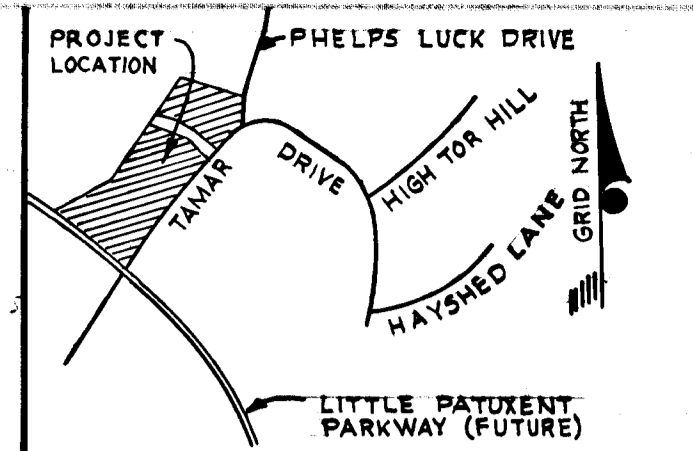


| STORM DRAIN STRUCTURE SCHEDULE | | | | |
|--------------------------------|-------------------------------------|--------------------|--|--|
| No. | Type | Top Elev./Inv. Out | Location | |
| I-10 | Special "K" Inlet See Detail sht. G | 408.42/404.41 | Inlet 65.00' left of station 8+75 | |
| I-11 | "A-10" width = 2'-6" | 403.25/398.88 | Inlet 15.22' left of station 0+68 | |
| I-12 | "A-10" width = 2'-6" | 402.38/398.78 | Inlet 15.92' right of station 0+68 | |
| MH-4 | Type "B" MH See Detail sht. G | 407.2/402.53 | Manhole 10.50' right of station 1+61.50 | |
| MH-5 | Type "B" MH See Detail sht. G | 418.20/414.12 | Manhole 5.0' right of station 2+97.76 | |
| MH-6 | Type "B" MH See Detail sht. G | 420.00/415.72 | Manhole 152.41' right of station 2+97.76 | |
| I-13 | "A-5" width = 2'-6" | 431.00/427.01 | Inlet 1.25' back of Linear Profile sta. 1+83 | |

GENERAL NOTES

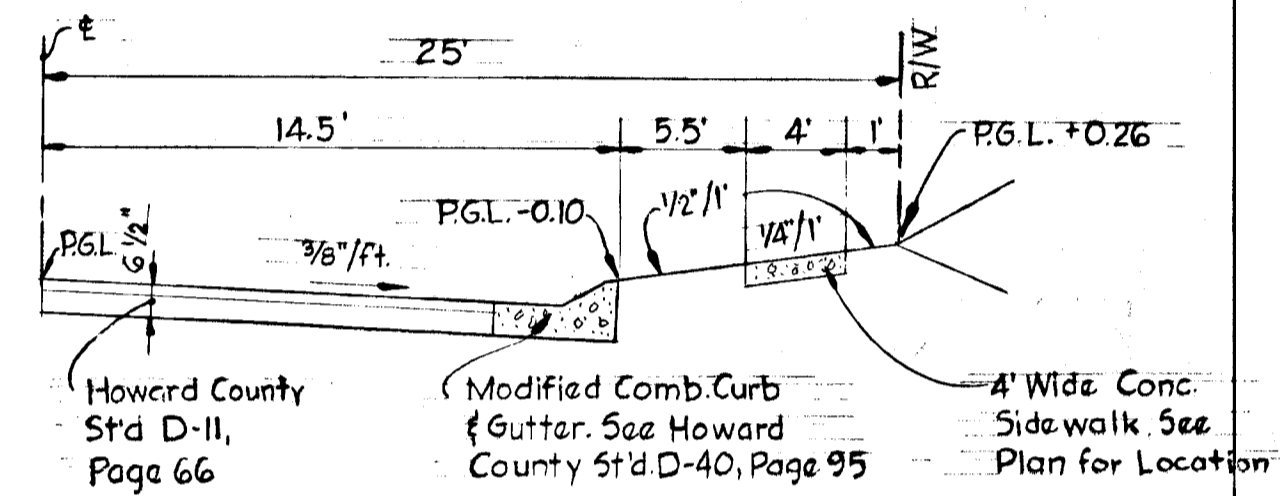
1. Bench Mark W-556 Elev. 405.08'
Iron pipe 145' left of centerline station 0+05 on Tamar Drive (South of Future Little Patuxent Parkway)
2. All work shall be performed in accordance with the Howard County Road Construction Code and Standard Specifications.
3. All utility companies shall be notified 24 hours in advance of construction.
4. Secondary residential streets are designed for 25 M.P.H. traffic speed in accordance with AASHO standards.
5. All inlets shall be Howard County Standards unless otherwise shown.
6. For stakeout details of standard cut-dc-sacs see Howard County Standard D-33A, page 88a.
7. Storm Drain trenches within road rights-of-way shall be backfilled and compacted in accordance with Howard County Road Code.
8. Proposed grading as shown is required to allow proper drainage to all sumped Special "K" Inlets.



VICINITY MAP
Scale 1" = 2,000'

WARNING
GAS AND/OR ELECTRIC FACILITIES IN THIS AREA. BEFORE YOU DIG, DRILL, BLAST ETC.
CALL
BALTIMORE GAS & ELECTRIC CO.
234-5691

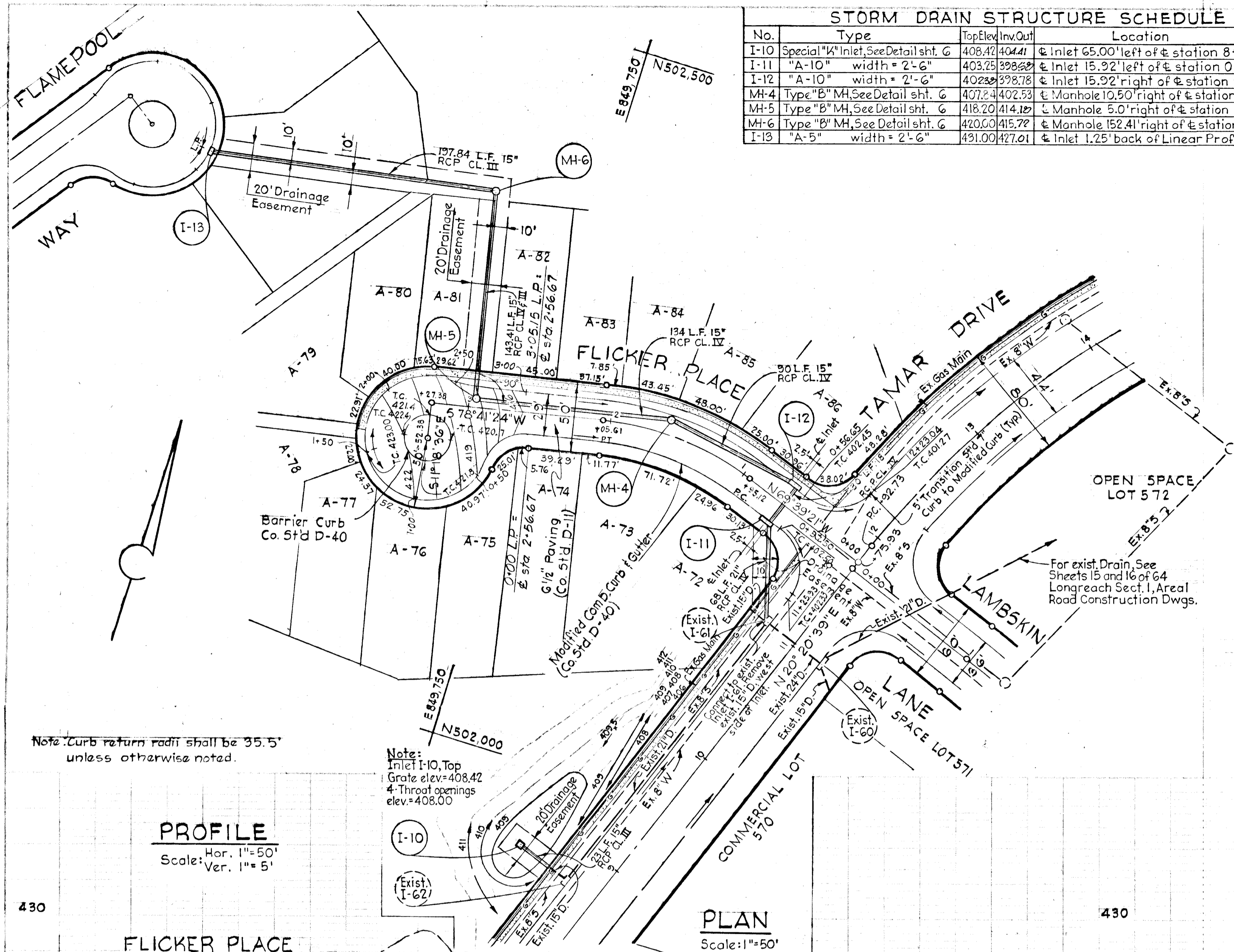
"VERTICAL REFERENCE"
Concrete Monument 112' left of E. Sta. 2+90
TAMAR DRIVE - ELEVATION 402.88



TYPICAL HALF SECTION
50' R/W - 29' ROADWAY
No Scale

CURVE DATA

PC: 0+95.12 to PT: 2+05.61
Δ = 31° 39' 15"
R = 200'
Arc = 110.49'
Tan = 56.70'
Ch = 103.09'
Brg. = N 85° 28' 58" W

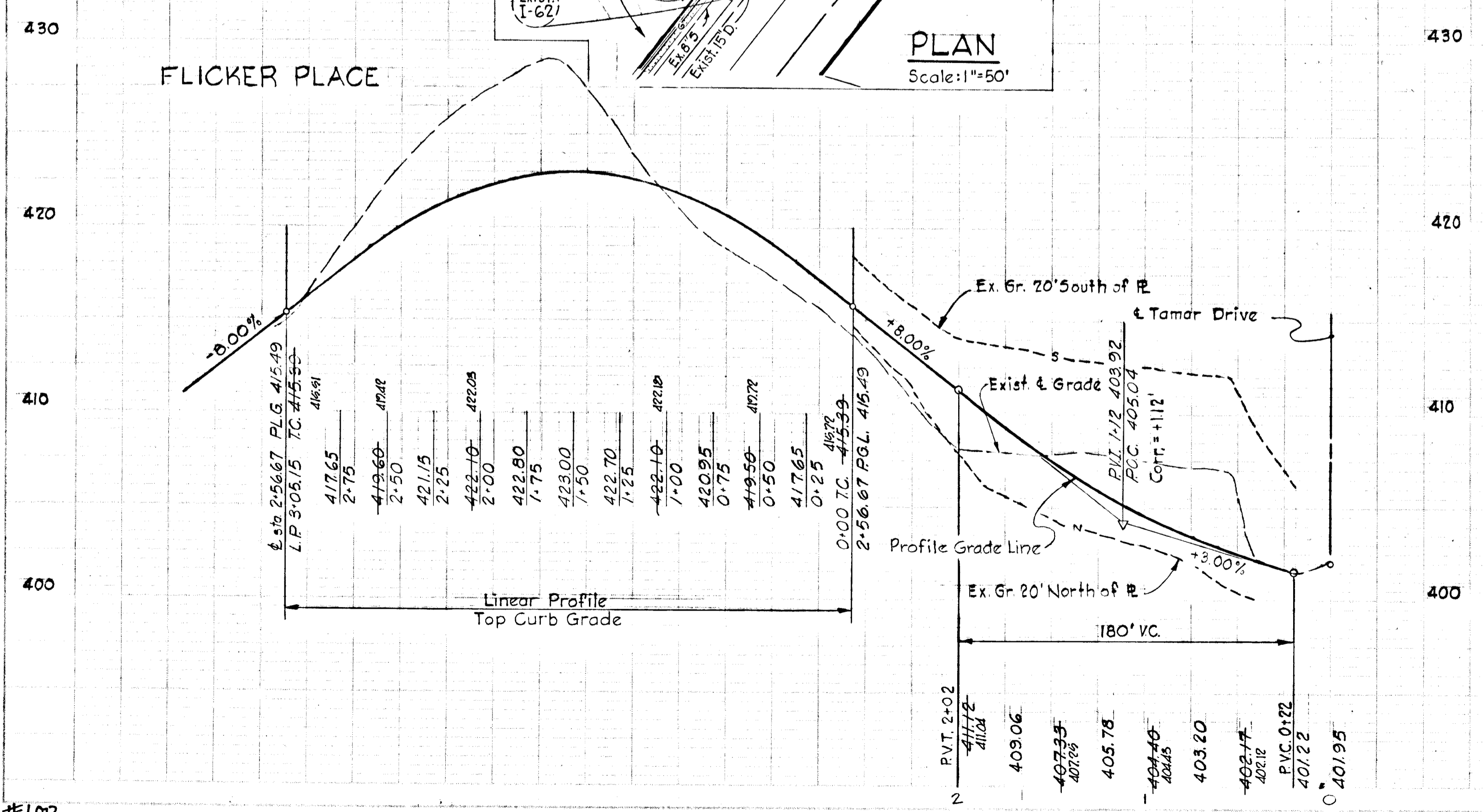


Note:
Inlet I-10, Top
Grate elev = 408.42
4" Throat openings
elev = 408.00

For exist. Drain, See
Sheets 15 and 16 of 64
Longreach Sect. 1, Areal
Road Construction Dwg.

PROFILE

Hor. 1" = 50'
Scale: Ver. 1" = 5'



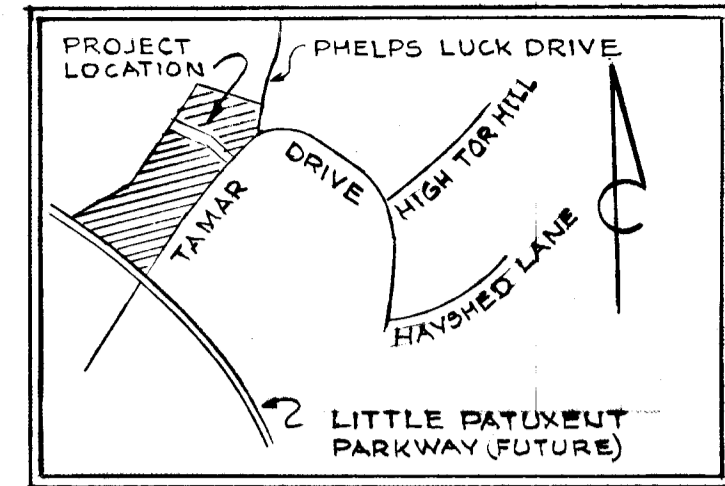
DEPARTMENT OF PUBLIC WORKS
Deanneville N. Melend 5/4/71
CHIEF BUREAU OF HIGHWAYS DATE
OFFICE OF PLANNING AND ZONING
CHIEF DIVISION OF LAND DEVELOPMENT & TRANSPORTATION PLANNING DATE

4-15-71 / Relocation of 15" Storm Drainage Pipe
Rev. Date (Rev. No.) Revision Description
COLUMBIA
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
OWNER AND DEVELOPER
HOWARD RESEARCH AND DEVELOPMENT CORP.
PROJECT AREA
VILLAGE OF LONG REACH
SECTION I, AREAL
RESUBDIVISION OF PARCELS "A" & "M"
PROJECT TITLE
PLAN AND PROFILE
FLICKER PLACE
SCALE: AS SHOWN DATE MARCH 26, 1971
WHITMAN, REQUARDT & ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21202

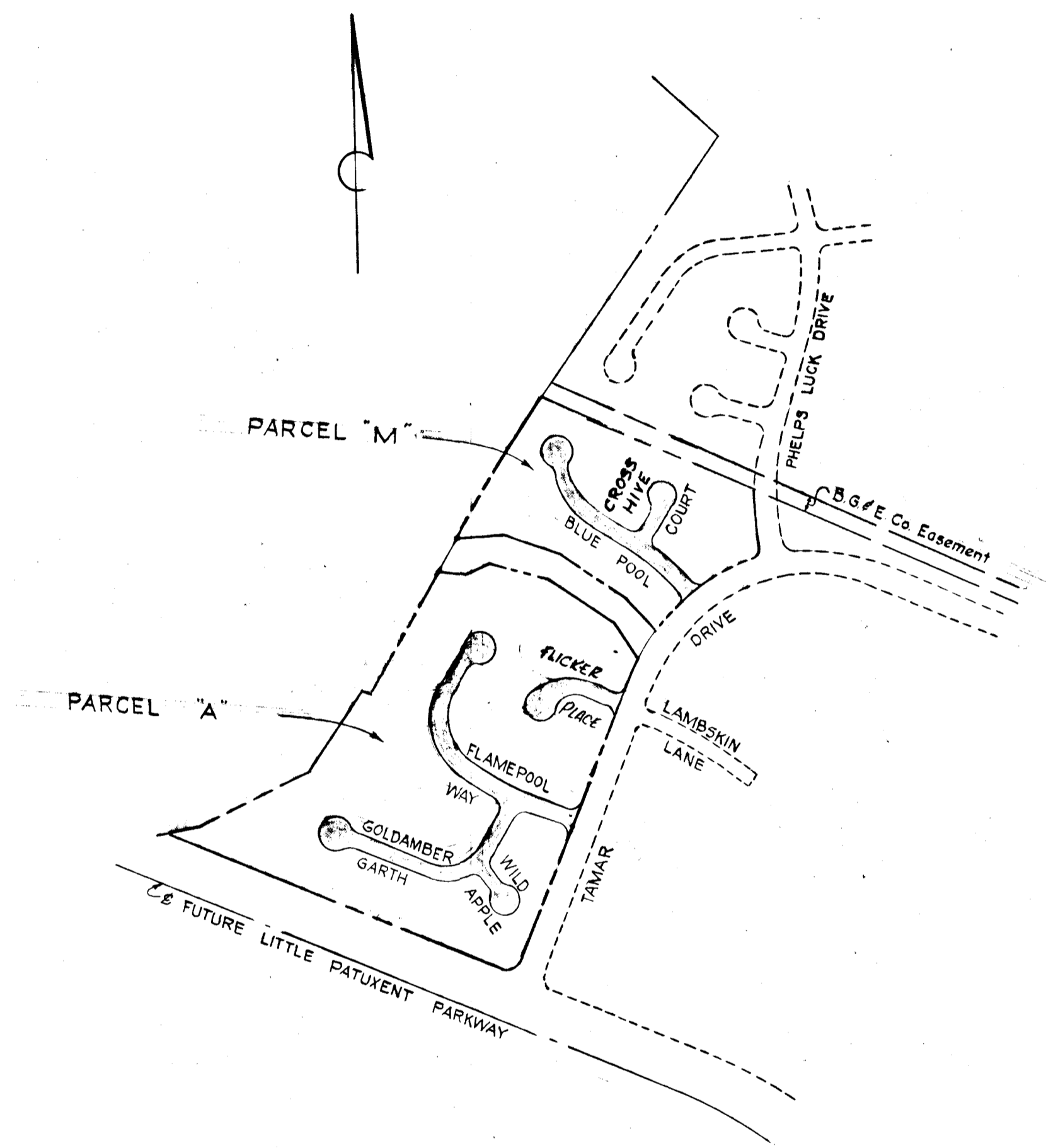
Kenneth A. McCord
KENNETH A. McCORD
Registered Engineer
No 1974

APPROVED
OFFICE OF PLANNING
AND ZONING OF
HOWARD COUNTY
DATE: 5/4/71
J.H.C.

| SHEET INDEX | |
|-------------|--|
| SHEET NO. | DESCRIPTION |
| 1A | Title Sheet |
| 1 | Plan and Profile - Flicker Place |
| 2 | " " " - Flamepool Way |
| 3 | " " " - Goldamber Garth and Wild Apple |
| 4 | " " " - Blue Pool and Cross Hive Court |
| 5 | Storm Drains - Profiles and Details |
| 6 | " " " " " " |



VICINITY MAP
Scale: 1"=2,000'



LOCATION PLAN
Scale: 1"=400'

GENERAL NOTES

1. Bench Mark W-556 Elev 405.08' Ironpipe 145' left of centerline station 6+05 on Tamar Drive (South of Future Little Patuxent Parkway)
2. All work shall be performed in accordance with the Howard County Road Construction Code and Standard Specification.
3. All utilities companies shall be notified 24 hours in advance of constructions
4. Secondary residential street are designed for 25 M.P.H. traffic speed in accordance with A.A.S.H.O. standards.
5. All inlets shall be Howard County Standard unless otherwise shown.
6. For stakeout details of standard cul-de-sacs see Howard County Standard D-33A, page 88a.
7. Storm Draintranches within road rights-of-way shall be back filled and compacted in accordance with Howard County Road Code.
8. Proposed grading as shown in required to allow proper drainage to all sumped Special "K" Inlets.

| | | | |
|---|--|--|--|
| WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202 <i>Kenneth A. McCord</i> KENNETH A. MCCORD Registered Engineer No 1974 | | DEPARTMENT OF PUBLIC WORKS <i>Francis M. Mehlend</i> 5/5/71 CHIEF, BUREAU OF HIGHWAYS DATE | OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORP. COLUMBIA, MARYLAND |
| | | DIVISION OF LAND DEVELOPMENT <i>J. H. Clawson Jr.</i> 5/4/71 TRANSPORTATION PLANNING DATE | |

SECTION I AREA I
COLUMBIA
 VILLAGE OF LONGREACH
 RESUBDIVISION OF PARCELS "A" AND "M"
 HOWARD COUNTY, MARYLAND
 6TH ELECTION DISTRICT
 DATE: MAY 3, 1971
 SCALE: AS SHOWN
 SHEET 1A OF 6

#100

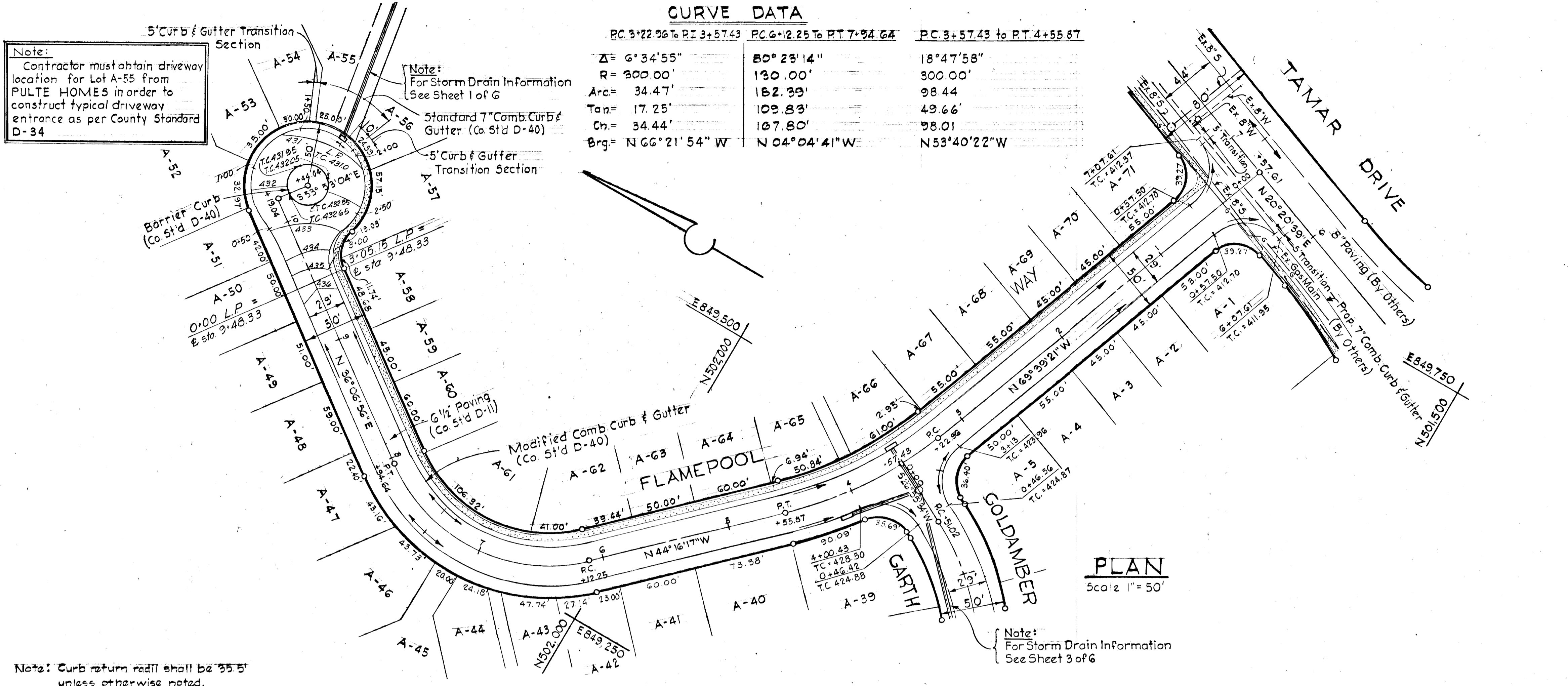
Note:
 Contractor must obtain driveway location for Lot A-55 from PULTE HOMES in order to construct typical driveway entrance as per County Standard D-34

Note:
 For Storm Drain Information See Sheet 1 of 6
 Standard 7" Comb. Curb & Gutter (Co. Std. D-40)
 5' Curb & Gutter Transition Section

Note:
 For Storm Drain Information See Sheet 3 of 6

CURVE DATA

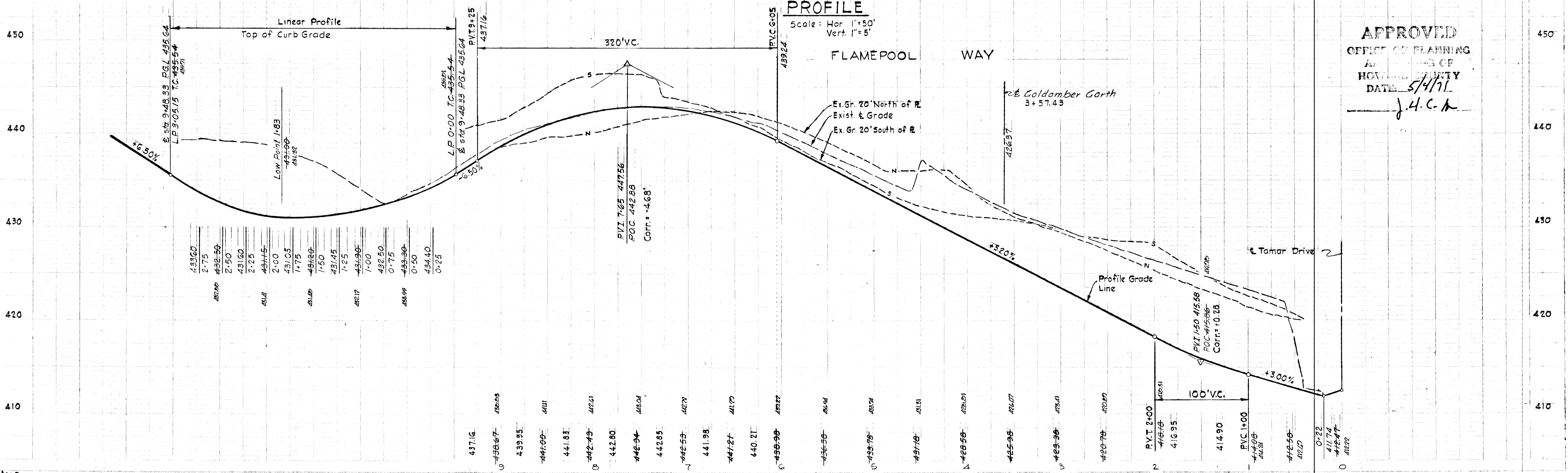
| | | |
|-------------------------------|--------------------------|--------------------------|
| PC 3+22.96 to PI 3+57.43 | PC 6+12.25 to PT 7+94.64 | PC 3+57.43 to PT 4+55.87 |
| $\Delta = 6^\circ 34' 55''$ | $80^\circ 23' 14''$ | $18^\circ 47' 58''$ |
| $R = 300.00'$ | $130.00'$ | $300.00'$ |
| $Arc = 34.47'$ | $182.39'$ | $98.44'$ |
| $Tan = 17.25'$ | $109.83'$ | $49.66'$ |
| $Ch = 34.44'$ | $167.80'$ | $98.01'$ |
| $Brg = N 66^\circ 21' 54'' W$ | $N 04^\circ 04' 41'' W$ | $N 53^\circ 40' 22'' W$ |



PLAN
 Scale 1" = 50'

WARNING
 GAS AND/OR ELECTRIC FACILITIES IN THIS AREA. BEFORE YOU DIG, DRILL, BLAST ETC.
CALL
 BALTIMORE GAS & ELECTRIC CO.
 234-5691

| Rev. Date | Rev. No. | Revision Description |
|--|----------|----------------------|
| | | |
| COLUMBIA | | |
| 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND | | |
| OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP. | | |
| PROJECT AREA | | |
| VILLAGE OF LONG REACH | | |
| SECTION I, AREA I RESUBDIVISION OF PARCELS "A" & "M" | | |
| PROJECT TITLE: | | |
| PLAN AND PROFILE FLAMEPOOL WAY | | |
| SCALE: AS SHOWN | | DATE: MARCH 26, 1971 |
| WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202 | | |
| KENNETH A. McCORD Registered Engineer No. 1974 | | |



APPROVED
 OFFICE OF PLANNING
 AND ZONING OF
 HOWARD COUNTY
 DATE: 5/4/71
 J.H.C.H.

| STORM DRAIN STRUCTURE SCHEDULE | | | |
|--------------------------------|-------------------------------------|-----------|----------|
| No. | Type | Top Elev. | Inv. Out |
| MH-1 | Standard Manhole | 411.50 | 404.64 |
| I-1 | Special "K" Inlet See Detail Sht. 6 | 410.50 | 405.64 |
| I-2 | "A-5" width = 2'-6" | 417.10 | 410.48 |
| MH-2 | Type "B" MH See Detail Sht. 6 | 418.50 | 412.22 |
| I-3 | Special "K" Inlet See Detail Sht. 6 | 418.50 | 415.01 |
| I-3a | Special "K" Inlet See Detail Sht. 6 | 424.50 | 419.06 |
| I-9 | "A-5" width = 2'-6" | 420.45 | 415.03 |
| I-4 | "A-15" width = 2'-6" | 423.36 | 418.34 |
| I-5 | "A-5" width = 2'-6" | 421.21 | 416.50 |
| I-6 | Special "K" Inlet See Detail Sht. 6 | 424.50 | 420.84 |
| MH-3 | Type "B" MH See Detail Sht. 6 | 425.64 | 422.27 |
| I-7 | "A-10" width = 2'-6" | 426.48 | 422.40 |
| I-8 | "A-10" width = 2'-6" | 429.31 | 424.34 |

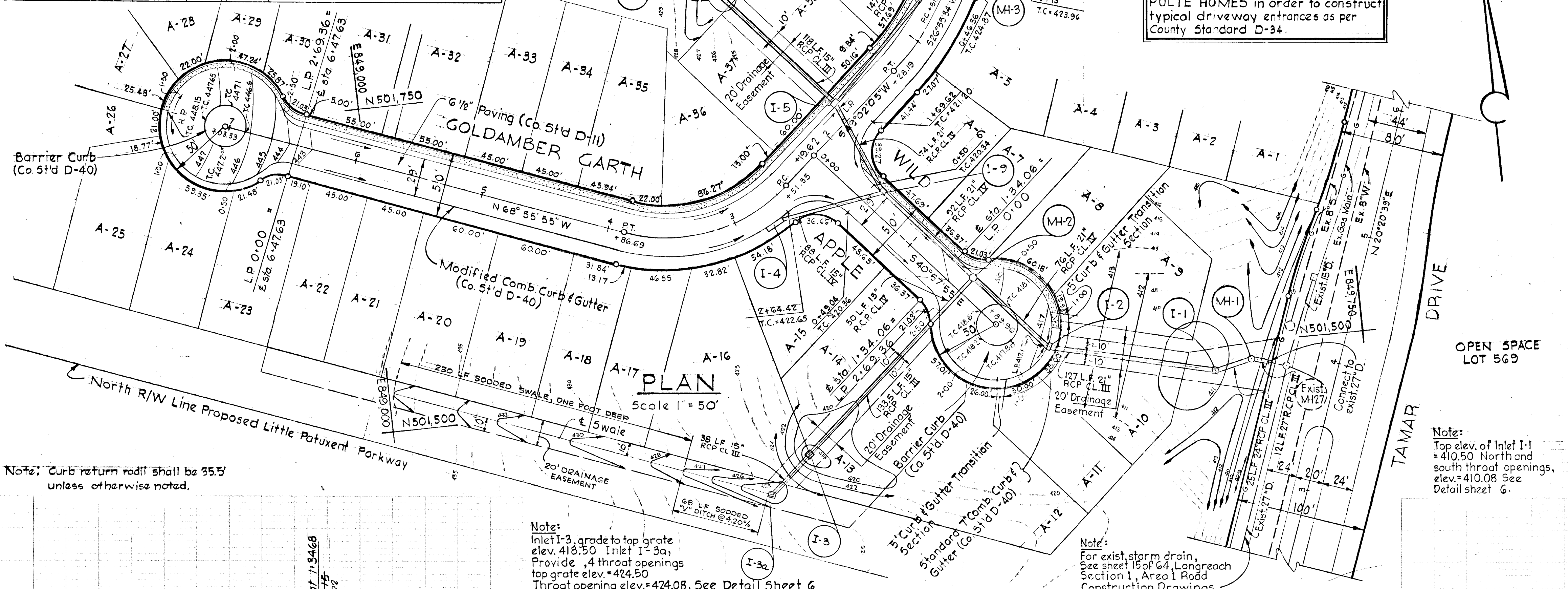
Note:
Inlet I-6 Top grate elev. = 424.50 One Throat opening N.W. side elev. = 424.08 See Detail Sheet 6.

Note:
Contractor must obtain driveway location for Lots A-10 and A-11 from PULTE HOMES in order to construct typical driveway entrances as per County Standard D-34.

CURVE DATA

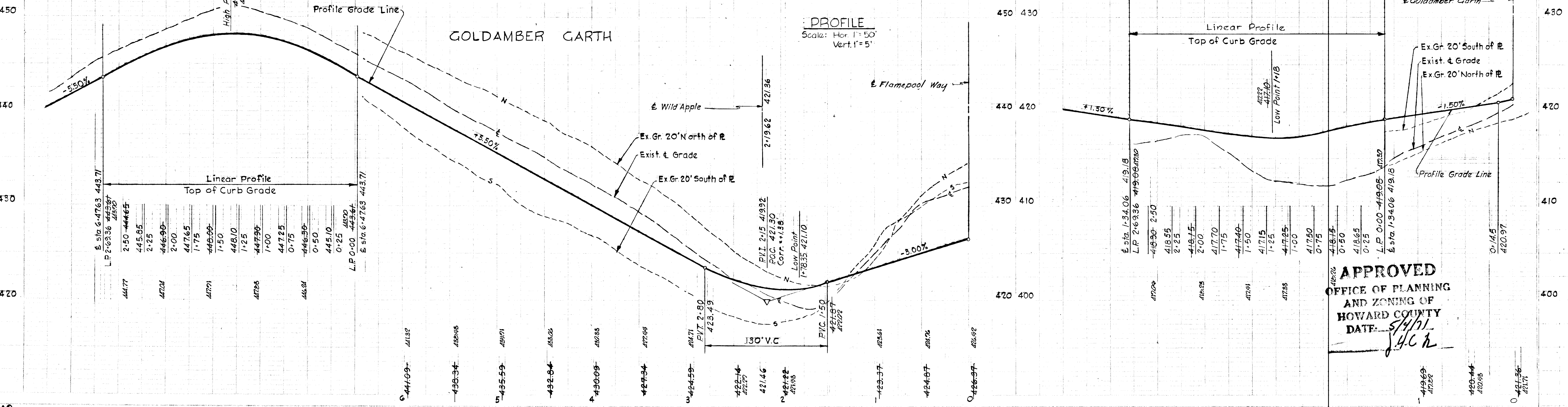
| | |
|------------------------------|--------------------------|
| PC 0+51.02 To PT 1+28.19 | PC 2+51.35 To PT 3+86.69 |
| $\Delta = 22^\circ 06' 30''$ | $62^\circ 02' 00''$ |
| $R = 200.00'$ | $125.00'$ |
| $ARC = 77.17'$ | $135.34'$ |
| $Tan = 39.07'$ | $75.16'$ |
| $Ch = 76.70'$ | $128.82'$ |
| $Brg = 53^\circ 58' 49'' W$ | $58^\circ 03' 05'' W$ |

DEPARTMENT OF PUBLIC WORKS
Dravelle M. Heiland 5/15/71
 CHIEF BUREAU OF HIGHWAYS DATE
OFFICE OF PLANNING AND ZONING
 CHIEF DIVISION OF LAND DEVELOPMENT & TRANSPORTATION PLANNING DATE



WARNING
 GAS AND/OR ELECTRIC FACILITIES IN THIS AREA. BEFORE YOU DIG, DRILL, BLAST ETC.
CALL
 BALTIMORE GAS & ELECTRIC CO.
234-5691

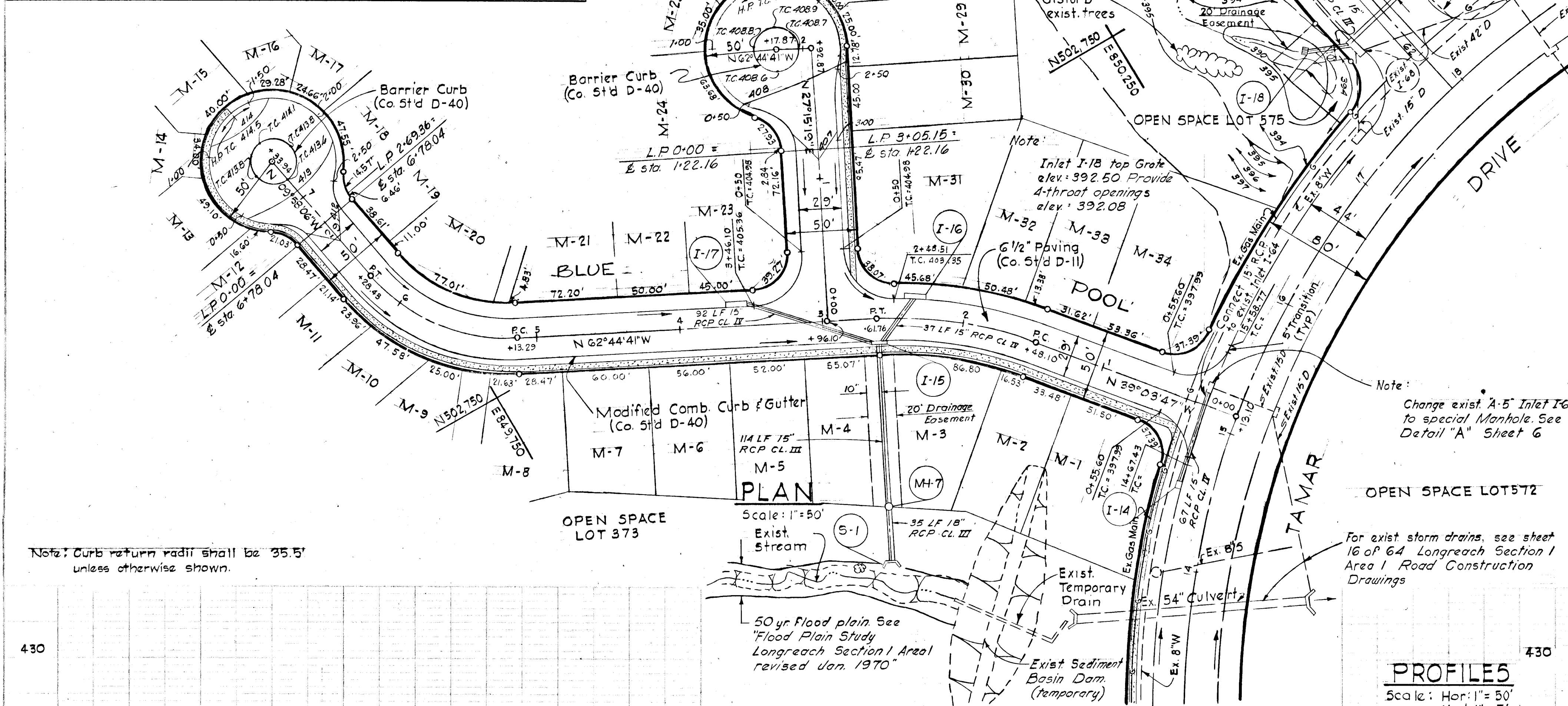
| Rev. Date | Rev. No | Revision Description |
|--|---------|----------------------|
| COLUMBIA | | |
| 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND | | |
| OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP. | | |
| PROJECT AREA VILLAGE OF LONG REACH | | |
| SECTION I, AREA I RESUBDIVISION OF PARCELS "A" & "M" | | |
| PROJECT TITLE: PLAN AND PROFILE GOLDAMMER GARTH AND WILD APPLE | | |
| SCALE: AS SHOWN | | DATE: MARCH 26, 1971 |
| WHITMAN, REQUARDT & ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21202 | | |



APPROVED
 OFFICE OF PLANNING AND ZONING OF HOWARD COUNTY
 DATE: 5/15/71
J.H.C.R.

| STORM DRAIN STRUCTURE SCHEDULE | | | |
|--------------------------------|---|----------------|---|
| No. | Type | Top El./Inlet | Location |
| S-1 | Endwall, See Detail sht G | 391.16/389.00 | Face of HW 170.50' left of & sta. 2+61.76 |
| M-7 | B'MH See Detail sht G | 394.70/389.22 | & Manhole 133.5' left of & sta. 2+61.76 |
| I-15 | A-10 width = 3'-0" | 403.51/396.85 | & Inlet 16.17' left of & sta. 2+61.76 |
| I-16 | A-15 width = 2'-6" | 403.26/399.09 | & Inlet 15.92' right of & sta. 2+36 |
| I-17 | A-15 width = 2'-6" | 405.86/401.29 | & Inlet 15.92' right of & sta. 3+60 |
| I-14 | A-5 width = 2'-6" | 398.63/394.11 | & Inlet 23.92' left of & sta. 14+56 |
| I-18 | Special 'K' See Detail sht G | 392.50/388.79 | & Inlet 59.00' right of & sta. 61+44 |
| I-64 | Exist. Inlet, change for manhole See Detail sht G | 396.83/392.574 | Existing Inlet |

DEPARTMENT OF PUBLIC WORKS
 Chief Bureau of Highways
 OFFICE OF PLANNING AND ZONING
 CHIEF DIVISION OF LAND DEVELOPMENT/TRANSPORTATION PLANNING



For exist storm drains See Longreach Section I Areal Road Construction Drawings Sheet 16 of 64

WARNING
 GAS AND/OR ELECTRIC FACILITIES IN THIS AREA. BEFORE YOU DIG, DRILL, BLAST ETC.
CALL
 BALTIMORE GAS & ELECTRIC CO.
 234-5691

CURVE DATA

| | |
|------------------------------|--------------------------|
| PC 1+48.10 to PT 2+61.76 | PC 5+13.29 to PT 6+28.43 |
| $\Delta = 23^\circ 40' 54''$ | $52^\circ 46' 35''$ |
| $R = 275.00'$ | $125.00'$ |
| Arc = 113.66' | 115.14' |
| Tan = 57.66' | 62.02' |
| Ch. = 112.86' | 111.11' |
| Brg. = N50°54'14"W | N36°21'23"W |

COLUMBIA
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORP.

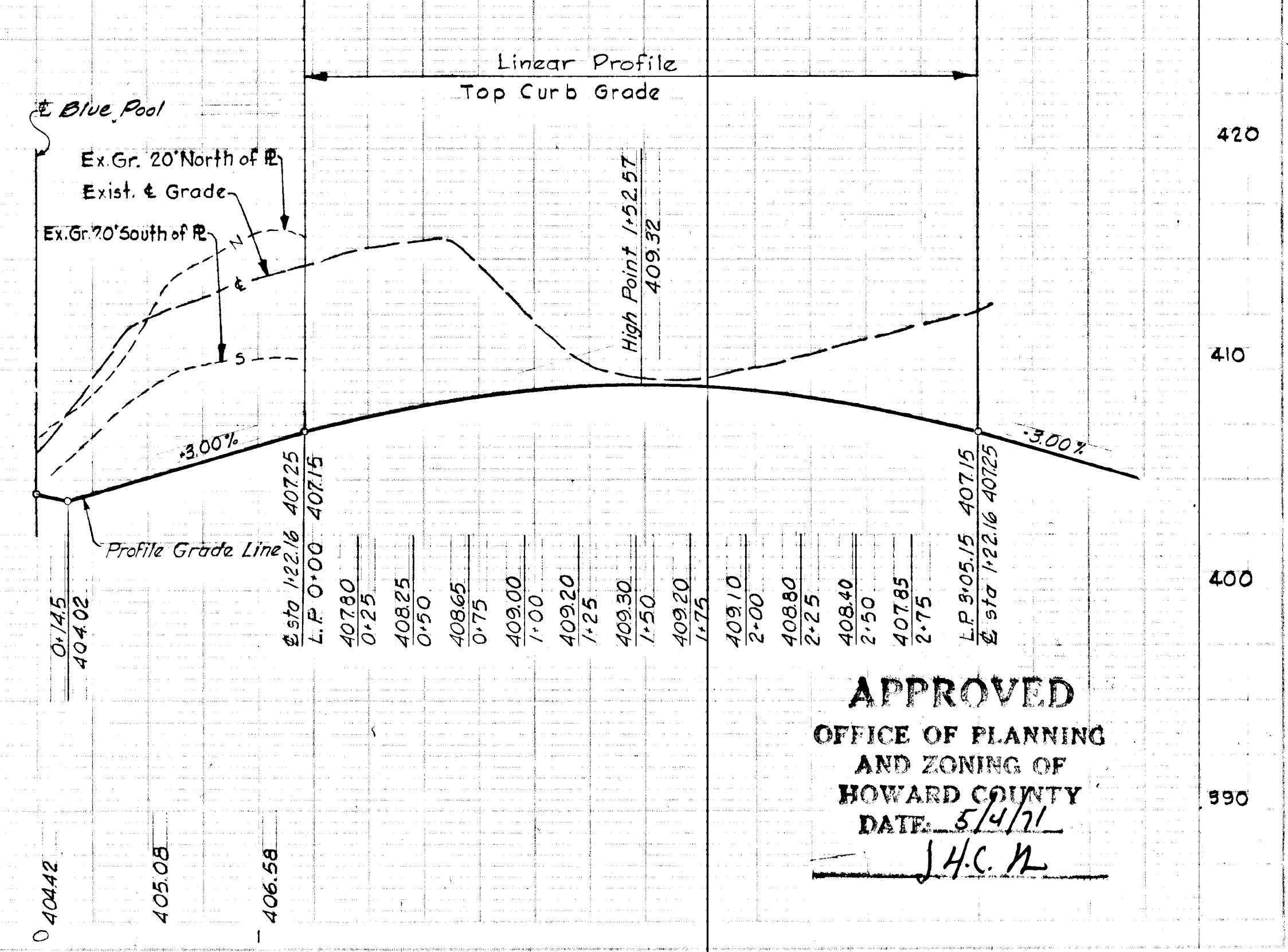
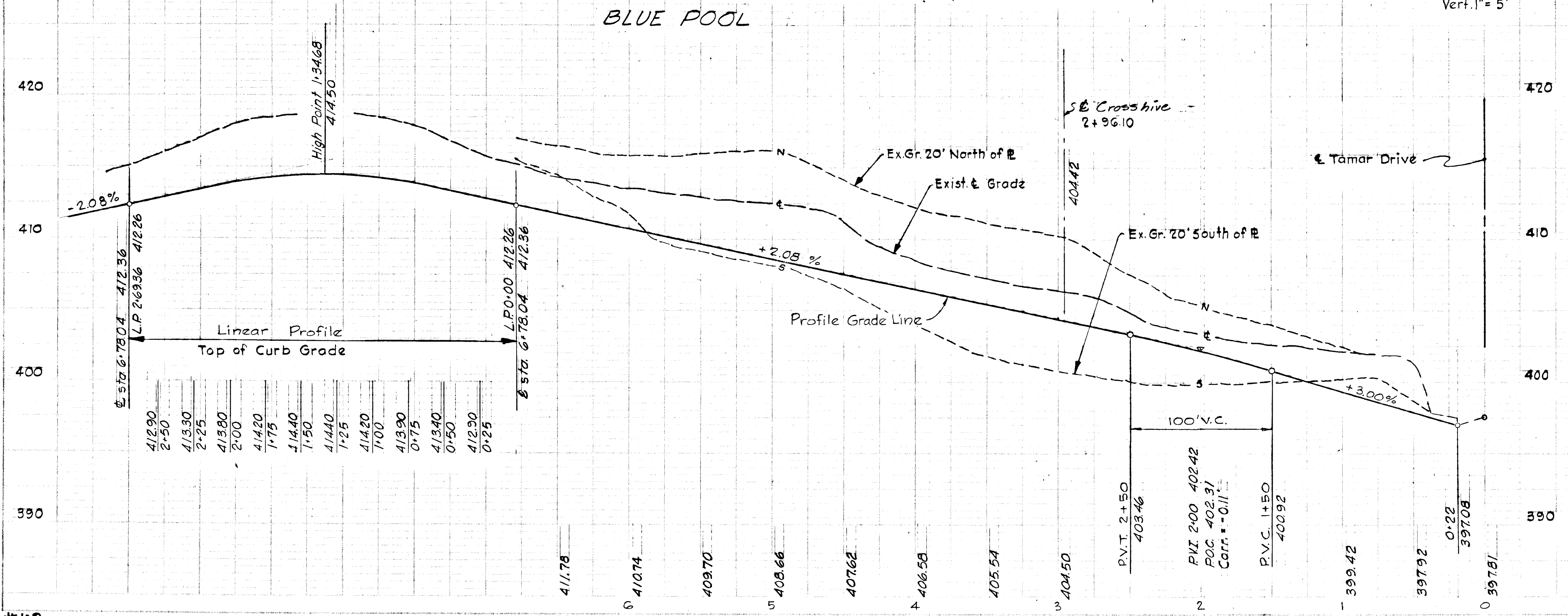
PROJECT AREA
VILLAGE OF LONG REACH
 SECTION I, AREA I
 RESUBDIVISION OF PARCELS 'A' & 'M'

PROJECT TITLE:
 PLAN AND PROFILE
 BLUE POOL AND CROSSHIVE.

SCALE: AS SHOWN DATE MARCH 26, 1971

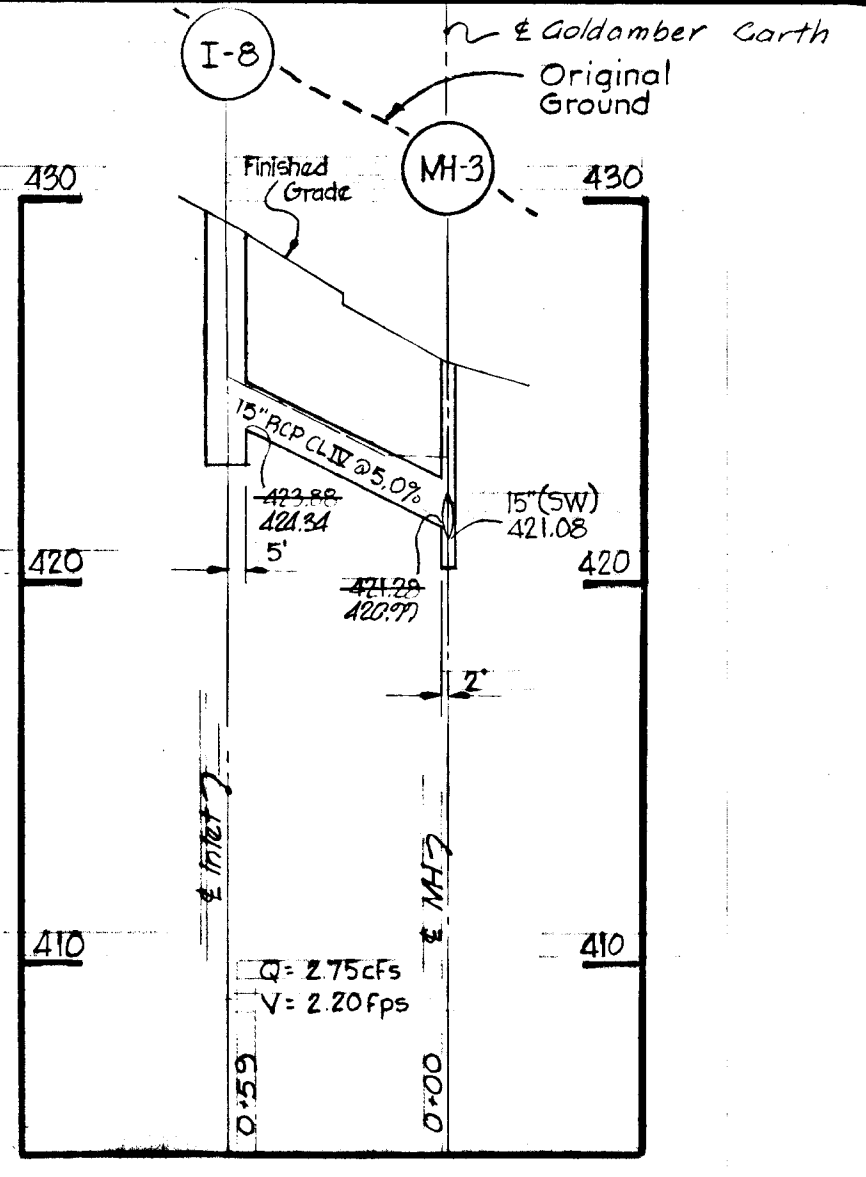
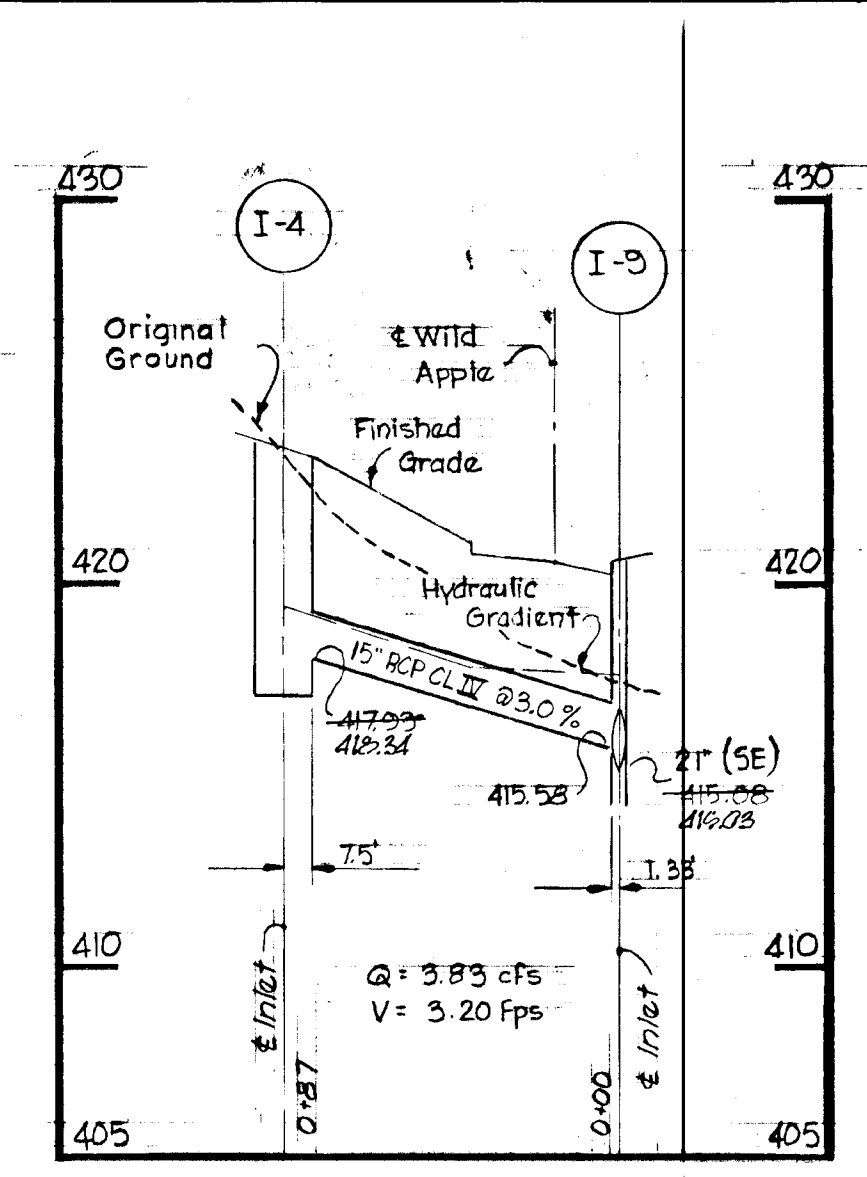
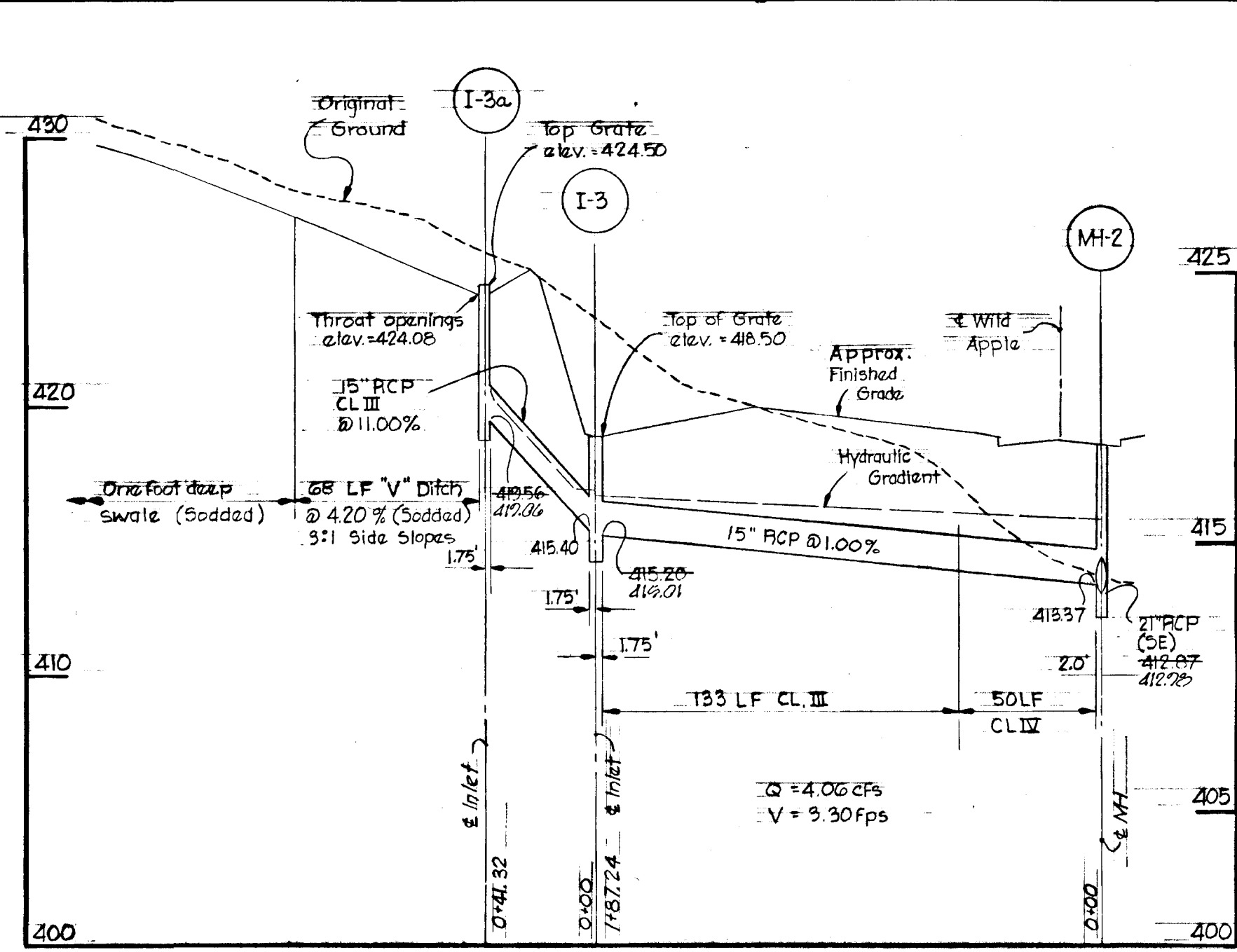
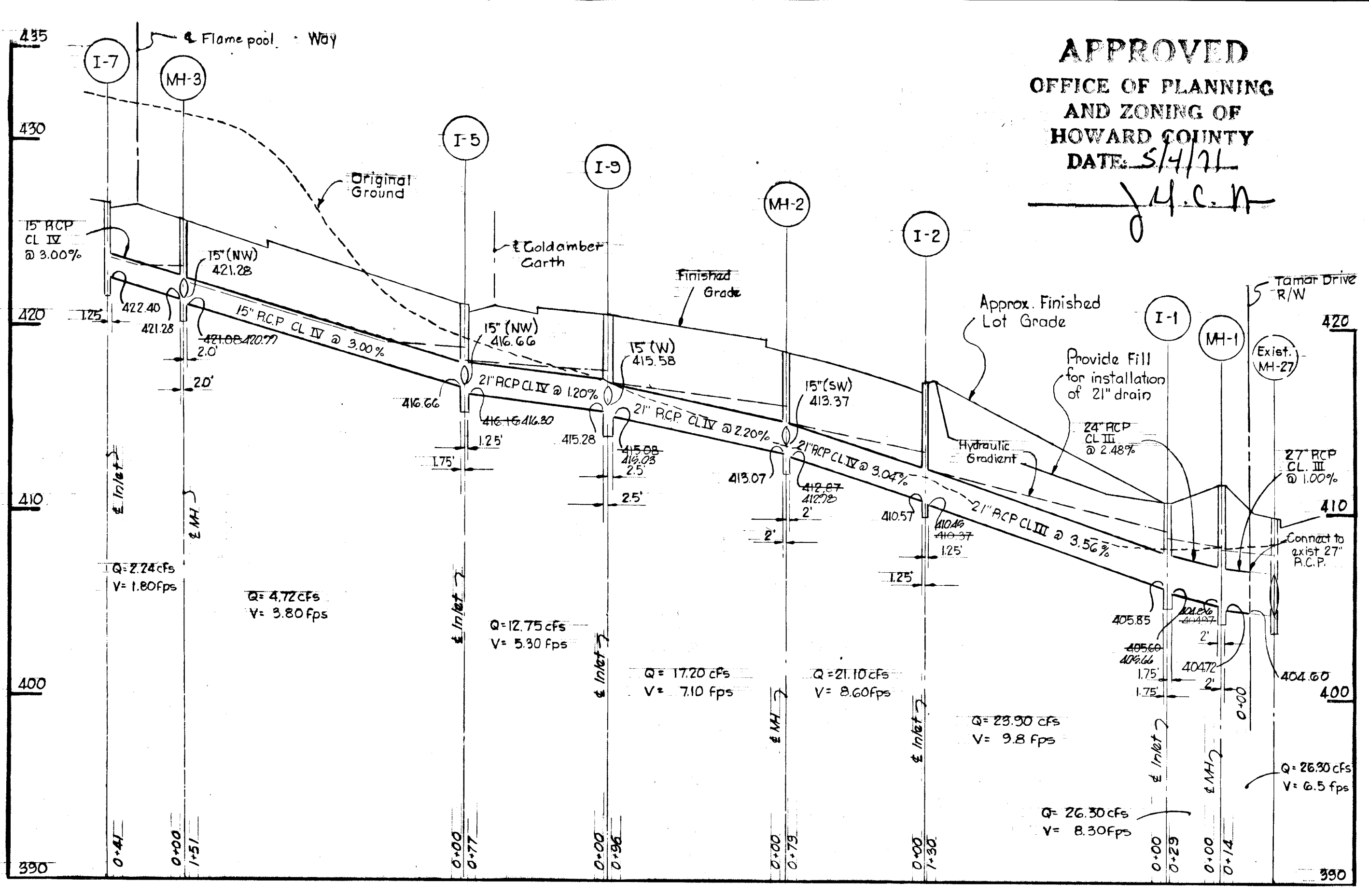
WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

Kenneth A. McCord
 KENNETH A. MCCORD
 Registered Engineer
 No. 1974

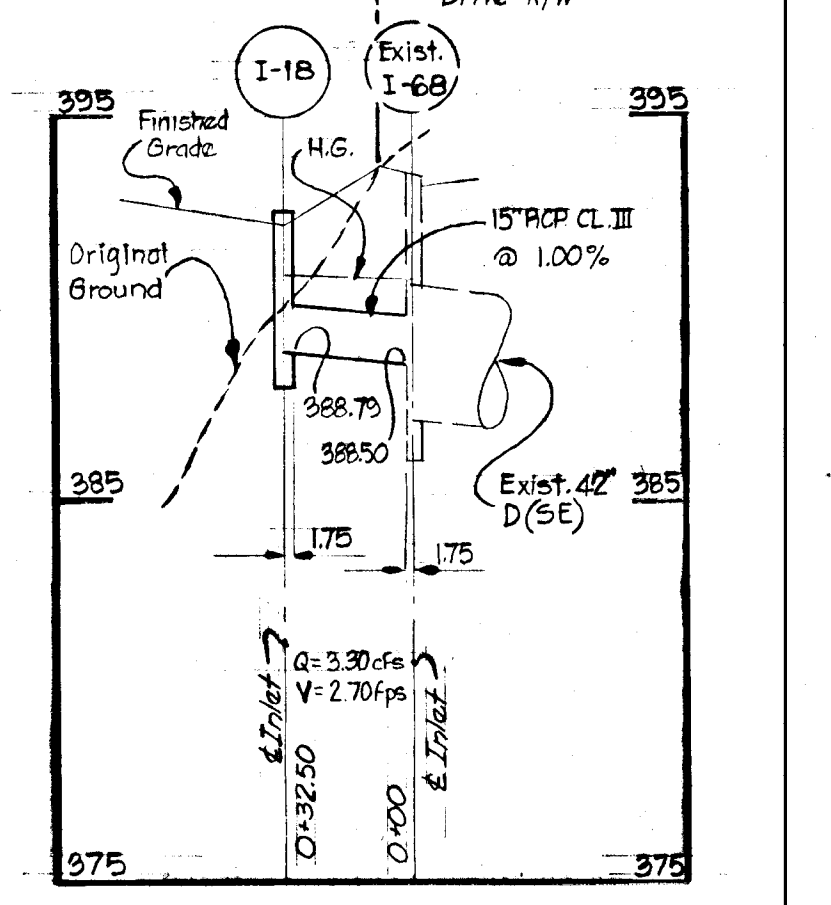
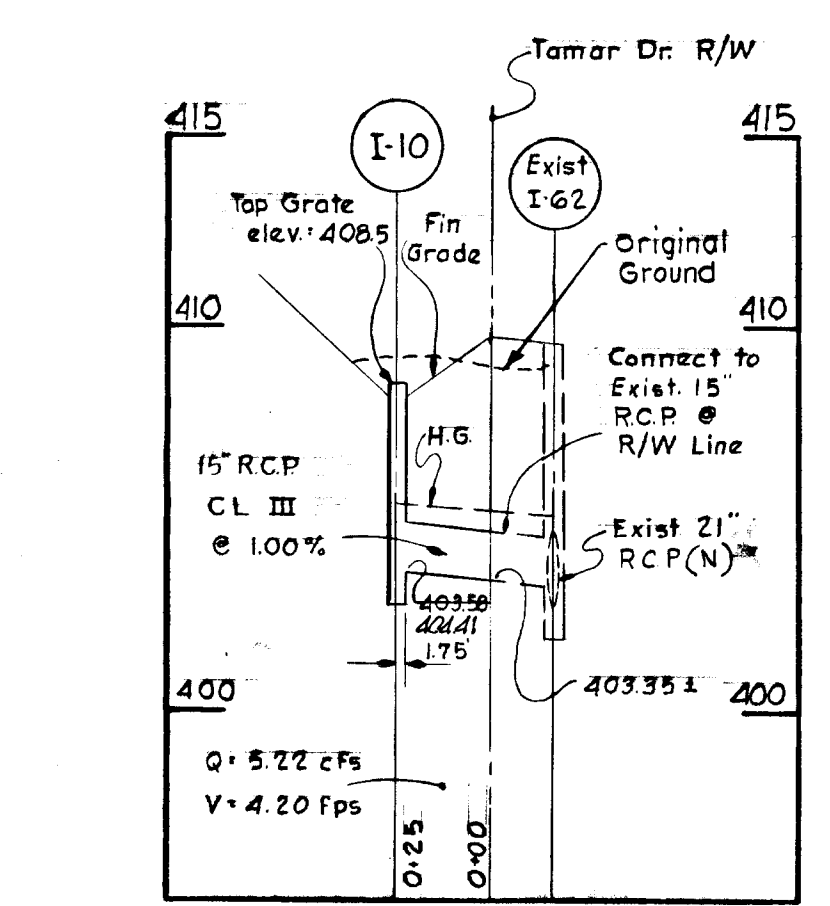
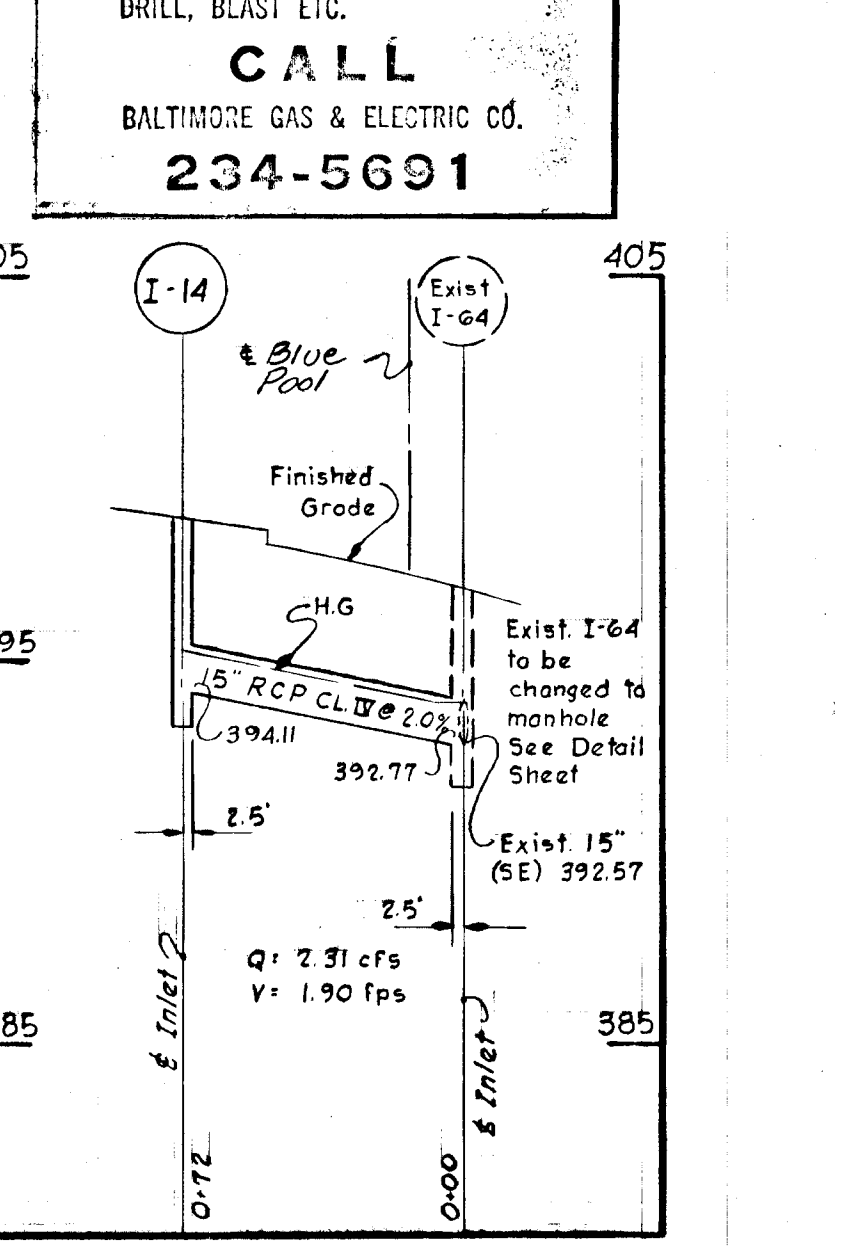
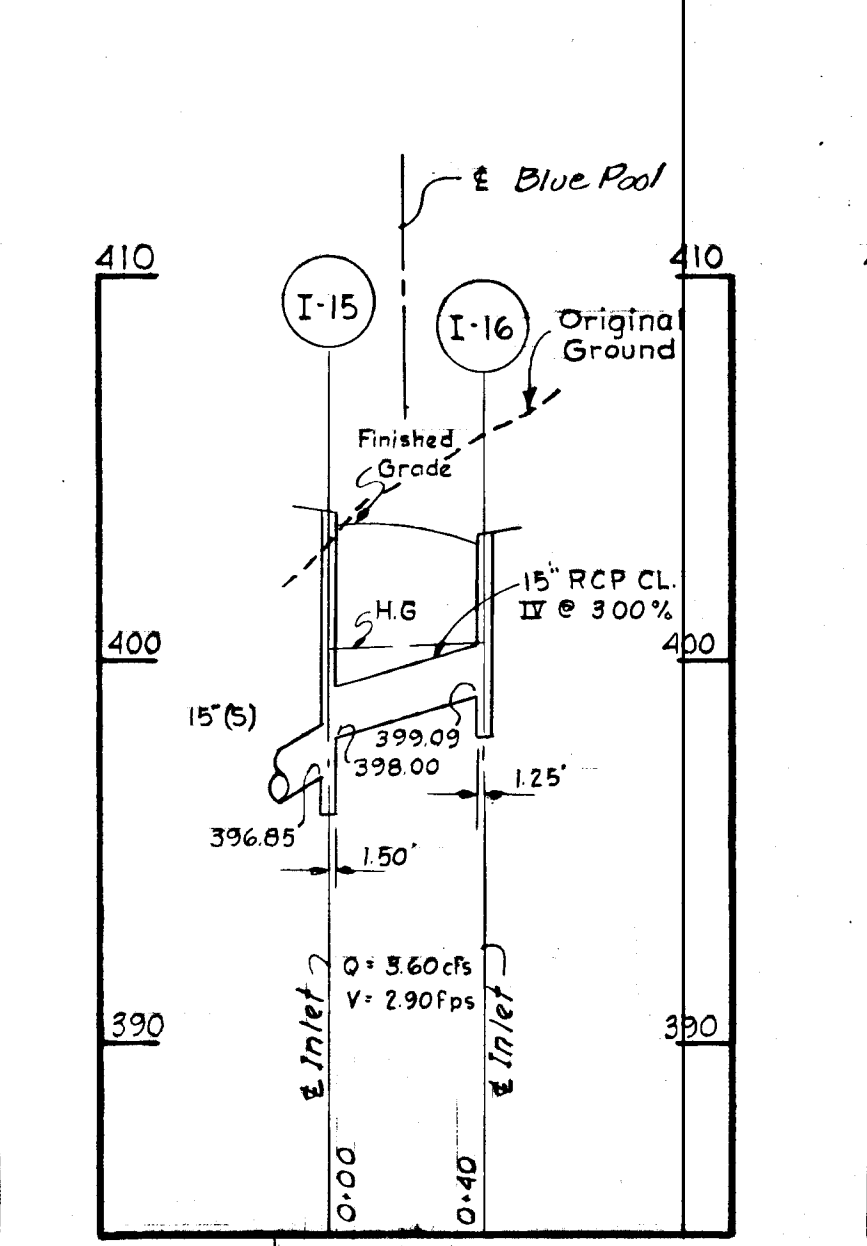
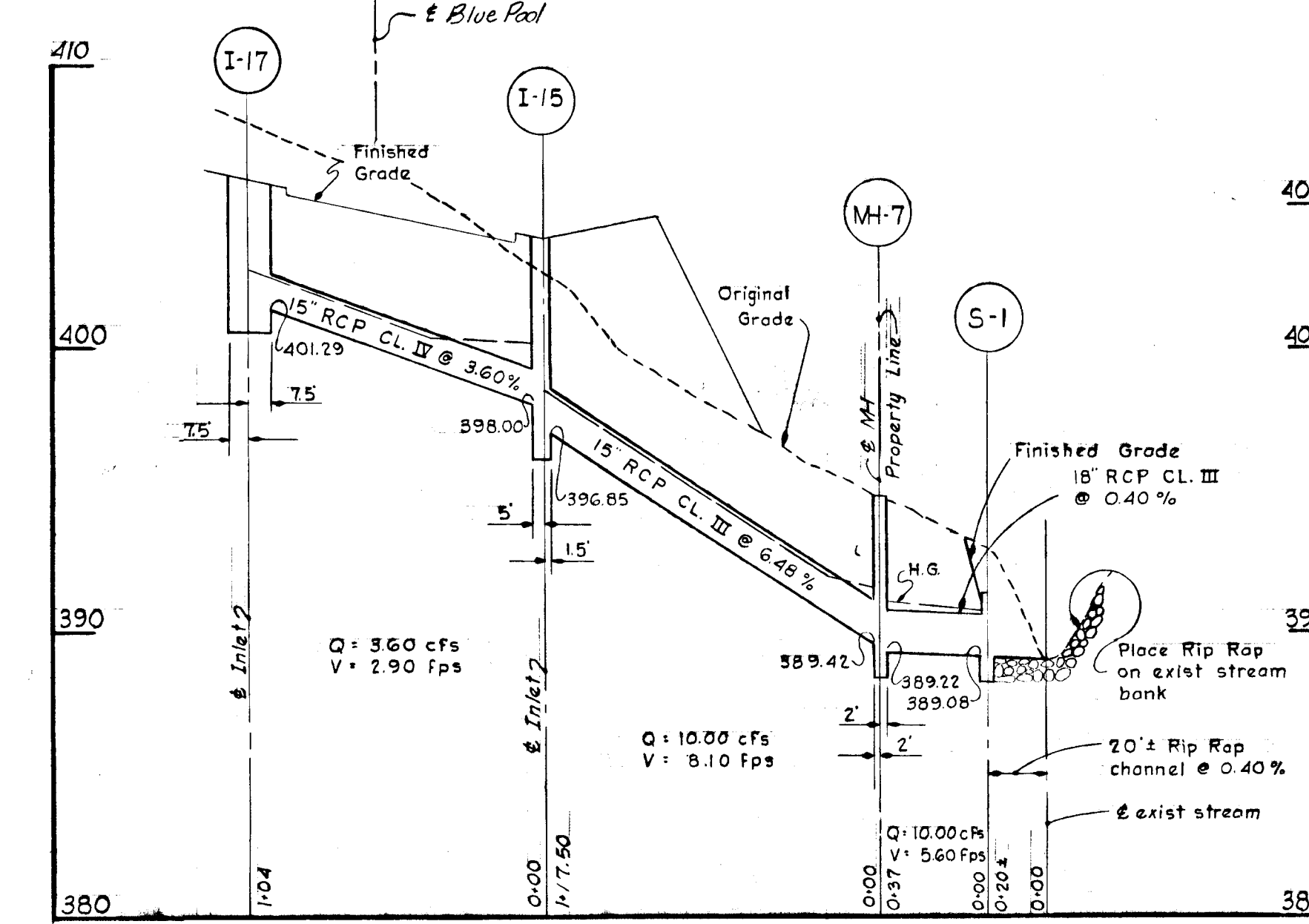
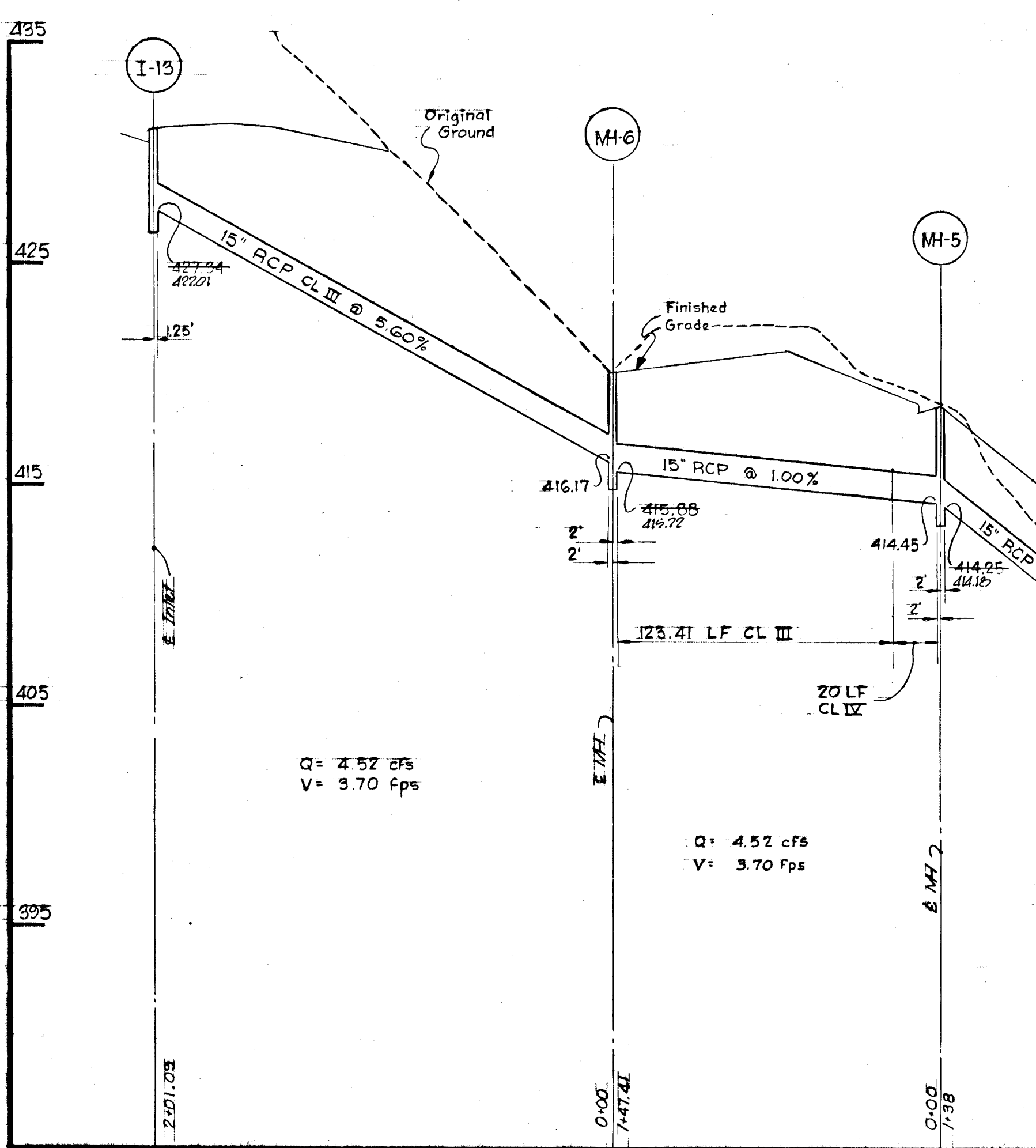
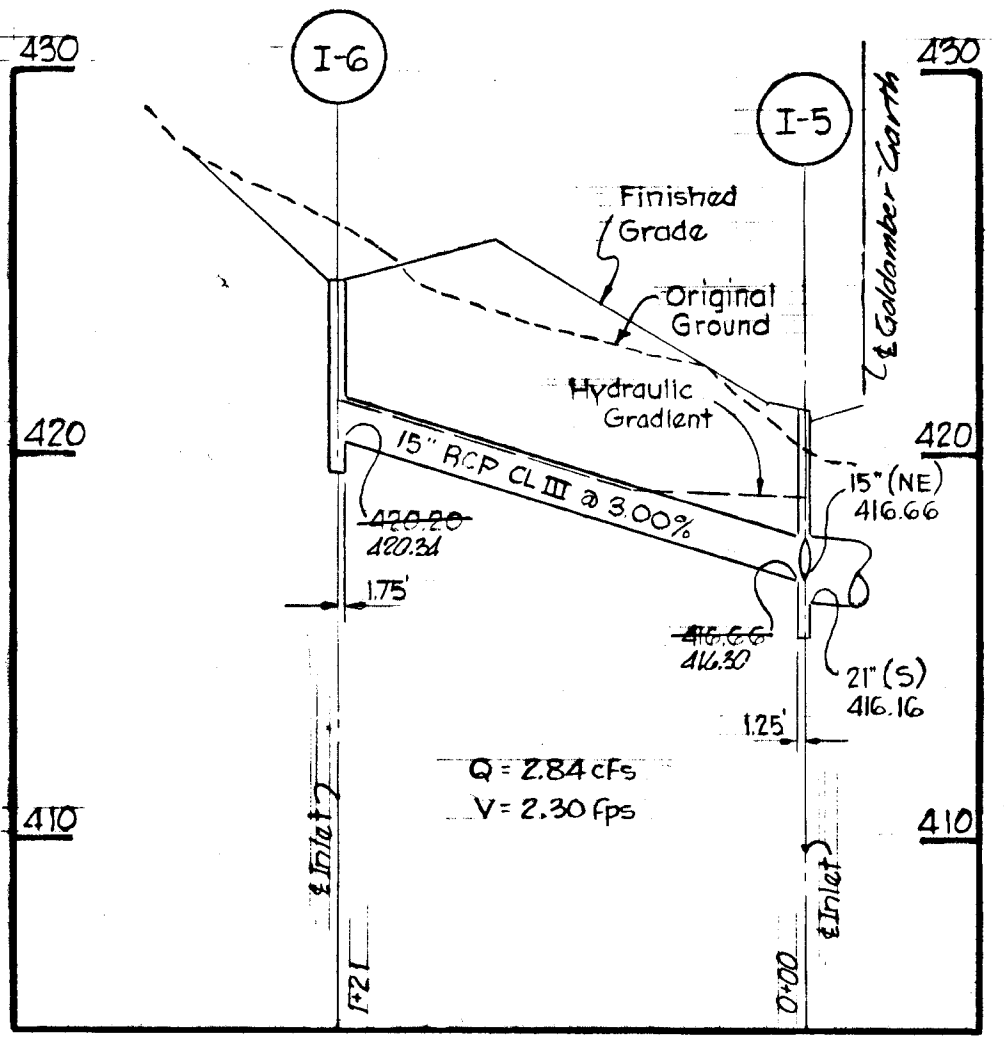


APPROVED
 OFFICE OF PLANNING AND ZONING OF HOWARD COUNTY
 DATE: 5/4/71
 J.H.C.

APPROVED
OFFICE OF PLANNING
AND ZONING OF
HOWARD COUNTY
 DATE 5/14/71
J.C.N.



WARNING
 GAS AND/OR ELECTRIC FACILITIES
 IN THIS AREA. BEFORE YOU DIG,
 DRILL, BLAST ETC.
CALL
 BALTIMORE GAS & ELECTRIC CO.
234-5691



| Rev. Date | Rev. No. | Revision Description |
|-----------|----------|----------------------|
| | | |

COLUMBIA
 6TH ELECTION DISTRICT
 HOWARD COUNTY, MARYLAND
 OWNER AND DEVELOPER
 HOWARD RESEARCH AND DEVELOPMENT CORP.

PROJECT AREA
VILLAGE OF LONGREACH
 SECTION I, AREA A
 RESUBDIVISION OF PARCELS 'A' & 'M'

PROJECT TITLE
STORM DRAINS-PROFILES AND DETAILS

SCALE: Horiz. 1" = 50'
 Vert. 1" = 5' DATE: March 26, 1971

WHITMAN, REQUARDT & ASSOCIATES
 ENGINEERS
 BALTIMORE, MARYLAND 21202

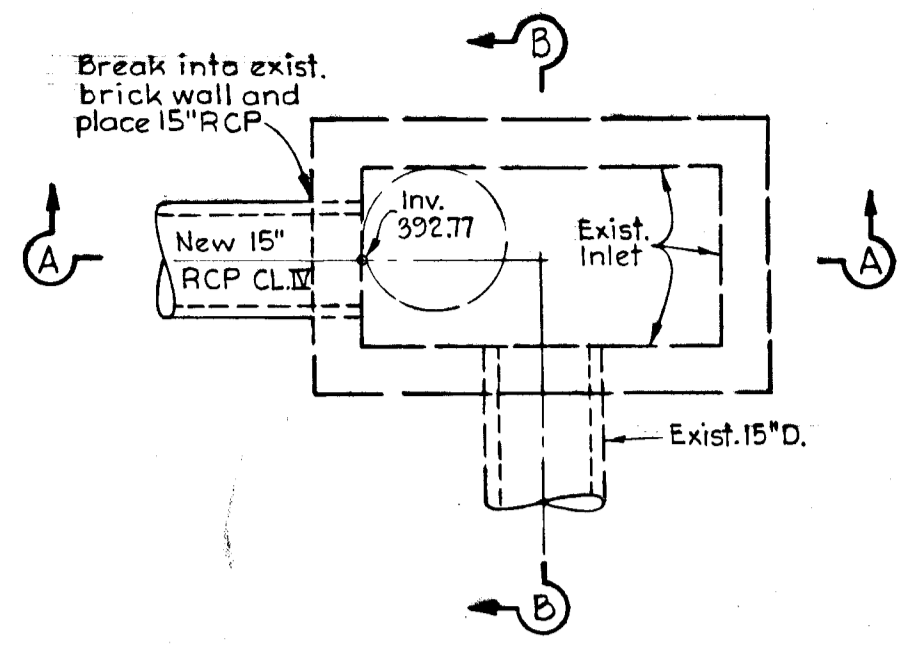
DEPARTMENT OF PUBLIC WORKS
Drumville H. Wickland 5/15/71
 CHIEF BUREAU OF HIGHWAYS DATE

OFFICE OF PLANNING AND ZONING
 CHIEF DIVISION OF LAND DEVELOPMENT & TRANSPORTATION PLANNING DATE

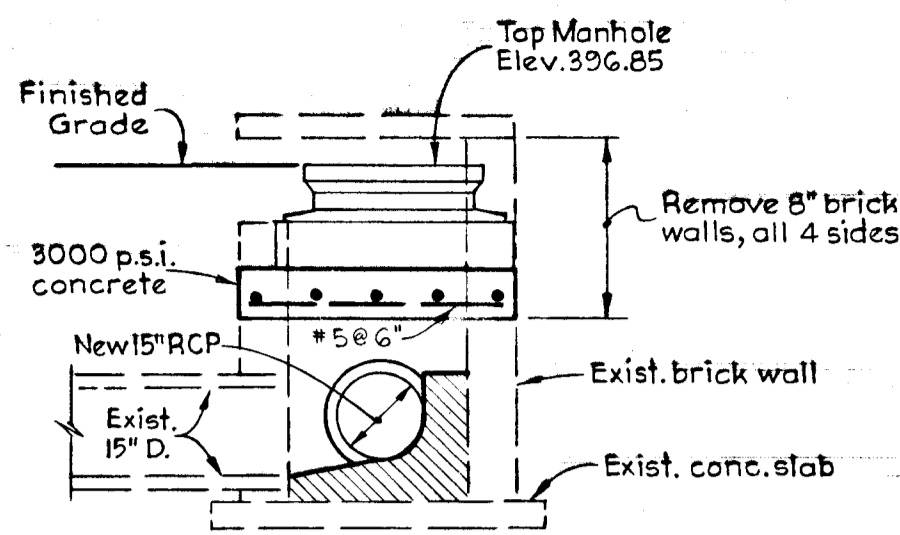
KENNETH A. MCCORD
 Registered Engineer
 No. 1974

DEPARTMENT OF PUBLIC WORKS
Drumville H. Wickland 5/15/71
 CHIEF BUREAU OF HIGHWAYS DATE

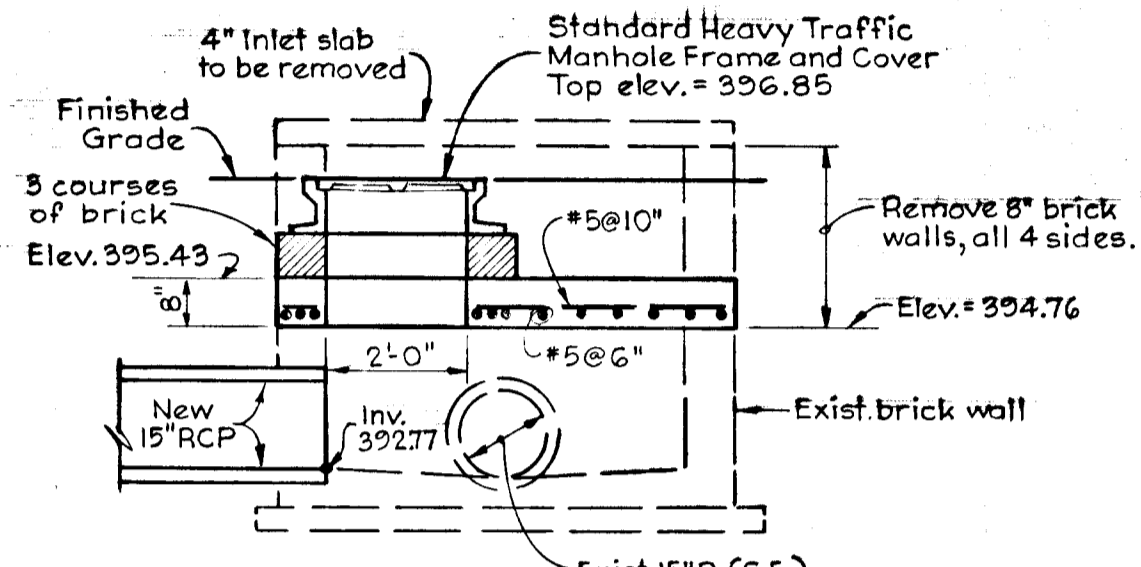
OFFICE OF PLANNING AND ZONING
 CHIEF DIVISION OF LAND DEVELOPMENT & TRANSPORTATION PLANNING DATE



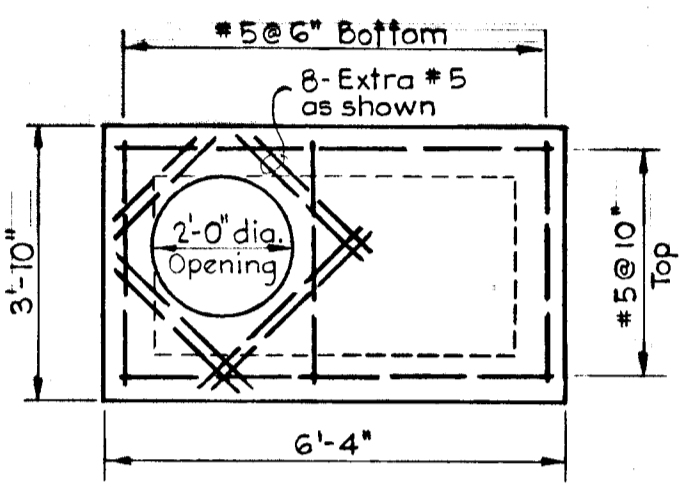
PLAN
(ELEV. 394.79)



SECTION "B-B"



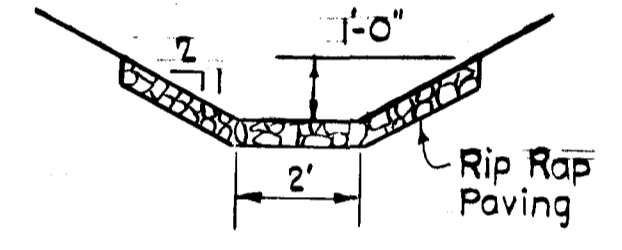
SECTION "A-A"



PLAN-CONC. SLAB
(ELEV. 395.43)

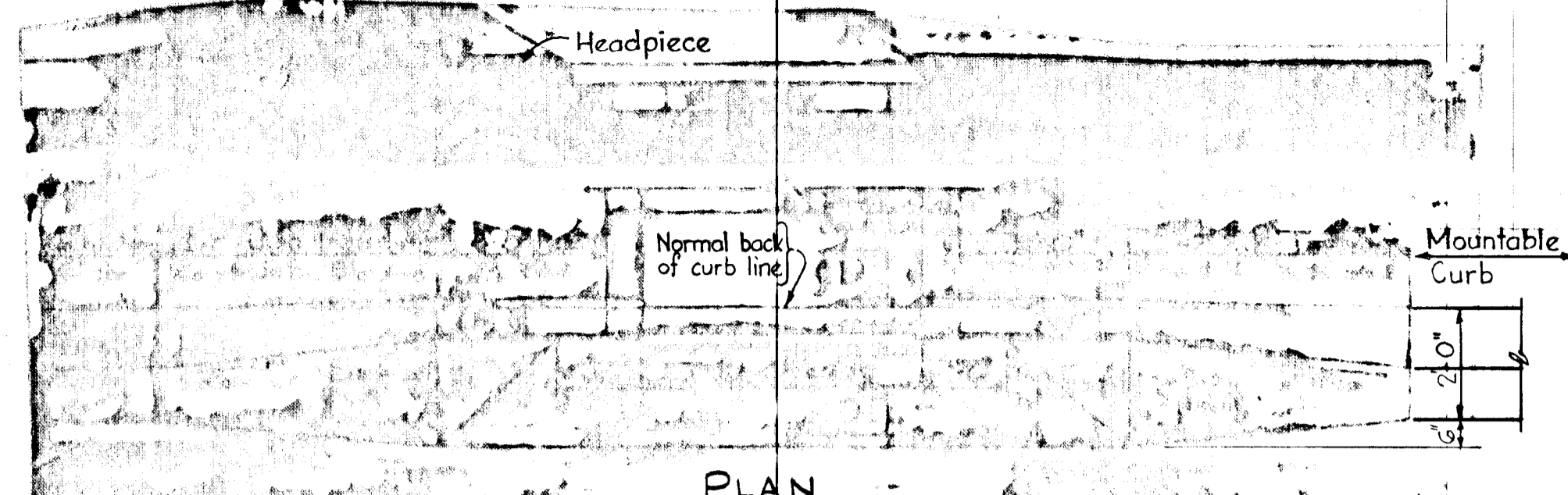
DETAIL "A"-EXISTING INLET I-64

Scale: 3/8" = 1'-0"



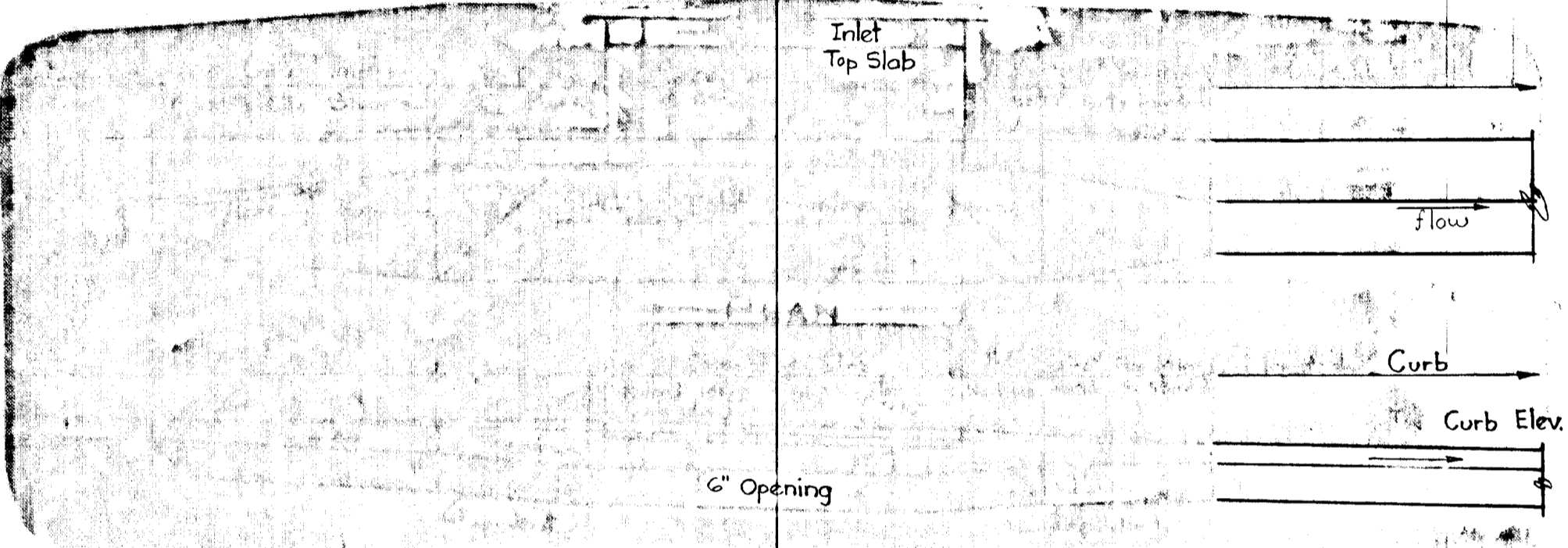
OUTFALL CHANNEL @ 5-T

No Scale

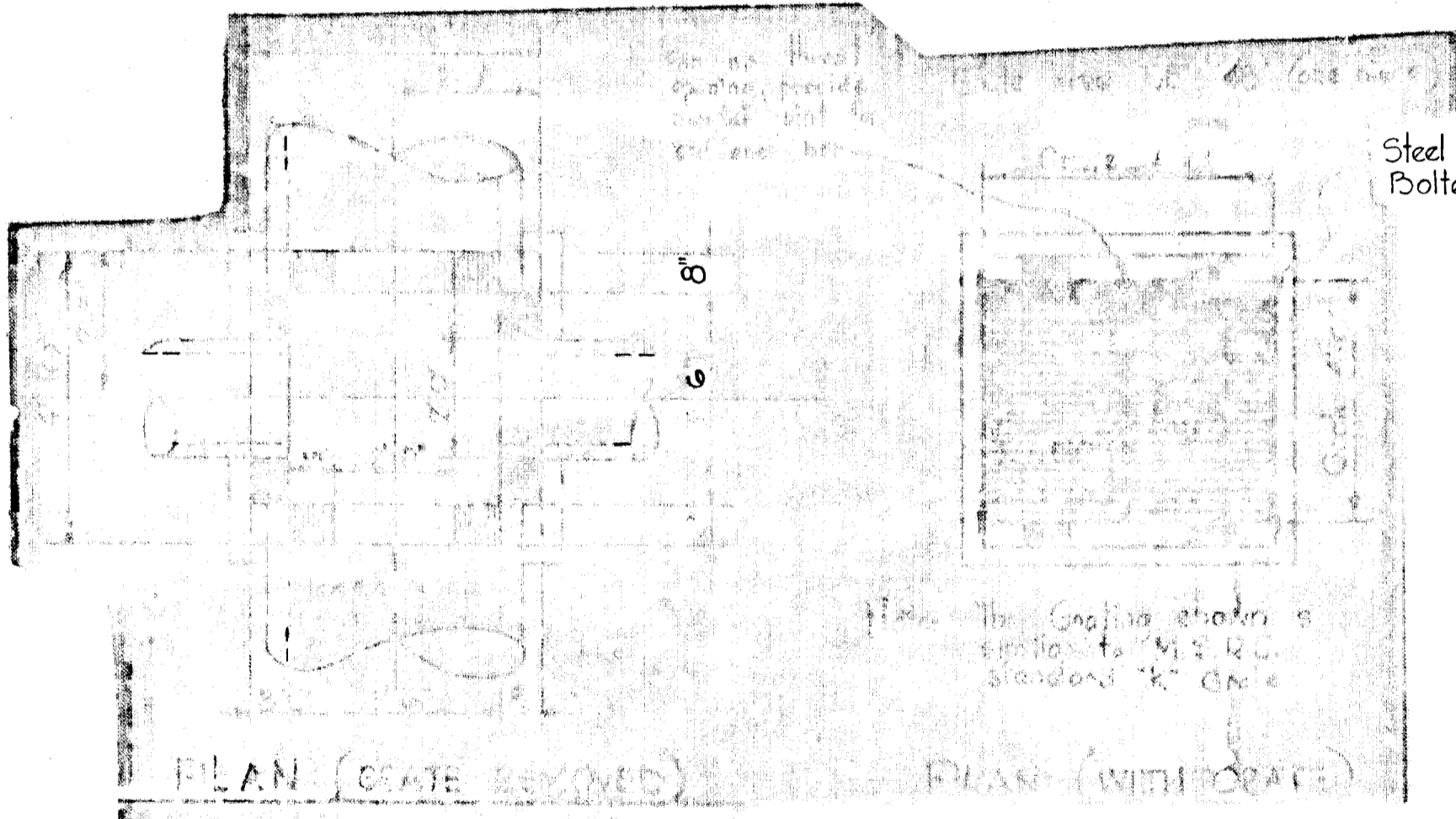


PLAN

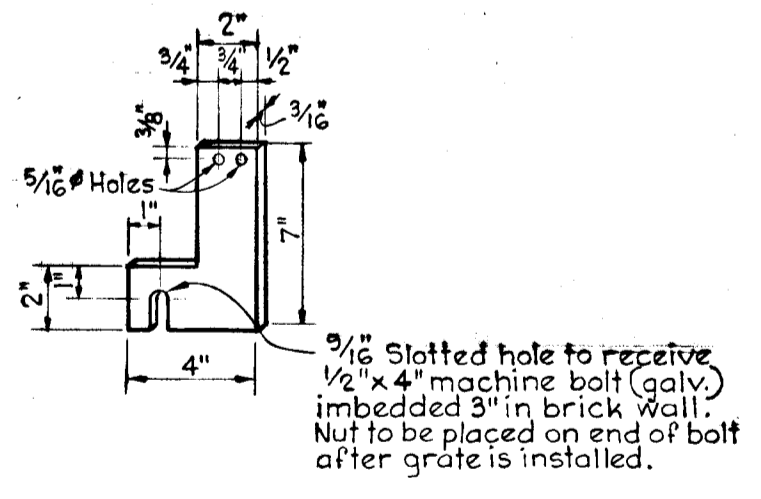
SECTION ALONG FLOW LINE - SUMPED "A" INLETS - MOUNTABLE CURB



SECTION ALONG FLOW LINE



Steel Strap (4 req'd.)
Bolted to outside bars.



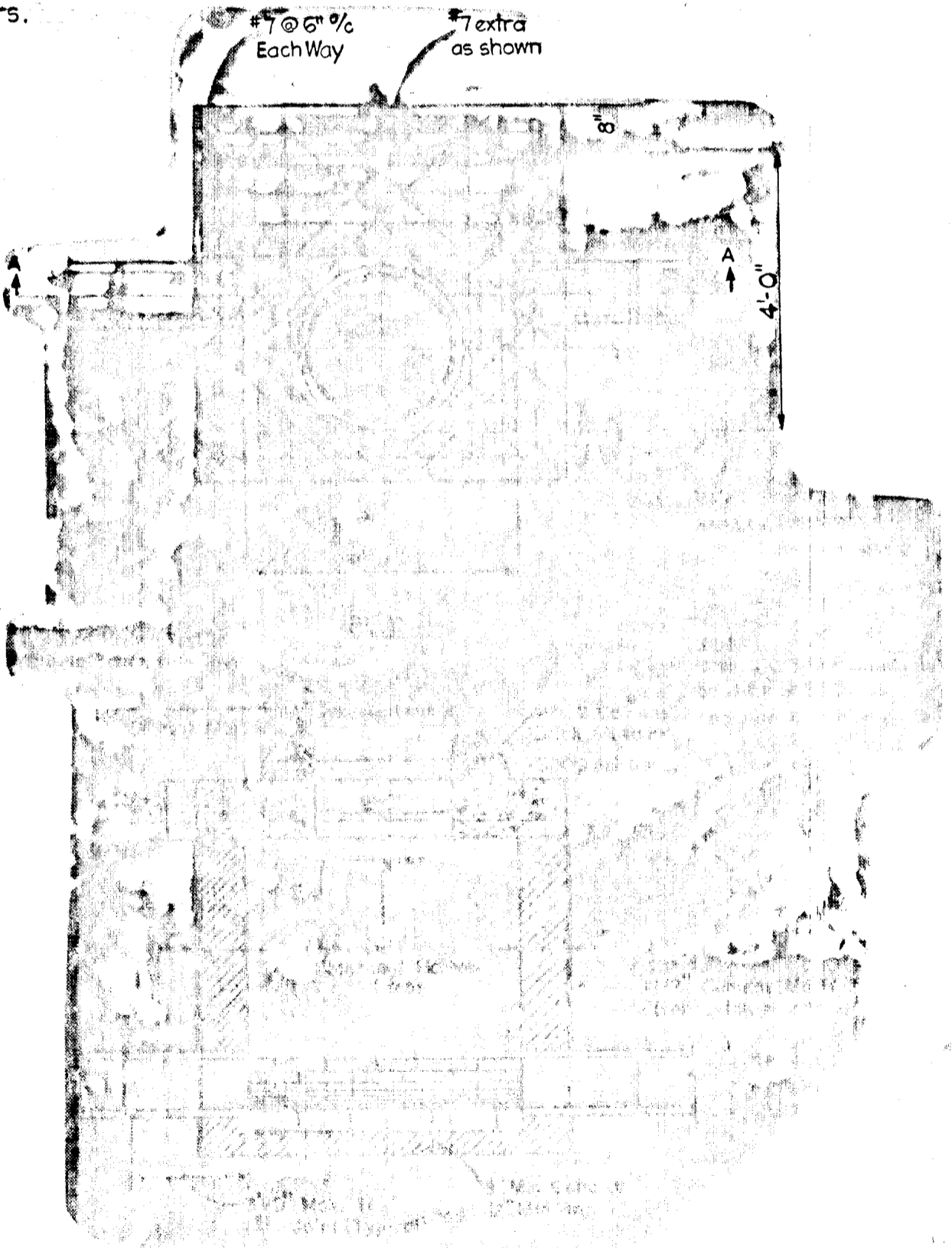
STRAP DETAIL

No Scale

- NOTES:**
1. Gratings are subject to approval for each job. Any type of substantial transverse bars may be used which will support a minimum uniform load of 150 lbs./sq. ft. The transverse bars shall be held rigid by spacer bars.
 2. All material to be hot dipped galvanized.

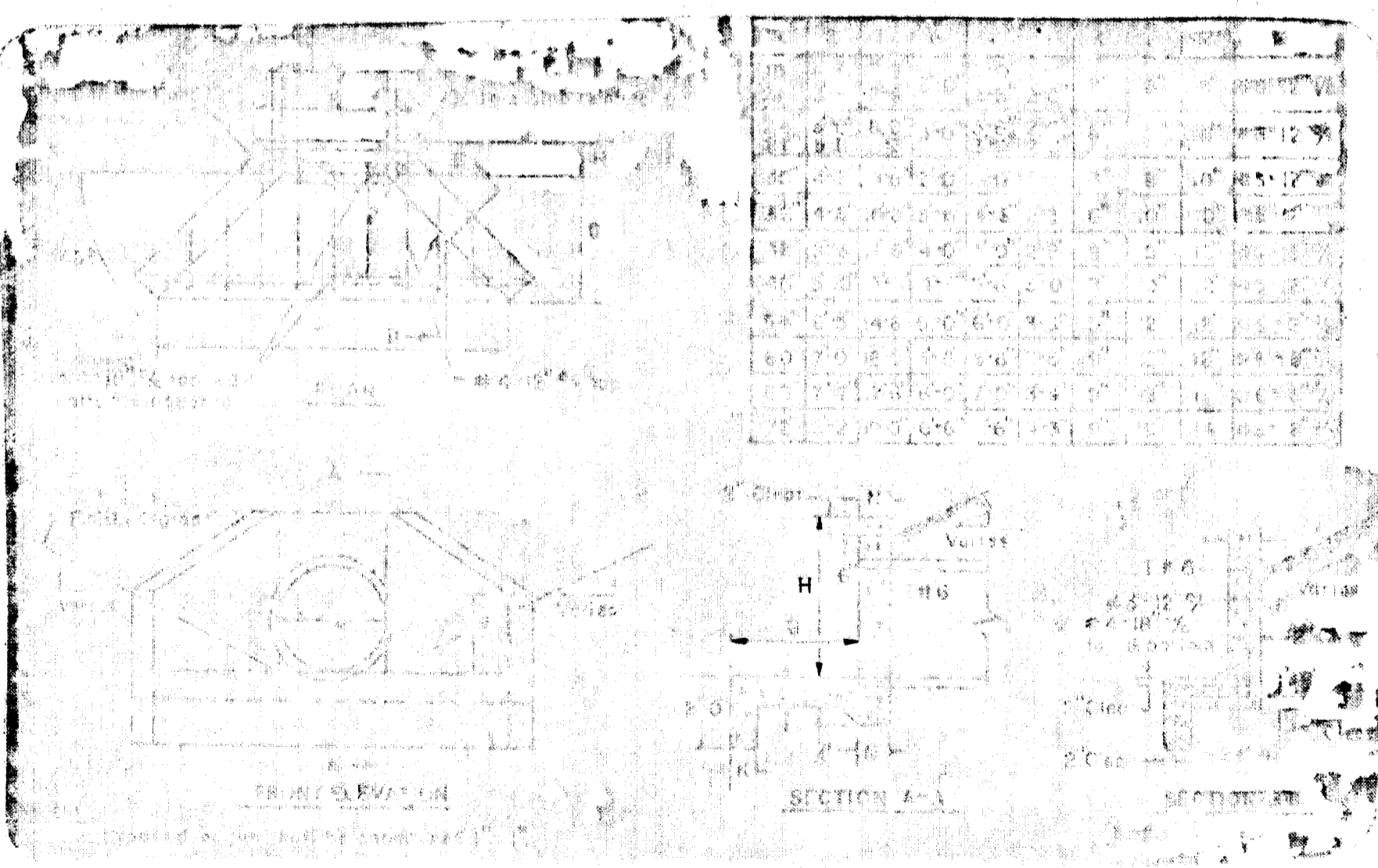
MODIFIED "K" INLET

Scale: 3/8" = 1'-0"



TYPE "B" MANHOLE

No Scale



ENDWALL S-1

No Scale

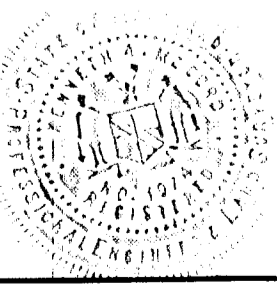
APPROVED
OFFICE OF PLANNING
AND ZONING OF
HOWARD COUNTY
DATE: 5/4/71
J.H.C. N

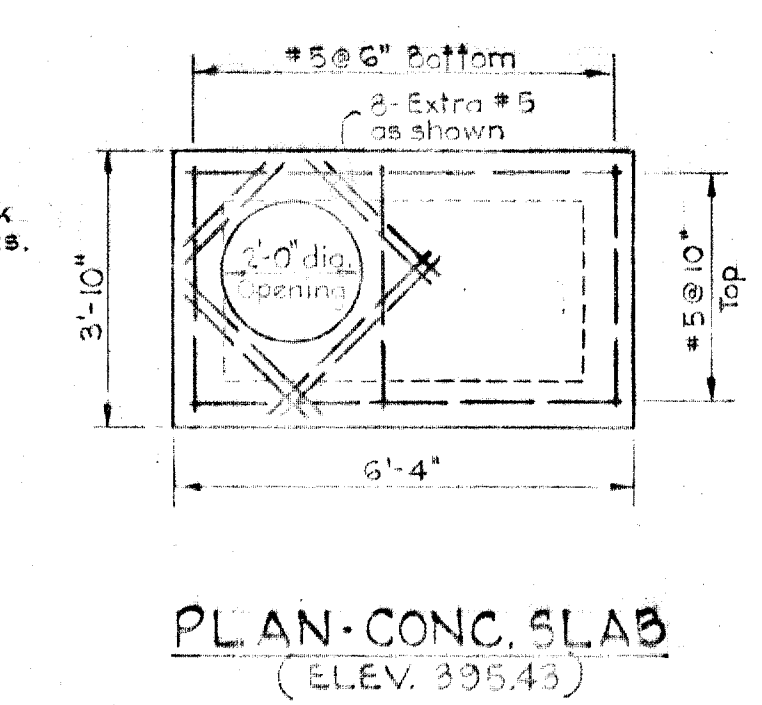
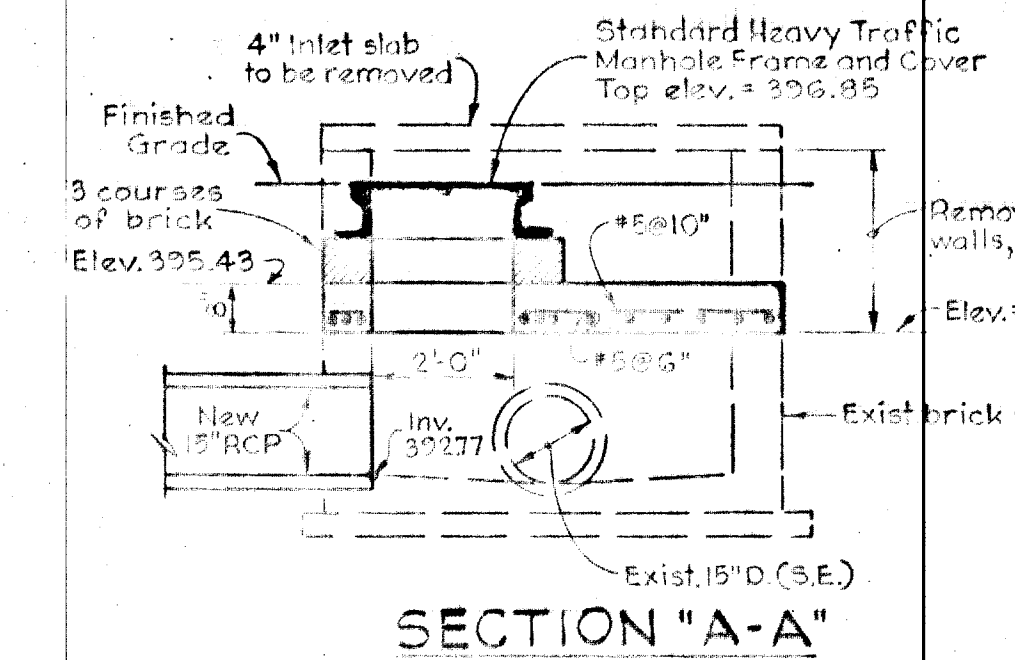
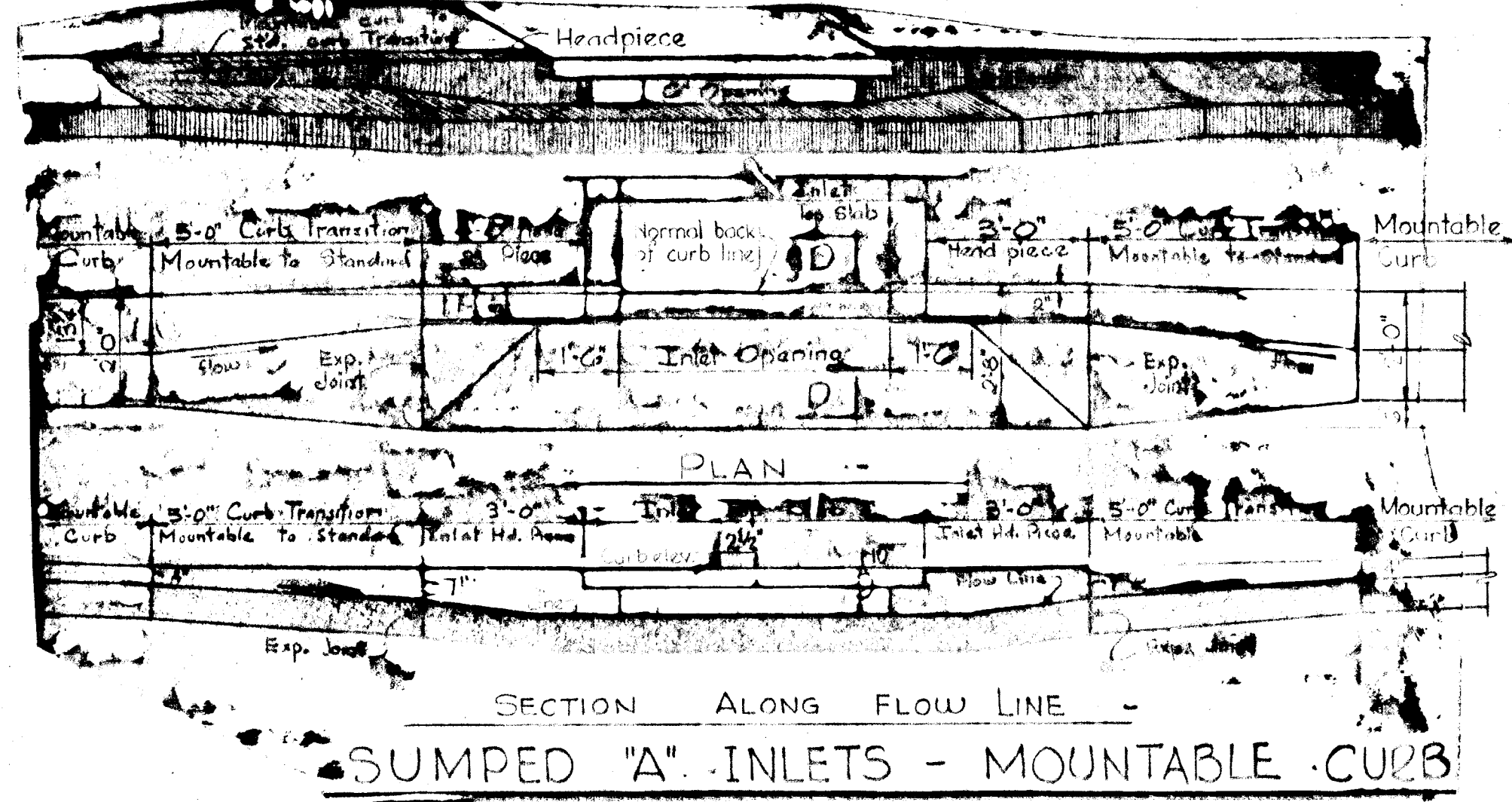
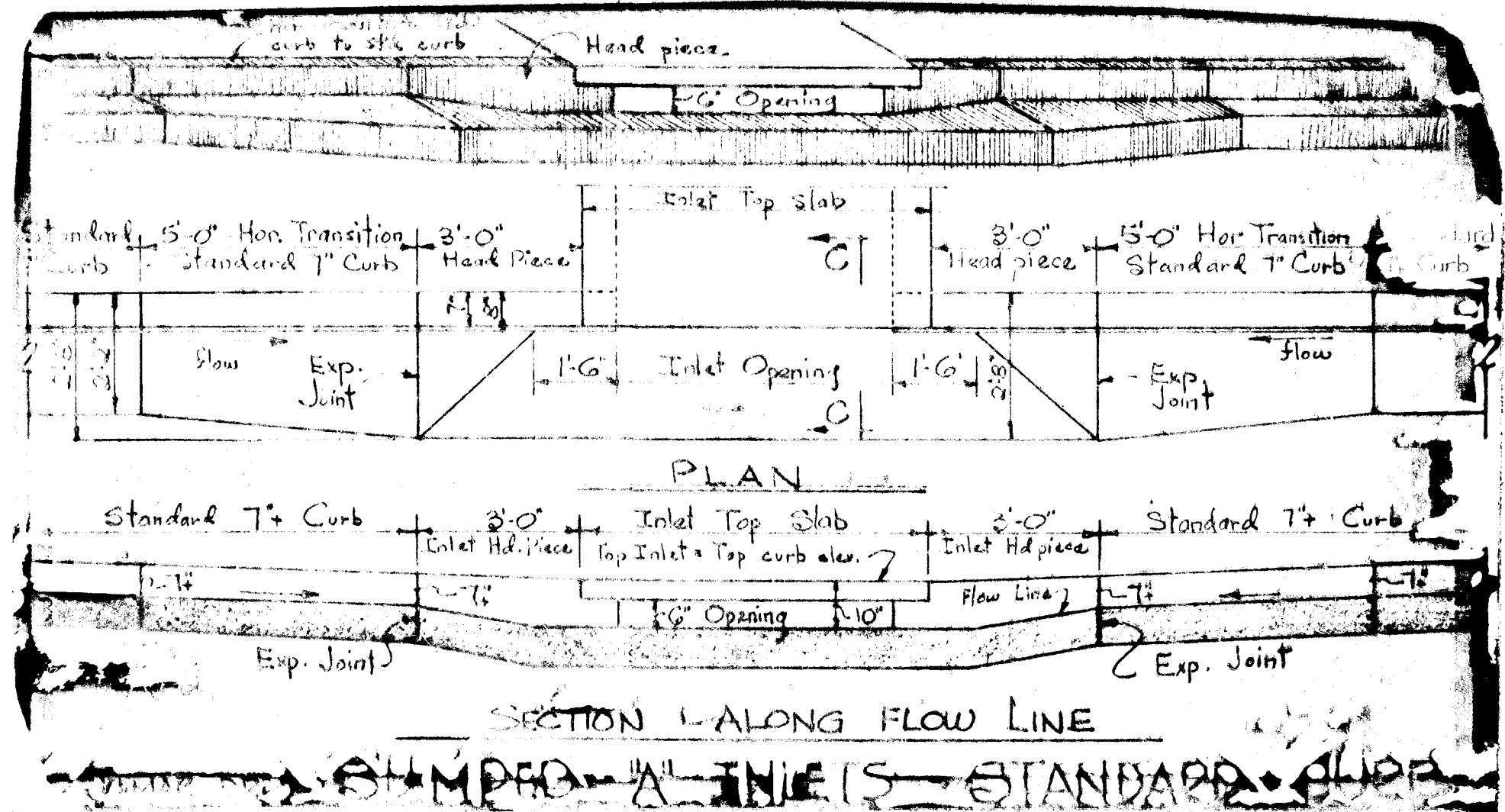
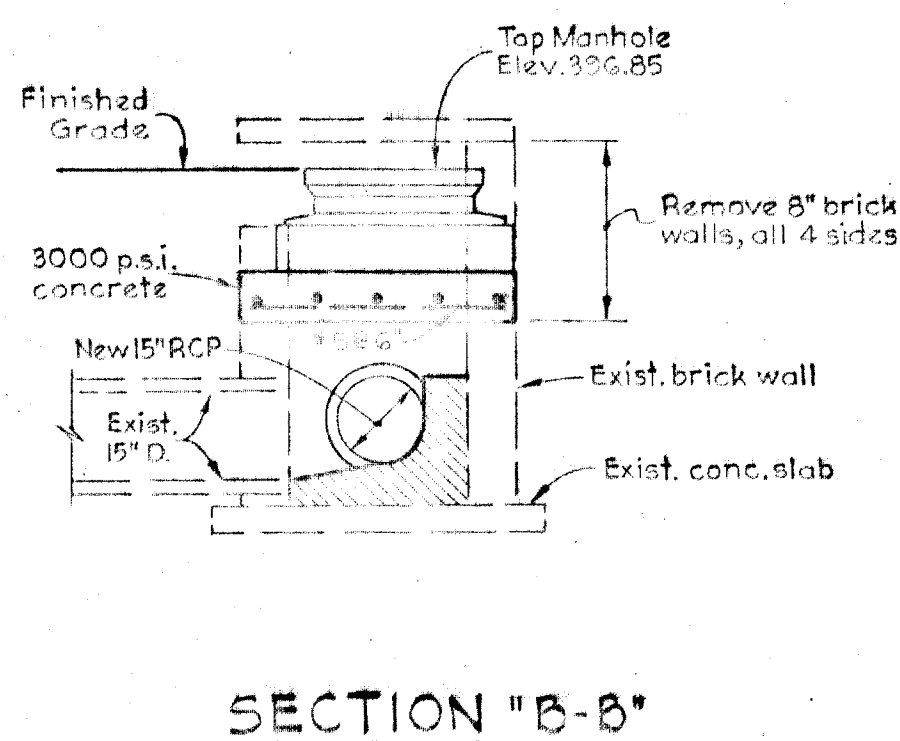
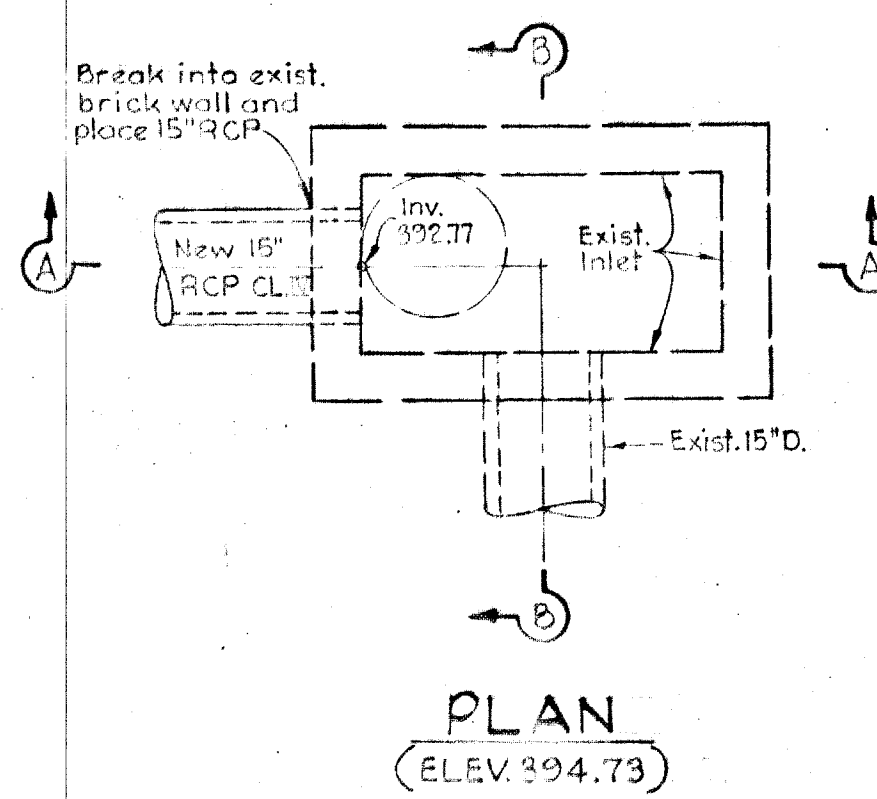
WARNING
GAS AND/OR ELECTRIC FACILITIES
IN THIS AREA. BEFORE YOU DIG,
DRILL, BLAST ETC.
CALL
BALTIMORE GAS & ELECTRIC CO.
234-5691

| Rev. Date | Rev. No. | Revision Description |
|--|----------|----------------------|
| COLUMBIA | | |
| 6TH ELECTION DISTRICT HOWARD COUNTY, MARYLAND | | |
| OWNER AND DEVELOPER HOWARD RESEARCH AND DEVELOPMENT CORP. | | |
| PROJECT AREA VILLAGE OF LONGREACH | | |
| SECTION I, AREA 1 RESUBDIVISION OF PARCEL "A" | | |
| PROJECT TITLE STORM DRAINS-PROFILES AND DETAILS | | |
| SCALE: As Shown | | DATE: March 26, 1971 |
| WHITMAN, REQUARDT & ASSOCIATES ENGINEERS | | |
| BALTIMORE, MARYLAND | | 21202 |

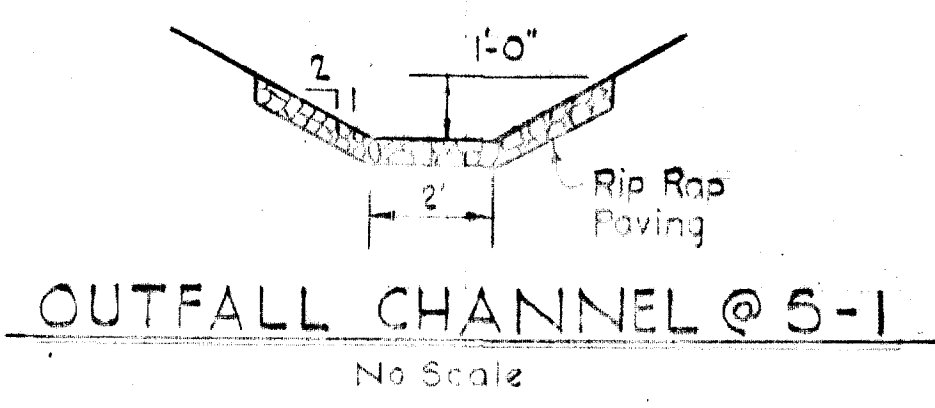
DEPARTMENT OF PUBLIC WORKS
CHIEF BUREAU OF HIGHWAYS
OFFICE OF PLANNING AND ZONING
CHIEF DIVISION OF LAND DEVELOPMENT & TRANSPORTATION PLANNING

DATE: 5/15/71
KENNETH A. McCORD
Registered Engineer
No. 1974

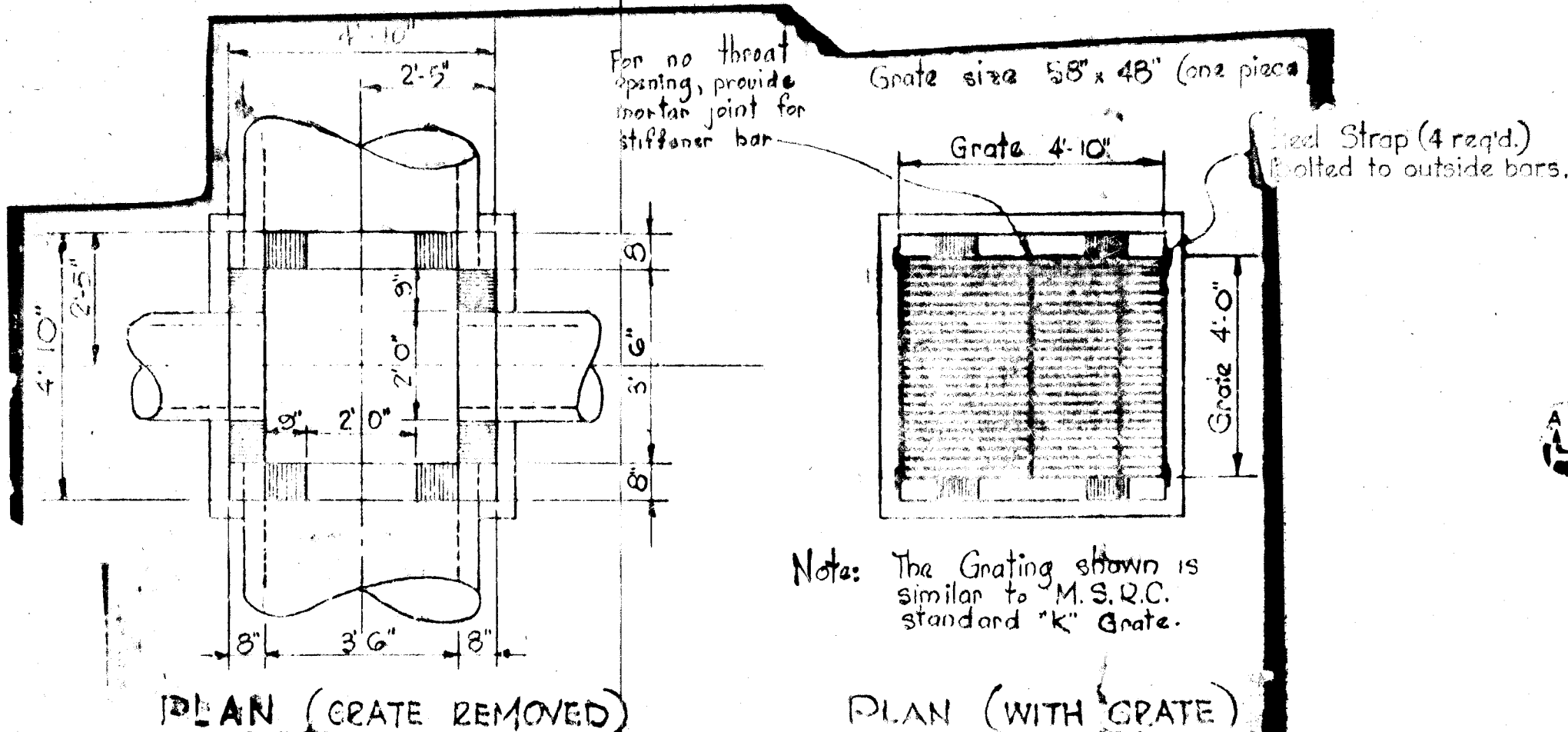
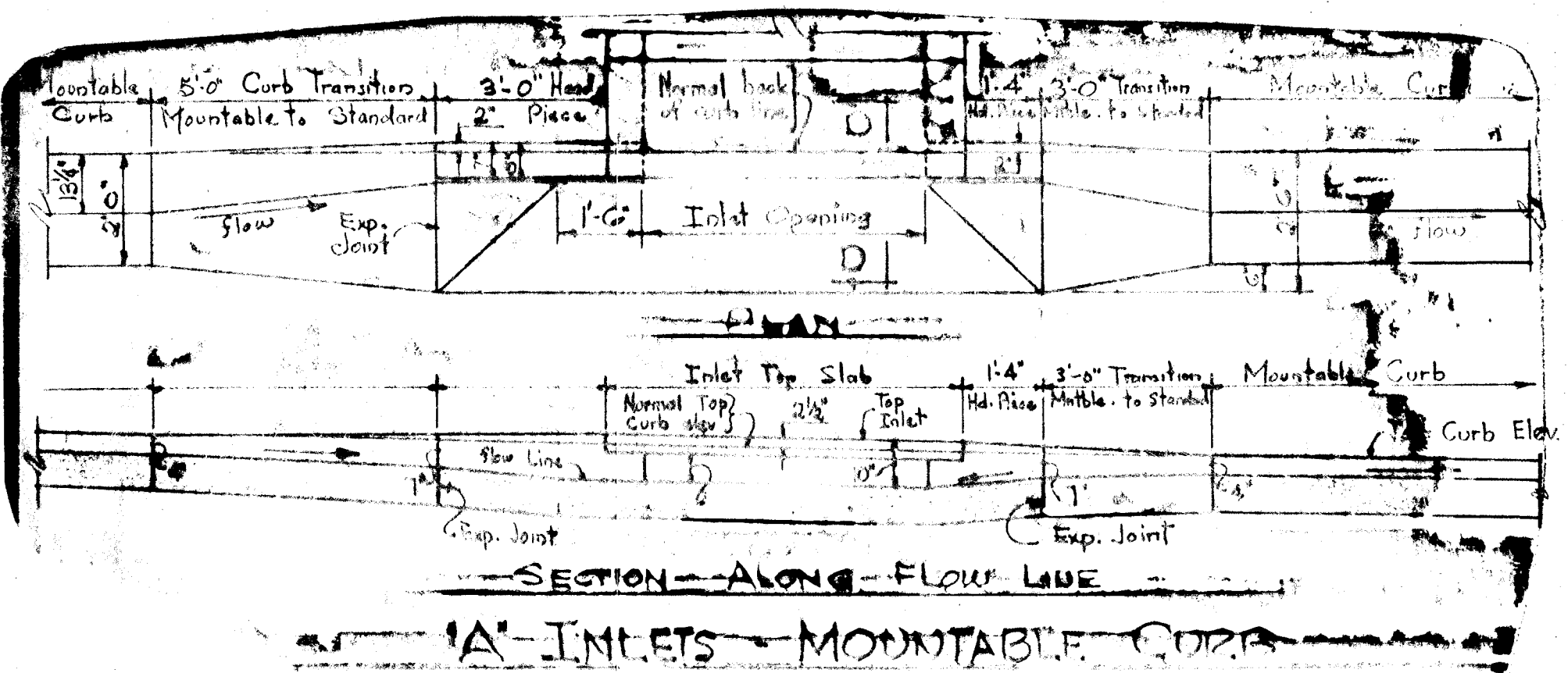




DETAIL "A"-EXISTING INLET 1-64
Scale: 3/4"=1'-0"

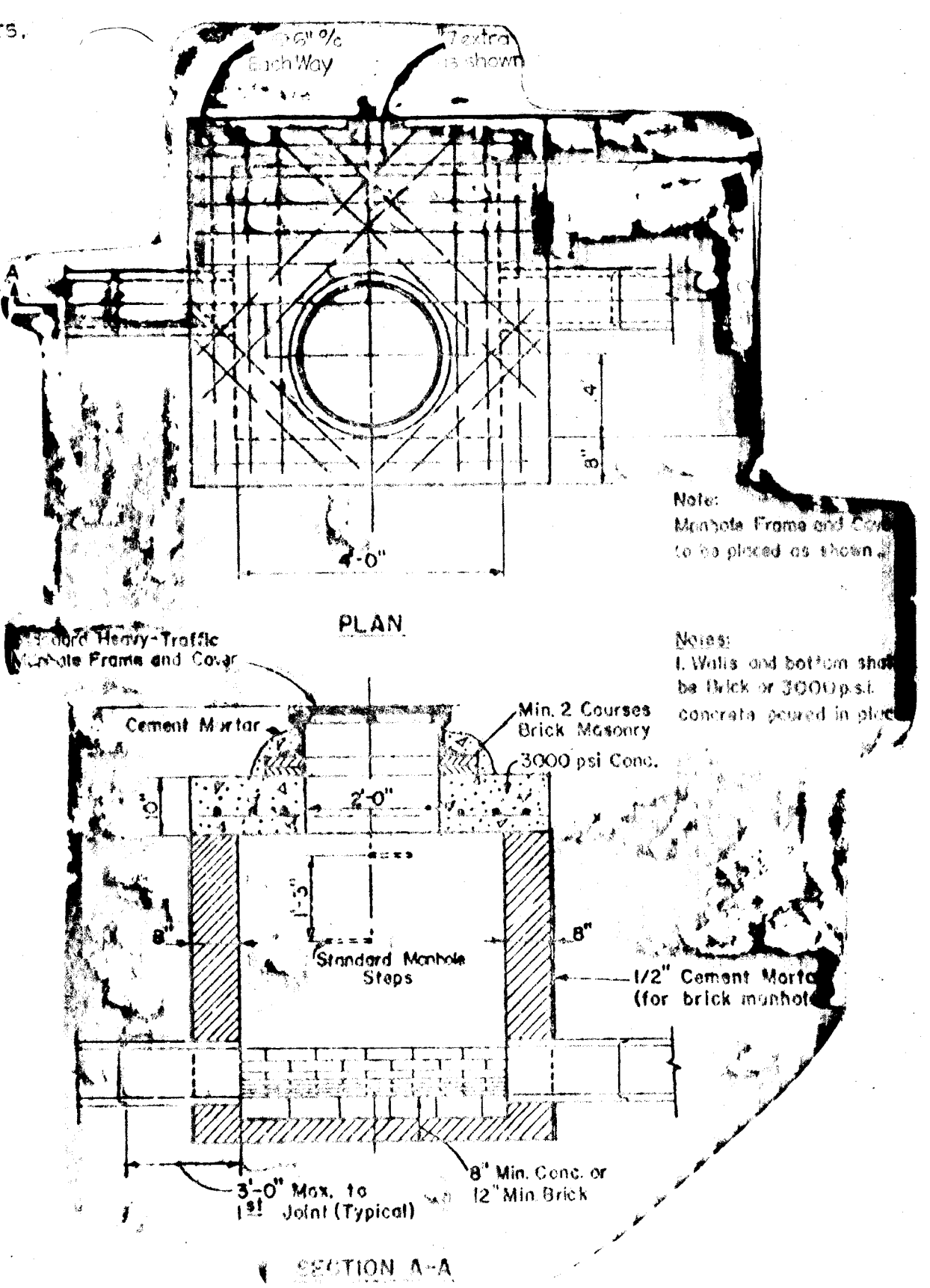


APPROVED
OFFICE OF PLANNING
AND ZONING OF
HOWARD COUNTY
DATE 5/4/71
J.H.C.N.

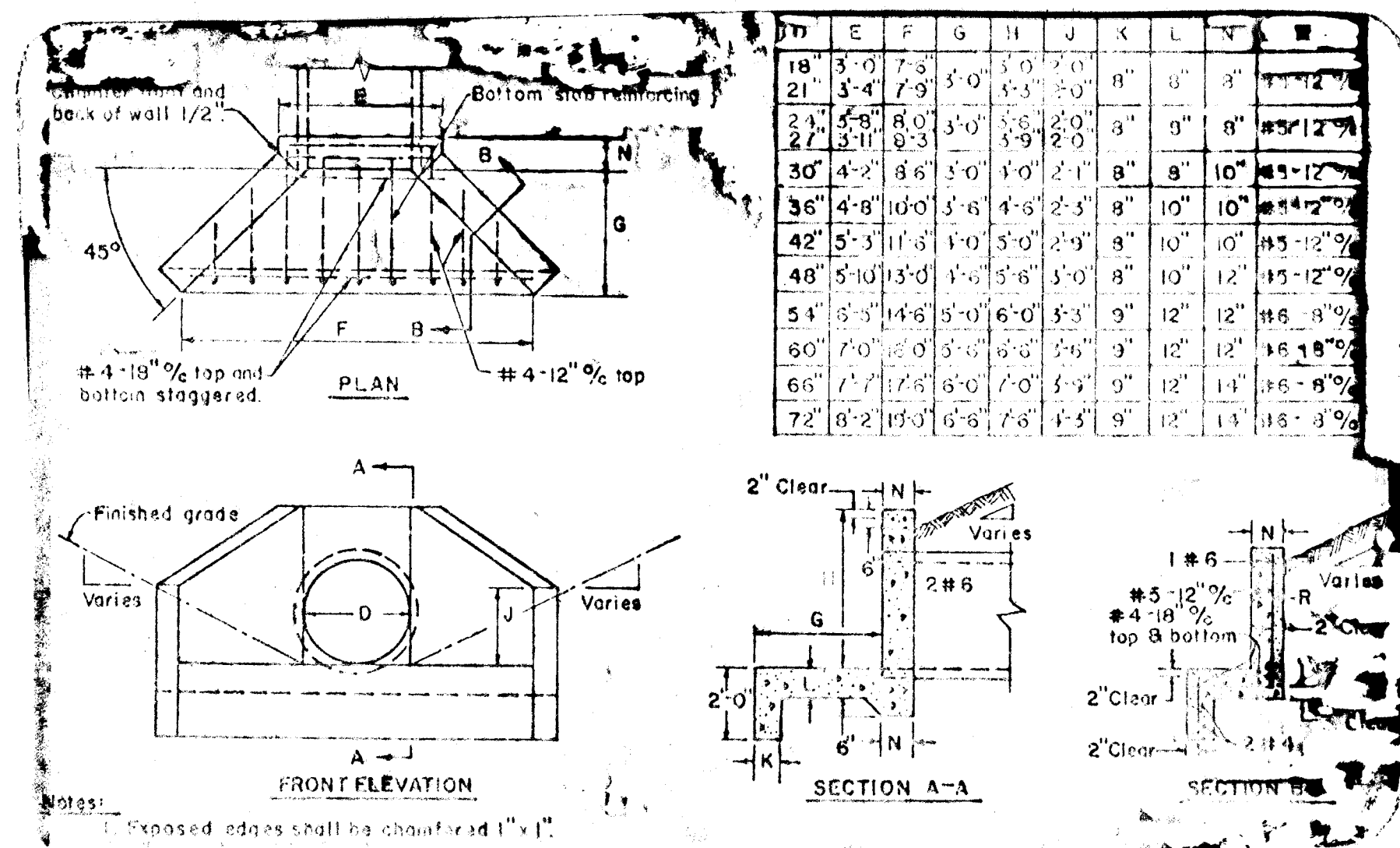


Note: The Grating shown is similar to M.S.Q.C. standard "K" Grate.

STRAP DETAIL
No Scale



TYPE "B" MANHOLE
No Scale



ENDWALL S-1
No Scale

- NOTES:
- Gratings are subject to approval for each job. Any type of substantial transverse bars may be used which will support a minimum uniform load of 150 lbs./sq.ft. The transverse bars shall be held rigid by spacer bars.
 - All material to be hot dipped galvanized.

MODIFIED "K" INLET
Scale: 1/4"=1'-0"

WARNING
GAS AND/OR ELECTRIC FACILITIES
IN THIS AREA. BEFORE YOU DIG,
DRILL, BLAST ETC.
CALL
BALTIMORE GAS & ELECTRIC CO.
234-5691

| Rev. Date | Rev. No. | Revision Description |
|-----------|----------|----------------------|
| | | |

COLUMBIA
6TH ELECTION DISTRICT
HOWARD COUNTY, MARYLAND
OWNER AND DEVELOPER
HOWARD RESEARCH AND DEVELOPMENT CORP.

PROJECT AREA
VILLAGE OF LONGREACH
SECTION I, AREA I
RESUBDIVISION OF PARCEL "A"

PROJECT TITLE
STORM DRAINS - PROFILES AND DETAILS

SCALE: As Shown DATE: March 26, 1971

WHITMAN, REJOURDT & ASSOCIATES
ENGINEERS
BALTIMORE, MARYLAND 21202

Kenneth A. McCord
Registered Engineer
No. 1974

DEPARTMENT OF PUBLIC WORKS
CHIEF BUREAU OF HIGHWAYS
OFFICE OF PLANNING AND ZONING
CHIEF DIVISION OF LAND DEVELOPMENT (TRANSPORTATION PLANNING)
DATE: 5/15/71