

Martin O'Malley  
*Governor*

Anthony G. Brown  
*Lt. Governor*



Margaret G. McHale  
*Chair*

Ren Serey  
*Executive Director*

**STATE OF MARYLAND  
CRITICAL AREA COMMISSION  
CHESAPEAKE AND ATLANTIC COASTAL BAYS**

1804 West Street, Suite 100, Annapolis, Maryland 21401  
(410) 260-3460 Fax: (410) 974-5338  
[www.dnr.state.md.us/criticalarea/](http://www.dnr.state.md.us/criticalarea/)

December 11, 2009

William E. Lesko  
Anne Arundel County  
Department of Public Works  
Bureau of Engineering  
2662 Riva Road, MS 7301  
Annapolis, MD 21401-7374

Re: Deale Road sewer extension

Dear Mr. Lesko:

Thank you for forwarding a consistency report for the above-referenced project proposal. The 5 acre project site is in the Critical Area and 0.6 acres are designated as a Resource Conservation Area (RCA), 1.6 acres are designated as a Limited Development Area (LDA) and 2.8 acres are designated as an Intensely Developed Area (IDA). The proposed project is the extension of an existing sewer line running east along Deale Road, across Tracy's Creek, and north on Rockhold Creek Road. The proposed project qualifies as a local agency action resulting in development of local significance on private lands or lands owned by local jurisdictions under COMAR 27.02.02.

The applicant proposes to install the extended sewer line using direction drilling, which significantly minimizes the proposed disturbance in the Critical Area and the 100-foot Buffer in contrast with the traditional open-trenching method. As provided by COMAR 27.01.02.04.C(1)(b), this utility project which will cross a Habitat Protection Area (the 100-foot Buffer) has been designed in a way that minimizes impacts to wildlife, and water quality. The required 11,240 square feet of disturbance in the 100-foot Buffer for excavation and construction of duct banks will be mitigated at a 3:1 ratio via payment into the County's fee-in-lieu account, as the applicant was unable to find an area on which to provide these plantings. The project does not require any clearing of existing trees, it will not create any additional lot coverage, and the applicant is addressing the 10% pollutant reduction requirement for development within the IDA with an impervious surface credit provided by the proposed construction of roadside grass swales.

Mr. Lesko  
December 11, 2009  
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The applicant has obtained the required local and State permits for sediment and erosion control, stormwater management, and directional drilling under tidal waters, as well as confirmation from the Maryland Department of Natural Resources' Wildlife and Heritage Service (WHS) and the Maryland Historic Trust (MHT) that the project will not create impacts to any known protected species or cultural resources.

Accordingly, this office concurs with the County's determination that the proposed project is consistent with the County's Critical Area program.

Please feel free to contact me at 410-260-3481 if you have any questions.

Sincerely,



Amber Widmayer  
Natural Resources Planner

cc: AA 152-08  
Kelly Krinetz

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June 3, 2008,

William E. Lesko  
Anne Arundel County  
Department of Public Works  
Bureau of Engineering  
2662 Riva Road, MS 7301  
Annapolis, MD 21401-7374

Re: Deale Road sewer extension

Dear Mr. Lesko:

Thank you for forwarding the above-referenced project proposal. The 5.4 acre project site is in the Critical Area and 3.8 acres are designated as a Resource Conservation Area (RCA), 1.6 acres are designated as a Limited Development Area (LDA) and 0.05 acres are designated as an Intensely Developed Area (IDA). The proposed project is the extension of an existing sewer line running east along Deale Road, across Tracy's Creek, and north on Rockhold Creek Road. The proposed project qualifies as a local agency action resulting in development of local significance on private lands or lands owned by local jurisdictions under COMAR 27.02.02. Because the project can not be done in a manner that is consistent with Anne Arundel County's Critical Area program due to the extent of proposed impacts within the 100-foot Buffer, the project requires conditional approval by the Commission under COMAR 27.02.06. Under this section, if development located in the Critical Area proposed by a State or local agency is prohibited from occurring then the agency proposing the development may seek conditional approval for the project.

In order for the Critical Area Commission to process this request as a conditional approval, the applicant must submit information demonstrating how the proposed project meets the following criteria.

***In order to qualify for consideration by the Commission for conditional approval, it shall be shown by the proposing or sponsoring agency that the project or program has the following characteristics:***

*B.(1) That there exist special features of the site or there are other special circumstances such that the literal enforcement of these regulations would prevent a project or program from being implemented;*

*B.(2) That the project or program otherwise provides substantial public benefits to the Chesapeake Bay Critical Area Program;*

*B.(3) That the project or program is otherwise in conformance with this subtitle;*

***The conditional approval request shall, at a minimum, contain the following:***

*C.(1) A showing that the literal enforcement of the provisions of this subtitle would prevent the conduct of an authorized State or local agency program or project;*

*C.(2) A proposed process by which the program or project could be so conducted as to conform, insofar as possible, with the approved local Critical Area program or if the development is to occur on State-owned lands, with the criteria set forth in COMAR 27.02.05;*

*C.(3) Measures proposed to mitigate adverse effects of the project or program or an approved local Critical Area program or, if on State-owned lands, on the criteria set forth in COMAR 27.02.05.*

In addition to providing the information above, a complete application will include any necessary State or local agency permits, a letter from Maryland Department of Natural Resources' Wildlife and Heritage Service stating that the proposed project will not impact rare, threatened or endangered species, and a letter from the Maryland Historical Trust that the proposed project will not impact any historic resources. Further information about these requirements is included in the enclosed project application checklist.

As soon as we receive your complete application, we will be able to schedule the presentation of your proposed project on the agenda for a Critical Area Commission meeting. Projects must be received at least one month prior to the next scheduled Commission meeting in order to be included on that meeting agenda. The Commission meets on the first Wednesday of each month, and the schedule is posted at <http://www.dnr.state.md.us/criticalarea/aboutthecommission>.

This office has reviewed the submitted project plans and we have provided comments and recommendations below:

- 1) Please provide information about the length of the proposed sewer line extension.
- 2) The plans indicate that the southern portion of the proposed sewer extension is not included in this contract. However, if the portion of the project that is beyond the scope of this project will be done on behalf of the County or within the County

owned right of way, that portion of the project will have to come to the Commission for approval as well. If feasible, both portions of the proposed sewer extension project should be reviewed by Commission staff at the same time so that the applicant will have to obtain only one conditional approval from the Commission for the entire project.

- 3) Please provide the following Critical Area information on the project plans: the areas that are designated as an RCA, LDA or IDA, the 100-foot Buffer as measured from the edge of tidal wetlands or waters in the field, the expanded Buffer where the 100-foot Buffer is contiguous with hydric soils or nontidal wetlands, the limits of tidal and nontidal wetlands and the 25-foot nontidal wetland buffer, and the total area of proposed disturbance within the tidal and nontidal wetlands and their buffers. Please show these Buffers and wetlands on both the plan views as well as the cross section views as applicable. Also, the applicant will need to obtain permits from Maryland Department of the Environment (MDE) for any disturbance within the nontidal wetlands and their buffers.
- 4) Once the 100-Buffer and expanded Buffer are mapped on the plans, please confirm that the total proposed Buffer disturbance from clearing, grading and the footprint of new structures and impervious surfaces will be 1.2 acres as is currently stated on the plans. This area of disturbance must be mitigated with plantings at a 3:1 ratio.
- 5) Any trees that are cleared within the RCA or LDA that are outside of the Buffer must be replaced at a 1:1 ratio.
- 6) Please confirm that no additional impervious surfaces will be created in conjunction with the proposed project for such improvements as maintenance roads, turn-around areas, or driveway extensions.
- 7) Because the nature of the property is a County owned linear right of way that is currently developed with a road, the applicant can not meet the 15% impervious surface limit, tree clearing limit or the minimum 15% afforestation requirement in the County's Critical Area program for development in a LDA or RCA. The applicant should discuss this limitation in the narrative addressing the conditional approval criteria. Also, in order to compensate for this requirement, we recommend that the applicant provide some type of stormwater treatment similar to that required by the 10% rule for development within Intensely Developed Areas (IDA).
- 8) Please provide a planting plan demonstrating how the mitigation plantings for the necessary tree clearing and Buffer disturbance will be provided. If locating all of these plantings on the property is not feasible, an offsite planting area within the Critical Area may be acceptable. The plantings should consist of native species,

Mr. Lesko  
June 3, 2008  
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and a list of such native species can be found in the "U.S. Fish and Wildlife Service's Native Plants for Wildlife Habitat and Conservation Landscaping: Chesapeake Bay Watershed" document which is available at <http://www.nps.gov/plants/pubs/chesapeake/>.

- 9) The applicant must complete and submit 10% pollutant reduction calculations for the portion of the project site that is within the IDA. The applicant may use the proposed limit of disturbance that is within the IDA as the site area for purposes of completing these calculations. The worksheet for these calculations and further information about the 10% rule is available on the Commission's website, at the following address:  
[http://www.dnr.state.md.us/criticalarea/guidancepubs/10percent\\_rule.html](http://www.dnr.state.md.us/criticalarea/guidancepubs/10percent_rule.html)

Please feel free to contact me at 410-260-3481 if you have any questions.

Sincerely,



Amber Widmayer  
Natural Resources Planner

cc: AA 152-08  
Dan Cockerham  
Kelly Krinetz

## Consistency Report for Local Government Projects

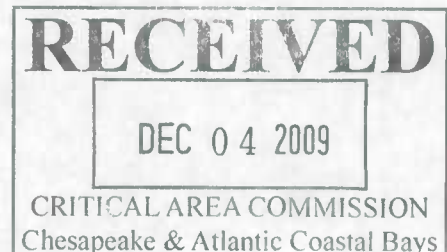
Project Name: <b>Deale Road Sewer Extension</b>	Jurisdiction: <b>Deale Maryland</b>
Project Description: <b>Installation of a low pressure sanitary sewer collection system to existing homes and businesses along MD route 256 (Deale Road), Herring Bay Road, &amp; Rockhold Creek Road, along existing street right of way and within acquired easements.</b>	
Local Agency proposing project: <b>Anne Arundel County Maryland</b>	
Contact Name and Phone Number: <b>Bill Lesko 410-222-7569</b>	
Project Location (include street address, tax map and parcel number): <b>NA. All work is within existing street right of way and acquired easements.</b>	
Critical Area acreage and designation: <b>5 Acres total RCA - 0.6 Acres LDA - 1.6 Acres IDA - 2.8 Acres</b>	

Project Data	
Existing forest/woodland/trees:	0 % of site: <b>None in the LODs (confirmed)</b>
Proposed clearing:	0% of existing forest:
Mitigation to be provided: <b>33480 SF provided as In lieu payment of \$24,420</b>	
Planting location & species (also show on site plan): <b>Fee In lieu payment</b>	
Existing impervious surface:	48.6% of site:
Proposed new impervious:	0% N/A
Total impervious surface:	48.6% of site:
<b>If the % of Impervious cover exceeds the permitted amount in the LDA or RCA, the project may need a Conditional Approval from the Critical Area Commission. Please contact your Commission planner for assistance.</b>	
Total Area Disturbed: <b>11,240 SF</b>	
Stormwater Management: (If site is in the IDA, the 10% worksheets must be attached. Otherwise, local stormwater requirements must be addressed.) <b>SWM will be addressed with grass channels.</b>	
Has project received local approval of SWM and sediment and erosion control plans? <b>Yes #G02013226 See attached</b>	
Buffer impacts? <b>Yes</b>	Is project water dependent? <b>No</b>
<b>If there are Buffer Impacts proposed and the project is not water dependent, the project may need a Conditional Approval from the Critical Area Commission. Please contact your Commission planner for assistance.</b>	
Other Habitat Protection Areas:	
Colonial Nesting Waterbird site? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Waterfowl Staging Area? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Endangered / threatened species? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	Forest Interior Dwelling Bird Habitat? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>
Anadromous Fish Propagation Waters? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/>	
Non-tidal Wetland Impacts? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, MDE permit #: <b>7-22:23-1232</b>	
Tidal Wetland Impacts? Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If yes, MDE permit #:	

**In accordance with COMAR 27.02.02, we hereby certify that this local agency project is consistent with the requirements of the local Critical Area Program.**

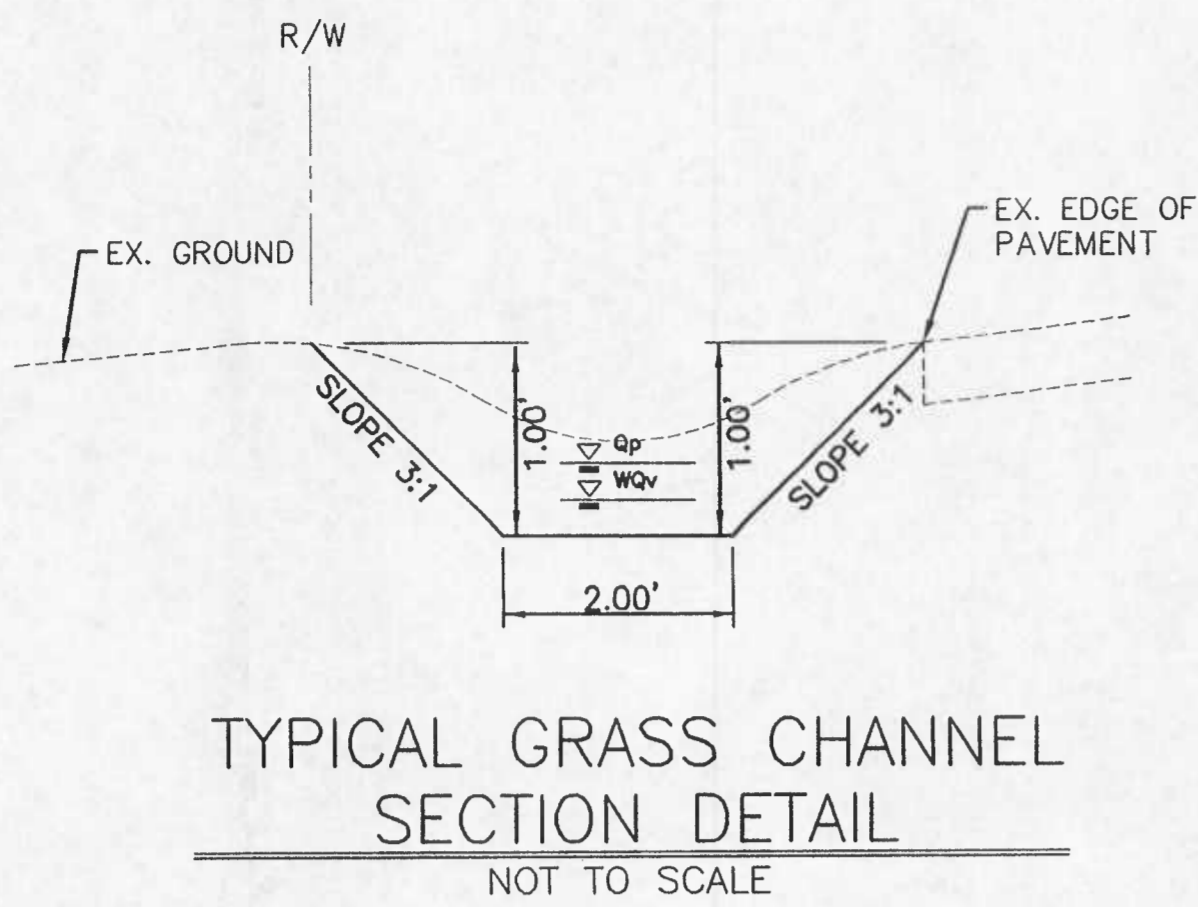
  
\_\_\_\_\_  
(Signature)

Please sign above, attach the site plan to this report and submit to the Critical Area Commission at 1804 West St., Suite 100, Annapolis, MD 21401



RECEIVED

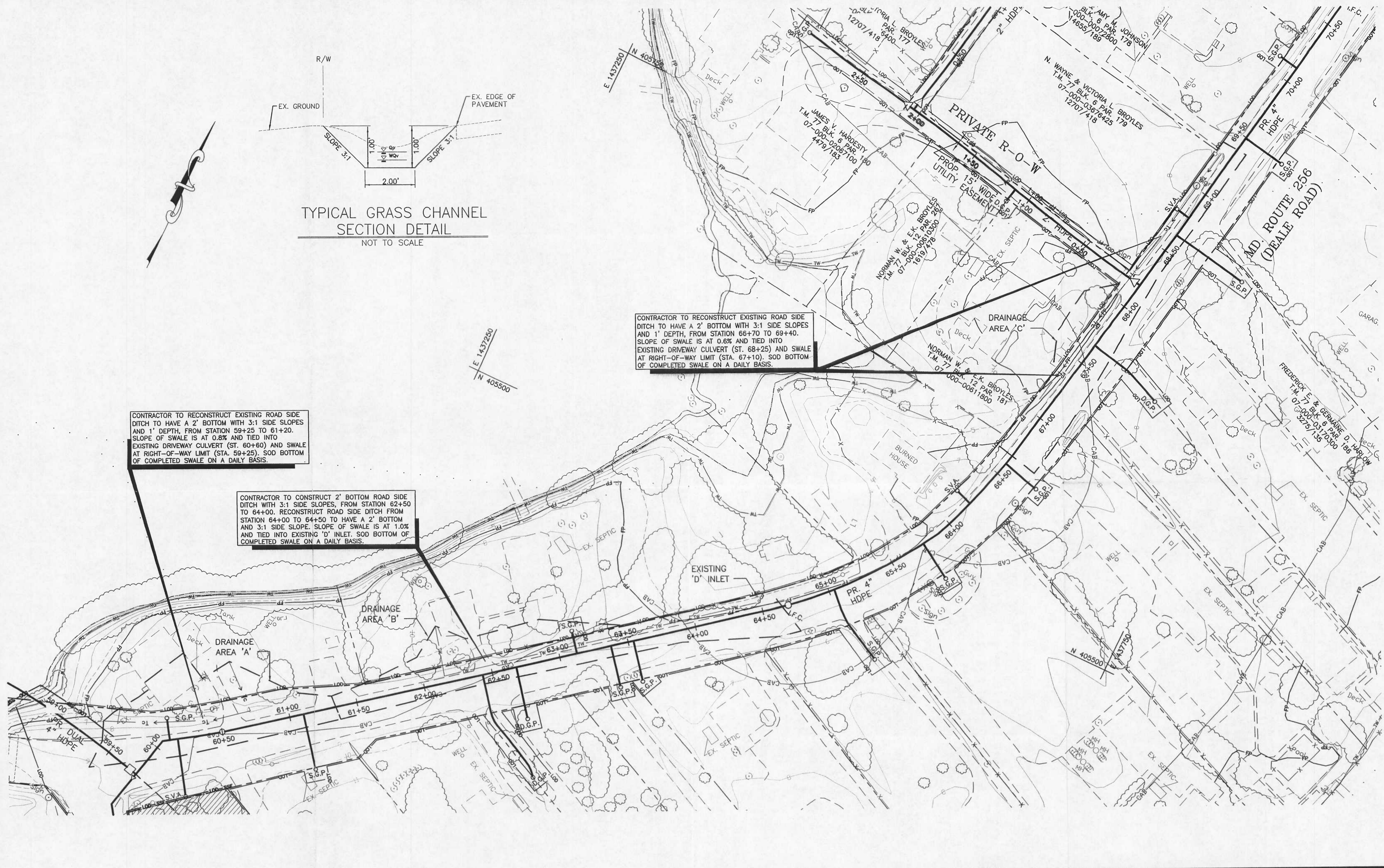




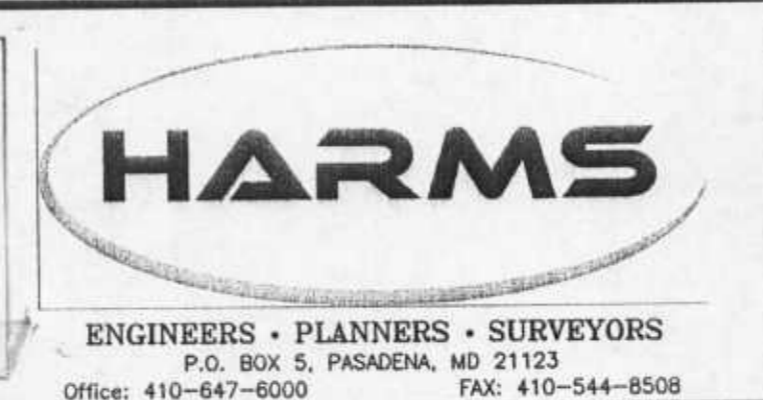
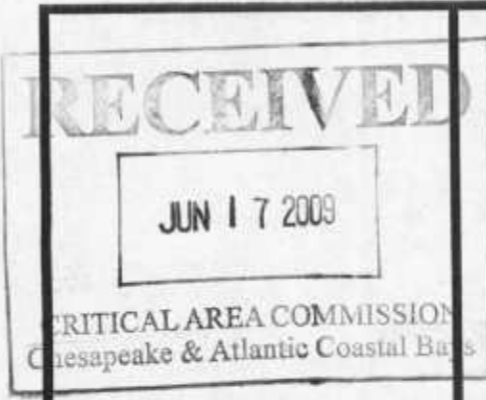
CONTRACTOR TO RECONSTRUCT EXISTING ROAD SIDE DITCH TO HAVE A 2' BOTTOM WITH 3:1 SIDE SLOPES AND 1' DEPTH, FROM STATION 66+70 TO 69+40. SLOPE OF SWALE IS AT 0.6% AND TIED INTO EXISTING DRIVEWAY CULVERT (ST. 68+25) AND SWALE AT RIGHT-OF-WAY LIMIT (STA. 67+10). SOD BOTTOM OF COMPLETED SWALE ON A DAILY BASIS.

CONTRACTOR TO RECONSTRUCT EXISTING ROAD SIDE DITCH TO HAVE A 2' BOTTOM WITH 3:1 SIDE SLOPES AND 1' DEPTH, FROM STATION 59+25 TO 61+20. SLOPE OF SWALE IS AT 0.8% AND TIED INTO EXISTING DRIVEWAY CULVERT (ST. 60+60) AND SWALE AT RIGHT-OF-WAY LIMIT (STA. 59+25). SOD BOTTOM OF COMPLETED SWALE ON A DAILY BASIS.

CONTRACTOR TO CONSTRUCT 2' BOTTOM ROAD SIDE DITCH WITH 3:1 SIDE SLOPES, FROM STATION 62+50 TO 64+00. RECONSTRUCT ROAD SIDE DITCH FROM STATION 64+00 TO 64+50 TO HAVE A 2' BOTTOM AND 3:1 SIDE SLOPE. SLOPE OF SWALE IS AT 1.0% AND TIED INTO EXISTING 'D' INLET. SOD BOTTOM OF COMPLETED SWALE ON A DAILY BASIS.



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 10810. EXPIRATION DATE: FEBRUARY 20, 2010.



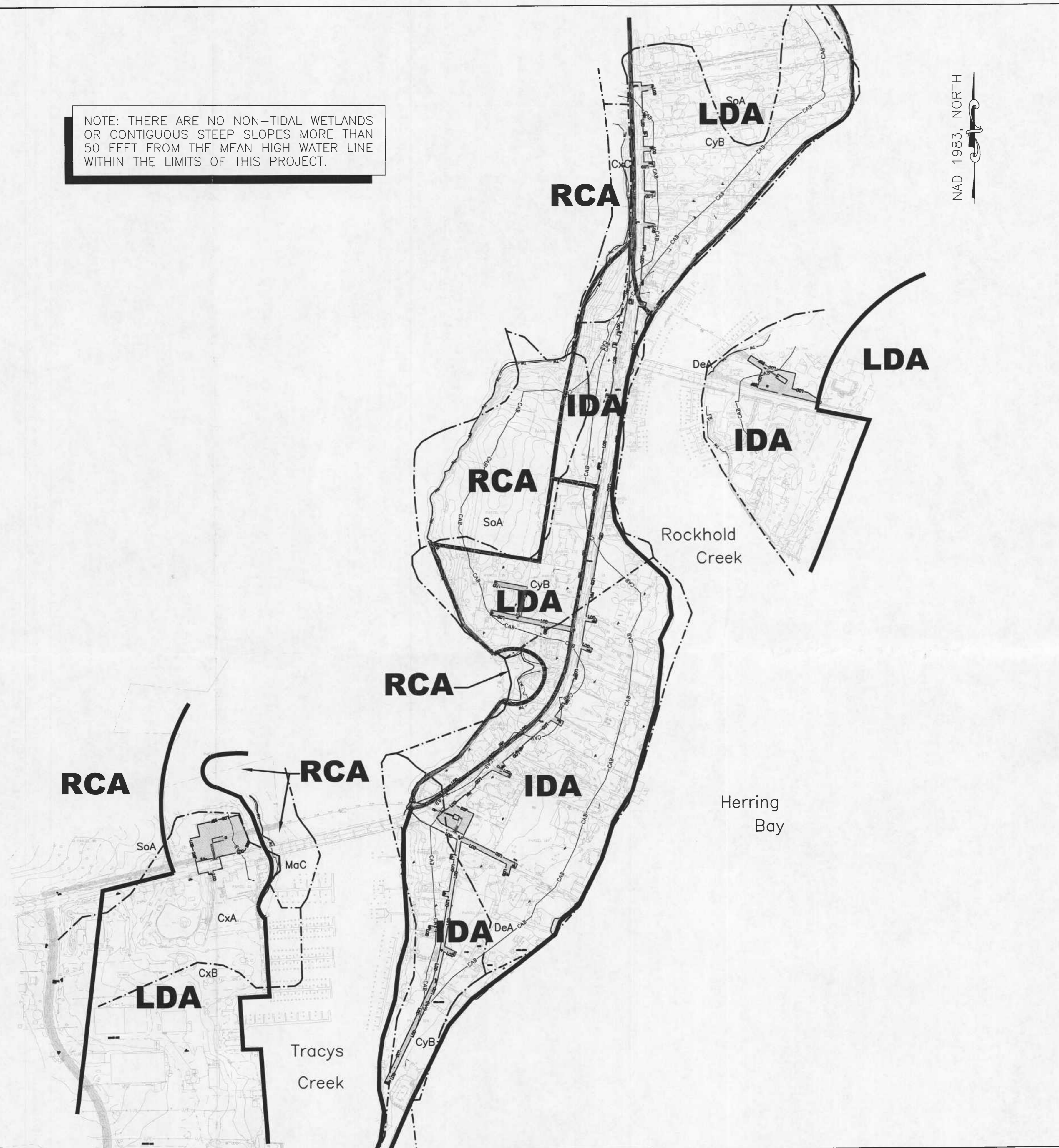
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS			
REVISED DATE:	BY:	APPROVED:	DATE:
		CHIEF ENGINEER	
		APPROVED:	DATE:
		ASSISTANT CHIEF ENGINEER	
APPROVED:	DATE:	APPROVED:	DATE:
		CHIEF RIGHT-OF-WAY	
SCALE: 1" = 30'		DRAWN BY: B.L.C.	
CHECKED BY: S.G.Z.		SHEET NO. 15 OF 25	
PROJECT NO.: S-8020		CONTRACT NO.: S-802001	

GRASS SWALE PLAN  
DEALE ROAD  
SEWER EXTENSION  
TAX MAP 77 BLOCK 6 PARCEL 210

Date: 06/03/2009 User: bcomelius Drawing Path: \\chillico-2\projects\Deale\Road Sewer Extension\02-05-005A\Reports\Environmental\SCARE-CON.dwg XREF File(s): \\BASE.dwg\DealeBase.dwg

NOTE: THERE ARE NO NON-TIDAL WETLANDS OR CONTIGUOUS STEEP SLOPES MORE THAN 50 FEET FROM THE MEAN HIGH WATER LINE WITHIN THE LIMITS OF THIS PROJECT.

NAD 1983 NORTH



PLAN VIEW  
SCALE: 1"=200'

**LEGEND**

- 12----- EXISTING 2' CONTOUR
- PROPERTY LINE/LOT LINE
- SF/1.00-----SF/1.00----- SILT FENCE/LIMIT OF DISTURBANCE
- X-----X----- EXISTING FENCE
- IDA** CRITICAL AREA ZONE
- CRITICAL AREA LINE
- MaC** SOIL TYPE
- SOIL BOUNDARY
- TW ----- TIDAL WETLANDS
- CAB ----- 100' CRITICAL AREA BUFFER

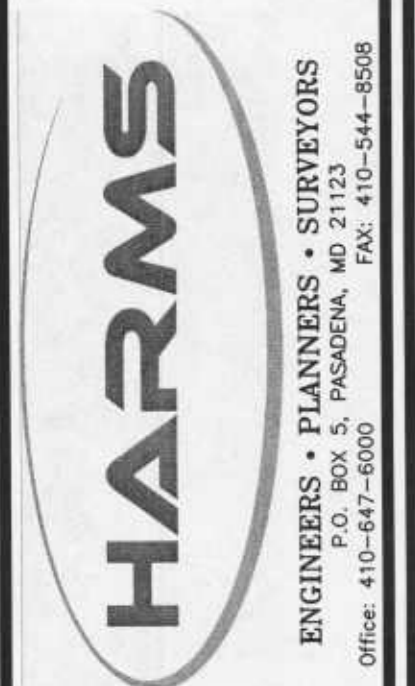
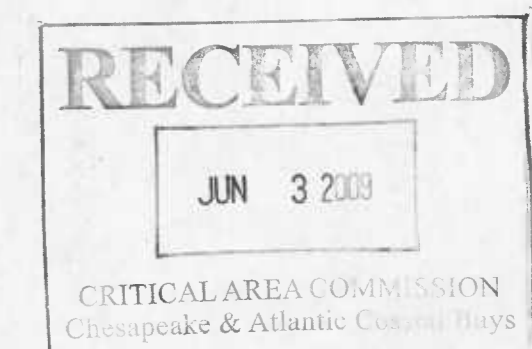
Soil Types						
SYMBOLS	SOIL SERIES	DESCRIPTION	HYDRIC	K-FACTOR >0.35	ACID-SULFATE BEARING	PRIME FARMLAND
CxA	Cumberstone-Mattapex Complex	0-2% slopes	NO	NO	NO	NO
CxB	Cumberstone-Mattapex Complex	2-5% slopes	NO	NO	NO	NO
CxC	Cumberstone-Mattapex Complex	5-10% slopes	NO	NO	NO	NO
CyB	Cumberstone-Mattapex Urban Land Complex	0-5% slopes	NO	NO	NO	NO
DeA	Deale-Shadyoak Urban Land Complex	0-2% slopes	NO	NO	NO	NO
MaC	Marr-Dodon Complex	5-10% slopes	NO	NO	NO	NO
SoA	Shadyoak-Elkton Complex	0-2% slopes	NO	NO	NO	NO

SITE INVENTORY		
CRITICAL AREA DESIGNATION	DISTURBANCE IN ACRES	DISTURBANCE IN SQ. FEET
IDA AREA	3.33 ACRES	145,156 S.F.
LDA AREA	1.62 ACRES	70,664 S.F.
RCA AREA	0.08 ACRES	3,433 S.F.
<b>TOTAL AREA</b>	<b>5.03 ACRES</b>	<b>219,253 S.F.</b>

VARIANCE INFORMATION		
TYPE OF DISTURBANCE	DISTURBANCE IN ACRES	DISTURBANCE IN SQ. FEET
100' BUFFER DISTURB.	2.54 ACRES	110,733 S.F.
NON-BUFFER DISTURB.	4.19 ACRES	182,561 S.F.
BUFFER FOREST CLEAR	0.0 ACRES	0 S.F.

**OWNER**  
ANNE ARUNDEL COUNTY DPW  
2662 RIVA ROAD  
ANNAPOLIS, MARYLAND, 21403

**DEVELOPER**  
ANNE ARUNDEL COUNTY DPW



NO.	REVISION	BY	DATE

**DEALE ROAD SEWER EXTENSION**  
CRITICAL AREA REPORT  
EXISTING CONDITIONS  
EXHIBIT D  
GRADING PERMIT NO. G02013226  
TAX MAP 77  
ANNE ARUNDEL CO. MD.

DESIGNED BY: DRC  
DRAWN BY: B.L.C.  
CHECKED BY: KAD  
DATE: June 2009  
W.O. NO. 02-05-005A

# ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS

## DEALE ROAD SEWER EXTENSION

### PROJECT NUMBER S-8020 CONTRACT NUMBER S-802001

#### GENERAL NOTES

1. ALL CONSTRUCTION SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE ANNE ARUNDEL COUNTY GRADING ORDINANCE, AND THE ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS "STANDARD DETAILS FOR CONSTRUCTION" AND "STANDARD SPECIFICATIONS FOR CONSTRUCTION", DATED JANUARY, 2001 AND ALL APPLICABLE ADDENDA, UNLESS OTHERWISE NOTED.
2. THE EXISTING UTILITIES AND OBSTRUCTIONS SHOWN ARE FROM THE BEST AVAILABLE RECORDS AND SHALL BE VERIFIED BY THE CONTRACTOR TO HIS SATISFACTION PRIOR TO CONSTRUCTION. NEITHER THE OWNER NOR THE ENGINEER WARRANT OR GUARANTEE THE COMPLETENESS OR CORRECTNESS OF THE INFORMATION SHOWN HEREIN. NECESSARY PRECAUTIONS SHALL BE TAKEN BY THE CONTRACTOR TO PROTECT EXISTING SERVICES AND MAINS. ANY DAMAGE TO THEM DUE TO HIS NEGLIGENCE SHALL BE REPAIRED IMMEDIATELY AT HIS OWN EXPENSE.
3. THE CONTRACTOR SHALL NOTIFY THE BALTIMORE GAS & ELECTRIC CO., (800-233-1854), AND MISS UTILITY, (800-257-7777), FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
4. THE CONTRACTOR SHALL NOTIFY THE ANNE ARUNDEL COUNTY DEPARTMENT OF PLANNING & ZONING (410-222-7780) AND (410-222-7560), 48 HOURS PRIOR TO STARTING WORK ON THESE DRAWINGS.
5. THE CONTRACTOR SHALL NOTIFY VERIZON (410-393-3648) FIVE (5) WORKING DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS.
6. UNLESS OTHERWISE NOTED LOW PRESSURE MAIN ELEVATIONS REFER TO TOP OF PIPE, AND ALL OTHER PIPE ELEVATIONS REFER TO INVERT.
7. IT SHALL BE DISTINCTLY UNDERSTOOD THAT FAILURE TO MENTION SPECIFICALLY ANY WORK WHICH WOULD NORMALLY BE REQUIRED TO COMPLETE THE PROJECT SHALL NOT RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITY TO PERFORM SUCH WORK.
8. THE CONTRACTOR SHALL NOTE THAT IN CASE OF DISCREPANCY BETWEEN THE SCALED AND FIGURED DIMENSIONS SHOWN ON THESE DRAWINGS, THE FIGURED DIMENSIONS SHALL GOVERN.
9. SEDIMENT CONTROL DEVICES SHALL BE COMPLETE AND IN SERVICE PRIOR TO CONSTRUCTION OF UTILITIES SHOWN ON THIS PLAN.
10. ALL WORK SHALL COMPLY WITH ALL APPLICABLE PROVISIONS OF THE MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL IN DEVELOPING AREAS ISSUED BY THE U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE.
11. LOW PRESSURE SEWER (L.P.S.) SHALL BE SDR-11 HIGH DENSITY POLYETHYLENE (H.D.P.E.) PIPE. 4" L.P.S. SHALL BE DUCTILE IRON PIPE SIZE (D.I.P.S.) AND ALL OTHER SMALLER PIPES SHALL BE IRON PIPE SIZE (I.P.S.).
12. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING AND REPLACING ANY EXISTING FENCES, CURBS, DRIVEWAYS, SIDEWALKS, PAVING, ETC. DAMAGED OR REMOVED DURING CONSTRUCTION TO LIKE OR BETTER CONDITION THAN ORIGINALLY FOUND.
13. TOPOGRAPHICAL INFORMATION SHOWN HEREON IS BASED ON INFORMATION RECEIVED FROM POTOMAC AERIAL SURVEYS INC., DATED JULY, 2005.
14. THE COORDINATES, BEARINGS, ELEVATIONS, ETC., SHOWN ON THESE PLANS REFER TO THE MARYLAND STATE SYSTEM OF PLANE COORDINATES AS ESTABLISHED FROM GPS POINTS SET BY JOHN E. HARMS, JR. & ASSOCIATES, INC.
15. THE CONTRACTOR SHALL ADHERE TO THE HIGH VOLTAGE LINE ACT.
16. ANY BORROW WILL COME FROM A SITE OR ANY SPOIL WILL BE PLACED ON A SITE APPROVED BY ANNE ARUNDEL COUNTY.
17. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATION OF HIS CONSTRUCTION WITH THE CONSTRUCTION BY OTHER CONTRACTORS.
18. ALL WORK WITHIN STATE RIGHTS-OF-WAY SHALL BE IN ACCORDANCE WITH SHA UTILITY PERMIT AND ALL APPLICABLE REQUIREMENTS OF THE MARYLAND STATE HIGHWAY ADMINISTRATION "STANDARD SPECIFICATIONS FOR CONSTRUCTION AND MATERIALS" AND "BOOK OF STANDARDS FOR HIGHWAY AND INCIDENTAL STRUCTURES", LATEST EDITIONS, INCLUDING ALL APPLICABLE SUPPLEMENTS AND ADDENDA.

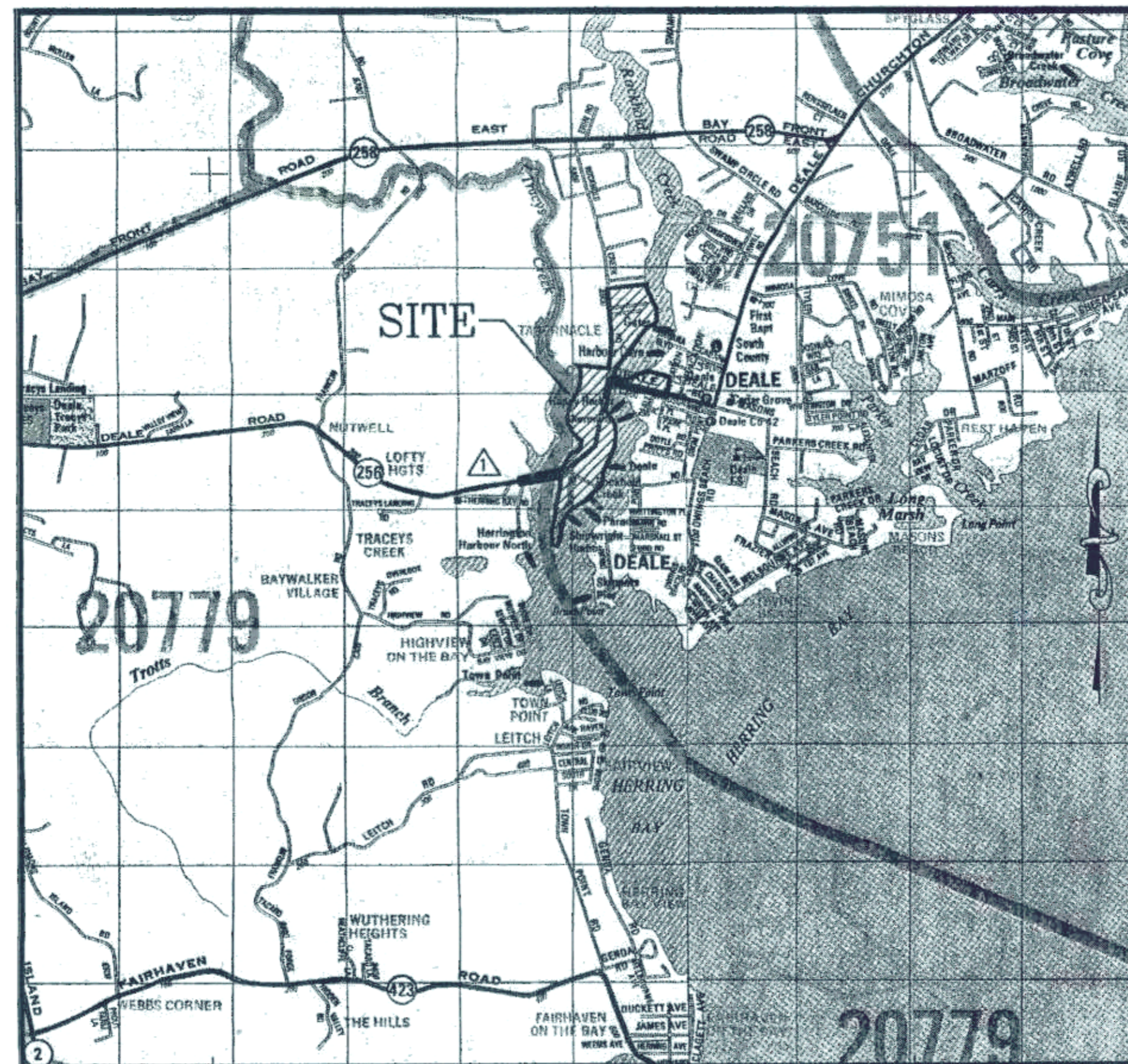
#### STANDARD RESPONSIBILITY NOTES

##### 1. DEVELOPER'S CERTIFICATION:

- I (WE) CERTIFY THAT:
- a) ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE IN ACCORDANCE WITH THIS SEDIMENT AND EROSION CONTROL PLAN, AND FURTHER, AUTHORIZE THE RIGHT OF ENTRY FOR PERIODIC ON-SITE EVALUATION BY THE ANNE ARUNDEL SOIL CONSERVATION DISTRICT BOARD OF SUPERVISORS OR THEIR AUTHORIZED AGENTS.
  - b) ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE FROM THE MARYLAND DEPARTMENT OF THE ENVIRONMENT APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.
- RESPONSIBLE PERSONNEL ON SITE:
- \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_
- c) THE APPROPRIATE ENCLOSURE WILL BE CONSTRUCTED AND MAINTAINED ON SEDIMENT BASIN(S) INCLUDED IN THIS PLAN. SUCH STRUCTURE(S) WILL BE IN COMPLIANCE WITH ARTICLE 21, SECTION 2-304 OF THE ANNE ARUNDEL COUNTY CODE.

#### LEGEND

-----	EXISTING PROPERTY/LOT LINE
-----	EXISTING RIGHT OF WAY/BOUNDARY LINE
-----	CENTERLINE/BASELINE
-----	FLOODPLAIN/LIMITS
-----	EXISTING STRUCTURES
-----	EXISTING INTERMEDIATE CONTOUR
-----	EXISTING INDEX CONTOUR
-----	EXISTING TREE LINE
-----	EXISTING CURB & GUTTER
-----	EXISTING FENCE
-----	EXISTING WATER MAIN
-----	EXISTING STORM DRAIN
-----	EXISTING FORCE MAIN
-----	EXISTING GAS MAIN
-----	EXISTING UNDERGROUND ELECTRIC
-----	EXISTING UNDERGROUND CABLE TELEVISION
-----	EXISTING UNDERGROUND TELEPHONE
-----	EXISTING FIRE HYDRANT
-----	EXISTING NON-TIDAL WETLANDS
-----	EXISTING TIDAL WETLANDS
-----	EXISTING WETLAND BUFFER
-----	EXISTING EXPANDED TIDAL BUFFER
-----	EXISTING STREAM
-----	WATERS OF THE US
-----	PROPOSED 3" L.P.S.
-----	PROPOSED LOW PRESSURE SEWER
-----	PROPOSED SIMPLEX GRINDER PUMP
-----	PROPOSED DUPLEX GRINDER PUMP
-----	PROPOSED SERVICE VALVE ASSEMBLY
-----	PROPOSED IN-LINE FLUSHING CONNECTION
-----	PROPOSED TERMINAL FLUSHING CONNECTION
-----	PROPOSED REINFORCED SILT FENCE
-----	PROPOSED SUPER SILT FENCE
-----	PROPOSED LIMIT OF DISTURBANCE
-----	PROPOSED LIMIT OF DISTURBANCE/REINFORCED SILT FENCE
-----	PROPOSED LIMIT OF DISTURBANCE/SUPER SILT FENCE
-----	STABILIZED CONSTRUCTION ENTRANCE
-----	SOIL BORING LOCATION



#### LIST OF DRAWINGS

1. COVER SHEET
2. KEY MAP
3. FOREMAN PLAN
4. FOREMAN PROFILE
5. FOREMAN PROFILE
6. FOREMAN PROFILE
7. FOREMAN PROFILE
8. FOREMAN PROFILE
9. FOREMAN PLAN
10. FOREMAN PROFILE
11. FOREMAN PLAN
12. FOREMAN PROFILE
13. FOREMAN PLAN
14. FOREMAN PROFILE
15. FOREMAN PLAN
16. FOREMAN PROFILE
17. FOREMAN PLAN
18. FOREMAN PLAN
19. MISCELLANEOUS DETAILS
20. SEDIMENT & EROSION CONTROL DETAILS
21. SEDIMENT & EROSION CONTROL DETAILS
22. TRAFFIC CONTROL DETAILS
23. GRINDER PUMP DETAILS
24. GRINDER PUMP DETAILS
25. GRINDER PUMP DETAILS

NOT IN CONTRACT

#### SEQUENCE OF CONSTRUCTION

1. CONDUCT A PRE-CONSTRUCTION MEETING. NOTIFY THE DEPARTMENT OF INSPECTIONS AND PERMITS AT LEAST 48 HOURS BEFORE COMMENCING WORK AT (410) 222-7780. WORK CANNOT COMMENCE UNTIL THE PERMITTEE OR THE RESPONSIBLE PERSONNEL HAVE MET ON SITE WITH THE SEDIMENT AND EROSION CONTROL INSPECTOR TO REVIEW THE APPROVED PLANS. 2 DAYS
2. INSTALL SILT FENCE, STABILIZED CONSTRUCTION ENTRANCE AND INLET PROTECTION AS SHOWN ON THESE PLANS, OR AS DIRECTED BY THE INSPECTOR. OBTAIN FIRST PHASE APPROVAL. 2 DAYS
3. CONSTRUCT AND COMPLETE THE INSTALLATION OF THE LOW PRESSURE SEWER MAINS AND GRINDER PUMPS. ALL DISTURBED AREAS SHALL BE STABILIZED ON A DAILY BASIS. 265 DAYS
4. WITH THE INSPECTOR'S APPROVAL, REMOVE ALL SEDIMENT CONTROL DEVICES. 1 DAY

#### DATE PRINTED

JUN 3 2009

HARMS ASSOCIATES

#### SEDIMENT CONTROL NOTES

1. PROVIDE SLUMP PIT WHENEVER ANY EXCAVATED SECTION IS TO BE DEWATERED.
2. ALL EXCAVATED MATERIAL TO BE STORED ON HIGH SIDE OF TRENCH WHEN PRACTICAL.
3. EXCAVATE ONLY THE AMOUNT OF TRENCH THAT WILL BE BACKFILLED AND STABILIZED THE SAME DAY. CLEAN AND SWEEP ROADWAYS DAILY.
4. PROVIDE INLET PROTECTION FOR ALL INLETS RECEIVING RUNOFF FROM DISTURBED AREAS AND/OR AS SHOWN ON THE DRAWINGS.
5. FOR AREAS WHERE ENTRANCES, SIDEWALKS OR ROAD ARE DISTURBED, PROVIDE 2-INCHES OF CRUSHED STONE OR TEMPORARY PATCH PAVING PER SPECIFICATIONS (UNLESS FINAL CONCRETE OR PAVEMENT IS PLACED THE SAME DAY), MAINTAIN UNTIL FINAL CONCRETE OR PAVEMENT IS PLACED.
6. SOD ALL SLOPES GREATER THAN 3:1.
7. AT ALL DRILLING PITS, WRAP DRILL PIT WITH SILT FENCE AS SHOWN ON THE PLANS, OR AS DIRECTED BY THE INSPECTOR. STORAGE/STOCKPILE AREA SHALL BE PER A.A. CO. STD. DETAIL G-8 (SEE SHEET 20).

BID DOCUMENTS



GRADING PERMIT # G02013226

CHANGED LIMIT OF CONTRACT

#### ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS

<b>REVISED</b>	<b>DATE</b>	<b>BY</b>	<b>APPROVED</b>	<b>DATE</b>	<b>APPROVED</b>	<b>DATE</b>	<b>SCALE: AS SHOWN</b>	<b>COVER SHEET</b>
6-9-08		B.L.C.		2/20/09		2/20/09	CHECKED BY: S.G.Z.	<b>DEALE ROAD</b>
			CHIEF ENGINEER		PROJECT MANAGER		SHEET NO. 1 OF 25	<b>SEWER EXTENSION</b>
			ASSISTANT CHIEF ENGINEER		CHIEF RIGHT-OF-WAY		PROJECT NO.: S-8020	TAX MAP 77 BLOCK 6 PARCEL 210
							CONTRACT NO.: S-802001	64425

**CONSULTANT'S CERTIFICATION**

THE DEVELOPER'S PLAN TO CONTROL SILT AND EROSION IS ADEQUATE TO CONTAIN THE SILT AND EROSION ON THE PROPERTY COVERED BY THE PLAN. I CERTIFY THAT THIS PLAN OF EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THIS SITE, AND WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE ANNE ARUNDEL SOIL CONSERVATION DISTRICT PLAN SUBMITTAL GUIDELINES AND THE CURRENT MARYLAND STANDARDS AND SPECIFICATIONS FOR SEDIMENT AND EROSION CONTROL. I HAVE REVIEWED THIS EROSION AND SEDIMENT CONTROL PLAN WITH THE OWNER/DEVELOPER.

MD. P.E. LICENSE # 10810 DATE 2-7-08

STEVEN G. ZAHN P.E. FIRM NAME JOHN HARMS & ASSOC.

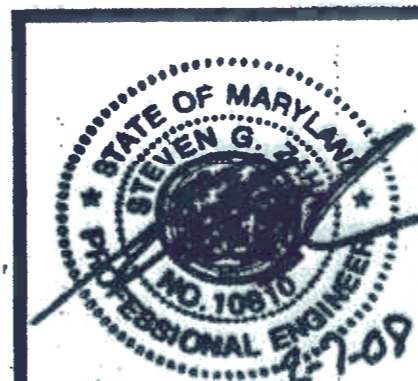
10010 HIGHWAY, P.O. BOX 5, PASADENA, MARYLAND 21122

**RECEIVED**

JUN 3 2009

AREA COM. ION & Atlantic City

PROFESSIONAL CERTIFICATION, I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 10810, EXPIRATION DATE: FEBRUARY 20, 2010.



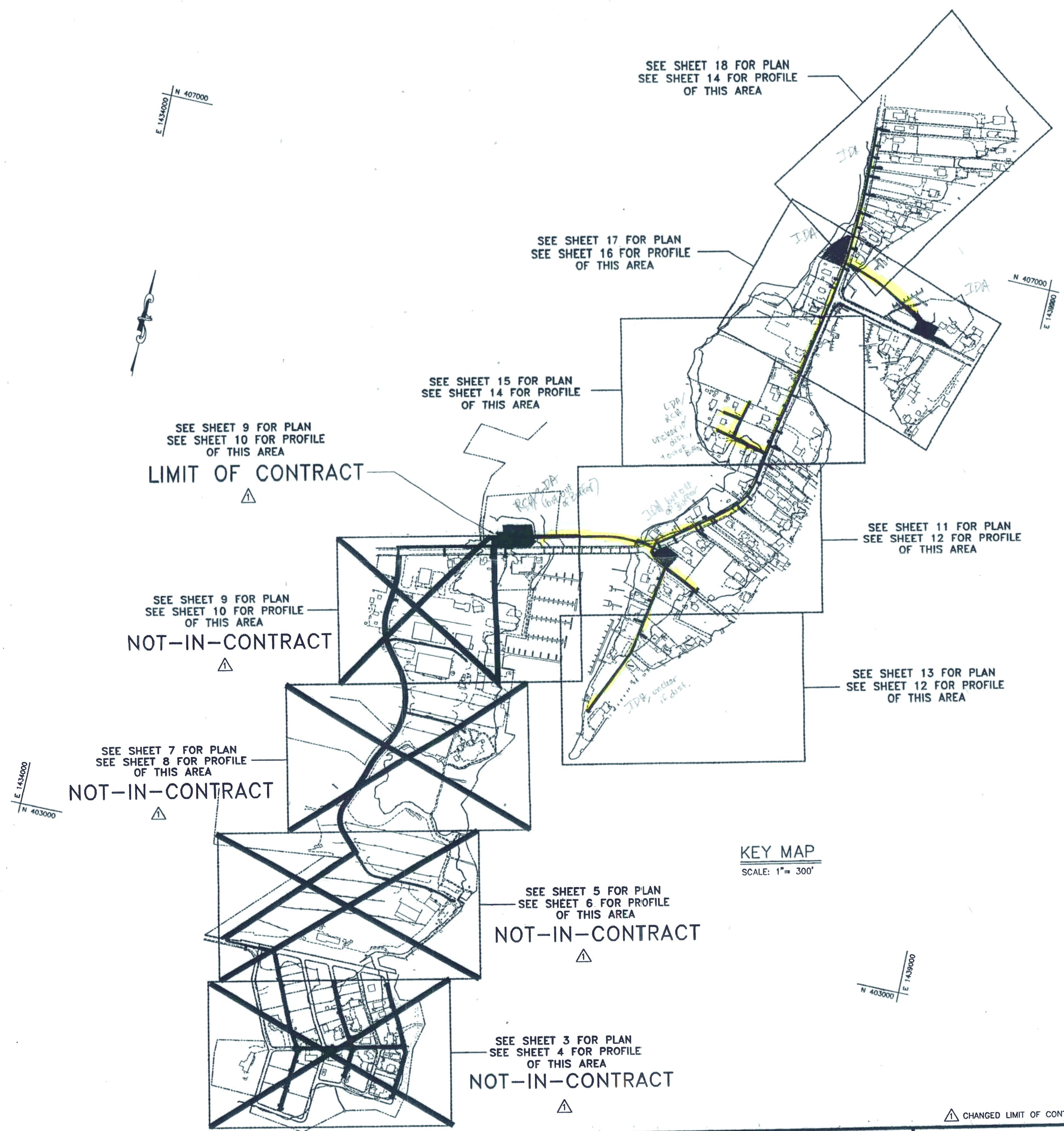
HARMS

ENGINEERS • PLANNERS • SURVEYORS

P.O. BOX 5, PASADENA, MD 21123  
Office: 410-647-6000 FAX: 410-644-8508

WORK ORDER #: 02-05-005A

DATE: 02/07/2009 USER: B00044 DRAWING PATH: \\belle00-2\projects\Deale Road Sewer Extension\02-05-005A\DWG\Deale02.dwg XREF FILE(S): \D:\Data\Bases.dwg\BASE.dwg



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 10810, EXPIRATION DATE: FEBRUARY 20, 2010.

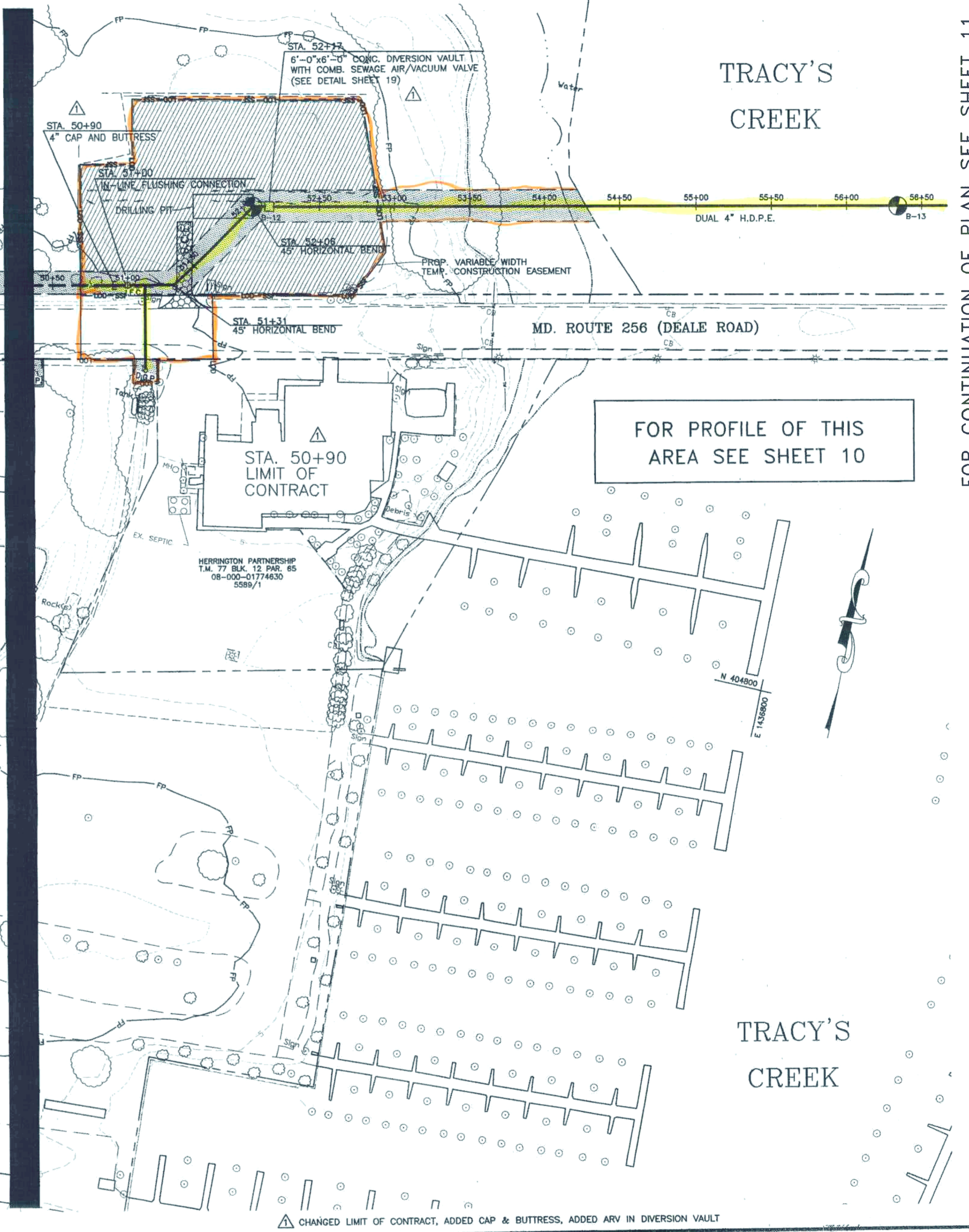


ANNE ARUNDEL COUNTY				DEPARTMENT OF PUBLIC WORKS			
REVISED DATE	APPROVED BY	DATE	APPROVED DATE	SCALE: AS SHOWN	KEY MAP		
16-9-08	B.L.C.	2-20-09	2/11/09	DRAWN BY: B.L.C.	DEALE ROAD SEWER EXTENSION		
	CHIEF ENGINEER		PROJECT MANAGER	CHECKED BY: S.G.Z.	TAX MAP 77 BLOCK 6 PARCEL 210		
	APPROVED DATE	APPROVED DATE	DATE	SHEET NO. 2 OF 25			
	ASSISTANT CHIEF ENGINEER	2-20-09	CHIEF RIGHT-OF-WAY	PROJECT NO.: S-8020			
				CONTRACT NO.: S-802001			

64426

WORK ORDER #: 02-05-005A

Date: 02/09/2008 User: BCORVELLUS Drawing Path: \\h600-2\projects\Deale Road Sewer Extension\02-05-005A\DWG\Drawn09.dwg REF File(s): \\h600-2\projects\Deale Road Sewer Extension\02-05-005A\DWG\Drawn09.dwg BISE.dwg



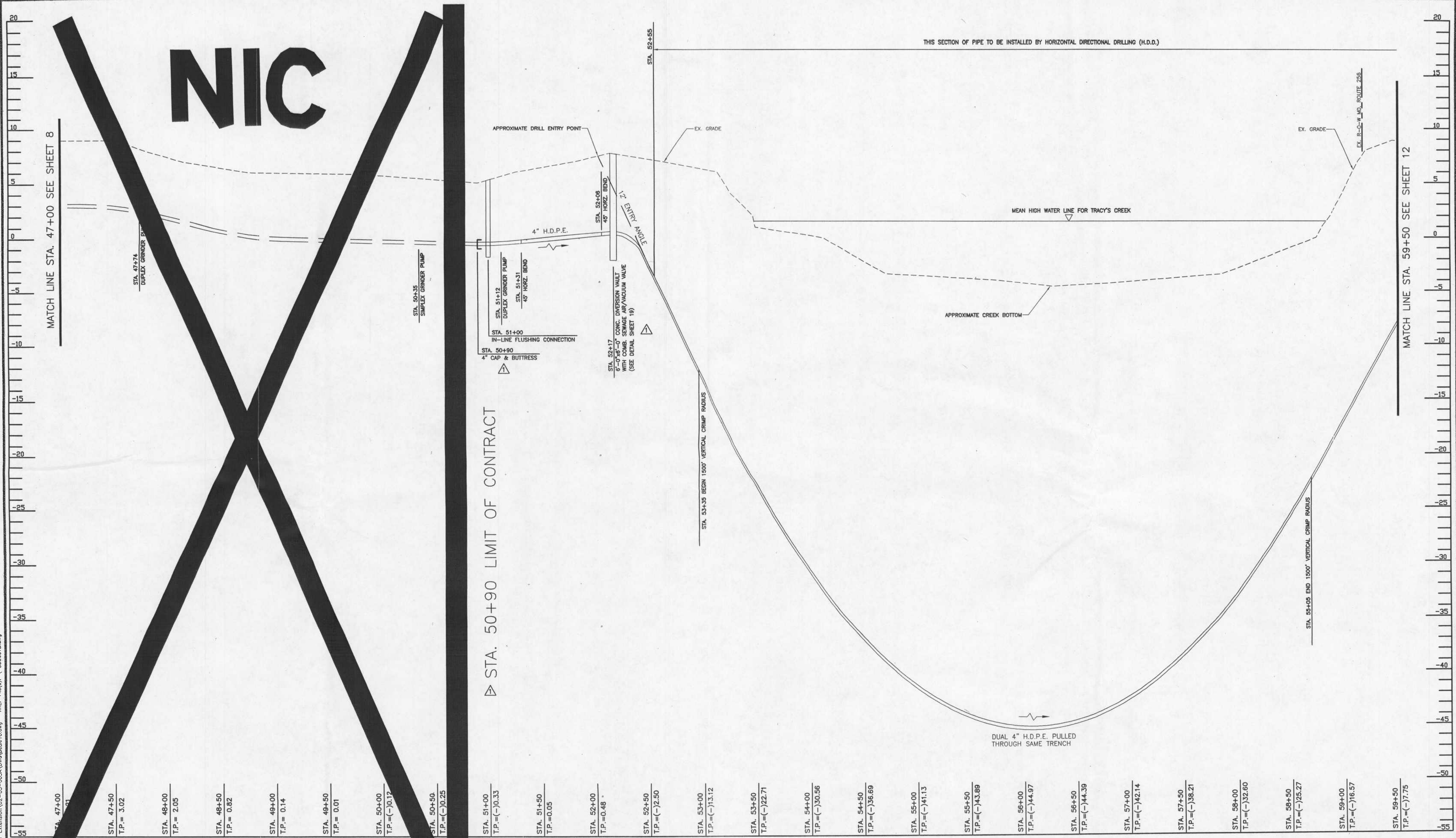
FOR CONTINUATION OF PLAN SEE SHEET 11



ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS			
REVISED DATE: 6-9-08	APPROVED BY: B.L.C.	DATE: 2/20/08	APPROVED: [Signature]
PROJECT MANAGER		DATE: 1/20/09	APPROVED: [Signature]
ASSISTANT CHIEF ENGINEER		DATE: 1/20/09	APPROVED: [Signature]
CHIEF ENGINEER		DATE: 1/20/09	APPROVED: [Signature]
CHIEF RIGHT-OF-WAY		DATE: 1/20/09	APPROVED: [Signature]
SCALE: AS SHOWN		DRAWN BY: B.L.C.	
CHECKED BY: S.G.Z.		SHEET NO. 9 OF 25	
PROJECT NO.: S-8020		CONTRACT NO.: S-802001	

PLAN  
DEALE ROAD  
SEWER EXTENSION  
TAX MAP 77 BLOCK 6 PARCEL 210

64433



△ STA. 50+90 LIMIT OF CONTRACT

PROFILE: MAIN LINE  
SCALE: 1" = 4' VERTICAL  
1" = 40' HORIZONTAL

FOR PLAN OF THIS AREA SEE SHEETS 9 & 11

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 10810, EXPIRATION DATE: FEBRUARY 20, 2010.



REVISD		APPROVED:		DATE:		APPROVED:		DATE:		SCALE: AS SHOWN	
DATE	BY	B.L.C.		2-20-08		PROJECT MANAGER		2/18/08		DRAWN BY: B.L.C.	
6-9-08	B.L.C.	CHIEF ENGINEER		2-20-08		ASSISTANT CHIEF ENGINEER		2/20/08		CHECKED BY: S.G.Z.	
								SHEET NO. 10 OF 25			
								PROJECT NO.: 5-8020			
								CONTRACT NO.: 5-802001			

△ CHANGED LIMIT OF CONTRACT, ADDED CAP & BUTTRISS, ADDED ARV IN DIVERSION VAULT

ANNE ARUNDEL COUNTY  
DEPARTMENT OF PUBLIC WORKS

RECEIVED  
IN 320

CRITICAL AREA COMMISSION  
PROFILE  
DEALE ROAD  
SEWER EXTENSION  
TAX MAP 77 BLOCK 6 PARCEL 210

64434

FOR CONTINUATION OF PLAN SEE SHEET 15

TRACY'S CREEK

NOTE:  
LIMIT OF DISTURBANCE IS THE LIMIT OF THE PUBLIC RIGHTS-OF-WAY AND THE LIMIT OF ALL PROPOSED UTILITY EASEMENTS AND TEMPORARY CONSTRUCTION EASEMENTS.

ROCKHOLD CREEK

TRACY'S CREEK

FOR PROFILE OF THIS AREA SEE SHEETS 10 & 12

FOR CONTINUATION OF PLAN SEE SHEET 13

PLAN  
SCALE: 1" = 40'

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 10810, EXPIRATION DATE: FEBRUARY 20, 2010.



ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS				PLAN	
REVISED	DATE	APPROVED	DATE	SCALE: AS SHOWN	DEALE ROAD SEWER EXTENSION
DATE	BY	DATE	DATE	DRAWN BY: B.L.C.	
6-9-08	B.L.C.	2-20-09	2/10/09	CHECKED BY: S.G.Z.	
		APPROVED	DATE	APPROVED	SHEET NO. 11 OF 25
		2-20-09	2/20/09	CHIEF RIGHT-OF-WAY	PROJECT NO.: S-8020
					CONTRACT NO.: S-802001

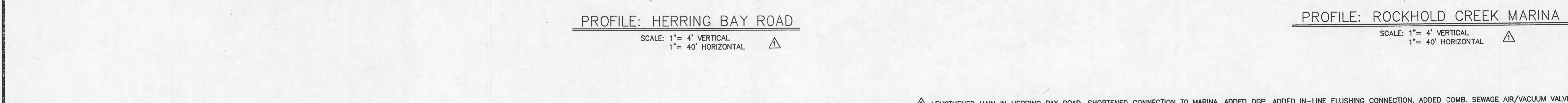
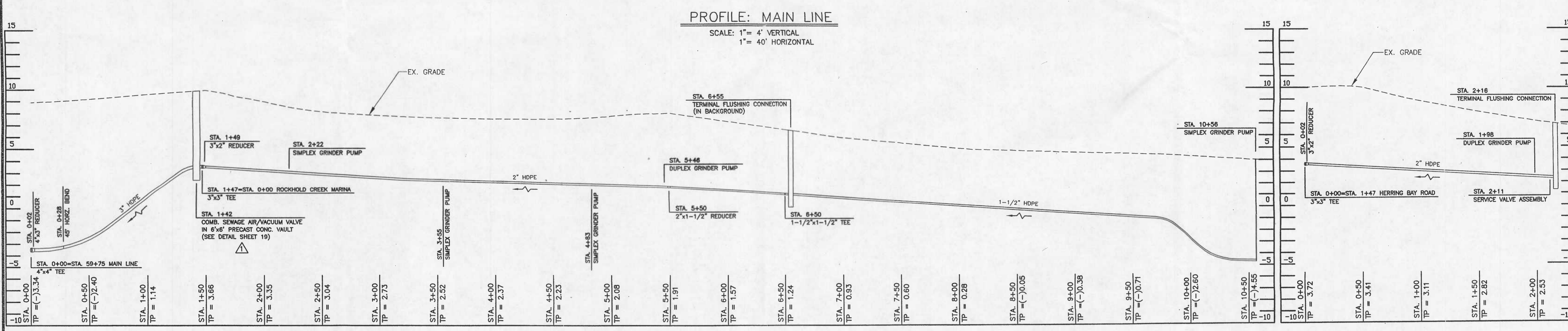
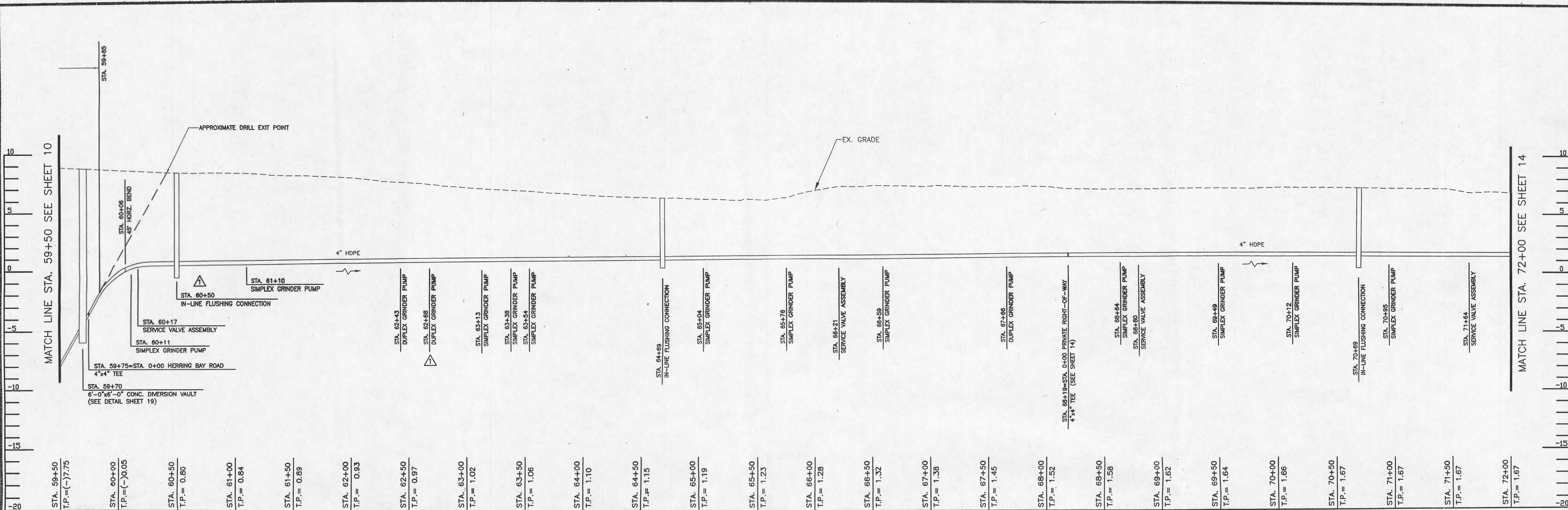
SHORTENED CONNECTION TO MARINA, ADDED DGP, REVISED LOCATION OF DGP, ADDED AIR/VACUUM VALVE

FOR CONTINUATION OF PLAN SEE SHEET 9

WORK ORDER #: 02-05-005A

Date: 02/08/2008 User: BCGORNELIUS Drawing Path: \\D:\41600-2\Projects\Deale Road Sewer Extension\02-05-005A\DWG\Deale11.dwg XREF File(s): \DocBase\dwg\BASE.dwg

64435



FOR PLAN OF THIS AREA SEE SHEETS 11 & 13

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 10810, EXPIRATION DATE: FEBRUARY 20, 2010.

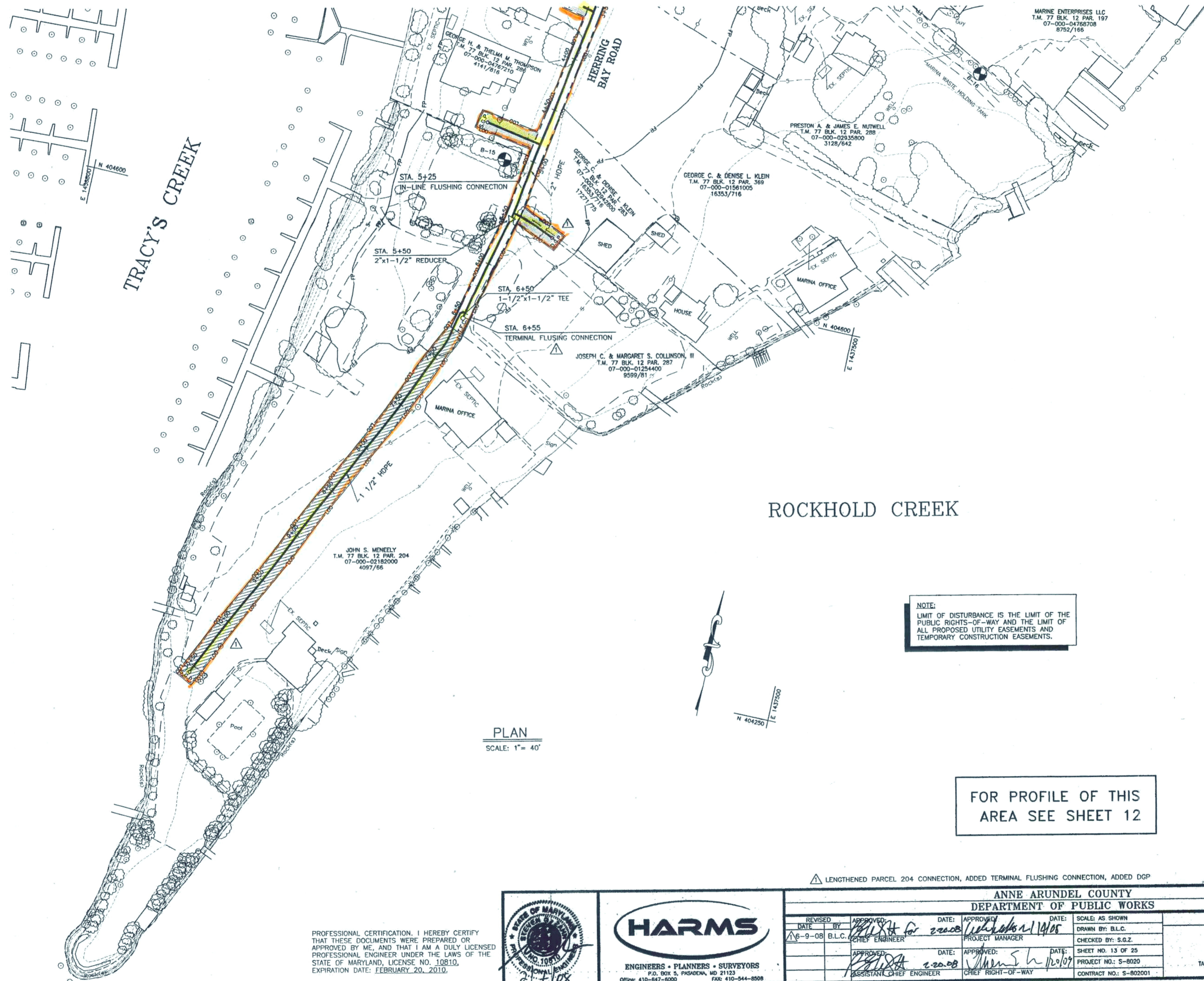


ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS				PROFILE	
REVISED DATE: 8-9-08	BY: B.L.C.	APPROVED: [Signature]	DATE: 2-20-08	PROJECT MANAGER: [Signature]	PROFILE <b>DEALE ROAD SEWER EXTENSION</b> TAX MAP 77 BLOCK 6 PARCEL 210
APPROVED: [Signature]	DATE: 2-20-08	APPROVED: [Signature]	DATE: 12/4/07	PROJECT NO.: S-8020	
SCALE: AS SHOWN		DRAWN BY: B.L.C.		CHECKED BY: S.G.Z.	
SHEET NO. 12 OF 25		PROJECT NO.: S-8020		CONTRACT NO.: S-802001	

64436



FOR CONTINUATION OF PLAN SEE SHEET 11



MARINE ENTERPRISES LLC  
T.M. 77 BLK. 12 PAR. 197  
07-000-04768708  
8752/166

PRESTON A. & JAMES E. NUTWELL  
T.M. 77 BLK. 12 PAR. 288  
07-000-02935800  
3128/642

GEORGE C. & DENISE L. KLEIN  
T.M. 77 BLK. 12 PAR. 369  
07-000-01561005  
16353/716

JOSEPH C. & MARGARET S. COLLINSON, III  
T.M. 77 BLK. 12 PAR. 287  
07-000-01254400  
9599/81

JOHN S. MENEELY  
T.M. 77 BLK. 12 PAR. 204  
07-000-02182000  
4097/86

NOTE:  
LIMIT OF DISTURBANCE IS THE LIMIT OF THE  
PUBLIC RIGHTS-OF-WAY AND THE LIMIT OF  
ALL PROPOSED UTILITY EASEMENTS AND  
TEMPORARY CONSTRUCTION EASEMENTS.

PLAN  
SCALE: 1" = 40'

FOR PROFILE OF THIS  
AREA SEE SHEET 12

LENGTHENED PARCEL 204 CONNECTION, ADDED TERMINAL FLUSHING CONNECTION, ADDED DGP

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY  
THAT THESE DOCUMENTS WERE PREPARED OR  
APPROVED BY ME, AND THAT I AM A DULY LICENSED  
PROFESSIONAL ENGINEER UNDER THE LAWS OF THE  
STATE OF MARYLAND, LICENSE NO. 10810,  
EXPIRATION DATE: FEBRUARY 20, 2010.



**HARMS**  
ENGINEERS • PLANNERS • SURVEYORS  
P.O. BOX 5, PASKADENA, MD 21123  
Office: 410-647-6000 FAX: 410-544-8508

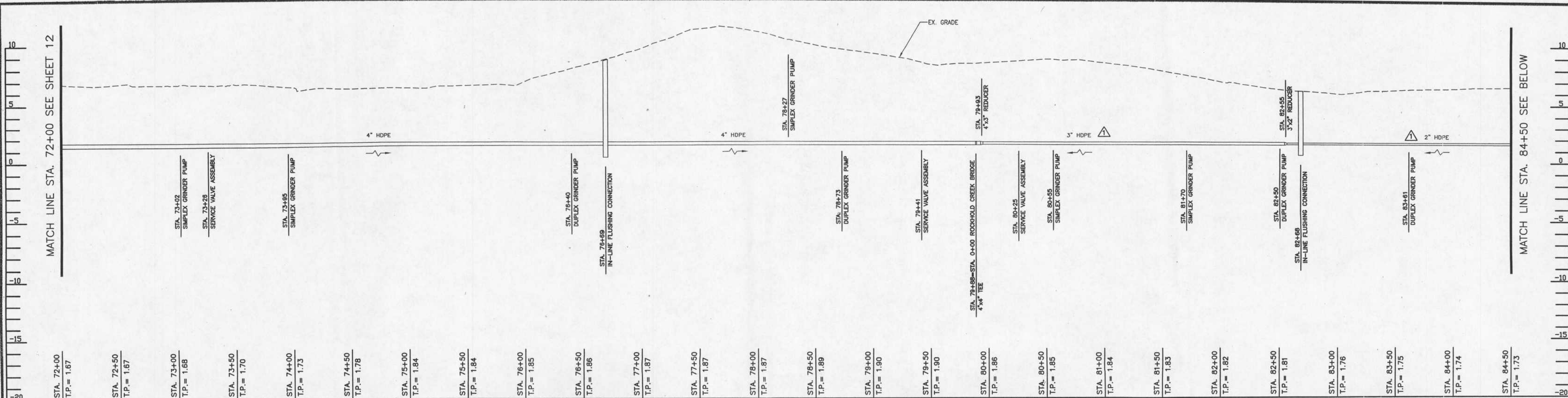
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS			
REVISED DATE	APPROVED BY	DATE	APPROVED DATE
6-9-08	B.L.C.	2/20/08	1/20/09
CHIEF ENGINEER		PROJECT MANAGER	
APPROVED		DATE	
2/20/08		1/20/09	
ASSISTANT CHIEF ENGINEER		CHIEF RIGHT-OF-WAY	
SCALE: AS SHOWN		DRAWN BY: B.L.C.	
CHECKED BY: S.G.Z.		SHEET NO. 13 OF 25	
PROJECT NO.: 5-8020		CONTRACT NO.: 5-802001	

PLAN  
DEALE ROAD  
SEWER EXTENSION  
TAX MAP 77 BLOCK 6 PARCEL 210

64437

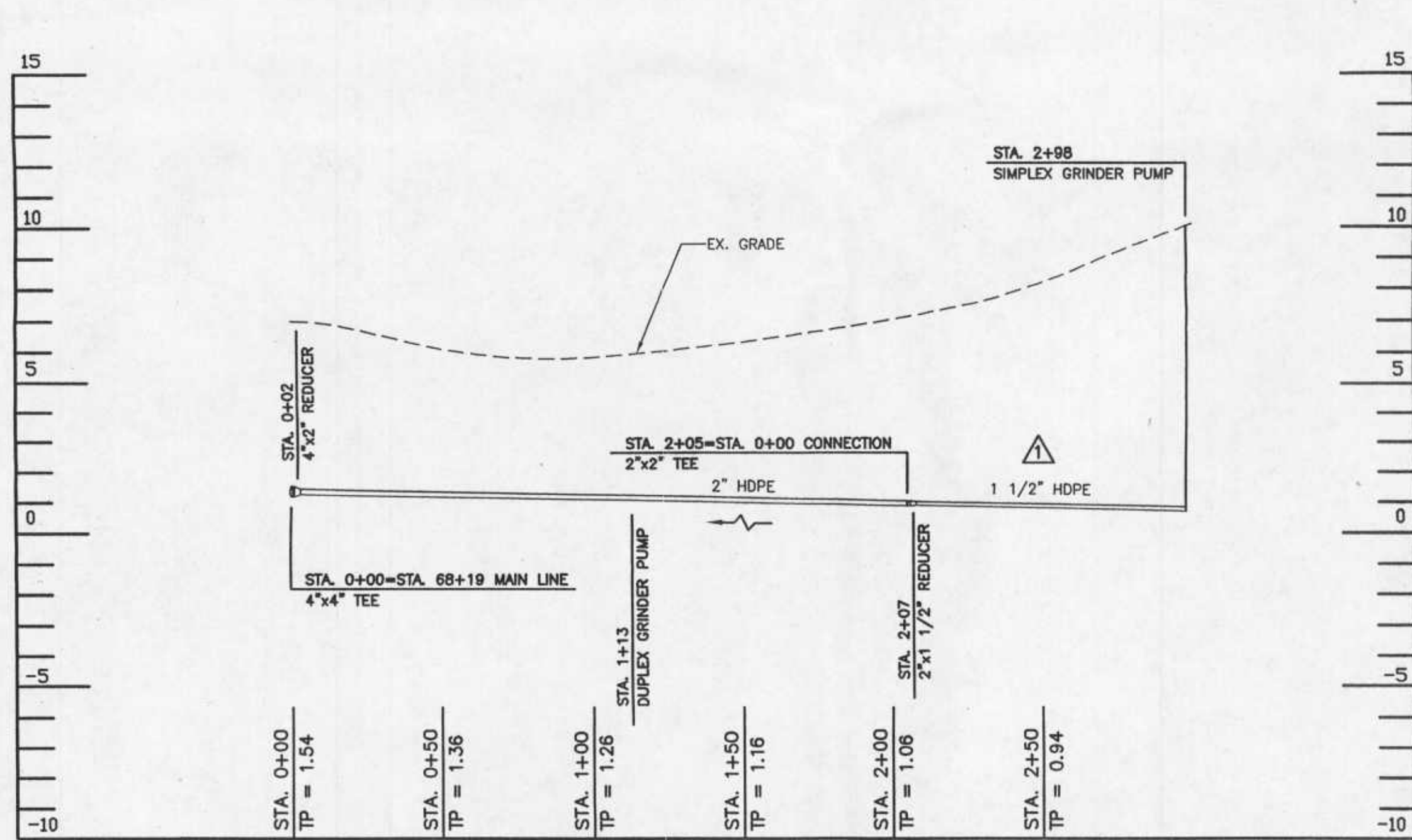
WORK ORDER #: 02-05-000A

Order: 02/07/2008 User: csmeyd Drawing Path: \\Dell4600-2\projects\Deale Road Sewer Extension\02-05-000A\DWG\Deale13.dwg XREF File(s): \\Dell4600-2\projects\Deale Road Sewer Extension\02-05-000A\DWG\Deale13.dwg XREF File(s): \\Dell4600-2\projects\Deale Road Sewer Extension\02-05-000A\DWG\Deale13.dwg



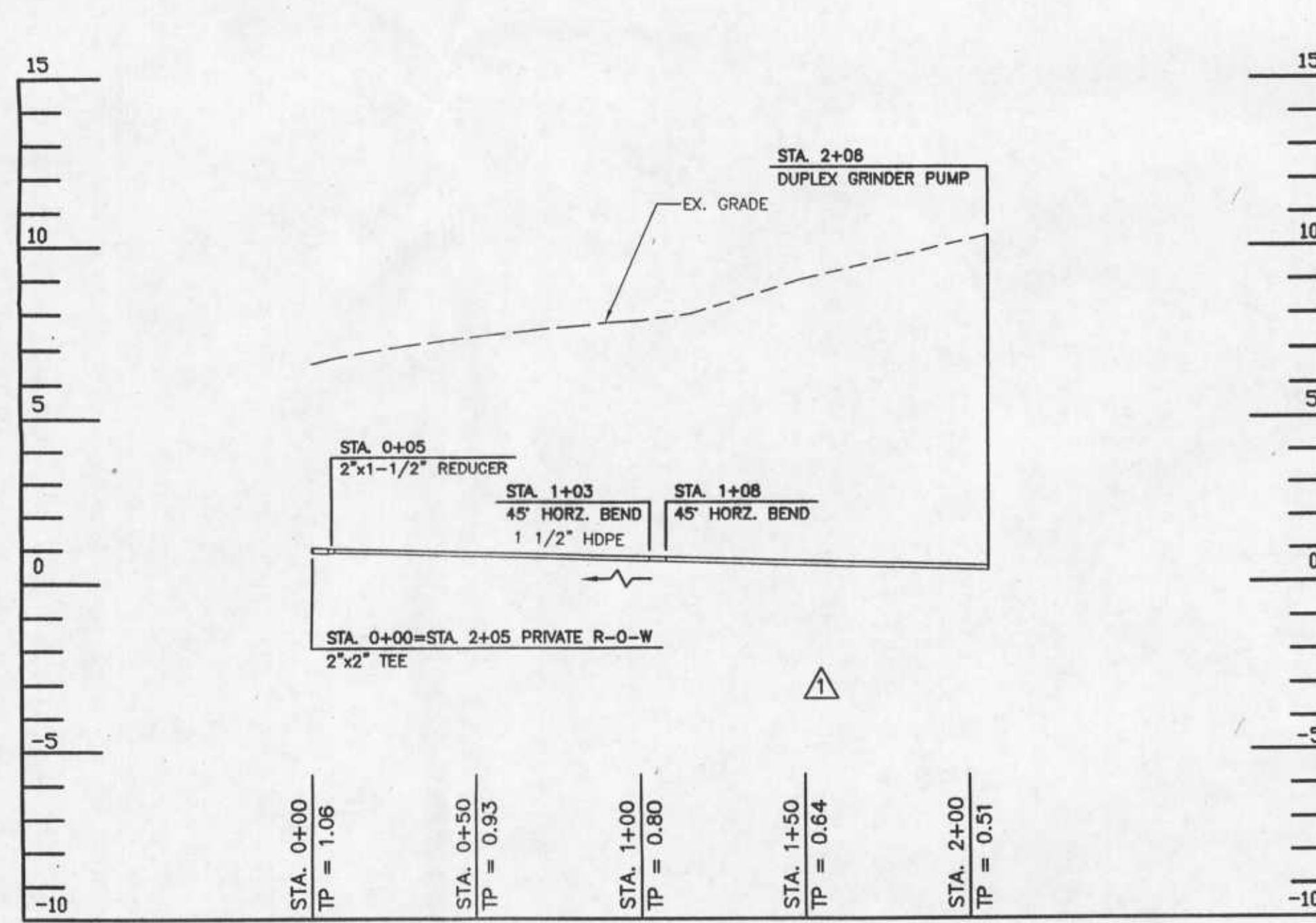
PROFILE: MAIN LINE

SCALE: 1" = 4' VERTICAL  
1" = 40' HORIZONTAL



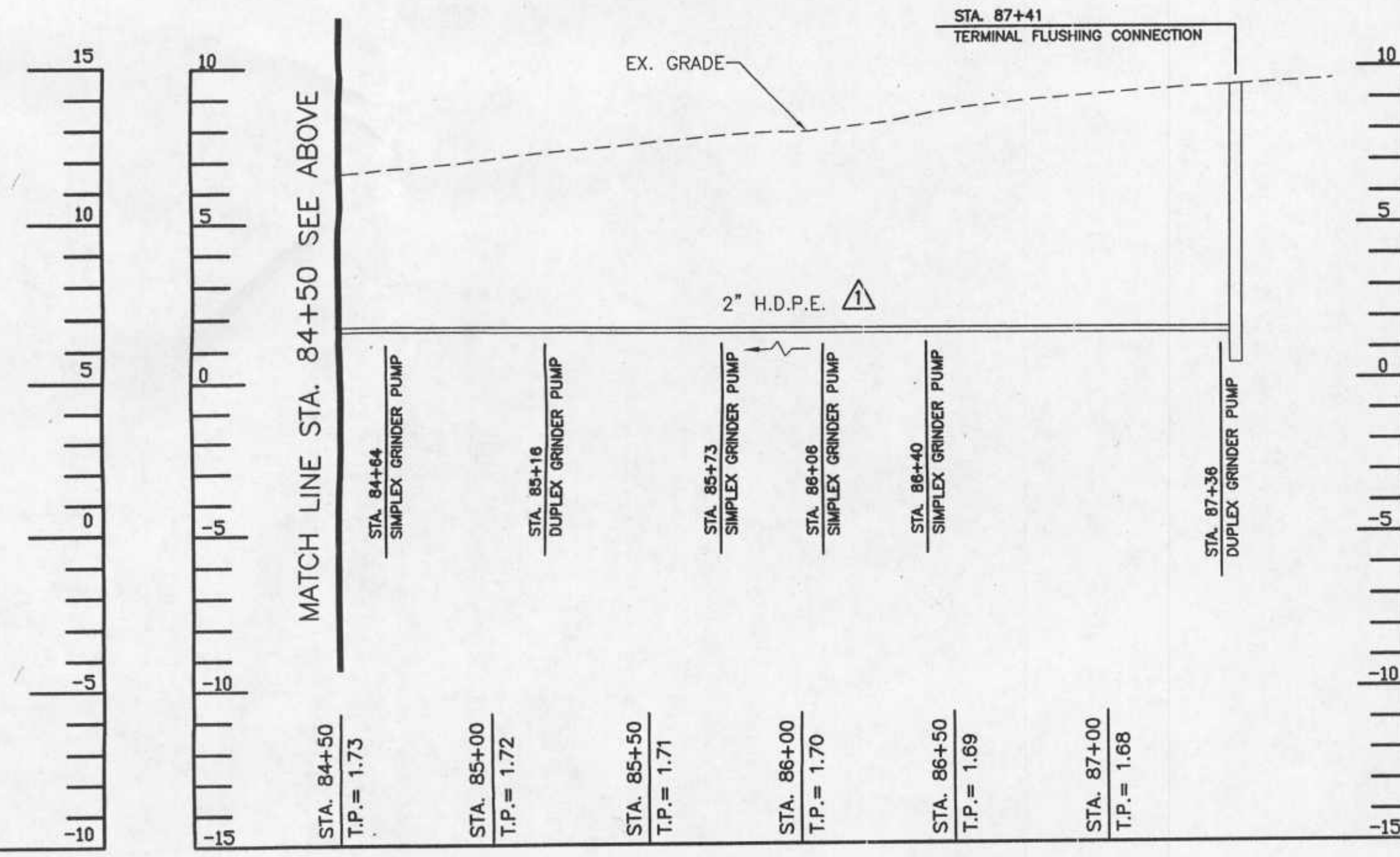
PLAN SHEET 15  
PROFILE: PRIVATE R-0-W

SCALE: 1" = 4' VERTICAL  
1" = 40' HORIZONTAL



PLAN SHEET 15  
PROFILE: CONNECTION TO PRIVATE R-0-W

SCALE: 1" = 4' VERTICAL  
1" = 40' HORIZONTAL



PLAN SHEET 18  
PROFILE: MAIN LINE

SCALE: 1" = 4' VERTICAL  
1" = 40' HORIZONTAL

CHANGED SLOPE OF PROFILES, REVISED PROFILE IN CONNECTION TO PRIVATE R-0-W

FOR PLAN OF THIS AREA  
SEE SHEETS 15, 17 & 18

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 10810, EXPIRATION DATE: FEBRUARY 20, 2010.



ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS				PROFILE	
REVISIONS	DATE	BY	APPROVED	DATE	SCALE: AS SHOWN
1	6-9-08	B.L.C.	[Signature]	2/1/09	DRAWN BY: B.L.C.
			[Signature]		CHECKED BY: S.G.Z.
			[Signature]		SHEET NO. 14 OF 25
			[Signature]		PROJECT NO.: S-8020
			[Signature]		CONTRACT NO.: S-802001

DEALE ROAD  
SEWER EXTENSION

TAX MAP 77 BLOCK 6 PARCEL 210

64438

FOR CONTINUATION OF PLAN SEE SHEET 17

E 1437000  
N 408250

HAPPY HARBOR HOLDING COMPANY LLC  
C/O BARBARA STURGELL  
T.M. 77 BLK. 6 PAR. 200  
07-000-9006233  
9801/293

CRANDELL A. & NICHOLAS H. PHIPPS  
T.M. 77 BLK. 6 PAR. 174  
07-000-03655600  
3263/153

JEFFREY T. & MERYL S. HICKMAN  
T.M. 77 BLK. 6 PAR. 231  
07-000-04147450  
16186/583

ANNE ARUNDEL COUNTY  
DEPT. OF REC. & MAPS  
T.M. 77 BLK. 6 PAR. 210  
COUNTY PIER  
807-000-00080288

HARVEY E. GATES, III  
T.M. 77 BLK. 6 PAR. 185  
07-000-03669100  
15250/289

NORMAN R. MANIFOLD  
T.M. 77 BLK. 6 PAR. 178  
07-000-03610290  
16352/262

N. WAYNE & VICTORIA L. BROYLES  
T.M. 77 BLK. 6 PAR. 176  
07-000-03674900  
12707/416

CLARENCE K. & AMY M. JOHNSON  
T.M. 77 BLK. 6 PAR. 176  
07-000-00072800  
14855/189

N. WAYNE & VICTORIA L. BROYLES  
T.M. 77 BLK. 6 PAR. 176  
07-000-03674925  
12707/416

STATION 0+00  
PRIVATE R-O-W  
4"x2" REDUCER

STATION 0+02  
PRIVATE R-O-W  
4"x2" REDUCER

STATION 0+04  
PRIVATE R-O-W  
4"x2" REDUCER

STATION 0+06  
PRIVATE R-O-W  
4"x2" REDUCER

STATION 0+08  
PRIVATE R-O-W  
4"x2" REDUCER

STATION 0+10  
PRIVATE R-O-W  
4"x2" REDUCER

STATION 0+12  
PRIVATE R-O-W  
4"x2" REDUCER

STATION 0+14  
PRIVATE R-O-W  
4"x2" REDUCER

STATION 0+16  
PRIVATE R-O-W  
4"x2" REDUCER

NOTE: CONTRACTOR TO REPLACE  
EXISTING SHC FROM HAPPY HARBOR  
RESTAURANT ACROSS MD. ROUTE  
256 TO NEW PROPOSED GRINDER PUMP.

TRACY'S  
CREEK

ROCKHOLD  
CREEK

NOTE:  
LIMIT OF DISTURBANCE IS THE LIMIT OF THE  
PUBLIC RIGHTS-OF-WAY AND THE LIMIT OF  
ALL PROPOSED UTILITY EASEMENTS AND  
TEMPORARY CONSTRUCTION EASEMENTS.

E 1437000  
N 405750

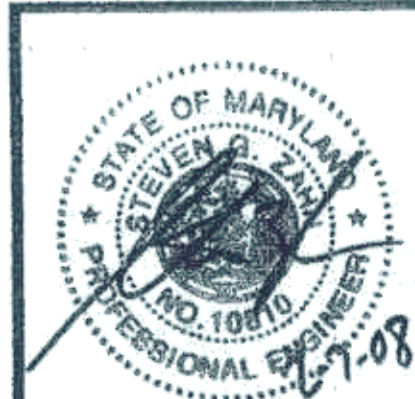
PLAN  
SCALE: 1" = 40'

FOR CONTINUATION OF PLAN SEE SHEET 11

▲ ADDED S.V.A., ADDED REDUCER, ADDED BENDS & SHORTENED MAIN LINE

FOR PROFILE OF THIS  
AREA SEE SHEETS 12 & 14

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY  
THAT THESE DOCUMENTS WERE PREPARED OR  
APPROVED BY ME, AND THAT I AM A DULY LICENSED  
PROFESSIONAL ENGINEER UNDER THE LAWS OF THE  
STATE OF MARYLAND, LICENSE NO. 10810,  
EXPIRATION DATE: FEBRUARY 20, 2010.

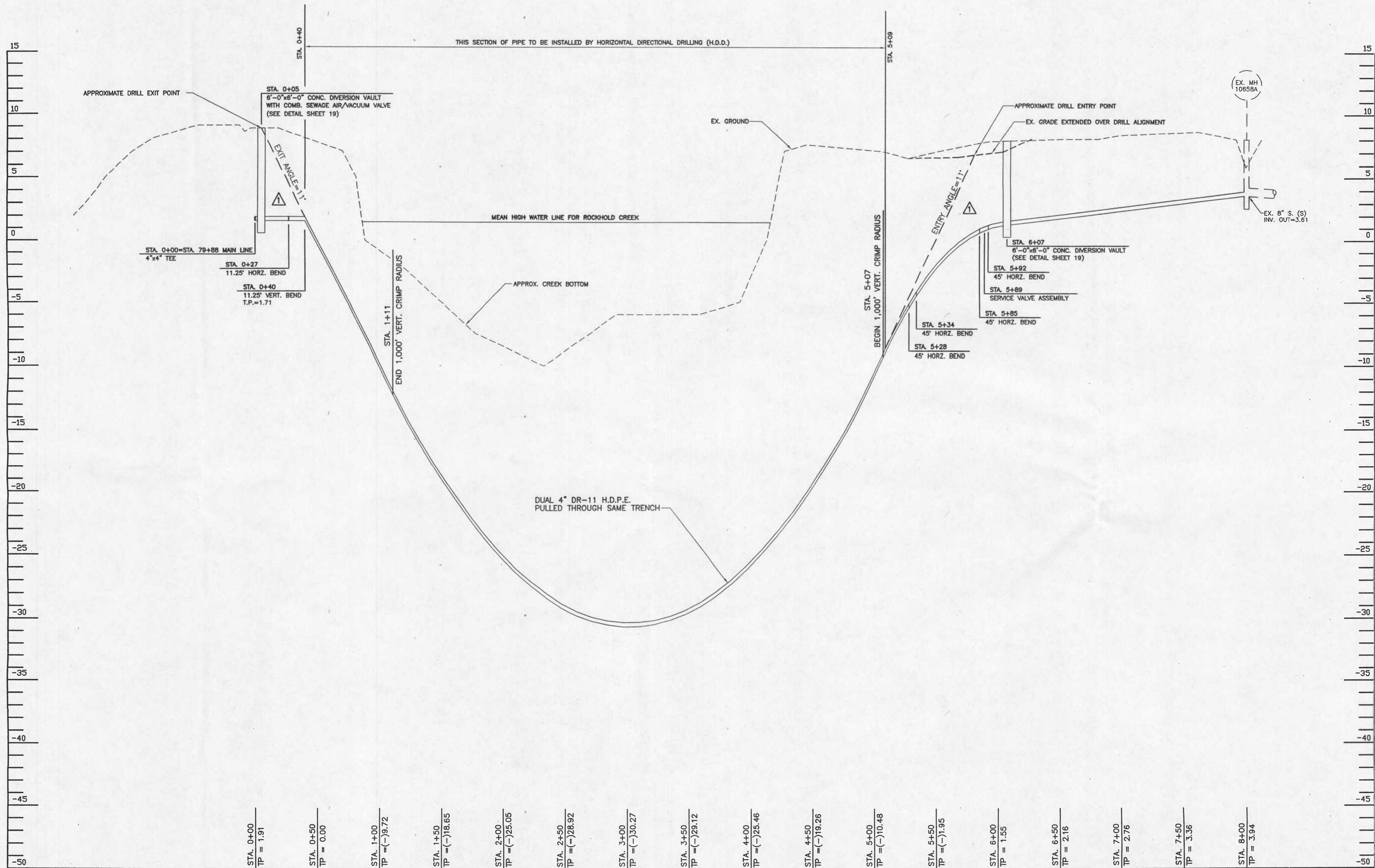


ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS				PLAN
REVISED DATE	APPROVED BY	DATE	APPROVED BY	DATE
8-9-08	B.L.C.	2-20-08	W. E. H.	2/20/08
PROJECT MANAGER		PROJECT MANAGER		SCALE: AS SHOWN
PROJECT NO. S-8020		PROJECT NO. S-8020		DRAWN BY: B.L.C.
SHEET NO. 15 OF 25		SHEET NO. 15 OF 25		CHECKED BY: S.G.Z.
CONTRACT NO. S-802001		CONTRACT NO. S-802001		PROJECT NO. S-8020
TAX MAP 77 BLOCK 6 PARCEL 210		TAX MAP 77 BLOCK 6 PARCEL 210		PLANNED BY: B.L.C.

64439

WORK ORDER #: 02-05-005A

Date: 02/08/2008 User: B.CORNELIUS Drawing Path: \\dell4600-2\projects\isole flood sewer Extension\02-05-005A\DWG\isole15.dwg XREF: Titles: \\dell4600-2\projects\isole flood sewer Extension\02-05-005A\DWG\isole15.dwg BASE.dwg



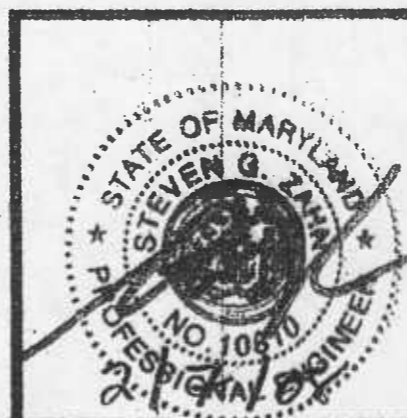
PROFILE: ROCKHOLD CREEK BRIDGE

SCALE: 1" = 4' VERTICAL  
1" = 40' HORIZONTAL

△ ADDED ARV IN DIVERSION VAULT, REVISED PROFILE

FOR PLAN OF THIS  
AREA SEE SHEET 17

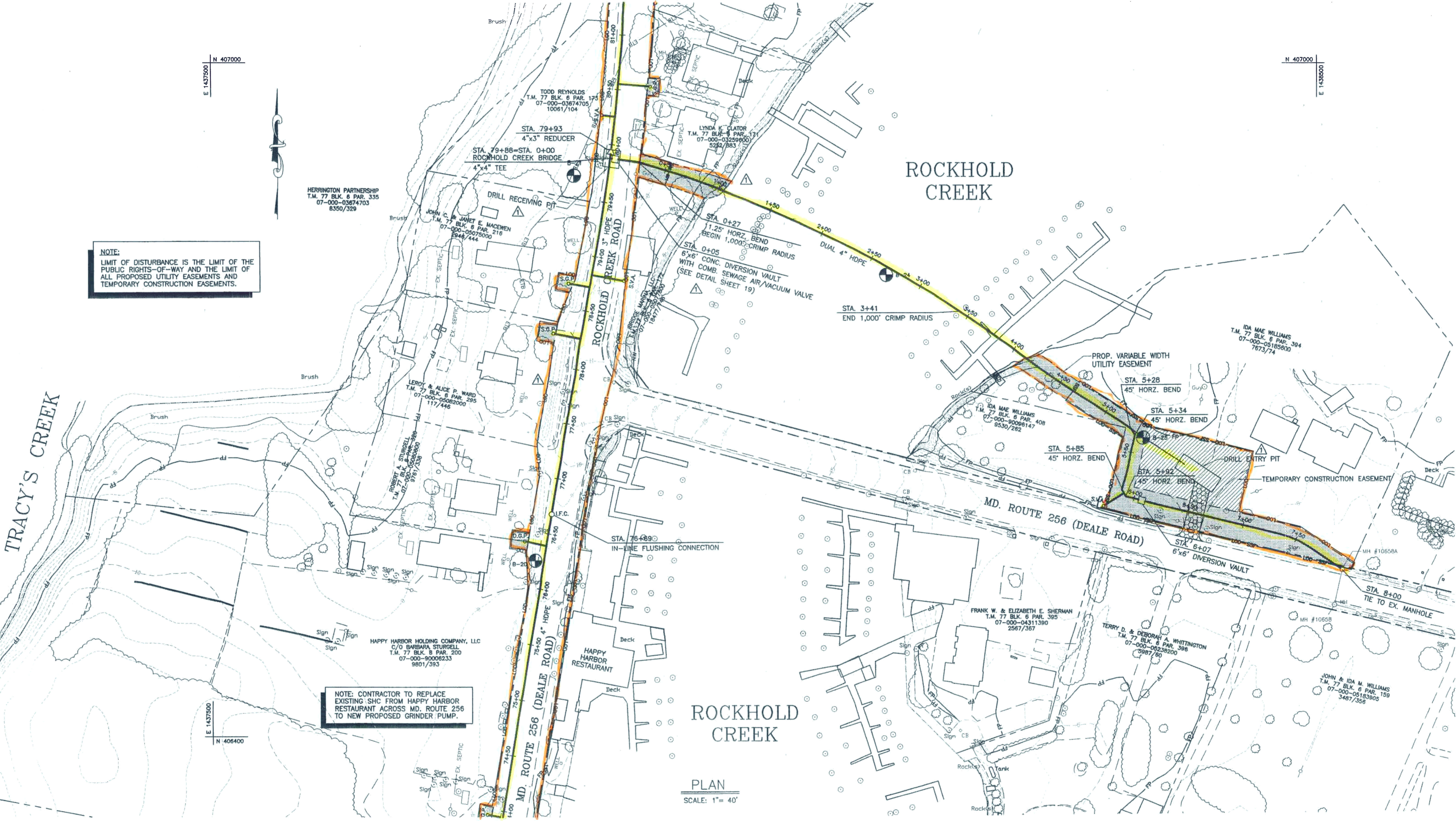
PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND. LICENSE NO. 10810. EXPIRATION DATE: FEBRUARY 20, 2010.



ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS				PROFILE	
REVISED	DATE	BY	APPROVED	DATE	SCALE: AS SHOWN
△ 6-9-08		B.L.C.	<i>[Signature]</i>	2/20/08	DRAWN BY: B.L.C.
			CHIEF ENGINEER		CHECKED BY: S.C.Z.
					SHEET NO. 16 OF 25
					PROJECT NO.: S-8020
					CONTRACT NO.: S-802001
					TAX MAP 77 BLOCK 6 PARCEL 210

64440

FOR CONTINUATION OF PLAN SEE SHEET 18



**NOTE:**  
LIMIT OF DISTURBANCE IS THE LIMIT OF THE PUBLIC RIGHTS-OF-WAY AND THE LIMIT OF ALL PROPOSED UTILITY EASEMENTS AND TEMPORARY CONSTRUCTION EASEMENTS.

**NOTE:** CONTRACTOR TO REPLACE EXISTING SHC FROM HAPPY HARBOR RESTAURANT ACROSS MD. ROUTE 256 TO NEW PROPOSED GRINDER PUMP.

PLAN  
SCALE: 1" = 40'

FOR CONTINUATION OF PLAN SEE SHEET 15

FOR PROFILE OF THIS AREA SEE SHEETS 14 & 16

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 10810. EXPIRATION DATE: FEBRUARY 20, 2010.



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Office: 410-647-6000 FAX: 410-544-8508

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS					
REVISED DATE: 8-9-08	BY: B.L.C.	APPROVED: [Signature]	DATE: 2-26-08	PROJECT MANAGER: [Signature]	SCALE: AS SHOWN
APPROVED: [Signature]	DATE: 2-20-08	ASSISTANT CHIEF ENGINEER	APPROVED: [Signature]	DATE: 1/20/07	CHIEF RIGHT-OF-WAY
DRAWN BY: B.L.C.			CHECKED BY: S.G.Z.		
SHEET NO. 17 OF 25			PROJECT NO.: S-8020		
CONTRACT NO.: S-802001			PLAN		
DEALE ROAD SEWER EXTENSION			TAX MAP 77 BLOCK 6 PARCEL 210		

64441

WORK ORDER #: 02-05-005A

Date: 02/08/2008 User: B.CORNELIUS Drawing Path: \\harms000-2\projects\Deale Road Sewer Extension\02-05-005A\Drawings\Deale17.dwg (REF File(s): \Drawings\Deale.dwg) B.A.S.E.dwg

FOR CONTINUATION OF PLAN SEE SHEET 17

FOR PROFILE OF THIS AREA SEE SHEET 14

HERRINGTON PARTNERSHIP  
T.M. 77 BLK 6 PAR. 335  
07-000-03674705  
8350/329

NOTE:  
LIMIT OF DISTURBANCE IS THE LIMIT OF THE PUBLIC RIGHTS-OF-WAY AND THE LIMIT OF ALL PROPOSED UTILITY EASEMENTS AND TEMPORARY CONSTRUCTION EASEMENTS.

STA. 87+41  
TERMINAL FLUSHING CONNECTION  
(SEE DETAIL SHEET 24)

STA. 82+68  
IN-LINE FLUSHING CONNECTION  
STA. 82+55  
3"x2" REDUCER

PLAN  
SCALE: 1" = 40'

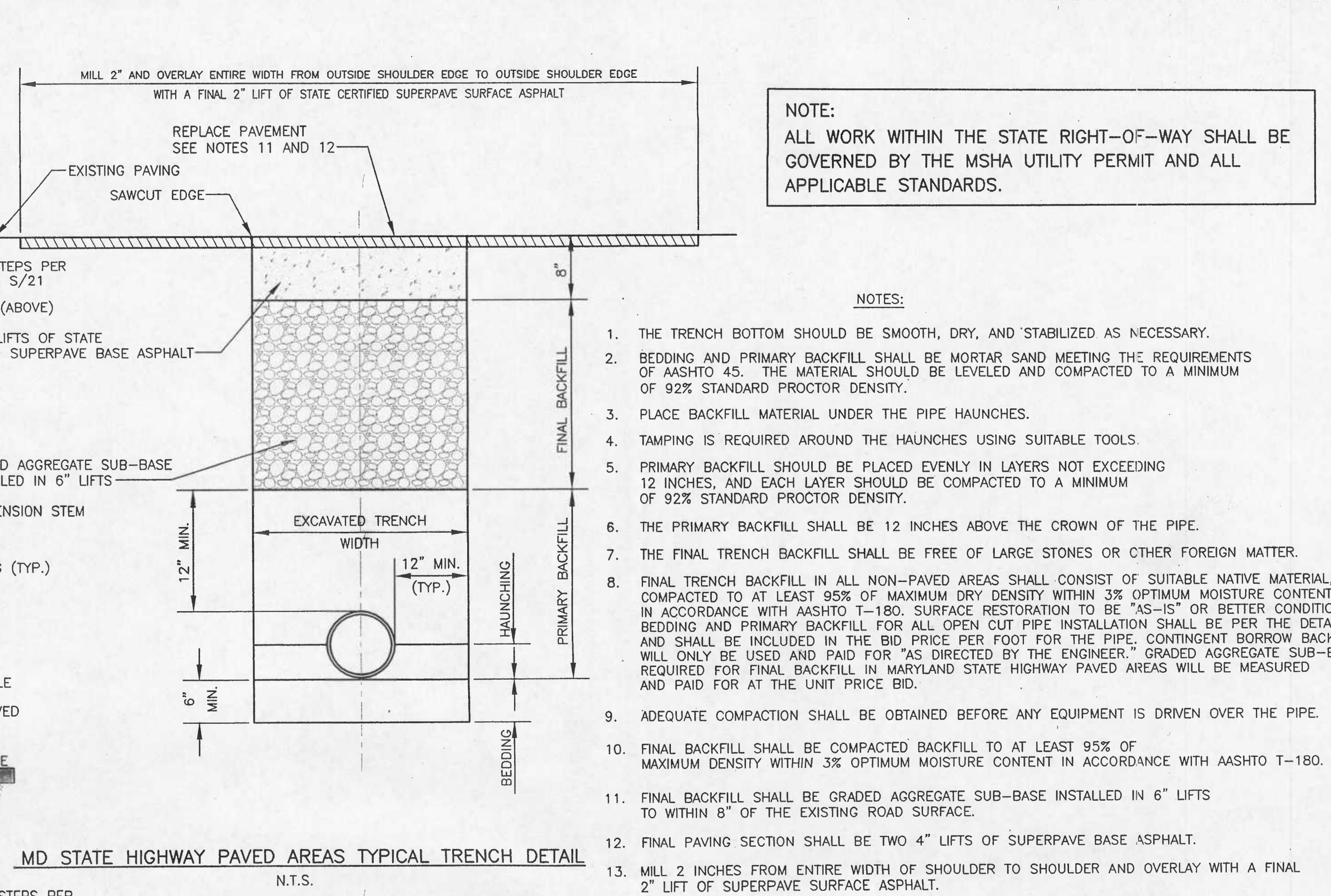
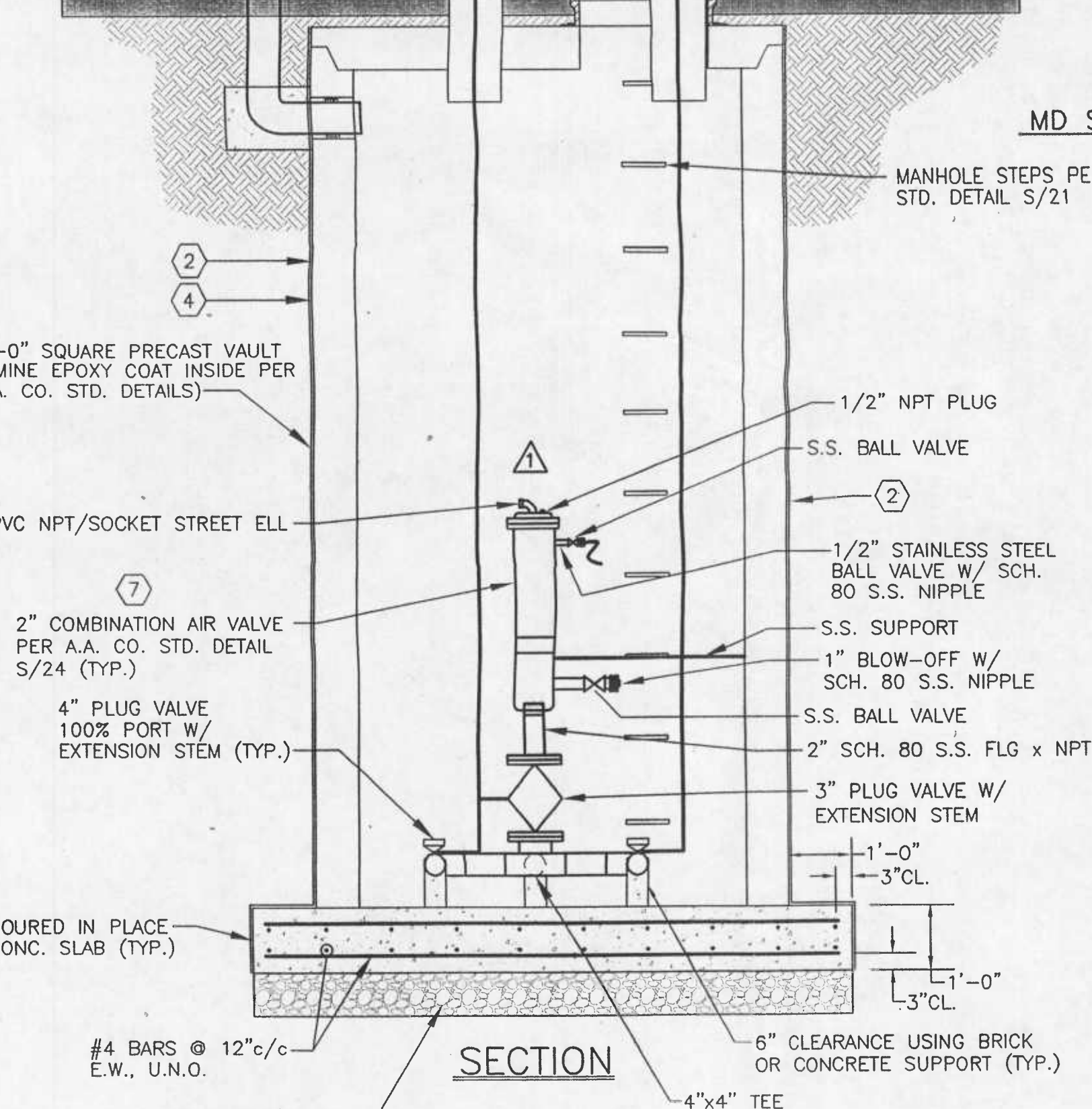
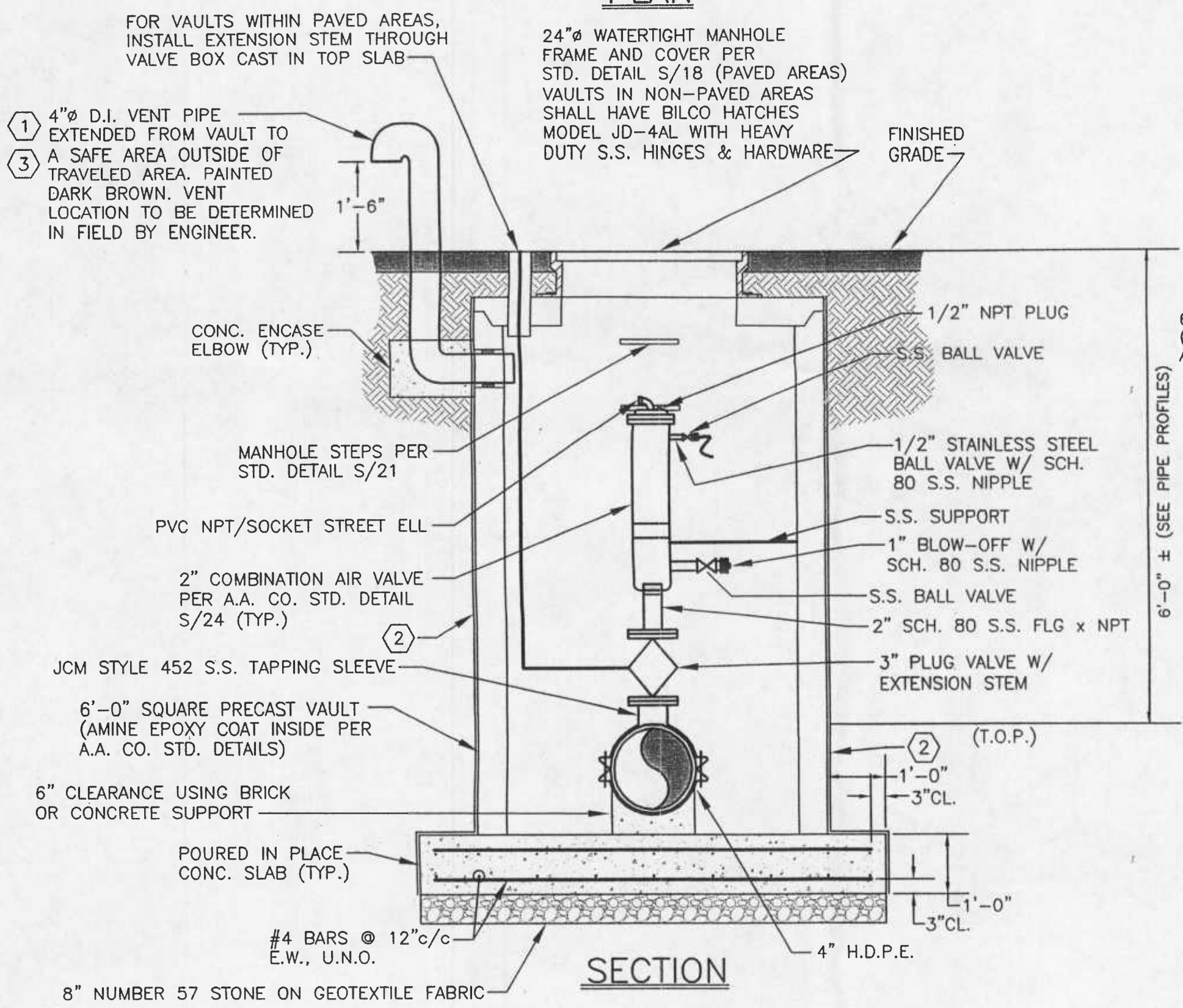
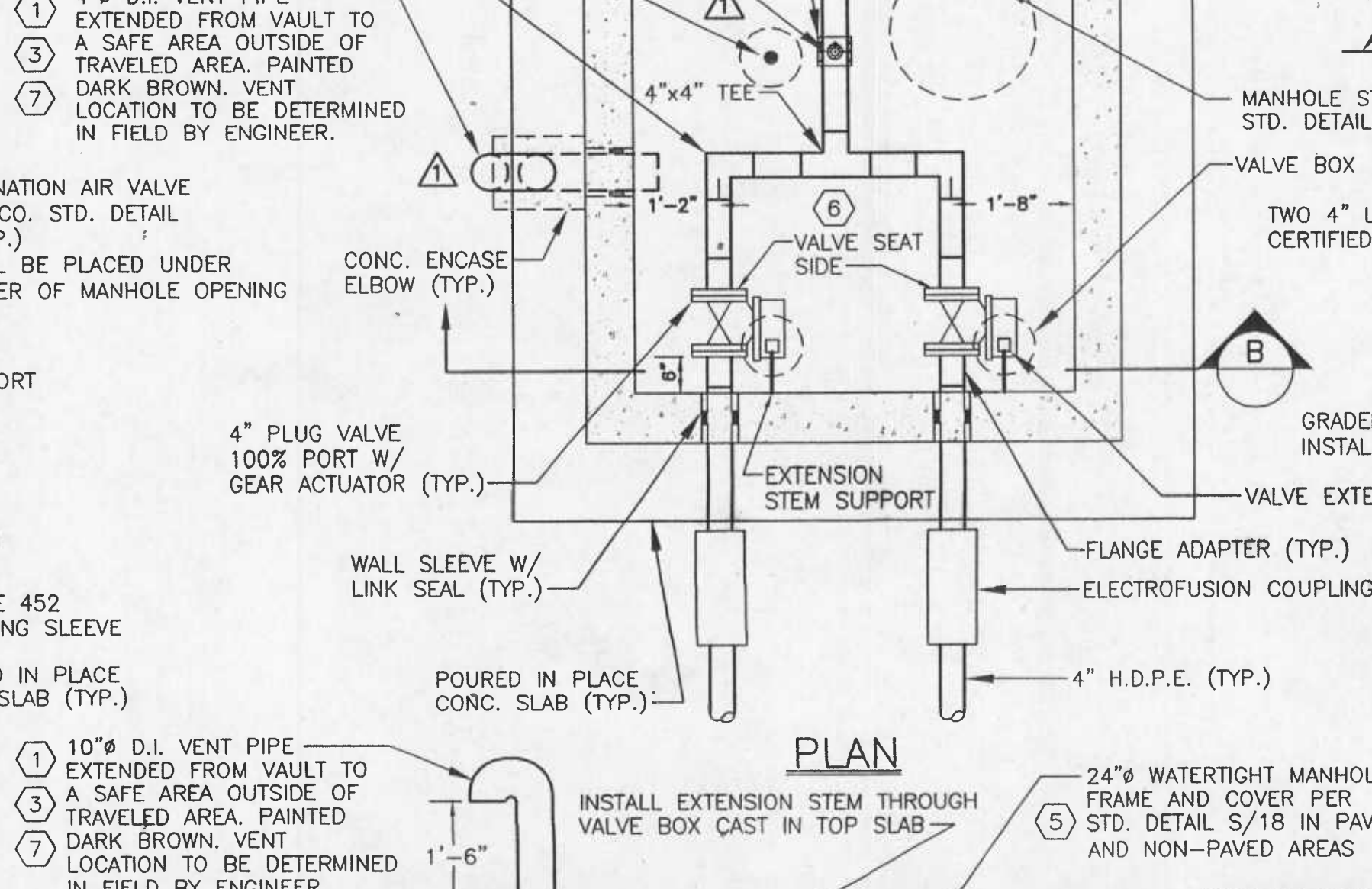
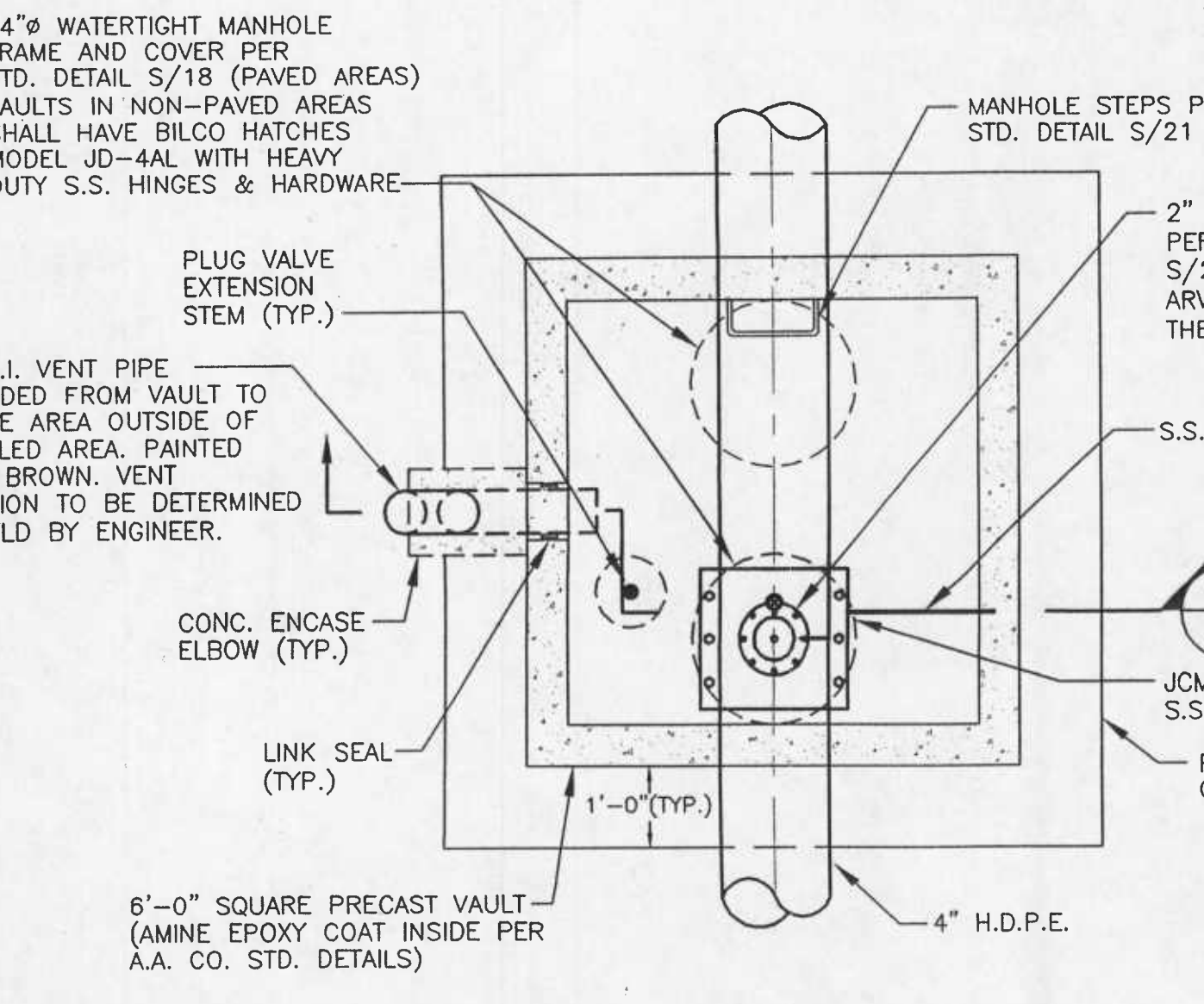
PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 10810, EXPIRATION DATE: FEBRUARY 20, 2010.



ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS				PLAN
REVISED DATE: 6-9-08	BY: B.L.C.	APPROVED: [Signature]	DATE: 2-28-08	SCALE: AS SHOWN
PROJECT MANAGER		PROJECT MANAGER		DRAWN BY: B.L.C.
CHECKED BY: S.G.Z.		PROJECT MANAGER		CHECKED BY: S.G.Z.
PROJECT NO.: S-8020		PROJECT MANAGER		SHEET NO. 18 OF 25
CONTRACT NO.: S-802001		PROJECT MANAGER		PROJECT NO.: S-8020
		PROJECT MANAGER		TAX MAP 77 BLOCK 6 PARCEL 210
		PROJECT MANAGER		

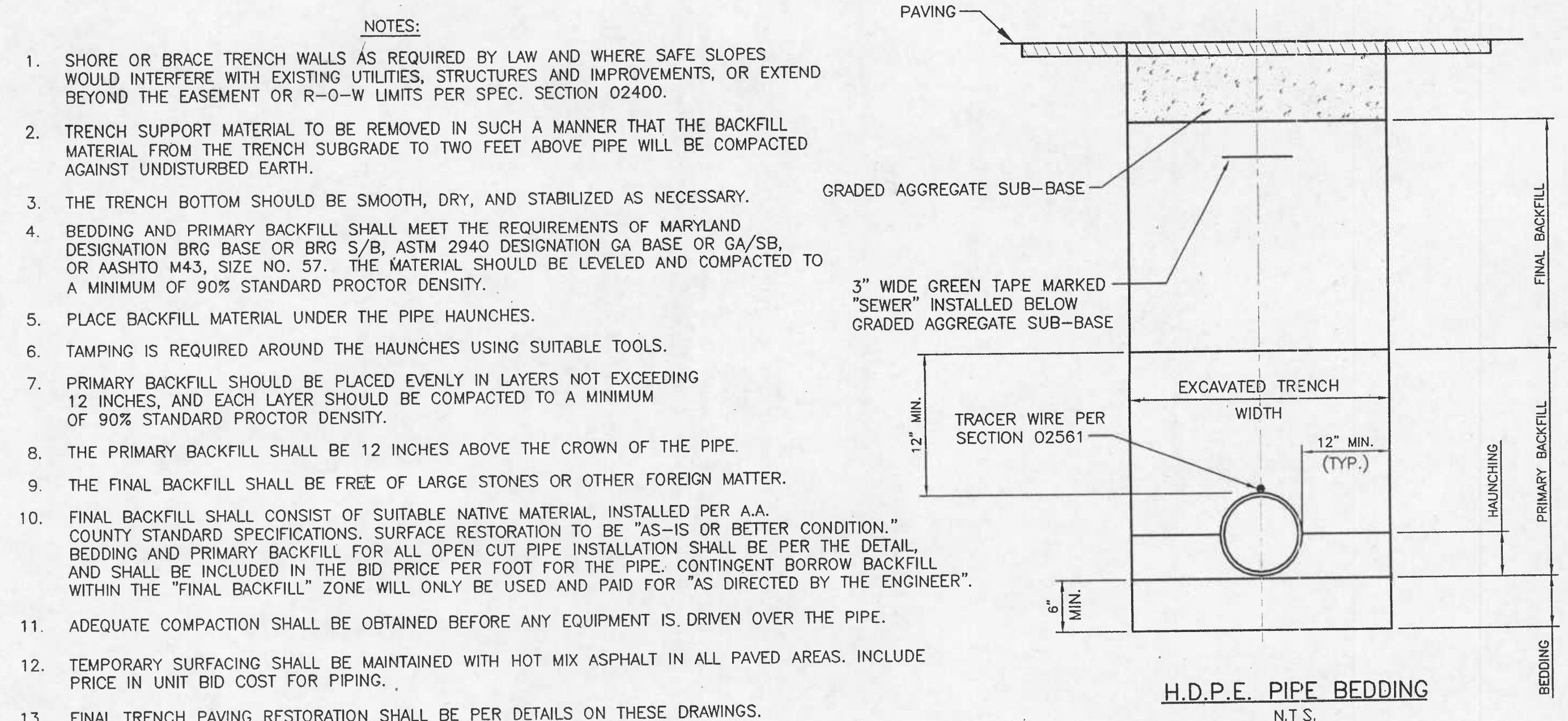
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WORK ORDER #: 02-05-005A XREF: File(s) Date: 02/07/2008 User: D:\del600-2\projects\Deale Road Sewer Extension\02-05-005A\DWG\Deale Road Sewer Extension.dwg Drawing Path: \del600-2\projects\Deale Road Sewer Extension\02-05-005A\DWG\Deale Road Sewer Extension.dwg



PAVING IN COUNTY & PRIVATE PAVED AREAS

FOLLOW A.A. CO. STANDARD TRENCH RESTORATION DETAILS FROM THE TOP OF THE PRIMARY BACKFILL TO EXISTING GRADE IN ALL COUNTY AND PRIVATE PAVED AREAS. PRIMARY BACKFILL SHALL BE AS OUTLINED IN THE ABOVE STATE HIGHWAY TRENCH DETAIL. PRIVATE PAVED AREAS SHALL BE MILLED AND OVERLAYED IN ACCORDANCE WITH A.A. CO. STD. DETAIL S-1.



GENERAL STRUCTURE NOTES

- 1. USE TYPE 304 S.S. BIRD SCREEN ATTACHED WITH S.S. FASTENERS (TYP. ALL VENTS ON ARV STRUCTURE).
- 2. APPLY DAMPPROOFING TO OUTSIDE OF ALL STRUCTURES.
- 3. APPLY 2 COATS OF DARK BROWN PAINT TO OUTSIDE VENTS OF ARV STRUCTURE.
- 4. ALL CONCRETE STRUCTURES TO BE DESIGNED FOR H-20 TRAFFIC LOADS. SUBMIT COMPUTATIONS SEALED BY A MARYLAND PROFESSIONAL ENGINEER.
- 5. IN NON-PAVED AREAS, EXTEND MANHOLE COVER TO 12 INCHES ABOVE FINISHED GRADE.
- 6. ALL PIPING AND FITTINGS IN DIVERSION VAULT SHALL BE H.D.P.E., SDR-11 (D.I.P.S.). FITTINGS SHALL NOT BE DERATED, AND SHALL HAVE SAME PRESSURE RATING AS PIPE.
- 7. WHERE INDICATED ON THE PLAN AND/OR PROFILE, PROVIDE SEWAGE AIR/VACUUM VALVE AND APPURTENANCES IN DIVERSION VAULT SIMILAR TO DETAIL ON THIS SHEET. WHEN AIR/VACUUM VALVE IS CALLED OUT, PROVIDE DUCTILE IRON VENT PIPE. PROVIDE BRICK OR CONCRETE SUPPORT UNDER AIR VALVE.

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 10810, EXPIRATION DATE: FEBRUARY 20, 2010.

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Office: 410-647-9000 FAX: 410-544-8508

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS			
REVISED DATE: 6-9-08	APPROVED BY: B.L.C. CHIEF ENGINEER	DATE: 2-20-09	SCALE: AS SHOWN
DRAWN BY: B.L.C.		CHECKED BY: S.G.Z.	SHEET NO. 19 OF 25
PROJECT MANAGER		DATE: 1/20/09	PROJECT NO.: S-8020
ASSISTANT CHIEF ENGINEER		CHIEF RIGHT-OF-WAY	CONTRACT NO.: S-802001

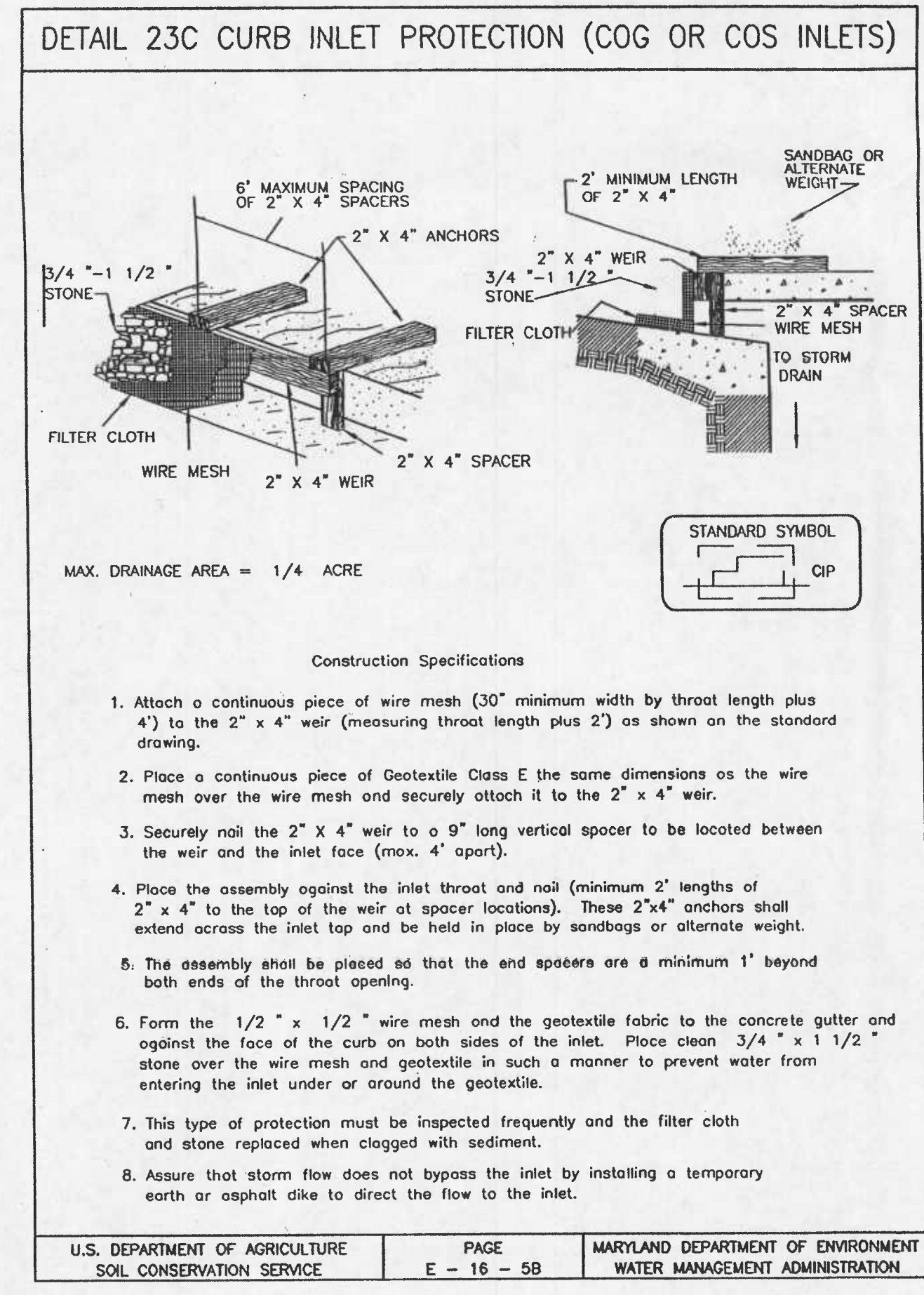
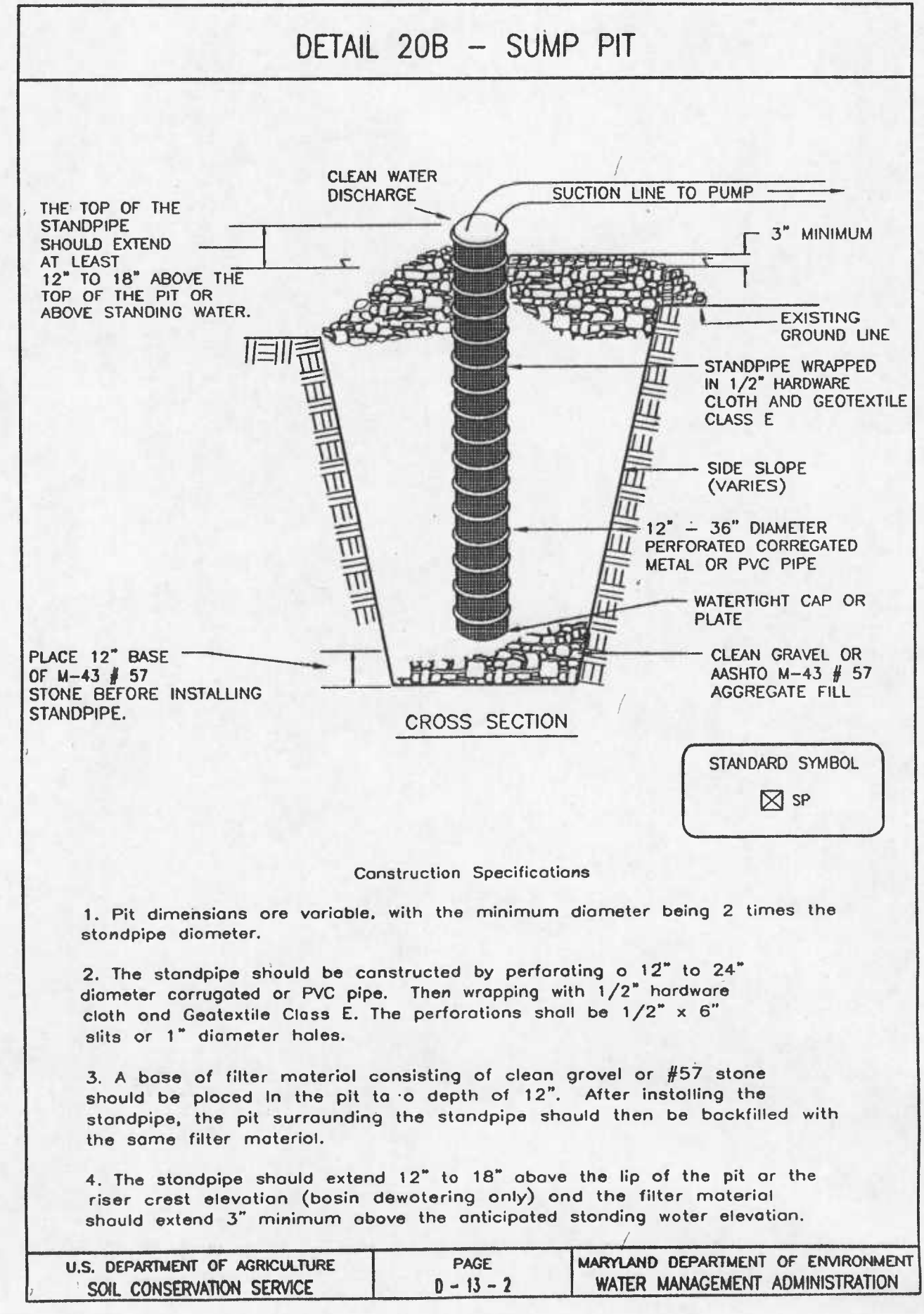
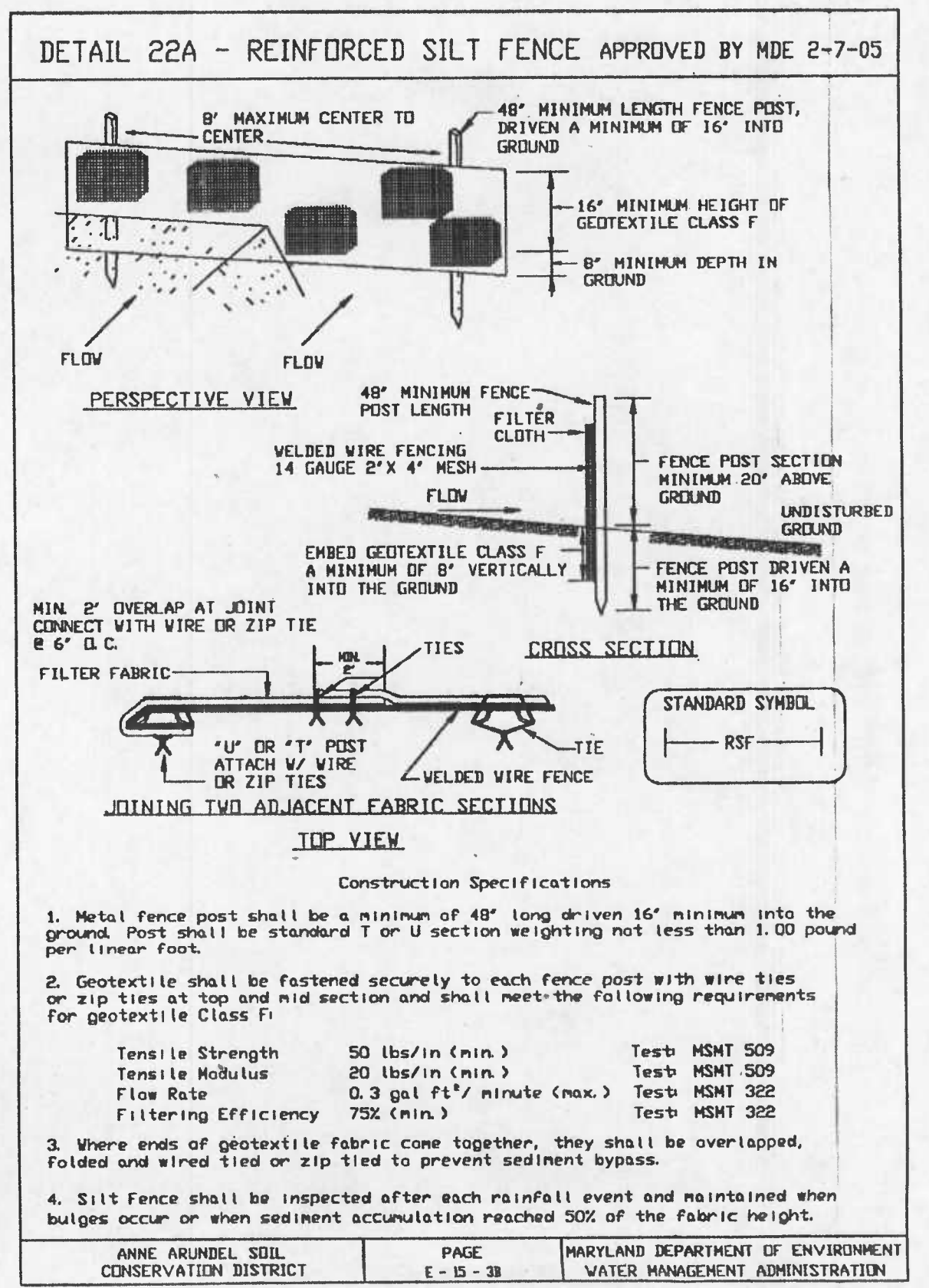
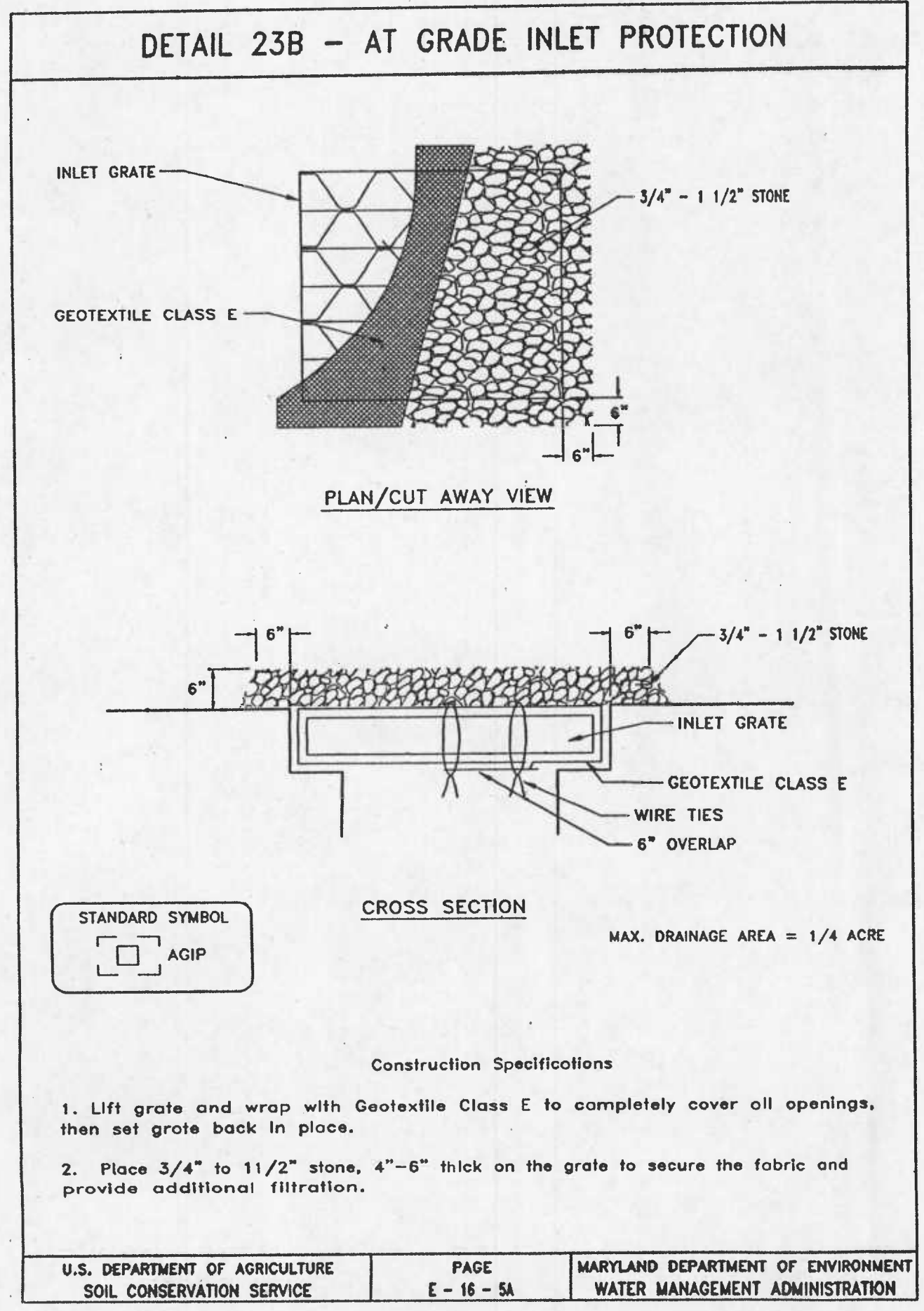
MISCELLANEOUS DETAILS  
**DEALE ROAD SEWER EXTENSION**  
TAX MAP 77 BLOCK 6 PARCEL 210

64443





WORK ORDER # 02-05-005A



### SILT FENCE

Silt Fence Design Criteria

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

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

U.S. DEPARTMENT OF AGRICULTURE SOIL CONSERVATION SERVICE      PAGE E-15-3C      MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 10810, EXPIRATION DATE: FEBRUARY 20, 2010.



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 Office: 410-647-8000      FAX: 410-544-8508

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS				SEDIMENT & EROSION CONTROL DETAILS	
REVISED DATE	BY	APPROVED DATE	DATE	SCALE: AS SHOWN	DRAWN BY: B.L.C.
		<i>[Signature]</i> 2-20-08	<i>[Signature]</i>		
		CHIEF ENGINEER	PROJECT MANAGER	CHECKED BY: S.G.Z.	
		APPROVED DATE: 2-20-08	DATE: <i>[Signature]</i>	SHEET NO. 21 OF 25	
		ASSISTANT CHIEF ENGINEER	CHIEF RIGHT-OF-WAY	PROJECT NO.: S-8020	
				CONTRACT NO.: S-802001	

**DEALE ROAD SEWER EXTENSION**

TAX MAP 77    BLOCK 6    PARCEL 210

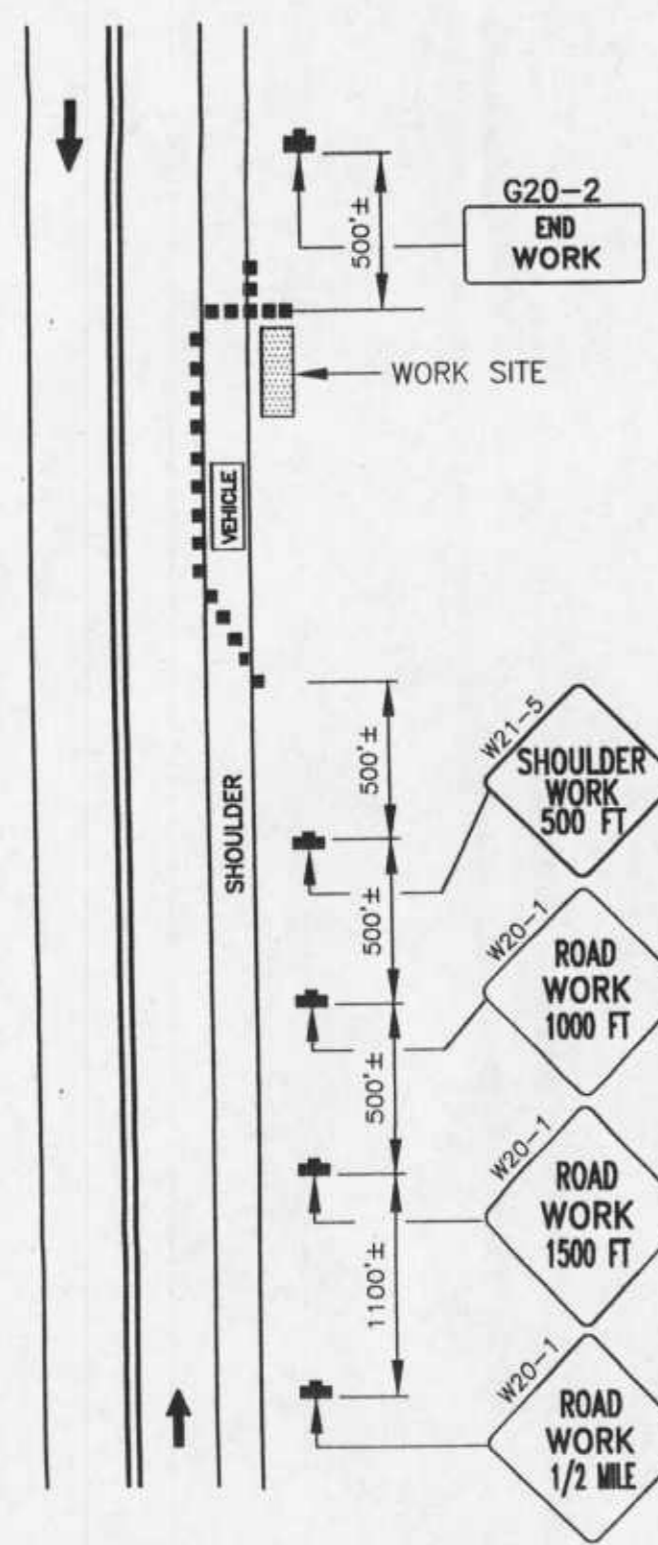
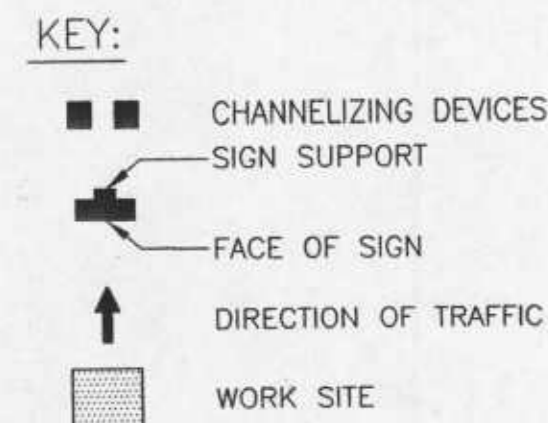
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Date: 02/07/2008 User: DArnold Drawing Path: \\D:\14600-2\Projects\Deale Road Sewer Extension\02-05-005A\DWG\Detail21.dwg XREF: File(s)

TRAFFIC CONTROL PLAN GENERAL NOTES

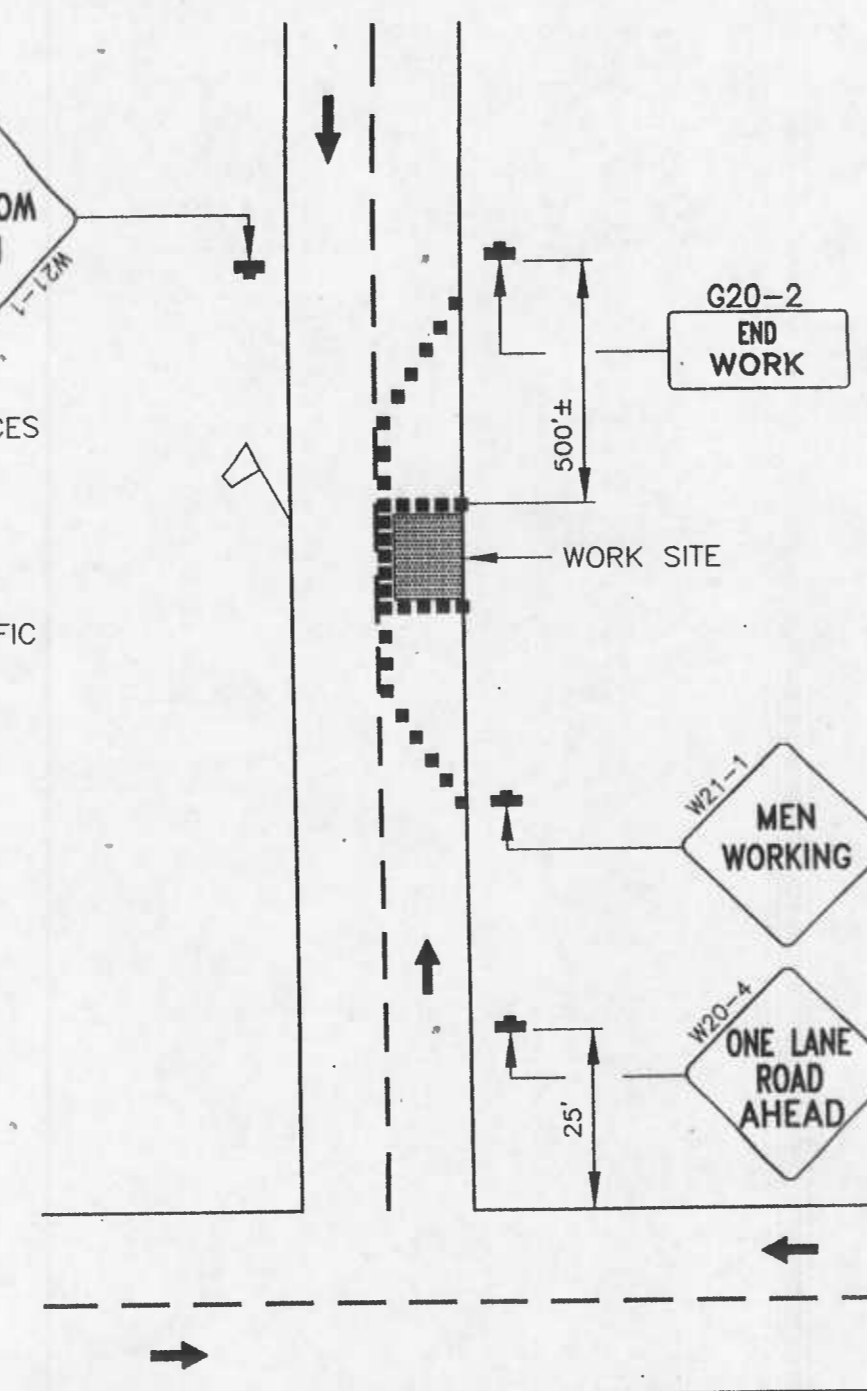
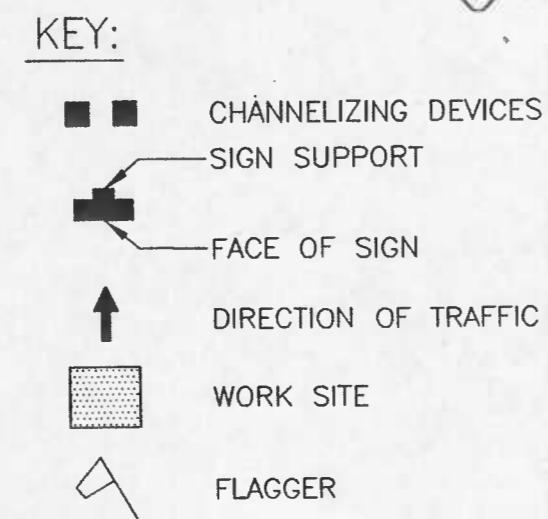
- [1] ANNE ARUNDEL COUNTY SHALL BE NOTIFIED AT LEAST 48 HRS PRIOR TO BEGINNING ANY WORK IN ORDER TO SCHEDULE A FIELD INSPECTION OF THE TRAFFIC CONTROL DEVICES. (FOR SUBDIVISIONS SIGNING CONTRACT INSPECTION DIVISION @ 222-7347, FOR CAPITAL PROJECTS CONTRACT ROADS DESIGN @ 222-7055). TRAFFIC ENGINEERING (222-7331) SHALL BE NOTIFIED DAILY AS CONSTRUCTION PROCEEDS.
- [2] ALL CONSTRUCTION AND MATERIALS FOR THE TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH THE STANDARD CONTAINED IN THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.
- [3] TRAVEL LANES SHALL BE A MINIMUM OF TEN FEET IN WIDTH. WHEN ONLY ONE LANE IS OPEN, FLAGMEN AND THE APPROPRIATE SIGNING SHALL BE PROVIDED. THE ROADWAY SHOULD BE REOPENED TO TWO LANES AND TEMPORARY SIGNS SHOULD BE REMOVED AT NIGHT.
- [4] TYPE II BARRICADES WITH WARNING LIGHTS SHALL BE USED TO MARK CHANNELIZING DEVICES AT NIGHT ALONG THE CONSTRUCTION AREA.
- [5] IF A DROPOFF MEASURES GREATER THAN 4", A BARRIER OR 2:1 SLOPE OF COMPACTED CRUSH-RUN GRAVEL WILL BE REQUIRED.
- [6] ALL OPEN TRENCHES SHALL BE CLOSED AT THE END OF THE DAY. IF STEEL PLATES ARE TO BE USED, APPROPRIATE SIGNING WILL BE REQUIRED AND THE PLATES WILL BE PINNED AND RAMPED.
- [7] ALL SIGNS THAT DO NOT APPLY WILL BE COVERED.
- [8] ACCESS SHALL BE PROVIDED TO ALL EXISTING DRIVEWAYS AT ALL TIMES.
- [9] ALL CONES AND FLAGMAN SHALL BE MOVED ACCORDINGLY AS CONSTRUCTION PROGRESSES.
- [10] ALL CONSTRUCTION SIGNING SHALL BE IN ACCORDANCE WITH THE TYPICAL SIGN PLACEMENT SHOWN ON THESE PLANS AND SHALL NOT OBSTRUCT EXISTING TRAFFIC CONTROL DEVICES.
- [11] IF TEMPORARY PARKING RESTRICTIONS WILL BE REQUIRED, THE CONTRACTOR WILL BE RESPONSIBLE FOR INSTALLING SIGNS AND FOR NOTIFYING AT LEAST ONE DAY IN ADVANCE ALL AFFECTED RESIDENTS. THE CONTRACTOR MUST CONTACT TRAFFIC ENGINEERING BEFORE ANY PARKING RESTRICTIONS ARE ENACTED.
- [12] CONSTRUCTION AND WORKMENS VEHICLES SHALL NOT BE PARKED IN A MANNER THAT WILL IMPEDE TRAFFIC OR IMPAIR SIGHT DISTANCE. THESE VEHICLES SHOULD BE PARKED OFF-STREET ON THE CONSTRUCTION SITE OR ON A SIDE STREET NOT UNDER CONSTRUCTION.
- [13] FLOOD LIGHTS SHOULD BE PROVIDED TO MARK FLAGGER STATIONS AT NIGHT AS NEEDED.
- [14] IF ENTIRE WORK AREA IS VISIBLE FROM ONE STATION, A SINGLE FLAGGER MAY BE USED.
- [15] CHANNELIZING DEVICES ARE TO BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.
- [16] NO ROAD CLOSURES WILL BE PERMITTED. CONTRACTOR SHALL MAINTAIN A MIN. OF ONE LANE FOR TRAFFIC AT ALL TIMES, USING APPROPRIATE SIGNAGE AND FLAG MAN AS NECESSARY.

WORK ORDER #: 02-05-0034



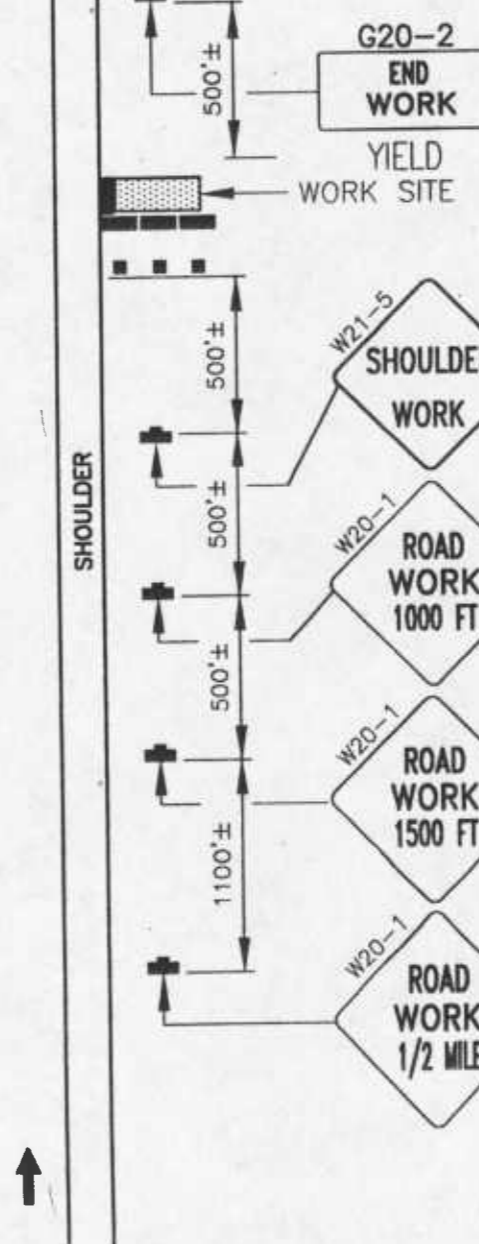
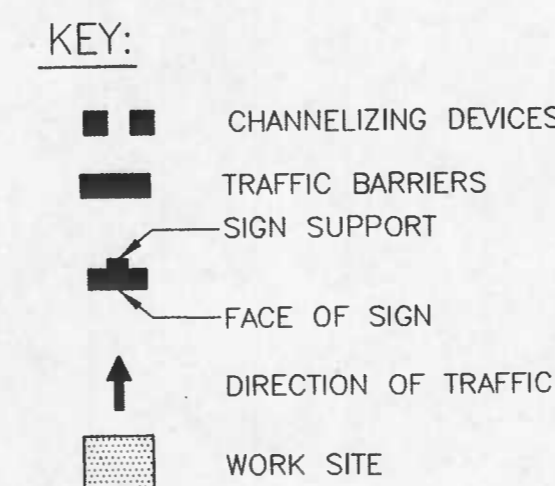
IMPORTANT - THIS DRAWING SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES.

SHOULDER WORK SITE TYPICAL DETAIL NOT-TO-SCALE



IMPORTANT - THIS DRAWING SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES.

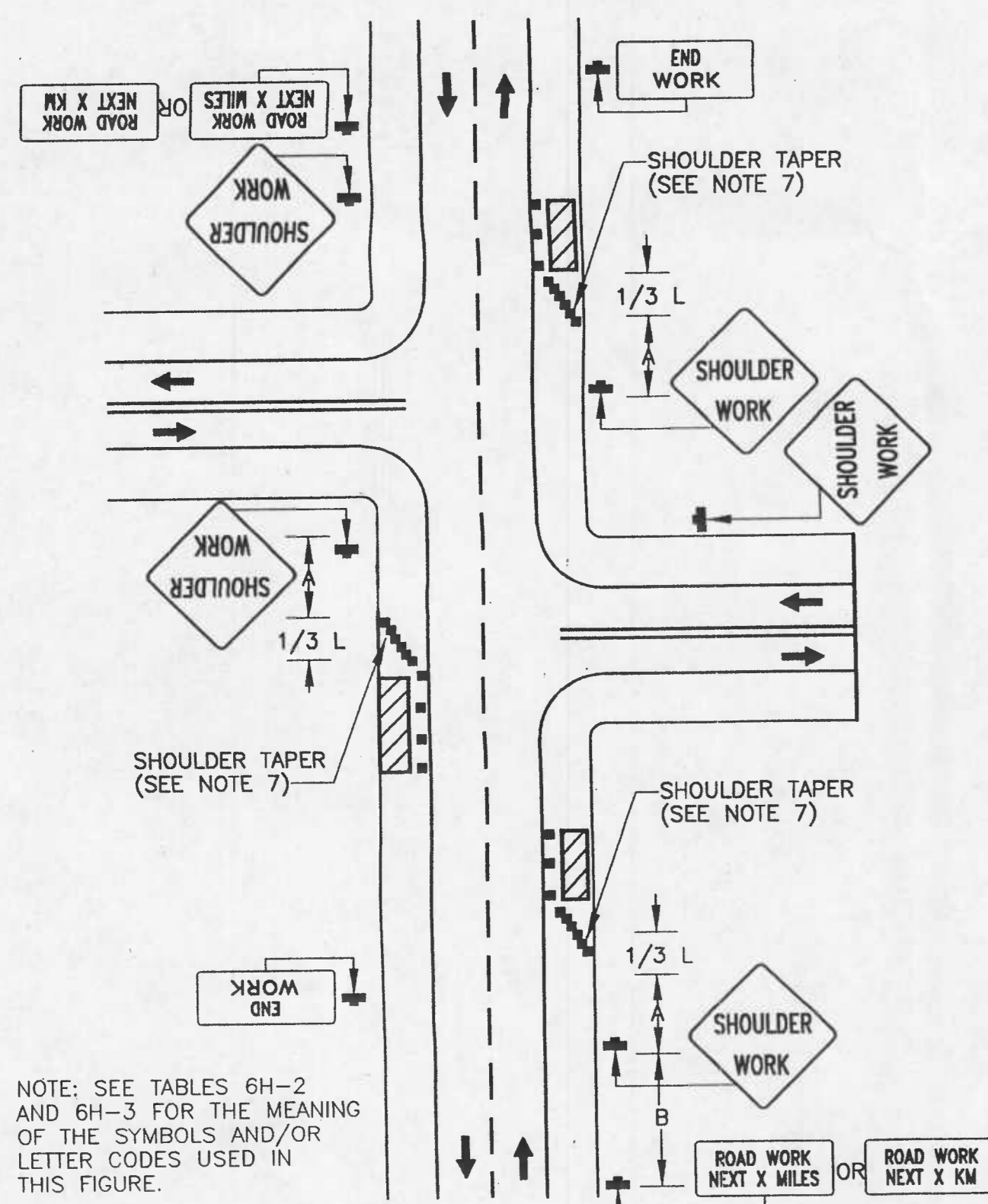
SINGLE LANE CLOSURE TYPICAL DETAIL NOT-TO-SCALE



IMPORTANT - THIS DRAWING SHALL BE USED IN COMBINATION WITH THE GENERAL NOTES.

JACKING/RECEIVING PIT WORK SITE TYPICAL DETAIL NOT-TO-SCALE

FIGURE 6H-3. WORK ON SHOULDERS (TA-3)



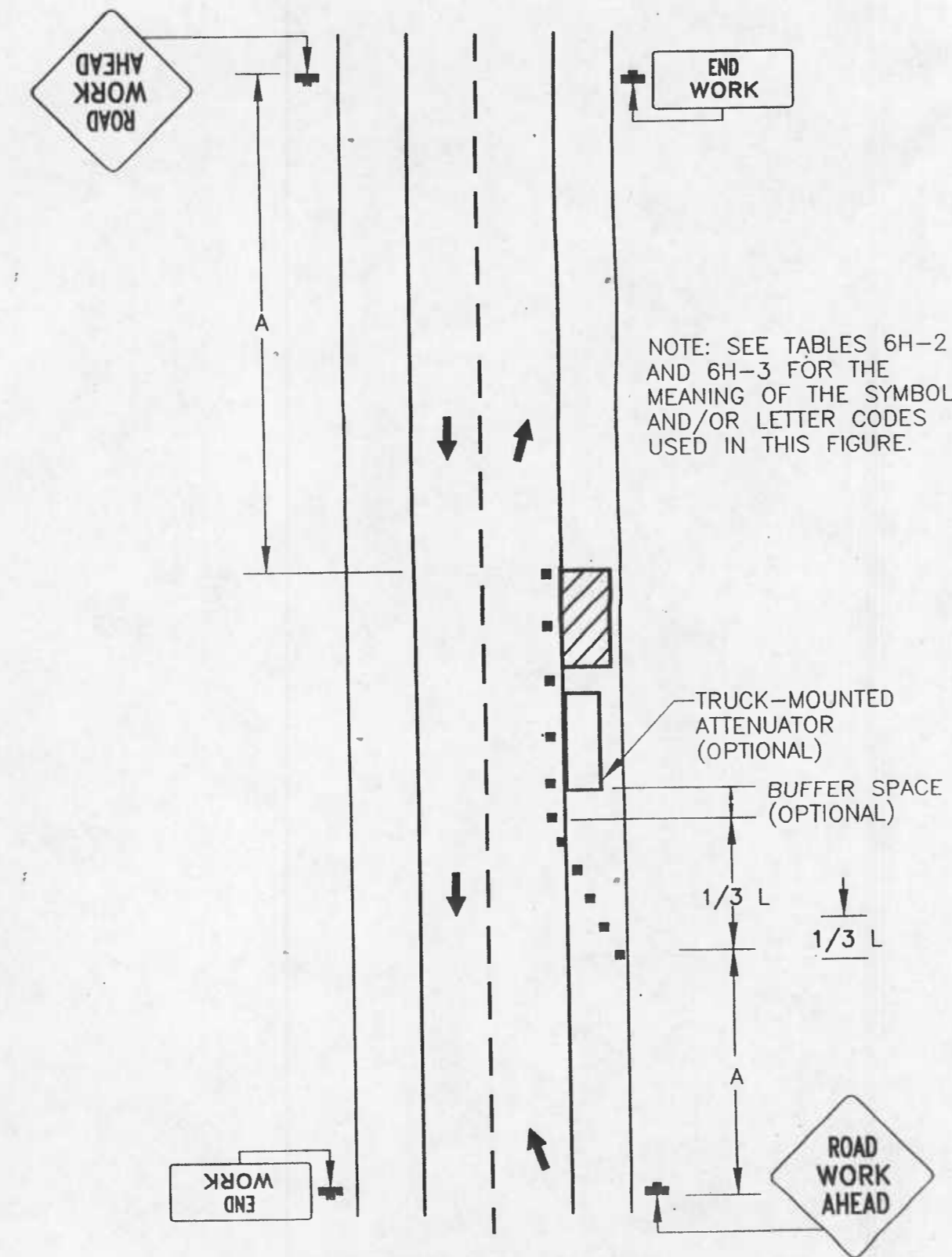
NOTE: SEE TABLES 6H-2 AND 6H-3 FOR THE MEANING OF THE SYMBOLS AND/OR LETTER CODES USED IN THIS FIGURE.

TYPICAL APPLICATION 3

Notes for Figure 6H-3—Typical Application 3 Work on Shoulders

- Guidance:**
1. A SHOULDER WORK sign should be placed on the left side of the roadway for a divided or one-way street only if the left shoulder is affected.
- Option:**
2. The Workers symbol signs may be used instead of SHOULDER WORK signs.
  3. The SHOULDER WORK AHEAD sign on an intersecting roadway may be omitted where drivers emerging from that roadway will encounter another advance warning sign prior to this activity area.
  4. For short-duration operations of 60 minutes or less, all signs and channelizing devices may be eliminated if a vehicle with activated high-intensity rotating, flashing, oscillating, or strobe lights is used.
  5. Vehicle hazard warning signals may be used to supplement high-intensity rotating, flashing, oscillating, or strobe lights.
- Standard:**
6. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.
  7. When paved shoulders having a width of 2.4 m (8 ft) or more are closed, at least one advance warning sign shall be used. In addition, channelizing devices shall be used to close the shoulder in advance to delineate the beginning of the work space and direct vehicular traffic to remain within the traveled way.

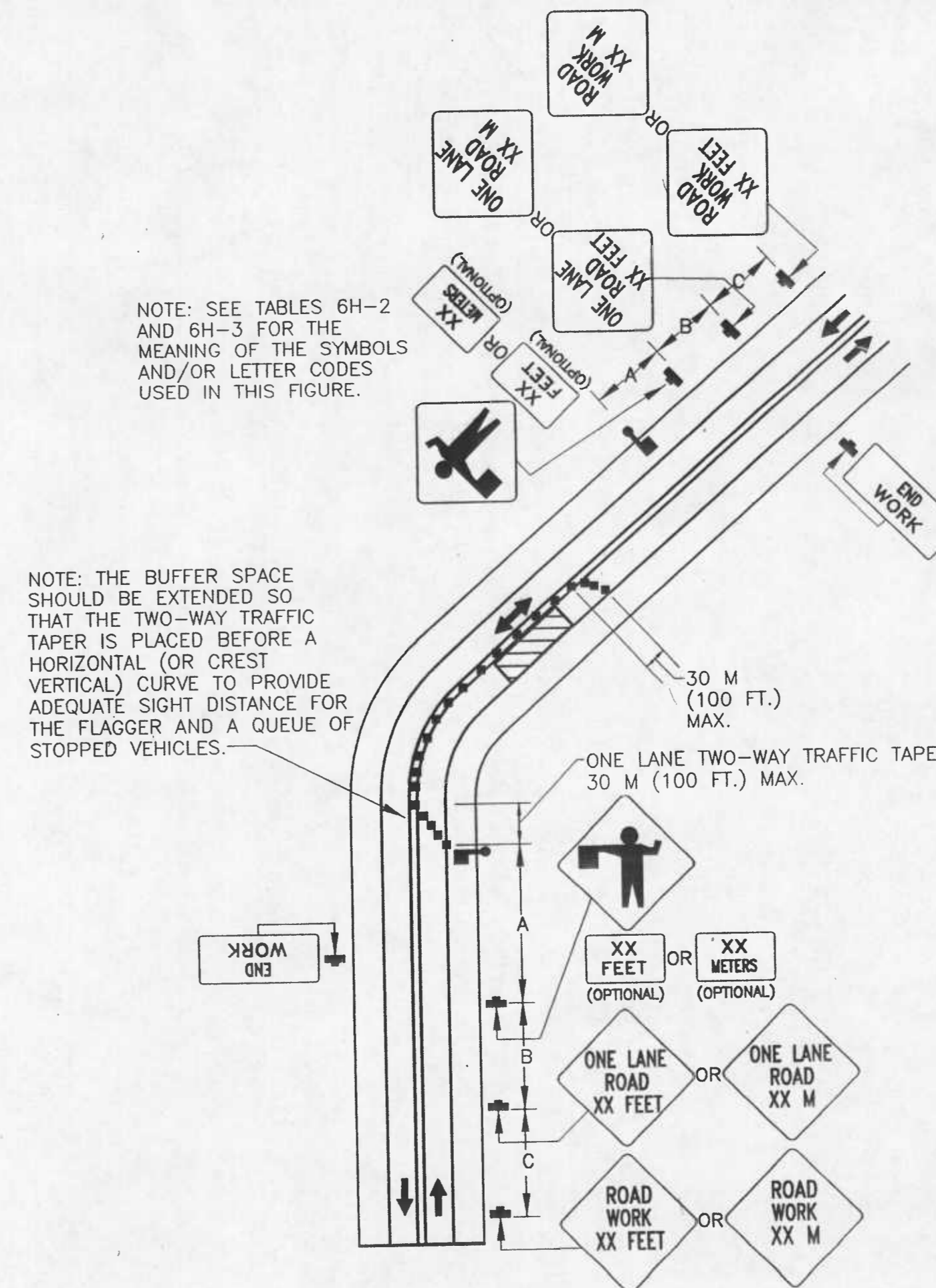
FIGURE 6H-6. SHOULDER WORK WITH MINOR ENCROACHMENT (TA-6)



NOTE: SEE TABLES 6H-2 AND 6H-3 FOR THE MEANING OF THE SYMBOLS AND/OR LETTER CODES USED IN THIS FIGURE.

TYPICAL APPLICATION 6

FIGURE 6H-10. LANE CLOSURE ON TWO-LANE ROAD USING FLAGGERS (TA-10)



NOTE: SEE TABLES 6H-2 AND 6H-3 FOR THE MEANING OF THE SYMBOLS AND/OR LETTER CODES USED IN THIS FIGURE.

NOTE: THE BUFFER SPACE SHOULD BE EXTENDED SO THAT THE TWO-WAY TRAFFIC TAPER IS PLACED BEFORE A HORIZONTAL (OR CREST VERTICAL) CURVE TO PROVIDE ADEQUATE SIGHT DISTANCE FOR THE FLAGGER AND A QUEUE OF STOPPED VEHICLES.

TYPICAL APPLICATION 10

Notes for Figure 6H-6—Typical Application 6 Shoulder Work with Minor Encroachment

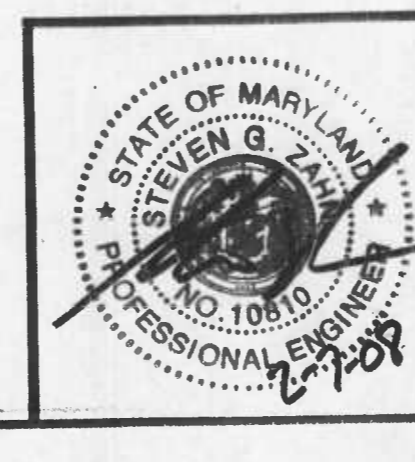
- Guidance:**
1. All lanes should be a minimum of 3 m (10 ft) in width as measured to the near face of the channelizing devices.
  2. The treatment shown should be used on a minor road having low speeds. For higher-speed traffic conditions, a lane closure should be used.
- Option:**
3. For short-term use on low-volume, low-speed roadways with vehicular traffic that does not include longer and wider heavy commercial vehicles, a minimum lane width of 2.7 m (9 ft) may be used.
  4. Where the opposite shoulder is suitable for carrying vehicular traffic and of adequate width, lanes may be shifted by use of closely spaced channelizing devices, provided that the minimum lane width of 3 m (10 ft) is maintained.
  5. Additional advance warning may be appropriate, such as a ROAD NARROWS sign.
  6. Temporary traffic barriers may be used along the work space.
  7. The shadow vehicle may be omitted if a taper and channelizing devices are used.
  8. A truck-mounted attenuator may be used on the shadow vehicle.
  9. For short-duration work, the taper and channelizing devices may be omitted if a shadow vehicle with activated high-intensity rotating, flashing, oscillating, or strobe lights is used.
  10. Vehicle hazard warning signals may be used to supplement high-intensity rotating, flashing, oscillating, or strobe lights.
- Standard:**
11. Vehicle hazard warning signals shall not be used instead of the vehicle's high-intensity rotating, flashing, oscillating, or strobe lights.

Notes for Figure 6H-10—Typical Application 10 Lane Closure on Two-Lane Road Using Flaggers

- Option:**
1. For low-volume situations with short work zones on straight roadways where the flagger is visible to road users approaching from both directions, a single flagger, positioned to be visible to road users approaching from both directions, may be used (see Chapter 6E).
  2. The ROAD WORK AHEAD and the END ROAD WORK signs may be omitted for short-duration operations.
  3. Flashing warning lights and/or flags may be used to call attention to the advance warning signs. A BE PREPARED TO STOP sign may be added to the sign series.
- Guidance:**
4. The buffer space should be extended so that the two-way traffic taper is placed before a horizontal (or crest vertical) curve to provide adequate sight distance for the flagger and a queue of stopped vehicles.
- Standard:**
5. At night, flagger stations shall be illuminated, except in emergencies.
- Guidance:**
6. When used, the BE PREPARED TO STOP sign should be located between the Flagger sign and the ONE LANE ROAD sign.
  7. When a highway-rail grade crossing exists within or upstream of the transition area and it is anticipated that queues resulting from the lane closure might extend through the highway-rail grade crossing, the TTC zone should be extended so that the transition area precedes the highway-rail grade crossing.
  8. When a highway-rail grade crossing equipped with active warning devices exists within the activity area, provisions should be made for keeping flaggers informed as to the activation status of these warning devices.
  9. When a highway-rail grade crossing exists within the activity area, drivers operating on the left side of the normal centerline should be provided with comparable warning devices as for drivers operating on the right side of the normal centerline.
  10. Early coordination with the railroad company should occur before work starts.
- Option:**
11. A flagger or a uniformed law enforcement officer may be used at the highway-rail grade crossing to minimize the probability that vehicles are stopped within 4.6 m (15 ft) of the highway-rail grade crossing, measured from both sides of the outside rails.

Date: 02/11/2008 User: RNeath Drawing Path: \\ch02\602-2\Projects\02-05-0034\DWG\Deale22.dwg XREF File(s):

PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 10810, EXPIRATION DATE: FEBRUARY 20, 2008.



**HARMS**

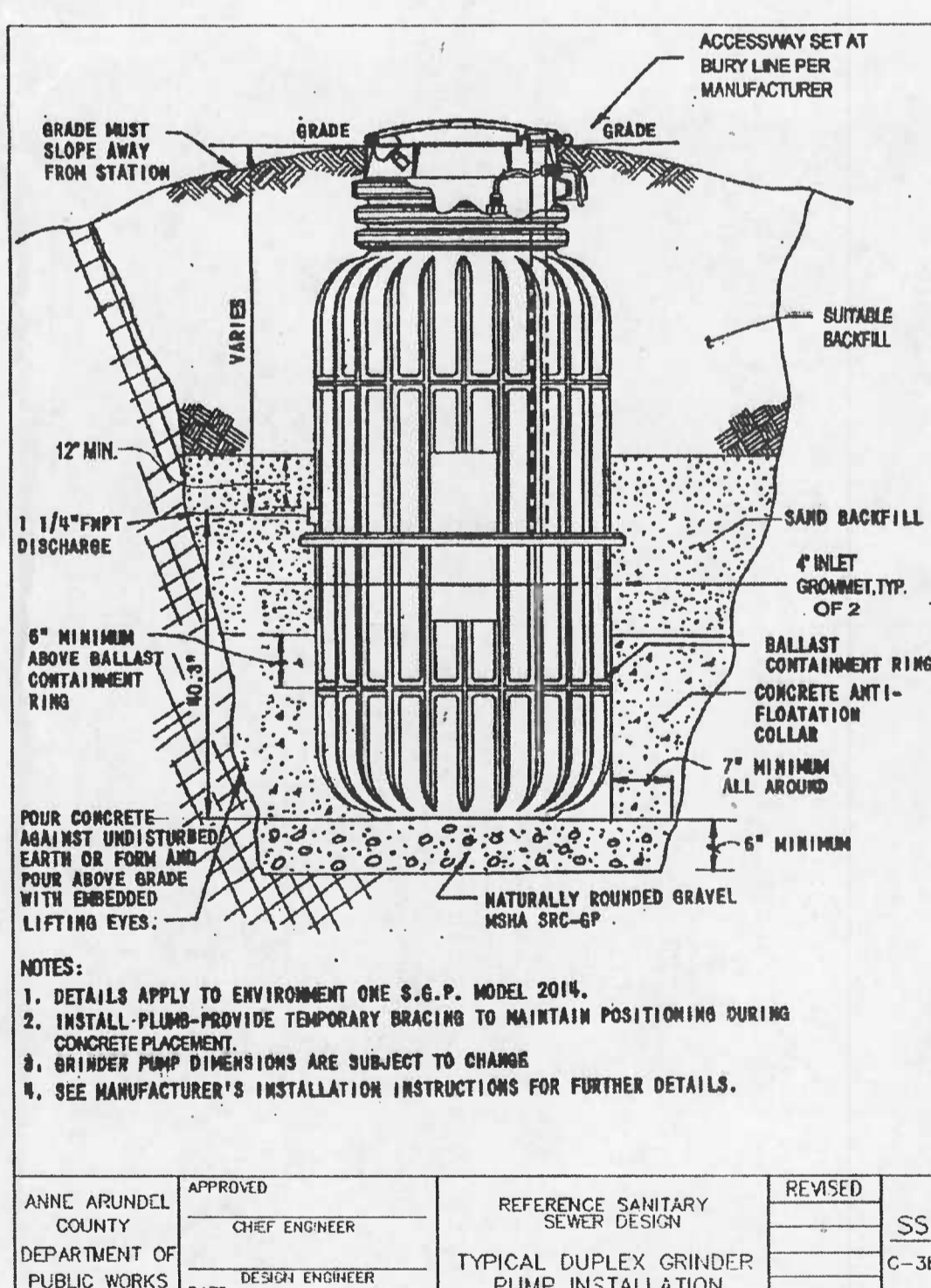
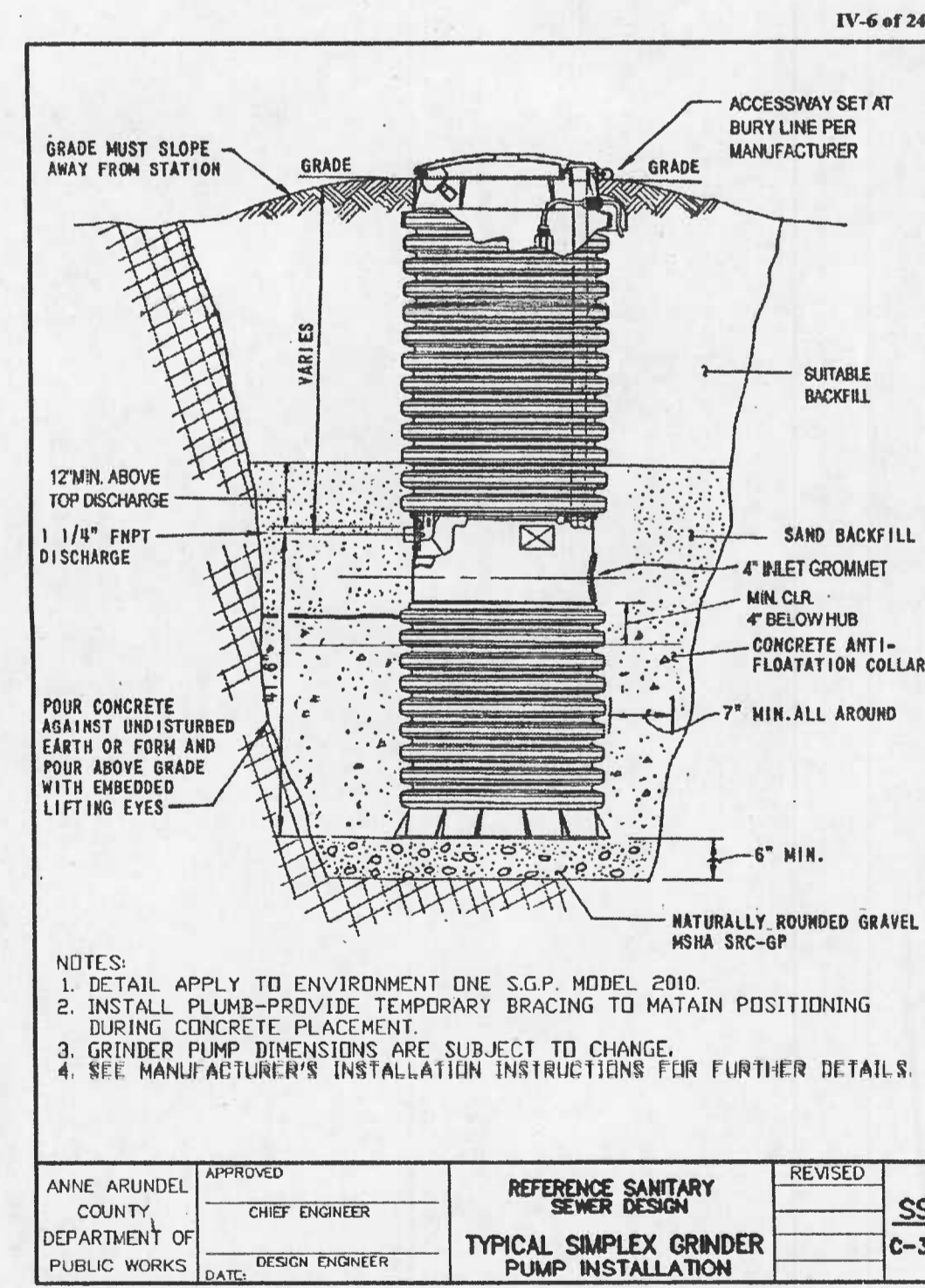
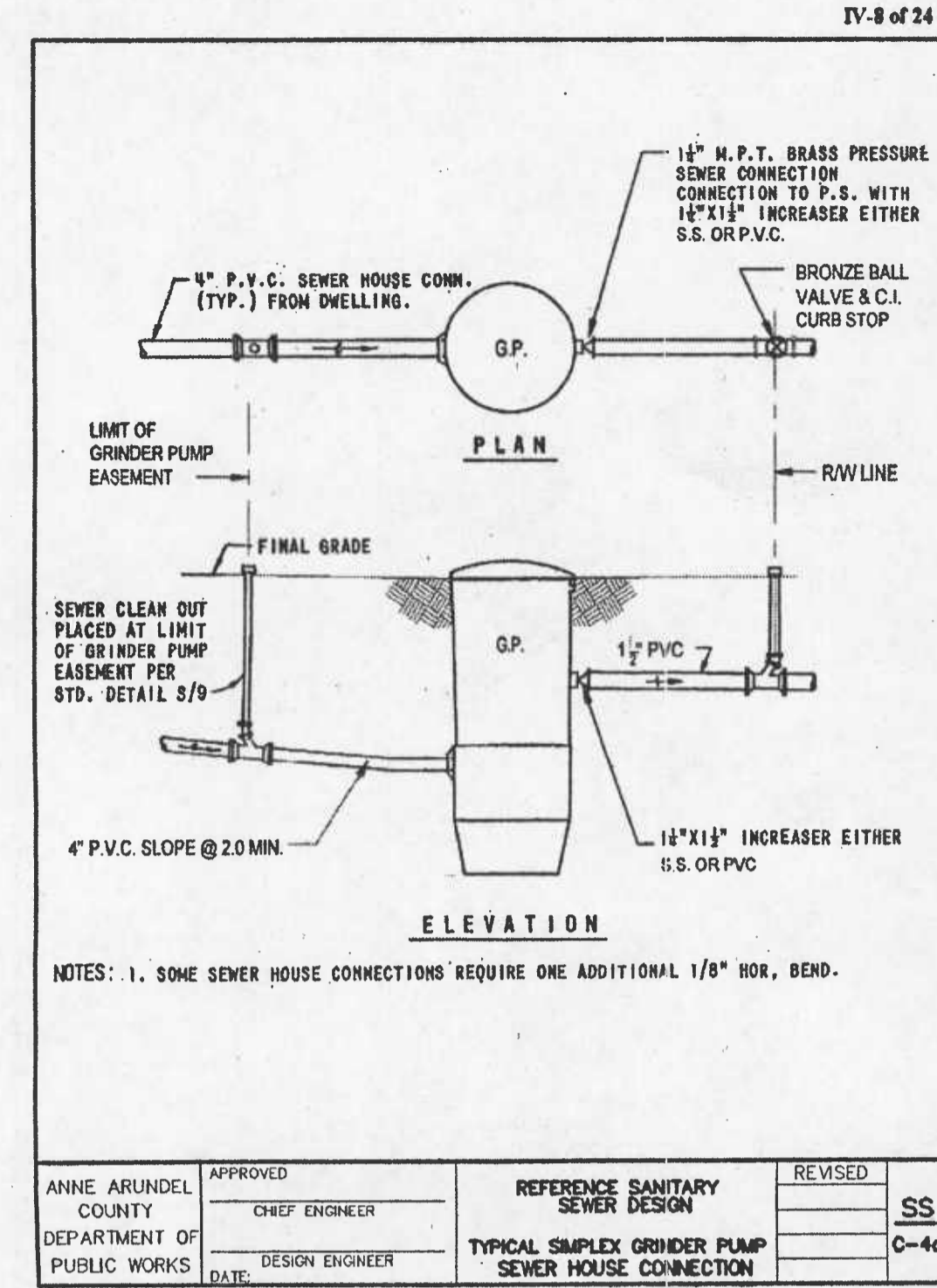
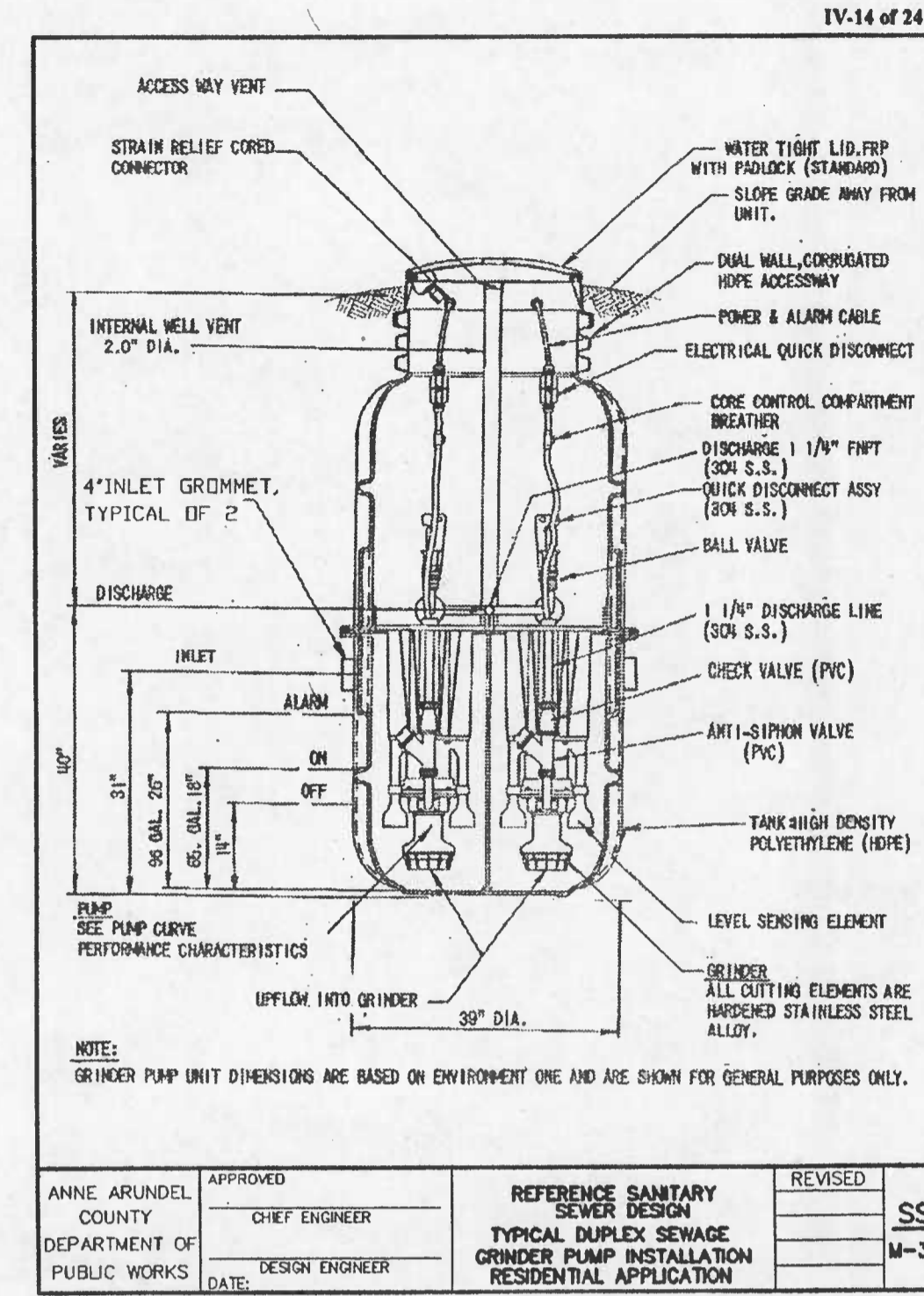
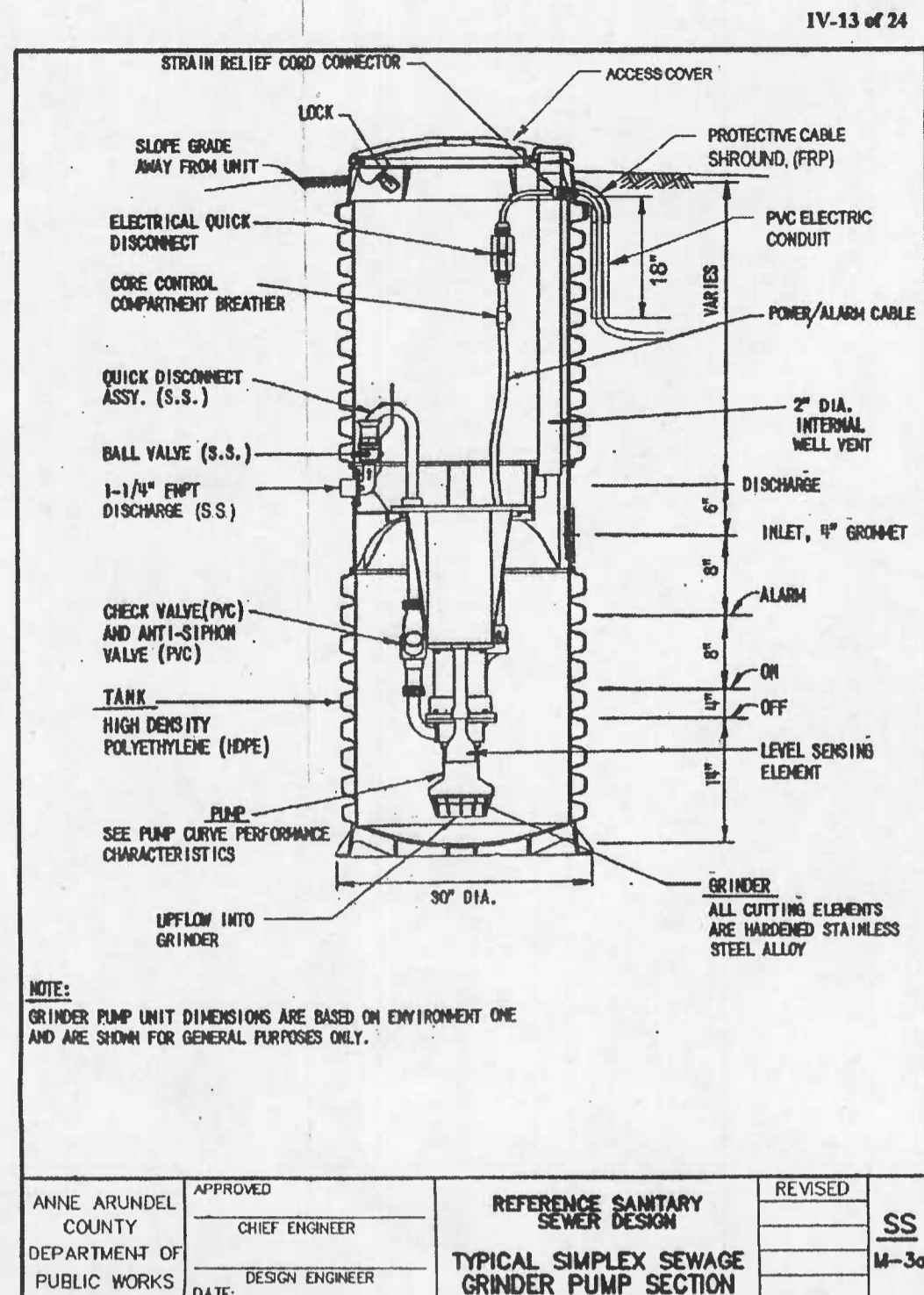
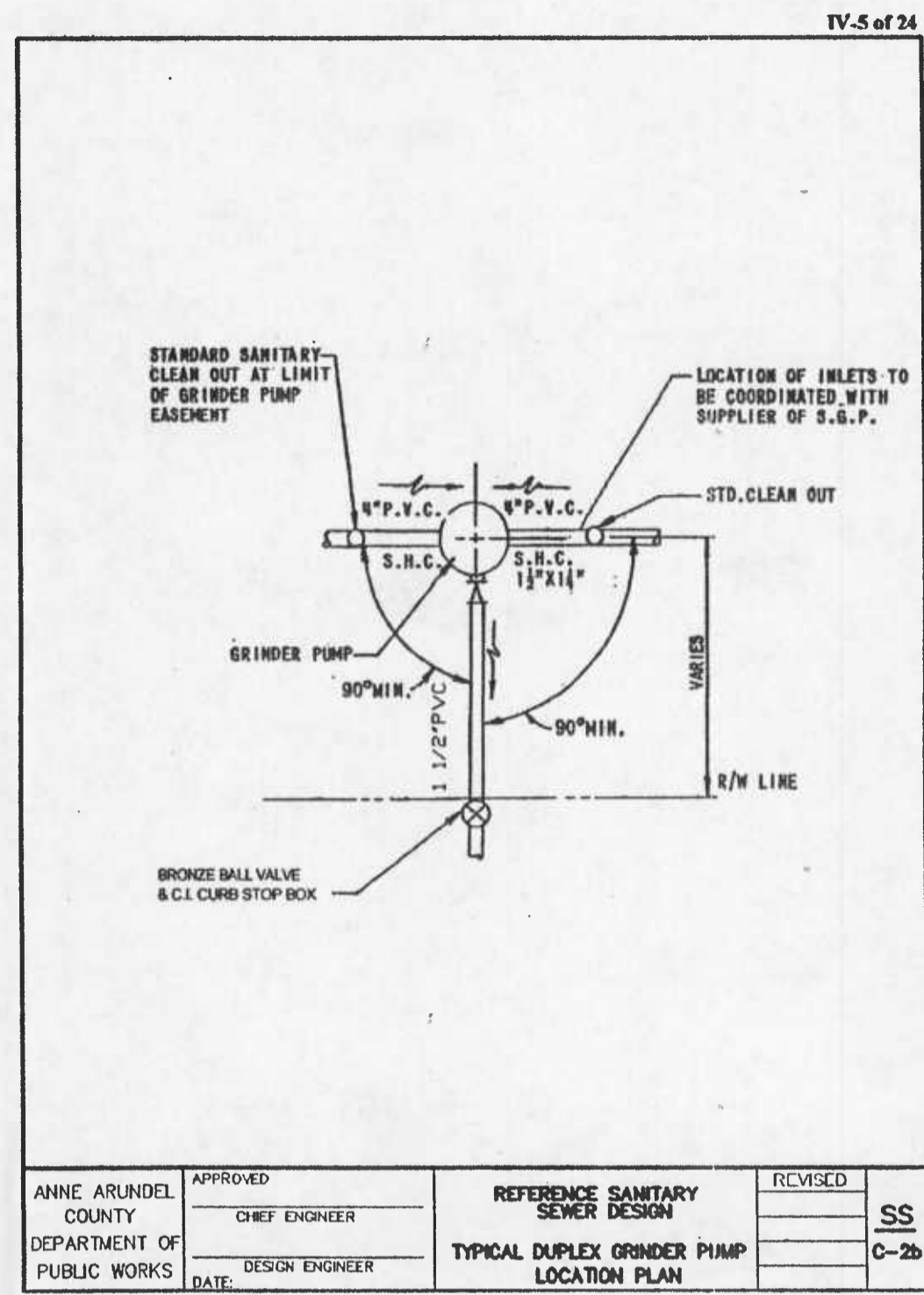
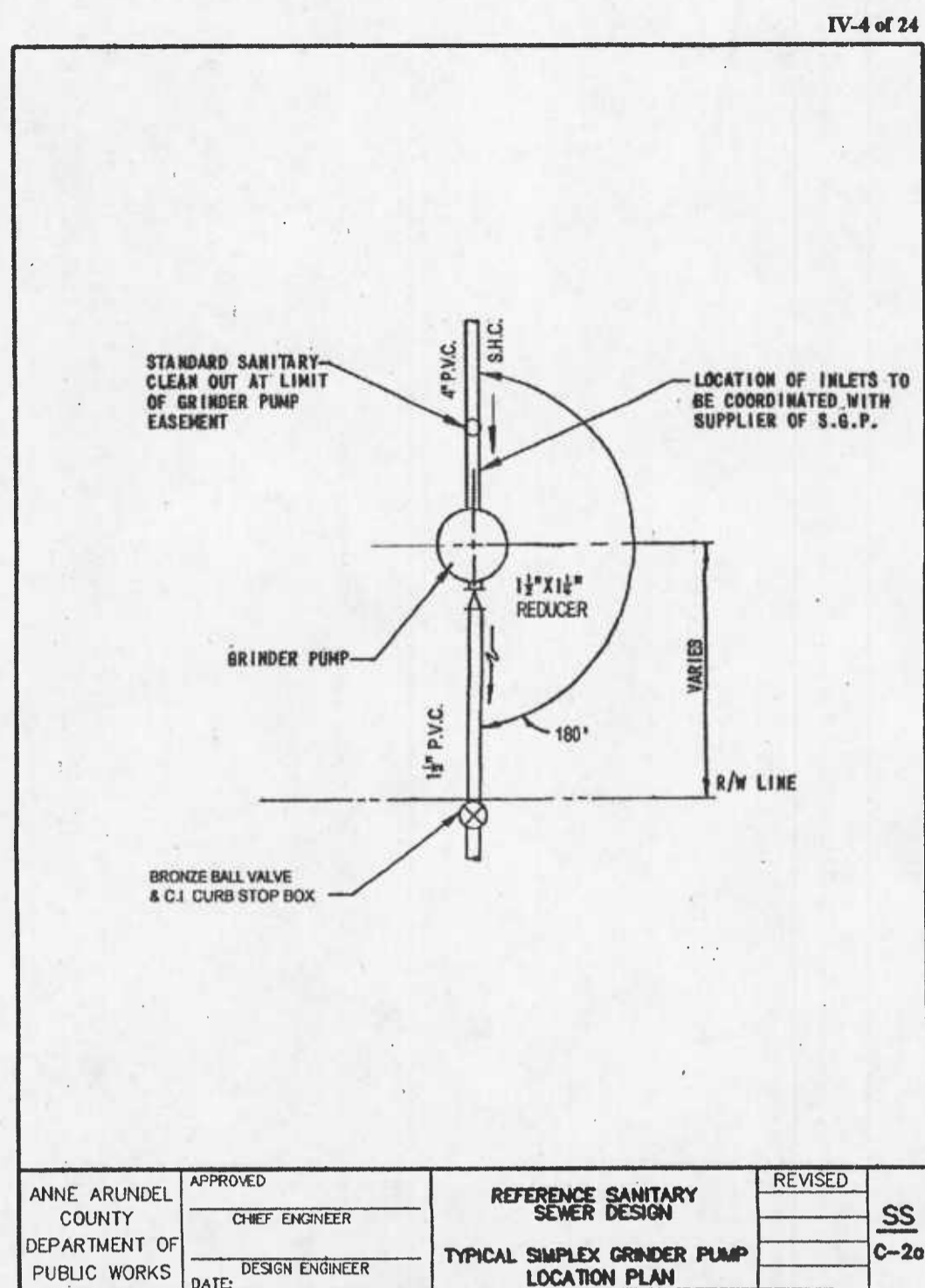
ENGINEERS • PLANNERS • SURVEYORS

P.O. BOX 5, PASADENA, MD 21123

Office: 410-647-6000 FAX: 410-544-8508

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS				TRAFFIC CONTROL DETAILS	
REVISED DATE:	BY:	APPROVED DATE:	DATE:	APPROVED DATE:	SCALE: AS SHOWN
		<i>REDA</i> 2-20-08		<i>Wichitson</i> 1/21/08	DRAWN BY: B.L.C.
		<i>REDA</i> 2-20-08		<i>Wichitson</i> 1/21/08	CHECKED BY: S.G.Z.
				<i>Wichitson</i> 1/21/08	SHEET NO. 22 OF 25
					PROJECT NO.: S-8020
					CONTRACT NO.: S-802001
					TAX MAP 77 BLOCK 6 PARCEL 210

64446



IV-24 of 24

NOTES:

- EACH GRINDER PUMP UNIT IS TO BE SUPPLIED WITH A ONE PIECE WRENCH SIZED TO FIT THE UNIT IT IS TO SERVE.
- PAD LOCKS KEYS TO THE COUNTY SYSTEM ARE TO BE FURNISHED FOR:
  - THE GRINDER PUMP LID.
  - THE ALARM SUBPANEL.
  - THE MAIN DISCONNECT.
- NO MODIFICATIONS FOR ALTERATIONS ARE TO BE MADE TO THE GRINDER PUMP OR CASING WITHOUT WRITTEN APPROVAL OF ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS.
- BLOCKING OF RESTRAINT JOINT PIPE IS NOT REQUIRED. BLOCKING OF UNRESTRAINT JOINT PIPE SHALL BE AS SHOWN ON THE ANNE ARUNDEL COUNTY, DEPARTMENT OF UTILITIES STANDARD SANITARY SEWER DETAIL S/28 FOR PIPE SIZES 1 1/4" TO 4" AND STANDARD WATER DETAIL W/2 AND W/3 FOR PIPE SIZES 6" AND UP.

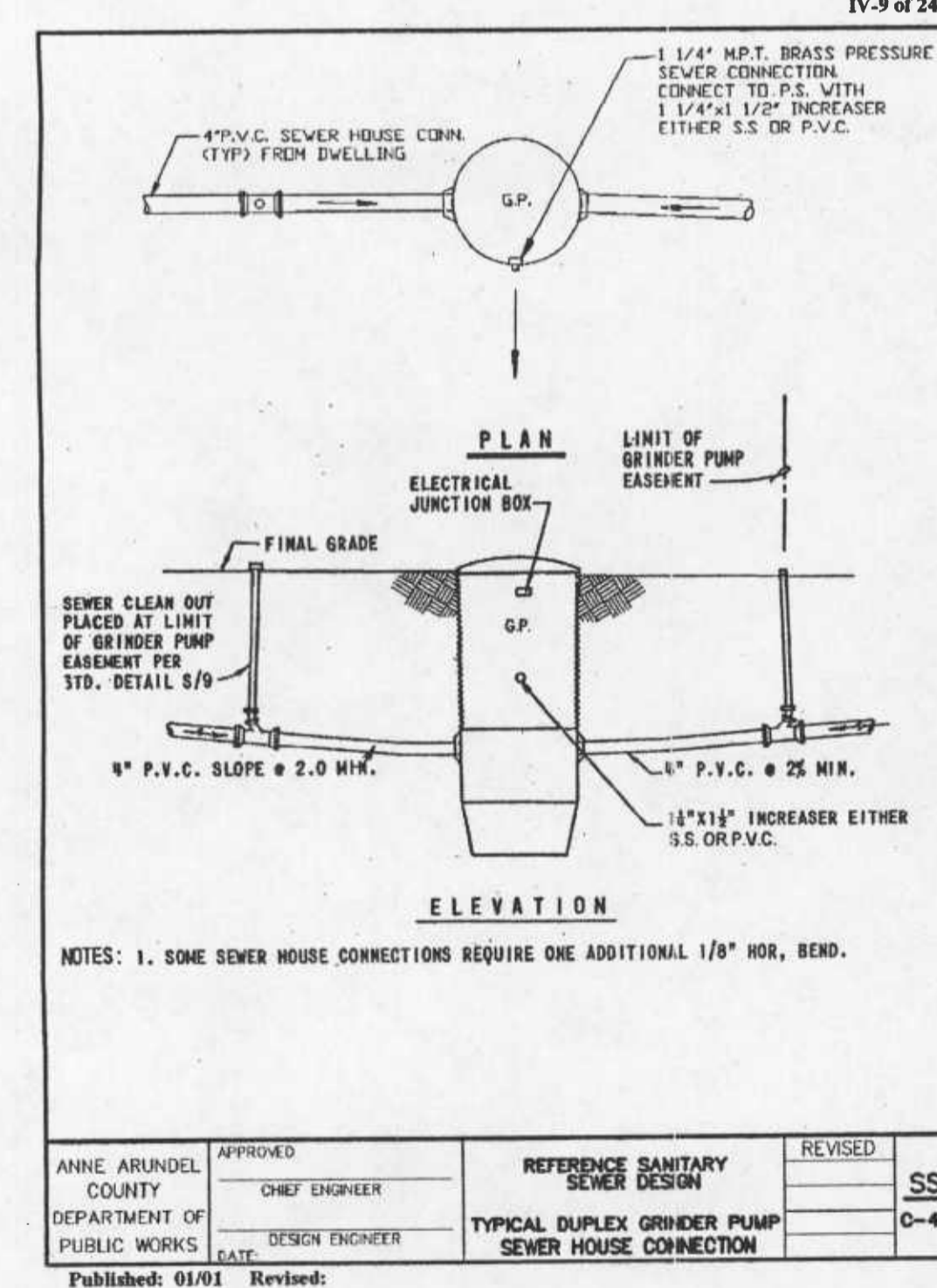
APPROVED: ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS, CHIEF ENGINEER

DESIGNED: ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS, DESIGN ENGINEER

DATE: 01/01

REVISIONS: SS, C-5

Published: 01/01 Revised:



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 10810, EXPIRATION DATE: FEBRUARY 20, 2010.

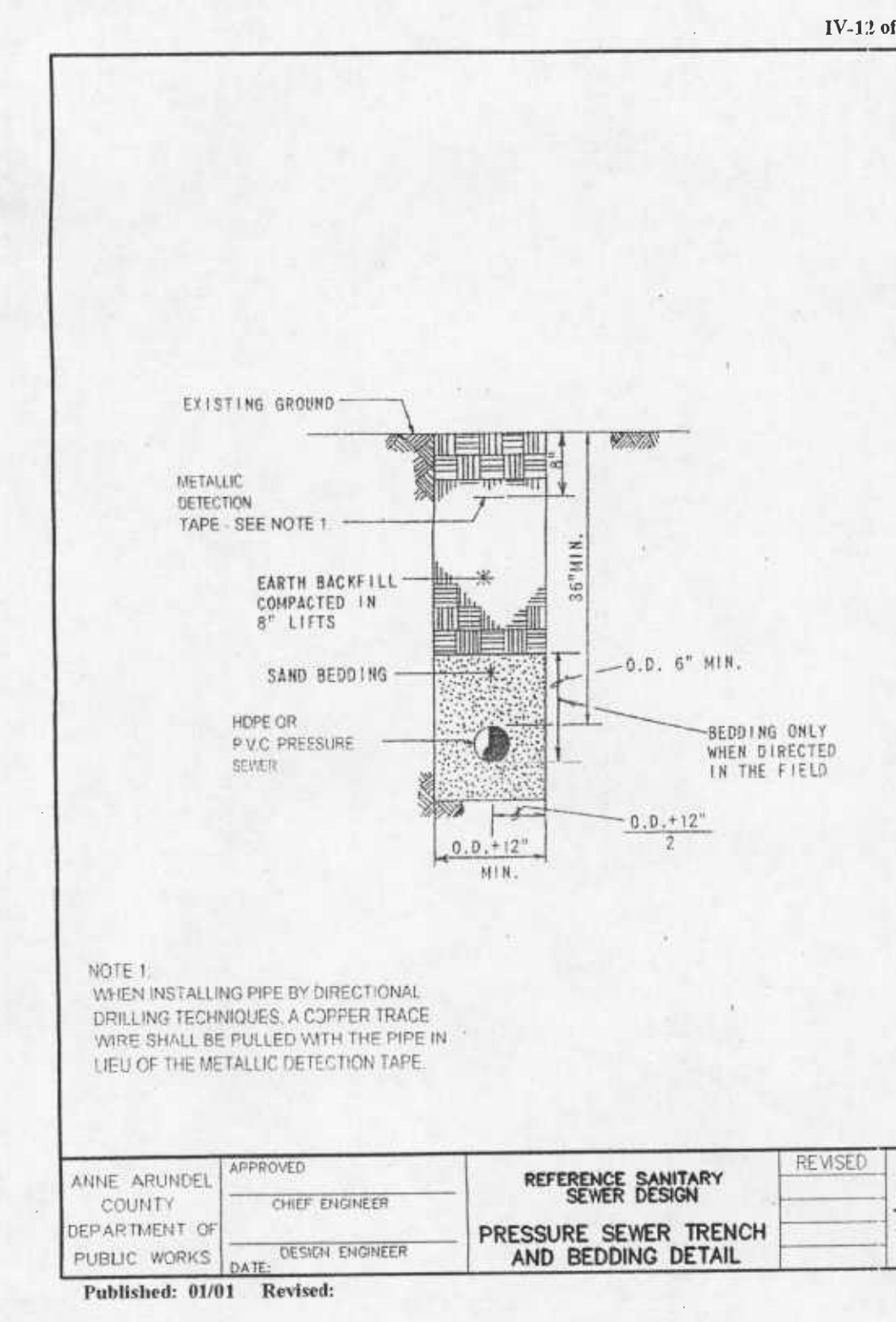
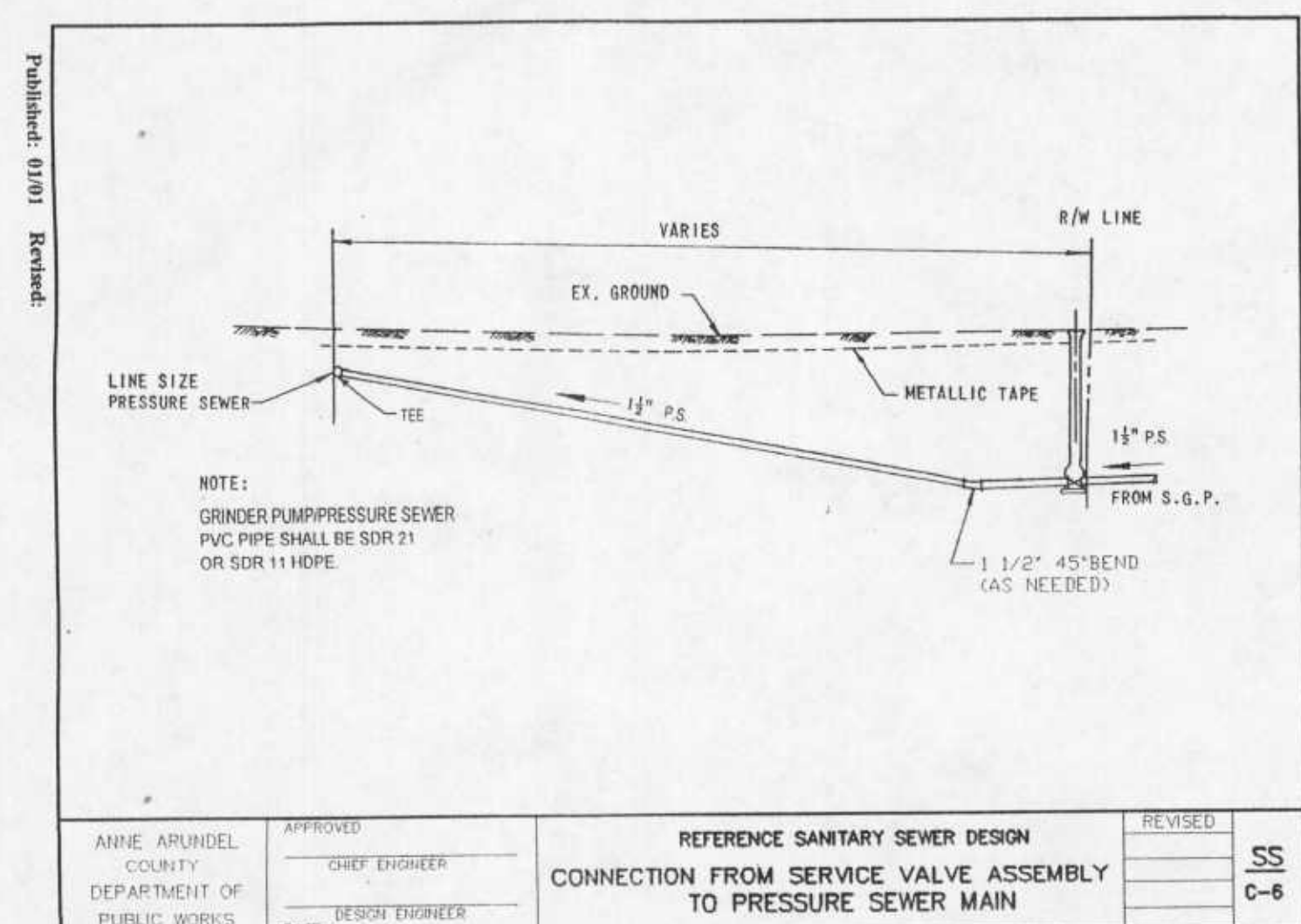
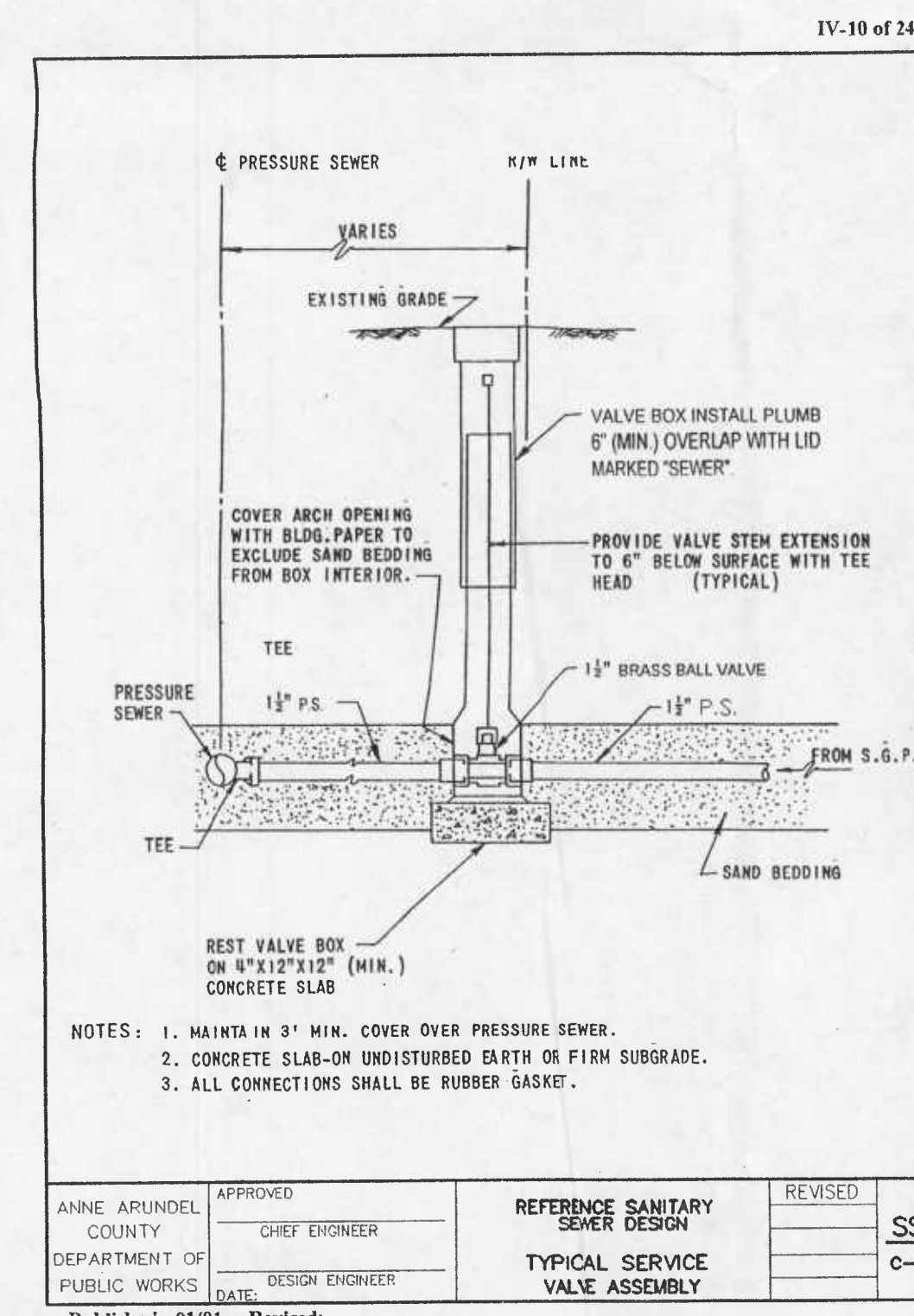
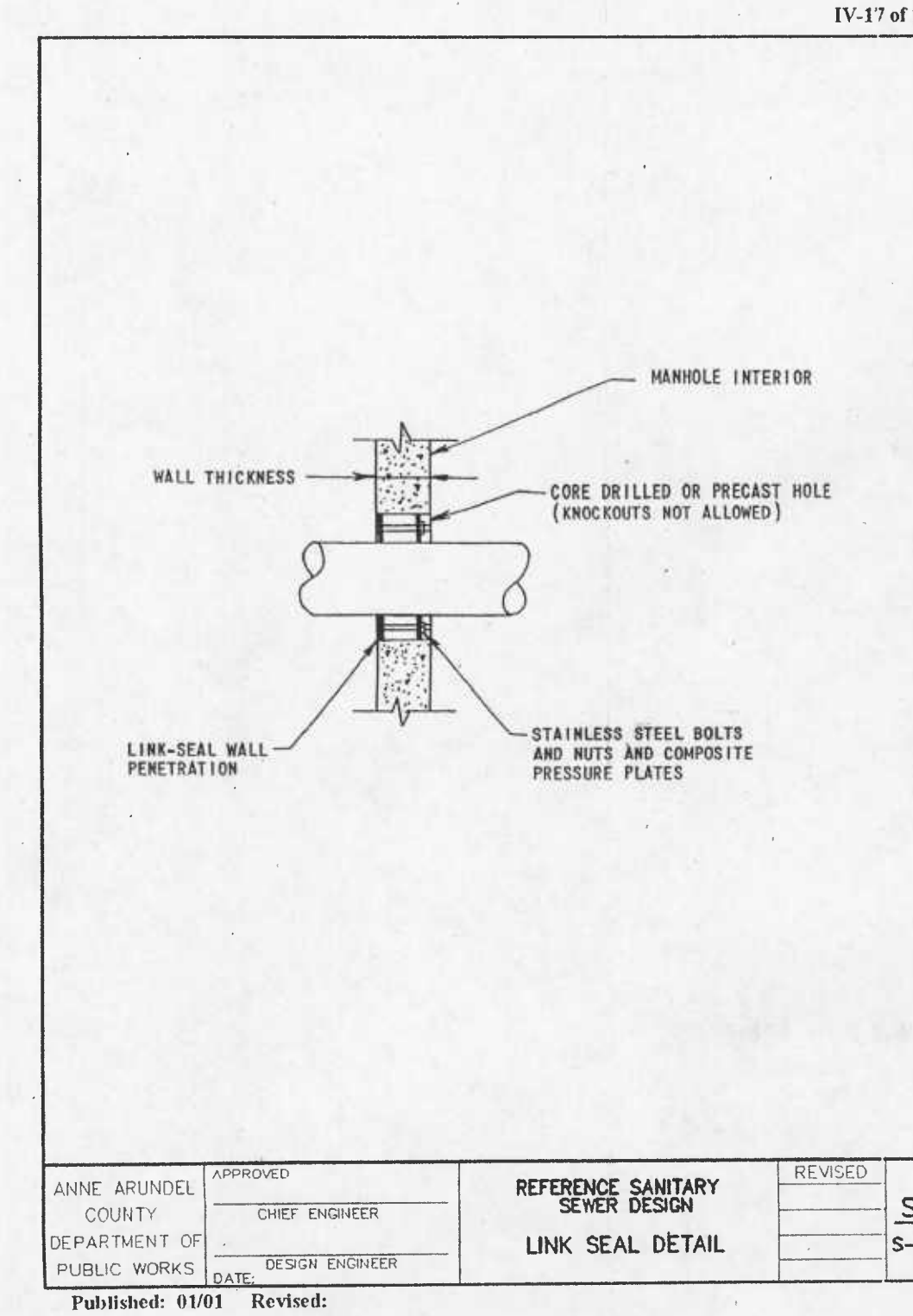
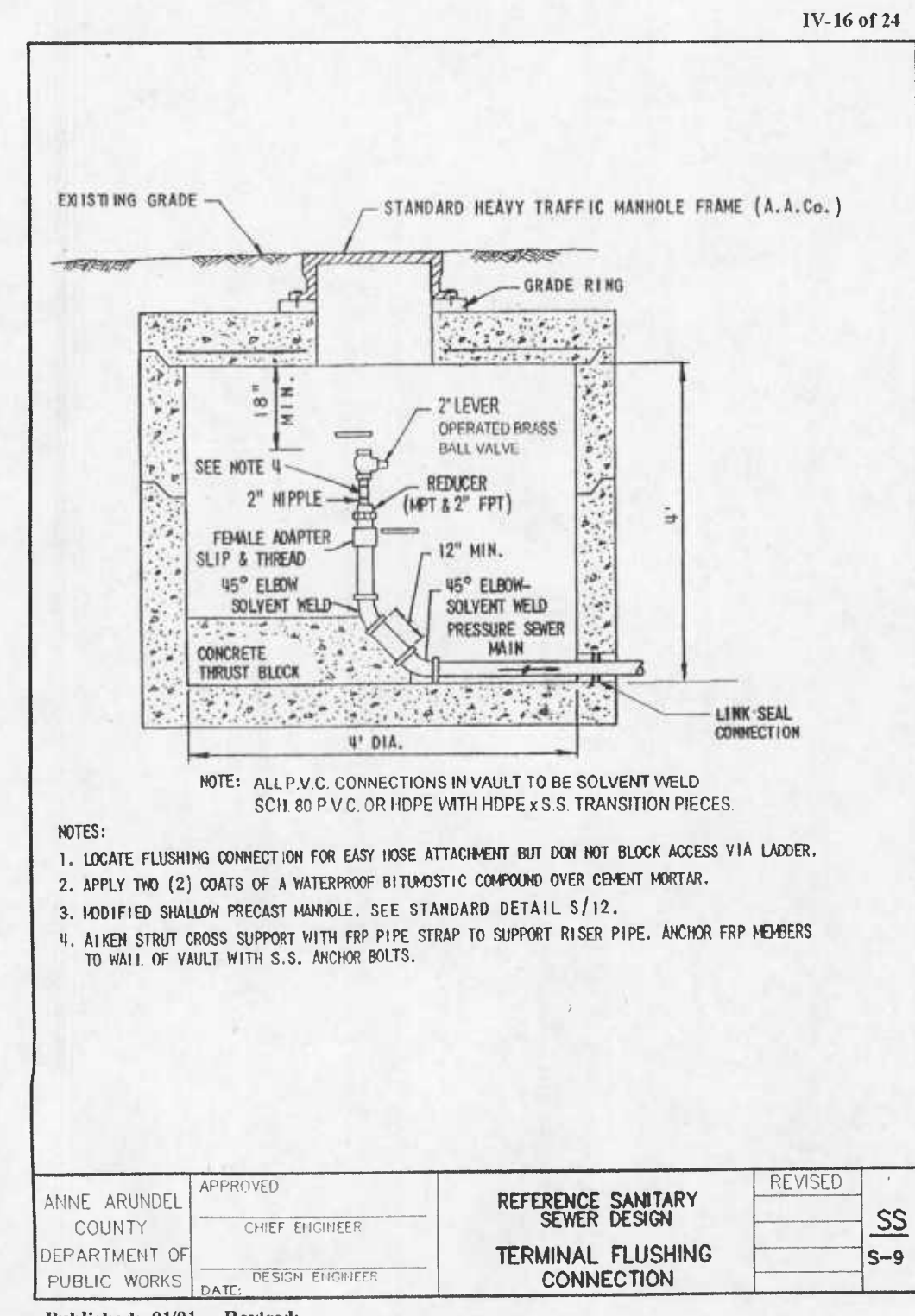
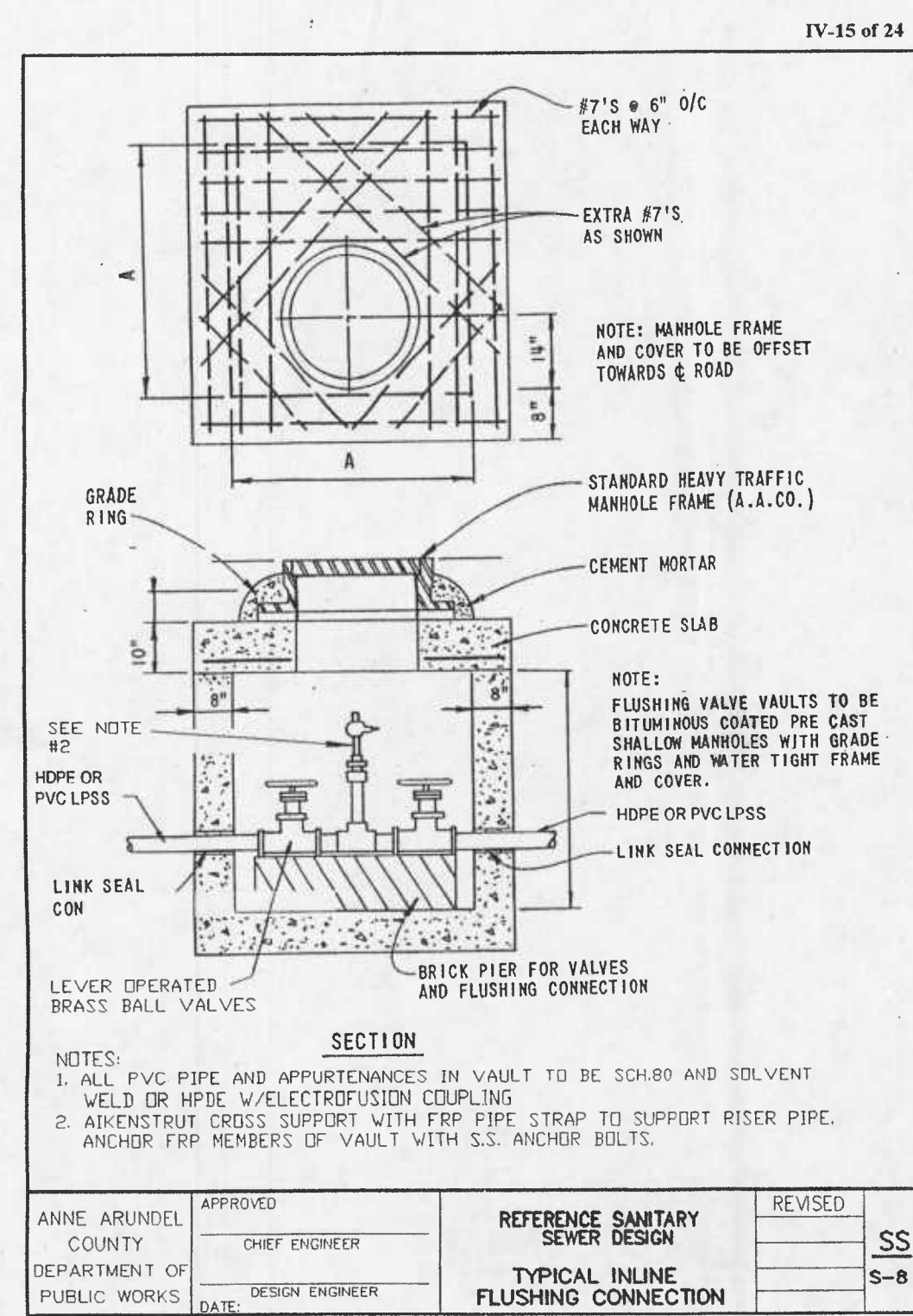


ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS			
REVISIONS:	APPROVED:	DATE:	APPROVED:
DATE:	BY:	DATE:	DATE:
	CHIEF ENGINEER	2-20-08	PROJECT MANAGER
	APPROVED:	DATE:	APPROVED:
	DATE:	2-20-08	DATE:
	ASSISTANT CHIEF ENGINEER		CHIEF RIGHT-OF-WAY
SCALE: AS SHOWN	DRAWN BY: B.L.C.	CHECKED BY: S.G.Z.	SHEET NO. 23 OF 25
PROJECT NO.: S-8020			CONTRACT NO.: S-802001
GRINDER PUMP DETAILS			
DEALE ROAD SEWER EXTENSION			
TAX MAP 77 BLOCK 6 PARCEL 210			

64447

WORK ORDER #: 02-05-005A

Date: 02/07/2008 User: Darold Drawing Path: \\dall600-2\projects\Deale Road Sewer Extension\02-05-005A\DWG\Deale2.dwg XREF files:



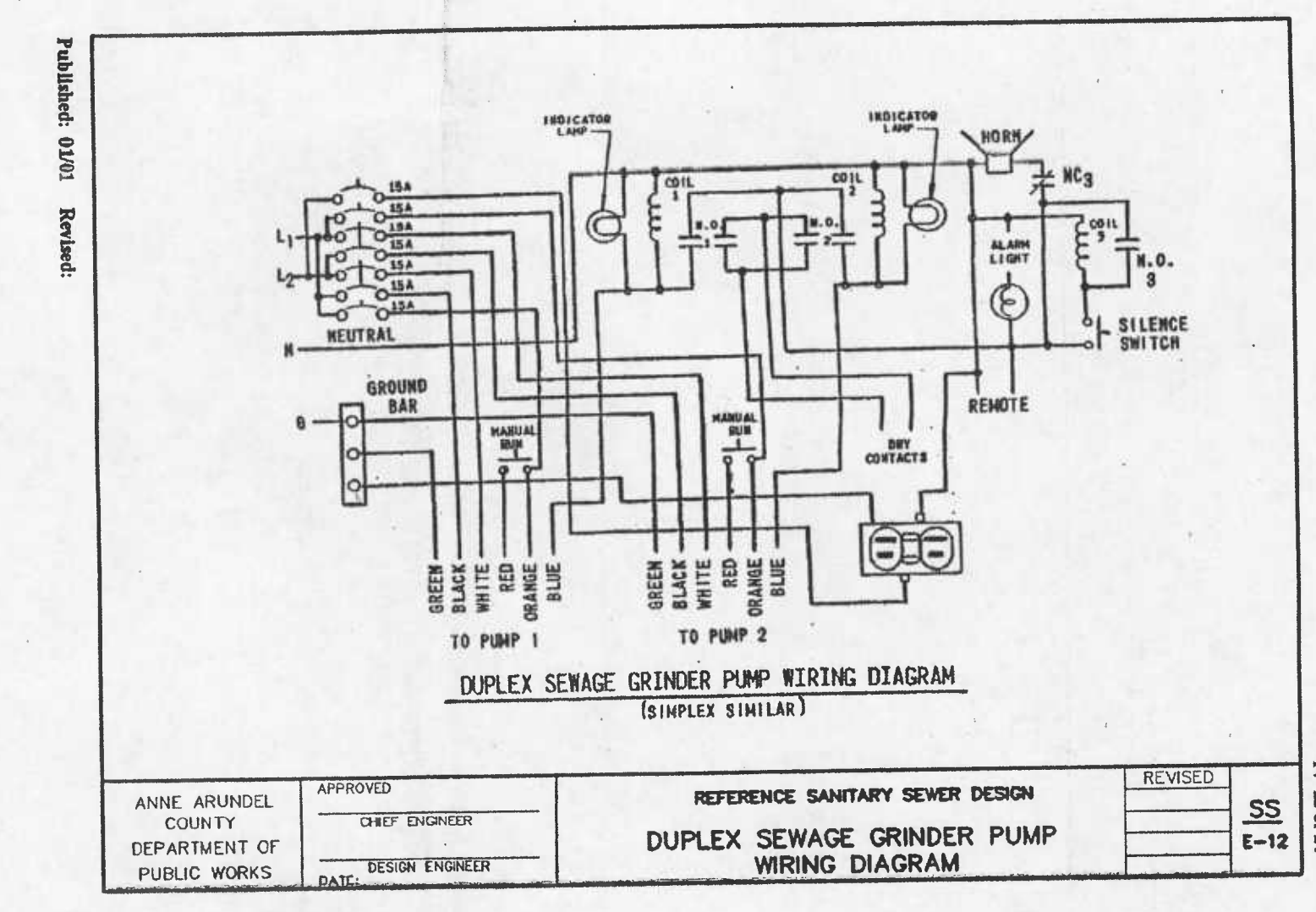
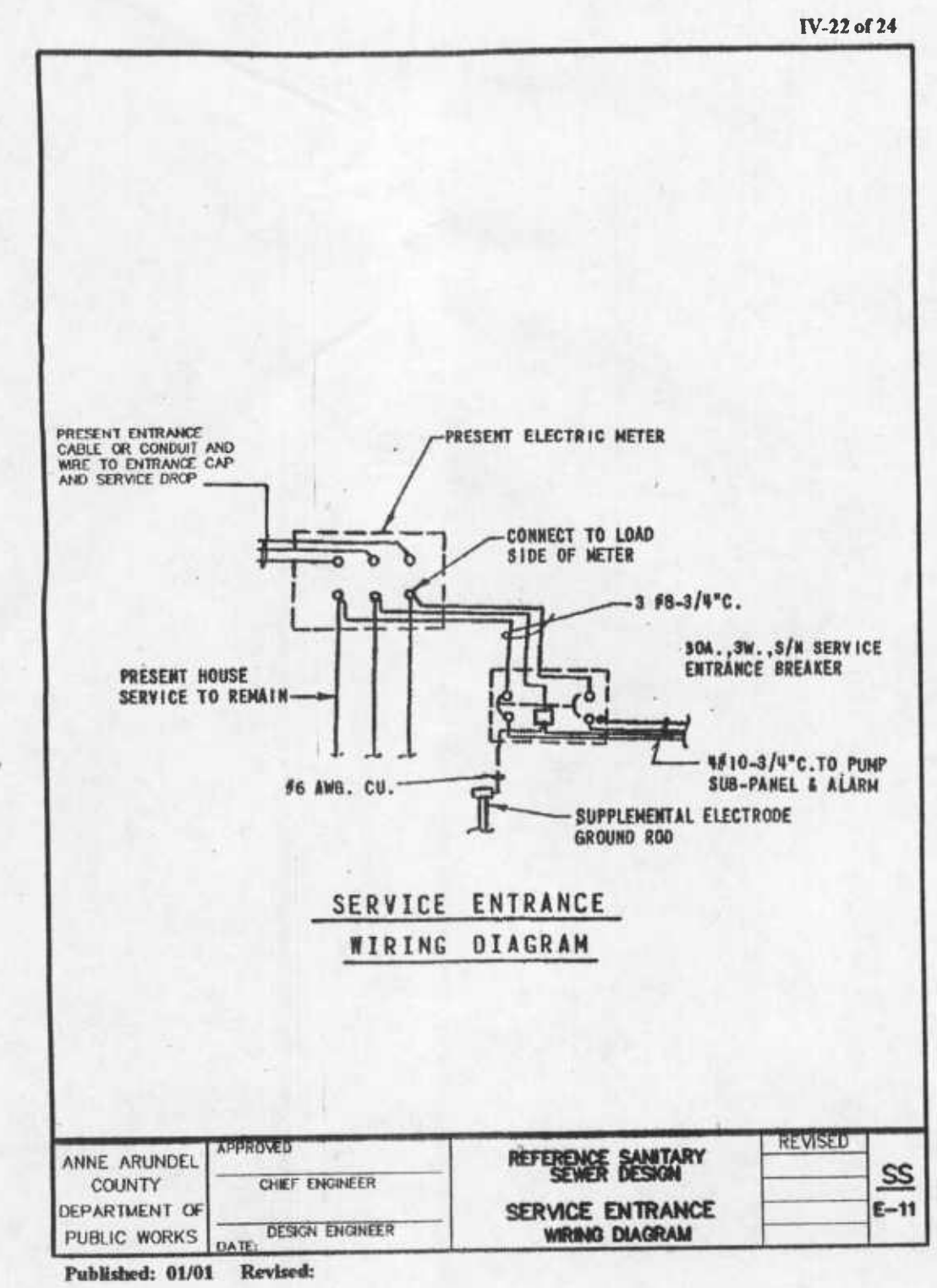
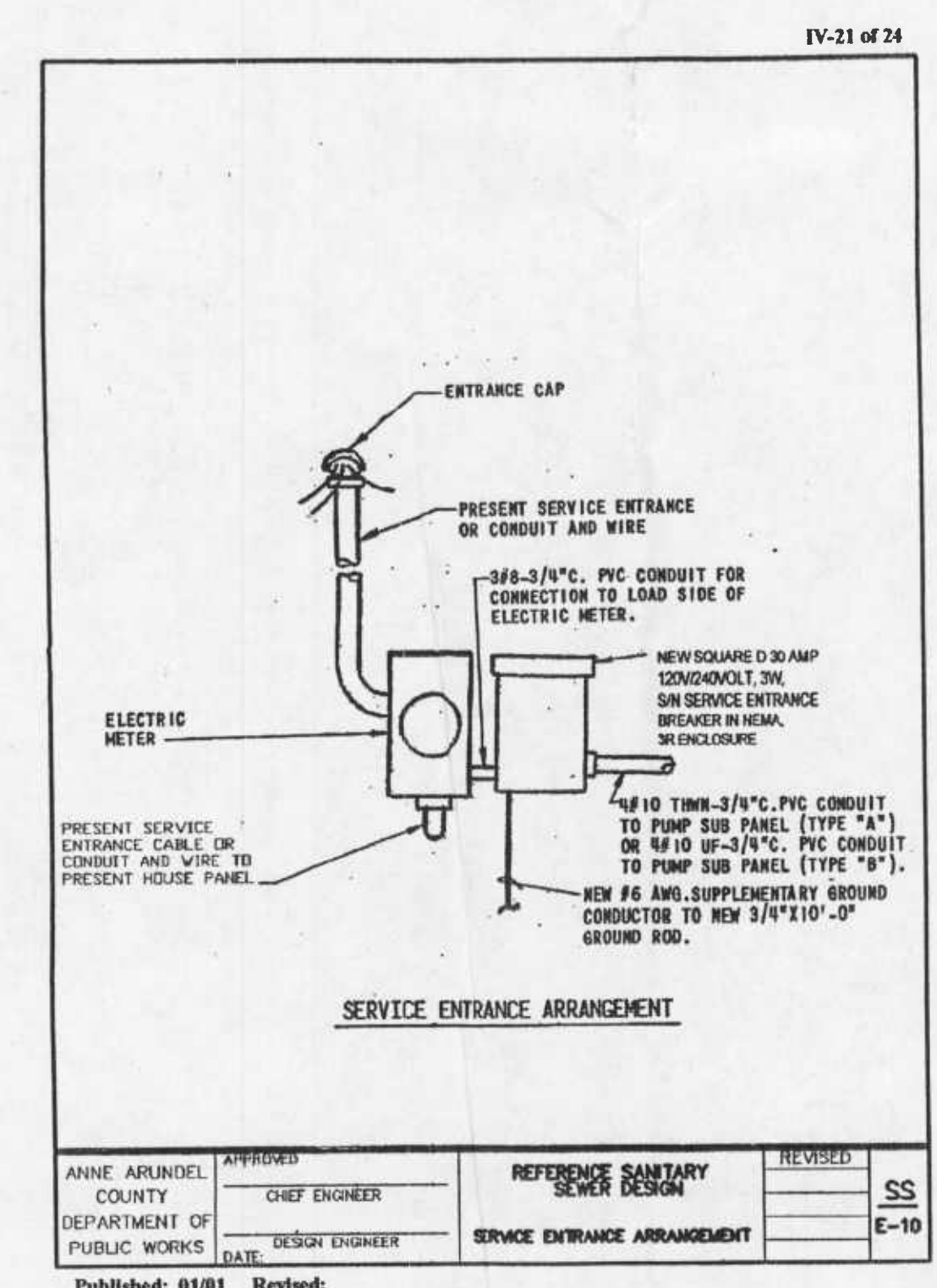
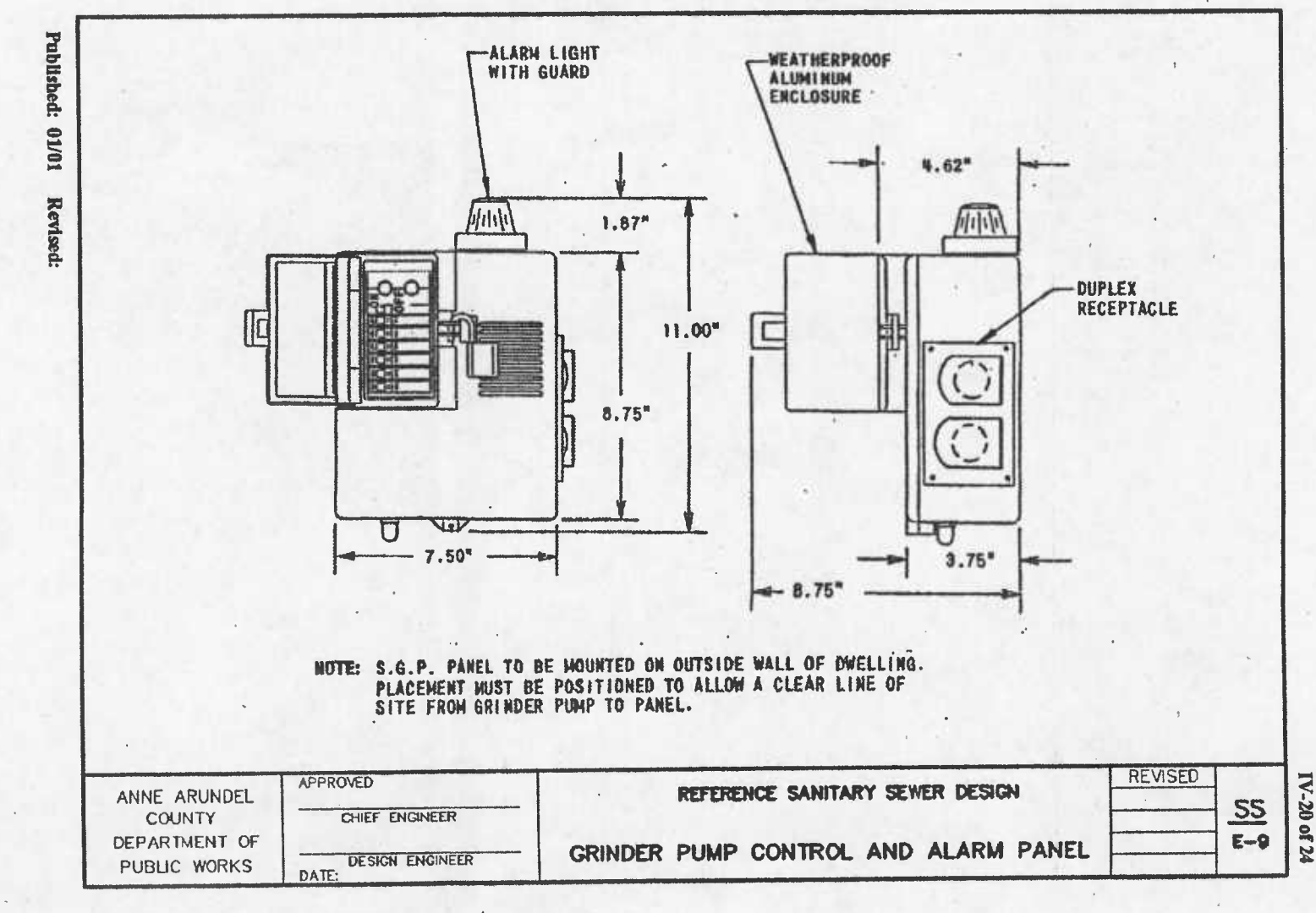
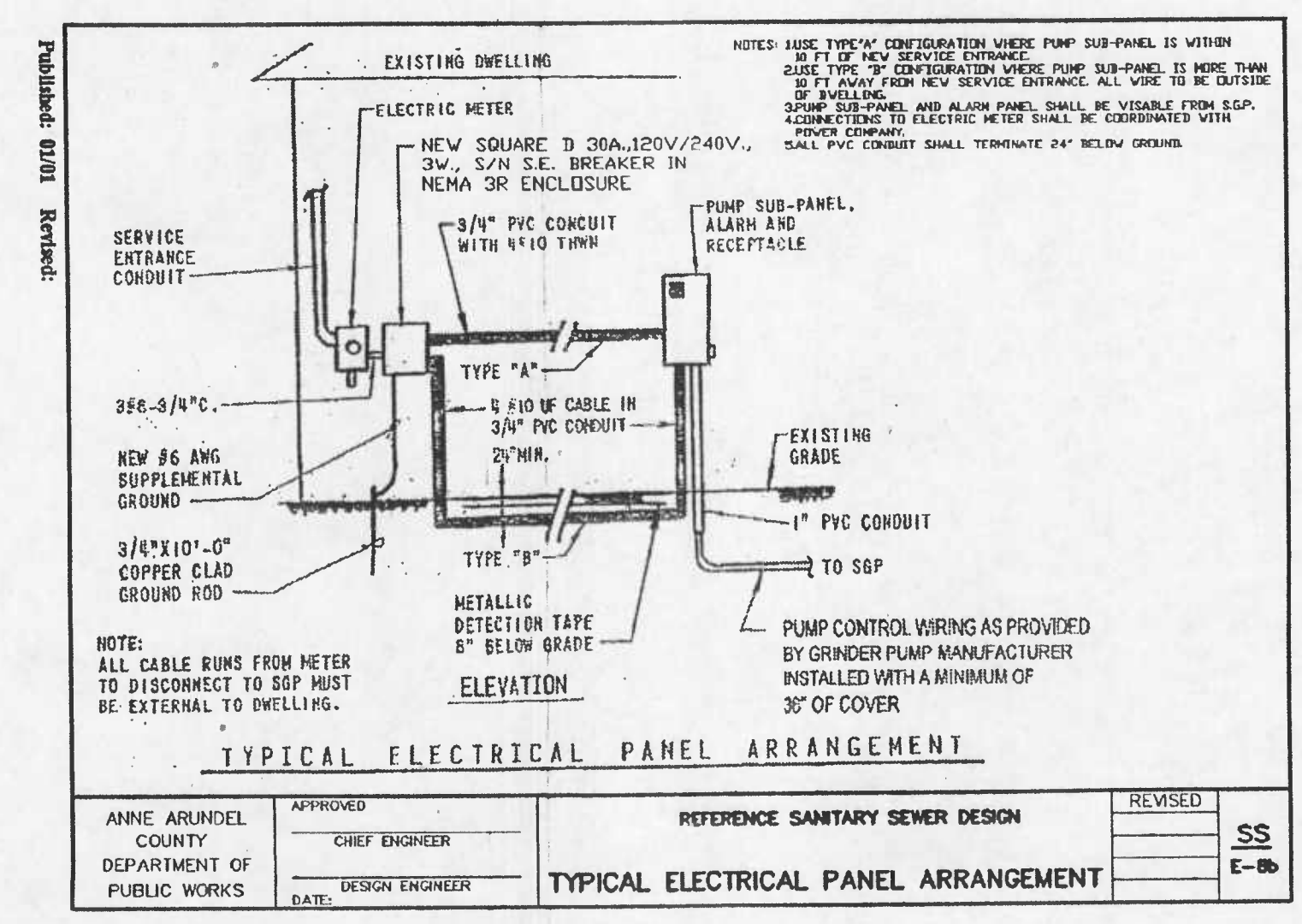
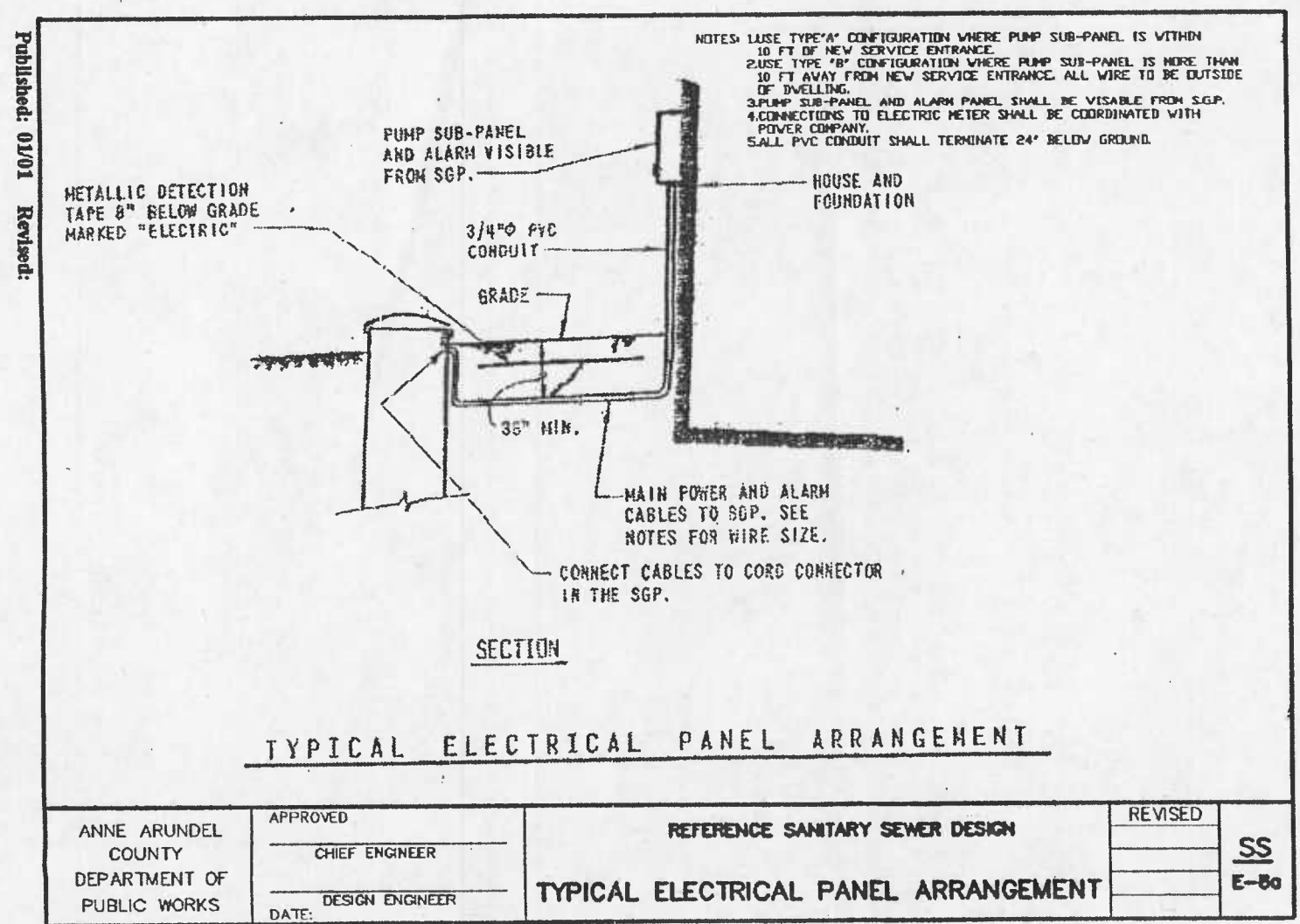
DELETED AIR RELEASE VALVE/TERMINAL FLUSHING CONNECTION DETAIL

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ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS				GRINDER PUMP DETAILS	
REVISION	DATE	BY	APPROVED	DATE	SCALE: AS SHOWN
6-9-08		B.L.C.	[Signature]	1/24/09	DRAWN BY: B.L.C.
			[Signature]		CHECKED BY: S.G.Z.
			[Signature]		SHEET NO. 24 OF 25
			[Signature]		PROJECT NO.: S-8020
			[Signature]		CONTRACT NO.: S-802001

4449



PROFESSIONAL CERTIFICATION. I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND, LICENSE NO. 10810, EXPIRATION DATE: FEBRUARY 20, 2010.



ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS			
REVISED DATE	BY	APPROVED DATE	DATE
		<i>[Signature]</i> 2-20-08	2-20-08
		<i>[Signature]</i> 1/2/09	1/2/09
SCALE: AS SHOWN	DRAWN BY: B.L.C.	CHECKED BY: S.G.Z.	SHEET NO. 25 OF 25
		PROJECT NO.: S-8020	CONTRACT NO.: S-802001
GRINDER PUMP DETAILS			TAX MAP 77 BLOCK 6 PARCEL 210

64449