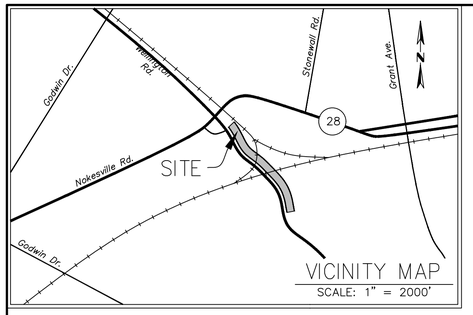


FOR INDEX OF SHEET SEE SHEET 1A

NOTE:
SHARED USE PATH AND THE ASSOCIATED STORM DRAINAGE IMPROVEMENTS WILL BE MAINTAINED BY THE CITY OF MANASSAS.

CITY OF MANASSAS
PUBLIC WORKS – ENGINEERING

UPC 118700

STATE	FEDERAL AID PROJECT	STATE ROUTE	STATE PROJECT	SHEET NO.
VA.	TAP–5B01 (208)	674	EN20–115–328 PE–101, RW–201, C–501	1

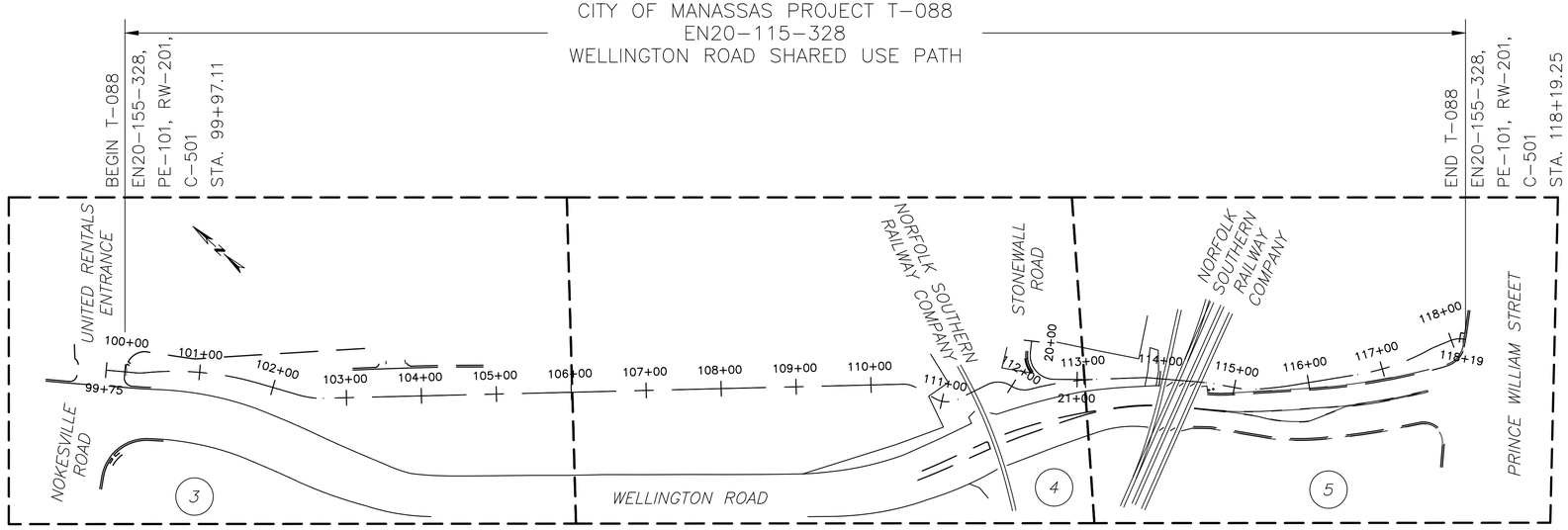
Responsible Land Disturber (RLD) means an individual holding a certificate of competence issued by DCR who will be in charge of and responsible for carrying out the land–disturbing activity in accordance with the approved plan.
The RLD may be the owner, applicant, permittee, designer, superintendent, project manager, contractor, or any other project or development team member. The RLD must be designated as a prerequisite for obtaining City permit and prior to any land disturbing activities. Ref VESCH

PLAN AND PROFILE OF PROPOSED

WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

FROM: NOKESVILLE ROAD
TO: PRINCE WILLIAM STREET

CITY OF MANASSAS PROJECT T–088
EN20–115–328
WELLINGTON ROAD SHARED USE PATH



SCALE: 1"=100'

TIER 1 PROJECT

LOCALLY ADMINISTERED PROJECTS

CITY OF MANASSAS
NAME OF LOCALITY

(SIGNATURE)
NAME OF RESPONSIBLE LOCAL GOVERNMENT OFFICAL (TYPED)
RECOMMENDED FOR APPROVAL FOR RIGHT OF WAY ACQUISITION

DATE — TITLE OF POSITION

(SIGNATURE)
NAME OF RESPONSIBLE LOCAL GOVERNMENT OFFICAL (TYPED)
RECOMMENDED FOR APPROVAL FOR CONSTRUCTION

DATE — TITLE OF POSITION

RECOMMENDED FOR APPROVAL FOR RIGHT OF WAY ACQUISITION

DATE — DISTRICT PLANNING AND INVESTMENT MANAGER

DATE — DISTRICT PROJECT DEVELOPMENT ENGINEER

APPROVED FOR RIGHT OF WAY ACQUISITION

DATE — DISTRICT ENGINEER/ADMINISTRATOR

RECOMMENDED FOR APPROVAL FOR CONSTRUCTION

DATE — DISTRICT PLANNING AND INVESTMENT MANAGER

DATE — DISTRICT PROJECT DEVELOPMENT ENGINEER

APPROVED FOR CONSTRUCTION

DATE — DISTRICT ENGINEER/ADMINISTRATOR

COMMONWEALTH OF VIRGINIA
BRENDA DUONG
Lic. No. 052964
PROFESSIONAL ENGINEER

Volkert, Inc.
Springfield, Virginia
ROADWAY ENGINEER

ENGINEER'S SEAL & SIGNATURE

MISS UTILITY 1–800–552–7001

Utility Owners:

Water & Sewer

City of Manassas
Utilities Department
P.O. Box 192
Manassas, VA 20108
Ph: 703–257–7275
Fx: 703–257–5794
Mike Nicholson
mnicholson@ci.manassas.va.us

Power

Dominion Virginia Power
701 E. Cary St.
Andrew J. Brooks
Underground Damage Prevention Manager
Dominion Emergency Preparedness Center
804–771–3655
804–514–2277 cell
Andrew.J.Brooks@dom.com
Facility.Locate.Request@dominionenergy.com

City of Manassas
Utilities Department
P.O. Box 192
Manassas, VA 20108
Ph: 703–257–8474
Fx: 703–257–5794
Tarek Aly
taly@ci.manassas.va.us

Telecom

AT&T Corp.
4800 Winchester Blvd
Frederick, MD 21703
Linard Miller 702–624–4956
Gary Wigfield 301– 874–1180
gw1349@att.com

Zayo Communications
Kris Kobylski
OSP Area Director VA/WV/MD | Zayo Group
13861 Sunrise Valley Dr | Suite 450 | Herndon, VA 20171
M: 571.220.4813
kris.kobylski@zayo.com

Verizon
William (Bill) Lacy
Verizon Project Designer / Highway Relocations
9401 Peabody Street Manassas, VA 20110
office 703/369–9571 fax 703/330–7323
cell 540/520–1905
william.lacy@verizon.com

Comcast
Planning & Design
324 W MAIN ST
CHARLOTTESVILLE, VA
22901
Doug Wright
434–951–3843
DOUGLAS_WRIGHT@comcast.com
NED–BLT_BeltwayRegionDesignRequests@cable.comcast.com

Summittig
22375 Broadrick Dr.
Suite 165
Dulles, VA. 20166
703–443–1956
540–364–2005
info@summitig.com
Greg Sydnor
804–385–1126

Level 3
Century Link, Inc.
Renoy Thomas
BUSINESS ANALYST I
OSP Relocations
CenturyLink
Tulsa, OK 74103
renoy.thomas@centurylink.com
NationalRelo@centurylink.com

Windstream KDL
Jerry Richardson
Senior OSP Engineer– Construction Manager
jerry.richardson@windstream.com
o: 804–422–4258 | m: 804–641–0240

Metro Duct Systems
10130 Residency Rd.
Manassas, Virginia 20110
PH: 703–335–5301
TF: 888–829–4540
FAX: 703–335–2022
https://metroductsystems.com/contact/

Gas

Columbia Gas
NiSource Damage Prevention Screening
1600 Dublin Road
Marble Cliff, Ohio 43215
Cell : 614 315–6524
Office: 614 481–1456
Fax: 614 481–1264
CDCDamagePreventionCenter@nisource.com

FUNCTIONAL CLASSIFICATION AND TRAFFIC DATA

URBAN MINOR ARTERIAL (GS–6) – 35 MPH POSTED SPEED

	WELLINGTON ROAD FR: NOKESVILLE ROAD TO: PRINCE WILLIAM STREET
ADT (2019)	17,000
ADT (2040)	21,000
DHV (VPH)	2,000
T (%)	2
DIRECTIONAL FACTOR (%)	49 EB / 51 WB
K(%)	10

E&S Bond Amount : $72,693.50

Official Approved Plan
The City of Manassas

The following endorsement hereby represent that this plan has been reviewed by all of the appropriate departments and agencies, using the City of Manassas Code of Ordinances and the City DCSM; and based upon the affirmative recommendation of those departments and agencies has been found to be consistent with the regulations, ordinances, conditions and provisions related to the development and use of this parcel and may be Approved as the Official Plan.

Development Services Manager — Date

90% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS
DATE — BY — DESCRIPTION

MANASSAS PROJECT NO.: T–088
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID.: Volkert
DESIGNED BY: BD DATE: 09/27/21
DRAWN BY: BD DATE: 09/27/21
CHECKED BY: RH DATE: 09/27/21
APPROVED BY: DATE:

WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

TITLE SHEET

SHEET
1
SCALE AS NOTED

CITY OF MANASSAS GENERAL NOTES

All construction within existing and/or proposed R/W is to conform to the current VDOT Standards and Specifications, the current edition of the City of Manassas Design and Construction Standards Manual (DCSM), latest edition Manual on Uniform Traffic Control Devices (MUTCD) and the Virginia Work Area Protection Manual (VMAPM), unless otherwise noted.

The Contractor shall be responsible for costs incurred for damage to any public utilities due to construction.

Measures to control erosion and siltation must be provided and installed according to Article 4 of the City of Manassas DCSM and/or the current edition of the Virginia Erosion and Sediment Control Handbook. The approval of these plans in no way relieves the contractor or agent of the responsibilities contained in the siltation and erosion control policy.

The contractor is required to schedule a preconstruction meeting with the Development Services Site Inspections Division prior to any land disturbing activities (703–257–8278).

Before burning, blasting, transportation or storage of explosives in the City of Manassas a permit shall be obtained from the Fire Marshal's Office.

Prior to any land disturbing activities, all necessary permits shall be obtained (703–257–8278).

A permit will be required for all advertising signs. This permit can be secured from the City of Manassas Development Services.

All unstable material shall be removed from the construction limits of the roadway before placing embankment.

All streets shall be compacted to a density of not less than 95% of maximum density determined in conformity with VTM–1 method. The subdivider shall use mechanical means to achieve the required compaction.

All storm sewer systems shall be reinforced concrete pipe. All concrete pipe to be placed within the dedicated right–of–way shall conform to ASTM Specification C76–65T class IV.

All City of Manassas standard pavement designs are based on a minimum CBR value of 10.

A smooth grade shall be maintained from centerline of existing road to proposed curb and gutter to preclude the forming of false gutters and/ or the ponding of any water on the roadway.

The contractor shall grade slopes no steeper than 3:1 on returns at intersections to provide adequate sight distance.

All underground utilities must be placed from the utility main to the right–of–way line for each lot and all underground utility mains and connections must be installed and tested in–place prior to the application of any bituminous materials or base stone.

The contractor shall be responsible for determining the location of all existing underground utilities and confirming existing conditions prior to beginning any construction. Call before you dig 1–800–552–7001.

It is the intention of these plans that all areas shall be graded in detail so as to provide positive surface drainage and to prevent the ponding of water.

The contractor shall provide adequate means of cleaning trucks and/ or other equipment of mud prior to entering public streets, and it is the contractor's responsibility to clean streets, allay dust, and to take whatever measures are necessary to insure that the road is maintained in a clean, mud and dust free condition at all times. No separate pay item will be provided for this work.

All utility tie in work shall be coordinated with the City Inspector.

Contractor shall be responsible for mowing within the project limits in accordance with City ordinance for the duration of the contract.

EROSION AND SEDIMENT CONTROL (ESC)

E–1 Plans have phased erosion and sediment control. All work shall be performed in accordance with approved plans and SWPPP.

E–2 Rock for Check Dams, Inlet Protection, Erosion Control Stone and Riprap shall be in accordance with Section 203 and Section 414 of the applicable VDOT Road and Bridge Specifications.

GENERAL NOTES

C–1 No open cut shall remain at the end of the work day, which may be necessary for purpose of pipe installation. Contractor shall be responsible for securing any excavation and placing safety fence. This work shall be considered incidental to pipe installation work and no direct reimbursement is due to the Contractor.

C–2 All existing utilities, pipelines, and structures shown are approximate. The Contractor shall be responsible for determining the exact locations, sizes, types, and elevations prior to construction and any damage which might occur by failure to locate or preserve these underground utilities.

C–3 Proposed shared–use paths shall be 10 ft in width unless otherwise specified on plans.

C–4 Maintain positive drainage at all times throughout the project area to prevent ponding/standing water, protect the subgrade and protect structures.

C–5 The Contractor shall be responsible for the removal of existing signs which shall be properly disposed of, relocated, or returned to the City. Coordination with the City is required.

C–6 Accessibility to properties within the project area shall be provided at all times.

C–7 The Contractor shall take all necessary precautions to protect existing site features which are to remain. Any damage incurred due to the Contractor's or Subcontractor's actions shall be repaired immediately at the Contractor's expense.

C–8 The Contractor shall take all necessary precautions to protect existing utilities and maintain uninterrupted service. Any damage incurred shall be repaired immediately to the satisfaction of the engineer and at no expense to the City. Any damages or interruption of service shall be reported immediately to the City of Manassas, Department of Utilities at (703) 257–8380 or the impacted utility.

C–9 Plan location and dimension shall be adhered to. Any field adjustments must be approved by the City Engineer.

C–10 Protect the integrity of survey control points and benchmarks at all times.

C–11 Contractor must test pit existing utility location as shown in the drawings prior to beginning construction and as needed to complete the work in a safe manner. If test pit data or field conditions show that there is a conflict with an existing utility, then the Contractor shall submit the information to the City of Manassas for review. Additional test pits performed by the Contractor to execute the work will be considered incidental to the work and will not be paid for as separate items.

C–12 Only the complete plan assembly as awarded, including all subsequent revisions, will be the official construction plans. Any combinations of layered sheets, if available, will not be considered a part of the official plan assembly.

C–13 Design features relating to construction or to regulation and control of traffic may be subject to change as deemed necessary by the City.

C–14 Contractor shall stake out all property lines adjacent to proposed shared–use path before construction. No encroachment onto private property is allowed without a construction easement.

C–15 Any construction that results in partial removal of curb, curb and gutter, asphalt pavement or concrete shall require the Contractor to sawcut or remove the site feature to the nearest joint and replace to match existing.

C–16 Prior to the start of construction on Norfolk Southern (NS) property, the following will be required by the Contractor with the City of Manassas as the Sponsor:

- A preconstruction meeting between NS, the Contractor, and the City of Manassas
- Contractor shall obtain and have approved the right of entry agreement in accordance with Norfolk Southern Public Improvements Projects Manual Appendix F: Norfolk Southern Typical Agreements.
- Contractor shall obtain and have approved Norfolk Southern Risk Management the required insurances in accordance with the Norfolk Southern Public Improvements Projects Manual Appendix E: Norfolk Southern – Special Provisions for Protection of Railway Interests.
- Contractor shall request flagging as required. Flagging may be required when the contractor is working within 25'–0" of the NS track or at the discretion of the NS track supervisor.
- NS has provided construction authorization to the Contractor.
- The Contractor checklist is completed and fully executed.

C–17 Contractor shall coordinate with the Norfolk Southern Signal's Department for protection of their facilities impacted by the proposed construction.

C–18 Contractor will not be permitted to store any equipment on NS property without permission from the NS Railroad Engineer in accordance with section E.5.K.1 of the NS Public Projects Manual.

C–19 Contractor to validate compaction of soils prior to installation of surfaces.

UTILITY LEGEND

Exiting Symbols

- Electric Manhole
- Electric Ped
- Electric Box
- Elec Hand Box
- Elec Meter
- Transformer
- UG/ Transformer
- Switchgear
- Generator
- Light Pole
- Security Camera Pole
- Ground Light
- Lighted Bollard
- Utility Pole
- Telephone Manhole
- Telephone Pedestal
- Telephone Cabinet
- Telephone Hand Box
- Phone Booth
- Call Box
- Fire Alarm Box
- TV Pedestal
- TV Cabinet/ Box
- TV Hand Box
- Card Reader
- Gas Manhole
- Gas Valve
- Gas Meter
- Gas Test Station
- Gas Vent
- Gas Regulator
- Unknown Manhole
- Unknown Valve
- Unknown Hand Box
- Unknown Cleanout
- Chilled Water Manhole
- Chilled Water Valve
- Fiber Optic Manhole
- FO Pedestal
- FO Box
- FO Handbox
- Water Manhole
- Water Valve
- Water Meter
- Fire Hydrant
- Siamese Connection
- Water Spigot
- Water Well
- Post Indicator Valve
- Water Valve Pit
- Water Vault
- Irrigation Control Valve
- Storm Drain Manhole
- Round Inlet
- Curb Inlet
- Rectangular Grate Inlet
- Small Inlet
- Square Inlet
- Storm Cleanout
- Roof Leader (Down Spout)
- Outfall End Section
- Traffic Signal Pole
- Ped Signal Pole
- Traffic Hand Box
- TC Signal Controller
- Sanitary Manhole
- Sanitary Lamphole
- Sanitary Cleanout
- Sanitary Vent
- Oil Water Separator
- Steam Manhole
- Steam Valve
- Steam Vent
- Fuel Tank Access
- Oil Fill Cap
- Fuel Vent Pipe
- Utility Line Stub
- Industrial Waste Manhole

Linetypes

- E — E — Existing Electric
- TV — Existing Cable TV
- FO — Existing Fiber Optic
- T — T — Existing Telephone
- COMM — Existing Communications
- GAS — Existing Gas
- S — S — Existing Sanitary
- Existing Storm Drain
- Existing Water
- TVFO — Existing TV Fiber Optic
- X — Existing Fence
- LOD — LOD — Limits of Disturbance
- ELEC — Proposed 2" Conduit - By Others
- Proposed Storm Drain
- Proposed Ditch Centerline

Abbreviations

TC Terra Cotta
VCP Vitrified Clay Pipe
VCPx Vitrified Clay Pipe, Extra Strength
RCP Reinforced Concrete Pipe
PCCP Prestressed Concrete Cylinder Pipe
CMP Corrugated Metal Pipe
PL Plastic (PVC, HDPE, etc.)
LOOP Traffic Loop Detector
CPP Corrugated Plastic Pipe

PLANIMETRIC LEGEND

- Existing Storm Sewer Structure Number
- Existing Sanitary Sewer Structure Number
- Storm Sewer Manhole
- Storm Sewer Curb Inlet
- Storm Sewer Grate
- Sanitary Sewer Manhole
- Sanitary Sewer Cleanout
- Fire Hydrant
- Water Valve
- Electric Handhole
- Electric Transformer
- Light Pole
- Power Pole
- Guy Wire
- Telephone Pedestal
- Communication Handhole
- Traffic Signal Box
- Traffic Signal Pole
- Pedestrian Signal Pole
- Tree
- Sign
- Proposed Streetlight (By Others)

INDEX OF SHEETS

SHEET	DESCRIPTION
1	TITLE SHEET
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1B	RIGHT OF WAY DATA SHEET
1C	NOT USED
1D(1) – 1D(2)	CONSTRUCTION ALIGNMENT DATA SHEET
1E	TRAFFIC MAINTENANCE PLAN AND SEQUENCE OF CONSTRUCTION
2A	TYPICAL SECTIONS
2B(1) – 2B(4)	EXISTING CONDITIONS
2C	NOT USED
2D – 2D(1)	EROSION AND SEDIMENT CONTROL GENERAL NOTES & STANDARD DETAILS
2E	EROSION AND SEDIMENT CONTROL NOTES & NARRATIVE
2F – 2F(1)	EROSION AND SEDIMENT CONTROL PLANS PHASE 1
2G – 2G(1)	EROSION AND SEDIMENT CONTROL PLANS PHASE 2
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3	PLAN AND PROFILE SHEET STA. 100+00.00 TO STA. 106+00.00
4	PLAN AND PROFILE SHEET STA. 106+00.00 TO STA. 113+00.00
4A	STONEWALL ROAD SIDEWALK CONNECTION PROFILE AND TIE–IN DETAILS
5	PLAN AND PROFILE SHEET STA. 113+00.00 TO STA. 118+46.84
6	SIGHT DISTANCE EXHIBIT
7(1) – 7(4)	SIGNING AND PAVEMENT MARKING PLANS
X–1 – X–25	WELLINGTON SUP CROSS SECTIONS

90% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO.: T–088
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID.: Volkert
DESIGNED BY: BD DATE: 09/27/21
DRAWN BY: BD DATE: 09/27/21
CHECKED BY: RH DATE: 09/27/21
APPROVED BY: DATE:

WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

GENERAL NOTES AND LEGEND

SHEET
1A
SCALE AS NOTED

RIGHT–OF–WAY DATA SHEET

Parcel Information						Area: Areas greater than or equal to 1 acre will be shown in acres to 3 decimal places (x.xxx AC). Areas less than 1 acre will be shown in square feet (xx.xxx SF).						
Number	Landowner Name	Inst #	Sheet	Deed	Remainder	Fee Take Summary			Permanent Easements	Utility Easements	Temporary Easements	Proffers
			Number	Acreage		Total	Prescriptive	Non-Prescr.	Drainage	Electric	Construction	Yes/NO
001	*UNITED RENTALS (NORTH AMERICA), INC.*	*200710030111748* *200801110003886*	*3*	*3.880 AC*	*3.868 AC*	*535.519 SF*					*806.165 SF*	

90% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

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WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

RIGHT OF WAY DATA SHEET

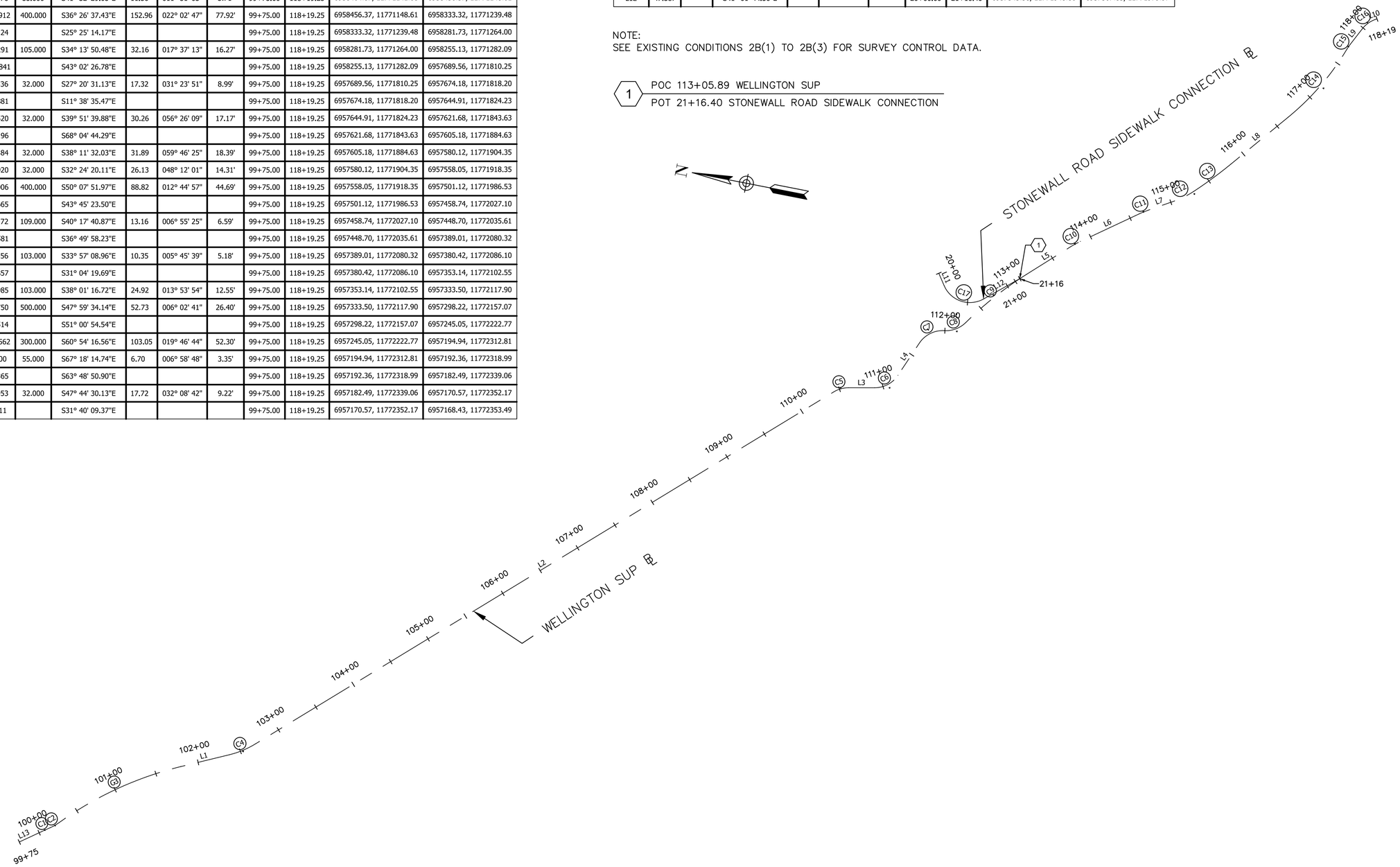
SHEET
1B OF
SCALE N/A

WELLINGTON SUP										
Number	Length	Radius	Line/Chord Direction	Chord Length	Delta (Δ)	Tangent	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L13	25.000		S36° 46' 07.61"E				99+75.00	118+19.25	6958496.43, 11771117.67	6958476.41, 11771132.64
C1	14.296	710.500	S36° 11' 32.51"E	14.30	001° 09' 10"	7.15'	99+75.00	118+19.25	6958476.41, 11771132.64	6958464.87, 11771141.08
C2	11.376	55.000	S41° 32' 29.05"E	11.36	011° 51' 03"	5.71'	99+75.00	118+19.25	6958464.87, 11771141.08	6958456.37, 11771148.61
C3	153.912	400.000	S36° 26' 37.43"E	152.96	022° 02' 47"	77.92'	99+75.00	118+19.25	6958456.37, 11771148.61	6958333.32, 11771239.48
L1	57.124		S25° 25' 14.17"E				99+75.00	118+19.25	6958333.32, 11771239.48	6958281.73, 11771264.00
C4	32.291	105.000	S34° 13' 50.48"E	32.16	017° 37' 13"	16.27'	99+75.00	118+19.25	6958281.73, 11771264.00	6958255.13, 11771282.09
L2	773.841		S43° 02' 26.78"E				99+75.00	118+19.25	6958255.13, 11771282.09	6957689.56, 11771810.25
C5	17.536	32.000	S27° 20' 31.13"E	17.32	031° 23' 51"	8.99'	99+75.00	118+19.25	6957689.56, 11771810.25	6957674.18, 11771818.20
L3	29.881		S11° 38' 35.47"E				99+75.00	118+19.25	6957674.18, 11771818.20	6957644.91, 11771824.23
C6	31.520	32.000	S39° 51' 39.88"E	30.26	056° 26' 09"	17.17'	99+75.00	118+19.25	6957644.91, 11771824.23	6957621.68, 11771843.63
L4	44.196		S68° 04' 44.29"E				99+75.00	118+19.25	6957621.68, 11771843.63	6957605.18, 11771884.63
C7	33.384	32.000	S38° 11' 32.03"E	31.89	059° 46' 25"	18.39'	99+75.00	118+19.25	6957605.18, 11771884.63	6957580.12, 11771904.35
C8	26.920	32.000	S32° 24' 20.11"E	26.13	048° 12' 01"	14.31'	99+75.00	118+19.25	6957580.12, 11771904.35	6957558.05, 11771918.35
C9	89.006	400.000	S50° 07' 51.97"E	88.82	012° 44' 57"	44.69'	99+75.00	118+19.25	6957558.05, 11771918.35	6957501.12, 11771986.53
L5	58.665		S43° 45' 23.50"E				99+75.00	118+19.25	6957501.12, 11771986.53	6957458.74, 11772027.10
C10	13.172	109.000	S40° 17' 40.87"E	13.16	006° 55' 25"	6.59'	99+75.00	118+19.25	6957458.74, 11772027.10	6957448.70, 11772035.61
L6	74.581		S36° 49' 58.23"E				99+75.00	118+19.25	6957448.70, 11772035.61	6957389.01, 11772080.32
C11	10.356	103.000	S33° 57' 08.96"E	10.35	005° 45' 39"	5.18'	99+75.00	118+19.25	6957389.01, 11772080.32	6957380.42, 11772086.10
L7	31.857		S31° 04' 19.69"E				99+75.00	118+19.25	6957380.42, 11772086.10	6957353.14, 11772102.55
C12	24.985	103.000	S38° 01' 16.72"E	24.92	013° 53' 54"	12.55'	99+75.00	118+19.25	6957353.14, 11772102.55	6957333.50, 11772117.90
C13	52.750	500.000	S47° 59' 34.14"E	52.73	006° 02' 41"	26.40'	99+75.00	118+19.25	6957333.50, 11772117.90	6957298.22, 11772157.07
L8	84.514		S51° 00' 54.54"E				99+75.00	118+19.25	6957298.22, 11772157.07	6957245.05, 11772222.77
C14	103.562	300.000	S60° 54' 16.56"E	103.05	019° 46' 44"	52.30'	99+75.00	118+19.25	6957245.05, 11772222.77	6957194.94, 11772312.81
C15	6.700	55.000	S67° 18' 14.74"E	6.70	006° 58' 48"	3.35'	99+75.00	118+19.25	6957194.94, 11772312.81	6957192.36, 11772318.99
L9	22.365		S63° 48' 50.90"E				99+75.00	118+19.25	6957192.36, 11772318.99	6957182.49, 11772339.06
C16	17.953	32.000	S47° 44' 30.13"E	17.72	032° 08' 42"	9.22'	99+75.00	118+19.25	6957182.49, 11772339.06	6957170.57, 11772352.17
L10	2.511		S31° 40' 09.37"E				99+75.00	118+19.25	6957170.57, 11772352.17	6957168.43, 11772353.49

STONEWALL ROAD										
Number	Length	Radius	Line/Chord Direction	Chord Length	Delta (Δ)	Tangent	STA (Start)	STA (End)	Northing, Easting (Start)	Northing, Easting (End)
L11	15.412		S54° 56' 52.05"W				20+00.00	21+16.40	6957599.63, 11771967.24	6957590.78, 11771954.62
C17	53.604	32.000	S06° 57' 33.85"W	47.55	095° 58' 36"	35.53'	20+00.00	21+16.40	6957590.78, 11771954.62	6957543.58, 11771948.86
L12	47.387		S41° 01' 44.36"E				20+00.00	21+16.40	6957543.58, 11771948.86	6957507.83, 11771979.97

NOTE:
SEE EXISTING CONDITIONS 2B(1) TO 2B(3) FOR SURVEY CONTROL DATA.

1 POC 113+05.89 WELLINGTON SUP
POT 21+16.40 STONEWALL ROAD SIDEWALK CONNECTION



GRAPHIC SCALE

60 0 30 60 120 240

(IN FEET)
1 inch = 60 ft.

COMMONWEALTH OF VIRGINIA
BRENDA DUONG
Lic. No. 052964
PROFESSIONAL ENGINEER

Volkert, Inc.
Springfield, Virginia
ROADWAY ENGINEER

90% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO.: T-088
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID.: Volkert
DESIGNED BY: BD DATE: 09/27/21
DRAWN BY: BD DATE: 09/27/21
CHECKED BY: RH DATE: 09/27/21
APPROVED BY: DATE:

WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

CONSTRUCTION ALIGNMENT
DATA SHEET

SHEET
1D(1)
SCALE 1"=60'

CONSTRUCTION BASELINE
WELLINGTON SUP

Alignment Name: WELLINGTON SUP
Station Range: Start: 99+75.00, End: 118+19.25
Description:
****

Begin WELLINGTON SUP
N 6,958,496.4323 E 11,771,117.6734 99+75.00

Line (13)
S36° 46' 08"E 25.00'
N 6,958,476.4059 E 11,771,132.6381 100+00.00
Line (13)

(1)
Curve (1)
BC N 6,958,476.4059 E 11,771,132.6381 100+00.00
CTR N 6,958,051.1097 E 11,770,563.4866
PI N 6,958,470.6798 E 11,771,136.9169

Direction Back S36° 46' 08"E
Radius 710.50'
Delta 1°09'10"(RT)
Length 14.30'
Tangent 7.15'
Chord Direction S36° 11' 33"E Distance 14.30'
Direction Ahead S35° 36' 57"E

EC N 6,958,464.8688 E 11,771,141.0796 100+14.30
Curve (1)

Reversing Curve

(2)
Curve (2)
BC N 6,958,464.8688 E 11,771,141.0796 100+14.30
CTR N 6,958,496.8981 E 11,771,185.7912
PI N 6,958,460.2283 E 11,771,144.4038

Direction Back S35° 36' 57"E
Radius 55.00'
Delta 11°51'03"(LT)
Length 11.38'
Tangent 5.71'
Chord Direction S41° 32' 29"E Distance 11.36'
Direction Ahead S47° 28' 01"E

EC N 6,958,456.3693 E 11,771,148.6103 100+25.67
Curve (2)

Reversing Curve

(3)
Curve (3)
BC N 6,958,456.3693 E 11,771,148.6103 100+25.67
CTR N 6,958,161.6147 E 11,770,878.2036
PI N 6,958,403.6943 E 11,771,206.0282

Direction Back S47° 28' 01"E
Radius 400.00'
Delta 22°02'47"(RT)
Length 153.91'
Tangent 77.92'
Chord Direction S36° 26' 37"E Distance 152.96'
Direction Ahead S25° 25' 14"E

EC N 6,958,333.3187 E 11,771,239.4760 101+79.58
Curve (3)

Line (1)
S25° 25' 14"E 57.12'
N 6,958,281.7254 E 11,771,263.9971 102+36.71
Line (1)

(4)
Curve (4)
BC N 6,958,281.7254 E 11,771,263.9971 102+36.71
CTR N 6,958,326.7977 E 11,771,358.8311
PI N 6,958,267.0272 E 11,771,270.9828

Direction Back S25° 25' 14"E
Radius 105.00'
Delta 17°37'13"(LT)
Length 32.29'
Tangent 16.27'
Chord Direction S34° 13' 50"E Distance 32.16'
Direction Ahead S43° 02' 27"E

EC N 6,958,255.1332 E 11,771,282.0900 102+69.00
Curve (4)

Line (2)
S43° 02' 27"E 773.84'
N 6,957,689.5576 E 11,771,810.2507 110+42.84
Line (2)

(5)
Curve (5)
BC N 6,957,689.5576 E 11,771,810.2507 110+42.84
CTR N 6,957,667.7170 E 11,771,786.8630
PI N 6,957,682.9841 E 11,771,816.3894

Direction Back S43° 02' 27"E
Radius 32.00'
Delta 31°23'51"(RT)
Length 17.54'
Tangent 8.99'
Chord Direction S27° 20' 31"E Distance 17.32'
Direction Ahead S11° 38' 35"E

EC N 6,957,674.1751 E 11,771,818.2045 110+60.37
Curve (5)

Line (3)
S11° 38' 35"E 29.88'
N 6,957,644.9091 E 11,771,824.2350 110+90.26
Line (3)

(6)
Curve (6)
BC N 6,957,644.9091 E 11,771,824.2350 110+90.26
CTR N 6,957,651.3672 E 11,771,855.5765
PI N 6,957,628.0913 E 11,771,827.7004

Direction Back S11° 38' 35"E
Radius 32.00'
Delta 56°26'09"(LT)
Length 31.52'
Tangent 17.17'
Chord Direction S39° 51' 40"E Distance 30.26'
Direction Ahead S68° 04' 44"E

EC N 6,957,621.6808 E 11,771,843.6300 111+21.78
Curve (6)

Line (4)
S68° 04' 44"E 44.20'
N 6,957,605.1811 E 11,771,884.6309 111+65.97
Line (4)

CONSTRUCTION BASELINE
WELLINGTON SUP CONT'D.

(7)
Curve (7)
BC N 6,957,605.1811 E 11,771,884.6309 111+65.97
CTR N 6,957,575.4947 E 11,771,872.6844
PI N 6,957,598.3152 E 11,771,901.6921

Direction Back S68° 04' 44"E
Radius 32.00'
Delta 59°46'25"(RT)
Length 33.38'
Tangent 18.39'
Chord Direction S38° 11' 32"E Distance 31.89'
Direction Ahead S8° 18' 20"E

EC N 6,957,580.1171 E 11,771,904.3487 111+99.36
Curve (7)

Reversing Curve

(8)
Curve (8)
BC N 6,957,580.1171 E 11,771,904.3487 111+99.36
CTR N 6,957,584.7396 E 11,771,936.0131
PI N 6,957,565.9529 E 11,771,906.4165

Direction Back S8° 18' 20"E
Radius 32.00'
Delta 48°12'01"(LT)
Length 26.92'
Tangent 14.31'
Chord Direction S32° 24' 20"E Distance 26.13'
Direction Ahead S56° 30' 20"E

EC N 6,957,558.0535 E 11,771,918.3538 112+26.28
Curve (8)

Reversing Curve

(9)
Curve (9)
BC N 6,957,558.0535 E 11,771,918.3538 112+26.28
CTR N 6,957,224.4772 E 11,771,697.6121
PI N 6,957,533.3925 E 11,771,955.6205

Direction Back S56° 30' 20"E
Radius 400.00'
Delta 12°44'57"(RT)
Length 89.01'
Tangent 44.69'
Chord Direction S50° 07' 52"E Distance 88.82'
Direction Ahead S43° 45' 23"E

EC N 6,957,501.1154 E 11,771,986.5261 113+15.28
Curve (9)

Line (5)
S43° 45' 23"E 58.66'
N 6,957,458.7426 E 11,772,027.0985 113+73.95
Line (5)

(10)
Curve (10)
BC N 6,957,458.7426 E 11,772,027.0985 113+73.95
CTR N 6,957,383.3587 E 11,771,948.3694
PI N 6,957,453.9799 E 11,772,031.6588

Direction Back S43° 45' 23"E
Radius 109.00'
Delta 6°55'25"(RT)
Length 13.17'
Tangent 6.59'
Chord Direction S40° 17' 41"E Distance 13.16'
Direction Ahead S36° 49' 58"E

EC N 6,957,448.7023 E 11,772,035.6117 113+87.12
Curve (10)

Line (6)
S36° 49' 58"E 74.58'
N 6,957,389.0086 E 11,772,080.3217 114+61.70
Line (6)

(11)
Curve (11)
BC N 6,957,389.0086 E 11,772,080.3217 114+61.70
CTR N 6,957,327.2619 E 11,771,997.8817
PI N 6,957,384.8607 E 11,772,083.4284

Direction Back S36° 49' 58"E
Radius 103.00'
Delta 5°45'39"(RT)
Length 10.36'
Tangent 5.18'
Chord Direction S33° 57' 09"E Distance 10.35'
Direction Ahead S31° 04' 20"E

EC N 6,957,380.4219 E 11,772,086.1031 114+72.06
Curve (11)

Line (7)
S31° 04' 20"E 31.86'
N 6,957,353.1359 E 11,772,102.5450 115+03.91
Line (7)

(12)
Curve (12)
BC N 6,957,353.1359 E 11,772,102.5450 115+03.91
CTR N 6,957,406.2959 E 11,772,190.7664
PI N 6,957,342.3831 E 11,772,109.0244

Direction Back S31° 04' 20"E
Radius 103.00'
Delta 13°53'54"(LT)
Length 24.98'
Tangent 12.55'
Chord Direction S38° 01' 17"E Distance 24.92'
Direction Ahead S44° 58' 14"E

EC N 6,957,333.5014 E 11,772,117.8969 115+28.90
Curve (12)

Compound Curve

CONSTRUCTION BASELINE
WELLINGTON SUP CONT'D.

(13)
Curve (13)
BC N 6,957,333.5014 E 11,772,117.8969 115+28.90
CTR N 6,957,686.8726 E 11,772,471.6324
PI N 6,957,314.8247 E 11,772,136.5544

Direction Back S44° 58' 14"E
Radius 500.00'
Delta 6°02'41"(LT)
Length 52.75'
Tangent 26.40'
Chord Direction S47° 59' 34"E Distance 52.73'
Direction Ahead S51° 00' 55"E

EC N 6,957,298.2165 E 11,772,157.0749 115+81.65
Curve (13)

Line (8
S51° 00' 55"E 84.51'
N 6,957,245.0476 E 11,772,222.7685 116+66.16
Line (8)

(14)
Curve (14)
BC N 6,957,245.0476 E 11,772,222.7685 116+66.16
CTR N 6,957,478.2413 E 11,772,411.5030
PI N 6,957,212.1440 E 11,772,263.4231

Direction Back S51° 00' 55"E
Radius 300.00'
Delta 19°46'44"(LT)
Length 103.56'
Tangent 52.30'
Chord Direction S60° 54' 17"E Distance 103.05'
Direction Ahead S70° 47' 39"E

EC N 6,957,194.9386 E 11,772,312.8136 117+69.72
Curve (14)

Reversing Curve

(15)
Curve (15)
BC N 6,957,194.9386 E 11,772,312.8136 117+69.72
CTR N 6,957,142.9998 E 11,772,294.7205
PI N 6,957,193.8352 E 11,772,315.9811

Direction Back S70° 47' 39"E
Radius 55.00'
Delta 6°58'48"(RT)
Length 6.70'
Tangent 3.35'
Chord Direction S67° 18' 15"E Distance 6.70'
Direction Ahead S63° 48' 51"E

EC N 6,957,192.3550 E 11,772,318.9912 117+76.42
Curve (15)

Line (9)
S63° 48' 51"E 22.37'
N 6,957,182.4856 E 11,772,339.0610 117+98.79
Line (9)

(16)
Curve (16)
BC N 6,957,182.4856 E 11,772,339.0610 117+98.79
CTR N 6,957,153.7698 E 11,772,324.9399
PI N 6,957,178.4171 E 11,772,347.3345

Direction Back S63° 48' 51"E
Radius 32.00'
Delta 32°08'42"(RT)
Length 17.95'
Tangent 9.22'
Chord Direction S47° 44' 30"E Distance 17.72'
Direction Ahead S31° 40' 09"E

EC N 6,957,170.5703 E 11,772,352.1749 118+16.74
Curve (16)

Line (10)
S31° 40' 09"E 2.51'
N 6,957,168.4330 E 11,772,353.4934 118+19.25
Line (10)

N 6,957,168.4330 E 11,772,353.4934 118+19.25
End WELLINGTON SUP

****
Alignment Length: 1,844.25'
****

CONSTRUCTION BASELINE
STONEWALL ROAD

Alignment Name: STONEWALL ROAD
Station Range: Start: 20+00.00, End: 21+16.40
Description:
****

Begin STONEWALL ROAD
N 6,957,599.6319 E 11,771,967.2376 20+00.00

Line (11)
S54° 56' 52"W 15.41'
N 6,957,590.7805 E 11,771,954.6209 20+15.41
Line (11)

(17)
Curve (17)
BC N 6,957,590.7805 E 11,771,954.6209 20+15.41
CTR N 6,957,564.5843 E 11,771,972.9993
PI N 6,957,570.3776 E 11,771,925.5390

Direction Back S54° 56' 52"W
Radius 32.00'
Delta 95°58'36"(LT)
Length 53.60'
Tangent 35.53'
Chord Direction S6° 57' 34"W Distance 47.55'
Direction Ahead S41° 01' 44"E

EC N 6,957,543.5782 E 11,771,948.8592 20+69.02
Curve (17)

Line (12)
S41° 01' 44"E 47.39'
N 6,957,507.8308 E 11,771,979.9657 21+16.40
Line (12)

N 6,957,507.8308 E 11,771,979.9657 21+16.40
End STONEWALL ROAD

****
Alignment Length: 116.40'
****

COMMONWEALTH OF VIRGINIA
BRENDA DUONG
Lic. No. 052964
PROFESSIONAL ENGINEER

Volkert, Inc.
Springfield, Virginia
ROADWAY ENGINEER

90% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO.: T-088
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID.: Volkert
DESIGNED BY: BD DATE: 09/27/21
DRAWN BY: BD DATE: 09/27/21
CHECKED BY: RH DATE: 09/27/21
APPROVED BY: DATE:

WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

CONSTRUCTION ALIGNMENT
DATA SHEET

SHEET
1D(2)
SCALE N/A

Transportation Management Plan & Sequence of Construction (TMP/SOC)

The TMP/SOC presented herein is not meant to be all–inclusive, but to present a number of suggestions for consideration for the Contractor's development of a transportation management plan for this project. The TMP work zone management strategies reflected within this plan may need to be adjusted or improved, thereby improving mobility as well as traveler, pedestrian, and worker safety and completing the construction work in a timely manner while maintaining access for the emergency services, businesses, residents, and other City services.

All traffic control devices and signal work shall be in accordance with the latest edition of the following documents or revisions thereof:

a. Manual on Uniform Traffic Control Devices (MUTCD)
b. Virginia Supplement to the Manual on Uniform Traffic Control Devices (VWAPM)
c. VDOT Road and Bridge Standards
d. VDOT Road and Bridge Specifications and Supplement
e. VDOT Work Area Protection Manual
f. City of Manassas – Design and Construction Standards Manual

1. The Contractor shall submit a temporary traffic control plan that prescribes the necessary traffic control measures for the work to be performed to be approved by the Engineer prior to commencement of any work activities. The City reserves the right to remove lane closures if traffic queues are deemed unacceptable by the Public Works Director at no cost to the project.

2. Note the hours the Construction Area will be active:

   Monday thru Friday: 8:00AM – 5:00PM
   Saturday: NO WORK
   Sunday: NO WORK
   Holidays: NO WORK

   Lane closures will be allowed on Wellington Road only during non–peak hours (9:30AM – 3:00PM).

   No lane closures will be allowed from noon the day before a holiday until noon on the workday following the holiday. Holidays include all State and Federal holidays.

3. The Contractor shall be responsible for coordinating with the City of Manassas Public Works and City of Manassas Traffic for project lane closure information throughout the duration of project.

4. The TMP/SOC plan, during construction, shall be in accordance with Sections 512, 701, 703 & 704 of the Virginia Department of Transportation Road and Bridge Specifications, dated 2020, the Virginia Work Area Protection Manual Revision 2.1, dated November 2020, and the Manual on Uniform Traffic Control Devices (MUTCD), 2009 Edition, including the 2011 Virginia Supplement to the MUTCD.

   Note any existing entrances, existing intersections, or existing pedestrian access points that will be affected by the Construction Area or by the traffic control devices:

   Existing Entrances:
   All existing commercial and/or private entrances shall remain open for the duration of construction. The Contractor shall ensure that access to private and commercial entrances is maintained at all times.

   Existing Intersections:
   There are two signalized intersections within the project limits, all of which are to remain operational for the duration of construction. They are the intersections of:
   Wellington Road and Nokesville Road
   Wellington Road and Prince William Street

   Existing Pedestrian Access Points:
   Within the project limits, pedestrian access point are generally at the intersections, and the Contractor is to maintain safe passage for pedestrians and bicyclists within the project for the duration of construction via sidewalk closures using applicable MUTCD and VWAPM applications. Contractor shall submit maintenance of pedestrian traffic plans to the City of Manassas for their approval prior to the start of any construction activity.

   Existing Railroad Crossings:
   There are two railroad crossing with Norfolk Southern Railway within the project limits, which is to remain operational for the duration of construction. Contractor will not be permitted to store any equipment on NS property without permission from the NS Railroad Engineer in accordance with section E.5.K.1 of the NS Public Projects Manual

5. The Contractor, at no additional cost to the project and which shall be considered incidental to the cost of the project, shall:

   Designate a person assigned to the project who will have the primary responsibility, with sufficient authority for implementing the TMP/SOC and other safety and mobility aspects of the permit work. This person will be in coordination with the City Construction Inspector during all work.

   Ensure that personnel assigned to the project are trained in traffic control to a level commensurate with their responsibilities in accordance with VDOT's work zone traffic control training guidelines.

   Inform the Engineer and City Construction Inspector of any work requiring lane shifts, lane closures, and/or phase changes a minimum of five (5) working days prior to implementing this activity

   Perform reviews of the Construction Area to ensure compliance with contract documents at regularly scheduled intervals at the direction of the Engineer and City Construction Inspector. Contractor shall maintain a copy of the temporary traffic control plan at the work site at all times.

   Coordinate with City of Manassas Police Department and City of Manassas Fire/Rescue Department for any lane closures and any detours of any nature, at no additional cost to the project.

   Schedule all phases of construction in such a manner that water, sanitary sewer, cable, fiber cable/optic cable, any overhanging utilities, and any underground utilities services will not be interrupted. The Contractor is solely responsible for any interruption in any utility service, and solely responsible for any repairs with the approval of the impacted utility service.

6. Contractor shall ensure positive drainage for the duration of the project. Contractor shall add any additional temporary measures necessary to facilitate proper drainage for the duration of construction.

7. Unless specified on the plans, all existing turn lanes shall be maintained at all times for the duration of construction.

8. During all phases of construction, the Contractor shall maintain pedestrian access on at least one side of the roadways from Nokesville Road to Prince William Street to provide continuous connectivity along Wellington Road within the project limits unless otherwise noted on this plan. The Contractor may only use existing crosswalk locations on Wellington Road to guide pedestrians across the roadways to achieve this continuous connectivity. To guide pedestrians, the Contractor is to follow the standards in VWAPM TTC–35.1 and VWAPM TTC–36.2 as necessary or as directed by the Engineer. When the Contractor presents traffic control plans for approval to the Engineer, they shall include pedestrian controls in accordance with the VWAPM when impacting pedestrian trails, paths, or sidewalks. Contractor shall be solely responsible for all costs (including signage) associated with maintaining pedestrian access to be incidental with the costs of implementing the Project's TMP/SOC, and not paid for as a separate item.

9. IMPLEMENTING THE TRANSPORTATION MANAGEMENT PLAN

   During the first day of the new work zone traffic pattern, the City Transportation Engineer, City Inspector, or City Designee along with the Contractor's Representative with Advanced and/or Immediate Work Zone Certifications shall inspect the work zone to ensure compliance with the TMP. The Contractor's Representative with Advanced and/or Work Zone Certifications shall perform at a minimum two (2) daily inspections of the entire work zone and keep documentation of all maintenance, safety issues, and recommend changes to the TMP.

   On the third to fifth day of implementation of the TMP's new work zone traffic pattern, the Contractor's Representative with Advanced and/or Work Zone Certifications shall conduct an on–site review of the work zone's performance. Any recommendations and comments shall be communicated to the City Transportation Engineer and Inspections Department in writing for appropriate changes to the TMP. The City Transportation Engineer, Inspector, or City Designee shall be afforded the opportunity to review all such changes prior to implementation. After approval of changes to the TMP, the Contractor shall make all required changes to the TMP for implementation to enhance the work zone's safety and mobility. All such changes shall be documented in writing.

   A work zone safety evaluation shall be conducted within 48 hours of any accident within the work zone by the City Inspector and Contractor's Representative.

12. PUBLIC COMMUNICATIONS PLAN (At no additional cost to the project.)
    The Contractor shall be responsible for:

    a. Notifying the Project Manager and Construction Inspector two weeks in advance of any scheduled work plans.

    b. Contractor shall attend meetings requested by the City of Manassas at no additional cost to the project.

15. TRANSPORTATION OPERATIONS
    The Contractor shall be responsible for implementing and providing the following:

    a. Post a list of local emergency response agencies inside the project's construction office/trailer.

    b. Immediately report any traffic incidents that may occur in the work zone.

    c. Contact the VDOT TOC 15–45 minutes prioer to executing all lane and/or shoulder closures and contact TOC 15–45 minutes after the work has been completed and lane and/or shoulder closures have been removed.

    d. Notify the project's Construction Inspector and City of Manassas of any incidents and expected traffic delays.

    e. Within 24 hours of any incidents within the construction work zone, a review of the traffic controls shall be completed and necessary adjustments made to reduce the frequency and severity of any future incidents.

    CONTACT NUMBERS
    The Contractor shall keep a list of contacts with phone numbers of the following:

City Director of Public Works	Scott Horan (703) 257–8476
City Project Manager	John Keenan (703) 257–8447
City Engineer	Lance Kilby (703) 257–8251
City Construction Inspectors	Elden Riffle (703) 257–8429
Emergency Call 911	
Non–Emergency Numbers:	
City of Manassas Police	(703) 257–8000
City of Manassas Fire & Rescue	(703) 257–8458
Adjacent Property Owners	

Sequence of Construction Notes:

1. Prior to the start of construction, the Contractor shall install project limit signage in accordance with VWAPM TTC–53.0. For the duration of construction, the Contractor shall ensure this signage remains in compliance if the project limits change.

2. The Contractor shall coordinate with the City for the removal and relocation of existing signs.

3. No lane closures are anticipated for the construction of Wellington Shared–Use Path from Nokesville Road to the Norfolk Southern Railway Company crossing. The Contractor shall perform work behind existing edge of pavement. The Contractor shall follow standards in VWAPM TTC 28.2 as necessary for temporary lane closure to construct beginning of shared–use path during non–peak hours. Costs of signage and traffic control measures and devices to be incidental with the costs of implementing the TTC and not paid for as a separate item.

4. The Contractor shall coordinate with Norfolk Southern's Track and Signals Departments for construction of proposed sidewalk on Norfolk Southern property. The Contractor shall follow standards in VWAPM TTC 16.2 and TTC 56.2 as necessary for temporary lane closure during non–peak hours only.

5. Outside lane closure is anticipated for the construction of Wellington Shared–Use Path from the Norfolk Southern Railway Company crossing to Prince William Street. The Contractor shall follow standards in the MUTCD TA–22 to remove existing sidewalk and construct shared–use path. The Contractor shall implement VWAPM TTC 28.2 as necessary for temporary lane closure curb ramp and install crosswalk pavement marking during non–peak hours. Costs of signage and traffic control measures and devices to be incidental with the costs of implementing the TA and TTC and not paid for as a separate item.

Commonwealth of Virginia
Virginia Department of Transportation
VDOT
VERIFICATION OF COMPLETION OF
ADVANCED WORK ZONE TRAFFIC CONTROL TRAINING
AND FLAGGER CERTIFICATION

This is to verify that Hari Thaker has successfully completed training and an examination by the Department on the proper practices and methods for the installation, maintenance, removal of temporary traffic control devices and flagging operations.

Date: 7/31/2019
State Traffic Engineer
Verification No.: 072119102
Expiration Date: 7/31/2023

COMMONWEALTH OF VIRGINIA
BRENDA DUONG
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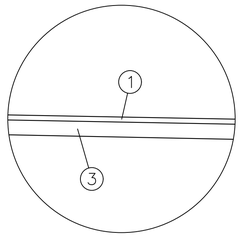
APPROVED BY: DATE:

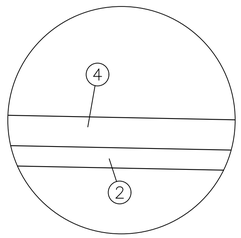
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

TRANSPORTATION MANAGEMENT PLAN & SEQUENCE OF CONSTRUCTION

SHEET
1E
SCALE N/A

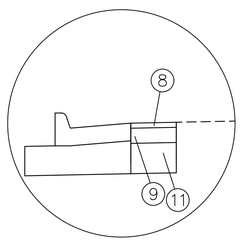


INSET A

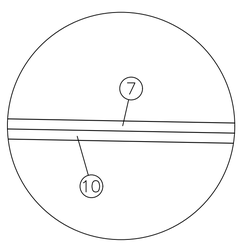


INSET B

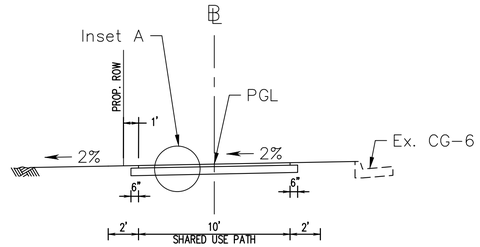
STA. 111+21.78 TO STA. 111+65.97
STA. 113+73.95 TO STA. 115+03.91



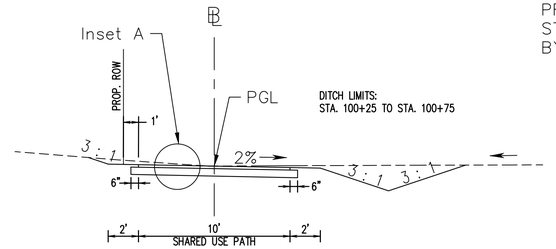
INSET C



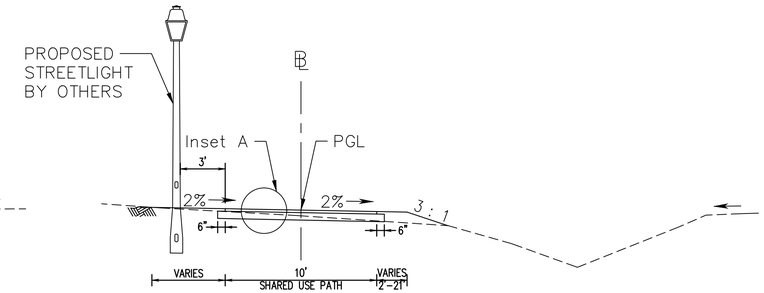
INSET D



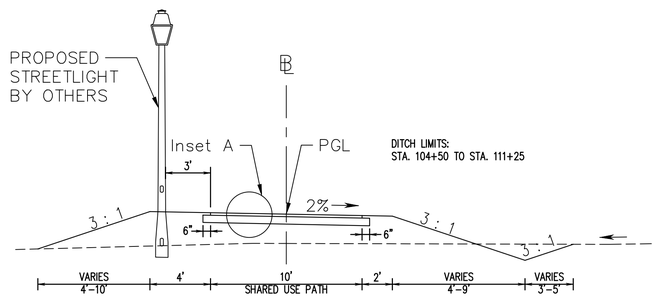
WELLINGTON ROAD
SHARED-USE PATH
(AT-GRADE)
STA. 100+00 TO STA. 100+25



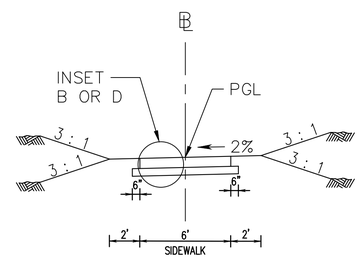
WELLINGTON ROAD
SHARED-USE PATH
(AT-GRADE)
STA. 100+25 TO STA. 101+00



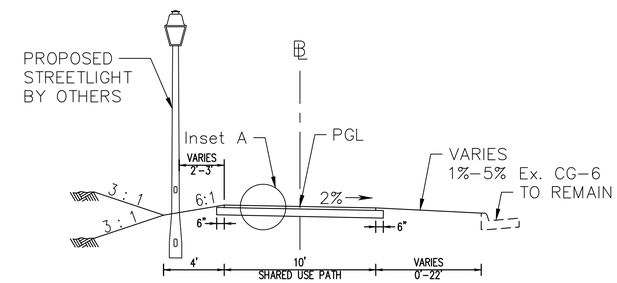
WELLINGTON ROAD
SHARED-USE PATH
(AT-GRADE)
STA. 101+00 TO STA. 103+00



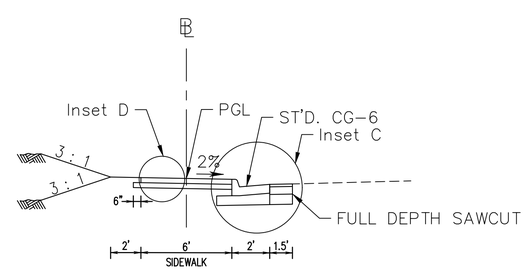
WELLINGTON ROAD
SHARED-USE PATH
(AT-GRADE)
STA. 103+00 TO STA. 111+22



WELLINGTON ROAD
SIDEWALK
(NORFOLK SOUTHERN RAILWAY)
STA. 111+22 TO STA. 115+11

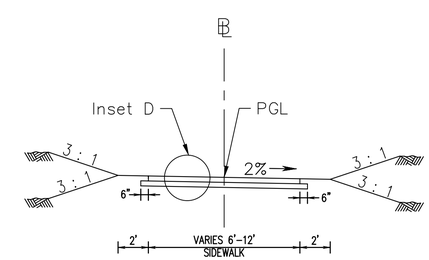


WELLINGTON ROAD
SHARED USE PATH
(WITH EX. CURB AND GUTTER)
STA. 115+11 TO STA. 117+95



STONEWALL ROAD
TYPICAL SECTION
SIDEWALK
(WITH CURB AND GUTTER)

STA. 20+23 TO STA. 20+40



STONEWALL ROAD

TYPICAL SECTION
SIDEWALK

STA. 20+40 TO STA. 21+16

① 2" ASPHALT CONCRETE, SM-9.5A, @ 220 lbs./Sq. Yds.

② 6" AGGREGATE BASE MATERIAL TYPE I, NO. 21B

③ 6" AGGREGATE BASE MATERIAL TYPE I, NO. 21B

④ 8" HYDRAULIC CEMENT CONCRETE, CLASS A3 WITH 4" W.W.F.

⑤ 6" ASPHALT CONCRETE, TYPE BM-25.0A

⑥ 8" AGGREGATE BASE MATERIAL, TYPE I, SIZE NO. 21B

⑦ 4" HYDRAULIC CEMENT CONCRETE, CLASS A3

⑧ 2" ASPHALT CONCRETE, SM-9.5D, @ 220 lbs./Sq. Yds.

⑨ 4" ASPHALT CONCRETE, TYPE BM-25.0A

⑩ 4" AGGREGATE BASE MATERIAL TYPE I, NO. 21B

⑪ MIN. 8" AGGREGATE BASE MATERIAL, TYPE I, SIZE NO. 21B OR EXTENDED TO THE BOTTOM OF EXISTING AGGREGATE, WHICHEVER IS GREATER

NOTE:
1. ALL PAVEMENT WIDENING SHALL BE PERFORMED IN ACCORDANCE WITH VDOT STANDARD WP-2.
2. WHERE SHARED-USE PATH ABUTS EXISTING BACK OF CURB, SHARED USE PATH SHALL MATCH EXISTING TOP OF CURB ELEVATION.

COMMONWEALTH OF VIRGINIA
BRENDA DUONG
Lic. No. 052964
PROFESSIONAL ENGINEER

Volkert, Inc.
Springfield, Virginia
ROADWAY ENGINEER

90% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

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CHECKED BY: RH DATE: 09/27/21
APPROVED BY: DATE:

WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

TYPICAL SECTIONS

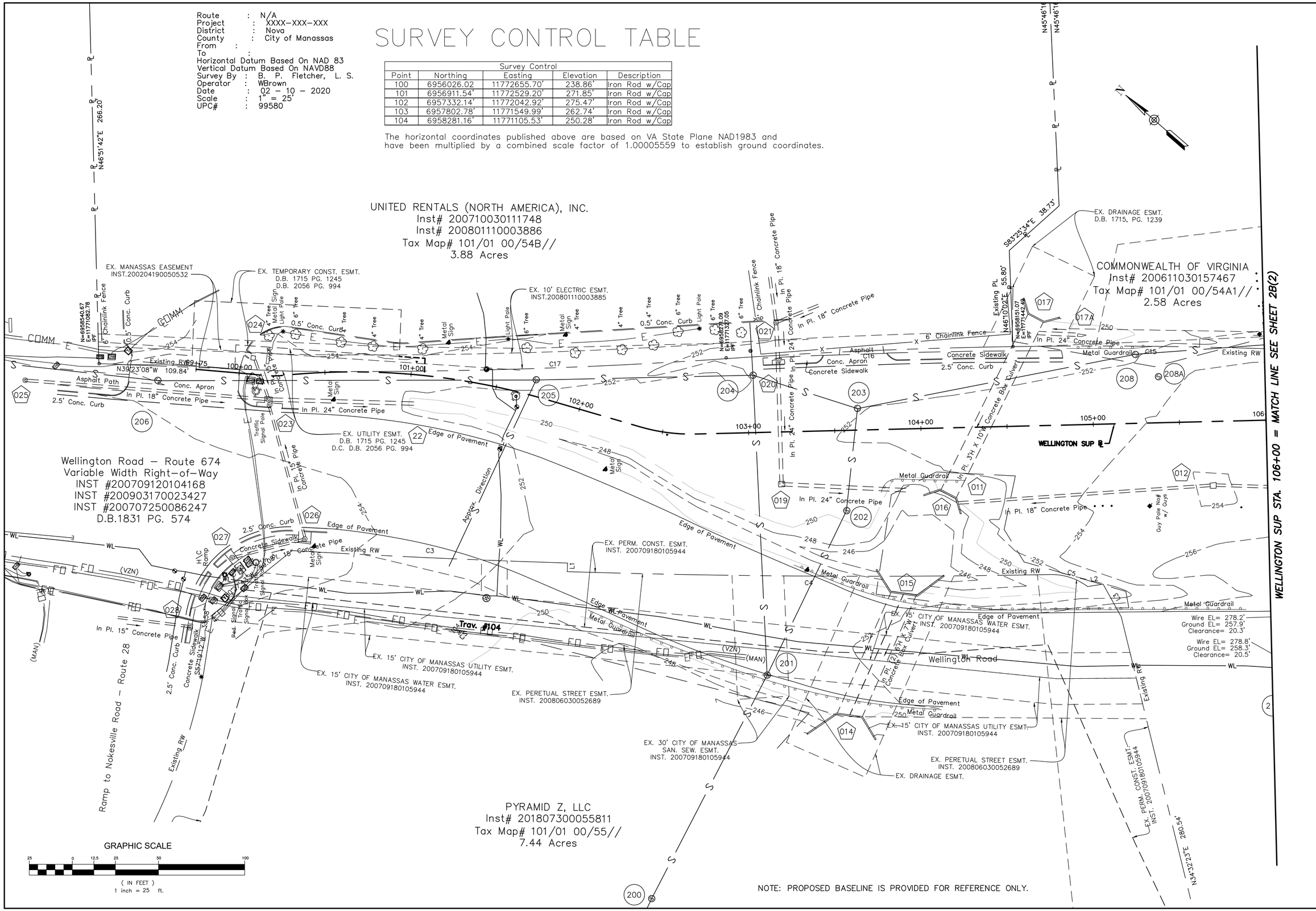
SHEET
2A
SCALE NTS

Route : N/A
Project : XXXX-XXX-XXX
District : Nova
County : City of Manassas
From :
To :
Horizontal Datum Based On NAD 83
Vertical Datum Based On NAVD88
Survey By : B. P. Fletcher, L. S.
Operator : WBrown
Date : 02 - 10 - 2020
Scale : 1" = 25'
UPC# : 99580

SURVEY CONTROL TABLE

Survey Control				
Point	Northing	Easting	Elevation	Description
100	6956026.02	11772655.70'	238.86'	Iron Rod w/Cap
101	6956911.54'	11772529.20'	271.85'	Iron Rod w/Cap
102	6957332.14'	11772042.92'	275.47'	Iron Rod w/Cap
103	6957802.78'	11771549.99'	262.74'	Iron Rod w/Cap
104	6958281.16'	11771105.53'	250.28'	Iron Rod w/Cap

The horizontal coordinates published above are based on VA State Plane NAD1983 and have been multiplied by a combined scale factor of 1.00005559 to establish ground coordinates.



NOTE: PROPOSED BASELINE IS PROVIDED FOR REFERENCE ONLY.

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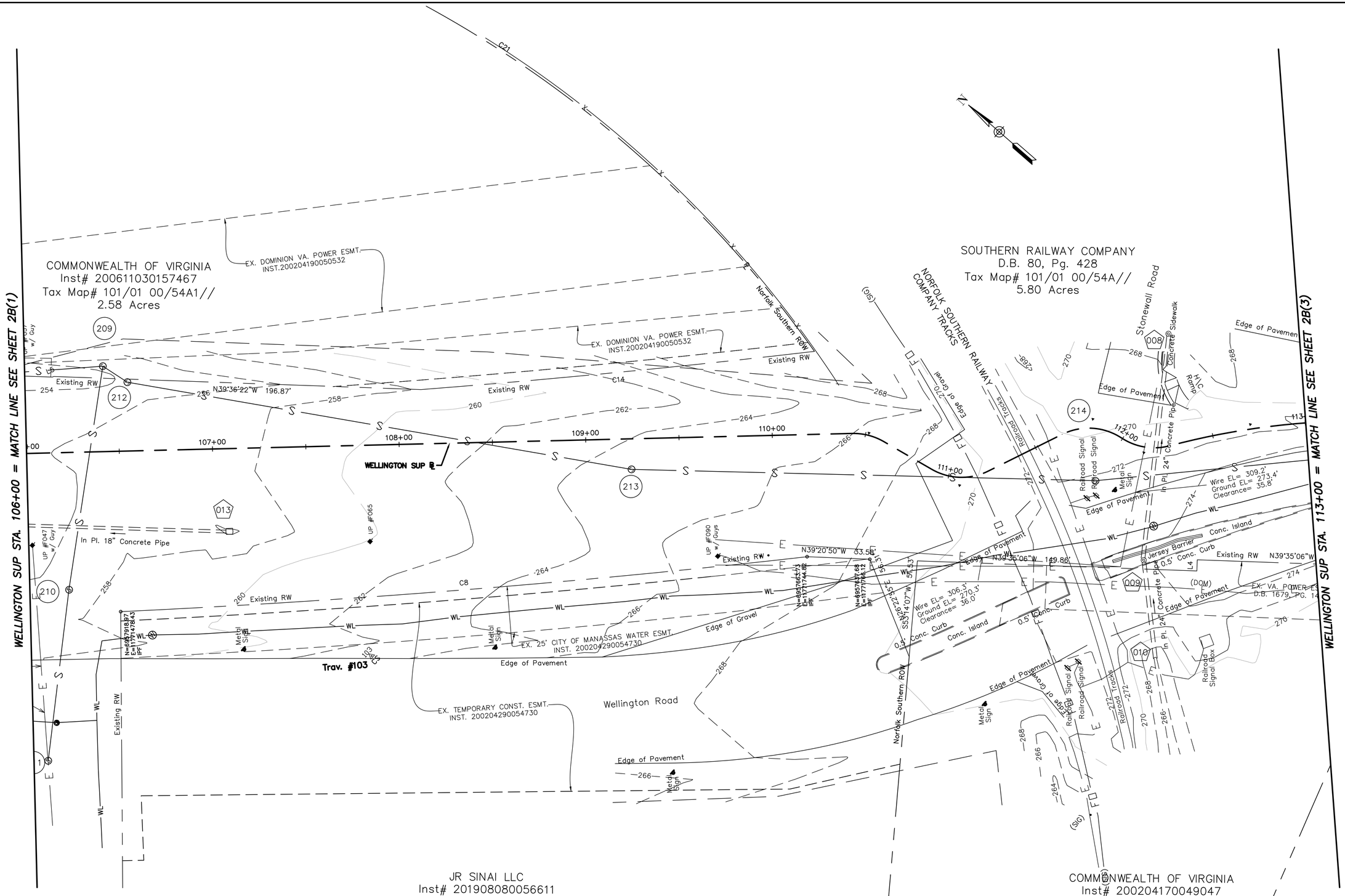
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

EXISTING CONDITIONS - 1

SHEET
2B(1)
SCALE 1"=25'



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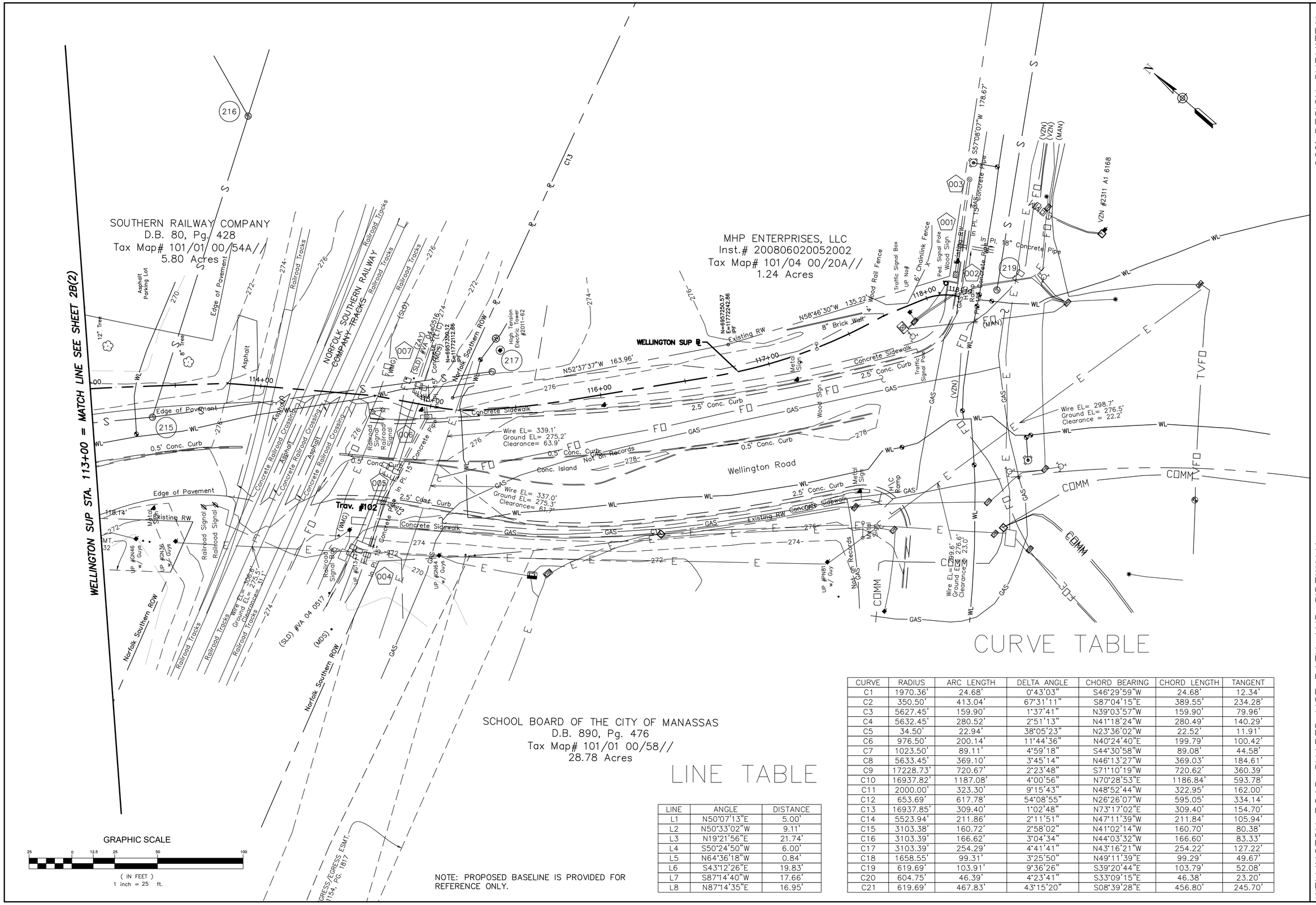
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

EXISTING CONDITIONS – 2

SHEET
2B(2)
SCALE 1"=25'



NOTE: PROPOSED BASELINE IS PROVIDED FOR REFERENCE ONLY.

LINE TABLE

LINE	ANGLE	DISTANCE
L1	N50°07'13"E	5.00'
L2	N50°33'02"W	9.11'
L3	N19°21'56"E	21.74'
L4	S50°24'50"W	6.00'
L5	N64°36'18"W	0.84'
L6	S43°12'26"E	19.83'
L7	S87°14'40"W	17.66'
L8	N87°14'35"E	16.95'

CURVE TABLE

CURVE	RADIUS	ARC LENGTH	DELTA ANGLE	CHORD BEARING	CHORD LENGTH	TANGENT
C1	1970.36'	24.68'	0°43'03"	S46°29'59"W	24.68'	12.34'
C2	350.50'	413.04'	67°31'11"	S87°04'15"E	389.55'	234.28'
C3	5627.45'	159.90'	1°37'41"	N39°03'57"W	159.90'	79.96'
C4	5632.45'	280.52'	2°51'13"	N41°18'24"W	280.49'	140.29'
C5	34.50'	22.94'	38°05'23"	N23°36'02"W	22.52'	11.91'
C6	976.50'	200.14'	11°44'36"	N40°24'40"E	199.79'	100.42'
C7	1023.50'	89.11'	4°59'18"	S44°30'58"W	89.08'	44.58'
C8	5633.45'	369.10'	3°45'14"	N46°13'27"W	369.03'	184.61'
C9	17228.73'	720.67'	2°23'48"	S71°10'19"W	720.62'	360.39'
C10	16937.82'	1187.08'	4°00'56"	N70°28'53"E	1186.84'	593.78'
C11	2000.00'	323.30'	9°15'43"	N48°52'44"W	322.95'	162.00'
C12	653.69'	617.78'	54°08'55"	N26°26'07"W	595.05'	334.14'
C13	16937.85'	309.40'	1°02'48"	N73°17'02"E	309.40'	154.70'
C14	5523.94'	211.86'	2°11'51"	N47°11'39"W	211.84'	105.94'
C15	3103.38'	160.72'	2°58'02"	N41°02'14"W	160.70'	80.38'
C16	3103.39'	166.62'	3°04'34"	N44°03'32"W	166.60'	83.33'
C17	3103.39'	254.29'	4°41'41"	N43°16'21"W	254.22'	127.22'
C18	1658.55'	99.31'	3°25'50"	N49°11'39"E	99.29'	49.67'
C19	619.69'	103.91'	9°36'26"	S39°20'44"E	103.79'	52.08'
C20	604.75'	46.39'	4°23'41"	S33°09'15"E	46.38'	23.20'
C21	619.69'	467.83'	43°15'20"	S08°39'28"E	456.80'	245.70'

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WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

EXISTING CONDITIONS – 3

SHEET
2B(3)
SCALE 1"=25'

STORM SEWER TABLE

001
In Pl. SSMH
Top = 276.60'
Inv. In = 273.60' (From Str. 002)
Inv. In = 273.59' (From Str. 003)
Inv. Out = 273.49'
In Pl. 18" Concrete Pipe

002
In Pl. Conc. DI
Top = 276.62'
Inv. Out = 273.69'
In Pl. 15" Concrete Pipe

003
In Pl. Conc. DI,
Top = 277.07'
Inv. Out = 273.96'
In Pl. 15" Concrete Pipe

004
Conc. Endsection
Inv. = 269.31'
In Pl. 15" Concrete Pipe

005
In Pl. Conc. DI
Top = 275.72'
Inv. In = 269.63' (From Str. 006)
Inv. Out = 269.56'
In Pl. 15" Concrete Pipe

006
In Pl. Conc. DI
Top = 275.69'
Inv. In = 270.40' (From Str. 007)
Inv. Out = 270.22'
In Pl. 15" Concrete Pipe

007
Conc. Endsection
Inv. = 270.55'
In Pl. 15" Concrete Pipe

008
In Pl. Conc. DI
Top = 267.92'
Inv. In = 263.74' (From Str. 009)

009
In Pl. SSMH
Top = 274.00'
Inv. In = 264.78' (From Str. 010)
Inv. Out = 264.71'
In Pl. 24" Concrete Pipe

010
Conc. Endsection
Inv. = 265.75'
In Pl. 24" Concrete Pipe

011
Conc. Headwall
Inv. = 246.09' (From Str. 012)
In Pl. 18" Concrete Pipe

012
In Pl. Metal Grate
Top = 253.04'
Inv. In = 250.29' (From Str. 013)
Inv. Out = 250.16'
In Pl. 18" Concrete Pipe

013
In Pl. Metal Grate
Top = 256.16'
Inv. Out = 251.62'
In Pl. 18" Concrete Pipe

014
Conc. Headwall
Inv. = 242.73'
In Pl. (2) 6'H X 7'W Concrete Box Culvert

015
Conc. Headwall
Inv. = 243.16'
In Pl. (2) 6'H X 7'W Concrete Box Culvert

016
Conc. Headwall
Inv. = 245.67'
In Pl. 3'H X 10'W Concrete Box Culvert

017
Conc. Headwall
Inv. = 246.36'
In Pl. 3'H X 10'W Concrete Box Culvert

017A
Conc. Endsection
Inv. = 247.73'
In Pl. 24" Concrete Pipe

018
Conc. Endsection
Inv. = 246.46'
In Pl. 24" Concrete Pipe

019
In Pl. Metal Grate
Top = 249.86'
Inv. In = 246.76' (From Str. 020)
Inv. Out = 246.64'
In Pl. 24" Concrete Pipe

020
In Pl. Conc. DI
Top = 250.95'
Inv. In = 247.58' (From Str. 021)
Inv. Out = 246.92'
In Pl. 24" Concrete Pipe

021
In Pl. Conc. DI
Top = 252.92'
Inv. In = 247.89' (From Northeast)
Inv. In = 248.05' (From Southeast)
Inv. Out = 247.71'
In Pl. 24" Concrete Pipe

022
Conc. Endsection
Inv. = 248.50'
In Pl. 24" Concrete Pipe

023
In Pl. Conc. DI
Top = 253.89'
Inv. In = 249.18' (From Str. 024)
Inv. In = 249.17' (From Str. 025)
Inv. In = 249.35' (From Str. 026)
Inv. Out = 249.08'
In Pl. 24" Concrete Pipe

024
In Pl. Metal Grate
Top = 252.23'
Inv. Out = 249.22'
In Pl. 15" Concrete Pipe

025
In Pl. Conc. DI
Top = 254.79'
Inv. Out = 249.79'
In Pl. 18" Concrete Pipe

026
In Pl. Conc. DI
Top = 254.93'
Inv. In = 250.43' (From Str. 027)
Inv. Out = 250.31'
In Pl. 15" Concrete Pipe

027
In Pl. Conc. DI
Top = 255.62'
Inv. Out = 251.42'
In Pl. 15" Concrete Pipe

028
In Pl. Conc. DI
Top = 256.11'
Inv. Out = 251.80'
In Pl. 15" Concrete Pipe

SANITARY SEWER TABLE

200
In Pl. San. MH
RIM = 246.15'
Inv. In = 236.28' (8" PVC From #201)
Inv. Out = 236.15' (8" PVC To Southwest)

201
In Pl. San. MH
RIM = 250.60'
Inv. In = 237.24' (8" PVC From #204)
Inv. In = 237.26' (8" PVC From #202)
Inv. Out = 237.19' (8" PVC To #200)

202
In Pl. San. MH
RIM = 249.41'
Inv. In = 238.55' (8" PVC From #203)
Inv. Out = 238.19' (8" PVC To #201)

203
In Pl. San. MH
RIM = 251.32'
Inv. In = 239.47' (8" PVC From #208)
Inv. In = 239.22' (8" PVC From #204)
Inv. Out = 239.12' (8" PVC To #202)

204
In Pl. San. MH
RIM = 254.30'
Inv. In = 238.92' (8" PVC From Northeast)
Inv. In = 239.02' (8" PVC From #205)
Inv. In = 239.04' (8" PVC From #203)
Inv. Out = 238.76' (8" PVC To #201)

205
In Pl. San. MH
RIM = '
Inv. In = 253.37' (8" PVC From #206)
Inv. In = 240.21' (8" PVC From Southwest)
Inv. Out = 240.06' (8" PVC To #204)

206
In Pl. San. MH
RIM = 253.40'
Inv. In = 242.12' (8" PVC From #207)
Inv. Out = 242.08' (8" PVC To #205)

207
In Pl. San. MH
RIM = 255.08'
Inv. In = 243.39' (8" PVC From Northwest)
Inv. In = 243.70' (8" PVC From North)
Inv. Out = 243.30' (8" PVC To #206)

208
In Pl. San. MH
RIM = 252.36'
Structure Full Of Water

208A
Sanitary F&C Set On Grass
No Structure Below

209
San. MH (Per Record)
Structure Not Found

210
In Pl. San. MH
RIM = 256.83'
Inv. In = 245.20' (8" PVC From #211)
Inv. Out = 245.16' (8" PVC To #209)

211
In Pl. San. MH
RIM = 257.84'
Unable To Open

212
San. MH (Per Record)
Structure Not Found

213
In Pl. San. MH
RIM = 265.76'
Inv. In = 254.12' (8" PVC From #214)
Inv. Out = 254.08' (8" PVC To #212)

214
In Pl. San. MH
RIM = 271.68'
Inv. In = 256.42' (8" PVC From #215)
Inv. Out = 256.36' (8" PVC To #213)

215
San. MH (Per Record)
Structure Not Found

216
In Pl. San. MH
RIM = 269.92'
Inv. In = 262.71' (8" PVC From North)
Inv. In = 261.88' (8" PVC From Northeast)
Inv. Out = 261.76' (8" PVC To #215)

217
San. MH (Per Record)
Structure Not Found

218
In Pl. San. MH
RIM = 278.47'
Inv. In = 269.64' (8" PVC From #219)
Inv. Out = 269.61' (8" PVC To Northeast)

219
In Pl. San. MH
RIM = 276.15'
Unable To Open

90% DESIGN SUBMITTAL

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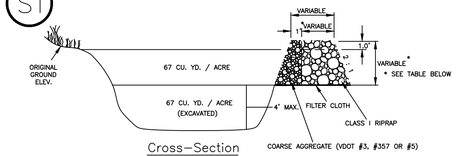
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

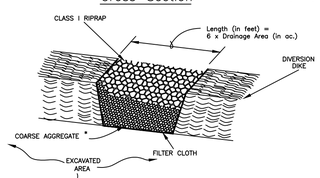
EXISTING CONDITIONS – 4

SHEET
2B(4)
SCALE N/A

ST — TEMPORARY SEDIMENT TRAP ***
DCR Standard & Spec. Number 3.13

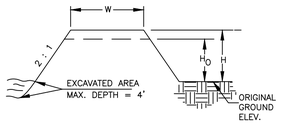


Cross-Section



Outlet (Perspective View)

MINIMUM TOP WIDTH (W) REQUIRED FOR SEDIMENT TRAP EMBANKMENTS ACCORDING TO HEIGHT OF EMBANKMENT (FEET)



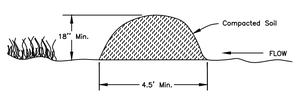
H	H_O	W
1.5	0.5	2.0
2.0	1.0	2.0
2.5	1.5	2.5
3.0	2.0	2.5
3.5	2.5	3.0
4.0	3.0	3.0
4.5	3.5	4.0
5.0	4.0	4.5

The maximum allowable drainage area is 3 acres. Sediment should be removed from the basin when the volume is reduced by one-half.

TEMPORARY SEDIMENT TRAP DATA

STRUCTURE	DRAINAGE AREA (ACRES)	STORAGE (C.Y.)		WEIR LENGTH (FEET)	WEIR HEIGHT (FEET)	BERM HEIGHT (FEET)
		REQUIRED	DESIGN			

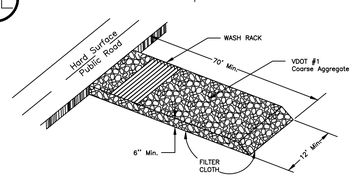
DD — TEMPORARY DIVERSION DIKE ***
DCR Standard & Spec. Number 3.13



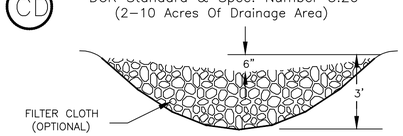
Below drainage areas of 5 acres or less.

The channel behind the dike shall have a positive grade to a stabilized outlet. If the channel slope is less than or equal to 2%, no stabilization is required. If the slope is greater than 2%, the channel shall be stabilized in accordance with Std. & Spec. 1.35 (STORMWATER CONVEYANCE CHANNEL) Virginia Erosion & Sediment Control Handbook, Third Edition, 1992.

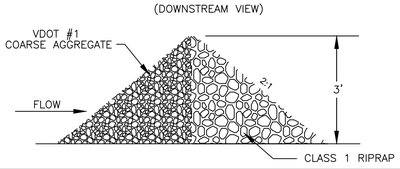
CE — GRAVEL CONSTRUCTION ENTRANCE ***
DCR Standard & Spec. Number 3.02



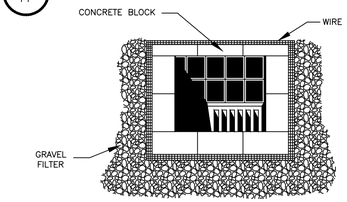
CD — ROCK CHECK DAM***
DCR Standard & Spec. Number 3.20
(2-10 Acres Of Drainage Area)



(DOWNSTREAM VIEW)

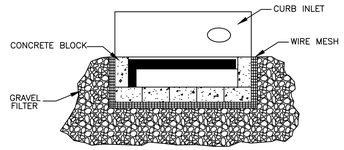


IP — TEMPORARY BLOCK & GRAVEL DROP INLET FILTER ***
DCR Standard & Spec. Number 3.07



Type A

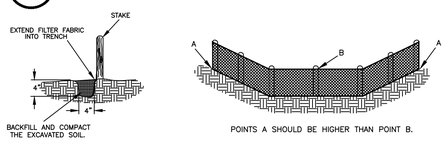
TEMPORARY BLOCK & GRAVEL CURB INLET FILTER ***



Type B

* GRAVEL SHALL BE #3, #357, OR # 5 COARSE AGGREGATE.

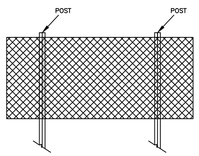
SF — SILT FENCE ***
DCR Standard & Spec. Number 3.05



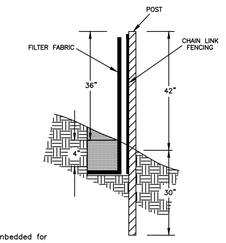
GENERAL NOTES – SILT FENCE

1) The height of a silt fence will be a minimum of 16 inches and a maximum of 34 inches above ground elevation.
2) Extra strength filter fabric shall be a continuous roll. When joints are unavoidable, a splice may be made at a support post with a 6 inch overlap.
3) The excavated trench shall be 4 inches wide and 4 inches deep on the upslope side of the proposed location.
4) Support posts shall be a maximum of 10 feet apart where wire support is used, and no more than 6 feet apart where wire is not used. When placing silt fence across a ditch or swale, the posts are to be set at a maximum 3 foot interval.
5) The trench shall be backfilled and the soil compacted over the filter fabric.
6) Silt fences shall be removed when the upslope area has been permanently stabilized.

SSF — SUPER SILT FENCE***
City of Manassas Spec. Number EC 2.2



ELEVATION VIEW



SECTION VIEW

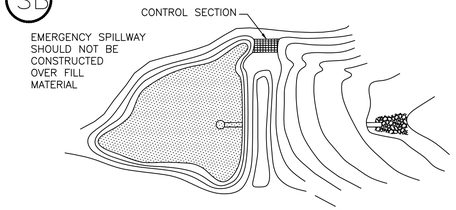
FENCING:

Chain link fence shall be 39" above grade with 3" embedded for a total fabric width of 42". The post shall be 42" above grade with 30" placed below grade (without concrete) for a total length of 72".

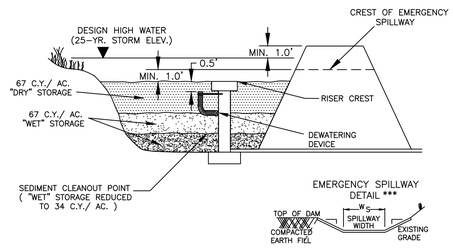
NOTES:

1. Chain link fence shall be fastened securely to fence posts with wire ties.
2. Filter fabric shall be fastened securely to chain link fence with ties spaced horizontally 24" at the top and midsection.
3. Physical properties of the filter fabric shall conform to the latest edition of the VIRGINIA EROSION & SEDIMENT CONTROL HANDBOOK.
4. When two sections of the filter fabric adjoin each other, they shall be overlapped by 6".
5. Maintenance shall be performed as needed and material shall be removed when sediment build-up reaches 50% of the height of the super silt fence.

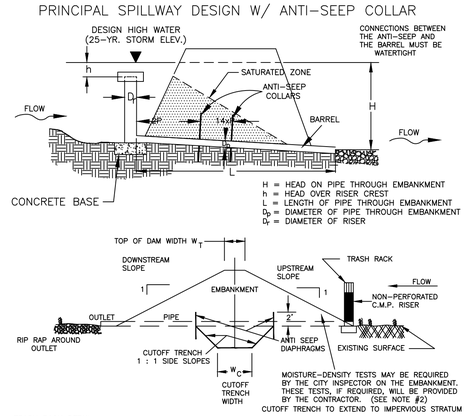
SB — TEMPORARY SEDIMENT BASIN ***
DCR Standard & Spec. Number 3.14



TEMPORARY SEDIMENT BASIN ***
(WITH EMERGENCY SPILLWAY)

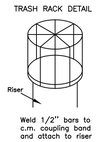


PRINCIPAL SPILLWAY DESIGN W/ ANTI-SEEP COLLAR



SECTION THRU DAM

TRASH RACK DETAIL



GENERAL NOTES–SEDIMENT BASIN

1. The site shall be cleared and grubbed and unsuitable material removed.
2. Embankment material to be taken from approved borrow area, free from roots, woody vegetation and oversized stones. Material shall be placed in 6" layers (loose) and compacted to at least 95% density.
3. Reservoir area shall be cleared and grubbed.
4. The top and sides of the embankment shall be covered with topsoil and properly seeded, mulched and fertilized.
5. Emergency spillway shall be cut into natural ground and stabilized.
6. Clean out elevation to be marked on riser in red paint.
7. Silt shall not be dumped in the downstream side of the silt basin.
8. All construction shall conform to City of Manassas Standards and Specifications and the Virginia Erosion and Sediment Control Handbook, Third Edition, 1992.
9. Temporary silt basins to be constructed prior to beginning rough grading operations.
10. Temporary silt basins to be removed and disturbed area stabilized as per approved plan.
11. Temporary silt basins to be maintained by developer.
12. Construction stake-out to be proved for each dam.

SEDIMENT BASIN DESIGN INFORMATION

DAM NO.	TOP OF DAM ELEVATION	EMERGENCY SPILLWAY ELEVATION	RISER PIPE		PIPE THRU DAM		NO. OF DIA-PHRAGMS	INV. IN	INV. OUT	CLEAN OUT ELEVATION	SPILLWAY W_S	STABILI-ZATION	TOP OF DAM W_T	CUTOFF W_C	DOWNSTREAM FILL SLOPE	UPSTREAM FILL SLOPE
			TOP ELEV	DIAM	LENGTH	DIAM										

IP

Type C

SOILS MAP AND TABLE

SEE DRAINAGE REPORT

STORMWATER MANAGEMENT COMPLIANCE
(Check Appropriate Block)

☐ Owner/developer will provide on-site stormwater management facility(ies) to accommodate additional storm drain run-off.

☐ Owner/developer requests the ability to provide a pro-rata cash contribution in-lieu of providing on-site stormwater management facility(ies).

Less Than or Equal to 40% Impervious Formula: $/Acre = A x I

Greater Than 40% Impervious Formula: $/Acre = B + (I x C)

Disturbed Acreage = _____

ENR Construction Cost Number = _____

A = _____ (3,400 x D)

B = _____ (400 x D)

C = _____ (6,000 x D)

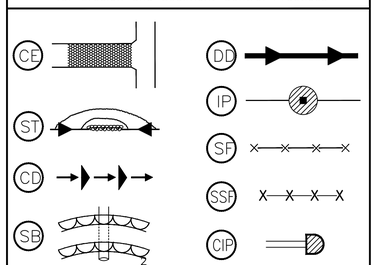
D = _____ (Current ENR Construction Cost Index / 3,726)

I = _____ (Percent of Imperviousness, i.e., 40% = .40)

$_____ (Dollar Amount)
**To Be Computed With Final Submission

☑ Owner/developer already complies with stormwater management requirements. Examples would include: a reduction in the impervious area or facility(ies) or existing on-site facilities which were installed to accommodate this proposed development. No fee is required or applicable in this circumstance.

VIRGINIA UNIFORM CODING SYSTEM for Erosion and Sediment Control Practices



Other E & S Uniform Codes Are Shown In The Current Virginia Erosion and Sediment Control Handbook

FOR ADDITIONAL INFORMATION PERTAINING TO THESE DRAWINGS, PLEASE REFERENCE THE VIRGINIA EROSION AND SEDIMENT CONTROL HANDBOOK, CURRENT EDITION, CHAPTER 3, ARTICLES 3.01 THRU 3.39.

ANY DEVIATION OR CHANGE IN THESE PLANS MUST BE APPROVED BY THE DEVELOPMENT SERVICES MANAGER PRIOR TO CONSTRUCTION.

COMMONWEALTH OF VIRGINIA
ADANE M. BOBO
Lic. No. 055443
PROFESSIONAL ENGINEER

Volkert, Inc.
Springfield, Virginia
HYDRAULIC ENGINEER

ENGINEER'S SEAL & SIGNATURE

90% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO.: T-088
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID.: Volkert
DESIGNED BY: BD DATE: 09/27/21
DRAWN BY: BD DATE: 09/27/21
CHECKED BY: RH DATE: 09/27/21
APPROVED BY: DATE:

WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

EROSION AND SEDIMENT CONTROL STANDARD DETAILS

SHEET 2D

SCALE N/A

ENGINEER TO ADDRESS AND VERIFY ALL REQUIREMENTS INDICATED IN THE CHECKLISTS ARE MET PRIOR TO THE INITIAL SUBMISSION OF THE DEVELOPMENT PLANS.

PLAN REVIEW MINIMUM STANDARD CHECKLIST

YES	NO	NA	
X	[ ]	[ ]	MS-1 Have temporary and permanent stabilization been addressed in narrative?
X	[ ]	[ ]	Are practices shown on the plan?
[ ]	[ ]	X	Seed specifications?
[ ]	[ ]	X	Mulching?
[ ]	[ ]	X	Gravel?

(Permanent or temporary soil stabilization shall be applied to denuded areas within seven days after final grade is reached on any portion of the site. Temporary soil stabilization shall be applied within seven days to denuded areas that may not be at final grade but will remain dormant for longer than 30 days. Permanent stabilization shall be applied to areas that are to be left dormant for more than one year.)

X	[ ]	[ ]	MS-2 Has stabilization of soil stockpiles been addressed in narrative?
X	[ ]	[ ]	Are sediment trapping measures provided?

(During construction of the project, soil stock piles and borrow areas shall be stabilized or protected with sediment trapping measures. The applicant is responsible for the temporary protection and permanent stabilization of all soil stockpiles on site as well as borrow areas and soil intentionally transported from the project site.)

X	[ ]	[ ]	MS-3 Has maintenance of permanent stabilization been addressed?

(A permanent vegetative cover shall be established on denuded areas not otherwise permanently stabilized. Permanent vegetation shall not be considered established until a ground cover is achieved that is uniform, mature enough to survive and will inhibit erosion.)

X	[ ]	[ ]	MS-4 Are sediment trapping facilities to be constructed as a first step in LDA?
X	[ ]	[ ]	Has maintenance of practices been addressed? (i.e. repair of structures and removal accumulated sediment)

(Sediment basins and traps, perimeter dikes, sediment barriers and other measures intended to trap sediment shall be constructed as a first step in any land-disturbing activity and shall be made functional before upslope land disturbance takes place.)

[ ]	[ ]	X	MS-5 Has stabilization of earthen structures been addressed?

(Stabilization measures shall be applied to earthen structures such as dams, dikes and diversions immediately after installation.)

[ ]	[ ]	X	MS-6 Are sediment basins required where needed?

(Sediment traps and sediment basins shall be designed and constructed based upon the total drainage area to be served by the trap or basin.)

a. The minimum storage capacity of a sediment trap shall be 134 cubic yards per acre of drainage area and the trap shall only control drainage areas less than three acres.

b. Surface runoff from disturbed areas that is comprised of flow from drainage areas greater than or equal to three acres shall be controlled by a sediment basin. The minimum storage capacity of a sediment basin shall be 134 cubic yards per acre of drainage area. The outfall system shall, at a minimum, maintain the structural integrity of the basin during a 25-year storm of 24-hour duration. Runoff coefficients used in runoff calculations shall correspond to a bare earth condition or those conditions expected to exist while the sediment basin is utilized.)

X	[ ]	[ ]	MS-7 Has stabilization of cut and fill slopes been adequately addressed?

(Cut and fill slopes shall be designed and constructed in a manner that will minimize erosion. Slopes that are found to be eroding excessively within one year of permanent stabilization shall be provided with additional slope stabilizing measures until the problem is corrected.)

[ ]	[ ]	X	MS-8 Are paved flumes, channels, or slope drains required where necessary?

(Concentrated runoff shall not flow down cut or fill slopes unless contained within an adequate temporary or permanent channel, flume or slope drain structure.)

X	[ ]	[ ]	MS-9 Have water seeps from slope face, adequate drainage or other protection addressed?

(Whenever water seeps from a slope face, adequate drainage or other protection shall be provided.)

X	[ ]	[ ]	MS-10 Is adequate inlet protection required on all operational storm sewer inlets?

(All storm sewer inlets that are made operable during construction shall be protected so that sediment-laden water cannot enter the conveyance system without first being filtered or otherwise treated to remove sediment.)

[ ]	[ ]	X	MS-11 Are channel lining and/or outlet protection required on stormwater conveyance channels?

(Before newly constructed stormwater conveyance channels or pipes are made operational, adequate outlet protection and any required temporary or permanent channel lining shall be installed in both the conveyance channel and receiving channel.)

[ ]	[ ]	X	MS-12 Are in-stream construction measures required so that channel damage is minimized?

(When work in a live watercourse is performed, precautions shall be taken to minimize encroachment, control sediment transport and stabilize the work area to the greatest extent possible during construction. Nonerodible material shall be used for the construction of causeways and cofferdams. Earthen fill may be used for these structures if armored by nonerodible cover materials.)

[ ]	[ ]	X	MS-13 Are temporary stream crossings of non-erodible material required where necessary?

(When a live watercourse must be crossed by construction vehicles more than twice in any six-month period, a temporary vehicular stream crossing constructed of nonerodible material shall be provided.)

[ ]	[ ]	X	MS-14 Are all applicable federal, state and local regulations pertaining to working in or crossing live watercourses being met?

(All applicable federal, state and local chapters pertaining to working in or crossing live watercourses shall be met.)

[ ]	[ ]	X	MS-15 Has re-stabilization of areas subject to in-stream construction been adequately addressed?

(The bed and banks of a watercourse shall be stabilized immediately after work in the watercourse is completed.)

[ ]	[ ]	X	MS-16 Has stabilization of utility trenches been addressed?

(Underground utility lines shall be installed in accordance with the following standards in addition to other applicable criteria:

a. No more than 500 linear feet of trench may be opened at one time.

b. Excavated material shall be placed on the uphill side of trenches.

c. Effluent from dewatering operations shall be filtered or passed through an approved sediment trapping device, or both, and discharged in a manner that does not adversely affect flowing streams or off-site property.

d. Material used for backfilling trenches shall be properly compacted in order to minimize erosion and promote stabilization.

e. Restabilization shall be accomplished in accordance with this chapter.

f. Applicable safety chapters shall be complied with.

X	[ ]	[ ]	MS-17 Has the prevention of transporting of soil and mud onto public roadways been adequately addressed? (i.e. Construction Entrances, Wash Racks, daily cleaning of roadways, transport of sediment to a trapping facility)

(Where construction vehicle access routes intersect paved or public roads, provisions shall be made to minimize the transport of sediment by vehicular tracking onto the paved surface. Where sediment is transported onto a paved or public road surface, the road surface shall be cleaned thoroughly at the end of each day. Sediment shall be removed from the roads by shoveling or sweeping and transported to a sediment control disposal area. Street washing shall be allowed only after sediment is removed in this manner. This provision shall apply to individual development lots as well as to larger land-disturbing activities.)

X	[ ]	[ ]	MS-18 Has the removal of temporary practices been addressed?

(All temporary erosion and sediment control measures shall be removed within 30 days after final site stabilization or after the temporary measures are no longer needed, unless otherwise authorized by the local program authority. Trapped sediment and the disturbed soil areas resulting from the disposition of temporary measures shall be permanently stabilized to prevent further erosion and sedimentation.)

X	[ ]	[ ]	MS-19 Are properties and waterways downstream from the development adequately protected from erosion and sediment deposition due to increases in peak stormwater runoff?

(Properties and waterways downstream from development sites shall be protected from sediment deposition, erosion and damage due to increases in volume, velocity and peak flow rate of stormwater runoff for the stated frequency storm of 24-hour duration in accordance with the following standards and criteria:

a. Concentrated stormwater runoff leaving a development site shall be discharged directly into an adequate natural or man-made receiving channel, pipe or storm sewer system. For those sites where runoff is discharged into a pipe or pipe system, downstream stability analyses at the outfall of the pipe or pipe system shall be performed.

b. Adequacy of all channels and pipes shall be verified in the following manner:

:

(1) The applicant shall demonstrate that the total drainage area to the point of analysis within the channel is one hundred times greater than the contributing drainage area of the project in question; or

(2) (a) Natural channels shall be analyzed by the use of a two-year storm to verify that stormwater will not overtop channel banks nor cause erosion of channel bed or banks.

(b) All previously constructed man-made channels shall be analyzed by the use of a ten-year storm to verify that stormwater will not overtop its banks and by the use of a two-year storm to demonstrate that stormwater will not cause erosion of channel bed or banks; and

(c) Pipes and storm sewer systems shall be analyzed by the use of a ten-year storm to verify that stormwater will be contained within the pipe or system.

c. If existing natural receiving channels or previously constructed man-made channels or pipes are not adequate, the applicant shall:

(1) Improve the channels to a condition where a ten-year storm will not overtop the banks and a two-year storm will not cause erosion to channel the bed or banks; or

(2) Improve the pipe or pipe system to a condition where the ten-year storm is contained within the appurtenances;

(3) Develop a site design that will not cause the pre-development peak runoff rate from a two-year storm to increase when runoff outfalls into a natural channel or will not cause the pre-development peak runoff rate from a ten-year storm to increase when runoff outfalls into a man-made channel; or

(1) Improve the channels to a condition where a ten-year storm will not overtop the banks and a two-year storm will not cause erosion to channel the bed or banks; or

(2) Improve the pipe or pipe system to a condition where the ten-year storm is contained within the appurtenances;

(3) Develop a site design that will not cause the pre-development peak runoff rate from a two-year storm to increase when runoff outfalls into a natural channel or will not cause the pre-development peak runoff rate from a ten-year storm to increase when runoff outfalls into a man-made channel; or

(4) Provide a combination of channel improvement, stormwater detention or other measures which is satisfactory to the plan approving authority to prevent downstream erosion.

d. The applicant shall provide evidence of permission to make the improvements.

e. All hydrologic analyses shall be based on the existing watershed characteristics and the ultimate development condition of the subject project.

f. If the applicant chooses an option that includes stormwater detention, he shall obtain approval from the locality of a plan for maintenance of the detention facilities. The plan shall set forth the maintenance requirements of the facility and the person responsible for performing the maintenance.

g. Outfall from a detention facility shall be discharged to a receiving channel, and energy dissipators shall be placed at the outfall of all detention facilities as necessary to provide a stabilized transistion from the facility to the receiving channel.

h. All on-site channels must be verified to be adequate.

i. Increased volumes of sheet flows that may cause erosion or sedimentation on adjacent property shall be diverted to a stable outlet, adequate channel, pipe or pipe system, or to a detention facility.

j. In applying these stormwater management criteria, individual lots or parcels in a residential, commercial or industrial development shall not be considered to be separate development projects. Instead, the development, as a whole, shall be considered to be a single development project. Hydrologic parameters that reflect the ultimate development condition shall be used in all engineering calculations.

k. All measures used to protect properties and waterways shall be employed in a manner which minimizes impacts on the physical, chemical and biological integrity of rivers, streams and other waters of the state.

CHECKLIST

NARRATIVE

- X Project description – Briefly describes the nature and purpose of the land-disturbing activity, and the area (acres) to be disturbed.
- X Existing site conditions – A description of the existing topography, vegetation and drainage.
- X Adjacent areas – A description of neighboring areas such as streams, lakes, residential areas, roads, etc., which might be affected by the land disturbance.
- X Off-site-areas – Describe any off-site land-disturbing activities that will occur (including borrow sites, waste or surplus areas, etc.). Will any other areas be disturbed?
- X Soils – A brief description of the soils on the site giving such information as soil name, mapping unit, erodibility, permeability, depth, texture and soil structure.
- X Critical areas – A description of areas on the site which have potentially serious erosion problems (e.g. steep slopes, channels, wet weather/underground springs, etc.).
- X Erosion and sediment control measures – A description of the methods which will be used to control erosion and sedimentation on the site (Controls should meet the specifications in Chapter 3.)
- X Permanent stabilization – A brief description, including specifications, of how the site will be stabilized after construction is completed.
- X Stormwater runoff considerations – Will the development site cause an increase in peak runoff rates? Will the increase in runoff cause flooding or channel degradation downstream? Describe the strategy to control stormwater runoff.
- X Calculations – Detailed calculations for the design of temporary sediment basins, permanent stormwater detention basins, diversions, channels, etc. Include calculations for pre- and post-development runoff.

SITE PLAN

- X Vicinity map – A small map locating the site in relation to the surrounding area. Include any landmarks which might assist in locating the site.
- X Indicate north – The direction of north in relation to the site.
- X Limits of clearing and grading – Areas which are to be cleared and graded.
- X Existing contours – The existing contours of the site.
- X Final contours – Changes to the existing contours, including final drainage patterns.
- X Existing vegetation – The existing tree lines, grassed areas, or unique vegetation.
- X Soils – The boundaries of different soil types.
- X Existing drainage patterns – The dividing lines and the direction of flow for the different drainage areas. Include the size (acreage) of each drainage area.
- X Critical erosion areas – Areas with potentially serious erosion problems. (See Chapter 6 for criteria).
- X Site Development – Show all improvements such as buildings, parking lots, access roads, utility construction, etc.
- X Location of practices – The locations of erosion and sediment controls and stormwater management practices used on the site. Use the standard symbols and abbreviations in Chapter 3 of the Virginia Erosion and Sediment Control Handbook.
- X Off-site areas – Identify any off-site land-disturbing activities (e.g., borrow sites, waste areas, etc.). Show location of erosion controls. (Is there sufficient information to assure adequate protection and stabilization?)
- X Detail drawings – Any structural practices used that are not referenced to the E&S handbook or local handbooks should be explained and illustrated with detail drawings.
- X Maintenance – A schedule of regular inspections and repair of erosion and sediment control structures should be set forth.

ANY DEVIATION OR CHANGE IN THESE PLANS MUST BE APPROVED BY THE DEVELOPMENT SERVICES MANAGER PRIOR TO CONSTRUCTION.

Erosion and Sediment Control Narrative

Project Description

The Wellington Road Shared Use Path project proposes a 10-foot wide multiuse trail along Wellington Road,from Nokesville Road to Prince William Street. The land disturbance area is approximately 1.40 acres.

Existing Site Condition

The existing site consists of a mixture of open area, curb & gutter, shoulder roadway sections, and drainage is generally conveyed from north to South via existing culverts and storm sewer crossings which serve as the project outfalls.

Adjacent Areas

Adjacent areas are forested and commercial.

Off-site Areas

All construction activities will be staged or performed within right-of-way and/or proposed easements , or on designated City of Manassas-owned property, for construction and permanent maintenance.

Soils

Based on the Web Soil Survey website, majority of the project site consists of hydrologic soil group C where the project site will have a moderately high runoff potential. In terms of soil erosion, the k-value is anticipated to be slightly high as the soil is susceptible to sheet and rill erosion by water.

Critical Areas

The project is not located within the floodplain; however, it crosses multiple railroad tracks at the south east end of the project.

Erosion and Sediment Control Measures

***Temporary Silt Fence (SF) -** VESCH St'd. 3.05: Is proposed throughout the project site as sediment trapping device. SF is placed at the toe of the slope, or as a perimeter protection measure.*

***Storm Drain Inlet Protection (IP) -** VESCH St'd. 3.07: To prevent sediment from entering storm drainage systems prior to permanent stabilization of the disturbed area.*

***Outlet Protection (OP) -** VESCH St'd. 3.18: Structurally lined aprons or other acceptable energy dissipating devices placed at the outlets of pipes or paved channel sections, used to prevent scour at stormwater outlets, to protect the outlet structure, and to minimize the potential for downstream erosion by reducing the velocity and energy of concentrated stormwater flows.*

Stormwater Runoff Considerations

According to Virginia Stormwater Management Program, any new or redeveloped project with a land-disturbance of one acre or greater will have a stormwater management plan. The land-disturbed area is about 1.40 acres; therefore, a stormwater management plan is required for this project. This is discussed in greater detail in the drainage report.

Permanent Stabilizations

Once the grading has been completed, the constructor will utilize same day stabilization matting and will seed. Once grass is established, and on approval by the inspector, the contractor will remove the silt fence based on the phasing and after the ground is established. Seeding shall meet Virginia Erosion and Sediment Control Handbook and VDOT Erosion and Sediment Control Requirements.

Calculations

Detailed calculations for the pre- and post-development runoff are provided in the drainage report.

Soil Stockpiling

During construction of the project, soil stockpiles and borrow areas shall be stabilized or protected with sediment trapping measures.

COMMONWEALTH OF VIRGINIA
ADANE M. BOBO
Lic. No. 055443
PROFESSIONAL ENGINEER

Volkert, Inc.
Springfield, Virginia
HYDRAULIC ENGINEER

ENGINEER'S SEAL & SIGNATURE

90% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

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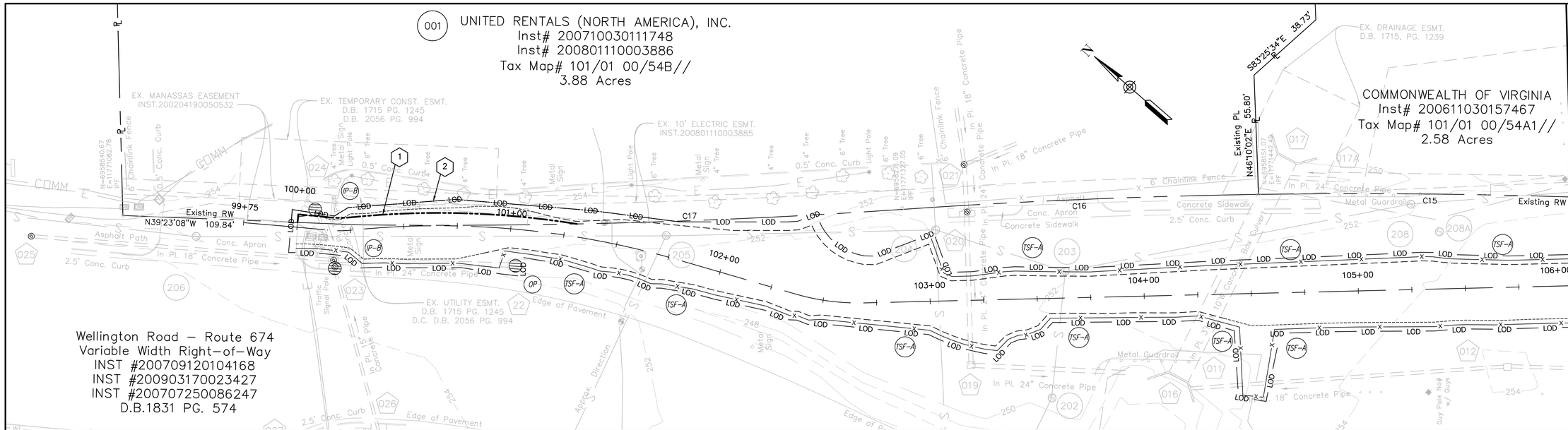
DESIGNED BY: BD DATE: 09/27/21
DRAWN BY: BD DATE: 09/27/21
CHECKED BY: RH DATE: 09/27/21
APPROVED BY: DATE:

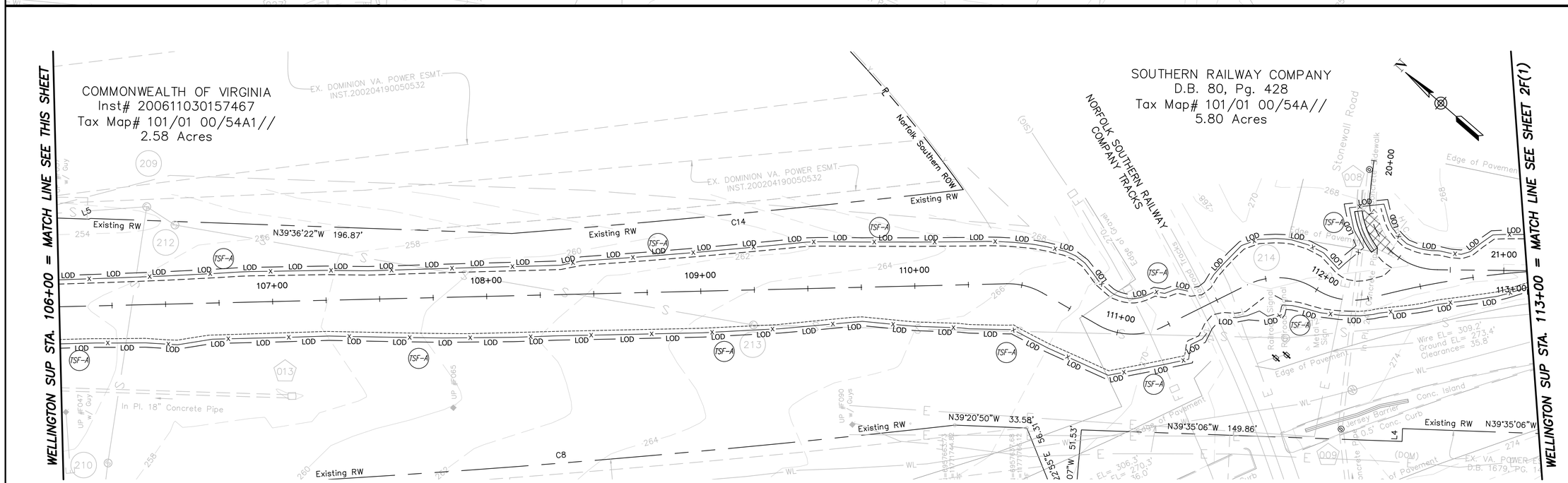
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

EROSION AND SEDIMENT CONTROL NOTES AND NARRATIVE

SHEET 2E

SCALE N/A





Erosion & Sediment Control Legend

- Temp. Silt Fence
- Storm Drain Inlet Protection Type A, B, or C
- Rock Check Dam Type I
- Rock Check Dam Type II
- LOD — Limit of Construction
- Construction Limits in Cut
- Construction Limits in Fill

R/W Legend

- (1) Denotes Prop. Right-of-Way
- (2) Denotes Temp. Constr. Easement

HORIZONTAL GRAPHIC SCALE

25 0 12.5 25 50 100

(IN FEET)
1 inch = 25 ft.

VERTICAL GRAPHIC SCALE

5 0 2.5 5 10 20

(IN FEET)
1 inch = 5 ft.

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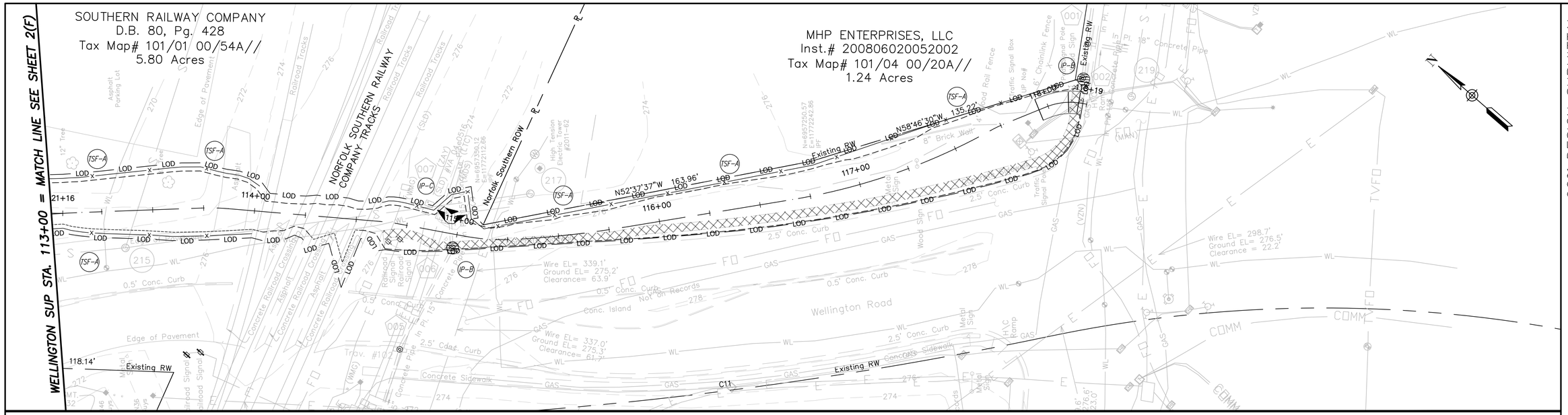
EROSION AND SEDEMENT CONTROL PLANS PHASE 1

SHEET
2F
SCALE 1"=25'



Erosion & Sediment Control Legend

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HORIZONTAL GRAPHIC SCALE

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WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

EROSION AND SEDEMENT CONTROL PLANS PHASE 1

SHEET
2F(1)
SCALE 1"=25'

Erosion & Sediment Control Legend

- Temp. Silt Fence
- Storm Drain Inlet Protection Type A, B, or C
- Rock Check Dam Type I
- Rock Check Dam Type II
- LOD — Limit of Construction
- Construction Limits in Cut
- Construction Limits in Fill

R/W Legend

- 1 Denotes Prop. Right-of-Way
- 2 Denotes Temp. Constr. Easement

HORIZONTAL GRAPHIC SCALE

25 0 12.5 25 50 100

(IN FEET)
1 inch = 25 ft.

VERTICAL GRAPHIC SCALE

5 0 2.5 5 10 20

(IN FEET)
1 inch = 5 ft.

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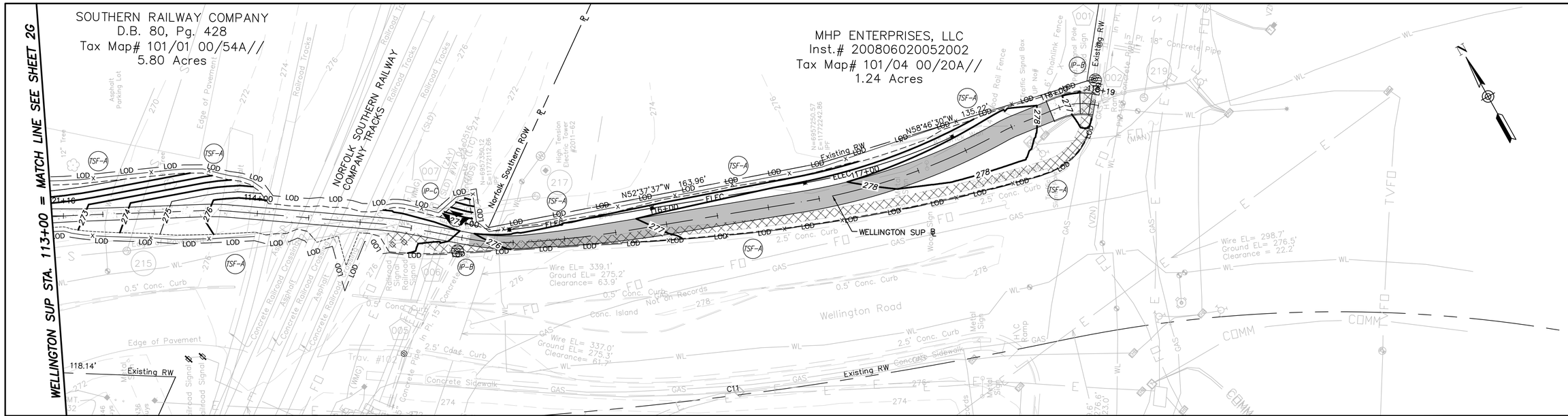
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

EROSION AND SEDEMENT CONTROL PLANS PHASE 2

SHEET
2G
SCALE 1"=25'



Erosion & Sediment Control Legend

- Temp. Silt Fence
- Storm Drain Inlet Protection Type A, B, or C
- Rock Check Dam Type I
- Rock Check Dam Type II
- LOD — Limit of Construction
- Construction Limits in Cut
- Construction Limits in Fill

R/W Legend

- 1 Denotes Prop. Right-of-Way
- 2 Denotes Temp. Constr. Easement

HORIZONTAL GRAPHIC SCALE

25 0 12.5 25 50 100

(IN FEET)
1 inch = 25 ft.

VERTICAL GRAPHIC SCALE

5 0 2.5 5 10 20

(IN FEET)
1 inch = 5 ft.

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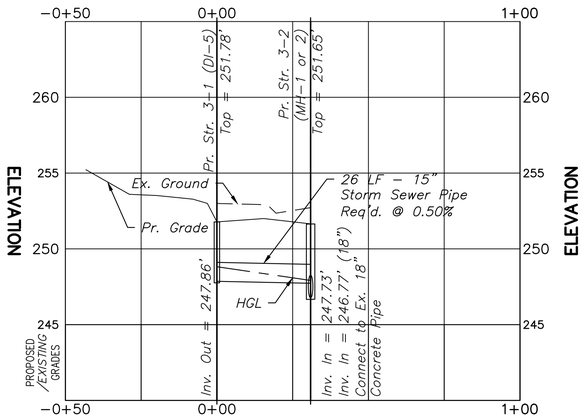
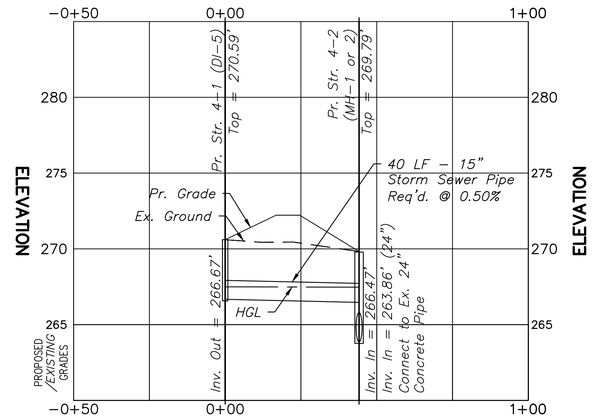
EROSION AND SEDEMENT CONTROL PLANS PHASE 2

SHEET
2G(1)
SCALE 1"=25'

Storm Sewer Profile: 3–1 to 3–2



Storm Sewer Profile: 4–1 to 4–2



DRAINAGE DESCRIPTIONS

3–1
1 St'd. DI–7 Req'd. Type III Grate Req'd.
H = 3.92', Top = 251.78' Inv. = 247.86'
St'd. IS–1 Req'd.

3–2
4.0 LF St'd. MH–1 or 2 Req'd.
Top = 251.65 Inv. = 247.73'
1 St'd. MH–1 Frame & Cover Req'd.
Connect to Ex. 24" Concrete Pipe
St'd. IS–1 Req'd.

3–1 — 3–2
26' – 15" Storm Sewer Pipe Req'd. (3' Cover)
Inv. In = 247.86' Inv. Out = 247.73'

4–1
1 St'd. DI–7 Req'd. Type III Grate Req'd.
H = 3.92', Top = 270.59' Inv. = 266.67'
St'd. IS–1 Req'd.
Connect to Ex. 24" Concrete Pipe

4–2
3.3 LF St'd. MH–1 or 2 Req'd.
Top = 269.79' Inv. = 266.47'
1 St'd. MH–1 Frame & Cover Req'd.
Connect to Ex. 24" Concrete Pipe
St'd. IS–1 Req'd.

4–1 — 4–2
40' – 15" Storm Sewer Pipe Req'd. (2' Cover)
Inv. In = 266.67' Inv. Out = 266.47'

Note:
In addition to the visual inspection performed by the Department during the initial installation of storm sewer pipes and pipe culverts, a post installation visual/video camera inspection shall be conducted by the Contractor on all storm sewer pipes and a selected number of pipe culverts in accordance with the requirements of this specification and VTM 123.

HORIZONTAL GRAPHIC SCALE

(IN FEET)
1 inch = 25 ft.

VERTICAL GRAPHIC SCALE

(IN FEET)
1 inch = 5 ft.

90% DESIGN SUBMITTAL

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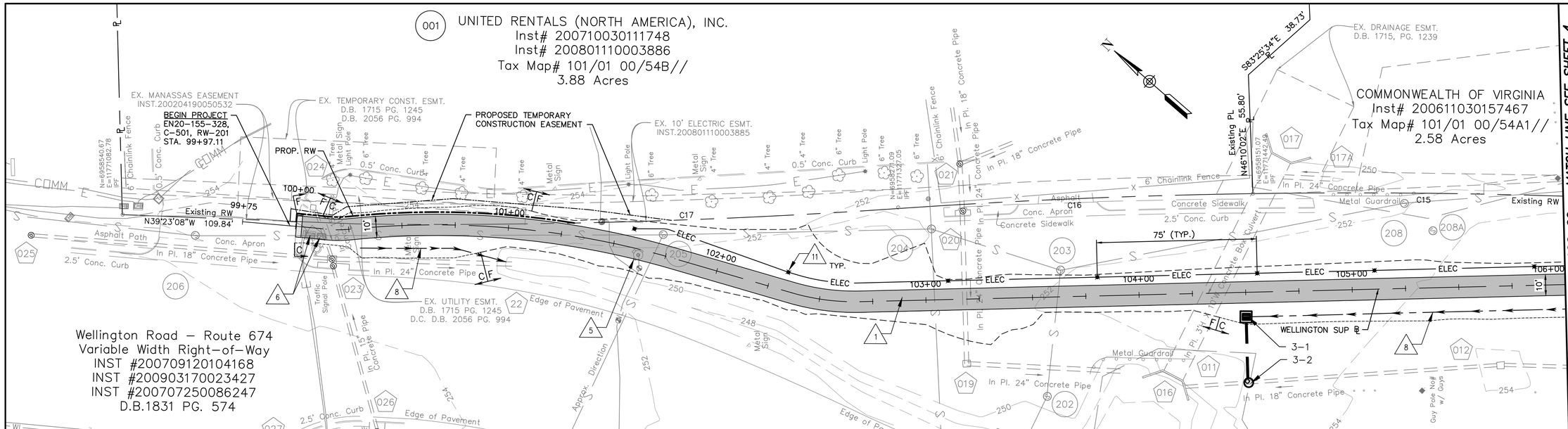
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

STORM SEWER PROFILES AND DRAINAGE DESCRIPTIONS

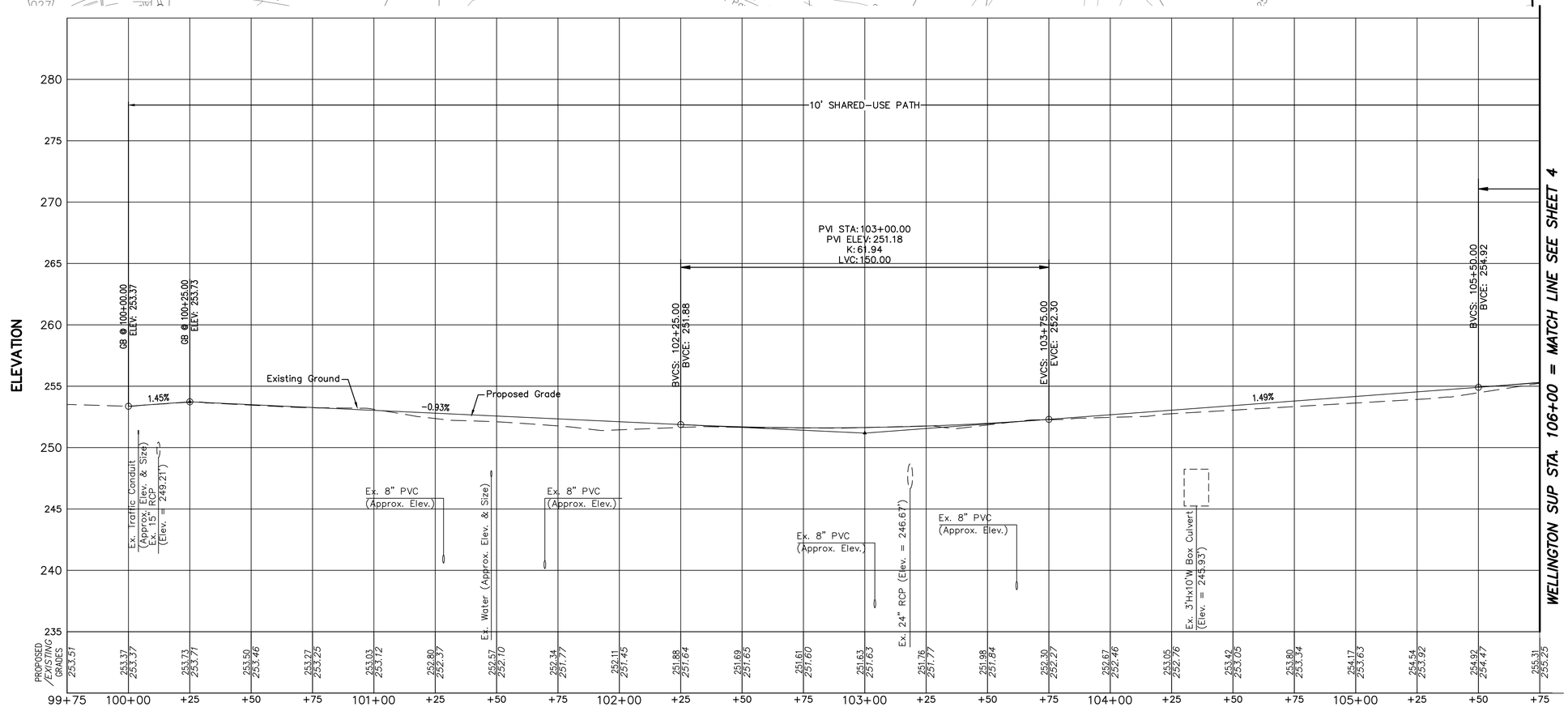
SHEET
2H
SCALE 1"=25'



CONSTRUCTION NOTES

1. ASPHALT SHARED USE PATH
2. CONCRETE SIDEWALK
3. ST'D. CG-12 TYPE B
4. DEMOLISH EXISTING SIDEWALK
5. RELOCATE EXISTING
6. MATCH TOP OF SHARED USE PATH TO TOP OF EXISTING TRAFFIC BOXES
7. SAW-CUT H.C.C. SIDEWALK
8. DITCH CENTERLINE
9. SAW-CUT ASPHALT CONC (FULL DEPTH)
10. ST'D. CG-6
11. PROPOSED STREETLIGHT (BY OTHERS)

Asphalt Pavement
Concrete Pavement
C Denotes Construction Limits in Cut
F Denotes Construction Limits in Fill
Ditch Centerline
ELEC 2" Conduit (By Others)



HORIZONTAL GRAPHIC SCALE

(IN FEET)
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VERTICAL GRAPHIC SCALE

(IN FEET)
1 inch = 5 ft.

COMMONWEALTH OF VIRGINIA
BRENDA DUONG
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WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

PLAN AND PROFILE

SHEET
3
SCALE AS NOTED

NOTES:

1. CONTRACTOR WILL NOT BE PERMITTED TO STORE ANY EQUIPMENT ON NORFOLK SOUTHERN PROPERTY WITHOUT PERMISSION FROM THE NORFOLK SOUTHERN RAILROAD ENGINEER IN ACCORDANCE WITH SECTION E.5.K.1 OF THE NORFOLK SOUTHERN PUBLIC PROJECTS MANUAL.
2. NORFOLK SOUTHERN FORCES WILL INSTALL PROPOSED PEDESTRIAN CROSSING TO 2'-0" BEYOND THE OUTSIDE EDGE OF EACH RAIL AT THE SPONSOR'S EXPENSE. THE CONTRACTOR WILL BE RESPONSIBLE TO INSTALL THE REMAINING PORTION OF THE CROSSING.

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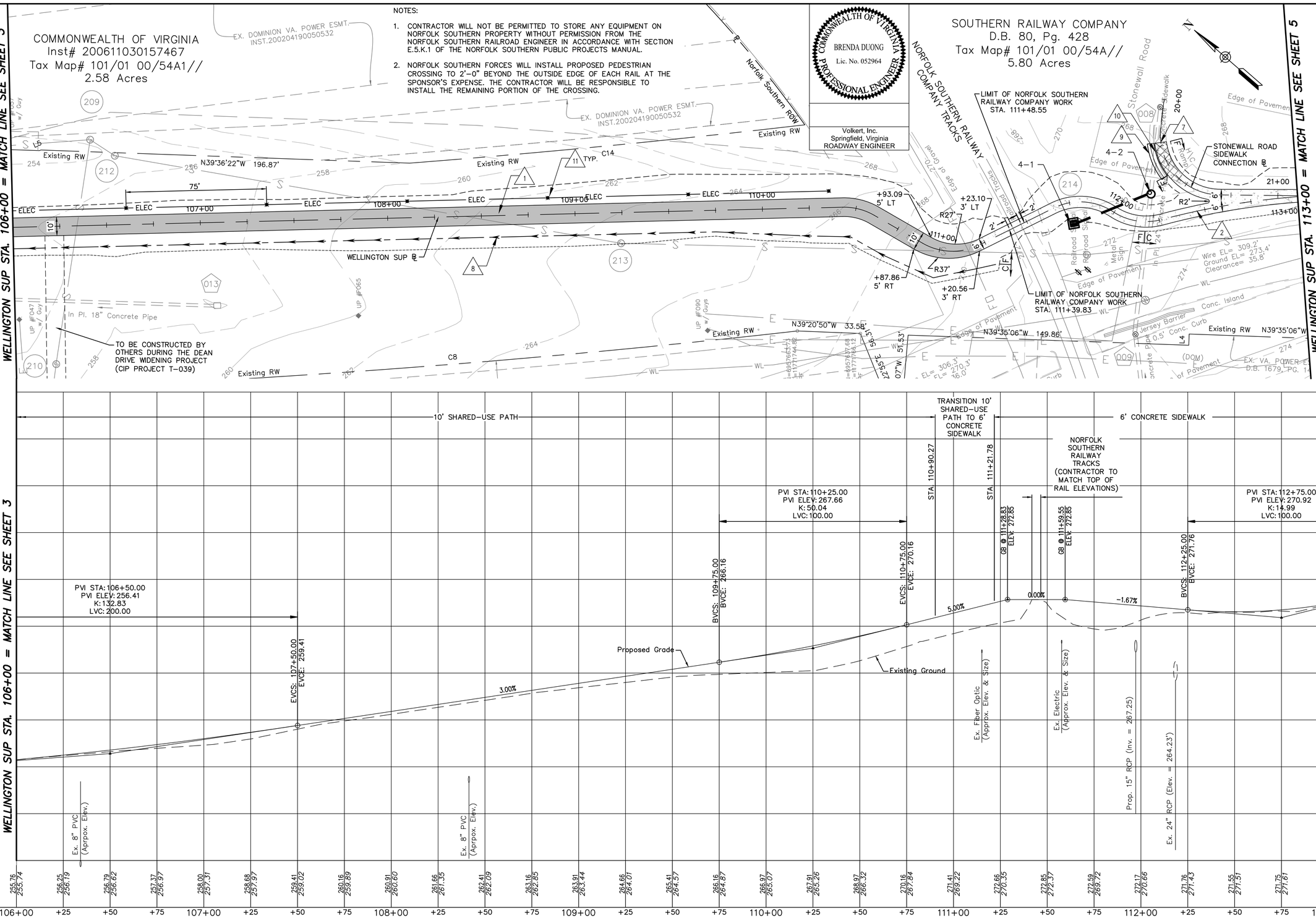

HORIZONTAL GRAPHIC SCALE

(IN FEET)
1 inch = 25 ft.

VERTICAL GRAPHIC SCALE

(IN FEET)
1 inch = 5 ft.

CONSTRUCTION NOTES

1. ASPHALT SHARED USE PATH
2. CONCRETE SIDEWALK
3. ST'D. CG-12 TYPE B
4. DEMOLISH EXISTING SIDEWALK
5. RELOCATE EXISTING
6. MATCH TOP OF SHARED USE PATH TO TOP OF EXISTING TRAFFIC BOXES
7. SAW-CUT H.C.C. SIDEWALK
8. DITCH CENTERLINE
9. SAW-CUT ASPHALT CONC (FULL DEPTH)
10. ST'D. CG-6
11. PROPOSED STREETLIGHT (BY OTHERS)

Asphalt Pavement — Concrete Pavement
C — Denotes Construction Limits in Cut
F — Denotes Construction Limits in Fill
Ditch Centerline — ELEC — 2" Conduit (By Others)

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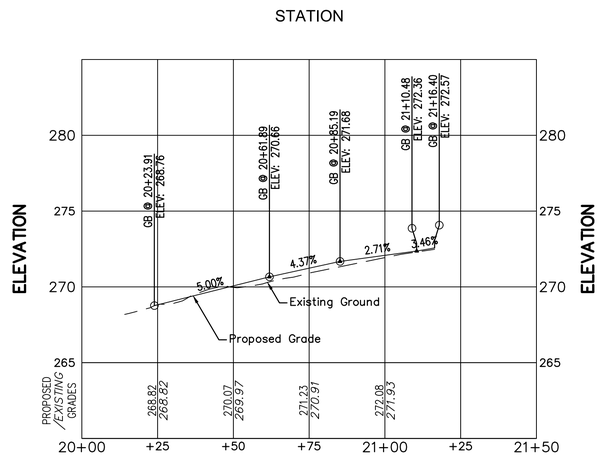
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

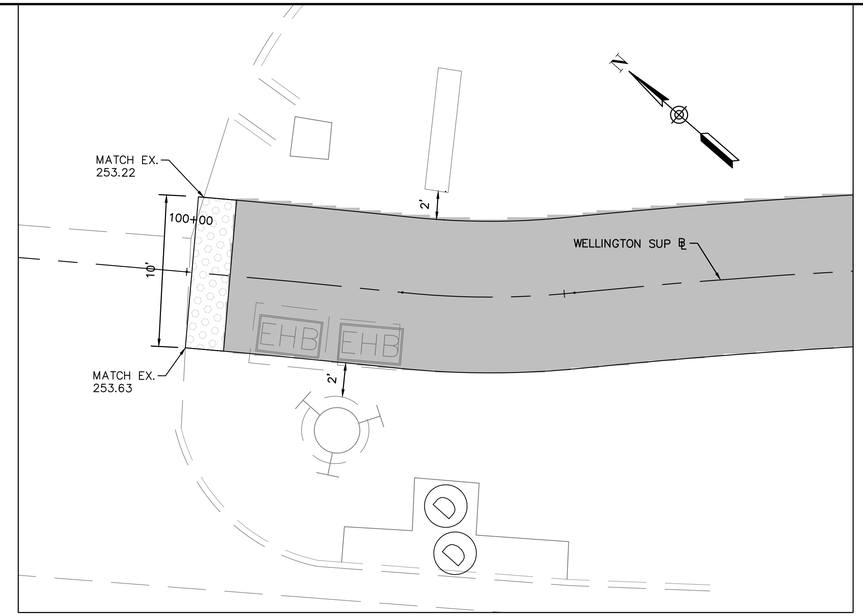
PLAN AND PROFILE

SHEET 4
SCALE AS NOTED



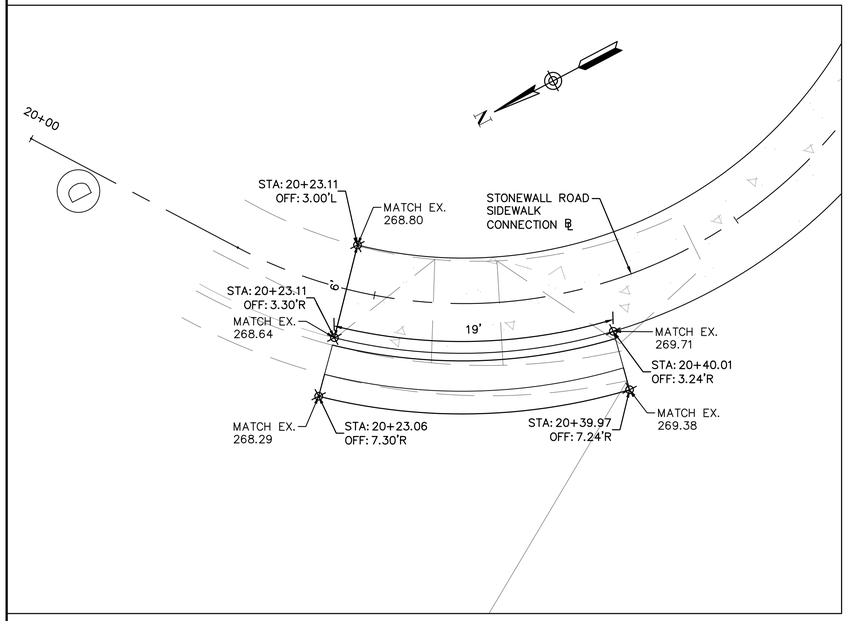
PROFILE – STONEWALL ROAD SIDEWALK CONNECTION

HORIZ. 1"=25'
VERT. 1"=5'



UNITED RENTAL ENTRANCE DETAILS

GRAPHIC SCALE
5 0 2.5 5 10 20
(IN FEET)
1 inch = 5 ft.



STONEWALL ROAD SIDEWALK DETAILS

GRAPHIC SCALE
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(IN FEET)
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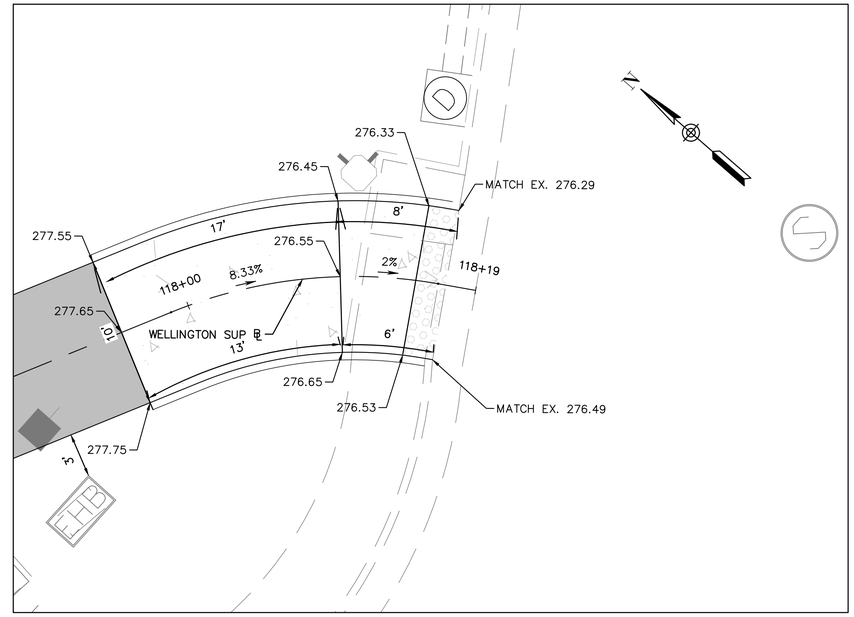

PRINCE WILLIAM STREET CG-12B SPOT DETAILS

GRAPHIC SCALE
5 0 2.5 5 10 20
(IN FEET)
1 inch = 5 ft.

COMMONWEALTH OF VIRGINIA
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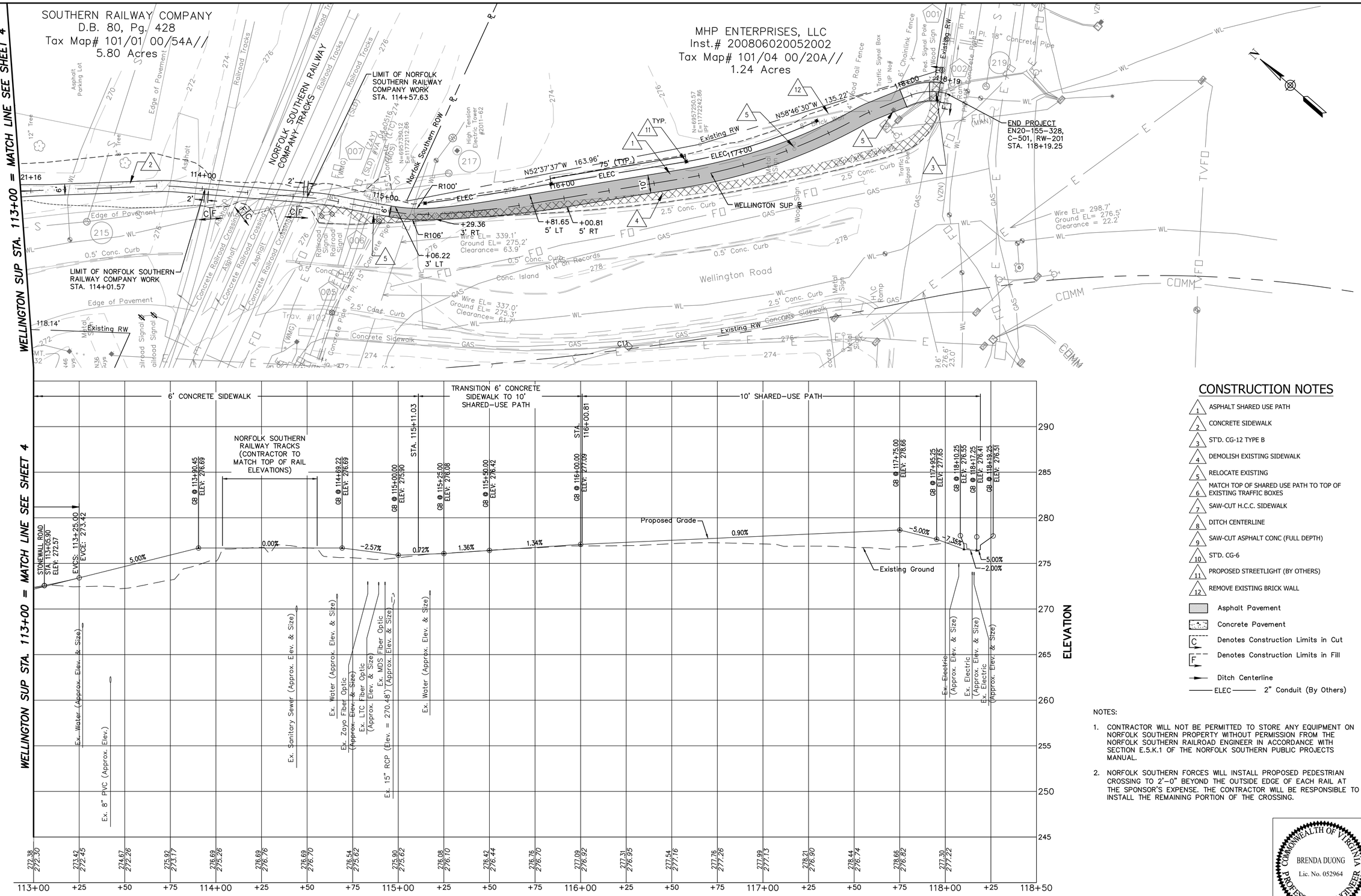
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

STONEWALL ROAD SIDEWALK
CONNECTION PROFILE AND
TIE-IN DETAILS

SHEET
4A
SCALE AS NOTED



CONSTRUCTION NOTES

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5. RELOCATE EXISTING
6. MATCH TOP OF SHARED USE PATH TO TOP OF EXISTING TRAFFIC BOXES
7. SAW-CUT H.C.C. SIDEWALK
8. DITCH CENTERLINE
9. SAW-CUT ASPHALT CONC (FULL DEPTH)
10. ST'D. CG-6
11. PROPOSED STREETLIGHT (BY OTHERS)
12. REMOVE EXISTING BRICK WALL

Asphalt Pavement
Concrete Pavement
Denotes Construction Limits in Cut
Denotes Construction Limits in Fill
Ditch Centerline
ELEC 2" Conduit (By Others)

NOTES:

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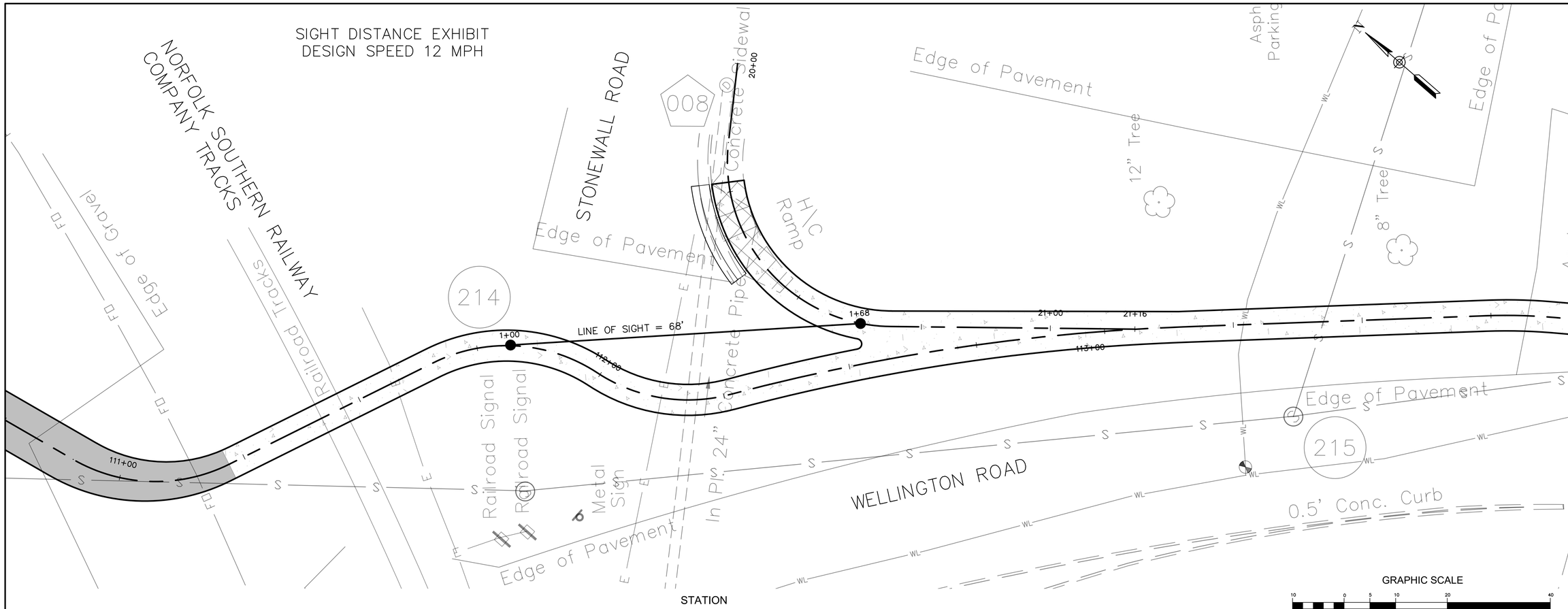
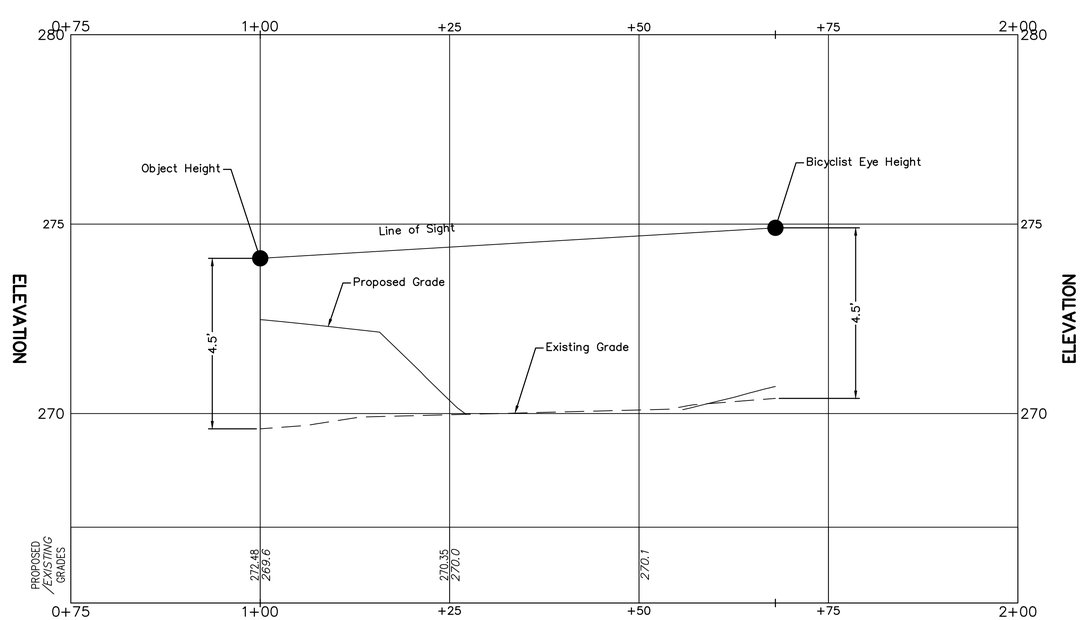
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

PLAN AND PROFILE

SHEET
5
SCALE AS NOTED

SIGHT DISTANCE EXHIBIT
DESIGN SPEED 12 MPH





PROFILE – Sight Distance
HORIZ. 1"=10'
VERT. 1"=2'

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WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

SIGHT DISTANCE EXHIBIT

SHEET
6
SCALE AS NOTED

PERMANENT SIGN SCHEDULE

TEXT NO.	SIGN ASSEMBLY NO(s).	TEXT	SIGN ASSEMBLY COMPONENTS: MUTCD ST'D.	PANEL SIZE W	PANEL SIZE H	QTY.	SIGN PANEL AREA (s.f.) per ASSEMBLY	SIGN PANEL AREA (s.f.) ALL ASSEM-BLIES	PROP. SIGN STRUCTURE ST'D.	REMARKS
1	201, 405	NO MOTOR VEHICLES	R5-3	24"	24"	2	4	8	STP-1, 2" (SIGN 201) STP-1, 2-1/2" (SIGN 405)	STP-1 FOUNDATION TYPE A
2	301	PATH NARROWS CYCLISTS MUST DISMOUNT BIKE ON SIDEWALK	W5-4a R9-1 (MOD)	18" 18"	18" 24"	1 1	5.25	5.25	STP-1, 2-1/2"	STP-1 FOUNDATION TYPE A
3	302, 303	RAIL ROAD CROSSING CYCLISTS MUST DISMOUNT BIKE ON SIDEWALK	R15-1 R9-1 (MOD)	48" 18"	9" 24"	2 2	6	12	STP-1, 2-1/2"	STP-1 FOUNDATION TYPE A
4	304	YIELD TO PEDS	R9-6	12"	18"	1	1.5	1.5	STP-1, 2"	STP-1 FOUNDATION TYPE A
5	401, 402	RAIL ROAD CROSSING 4 TRACKS CYCLISTS MUST DISMOUNT BIKE ON SIDEWALK	R15-1 R15-2P R9-1 (MOD)	48" 27" 18"	9" 18" 24"	2 2 2	9.375	18.75	STP-1, 2-1/2"	STP-1 FOUNDATION TYPE A
6	403	CYCLISTS MUST DISMOUNT BIKE ON SIDEWALK	R9-1 (MOD)	18"	24"	1	3	3	STP-1, 2"	STP-1 FOUNDATION TYPE A
7	404	PATH NARROWS	W5-4a	18"	18"	1	2.25	2.25	STP-1, 2"	STP-1 FOUNDATION TYPE A

GENERAL NOTES

1. All work shall be in conformance with the current edition of the following documents:
   - Manual on Uniform Traffic Control Devices (MUTCD).
   - Virginia Supplement to The Manual on Uniform Traffic Control Devices
   - VDOT Road and Bridge Standards
   - VDOT Road and Bridge Specifications
   - VDOT Work Area Protection Manual
   - City of Manassas – Design and Construction Standards Manual

   and all special provisions in effect at the time the plans are approved.

2. Unless otherwise approved by the engineer or indicated in the maintenance of traffic and sequence of construction plans, existing traffic signs which are to be removed shall remain in place until the new sign posts and panels are in place.

3. The removal of existing sign panels, structures, or foundations shall conform to section 510 of the VDOT specifications.

4. New materials and items required to complete the removal of existing items shall be submitted to the engineer for review and approval in accordance with section 105 of the specifications.

5. All existing and proposed sign locations are approximate and shall be field verified by the contractor. Signs for both roadway and shared use path users shall be installed in accordance with MUTCD part 2 and part 9. All proposed sign locations shall be staked by the contractor and approved by the engineer.

6. All proposed pavement markings shall match and tie-in to existing markings or as directed by the engineer.

7. Existing pavement markings that conflict with the proposed markings shown on plans shall be eradicated.

STANDARD SIGN LEGEND

PLAN ITEM	PLAN SYMBOL: PROPOSED	PLAN SYMBOL: EXISTING
Single Post Sign Support		
Double Post Sign Support		
Triple Post Sign Support		
Pedestrian Pushbutton & Sign	P.B.	P.B.

SIGN CALL-OUTS

Existing Sign to Remain or to be Relocated	VIRGINIA 95
Existing Sign to be Removed	VIRGINIA 95
Proposed Sign Panel	VIRGINIA 95

SIGN LABELS

Proposed Sign Assemblies

2808 / 3 — denotes Sign Assembly No. / denotes Text No.

Sign Relocation or Payable Sign Disposal/Salvage

GM / A — denotes Existing Sign Structure and/or Sign Panel Type

STRUCTURE & SIGN PANEL
GM – Ground Mounted
OM – Overhead Mounted
CM – Cantilever Mounted

SIGN PANEL
SP-GM – Ground Mounted Sign Panel
SP-OH – Overhead Mounted Sign Panel

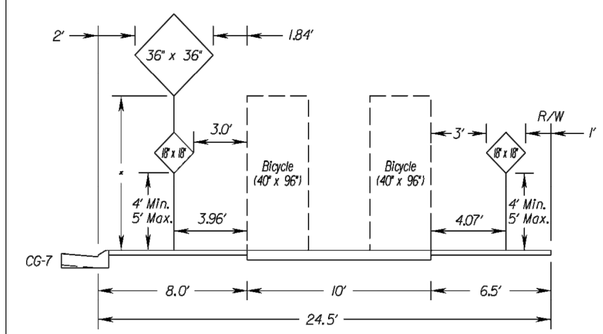
STRUCTURE ONLY
ST-GM – Ground Mounted

denotes Action and Measurement & Payment Item
A – Remove & Dispose
B – Remove & Salvage
C – Relocate
D – Overlay Sign Panel

Signs noted on plans to be removed that do not have an accompanying sign label shall not be measured separately for payment. Removal and disposal for such signs shall be incidental to other contract items.

SIGN PLACEMENT

Typical section with roadway sign and shared use path sign.



Notes:

- *For roadway signs 30" in width or less, use 7' minimum mounting height.*
- *For roadway signs greater than 30", use 8' minimum mounting height.*

COMMONWEALTH OF VIRGINIA
HARSHIT THAKER
Lic. No. 049174
PROFESSIONAL ENGINEER

Volkert, Inc.
Springfield, Virginia
TRAFFIC ENGINEER

90% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

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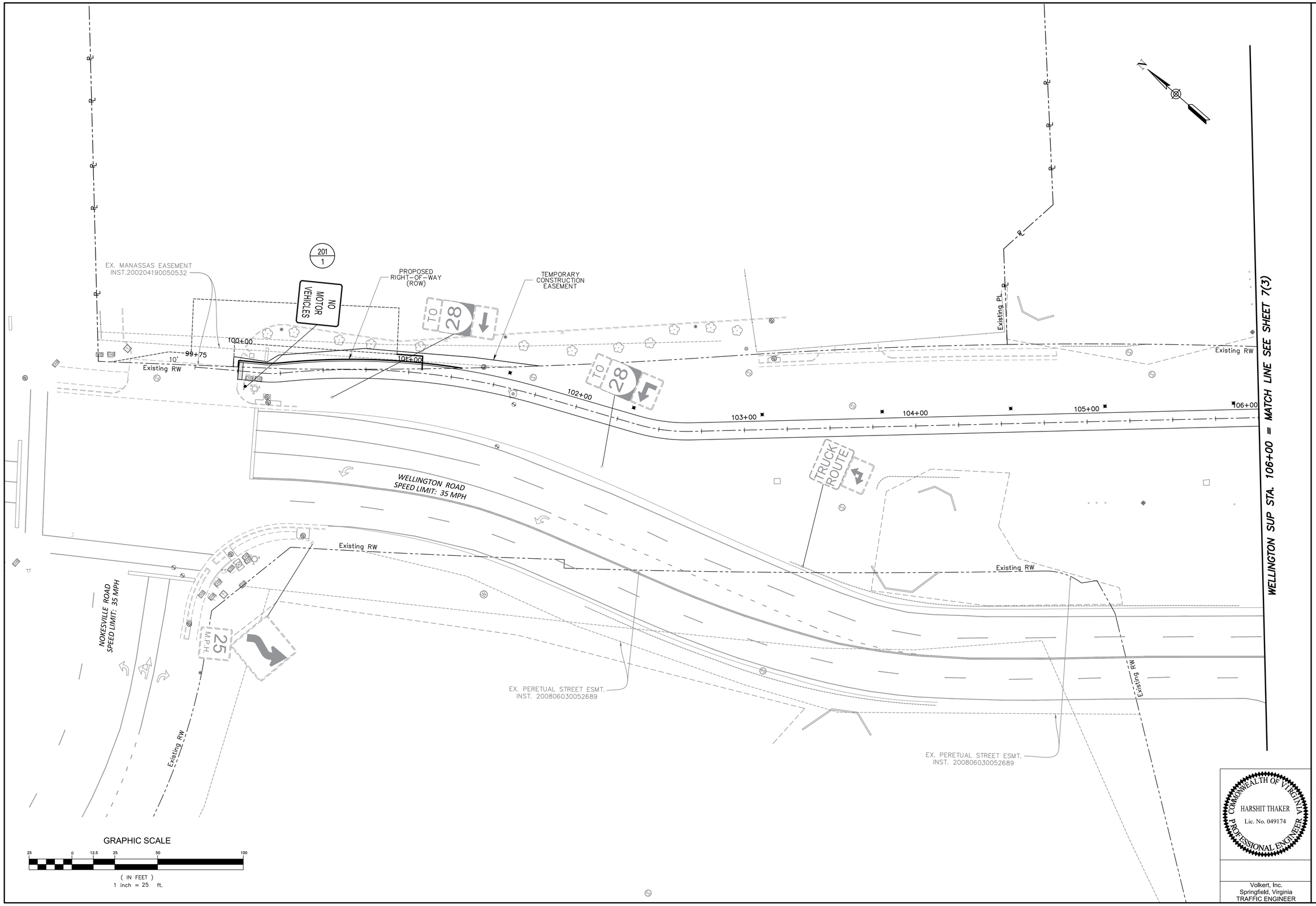
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

SIGNAGE AND PAVEMENT MARKING PLAN GENERAL NOTES

SHEET 7(1)

SCALE 1"=25'



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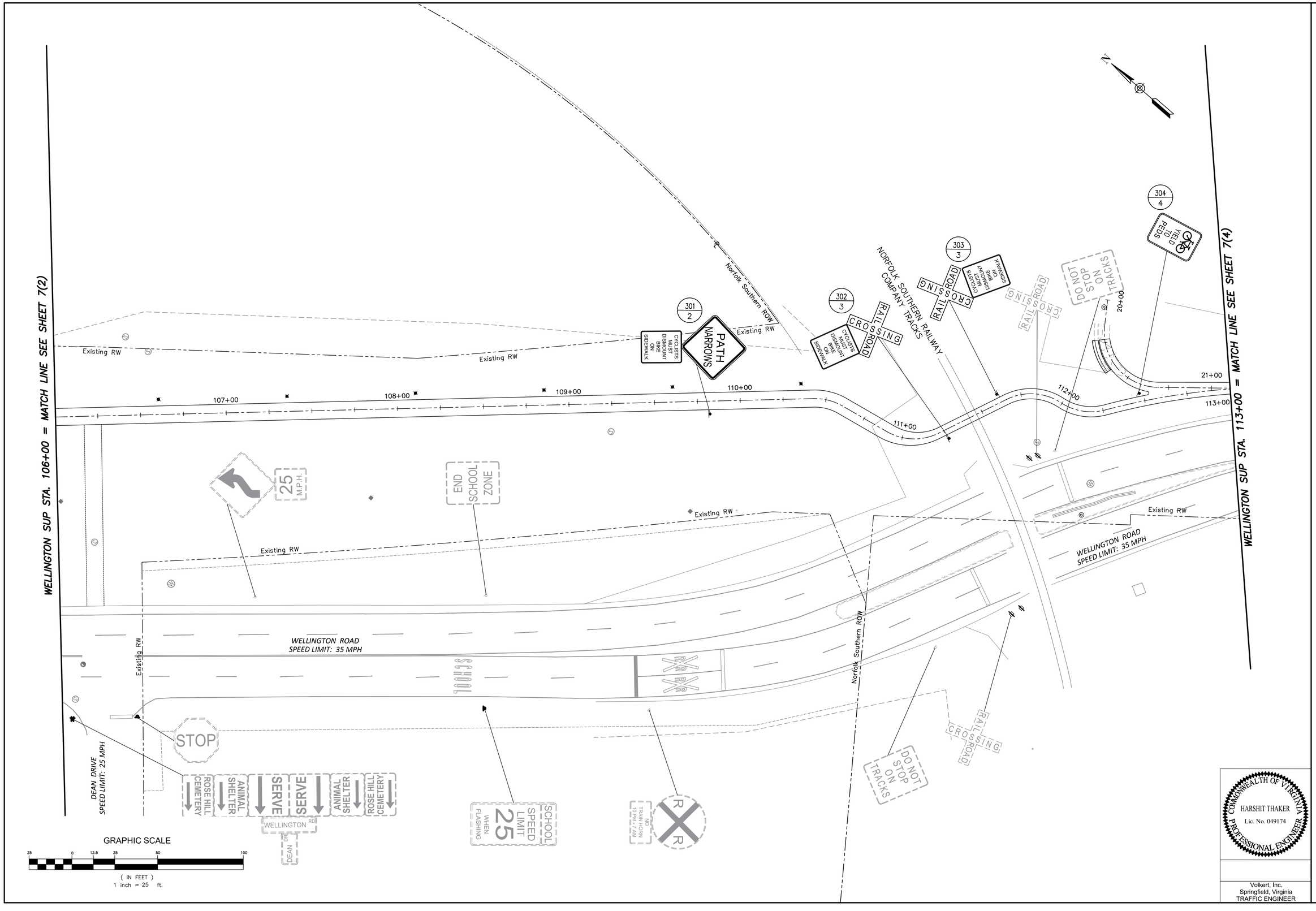
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

SIGNAGE AND PAVEMENT MARKING PLAN

SHEET
7(2)
SCALE 1"=25'



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WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

SIGNAGE AND PAVEMENT MARKING PLAN

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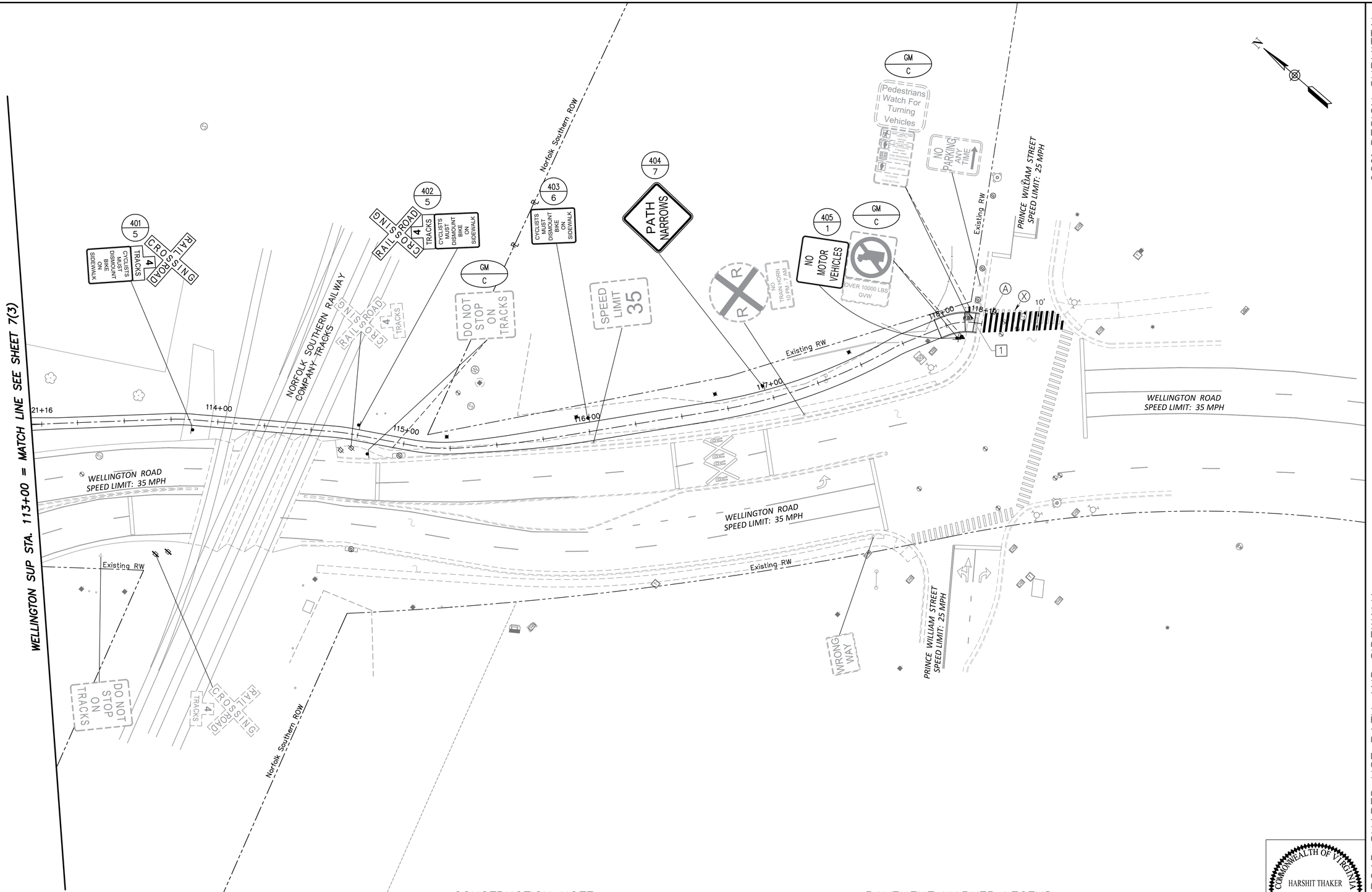
SHEET
7(3)
SCALE 1"=25'



GRAPHIC SCALE

25 0 12.5 25 50 100

(IN FEET)
1 inch = 25 ft.

CONSTRUCTION NOTE

1 CONTRACTOR SHALL RELOCATE THE EXISTING PEDESTRIAN PUSH BUTTON TO LOCATION SHOWN ON PLAN.

PAVEMENT MARKER LEGEND

(A) TYPE B, CLASS I, WHITE PAVEMENT LINE MARKING, 12" WIDTH WITH 24" SPACING

(X) ERADICATE EXISTING PAVEMENT MARKINGS

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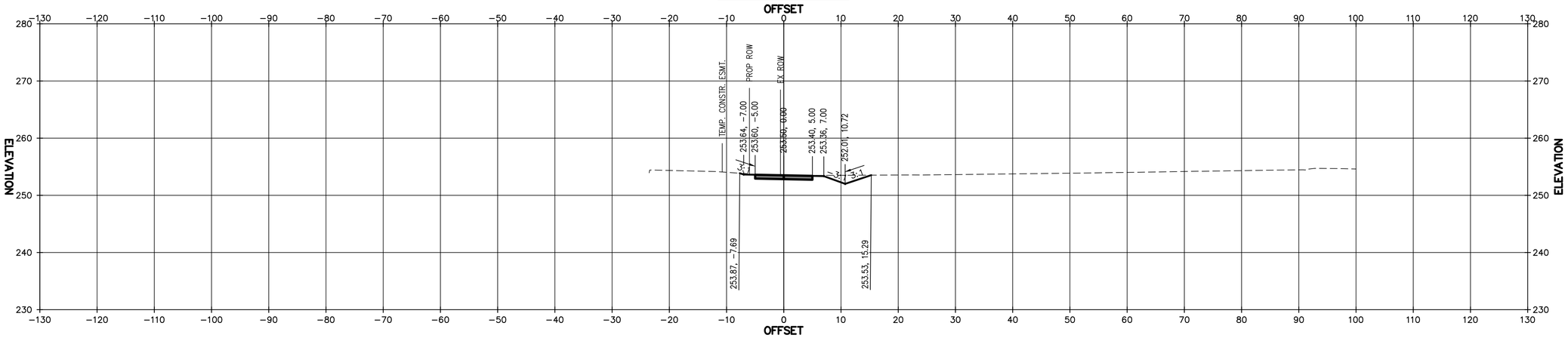
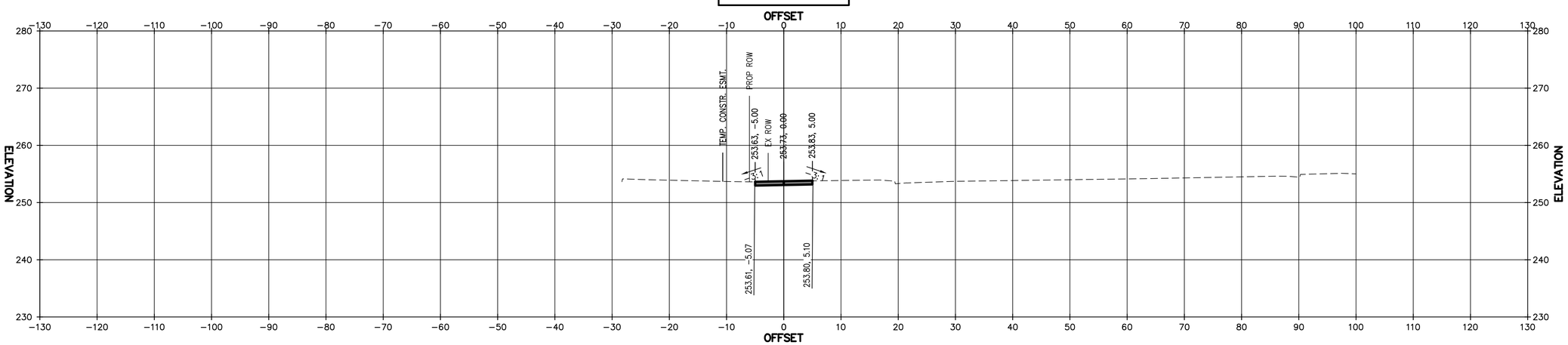
SIGNAGE AND PAVEMENT MARKING PLAN

SHEET
7(4)
SCALE 1"=25'

100+50.00



100+25.00



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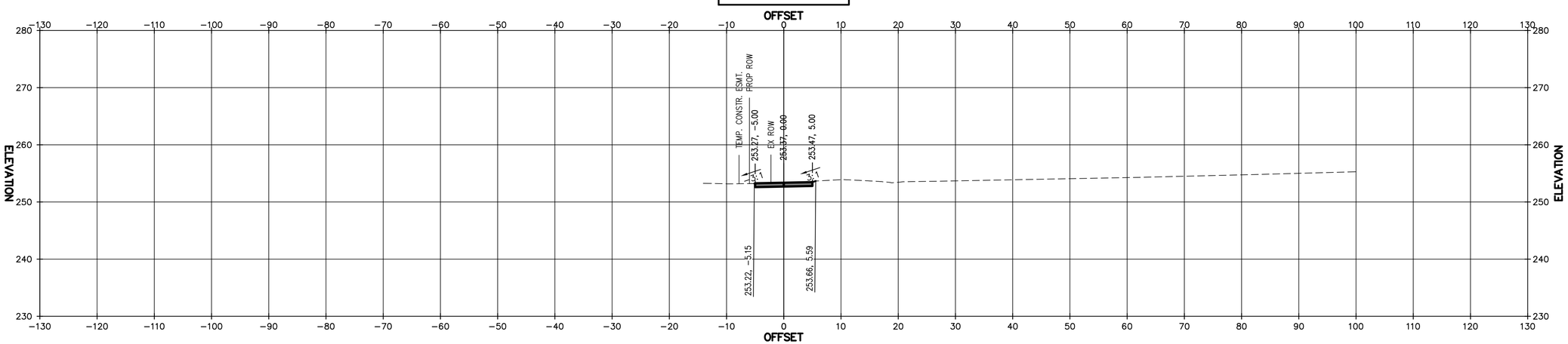

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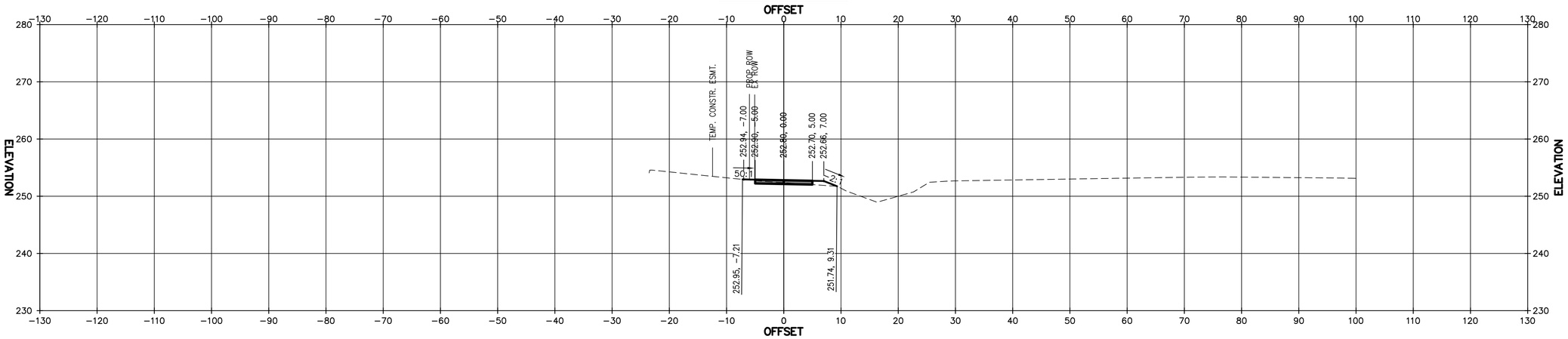
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

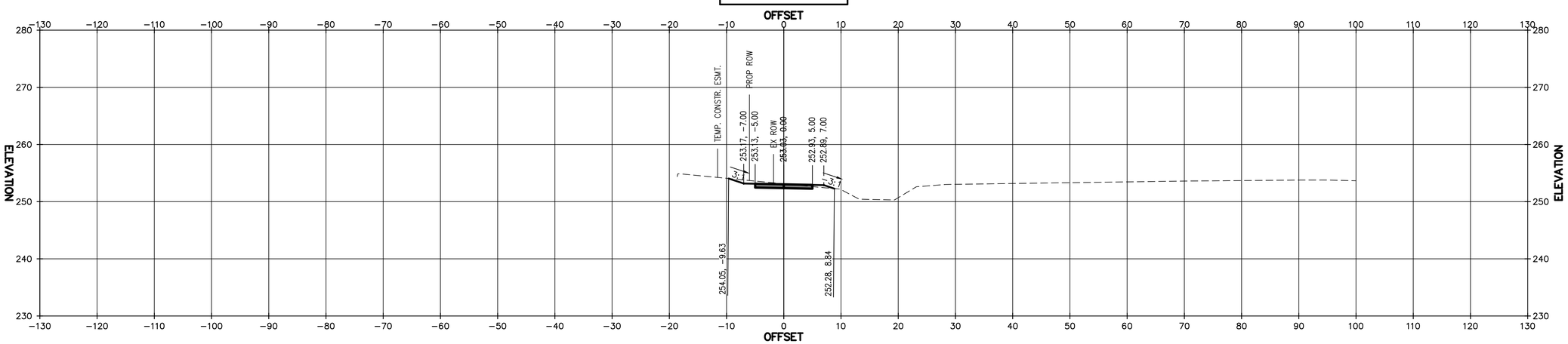
WELLINGTON SUP CROSS SECTIONS

SHEET
X-1
SCALE 1"=10'

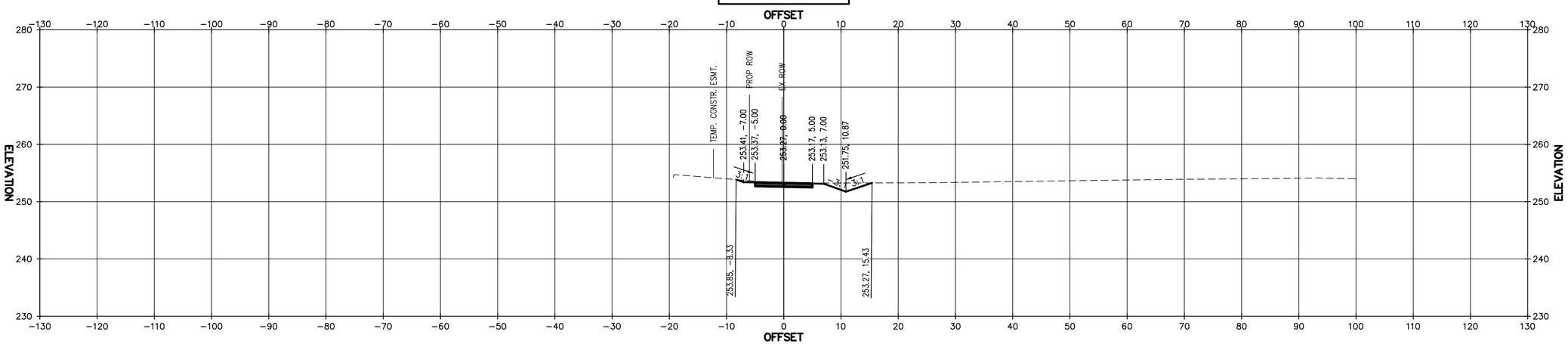
101+25.00



101+00.00



100+75.00



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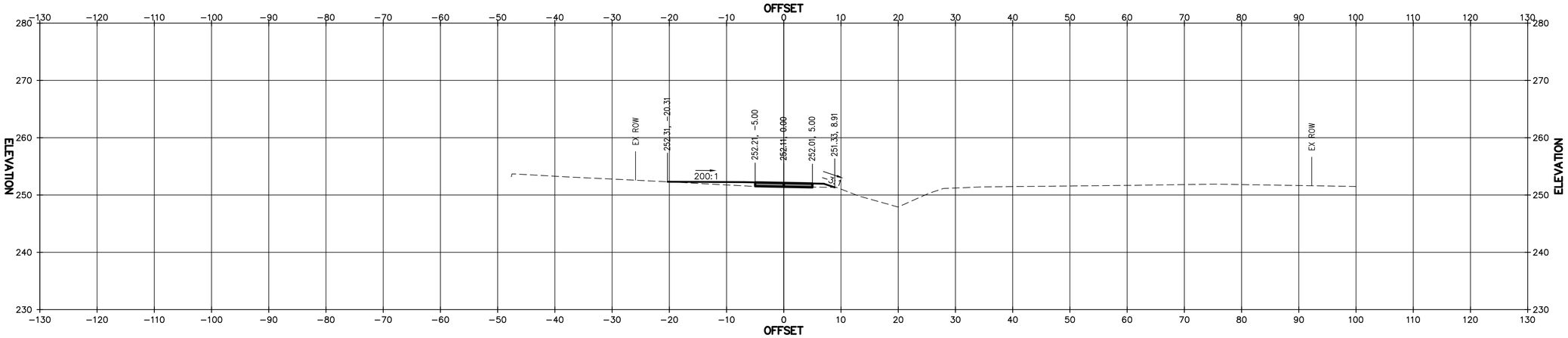
WELLINGTON SUP CROSS SECTIONS

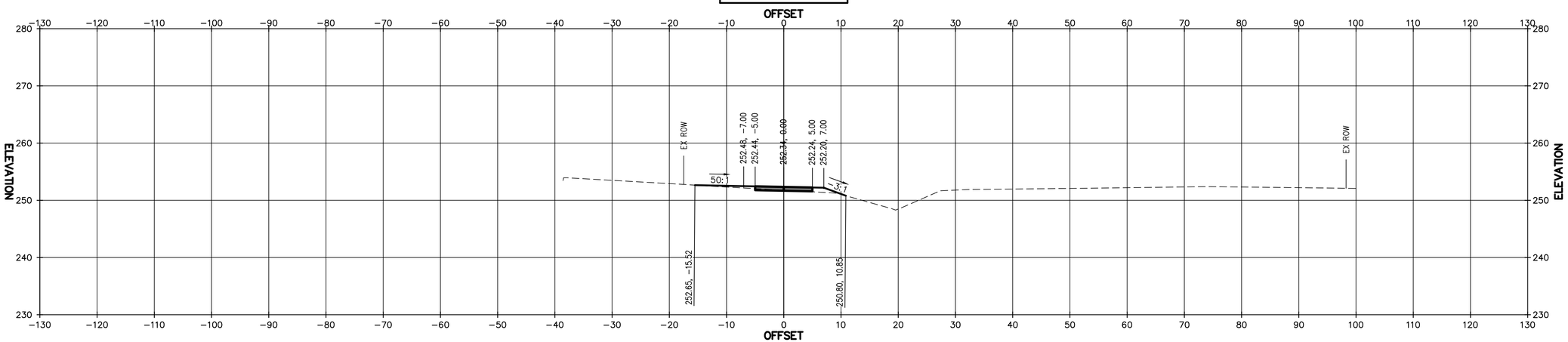
SHEET
X-2
SCALE 1"=10'

WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

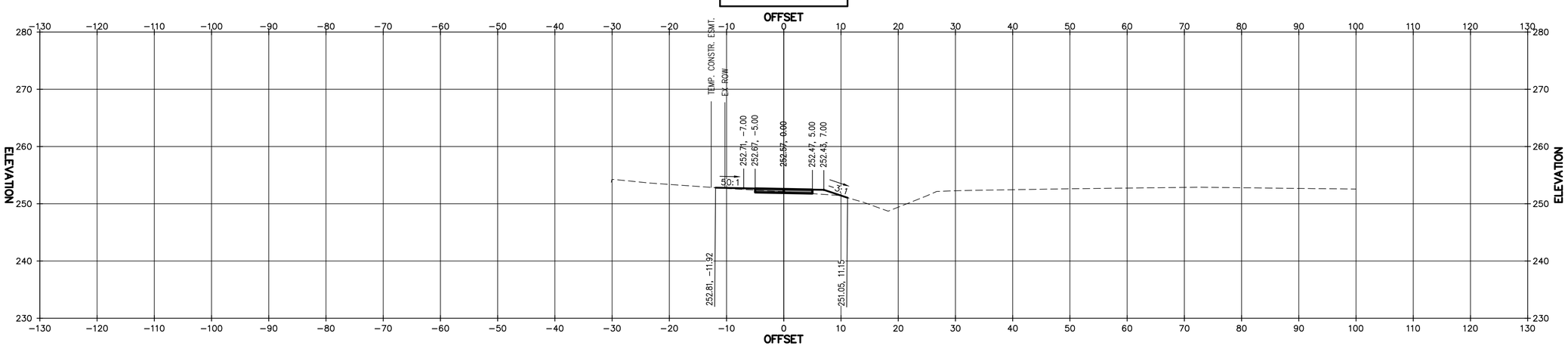
102+00.00



101+75.00



101+50.00



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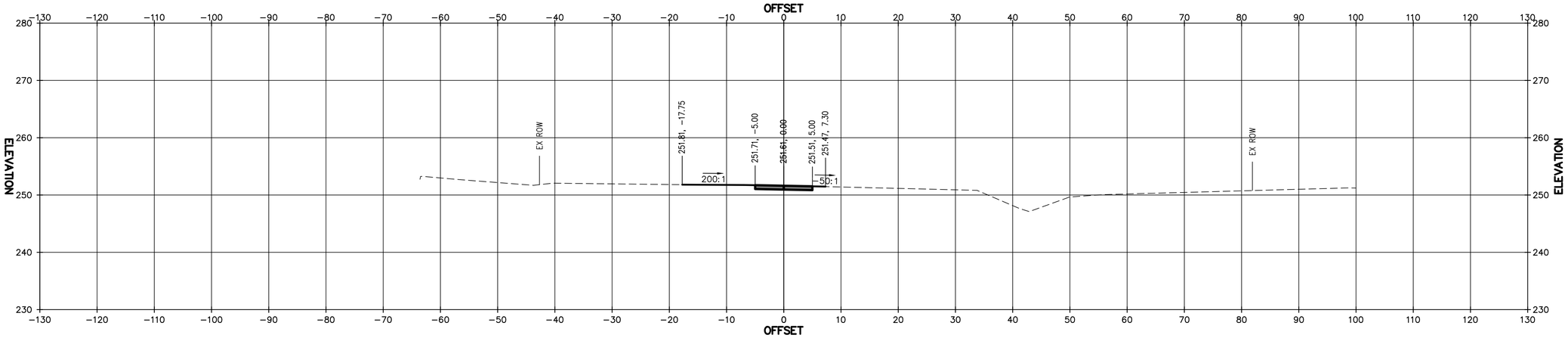
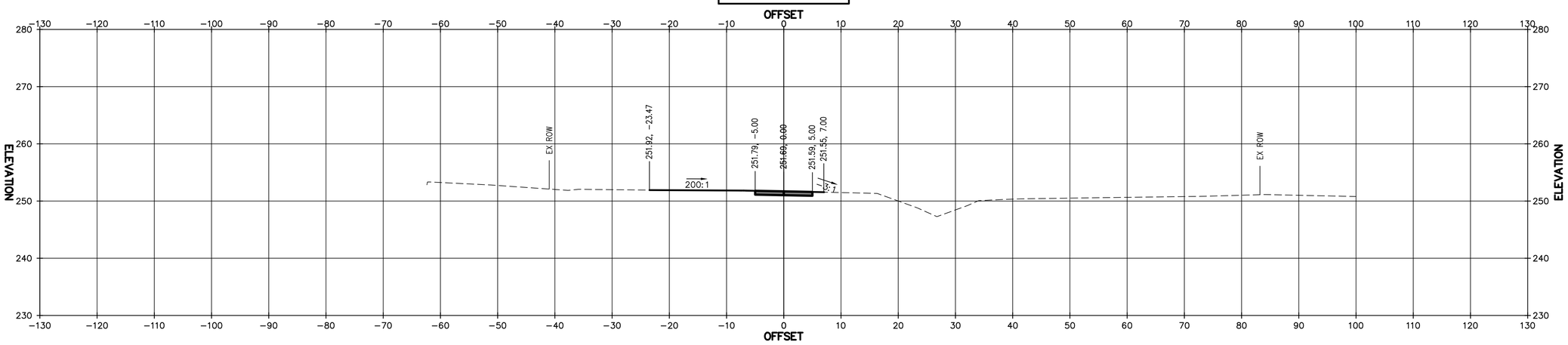
WELLINGTON SUP CROSS SECTIONS

SHEET
X-3
SCALE 1"=10'

102+75.00



102+50.00



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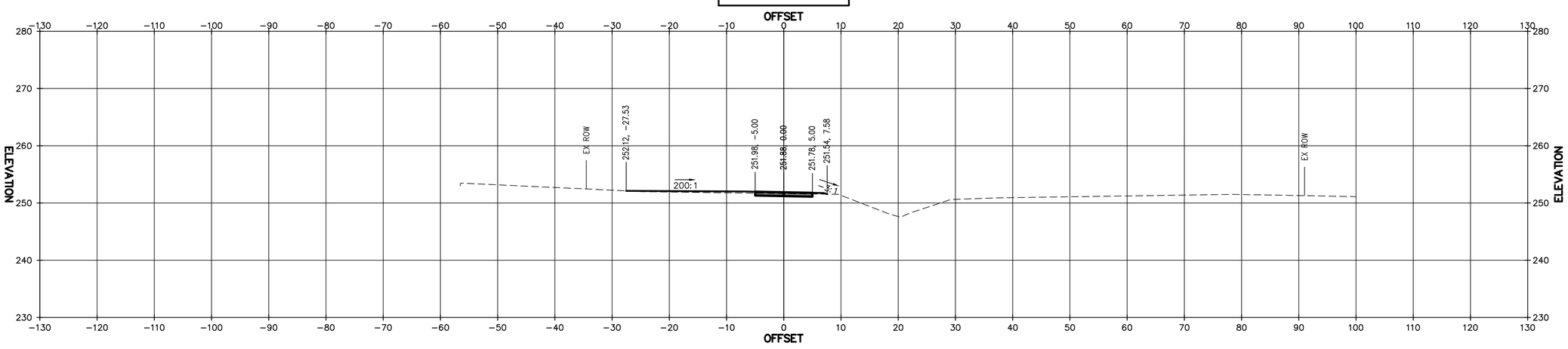

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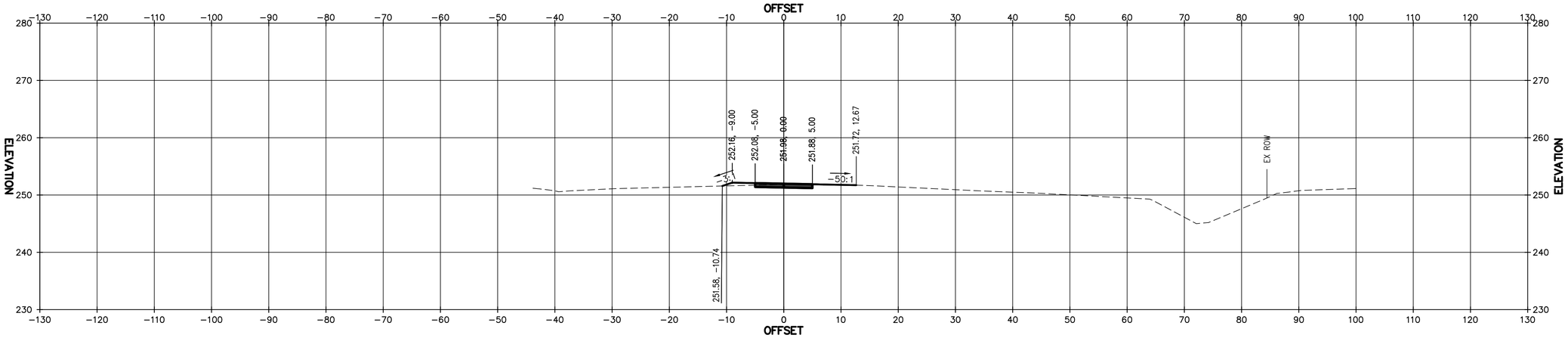
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

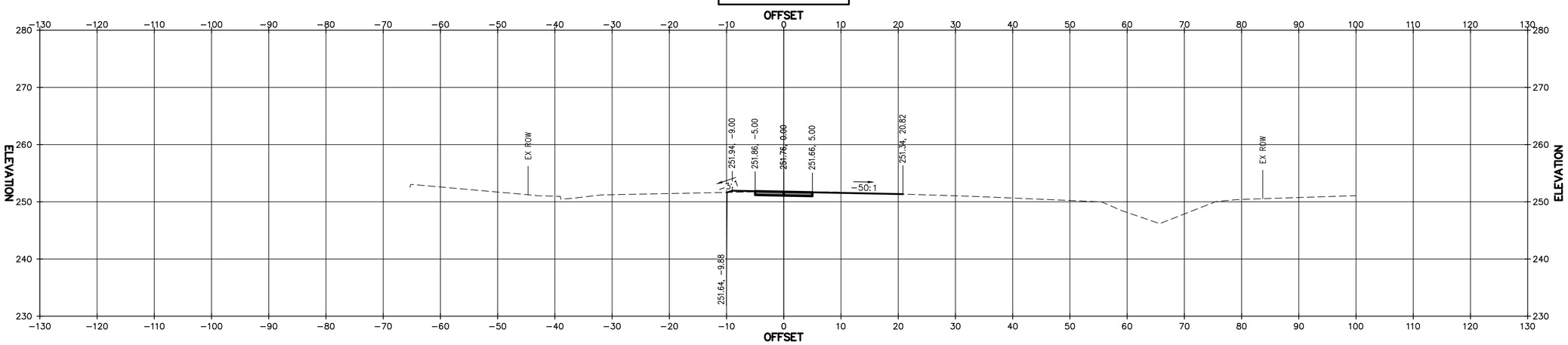
WELLINGTON SUP CROSS SECTIONS

SHEET
X-4
SCALE 1"=10'

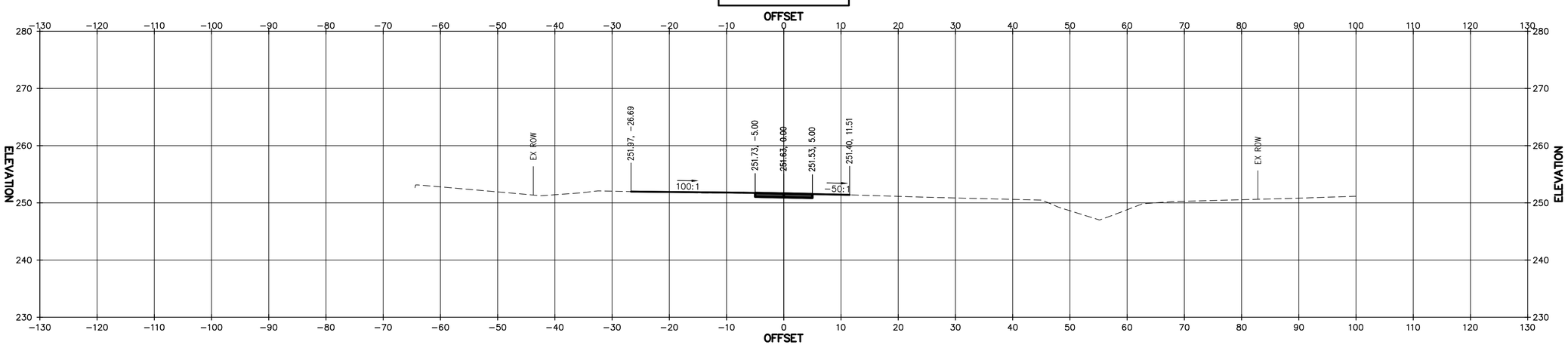
103+50.00



103+25.00



103+00.00



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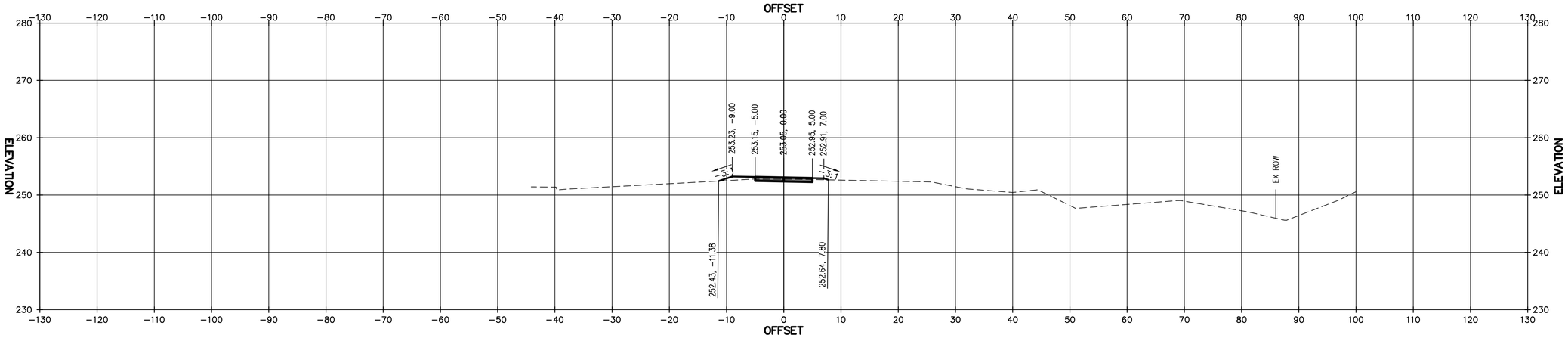
WELLINGTON SUP CROSS SECTIONS

SHEET
X-5
SCALE 1"=10'

104+25.00



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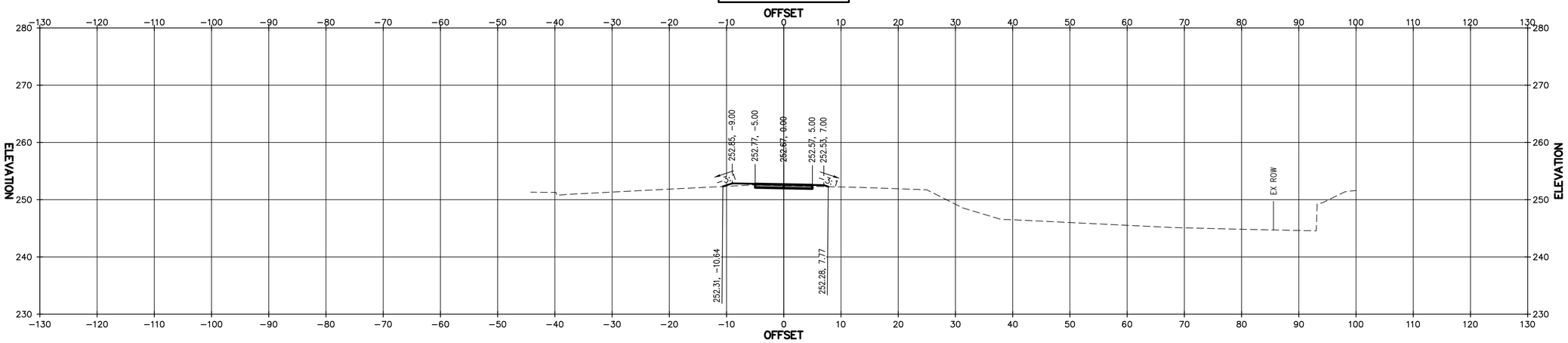
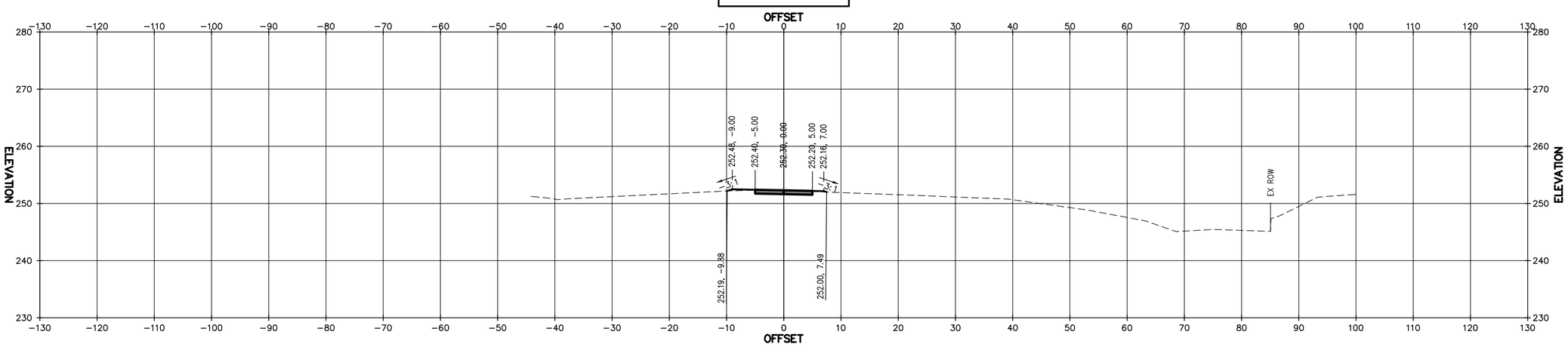


103+75.00



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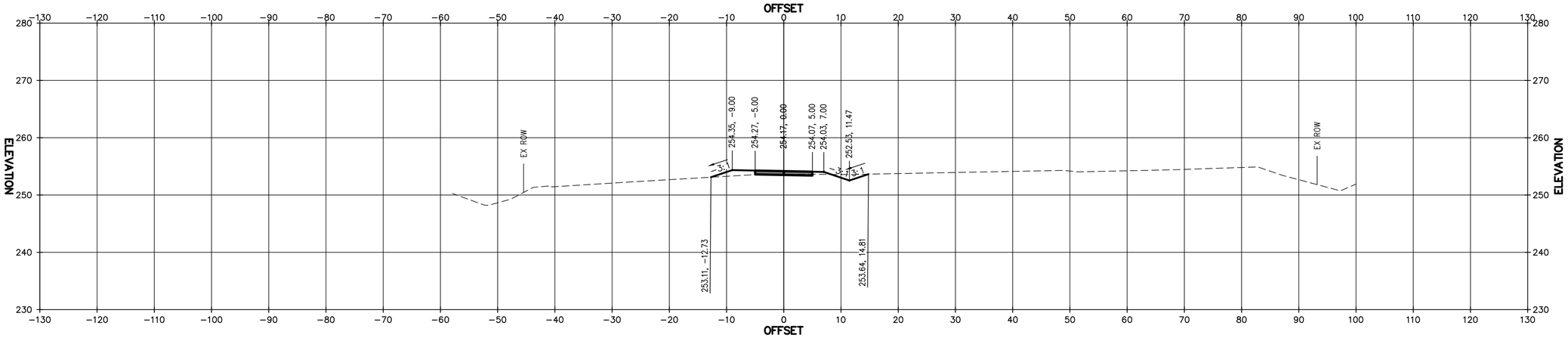
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

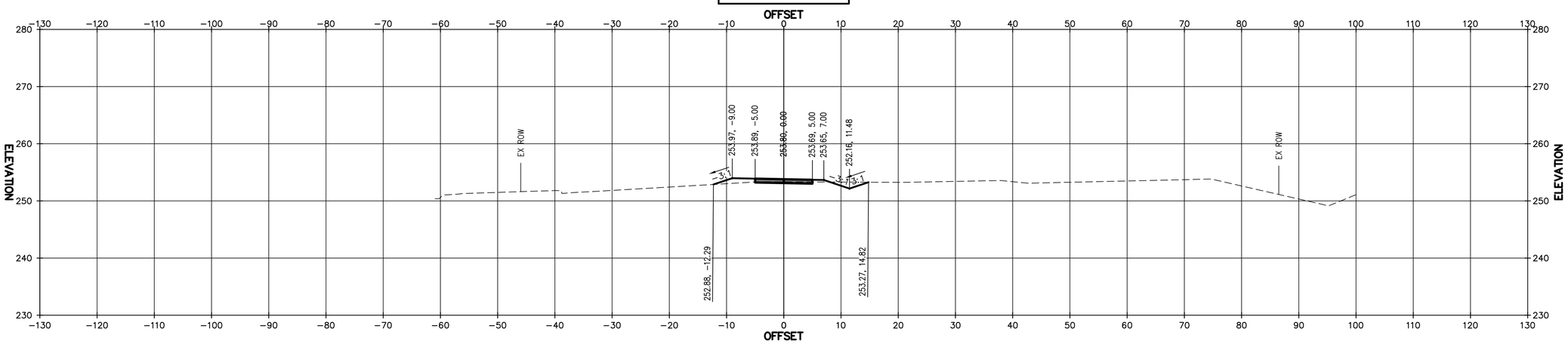
WELLINGTON SUP CROSS SECTIONS

SHEET
X-6
SCALE 1"=10'

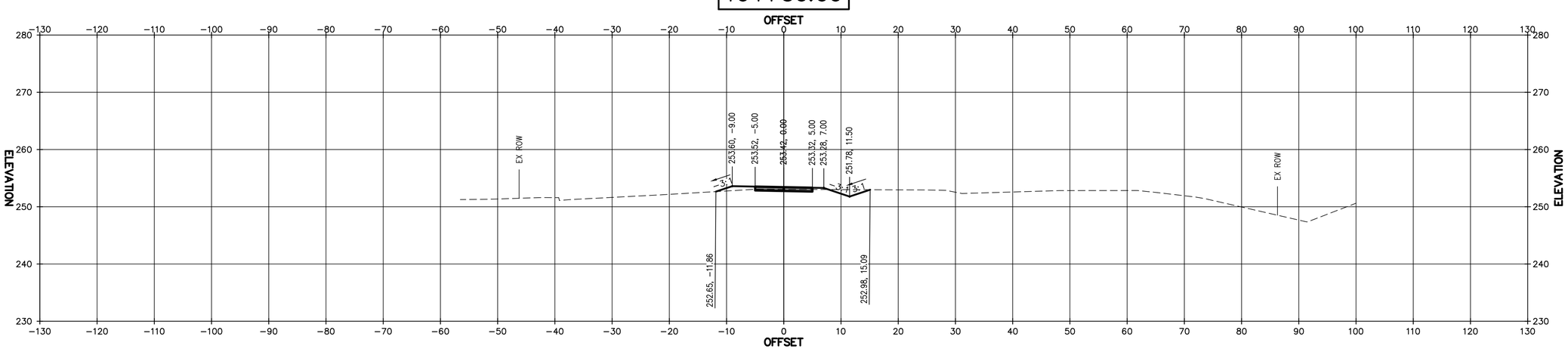
105+00.00



104+75.00



104+50.00



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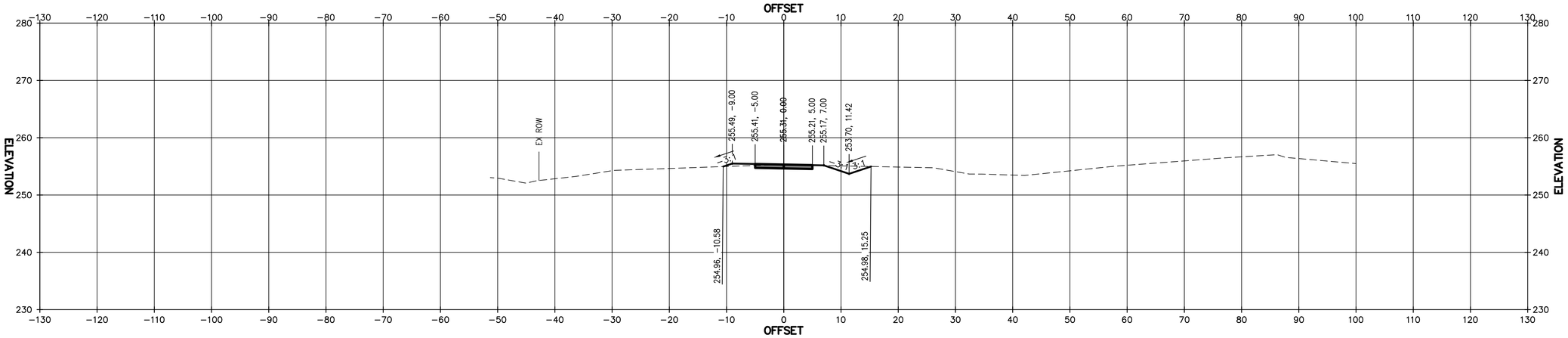
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

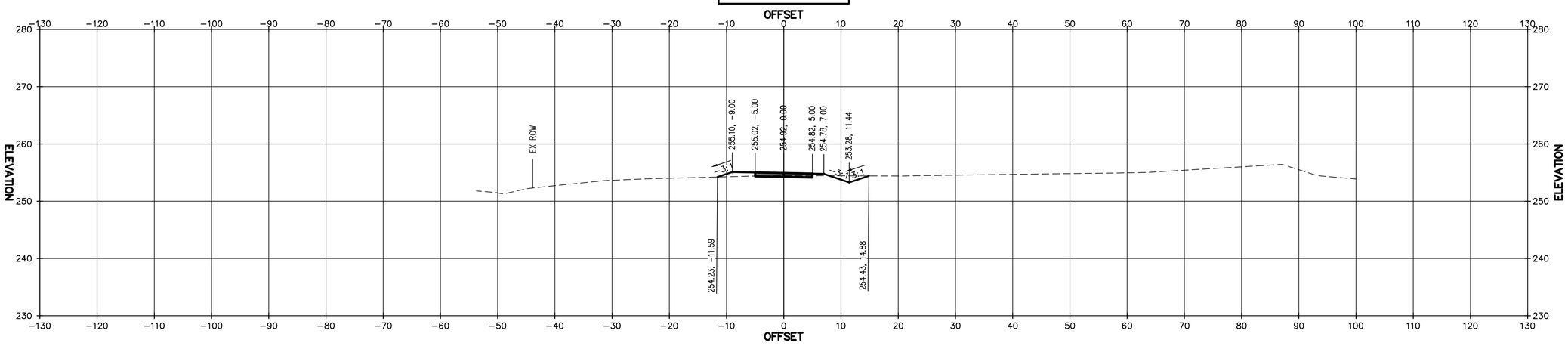
WELLINGTON SUP CROSS SECTIONS

SHEET
X-7
SCALE 1"=10'

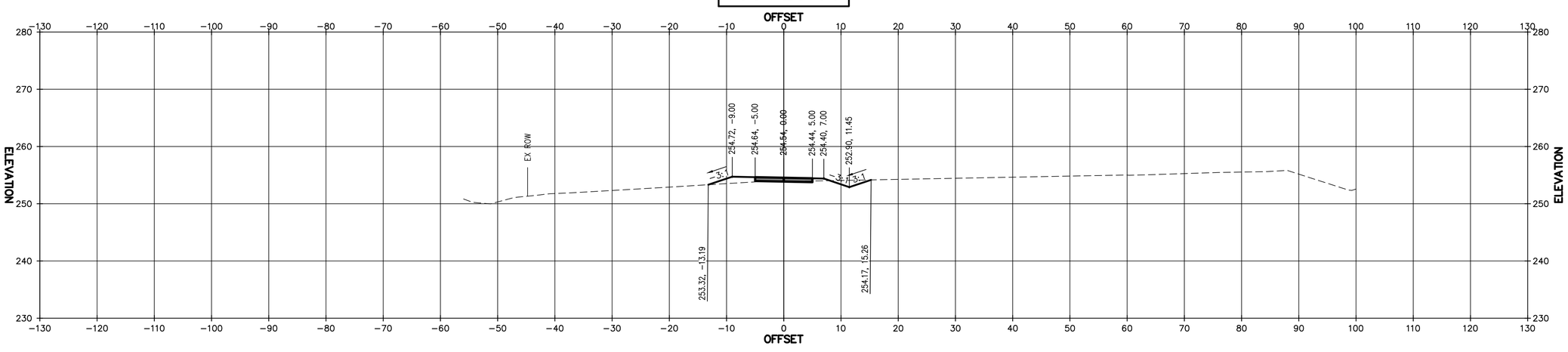
105+75.00



105+50.00



105+25.00



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CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

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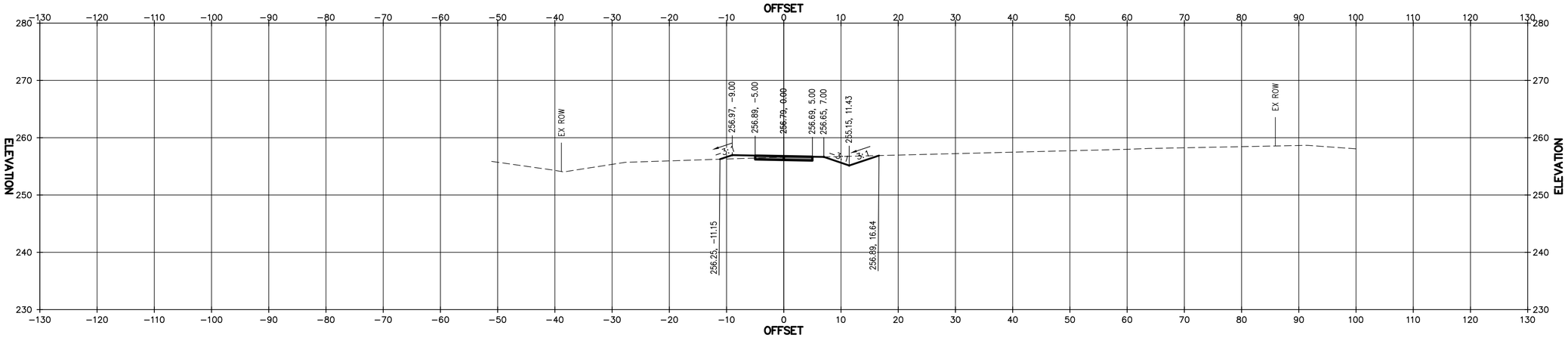
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

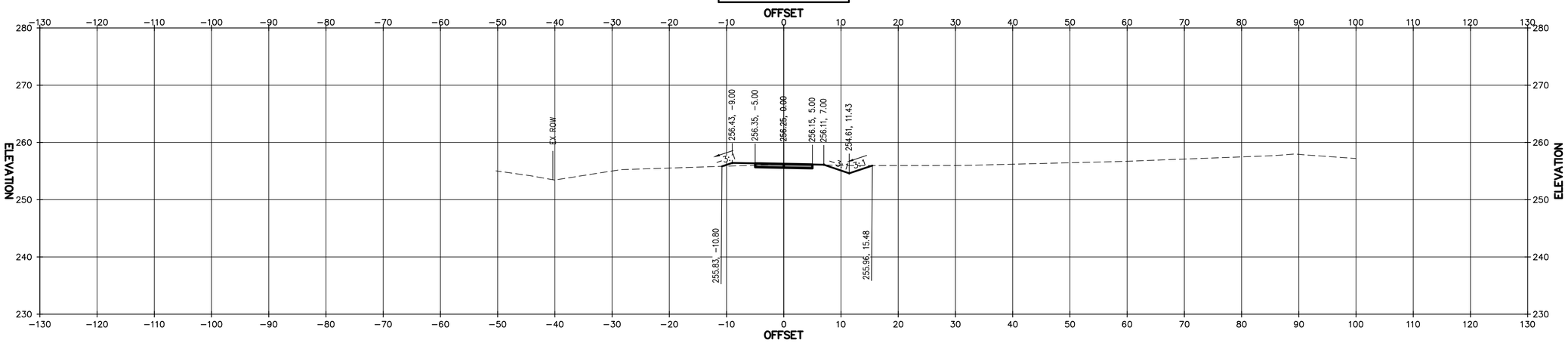
WELLINGTON SUP CROSS SECTIONS

SHEET
X-8
SCALE 1"=10'

106+50.00



106+25.00



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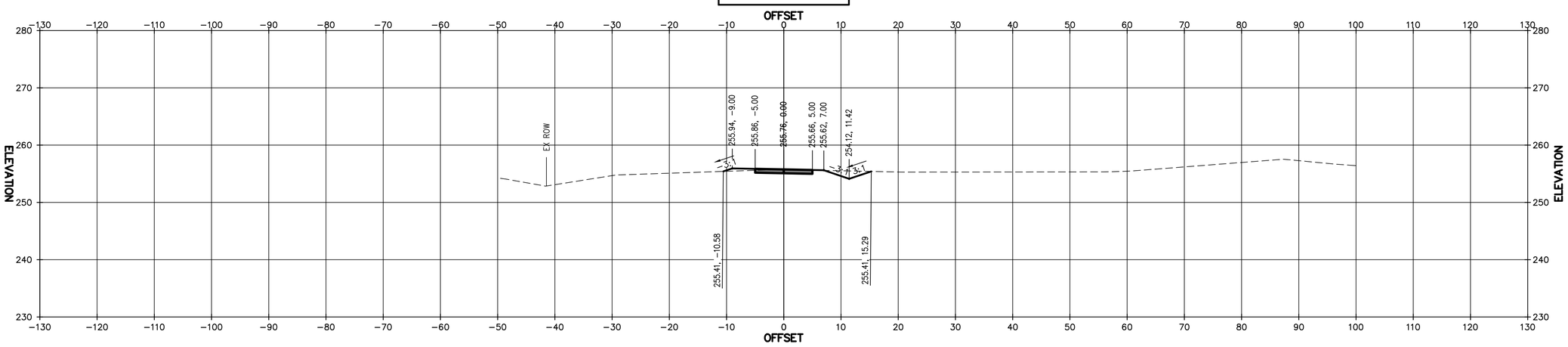

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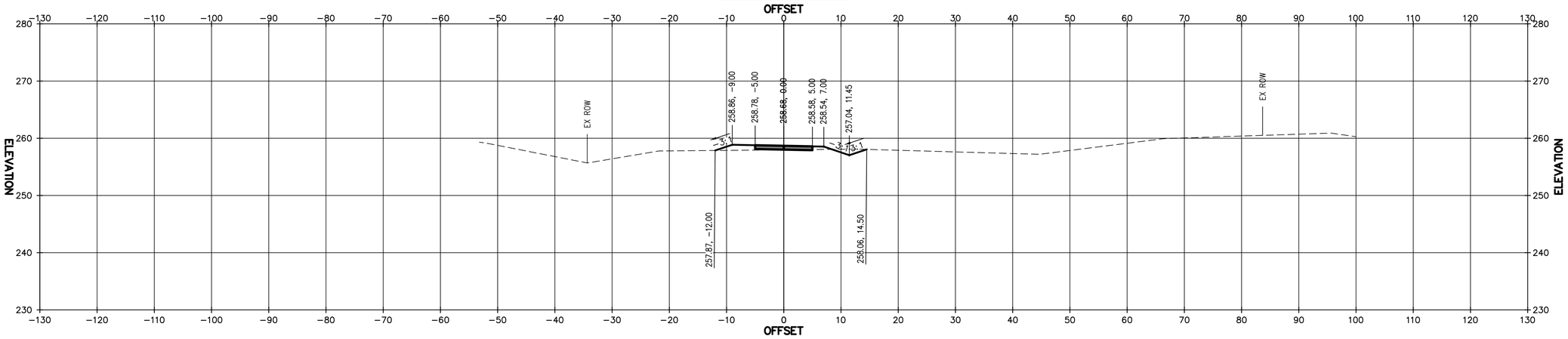
WELLINGTON SUP CROSS SECTIONS

SHEET
X-9
SCALE 1"=10'

WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

107+25.00



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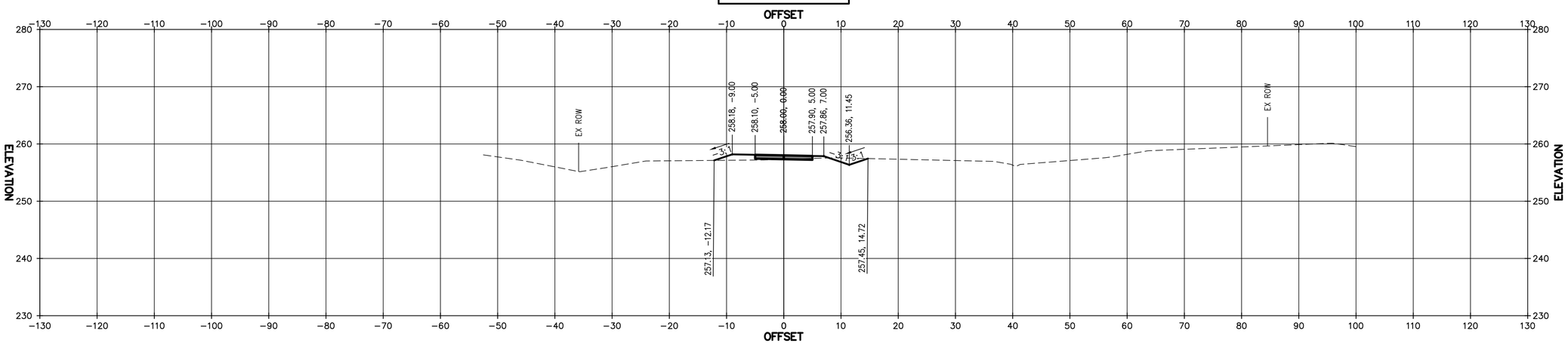

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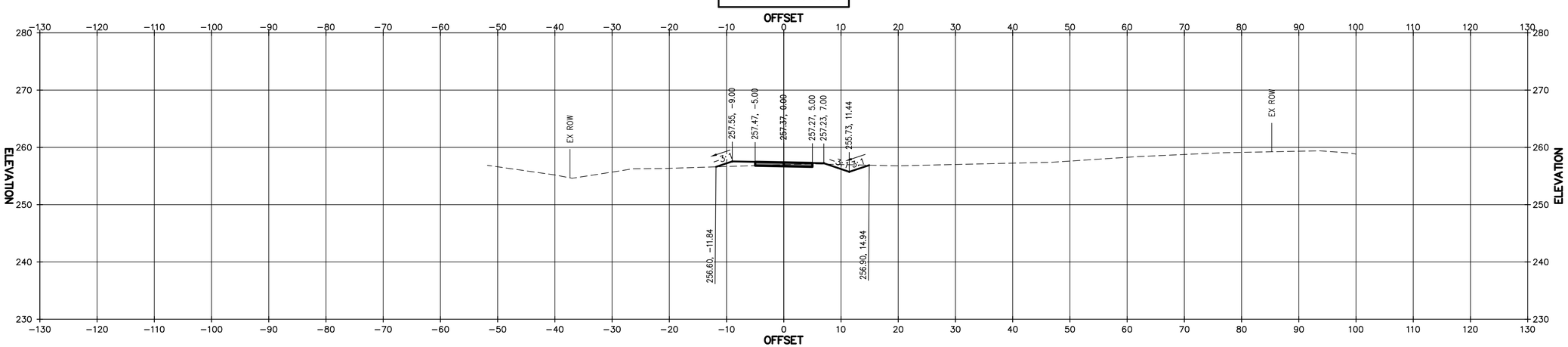

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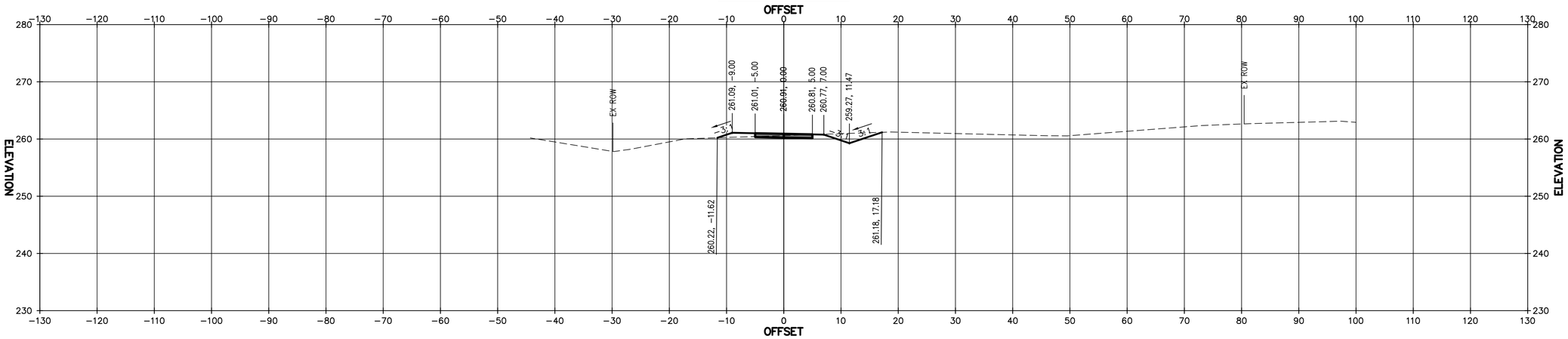
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

WELLINGTON SUP CROSS SECTIONS

SHEET
X-10
SCALE 1"=10'

108+00.00



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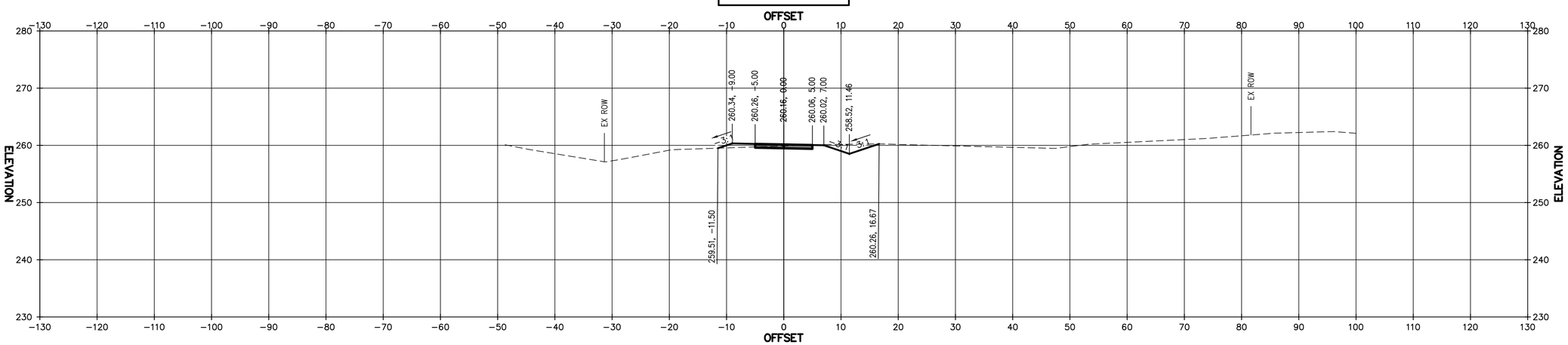

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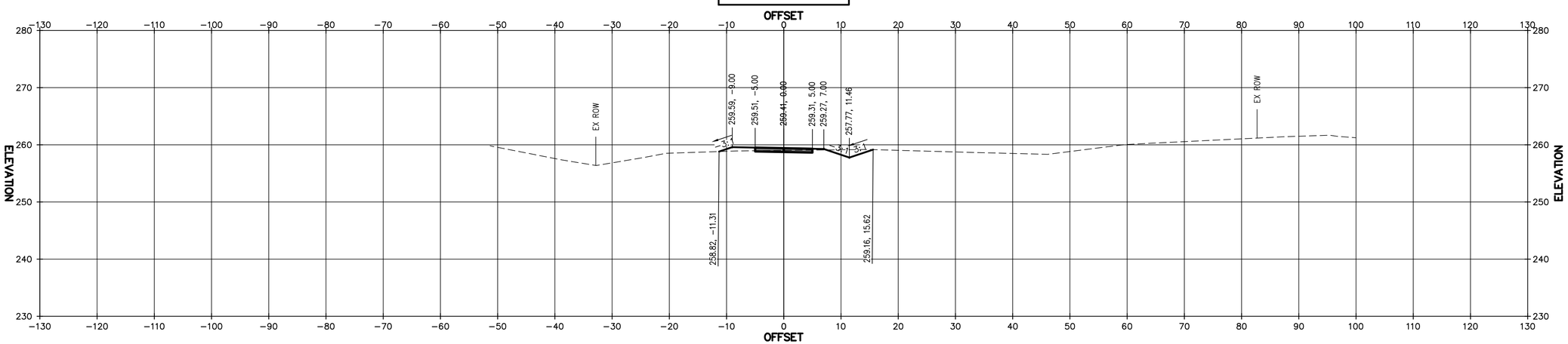

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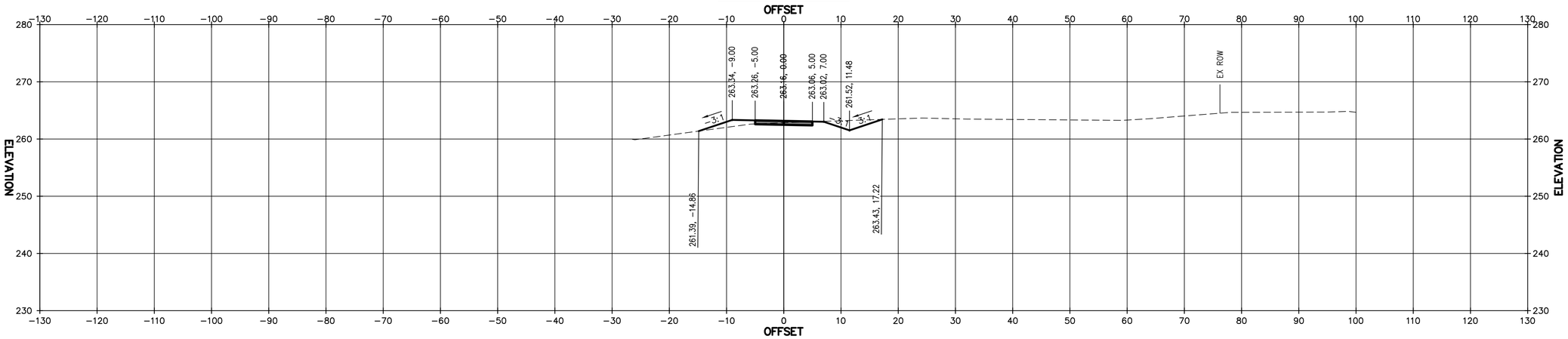
WELLINGTON SUP CROSS SECTIONS

SHEET
X-11
SCALE 1"=10'

WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

108+75.00



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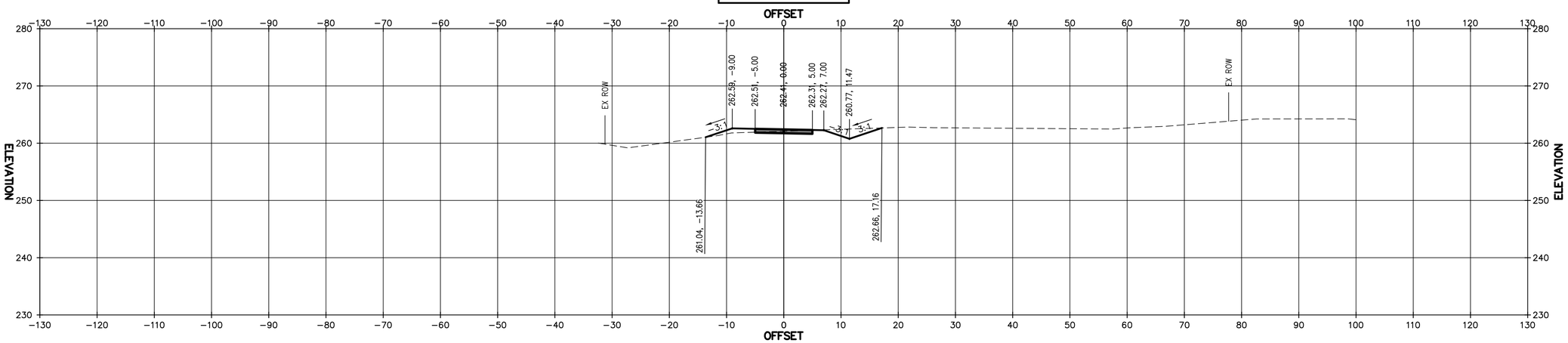
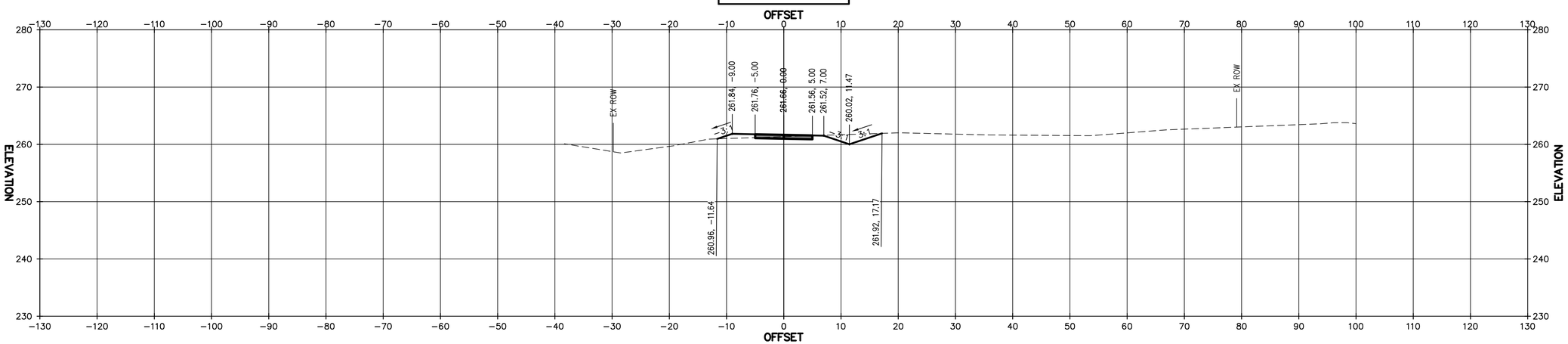


108+25.00



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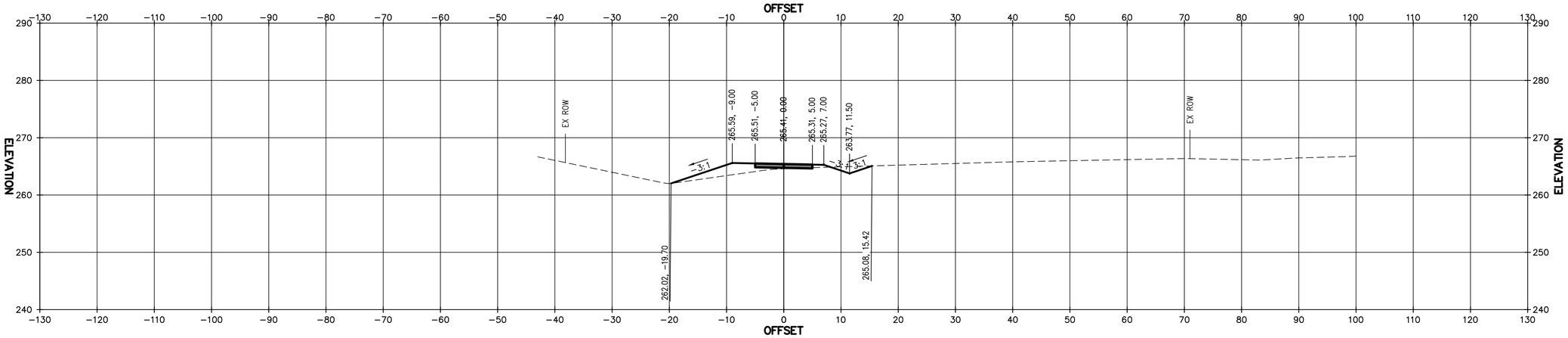
WELLINGTON SUP CROSS SECTIONS

SHEET
X-12
SCALE 1"=10'

WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

109+50.00



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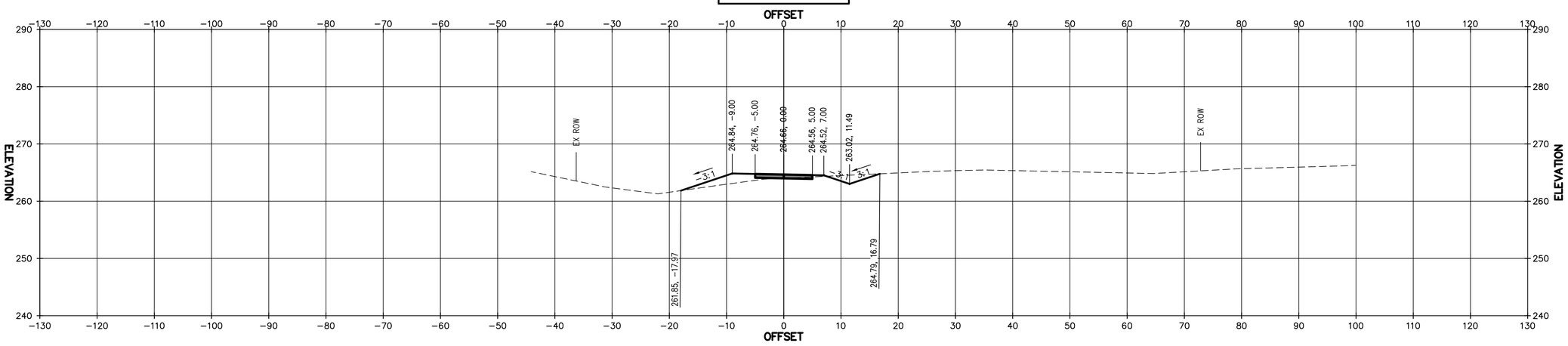

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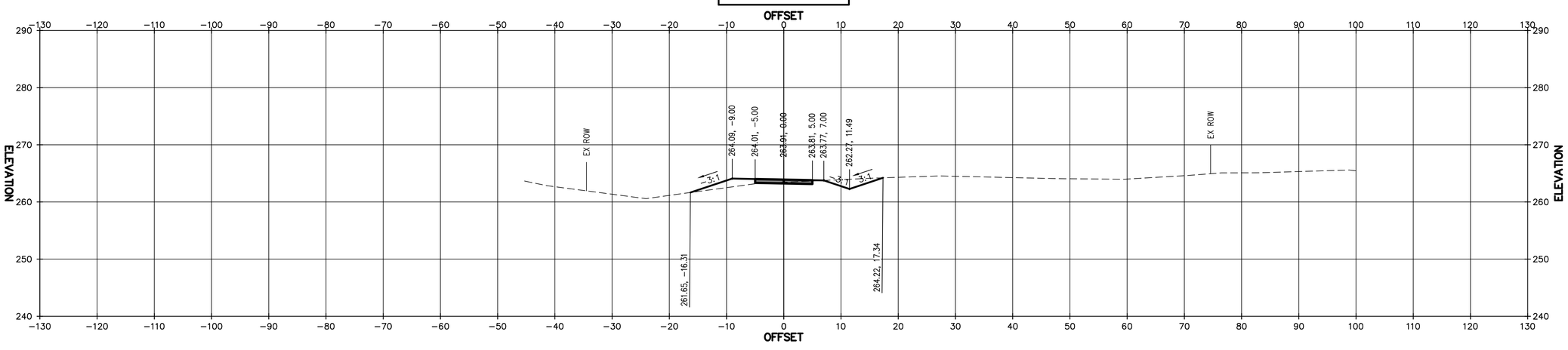

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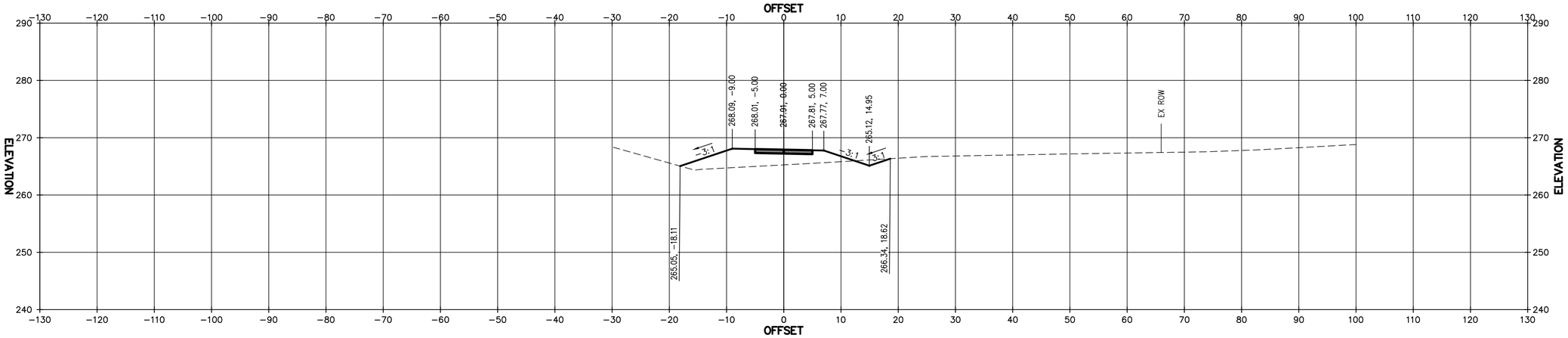
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

WELLINGTON SUP CROSS SECTIONS

SHEET
X-13
SCALE 1"=10'

110+25.00



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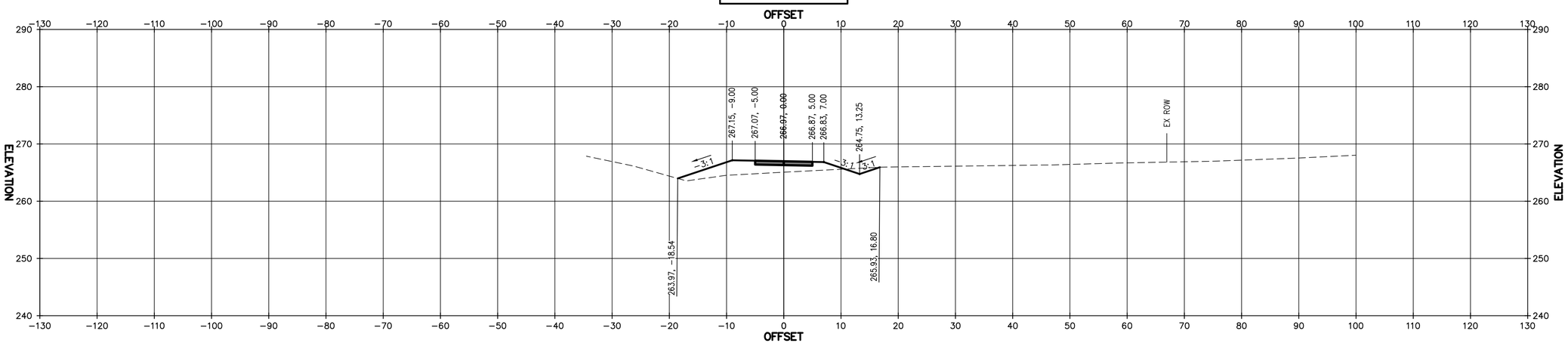
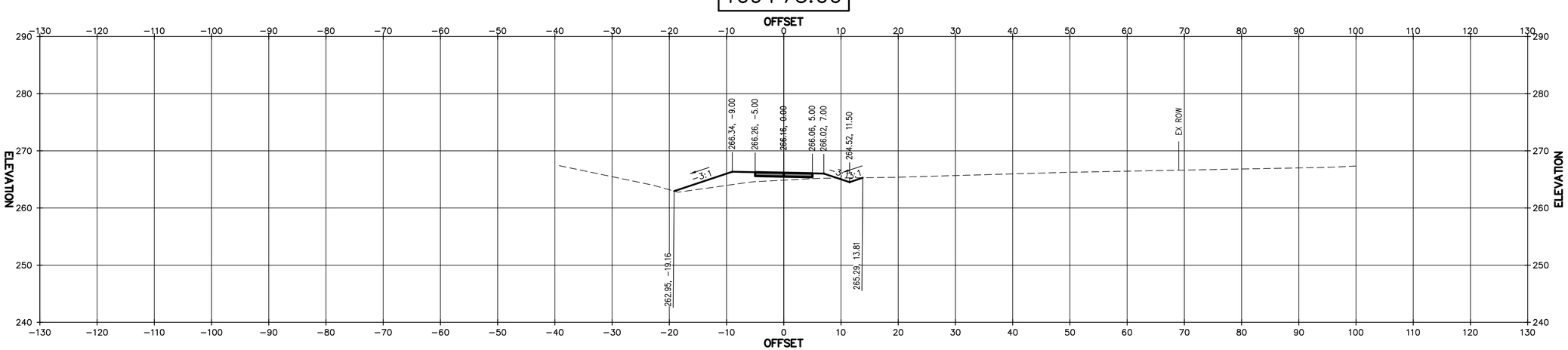


109+75.00



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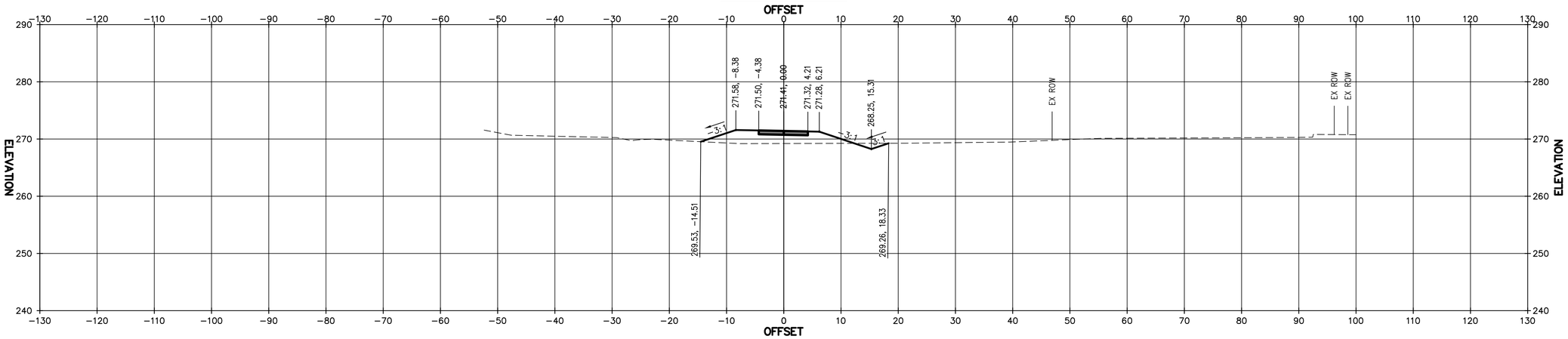
WELLINGTON SUP CROSS SECTIONS

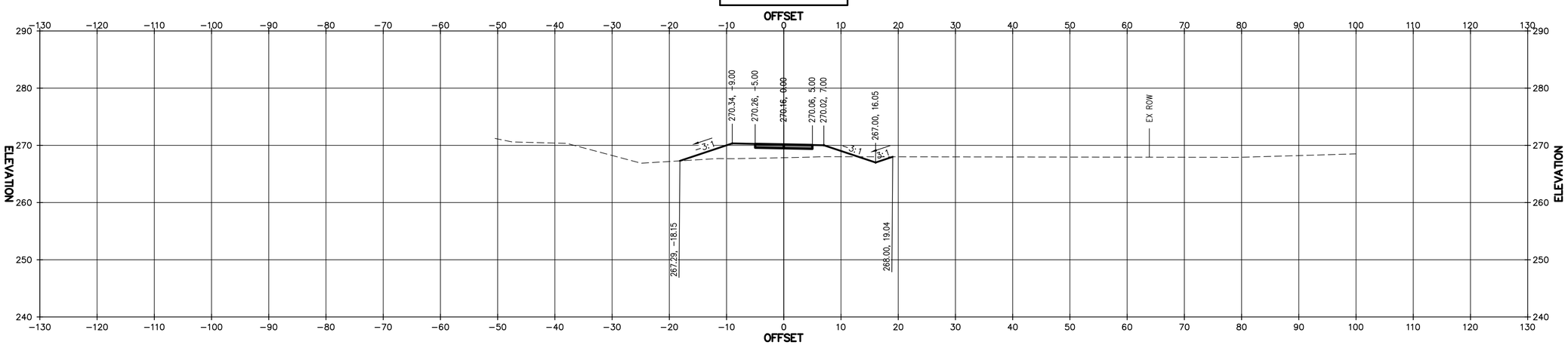
SHEET
X-14
SCALE 1"=10'

WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

111+00.00



110+75.00



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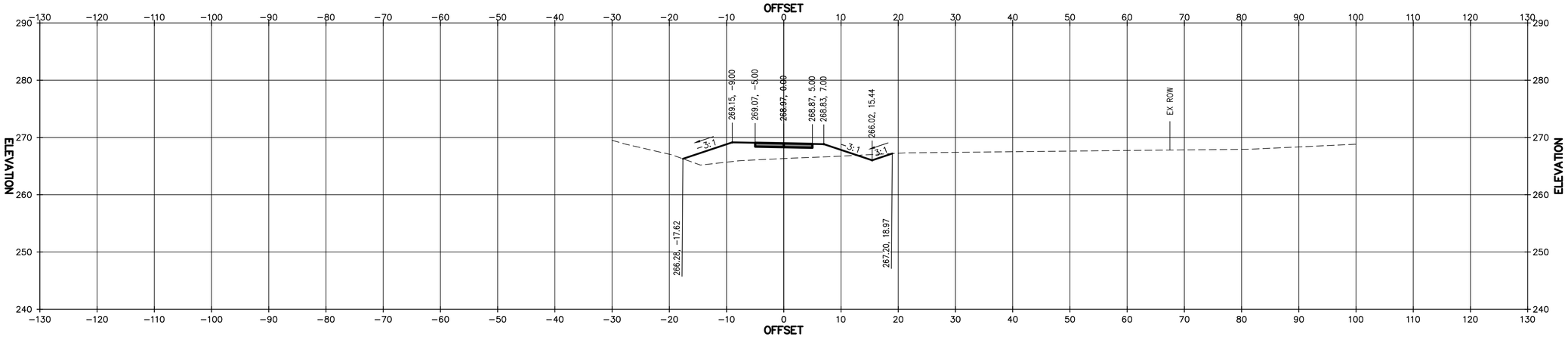

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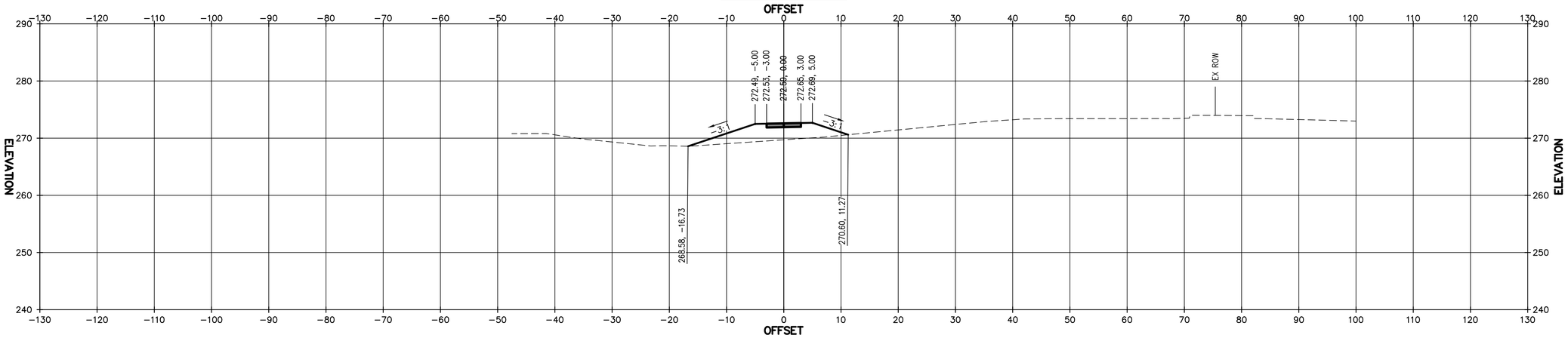
WELLINGTON SUP CROSS SECTIONS

SHEET
X-15
SCALE 1"=10'

WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

111+75.00



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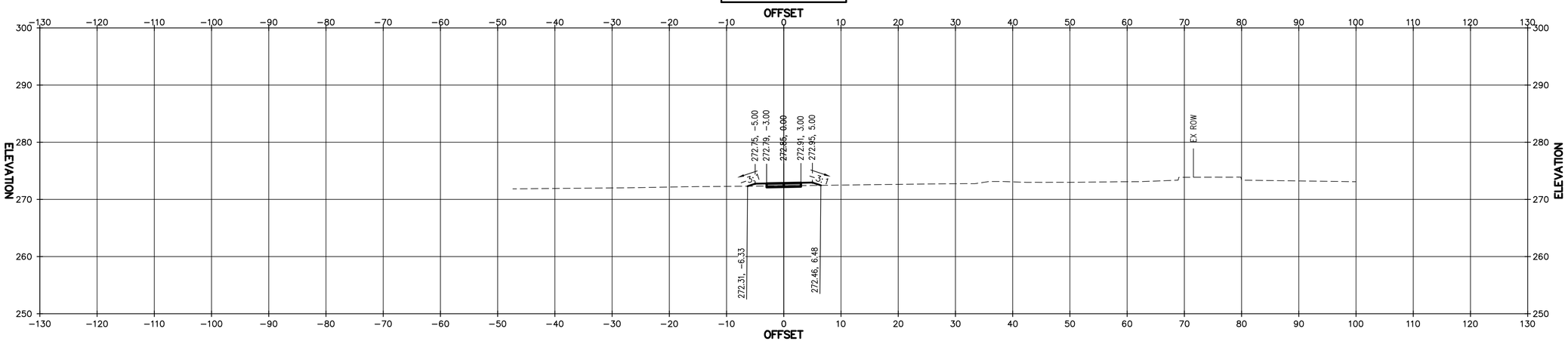

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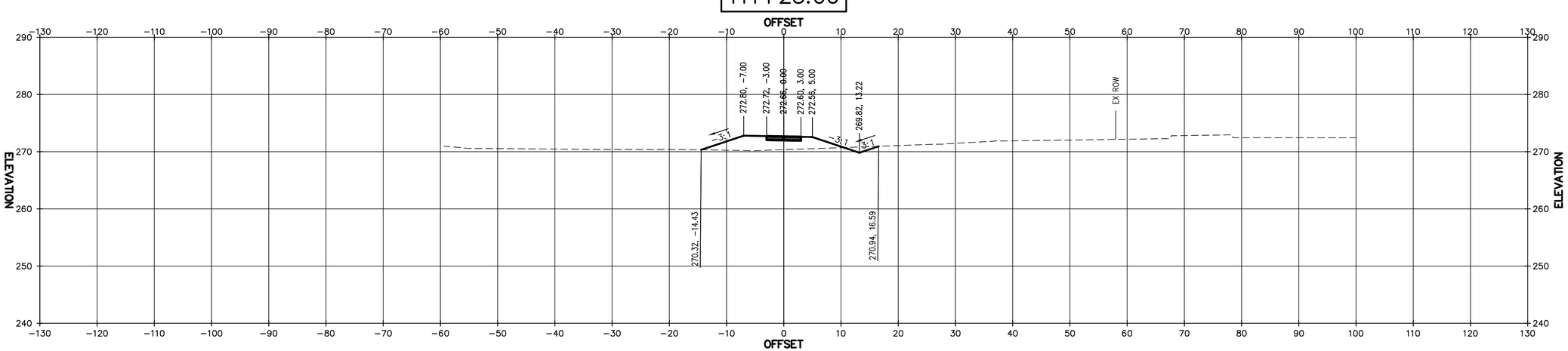

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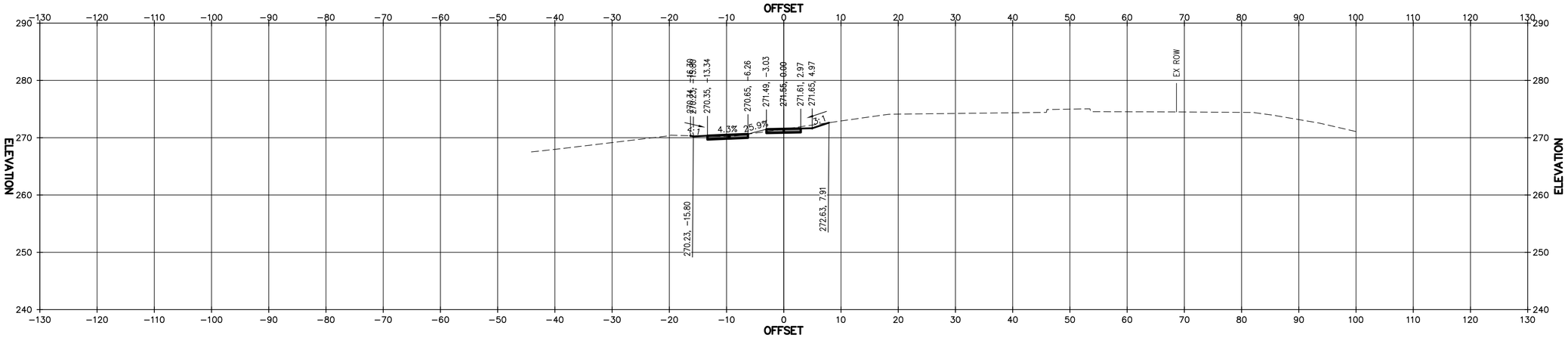
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

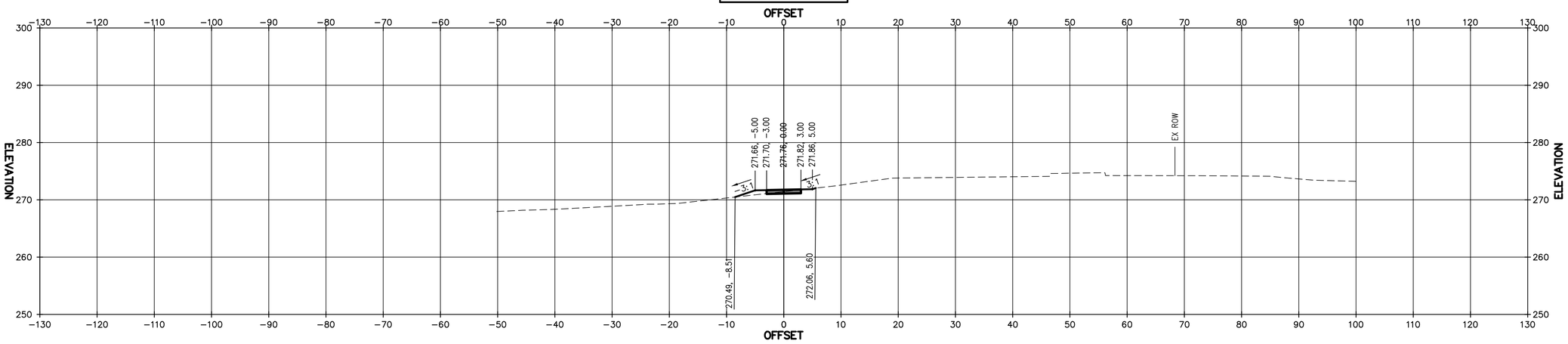
WELLINGTON SUP CROSS SECTIONS

SHEET
X-16
SCALE 1"=10'

112+50.00



112+25.00



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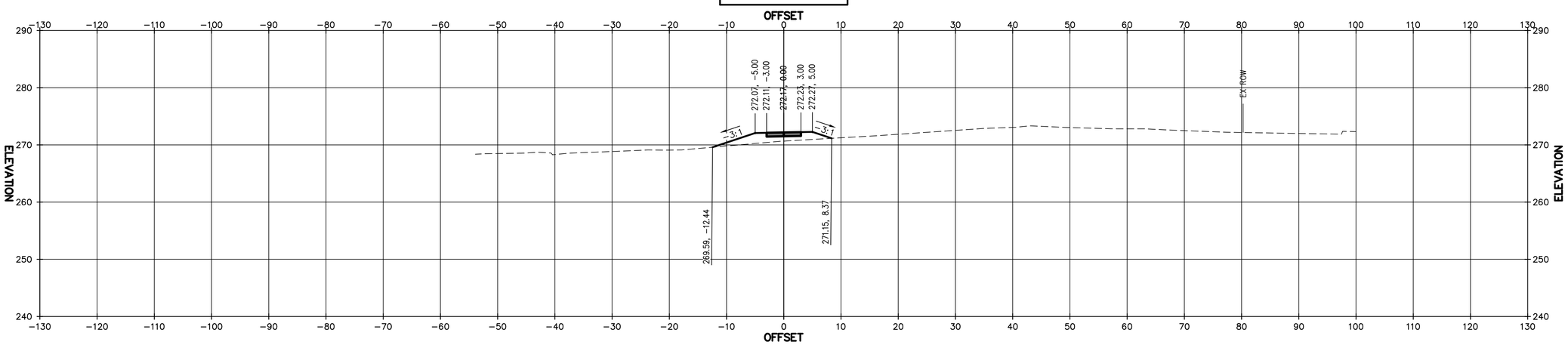

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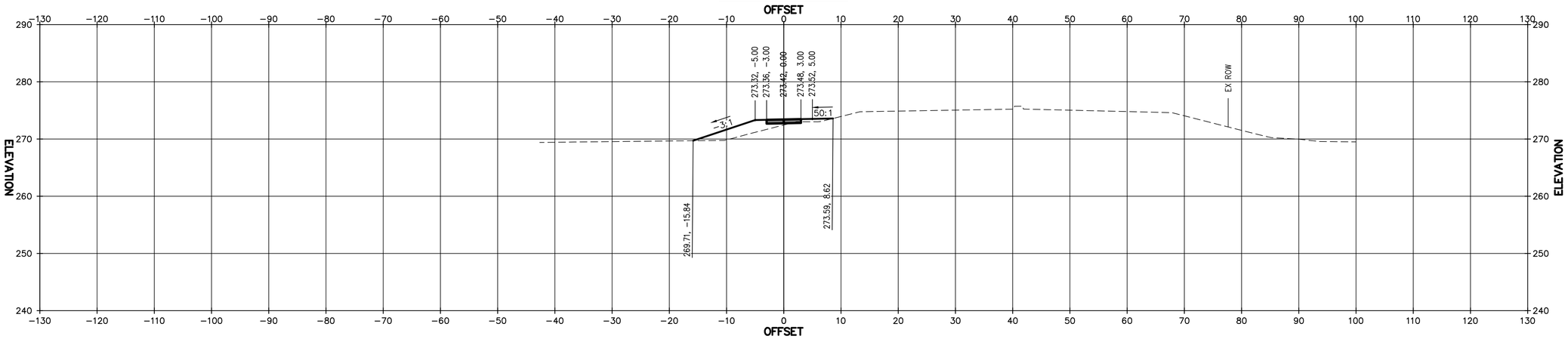
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

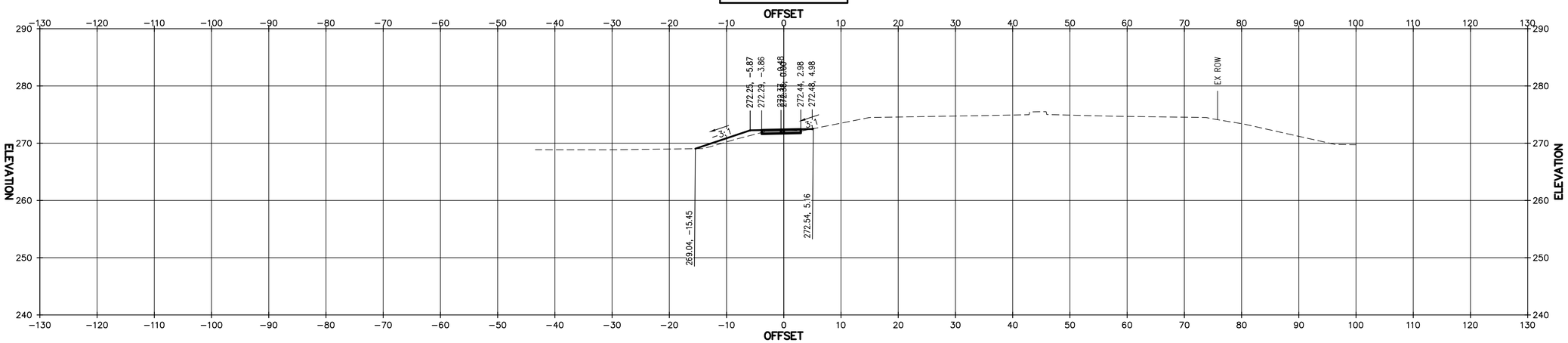
WELLINGTON SUP CROSS SECTIONS

SHEET
X-17
SCALE 1"=10'

113+25.00



113+00.00



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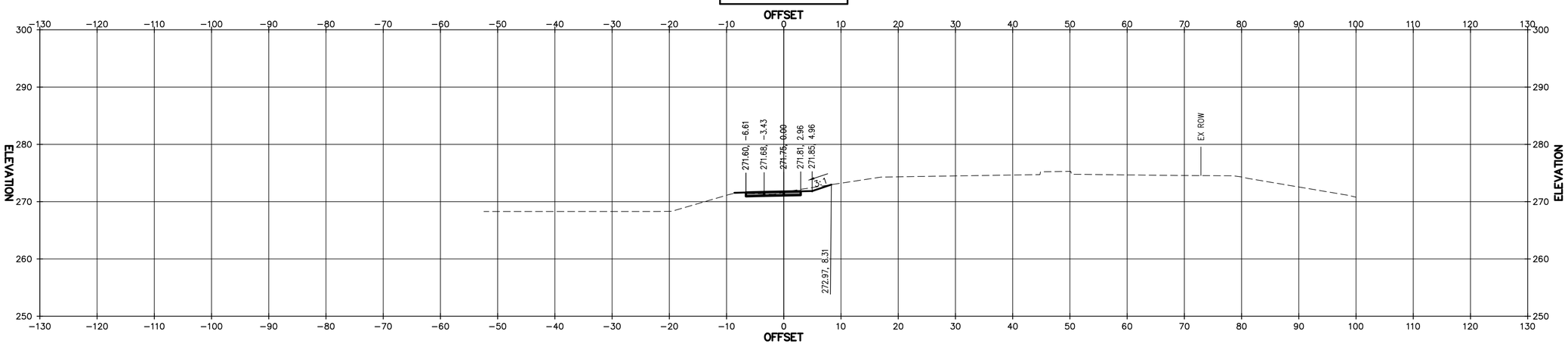

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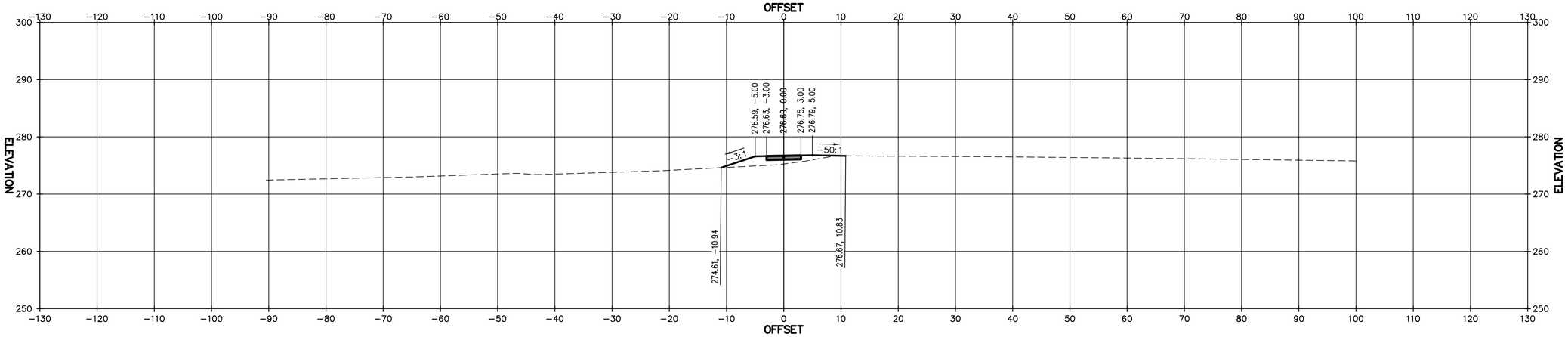
WELLINGTON SUP CROSS SECTIONS

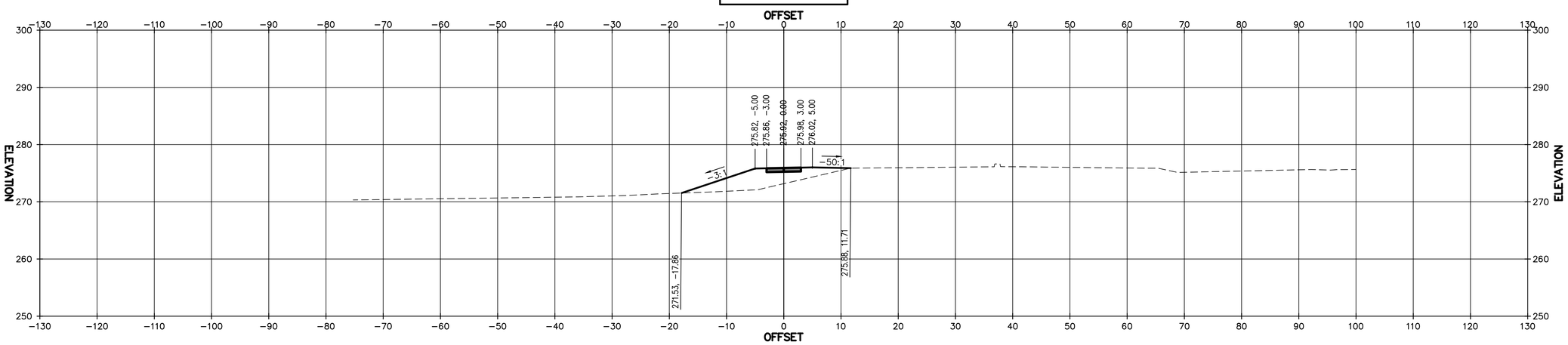
SHEET
X-18
SCALE 1"=10'

WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

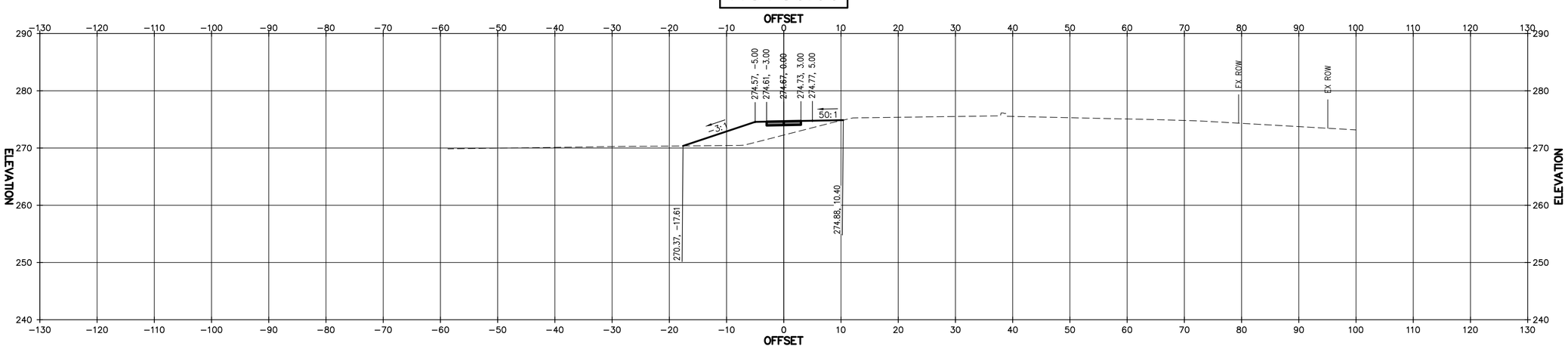
114+00.00



113+75.00



113+50.00



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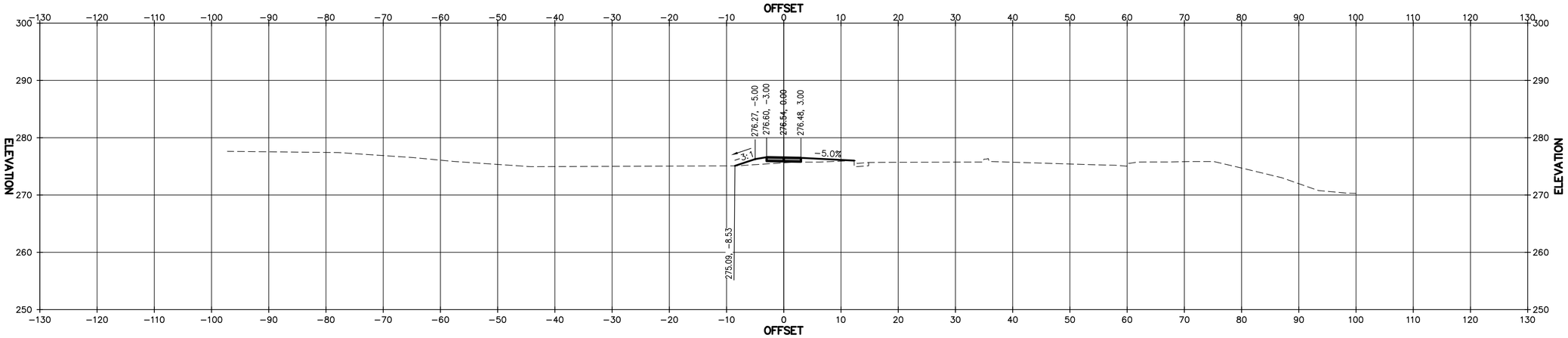
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

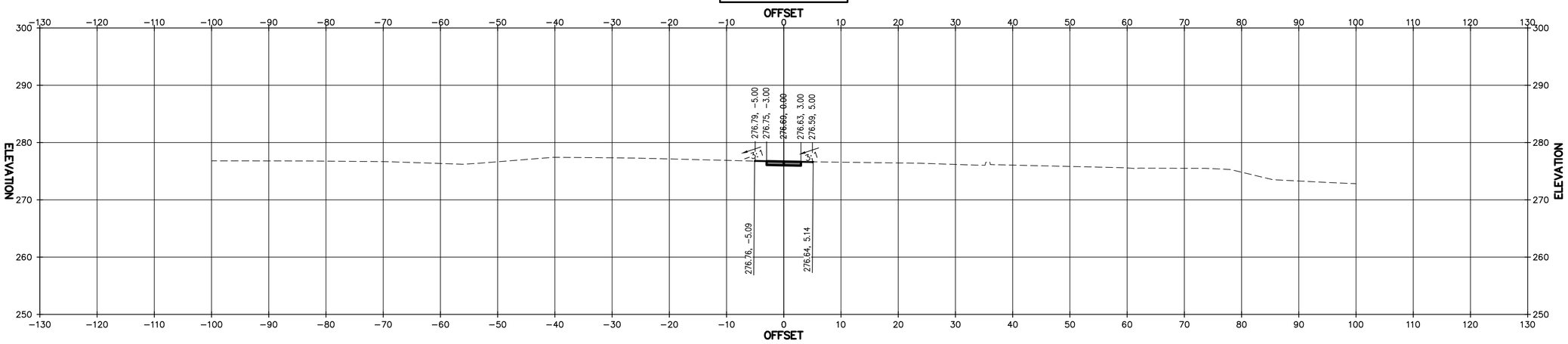
WELLINGTON SUP CROSS SECTIONS

SHEET
X-19
SCALE 1"=10'

114+75.00



114+50.00



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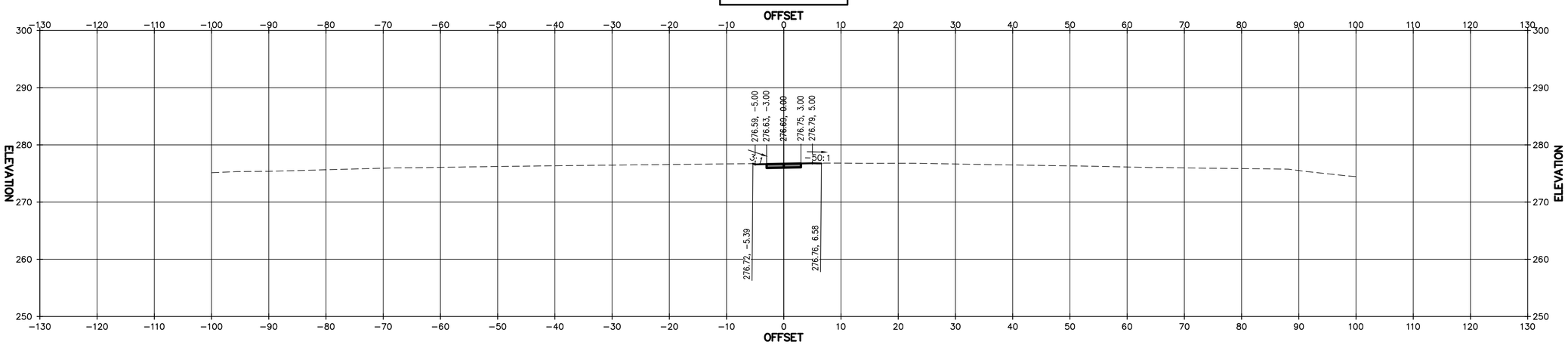

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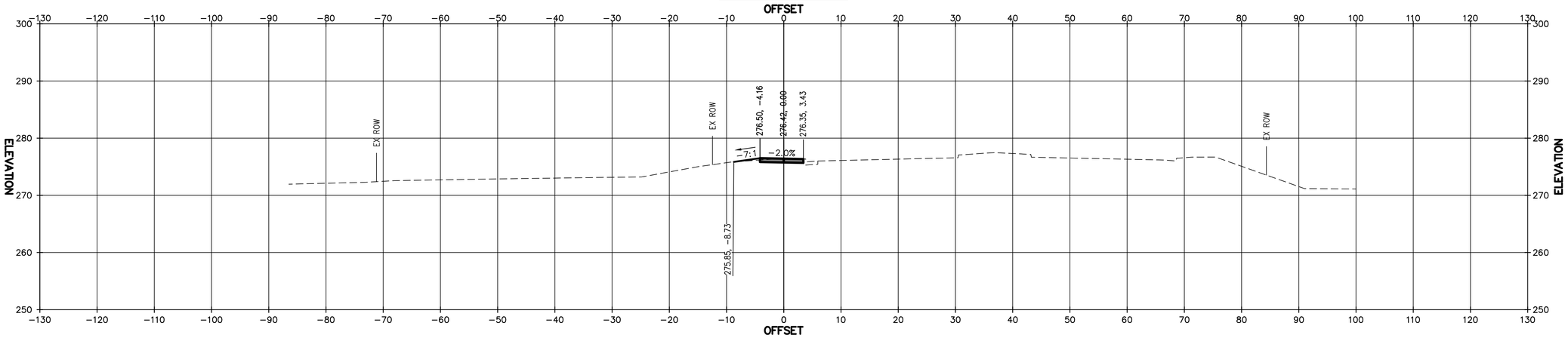
DESIGNED BY: BD DATE: 09/27/21
DRAWN BY: BD DATE: 09/27/21
CHECKED BY: RH DATE: 09/27/21
APPROVED BY: DATE:

WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

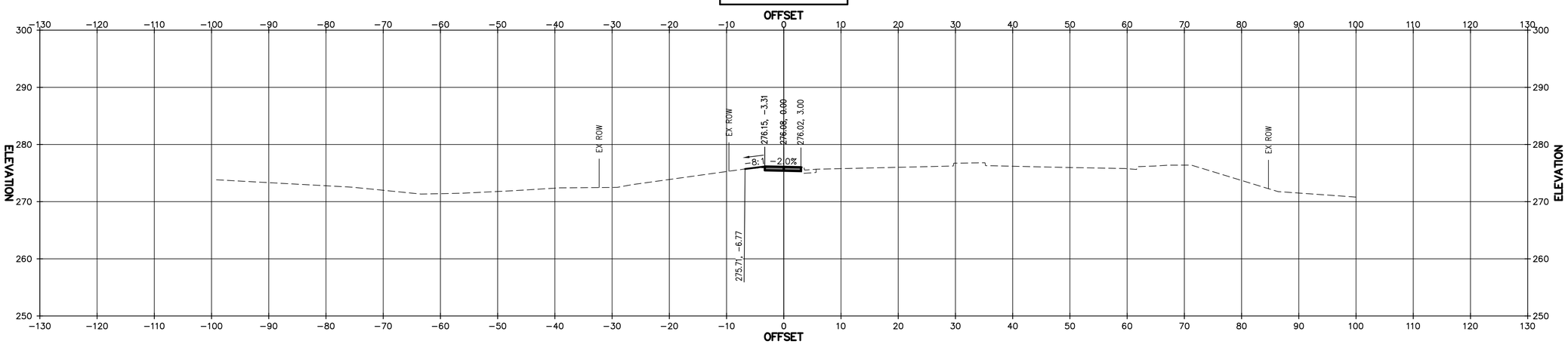
WELLINGTON SUP CROSS SECTIONS

SHEET
X-20
SCALE 1"=10'

115+50.00



115+25.00



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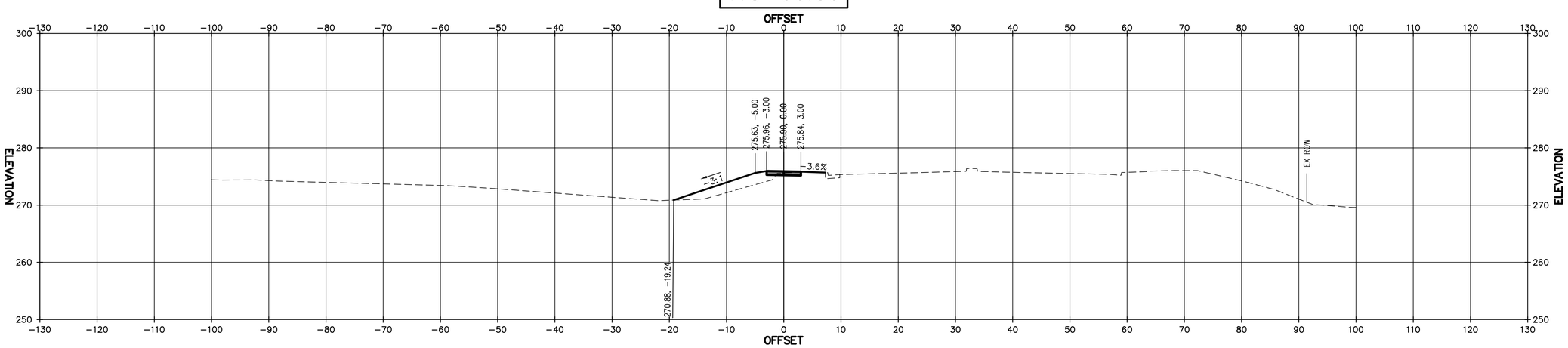

90% DESIGN SUBMITTAL

CITY OF MANASSAS, VIRGINIA
DEPARTMENT OF ENGINEERING
8500 PUBLIC WORKS DR
MANASSAS, VIRGINIA 20110

REVISIONS

DATE	BY	DESCRIPTION

MANASSAS PROJECT NO.: T-088
DATE OF PLAN ISSUANCE: TBD
CONSULTANT PROJECT ID.: Volkert
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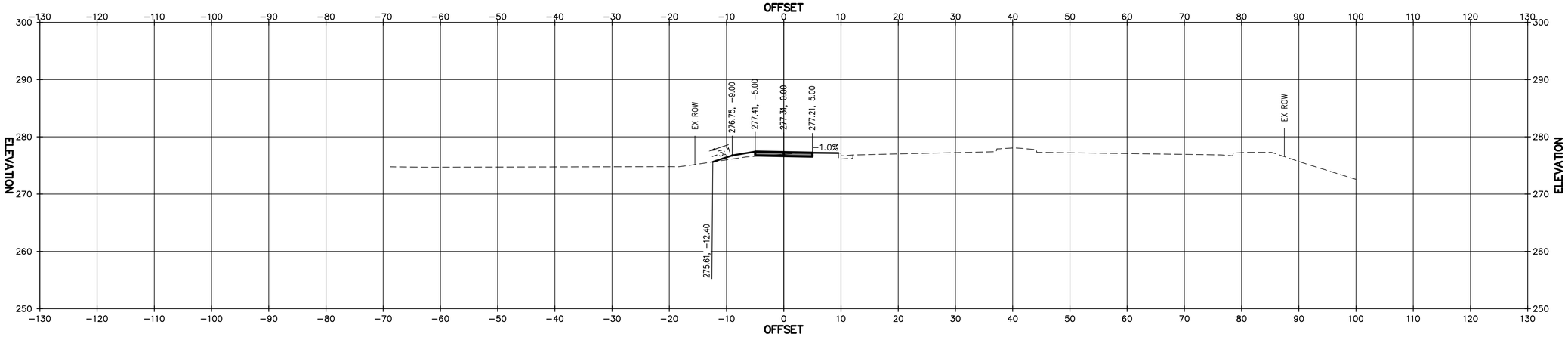
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

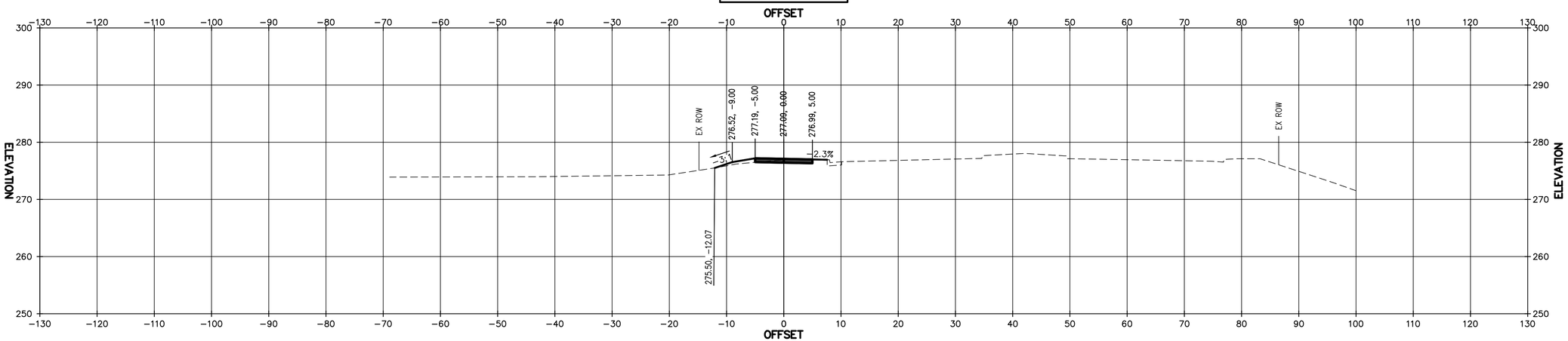
WELLINGTON SUP CROSS SECTIONS

SHEET
X-21
SCALE 1"=10'

116+25.00



116+00.00



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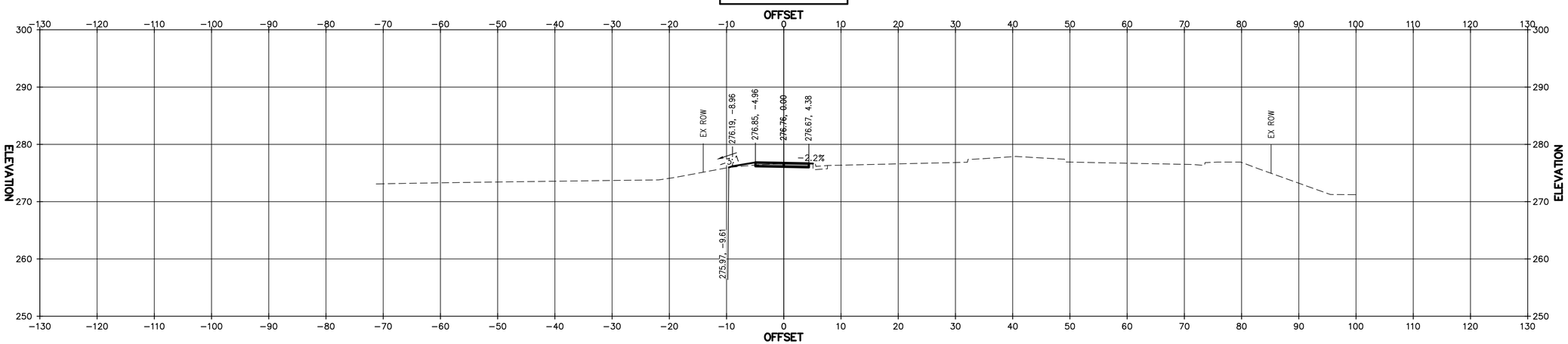

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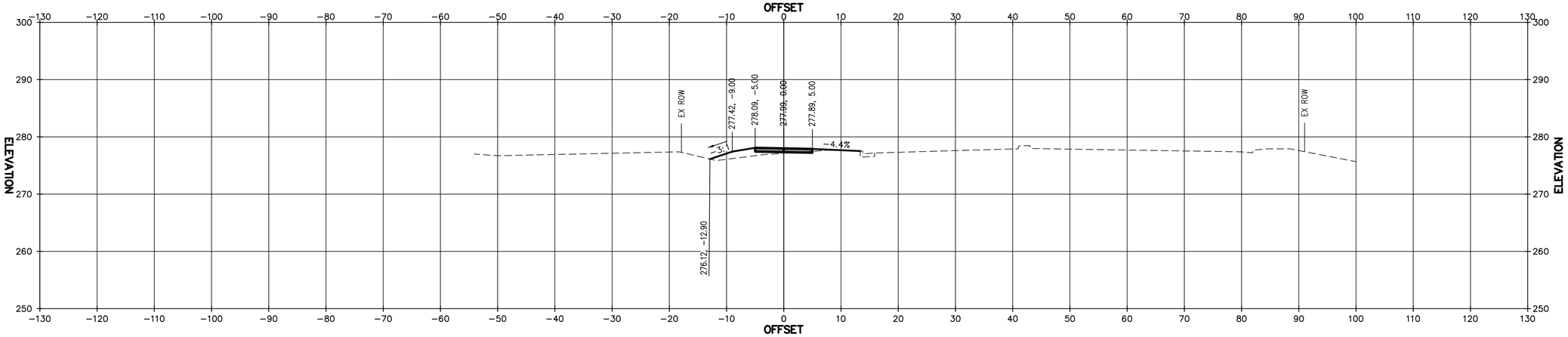
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

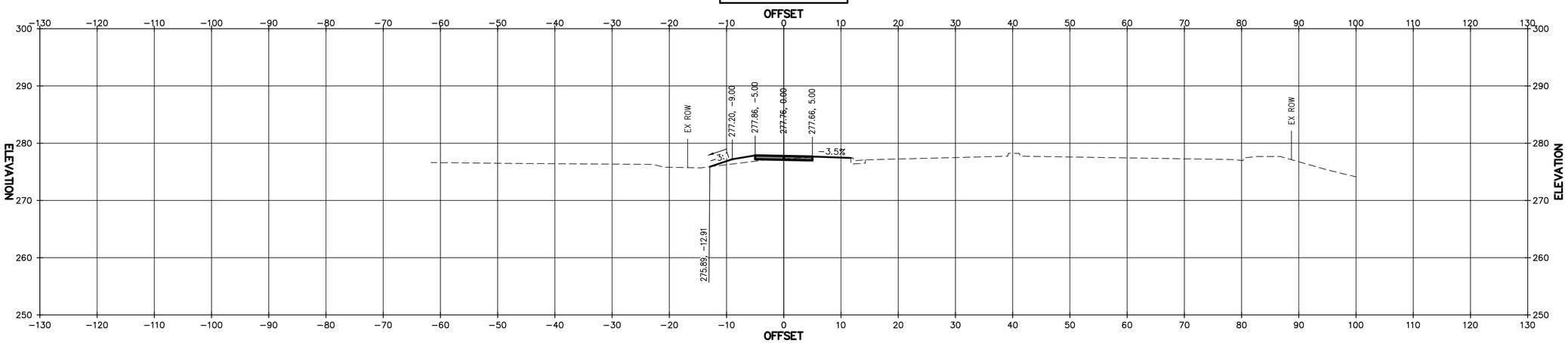
WELLINGTON SUP CROSS SECTIONS

SHEET
X-22
SCALE 1"=10'

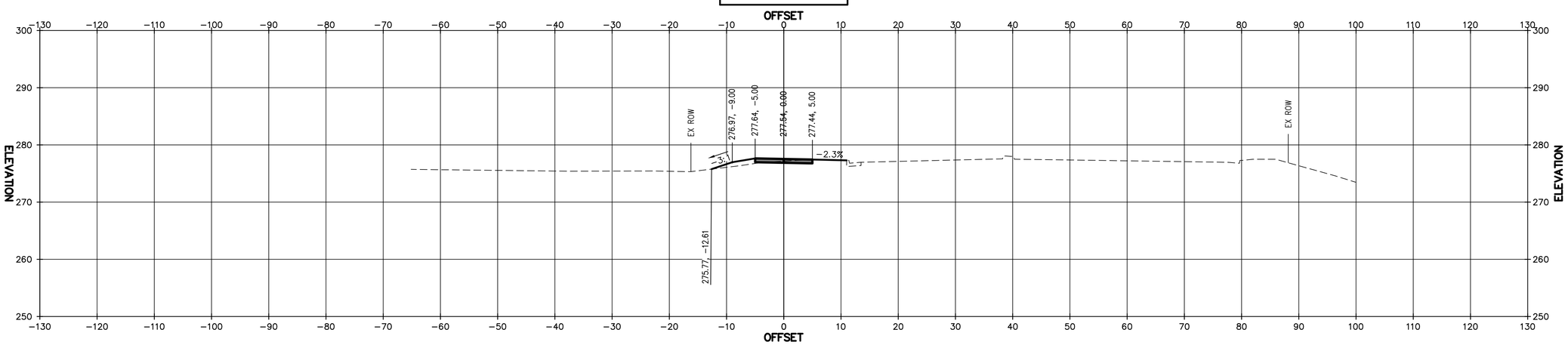
117+00.00



116+75.00



116+50.00



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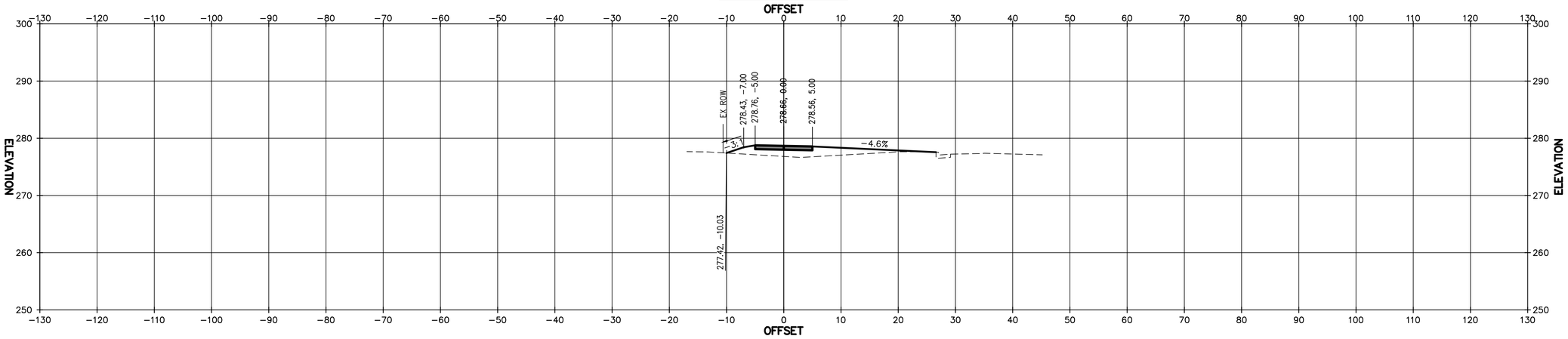
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

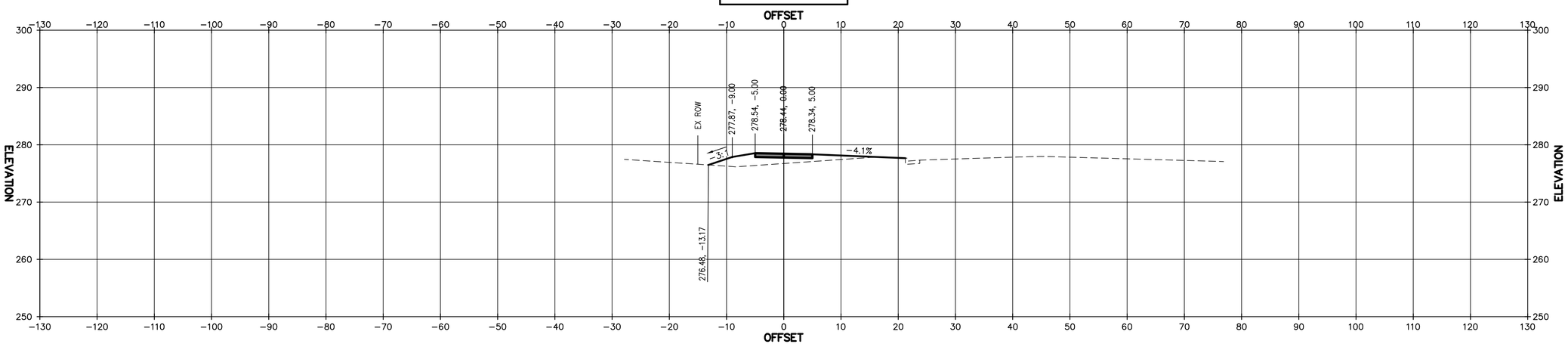
WELLINGTON SUP CROSS SECTIONS

SHEET
X-23
SCALE 1"=10'

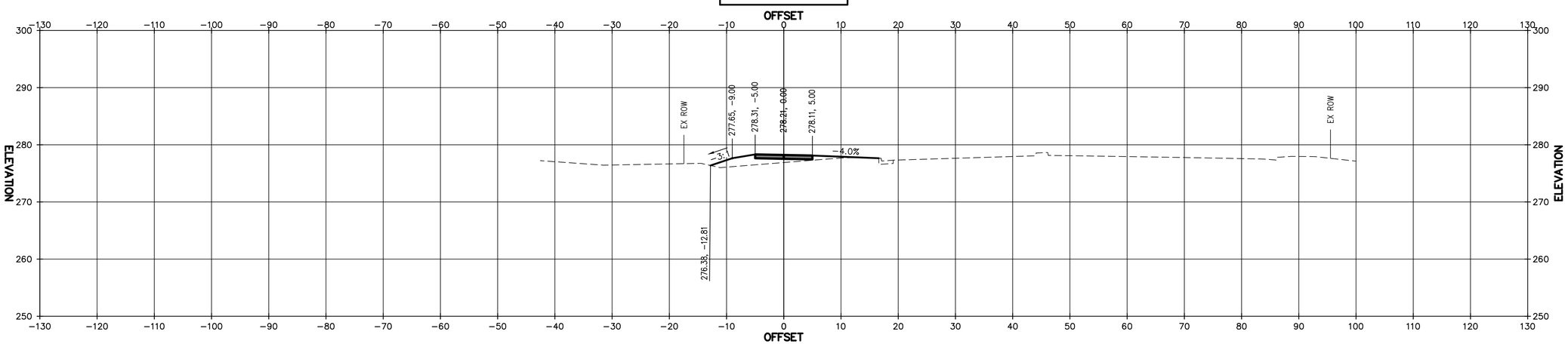
117+75.00



117+50.00



117+25.00



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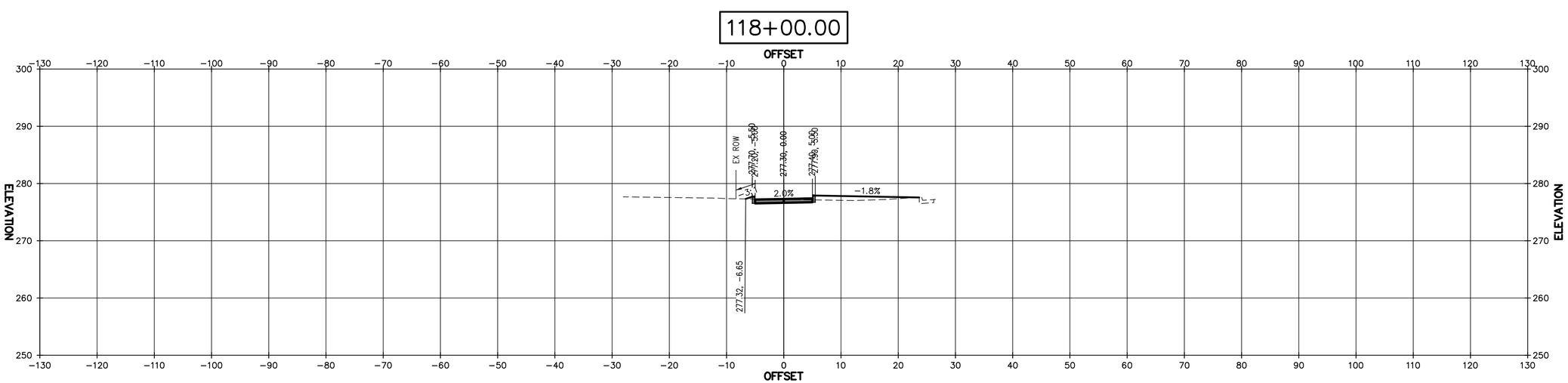
WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

WELLINGTON SUP CROSS SECTIONS

SHEET
X-24
SCALE 1"=10'



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WELLINGTON ROAD SHARED USE PATH AND SIDEWALK

CROSS SECTIONS

SHEET
X-25
SCALE 1"=10'