

HOWARD COUNTY, MARYLAND DEPARTMENT OF PUBLIC WORKS

CAPITAL PROJECT NO. J-4143

WINTERS LANE ROAD WIDENING

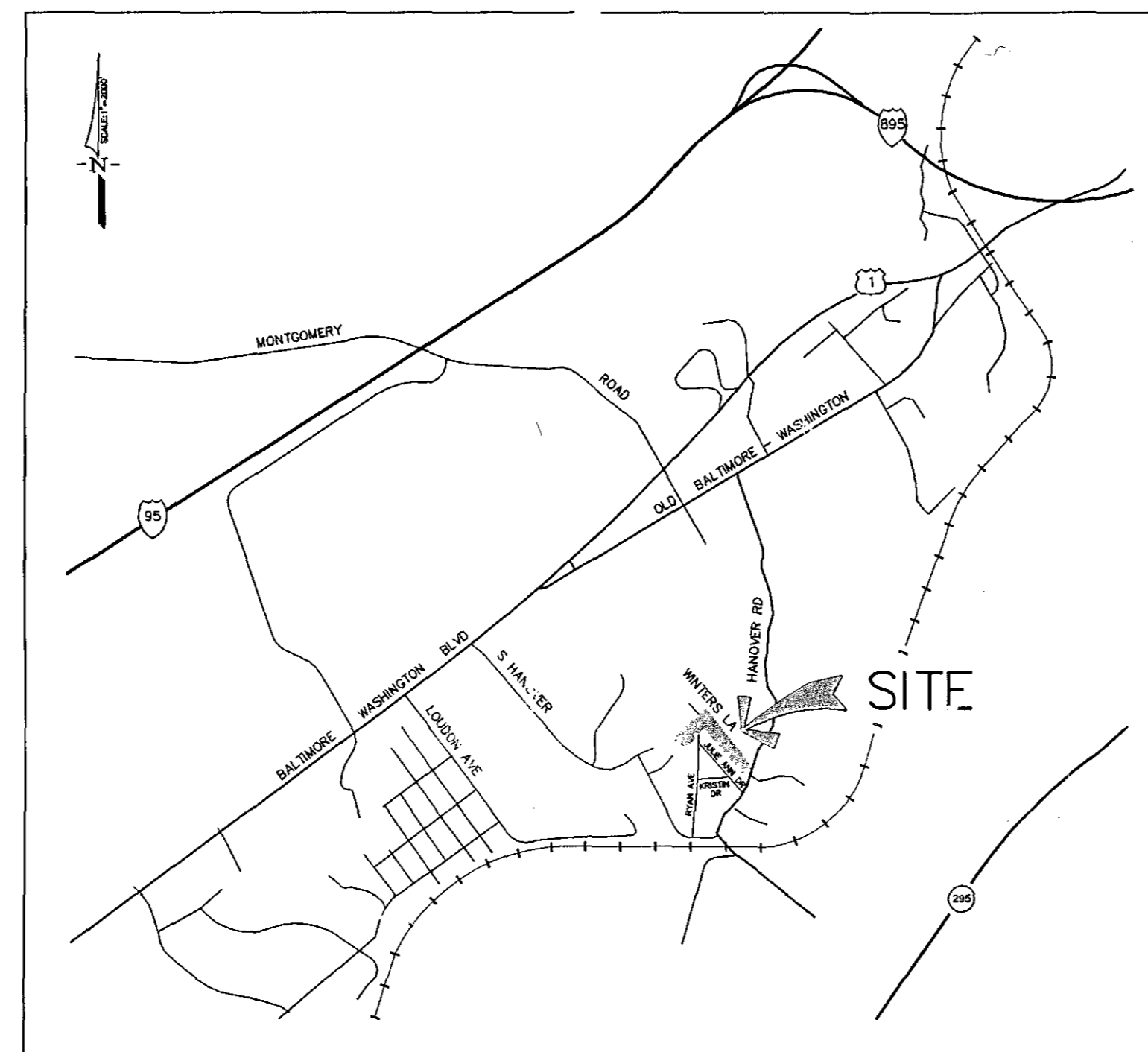
FINAL SUBMISSION

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15. SEDIMENT AND EROSION CONTROL DETAILS

GENERAL NOTES.

1. THE CONTRACTOR IS RESPONSIBLE FOR DAMAGES TO OR ADJUSTMENTS TO ANY RESIDENTIAL DRIVEWAYS, APRONS, DOWN SPOUTS, ROOF DRAIN LEADERS, OR UNDERDRAINS WHILE RECONSTRUCTING PROPOSED CURB AND DRIVEWAY APRONS.
2. THE CONTRACTOR IS RESPONSIBLE FOR THE RELOCATION AND/OR REPLACEMENT OF ANY MAIL BOXES OR LETTER BOXES, FENCES, AND SIGNS REMOVED OR DAMAGED DURING THE COURSE OF CONSTRUCTION.
3. THE CONTRACTOR SHALL REPLACE OR REPAIR ANY ROAD PAVEMENT DAMAGED DURING THE COURSE OF CONSTRUCTION AS DIRECTED BY THE HOWARD COUNTY INSPECTOR.
4. ALL RESIDENTIAL DRIVEWAYS, APRONS, AND PUBLIC ROADWAYS SHALL BE KEPT CLEAN AND FREE OF ALL CONSTRUCTION RELATED DEBRIS.
5. AT NO TIME SHALL ANY RESIDENTIAL DRIVEWAYS BE BLOCKED BY CONSTRUCTION VEHICLES AND/OR MATERIALS.
6. UNDER THE DIRECTION OF HOWARD COUNTY INSPECTORS, ONE TRAVEL LANE MAY BE CLOSED DURING NON-RUSH HOUR PERIODS. THIS TEMPORARY CLOSURE MUST NOT INHIBIT EMERGENCY VEHICLE INGRESS/EGRESS.
7. AT NO TIME SHALL CONTRACTOR ENTER PRIVATE PROPERTY WITH CONSTRUCTION VEHICLES, EQUIPMENT, MATERIALS AND/OR WORK CREWS.
8. BASE LINE OF CONSTRUCTION (B/L OF CONSTR.) REPRESENTS PROPOSED CROWN OF ROADWAY EXCEPT WHERE NOTED. THE ROADWAY STATIONING IS BASED ON CENTERLINE GEOMETRY AND DOES NOT RELATE TO ANY EXISTING STATIONING.
9. CONTRACTOR SHALL ADJUST FINAL ELEVATIONS FOR MANHOLE AND WATERLINE APPURTENANCES TO FINISH GRADE AS NECESSARY.
10. TREES ARE TO BE PROTECTED FROM DAMAGE TO MAXIMUM EXTENT. TREES NOT DESIGNATED TO BE REMOVED ARE NOT TO BE REMOVED OR DAMAGED BY THE CONTRACTOR.
11. CONTRACTOR TO ADJUST GRADES AS REQUIRED TO MEET FIELD CONDITIONS, TO ENSURE ADEQUATE DRAINAGE TO EXISTING AND PROPOSED STORM DRAIN STRUCTURES.
12. CONTRACTOR TO MATCH EXISTING GRADES AT LIMITS OF DISTURBANCE. CONTRACTOR TO MATCH EXISTING GRADES AT TIE-IN POINTS OF ALL PROPOSED DRIVEWAYS.
13. THE EXISTING UTILITIES AND OBSTRUCTIONS SHOWN ON THE PLANS ARE FROM THE BEST AVAILABLE RECORDS AND SHALL BE VERIFIED BY THE CONTRACTOR BEFORE STARTING CONSTRUCTION. NEITHER THE ENGINEER NOR THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS WARRANT OR GUARANTEE THE COMPLETENESS OR CORRECTNESS OF THE INFORMATION SHOWN.
14. THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING UTILITIES. ANY DAMAGE DUE TO THE CONTRACTOR'S NEGLIGENCE SHALL BE REPAIRED IMMEDIATELY AT THE CONTRACTOR'S EXPENSE. IF CLEARANCES OF UTILITY CROSSINGS ARE LESS THAN SPECIFIED ON THIS PLAN OR LESS THAN 12" WHEN NOT SPECIFIED, THE CONTRACTOR MUST CONTACT THE COUNTY'S INSPECTOR AND THE APPROPRIATE UTILITY OWNER BEFORE PROCEEDING WITH CONSTRUCTION.
15. TEST PITS SHALL BE DUG AT ALL UTILITY CROSSINGS TO DETERMINE EXISTING HORIZONTAL AND VERTICAL ALIGNMENT OF UTILITIES. TEST PITS SHALL BE DUG A SUFFICIENT AMOUNT OF TIME IN ADVANCE OF THE CONSTRUCTION OR TRENCHING OPERATION, IN ORDER TO ALLOW FOR NECESSARY ADJUSTMENTS.
16. ALL PIPE ELEVATIONS SHOWN ARE INVERT ELEVATIONS.
17. CONTRACTOR SHALL REMOVE TREES, STUMPS AND ROOTS ALONG LINE OF EXCAVATION AS DIRECTED BY THE COUNTY INSPECTOR. PAYMENT FOR SUCH REMOVAL SHALL BE INCLUDED IN THE UNIT PRICE BID FOR FURNISHING AND LAYING STORM DRAIN PIPE AND FOR THE ROADWAY GRADING.
18. PLACE REGULATION AND WARNING SIGNS AS REQUIRED TO COMPLY WITH MARYLAND STATE HIGHWAY ADMINISTRATION MANUAL OF TRAFFIC CONTROL FOR HIGHWAY CONSTRUCTION AND MAINTENANCE OPERATIONS, AND THE LATEST EDITION OF MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES AND ALL SUBSEQUENT ADDENDUMS.
19. EXISTING WATER HOUSE SERVICES THAT ARE IN CONFLICT WITH THE PROPOSED STORM DRAINAGE FACILITIES SHALL BE ADJUSTED BY THE CONTRACTOR.
20. FOR DETAILS NOT SHOWN ON THE DRAWINGS, AND FOR MATERIALS AND CONSTRUCTION METHODS, THE CONTRACTOR SHALL ABIDE BY THE HOWARD COUNTY DESIGN MANUAL, VOLUME IV, "STANDARD SPECIFICATIONS AND DETAILS FOR CONSTRUCTION" AND THE SPECIAL PROVISIONS. IN THE EVENT OF ANY DISCREPANCY BETWEEN THESE TWO SOURCES, THE LATTER SHALL GOVERN.
21. ALL SLOPES AND/OR DISTURBED AREAS SHALL RECEIVE 2-INCH DEPTH OF TOPSOIL BEFORE SEEDING AND MULCHING OR SODDING.
22. THE CONTRACTOR SHALL LOCATE EXISTING UTILITIES A MINIMUM OF TWO WEEKS IN ADVANCE OF CONSTRUCTION OPERATIONS IN VICINITY OF UTILITIES. COST SHALL BE INCLUDED IN THE UNIT PRICES BID FOR STORM DRAIN ITEMS.
23. STANDARD DETAILS OF THE HOWARD COUNTY DESIGN MANUAL AND MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD DETAILS SHALL BE USED.
24. THE CONTRACTOR SHALL NOTIFY THE UTILITIES AGENCIES AT LEAST FIVE (5) DAYS BEFORE STARTING WORK SHOW HEREON: MISS UTILITY 1-800-257-7777; BALTIMORE GAS & ELECTRIC CO., UNDERGROUND ELECTRICAL DISTRIBUTION ENGINEERING DAMAGE CONTROL 234-6313; BALTIMORE GAS & ELECTRIC CO., UNDERGROUND GAS DISTRIBUTION ENGINEERING 234-5533; CHESAPEAKE AND POTOMAC TELEPHONE CO., 725-9976; COLONIAL PIPELINE COMPANY 781-4641; HOWARD COUNTY BUREAU OF UTILITIES 313-4900; HOWARD COUNTY TRAFFIC DIVISION 313-2430; HOWARD COUNTY SURVEYING AND DRAFTING DIVISION 313-2417; HOWARD COUNTY DIVISION OF CONSTRUCTION INSPECTION 313-1870.
25. THE CONTRACTOR SHALL REPLACE ALL STEPS AND LEAD SAILS IN KIND DISTURBED IN CONSTRUCTION. THE CONTRACTOR SHALL MAKE ADJUSTMENTS AS REQUIRED BY THE HOWARD COUNTY INSPECTOR.
26. THE CONTRACTOR IS TO ADJUST ALL APPURTENANCES TO MATCH THE PAVEMENT TO MATCH FINAL PAVEMENT ELEVATION.
27. COORDINATES ARE BASED ON THE HOWARD COUNTY G.P.S. GEODETIC CONTROL (NAD 83) DATUM.
28. ALL VERTICAL CONTROLS ARE BASED ON NAVD 88 DATUM. BENCHMARK INFORMATION IS GIVEN IN THE GEOMETRIC LAYOUT PLAN.
29. ALL HORIZONTAL AND VERTICAL POSITIONS ESTABLISHED FROM HOWARD COUNTY CONTROL MONUMENTS 38A9 AND 38B6.



VICINITY MAP
SCALE 1"=2000'

ROADWAY DATA

ROADWAY CLASSIFICATION	LOCAL
DESIGN SPEED	30 mph
AVERAGE DAILY TRAFFIC	NOT AVAILABLE

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

John O'Hare 8/1/06
DIRECTOR OF PUBLIC WORKS
Mark Deane 7/31/06
CHIEF, BUREAU OF HIGHWAYS
ACTING

Paul J. Ryan 7/14/06
CHIEF, BUREAU OF ENGINEERING
Steve Shanay 7/14/06
CHIEF, TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT

VIEW ENGINEERING



DES: JCM

DRN: JCM

CHK: MFM

DATE: 5/04

BY NO.

REVISION

DATE

600' SCALE MAP NO.

BLOCK NO.

WINTERS LANE ROAD WIDENING
CAPITAL PROJECT J-4143
HOWARD COUNTY, MARYLAND

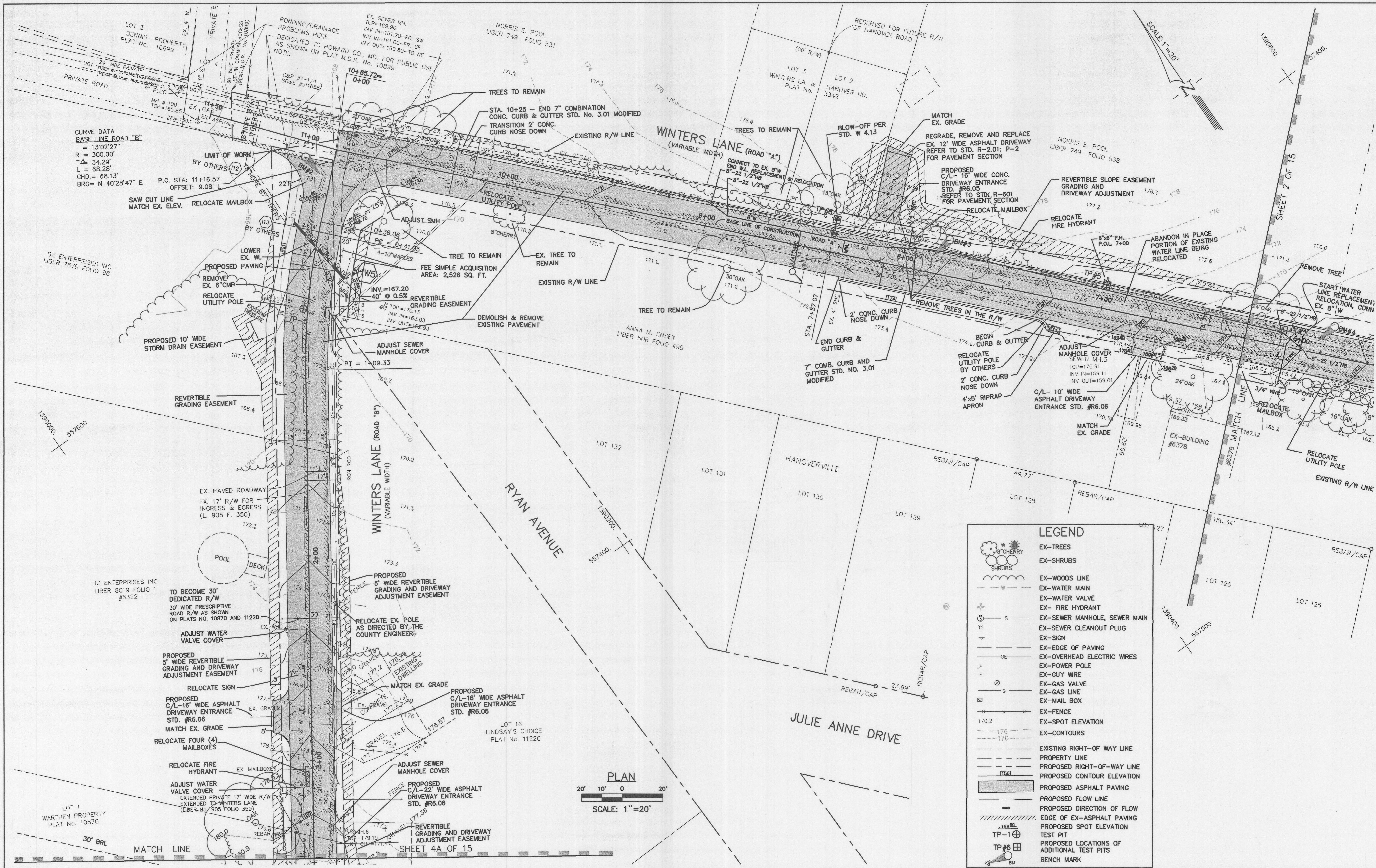
COVER SHEET

SCALE

AS SHOWN

SHEET

1 OF 15



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DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND	
Director of Public Works <i>John J. O'Hara</i> 8/1/06 DATE	Chief, Bureau of Engineering <i>Paul R. Ryan</i> 7/14/06 DATE
Chief, Bureau of Highways <i>Mike Decker</i> 7/31/06 DATE	Transportation Projects and Watershed Management <i>Steve Slavin</i> 7/11/06 DATE

VIEW

ENGINEERING

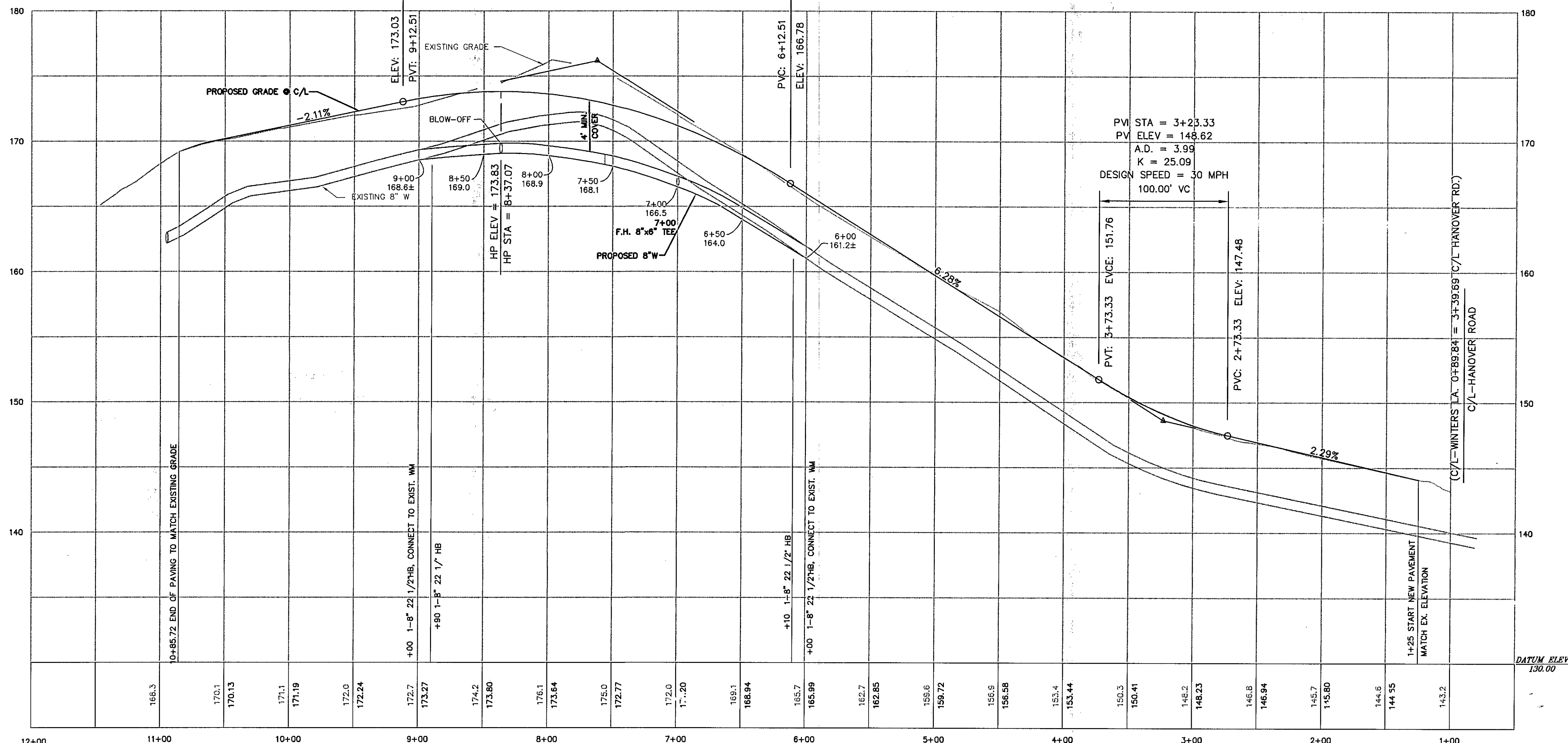
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DRN: MFM					
CHK: EUA					
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WINTERS LANE ROAD WIDENING
 CAPITAL PROJECT J-4143
 HOWARD COUNTY, MARYLAND

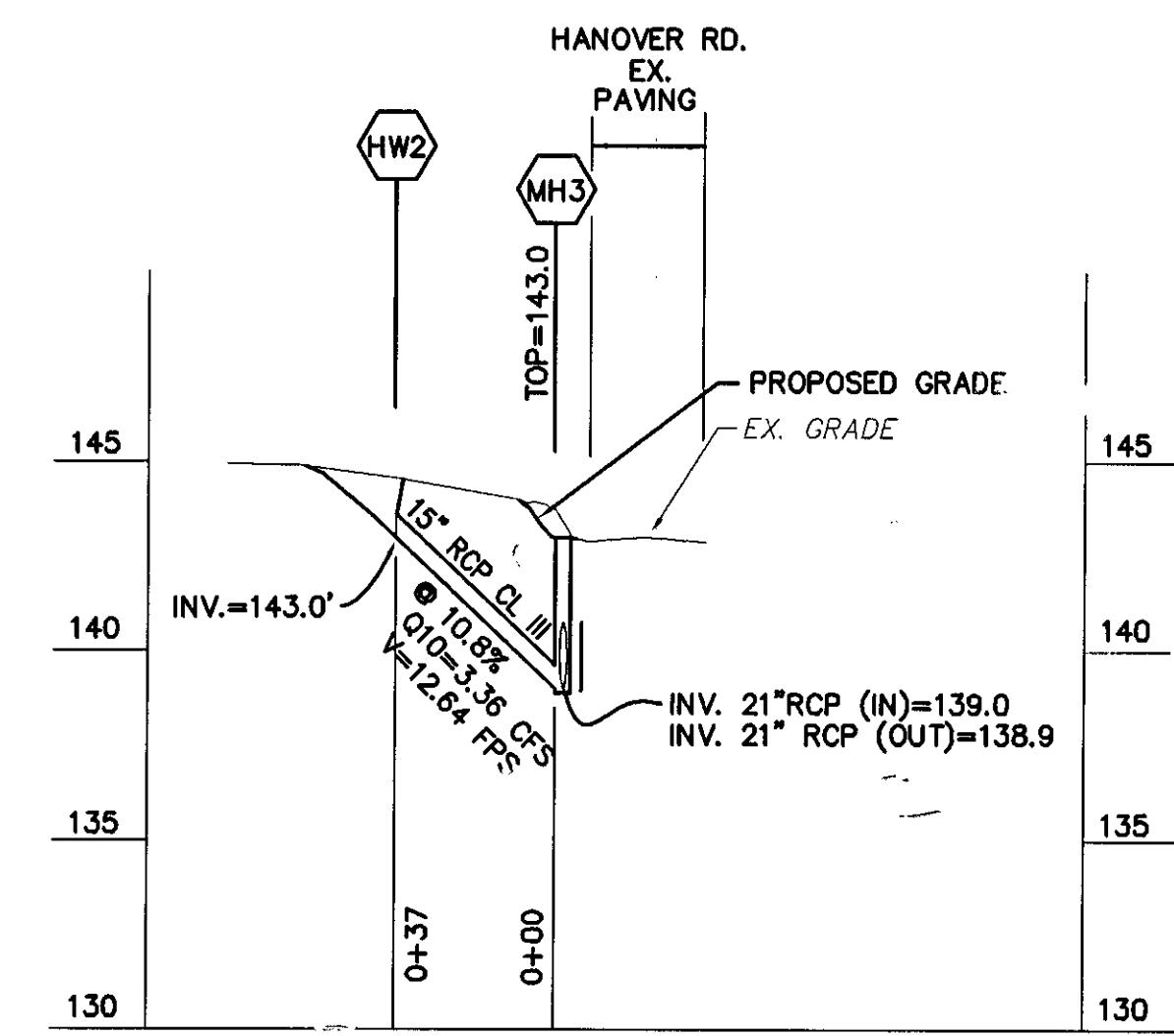
ROADWAY PLAN

SCALE 1"=20'
 SHEET 3 OF 15

PVI STA = 7+62.51
 PVI ELEV = 176.20
 A.D. = -8.39
 K = 35.77
 DESIGN SPEED = 30 MPH
 300.00' VC



PROFILE
WINTERS LANE (ROAD "A")
 SCALE: HORIZONTAL 1"=50'
 VERTICAL 1"=5'

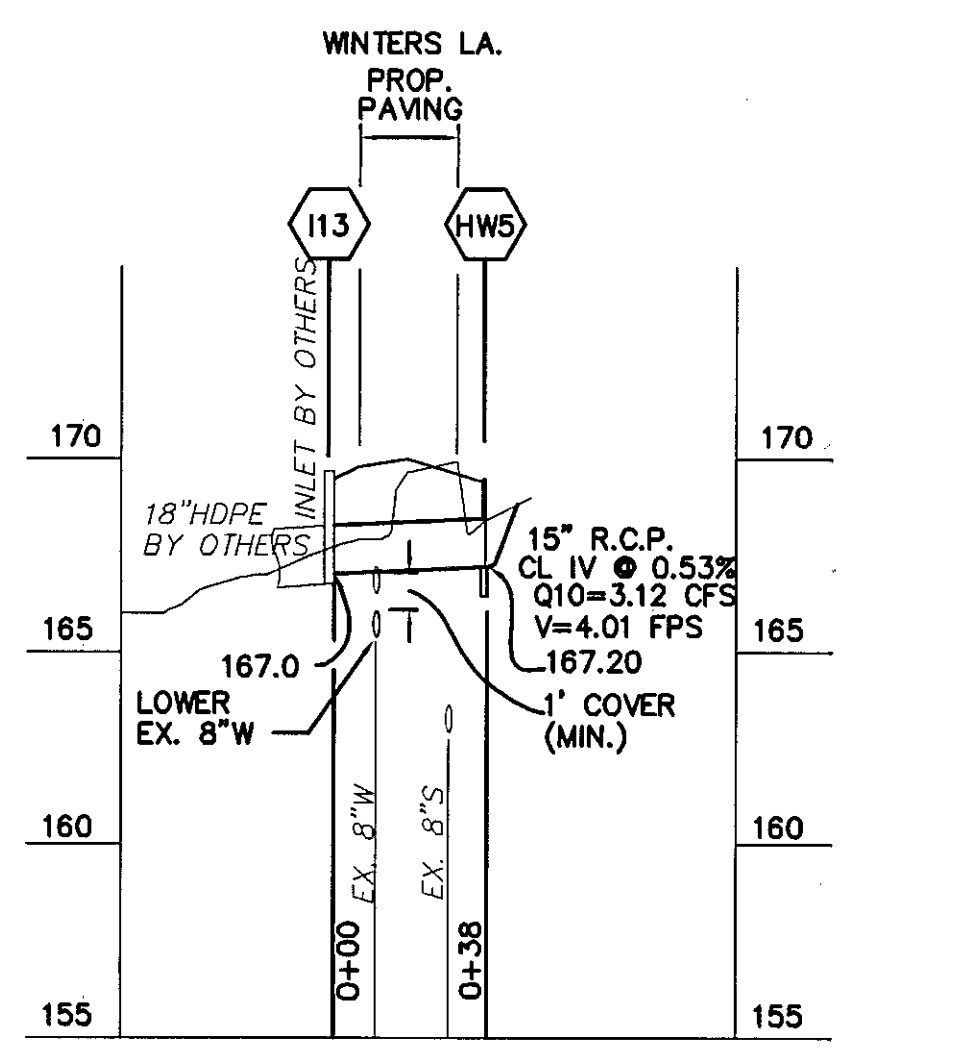


STORM DRAIN PIPE SCHEDULE

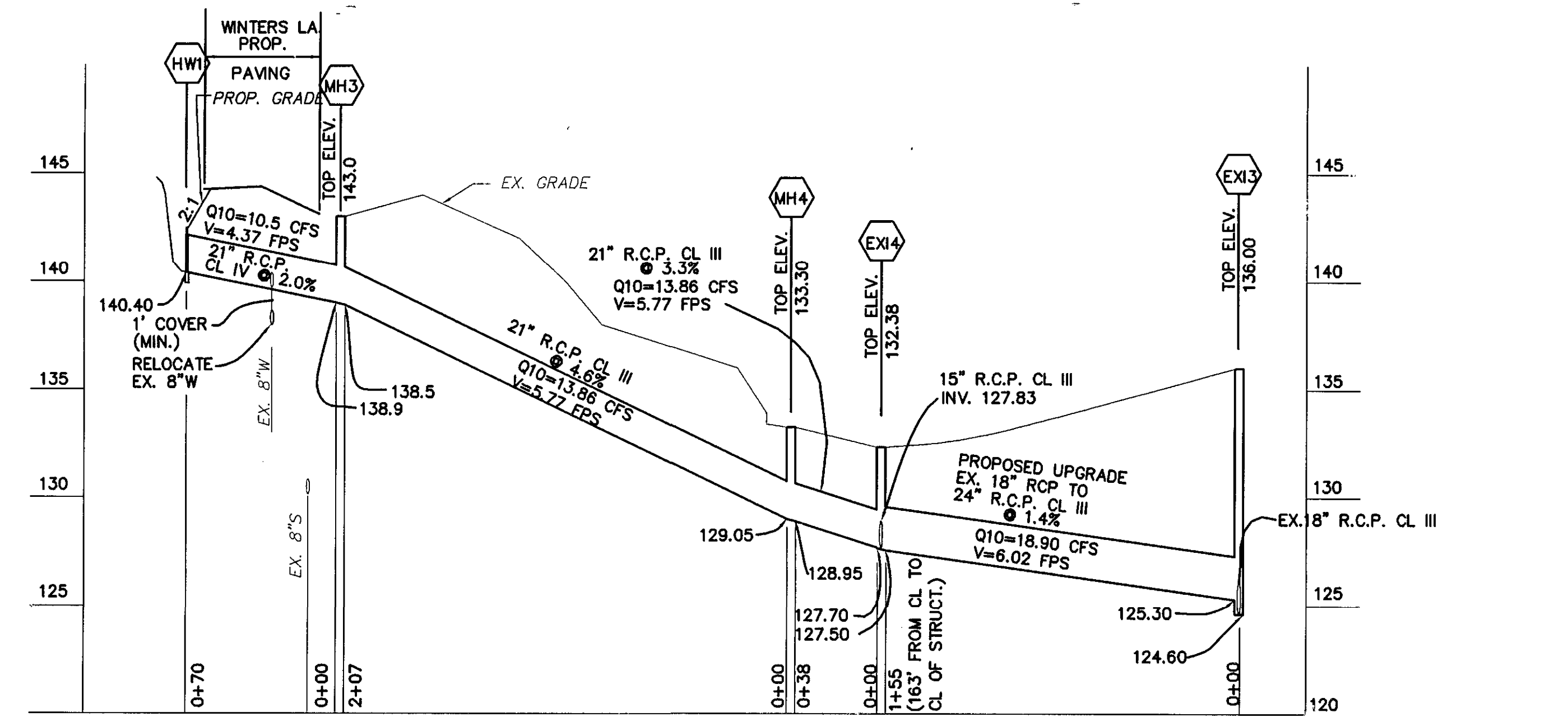
SIZE	TYPE	CLASS	LENGTH
15"	RCP	III	37'
15"	RCP	IV	38'
21"	RCP	III	207'
21"	RCP	IV	38'
24"	RCP	III	163'

STORM STRUCTURE SCHEDULE

NO.	TYPE	STATION	OFFSET	TOP	INV. IN	INV. OUT	REMARKS/DETAIL#
HW1	HEADWALL 21"	1+52	22' RT	-	140.32	-	SHA MD 354.02
HW2	HEADWALL 15"	1+37	19' LT	-	143.0	-	SHA MD 354.02
MH3	MANHOLE	1+03	17' LT	143.0	138.9	138.5	SHA MD 383.00
MH4	MANHOLE	5+72.5	19.5' RT	133.30	129.05	128.95	SHA MD 383.00
HW5	HEADWALL 15"	0+62	16' LT	169.50	-	167.20	SHA MD 354.02



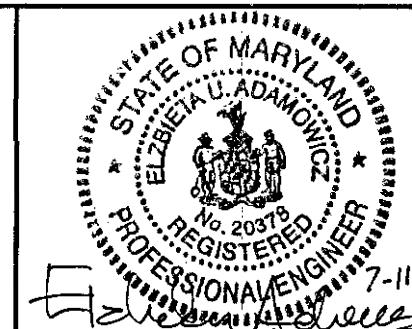
STORM DRAIN PROFILES
 SCALE: HORIZ. 1"=50'
 VERT. 1"=5'



DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Director of Public Works: *Mark O'Hara* 8/1/06
 Chief, Bureau of Highways: *Mark O'Hara* 7/31/06
 Chief, Bureau of Engineering: *Steve Shaver* 7/14/06
 Chief, Bureau of Watershed Management: *Steve Shaver* 7/14/06

VIEW ENGINEERING

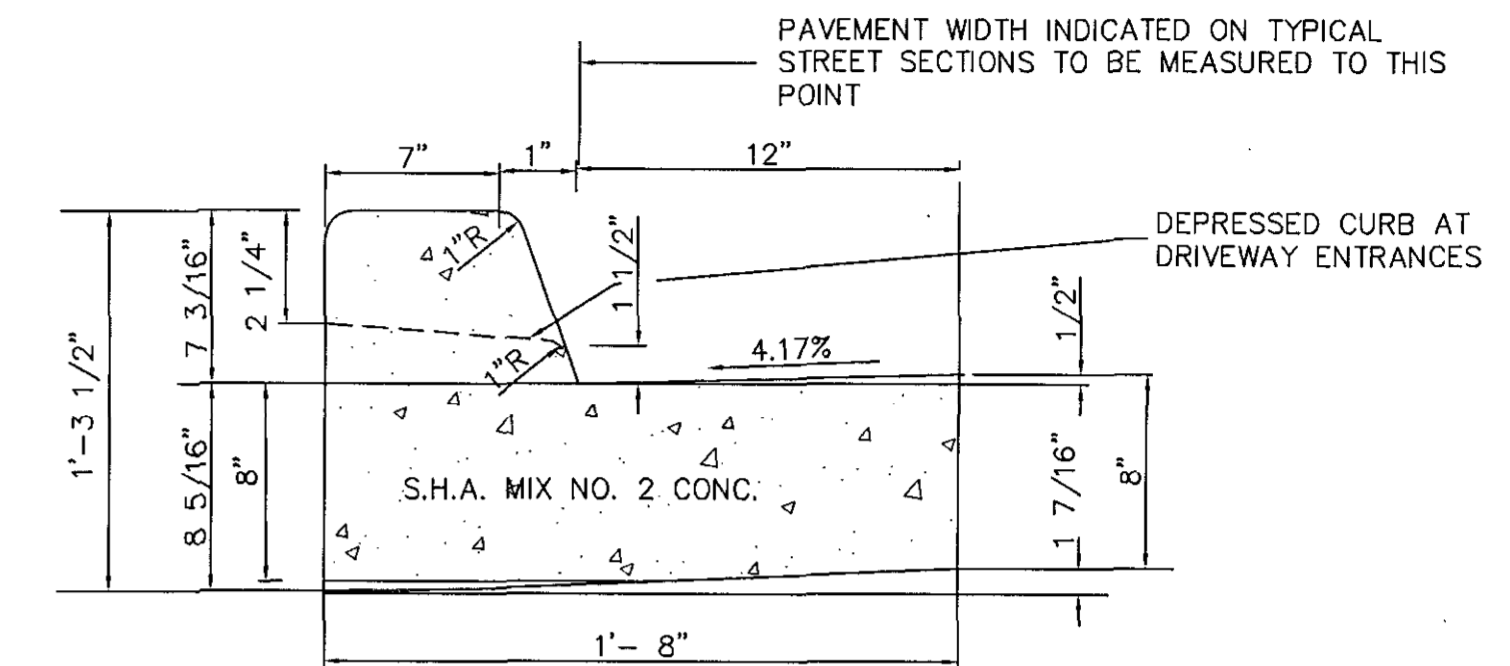
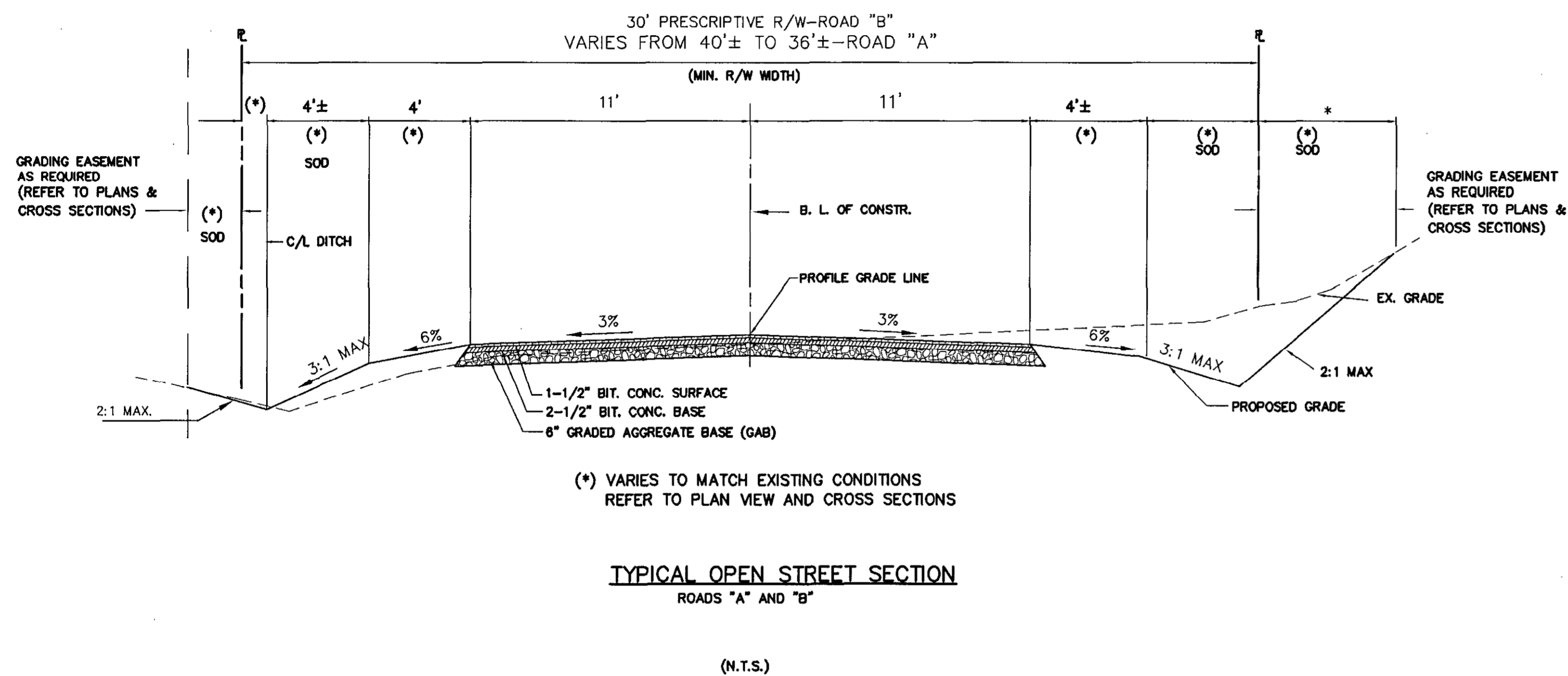


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CHK: EUA			
DATE: 07/2006	BY NO.	REVISION	DATE

WINTERS LANE ROAD WIDENING
 CAPITAL PROJECT J-4143
 HOWARD COUNTY, MARYLAND

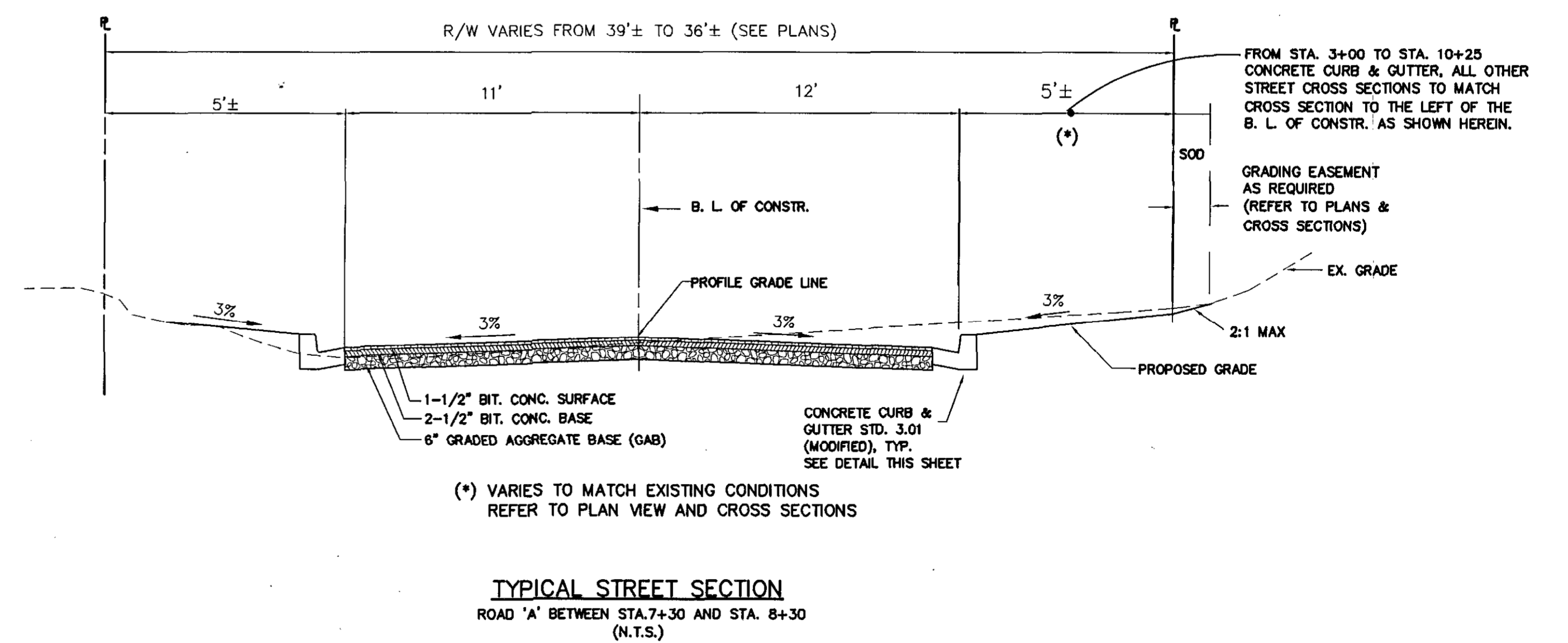
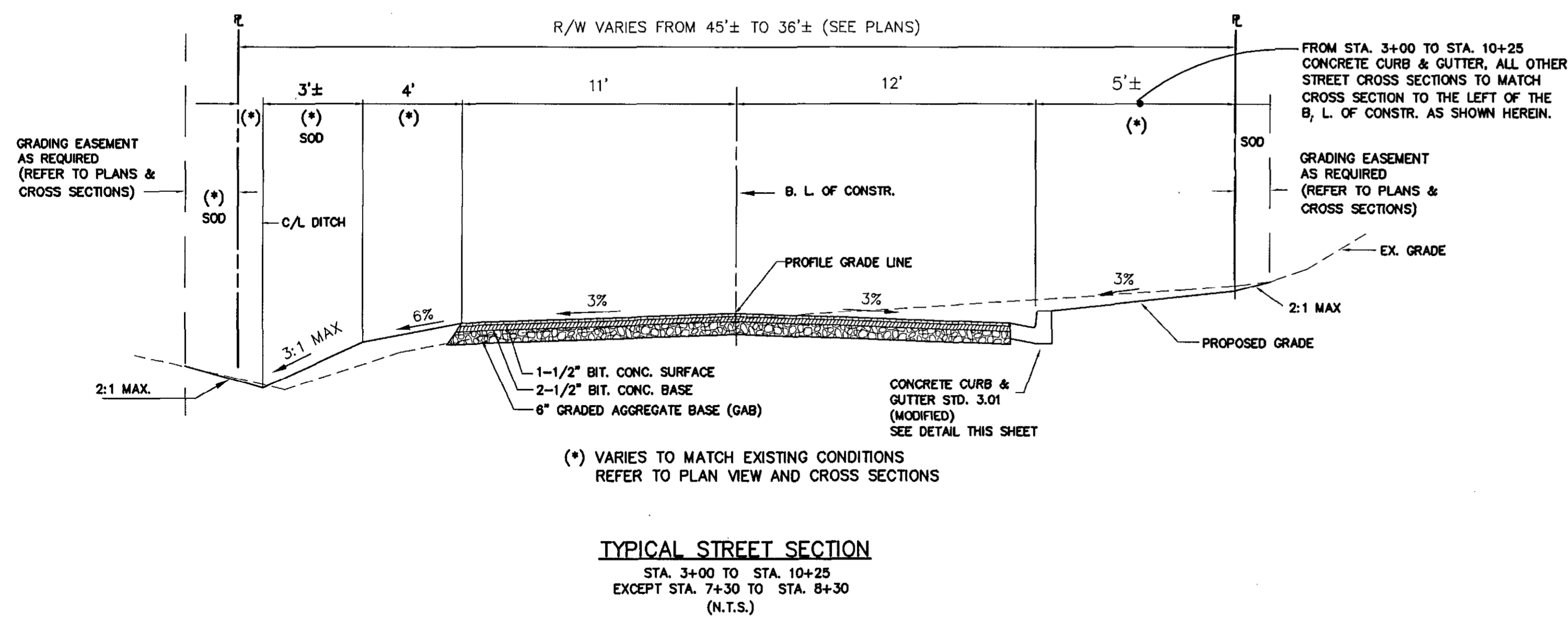
SCALE
 H: 1"=50'
 V: 1"=5'
 SHEET
 4 OF 15

PROFILES



* GUTTER PAN AT THE MEDIAN EDGE OF INTERMEDIATE ARTERIALS OR THE HIGH SIDE OF SUPERELEVATED SECTIONS SHALL BE SLOPED AT THE RATE AND IN THE SAME DIRECTION AS THE PAVEMENT. MATCH PAVEMENT CROSS SLOPE WHEN CURB IS LOCATED ON THE LOW SIDE OF SUPERELEVATED SECTION AND THE RATE OF SUPERELEVATION IS GREATER THAN 3% FOR MODIFIED CURB AND GUTTER.

STANDARD 7" COMBINATION CURB AND GUTTER
STD. 3-01 (MODIFIED)
(N.T.S.)



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

Director of Public Works
8/1/06
7/11/06

Chief, Bureau of Engineering
7/19/06
7/11/06

VIEW ENGINEERING



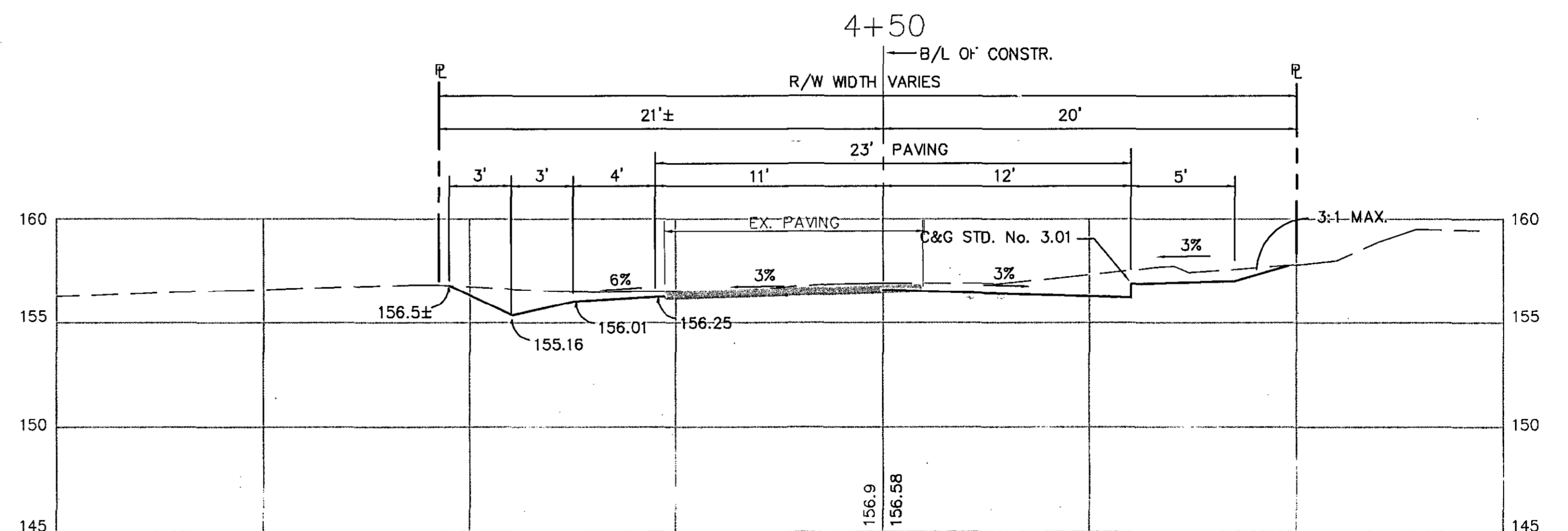
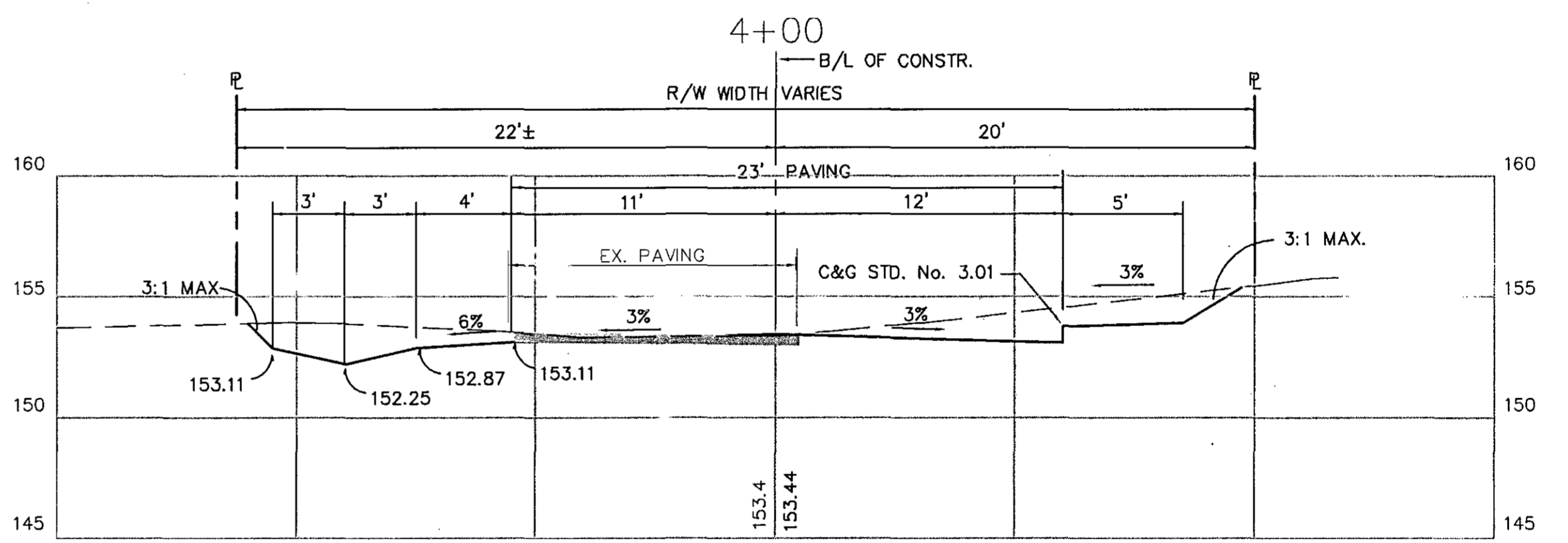
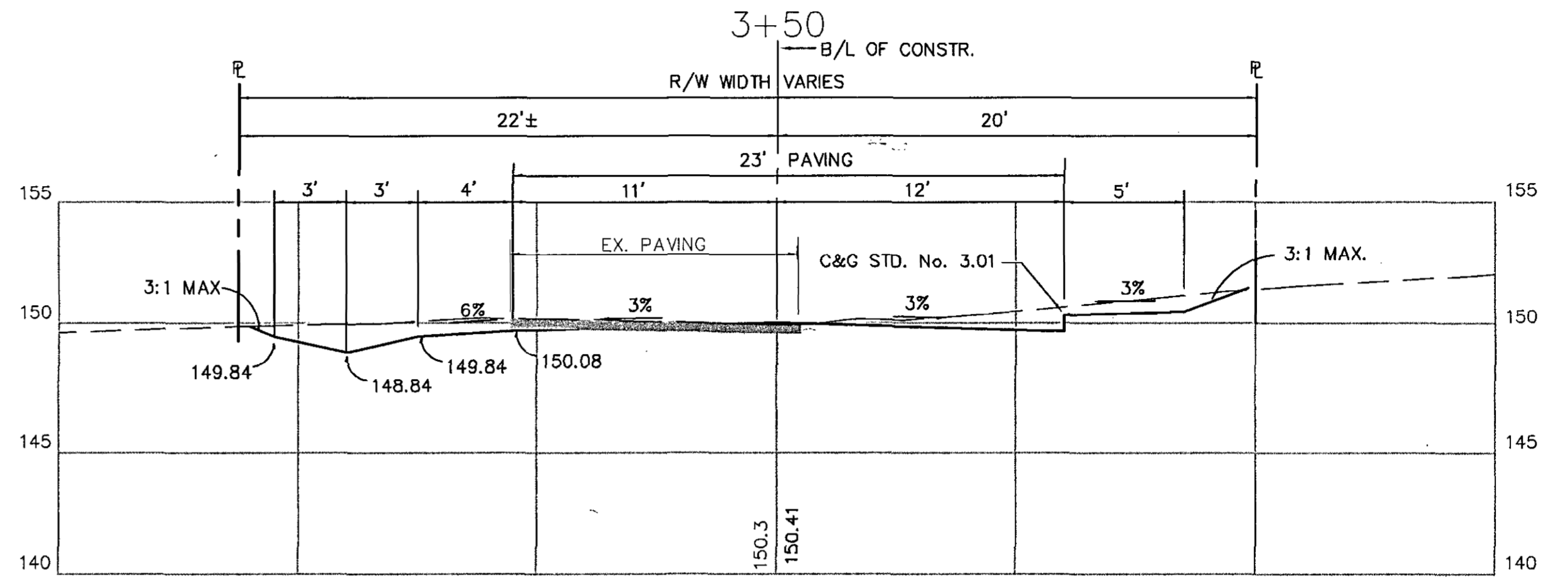
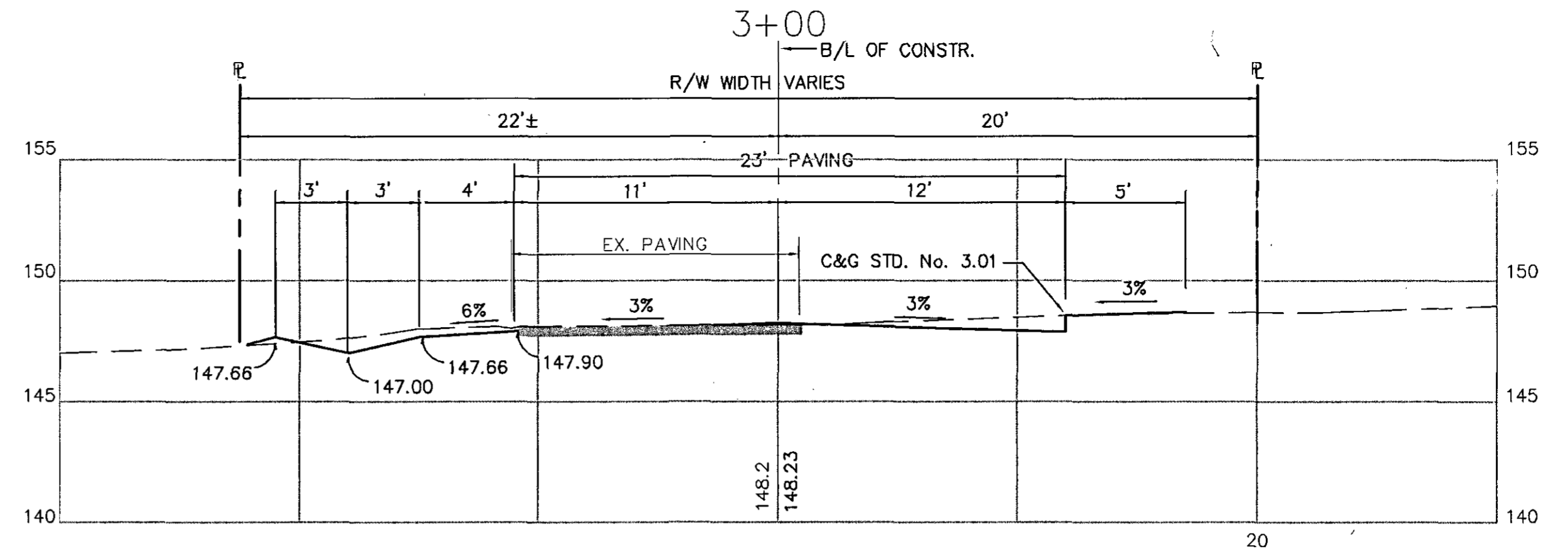
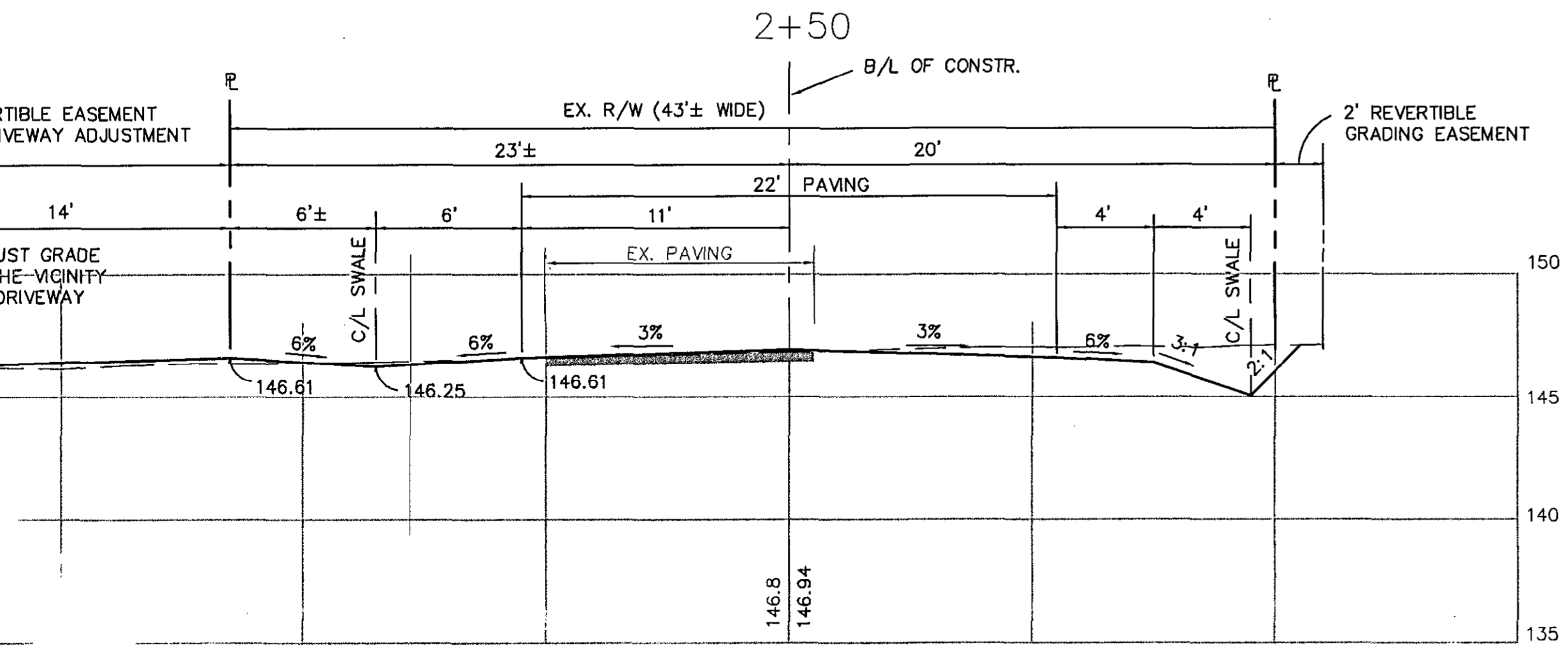
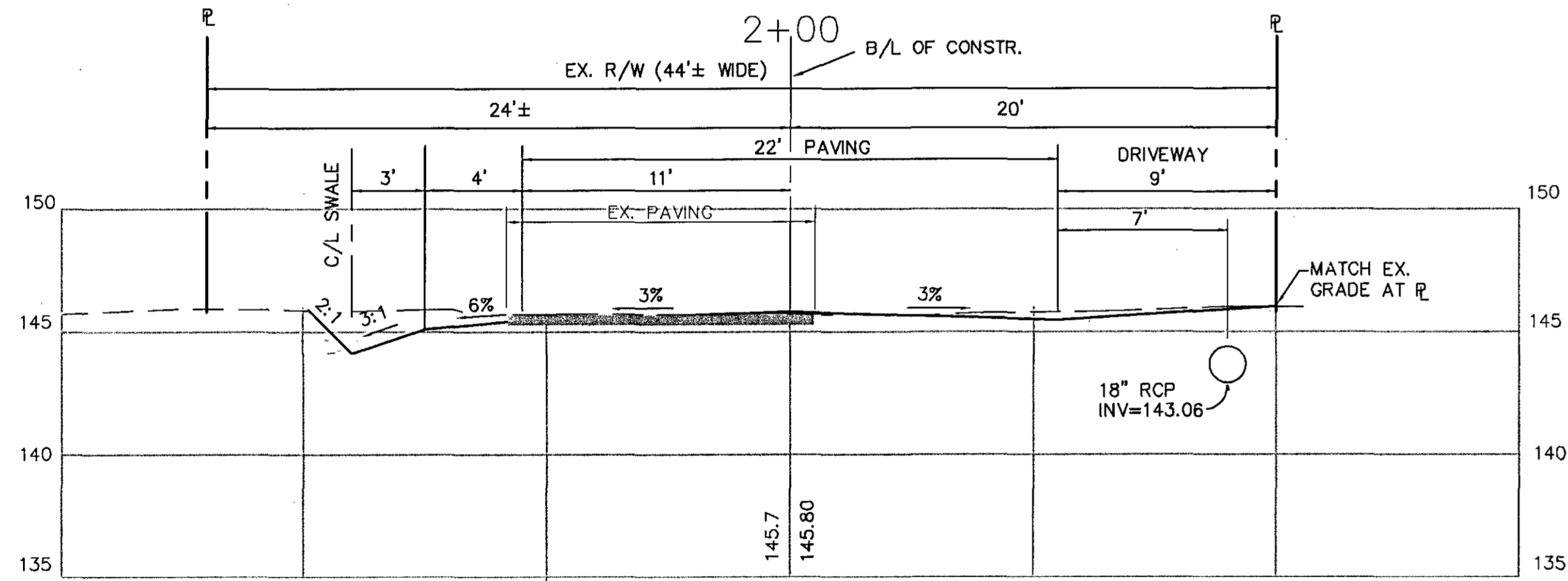
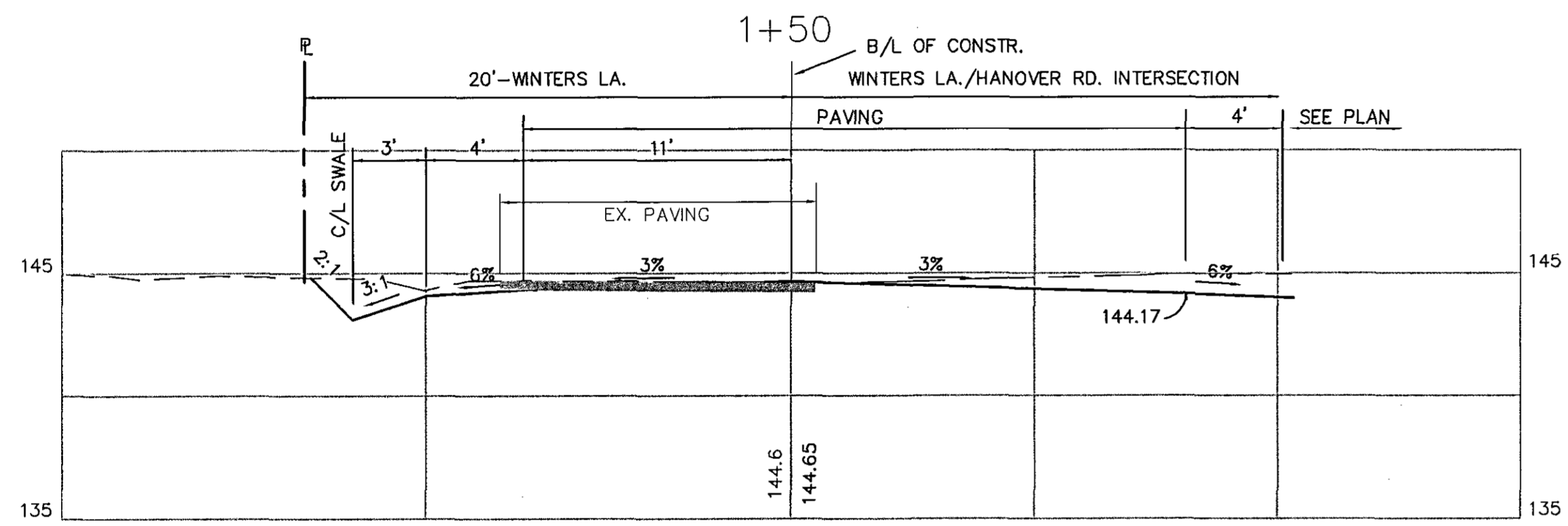
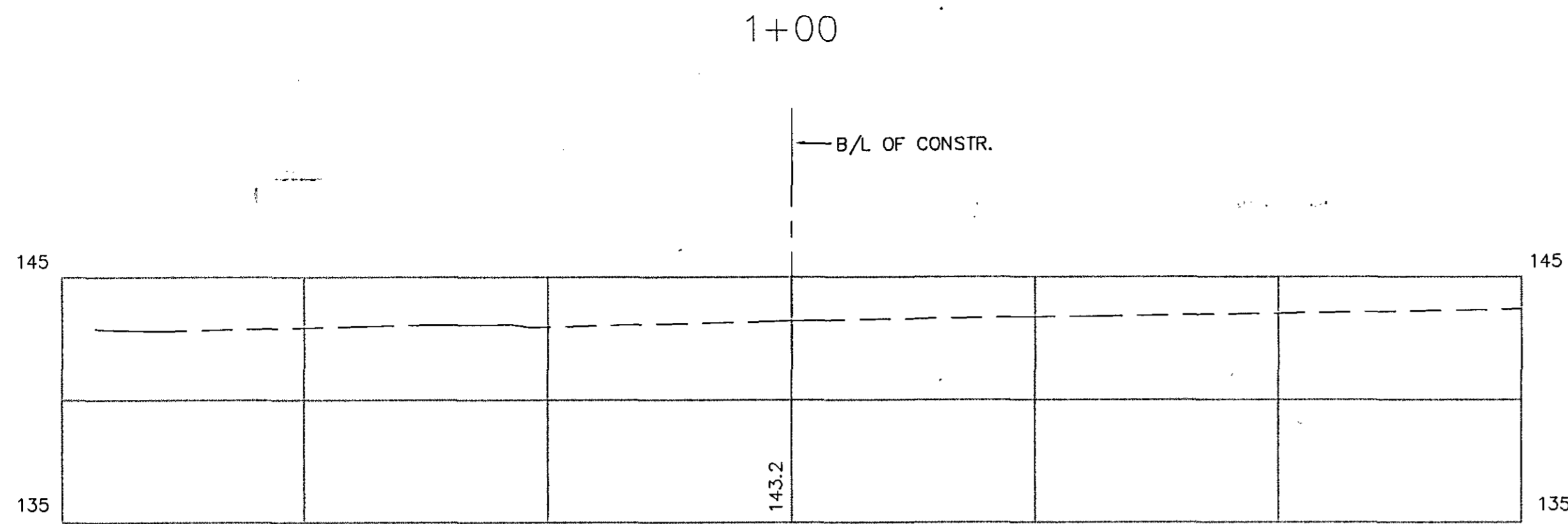
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DRN: J.C.M.
CHK: M.F.M.
DATE: 5/04

BY	NO.	REVISION	DATE

WINTERS LANE ROAD WIDENING
CAPITAL PROJECT J-4143
HOWARD COUNTY, MARYLAND

TYPICAL STREET CROSS SECTIONS

SCALE AS SHOWN
SHEET 5 OF 15



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 7/14/06
DIRECTOR OF PUBLIC WORKS DATE
[Signature] 7/14/06
CHIEF, BUREAU OF ENGINEERING DATE
[Signature] 7/14/06
CHIEF, BUREAU OF HIGHWAYS DATE
[Signature] 7/14/06
CHIEF, BUREAU OF TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DATE

NEW ENGINEERING

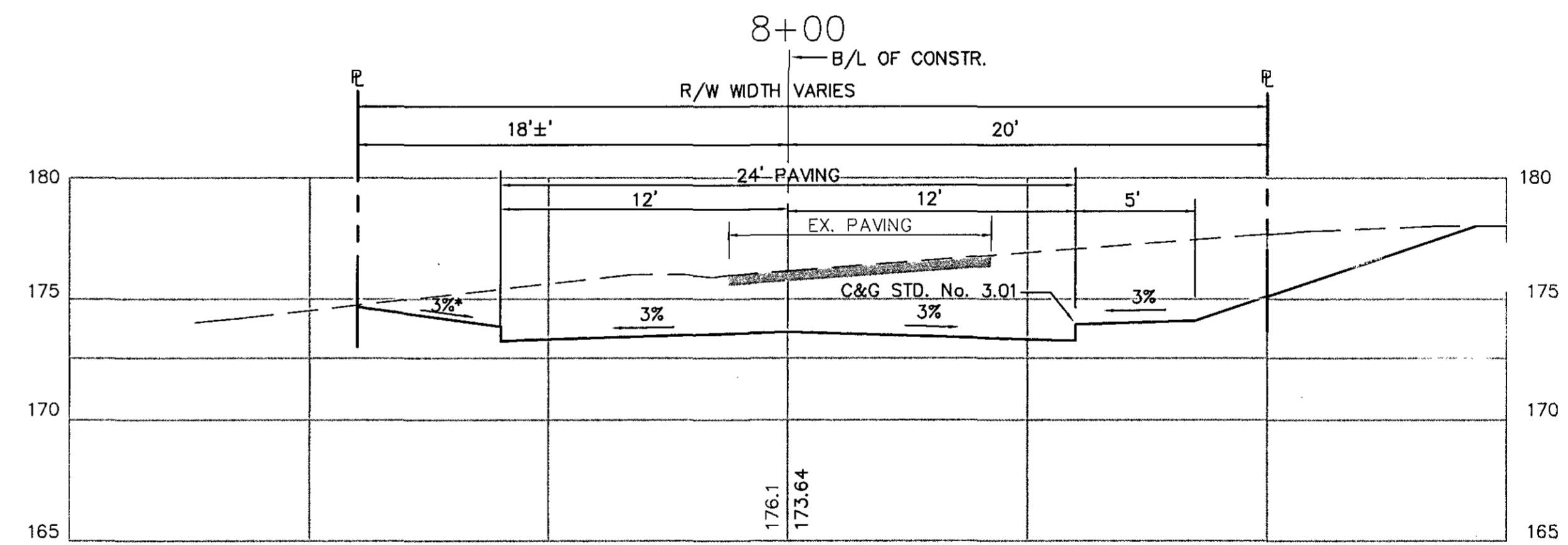
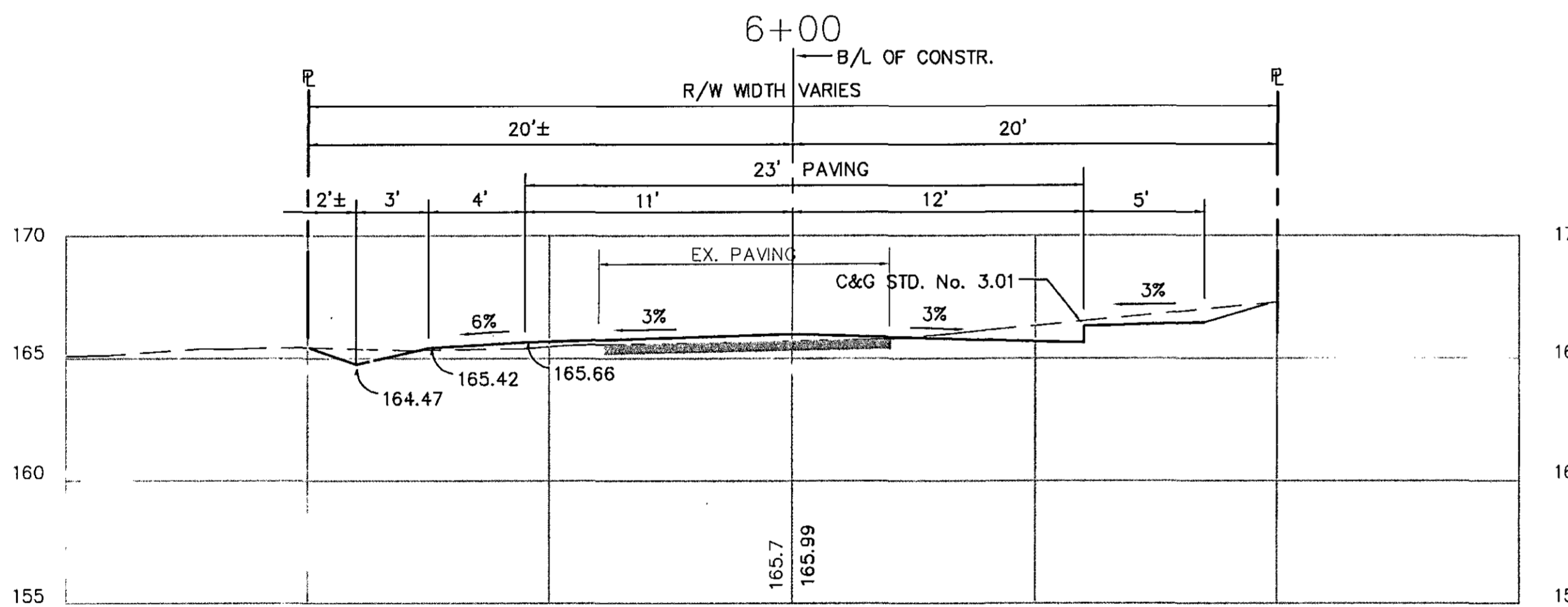
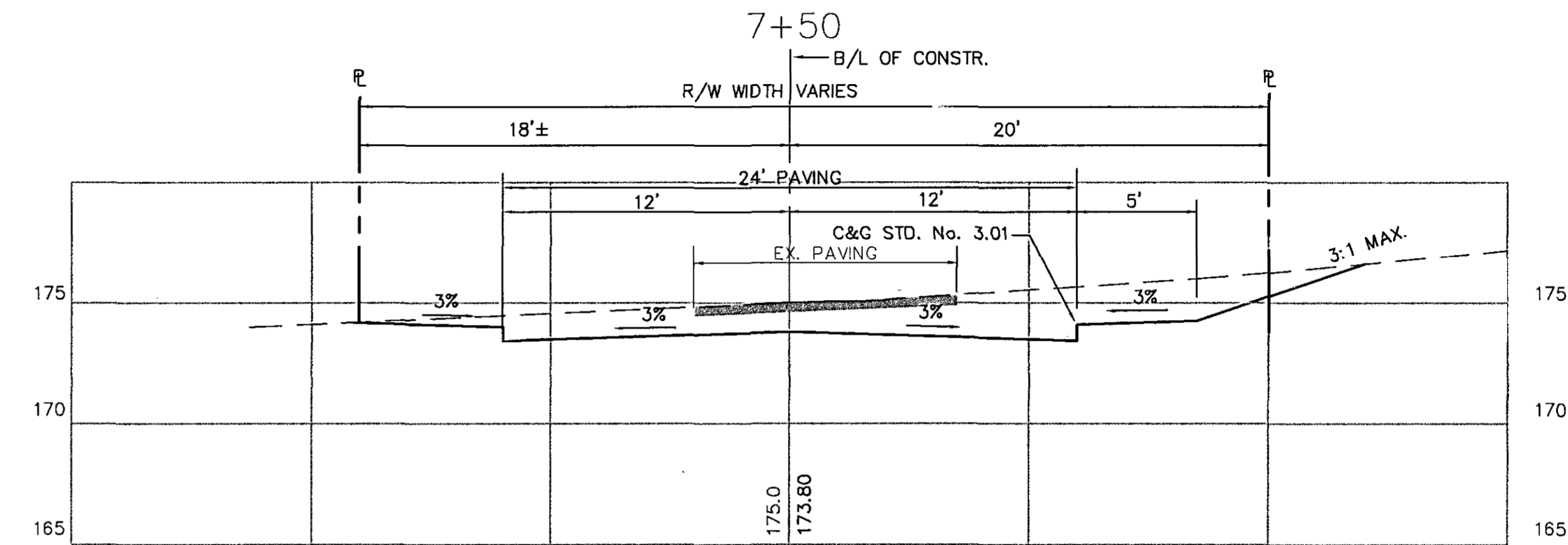
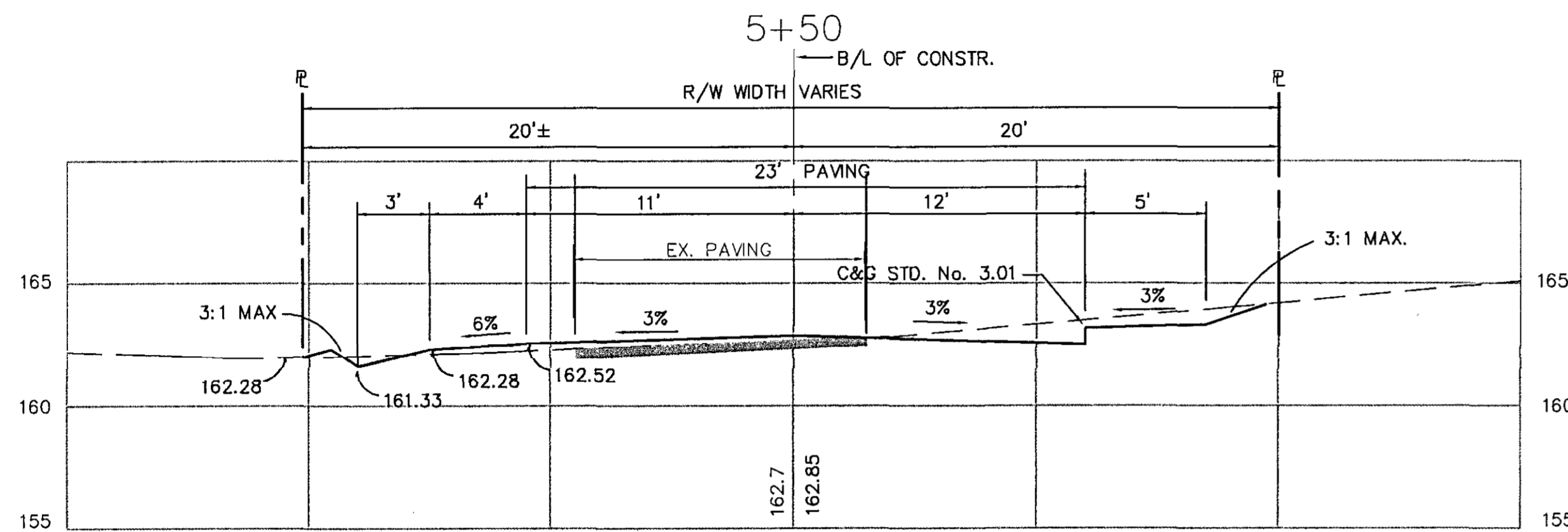
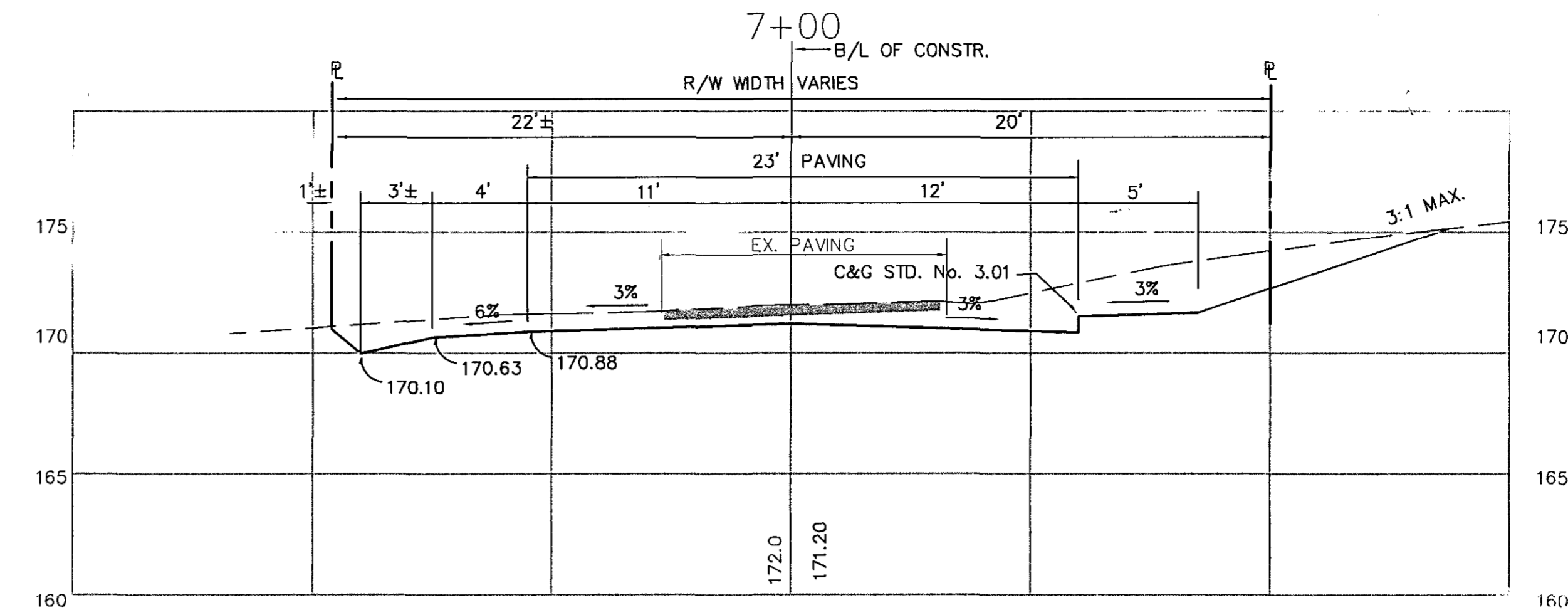
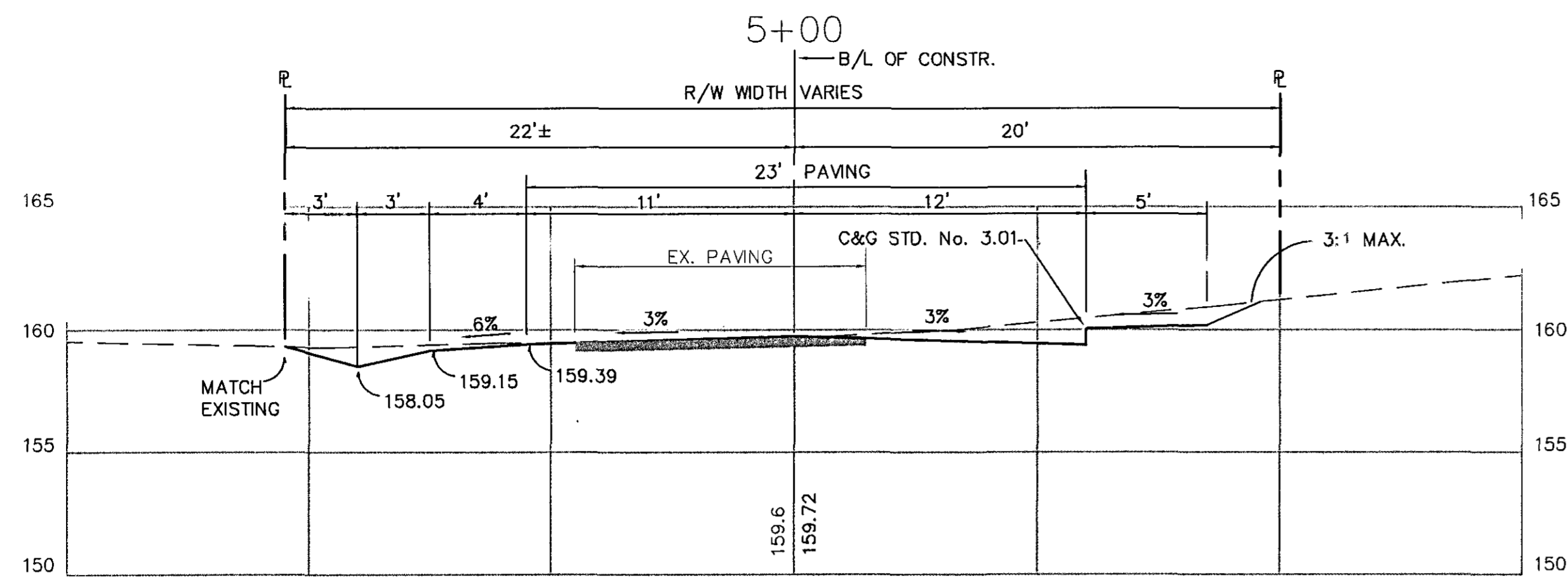


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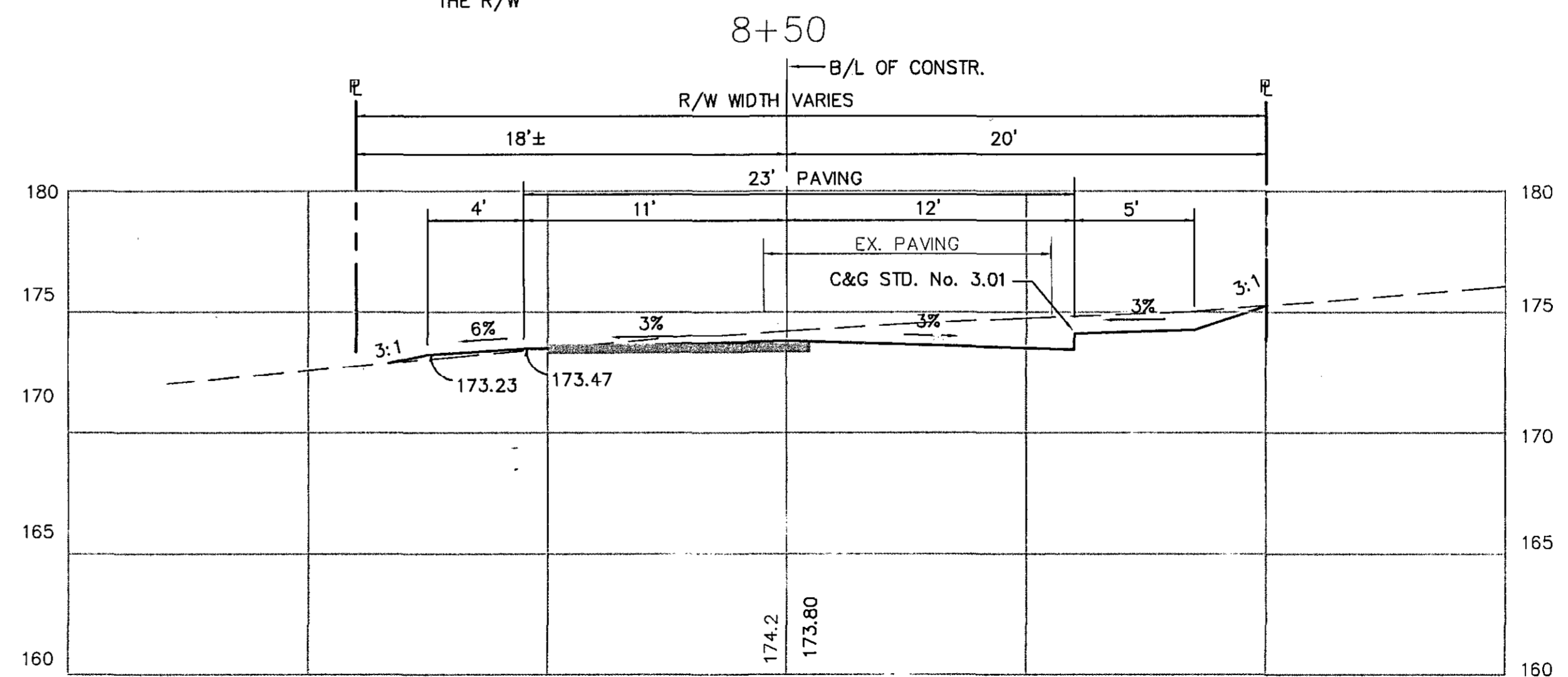
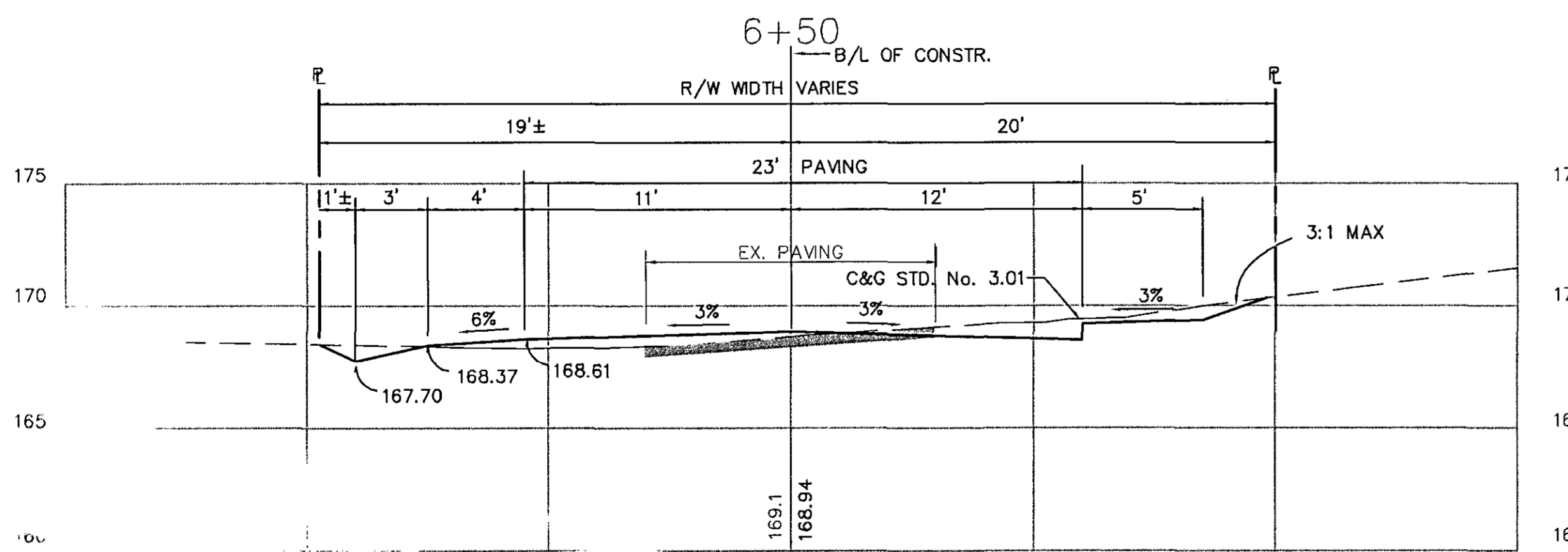
BY	NO.	REVISION	DATE	600' SCALE MAP NO.	BLOCK NO.

WINTERS LANE ROAD WIDENING
CAPITAL PROJECT J-4143
HOWARD COUNTY, MARYLAND
STREET CROSS SECTIONS (ROAD "A")
FROM STA. 1+00 TO STA. 4+50

SCALE
HORIZ. 1"=5'
VERT. 1"=5'
SHEET
6 OF 15



* ADJUST GRADE INSIDE THE R/W



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

John D. O'Hara
DIRECTOR OF PUBLIC WORKS
DATE: 8/1/06

Steve Slavan
CHIEF, BUREAU OF ENGINEERING
DATE: 7/14/06

VIEW ENGINEERING



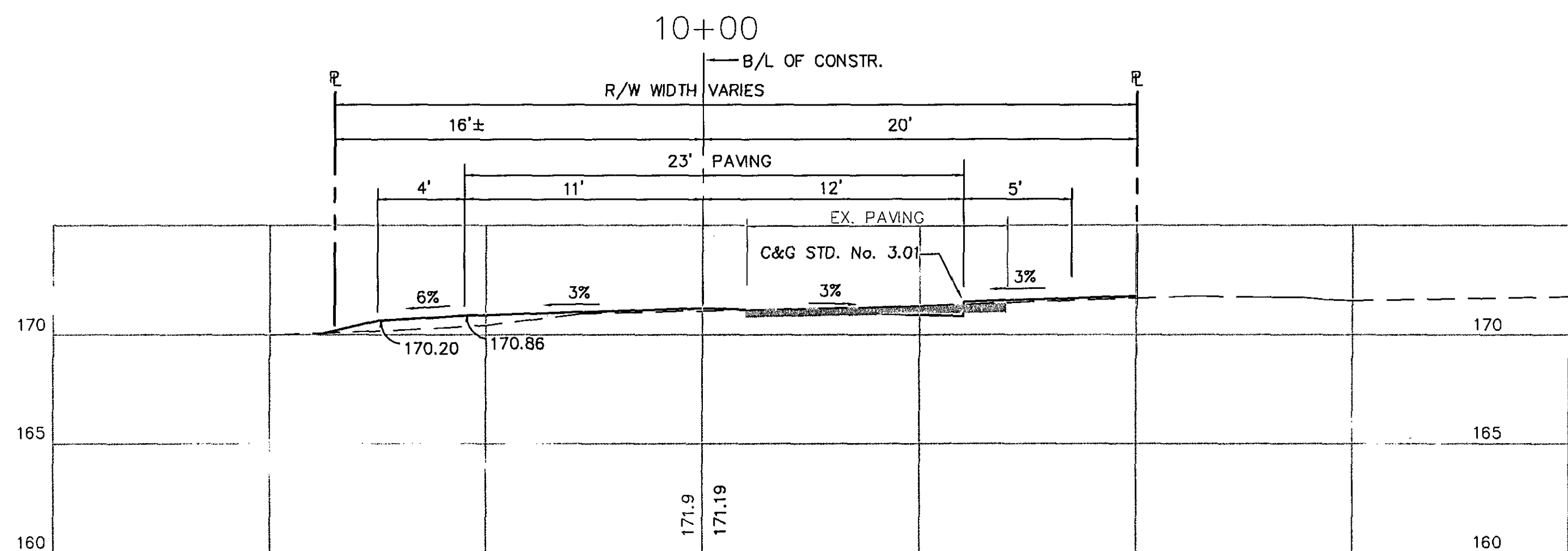
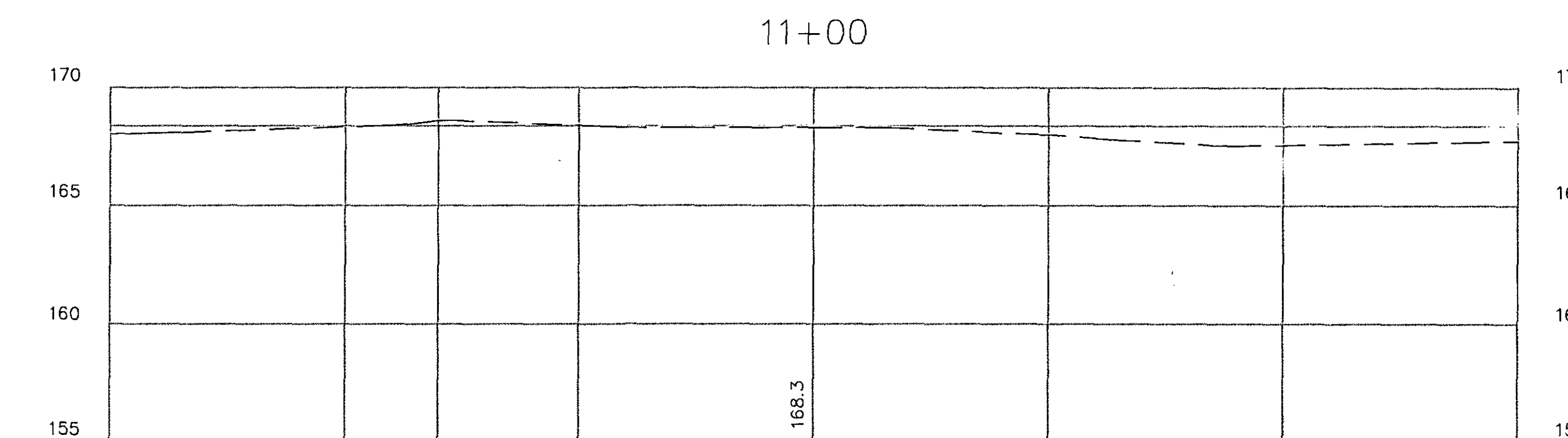
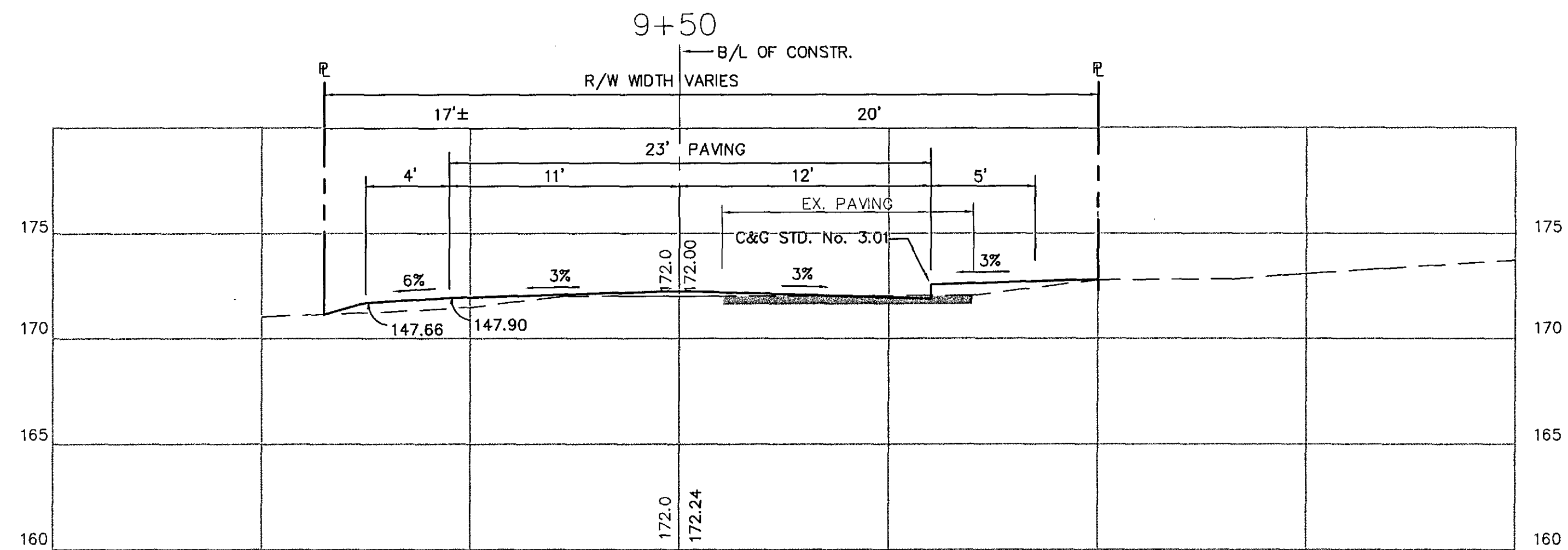
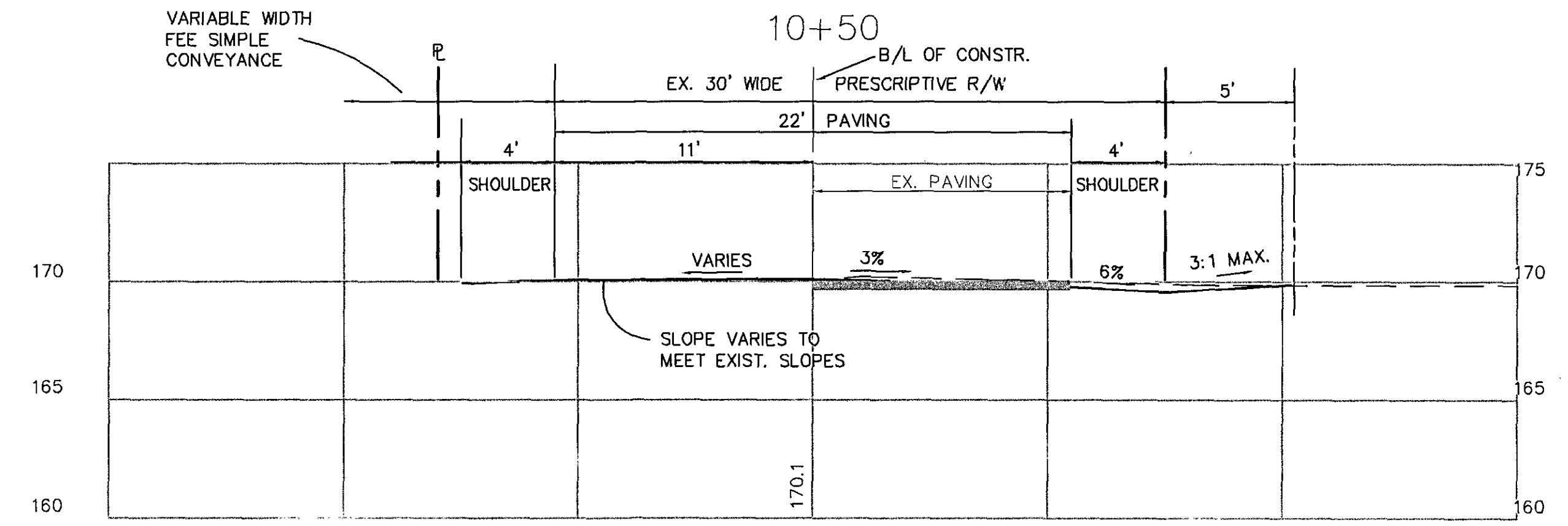
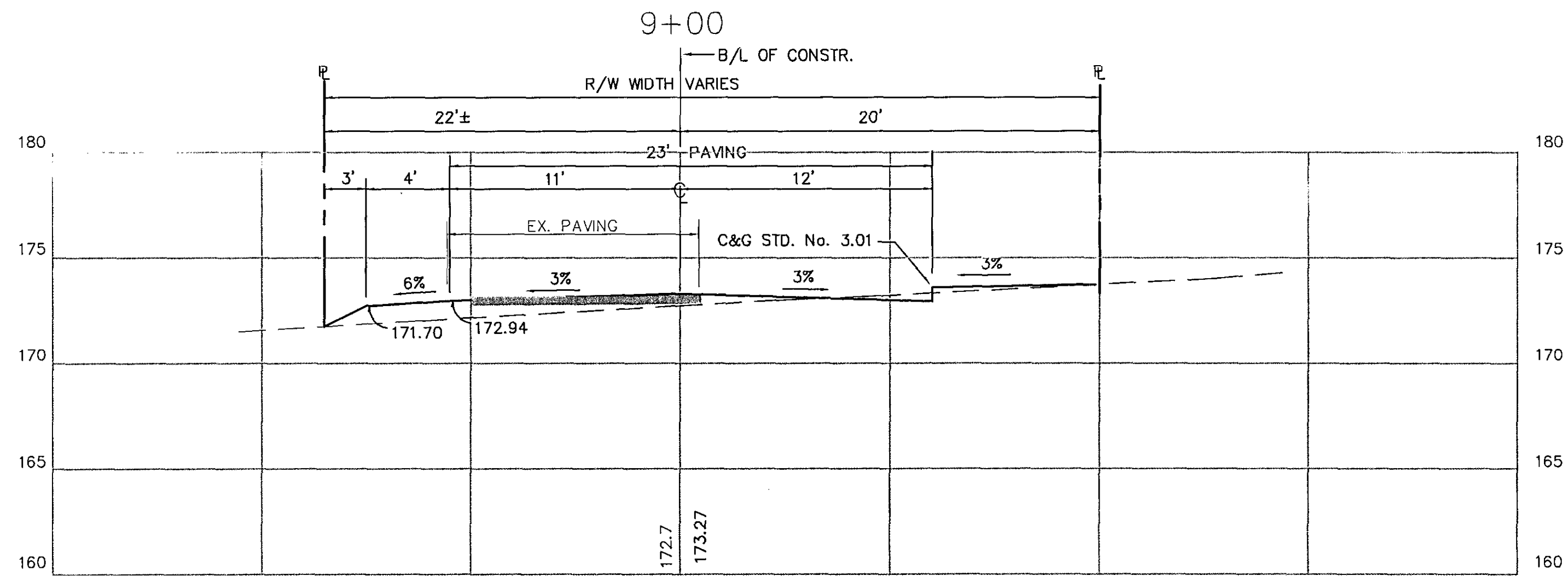
DES: J.C.M.
DRN: J.C.M.
CHK: M.F.M.
DATE: 5/04

BY	NO.	REVISION	DATE

WINTERS LANE ROAD WIDENING
CAPITAL PROJECT J-4143
HOWARD COUNTY, MARYLAND
STREET CROSS SECTIONS (ROAD "A")
FROM STA. 5+00 TO STA 8+50

SCALE
HORIZ. 1"=5'
VERT. 1"=5'
SHEET
7 OF 15

Printed: Aug 27, 2003 4:33pm Dwg: A:\1812-06\CAD\Section.dwg



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

[Signature] 8/1/06
DIRECTOR OF PUBLIC WORKS DATE

[Signature] 7/19/06
CHIEF, BUREAU OF ENGINEERING DATE

NEW ENGINEERING



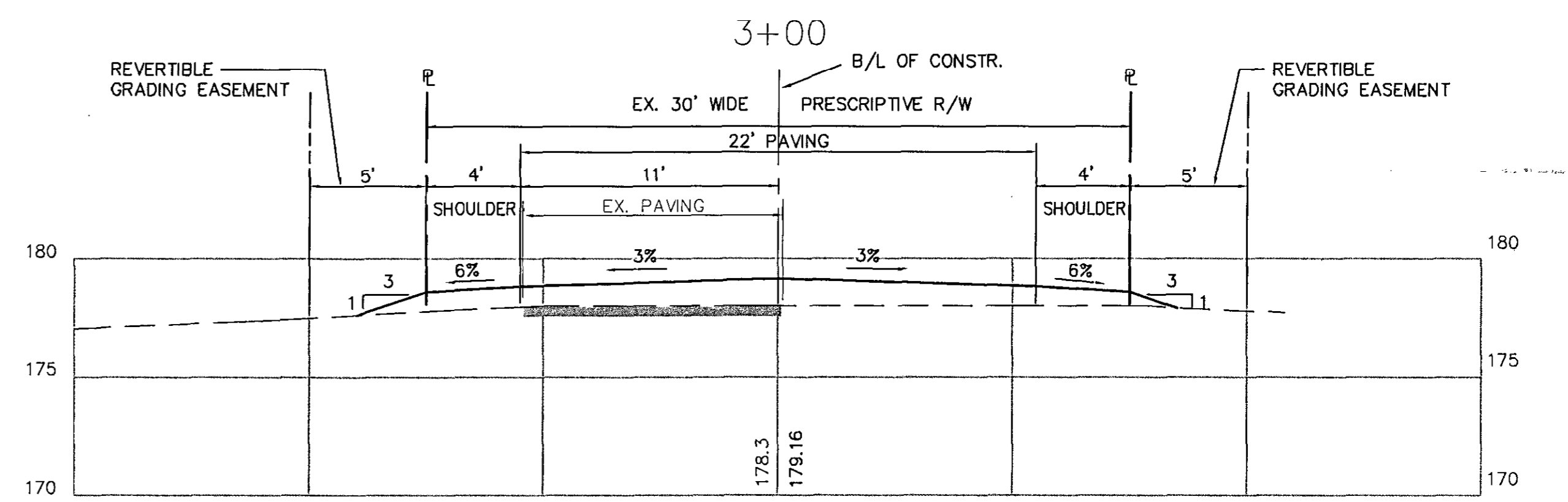
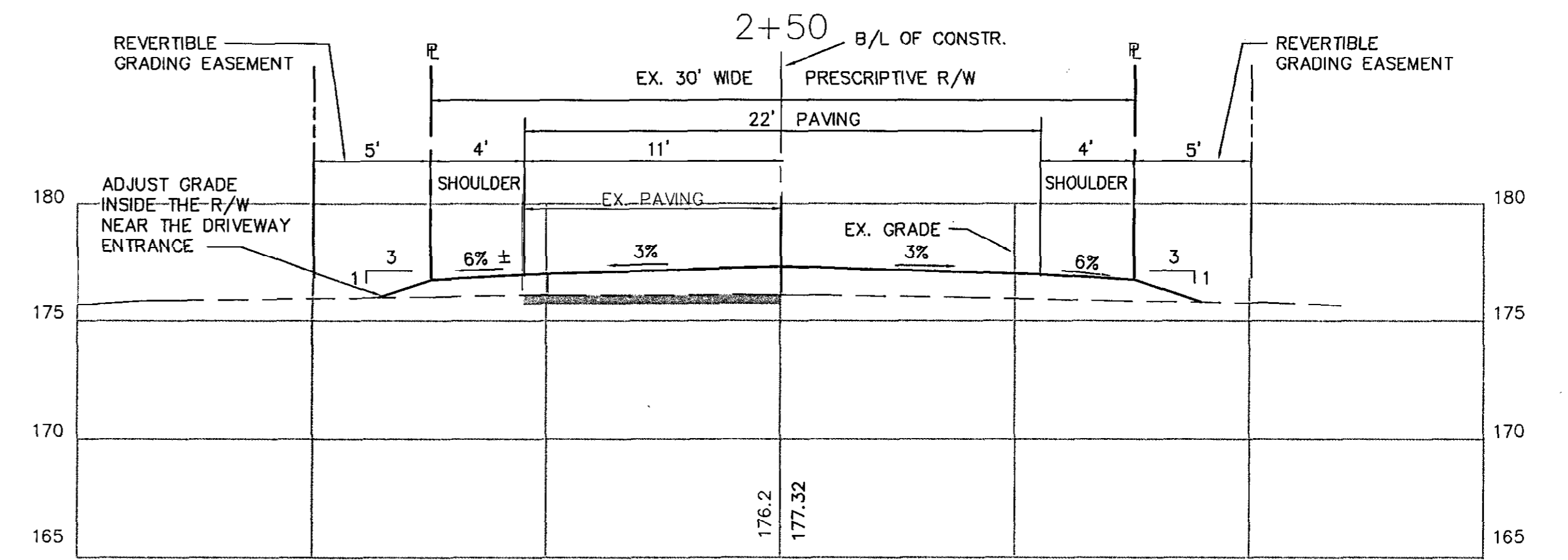
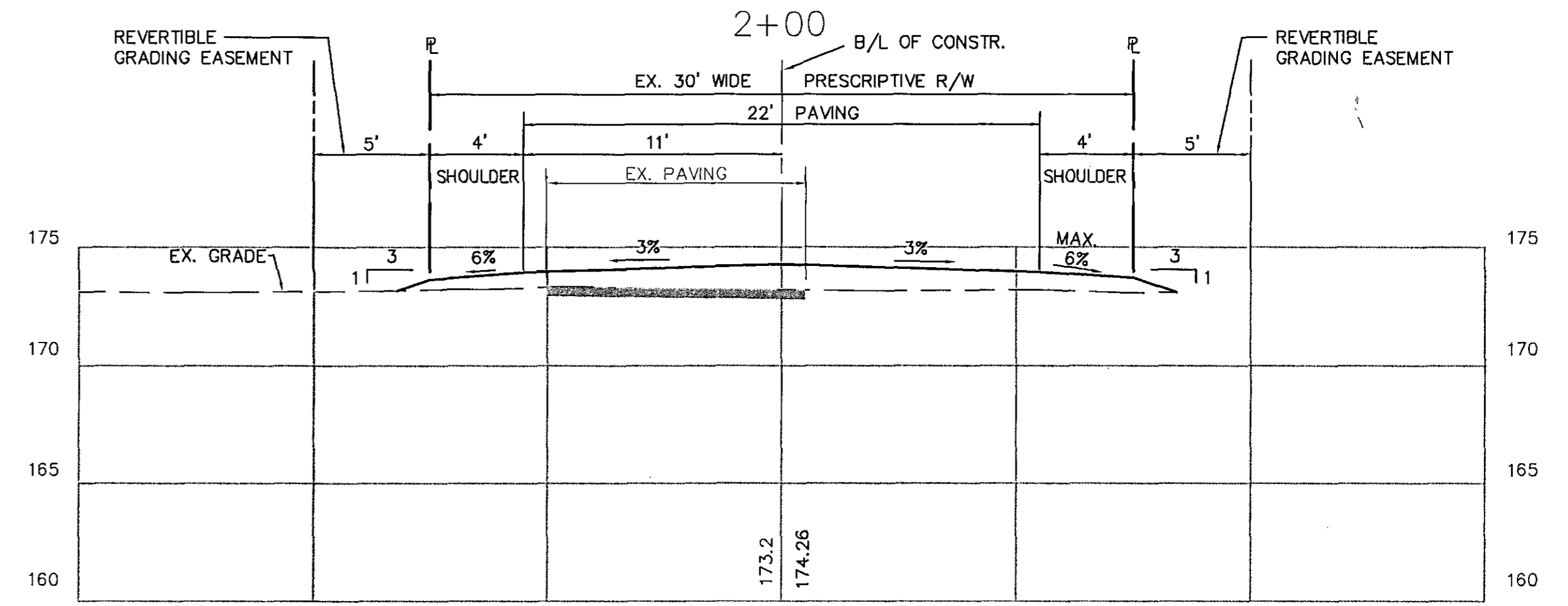
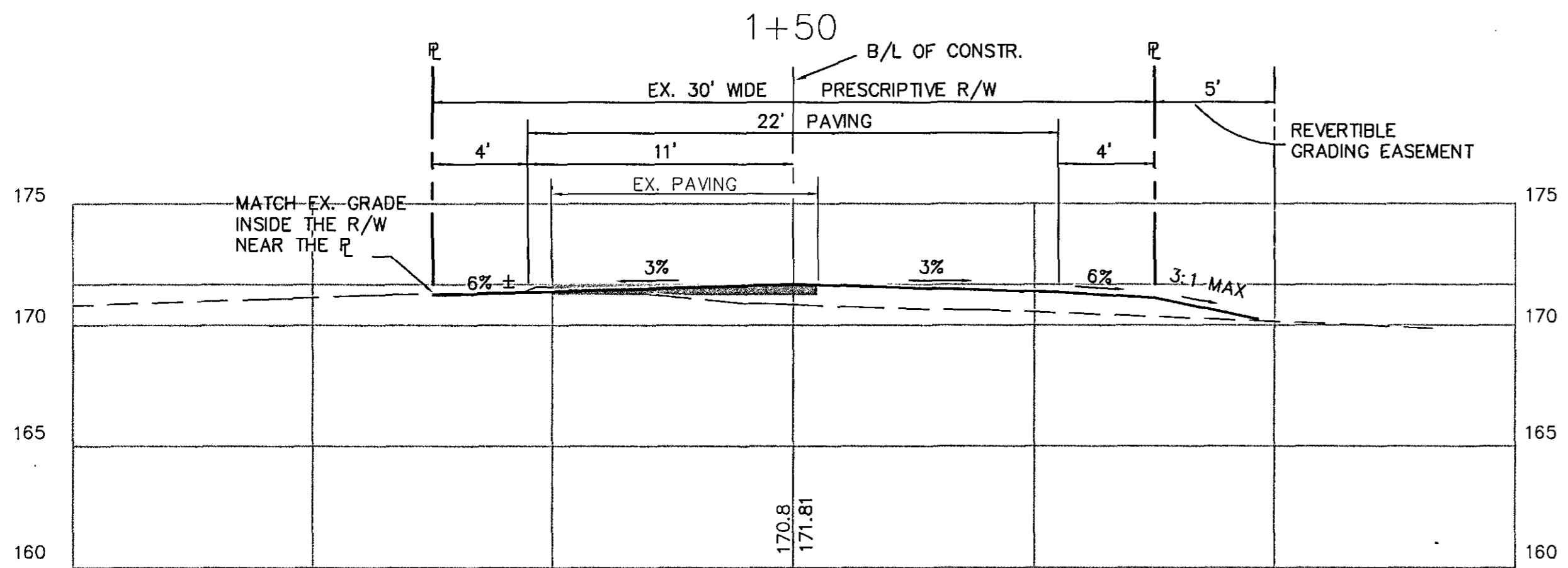
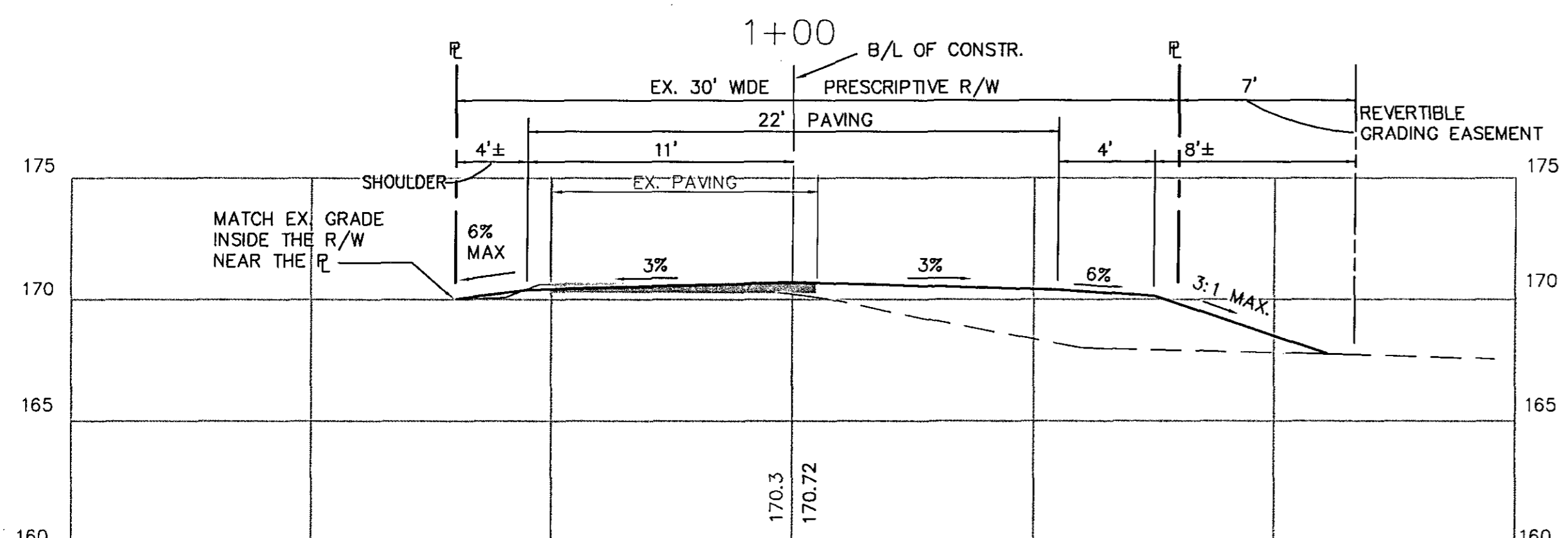
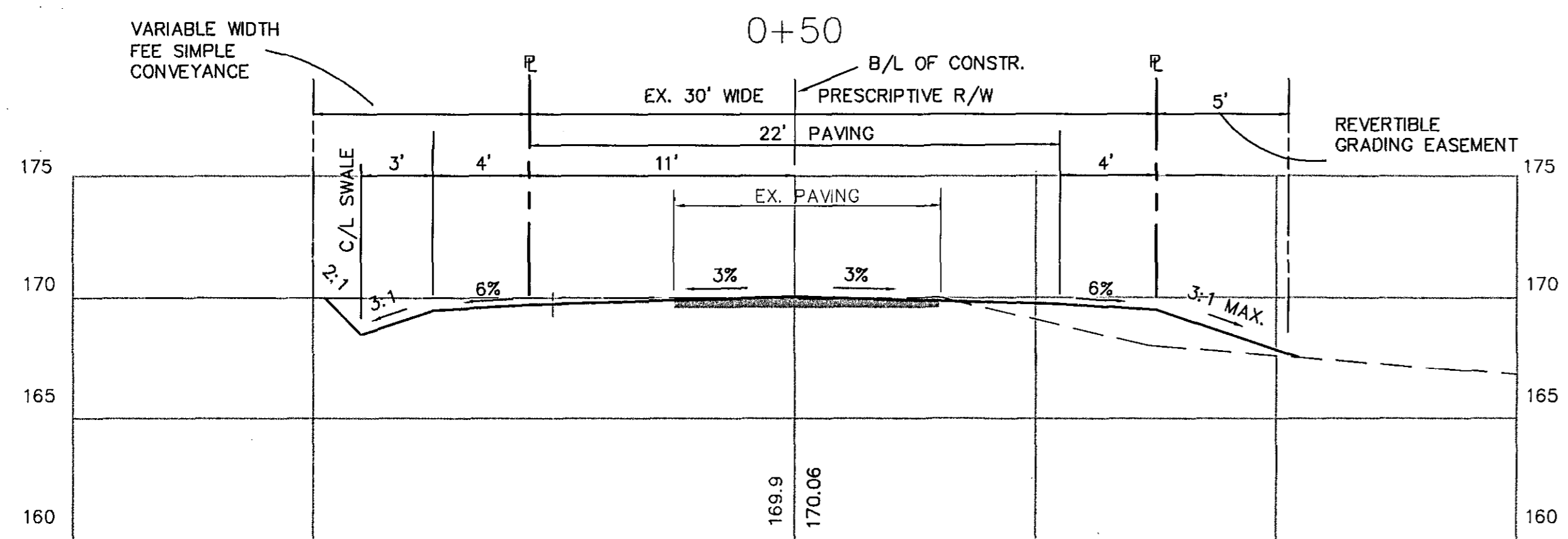
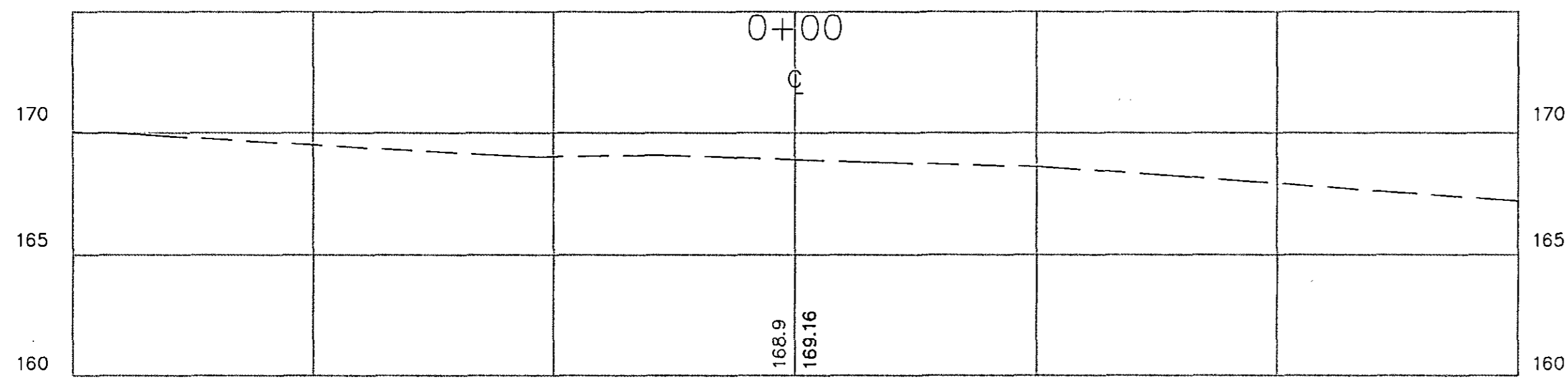
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DATE: 5/04

BY	NO.	REVISION	DATE

WINTERS LANE ROAD WIDENING
CAPITAL PROJECT J-4143
HOWARD COUNTY, MARYLAND
STREET CROSS SECTION (ROAD "A")
FROM STA. 9+00 TO STA. 11+00

SCALE
HORIZ. 1"=5'
VERT. 1"=5'
SHEET
8 OF 15

Plotted: Aug. 27, 2003 4:38pm
 Dwg. 031512-08(000)Sections.dwg



DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

John J. O'Hara 8/1/06
DIRECTOR OF PUBLIC WORKS DATE

Steve Sharan 7/14/06
CHIEF, BUREAU OF ENGINEERING DATE

Steve Sharan 7/14/06
CHIEF, BUREAU OF HIGHWAYS DATE

Steve Sharan 7/14/06
TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DATE

VIEW ENGINEERING



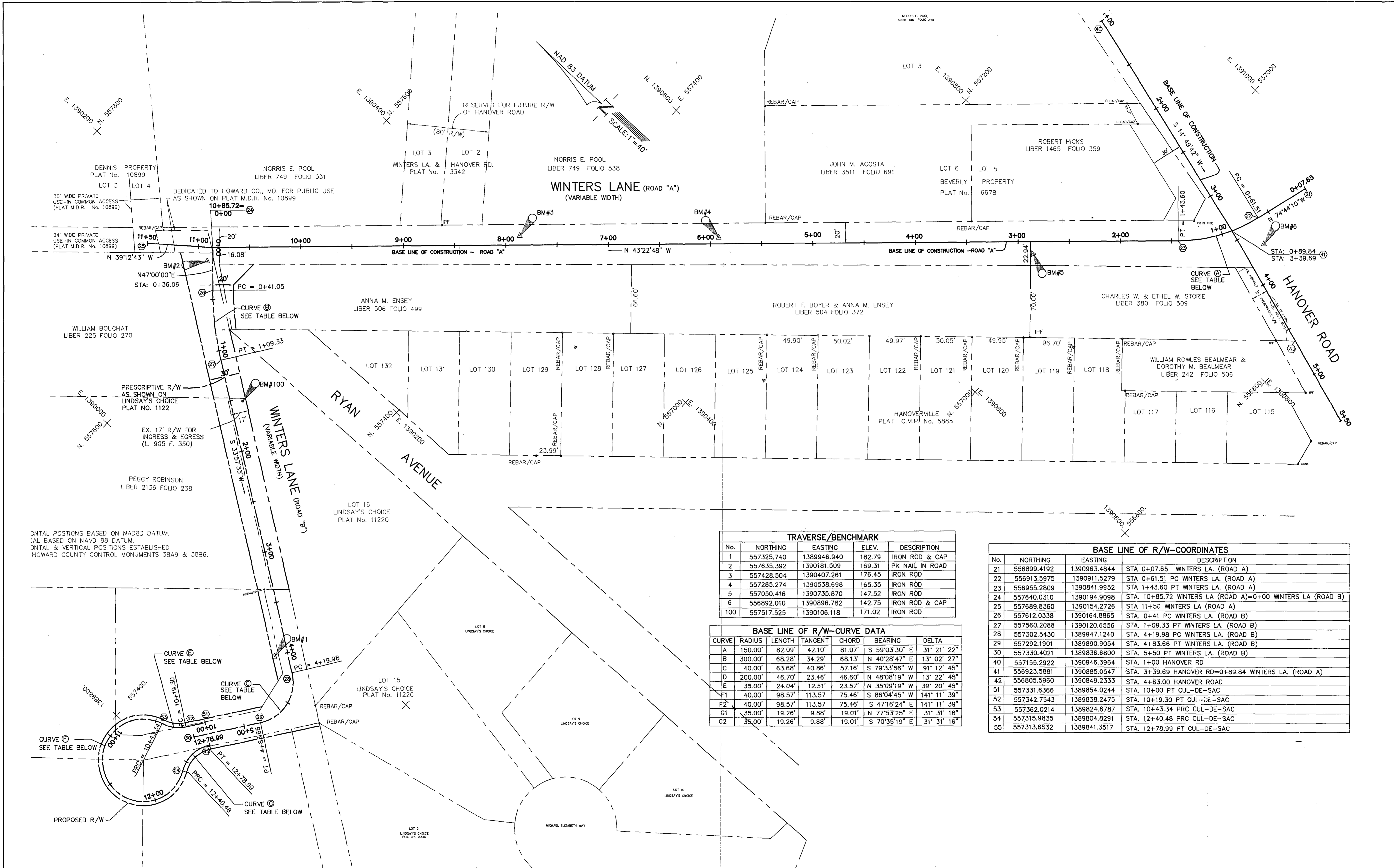
DES: J.C.M.			
DRN: J.C.M.			
CHK: M.F.M.			
DATE: 5/04			
BY: NO.		REVISION	

DATE	600' SCALE MAP NO.	BLOCK NO.

WINTERS LANE ROAD WIDENING
CAPITAL PROJECT J-4143
HOWARD COUNTY, MARYLAND
STREET CROSS SECTIONS (ROAD "B")
FROM STA. 0+00 TO STA. 3+00

SCALE
HORIZ. 1"=5'
VERT. 1"=5'

SHEET
9 OF 15



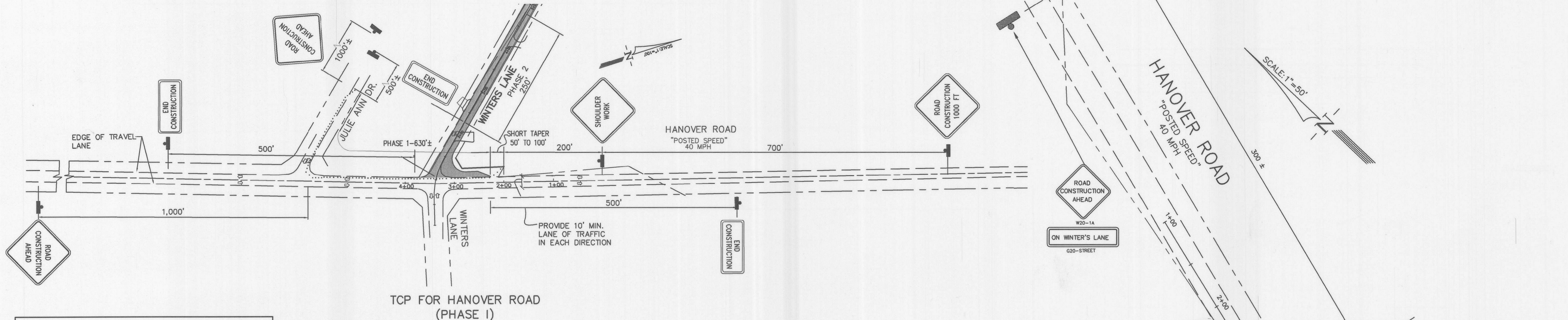
ALL POINTS BASED ON NAD83 DATUM.
 HORIZONTAL POSITIONS BASED ON NAVD 88 DATUM.
 HORIZONTAL & VERTICAL POSITIONS ESTABLISHED
 HOWARD COUNTY CONTROL MONUMENTS 38A & 38B.6.

TRAVERSE/BENCHMARK				
No.	NORTHING	EASTING	ELEV.	DESCRIPTION
1	557325.740	1389946.940	182.79	IRON ROD & CAP
2	557635.392	1390181.509	169.31	PK NAIL IN ROAD
3	557428.504	1390407.261	176.45	IRON ROD
4	557285.274	1390538.698	165.35	IRON ROD
5	557050.416	1390735.870	147.52	IRON ROD
6	556892.010	1390896.782	142.75	IRON ROD & CAP
100	557517.525	1390106.118	171.02	IRON ROD

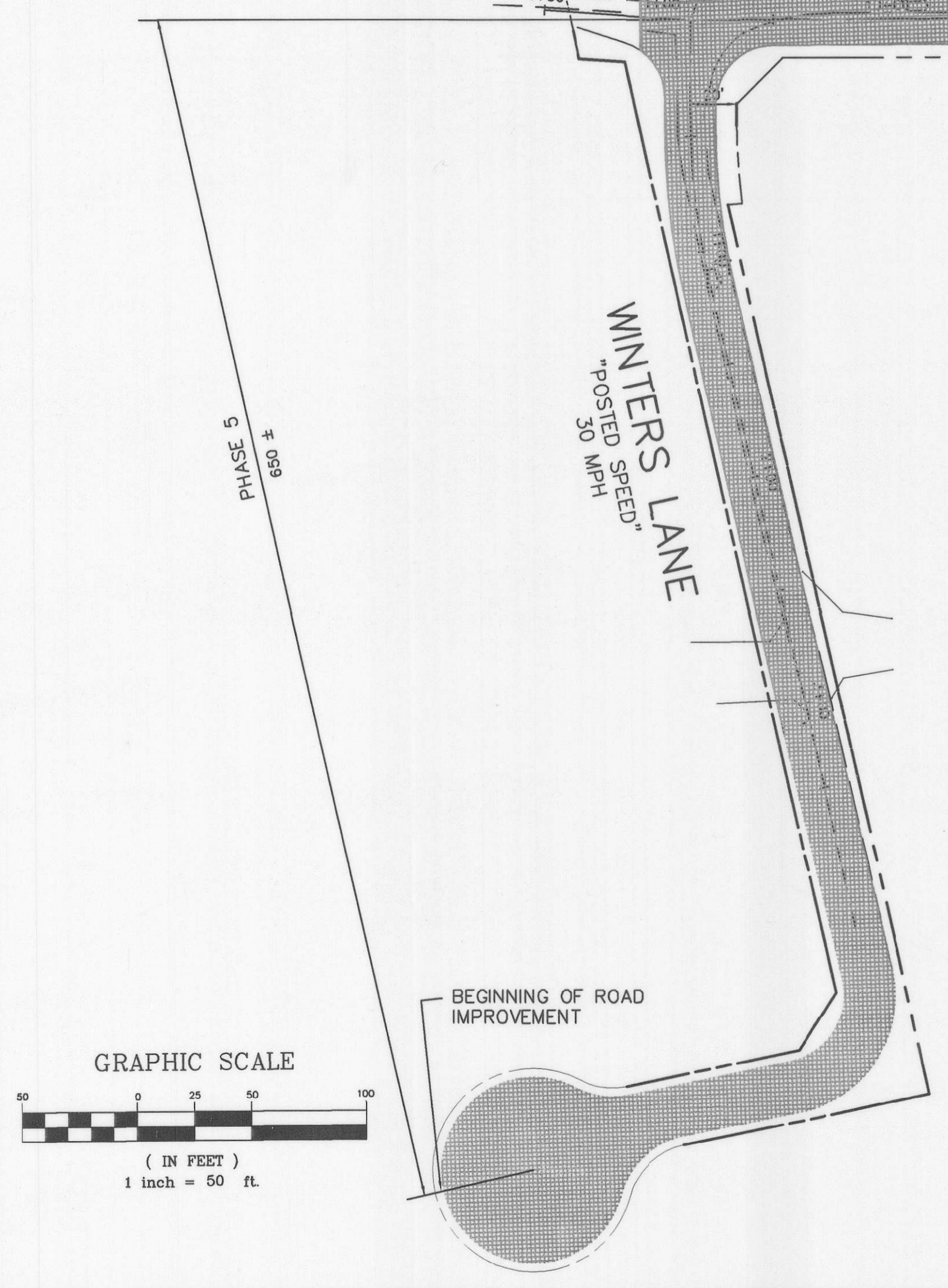
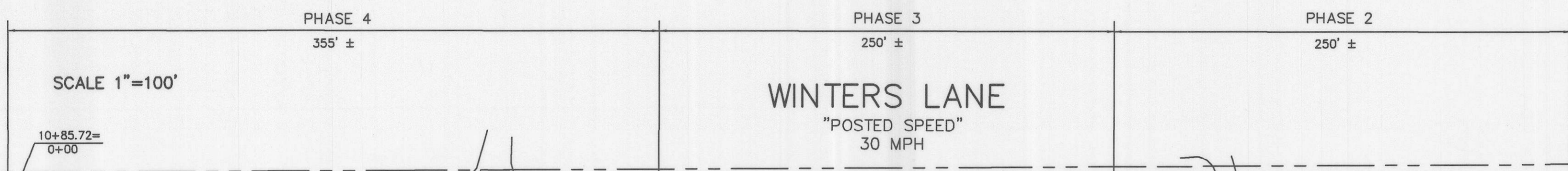
BASE LINE OF R/W-CURVE DATA						
CURVE	RADIUS	LENGTH	TANGENT	CHORD	BEARING	DELTA
A	150.00'	82.09'	42.10'	81.07'	S 59°03'30" E	31° 21' 22"
B	300.00'	68.28'	34.29'	68.13'	N 40°28'47" E	13° 02' 27"
C	40.00'	63.68'	40.86'	57.16'	S 79°33'56" W	91° 12' 45"
D	200.00'	46.70'	23.46'	46.60'	N 48°08'19" W	13° 22' 45"
E	35.00'	24.04'	12.51'	23.57'	N 35°08'19" W	39° 20' 45"
F1	40.00'	98.57'	113.57'	75.46'	S 86°04'45" W	141° 11' 39"
F2	40.00'	98.57'	113.57'	75.46'	S 47°16'24" E	141° 11' 39"
G1	35.00'	19.26'	9.88'	19.01'	N 77°53'25" E	31° 31' 16"
G2	35.00'	19.26'	9.88'	19.01'	S 70°35'19" E	31° 31' 16"

BASE LINE OF R/W-COORDINATES			
No.	NORTHING	EASTING	DESCRIPTION
21	556899.4192	1390963.4844	STA 0+07.65 WINTERS LA. (ROAD A)
22	556913.5975	1390911.5279	STA 0+61.51 PC WINTERS LA. (ROAD A)
23	556955.2809	1390841.9952	STA 1+43.60 PT WINTERS LA. (ROAD A)
24	557640.0310	1390194.9098	STA. 10+85.72 WINTERS LA (ROAD A)=0+00 WINTERS LA (ROAD B)
25	557689.8360	1390154.2726	STA 11+50 WINTERS LA (ROAD A)
26	557612.0338	1390164.8865	STA. 0+41 PC WINTERS LA. (ROAD B)
27	557560.2088	1390120.6556	STA. 1+09.33 PT WINTERS LA. (ROAD B)
28	557302.5430	1389947.1240	STA. 4+19.98 PC WINTERS LA. (ROAD B)
29	557292.1901	1389890.9054	STA. 4+83.66 PT WINTERS LA. (ROAD B)
30	557330.4021	1389836.6800	STA. 5+50 PT WINTERS LA. (ROAD B)
40	557155.2922	1390946.3964	STA. 1+00 HANOVER RD
41	556923.5881	1390885.0547	STA. 3+39.69 HANOVER RD=0+89.84 WINTERS LA. (ROAD A)
42	556805.5960	1390849.2333	STA. 4+63.00 HANOVER ROAD
51	557331.6366	1389854.0244	STA. 10+00 PT CUL-DE-SAC
52	557342.7543	1389838.2475	STA. 10+19.30 PT CUI-DE-SAC
53	557382.0214	1389824.6787	STA. 10+43.34 PRC CUL-DE-SAC
54	557315.9835	1389804.8291	STA. 12+40.48 PRC CUL-DE-SAC
55	557313.6532	1389841.3517	STA. 12+78.99 PT CUL-DE-SAC

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND Director: <i>Mark D. ...</i> 8/1/06 Chief, Bureau of Highways: <i>Mark D. ...</i> 7/31/06		Chief, Bureau of Engineering: <i>Paul ...</i> 7/14/06 Chief, Division of Roads, Bridges & Storm Drainage: <i>Steve ...</i> 7/14/06		VIEW ENGINEERING State of Maryland Professional Engineer Seal Date: 5/04		DES: JCM DRN: JCM CHK: CS DATE: 5/04		WINTERS LANE ROAD WIDENING CAPITAL PROJECT J-4143 HOWARD COUNTY, MARYLAND GEOMETRIC LAYOUT PLAN		SCALE 1"=40' SHEET 10 OF 15	
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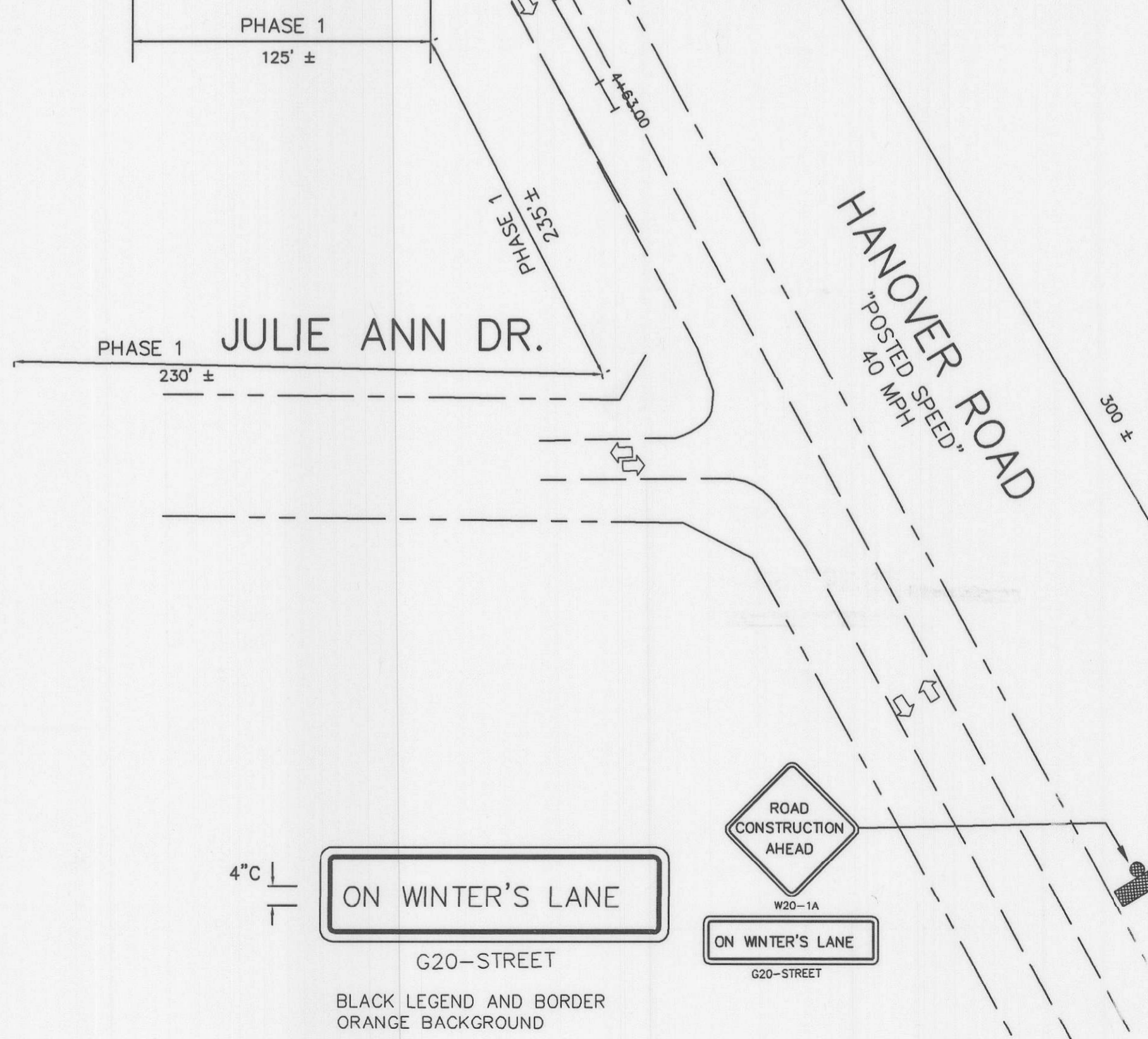


REFER TO SHEET 12 OF 15 FOR EXPLANATION OF PHASING AND ADDITIONAL RELATED DETAILS.



MAINTENANCE OF TRAFFIC NOTES

1. ALL SIGNS, CHANNELIZING DEVICES, ETC. SHALL BE IN ACCORDANCE WITH THE LATEST EDITION OF THE MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
2. FLASHING WARNING LIGHTS SHALL BE USED ON TYPE III BARRICADES.
3. CHANNELIZING DEVICES ARE TO BE EXTENDED TO A POINT WHERE THEY ARE VISIBLE TO APPROACHING TRAFFIC.
4. WARNING SIGNS MOUNTED ON WOOD POST(S) FOR THE OVER 24 HOUR OPERATIONS SHALL BE INSTALLED AS SHOWN IN FIGURE 6-1, PART VI OF THE MUTCD. THE BOTTOM OF THE SIGNS MOUNTED ON PORTABLE SUPPORTS SHALL BE NOT LESS THAN ONE FOOT ABOVE THE PAVEMENT ELEVATION. ALL SIGNS SHALL BE INSTALLED IN SUCH A MANNER AS TO PROVIDE ADEQUATE VISIBILITY OF THESE SIGNS AND ALL OTHER EXISTING SIGNS ON THE ROAD TO THE DRIVER.
5. ALL STRUCTURES USED FOR TRAFFIC CONTROL SHALL BE IN ACCORDANCE WITH MSHA STANDARDS.
6. POSTED SPEED IN A CONSTRUCTION ZONE SHALL BE 15 MPH.
7. THE CONTRACTOR SHALL CONTACT OCCUPANTS OF ALL ADJOINING PROPERTIES AND INFORM THEM OF THE SCOPE OF WORK AND THE TIMING OF CONSTRUCTION A MINIMUM OF 24 HOURS PRIOR TO THE START OF ANY ACTIVITY WITHIN WINTERS LANE.
8. THE CONTRACTOR SHALL MAINTAIN RESIDENTIAL, EMERGENCY AND COMMERCIAL VEHICLE ACCESS TO ALL DRIVEWAYS AT ALL TIMES THROUGH USE OF TEMPORARY STONE PAVING ALONG EDGE OF ROADWAY TO MAINTAIN A TEN FOOT (10') MINIMUM ROAD WIDTH.
9. ALL CHANGES IN TRAFFIC CONTROL MUST BE COORDINATED A MINIMUM OF 48 HOURS IN ADVANCE WITH THE HOWARD COUNTY DEPARTMENT OF PUBLIC WORKS.
10. REFER TO SHEET 12 OF 15 FOR MAINTENANCE OF TRAFFIC SEQUENCING.
11. REFER TO HOWARD COUNTY DPW DETAIL TE-11 FOR TRAFFIC CONTROL DURING CONSTRUCTION OF AUXILIARY LANES ALONG HANOVER ROAD.
12. TWO WAY TRAFFIC ACCESS SHALL BE PROVIDED AT THE INTERSECTION OF WINTERS LANE AND HANOVER ROAD AT ALL TIMES.



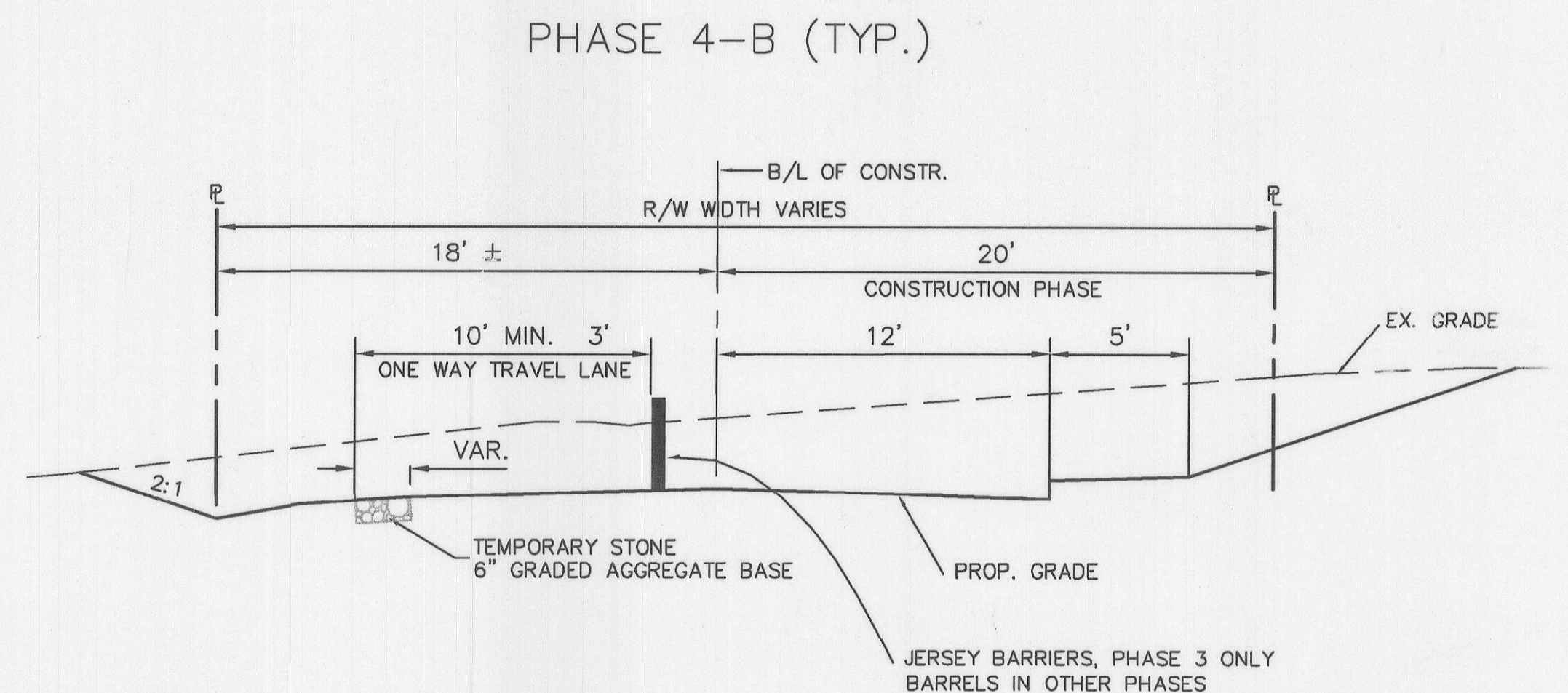
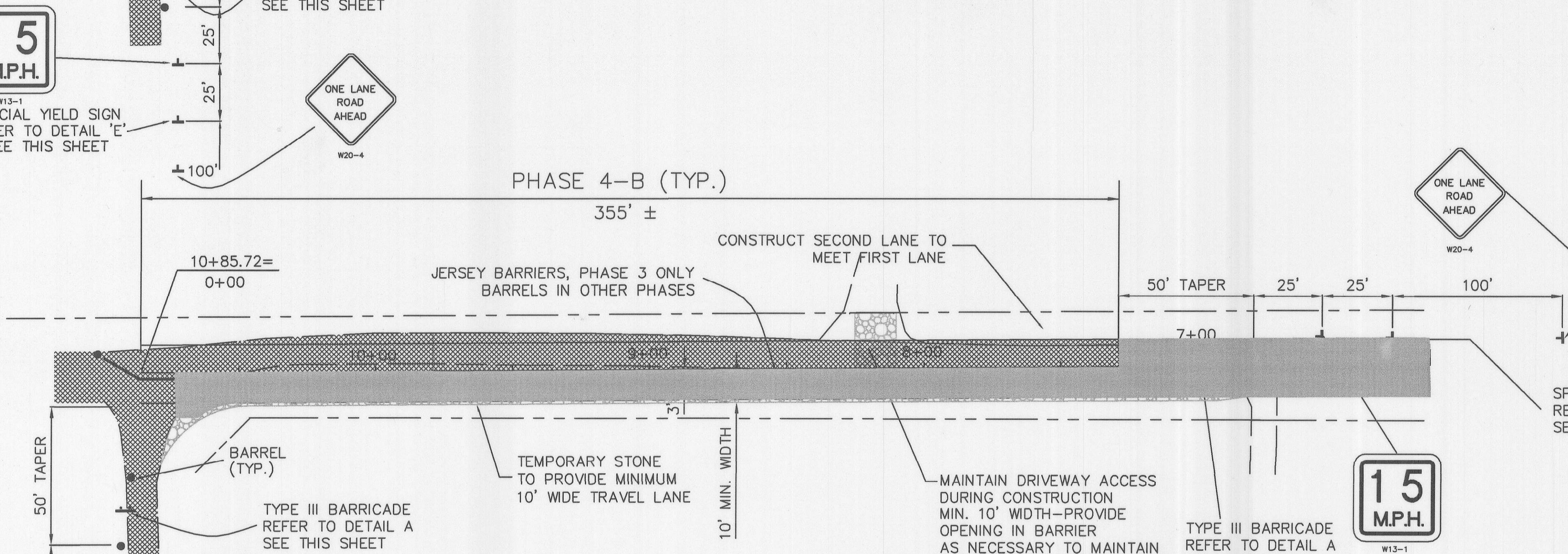
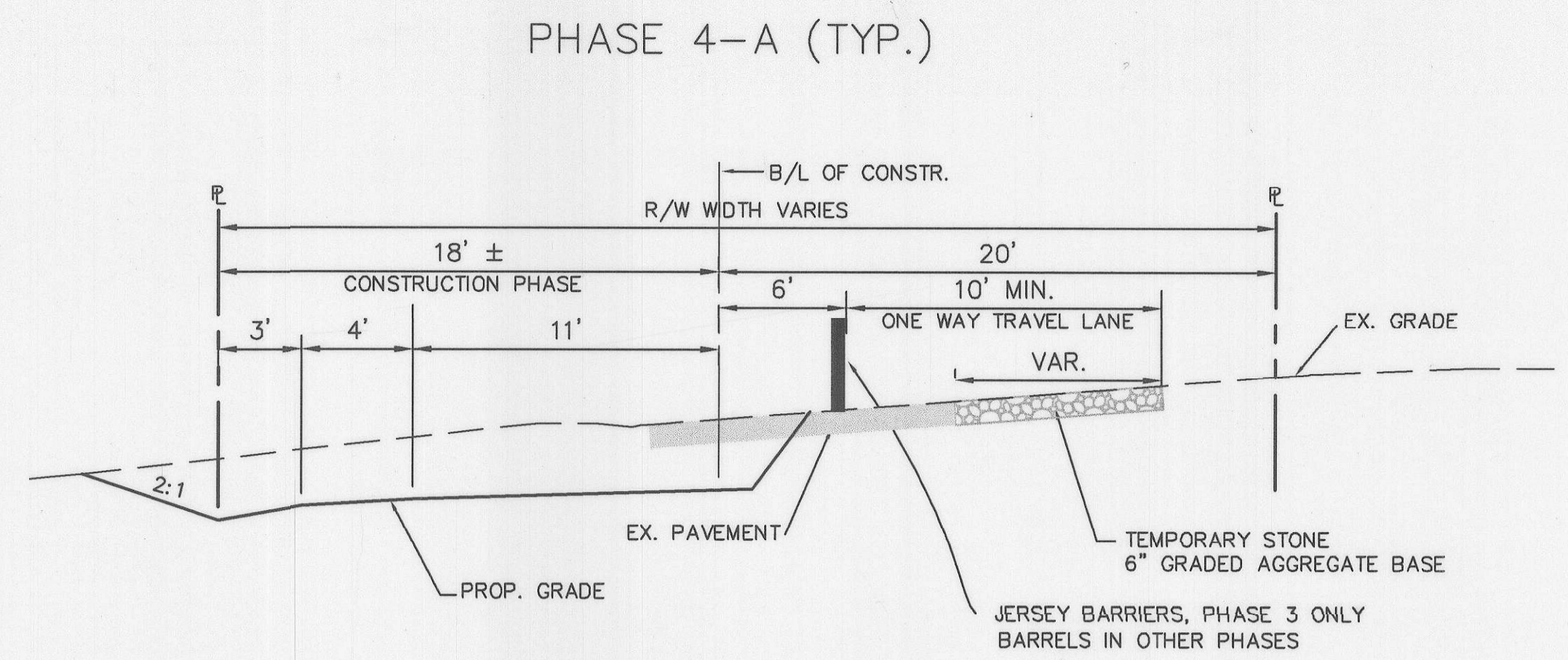
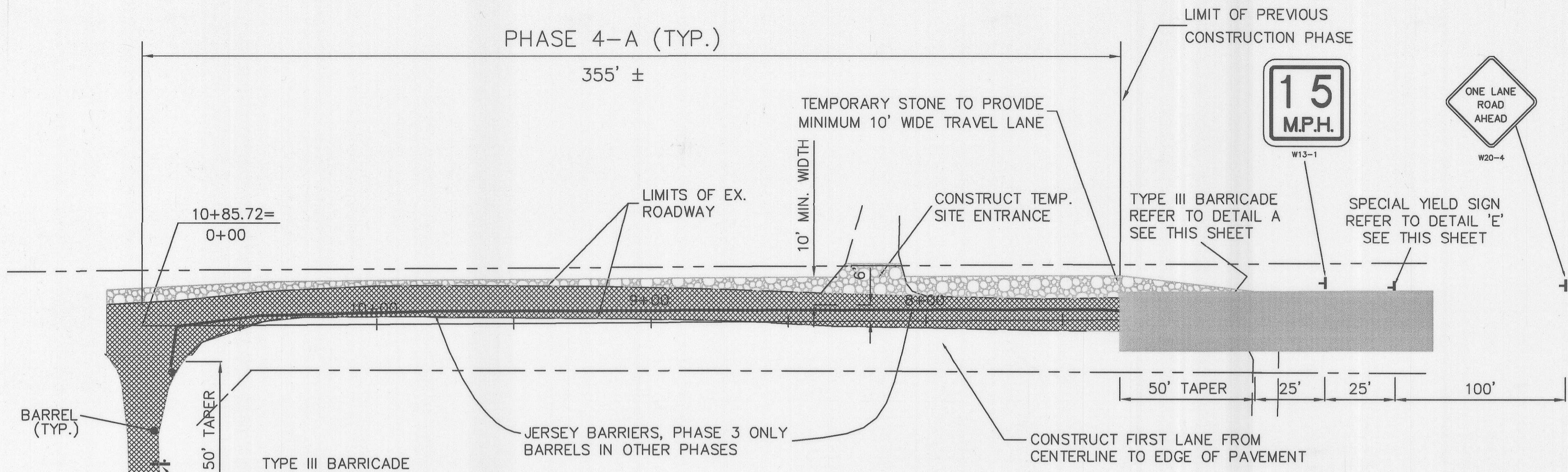
Project: Aug. 28, 2003 8:30am
 Dept. J:\1182-08\CAD01\18p.dwg
 VEW ENGINEERING

DEPARTMENT OF PUBLIC WORKS HOWARD COUNTY, MARYLAND		
Director of Public Works <i>John Ottens</i> 8/1/06	Chief, Bureau of Engineering <i>Steve Shanan</i> 7/14/06	
Chief, Bureau of Highways <i>Steve Shanan</i> 7/31/06	Transportation Projects and Watershed Management <i>Steve Shanan</i> 7/14/06	

VEW ENGINEERING 4104 Elab...	DES: DPK DRN: JKK CHK: HJS DATE: 5/04
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BY	NO.	REVISION	DATE

WINTERS LANE ROAD WIDENING CAPITAL PROJECT J-4143 HOWARD COUNTY, MARYLAND TRAFFIC CONTROL PLAN	SCALE N.T.S. SHEET 11 OF 15
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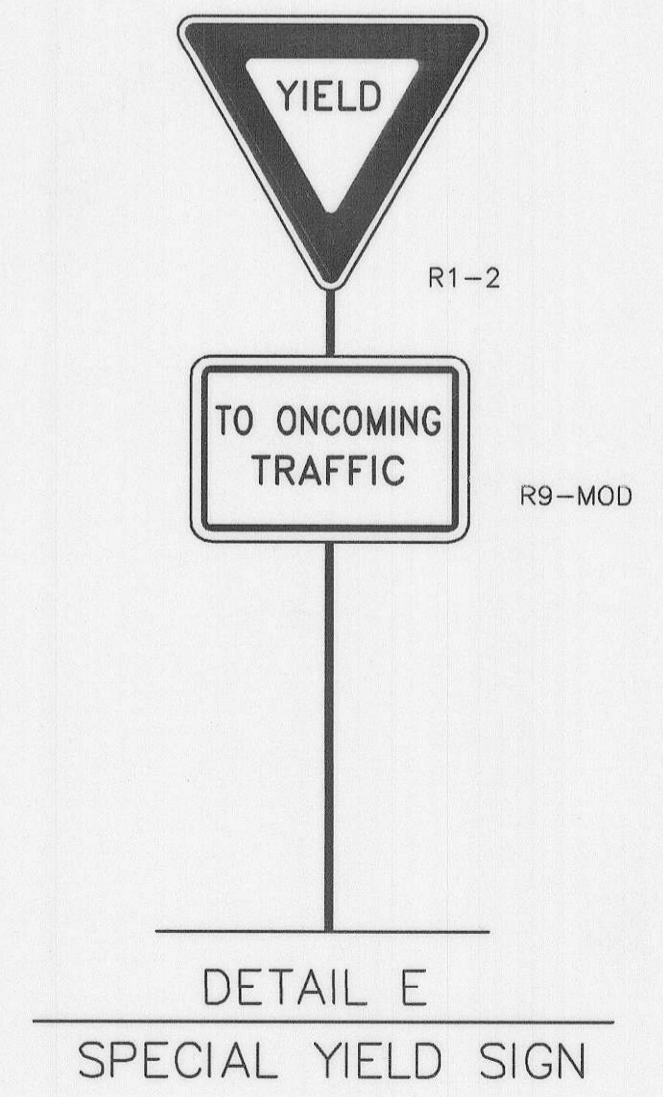
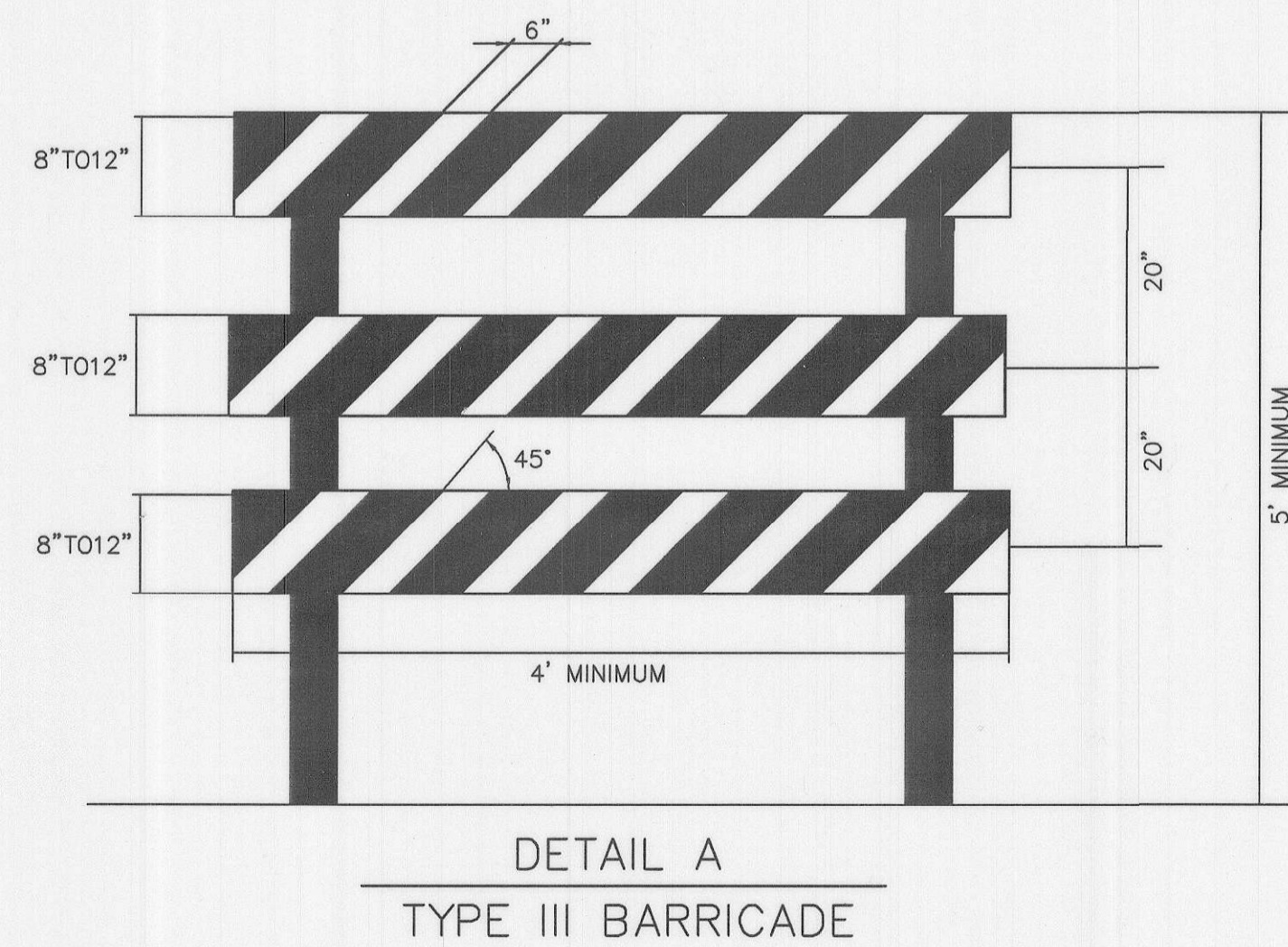
MAINTENANCE OF TRAFFIC SEQUENCING
 THE TRAFFIC CONTROL PLAN (TCP) IS COMPRISED OF FIVE (5) CONSTRUCTION PHASES. THE FIRST FOUR PHASES ARE FURTHER DIVIDED INTO TWO (2) SUBPHASES, A AND B. THE CONTRACTOR MAY ALTERNATE THE SEQUENCE OF THE SUBPHASES AS NEEDED TO MINIMIZE THE REQUIRED USE OF TEMPORARY STONE BASE MATERIALS.

SUBPHASE A: PROVIDE TEMPORARY STONE ALONG THE EDGE OF THE EXISTING ROADWAY TO MAINTAIN A TEN FOOT (10') MINIMUM ONE WAY TRAVEL LANE TO DIVERT TRAFFIC FLOW AROUND CONSTRUCTION AREA. USE BARRELS OR JERSEY BARRIER TO CHANNELIZE TRAFFIC. POST YIELD AND SPEED LIMIT SIGNS AND TYPE III BARRICADES AT EACH END OF PHASE.

DURING THE SUBPHASES, THE CONTRACTOR IS TO REMOVE EXISTING PAVEMENT, GRADE AND COMPACT TO THE PROPOSED SUBGRADE ELEVATIONS, CONSTRUCT CURB & GUTTER WHERE SHOWN ON PLAN, AND PLACE AGGREGATE BASE AND BITUMINOUS BASE MATERIALS.

SUBPHASE B: UPON COMPLETION OF PHASE A, SHIFT TRAFFIC FLOW ON TO THE NEW ROADWAY. REMOVE REMAINING EXISTING ROADWAY AND CONSTRUCT SECOND PROPOSED LANE. IF NECESSARY PROVIDE TEMPORARY STONE TO OBTAIN 10' MINIMUM TRAVEL LANE WIDTH. USE BARRICADES AND SIGNAGE INDICATED IN PHASE A TO DIRECT TRAFFIC FLOW.

PHASE 5: CONTRACTOR TO PLACE BITUMINOUS SURFACE COURSE FOR ENTIRE LENGTH OF ROADWAY IMPROVEMENTS. CONTRACTOR TO USE FLAGGERS AS NECESSARY DURING FINAL PAVING OPERATIONS.



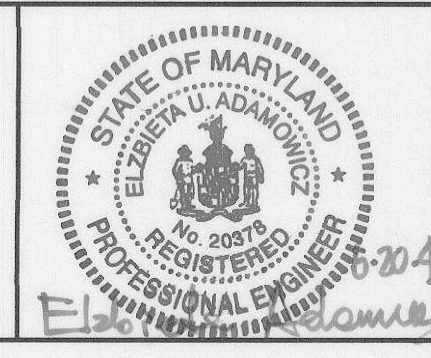
NOTE: STRIPES ON TYPE III BARRICADE SHALL SLOPE DOWNWARDS IN THE DIRECTION THAT TRAFFIC PASSES

DEPARTMENT OF PUBLIC WORKS
 HOWARD COUNTY, MARYLAND

Director of Public Works: *John O'Hara* 8/1/06
 Chief, Bureau of Engineering: *Paul J. Seaman* 7/19/06

Chief, Bureau of Highways: *Mark D. ...* 7/31/06
 Transportation Projects and Watershed Management: *Steve Sharan* 7/14/06

VIEW ENGINEERING



DES: DPK			
DRN: DPK			
CHK: HJS			
DATE: 5/04	BY NO.	REVISION	DATE

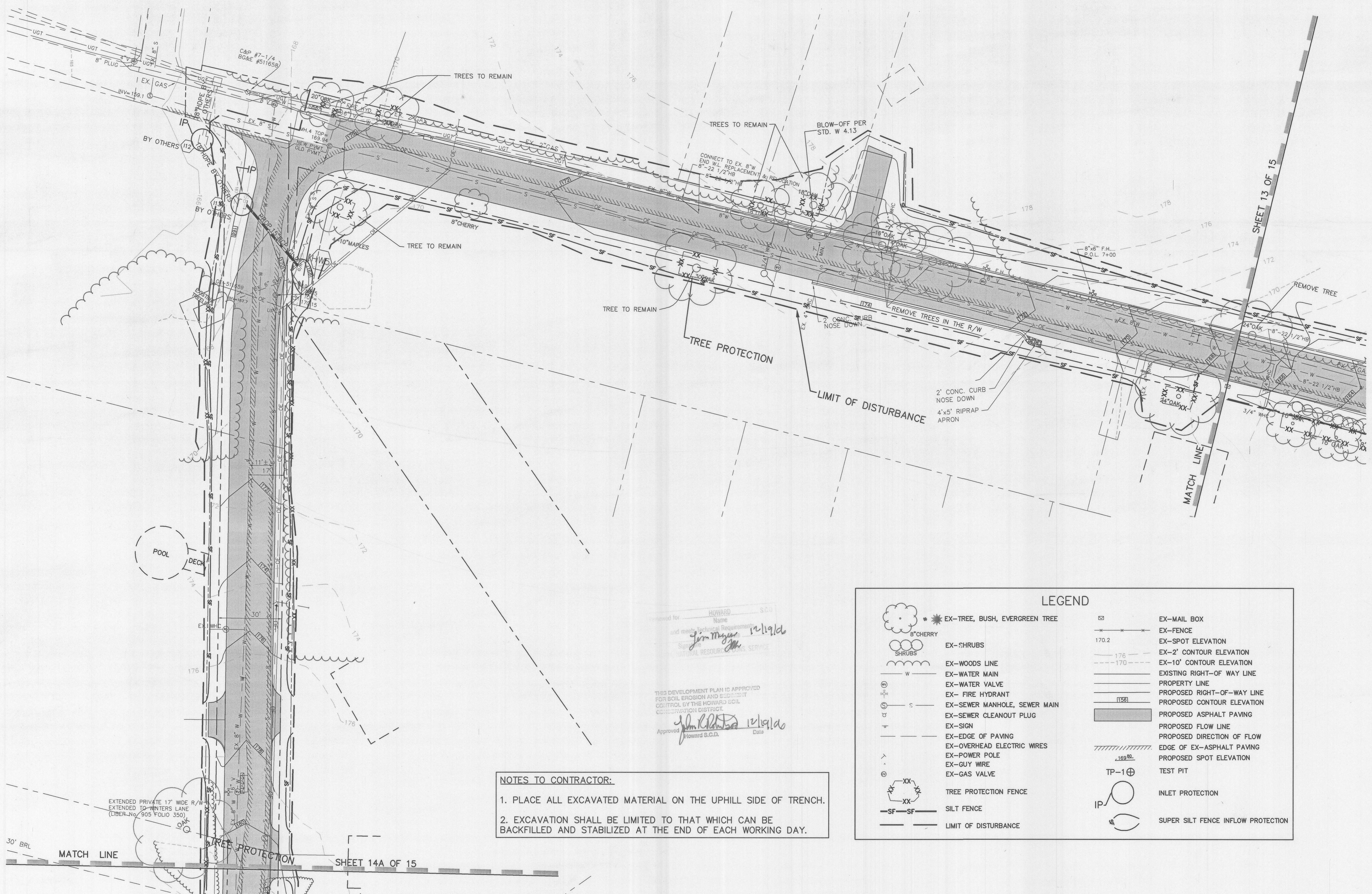
600' SCALE MAP NO.	BLOCK NO.
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WINTERS LANE ROAD WIDENING
 CAPITAL PROJECT J-4143
 HOWARD COUNTY, MARYLAND

TRAFFIC CONTROL DETAILS

SCALE
 N.T.S.

SHEET
 12 OF 15



Reviewed for HOWARD S.C.D.
Name
and meets Technical Requirements
Signature: *Jim Meyer* 12/19/06
NATURAL RESOURCE SERVICE

THIS DEVELOPMENT PLAN IS APPROVED
FOR SOIL EROSION AND SEDIMENT
CONTROL BY THE HOWARD SOIL
CONSERVATION DISTRICT.
Signature: *John [unclear]* 12/19/06
Approved: Howard S.C.D. Date

NOTES TO CONTRACTOR:

1. PLACE ALL EXCAVATED MATERIAL ON THE UPHILL SIDE OF TRENCH.
2. EXCAVATION SHALL BE LIMITED TO THAT WHICH CAN BE BACKFILLED AND STABILIZED AT THE END OF EACH WORKING DAY.

LEGEND	
	EX-TREE, BUSH, EVERGREEN TREE
	8" CHERRY
	EX-SHRUBS
	EX-WOODS LINE
	EX-WATER MAIN
	EX-WATER VALVE
	EX-FIRE HYDRANT
	EX-SEWER MANHOLE, SEWER MAIN
	EX-SEWER CLEANOUT PLUG
	EX-SIGN
	EX-EDGE OF PAVING
	EX-OVERHEAD ELECTRIC WIRES
	EX-POWER POLE
	EX-GUY WIRE
	EX-GAS VALVE
	TREE PROTECTION FENCE
	SILT FENCE
	LIMIT OF DISTURBANCE
	EX-MAIL BOX
	EX-FENCE
	EX-SPOT ELEVATION
	EX-2' CONTOUR ELEVATION
	EX-10' CONTOUR ELEVATION
	EXISTING RIGHT-OF-WAY LINE
	PROPERTY LINE
	PROPOSED RIGHT-OF-WAY LINE
	PROPOSED CONTOUR ELEVATION
	PROPOSED ASPHALT PAVING
	PROPOSED FLOW LINE
	EDGE OF EX-ASPHALT PAVING
	PROPOSED SPOT ELEVATION
	TEST PIT
	INLET PROTECTION
	SUPER SILT FENCE INFLOW PROTECTION

DEPARTMENT OF PUBLIC WORKS
HOWARD COUNTY, MARYLAND

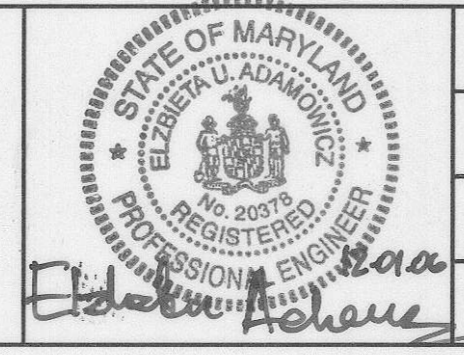
Paul [unclear] 12/18/06
DIRECTOR OF PUBLIC WORKS DATE

Steve Shanahan 12/18/06
CHIEF, BUREAU OF ENGINEERING DATE

Steve Shanahan 12/18/06
CHIEF, BUREAU OF HIGHWAYS DATE

Steve Shanahan 12/18/06
TRANSPORTATION PROJECTS AND WATERSHED MANAGEMENT DATE

VIEW ENGINEERING

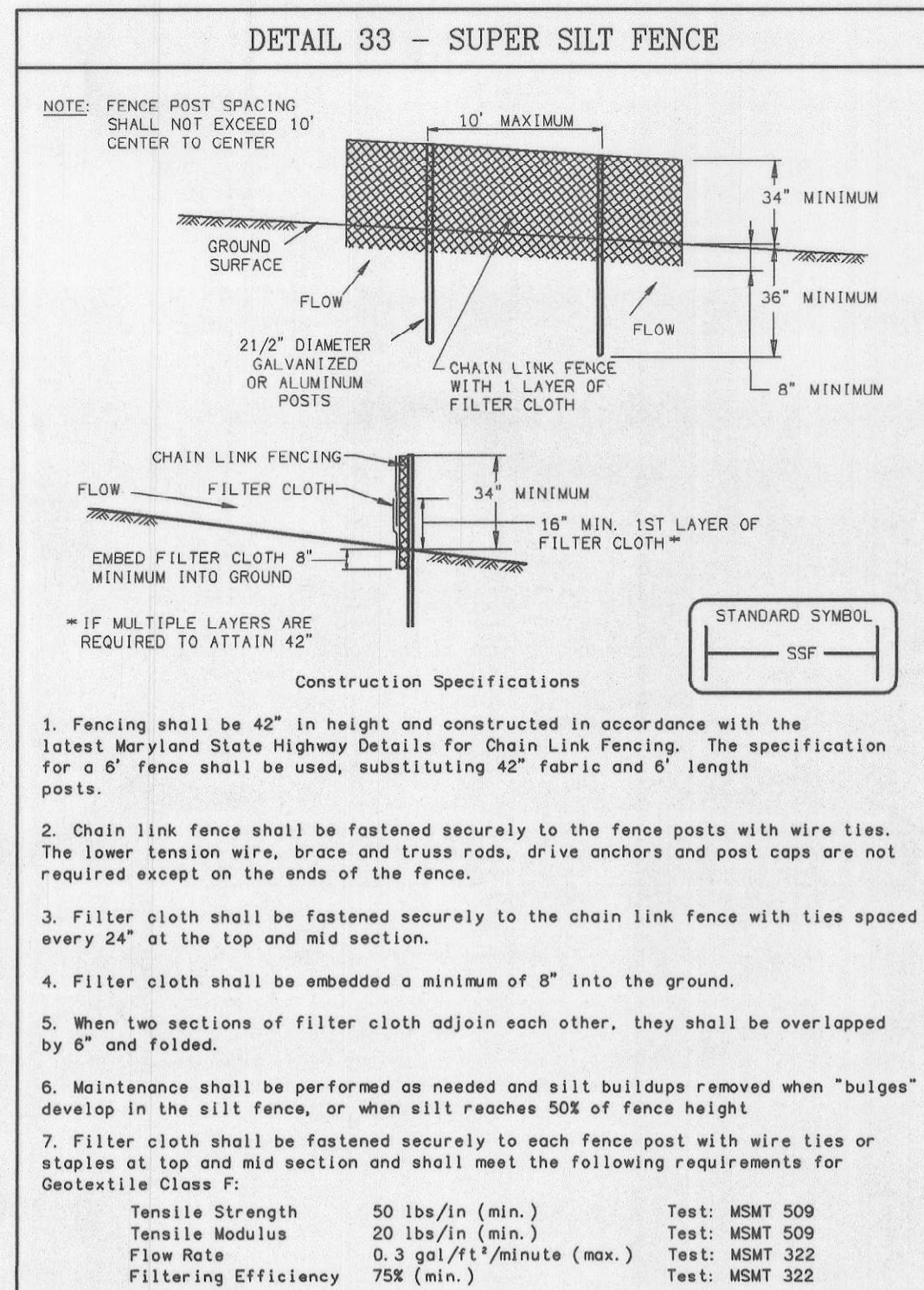


DES: J.C.M			
DRN: J.C.M			
CHK: E.U.A			
DATE: 12/20/06	BY NO.	REVISION	DATE

600' SCALE MAP NO. _____ BLOCK NO. _____

WINTERS LANE ROAD WIDENING
CAPITAL PROJECT J-4143
HOWARD COUNTY, MARYLAND
SEDIMENT AND EROSION CONTROL PLAN

SCALE
1"=20'
SHEET
14 OF 15



SUPER SILT FENCE

Design Criteria

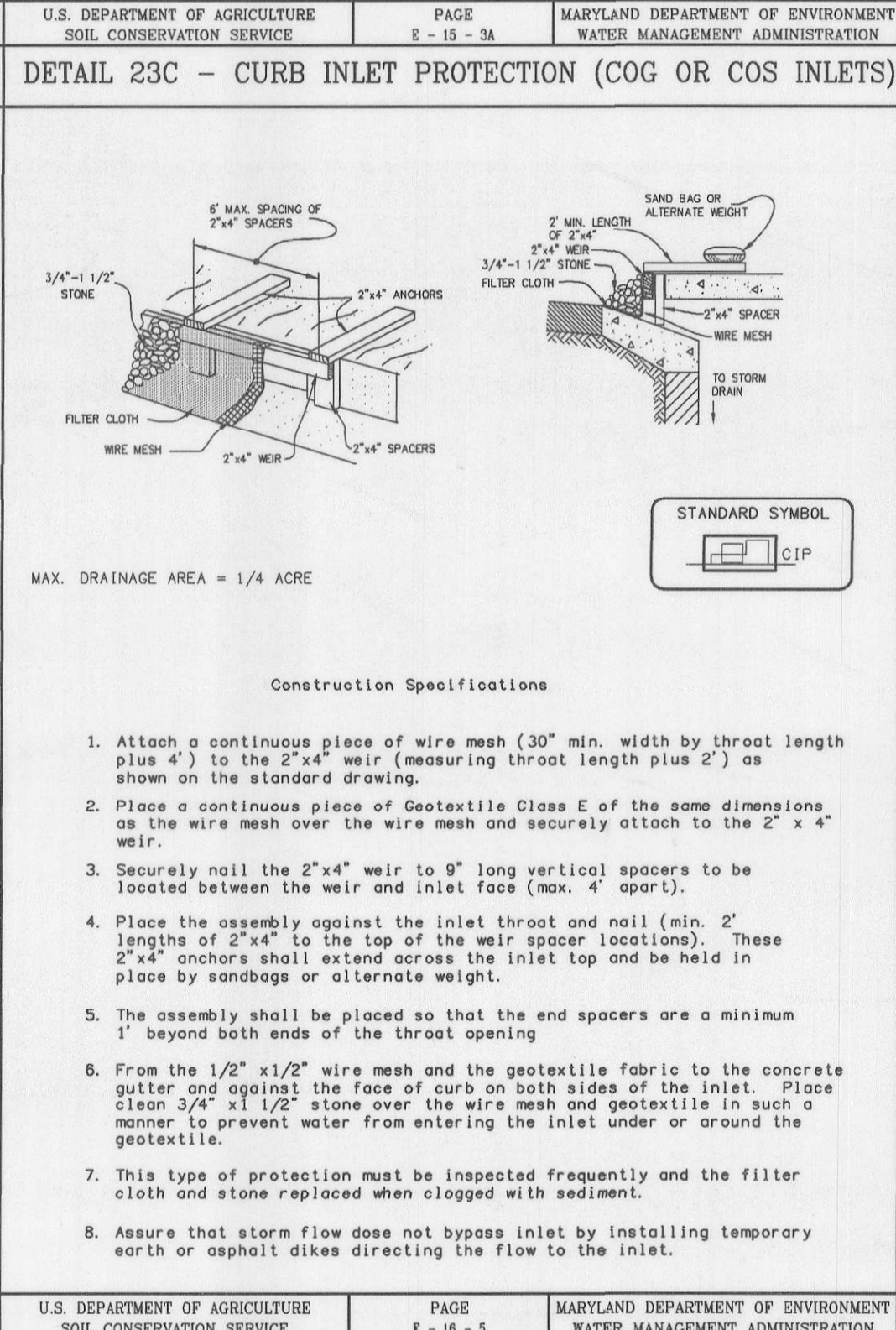
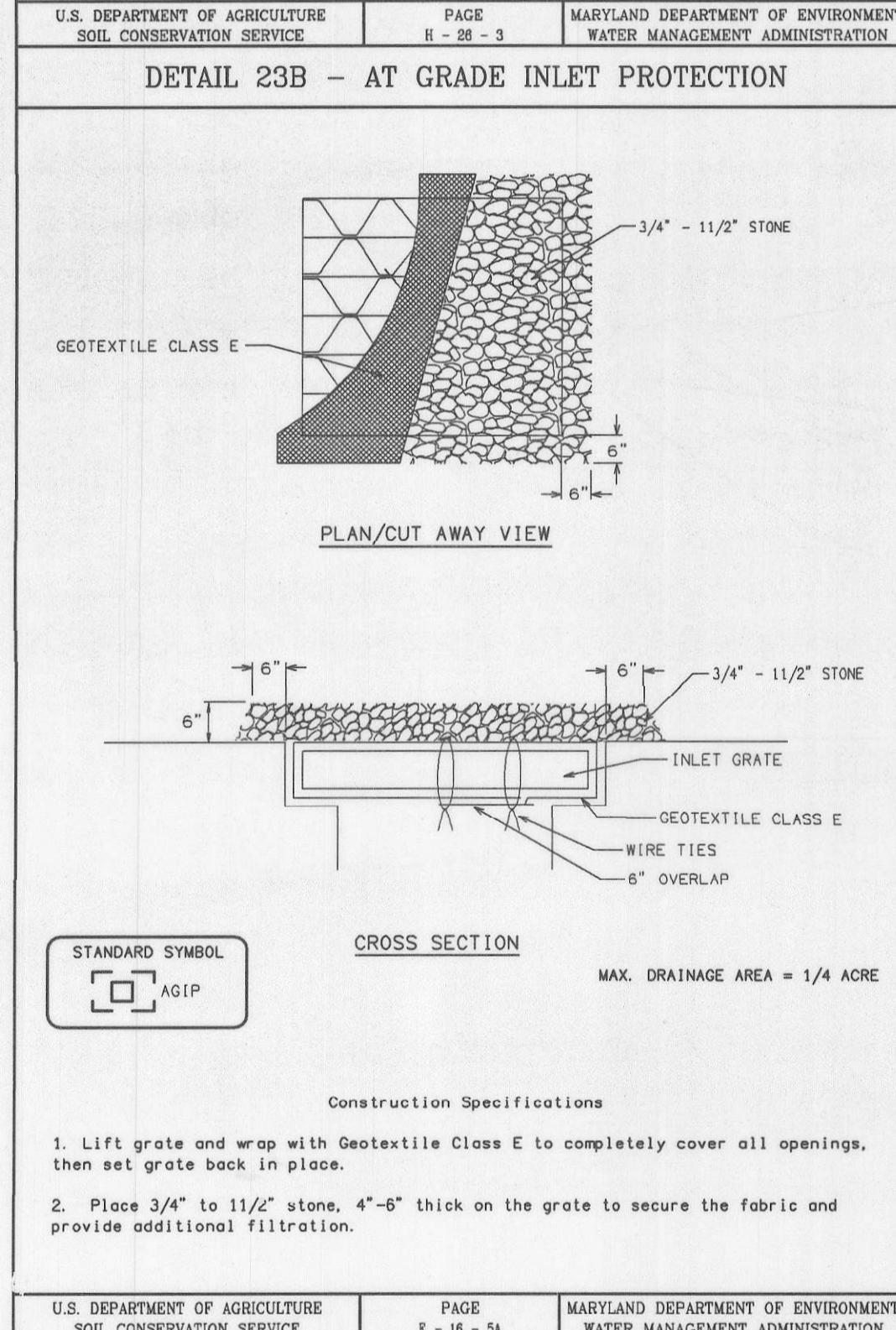
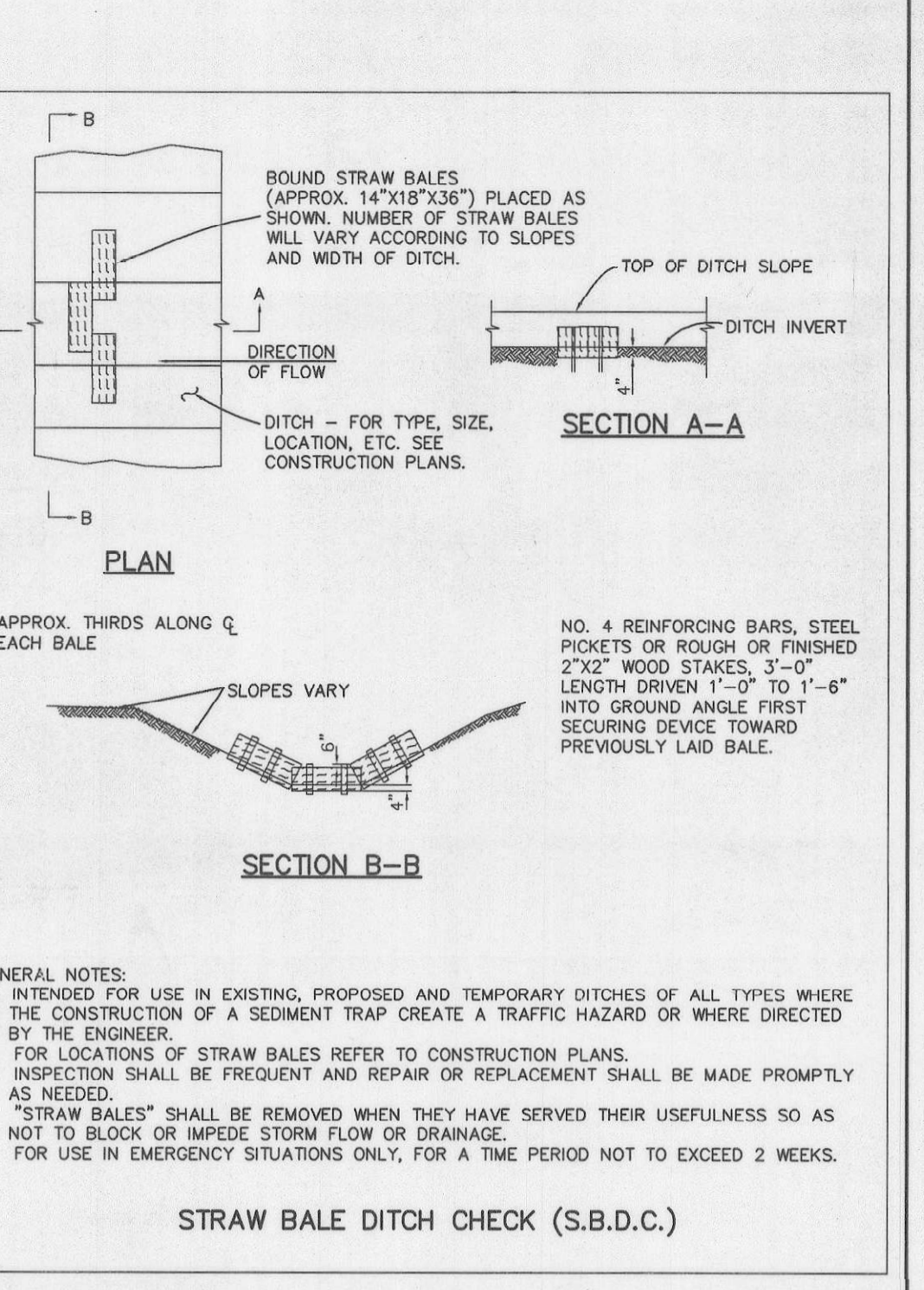
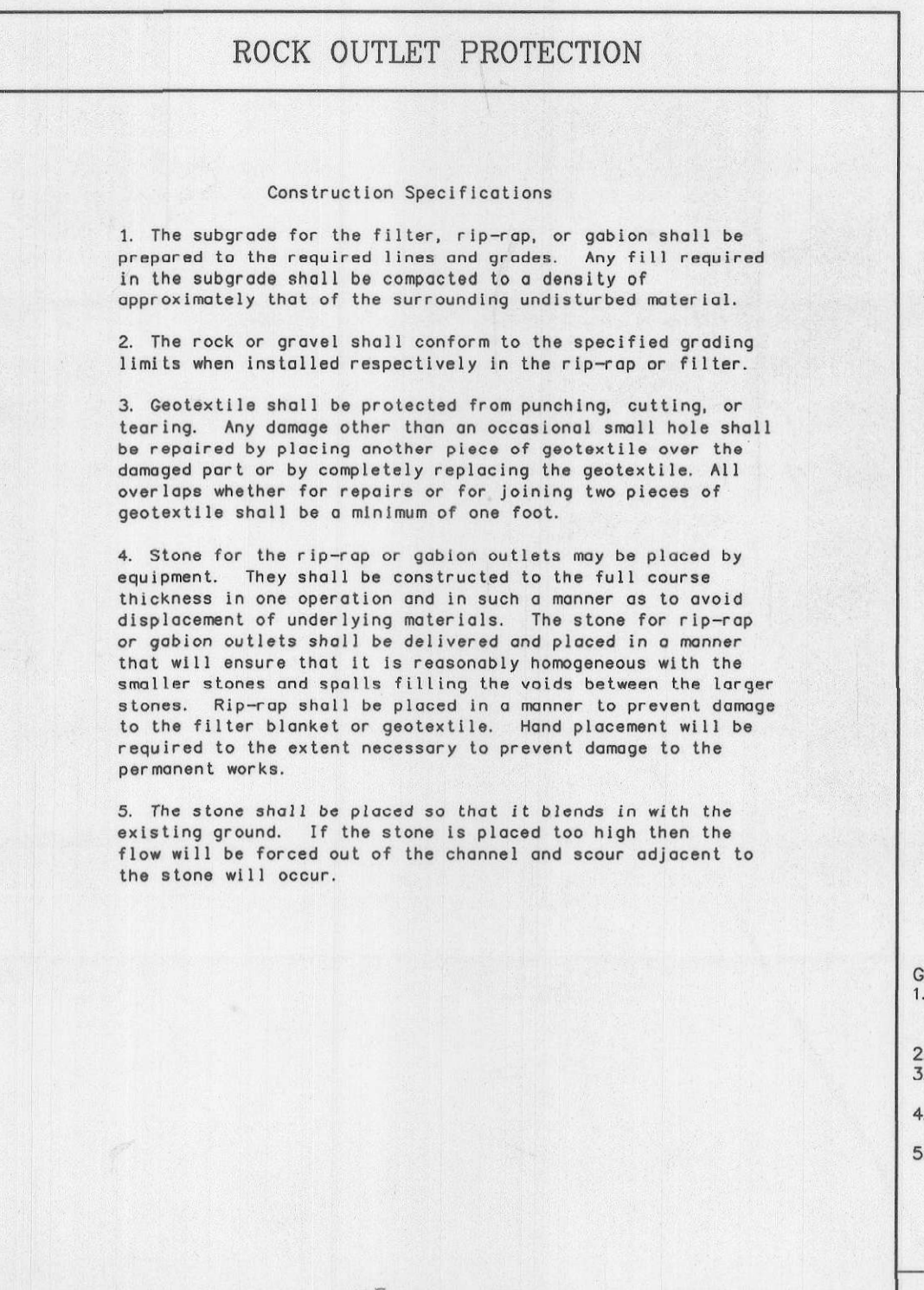
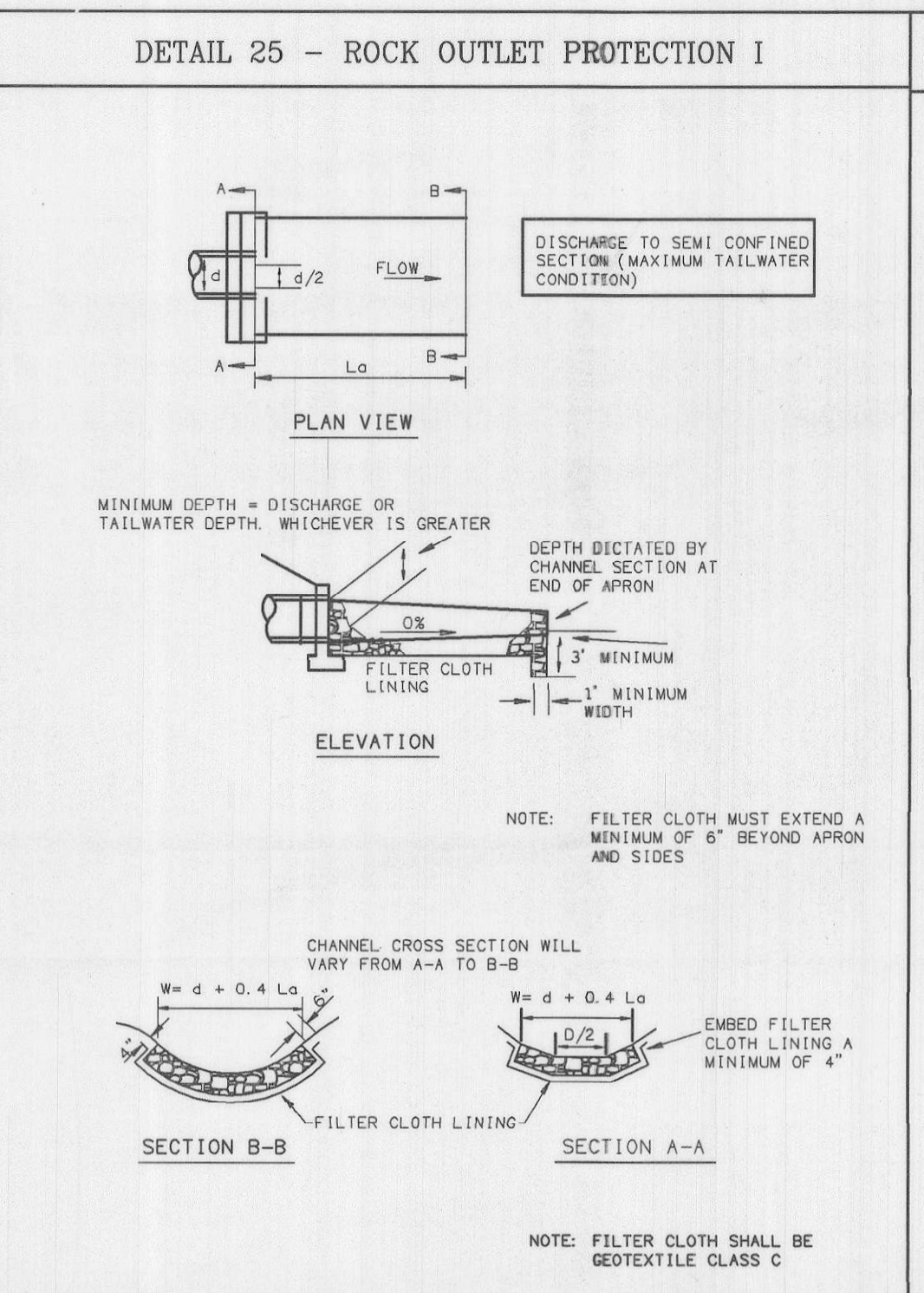
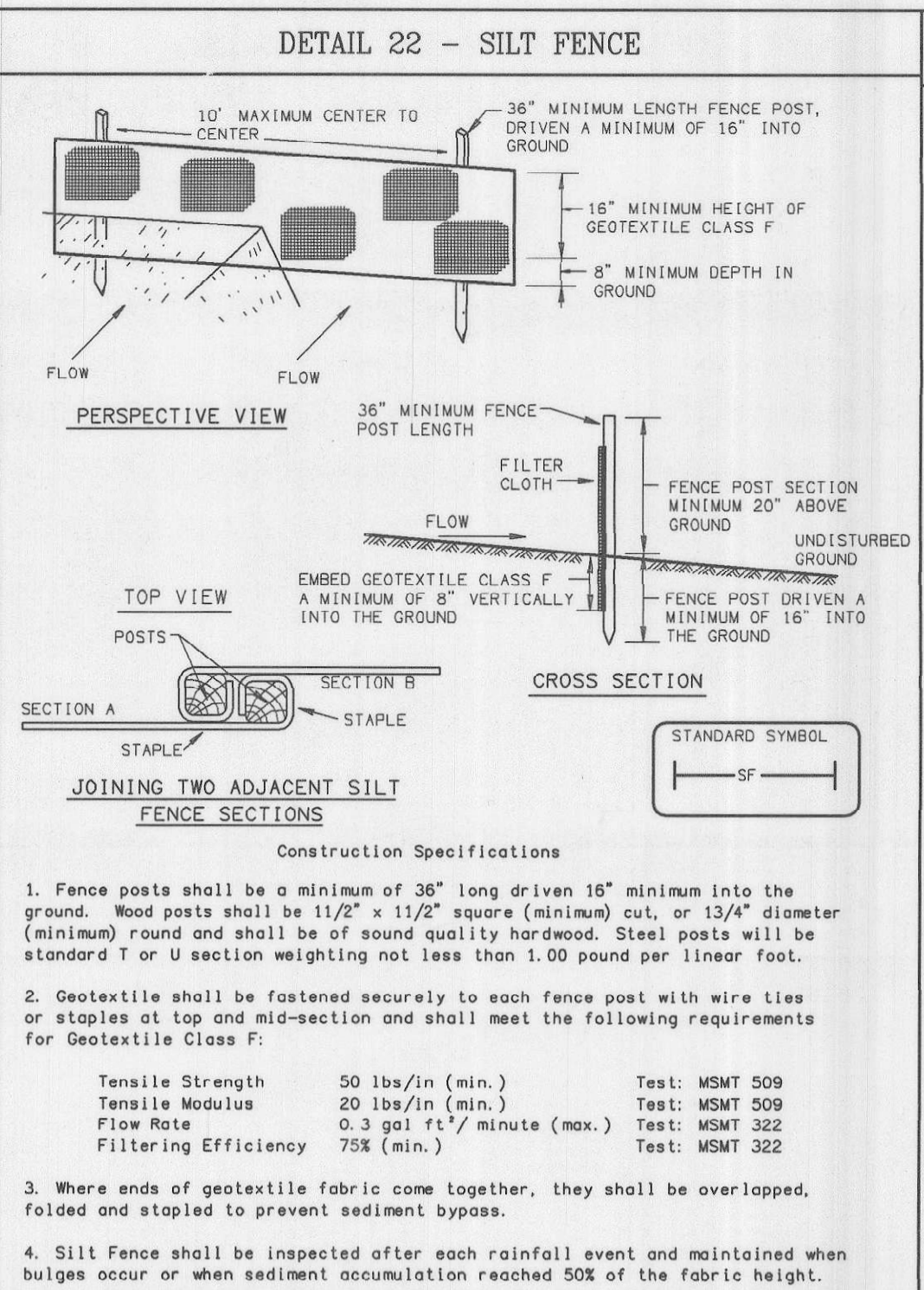
Slope	Slope Steepness	Slope Length (maximum)	Silt Fence Length (maximum)
0 - 10%	0 - 10:1	Unlimited	Unlimited
10 - 20%	10:1 - 5:1	200 feet	1,500 feet
20 - 33%	5:1 - 3:1	100 feet	1,000 feet
33 - 50%	3:1 - 2:1	100 feet	500 feet
50% +	2:1 +	50 feet	250 feet

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 2% 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.



HOWARD SOIL CONSERVATION DISTRICT

PERMANENT SEEDING NOTES

Apply to graded or cleared areas not subject to immediate further disturbance where a permanent long-lived vegetative cover is needed.

Seedbed Preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: In lieu of soil test recommendations, use one of the following schedules:

- Preferred - Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 600 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil. At time of seeding, apply 400 lbs/acre 30-0-0 ureaform fertilizer (9 lbs/1000 sq. ft.)
- Acceptable - Apply 2 tons/acre dolomitic limestone (92 lbs/1000 sq. ft.) and 1000 lbs/acre 10-10-10 fertilizer (23 lbs/1000 sq. ft.) before seeding. Harrow or disk into upper three inches of soil.

Seeding: For the periods March 1-April 30, and August 1-October 15, seed with 60 lbs/acre (1.4 lbs/1000 sq. ft.) of Kentucky 31 Tall Fescue. For the period May 1-July 31, seed with 60 lbs Kentucky 31 Tall Fescue per acre and 2 lbs/acre (.05 lbs/1000 sq. ft.) of weeping lovegrass. During the period of October 16-February 28, protect site by: Option 1 - Two tons per acre of well anchored straw mulch and seed as soon as possible in the spring. Option 2 - Use sod. Option 3 - Seed with 60 lbs/acre Kentucky 30 Tall Fescue and mulch with 2 tons/acre well anchored straw.

Mulching: Apply 1-1/2 to 2 tons per acre (70 to 90 lbs/1000 sq. ft.) of unrotted small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gallons per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slope 89 feet or higher, use 348 gallons per acre (8 gal/1000 sq. ft.) for anchoring.

Maintenance: Inspect all seeding areas and make needed repairs, replacements and reseedings.

TEMPORARY SEEDING NOTES

Apply to graded to cleared areas likely to be re-disturbed where a short-term vegetative cover is needed.

Seedbed preparation: Loosen upper three inches of soil by raking, disking or other acceptable means before seeding, if not previously loosened.

Soil Amendments: Apply 60 lbs/acre 10-10-10 fertilizer (14 lbs/1000 sq. ft.)

Seeding: For periods March 1-April 30 and from August 15-October 15, seed with 2-1/2 bushel per acre of annual rye (3.2 lbs/1000 sq. ft.). For the period May 1-August 14, seed with 3 lbs/acre of weeping lovegrass (.07 lbs/1000 sq. ft.). For the period November 16-February 28, protect site by applying 2 tons/acre of well anchored straw mulch and seed as soon as possible in the spring, or use sod.

Mulching: Apply 1-1/2 to 2 tons/acre (70 to 90 lbs/1000 sq. ft.) of unrotted weed, small grain straw immediately after seeding. Anchor mulch immediately after application using mulch anchoring tool or 218 gal. per acre (5 gal/1000 sq. ft.) of emulsified asphalt on flat areas. On slope 8 ft. or higher, use 348 gal. per acre (8 gal/1000 sq. ft.) for anchoring.

Refer to the 1994 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL for additional rates and methods not covered.

HOWARD SOIL CONSERVATION DISTRICT

STANDARD SEDIMENT CONTROL NOTES

- A minimum of 48 hours notice must be given to the Howard County Department of Inspections, Licenses and Permits, Sediment Control Division prior to the start of any construction (313-1855).
- All vegetative and structural practices are to be installed according to the provisions of this plan and are to be in conformance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for revisions thereto.
- Following initial soil disturbance or re-disturbance, permanent or temporary stabilization shall be completed within: a) 7 calendar days for all perimeter sediment control structures, dikes, perimeter slopes and all slopes steeper than 3:1; b) 14 days as to all other disturbed or graded areas on the project site.
- All sediment traps/basins shown must be fenced and warning signs posted around their perimeter in accordance with Vol 1, Chapter 7 of the HOWARD COUNTY DESIGN MANUAL, Storm Drainage.
- All disturbed areas must be stabilized within the time period specified above in accordance with the 1994 MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL for permanent seeding, sod, temporary seeding, and mulching (Sec. G). Temporary stabilization with mulch along shall only be done with recommended seeding dates do not allow for proper germination and establishment of grasses.
- All sediment control structures are to remain in place and are to be maintained in operative condition until permission for their removal has been obtained from the Howard County Sediment Control Inspector.
- Site Analysis:

Total Area of Site	=	N/A	Acres
Area Disturbed	=	2.13	Acres
Area to be roofed or paved	=	1.23	Acres
Area to be vegetatively stabilized	=	0.92	Acres
Total Cut	=	372	Cu. Yds.
Total Fill	=	364	Cu. Yds.
Offsite waste borrow area location:	=	N/A	
- Any sediment control practice which is disturbed by grading activity for placement of utilities must be repaired on the same day of disturbance.
- Additional sediment control must be provided, if deemed necessary, by the Howard County Sediment Control Inspector.
- On all sites with disturbed areas in excess of 2 acres, approval of the inspection agency shall be requested upon completion of installation of perimeter erosion and sediment controls, but before proceeding with any other earth disturbance or grading. Other building or grading inspection approvals may not be authorized until this initial approval by the inspection agency is made.
- Trenches for the construction of utilities is limited to three pipe lengths or that which shall be backfilled and stabilized within one working day, whichever is shorter.

DEVELOPER'S CERTIFICATION

"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 the Environment Approved Training Program for the Control of Sediment and Erosion before beginning the project. I also authorize periodic on-site inspection by the Howard Soil Conservation District."

Signature of Developer: *Elzbieta Adamowicz* Date: 12/18/06

ENGINEER'S CERTIFICATION

"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."

Signature of Engineer: *Elzbieta Adamowicz* Date: 12-01-06

Print name below signature: Elzbieta Adamowicz

Reviewed for HOWARD SCD and meets Technical Requirements

Signature: *Jim Moore* Date: 12/19/06

OSDA-Natural Resources Conservation Service

This development plan is approved for soil erosion and sediment control by the HOWARD SOIL CONSERVATION DISTRICT.

Signature: *John R. Roberts* Date: 12/19/06

Howard SCD

DEPARTMENT OF PUBLIC WORKS

HOWARD COUNTY, MARYLAND

Director of Public Works: *John R. Roberts* Date: 12/15/06

Chief, Bureau of Engineering: *John R. Roberts* Date: 12/18/06

Chief, Bureau of Highways: *Steve Shaver* Date: 12-15-06

Transportation Projects and Watershed Management

NEW ENGINEERING

DES: J.C.M.

DRN: M.F.M.

CHK: E.U.A.

DATE: 12/20/06

STATE OF MARYLAND

DESIGNER: J.C.M.

DATE: 12/20/06

NO.	REVISION	DATE

WINTERS LANE ROAD WIDENING

CAPITAL PROJECT J-4143

HOWARD COUNTY, MARYLAND

SCALE: 1"=20'

SHEET 15 OF 15

60' SCALE MAP NO. _____ BLOCK NO. _____

EROSION SEDIMENT CONTROL DETAILS