

GENERAL NOTES:

- ALL WORK SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND SPECIFICATIONS OF HOWARD COUNTY PLUS MSHA STANDARDS AND SPECIFICATIONS, IF APPLICABLE.
- THE LOCATION AND ELEVATIONS OF THE EXISTING UTILITIES SHOWN ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY THE EXISTENCE, LOCATION, AND DEPTH OF EXISTING UTILITIES IN THE WORK AREA AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES PRIOR TO BEGINNING WORK.
- THE CONTRACTOR WILL BE RESPONSIBLE FOR NOTIFYING FREDERICK WARD ASSOC., INC. AT (410) 720-6000 IN THE EVENT OF ANY DISCREPANCIES ON THE PLAN OR IN THE RELATIONSHIP OF EXISTING GRADES WITH PROPOSED GRADES PRIOR TO BEGINNING WORK.
- THE CONTRACTOR SHALL NOTE THAT IN THE CASE OF A DISCREPANCY BETWEEN A SCALED DIMENSION AND A FIGURED DIMENSION SHOWN ON THE PLANS, THE FIGURED DIMENSION SHALL GOVERN.
- IT SHALL BE DISTINCTLY UNDERSTOOD THAT THE FAILURE TO MENTION SPECIFICALLY WORK THAT WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT, SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.
- THE CONTRACTOR SHALL NOTIFY THE FOLLOWING UTILITIES OR AGENCIES AT LEAST 5 WORKING DAYS PRIOR TO BEGINNING WORK:
 HOWARD COUNTY CONSTRUCTION INSPECTION DIVISION (410) 313-1880
 MISS UTILITY (AT LEAST 48 HRS PRIOR TO ANY EXCAVATION): 1-800-257-7777
 CAP TELEPHONE CO. 726-4976
 HOWARD COUNTY BUREAU OF UTILITIES 313-2566
 AT&T CABLE LOCATION DIVISION 243-3553
 BGE 685-0123
 NOTIFY HOWARD COUNTY DEPARTMENT OF INSPECTIONS, LICENSES AND PERMITS, SEDIMENT CONTROL DIVISION AT LEAST 48 HOURS PRIOR TO START (313-1855)
- ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS, UNLESS STATED OTHERWISE.
- ALL DIMENSIONS ARE TO FACE OF CURB UNLESS OTHERWISE NOTED.
- THE PURPOSE OF THIS SITE DEVELOPMENT PLAN IS TO CONSTRUCT AN OFFICE/WAREHOUSE AND RELATED SITE AMENITIES AND INFRASTRUCTURE.
- STORM WATER QUALITY AND QUANTITY WILL BE PROVIDED FOR ON SITE UNDER THE OWNERSHIP AND MAINTENANCE RESPONSIBILITY OF TSC PUMPHOUSE ROAD, LLC.
- SECTION 404 OF THE MD DEPARTMENT OF NATURAL RESOURCES DOES NOT APPLY NOR ARE ANY WETLANDS PERMITS REQUIRED FOR THIS PROJECT.
- PUBLIC WATER AND SEWER WILL BE UTILIZED. A WATER METER SHALL BE LOCATED WITHIN THE BUILDINGS AND WILL MEET ALL HOWARD COUNTY STANDARDS. PROPOSED ON-SITE WATER AND SEWER SHALL BE PRIVATE.
- EXISTING WATER IS PUBLIC AND ARE SHOWN PER CONTRACT NO. 24-3857-D. EXISTING SEWER SHOWN ON SITE IS PUBLIC PER CONTRACT 24-3857-D.
- 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 SITE LIGHTING MUST BE DIRECTED AWAY FROM THE ADJACENT PUBLIC RIGHT-OF-WAY AND THE ADJACENT RESIDENTIAL PROPERTIES AND COMPLY WITH THE REQUIREMENTS OF ZONING SECTION 134.
- CONTRACTOR SHALL CONTACT THE DEPARTMENT OF PUBLIC WORKS/BUREAU OF ENGINEERING CONSTRUCTION INSPECTION DIVISION AT LEAST FIVE (5) WORKING DAYS IN ADVANCE OF THE COMMENCEMENT OF WORK @ (410) 313-1880.
- NO FLOODPLAIN IS LOCATED ON THE SITE.
- THE EXISTING TOPOGRAPHY IS TAKEN FROM A FIELD RUN SURVEY WITH TWO FOOT CONTOUR INTERVALS PREPARED BY FREDERICK WARD ASSOCIATES, INC DATED MARCH, 2001.
- THE COORDINATES SHOWN HEREON ARE BASED UPON THE HOWARD COUNTY GEODETIC CONTROL, WHICH IS BASED UPON THE MARYLAND STATE PLANE COORDINATION SYSTEM. HOWARD COUNTY MONUMENTS NO. 24B5 AND NO. 24AA WERE USED FOR THIS PROJECT.
- THE TRAFFIC STUDY FOR THIS PROJECT WAS PREPARED BY THE TRAFFIC GROUP, INC., DATED JUNE 8, 2001, AND WAS APPROVED ON SEPTEMBER 10, 2001.
- FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING HAS BEEN POSTED AS PART OF THE DPX DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$7,290.00.
- THE FOREST CONSERVATION OBLIGATIONS OF THIS PLAN WILL BE SATISFIED BY FEE-IN-LIEU IN THE AMOUNT OF \$28,314.00.
- DPZ FILE NUMBERS F-00-177, P-86-19, S-86-08.
- THERE ARE NO WETLANDS ON THIS SITE.
- STREET LIGHTS WILL BE REQUIRED IN THIS DEVELOPMENT IN ACCORDANCE WITH THE DESIGN MANUAL.
- DESIGN MANUAL WAIVER APPROVED 11/30/01 TO ALLOW DISSIMILAR MATERIALS FOR MANHOLE IS AND STORAGE PIPE BY USING WATER TIGHT CONNECTOR.

SITE DEVELOPMENT PLAN

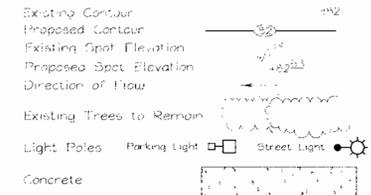
C-W & COMPANY, PARCEL A-2

OFFICE/WAREHOUSE

6TH ELECTION DISTRICT

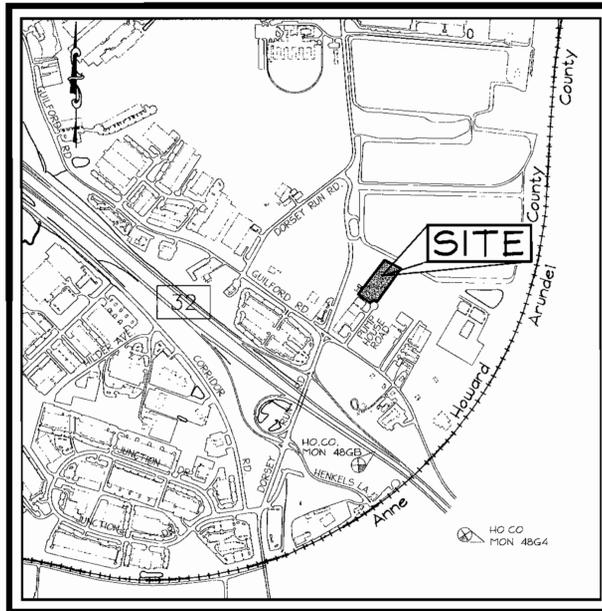
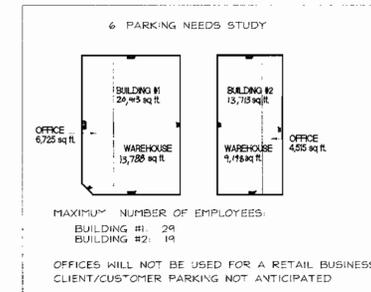
HOWARD COUNTY, MARYLAND

LEGEND:

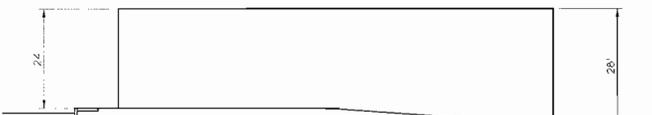


SITE INFORMATION:

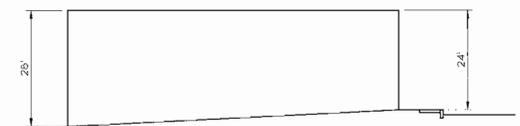
- TOTAL SITE AREA 121,968.00 S.F. = 2.80 AC
- TOTAL NUMBER OF LOTS 1
- PRESENT ZONING M-2 (DISTRICT MANUFACTURING, HEAVY)
- ELECTION DISTRICT: 6TH
- TAX MAP 48, GRID 14, PARCEL 6B, PARCEL A-2
- PARKING
 PARKING REQUIREMENT IS BASED ON THE MAXIMUM NUMBER OF EMPLOYEES FOR EACH BUILDING.
 A. THE PARKING REQUIREMENT FOR THIS SITE WAS CALCULATED USING A PARKING NEEDS STUDY BASED ON THE MAXIMUM NUMBER OF EMPLOYEES IN EACH BUILDING. ANY EXPANSION OF THE OFFICE AREA IN EITHER BUILDING WILL REQUIRE APPROVAL FROM THE DEPARTMENT OF PLANNING AND ZONING. THE TOTAL REQUIRED PARKING IS 48 SPACES.
 B. TOTAL SPACES PROVIDED 54 SPACES (INCLUDING 3 HANDICAP SPACES)
- PAVED AREA: EXISTING 0 S.F. = 0 ACRES = 0%
 PROPOSED 68,366.0 S.F. = 1.56 ACRES = 56%
- BUILDING COVERAGE (1 STORY) 34,060 S.F. = 0.78 ACRES = 28%
- TOTAL IMPERVIOUS AREA EXISTING 0 S.F. = 0 ACRES = 0%
 PROPOSED 102,366.0 S.F. = 2.35 ACRES = 84%
- PROPOSED IMPROVEMENTS
 CONSTRUCTION OF OFFICE/WAREHOUSE AND ASSOCIATED PARKING, STORM DRAIN AND UTILITY INFRASTRUCTURE.
- BUILDING USE: OFFICE/WAREHOUSE
- OWNER:
 TSC PUMPHOUSE ROAD, LLC
 1628 LONG JUMP TRAIL
 ELLICOTT CITY, MARYLAND 21042
- SITE ADDRESS
 10921 PUMPHOUSE ROAD
 ANNAPOLIS JUNCTION, MARYLAND 20701
- TOPOGRAPHIC SURVEY PERFORMED BY FREDERICK WARD ASSOCIATES MARCH 2001
- PLAT #14442 RECORDED SEPTEMBER 27, 2000.
- LIMIT OF DISTURBED AREA 121,968 S.F.
- WATER QUALITY AND STORM WATER MANAGEMENT WILL BE PROVIDED ON SITE AND WILL BE PRIVATELY MAINTAINED.
- WATER PUBLIC CONTRACT #24-3857-D. SEWER PUBLIC CONTRACT #24-3857-D.



(SOURCE: HOWARD COUNTY TAX MAP NO. 48)
VICINITY MAP
 SCALE: 1" = 1000'



BUILDING #1
SIDE ELEVATION
 SCALE: 1" = 20'



BUILDING #2
SIDE ELEVATION
 SCALE: 1" = 20'

BENCHMARKS:

- HOWARD COUNTY GEODETIC CONTROL STA. 48G4
 N 531519.241 E 1371653.842
- HOWARD COUNTY GEODETIC CONTROL STA. 48G5
 N 532530.284 E 1370623.784
- BENCHMARK NO. 26
 CONCRETE MONUMENT FOUND ELEV. 215.91
- BENCHMARK NO. 23
 3/4" REBAR WITH "P4" CAP FOUND ELEV. 211.57

SHEET INDEX

| DESCRIPTION | SHEET NO. |
|--|-----------|
| TITLE SHEET | 1 OF 11 |
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| SITE LAYOUT PLAN | 3 OF 11 |
| SITE GRADING AND UTILITY PLAN | 4 OF 11 |
| SEDIMENT AND EROSION CONTROL PLAN | 5 OF 11 |
| SEDIMENT AND EROSION CONTROL NOTES & DETAILS | 6 OF 11 |
| STORM DRAIN PROFILES AND DETAILS | 7 OF 11 |
| STORM DRAIN PROFILES AND DETAILS | 8 OF 11 |
| WATER AND SEWER PROFILES AND DETAILS | 9 OF 11 |
| DRAINAGE AREA MAPS AND SWM DETAILS | 10 OF 11 |
| LANDSCAPE AND FOREST CONSERVATION PLAN | 11 OF 11 |

ADDRESS CHART

| LOT/PARCEL # | STREET ADDRESS |
|-------------------------|----------------------|
| PARCEL A-2 PARCEL 6B | 10921 PUMPHOUSE ROAD |

PERMIT INFORMATION CHART

| | | |
|-----------------------------------|-----------------------|----------------------------|
| Subdivision Name C-W & COMPANY | Section/Area N/A | Lot/Parcel No. A-2/P6-B |
| Plat # or L/T 15212 | Grid # 14 | Zoning M-2 |
| Water Code B02 | Tax Map No. 48 | Elect. Det. 6TH |
| | Sewer Code 5272200 | Census Tract 6069.01 |

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS
 HOWARD COUNTY HEALTH DEPARTMENT
 COUNTY HEALTH OFFICER _____ DATE _____

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
 CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* 3/15/02
 CHIEF, DIVISION OF LAND DEVELOPMENT *[Signature]* 3/13/02
 DIRECTOR *[Signature]* 3/12/02

BEFORE BEGINNING CONSTRUCTION CONTACT
 "MISS UTILITY"
 AT
 1-800-257-7777
 AT LEAST 48 HOURS PRIOR TO EXCAVATION

OWNER/DEVELOPER
 TSC PUMPHOUSE ROAD, LLC
 1628 LONG JUMP TRAIL
 ELLICOTT CITY, MD 21042

| NO. | REVISION | DATE |
|-----|----------|------|
| | | |

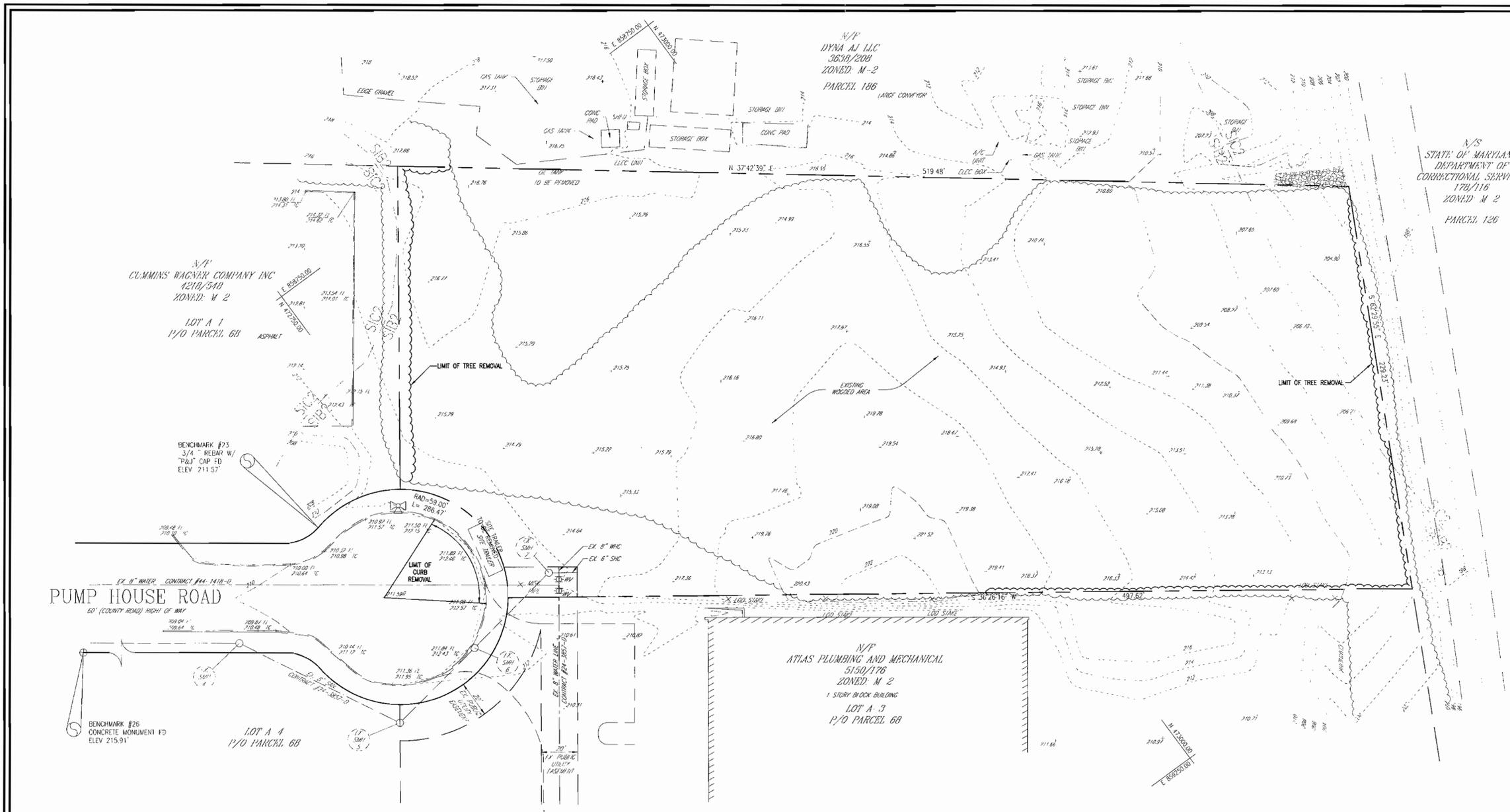
TITLE SHEET
C-W AND COMPANY, PARCEL A-2
OFFICE/WAREHOUSE

TAX MAP #48 GRID #14 PARCEL 6B
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
 ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354
 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226
 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: R/W/VR
 DRAWN BY: KD
 CHECKED BY: R/W
 DATE: JANUARY, 2002
 SCALE: 1" = 30'
 H.C. NO. 2014030.00



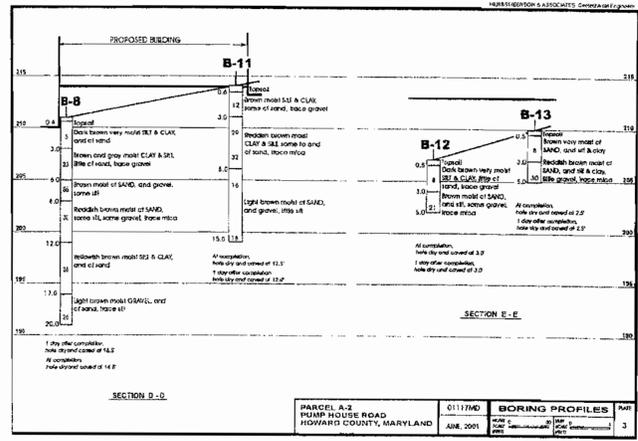
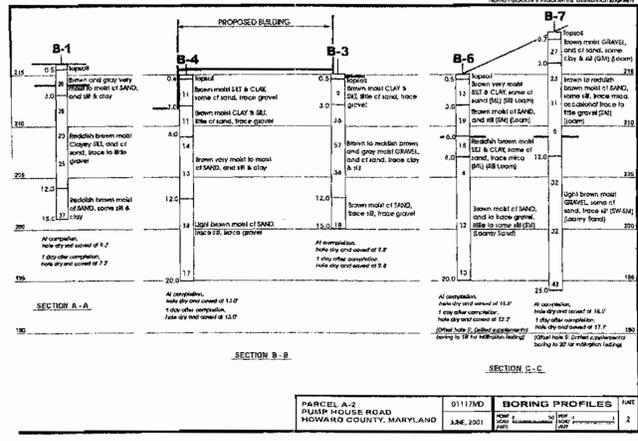
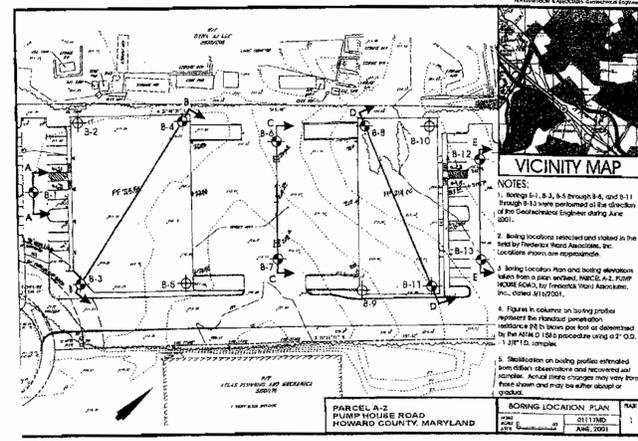
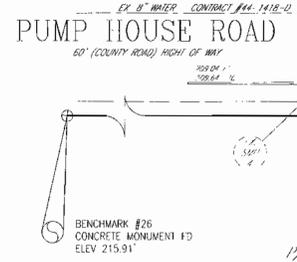


- DEMOLITION NOTES:**
1. PRIOR TO CONSTRUCTION, CONTRACTOR SHALL FAMILIARIZE HIMSELF WITH THE SITE AND VERIFY EXISTING SITE CONDITIONS TO HIS SATISFACTION.
 2. CONTRACTOR TO MEET WITH DEVELOPER ON JOB SITE TO IDENTIFY EQUIPMENT, SIGNS AND ITEMS TO BE REMOVED OR RETAINED PRIOR TO THE START OF CONSTRUCTION.
 3. CONTRACTOR MUST ADHERE TO ALL SAFETY REGULATIONS GIVEN BY O.S.H.A. AND HOWARD COUNTY.
 4. ALL DEMOLISHED MATERIALS TO BE REMOVED TO AN APPROVED LOCATION.
 5. ALL UTILITIES AND STRUCTURES WITHIN PUBLIC RIGHTS OF WAY SHALL REMAIN.
 6. ALL UTILITIES DAMAGED DURING DEMOLITION AND CONSTRUCTION SHALL BE REPAIRED AND/OR REPLACED IN KIND BY THE CONTRACTOR AT HIS OWN EXPENSE.
 7. TOPOGRAPHIC BOUNDARY SURVEY INFORMATION SHOWN ON THIS PLAN IS FROM A SURVEY PREPARED BY FREDERICK WARD ASSOC., INC. DATED MARCH 2001.
 8. REFER TO DRAWING SHEET 4 OF 11 FOR GENERAL NOTES PERTAINING TO UTILITIES.
 9. REFER TO SHEETS 5 AND 6 OF 11 FOR ALL REQUIRED SEDIMENT CONTROL MEASURES.

UTILITY NOTES:

UTILITIES AND OTHER OBSTRUCTIONS AS SHOWN HEREON HAVE BEEN LOCATED BY ACTUAL FIELD MEASUREMENT, SUPPLEMENTED BY INFORMATION OBTAINED FROM THE VARIOUS AGENCIES INVOLVED. HOWEVER, WE DO NOT GUARANTEE THE ACCURACY NOR THE COMPLETENESS OF THE INFORMATION RECEIVED. IF CONSTRUCTION ON THIS SITE TAKES PLACE, THE CONTRACTOR MUST VERIFY ALL SUCH INFORMATION TO HIS OWN SATISFACTION AND MUST NOTIFY THE COMPANIES INVOLVED PRIOR TO THE START OF CONSTRUCTION.

LOCATIONS OF INDIVIDUAL ELECTRIC, TELEPHONE, GAS, WATER AND SANITARY SEWER SERVICE CONNECTIONS, AS SHOWN HEREON, ARE UNCERTAIN. THE LOCATIONS OF SAID CONNECTIONS SHOWN ARE BASED ON PROPOSED SITE PLANS OR AN ESTIMATION OF POSSIBLE LOCATION. SHOULD EXCAVATION BECOME NECESSARY FOR MAINTENANCE OR REPAIR OF THESE LINES, IT IS THE CONTRACTOR'S RESPONSIBILITY TO ACCURATELY DETERMINE THE LOCATION OF THESE LINES BEFORE COMMENCING WORK.



OWNER/DEVELOPER
 TSC PUMPHOUSE ROAD, LLC
 11628 LONG JUMP ROAD
 ELICOTT CITY, MD 21042

| NO. | REVISION | DATE |
|-----|----------|------|
| | | |
| | | |
| | | |

EXISTING CONDITIONS, DEMOLITION AND BORING LOCATION PLAN
C-W AND COMPANY, PARCEL A-2
OFFICE/WAREHOUSE

TAX MAP #48 GRID #14 PARCEL 68
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
 ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354
 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226
 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Chief Development Engineering Division DATE: 3/5/02
Chief Division of Land Development DATE: 3/8/02
 RECTOR DATE: 3/12/02

BEFORE BEGINNING CONSTRUCTION CONTACT "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO EXCAVATION

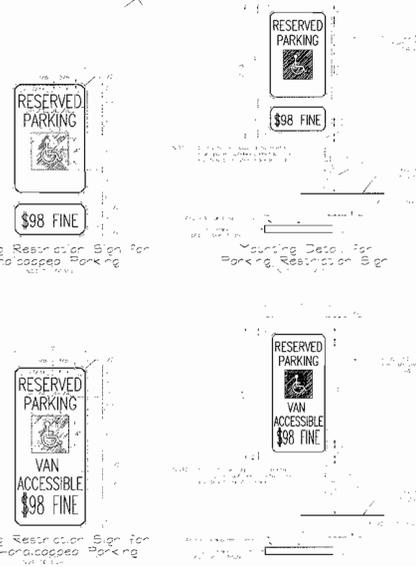
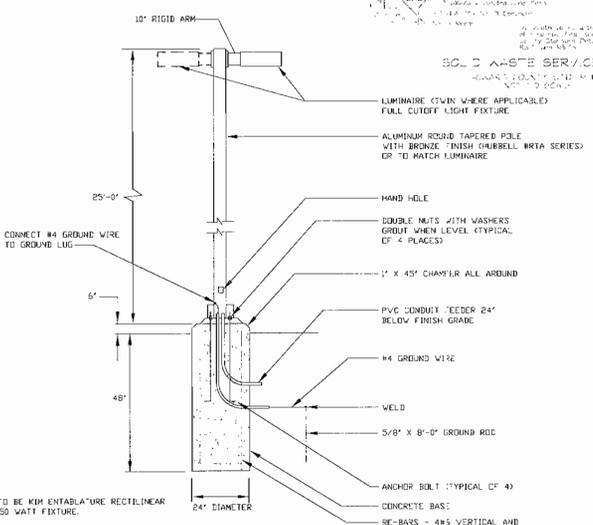
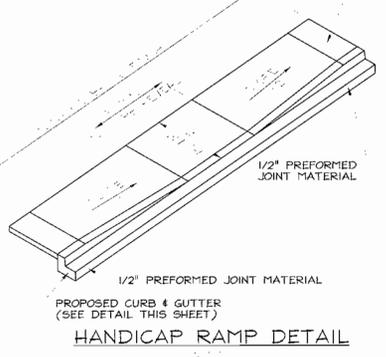
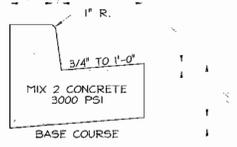
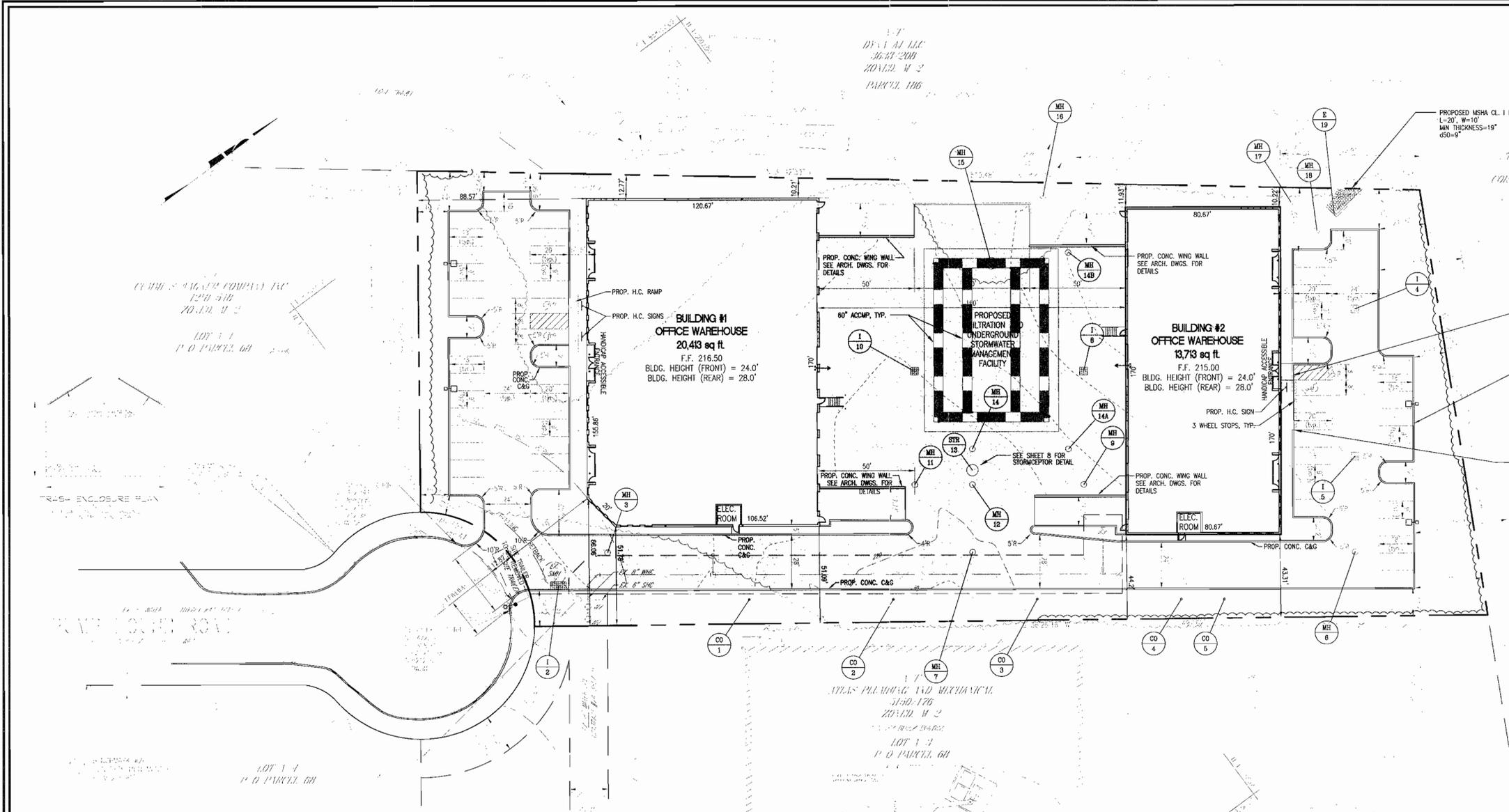
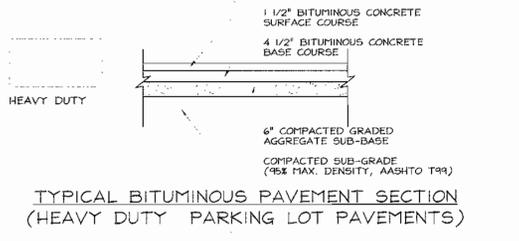
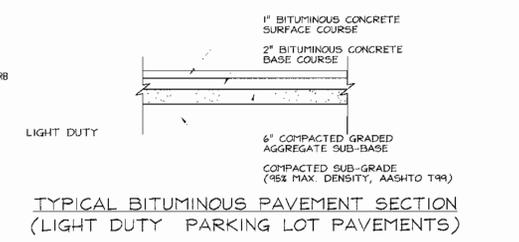
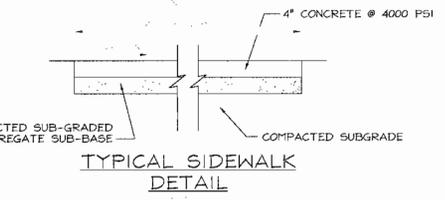
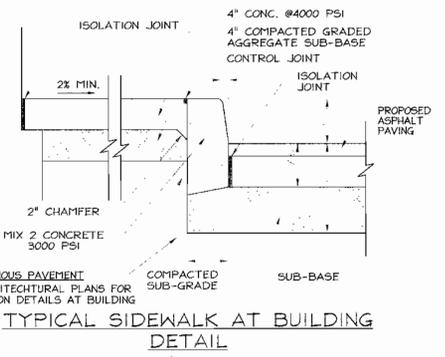
APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER DATE

DESIGN BY: R/W/MR
 DRAWN BY: KO
 CHECKED BY: R/W
 DATE: JANUARY, 2002
 SCALE: 1"=30'
 M.O. NO.: 201403000

2 SHEET OF 11

DATE: 03/12/02
 DRAWN BY: J. HAMMILL
 CHECKED BY: J. HAMMILL
 SCALE: AS SHOWN
 PROJECT: C-W AND COMPANY, PARCEL A-2 OFFICE/WAREHOUSE

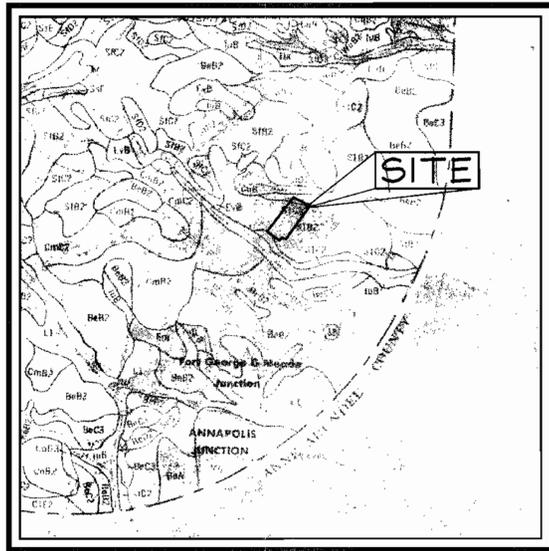


OWNER/DEVELOPER

SITE LAYOUT PLAN
C-W AND COMPANY, PARCEL A-2 OFFICE/WAREHOUSE
 TAX MAP #48 GRID #14
 6TH ELECTION DISTRICT
 PARCEL 68
 HOWARD COUNTY, MARYLAND
FREDERICK WARD ASSOCIATES, INC.
 ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354
 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226
 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: [Signature]
 DRAWN BY: [Signature]
 CHECKED BY: [Signature]
 DATE: 3/12/02
 SCALE: AS SHOWN
 AC NO: 3 11

Handwritten notes and signatures:
 "MISS UTILITY"
 1-800-257-7777
 3/5/02
 3/8/02
 3/12/02
 [Signatures]



SOILS MAP
SCALE: 1"=1000'

NOTE:
PROPOSED LOCATION OF STABILIZED CONSTRUCTION ENTRANCE IS RECOMMENDED. THE LOCATION MAY BE MODIFIED AS THE CONTRACTOR SEES FIT, AFTER RECEIVING PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR.

SEQUENCE OF CONSTRUCTION

1. OBTAIN HOWARD COUNTY GRADING PERMIT. (WEEK 1)
2. NOTIFY HOWARD COUNTY AT LEAST 48 HOURS PRIOR TO START OF CONSTRUCTION. (WEEK 1)
3. CONDUCT A PRE-CONSTRUCTION MEETING WITH THE SEDIMENT CONTROL INSPECTOR PRIOR TO ANY LAND DISTURBANCE. (WEEK 1)
4. INSTALL ALL SUPER SILT FENCE AS INDICATED ON PLANS. (WEEK 2)
5. INSTALL STABILIZED CONSTRUCTION ENTRANCE WITH MOUNTABLE BERM. (WEEK 2)
6. ROUGH GRADE SITE. (WEEK 3)
7. SEED AND STOCKPILE TOPSOIL. STABILIZE STOCKPILE WITH SEED AND MULCH. (WEEK 3)
8. BEGIN BUILDING CONSTRUCTION. (WEEK 4)
9. COMPLETE BUILDING CONSTRUCTION. (WEEK 30)
10. INSTALL STORM DRAIN, UTILITIES, AND S.W.M. FACILITY. STABILIZE INLET WITH INLET PROTECTION, IMMEDIATELY UPON COMPLETION OF STORM DRAIN INSTALLATION. (WEEK 30)
11. COMPLETE INSTALLATION OF STORM DRAIN/SWM FACILITY SYSTEM AND REMAINING ON-SITE UTILITIES. CONTRACTOR MUST TAKE ALL NECESSARY MEASURES TO PREVENT SEDIMENT FROM ENTERING THE SYSTEM. (WEEK 33)
12. INSTALL CURB AND GUTTER. (WEEK 34)
13. INSTALL PAVING BASE COURSE. REMOVE INLET PROTECTION PER THE SEDIMENT CONTROL INSPECTOR AS WORK PROGRESSES. (WEEK 35)
14. INSTALL PAVING SURFACE COURSE. (WEEK 35)
15. FINE GRADE AND STABILIZE REMAINING SITE. INSTALL LANDSCAPING. (WEEK 36)
16. CLEAN AND FLUSH OUT STORM DRAIN SYSTEM. DISPOSE OF SEDIMENT LADEN MATERIAL CLEANED OUT OF STORM DRAIN IN A MANNER APPROVED BY THE SEDIMENT CONTROL INSPECTOR. REMOVE STORAGE PIPES BLOCKADE. (WEEK 37)
17. REMOVE ALL SEDIMENT CONTROL MEASURES AFTER RECEIVING APPROVAL FROM THE SEDIMENT CONTROL INSPECTOR. (WEEK 37)

SOILS CLASSIFICATION

| TYPE | DESCRIPTION | CLASS |
|------|---|-------|
| SIB2 | SASSAFRAS LOAM, 1 TO 5 PERCENT SLOPES, MODERATELY ERODED | B |
| SIC2 | SASSAFRAS LOAM, 5 TO 10 PERCENT SLOPES, MODERATELY ERODED | B |

ESTIMATE OF SEDIMENT CONTROL QUANTITIES

SUPER SILT FENCE: 400 L.F.
STABILIZED CONSTRUCTION ENTRANCE: 1 EA.
INLET PROTECTION: 6 EA.

NOTE: THESE QUANTITIES ARE FOR SEDIMENT CONTROL USE ONLY. CONTRACTOR SHALL NOT RELY ON THESE QUANTITIES FOR ESTIMATING AND BIDDING PURPOSES.

SITE ANALYSIS DATA

1. TOTAL SITE AREA: 121,968.00 S.F. = 2.80 AC.±
2. TOTAL DISTURBED AREA: 121,968.00 S.F. = 2.80 AC.±
3. TOTAL IMPERVIOUS AREA: 102,366.00 S.F. = 2.35 AC.±
4. AREA TO BE VEGETATIVELY STABILIZED: 19,602.00 S.F. = 0.45 AC.±
5. EARTH WORK:
CUT = 3750 CY±
FILL = 4100 CY±
TOPSOIL = 1490.7 CY±

NOTE: THESE QUANTITIES ARE FOR SEDIMENT CONTROL USE ONLY. CONTRACTOR SHALL NOT RELY ON THESE QUANTITIES FOR ESTIMATING AND BIDDING PURPOSES.

UTILITY NOTES

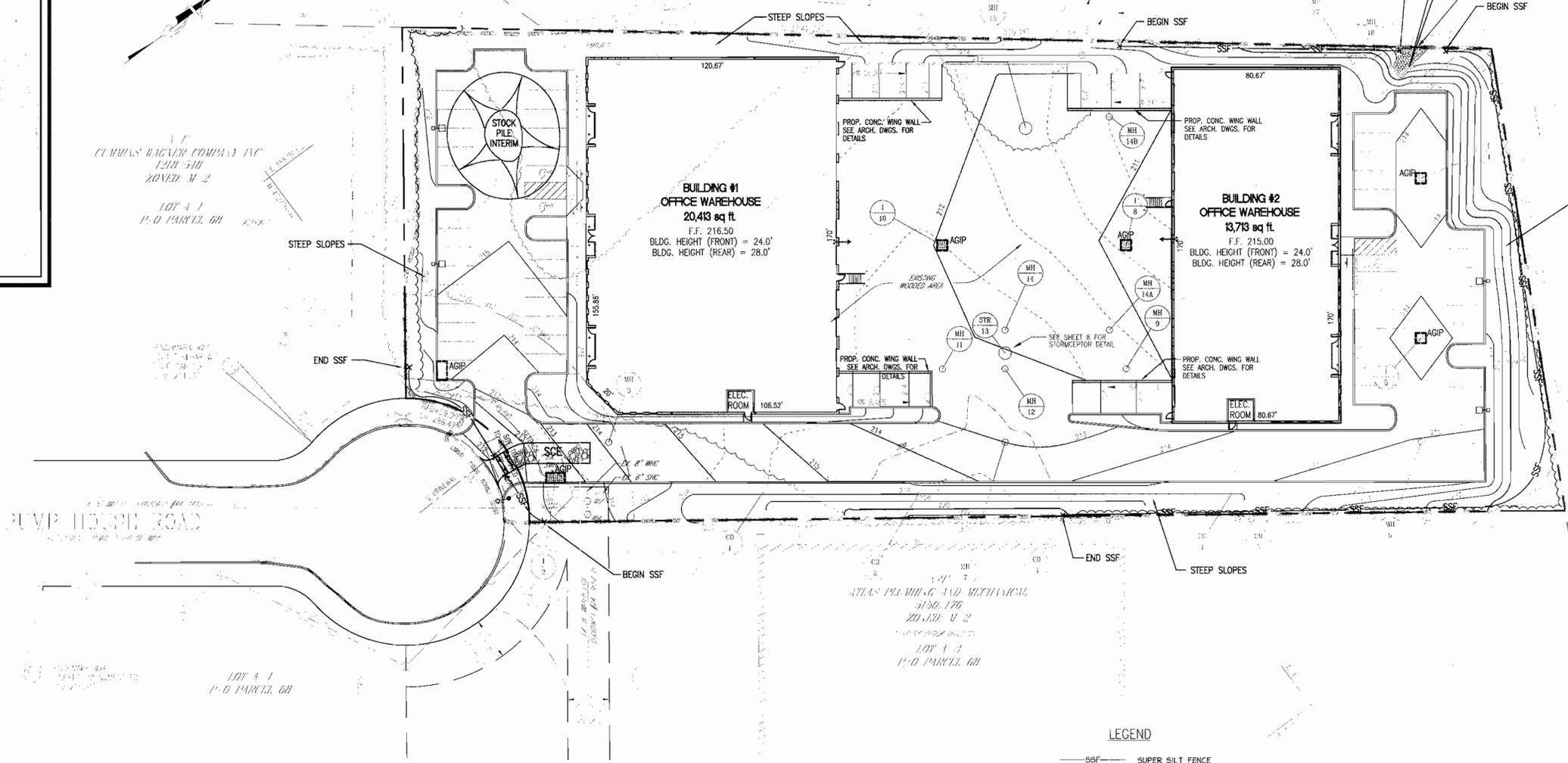
1. CONTRACTOR SHOULD OPEN THAT SECTION OF TRENCH THAT CAN BE BACKFILLED AND STABILIZED EACH DAY. IF TRENCH MUST REMAIN OPEN LONGER THAN ONE DAY, SILT FENCE SHALL BE PLACED BELOW (DOWN SLOPE) THE TRENCH.
2. PLACE ALL EXCAVATED MATERIAL ON UPHILL SIDE OF TRENCH.
3. ANY SEDIMENT CONTROLS DISTURBED BY UTILITY CONSTRUCTION ARE TO BE REPAIRED IMMEDIATELY.

LEGEND

- SSF — SUPER SILT FENCE
- LIMIT OF DISTURBANCE
- STABILIZED CONSTRUCTION ENTRANCE W/ MOUNTABLE BERM
- EXISTING CONTOUR
- 172 — PROPOSED CONTOUR
- EXISTING SPOT ELEVATION
- + 102.53 — PROPOSED SPOT ELEVATION
- LIGHT DUTY PAVING
- HEAVY DUTY PAVING
- PROPOSED CONCRETE PAVING
- EXISTING SOILS
- STEEP SLOPES @50%

NOTE:
ALL EXCAVATED MATERIAL SHALL BE DEPOSITED OFFSITE AT AN APPROVED LOCATION.

NOTE:
TIMES SHOWN ARE APPROXIMATE, AND FOR SEDIMENT CONTROL USE ONLY. THE SEQUENCE MAY BE MODIFIED AFTER RECEIVING PERMISSION FROM THE SEDIMENT CONTROL INSPECTOR, AND AS LONG AS THE INTENTION OF THIS PLAN IS NOT COMPROMISED. IT IS THE INTENTION OF THIS PLAN THAT CONSTRUCTION BE CARRIED OUT IN AN EXPEDITIOUS AND SAFE MANNER SUCH AS TO MINIMIZE DISRUPTION OF BUSINESS WHILE MAINTAINING PROPER SEDIMENT CONTROL MEASURES.



AFTER CONSTRUCTION OF RIPRAP OUTFALL, PROTECT WITH FILTER CLOTH. REMOVE FILTER CLOTH AFTER SITE HAS BEEN STABILIZED.

PROPOSED MSHA CL. I RIPRAP
L=20', W=10'
MIN THICKNESS=19"
950-9'

STATE OF MARYLAND
DEPARTMENT OF
COMPUTERS, PLANNING &
CONSTRUCTION
170-116
20-110 M 2
PARCEL 186

OWNER/DEVELOPER

SEDIMENT AND EROSION CONTROL PLAN
C-W AND COMPANY, PARCEL A-2
OFFICE/WAREHOUSE

TAX MAP #48 GRID #14 PARCEL 68
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
7125 Riverwood Drive Columbia, Maryland 21046-2354
Phone: 410-290-9550 Fax: 410-720-6226
Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY
CHECKED BY
DATE
SCALE
APP NO.

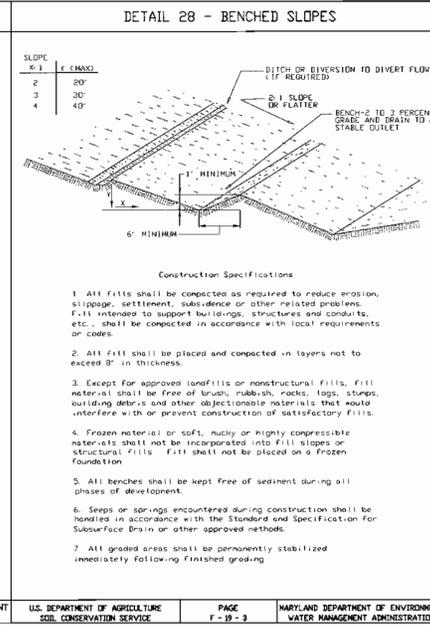
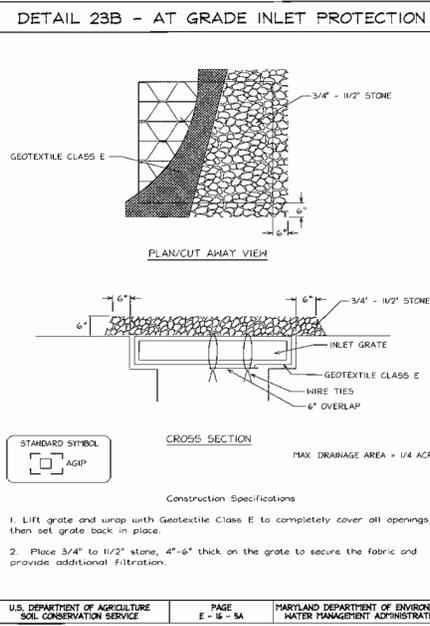
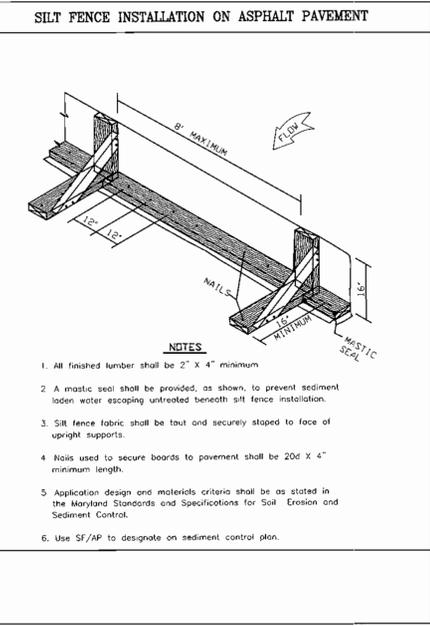
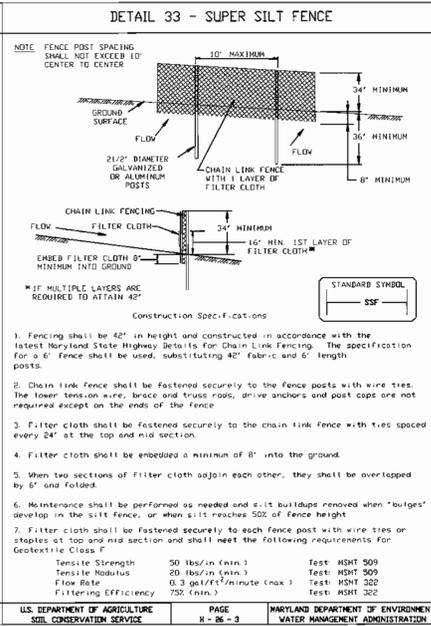
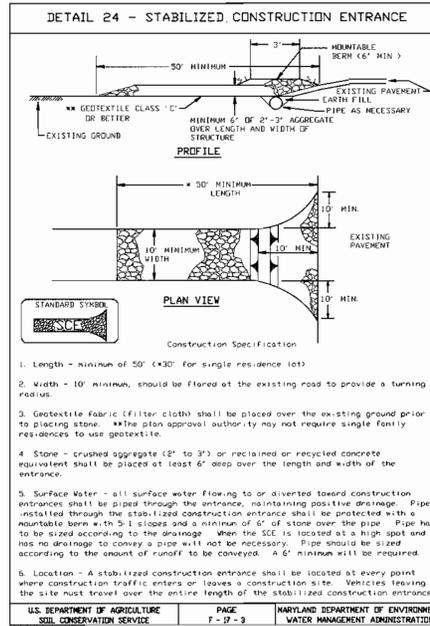
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"MISS UTILITY"
1-800-257-7777

Member 02/07/02

3/1/02
3/1/02



PERMANENT SEEDING NOTES

APPLY TO GRADED OR CLEARED AREA NOT SUBJECT TO IMMEDIATE FURTHER DISTURBANCE WHERE A PERMANENT LONG-LIVED VEGETATIVE COVER IS NEEDED.

SEEDBED PREPARATION: LOOSEN UPPER 3 INCHES OF SOIL BY RACKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING (UNLESS PREVIOUSLY LOOSENEED).

SOIL AMENDMENTS: IN LIEU OF SOIL TEST RECOMMENDATIONS, USE ONE OF THE FOLLOWING SCHEDULES:

- PREFERRED - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ FT) AND 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOIL. AT TIME OF SEEDING, APPLY 400 LBS. PER ACRE 3-0-0 UREA-FORM FERTILIZER (9 LBS./1000 SQ FT).
- ACCEPTABLE - APPLY 2 TONS PER ACRE DOLOMITIC LIMESTONE (92 LBS./1000 SQ FT) AND 1000 LBS. PER ACRE 10-10-10 FERTILIZER (23/1000 SQ FT) BEFORE SEEDING. HARROW OR DISC INTO UPPER THREE INCHES OF SOILS.

SEEDING: FOR THE PERIODS MARCH 1 THROUGH APRIL 30, AND AUGUST 1 THROUGH OCTOBER 15, SEED WITH 60 LBS. PER ACRE (14 LBS./1000 SQ FT) OF KENTUCKY 31 TALL FESCUE. FOR THE PERIOD MAY 1 THROUGH JULY 31, SEED WITH 60 LBS. KENTUCKY 31 TALL FESCUE PER ACRE AND 2 LBS PER ACRE (0.5 LBS./1000 SQ FT) OF WEEPING LOVEGRASS. DURING THE PERIOD OF OCTOBER 16 THROUGH FEBRUARY 28, PROJECT SITE BY: OPTION (1) 2 TONS PER ACRE OF WELL-ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING. OPTION (2) USE SOD. OPTION (3) SEED WITH 60 LBS. ACRES KENTUCKY 31 TALL FESCUE AND MULCH WITH 2 TONS/ACRE WELL ANCHORED MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70 TO 90 LBS./1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALLONS PER ACRE (5 GALS./1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREA. ON SLOPES 8 FEET OR HIGHER, USE 348 GALLONS PER ACRE (8 GALS./1000 SQ FT) FOR ANCHORING.

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

TOPSOIL CONSTRUCTION AND MATERIAL SPECIFICATIONS

TOPSOIL SALVAGED FROM THE EXISTING SITE MAY BE USED PROVIDED THAT IT MEETS THE STANDARDS AS SET FORTH IN THESE SPECIFICATIONS. TYPICALLY, THE DEPTH OF TOPSOIL TO BE SALVAGED FOR A GIVEN SOIL TYPE CAN BE FOUND IN THE REPRESENTATIVE SOIL PROFILE SECTION IN THE SOIL SURVEY PUBLISHED BY USDA-SCS IN COOPERATION WITH MARYLAND AGRICULTURAL EXPERIMENTAL STATION.

TOPSOIL SPECIFICATIONS - SOIL TO BE USED AS TOPSOIL MUST MEET THE FOLLOWING:

TOPSOIL SHALL BE A LOAM, SANDY LOAM, CLAY LOAM, SILT LOAM, SANDY CLAY LOAM, LOAMY SAND, OTHER SOILS MAY BE USED IF RECOMMENDED BY AN AGRONOMIST OR SOIL SCIENTIST AND APPROVED BY THE APPROPRIATE APPROVAL AUTHORITY. REGARDLESS, TOPSOIL SHALL NOT BE A MIXTURE OF CONTRASTING TEXTURED SUBSOILS AND SHALL CONTAIN LESS THAN 5% BY VOLUME OF CHOKERS, STONES, SLAG, COARSE FRAGMENTS, DRIVEL, STICKS, ROOTS, TRASH, OR OTHER MATERIALS LARGER THAN 1 1/2" IN DIAMETER.

TOPSOIL MUST BE FREE OF PLANTS OR PLANT PARTS SUCH AS BERMUDA GRASS, QUACKGRASS, JOHNSONGRASS, NUTSEDGE, POISON IVY, THISTLE, OR OTHERS AS SPECIFIED.

WHERE THE SUBSOIL IS EITHER HIGHLY ACIDIC OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 4-8 TONS/ACRE (200-400 POUNDS PER 1,000 SQUARE FEET) PRIOR TO THE PLACEMENT OF TOPSOIL. LIME SHALL BE DISTRIBUTED UNIFORMLY OVER DESIGNATED AREAS AND WORKED INTO THE SOIL IN CONJUNCTION WITH TILLAGE OPERATIONS AS DESCRIBED IN THE FOLLOWING PROCEDURES.

FOR SITES HAVING DISTURBED AREAS UNDER 5 ACRES:

PLACE TOPSOIL (IF REQUIRED) AND APPLY SOIL AMENDMENTS AS SPECIFIED IN 200 VEGETATIVE STABILIZATION - SECTION 1 - VEGETATIVE STABILIZATION METHODS AND MATERIALS.

TOPSOIL APPLICATION

WHEN TOPSOILING, MAINTAIN NEEDED EROSION AND SEDIMENT CONTROL PRACTICES SUCH AS DIVERSIONS, GRADE STABILIZATION STRUCTURES, EARTH DIKES, SLOPE SILT FENCE AND SEDIMENT TRAPS AND BASINS.

GRADY ON THE AREAS TO BE TOPSOILED, WHICH HAVE BEEN PREVIOUSLY ESTABLISHED, SHALL BE MAINTAINED, ALBERT 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 SODDING OR SEEDING CAN PROCEED WITH A MINIMUM OF ADDITIONAL SOIL PREPARATION AND TILLAGE ANY IRREGULARITIES IN THE SURFACE RESULTING FROM TOPSOILING OR OTHER OPERATIONS SHALL BE CORRECTED IN ORDER TO PREVENT THE FORMATION OF DEPRESSIONS OF 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 SEEDBED PREPARATION.

THESE TOPSOIL SPECIFICATIONS HAVE BEEN EDITED FROM THE 1994 EROSION AND SEDIMENT CONTROL STANDARDS TO FIT THIS PROJECT. IT IS STILL THE INTENTION TO FOLLOW THE REFERENCED 1994 EROSION AND SEDIMENT CONTROL STANDARDS IN THEIR ENTIRETY.

TEMPORARY SEEDING NOTES

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

SEEDBED PREPARATION: LOOSEN UPPER 3 INCHES OF SOIL BY RACKING, DISCING OR OTHER ACCEPTABLE MEANS BEFORE SEEDING (UNLESS PREVIOUSLY LOOSENEED).

SOILS AMENDMENTS: APPLY 600 LBS. PER ACRE 10-10-10 FERTILIZER (14 LBS./1000 SQ FT).

SEEDING: FOR PERIODS MARCH 1ST THROUGH APRIL 30TH AND FROM AUGUST 15TH THROUGH NOVEMBER 15TH, SEED WITH 2 1/2 BU. PER ACRE OF ANNUAL RYE (3.2 LBS./1000 SQ FT). FOR THE PERIOD MAY 1ST THROUGH AUGUST 14TH, SEED WITH 3 LBS. PER ACRE OF WEEPING LOVEGRASS (0.7 LBS./1000 SQ FT). FOR THE PERIOD NOVEMBER 16TH THROUGH FEBRUARY 28TH, PROTECT SITE BY APPLYING 2 TONS PER ACRE OF WELL ANCHORED STRAW MULCH AND SEED AS SOON AS POSSIBLE IN THE SPRING, OR USE MULCHING: APPLY 1 1/2 TO 2 TONS PER ACRE (70-90 LBS./1000 SQ FT) OF UNROTTED SMALL GRAIN STRAW IMMEDIATELY AFTER SEEDING. ANCHOR MULCH IMMEDIATELY AFTER APPLICATION USING MULCH ANCHORING TOOL OR 218 GALS. PER ACRE (5 GALS./1000 SQ FT) OF EMULSIFIED ASPHALT ON FLAT AREAS. ON SLOPES, 8 FT OR HIGHER, USE 348 GALS. PER ACRE (8 GALS./1000 SQ FT) FOR ANCHORING.

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

STANDARDS AND SPECIFICATIONS FOR STABILIZATION WITH SOD

- CLASS OF TURFOSS SOD SHALL BE MARYLAND STATE CERTIFIED, OR MARYLAND OR VIRGINIA STATE APPROVED SOD.
- SOD SHALL BE MACHINE CUT AT A UNIFORM SOIL THICKNESS OF INCH PLUS OR MINUS 25/64 INCH. AT THE TIME OF CUTTING, MEASUREMENT FOR THICKNESS SHALL EXCLUDE TOP GROWTH AND THATCH.
- STANDARD SIZE SECTIONS OF SOD SHALL BE STRONG ENOUGH TO SUPPORT THEIR OWN WEIGHT AND RETAIN THEIR SIZE AND SHAPE WHEN SUSPENDED VERTICALLY WITH A FIRM GRASP ON THE UPPER 10 PERCENT OF THE SECTION.
- INDIVIDUAL PIECES OF SOD SHALL BE CUT TO THE SUPPLIER'S WIDTH AND LENGTH, MAXIMUM ALLOWABLE DEVIATION FROM STANDARD WIDTHS AND LENGTHS SHALL BE 5 PERCENT BROKEN PADS AND TORN OR UNEVEN ENDS WILL NOT BE ACCEPTABLE.
- SOD SHALL BE HARVESTED OR TRANSPORTED WHEN MOISTURE CONTENT (EXCESSIVELY DRY OR WET) MAY ADVERSELY AFFECT ITS SURVIVAL.
- SOD SHALL BE HARVESTED, DELIVERED AND INSTALLED WITHIN A PERIOD OF 36 HOURS. SOD NOT TRANSPORTED WITHIN THIS PERIOD SHALL BE INSPECTED AND APPROVED PRIOR TO ITS INSTALLATION.

SITE PREPARATION

FERTILIZER AND LIME APPLICATION RATES SHALL BE DETERMINED BY SOIL TEST. UNDER USUAL CIRCUMSTANCES WHERE THERE IS INSUFFICIENT TIME FOR A COMPLETE SOIL TEST, FERTILIZER AND LIME MATERIALS MAY BE APPLIED IN AMOUNTS SHOWN UNDER B, BELOW.

A. PRIOR TO SODDING, THE SURFACE SHALL BE CLEARED OF ALL TRASH, DEBRIS, AND OF ALL ROOTS, BRUSH, WIRE, GRADE STAKES AND OTHER OBJECTS THAT WOULD INTERFERE WITH PLANTING, FERTILIZING OR MAINTENANCE OPERATIONS.

B. WHERE THE SOIL IS ACID OR COMPOSED OF HEAVY CLAYS, GROUND LIMESTONE SHALL BE SPREAD AT THE RATE OF 2 TONS/ACRE OR 100 POUNDS PER 1,000 SQUARE FEET IN ALL SOILS, 1000 POUNDS PER ACRE OR 25 POUNDS PER 1000 SQUARE FEET OF 10-10-10 FERTILIZER OR EQUIVALENT SHALL BE UNIFORMLY APPLIED AND MIXED INTO THE TOP 3 INCHES OF SOIL WITH THE REQUIRED LIME.

C. ALL AREAS RECEIVING SOD SHALL BE UNIFORMLY FINE GRADED, HARD-PACKED EARTH SHALL BE SCARIFIED PRIOR TO PLACEMENT OF SOD.

SOD INSTALLATION

A. DURING PERIODS OF EXCESSIVELY HIGH TEMPERATURE THE SOIL SHALL BE LIGHTLY IRRIGATED IMMEDIATELY PRIOR TO LAYING THE SOD.

B. THE FIRST ROW OF SOD SHALL BE LAID IN A STRAIGHT LINE WITH SUBSEQUENT ROWS PLACED PARALLEL TO AND TIGHTLY WEDGED AGAINST EACH OTHER. LATERAL JOINTS SHALL BE STAGGERED TO PROMOTE MORE UNIFORM GROWTH AND STRENGTH. INSURE THAT SOD IS NOT STRETCHED OR OVERLAPPED AND THAT ALL JOINTS ARE BUTTED TIGHT IN ORDER TO PREVENT VOIDS WHICH WOULD CAUSE AIR-BRIBING OF THE ROOTS.

C. ON SLOPING AREAS WHERE EROSION MAY BE A PROBLEM, SOD SHALL BE LAID WITH THE LONG EDGES PARALLEL TO THE CONTOUR AND WITH STAGGERED JOINTS. SECURE THE SOD BY TAMING AND PEGGING OR OTHER APPROVED METHODS.

D. AS SODDING IS COMPLETED IN ANY ONE SECTION, THE ENTIRE AREA SHALL BE ROLLED OR TAMPED TO INSURE SOLID CONTACT OF ROOTS WITH THE SOIL SURFACE. SOD SHALL BE WATERED IMMEDIATELY AFTER ROLLING OR TAMING UNTIL THE UNDERSIDE OF THE NEW SOD PAD AND SOIL SURFACE BELOW THE SOD ARE THOROUGHLY WET. THE OPERATIONS OF LAYING, TAMING AND IRRIGATING FOR ANY PIECE OF SOD SHALL BE COMPLETED WITHIN EIGHT HOURS.

SOD MAINTENANCE

A. IN THE ABSENCE OF ADEQUATE RAINFALL, WATERING SHALL BE PERFORMED DAILY OR AS OFTEN AS NECESSARY DURING THE FIRST WEEK AND IN SUFFICIENT QUANTITIES TO MAINTAIN MOIST SOIL TO A DEPTH OF 4 INCHES. WATERING SHALL BE DONE DURING THE HEAT OF THE DAY TO PREVENT WILTING.

B. AFTER THE FIRST WEEK, SOD SHALL BE WATERED AS NECESSARY TO MAINTAIN ADEQUATE MOISTURE AND INSURE ESTABLISHMENT.

C. FIRST MOWING SHOULD NOT BE ATTEMPTED UNTIL SOD IS FIRMLY ROOTED, NO MORE THAN 1/3 OF THE GRASS LEAF SHALL BE REMOVED BY THE INITIAL CUTTING OR SUBSEQUENT CUTTINGS. GRASS HEIGHT SHALL BE MAINTAINED BETWEEN 2 AND 3 INCHES UNLESS OTHERWISE SPECIFIED.

D. MAINTENANCE OF ESTABLISHED SOD SHOULD FOLLOW SPECIFICATIONS OUTLINED IN TABLE 54-1.

HOWARD SOIL CONSERVATION DISTRICT STANDARD SEDIMENT CONTROL NOTES

- A MINIMUM OF 48 HOURS NOTICE MUST BE GIVEN TO THE HOWARD COUNTY DEPARTMENT OF INSPECTION, 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 REVISING THEREO.
- FOLLOWING INITIAL SOIL DISTURBANCE, PERMANENT OR TEMPORARY STABILIZATION SHALL BE COMPLETED WITHIN 4) 7 CALENDAR DAYS FOR ALL PERIMETER SEDIMENT CONTROL STRUCTURES, DIKES, PERIMETER SLOPES AND ALL SLOPES STEEPER THAN 3:1, 6) 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 6) TEMPORARY STABILIZATION WITH MULCH ALONE SHALL ONLY BE DONE WHEN RECOMMENDED SEEDING DATES DO NOT ALLOW FOR PROPER GERMINATION AND ESTABLISHMENT OF GRASSES.
- ALL SEDIMENT CONTROL STRUCTURES ARE TO REMAIN IN PLACE AND ARE TO BE MAINTAINED IN OPERATIVE CONDITION UNTIL PERMISSION FOR THEIR REMOVAL HAS BEEN OBTAINED FROM THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ANY SEDIMENT CONTROL PRACTICE WHICH IS DISTURBED BY GRADING ACTIVITY FOR PLACEMENT OF UTILITIES MUST BE REPAIRED OR THE SAME DAY OF DISTURBANCE.
- ADDITIONAL SEDIMENT CONTROL MUST BE PROVIDED, IF DEEMED NECESSARY BY THE HOWARD COUNTY SEDIMENT CONTROL INSPECTOR.
- ON ALL SITES WITH DISTURBED AREAS IN EXCESS OF 2 ACRES, APPROVAL OF THE INSPECTION AGENCY SHALL BE REQUESTED UPON COMPLETION OF INSTALLATION OF PERIMETER EROSION AND SEDIMENT CONTROLS BUT BEFORE PROCEEDING WITH ANY OTHER EARTH DISTURBANCE OR GRADING. OTHER BUILDING OR GRADING INSPECTION APPROVALS MAY NOT BE AUTHORIZED UNTIL THIS WITHIN APPROVAL BY THE INSPECTION AGENCY IS MADE.
- TRENCHES FOR THE CONSTRUCTION OF UTILITIES IS LIMITED TO THREE (3) PPE LENGTHS OR THAT WHICH SHALL BE BACK-FILLED AND STABILIZED WITHIN ONE WORKING DAY, WHICHEVER IS SHORTER.

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER _____ DATE _____

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION _____ DATE 3/5/02

CHIEF, DIVISION OF PLANNING AND DEVELOPMENT _____ DATE 3/8/02

DIRECTOR _____ DATE 3/12/02

DEVELOPER'S CERTIFICATE

"I HEREBY CERTIFY THAT ALL DEVELOPMENT AND/OR CONSTRUCTION WILL BE DONE IN ACCORDANCE TO THESE PLANS, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE FROM THE HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOUSING AND SEDIMENT CONTROL STANDARDS WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

DATE 02/07/02

SIGNATURE OF DEVELOPER _____

ENGINEER'S CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOUSING AND SEDIMENT CONTROL STANDARDS WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

DATE 3/1/02

SIGNATURE OF ENGINEER _____

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

DATE 3/1/02

SIGNATURE OF REVIEWER _____

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION _____ DATE 3/5/02

CHIEF, DIVISION OF PLANNING AND DEVELOPMENT _____ DATE 3/8/02

DIRECTOR _____ DATE 3/12/02

CONTACT "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO EXCAVATION

DEVELOPER'S CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOUSING AND SEDIMENT CONTROL STANDARDS WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

DATE 02/07/02

SIGNATURE OF DEVELOPER _____

ENGINEER'S CERTIFICATE

"I HEREBY CERTIFY THAT THIS PLAN FOR POND CONSTRUCTION, EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS. THIS PLAN WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT. I HAVE NOTIFIED THE DEVELOPER THAT HE/SHE MUST ENGAGE A REGISTERED PROFESSIONAL ENGINEER TO SUPERVISE POND CONSTRUCTION AND PROVIDE THE HOUSING AND SEDIMENT CONTROL STANDARDS WITH AN "AS-BUILT" PLAN OF THE POND WITHIN 30 DAYS OF COMPLETION.

DATE 3/1/02

SIGNATURE OF ENGINEER _____

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

DATE 3/1/02

SIGNATURE OF REVIEWER _____

OWNER/DEVELOPER
TSC PUMPHOUSE ROAD, LLC
11628 LONG JUMP TRAIL
ELLCOTT CITY, MD 21042

NO. _____ REVISION _____ DATE _____

SEDIMENT AND EROSION CONTROL NOTES AND DETAILS
C-W AND COMPANY, PARCEL A-2
OFFICE/WAREHOUSE

TAX MAP #48 GRID #14 PARCEL 68
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
7125 Riverwood Drive Columbia, Maryland 21046-2354
Phone: 410-290-9550 Fax: 410-720-6226
Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: RHW/MR
DRAWN BY: _____
CHECKED BY: RHW
DATE: JANUARY, 2002
SCALE: 1"=30'
I.W.O. NO.: 201403.00

6 SHEET OF 11

OPERATION AND MAINTAINANCE SCHEDULE FOR PRIVATELY OWNED AND MAINTAINED UNDERGROUND FACILITIES

- A. THE UNDERGROUND STORMWATER MANAGEMENT FACILITY IS PRIVATELY OWNED AND IT SHALL BE THE RESPONSIBILITY OF THE OWNER TO PERIODICALLY INSPECT AND CLEAN THE FACILITY TO MAINTAIN ITS OPERATION AND FUNCTION.
- B. THE UNDERGROUND STORMWATER MANAGEMENT FACILITY SHALL BE INSPECTED YEARLY AT A MINIMUM AND AFTER ESPECIALLY SEVERE STORM EVENTS.
- C. WHEN SEDIMENT ACCUMULATION OF MORE THAN 2" IS OBSERVED OR ANY DEBRIS THAT MIGHT OBSTRUCT THE OUTFLOW IS OBSERVED, THE FACILITY SHALL BE CLEANED.
- D. THE FACILITY SHALL BE CLEANED IMMEDIATELY AFTER PETROLEUM SPILLS. THE OWNER SHALL CONTACT THE APPROPRIATE REGULATORY AGENCIES NOTIFYING THEM OF THE SPILL AND CLEANUP OPERATION.
- E. THE SEDIMENT AND DEBRIS SHALL BE REMOVED FROM THE UNDERGROUND STORMWATER MANAGEMENT FACILITY BY VACUUM TRUCK OR OTHER MANUAL MEANS. THE OWNER SHALL FOLLOW PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIAL AND LIQUID.
- F. THE INLET AND OUTLET PIPES SHALL BE CHECKED FOR ANY OBSTRUCTIONS AT LEAST ONCE EVERY SIX (6) MONTHS. IF OBSTRUCTIONS ARE FOUND, THE OWNER SHALL HAVE THEM REMOVED AND PROPERLY DISPOSED OF.

STORMWATER MANAGEMENT AND WATER QUALITY MAINTENANCE NOTES (PRIVATE OWNERSHIP AND MAINTENANCE)

1. INSPECT THE STORMCEPTOR ON A MONTHLY BASIS AND NOTE THE SEDIMENT AND OIL ACCUMULATIONS. MORE FREQUENT INSPECTIONS ARE APPROPRIATE WHERE OIL SPILLS OCCUR REGULARLY. STORMCEPTOR CANADA INC. CAN PROVIDE ADVICE ON SAMPLING EQUIPMENT.
2. SEDIMENT SHOULD BE REMOVED ANNUALLY, OR WHENEVER THE ACCUMULATION REACHES 50% OF THE OPERATING DEPTH, FROM BASE TO DRAIN INVERT. IN AREAS OF NEW CONSTRUCTION, OR WHERE VEGETATION HAS NOT YET BEEN ESTABLISHED, MORE FREQUENT REMOVAL MAY BE NECESSARY.
3. VACUUM TRUCKS ARE USED TO REMOVE THE SEDIMENT AND OIL FROM THE STORMCEPTOR TREATMENT CHAMBER. OIL LEVELS GREATER THAN 2.5 CM SHOULD BE REMOVED IMMEDIATELY BY A LICENSED WASTE MANAGEMENT FIRM, AND SIGNIFICANT SPILLS MUST BE REPORTED TO THE APPROPRIATE REGULATORY AGENCY.
4. THE PIPES AND STRUCTURAL PARTS SHALL BE CLEANED AND REPAIRED AS NEEDED.
5. ALL MAINTENANCE SHALL BE PERFORMED BY THE OWNER OR BY THE OWNER'S REPRESENTATIVE AT THE OWNER'S EXPENSE.
6. MINIMIZE SURFACE EROSION FROM PEROUS SURFACES AT ALL TIMES. MAINTAIN GRASS, SOIL, AND/OR MULCH COVERAGE UPON LANDSCAPING.
7. REMOVE DEBRIS ON TOP OF INLET GRATES AFTER EVERY RAINFALL. REMOVE OILS, SILTS AND AGGREGATES, AND DEBRIS FROM ALL INLETS AND STRUCTURES.
8. THE DISPOSAL OF THE LIQUID AND SOLID MATTER SHOULD BE AS FOLLOWS:
 - A. ALL LIQUID MATERIAL IN THE SEPARATOR INLET SHALL BE PUMPED INTO A SUITABLE TANK TRUCK AND DISPOSED OF AT AN APPROVED SANITARY DISTRICT DISCHARGE MANHOLE OR BE TAKEN TO AN APPROVED SEWAGE TREATMENT PLANT FOR DISCHARGE.
 - B. THE SOLID MATERIAL SHALL BE LANDFILLED IN AN APPROVED SANITARY LANDFILL.

GENERAL NOTES

1. ALL STRUCTURES DETAILED ON THIS SHEET SHALL BE CAPABLE OF SUPPORTING AASHTO HS-20 LOADING, AND SHALL BE CONSTRUCTED IN FULL ACCORDANCE WITH ACI 318, LATEST EDITION.
2. CONCRETE SHALL HAVE A MINIMUM 28 DAY COMPRESSIVE STRENGTH $f_c = 3,500$ psi.
3. ALL REINFORCING SHALL CONFORM TO ASTM A-615 GRADE 60.
4. CONTRACTOR SHALL PRE-CAST STRUCTURE IN WHOLE OR IN PART, SUBJECT TO THE PRIOR APPROVAL OF PRE-CAST SHOP DRAWING SUBMITTED TO HOWARD COUNTY BUREAU OF ENGINEERING PRIOR TO MANUFACTURING.
5. SILT AND DEBRIS SHALL NOT BE ALLOWED TO ENTER THE STRUCTURES UNTIL THE CONTRIBUTING DRAINAGE AREA HAS BEEN PERMANENTLY STABILIZED.
6. ALL OPENINGS TO THE STRUCTURE SHALL BE PROTECTED WITH THE APPROPRIATE SEDIMENT CONTROL MEASURES DURING CONSTRUCTION.

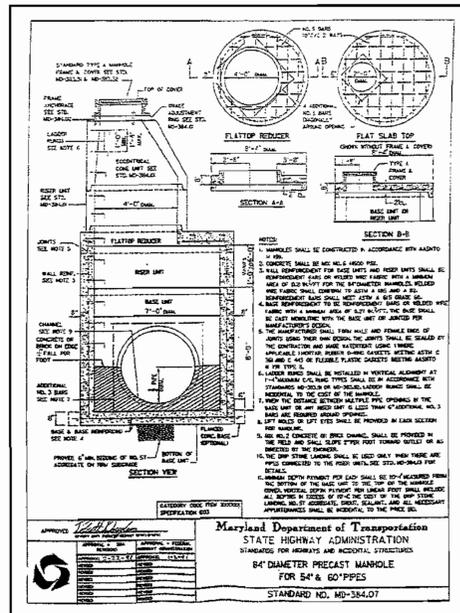
APPROVED: FOR PRIVATE WATER AND PRIVATE
SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER _____ DATE _____

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

Michael J. ... 3/5/02
CHIEF, DEVELOPMENT ENGINEERING DIVISION
Sandy ... 3/8/02
CHIEF, DIVISION OF LAND DEVELOPMENT
... 3/12/02
DIRECTOR

BEFORE BEGINNING CONSTRUCTION
CONTACT
"MISS UTILITY"
AT
1-800-257-7777
AT LEAST 48 HOURS
PRIOR TO EXCAVATION



Stormceptor Order Request Form

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

Owner Information
Name: TSC PUMPHOUSE ROAD, LLC
Phone: _____
Fax: _____

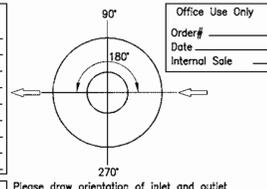
Stormceptor® Model

| STA | STC-L | Insert Size | Manhole - STC-4800 |
|------|-------|-------------|--|
| 900 | 3600 | 22" | Top Elevation (ft) 212.00 |
| 1200 | 4800 | 32" | Inlet Pipe Invert (ft) 205.65 |
| 1800 | 6000 | 44" | Outlet Pipe Invert (ft) 205.55 |
| 2400 | 7200 | Custom | Pipe Type: RCP 21" (IN) 21" RCP (OUT) |
| | | | Pipe Inside Diameter (in) [10] 21" (OUT) |
| | | | Pipe Outside Diameter (in) [00] |

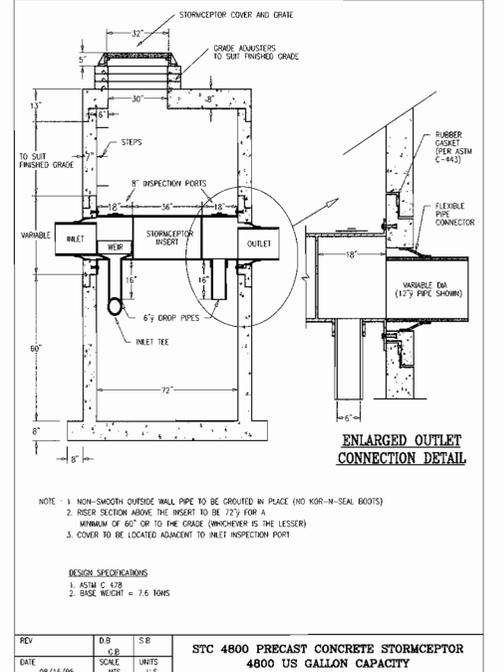
Project Name: PUMPHOUSE ROAD - OFFICE/WAREHOUSE LOT A-2
Approximate time frame until required delivery (weeks): _____
Delivery Address: Street 10921 PUMPHOUSE ROAD
City: ANNAPOLIS JUNCTION **State:** MARYLAND **Zip Code:** 20701
Designer Company: FREDERICK WARD ASSOCIATES
Designer Contact: MIKE RAZAVI **Phone:** (410) 720-6900 **Fax:** (410) 720-6226

Please fax this sheet back to Hydro Conduit/Virginia Precast at (804) 798-3428
Attn: Dave Brinser / Bryant Lowery (Phone: 1-800-999-2278)

For credit information/applications contact Carole Broadus at (804) 798-6068
For Technical Assistance Please Call Stormceptor Corporation
at (301) 762-8361 or toll free at 1-800-762-4703



- ### CONTRACTOR INSTALLATION INSTRUCTIONS: PRECAST CONCRETE STORMCEPTOR
1. STAKE-OUT THE LOCATION OF THE STORMCEPTOR AND EXCAVATE HOLE. EXCAVATE ADEQUATE SPACE TO CONNECT INLET AND OUTLET PIPES TO UNIT. INSTALL A 12" DEEP (OR AS REQUIRED) LAYER OF COMPACTED (85% STANDARD PROCTOR DENSITY OR LOCAL AND STATE REQUIREMENTS, AS DIRECTED BY THE INSPECTOR) AGGREGATE SUBGRADE AT BOTTOM OF EXCAVATION. INSTALL MALE OR SHORING, AS NEEDED.
 2. CHECK ELEVATION OF UNIT BY MEASURING ITS SECTIONS FROM BASE OF THE STORAGE CHAMBER (BOTTOM OF UNIT'S SLAB) TO THE INVERT OF STORMCEPTOR INLET ELEVATION (FIBERGLASS INSERT). SUBTRACT THIS DISTANCE FROM DESIGN INLET ELEVATION TO DETERMINE TOP OF SUBBASE ELEVATION. CHECK ELEVATION OF INSTALLED SUBBASE AND ADJUST AS NEEDED.
 3. SECURE INSPECTOR APPROVAL OF SUBGRADE AND SUBBASE.
 4. INSTALL STORAGE CHAMBER. INSTALL SCREW INSERTS INTO BASE OF STORAGE CHAMBER. ATTACH CABLES OR CHAINS TO ALL 3 LIFTING LUGS ON THE BASE SLAB. USING LARGE EQUIPMENT OR CRANE LIFT AND PLACE THE BASE SECTION OF THE STORAGE CHAMBER IN THE EXCAVATED HOLE ON THE SUBBASE. MAKE SURE THAT THE BASE IS LEVEL. SPECIFIC ALIGNMENT OF THIS PART IS NOT REQUIRED. INSTALL RUBBER GASKET ON BASE UNIT AND COAT WITH LUBRICATING GREASE (PROVIDED IN SHIPMENT), IF NOT PRELUBRICATED. INSTALL ADDITIONAL STORAGE CHAMBER SECTIONS, AS REQUIRED (PROCEDURE IS SAME AS STEP 4).
 5. INSTALL REDUCING SLAB. (STORMCEPTOR MODELS STC-2400, STC-3600, STC-4800, STC-6000 AND STC-7200) CHECK THAT SECTION IS SET FLUSH LEVEL AND IS AT THE PROPER ELEVATION. INSTALL RUBBER GASKET ON THE TRANSITION SLAB SPIGOT AND COAT WITH LUBRICATING GREASE (PROVIDED IN SHIPMENT).
 6. INSTALL BYPASS CHAMBER OF STORMCEPTOR WITH FACTORY INSTALLED STORMCEPTOR INSERT. LIFT BYPASS SECTION AND INSTALL, WHILE CHECKING ALIGNMENT AND GRADE OF INLET AND OUTLET DRAINAGE PIPES. CHECK TO MAKE SURE THE BYPASS CHAMBER IS SET FLUSH LEVEL AND IS AT THE PROPER ELEVATION. THE BYPASS CHAMBER MUST BE ORIENTED SUCH THAT INLET PIPE DISCHARGES INTO THE V-SHAPED FIBERGLASS WEIRS (INSIDE INSERT). INSTALL RUBBER GASKET ON TOP OF BYPASS SECTION AND COAT WITH LUBRICATING GREASE, IF NOT PRELUBRICATED.
 7. INSTALL STORMCEPTOR DROP PIPES ACCORDING TO STC PIPE INSTALLATION PROCEDURE.
 8. INSTALL RISER SECTION. LIFT RISER SECTION AND INSTALL, WHILE CHECKING THAT SECTION IS SET FLUSH AND IS AT PROPER ELEVATION AND THAT UNIT IS LEVEL. SPECIFIC ALIGNMENT OF THIS PART IS REQUIRED IF STEPS ARE INCLUDED. ALIGN STEPS ABOVE INLET INSPECTION PORT. NOTE: FOR SHALLOW INSTALLATIONS THIS SECTION MAY NOT BE REQUIRED. INSTALL TOP CAP WITH GRASSING FOR STORMCEPTOR COVER. IF OPENING IS OFFSET (NOT CENTERED) THE TOP CAP OPENING SHOULD BE ORIENTED ABOVE THE STORMCEPTOR INLET INSPECTION PORT (PING).
 9. BACKFILL STORMCEPTOR WITH APPROVED BACKFILL MATERIAL (NO ORGANIC OR TOPSOIL IS TO BE USED FOR BACKFILL). BACKFILL AND COMPACT IN 8 INCH LIFTS. BACKFILL SHOULD BE COMPACTED TO 85% OF STANDARD PROCTOR DENSITY, OR LOCAL AND STATE REQUIREMENTS, AS DIRECTED BY THE INSPECTOR.
 10. INSTALL AND SET GRADE ADJUSTING RINGS, AS NEEDED.
 11. INSTALL AND SET STORMCEPTOR FRAME AND COVER.
 12. INSTALL INLET AND OUTLET STORM DRAIN PIPES. CONNECT INLET AND OUTLET STORM DRAIN PIPES WITH FLEXIBLE BOOTS (WHEN PROVIDED) AND WITH NON-SHORING DRAIN PIPES. IF FLEXIBLE BOOTS ARE PROVIDED, THE INVERT OF THE INLET AND OUTLET PIPE IS TO MATCH WITH THE INVERT OF THE STORMCEPTOR INSERT. FLEXIBLE BOOT INSTALLATION PROCEDURES: CENTER THE PIPE IN THE BOOT OPENING. LUBRICATE THE OUTSIDE OF THE PIPE AND/OR THE INSIDE OF THE BOOT IF THE PIPE OUTSIDE DIAMETER IS THE SAME AS THE INSIDE DIAMETER OF THE BOOT. POSITION THE PIPE CLAMP IN THE GROOVE OF THE BOOT WITH THE SCREW AT THE TOP. TIGHTEN THE PIPE CLAMP SCREW TO 60 INCH POUNDS. IF THE PIPE IS MUCH SMALLER THAN THE BOOT, LIFT THE BOOT SUCH THAT IT CONTACTS THE BOTTOM OF THE PIPE WHILE TIGHTENING THE CLAMP TO ENSURE EVEN CONTACT OF THE RUBBER. MOVE THE PIPE HORIZONTALLY AND/OR VERTICALLY TO BRING IT TO GRADE.
 13. THE STORMCEPTOR SHOULD BE PUMPED OUT WHEN THE SEDIMENT CONTROL MEASURES ARE REMOVED (SITE PERMANENTLY STABILIZED).
 14. FINAL INSPECTION.



DIMENSIONS*

| MODEL | DIAM (ft) | DROP PIPE DIA. (IN) | HL (in) | T ¹ (in) | T ² (in) |
|----------|-----------|---------------------|---------|---------------------|---------------------|
| STC 900 | 6 | 6 | 42 | 8 | 8 |
| STC 1200 | 6 | 6 | 60 | 8 | 8 |
| STC 1800 | 6 | 6 | 96 | 8 | 8 |
| STC 2400 | 8 | 8 | 76 | 8 | 0 |
| STC 3600 | 8 | 8 | 118 | 8 | 0 |
| STC 4800 | 10 | 10 | 106 | 12 | 0 |
| STC 6000 | 10 | 10 | 130 | 12 | 0 |
| STC 7200 | 12 | 12 | 114 | 14 | 0 |

FLOWS AND CAPACITIES*

| PIPE DIAMETER D (in) | PIPE MATERIAL | HIN (in) | H (in) | L (in) |
|----------------------|---------------|----------|--------|--------|
| 10 | PVC | 22 | 36 | 8 |
| 10 | CONC / PE RIB | 22 | 36 | 7 |
| 12 | PVC / PE RIB | 22 | 36 | 9 |
| 12 | CONCRETE | 22 | 42 | 11 |
| 15 | PVC / PE RIB | 22 | 42 | 9.5 |
| 15 | CONCRETE | 22 | 48 | 11.5 |
| 18 | PVC / PE RIB | 22 | 48 | 10 |
| 18 | CONCRETE | 32 | 48 | 11 |
| 21 | PVC / PE RIB | 32 | 48 | 9.5 |
| 21 | CONCRETE | 32 | 54 | 11.5 |
| 24 | PVC | 32 | 48 | 9 |
| 24 | PE RIBBED | 32 | 54 | 10 |
| 24 | CONCRETE | 32 | 54 | 11 |
| 27 | PVC | 32 | 54 | 8.5 |
| 27 | CONCRETE | 44 | 60 | 11.5 |
| 30 | CONCRETE | 44 | 60 | 12 |
| 33 | CONCRETE | 44 | 60 | 12.5 |
| 36 | CONCRETE | 44 | 60 | 13 |

- ### GENERAL NOTES FOR STORM DRAIN CONSTRUCTION
1. MANHOLE LIDS AND INLET GRATES SHALL BE TRAFFIC BEARING AND BICYCLE SAFE.
 2. ALL MANHOLE LIDS, INLET GRATES, AND CLEANOUT TOPS TO BE ADJUSTED TO MATCH CROSS-PITCH AND SLOPE OF EXISTING AND PROPOSED GRADES.
 3. ROOF DRAIN PIPE TO BE HDPE, OR PVC SCH. 40, UNLESS OTHERWISE NOTED.
 4. ALL STORM DRAINS SHALL BE CONSTRUCTED IN ACCORDANCE WITH THE LATEST EDITION OF THE HOWARD COUNTY STANDARDS AND SPECIFICATIONS.
 5. INFORMATION IS UNAVAILABLE REGARDING THE LOCATION OF ON-SITE TELEPHONE, GAS, AND ELECTRIC.

OWNER/DEVELOPER
TSC PUMPHOUSE ROAD, LLC
11628 LONG JUMP TRAIL
ELLICOTT CITY, MD 21042

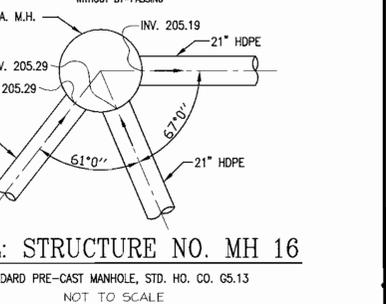
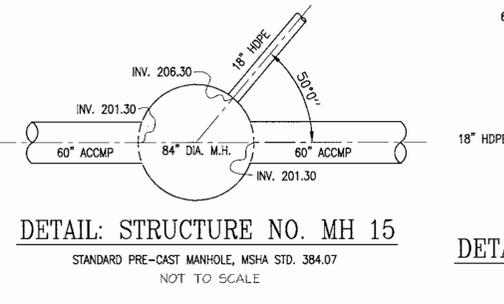
OPERATION AND MAINTENANCE SCHEDULE STORMCEPTOR WATER QUALITY DEVICE

- A. THE STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE PERIODICALLY INSPECTED AND CLEANED TO MAINTAIN OPERATION AND FUNCTION. THE OWNER SHALL INSPECT THE STORMCEPTOR UNIT YEARLY AT A MINIMUM, UTILIZING THE STORMCEPTOR INSPECTION/MONITORING FORM. INSPECTIONS SHALL BE DONE BY USING A CLEAR PLEXIGLAS TUBE (SLUDGE JUDG) TO EXTRACT A WATER COLUMN SAMPLE. WHEN THE SEDIMENTS DEPTHS EXCEED THE LEVEL SPECIFIED IN TABLE 6 OF THE STORMCEPTOR TECHNICAL MANUAL, THE UNIT MUST BE CLEANED.
- B. THE STORMCEPTOR WATER QUALITY STRUCTURE SHALL BE CHECKED AND CLEANED IMMEDIATELY AFTER PETROLEUM SPILLS. THE OWNER SHALL CONTACT THE APPROPRIATE REGULATORY AGENCIES.
- C. THE MAINTENANCE OF THE STORMCEPTOR UNIT SHALL BE DONE USING A VACUUM TRUCK WHICH WILL REMOVE THE WATER, SEDIMENT, DEBRIS, FLOATING HYDROCARBONS, AND OTHER MATERIALS IN THE UNIT. PROPER CLEANING AND DISPOSAL OF THE REMOVED MATERIALS AND LIQUID MUST BE FOLLOWED BY THE OWNER.
- D. THE INLET AND OUTLET PIPES SHALL BE CHECKED FOR ANY OBSTRUCTIONS AT LEAST ONCE EVERY SIX MONTHS. IF OBSTRUCTIONS ARE FOUND THE OWNER SHALL HAVE THEM REMOVED. STRUCTURAL PARTS OF THE STORMCEPTOR UNIT SHALL BE REPAIRED AS NEEDED.
- E. THE OWNER SHALL RETAIN AND MAKE THE STORMCEPTOR INSPECTION/MONITORING FORMS AVAILABLE TO THE HOWARD COUNTY OFFICIALS UPON THEIR REQUEST.

FLOWS AND CAPACITIES*

| MODEL | MAX. TREATED FLOW RATE (gpm)** | SEDIMENT CAPACITY (U.S. gal.) | OIL CAPACITY (U.S. gal.) | TOTAL CAPACITY (U.S. gal.) |
|----------|--------------------------------|-------------------------------|--------------------------|----------------------------|
| STC 900 | 285 | 70 | 280 | 910 |
| STC 1200 | 285 | 110 | 280 | 1230 |
| STC 1800 | 285 | 195 | 280 | 1860 |
| STC 2400 | 475 | 210 | 560 | 2405 |
| STC 3600 | 475 | 390 | 560 | 3720 |
| STC 4800 | 800 | 515 | 675 | 5030 |
| STC 6000 | 800 | 675 | 675 | 6205 |
| STC 7200 | 1110 | 800 | 880 | 7510 |

* APPROXIMATE
** WITHOUT BY-PASSING



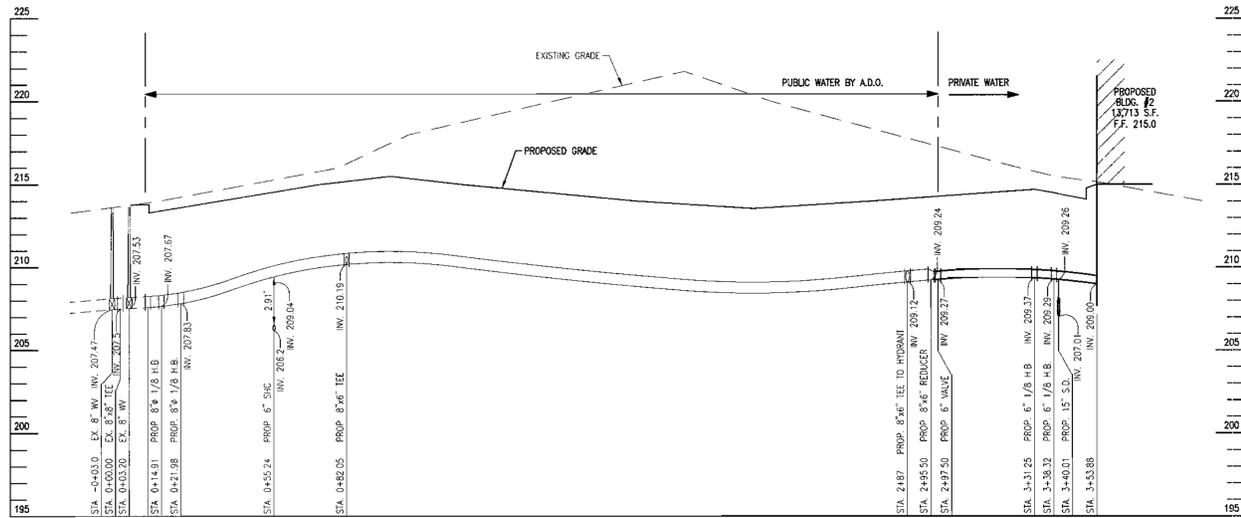
STORMDRAIN PROFILES AND DETAILS C-W AND COMPANY, PARCEL A-2 OFFICE/WAREHOUSE

TAX MAP #48 GRID #14 PARCEL 68
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354
ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226
SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

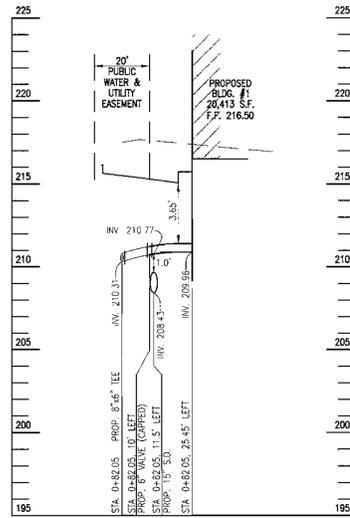
DESIGN BY: RHW/MR
DRAWN BY: KO
CHECKED BY: RHW
DATE: JANUARY, 2002
SCALE: 1"=30'
H/O NO.: 2014630.00

8 SHEET OF 11



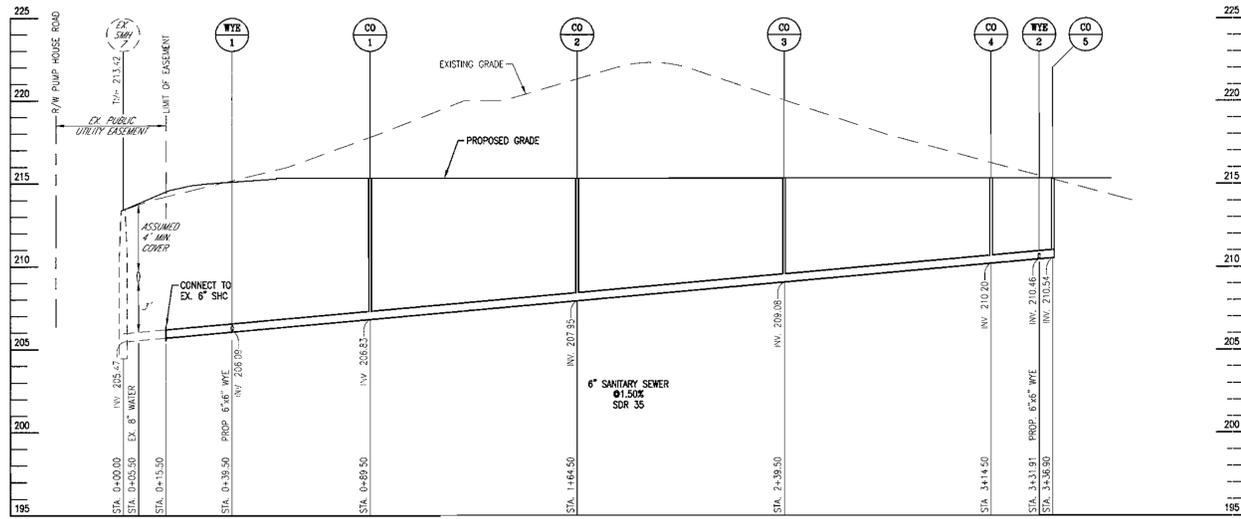
PROPOSED 6" WATER LINE PROFILE

SCALE: HOR.: 1"=30'
VERT.: 1"=5'



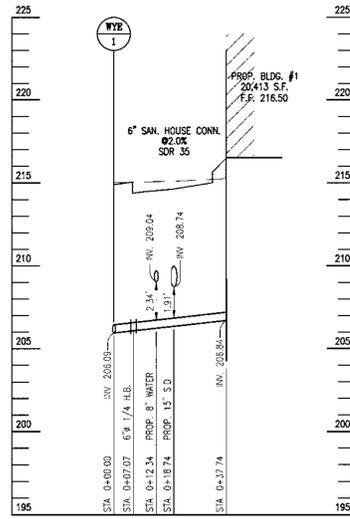
PROPOSED 6" WATER HOUSE CONNECTION PROFILE

SCALE: HOR.: 1"=30'
VERT.: 1"=5'



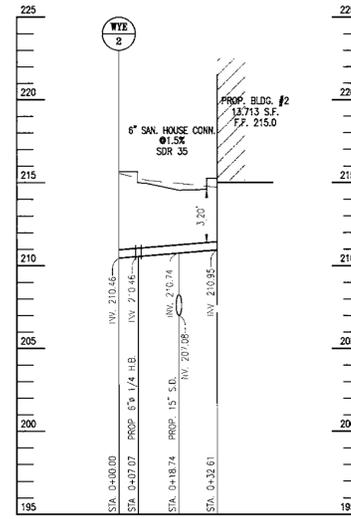
PROPOSED 6" SANITARY SEWER LINE PROFILE

SCALE: HOR.: 1"=30'
VERT.: 1"=5'



PROPOSED 6" SEWER HOUSE CONNECTION PROFILE

SCALE: HOR.: 1"=30'
VERT.: 1"=5'



PROPOSED 6" SEWER HOUSE CONNECTION PROFILE

SCALE: HOR.: 1"=30'
VERT.: 1"=5'

OWNER/DEVELOPER
TSC PUMPHOUSE ROAD, LLC
11628 LONG JUMP TRAIL
ELLCOTT CITY, MD 21042

GENERAL NOTES FOR UTILITY CONSTRUCTION

1. INFORMATION CONCERNING THE HORIZONTAL AND VERTICAL LOCATION OF EXISTING UTILITIES WAS TAKEN FROM RECORDS PROVIDED BY UTILITY COMPANIES, AN ALTA SURVEY PREPARED BY FREDERICK WARD ASSOCIATES (DATED 3/01), AND HOWARD COUNTY DPW. THESE LOCATIONS SHOULD BE CONSIDERED APPROXIMATE. FREDERICK WARD ASSOCIATES, INC. MAKES NO GUARANTEE AS TO THE COMPLETENESS OR ACCURACY OF UTILITIES AND THEIR LOCATIONS, SHOWN OR NOT SHOWN, ON THESE DRAWINGS. SUCH INFORMATION PROVIDED ON THESE PLANS IS FOR THE CONVENIENCE OF THE CONTRACTOR. HOWEVER, THE CONTRACTOR SHALL VERIFY THE PRESENCE, ABSENCE AND LOCATIONS OF ALL UTILITIES TO HIS SATISFACTION, PRIOR TO ANY WORK UNDER THIS CONTRACT.
2. THE CONTRACTOR IS TO NOTIFY MISS UTILITY AT LEAST 48 HOURS PRIOR TO ANY CONSTRUCTION AND EXCAVATION. PHONE: 1-800-257-7777.
3. PRIOR TO ANY CONSTRUCTION UNDER THIS CONTRACT, CONTRACTOR SHALL TEST PIT TO VERIFY EXACT LOCATIONS AND ELEVATIONS OF ALL EXISTING UTILITIES WHERE UTILITY TIE-INS AND CROSSINGS WILL BE ENCOUNTERED. ANY DISCREPANCIES IN HORIZONTAL AND VERTICAL LOCATIONS SHOWN ON THE DRAWINGS, PARTICULARLY AT PROPOSED STORM DRAIN, SANITARY AND WATER CONNECTIONS SHALL BE IMMEDIATELY REPORTED TO FREDERICK WARD ASSOCIATES PRIOR TO ANY CONTINUATION OF WORK UNDER THIS CONTRACT. THIS IS FOR THE PURPOSE OF IDENTIFYING ANY CONFLICTS, WHICH MAY IMPACT THE PROPOSED DESIGN, AND RESOLUTION OF SAID CONFLICTS PRIOR TO CONTINUATION OF WORK.
4. ANY EXISTING UTILITIES AND AMENITIES, WHICH MAY BE DAMAGED DUE TO FITTING AND UTILITY CONSTRUCTION, SHALL BE REPAIRED IN KIND AT THE SOLE EXPENSE OF THE CONTRACTOR.
5. ANY SEDIMENT CONTROL MEASURES REMOVED FOR THE PURPOSE OF UTILITY CONSTRUCTION SHALL BE REPLACED AT THE END OF THE DAY BY THE UTILITY CONTRACTOR.
6. LOCATION OF GAS AND ELECTRIC, AND TELEPHONE SERVICE TO BUILDING TO BE COORDINATED WITH THE APPROPRIATE UTILITY COMPANIES BY THE OWNER.
7. UTILITIES TO BE INSTALLED IN LANDSCAPED AREAS SHALL BE WRAPPED WITH BIODEGRADABLE PIPE PROTECTION.
8. ALL UTILITY WORK WITHIN SHA R/W SHALL BE GOVERNED BY THE UTILITY PERMIT.

GENERAL NOTES FOR GRADING

1. COMPACTION IN BUILDING AND PAVEMENT AREAS TO BE AT 95%, AND COMPACTION IN LANDSCAPING AREAS TO BE AT 90%, TO MEET ASTM D-1557 REQUIREMENTS.
2. IT IS RECOMMENDED A GEOTECHNICAL ENGINEER BE RETAINED TO MONITOR EARTHWORK ACTIVITIES TO MAKE APPROPRIATE RECOMMENDATIONS AS NECESSARY.

GENERAL NOTES FOR WATER AND SEWER CONSTRUCTION

1. SANITARY CLEANOUT TOPS TO BE ADJUSTED TO MATCH CROSS-PITCH AND SLOPE OF PROPOSED GRADES. CLEANOUT TOPS TO BE IDENTIFIED AS SANITARY CLEANOUTS, THREADED AND CONTAIN COUNTERSUNK PLUGS.
2. UTILITIES SHALL MAINTAIN A MINIMUM 12-INCH CLEARANCE WHEN CROSSING EXISTING AND PROPOSED UTILITIES ON AND OFF SITE.
3. WATER SERVICES SHALL HAVE A MINIMUM 3.5 FOOT COVER OVER CROWN PIPE.
4. WATER SERVICE SHALL BE SOFT ANNEALED TYPE K COPPER TUBING, OR APPROVED EQUAL. SANITARY SEWER PIPE SHALL BE PVC SDR 35, OR APPROVED EQUAL.
5. WATER AND SEWER SERVICES SHALL BE COORDINATED WITH THE BUILDING CONTRACTOR FOR HORIZONTAL AND VERTICAL ALIGNMENT AND CONNECTION.

APPROVED: FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT
COUNTY HEALTH OFFICER _____ DATE _____

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING
CHIEF, DEVELOPMENT ENGINEERING DIVISION *[Signature]* 3/5/02 DATE
CHIEF, DIVISION OF LAND DEVELOPMENT *[Signature]* 3/5/02 DATE
DIRECTOR *[Signature]* 3/12/02 DATE

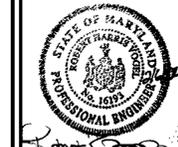
BEFORE BEGINNING CONSTRUCTION CONTACT
"MISS UTILITY"
AT
1-800-257-7777
AT LEAST 48 HOURS PRIOR TO EXCAVATION

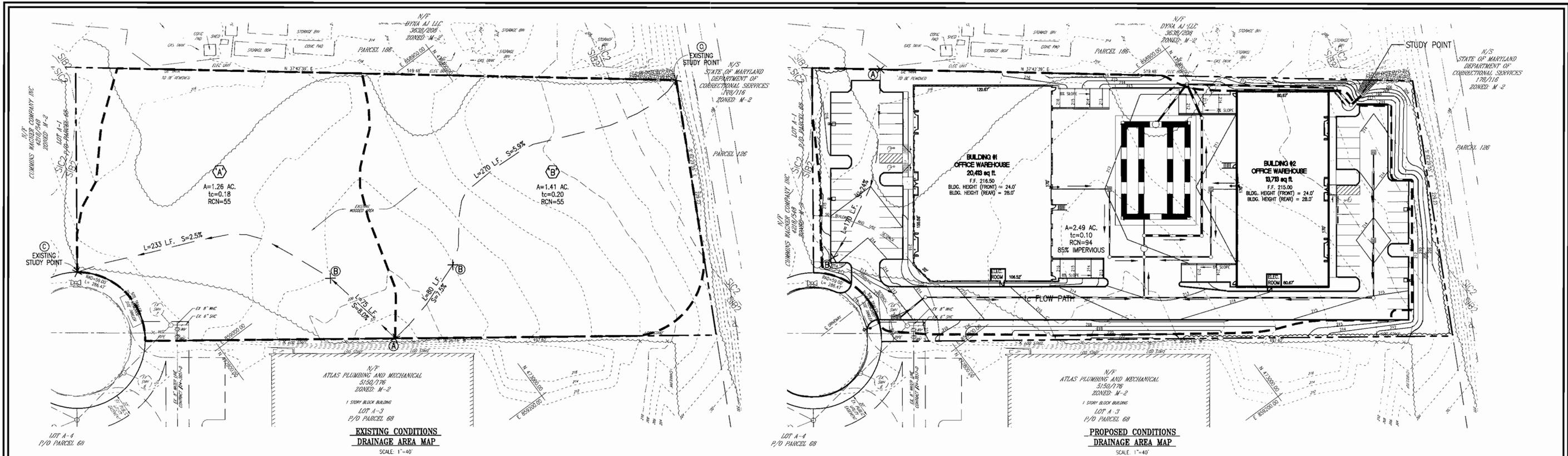
| NO. | REVISION | DATE |
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WATER AND SEWER PROFILES AND DETAILS
C-W AND COMPANY, PARCEL A-2
OFFICE/WAREHOUSE
TAX MAP #48 GRID #14 PARCEL 68
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354
ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226
SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: RW/RW
DRAWN BY: KO
CHECKED BY: RWV
DATE: JANUARY, 2002
SCALE: 1"=30'
W.O. NO.: 2014030.00
9 SHEET OF 11

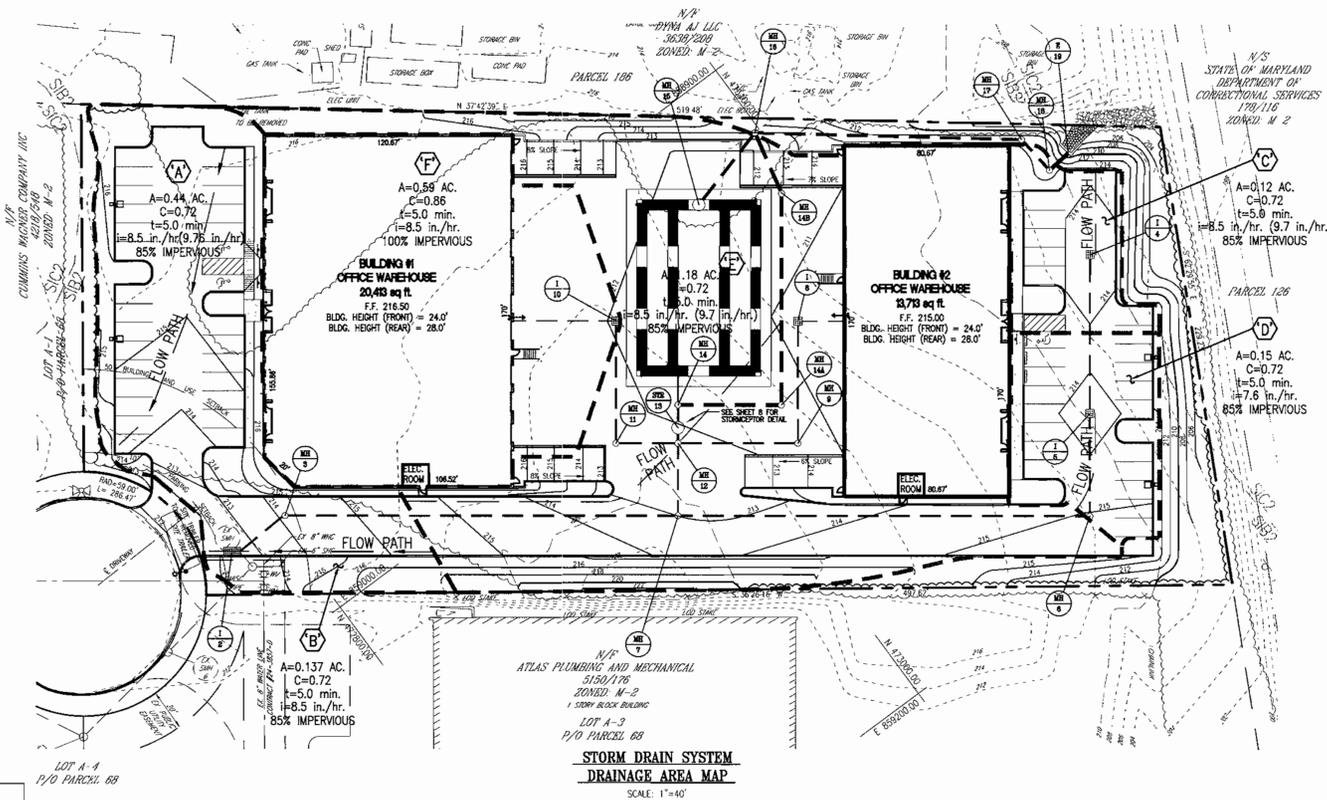




| CONDITION | CN | tc | RUNOFF Qu YR STORM | Q 1YR | Q 10YR | Q 100YR |
|-----------|----|------|-----------------------|----------|-----------|------------|
| | | HR. | INCHES | CFS | CFS | CFS |
| EXISTING | 55 | 0.2 | 0.10 | 0.13 | 3.06 | 7.30 |
| IMPROVED | 94 | 0.10 | 1.97 | 7.50 | 16.70 | 24.62 |

SUMMARY TABLE

| STEP | REQUIREMENT | VOLUME REQUIREMENT | NOTES |
|------|---------------------------------|-----------------------------------|--|
| 1 | WATER QUALITY VOLUME WQv | 0.17 AC. FT 7411.7 CU. FT | WATER QUALITY VOLUME PROVIDED IN PROPOSED INFILTRATION TRENCH |
| 2 | RECHARGE VOLUME REV | 0.044 AC. FT 1916.6 CU. FT | WATER VOLUME PROVIDED IN PROPOSED INFILTRATION TRENCH |
| 3 | CHANNEL PROTECTION VOLUME CPv | 11663 CU. FT 0.27 AC. FT | CPv WILL BE PROVIDED IN PROPOSED INFILTRATION TRENCH |
| 4 | OVERHEAD FLOOD PROTECTION, Q10p | N/A | N/A |
| 5 | EXTREME FLOOD VOLUME, Q100p | N/A | N/A |
| | | 852 9pm REG'D 800 9pm PROVIDED | UTILITY STORMCEPTOR STC4800 TO PRETREAT RUNOFF PRIOR TO ENTERING INFILTRATION SYSTEM |



OWNER/DEVELOPER
TSC PUMPHOUSE ROAD, LLC
11626 LONG JUMP TRAIL
ELLCOTT CITY, MD 21042

APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS
HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER _____ DATE _____

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION 3/5/02

CHIEF, DIVISION OF LAND DEVELOPMENT 3/5/02

DIRECTOR 3/12/02

BEFORE BEGINNING CONSTRUCTION
CONTACT
"MISS UTILITY"
AT
1-800-257-7777
AT LEAST 48 HOURS
PRIOR TO EXCAVATION

| NO. | REVISION | DATE |
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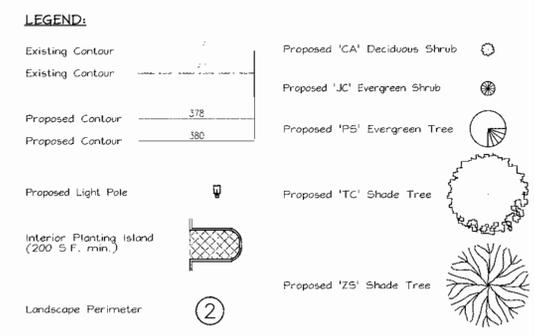
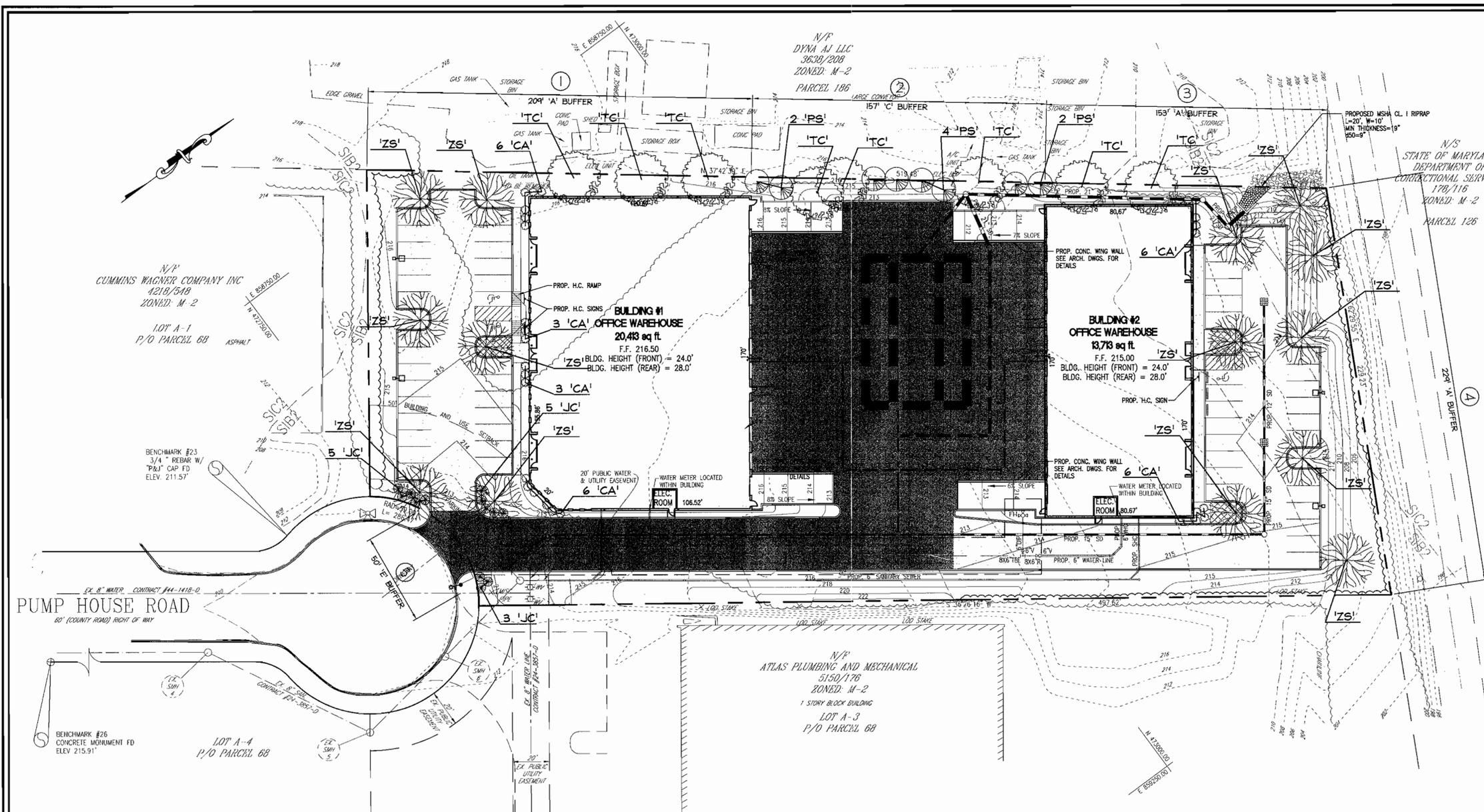
DRAINAGE AREA MAPS AND SWM DETAILS
C-W AND COMPANY, PARCEL A-2
OFFICE/WAREHOUSE

TAX MAP #48 GRID #14 PARCEL 68
6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354
ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226
SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: BHW/MR
DRAWN BY: KO
CHECKED BY: BHW
DATE: JANUARY, 2002
SCALE: 1"=30'
W.O. NO.: 2014030.00

10 SHEET OF 11



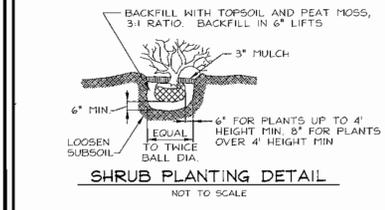
- GENERAL NOTES:**
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. THE REQUIRED PARKING AND PERIMETER LANDSCAPING WILL BE BONDED PER THIS SUBMISSION.
 - FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$7,250.00 FOR THE REQUIRED 19 SHADE TREES, 8 EVERGREEN TREES AND 13 SHRUBS.
 - ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAS SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH LCAMW PLANTING SPECIFICATIONS.
 - MAINTENANCE TO INCLUDE MONITORING AND HAND WATERING AS NEEDED FOR THE FIRST TWO GROWING SEASONS TO ESTABLISH WOODY PLANTS. SPECIALIZED PLANTING AREAS INCLUDING INTERIOR COURTYARDS AND ANNUAL BEDS MAY REQUIRE REGULAR HAND WATERING OR IRRIGATION.
 - CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
 - FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
 - CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

SCHEDULE 'B': PARKING LOT INTERNAL LANDSCAPING

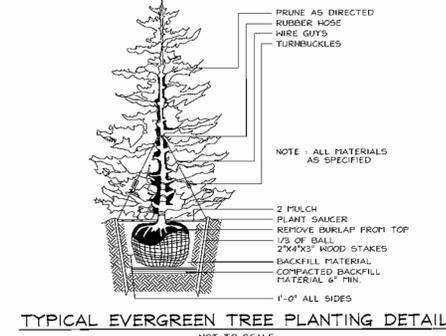
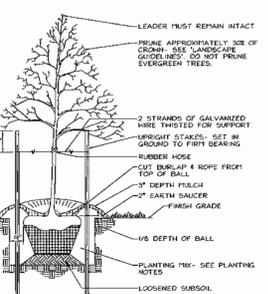
| | |
|---|----|
| Number of parking spaces | 54 |
| Number of trees and parking lot islands required (1:20) | 3 |
| Number of trees and parking lot islands provided | 3 |
| Shade Trees | 3 |
| Other Trees (2:1 Substitution) | |

LANDSCAPE SCHEDULE

| KEY | QUAN. | BOTANICAL NAME | SIZE | REMARKS |
|-----|-------|--|----------------|-----------|
| CA | 30 | Clethra alnifolia 'September Beauty' September Beauty Summersweet | #3 con | Container |
| JC | 13 | Juniperus chinensis 'Gold Star' Gold Star | 3' HT. | B & B |
| PS | 8 | Pinus strobus White Pine | 6'-8' HT | B & B |
| TC | 5 | Tilia cordata 'Greenspire' Greenspire Littleleaf Linden | 2 1/2"-3" cal. | B & B |
| ZS | 14 | Zelkova serrata Japanese Zelkova | 2 1/2"-3" cal. | B & B |



- NOTES:**
- SEE "LANDSCAPE SPECIFICATION GUIDELINES FOR BUILDING AREAS" FOR ALL MATERIAL, PRODUCT, AND PROCEDURE SPECIFICATIONS.
 - SEE "LANDSCAPE GUIDELINES FOR SUPPORTING TREES LARGER THAN 4" DBH" FOR ALL MATERIAL, PRODUCT, AND PROCEDURE SPECIFICATIONS.
 - PLACE UPRIGHT STAKES PARALLEL TO MAINS & BUILDINGS.
 - KEEP FRANCH 1" FROM TRUNK.
 - SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTING NOTES. EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS.
 - TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWERAGE EASEMENT.



FOREST CONSERVATION WORKSHEET

NET TRACT AREA:
 A. TOTAL TRACT AREA = 2.80 AC
 B. AREA WITHIN 100 YEAR FLOODPLAIN = 0.00 AC
 C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION = 0.00 AC
 D. NET TRACT AREA = 2.80 AC

LAND USE CATEGORY (FROM TABLE 3.2.1, PAGE 40, MANUAL)
 INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY.

| | | | | | |
|-----|-----|-----|-----|-----|----|
| ARA | MDR | IDA | HDR | MPD | CA |
| 0 | 0 | 0 | 0 | 0 | 0 |

E. AFFOREST THRESHOLD = 15% X D = 0.42 AC
F. CONSERVATION THRESHOLD = 15% X D = 0.42 AC

EXISTING FOREST COVER:
 G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN) = 2.27 AC
 H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD = 1.85 AC
 I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD = 1.85 AC

BREAK EVEN POINT:
 J. FOREST RETENTION WITH NO MITIGATION = 0.79 AC
 K. CLEARING PERMITTED WITHOUT MITIGATION = 1.08 AC

PROPOSED FOREST CLEARING:
 L. TOTAL AREA OF FOREST TO BE CLEARED = 2.27 AC
 M. TOTAL AREA OF FOREST TO BE RETAINED = 0.00 AC

PLANTING REQUIREMENTS:
 N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD = 0.46 AC
 O. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD = 0.84 AC
 Q. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD = 0.00 AC
 R. TOTAL REFORESTATION REQUIRED = 1.3 AC
 S. TOTAL AFFORESTATION REQUIRED = 0.00 AC
 T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED = 1.3 AC (56628 SF)

THE FOREST CONSERVATION OBLIGATIONS OF THIS PLAN WILL BE SATISFIED BY FEE-IN-LIEU.
 FEE-IN-LIEU: 56,628 SF x \$0.50 = \$28,314.00

SCHEDULE A PERIMETER LANDSCAPE EDGE

| CATEGORY | ADJACENT TO PROPERTIES* | | | | ADJACENT TO ROADWAYS |
|--|-------------------------|------|------|------|----------------------|
| | 1 | 2 | 3 | 4 | |
| Perimeter/Frontage Designation | A | C | A | A | E |
| Linear Feet of Roadway | 209' | 157' | 153' | 229' | 50 |
| Frontage/Perimeter | | | | | |
| Credit for Existing Vegetation (Yes, No, Linear Feet) Describe below if needed | No | No | No | No | No |
| Credit for Wall, Fence or Berm (Yes, No, Linear Feet) Describe below if needed | No | No | No | No | No |
| Number of Plants Required | 1160 | 4 | 160 | 3 | 1160 |
| Shade Trees | 1160 | 4 | 160 | 3 | 1160 |
| Evergreen Trees | - | - | - | - | 1.4 |
| Shrubs | - | - | - | - | 13 |
| Number of Plants Provided | 4 | 4 | 3 | 4 | 1 |
| Evergreen Trees | - | - | - | - | - |
| Other Trees (2:1 Substitution) | - | - | - | - | - |
| Shrubs (10:1 Substitution) | - | - | - | - | 13 |
| Describe Plant Substitution Credits Below if needed | | | | | |

*PARCEL A-2 IS AN INTERIOR PARCEL WITHIN A SUBDIVISION. NO PERIMETER BUFFER IS REQUIRED ADJACENT TO PARCELS A-1 AND A-3.

OWNER/DEVELOPER
 TSC PUMPHOUSE ROAD, LLC
 11628 LONG JUMP TRAIL
 ELK COTT CITY, MD 21042

| NO. | REVISION | DATE |
|-----|----------|------|
| | | |
| | | |

LANDSCAPE AND FOREST CONSERVATION PLAN
C-W AND COMPANY, PARCEL A-2
OFFICE/WAREHOUSE

TAX MAP #48 GRID #14
 6TH ELECTION DISTRICT

PARCEL 68
 HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
 ENGINEERS ARCHITECTS SURVEYORS
 7125 Riverwood Drive Columbia, Maryland 21046-2354
 Phone: 410-290-9550 Fax: 410-720-6226
 Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

APPROVED: HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF, DEVELOPMENT ENGINEERING DIVISION
 DATE: 3/5/02

CHIEF, DIVISION OF LAND DEVELOPMENT
 DATE: 3/8/02

DIRECTOR
 DATE: 3/12/02

BEFORE BEGINNING CONSTRUCTION

CONTACT
"MISS UTILITY"
 AT
 1-800-257-7777
 AT LEAST 48 HOURS PRIOR TO EXCAVATION

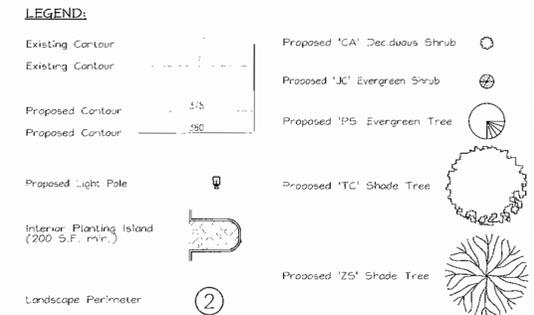
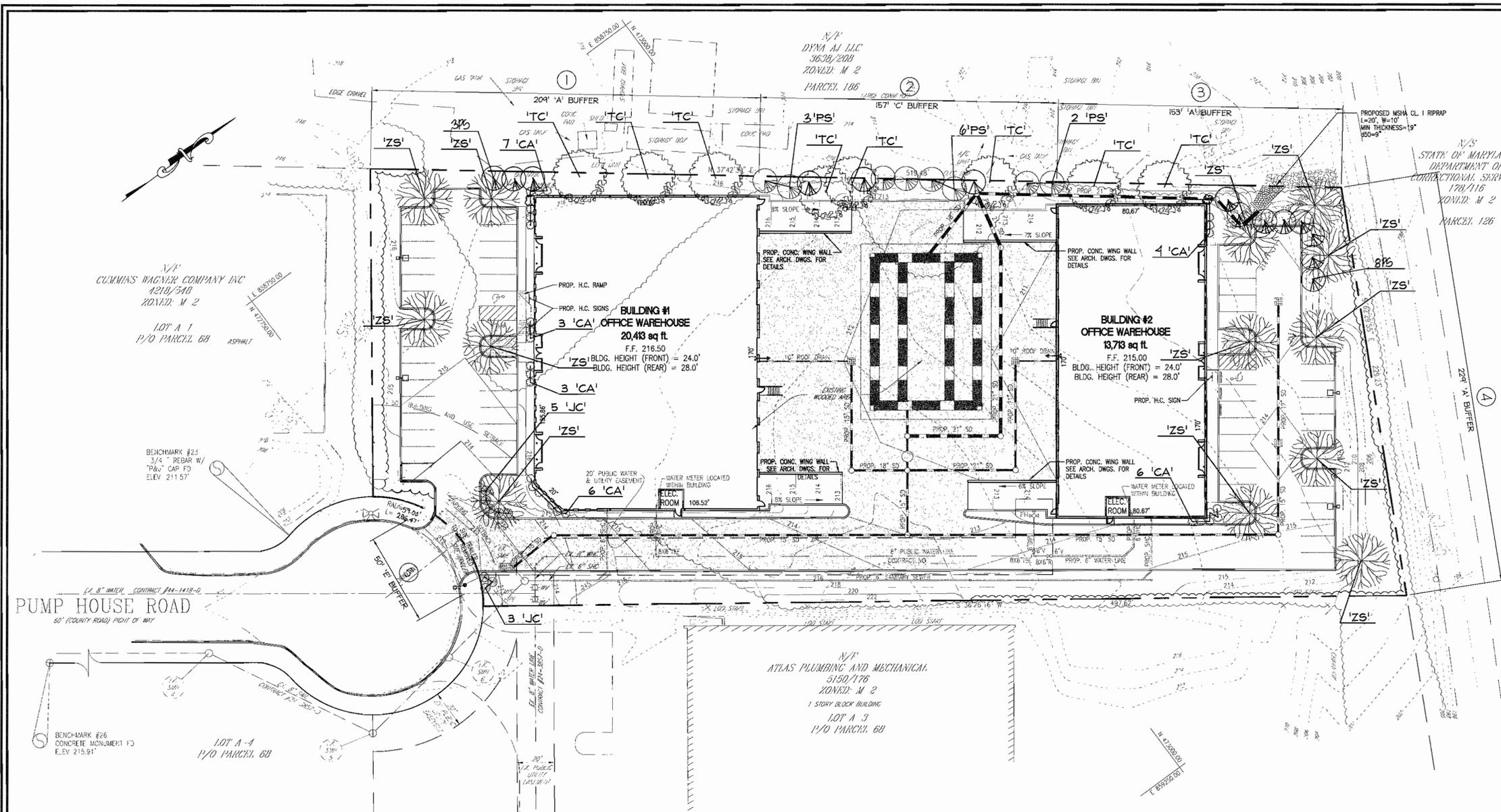
DEVELOPER'S BUILDER'S CERTIFICATE

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 MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

DATE: 02/10/02

DESIGN BY: RW/MR
 DRAWN BY: KO
 CHECKED BY: RWV
 DATE: JANUARY, 2002
 SCALE: 1"=30'
 H.O. NO.: 2014030.00

11 SHEET OF 11



- GENERAL NOTES:**
- THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE PROVISIONS OF SECTION 16.124 OF THE HOWARD COUNTY CODE AND THE LANDSCAPE MANUAL. THE REQUIRED PARKING AND PERIMETER LANDSCAPING WILL BE BONDED PER THIS SUBMISSION.
 - FINANCIAL SURETY FOR THE REQUIRED LANDSCAPING MUST BE POSTED AS PART OF THE DEVELOPER'S AGREEMENT IN THE AMOUNT OF \$7,290.00 FOR THE REQUIRED 19 SHADE TREES, 8 EVERGREEN TREES AND 13 SHRUBS.
 - ALL PLANT MATERIALS SHALL BE FULL AND HEAVY, BE WELL FORMED AND SYMMETRICAL, CONFORM TO THE MOST CURRENT AAN SPECIFICATIONS AND BE INSTALLED IN ACCORDANCE WITH LCAMA PLANTING SPECIFICATIONS.
 - MAINTENANCE TO INCLUDE MONITORING AND HAND WATERING AS NEEDED FOR THE FIRST TWO GROWING SEASONS TO ESTABLISH WOODY PLANTS. SPECIALIZED PLANTING AREAS INCLUDING INTERIOR COURTYARDS AND ANNUAL BEDS MAY REQUIRE REGULAR HAND WATERING OR IRRIGATION.
 - CONTRACTOR SHALL VERIFY LOCATION OF ALL UNDERGROUND UTILITIES PRIOR TO DIGGING.
 - FINAL LOCATION OF PLANT MATERIAL MAY NEED TO VARY TO MEET FINAL FIELD CONDITIONS. TREES SHALL NOT BE PLANTED IN THE BOTTOM OF DRAINAGE SWALES.
 - CONTRACTOR SHALL VERIFY PLANT QUANTITIES PRIOR TO BIDDING. IF PLAN DIFFERS FROM LANDSCAPE SCHEDULE, THE PLAN SHALL GOVERN.

SCHEDULE 'B': PARKING LOT INTERNAL LANDSCAPING

| | |
|---|----|
| Number of parking spaces | 52 |
| Number of trees and parking lot islands required (1:20) | 3 |
| Shade Trees | 3 |
| Other Trees (2:1 Substitution) | |

LANDSCAPE SCHEDULE

| KEY | QUAN. | BOTANICAL NAME | SIZE | REMARKS |
|-----|-------|--|-----------------|-----------|
| CA | 29 | Celastrus alifolia 'September Beauty' | 13 cal. | Container |
| JC | 8 | Juniperus chinensis 'Gold Star' | 3 HT. | B & B |
| PS | 20 | Pinus strobus White Pine | 6'-8' HT | B & B |
| TC | 8 | QUERCUS PHELLOS WILLOW OAK | 2 1/2 - 3' cal. | B & B |
| ZS | 12 | PYRUS CALLERYANA BRADFORD BRANDED PEAR | 1' cal. | B & B |

OWNER/DEVELOPER
 TSC PUMPHOUSE ROAD, LLC
 1625 LONG JUMP TRAIL
 ELL CITY, MD 21042

FOREST CONSERVATION WORKSHEET

NET TRACT AREA:
 A. TOTAL TRACT AREA = 2.80 AC
 B. AREA WITHIN 100 YEAR FLOODPLAIN = 0.00 AC
 C. AREA TO REMAIN IN AGRICULTURAL PRODUCTION = 0.00 AC
 D. NET TRACT AREA = 2.80 AC

LAND USE CATEGORY (FROM TABLE 3.2.1, PAGE 40, MANUAL)
 INPUT THE NUMBER "1" UNDER THE APPROPRIATE LAND USE ZONING, AND LIMIT TO ONLY ONE ENTRY.
 ARA MDR IDA HDR MPD CIA
 0 0 0 0 0 1

E. AFFOREST THRESHOLD 15% X D = 0.42 AC
F. CONSERVATION THRESHOLD 15% X D = 0.42 AC

EXISTING FOREST COVER:
 G. EXISTING FOREST COVER (EXCLUDING FLOODPLAIN) = 2.27 AC
 H. AREA OF FOREST ABOVE AFFORESTATION THRESHOLD = 1.85 AC
 I. AREA OF FOREST ABOVE CONSERVATION THRESHOLD = 1.85 AC

BREAK EVEN POINT:
 J. FOREST RETENTION WITH NO MITIGATION = 0.79 AC
 K. CLEARING PERMITTED WITHOUT MITIGATION = 1.06 AC

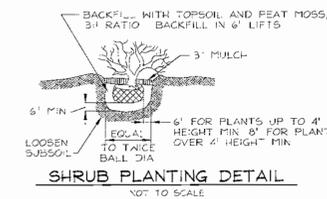
PROPOSED FOREST CLEARING:
 L. TOTAL AREA OF FOREST TO BE CLEARED = 2.27 AC
 M. TOTAL AREA OF FOREST TO BE RETAINED = 0.00 AC

PLANTING REQUIREMENTS:
 N. REFORESTATION FOR CLEARING ABOVE CONSERVATION THRESHOLD = 0.46 AC
 O. REFORESTATION FOR CLEARING BELOW CONSERVATION THRESHOLD = 0.84 AC
 P. CREDIT FOR RETENTION ABOVE CONSERVATION THRESHOLD = 0.00 AC
 Q. TOTAL REFORESTATION REQUIRED = 1.3 AC
 R. TOTAL AFFORESTATION REQUIRED = 0.00 AC
 T. TOTAL REFORESTATION AND AFFORESTATION REQUIRED = 1.3 AC (56628 SF)

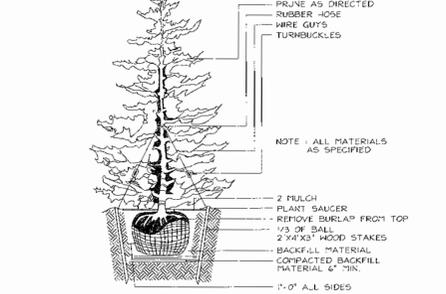
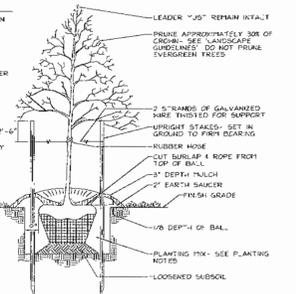
SCHEDULE A PER METER LANDSCAPE EDGE

| CATEGORY | ADJACENT TO PROPERTIES | | | | ADJACENT TO ROADWAYS |
|---|------------------------|------|------|------|----------------------|
| | 1 | 2 | 3 | 4 | |
| Perimeter/Frontage Designation | 1 | 2 | 3 | 4 | 5 |
| Linear Feet of Roadway | 209' | 157' | 153' | 229' | 50' |
| Credit for Existing Vegetation (Yes, No, Linear Feet) | No | No | No | No | No |
| Credit for Wall, Fence or Berm (Yes, No, Linear Feet) | No | No | No | No | No |
| Number of Plants Required | 160 | 140 | 160 | 160 | 140 |
| Shade Trees | - | - | - | - | - |
| Evergreen Trees | - | - | - | - | - |
| Shrubs | - | - | - | - | - |
| Number of Plants Provided | 4 | 4 | 3 | 4 | 1 |
| Shade Trees | - | - | - | - | - |
| Evergreen Trees | - | - | - | - | - |
| Shrubs (10:1 Substitution) | - | - | - | - | 13 |

*PARCEL A-2 IS AN INTERIOR PARCEL WITHIN A SUBDIVISION. NO PERIMETER BUFFER IS REQUIRED ADJACENT TO PARCELS A-1 AND A-3.



- NOTES:**
- SEE "LANDSCAPE SPECIFICATION GUIDELINES FOR BUILT-TREE WASHINGTON PERENNIAL PLANT AREAS" FOR ANNUAL SPECIFICATIONS
 - SEE "LANDSCAPE SPECIFICATION GUIDELINES FOR SUPPORTING TREES LARGER THAN 2-1/2" CALIBER
 - PLACE UPRIGHT STAKES PARALLEL TO WALKS & BUILDINGS
 - KEEP MULCH 1" FROM TRUNK
 - SEE ARCHITECTURAL PLANS FOR ADDITIONAL PLANTINGS WHICH EXCEED HOWARD COUNTY MINIMUM REQUIREMENTS
 - TREES ARE NOT TO BE PLANTED OVER PRIVATE SEWERAGE SYSTEMS



APPROVED FOR PRIVATE WATER AND PRIVATE SEWERAGE SYSTEMS
 HOWARD COUNTY HEALTH DEPARTMENT

COUNTY HEALTH OFFICER _____ DATE _____

APPROVED HOWARD COUNTY DEPARTMENT OF PLANNING AND ZONING

CHIEF DEVELOPER ENGINEERING DIVISION _____ DATE 3/5/02

CHIEF DIVISION OF LAND DEVELOPMENT _____ DATE 3/8/02

DIRECTOR _____ DATE 3/13/02

BEFORE BEGINNING CONSTRUCTION CONTACT "MISS UTILITY" AT 1-800-257-7777 AT LEAST 48 HOURS PRIOR TO EXCAVATION

DEVELOPER'S BUILDER'S 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 MANUAL. I/WE FURTHER CERTIFY THAT UPON COMPLETION, A CERTIFICATION OF LANDSCAPE INSTALLATION, ACCOMPANIED BY AN EXECUTED ONE(1) YEAR GUARANTEE OF PLANT MATERIALS, WILL BE SUBMITTED TO THE DEPARTMENT OF PLANNING AND ZONING.

DATE 02/10/02

THE FOREST CONSERVATION OBLIGATIONS OF THIS PLAN WILL BE SATISFIED BY TREE-IN-LIEU.

TREE-IN-LIEU: 56,628 SF x \$0.50 = \$28,314.00

REVISE PLANTINGS PER AS-BUILT
 NO. _____ REVISION _____ DATE 1/15/03

LANDSCAPE AND FOREST CONSERVATION PLAN
C-W AND COMPANY, PARCEL A-2
OFFICE/WAREHOUSE

TAX MAP #48 GRID #14 PARCEL 68
 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND

FREDERICK WARD ASSOCIATES, INC.
 ENGINEERS 7125 Riverwood Drive Columbia, Maryland 21046-2354
 ARCHITECTS Phone: 410-290-9550 Fax: 410-720-6226
 SURVEYORS Bel Air, Maryland Columbia, Maryland Warrenton, Virginia

DESIGN BY: RHW/RR
 DRAWN BY: RC
 CHECKED BY: RHW
 DATE: JANUARY 2002
 SCALE: 1"=50'
 P.C. NO.: 2014030.00

11 SHEET OF 11