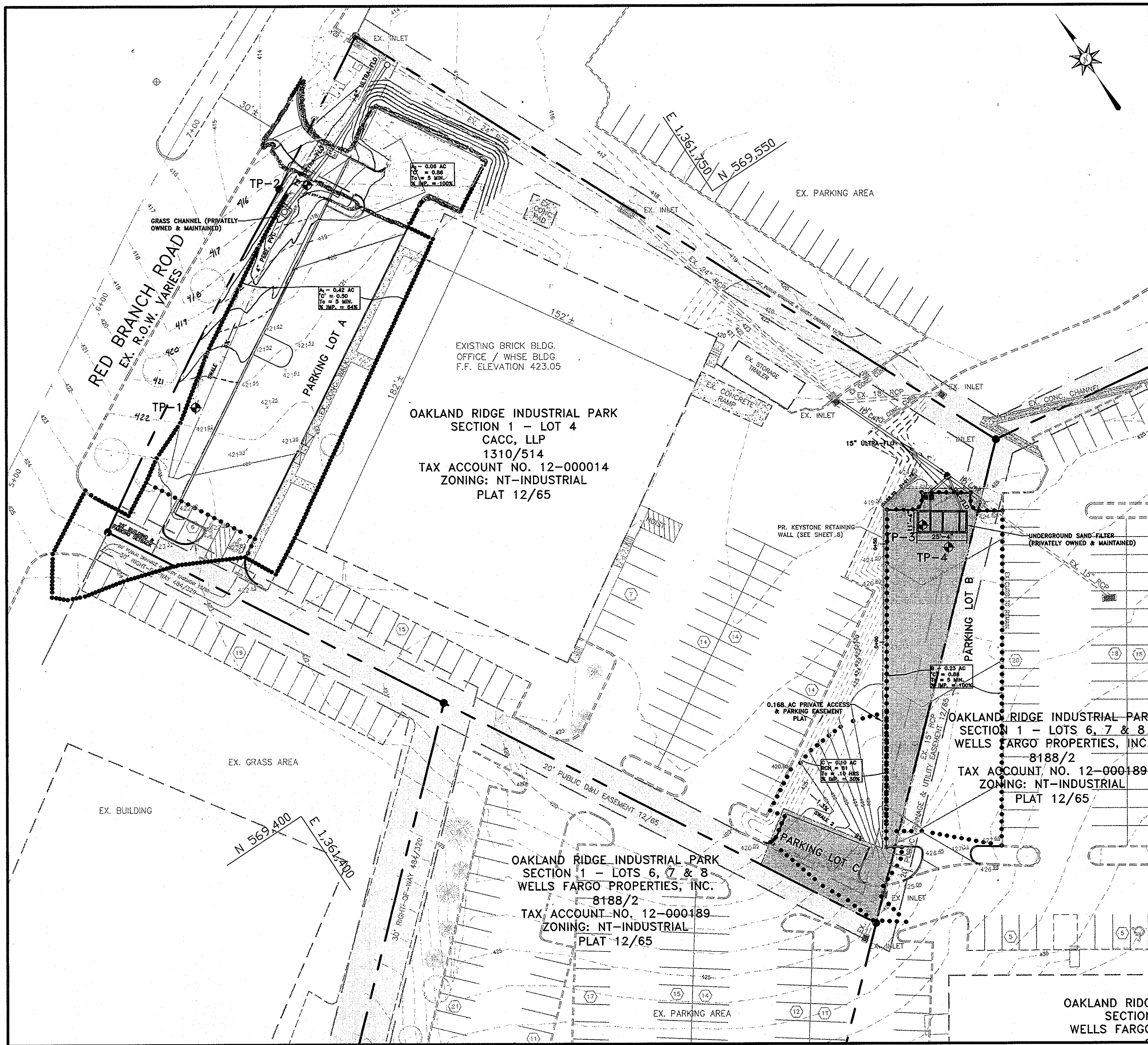
730 W. Padonia Road, Suite 101
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ATTN: STEPHEN SMITH
PHONE: 410-992-9570

OAKLAND RIDGE INDUSTRIAL PARK, SEC. 1, LOTS 4 & 7 (PARKING ADDITIONS)		TAX MAP 30		A.D.C. MAP 5		JOB # 03053		SHEET	
SITE DEVELOPMENT PLANS		AS SHOWN		GRID D-13		PLAT REF.		NO. 2	
SITE PLAN, PROFILES & DETAILS		DEED REF. 1310/514		PARCEL 239		FILES G:\JOBS\2005\03053\DRAWINGS\SHEET2.dwg		NO. 7	
SECOND ELECTION DISTRICT		HOWARD COUNTY, MARYLAND		DRAWING COMPLETED 4-20-05					
DESIGNED BY: J.P.D.	SCALE	TAX MAP	A.D.C. MAP	JOB #	SHEET				
DRAWN BY: J.P.D.	AS SHOWN	30	5	03053	2				
CHECKED BY: J.P.D.	DEED REF.	GRID	PLAT REF.	FILES	NO.				
	1310/514	D-13	12/65	G:\JOBS\2005\03053\DRAWINGS\SHEET2.dwg	7				
	8188/2	239							



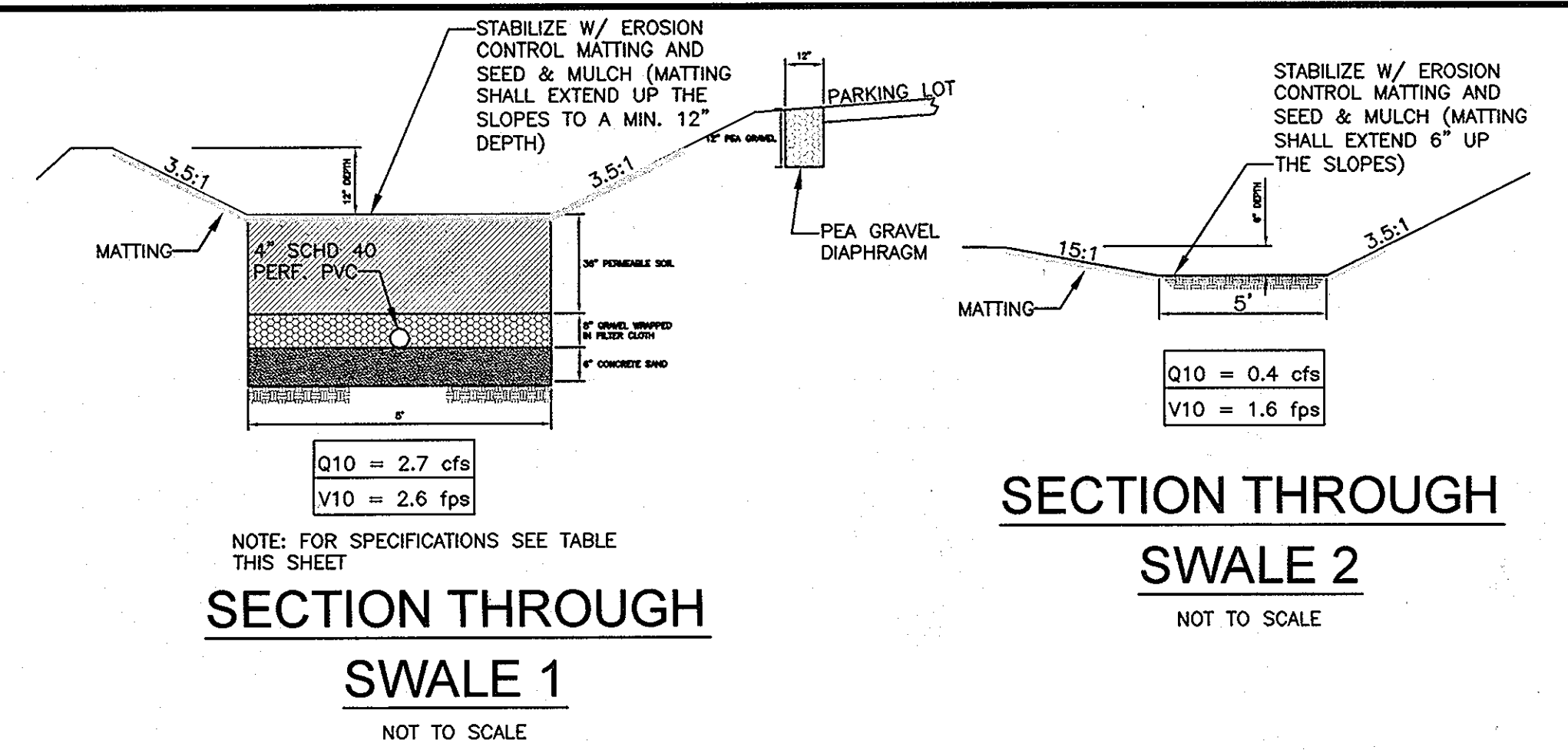
SCALE: 1" = 30'

NOTE: THIS SITE IS CONSIDERED A FURTHER DEVELOPMENT OF A PARTIALLY DEVELOPED SITE.

- SWM DATA (PARKING LOT A)**
- ON-SITE FACILITY
 - STRUCTURE CLASSIFICATION - NA (NOT 378)
 - TYPE OF FACILITY - DRY SWALE
 - MAINTENANCE RESPONSIBILITY - PRIVATE
 - WATERSHED AREA TO FACILITY - 0.42 AC.±
 - Q1 = 1.1 CFS, Q10 = 2.7 CFS
 - CPV NOT REQUIRED.
 - RUNOFF CURVE NUMBER - 89
 - TIME OF CONCENTRATION - 0.10 HOURS
 - 10-YEAR VELOCITY - 2.58 FPS

- SWM DATA (PARKING LOT B)**
- ON-SITE FACILITY
 - STRUCTURE CLASSIFICATION - NA (NOT 378)
 - TYPE OF FACILITY - UNDERGROUND SAND FILTER
 - MAINTENANCE RESPONSIBILITY - PRIVATE
 - WATERSHED AREA TO FACILITY - 0.23 AC.±
 - Q1 = 0.7 CFS, Q10 = 1.4 CFS
 - CPV NOT REQUIRED.
 - REQUIRED STORAGE VOLUME - 518 CU.FT.
 - PROVIDED STORAGE VOLUME - 845 CU.FT.
 - FILTER BED AREA REQUIRED - 88 S.F.
 - FILTER BED AREA PROVIDED - 60 S.F.
 - TOTAL SITE AREA - 0.23 AC.±
 - RUNOFF CURVE NUMBER - 98
 - TIME OF CONCENTRATION - 0.10 HOURS

- SWM DATA (PARKING LOT C)**
- SWALE IS PROVIDED FOR RECHARGE ONLY.
 - WATER QUALITY IS PROVIDED FOR THIS AREA IN AREA A BY TREATING AN EQUIVALENT AMOUNT OF EXISTING IMPERVIOUS.
 - STRUCTURE CLASSIFICATION - NA (NOT 378)
 - TYPE OF FACILITY - GRASS CHANNEL
 - MAINTENANCE RESPONSIBILITY - PRIVATE
 - WATERSHED AREA TO FACILITY - 0.10 AC.±
 - Q1 = 0.15 CFS, Q10 = 0.43 CFS
 - CPV NOT REQUIRED.
 - RUNOFF CURVE NUMBER - 89
 - TIME OF CONCENTRATION - 0.10 HOURS
 - 10-YEAR VELOCITY - 1.62 FPS



SECTION THROUGH SWALE 1
NOT TO SCALE

SECTION THROUGH SWALE 2
NOT TO SCALE

MATERIAL SPECIFICATIONS

MATERIAL	SPECIFICATION/TEST METHOD	SIZE	NOTES
'CONCRETE' SAND	CLEAN ASHTO-M-6 OR ASTM-C-33	0.02" TO 0.04"	SAND SUBSTITUTIONS SUCH AS DIABASE AND GRAYSTONE #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATED OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND.
GEOTEXTILE FABRIC	ASTM-D-4833 (PUNCTURE STRENGTH - 125 LB.) ASTM-D-4832 (TENSILE STRENGTH - 300 LB.)	0.08" THICK EQUIVALENT OPENING SIZE OF #80 SIEVE	MUST MAINTAIN 125 GPM PER SQ. FT. FLOW RATE
UNDERDRAIN PIPING	F758, TYPE PS 28 OR ASHTO-M-278	4"-6" RIGID SCHEDULE 40 PVC OR SDR35	3/8" PERF. Ø 6" ON CENTER, 4 HOLES PER ROW, MINIMUM OF 3" OF GRAVEL OVER PIPES; NOT NECESSARY UNDERNEATH PIPES
UNDERDRAIN GRAVEL	ASHTO-M-43	0.375"-0.75"	
TOP SOIL	SAND 35% TO 60% SILT 30% TO 55% CLAY 0% TO 10%	N/A	USDA SOIL TYPES LOAMY SAND, SANDY LOAM OR LOAM

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 10/27/04

SAND FILTER MAINTENANCE SCHEDULE

- THE SEDIMENT CHAMBER OUTLET DEVICES SHALL BE CLEANED AND/OR REPAIRED WHEN DRAWDOWN TIMES WITHIN THE CHAMBER EXCEED 36 HOURS.
- DEBRIS AND LITTER SHALL BE REMOVED AS NECESSARY TO INSURE PROPER OPERATION OF THE SYSTEM.
- SEDIMENT SHALL BE CLEANED OUT OF THE SEDIMENTATION CHAMBER WHEN IT ACCUMULATES TO A DEPTH OF 6 INCHES. VEGETATION WITHIN THE CHAMBER SHALL BE LIMITED TO A HEIGHT OF 18 INCHES.
- WHEN WATER PONDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 72 HOURS, THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REPLACED WITH FRESH MATERIAL. THE OWNER MUST FOLLOW PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS AND LIQUID.
- A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

OPEN CHANNEL MAINTENANCE SCHEDULE

- THE OPEN CHANNEL SYSTEM SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
- THE OPEN CHANNEL SHALL BE MAINTAINED TO A MINIMUM OF AS NEEDED DURING THE GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN 6".
- DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
- VISIBLE SIGNS OF EROSION IN THE OPEN CHANNEL SYSTEM SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
- REMOVE SILT IN THE OPEN CHANNEL SYSTEM WHEN IT ACCUMULATES TO A DEPTH OF THREE INCHES.

ULTRA FLO STORM SEWER PIPE SPECIFICATIONS

SCOPE
THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE ULTRA FLO PIPE DETAILED IN THE PROJECT PLANS.

MATERIAL
THE PIPE MATERIAL SHALL BE ALUMINUM AND SHALL HAVE A MANNING'S OF .012.

PIPE
THE ULTRA FLO SHALL BE MANUFACTURED WITH THE 3/4" x 3/4" x 7-1/2" EXTERNAL RIBS IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF ASTM B 745. THE PIPE SIZES AND GAGES SHALL BE AS SHOWN ON THE PROJECT PLANS.

HANDLING & ASSEMBLY
SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE NATIONAL CORRUGATED STEEL PIPE ASSOCIATION.

INSTALLATION
SHALL BE IN ACCORDANCE WITH ASTM B 788 AND B 790 AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS, THE CONTRACTOR MUST BRING THEM TO THE ATTENTION OF THE PROJECT ENGINEER.

CONSTRUCTION LOADS
CONSTRUCTION LOADS MAY BE HIGHER THAN FINAL LOADS. FOLLOW THE GUIDELINES OF THE MANUFACTURER OR THE NATIONAL CORRUGATED STEEL PIPE ASSOCIATION.

STORMWATER MANAGEMENT SUMMARY							
SUB-AREA	ACREAGE (ACRES)	Rev (CU FT)	WQv (CU FT)	Cpv (CU FT)	10-YR (CFS)	100-YR (CFS)	
A	0.48	133	1021	NOT REQ'D	CONVEYED SAFELY	NOT REQ'D	
B	0.23	103	690	NOT REQ'D	CONVEYED SAFELY	NOT REQ'D	
C	0.10	GRASS CHANNEL	PROV'D FOR IN AREA A	NOT REQ'D	CONVEYED SAFELY	NOT REQ'D	

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division
Date: 6/7/05

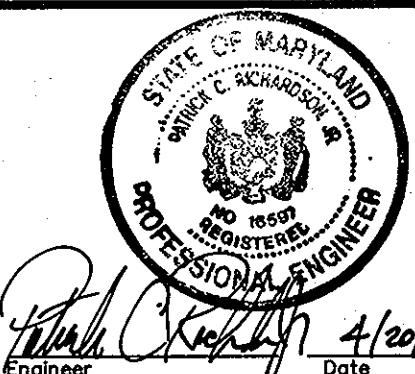
Chief, Division of Land Development
Date: 6/16/05

Director

ASBUILT
2/19/13
FOR AS BUILT

Richardson Engineering, LLC

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OAKLAND RIDGE INDUSTRIAL PARK, SEC. 1, LOTS 4 & 7
(PARKING ADDITIONS)
SITE DEVELOPMENT PLANS
SWM PLAN & DRAINAGE AREA MAP
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGNED BY: J.P.D.
DRAWN BY: J.P.D.
CHECKED BY: J.P.D.

SCALE AS SHOWN
DEED REF. 1310/514
8188/2

TAX MAP 30
GRID 17
PARCEL 239

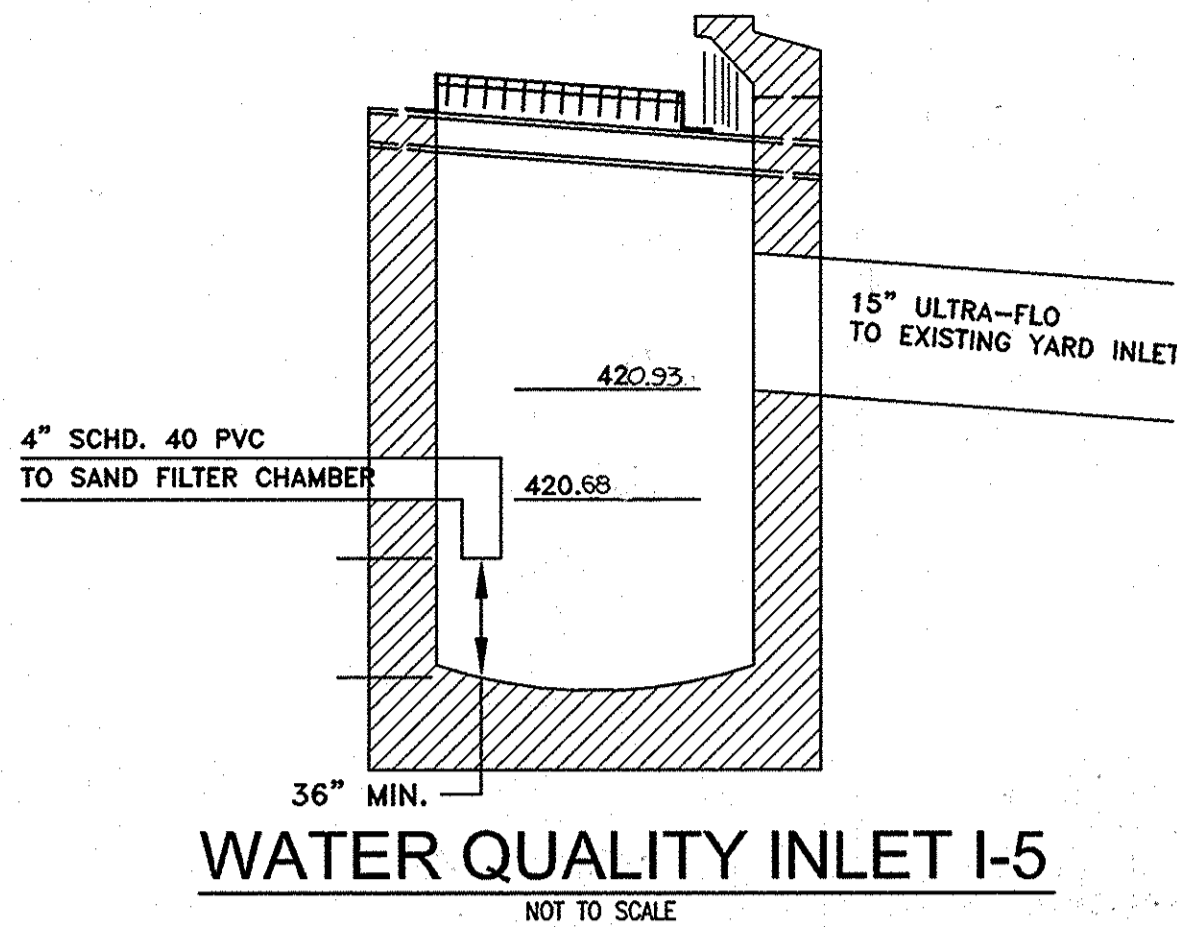
A.D.C. MAP 5
GRID D-13
PLAT REF. 12/65

DRAWING COMPLETED 4-20-05

JOB # 03053
FILES C:\JOBS\2005\03053\DRAWINGS\SHEETS.dwg

DATE REVISION BY

NO. 3
OF 7



WATER QUALITY INLET I-5
NOT TO SCALE

PIPE SCHEDULE

FROM	TO	PIPE TYPE	SIZE	LENGTH
I-3	I-2	ULTRA-FLO	15"	38.5'
I-2	M-1	ULTRA-FLO	15"	5.5'
I-5	M-4	ULTRA-FLO	15"	12'
SF-1	M-4	ULTRA-FLO	12"	20'

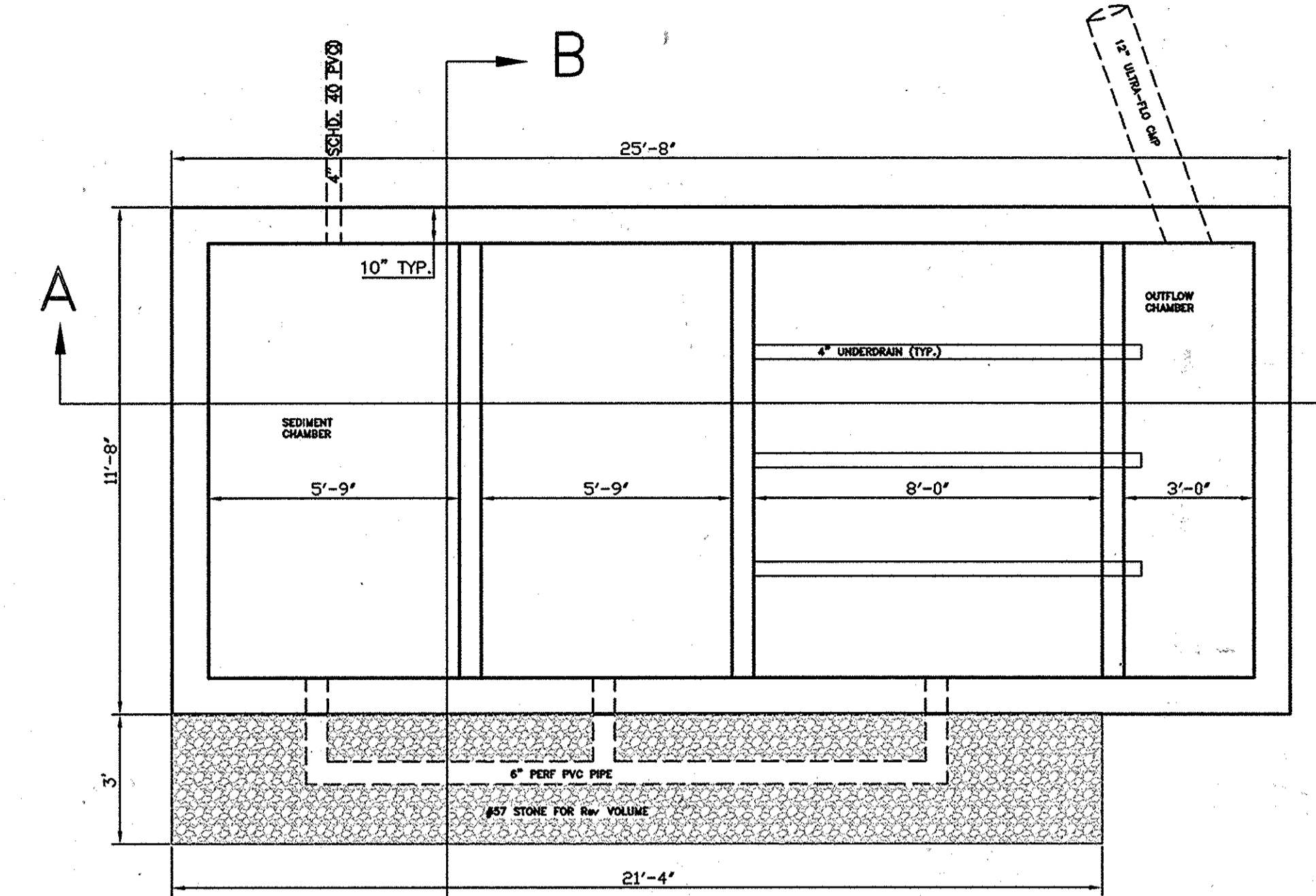
STRUCTURE SCHEDULE

NO.	STRUCTURE	INVERT	INVERT	TOP	NORTHING/EASTING/SEE NOTE BELOW
I-5	DOUBLE 'S' COMBINATION INLET	420.93	423.48	569,570.42 / 1,361,822.12	
I-3	TYPE 'D' INLET	414.05	417.09	569,651.14 / 1,361,563.88	
I-2	DOUBLE 'S' COMBINATION INLET	412.79	415.86	569,672.43 / 1,361,600.33	
M-4	PRECAST CONCRETE MANHOLE	415.34	423.53	569,573.54 / 1,361,675.50	
M-1	PRECAST CONCRETE MANHOLE	410.36	414.28	569,694.79 / 1,361,646.59	

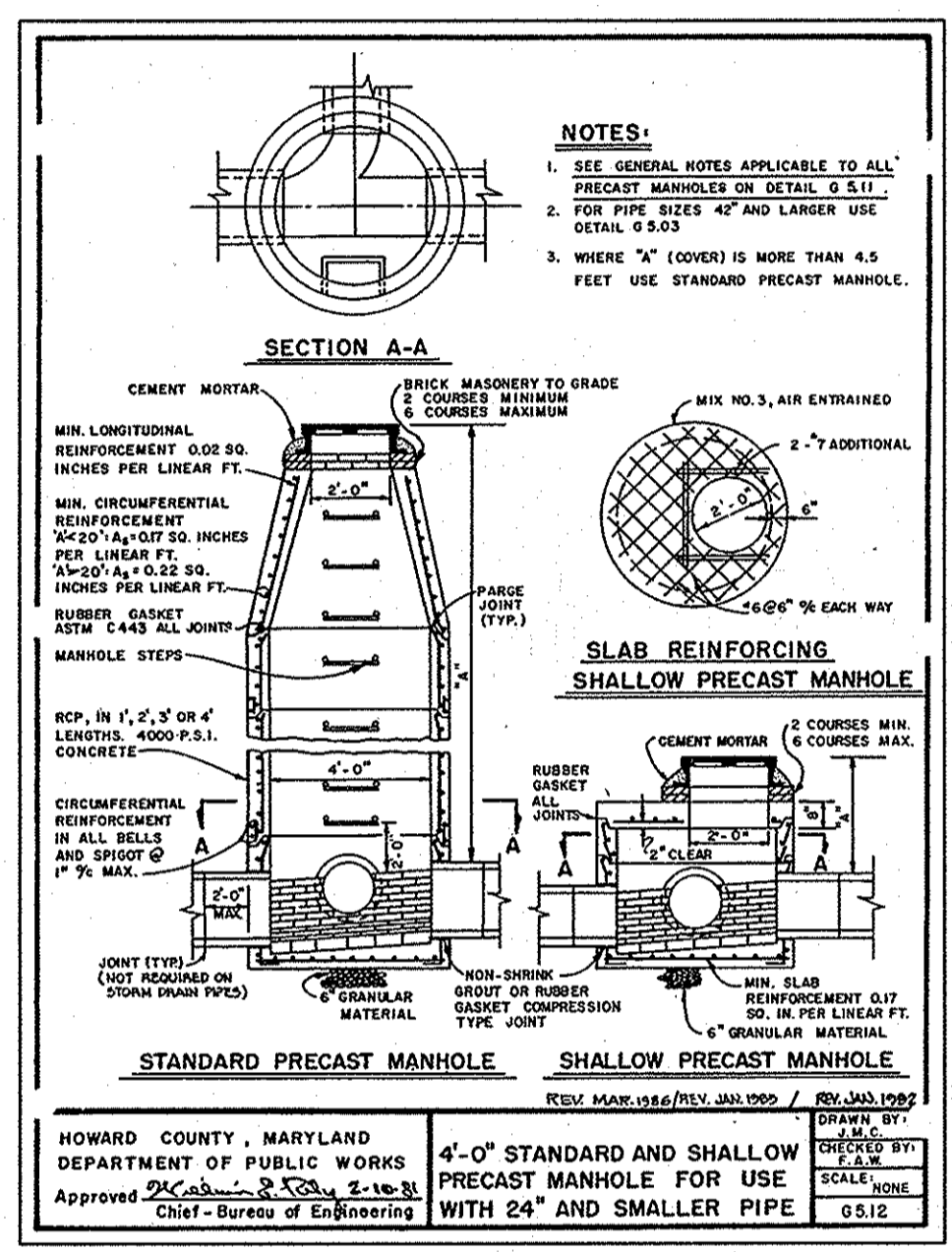
NOTE: DOUBLE 'S' INLETS ARE COORDINATED TO THE CENTERLINE OF THE INLET ALONG THE PROJECTED FLOWLINE. TYPE 'D' INLET IS COORDINATED TO THE CENTERLINE OF THE BOX AND MANHOLES ARE COORDINATED TO THE CENTERLINE OF THE MANHOLE.

CONSTRUCTION SPECIFICATIONS

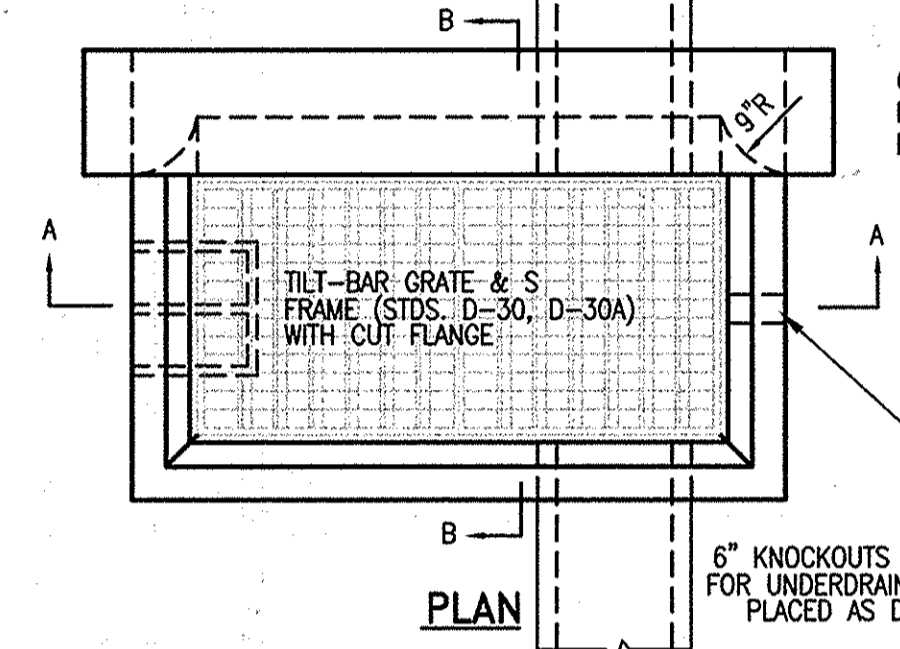
- GENERAL**
THIS STORMWATER MANAGEMENT FACILITY SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY'S "STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION".
- TIMING**
THIS UNDERGROUND MANAGEMENT FACILITY SHALL NOT BE CONSTRUCTED OR PLACED IN SERVICE UNTIL ALL OF THE CONTRIBUTING AREA HAS BEEN STABILIZED AND APPROVED BY THE RESPONSIBLE INSPECTOR.
- STRUCTURAL BACKFILL MATERIAL**
THE BACKFILL MATERIAL SHALL BE TAKEN FROM AN APPROVED BORROW AREA. ALL MATERIAL SHALL BE FREE FROM ROOTS, STUMPS, WOOD, RUBBISH, OVERSIZED STONES, FROZEN OR OTHER OBJECTIONABLE MATERIAL.
- PLACEMENT & COMPACTION**
THE BACKFILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 4 INCHES IN THICKNESS AND COMPACTED BY HAND TEMPERERS OR OTHER COMPACTION EQUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPES. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN 4 FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE OR PIPE UNLESS THERE IS A COMPACTED FILL OF 24 INCHES OR GREATER OVER THE STRUCTURE OR PIPE.
- PIPE CONDUITS MATERIALS (CORRUGATED STEEL PIPE):**
THIS PIPE AND ITS APPURTENANCES SHALL BE GALVANIZED AND FULLY BITUMINOUS COATED AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATIONS M-190, TYPE A WITH WATERTIGHT COUPLING BANDS. ANY BITUMINOUS COATING DAMAGED OR OTHERWISE REMOVED SHALL BE REPLACED WITH COLD APPLIED BITUMINOUS COATING COMPOUND. COATED C.M.P. SHALL HAVE A MINIMUM COATING THICKNESS OF 10 ML ON BOTH SIDES OF PIPE AND SHALL MEET REQUIREMENTS OF AASHTO M-245 AND M-246.
- CONNECTIONS:**
ALL CONNECTIONS WITH PIPES MUST BE COMPLETELY WATERTIGHT. WATERTIGHT COUPLING BANDS OR FLANGES SHALL BE USED AT ALL JOINTS. DIMPLE BANDS ARE NOT CONSIDERED TO BE WATERTIGHT. BEDDING THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSUITABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIALS SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH MATERIAL COMPACTED TO PROVIDE ADEQUATE SUPPORT. LAYING PIPE THE PIPE SHALL BE PLACED WITH INSIDE CIRCUMFERENTIAL LAPS POINTING DOWNSTREAM AND WITH THE LONGITUDINAL LAPS AT THE SIDES. BACKFILLING BACKFILL SHALL CONFORM TO STRUCTURAL BACKFILL AS SHOWN ABOVE. OTHER DETAILS SILT, TRAPPING MANHOLES, ETC. SHALL BE AS SHOWN ON THE DRAWINGS. REINFORCED CONCRETE PIPE MATERIALS: REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM C-361.
- CONCRETE:**
CONCRETE SHALL MEET MINIMUM REQUIREMENTS SET FORTH IN MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 918 (PORTLAND CEMENT CONCRETE MIXTURES), MIX NO. 3. REINFORCING STEEL SHALL BE ASTM A-615, GRADE 60. REBARS SHALL HAVE 3" COVER (MINIMUM) AND A MINIMUM OVERLAP OF 30 BAR DIAMETERS, EXCEPT AS NOTED ON THE PLAN. STEEL ANGLES AND ANCHOR BARS SHALL BE ASTM A-36.
- EROSION CONTROL:**
FACILITIES ALL DISTURBED AREA SHALL BE CONTROLLED BY AN EROSION AND SEDIMENT CONTROL PLAN WHICH HAS BEEN APPROVED BY HOWARD COUNTY DEPT. OF PUBLIC WORKS SOIL CONSERVATION DISTRICT. PROVIDE INLET PROTECTION FOR THOSE INLETS LOCATED ABOVE THE FACILITY UNTIL THE CONTRIBUTING AREAS HAVE BEEN STABILIZED.
- FILTER CLOTH:**
ALL FILTER CLOTH SHALL BE POLYFILTER - X OR EQUIVALENT.
- RIPRAP:**
ALL RIPRAP SHALL CONFORM TO HOWARD COUNTY SPECIFICATIONS.
- CONSTRUCTION INSPECTION BY DESIGNATED ENGINEERS:**
THE CONSTRUCTION OF THIS FACILITY, AND CERTIFICATION THAT THIS FACILITY HAS BEEN BUILT IN ACCORDANCE WITH THE PLANS, SHALL BE UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER. THE ENGINEER SHALL BE NOTIFIED SUFFICIENTLY IN ADVANCE OF CONSTRUCTION IN ORDER THAT ARRANGEMENTS CAN BE MADE FOR:
1) INSPECTION OF PIPE TRENCH AND BEDDING, INSPECTION OF SPECIAL PIPE SECTIONS AND FITTINGS, AND 3) SUPERVISION OF BACKFILLING OPERATIONS. THE ENGINEER SHALL DIRECT THE HANDLING OF WATER DURING CONSTRUCTION, MINOR CHANGES NOT AFFECTING THE INTEGRITY OR PERFORMANCE OF THE FACILITY, AND THE REMOVAL AND REPLACEMENT OF DEFECTIVE FILL.



B PLAN
SCALE: 1" = 3'



STANDARD PRECAST MANHOLE
SHALLOW PRECAST MANHOLE

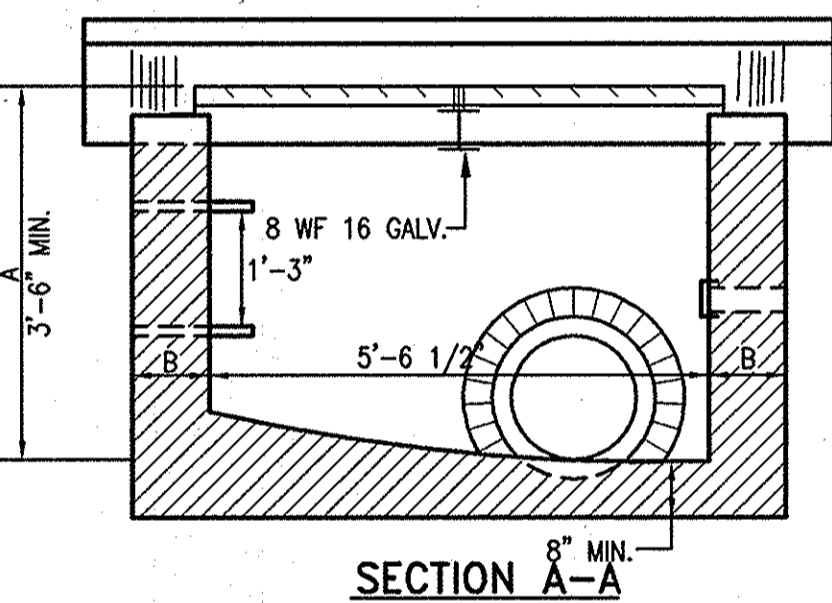


6" KNOCKOUTS FOR UNDERDRAIN w/CAPS TO BE PLACED ON ALL WALLS OF INLET WHERE NO PIPE IS PRESENT. INVERT OF KNOCKOUT = HIGHEST PIPE CROWN

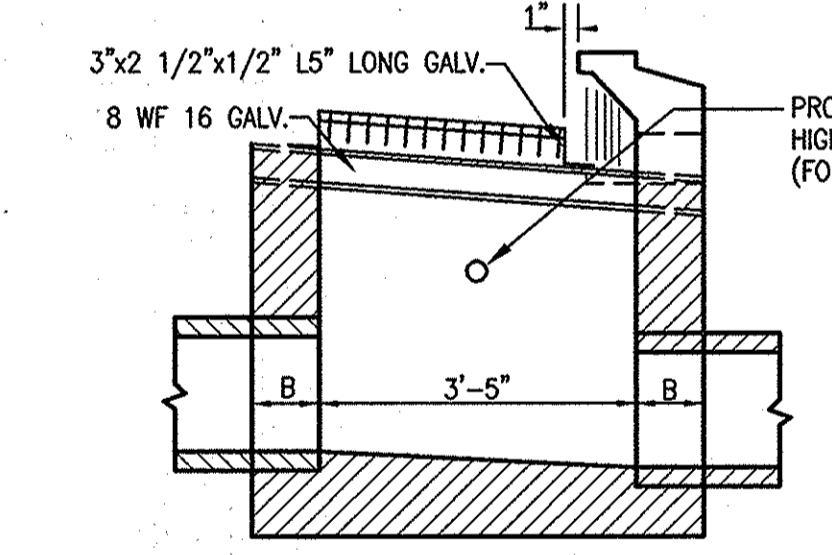
NOTES:

- THE STRUCTURE SHALL BE CONSTRUCTED OF 4500 PSI CONCRETE
- REINFORCING = #4 AT 10" O/C E.W. AT CL OF WALLS. REINFORCING SHALL BE CONTINUOUS AT CORNERS. ALL LAP SPICES 1'-4" MINIMUM.
- ADDITIONAL #4 BARS TO BE ADDED AT ALL OPENINGS.
- INVERTS TO BE BRICK, GRADE SM (ASTM C32)
- WHERE A IS 3'-6" OR GREATER STANDARD MANHOLE STEPS SHALL BE INSTALLED AS SHOWN.

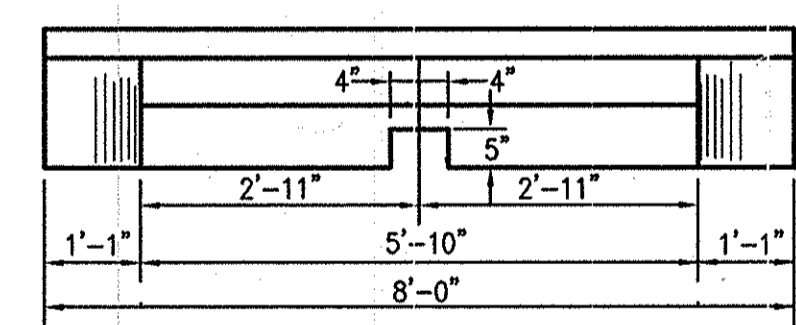
A	B	WALLS
<5'	8"	CONC.
5' TO 9'	12"	CONC.
9' TO 14'	8"	CONC.



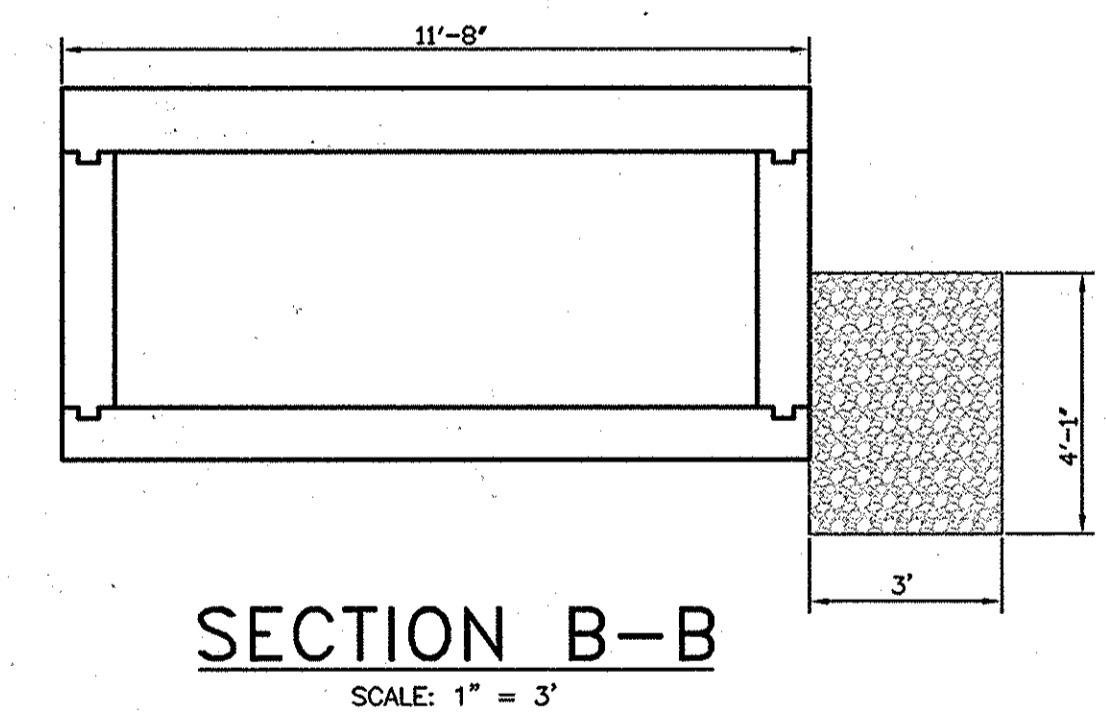
SECTION A-A
MODIFIED DOUBLE TYPE 'S' COMB. INLET
NOT TO SCALE



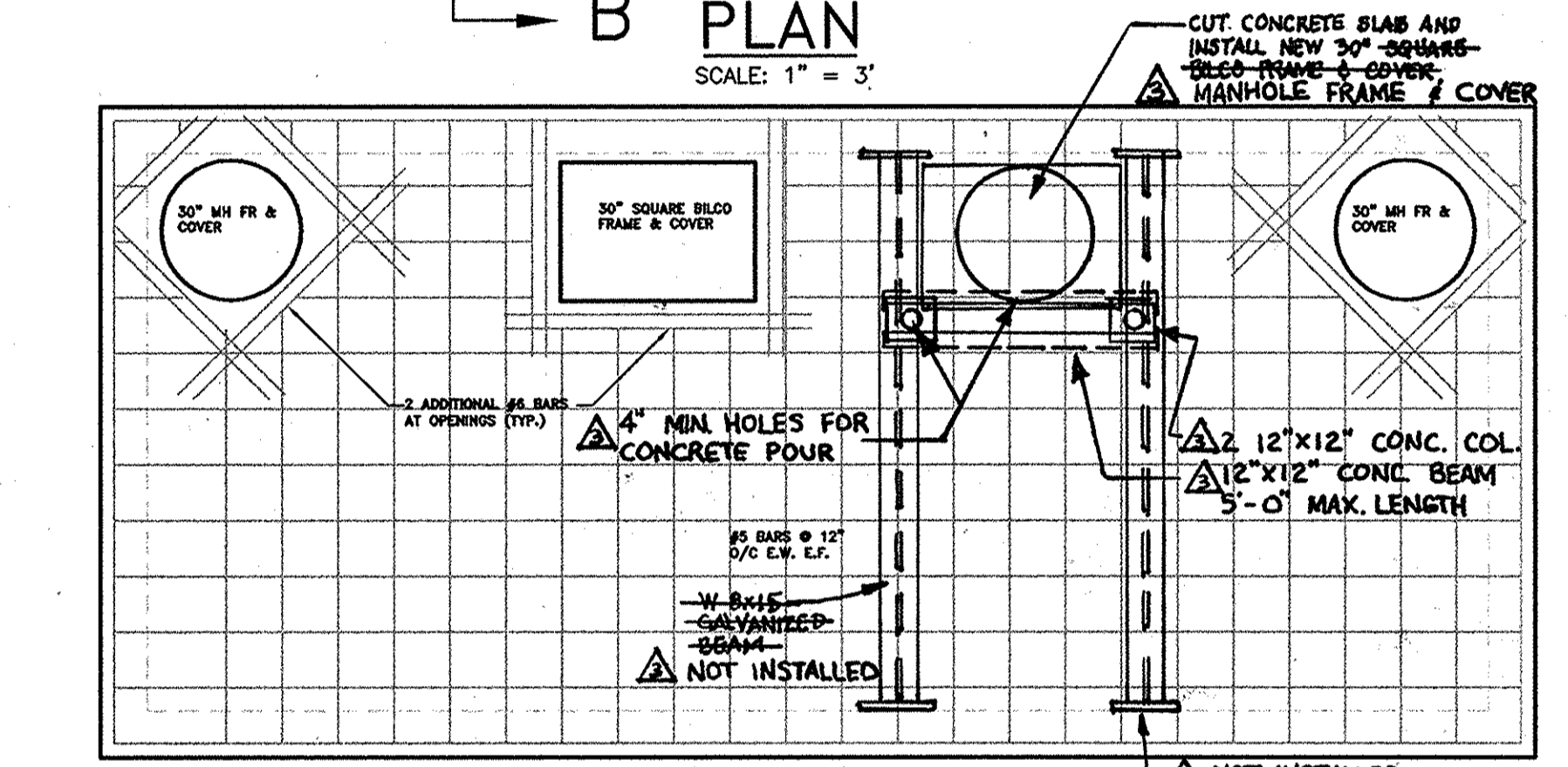
PROVIDE 1" DIAMETER WEEP HOLE 6" ABOVE HIGHEST CROWN OF PIPE OR AS DIRECTED (FOR BRICK MASONRY STRUCTURE ONLY).



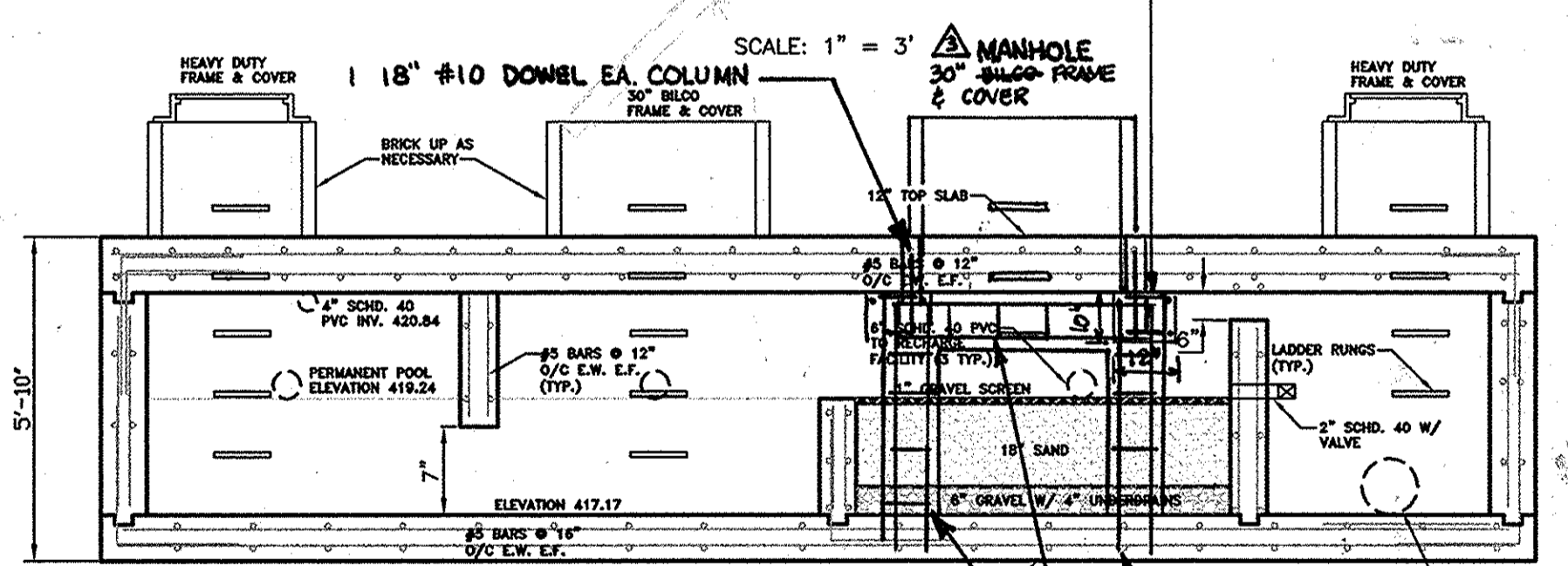
ELEVATION-HEADPIECE



SECTION B-B
SCALE: 1" = 3'



TOP SLAB
SCALE: 1" = 3'



SECTION A-A
SCALE: 1" = 3'

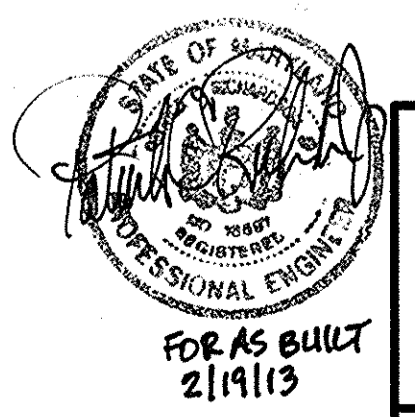
- NOTES:**
- EX. TOP CONC. SLAB TO BE INSPECTED BY A STRUCTURAL ENGINEER
 - COLUMNS TO BE ALIGNED TO MESS UNDERDRAINS
 - ALL REBAR TO BE EPOXY COATED
 - REBAR CLR IS 2" UNLESS OTHERWISE SPECIFIED
- 2 #4" TOP
2 #8" BOTTOM
4 #3 STIRRUPS @ 9.75"
FROM CL COL.
- NOT INSTALLED
1/2" GALV. STEEL PLATE - WELDED TO SHIP-ON-WELVES - ATTACHED WITH 5/8" STAINLESS STEEL EXPANSION BOLTS TO EXISTING CONCRETE WALLS
- DRILL 7/8" HOLE & ANCHOR (QUIKRETE 8620-31) 4 #6 REBAR INTO BTM SLAB FOR EACH CONCRETE COLUMN
#3 TIES @ 12" EACH COLUMN



APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE 10/27/04

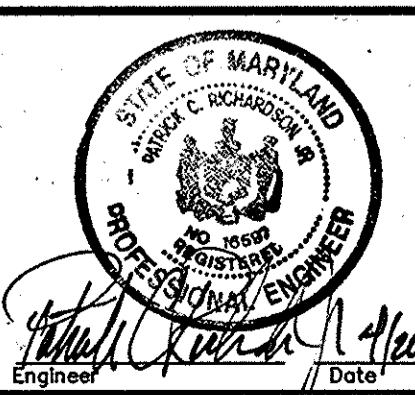
ASBUILT

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division
Date 4/3/05
Chief, Division of Land Development
Date 6/14/04
Director



Richardson Engineering, LLC

730 W. Padonia Road, Suite 101
Cockeysville, Maryland 21030
Phone: 410-560-1502 Fax: 410-560-0827



OWNER/DEVELOPER
WELLS FARGO PROPERTIES, INC.
2329 CENTRAL AVENUE NE
MINNEAPOLIS, MINNESOTA 55479
ATTN: CARRIE JOHNSON
PHONE: 612-667-8714
CACC, LLP
9195 RED BRANCH ROAD
COLUMBIA, MARYLAND 21045
ATTN: STEPHEN SMITH
PHONE: 410-992-9570

DESIGNED BY: J.P.D.
DRAWN BY: J.P.D.
CHECKED BY: J.P.D.

SCALE: AS SHOWN
DEED REF.: 1510/514 8188/2

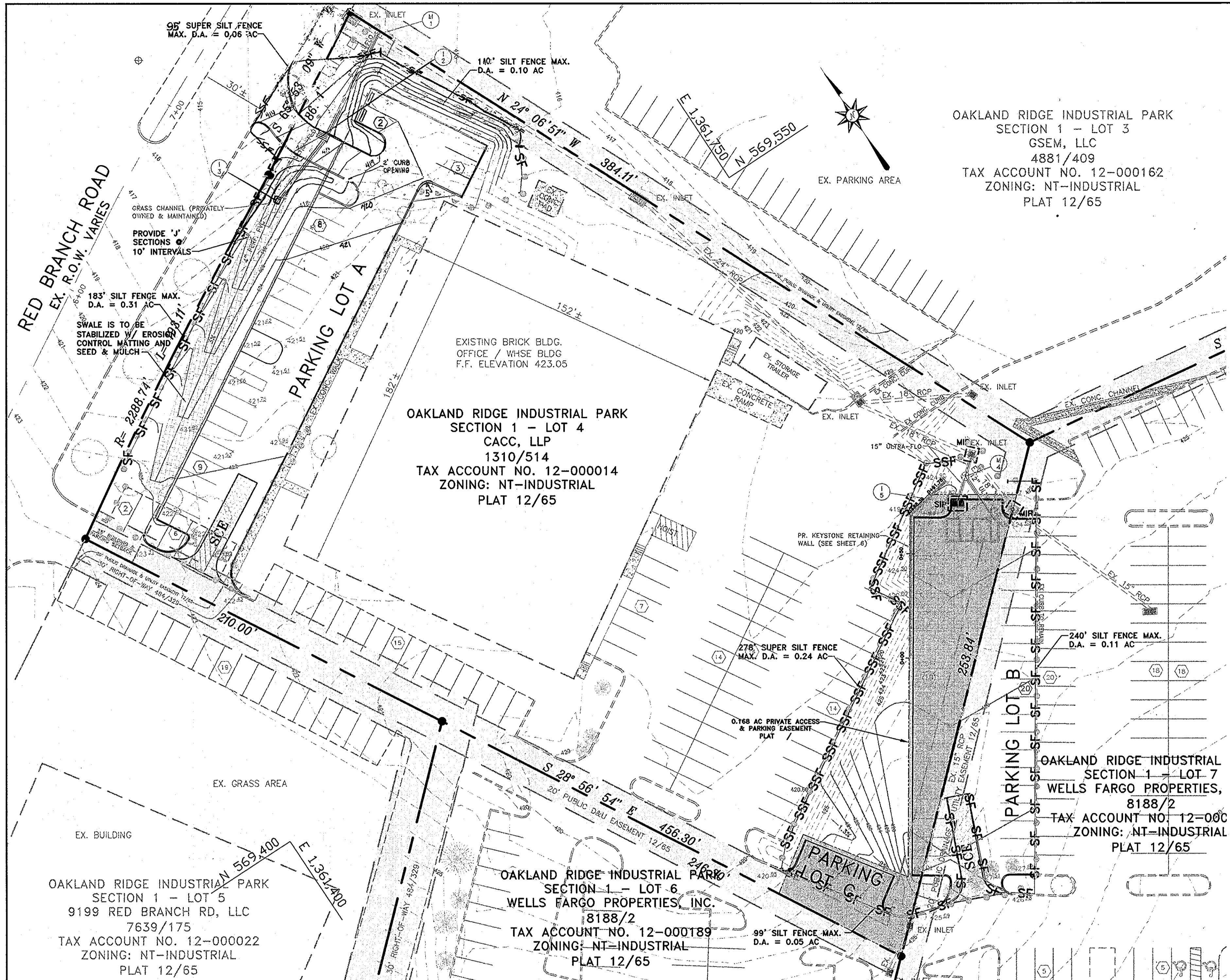
TAX MAP: 30
GRID: 17
PARCEL: 239

A.D.C. MAP 5: GRID D-13
PLAT REF.: 12/65

JOB #: 03053
NO.: 4
OF: 7

DATE: 10/27/04
DRAWING COMPLETED: 4-20-05

FILES: SA\JOBS\2005\03053\DRAWINGS\SHEET4.dwg



OAKLAND RIDGE INDUSTRIAL PARK
SECTION 1 - LOT 3
GSEM, LLC
4881/409
TAX ACCOUNT NO. 12-000162
ZONING: NT-INDUSTRIAL
PLAT 12/65

OAKLAND RIDGE INDUSTRIAL PARK
SECTION 1 - LOT 4
CACC, LLP
1310/514
TAX ACCOUNT NO. 12-000014
ZONING: NT-INDUSTRIAL
PLAT 12/65

OAKLAND RIDGE INDUSTRIAL PARK
SECTION 1 - LOT 7
WELLS FARGO PROPERTIES,
8188/2
TAX ACCOUNT NO. 12-000165
ZONING: NT-INDUSTRIAL
PLAT 12/65

OAKLAND RIDGE INDUSTRIAL PARK
SECTION 1 - LOT 5
9199 RED BRANCH RD, LLC
7639/175
TAX ACCOUNT NO. 12-000022
ZONING: NT-INDUSTRIAL
PLAT 12/65

OAKLAND RIDGE INDUSTRIAL PARK
SECTION 1 - LOT 6
WELLS FARGO PROPERTIES, INC.
8188/2
TAX ACCOUNT NO. 12-000189
ZONING: NT-INDUSTRIAL
PLAT 12/65



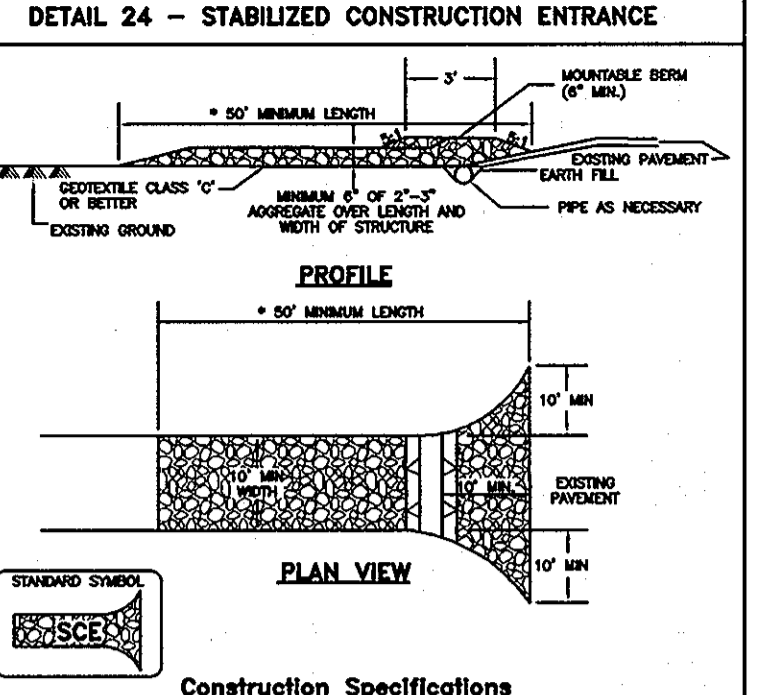
Reviewed for Howard SCD and meets Technical Requirements
USDA - Natural Resources Conservation Service
Date: 6/1/05
Date: 6/1/05

ENGINEER'S CERTIFICATE
"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION 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 of Engineer: Patrick C. Richardson, N.R.
Date: 4/20/05

DEVELOPER'S CERTIFICATE
"I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN FOR EROSION AND SEDIMENT CONTROL AND THAT ALL RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."
Signature of Developer: Carrie Johnson
Date: 5/13/05

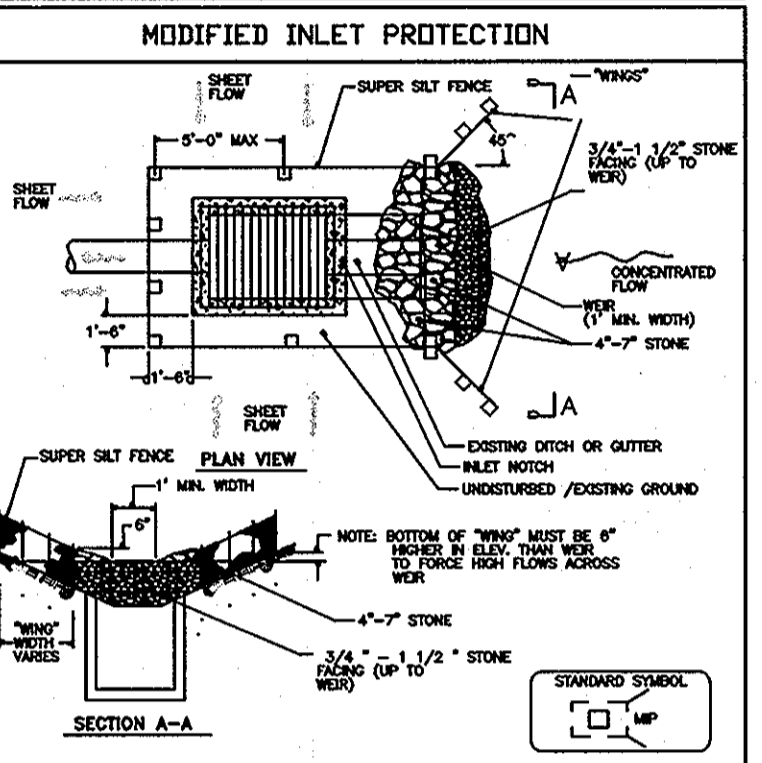
LEGEND

---	EXISTING CONTOUR
---	EXISTING PAVED AREAS
---	EXISTING BUILDING
---	PROPOSED PAVING
---	PROPOSED CONTOUR
SF	SILT FENCE
SSF	SUPER SILT FENCE
---	LIMIT OF DISTURBANCE
MIP	MODIFIED INLET PROTECTION
SIP	STANDARD INLET PROTECTION
---	EROSION CONTROL MATTING



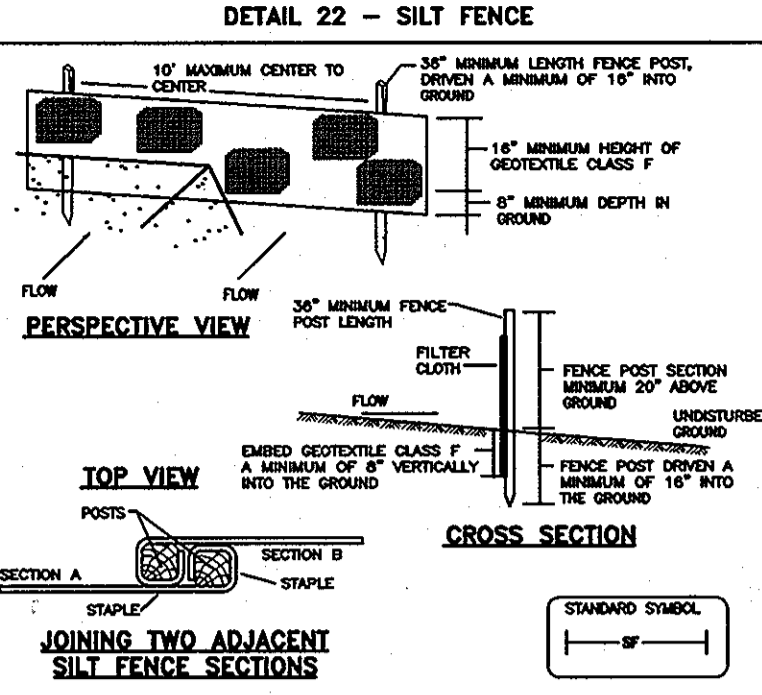
Construction Specifications

- LENGTH - Minimum of 50' (30' for slope reduction)
- WIDTH - 10' minimum, should be fixed at the existing road to provide a turning radius.
- Aggregate base (Other stone) shall be placed over the existing ground prior to placing stone. The stone should be placed over the existing ground and not on top of the aggregate base.
- Stone - Crushed aggregate (2-3") or crushed or recycled concrete equivalent shall be placed at least 8" deep over the length and width of the entrance.
- SURFACE MATTING - All surface water flowing to or diverted toward construction entrance shall be filtered through the entrance, including surface water flowing through the stabilized construction entrance shall be protected with a non-erodible matting with 50% porosity and a minimum of 1/2" space over the aggregate base. The matting shall be secured to the aggregate base with staples. The matting shall be secured to the aggregate base with staples. The matting shall be secured to the aggregate base with staples.
- LOCATION - A stabilized construction entrance shall be located at every point where construction traffic enters or leaves a construction site. Whether leaving the site must travel over the entire length of the stabilized construction entrance.



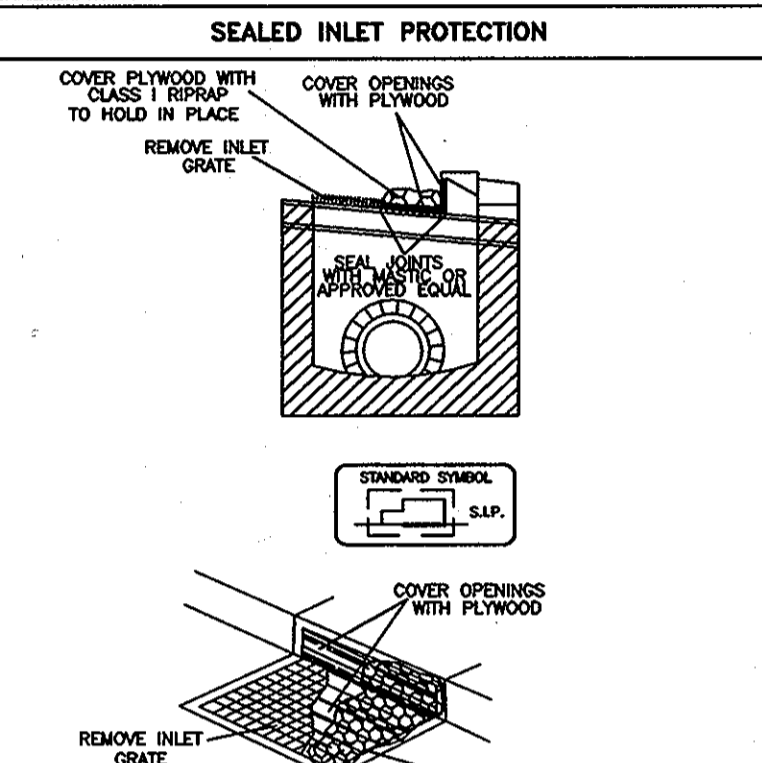
Construction Specifications

- Fence posts shall be 30" (min.) long, when 18" into the ground and spaced 5' (max.) apart. Wood posts shall be 1 1/2" x 1 1/2" (min.) diameter and 1/2" (min.) diameter round and shall be of sound quality hardwood. Steel posts shall be standard 1" or 1 1/2" section weighing not less than 1.0 pound per linear foot.
- Geotextile fabric shall be fastened securely to each post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F.
- Where ends of geotextile fabric come together they shall be overlapped, folded and stapled.
- Median Inlet Protection shall be inspected after each rain event and maintained when damage occurs in the fabric or when the stone gets displaced.
- Stone used to construct the wall shall be 4" - 2" with a 1" thick layer of 3/4" - 1 1/2" stone on the upstream face.



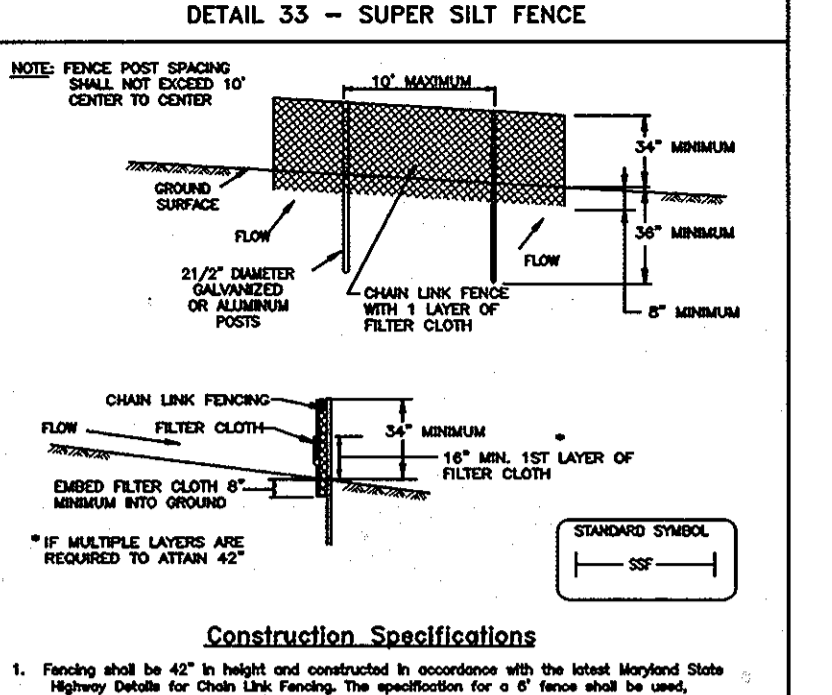
Construction Specifications

- Fence posts shall be a minimum of 30" long when 18" minimum into the ground. Wood posts shall be 1 1/2" x 1 1/2" square (minimum) and, or 1 3/4" diameter (minimum) round and shall be of sound quality hardwood. Steel posts shall be standard T or U section weighing not less than 1.000 pound per linear foot.
- Geotextile fabric shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F.
- Where ends of geotextile fabric come together they shall be overlapped, folded and stapled to prevent sediment bypass.
- Silt Fence shall be inspected after each rainfall event and maintained when damage occurs or when sediment accumulation reaches the top of the fabric height.



Construction Specifications

- REMOVE INLET GRATE TO EXPOSE OPENING.
- COVER OPENING WITH PLYWOOD.
- SEAL JOINTS AROUND PLYWOOD WITH MASTIC OR APPROVED EQUAL.
- COVER PLYWOOD WITH CLASS 1 RIPRAP TO HOLD IT IN PLACE.



Construction Specifications

- Fencing shall be 42" in height and constructed in accordance with the latest Maryland State Highway Design for Chain Link Fencing. The specification for a 4" fence shall be used, including 42" high x 4" length posts.
- Chain link fence shall be fastened securely to the fence posts with wire ties. The lower tension wire, inner and outer wires, wire anchors and post caps are not required except on the ends of the fence.
- Filter cloth shall be fastened securely to the chain link fence with the spaced every 24" at the top and mid-section.
- Filter cloth shall be embedded a minimum of 6" into the ground.
- When two sections of filter cloth adjoin each other, they shall be overlapped by 6" and stapled.
- Maintenance shall be performed as needed and all damage removed when "bump" develop in the filter cloth. The filter cloth shall be replaced every 300' of fence height.
- Filter cloth shall be fastened securely to each fence post with wire ties or staples at top and mid-section and shall meet the following requirements for Geotextile Class F:

SEDIMENT CONTROL NOTES

- 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.
- ALL VEGETATIVE AND STRUCTURAL PRACTICES ARE TO BE INSTALLED ACCORDING TO THE PROVISIONS OF THIS PLAN AND ARE TO BE IN CONFORMANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL AND REVISIONS THERETO.
- FOLLOWING INITIAL SOIL STABILIZATION OR REDISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN: A) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES GREATER THAN 3:1, B) 14 DAYS AS TO ALL OTHER DISTURBED OR GRADED AREAS ON THE PROJECT SITE.
- ALL SEDIMENT TRAPS/BASINS SHOWN MUST BE FENCED AND WARNING SIGNS POSTED AROUND THEIR PERIMETER IN ACCORDANCE WITH VOL. 1, CHAPTER 7, OF THE HOWARD COUNTY DESIGN MANUAL, STORM DRAINAGE.
- ALL DISTURBED AREAS MUST BE STABILIZED WITHIN THE TIME PERIOD SPECIFIED ABOVE IN ACCORDANCE WITH THE 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL FOR PERMANENT SEEDING, SOD, TEMPORARY SEEDING, AND MULCHING SEC. G. TEMPORARY STABILIZATION WITH MULCH ALONE CAN ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMITS FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.

SEQUENCE OF OPERATIONS

- NOTIFY HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES & PERMITS AT LEAST 48 HOURS PRIOR TO ANY LAND DISTURBANCE @ 410-313-2455.
- INSTALL STABILIZED CONSTRUCTION ENTRANCE, SILT FENCE, SUPER SILT FENCE AND INLET PROTECTION AT LOCATION SHOWN ON PLAN. (2 DAYS)
- UPON RECEIVING NOTIFICATION TO PROCEED FROM THE INSPECTOR, BEGIN SITE GRADING AND RETAINING WALL CONSTRUCTION. (30 DAYS)
- INSTALL STORM DRAIN SYSTEM AND PROVIDE INLET PROTECTION. (10 DAYS)
- INSTALL STONE BASE IN AREAS TO BE PAVED. (10 DAYS)
- CONSTRUCT SWALE 1 AND 2 AND INSTALL THE SANDFILTER AS FOLLOWS. (10 DAYS)
 - INSTALL STORM DRAIN INLETS AND PROVIDE INLET PROTECTION. INSTALLATION OF UNDERGROUND SAND FILTER MAY TAKE PLACE SIMULTANEOUSLY, HOWEVER, FLOW TO THE SAND FILTER SHOULD BE PREVENTED UNTIL ALL CONTRIBUTORY DRAINAGE AREA IS STABILIZED. (10 DAYS)
 - UPON COMPLETION OF INSTALLATION OF STONE BASE ON THE PARKING LOT A, ADJACENT TO RED BRANCH ROAD, CONSTRUCT THE DRY SWALE. THE SWALE SHOULD BE STABILIZED AT THE END OF EACH WORKING DAY. (5 DAYS)
 - UPON COMPLETION OF GRADING STABILIZATION AND STONE BASE PLACEMENT IN PARKING LOT C, CONSTRUCT SWALE AND RAINGARDEN. THE SWALE SHOULD BE STABILIZED IMMEDIATELY AND THE RAINGARDEN PLANTED IN ACCORDANCE WITH THE LANDSCAPING PLAN. (3 DAY)
 - UPON COMPLETION STABILIZE ANY REMAINING AREAS AND DIVERT FLOW INTO THE UNDERGROUND SAND FILTER. (1 DAY)
 - REMOVE THE SEDIMENT CONTROLS ONLY AFTER APPROVAL BY THE INSPECTOR. (1 DAY)
- INSTALL PAVING. (3 DAYS)
- FINE GRADE REMAINING AREAS AND PROVIDE PERMANENT STABILIZATION. (2 DAYS)
- REMOVE SEDIMENT CONTROL MEASURES WITH APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR.
- STABILIZE AREAS DISTURBED AS A RESULT OF SEDIMENT CONTROL MEASURE REMOVAL.

7. SITE ANALYSIS:

TOTAL AREA OF SITE	574,556 SF / 13.19 AC.
AREA DISTURBED	37,897 SF / 0.87 AC.
AREA TO BE:	
ROOFED OR PAVED	23,087 SF / 0.53 AC.
VEGETATIVELY STABILIZED	14,810 SF / 0.34 AC.
TOTAL CUT	1,363 CU. YDS
TOTAL FILL	1,411 CU. YDS
OFFSITE WASTE/BORROW AREA LOCATION-	A SITE WITH A CURRENTLY ACTIVE GRADING PERMIT.

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 WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

APPROVED
PLANNING BOARD
OF HOWARD COUNTY
DATE: 10/27/04

APPROVED: DEPARTMENT OF PLANNING AND ZONING

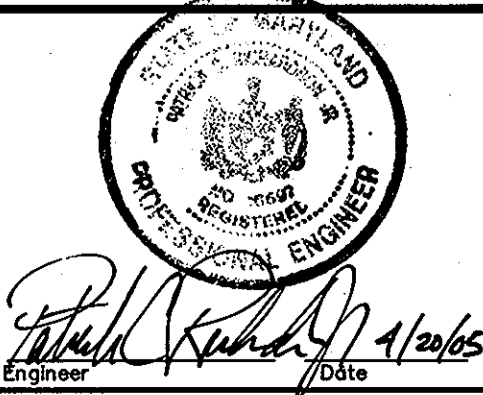
Chief, Development Engineering Division
Date: 6/3/05

Chief, Division of Land Development
Date: 6/1/05

Director
Date: 6/1/05

Richardson Engineering, LLC

730 W. Padonia Road, Suite 101
Cockeysville, Maryland 21030
Phone: 410-560-1502 Fax: 410-560-0827



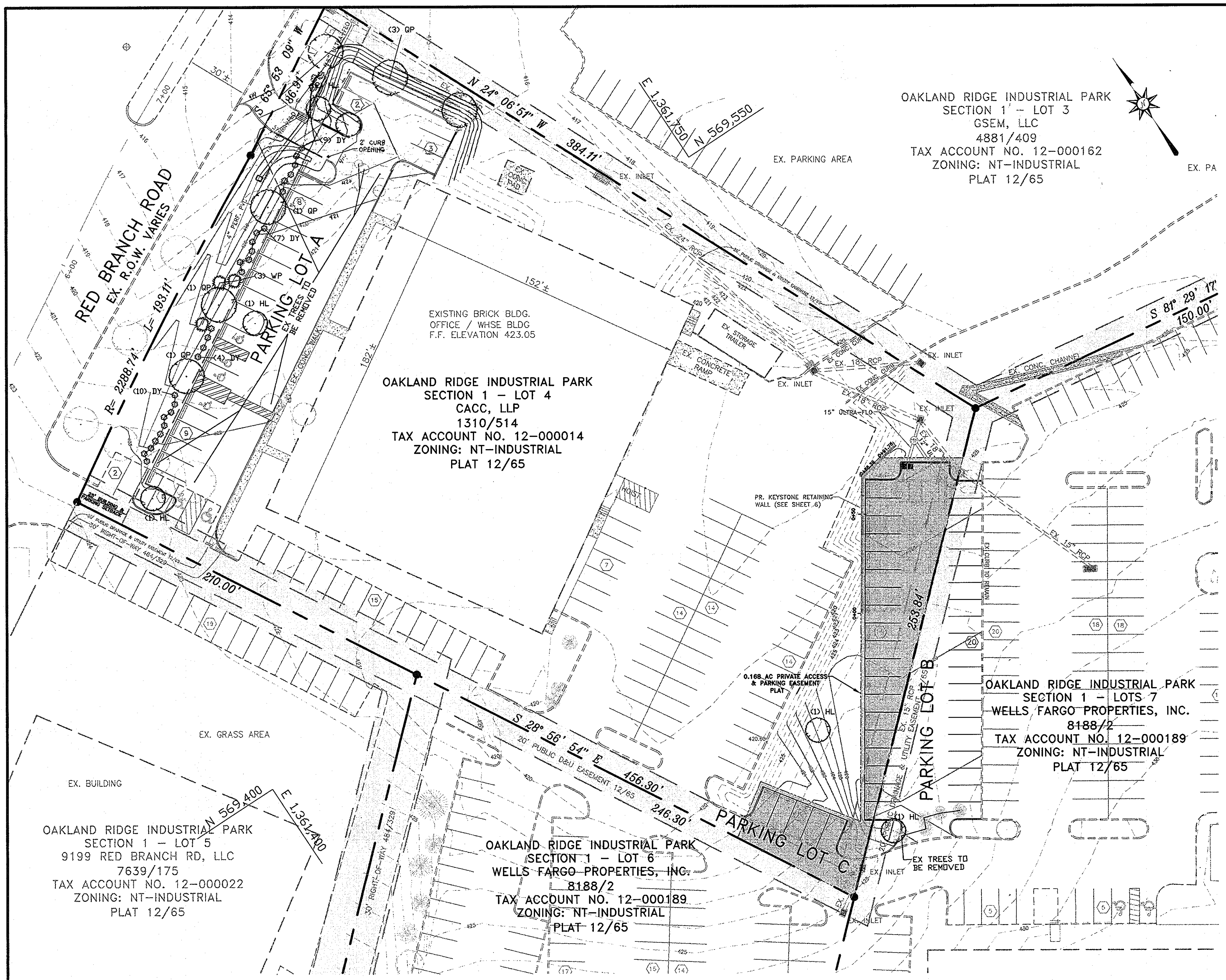
OWNER/DEVELOPER
WELLS FARGO PROPERTIES, INC.
2329 CENTRAL AVENUE NE
MINNEAPOLIS, MINNESOTA 55479
ATTN: CARRIE JOHNSON
PHONE: 612-667-8714

CACC, LLP
9199 RED BRANCH ROAD
COLUMBIA, MARYLAND 21045
ATTN: STEPHEN SMITH
PHONE: 410-992-8570

OAKLAND RIDGE INDUSTRIAL PARK, SEC. 1, LOTS 4 & 7
(PARKING ADDITIONS)
SITE DEVELOPMENT PLANS
SEDIMENT & EROSION CONTROL PLAN & DETAILS
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGNED BY: J.P.D. SCALE: AS SHOWN
DRAWN BY: J.P.D. DEED REF. 1310/514
CHECKED BY: J.P.D. PARCEL 239

DATE	7-21-05	REVISION	BY
DATE	10/27/04	REVISION	BY
DRAWING COMPLETED	4-20-05		
A.D.C. MAP 5	GRID D-13	JOB #	03053
PLAT REF.	12/65	FILES	03053.dwg
NO.	5	DRAWINGS/SHEETS	7



PLANT LIST

QTY.	SYM.	BOTANICAL NAME	COMMON NAME	REMARKS
6	QP	QUERCUS PHELLOS	WILLOW OAK	2 1/2"-3" CAL.
6	HL	GLEDITSIA TRIACANTHOS INERMIS 'HALKA'	HALKA HONEYLOCUST	2 1/2"-3" CAL.
30	DY	TAXUS MEDIA DENSIFORMIS	DENSIFORMIS YEW	24-30"
3	WP	PINUS STROBUS	WHITE PINE	6-8' HGT

AT THE TIME OF INSTALLATION, ALL SHRUBS AND OTHER PLANTINGS HEREWITH LISTED AND APPROVED FOR THIS SITE, SHALL BE OF THE PROPER HEIGHT REQUIREMENTS IN ACCORDANCE WITH THE HOWARD COUNTY LANDSCAPE MANUAL. IN ADDITION, NO SUBSTITUTIONS OR RELOCATION OF REQUIRED PLANTINGS MAY BE MADE WITHOUT PRIOR REVIEW AND APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. ANY DEVIATION FROM THIS APPROVED LANDSCAPE PLAN MAY RESULT IN DENIAL OR DELAY IN THE RELEASE OF LANDSCAPE SURETY UNTIL SUCH TIME AS ALL REQUIRED MATERIALS ARE PLANTED AND/OR REVISIONS ARE MADE TO APPLICABLE PLANS AND CERTIFICATIONS.

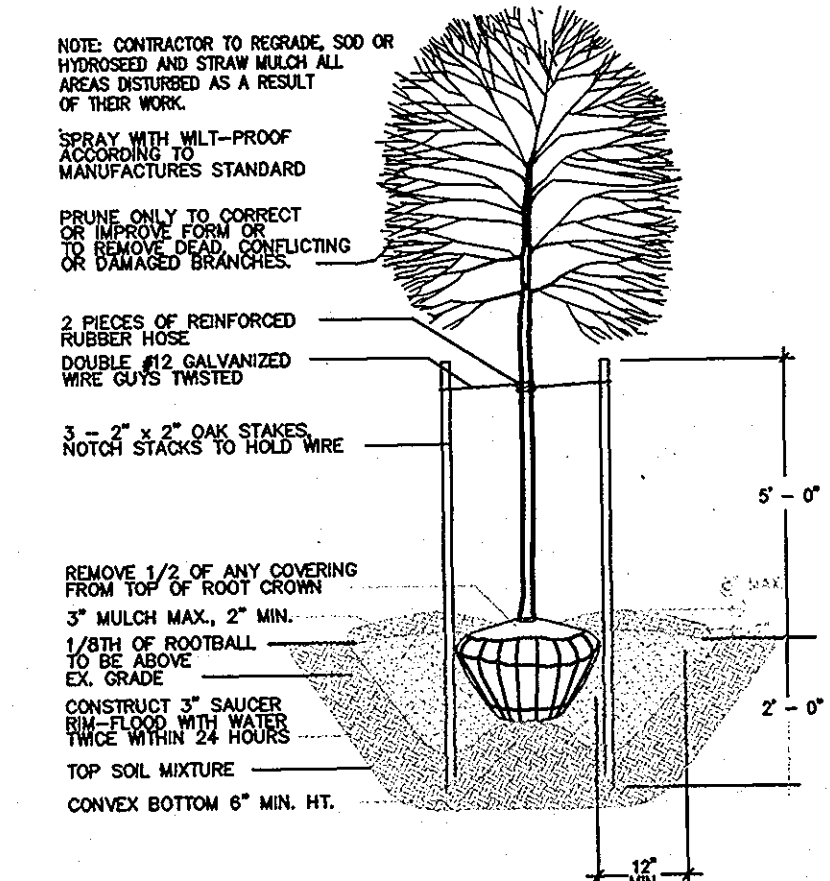
SCHEDULE A PERIMETER LANDSCAPE EDGE

CATEGORY	ADJACENT TO ROADWAYS
LANDSCAPE TYPE	E
LINEAR FEET OF ROADWAY/FRONTAGE/PERIMETER	282
CREDIT FOR EXISTING VEGETATION (YES NO. LINEAR FEET)	0
CREDIT FOR WALL FENCE OR BERM (YES NO. LINEAR FEET)	0
NUMBER OF PLANTS REQUIRED	
SHADE TREES	1/40'=7
EVERGREEN TREES	0
SHRUBS	1/4'=70
NUMBER OF PLANTS PROVIDED	
SHADE TREES	9
EVERGREEN TREES	3
OTHER TREES (2:1 SUBSTITUTION)	0
SHRUBS (10:1 SUBSTITUTION)	50

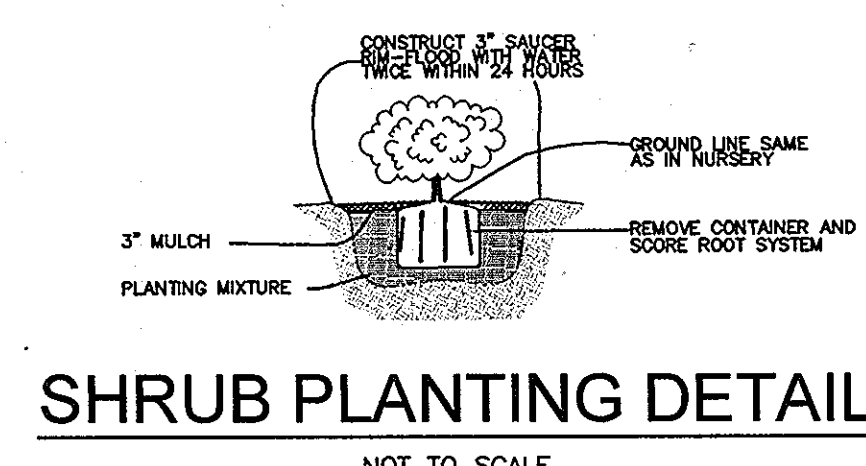
THE SEVEN REQUIRED TREES HAVE BEEN PROVIDED ALONG WITH AN ADDITIONAL 5 TREES THAT ARE USED AS SUBSTITUTION FOR THE SHRUBS. EACH SUBSTITUTED TREE CORRESPONDS WITH TEN SHRUBS, THUS 50 SHRUBS ARE REPLACED BY TREES.

SCHEDULE B PARKING LOT INTERNAL LANDSCAPING

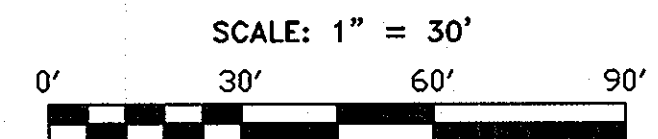
NUMBER OF PARKING SPACES	62
NUMBER OF TREES REQUIRED	3
NUMBER OF REQUIRED ISLANDS	3
NUMBER OF PROVIDED ISLANDS	4
NUMBER OF TREES PROVIDED	
SHADE TREES	3
OTHER TREES (2:1 SUBSTITUTION)	0



TREE PLANTING DETAIL
NOT TO SCALE



SHRUB PLANTING DETAIL
NOT TO SCALE



DEVELOPER'S/BUILDERS CERTIFICATE

I/WE CERTIFY THAT THE LANDSCAPING SHOWN ON THIS PLAN WILL BE DONE ACCORDING TO THE PLAN, SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE HOWARD COUNTY LANDSCAPE INSTALLATION, ACCOMPANIED BY AND EXECUTED ONE YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

David M. Johnson 5/13/15
NAME DATE

THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL.

FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DEV. AGREEMENT IN THE AMOUNT OF \$4,950.00. THIS SURETY IS BASED ON 12 SHADE TREES AT \$300.00 EACH, 3 EVERGREEN TREES AT \$150.00 EACH AND 30 SHRUBS @ \$30.00.

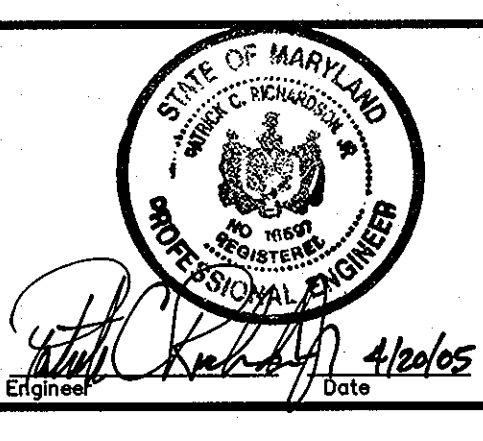
THE OWNER, TENTANT, AND/OR THEIR AGENTS SHALL BE RESPONSIBLE FOR THE MAINTENANCE OF THE REQUIRED LANDSCAPING, INCLUDING BOTH PLANT MATERIALS AND BERMS, FENCES AND WALLS. ALL PLANT MATERIALS SHALL BE MAINTAINED IN GOOD GROWING CONDITION, AND WHEN NECESSARY, REPLACED WITH NEW MATERIALS TO ENSURE CONTINUED COMPLIANCE WITH APPLICABLE REGULATIONS. ALL OTHER REQUIRED LANDSCAPING SHALL BE PERMANENTLY MAINTAINED IN GOOD CONDITION, AND WHEN NECESSARY, REPAIRED OR REPLACED.

APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division Date 6/3/15
 Chief, Division of Land Development Date 6/1/15
 Director Date 6/1/15

Richardson Engineering, LLC

730 W. Patonla Road, Suite 101
 Cockeysville, Maryland 21030
 Phone: 410-560-1502 Fax: 410-560-0827



OWNER/DEVELOPER

WELLS FARGO PROPERTIES, INC.
 2329 CENTRAL AVENUE NE
 MINNEAPOLIS, MINNESOTA 55479
 ATTN: CARRIE JOHNSON
 PHONE: 612-667-8714

CACC, LLP
 9195 RED BRANCH ROAD
 COLUMBIA, MARYLAND 21045
 ATTN: STEPHEN SMITH
 PHONE: 410-992-9570

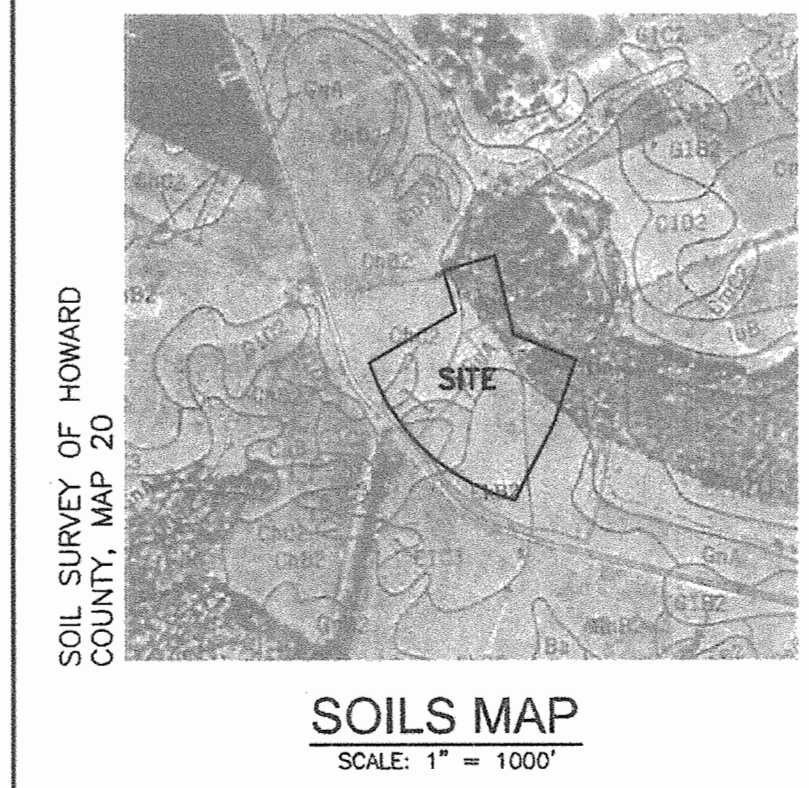
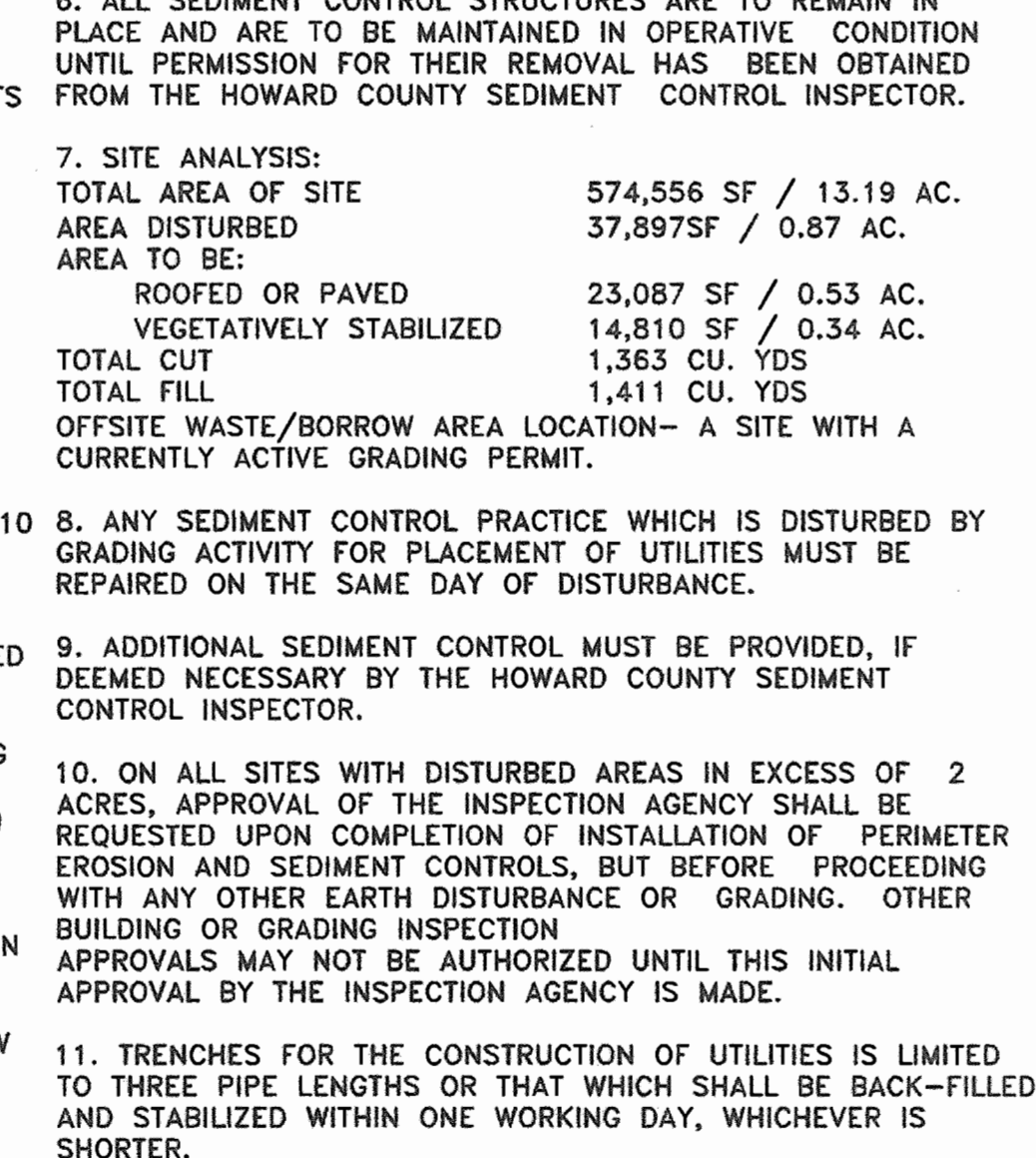
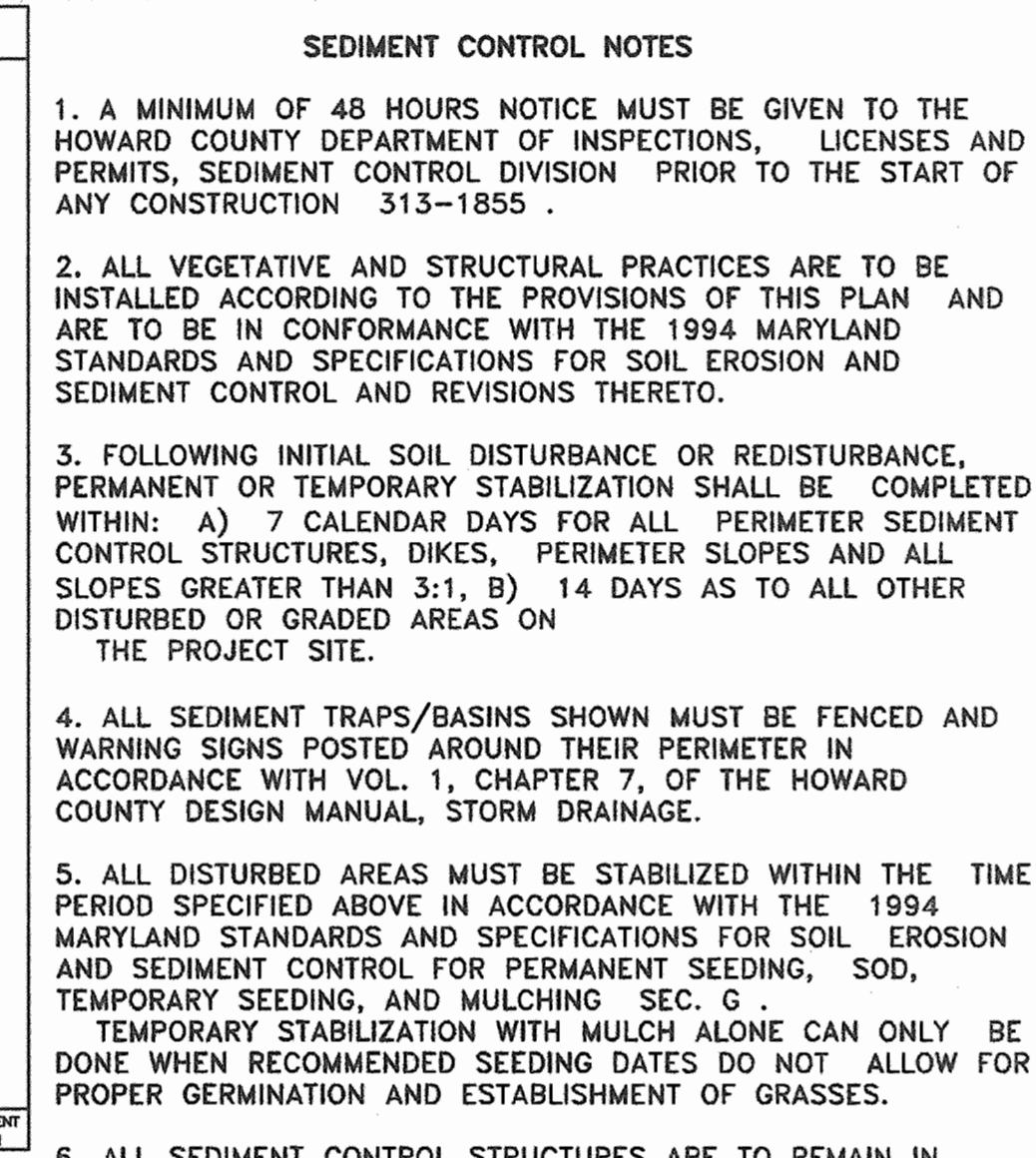
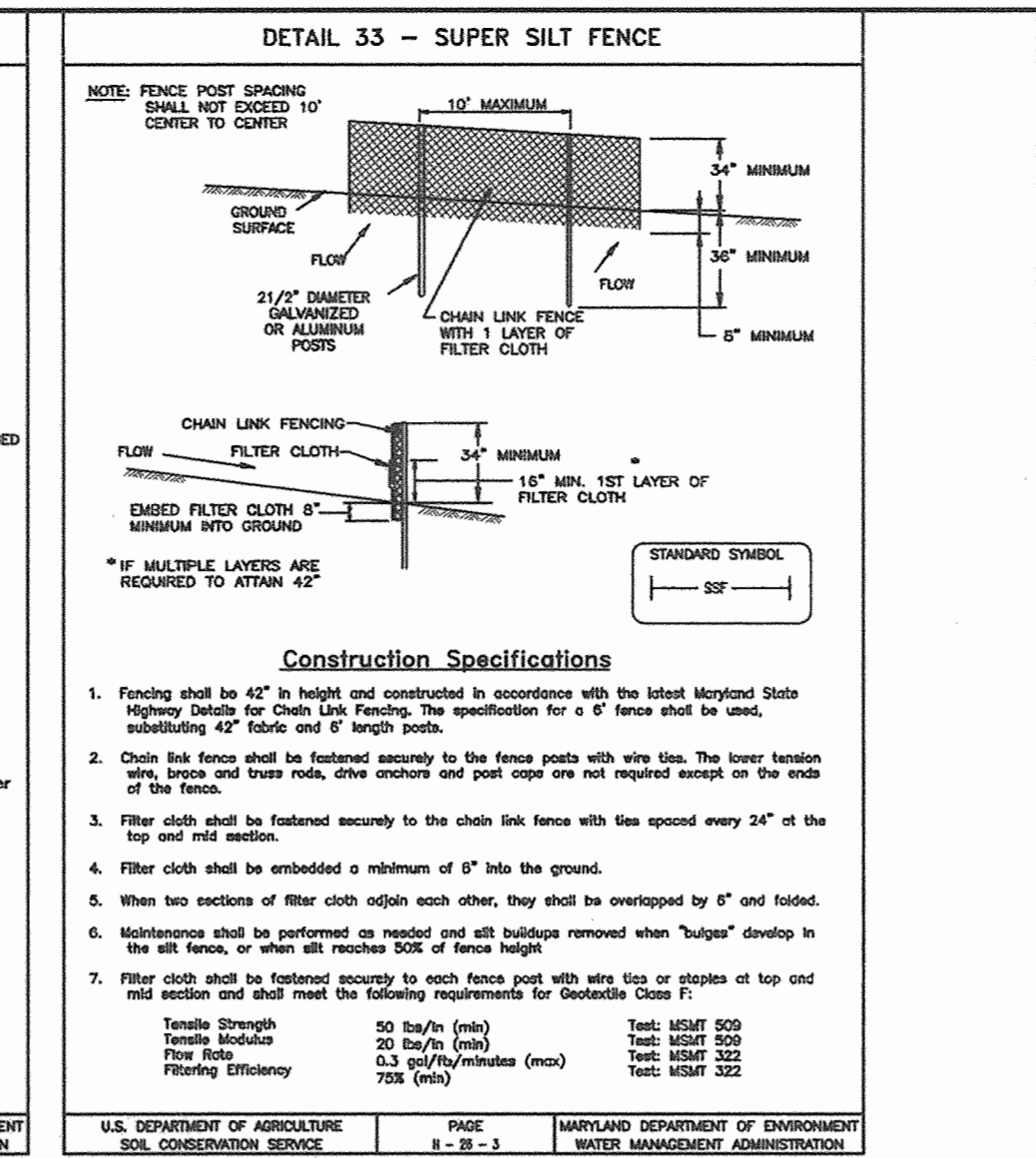
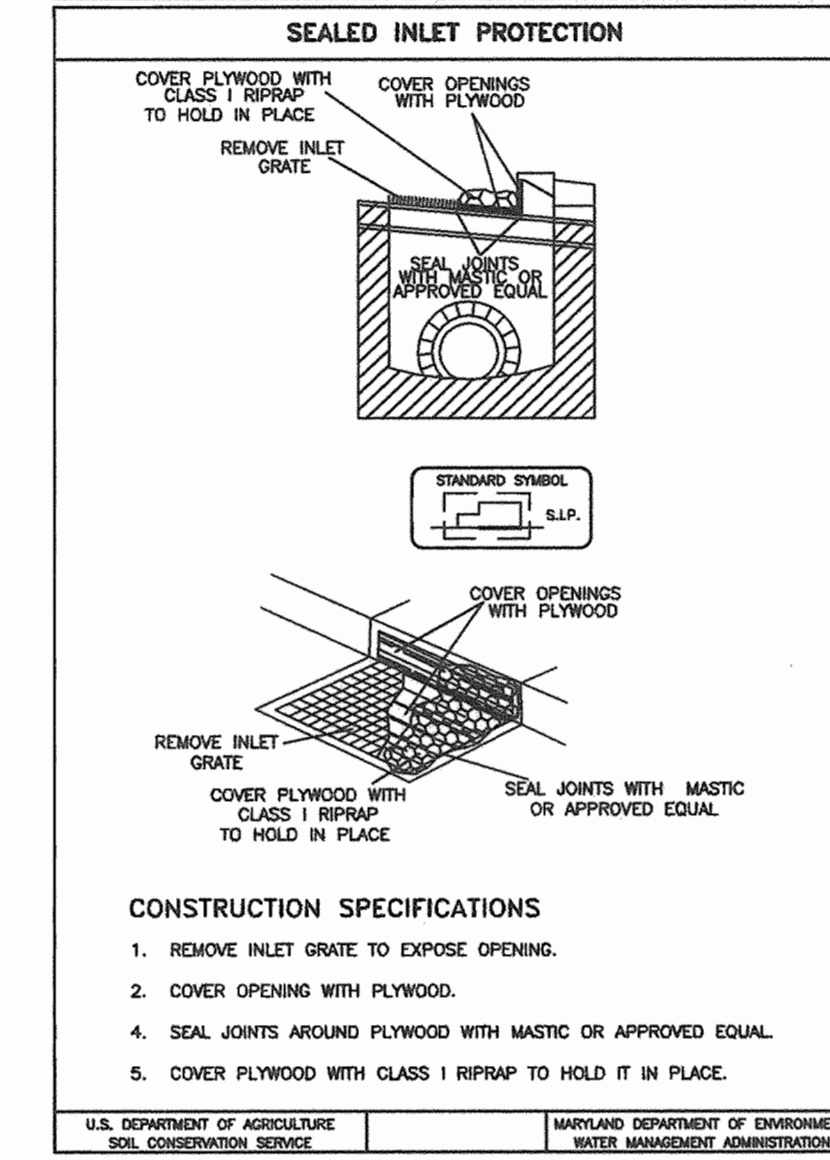
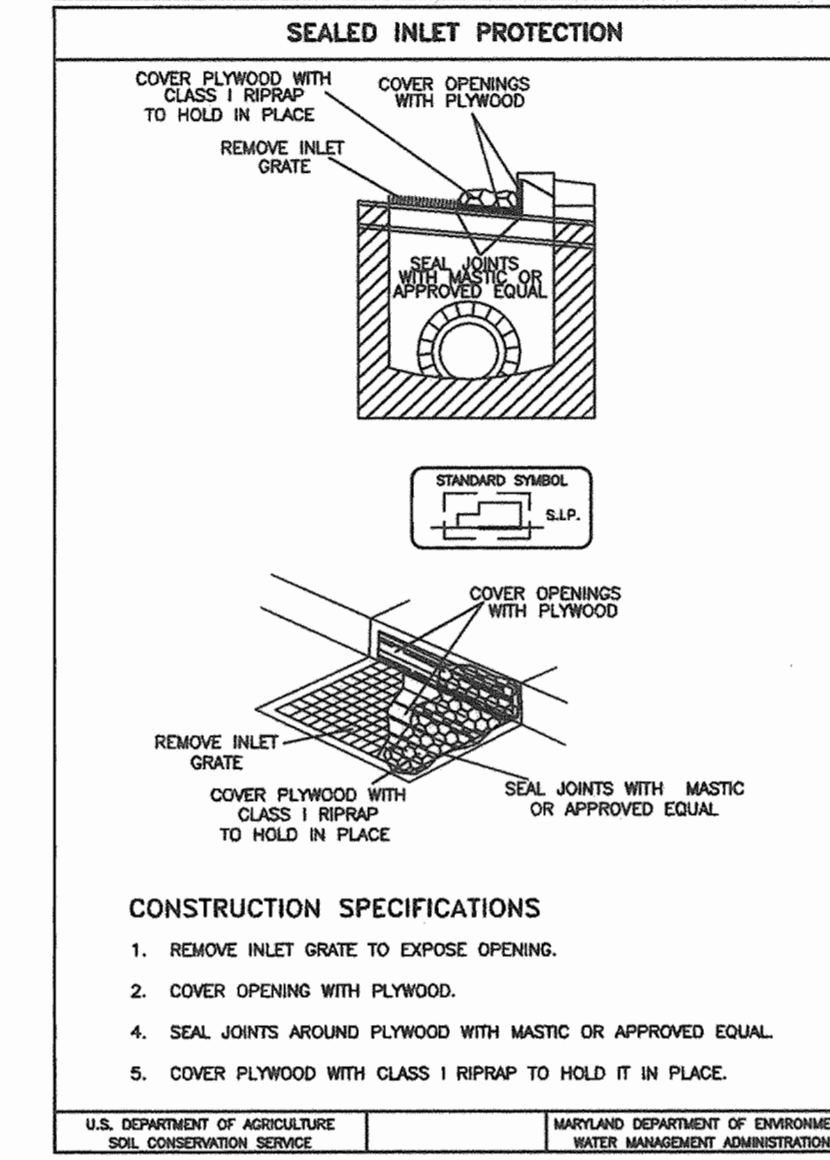
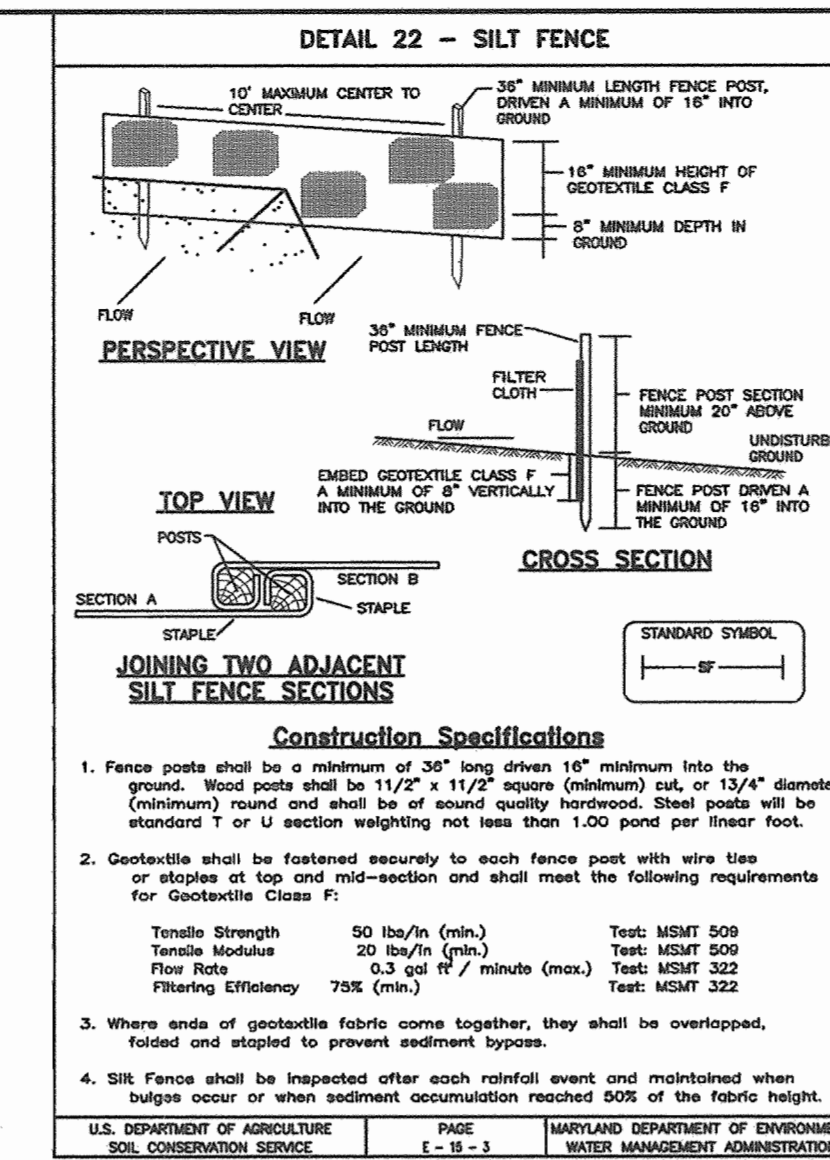
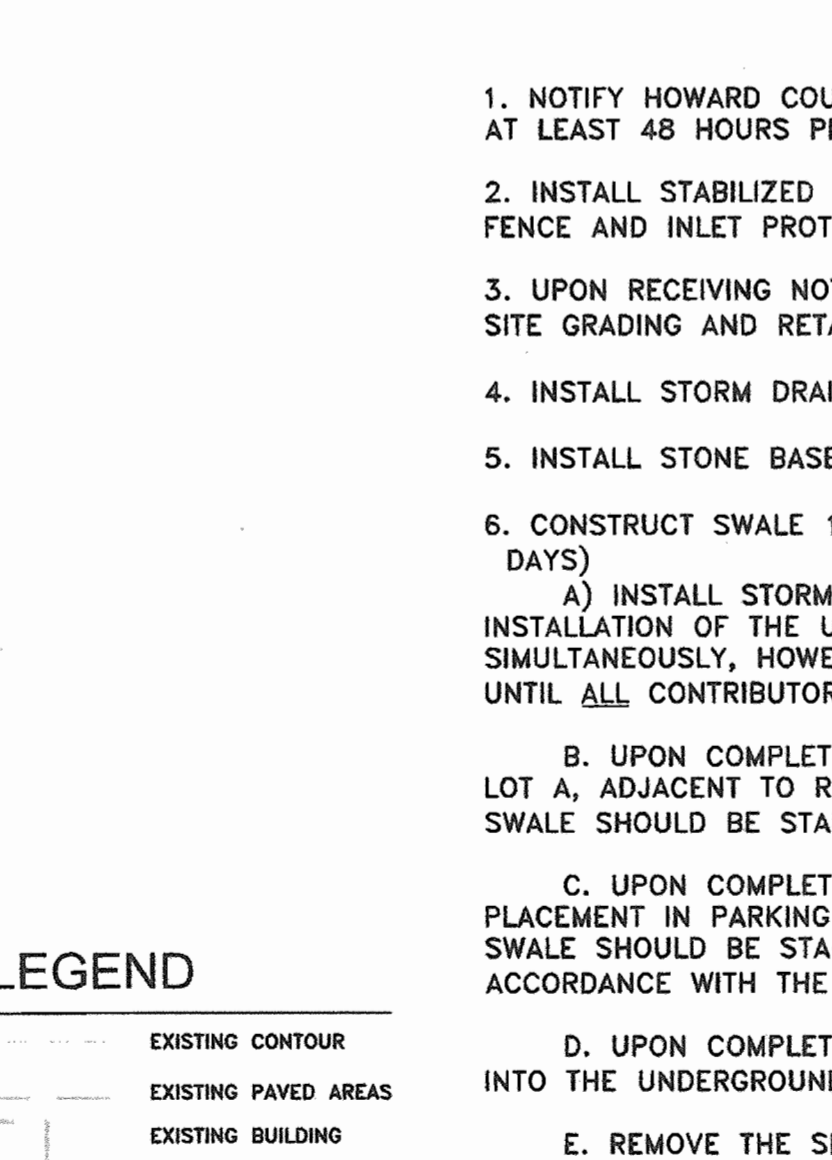
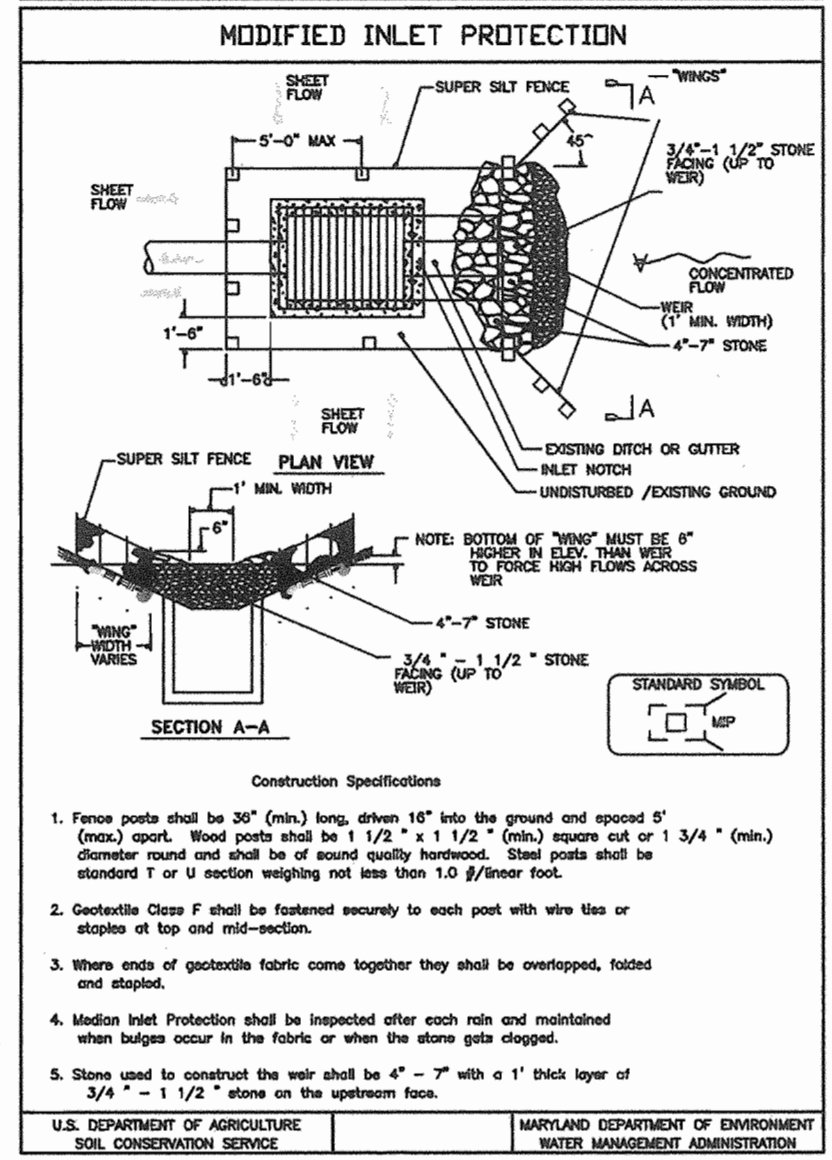
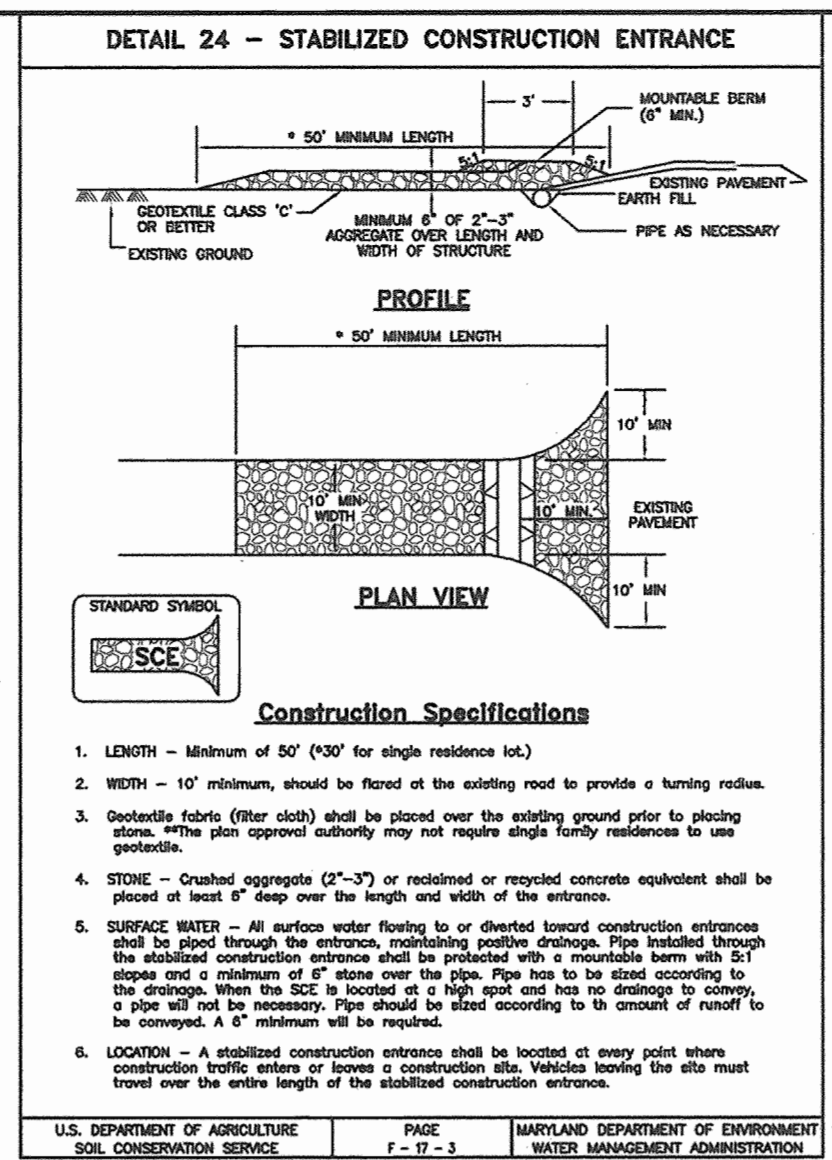
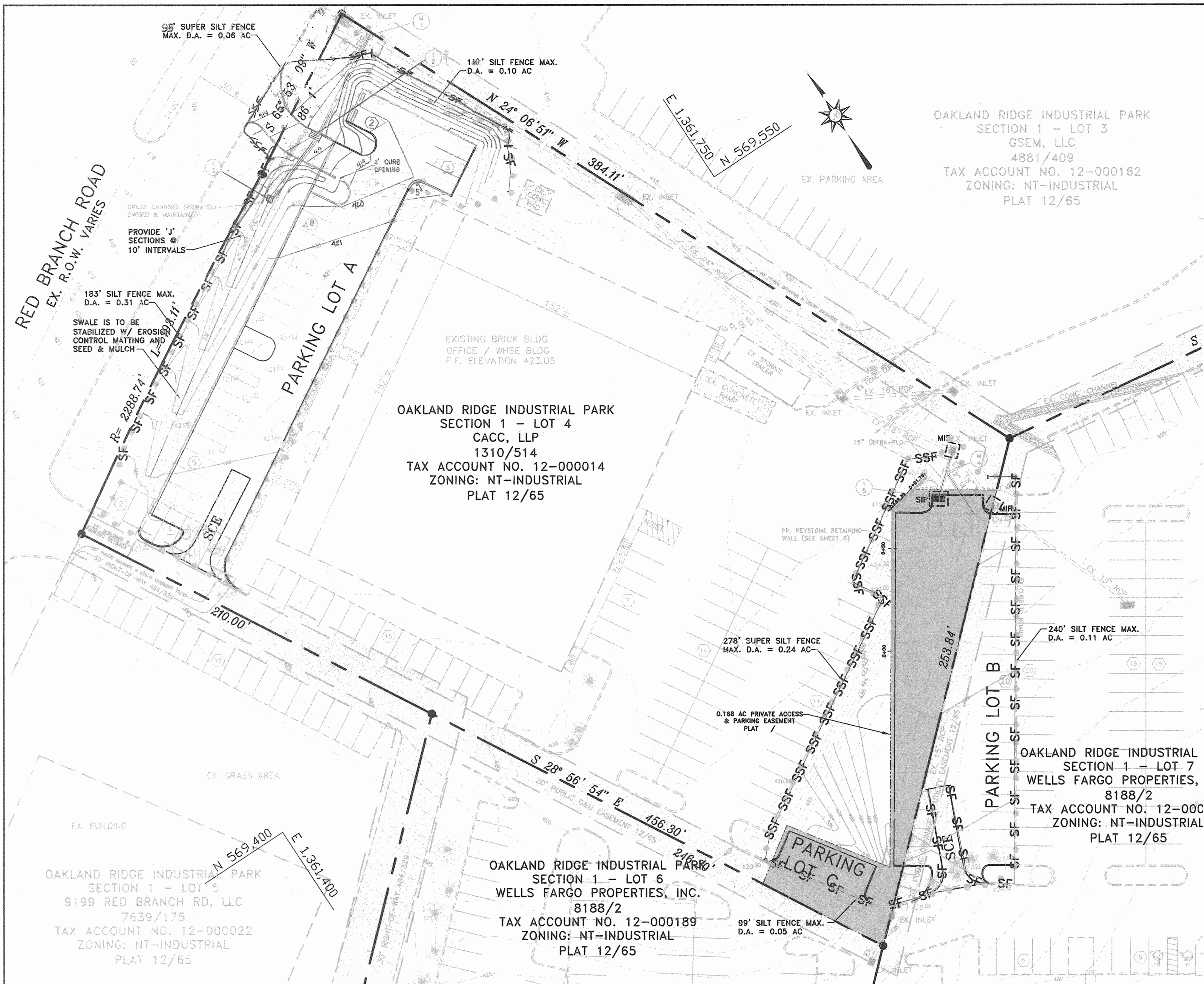
OAKLAND RIDGE INDUSTRIAL PARK, SEC. 1, LOTS 4 & 7
 (PARKING ADDITIONS)
 SITE DEVELOPMENT PLANS
 LANDSCAPING PLAN

DESIGNED BY: J.P.D. SCALE AS SHOWN TAX MAP 30
 DRAWN BY: J.P.D. DEED REF. 17 GRID 17
 CHECKED BY: J.P.D. 8188/2 PARCEL 239

A.D.C. MAP 5 GRID D-13 JOB # 03053 SHEET NO. 7
 PLAT REF. 12/65 FILES 0310085\2005\03053\DRAWINGS\SHEET7.dwg OF 7

DRAWING COMPLETED 4-20-05

APPROVED
 PLANNING BOARD
 of HOWARD COUNTY
 DATE 10/27/04



SCALE: 1" = 30'

Reviewed for Howard SCD and meets Technical Requirements

Joe Mays 6/1/05
USDA - Natural Resources Conservation Service Date

This development plan is approved for soil erosion and sediment control by the Howard Soil Conservation District.

Carrie Johnson 6/1/05
USDA - Natural Resources Conservation Service Date

ENGINEER'S CERTIFICATE

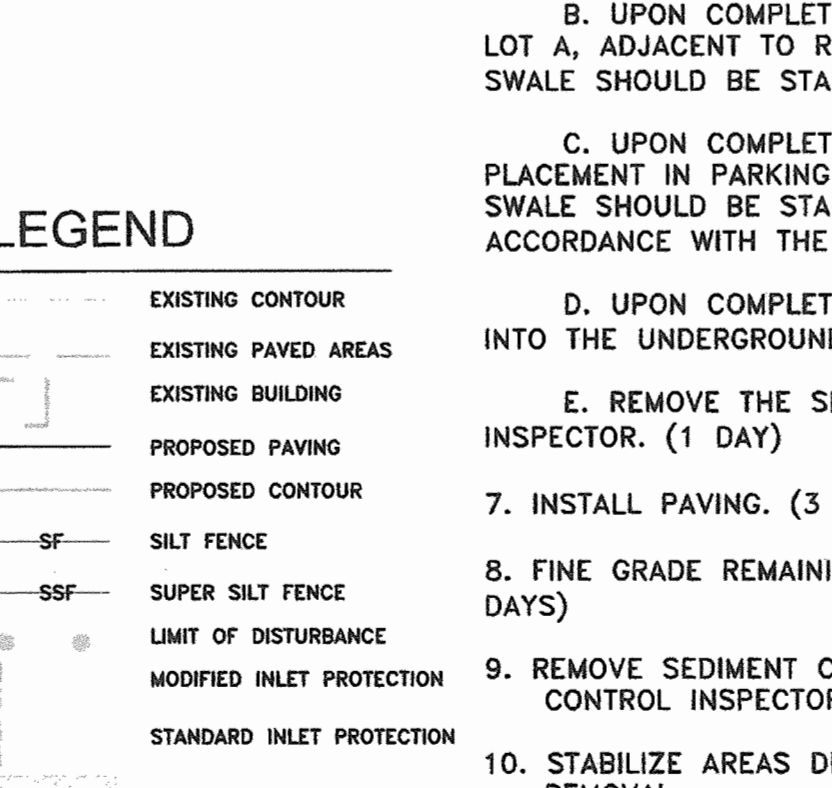
"I CERTIFY THAT THIS PLAN FOR SEDIMENT AND EROSION CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."

Patrick C. Richardson, Jr. 4/20/05
SIGNATURE OF ENGINEER (Print name below signature) DATE

DEVELOPER'S CERTIFICATE

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

Carrie Johnson - Wells Fargo 5/13/05
SIGNATURE OF DEVELOPER (Print name below signature) DATE



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division 6/3/05
Date

Chief, Division of Land Development 6/7/05
Date

Director 6/2/05
Date

Richardson Engineering, LLC

730 W. Padonia Road, Suite 101
Cockeysville, Maryland 21030
Phone: 410-560-1502 Fax: 410-560-0827

OWNER/DEVELOPER

WELLS FARGO PROPERTIES, INC.
2329 CENTRAL AVENUE NE
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CACC, LLP
9195 RED BRANCH ROAD
COLUMBIA, MARYLAND 21045
ATTN: STEPHEN SMITH
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OAKLAND RIDGE INDUSTRIAL PARK, SEC. 1, LOTS 4 & 7
(PARKING ADDITIONS)
SITE DEVELOPMENT PLANS
SEDIMENT & EROSION CONTROL PLAN & DETAILS
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

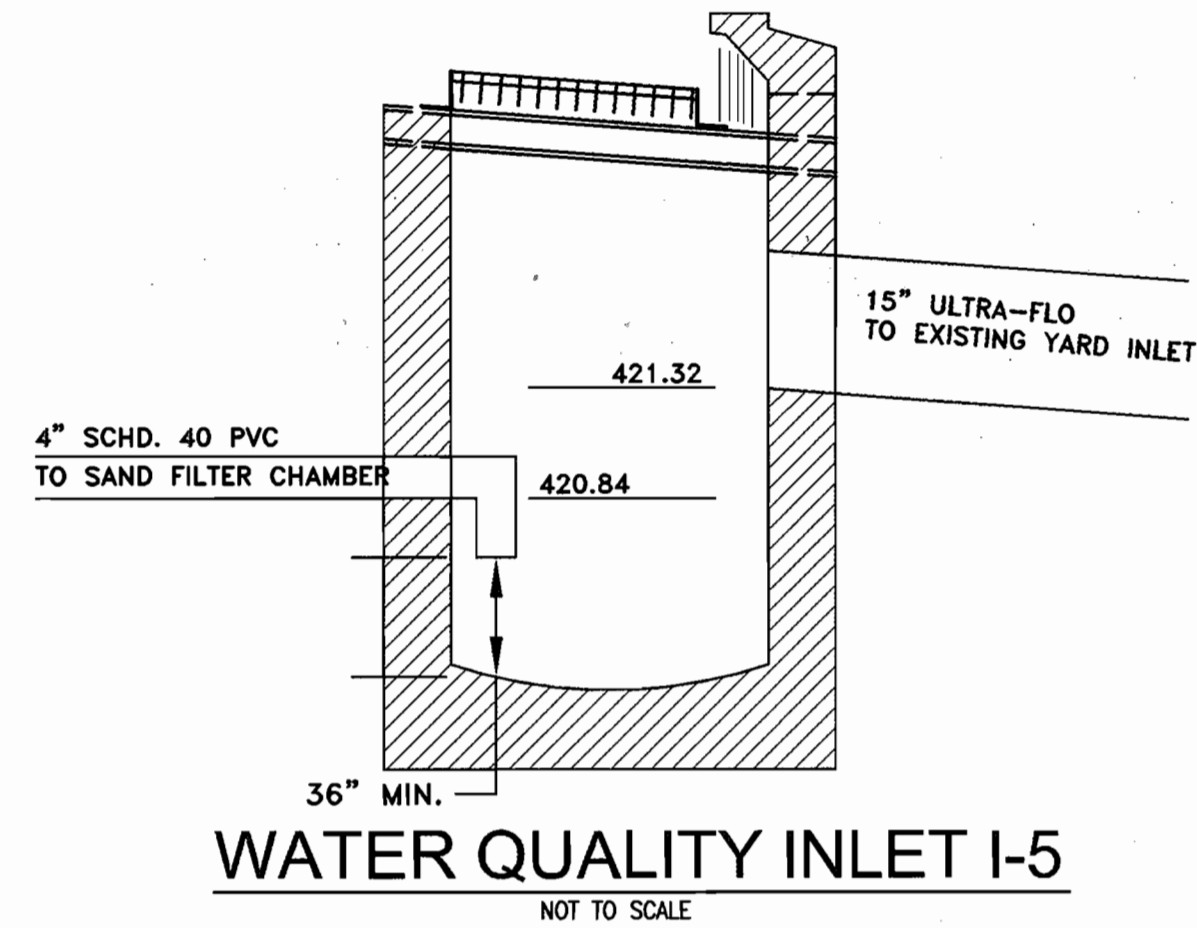
DESIGNED BY: J.P.D.
SCALE AS SHOWN
DRAWN BY: J.P.D.
DEED REF. 1310/514
CHECKED BY: J.P.D.
8168/2

TAX MAP 30
GRID D-13
PLAT REF. 12/65
PARCEL 259

A.D.C. MAP 5
JOB # 03053
FILES C:\JOBS\2005\03053\DRAWINGS\SHEETS.dwg

DRAWING COMPLETED 4-20-05
NO. 5
OF 7

APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE 10/27/04



PIPE SCHEDULE

FROM	TO	PIPE TYPE	SIZE	LENGTH
I-3	I-2	ULTRA-FLO	15"	38.5'
I-2	M-1	ULTRA-FLO	15"	5.5'
I-5	M-4	ULTRA-FLO	15"	23'
M-4	EX. I-1	ULTRA-FLO	15"	11'
SF-1	M-4	ULTRA-FLO	12"	30'

STRUCTURE SCHEDULE

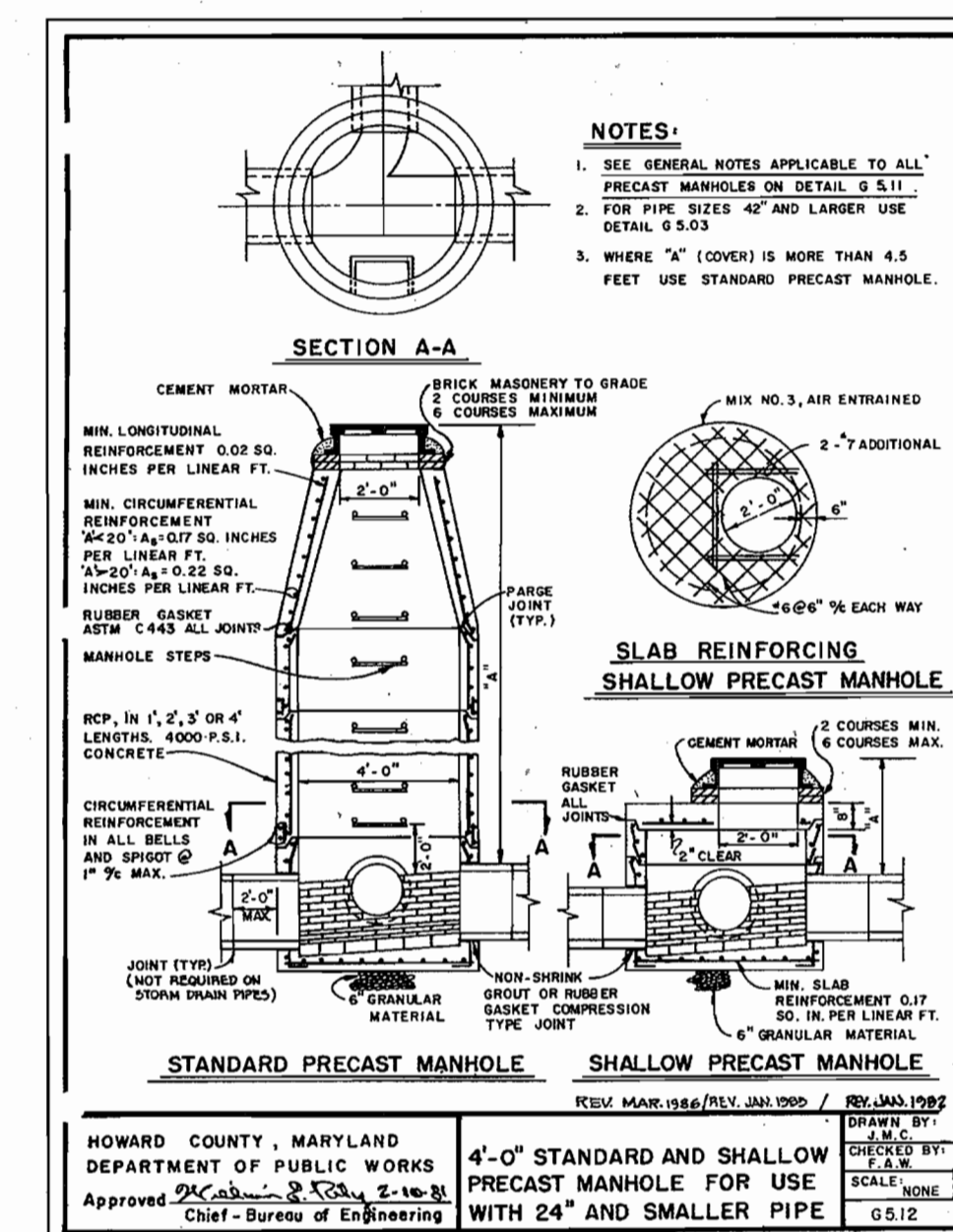
NO.	STRUCTURE	INVERT	TOP	VERTING/EASTING/SEE NOTE BELOW	
I-5	DOUBLE 'S' COMBINATION INLET	421.32	423.82	569,360.92 / 1,361,756.05	
I-3	TYPE 'D' INLET	416.29	417.00	569,653.84 / 1,361,563.82	
I-2	DOUBLE 'S' COMBINATION INLET	411.87	416.03	569,875.44 / 1,361,599.37	
M-4	PRECAST CONCRETE MANHOLE	419.99	416.50	569,368.46 / 1,361,765.18	
M-1	PRECAST CONCRETE MANHOLE	410.95	103.73	413.10	569,699.54 / 1,361,648.29

NOTE: DOUBLE 'S' INLETS ARE COORDINATED TO THE CENTERLINE OF THE INLET ALONG THE PROJECTED FLOWLINE. TYPE 'D' INLET IS COORDINATED TO THE CENTERLINE OF THE BOX AND MANHOLES ARE COORDINATED TO THE CENTERLINE OF THE MANHOLE.

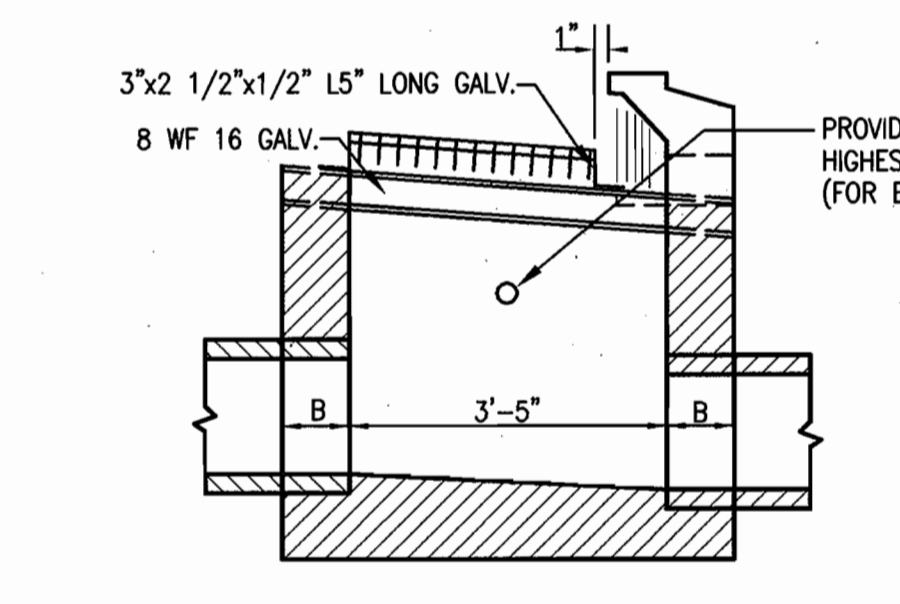
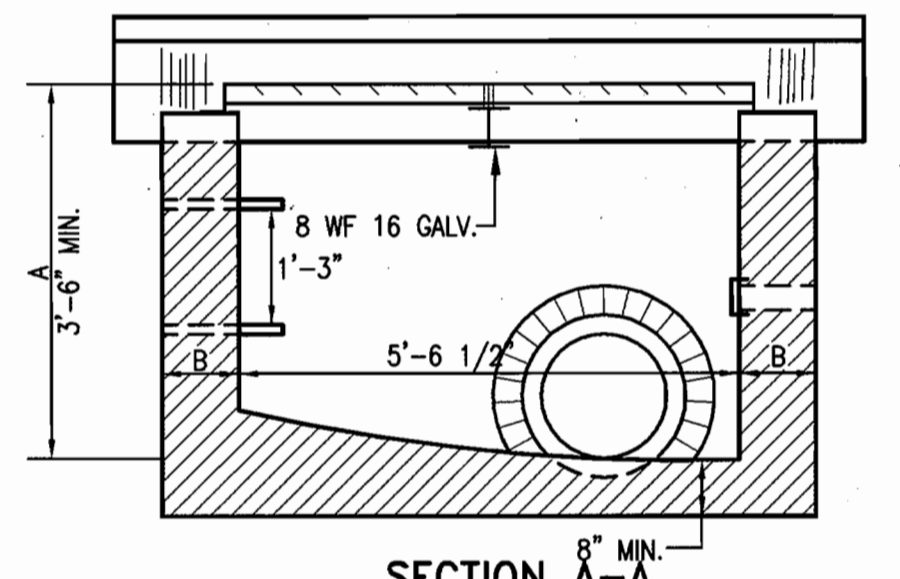
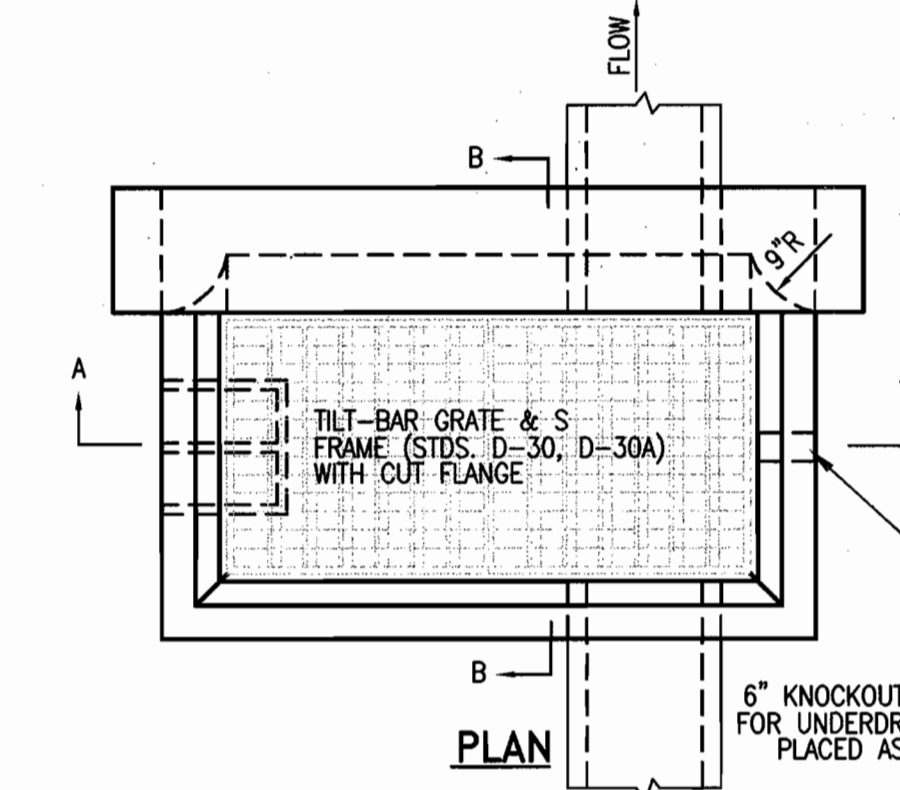
CONSTRUCTION SPECIFICATIONS

- GENERAL: THIS STORMWATER MANAGEMENT FACILITY SHALL BE CONSTRUCTED IN ACCORDANCE WITH HOWARD COUNTY'S "STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION".
- TIMING: THIS UNDERGROUND MANAGEMENT FACILITY SHALL NOT BE CONSTRUCTED OR PLACED IN SERVICE UNTIL ALL OF THE CONTRIBUTING AREA HAS BEEN STABILIZED AND APPROVED BY THE RESPONSIBLE INSPECTOR.
- STRUCTURAL BACKFILL MATERIAL: THE BACKFILL MATERIAL SHALL BE TAKEN FROM AN APPROVED BORROW AREA. ALL MATERIAL SHALL BE FREE FROM ROOTS, STUMPS, WOOD, RUBBISH, OVERSIZED STONES, FROZEN OR OTHER OBJECTIONABLE MATERIAL.
- PLACEMENT & COMPACTION: THE BACKFILL SHALL BE PLACED IN HORIZONTAL LAYERS NOT TO EXCEED 4 INCHES IN THICKNESS AND COMPACTED BY HAND TEMPERS OR OTHER COMPACTION EQUIPMENT. THE MATERIAL NEEDS TO FILL COMPLETELY ALL SPACES UNDER AND ADJACENT TO THE PIPES. AT NO TIME DURING THE BACKFILLING OPERATION SHALL DRIVEN EQUIPMENT BE ALLOWED TO OPERATE CLOSER THAN 4 FEET, MEASURED HORIZONTALLY, TO ANY PART OF A STRUCTURE OR PIPE UNLESS THERE IS A COMPACTED FILL OF 24 INCHES OR GREATER OVER THE STRUCTURE OR PIPE.
- PIPE CONDUITS MATERIALS (CORRUGATED STEEL PIPE): THIS PIPE AND ITS APPURTENANCES SHALL BE GALVANIZED AND FULLY BITUMINOUS COATED AND SHALL CONFORM TO THE REQUIREMENTS OF AASHTO SPECIFICATIONS M-190 TYPE A WITH WATER TIGHT COUPLING BANDS. ANY BITUMINOUS COATING DAMAGED OR OTHERWISE REMOVED SHALL BE REPLACED WITH COLD APPLIED BITUMINOUS COATING COMPOUND. COATED C.M.P. SHALL HAVE A MINIMUM COATING THICKNESS OF 10 MIL ON BOTH SIDES OF PIPE AND SHALL MEET REQUIREMENTS OF AASHTO M-245 AND M-246.
- CONNECTIONS: ALL CONNECTIONS WITH PIPES MUST BE COMPLETELY WATERTIGHT. WATERTIGHT COUPLING BANDS OR FLANGES SHALL BE USED AT ALL JOINTS. DIMPLE BANDS ARE NOT CONSIDERED TO BE WATERTIGHT. BEDDING THE PIPE SHALL BE FIRMLY AND UNIFORMLY BEDDED THROUGHOUT ITS ENTIRE LENGTH. WHERE ROCK OR SOFT, SPONGY OR OTHER UNSUITABLE SOIL IS ENCOUNTERED, ALL SUCH MATERIALS SHALL BE REMOVED AND REPLACED WITH SUITABLE EARTH MATERIAL COMPACTED TO PROVIDE ADEQUATE SUPPORT. LAYING PIPE THE PIPE SHALL BE PLACED WITH INSIDE CIRCUMFERENTIAL LAPS POINTING DOWNSTREAM AND WITH THE LONGITUDINAL LAPS AT THE SIDES. BACKFILLING BACKFILL SHALL CONFORM TO STRUCTURAL BACKFILL AS SHOWN ABOVE. OTHER DETAILS SILT, TRAPPING MANHOLES, ETC. SHALL BE AS SHOWN ON THE DRAWINGS. REINFORCED CONCRETE PIPE: MATERIALS: REINFORCED CONCRETE PIPE SHALL HAVE BELL AND SPIGOT JOINTS WITH RUBBER GASKETS AND SHALL EQUAL OR EXCEED ASTM C-361.
- CONCRETE: CONCRETE SHALL MEET MINIMUM REQUIREMENTS SET FORTH IN MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS, SECTION 918 (PORTLAND CEMENT CONCRETE MIXTURES), MIX NO. 3. REINFORCING STEEL SHALL BE ASTM A-615, GRADE 60. REBARS SHALL HAVE 3" COVER (MINIMUM) AND A MINIMUM OVERLAP OF 30 BAR DIAMETERS, EXCEPT AS NOTED ON THE PLAN. STEEL ANGLES AND ANCHOR BARS SHALL BE ASTM A-36.
- EROSION CONTROL: FACILITIES ALL DISTURBED AREA SHALL BE CONTROLLED BY AN EROSION AND SEDIMENT CONTROL PLAN WHICH HAS BEEN APPROVED BY HOWARD COUNTY DEPT. OF PUBLIC WORKS SOIL CONSERVATION DISTRICT. PROVIDE INLET PROTECTION FOR THOSE INLETS LOCATED ABOVE THE FACILITY UNTIL THE CONTRIBUTING AREAS HAVE BEEN STABILIZED.
- FILTER CLOTH: ALL FILTER CLOTH SHALL BE POLYFILTER - X OR EQUIVALENT.
- RIPRAP: ALL RIPRAP SHALL CONFORM TO HOWARD COUNTY SPECIFICATIONS.
- CONSTRUCTION INSPECTION BY DESIGNATED ENGINEERS: THE CONSTRUCTION OF THIS FACILITY AND CERTIFICATION THAT THIS FACILITY HAS BEEN BUILT IN ACCORDANCE WITH THE PLANS, SHALL BE UNDER THE SUPERVISION OF A REGISTERED PROFESSIONAL ENGINEER. THE ENGINEER SHALL BE NOTIFIED SUFFICIENTLY IN ADVANCE OF CONSTRUCTION IN ORDER THAT ARRANGEMENTS CAN BE MADE FOR: 1) INSPECTION OF PIPE TRENCH AND BEDDING, INSPECTION OF SPECIAL PIPE SECTIONS AND FITTINGS, AND 2) SUPERVISION OF BACKFILLING OPERATIONS. THE ENGINEER SHALL DIRECT THE HANDLING OF WATER DURING CONSTRUCTION. MINOR CHANGES NOT AFFECTING THE INTEGRITY OR PERFORMANCE OF THE FACILITY, AND THE REMOVAL AND REPLACEMENT OF DEFECTIVE FILL.

WATER QUALITY INLET I-5
NOT TO SCALE



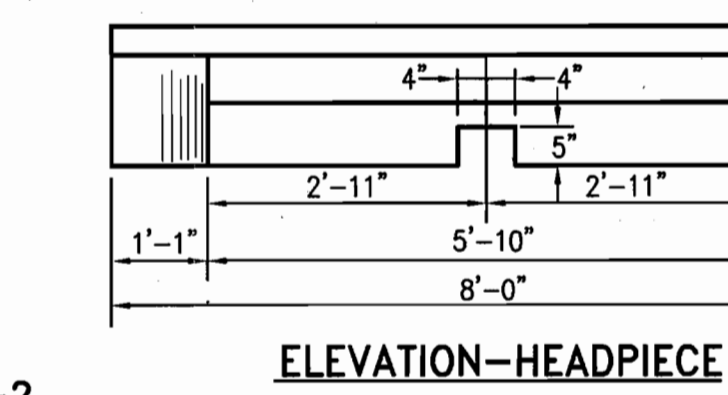
HOWARD COUNTY, MARYLAND
DEPARTMENT OF PUBLIC WORKS
Approved: [Signature] Chief - Bureau of Engineering



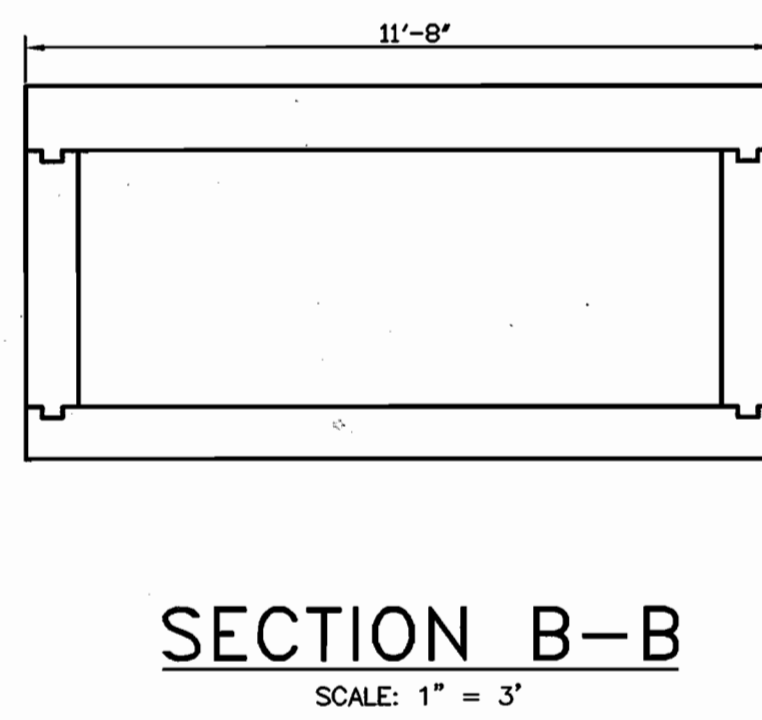
SECTION B-B
1-2
MODIFIED DOUBLE TYPE 'S' COMB. INLET
NOT TO SCALE

- 6" KNOCKOUTS FOR UNDERDRAIN w/CAPS TO BE PLACED ON ALL WALLS OF INLET WHERE NO PIPE IS PRESENT. INVERT OF KNOCKOUT = HIGHEST PIPE CROWN
- NOTES:
- THE STRUCTURE SHALL BE CONSTRUCTED OF 4500 PSI CONCRETE
 - REINFORCING = #4 AT 10" O/C E.W. AT CL OF WALLS. REINFORCING SHALL BE CONTINUOUS AT CORNERS. ALL LAP SPLICES 1'-4" MINIMUM.
 - ADDITIONAL #4 BARS TO BE ADDED AT ALL OPENINGS.
 - INVERTS TO BE BRICK, GRADE SM (ASTM C32)
 - WHERE A IS 3'-6" OR GREATER STANDARD MANHOLE STEPS SHALL BE INSTALLED AS SHOWN.

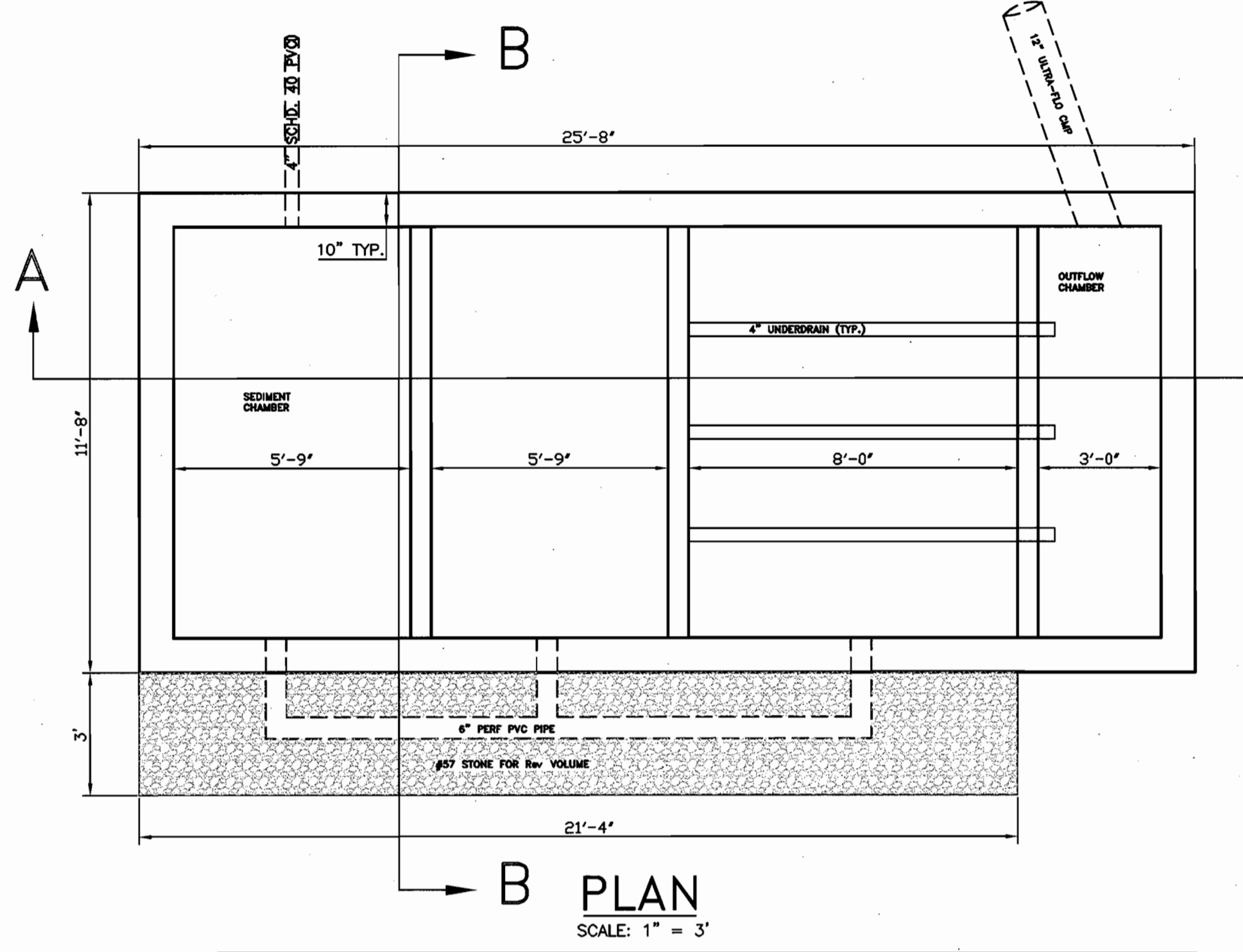
A	B	WALLS
< 5'	8"	CONC.
5' TO 9'	12"	CONC.
9' TO 14'	8"	CONC.



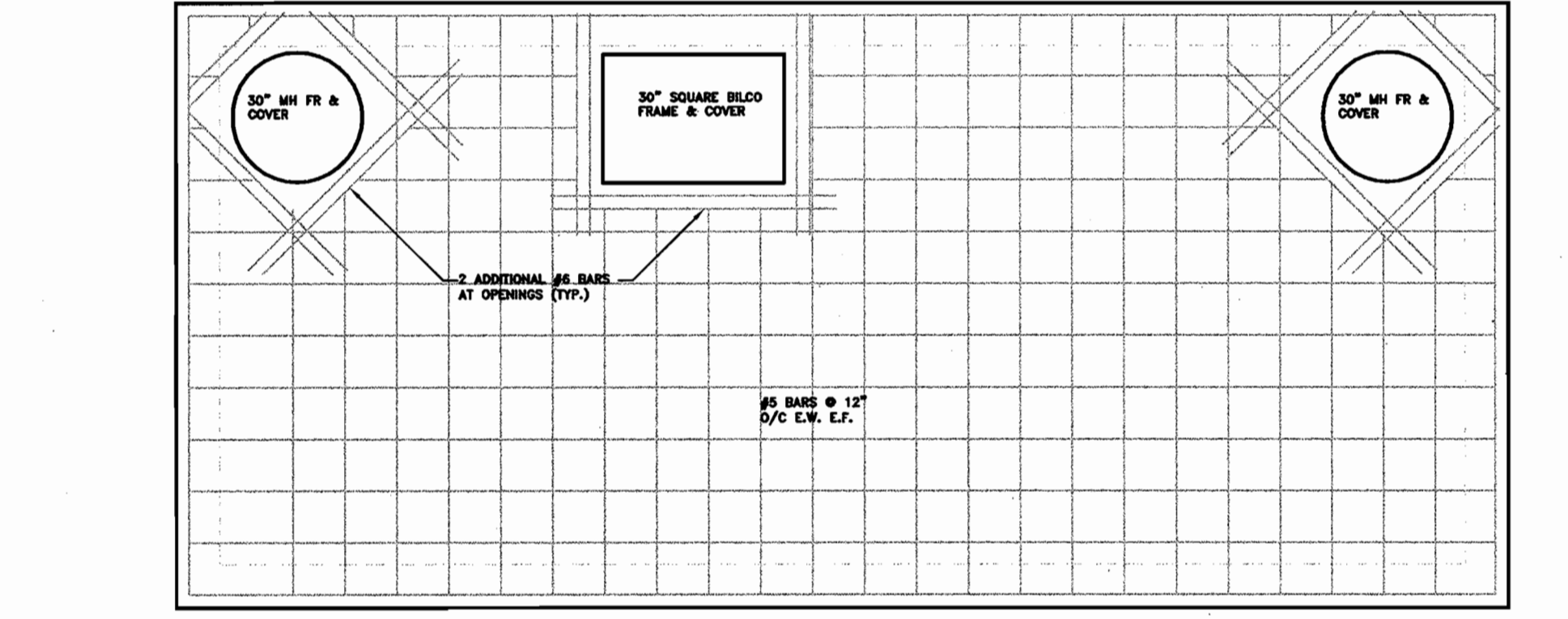
ELEVATION-HEADPIECE



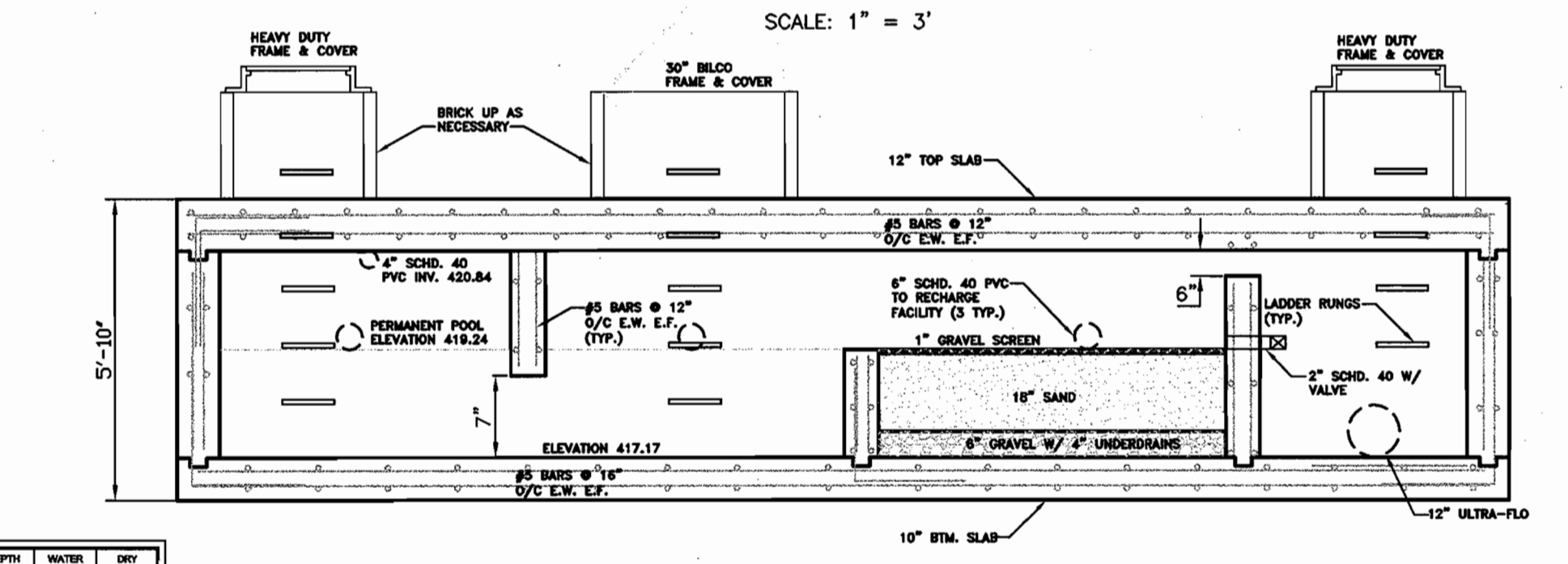
SECTION B-B
SCALE: 1" = 3'



B PLAN
SCALE: 1" = 3'



TOP SLAB
SCALE: 1" = 3'



SECTION A-A
SCALE: 1" = 3'

DEPTH (FT)	WATER CONTENT (%)	DRY DENSITY (PCF)
0.0	12.0	110.0
0.2	12.0	110.0
0.4	12.0	110.0
0.6	12.0	110.0
0.8	12.0	110.0
1.0	12.0	110.0
1.2	12.0	110.0
1.4	12.0	110.0
1.6	12.0	110.0
1.8	12.0	110.0
2.0	12.0	110.0

DEPTH (FT)	WATER CONTENT (%)	DRY DENSITY (PCF)
0.0	12.0	110.0
0.2	12.0	110.0
0.4	12.0	110.0
0.6	12.0	110.0
0.8	12.0	110.0
1.0	12.0	110.0
1.2	12.0	110.0
1.4	12.0	110.0
1.6	12.0	110.0
1.8	12.0	110.0
2.0	12.0	110.0

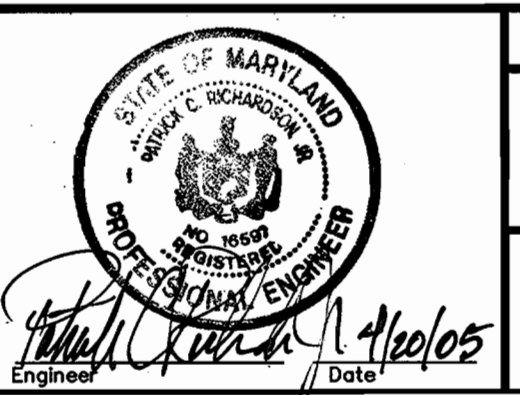
DEPTH (FT)	WATER CONTENT (%)	DRY DENSITY (PCF)
0.0	12.0	110.0
0.2	12.0	110.0
0.4	12.0	110.0
0.6	12.0	110.0
0.8	12.0	110.0
1.0	12.0	110.0
1.2	12.0	110.0
1.4	12.0	110.0
1.6	12.0	110.0
1.8	12.0	110.0
2.0	12.0	110.0

DEPTH (FT)	WATER CONTENT (%)	DRY DENSITY (PCF)
0.0	12.0	110.0
0.2	12.0	110.0
0.4	12.0	110.0
0.6	12.0	110.0
0.8	12.0	110.0
1.0	12.0	110.0
1.2	12.0	110.0
1.4	12.0	110.0
1.6	12.0	110.0
1.8	12.0	110.0
2.0	12.0	110.0

APPROVED PLANNING BOARD OF HOWARD COUNTY
DATE 10/27/04

APPROVED: DEPARTMENT OF PLANNING AND ZONING
Chief, Development Engineering Division
Chief, Division of Land Development
Date 4/3/05
Date 4/1/05
Date 6/1/05

Richardson Engineering, LLC
730 W. Padonia Road, Suite 101
Cockeysville, Maryland 21030
Phone: 410-560-1502 Fax: 410-560-0827

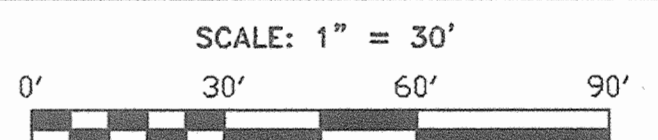
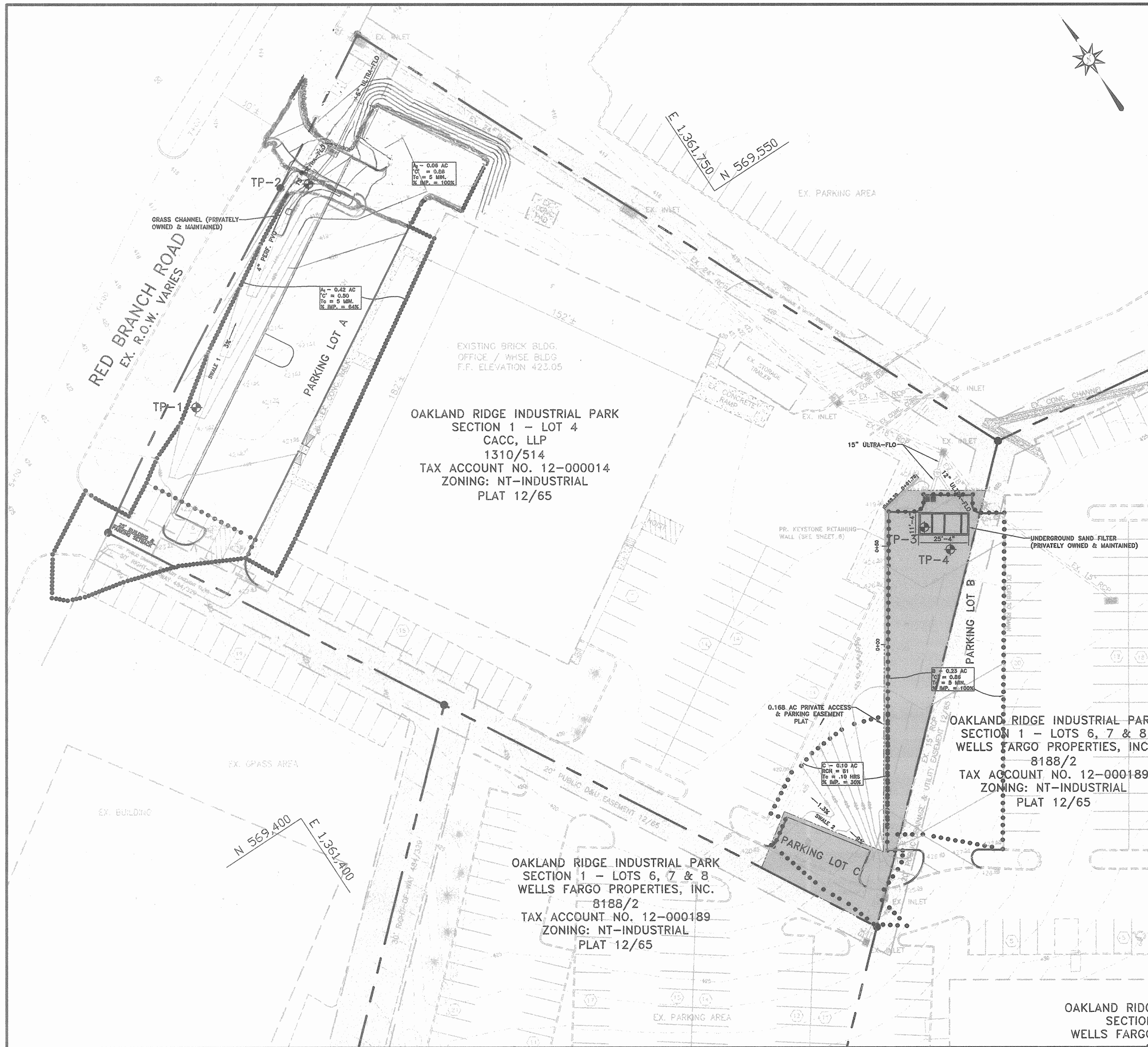


OWNER/DEVELOPER
WELLS FARGO PROPERTIES, INC.
2329 CENTRAL AVENUE NE
MINNEAPOLIS, MINNESOTA 55479
ATTN: CARRIE JOHNSON
PHONE: 612-667-8714
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ATTN: STEPHEN SMITH
PHONE: 410-992-9570

OAKLAND RIDGE INDUSTRIAL PARK, SEC. 1, LOTS 4 & 7
(PARKING ADDITIONS)
SITE DEVELOPMENT PLANS
SWM NOTES & DETAILS
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FILE #	DATE	REVISION	BY
221-05	12/05	1	CHD

DRAWING COMPLETED 4-20-05
JOB # 03053
SHEET NO. 4 OF 7

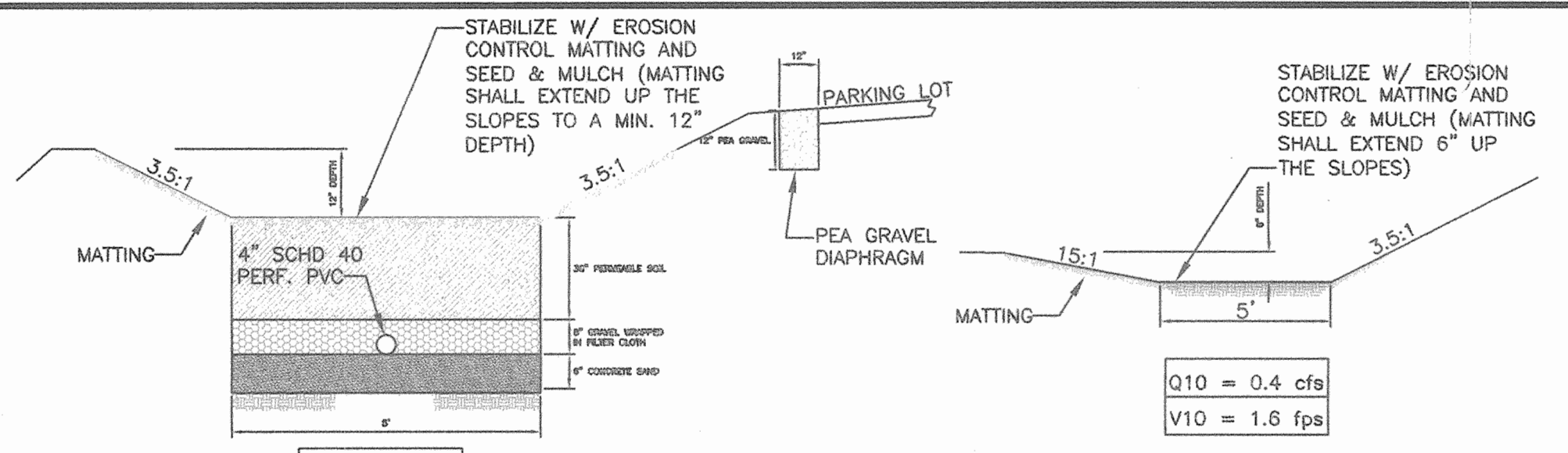


NOTE: THIS SITE IS CONSIDERED A FURTHER DEVELOPMENT OF A PARTIALLY DEVELOPED SITE.

- SWM DATA (PARKING LOT A)**
- ON-SITE FACILITY
 - STRUCTURE CLASSIFICATION - NA (NOT 378)
 - TYPE OF FACILITY - DRY SWALE
 - MAINTENANCE RESPONSIBILITY - PRIVATE
 - WATERSHED AREA TO FACILITY - 0.42 AC.±
 - Q1 = 1.1 CFS, Q10 = 2.7 CFS
 - CPV NOT REQUIRED.
 - REQUIRED STORAGE VOLUME - 845 CU.FT.
 - PROVIDED STORAGE VOLUME - 845 CU.FT.
 - FILTER BED AREA REQUIRED - 68 S.F.
 - TIME OF CONCENTRATION - 0.10 HOURS
 - 10-YEAR VELOCITY - 2.58 FPS

- SWM DATA (PARKING LOT B)**
- ON-SITE FACILITY
 - STRUCTURE CLASSIFICATION - NA (NOT 378)
 - TYPE OF FACILITY - UNDERGROUND SAND FILTER
 - MAINTENANCE RESPONSIBILITY - PRIVATE
 - WATERSHED AREA TO FACILITY - 0.23 AC.±
 - Q1 = 0.7 CFS, Q10 = 1.4 CFS
 - CPV NOT REQUIRED.
 - REQUIRED STORAGE VOLUME - 518 CU.FT.
 - PROVIDED STORAGE VOLUME - 845 CU.FT.
 - FILTER BED AREA REQUIRED - 68 S.F.
 - TIME OF CONCENTRATION - 0.10 HOURS
 - 10-YEAR VELOCITY - 1.62 FPS

- SWM DATA (PARKING LOT C)**
- SWALE IS PROVIDED FOR RECHARGE ONLY.
 - WATER QUALITY IS PROVIDED FOR THIS AREA IN AREA A BY TREATING AN EQUIVALENT AMOUNT OF EXISTING IMPERVIOUS.
 - STRUCTURE CLASSIFICATION - NA (NOT 378)
 - TYPE OF FACILITY - GRASS CHANNEL
 - MAINTENANCE RESPONSIBILITY - PRIVATE
 - WATERSHED AREA TO FACILITY - 0.10 AC.±
 - Q1 = 0.15 CFS, Q10 = 0.43 CFS
 - CPV NOT REQUIRED.
 - REQUIRED STORAGE VOLUME - 89
 - PROVIDED STORAGE VOLUME - 89
 - FILTER BED AREA REQUIRED - 0.10 HOURS
 - 10-YEAR VELOCITY - 1.62 FPS



SECTION THROUGH SWALE 1
NOT TO SCALE

SECTION THROUGH SWALE 2
NOT TO SCALE

MATERIAL SPECIFICATIONS

MATERIAL	SPECIFICATION/TEST METHOD	SIZE	NOTES
"CONCRETE" SAND	CLEAN ASHTO-M-8 OR ASTM-C-33	0.02" TO 0.04"	SAND SUBSTITUTIONS SUCH AS DUNES AND GRAYSTONE #10 ARE NOT ACCEPTABLE. NO CALCIUM CARBONATE OR DOLOMITIC SAND SUBSTITUTIONS ARE ACCEPTABLE. NO "ROCK DUST" CAN BE USED FOR SAND.
GEOTEXTILE FABRIC	ASTM-D-4833 (PUNCTURE STRENGTH -125 LB.) ASTM-D-4833 (TENSILE STRENGTH - 300 LB.)	0.008" THICK EQUIVALENT OPENING SIZE OF #60 SIEVE	MUST MAINTAIN 125 GPM PER SQ. FT. FLOW RATE
UNDERDRAIN PIPING	F750, TYPE PS 20 OR ASHTO-M-270	4" SCHED 40 PVC OR SDR35	3/4" PERF. @ 4" ON CENTER, 4 HOLES PER ROW, MINIMUM OF 3" OF GRAVEL OVER PIPES; NOT NECESSARY UNDERNEATH PIPES
UNDERDRAIN GRAVEL	ASHTO-M-43	0.375"-0.75"	
TOP SOIL	SAND 35% TO 60% SILT 35% TO 60% CLAY 0% TO 10%	N/A	USDA SOIL TYPES LOAMY SAND, SANDY LOAM OR LOAM

ULTRA FLO STORM SEWER PIPE SPECIFICATIONS

SCOPE
THIS SPECIFICATION COVERS THE MANUFACTURE AND INSTALLATION OF THE ULTRA FLO PIPE DETAILED IN THE PROJECT PLANS.

MATERIAL
THE PIPE MATERIAL SHALL BE ALUMINUM AND SHALL HAVE A MANNING'S OF .012.

PIPE
THE ULTRA FLO SHALL BE MANUFACTURED WITH THE 3/4" x 3/4" x 7-1/2" EXTERNAL RIBS IN ACCORDANCE WITH THE APPLICABLE REQUIREMENTS OF ASTM B 745. THE PIPE SIZES AND GAGES SHALL BE AS SHOWN ON THE PROJECT PLANS. HANDLING & ASSEMBLY SHALL BE IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE NATIONAL CORRUGATED STEEL PIPE ASSOCIATION.

INSTALLATION
SHALL BE IN ACCORDANCE WITH ASTM B 788 AND B 790 AND IN CONFORMANCE WITH THE PROJECT PLANS AND SPECIFICATIONS. IF THERE ARE ANY INCONSISTENCIES OR CONFLICTS, THE CONTRACTOR MUST BRING THEM TO THE ATTENTION OF THE PROJECT ENGINEER.

CONSTRUCTION LOADS
CONSTRUCTION LOADS MAY BE HIGHER THAN FINAL LOADS. FOLLOW THE GUIDELINES OF THE MANUFACTURER OR THE NATIONAL CORRUGATED STEEL PIPE ASSOCIATION.

SAND FILTER MAINTENANCE SCHEDULE

- THE SEDIMENT CHAMBER OUTLET DEVICES SHALL BE CLEANED AND/OR REPAIRED WHEN DRAWDOWN TIMES WITHIN THE CHAMBER EXCEED 36 HOURS.
- DEBRIS AND LITTER SHALL BE REMOVED AS NECESSARY TO INSURE PROPER OPERATION OF THE SYSTEM.
- SEDIMENT SHALL BE CLEANED OUT OF THE SEDIMENTATION CHAMBER WHEN IT ACCUMULATES TO A DEPTH OF 6 INCHES. VEGETATION WITHIN THE CHAMBER SHALL BE LIMITED TO A HEIGHT OF 18 INCHES.
- WHEN WATER PONDS ON THE SURFACE OF THE FILTER BED FOR MORE THAN 72 HOURS, THE TOP FEW INCHES OF DISCOLORED MATERIAL SHALL BE REPLACED WITH FRESH MATERIAL. THE OWNER MUST FOLLOW PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS AND LIQUID.
- A LOGBOOK SHALL BE MAINTAINED TO DETERMINE THE RATE AT WHICH THE FACILITY DRAINS.
- THE MAINTENANCE LOGBOOK SHALL BE AVAILABLE TO HOWARD COUNTY FOR INSPECTION TO INSURE COMPLIANCE WITH OPERATION AND MAINTENANCE CRITERIA.
- ONCE THE PERFORMANCE CHARACTERISTICS OF THE INFILTRATION SYSTEM HAVE BEEN VERIFIED, THE MONITORING SCHEDULE CAN BE REDUCED TO AN ANNUAL BASIS UNLESS THE PERFORMANCE DATA INDICATES THAT A MORE FREQUENT SCHEDULE IS REQUIRED.

OPEN CHANNEL MAINTENANCE SCHEDULE

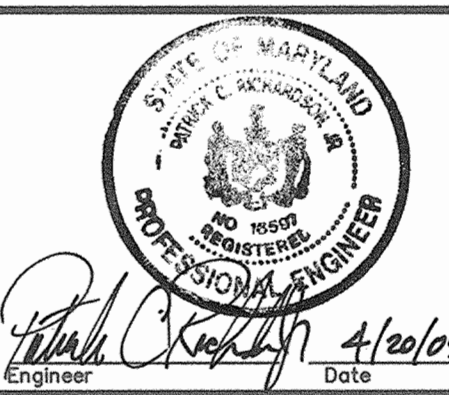
- THE OPEN CHANNEL SYSTEM SHALL BE INSPECTED ANNUALLY AND AFTER MAJOR STORMS. INSPECTIONS SHALL BE PERFORMED DURING WET WEATHER TO DETERMINE IF THE FACILITY IS FUNCTIONING PROPERLY.
- THE OPEN CHANNEL SHALL BE MOWED A MINIMUM OF AS NEEDED DURING THE GROWING SEASON TO MAINTAIN A MAXIMUM GRASS HEIGHT OF LESS THAN 6".
- DEBRIS AND LITTER SHALL BE REMOVED DURING REGULAR MOWING OPERATIONS AND AS NEEDED.
- VISIBLE SIGNS OF EROSION IN THE OPEN CHANNEL SYSTEM SHALL BE REPAIRED AS SOON AS IT IS NOTICED.
- REMOVE SILT IN THE OPEN CHANNEL SYSTEM WHEN IT ACCUMULATES TO A DEPTH OF THREE INCHES.

SUB-AREA	ACREAGE (ACRES)	Rev (CU FT)	WQv (CU FT)	Cpv (CU FT)	10-YR (CFS)	100-YR (CFS)
A	0.48	133	1021	NOT REQ'D	CONVEYED SAFELY	NOT REQ'D
B	0.23	103	690	NOT REQ'D	CONVEYED SAFELY	NOT REQ'D
C	0.10	GRASS CHANNEL	PROV'D FOR IN AREA A	NOT REQ'D	CONVEYED SAFELY	NOT REQ'D

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

Richardson Engineering, LLC

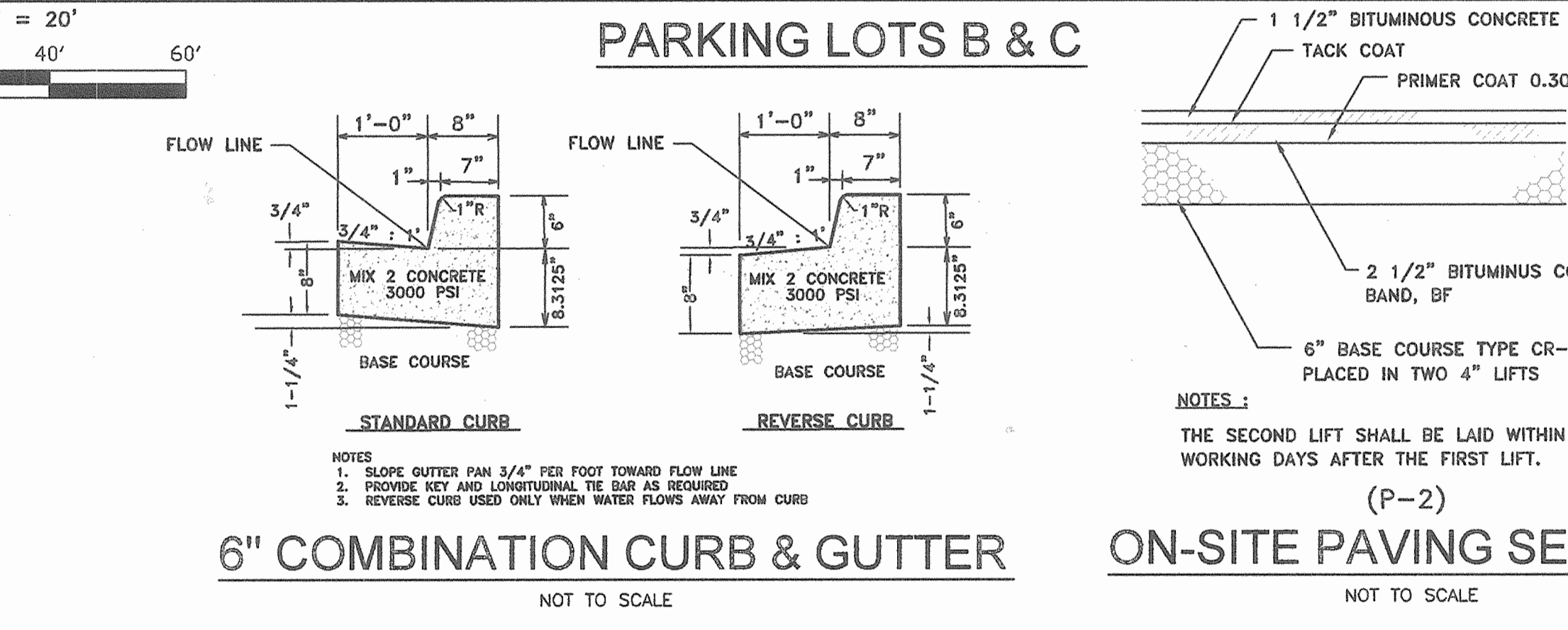
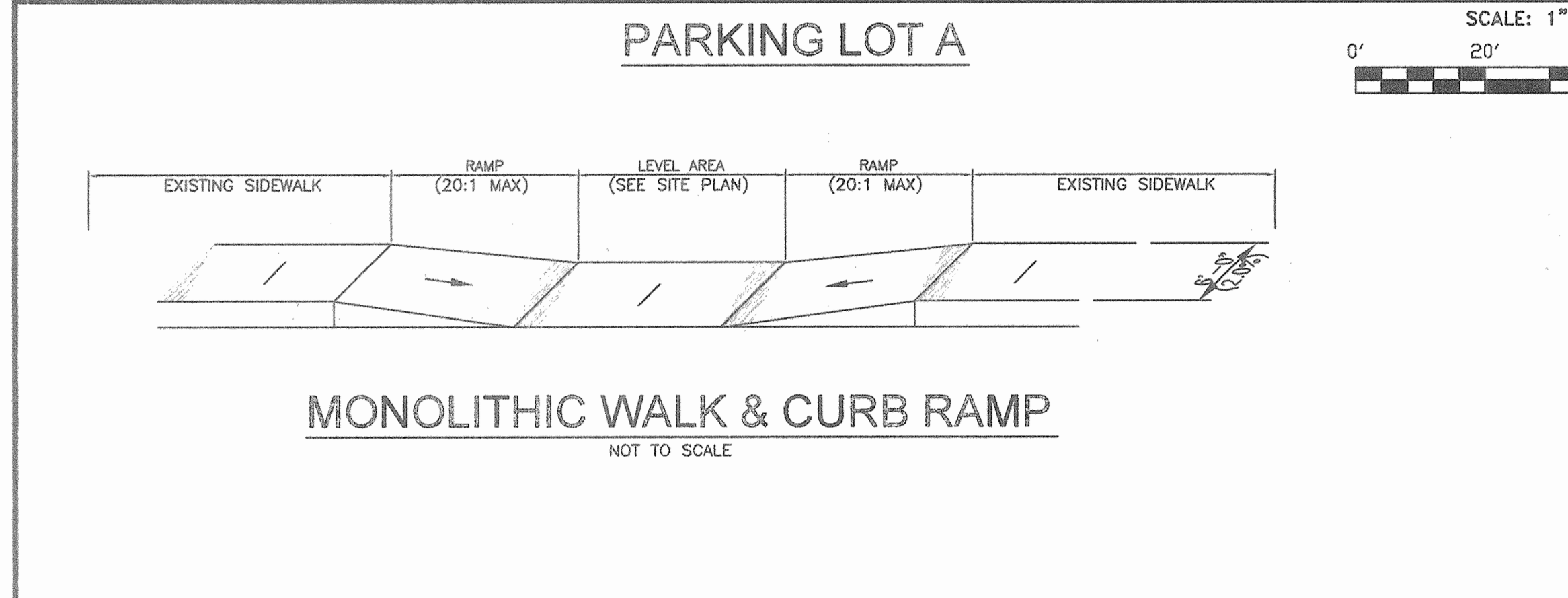
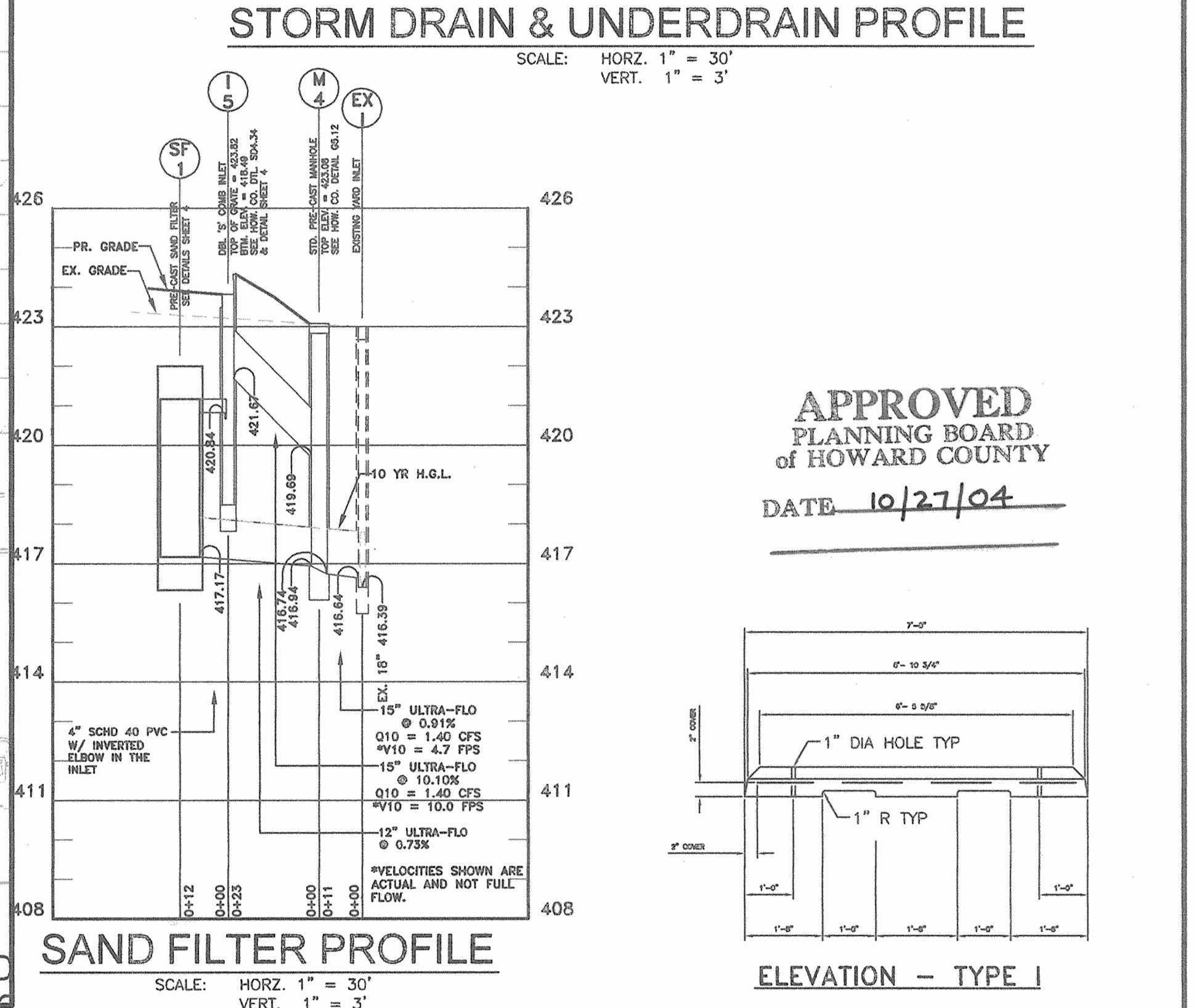
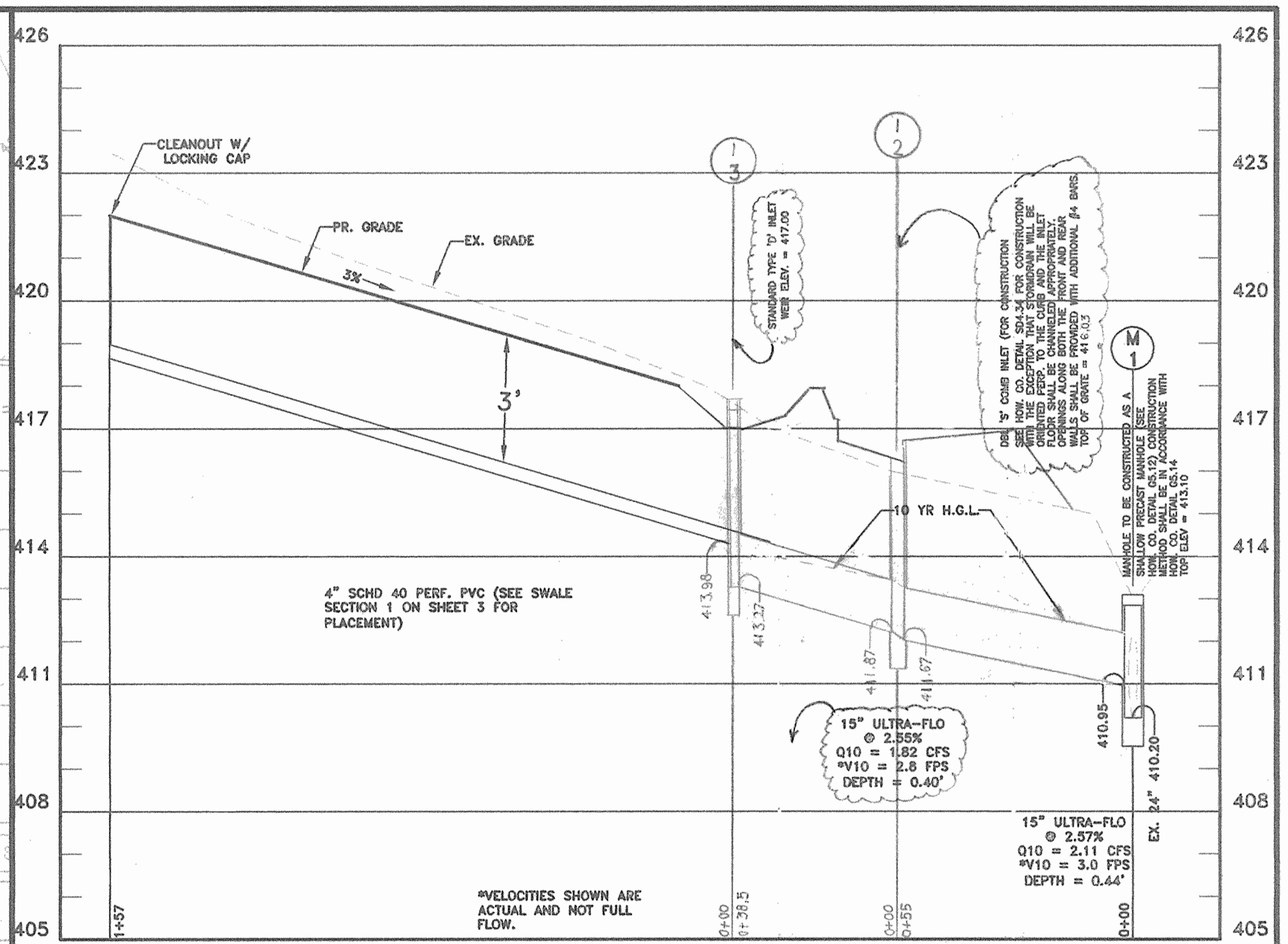
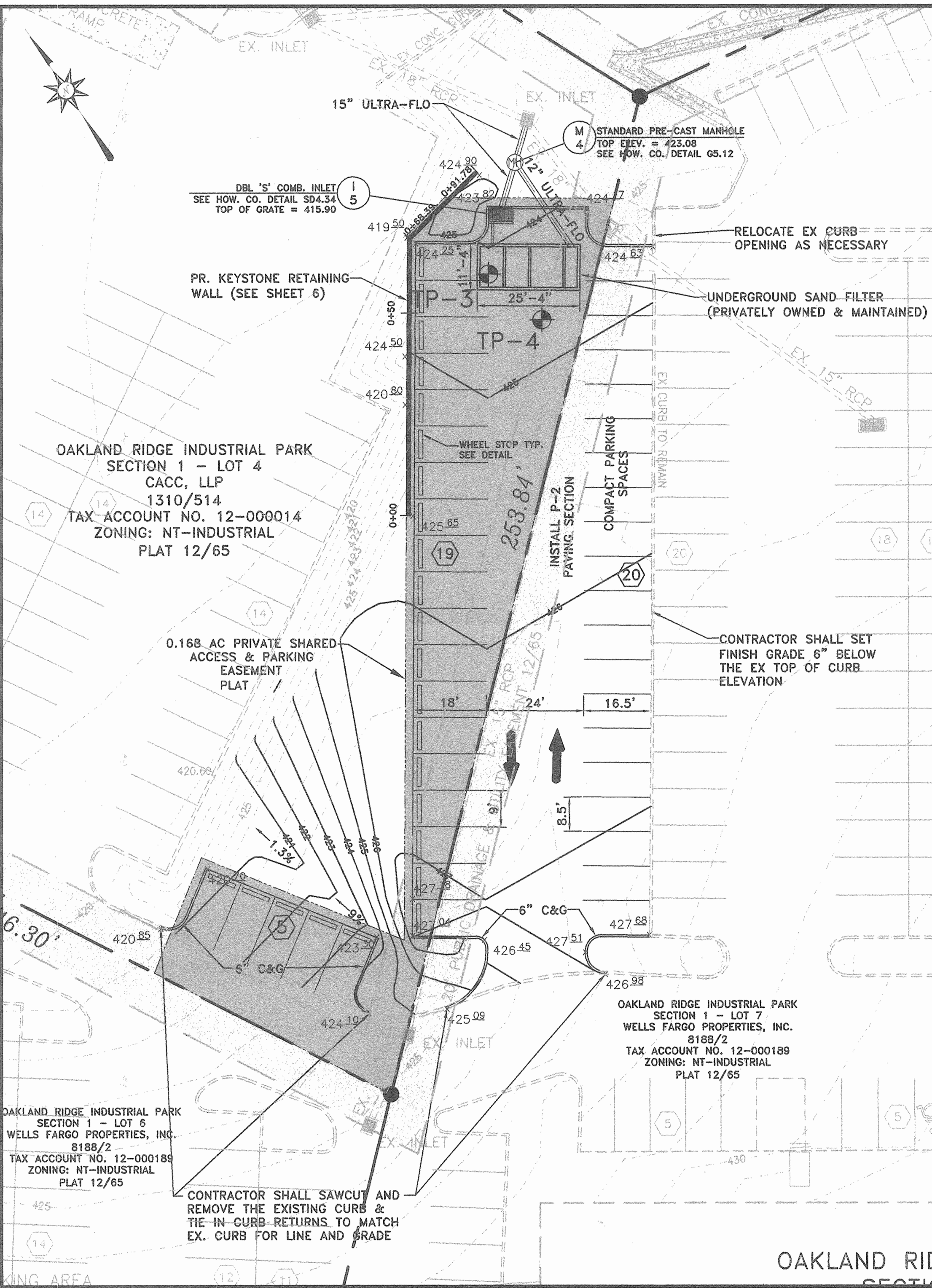
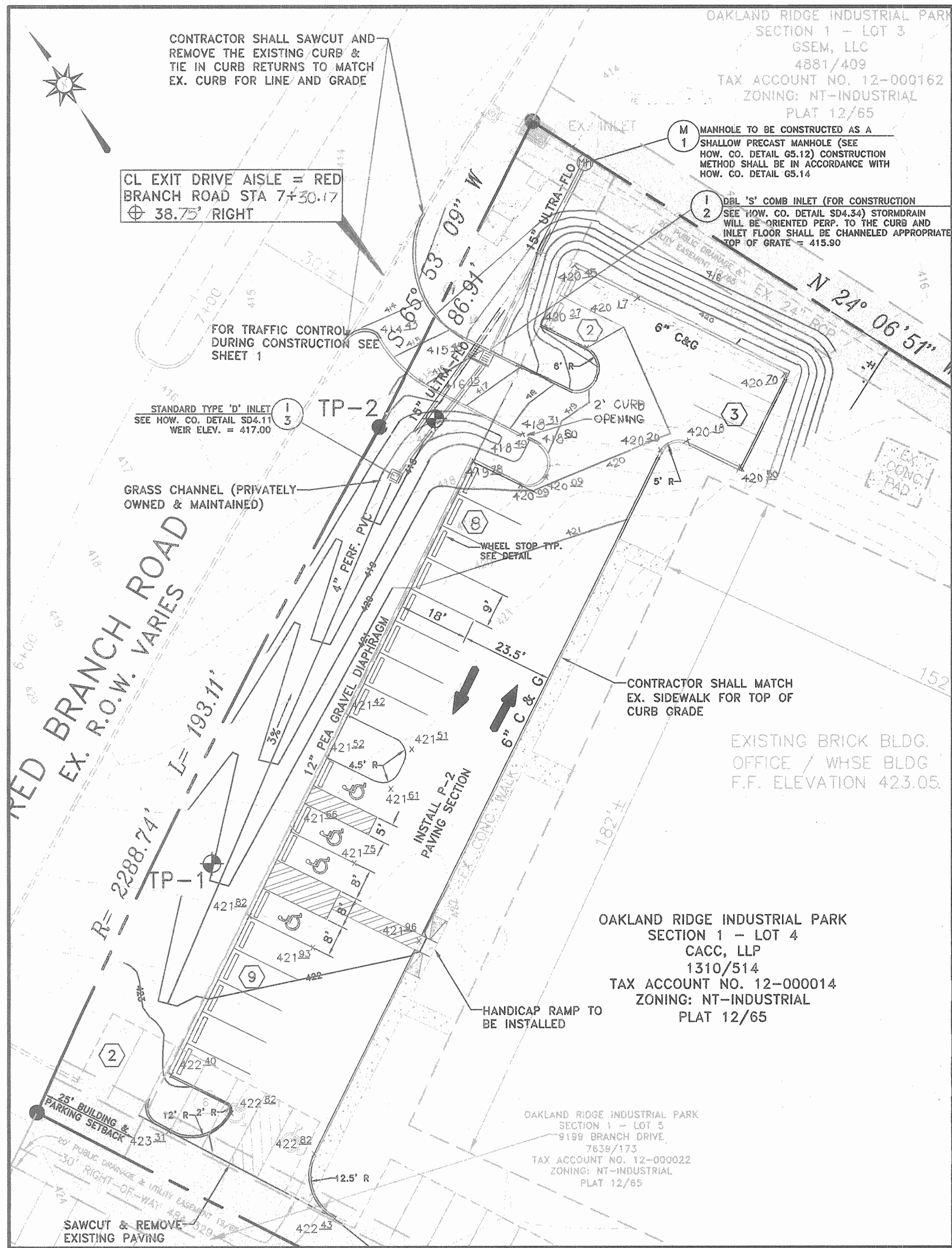
730 W. Padonia Road, Suite 101
 Cockeysville, Maryland 21030
 Phone: 410-560-1502 Fax: 410-560-0827



OWNER/DEVELOPER
 WELLS FARGO PROPERTIES, INC.
 2329 CENTRAL AVENUE NE
 MINNEAPOLIS, MINNESOTA 55479
 ATTN: CARRIE JOHNSON
 PHONE: 612-667-8714

OAKLAND RIDGE INDUSTRIAL PARK, SEC. 1, LOTS 4 & 7
 (PARKING ADDITIONS)
 SITE DEVELOPMENT PLANS
 SWM PLAN & DRAINAGE AREA MAP
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGNED BY:	SCALE	TAX MAP	A.D.C. MAP 5	JOB #	SHEET
J.P.D.	AS SHOWN	30	GRID D-13	03053	3
J.P.D.	DEED REF.	GRID 17	PLAT REF.	FILES	NO.
J.P.D.	1310/514	PARCEL 259	12/65	03053	7
J.P.D.	8188/2			DRAWINGS/SHEETS.dwg	OF



APPROVED: DEPARTMENT OF PLANNING AND ZONING

Chief, Development Engineering Division	Date
<i>[Signature]</i>	6/3/05
Chief, Division of Land Development	Date
<i>[Signature]</i>	6/7/05
Director	Date
<i>[Signature]</i>	6/1/05

Richardson Engineering, LLC

730 W. Padonia Road, Suite 101
Cockeysville, Maryland 21030
Phone: 410-560-1502 Fax: 410-560-0827

STATE OF MARYLAND
PROFESSIONAL ENGINEER
[Signature] 4/29/05

OWNER/DEVELOPER
WELLS FARGO PROPERTIES, INC.
2329 CENTRAL AVENUE NE
MINNEAPOLIS, MINNESOTA 55479
ATTN: CARRIE JOHNSON
PHONE: 612-667-8714
CACC, LLP
9199 RED BRANCH ROAD
COLUMBIA, MARYLAND 21045
ATTN: STEPHEN SMITH
PHONE: 410-992-9570

OAKLAND RIDGE INDUSTRIAL PARK, SEC. 1, LOTS 4 & 7
(PARKING ADDITIONS)
SITE DEVELOPMENT PLANS
SITE PLAN, PROFILES & DETAILS
SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGNED BY: J.P.D.	SCALE AS SHOWN	TAX MAP 30 GRID D-13	A.D.C. MAP 5 GRID D-13	JOB # 03053	SHEET
DRAWN BY: J.P.D.	DEED REF. 17	PARCEL 259	PLAT REF. 12/65	FILES: G:\JOBS\2003\03053\DRAWINGS\SHEET2.dwg	NO. 2 OF 7
CHECKED BY: J.P.D.				DRAWING COMPLETED 4-20-05	

DATE 7-21-05	REVISION	BY
DRAWING COMPLETED 4-20-05		

SDP-04-115

TRAFFIC CONTROL NOTES

1. ALL ROAD WORK SHALL BE IN ACCORDANCE WITH MARYLAND SHA STANDARDS 104.04 AND 104.31 FOR TRAFFIC CONTROL.
2. PAVEMENT MARKINGS IN RED BRANCH ROAD SHALL BE MODIFIED OR INSTALLED AS DIRECTED BY THE INSPECTOR.
3. DUE TO THE LIMITED DISTANCE FROM THE INTERSECTION OF RED BRANCH AND OLD ANNAPOLIS ROADS, THE ADVANCE WARNING SIGNAGE WILL BE MODIFIED FROM THE STANDARD DETAIL PROVIDED TO THAT SHOWN ON THE PLAN.

NOTES:

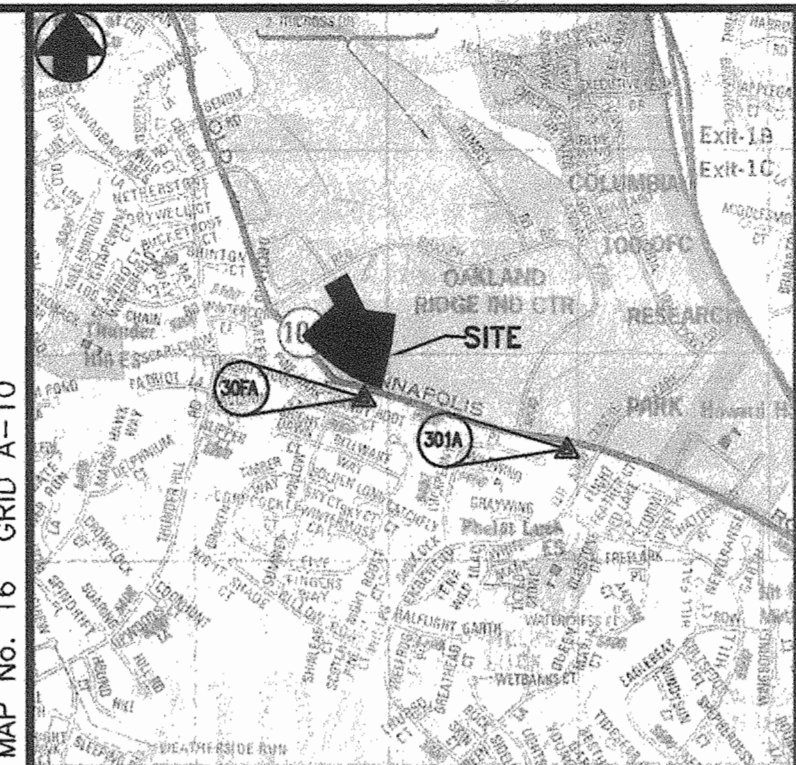
1. THE EXISTING FEATURES WITHIN THE DEVELOPMENT ENVELOPE ON THIS DRAWING WERE GENERATED FROM FIELD TOPOGRAPHY COMPLETED BY THOMPSON & McCORD 12/2003 AND GERHOLD, CROSS & ETZEL DATED 1/2000.
2. BOUNDARY INFORMATION PROVIDED BY LDE, INC DATED 6/1999.

BENCH MARKS

30FA BRASS DISC IN CONC. N 565,621.329 E 1,361,563.983 ELEV. 441.519
 301A BRASS DISC IN CONC. N 567,750.958 E 1,364,842.598 ELEV. 499.814

DESIGN AND DRAWINGS ARE BASED ON MARYLAND COORDINATE SYSTEM (MCS). HORIZONTAL - NAD 83/91 VERTICAL - NAVD 88

COPYRIGHT ADC THE MAP PEOPLE PERMITTED USE NO. 20402106 MAP NO. 16 GRID A-10



GENERAL NOTES

1. BEFORE THE START OF CONSTRUCTION, THE CONTRACTOR IS TO VERIFY THE LOCATION OF EXISTING UTILITIES BY CONTACTING "MISS UTILITY" (1-800-257-7777).
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO AND MAINTENANCE AND PROTECTION OF EXISTING UTILITIES AND STRUCTURES.
3. WHERE REQUIRED BY ENCOUNTERED SPRINGS OR OTHER SEEPAGE CONDITIONS, UNDERDRAIN LINES SHALL BE INSTALLED USING 6-INCH DIAMETER PERFORATED UNDERDRAIN PIPE MEETING HOWARD COUNTY STANDARD SPECIFICATIONS.
4. ALL DISTURBED AREAS AS A RESULT OF ROADWAY AND STORM DRAIN CONSTRUCTION SHALL BE SEEDED AND MULCHED WITHIN FOURTEEN (14) DAYS AFTER COMPLETION.
5. AN EASEMENT WILL BE RECORDED FOR THE CONSTRUCTION OF THE PARKING LOT ACROSS PROPERTY LINES.
6. THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL THAT IS BASED UPON THE MARYLAND STATE PLANE COORDINATE SYSTEM. HOWARD COUNTY MONUMENT NOS. 30FA AND 301A WERE USED FOR THIS PROJECT.
7. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS IF APPLICABLE.
8. 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.
9. TRAFFIC CONTROL DEVICES, MARKINGS AND SIGNING SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD). ALL STREET AND REGULATORY SIGNS SHALL BE IN PLACE PRIOR TO THE PLACEMENT OF ANY ASPHALT.
10. ALL PLAN DIMENSIONS ARE TO THE FACE OF CURB UNLESS OTHERWISE NOTED.
11. WATER IS PUBLIC 165 W&S.
12. SEWER IS PUBLIC 165 W&S.
13. WATER QUALITY ON THE SITE IS PROVIDED BY AN UNDERGROUND SAND FILTER AND AN OPEN CHANNEL. THE FACILITIES ARE PRIVATE AND WILL BE MAINTAINED BY THE OWNER.
14. THE EXISTING UTILITIES ARE BASED ON FIELD RUN TOPOGRAPHY. THE LOCATION AND ELEVATION OF ALL UTILITIES SHALL BE TEST PITTED PRIOR TO CONSTRUCTION.
15. THERE IS NO FLOODPLAIN ON THIS SITE.
16. THERE ARE NO WETLANDS ON THE SITE.
17. THIS PLAN IS SUBJECT TO THE REQUIREMENTS OF THE AMENDED FIFTH EDITION OF THE SUBDIVISION AND LAND DEVELOPMENT REGULATIONS.
18. PREVIOUS DEPARTMENT OF PLANNING AND ZONING REFERENCES ARE SDP-00-134, GP-02-59, FDP-3-A PLAT, F-56-37, SDP-69-17, SDP-75-23
19. A LANDSCAPE SURETY IN THE AMOUNT OF \$4,950 HAS BEEN INCLUDED WITH THE DEVELOPER'S AGREEMENT.

SITE ANALYSIS DATA CHART

1. TOTAL PROJECT AREA: LOT 4: 2.542 ACRES LOT 7: 6.250 ACRES
2. AREA OF PLAN SUBMISSION: 0.87± ACRES
3. EXISTING USE: OFFICE/WAREHOUSE
4. PROPOSED USE: OFFICE/WAREHOUSE
5. EXISTING BUILDING COVERAGE: LOT 4: 27,680 S.F. (25.0% COVERAGE) LOT 7: 56,633 S.F. (20.7% COVERAGE)
6. PARKING COMPUTATIONS: NUMBER OF PARKING SPACES REQUIRED: LOT 4: 27,680 S.F. @2.5 PS/1,000 S.F. = 69 PS W/3 HC SPACES LOT 7: 56,633 S.F. @2.5 PS/1,000 S.F. = 59 PS W/5 HC SPACES
7. EXISTING PARKING SPACES: LOT 4: 70 PS W/ 2 HC SPACES LOT 7: 189 PS W/6 HC SPACES
8. NUMBER OF PARKING SPACES TO BE REMOVED: LOT 4: 4 SPACES LOT 7: 0
9. PROPOSED PARKING SPACES: LOT 4: 107 PS LOT 7: 189 PS
10. LIMIT OF DISTURBED AREA: 0.87± ACRES
11. EXISTING ZONING: NT - INDUSTRIAL, FDP 3-A
12. ADDITIONAL IMPERVIOUS AREA: 20,909± S.F.

INDEX OF DRAWINGS

SHT. NO.	DESCRIPTION
1	SITE MAP & TRAFFIC CONTROL PLAN
2	SITE PLAN, PROFILES & DETAILS
3	SWM PLAN AND DRAINAGE AREA MAP
4	STORMWATER MANAGEMENT NOTES & DETAILS
5	SEDIMENT & EROSION CONTROL PLAN & DETAILS
6	SEDIMENT AND EROSION CONTROL NOTES & RETAINING WALL DETAILS
7	LANDSCAPING PLAN

ADDRESS CHART

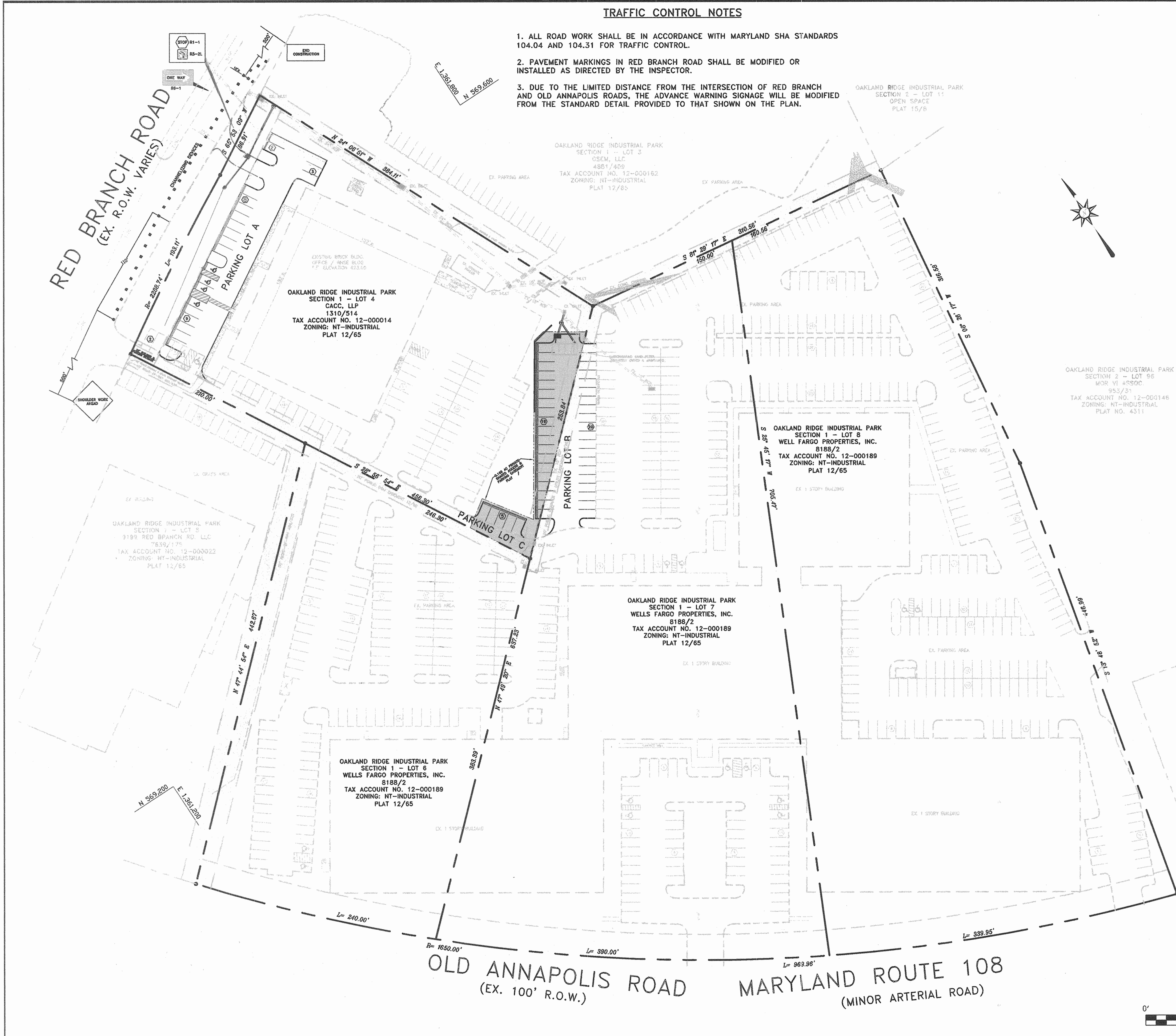
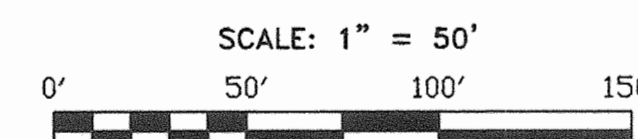
Lot/Parcel #	Street Addresses
LOT 4	9195 RED BRANCH ROAD
LOT 7	9052 OLD ANNAPOLIS ROAD

PERMIT INFORMATION CHART

Subdivision Name	Section/Area	Lot/Parcel No.
OAKLAND RIDGE INDUSTRIAL PARK	SECTION 1	LOTS 4 & 7
Plat # 12/65	Grid # 17	Zoning NT
Tax Map No. 30	Election District 2	Census Tract 6023.02
Water Code 604	Sewer Code 5657400	

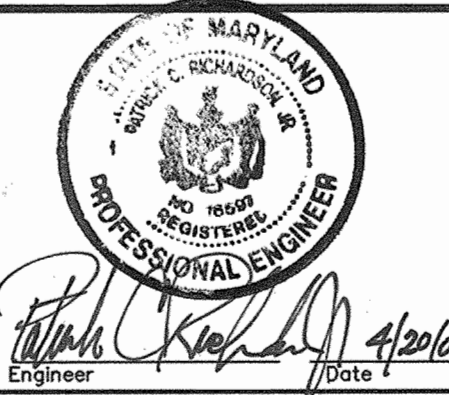
APPROVED PLANNING BOARD of HOWARD COUNTY

DATE 10/27/04



APPROVED: DEPARTMENT OF PLANNING AND ZONING
 Chief, Development Engineering Division Date 4/3/05
 Chief, Division of Land Development Date 6/7/05
 Director Date 6/8/05

Richardson Engineering, LLC
 730 W. Padonia Road, Suite 101
 Cockeysville, Maryland 21030
 Phone: 410-560-1502 Fax: 410-560-0827



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OAKLAND RIDGE INDUSTRIAL PARK, SEC. 1, LOTS 4 & 7
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 SITE DEVELOPMENT PLANS
 SITE MAP & TRAFFIC CONTROL PLAN
 SECOND ELECTION DISTRICT HOWARD COUNTY, MARYLAND

DESIGNED BY: J.P.D.	SCALE AS SHOWN	TAX MAP 30	A.D.C. MAR 5	JOB # 03053	SHEET
DRAWN BY: J.P.D.	DEED REF. 1310/514	GRID 17	PLAT REF. 12/65	FILES G:\JOBS\2005\03053\	NO. 1
CHECKED BY: J.P.D.	PARCEL 259			DRAWINGS\SHEET1.dwg	OF 7