

# ROADWAY IMPROVEMENTS MALAGA ROAD (CR 659)

MILE POST 4.89 TO 5.30

TOWNSHIP OF MONROE, GLOUCESTER COUNTY, NEW JERSEY

## PUBLIC UTILITIES

<b>ATLANTIC CITY ELECTRIC</b> 428 ELLIS STREET GLASSBORO, NJ 08028 ATTN: TIM BATEMAN		PHONE: (856) 863-7927
<b>VERIZON</b> 10 TANSBORO ROAD BERLIN, N.J. 08009 ATTN: SEBASTINE OLADIPO		PHONE: (856) 767-6970
<b>SOUTH JERSEY GAS</b> 142 SOUTH MAIN STREET GLASSBORO, NJ 08028 ATTN: ERNIE SCHANCK		EXTENSION 6221 PHONE: (856) 881-7000
<b>SOUTH JERSEY GAS (PIPELINE DIVISION)</b> 215 CATES ROAD EGG HARBOR TOWNSHIP, NJ 08234 ATTN: VINCE JACKSON		EXTENSION 6519 PHONE: (609) 561-9000
<b>COMCAST CABLE</b> 1846 NORTH WEST BLVD VINELAND, NJ 08360 ATTN: GLEN HEARD		PHONE: (856) 694-6015
<b>MONROE TOWNSHIP M.U.A.</b> 372 SOUTH MAIN STREET WILLIAMSTOWN, NJ 08094 ATTN: GEORGE COSSABONE		PHONE: (856) 629-1444
<b>GLOUCESTER COUNTY PUBLIC WORKS DEPARTMENT</b> 1200 N. DELSEA DRIVE CLAYTON, NJ 08312		PHONE: (856) 307-6410

## UNDERGROUND LOCATING SERVICE



BEFORE STARTING WORK THE CONTRACTOR WILL NOTIFY ALL UTILITY COMPANIES AND OTHER INTERESTED PARTIES OF THE SCHEDULE AND STARTING DATE. MAINTENANCE AND PROTECTION OF TRAFFIC MUST BE PLANNED AND MARKED BY THE CONTRACTOR, AND THE UTILITIES PROTECTED AS REQUIRED BY THE UTILITY COMPANIES. THE LOCATIONS OF THE EXISTING UTILITIES SHOWN SHALL BE CONSIDERED APPROXIMATE AND ONLY AS A GUIDE FOR CONSTRUCTION. ONLY THE APPROPRIATE UTILITY COMPANY CAN SPECIFY THE EXACT LOCATIONS OF THEIR SPECIFIC FACILITIES.

## SPECIFICATIONS

NEW JERSEY DEPARTMENT OF TRANSPORTATION STANDARD SPECIFICATION FOR ROAD AND BRIDGE CONSTRUCTION, CURRENT EDITION, WITH APPLICABLE AMENDMENTS THERETO, SHALL GOVERN. UNLESS SPECIFICALLY DETAILED OR SPECIFIED OTHERWISE HEREIN, ALL ITEMS SHALL CONFORM TO ALL APPLICABLE NUDOT STANDARD ROAD CONSTRUCTION-TRAFFIC CONTROL-BRIDGE CONSTRUCTION DETAILS, CURRENT EDITION. A COPY OF THE STANDARD SPECIFICATIONS AND THE STANDARD DETAILS SHALL BE KEPT WITH THE APPROVED PLANS, AT THE SITE, AT ALL TIMES. ANY QUESTIONS REGARDING APPLICABILITY OF DETAILS OR SPECIFICATIONS SECTIONS SHALL BE SUBMITTED TO THE ENGINEER, PRIOR TO SCHEDULING THE WORK.

CERTIFICATIONS OF COMPLIANCE (BY MANUFACTURER OR CERTIFIED TESTING LABORATORY, SUBJECT TO APPROVAL BY THE ENGINEER) SHALL BE SUBMITTED FOR ALL ITEMS AND MATERIALS USED IN THE WORK.

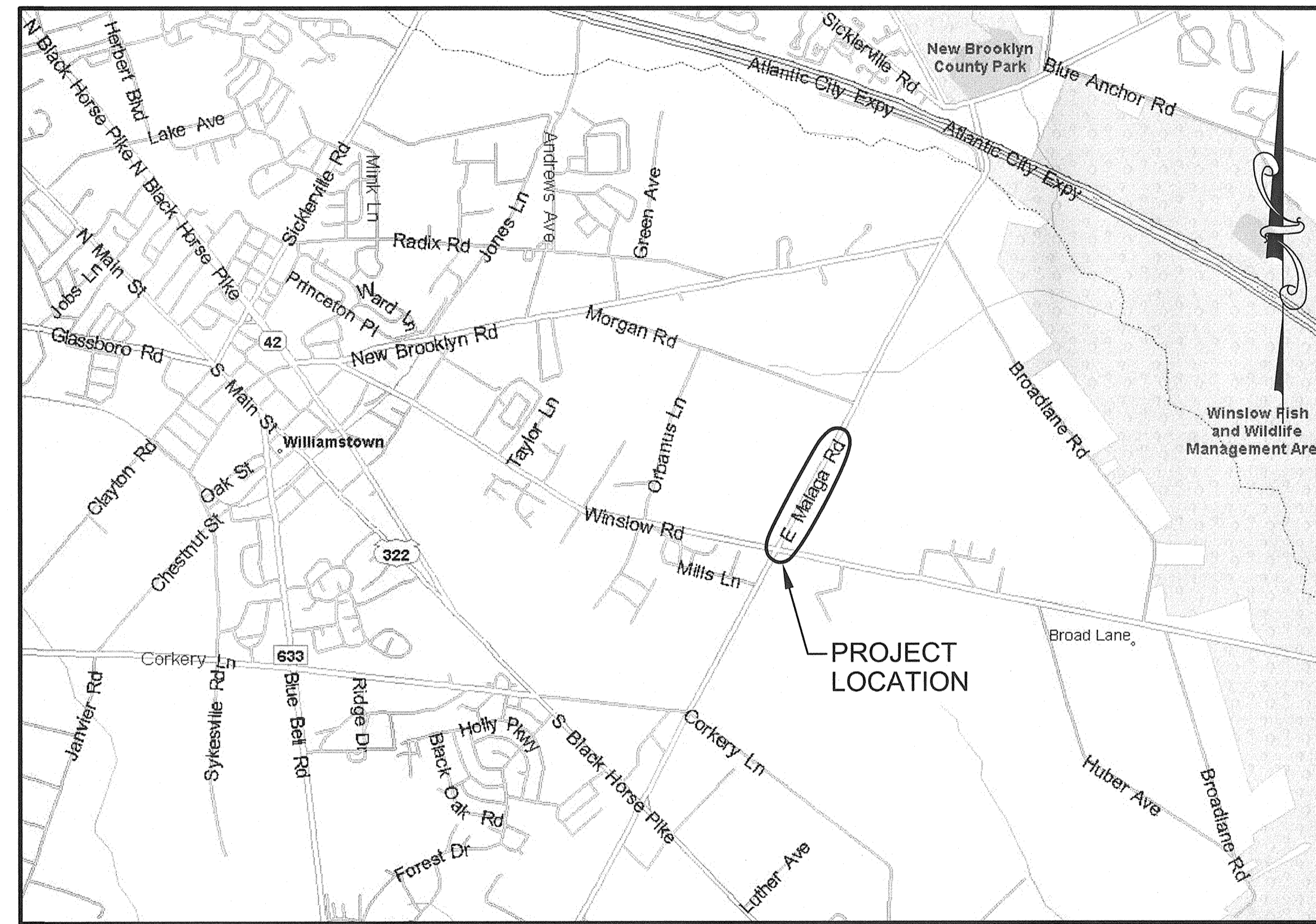
## HIGH-VOLTAGE PROXIMITY ACT

THE CONTRACTOR IS NOTIFIED THAT ALL PROVISIONS OF THE HIGH-VOLTAGE PROXIMITY ACT, P.L. 1948, C. 249, AS AMENDED, SHALL BE STRICTLY ADHERED TO. THE CONTRACTOR SHALL ALSO ADHERE TO ALL PROVISIONS OF PART 1926.550, SUBPART N OF THE FEDERAL OCCUPATIONAL SAFETY AND HEALTH ACT OF DECEMBER, 1970. PARTICULAR ATTENTION IS DIRECTED TO THE PROVISIONS OF THE ABOVE ACT REQUIRING WARNING SIGNS, NOTIFICATION TO POWER COMPANY AND RESPONSIBILITY FOR SAFEGUARDS AND ALSO PROHIBITED ACTIVITY.

A COPY OF THE HIGH VOLTAGE PROXIMITY ACT IS AVAILABLE IN THE OFFICE OF THE COUNTY ENGINEER OR MAY BE OBTAINED FROM THE NEW JERSEY DEPARTMENT OF LABOR, DIVISION OF WORKPLACE STANDARDS, OFFICE OF SAFETY COMPLIANCE, CN386, TRENTON, NJ. 08625-0386.

## SITE SAFETY

THE CONTRACTOR SHALL DESIGNATE IN WRITING A SITE SAFETY SUPERVISOR PRIOR TO ANY WORK ON SITE. THE DESIGNATED SAFETY SUPERVISOR SHALL BE RESPONSIBLE FOR SAFETY AND COMPLIANCE WITH ALL APPLICABLE CODES AND STANDARDS UNTIL FINAL ACCEPTANCE OF THE WORK.



SITE LOCATION MAP

0 0.5 1.0  
SCALE IN MILES

## INDEX OF SHEETS

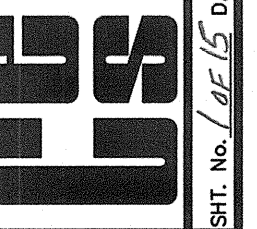
SHEET NUMBER	SHEET TITLE
1	COVER SHEET
2	LEGEND, NOTES & TYPICAL SECTIONS
3-6	CONSTRUCTION PLAN & PROFILE
7	SIGNAGE & STRIPING PLAN
8-12	CROSS-SECTIONS
13-15	CONSTRUCTION DETAILS

Michael R. Brown  
MICHAEL R. BROWN  
PROFESSIONAL ENGINEER, NEW JERSEY LIC. NO. GE-44222  
DATE 3/17/14

REV	DATE	DESCRIPTION
JAC	3/17/14	REV INDEX OF SHEETS
MRB	9/6/13	UPDATED TITLE BLOCK
DRN		DATE

COVER SHEET  
ROADWAY IMPROVEMENTS  
MALAGA ROAD (GLOUCESTER COUNTY ROUTE 659)  
MONROE TOWNSHIP, GLOUCESTER COUNTY, NEW JERSEY

PREPARED BY  
CONSULTING ENGINEER SERVICES  
PROFESSIONAL ENGINEERS, PLANNERS, & LAND SURVEYORS  
645 BELLEVILLE ROAD, SUITE 200  
MANTON, NJ 08051  
PHONE (609) 228-2200 FAX (609) 232-2346  
N.J. CERTIFICATE OF AUTHORIZATION No. 2462789700  
DRAWN BY: JAC



SHT. No. / OF 15 DATE: 12/27/11 SCALE: AS NOTED. CES No. 2912 FILE No. H-009

**SYMBOL LEGEND**

**LINEAR FEATURES**

Existing	PROPOSED	
W	W	WATER MAIN (SIZE)
G	G	GAS MAIN (SIZE)
T	T	TELEPHONE CONDUIT
E	E	ELECTRIC CONDUIT (HIGHWAY OR UTILITY)
FO	FO	FIBER OPTIC CABLE
OHE	OHE	OVERHEAD ELECTRIC WIRES
UGE	UGE	UNDERGROUND ELECTRIC
CTV	CTV	CABLE TV
SS	SS	SANITARY SEWER
FM	FM	SANITARY SEWER FORCE MAIN
(SIZE & TYPE) (OVER 12" - DRAW TO SIZE)	(SIZE & TYPE)	STORM DRAINS
		EDGE OF PAVEMENTS (CONCRETE OR BITUMINOUS)
		CURB, VERTICAL
		CURB & GUTTER, MONOLITHIC
		SLOPES (CUT, FILL & LIMIT OF DISTURBANCE)
		RIGHT-OF-WAY AND/OR CONSTRUCTION CENTERLINE
		TOWNSHIP, CITY & COUNTY LINES
		RIGHT OF WAY LINES (ACCESS PERMITTED)
		RIGHT OF WAY LINES (NO ACCESS)
		EASEMENTS
		PROPERTY LINE
		FENCE (SIZE & TYPE)
		RESET FENCE
		BEAM GUIDE RAIL
		RESET BEAM GUIDE RAIL
		WETLAND LIMIT LINE
		EDGE OF WATER OR STREAM
		CENTERLINE OF SWALE, STREAM OR DITCH
		SILT FENCE
		DITCHES
		RAILROAD TRACKS
		TREE LINE

**TOPOGRAPHICAL FEATURES**

Existing	PROPOSED	
		INLETS (LABEL TYPE)
		INLETS (TYPE ES)
		MANHOLE (LABEL TYPE OR UTILITY)
		INLET - RECONSTRUCT TO MANHOLE
		RESET (INLETS OR MANHOLES)
		RECONSTRUCTED (INLETS OR MANHOLES)
		NEW MANHOLE CASTING, SQUARE FRAME, CIRCULAR COVER
		END SECTION
		HEADWALL & APRON
		WATER GATE VALVE
		GAS GATE VALVE
		RESET GATE VALVE
		FIRE HYDRANT
		TELEPHONE RISER
		UTILITY POLE
		UTILITY POLE GUY WIRE
		TRAFFIC SIGNAL FOUNDATION
		TRAFFIC SIGNAL JUNCTION BOX
		SIGNS
		GUIDE RAIL END TERMINAL OR ANCHORAGE
		MAILBOX
		ELEVATION CONTOURS

**TOPOGRAPHICAL FEATURES**

Existing	PROPOSED	
		MONUMENTS
		TEST PIT
		BORINGS
		TREE (SIZE, KIND)
		BUSH
		HEDGES
		SWAMP

**MISCELLANEOUS SYMBOLS**

	MILLING AND OVERLAY
	FULL DEPTH PAVEMENT
	HMA DRIVEWAY OR PAVEMENT RESTORATION
	CONCRETE
	RIP RAP
	HIGH POINT
	LOW POINT
	BENCH MARK
	POINT OF INTERSECTION
	PK NAIL
	BLOCK
	LOT

**ABBREVIATIONS USED IN THIS CONTRACT**

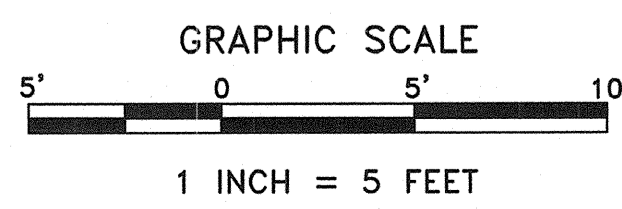
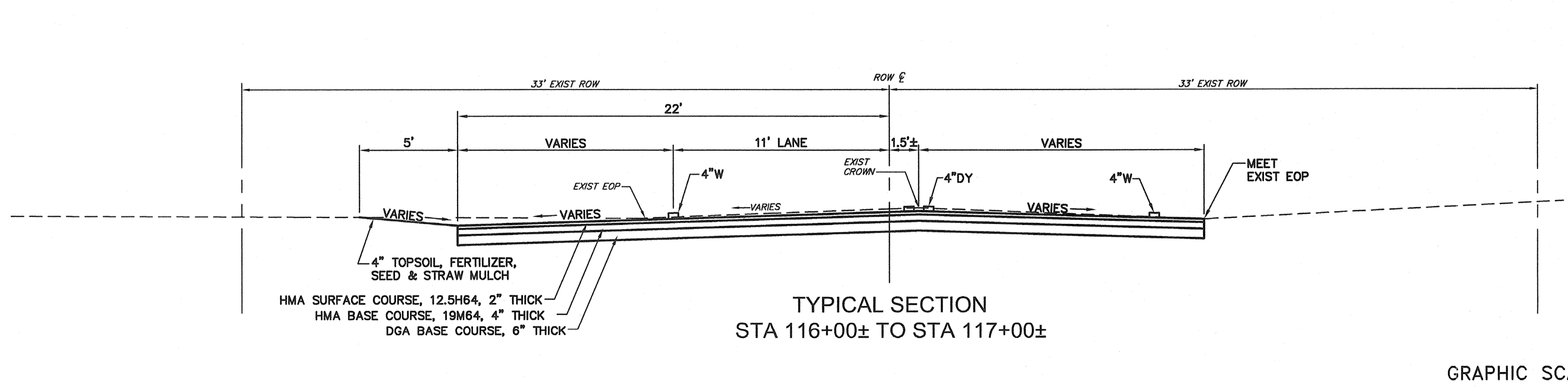
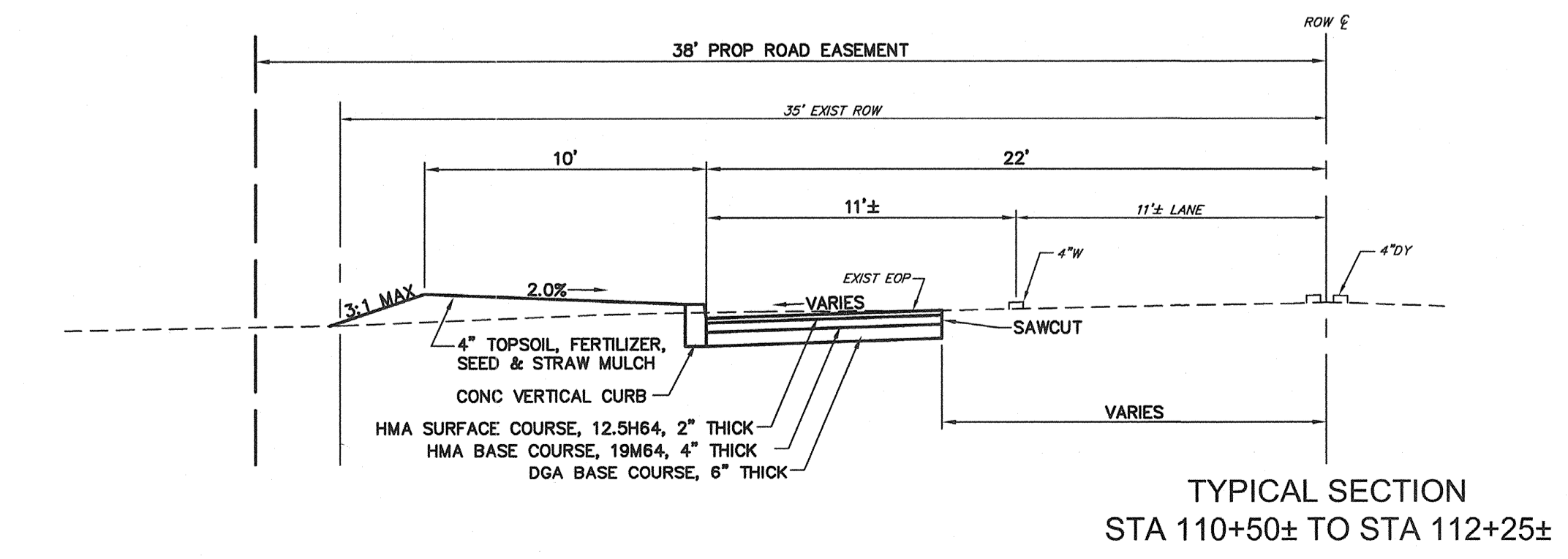
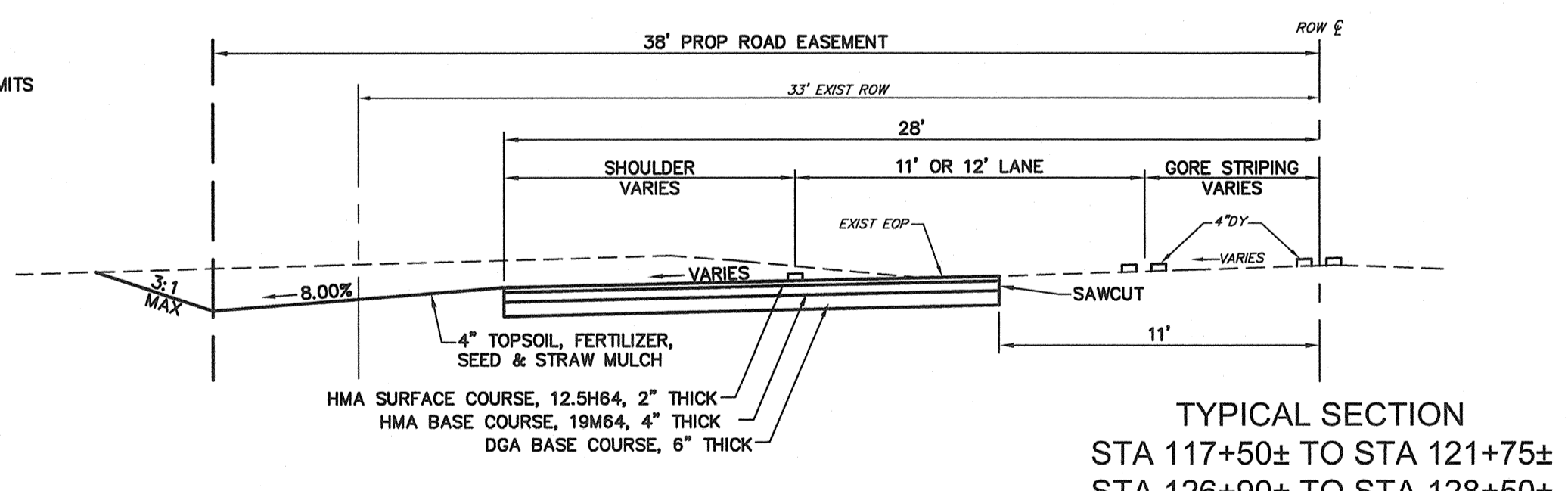
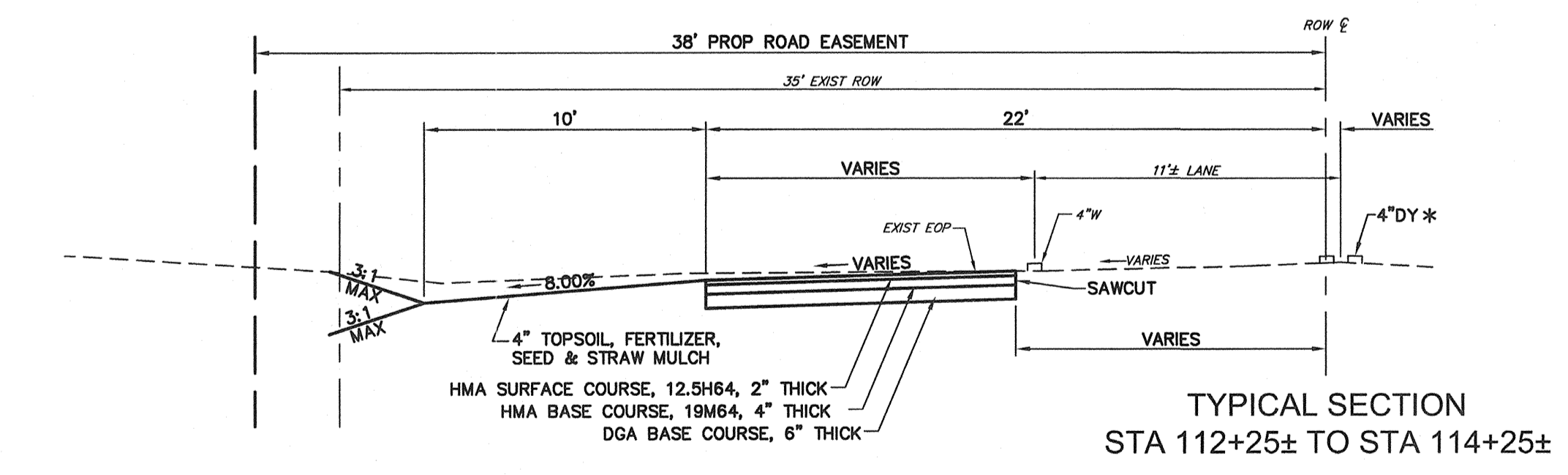
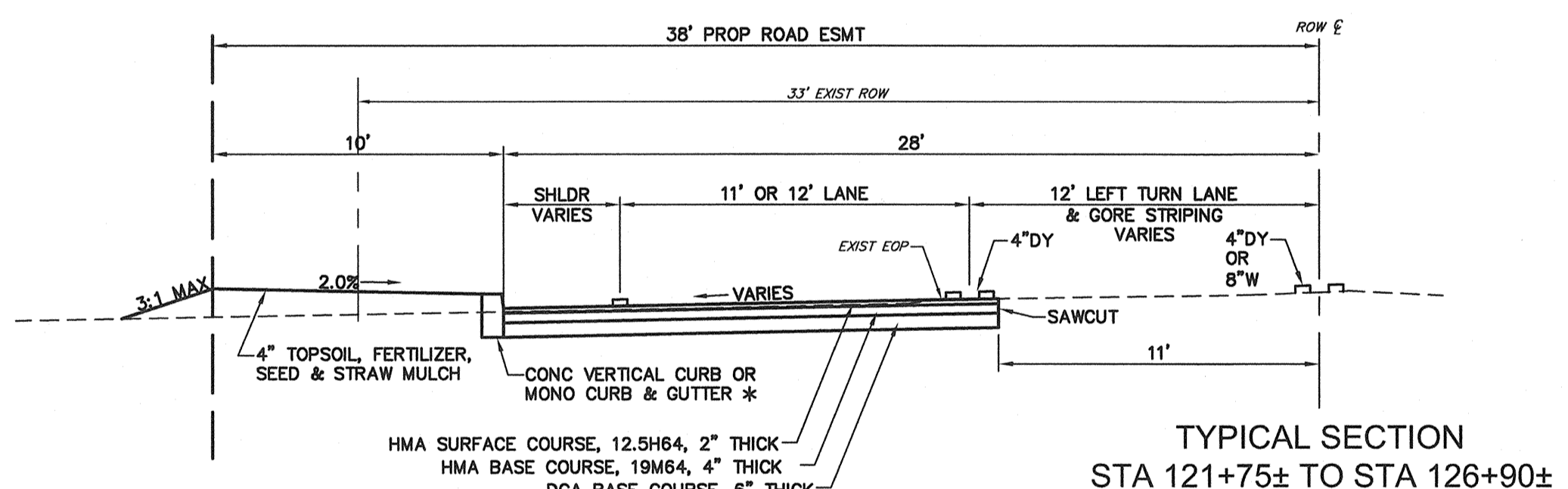
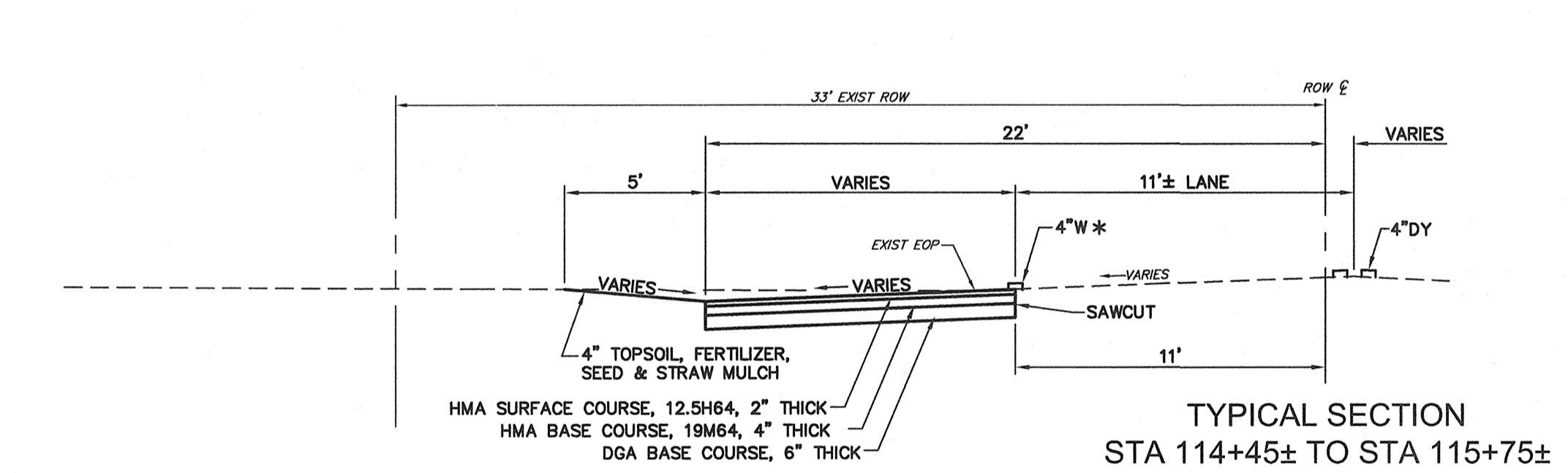
BC	BOTTOM OF CURB	NAD	NORTH AMERICAN DATUM
BGR	BENCH GUIDE RAIL	NAVD	NORTH AMERICAN VERTICAL DATUM
BL	BASILINE	NGCS	NATIONAL GEODETIC CONTROL SURVEY
BM	BENCHMARK	NGVD	NATIONAL GEODETIC VERTICAL DATUM
BIT	BITUMINOUS	NJDOT	NEW JERSEY DEPARTMENT OF TRANSPORTATION
BLDG	BUILDING	NO	NUMBER
CL	CENTERLINE	NTS	NOT TO SCALE
CL	CHAIN LINK (FENCE)	OC	ON CENTER
CIP	CAST IRON PIPE, CAST IN PLACE	PC	POINT OF CURVATURE
CMP	CORRUGATED METAL PIPE	PGL	PROFILE GRADE LINE
CMPA	CORRUGATED METAL PIPE ARCH	PI	POINT OF INTERSECTION
CONC	CONCRETE	PL	PROPERTY LINE, PROFILE LINE, PLATE
CONST	CONSTRUCTION	PK	PARKER KAYLON MASONRY NAIL
CT	CURB TRANSITION	PRC	POINT OF REVERSE CURVE
DIA, Ø	DIAMETER	PROP	PROPOSED
DC	DEPRESSED CURB	PT	POINT OF TANGENCY
DGA	DENSE GRADED AGGREGATE	PVC	POINT OF VERTICAL CURVATURE
DTS	DESIRED TYPICAL SECTION	PVC	POLYVINYL CHLORIDE PIPE
DWY	DRIVEWAY	PVI	POINT OF VERTICAL INTERSECTION
ELEVATION	ELEVATION	PVT	PAVEMENT
EOP	EDGE OF PAVEMENT	R	RADIUS, RIGHT
ESMT	EASEMENT	SB	SOUTHBOUND
ET	EXTRUDER TERMINAL	RCCP	REINFORCED CONCRETE CULVERT PIPE
EXIST	EXISTING	RMC	RIGID METALLIC CONDUIT
FC	FLUSH CURB	RNMC	RIGID NON-METALLIC CONDUIT
GL	GUTTER LINE	ROW	RIGHT OF WAY
GR	GRATE	RT	ROUTE
HDPE	HIGH DENSITY POLYETHYLENE PIPE	SAN	SANITARY
HMA	HOT MIX ASPHALT	SB	SOUTHBOUND
HP	HIGH POINT	SL	SURVEY LINE
HW	HEADWALL	SR	SPLIT RAIL (FENCE)
HYD	HYDRANT	SRT	SLOTTED RAIL TERMINAL
INL	INLET	SS	SANITARY SEWER
INV	INVERT	SY	SQUARE YARD
IP	IRON PIN, IRON PIPE	TBR	TO BE REMOVED
JB	JUNCTION BOX	TC	TOP OF CURB
L	LEFT	TCE	TEMPORARY CONSTRUCTION EASEMENT
LF	LINEAR FEET	TEL	TELEPHONE
LL	LEVEL LINE	TEMP	TEMPORARY
LOD	LIMIT OF DISTURBANCE	TYP	TYPICAL
LOM	LIMIT OF MILLING	UP	UTILITY POLE
LOP	LIMIT OF PAVING	VAR	VARIABLE, VARIES
LP	LOW POINT	VC	VERTICAL CURVE
MAX	MAXIMUM	W	WATER
MB	MAILBOX	WM	WATER METER
MH	MANHOLE	WSE	WATER SURFACE ELEVATION
MIN	MINIMUM		
MP	MILE POST		

**GENERAL NOTES:**

- HORIZONTAL AND VERTICAL INFORMATION, INCLUDING EXISTING RIGHT OF WAY, TAKEN FROM PLANS ENTITLED "MALAGA ROAD TRACT, PLATE 27, BLOCK 2702, LOTS 11, 15-18, 40 AND 41, MONROE TOWNSHIP, GLOUCESTER COUNTY, NEW JERSEY", PREPARED BY CES.
- HORIZONTAL DATUM IS NAD83, VERTICAL DATUM NAVD88.
- ALL REFERENCES TO "SITE PLANS" SHALL REFER TO THE PLANS REFERENCED IN NOTE 1 ABOVE.
- NO DEVELOPMENT, INCLUDING CLEARING AND LAND DISTURBANCE, IS PERMITTED IN WETLANDS OR WETLANDS BUFFERS.
- TOTAL LINEAR FEET OF WATER MAIN:
  - 2" WATER MAIN: 208 LF
  - 8" WATER MAIN: 6,865 LF
  - 12" WATER MAIN: 2,514 LF
- TOTAL LINEAR FEET OF SANITARY SEWER MAIN:
  - 8" SANITARY SEWER MAIN: 5,951 LF
  - 10" SANITARY SEWER MAIN: 1,358 LF
- TOTAL LINEAR FEET OF FORCE MAIN:
  - 4" DIP FORCE MAIN: 5,735 LF

**CONSTRUCTION NOTES:**

- ALL CLEARING ITEMS (TREES, BRUSH, STUMPS, ETC.) SHALL BE REMOVED FROM PROJECT AND DISPOSED OF IN A LAWFUL MANNER.
- ALL CONSTRUCTION DEBRIS (ASPHALT, CONCRETE, ETC.) SHALL BE REMOVED FROM PROJECT SITE PRIOR TO END OF EACH DAY'S WORK TO ELIMINATE ANY POTENTIAL HAZARDS. NO SEPARATE PAYMENT SHALL BE MADE FOR THIS REQUIREMENT.
- THE CONTRACTOR SHALL PROPERLY BACKFILL AND COMPACT ALL TRENCHES, NO TRENCHES SHALL BE LEFT OPEN AFTER END OF A DAY'S WORK.
- ALL CONCRETE CURB AND SIDEWALK DESIGNATED FOR REMOVAL SHALL BE TAKEN TO THE NEAREST JUNCTION AS NECESSARY, OR SAWCUT AS DIRECTED BY THE ENGINEER.
- INSPECTIONS OR FAILURES TO INSPECT ANY MATERIALS OR WORKMANSHIP BY MUNICIPAL COUNTY OR STATE OFFICIALS SHALL IN NO WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES TO PERFORM THE WORK IN ACCORDANCE WITH APPLICABLE PLANS, SPECIFICATIONS AND LAWS.
- THE CONTRACTOR SHALL BE REQUIRED TO COORDINATE HIS WORK WITH ANY AND ALL UTILITY COMPANIES AND/OR OTHER CONTRACTORS IN ORDER TO ELIMINATE ANY CONFLICTS AND/OR DELAYS. NO COMPENSATION WILL BE MADE FOR ANY DELAYS DUE TO COORDINATION DIFFICULTIES.
- ALL MANHOLE RIMS AND INLET GRATES WITHIN ROADWAY TO BE CONSTRUCTED OR RESET SHALL BE SET AT PROPOSED PAVEMENT GRADE AND CROSS SLOPE 24 HOURS PRIOR TO FINAL TOP COURSE PAVING.
- ALL TIES SHOWN ON THE PLANS ARE TO THE RIGHT-OF-WAY CENTERLINE.
- THE CONTRACTOR SHALL ADHERE TO THE NJDOT STANDARD SPECIFICATIONS, 2007, AND ALL APPLICABLE AMENDMENTS FOR ALL PROPOSED ROADWAY CONSTRUCTION.
- THE CONTRACTOR SHALL PREPARE A MAINTENANCE AND PROTECTION OF TRAFFIC PLAN WHICH SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PRIOR TO COMMENCEMENT OF WORK.
- ALL STREET APPURTENANCES REMOVED WITHIN THE RIGHT-OF-WAY SHALL BE REPLACED IN KIND.
- RELOCATED UTILITY POLES ARE SHOWN FOR ILLUSTRATIVE PURPOSES ONLY. EXACT LOCATIONS WILL BE DETERMINED BY THE UTILITY COMPANY.
- ALL RELOCATED UTILITY POLES MUST BE OFFSET A MINIMUM OF 24" FROM THE FACE OF CURB (OR EDGE OF PAVEMENT) TO THE FACE OF POLE.
- ALL CONCRETE TO BE CLASS B, AIR-ENTRAINED (6% ±1%), 28 DAY DESIGN COMPRESSIVE STRENGTH 3700 PSI.
- ALL RCP STORM PIPE SHALL BE CLASS III UNLESS OTHERWISE NOTED.
- SAWCUT 1" MINIMUM FROM EXISTING EDGE OF PAVEMENT IN AREAS OF ROADWAY WIDENING OR RECONSTRUCTION TO PROVIDE A STABLE EDGE FOR PROPOSED PAVING.
- ALL SUBGRADE MATERIAL SHALL BE PREPARED AND COMPACTED IN ACCORDANCE WITH NJDOT SPECIFICATIONS AND THE COUNTY ENGINEER.
- SEE SITE PLANS FOR GRADING AND WORK OUTSIDE OF THE RIGHT-OF-WAY, AND FOR UTILITY NOTES AND DETAILS.
- SOIL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED AND MAINTAINED IN ACCORDANCE WITH THE GLOUCESTER COUNTY SOIL CONSERVATION DISTRICT AND THE PROJECT SITE PLANS.



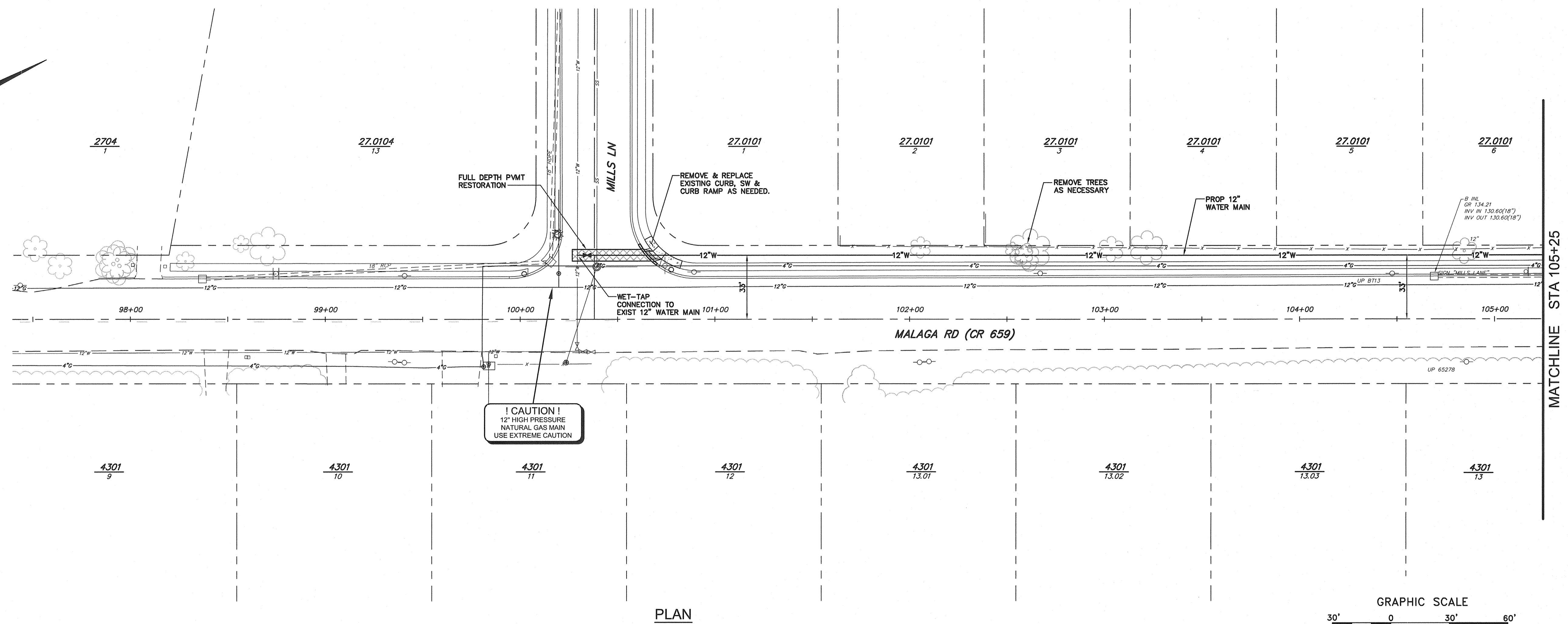
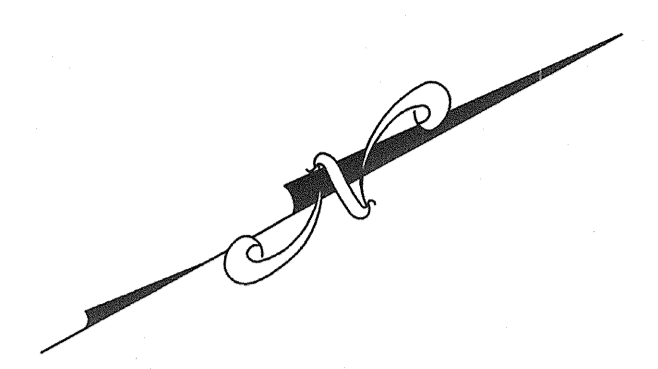
**LEGEND, NOTES & TYPICAL SECTIONS**  
**ROADWAY IMPROVEMENTS**  
**MALAGA ROAD (GLOUCESTER COUNTY ROUTE 659)**  
MONROE TOWNSHIP, GLOUCESTER COUNTY, NEW JERSEY

PREPARED BY: CONSULTING ENGINEER SERVICES  
PROFESSIONAL ENGINEERS, PLANNERS, & LAND SURVEYORS  
645 BELLEVILLE ROAD, FANX (609) 232-2346  
PHONE (609) 228-2200 FAX (609) 232-2346  
N.J. CERTIFICATE OF AUTHORIZATION No. 24627897700

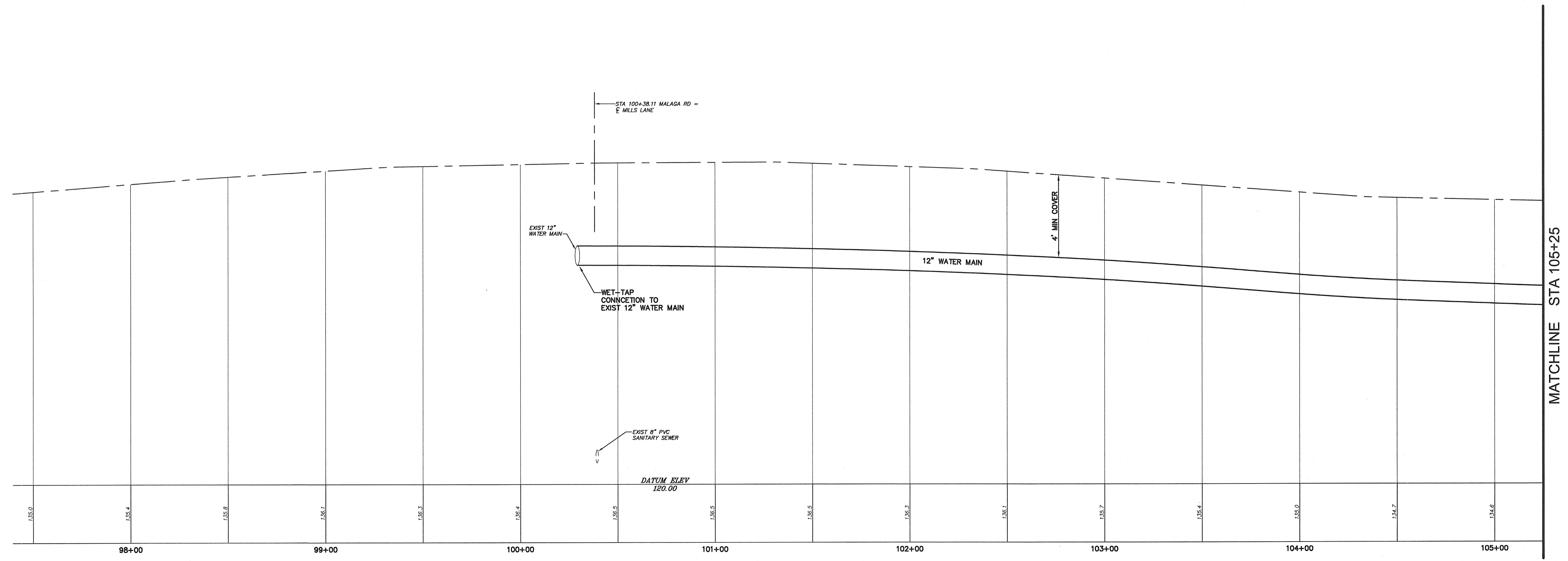
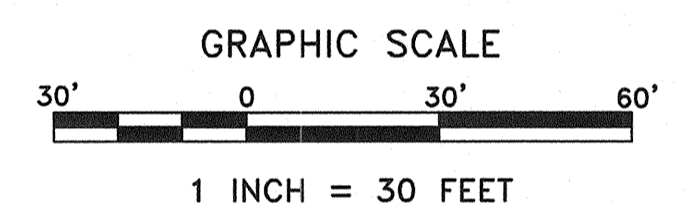
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CES No. 2012  
DRAWN BY: JAC

REVISIONS  
DATE DATE  
LAC 11/29/13 REV PER CODE & UPDATE GENERAL NOTES  
JAC 9/8/13 REV GEN NOTES & TYP SECTIONS  
JAC 10/24/12 UPDATED UTIL DOTS IN GENERAL NOTES  
LAM 05/14/12 PER PENLANDS REVIEW LIRS DATED MARCH 23 & 30, 2012

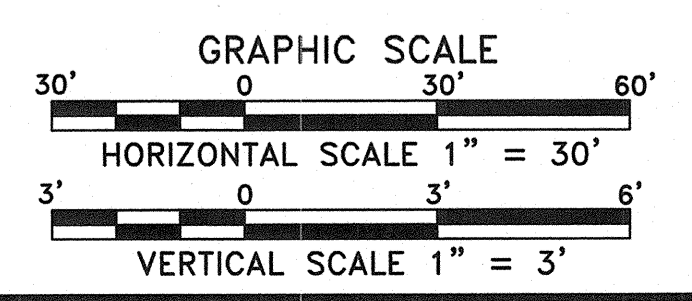
MICHAEL R. BROWN 11/21/13 DATE  
PROFESSIONAL ENGINEER, NEW JERSEY LIC. NO. GE-44222



PLAN



PROFILE



MATCHLINE STA 105+25

MATCHLINE STA 105+25

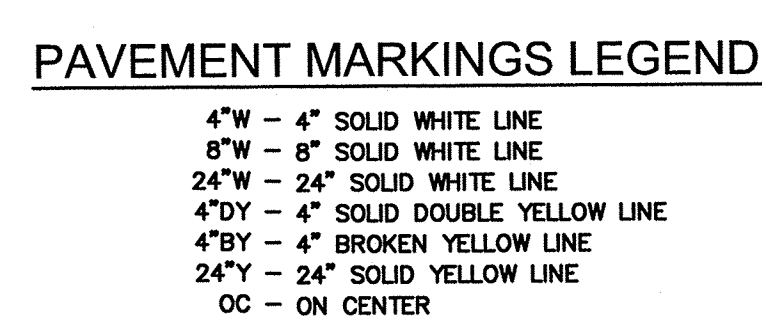
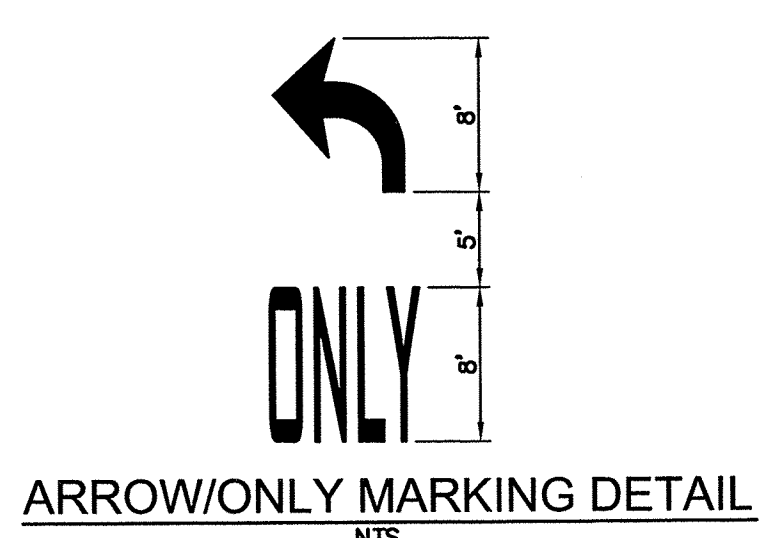
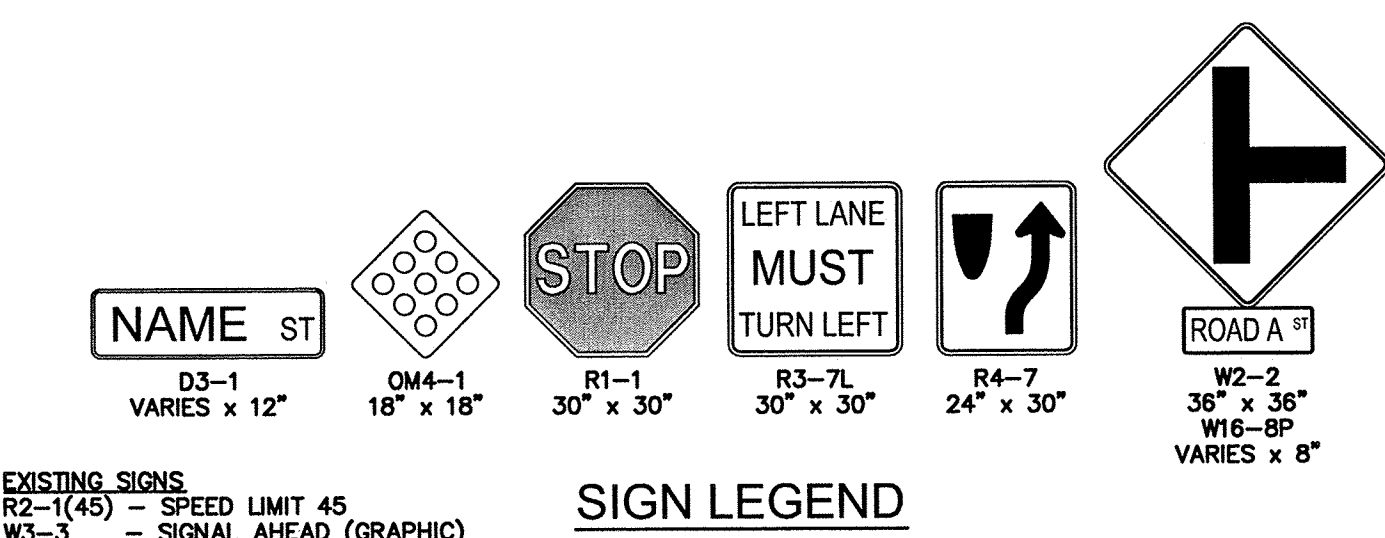
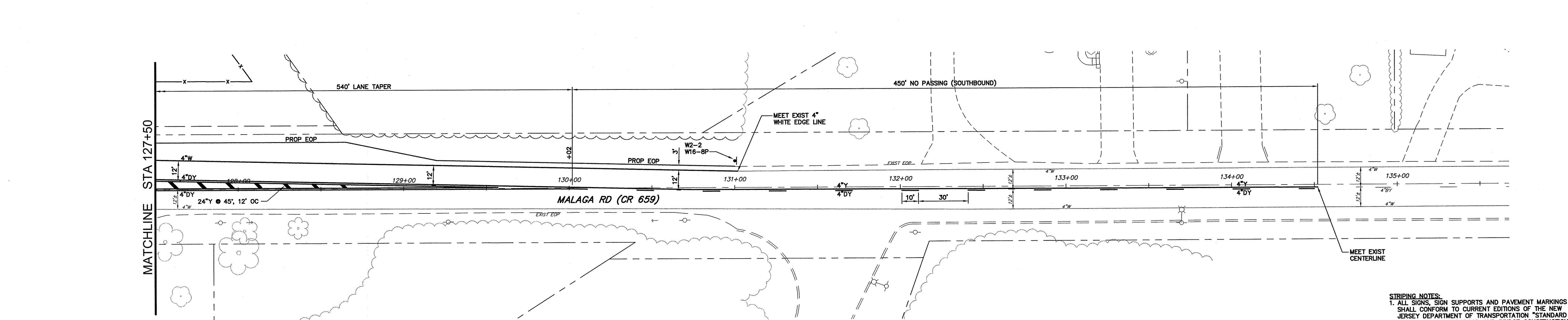
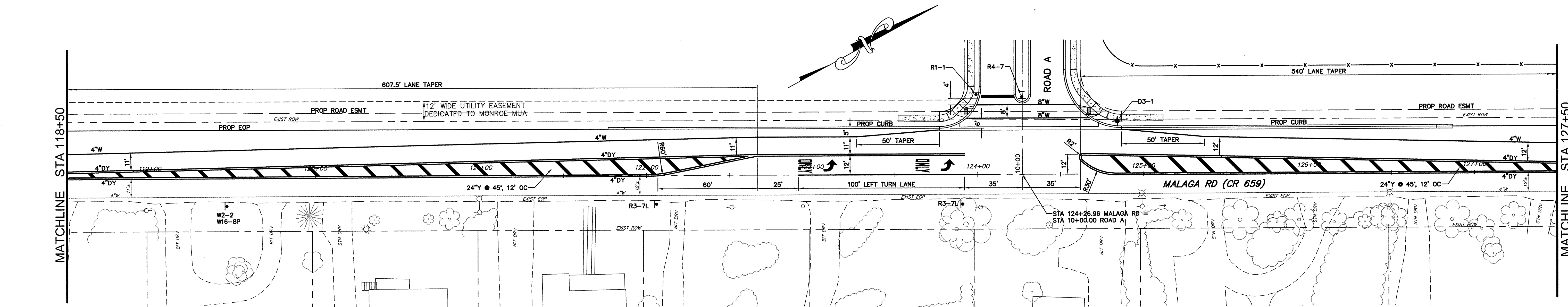
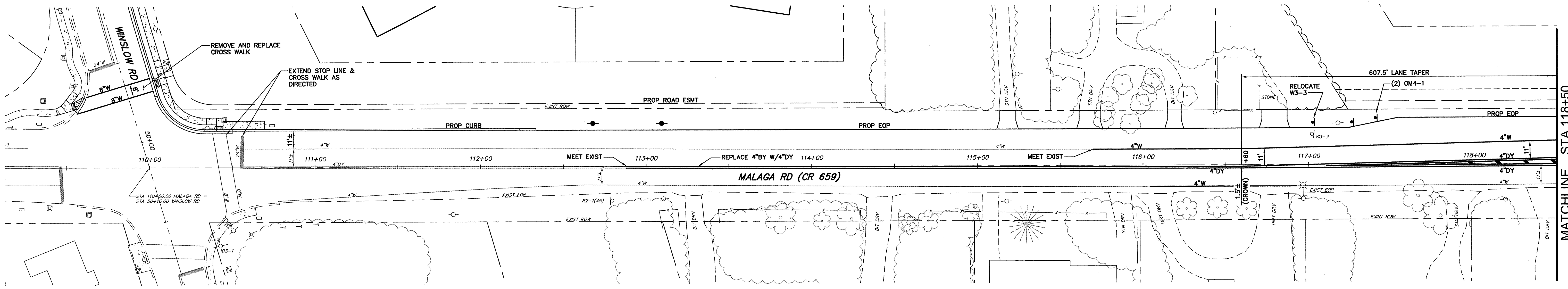
<p><b>CONSTRUCTION PLAN &amp; PROFILE</b>  <b>ROADWAY IMPROVEMENTS</b>          MALAGA ROAD (GLOUCESTER COUNTY ROUTE 659)          MONROE TOWNSHIP, GLOUCESTER COUNTY, NEW JERSEY</p>	<p>DATE: 3/17/14 SCALE: 1"=30'          FILE No. 2912          PREPARED BY: JAC          DRAWN BY: JAC</p>
<p>PROFESSIONAL ENGINEER SERVICES          CONSULTING ENGINEERS, PLANNERS, &amp; LAND SURVEYORS          645 BEAVER CREEK ROAD, ROCKERSYDNEY, NJ 08081          PHONE: 609-233-2344 FAX: 609-233-2344          N.J. CERTIFICATE OF AUTHORIZATION No. 24027897700</p>	<p>DATE: 3/17/14          MICHAEL R. BROWN          PROFESSIONAL ENGINEER, NEW JERSEY LIC. NO. GE44222</p>

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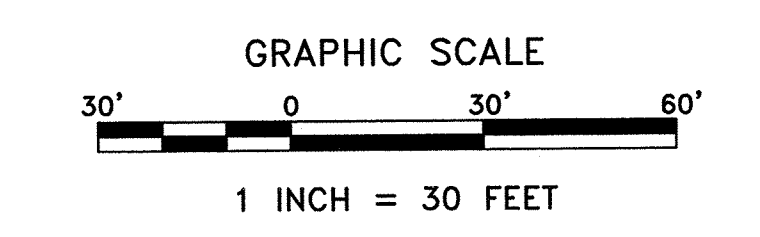








**STRIPING NOTES:**  
 1. ALL SIGNS, SIGN SUPPORTS AND PAVEMENT MARKINGS SHALL CONFORM TO CURRENT EDITIONS OF THE NEW JERSEY DEPARTMENT OF TRANSPORTATION "STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION" AND THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES".  
 2. ALL 4" WIDE TRAFFIC STRIPES SHALL BE LONG-LIFE EPOXY RESIN. ALL OTHER TRAFFIC MARKINGS SHALL BE HOT EXTRUDED THERMOPLASTIC MATERIAL. THE CONTRACTOR SHALL SUBMIT PROPOSED SPECIFICATIONS TO THE ENGINEER FOR APPROVAL PRIOR TO CONSTRUCTION.  
 3. ALL CONFLICTING SIGNAGE AND STRIPING SHALL BE REMOVED. CONFLICTING STRIPING SHALL BE REMOVED BY WATER BLASTING OR GRINDING, AS DIRECTED BY THE ENGINEER.



MATCHLINE STA 118+50

MATCHLINE STA 127+50

MATCHLINE STA 118+50

MATCHLINE STA 127+50

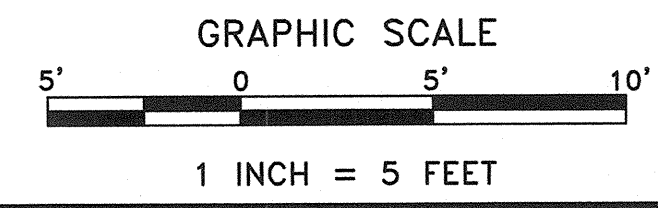
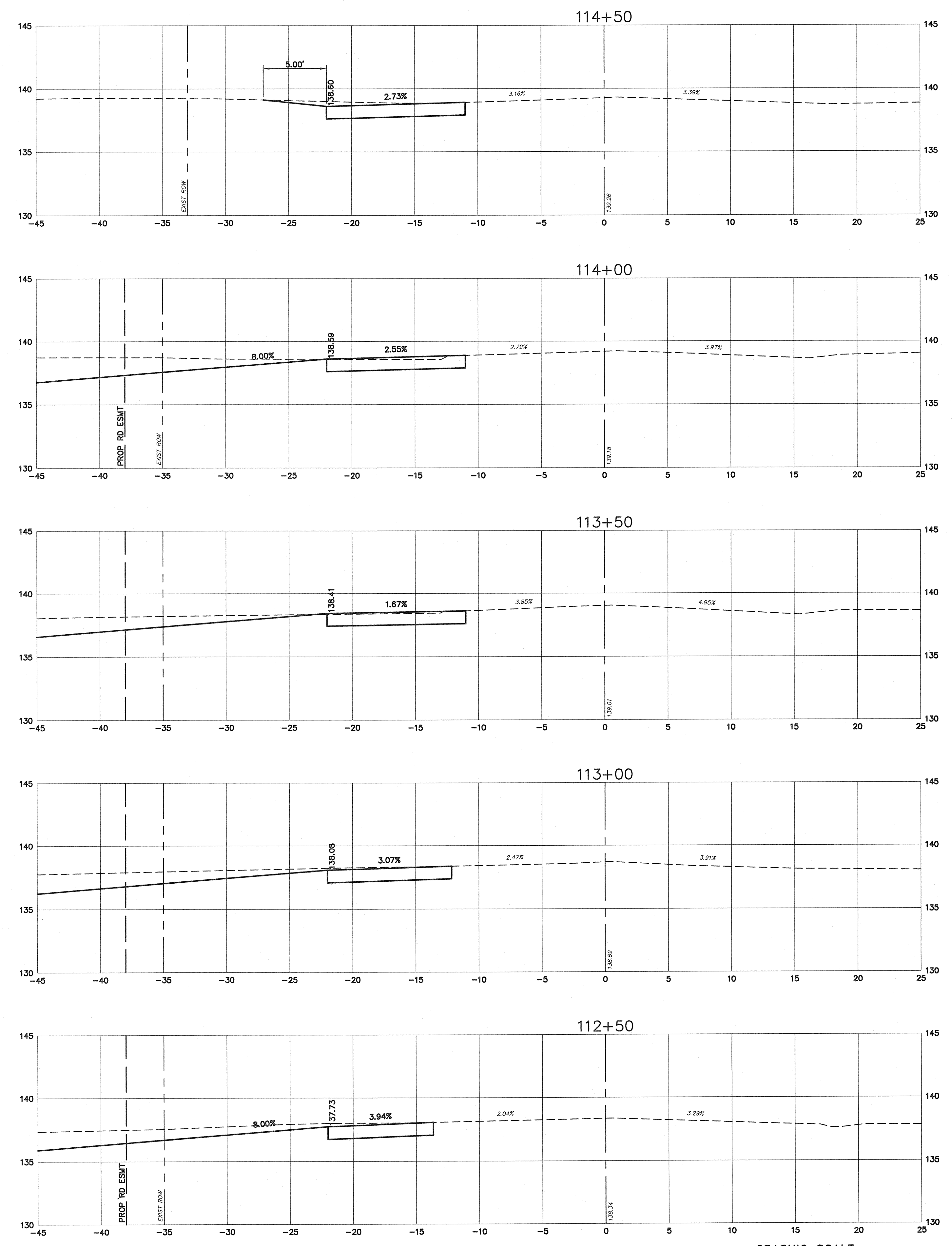
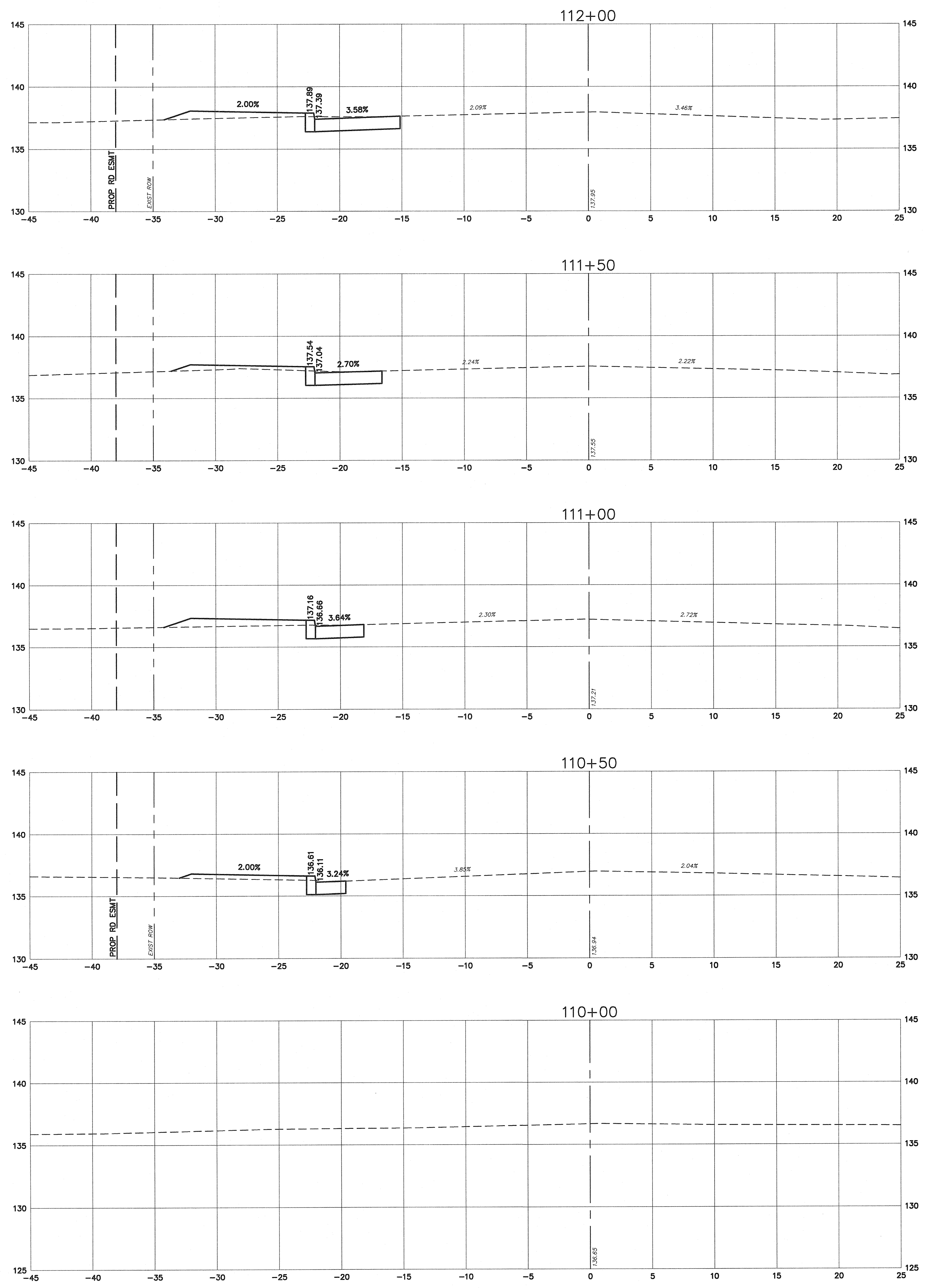
Michael R. Brown  
**MICHAEL R. BROWN**  
 PROFESSIONAL ENGINEER, NEW JERSEY LIC. NO. GE44222  
 DATE: 7/16/14

JAC	7/16/14	EXTENDED PROPOSED ROAD EASEMENT ACROSS ROAD A
JAC	11/20/13	REV PROP STRIPING STA HEADS TO 117+00
JAC	9/16/13	REV PROP STRIPING AND STATIONING
MRB	2/14/13	REV PROP EOP & STRIPING FOR GAS VAULT @ STA 116+70 L
JAC	10/24/12	REV FOR FORCE MAIN INSTALLATION
DRWN		REVISIONS
DATE		

**SIGNAGE & STRIPING PLAN**  
**ROADWAY IMPROVEMENTS**  
**MALAGA ROAD (GLOUCESTER COUNTY ROUTE 659)**  
 MONROE TOWNSHIP, GLOUCESTER COUNTY, NEW JERSEY

PREPARED BY: CONSULTING ENGINEER SERVICES  
 PROFESSIONAL ENGINEERS: LANNESSE, BROWN AND SURVILLERS  
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 PHONE (855) 238-2200, FAX (855) 232-2348, 60801  
 N.J. CERTIFICATE OF AUTHORIZATION No. 24629795700  
 FILE No. 14-SP, SCALE: 1"=30', DATE: 12/27/11, DRAWN BY: JAC

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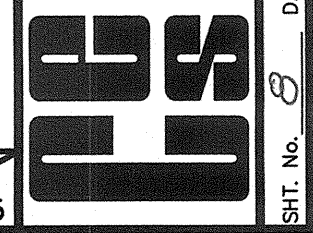
Michael R. Brown  
**MICHAEL R. BROWN**  
 PROFESSIONAL ENGINEER, NEW JERSEY LIC. NO. GE44222

REV	DATE	DESCRIPTION
1	11/20/13	REV PER QED
2	9/9/13	REV STATIONING & PROP EOP ELEVATIONS

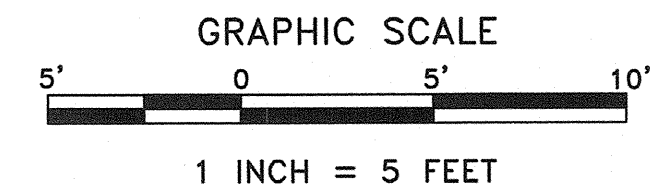
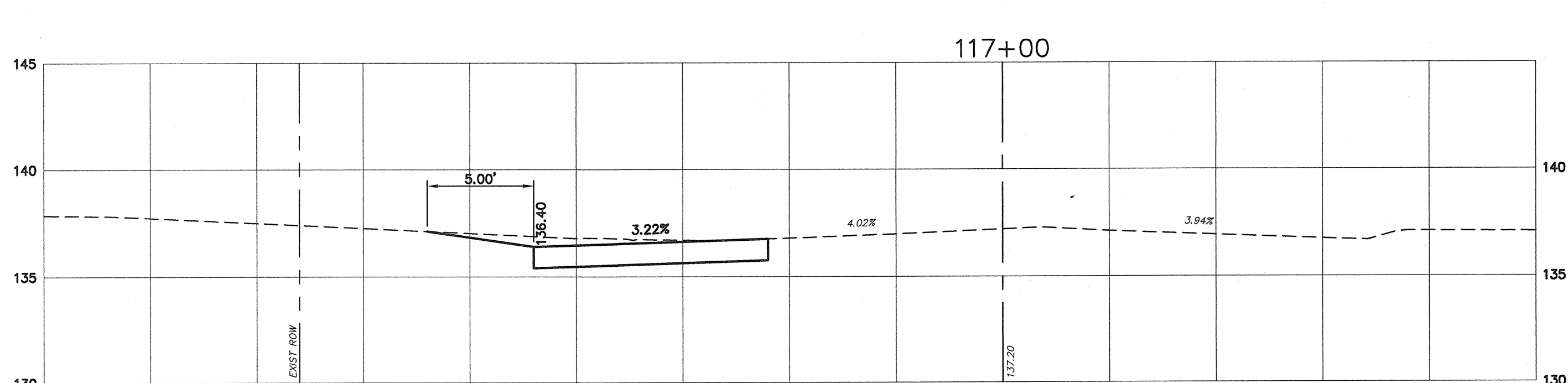
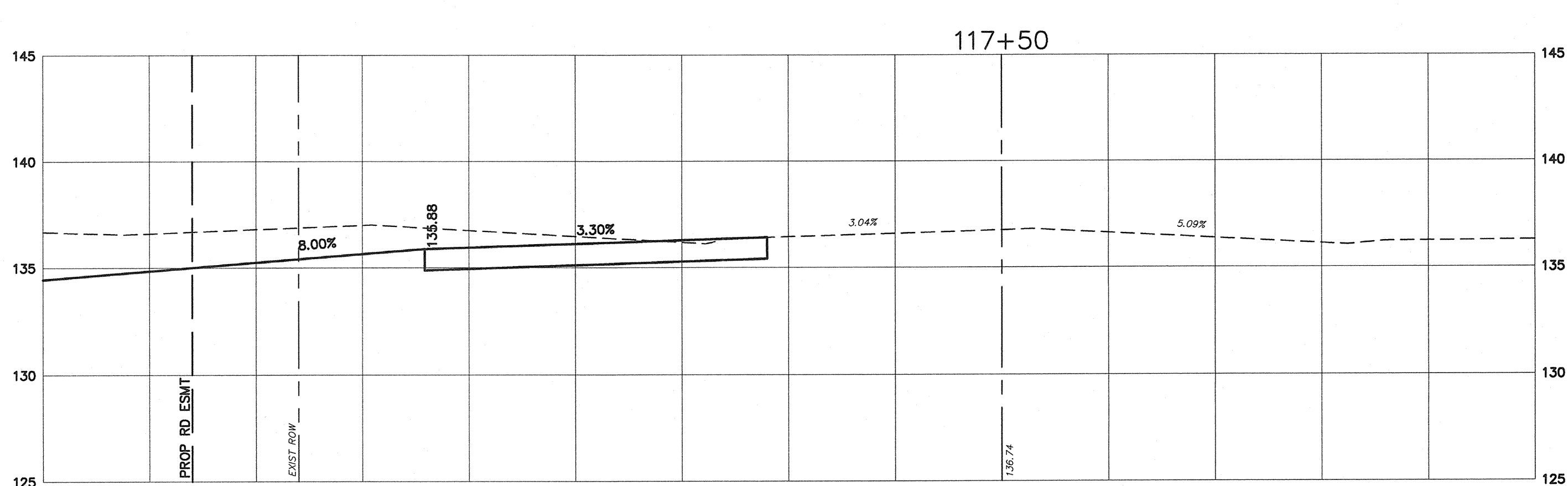
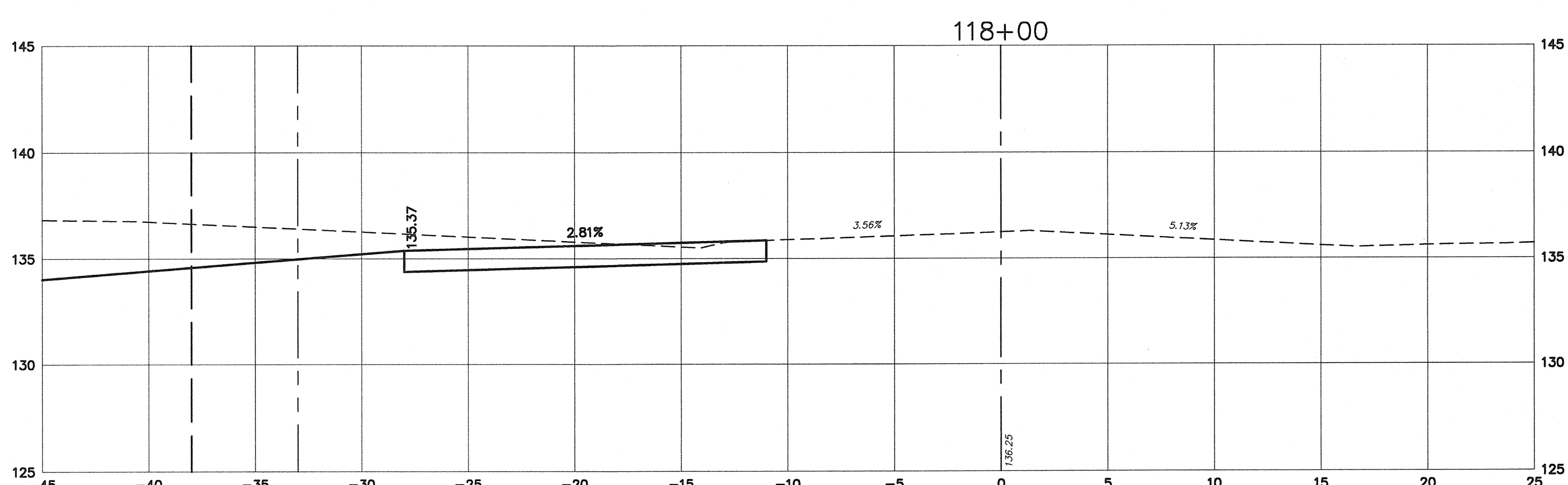
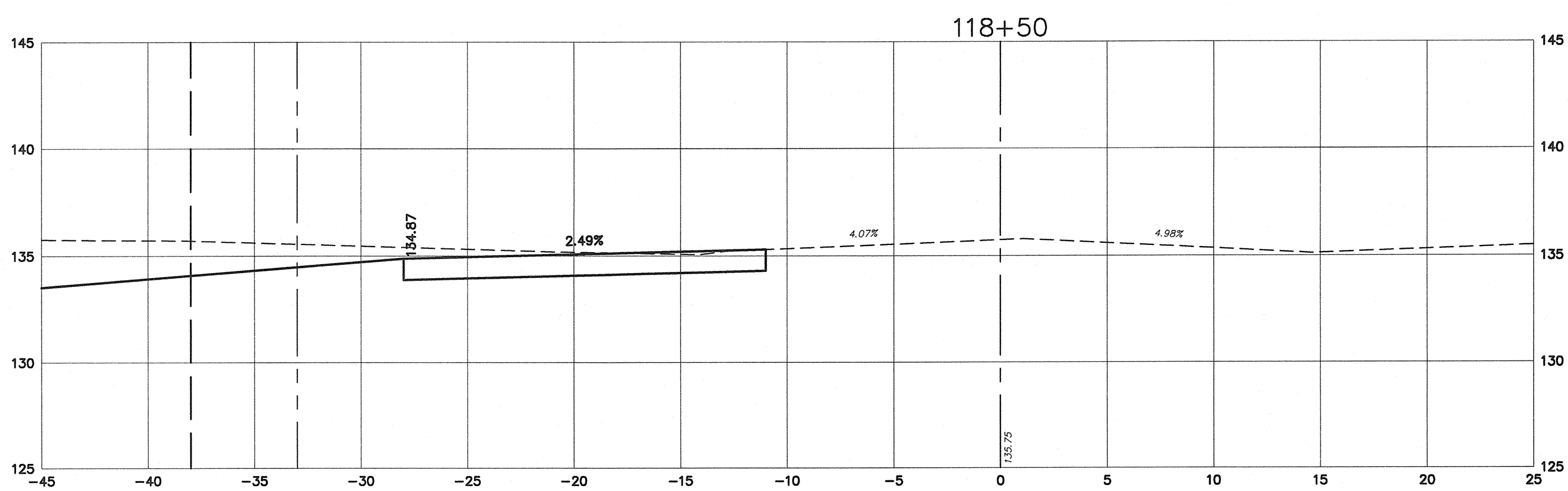
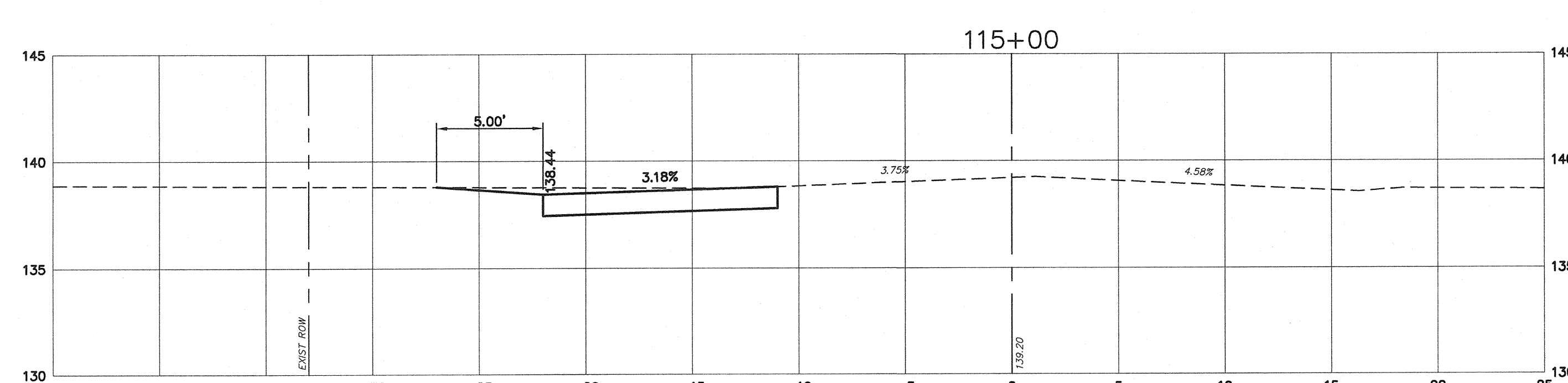
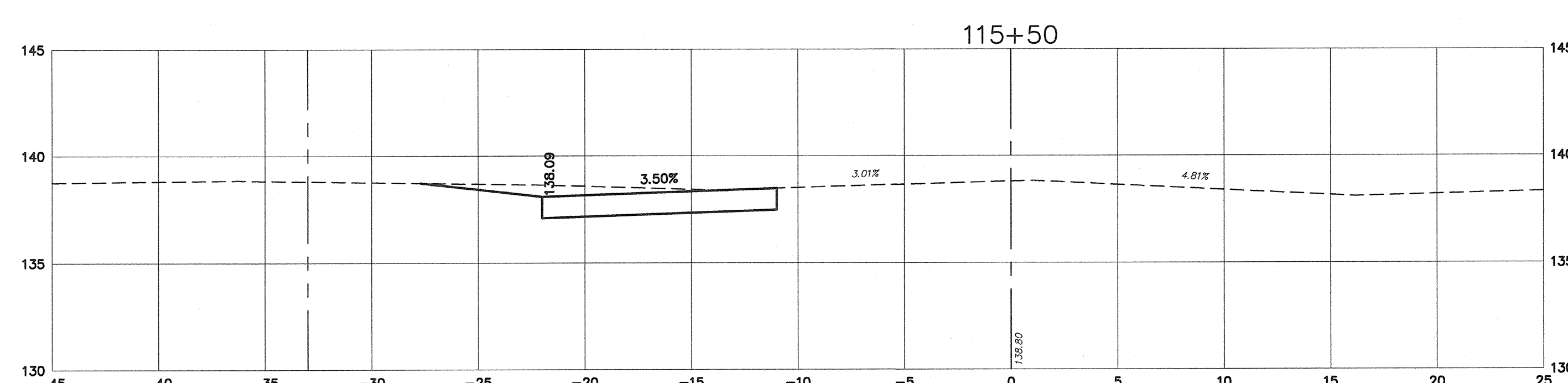
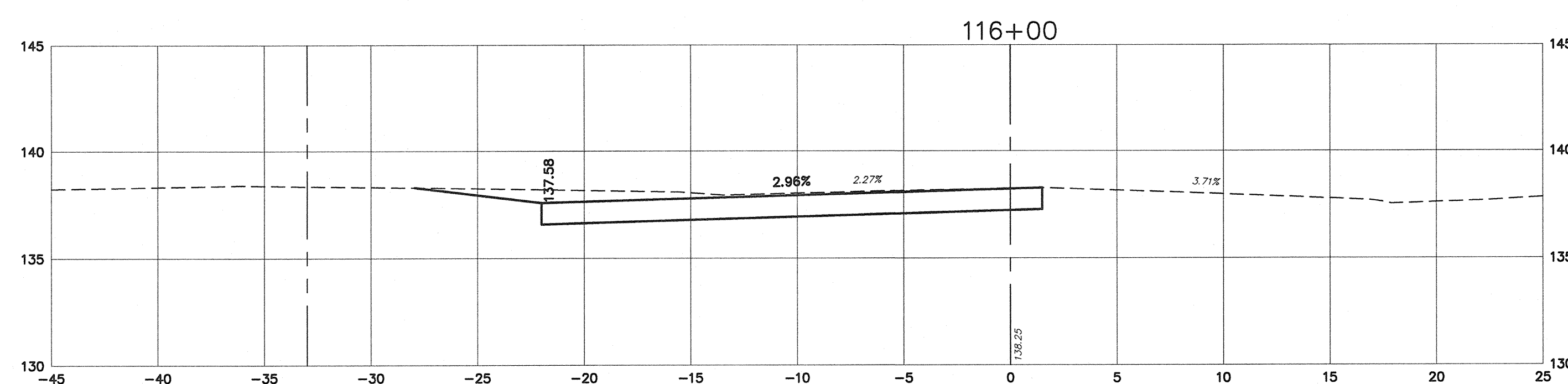
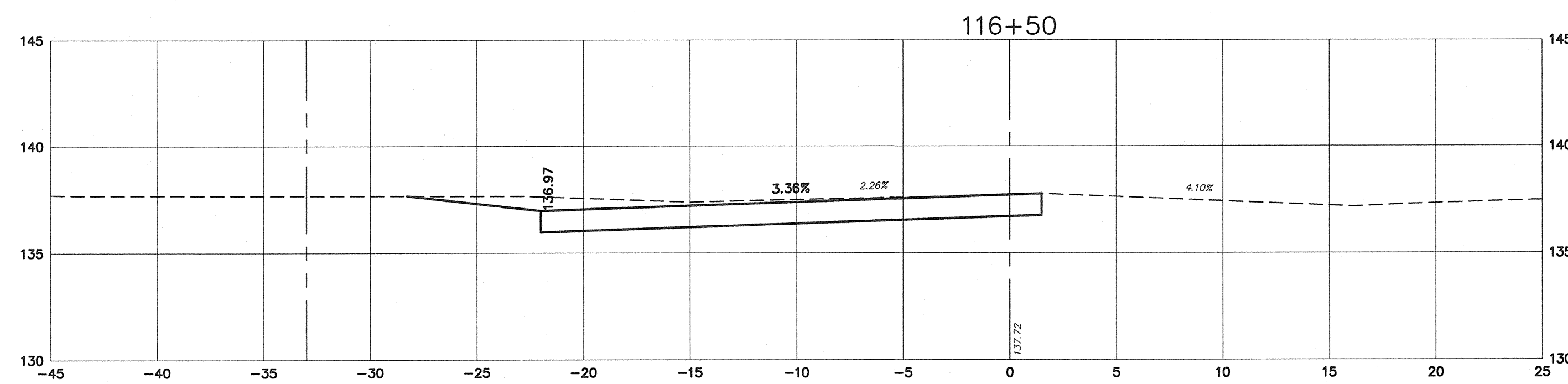
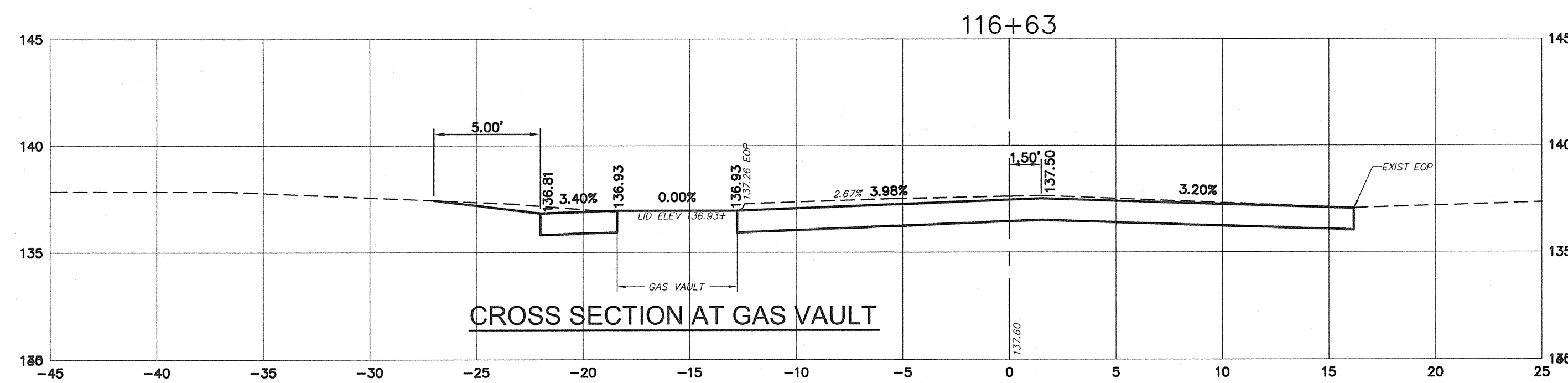
**CROSS SECTIONS**  
**ROADWAY IMPROVEMENTS**  
 MALAGA ROAD (GLOUCESTER COUNTY ROUTE 659)  
 MONROE TOWNSHIP, GLOUCESTER COUNTY, NEW JERSEY

PREPARED BY  
**CONSULTING ENGINEER SERVICES**  
 PROFESSIONAL ENGINEERS, PLANNERS, & LAND SURVEYORS  
 645 BELLEVILLE ROAD, SUITE 200  
 PHILADELPHIA, PA 19106  
 PHONE (800) 228-2200 FAX (800) 232-2346  
 N.J. CERTIFICATE OF AUTHORIZATION NO. 246A27897700

DATE: 12/11/11 SCALE: 1"=5' FILE NO. H-2586  
 DRAWN BY: JAC





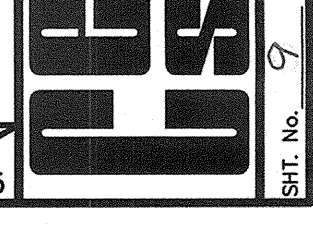


Michael R. Brown  
**MICHAEL R. BROWN**  
 PROFESSIONAL ENGINEER, NEW JERSEY LIC. NO. GE44222

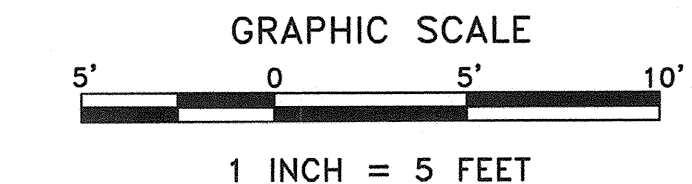
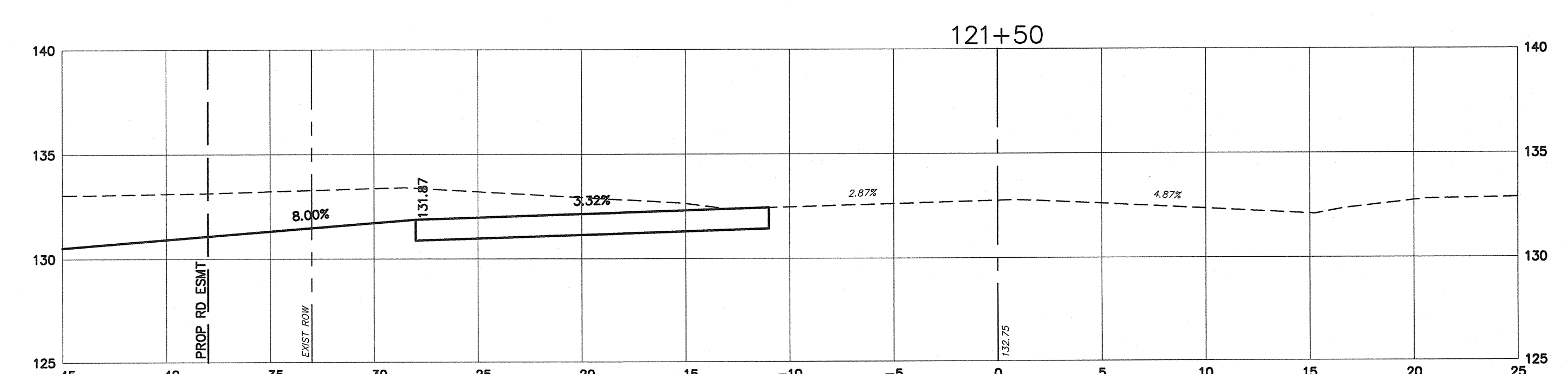
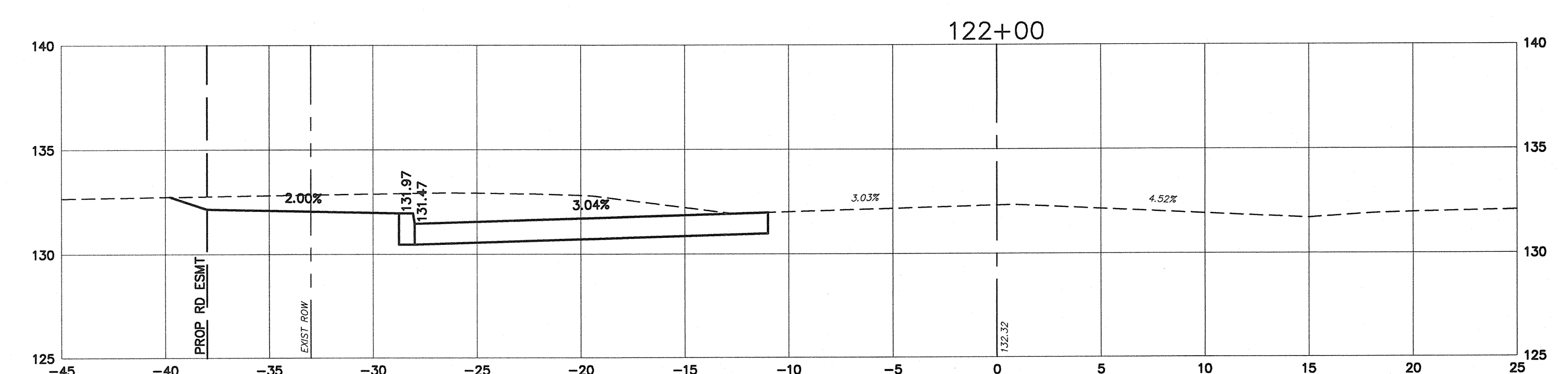
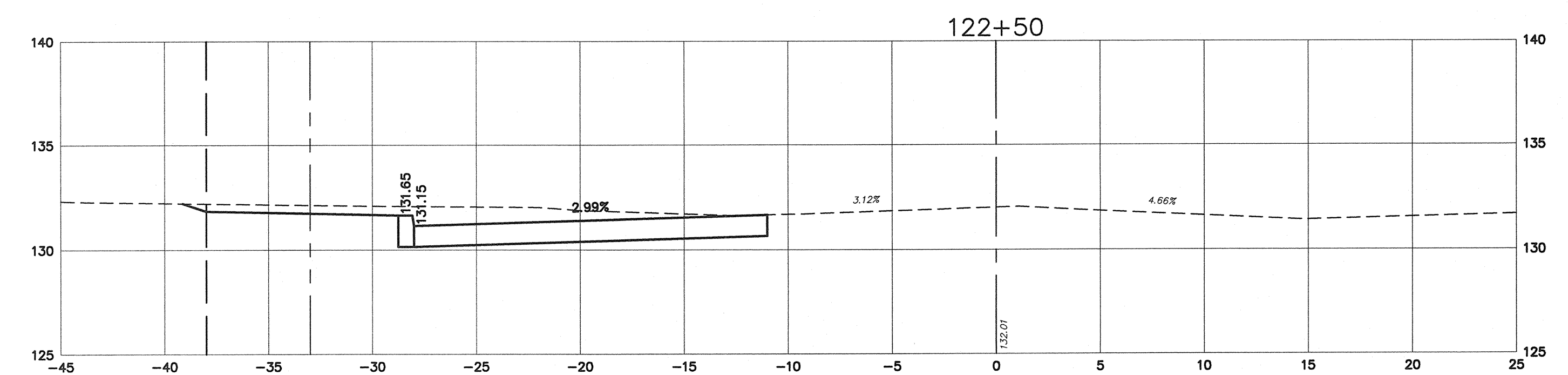
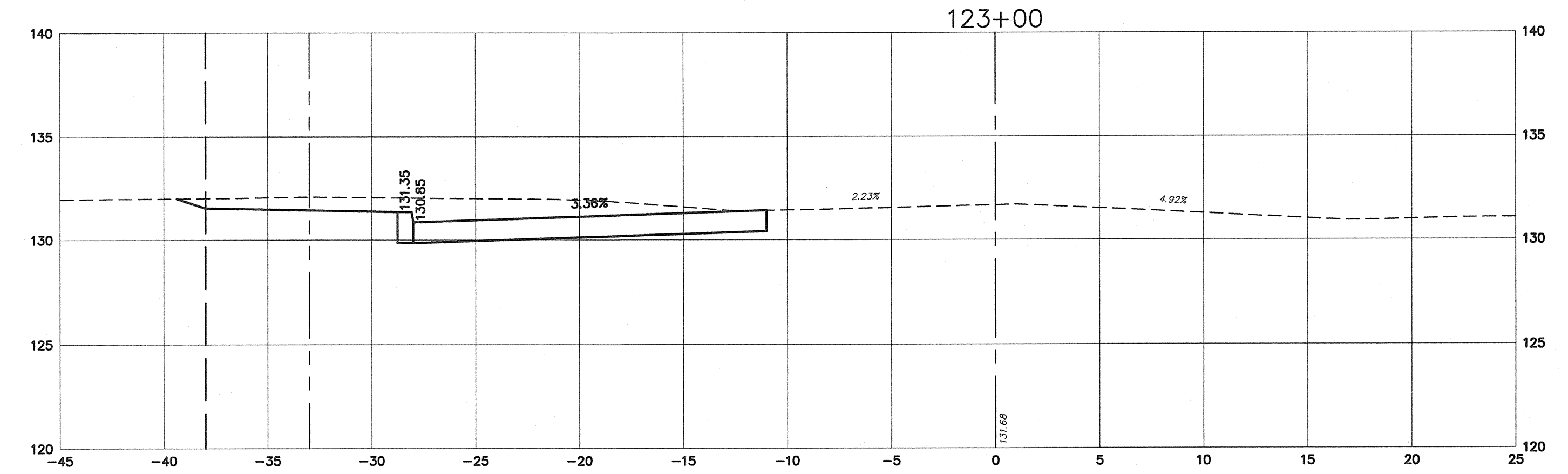
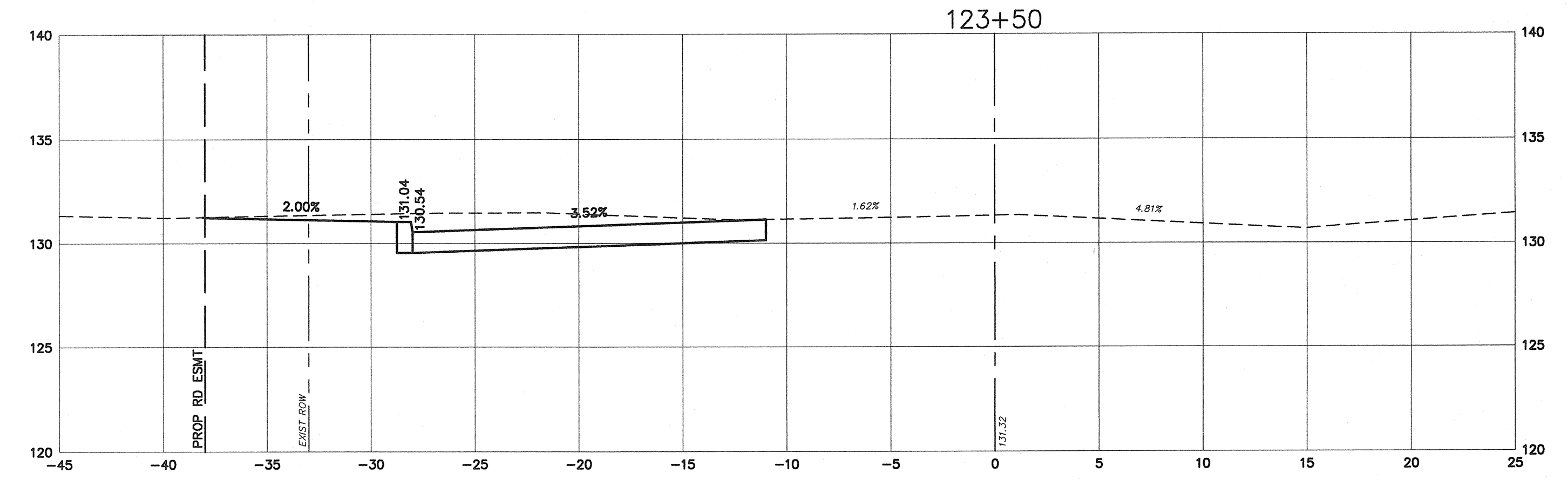
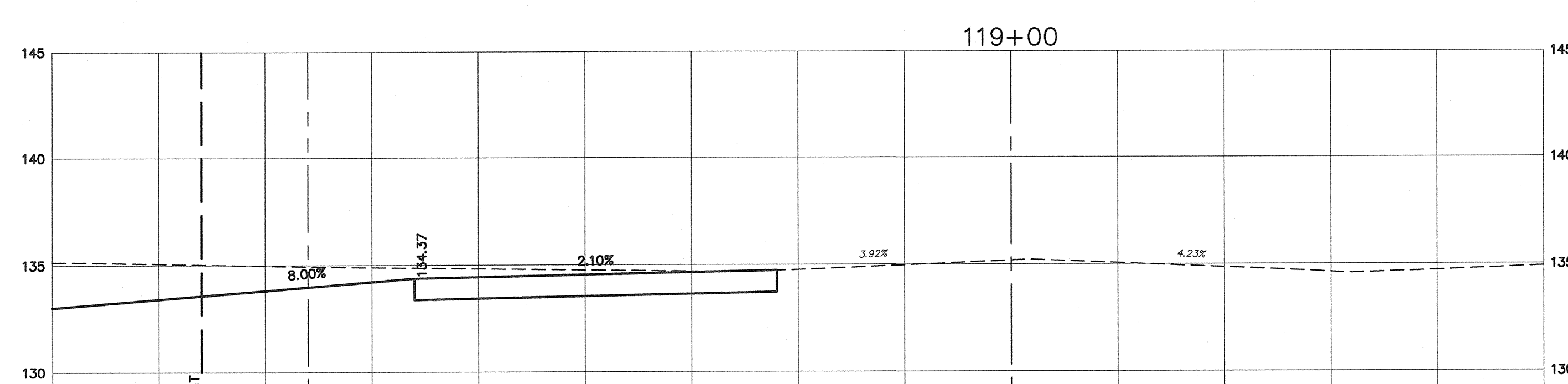
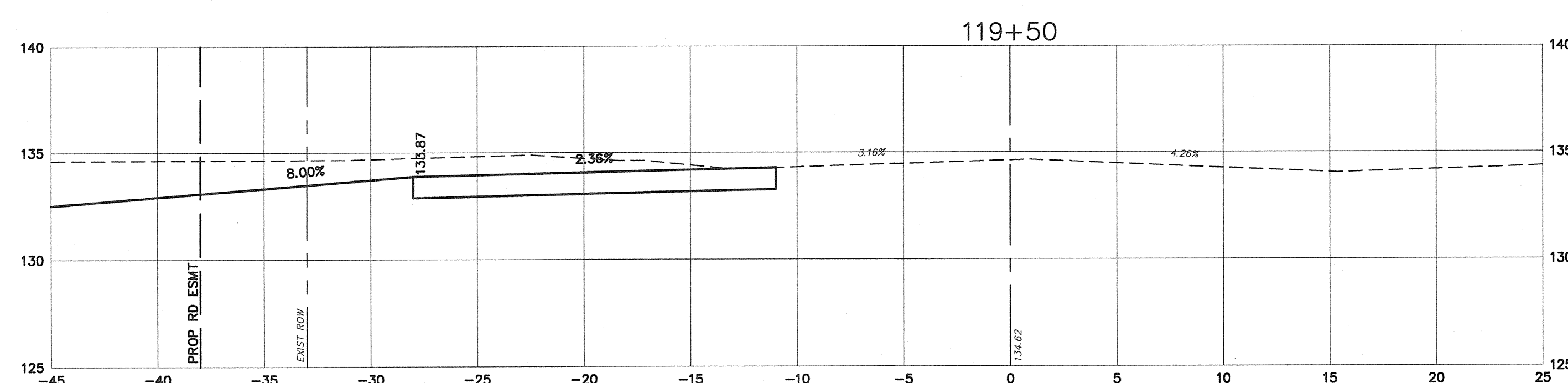
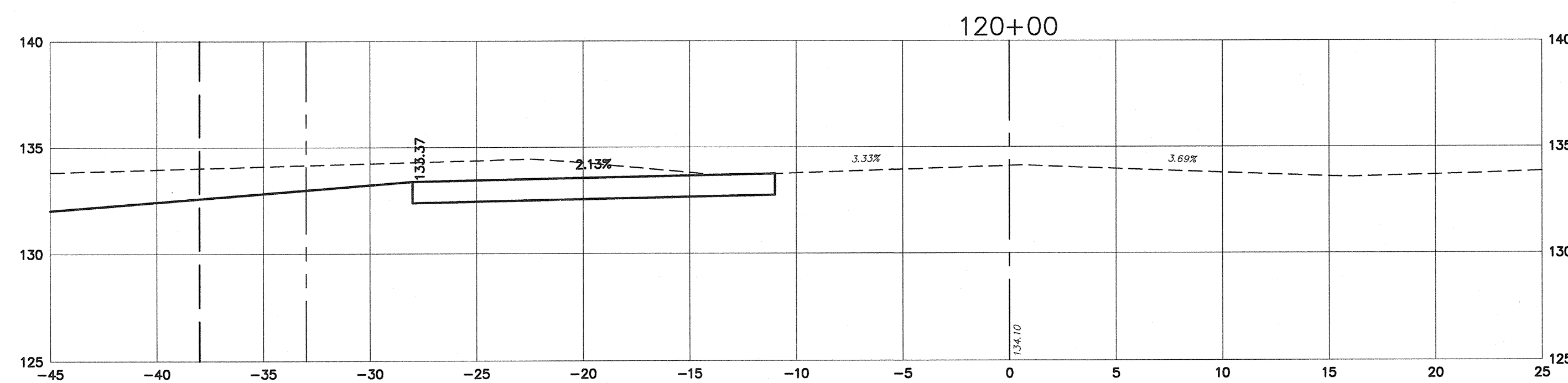
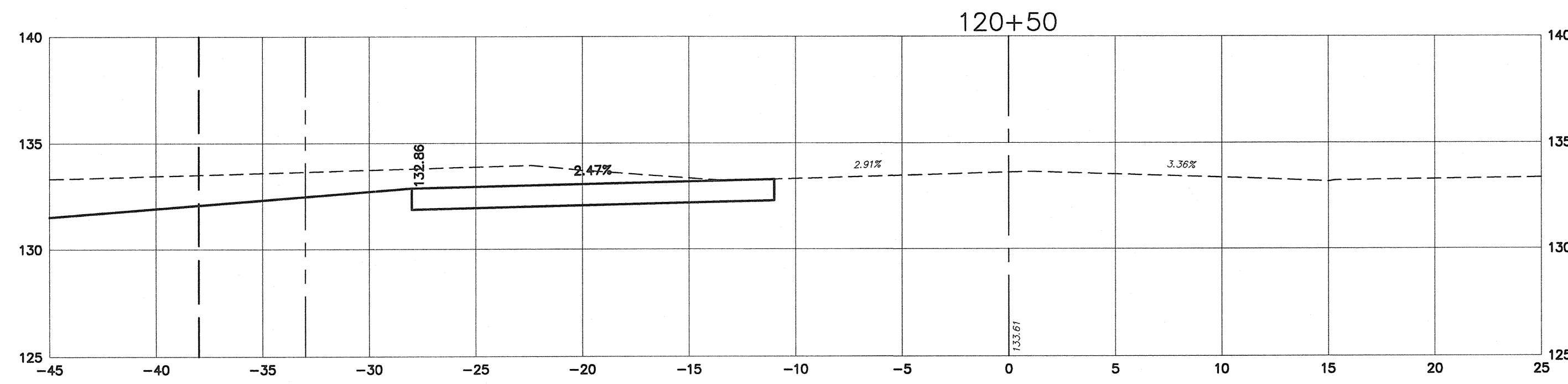
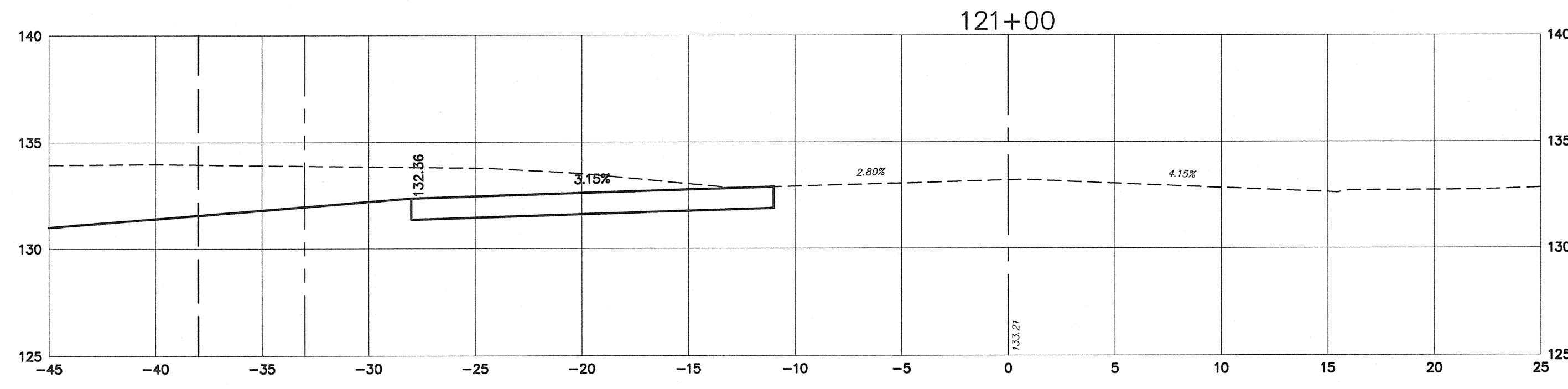
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JAC	9/9/13	REV STATIONING, PROP. EOP ELEV. & PROP. PAVT. 116+00 - 116+50

**CROSS SECTIONS**  
**ROADWAY IMPROVEMENTS**  
 MALAGA ROAD (GLOUCESTER COUNTY ROUTE 659)  
 MONROE TOWNSHIP, GLOUCESTER COUNTY, NEW JERSEY

PREPARED BY  
**CONSULTING ENGINEER SERVICES**  
 PROFESSIONAL ENGINEERS, PLANNERS, & LAND SURVEYORS  
 645 BELMONT ROAD, SUITE 200  
 PHILADELPHIA, PA 19106  
 PHONE (800) 226-2200 FAX (800) 232-2348  
 N.J. CERTIFICATE OF AUTHORIZATION No. 24602785700



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**CROSS SECTIONS**

**ROADWAY IMPROVEMENTS**

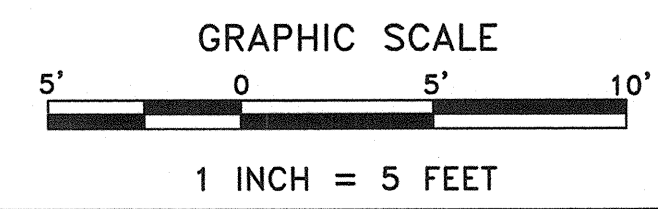
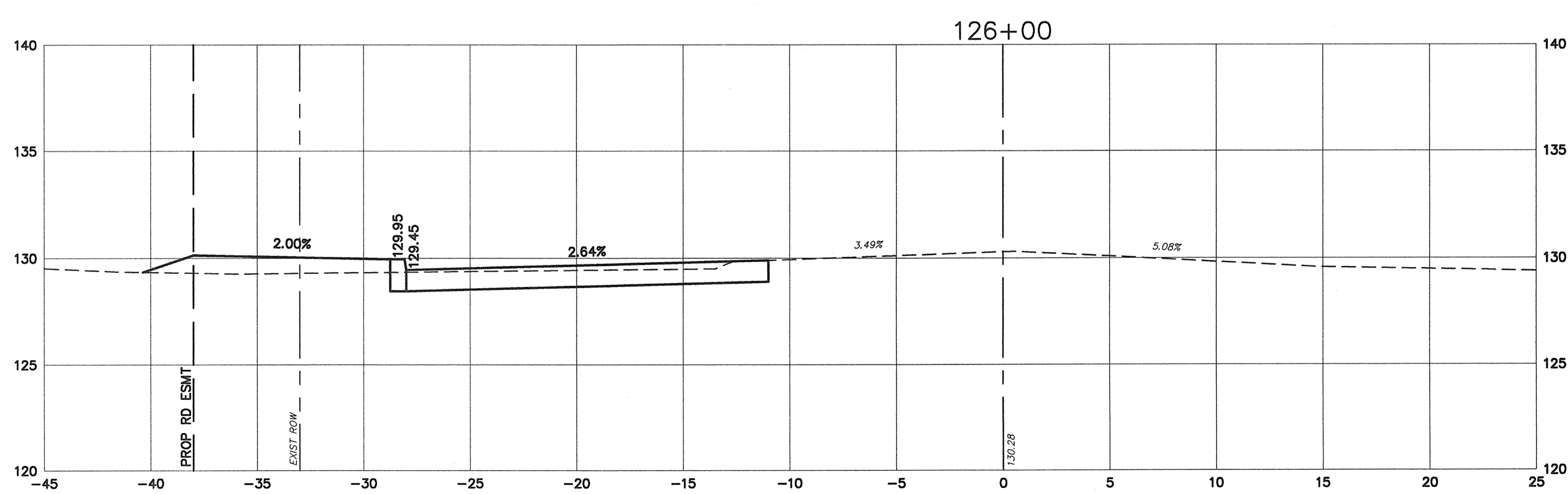
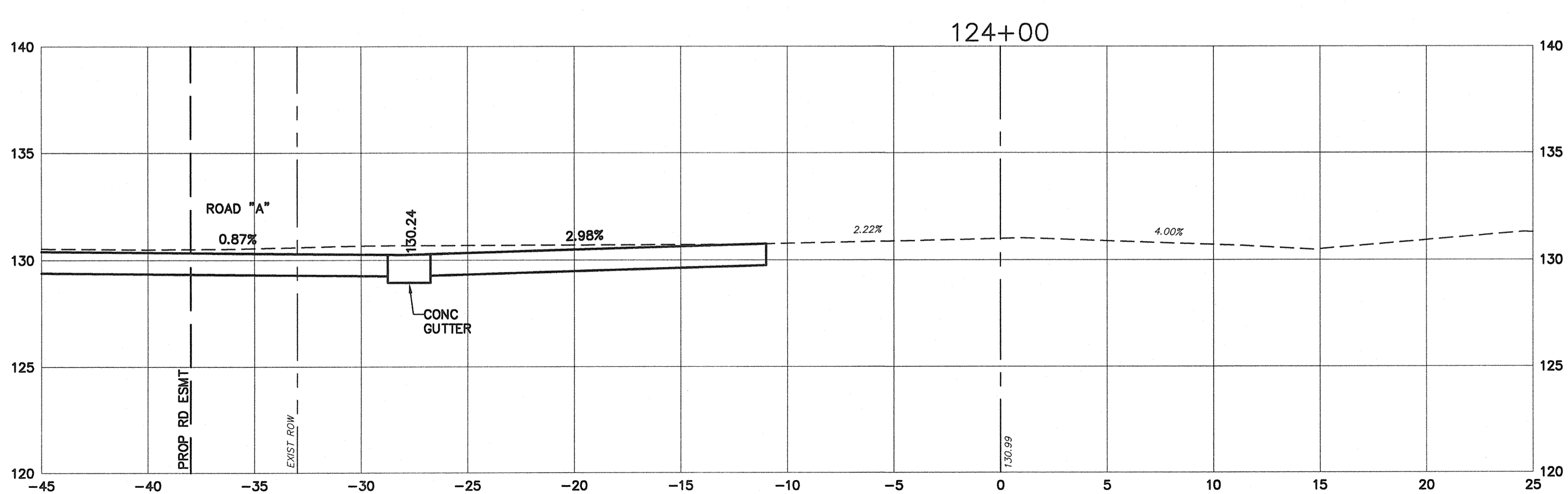
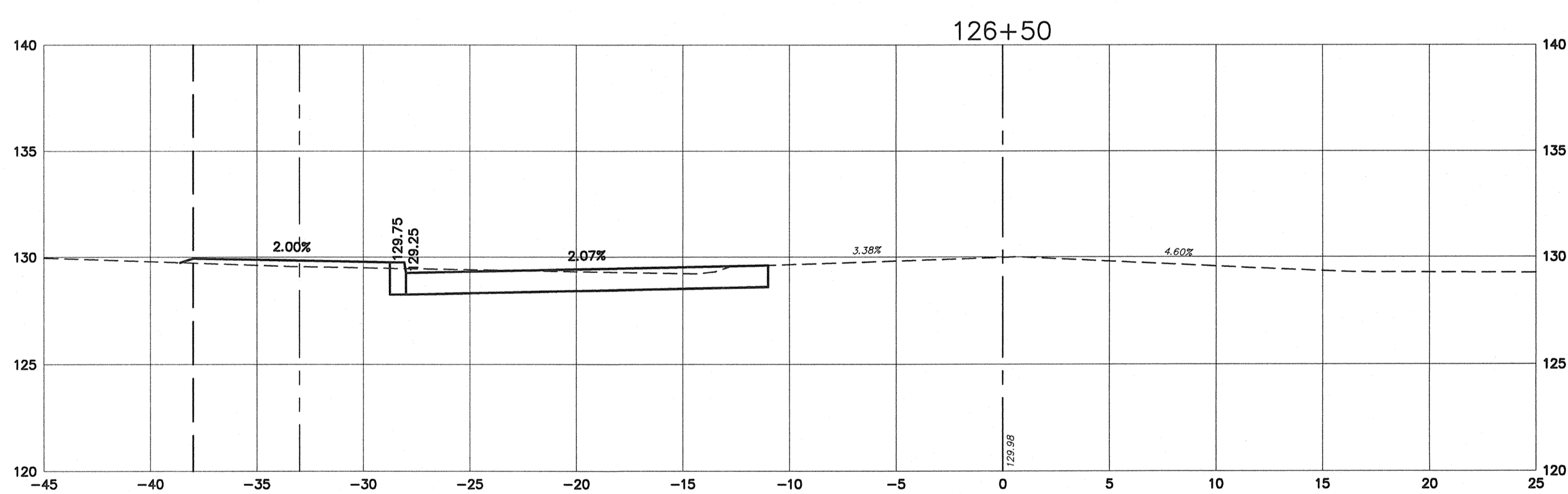
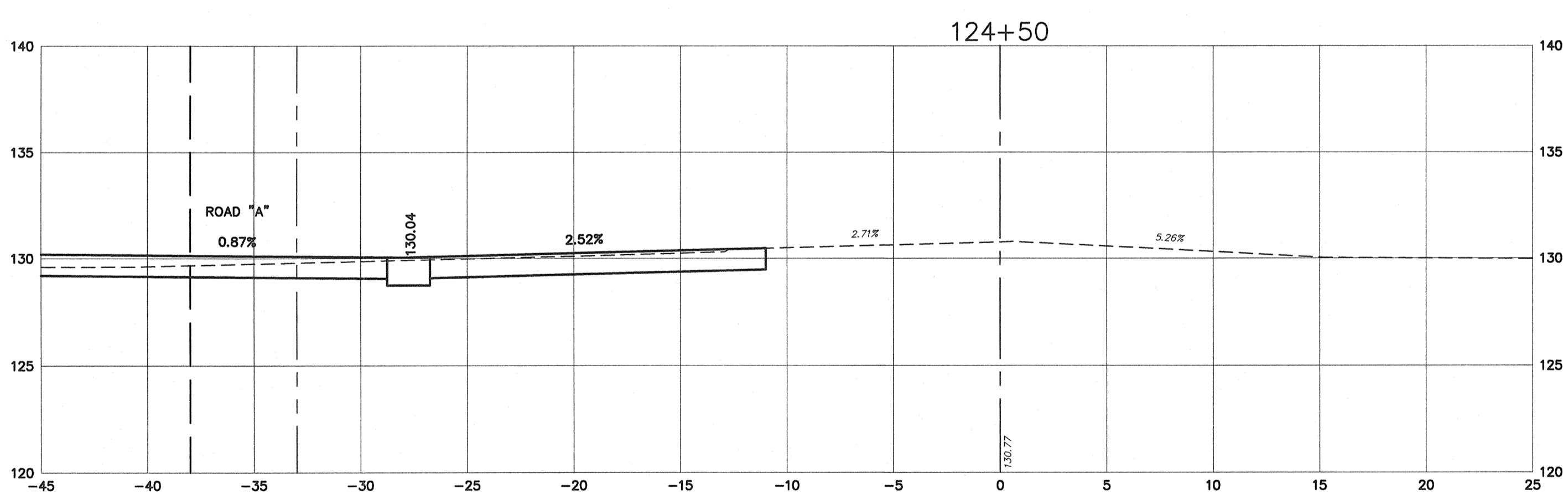
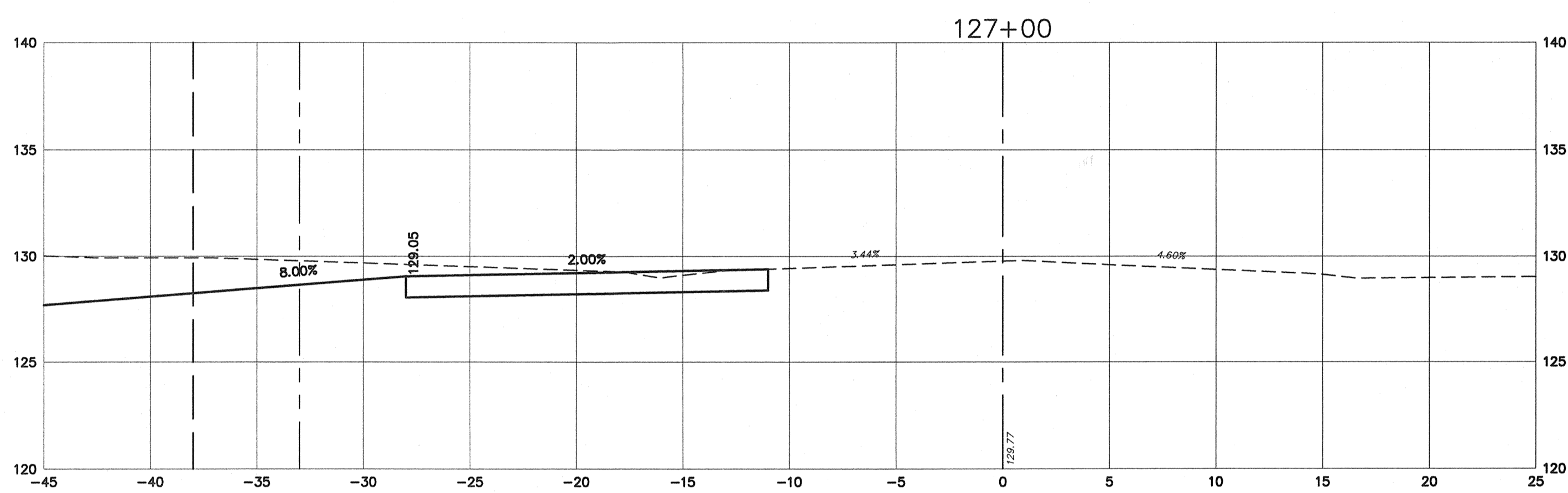
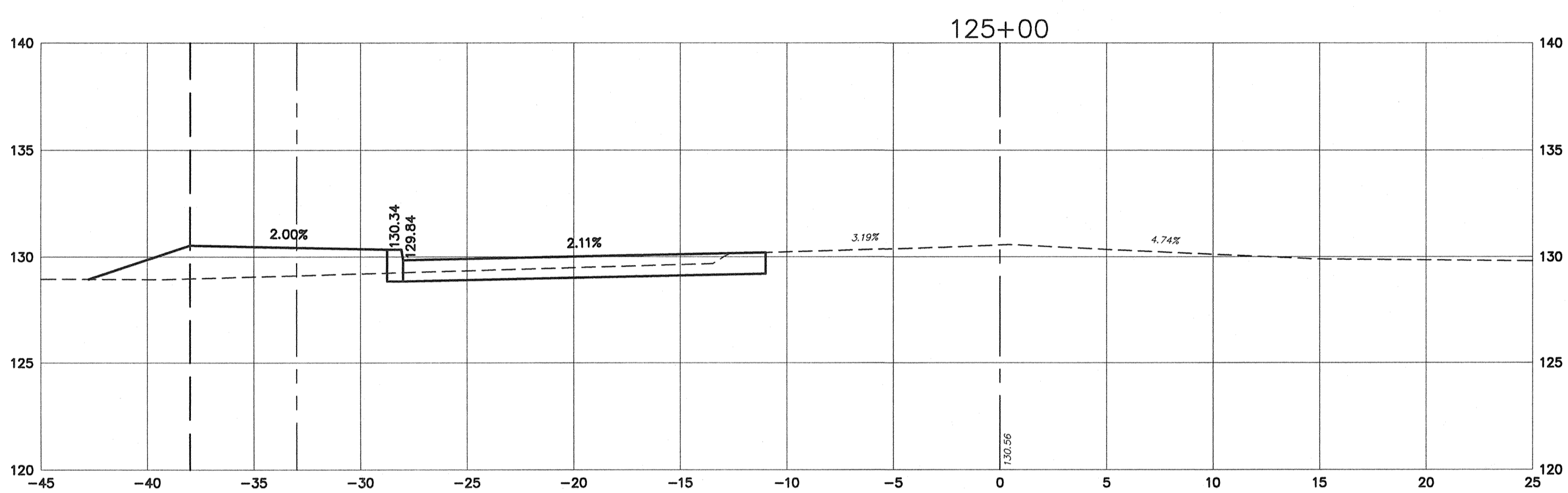
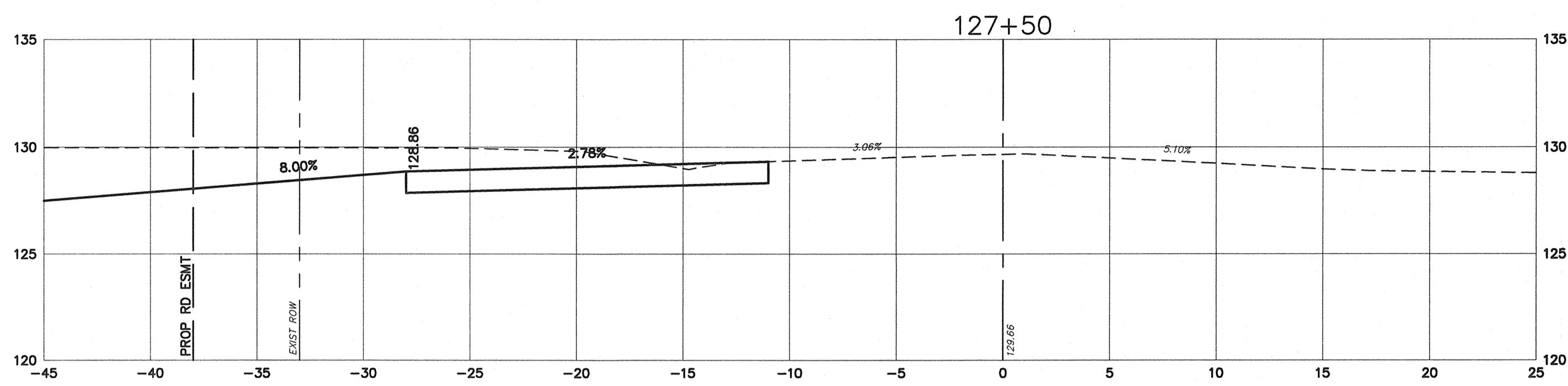
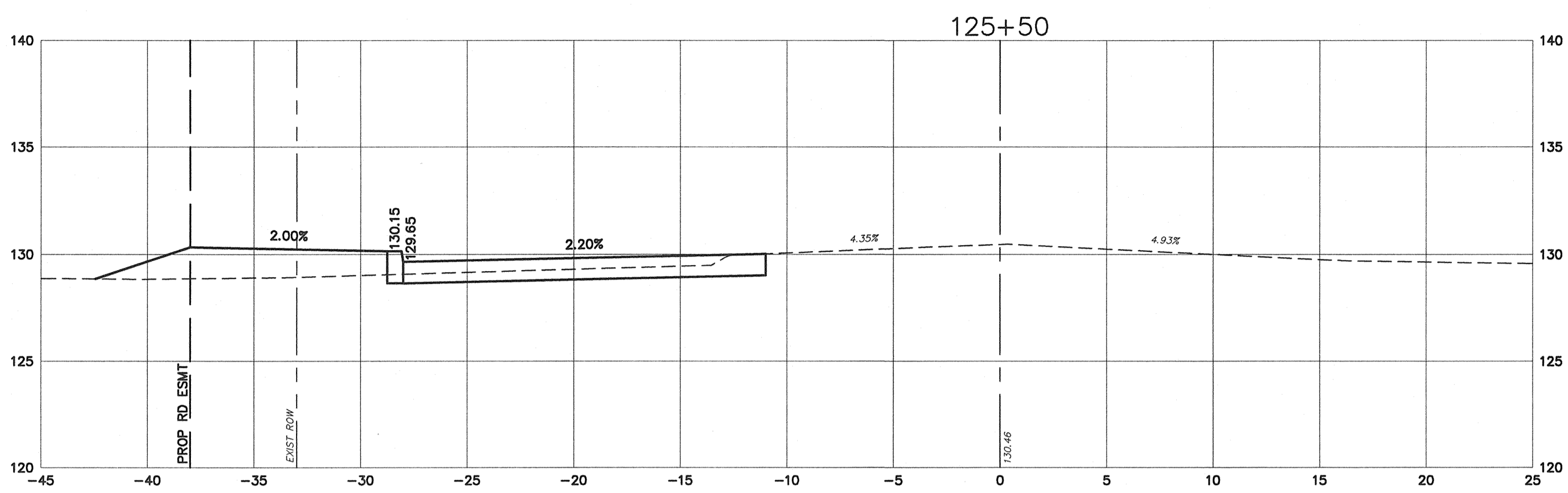
**MALAGA ROAD (GLOUCESTER COUNTY ROUTE 659)**

MONROE TOWNSHIP, GLOUCESTER COUNTY, NEW JERSEY

PREPARED BY  
CONSULTING ENGINEER SERVICES  
PROFESSIONAL ENGINEERS, PLANNERS, & LAND SURVEYORS  
645 BELLEVILLE ROAD, SUITE 100  
PHILADELPHIA, PA 19106  
PHONE (800) 226-2200 FAX (800) 232-2346  
N.J. CERTIFICATE OF AUTHORIZATION No. 246027857700

DATE: 11/27/11 SCALE: 1"=5' FILE No. H-2586 DRAWN BY: JAC

MICHAEL R. BROWN  
PROFESSIONAL ENGINEER, NEW JERSEY LIC. NO. GE-44222  
DATE: 11/21/13



Michael R. Brown  
**MICHAEL R. BROWN**  
 PROFESSIONAL ENGINEER, NEW JERSEY LIC. NO. GE-44222  
 DATE 11/21/13

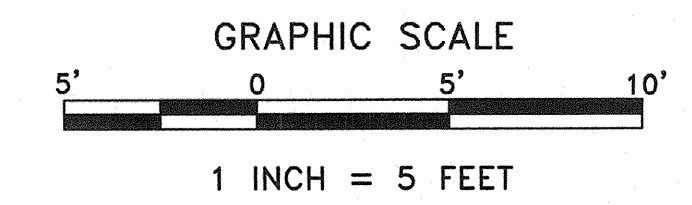
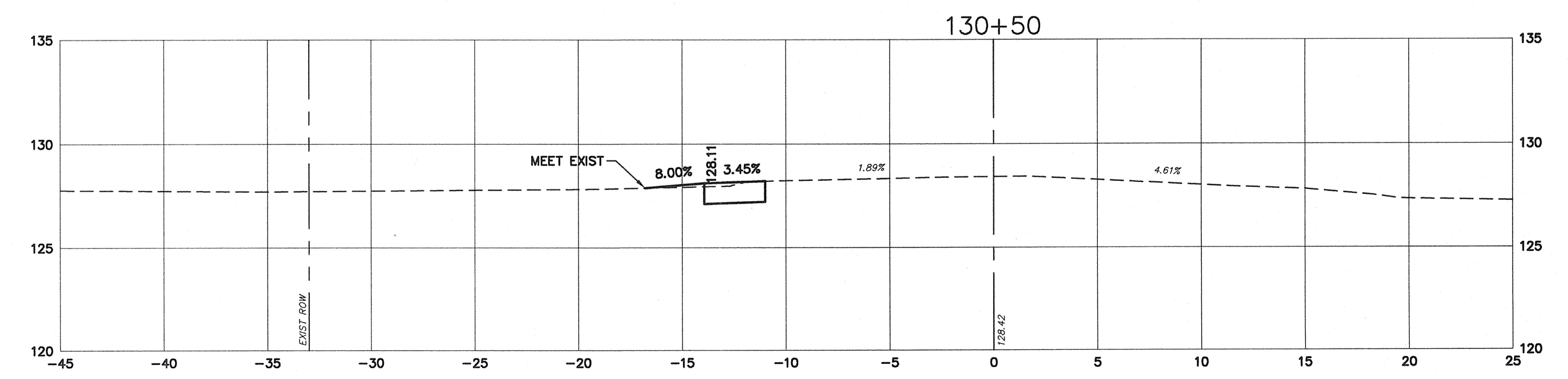
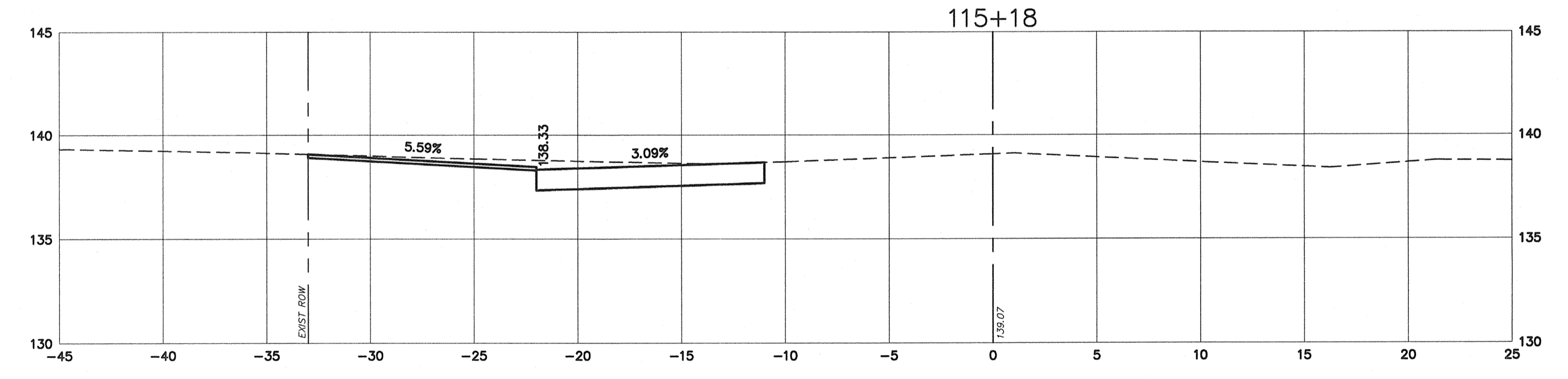
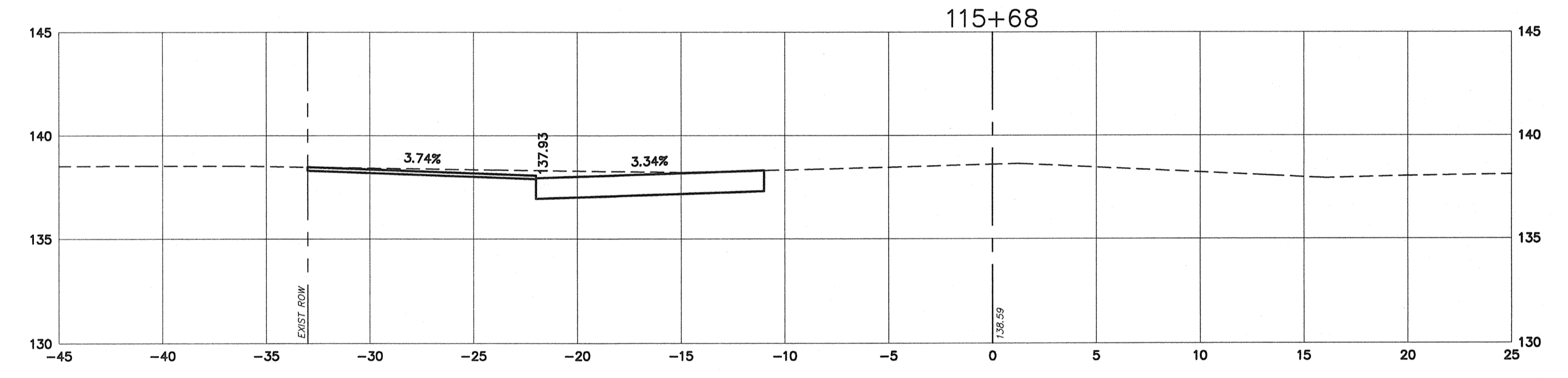
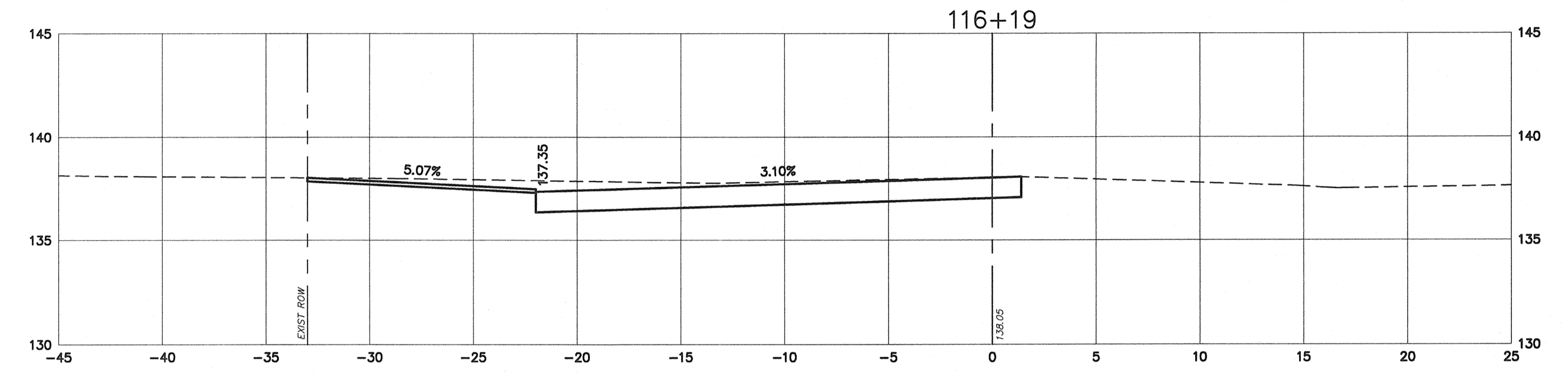
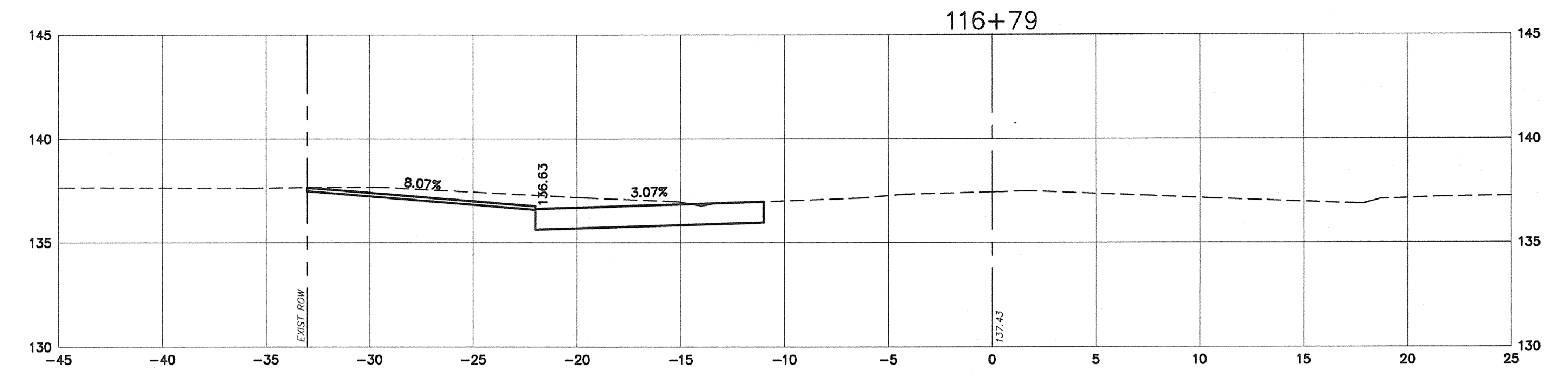
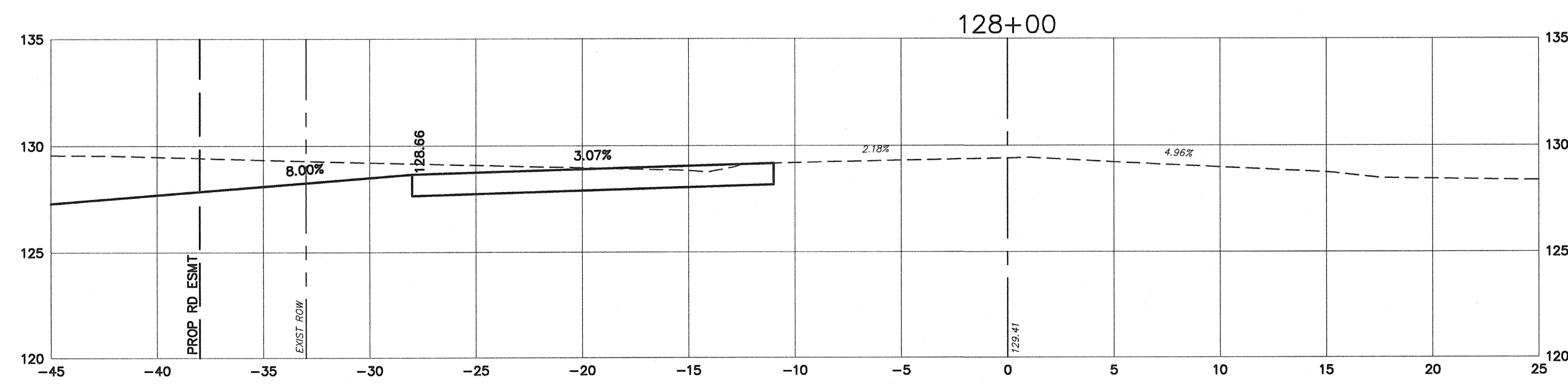
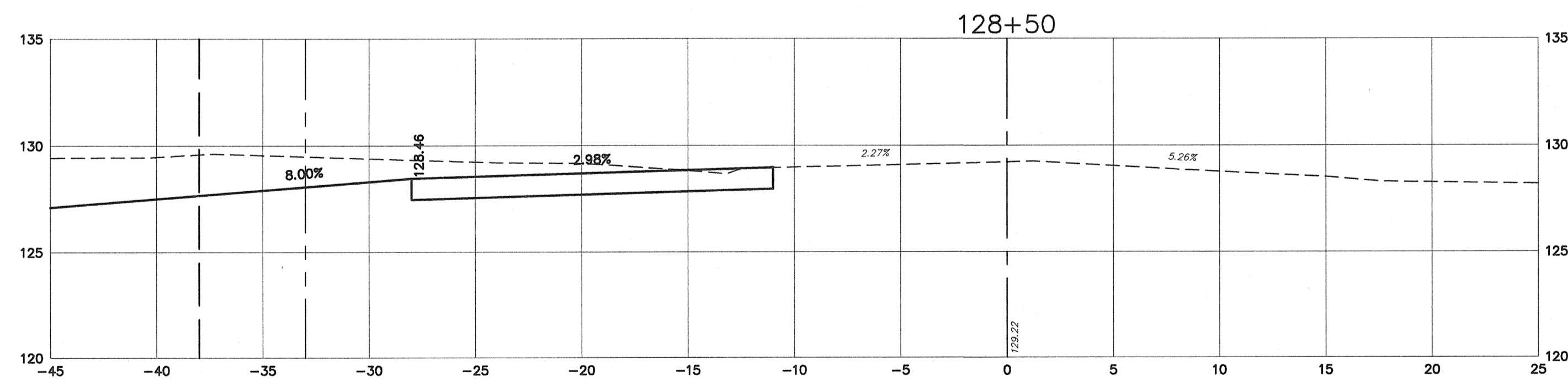
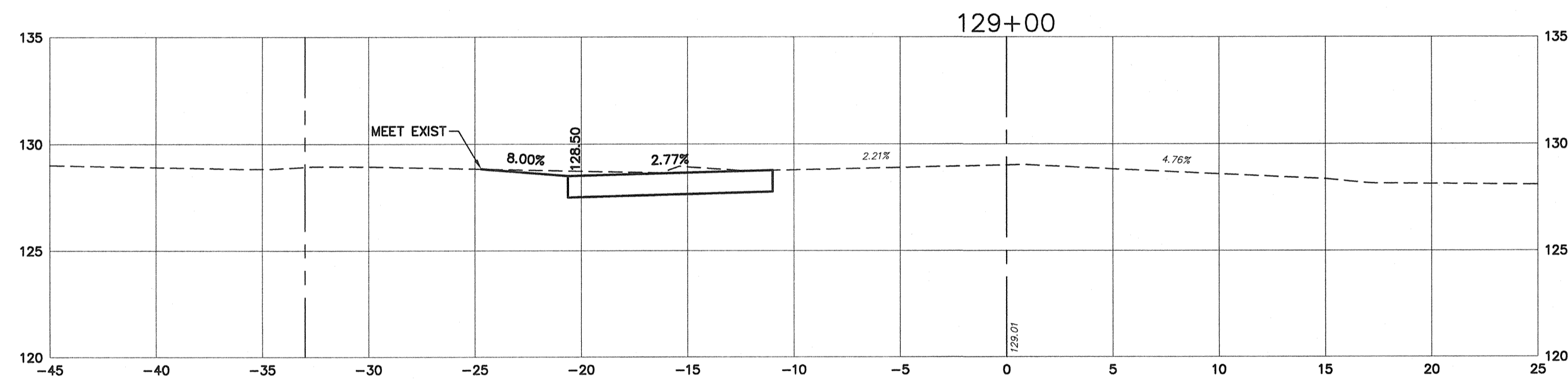
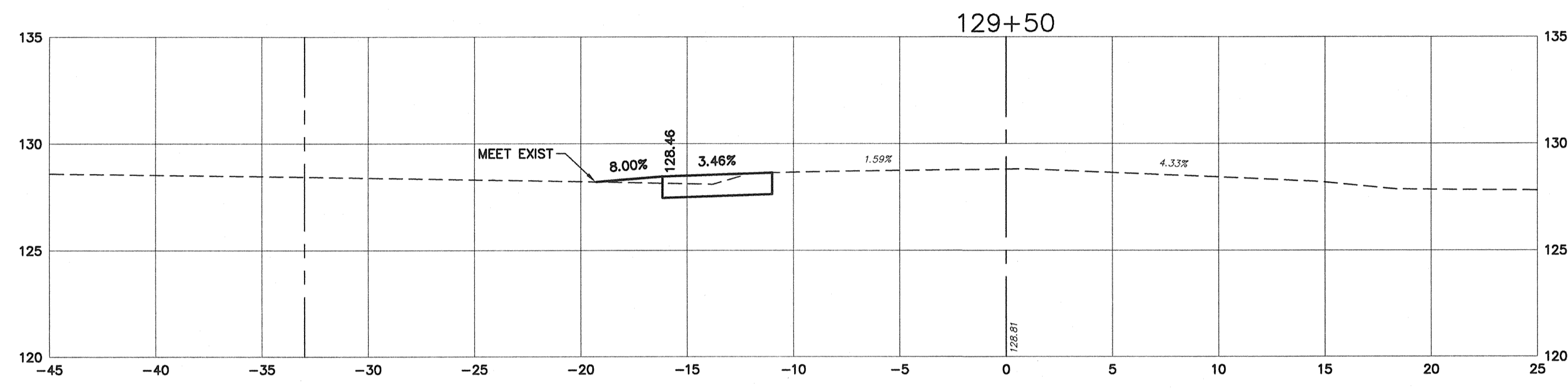
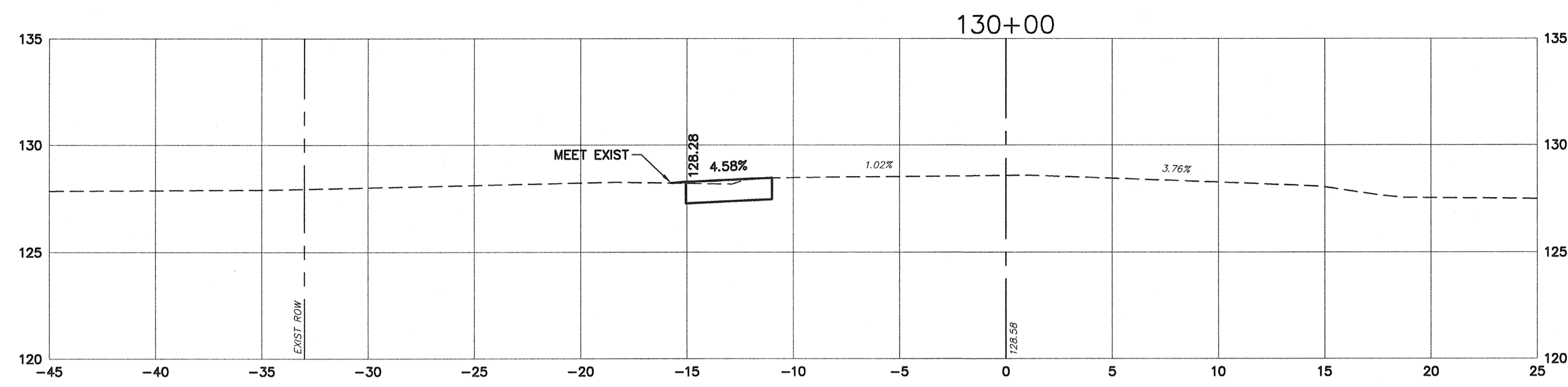
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1	11/20/13	REV PER GCD
2	9/6/13	REV STATIONING
3	DRWN	DATE

**CROSS SECTIONS**  
**ROADWAY IMPROVEMENTS**  
**MALAGA ROAD (GLOUCESTER COUNTY ROUTE 659)**  
 MONROE TOWNSHIP, GLOUCESTER COUNTY, NEW JERSEY

PREPARED BY  
**CONSULTING ENGINEER SERVICES**  
 PROFESSIONAL ENGINEERS, PLANNERS, & LAND SURVEYORS  
 645 BELLEVILLE ROAD, SUITE 100, LYNDENHURST, NJ 07036  
 PHONE (908) 226-2200 FAX (908) 212-2346  
 N.J. CERTIFICATE OF AUTHORIZATION No. Z6027857700  
 DRAWN BY: JAC.  
 FILE NO.: H-3586  
 DATE: 12/27/11 SCALE: 1"=5'  
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DRIVEWAY ADJUSTMENT CROSS SECTIONS



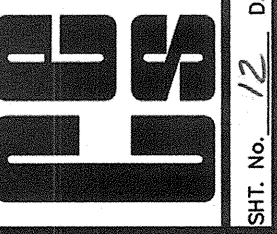
Michael R. Brown 11/21/13 DATE  
**MICHAEL R. BROWN** PROFESSIONAL ENGINEER, NEW JERSEY LIC. NO. GE44222

NO.	DATE	BY	REVISIONS
1	11/20/13	JAC	REV. PER. GSD
2	9/9/13	JAC	REV. STATIONING, ADDED DRIVEWAY & GAS WALL CROSS SECTIONS

**CROSS SECTIONS**  
**ROADWAY IMPROVEMENTS**  
 MALAGA ROAD (GLOUCESTER COUNTY ROUTE 659)  
 MONROE TOWNSHIP, GLOUCESTER COUNTY, NEW JERSEY

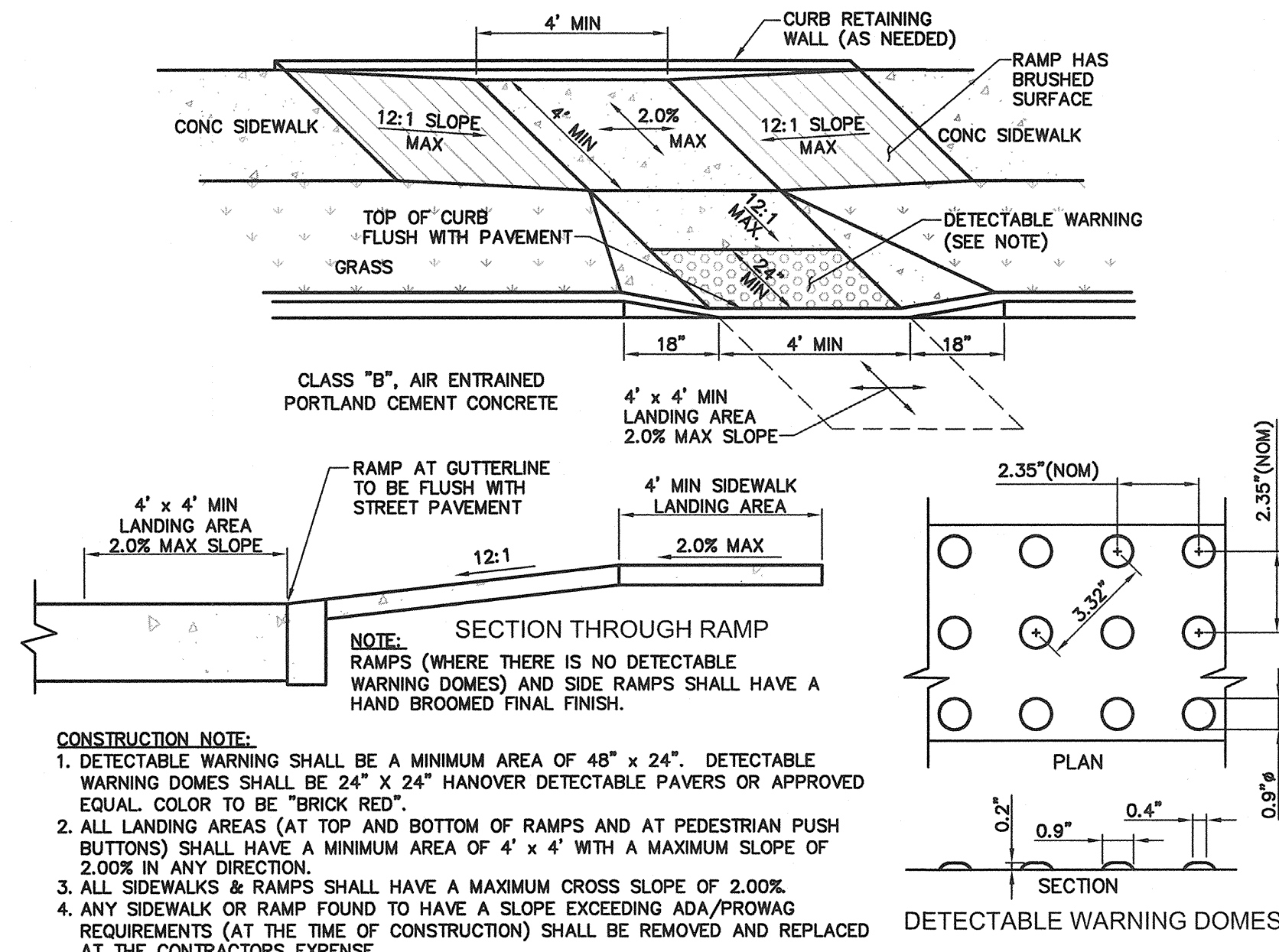
PREPARED BY  
**CONSULTING ENGINEER SERVICES**  
 PROFESSIONAL ENGINEERS, PLANNERS, & LAND SURVEYORS  
 645 BERLIN RD., SUITE 200, ROCKY HILL, NJ 08051  
 N.J. CERTIFICATE OF AUTHORIZATION NO. 24027857700

DATE: 12/27/11 SCALE: 1"=5' FILE NO. H-2586 DRAWN BY: JAC



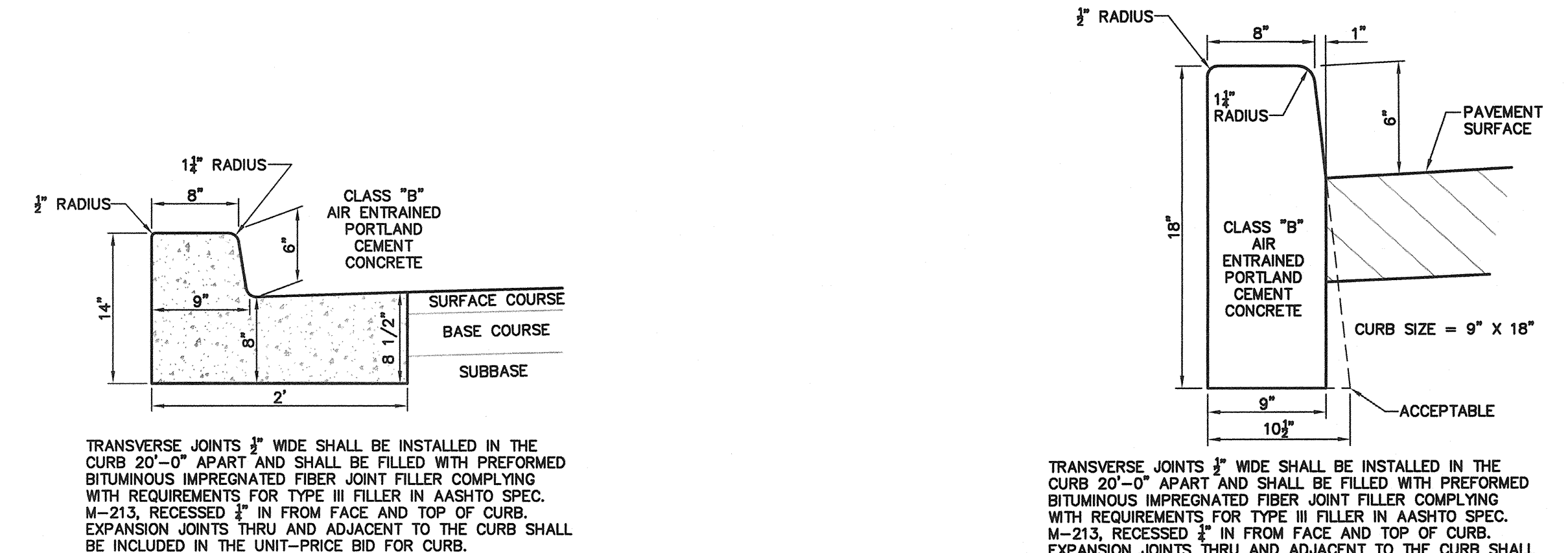
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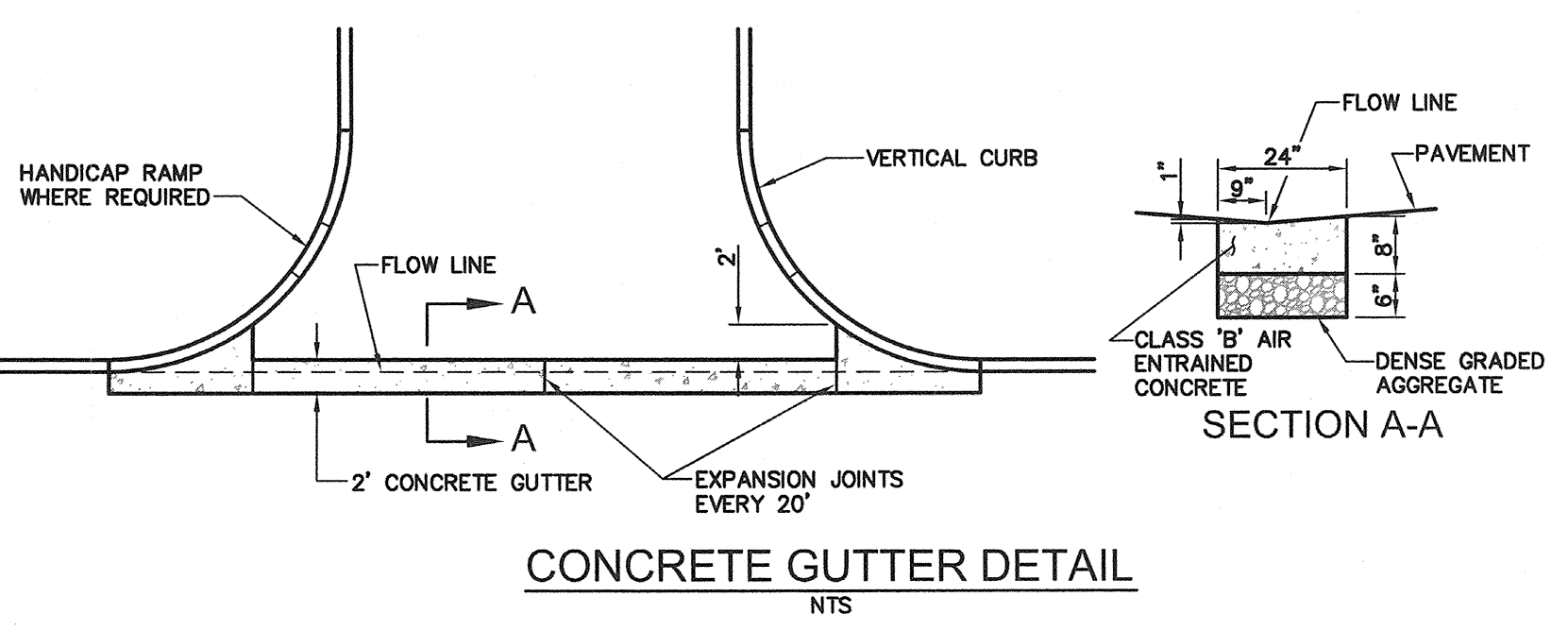
**CONSTRUCTION NOTE:**  
 1. DETECTABLE WARNING SHALL BE A MINIMUM AREA OF 48" x 24". DETECTABLE WARNING DOMES SHALL BE 24" x 24" HANOVER DETECTABLE PAVERS OR APPROVED EQUAL COLOR TO BE "BRICK RED".  
 2. ALL LANDING AREAS (AT TOP AND BOTTOM OF RAMP) AND AT PEDESTRIAN PUSH BUTTONS) SHALL HAVE A MINIMUM AREA OF 4' x 4' WITH A MAXIMUM SLOPE OF 2.00% IN ANY DIRECTION.  
 3. ALL SIDEWALKS & RAMP SHALL HAVE A MAXIMUM CROSS SLOPE OF 2.00%.  
 4. ANY SIDEWALK OR RAMP FOUND TO HAVE A SLOPE EXCEEDING ADA/PROWAG REQUIREMENTS (AT THE TIME OF CONSTRUCTION) SHALL BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

**CURB RAMP DETAILS**  
NTS

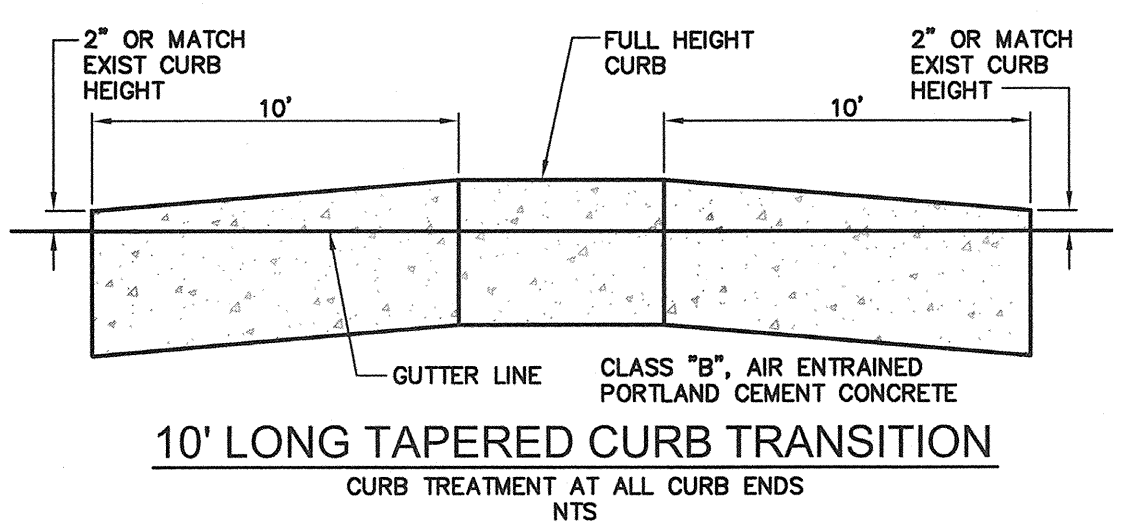


**CONCRETE MONOLITHIC CURB & GUTTER**  
NTS

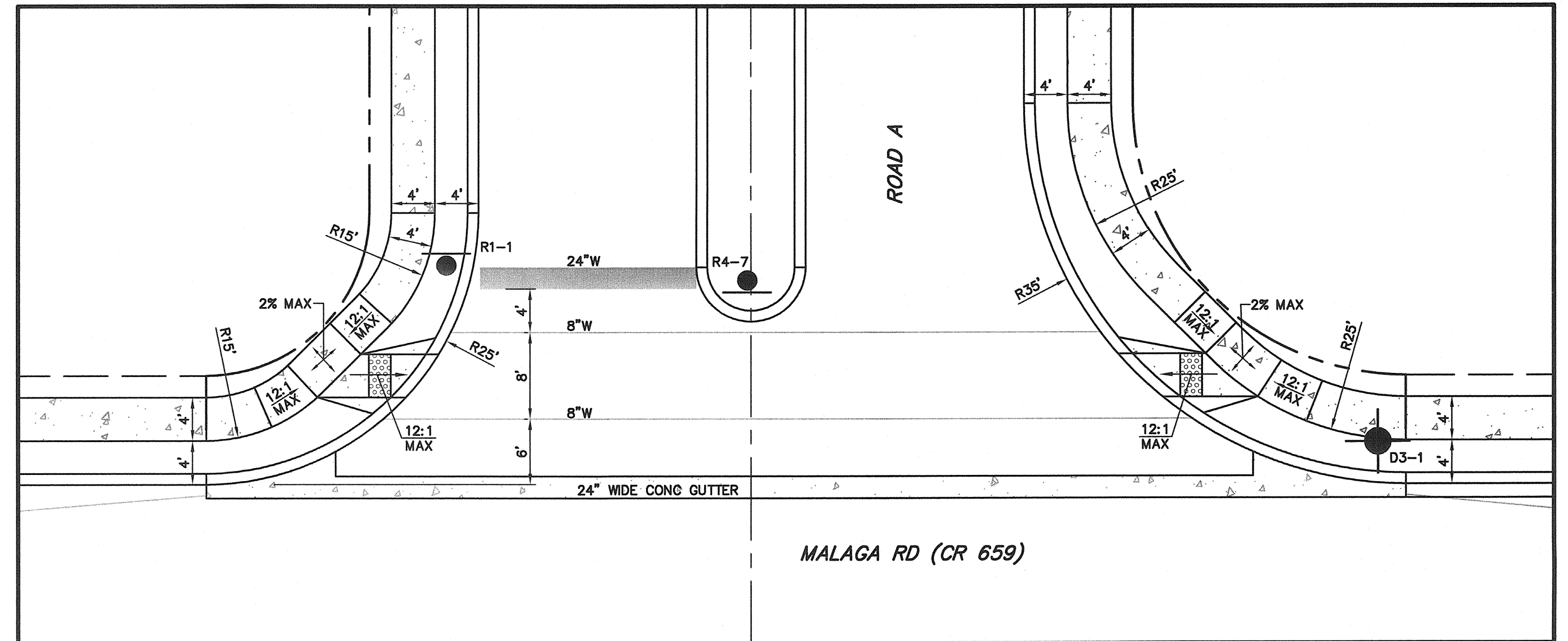
**CONCRETE VERTICAL CURB**  
NTS



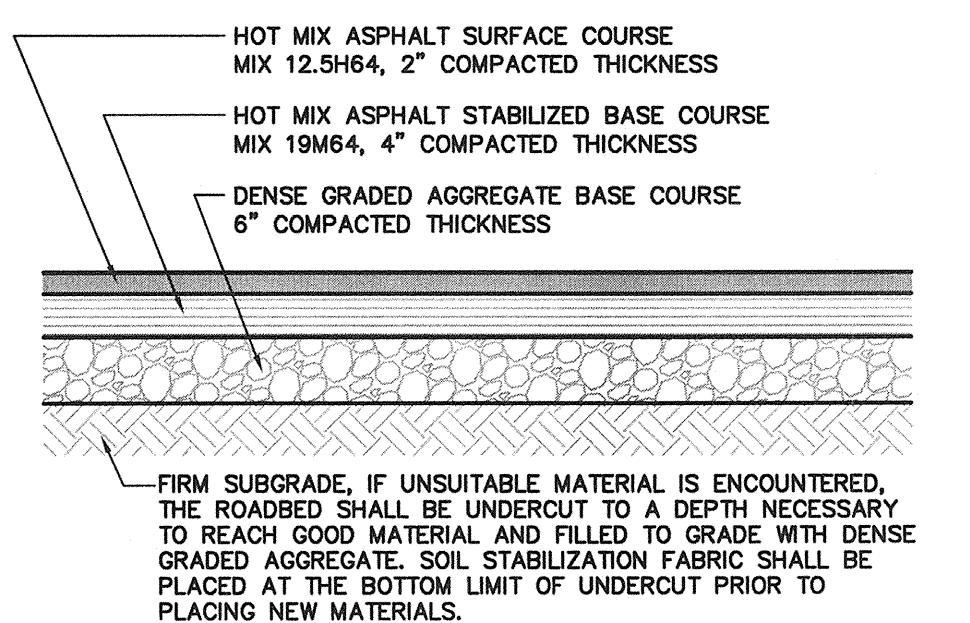
**CONCRETE GUTTER DETAIL**  
NTS



**10' LONG TAPERED CURB TRANSITION**  
CURB TREATMENT AT ALL CURB ENDS  
NTS



**CURB RAMP DETAILS MALAGA RD & ROAD A**  
SCALE: 1" = 10'

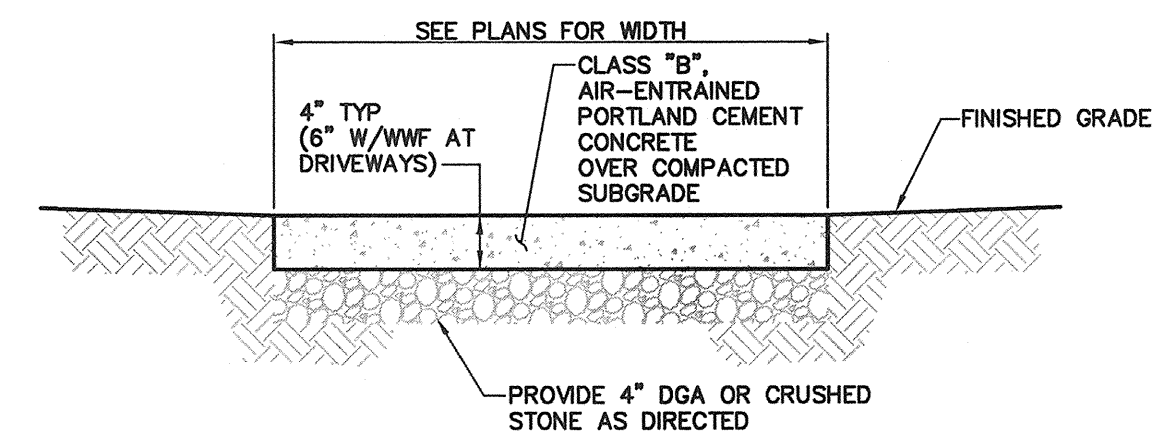


**STANDARD COUNTY BITUMINOUS PAVEMENT**  
NOTE: ALL MATERIALS PER NJDOT SPECIFICATIONS  
NTS

**COLD WEATHER LIMITATIONS**  
HMA SHALL BE PLACED WHEN COMBINATIONS OF LIFT THICKNESS AND BASE SURFACE TEMPERATURES ARE WITHIN THE FOLLOWING LIMITS:

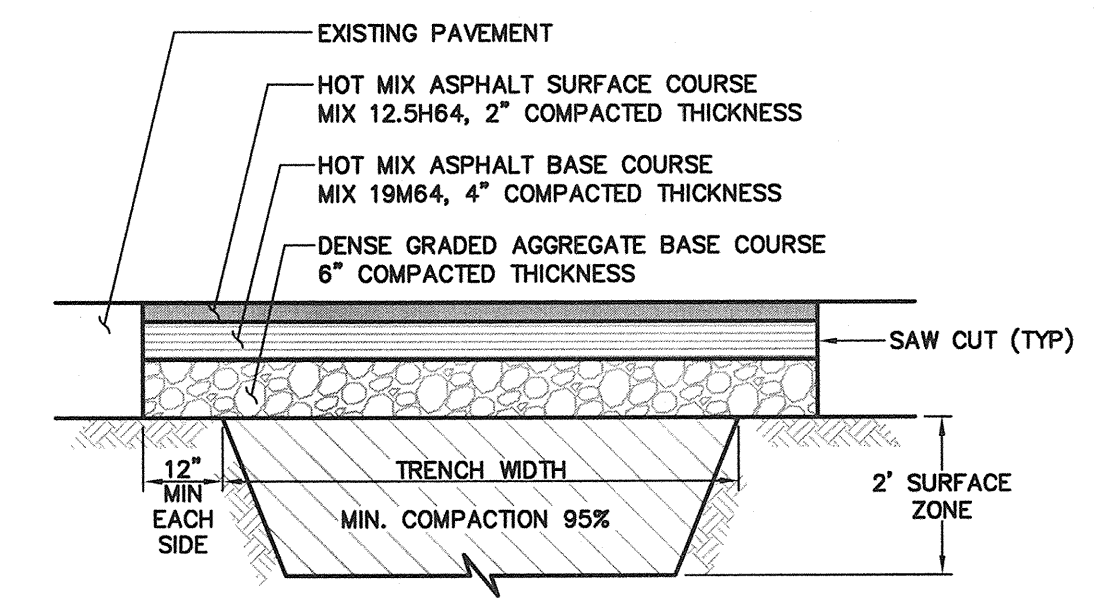
LIFT THICKNESS INCHES	MINIMUM BASE TEMPERATURE, °F
≤ 1	50
1 - 2	41
≥ 2	32

SEE NJDOT STANDARD SPECIFICATION - 2007, SECTION 401.03.03

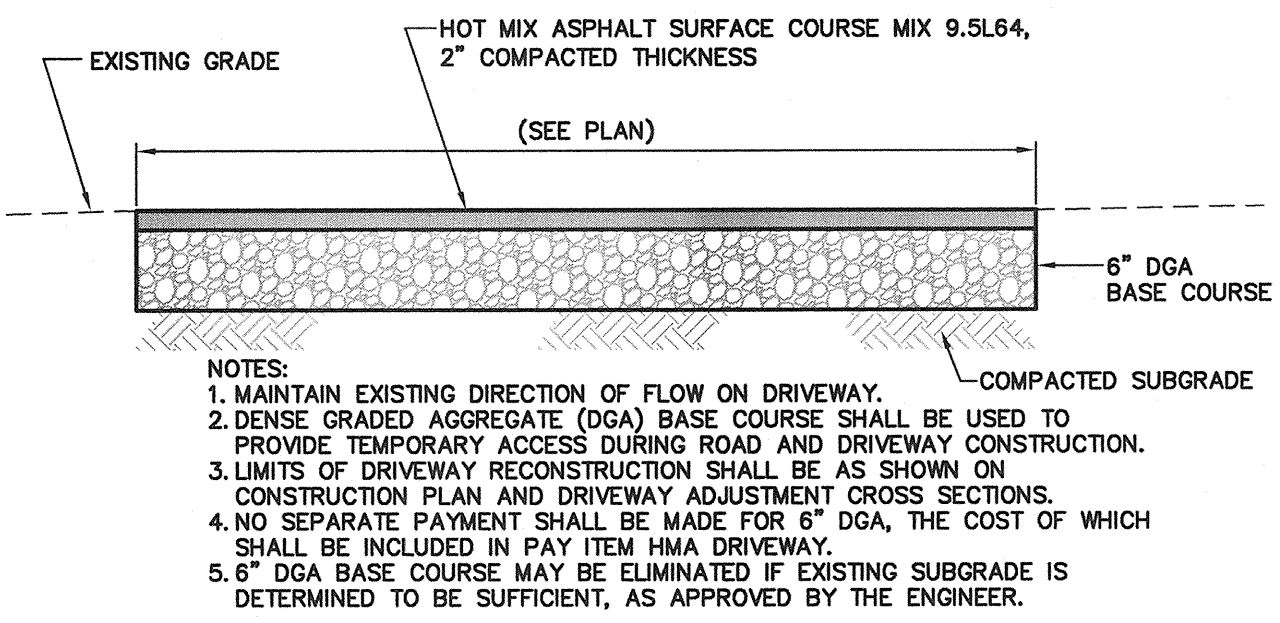


**CONCRETE SIDEWALK DETAIL**  
NTS

**NOTES:**  
 1. TRANSVERSE JOINTS 3" WIDE SHALL BE PROVIDED AT INTERVALS OF NOT MORE THAN 20'-0" AND FILLED WITH PREFABRICATED BITUMINOUS CELLULAR TYPE JOINT FILLER.  
 2. TRANSVERSE SURFACE GROOVES SHALL BE CUT IN SIDEWALK BETWEEN EXPANSION JOINTS AT INTERVALS EQUAL TO THE SIDEWALK WIDTH.  
 3. LONGITUDINAL JOINTS 3" WIDE SHALL BE PROVIDED BETWEEN CURBS AND ABUTTING SIDEWALK, AND SHALL BE FILLED WITH PREMOULDED BITUMINOUS TYPE JOINT FILLER.  
 4. ALL LANDING AREAS (AT TOP AND BOTTOM OF RAMP) AND AT PEDESTRIAN PUSH BUTTONS) SHALL HAVE A MINIMUM AREA OF 4' x 4' WITH A MAXIMUM SLOPE OF 2.00% IN ANY DIRECTION.  
 5. ALL SIDEWALKS SHALL HAVE A MAXIMUM CROSS SLOPE OF 2.00%.  
 6. ANY SIDEWALK OR RAMP FOUND TO HAVE A SLOPE EXCEEDING ADA/PROWAG REQUIREMENTS (AT THE TIME OF CONSTRUCTION) SHALL BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

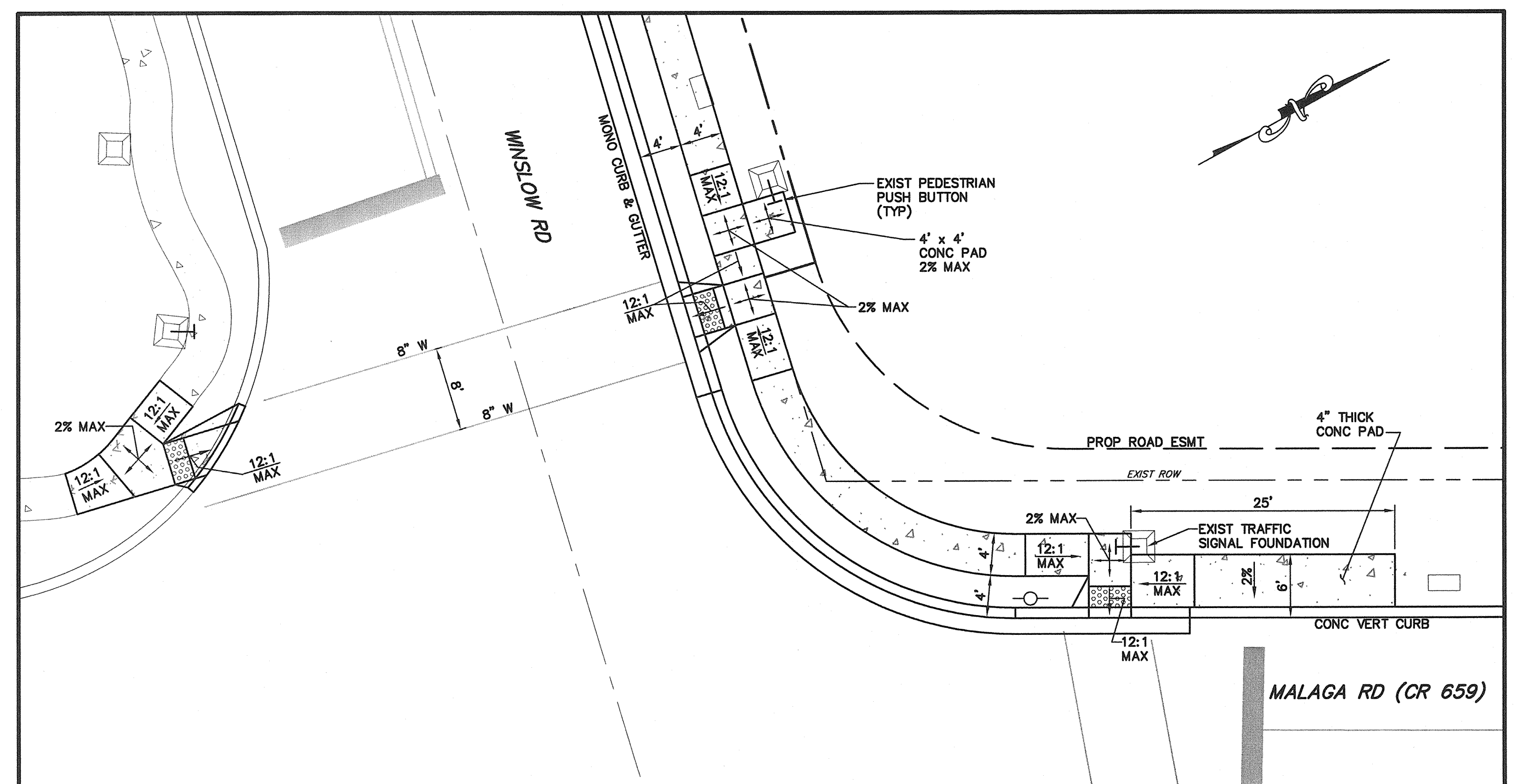


**REPLACEMENT OF BITUMINOUS PAVEMENT IN COUNTY ROADWAYS**  
NOTE: ALL MATERIALS PER NJDOT SPECIFICATIONS.  
NTS



**TYPICAL DRIVEWAY SECTION FOR RECONSTRUCTION OF BITUMINOUS OR GRAVEL DRIVEWAYS**  
NTS

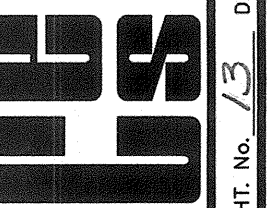
**NOTES:**  
 1. MAINTAIN EXISTING DIRECTION OF FLOW ON DRIVEWAY.  
 2. DENSE GRADED AGGREGATE (DGA) BASE COURSE SHALL BE USED TO PROVIDE TEMPORARY ACCESS DURING ROAD AND DRIVEWAY CONSTRUCTION.  
 3. LIMITS OF DRIVEWAY RECONSTRUCTION SHALL BE AS SHOWN ON CONSTRUCTION PLAN AND DRIVEWAY ADJUSTMENT CROSS SECTIONS.  
 4. NO SEPARATE PAYMENT SHALL BE MADE FOR 6" DGA, THE COST OF WHICH SHALL BE INCLUDED IN PAY ITEM HMA DRIVEWAY.  
 5. 6" DGA BASE COURSE MAY BE ELIMINATED IF EXISTING SUBGRADE IS DETERMINED TO BE SUFFICIENT, AS APPROVED BY THE ENGINEER.

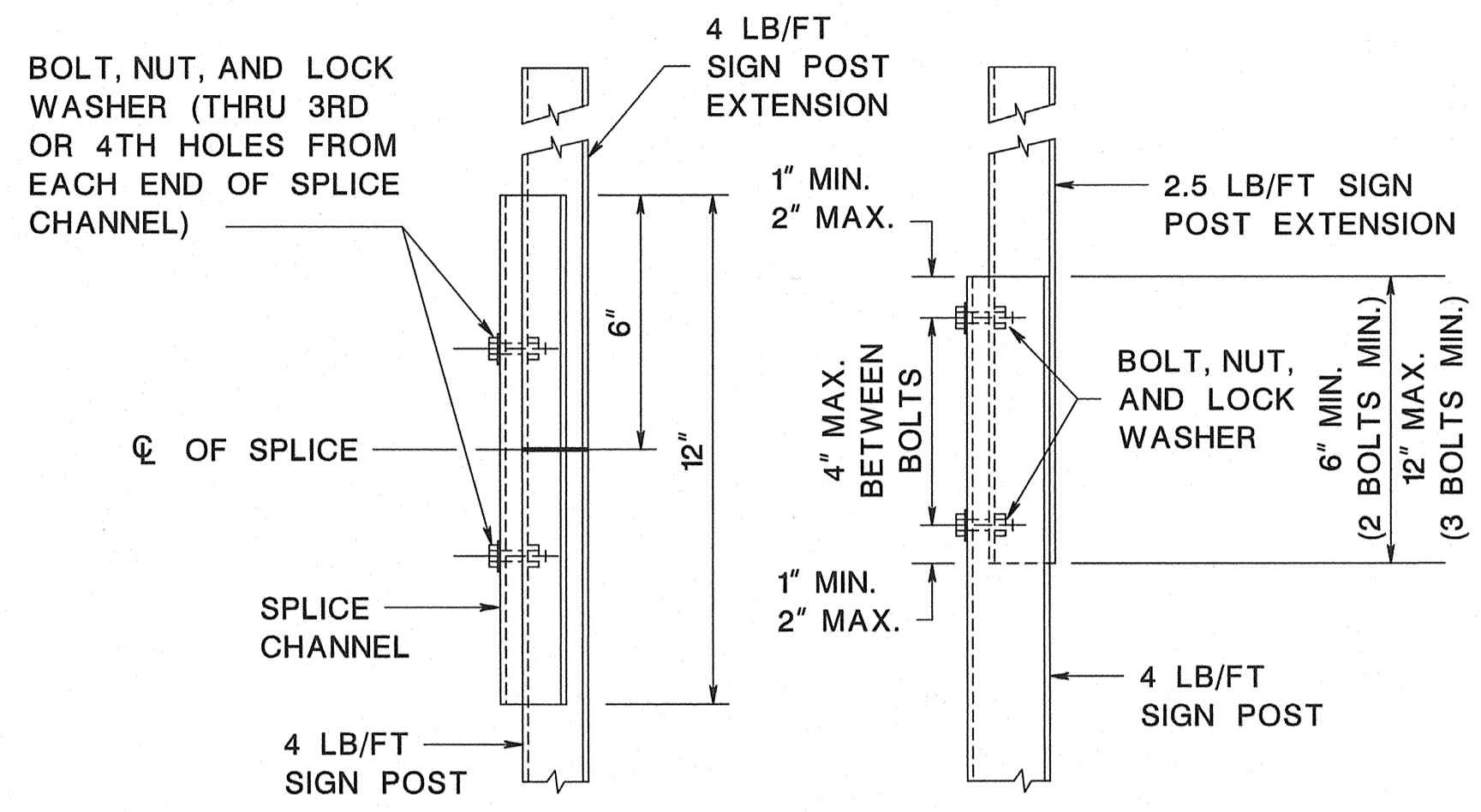


**CURB RAMP DETAILS MALAGA RD & WINSLOW RD**  
SCALE: 1" = 10'

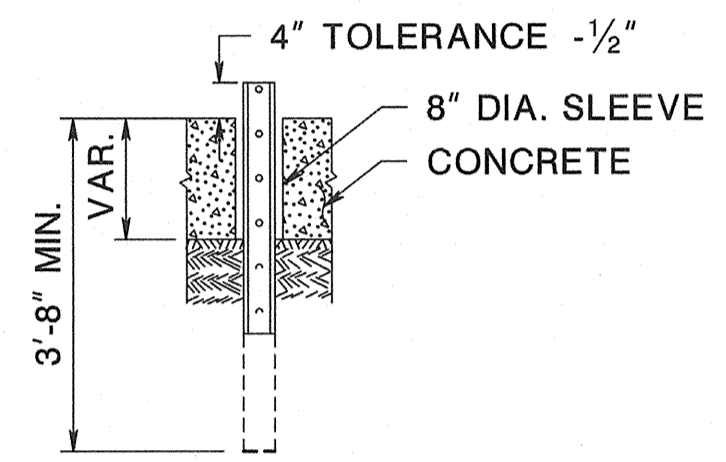
JAC	9/6/13	REVISED MONO CURB & CURB RAMP DETAILS	REVISIONS
JAC	10/27/12	ADDED CURB RAMP DETAILS	

DRAWN BY: JAC  
 CHECKED BY: JAC  
 PROFESSIONAL RESPONSIBILITY FOR THE PLAN & SPEC SHALL NOT BE ASSUMED BY AN AUTHORIZED JOURNALING PARTY UNLESS INDICATED OTHERWISE.  
 THIS PLAN & SPEC SHALL BE USED ONLY FOR THE PROJECT AND SITE SPECIFICALLY IDENTIFIED HEREIN.  
 ANY REUSE OF THIS PLAN & SPEC FOR ANY OTHER PROJECT WITHOUT THE WRITTEN PERMISSION OF THE ENGINEER IS PROHIBITED.

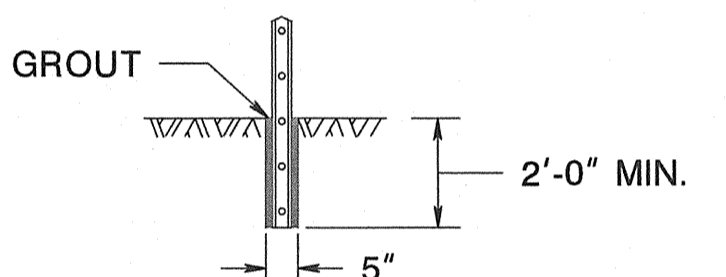




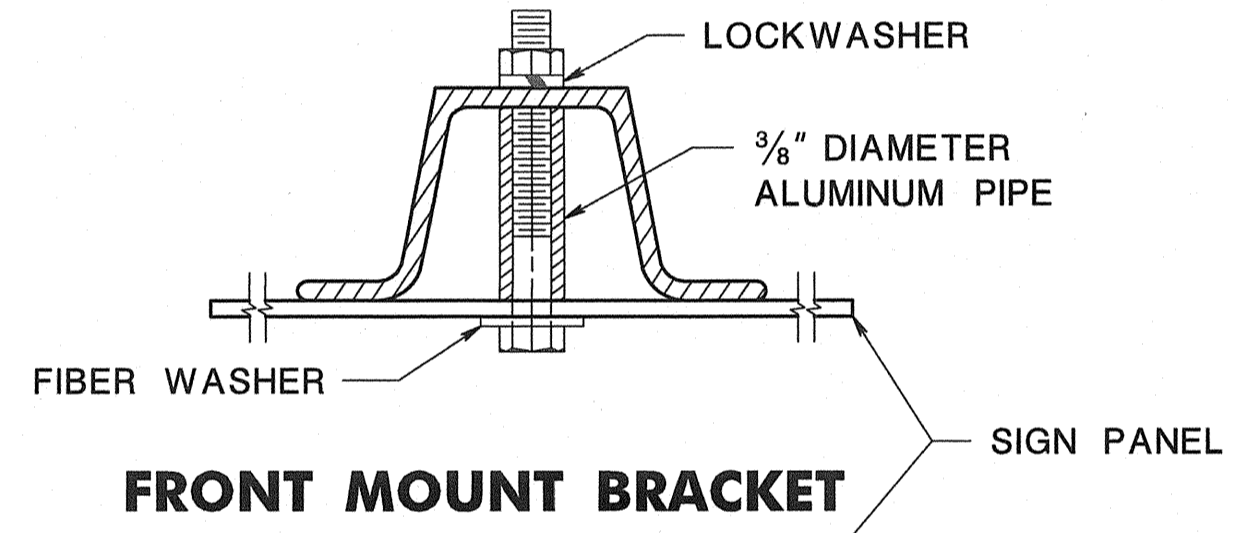
**SIGN POST EXTENSION SPLICE DETAILS**



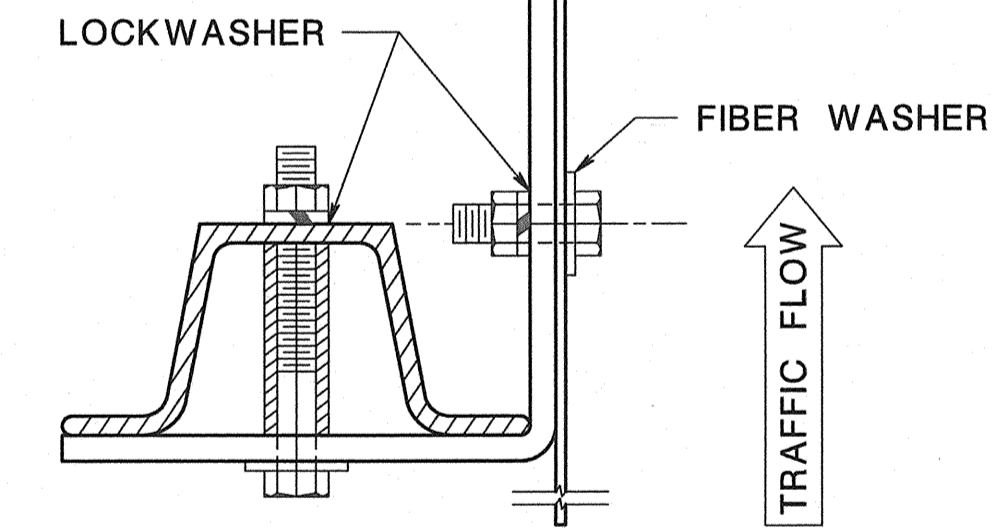
**CONCRETE INSTALLATION**



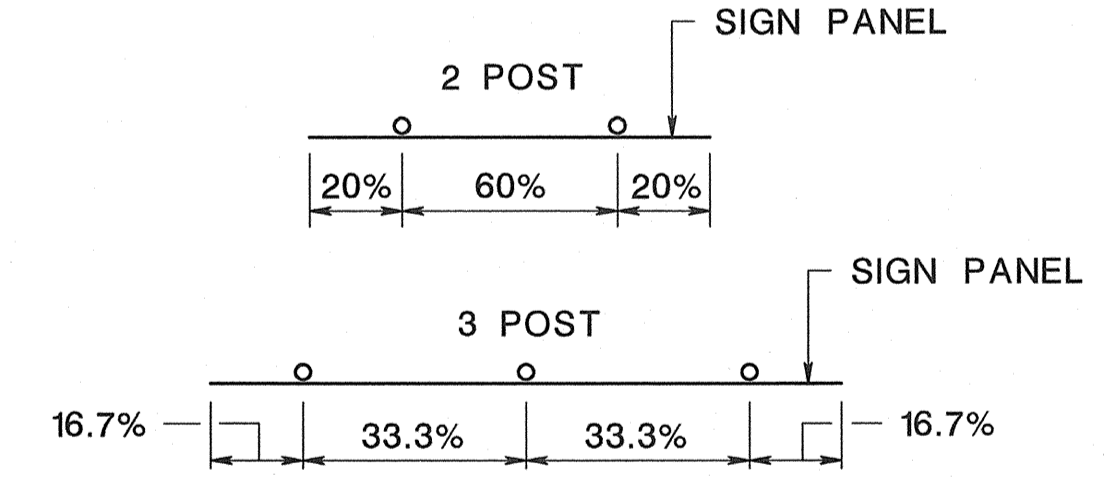
**ROCK INSTALLATION**



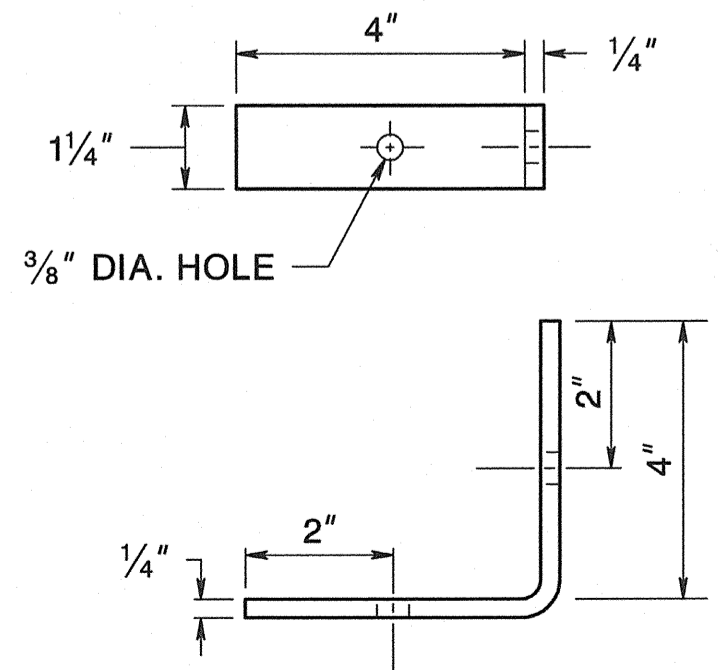
**FRONT MOUNT BRACKET**



**SIDE MOUNT BRACKET**



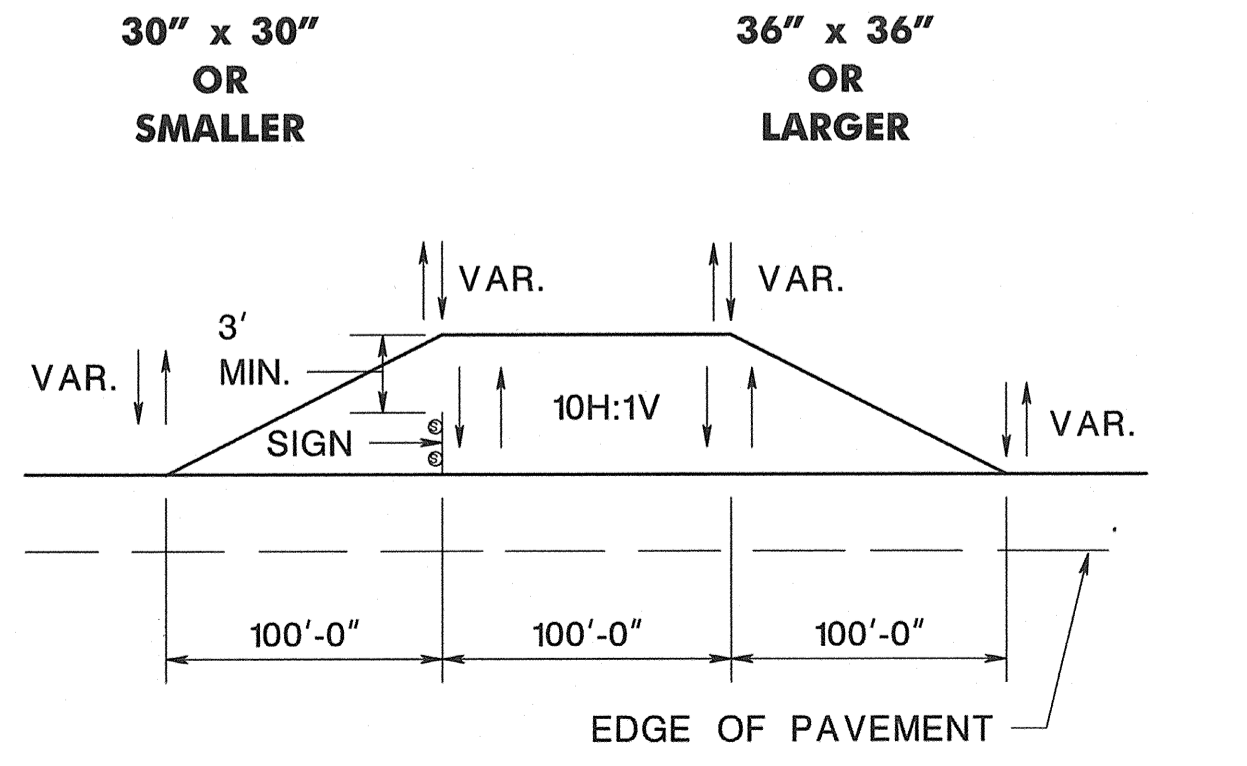
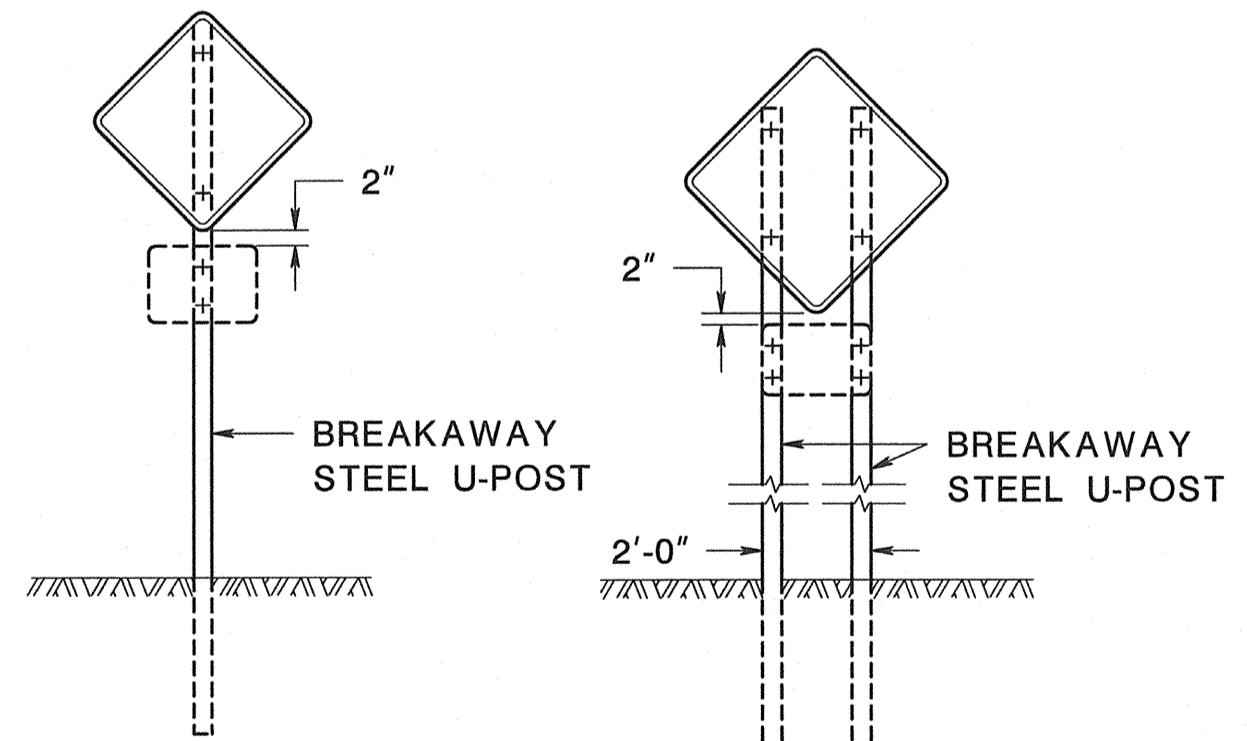
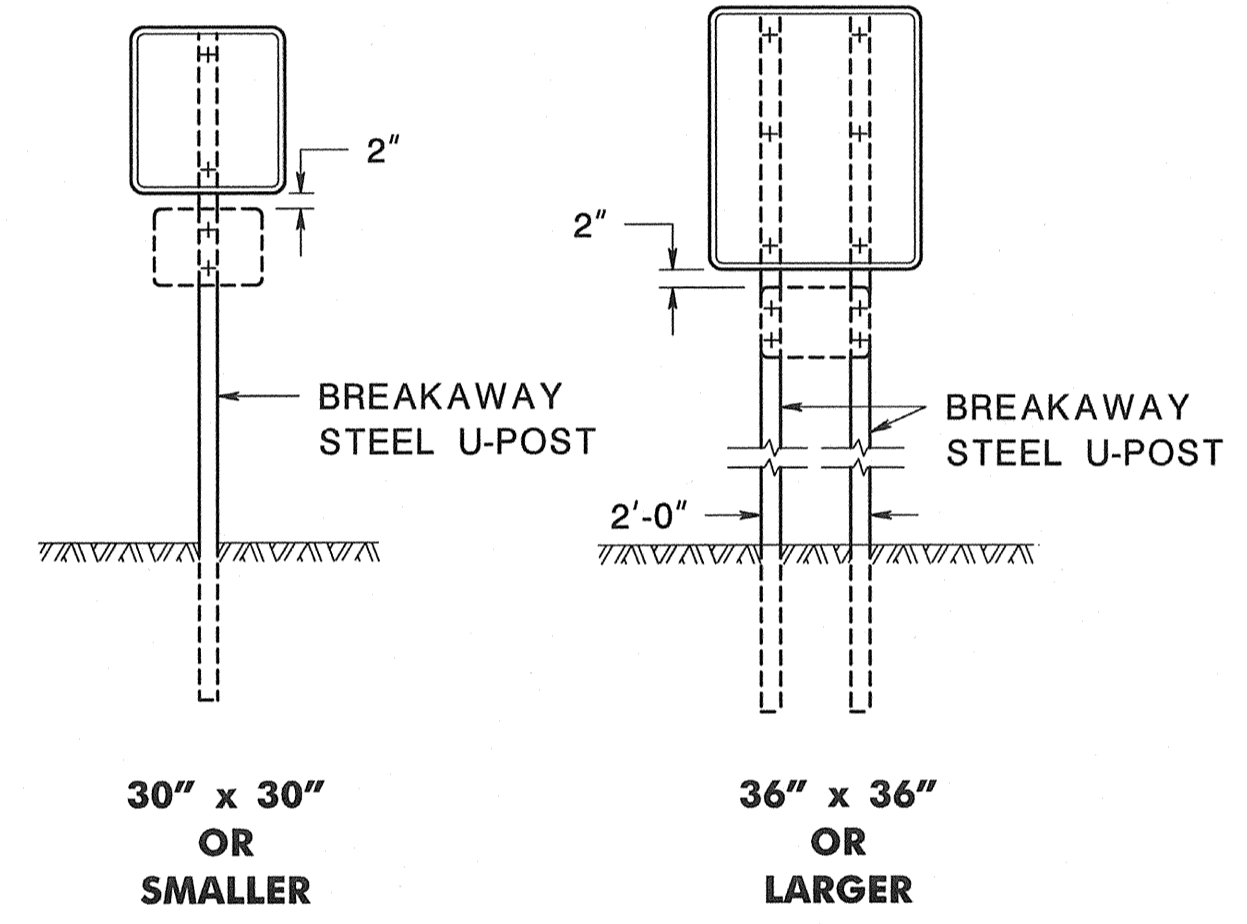
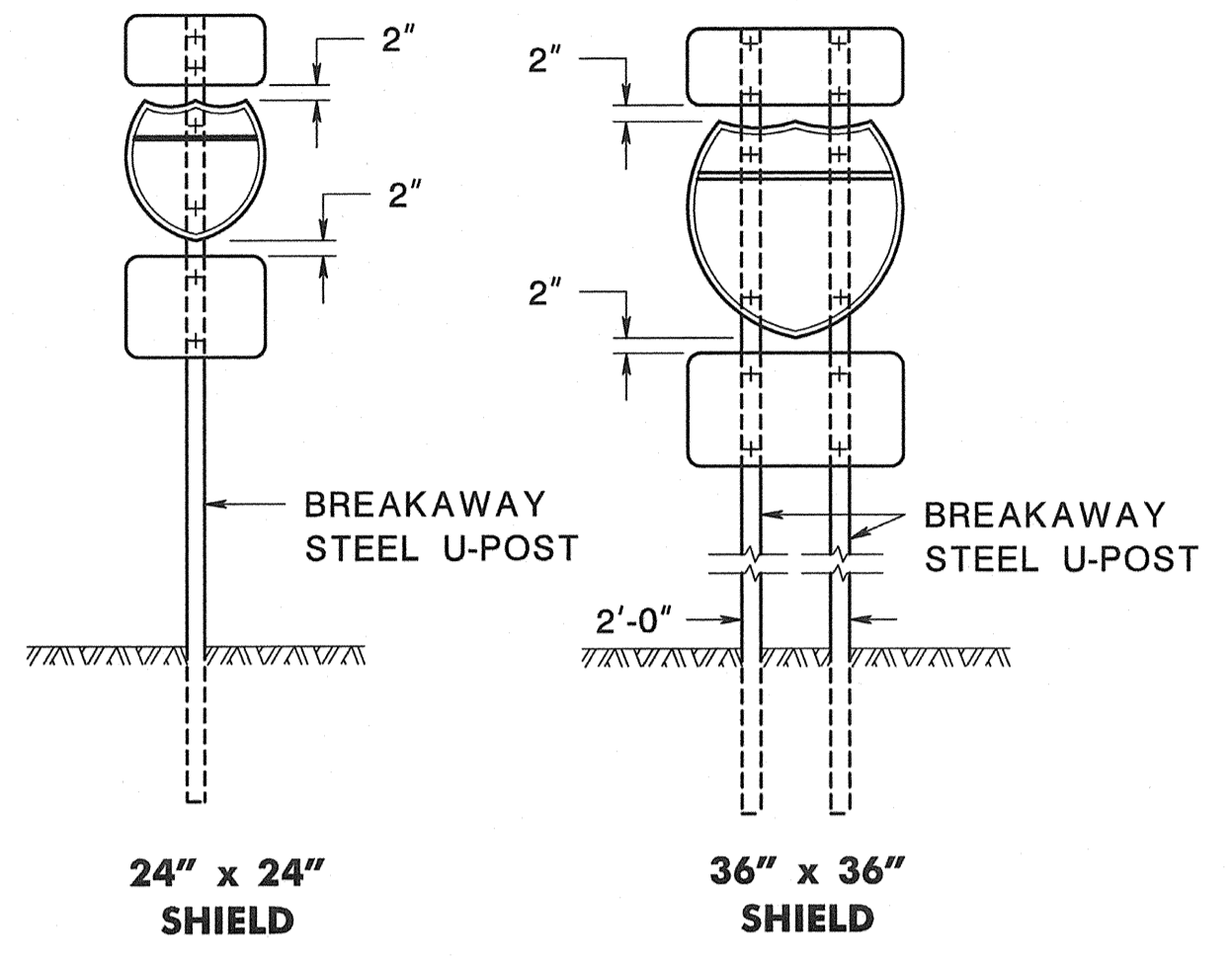
**STEEL U-POST SPACING**



**DETAIL OF BRACKET FOR SIDE MOUNTED SIGNS**

PANEL SIZE (W x H)	# OF POSTS	POST SIZE (LB/FT)	PANEL SIZE (W x H)	# OF POSTS	POST SIZE (LB/FT)
18" x 18"	1	2.5	36" x 36"	2	2.5
18" x 24"	1	2.5	36" x 48"	2	2.5
24" x 24"	1	2.5	45" x 36"	2	2.5
24" x 30"	1	2.5	48" x 24"	2	2.5
24" x 36"	1	2.5	48" x 36"	2	2.5
30" x 24"	1	2.5	48" x 48"	2	4.0
30" x 30"	1	2.5	48" x 64" x 64"	2	2.5
36" x 12"	2	2.5	60" x 36"	2	4.0
36" x 36" x 36"	2	2.5	48" x 60"	2	4.0
30" x 36"	1	4.0	60" x 30"	2	4.0

**U-POST SELECTION TABLE  
BREAKAWAY SIGN SUPPORT**



**STEEL U-POST GRADING DETAIL**

**GENERAL NOTES:**

- ALL POSTS SHALL BE OF ADEQUATE LENGTH TO MEET THE REQUIREMENTS FOR ERECTION AS STATED IN THE CURRENT "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS" AND AS INDICATED BELOW.
- ALL SMALL SIGN SUPPORTS SHALL BE OF THE BREAKAWAY TYPE WITH EXCEPTION OF THOSE INSTALLED BEHIND GUIDE RAIL OR OTHER ROADSIDE BARRIER.
- ALL STEEL POSTS AND BRACKETS SHALL BE CUT, BENT, AND HOLES PUNCHED AND DRILLED BEFORE GALVANIZING. GALVANIZING SHALL BE IN CONFORMANCE WITH ASTM A123.
- ALL STEEL U-POST SIGN SUPPORTS MUST BE INSTALLED FACING THE PREDOMINANT TRAFFIC FLOW. A MOUNTING BRACKET SHOULD BE USED ON SIDE MOUNTED SIGNS SUCH AS "ONE WAY" SIGNS INSTALLED IN MEDIANS.
- SIGN PANEL SIZES SHALL DETERMINE POST TYPE AND NUMBER AS SHOWN ON THIS DETAIL.
- BOLTS SHALL NOT PROTRUDE MORE THAN 3/4" BEYOND THE NUT WHEN TIGHT, BUT SHALL ENGAGE ALL THREADS IN THE NUT.
- WHEN SIGNS ARE INSTALLED ON SLOPES 10H:1V OR FLATTER, THE MINIMUM VERTICAL CLEARANCE REQUIREMENTS FOR SIGNS ARE:  
FOR SINGLE POST INSTALLATIONS - THE MINIMUM DISTANCE BETWEEN THE EDGE OF THE PAVEMENT AND THE BOTTOM OF ANY PANEL MUST BE 7 FEET, AND THE MINIMUM DISTANCE FROM EDGE OF PAVEMENT TO THE TOP OF ANY SIGN PANEL MUST BE 9 FEET.  
FOR MULTI-POST INSTALLATIONS - THE MINIMUM DISTANCE BETWEEN THE EDGE OF PAVEMENT AND THE BOTTOM OF A MAIN SIGN PANEL MUST BE 7 FEET.  
SECONDARY SIGN PANELS (LAND SERVICE HIGHWAYS) - THE MINIMUM DISTANCE BETWEEN THE EDGE OF PAVEMENT AND THE BOTTOM OF A SECONDARY SIGN PANEL IS 6 FEET.  
SECONDARY SIGN PANELS (INTERSTATE AND FREEWAYS) - THE BOTTOM OF THE MAIN SIGN SHALL BE A MINIMUM OF 8 FEET AND THE SECONDARY SIGN PANEL A MINIMUM OF 5 FEET ABOVE THE EDGE OF PAVEMENT.  
WHERE GRADING OF 10H:1V OR FLATTER CANNOT BE OBTAINED, OR WHERE CURB OR BERM IS GREATER THAN 4 INCHES, THE MINIMUM VERTICAL CLEARANCE WILL BE MEASURED FROM THE GROUND LINE TO THE BOTTOM OF THE SIGN.
- THE HORIZONTAL OFFSET FROM EDGE OF PAVEMENT TO EDGE OF SIGN IS DERIVED FROM SECTION 2A.19 OF THE MUTCD AS FOLLOWS:  
FOR URBAN INSTALLATIONS - IN AREAS WHERE LATERAL OFFSETS ARE LIMITED, A MINIMUM LATERAL OFFSET OF 2 FEET IS DESIRABLE. A MINIMUM OFFSET OF 1 FOOT FROM THE FACE OF THE CURB MAY BE USED IN AREAS WHERE THE SIDEWALK WIDTH IS LIMITED OR WHERE EXISTING POLES ARE CLOSE TO THE CURB.  
FOR RURAL INSTALLATIONS - 6 FEET MINIMUM DESIRABLE FROM EDGE OF SHOULDER, BUT 12 FEET MINIMUM DESIRABLE FROM EDGE OF TRAFFIC OR AUXILIARY LANE.  
FOR INTERSTATE AND FREEWAY INSTALLATIONS - 6 FEET MINIMUM DESIRABLE FROM EDGE OF SHOULDER, BUT NOT LESS THAN 12 FEET FROM THE EDGE OF TRAFFIC OR AUXILIARY LANE.  
FOR RAMP INSTALLATIONS - 6 FEET MINIMUM FROM EDGE OF ROAD.  
WHERE BEHIND GUIDE RAIL - 4 FEET MINIMUM FROM BACK OF BEAM GUIDE RAIL ELEMENT TO SIGN POST.
- PERMANENT SIGN SUPPORTS SHOULD NOT BE INSTALLED ON SLOPES GREATER THAN 10H:1V, EXCEPT WHERE GRADING OF 10H:1V CANNOT BE OBTAINED OR THE SIGN SUPPORTS WILL BE BEHIND A TRAFFIC BARRIER. THE SLOPE SHALL EXTEND A MINIMUM OF 3 FEET BEYOND THE OUTSIDE EDGE OF SIGN (SEE GRADING DETAIL FOR SLOPE TREATMENT).
- EXTRUDED ALUMINUM SIGN PANELS ARE NOT PERMITTED FOR USE WITH STEEL U-POST SIGN SUPPORTS.
- STEEL U-POST SIGN SUPPORTS SHALL NOT BE PLACED IN FRONT OF GUIDE RAIL AND THE POSTS MUST NOT STRADDLE GUIDE RAIL.
- TO EXTEND THE HEIGHT OF A SIGN POST, A MAXIMUM OF ONE SPLICE MAY BE MADE AND MUST BE A MINIMUM OF 9 FEET FROM THE GROUNDLINE TO CENTER LINE OF SPLICE.

**STEEL U-POST SIGN SUPPORTS**

N.T.S.

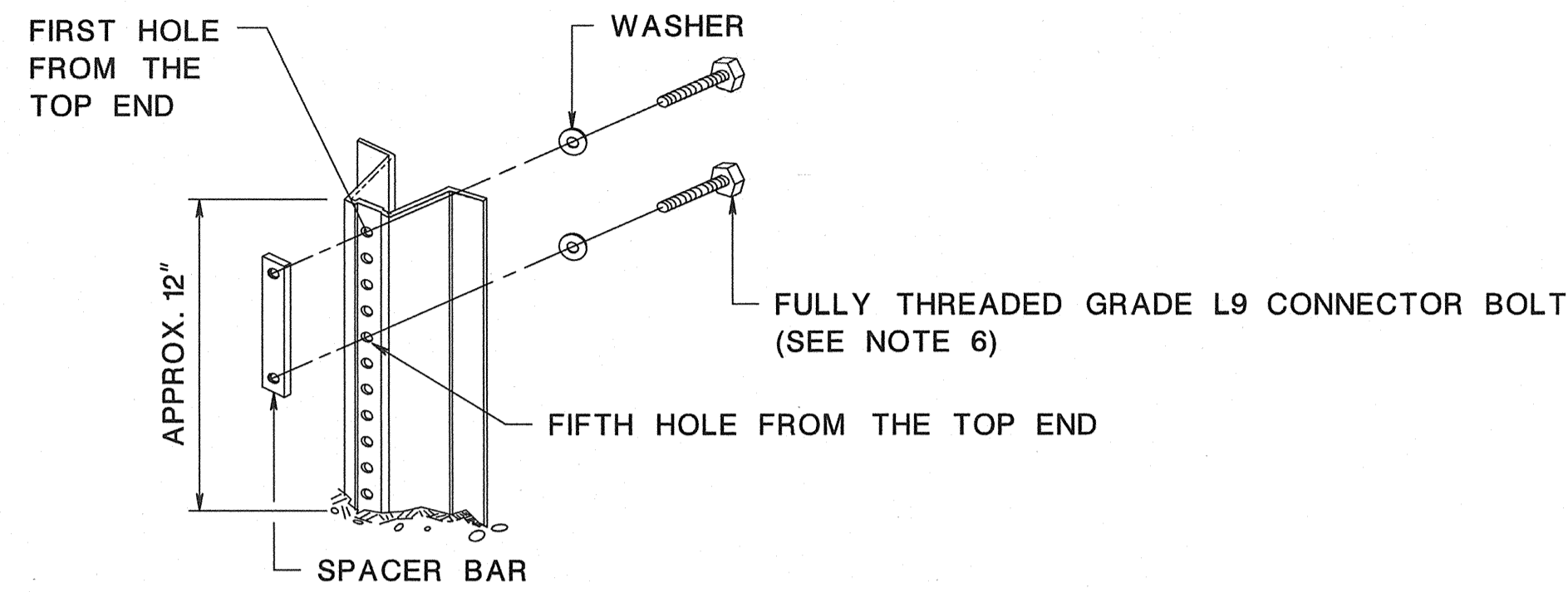
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NEW JERSEY DEPARTMENT OF TRANSPORTATION

**CONSTRUCTION DETAILS**

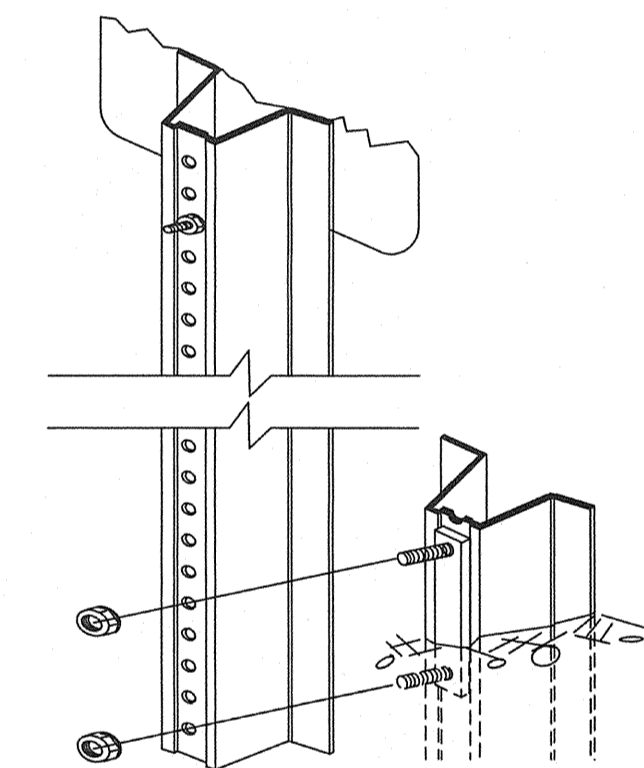
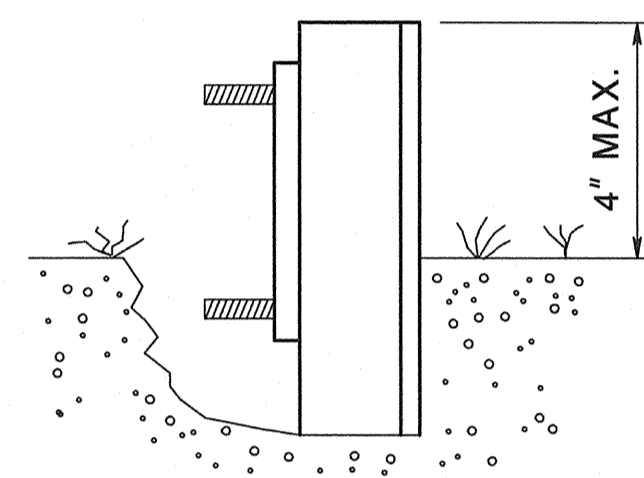
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 BDC:HD-05 NEW NOTE 8  
 BDC:JD-ORIGINAL SHEET

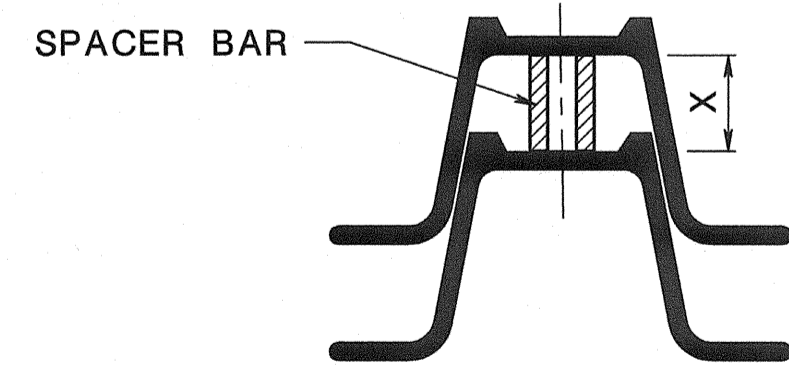
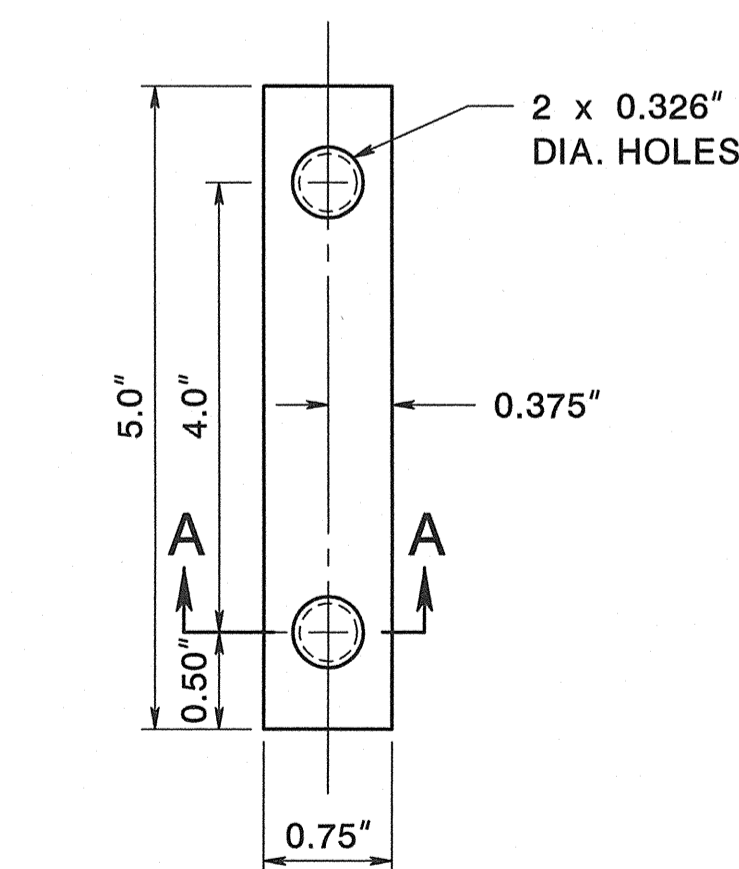


**NOTES:**

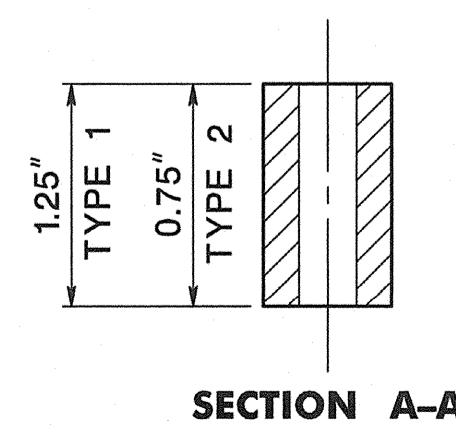
1. DRIVE ANCHOR POST ASSEMBLY TO WITHIN APPROXIMATELY 12 INCHES ABOVE GROUND LEVEL. PLACE BOLT AND WASHER IN FIRST AND FIFTH HOLES FROM THE TOP END, AND SECURE BOLTS ONTO SPACER.
2. DRIVE ANCHOR POST ASSEMBLY TO WITHIN A MAXIMUM OF 4 INCHES ABOVE GROUND LEVEL.
3. DIG OUT AROUND BACK OF ANCHOR POST ASSEMBLY TO ALLOW ROOM FOR TOP POST TO BE ATTACHED.
4. NEST TOP POST ASSEMBLY ONTO PROTRUDING ANCHOR POST ASSEMBLY BOLTS, THROUGH THE FIRST AND FIFTH HOLES FROM THE BOTTOM OF THE TOP POST.
5. PLACE AND TIGHTEN A SELF-LOCKING FLANGE NUT ON EACH BOLT. WHEN INSTALLATION IS COMPLETE, TOP OF GROUND POST SHALL NOT EXCEED 4 INCHES ABOVE GROUND LEVEL.
6. SIZE OF CONNECTOR BOLT FOR TYPE 1, 5/16" x 1 1/2"  
SIZE OF CONNECTOR BOLT FOR TYPE 2, 5/16" x 2"
7. THE CONNECTOR BOLTS SHALL BE FULLY THREADED. EACH CONNECTOR BOLT AND NUT SHALL BE CLEARLY STAMPED WITH MANUFACTURER'S IDENTIFYING MARK.



**ANCHOR POST ASSEMBLY  
SIGN SUPPORTS**



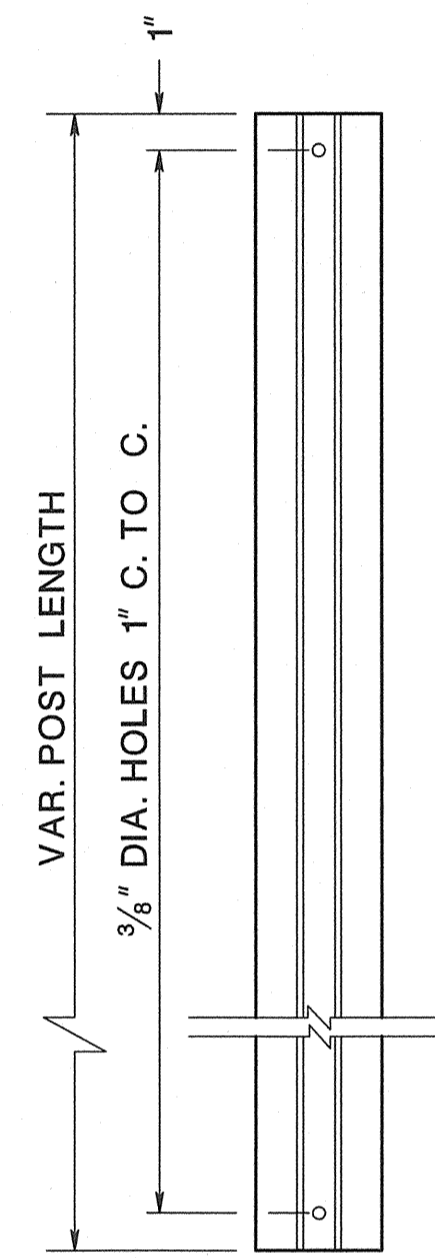
WHEN X IS GREATER THAN 0.75", USE TYPE 1 SPACER BAR  
WHEN X IS 0.75" OR LESS, USE TYPE 2 SPACER BAR



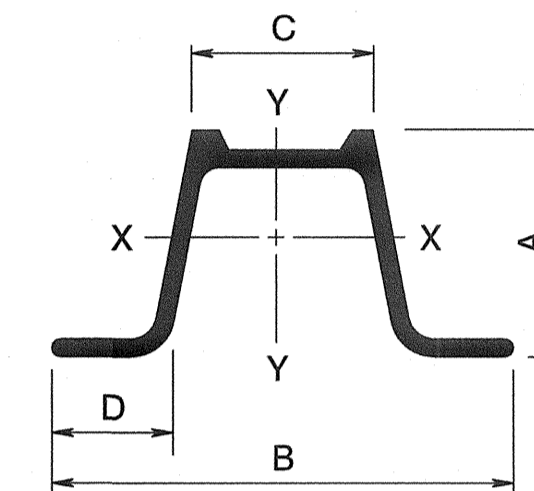
**SPACER BAR**

WEIGHT * LBS./FT.	DIMENSIONS (IN)				AREA IN. <sup>2</sup>	X-X AXIS **		Y-Y AXIS	
	"A"	"B"	"C"	"D"		I(IN. <sup>4</sup> )	S(IN. <sup>3</sup> )	I(IN. <sup>4</sup> )	S(IN. <sup>3</sup> )
2.50	1.516	3.062	1.278	0.669	0.760	0.228	0.313	0.539	0.352
4.00	1.968	3.500	1.336	0.834	1.187	0.611	0.707	1.161	0.664

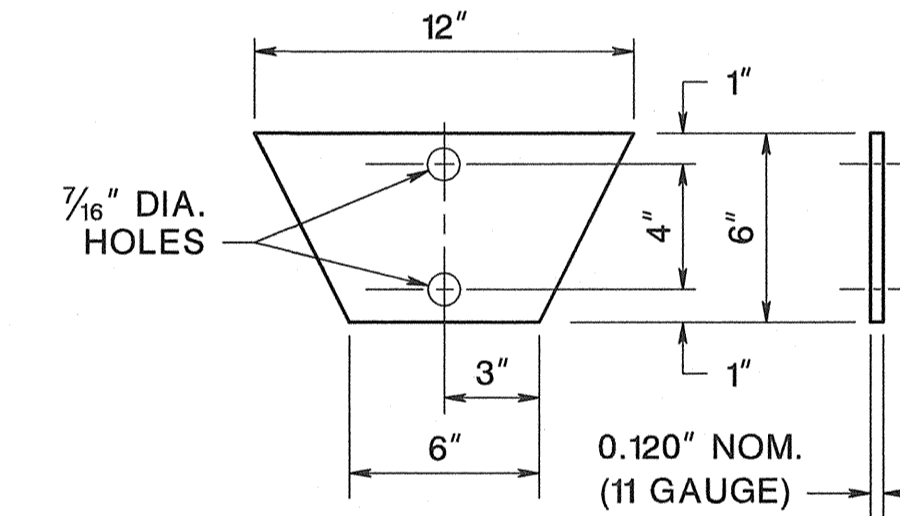
\* ± 5% **TYPE 1 STEEL U-POST PROPERTIES**  
\*\* GOVERNING SECTION



**TOP POST  
U-POST**



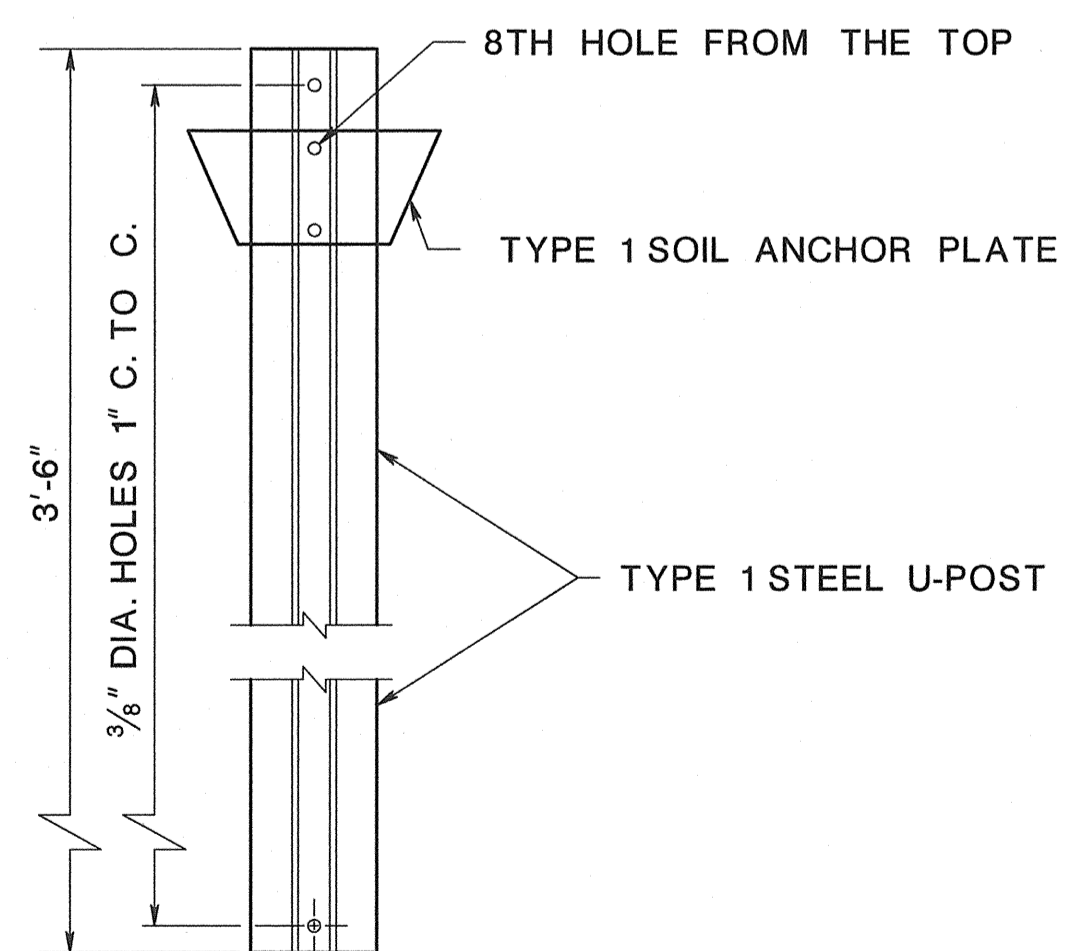
**TYPE 1 STEEL  
U-POST**



**TYPE 1  
SOIL ANCHOR PLATE**

**NOTES:**

1. ANCHOR POST AND TOP POST SHALL BE OF EQUAL WEIGHT/FEET.
2. SOIL ANCHOR PLATE SHALL BE ATTACHED TO ALL ANCHOR POSTS.
3. THE MATERIAL FOR THE SOIL ANCHOR PLATES SHALL BE CARBON SHEET STEEL.
4. THE STEEL "U" POST SHALL BE GRADE 60.



**TYPE 1  
ANCHOR POST  
ASSEMBLY**

**STEEL U-POST SIGN  
SUPPORTS**

N.T.S.

NEW JERSEY DEPARTMENT OF TRANSPORTATION

**CONSTRUCTION DETAILS**