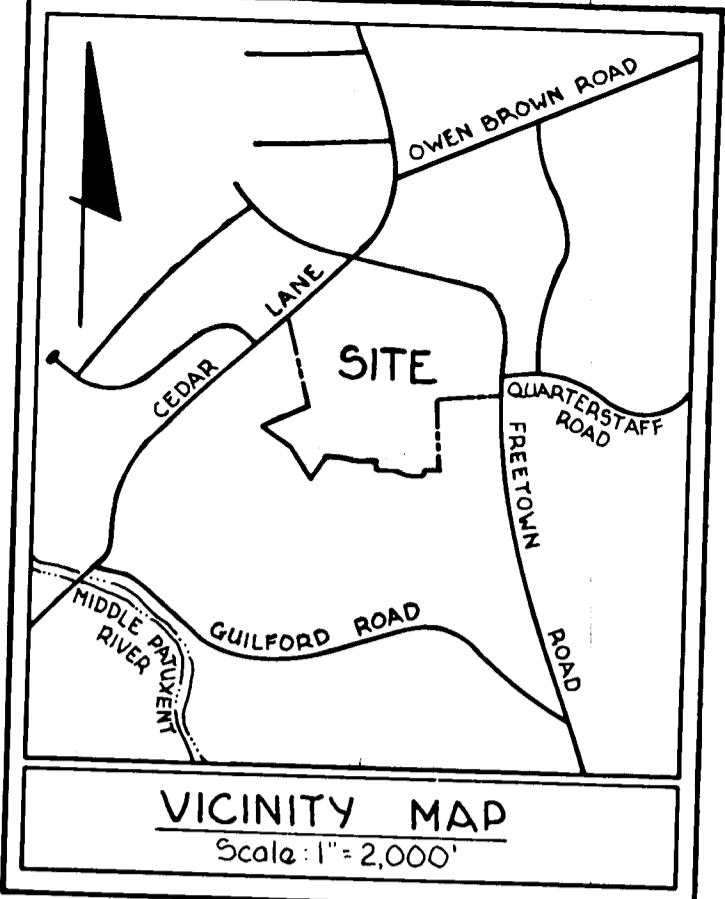
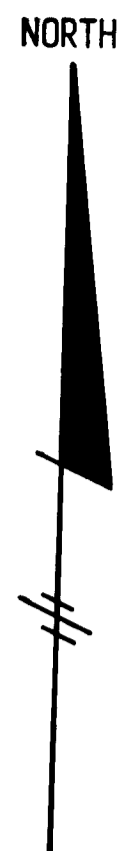
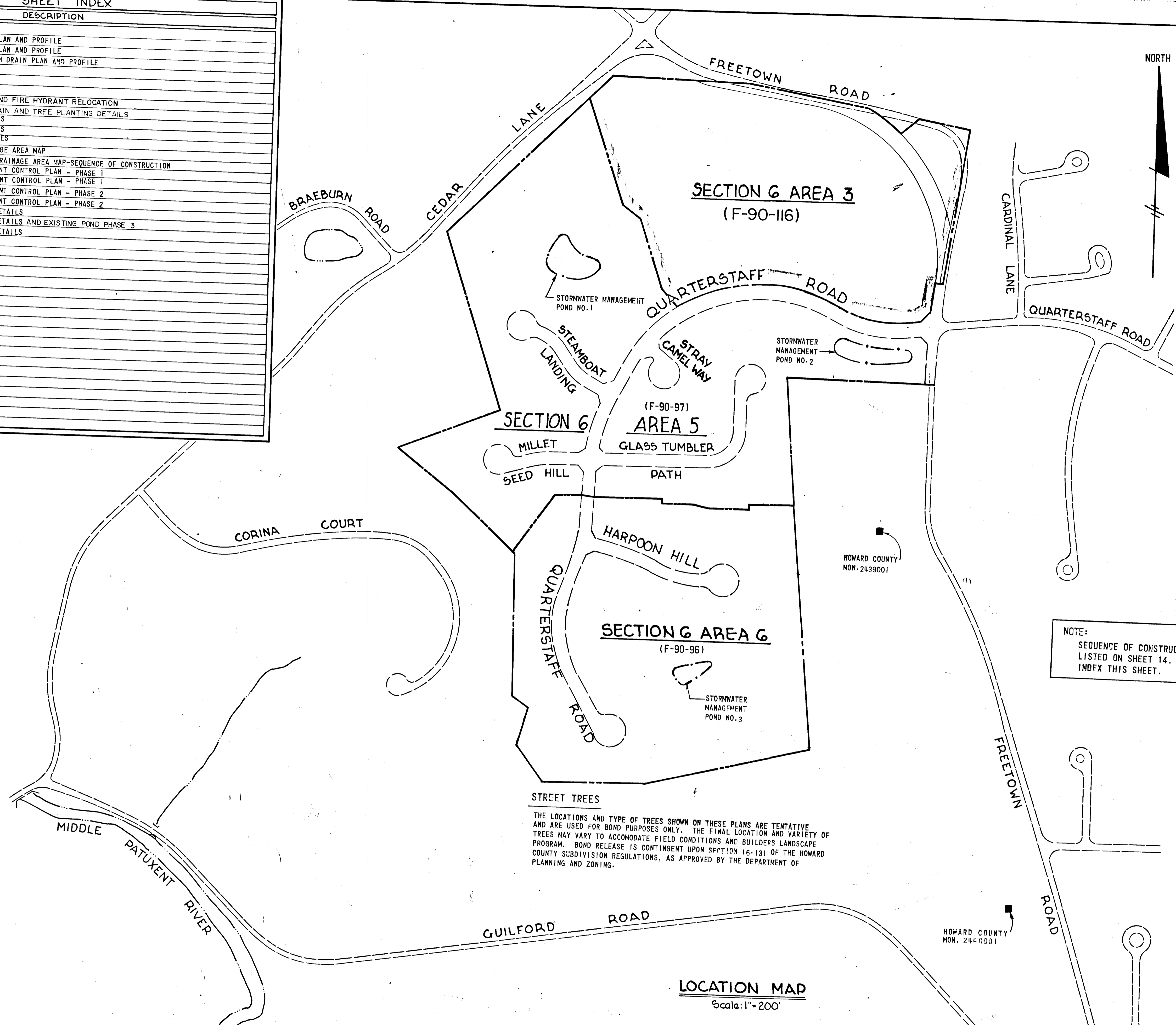


SHEET INDEX	
NO.	DESCRIPTION
1	TITLE SHEET
2	FREETOWN ROAD - PLAN AND PROFILE
3	FREETOWN ROAD - PLAN AND PROFILE
4	CEDAR LANE - STORM DRAIN PLAN AND PROFILE
5	ROADWAY DETAILS
6	ROADWAY DETAILS
7	ROADWAY DETAILS
8	ROADWAY DETAILS AND FIRE HYDRANT RELOCATION
9	ROADWAY STORM DRAIN AND TREE PLANTING DETAILS
10	STORM DRAIN DETAILS
11	STORM DRAIN DETAILS
12	STORM DRAIN PROFILES
13	STORM DRAIN DRAINAGE AREA MAP
14	SEDIMENT CONTROL DRAINAGE AREA MAP-SEQUENCE OF CONSTRUCTION
15	GRADING AND SEDIMENT CONTROL PLAN - PHASE 1
16	GRADING AND SEDIMENT CONTROL PLAN - PHASE 1
17	GRADING AND SEDIMENT CONTROL PLAN - PHASE 2
18	GRADING AND SEDIMENT CONTROL PLAN - PHASE 2
19	SEDIMENT CONTROL DETAILS
20	SEDIMENT CONTROL DETAILS AND EXISTING POND PHASE 3
21	SEDIMENT CONTROL DETAILS



**GENERAL NOTES**

- ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH HOWARD COUNTY STANDARDS, SPECIFICATIONS AND DETAILS FOR CONSTRUCTION.
- ALL UTILITY COMPANIES SHALL BE NOTIFIED 24 HOURS IN ADVANCE OF CONSTRUCTION.
- ALL INLETS SHALL BE HOWARD COUNTY STANDARD UNLESS OTHERWISE SHOWN.
- ALL STREET CURB RETURNS SHALL HAVE A 30.0' RADIUS UNLESS OTHERWISE NOTED.
- STORM DRAIN TRENCHES WITHIN ROAD RIGHTS-OF-WAY SHALL BE BACKFILLED AND COMPACTED IN ACCORDANCE WITH HOWARD COUNTY ROAD CODE.
- APPROXIMATE LOCATION OF EXISTING UTILITIES ARE SHOWN. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT THE EXISTING UTILITIES AND TO MAINTAIN UNINTERRUPTED SERVICE. ANY DAMAGE INCURRED DUE TO CONTRACTOR'S OPERATIONS SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE.
- THE CONTRACTOR SHALL TEST PIT EXISTING UTILITIES WHERE DIRECTED BY THE ENGINEER A MINIMUM OF TWO WEEKS IN ADVANCE OF ANY CONSTRUCTION.
- TEMPORARY COMPACTED 18" HIGH EARTH FILL DIVERSION DIKES SHALL BE CONSTRUCTED ABOVE THE LIPS OF FILL SLOPES ON THE R.O.W. CONCURRENTLY WITH THE INITIAL GRADING AND DIRECTED TO UNDISTURBED SOG AREAS AT THE END OF EACH DAY.
- CONTRACTOR TO NOTIFY THE HOWARD COUNTY DEPARTMENT OF INSPECTIONS AND PERMITS AT LEAST 3 DAYS BEFORE STARTING WORK SHOWN ON THESE DRAWINGS. TELEPHONE NO. 992-2436.
- ALL DISTURBED SLOPE AREAS TO BE STABILIZED AS SOON AS GRADING IS COMPLETED.
- ALL REINFORCED CONCRETE FOR STORM DRAIN STRUCTURES SHALL HAVE A MINIMUM OF 28 DAYS STRENGTH OF 4000 P.S.I.
- ALL SWALES AND SLOPES SHALL BE PERMANENTLY SEEDED. SEE THE SEED SPECIFICATIONS ON SHEET 21.
- TRAFFIC CONTROL DEVICES AND THEIR INSTALLATION SHALL BE IN ACCORDANCE WITH THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES, 1988 REVISED EDITION.
- STABILENKA (FILTER CLOTH T-100) OR EQUAL SHALL BE PLACED UNDER ALL STONE RIP-RAP (FULL WIDTH AND LENGTH OF STONE).
- STONE FOR RIP-RAP SHALL BE AS SPECIFIED ON THE DRAWINGS. ALL RIP-RAP SHALL BE UNPAVED.
- LAMP POST-150 WATT HIGH PRESSURE SODIUM VAPOR PENDANTS MOUNTED AT 25' HEIGHT ON STEEL POLES NO LESS THAN 6' FROM PAVEMENT EDGE.
- STORMWATER MANAGEMENT PONDS 1 AND 2 ARE PROVIDED IN SECTION 6 AREA 5 TO SERVE THIS SECTION 6 AREA 3. SEE ROAD CONSTRUCTION DRAWINGS (F-90-97).
- EXISTING POND REMOVAL-OPEN SPACE LOT 109. SEE SEQUENCE OF CONSTRUCTION SHEET 14.
- REINFORCING STEEL SPECIFICATIONS:  
FY=60,000 P.S.I.

NOTE:  
SEQUENCE OF CONSTRUCTION IS LISTED ON SHEET 14. SEE SHEET INDEX THIS SHEET.

**STREET TREES**  
THE LOCATIONS AND TYPE OF TREES SHOWN ON THESE PLANS ARE TENTATIVE AND ARE USED FOR BOND PURPOSES ONLY. THE FINAL LOCATION AND VARIETY OF TREES MAY VARY TO ACCOMMODATE FIELD CONDITIONS AND BUILDERS LANDSCAPE PROGRAM. BOND RELEASE IS CONTINGENT UPON SECTION 16.131 OF THE HOWARD COUNTY SUBDIVISION REGULATIONS, AS APPROVED BY THE DEPARTMENT OF PLANNING AND ZONING.

**LOCATION MAP**  
Scale: 1"=200'

WHITMAN, REQUARDT AND ASSOCIATES  
- Engineers -  
2315 SAINT PAUL STREET  
BALTIMORE, MARYLAND 21218



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Chad M. Thompson* 10/27/90  
CHIEF, LAND DEVELOPMENT DIVISION DATE  
*W. C. Srafer* 10-29-90  
CHIEF, BUREAU OF ENGINEERING DATE  
DEPARTMENT OF PLANNING AND ZONING  
*Thomas J. Srafer* 10/27/90  
CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

OWNER AND DEVELOPER  
THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION  
COLUMBIA, MARYLAND

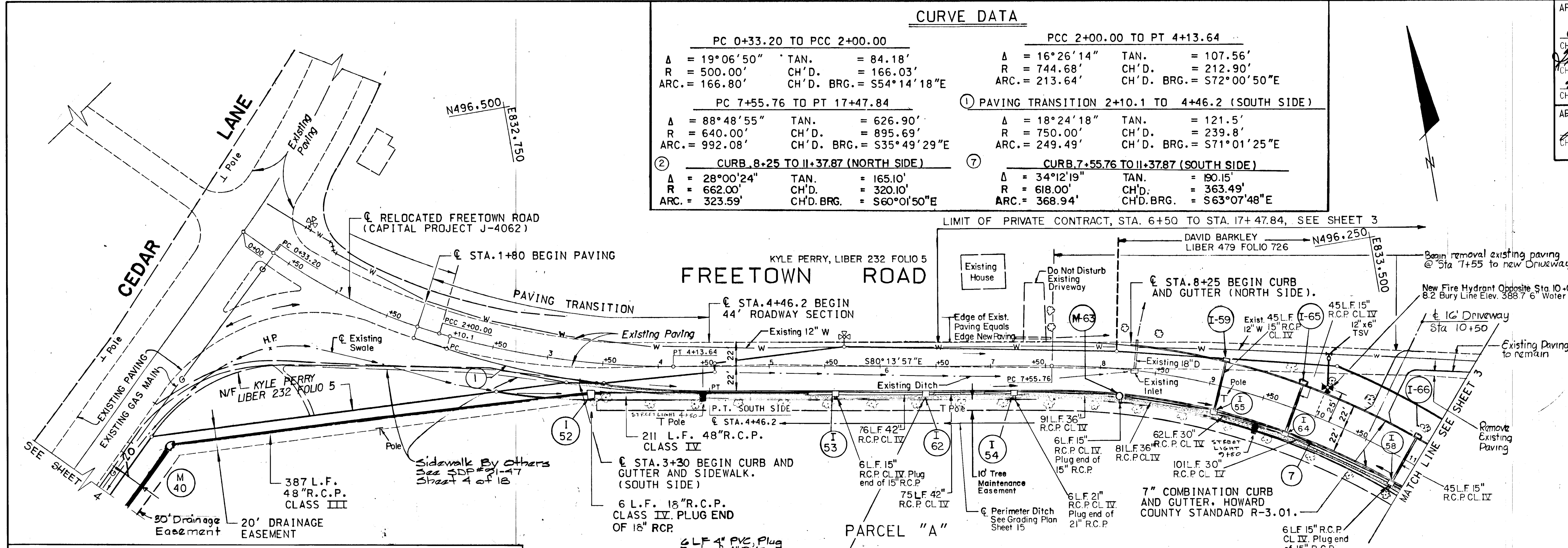
**BENCH MARKS**  
HOWARD CO. MON. #2439001 ELEV. 418.315  
HUB & JACK EDGE WEST PAVEMENT FREETOWN ROAD AT INTERSECTION WITH QUARTERSTAFF ROAD.  
HOWARD CO. MON. #2440001 ELEV. 420.849  
HUB & TRACK 60' SOUTH OF C&P POLL #162272 AND 8' EAST EDGE OF PAVEMENT FREETOWN ROAD.

DATE	NO.	REVISION
VILLAGE OF HICKORY RIDGE SECTION 6 AREA 3 ROAD CONSTRUCTION PLANS		
OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION COLUMBIA, MARYLAND		
5TH ELECTION DISTRICT OF HOWARD COUNTY, MARYLAND		
DATE: DEC 15 1989	SHEET 1	SCALE: AS SHOWN

**CURVE DATA**

PC 0+33.20 TO PCC 2+00.00				PCC 2+00.00 TO PT 4+13.64			
Δ = 19°06'50"	TAN. = 84.18'	R = 500.00'	CH'D. = 166.03'	Δ = 16°26'14"	TAN. = 107.56'	R = 744.68'	CH'D. = 212.90'
ARC. = 166.80'	CH'D. BRG. = S54°14'18"E			ARC. = 213.64'	CH'D. BRG. = S72°00'50"E		
PC 7+55.76 TO PT 17+47.84				① PAVING TRANSITION 2+10.1 TO 4+46.2 (SOUTH SIDE)			
Δ = 88°48'55"	TAN. = 626.90'	R = 640.00'	CH'D. = 895.69'	Δ = 18°24'18"	TAN. = 121.5'	R = 750.00'	CH'D. = 239.8'
ARC. = 992.08'	CH'D. BRG. = S35°49'29"E			ARC. = 249.49'	CH'D. BRG. = S71°01'25"E		
② CURB 8.25 TO 11+37.87 (NORTH SIDE)				⑦ CURB 7.5576 TO 11+37.87 (SOUTH SIDE)			
Δ = 28°00'24"	TAN. = 165.10'	R = 662.00'	CH'D. = 320.10'	Δ = 34°12'19"	TAN. = 190.15'	R = 618.00'	CH'D. = 363.49'
ARC. = 323.59'	CH'D. BRG. = S60°01'50"E			ARC. = 368.94'	CH'D. BRG. = S63°07'48"E		

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Oliver M. Tamm* 10/29/90  
 CHIEF, LAND DEVELOPMENT DIVISION DATE  
*Harvill W. Clelland* 10/29/90  
 CHIEF, BUREAU OF HIGHWAYS DATE  
*W. S. ...* 10/29/90  
 CHIEF, BUREAU OF ENGINEERING DATE  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*...* 10/29/90  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE



REV. DATE	REV. NO.	REVISION DESCRIPTION
4-23-92	2	Added 6 L.F. 4" PVC From I-66 Revised Begin Curb/Walk to Sta. 3+30 Showed Sidewalk 6'0" wide Raised Top EL. I-66 to 382.50, one Side Open to El. 391.50
6-17-91	1	Revised Storm Drain & Easement Changed I-66 to Match Changed Sidewalk from 24' to 18' Removed Sidewalk

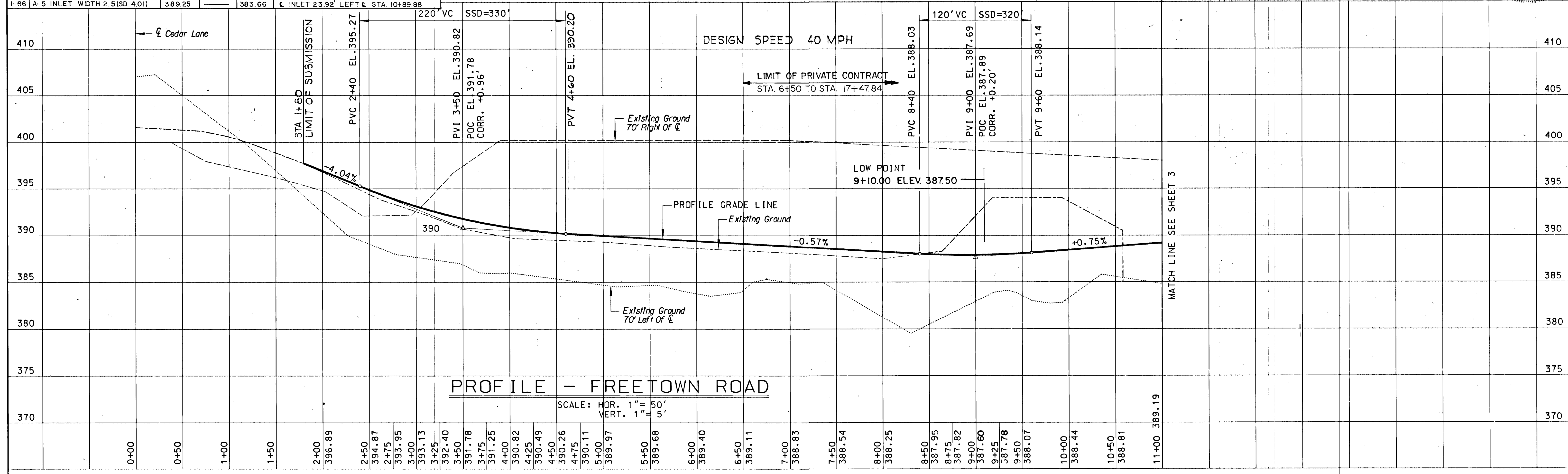
**COLUMBIA**  
 5TH ELECTION DISTRICT  
 HOWARD COUNTY MARYLAND  
 OWNER AND DEVELOPER  
 THE HOWARD RESEARCH  
 AND DEVELOPMENT CORPORATION  
 PROJECT AREA:  
 VILLAGE OF HICKORY RIDGE  
 SECTION 6 AREA 3  
 PROJECT TITLE:  
 PLAN AND PROFILE  
 FREETOWN ROAD  
 STA. 0+00 TO STA. 11+00  
 SCALE: AS SHOWN DATE: Dec 15 1990

WHITMAN, REQUARDT AND ASSOCIATES  
 ENGINEERS  
 BALTIMORE, MARYLAND 21218  
*Thomas J. Shafer*  
 THOMAS J. SHAFER  
 REGISTERED ENGINEER  
 NO. 8457



**STORM DRAIN STRUCTURE SCHEDULE**

NO.	TYPE	TOP EL.	INV. IN	INV. OUT	LOCATION
M-63	Standard Manhole (6.505)	388.23	381.22	381.02	Manhole 24.77' Right of Sta. 8+19.92
I-52	SPECIAL STRUCTURE	392.30	377.20	377.00	INLET 27.5' RIGHT OF STA. 3+43
I-53	A-5 INLET WIDTH 4.5' (SD 4.0)	389.76	378.80	378.30	INLET 24.92' RIGHT OF STA. 5+60.12
I-54	A-5 INLET WIDTH 4.0' (SD 4.0)	388.85	380.30	379.80	INLET 24.67' RIGHT OF STA. 7+21.14
I-55	A-5 INLET WIDTH 3.5' (SD 4.0)	387.81	382.15	381.65	INLET 24.17' RIGHT OF STA. 9+09.86
I-58	A-5 INLET WIDTH 3.0' (SD 4.0)	389.25	383.42	383.22	INLET 24.42' RIGHT OF STA. 10+89.88
I-59	A-5 INLET WIDTH 2.5' (SD 4.0)	387.81	382.59	382.59	INLET 23.92' LEFT OF STA. 9+09.86
I-62	A-5 INLET WIDTH 4.0' (SD 4.0)	389.30	379.40	379.20	INLET 24.67' RIGHT OF STA. 6+40.82
I-64	A-5 INLET WIDTH 3.0' (SD 4.0)	388.43	382.69	382.49	INLET 24.17' RIGHT OF STA. 9+79.75
I-65	A-5 INLET WIDTH 2.5' (SD 4.0)	388.43	383.50	383.50	INLET 23.92' LEFT OF STA. 9+79.75
I-66	A-5 INLET WIDTH 2.5' (SD 4.0)	389.25	383.66	383.66	INLET 23.92' LEFT OF STA. 10+89.88



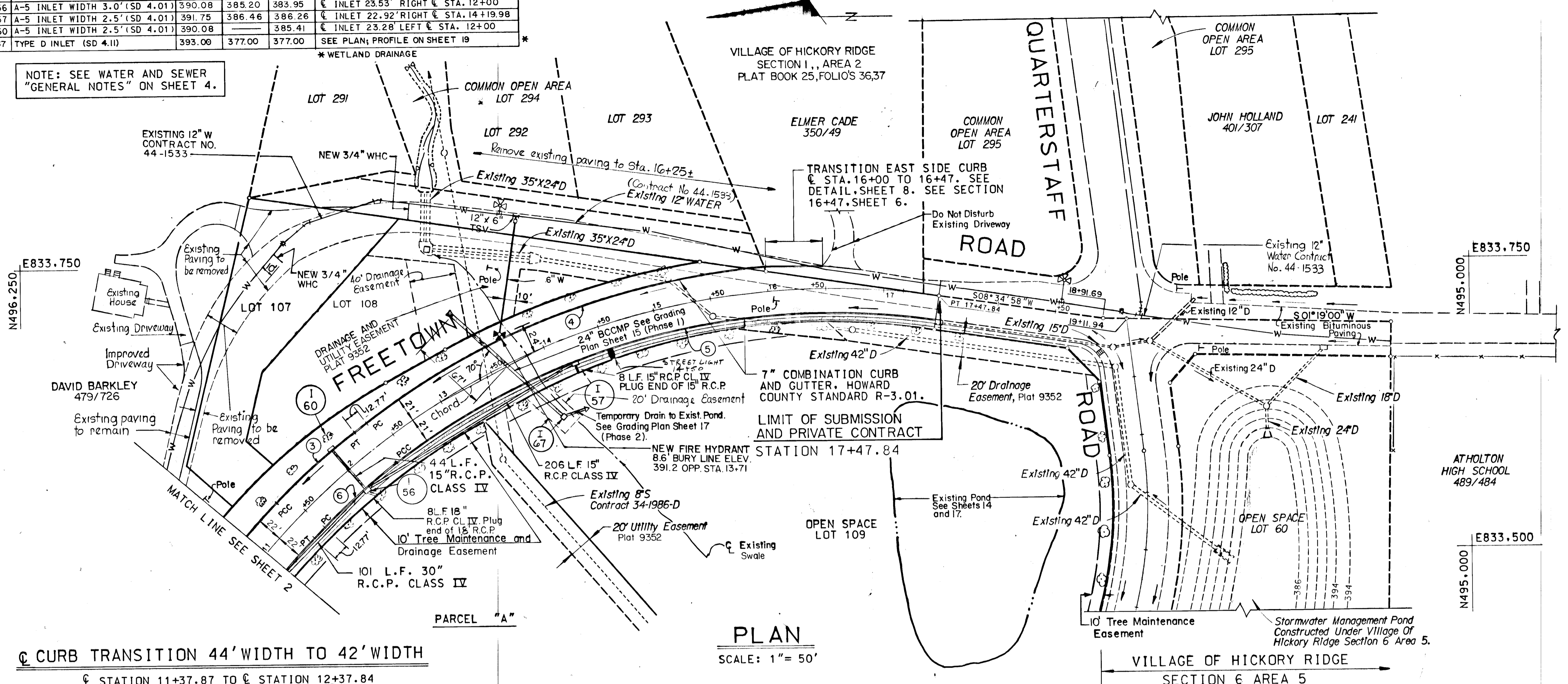


APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*James J. Shafer* 10/27/90  
 CHIEF, LAND DEVELOPMENT DIVISION  
*Draville W. Weiland* 10/24/90  
 CHIEF, BUREAU OF HIGHWAYS  
*James B. ...* 10-29-90  
 CHIEF, BUREAU OF ENGINEERING  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Mark J. ...* 10/23/90  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT

**STORM DRAIN STRUCTURE SCHEDULE**

NO	TYPE	TOP EL	INV IN	INV OUT	LOCATION
1-56	A-5 INLET WIDTH 3.0' (SD 4.01)	390.08	385.20	383.95	INLET 23.53' RIGHT @ STA. 12+00
1-57	A-5 INLET WIDTH 2.5' (SD 4.01)	391.75	386.46	386.26	INLET 22.92' RIGHT @ STA. 14+19.98
1-60	A-5 INLET WIDTH 2.5' (SD 4.01)	390.08	385.41	385.41	INLET 23.28' LEFT @ STA. 12+00
1-67	TYPE D INLET (SD 4.1)	393.00	377.00	377.00	SEE PLAN; PROFILE ON SHEET 19

NOTE: SEE WATER AND SEWER "GENERAL NOTES" ON SHEET 4.



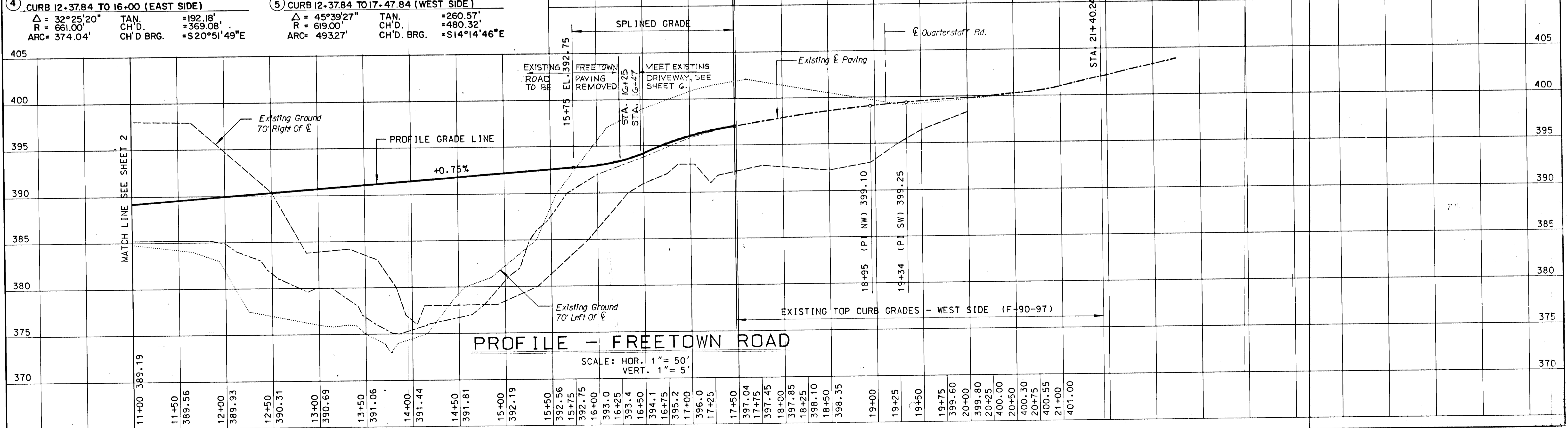
**PLAN**

SCALE: 1" = 50'

**C CURB TRANSITION 44' WIDTH TO 42' WIDTH**

- ③ CURB 11+37.87 TO 12+25.07 (NORTHEAST SIDE)
  - Δ = 8°57'09" TAN. = 45.40'
  - R = 579.91' CH'D. = 90.52'
  - ARC = 90.61' CH'D. BRG. = S41°33'03"E
- ④ CURB 12-37.84 TO 16+00 (EAST SIDE)
  - Δ = 32°25'20" TAN. = 192.18'
  - R = 661.00' CH'D. = 369.08'
  - ARC = 374.04' CH'D. BRG. = S20°51'49"E
- ⑤ CURB 12-37.84 TO 17-47.84 (WEST SIDE)
  - Δ = 45°39'27" TAN. = 260.57'
  - R = 619.00' CH'D. = 480.32'
  - ARC = 493.27' CH'D. BRG. = S14°14'46"E
- ⑥ CURB 11-50.64 TO 12-37.84 (SOUTHWEST SIDE)
  - Δ = 8°57'09" TAN. = 42.03'
  - R = 536.91' CH'D. = 83.81'
  - ARC = 83.89' CH'D. BRG. = S41°33'04"E

PRIVATE CONTRACT LIMIT OF SUBMISSION VILLAGE OF HICKORY RIDGE SECTION 6 AREA 5 (F-90-97) STA. 17+47.84 EL. 397.20



**PROFILE - FREETOWN ROAD**

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

REV. DATE	REV. NO.	REVISION DESCRIPTION
6/17/91	1	Removed Sidewalk Changed I-5G stub from 24" to 18"

**COLUMBIA**  
 5TH ELECTION DISTRICT  
 HOWARD COUNTY MARYLAND

OWNER AND DEVELOPER  
 THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION

PROJECT AREA:  
 VILLAGE OF HICKORY RIDGE SECTION 6 AREA 3

PROJECT TITLE:  
 PLAN AND PROFILE FREETOWN ROAD STA. 11+00 TO STA. 17+47.84

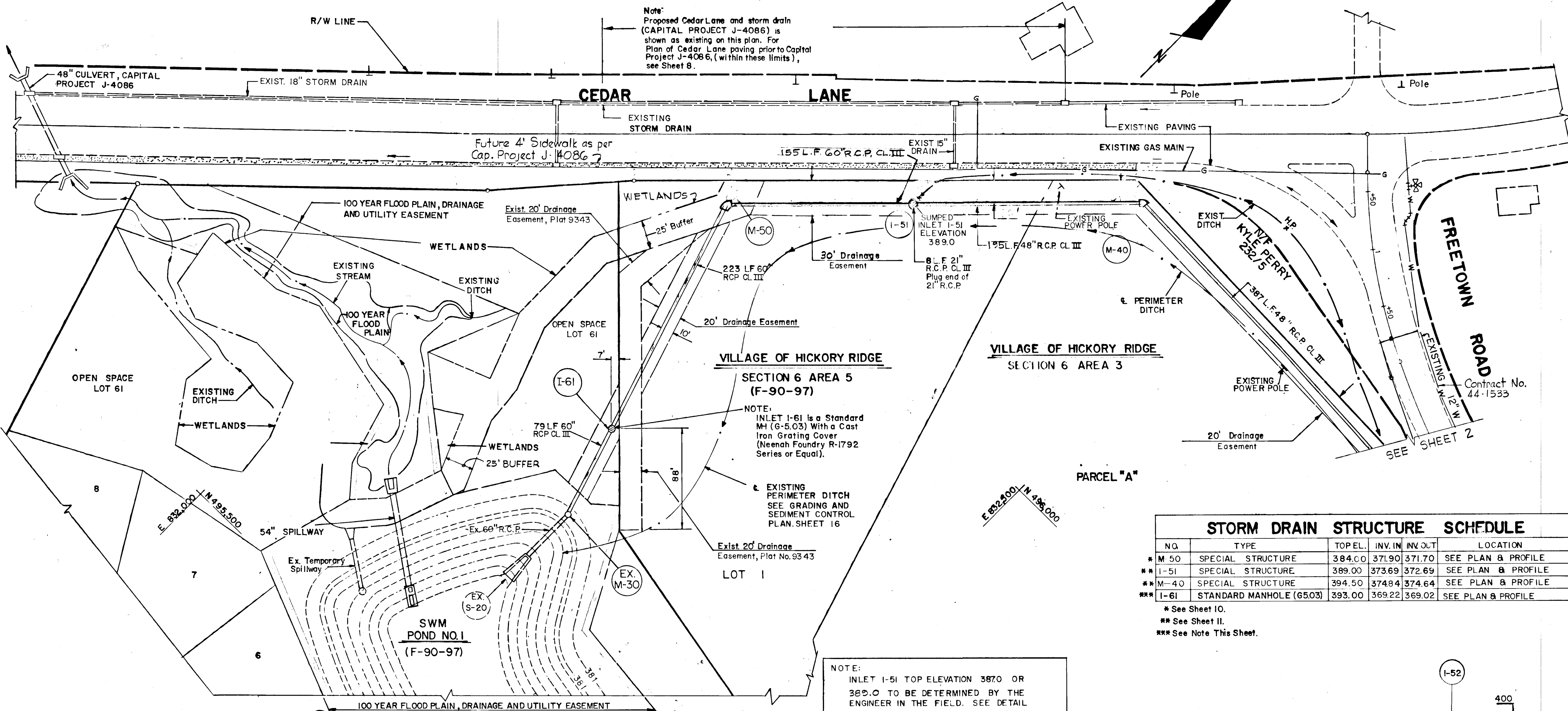
SCALE: AS SHOWN DATE:

WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS  
 BALTIMORE, MARYLAND 21218

*Thomas J. Shafer*  
 THOMAS J. SHAFER REGISTERED ENGINEER NO. 8457

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*John M. Ferguson* 10/27/90  
 CHIEF, LAND DEVELOPMENT DIVISION DATE  
*Drewville W. Wilcox* 10/24/90  
 CHIEF, BUREAU OF HIGHWAYS DATE  
*William E. Cole* 10-22-90  
 CHIEF, BUREAU OF ENGINEERING DATE

APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Frank S. J. Campbell* 1/15/91  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

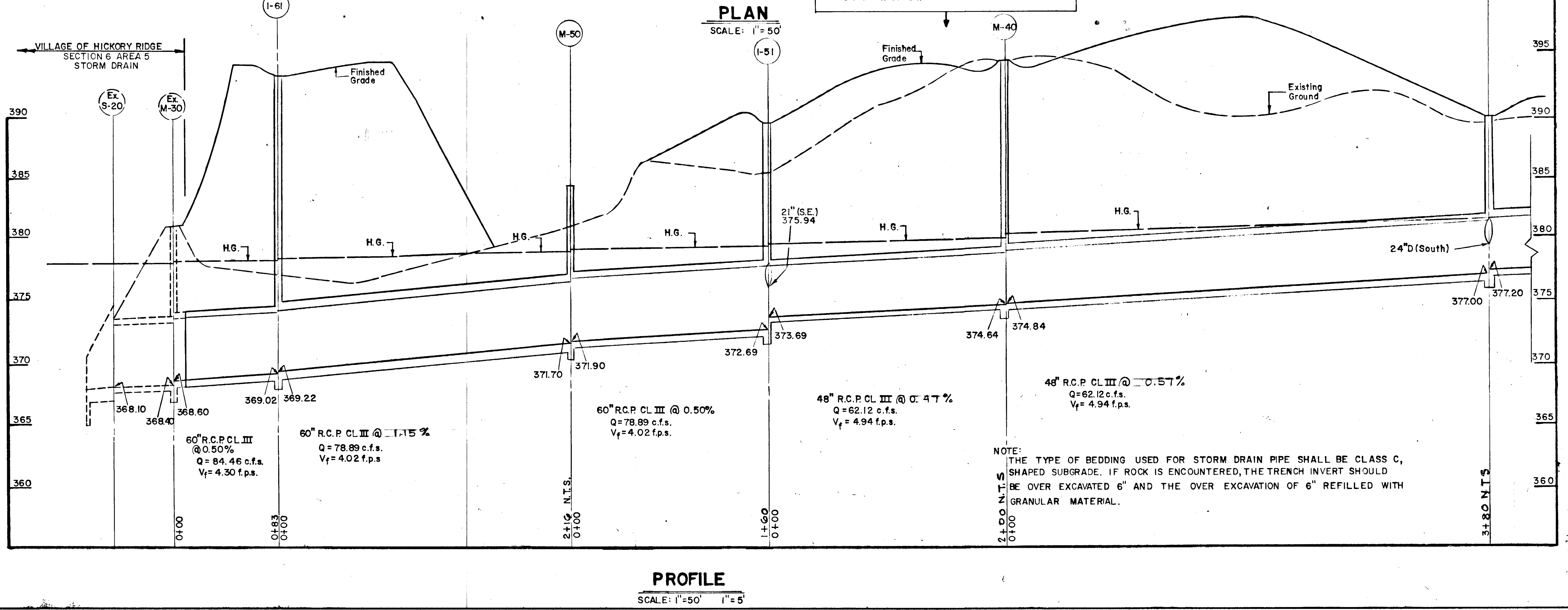


NO.	TYPE	TOPEL.	INV. IN	INV. OUT	LOCATION
** M-50	SPECIAL STRUCTURE	384.00	371.90	371.70	SEE PLAN & PROFILE
** I-51	SPECIAL STRUCTURE	389.00	373.69	372.69	SEE PLAN & PROFILE
** M-40	SPECIAL STRUCTURE	394.50	374.84	374.64	SEE PLAN & PROFILE
*** I-61	STANDARD MANHOLE (6503)	393.00	369.22	369.02	SEE PLAN & PROFILE

\* See Sheet 10.  
 \*\* See Sheet 11.  
 \*\*\* See Note This Sheet.

- GENERAL NOTES**  
 (SEE SHEET 2 AND 3)
- ALL WATER MAINS TO BE D.I.P. CLASS 52 UNLESS OTHERWISE NOTED.
  - ALL D.I.P. FITTINGS SHALL BE IN ACCORDANCE WITH AWWA SPECIFICATIONS C-158 DUCTILE IRON COMPACT FITTINGS 3-INCH THROUGH 12-INCH FOR WATER AND OTHER LIQUIDS.
  - TOPS OF ALL WATER MAINS TO HAVE A MINIMUM OF 3-1/2" COVER UNLESS OTHERWISE NOTED.
  - VALVES ADJACENT TO TEES SHALL BE STRAPPED TO TEES.
  - ALL FITTINGS SHALL BE BUTTRESSED AND ANCHORED WITH CONCRETE IN ACCORDANCE WITH THE STANDARD DETAILS UNLESS OTHERWISE PROVIDED FOR ON THE DRAWING.
  - FIRE HYDRANTS SHALL BE SET TO THE BURY LINE ELEVATIONS SHOWN ON THE DRAWINGS. ALL FIRE HYDRANTS SHALL BE STRAPPED AND BUTTRESSED WITH CONCRETE IN ACCORDANCE WITH STANDARD DETAILS. SOIL AROUND THE FIRE HYDRANT SHALL BE COMPACTED IN ACCORDANCE WITH SECTION 1003 OF THE STANDARD SPECIFICATIONS.
  - THE CONTRACTOR SHALL NOT OPERATE ANY WATER MAIN VALVES ON THE EXISTING WATER SYSTEM.
  - ALL WATER HOUSE CONNECTIONS SHALL BE FOR INSIDE METER SETTINGS UNLESS OTHERWISE NOTED ON THE PLANS OR IN THE SPECIFICATIONS.
  - ALL W.H.C.'S SHALL BE 3/4" UNLESS OTHERWISE NOTED.

NOTE:  
 INLET I-51 TOP ELEVATION 387.0 OR 389.0 TO BE DETERMINED BY THE ENGINEER IN THE FIELD. SEE DETAIL SHEET 11 OF 21. SEE SHEET 18 & 20.



NOTE:  
 THE TYPE OF BEDDING USED FOR STORM DRAIN PIPE SHALL BE CLASS C, SHAPED SUBGRADE. IF ROCK IS ENCOUNTERED, THE TRENCH INVERT SHOULD BE OVER EXCAVATED 6" AND THE OVER EXCAVATION OF 6" REFILLED WITH GRANULAR MATERIAL.

REV. DATE	REV. NO.	REVISION DESCRIPTION
6/17/91	1	Revised Storm Drain Easement
		Revised Storm Drain from M-40 to M-50

**COLUMBIA**  
 5TH ELECTION DISTRICT  
 HOWARD COUNTY MARYLAND

OWNER AND DEVELOPER  
 THE HOWARD RESEARCH  
 AND DEVELOPMENT CORPORATION

PROJECT AREA:  
 VILLAGE OF HICKORY RIDGE  
 SECTION 6 AREA 3

PROJECT TITLE:  
 STORM DRAIN PLAN AND PROFILE

SCALE: AS SHOWN DATE: DEC. 15, 1989

WHITMAN, REQUARDT AND ASSOCIATES  
 ENGINEERS  
 BALTIMORE, MARYLAND 21218

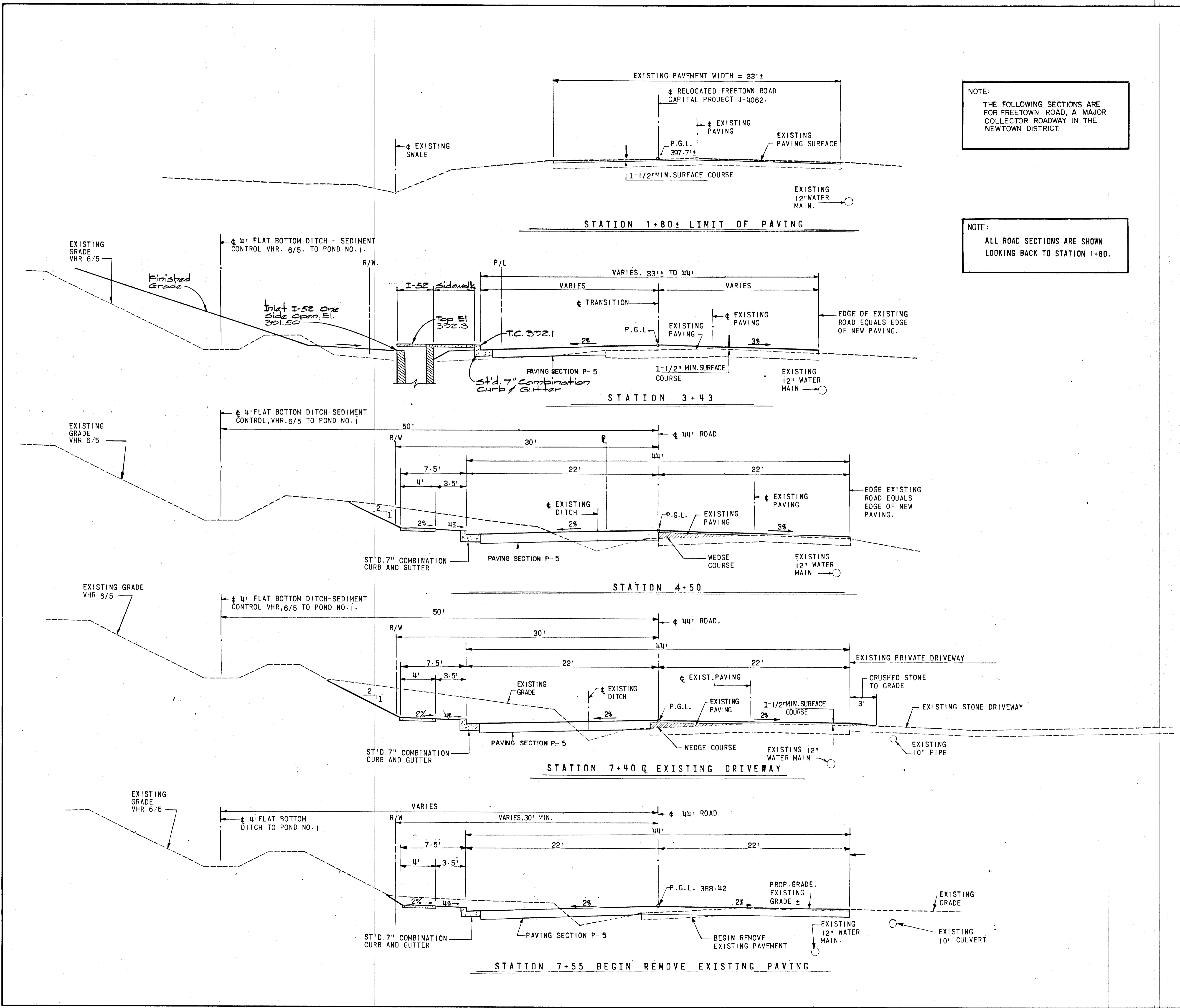
*Thomas J. Shafer*  
 THOMAS J. SHAFER  
 REGISTERED ENGINEER  
 NO. 8457



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Oliver M. Ferguson* 10/27/90  
 CHIEF, LAND DEVELOPMENT DIVISION DATE  
*Draville W. Weiland* 10/24/90  
 CHIEF, BUREAU OF HIGHWAYS DATE  
*William R. O'Day* 10/29/90  
 CHIEF, BUREAU OF ENGINEERING DATE  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Mark S. DeLoach* 10/18/90  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

NOTE:  
 THE FOLLOWING SECTIONS ARE FOR FREETOWN ROAD, A MAJOR COLLECTOR ROADWAY IN THE NEWTOWN DISTRICT.

NOTE:  
 ALL ROAD SECTIONS ARE SHOWN LOOKING BACK TO STATION 1+80.



REV. DATE	REV. NO.	REVISION DESCRIPTION
4/23/92	1	Raise Inlet I-52, Added Curb & Gutter, Finished Grade to Sec. 3+43

**COLUMBIA**  
 5TH ELECTION DISTRICT  
 HOWARD COUNTY MARYLAND

OWNER AND DEVELOPER  
 THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION

PROJECT AREA:  
 VILLAGE OF HICKORY RIDGE  
 SECTION 6 AREA 3

PROJECT TITLE:  
 ROADWAY DETAILS

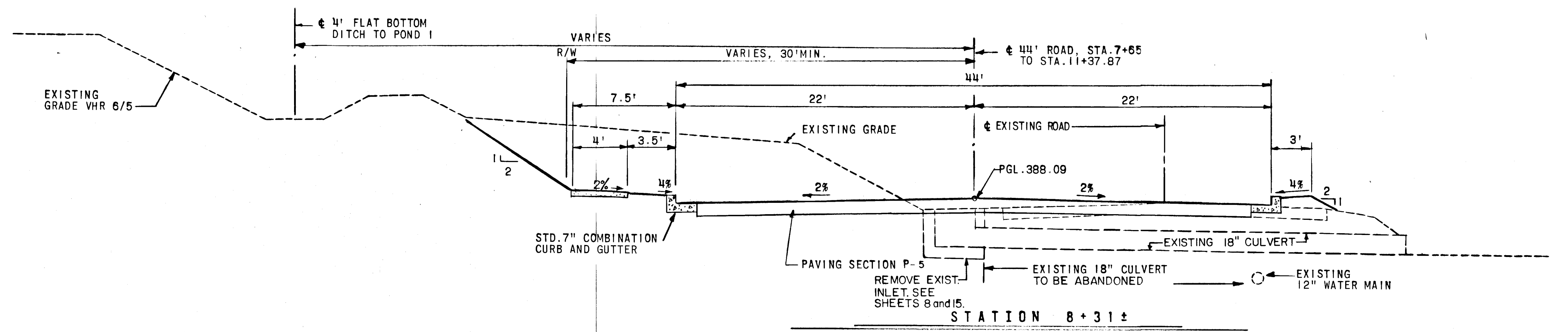
SCALE: 1" = 5' DATE: DEC. 15, 1989

WHITMAN, REQUARDT AND ASSOCIATES  
 ENGINEERS  
 BALTIMORE, MARYLAND 21218

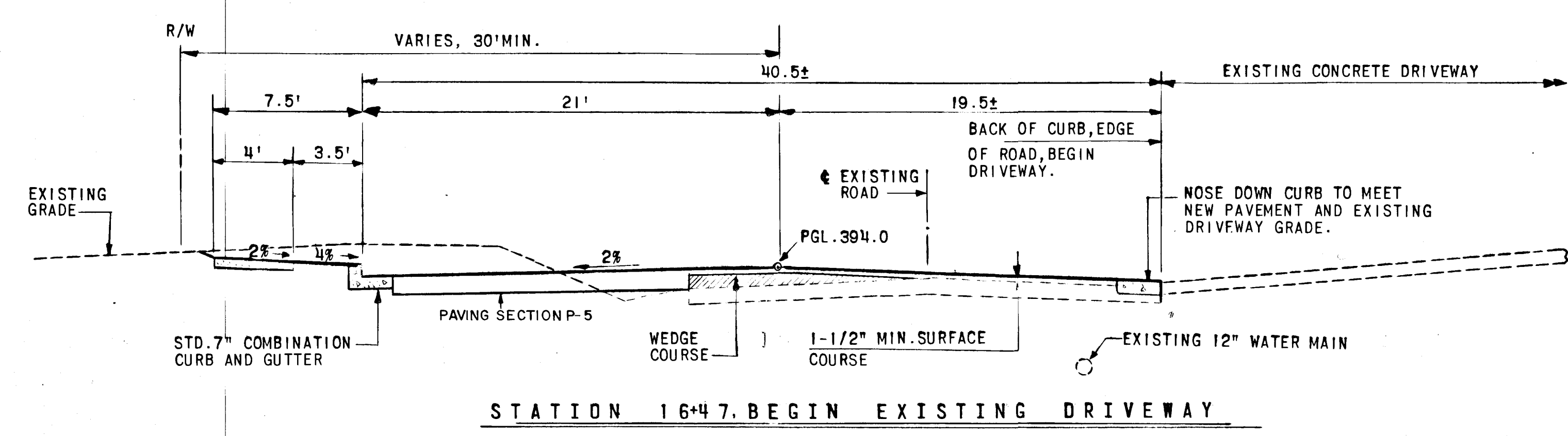
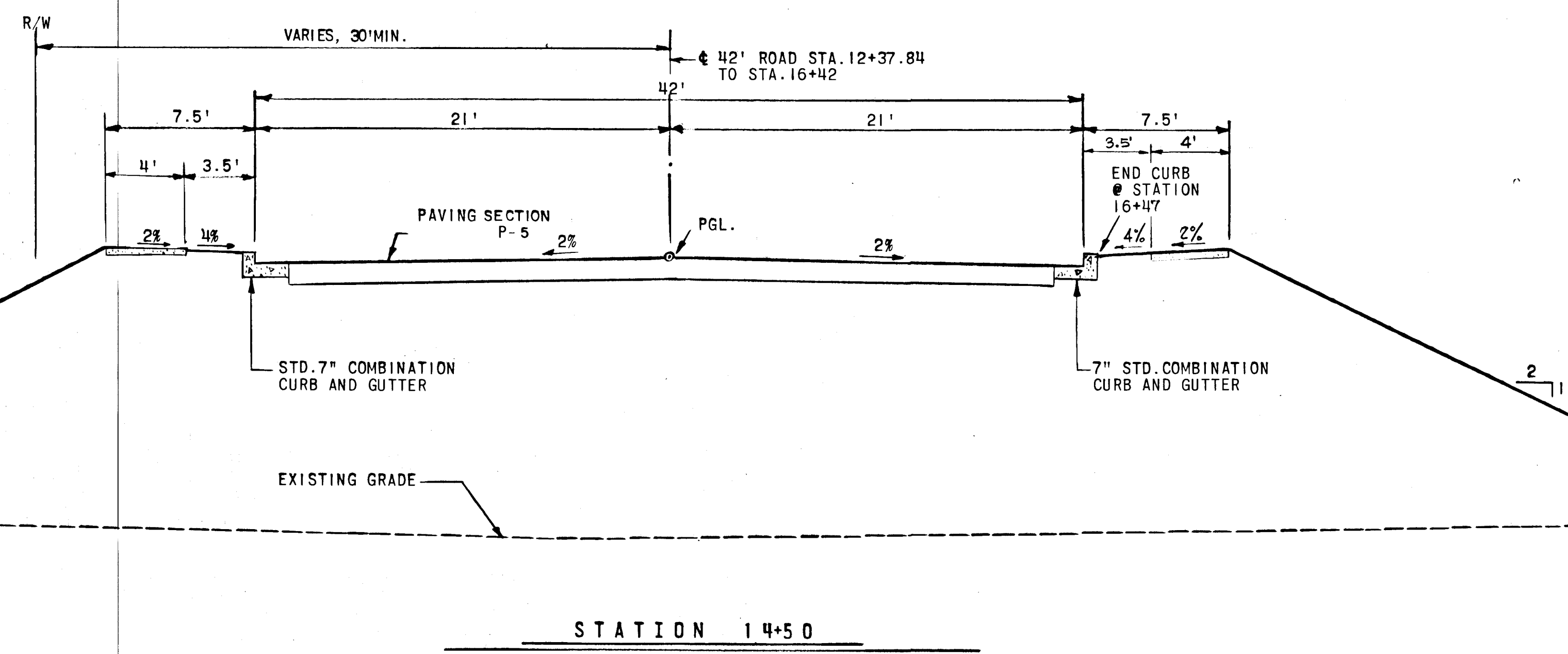
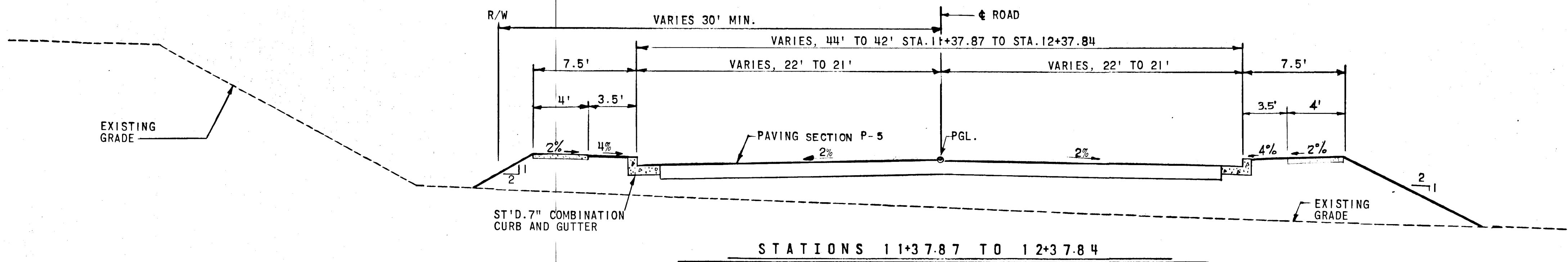
*Thomas J. Shaper*  
 THOMAS J. SHAPER  
 REGISTERED ENGINEER  
 NO. 8457

42

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Alan M. Tangman* 10/27/90  
 CHIEF, LAND DEVELOPMENT DIVISION DATE  
*Annalisa W. Weiland* 10/24/90  
 CHIEF, BUREAU OF HIGHWAYS DATE  
*William B. Ray* 10-29-90  
 CHIEF, BUREAU OF ENGINEERING DATE  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Paul S. Taylor* 11/15/90  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

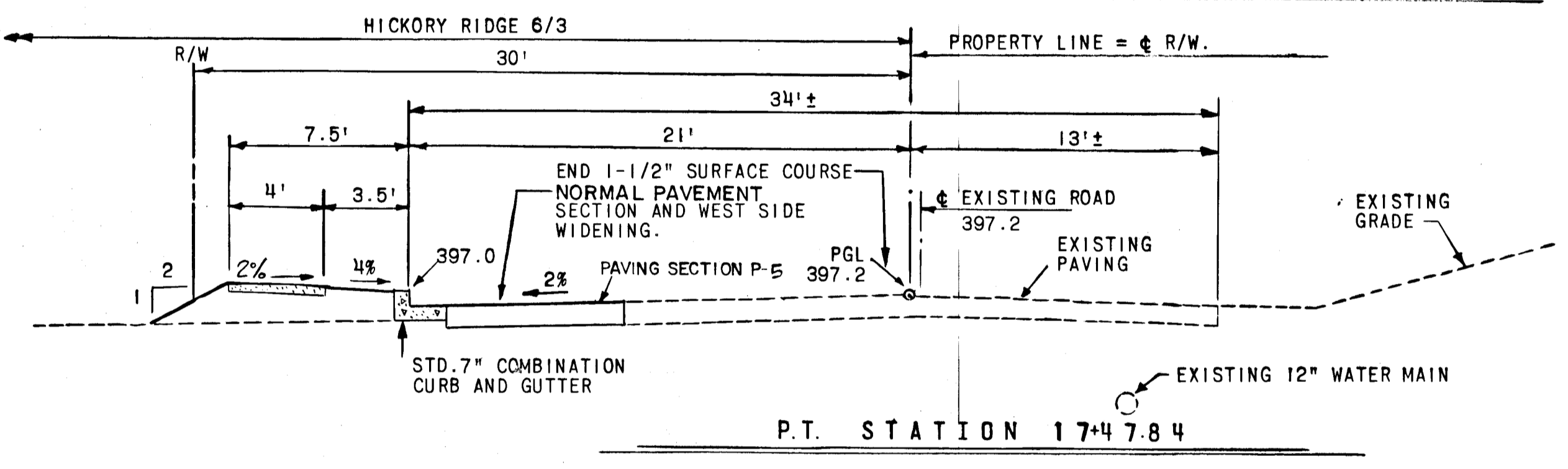
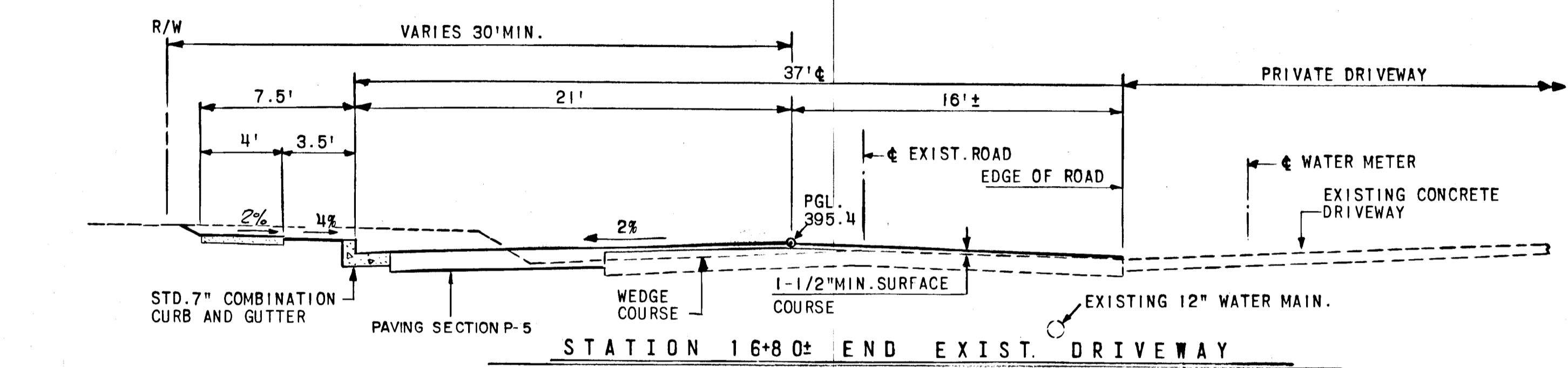
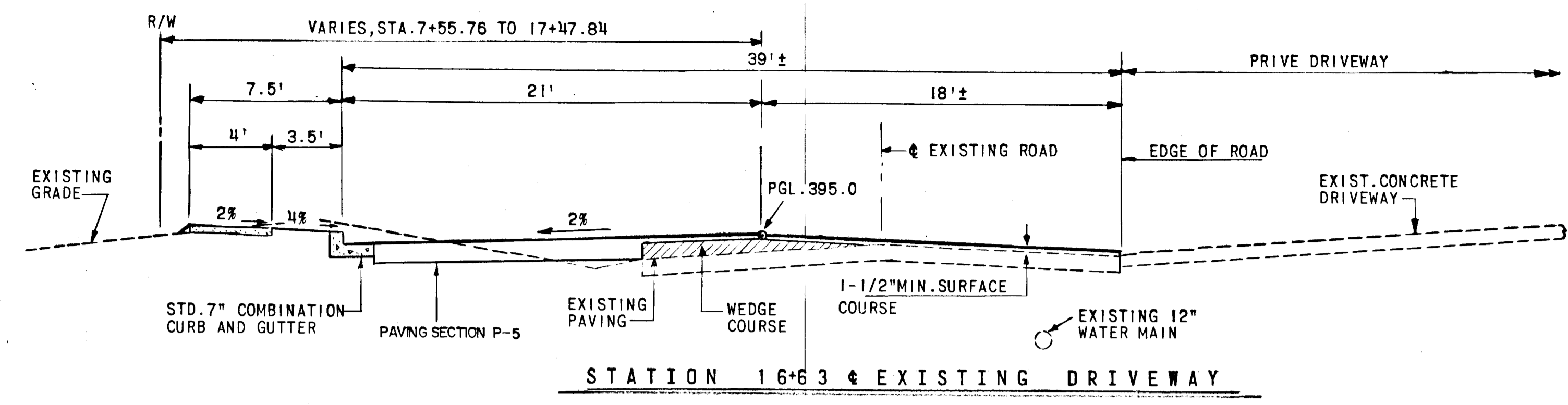


NOTE:  
 ALL ROAD SECTIONS ARE SHOWN  
 LOOKING BACK TO STATION 1+80.

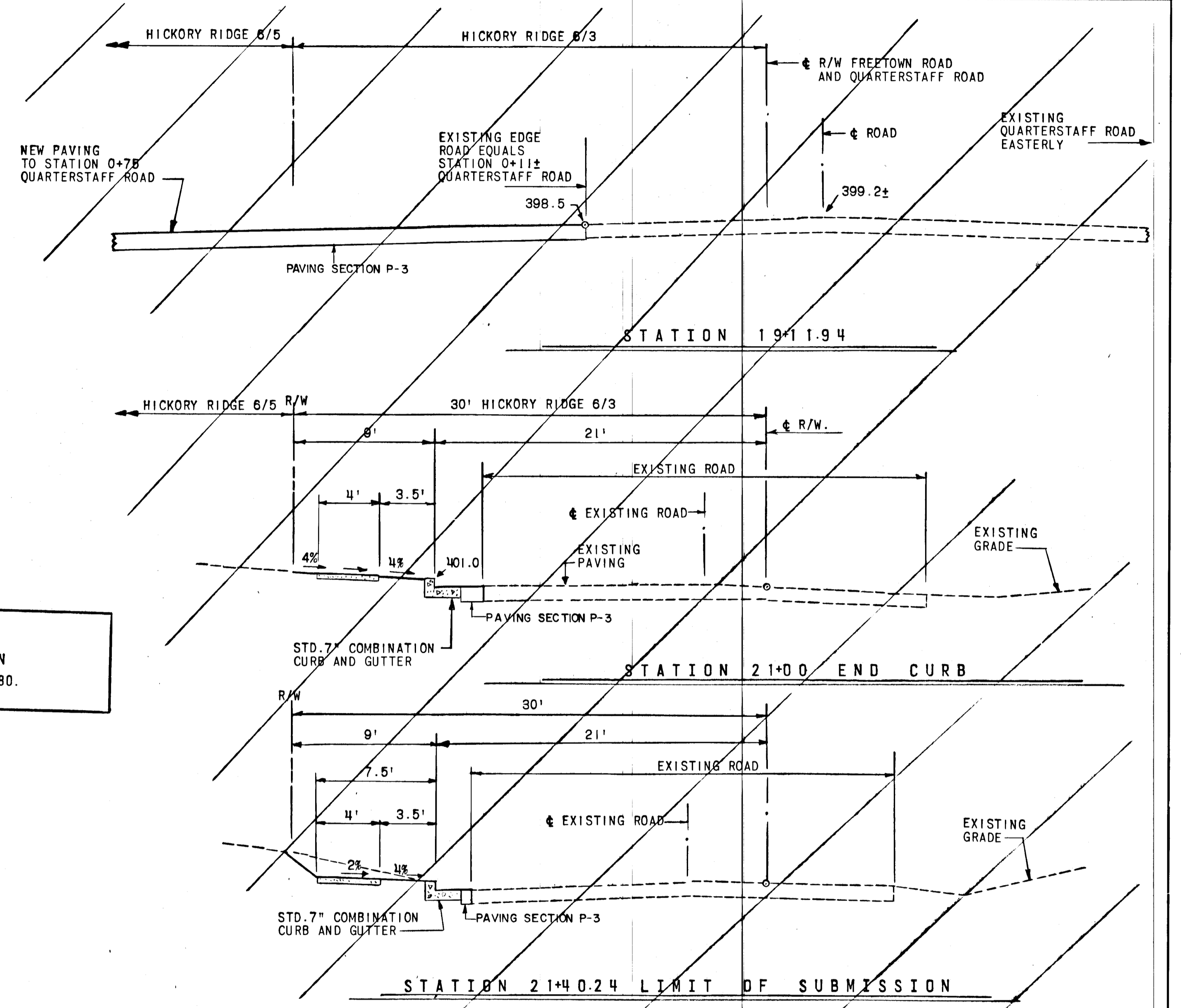
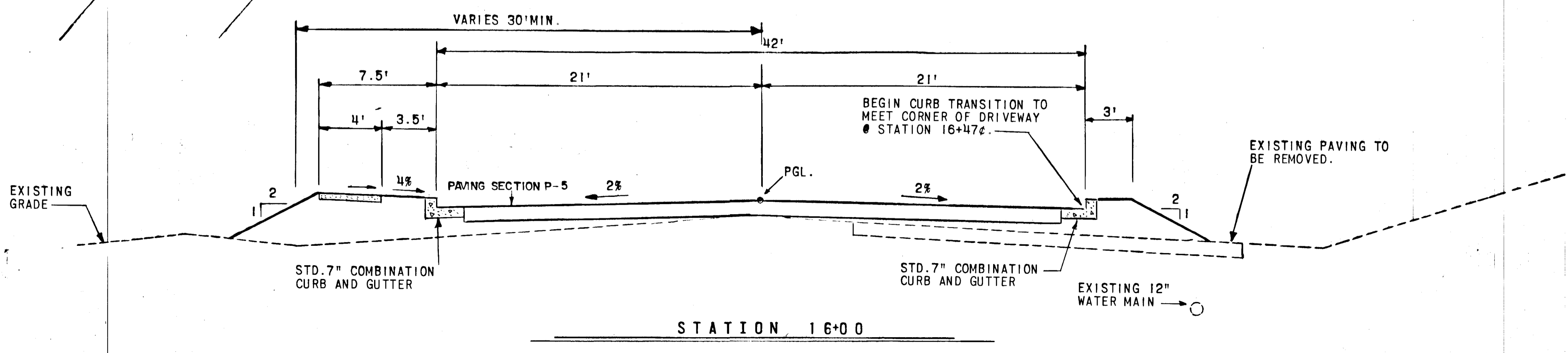
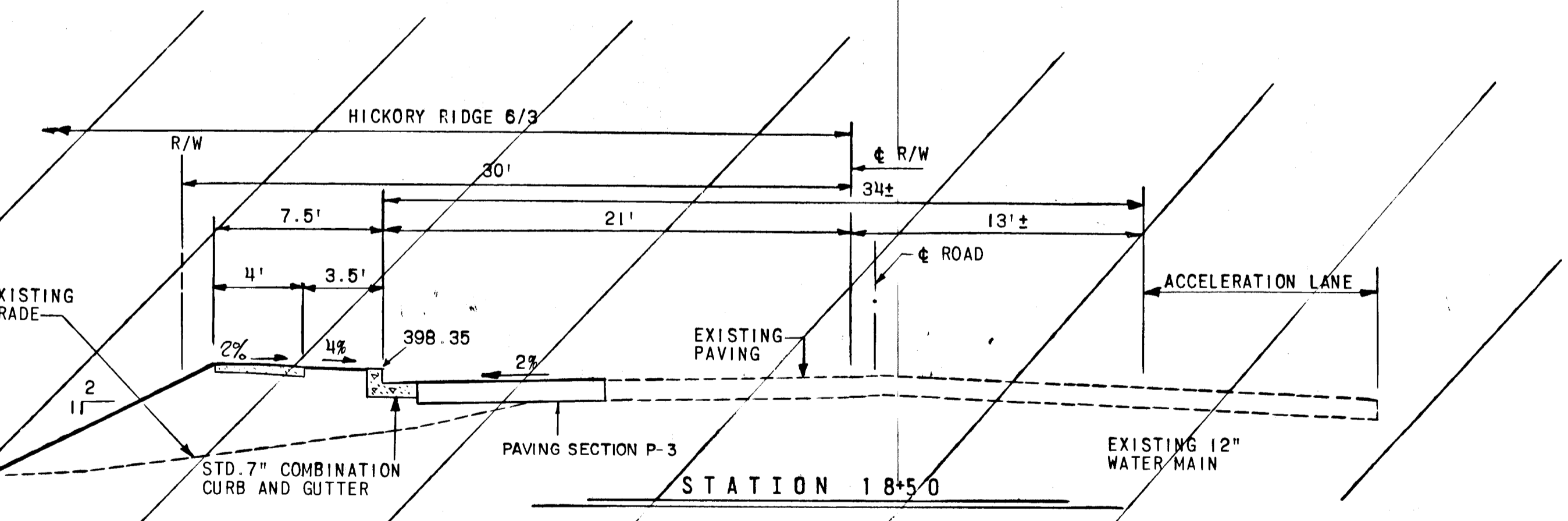


REV. DATE	REV. NO.	REVISION DESCRIPTION
<b>COLUMBIA</b> 5TH ELECTION DISTRICT HOWARD COUNTY MARYLAND		
OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION		
PROJECT AREA: VILLAGE OF HICKORY RIDGE SECTION 6 AREA 3		
PROJECT TITLE: <b>ROADWAY DETAILS</b>		
SCALE: 1" = 5'		DATE: DEC. 15, 1989
WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218		
<i>Thomas J. Shafer</i> THOMAS J. SHAFER REGISTERED ENGINEER NO. 8457		

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*John M. Mangum* 10/21/90  
 CHIEF, LAND DEVELOPMENT DIVISION DATE  
*Lawrence W. Wellwood* 10/21/90  
 CHIEF, BUREAU OF HIGHWAYS DATE  
*Robert B. Riley* 10-22-90  
 CHIEF, BUREAU OF ENGINEERING DATE  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Mark S. J. Smith* 10/21/90  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE



NOTE:  
 ALL ROAD SECTIONS ARE SHOWN  
 LOOKING BACK TO STATION 1+80.



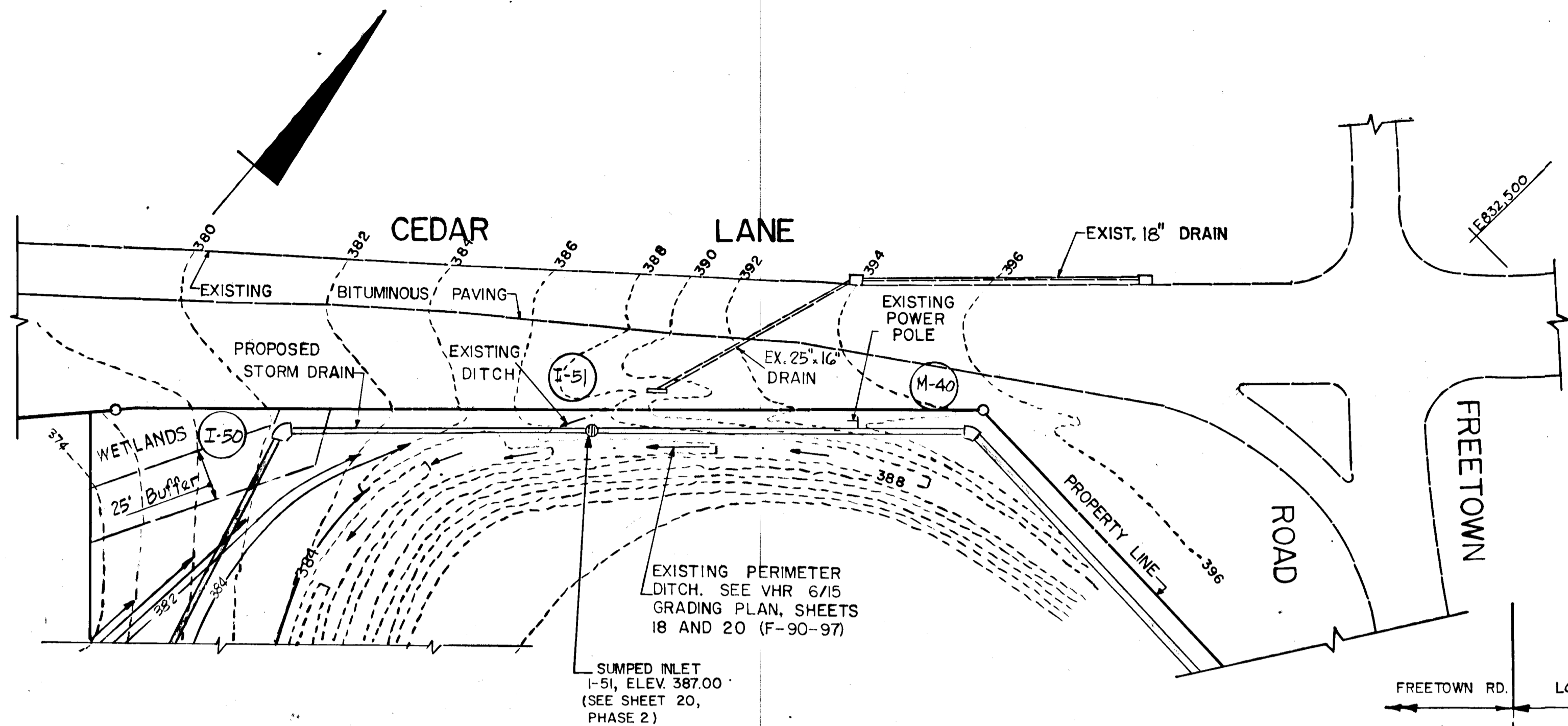
REV. DATE	REV. NO.	REVISION DESCRIPTION
<b>COLUMBIA</b>		
5TH ELECTION DISTRICT HOWARD COUNTY MARYLAND		
OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION		
PROJECT AREA: VILLAGE OF HICKORY RIDGE SECTION 6 AREA 3		
PROJECT TITLE: <b>ROADWAY DETAILS</b>		
SCALE: 1" = 5'		DATE: DEC. 15, 1989
WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218		
<i>Thomas J. Shafer</i> THOMAS J. SHAFER REGISTERED ENGINEER NO. 8457		

42

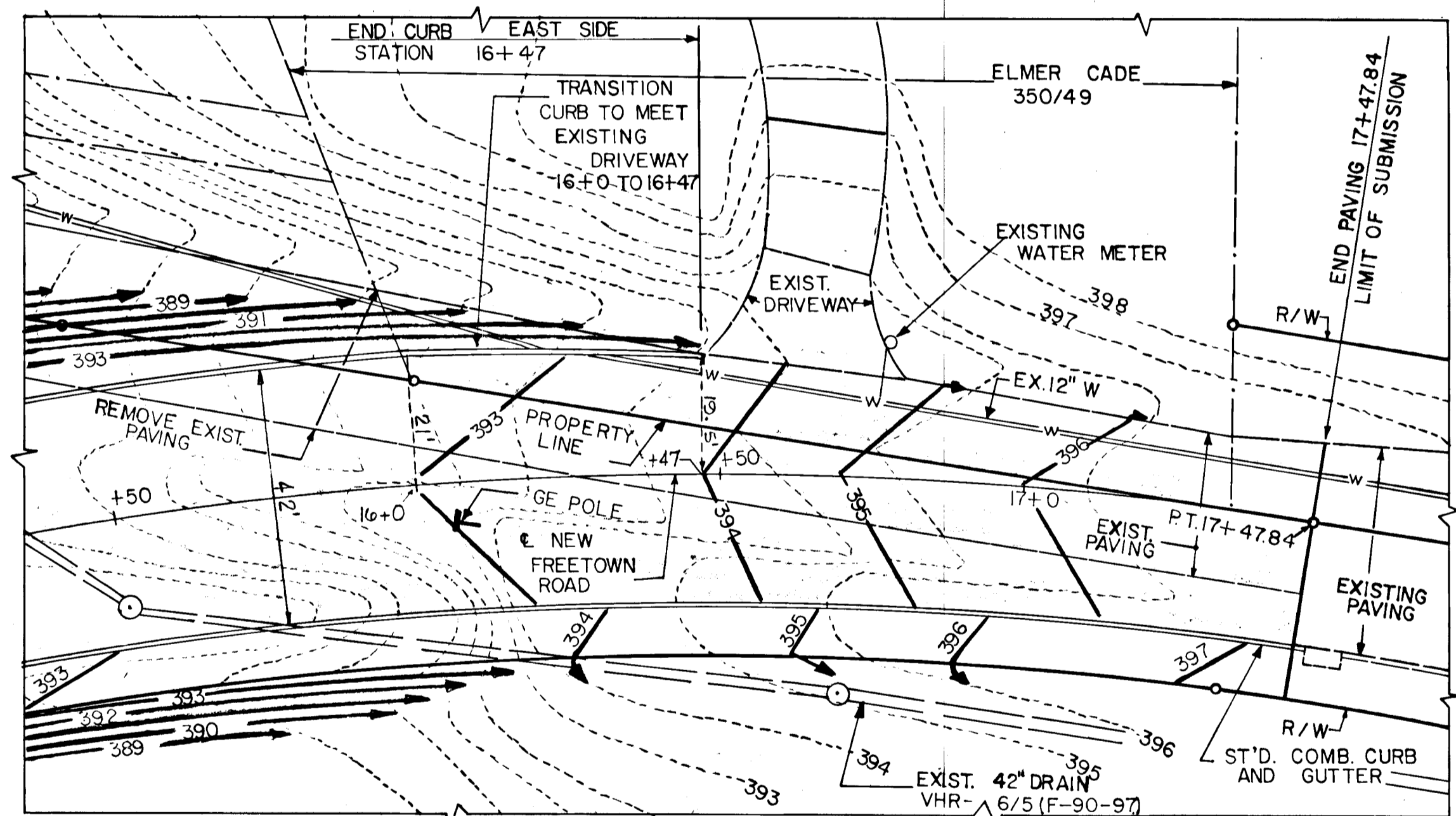


APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 Chief, Land Development Division *10/27/90*  
 DATE: 10/24/90  
 Chief, Bureau of Highways  
 Chief, Bureau of Engineering *10/29/90*  
 DATE: 10/29/90

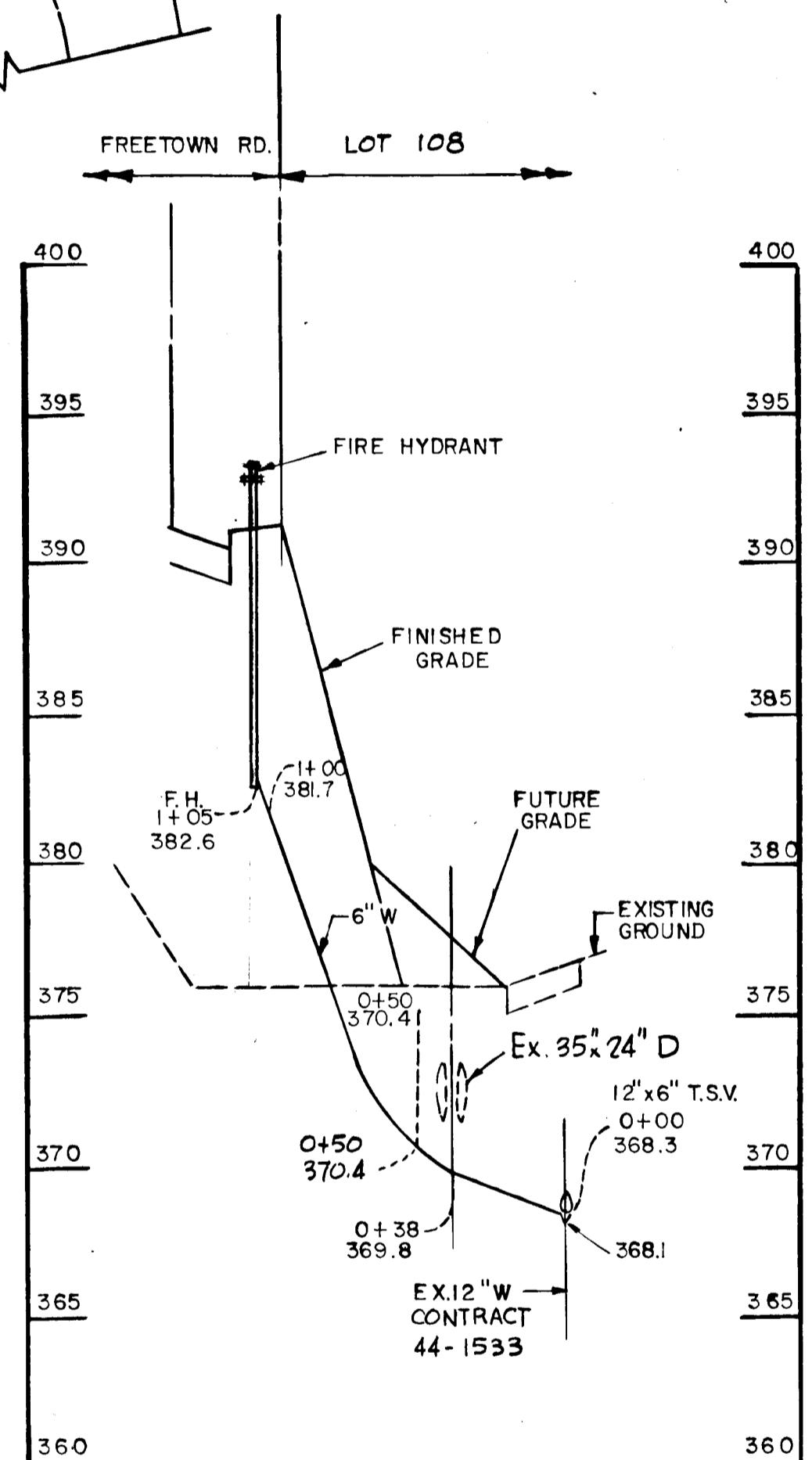
APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Division of Community Planning and Land Development *11/8/90*  
 DATE: 11/8/90



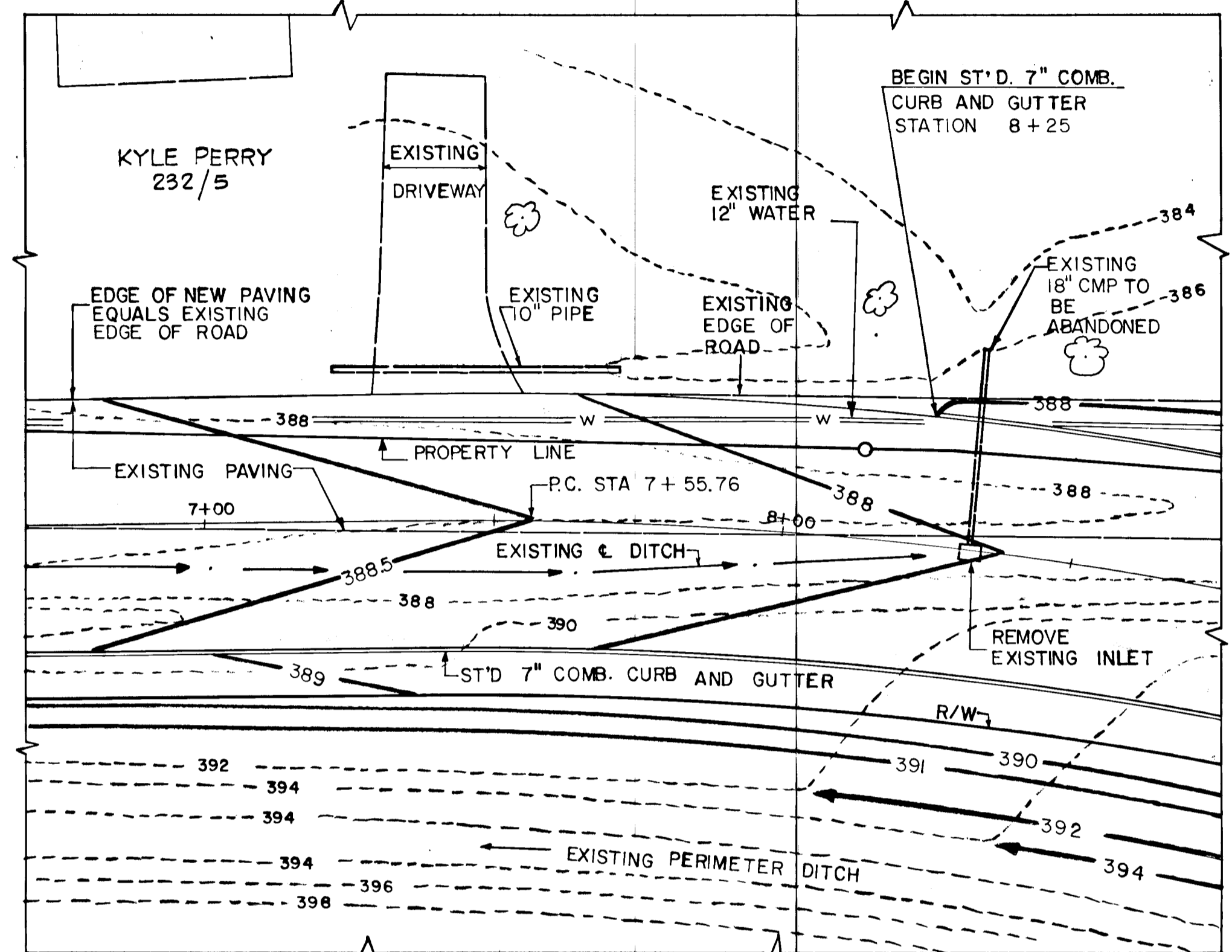
PLAN (Prior to Cap. Project J-4086)  
 SCALE: 1" = 50'



PLAN - FREETOWN ROAD AT EXISTING DRIVEWAY STA. 16+63  
 SCALE: 1" = 20'



PROFILE - FIRE HYDRANT RELOCATION  
 SCALE: 1" = 50'; 1" = 5'

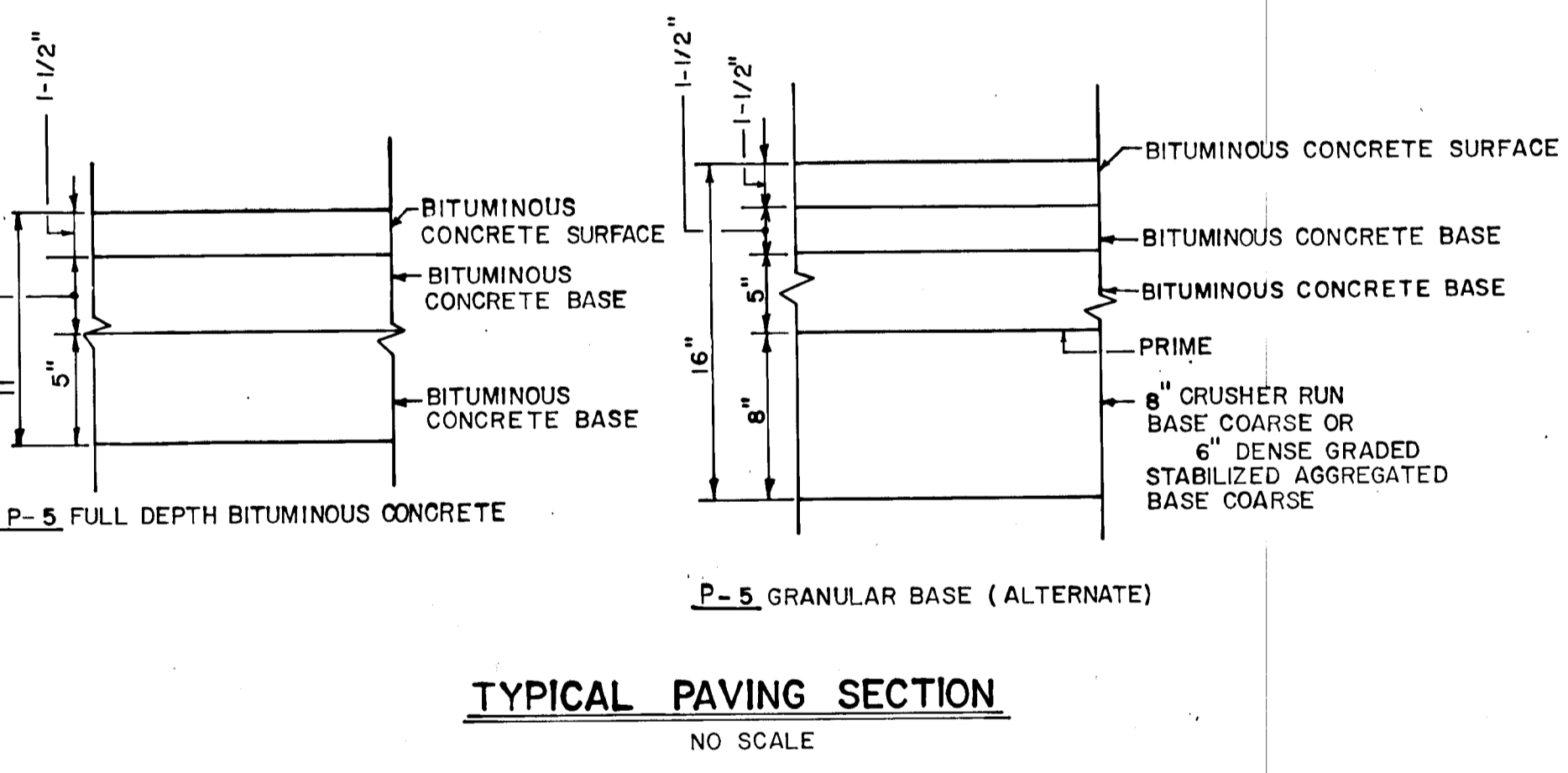
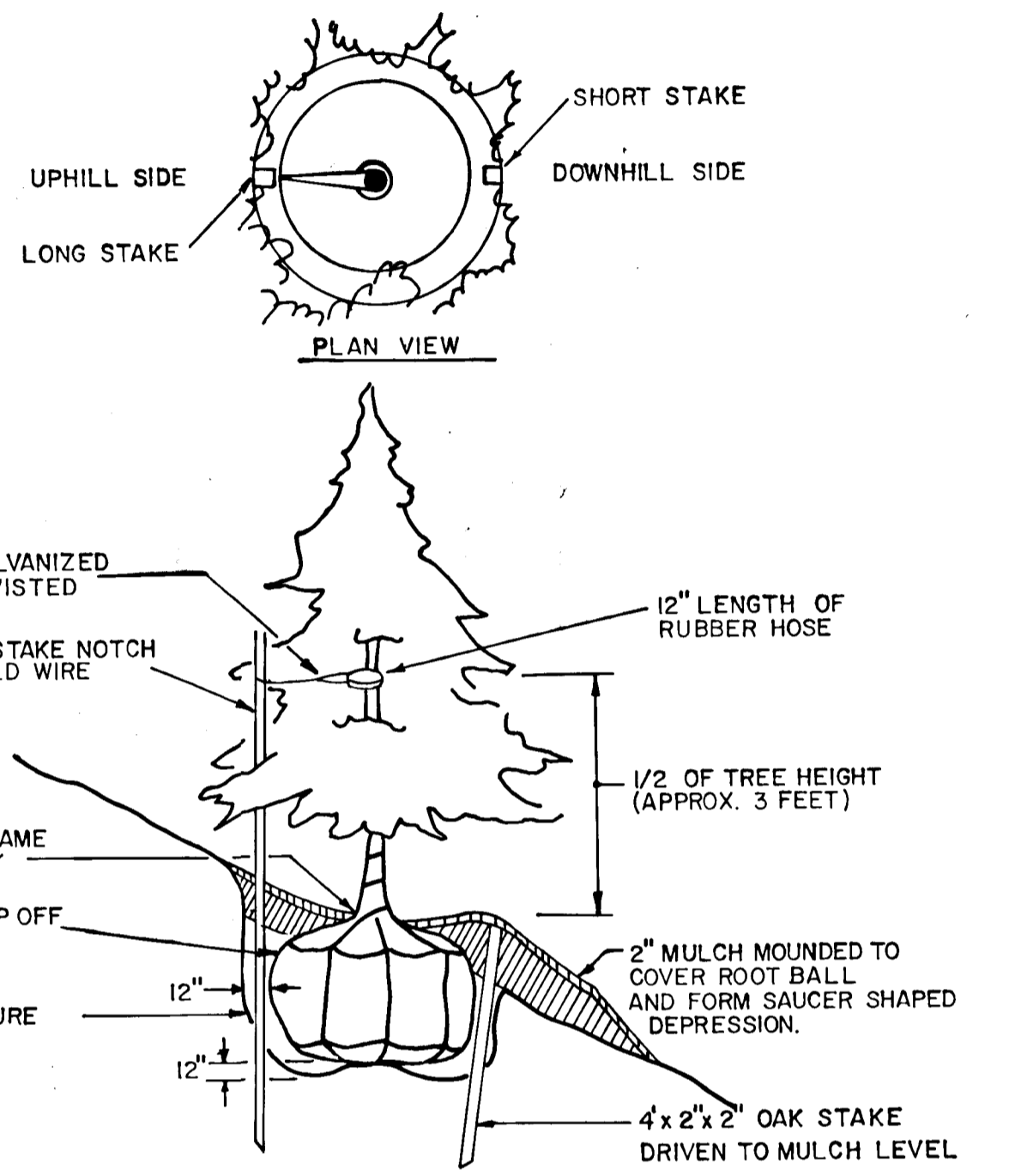
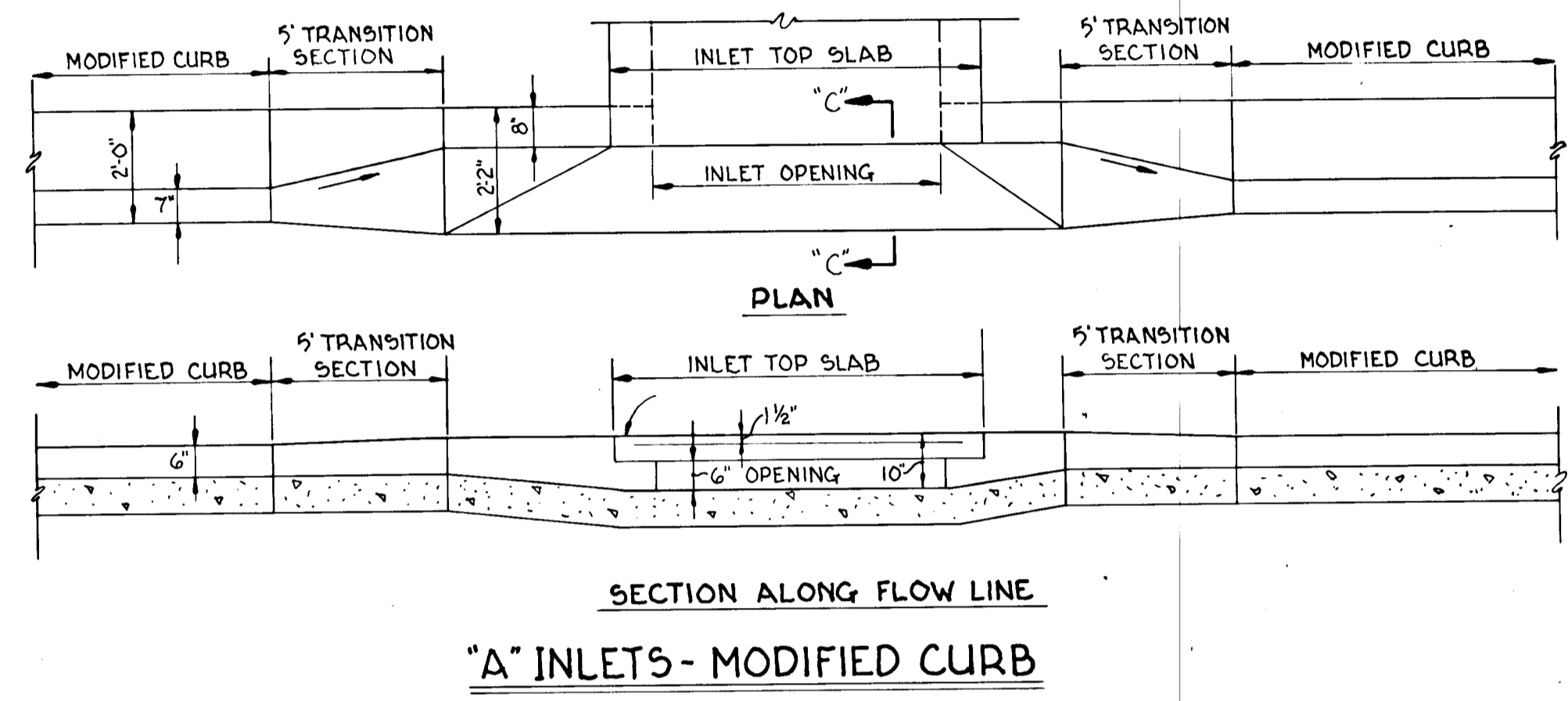
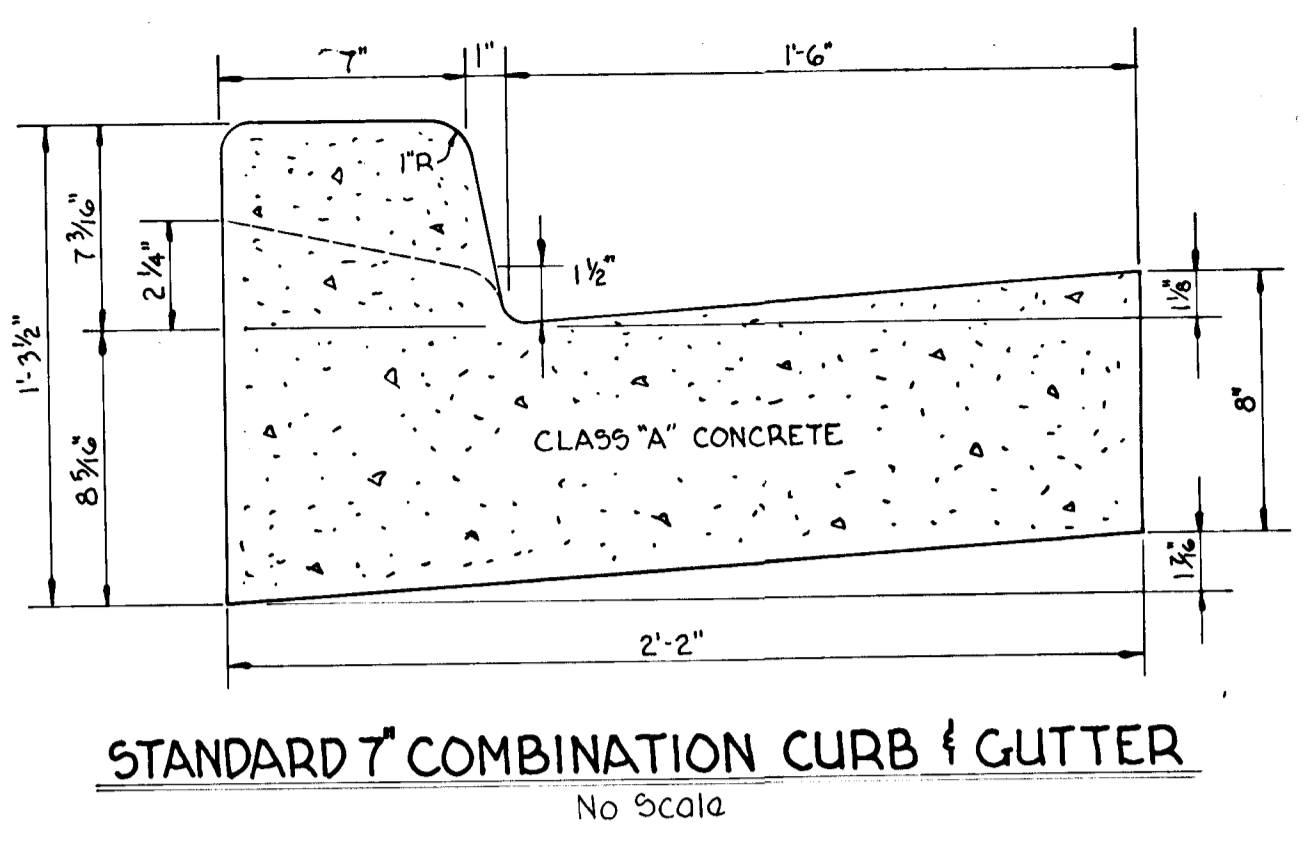
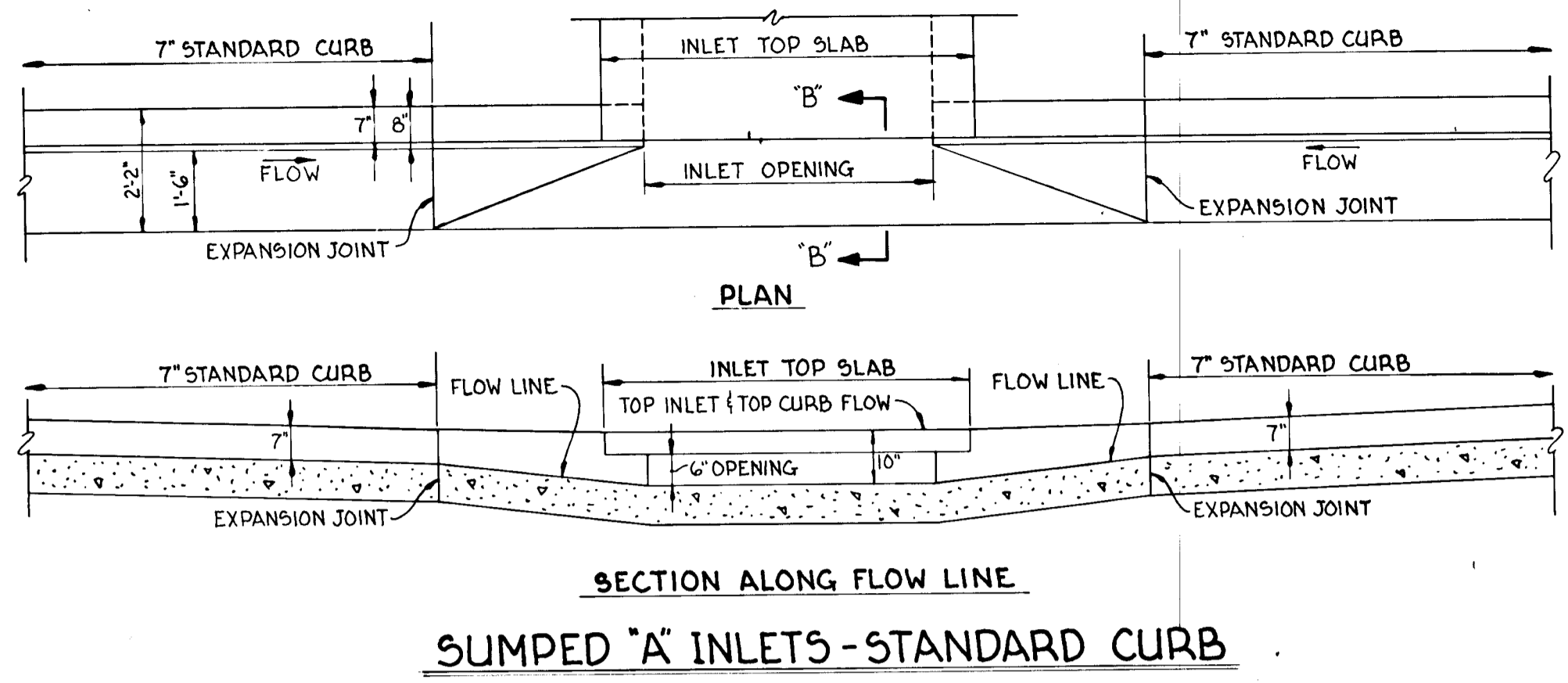


PLAN - FREETOWN ROAD AT EXISTING DRIVEWAY STA. 7+40  
 SCALE: 1" = 20'

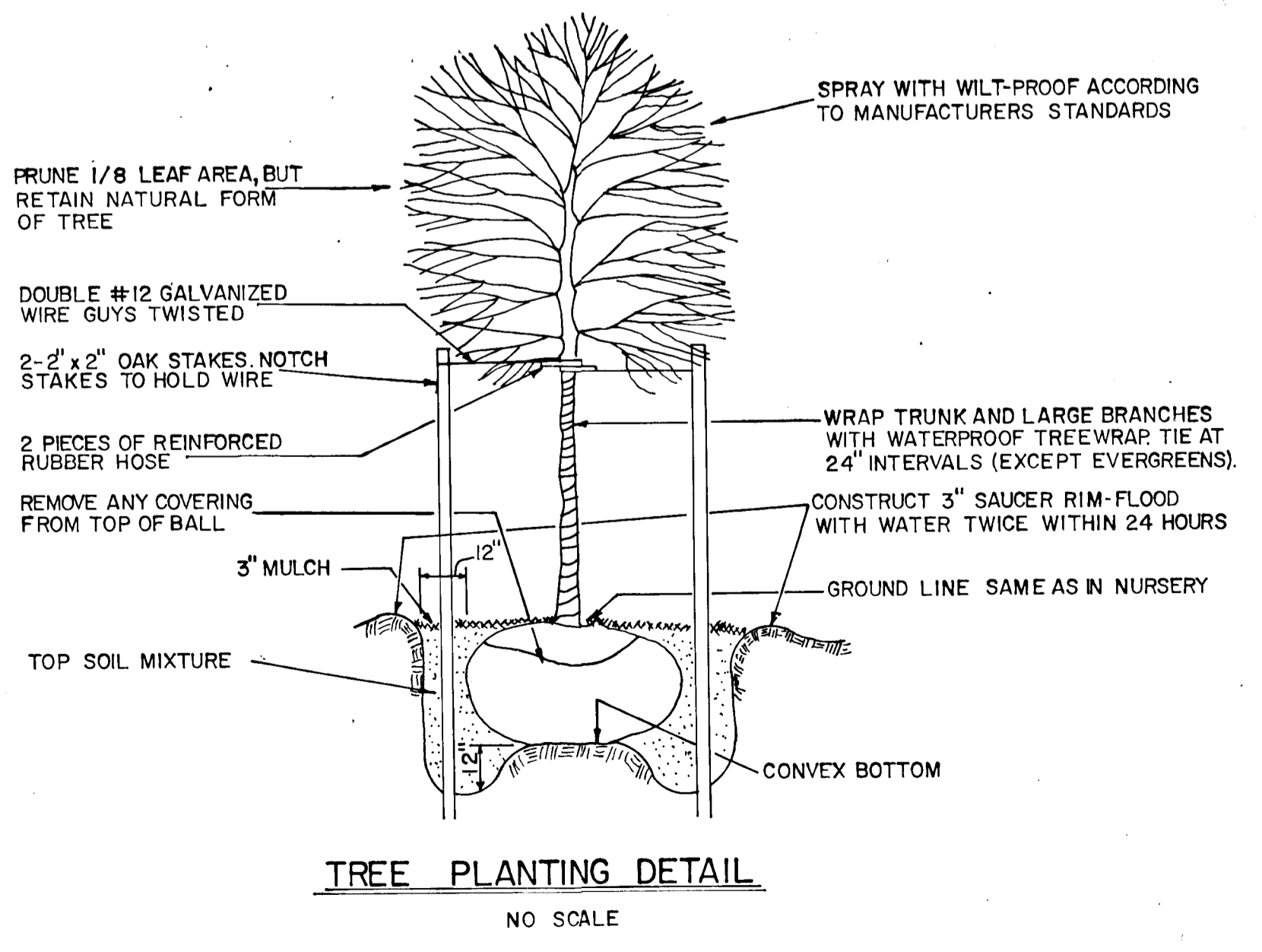
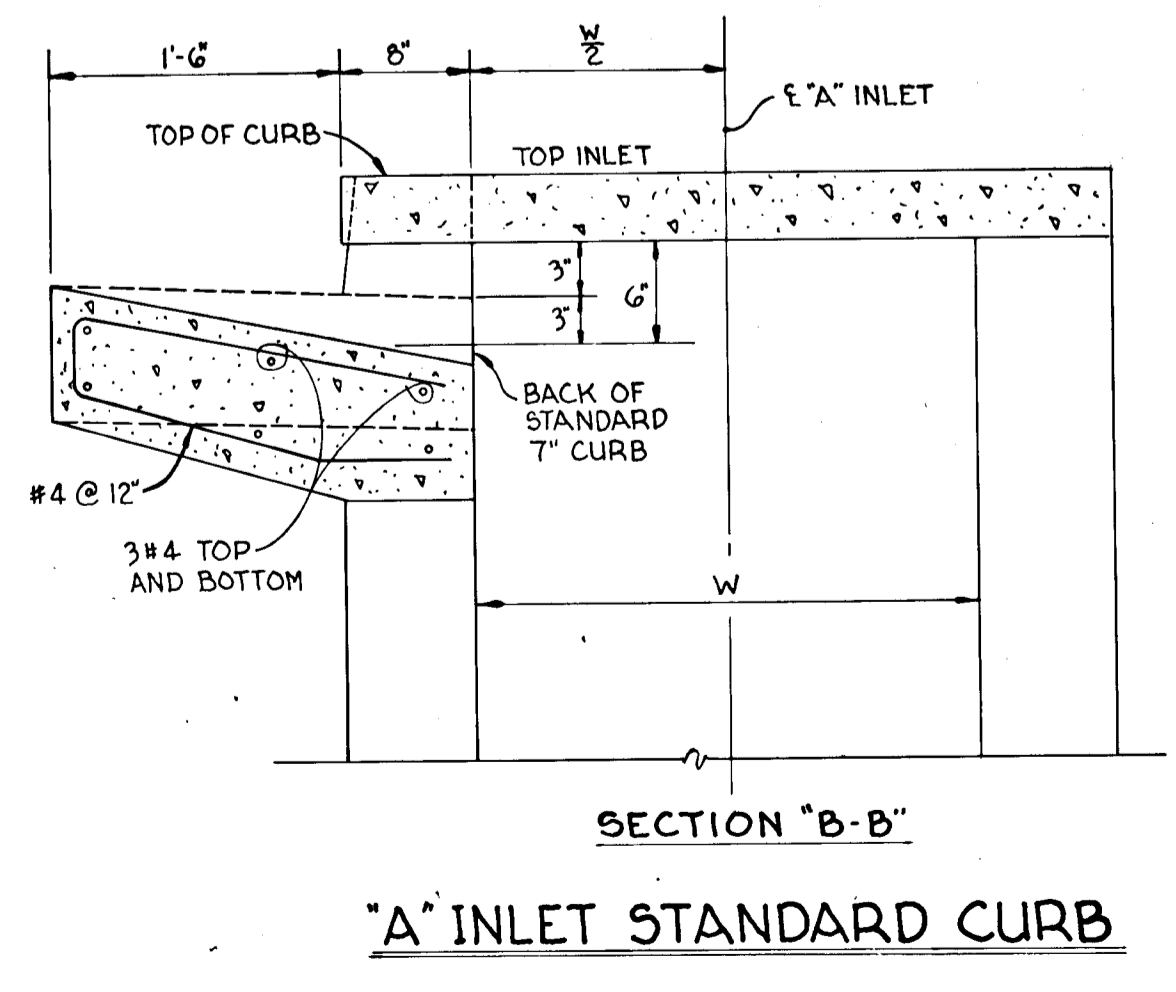
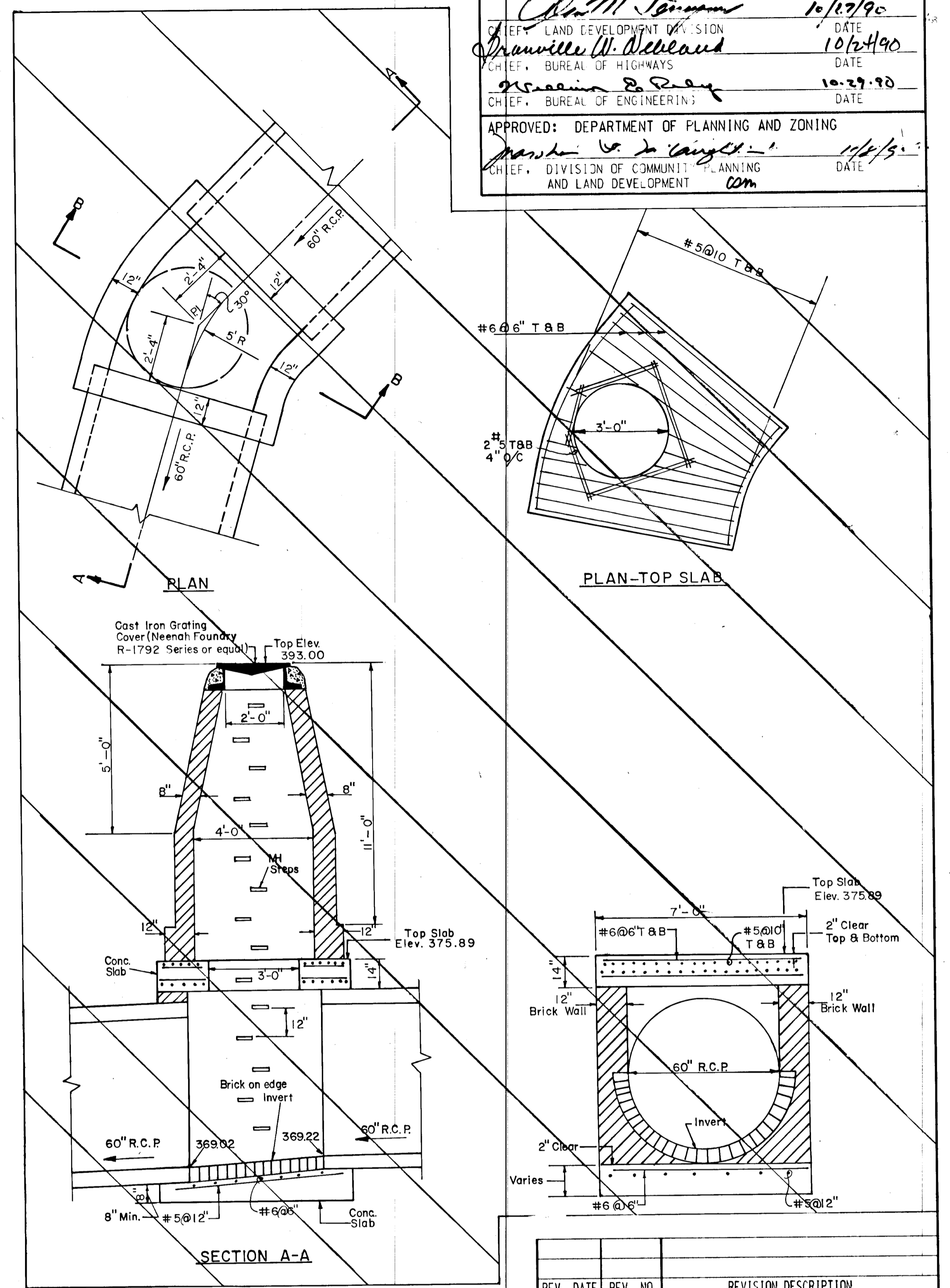
REV. DATE	REV. NO.	REVISION DESCRIPTION
<b>COLUMBIA</b> 5TH ELECTION DISTRICT HOWARD COUNTY MARYLAND OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION PROJECT AREA: VILLAGE OF HICKORY RIDGE SECTION 6 AREA 3 PROJECT TITLE: ROADWAY DETAILS AND FIRE HYDRANT RELOCATION SCALE: 1" = 5' DATE: DEC. 15, 1989 WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218 THOMAS J. SHAFER REGISTERED ENGINEER NO. 8457		



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 Chief, LAND DEVELOPMENT DIVISION  
*Howie W. DeBeard* 10/27/90  
 Chief, BUREAU OF HIGHWAYS  
 Chief, BUREAU OF ENGINEERING  
 Approved: DEPARTMENT OF PLANNING AND ZONING  
 Chief, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT  
*Thomas J. Shafer* 11/15/90

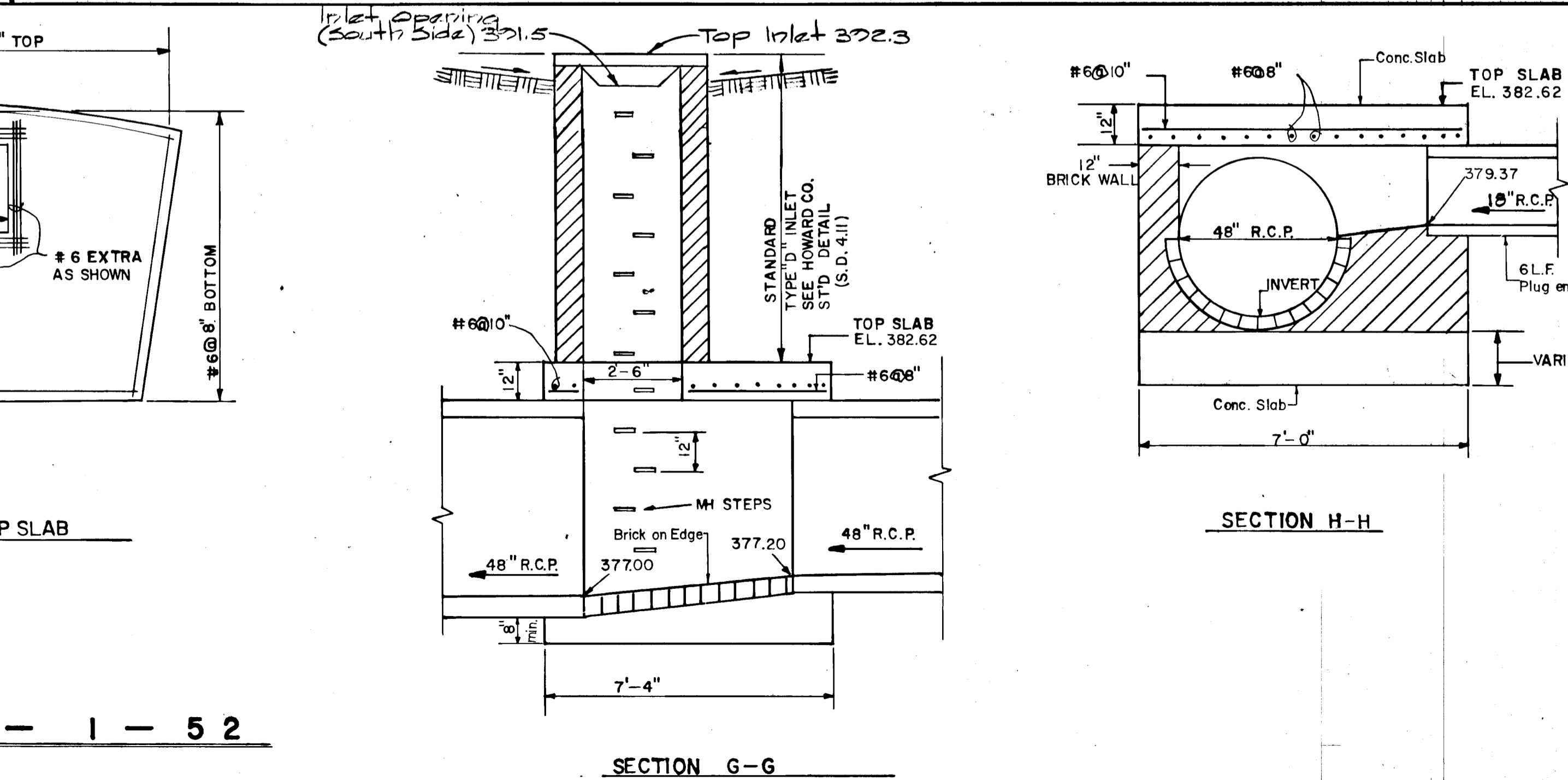
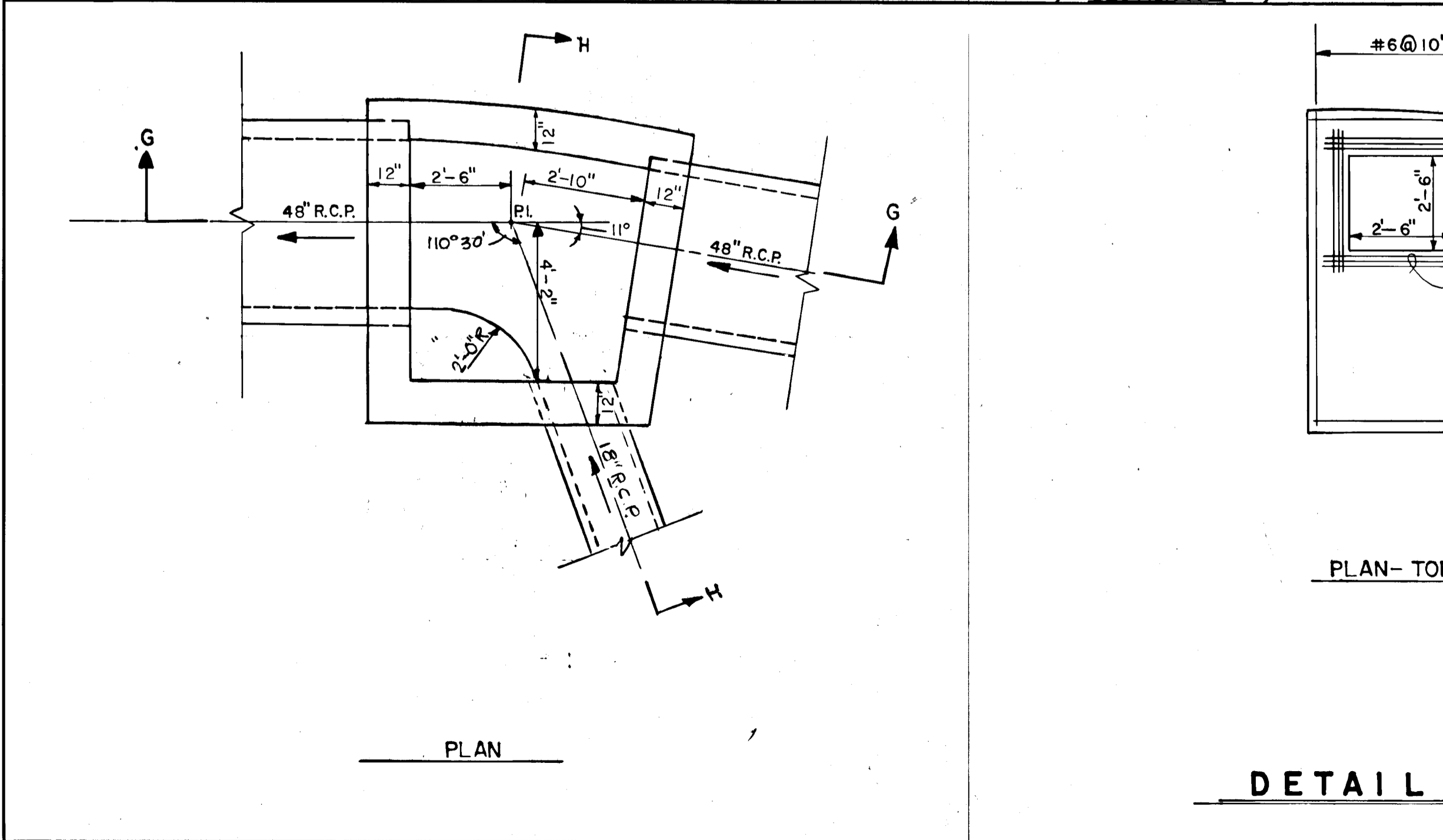
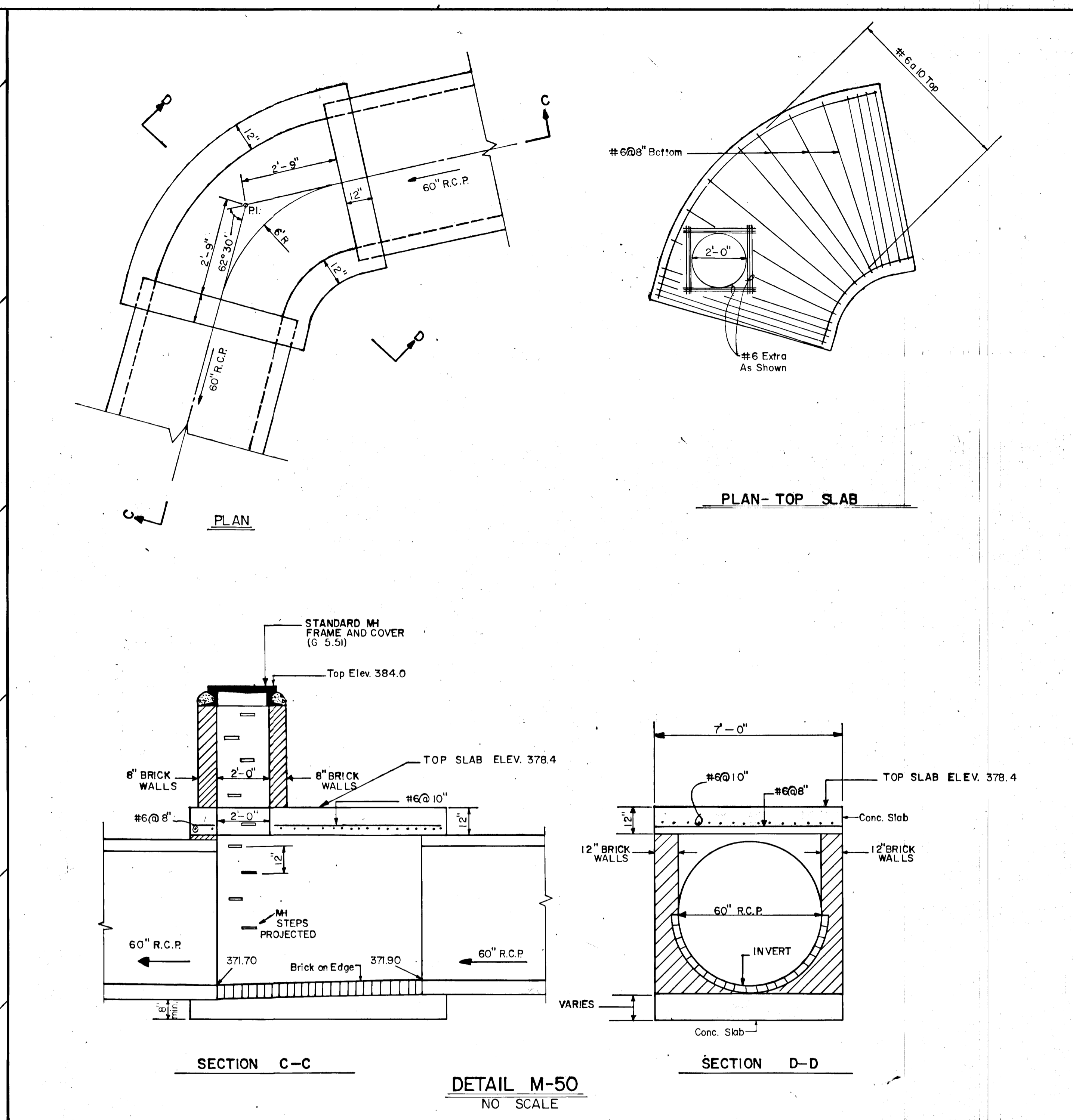
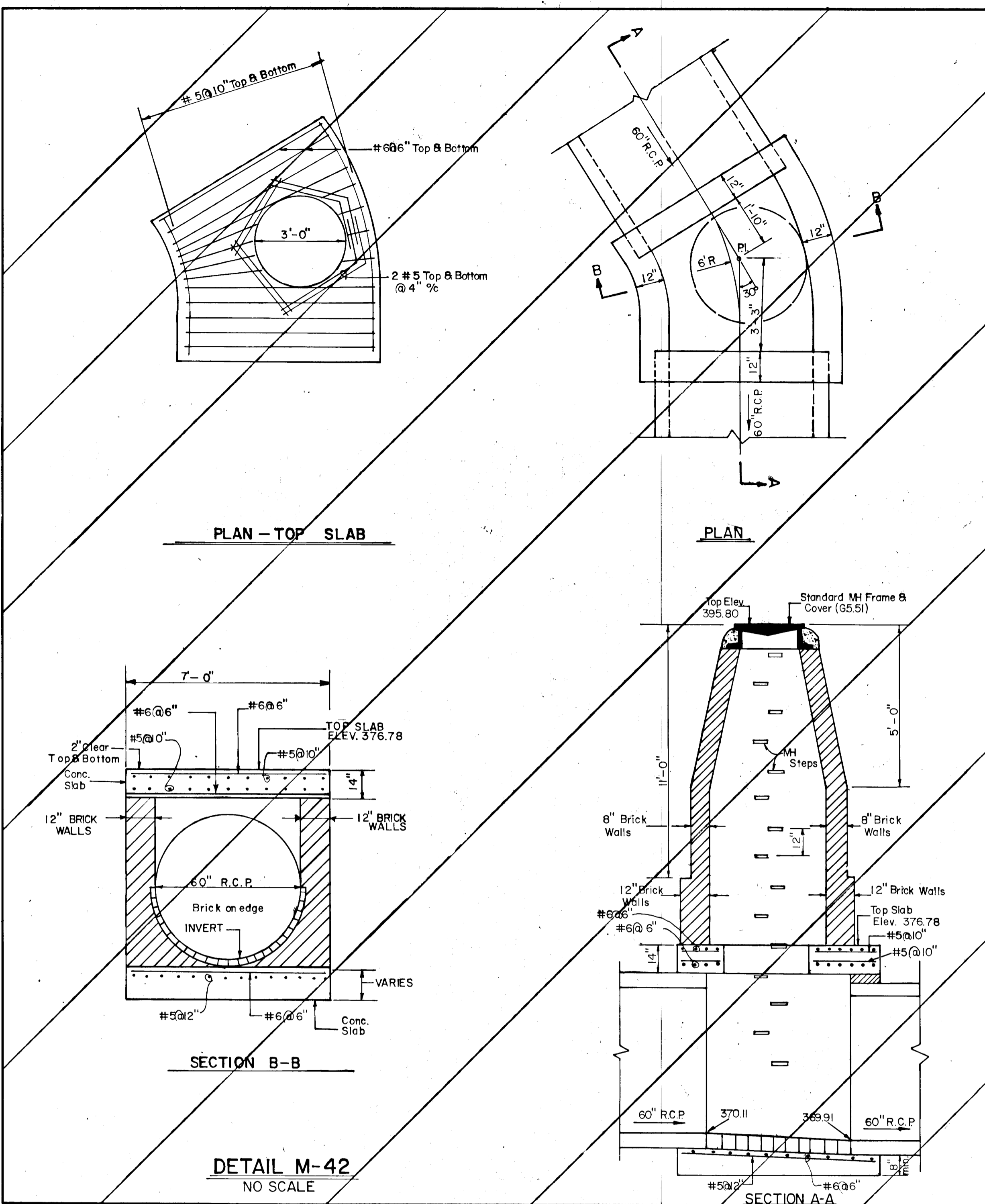


QUANTITY OF TREES	COMMON NAME	BOTANICAL NAME	HEIGHT
52	PIN OAK	QUERCUS PALUSTRIS	40'



REV. DATE	REV. NO.	REVISION DESCRIPTION
<b>COLUMBIA</b> 5TH ELECTION DISTRICT HOWARD COUNTY MARYLAND		
OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION		
PROJECT AREA: VILLAGE OF HICKORY RIDGE SECTION 6 AREA 3		
PROJECT TITLE: ROADWAY STORM DRAIN AND TREE PLANTING DETAILS		
SCALE: AS SHOWN		DATE: DEC. 15, 1989
WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218		
<i>Thomas J. Shafer</i> THOMAS J. SHAFER REGISTERED ENGINEER NO. 8457		

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Oliver M. Ferguson* 10/27/90  
 CHIEF, LAND DEVELOPMENT DIVISION DATE  
*Lawrence W. Weiland* 10/24/90  
 CHIEF, BUREAU OF HIGHWAYS DATE  
*William R. Quinn* 10-24-90  
 CHIEF, BUREAU OF ENGINEERING DATE  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Frank J. Long* 11/15/90  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE



REV. DATE	REV. NO.	REVISION DESCRIPTION
4/23/92	2	Raised Top Inlet (I-52) to E. 382.3
6/17/91	1	Changed I-52 Stub from 24" to 18"

**COLUMBIA**  
 5TH ELECTION DISTRICT  
 HOWARD COUNTY MARYLAND

OWNER AND DEVELOPER  
 THE HOWARD RESEARCH  
 AND DEVELOPMENT CORPORATION

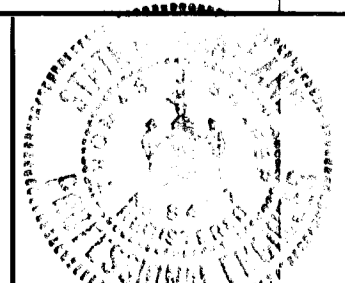
PROJECT AREA:  
 VILLAGE OF HICKORY RIDGE  
 SECTION 6 AREA 3

PROJECT TITLE:  
**STORM DRAIN DETAILS**

SCALE: AS SHOWN DATE: DEC. 15, 1989

WHITMAN, REQUARDT AND ASSOCIATES  
 ENGINEERS  
 BALTIMORE, MARYLAND 21218

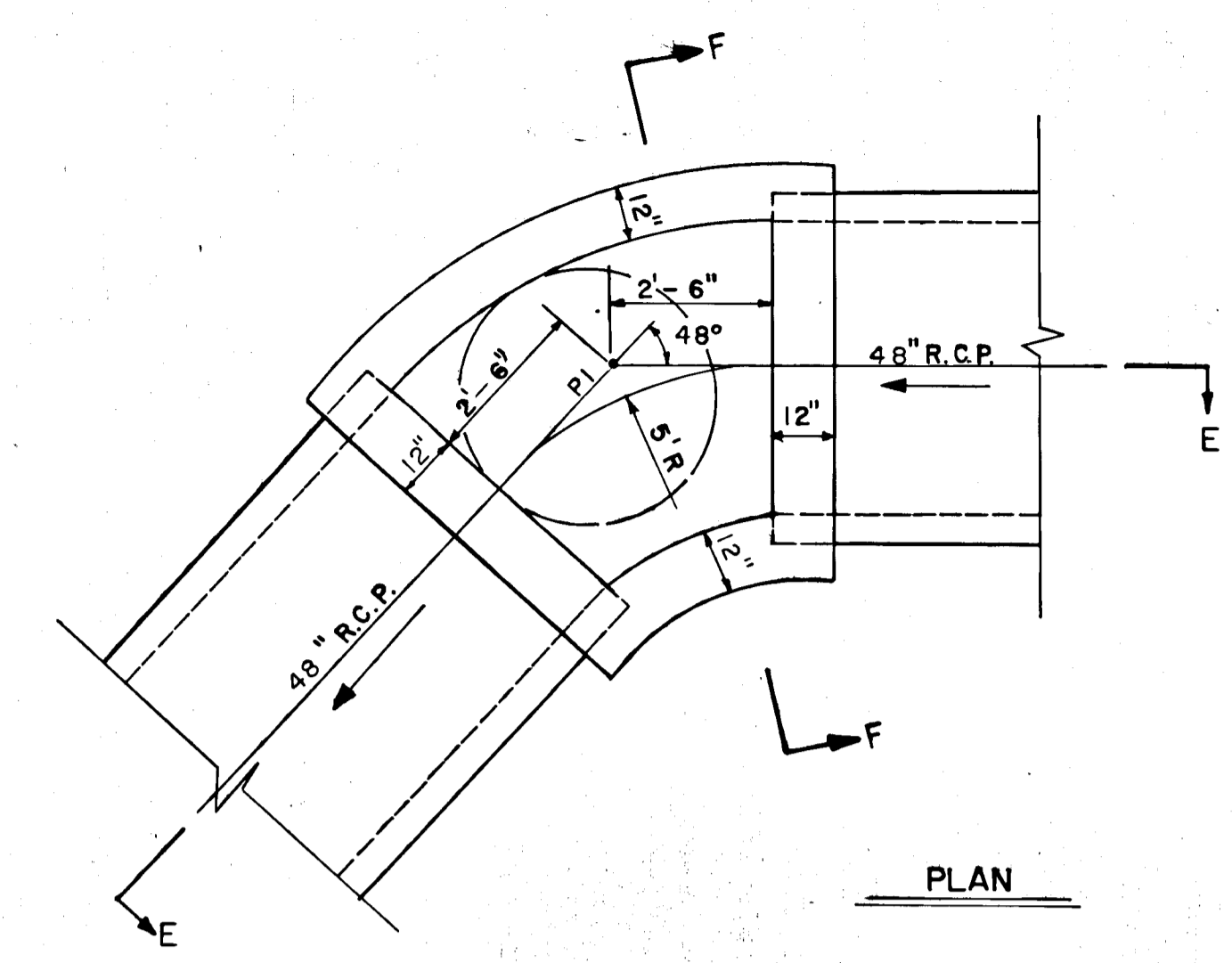
*Thomas J. Shafer*  
 THOMAS J. SHAFER  
 REGISTERED ENGINEER  
 NO. 8457



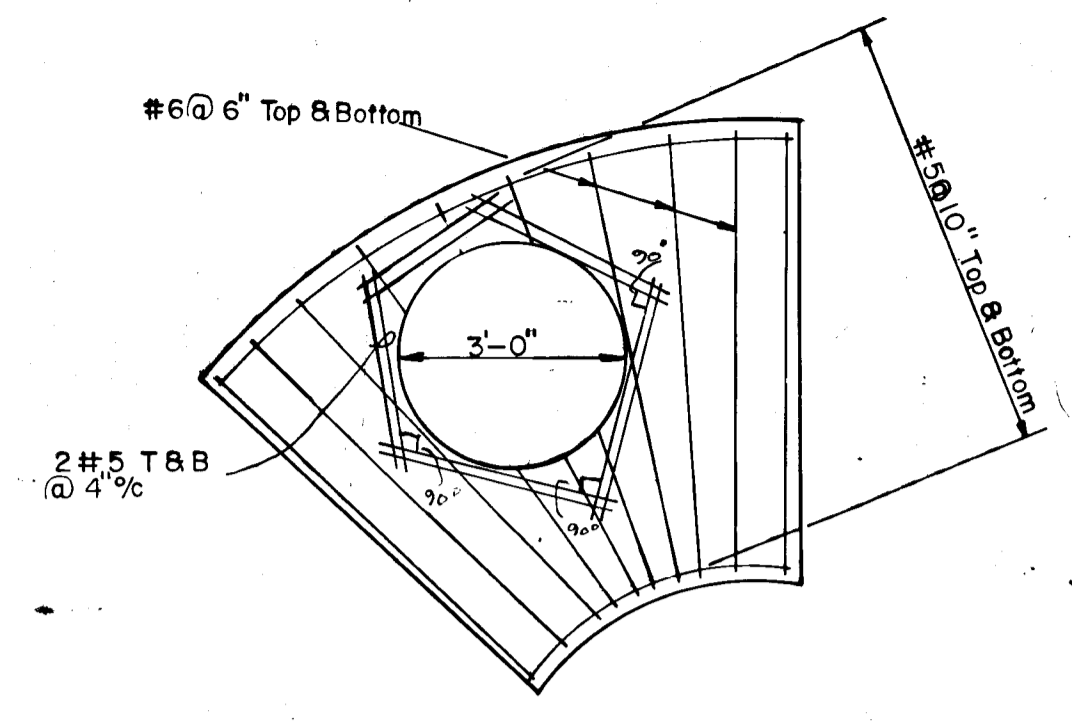
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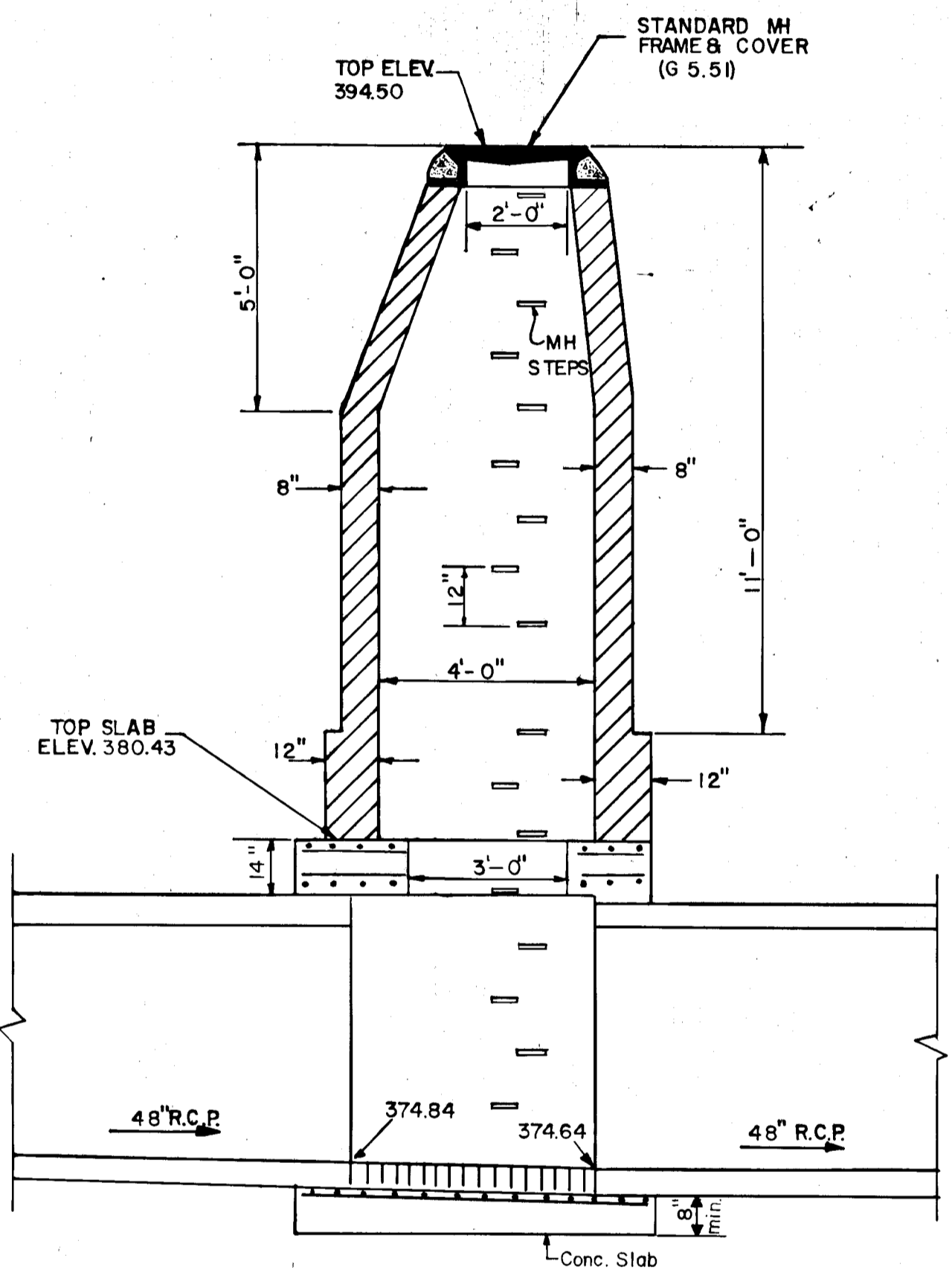
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Chas. M. Tangeman* 10/23/90  
 CHIEF, LAND DEVELOPMENT DIVISION DATE  
*Samuel W. Weisand* 10/24/90  
 CHIEF, BUREAU OF HIGHWAYS DATE  
*Deanna B. Pugh* 10-29-90  
 CHIEF, BUREAU OF ENGINEERING DATE  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*David S. ...* 11/2/90  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE



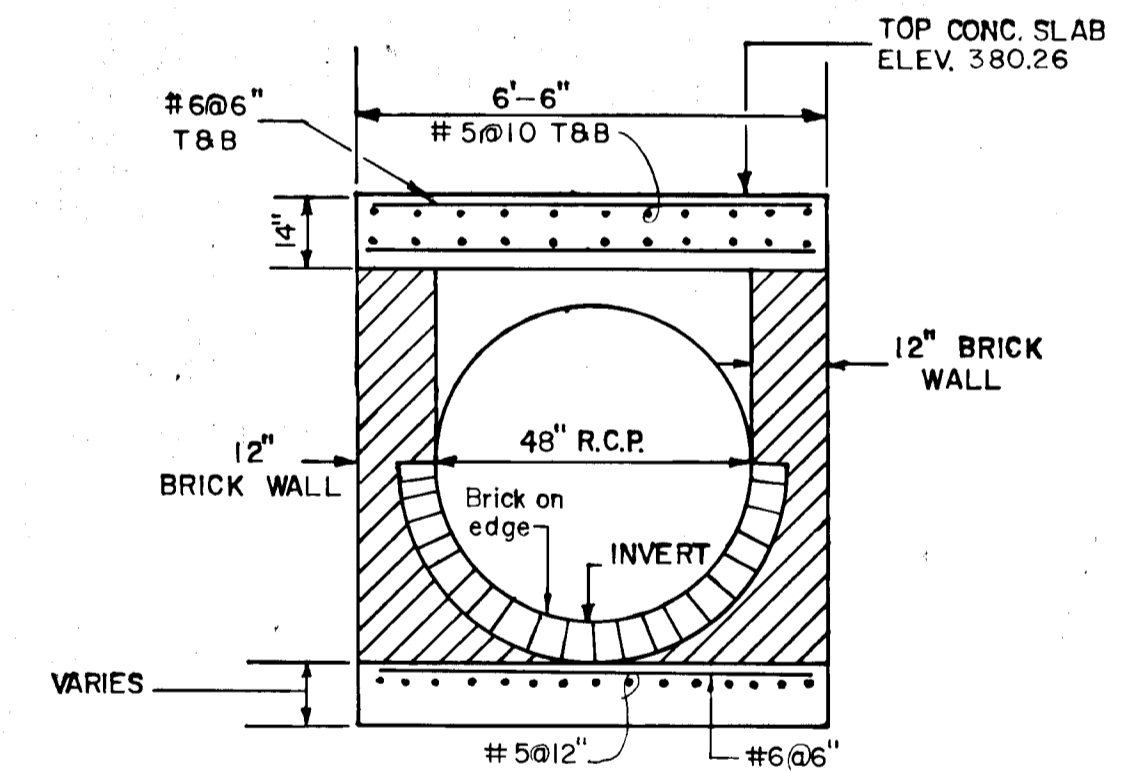
PLAN



PLAN-TOP SLAB

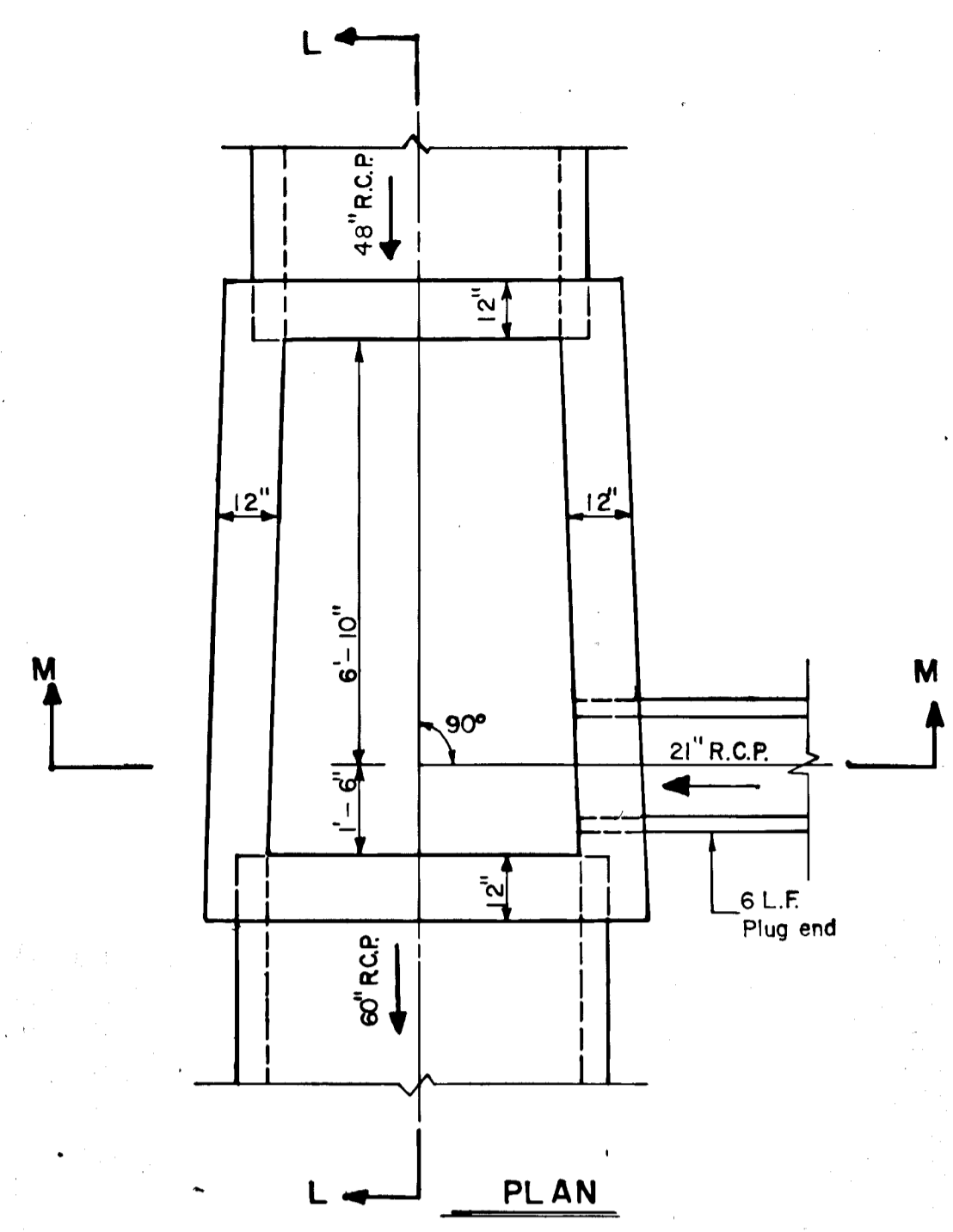


SECTION E-E

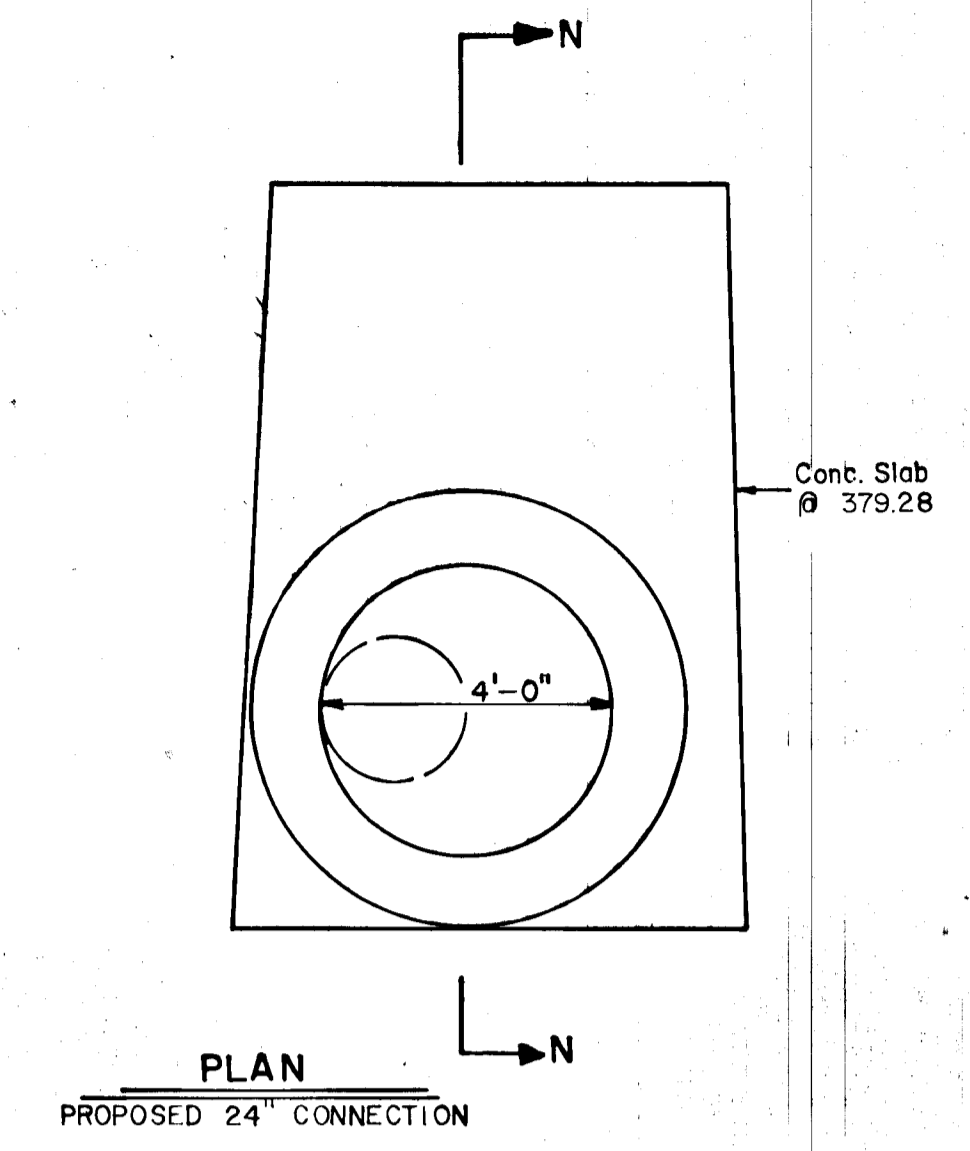


SECTION F-F

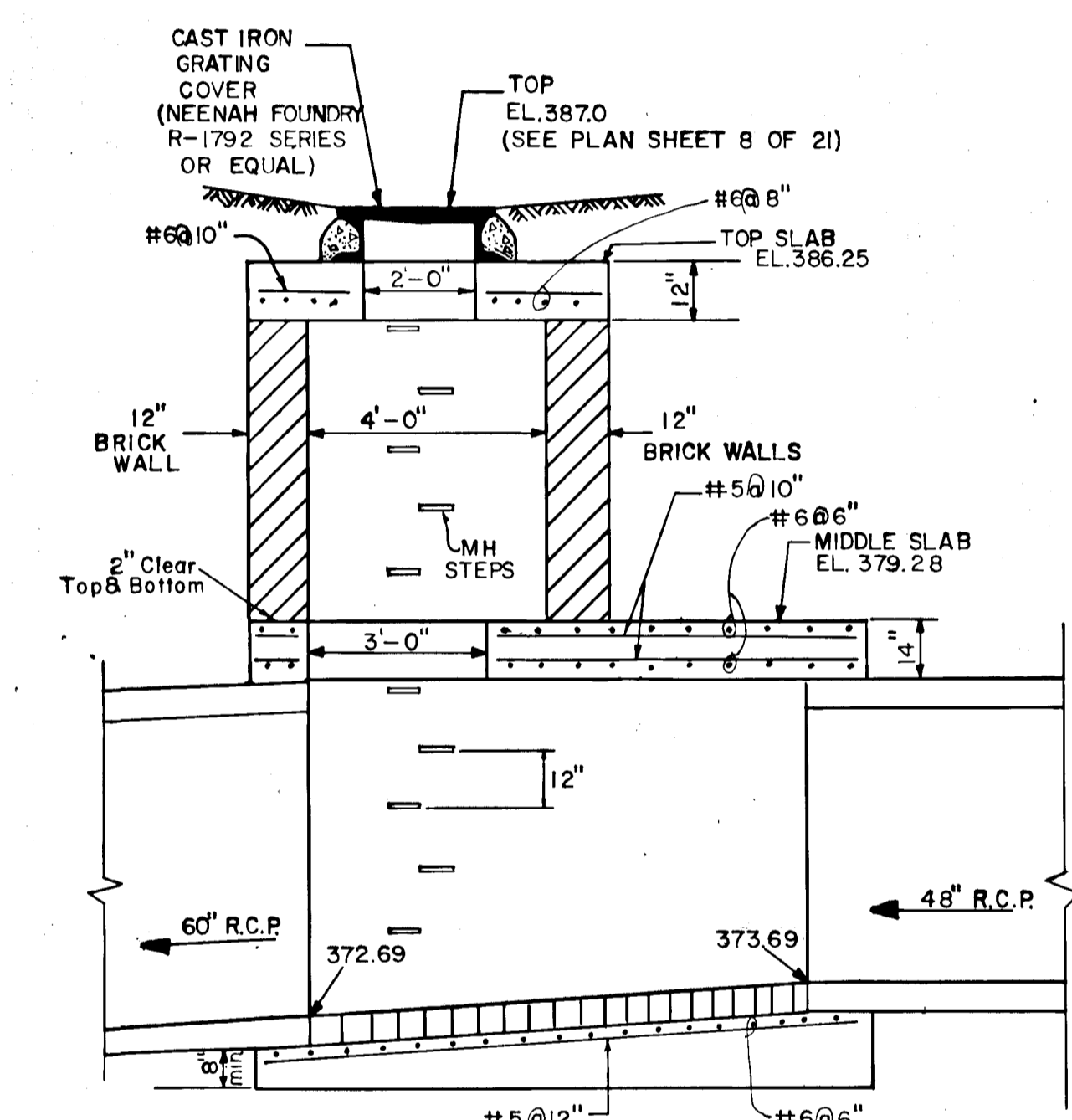
DETAIL M-40  
NO SCALE



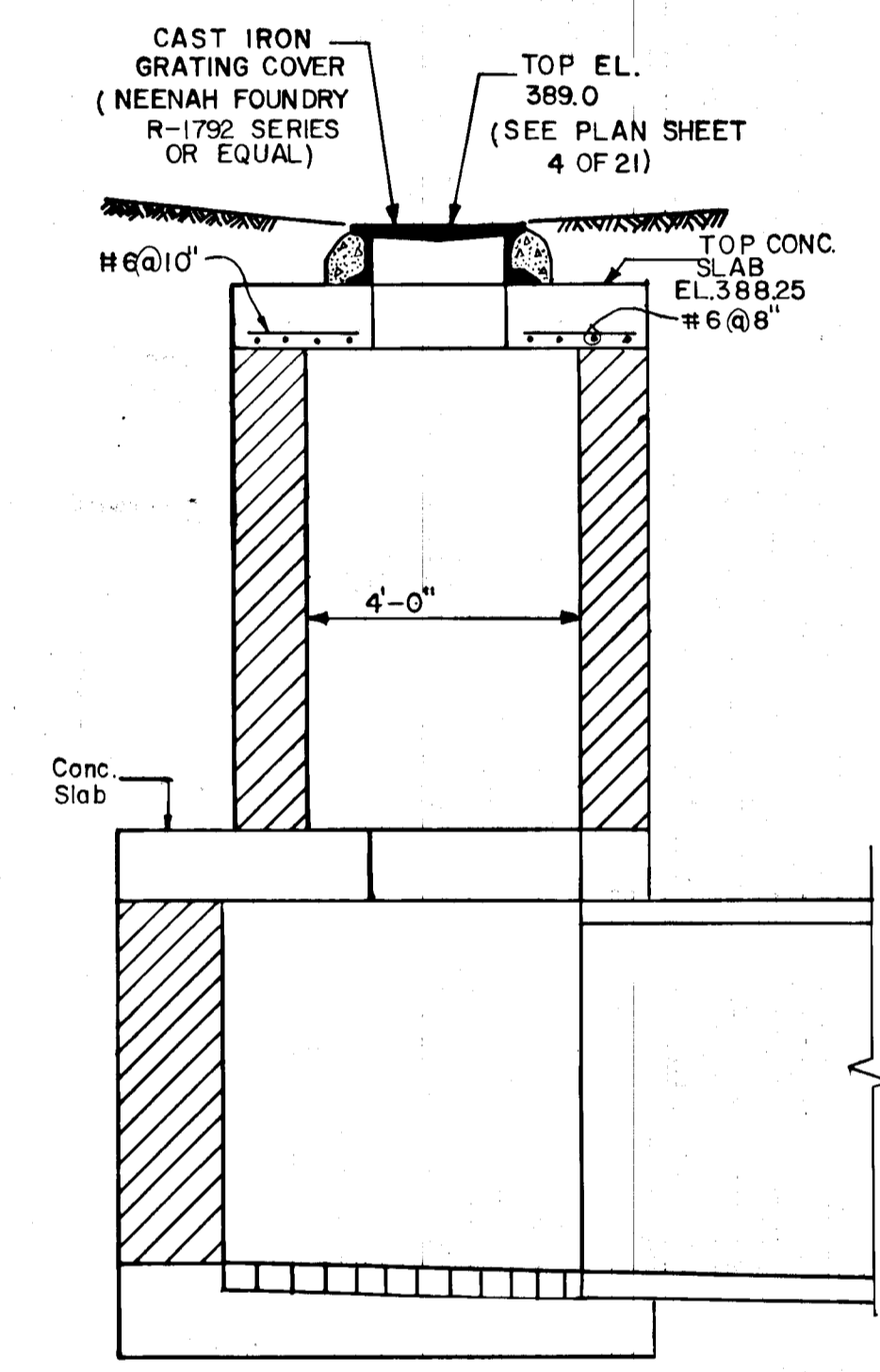
PLAN



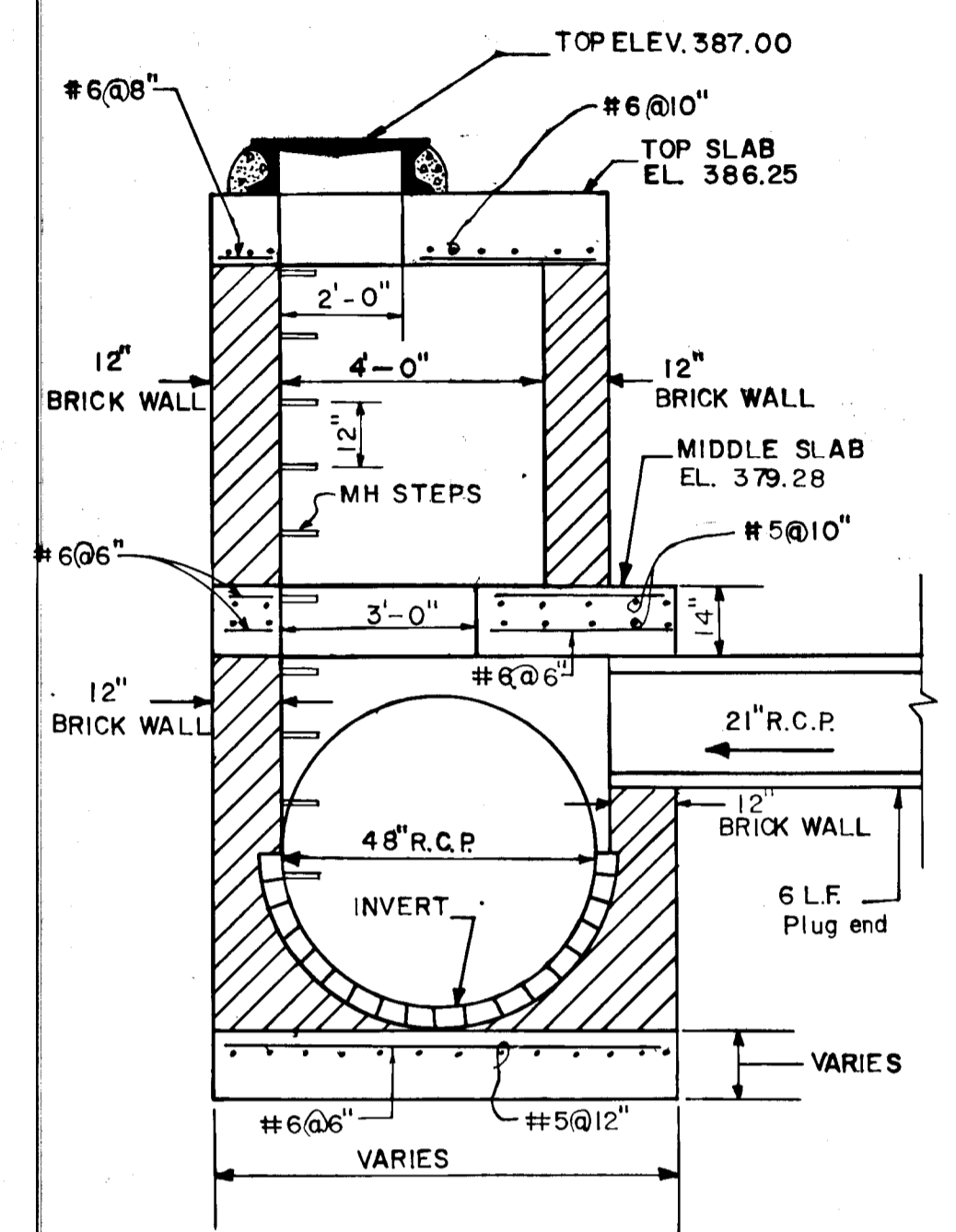
PLAN  
PROPOSED 24" CONNECTION



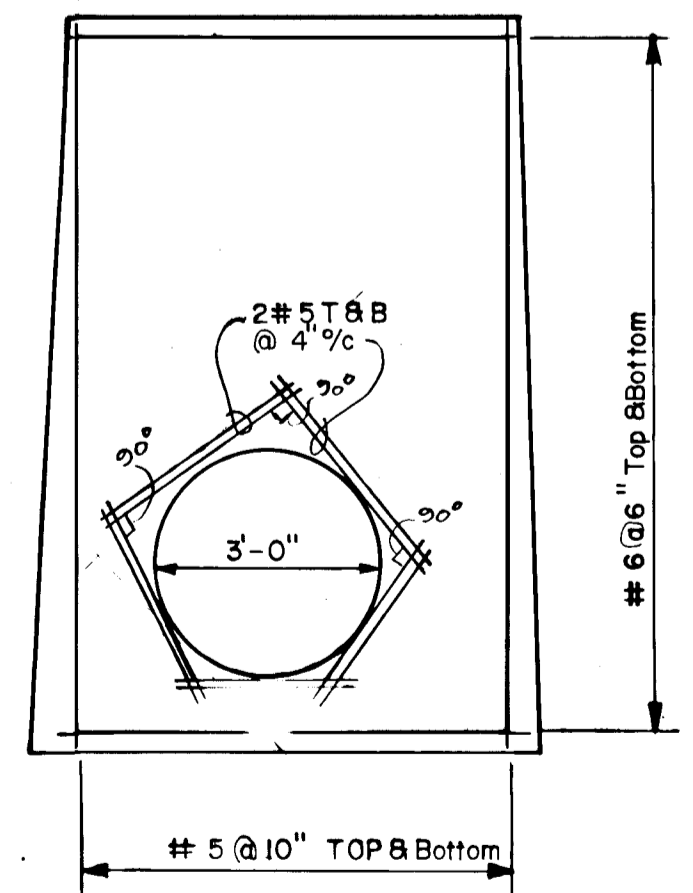
SECTION L-L



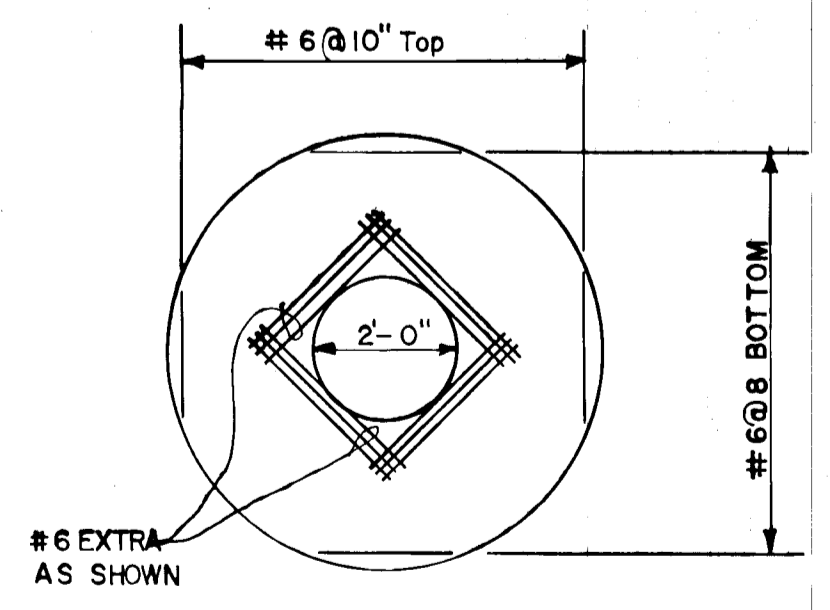
SECTION N-N



SECTION M-M



PLAN MIDDLE SLAB



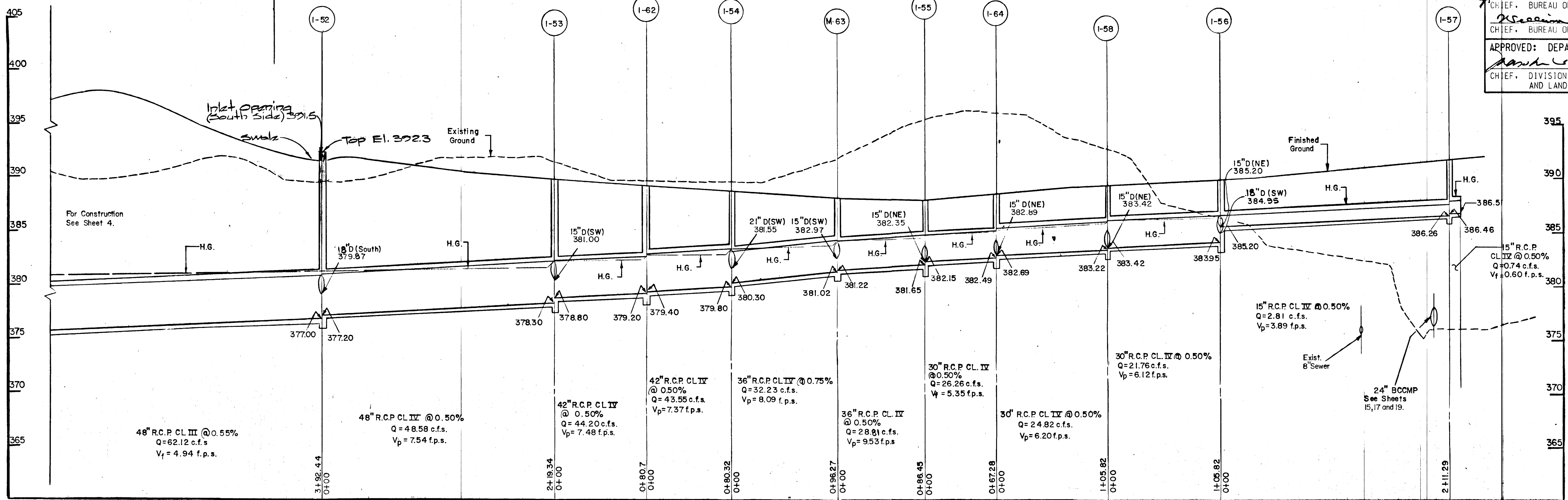
PLAN TOP SLAB

DETAIL I-51  
NO SCALE

REV. DATE	REV. NO.	REVISION DESCRIPTION
<b>COLUMBIA</b> 5TH ELECTION DISTRICT HOWARD COUNTY MARYLAND  OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION  PROJECT AREA: VILLAGE OF HICKORY RIDGE SECTION 6 AREA 3  PROJECT TITLE: STORM DRAIN DETAILS  SCALE: _____ DATE: _____  WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218  <i>Thomas J. Shafer</i> THOMAS J. SHAFER REGISTERED ENGINEER NO. 8457		

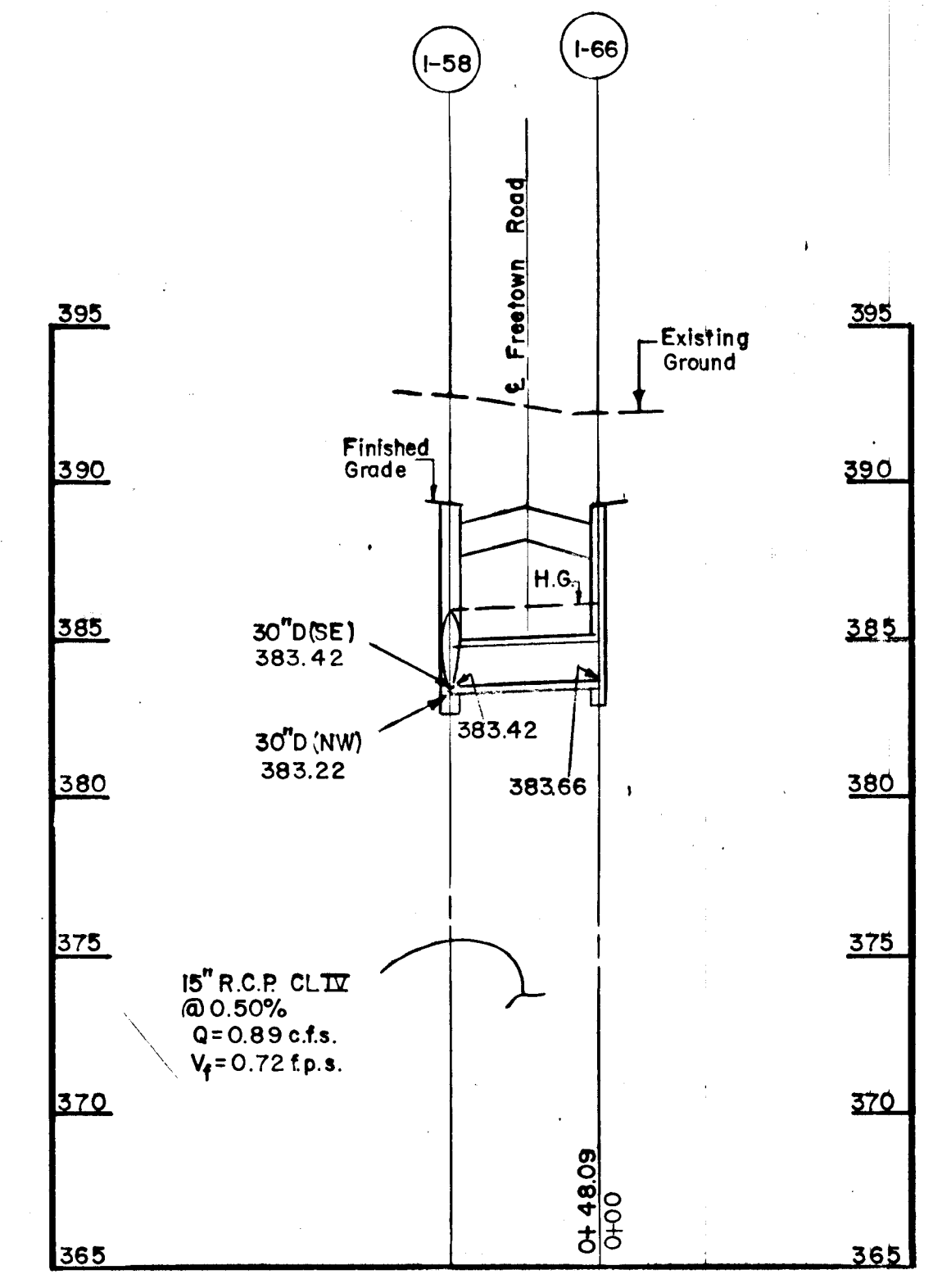
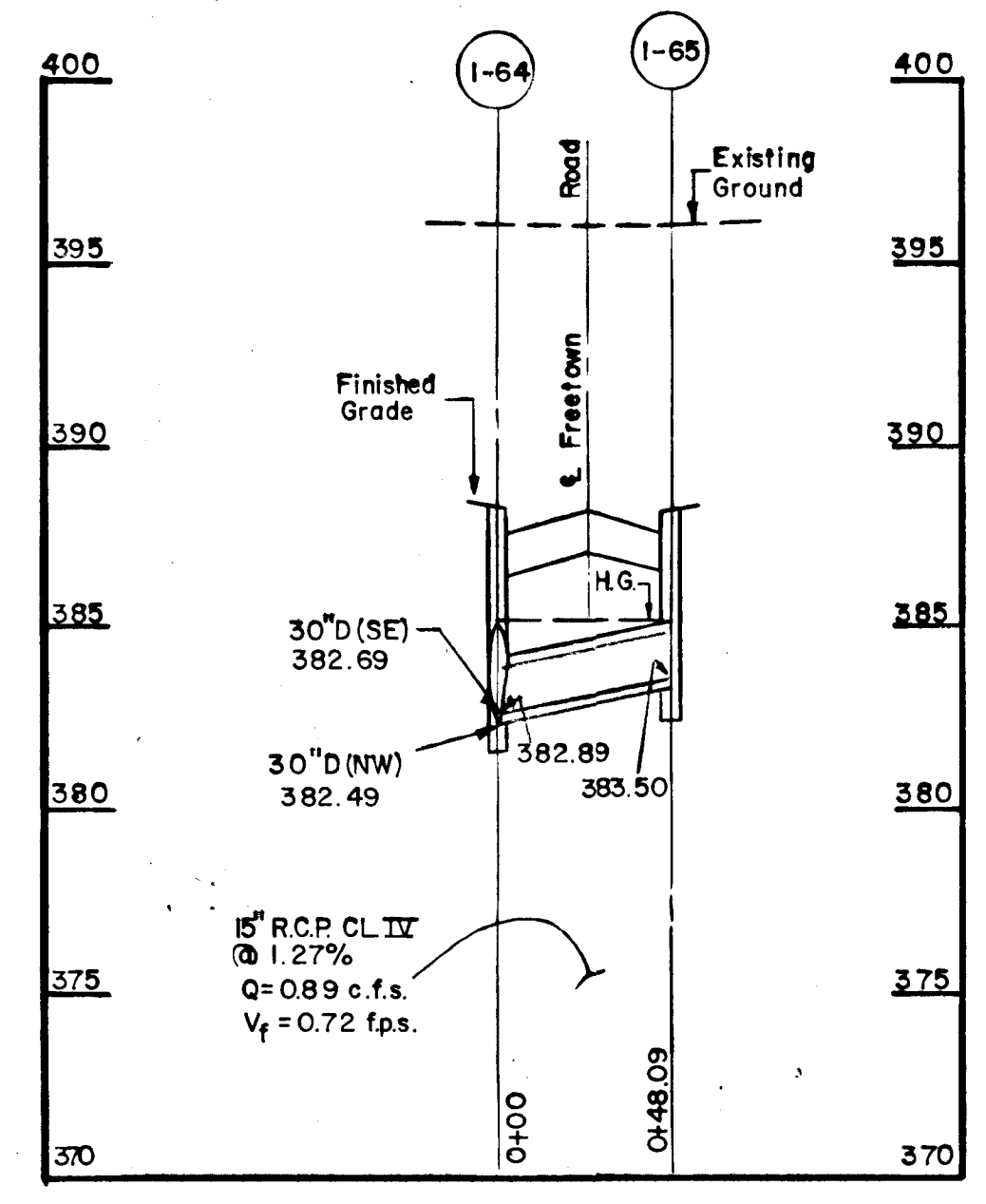
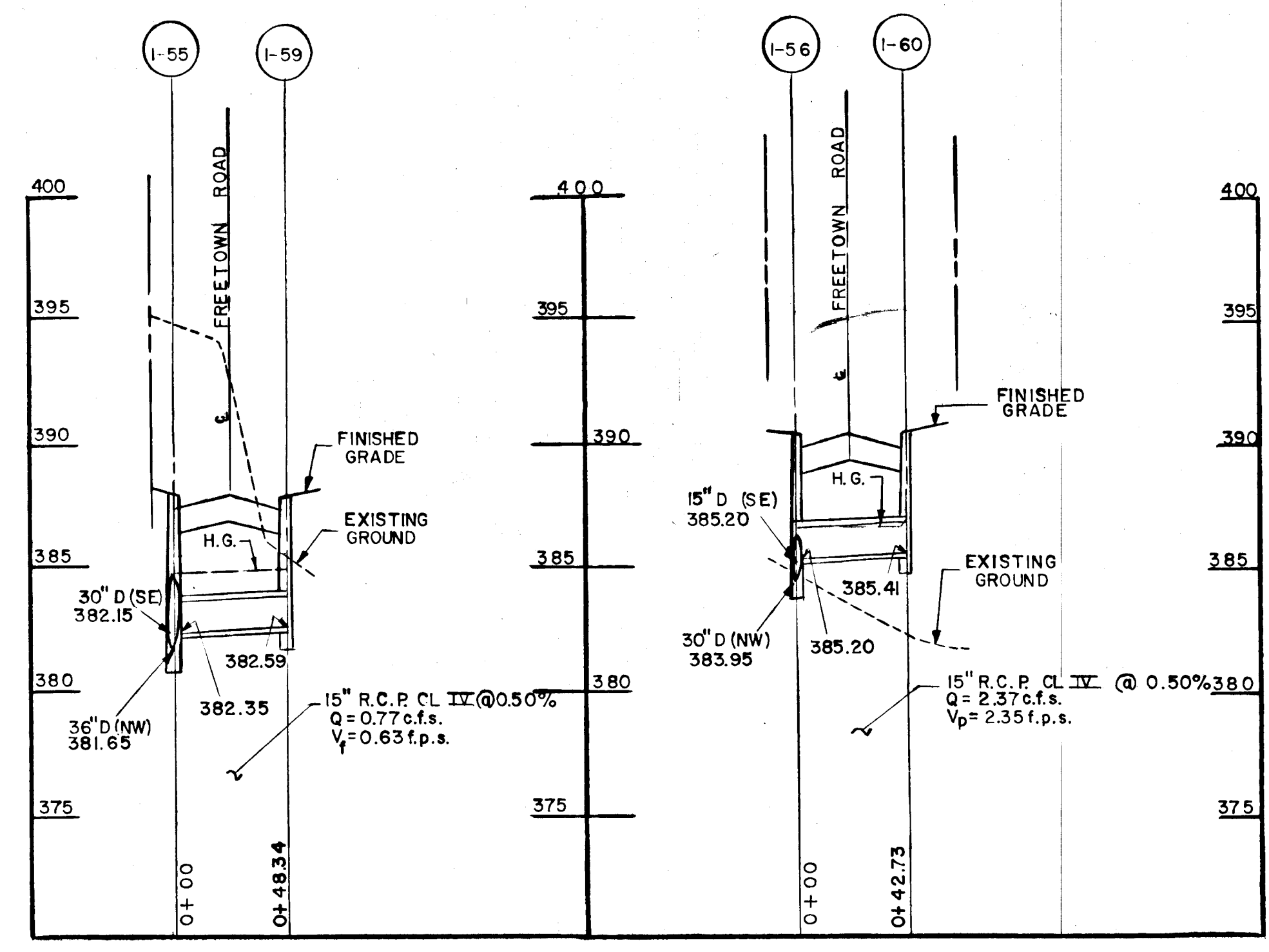
42

FREETOWN ROAD



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
 Chief, Land Development Division *10/27/90*  
*Lawrence W. Weiland* 10/24/90  
 Chief, Bureau of Highways  
 Chief, Bureau of Engineering *10/29/90*  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
 Chief, Division of Community Planning and Land Development *11/2/90*

NOTE:  
 THE TYPE OF BEDDING USED FOR STORM DRAIN PIPE SHALL BE CLASS C, SHAPED SUBGRADE. IF ROCK IS ENCOUNTERED, THE TRENCH INVERT SHOULD BE OVER EXCAVATED 6" AND THE OVER EXCAVATION OF 6" REFILLED WITH GRANULAR MATERIAL.



REV. DATE	REV. NO.	REVISION DESCRIPTION
4/23/92	3	Raised I-52 to Top El. 392.30
7/30/91	2	Changed 240 to 180 @ Inlets I-52 & I-56
6/17/91	1	Changed I-63 to M-63

**COLUMBIA**  
 5TH ELECTION DISTRICT  
 HOWARD COUNTY MARYLAND

OWNER AND DEVELOPER  
 THE HOWARD RESEARCH  
 AND DEVELOPMENT CORPORATION

PROJECT AREA:  
 VILLAGE OF HICKORY RIDGE  
 SECTION 6 AREA 3

PROJECT TITLE:  
 STORM DRAIN PROFILES

SCALE: 1"=50' ; 1"=5' DATE: DEC. 15, 1989

WHITMAN, REQUARDT AND ASSOCIATES  
 ENGINEERS  
 BALTIMORE, MARYLAND 21218

*Thomas J. Shafer*  
 THOMAS J. SHAFER  
 REGISTERED ENGINEER  
 NO. 8457

42



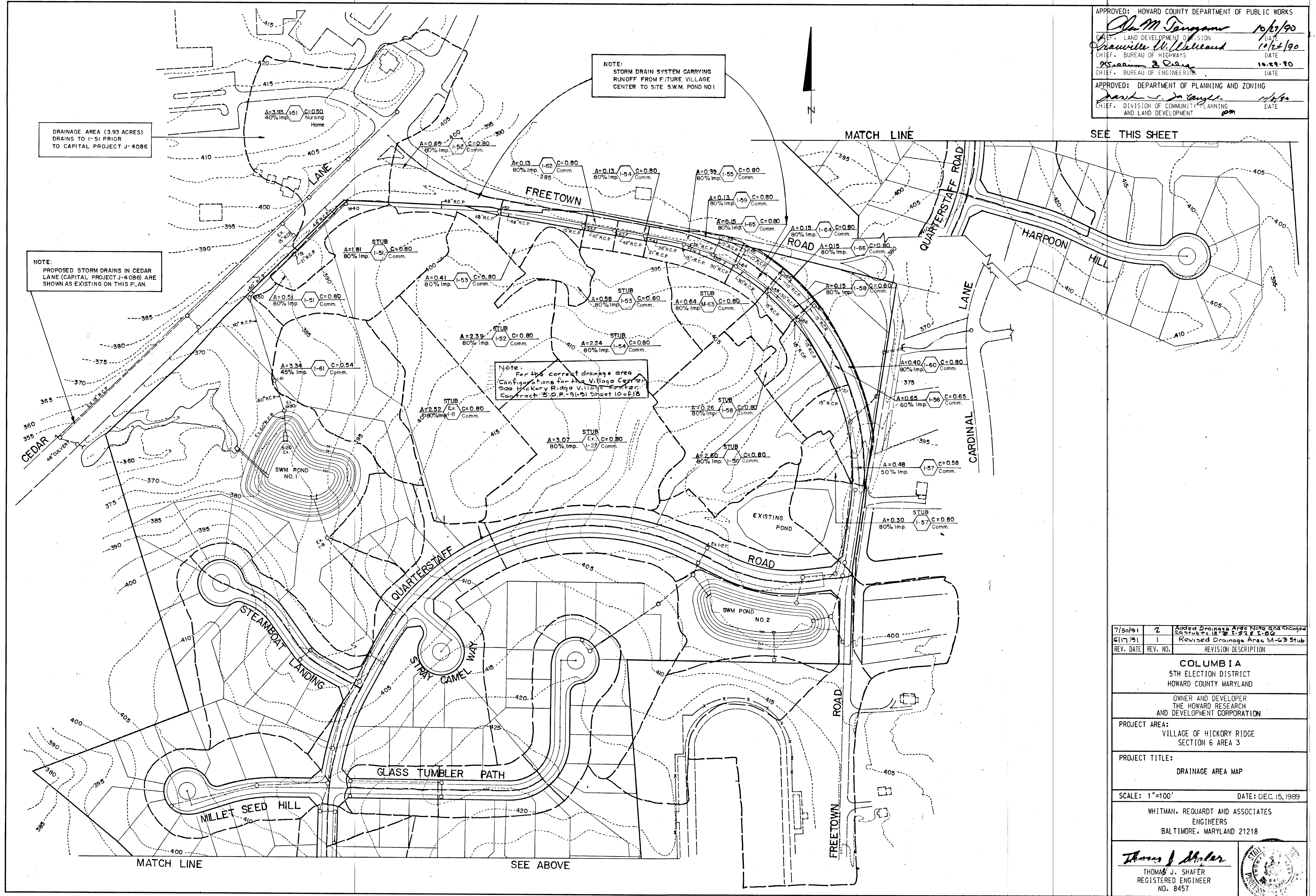
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*John M. Tangeman* 10/29/90  
 CHIEF, LAND DEVELOPMENT DIVISION DATE  
*William W. DeBeauvoir* 10/24/90  
 CHIEF, BUREAU OF HIGHWAYS DATE  
*William W. DeBeauvoir* 10/29/90  
 CHIEF, BUREAU OF ENGINEERING DATE  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Mark J. Doyle* 10/24/90  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

NOTE:  
 STORM DRAIN SYSTEM CARRYING  
 RUNOFF FROM FUTURE VILLAGE  
 CENTER TO SITE S.W.M. POND NO.1

DRAINAGE AREA (3.93 ACRES)  
 DRAINS TO I-51 PRIOR  
 TO CAPITAL PROJECT J-4086

NOTE:  
 PROPOSED STORM DRAINS IN CEDAR  
 LANE (CAPITAL PROJECT J-4086) ARE  
 SHOWN AS EXISTING ON THIS PLAN.

Note:  
 For the correct drainage area  
 configurations for the Village Center  
 see Hickory Ridge Village Center  
 Contract S.D.P.-9(1-51) Sheet 10 of 13



REV. DATE	REV. NO.	REVISION DESCRIPTION
7/30/91	2	Added Drainage Area Note and changed 24 stub to 18" & 1-24 & 1-50
6/17/91	1	Revised Drainage Area M-63 Stub

**COLUMBIA**  
 5TH ELECTION DISTRICT  
 HOWARD COUNTY MARYLAND

OWNER AND DEVELOPER  
 THE HOWARD RESEARCH  
 AND DEVELOPMENT CORPORATION

PROJECT AREA:  
 VILLAGE OF HICKORY RIDGE  
 SECTION 6 AREA 3

PROJECT TITLE:  
 DRAINAGE AREA MAP

SCALE: 1"=100' DATE: DEC. 15, 1989

WHITMAN, REQUARDT AND ASSOCIATES  
 ENGINEERS  
 BALTIMORE, MARYLAND 21218

*Thomas J. Shafer*  
 THOMAS J. SHAFER  
 REGISTERED ENGINEER  
 NO. 8457



42



APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Alan M. Tangam* 10/27/90  
 CHIEF, LAND DEVELOPMENT DIVISION  
*Granville W. Welton* 10/27/90  
 CHIEF, BUREAU OF HIGHWAYS  
*Deane B. Ray* 10-29-90  
 CHIEF, BUREAU OF ENGINEERING  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*John S. J. [unclear]* 11/19  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT *com*

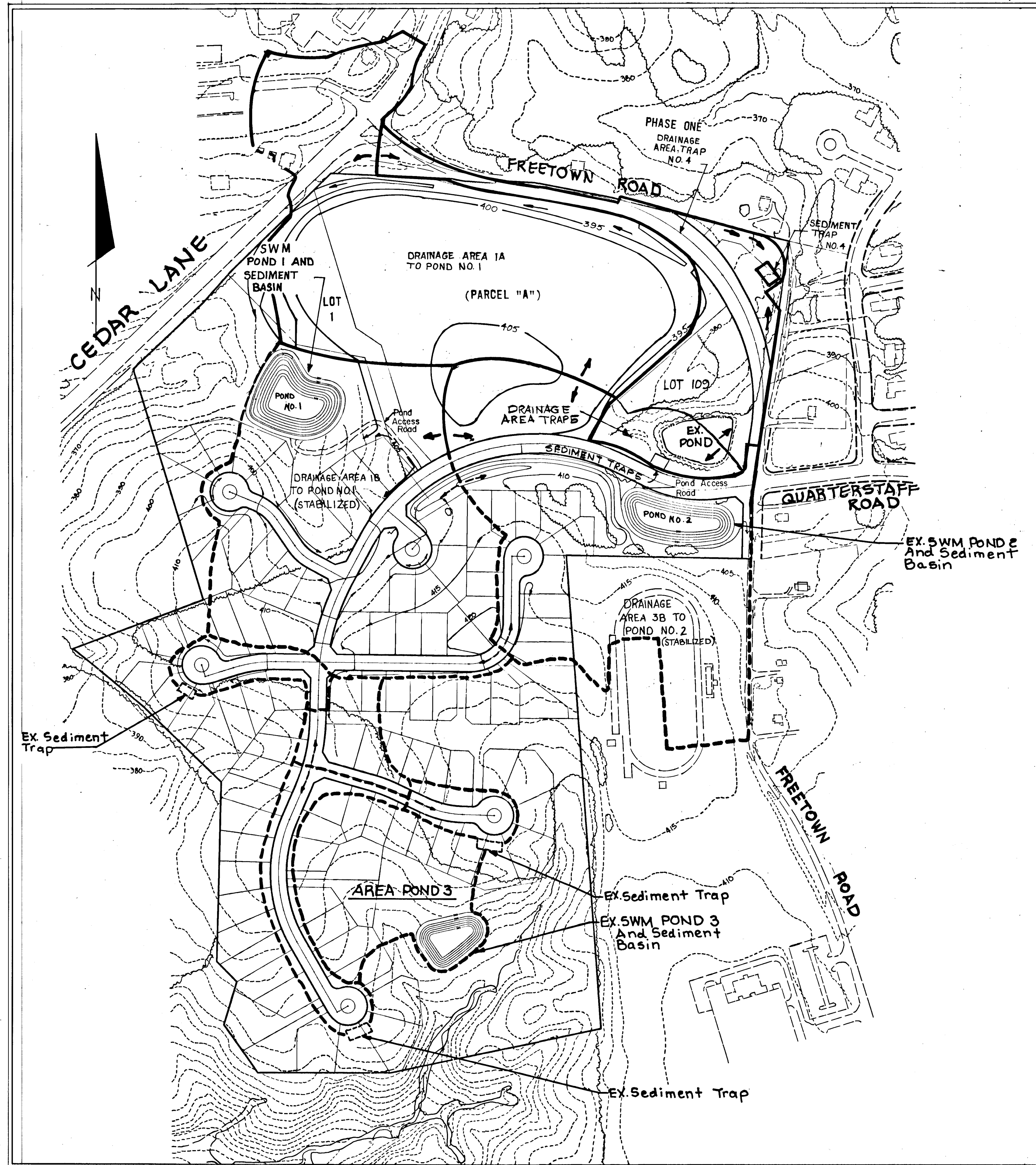
**SEQUENCE OF CONSTRUCTION**

PHASE ONE - (See Drawings 15 And 16).

1. OBTAIN GRADING PERMIT.
2. SEE ROAD CONSTRUCTION DRAWINGS FOR THE VILLAGE OF HICKORY RIDGE SECTION 6 AREA 5 (F-90-97), SHEETS 13 THRU 20. SEQUENCE OF CONSTRUCTION IS LISTED ON SHEET 13.  
GRADING AND SEDIMENT CONTROL WORK SHALL BE COORDINATED WITH GRADING AND SEDIMENT CONTROL CONSTRUCTION UNDER F-90-97.
3. CONSTRUCT STONE ENTRANCE OFF EXISTING FREETOWN ROAD OPPOSITE & STATION 12+0 OF NEW FREETOWN ROAD (SEE SHEET 15).
4. CLEAR AND GRUB AREAS FOR SEDIMENT CONTROL FACILITIES ONLY.
5. INSTALL 24" BCCMP. SEE SHEET 15. SEE PROFILE ON SHEET 19. PROVIDE TEMPORARY BULKHEAD IN MH-17 (SEE SHEETS 15 AND 19).
6. CONSTRUCT TRAP 4. CONSTRUCT THE BERM AND SWALE TO TRAP 4 AND CONNECT OUTFLOW WEIR TO EXISTING STORM DRAIN INLET I-36. SEE DETAIL ON SHEET 19.
7. AT NEW FREETOWN ROAD 8+31. REMOVE EXISTING INLET, BLOCK UPSTREAM END OF EXISTING 18" DRAIN, AND DIRECT ROAD SIDE RUNOFF TOWARD TRAP 4 (SEE SHEET 15).
8. CONSTRUCT NEW SILT FENCE AS SHOWN ON SHEET 16.
9. CONSTRUCT PERIMETER STORM DRAIN FROM MANHOLE M-30 AT POND 1. SEE PLAN AND PROFILES ON SHEETS 4 AND 12. THE PERIMETER DITCH SHALL BE MAINTAINED DURING STORM DRAIN CONSTRUCTION.
10. GRADE NEW FREETOWN ROAD.
11. CONSTRUCT UTILITIES AND RELOCATE FIRE HYDRANTS.

PHASE TWO - ( See Drawings 17,18,20 AND 21)

12. CONSTRUCT DIVERSION DIKE TO INLET I-51 AS SHOWN (SEE SHEET 18).
13. REMOVE PERIMETER DITCH. GRADE FILL AREA ADJACENT TO CEDAR LANE. INLETS I-51 AND I-61 SHALL BE SUMPED. SEE DETAILS, SHEETS 9 AND 19. SEE GRADING ON SHEET 18.
14. EXTEND THE ORIGINAL PERIMETER DIKE, (EAST SIDE). SEE SHEET 17. PARCEL A AND FREETOWN ROAD DRAIN TO POND 1 (SEDIMENT BASIN) VIA THE PERIMETER STORM DRAIN.
15. CONSTRUCT SILT FENCE ALONG NORTH SIDE QUARTERSTAFF ROAD (LOT 109).
16. REMOVE WATER FROM THE EXISTING POND IN OPEN SPACE LOT 109. WATER SHALL BE REMOVED BY PUMPING. PUMPED WATER SHALL DRAIN TO THE 24" BCCMP. SEE SHEET 17.
17. AFTER WATER REMOVAL, CONSTRUCT NEW INLET AT UPSTREAM END OF 24" BCCMP AND INSTALL 15" PLASTIC STORM DRAIN PIPE TO EXIST. POND. SEE PROFILE ON SHEET 19.
18. GRADE LOT 109 AS SHOWN. DO NOT DISTURB EXISTING POND.
19. CONSTRUCT CURB AND GUTTER AND PAVE NEW FREETOWN ROAD.
20. STABILIZE PARCEL A AND LOT 109.
21. INSTALL NEW SILT FENCE AROUND WETLAND CREATION AREA. SEE PARTIAL GRADING PLAN ON SHEET 17. REMOVE REMAINING OLD FREETOWN ROAD PAVING.
22. GRADE LOTS 107 AND 108 FOR WETLAND CREATION AS SHOWN ON PARTIAL PLAN, SHEET 17. REMOVE TRAP 4 AT END OF THIS GRADING.
23. MODIFY INLET I-36 AS SHOWN ON SHEET 20.
24. SEED ENTIRE AREA (LOTS 107 & 108) WITH WET AREA SEED MIXTURE. SEE NOTES ON SHEET 20.
25. INSTALL PLANT MATERIAL IN ACCORDANCE WITH PLANTING PLAN, SCHEDULES AND NOTES. SEE SHEET 20.
26. AFTER APPROVAL BY THE SEDIMENT CONTROL INSPECTOR, SEDIMENT CONTROL FACILITIES MAY BE REMOVED EXCEPT AS SPECIFIED.



**SEDIMENT CONTROL- INTERIM SWM**

PHASE ONE

- \* Drainage Area, Pond 1 = 37.2 Acres
- \* Drainage Area, Pond 2 = 16.2 Acres
- \* Drainage Area, Trap No. 4 = 0.4 ACRES
- \* Drainage Area, Trap No. 5 = 1.3 ACRES
- \* Drainage Areas Shown are the Same as Listed on Sheet 13 of the Road Drawings VHR 6/5 (F-90-97).
- \*\* Sediment Control Only.

PHASE TWO

- Drainage Area, Pond No. 1 = 40.1 Acres
- Drainage Area, Trap No. 4 = 4.6 ACRES

6/13/91	1	Added Trap 5 Revised Constr. Sequence
REV. DATE	REV. NO.	REVISION DESCRIPTION

**COLUMBIA**  
 5TH ELECTION DISTRICT  
 HOWARD COUNTY MARYLAND

OWNER AND DEVELOPER  
 THE HOWARD RESEARCH  
 AND DEVELOPMENT CORPORATION

PROJECT AREA:  
 VILLAGE OF HICKORY RIDGE  
 SECTION 6 AREA 3

PROJECT TITLE:  
 SEDIMENT CONTROL DRAINAGE AREA MAP

SCALE: 1" = 200' DATE: DEC. 15, 1989

WHITMAN, REQUARDT AND ASSOCIATES  
 ENGINEERS  
 BALTIMORE, MARYLAND 21218

*Thomas J. Shafer*  
 THOMAS J. SHAFER  
 REGISTERED ENGINEER  
 NO. 8457

REVIEWED FOR HOWARD S.C.D. AND MEETS THE TECHNICAL REQUIREMENTS.  
*John H. [unclear]* 9/28/90  
 SOIL CONSERVATION SERVICE DATE

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

BY THE ENGINEER:  
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."  
*Thomas J. Shafer* 12-15-89  
 THOMAS J. SHAFER P.E. NO. 8457 DATE

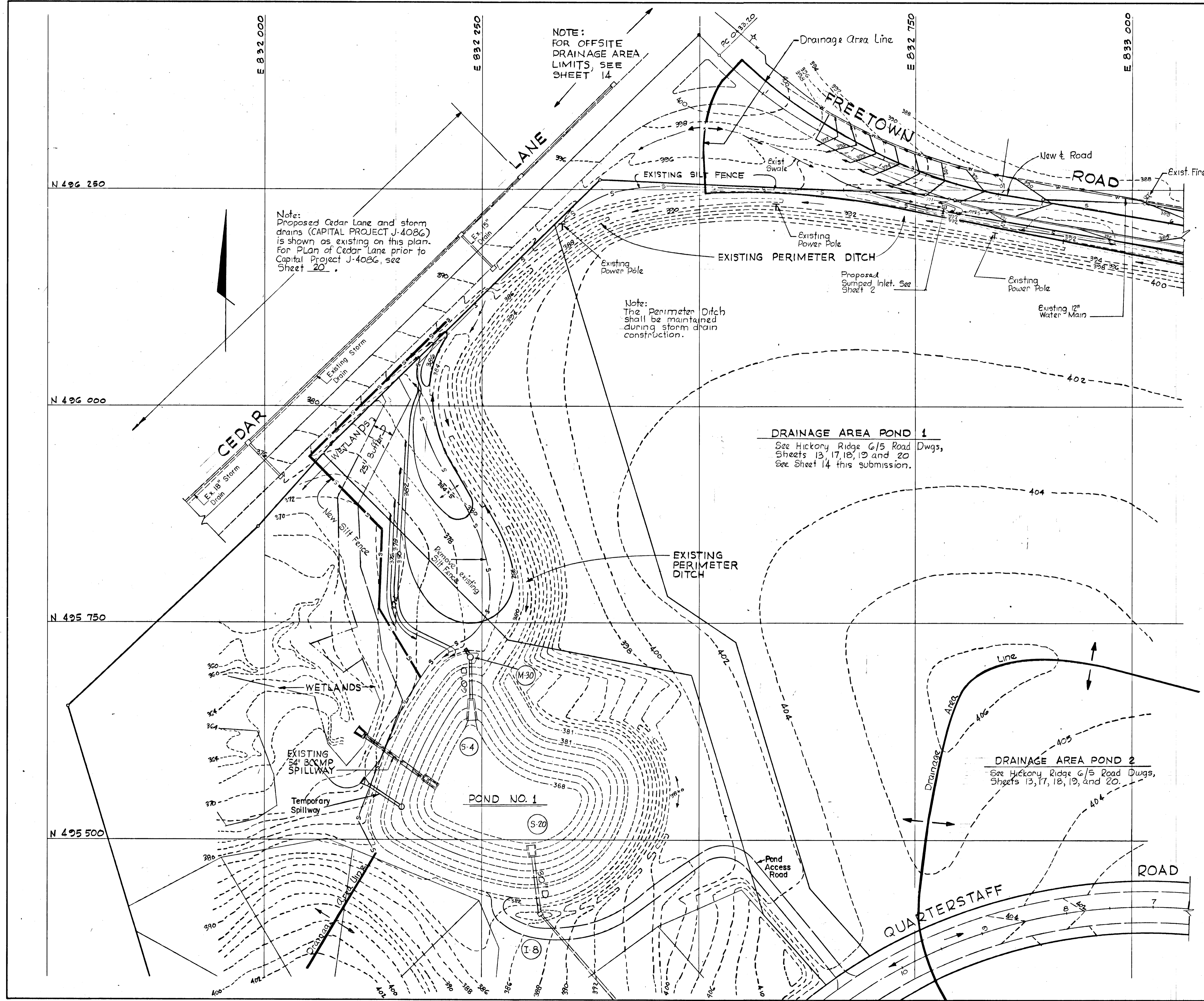
THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
*John H. [unclear]* 9/28/90  
 HOWARD S.C.D. DATE

*Joseph H. Necker Jr.* 12-15-89  
 JOSEPH H. NECKER JR. DATE









APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Alan M. Taragano* 10/27/90  
 CHIEF, LAND DEVELOPMENT DIVISION DATE  
*Graville W. Weiland* 10/24/90  
 CHIEF, BUREAU OF HIGHWAYS DATE  
*William B. Ray* 11-29-90  
 CHIEF, BUREAU OF ENGINEERING DATE  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*David J. ...* 11/1/90  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

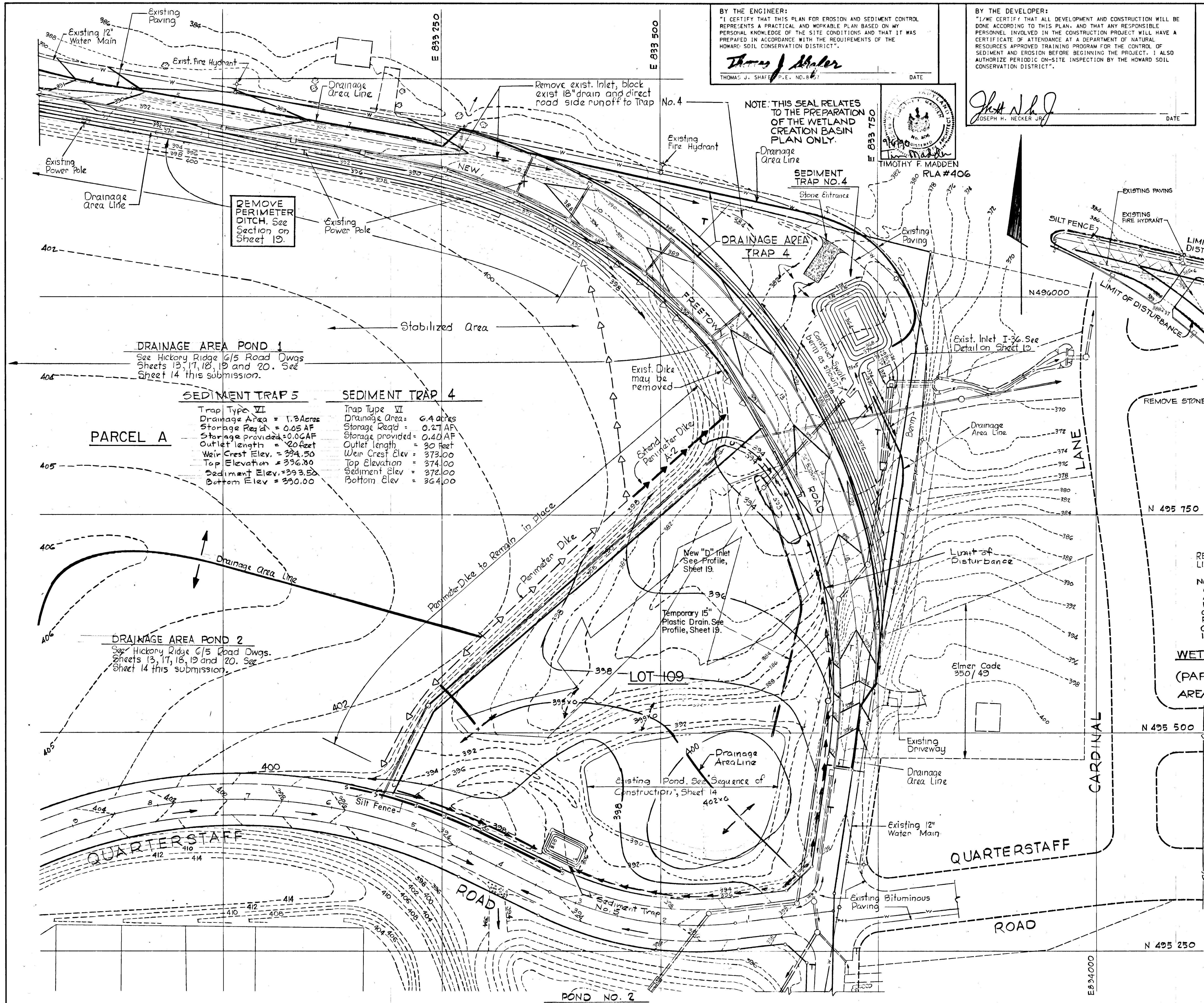
REVIEWED FOR HOWARD S.C.D. AND MEETS THE TECHNICAL REQUIREMENTS.  
*James M. Holden* 9/28/90  
 SOIL CONSERVATION SERVICE DATE  
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
*J. P. ...* 9/28/90  
 HOWARD S.C.D. DATE

BY THE DEVELOPER:  
 "I/WE CERTIFY THAT ALL DEVELOPMENT AND CONSTRUCTION WILL BE DONE ACCORDING TO THIS PLAN, AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT. I ALSO AUTHORIZE PERIODIC ON-SITE INSPECTION BY THE HOWARD SOIL CONSERVATION DISTRICT."  
*Joseph H. Necker Jr.*  
 JOSEPH H. NECKER JR. DATE

BY THE ENGINEER:  
 "I CERTIFY THAT THIS PLAN FOR EROSION AND SEDIMENT CONTROL REPRESENTS A PRACTICAL AND WORKABLE PLAN BASED ON MY PERSONAL KNOWLEDGE OF THE SITE CONDITIONS AND THAT IT WAS PREPARED IN ACCORDANCE WITH THE REQUIREMENTS OF THE HOWARD SOIL CONSERVATION DISTRICT."  
*Thomas J. Shafer*  
 THOMAS J. SHAFER P.E. NO. 8457 DATE

REV. DATE	REV. NO.	REVISION DESCRIPTION
<b>COLUMBIA</b> 5TH ELECTION DISTRICT HOWARD COUNTY MARYLAND		
OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION		
PROJECT AREA: VILLAGE OF HICKORY RIDGE SECTION 6 AREA 3		
PROJECT TITLE: GRADING AND SEDIMENT CONTROL PLAN PHASE 1		
SCALE: 1" = 50'		DATE: DEC. 15, 1989
WHITMAN, REARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218		
<i>Thomas J. Shafer</i> THOMAS J. SHAFER REGISTERED ENGINEER NO. 8457		

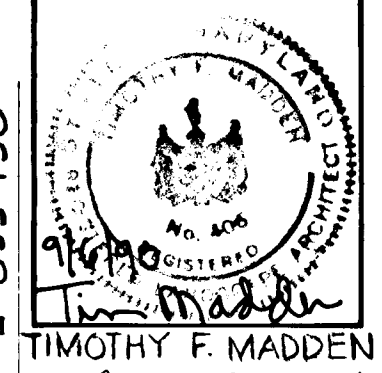




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*Thomas J. Shafer*  
 THOMAS J. SHAFER, P.E., NO. 8457 DATE

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*Joseph H. Necker Jr.*  
 JOSEPH H. NECKER JR. DATE

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Clayton J. Johnson* 10/29/90 DATE  
 CHIEF, LAND DEVELOPMENT DIVISION  
*Charles W. Wilcox* 10/24/90 DATE  
 CHIEF, BUREAU OF HIGHWAYS  
*William E. Sney* 10-22-90 DATE  
 CHIEF, BUREAU OF ENGINEERING  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Paul V. ...* 11/01 DATE  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT



REVIEWED FOR HOWARD S.C.D. AND MEETS THE TECHNICAL REQUIREMENTS.  
*James M. ...* 9/26/90 DATE  
 SOIL CONSERVATION SERVICE  
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
*J.P. ...* 9/26/90 DATE  
 HOWARD S.C.D.

**DRAINAGE AREA POND 1**  
 See Hickory Ridge G/5 Road Dwgs. Sheets 13, 17, 18, 19 and 20. See Sheet 14 this submission.

**SEDIMENT TRAP 5**  
 Trap Type VII  
 Drainage Area = 1.3 Acres  
 Storage Req'd = 0.05 AF  
 Storage provided = 0.06 AF  
 Outlet length = 20 feet  
 Weir Crest Elev. = 394.50  
 Top Elevation = 396.80  
 Sediment Elev. = 393.50  
 Bottom Elev. = 390.00

**SEDIMENT TRAP 4**  
 Trap Type VI  
 Drainage Area = 6.4 acres  
 Storage Req'd = 0.27 AF  
 Storage provided = 0.40 AF  
 Outlet length = 30 feet  
 Weir Crest Elev. = 373.00  
 Top Elevation = 374.00  
 Sediment Elev. = 372.00  
 Bottom Elev. = 364.00

**PARCEL A**

**DRAINAGE AREA POND 2**  
 See Hickory Ridge G/5 Road Dwgs. Sheets 13, 17, 18, 19 and 20. See Sheet 14 this submission.

**WETLAND CREATION BASIN PLAN**  
 SCALE: 1" = 50'  
 (PARTIAL GRADING PLAN)  
 AREA TO BE RETURNED TO HRD

REV. DATE	REV. NO.	REVISION DESCRIPTION
6/19/91	1	Added Grading, Sediment Control Lot 109

**COLUMBIA**  
 5TH ELECTION DISTRICT  
 HOWARD COUNTY MARYLAND

OWNER AND DEVELOPER  
 THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION

PROJECT AREA:  
 VILLAGE OF HICKORY RIDGE  
 SECTION 6 AREA 3

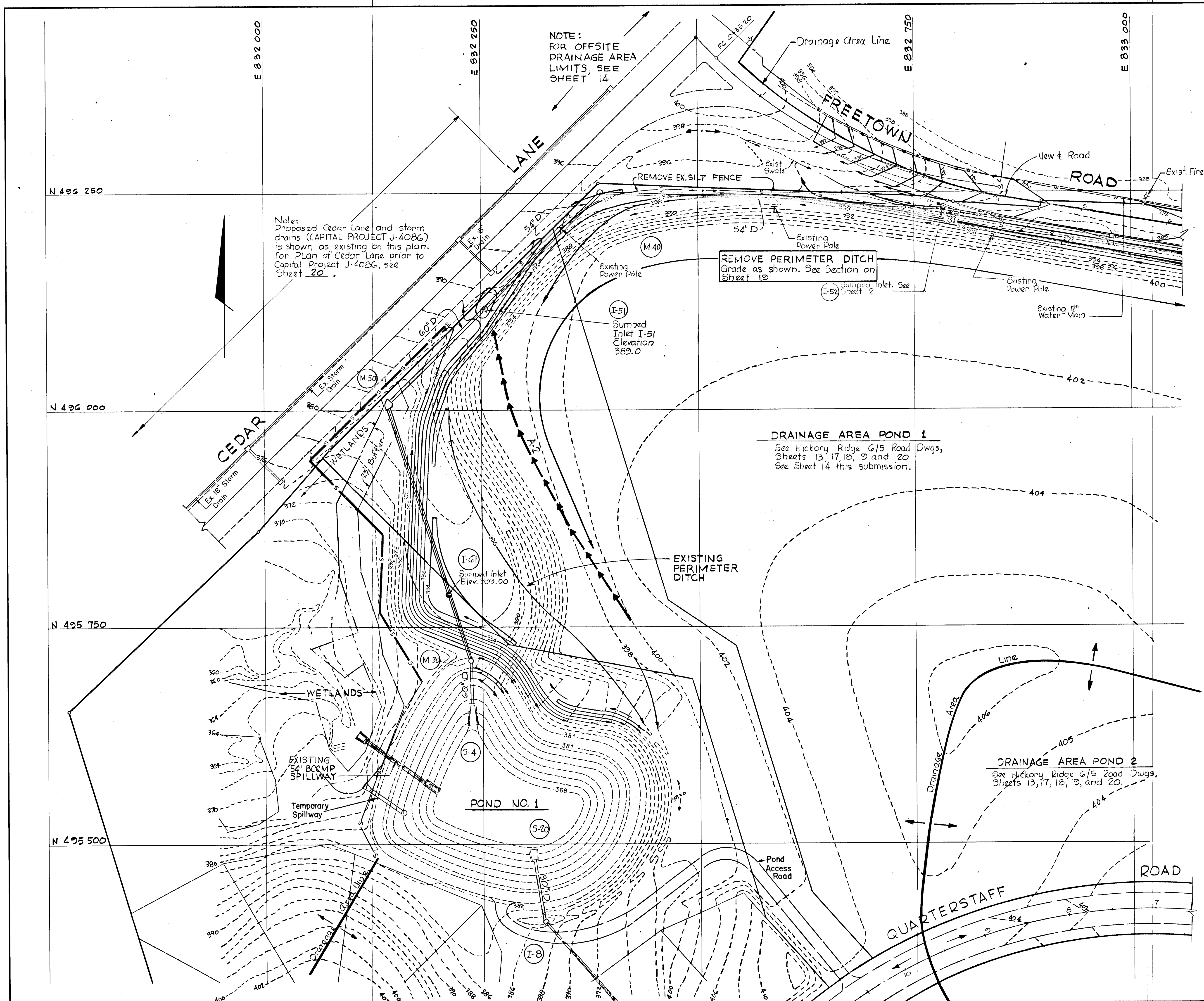
PROJECT TITLE:  
 GRADING AND SEDIMENT CONTROL PLAN  
 PHASE 2

SCALE: 1" = 50' DATE: DEC. 15, 1989

WHITMAN, REQUARDT AND ASSOCIATES  
 ENGINEERS  
 BALTIMORE, MARYLAND 21218

*Thomas J. Shafer*  
 THOMAS J. SHAFER  
 REGISTERED ENGINEER  
 NO. 8457





NOTE:  
FOR OFFSITE  
DRAINAGE AREA  
LIMITS, SEE  
SHEET 14

Note:  
Proposed Cedar Lane and storm  
drains (CAPITAL PROJECT J-4086)  
is shown as existing on this plan.  
For PLAN of Cedar Lane prior to  
Capital Project J-4086, see  
Sheet 20.

REMOVE PERIMETER DITCH  
Grade as shown. See Section on  
Sheet 13

**DRAINAGE AREA POND 1**  
See Hickory Ridge G/5 Road  
Dwgs,  
Sheets 13, 17, 18, 19 and 20  
See Sheet 14 this submission.

**DRAINAGE AREA POND 2**  
See Hickory Ridge G/5 Road Dwgs,  
Sheets 13, 17, 18, 19, and 20.

APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*John M. Tompkins* 10/23/90  
 CHIEF, LAND DEVELOPMENT DIVISION DATE  
*Lawrence W. Welwood* 10/24/90  
 CHIEF, BUREAU OF HIGHWAYS DATE  
*William B. Riley* 10/24/90  
 CHIEF, BUREAU OF ENGINEERING DATE  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Paul J. ...* 11/4/90  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE

REVIEWED FOR HOWARD S.C.D. AND MEETS THE  
TECHNICAL REQUIREMENTS.  
*James M. ...* 9/28/90  
 U.S. SOIL CONSERVATION SERVICE DATE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL  
EROSION AND SEDIMENT CONTROL BY THE HOWARD  
SOIL CONSERVATION DISTRICT.  
*John R. ...* 9/28/90  
 HOWARD S.C.D. DATE

BY THE DEVELOPER:  
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*Joseph H. Necker Jr.*  
 JOSEPH H. NECKER JR. DATE

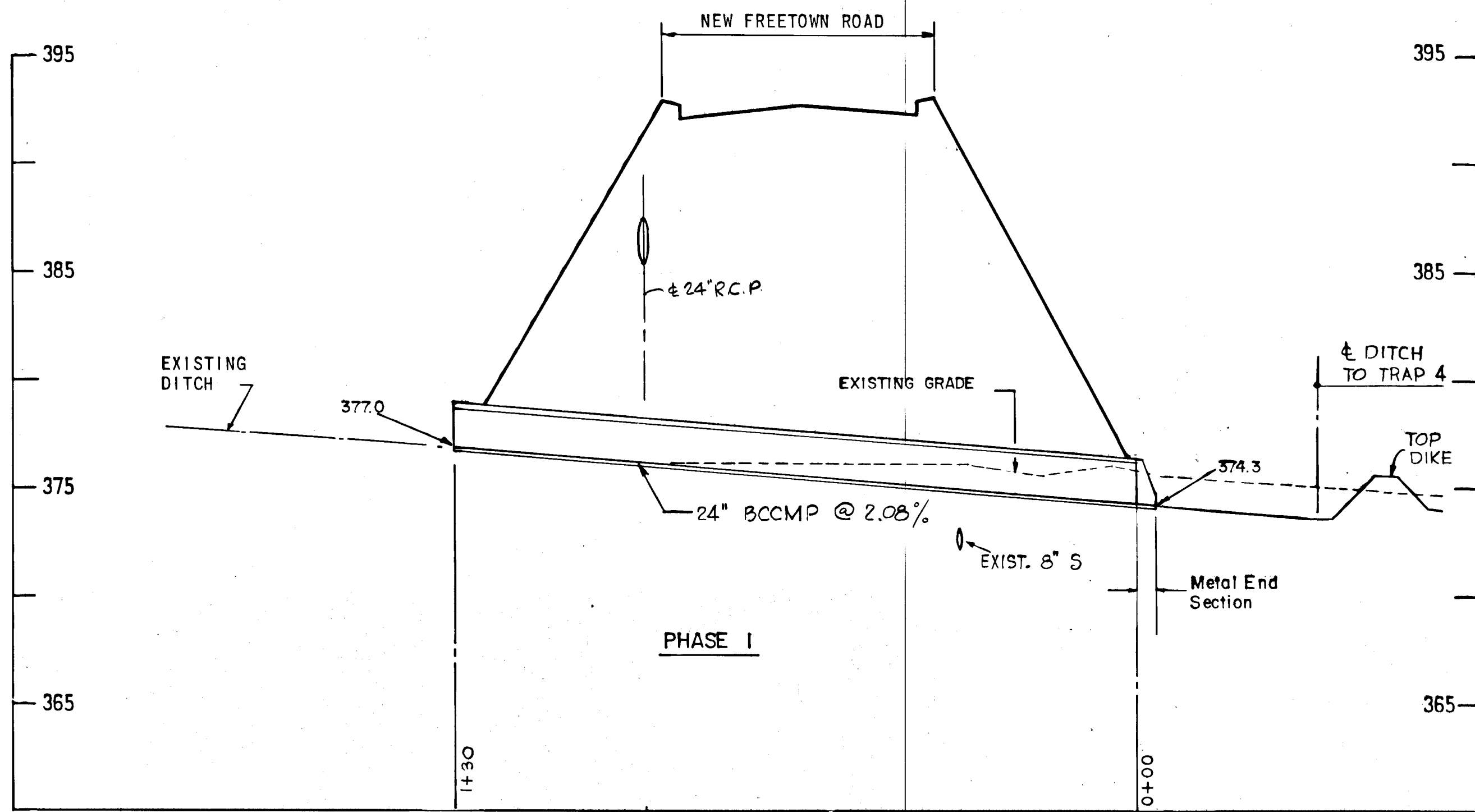
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HOWARD SOIL CONSERVATION DISTRICT."  
*Thomas J. Shafer*  
 THOMAS J. SHAFER, P.E. NO. 8457 DATE

REV. DATE	REV. NO.	REVISION DESCRIPTION
<b>COLUMBIA</b>		
5TH ELECTION DISTRICT HOWARD COUNTY MARYLAND		
OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION		
PROJECT AREA: VILLAGE OF HICKORY RIDGE SECTION 6 AREA 3		
PROJECT TITLE: GRADING AND SEDIMENT CONTROL PLAN PHASE 2		
SCALE: 1" = 50'		DATE: DEC. 15, 1989
WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218		
<i>Thomas J. Shafer</i> THOMAS J. SHAFER REGISTERED ENGINEER NO. 8457		

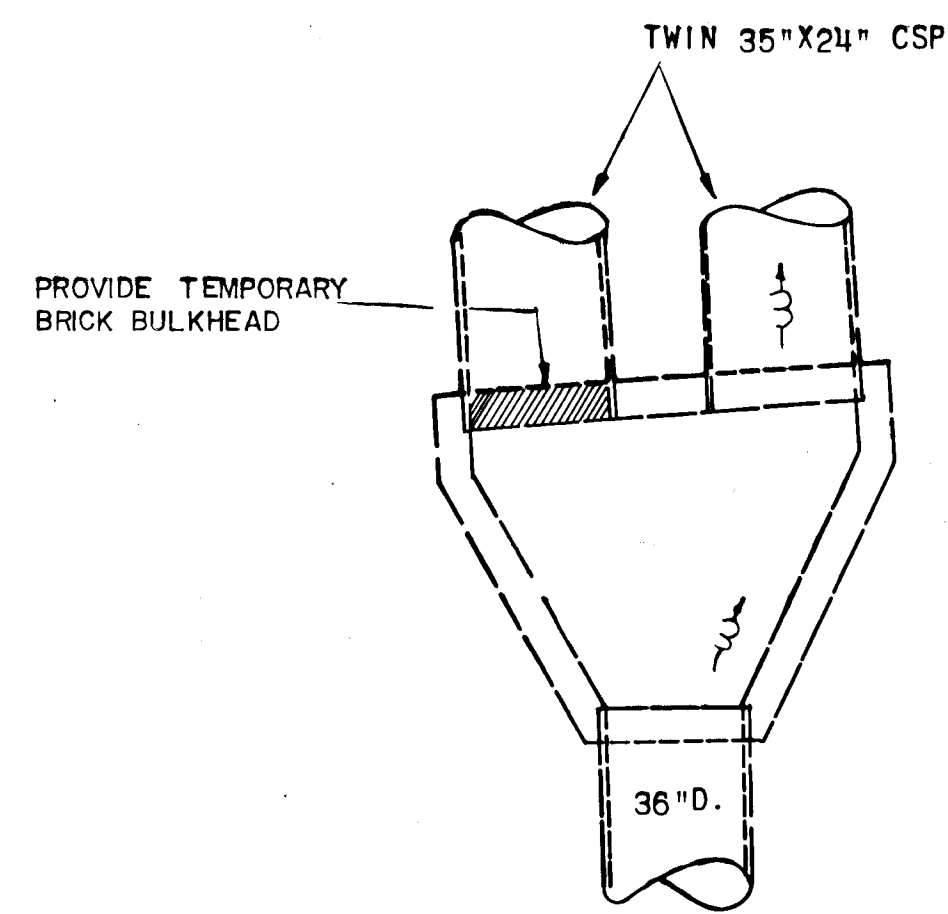
42



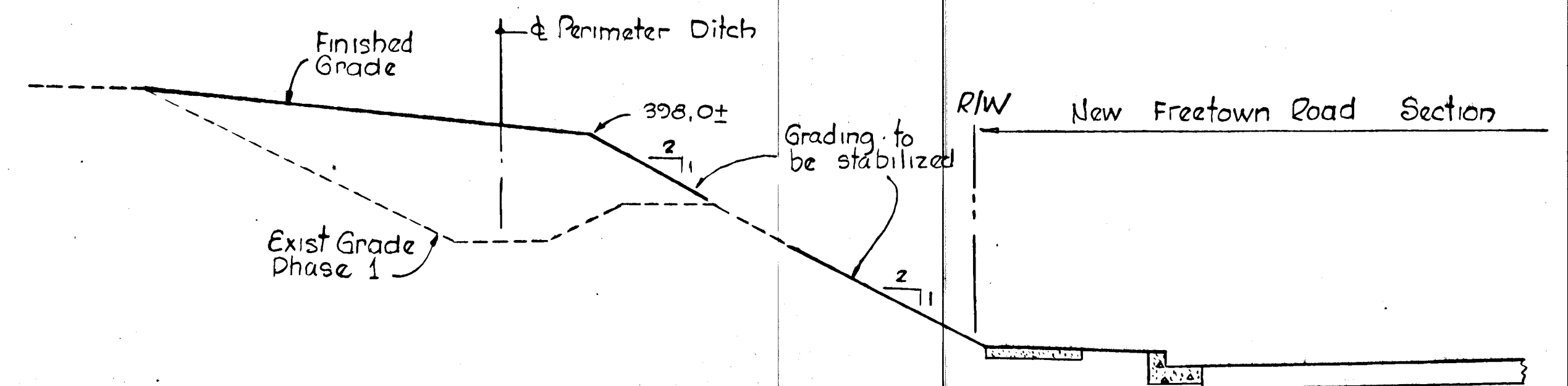
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Robert M. Tangeman* 10/23/90  
 CHIEF, LAND DEVELOPMENT DIVISION DATE  
*Lawrence W. Welsand* 10/23/90  
 CHIEF, BUREAU OF HIGHWAYS DATE  
*William B. Ryan* 10/23/90  
 CHIEF, BUREAU OF ENGINEERING DATE  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Mark S. Taylor* 11/13/90  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE



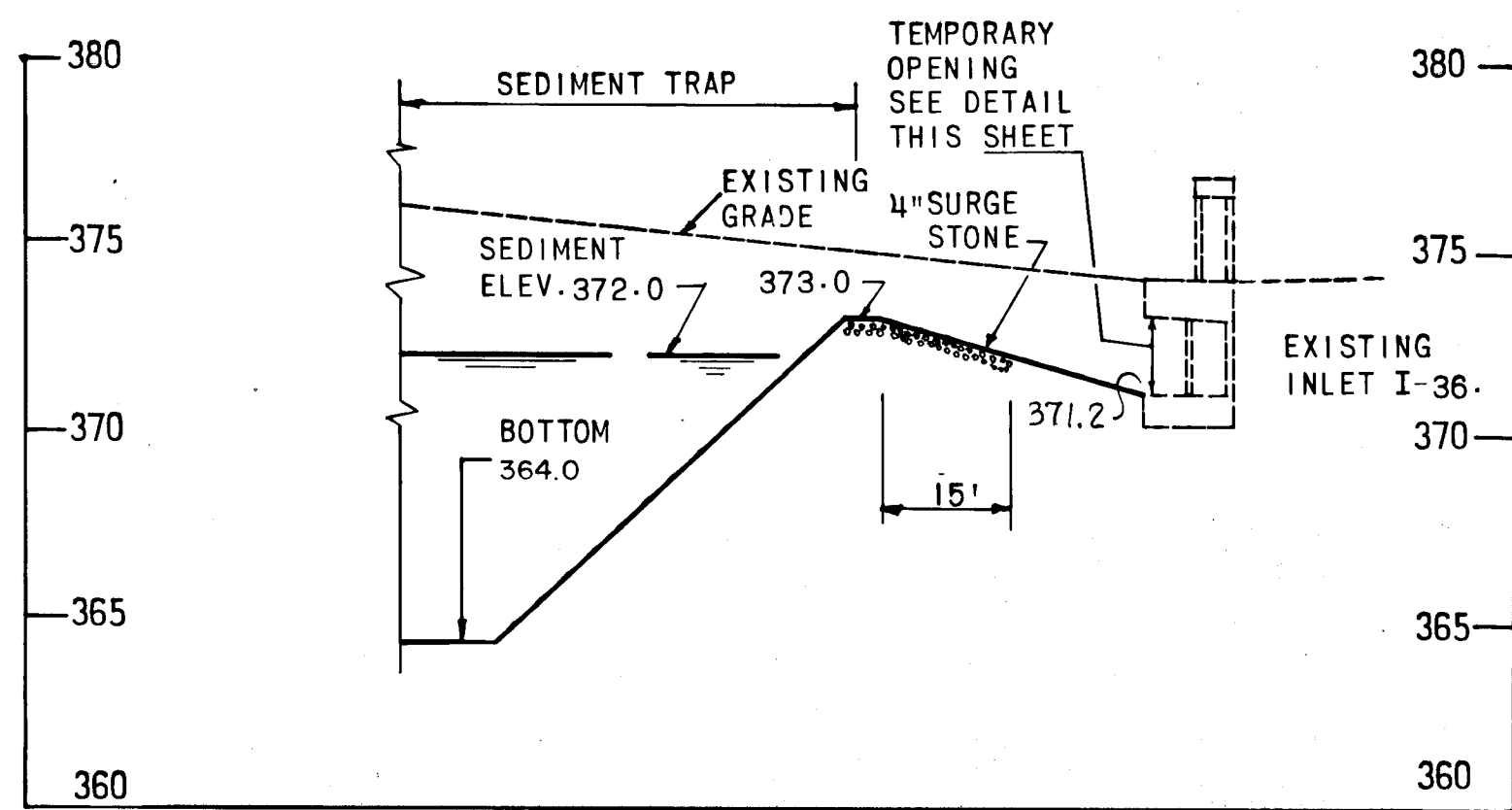
-- PROFILE - WETLAND DRAIN --  
 SCALE: 1" = 20', 1" = 5'



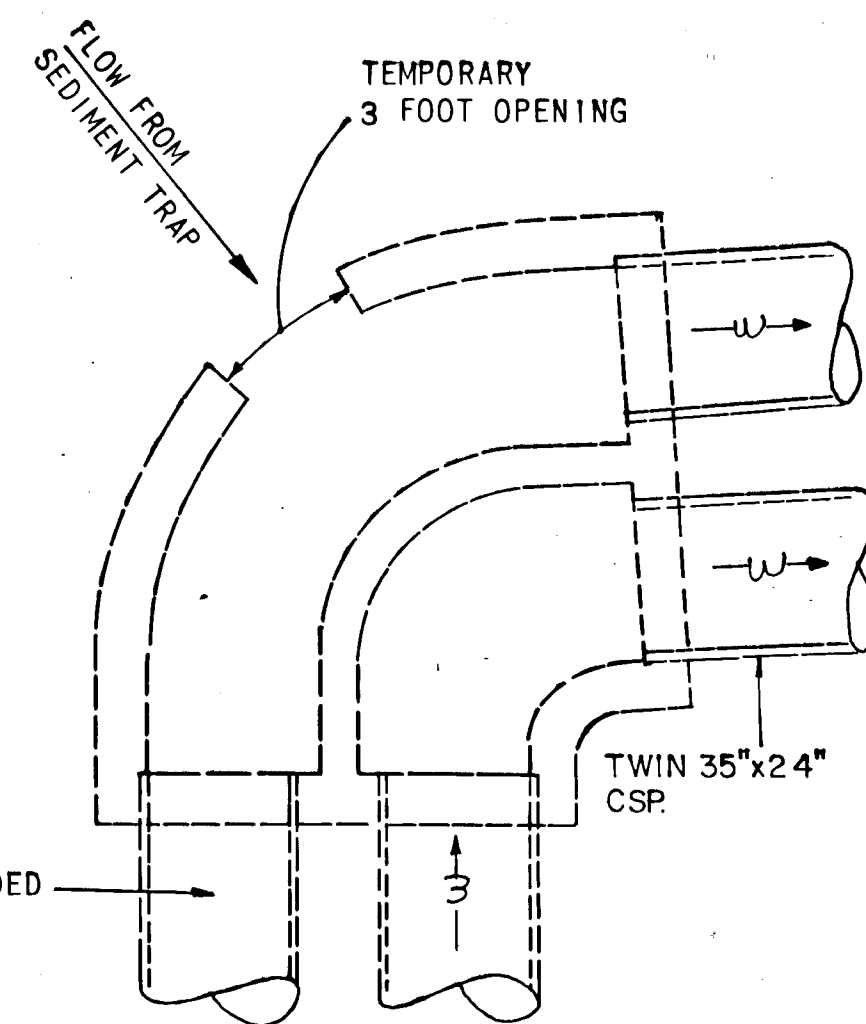
EXISTING MANHOLE - 17  
 SCALE: 1/4" = 1'-0"



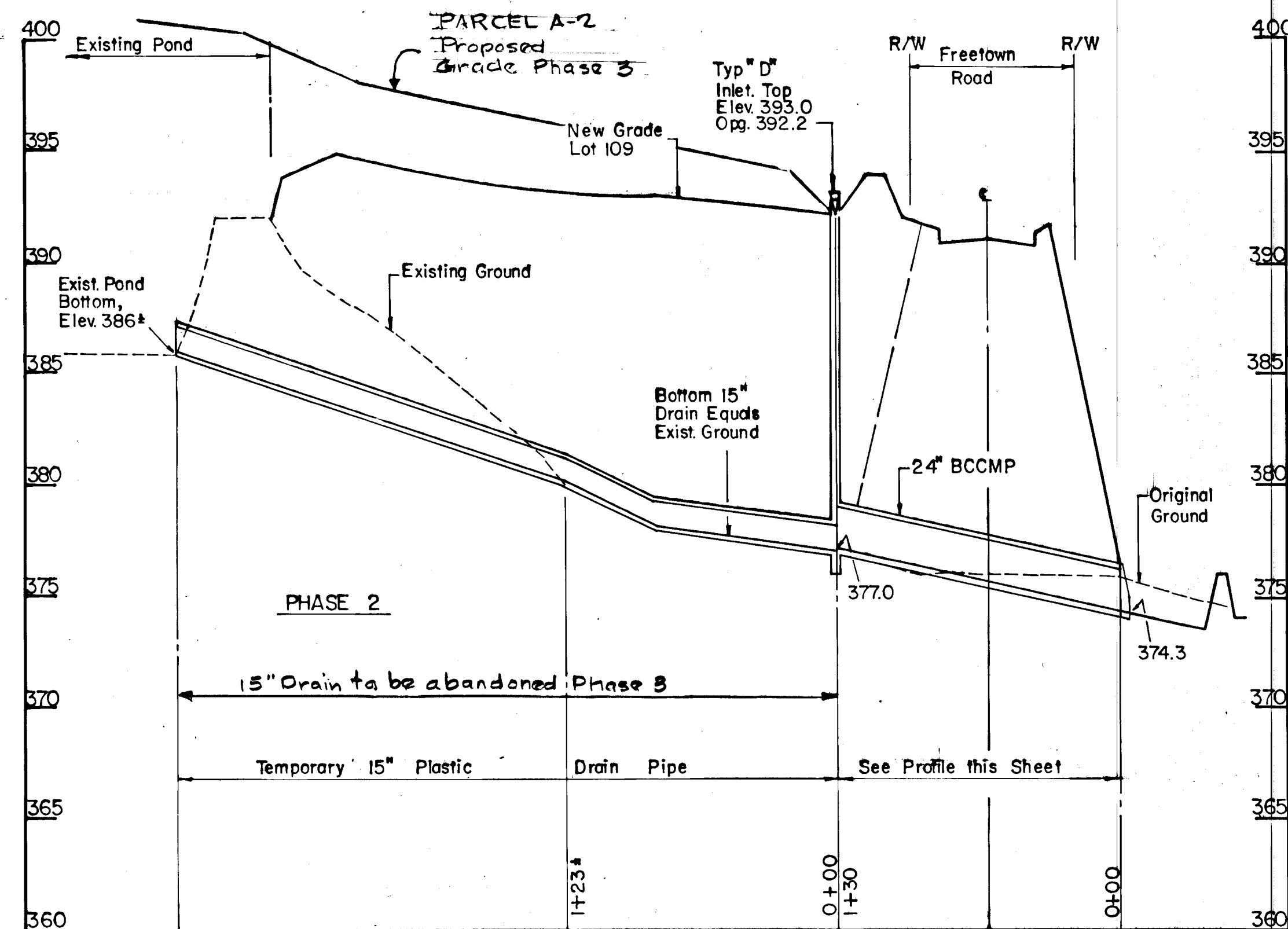
PERIMETER DITCH REMOVAL PHASE 2  
 Scale 1" = 5'-0"



PROFILE - SEDIMENT TRAP, INLET I-36



EXISTING INLET I-36  
 SCALE: 1/4" = 1'-0"



PROFILE - TEMPORARY 15" DRAIN TO EXISTING POND  
 SCALE: 1" = 50', 1" = 5'

REV. DATE	REV. NO.	REVISION DESCRIPTION
6/19/91	1	Added Prop Grade Lot 109 15" D Abandoned

**COLUMBIA**  
 5TH ELECTION DISTRICT  
 HOWARD COUNTY MARYLAND

OWNER AND DEVELOPER  
 THE HOWARD RESEARCH  
 AND DEVELOPMENT CORPORATION

PROJECT AREA:  
 VILLAGE OF HICKORY RIDGE  
 SECTION 6 AREA 3

PROJECT TITLE:  
**SEDIMENT CONTROL DETAILS**

SCALE: AS SHOWN DATE: DEC. 15, 1989

WHITMAN, REQUARDT AND ASSOCIATES  
 ENGINEERS  
 BALTIMORE, MARYLAND 21218

*Thomas J. Shafer*  
 THOMAS J. SHAFER  
 REGISTERED ENGINEER  
 NO. 8457

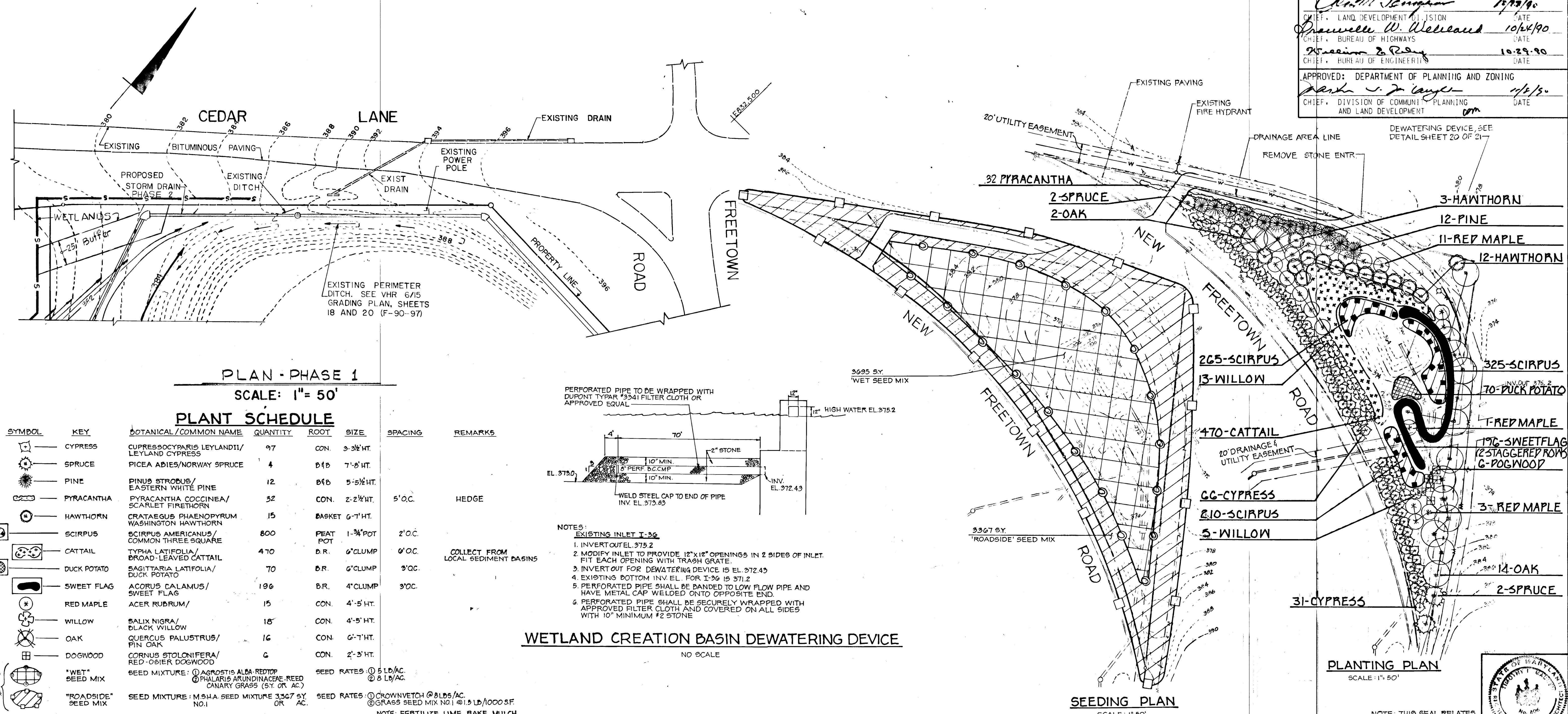
REVIEWED FOR HOWARD S.C.D. AND MEETS THE TECHNICAL REQUIREMENTS.  
*John M. Selma* 9/28/90  
 SOIL CONSERVATION SERVICE

THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL, BY THE HOWARD SOIL CONSERVATION DISTRICT.  
*Paul Roberts* 9/28/90  
 HOWARD S.C.D.

BY THE DEVELOPER:  
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*Joseph H. Necker Jr.*  
 JOSEPH H. NECKER JR.  
 DATE 12-15-89

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 THOMAS J. SHAFER, P.E., NO. 8457  
 DATE 12-15-89

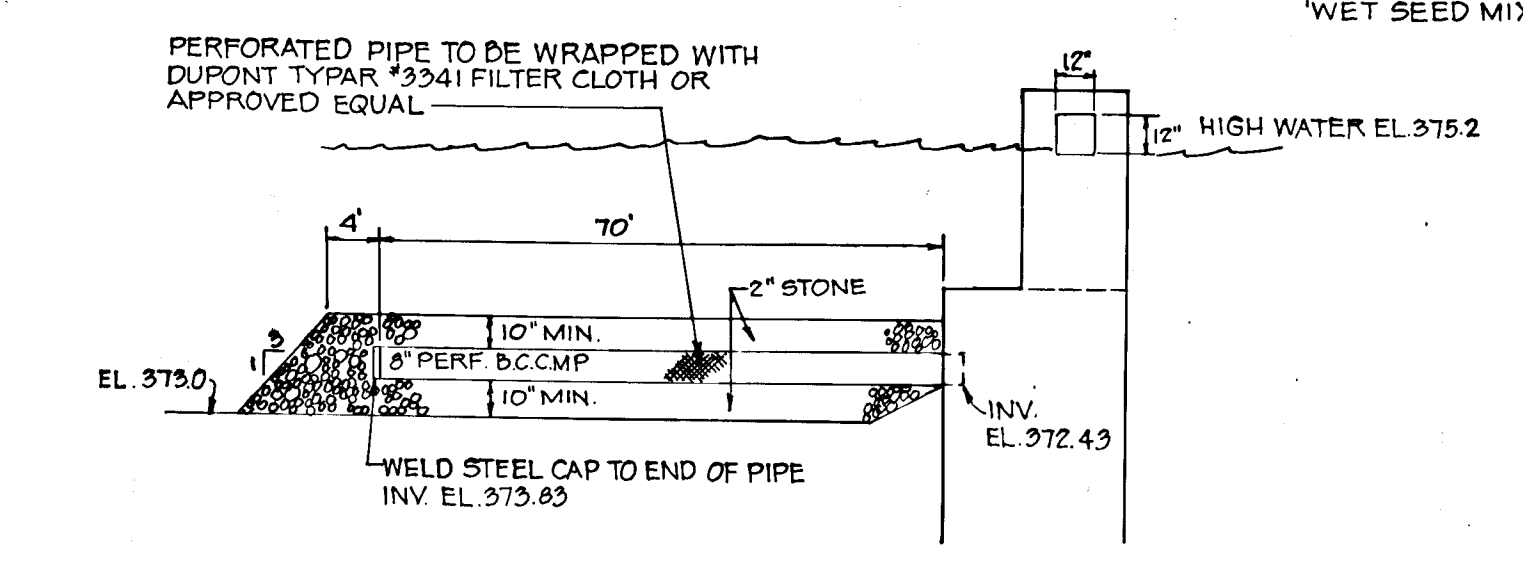
APPROVED: HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS  
*Robert M. Termon* 10/29/90  
 CHIEF, LAND DEVELOPMENT DIVISION DATE  
*Lawrence W. Wellwood* 10/24/90  
 CHIEF, BUREAU OF HIGHWAYS DATE  
*William S. Reid* 10-29-90  
 CHIEF, BUREAU OF ENGINEERING DATE  
 APPROVED: DEPARTMENT OF PLANNING AND ZONING  
*Mark S. Taylor* 1/15/91  
 CHIEF, DIVISION OF COMMUNITY PLANNING AND LAND DEVELOPMENT DATE



PLAN - PHASE 1  
 SCALE: 1" = 50'

PLANT SCHEDULE

SYMBOL	KEY	BOTANICAL / COMMON NAME	QUANTITY	ROOT	SIZE	SPACING	REMARKS
	CYPRESS	CUPRESSOCYPARIS LEYLANDII/ LEYLAND CYPRESS	97	CON.	3-3 1/2 HT.		
	SPRUCE	PICEA ADIES/NORWAY SPRUCE	4	D4D	7'-8' HT.		
	PINE	PINUS STROBUS/ EASTERN WHITE PINE	12	D4D	5'-5 1/2 HT.		
	PYRACANTHA	PYRACANTHA COCCINEA/ SCARLET FIRETHORN	32	CON.	2-2 1/2 HT.	5' O.C.	HEDGE
	HAWTHORN	CRATAEGUS PHAENOPYRUM WASHINGTON HAWTHORN	15	BASKET	6'-7' HT.		
	SCIRPUS	SCIRPUS AMERICANUS/ COMMON THREE SQUARE	800	PEAT POT	1-3/4 POT	2' O.C.	
	CATTAIL	TYPHA LATIFOLIA/ BROAD-LEAVED CATTAIL	470	D.R.	6' CLUMP	6' O.C.	COLLECT FROM LOCAL SEDIMENT BASINS
	DUCK POTATO	SAGITTARIA LATIFOLIA/ DUCK POTATO	70	D.R.	6' CLUMP	3' O.C.	
	SWEET FLAG	ACORUS CALAMUS/ SWEET FLAG	196	D.R.	4' CLUMP	3' O.C.	
	RED MAPLE	ACER RUBRUM/	15	CON.	4'-5' HT.		
	WILLOW	SALIX NIGRA/ BLACK WILLOW	18	CON.	4'-5' HT.		
	OAK	QUERCUS PALUSTRIS/ PIN OAK	16	CON.	6'-7' HT.		
	DOGWOOD	CORNUS STOLONIFERA/ RED-OSIER DOGWOOD	6	CON.	2'-3' HT.		
	"WET" SEED MIX	SEED MIXTURE: ① AGROSTIS ALBA-REDTOP ② PHALARIS ARUNDINACEAE-REED ③ CANARY GRASS (SY. OR. AC.)		SEED RATES: ① 5 LB./AC. ② 8 LB./AC.			
	"ROADSIDE" SEED MIX	SEED MIXTURE: MSHA SEED MIXTURE 3307 SY. NO.1		SEED RATES: ① CROWN VETCH @ 8 LB./AC. ② GRASS SEED MIX NO.1 @ 1.5 LB./1000 SF.			NOTE: FERTILIZE, LIME, RAKE, MULCH AND WATER AS SPECIFIED IN MSHA SECTION 701.03.



NOTES:  
 EXISTING INLET I-26  
 1. INVERT OUTLET 375.2  
 2. MODIFY INLET TO PROVIDE 12"x12" OPENINGS IN 2 SIDES OF INLET. FIT EACH OPENING WITH TRASH GRATE.  
 3. INVERT OUT FOR DEWATERING DEVICE IS EL. 372.43  
 4. EXISTING BOTTOM INV. EL. FOR I-26 IS 371.2  
 5. PERFORATED PIPE SHALL BE BENDED TO LOW FLOW PIPE AND HAVE METAL CAP WELDED ONTO OPPOSITE END.  
 6. PERFORATED PIPE SHALL BE SECURELY WRAPPED WITH APPROVED FILTER CLOTH AND COVERED ON ALL SIDES WITH 10" MINIMUM #2 STONE

WETLAND CREATION BASIN DEWATERING DEVICE  
 NO SCALE

SEEDING PLAN  
 SCALE: 1" = 50'

PLANTING PLAN  
 SCALE: 1" = 50'

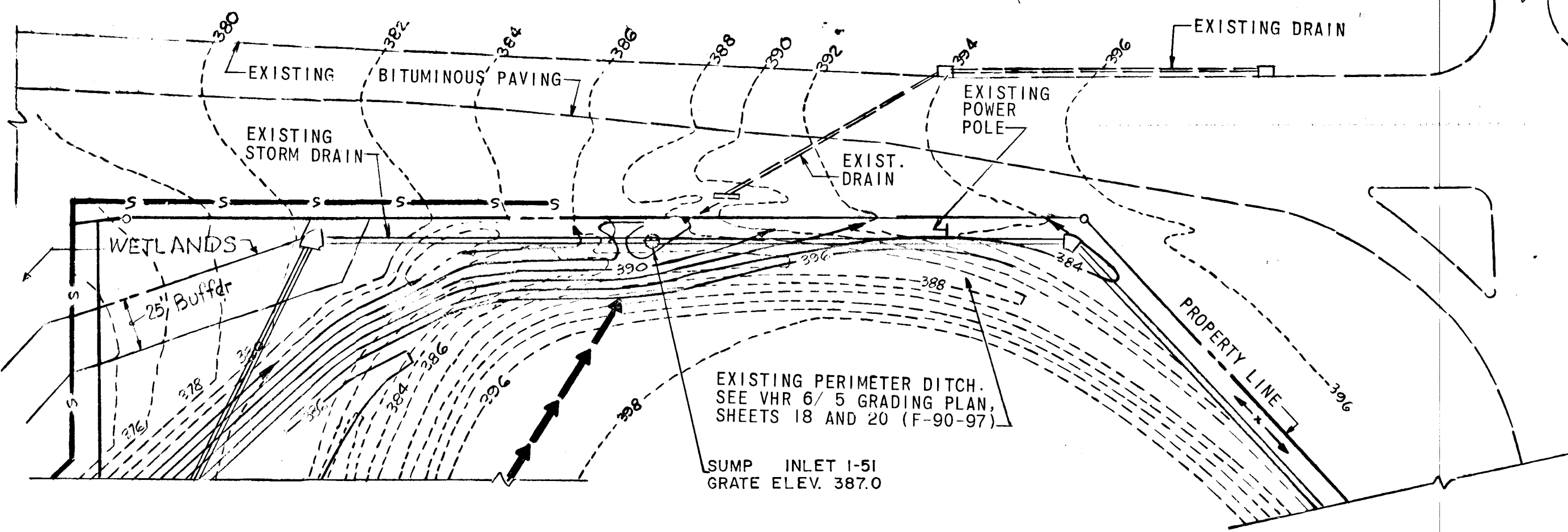
NOTE: THIS SEAL RELATES TO THE PREPARATION OF THE PLANTING PLAN, SEEDING PLAN, PLANT SCHEDULE, NOTES AND LANDSCAPE DETAILS ONLY.  
 TIMOTHY E. MADDEN  
 R.L.A. #406 9/10/90

LIST OF ABBREVIATIONS

CON - CONTAINER  
 D4D - BALLED IN DURLAPED  
 HT. - HEIGHT  
 D.R. - BARE ROOT  
 O.C. - ON CENTER  
 SY. - SQUARE YARD  
 N/A - NOT APPLICABLE

PLANTING NOTES

- ALL PLANT MATERIAL SHALL BE CONDITIONED FOR PLANTING IN SATURATED SOIL FOR AT LEAST ONE YEAR BY A NURSERY OR NURSERYMAN EXPERIENCED IN THE CONDITIONING OF WETLAND PLANTS
- ALL PLANT MATERIAL SHALL CONFORM TO THE CURRENT ISSUE OF THE AMERICAN STANDARD FOR NURSERY STOCK PUBLISHED BY THE AMERICAN ASSOCIATION OF NURSERYMEN, EXCEPT WHERE OTHERWISE NOTED.



PLAN PHASE 2  
 SCALE: 1" = 50'

REVIEWED FOR HOWARD S.C.D. AND MEETS THE TECHNICAL REQUIREMENTS.  
*Joseph H. Necker, Jr.* 12-15-89  
 U.S. SOIL CONSERVATION SERVICE DATE  
 THIS DEVELOPMENT PLAN IS APPROVED FOR SOIL EROSION AND SEDIMENT CONTROL BY THE HOWARD SOIL CONSERVATION DISTRICT.  
*Thomas J. Shafer* 12-15-89  
 HOWARD S.C.D. DATE

BY THE DEVELOPER:  
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 THOMAS J. SHAFER, P.E. NO. 8457 DATE

REV. DATE	REV. NO.	REVISION DESCRIPTION
COLUMBIA 5TH ELECTION DISTRICT HOWARD COUNTY MARYLAND		
OWNER AND DEVELOPER THE HOWARD RESEARCH AND DEVELOPMENT CORPORATION		
PROJECT AREA: VILLAGE OF HICKORY RIDGE SECTION 6 AREA 3		
PROJECT TITLE: SEDIMENT CONTROL DETAILS		
SCALE: AS SHOWN DATE: DEC. 15, 1989		
WHITMAN, REQUARDT AND ASSOCIATES ENGINEERS BALTIMORE, MARYLAND 21218		
<i>Thomas J. Shafer</i> THOMAS J. SHAFER REGISTERED ENGINEER NO. 8457		



