

# COMPLETE STREETS IMPROVEMENT PROJECT

WESTWOOD  
DOWNEY STREET SIDEWALK  
TITLE SHEET & INDEX  
SHEET 1 OF 22

PLAN OF  
DOWNEY STREET SIDEWALK

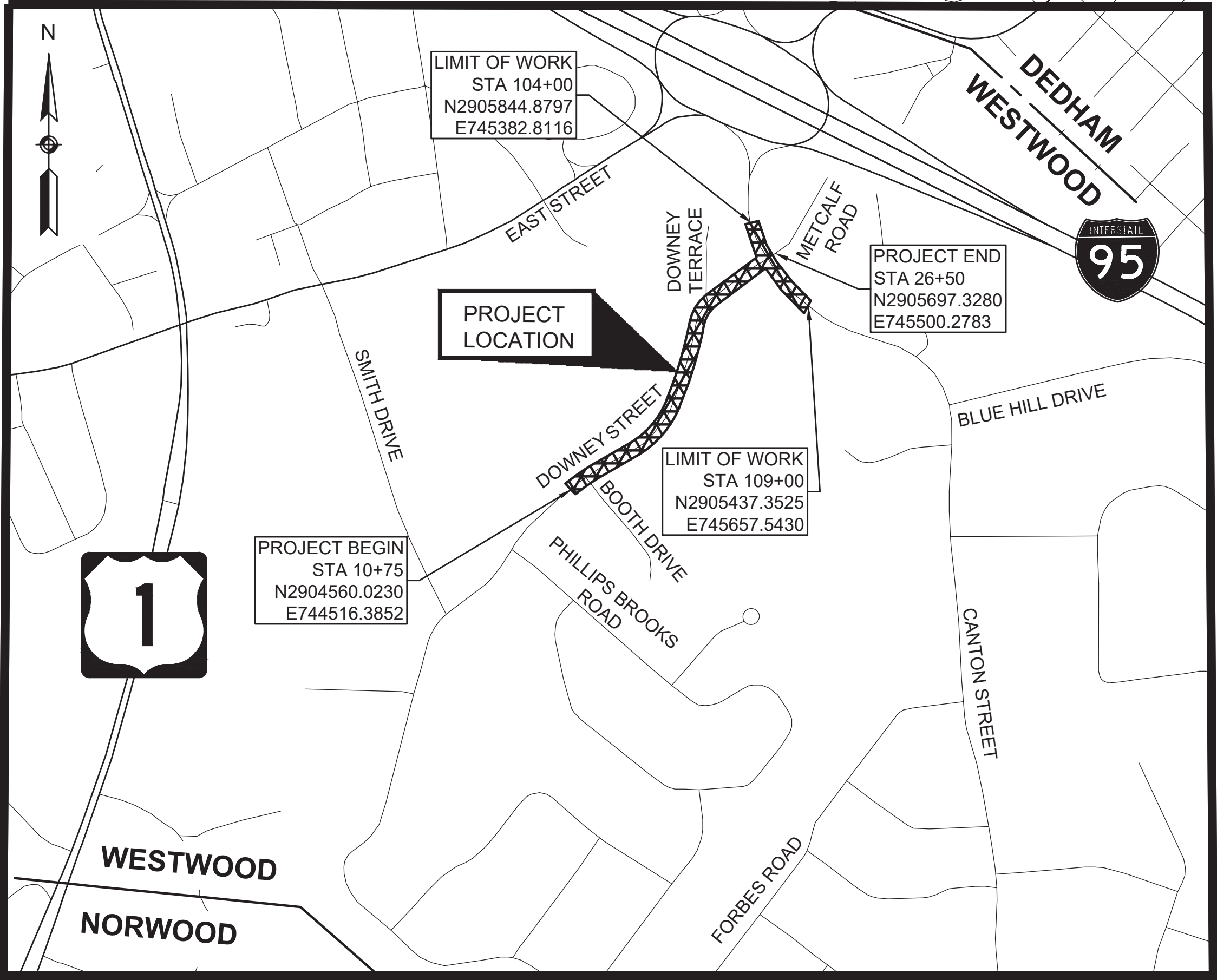
IN THE TOWN OF  
WESTWOOD  
NORFOLK COUNTY

BID #DPW-23-B-025

THESE PLANS ARE SUPPLEMENTED BY THE 2023 MASSDOT STANDARD SPECIFICATIONS FOR HIGHWAYS AND BRIDGES, THE OCTOBER 2017 CONSTRUCTION STANDARD DETAILS, THE 2015 OVERHEAD SIGNAL STRUCTURE AND FOUNDATION STANDARD DRAWINGS, MASSDOT TRAFFIC MANAGEMENT PLANS AND DETAIL DRAWINGS, THE 1990 STANDARD DRAWINGS FOR SIGNS AND SUPPORTS, THE 1968 STANDARD DRAWINGS FOR TRAFFIC SIGNALS AND HIGHWAY LIGHTING, AND THE LATEST EDITION OF THE AMERICAN STANDARD FOR NURSERY STOCK.

# FINAL SUBMITTAL

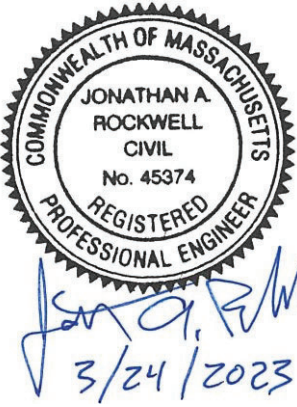
SHEET NO.	DESCRIPTION
1	TITLE SHEET & INDEX
2-3	LEGEND & ABBREVIATIONS, GENERAL NOTES
4	TYPICAL SECTIONS & PAVEMENT NOTES
5-7	CONSTRUCTION PLANS
8-9	TEMPORARY TRAFFIC CONTROL PLANS
10-13	CONSTRUCTION DETAILS
14-18	CROSS SECTIONS
19-21	BID ALTERNATE 1 - REPLACEMENT TREES
22	BID ALTERNATE 2 - ALTERNATIVE DRAINAGE OUTLET



0 1000 2000 3000 4000  
SCALE: 1" = 500'

LENGTH OF PROJECT = 2,075.00 FEET = 0.393 MILES

DATE	DESCRIPTION	REV #
03/24/23	FINAL SUBMITTAL (2)	3
12/12/22	FINAL SUBMITTAL	2
08/18/22	PRELIMINARY DESIGN	1



282 Merrimack Street 2nd Floor Lawrence, MA 01843 978-794-1792	311 Main Street 2nd Floor Worcester, MA 01608 508-868-5104	169 Ocean Blvd, Unit 3 PO Box 249 Hampton, NH 03842 603-601-8154
---	---	---

www.TheEngineeringCorp.com



GENERAL SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		JERSEY BARRIER
		CATCH BASIN OR GUTTER INLET
		CATCH BASIN OR GUTTER INLET WITH CURB INLET
		DROP INLET
		FLAG POLE
		GAS PUMP
		MAIL BOX
		POST SQUARE
		POST CIRCULAR
		WELL
		ELECTRIC HANDHOLE
		FENCE GATE POST
		GAS GATE
		BORING HOLE
		MONITORING WELL
		TEST PIT
		HYDRANT
		LIGHT POLE
		COUNTY BOUND
		GPS POINT
		CABLE MANHOLE
		DRAINAGE MANHOLE
		ELECTRIC MANHOLE
		GAS MANHOLE
		MISC MANHOLE
		SEWER MANHOLE
		TELEPHONE MANHOLE
		WATER MANHOLE
		MASSACHUSETTS HIGHWAY BOUND
		MONUMENT
		STONE BOUND
		TOWN OR CITY BOUND
		TRAVERSE OR TRIANGULATION STATION
		TROLLEY POLE OR GUY POLE
		TRANSMISSION POLE
		UTILITY POLE W/ FIREBOX
		UTILITY POLE WITH DOUBLE LIGHT
		UTILITY POLE W / 1 LIGHT
		UTILITY POLE
		BUSH
		TREE
		STUMP
		SWAMP / MARSH
		WATER GATE
		PARKING METER
		OVERHEAD CABLE/WIRE
		CURBING
		CONTOURS (ON-THE-GROUND SURVEY DATA)
		CONTOURS (PHOTOGRAMMETRIC DATA)
		UNDERGROUND DRAIN PIPE (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND ELECTRIC DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND GAS MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND SEWER MAIN (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND TELEPHONE DUCT (DOUBLE LINE 24 INCH AND OVER)
		UNDERGROUND WATER MAIN (DOUBLE LINE 24 INCH AND OVER)
		BALANCED STONE WALL
		GUARD RAIL - STEEL POSTS
		GUARD RAIL - WOOD POSTS
		CHAIN LINK OR METAL FENCE
		WOOD FENCE
		SEDIMENT CONTROL BARRIER
		TREE LINE
		SAWCUT LINE
		TOP OR BOTTOM OF SLOPE
		LIMIT OF EDGE OF PAVEMENT OR COLD PLANE AND OVERLAY
		LIMIT OF GRADING
		BANK OF RIVER OR STREAM
		BORDER OF WETLAND
		100 FT WETLAND BUFFER
		200 FT RIVERFRONT BUFFER
		STATE HIGHWAY LAYOUT
		TOWN OR CITY LAYOUT
		COUNTY LAYOUT
		RAILROAD SIDELINE
		TOWN OR CITY BOUNDARY LINE
		PROPERTY LINE OR APPROXIMATE PROPERTY LINE
		EASEMENT

TRAFFIC SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
		CONTROLLER CABINET, FOUNDATION
		CONTROLLER CABINET, FOUNDATION, CONC. PAD
		MAST ARM FOUNDATION (SCALE OF BLOCK = DIAMETER IN INCHES)
		MAST ARM (LENGTH NOTED)
		EMERGENCY PREEMPTION CONFIRMATION STROBE LIGHT
		VEHICULAR SIGNAL HEAD
		PEDESTRIAN SIGNAL HEAD
		MAST ARM OR TS POLE MOUNTED SIGN
		EMERGENCY PRE-EMPTION RECEIVER
		EMERGENCY PRE-EMPTION CONFIRMATION STROBE
		PEDESTRIAN PUSH BUTTON
		YAGI ANTENNA
		BICYCLE WIRE LOOP DETECTOR (SIZE AS NOTED)
		WIRE LOOP DETECTOR (SIZE AND TYPE NOTED)
		TRAFFIC SIGN (1 POST)
		TRAFFIC SIGN (2 POST)
		PULL BOX 12"x12" (OR AS NOTED)
		ELECTRIC HANDHOLE 12"x24" (OR AS NOTED)
		TRAFFIC SIGNAL CONDUIT

ABBREVIATIONS

GENERAL		ABBREVIATIONS (cont.)	
AADT	ANNUAL AVERAGE DAILY TRAFFIC	PVC	POINT OF VERTICAL CURVATURE
ABAN	ABANDON	PVI	POINT OF VERTICAL INTERSECTION
ADJ	ADJUST	PVT	POINT OF VERTICAL TANGENCY
APPROX.	APPROXIMATE	PVMT	PAVEMENT
A.C.	ASPHALT CONCRETE	R	RADIUS OF CURVATURE
ACCM PIPE	ASPHALT COATED CORRUGATED METAL PIPE	R&D	REMOVE AND DISPOSE
BIT.	BITUMINOUS	RCP	REINFORCED CONCRETE PIPE
BC	BOTTOM OF CURB	RD	ROAD
BD.	BOUND	RDWY	ROADWAY
BL	BASELINE	REM	REMOVE
BLDG	BUILDING	RET	RETAIN
BM	BENCHMARK	RET WALL	RETAINING WALL
BO	BY OTHERS	ROW	RIGHT OF WAY
BOS	BOTTOM OF SLOPE	RR	RAILROAD
BR.	BRIDGE	R&R	REMOVE AND RESET
CB	CATCH BASIN	R&S	REMOVE AND STACK
CBCI	CATCH BASIN WITH CURB INLET	RT	RIGHT
CC	CEMENT CONCRETE	SB	SERVICE BOX
CCM	CEMENT CONCRETE MASONRY	SGE	SLANTED GRANITE EDGING
CEM	CEMENT	SHLD	SHOULDER
CI	CURB INLET	SMH	SEWER MANHOLE
CIP	CAST IRON PIPE	ST	STREET
CLF	CHAIN LINK FENCE	STA	STATION
CL	CENTERLINE	SSD	STOPPING SIGHT DISTANCE
CMP	CORRUGATED METAL PIPE	SHLO	STATE HIGHWAY LAYOUT LINE
CSP	CORRUGATED STEEL PIPE	SW	SIDEWALK
CO.	COUNTY	SWAG	SIDEWALK ANCHOR GUY
CONC	CONCRETE	T	TANGENT DISTANCE OF CURVE/TRUCK %
CONT	CONTINUOUS	TAN	TANGENT
CONST	CONSTRUCTION	TEMP	TEMPORARY
CR GR	CROWN GRADE	TC	TOP OF CURB
DH	DRILL HOLE	TOS	TOP OF SLOPE
DHV	DESIGN HOURLY VOLUME	TYP	TYPICAL
DI	DROP INLET	UP	UTILITY POLE
DIA	DIAMETER	VAR	VARIES
DIP	DUCTILE IRON PIPE	VERT	VERTICAL
DSCB	DEEP SUMP CATCH BASIN	VC	VERTICAL CURVE
DW	STEADY DON'T WALK - PORTLAND ORANGE	WCR	WHEEL CHAIR RAMP
DWY	DRIVEWAY	WG	WATER GATE
ELEV (or EL.)	ELEVATION	WIP	WROUGHT IRON PIPE
EMB	EMBANKMENT	WM	WATER METER/WATER MAIN
EOP	EDGE OF PAVEMENT	X-SECT	CROSS SECTION
EQ	EQUAL		
EXIST (or EX)	EXISTING		
EXC	EXCAVATION		
F&C	FRAME AND COVER		
F&G	FRAME AND GRATE		
FDN.	FOUNDATION		
FLDSTN	FIELDSTONE		
GAR	GARAGE		
GD	GROUND		
GG	GAS GATE		
GI	GUTTER INLET		
GIP	GALVANIZED IRON PIPE		
GRAN	GRANITE		
GRAV	GRAVEL		
GRD	GUARD		
HDW	HEADWALL		
HMA	HOT MIX ASPHALT		
HOR	HORIZONTAL		
HYD	HYDRANT		
INV	INVERT		
JCT	JUNCTION		
L	LENGTH OF CURVE		
L&S	LOAM AND SEED		
LB	LEACH BASIN		
LOG	LIMIT OF GRADING		
LP	LIGHT POLE		
LT	LEFT		
MAX	MAXIMUM		
MB	MAILBOX		
MH	MANHOLE		
MHB	MASSACHUSETTS HIGHWAY BOUND		
MIN	MINIMUM		
NIC	NOT IN CONTRACT		
NO.	NUMBER		
PC	POINT OF CURVATURE		
PCC	POINT OF COMPOUND CURVATURE		
P.G.L.	PROFILE GRADE LINE		
PI	POINT OF INTERSECTION		
POC	POINT ON CURVE		
POT	POINT ON TANGENT		
PRC	POINT OF REVERSE CURVATURE		
PROJ	PROJECT		
PROP	PROPOSED		
PSB	PLANTABLE SOIL BORROW		
PT	POINT OF TANGENCY		

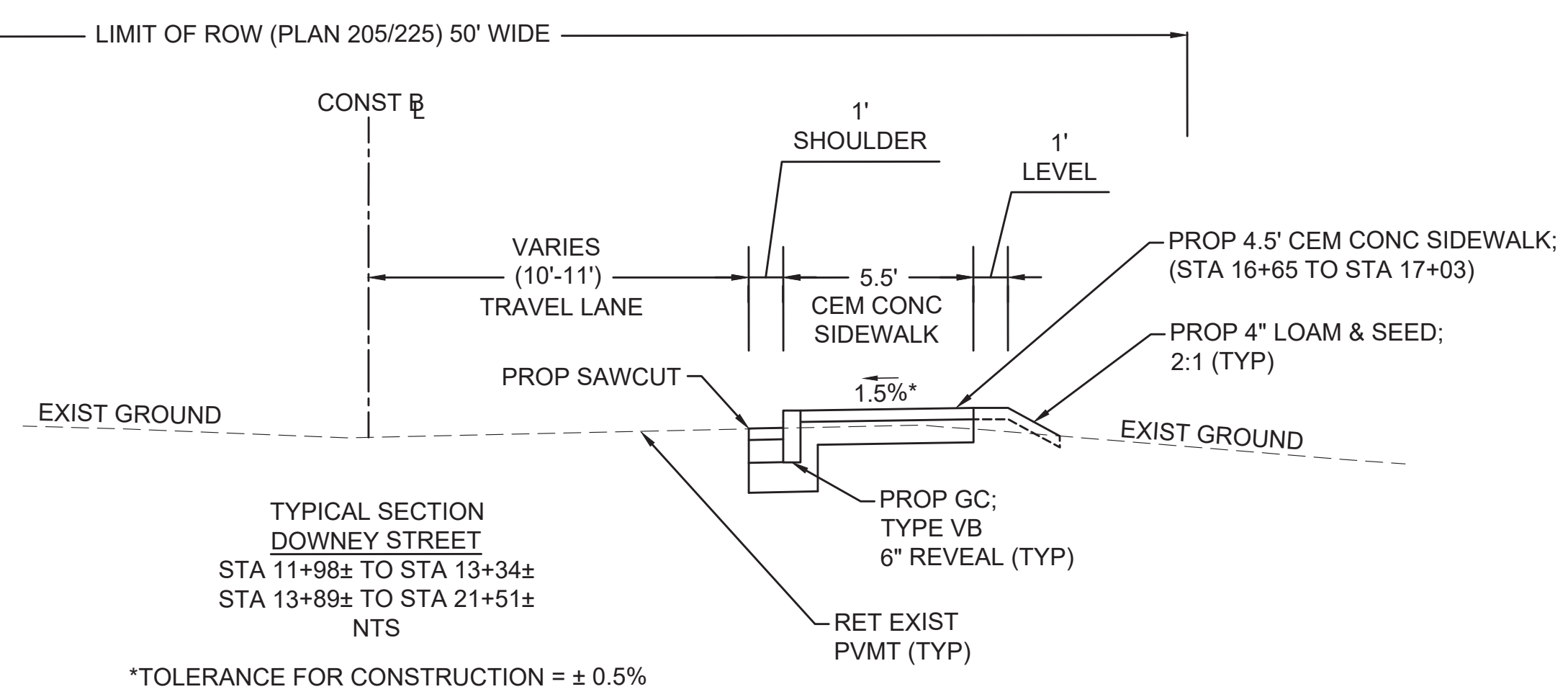
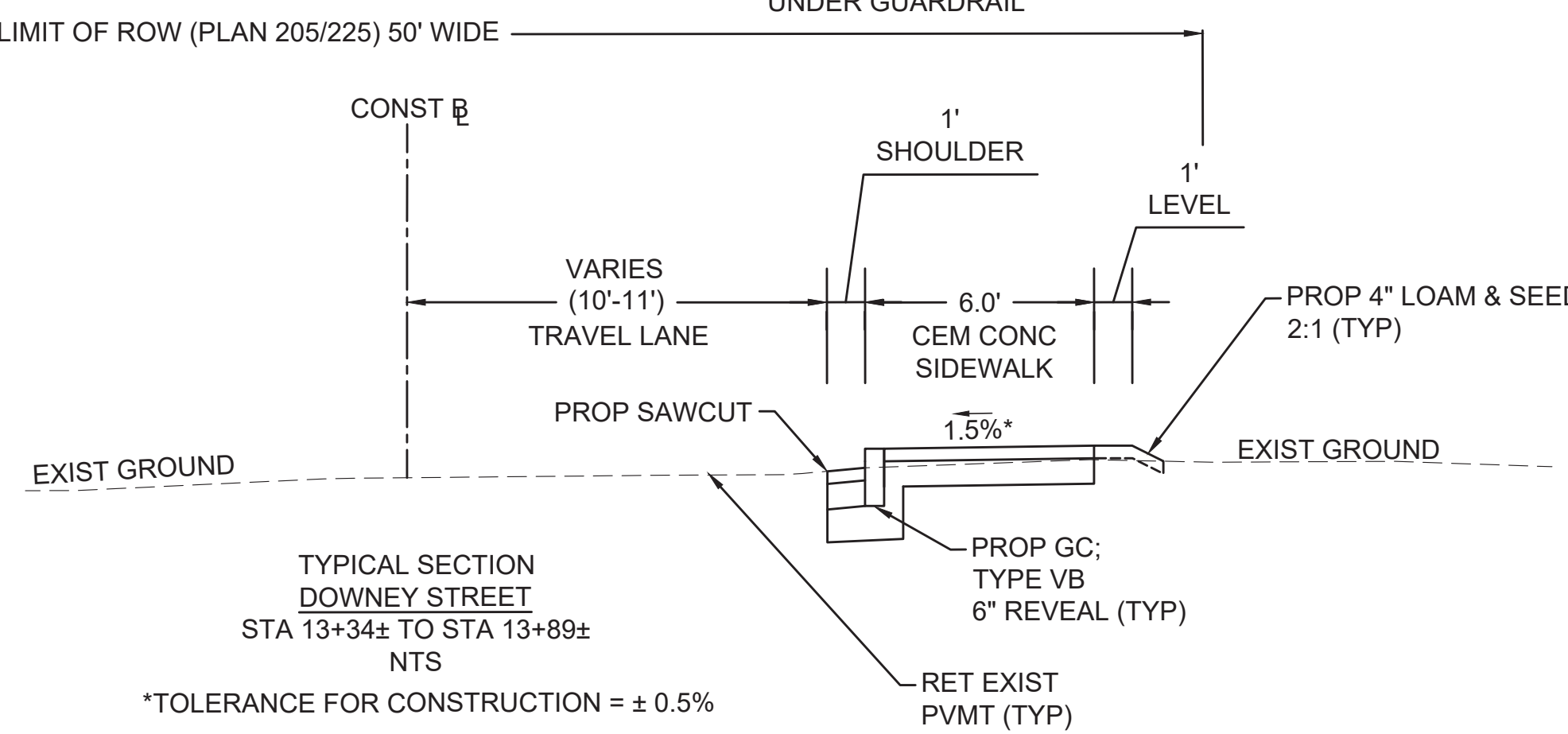
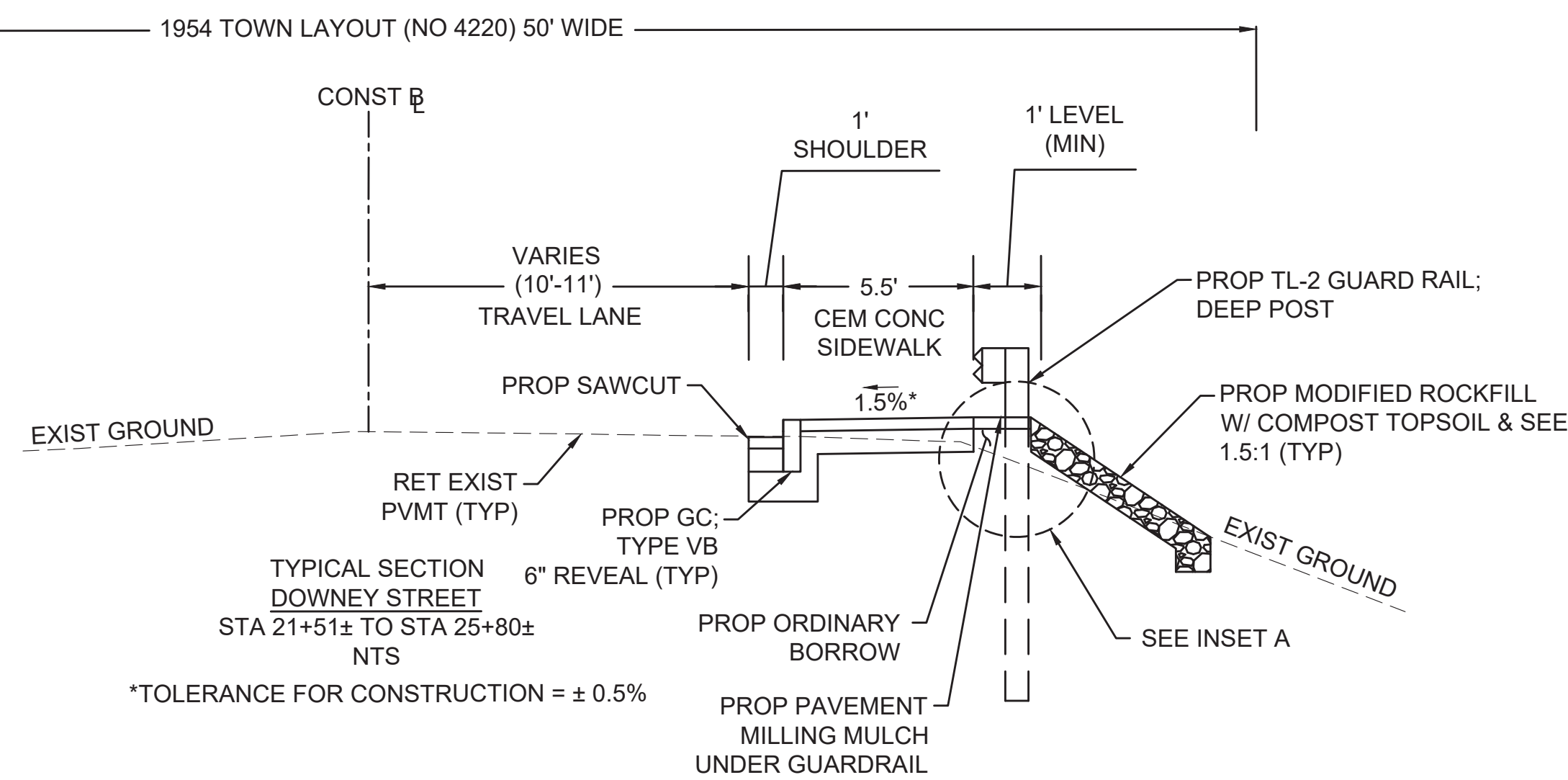
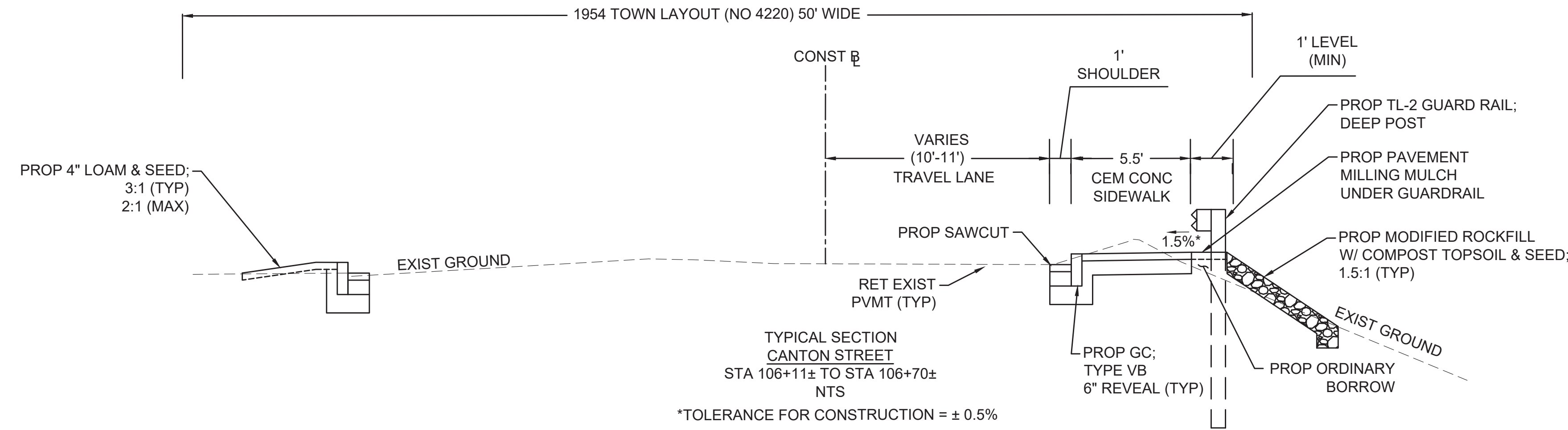
WESTWOOD  
DOWNEY STREET SIDEWALK  
LEGEND & ABBREVIATIONS  
SHEET 2 OF 22



CONSTRUCTION NOTES:

1. EXISTING CONDITIONS INFORMATION COMPILED FROM SURVEY BY HANCOCK ASSOCIATES, BOSTON, MA PERFORMED IN JULY 2022.  
  
THE VERTICAL DATUM FOR THIS SURVEY IS THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88). SAID DATUM WAS ESTABLISHED VIA GPS OBSERVATIONS UTILIZING REALIZATION NAD83(2011) AND GEOID 12A.
2. ALL EXISTING STATE, COUNTY, AND TOWN LOCATION LINES HAVE BEEN ESTABLISHED FROM AN ACTUAL ON-THE-GROUND SURVEY. ALL PRIVATE PROPERTY LINES HAVE BEEN ESTABLISHED FROM AVAILABLE INFORMATION AND THEIR EXACT LOCATION ARE NOT GUARANTEED.
3. THE LOCATIONS OF EXISTING UNDERGROUND UTILITIES ARE SHOWN IN AN APPROXIMATE WAY ONLY AND HAVE NOT BEEN INDEPENDENTLY VERIFIED BY THE OWNER OR ITS REPRESENTATIVE. THE CONTRACTOR SHALL CONTACT DIGSAFE (1-888-DIGSAFE) A MINIMUM OF 72 HOURS PRIOR TO ANY CONSTRUCTION TO VERIFY THE LOCATION OF ALL EXISTING UTILITIES BEFORE COMMENCING WORK, AND SHALL BE FULLY RESPONSIBLE FOR ANY AND ALL DAMAGES WHICH MIGHT BE OCCASIONED BY THE CONTRACTOR'S FAILURE TO LOCATE AND PRESERVE ANY AND ALL UNDERGROUND UTILITIES.
4. WHERE AN EXISTING UTILITY IS FOUND TO CONFLICT WITH THE PROPOSED WORK, THE LOCATION, ELEVATION AND SIZE OF THE UTILITY SHALL BE ACCURATELY DETERMINED WITHOUT DELAY BY THE CONTRACTOR, AND THE INFORMATION FURNISHED TO THE ENGINEER FOR RESOLUTION OF THE CONFLICT.
5. ALL PRIVATELY OWNED UTILITY STRUCTURES (GAS GATES, ELECTRIC /TELEPHONE MANHOLES, ETC.) SHALL BE ADJUSTED TO FINISHED GRADE BY THE PRIVATE UTILITY COMPANY, UNLESS DIRECTED OTHERWISE. THE CONTRACTOR SHALL COORDINATE WITH PRIVATE UTILITY COMPANIES FOR THE ALTERATION AND ADJUSTMENT, AS NECESSARY.
6. AREAS OUTSIDE THE LIMITS OF PROPOSED WORK DISTURBED BY THE CONTRACTOR'S OPERATIONS SHALL BE RESTORED BY THE CONTRACTOR TO THEIR ORIGINAL CONDITION AT THE CONTRACTORS EXPENSE.
7. ALL DISTURBED AREAS OUTSIDE THE CURBLINE SHALL BE STABILIZED WITH 4" LOAM AND SEED, UNLESS OTHERWISE NOTED.
8. THE TERM "PROPOSED" (PROP) MEANS WORK TO BE CONSTRUCTED USING NEW MATERIALS OR, WHERE APPLICABLE, RE-USING EXISTING MATERIALS IDENTIFIED AS "REMOVE AND RESET" (R&R), AS APPROVED BY THE ENGINEER.
9. THE TERM "MEET EXIST" MEANS TO MEET BOTH THE EXISTING ALIGNMENT AND ELEVATION.
10. ALL EXISTING TREES WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS INDICATED OTHERWISE ON THE DRAWINGS. ALL PROVIDED DIMENSIONS REFER TO THE DIAMETER AT BREST HEIGHT.
11. AN UNOBSTRUCTED PATH OF TRAVEL WITH A MINIMUM WIDTH OF 3'-0" (EXCLUDING THE WIDTH OF CURB) SHALL BE MAINTAINED PAST ALL VERTICAL OBSTRUCTIONS (UTILITY POLES, LIGHT POLES, SIGNS, MAILBOXES, ETC.)
12. DETECTABLE WARNING PANELS ARE REQUIRED ON ALL PROPOSED PEDESTRIAN CURB RAMPS AND SHALL BE INSTALLED IN ACCORDANCE WITH MASSDOT CONSTRUCTION STANDARDS. DETECTABLE WARNING PANELS COLOR SHALL BE APPROVED BY THE WESTWOOD DPW.
13. ALL EXISTING GRANITE CURB THAT MEETS SPECIFICATIONS SHALL BE RE-USED WITHIN THE PROPOSED WORK, EXCEPT CURVED STONES OF A DIFFERENT RADIUS THAN THAT PROPOSED.
14. IN INSTANCES WHERE AN EXISTING MANHOLE, HANDHOLE, OR OTHER "SURFACE" TYPE STRUCTURE THAT CANNOT BE REMOVED OR RESET IS WITHIN THE PROPOSED OR EXISTING (IF RECIPROCAL OR WITHIN PROJECT LIMITS) ACCESSIBLE SURFACE, THE STRUCTURE SHALL BE CAREFULLY ADJUSTED SUCH THAT THE TOPMOST SURFACES OR THE STRUCTURE COVER SHALL BE FLUSH WITH THE CURB RAMP SURFACE.
15. THE CONTRACTOR SHALL NOTE THE EXISTING CONDITION OF ADJACENT PRIVATELY-OWNED FEATURES PRIOR TO THE START OF CONSTRUCTION. PRE-CONSTRUCTION PHOTOS AND VIDEOS SHALL BE REQUIRED AND SUBMITTED TO THE TOWN PRIOR TO THE START OF CONSTRUCTION. ANY DAMAGE TO THE EXISTING PRIVATELY-OWNED FEATURES BY CONSTRUCTION ACTIVITIES SHALL BE REPAIRED AT THE CONTRACTOR'S EXPENSE.
16. ALL EXISTING SIGNS WITHIN THE PROJECT LIMITS SHALL BE RETAINED UNLESS INDICATED OTHERWISE ON THE DRAWINGS. ALL SIGNS THAT ARE TO BE REMOVED AND RESET SHALL BE RESET WITH A NEW P5 POST.
17. RETAIN ALL PAVEMENT MARKINGS EXCEPT THOSE IN CONFLICT WITH PROPOSED PAVEMENT MARKINGS, WHICH SHALL BE REMOVED BY APPROVED METHODS.
18. ALL PROPOSED PAVEMENT MARKINGS WITHIN THE LIMITS OF WORK SHALL BE EPOXY.
19. A MINIMUM SIDEWALK 3'-0" PATH OF TRAVEL CLEARANCE, EXCLUDING CURB, IS REQUIRED WHEN PLACING SIGNS.
20. THE MINIMUM MOUNTING HEIGHT OF POST MOUNTED SIGNS, MEASURED VERTICALLY FROM THE BOTTOM OF THE SIGN TO THE TOP OF THE CURB OR SIDEWALK SHALL BE 7 FEET.
21. IN AREAS OF EXISTING ROADWAY / SIDEWALK WHERE LOAM AND SEED IS PROPOSED, THE CONTRACTOR SHALL REMOVE EXISTING ROADWAY / SIDEWALK AND SUBBASE, AND REPLACE WITH SUITABLE EXCAVATED MATERIAL AND PROPOSED 4" LOAM AND SEED TO MEET FINAL GRADE.
22. UPL 80-10 MAY REQUIRE TEMPORARY SUPPORT WHILE ADJACENT DRAINAGE PIPE IS BEING INSTALLED. CONTRACTOR SHALL COORDINATE WITH EVERSOURCE AS REQUIRED.
23. CONTRACTOR SHALL GRADE A SWALE FOR DRAINING THE OUTLET WHERE NECESSARY TO MEET PROPOSED OUTLET ELEVATION.

**WESTWOOD  
DOWNEY STREET SIDEWALK  
TYPICAL SECTIONS & PAVEMENT NOTES  
SHEET 4 OF 22**



**PAVEMENT NOTES**

**PROPOSED HOT MIX ASPHALT DRIVEWAY**

SURFACE: 1½" SUPERPAVE SURFACE COURSE - 9.5 (SSC - 9.5) OVER  
2½" SUPERPAVE SURFACE COURSE - 12.5 (SSC - 12.5) OVER  
BASE: 8" GRAVEL BORROW, TYPE b

**PROPOSED CEMENT CONCRETE PEDESTRIAN CURB RAMP / SIDEWALK / WALK**

SURFACE: 4" CEMENT CONCRETE (4000 PSI, ¾", 610)  
BASE: 8" GRAVEL BORROW, TYPE b

**PROPOSED CEMENT CONCRETE SIDEWALK AT DRIVEWAY**

SURFACE: 6" CEMENT CONCRETE (4000 PSI, ¾", 610)  
BASE: 8" GRAVEL BORROW, TYPE b

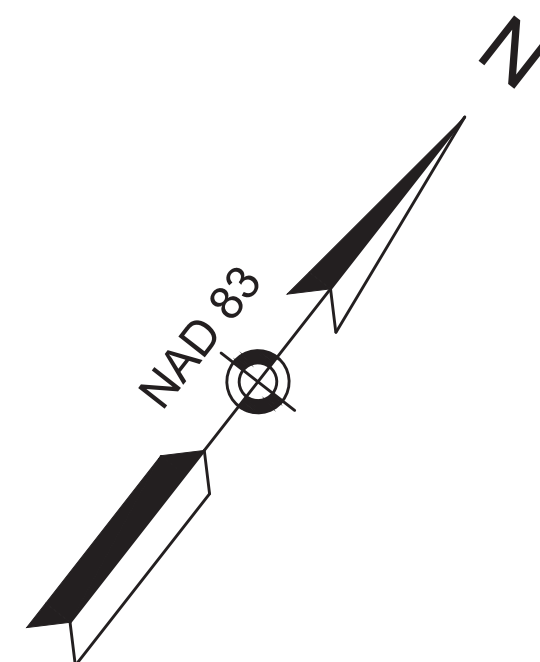
**PROPOSED GRAVEL DRIVEWAY**

SURFACE: 12" PROCESSED GRAVEL

**GENERAL PAVEMENT NOTES**

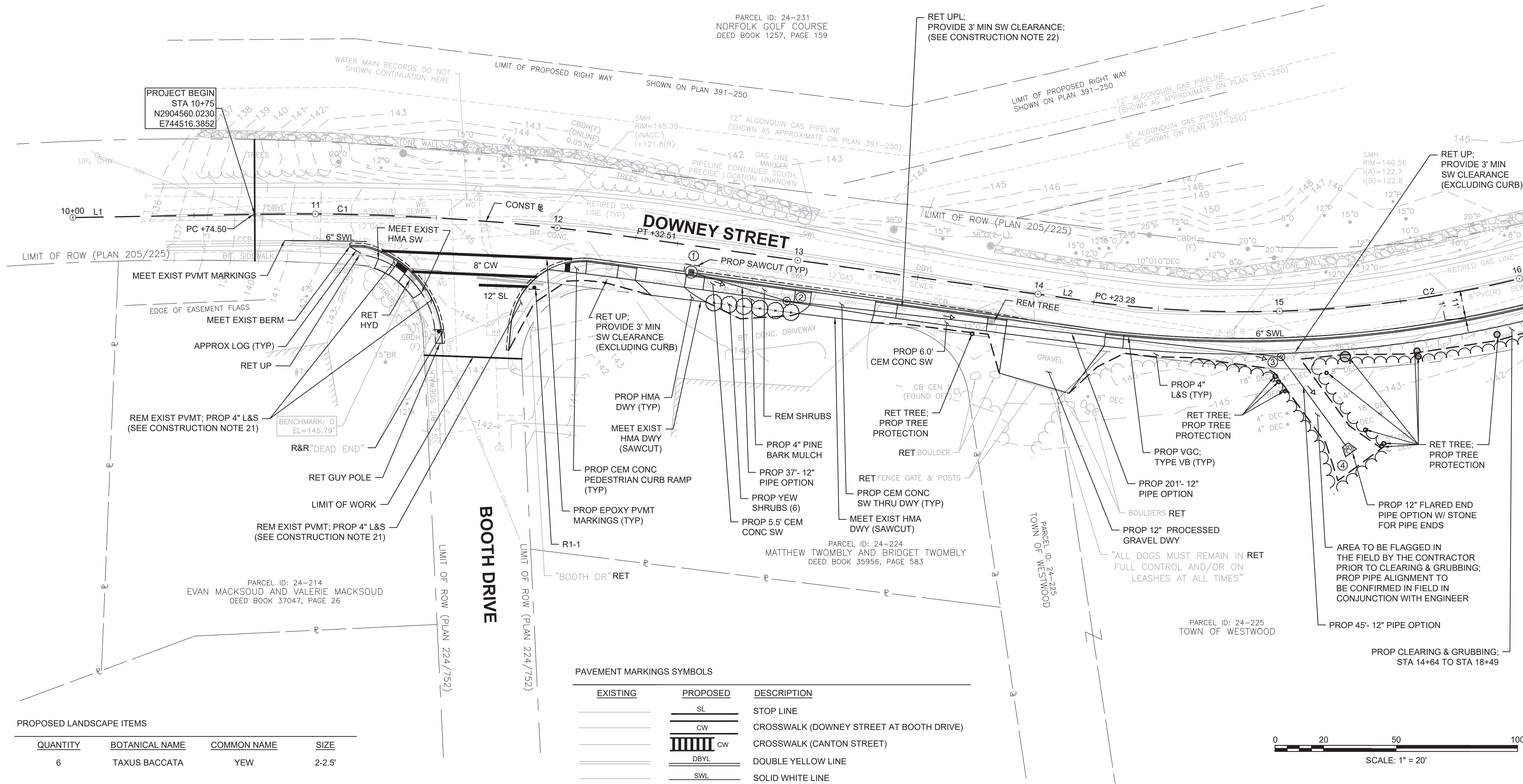
1. ASPHALT EMULSION FOR TACK COAT SHALL BE APPLIED BETWEEN ALL ASPHALT SURFACES AND SAWCUT JOINTS BEFORE PAVING. HMA JOINT ADHESIVE SHALL BE APPLIED TO ALL COLD JOINTS (LONGITUDINAL AND TRANSVERSE) BEFORE PAVING SURFACE COURSE. ASPHALT EMULSION FOR TACK COAT SHALL BE APPLIED AT A RATE CONSISTENT WITH STANDARD SPECIFICATION 450.43.G.2. ALL SURFACES SHALL BE CLEAN OF ALL ORGANICS, DEBRIS, AND SAND PRIOR TO PAVING.
2. ASPHALT EMULSION FOR TACK COAT SHALL BE RS-1H TO RESIST TRACKING OF TACK HAUL VEHICLES.
3. HMA FOR WALKS AND DRIVEWAYS SHALL BE IN ACCORDANCE WITH SECTION 700.
4. ALL GRAVEL BORROW MEETING SPECIFICATION SHALL BE RETAINED IN PLACE, COMPACTED, AND LEVELED AS REQUIRED.





PROPOSED DRAINAGE STRUCTURE DATA							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
1	PROP GI	12+57.3	12.1' RT	145.15	-	142.65	
2	PROP CB	12+97.8	17.2' RT	145.89	142.47	142.37	W/ 4' SUMP MH COVER
3	PROP DMH	15+00.0	18.9' RT	146.72	141.35	141.25	
4	PROP 12" FES	15+22.8	56.6' RT	-	141.02	-	SEE NOTE 23

DOWNEY STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
L1	10+00.00	2904512.7804	744458.1347		N50°57'25"E 74.50'	10+74.50	2904559.7091	744515.9980
C1	10+74.50	2904559.7091	744515.9980	R=1000.00' L=158.01' Δ=9°03'11" T=79.17'		12+32.51	2904649.1489	744646.0536
L2	12+32.51	2904649.1489	744646.0536		N60°00'36"E 190.77'	14+23.28	2904744.5065	744811.2847
C2	14+23.28	2904744.5065	744811.2847	R=480.08' L=354.94' Δ=42°21'40" T=186.02'		17+78.23	2905017.0301	745025.9501

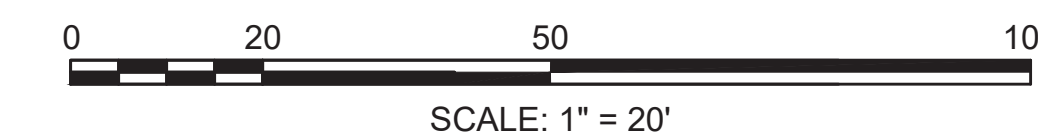


PAVEMENT MARKINGS SYMBOLS

EXISTING	PROPOSED	DESCRIPTION
---	SL	STOP LINE
---	CW	CROSSWALK (DOWNEY STREET AT BOOTH DRIVE)
---	CW	CROSSWALK (CANTON STREET)
---	DBYL	DOUBLE YELLOW LINE
---	SWL	SOLID WHITE LINE

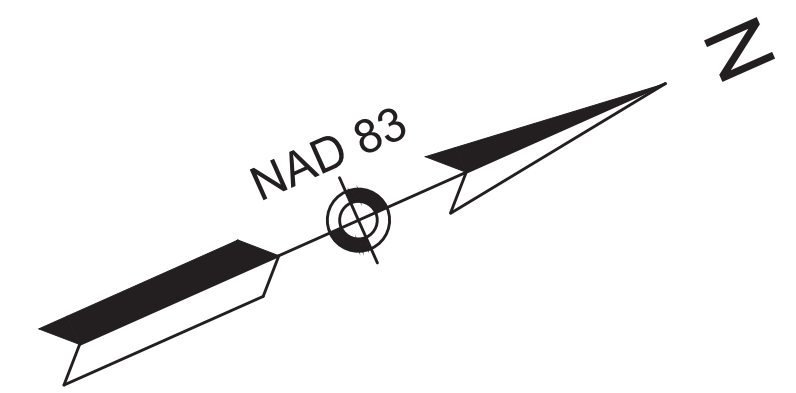
PROPOSED LANDSCAPE ITEMS

QUANTITY	BOTANICAL NAME	COMMON NAME	SIZE
6	TAXUS BACCATA	YEW	2-2.5'

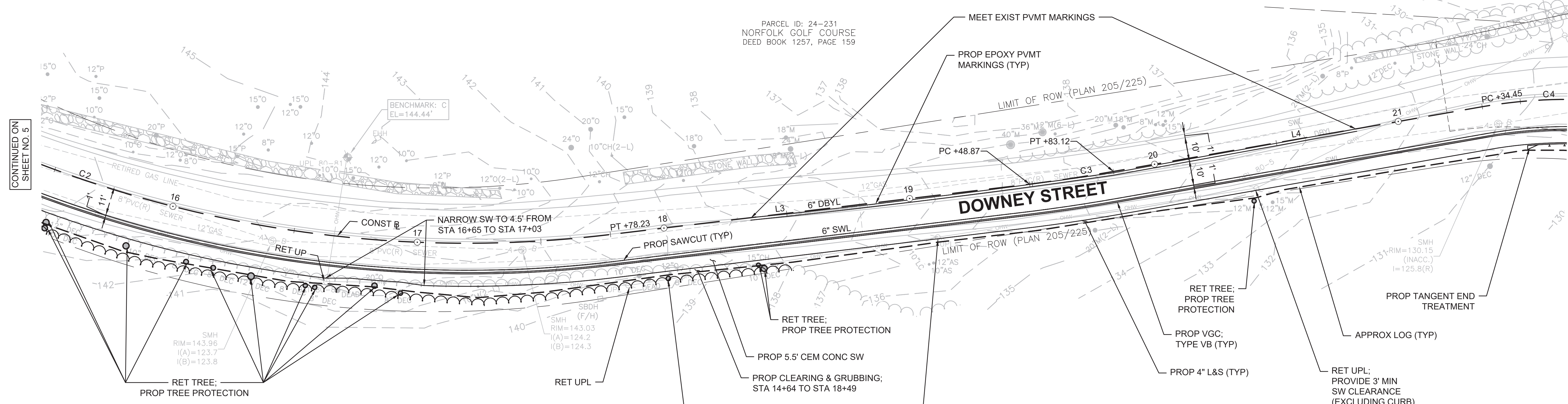


CONTINUED ON  
SHEET NO. 6





IDENTIFICATION NUMBER	SIZE OF SIGN (in)		LEGEND	TEXT DIMENSIONS (in)			NUMBER OF SIGNS REQUIRED	COLOR			SIZE AND NUMBER OF POSTS REQUIRED	UNIT AREA (SF)	TOTAL AREA (SF)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR		BACK-GROUND	LEGEND	BORDER			
R1-1	30	30				①	1	RED	WHITE	WHITE	P5 1	6.25	6.25
W11-2	30	30					4	FL. YELLOW-GREEN	BLACK	BLACK	P5 4	6.25	25.00
W16-7pL	24	12					2	FL. YELLOW-GREEN	BLACK	BLACK	MOUNT W/ W11-2	2.00	4.00
W16-9P	24	12					2	FL. YELLOW-GREEN	BLACK	BLACK	MOUNT W/ W11-2	2.00	4.00



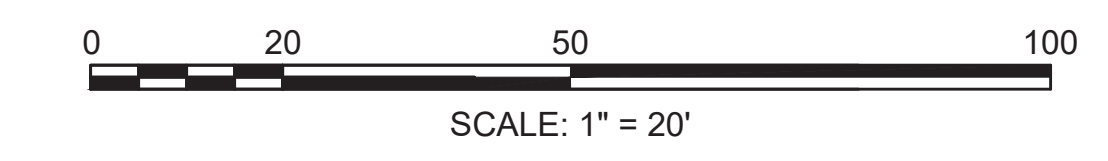
CONTINUED ON SHEET NO. 5

CONTINUED ON SHEET NO. 7

DOWNEY STREET CONSTRUCTION BASELINE DATA

NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C2	14+23.28	2904744.5065	744811.2847	R=480.08' Δ=42°21'40" L=354.94' T=186.02'		17+78.23	2905017.0301	745025.9501
L3	17+78.23	2905017.0301	745025.9501		N17°08'49"E 170.64'	19+48.87	2905180.0870	745076.2596
C3	19+48.87	2905180.0870	745076.2596	R=732.50' Δ=2°40'46" L=34.25' T=17.13'		19+83.12	2905213.1110	745085.3453
L4	19+83.12	2905213.1110	745085.3453		N14°02'36"E 151.33'	21+34.45	2905359.9210	745122.0669
C4	21+34.45	2905359.9210	745122.0669	R=197.50' Δ=38°13'58" L=131.79' T=68.45'		22+66.24	2905468.2126	745192.8219

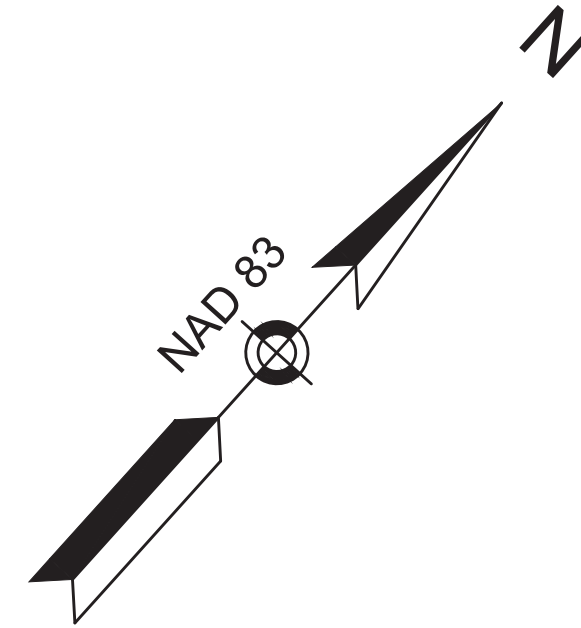
PARCEL ID: 24-225  
TOWN OF WESTWOOD





GUARDRAIL DETAILS

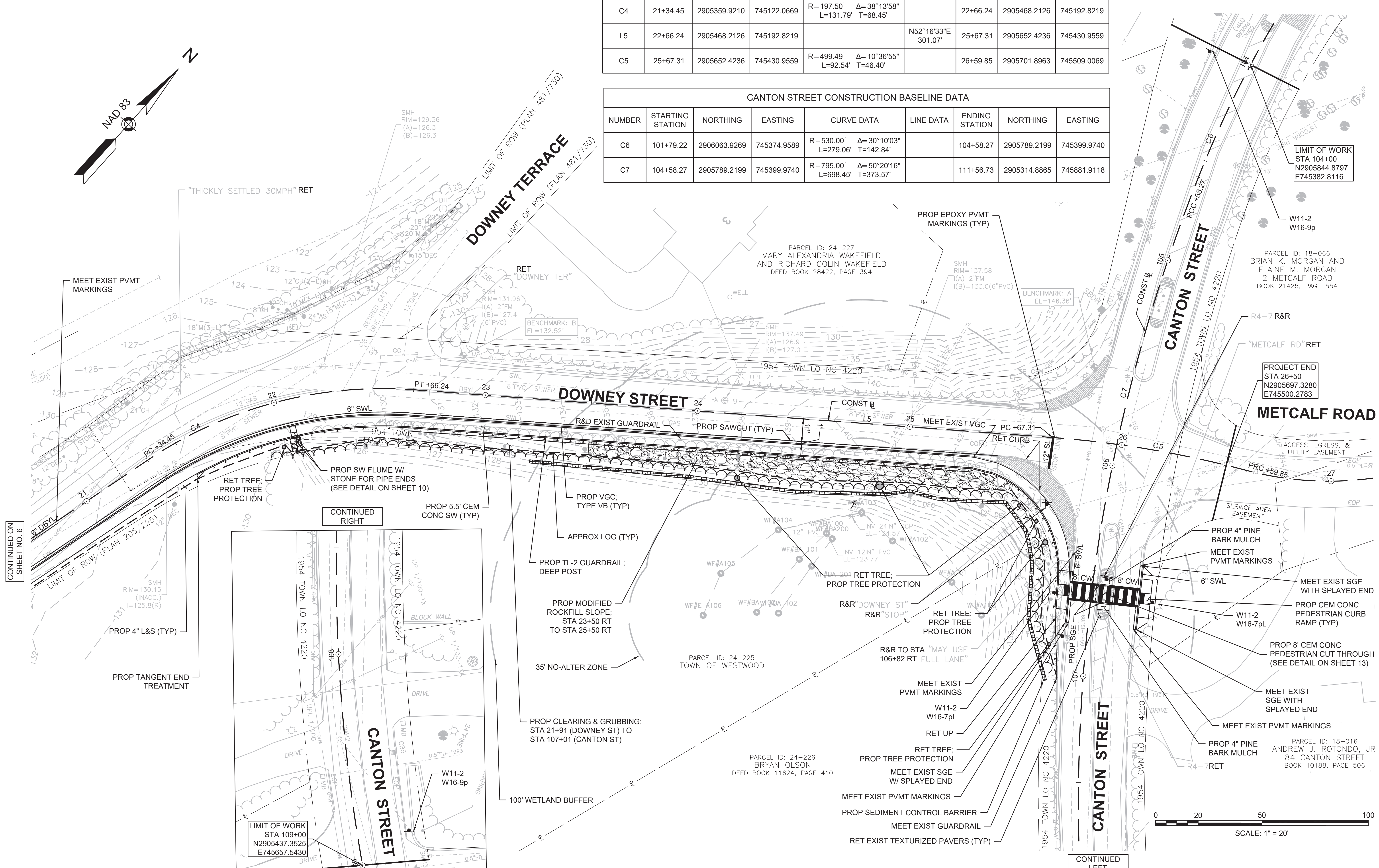
STA 21+51 RT TO STA 21+78 RT, TANGENT END TREATMENT  
 STA 21+78 RT (DOWNEY STREET  $\square$ ) TO STA 107+00 RT (CANTON STREET  $\square$ ), TL-2 (DEEP POST)



DOWNEY STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C4	21+34.45	2905359.9210	745122.0669	R=197.50' Δ=38°13'58" L=131.79' T=68.45'		22+66.24	2905468.2126	745192.8219
L5	22+66.24	2905468.2126	745192.8219		N52°16'33"E 301.07'	25+67.31	2905652.4236	745430.9559
C5	25+67.31	2905652.4236	745430.9559	R=499.49' Δ=10°36'55" L=92.54' T=46.40'		26+59.85	2905701.8963	745509.0069

CANTON STREET CONSTRUCTION BASELINE DATA								
NUMBER	STARTING STATION	NORTHING	EASTING	CURVE DATA	LINE DATA	ENDING STATION	NORTHING	EASTING
C6	101+79.22	2906063.9269	745374.9589	R=530.00' Δ=30°10'03" L=279.06' T=142.84'		104+58.27	2905789.2199	745399.9740
C7	104+58.27	2905789.2199	745399.9740	R=795.00' Δ=50°20'16" L=698.45' T=373.57'		111+56.73	2905314.8865	745881.9118

WESTWOOD  
 DOWNEY STREET SIDEWALK  
 CONSTRUCTION PLANS  
 SHEET 7 OF 22

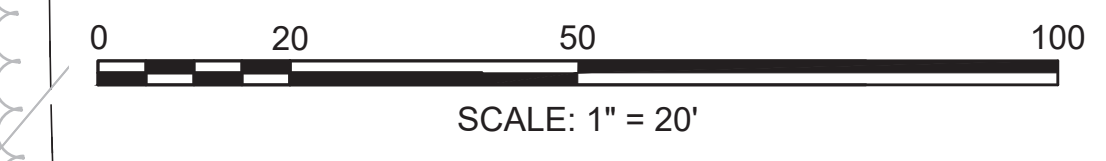


LIMIT OF WORK  
 STA 104+00  
 N2905844.8797  
 E745382.8116

PARCEL ID: 18-066  
 BRIAN K. MORGAN AND  
 ELAINE M. MORGAN  
 2 METCALF ROAD  
 BOOK 21425, PAGE 554

PROJECT END  
 STA 26+50  
 N2905697.3280  
 E745500.2783

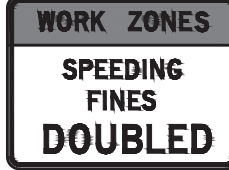
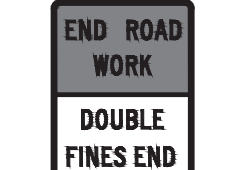




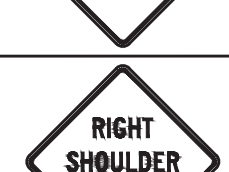
PARCEL ID: 18-016  
 ANDREW J. ROTONDO, JR  
 84 CANTON STREET  
 BOOK 10188, PAGE 506

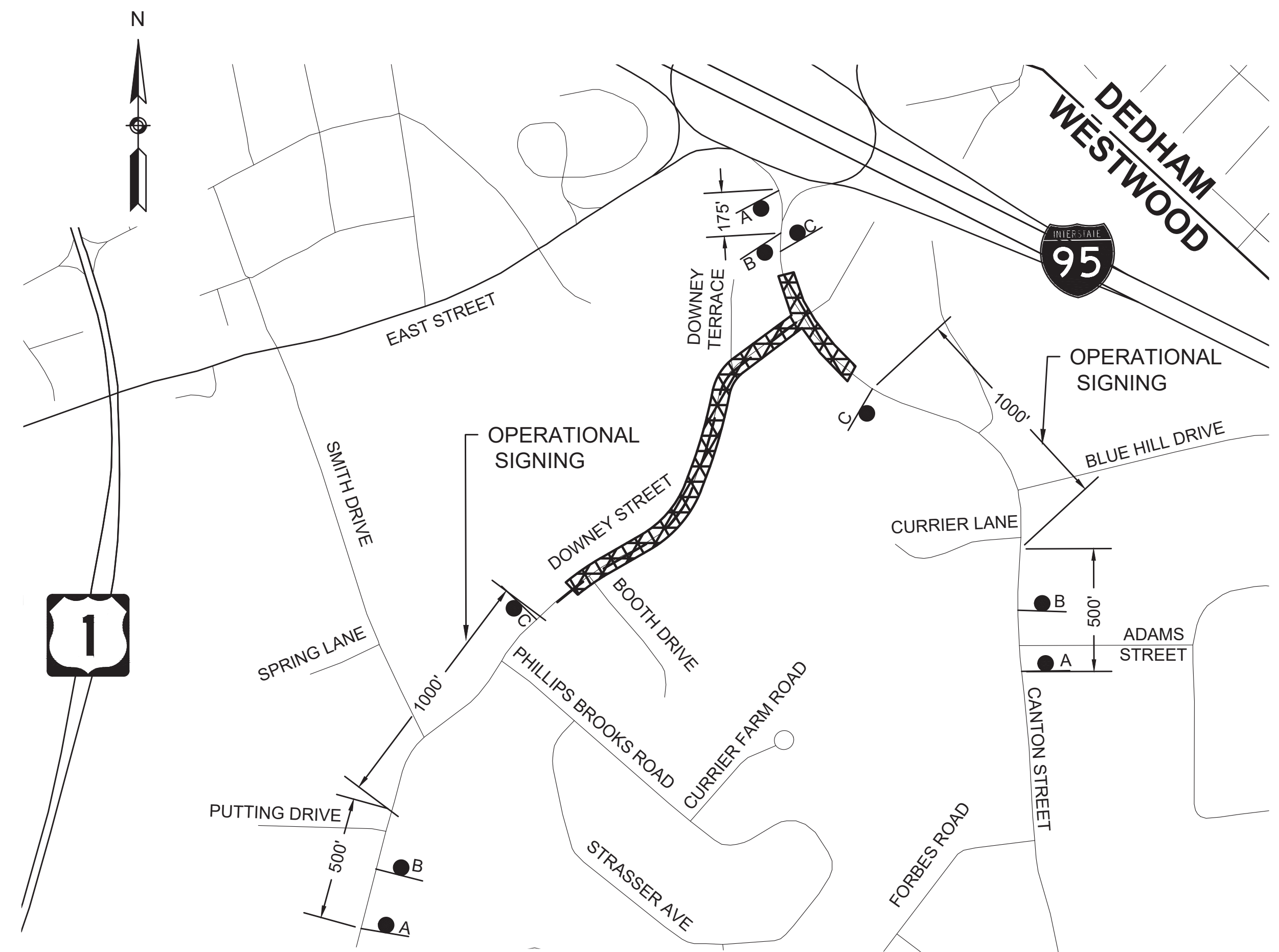


CONTINUED ON  
 SHEET NO. 6

CONTINUED  
 LEFT






TEMPORARY TRAFFIC CONTROL SIGN SUMMARY												
IDENTIFICATION NUMBER	SIZE OF SIGN (in)		LEGEND	TEXT DIMENSIONS (in)			COLOR			NUMBER OF SIGNS REQUIRED	UNIT AREA (SF)	TOTAL AREA (SF)
	WIDTH	HEIGHT		LETTER HEIGHT	VERTICAL SPACING	ARROW RTE. MKR	BACK-GROUND	LEGEND	BORDER			
MA-R2-10a	48	36		MASSDOT STANDARD SIGN			FL. ORANGE	BLACK	BLACK	3	12.00	36.00
MA-R2-10e	36	48		↓			FL. ORANGE	BLACK	BLACK	3	12.00	36.00
W5-1	36	36		SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			FL. ORANGE	BLACK	BLACK	1	9.00	9.00
W20-1	36	36		↓			FL. ORANGE	BLACK	BLACK	3	9.00	27.00
W20-4	36	36		↓			FL. ORANGE	BLACK	BLACK	3	9.00	27.00
MA-W20-7b	36	36		MASSDOT STANDARD SIGN			FL. ORANGE	BLACK	BLACK	3	9.00	27.00
W21-5a	36	36		SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS			FL. ORANGE	BLACK	BLACK	1	9.00	9.00



ADVANCE SIGNING SCHEMATIC  
 N.T.S.

LEGEND:

- A  W20-1
- B  MA-R2-10a
- C  MA-R2-10e

NOTE:  
 MA-R2-10e SIGNS SHALL BE LOCATED 100'  
 FROM THE LIMIT OF WORK.



**NOTES:**

- ALL TEMPORARY TRAFFIC CONTROL WORK SHALL CONFORM TO THE LATEST EDITION OF THE "MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES" (MUTCD) AND ALL REVISIONS, UNLESS SUPERCEDED BY THESE PLANS.
- ALL SIGN LEGENDS, BORDERS, AND MOUNTING SHALL BE IN ACCORDANCE WITH THE MUTCD.
- TEMPORARY CONSTRUCTION SIGNING AND ALL OTHER TRAFFIC CONTROL DEVICES SHALL BE IN PLACE PRIOR TO THE START OF ANY WORK.
- TEMPORARY CONSTRUCTION SIGNING, BARRICADES, AND ALL OTHER NECESSARY WORK ZONE TRAFFIC CONTROL DEVICES SHALL BE REMOVED FROM THE HIGHWAY OR COVERED WHEN THEY ARE NOT REQUIRED FOR CONTROL OF TRAFFIC.
- SIGNS AND SIGN SUPPORTS LOCATED ON OR NEAR THE TRAVELED WAY, CHANNELIZING DEVICES, BARRIERS, AND CRASH ATTENUATORS MUST PASS THE CRITERIA SET FORTH IN THE "MANUAL FOR ASSESSING SAFETY HARDWARE" (MASH).
- CONTRACTORS SHALL NOTIFY EACH ABUTTER AT LEAST 24 HOURS IN ADVANCE OF THE START OF ANY WORK THAT WILL REQUIRE THE TEMPORARY CLOSURE OF ACCESS, SUCH AS CONDUIT INSTALLATION, EXISTING PAVEMENT EXCAVATION, TEMPORARY DRIVEWAY PAVEMENT PLACEMENT, AND SIMILAR OPERATIONS.
- THE ADVISORY SPEED LIMIT, IF REQUIRED, SHALL BE DETERMINED BY THE ENGINEER.
- DISTANCES ARE A GUIDE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
- MAXIMUM SPACING OF TRAFFIC DEVICES IN A TAPER (DRUMS OR CONES) IS EQUAL IN FEET TO THE SPEED LIMIT IN MPH.
- MINIMUM LANE WIDTH IS TO BE 11 FEET UNLESS OTHERWISE SHOWN. MINIMUM LANE WIDTH TO BE MEASURED FROM THE EDGE OF DRUMS OR MEDIAN BARRIER.
- ALL SIGNS SHALL BE MOUNTED ON THEIR OWN STANDARD SIGN SUPPORTS.
- NO WORK THAT IMPACTS THE TRAVELED WAY SHALL BE PERMITTED DURING PEAK HOUR TRAFFIC. PEAK HOUR IS DEFINED AS WEEKDAYS FROM 7-9 AM & 4-6 PM.

**LEGEND:**

- CHANNELIZATION DEVICE
- ◻ WORK ZONE
- 🚚 WORK VEHICLE
- 👮 POLICE/FLAGGER DETAIL
- ➔ DIRECTION OF TRAFFIC
- 🚚 TRUCK MOUNTED ATTENUATOR
- 🚧 TYPE III BARRICADE
- 🌐 IMPACT ATTENUATOR
- 🚦 TRAFFIC OR PEDESTRIAN SIGNAL
- 📄 CHANGEABLE MESSAGE SIGN
- ▭ MEDIAN BARRIER
- 🚦 SIGN
- 📄 ARROW BOARD
- ▭ MEDIAN BARRIER WITH WARNING LIGHTS
- 📄 TEMPORARY PORTABLE RUMBLE STRIP

**TAPER LENGTH CRITERIA FOR TEMPORARY TRAFFIC CONTROL ZONES**

TYPE OF TAPER	TAPER LENGTH (L)
MERGING TAPER	AT LEAST L
SHIFTING TAPER	AT LEAST 0.5L
SHOULDER TAPER	AT LEAST 0.33L
ONE-LANE, TWO-WAY TRAFFIC TAPER	50 FT MIN. 100 FT MAX.
DOWNSTREAM TAPER	50 FT MIN. 100 FT MAX. PER LANE

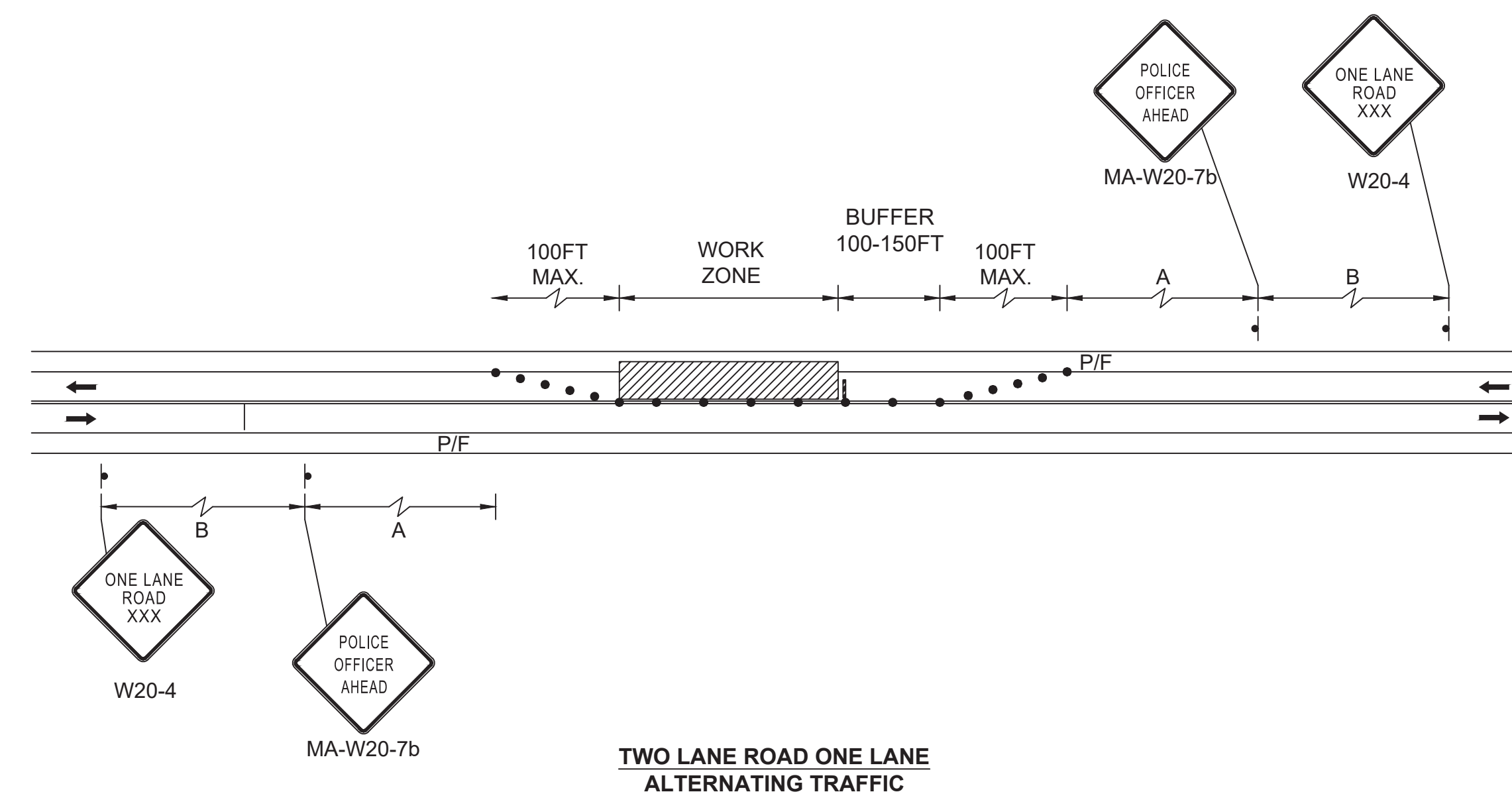
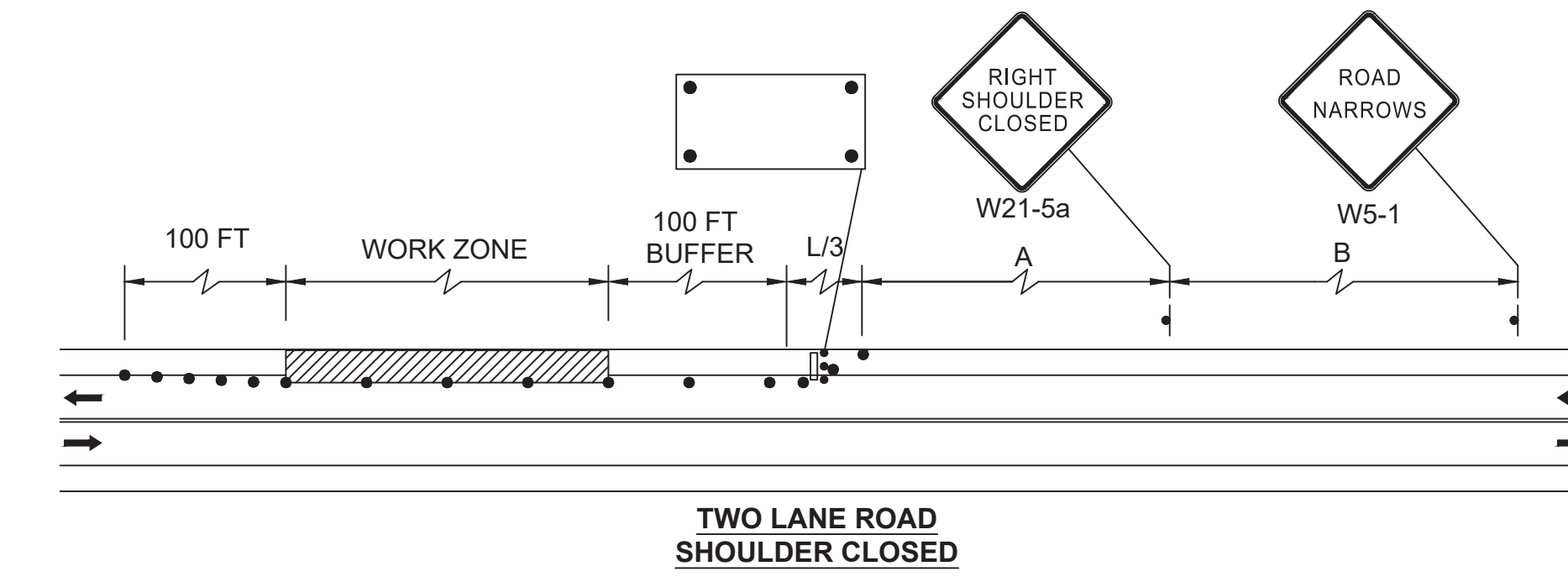
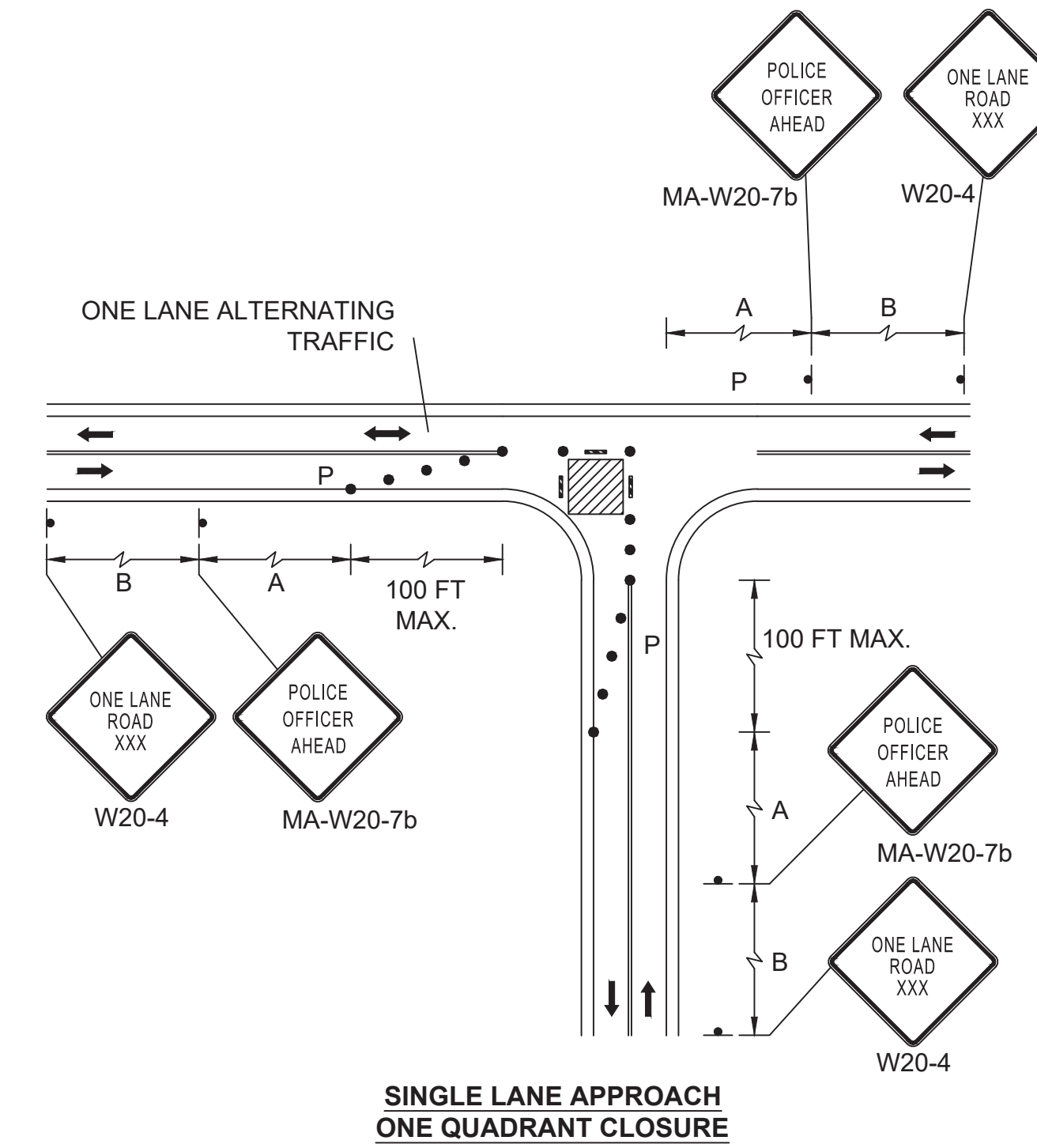
**FORMULAS FOR DETERMINING TAPER LENGTHS**

SPEED LIMIT (S)	TAPER LENGTH (L) FEET
40 MPH OR LESS	$L = \frac{WS^2}{60}$
45 MPH OR MORE	$L = WS$

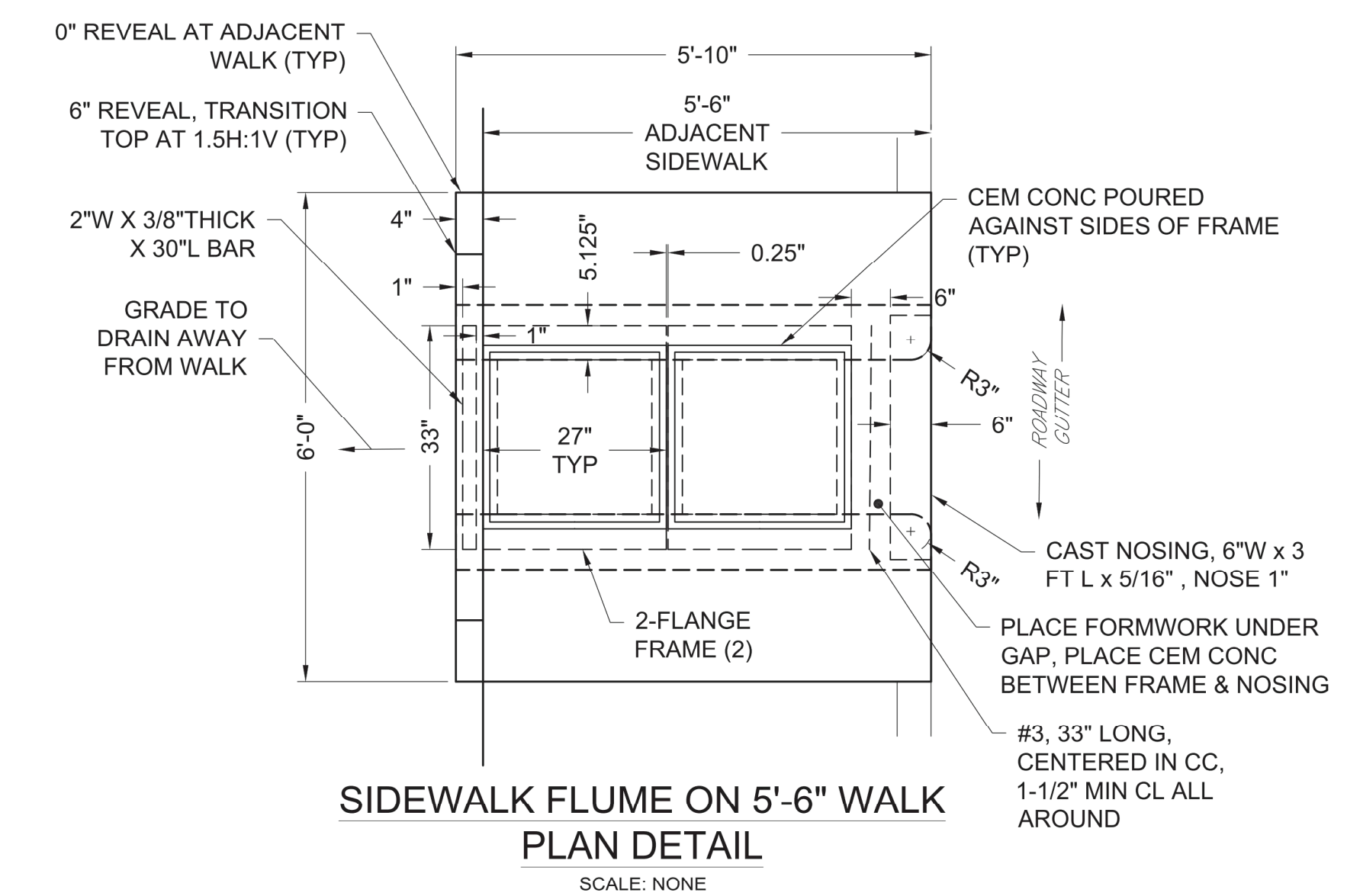
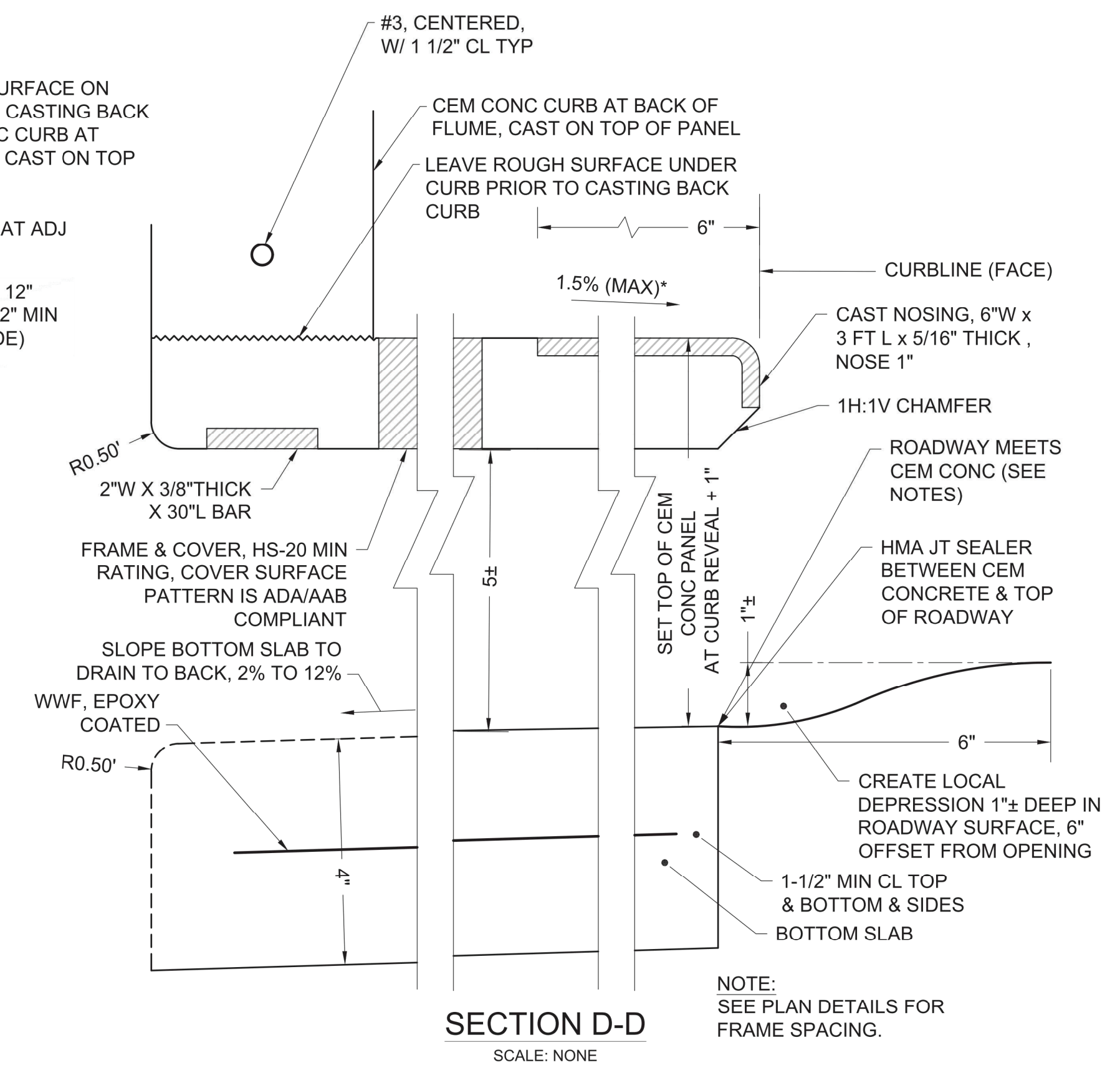
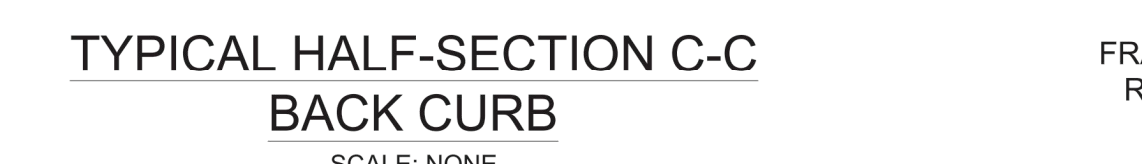
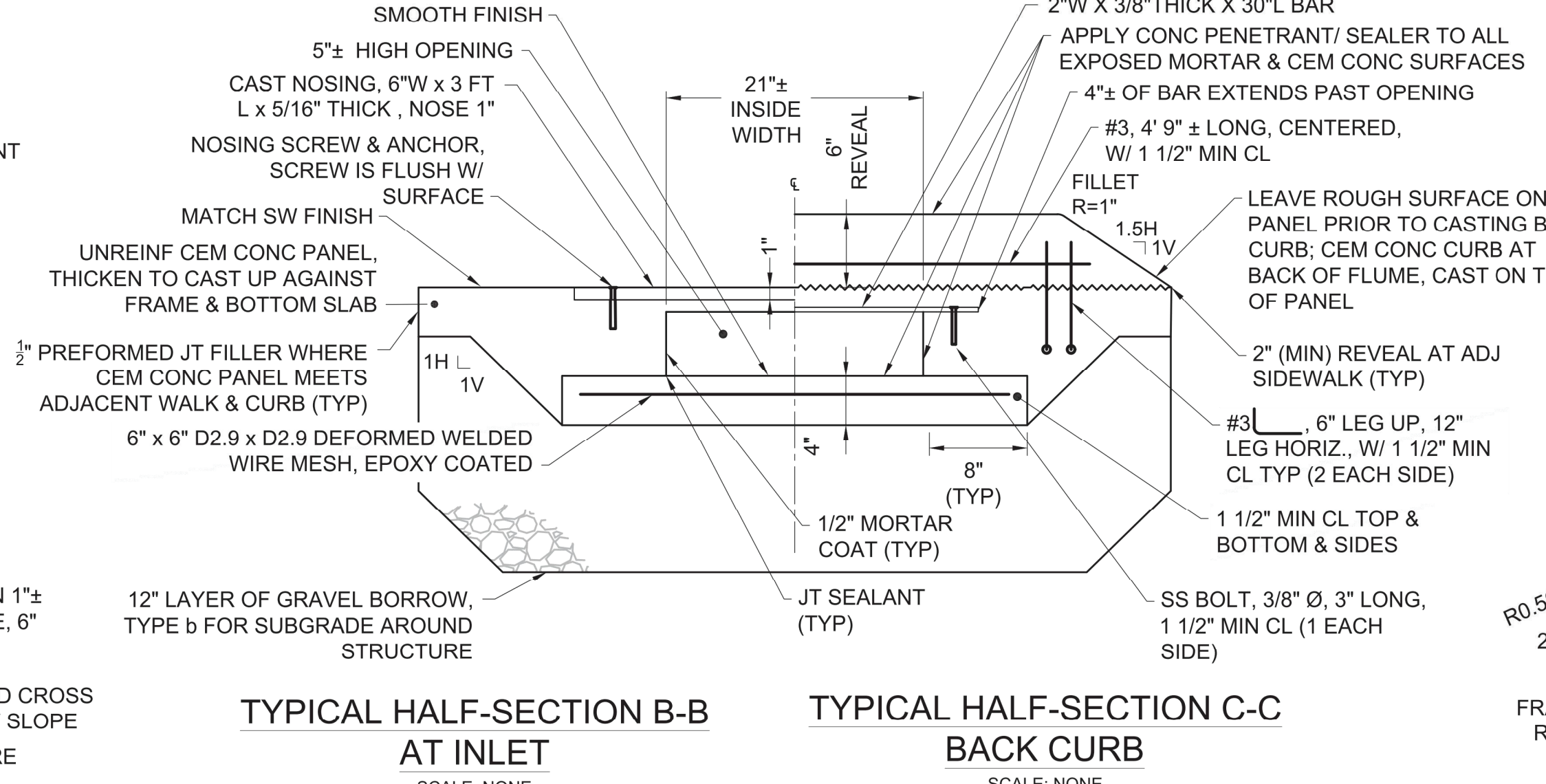
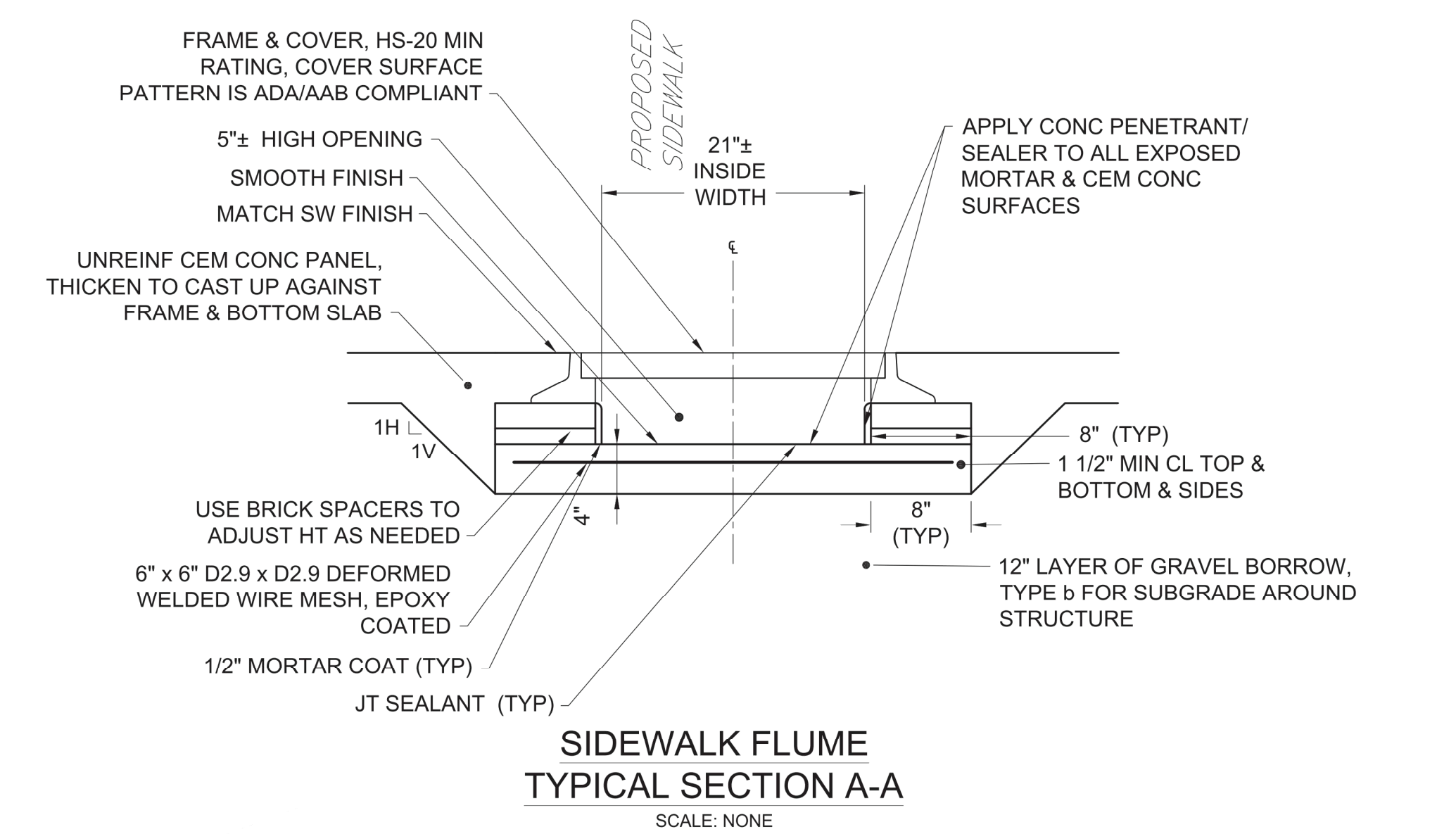
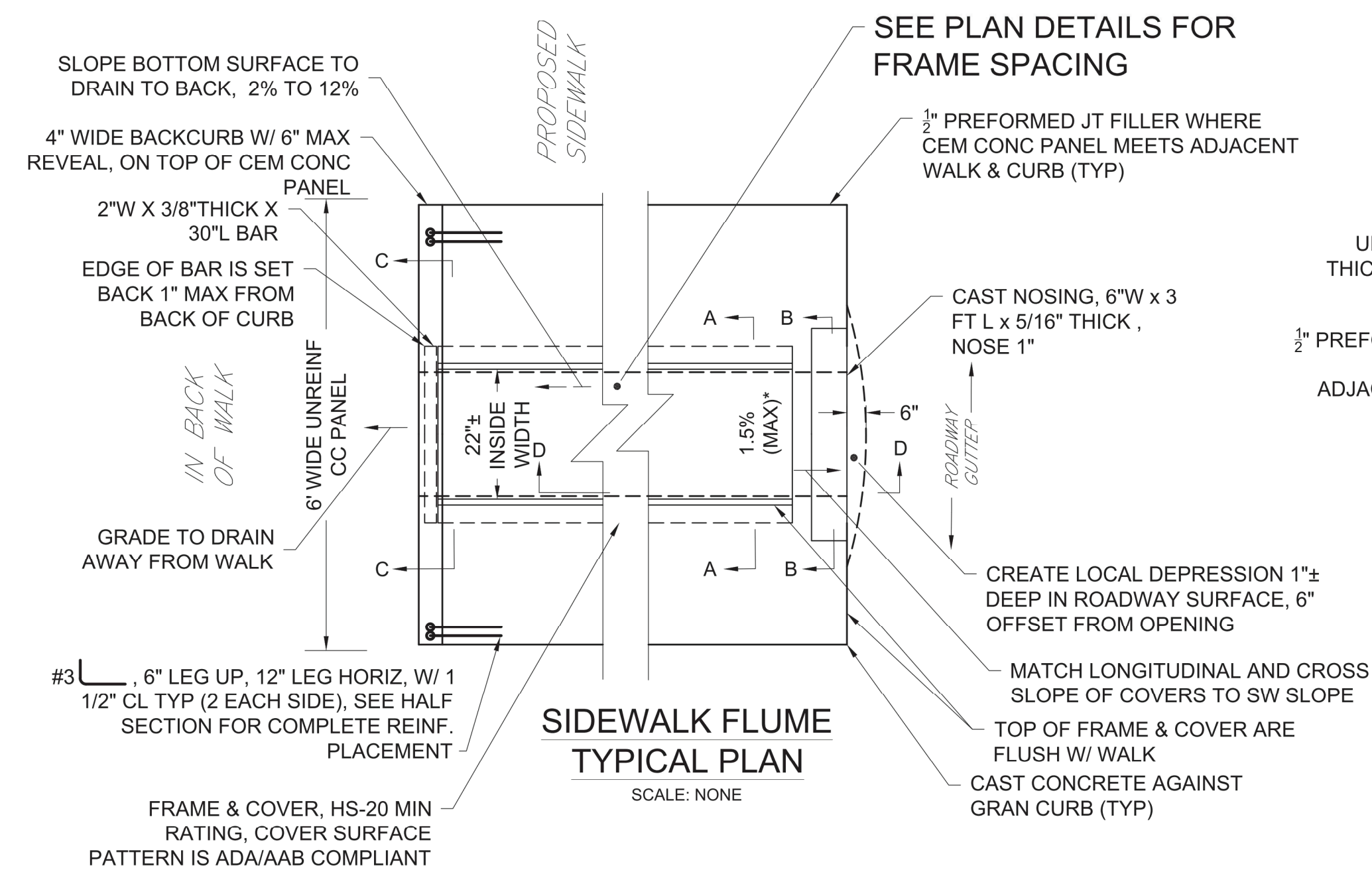
WHERE: L = TAPER LENGTH IN FEET

W = WIDTH OF OFFSET IN FEET

S = POSTED SPEED LIMIT, OR OFF-PEAK 85TH-PERCENTILE SPEED PRIOR TO WORK STARTING, OR THE ANTICIPATED OPERATING SPEED IN MPH



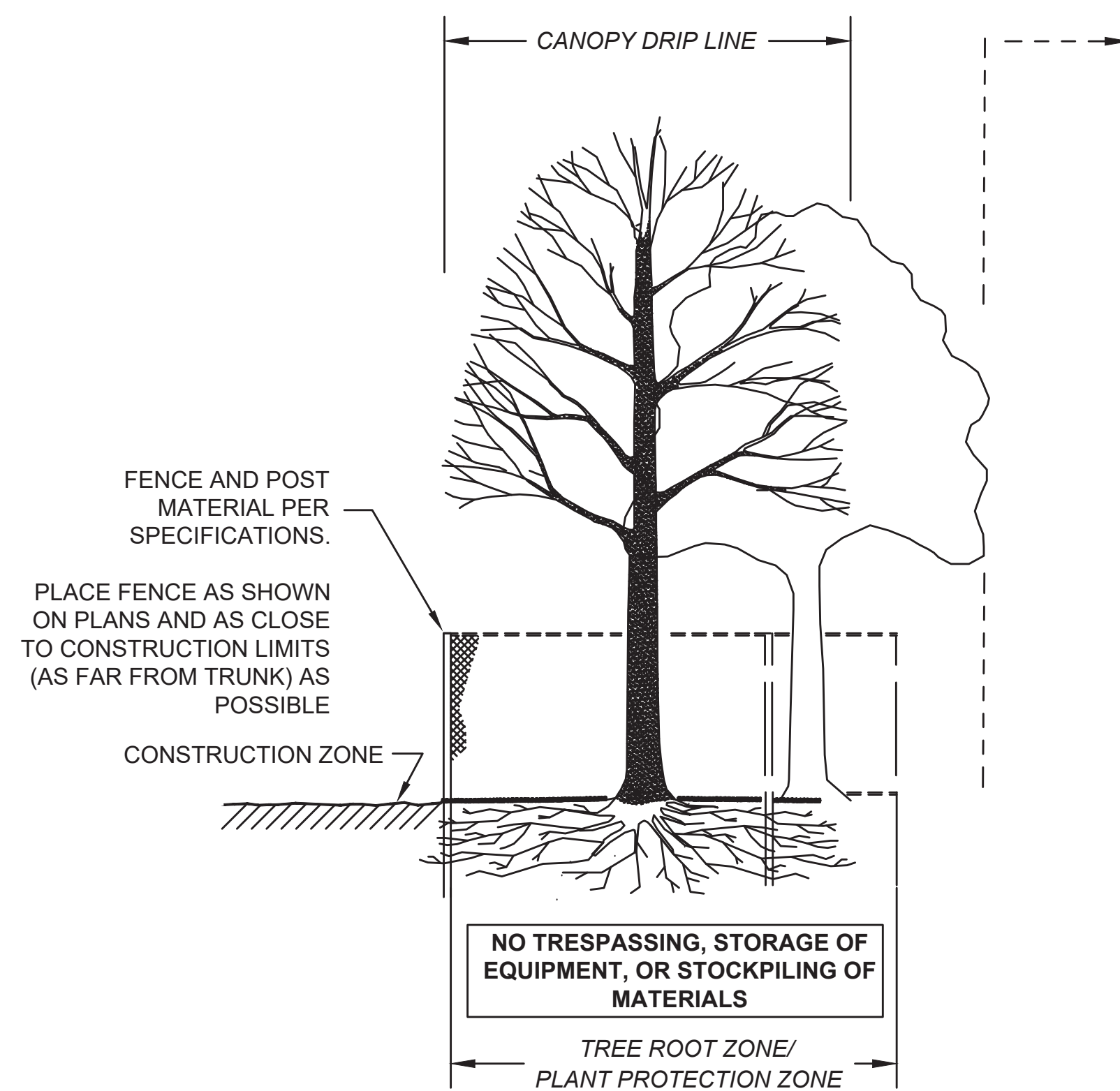




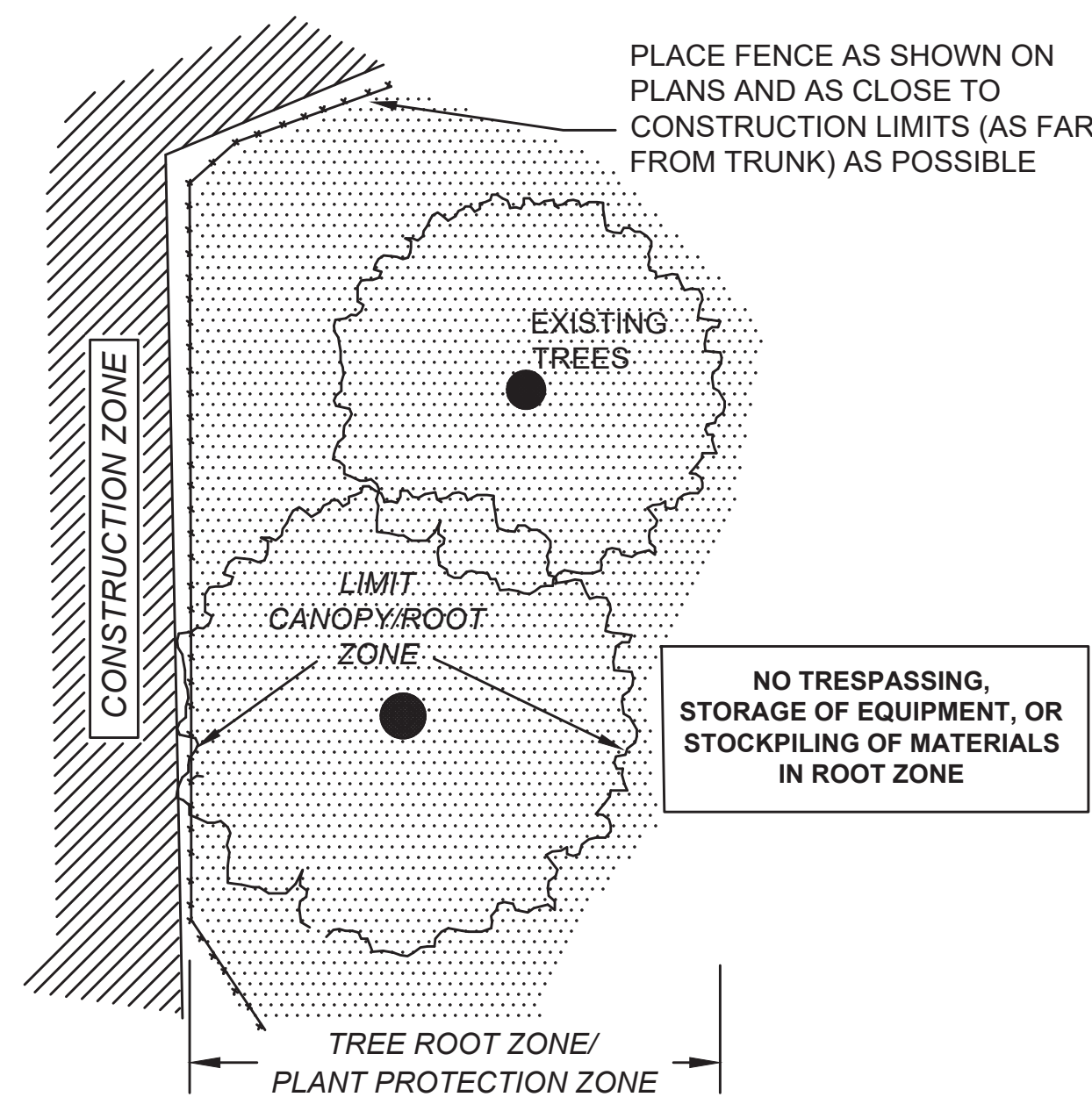
\* TOLERANCE FOR CONSTRUCTION OF ±0.5%

- SIDEWALK FLUME NOTES:**
1. CONTRACTOR SHALL VERIFY ALL DIMENSIONS FOR THE CONSTRUCTABILITY OF THE SIDEWALK FLUME. ONLY AFTER VERIFICATION SHALL ANY REINFORCEMENT, STRUCTURAL STEEL, FRAMES, OR COVERS BE ORDERED.
  2. MINIMUM SPACING BETWEEN FRAMES AND CAST NOSING IS 1/4 INCH.
  3. CAST NOSING - INSTALL PER MANUFACTURER'S INSTRUCTIONS. SURFACE OF CAST NOSING SHALL BE NON-SKID.
  4. SUBMIT SHOP DRAWINGS FOR FRAME & COVERS FOR ENGINEER'S APPROVAL. MINIMUM LOAD RATING FOR FRAME & COVER IS HS-20. SHOW INSTALLATION OF FRAME & COVER ON CEMENT CONCRETE FLUME STRUCTURE.
  5. IN WET AREAS, WRAP SUB-BASE IN GEOTEXTILE FABRIC FOR STABILIZATION AS DIRECTED BY ENGINEER.
  6. ADJUST FORMWORK TO ADJUST HEIGHT OF INLET OPENING AND SIDEWALLS TO MEET CURB REVEAL.
  7. ADJUST SLOPE OF BOTTOM SLAB FOR POSITIVE DRAINAGE.
  8. USE 4000 PSI, 3/4 INCH, 610 LB CEMENT CONCRETE.
  9. FOR BARS, ANGLES, AND RODS, USE Fy 36 ksi MINIMUM STRENGTH, GALVANIZED STEEL.
  10. FOR DEFORMED WELDED WIRE FABRIC, USE Fy 60 ksi MINIMUM STRENGTH, EPOXY COATED.
  11. APPLY PENETRANT/SEALER TO MORTAR & CEM CONC SURFACES INSIDE OF FLUME PRIOR TO INSTALLING COVERS.





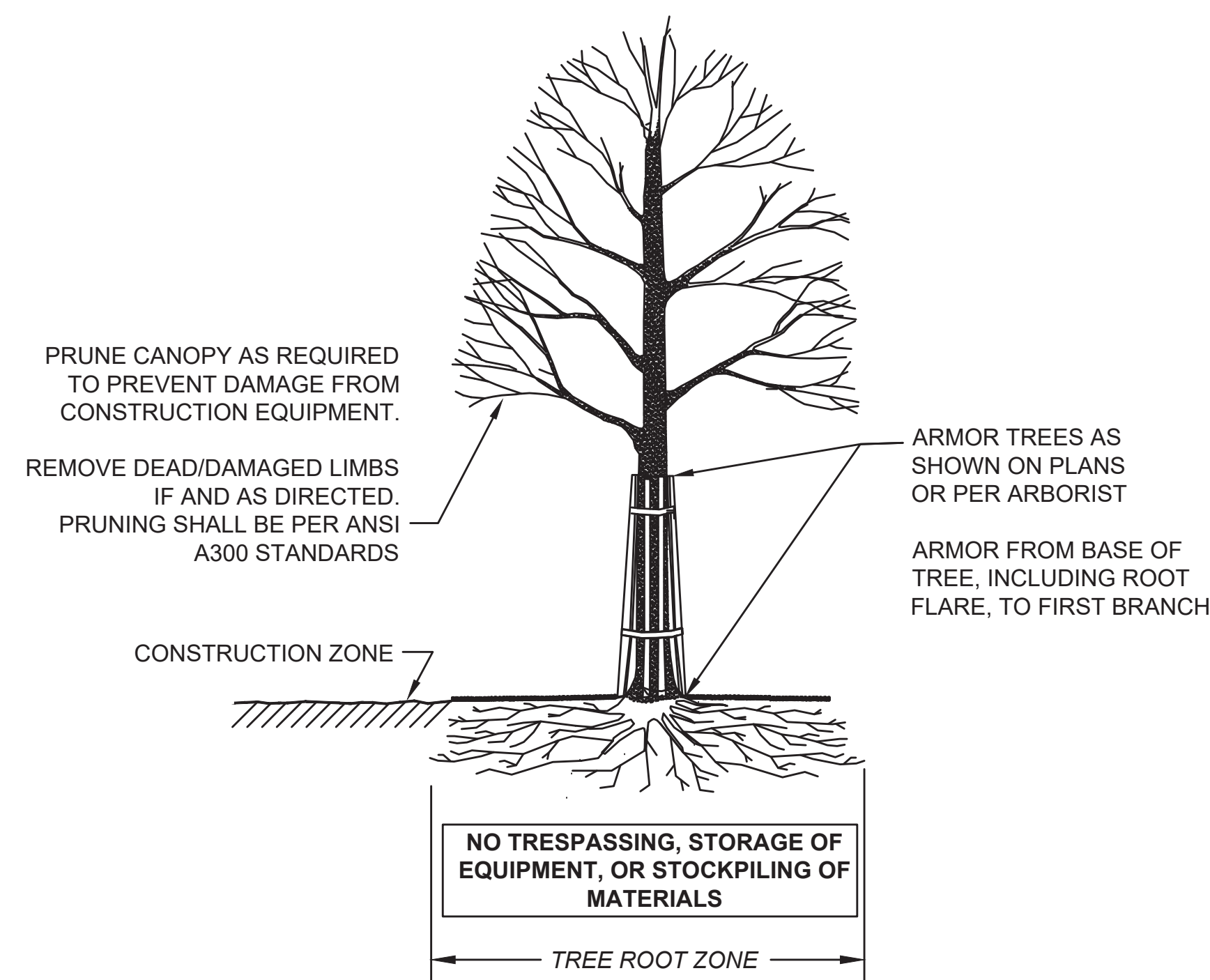
SECTION - FENCE PROTECTION OF ROOT ZONE



PLAN VIEW - FENCE PROTECTION OF ROOT ZONE

TREE PROTECTION - ROOT ZONE

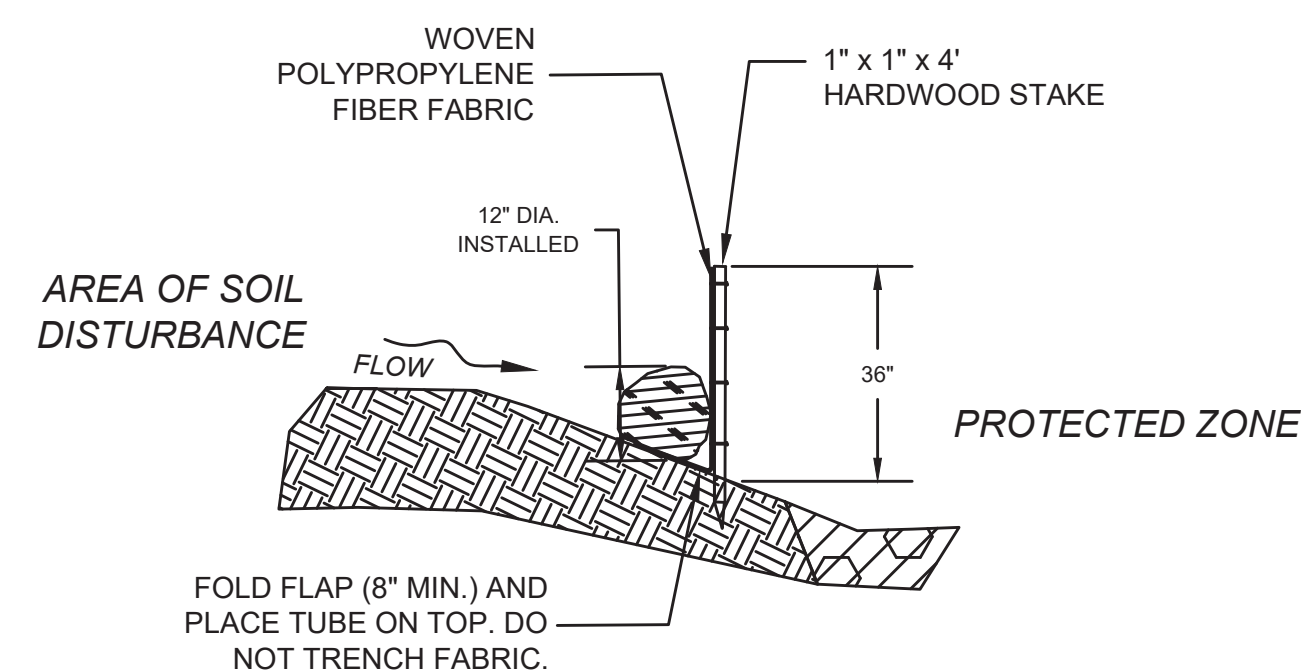
N.T.S.



SECTION - TRUNK ARMORING & PRUNING

TREE PROTECTION - TRUNK

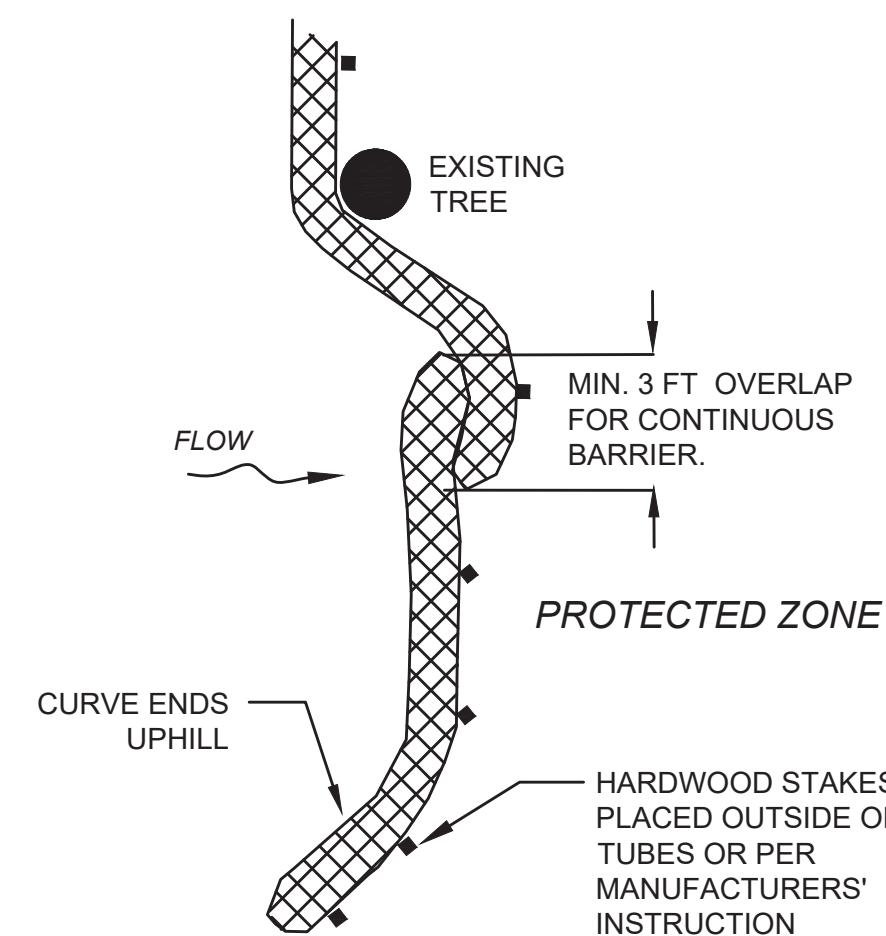
N.T.S.



SECTION

COMPOST FILTER TUBE & SILT FENCE

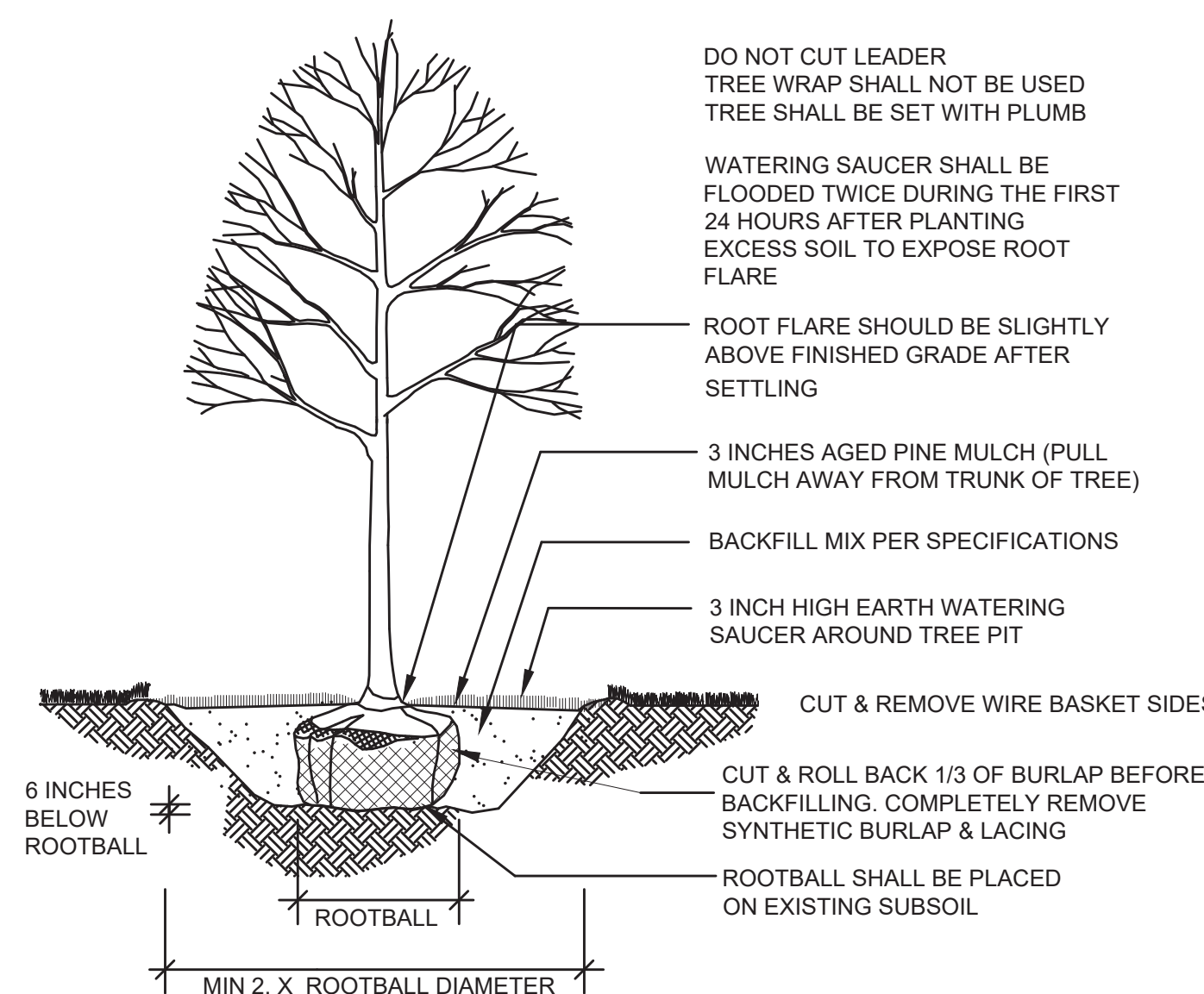
N.T.S.



PLAN VIEW

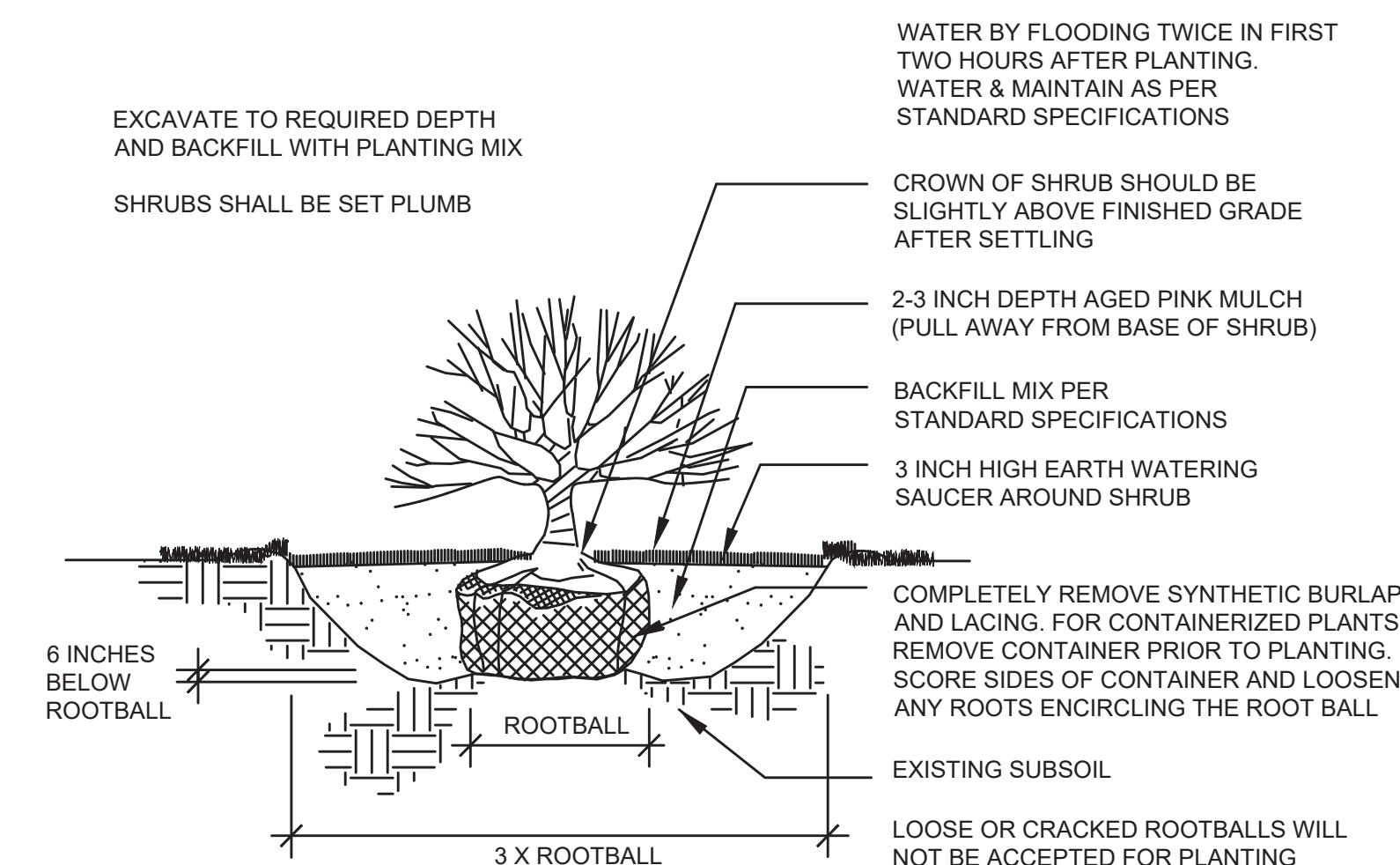
SEDIMENT CONTROL BARRIER

N.T.S.



DECIDUOUS TREE PLANTING

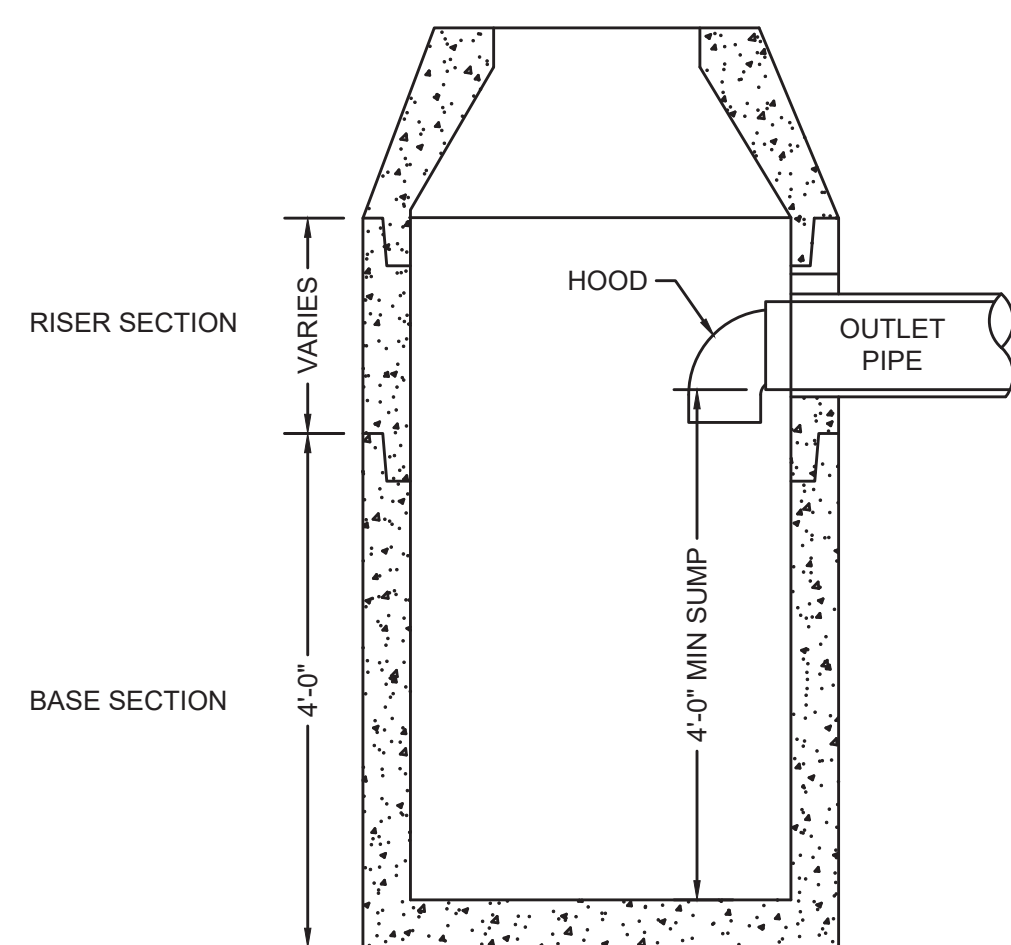
N.T.S.



SHRUB PLANTING

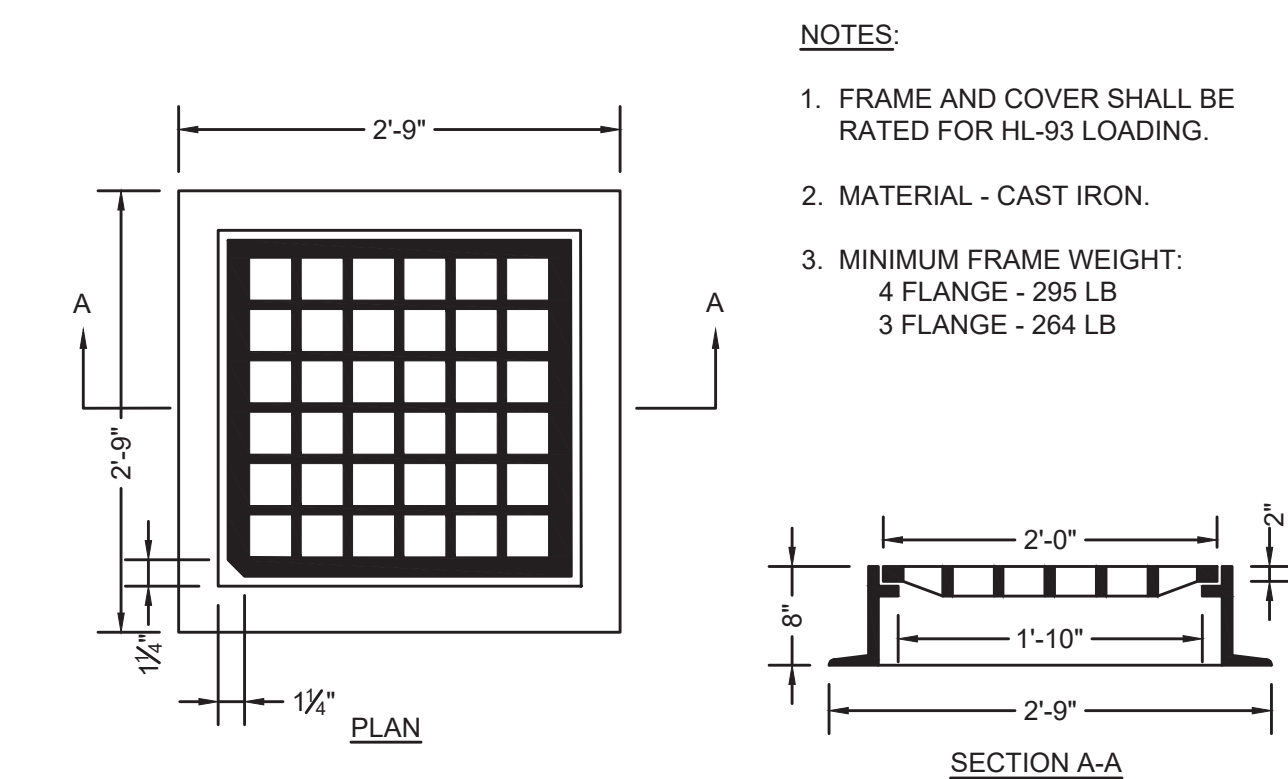
N.T.S.





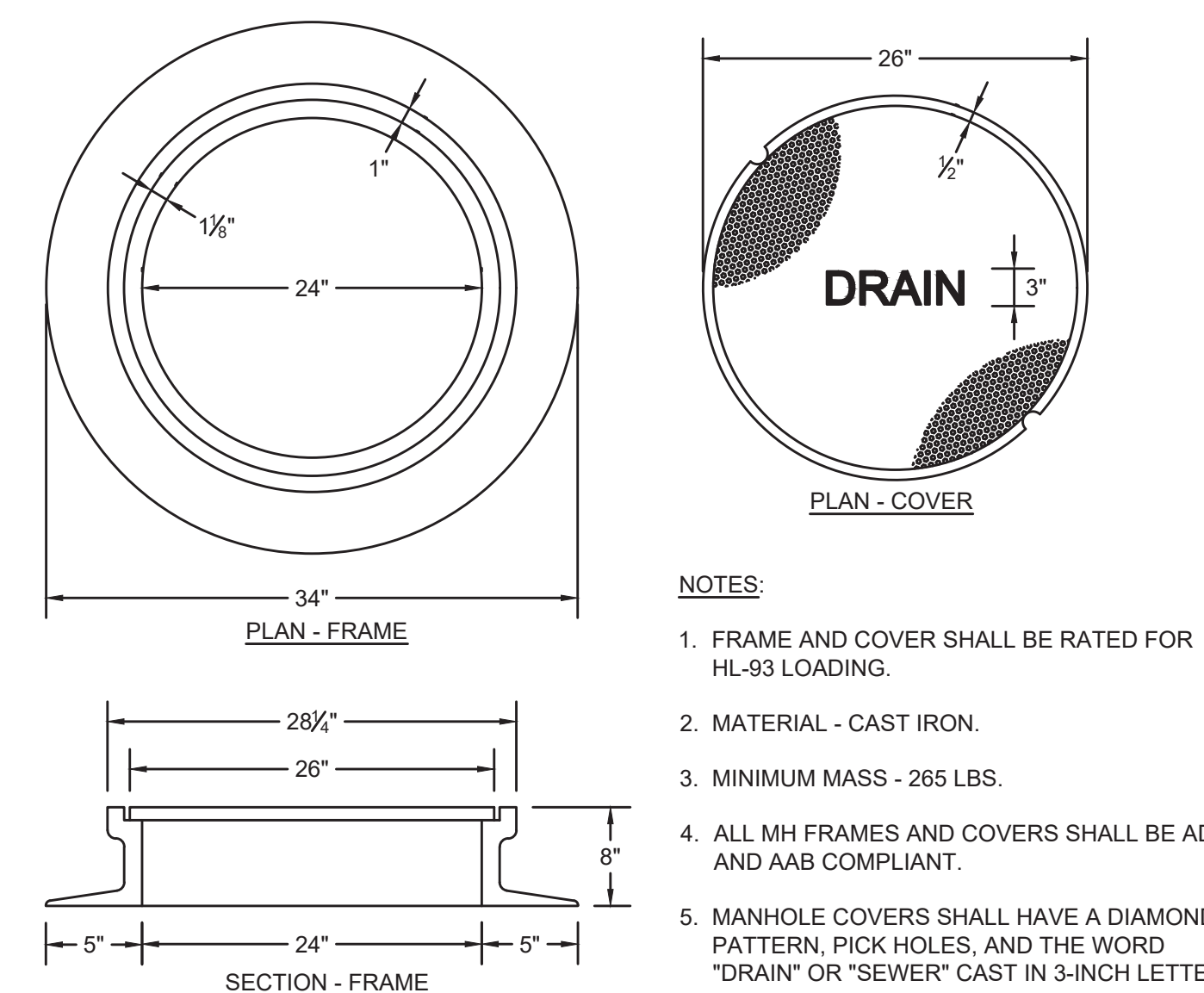
NOTE:  
ALL CATCH BASINS SHALL CONFORM TO MASSDOT CONSTRUCTION STANDARD E 201.4.0 EXCEPT FOR 4\"/>

**DEEP SUMP CATCH BASIN WITH HOOD**  
N.T.S.



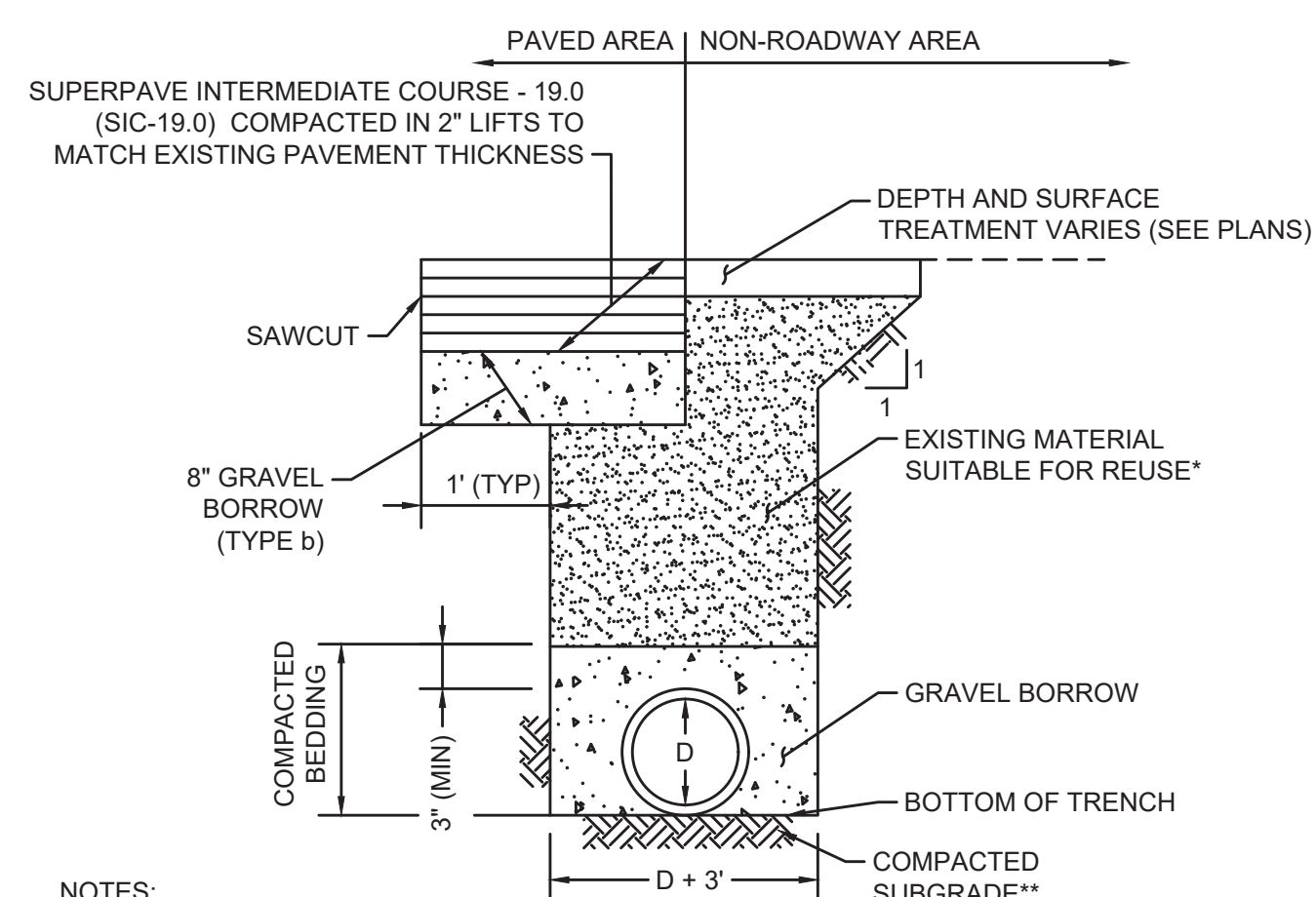
NOTES:  
1. FRAME AND COVER SHALL BE RATED FOR HL-93 LOADING.  
2. MATERIAL - CAST IRON.  
3. MINIMUM FRAME WEIGHT:  
4 FLANGE - 295 LB  
3 FLANGE - 264 LB

**CATCH BASIN FRAME & GRATE (MUNICIPAL STANDARD)**  
N.T.S.



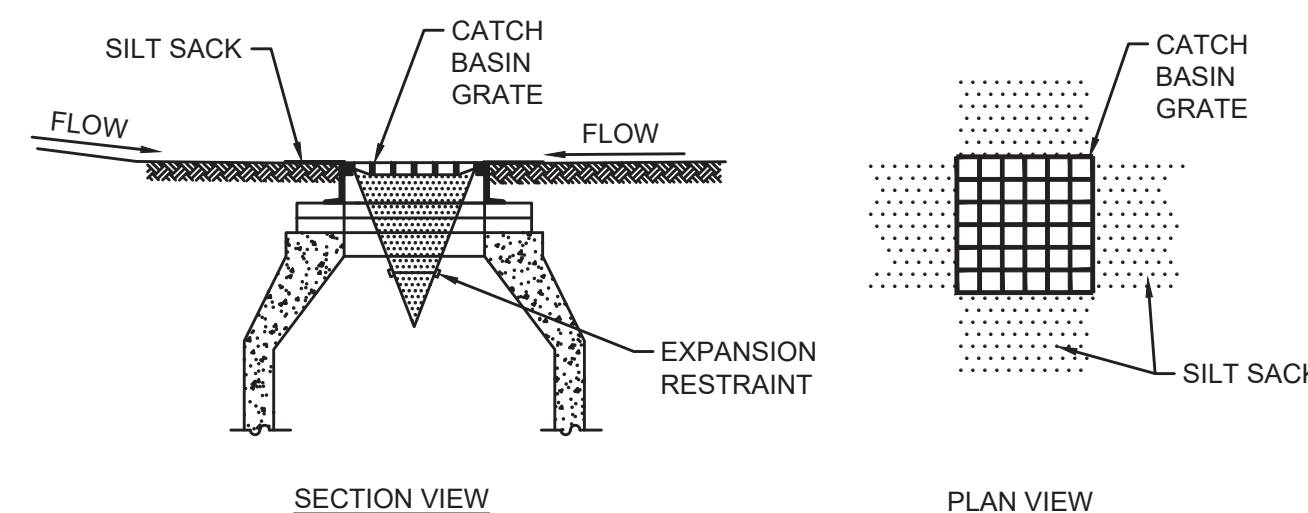
NOTES:  
1. FRAME AND COVER SHALL BE RATED FOR HL-93 LOADING.  
2. MATERIAL - CAST IRON.  
3. MINIMUM MASS - 265 LBS.  
4. ALL MH FRAMES AND COVERS SHALL BE ADA AND AAB COMPLIANT.  
5. MANHOLE COVERS SHALL HAVE A DIAMOND PATTERN, PICK HOLES, AND THE WORD "DRAIN" OR "SEWER" CAST IN 3-INCH LETTERS.

**MANHOLE FRAME & COVER (MUNICIPAL STANDARD)**  
N.T.S.



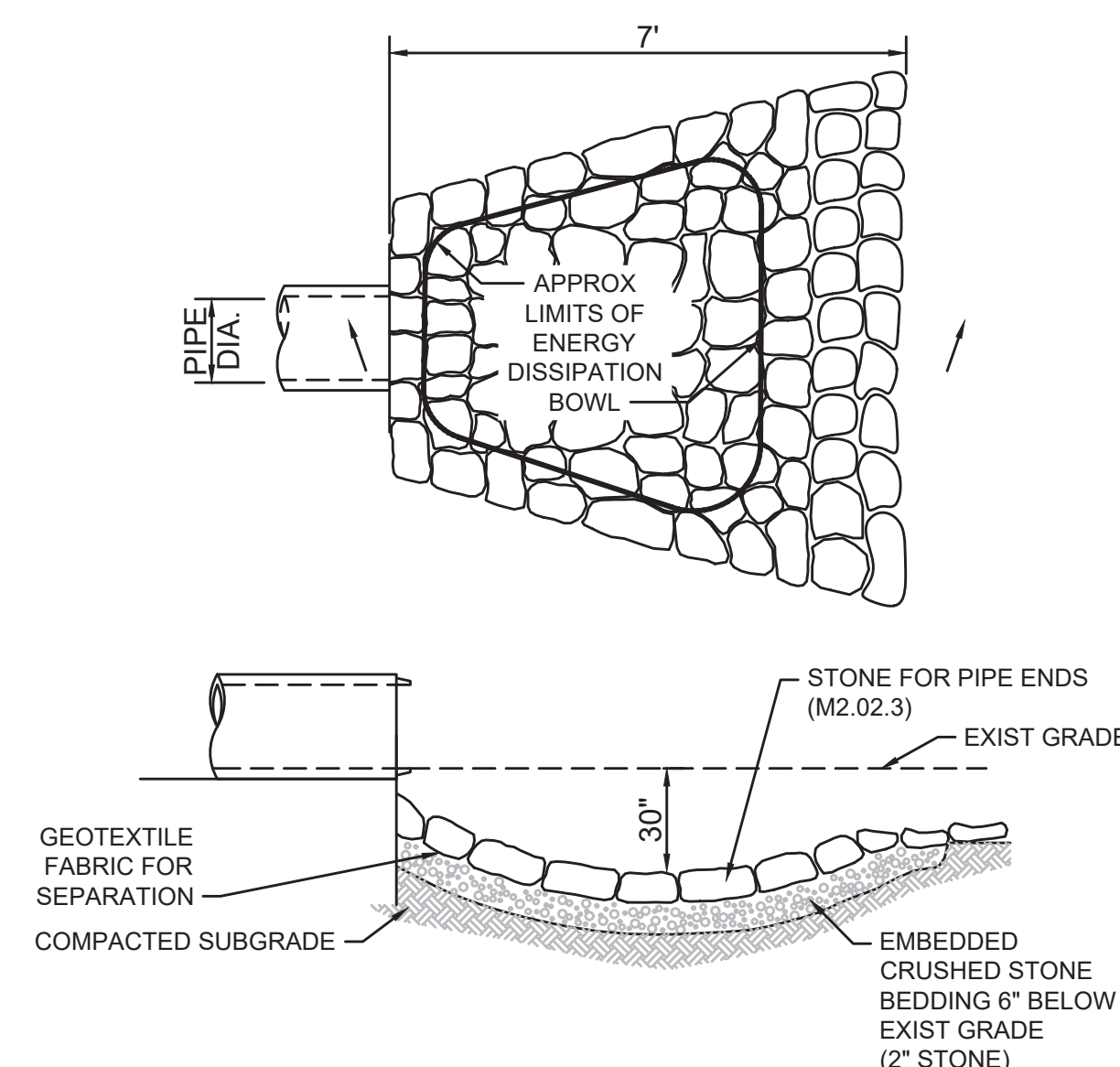
NOTES:  
\* EXISTING MATERIAL OBTAINED FROM EXCAVATION THAT IS DETERMINED TO BE SUITABLE, AND APPROVED BY THE ENGINEER SHALL BE USED. BACKFILL SHALL BE PLACED IN LAYERS NO MORE THAN 6\"/>

**UTILITY TRENCH**  
N.T.S.

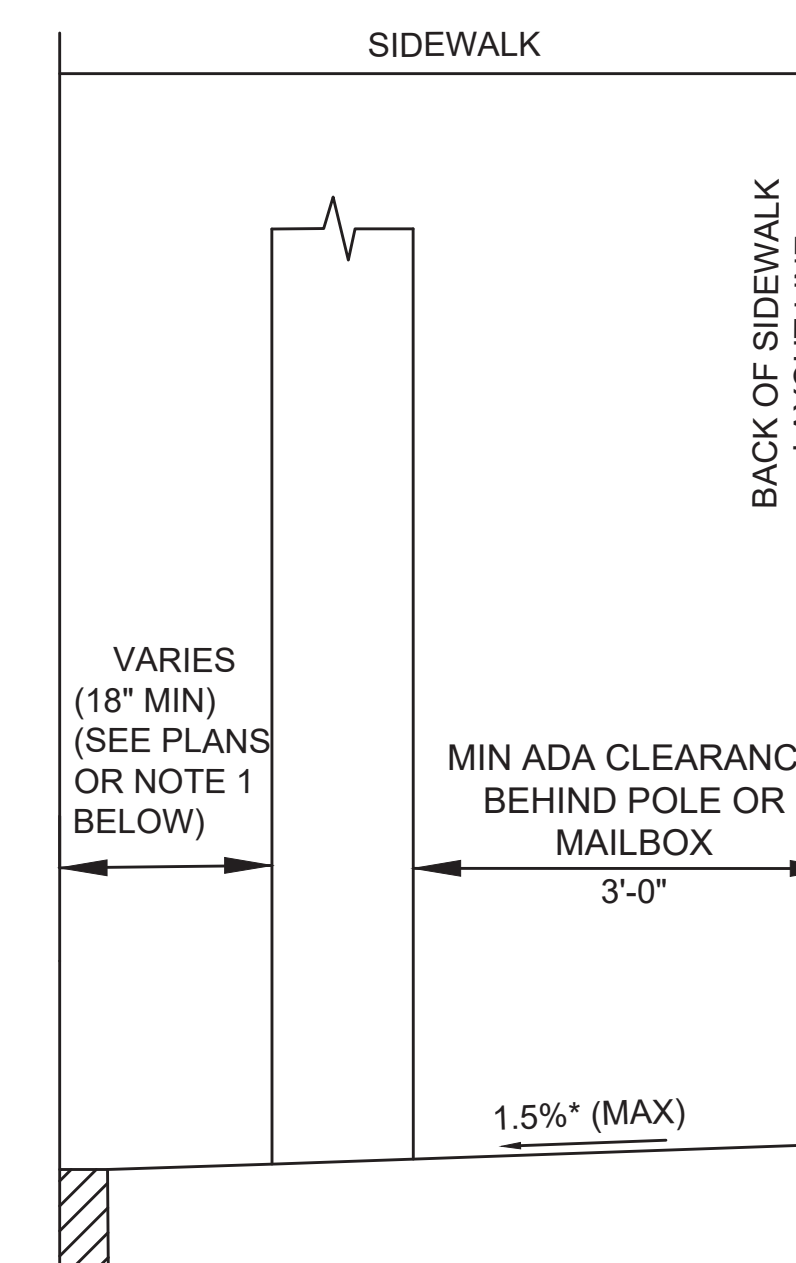


NOTES:  
1. INSTALL SILT SACK IN EXISTING CATCH BASINS BEFORE COMMENCING WORK, AND IN NEW CATCH BASINS IMMEDIATELY AFTER INSTALLATION OF STRUCTURE. MAINTAIN UNTIL BINDER COURSE PAVING IS COMPLETE OR A PERMANENT STAND OF GRASS HAS BEEN ESTABLISHED.  
2. GRATE TO BE PLACED OVER SILT SACK.  
3. SILT SACK SHALL BE INSPECTED PERIODICALLY AND AFTER ALL STORM EVENTS AND CLEANING OR REPLACEMENT SHALL BE PERFORMED PROMPTLY AS NEEDED.

**INLET PROTECTION SILT SACK IN CATCH BASIN**  
N.T.S.



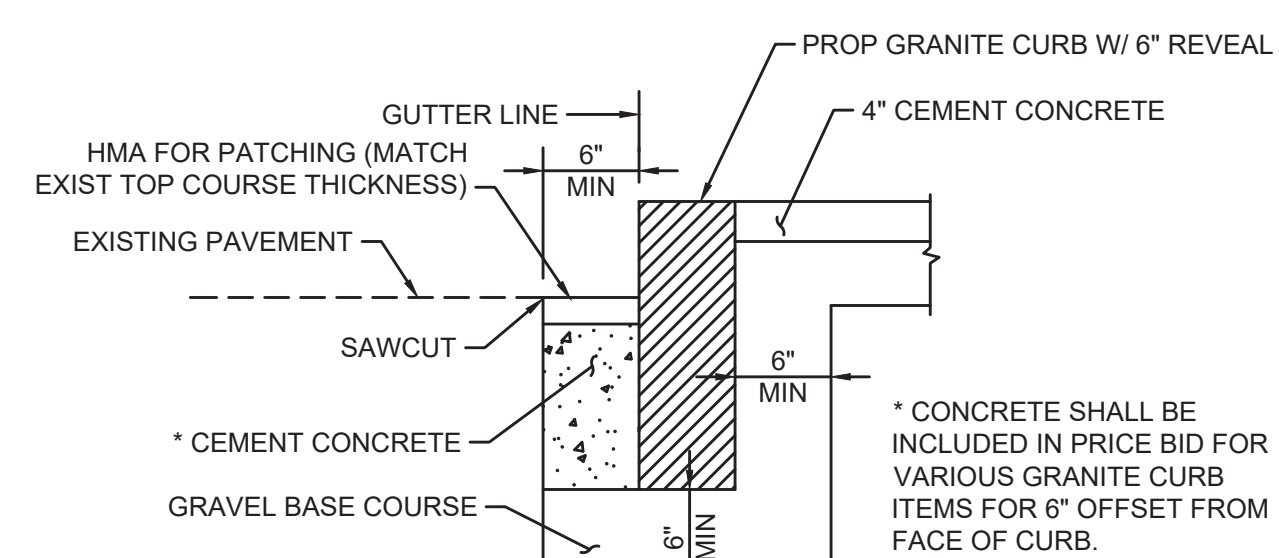
**STONE FOR PIPE ENDS**  
N.T.S.



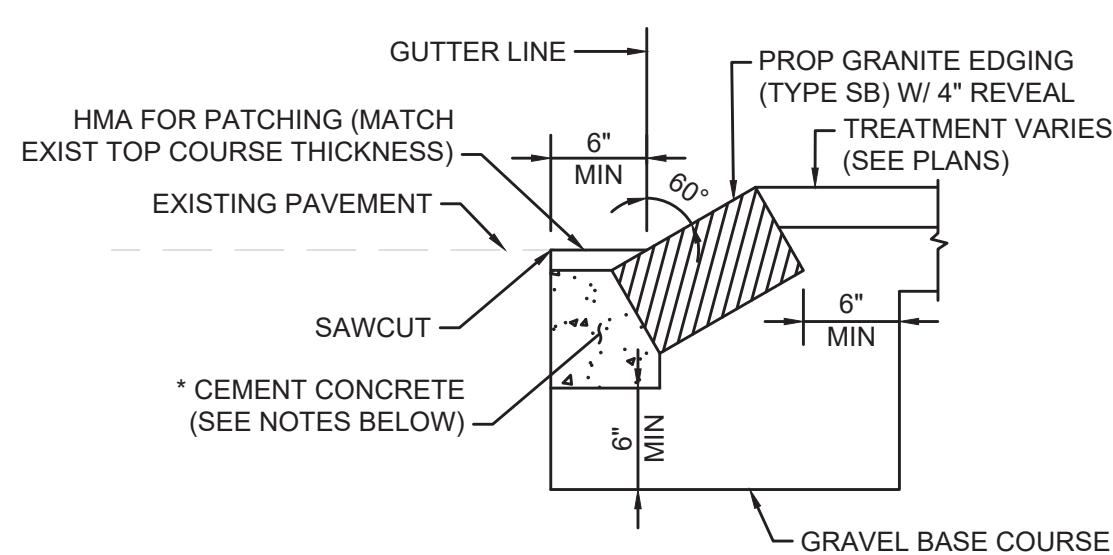
**MIN CLEARANCE BEHIND VERTICAL STRUCTURE**  
N.T.S.

\*TOLERANCE FOR CONSTRUCTION ±0.5%

NOTES:  
1. SEE MASSDOT CONSTRUCTION DETAIL E 504.1.0 FOR POST LOCATIONS FOR RESET MAILBOXES.

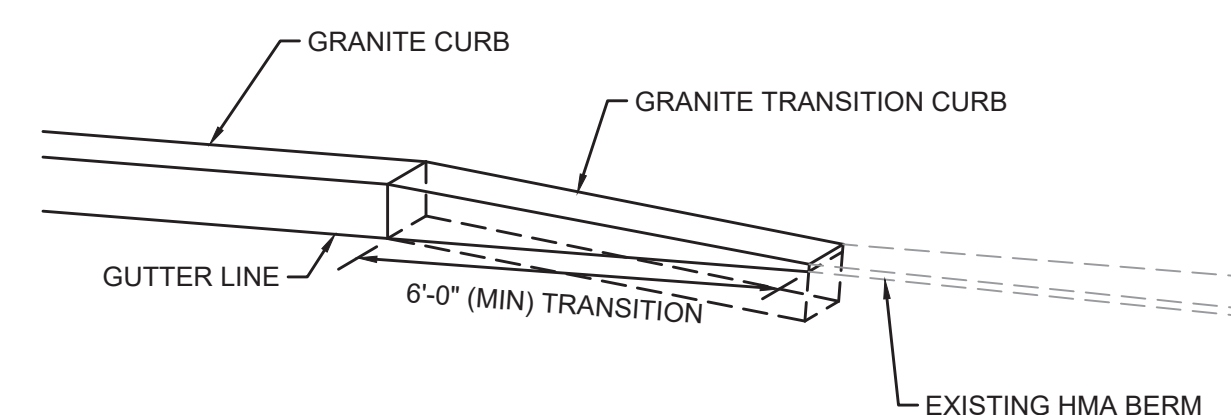


**GRANITE CURB IN EXISTING PAVEMENT**  
N.T.S.

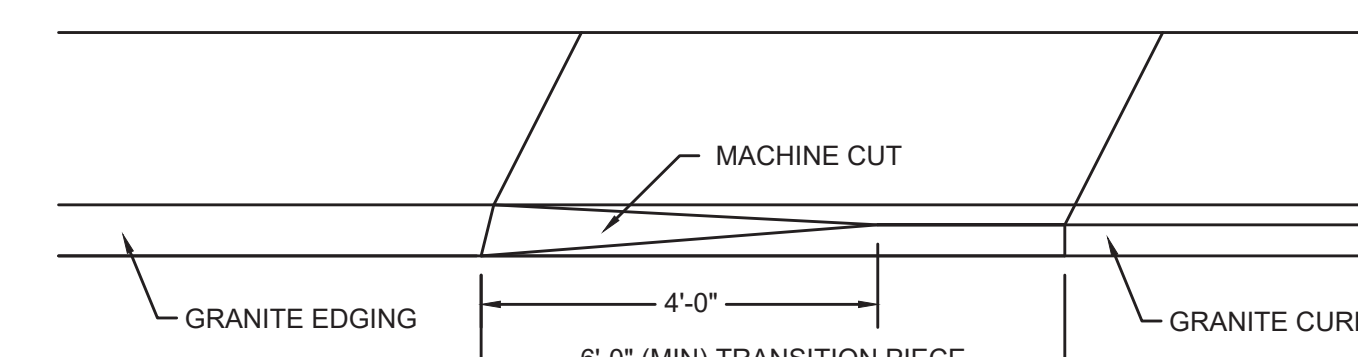


1. CONCRETE SHALL BE INCLUDED IN PRICE BID FOR VARIOUS GRANITE EDGING ITEMS FOR 6\"/>

**GRANITE EDGING IN EXISTING PAVEMENT**  
N.T.S.

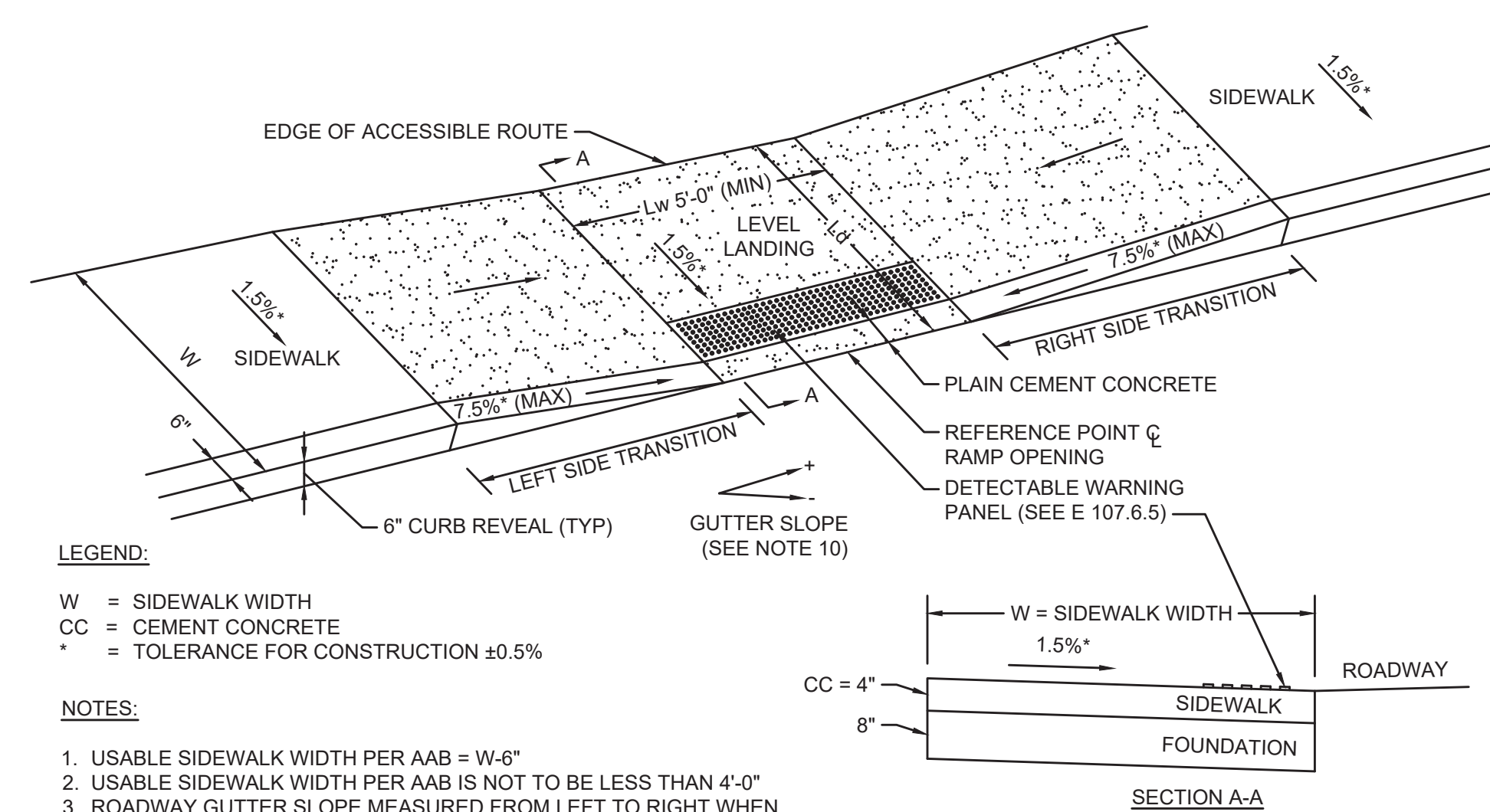


**GRANITE CURB TRANSITION TO HMA BERM**  
N.T.S.



**GRANITE CURB SPLAYED END**  
N.T.S.

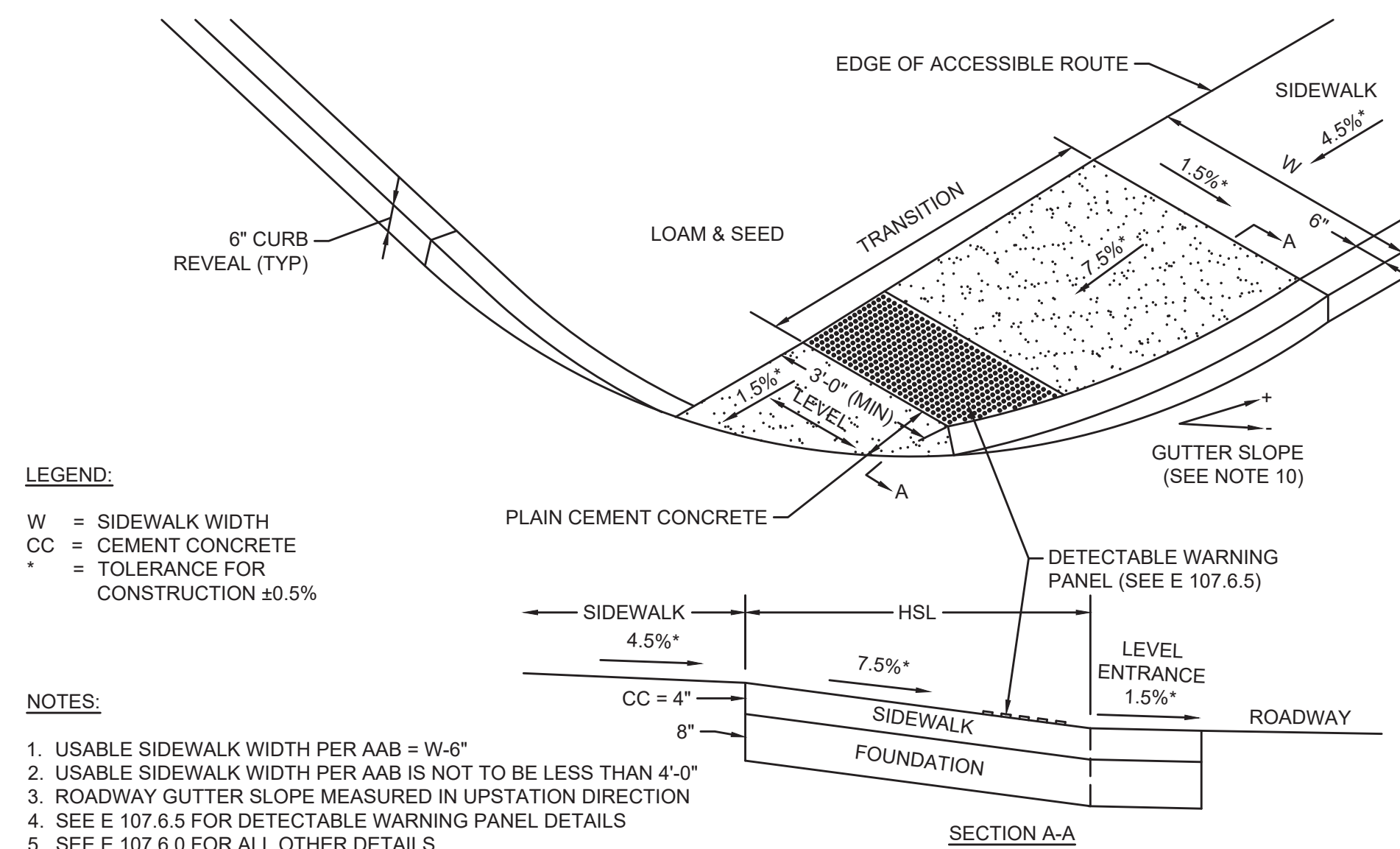




**LEGEND:**  
W = SIDEWALK WIDTH  
CC = CEMENT CONCRETE  
\* = TOLERANCE FOR CONSTRUCTION ±0.5%

- NOTES:**
1. USABLE SIDEWALK WIDTH PER AAB = W-6"
  2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0" FACING RAMP OPENING
  3. ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING RAMP OPENING
  4. SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS
  5. SEE E 107.2.1 FOR ALL OTHER DETAILS

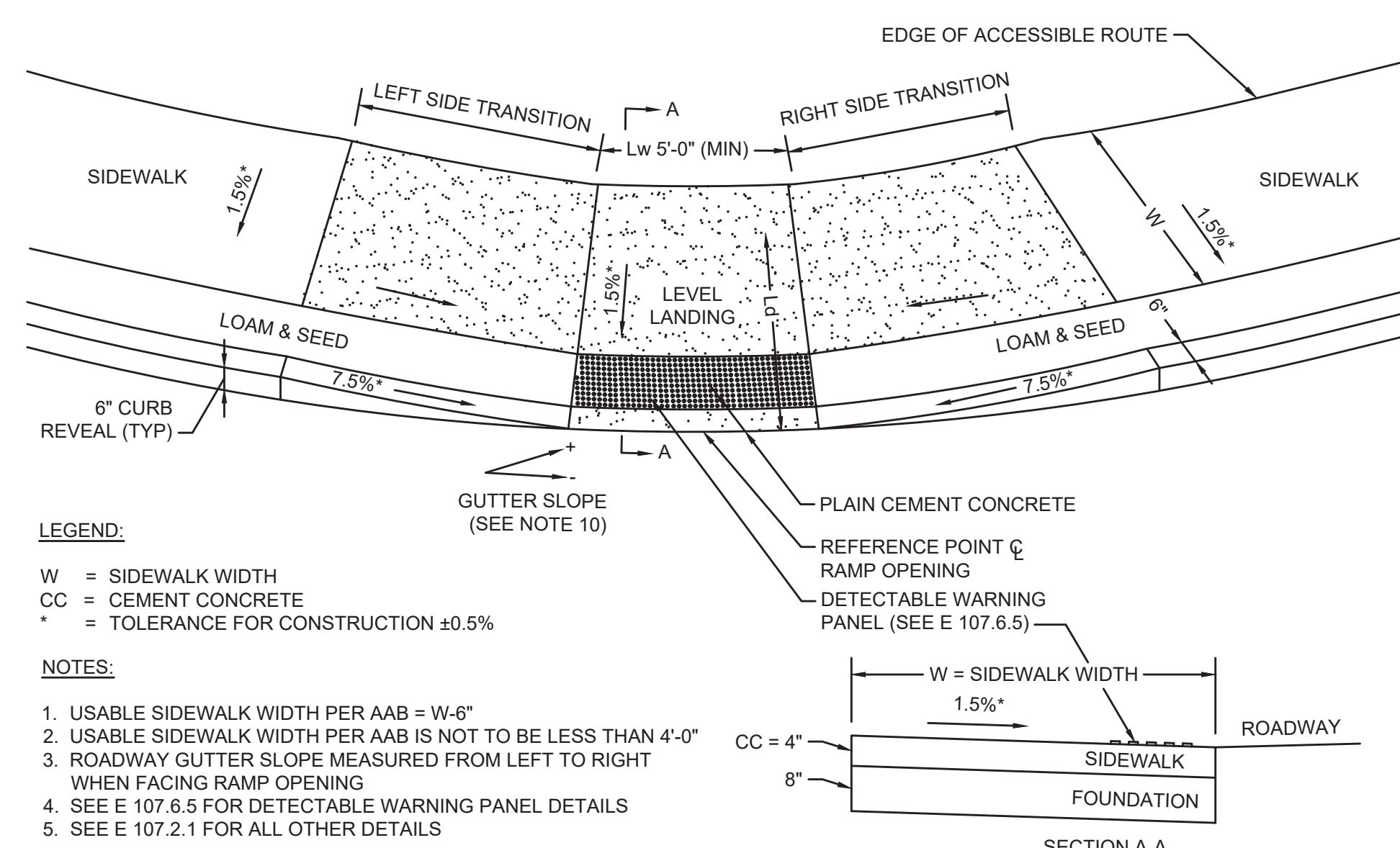
**CURB RAMP TYPE A**  
N.T.S.



**LEGEND:**  
W = SIDEWALK WIDTH  
CC = CEMENT CONCRETE  
\* = TOLERANCE FOR CONSTRUCTION ±0.5%

- NOTES:**
1. USABLE SIDEWALK WIDTH PER AAB = W-6"
  2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0" FACING RAMP OPENING
  3. ROADWAY GUTTER SLOPE MEASURED IN UPSTATION DIRECTION
  4. SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS
  5. SEE E 107.6.0 FOR ALL OTHER DETAILS

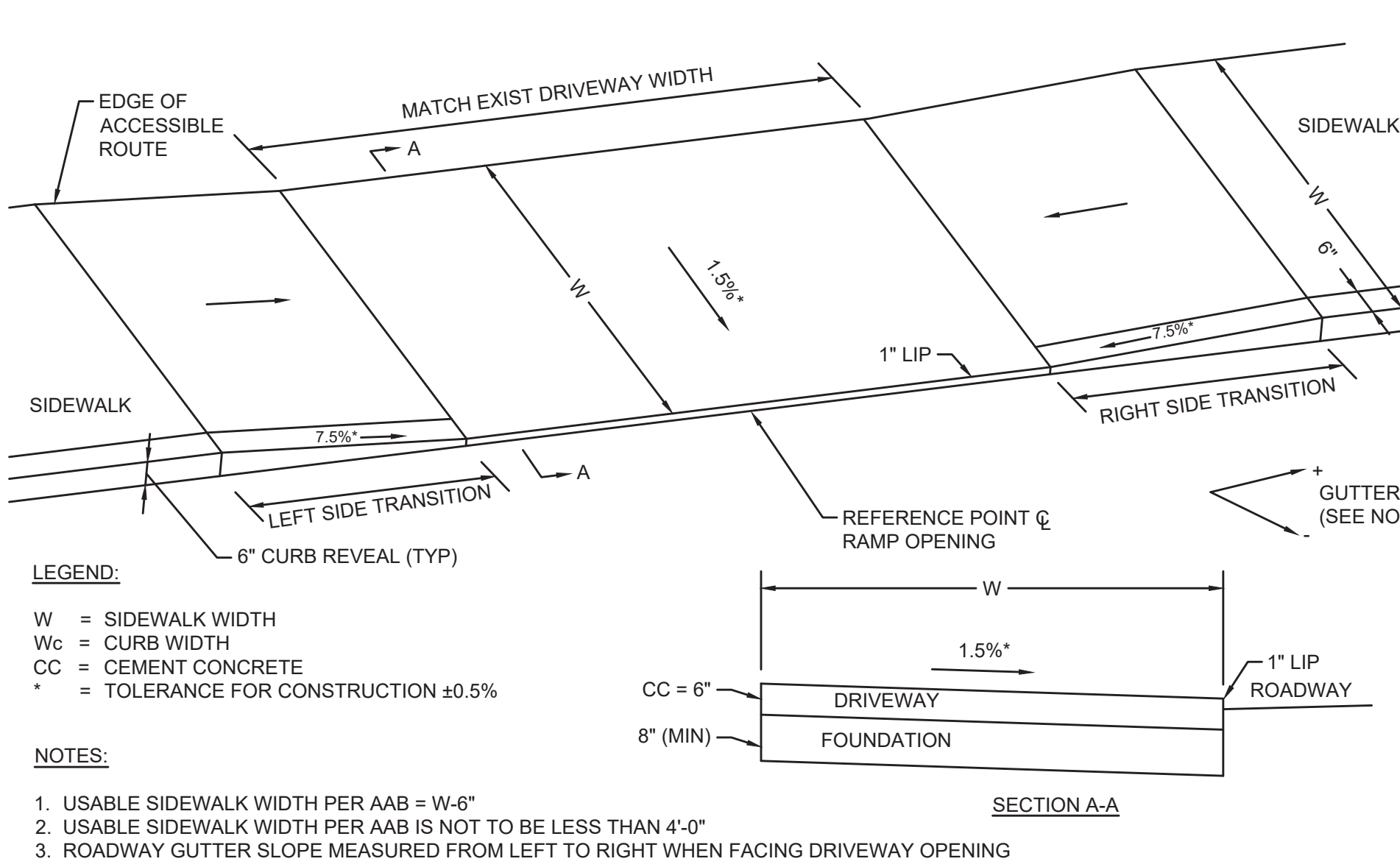
**CURB RAMP TYPE B**  
N.T.S.



**LEGEND:**  
W = SIDEWALK WIDTH  
CC = CEMENT CONCRETE  
\* = TOLERANCE FOR CONSTRUCTION ±0.5%

- NOTES:**
1. USABLE SIDEWALK WIDTH PER AAB = W-6"
  2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0" FACING RAMP OPENING
  3. ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING RAMP OPENING
  4. SEE E 107.6.5 FOR DETECTABLE WARNING PANEL DETAILS
  5. SEE E 107.2.1 FOR ALL OTHER DETAILS

**CURB RAMP TYPE C**  
N.T.S.



**LEGEND:**  
W = SIDEWALK WIDTH  
Wc = CURB WIDTH  
CC = CEMENT CONCRETE  
\* = TOLERANCE FOR CONSTRUCTION ±0.5%

- NOTES:**
1. USABLE SIDEWALK WIDTH PER AAB = W-6"
  2. USABLE SIDEWALK WIDTH PER AAB IS NOT TO BE LESS THAN 4'-0" FACING DRIVEWAY OPENING
  3. ROADWAY GUTTER SLOPE MEASURED FROM LEFT TO RIGHT WHEN FACING DRIVEWAY OPENING
  4. SURFACE TREATMENT VARIES; SEE PLANS

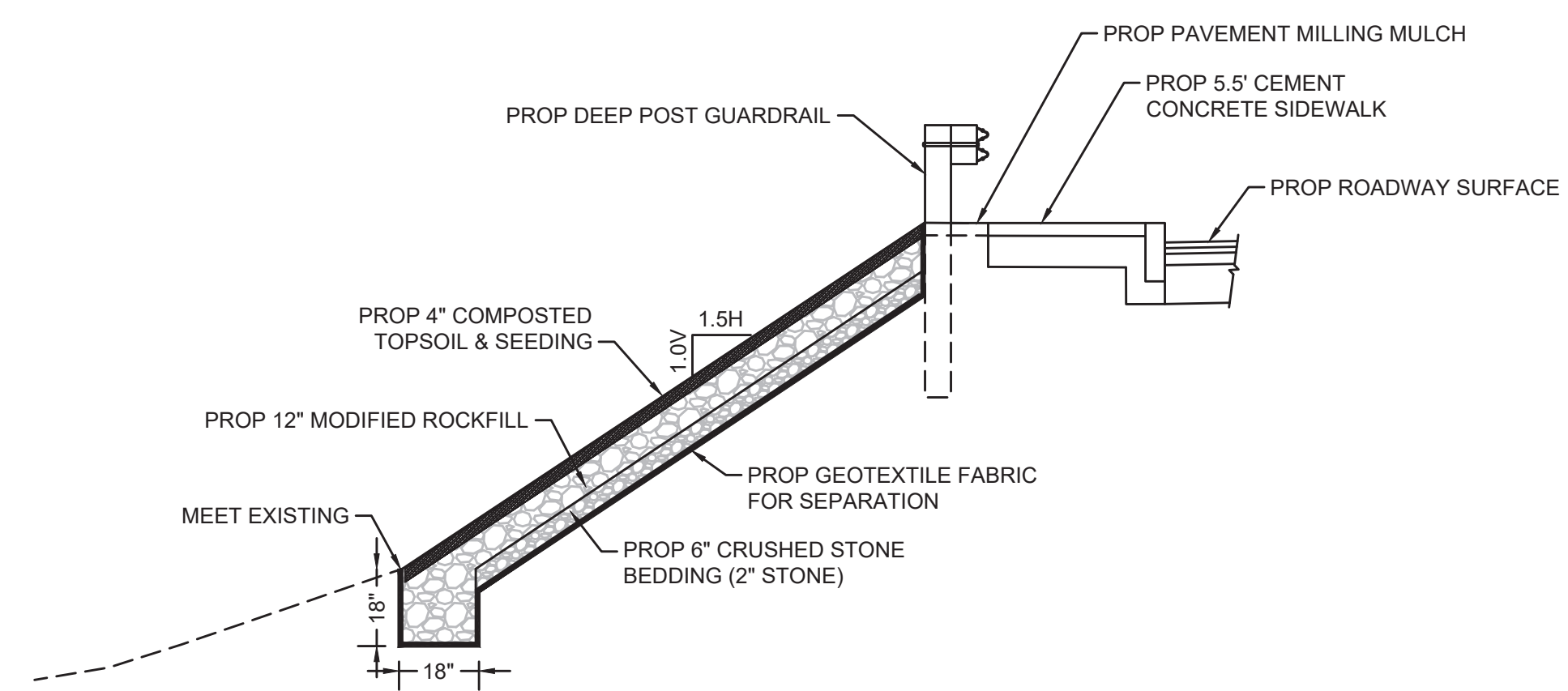
**SIDEWALK THROUGH DRIVEWAY TYPE A**  
N.T.S.

- CURB RAMP NOTES:**
1. MAXIMUM ALLOWABLE SLOPE OF ACCESSIBLE ROUTE EXCLUDING CURB RAMPS SHALL BE DESIGNED TO 4.5% ±0.5% (7.5% ±0.5% FOR CURB RAMPS)
  2. A MINIMUM OF 3'-0" CLEAR SHALL BE MAINTAINED AT ANY PERMANENT OBSTACLE IN ACCESSIBLE ROUTE (I.E., HYDRANTS, UTILITY POLES, TREE WELLS, SIGNS, ETC.).
  3. CURB TREATMENT VARIES, SEE PLANS FOR CURB TYPE.
  4. RAMP, CURB AND ADJACENT PAVEMENTS SHALL BE GRADED TO PREVENT PONDING.
  5. WHERE ACCESSIBLE ROUTES ARE LESS THAN 5' IN WIDTH (EXCLUDING CURBING) A 5x5' PASSING AREA SHALL BE PROVIDED AT INTERVALS NOT TO EXCEED 200 FT.
  6. ELIMINATE CURBING AT RAMP WHERE IT ABUTS ROADWAY.
  7. DETECTABLE WARNING PANELS ARE REQUIRED ON ALL OF THE PROPOSED CURB RAMPS AND ARE TO BE INSTALLED IN ACCORDANCE WITH CONSTRUCTION STANDARD E 107.6.5 (OCTOBER 2017). CONTRACTOR SHALL PROVIDE 6" BETWEEN DETECTABLE WARNING PANEL AND EDGE OF CONCRETE WHERE IT ABUTS LOAM & SEED.
  8. CURB RAMP SLOPES AND CROSS SLOPES SHALL HAVE A CONSTRUCTION TOLERANCE OF ±0.5%.
  9. CONTRACTOR TO COORDINATE WITH TOWN OF WESTWOOD DPW TO DETERMINE COLOR OF DETECTABLE WARNING PANEL
  10. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY EXISTING GUTTER SLOPES AND ENSURE CURB RAMP AND SIDEWALK TRANSITIONS ARE CONSTRUCTED TO MEET ADA REQUIREMENTS.

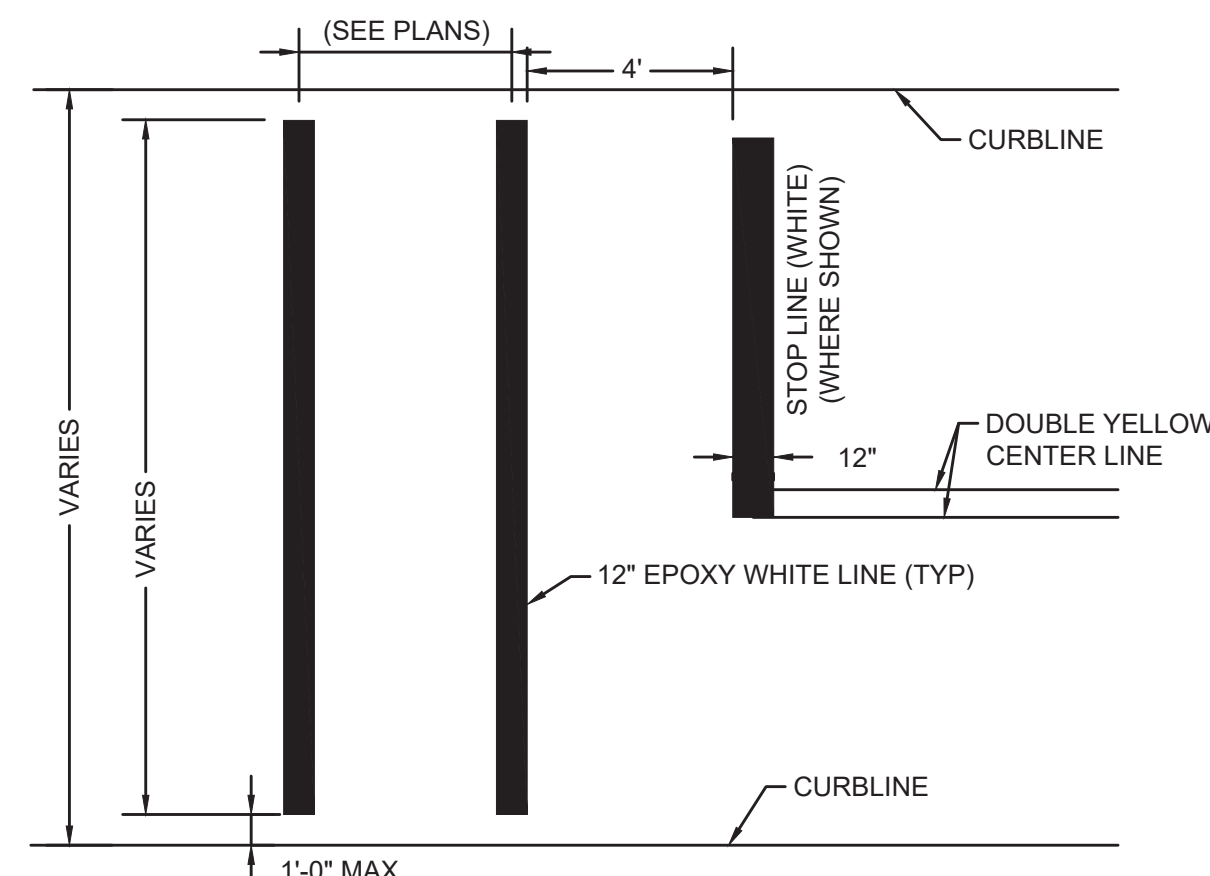
ROADWAY PROFILE GRADE	*HIGH SIDE TRANSITION LENGTH
%	ENGLISH UNITS
0%	6'-6"
>0% TO 1%	7'-8"
>1% TO 2%	9'-0"
>2% TO 3%	11'-0"
>3% TO 4%	14'-0"
>4% TO 5%	15'-0" - MAX

**CURB TRANSITION LENGTH FOR PEDESTRIAN CURB RAMPS AND DRIVEWAY TRANSITIONS**  
N.T.S.

**NOTE:**  
\* BASED ON A DESIGN SLOPE OF 7.5% AND A REVEAL OF 6".

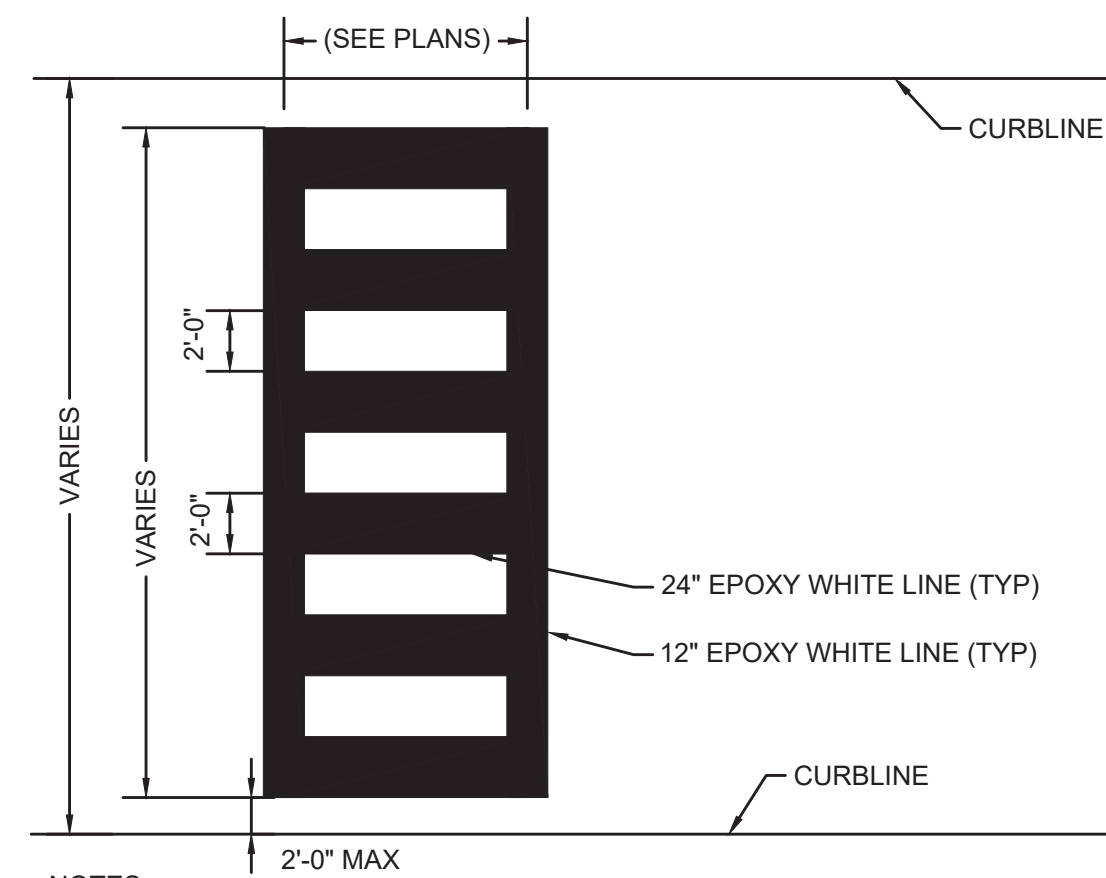


**MODIFIED ROCKFILL SLOPE STABILIZATION**  
N.T.S.



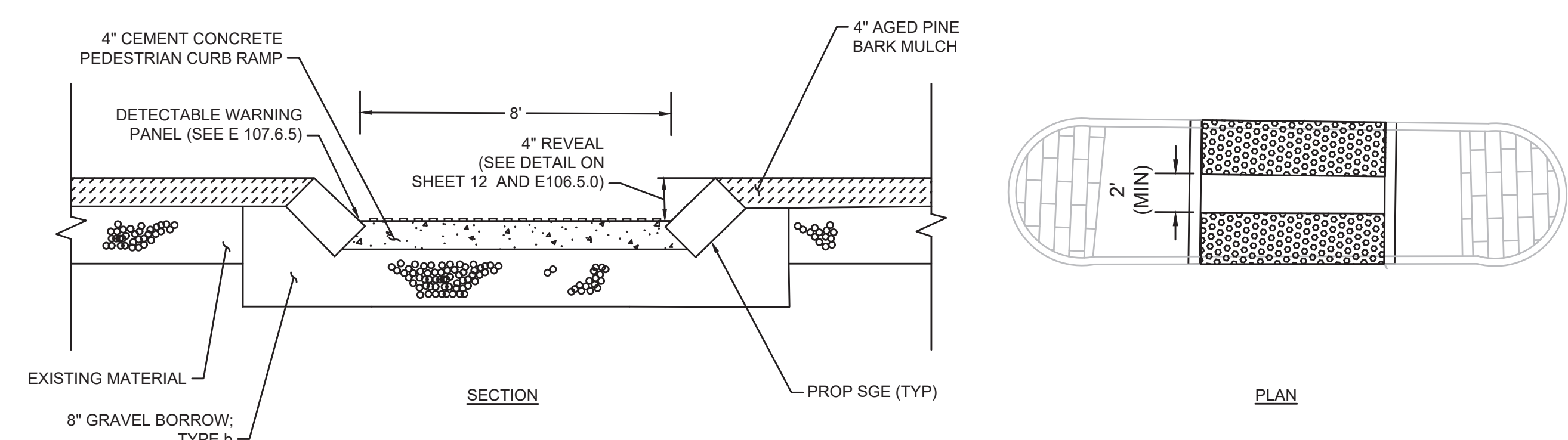
- NOTES:**
1. ALL 12" LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (TWO - 6" LINES) WILL BE ACCEPTED.
  2. LAYOUT OF CROSSWALKS SHALL BE APPROVED BY THE ENGINEER PRIOR TO APPLICATION.

**CROSSWALK PAVEMENT MARKING: UNSIGNALIZED APPROACH**  
N.T.S.



- NOTES:**
1. ALL 12" LINES SHALL BE APPLIED IN ONE APPLICATION, NO COMBINATION OF LINES (TWO - 6" LINES) WILL BE ACCEPTED. ALL 24" LINES MAY BE EITHER ONE 24" LINE OR A COMBINATION OF TWO - 12" LINES.
  2. LAYOUT OF CROSSWALKS SHALL BE APPROVED BY THE ENGINEER PRIOR TO APPLICATION.
  3. CROSSWALK BARS SHALL BE PLACED OUTSIDE THE VEHICULAR WHEEL PATH WHEREVER POSSIBLE.
  4. OMIT STOP BAR WHERE NOT SHOWN ON PLANS.

**CROSSWALK PAVEMENT MARKING (LADDER); UNSIGNALIZED APPROACH**  
N.T.S.

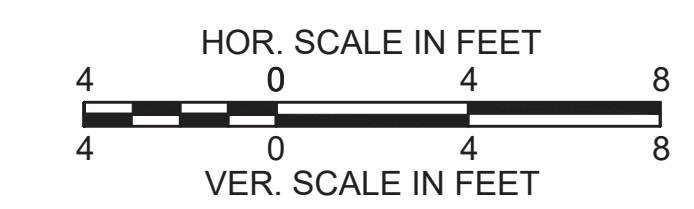
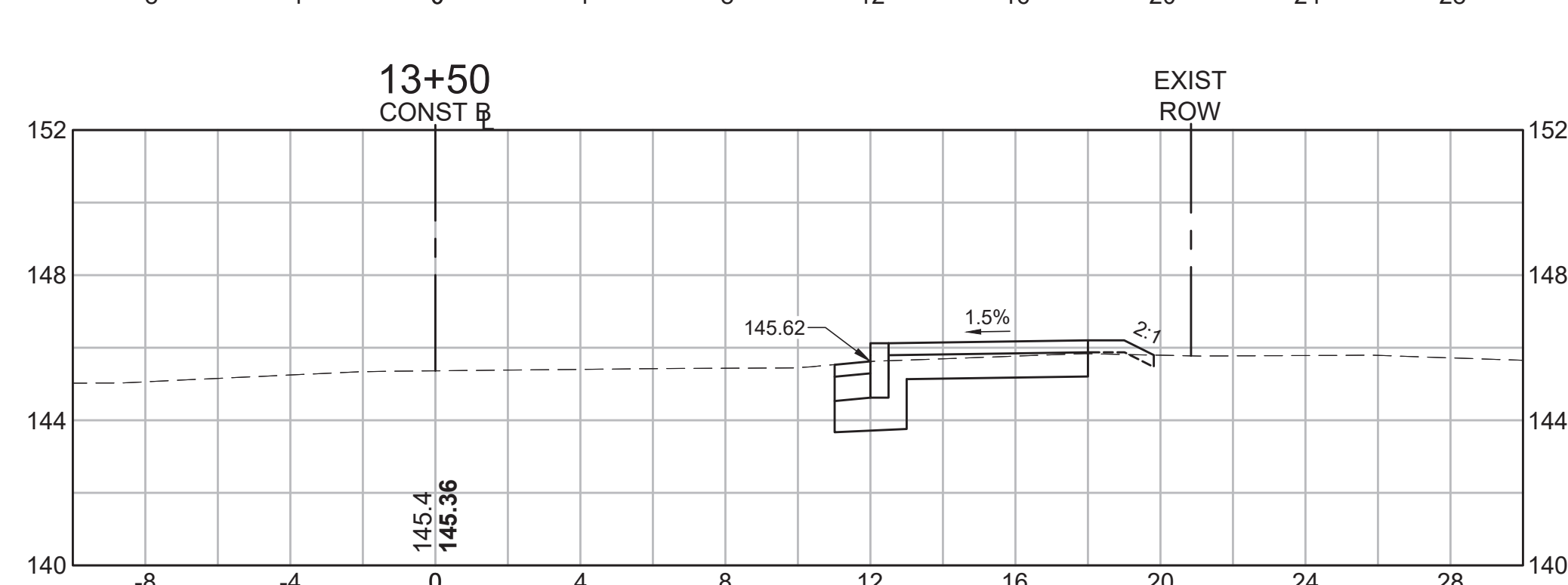
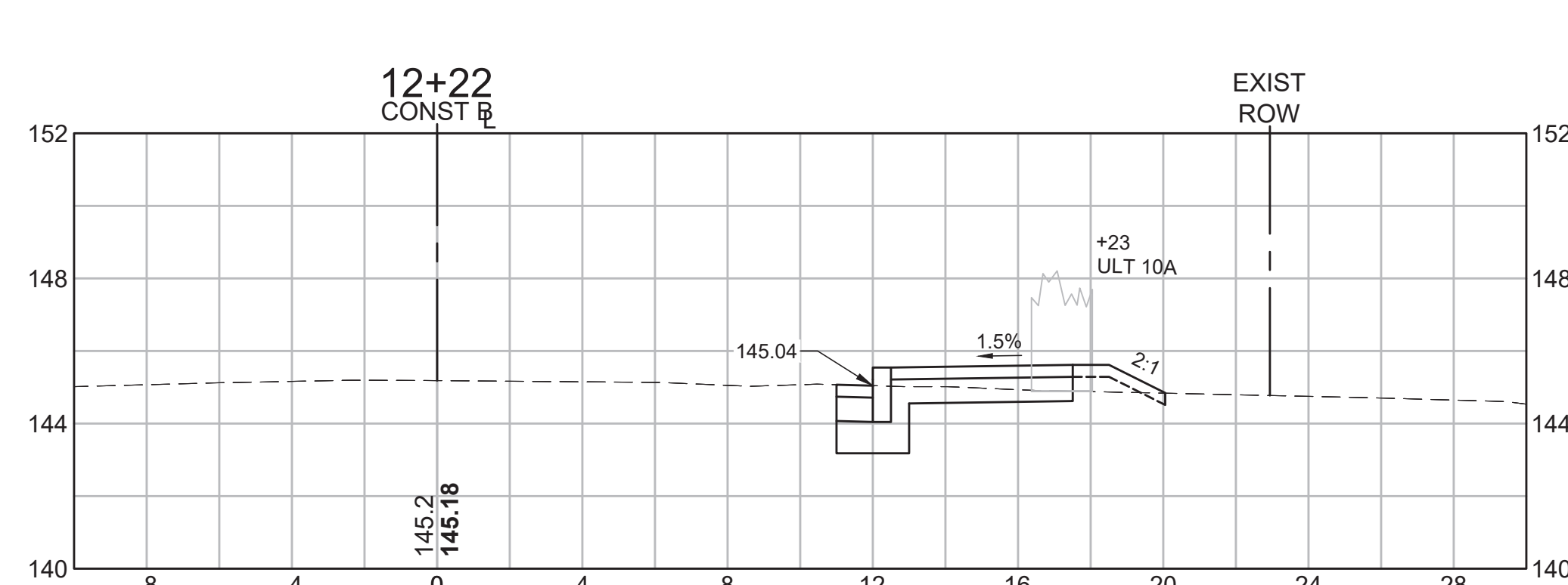
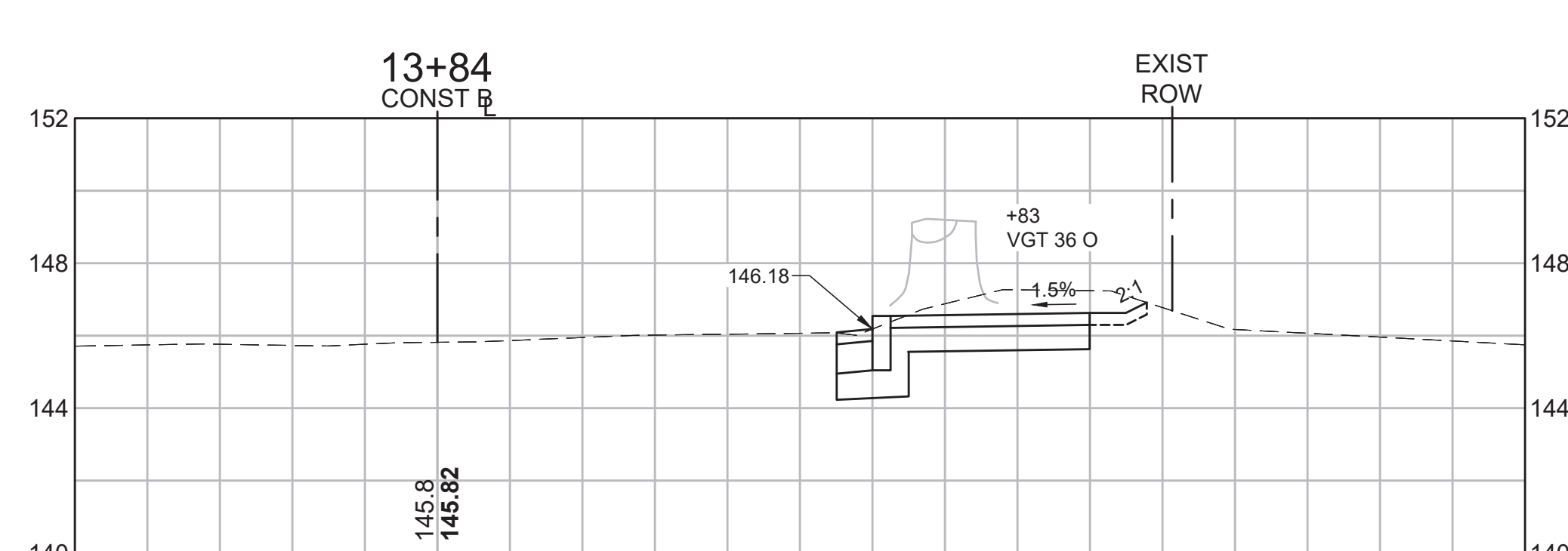
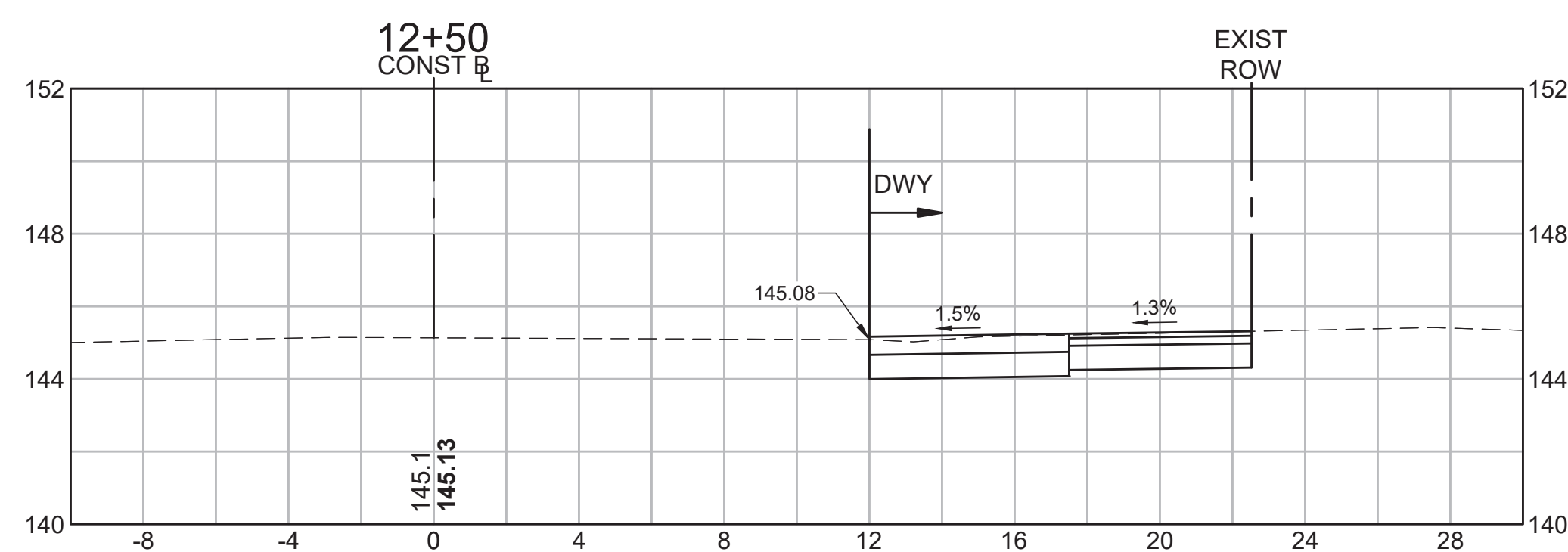
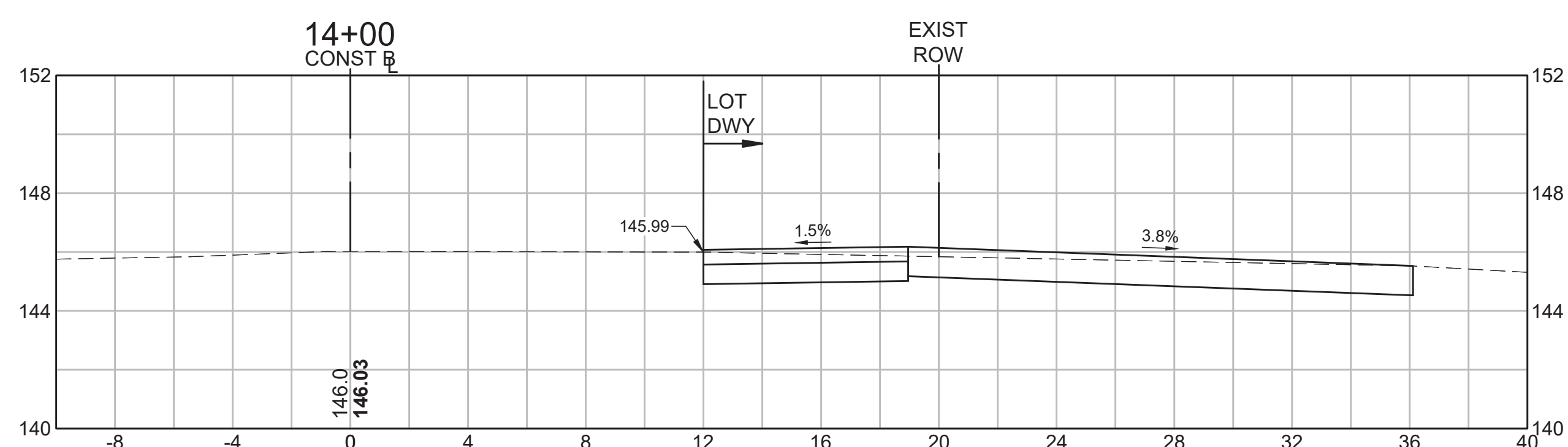
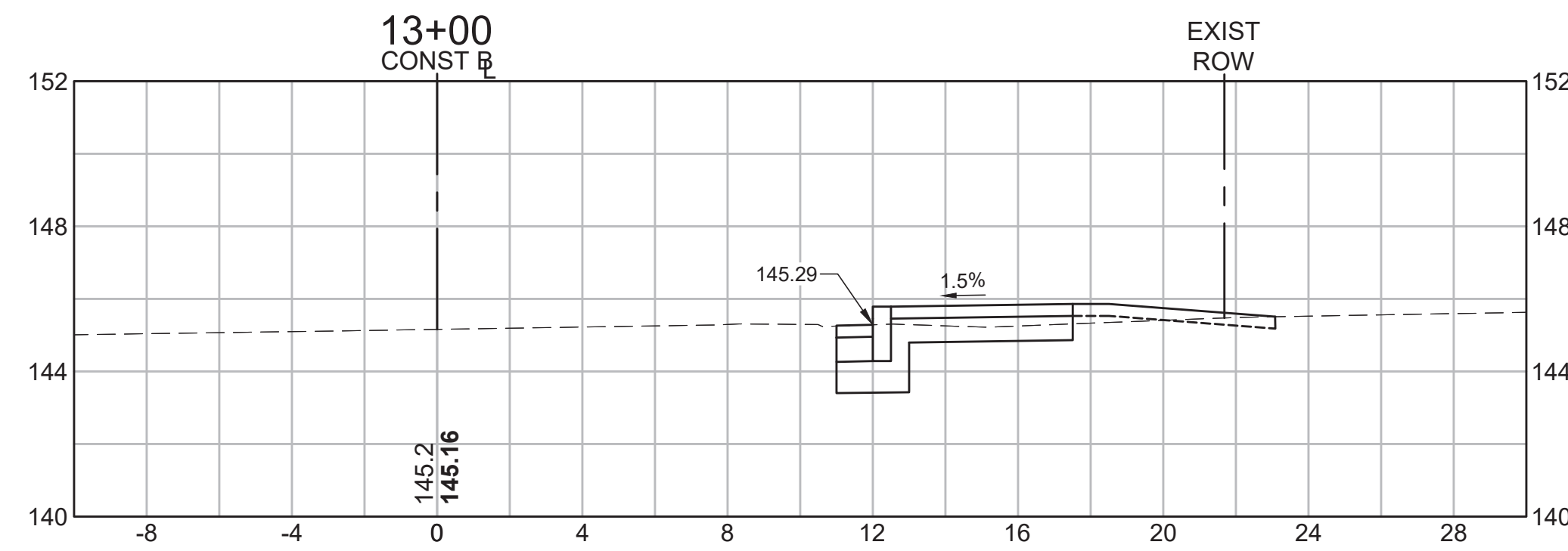
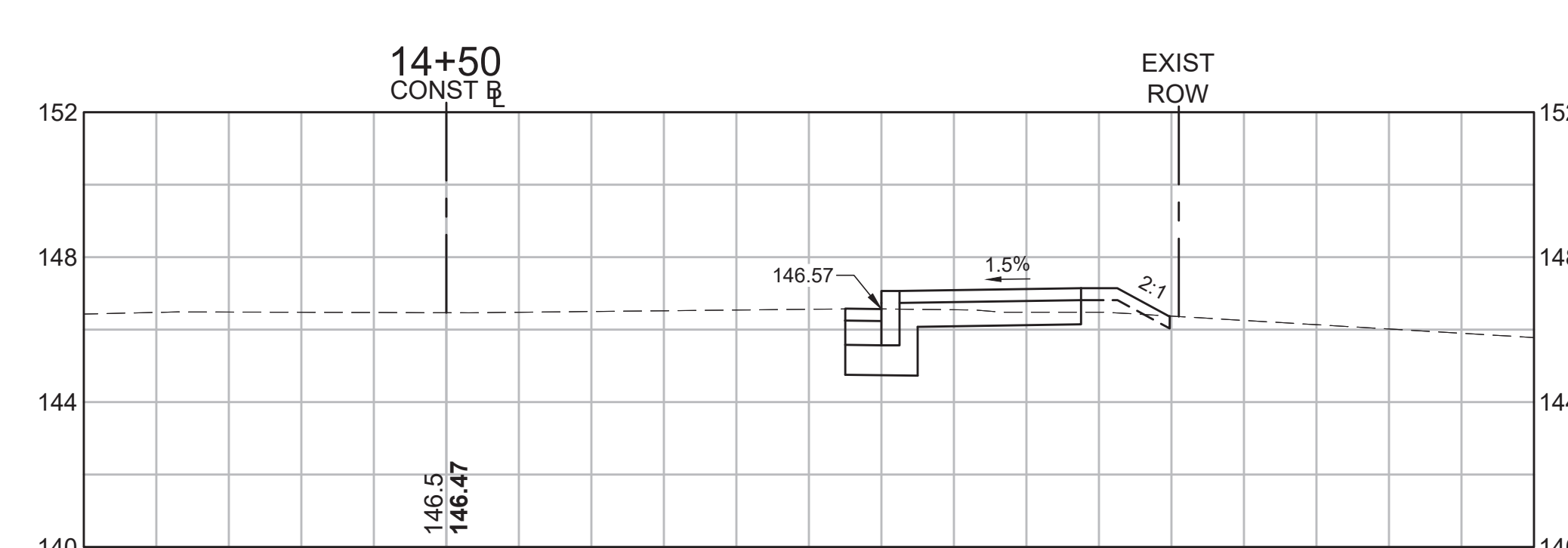
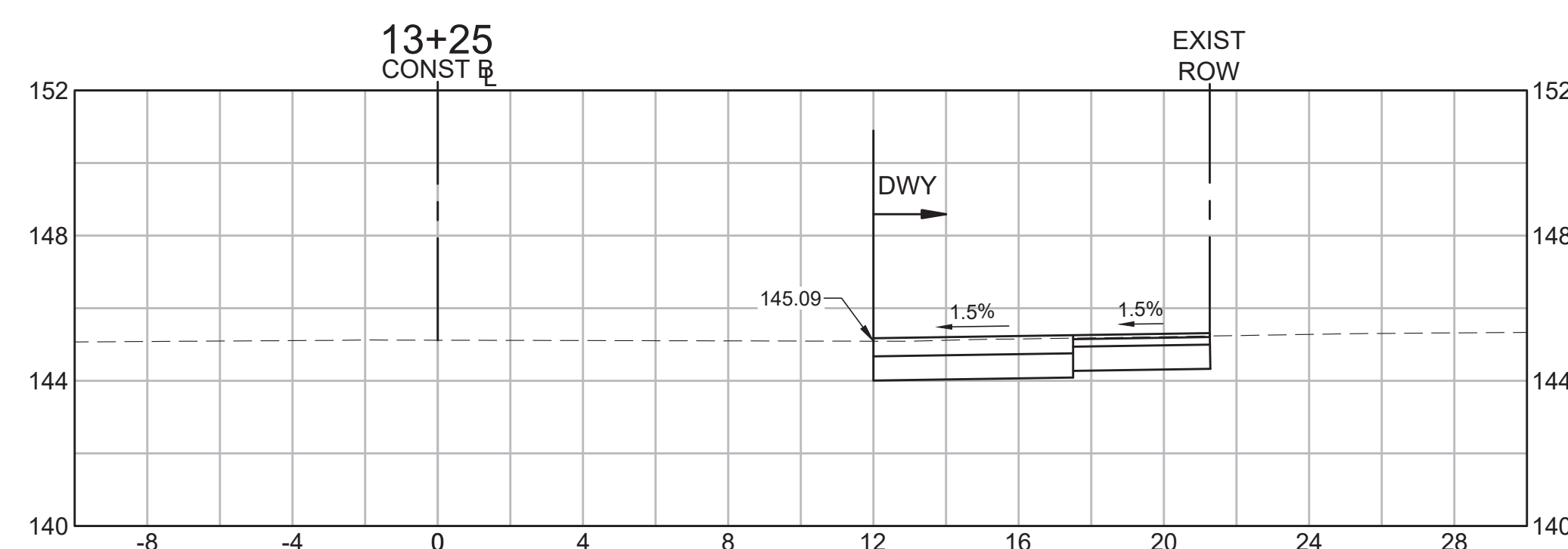
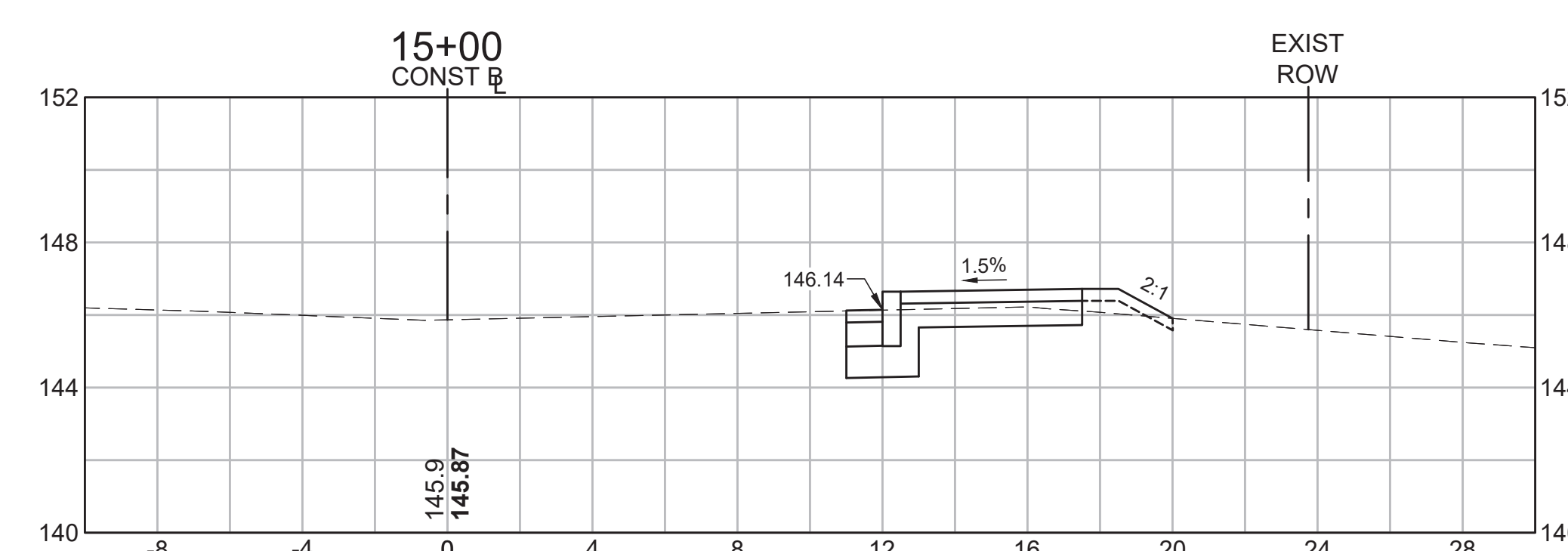
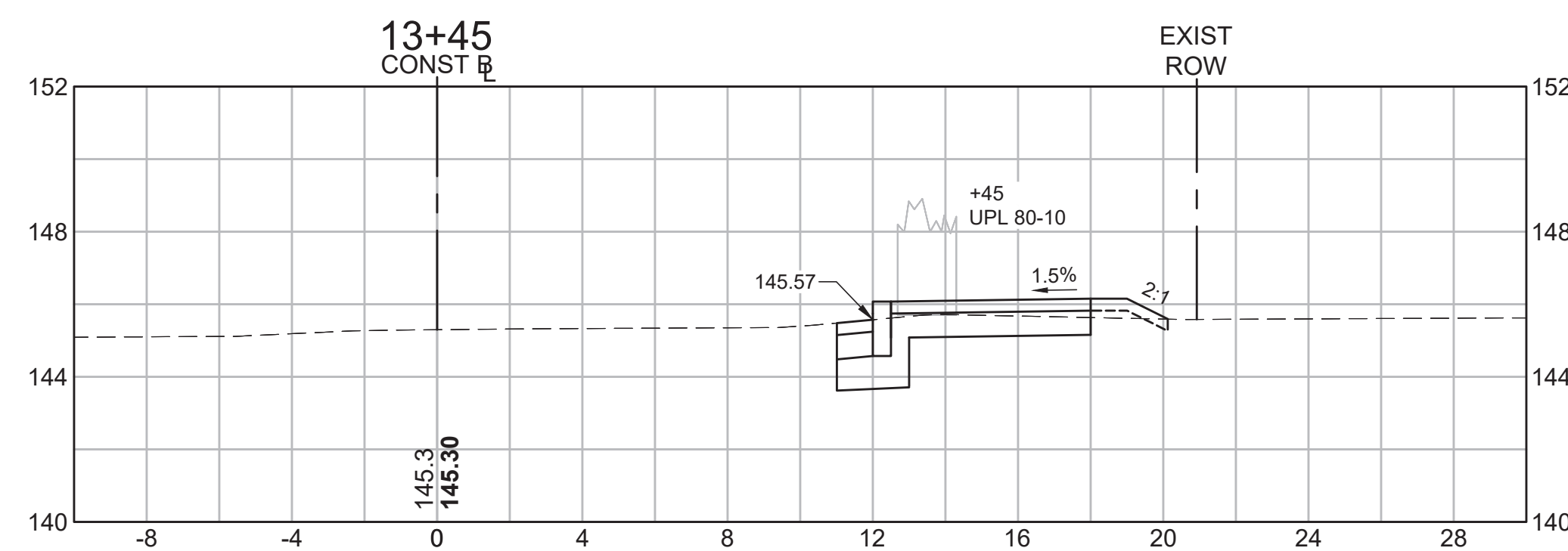


**PEDESTRIAN ISLAND CUT THROUGH**  
N.T.S.



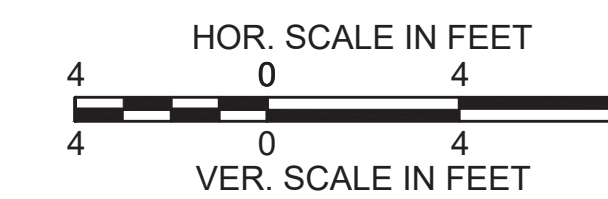
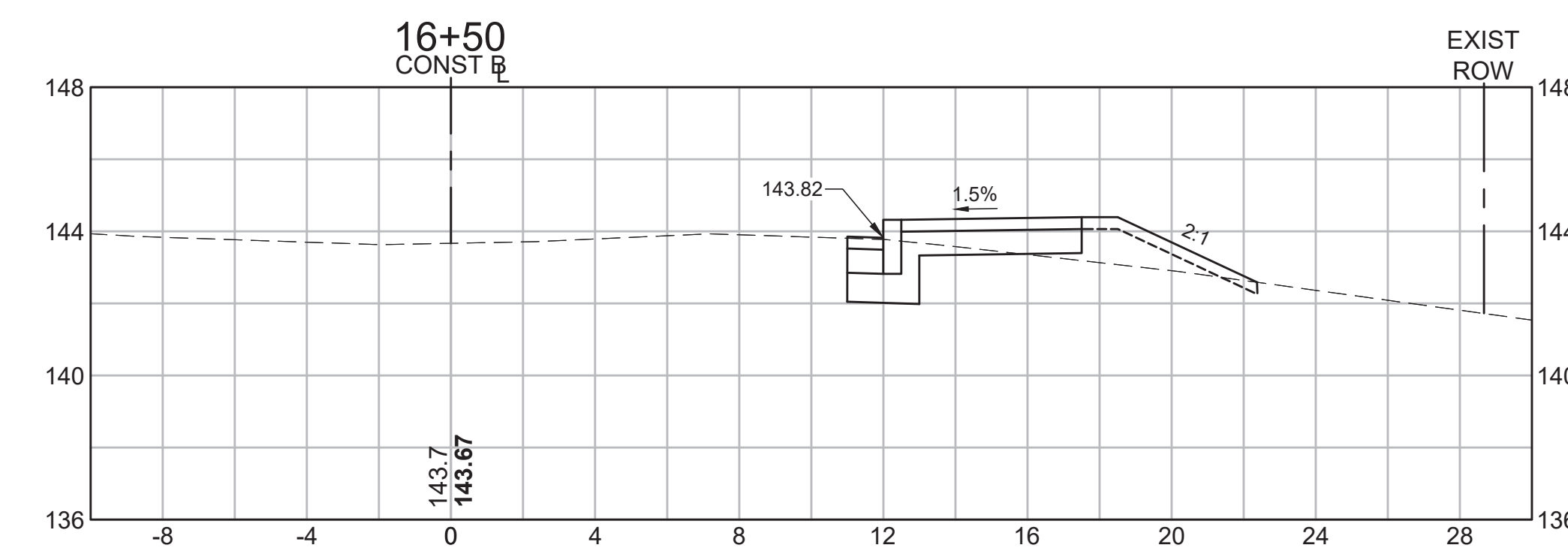
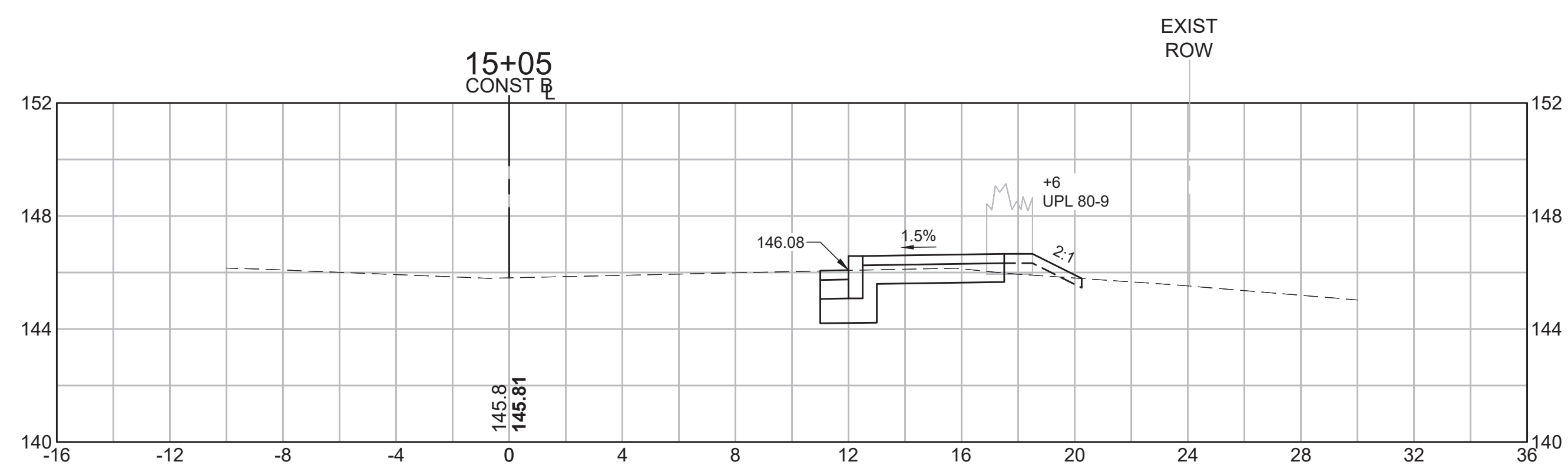
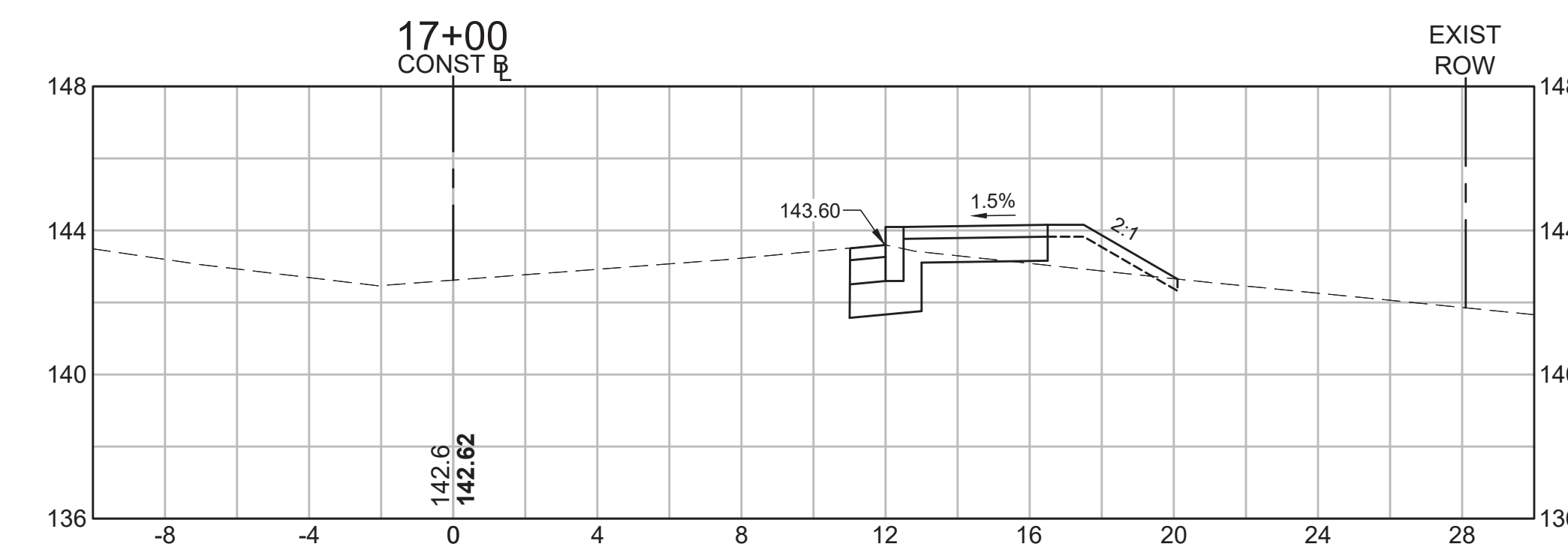
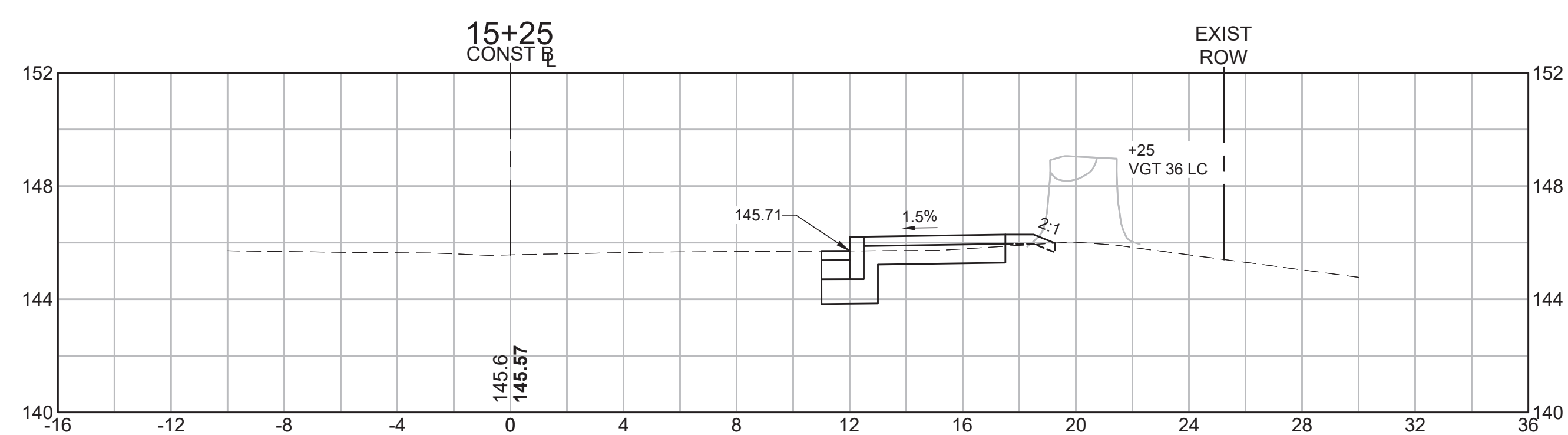
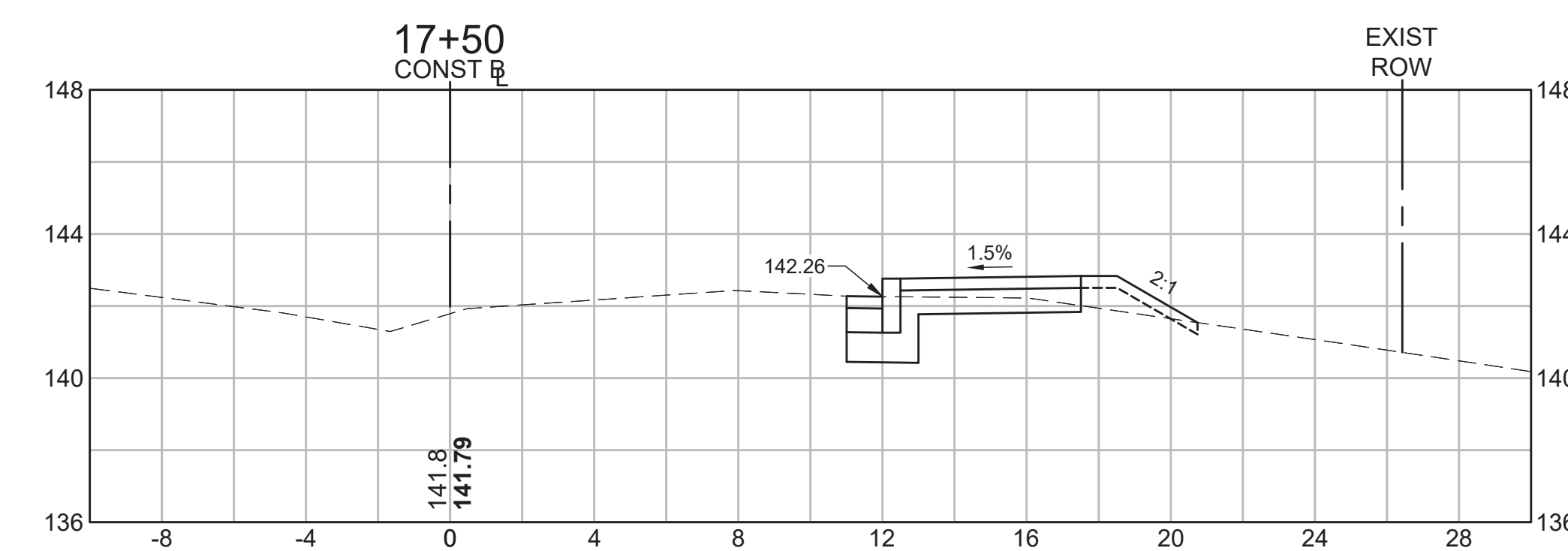
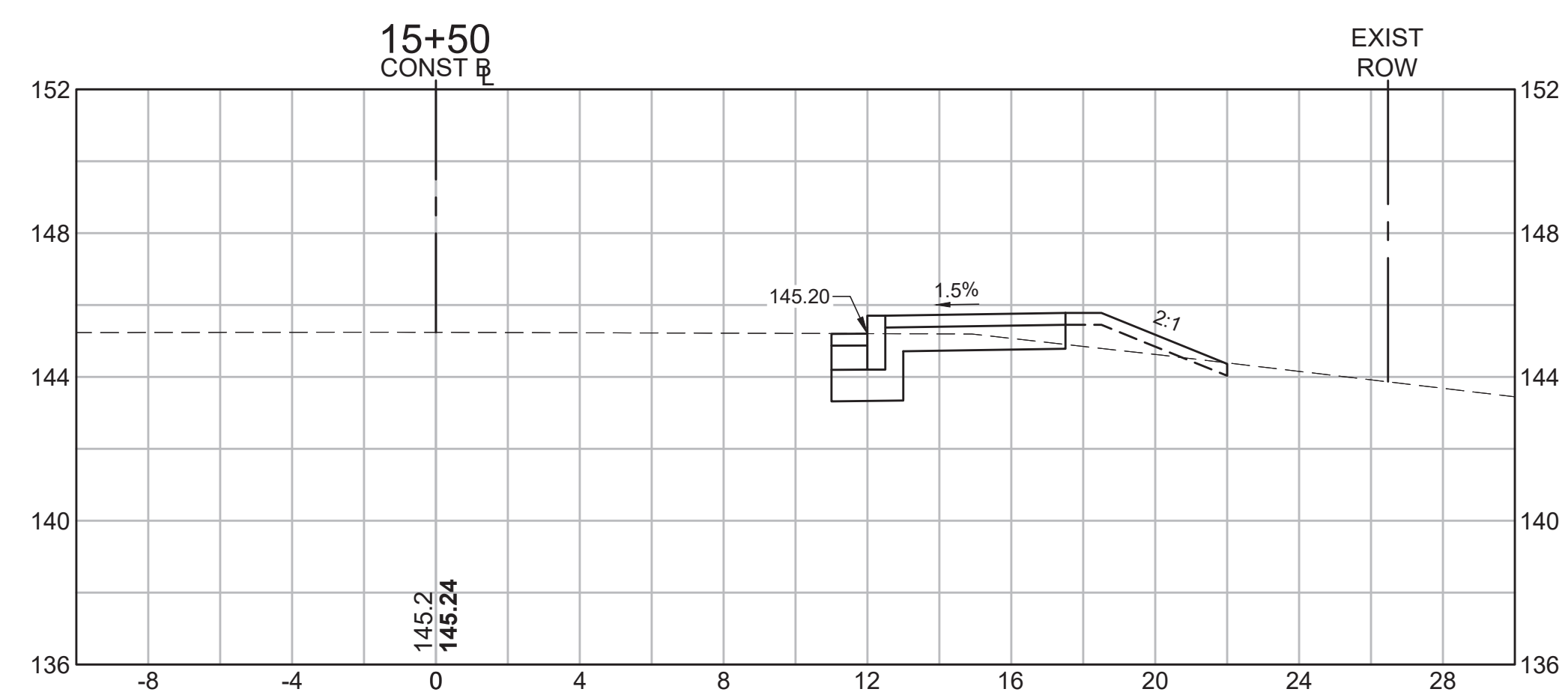
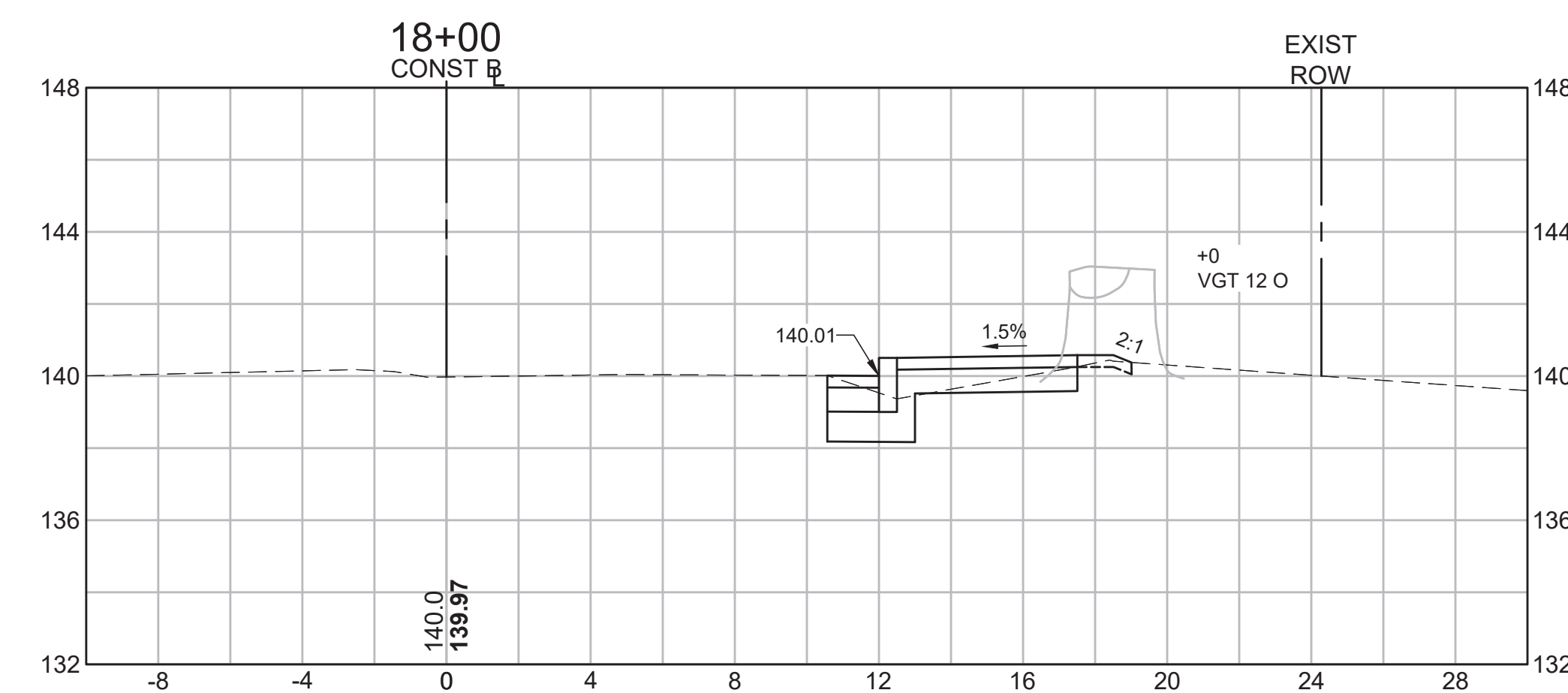
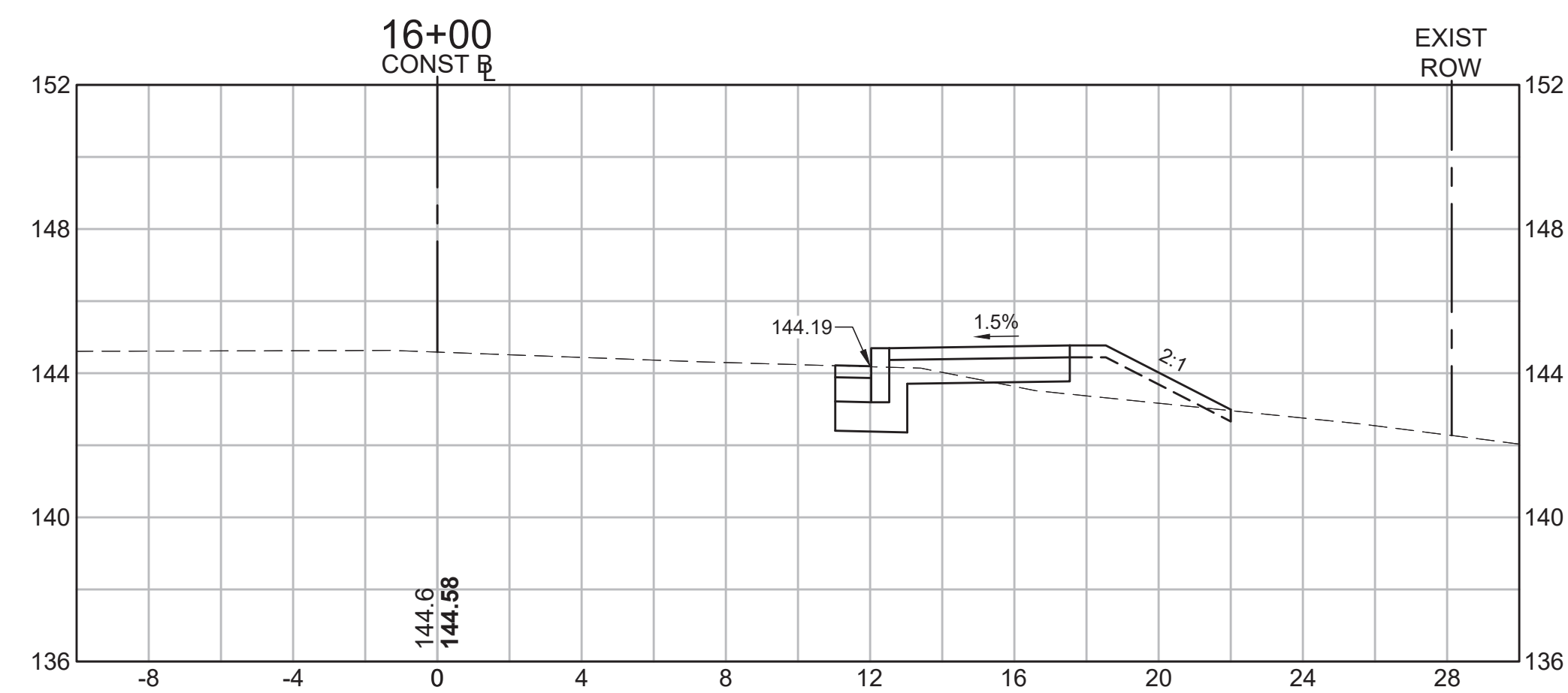
WESTWOOD  
DOWNEY STREET SIDEWALK  
CROSS SECTIONS  
SHEET 14 OF 22

T:\251\_HD7\CROSS SECTIONS\DWG Plotted on 17-Mar-2023 7:25 AM



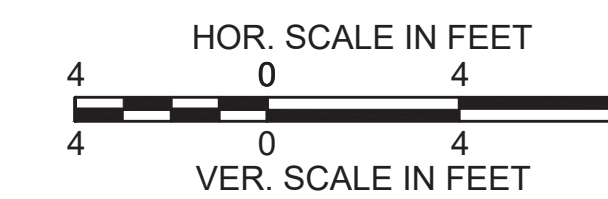
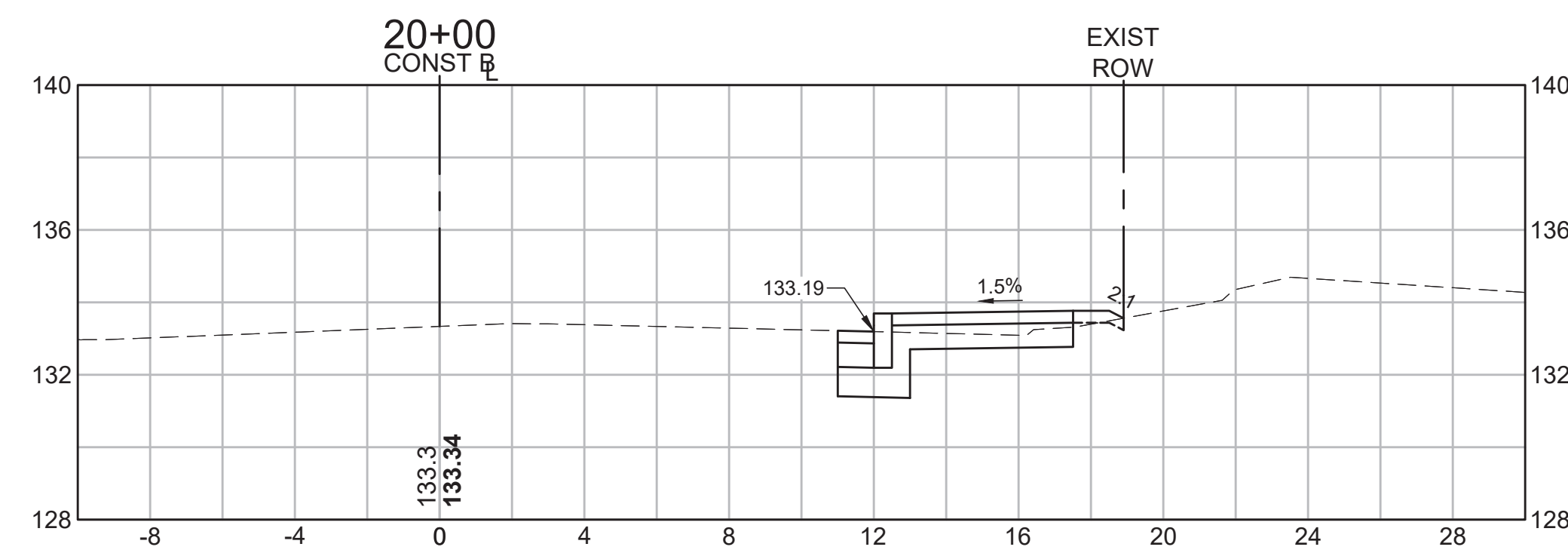
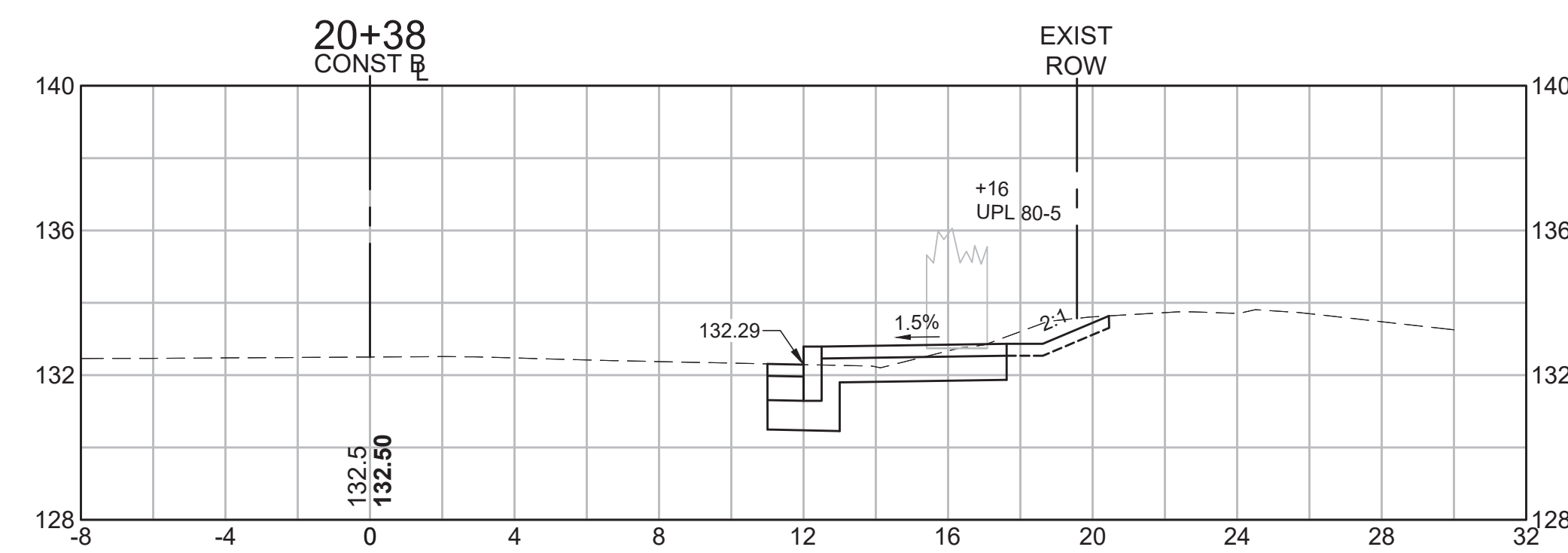
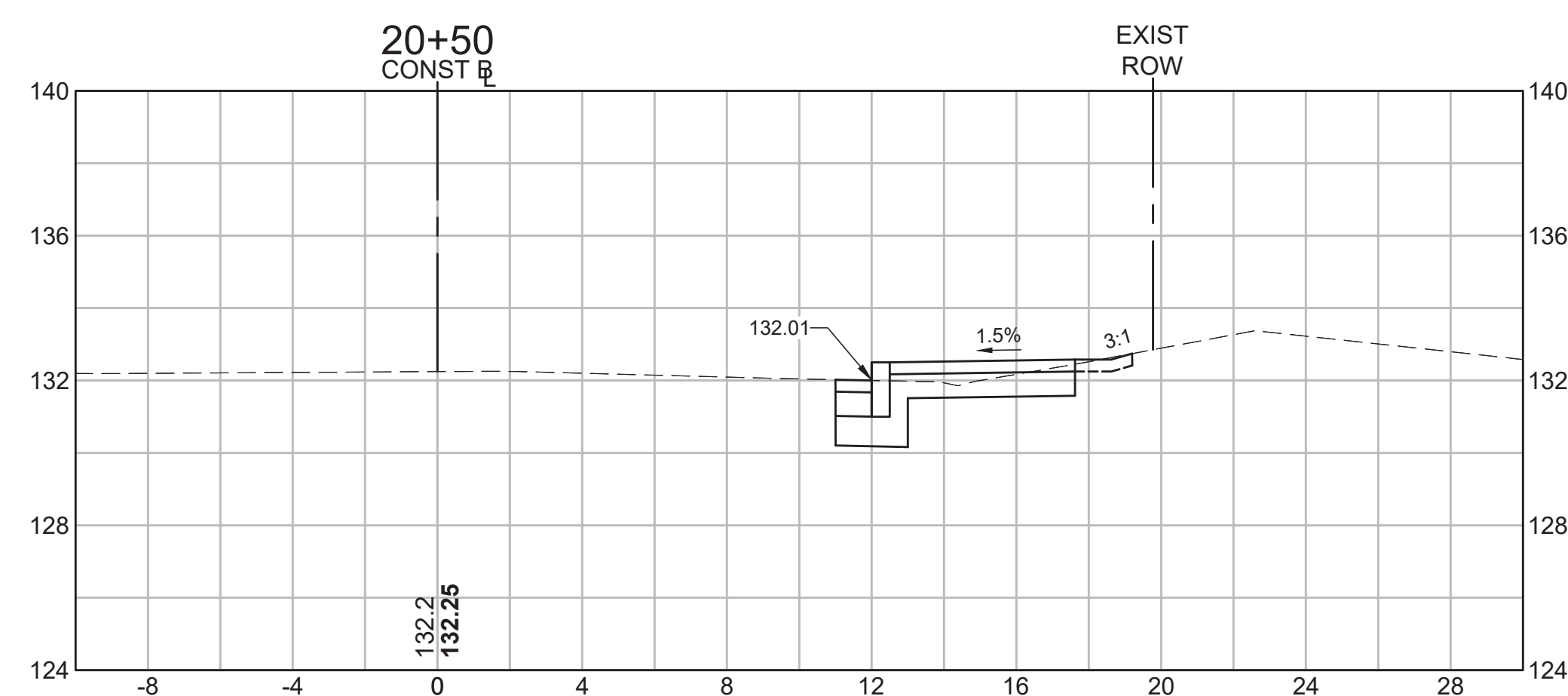
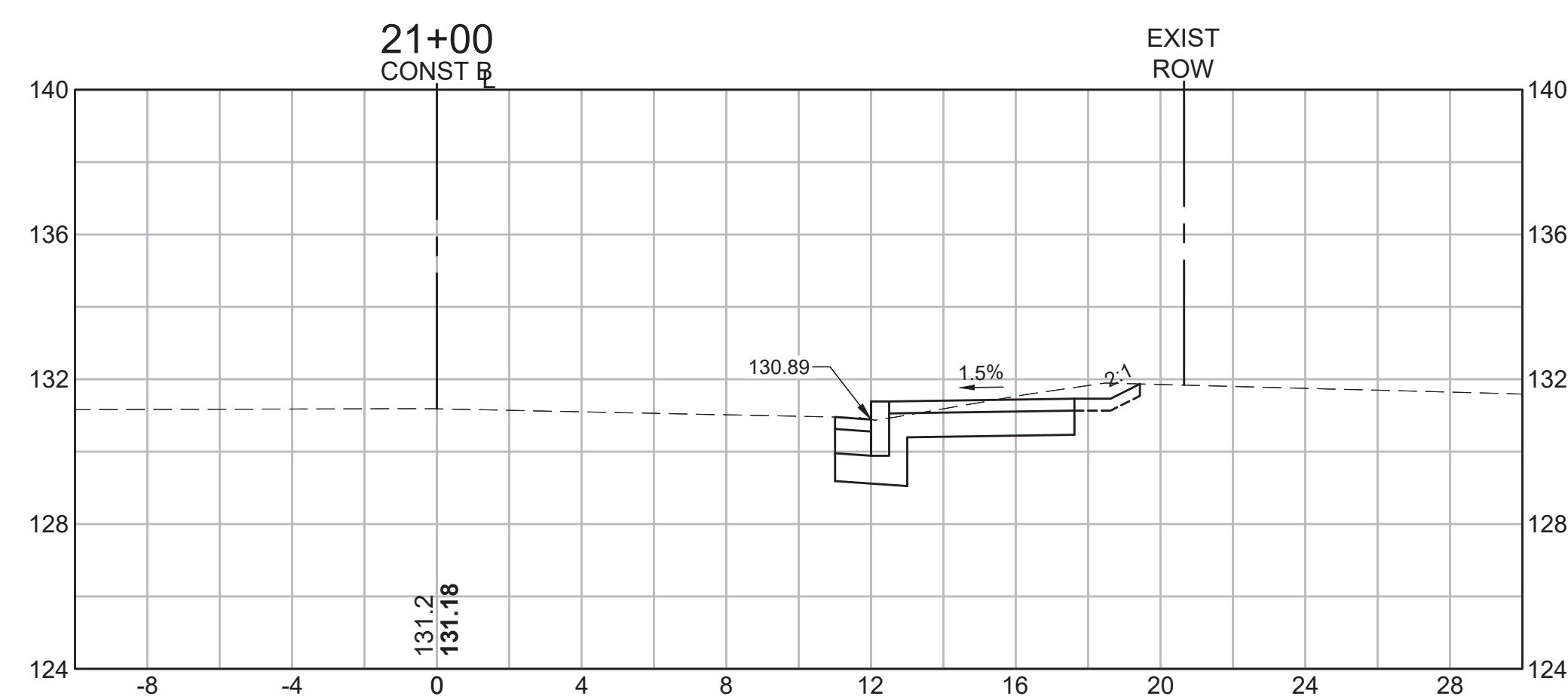
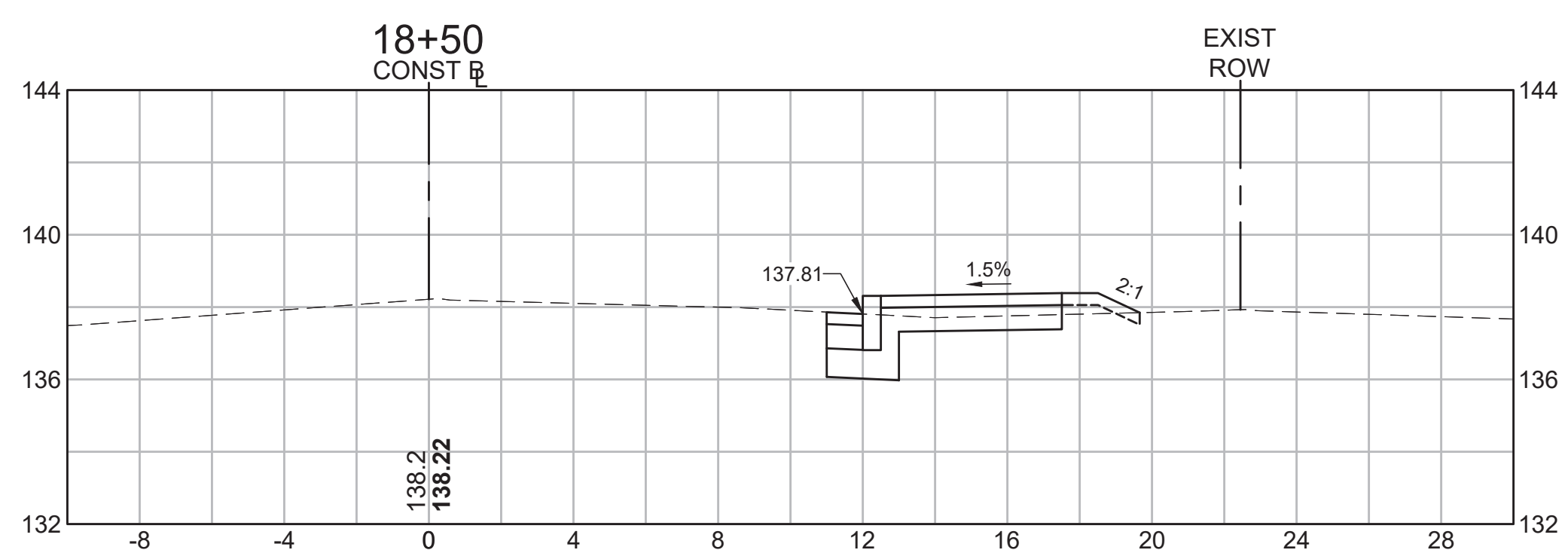
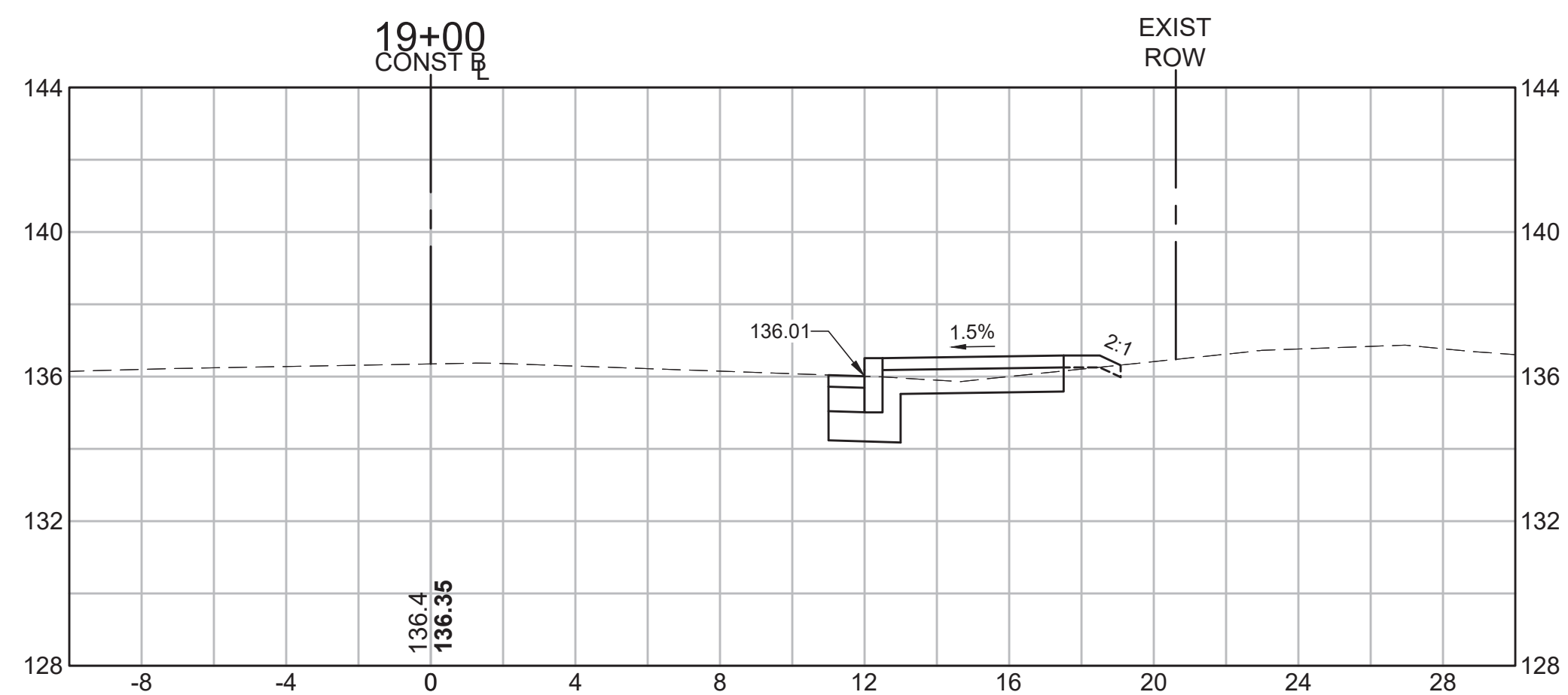
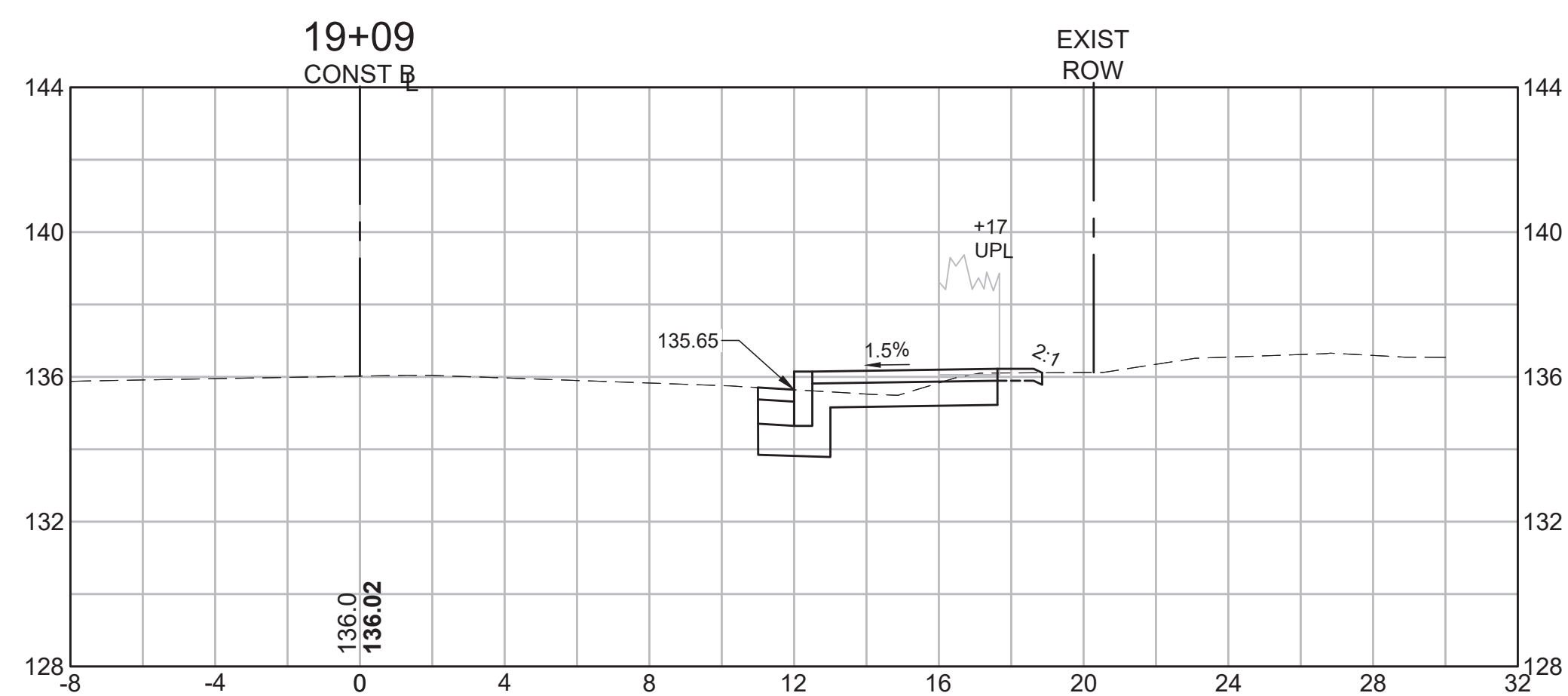
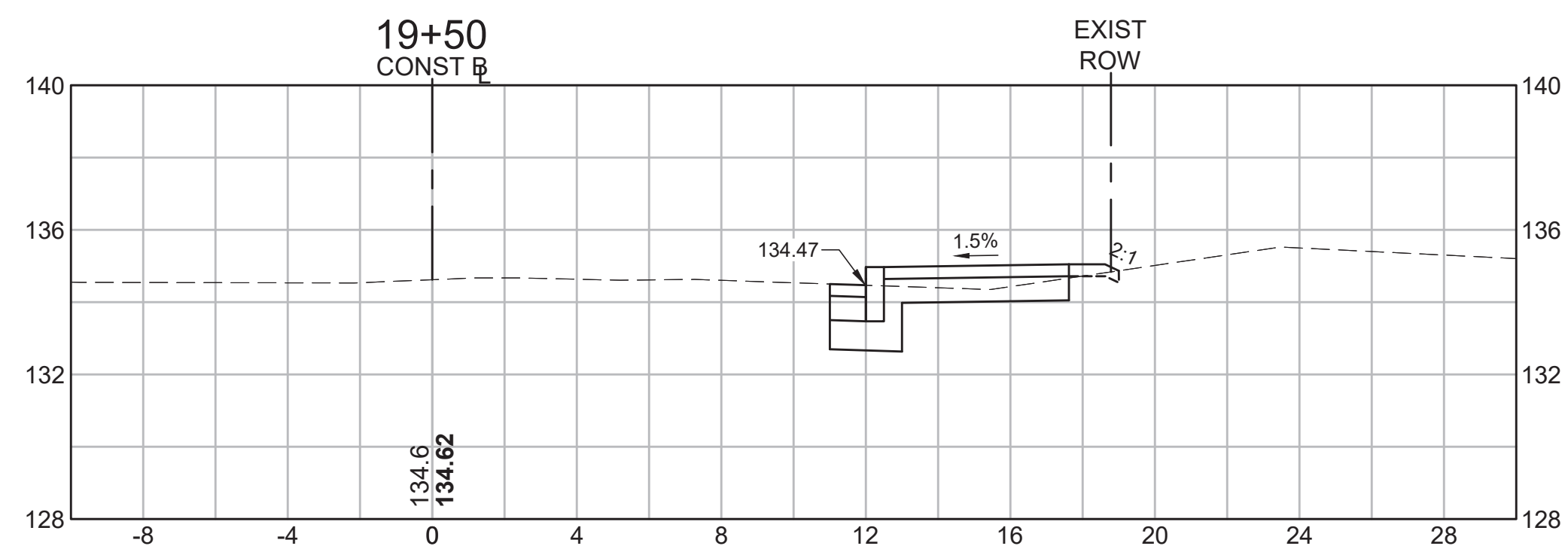


WESTWOOD  
DOWNEY STREET SIDEWALK  
CROSS SECTIONS  
SHEET 15 OF 22



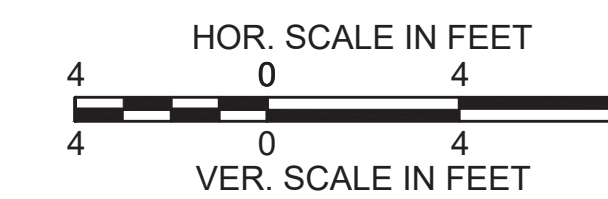
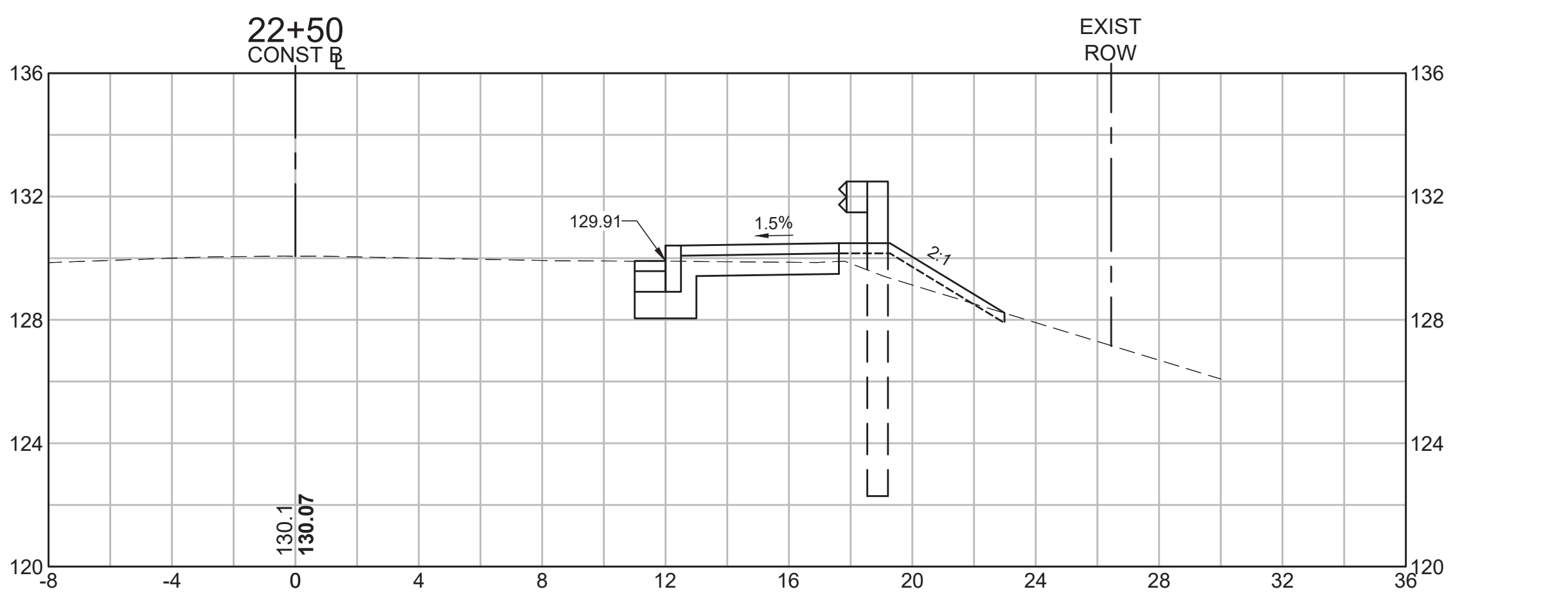
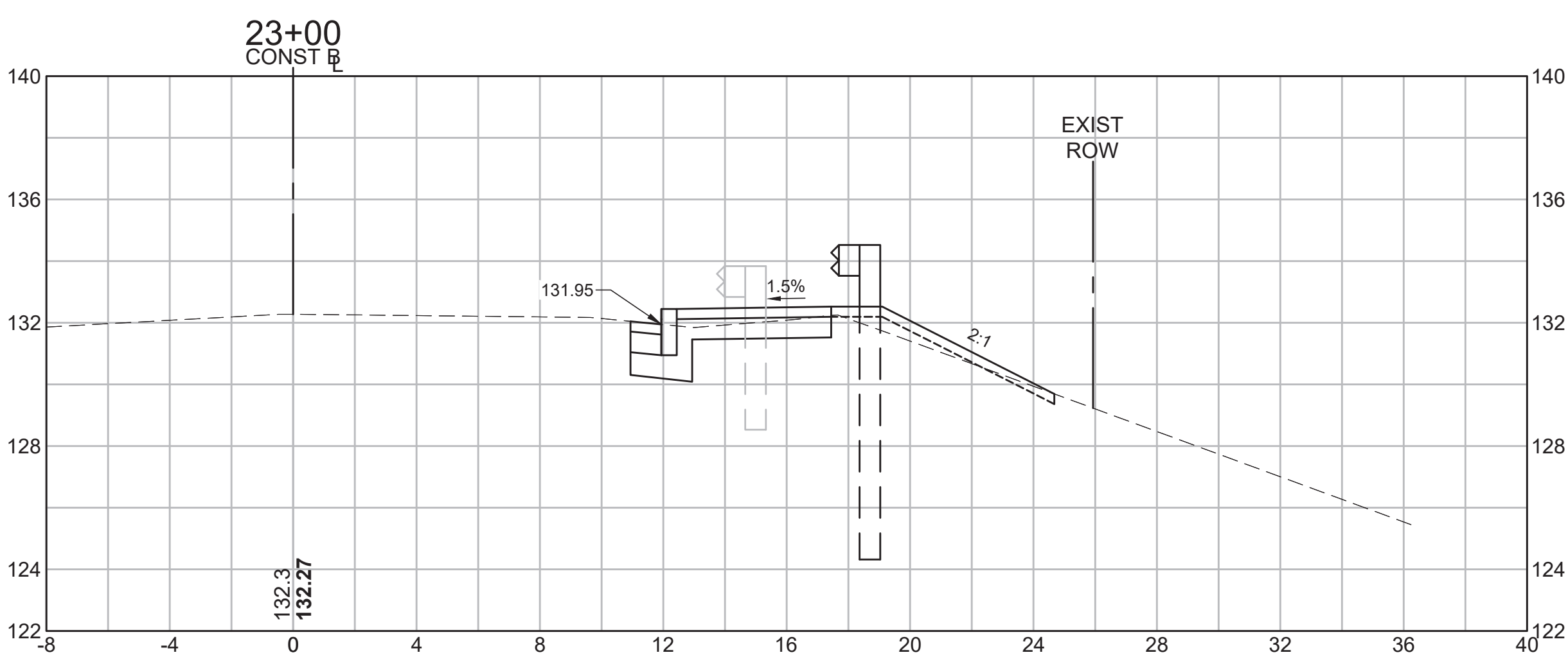
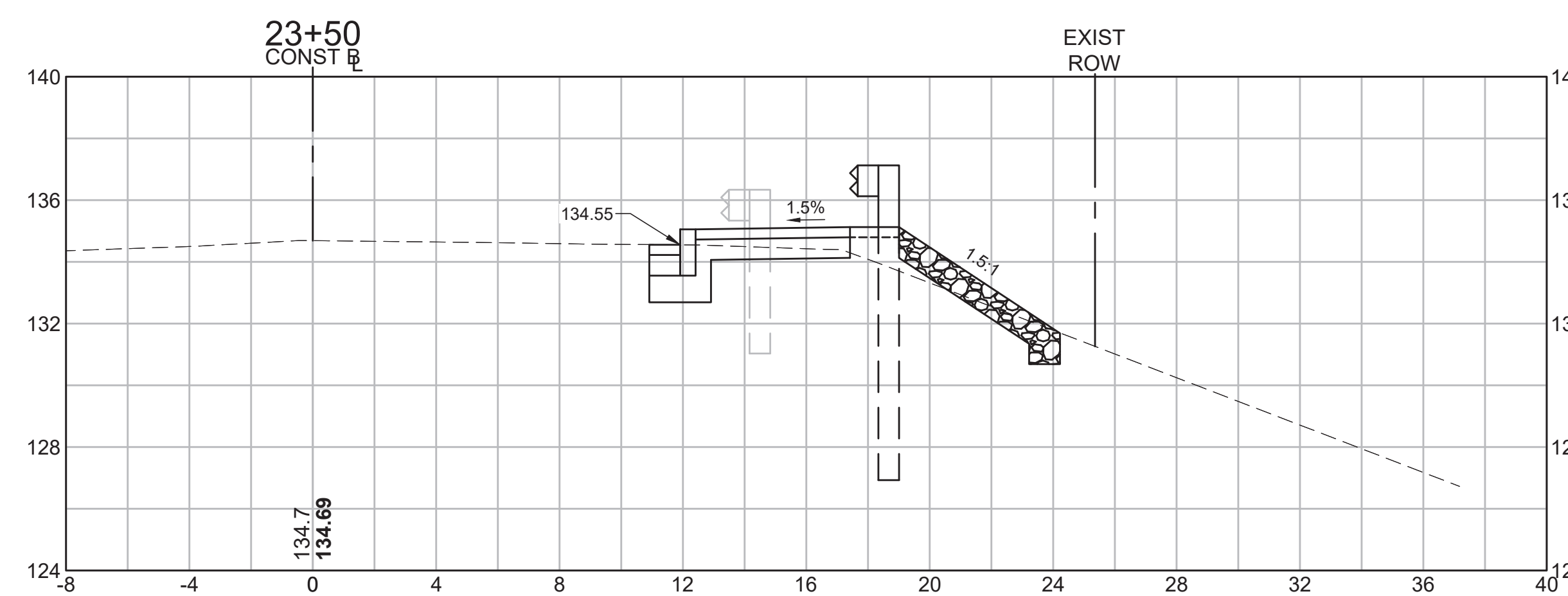
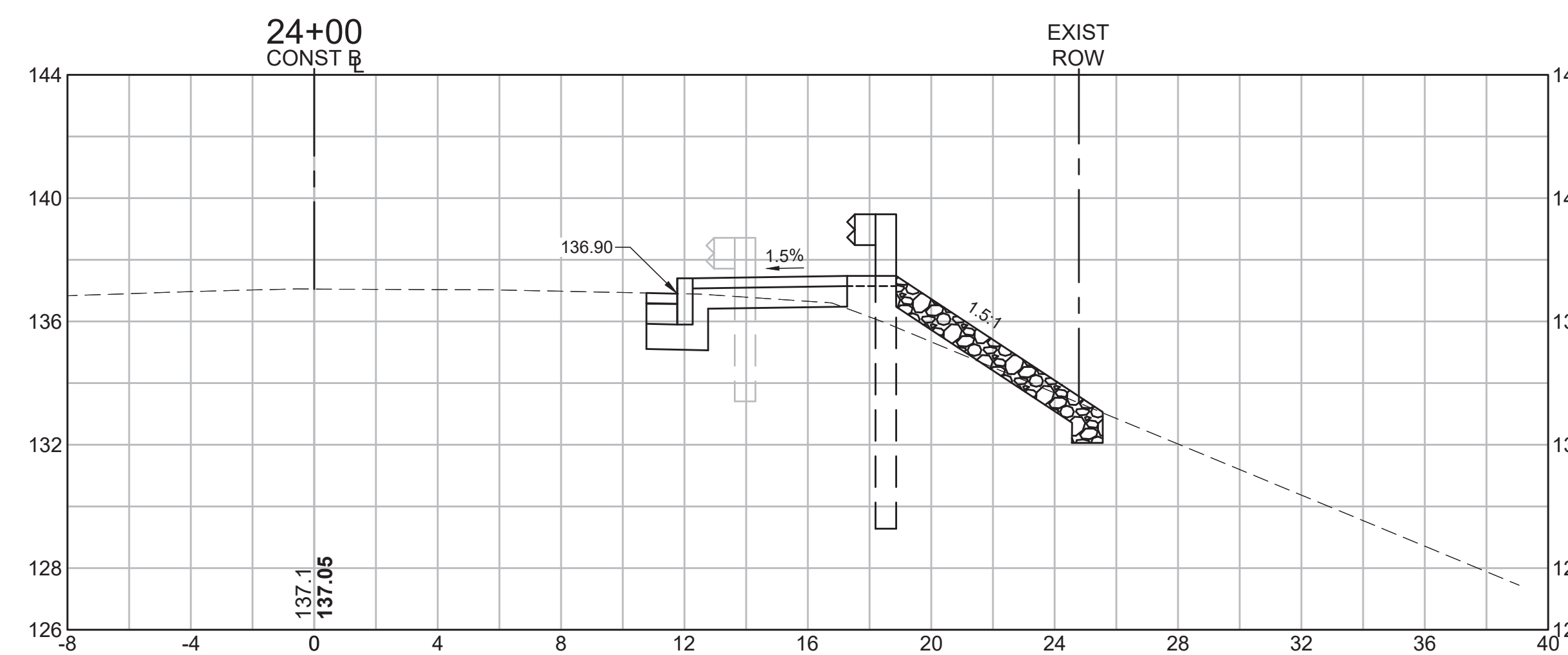
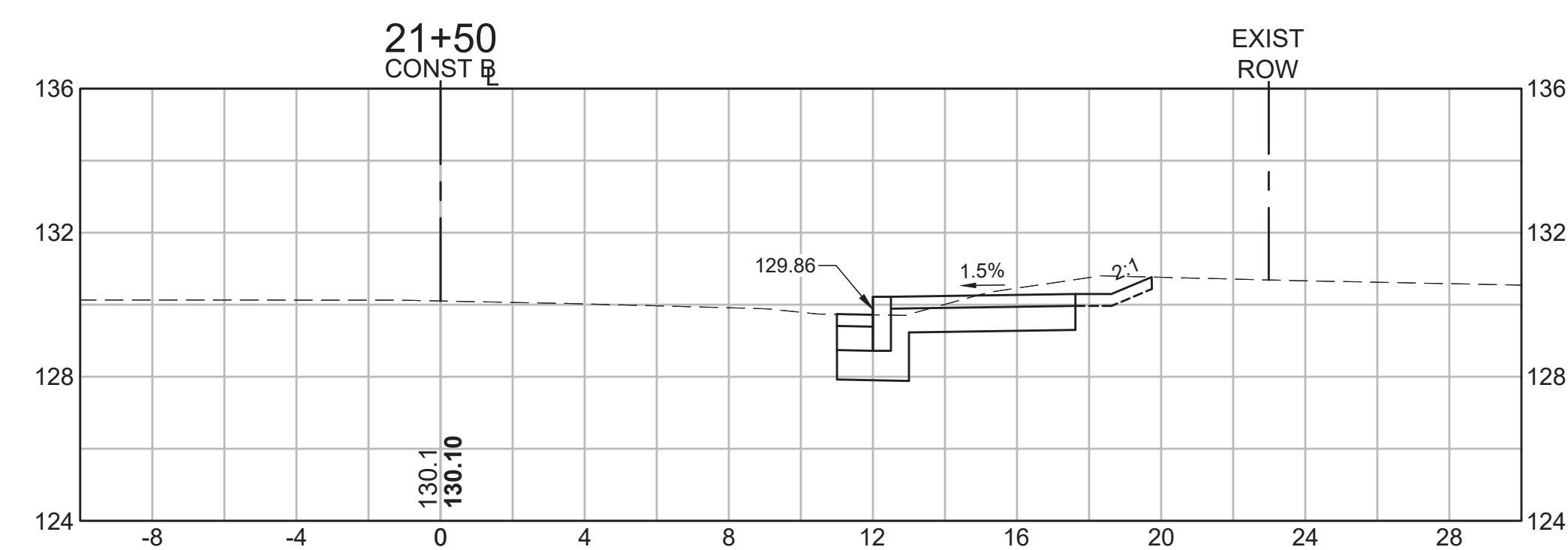
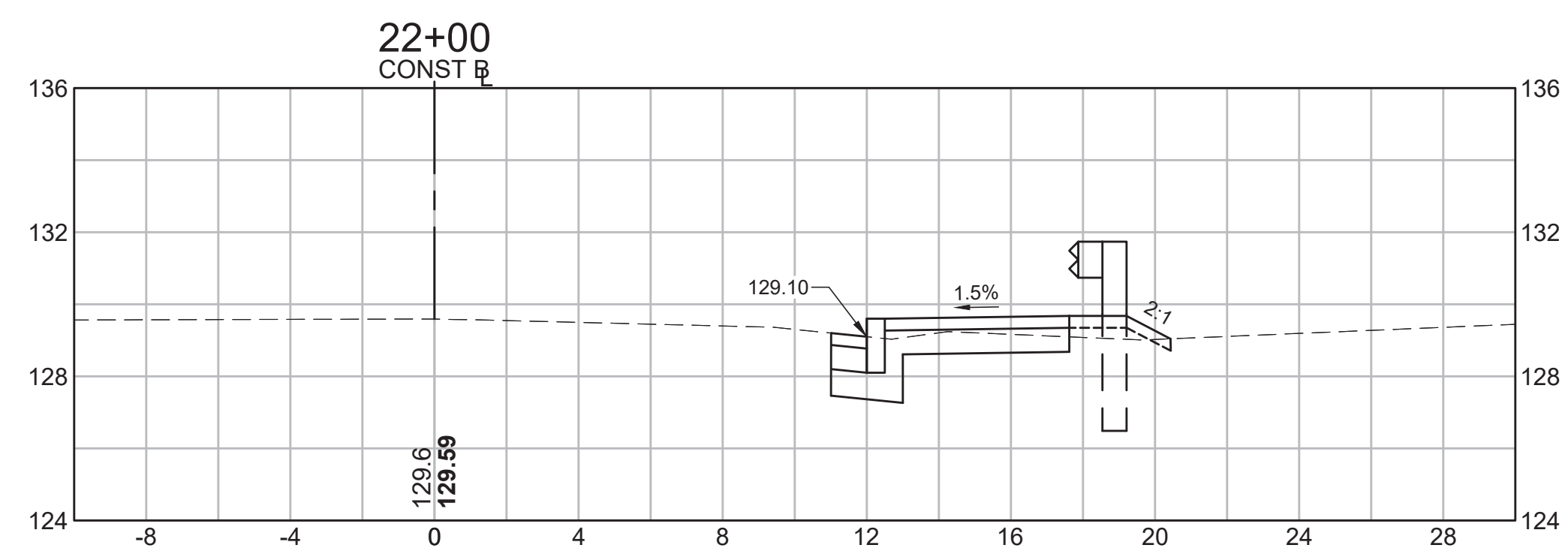
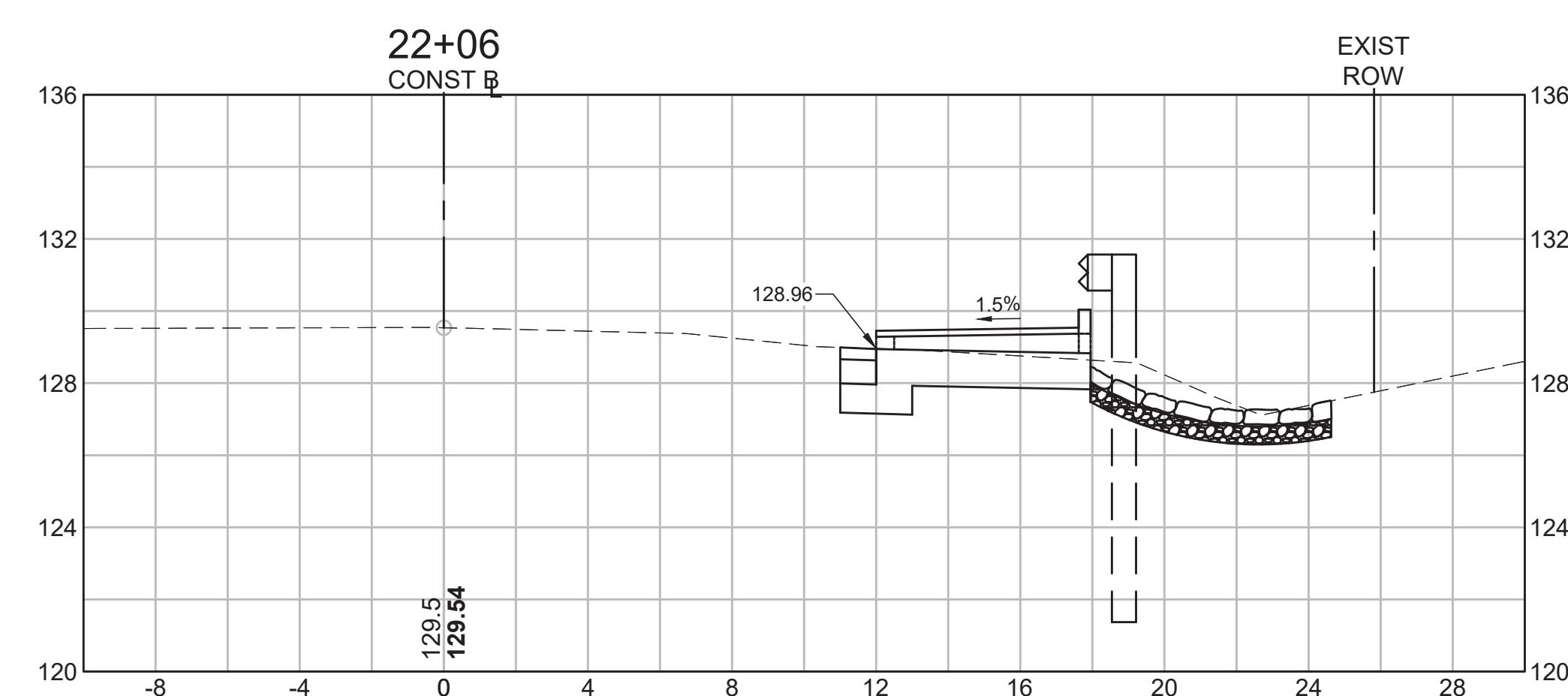
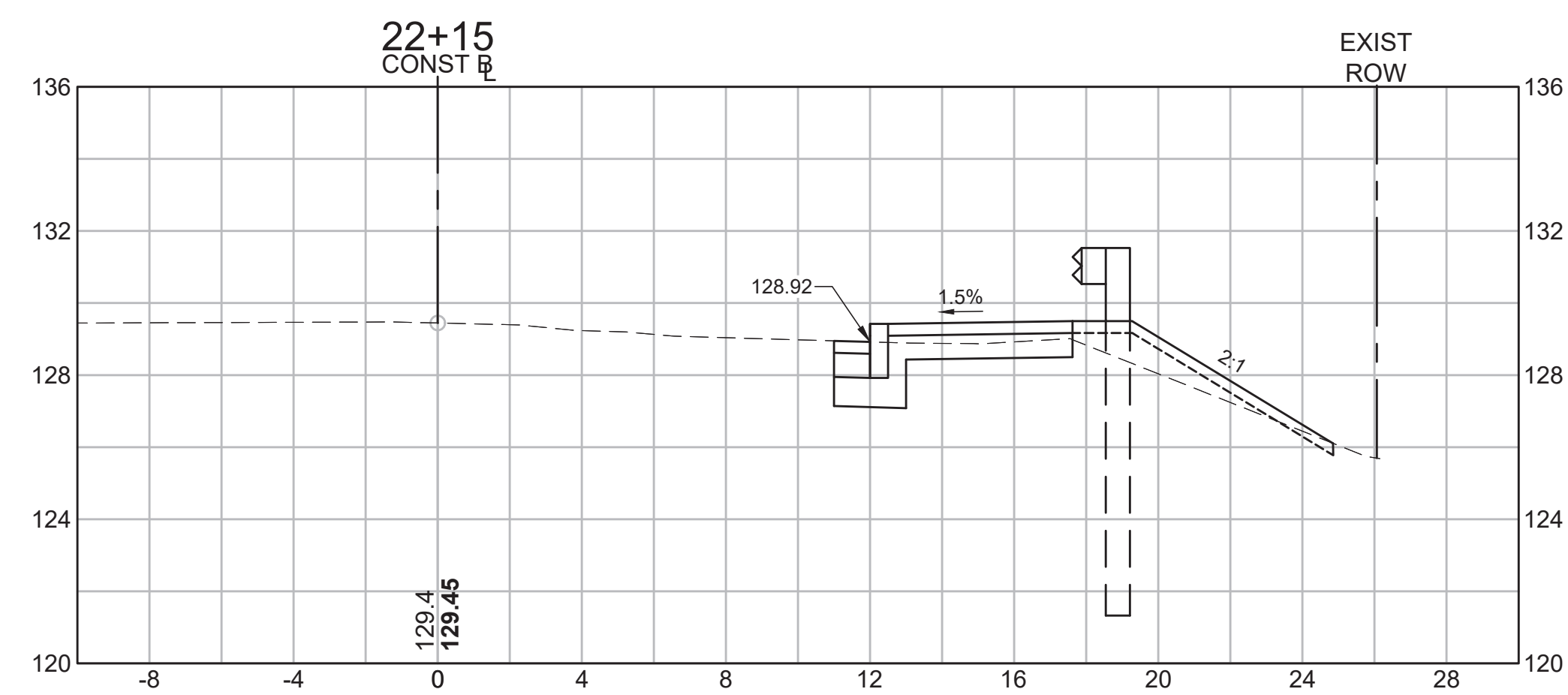


WESTWOOD  
DOWNEY STREET SIDEWALK  
CROSS SECTIONS  
SHEET 16 OF 22

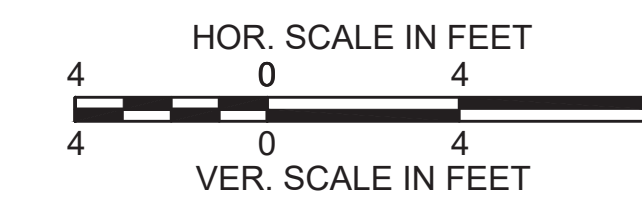
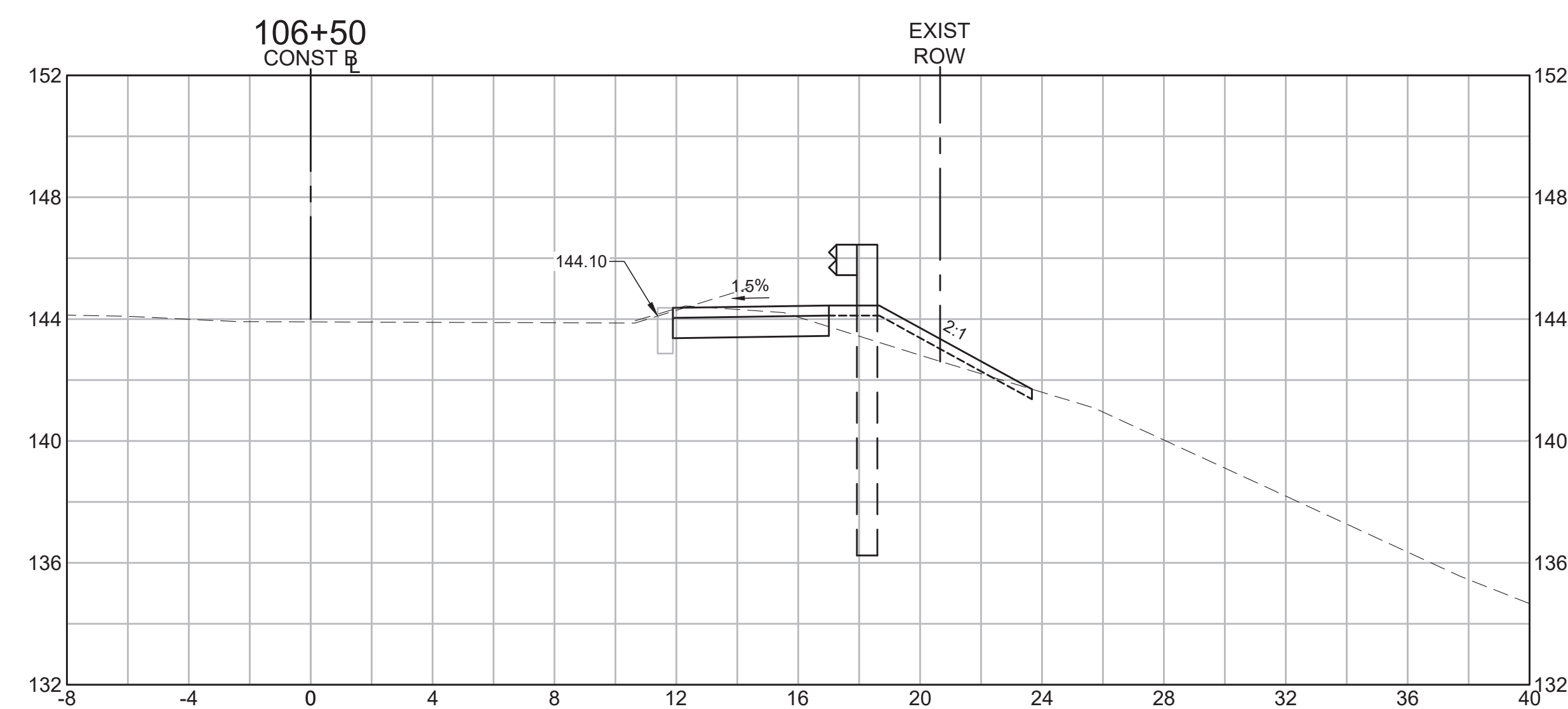
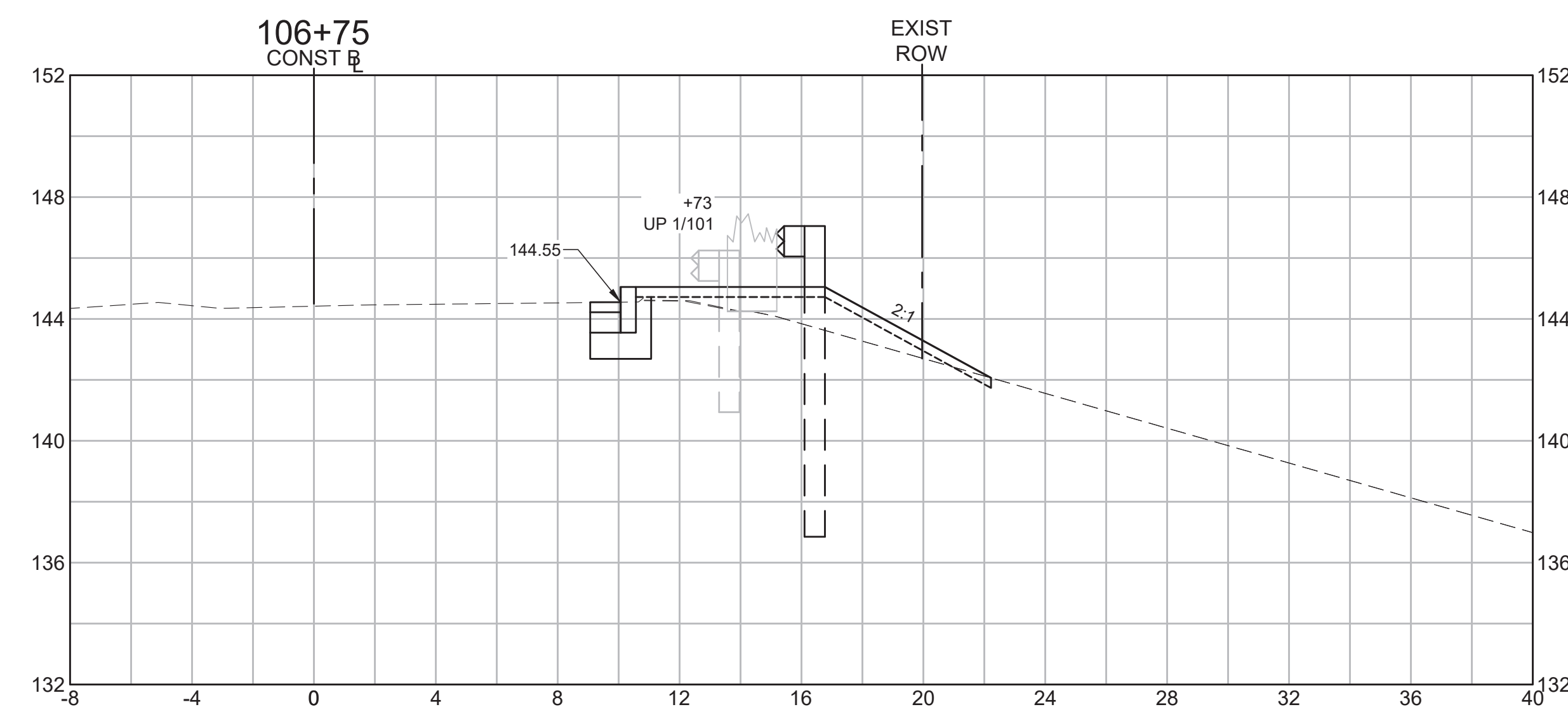
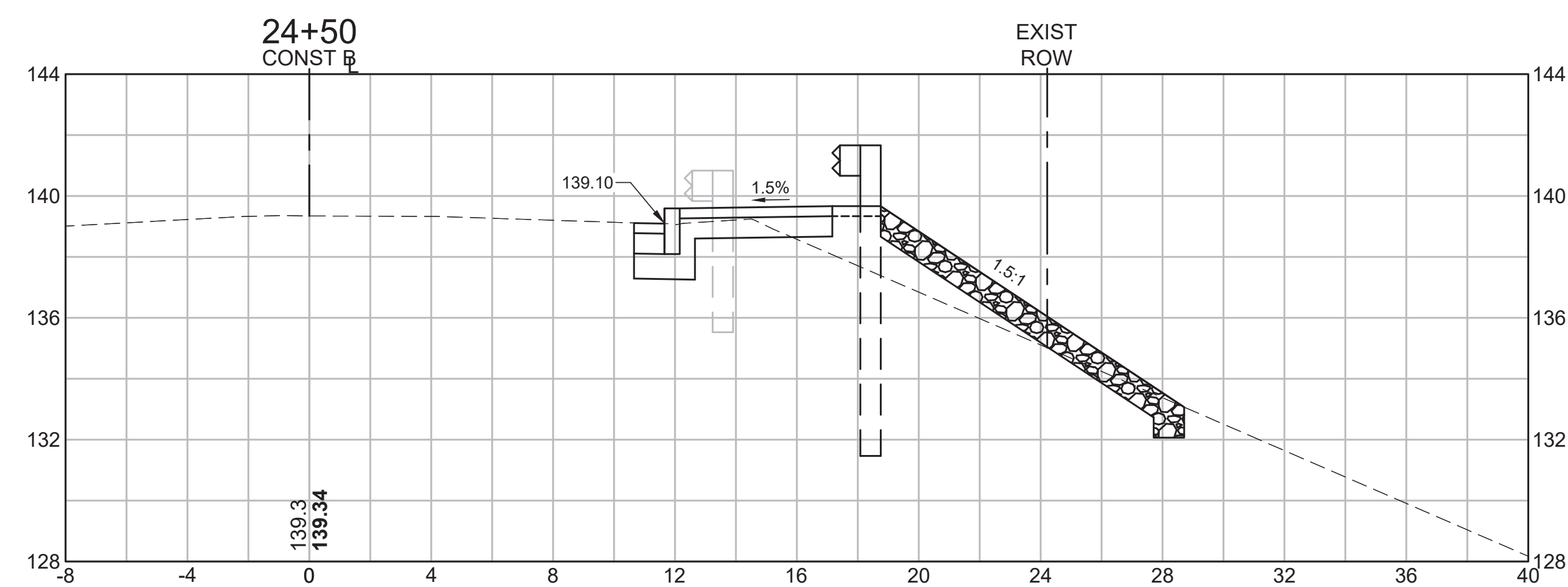
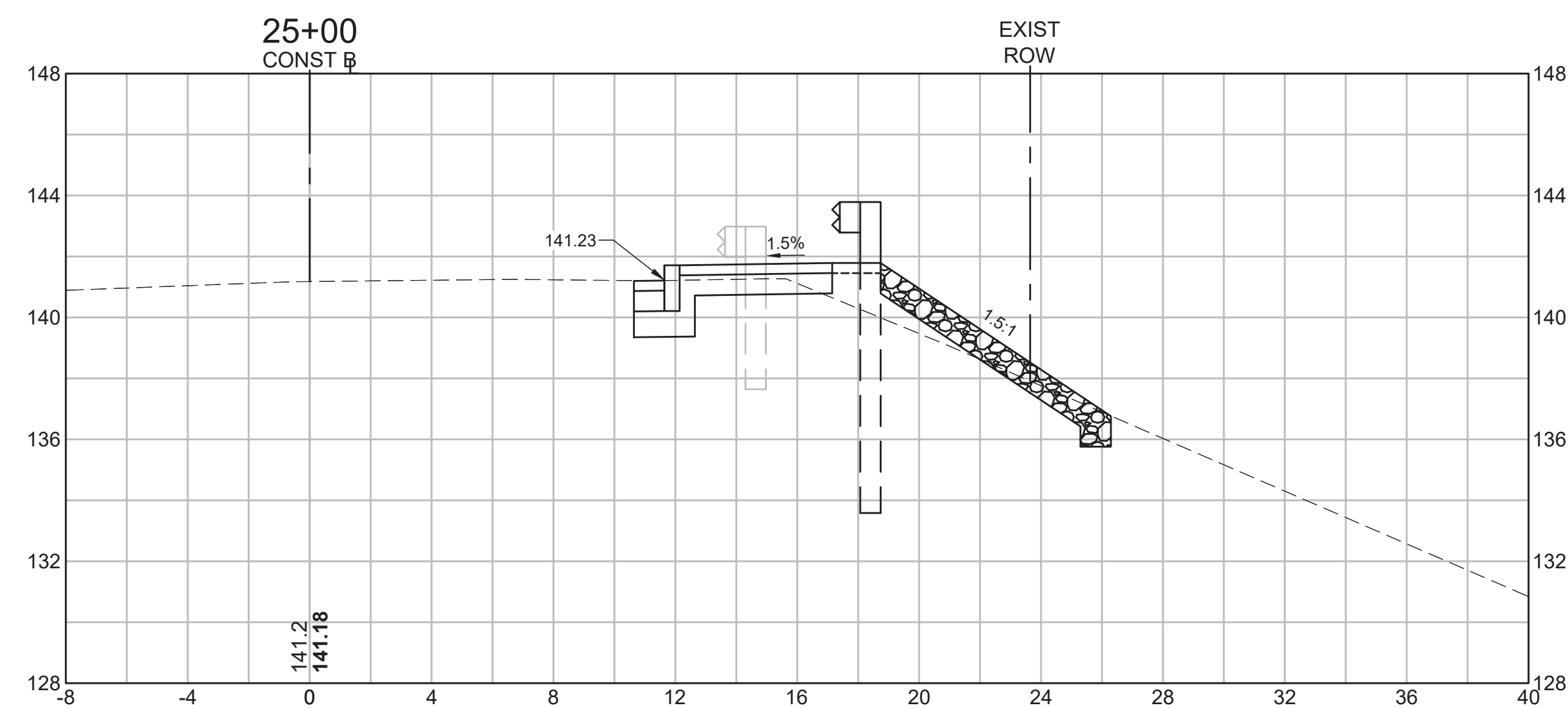
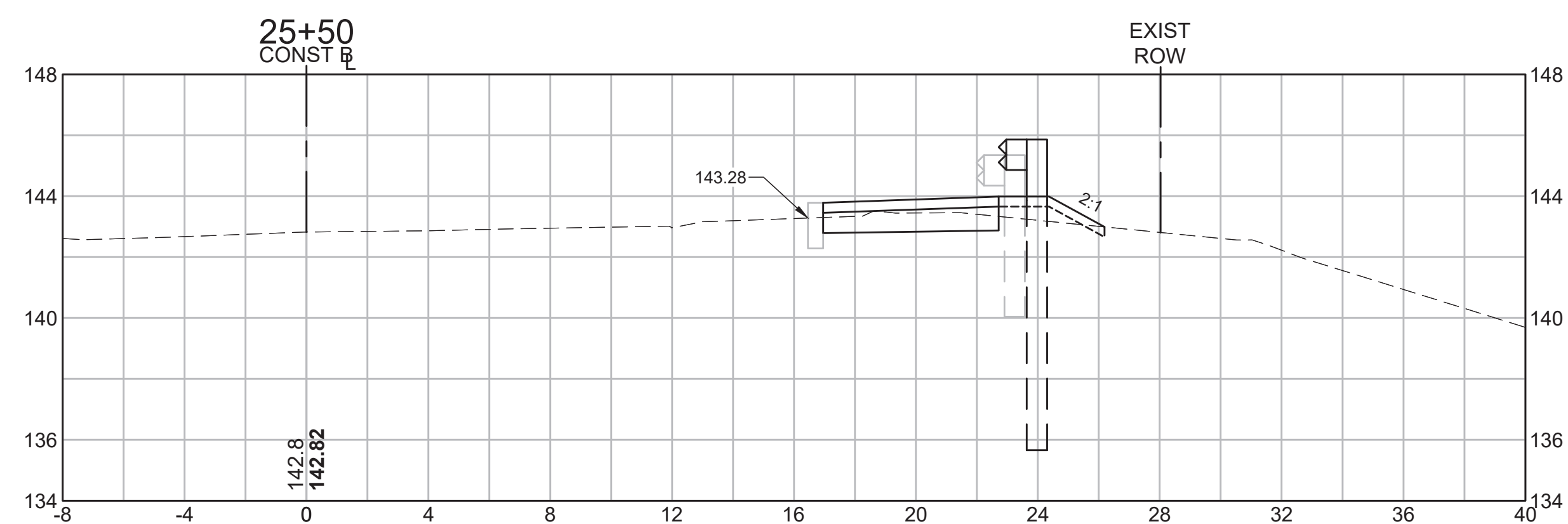




WESTWOOD  
DOWNEY STREET SIDEWALK  
CROSS SECTIONS  
SHEET 17 OF 22









WESTWOOD  
DOWNEY STREET SIDEWALK  
BID ALTERNATIVE 1  
TREE PLANTING  
SHEET 19 OF 22

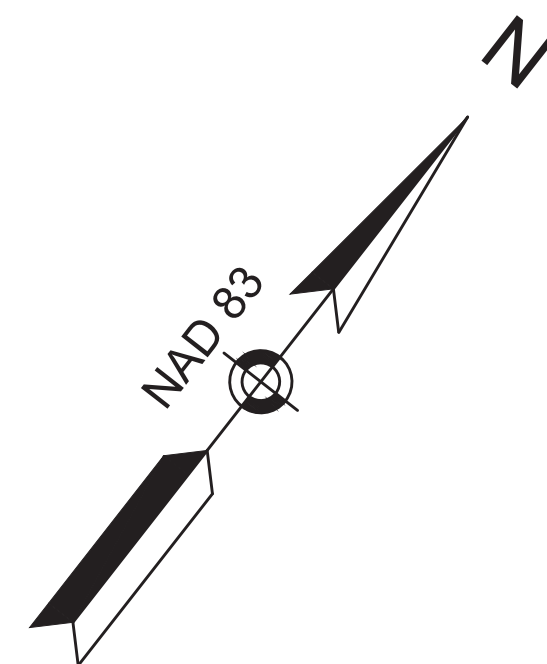
QUAN	BOTANICAL NAME	COMMON NAME	SPACING	SIZE
3	QUERCUS RUBRA	RED NORTHERN OAK	25'-30'	≥ 2.5" cal
3	QUERCUS ALBA	WHITE OAK	25'-30'	≥ 2.5" cal
4	BETULA NIGRA	RIVER BIRCH	25'-30'	≥ 2.5" cal
3	QUERCUS RUBRA	RED NORTHERN OAK	25'-30'	≥ 3" cal
3	QUERCUS ALBA	WHITE OAK	25'-30'	≥ 3" cal
2	BETULA NIGRA	RIVER BIRCH	25'-30'	≥ 3" cal
1	QUERCUS RUBRA	RED NORTHERN OAK	25'-30'	≥ 4" cal
1	QUERCUS ALBA	WHITE OAK	25'-30'	≥ 4" cal
3	BETULA NIGRA	RIVER BIRCH	25'-30'	≥ 4" cal

PLANTING NOTES

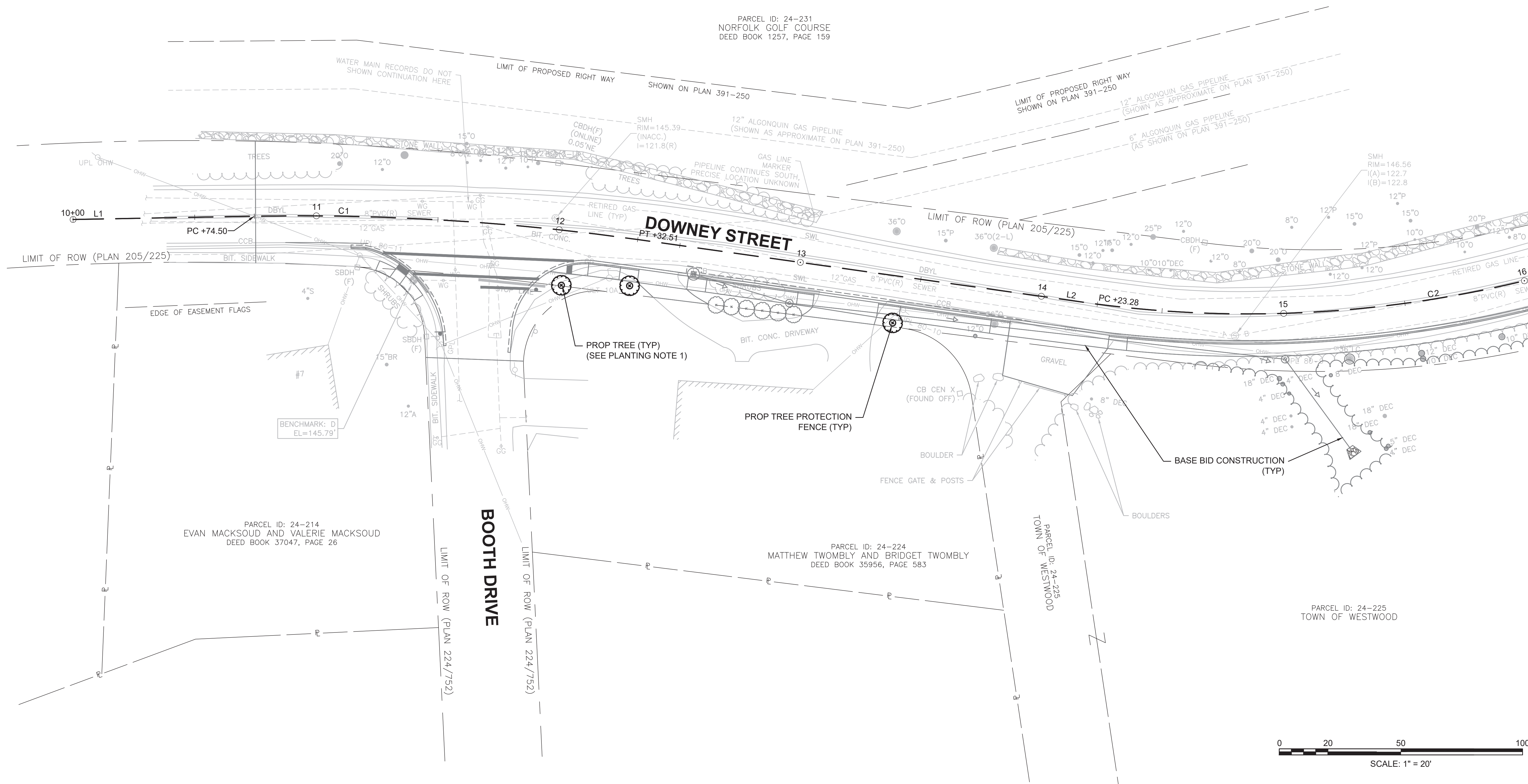
1. PLANTING PLAN IS SCHEMATIC ONLY. FINAL PLANTING LOCATION OF EACH SPECIES AND SIZE TO BE CONFIRMED IN THE FIELD BY THE ENGINEER OR TREE WARDEN AT THE TIME OF PLANTING.
2. CONTRACTOR SHALL HAVE ALL SUBSURFACE UTILITIES MARKED PRIOR TO THE START OF WORK.
3. ALL PLANT MATERIAL SHALL HAVE TAGS INDICATING COMMON NAME, BOTANICAL NAME, CULTIVAR, & SIZE.
4. IMMEDIATELY AFTER ACCEPTANCE OF PLANTING, TAGS AND RIBBONS SHALL BE REMOVED.
5. ALL PLANTS SHALL BE MULCHED PER PLANS AND SPECIFICATIONS.
6. PLANTS AND PLANTING BEDS SHALL BE THOROUGHLY WATERED AS NECESSARY AND PER SPECIFICATIONS.
7. TREE PROTECTION FENCES SHALL BE INSTALLED FOR DEER BROWSING PROTECTION PER SPECIAL PROVISION FOR ITEM 102.522.

WATERING NOTES

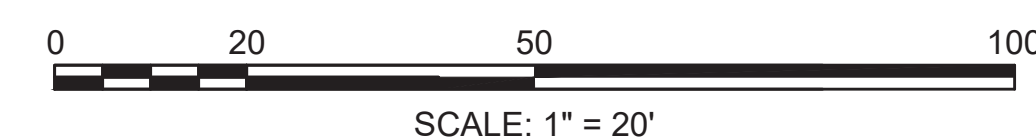
1. IRRIGATION BAGS MAY BE USED UPON APPROVAL OF THE ENGINEER AND TREE WARDEN.
2. A SCHEDULE FOR FILLING AND REMOVAL SHALL BE SUBMITTED TO THE ENGINEER.
3. USE AND SCHEDULE MUST BE APPROVED BY THE ENGINEER OR TREE WARDEN.
4. A MINIMUM OF 2 BAGS PER TREE SHALL BE USED. BAGS SHALL BE ATTACHED TO STAKES.
5. NO BAGS SHALL BE PLACED AROUND THE TREE TRUNK.
6. BAGS SHALL BE MAINTAINED FULL JUNE 1 - OCTOBER 1 OR AS APPROVED.
7. BAGS SHALL BE REMOVED AT THE END OF THE SEASON.
8. REMAINING PROPOSED TREES NOT INDIVIDUALLY SHOWN SHALL BE PLANTED AT THE BASE OF THE ROCKFILL SLOPE OR AT AN ALTERNATIVE LOCATION WITHIN THE TOWN AS DETERMINED BY THE TREE WARDEN.



PARCEL ID: 24-231  
NORFOLK GOLF COURSE  
DEED BOOK 1257, PAGE 159



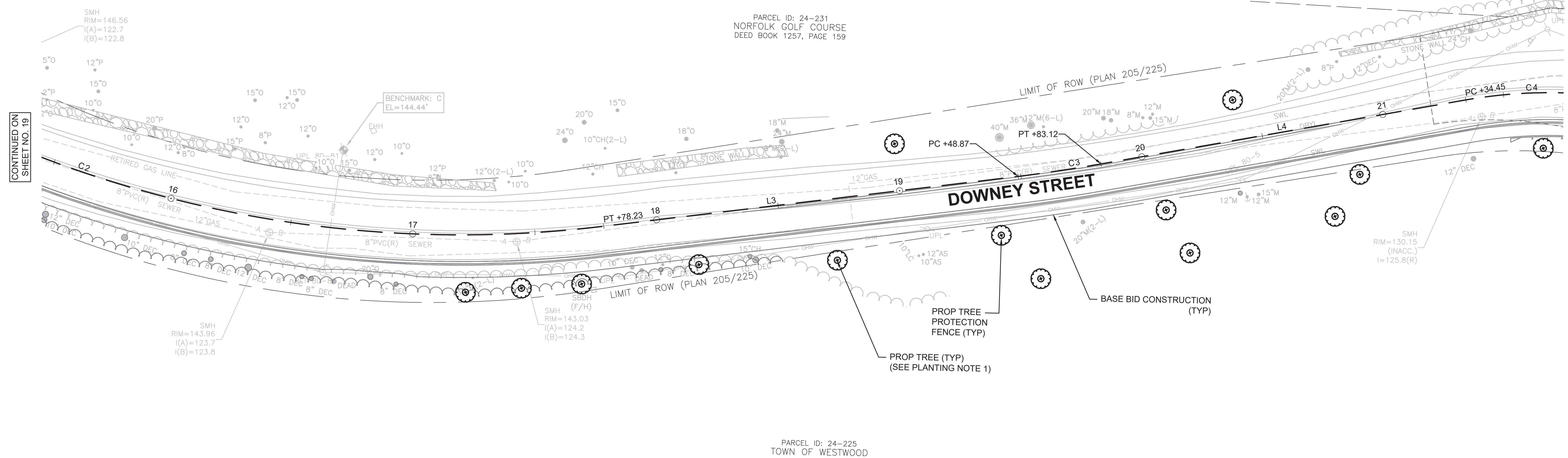
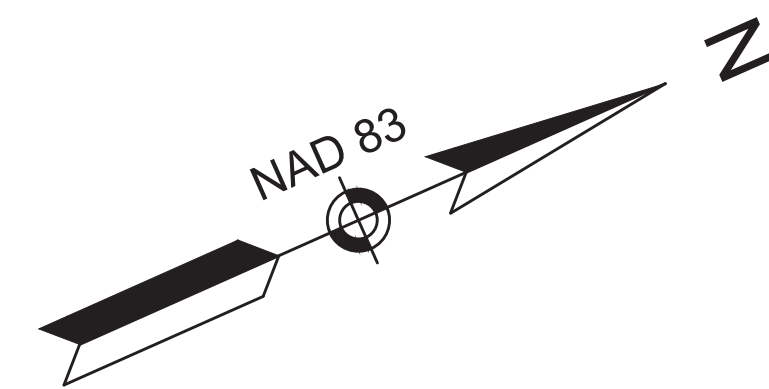
CONTINUED ON  
SHEET NO. 20





WESTWOOD  
 DOWNEY STREET SIDEWALK  
 BID ALTERNATE 1  
 TREE PLANTING  
 SHEET 20 OF 22

QUAN	BOTANICAL NAME	COMMON NAME	SPACING	SIZE
3	QUERCUS RUBRA	RED NORTHERN OAK	25'-30'	≥ 2.5" cal
3	QUERCUS ALBA	WHITE OAK	25'-30'	≥ 2.5" cal
4	BETULA NIGRA	RIVER BIRCH	25'-30'	≥ 2.5" cal
3	QUERCUS RUBRA	RED NORTHERN OAK	25'-30'	≥ 3" cal
3	QUERCUS ALBA	WHITE OAK	25'-30'	≥ 3" cal
2	BETULA NIGRA	RIVER BIRCH	25'-30'	≥ 3" cal
1	QUERCUS RUBRA	RED NORTHERN OAK	25'-30'	≥ 4" cal
1	QUERCUS ALBA	WHITE OAK	25'-30'	≥ 4" cal
3	BETULA NIGRA	RIVER BIRCH	25'-30'	≥ 4" cal

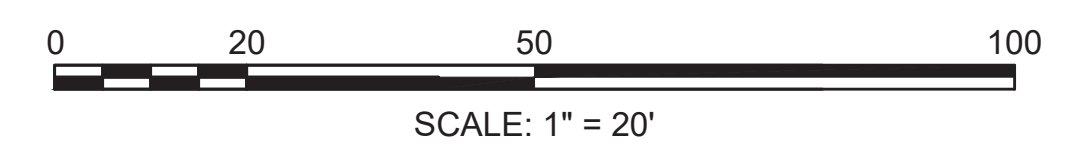


CONTINUED ON  
 SHEET NO. 19

CONTINUED ON  
 SHEET NO. 21

PARCEL ID: 24-231  
 NORFOLK GOLF COURSE  
 DEED BOOK 1257, PAGE 159

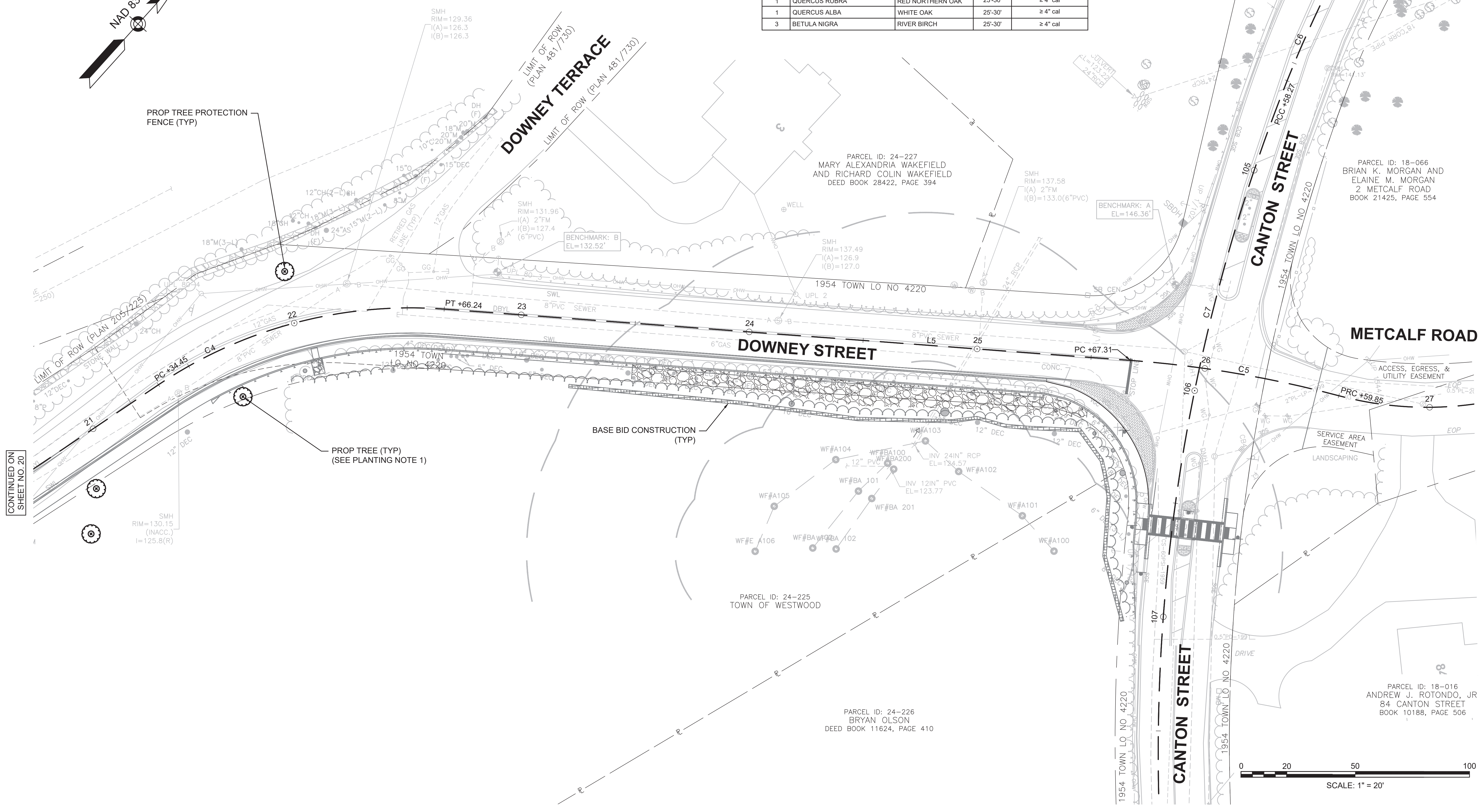
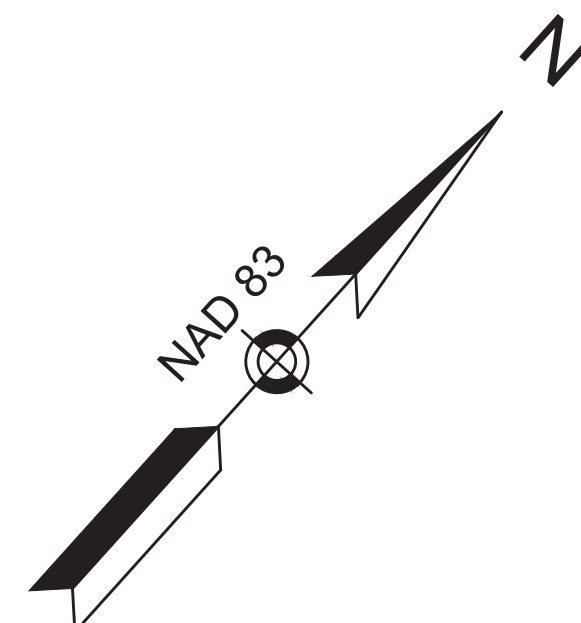
PARCEL ID: 24-225  
 TOWN OF WESTWOOD



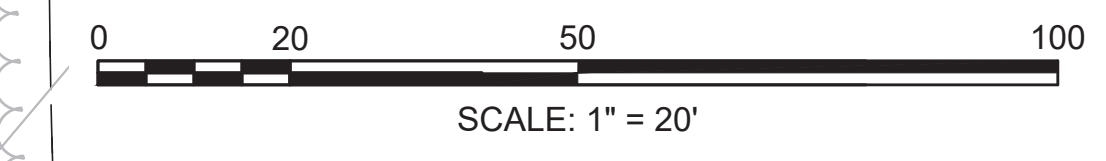


WESTWOOD  
 DOWNEY STREET SIDEWALK  
 BID ALTERNATE 1  
 TREE PLANTING  
 SHEET 21 OF 22

QUAN	BOTANICAL NAME	COMMON NAME	SPACING	SIZE
3	QUERCUS RUBRA	RED NORTHERN OAK	25'-30'	≥ 2.5" cal
3	QUERCUS ALBA	WHITE OAK	25'-30'	≥ 2.5" cal
4	BETULA NIGRA	RIVER BIRCH	25'-30'	≥ 2.5" cal
3	QUERCUS RUBRA	RED NORTHERN OAK	25'-30'	≥ 3" cal
3	QUERCUS ALBA	WHITE OAK	25'-30'	≥ 3" cal
2	BETULA NIGRA	RIVER BIRCH	25'-30'	≥ 3" cal
1	QUERCUS RUBRA	RED NORTHERN OAK	25'-30'	≥ 4" cal
1	QUERCUS ALBA	WHITE OAK	25'-30'	≥ 4" cal
3	BETULA NIGRA	RIVER BIRCH	25'-30'	≥ 4" cal

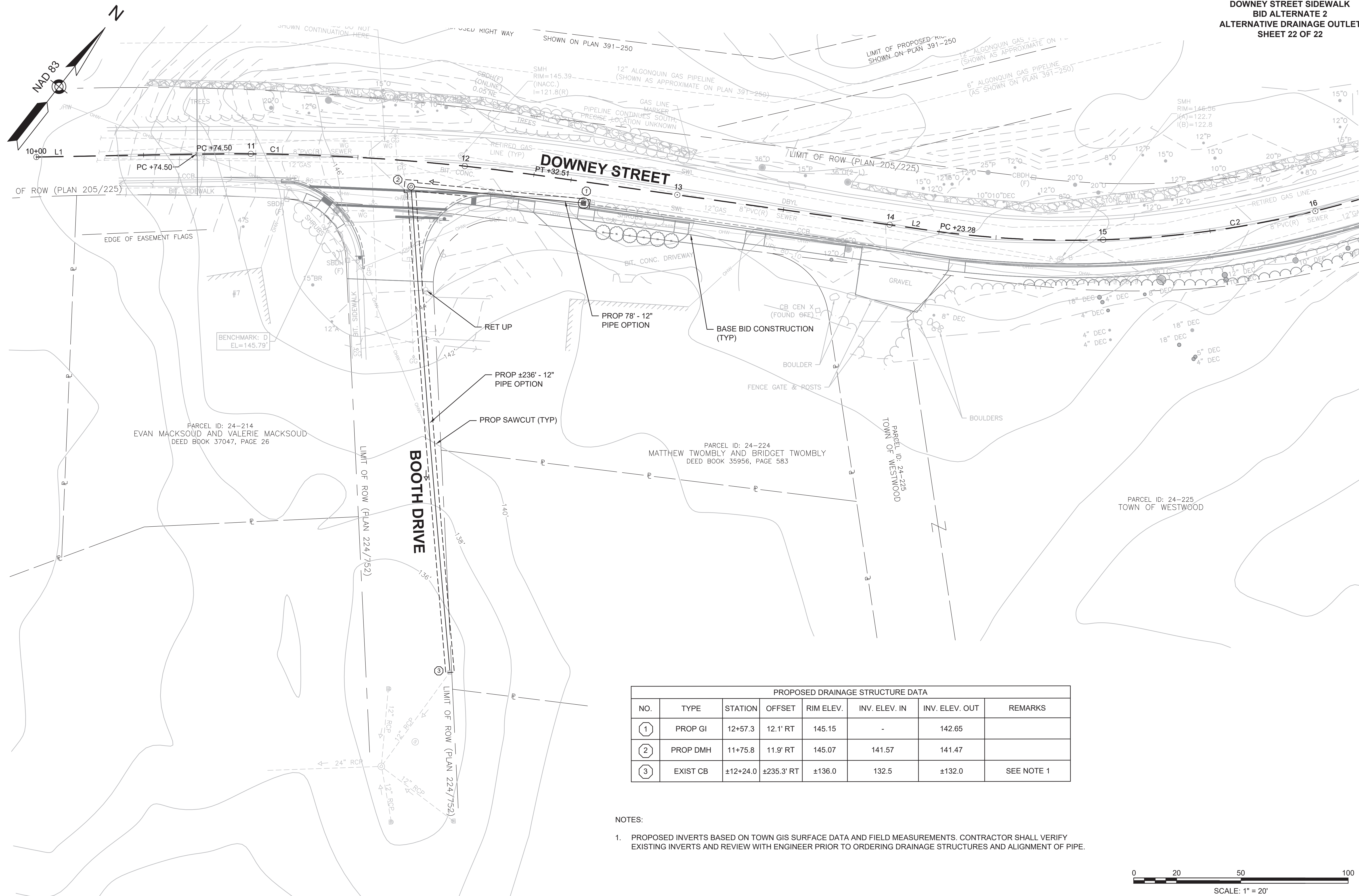


CONTINUED ON  
 SHEET NO. 20





WESTWOOD  
 DOWNEY STREET SIDEWALK  
 BID ALTERNATE 2  
 ALTERNATIVE DRAINAGE OUTLET  
 SHEET 22 OF 22



PARCEL ID: 24-214  
 EVAN MACKSOUD AND VALERIE MACKSOUD  
 DEED BOOK 37047, PAGE 26

PARCEL ID: 24-224  
 MATTHEW TWOMBLY AND BRIDGET TWOMBLY  
 DEED BOOK 35956, PAGE 583

PARCEL ID: 24-225  
 TOWN OF WESTWOOD

PROPOSED DRAINAGE STRUCTURE DATA							
NO.	TYPE	STATION	OFFSET	RIM ELEV.	INV. ELEV. IN	INV. ELEV. OUT	REMARKS
1	PROP GI	12+57.3	12.1' RT	145.15	-	142.65	
2	PROP DMH	11+75.8	11.9' RT	145.07	141.57	141.47	
3	EXIST CB	±12+24.0	±235.3' RT	±136.0	132.5	±132.0	SEE NOTE 1

- NOTES:
- PROPOSED INVERTS BASED ON TOWN GIS SURFACE DATA AND FIELD MEASUREMENTS. CONTRACTOR SHALL VERIFY EXISTING INVERTS AND REVIEW WITH ENGINEER PRIOR TO ORDERING DRAINAGE STRUCTURES AND ALIGNMENT OF PIPE.

