

# MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION

## FRANKLIN AVENUE SIDEWALK FROM US 29 TO MD 193 CIP PROJECT NO. 501734

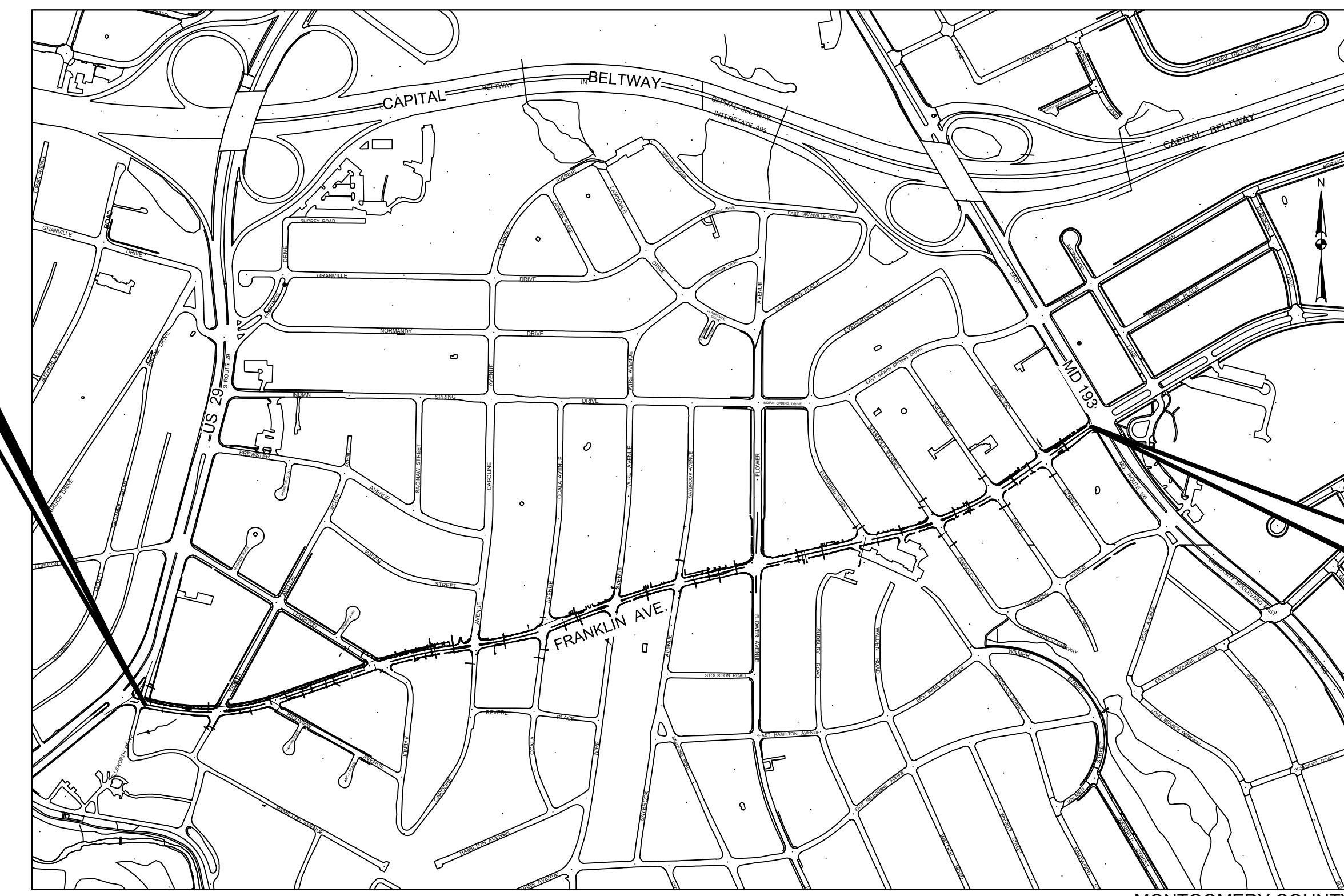
RELATED REQUIRED PERMITS					
To be completed by the consultant and placed on the first sheet of the Sediment Control / Stormwater Management plan set for all projects					
IT IS THE RESPONSIBILITY OF PERMITTEE/OWNER OF THIS SITE TO OBTAIN ALL REQUIRED PERMITS PRIOR TO ISSUANCE OF THE APPROVED SEDIMENT CONTROL PERMIT					
TYPE OF PERMIT	REQD	NOT REQD	PERMIT #	EXPIRATION DATE	WORK RESTRICTION DATES
MCDPS Floodplain District		√	N/A		
WATERWAYS/WETLAND(S):		√	N/A		
a. Corps of Engineers		√	N/A		
b. MDE		√	N/A		
c. MDE Water Quality Certification		√	N/A		
MDE Dam Safety		√	N/A		
DNR Roadside Tree Care Permit		√	N/A		
DPS Roadside Tree Protection Plan		√	N/A		
N.P.D.E.S. NOTICE OF INTEND		√	N/A		
Forest Conservation Exemption Plan		N/A	Approval Date		

INDEX OF SHEETS			
SHEET NO.	DWG. NO.	SC/SWM NO.	DESCRIPTION
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77 - 84	LD-01 TO LD-08		LANDSCAPE PLAN
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109	SQ-01		SUMMARY OF QUANTITIES

TREE CANOPY REQUIREMENTS TABLE	
To be completed by the consultant and placed on the first sheet of the Sediment Control / Stormwater Management plan set for all projects.	
Exempt: Yes <input type="checkbox"/> No <input checked="" type="checkbox"/> If exempt under Section 55-5 of the Code, please check the applicable exemption category below.	
<b>Total Property Area</b> NA / ROW square feet	<b>Total Disturbed Area</b> 87,120 square feet
<b>Shade Trees Required</b> 33	<b>Shade Trees Proposed to be Planted</b> 0 - entire project under overhead lines
<b>Fee in Lieu</b> (Trees Required - Trees Planted) x \$250	\$ 8,250
<b>Required Number of Shade Trees</b>	
Area (sq. ft.) of the Limits of Disturbance	Number of Shade Trees Required
FROM TO	
1 6,001	3
6,001 8,000	6
8,001 12,000	9
12,001 14,000	12
14,001 40,000	15
If the square footage of the limits of disturbance is more than 40,000, then the number of shade trees required must be calculated using the following formula: $(\text{Number of Square Feet in Limits of Disturbance} \div 40,000) \times 15$	
<b>EXEMPTION CATEGORIES:</b>	
<input type="checkbox"/> 55-5(a) any activity that is subject to Article II of Chapter 22A; <input type="checkbox"/> 55-5(b) any commercial logging or timber harvesting operation with an approved exemption from Article II of Chapter 22A; <input type="checkbox"/> 55-5(c) any activity conducted by the County Parks Department; <input type="checkbox"/> 55-5(d) routine or emergency maintenance of an existing stormwater management facility, including an existing access road, if the person performing the	<input type="checkbox"/> 55-5(h) any stream restoration project if the person performing the work has obtained all necessary permits; <input type="checkbox"/> 55-5(i) cutting or clearing any tree to comply with applicable provisions of any federal, state, or local law governing safety of dams; <input type="checkbox"/> OTHER: Specify per Section 55-5 of the Code.

**LIMIT OF WORK**  
CONTR. NO. 000000  
FRANKLIN AVE.  
STA. 0+85.40

**LIMIT OF WORK**  
CONTR. NO. 000000  
FRANKLIN AVE.  
STA. 46+09.40



**VICINITY MAP**  
SCALE: 1" = 1,000'  
MONTGOMERY COUNTY  
LENGTH OF PROJECT  
FRANKLIN AVE. = 0.86 MILES

THE FOLLOWING MONTGOMERY COUNTY STANDARDS ARE REQUIRED FOR THIS PROJECT:

- MC-100.01 - COMBINATION CONCRETE CURB AND GUTTER - TYPE A
- MC-101.01 - COMBINATION CONCRETE CURB AND GUTTER - TYPE C
- MC-102.01 - DEPRESSED CURB ENTRANCE
- MC-110.01 - RESIDENTIAL SIDEWALK
- MC-112.01 - RESIDENTIAL SIDEWALK RAMP
- MC-301.01 - RESIDENTIAL DRIVEWAY
- MC-301.04 - RESIDENTIAL DRIVEWAY LIMITED WIDTH
- MC-301.05 - RESIDENTIAL DRIVEWAY WITH CURB RADIUS
- MC-501.01 - A INLET
- MC-502.01 - B INLET
- MC-502.01 - REVERSE B INLET
- MC-510.01 - "A" MANHOLE
- MC-515.01 - "B" MANHOLE

THE MOST CURRENT VERSION OF THESE STANDARDS CAN BE ACCESSED AT:  
<https://www.montgomerycountymd.gov/dot-dte/common/standards.html>

THE FOLLOWING MARYLAND STATE HIGHWAY DEPARTMENT OF TRANSPORTATION, STATE HIGHWAY ADMINISTRATION STANDARDS (CONSTRUCTION AND TEMPORARY TRAFFIC CONTROL) ARE REQUIRED FOR THIS PROJECT:

- MD-354.01 - STANDARD TYPE C ENDWALL
- MD-374.08 - TRIPLE WR INLET
- MD-374.51 - PRECAST OR CAST IN PLACE SQUARE AND RECTANGULAR COG INLETS 5', 10', 15' & 20'
- MD-374.68 - PRECAST OR CAST-IN-PLACE COG / GOS OPENING FOR 8" CURB 5' OR 10' ONLY
- MD-378.11 - PRECAST STANDARD SINGLE OR DOUBLE OPENING TYPE K INLET OPEN-END GRATE
- MD-578.01 - REPAIRING PAVEMENT OPENINGS FOR UTILITY TRENCHES
- MD-630.01 - STANDARD ENTRANCE
- MD-640.02 - STANDARD CURB OPENING DETAILS
- MD-655.11 - SIDEWALK RAMP PERPENDICULAR
- MD-655.12 - SIDEWALK RAMP PARALLEL
- MD-655.40 - DETECTABLE WARNING SURFACES

FOR ALL SHA STANDARDS REFERRED TO ON THE PLANS, THE CONTRACTOR MUST GO TO THE BOOK OF STANDARDS WHICH WILL HAVE THE MOST CURRENT VERSION. THE BOOK OF STANDARDS CAN BE ACCESSED AT:  
<http://apps.roads.maryland.gov/businesswithsha/bizStdsSpecs/desManualStdPub/publicationsonline/ohd/bookstd/index.asp>

ALL ITEMS ARE TO BE CONSTRUCTED IN ACCORDANCE WITH THE CURRENT VERSION OF THE REFERENCED STANDARD AT THE TIME OF CONSTRUCTION.

**PROFESSIONAL CERTIFICATION:**

I HEREBY CERTIFY THAT THESE DOCUMENTS WERE PREPARED OR APPROVED BY ME, AND THAT I AM A DULY LICENSED PROFESSIONAL ENGINEER UNDER THE LAWS OF THE STATE OF MARYLAND.  
LICENSE NO. 53728  
EXPIRATION DATE: 12-06-2025

100% SUBMITTAL  
FEBRUARY 2024



**OWNER'S / DEVELOPER'S CERTIFICATION**

I/WE HEREBY CERTIFY THAT ALL CLEARING, GRADING, CONSTRUCTION, AND OR DEVELOPMENT WILL BE DONE PURSUANT TO THIS PLAN AND THAT ANY RESPONSIBLE PERSONNEL INVOLVED IN THE CONSTRUCTION PROJECT WILL HAVE A CERTIFICATE OF ATTENDANCE AT A DEPARTMENT OF NATURAL RESOURCES APPROVED TRAINING PROGRAM FOR THE CONTROL OF SEDIMENT AND EROSION BEFORE BEGINNING THE PROJECT.

DATE: 3/11/2024  
*Jose Thommana*  
JOSE THOMMANA  
CHIEF, DIVISION OF TRANSPORTATION ENGINEERING

**DESIGN CERTIFICATION**

I HEREBY CERTIFY THAT THIS PLAN HAS BEEN PREPARED IN ACCORDANCE WITH THE "1994 MARYLAND STANDARDS AND SPECIFICATION FOR SOIL EROSION AND SEDIMENT CONTROL", MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES EXECUTIVE REGULATIONS 5-90, 7-02AM AND 36-90, AND MONTGOMERY COUNTY DEPARTMENT OF PUBLIC WORKS AND TRANSPORTATION "STORM DRAIN DESIGN CRITERIA" DATED AUGUST 1988.

DATE: 2-26-2024  
*Moyassar Y. Mohammed*  
MOYASSAR Y. MOHAMMED, P.E.  
SHELADIA ASSOCIATES, INC.

**CERTIFICATION OF THE QUANTITIES**

I/WE HEREBY CERTIFY THAT THE ESTIMATED TOTAL AMOUNT OF EXCAVATION AND FILL AS SHOWN ON THESE PLANS HAS BEEN COMPUTED TO X,XXX CUBIC YARDS OF EXCAVATION, XXX CUBIC YARDS OF FILL AND THE TOTAL AREA TO BE DISTURBED AS SHOWN ON THESE PLANS HAS BEEN DETERMINED TO BE XXX,XXX SQUARE FEET OR 3.33 ACRES.

DATE: 2-26-2024  
*Moyassar Y. Mohammed*  
MOYASSAR Y. MOHAMMED, P.E.  
MD. REGISTRATION NO. 53728

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:		
Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____	SEDDIMENT CONTROL PERMIT NO. _____
S.M. FILE NO. _____		

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT.  
MCDOT APPROVAL OF THIS PLAN WILL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL. IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED.

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND  RECOMMENDED FOR APPROVAL <i>David M. Sharda</i> March 11, 2024 <small>Chief, Design Section</small> APPROVED <i>Jose Thommana</i> March 11, 2024 <small>Chief, Division of Transportation Engineering</small>	<b>FRANKLIN AVENUE SIDEWALK</b>  TITLE SHEET  SCALE: AS SHOWN Project No.: TBD 01 of 109
Designed by: _____ Drawn by: _____ Checked by: _____	

GENERAL NOTES

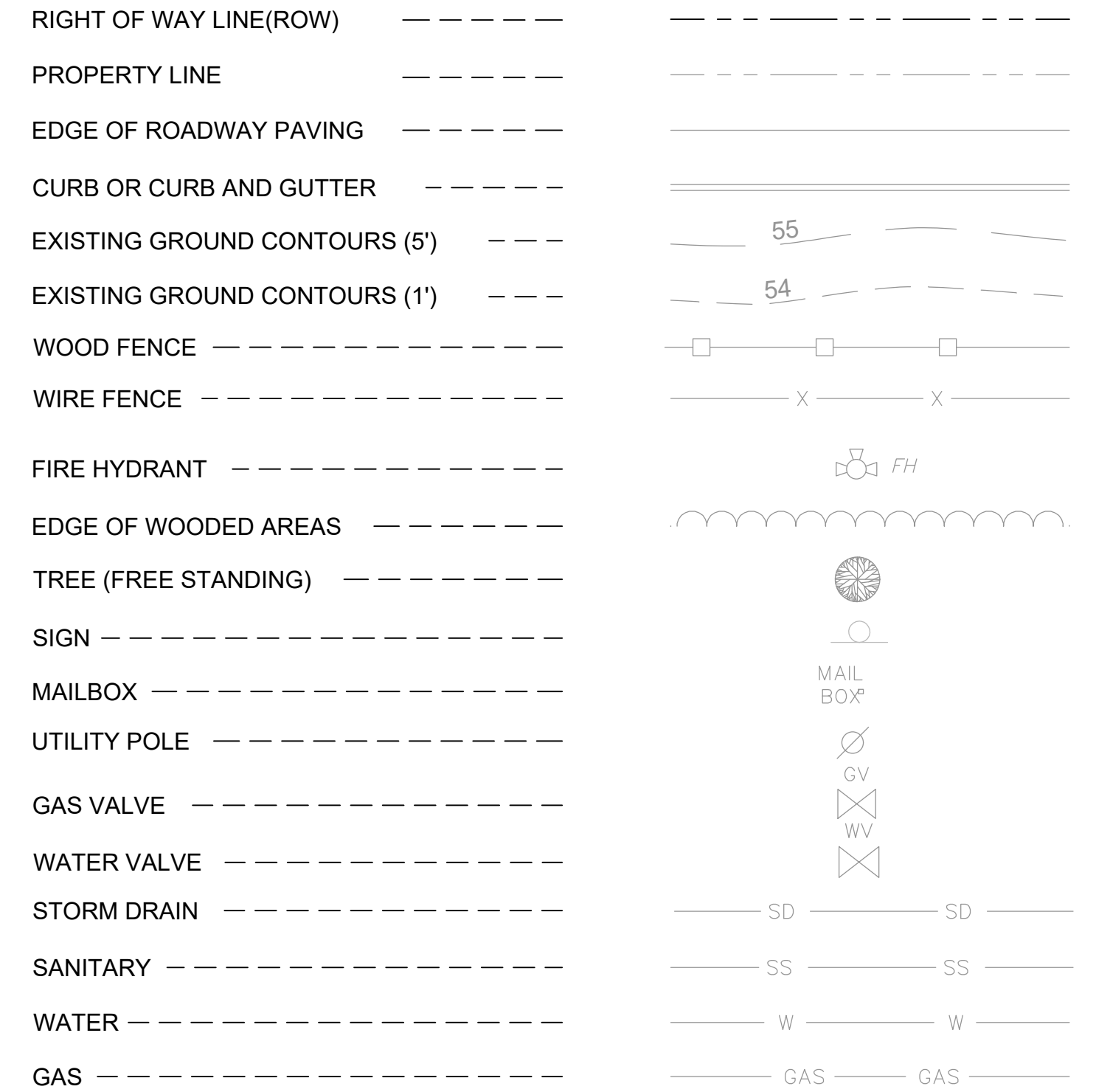
- 1. ALL CONSTRUCTION SHALL BE DONE IN ACCORDANCE WITH THE LATEST EDITION OF THE STANDARD SPECIFICATIONS OF THE MARYLAND STATE HIGHWAY ADMINISTRATION, MONTGOMERY COUNTY, AND THE WASHINGTON SUBURBAN SANITARY COMMISSION.
2. TYPES OF STORM DRAIN STRUCTURES REFER TO THE "DESIGN STANDARDS" OF MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION, UNLESS OTHERWISE NOTED.
3. WHEN THE DROP ON THE MAIN LINE THROUGH A STORM DRAIN STRUCTURE CAN BE ACCOMMODATED BY AN INVERT SLOPE OF 1.5:1 OR FLATTER, A ROUNDED CHANNEL LINED WITH SEWER BRICK ON EDGE SHALL BE BUILT TO THE CROWN OF THE PIPES. WHEN THE INVERT SLOPES WOULD BE GREATER THAN 1.5:1, A SPECIAL INVERT SHALL BE CONSTRUCTED AS NOTED.
4. ALL STORM DRAIN PIPE SHALL BE INSTALLED WITH CLASS "C" BEDDING UNLESS OTHERWISE SPECIFIED.
5. THE CONTRACTOR SHALL MAKE FIELD ADJUSTMENTS TO STORM DRAIN STRUCTURES, WHEN NECESSARY TO MEET EXISTING CONDITIONS. AS APPROVED BY MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION'S PROJECT INSPECTOR.
6. INFORMATION CONCERNING UNDERGROUND UTILITIES WAS OBTAINED FROM AVAILABLE RECORDS, BUT THE CONTRACTOR MUST DETERMINE THE EXACT LOCATIONS AND ELEVATIONS OF THE LINES BY DIGGING TEST PITS BY HAND AT ALL UTILITY CROSSINGS, WELL IN ADVANCE OF TRENCHING. IF CLEARANCES ARE LESS THAN SHOWN OR SIX (6) INCHES, WHICHEVER IS LESS, CONTACT MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION'S PROJECT INSPECTOR AND THE APPROPRIATE UTILITY OWNER BEFORE PROCEEDING WITH CONSTRUCTION.
7. REPAIRS TO UTILITIES OR PROPERTY DAMAGE AS A RESULT OF THE CONTRACTOR'S NEGLIGENCE OR METHOD OF OPERATION MUST BE MADE AT THE CONTRACTOR'S EXPENSE BEFORE PROCEEDING WITH CONSTRUCTION.
8. CALL "MISS UTILITY" AT 1-800-257-7777 FORTY-EIGHT (48) HOURS PRIOR TO BEGINNING EXCAVATION TO DETERMINE THE EXACT LOCATION OF EXISTING UTILITIES.
9. CLEARING IS TO BE LIMITED TO THE "LIMIT OF GRADING" AS SHOWN ON THE PLANS.
10. ALL GRADING SHALL BE DONE IN SUCH A MANNER AS TO PROVIDE POSITIVE DRAINAGE.
11. ALL DISTURBED AREAS TO BE SEEDED AND MULCHED UNLESS OTHERWISE NOTED.
12. THE CONTRACTOR SHALL OBTAIN A ROADSIDE TREE PERMIT FOR ANY MAINTENANCE, TREATMENT, PLANTING, REMOVAL, OR ROOT CUTTING ON TREES WITHIN THE PUBLIC RIGHT OF WAY. PERMIT REQUIREMENTS MAY BE OBTAINED FROM THE DEPARTMENT OF NATURAL RESOURCES, MARYLAND FOREST, PARK AND WILDLIFE SERVICE, TELEPHONE 301-854-6060.
13. THE CONTRACTOR SHALL CONSTRUCT ALL DRIVEWAY TIE-INS IN-KIND TO THE LIMIT SHOWN ON THE PLANS.
14. ALL WSSC SURFACE ASSETS, INCLUDING BUT NOT LIMITED TO, VALVES, MANHOLES, METERS, CLEANOUTS, FIRE HYDRANT ETC., SHALL BE ADJUSTED TO FINISH GRADE.

ABBREVIATIONS

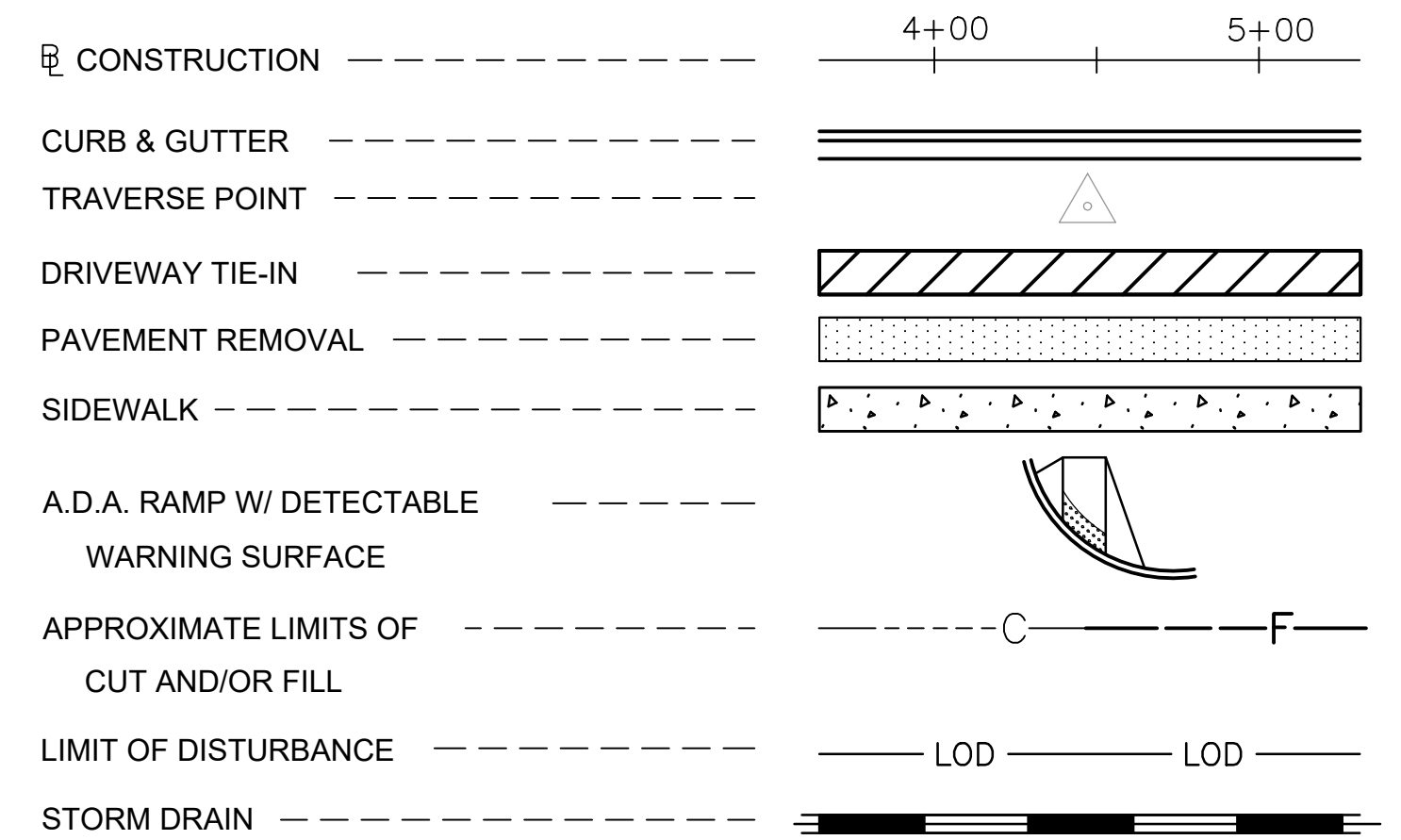
- AASHTO - American Association of State Highway Transportation Officials
ADT - Average Daily Traffic
AHD - Ahead
APPROX - Approximate
B/L - Baseline
BK - Back/Book
BIT - Bituminous
B.C. - Bituminous Concrete
B.M. - Bench Mark
BOT - Bottom
C.C. - Center of Curve
CAP - Corrugated Aluminum Pipe
CAPA - Corrugated Aluminum Pipe Arch
CATV - Cable Television
C.B.R. - California Bearing Ratio
C/L - Centerline
CL - Class
CLF - Chainlink Fence
CMP - Corrugated Metal Pipe
C.O. - Cleanout
COMB - Combination
COC - Concrete
CONSTR - Construction
COR - Corner
CORR - Correction
CPP-S - Corrugated Polyethylene Pipe - Type 'S'
CSP - Corrugated Steel Pipe - Aluminized Type 2
CSPA - Corrugated Steel Pipe Arch - Aluminized Type 2
C - Cut
DC - Degree of Curve
D.H.V. - Design Hourly Volume
D.I. - Drop Inlet
DIA - Diameter
D.O. - Double Opening
E - East
E - Electric
E - External Distance
EA - Each
EB - Eastbound
ELEV - Elevation
ES - End Section
EX or EXIST - Existing
FT - Feet
F - Fill
FL - Flowline
F.B.D. - Flat bottom Ditch
F.H. - Fire Hydrant
FWD - Forward
G - Gas
G.V. - Gas Valve
H.B. - Handbox
HDPE - High Density Polyethylene
HDWL - Headwall
HERCP - Horizontal Elliptical Reinforced Concrete Pipe
HP - High point
IN - Inch
I.S.T. - Inlet Sediment Trap
INV - Invert
J.V. - Junction Box
K - K Inlet
L - Length
LF - Linear Feet
L.L. - Liquid Limit
LP - Low Point
L.P. - Light Pole
LT - Left
MAC - Macadam
M.C. - Moisture Content
MAX - Maximum
M.D.D. - Maximum Dry Content
MOD - Modified
MIN - Minimum
N - North
NB - Northbound
NE - Northeast
N.P. - Non-Plastic
O.C. - On Center
OHE - Overhead Electric
O.M. - Optimum Moisture
PAVT - Pavement
P.C. - Point of Curvature
P.C.C. - Point of Compound Curvature
P/C - Point of Crown
P/GE - Profile Grade Elevation
P.G.E. - Profile Ground Elevation
P.G.L. - Profile Grade Line
P/GL - Profile Ground Line
P/R - Point of Rotation
P.I. - Plasticity Index
PI - Point of Intersection
POC - Point On Curve
POT - Point of Tangent
PPWP - Polyvinyl Chloride Profile Wall Pipe
PROP - Proposed
PRC - Point of Reverse Curve
PT - Point
P.T. - Point of Tangency
P.V.C. - Point of Vertical Curve
PVC - Polyvinyl Chloride
P.V.I. - Point of Vertical Intersection
P.V.R.C. - Point of Vertical Reverse Curve
P.V.T. - Point of Vertical Tangency
R - Radius
R.F. - Rock Fragments
RT - Right
RW or R/W - Right of Way
RCP - Reinforced Concrete Pipe
RCP - Reinforced Concrete Pressure
R.Q.D. - Rock Quality Designation
R.M. - Rootman
S - South
SAN - Sanitary Sewer
SB or S/B - Southbound
S.D. - Storm Drain
S.D.D. - Surface Drain
S/E - Super Elevation
SF - Silt Fence
SF - Square Feet
SHT - Sheet
SPP - Structural Steel Plate Pipe
SPPA - Structural Steel Plate Pipe Arch
S.P.T. - Standard Penetration Testing
SRP - Steel Spiral Rib Pipe - Aluminized Type 2
SRPA - Steel Spiral Rib Pipe Arch - Aluminized Type 2
SSD - Stopping Sight Distance
SSF - Super Silt Fence
STD - Standard
STA - Station
SO - Single Opening.
SY - Square Yards
SWM - Stormwater Management
T - Tangent
T - Telephone
T.C. - Top of Cover
T.G. - Top of Grate
T OR TL - Traverse Line
T.M. - Top of Manhole
TRAV - Traverse
TS - Temporary Swale
T.S. - Top of Slab
T.S. - Topsoil
TYP - Typical
U.D. - Underdrain
U.G. - Underground
U.P. - Utility Pole
USDA - United States Department of Agriculture
VCL - Vertical Clearance
V.C.L. - Vertical Curve Length
W - Water
W - West
WB - Westbound
WB - Wetland Buffer
W.M. - Water Meter
W.S. - Wrapped Steel
WUS - Water of the United States
W.V. - Water Valve

CONVENTIONAL SYMBOLS

EXISTING FEATURES

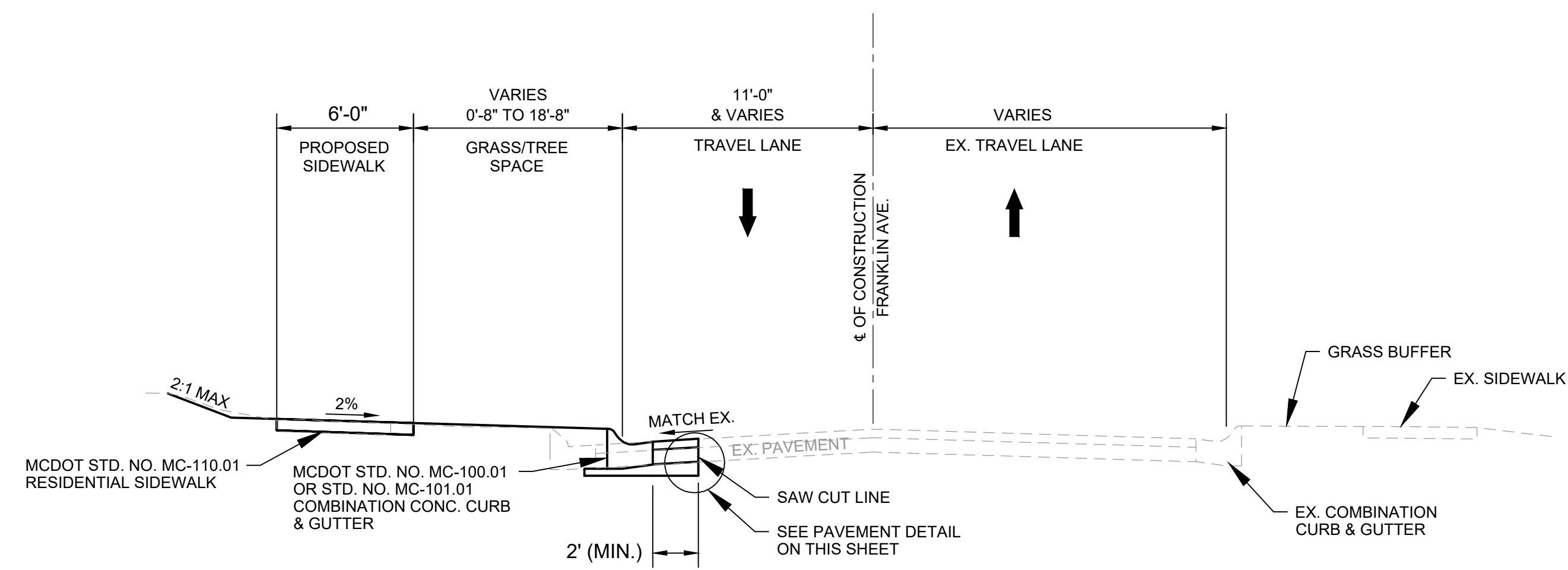


PROPOSED FEATURES



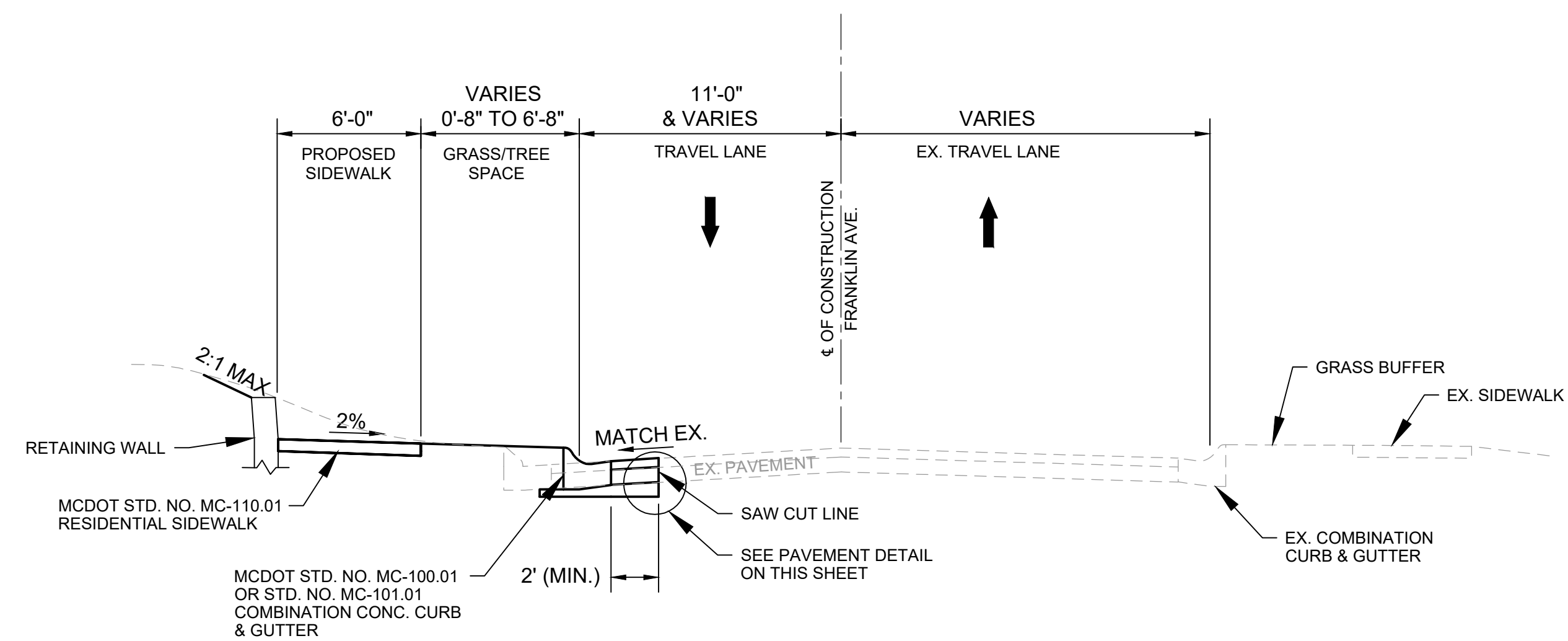
Approval and signature block for Montgomery County Department of Transportation, including fields for Design Section, Chief of Division, Date, and a large diagonal watermark reading 'SEE TITLE SHEET FOR SIGNATURES'. Includes project title 'FRANKLIN AVENUE SIDEWALK' and sheet identifier 'GN - 01'.





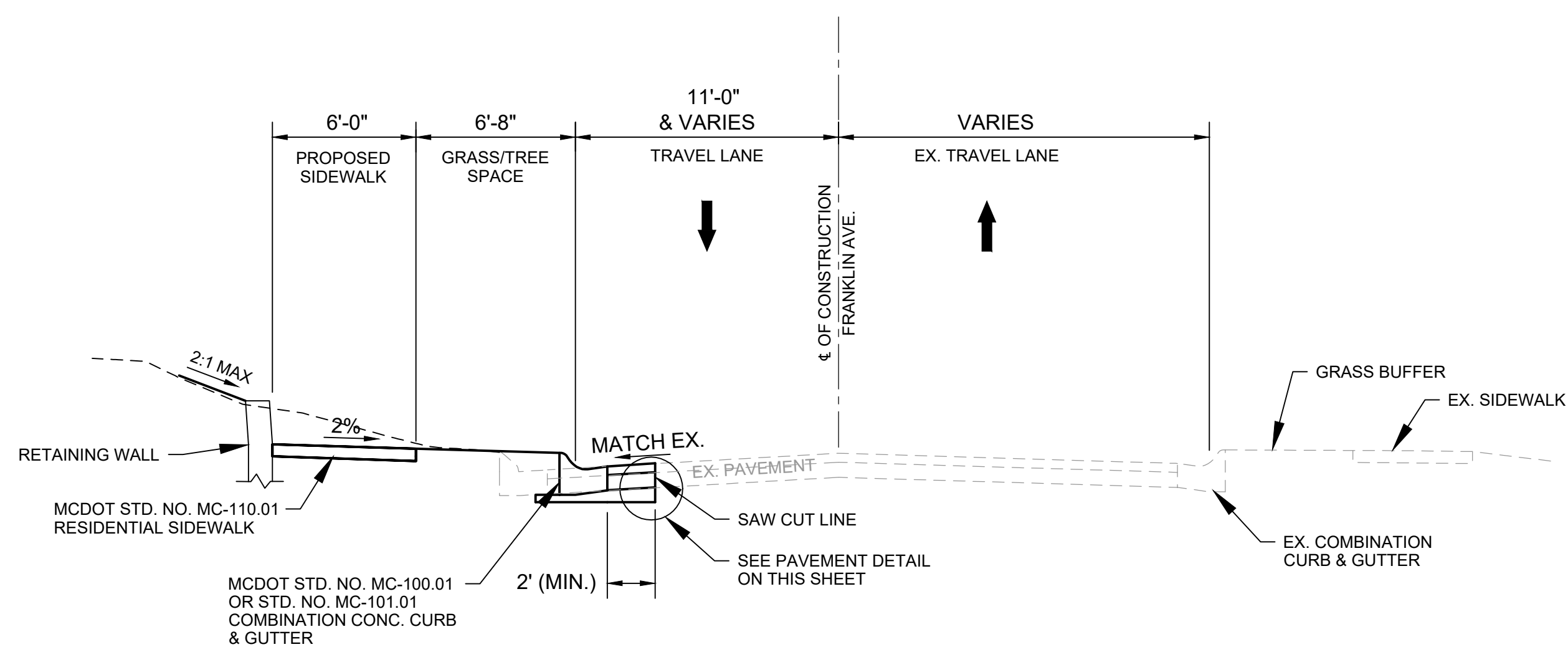
**TYPICAL SECTION - SIDEWALK WITH DIRECT TIE-IN**

STA. 0+85.40 TO STA. 16+82.70  
 STA. 19+45.71 TO STA. 39+18.64  
 STA. 40+69.72 TO STA. 46+09.40  
 NOT TO SCALE



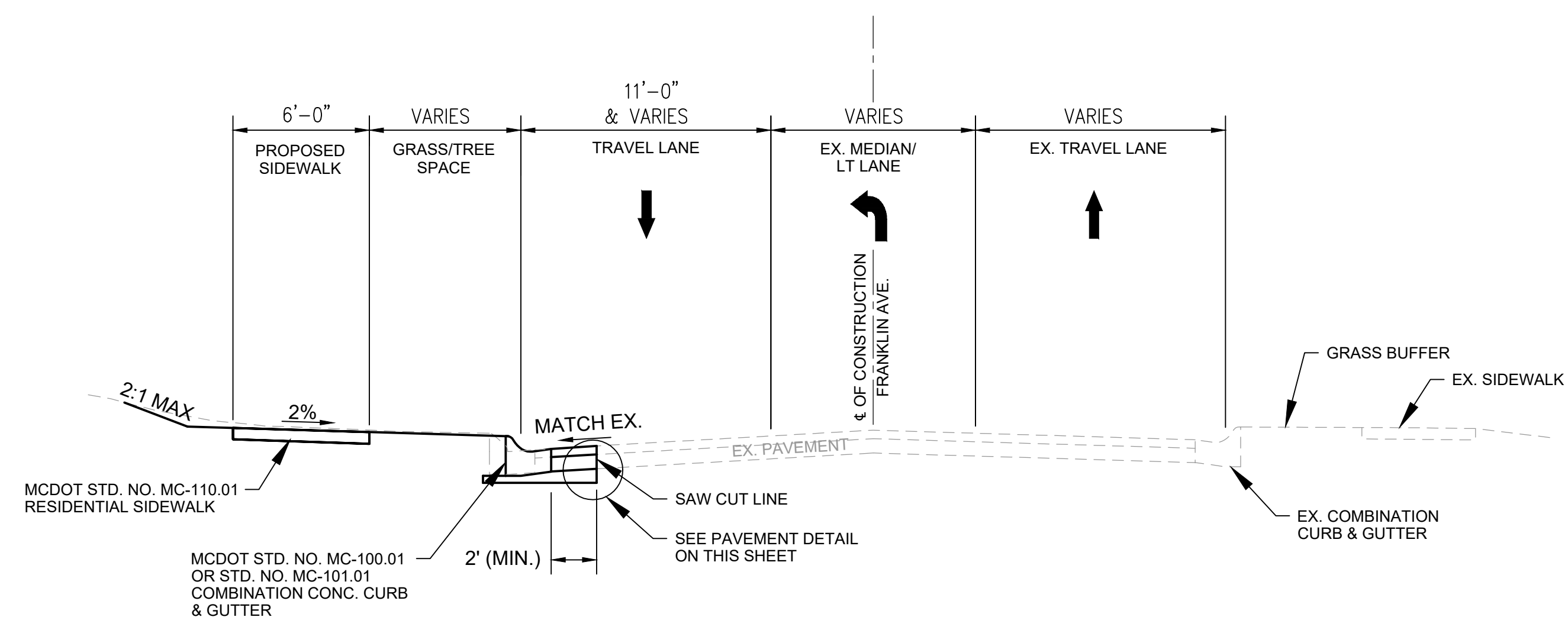
**TYPICAL SECTION - ADJACENT SIDEWALK WITH RETAINING WALL**

STA. 16+82.70 TO STA. 19+45.71  
 NOT TO SCALE



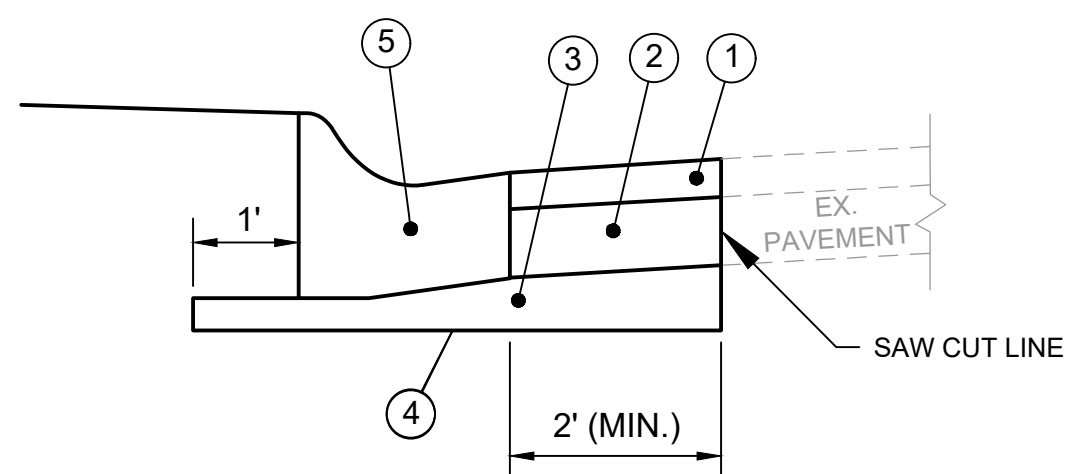
**TYPICAL SECTION - ADJACENT SIDEWALK AND RETAINING WALL**

STA. 39+18.64 TO STA. 40+69.72  
 NOT TO SCALE



**TYPICAL SECTION - MEDIAN / LEFT TURNING LANE**

AT INTERSECTIONS  
 NOT TO SCALE



**FULL DEPTH PAVING SECTION**  
 NOT TO SCALE

**LEGEND**

- ① 3" BITUMINOUS CONCRETE SURFACE COURSE IN 2 - 1 1/2" LAYERS
- ② 5" BITUMINOUS CONCRETE BASE COURSE
- ③ 6" GRADED AGGREGATE BASE COURSE
- ④ COMPACTED SUBBASE
- ⑤ MCDOT STANDARD NO. MC-100.01 OR STANDARD NO. MC-101.01 COMBINATION CONCRETE CURB AND GUTTER

**OWNER/ADDRESS:**

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 100 EDISON PARK DRIVE  
 GAITHERSBURG, MARYLAND

**CONTACT:**  
 DIVISION OF TRANSPORTATION ENGINEERING  
 CONSTRUCTION SECTION  
 240-777-7210  
 DESIGN SECTION  
 240-777-7221

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
 APPROVED

Chief, Division of Transportation Engineering

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

**MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:**

Stormwater Management:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

Approved \_\_\_\_\_ Date \_\_\_\_\_

Approved \_\_\_\_\_ Date \_\_\_\_\_

FILE NO. \_\_\_\_\_

Sediment Control Technical Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

Approved \_\_\_\_\_ Date \_\_\_\_\_

Approved \_\_\_\_\_ Date \_\_\_\_\_

FILE NO. \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

Approved \_\_\_\_\_ Date \_\_\_\_\_

Approved \_\_\_\_\_ Date \_\_\_\_\_

FILE NO. \_\_\_\_\_

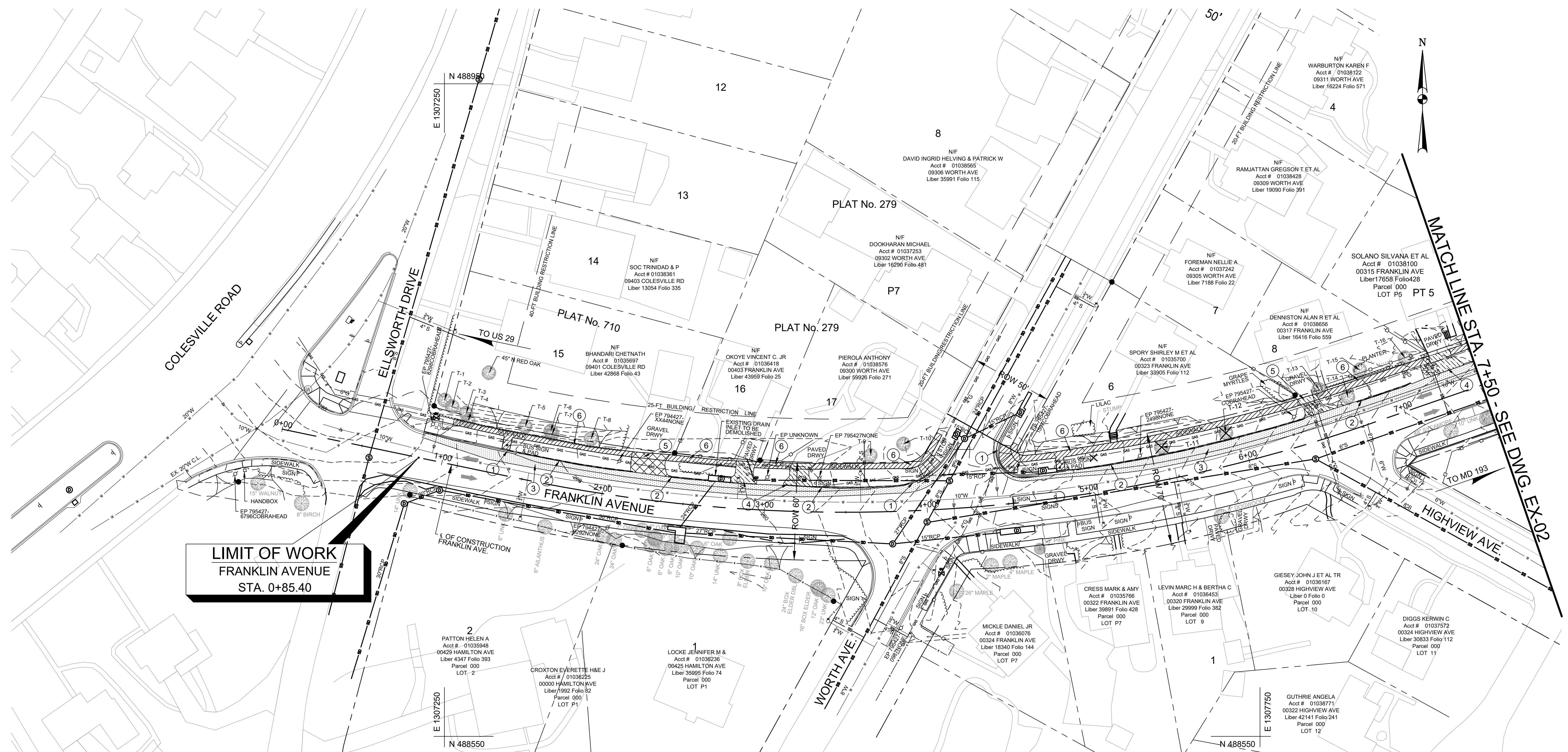
**FRANKLIN AVENUE  
 SIDEWALK  
 TYPICAL SECTIONS**

SCALE: AS SHOWN

TS-01

Project No.: TBD 03 of 109



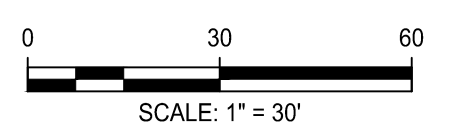


**LIMIT OF WORK**  
FRANKLIN AVENUE  
STA. 0+85.40

DEMOLITION LEGEND		
SYMBOL	DESCRIPTION	NOTES
	REMOVE EXISTING CONCRETE CURB AND GUTTER AT THE NEAREST JOINT	①
	REMOVE EXISTING ASPHALT CURB AT THE NEAREST JOINT	②
	SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT	③
	SAWCUT AND REMOVE EXISTING CONCRETE PAVEMENT TO NEAREST JOINT	④
	REMOVE EXISTING GRAVEL	⑤
	SAWCUT AND REMOVE EXISTING CONCRETE SIDEWALK TO NEAREST JOINT	⑥
	SAWCUT AND REMOVE EXISTING WALL	⑦
	REMOVE EXISTING FENCE AND TREE LINE	⑧
	EXISTING TREE (TO BE REMOVED)	

**REFERENCE NOTE:**

- FOR EXISTING TREE INFORMATION ALONG NORTH SIDE OF FRANKLIN AVE., SEE DWG. EX-06.



Engineers, Architects  
Development Consultants  
2099 Gaumer Road, Rockville, MD 20850  
Phone: 301-590-3939 Fax: 301-946-7174  
www.sheladja.com

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_  
APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

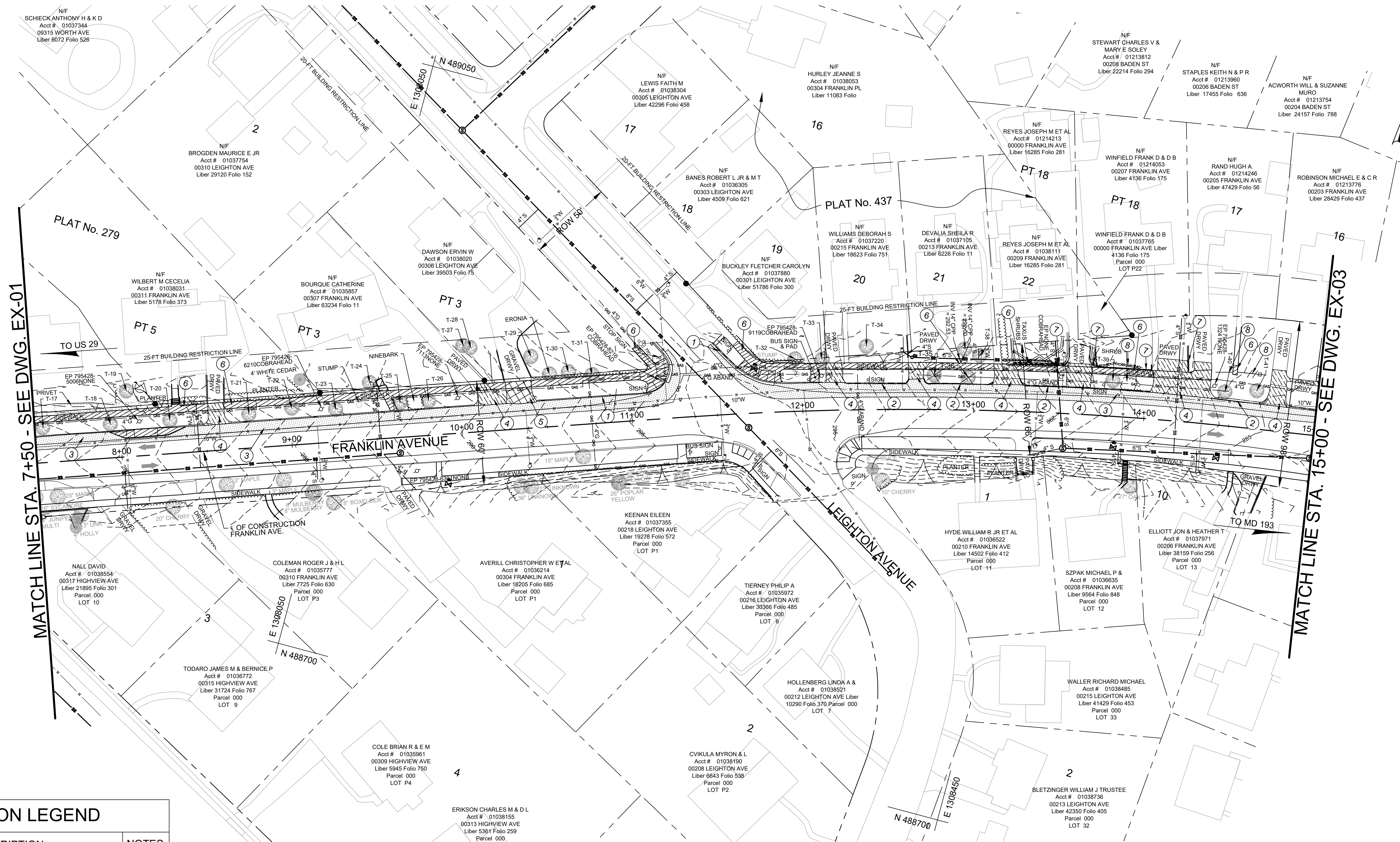
Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

**FRANKLIN AVENUE  
SIDEWALK  
EXISTING CONDITION AND  
DEMOLITION PLAN  
STA. 0+00 TO STA. 7+50**

SCALE: AS SHOWN

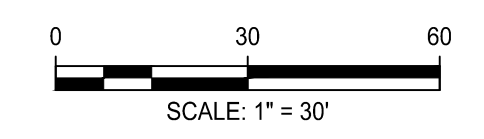
Project No.: TBD

EX-01



DEMOLITION LEGEND		
SYMBOL	DESCRIPTION	NOTES
	REMOVE EXISTING CONCRETE CURB AND GUTTER AT THE NEAREST JOINT	(1)
	REMOVE EXISTING ASPHALT CURB AT THE NEAREST JOINT	(2)
	SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT	(3)
	SAWCUT AND REMOVE EXISTING CONCRETE PAVEMENT TO NEAREST JOINT	(4)
	REMOVE EXISTING GRAVEL	(5)
	SAWCUT AND REMOVE EXISTING CONCRETE SIDEWALK TO NEAREST JOINT	(6)
	SAWCUT AND REMOVE EXISTING WALL	(7)
	REMOVE EXISTING FENCE AND TREE LINE	(8)
	EXISTING TREE (TO BE REMOVED)	

**REFERENCE NOTE:**  
 1. FOR EXISTING TREE INFORMATION ALONG NORTH SIDE OF FRANKLIN AVE., SEE DWG. EX-06.



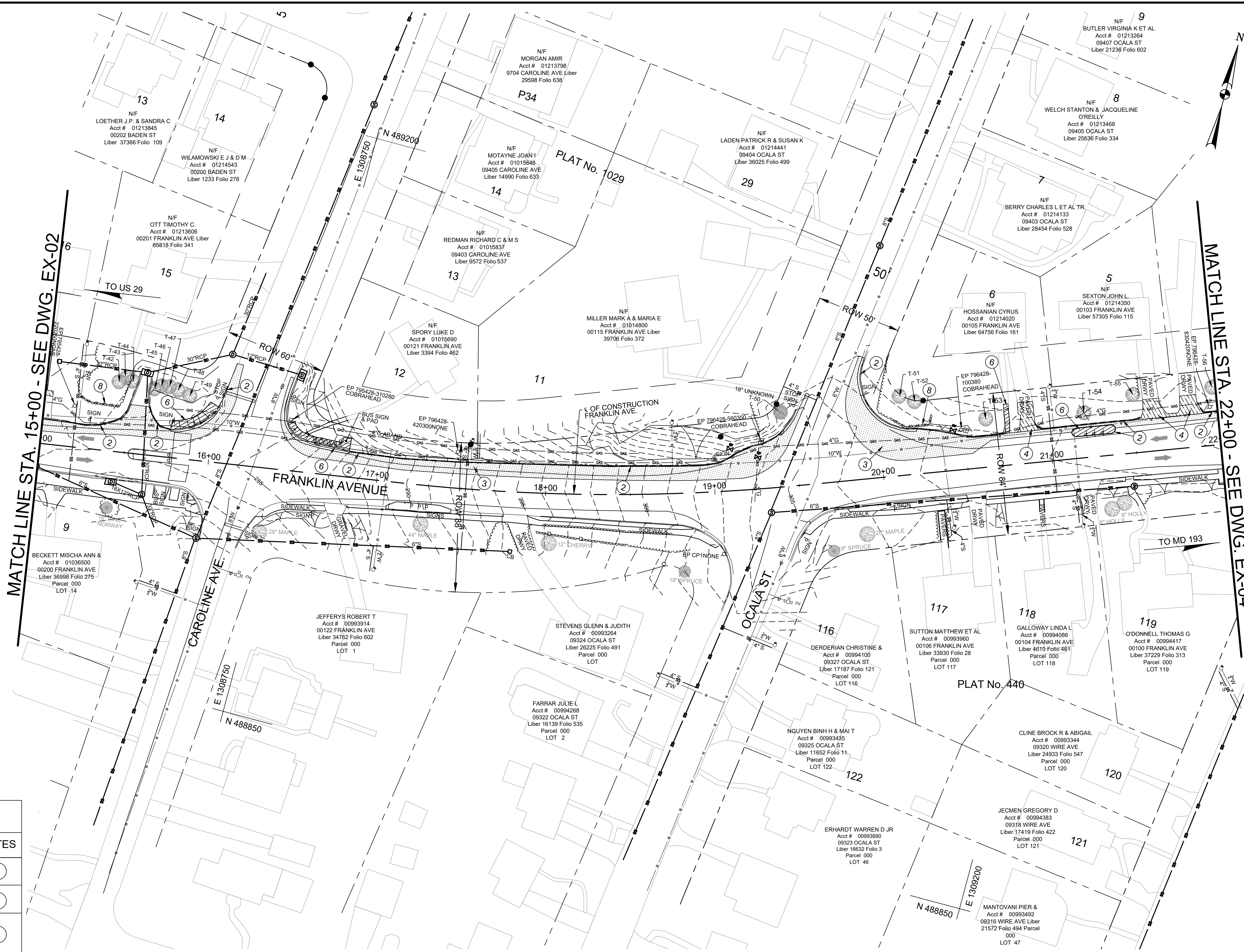
**Engineers, Architects  
Development Consultants**  
 2099 Gaumer Road, Rockville, MD 20850  
 Phone: 301-590-3939 Fax: 301-946-7174  
 www.sheledia.com

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND			
RECOMMENDED FOR APPROVAL	Chief, Design Section	_____	Date _____
APPROVED	Chief, Division of Transportation Engineering	_____	Date _____
DESIGNED BY	DESIGNED BY	CHECKED BY	CHECKED BY
NO.	REVISION	DATE	BY

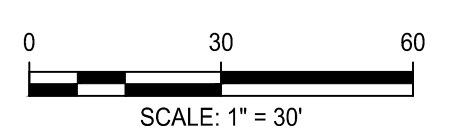
**FRANKLIN AVENUE  
SIDEWALK  
EXISTING CONDITION AND  
DEMOLITION PLAN  
STA. 7+50 TO STA. 15+00**

SCALE: AS SHOWN

Project No.: TBD of 109



**REFERENCE NOTE:**  
 1. FOR EXISTING TREE INFORMATION ALONG NORTH SIDE OF FRANKLIN AVE., SEE DWG. EX-06.



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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND	
RECOMMENDED FOR APPROVAL	Date
Chief, Design Section	
APPROVED	Date
Chief, Division of Transportation Engineering	
Designed by:	Checked by:
Drawn by:	

**FRANKLIN AVENUE  
 SIDEWALK  
 EXISTING CONDITION AND  
 DEMOLITION PLAN  
 STA. 15+00 TO STA. 22+00**

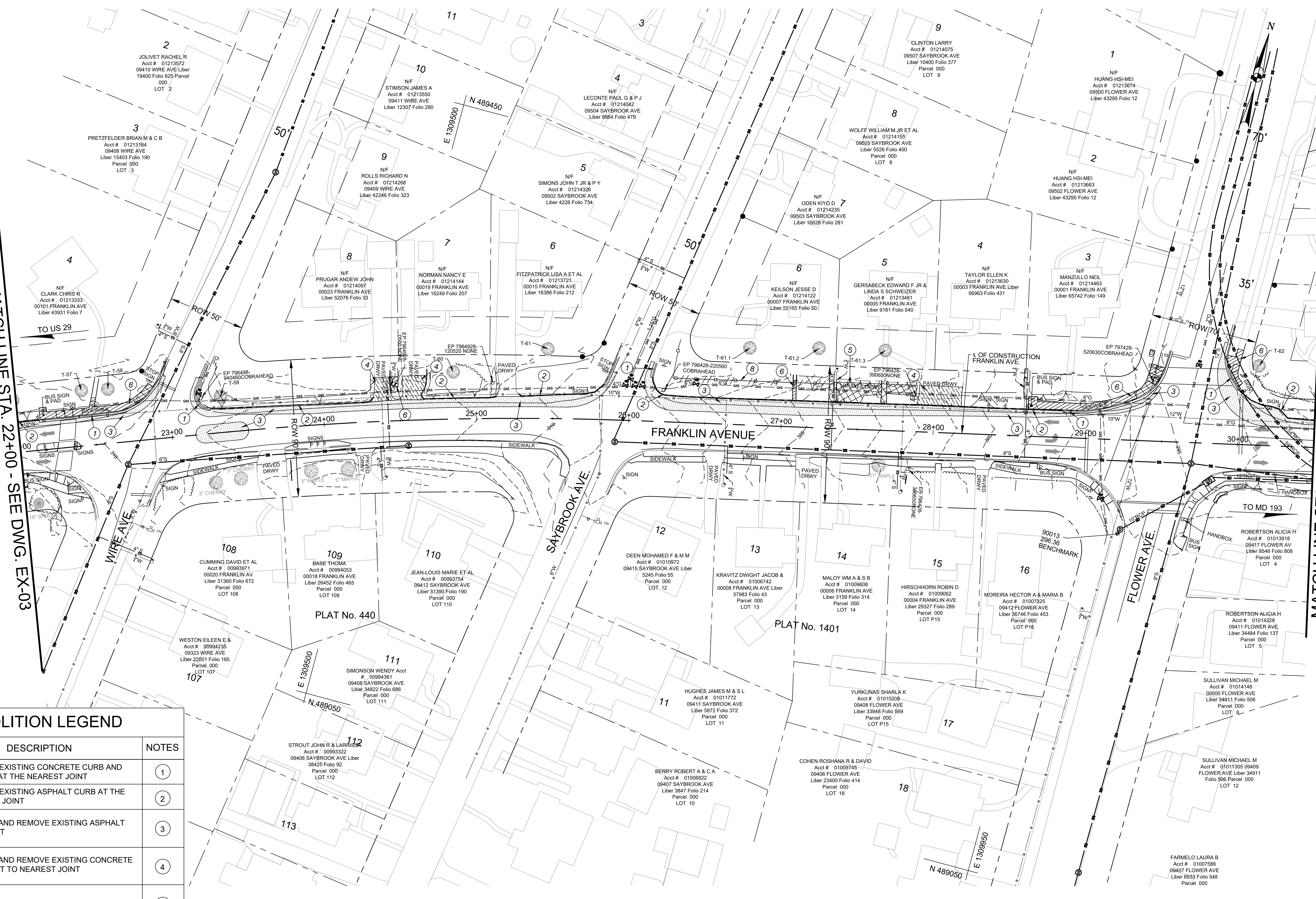
SCALE: AS SHOWN

**EX-03**

Project No.: TBD of 109

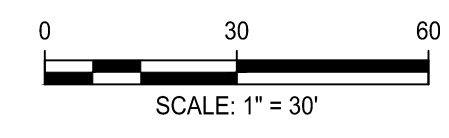
MATCH LINE STA. 22+00 - SEE DWG. EX-03

MATCH LINE STA. 30+50 - SEE DWG. EX-05



DEMOLITION LEGEND		
SYMBOL	DESCRIPTION	NOTES
	REMOVE EXISTING CONCRETE CURB AND GUTTER AT THE NEAREST JOINT	①
	REMOVE EXISTING ASPHALT CURB AT THE NEAREST JOINT	②
	SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT	③
	SAWCUT AND REMOVE EXISTING CONCRETE PAVEMENT TO NEAREST JOINT	④
	REMOVE EXISTING GRAVEL	⑤
	SAWCUT AND REMOVE EXISTING CONCRETE SIDEWALK TO NEAREST JOINT	⑥
	SAWCUT AND REMOVE EXISTING WALL	⑦
	REMOVE EXISTING FENCE AND TREE LINE	⑧
	EXISTING TREE (TO BE REMOVED)	

**REFERENCE NOTE:**  
 1. FOR EXISTING TREE INFORMATION ALONG NORTH SIDE OF FRANKLIN AVE., SEE DWG. EX-06.



**Engineers, Architects  
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 209 Gunner Road, Rockville, MD 20850  
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_  
 APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

**FRANKLIN AVENUE  
SIDEWALK  
EXISTING CONDITION AND  
DEMOLITION PLAN  
STA. 22+00 TO STA. 30+50**

SCALE: AS SHOWN

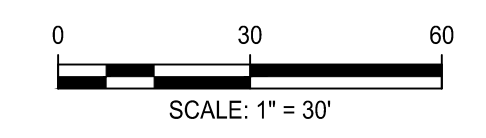
Project No.: TBD 07 of 109

**EX-04**



DEMOLITION LEGEND		
SYMBOL	DESCRIPTION	NOTES
	REMOVE EXISTING CONCRETE CURB AND GUTTER AT THE NEAREST JOINT	(1)
	REMOVE EXISTING ASPHALT CURB AT THE NEAREST JOINT	(2)
	SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT	(3)
	SAWCUT AND REMOVE EXISTING CONCRETE PAVEMENT TO NEAREST JOINT	(4)
	REMOVE EXISTING GRAVEL	(5)
	SAWCUT AND REMOVE EXISTING CONCRETE SIDEWALK TO NEAREST JOINT	(6)
	SAWCUT AND REMOVE EXISTING WALL	(7)
	REMOVE EXISTING FENCE AND TREE LINE	(8)
	EXISTING TREE (TO BE REMOVED)	

**REFERENCE NOTE:**  
 1. FOR EXISTING TREE INFORMATION ALONG NORTH SIDE OF FRANKLIN AVE., SEE DWG. EX-06.



**Engineers, Architects**  
**Development Consultants**  
 SHELDONIA  
 2099 Garner Road, Rockville, MD 20850  
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 www.sheldonia.com

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND	
RECOMMENDED FOR APPROVAL	
Chief, Design Section	
APPROVED	
Chief, Division of Transportation Engineering	
Designed by: _____	Checked by: _____
Drawn by: _____	Date: _____

**FRANKLIN AVENUE**  
**SIDEWALK**  
 EXISTING CONDITION AND  
 DEMOLITION PLAN  
 STA. 30+50 TO STA. 38+50

SCALE: AS SHOWN

**EX-05**



EXISTING TREE INFORMATION					
SYMBOL/NO.	DESCRIPTION	SYMBOL/NO.	DESCRIPTION	SYMBOL/NO.	DESCRIPTION
T- 1	18" RED OAK	T- 21	3" KOUSA DOGWOOD	T- 41	18" RED MAPLE
T- 2	DEAD	T- 22	7" AMUR MAPLE	T- 42	4" EVERGREEN SHRUB
T- 3	6" RED OAK	T- 23	1-2" SAND PALUM	T- 43	4" CEDAR
T- 4	3" WHITE MULBERRY	T- 24	15" CHERRY	T- 44	8" CEDAR
T- 5	2" SWEET CHEERY	T- 25	4" KOUSA DOGWOOD	T- 45	46" SILVER MAPLE
T- 6	9" RED OAK	T- 26	1-2" SAND PALUM	T- 46	18" SILVER MAPLE
T- 7	DEAD	T- 27	5-6" AMERICAN ELM	T- 47	30" SILVER MAPLE
T- 8	22" RED OAK	T- 28	4-6" BLACK CHERRY	T- 48	28" SILVER MAPLE
T- 9	16" AMERICAN ELM	T- 29	48" TULIP POPLAR	T- 49	24" SILVER MAPLE
T- 10	13" JAPANESE CHERRY	T- 30	DEAD	T- 50	20" SOUTHER MAGNOLIA
T- 11	9" REDBUD	T- 31	4" AMERICAN DOGWOOD	T- 51	12" DOGWOOD
T- 12	9" REDBUD	T- 32	11" AMERICAN ELM	T- 52	1" APPLE
T- 13	9" HOLLY	T- 33	14" AMERICAN HOLLY	T- 53	34" RED OAK
T- 14	4-5" CRAPE MYRTLE	T- 34	7" DOGWOOD	T- 54	13" HACKBERRY
T- 15	6" AMERICAN DOGWOOD	T- 35	15" SAWTOOTH OAK	T- 55	24/22" MULLBERRY
T- 16	2-4" CRAPE MYRTLE	T- 36	16" SAWTOOTH OAK	T- 56	2-4" CRAPE MYRTLE
T- 17	9" AMUR MAPLE	T- 37	15" HOLLY	T- 57	7" CRAPE MYRTLE
T- 18	4" SERVICEBERRY	T- 38	11" X 2 HOLLY	T- 58	2-4" CRAPE MYRTLE
T- 19	4" VIBURNUM	T- 39	2-4" CRAPE MYRTLE	T- 59	16" EASTERN RED CEDAR
T- 20	4" REDBUD	T- 40	16" RED MAPLE	T- 60	8" DOGWOOD
				T- 61	1/4" CHERRY
				T- 62	34" SOUTHER RED OAK
				T- 63	42" SYCAMORE
				T- 64	10" BLUE SPRUCE
				T- 65	10" BLUE SPRUCE
				T- 66	11" BRADFORD PEAR
				T- 67	9" MULLBERRY
				T- 66.2	9" REDBUD
				T- 66.3	6" MULLBERRY
				T- 66.4	8" MULLBERRY
				T- 66.5	3" REDBUD
				T- 67	2" MULLBERRY
				T- 68	10" DOGWOOD
				T- 69	20" JAPANESE CHERRY
				T- 70	27" SOUTHER RED OAK
				T- 71	2" RED MAPLE
				T- 72	9" KOUSA DOGWOOD
				T- 73	13" RED CEDAR
				T- 74	12" WHITE PINE
				T- 75	4" REDBUD

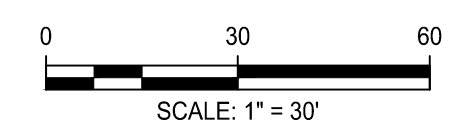


MATCH LINE STA. 38+50 - SEE DWG. EX-05

**LIMIT OF WORK**  
FRANKLIN AVENUE  
STA. 46+09.40

DEMOLITION LEGEND		
SYMBOL	DESCRIPTION	NOTES
	REMOVE EXISTING CONCRETE CURB AND GUTTER AT THE NEAREST JOINT	①
	REMOVE EXISTING ASPHALT CURB AT THE NEAREST JOINT	②
	SAWCUT AND REMOVE EXISTING ASPHALT PAVEMENT	③
	SAWCUT AND REMOVE EXISTING CONCRETE PAVEMENT TO NEAREST JOINT	④
	REMOVE EXISTING GRAVEL	⑤
	SAWCUT AND REMOVE EXISTING CONCRETE SIDEWALK TO NEAREST JOINT	⑥
	SAWCUT AND REMOVE EXISTING WALL	⑦
	REMOVE EXISTING FENCE AND TREE LINE	⑧
	EXISTING TREE (TO BE REMOVED)	

REFERENCE NOTE:  
1. FOR EXISTING TREE INFORMATION ALONG NORTH SIDE OF FRANKLIN AVE., SEE TABLE ON THIS SHEET.



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MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND			
RECOMMENDED FOR APPROVAL	Date		
Chief, Design Section	APPROVED		
Chief, Division of Transportation Engineering	Date		
Designed by: _____	Drawn by: _____	Checked by: _____	

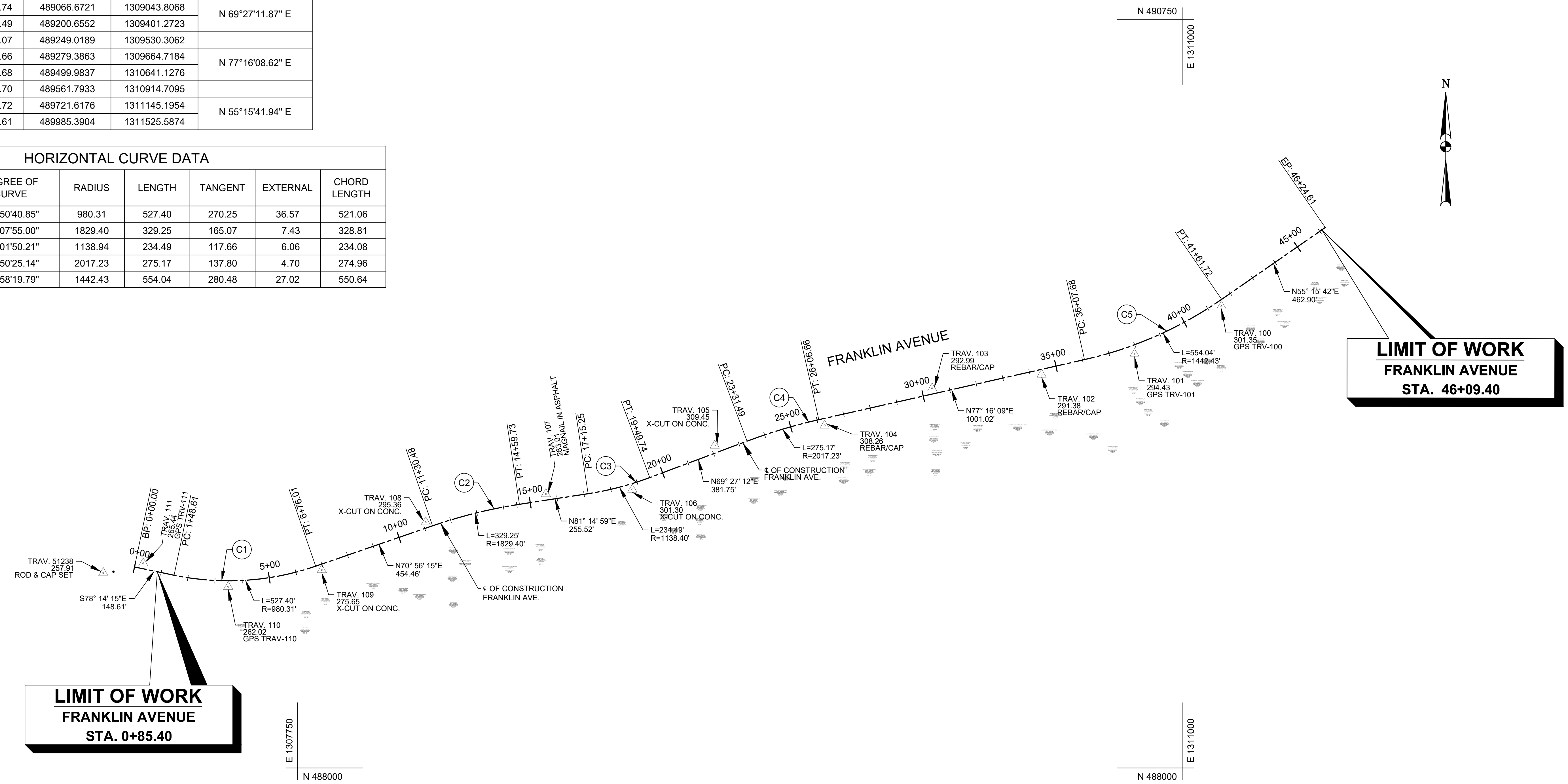
**FRANKLIN AVENUE**  
**SIDEWALK**  
EXISTING CONDITION AND  
DEMOLITION PLAN  
STA. 38+50 TO STA. 46+25

SCALE: AS SHOWN

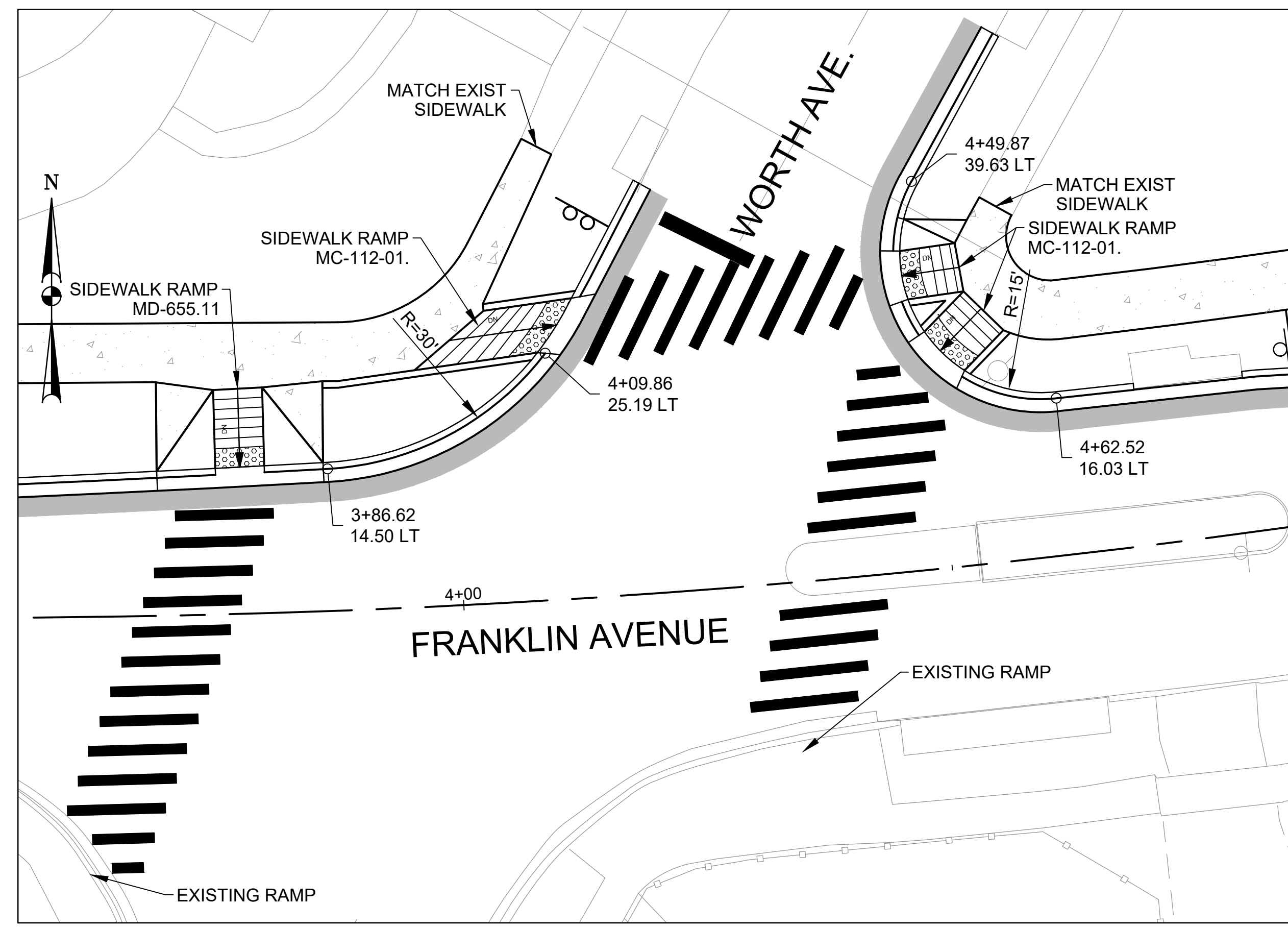
EX - 06

PROJECT COORDINATES					
CURVE NO.	DESCRIPTION	STATION	NORTHING	EASTING	BEARING
	POB	0+00.00	488738.2784	1307150.5858	
C1	PC	1+48.61	488707.9829	1307296.0785	S 78°14'15.22" E
	PI	4+12.31	488652.8914	1307560.6533	
	PT	6+76.01	488741.1542	1307816.0835	N 70°56'15.47" E
C2	PC	11+30.48	488889.5803	1308245.6249	
	PI	12+95.10	488943.4922	1308401.6443	
	PT	14+59.73	488968.6045	1308564.7943	N 81°14'58.54" E
C3	PC	17+15.25	489007.4767	1308817.3391	
	PI	18+32.49	489025.3765	1308933.6306	
	PT	19+49.74	489066.6721	1309043.8068	N 69°27'11.87" E
C4	PC	23+31.49	489200.6552	1309401.2723	
	PI	24+69.07	489249.0189	1309530.3062	
	PT	26+06.66	489279.3863	1309664.7184	N 77°16'08.62" E
C5	PC	36+07.68	489499.9837	1310641.1276	
	PI	38+84.70	489561.7933	1310914.7095	
	PT	41+61.72	489721.6176	1311145.1954	N 55°15'41.94" E
	POE	46+24.61	489985.3904	1311525.5874	

HORIZONTAL CURVE DATA							
CURVE NO.	DELTA	DEGREE OF CURVE	RADIUS	LENGTH	TANGENT	EXTERNAL	CHORD LENGTH
C1	30°49'29.31"	5°50'40.85"	980.31	527.40	270.25	36.57	521.06
C2	10°18'43.07"	3°07'55.00"	1829.40	329.25	165.07	7.43	328.81
C3	11°47'46.67"	5°01'50.21"	1138.94	234.49	117.66	6.06	234.08
C4	7°48'56.75"	2°50'25.14"	2017.23	275.17	137.80	4.70	274.96
C5	22°00'26.68"	3°58'19.79"	1442.43	554.04	280.48	27.02	550.64

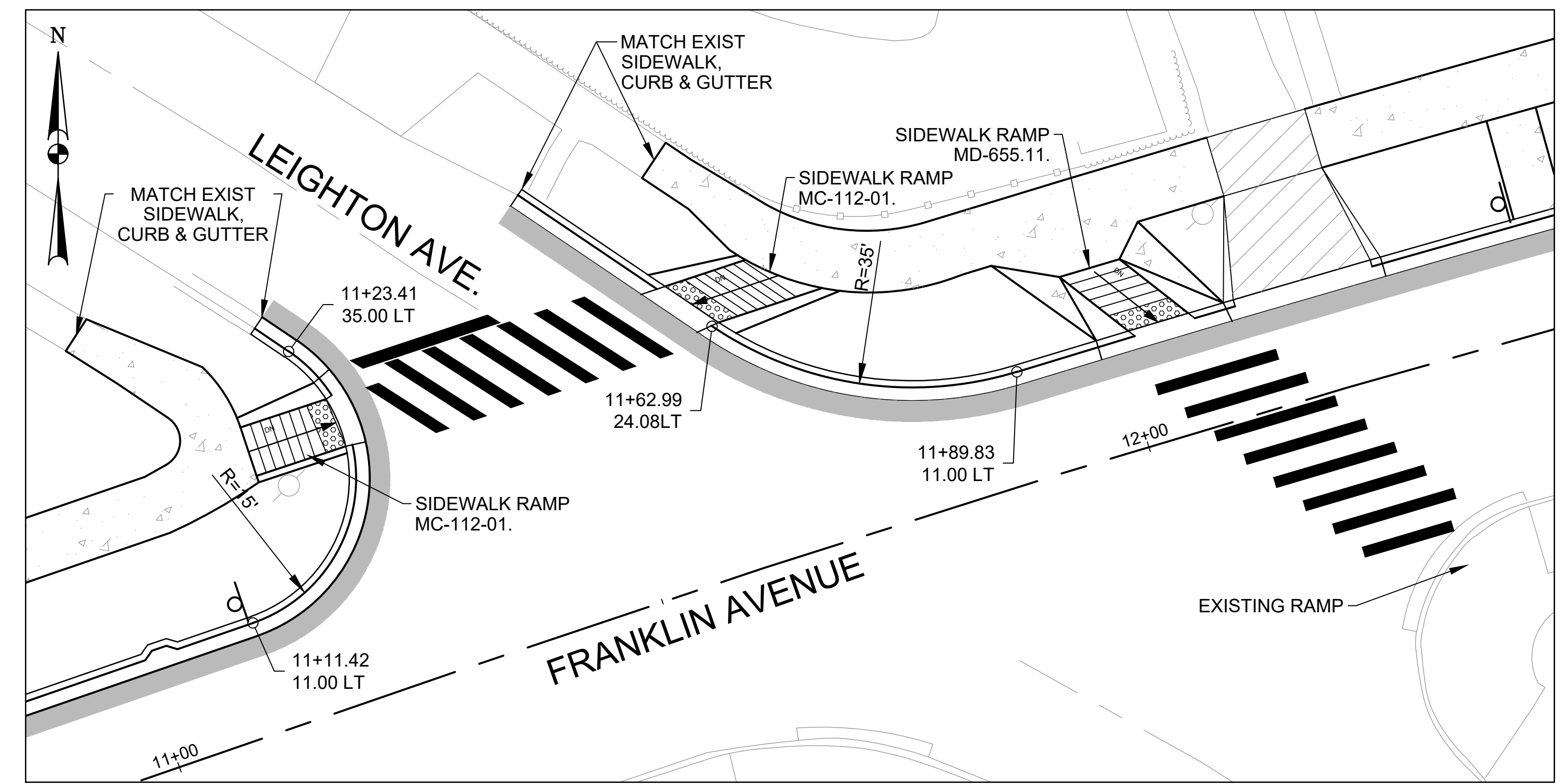


				MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND	
RECOMMENDED FOR APPROVAL Chief, Design Section _____ Date _____ APPROVED Chief, Division of Transportation _____ Date _____				<b>FRANKLIN AVENUE          SIDEWALK          GEOMETRIC LAYOUT</b>	
NO. _____ REVISION _____ DATE _____ BY _____				SCALE: 1" = 200' Project No.: <u>TBD</u> of <u>109</u>	
DESIGNED BY: _____ DRAWN BY: _____ CHECKED BY: _____				GS-01	



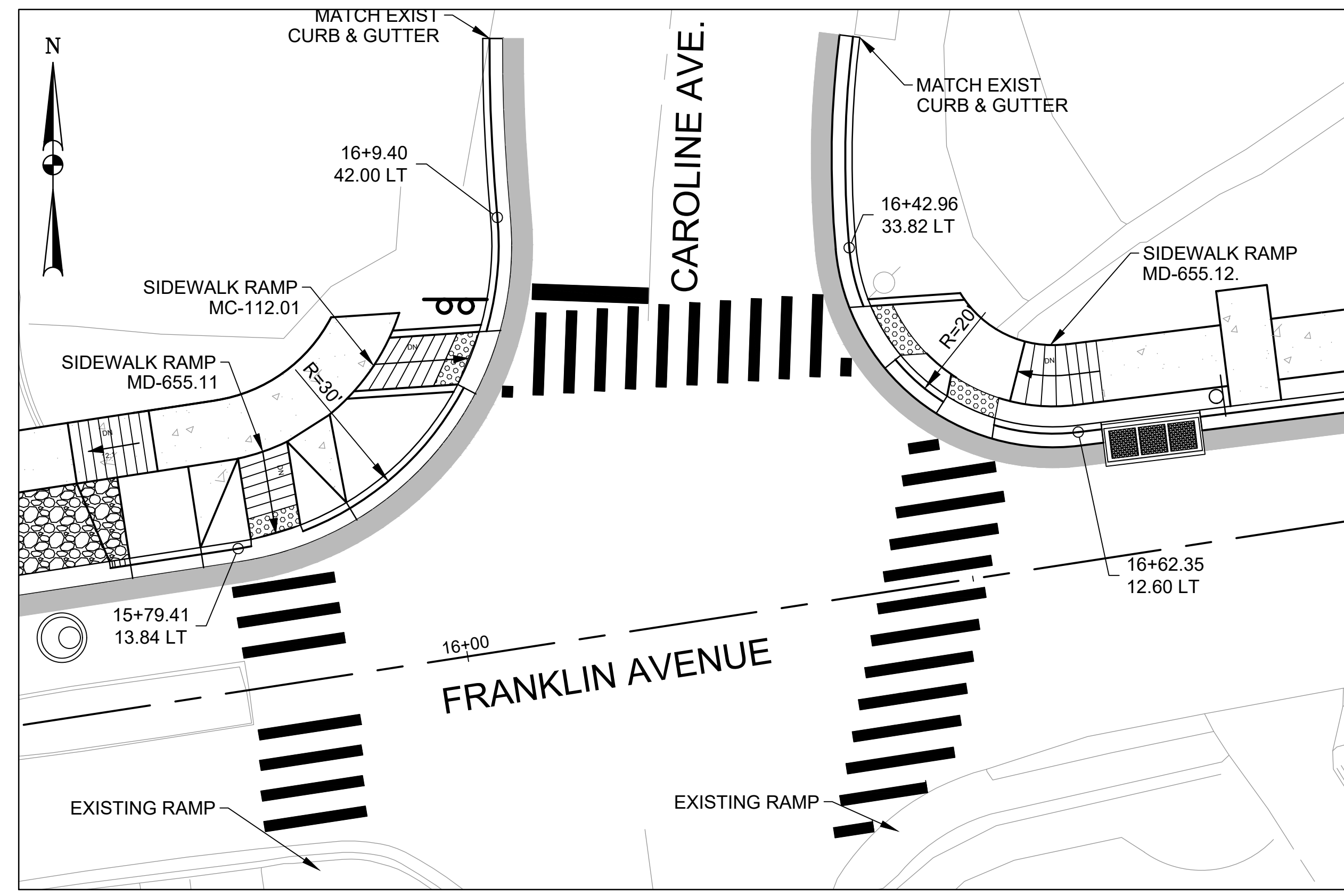
**FRANKLIN AVE. AND WORTH AVE. INTERSECTION**

SCALE: 1" = 10'



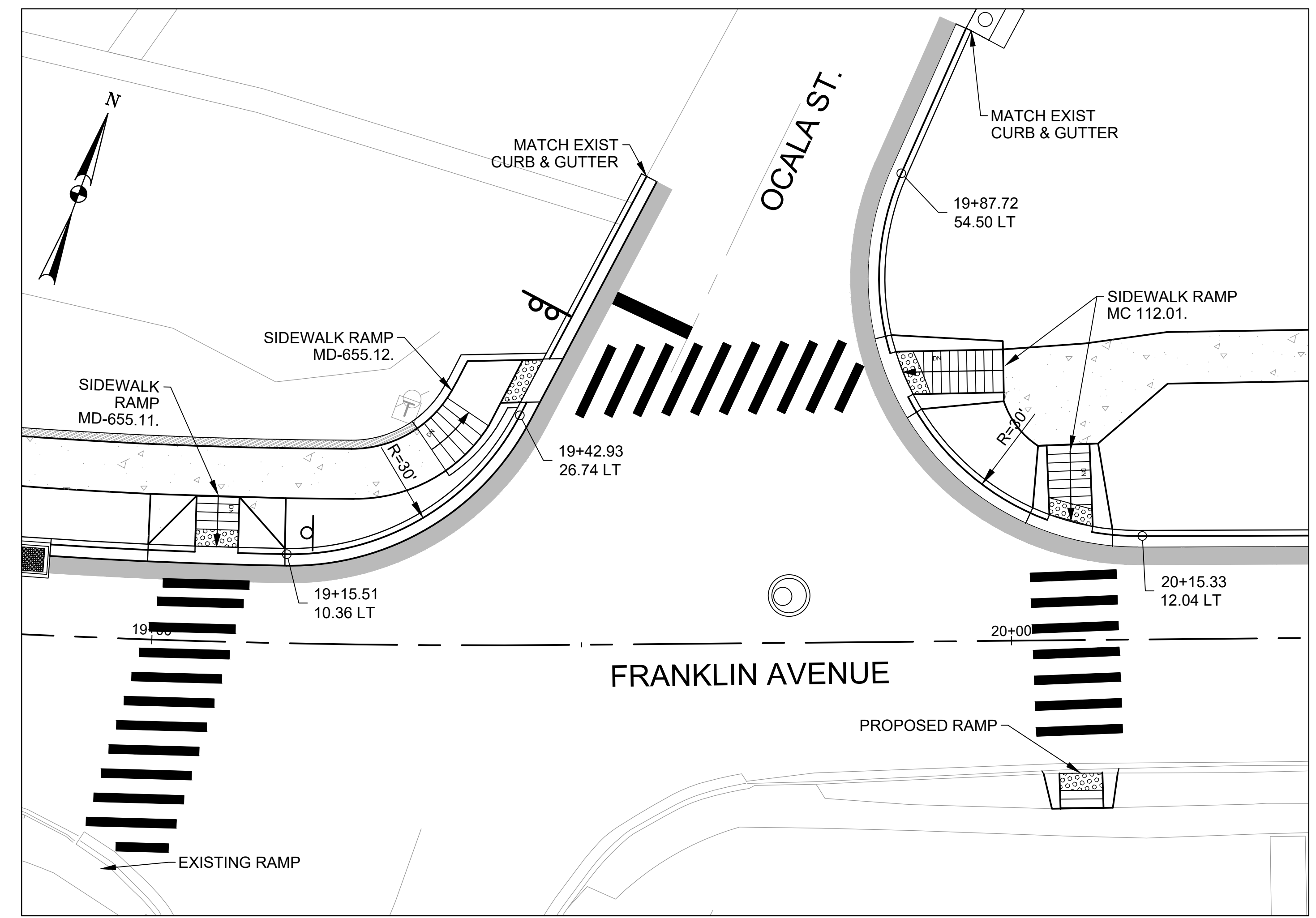
**FRANKLIN AVE. AND LEIGHTON AVE. INTERSECTION**

SCALE: 1" = 10'



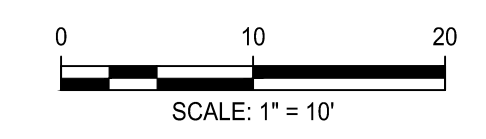
**FRANKLIN AVE. AND CAROLINE AVE. INTERSECTION**

SCALE: 1" = 10'



**FRANKLIN AVE. AND OCALA ST. INTERSECTION**

SCALE: 1" = 10'



Engineers, Architects  
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SHELADIA  
2099 Garner Road, Rockville, MD, 20850  
Phone: 301-586-3939 Fax: 301-946-7174  
www.sheladia.com

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_  
APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

**FRANKLIN AVENUE  
SIDEWALK  
INTERSECTION DETAILS**

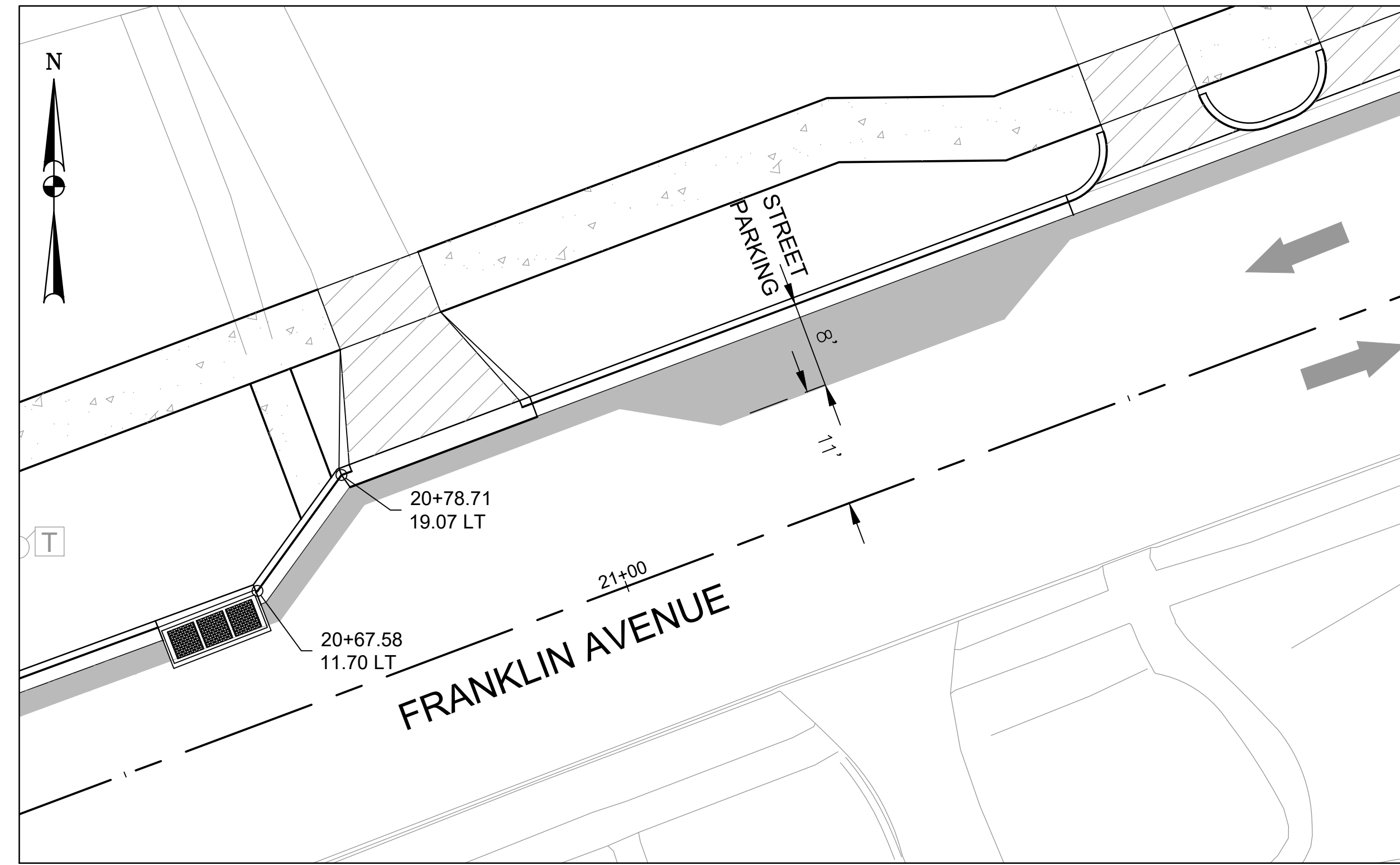
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GS - 02

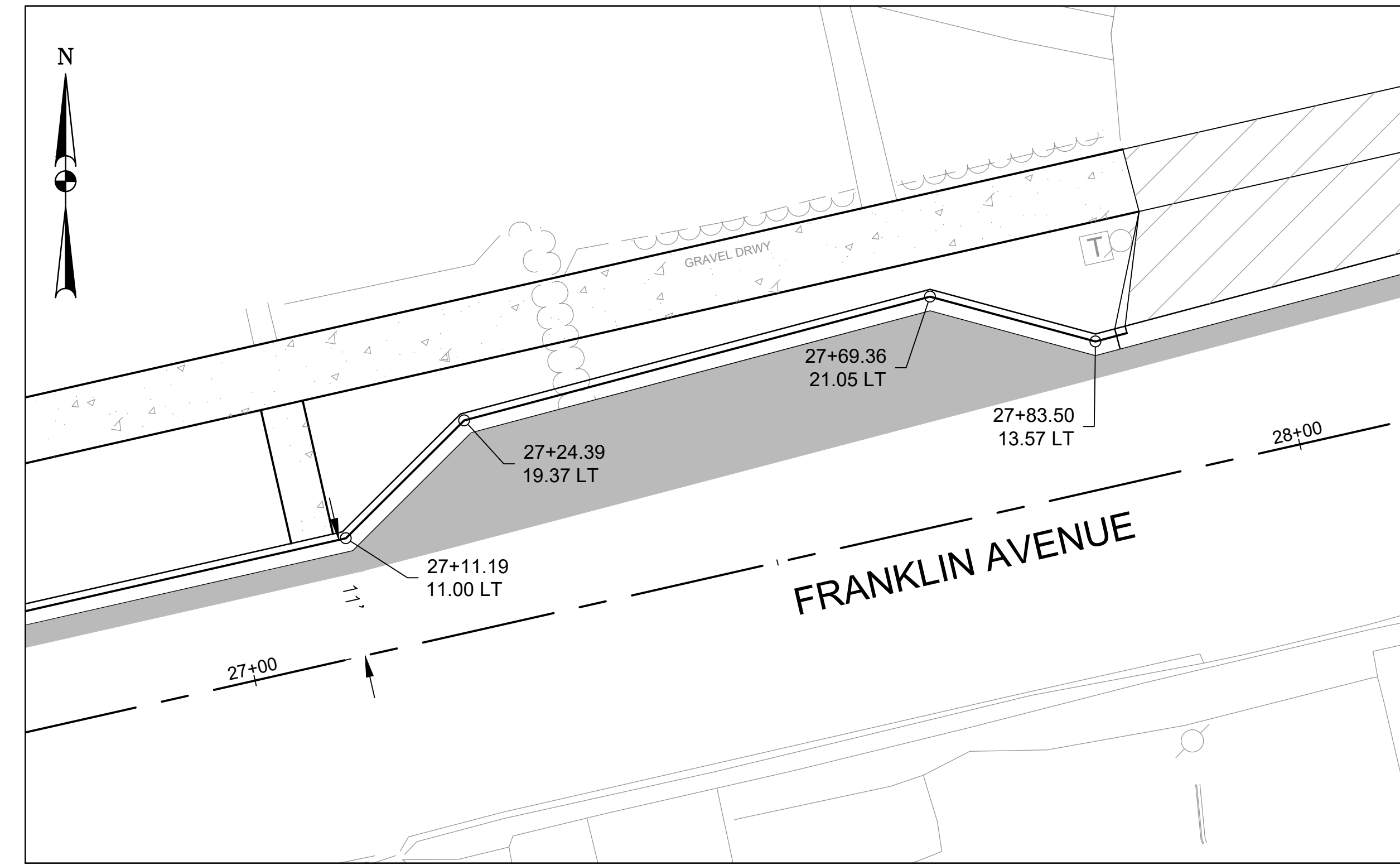
Project No.: TBD 11 of 109



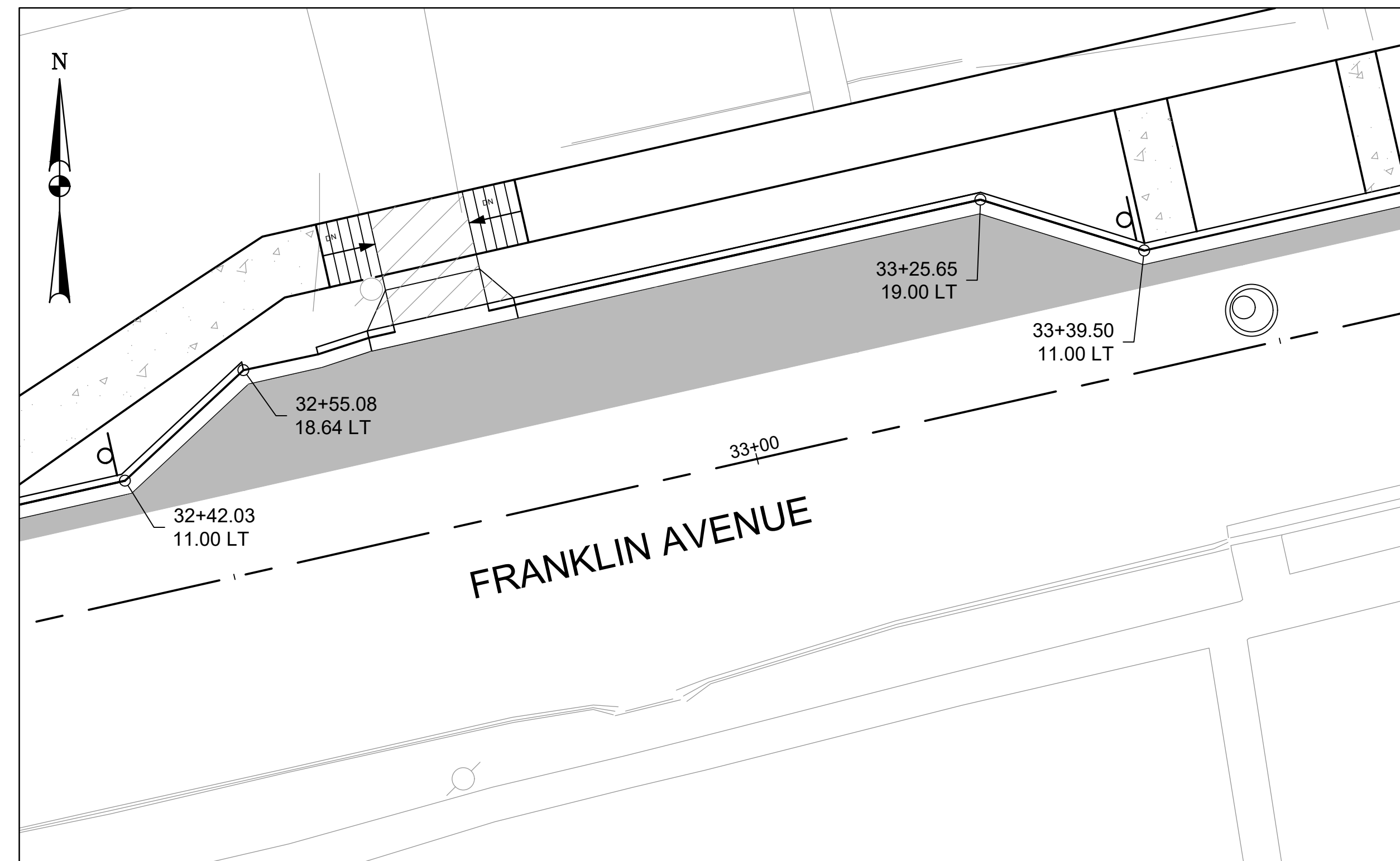




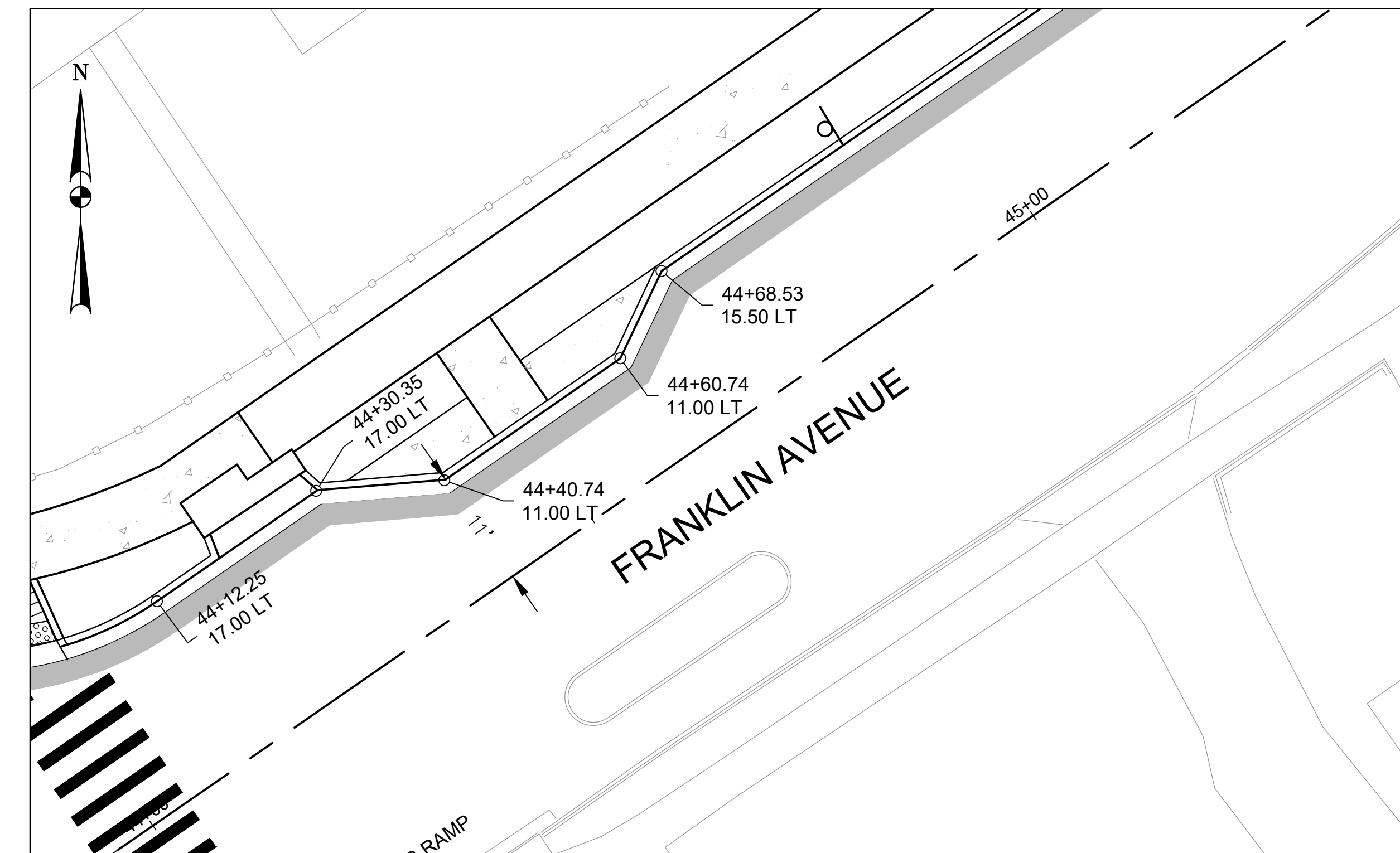
**DETAIL - 1**  
SCALE: 1" = 10'



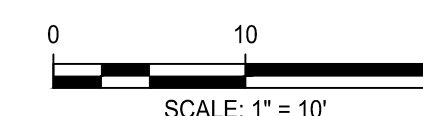
**DETAIL - 2**  
SCALE: 1" = 10'



**DETAIL 3**  
SCALE: 1" = 10'



**DETAIL 4**  
SCALE: 1" = 10'



**Engineers, Architects  
Development Consultants**  
SHELADIA  
2099 Garthier Road, Rockville, MD, 20850  
Phone: 301-586-3939 Fax: 301-946-7174  
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND	
RECOMMENDED FOR APPROVAL	
Chief, Design Section	
APPROVED	
Chief, Division of Transportation Engineering	
Designed by: _____	Checked by: _____
Drawn by: _____	Date: _____
	Date: _____

**FRANKLIN AVENUE  
SIDEWALK  
CURB EXTENSION DETAILS**

SCALE: AS SHOWN

GS - 05

COMBINATION CONCRETE CURB AND GUTTER TYPE A (STD. NO. MC-100.01)		
QUANTITY (LF)	STA. START	STA. END
85.8	0+85.50 LT	1+71.30 LT
29.3	1+82.00 LT	2+11.60 LT
18.1	2+40.20 LT	2+58.50 LT
32.4	3+80.07 LT	4+09.86 LT
12.1	4+13.87 LT	4+21.00 LT
24.6	4+47.21 LT	4+60.00 LT
3.9	4+47.58 LT	4+49.00 LT
18.1	4+53.00 LT	4+71.00 LT

COMBINATION CONCRETE CURB AND GUTTER TYPE C (STD. NO. MC-101.01)		
QUANTITY (SF)	STA. START	STA. END
3.4	2+74.71 LT	2+78.18 LT
14.4	2+97.08 LT	3+11.69 LT
42	3+32.48 LT	3+75.00 LT
38.7	4+81.93 LT	5+21.03 LT
31.1	5+25.08 LT	5+56.58 LT
7.3	5+60.62 LT	5+68.04 LT
7.3	5+72.09 LT	5+79.05 LT
14.3	5+83.59 LT	5+98.10 LT
7.3	6+02.15 LT	6+09.58 LT
7.3	6+13.62 LT	6+21.05 LT
9.6	6+25.12 LT	6+34.81 LT
65.1	6+55.96 LT	7+21.25 LT
8.1	7+41.27 LT	7+50.00 LT

DEPRESSED CURB ENTRANCE (STD. NO. MC-102.01)		
QUANTITY (SF)	STA. START	STA. END
28.3	2+11.59 LT	2+40.20 LT
18.7	2+78.18 LT	2+97.08 LT
20.5	3+11.69 LT	3+32.48 LT
5	3+75.00 LT	3+80.00 LT
6.7	4+09.06 LT	4+13.00 LT
5.4	4+47.90 LT	4+48.24 LT
6	4+49.63 LT	4+53.36 LT
21	6+34.81 LT	6+55.96 LT
20	7+21.25 LT	7+41.27 LT

4 INCH THICK RESIDENTIAL SIDEWALK (STD. NO. MC-110.01)		
QUANTITY (SF)	STA. START	STA. END
705	1+01.86 LT	2+15.58 LT
262	2+36.25 LT	2+81.04 LT
134	2+93.40 LT	3+16.27 LT
528	3+28.78 LT	4+11.82 LT
1196	4+61.58 LT	6+38.91 LT
436	6+52.00 LT	7+25.25 LT
77	7+37.27 LT	7+50.00 LT

7 INCH THICK PLAIN CONCRETE FOR DRIVEWAYS AND DRIVEWAY APRONS (STD. NO. MC-301.01)	
QUANTITY (SF)	STATION
361	2+25.86 LT
233	2+87.22 LT
247	3+22.52 LT
247	6+45.45 LT
237	7+31.28 LT

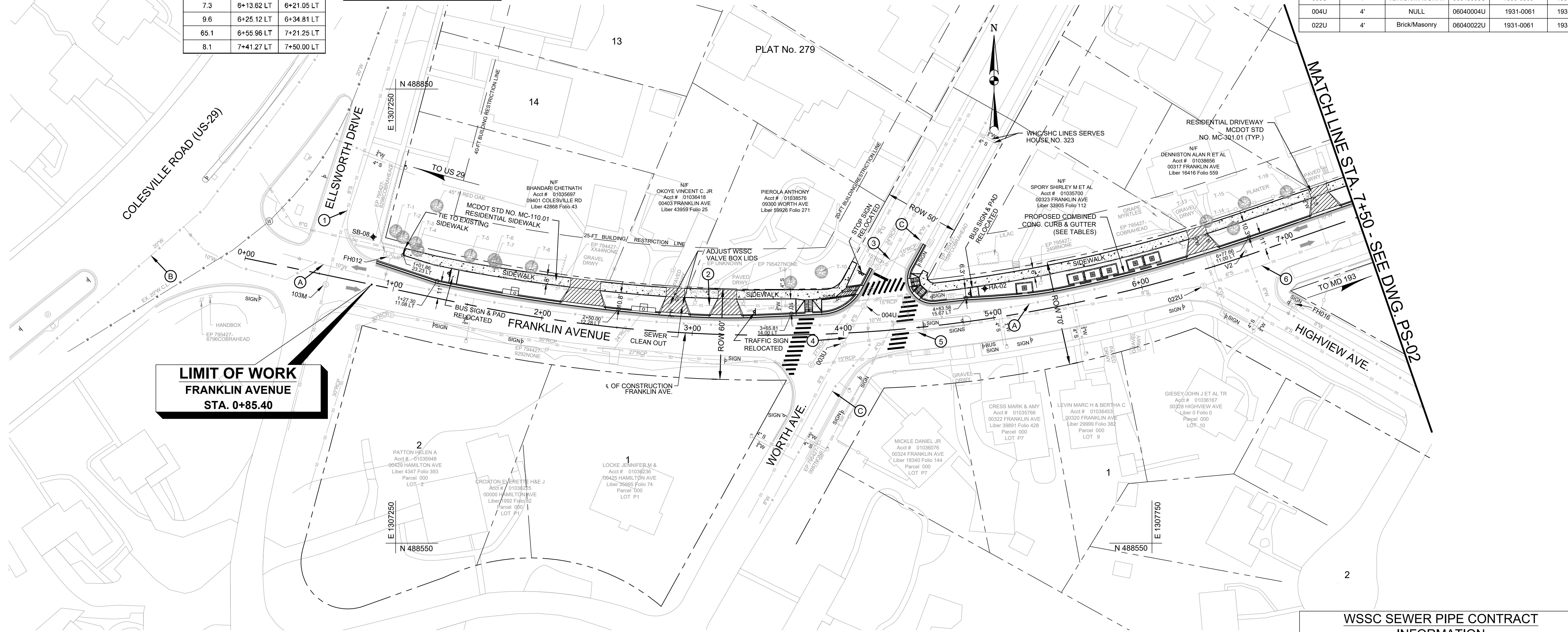
SIDEWALK RAMP PERPENDICULAR (STD. NO. MD-655.11)	
QUANTITY (EA)	STATION
1	3+77.53 LT
1	4+11.21 LT
1	4+47.85 LT
1	4+51.10 LT

DETECTABLE WARNING SURFACE (STD. NO. MD-655.40)	
QUANTITY (SF)	STATION
10	3+77.53 LT
13	4+14.93 LT
10	4+47.88 LT
11	4+51.57 LT

CURB OPENING @ PLANTERS OPENING SIZE (4'-0" X 0'-3" MIN) STA. (CENTER OF OPENING)	
5+23.00 LT	
5+58.60 LT	
5+70.00 LT	
5+81.57 LT	
6+00 LT	
6+11.60 LT	
6+23.00 LT	

FULL DEPTH BITUMINOUS CONCRETE PAVEMENT		
QUANTITY	STA. START	STA. END
77 SY	0+85.45 LT	4+23.57 LT
57 SY	4+57.33 LT	7+50.00 LT

WSSC - SEWER MANHOLES CONTRACT INFORMATION					
WERI NUMBER	MANHOLE DIA.	TYPE	ID	CONTRACT NO.	YEAR
103M	4'	UNKNOWN	06039103M	1931-0061	1931
003U	4'	VBRICK/MASONRY	06040003U	1930-0066	1930
004U	4'	NULL	06040004U	1931-0061	1931
022U	4'	Brick/Masonry	06040002U	1931-0061	1931

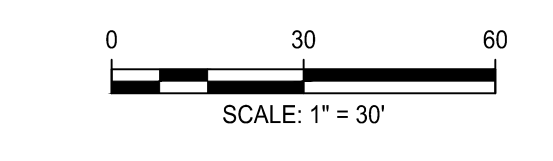


**LIMIT OF WORK**  
FRANKLIN AVENUE  
STA. 0+85.40

- REFERENCE NOTES:
- FOR EXISTING TREE INFORMATION ALONG NORTH SIDE OF FRANKLIN AVE., SEE DWG. EX-06.
  - FOR STORM DRAIN PLAN, SEE DWG'S. SD-01 TO SD-06.
  - FOR PLANTER BOX AND PERVIOUS CONCRETE PLAN, SEE DWG'S. SWM-01 TO SWM-04.
  - FOR SOIL BORING LOGS, SEE DWG. SB-01.

**LEGEND:**

- CONCRETE SIDEWALK
- CONCRETE DRIVEWAY
- PERVIOUS CONCRETE SIDEWALK
- FULL DEPTH PAVEMENT
- SOIL BORING LOCATIONS



**Engineers, Architects**  
**SHELDON**  
Development Consultants  
2039 Guilford Road, Rockville, MD, 20850  
Phone: 301-590-3939 Fax: 301-948-7174  
www.sheldonia.com

WSSC FIRE HYDRANT CONTRACT INFORMATION						
WERI NUMBER	VAULT SIZE	FIRE HYDRANT SIZE	TYPE	ID	CONTRACT NO.	YEAR
FH012	6"	6"X10" FH	FV-Fire Hydrant with Valve	FH11D01012	2013-5571A	2013
FH016	6"	6"X10" FH	FV-Fire Hydrant with Valve	FH11D01016	2013-5571A	2013

WSSC WATER PIPE CONTRACT INFORMATION					
NOTES	PIPE SIZE	PIPE TYPE	ID	CONTRACT NO.	YEAR
(A)	10"W	ASPHALT DUCTILE IRON	NULL	2013-5571A	2013
(B)	20"W	E-ZINC COATED DUCTILE IRON PIPE	NULL	2015-5977A	2015
(C)	8"W	Asphaltic Ductile Iron (old type)	NULL	2013-5571A	2013

WSSC SEWER PIPE CONTRACT INFORMATION					
NOTES	PIPE SIZE	PIPE TYPE	ID	CONTRACT NO.	YEAR
(1)	8"S	V-Vitrified Clay	06039104S	1931-0061	1931
(2)	8"S	V-Vitrified Clay	06040021S	1941-0517L	1941
(3)	8"S	U-Unknown	06040005S	1931-0061	1931
(4)	8"S	V-Vitrified Clay	06040004S	1931-0066	1931
(5)	8"S	V-Vitrified Clay	06040022S	1931-0061	1931
(6)	8"S	V-Vitrified Clay	06040027S	1931-0061	1931

**OWNER/ADDRESS:**  
DEPARTMENT OF TRANSPORTATION  
100 EDISON PARK DRIVE  
GAITHERSBURG, MARYLAND

**CONTACT:**  
DIVISION OF TRANSPORTATION ENGINEERING  
CONSTRUCTION SECTION  
240-777-7210  
DESIGN SECTION  
240-777-7221

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management: \_\_\_\_\_

Sediment Control Technical Requirements: Reviewed \_\_\_\_\_ Date \_\_\_\_\_

Administrative Requirements: Approved \_\_\_\_\_ Date \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements: Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEWAGE CONTROL PERMIT NO. \_\_\_\_\_

MCDOT APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

**FRANKLIN AVENUE**  
**SIDEWALK**  
ROADWAY AND SIDEWALK PLAN  
STA. 0+00 TO STA. 7+50

SCALE: AS SHOWN

Project No.: TBD 15 of 109

PS-01

COMBINATION CONCRETE CURB AND GUTTER TYPE A (STD. NO.MC-100.01)		
QUANTITY (LF)	STA. START	STA. END
21.9	11+11.42 LT	11+26.32 LT
10	11+26.00 LT	11+21.00 LT
16.4	11+49.20 LT	11+59.00 LT
43.4	11+62.93 LT	12+01.82 LT
4.1	12+07.91 LT	12+02.00 LT

COMBINATION CONCRETE CURB AND GUTTER TYPE C (STD. NO.MC-101.01)		
QUANTITY (LF)	STA. START	STA. END
98.0	7+50.00 LT	8+48.00 LT
136.3	8+66.00 LT	10+02.00 LT
65.1	10+46.36 LT	11+11.42 LT
5.0	12+07.00 LT	12+12.00 LT
32.2	12+25.90 LT	12+58.00 LT
31.7	12+75.84 LT	13+07.39 LT
24.5	13+26.26 LT	13+50.62 LT
5.6	13+71.98 LT	13+77.52 LT
3.6	13+98.39 LT	14+01.97 LT
25.7	14+41.62 LT	14+67.21 LT
15.5	14+84.64 LT	15+00.00 LT

DEPRESSED CURB ENTRANCE (STD. NO.MC-102.01)		
QUANTITY (LF)	STA. START	STA. END
18.0	8+48.00 LT	8+66.00 LT
44.0	10+02.36 LT	10+46.31 LT
5.0	11+26.32 LT	11+26.00 LT
5.0	11+59.01 LT	11+62.93 LT
5.0	12+02.82 LT	12+07.91 LT
14.0	12+12.00 LT	12+25.90 LT
18.0	12+57.95 LT	12+75.84 LT
19.0	13+07.39 LT	13+26.26 LT
21.5	13+50.62 LT	13+72.00 LT
39.9	14+01.97 LT	14+41.62 LT
17.3	14+67.21 LT	14+84.54 LT

FULL DEPTH BITUMINOUS CONCRETE PAVEMENT		
QUANTITY (SY)	STA. START	STA. END
108	7+50.00 LT	11+23.66 LT
82	11+46.61 LT	15+00.00 LT

4 INCH THICK RESIDENTIAL SIDEWALK (STD. NO.MC-110.01)		
QUANTITY (SF)	STA. START	STA. END
673.4	7+50.00 LT	8+52.02 LT
908.9	8+62.02 LT	10+06.36 LT
535.3	10+42.31 LT	11+05.72 LT
343.8	11+61.00 LT	12+14.00 LT
281.5	12+23.88 LT	12+61.92 LT
240.2	12+71.81 LT	13+11.33 LT
196.5	13+22.24 LT	13+54.53 LT
230.6	13+67.92 LT	14+05.69 LT
207.9	14+36.90 LT	14+71.00 LT
112.2	14+81.00 LT	15+00.00 LT

7 INCH THICK PLAIN CONCRETE FOR DRIVEWAYS AND DRIVEWAY APRONS (STD NO. MC-301.01)		
QUANTITY (SF)	STATION	
204.5	8+57.00 LT	
627.9	10+24.34 LT	
179.8	12+18.94 LT	
199.9	12+66.86 LT	
216.6	13+16.79 LT	
282.00	13+61.23 LT	
796.5	14+21.51 LT	
282.1	14+75.89 LT	

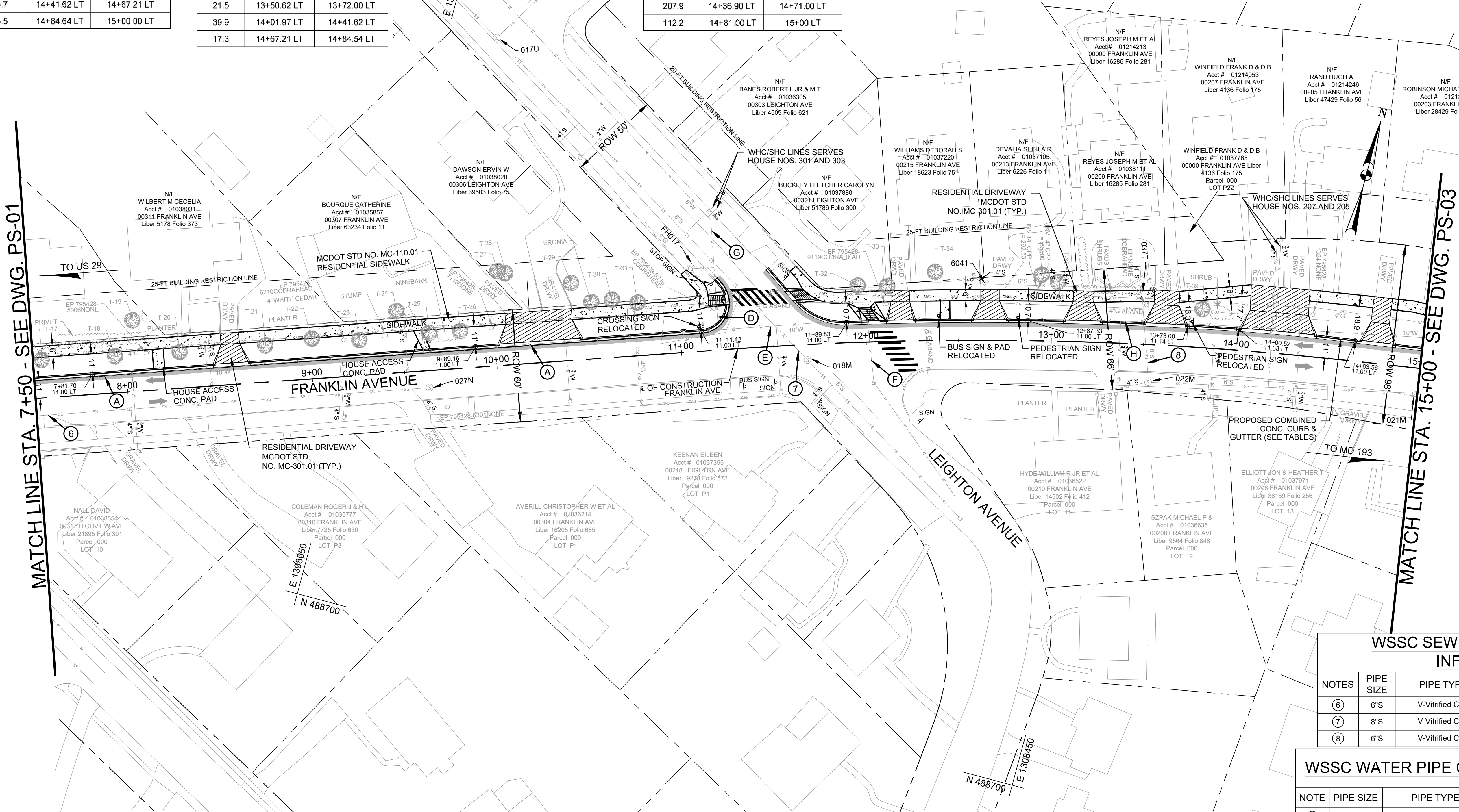
SIDEWALK RAMP PERPENDICULAR (STD NO. MD-655.11)		
QUANTITY (EA)	STATION	
1	12+04.55 LT	

RESIDENTIAL SIDEWALK RAMP (STD NO. MC-112.01)		
QUANTITY (EA)	STATION	
1	11+25.50 LT	
1	11+61.04 LT	

DETECTABLE WARNING SURFACE (STD NO. MD-655.40)		
QUANTITY (SF)	STATION	
10	11+25.50 LT	
10	11+61.04 LT	
10	12+04.55 LT	

WSSC - SEWER MANHOLES CONTRACT INFORMATION						
WERI NUMBER	MANHOLE DIA.	TYPE	ID	CONTRACT NO.	YEAR	
027N	4'	VBRICK/MASONRY	06040027N	1931-0061	1931	
017U	4'	VBRICK/MASONRY	06040017U	1931-0061	1931	
018M	4'	VBRICK/MASONRY	06040018M	1931-0061	1931	
022M	4'	UNKNOWN	06040022M	1935-0271	1935	
021M	4'	UNKNOWN	06041021M	1935-0271	1935	



- REFERENCE NOTES:**
- FOR EXISTING TREE INFORMATION ALONG NORTH SIDE OF FRANKLIN AVE., SEE DWG. EX-06.
  - FOR STORM DRAIN PLAN, SEE DWG'S. SD-01 TO SD-06.
  - FOR PLANTER BOX AND PERVIOUS CONCRETE PLAN, SEE DWG'S. SWM-01 TO SWM-04.

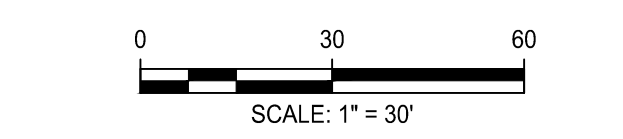
FIRE HYDRANT WSSC CONTRACT INFORMATION						
NOTES	PIPE SIZE	FIRE HYDRANT SIZE	TYPE	ID	CONTRACT NO.	YEAR
FH017	6"	6"x10" FH	FV-Fire Hydrant with Valve	FH11D01017	2000-2691A	2000

WSSC SEWER PIPE CONTRACT INFORMATION					
NOTES	PIPE SIZE	PIPE TYPE	ID	CONTRACT NO.	YEAR
⑥	6"S	V-Vitrified Clay	06040027S	1931-0061	1931
⑦	8"S	V-Vitrified Clay	06040018S	1931-0061	1931
⑧	6"S	V-Vitrified Clay	06041037S	1935-0271	1935

WSSC WATER PIPE CONTRACT INFORMATION					
NOTE	PIPE SIZE	PIPE TYPE	ID	CONTRACT NO.	YEAR
(A)	10"	ASPHALT DUCTIL IRON	NULL	2013-5571A	2013
(D)	6"	CAST IRON / SAND SPUN	WS00078434	1926-0173	1926
(E)	10"	CAST IRON / SAND SPUN	WS00078183	1933-0007	1933
(F)	8"	CAST IRON / SAND SPUN	WS00078181	1929-0033	1929
(G)	6"	CAST IRON / SAND SPUN	WS00078435	2000-2691A	2000
(H)	10"	CAST IRON / SAND SPUN	WS00078185	1933-0007	1933

**LEGEND:**

- CONCRETE SIDEWALK
- CONCRETE DRIVEWAY
- PERVIOUS CONCRETE SIDEWALK
- FULL DEPTH PAVEMENT



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 CONSTRUCTION SECTION  
 240-777-7210  
 DESIGN SECTION  
 240-777-7221

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:  
 Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEWAGE CONTROL PERMIT NO. \_\_\_\_\_

MCDOT APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL OF THE PERMIT UNLESS THE PERMIT HAS BEEN EXTENDED

**FRANKLIN AVENUE**  
**SIDEWALK**  
 ROADWAY AND SIDEWALK PLAN  
 STA. 7+50 TO STA. 15+00

SCALE: AS SHOWN

PS-02

Project No.: TBD 16 of 109



COMBINATION CONCRETE CURB AND GUTTER TYPE A (STD. NO. MC-100.01)		
QUANTITY (LF)	STA. START	STA. END
14.6	15+65.04 LT	15+80.73 LT
21.6	15+85.93 LT	16+03.61 LT
28.8	16+06.64 LT	16+11.30 LT
26.6	16+46.50 LT	16+43.47 LT
6.3	16+45.76 LT	16+49.77 LT
10.7	16+54.30 LT	16+64.66 LT
5.5	18+99.18 LT	19+04.71 LT
40.7	19+09.76 LT	19+43.75 LT
24.1	19+46.49 LT	19+58.07 LT
39.6	19+95.39 LT	19+86.14 LT
22.1	19+88.24 LT	20+04.31 LT
7.5	20+09.81 LT	20+17.24 LT

COMBINATION CONCRETE CURB AND GUTTER TYPE C (STD. NO. MC-101.01)		
QUANTITY (LF)	STA. START	STA. END
48.6	15+00.00 LT	15+48.54 LT
104.3	16+64.66 LT	17+69.49 LT
96.4	17+80.61 LT	18+78.00 LT
54.6	20+27.00 LT	20+79.71 LT
62.7	20+96.71 LT	21+56.52 LT
18.0	21+66.08 LT	21+78.35 LT
14.8	21+88.00 LT	22+00 LT

DEPRESSED CURB ENTRANCE (STD. NO. MC-102.01)		
QUANTITY (LF)	STA. START	STA. END
5.0	15+80.73 LT	15+85.93 LT
5.9	16+03.88 LT	16+06.64 LT
6.1	16+43.47 LT	16+45.76 LT
5.5	16+49.77 LT	16+54.30 LT
5.0	19+04.71 LT	19+09.76 LT
5.7	19+43.75 LT	19+46.49 LT
5.8	19+86.14 LT	19+88.24 LT
5.7	20+04.31 LT	20+09.81 LT
17.0	20+79.71 LT	20+96.71 LT
14.6	21+54.00 LT	21+68.59 LT
14.7	21+75.85 LT	21+90.57 LT

4 INCH THICK RESIDENTIAL SIDEWALK (STD. NO. MC-110.01)		
QUANTITY (SF)	STA. START	STA. END
744.6	15+00.00 LT	16+98.51 LT
1624.7	16+65.25 LT	19+34.12 LT
622.4	20+00.00 LT	20+82.70 LT
388.9	20+92.70 LT	21+56.50 LT
73.7	21+66.08 LT	21+78.35 LT
71.5	21+88.06 LT	22+00.00 LT

7 INCH THICK PLAIN CONCRETE FOR DRIVEWAYS AND DRIVEWAY APRONS (STD. NO. MC-301.01)	
QUANTITY (SF)	STATION
199.5	20+87.80 LT

7 INCH THICK PLAIN CONCRETE FOR DRIVEWAYS AND DRIVEWAY APRONS (STD. NO. MC-301.05)	
QUANTITY (SF)	STATION
111.5	21+61.30 LT
113.0	21+83.21 LT

SIDEWALK RAMP PERPENDICULAR (STD. NO. MD-655.11)	
QUANTITY (EA)	STATION
1	15+82.19 LT
1	19+07.24 LT

RESIDENTIAL SIDEWALK RAMP (STD. NO. MC-112.01)	
QUANTITY (EA)	STATION
1	16+04.65 LT
1	19+87.77 LT
1	20+07.00 LT

SIDEWALK RAMP PARALLEL (STD. NO. MD-655.12)	
QUANTITY (EA)	STATION
1	16+45.06 LT
1	16+52.26 LT
1	19+44.34 LT

DETECTABLE WARNING SURFACE (STD. NO. MD-655.40)	
QUANTITY (SF)	STATION
10.0	15+83.34 LT
11.3	16+04.51 LT
11.5	16+45.06 LT
11.4	16+52.26 LT
11.4	19+07.24 LT
10.6	19+44.34 LT
10.0	19+87.77 LT
12.0	20+07.07 LT

FULL DEPTH BITUMINOUS CONCRETE PAVEMENT		
QUANTITY (SY)	STA. START	STA. END
33	15+00.00 LT	16+12.62 LT
84	16+45.18 LT	19+59.25 LT
60	19+94.18 LT	22+00.00 LT

REINFORCED RETAINING WALL		
QUANTITY (LF)	STA. START	STA. END
69.3	17+99.39 LT	17+30.71 LT
48.7	18+80.86 LT	19+30.71 LT

**FIRE HYDRANT WSSC CONTRACT INFORMATION**

NOTES	PIPE SIZE	FIRE HYDRANT SIZE	TYPE	ID	CONTRACT NO.	YEAR
FH022	6"	6"x10" FH	FV-Fire Hydrant with Valve	FH11D01022	1935-0169Y	1935
FH024	6"	6"x10" FH	FV-Fire Hydrant with Valve	FH11D01024	1935-0142	1935

**WSSC - SEWER MANHOLES CONTRACT INFORMATION**

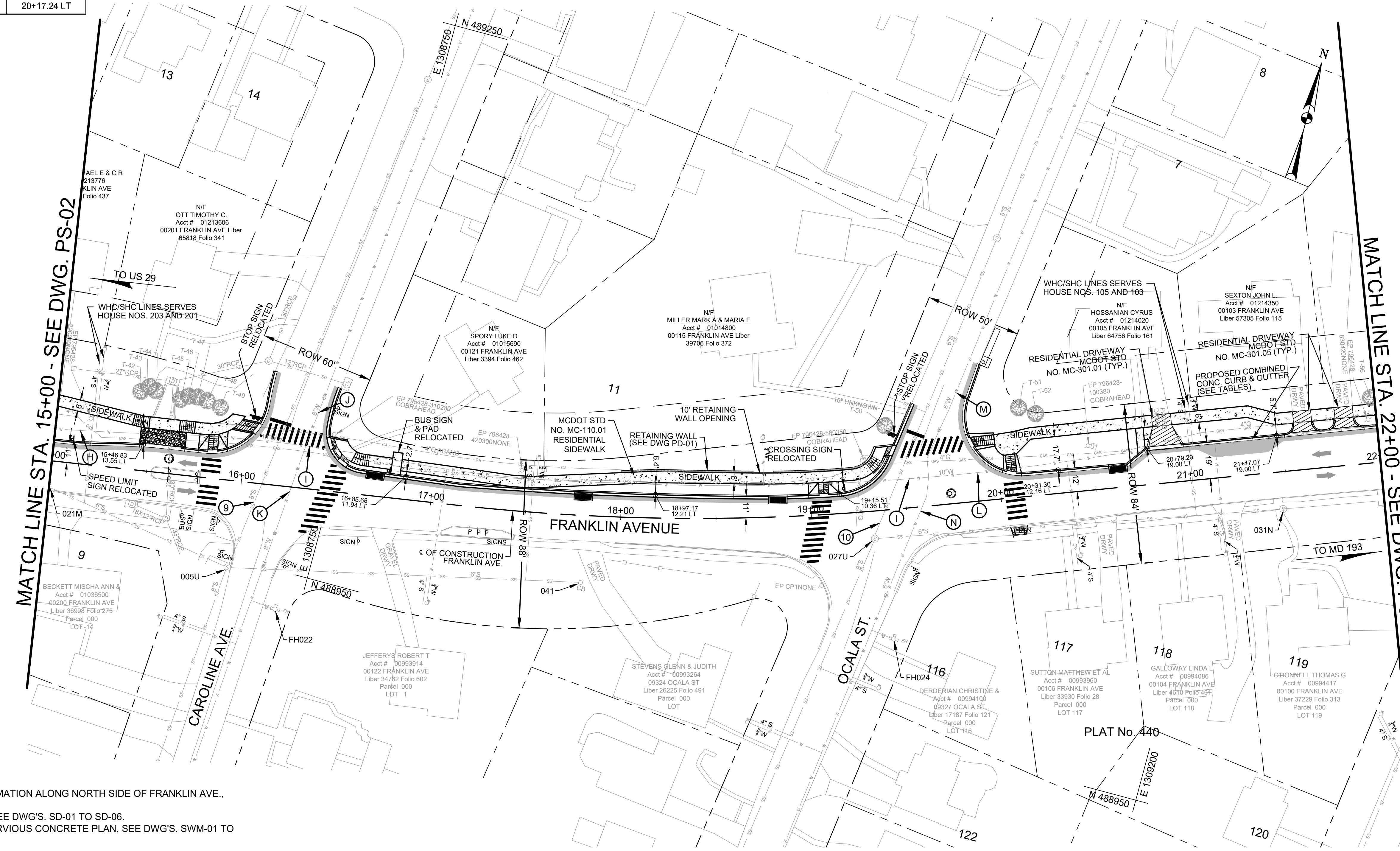
WERI NUMBER	MANHOLE DIA.	TYPE	ID	CONTRACT NO.	YEAR
021M	4'	UNKNOWN	06041021M	1935-0271	1935
005U	4'	UNKNOWN	06041005U	1935-0271	1935
06041	6"	V-VITRIFIED CLAY	06041023K	1940-0331	1940
027U	4'	UNKNOWN	06041027U	1935-0143	1935
031N	4'	UNKNOWN	06041021M	1936-0026	1936

**WSSC WATER PIPE CONTRACT INFORMATION**

NOTE	PIPE SIZE	PIPE TYPE	ID.	CONTRACT NO.	YEAR
(H)	10"	CAST IRON / SAND SPUN	WS00078185	1933-0007	1933
(I)	10"	CAST IRON / SAND SPUN	WS00078594	1933-0007	1933
(J)	8"	CAST IRON / SAND SPUN	WS00078592	1947-0444	1947
(K)	8"	CAST IRON / SAND SPUN	WS00078595	1936-0025	1936
(L)	10"	CAST IRON / SAND SPUN	WS00078534	1933-0007	1933
(M)	6"	CAST IRON / SAND SPUN	WS00125215	1947-0444	1947
(N)	6"	CAST IRON / SAND SPUN	WS00078601	1935-0142	1935

**WSSC SEWER PIPE CONTRACT INFORMATION**

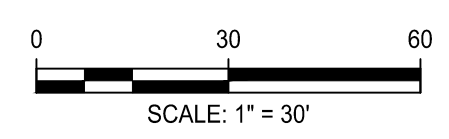
NOTES	PIPE SIZE	PIPE TYPE	ID	CONTRACT NO.	YEAR
(9)	8"S	V-Vitrified Clay	06041006S	1942-0038	1942
(10)	6"S	C-PLAIN CONCRETE	06041028S	1947-0445	1947



- REFERENCE NOTES:**
- FOR EXISTING TREE INFORMATION ALONG NORTH SIDE OF FRANKLIN AVE., SEE DWG. EX-06.
  - FOR STORM DRAIN PLAN, SEE DWG'S. SD-01 TO SD-06.
  - FOR PLANTER BOX AND PERVIOUS CONCRETE PLAN, SEE DWG'S. SWM-01 TO SWM-04.

**LEGEND:**

[Symbol]	CONCRETE SIDEWALK
[Symbol]	CONCRETE DRIVEWAY
[Symbol]	PERVIOUS CONCRETE SIDEWALK
[Symbol]	FULL DEPTH PAVEMENT



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NO.	REVISION	DATE	BY

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MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:  
 Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEWAGE CONTROL PERMIT NO. \_\_\_\_\_

PROJECT NO. \_\_\_\_\_

**FRANKLIN AVENUE SIDEWALK ROADWAY AND SIDEWALK PLAN STA. 15+00 TO STA. 22+00**

SCALE: AS SHOWN

PS-03

Project No.: TBD 17 of 109

**4 INCH THICK RESIDENTIAL SIDEWALK (STD. NO. MC-110.01)**

QUANTITY (SF)	STA. START	STA. END
594	22+00.00 LT	22+89.71 LT
671	23+25.61 LT	24+34.08 LT
50	24+43.97 LT	24+52.22 LT
259	24+67.14 LT	25+09.16 LT
248	25+31.98 LT	25+73.75 LT
1090	26+20.82 LT	27+90.14 LT
662	28+18.16 LT	29+20.82 LT
50	29+41.88 LT	29+45.51 LT
99	29+97.81 LT	29+92.55 LT
250	30+07.74 LT	30+50.00 LT

**FULL DEPTH BITUMINOUS CONCRETE PAVEMENT**

QUANTITY (SY)	STA. START	STA. END
24	22+00.00 LT	22+99.43 LT
68	23+19.22 LT	25+91.00 LT
132	26+13.93 LT	29+48.28 LT
24	29+89.15 LT	30+50.00 LT

**MONOLETHIC CONCRETE MEDIAN, 4' WIDE**

QUANTITY (LF)	STA. START	STA. END
27.1	23+19.00	23+46.00

**RESIDENTIAL SIDEWALK RAMP (STD NO. MC-112.01)**

QUANTITY (EA)	STATION
1	22+86.67 LT
1	23+19.25 LT
1	23+28.14 LT
1	23+28.14 RT
1	26+13.56 LT
1	26+30.47 LT

**SIDEWALK RAMP PARALLEL (STD NO. MD-655.12)**

QUANTITY (EA)	STATION
1	25+85.44 LT
1	29+31.90 LT
1	29+43.31 LT
1	29+91.57 LT
1	29+97.70 LT

**SIDEWALK RAMP PERPENDICULAR (STD NO. MD-655.11)**

QUANTITY (EA)	STATION
1	22+33.17 LT
1	25+56.82 LT

**MEDIAN OPENING (STD NO. MC-114.01)**

QUANTITY (EA)	STATION
1	23+28.14

**DETECTABLE WARNING SURFACE (STD NO. MD-655.40)**

QUANTITY (SF)	STATION
12	22+33.17 LT
16	22+86.67 LT
11	23+19.32 LT
10	23+28.14 LT
23	23+28.14 LT (MEDIAN)
10	23+28.14 RT
12	25+56.84 LT
14	25+85.44 LT
12	26+13.56 LT
10	26+30.47 LT
10	26+30.47 RT
10	29+31.86 LT
10	29+43.31 LT
12	29+91.74 LT
11	29+97.79 LT

**7 INCH THICK PLAIN CONCRETE FOR DRIVEWAYS AND DRIVEWAY APRONS (STD NO. MC-301.01)**

QUANTITY (SF)	STATION
193.8	24+39.00 LT
283.6	24+61.33 LT
472.8	28+04.15 LT

**7 INCH THICK PLAIN CONCRETE FOR DRIVEWAYS AND DRIVEWAY APRONS (STD NO. MD-630.01)**

QUANTITY (SF)	STATION
110.0	25+20.57 LT

**WSSC WATER PIPE CONTRACT INFORMATION**

NOTE	PIPE SIZE	PIPE TYPE	ID	CONTRACT NO.	YEAR
(L)	10"	CAST IRON / SAND SPUN	WS00078534	1933-0007	1933
(O)	8"	CAST IRON / SAND SPUN	WS00125216	1938-0271N	1938
(P)	8"	CAST IRON / SAND SPUN	WS00078194	1935-0142	1935
(Q)	10"	CAST IRON / SAND SPUN	WS00078532	1933-0007	1933
(R)	10"	CAST IRON / SAND SPUN	WS00122360	1933-0007	1933
(S)	6"	CAST IRON / SAND SPUN	WS00125219	1938-0286	1938
(T)	6"	CAST IRON / SAND SPUN	WS00078537	1935-0142	1935
(U)	12"	CAST IRON / SAND SPUN	WS00067864	1932-0126	1932
(V)	12"	CAST IRON / SAND SPUN	WS00067861	1932-0126	1932
(W)	12"	CAST IRON / SAND SPUN	WS00048994	1932-0126	1932

**COMBINATION CONCRETE CURB AND GUTTER TYPE A (STD. NO. MC-100.01)**

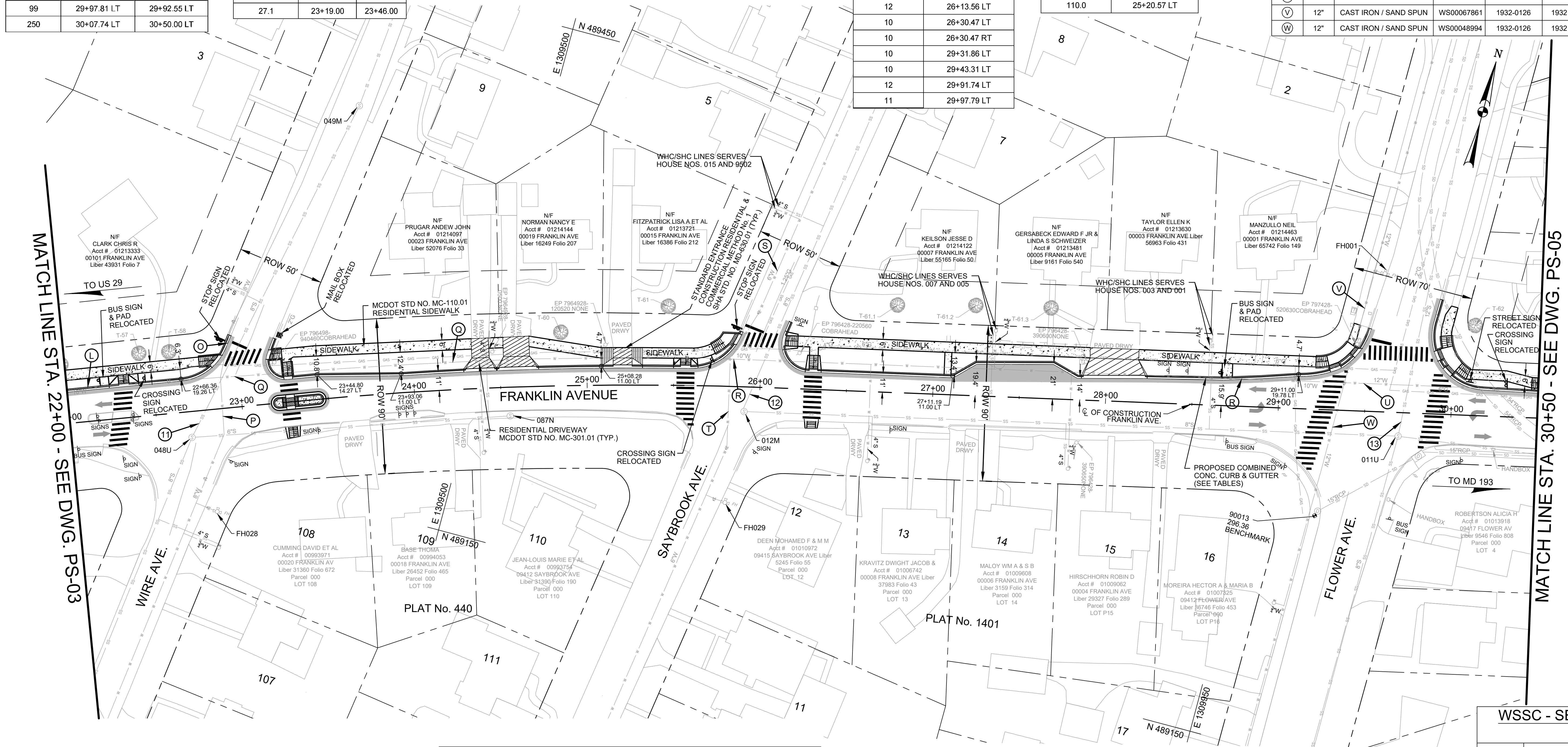
QUANTITY (LF)	STA. START	STA. END
49.2	22+36.17 LT	22+84.15 LT
12.9	22+90.13 LT	22+96.52 LT
6.9	23+22.69 LT	23+19.66 LT
15.4	23+17.57 LT	23+25.64 LT
54.9	23+18.68 (MEDIAN)	23+47.08 (MEDIAN)
29.5	25+59.81 LT	25+84.45 LT
1.7	25+87.39 LT	25+87.95 LT
8.2	26+16.53 LT	26+13.60 LT
22.2	26+12.89 LT	26+27.98 LT
48.4	28+81.23 LT	29+29.10 LT
9.4	29+35.19 LT	29+42.19 LT
13.0	29+45.74 LT	29+50.86 LT
30.2	29+92.38 LT	29+89.90 LT
5.0	29+92.34 LT	29+95.15 LT
20.0	29+99.50 LT	30+17.85 LT

**COMBINATION CONCRETE CURB AND GUTTER TYPE C (STD. NO. MC-101.01)**

QUANTITY (LF)	STA. START	STA. END
3.6	22+00.00 LT	22+03.59 LT
10.6	22+19.59 LT	22+30.17 LT
100.2	23+30.64 LT	24+30.10 LT
2.3	24+47.00 LT	24+49.32 LT
44.2	24+71.20 LT	25+15.11 LT
28.0	25+26.05 LT	25+53.84 LT
36.0	26+33.00 LT	26+69.00 LT
100.8	26+95.00 LT	27+86.54 LT
45.3	28+22.51 LT	28+70.07 LT
32.4	30+17.85 LT	30+50.00 LT

**DEPRESSED CURB ENTRANCE (STD. NO. MC-102.01)**

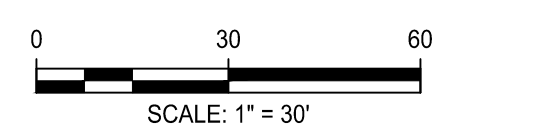
QUANTITY	STA. START	STA. END
6.0	22+30.17 LT	22+36.17 LT
6.0	22+92.71 LT	22+95.57 LT
6.0	23+21.86 LT	23+19.23 LT
5.0	23+25.64 LT	23+30.64 LT
17.0	24+30.10 LT	24+47.00 LT
22.0	24+49.32 LT	24+71.20 LT
11.0	25+15.11 LT	25+26.05 LT
6.0	25+53.84 LT	25+59.80 LT
9.4	25+82.71 LT	25+87.29 LT
6.4	26+13.60 LT	26+12.89 LT
5.0	26+28.00 LT	26+33.00 LT
36.0	27+86.52 LT	28+22.51 LT
6.4	29+29.10 LT	29+35.19 LT
6.0	29+88.38 LT	29+88.71 LT
6.0	29+95.15 LT	29+99.50 LT



- REFERENCE NOTES:**
- FOR EXISTING TREE INFORMATION ALONG NORTH SIDE OF FRANKLIN AVE., SEE DWG. EX-06.
  - FOR STORM DRAIN PLAN, SEE DWG'S. SD-01 TO SD-06.
  - FOR PLANTER BOX AND PERVIOUS CONCRETE PLAN, SEE DWG'S. SWM-01 TO SWM-04.

**LEGEND:**

[Symbol]	CONCRETE SIDEWALK
[Symbol]	CONCRETE DRIVEWAY
[Symbol]	PERVIOUS CONCRETE SIDEWALK
[Symbol]	FULL DEPTH PAVEMENT



**Engineers, Architects  
Development Consultants**  
2019 Gaithersburg, Rockville, MD, 20850  
Phone: 301-590-3939 Fax: 301-948-7174  
www.sheleladia.com

**FIRE HYDRANT WSSC CONTRACT INFORMATION**

NOTES	VAULT SIZE	FIRE HYDRANT SIZE	TYPE	ID	CONTRACT NO.	YEAR
FH028	6"	6"x10" FH	FV-Fire Hydrant with Valve	FH11D01028	1935-0142	1935
FH029	6"	6"x10" FH	FV-Fire Hydrant with Valve	FH11D01029	1935-0142	1935
FH001	8"	8" FH	FV-Fire Hydrant with Valve	FH11A01001	1932-0126	1932

**WSSC SEWER PIPE CONTRACT INFORMATION**

NOTES	PIPE SIZE	PIPE TYPE	ID	CONTRACT NO.	YEAR
(11)	8"S	V-Vitrified Clay	06034049S	1938-0287	1938
(12)	8"S	U-UNKNOWN	06042013S	1938-0287	1938
(13)	12"S	V-Vitrified Clay	06043002S	1940-0162	1940

**WSSC - SEWER MANHOLES CONTRACT INFORMATION**

WERI NUMBER	MANHOLE DIA.	TYPE	ID	CONTRACT NO.	YEAR
048U	4'	UNKNOWN	06034048U	1935-0143	1935
049M	4'	UNKNOWN	06034049M	1938-0287	1938
087N	4'	UNKNOWN	06034087N	1935-0143	1935
012M	4'	UNKNOWN	06042012M	1938-0287	1938
011U	4'	UNKNOWN	06042011U	1938-0265	1938

**OWNER ADDRESS:**  
DEPARTMENT OF TRANSPORTATION  
100 EDISON PARK DRIVE  
GAITHERSBURG, MARYLAND

**CONTACT:**  
DIVISION OF TRANSPORTATION ENGINEERING  
CONSTRUCTION SECTION  
240-777-7210  
DESIGN SECTION  
240-777-7221

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

Administrative Requirements:  
Reviewed \_\_\_\_\_ Date \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

MCDOT APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL OF THE PROJECT UNLESS THE PERMIT HAS BEEN EXTENDED

**FRANKLIN AVENUE  
SIDEWALK  
ROADWAY AND SIDEWALK PLAN  
STA. 22+00 TO STA. 30+50**

SCALE: AS SHOWN

Project No.: TBD 18 of 109

**PS-04**

**COMBINATION CONCRETE CURB AND GUTTER TYPE A (STD. NO. MC-100.01)**

QUANTITY (LF)	STA. START	STA. END
28.5	34+08.13 LT	34+32.53 LT
28.2	34+35.92 LT	34+37.48 LT
33.0	34+67.10 LT	34+72.69 LT
23.7	34+77.80 LT	34+99.10 LT
4.4	35+04.10 LT	35+08.51 LT
36.3	37+16.22 LT	37+51.98 LT
7.4	37+60.16 LT	37+64.23 LT
6.5	37+67.54 LT	37+69.28 LT
17.0	37+95.74 LT	38+00.22 LT
29.0	38+05.10 LT	38+29.05 LT
63.3	38+23.73(MEDIAN)	38+52.38(MEDIAN)
7.0	38+34.11 LT	38+41.21 LT

**COMBINATION CONCRETE CURB AND GUTTER TYPE C (STD. NO. MC-101.01)**

QUANTITY (LF)	STA. START	STA. END
95.5	30+50.00 LT	31+45.64 LT
8.7	31+95.61 LT	32+04.34 LT
27.7	32+28.48 LT	32+55.58 LT
2.2	32+65.08 LT	32+67.15 LT
65.9	32+81.15 LT	33+44.95 LT
47	33+56.12 LT	34+03.12 LT
10.3	35+19.51 LT	35+29.83 LT
18.3	35+57.03 LT	36+75.29 LT
14.3	35+96.20 LT	36+10.54 LT
40.6	36+21.62 LT	36.62.51 LT
24.2	36+80.12 LT	37+05.16 LT

**DEPRESSED CURB ENTRANCE (STD. NO. MC-102.01)**

QUANTITY (LF)	STA. START	STA. END
50.0	31+45.54 LT	31+95.61 LT
24.2	32+04.34 LT	32+28.48 LT
14.0	32+67.15 LT	32+81.15 LT
5.0	34+03.13 LT	34+08.13 LT
7.0	34+32.84 LT	34+36.09 LT
8.0	34+73.48 LT	34+78.44 LT
5.0	34+99.10 LT	35+04.10 LT
27.2	35+29.83 LT	35+57.03 LT
20.9	35+75.29 LT	35+96.20 LT
18.2	36+62.51 LT	36+80.82 LT
8.1	37+52.36 LT	37+59.21 LT
8.1	37+65.34 LT	37+68.91 LT
7.7	38+00.86 LT	38+04.24 LT
5.0	38+29.06 LT	38+34.11 LT

**4 INCH THICK RESIDENTIAL SIDEWALK (STD. NO. MC-110.01)**

QUANTITY (SF)	STA. START	STA. END
226	30+50.00 LT	30+87.52 LT
64	33+39.68 LT	33+44.68 LT
48	33+60.87 LT	32+64.64 LT
83	34+12.64 LT	34+26.32 LT
119	34+85.10 LT	35+05.15 LT
412	35+97.93 LT	36+63.47 LT
425	36+79.79 LT	37+44.50 LT
83	38+09.21 LT	38+22.10 LT
58	38+40.18 LT	38+50.00 LT

**SIDEWALK RAMP PERPENDICULAR (STD. NO. MD-655.11)**

QUANTITY (EA)	STATION
1	35+01.60 LT
1	35+01.60 RT

**SIDEWALK RAMP PARALLEL (STD. NO. MD-655.12)**

QUANTITY (EA)	STATION
1	37+55.95 LT
1	37+65.50 LT
1	38+03.71 LT
1	38+31.59 LT

**DETECTABLE WARNING SURFACE (STD. NO. MD-655.40)**

QUANTITY (SF)	STATION
10	34+05.63 LT
13	34+33.59 LT
17	34+75.77 LT
10	35+01.60 LT
10	35+01.60 RT
15	37+55.94 LT
12	37+85.50 LT
12	38+03.71 LT
10	38+31.59 LT
23	38+31.59 LT (MEDIAN)

**7 INCH THICK PLAIN CONCRETE FOR DRIVEWAYS AND DRIVEWAY APRONS (STD. NO. MC-301.01)**

QUANTITY (SF)	STATION
310	35+43.53 LT
260	35+82.78 LT
115	36+71.66 LT

**7 INCH THICK PLAIN CONCRETE FOR DRIVEWAYS AND DRIVEWAY APRONS (STD. NO. MC-301.04)**

QUANTITY (SF)	STATION
336	31+70.81 LT
149	32+15.91 LT

**7 INCH THICK PLAIN CONCRETE FOR DRIVEWAYS AND DRIVEWAY APRONS (SHA STD. NO. MC-630.01)**

QUANTITY (SF)	STATION
105	32+74.15 LT

**RESIDENTIAL SIDEWALK RAMP (STD. NO. MC-112.01)**

QUANTITY (EA)	STATION
1	34+05.63 LT
1	34+33.80 LT
1	34+75.63 LT

**FULL DEPTH BITUMINOUS CONCRETE PAVEMENT**

QUANTITY (SY)	STA. START	STA. END
159.6	30+50.00 LT	34+41.00 LT
78.3	34+95.00 LT	37+73.00 LT
17.6	37+92.00 LT	38+50.00 LT

**4 INCH PERVIOUS CONCRETE SIDEWALK**

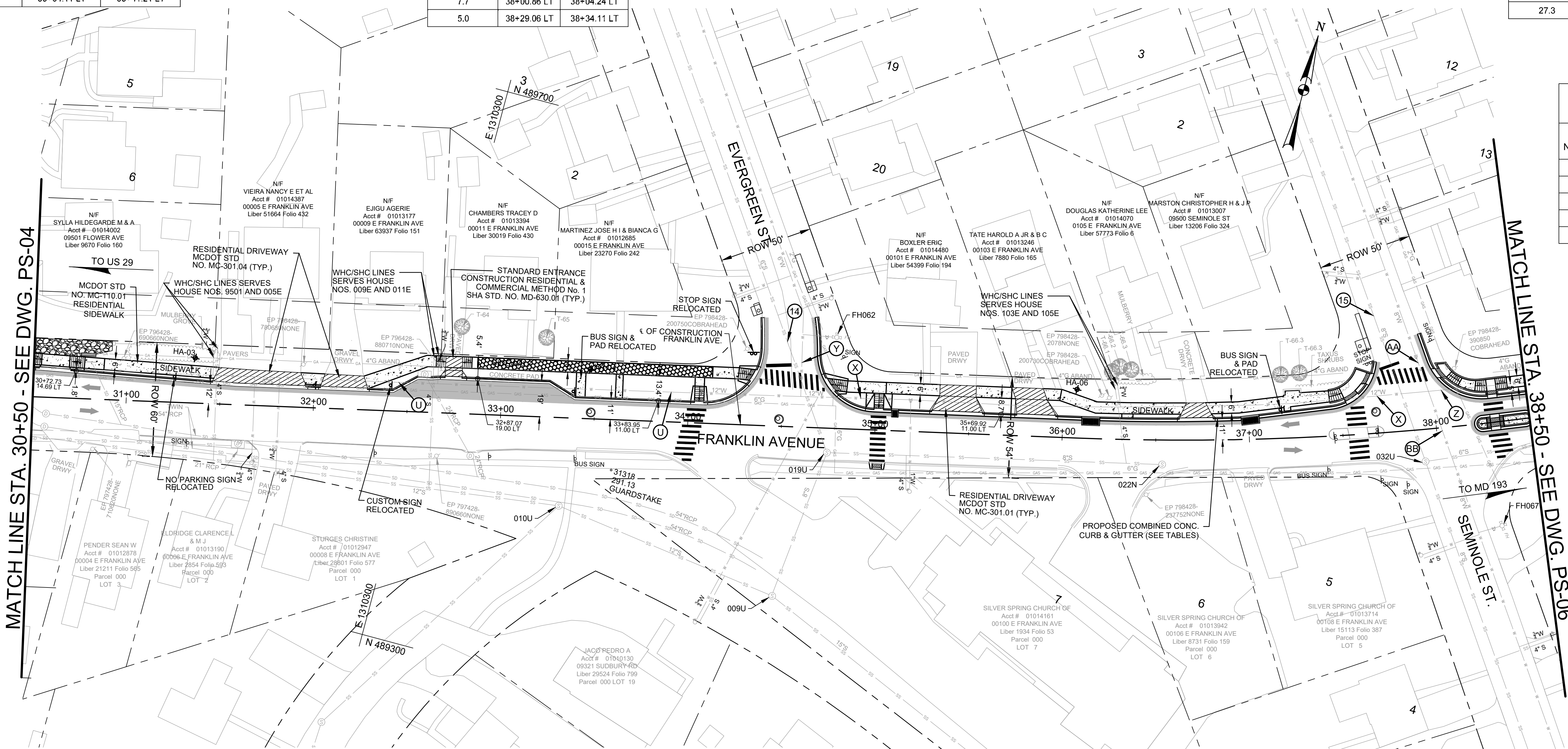
QUANTITY (SF)	STA. START	STA. END
1330	31+95.61 LT	34+12.64 LT

**MONOLETHIC CONCRETE MEDIAN, 4' WIDE**

QUANTITY (LF)	STA. START	STA. END
27.3	38+24.44	38+51.72

**MEDIAN OPENING (STD. NO. MC-114.01)**

QUANTITY (EA)	STATION
1	38+31.59



**WSSC - SEWER MANHOLES CONTRACT INFORMATION**

WERI NUMBER	MANHOLE DIA.	TYPE	ID	CONTRACT NO.	YEAR
010U	4'	UNKNOWN	06042010U	1938-0265	1938
009U	4'	UNKNOWN	06042009U	1938-0265	1938
019U	4'	UNKNOWN	06042019U	1938-0337	1938
022N	4'	UNKNOWN	06042022N	1938-0337	1938
032U	4'	UNKNOWN	06042032U	1936-0240	1936

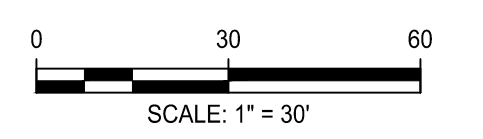
**WSSC WATER PIPE CONTRACT INFORMATION**

NOTE	PIPE SIZE	PIPE TYPE	ID	CONTRACT NO.	YEAR
U	12"	CAST IRON / SAND SPUN	WS00067865	1932-0126	1932
X	12"	CAST IRON / SAND SPUN	WS00051068	1932-0126	1932
Y	6"	CAST IRON / SAND SPUN	WS00051098	1940-0278	1940
Z	12"	CAST IRON / SAND SPUN	WS00051061	1932-0126	1932
AA	8"	CAST IRON / SAND SPUN	WS00051069	1936-0239	1936
BB	8"	CAST IRON / SAND SPUN	WS00067866	1939-0350	1939

- REFERENCE NOTES:**
- FOR EXISTING TREE INFORMATION ALONG NORTH SIDE OF FRANKLIN AVE., SEE DWG. EX-06.
  - FOR STORM DRAIN PLAN, SEE DWG'S. SD-01 TO SD-06.
  - FOR PLANTER BOX AND PERVIOUS CONCRETE PLAN, SEE DWG'S. SWM-01 TO SWM-04.
  - FOR SOIL BORING LOGS, SEE DWG. SB-01.

**LEGEND:**

- CONCRETE SIDEWALK
- CONCRETE DRIVEWAY
- PERVIOUS CONCRETE SIDEWALK
- FULL DEPTH PAVEMENT
- SOIL BORING LOCATIONS



**Engineers, Architects**  
**SHELADIA Development Consultants**  
 2019 Galtier Road, Rockville, MD, 20850  
 Phone: 301-590-3939 Fax: 301-948-7174  
 www.sheladia.com

**FIRE HYDRANT WSSC CONTRACT INFORMATION**

NOTES	VAULT SIZE	FIRE HYDRANT SIZE	TYPE	ID	CONTRACT NO.	YEAR
FH062	6"	6"X10" FH	FV-Fire Hydrant with Valve	FH12A01062	1940-0278	1940
FH067	6"	6"X10" FH	FV-Fire Hydrant with Valve	FH12A01067	1939-0350	1939

**OWNER/ADDRESS:**  
 DEPARTMENT OF TRANSPORTATION  
 DEPARTMENT OF TRANSPORTATION  
 100 EDISON PARK DRIVE  
 GAITHERSBURG, MARYLAND

**CONTACT:**  
 DIVISION OF TRANSPORTATION ENGINEERING  
 CONSTRUCTION SECTION  
 240-777-7210  
 DESIGN SECTION  
 240-777-7221

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

SEWER CONTROL PERMIT NO. \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEWER CONTROL PERMIT NO. \_\_\_\_\_

MCDOT APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

**WSSC SEWER PIPE CONTRACT INFORMATION**

NOTES	PIPE SIZE	PIPE TYPE	ID	CONTRACT NO.	YEAR
14	6"S	V-Vitrified Clay	06042020S	1940-0253	1940
15	8"S	U-UNKNOWN	06042033S	1936-0240	1936

**FRANKLIN AVENUE SIDEWALK ROADWAY AND SIDEWALK PLAN STA. 30+50 TO STA. 38+50**

SCALE: AS SHOWN

PS-05

Project No.: TBD 19 of 109

**COMBINATION CONCRETE CURB AND GUTTER TYPE A (STD. NO.MC-100.01)**

QUANTITY (LF)	STA. START	STA. END
7.7	40+52.80 LT	40+60.51 LT
11	40+65.56 LT	40+74.66 LT
43.4	40+79.18 LT	40+82.89 LT
30.3	41+10.39 LT	41+16.39 LT
18.5	41+20.55 LT	41+36.34 LT
5.3	41+41.42 LT	41+46.71 LT
26.5	43+26.25 LT	43+35.29 LT
21.2	43+40.39 LT	43+54.18 LT
22.5	43+55.71 LT	43+56.06 LT
19.8	43+82.38 LT	43+84.65 LT
14.1	43+87.37 LT	43+97.63 LT
20.2	44+02.40 LT	44+22.37 LT

**COMBINATION CONCRETE CURB AND GUTTER TYPE C (STD. NO.MC-101.01)**

QUANTITY (LF)	STA. START	STA. END
38.5	38+52.32 LT	38+91.14 LT
27.8	39+15.37 LT	39+43.41 LT
90.5	39+61.64 LT	40+52.80 LT
105.3	41+46.71 LT	42+49.29 LT
67.2	42+61.79 LT	43+26.17 LT
49.9	44+28.38 LT	44+75.50 LT
48.3	44+86.50 LT	45+31.31 LT
18.7	45+46.31 LT	45+52.90 LT
45.1	45+67.90 LT	46+09.42 LT

**DEPRESSED CURB ENTRANCE (STD. NO.MC-102.01)**

QUANTITY (LF)	STA. START	STA. END
24.0	38+91.14 LT	39+15.37 LT
18.0	39+43.33 LT	39+61.64 LT
5.0	40+60.51 LT	40+65.56 LT
6.2	41+16.39 LT	41+20.55 LT
5.0	41+36.34 LT	41+41.42 LT
17.4	42+49.29 LT	42+61.79 LT
5.0	43+35.29 LT	43+40.39 LT
5.0	43+54.18 LT	43+55.71 LT
5.7	43+84.65 LT	43+87.37 LT
5.2	43+97.60 LT	44+02.40 LT
15.0	45+28.96 LT	45+43.81 LT
19.9	45+50.39 LT	45+70.33 LT

**4 INCH THICK RESIDENTIAL SIDEWALK (STD. NO.MC-110.01)**

QUANTITY (SF)	STA. START	STA. END
267	38+50.00 LT	38+95.22 LT
213	39+11.42 LT	39+47.46 LT
641	39+57.62 LT	40+67.18 LT
769	41+28.52 LT	42+49.29 LT
559	42+61.79 LT	43+46.77 LT
213	43+94.18 LT	45+28.51 LT
154	44+33.12 LT	44+68.35 LT
229	45+71.30 LT	46+09.42 LT

**7 INCH THICK PLAIN CONCRETE FOR DRIVEWAYS AND DRIVEWAY APRONS (STD NO. MC-301.01)**

QUANTITY (SF)	STATION
198.5	39+03.32 LT
144.2	39+52.54 LT

**4 INCH PERVIOUS CONCRETE SIDEWALK**

QUANTITY (SF)	STA. START	STA. END
278	44+28.52 LT	44+76.67 LT
495	44+88.78 LT	45+71.30 LT

**SIDEWALK RAMP PERPENDICULAR (STD NO. MD-655.11)**

QUANTITY (EA)	STATION
1	40+62.76 LT
1	40+75.41 LT
1	41+19.17 LT
1	41+28.65 LT
1	43+39.00 LT
1	43+54.27 LT
1	43+86.66 LT
1	44+00.12 LT

**DETECTABLE WARNING SURFACE (STD NO. MD-655.40)**

QUANTITY (SF)	STATION
10	40+61.54 LT
10	40+77.18 LT
12.6	41+19.17 LT
10	41+28.65 LT
10	43+28.66 LT
10	43+53.88 LT
11.8	43+86.66 LT
10	44+01.77 LT

**7 INCH THICK PLAIN CONCRETE FOR DRIVEWAYS AND DRIVEWAY APRONS (STD NO. MC-301.05)**

QUANTITY (SF)	STATION
223.0	42+55.54 LT
116.3	45+36.32 LT
171.1	45+60.40 LT

**FULL DEPTH BITUMINOUS CONCRETE PAVEMENT**

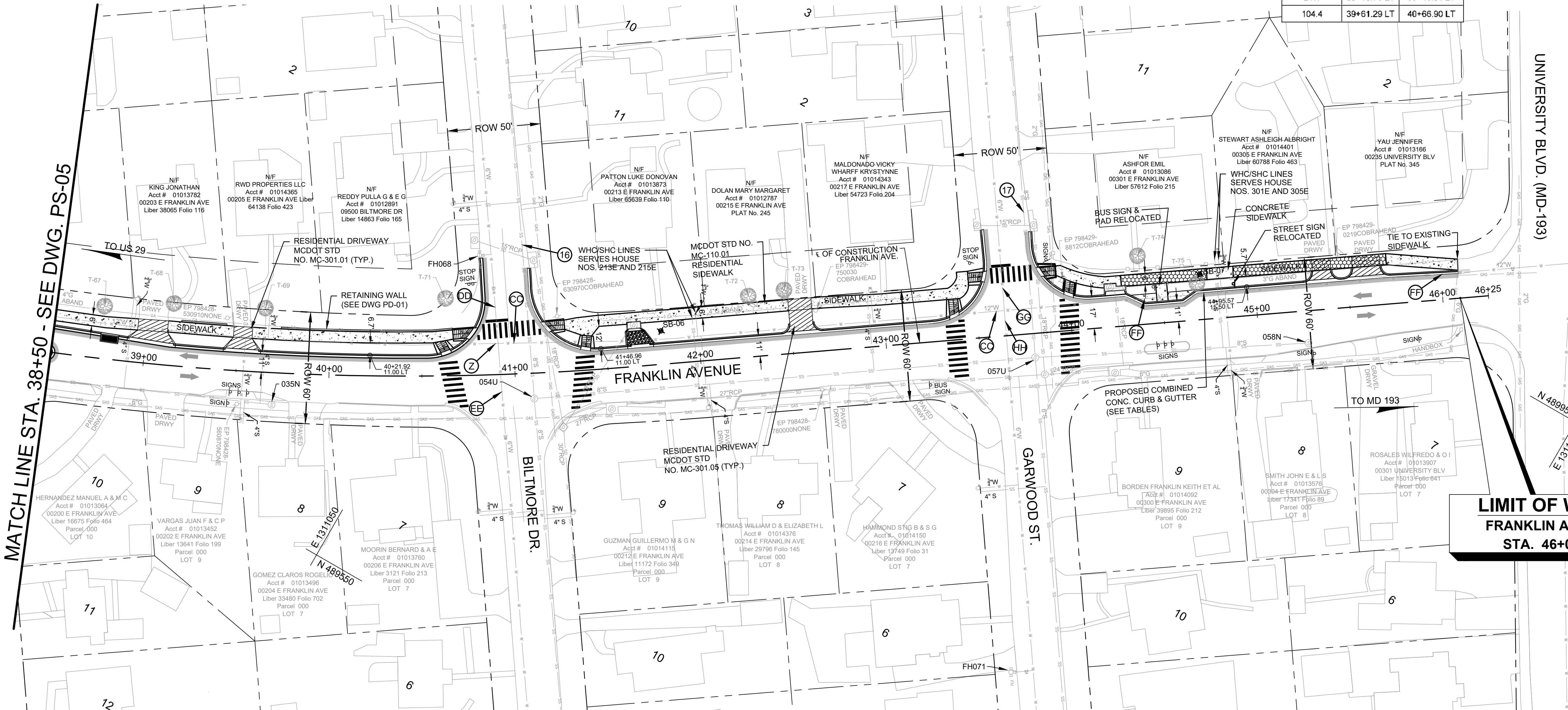
QUANTITY (SY)	STA. START	STA. END
77.1	38+50.00 LT	40+82.89 LT
57.1	41+10.39 LT	43+56.06 LT
57.4	43+82.38 LT	46+09.42 LT

**WSSC - SEWER MANHOLES CONTRACT INFORMATION**

WERI NUMBER	MANHOLE DIA.	TYPE	ID	CONTRACT NO.	YEAR
035N	4'	UNKNOWN	06042035N	1939-0351	1939
054U	4'	UNKNOWN	06042054U	1936-0172	1936
057U	4'	UNKNOWN	06042057U	1936-0172	1936
058N	4'	PRECAST CONCRETE	06042058N	2016-6186D	2016

**WSSC SEWER PIPE CONTRACT INFORMATION**

NOTES	PIPE SIZE	PIPE TYPE	ID	CONTRACT NO.	YEAR
(16)	8"S	U-UNKNOWN	06042055S	1936-0172	1936
(17)	8"S	V-VITRIFIED CLAY	06042059S	1936-0172	1936



- REFERENCE NOTES:**
- FOR EXISTING TREE INFORMATION ALONG NORTH SIDE OF FRANKLIN AVE., SEE DWG. EX-06.
  - FOR STORM DRAIN PLAN, SEE DWG'S. SD-01 TO SD-06.
  - FOR PLANTER BOX AND PERVIOUS CONCRETE PLAN, SEE DWG'S. SWM-01 TO SWM-04.
  - FOR SOIL BORING LOGS, SEE DWG. SB-01.

**LEGEND:**

- CONCRETE SIDEWALK
- CONCRETE DRIVEWAY
- PERVIOUS CONCRETE SIDEWALK
- FULL DEPTH PAVEMENT
- SOIL BORING LOCATIONS

Scale: 1" = 30'

Engineers, Architects  
**SHELADIA Development Consultants**  
2019 Gaithersburg, Rockville, MD, 20850  
Phone: 301-590-3939 Fax: 301-948-7174  
www.sheladia.com

**FIRE HYDRANT WSSC CONTRACT INFORMATION**

NOTES	VAULT SIZE	FIRE HYDRANT SIZE	TYPE	ID	CONTRACT NO.	YEAR
FH068	6"	6"x10" FH	FV-Fire Hydrant	FH12A01068	1927-0369Y	1927
FH071	6"	6"x10" FH	FV-Fire Hydrant with Valve	FH12A01071	1928-0459	1928

**OWNER/ADDRESS:**  
DEPARTMENT OF TRANSPORTATION  
100 EDISON PARK DRIVE  
GAITHERSBURG, MARYLAND

**CONTACT:**  
DIVISION OF TRANSPORTATION ENGINEERING  
CONSTRUCTION SECTION  
240-777-7210  
DESIGN SECTION  
240-777-7221

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

Administrative Requirements:  
Reviewed \_\_\_\_\_ Date \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

SEWAGE CONTROL PERMIT NO. \_\_\_\_\_

MCDPS APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT BEEN STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

**WSSC WATER PIPE CONTRACT INFORMATION**

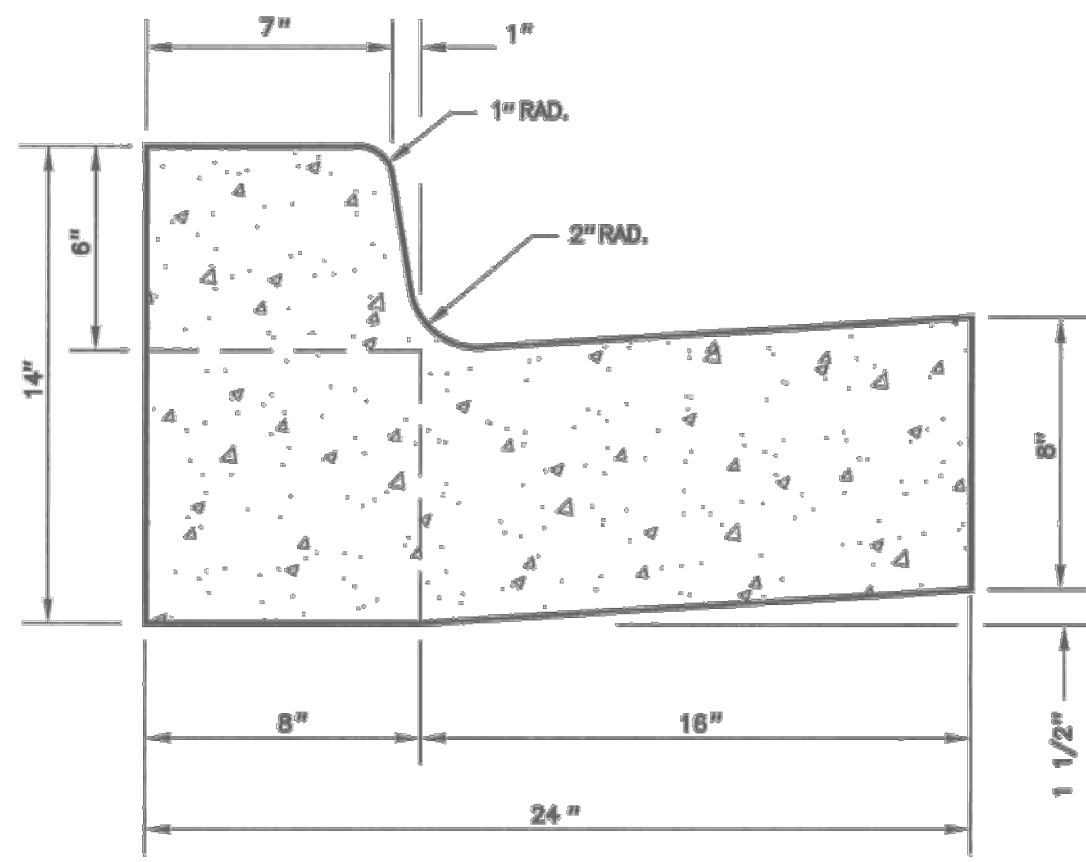
NOTE	PIPE SIZE	PIPE TYPE	ID	CONTRACT NO.	YEAR
(Z)	12"	CAST IRON / SAND SPUN	WS00051060	1932-0126	1932
(CC)	12"	CAST IRON / SAND SPUN	WS00051046	1927-0369Y	1927
(DD)	6"	CAST IRON / SAND SPUN	WS00051062	1927-0369Y	1927
(EE)	6"	CAST IRON / SAND SPUN	WS00067870	1931-0169	1931
(FF)	12"	CAST IRON / SAND SPUN	WS00051044	1927-0369Y	1927
(GG)	6"	CAST IRON / SAND SPUN	WS00051047	1927-0369Y	1927
(HH)	6"	CAST IRON / SAND SPUN	WS00067874	1928-0459	1928

**FRANKLIN AVENUE SIDEWALK ROADWAY AND SIDEWALK PLAN STA. 38+50 TO STA. 46+09.40**

SCALE: AS SHOWN

PS - 06

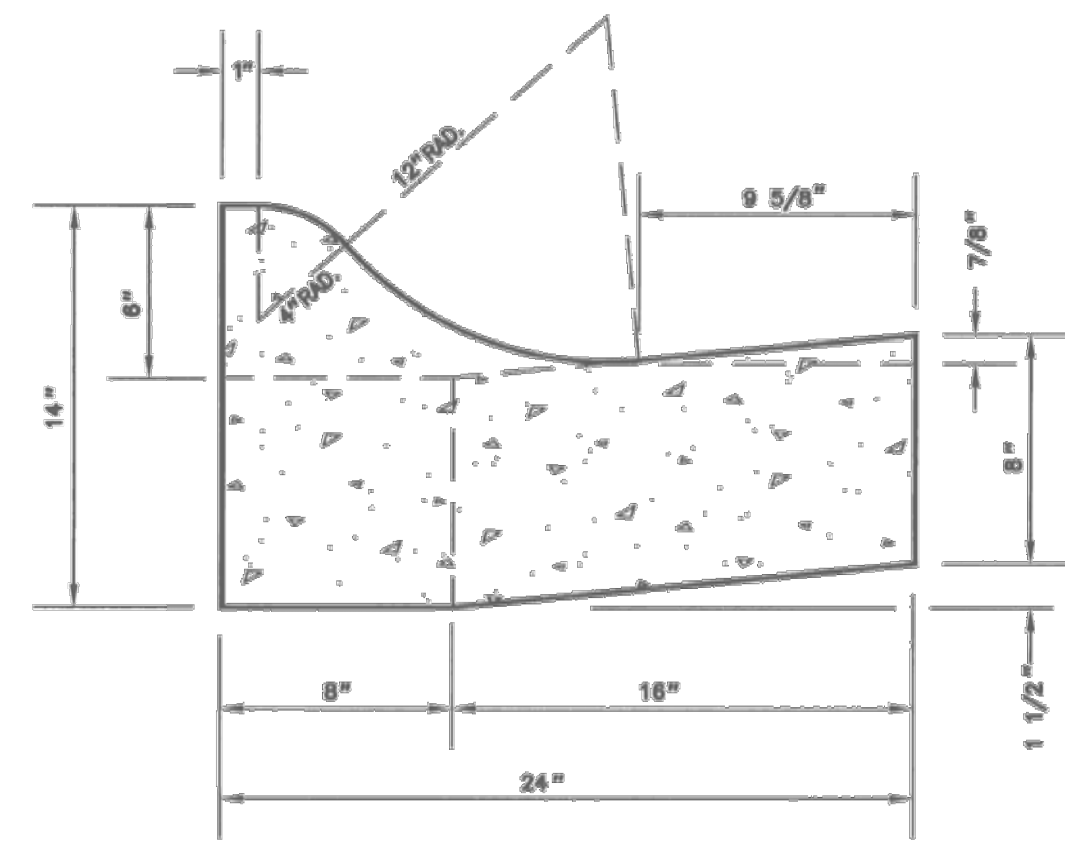
Project No.: TBD 20 of 109



GENERAL NOTES

- REFER TO MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR MATERIALS, METHODS OF CONSTRUCTION AND EXPANSION JOINT LOCATIONS.
- THIS STANDARD SHALL BE USED ON PRIMARY RESIDENTIAL, ARTERIAL AND BUSINESS DISTRICT ROADS AS WELL AS CURB RETURNS AND INLET THROATS.
- WHENEVER STANDARD MC-101.01 CURB IS USED IN CONJUNCTION WITH THIS STANDARD, A TEN FOOT TRANSITION SHALL BE PROVIDED FROM STANDARD MC-100.01 TO STANDARD MC-101.01 FOR CURB RETURNS AND CURB SECTIONS WHICH INCLUDE INLETS.
- THE STANDARD DISTANCE BETWEEN JOINTS SHALL BE TEN FEET (MAXIMUM AND MINIMUM DISTANCES SHALL BE THIRTEEN FEET AND FIVE FEET RESPECTIVELY).
- EXPANSION JOINT MATERIAL SHALL BE 1/2 INCH PREFORMED CORK, TRIMMED AND SEALED WITH NON-STAINING TWO-COMPONENT POLYSULFIDE OR POLYURETHANE ELASTOMERIC TYPE SEALANT COMPLYING WITH ASTM-C920.

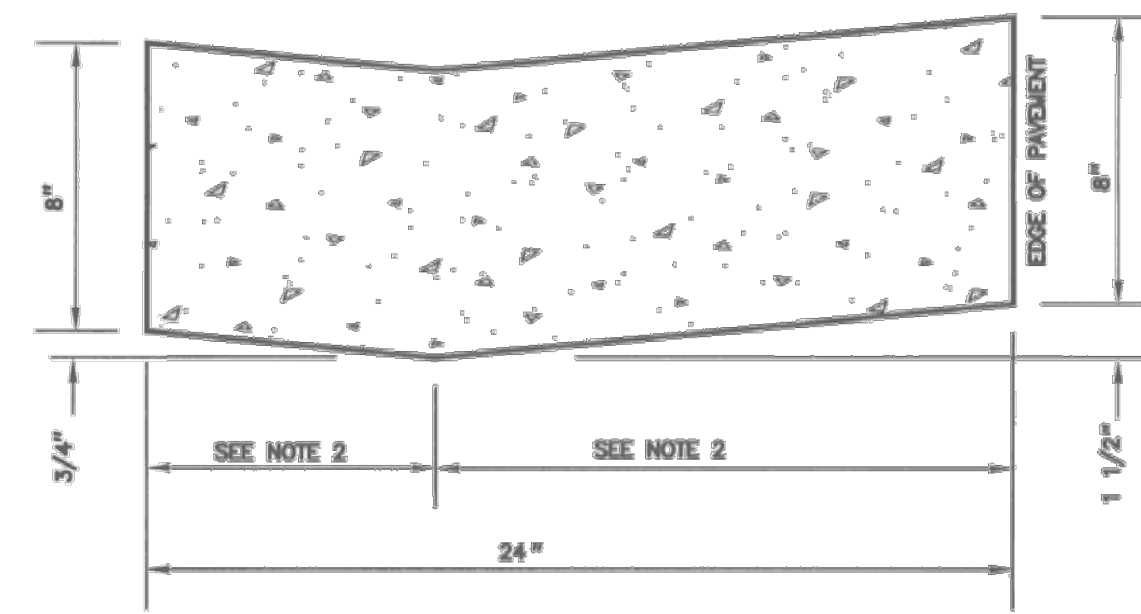
APPROVED 14 APR 06 DATE <i>Auth. H. Secor</i> DIRECTOR, DEPT. OF PUBLIC WORKS & TRANSPORTATION <i>Holger Secor</i> for CHIEF, DIV. OF CAP. DEV.	REVISED ASTM-C920 4/2006	MONTGOMERY COUNTY DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION <b>COMBINATION CONCRETE CURB AND GUTTER TYPE A</b>
<b>STANDARD NO. MC-100.01</b>		



GENERAL NOTES

- REFER TO MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR MATERIALS, METHODS OF CONSTRUCTION AND EXPANSION JOINT LOCATIONS.
- THIS STANDARD SHALL BE USED ON PRIMARY, SECONDARY AND TERTIARY RESIDENTIAL ROADS EXCEPT AT CURB RETURNS AND INLET THROATS.
- WHENEVER STANDARD MC-100.01 CURB IS USED IN CONJUNCTION WITH THIS STANDARD, A TEN FOOT TRANSITION SHALL BE PROVIDED FROM STANDARD MC-101.01 TO STANDARD MC-100.01 FOR CURB RETURNS AND CURB SECTIONS WHICH INCLUDE INLETS.
- THE STANDARD DISTANCE BETWEEN JOINTS SHALL BE TEN FEET (MAXIMUM AND MINIMUM DISTANCES SHALL BE THIRTEEN FEET AND FIVE FEET RESPECTIVELY).
- EXPANSION JOINT MATERIAL SHALL BE 1/2 INCH PREFORMED CORK, TRIMMED AND SEALED WITH NON-STAINING TWO-COMPONENT POLYSULFIDE OR POLYURETHANE ELASTOMERIC TYPE SEALANT COMPLYING WITH ASTM-C920.

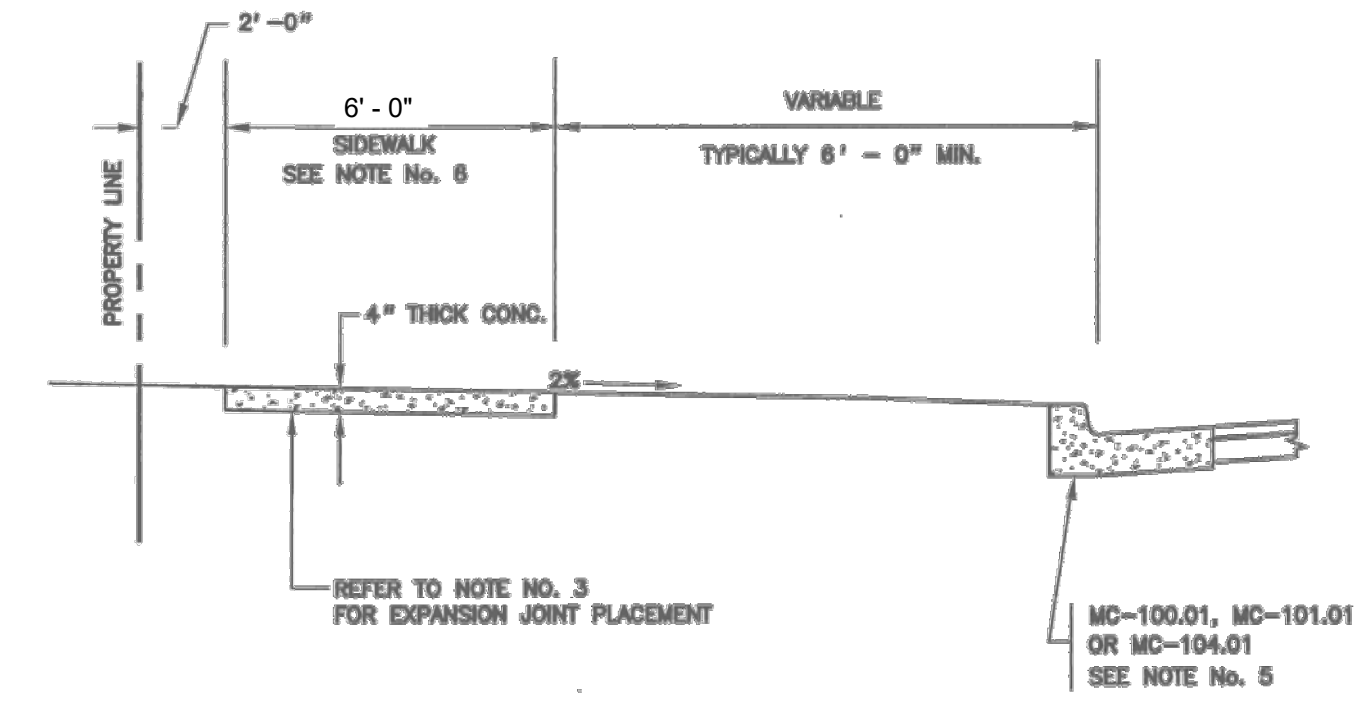
APPROVED 14 APR 06 DATE <i>Auth. H. Secor</i> DIRECTOR, DEPT. OF PUBLIC WORKS & TRANSPORTATION <i>Holger Secor</i> for CHIEF, DIV. OF CAP. DEV.	REVISED ASTM-C920 4/2006	MONTGOMERY COUNTY DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION <b>COMBINATION CONCRETE CURB AND GUTTER TYPE C</b>
<b>STANDARD NO. MC-101.01</b>		



GENERAL NOTES

- REFER TO MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION SPECIFICATIONS FOR MATERIALS, METHODS OF CONSTRUCTION AND EXPANSION JOINT LOCATIONS.
- THE DISTANCES FROM THE FLOWLINE TO THE FRONT AND BACK EDGE OF CURB SHALL BE ADJUSTED TO MATCH EXISTING CONDITIONS.
- THE STANDARD DISTANCE BETWEEN JOINTS SHALL BE TEN FEET (MAXIMUM AND MINIMUM DISTANCES SHALL BE THIRTEEN FEET AND FIVE FEET RESPECTIVELY).
- EXPANSION JOINT MATERIAL SHALL BE 1/2 INCH PREFORMED CORK, TRIMMED AND SEALED WITH NON-STAINING TWO-COMPONENT POLYSULFIDE OR POLYURETHANE ELASTOMERIC TYPE SEALANT COMPLYING WITH ASTM-C920.

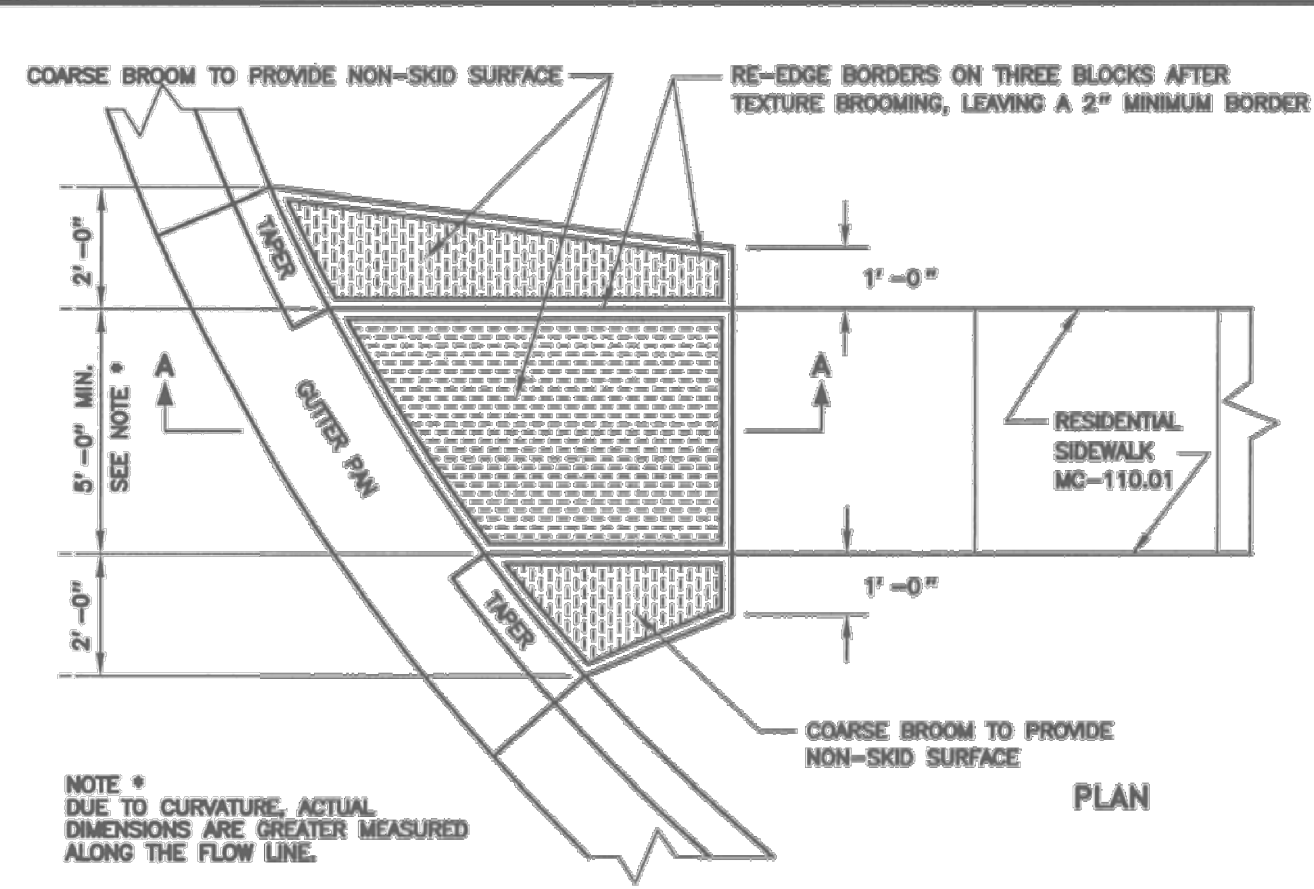
APPROVED 14 APR 06 DATE <i>Auth. H. Secor</i> DIRECTOR, DEPT. OF PUBLIC WORKS & TRANSPORTATION <i>Holger Secor</i> for CHIEF, DIV. OF CAP. DEV.	REVISED ASTM-C920 4/2006	MONTGOMERY COUNTY DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION <b>DEPRESSED CURB ENTRANCE</b>
<b>STANDARD NO. MC-102.01</b>		



GENERAL NOTES

- REFER TO MARYLAND STATE HIGHWAY ADMINISTRATION SPECIFICATIONS FOR MATERIALS AND METHODS OF CONSTRUCTION.
- REFER TO THE APPLICABLE MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION DESIGN STANDARDS FOR DETAILS AT DRIVEWAYS.
- EXPANSION JOINTS SHALL HAVE A MAXIMUM SPACING OF 100 FEET AND BE LOCATED AT POINTS OF CURVATURE. EXPANSION JOINT MATERIAL SHALL BE 1/2 INCH PREFORMED CORK, TRIMMED AND SEALED WITH NON-STAINING TWO-COMPONENT POLYSULFIDE OR POLYURETHANE ELASTOMERIC TYPE SEALANT COMPLYING WITH ASTM-C920.
- SCORE THE CONCRETE TO A DEPTH OF 1/3 THE SLAB THICKNESS TO PROVIDE WEAKENED PLANE TRANSVERSE JOINTS AT 5'-0" INTERVALS.
- REFER TO THE APPLICABLE ROAD STANDARD AND CURB AND GUTTER STANDARDS FOR OTHER OPTIONS.
- SIDEWALK WIDTH SHALL BE 4'-0" FOR SECONDARY AND TERTIARY ROADWAYS.

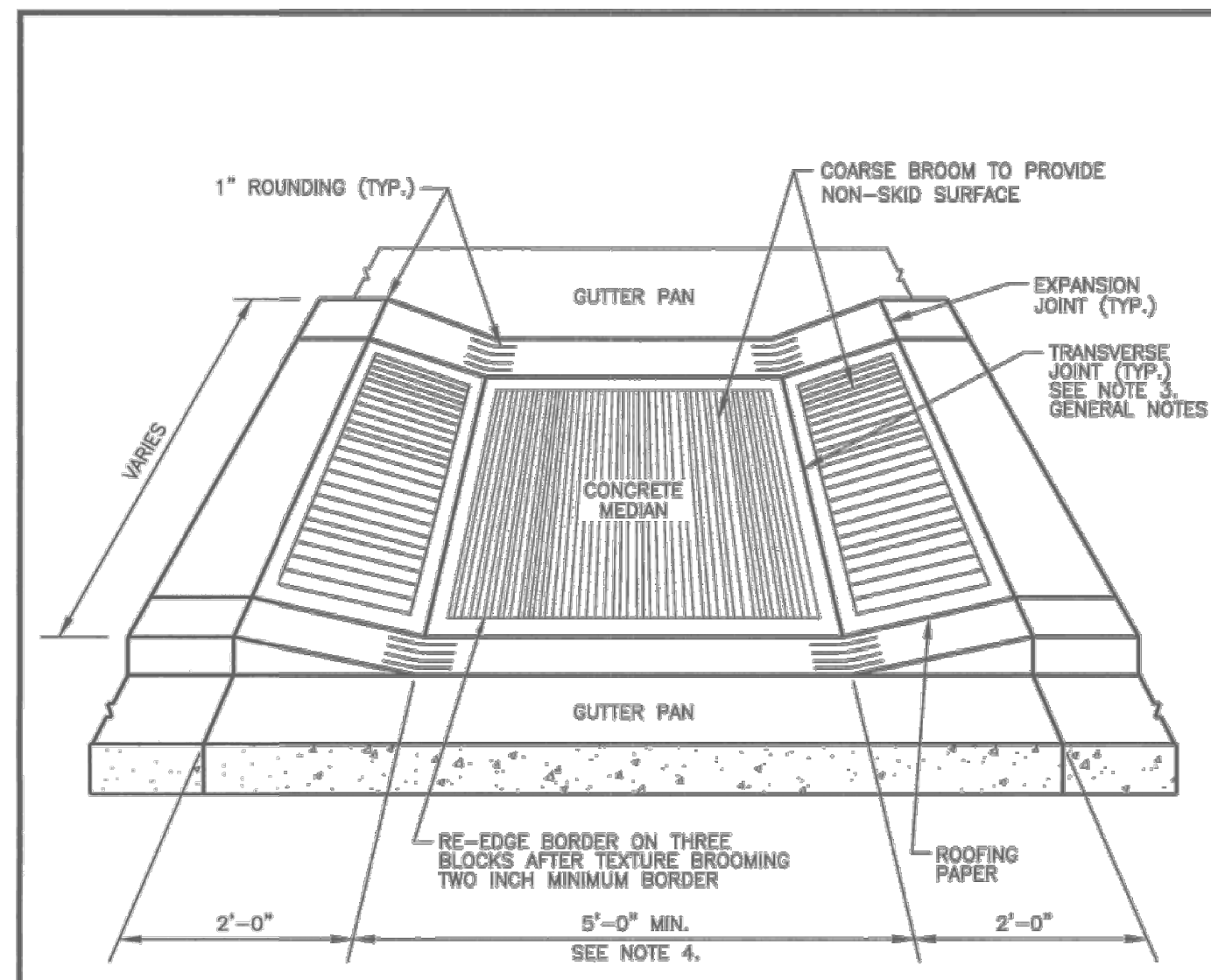
APPROVED 14 APR 06 DATE <i>Auth. H. Secor</i> DIRECTOR, DEPT. OF TRANS. <i>Holger Secor</i> for CHIEF, DIV. OF CAP. DEV.	REVISED ASTM-C920 4/2006	MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION <b>RESIDENTIAL SIDEWALK CLOSED SECTION</b>
<b>STANDARD NO. MC-110.01</b>		



GENERAL NOTES

- REFER TO MARYLAND STATE HIGHWAY ADMINISTRATION SPECIFICATIONS FOR MATERIAL AND METHODS OF CONSTRUCTION.
- SIDEWALK RAMPS SHOULD BE LOCATED AS INDICATED. HOWEVER, EXISTING SURFACE UTILITIES AND EXISTING OR PROPOSED GEOMETRICS MAY AFFECT PLACEMENT.
- EXPANSION JOINT MATERIAL SHALL BE 1/2 INCH PREFORMED CORK, TRIMMED AND SEALED WITH NON-STAINING TWO-COMPONENT POLYSULFIDE OR POLYURETHANE ELASTOMERIC TYPE SEALANT, COMPLYING WITH ASTM-C920.

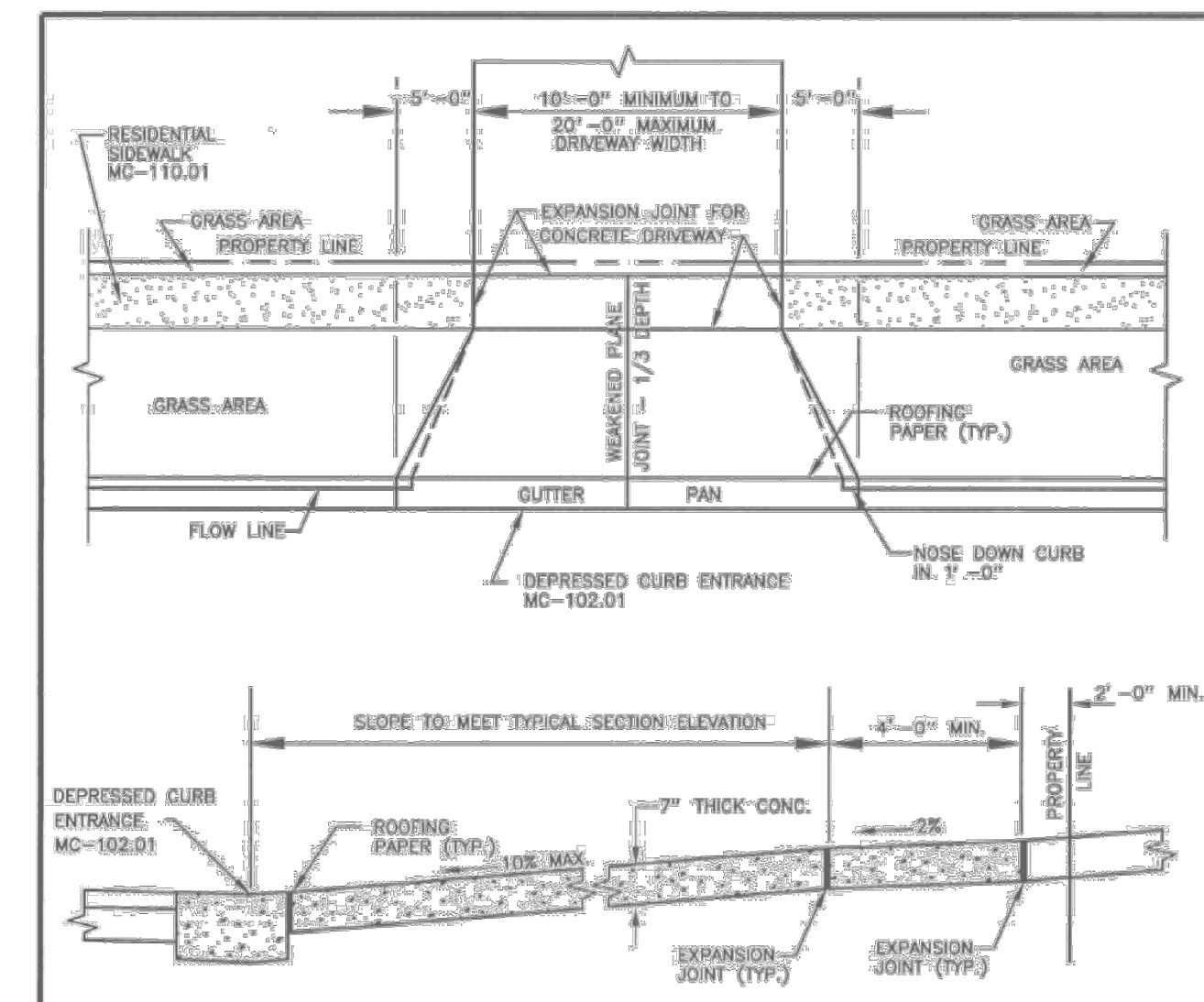
APPROVED 14 APR 06 DATE <i>Auth. H. Secor</i> DIRECTOR, DEPT. OF PUBLIC WORKS & TRANSPORTATION <i>Holger Secor</i> for CHIEF, DIV. OF CAP. DEV.	REVISED ASTM-C920 4/2006	MONTGOMERY COUNTY DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION <b>RESIDENTIAL SIDEWALK RAMP</b>
<b>STANDARD NO. MC-112.01</b>		



GENERAL NOTES

- REFER TO MARYLAND STATE HIGHWAY ADMINISTRATION SPECIFICATIONS FOR MATERIALS AND METHODS OF CONSTRUCTION.
- EXPANSION JOINT MATERIAL SHALL BE 1/2 INCH PREFORMED CORK, TRIMMED AND SEALED WITH NON-STAINING TWO-COMPONENT POLYSULFIDE OR POLYURETHANE ELASTOMERIC TYPE SEALANT, COMPLYING WITH ASTM-C920.
- SCORE THE CONCRETE FOR THE TRANSVERSE JOINTS TO A DEPTH OF 1/3 OF THE THICKNESS TO PROVIDE A WEAKENED PLANE.
- THE WIDTH MAY BE INCREASED TO MATCH THE WIDTH OF AN APPROACHING BIKEWAY.

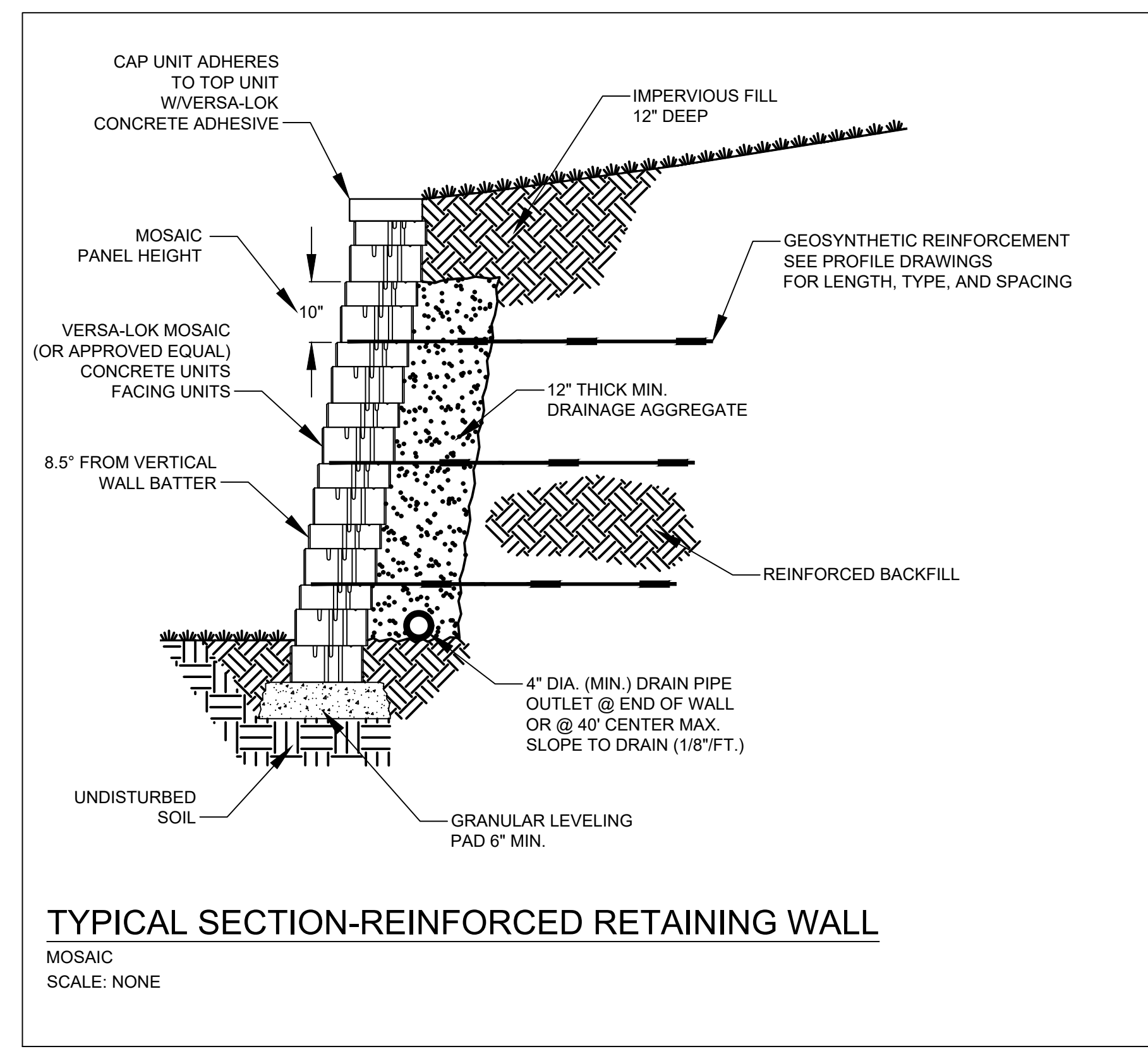
APPROVED 14 APR 06 DATE <i>Auth. H. Secor</i> DIRECTOR, DEPT. OF PUBLIC WORKS & TRANSPORTATION <i>Holger Secor</i> for CHIEF, DIV. OF CAP. DEV.	REVISED ASTM-C920 4/2006	MONTGOMERY COUNTY DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION <b>MEDIAN OPENING</b>
<b>STANDARD NO. MC-114.01</b>		



GENERAL NOTES

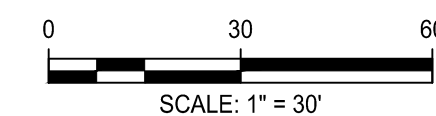
- REFER TO MARYLAND STATE HIGHWAY ADMINISTRATION SPECIFICATIONS FOR MATERIALS AND METHODS OF CONSTRUCTION.
- DRIVEWAY AND DRIVEWAY APRON TO BE MAINTAINED BY PROPERTY OWNER.
- PROVIDE WEAKENED PLANE JOINTS AT MAXIMUM INTERVALS OF 15'.
- THE EXPANSION JOINTS SHALL BE PLACED AT LOCATIONS SHOWN.
- EXPANSION JOINT MATERIAL SHALL BE 1/2 INCH PREFORMED CORK, TRIMMED AND SEALED WITH NON-STAINING TWO-COMPONENT POLYSULFIDE OR POLYURETHANE ELASTOMERIC TYPE SEALANT, COMPLYING WITH ASTM-C920.

APPROVED 14 APR 06 DATE <i>Auth. H. Secor</i> DIRECTOR, DEPT. OF TRANS. <i>Holger Secor</i> for CHIEF, DIV. OF CAP. DEV.	REVISED ASTM-C920 4/2006	MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION <b>RESIDENTIAL DRIVEWAY</b>
<b>STANDARD NO. MC-301.01</b>		



TYPICAL SECTION-REINFORCED RETAINING WALL

MOSAIC SCALE: NONE



Engineers, Architects  
Development Consultants  
2099 Quaker Road, Rockville, MD 20850  
Phone: 301-590-3939 Fax: 301-946-7174  
www.sheladja.com

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND	
RECOMMENDED FOR APPROVAL	DATE
Chief, Design Section	
APPROVED	DATE
Chief, Division of Transportation Engineering	
Designed by: _____	Drawn by: _____
Checked by: _____	

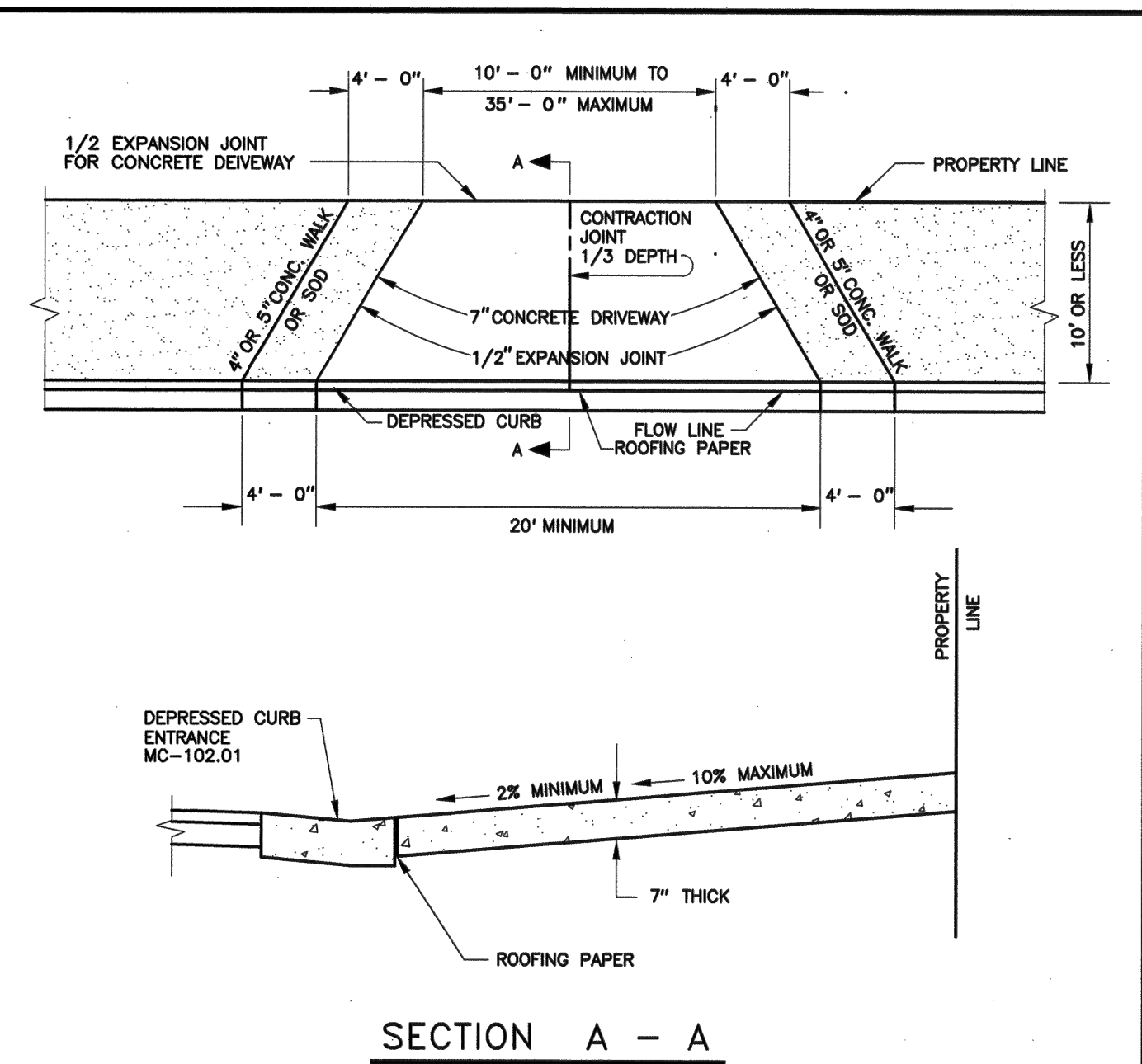
**FRANKLIN AVENUE  
SIDEWALK**

MISCELLANEOUS DETAILS - 1

SCALE: AS SHOWN

Project No.: TBD

21 of 109

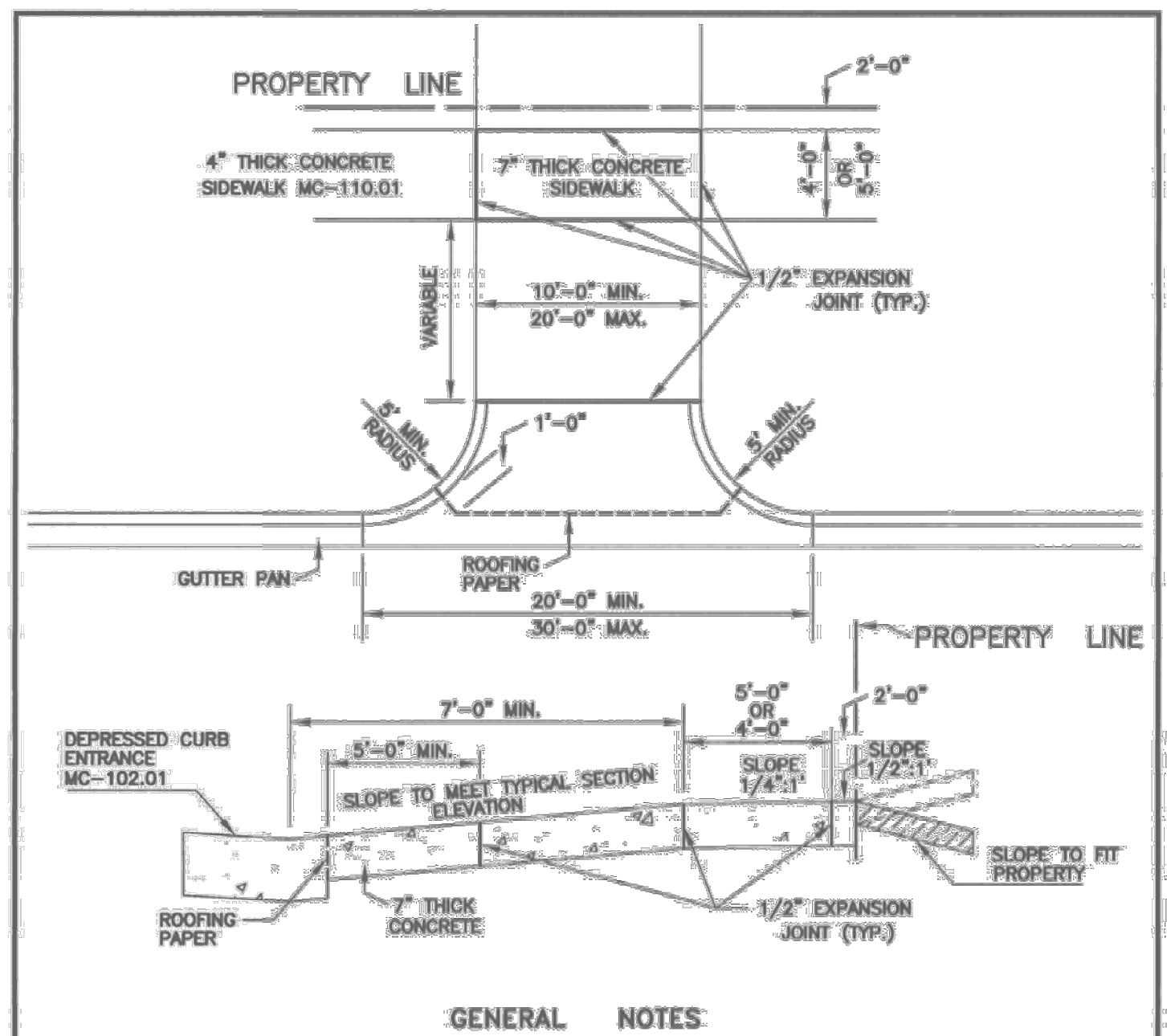


SECTION A - A

GENERAL NOTES

- REFER TO MARYLAND STATE HIGHWAY ADMINISTRATION SPECIFICATIONS FOR MATERIALS AND METHODS OF CONSTRUCTION.
- DRIVEWAY AND DRIVEWAY APRON TO BE MAINTAINED BY PROPERTY OWNER.
- ALL DRIVEWAYS DEPRESSED 2" AT PROPERTY LINE WHEN USING 8" CURB.
- PROVIDE WEAKENED PLANE JOINTS AT MAXIMUM INTERVALS OF 15'.

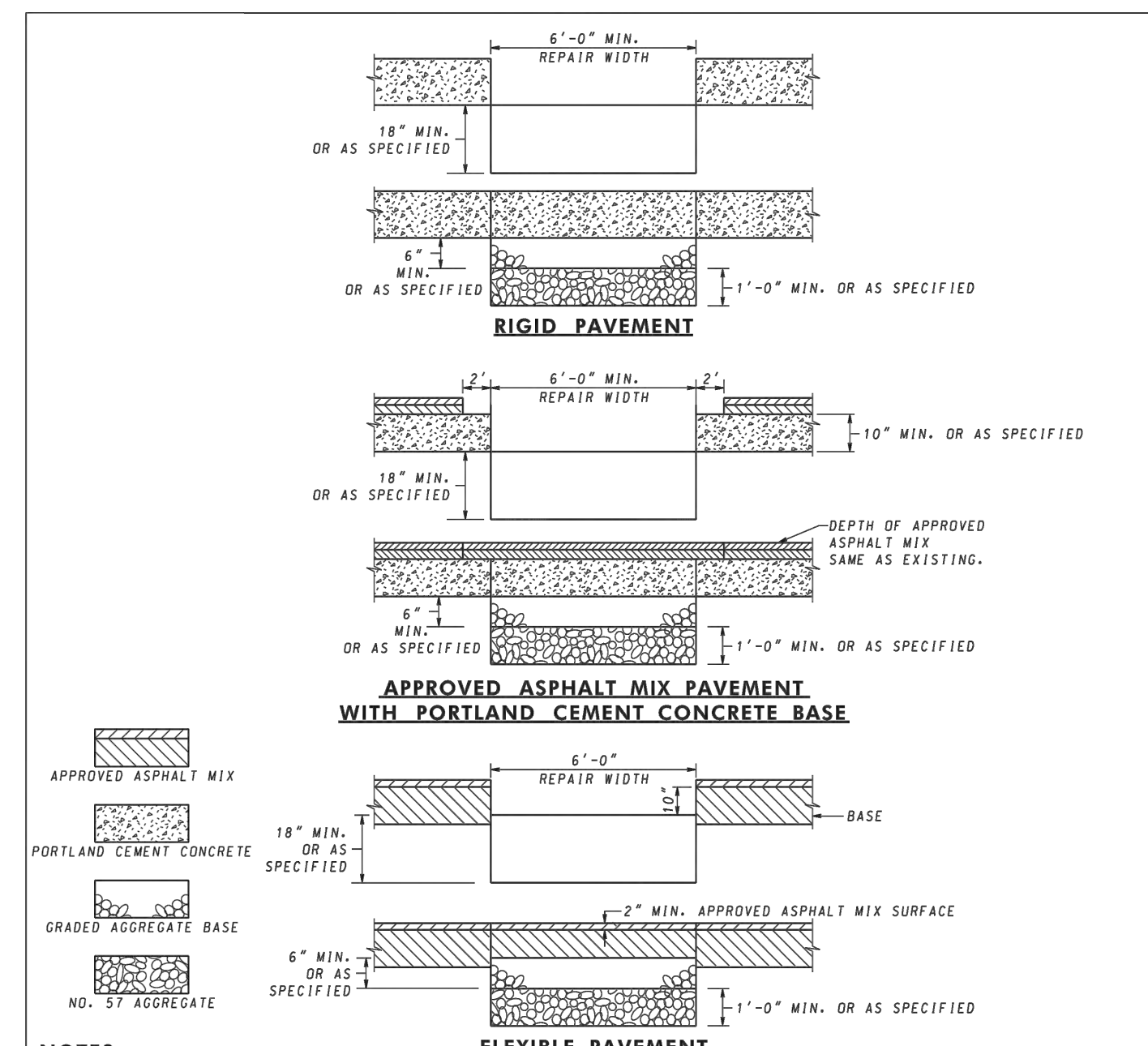
APPROVED	JAN 5/06	REVISED		MONTGOMERY COUNTY
	DATE			DEPARTMENT OF TRANSPORTATION
 DIRECTOR, DEPT. OF TRANS.		<b>RESIDENTIAL DRIVEWAY LIMITED WIDTH</b>		
 CHIEF, DIV. OF ENG. SERVICES		<b>STANDARD NO. MC-301.04</b>		



GENERAL NOTES

- REFER TO MARYLAND STATE HIGHWAY ADMINISTRATION SPECIFICATIONS FOR MATERIALS AND METHODS OF CONSTRUCTION.
- DRIVEWAY AND DRIVEWAY APRON TO BE MAINTAINED BY PROPERTY OWNER.
- THE EXPANSION JOINTS SHALL BE PLACED AT LOCATIONS SHOWN.
- EXPANSION JOINT MATERIAL SHALL BE 1/2 INCH PREFORMED DORS, TRIMMED AND SEALED WITH NON-STAINING TWO-COMPONENT POLYSULFIDE OR POLYURETHANE ELASTOMERIC TYPE SEALANT COMPLYING WITH ASTM-C920.

APPROVED	14 APR 06	REVISED		MONTGOMERY COUNTY
	DATE			DEPARTMENT OF PUBLIC WORKS & TRANSPORTATION
 DIRECTOR, DEPT. OF PUBLIC WORKS & TRANSPORTATION		<b>RESIDENTIAL DRIVEWAY WITH CURB RADIUS</b>		
 CHIEF, DIV. OF CAP. DEV.		<b>STANDARD NO. MC-301.05</b>		

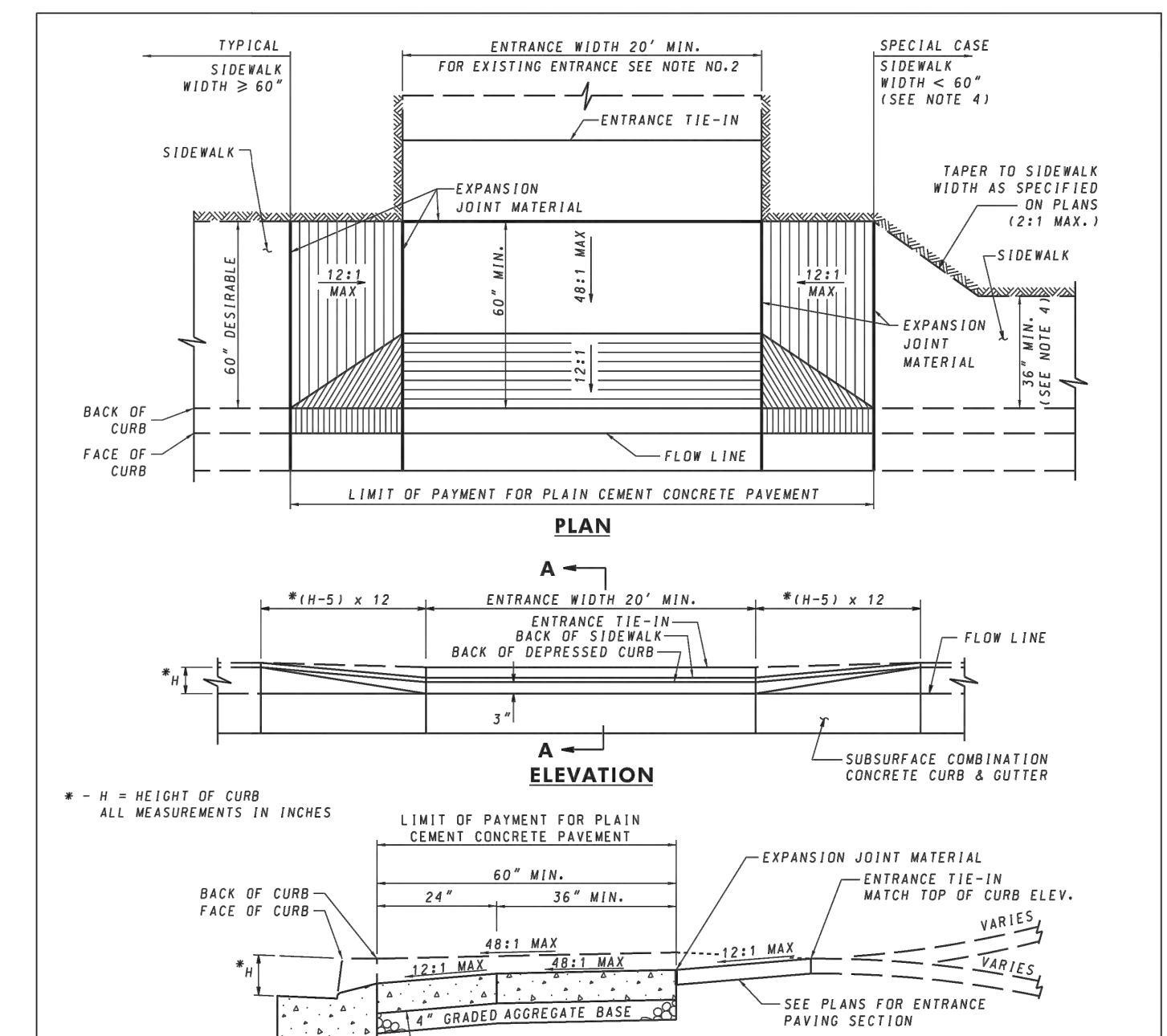


**NOTES**

- THIS STANDARD IS TO BE USED IN ACCORDANCE WITH SECTIONS 505 AND 522. THE ROADWAY SHALL BE PATCHED WITH THE SAME TYPE MATERIAL REMOVED UNLESS NOTED IN THE SPECIFICATIONS. PORTLAND CEMENT CONCRETE PAVEMENT REPAIR SHALL BE IN ACCORDANCE WITH STANDARDS 517-02, 517-03, 517-04, 517-05, 517-06, OR 517-10.
- THE TOP 1 FT. OF THE TRENCH SHALL BE FILLED WITH NO. 57 AGGREGATE. TRENCH TO BE EXTENDED TO DITCH LINE.
- WHEREVER A TRENCH CROSSES A CONCRETE ROADWAY THAT HAS JOINT INSTALLATIONS THE ENTIRE SLAB BETWEEN THE EDGE OF THE TRENCH AND NEAREST JOINT SHALL BE REMOVED IF THE DISTANCE IS LESS THAN 6 FT.
- CLEAN AND WET EDGES OF CUT AND SUBBASE BEFORE PLACING CONCRETE. MATERIAL CONFORMING TO SECTION 303. CR-6. NO. 57 AGGREGATE WRAPPED IN SE GEOTEXTILE, CLM OR GAB.
- ALL WORK SUCH AS TRENCH BACKFILL, CURING OF CONCRETE, MATERIALS USED, ETC. SHALL BE IN ACCORDANCE WITH SECTIONS 201, 505 AND 522 OF THE SPECIFICATIONS OR AS SPECIFIED IN THE PERMIT.
- ALL COSTS FOR SAWCUTS, TRENCH EXCAVATION, BACKFILL, APPROVED ASPHALT MIX, CONCRETE, MATERIAL CONFORMING TO SECTION 303, CR-6, NO. 57 AGGREGATE WRAPPED IN SE GEOTEXTILE, CLM OR GAB, MATERIALS, TOOLS, LABOR AND INCIDENTALS SHALL BE INCLUDED IN THE PRICE OF THE UTILITY ITEMS.
- CLM - CONTROLLED LOW STRENGTH MATERIAL.
- NO. 57 AGGREGATE SHALL BE COMPLETELY WRAPPED IN SE GEOTEXTILE AS DIRECTED BY THE ENGINEER.

SPECIFICATION	505	CATEGORY CODE ITEMS	
APPROVED	 DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT		
	APPROVAL	REVISIONS	APPROVAL - FEDERAL HIGHWAY ADMINISTRATION
	3-4-86	APPROVAL	3-18-86
	REVISIONS	2-25-18	REVISIONS
	REVISIONS	2-25-18	REVISIONS

**Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION**  
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES  
**REPAIRING PAVEMENT OPENINGS FOR UTILITY TRENCHES**  
STANDARD NO. MD 578.01



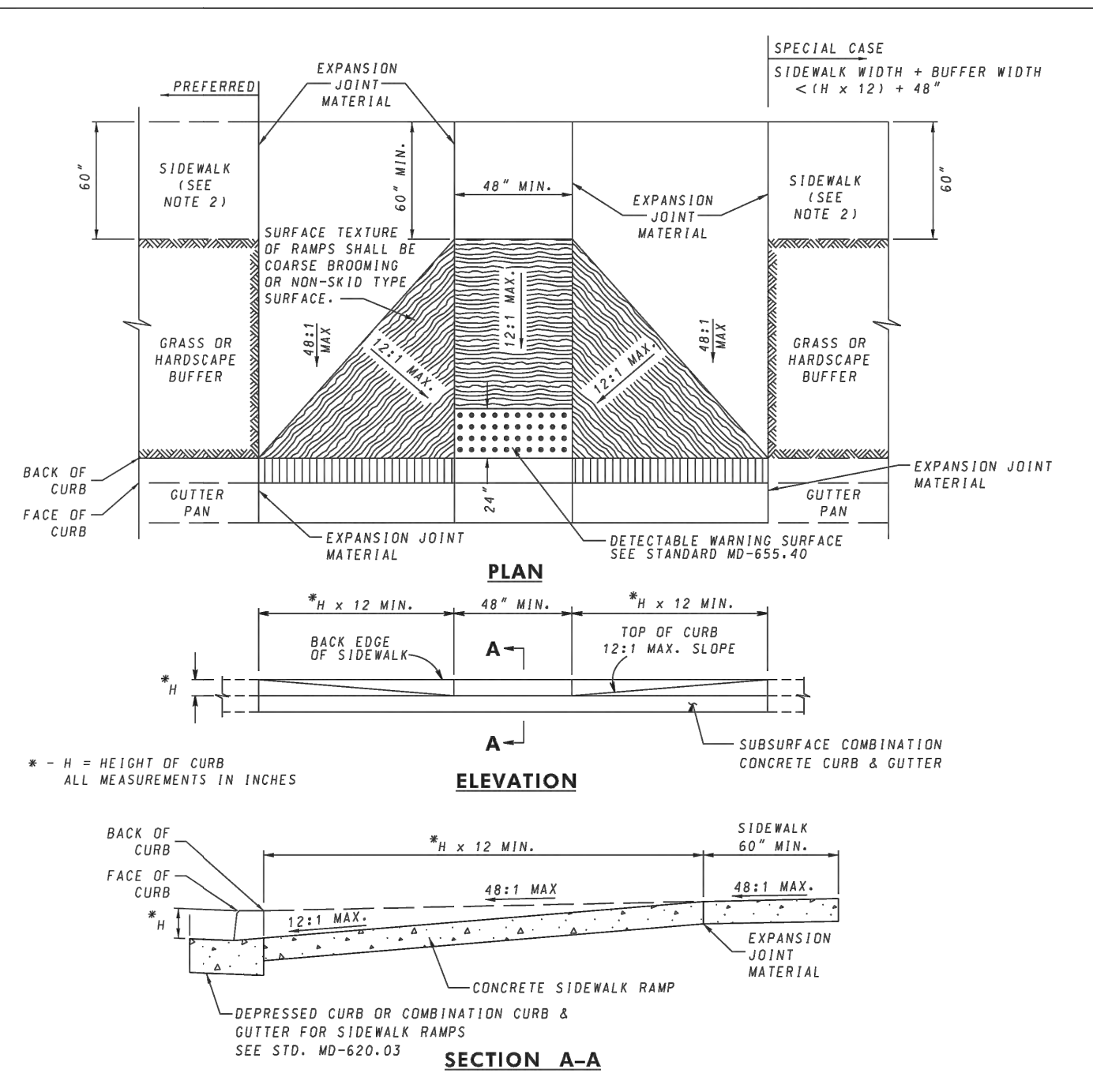
SECTION A-A

**NOTES**

- FOR USE IN AREAS WHERE THERE IS SIDEWALK ADJACENT TO THE BACK OF CURB OR WHERE IT IS EXPECTED THAT SIDEWALK WILL BE ADDED IN THE FUTURE.
- WHEN AN EXISTING ENTRANCE IS LESS THAN 20' IN WIDTH A UNIFORM TAPER SHALL BE CONSTRUCTED TO TIE INTO THE EXISTING ENTRANCE AS DIRECTED BY THE ENGINEER.
- EXPANSION JOINT MATERIAL TO BE INSTALLED IN ACCORDANCE WITH STD. MD-655.01.
- WHERE 60" SIDEWALK CAN NOT BE PROVIDED, 36" MIN. MAY BE USED AS LONG AS PASSING ZONES ARE PROVIDED IN ACCORDANCE WITH STD. MD-655.02.
- TYPE A AND B CURB AND THE CURB FOR TYPE A, B, AND D COMBINATION CURB AND GUTTER SHALL BE DEPRESSED AS SHOWN ON STD. 620-02-01 TYPE C. PAYMENT FOR DEPRESSING THE CURB SHALL BE AS SPECIFIED ON STD. 620-03 NOTE C.
- TRANSITION PANELS TO TIE INTO EXISTING SIDEWALK MUST BE A MINIMUM OF 5' IN LENGTH.
- RAMP SLOPES MUST BE CALCULATED USING THE HORIZONTAL PLANE. USING ONLY THE RISE-OVER-RUN METHOD IS INSUFFICIENT FOR DETERMINING SLOPE. ANY VARIANCE FROM THE HORIZONTAL PLANE OF THE SURROUNDING ROADWAY FACILITY MUST ALSO BE DETERMINED AND ACCOUNTED FOR.
- USE MIX 9 UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

SPECIFICATION		CATEGORY CODE ITEMS	
APPROVED	 DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT		
	APPROVAL	REVISIONS	APPROVAL - FEDERAL HIGHWAY ADMINISTRATION
	2-10-04	APPROVAL	3-31-04
	REVISIONS	6-2-14	REVISIONS
	REVISIONS	6-14-16	REVISIONS

**Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION**  
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES  
**STANDARD ENTRANCE CONSTRUCTION RESIDENTIAL & COMMERCIAL METHOD NO. 1**  
STANDARD NO. MD 630.01



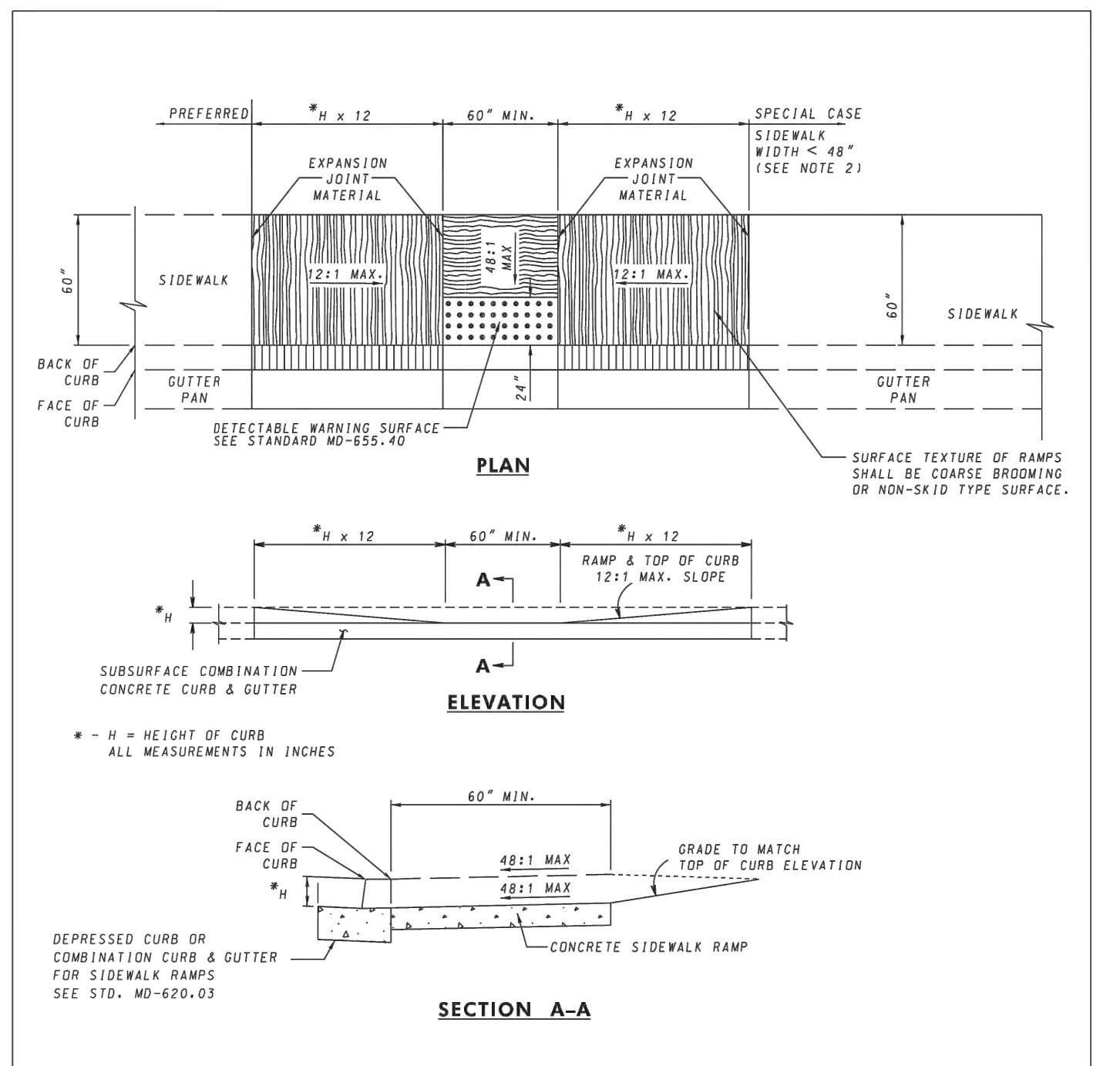
SECTION A-A

**NOTES**

- TO BE USED ON WIDE SIDEWALKS OR SIDEWALKS WITH SIGNIFICANT SEPARATION FROM THE ROADWAY WHERE THE GEOMETRY SPECIFIED IN THE DETAILS ABOVE CAN BE MODIFIED TO SUIT A PARTICULAR LOCATION.
- WHERE 60" SIDEWALK CAN NOT BE PROVIDED, A DESIGN WAIVER MUST BE REQUESTED.
- NO TRAVERSABLE SLOPE ON THE RAMP OR SIDEWALK SHALL EXCEED 12:1 IN THE DIRECTION OF PEDESTRIAN TRAVEL, OR 48:1 PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL.
- EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STD. MD-655.01.
- SIDEWALK RAMP TO BE SHOWN ON PLANS SYMBOLICALLY AND REFERENCED WITH THE CENTER OF THE RAMP ALIGNED TO A STATION ON THE CONSTRUCTION CENTERLINE. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED RAMP VARIES FROM STANDARD CASES.
- TRANSITION PANELS TO TIE INTO EXISTING SIDEWALK MUST BE A MINIMUM OF 5' IN LENGTH.

SPECIFICATION	603 & 611	CATEGORY CODE ITEMS	
APPROVED	 DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT		
	APPROVAL	REVISIONS	APPROVAL - FEDERAL HIGHWAY ADMINISTRATION
	3-18-04	APPROVAL	3-31-04
	REVISIONS	3-25-08	REVISIONS
	REVISIONS	6-2-14	REVISIONS

**Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION**  
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES  
**SIDEWALK RAMPS PERPENDICULAR**  
STANDARD NO. MD 655.11



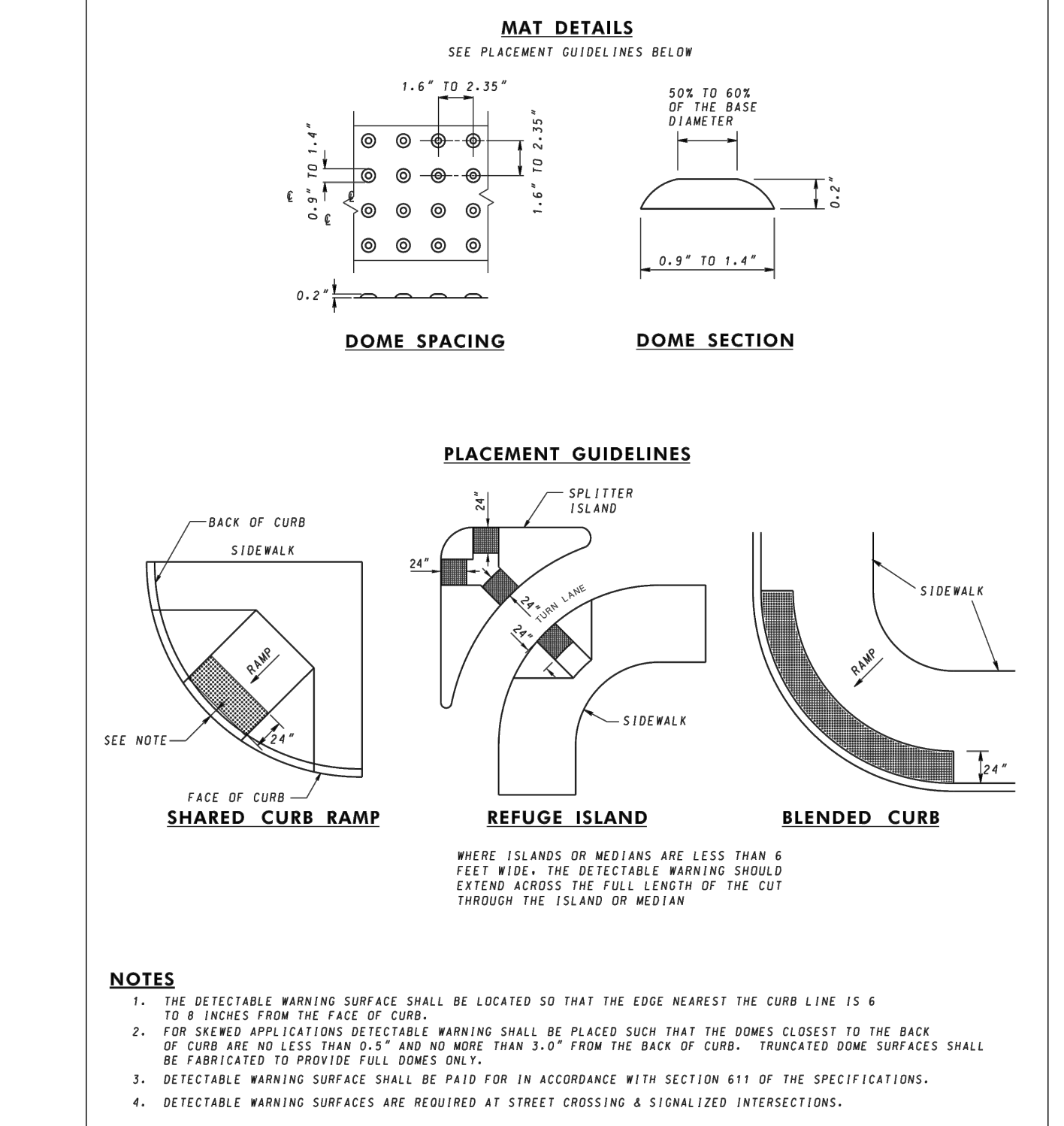
SECTION A-A

**NOTES**

- TO BE USED WHERE SIDEWALK IS ADJACENT TO THE CURB. THIS STANDARD MAY BE MODIFIED TO SUIT A PARTICULAR LOCATION.
- WHERE 60" SIDEWALK CAN NOT BE PROVIDED, A DESIGN WAIVER MUST BE REQUESTED.
- NO TRAVERSABLE SLOPE ON THE RAMP OR SIDEWALK SHALL EXCEED 12:1 IN THE DIRECTION OF PEDESTRIAN TRAVEL, OR 48:1 PERPENDICULAR TO THE DIRECTION OF PEDESTRIAN TRAVEL. THE CROSS-SLOPE OF THE LANDING AREA CANNOT EXCEED GRADE OF ROADWAY.
- EXPANSION JOINT MATERIAL SHALL BE INSTALLED IN ACCORDANCE WITH STD. MD-655.01.
- SIDEWALK RAMP TO BE SHOWN ON PLANS SYMBOLICALLY AND REFERENCED WITH THE CENTER OF THE RAMP ALIGNED TO A STATION ON THE CONSTRUCTION CENTERLINE. SEPARATE DETAILS SHALL BE SHOWN WHERE PROPOSED RAMP VARIES FROM STANDARD CASES.
- TRANSITION PANELS TO TIE INTO EXISTING SIDEWALK MUST BE A MINIMUM OF 5' IN LENGTH.

SPECIFICATION	603 & 611	CATEGORY CODE ITEMS	
APPROVED	 DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT		
	APPROVAL	REVISIONS	APPROVAL - FEDERAL HIGHWAY ADMINISTRATION
	3-18-04	APPROVAL	3-31-04
	REVISIONS	3-25-08	REVISIONS
	REVISIONS	6-2-14	REVISIONS

**Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION**  
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES  
**SIDEWALK RAMPS PARALLEL**  
STANDARD NO. MD 655.12



**NOTES**

- THE DETECTABLE WARNING SURFACE SHALL BE LOCATED SO THAT THE EDGE NEAREST THE CURB LINE IS 6 TO 8 INCHES FROM THE FACE OF CURB.
- TOP SAWED APPLICATIONS DETECTABLE WARNING SHALL BE PLACED SUCH THAT THE DOMES CLOSEST TO THE BACK OF CURB ARE NO LESS THAN 0.5' AND NO MORE THAN 3.0' FROM THE BACK OF CURB. FRONTAL DOMES SURFACES SHALL BE FABRICATED TO PROVIDE FULL DOMES ONLY.
- DETECTABLE WARNING SURFACES SHALL BE PAID FOR IN ACCORDANCE WITH SECTION 611 OF THE SPECIFICATIONS.
- DETECTABLE WARNING SURFACES ARE REQUIRED AT STREET CROSSING A SIGNALIZED INTERSECTIONS.

SPECIFICATION	611	CATEGORY CODE ITEMS	
APPROVED	 DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT		
	APPROVAL	REVISIONS	APPROVAL - FEDERAL HIGHWAY ADMINISTRATION
	2-10-04	APPROVAL	3-31-04
	REVISIONS	4-17-08	REVISIONS
	REVISIONS	4-3-04	REVISIONS

**Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION**  
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES  
**DETECTABLE WARNING SURFACES**  
STANDARD NO. MD 655.40

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION	
ROCKVILLE, MARYLAND	
RECOMMENDED FOR APPROVAL	Date
Chief, Design Section	
APPROVED	Date
Chief, Division of Transportation Engineering	

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION	
ROCKVILLE, MARYLAND	
RECOMMENDED FOR APPROVAL	Date
Chief, Design Section	
APPROVED	Date
Chief, Division of Transportation Engineering	

**Engineers, Architects Development Consultants**  
2089 Quince Road, Rockville, MD 20850  
Phone: 301-580-3939 Fax: 301-946-7174  
www.sheladiala.com

NO.	REVISION	DATE	BY

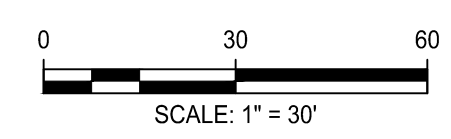
DESIGNED BY	DRAWN BY	CHECKED BY

**FRANKLIN AVENUE SIDEWALK**  
MISCELLANEOUS DETAILS - 2  
SCALE: AS SHOWN  
Project No.: TBD  
22 of 109



**LIMIT OF WORK**  
**FRANKLIN AVENUE**  
**STA. 0+85.40**

- REFERENCE NOTES:**
- SEE DWG'S XS-01 THROUGH XS-23 FOR SECTION VIEWS.
  - CONTRACTOR SHALL NOT WORK OUTSIDE THE LOD BOUNDARY AS SHOWN ABOVE.



NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
DEPARTMENT OF TRANSPORTATION  
100 EDISON PARK DRIVE  
GAITHERSBURG, MARYLAND

**CONTACT:**  
DIVISION OF TRANSPORTATION ENGINEERING  
CONSTRUCTION SECTION  
240-777-7210  
DESIGN SECTION  
240-777-7221

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_  
APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

SM FILE NO. \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEGMENT CONTROL PERMIT NO. \_\_\_\_\_

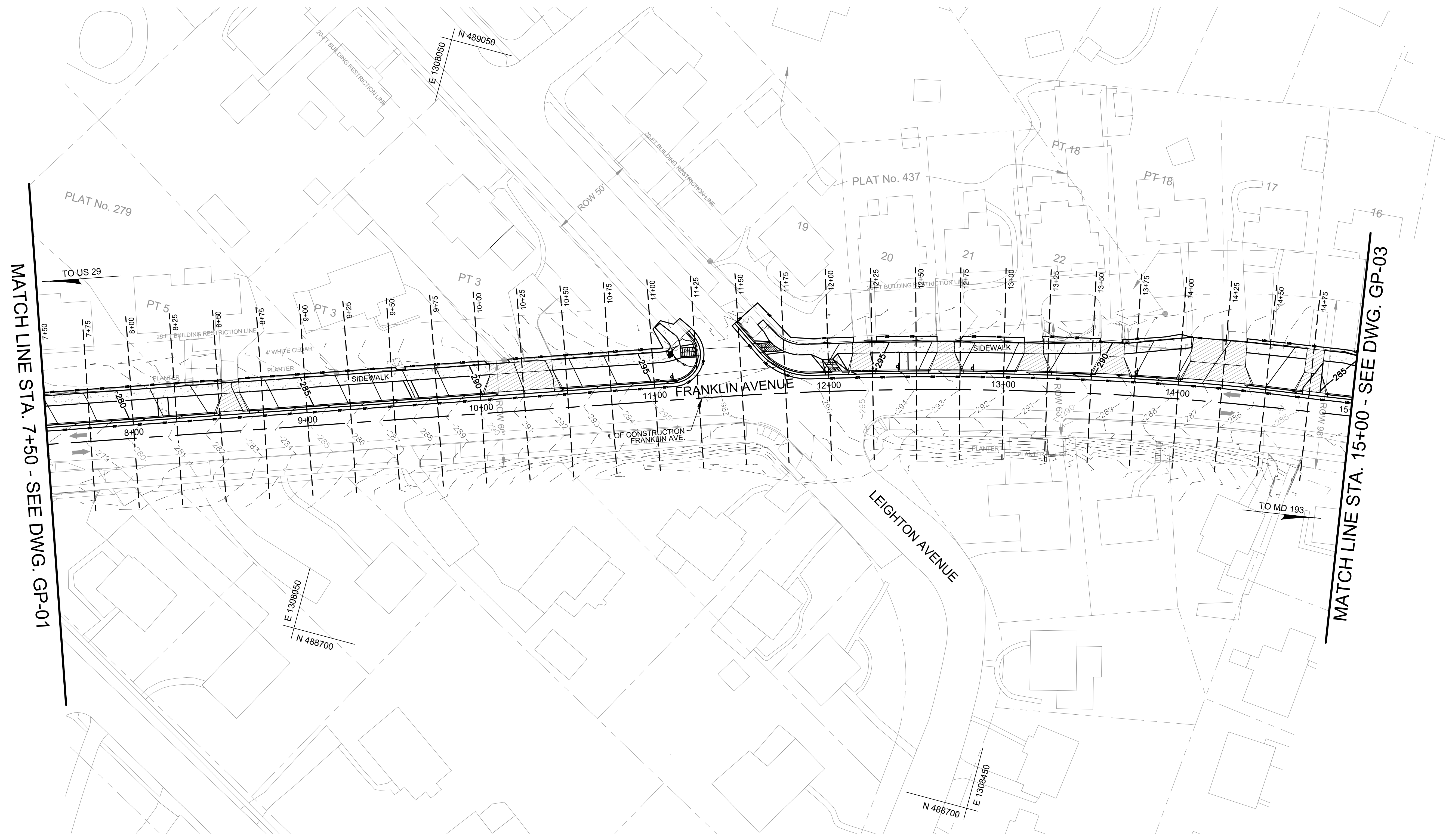
MCDOT APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

**FRANKLIN AVENUE**  
**SIDEWALK**  
**GRADING PLAN**  
**STA. 0+00 TO STA. 7+50**

SCALE: AS SHOWN

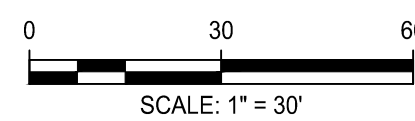
Project No.: TBD of 109

**GP-01**



**REFERENCE NOTES:**

- SEE DWG'S. XS-01 THROUGH XS-23 FOR SECTION VIEWS.
- CONTRACTOR SHALL NOT WORK OUTSIDE THE LOD BOUNDARY AS SHOWN ABOVE.



NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
 DEPARTMENT OF TRANSPORTATION  
 100 EDISON PARK DRIVE  
 GAITHERSBURG, MARYLAND

**CONTACT:**  
 DIVISION OF TRANSPORTATION ENGINEERING  
 CONSTRUCTION SECTION  
 240-777-7210  
 DESIGN SECTION  
 240-777-7221

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_  
 APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

PROJECT NO. \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEEDMENT CONTROL PERMIT NO. \_\_\_\_\_

MCDPS APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

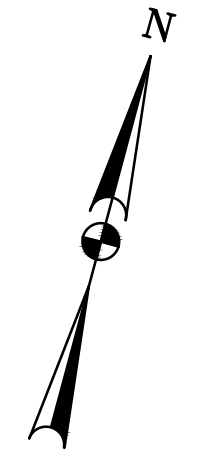
**FRANKLIN AVENUE  
 SIDEWALK  
 GRADING PLAN  
 STA. 7+50 TO STA. 15+00**

SCALE: AS SHOWN

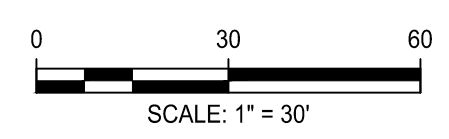
Project No.: TBD of 109

**GP-02**





- REFERENCE NOTES:**
- SEE DWG'S. XS-01 THROUGH XS-23 FOR SECTION VIEWS.
  - CONTRACTOR SHALL NOT WORK OUTSIDE THE LOD BOUNDARY AS SHOWN ABOVE.



NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
 DEPARTMENT OF TRANSPORTATION  
 100 EDISON PARK DRIVE  
 GAITHERSBURG, MARYLAND

**CONTACT:**  
 DIVISION OF TRANSPORTATION ENGINEERING  
 CONSTRUCTION SECTION  
 240-777-7210  
 DESIGN SECTION  
 240-777-7221

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

SM FILE NO. \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEEDMENT CONTROL PERMIT NO. \_\_\_\_\_

MCDOT APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

**FRANKLIN AVENUE  
 SIDEWALK  
 GRADING PLAN  
 STA. 15+00 TO STA. 22+00**

SCALE: AS SHOWN

**GP-03**

Project No.: TBD of 109

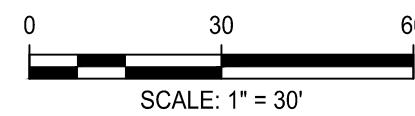


MATCH LINE STA. 22+00 - SEE DWG. GP-03

MATCH LINE STA. 30+50 - SEE DWG. GP-05

**REFERENCE NOTES:**

- SEE DWG'S. XS-01 THROUGH XS-23 FOR SECTION VIEWS.
- CONTRACTOR SHALL NOT WORK OUTSIDE THE LOD BOUNDARY AS SHOWN ABOVE.



NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
 DEPARTMENT OF TRANSPORTATION  
 100 EDISON PARK DRIVE  
 GAITHERSBURG, MARYLAND

**CONTACT:**  
 DIVISION OF TRANSPORTATION ENGINEERING  
 CONSTRUCTION SECTION  
 240-777-7210  
 DESIGN SECTION  
 240-777-7221

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_  
 APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

PROJECT NO. \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEEDMENT CONTROL PERMIT NO. \_\_\_\_\_

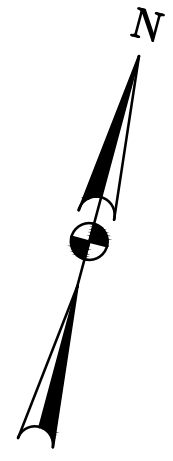
MCDOT APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

**FRANKLIN AVENUE  
 SIDEWALK  
 GRADING PLAN  
 STA. 22+00 TO STA. 30+50**

SCALE: AS SHOWN

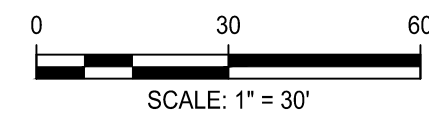
Project No.: TBD of 109

**GP-04**



**REFERENCE NOTES:**

1. SEE DWG'S XS-01 THROUGH XS-23 FOR SECTION VIEWS.
2. CONTRACTOR SHALL NOT WORK OUTSIDE THE LOD BOUNDARY AS SHOWN ABOVE.



NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
DEPARTMENT OF TRANSPORTATION  
100 EDISON PARK DRIVE  
GAITHERSBURG, MARYLAND

**CONTACT:**  
DIVISION OF TRANSPORTATION ENGINEERING  
CONSTRUCTION SECTION  
240-777-7210  
DESIGN SECTION  
240-777-7221

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND	
RECOMMENDED FOR APPROVAL	
Chief, Design Section	Date
APPROVED	
Chief, Division of Transportation Engineering	Date
Designed by: _____	Drawn by: _____
Checked by: _____	

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:	
Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____
SM FILE NO. _____	

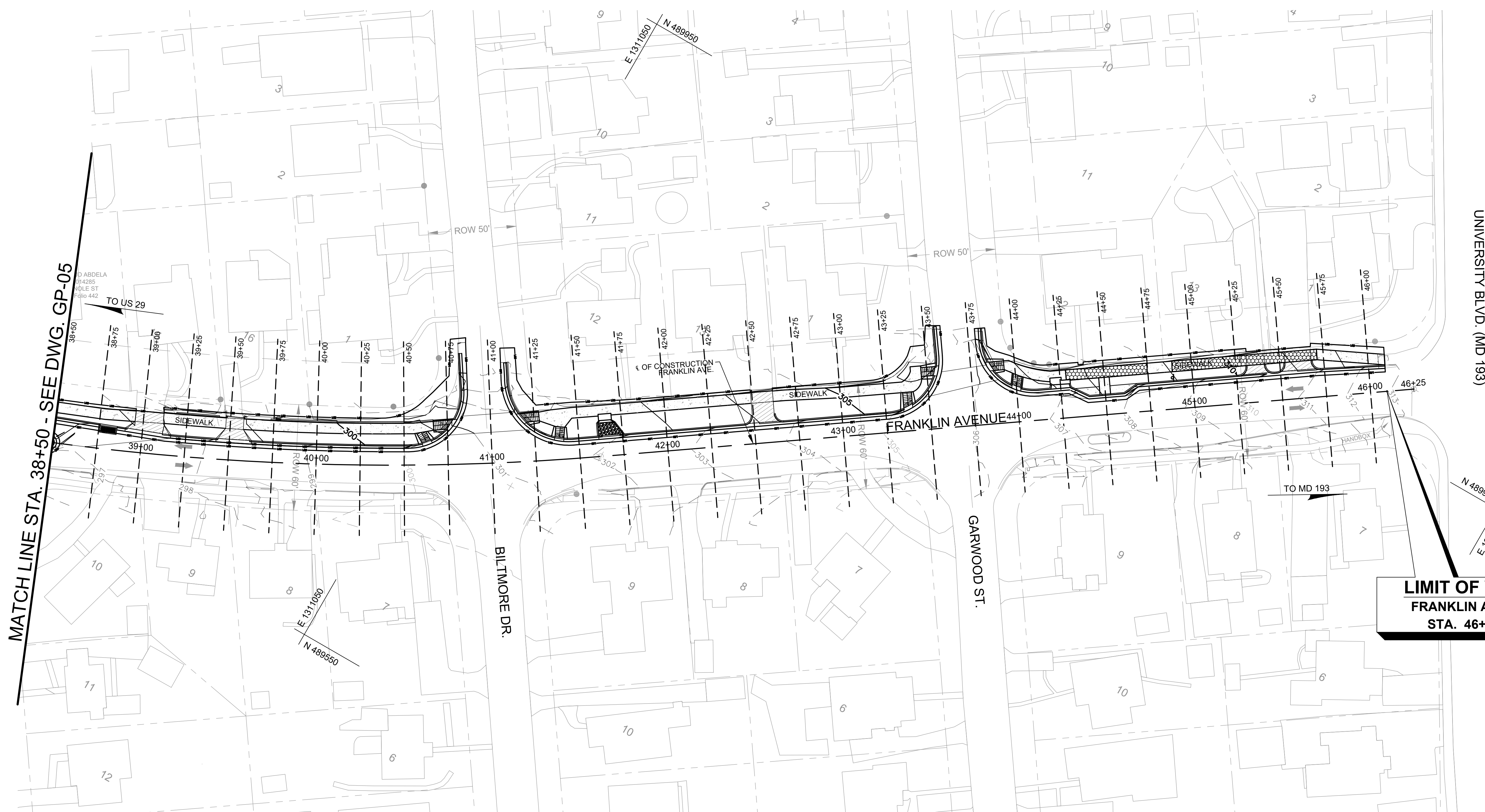
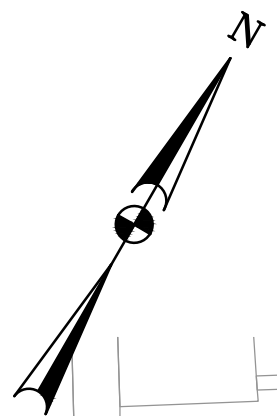
NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT	
Administrative Requirements:	
Reviewed _____ Date _____	
SEEDMENT CONTROL PERMIT NO. _____	
<small>MCDOT APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED</small>	

**FRANKLIN AVENUE  
SIDEWALK  
GRADING PLAN  
STA. 30+00 TO STA. 38+50**

SCALE: AS SHOWN

**GP-05**

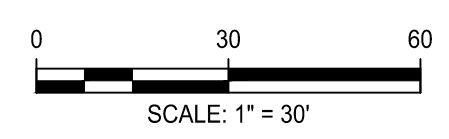
Project No.: TBD of 109



MATCH LINE STA. 38+50 - SEE DWG. GP-05

**LIMIT OF WORK**  
FRANKLIN AVENUE  
STA. 46+09.40

- REFERENCE NOTES:**
- SEE DWG'S XS-01 THROUGH XS-23 FOR SECTION VIEWS.
  - CONTRACTOR SHALL NOT WORK OUTSIDE THE LOD BOUNDARY AS SHOWN ABOVE.



NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
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100 EDISON PARK DRIVE  
GAITHERSBURG, MARYLAND

**CONTACT:**  
DIVISION OF TRANSPORTATION ENGINEERING  
CONSTRUCTION SECTION  
240-777-7210  
DESIGN SECTION  
240-777-7221

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management: _____ Reviewed _____ Date _____ Approved _____ Date _____	Sediment Control Technical Requirements: Reviewed _____ Date _____ Approved _____ Date _____
---	--

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Administrative Requirements:  
Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEEDMENT CONTROL PERMIT NO. \_\_\_\_\_

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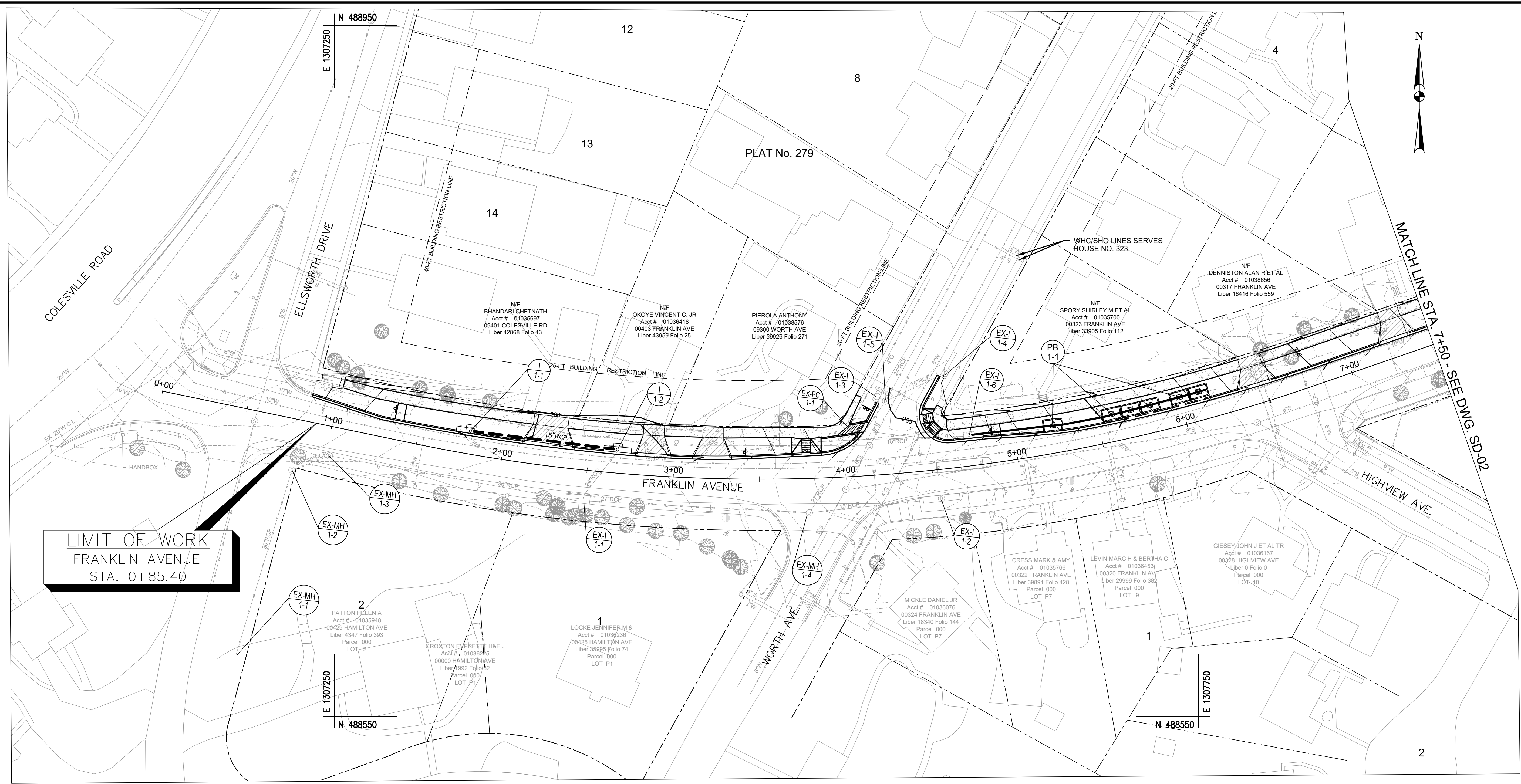
**FRANKLIN AVENUE  
SIDEWALK  
GRADING PLAN  
STA. 38+50 TO STA. 46+09.40**

SCALE: AS SHOWN

Project No.: TBD

GP - 06

28 of 109

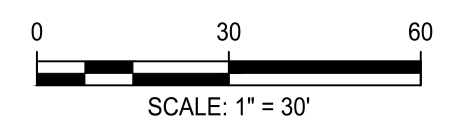


**GENERAL NOTES FOR UTILITIES**

- THE LOCATION OF THE UTILITIES SHOWN ON THE PLANS ARE BASED ON FIELD SURVEY DATA/OR RECORD DRAWINGS ON THE ORIGINAL LOCATIONS. THE INFORMATION SHOWN IS NOT NECESSARILY COMPLETE AND LOCATIONS OF THE UTILITIES SHOWN IS APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE OF ALL UTILITIES WELL IN ADVANCE OF CONDUCTING CONSTRUCTION OPERATIONS WHICH COULD DAMAGE THESE FACILITIES. IN THE AREAS WHERE PROPOSED CONSTRUCTION MAY CONFLICT WITH EXISTING UTILITIES, THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING UTILITIES.
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**LEGEND**

- BMP-PERVIOUS CONCRETE SIDEWALK
- BMP-GRASS SWALE
- BMP-PLANTER BOX
- PROPOSED STRUCTURE NUMBER
- EXISTING STRUCTURE NUMBER
- PROPOSED PIPE
- EX. CONTOUR
- PROPOSED CONTOUR



**Engineers, Architects**  
**SHELDONIA Development Consultants**  
 2039 Galtier Road, Rockville, MD, 20850  
 Phone: 301-590-3939 Fax: 301-948-7174  
 www.sheldonia.com

NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
 DEPARTMENT OF TRANSPORTATION  
 100 EDISON PARK DRIVE  
 GAITHERSBURG, MARYLAND

**CONTACT:**  
 DIVISION OF TRANSPORTATION ENGINEERING  
 CONSTRUCTION SECTION  
 240-777-7210  
 DESIGN SECTION  
 240-777-7221

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_  
 APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

Designed by: JS Drawn by: ES Checked by: NM

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

SM FILE NO. \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEDMENT CONTROL PERMIT NO. \_\_\_\_\_

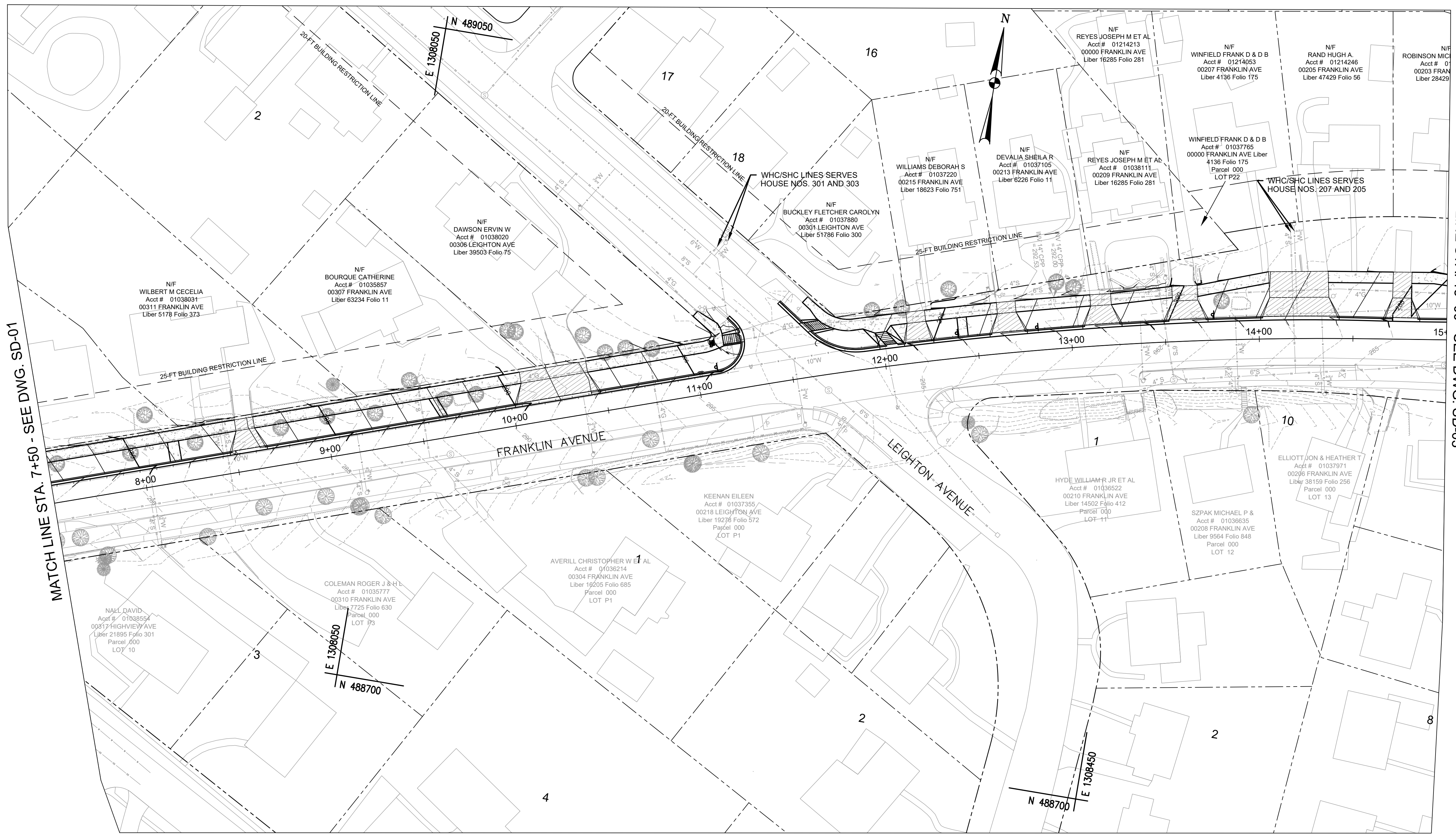
MCDPS APPROVAL OF THIS PLAN EXPIRES ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

**FRANKLIN AVENUE  
 SIDEWALK  
 STORM DRAIN PLAN**

SCALE: AS SHOWN

Project No.: TBD of 109

**SD-01**



MATCH LINE STA. 7+50 - SEE DWG. SD-01

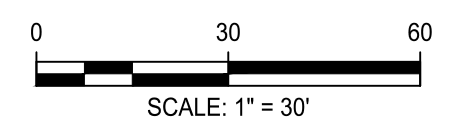
MATCH LINE STA. 15+00 - SEE DWG. SD-03

**GENERAL NOTES FOR UTILITIES**

- THE LOCATION OF THE UTILITIES SHOWN ON THE PLANS ARE BASED ON FIELD SURVEY DATA/OR RECORD DRAWINGS ON THE ORIGINAL LOCATIONS. THE INFORMATION SHOWN IS NOT NECESSARILY COMPLETE AND LOCATIONS OF THE UTILITIES SHOWN IS APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE OF ALL UTILITIES WELL IN ADVANCE OF CONDUCTING CONSTRUCTION OPERATIONS WHICH COULD DAMAGE THESE FACILITIES. IN THE AREAS WHERE PROPOSED CONSTRUCTION MAY CONFLICT WITH EXISTING UTILITIES, THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING UTILITIES.
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**LEGEND**

- BMP-PERVIOUS CONCRETE SIDEWALK
- BMP-GRASS SWALE
- BMP-PLANTER BOX
- PROPOSED STRUCTURE NUMBER
- EXISTING STRUCTURE NUMBER
- PROPOSED PIPE
- EX. CONTOUR
- PROPOSED CONTOUR



**Engineers, Architects**  
**SHELADIA Development Consultants**  
 2019 Gaithersburg, Rockville, MD, 20850  
 Phone: 301-590-3939 Fax: 301-948-7174  
 www.sheladia.com

NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
 DEPARTMENT OF TRANSPORTATION  
 100 EDISON PARK DRIVE  
 GAITHERSBURG, MARYLAND

**CONTACT:**  
 DIVISION OF TRANSPORTATION ENGINEERING  
 CONSTRUCTION SECTION  
 240-777-7210  
 DESIGN SECTION  
 240-777-7221

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: JS Drawn by: ES Checked by: NM

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEEDMENT CONTROL PERMIT NO. \_\_\_\_\_

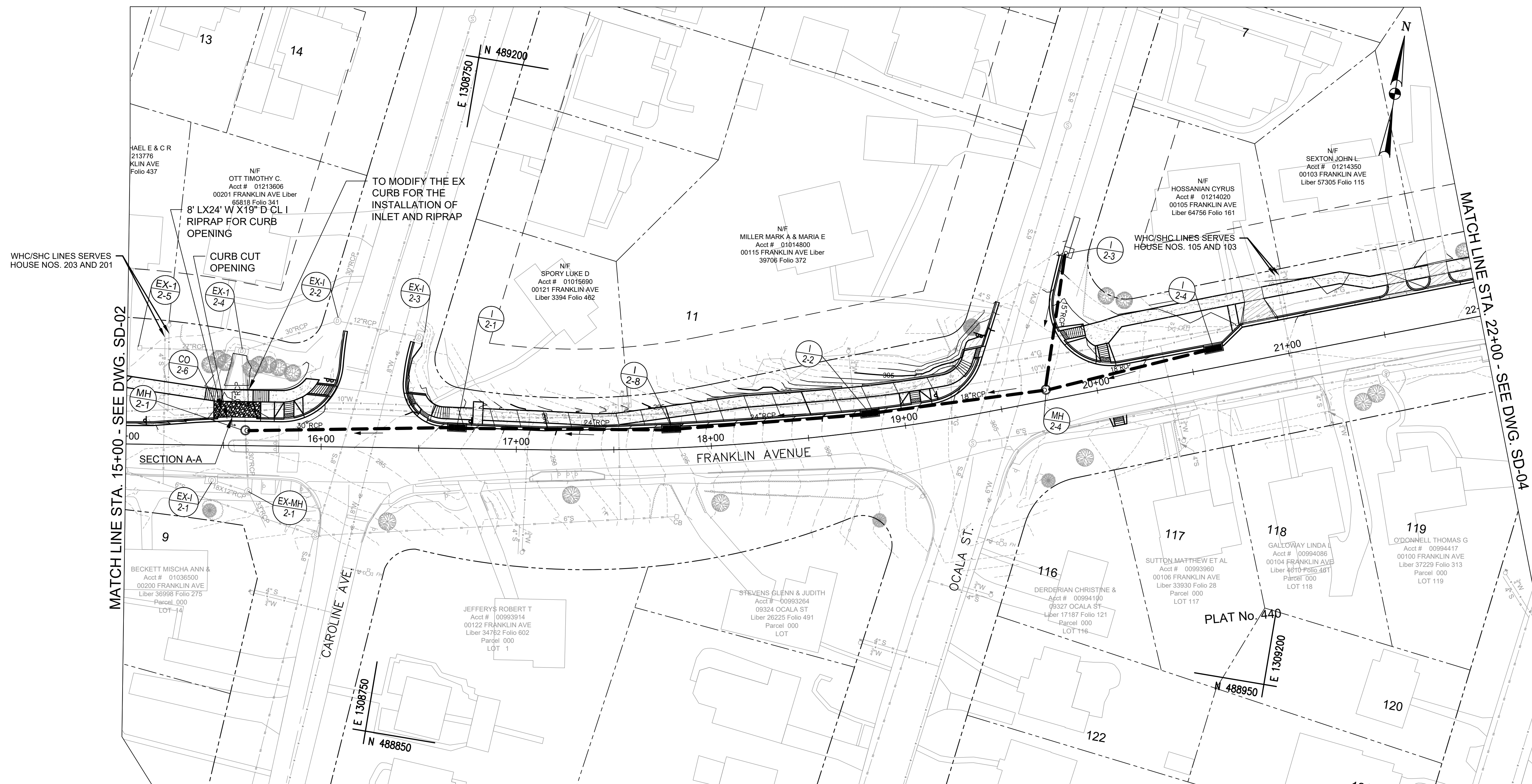
MCDOT APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

**FRANKLIN AVENUE  
 SIDEWALK  
 STORM DRAIN PLAN**

SCALE : AS SHOWN

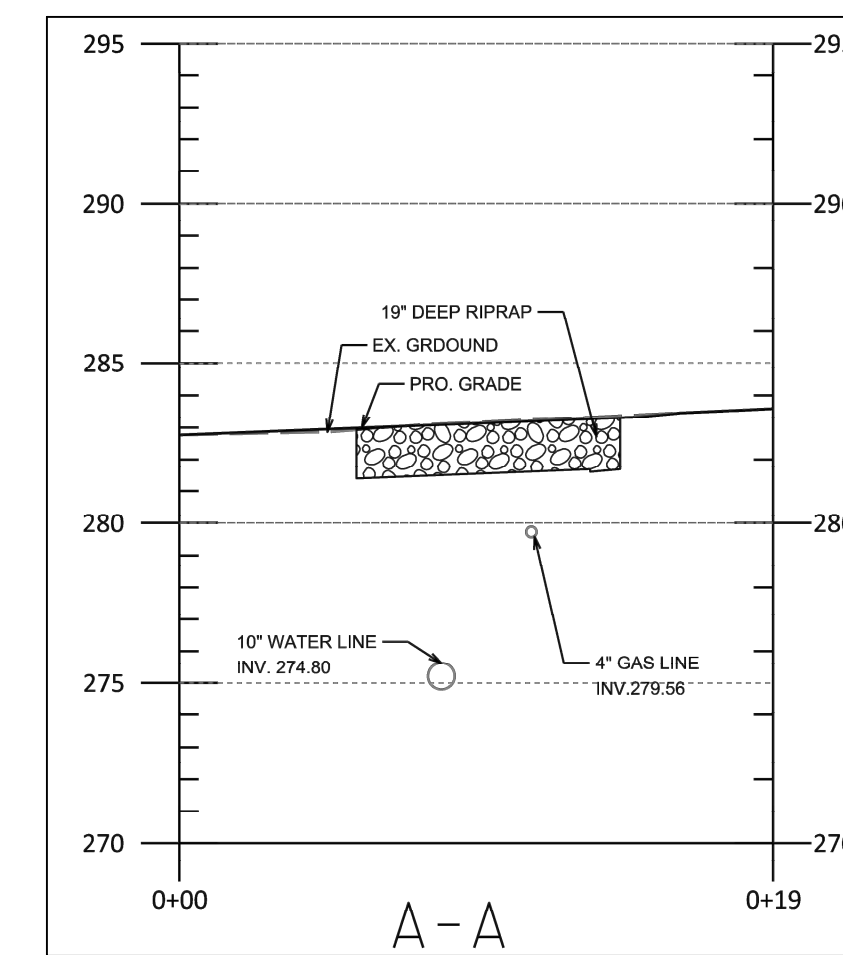
SD-02

Project No. : TBD of 109



**GENERAL NOTES FOR UTILITIES**

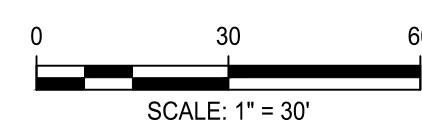
1. THE LOCATION OF THE UTILITIES SHOWN ON THE PLANS ARE BASED ON FIELD SURVEY DATA/OR RECORD DRAWINGS ON THE ORIGINAL LOCATIONS. THE INFORMATION SHOWN IS NOT NECESSARILY COMPLETE AND LOCATIONS OF THE UTILITIES SHOWN IS APPROXIMATE. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE EXISTENCE OF ALL UTILITIES WELL IN ADVANCE OF CONDUCTING CONSTRUCTION OPERATIONS WHICH COULD DAMAGE THESE FACILITIES. IN THE AREAS WHERE PROPOSED CONSTRUCTION MAY CONFLICT WITH EXISTING UTILITIES, THE CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO AVOID DAMAGE TO EXISTING UTILITIES.
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CURB CUT OPENING WITH RIPRAP AT CO-2-6

**LEGEND**

- BMP-PERVIOUS CONCRETE SIDEWALK
- BMP-GRASS SWALE
- BMP-PLANTER BOX
- PROPOSED STRUCTURE NUMBER
- EXISTING STRUCTURE NUMBER
- PROPOSED PIPE
- EX. CONTOUR
- PROPOSED CONTOUR



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NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
 DEPARTMENT OF TRANSPORTATION  
 100 EDISON PARK DRIVE  
 GAITHERSBURG, MARYLAND

**CONTACT:**  
 DIVISION OF TRANSPORTATION ENGINEERING  
 CONSTRUCTION SECTION  
 240-777-7210  
 DESIGN SECTION  
 240-777-7221

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND	
RECOMMENDED FOR APPROVAL	
Chief, Design Section	
APPROVED	Date
Chief, Division of Transportation Engineering	Date
Designed by: <u>JS</u>	Drawn by: <u>ES</u> Checked by: <u>NM</u>

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:	
Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

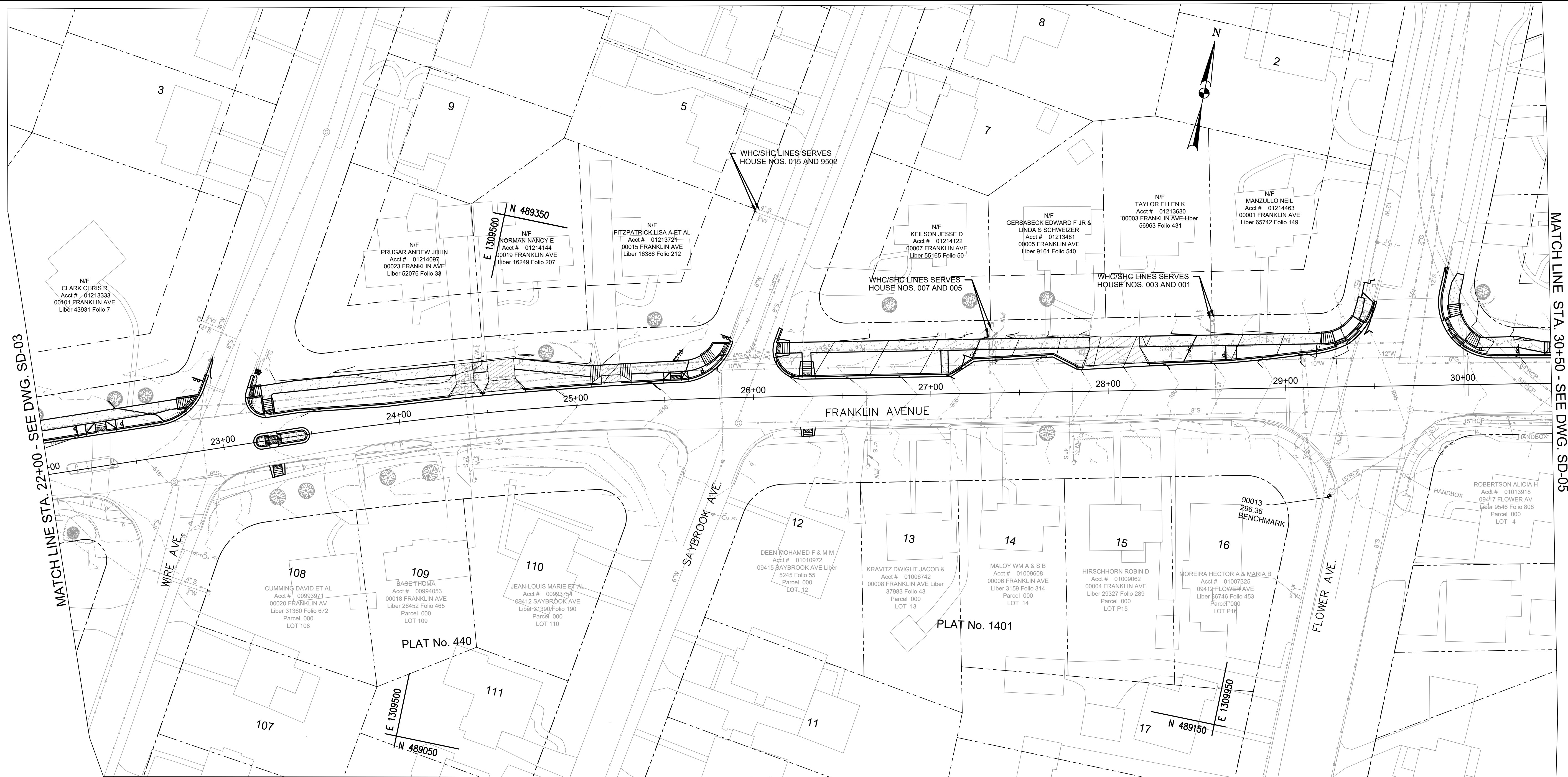
NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT	
Administrative Requirements:	
Reviewed _____ Date _____	Reviewed _____ Date _____
SEGMENT CONTROL PERMIT NO. _____	
MCDPS APPROVAL OF THIS PLAN EXPIRES ONE YEAR FROM THE DATE OF APPROVAL. IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED.	

**FRANKLIN AVENUE  
 SIDEWALK  
 STORM DRAIN PLAN**

SCALE : AS SHOWN

SD-03

Project No. : TBD 31 of 109

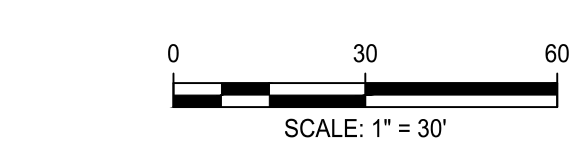


**GENERAL NOTES FOR UTILITIES**

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**LEGEND**

- BMP-PERVIOUS CONCRETE SIDEWALK
- BMP-GRASS SWALE
- BMP-PLANTER BOX
- PROPOSED STRUCTURE NUMBER
- EXISTING STRUCTURE NUMBER
- PROPOSED PIPE
- EX. CONTOUR
- PROPOSED CONTOUR



**Engineers, Architects  
Development Consultants**  
2039 Gaither Road, Rockville, MD 20850  
Phone: 301-590-3939 Fax: 301-948-7174  
www.sheladia.com

NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
DEPARTMENT OF TRANSPORTATION  
100 EDISON PARK DRIVE  
GAITHERSBURG, MARYLAND

**CONTACT:**  
DIVISION OF TRANSPORTATION ENGINEERING  
CONSTRUCTION SECTION  
240-777-7210  
DESIGN SECTION  
240-777-7221

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: JS Drawn by: ES Checked by: NM

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

SMPLF NO. \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEWAGE CONTROL PERMIT NO. \_\_\_\_\_

MCDOT APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

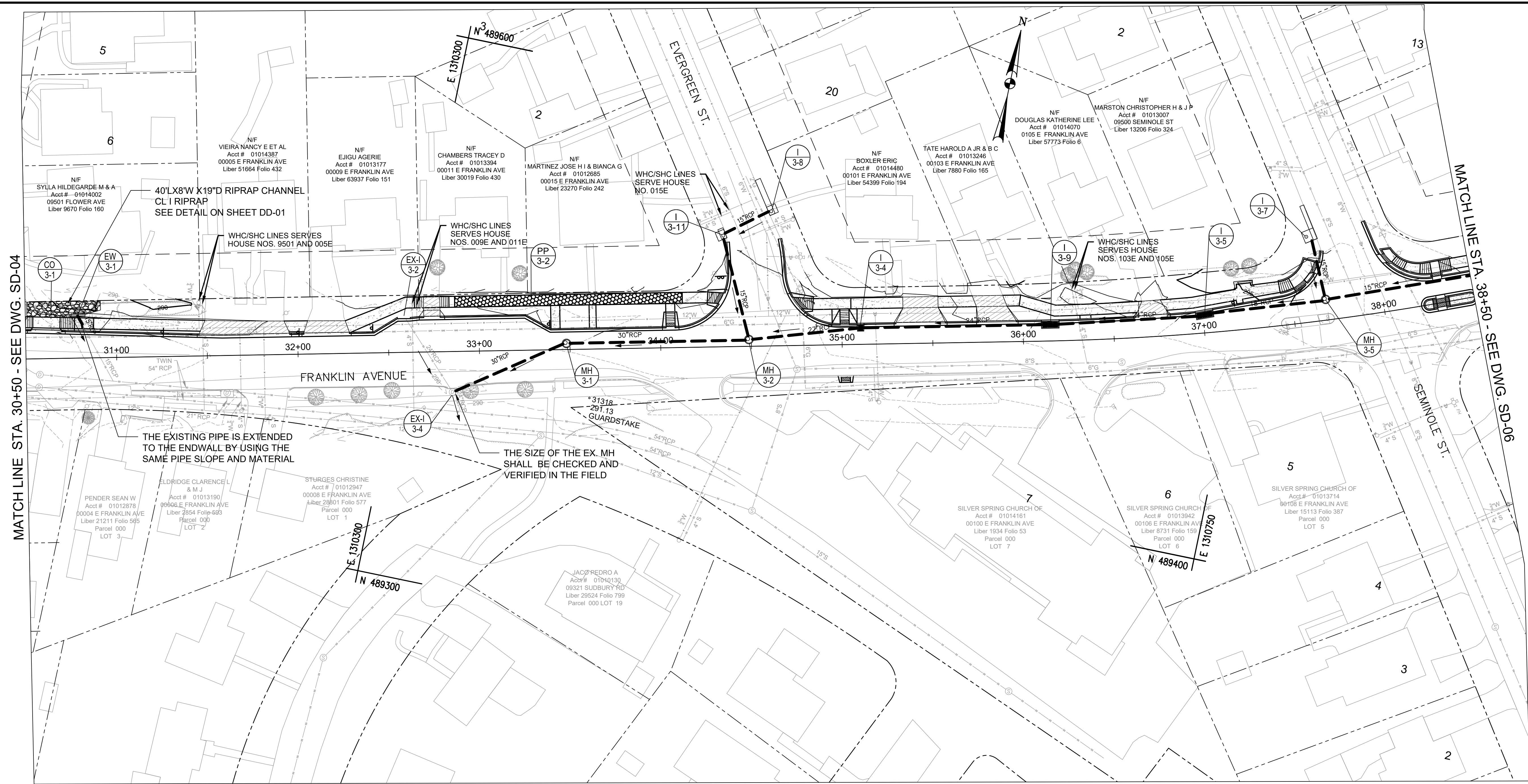
**FRANKLIN AVENUE  
SIDEWALK  
STORM DRAIN PLAN**

SCALE : AS SHOWN

Project No. : TBD 32 of 109

**SD-04**





THE EXISTING PIPE IS EXTENDED TO THE ENDWALL BY USING THE SAME PIPE SLOPE AND MATERIAL

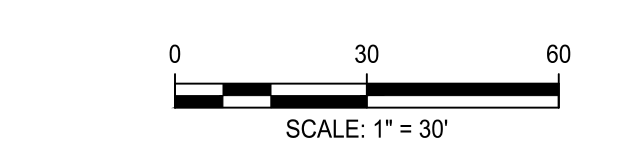
THE SIZE OF THE EX. MH SHALL BE CHECKED AND VERIFIED IN THE FIELD

**GENERAL NOTES FOR UTILITIES**

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- BMP-GRASS SWALE
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- PROPOSED STRUCTURE NUMBER
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 SHELADIA  
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MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: JS Drawn by: ES Checked by: NM

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
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SM FILE NO. \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:

Reviewed _____	Date _____
Reviewed _____	Date _____

SEDMENT CONTROL PERMIT NO. \_\_\_\_\_

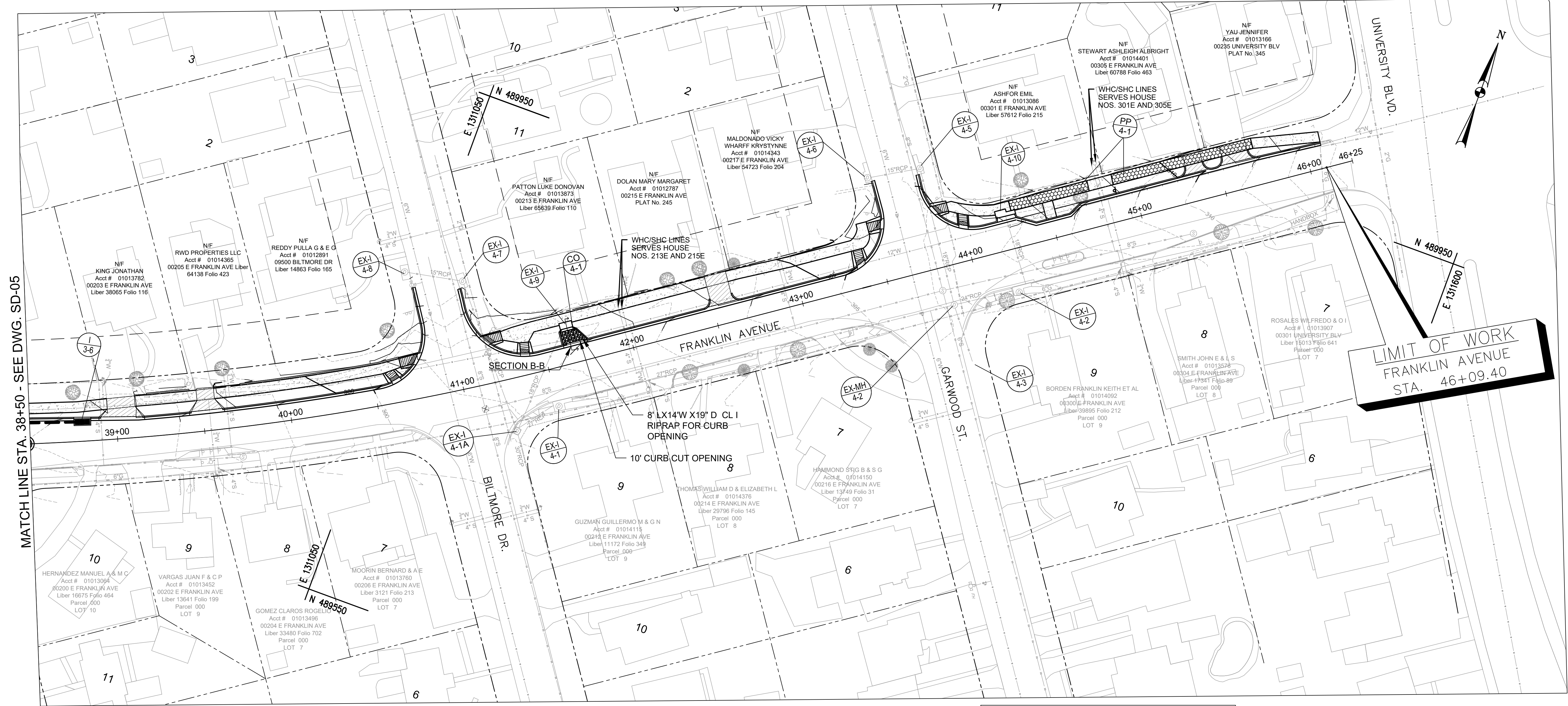
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**FRANKLIN AVENUE  
 SIDEWALK  
 STORM DRAIN PLAN**

SCALE: AS SHOWN

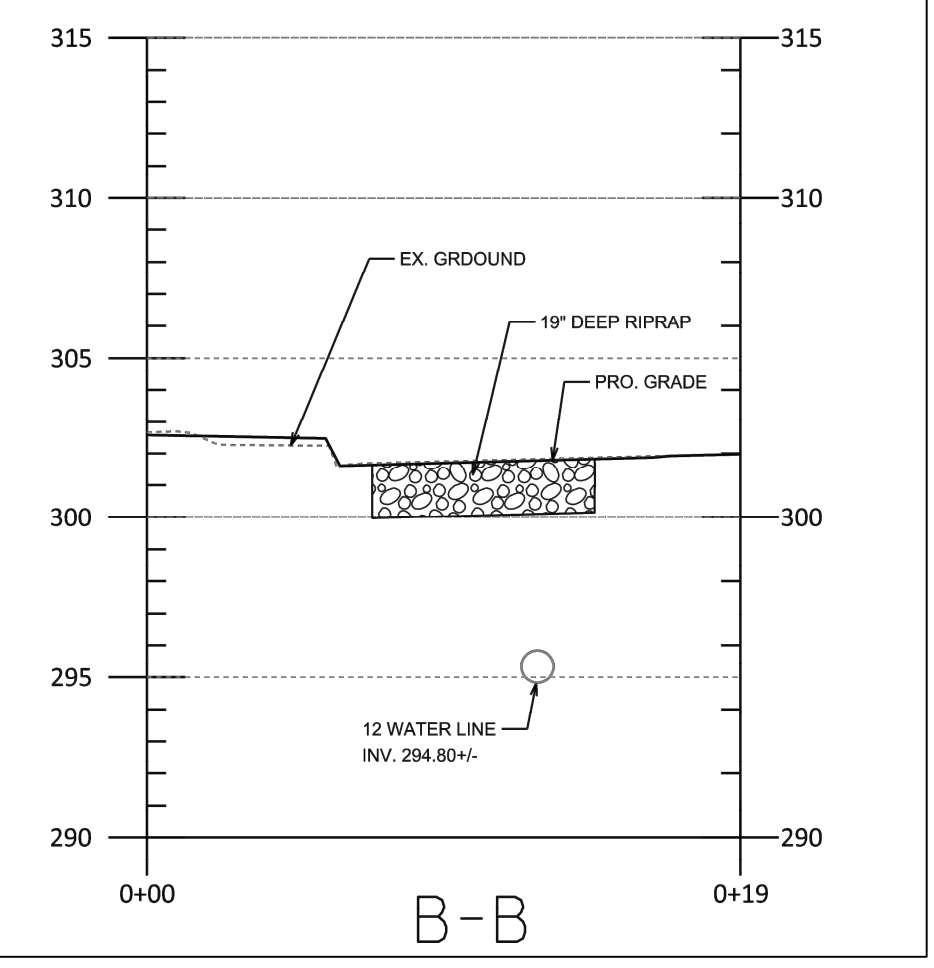
SD-05

Project No.: TBD of 109



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CURB CUT OPENING WITH RIPRAP AT CO-4-1

**LEGEND**

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- EXISTING STRUCTURE NUMBER
- PROPOSED PIPE
- EX. CONTOUR
- PROPOSED CONTOUR

0 30 60  
SCALE: 1" = 30'

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2019 Gaithersburg, Rockville, MD, 20850  
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MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: JS Drawn by: ES Checked by: NM

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management: _____ Reviewed _____ Date _____	Sediment Control Technical Requirements: Reviewed _____ Date _____ Approved _____ Date _____
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SEEDMENT CONTROL PERMIT NO. \_\_\_\_\_

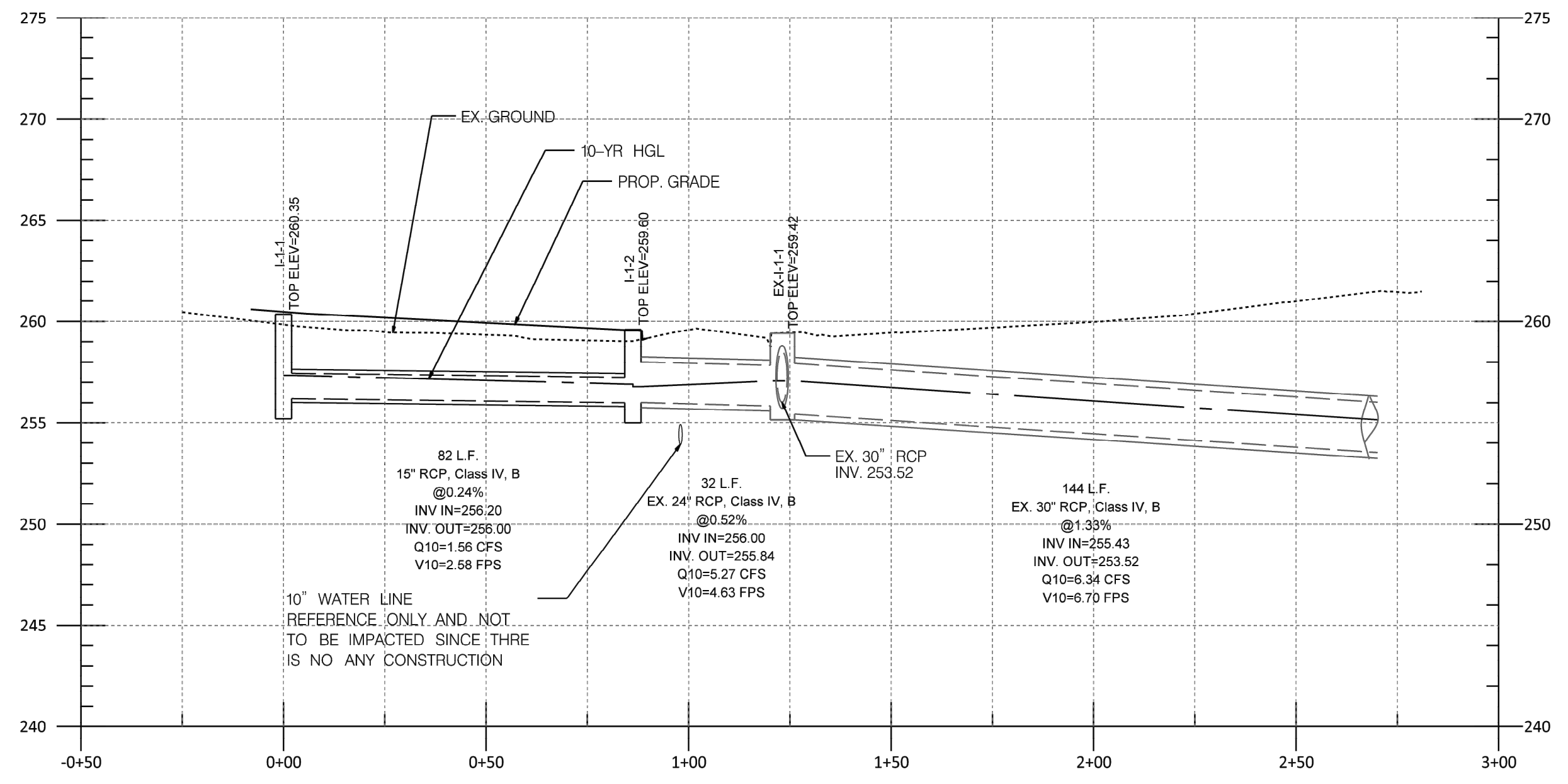
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**FRANKLIN AVENUE  
SIDEWALK  
STORM DRAIN PLAN**

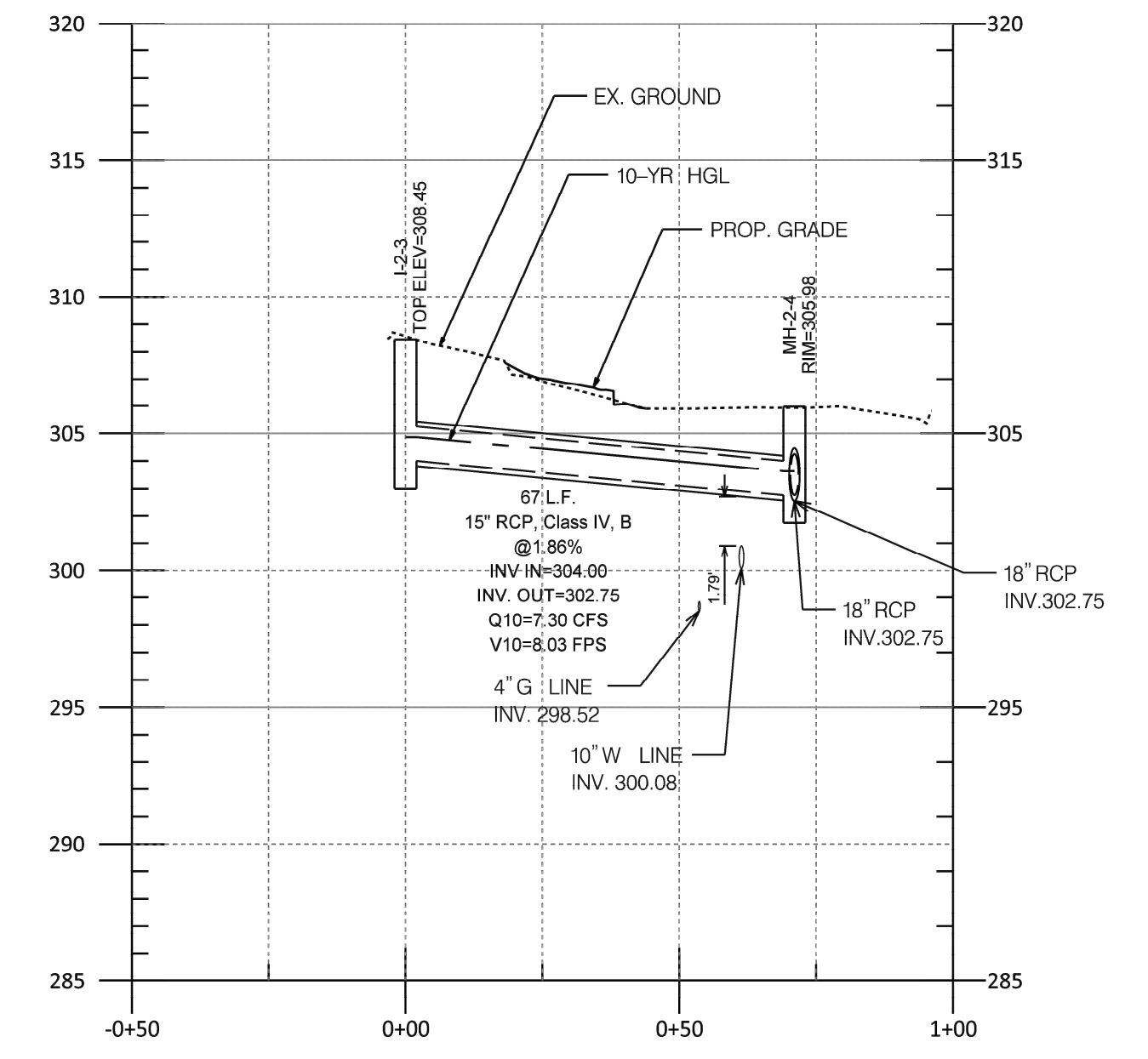
SCALE: AS SHOWN

SD-06

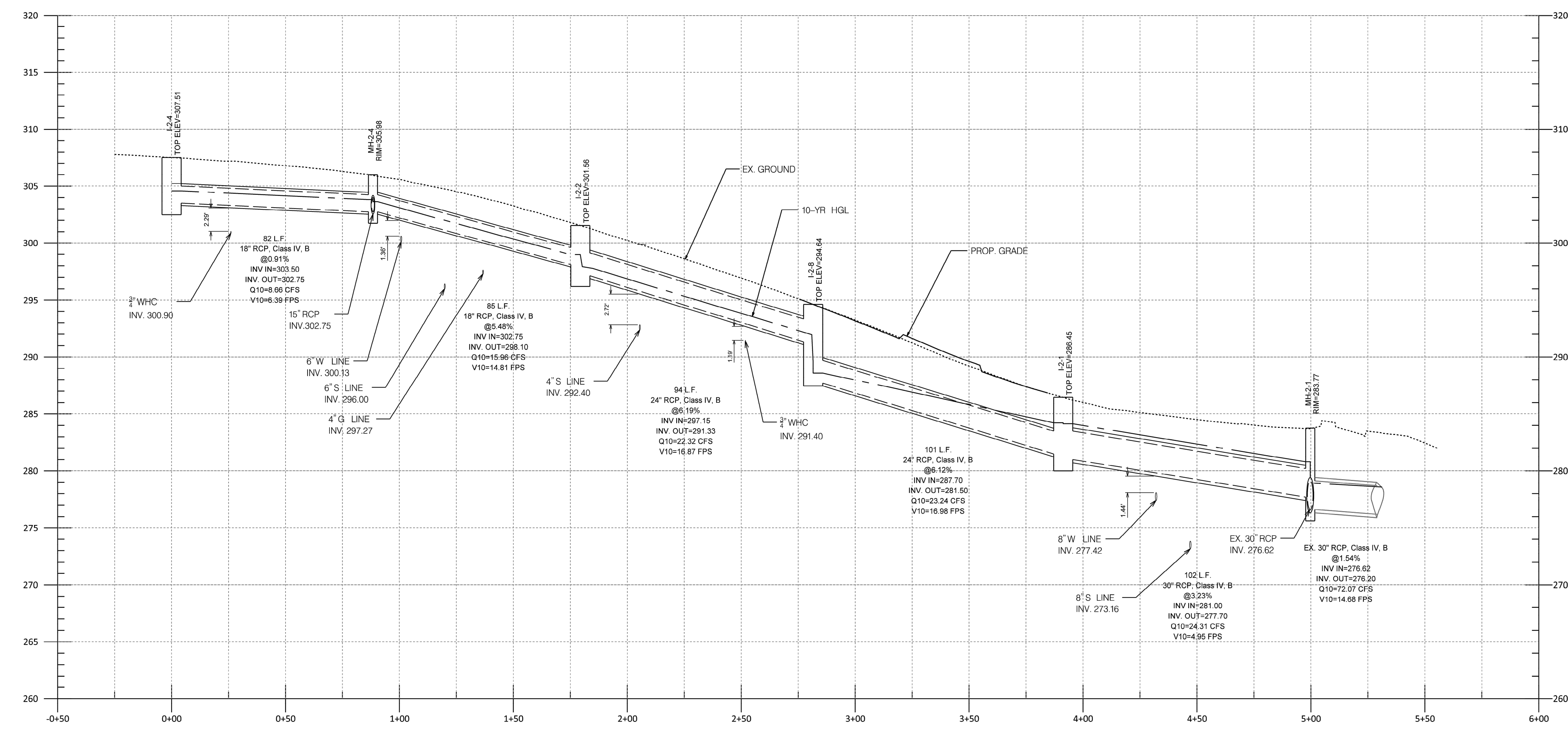
Project No.: TBD 34 of 109



I-1-1 to EX-I-1-1



I-2-3 TO MH-2-4



I-2-4 TO MH-2-1

**NOTES**  
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PROJECT NO. \_\_\_\_\_

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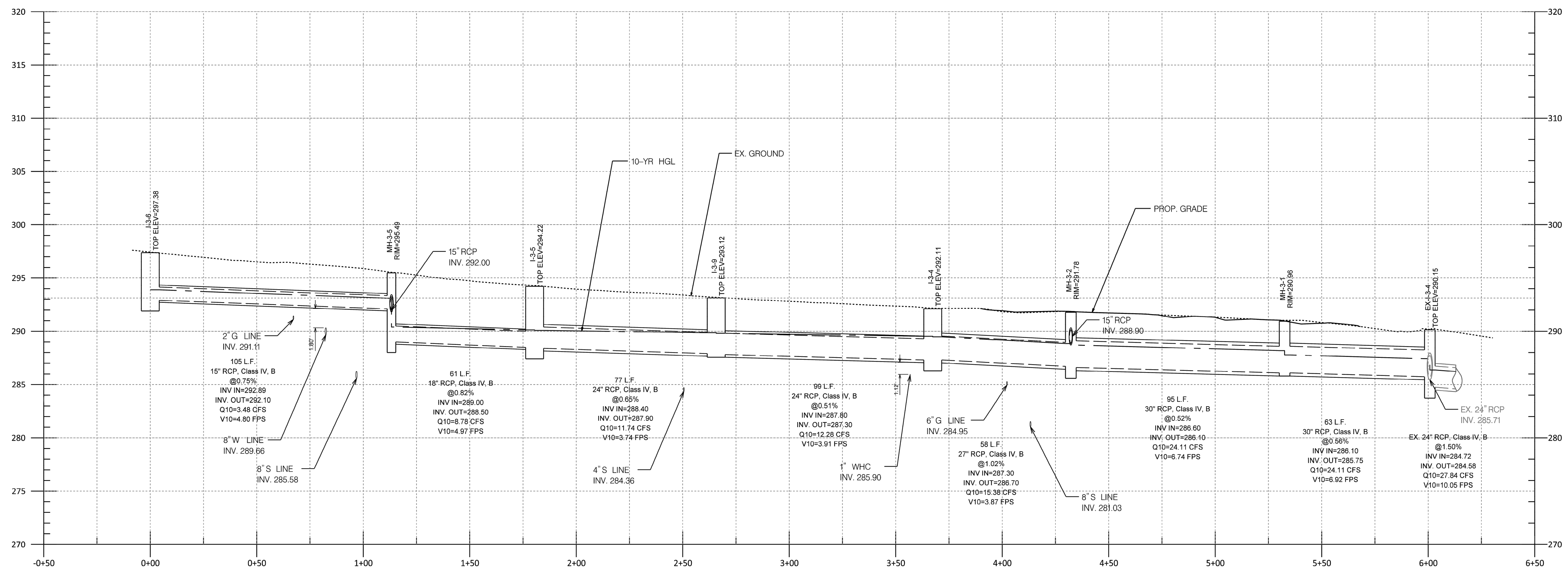
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**FRANKLIN AVENUE  
 SIDEWALK  
 STORM DRAIN PROFILE**

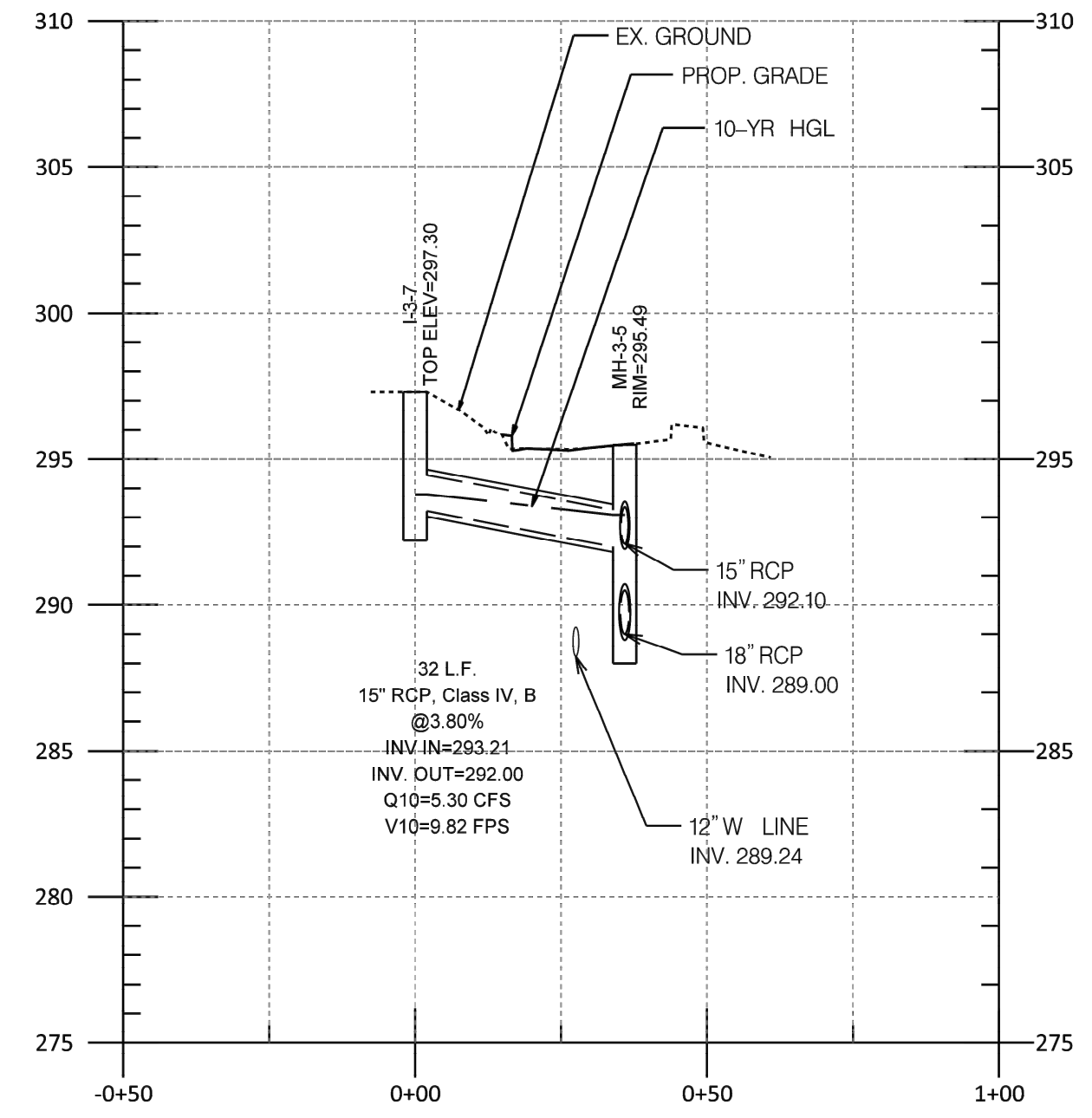
SCALE : HOR:1"=30'; VERT:1"=5'

Project No. : TBD of 109

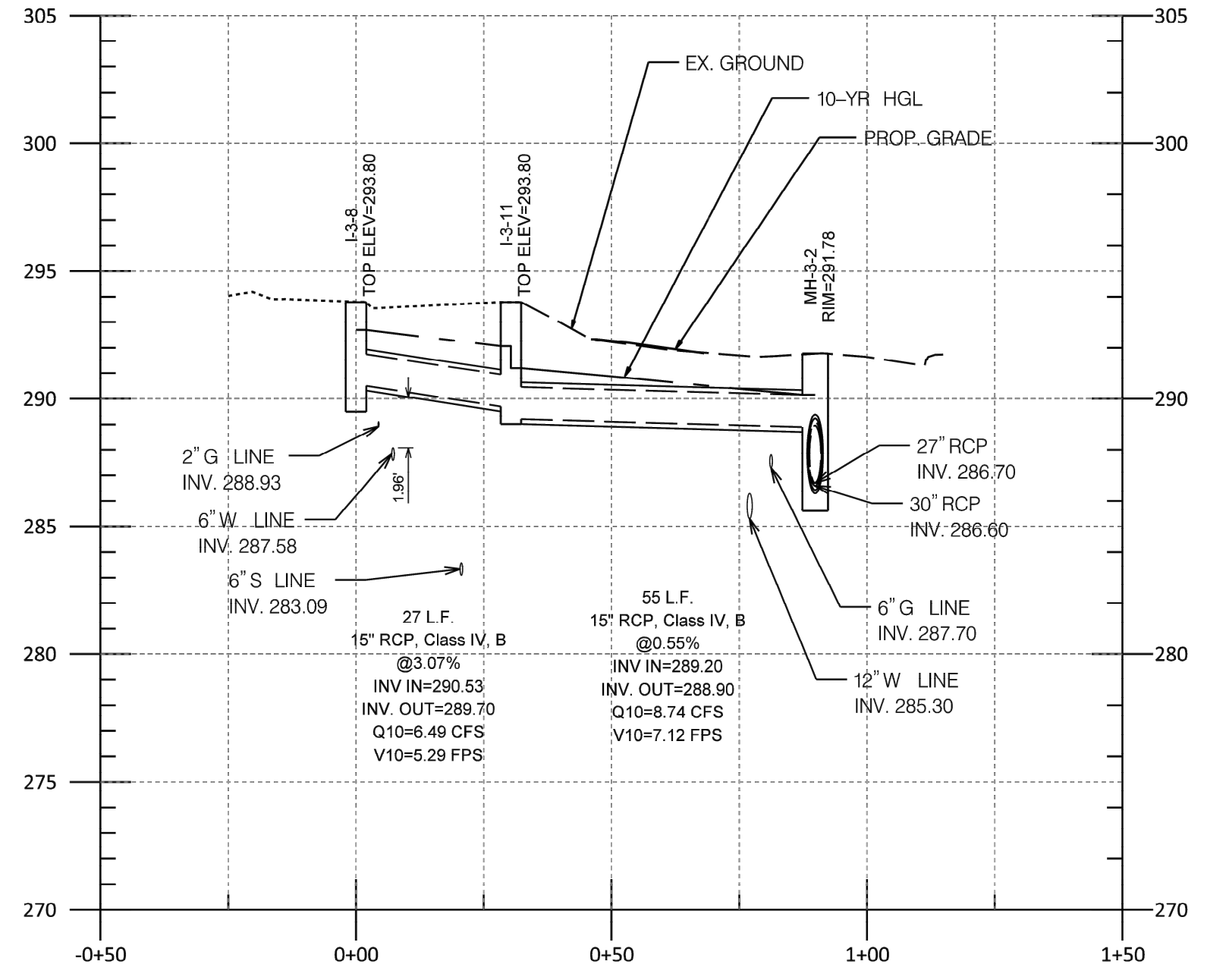
**DP-01**



I-3-6 TO EX-1-3-4



I-3-7 TO MH-3-5



I-3-8 TO MH-3-2

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MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
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Chief, Division of Transportation Engineering  
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Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
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SM FILE NO. \_\_\_\_\_

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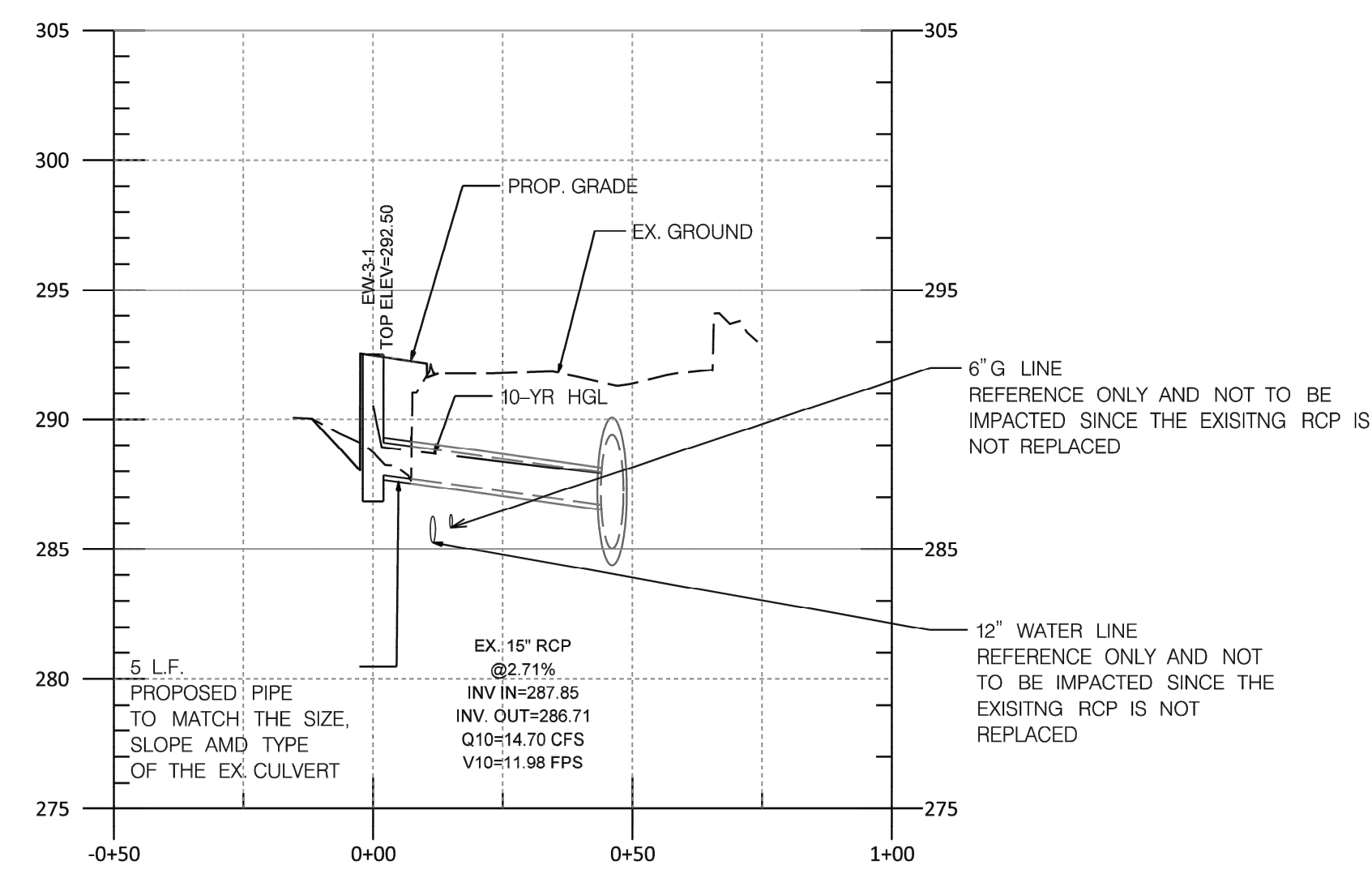
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**FRANKLIN AVENUE  
 SIDEWALK  
 DRAINAGE DETAILS**

SCALE : HOR:1"=30'; VERT:1"=5'

Project No. : TBD of 109


**DP-02**



EW-3-1 to 54" PIPE

**NOTES**

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Chief, Design Section  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

SEE TITLE SHEET FOR SIGNATURES

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
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FRANKLIN AVENUE  
 SIDEWALK  
 DRAINAGE DETAILS

SCALE : HOR:1"=30'; VERT:1"=5'

Project No. : TBD of 109

DP-03

STRUCTURE SCHEDULE

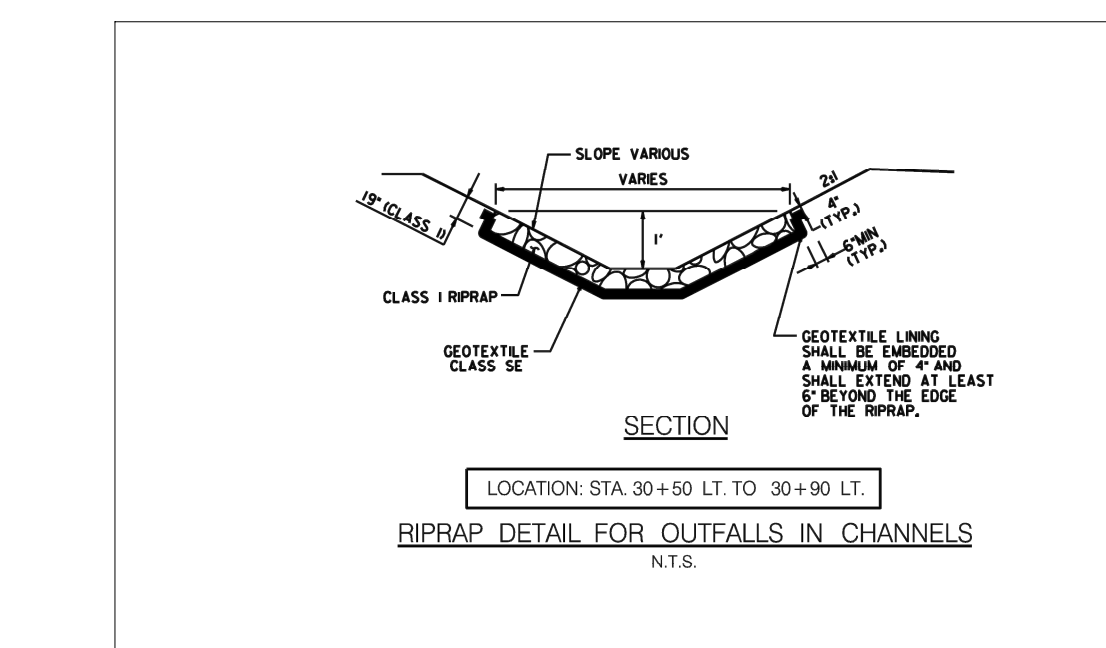
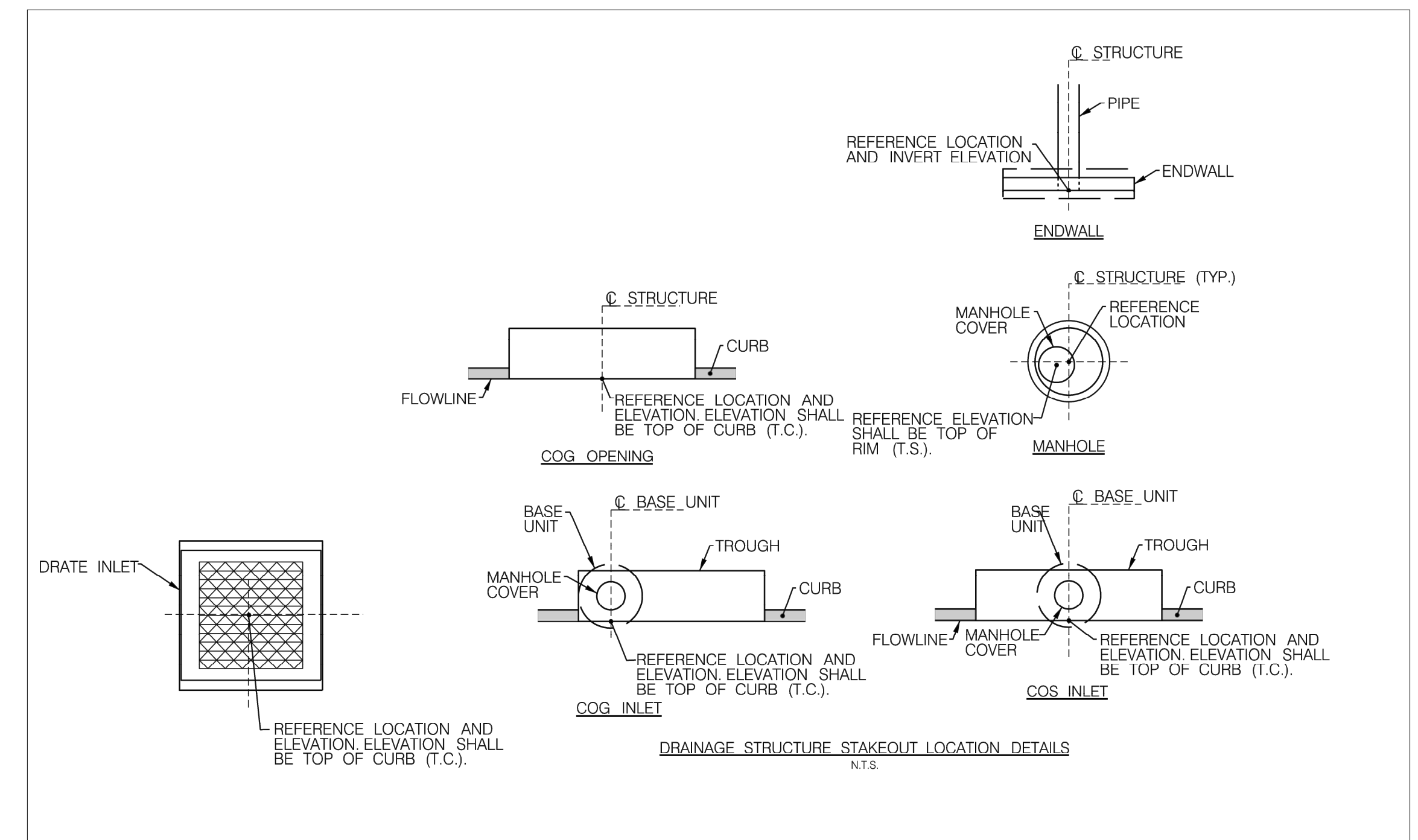
STRUCTURE NO	TYPE	BASELINE	STATION	OFFSET	LT/RT	INV. OUT	STANDARD	STRUCTURE DEPTH	TOP ELEV*
I-1-1	STD 10' TYPE "B" INLET	FRANKLIN AVE	1+79.2	12.2	LT	256.20	MC 502.01	4.15	260.35
I-1-2	STD 15' TYPE "A" INLET	FRANKLIN AVE	2+66.50	12.2	LT	256.00	MC 501.01	3.60	259.60
MH-2-1	72" DIA PRECAST MANHOLE	FRANKLIN AVE	15+60.9	7.8	LT	276.61	MD 384.05	7.17	283.77
I-2-1	STD TRIPLE WR INLET	FRANKLIN AVE	16+69.5	10.9	LT	281.00	MD 374.08	5.45	286.45
I-2-2	STD TRIPLE WR INLET	FRANKLIN AVE	18+83.0	8.9	LT	297.15	MD 374.08	4.41	301.56
MH-2-4	60" DIA PRECAST MANHOLE	FRANKLIN AVE	19+74.1	5.6	LT	302.75	MD 384.03	3.23	305.98
I-2-3	STD 20' TYPE "B" INLET	FRANKLIN AVE	19+96.60	73.6	LT	304.00	MC 502.01	4.45	308.45
I-2-4	STD TRIPLE WR INLET	FRANKLIN AVE	20+62.4	9.7	LT	303.50	MD 374.08	4.01	307.51
I-2-8	STD TRIPLE WR INLET	FRANKLIN AVE	17+79.6	10.0	LT	290.33	MD 374.08	4.31	294.64
EW-3-1	STD TYPE "C" ENDWALL	FRANKLIN AVE	30+78.4	23.3	LT	287.85	MD 354.01	---	292.80
MH-3-1	60" DIA PRECAST MANHOLE	FRANKLIN AVE	33+48.4	3.3	LT	286.10	MD 384.03	4.86	290.96
MH-3-2	60" DIA PRECAST MANHOLE	FRANKLIN AVE	34+49.1	3.8	LT	286.60	MD 384.03	5.18	291.78
I-3-4	STD SINGLE WR INLET	FRANKLIN AVE	35+9.8	9.3	LT	287.30	MD 374.06	4.81	292.11
I-3-5	STD TRIPLE WR INLET	FRANKLIN AVE	37+0.8	10.0	LT	288.40	MD 374.08	5.82	294.22
MH-3-5	60" DIA PRECAST MANHOLE	FRANKLIN AVE	37+68.6	11.0	LT	289.00	MD 384.03	6.49	295.49
I-3-6	STD TRIPLE WR INLET	FRANKLIN AVE	38+80.1	11.2	LT	292.89	MD 374.08	4.49	297.38
I-3-7	STD REVERSE 20' TYPE "B" INLET	FRANKLIN AVE	37+65.2	48.1	LT	293.21	MC 502.02	4.09	297.30
I-3-8	STD 20' TYPE "B" INLET	FRANKLIN AVE	34+59.7	74.4	LT	290.53	MC 502.01	3.27	293.80
I-3-9	STD TRIPLE WR INLET	FRANKLIN AVE	36+15.2	9.3	LT	287.80	MD 374.08	5.32	293.12
I-3-11	STD 5' TYPE "B" INLET	FRANKLIN AVE	34+34.1	61.4	LT	289.20	MC 502.01	4.60	293.80

PIPE SCHEDULE

FROM	TO	SIZE (IN)	TYPE	LENGTH (L.F.)
I-1-1	I-1-2	15	RCP CLASS IV	82
I-2-1	MH-2-1	30	RCP CLASS IV	102
I-2-2	I-2-8	24	RCP CLASS IV	94
MH-2-4	I-2-2	24	RCP CLASS IV	85
I-2-3	MH-2-4	15	RCP CLASS IV	67
I-2-4	MH-2-4	18	RCP CLASS IV	82
I-2-8	I-2-1	24	RCP CLASS IV	101
EW-3-1	EX 54" PIPE	15	RCP CLASS IV	53*
MH-3-1	EX-I-3-4	30	RCP CLASS IV	63
MH-3-2	MH-3-1	30	RCP CLASS IV	97
I-3-4	MH-3-2	27	RCP CLASS IV	58
I-3-5	I-3-9	24	RCP CLASS IV	77
MH-3-5	I-3-5	18	RCP CLASS IV	61
I-3-6	MH-3-5	15	RCP CLASS IV	105
I-3-7	MH-3-5	15	RCP CLASS IV	32
I-3-8	I-3-11	15	RCP CLASS IV	27
I-3-9	I-3-4	24	RCP CLASS IV	99
I-3-11	MH-3-2	15	RCP CLASS IV	55

\*\*ONLY 5 FEET PIPE DOWNSTREAM OF EW 3-1 IS PROPOSED FOR THE EXTENSION OF THE EX. 15" PIPE.

NOTE: CO-2-6, CO-3-1 AND CO-4-1 ARE CURB CUT OPENING TO CONVEY THE RUNOFF TO THE DOWNSTREAM CATCH BASIN AND NOT A DRAINAGE STRUCTURE. SEE DETAIL DWG. 621.41 ON SHEET DD-04 FOR THE DETAILS.



EW - ENDWALL  
 I - INLET  
 MH - MANHOLE  
 PP - PERVIOUS CONCRETE  
 CO - STD CURB OPENING (MD 640.02)  
 WQO - CURB CUT FOR ESDv FLOW (DETAIL 621.41)

NOTE:  
 1. THE DOWNSTREAM OF I-3-1 IS A RIPRAP LINED DITCH. SEE THE PLAN FOR THE DETAILS.  
 2. GEOTEXTILE SHALL BE EMBEDDED A MINIMUM OF 4" AND SHALL EXTEND AT LEAST 6" BEYOND THE EDGE OF RIPRAP (TYPICAL).

**Engineers, Architects Development Consultants**  
 SHELDIA  
 2039 Gaithers Road, Rockville, MD 20850  
 Phone: 301-590-3939 Fax: 301-946-7174  
 www.sheldia.com

NO.	REVISION	DATE	BY

OWNER/ADDRESS:  
 DEPARTMENT OF TRANSPORTATION  
 100 EDISON PARK DRIVE  
 GAITHERSBURG, MARYLAND

CONTACT:  
 DIVISION OF TRANSPORTATION ENGINEERING  
 CONSTRUCTION SECTION  
 240-777-7210  
 DESIGN SECTION  
 240-777-7221

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management: \_\_\_\_\_  
 Reviewed \_\_\_\_\_ Date \_\_\_\_\_  
 Approved \_\_\_\_\_ Date \_\_\_\_\_

Sediment Control Technical Requirements:  
 Reviewed \_\_\_\_\_ Date \_\_\_\_\_  
 Approved \_\_\_\_\_ Date \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

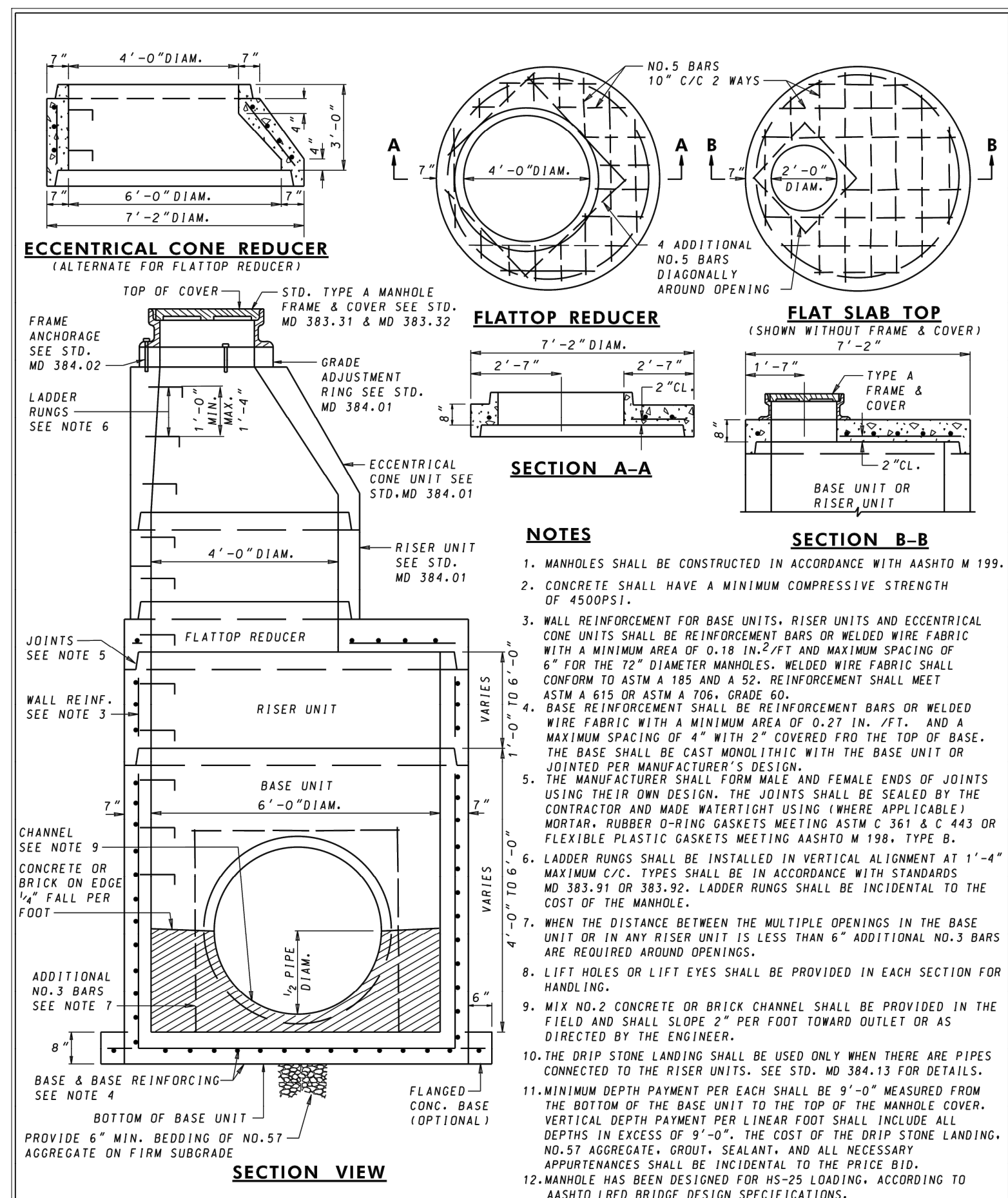
Administrative Requirements:  
 Reviewed \_\_\_\_\_ Date \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

FRANKLIN AVENUE  
 SIDEWALK  
 DRAINAGE DETAILS

SCALE: AS SHOWN

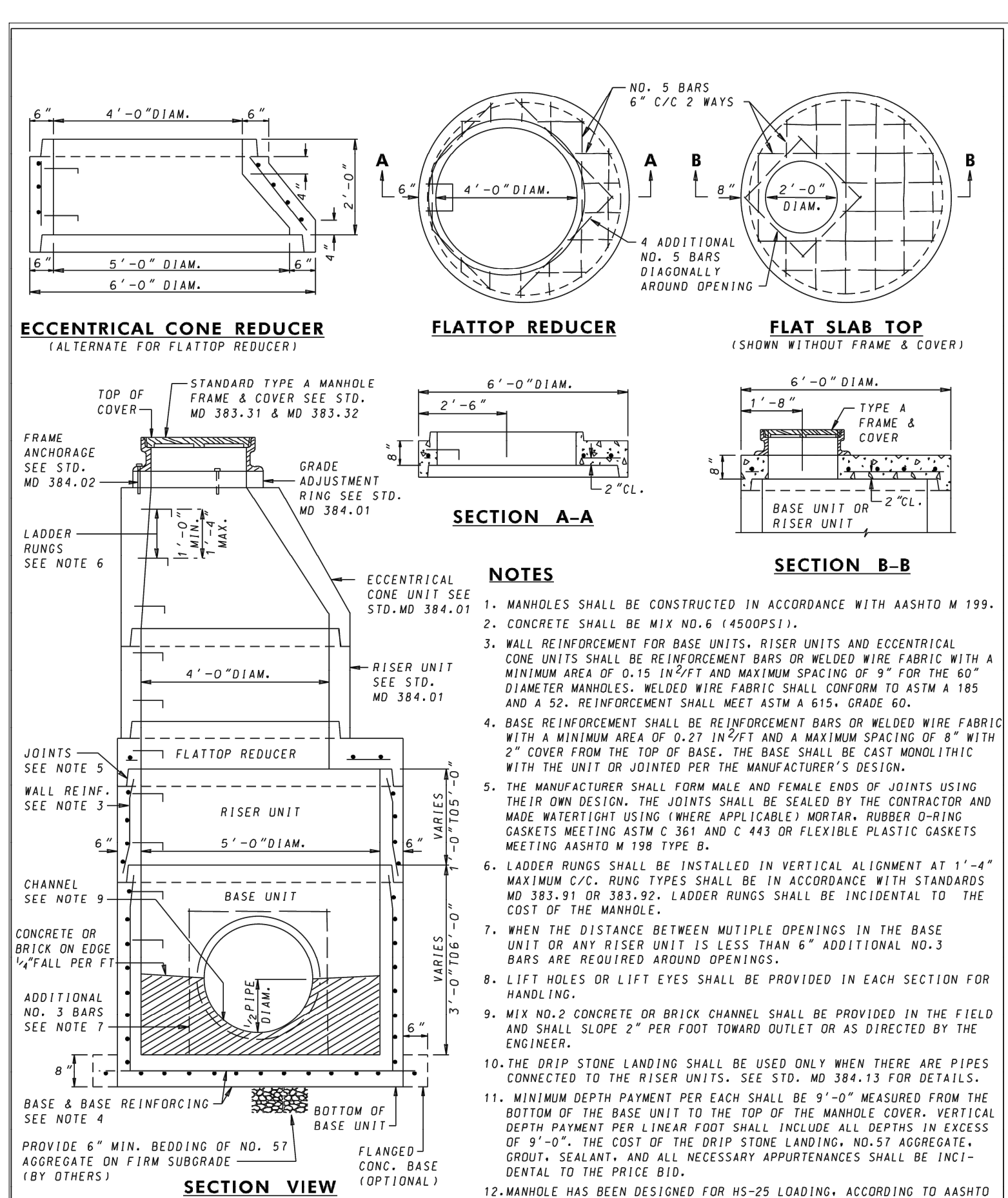
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Project No.: TBD 38 of 109



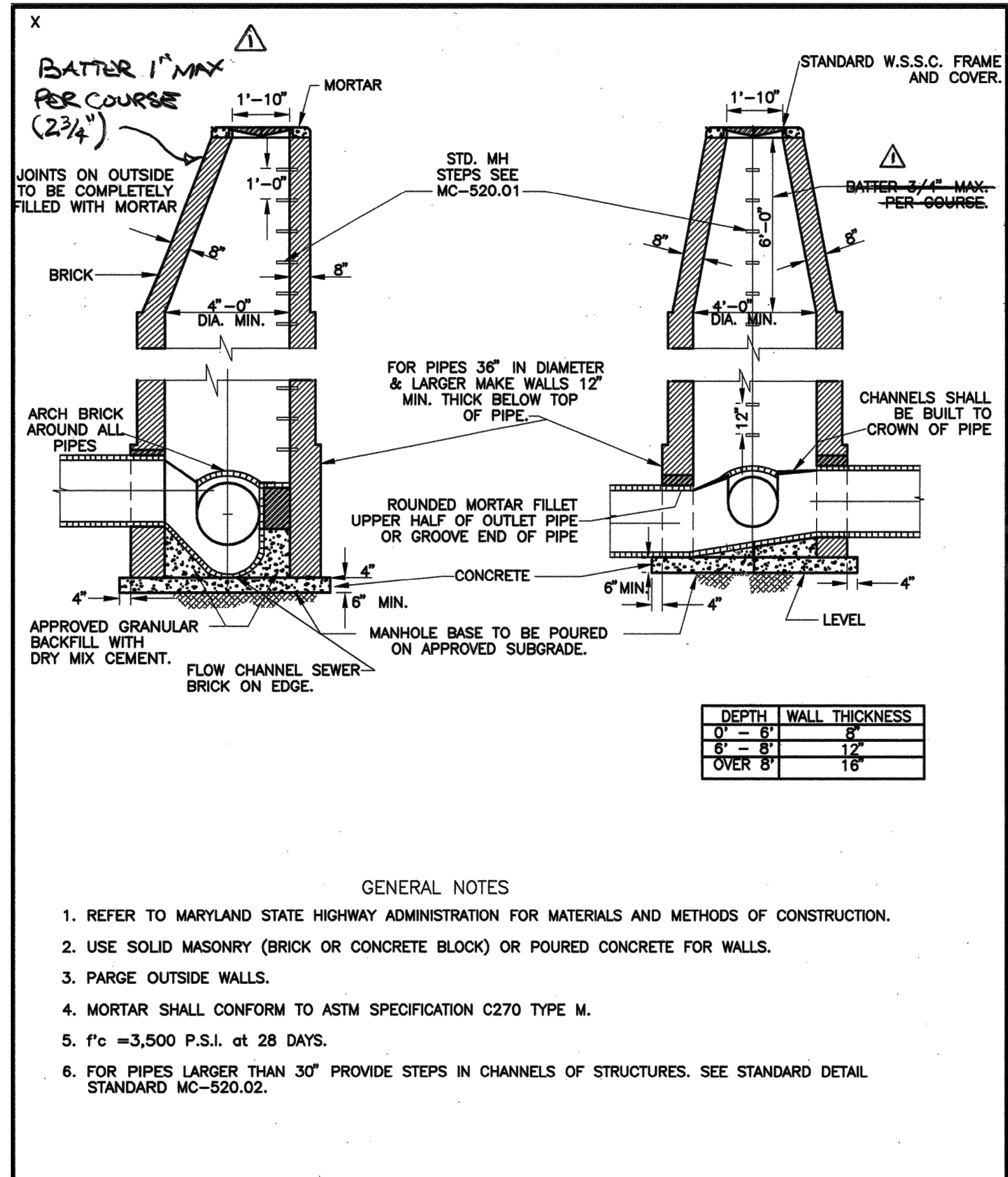
**Maryland Department of Transportation  
STATE HIGHWAY ADMINISTRATION**  
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES  
**72" DIAMETER PRECAST MANHOLE  
FOR 42" & 48" PIPES**  
STANDARD NO. MD 384.05

SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT
APPROVAL	SHA REVISIONS
APPROVAL	APPROVAL - FEDERAL HIGHWAY ADMINISTRATION
REVISION	REVISION
REVISION	REVISION
REVISION	REVISION



**Maryland Department of Transportation  
STATE HIGHWAY ADMINISTRATION**  
STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES  
**60" DIAMETER PRECAST MANHOLE  
FOR 27" TO 36" PIPES**  
STANDARD NO. MD 384.03

SPECIFICATION	CATEGORY CODE ITEMS
305	
APPROVED	DIRECTOR - OFFICE OF HIGHWAY DEVELOPMENT
APPROVAL	SHA REVISIONS
APPROVAL	APPROVAL - FEDERAL HIGHWAY ADMINISTRATION
REVISION	REVISION
REVISION	REVISION
REVISION	REVISION



**MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION**  
"A" MANHOLE  
STANDARD NO. MC-510.01

APPROVED	DATE	REVISION	DATE
JAN 5 1995		MAX BATTER	10/25/12
APPROVED		MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION	
DIRECTOR, DEPT. OF TRANS.			
OFFICE DIV. OF ENG. SERVICES			



NO.	REVISION	DATE	BY

OWNER ADDRESS:  
DEPARTMENT OF TRANSPORTATION  
100 EDISON PARK DRIVE  
GAITHERSBURG, MARYLAND

CONTACT:  
DIVISION OF TRANSPORTATION ENGINEERING  
CONSTRUCTION SECTION  
240-777-7210  
DESIGN SECTION  
240-777-7221

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:	
Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEGMENT CONTROL PERMIT NO. \_\_\_\_\_

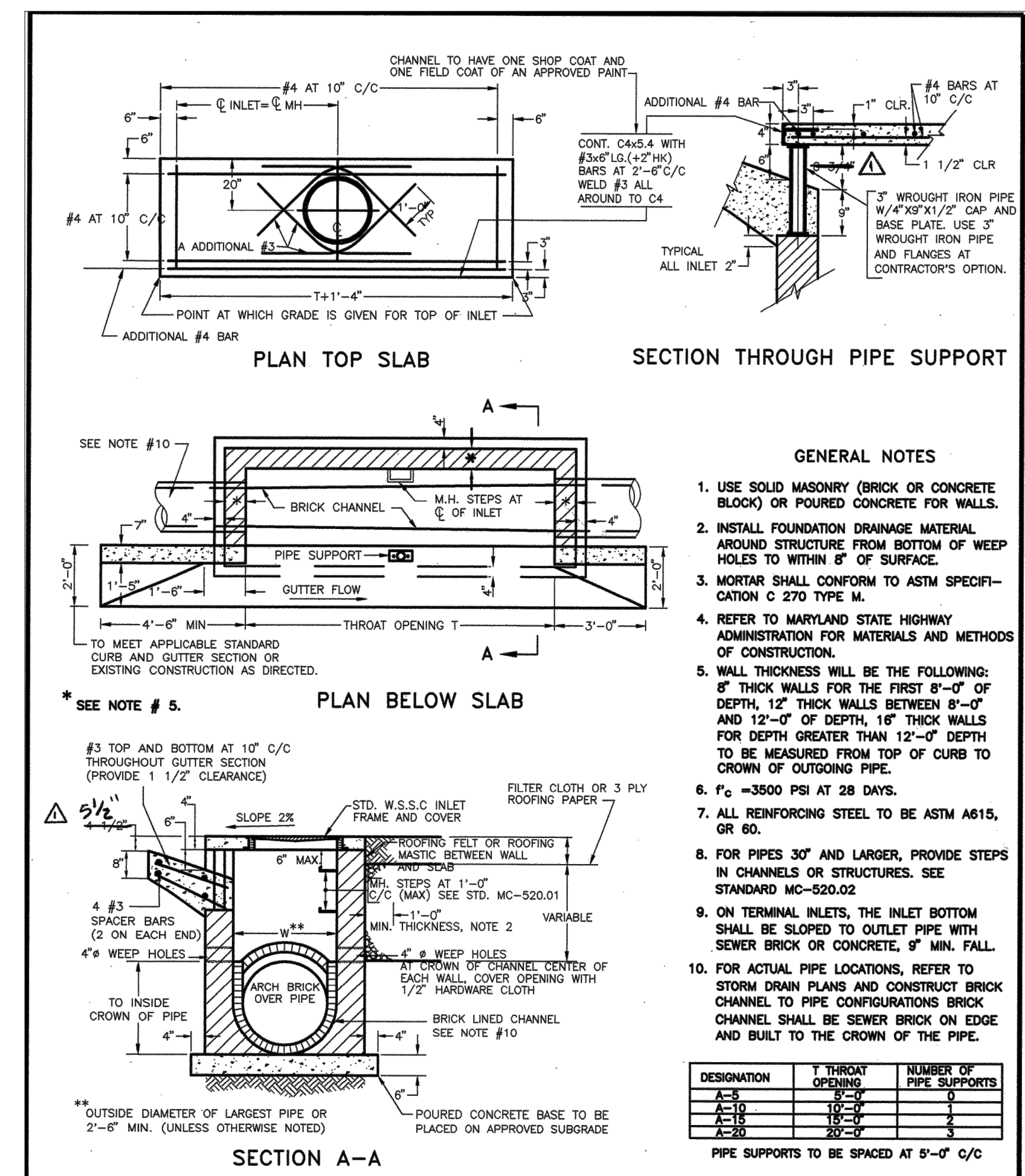
MCDPS APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

**FRANKLIN AVENUE  
SIDEWALK  
DRAINAGE DETAILS**

SCALE: AS SHOWN

DD-02

Project No.: TBD 39 of 109

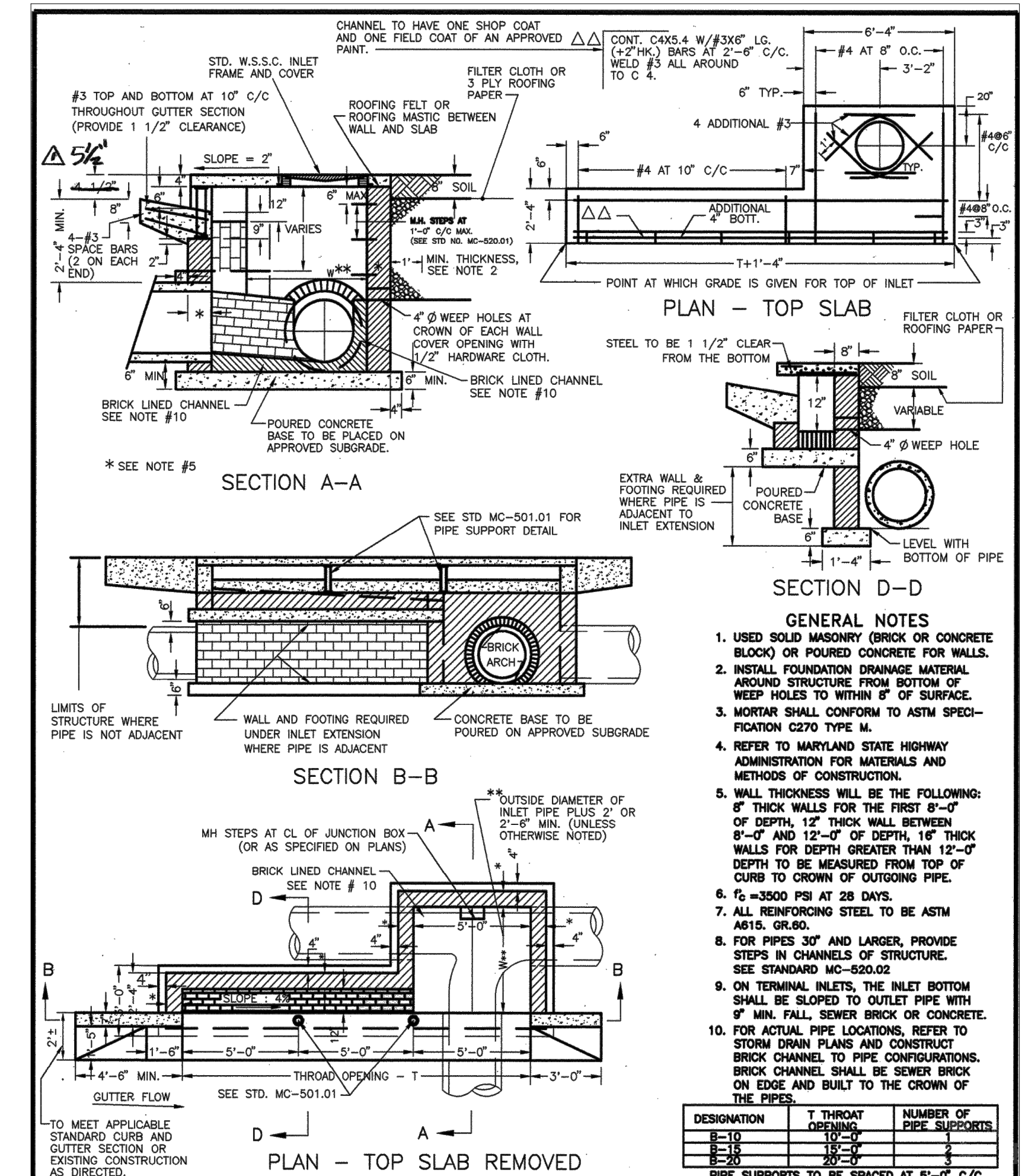


APPROVED JAN 5/96 DATE  
 REVISOR RESTORED  
 REVISION 1" DEPRESSION AT GUTTER EDGE 6/25/12  
 DIRECTOR, DEPT. OF TRANS.  
 CHIEF, DIV. OF ENG. SERVICES

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION

"A" INLET

STANDARD NO. MC-501.01

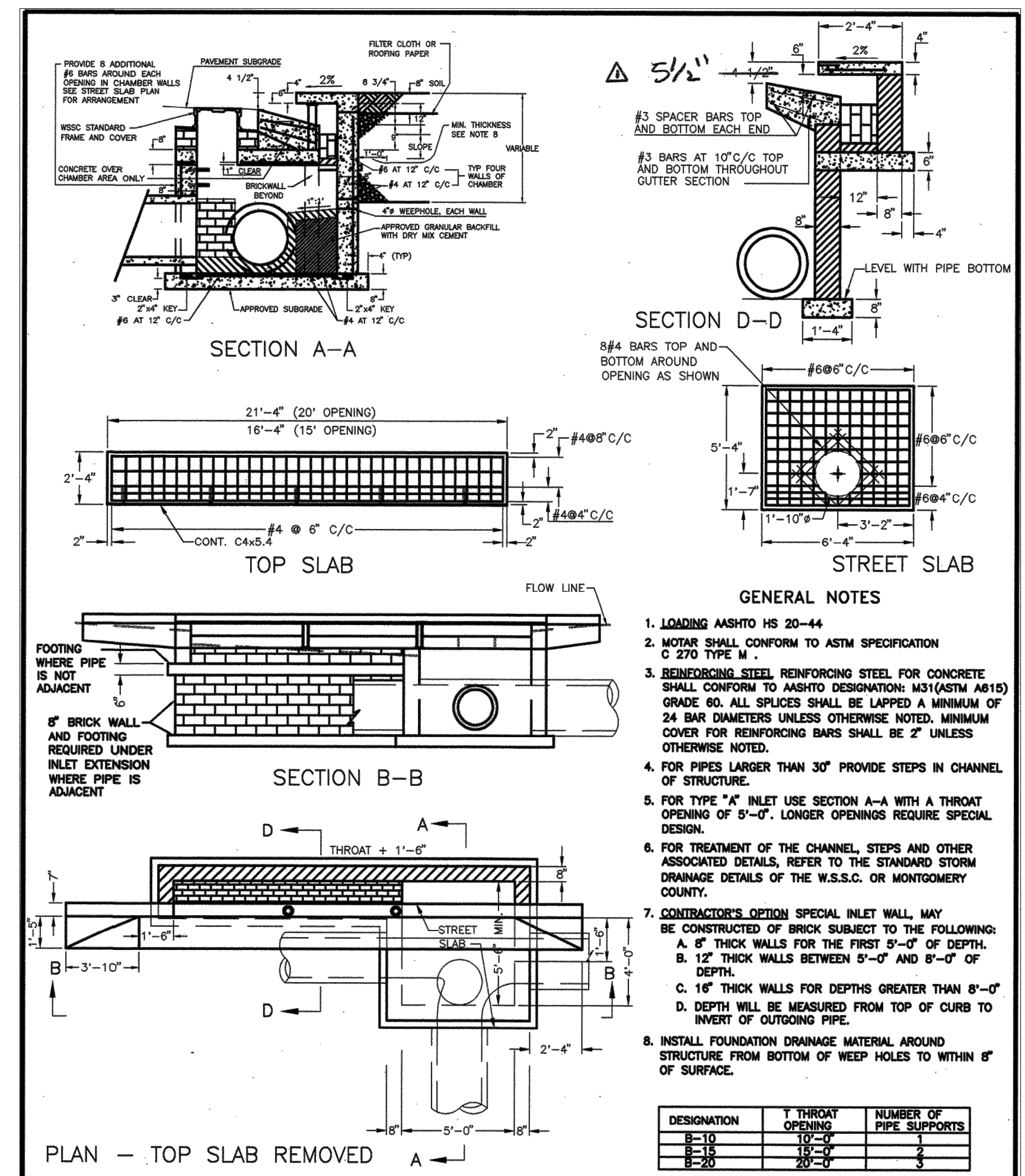


APPROVED JAN 5/96 DATE  
 REVISOR RESTORED  
 REVISION 1" DEPRESSION AT GUTTER EDGE 6/25/12  
 DIRECTOR, DEPT. OF TRANS.  
 CHIEF, DIV. OF ENG. SERVICES

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION

"B" INLET

STANDARD NO. MC-502.01



APPROVED JAN 5/96 DATE  
 REVISOR RESTORED  
 REVISION 1" DEPRESSION AT GUTTER EDGE 6/25/12  
 DIRECTOR, DEPT. OF TRANS.  
 CHIEF, DIV. OF ENG. SERVICES

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION

REVERSE "B" INLET

STANDARD NO. MC-502.02

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CONTACT:  
 DIVISION OF TRANSPORTATION ENGINEERING  
 CONSTRUCTION SECTION  
 240-777-7210  
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 240-777-7221

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____	Reviewed _____ Date _____

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

FRANKLIN AVENUE  
 SIDEWALK  
 DRAINAGE DETAILS

SCALE: AS SHOWN

DD-03

Project No.: TBD of 109



**PLAN**

**ELEVATION**

**DISPOSITION OF BARS DETAIL**

**QUANTITIES FOR ESTIMATING PURPOSES ONLY**

OPENING DIMENSIONS	QUANTITIES	
	D AREA	CONC. STEEL C.Y. / LBS.
12 0.79 3' 6" 6" 6" 1'-9" 3' 1'-8" 8'-6" 0.61 47		
15 1.23 3' 6" 6" 6" 1'-9" 3' 2'-0" 7'-9" 0.77 47		
18 1.77 3' 6" 6" 6" 1'-9" 3' 2'-3" 9'-0" 0.95 54		
21 2.40 3' 6" 6" 6" 1'-9" 3' 2'-6" 10'-3" 1.14 70		
24 3.14 3' 6" 6" 6" 2'-5" 3' 2'-9" 11'-6" 1.56 80		
27 3.98 3' 6" 6" 6" 2'-5" 3' 3'-0" 12'-9" 1.82 88		
30 4.91 3' 6" 6" 6" 2'-5" 3' 3'-6" 14'-2" 2.22 98		
33 5.94 3' 6" 6" 6" 2'-5" 3' 3'-9" 15'-5" 2.48 105		
36 7.07 3' 6" 6" 6" 3'-2" 3' 3'-2" 16'-8" 4.16 182		
42 9.62 3' 6" 6" 6" 3'-2" 3' 3'-2" 18'-2" 5.07 206		
48 12.57 3' 6" 6" 6" 3'-2" 3' 3'-2" 20'-8" 6.09 244		
54 15.90 3' 6" 6" 6" 3'-2" 3' 3'-2" 23'-4" 7.62 275		
60 19.64 3' 6" 6" 6" 3'-2" 3' 3'-2" 26'-0" 8.82 304		
72 28.27 3' 6" 6" 6" 3'-2" 3' 3'-2" 31'-8" 11.46 377		

**GENERAL NOTES**

SPECIFICATIONS: LATEST S.H.A. CONCRETE SHALL BE MIX NO. 2 REINFORCING: DEFORMED STEEL BARS NO. 4 CHAMFER: ALL EXPOSED EDGES 1"x1" OR AS DIRECTED

**Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION**

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

**STANDARD TYPE C ENDWALL METAL OR CONCRETE ROUND PIPE**

STANDARD NO. MD 354.01

APPROVED: *Kel G. McCall*

APPROVAL: SHA REVISIONS: APPROVAL: FEDERAL HIGHWAY ADMINISTRATION: APPROVAL: 8-28-86 APPROVAL: 12-12-88 REVISION: 10-1-91 REVISION: 10-1-91

**SECTION A-A**

**SECTION B-B**

**SECTION C-C**

**GENERAL NOTES**

1. CONCRETE TO BE MIX NO. 6 (4500 P.S.I.)

2. REINFORCING WALLS - 2 LAYERS OF 4X4-W4-D WELDED WIRE FABRIC; BASE - 2 LAYERS OF 4X4-W5.0 X W5.0 WELDED WIRE FABRIC

3. THREADED PLASTIC INSERTS TO BE PROVIDED FOR HANDLING.

4. PIPE OPENINGS TO BE PROVIDED AS REQUIRED. FOR SIZE, LOCATION AND INVERT ELEVATIONS REFER TO CONSTRUCTION PLANS.

5. FOR GRATE DETAILS SEE STANDARD MD-378-05. GRATE TO BE AS SHOWN OR FURNISH APPROVED EQUIVALENT.

6. "MINIMUM DEPTH" PAYMENT PER "EACH" INLET INCLUDES DEPTHS UP TO 3'-6" VERTICAL DEPTH PAYMENT PER "LINEAR FOOT" FOR DEPTHS IN EXCESS OF 3'-6".

7. THIS INLET IS TO BE USED IN MEDIAN DITCHES AND ANY DITCH BEYOND THE SHOULDER AREA. THIS INLET IS NOT TO BE USED IN ROADWAY OR SHOULDER PAYMENT AREAS OR WHERE BIKE OR MOTORCYCLE TRAFFIC IS ANTICIPATED.

8. INLET WAS DESIGNED FOR HS-25 LOADING. ACCORDING TO ASPHALT/CONCRETE BRIDGE DESIGN SPECIFICATIONS.

**Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION**

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

**STANDARD CURB OPENING DETAILS FOR COMBINATION CURB & GUTTER**

STANDARD NO. MD 640.02

APPROVED: *Kel G. McCall*

APPROVAL: SHA REVISIONS: APPROVAL: FEDERAL HIGHWAY ADMINISTRATION: APPROVAL: 3-15-82 APPROVAL: 8-1-84 REVISION: 10-1-91 REVISION: 8-1-84

**SECTION B-B SINGLE OPENING**

**SECTION B-B DOUBLE OPENING**

**SECTION C-C**

**DOUBLE OPENING**

**SINGLE OPENING**

**GENERAL NOTES**

1. CONCRETE TO BE MIX NO. 6 (4500 P.S.I.)

2. REINFORCING WALLS - 2 LAYERS OF 4X4-W4-D WELDED WIRE FABRIC; BASE - 2 LAYERS OF 4X4-W5.0 X W5.0 WELDED WIRE FABRIC

3. THREADED PLASTIC INSERTS TO BE PROVIDED FOR HANDLING.

4. PIPE OPENINGS TO BE PROVIDED AS REQUIRED. FOR SIZE, LOCATION AND INVERT ELEVATIONS REFER TO CONSTRUCTION PLANS.

5. FOR GRATE DETAILS SEE STANDARD MD-378-05. GRATE TO BE AS SHOWN OR FURNISH APPROVED EQUIVALENT.

6. "MINIMUM DEPTH" PAYMENT PER "EACH" INLET INCLUDES DEPTHS UP TO 3'-6" VERTICAL DEPTH PAYMENT PER "LINEAR FOOT" FOR DEPTHS IN EXCESS OF 3'-6".

7. THIS INLET IS TO BE USED IN MEDIAN DITCHES AND ANY DITCH BEYOND THE SHOULDER AREA. THIS INLET IS NOT TO BE USED IN ROADWAY OR SHOULDER PAYMENT AREAS OR WHERE BIKE OR MOTORCYCLE TRAFFIC IS ANTICIPATED.

8. INLET WAS DESIGNED FOR HS-25 LOADING. ACCORDING TO ASPHALT/CONCRETE BRIDGE DESIGN SPECIFICATIONS.

**Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION**

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

**PRECAST STANDARD SINGLE OR DOUBLE OPENING TYPE K INLET OPEN-END GRATE**

STANDARD NO. MD 378.11

APPROVED: *Kel G. McCall*

APPROVAL: SHA REVISIONS: APPROVAL: FEDERAL HIGHWAY ADMINISTRATION: APPROVAL: 6-8-84 APPROVAL: 8-1-84 REVISION: 10-1-91 REVISION: 6-23-87 REVISION: 10-7-14 REVISION: 9-29-14

**SECTION A-A**

**SECTION B-B**

**GENERAL NOTES**

1. THIS STANDARD TO BE USED WITH TYPE A COMBINATION CURB AND GUTTER ONLY.

2. CURB OPENINGS SHALL NOT ENCRUSH ON CROSSWALK AREAS.

3. CONCRETE SHALL BE MIX NO. 6 (4500 P.S.I.) FOR PRECAST UNITS AND MIX NO. 3 (3500 P.S.I.) FOR STRUCTURES CAST IN PLACE.

4. INLET MAY BE PRECAST OR CAST IN PLACE. ON WALLS, REINFORCEMENT SHALL BE AS SHOWN ON STD MD 351-52-01 TABLE WITH 1/2" COVER FOR WELDED WIRE FABRIC (PRECAST) OR 2" COVER FOR DEFORMED BARS (CAST IN PLACE). ON BASE, REINFORCEMENT SHALL BE AS SHOWN ON STD. 374-51-01 TABLE WITH 1/2" COVER (PRECAST) AND 2" COVER (CAST IN PLACE) FROM TOP OF BASE.

5. A CONCRETE OR BRICK CHANNEL WHICH SLOPES AT LEAST 2 IN./FT TOWARD THE OUTLET SHALL BE PROVIDED IN THE FIELD.

6. GRADE AND SLOPE ADJUSTMENTS SHALL BE COMPLETED IN THE FIELD USING PRECAST ADJUSTMENT COLLAR AND MORTAR.

7. SLOPED TROUGH FLOOR TO BE CAST IN THE FIELD AND USED ONLY WHEN ROAD GRADE IS 1.5% OR LESS. WHEN SLOPED TROUGH FLOOR IS USED, ROUGHEN PRECAST TROUGH FLOOR.

8. PRECAST INLET JOINTS - THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THEIR OWN DESIGN. THE JOINTS SHALL BE SEALED BY THE CONTRACTOR AND MADE WATERTIGHT USING THE MANUFACTURER'S RECOMMENDED ASTM OR AASHTO APPROVED SEALANT.

9. LADDER RUNGS SHALL BE PLACED IN VERTICAL ALIGNMENT AT 1'-3" C/C. RUNG TYPE SHALL BE IN ACCORDANCE WITH STANDARDS MD 383-91 OR MD 383-92. RUNGS ARE INCIDENTAL TO THE COST OF THE INLET.

10. ANGLE IRON AND SHEAR STUD CONNECTORS SHALL BE GALVANIZED AFTER WELDING IN ACCORDANCE WITH ASTM A 123. SEE STD. MD 374.55 & MD 374.64.

11. SEE STANDARD MD 374.65 FOR DEPRESSION GUTTER PAN.

12. SEE STANDARD MD 374.64 FOR ALTERNATE PRECAST COG TROUGHS.

13. PAY MEASUREMENTS FOR CAST IN PLACE UNIT SHALL BE THE SAME AS THE PRECAST UNIT. REFER TO NOTE 14. ALL OTHER DIMENSIONS SHOWN FOR PRECAST SHALL APPLY TO CAST IN PLACE.

14. MINIMUM DEPTH PAYMENT PER EACH SHALL BE 6'-2" MEASURED FROM THE PIPE INVERT TO THE TOP OF THE TROUGH SLAB. VERTICAL DEPTH PAYMENT PER LINEAR FOOT SHALL INCLUDE ALL DEPTHS IN EXCESS OF 6'-2" INCLUDING ALL APPURTENANCES.

15. PRECAST BASE UNIT WALLS MAY TAPER PER MANUFACTURER'S DESIGN.

16. FROM CURB LINE, INLET HAS BEEN DESIGNED FOR HS-25 LOADING ACCORDING TO AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS.

17. SEE STD MD 374.51-01 FOR PIPE / PRECAST DIMENSIONS TABLE.

**Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION**

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

**PRECAST OR CAST IN PLACE SQUARE AND RECTANGULAR COG INLETS 5', 10', 15' & 20'**

STANDARD NO. MD 374.51

APPROVED: *Kel G. McCall*

APPROVAL: SHA REVISIONS: APPROVAL: FEDERAL HIGHWAY ADMINISTRATION: APPROVAL: 2-22-91 APPROVAL: 1-21-91 REVISION: 8-3-10 REVISION: 7-26-10 REVISION: 10-7-14 REVISION: 9-29-14

**PLAN**

**SECTION A-A**

**SECTION B-B**

**GENERAL NOTES**

1. CONCRETE TO BE MIX NO. 2 (3500 P.S.I.)

2. SIZE, TYPE, AND DIRECTION OF INLET CONNECTION WILL VARY TO SUIT CONDITIONS.

3. SEE SHA LATEST SPECIFICATIONS FOR INLETS.

4. WHEN "A" IS LESS THAN 1'-0", WALL REINFORCEMENT SHALL BE ONE LAYER OF NO. 4 DEFORMED BARS @ 6" C/C TWO WAYS, AND HAVE 3/8" COVER. WHEN "A" IS GREATER THAN 1'-0" AND LESS THAN 15'-0", WALL REINFORCEMENT TO BE TWO LAYERS OF NO. 4 DEFORMED BARS @ 6" C/C TWO WAYS, ON INSIDE AND OUTSIDE WALLS WITH 2" COVER.

5. BASE REINFORCEMENT SHALL BE ONE LAYER OF NO. 4 DEFORMED BARS @ 6" C/C TWO WAYS WITH 2" COVER FROM TOP OF BASE.

6. PLACE 1/2" EXPANSION MATERIAL OF THE SAME TYPE APPROVED FOR PAYMENT IN BETWEEN THE FRAME AND ABUTTING RISER PAYMENT AND BETWEEN ENDS OF INLET CURB AND NORMAL CURB.

7. BRICK FOR MASONRY TO COMPLY WITH THE SHA SPECIFICATION.

8. FOR UNDEPRESSION INLETS USE NORMAL PAVEMENT SLOPE.

9. LADDER RUNGS SHALL BE IN ACCORDANCE WITH STD MD 383-91 AND MD 383-92 OR AS DIRECTED BY THE ENGINEER.

10. FROM THE CURB LINE, INLET HAS BEEN DESIGNED FOR HS-25 LOADING ACCORDING TO LRFD BRIDGE DESIGN SPECIFICATIONS AND TO A MINIMUM DEPTH OF 15'-0".

**Maryland Department of Transportation STATE HIGHWAY ADMINISTRATION**

STANDARDS FOR HIGHWAYS AND INCIDENTAL STRUCTURES

**TRIPLE WR INLET**

STANDARD NO. MD 374.08

APPROVED: *Kel G. McCall*

APPROVAL: SHA REVISIONS: APPROVAL: FEDERAL HIGHWAY ADMINISTRATION: APPROVAL: 8-7-83 APPROVAL: 3-23-84 REVISION: 10-1-91 REVISION: 3-24-89 REVISION: 10-7-14 REVISION: 9-29-14

**DETAIL A - Concrete Flume with Wingwalls and Stone Splash Pad**

**DETAIL B - Concrete Flume with Stone Splash Pad**

**GENERAL NOTES**

1. CURB OPENING DIMENSION SHOWN IS A MINIMUM. CURB CUT SHALL BE SIZED TO CONVEY 1.2" RAINFALL OFFLINE OR TO CONTROL SPREAD IN THE GUTTER PAN (ONLINE) PER DDOT DESIGN AND ENGINEERING MANUAL.

2. SEE SECTION A-A ON DWG. NO. 621.42

**MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION**

ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section

APPROVED

DATE: \_\_\_\_\_

REVISION: \_\_\_\_\_

ISSUED: \_\_\_\_\_

REFERENCE: CHIEF TRANSPORTATION ENGINEER

**DISTRICT OF COLUMBIA DEPARTMENT OF TRANSPORTATION**

DW.G. NO. 621.41

**MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:**

Stormwater Management: \_\_\_\_\_

Sediment Control Technical Requirements: \_\_\_\_\_

Administrative Requirements: \_\_\_\_\_

Reviewed: \_\_\_\_\_ Date: \_\_\_\_\_

Approved: \_\_\_\_\_ Date: \_\_\_\_\_

Approved: \_\_\_\_\_ Date: \_\_\_\_\_

Approved: \_\_\_\_\_ Date: \_\_\_\_\_

APPROVED: \_\_\_\_\_

DESIGNED BY: \_\_\_\_\_

DRAWN BY: \_\_\_\_\_

CHECKED BY: \_\_\_\_\_

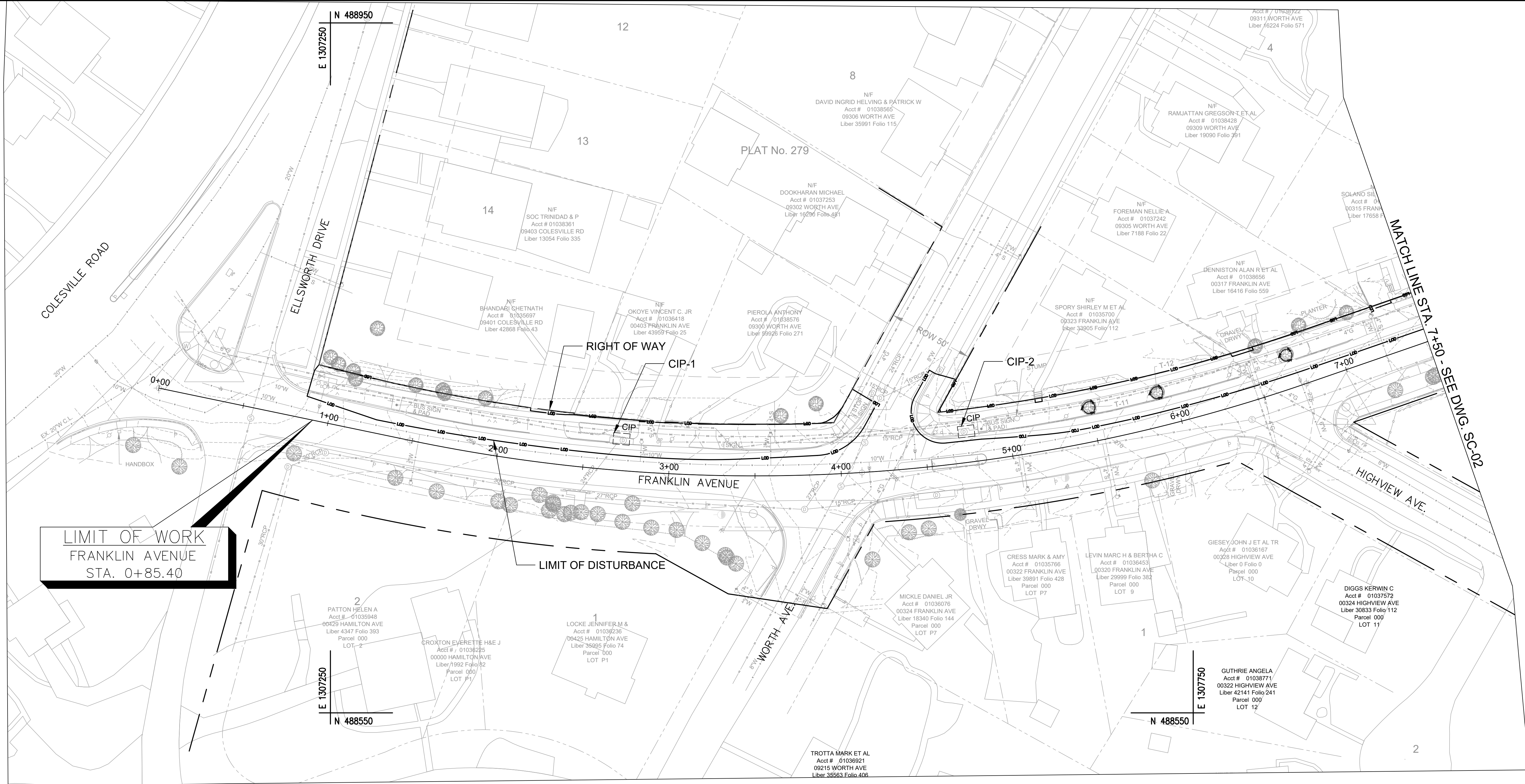
SCALE: AS SHOWN

**FRANKLIN AVENUE SIDEWALK DRAINAGE DETAILS**

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

SCALE: AS SHOWN

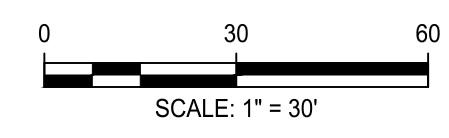
DD-04



- NOTES
1. NO SEDIMENT LADEN RUNOFF SHALL LEAVE THE WORK AREA UNLESS DIRECTED TO AN MDE APPROVED SEDIMENT CONTROL DEVICES.
  2. EROSION AND SEDIMENT CONTROL WILL BE STRICTLY ENFORCED.
  3. THE CONTRACTOR SHOULD PROVIDE THE STABILIZED CONSTRUCTION ENTRANCE AS NEEDED AND THE LOCATION SHOULD BE APPROVED BY EROSION AND SEDIMENT CONTROL INSPECTOR.
  4. SEE THE GENERAL NOTES SHEET FOR THE SEQUENCE OF CONSTRUCTION OF PHASE 1.

CURB INLET PROTECTION(CIP)		
CIP-1	STA. 2+69.2, 17.1 LT	1 EA
CIP-2	STA. 4+75.2, 18.1 LT	1 EA

- LEGEND
- LOD ——— LIMIT OF DISTURBANCE
  - TREE PROTECTION FENCE
  - CIP CURB INTET PROTECTION
  - SIP STANDARD INLET PROTECTION
  - TSOS TEMPORARY STONE OUTLET STRUCTURE



**Engineers, Architects  
Development Consultants**  
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www.sheladia.com

NO.	REVISION	DATE	BY

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**CONTACT:**  
DIVISION OF TRANSPORTATION ENGINEERING  
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240-777-7210  
DESIGN SECTION  
240-777-7221

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: JS Drawn by: ES Checked by: NM

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

SM FILE NO. \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEEDMENT CONTROL PERMIT NO. \_\_\_\_\_

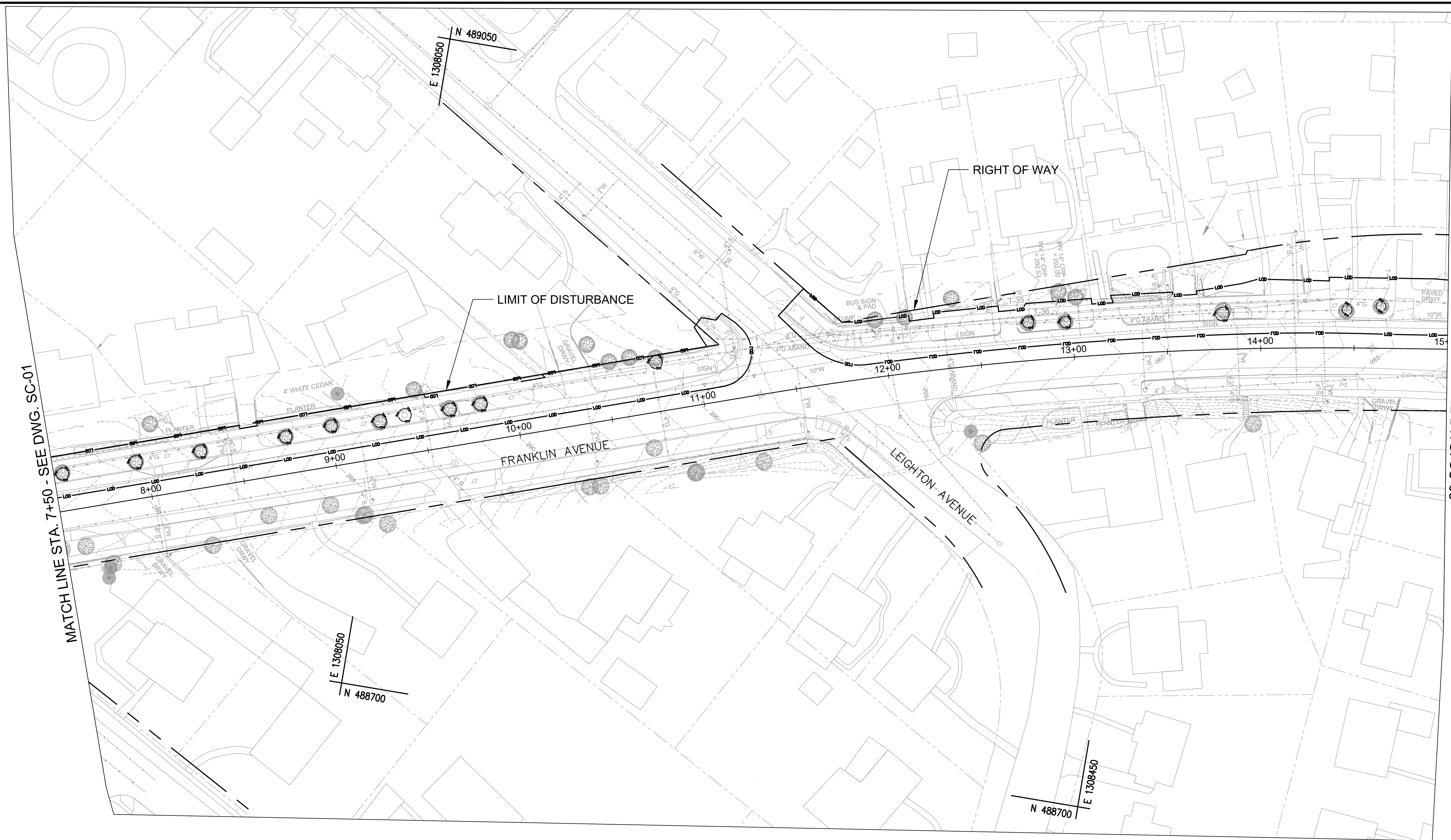
MCDOT APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

**FRANKLIN AVENUE  
SIDEWALK  
EROSION & SEDIMENT CONTROL PLAN  
PHASE I**

SCALE: AS SHOWN

Project No.: TBD 42 of 109

**SC-01**



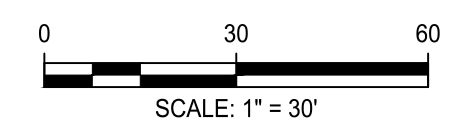
MATCH LINE STA. 7+50 - SEE DWG. SC-01

MATCH LINE STA. 15+00 - SEE DWG. SC-03

- NOTES**
1. NO SEDIMENT LADEN RUNOFF SHALL LEAVE THE WORK AREA UNLESS DIRECTED TO AN MDE APPROVED SEDIMENT CONTROL DEVICES.
  2. EROSION AND SEDIMENT CONTROL WILL BE STRICTLY ENFORCED.
  3. THE CONTRACTOR SHOULD PROVIDE THE STABILIZED CONSTRUCTION ENTRANCE AS NEEDED AND THE LOCATION SHOULD BE APPROVED BY EROSION AND SEDIMENT CONTROL INSPECTOR.
  4. SEE THE GENERAL NOTES SHEET FOR THE SEQUENCE OF CONSTRUCTION OF PHASE 1.

**LEGEND**

- LOD ——— LIMIT OF DISTURBANCE
- TREE PROTECTION FENCE
- CIP CURB INLET PROTECTION
- SIP STANDARD INLET PROTECTION
- TSOS TEMPORARY STONE OUTLET STRUCTURE



NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
 DEPARTMENT OF TRANSPORTATION  
 100 EDISON PARK DRIVE  
 GAITHERSBURG, MARYLAND

**CONTACT:**  
 DIVISION OF TRANSPORTATION ENGINEERING  
 CONSTRUCTION SECTION  
 240-777-7210  
 DESIGN SECTION  
 240-777-7221

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_  
 APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

Designed by: JS Drawn by: ES Checked by: NM

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

SM FILE NO. \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEEDMENT CONTROL PERMIT NO. \_\_\_\_\_

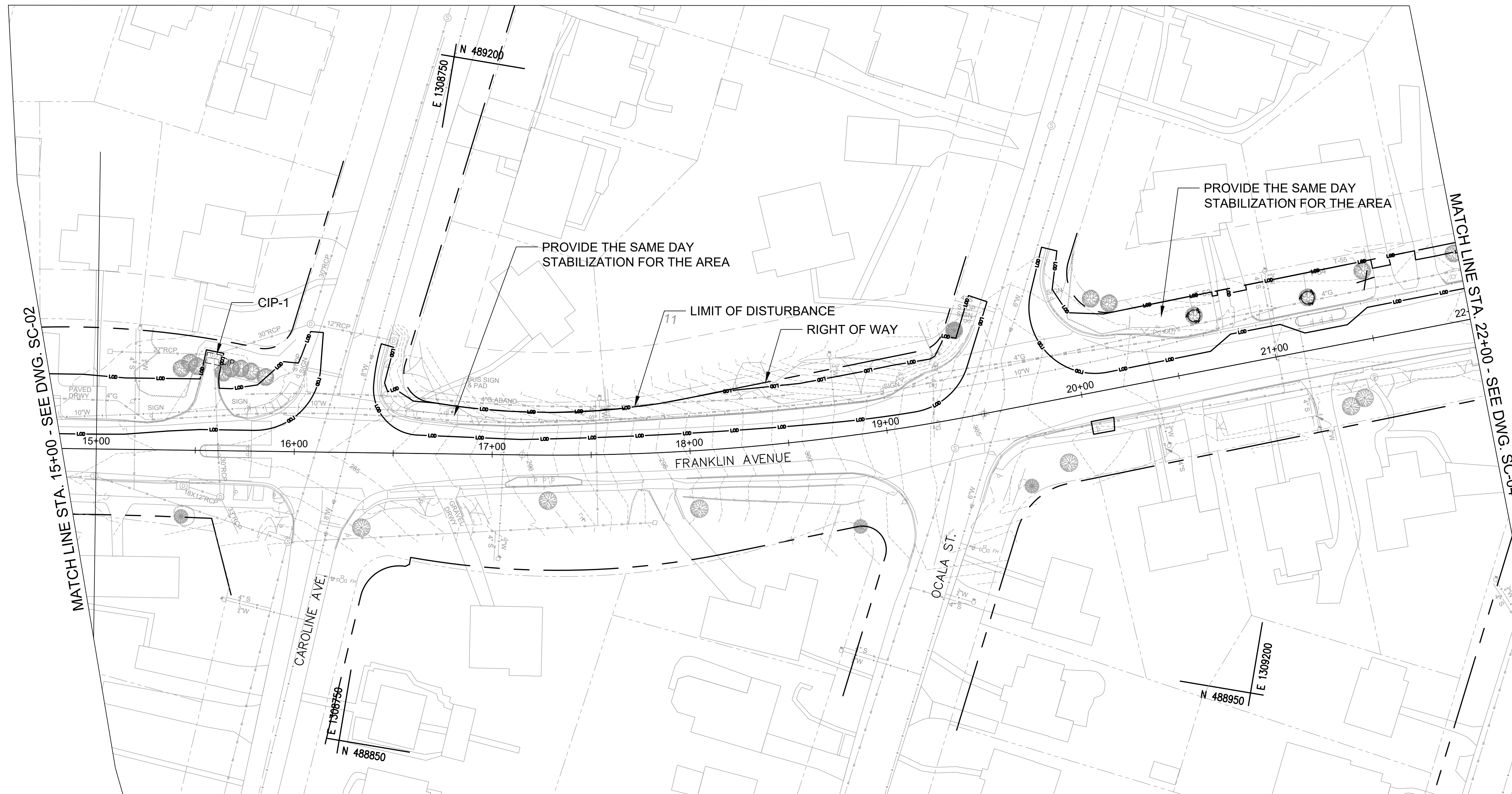
MCDOT APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL. IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

**FRANKLIN AVENUE  
 SIDEWALK  
 EROSION & SEDIMENT CONTROL PLAN  
 PHASE I**

SCALE : AS SHOWN

SC-02

Project No. : TBD 43 of 109



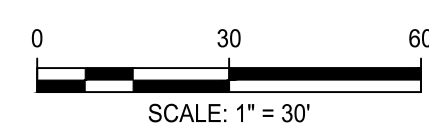
**NOTES**

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CURB INLET PROTECTION(CIP)		
CIP-1	STA. 15+56.9, 45.2' LT	1 EA

**LEGEND**

- LOD ——— LIMIT OF DISTURBANCE
- TREE PROTECTION FENCE
- CIP CURB INLET PROTECTION
- SIP STANDARD INLET PROTECTION
- TSOS TEMPORARY STONE OUTLET STRUCTURE



NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
 DEPARTMENT OF TRANSPORTATION  
 100 EDISON PARK DRIVE  
 GAITHERSBURG, MARYLAND

**CONTACT:**  
 DIVISION OF TRANSPORTATION ENGINEERING  
 CONSTRUCTION SECTION  
 240-777-7210  
 DESIGN SECTION  
 240-777-7221

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: JS Drawn by: ES Checked by: NM

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
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Approved _____ Date _____	Approved _____ Date _____

SM FILE NO. \_\_\_\_\_

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Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEEDMENT CONTROL PERMIT NO. \_\_\_\_\_

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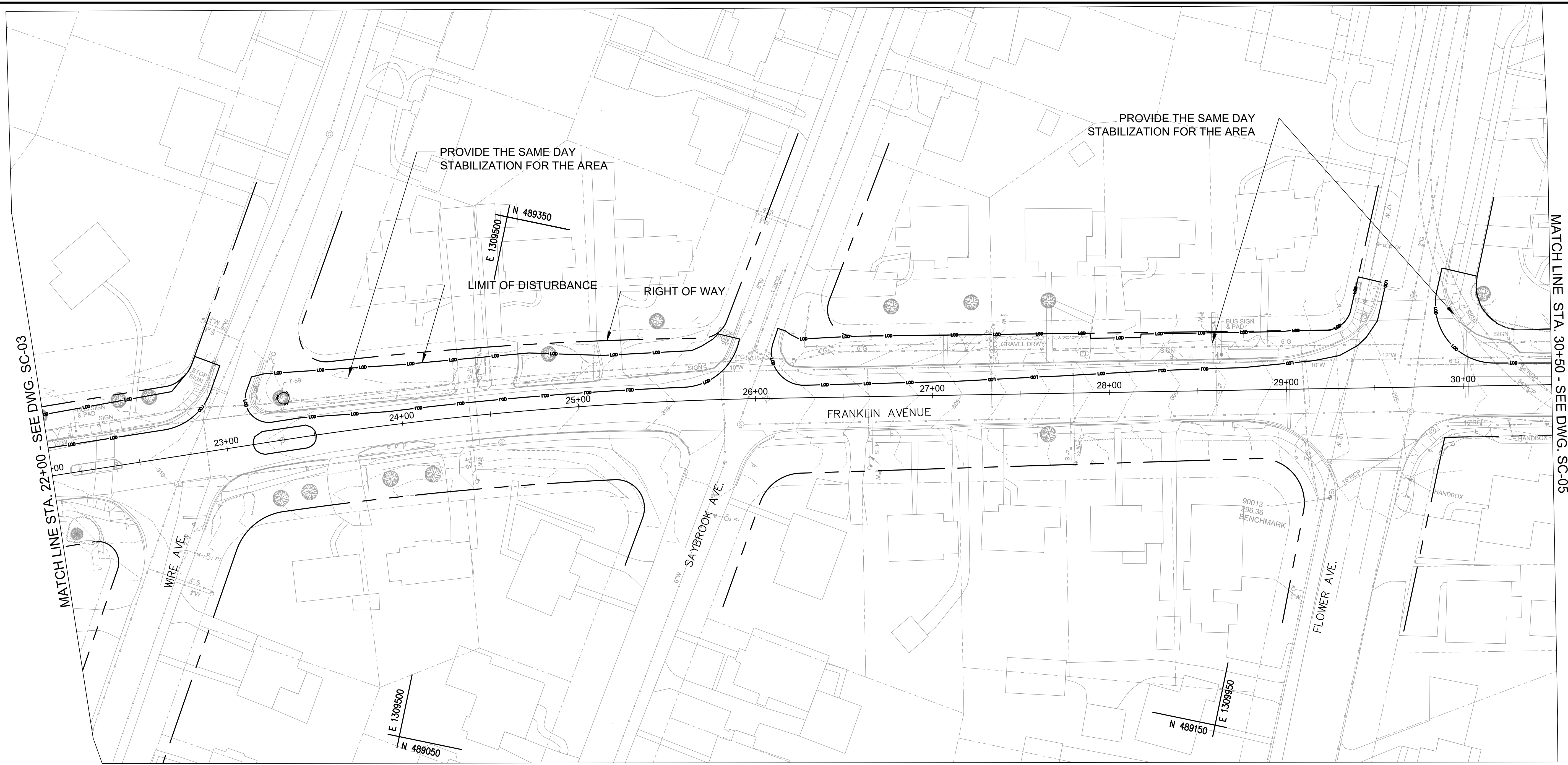
**FRANKLIN AVENUE  
 SIDEWALK**

EROSION & SEDIMENT CONTROL PLAN  
 PHASE I

SCALE: AS SHOWN

Project No.: TBD 44 of 109

**SC-03**

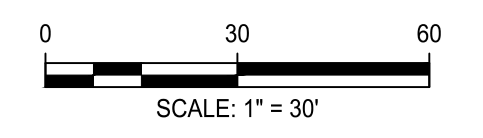


**NOTES**

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**LEGEND**

- LOD ——— LIMIT OF DISTURBANCE
- TREE PROTECTION FENCE
- CIP CURB INLET PROTECTION
- SIP STANDARD INLET PROTECTION
- TSOS TEMPORARY STONE OUTLET STRUCTURE



NO.	REVISION	DATE	BY

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MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_  
 APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

Designed by: JS Drawn by: ES Checked by: NM

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
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SM FILE NO. \_\_\_\_\_

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Administrative Requirements:

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SEEDMENT CONTROL PERMIT NO. \_\_\_\_\_

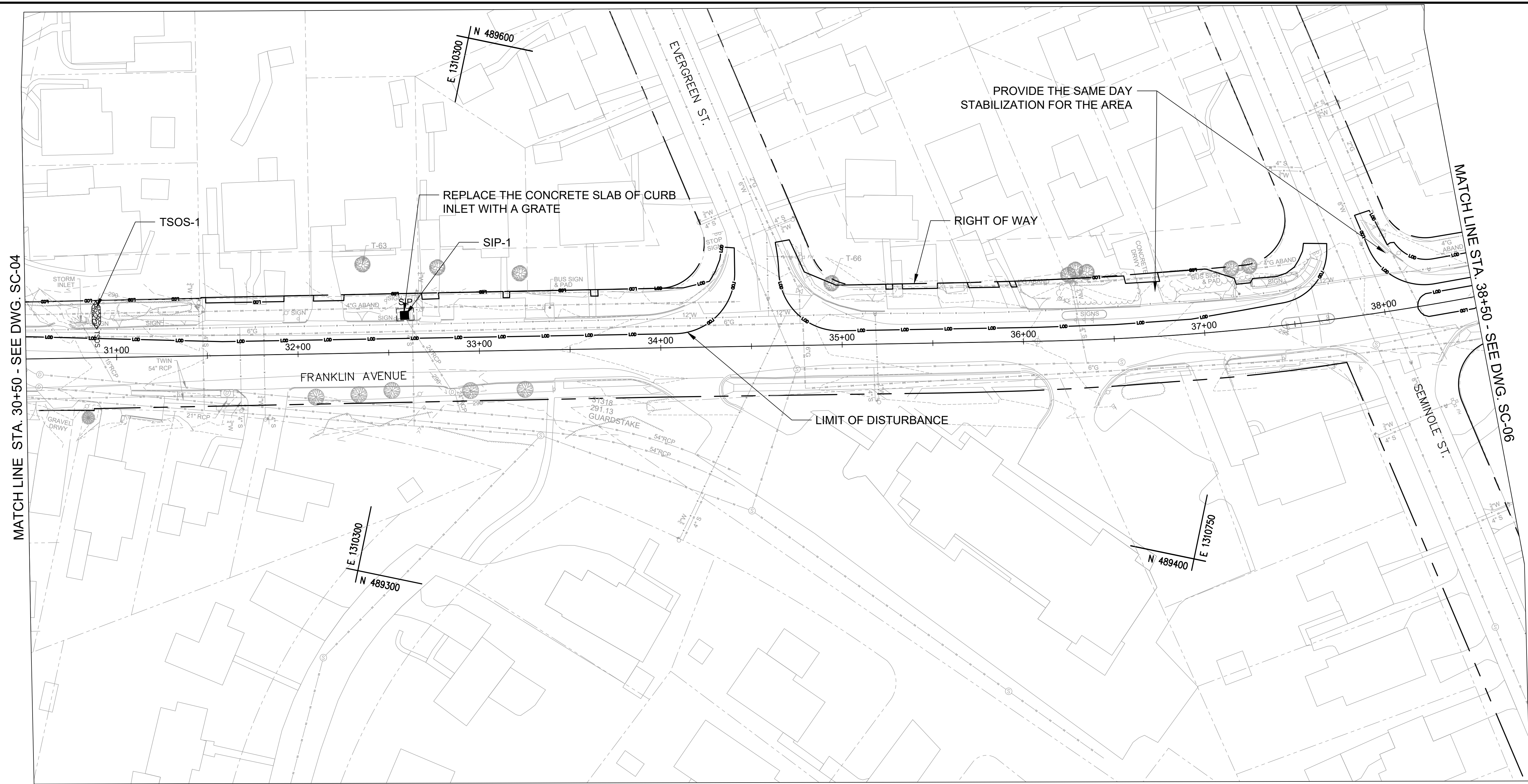
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**FRANKLIN AVENUE  
 SIDEWALK  
 EROSION & SEDIMENT CONTROL PLAN  
 PHASE I**

SCALE: AS SHOWN

Project No.: TBD 45 of 109

**SC-04**



**NOTES**

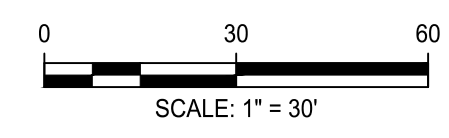
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STANDARD INLET PROTECTION(SIP)		
SIP-1	STA. 32+59.0, 20.7' LT	1 EA

TEMP. STONE OUTLET PROTECTION(TSOS)		
TSOS-1	STA. 30+39.0, 23.5' LT	1 EA

**LEGEND**

- LOD ——— LIMIT OF DISTURBANCE
- TREE PROTECTION FENCE
- CIP CURB INLET PROTECTION
- SIP STANDARD INLET PROTECTION
- TSOS TEMPORARY STONE OUTLET STRUCTURE



NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
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 GAITHERSBURG, MARYLAND

**CONTACT:**  
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 CONSTRUCTION SECTION  
 240-777-7210  
 DESIGN SECTION  
 240-777-7221

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: JS Drawn by: ES Checked by: NM

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

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Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEEDMENT CONTROL PERMIT NO. \_\_\_\_\_

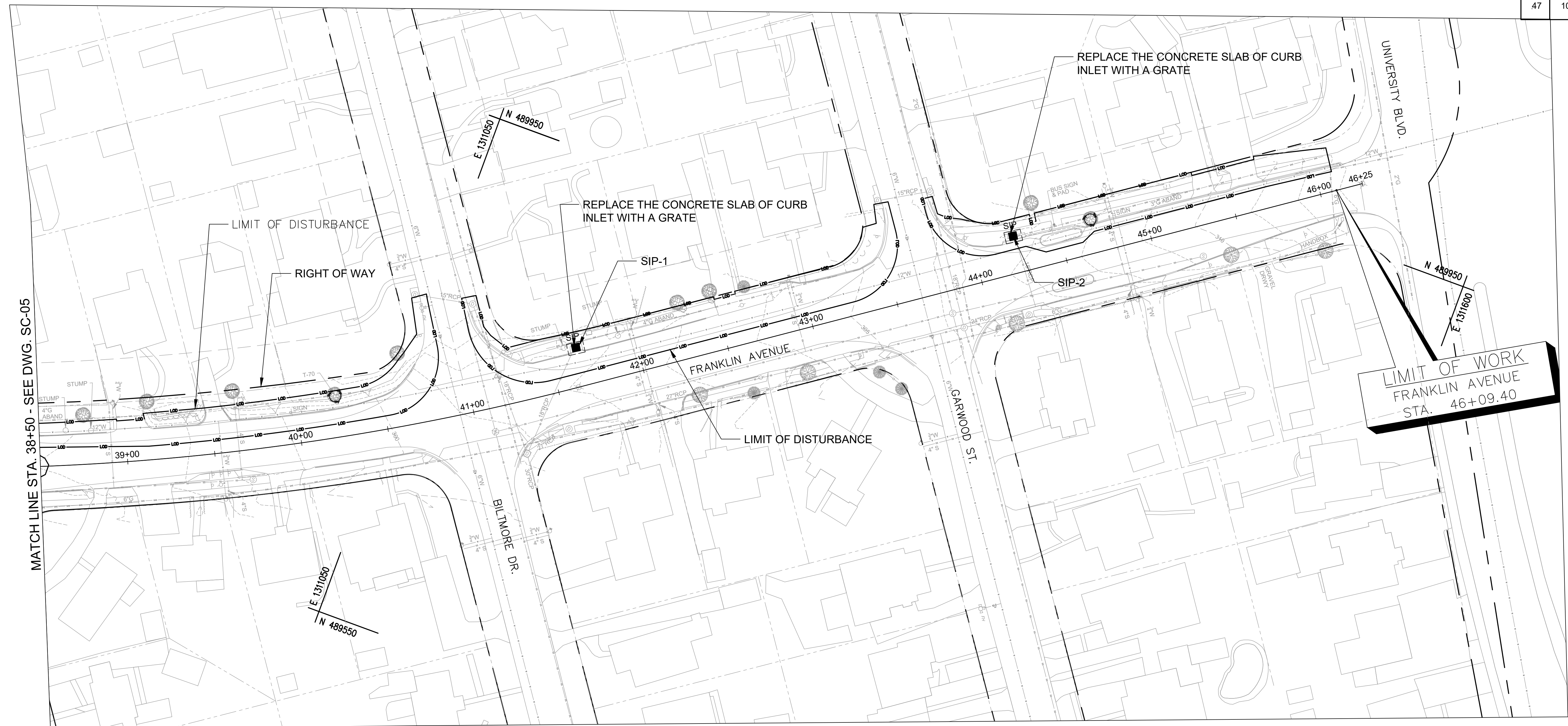
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**FRANKLIN AVENUE  
 SIDEWALK  
 EROSION & SEDIMENT CONTROL PLAN  
 PHASE I**

SCALE : AS SHOWN

Project No. : TBD 46 of 109

**SC-05**



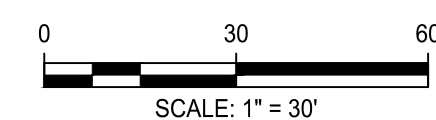
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4. SEE THE GENERAL NOTES SHEET FOR THE SEQUENCE OF CONSTRUCTION OF PHASE 1.

STANDARD INLET PROTECTION(SIP)		
SIP-1	STA. 41+15.9, 22.4' LT	1 EA
SIP-2	STA. 44+23.7, 21.3 LT	1 EA

**LEGEND**

- LOD ——— LIMIT OF DISTURBANCE
- TREE PROTECTION FENCE
- CIP CURB INLET PROTECTION
- SIP STANDARD INLET PROTECTION
- TSOS TEMPORARY STONE OUTLET STRUCTURE



NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
 DEPARTMENT OF TRANSPORTATION  
 100 EDISON PARK DRIVE  
 GAITHERSBURG, MARYLAND

**CONTACT:**  
 DIVISION OF TRANSPORTATION ENGINEERING  
 CONSTRUCTION SECTION  
 240-777-7210  
 DESIGN SECTION  
 240-777-7221

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: JS Drawn by: ES Checked by: NM

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

SMPL# NO. \_\_\_\_\_

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Administrative Requirements:

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SEEDMENT CONTROL PERMIT NO. \_\_\_\_\_

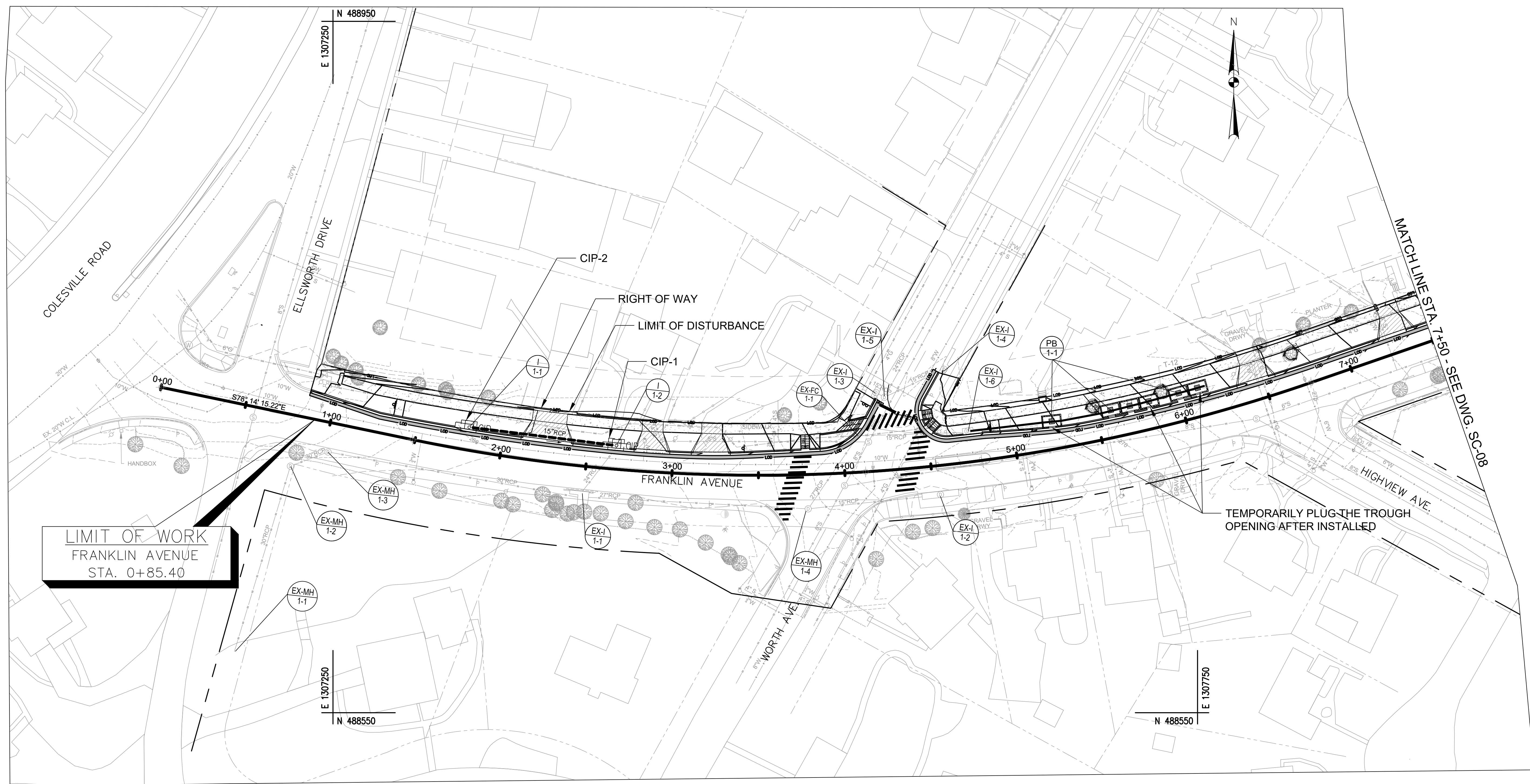
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**FRANKLIN AVENUE  
 SIDEWALK  
 EROSION & SEDIMENT CONTROL PLAN  
 PHASE I**

SCALE : AS SHOWN

Project No. : TBD 47 of 109

**SC-06**



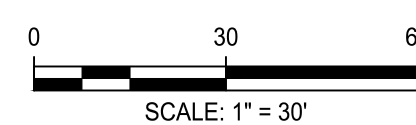
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5. THE CONTRACTOR SHALL INSTALL INLET PROTECTIONS AT THE SAME DAY THAT INLETS BECOME FUNCTIONAL.
6. EROSION AND SEDIMENT CONTROL MEASURES SHOWN IN GREY ARE INSTALLED UNDER PHASE I SHALL BE KEPT AND MAINTAINED AS LONG AS POSSIBLE.

CURB/STANDARD INLET PROTECTION(CIP/SIP)		
CIP-1	STA. 2+66.5, 12.20 LT	1 EA
CIP-2	STA. 1+75, 12.20 LT	1 EA

**LEGEND**

- LOD ——— LIMIT OF DISTURBANCE
- TREE PROTECTION FENCE
- CIP CURB INLET PROTECTION
- SIP STANDARD INLET PROTECTION
- TSOS TEMPORARY STONE OUTLET STRUCTURE



NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
 DEPARTMENT OF TRANSPORTATION  
 100 EDISON PARK DRIVE  
 GAITHERSBURG, MARYLAND

**CONTACT:**  
 DIVISION OF TRANSPORTATION ENGINEERING  
 CONSTRUCTION SECTION  
 240-777-7210  
 DESIGN SECTION  
 240-777-7221

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_  
 APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

SM FILE NO. \_\_\_\_\_

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Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEEDMENT CONTROL PERMIT NO. \_\_\_\_\_

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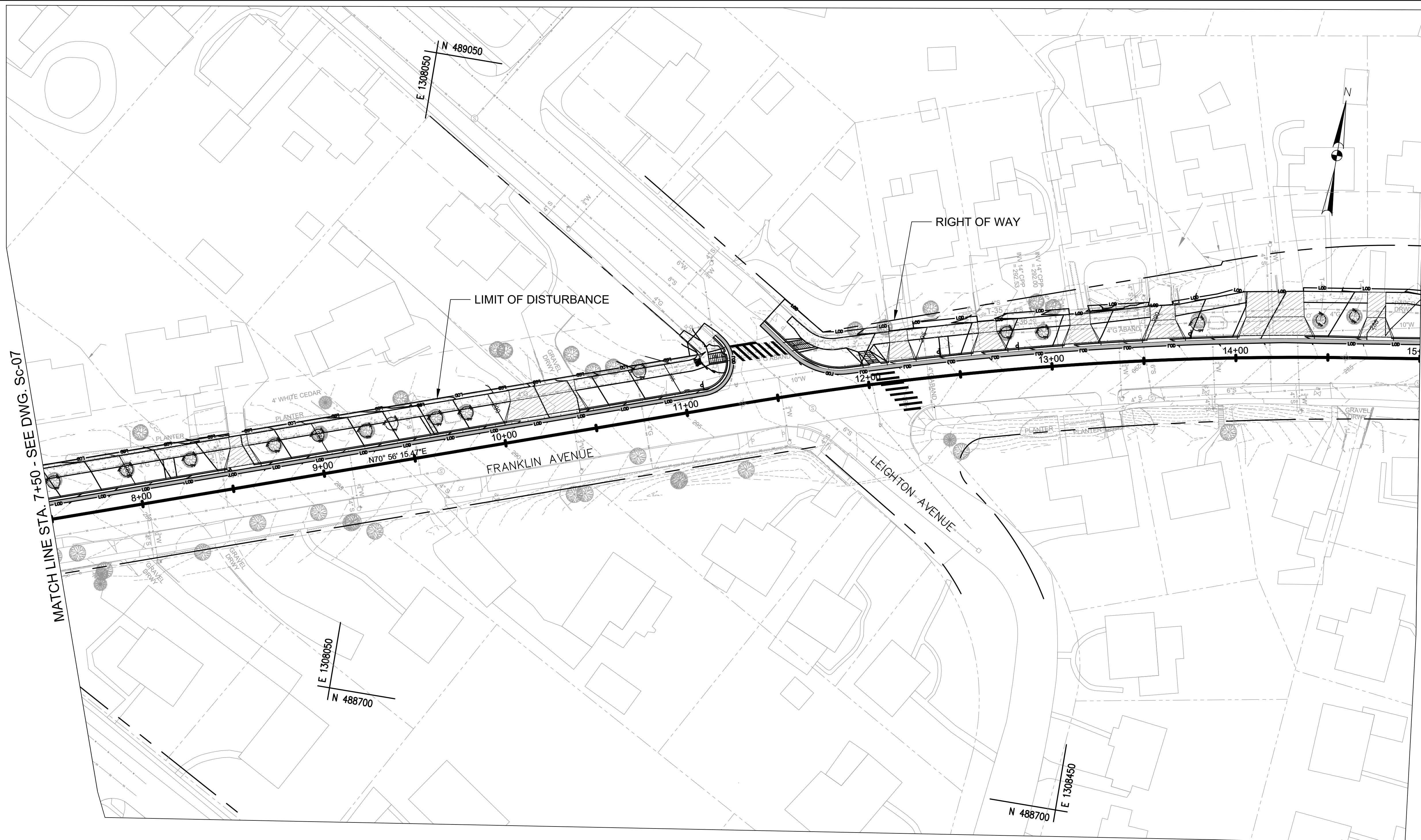
**FRANKLIN AVENUE  
 SIDEWALK  
 EROSION & SEDIMENT CONTROL PLAN  
 PHASE II**

SCALE : AS SHOWN

Project No. : TBD 48 of 109

**SC-07**



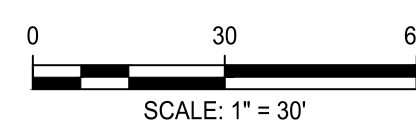


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**LEGEND**

- LOD ——— LIMIT OF DISTURBANCE
- TREE PROTECTION FENCE
- CIP CURB INLET PROTECTION
- SIP STANDARD INLET PROTECTION
- TSOS TEMPORARY STONE OUTLET STRUCTURE



NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
DEPARTMENT OF TRANSPORTATION  
100 EDISON PARK DRIVE  
GAITHERSBURG, MARYLAND

**CONTACT:**  
DIVISION OF TRANSPORTATION ENGINEERING  
CONSTRUCTION SECTION  
240-777-7210  
DESIGN SECTION  
240-777-7221

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

SMPLF NO. \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEEDMENT CONTROL PERMIT NO. \_\_\_\_\_

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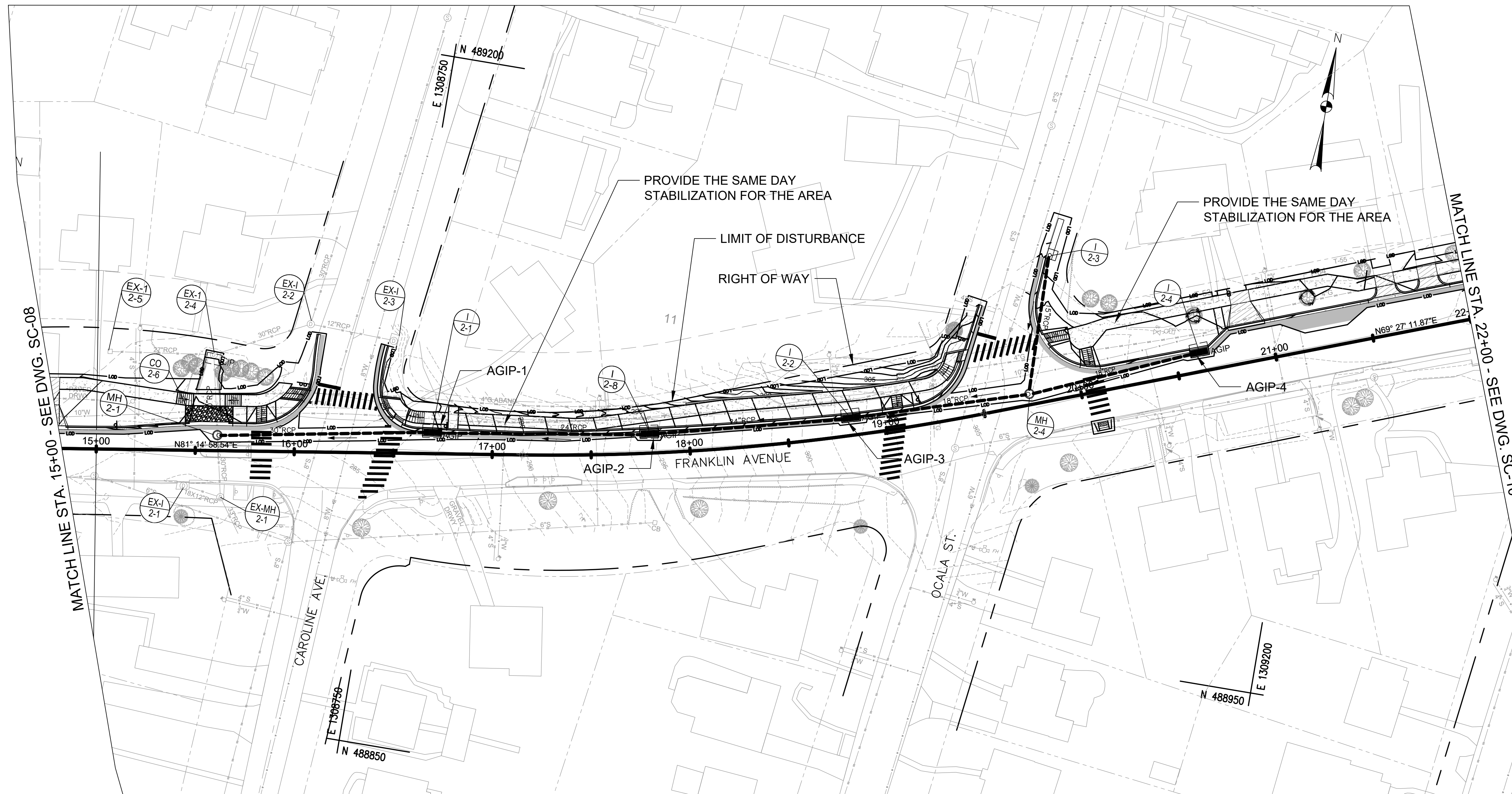
**FRANKLIN AVENUE  
SIDEWALK**

**EROSION & SEDIMENT CONTROL PLAN  
PHASE II**

SCALE: AS SHOWN

Project No.: TBD of 109

**SC-08**



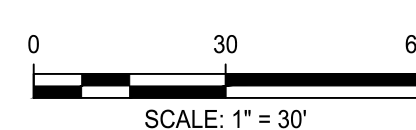
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AT GRADE INLET PROTECTION(AGIP)		
AGIP-1	STA. 16+69.5, 11.5' LT	1 EA
AGIP-2	STA. 17+80.5, 10.4' LT	1 EA
AGIP-3	STA. 18+83.0, 9.8' LT	1 EA
AGIP-4	STA. 20+63.4, 10.9' LT	1 EA

**LEGEND**

- LOD ——— LIMIT OF DISTURBANCE
- TREE PROTECTION FENCE
- CIP CURB INLET PROTECTION
- SIP STANDARD INLET PROTECTION
- TSOS TEMPORARY STONE OUTLET STRUCTURE



NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
 DEPARTMENT OF TRANSPORTATION  
 100 EDISON PARK DRIVE  
 GAITHERSBURG, MARYLAND

**CONTACT:**  
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MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_  
 APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
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PROJECT NO. \_\_\_\_\_

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Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEEDMENT CONTROL PERMIT NO. \_\_\_\_\_

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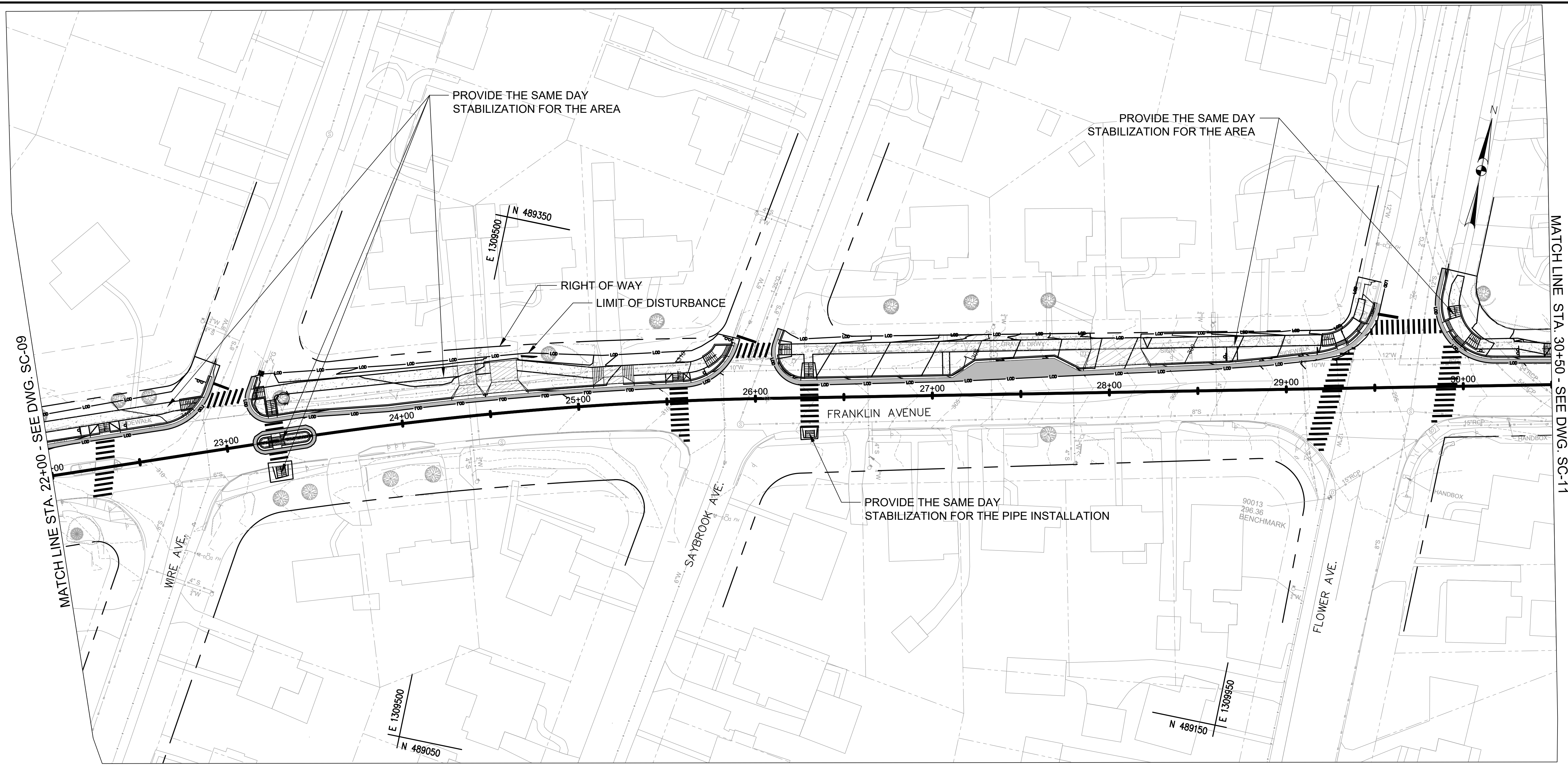
**FRANKLIN AVENUE  
 SIDEWALK**

**EROSION & SEDIMENT CONTROL PLAN  
 PHASE II**

SCALE: AS SHOWN

Project No.: TBD 50 of 109

**SC-09**

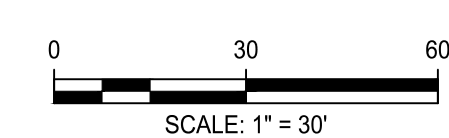


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**LEGEND**

- LOD ——— LIMIT OF DISTURBANCE
- TREE PROTECTION FENCE
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MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_  
 APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

SM FILE NO. \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEEDMENT CONTROL PERMIT NO. \_\_\_\_\_

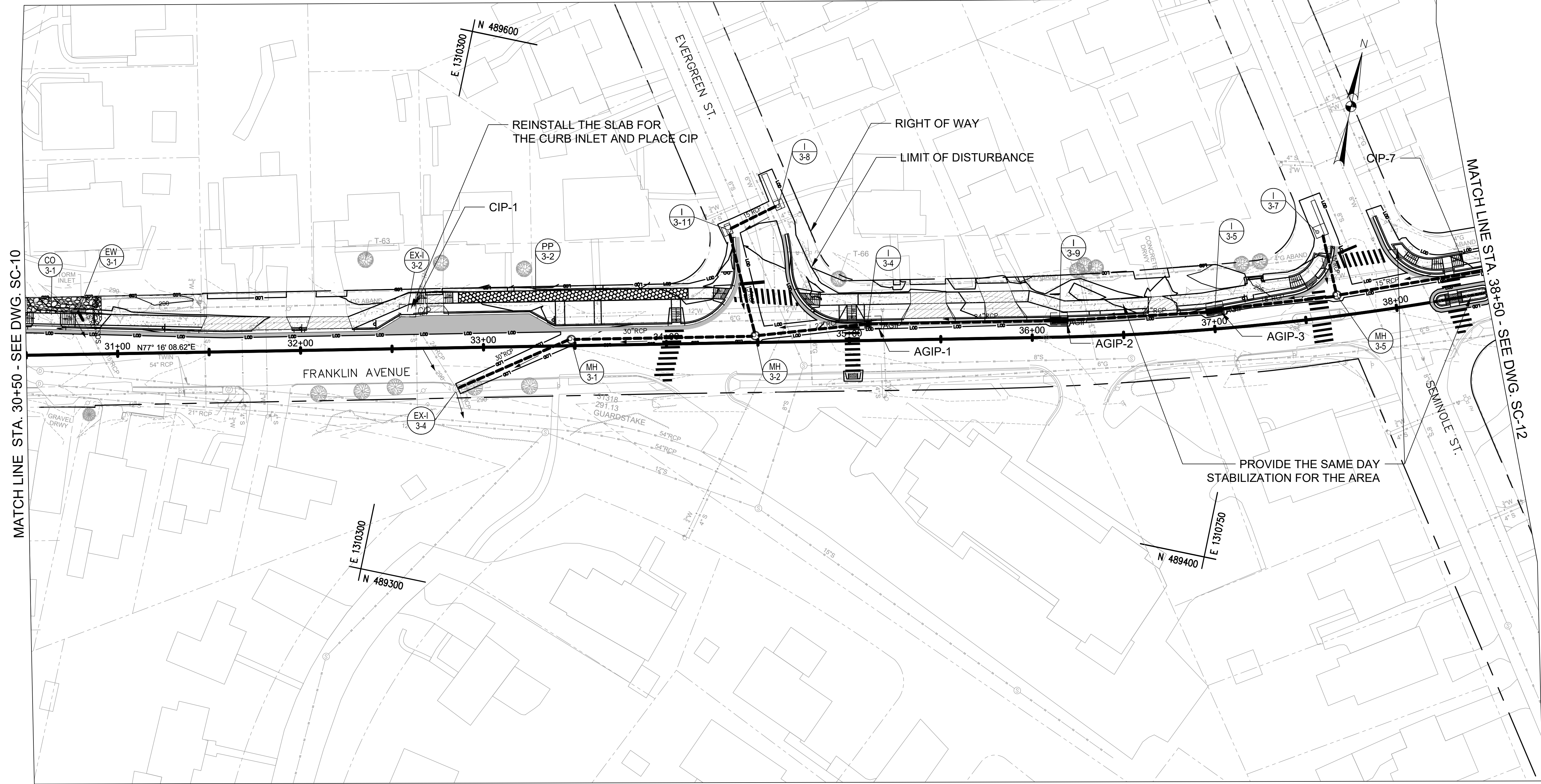
MCDPS APPROVAL OF THIS PLAN EXPIRES ONE YEAR FROM THE DATE OF APPROVAL. IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED.

**FRANKLIN AVENUE  
 SIDEWALK  
 EROSION & SEDIMENT CONTROL PLAN  
 PHASE II**

SCALE : AS SHOWN

Project No. : TBD 51 of 109

**SC-10**



**NOTES**

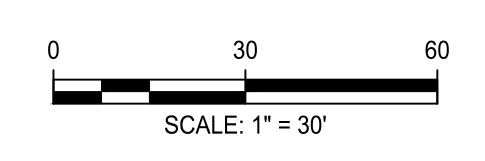
1. NO SEDIMENT LADEN RUNOFF SHALL LEAVE THE WORK AREA UNLESS DIRECTED TO AN MDE APPROVED SEDIMENT CONTROL DEVICES.
2. EROSION AND SEDIMENT CONTROL WILL BE STRICTLY ENFORCED.
3. THE CONTRACTOR SHOULD PROVIDE THE STABILIZED CONSTRUCTION ENTRANCE AS NEEDED AND THE LOCATION SHOULD BE APPROVED BY EROSION AND SEDIMENT CONTROL INSPECTOR.
4. SEE THE GENERAL NOTES SHEET FOR THE SEQUENCE OF CONSTRUCTION OF PHASE 2.
5. THE CONTRACTOR SHALL INSTALL INLET PROTECTIONS AT THE SAME DAY THAT INLETS BECOME FUNCTIONAL.
6. EROSION AND SEDIMENT CONTROL MEASURES SHOWN IN GREY ARE INSTALLED UNDER PHASE I SHALL BE KEPT AND MAINTAINED AS LONG AS POSSIBLE.

CURB/STANDARD INLET PROTECTION(CIP/SIP)		
CIP-1	STA. 32+58.5, 19.8' LT	1 EA

AT GRADE INLET PROTECTION(AGIP)		
AGIP-1	STA. 35+13.7, 9.5' LT	1 EA
AGIP-2	STA. 36+15.2, 9.5' LT	1 EA
AGIP-3	STA. 37+2.8, 10.4' LT	1 EA

**LEGEND**

- LOD ——— LIMIT OF DISTURBANCE
- TREE PROTECTION FENCE
- CIP CURB INTET PROTECTION
- SIP STANDARD INLET PROTECTION
- TSOS TEMPORARY STONE OUTLET STRUCTURE



NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
 DEPARTMENT OF TRANSPORTATION  
 100 EDISON PARK DRIVE  
 GAITHERSBURG, MARYLAND

**CONTACT:**  
 DIVISION OF TRANSPORTATION ENGINEERING  
 CONSTRUCTION SECTION  
 240-777-7210  
 DESIGN SECTION  
 240-777-7221

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_  
 APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

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NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:

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SEEDMENT CONTROL PERMIT NO. \_\_\_\_\_

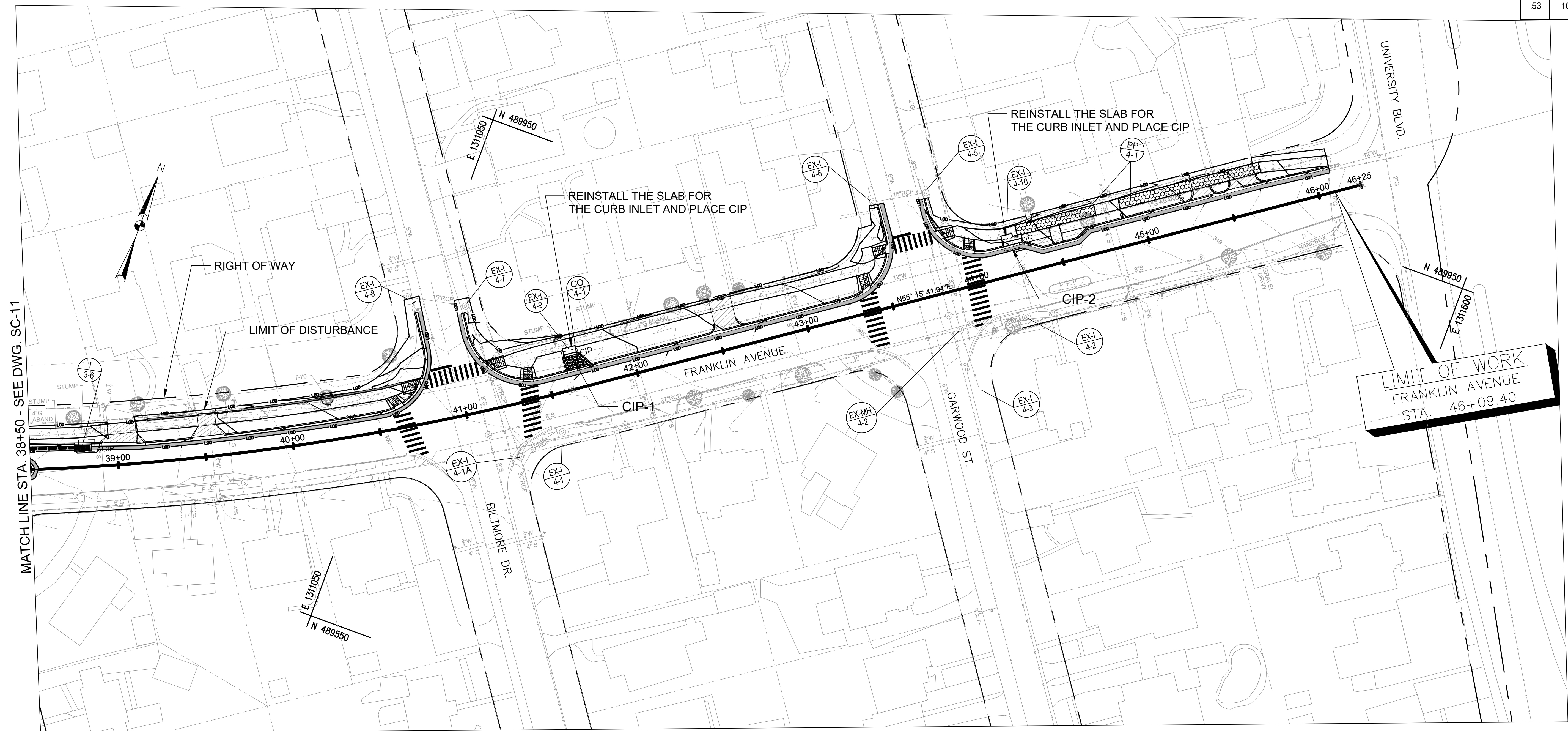
MCDPS APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL. IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

**FRANKLIN AVENUE  
 SIDEWALK  
 EROSION & SEDIMENT CONTROL PLAN  
 PHASE II**

SCALE: ~~AS SHOWN~~

Project No.: TBD of 109

SC-11



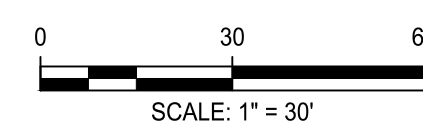
**NOTES**

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4. SEE THE GENERAL NOTES SHEET FOR THE SEQUENCE OF CONSTRUCTION OF PHASE 2.
5. THE CONTRACTOR SHALL INSTALL INLET PROTECTIONS AT THE SAME DAY THAT INLETS BECOME FUNCTIONAL.
6. EROSION AND SEDIMENT CONTROL MEASURES SHOWN IN GREY ARE INSTALLED UNDER PHASE I SHALL BE KEPT AND MAINTAINED AS LONG AS POSSIBLE.

CURB INLET PROTECTION(CIP)		
CIP-1	STA. 41+67.5, 17.3' LT	1 EA
CIP-2	STA. 44+24.7, 17.5 LT	1 EA

**LEGEND**

- LOD ——— LIMIT OF DISTURBANCE
- TREE PROTECTION FENCE
- CIP CURB INLET PROTECTION
- SIP STANDARD INLET PROTECTION
- TSOS TEMPORARY STONE OUTLET STRUCTURE



NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
 DEPARTMENT OF TRANSPORTATION  
 100 EDISON PARK DRIVE  
 GAITHERSBURG, MARYLAND

**CONTACT:**  
 DIVISION OF TRANSPORTATION ENGINEERING  
 CONSTRUCTION SECTION  
 240-777-7210  
 DESIGN SECTION  
 240-777-7221

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
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Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEEDMENT CONTROL PERMIT NO. \_\_\_\_\_

NEED APPROVAL OF THIS PLAN TO EXPIRE ONE YEAR FROM THE DATE OF APPROVAL. IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

**FRANKLIN AVENUE  
 SIDEWALK  
 EROSION & SEDIMENT CONTROL PLAN  
 PHASE II**

SCALE : AS SHOWN

Project No. : TBD 53 of 109

**SC-12**



### DETAIL B-1 STABILIZED CONSTRUCTION ENTRANCE

STANDARD SYMBOL: SCE

**CONSTRUCTION SPECIFICATIONS**

- PLACE STABILIZED CONSTRUCTION ENTRANCE IN ACCORDANCE WITH THE APPROVED PLAN. VEHICLES MUST TRAVEL OVER THE ENTIRE LENGTH OF THE SCE. USE MINIMUM LENGTH OF 50 FEET (\*30 FEET FOR SINGLE RESIDENCE LOT). USE MINIMUM WIDTH OF 10 FEET. FLARE SCE 10 FEET MINIMUM AT THE EXISTING ROAD TO PROVIDE A TURNING RADIUS.
- PIPE ALL SURFACE WATER FLOWING TO OR DIVERTED TOWARD THE SCE UNDER THE ENTRANCE, MAINTAINING POSITIVE DRAINAGE. PROTECT PIPE INSTALLED THROUGH THE SCE WITH A MOUNTABLE BERM WITH 5:1 SLOPES AND A MINIMUM OF 12 INCHES OF STONE OVER THE PIPE. PROVIDE PIPE AS SPECIFIED ON APPROVED PLAN. WHEN THE SCE IS LOCATED AT A HIGH SPOT AND HAS NO DRAINAGE TO CONVEY, A PIPE IS NOT NECESSARY. A MOUNTABLE BERM IS REQUIRED WHEN SCE IS NOT LOCATED AT A HIGH SPOT.
- PREPARE SUBGRADE AND PLACE NONWOVEN GEOTEXTILE, AS SPECIFIED IN SECTION H-1 MATERIALS.
- PLACE CRUSHED AGGREGATE (2 TO 3 INCHES IN SIZE) OR EQUIVALENT RECYCLED CONCRETE (WITHOUT REBAR) AT LEAST 6 INCHES DEEP OVER THE LENGTH AND WIDTH OF THE SCE.
- MAINTAIN ENTRANCE IN A CONDITION THAT MINIMIZES TRACKING OF SEDIMENT. ADD STONE OR MAKE OTHER REPAIRS AS CONDITIONS DEMAND TO MAINTAIN CLEAN SURFACE. MOUNTABLE BERM, AND SPECIFIED DIMENSIONS. IMMEDIATELY REMOVE STONE AND/OR SEDIMENT SPILLED, DROPPED, OR TRACKED ONTO ADJACENT ROADWAY BY VACUUMING, SCRAPING, AND/OR SWEEPING. WASHING ROADWAY TO REMOVE MUD TRACKED ONTO PAVEMENT IS NOT ACCEPTABLE UNLESS WASH WATER IS DIRECTED TO AN APPROVED SEDIMENT CONTROL PRACTICE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL D-4-1-B ROCK OUTLET PROTECTION II

STANDARD SYMBOL: ROPII

**CONSTRUCTION SPECIFICATIONS**

- RIPRAP AND STONE MUST CONFORM TO THE SPECIFIED CLASS.
- USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS. AND PROTECT FROM PUNCTURING, CUTTING, OR TEARING. REPAIR ANY DAMAGE OTHER THAN AN OCCASIONAL SMALL HOLE BY PLACING ANOTHER PIECE OF GEOTEXTILE OVER THE DAMAGED PART OR BY COMPLETELY REPLACING THE GEOTEXTILE. PROVIDE A MINIMUM OF ONE FOOT OVERLAP FOR ALL REPAIRS AND FOR JOINING TWO PIECES OF GEOTEXTILE TOGETHER.
- PREPARE THE SUBGRADE FOR GEOTEXTILE OR STONE FILTER (3/4 TO 1 1/2 INCH STONE FOR 6 INCH MINIMUM DEPTH) AND RIPRAP TO THE REQUIRED LINES AND GRADES. COMPACT ANY FILL REQUIRED IN THE SUBGRADE TO A DENSITY OF APPROXIMATELY THAT OF THE SURROUNDING UNDISTURBED MATERIAL.
- EXTEND GEOTEXTILE AT LEAST 6 INCHES BEYOND EDGES OF RIPRAP AND EMBED AT LEAST 4 INCHES AT SIDES OF RIPRAP.
- CONSTRUCT RIPRAP OUTLET TO FULL COURSE THICKNESS IN ONE OPERATION AND IN SUCH A MANNER AS TO AVOID DISPLACEMENT OF UNDERLYING MATERIALS. PLACE STONE FOR RIPRAP OUTLET IN A MANNER THAT WILL ENSURE THAT IT IS REASONABLY HOMOGENEOUS WITH THE SMALLER STONES AND SPALLS. FILING THE VOIDS BETWEEN THE LARGER STONES. PLACE RIPRAP IN A MANNER TO PREVENT DAMAGE TO THE STONE FILTER BLANKET OR GEOTEXTILE. HAND PLACE TO THE EXTENT NECESSARY.
- WHERE NO ENDWALL IS USED, CONSTRUCT THE UPSTREAM END OF THE APRON SO THAT THE WIDTH IS TWO TIMES THE DIAMETER OF THE OUTLET PIPE, AND EXTEND THE STONE UNDER THE OUTLET BY A MINIMUM OF 18 INCHES.
- CONSTRUCT APRON WITH OR SLOPE ALONG ITS LENGTH AND WITHOUT OBSTRUCTIONS. PLACE STONE SO THAT IT BLENDS IN WITH EXISTING GROUND.
- MAINTAIN LINE, GRADE, AND CROSS SECTION. KEEP OUTLET FREE OF EROSION. REMOVE ACCUMULATED SEDIMENT AND DEBRIS. AFTER HIGH FLOWS INSPECT FOR SCOUR AND DISLODGED RIPRAP. MAKE NECESSARY REPAIRS IMMEDIATELY.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL E-7 TEMPORARY STONE OUTLET STRUCTURE

STANDARD SYMBOL: ISOS

**CONSTRUCTION SPECIFICATIONS**

- PROVIDE STORAGE VOLUME AS SPECIFIED ON APPROVED PLANS.
- USE NONWOVEN GEOTEXTILE ON INTERFACE BETWEEN GROUND AND STONE.
- PERFORATE BAFFLE BOARD WITH 3 ROWS OF 1 INCH DIAMETER HOLES 6 INCHES ON CENTER, EMBED A MINIMUM OF 4 INCHES INTO GROUND, AND EXTEND BAFFLE BOARD MINIMUM OF 12 INCHES INTO EARTH DIKE.
- USE CLEAN 2 TO 3 INCH STONE OR EQUIVALENT RECYCLED CONCRETE. PLACE WOVEN MONOFILAMENT GEOTEXTILE ON UPSTREAM FACE AND COVER WITH A MINIMUM OF 6 INCHES OF ADDITIONAL STONE.
- USE NONWOVEN AND WOVEN MONOFILAMENT GEOTEXTILES AS SPECIFIED IN SECTION H-1 MATERIALS.
- SET WEIR CREST OF STONE 6 INCHES LOWER THAN THE TOP OF EARTH DIKE. USE MINIMUM LENGTH OF 6 FEET FOR WEIR CREST.
- REMOVE SEDIMENT WHEN IT HAS ACCUMULATED TO WITHIN 6 INCHES OF WEIR CREST. REPLACE GEOTEXTILE AND STONE FACING WHEN STRUCTURE CEASES TO DRAIN. MAINTAIN LINE, GRADE, AND CROSS SECTION.
- UPON REMOVAL OF STONE OUTLET STRUCTURE, GRADE AREA FLUSH WITH EXISTING GROUND. WITHIN 24 HOURS STABILIZE DISTURBED AREA WITH TOPSOIL, SEED, AND MULCH, OR AS SPECIFIED ON APPROVED PLAN.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL E-7 TEMPORARY STONE OUTLET STRUCTURE

STANDARD SYMBOL: ISOS

**CONSTRUCTION SPECIFICATIONS**

- USE NOMINAL 2 INCH X 4 INCH LUMBER.
- USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- NAIL THE 2x4 WEIR TO 9 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART).
- ATTACH A CONTINUOUS PIECE OF 1/4 INCH GALVANIZED HARDWARE CLOTH WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2x4 WEIR, EXTENDING IT 2 FEET BEYOND THROAT ON EACH SIDE.
- PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE OF THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH TO THE 2x4 WEIR.
- PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2x4 ANCHORS (MINIMUM 3 FEET LENGTH). EXTEND THE ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
- INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING.
- FORM THE HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND FACE OF CURB TO SPAN THE INLET OPENING. COVER THE HARDWARE CLOTH AND GEOTEXTILE WITH CLEAN 3/4 TO 1 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
- AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL E-9-3 CURB INLET PROTECTION

STANDARD SYMBOL: CIP

**CONSTRUCTION SPECIFICATIONS**

- USE NOMINAL 2 INCH X 4 INCH LUMBER.
- USE NONWOVEN GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- NAIL THE 2x4 WEIR TO 9 INCH LONG VERTICAL SPACERS (MAXIMUM 6 FEET APART).
- ATTACH A CONTINUOUS PIECE OF 1/4 INCH GALVANIZED HARDWARE CLOTH WITH A MINIMUM WIDTH OF 30 INCHES AND A MINIMUM LENGTH OF 4 FEET LONGER THAN THE THROAT OPENING, TO THE 2x4 WEIR, EXTENDING IT 2 FEET BEYOND THROAT ON EACH SIDE.
- PLACE A CONTINUOUS PIECE OF NONWOVEN GEOTEXTILE OF THE SAME DIMENSIONS AS THE HARDWARE CLOTH OVER THE HARDWARE CLOTH AND SECURELY ATTACH TO THE 2x4 WEIR.
- PLACE THE ASSEMBLY AGAINST THE INLET THROAT AND NAIL TO 2x4 ANCHORS (MINIMUM 3 FEET LENGTH). EXTEND THE ANCHORS ACROSS THE INLET TOP AND HOLD IN PLACE BY SANDBAGS OR OTHER APPROVED ANCHORING METHOD.
- INSTALL END SPACERS A MINIMUM OF 1 FOOT BEYOND THE ENDS OF THE THROAT OPENING.
- FORM THE HARDWARE CLOTH AND THE GEOTEXTILE TO THE CONCRETE GUTTER AND FACE OF CURB TO SPAN THE INLET OPENING. COVER THE HARDWARE CLOTH AND GEOTEXTILE WITH CLEAN 3/4 TO 1 1/2 INCH STONE OR EQUIVALENT RECYCLED CONCRETE.
- AT NON-SUMP LOCATIONS, INSTALL A TEMPORARY SANDBAG OR ASPHALT BERM TO PREVENT INLET BYPASS.
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL: CWS

**CONSTRUCTION SPECIFICATIONS**

- LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
- SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
- PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
- PROVIDE A SIGN FOR THE WASHOUT IN CLOSE PROXIMITY TO THE FACILITY.
- KEEP CONCRETE WASHOUT STRUCTURE WATER TIGHT. REPLACE IMPERMEABLE LINER IF DAMAGED (E.G., RIPPED OR PUNCTURED). EMPTY OR REPLACE WASHOUT STRUCTURE THAT IS 75 PERCENT FULL, AND DISPOSE OF ACCUMULATED MATERIAL PROPERLY. DO NOT REUSE PLASTIC LINER. WET-VACUUM STORED LIQUIDS THAT HAVE NOT EVAPORATED AND DISPOSE OF IN AN APPROVED MANNER. PRIOR TO FORECASTED RAINSTORMS, REMOVE LIQUIDS OR COVER STRUCTURE TO PREVENT OVERFLOWS. REMOVE HARDENED SOLIDS, WHOLE OR BROKEN UP, FOR DISPOSAL OR RECYCLING. MAINTAIN RUNOFF DIVERSION AROUND EXCAVATED WASHOUT STRUCTURE UNTIL STRUCTURE IS REMOVED.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL H-6 ONSITE CONCRETE WASHOUT STRUCTURE

STANDARD SYMBOL: CWS

**CONSTRUCTION SPECIFICATIONS**

- LOCATE WASHOUT STRUCTURE A MINIMUM OF 50 FEET AWAY FROM OPEN CHANNELS, STORM DRAIN INLETS, SENSITIVE AREAS, WETLANDS, BUFFERS AND WATER COURSES AND AWAY FROM CONSTRUCTION TRAFFIC.
- SIZE WASHOUT STRUCTURE FOR VOLUME NECESSARY TO CONTAIN WASH WATER AND SOLIDS AND MAINTAIN AT LEAST 4 INCHES OF FREEBOARD. TYPICAL DIMENSIONS ARE 10 FEET X 10 FEET X 3 FEET DEEP.
- PREPARE SOIL BASE FREE OF ROCKS OR OTHER DEBRIS THAT MAY CAUSE TEARS OR HOLES IN THE LINER. FOR LINER, USE 10 MIL OR THICKER UV RESISTANT, IMPERMEABLE SHEETING, FREE OF HOLES AND TEARS OR OTHER DEFECTS THAT COMPROMISE IMPERMEABILITY OF THE MATERIAL.
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MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

### DETAIL E-9-1 STANDARD INLET PROTECTION

STANDARD SYMBOL: SIP

**CONSTRUCTION SPECIFICATIONS**

- USE WOVEN SUT FILM GEOTEXTILE AS SPECIFIED IN SECTION H-1 MATERIALS.
- EXCAVATE COMPLETELY AROUND THE INLET TO A DEPTH OF 18 INCHES BELOW THE NOTCH ELEVATION.
- FOR TYPE A, USE NOMINAL 2 INCH X 4 INCH CONSTRUCTION GRADE LUMBER POSTS, DRIVEN 1 FOOT INTO THE GROUND AT EACH CORNER OF THE INLET. PLACE NAIL STRIPS BETWEEN THE POSTS ON THE ENDS OF THE INLET. ASSEMBLE THE TOP PORTION OF THE 2x4 FRAME AS SHOWN. STRETCH 1/2 INCH GALVANIZED HARDWARE CLOTH TIGHTLY AROUND THE FRAME AND FASTEN SECURELY. FASTEN GEOTEXTILE SECURELY TO THE HARDWARE CLOTH WITH TIES SPACED EVERY 24 INCHES AT THE TOP AND MID SECTION. EMBED GEOTEXTILE AND HARDWARE CLOTH A MINIMUM OF 18 INCHES BELOW THE WEIR CREST. THE ENDS OF THE GEOTEXTILE MUST MEET AT A POST, BE OVERLAPPED AND FOLDED, THEN FASTENED TO THE POST.
- BACKFILL AROUND THE INLET IN LOOSE 4 INCH LIFTS AND COMPACT UNTIL SOIL IS LEVEL WITH THE NOTCH ELEVATION ON THE ENDS AND TOP ELEVATION ON THE SIDES.
- STORM DRAIN INLET PROTECTION REQUIRES FREQUENT MAINTENANCE. REMOVE ACCUMULATED SEDIMENT AFTER EACH RAIN EVENT TO MAINTAIN FUNCTION AND AVOID PREMATURE CLOGGING. IF INLET PROTECTION DOES NOT COMPLETELY DRAIN WITHIN 24 HOURS AFTER A STORM EVENT, IT IS CLOGGED. WHEN THIS OCCURS, REMOVE ACCUMULATED SEDIMENT AND CLEAN, OR REPLACE GEOTEXTILE AND STONE.

MARYLAND STANDARDS AND SPECIFICATIONS FOR SOIL EROSION AND SEDIMENT CONTROL  
U.S. DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE 2011 MARYLAND DEPARTMENT OF ENVIRONMENT WATER MANAGEMENT ADMINISTRATION

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DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management: \_\_\_\_\_  
Sediment Control Technical Requirements: \_\_\_\_\_

Reviewed \_\_\_\_\_ Date \_\_\_\_\_  
Approved \_\_\_\_\_ Date \_\_\_\_\_

Administrative Requirements:  
Reviewed \_\_\_\_\_ Date \_\_\_\_\_  
SEDMENT CONTROL PERMIT NO. \_\_\_\_\_

NOTE: MCDCPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDCPS ACCESS PERMIT

**FRANKLIN AVENUE  
SIDEWALK**

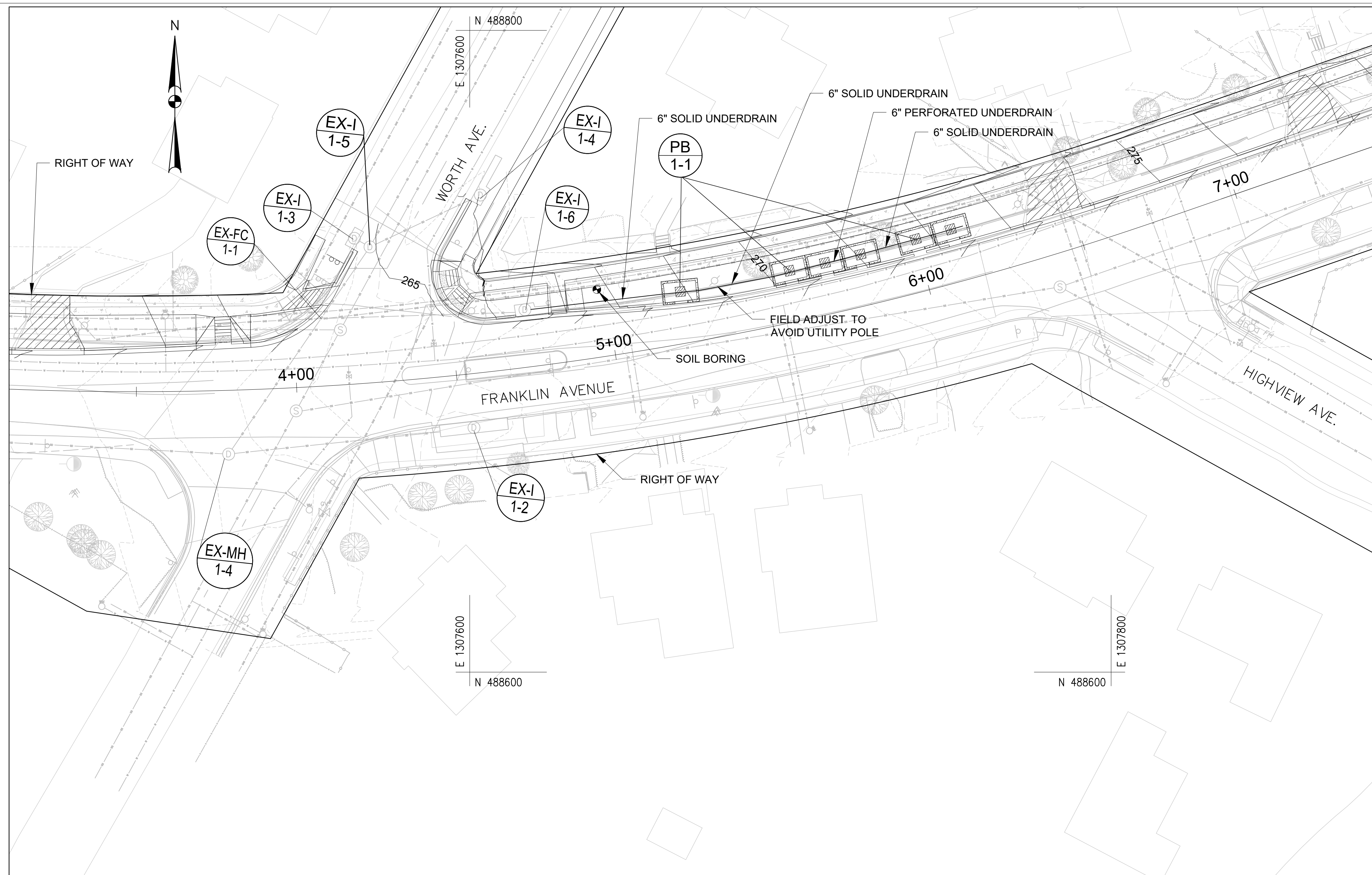
EROSION AND SEDIMENT CONTROL  
DETAILS

SCALE: AS SHOWN

SC-14

Project No.: TBD 55 of 109





### CONSTRUCTION INSPECTION CHECK-OFF LIST FOR MICRO BIORETENTION FACILITY

STAGE	COUNTY INSPECTOR INITIALS/DATE	OWNER/DEVELOPER INITIALS/DATE
<b>MANDATORY NOTIFICATION:</b> Inspection and approval of each practice is required at these points prior to proceeding with construction. The permittee is required to give the MCDPS Inspector twenty-four (24) hours notice (DPS telephone 240-777-0311). The DPS inspector may waive an inspection, and allow the owner/developer to make the required inspection per a prior scheduled arrangement which has been confirmed with the DPS inspector in writing. Work completed without MCDPS approval may result in the permittee having to remove and reconstruct the unapproved work. <b>Upon completion of the project, a formal Stormwater Management As-Built must be submitted to MCDPS unless a Record Drawing Certification has been allowed instead.</b> Each of the steps listed below must be verified by either the MCDPS Inspector OR the Owner/Developer.		
1. Excavation for Micro Bioretention facility conforms to approved plans		
2. Placement of stone backfill and underdrain system conforms to approved plans		
3. Placement of filter media conforms to approved plans		
4. Connecting pipes and/or grading conveyance to the facility constructed per the approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

### CONSTRUCTION INSPECTION CHECK-OFF LIST FOR SWALES

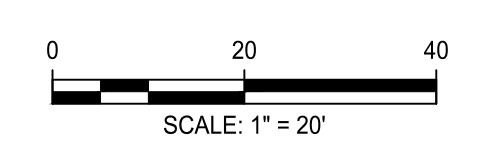
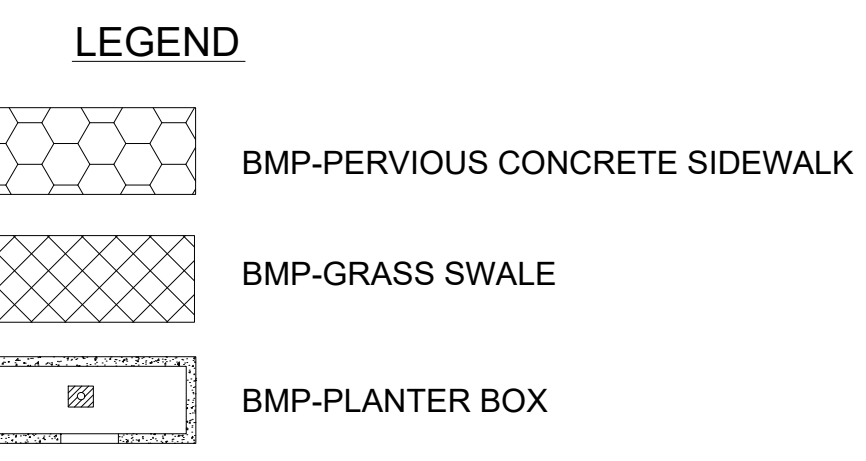
STAGE	MCDPS INSPECTOR INITIALS/DATE	OWNER/DEVELOPER INITIALS/DATE
<b>MANDATORY NOTIFICATION:</b> Inspection and approval of each practice is required at these points prior to proceeding with construction. The permittee is required to give the MCDPS Inspector twenty-four (24) hours notice (DPS telephone 240-777-0311). The DPS inspector may waive an inspection, and allow the owner/developer to make the required inspection per a prior scheduled arrangement which has been confirmed with the DPS inspector in writing. Work completed without MCDPS approval may result in the permittee having to remove and reconstruct the unapproved work. The permittee must maintain a "record set" of approved SC/SM plans on-site at all times. <b>Upon completion of the project, a formal Stormwater Management As-Built must be submitted to MCDPS unless a Record Drawing Certification has been allowed instead.</b> Each of the steps listed below must be verified by either the MCDPS Inspector OR the Owner/Developer.		
1. Placement of backfill of underdrains and installation of diaphragms, forebays, check dams, or weirs conforms to approved plans		
2. Final grading and establishment of permanent stabilization conforms to approved plans		

### ESD PLANTER BOX (PB) DESIGN SUMMARY

ESD NO.	POI	DRAINAGE AREA (AC)	IMPERV. AREA(AC)	SOIL TYPE	PE REQUIRED (R.O.W)*	PE TREATED**	ESDv PROVIDED (CF)
PB 1-1	POI-1	1.28	0.54	B	1.8	0.5	936

\*THE REQUIRED PE IS CALCULATED WITHIN THE R.O.W.  
 \*\*PARTIAL TREATMENT IS PROVIDED FOR THE PP

NOTE: SEE THE DETAIL PLAN SHEETS FOR THE PLANTER BOX (PB) DIMENSIONS AND TYPICAL SECTIONS



**Engineers, Architects Development Consultants**  
 SHELDIA  
 2039 Gaither Road, Rockville, MD 20850  
 Phone: 301-590-3939 Fax: 301-946-7174  
 www.sheldia.com

NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
 DEPARTMENT OF TRANSPORTATION  
 100 EDISON PARK DRIVE  
 GAITHERSBURG, MARYLAND

**CONTACT:**  
 DIVISION OF TRANSPORTATION ENGINEERING  
 CONSTRUCTION SECTION  
 240-777-7210  
 DESIGN SECTION  
 240-777-7221

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
 \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management: \_\_\_\_\_

Sediment Control Technical Requirements:  
 Reviewed \_\_\_\_\_ Date \_\_\_\_\_  
 Approved \_\_\_\_\_ Date \_\_\_\_\_

Administrative Requirements:  
 Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEGMENT CONTROL PERMIT NO. \_\_\_\_\_

MCDPS APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

SCALE NO. \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

**FRANKLIN AVENUE  
 SIDEWALK  
 PLANTER BOX  
 PB 1-1**

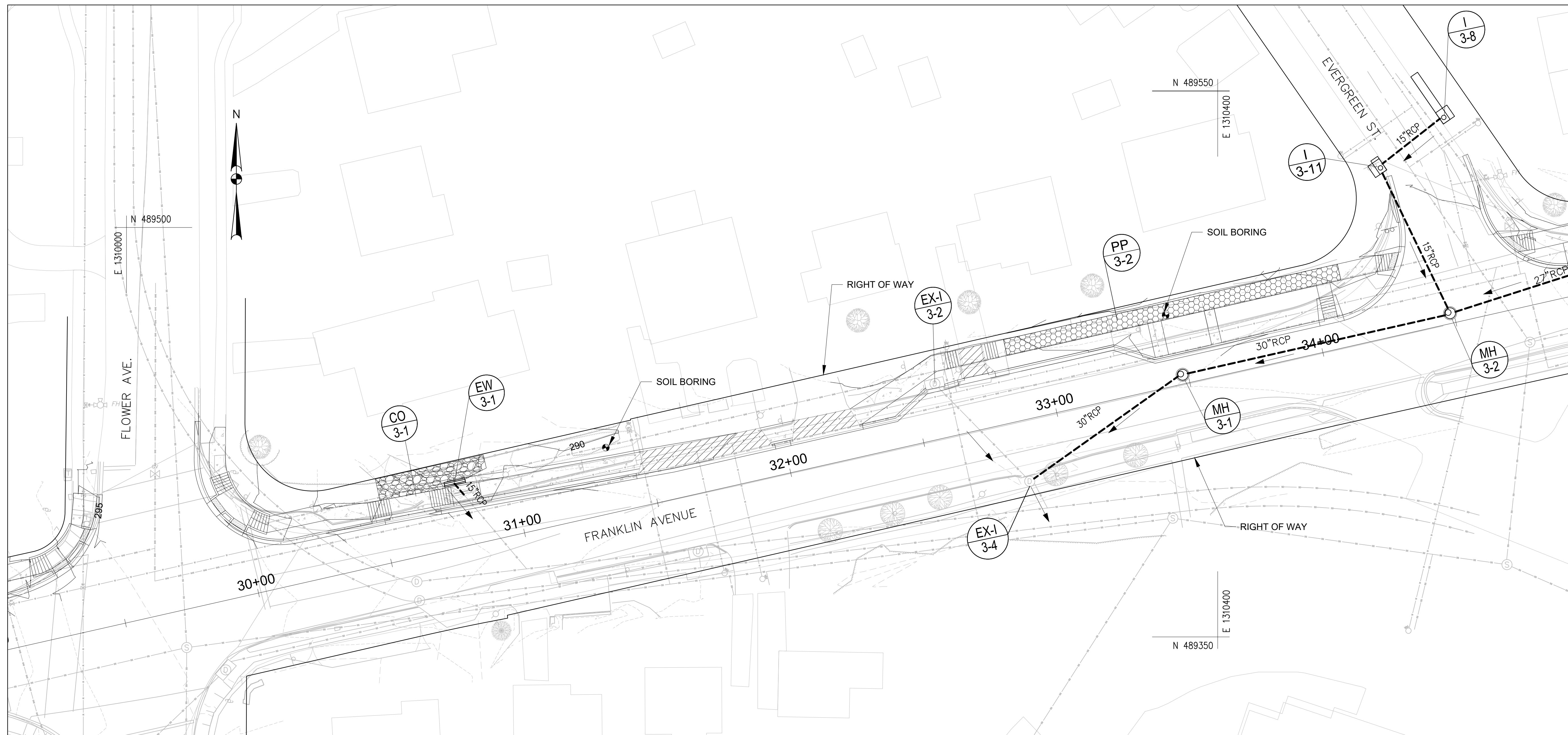
SCALE: AS SHOWN

Project No.: TBD

**SWM-01**

56 of 109





**CONSTRUCTION INSPECTION CHECK-OFF LIST FOR PERMEABLE PAVEMENTS**

STAGE	MCDPS INSPECTOR INITIALS/DATE	OWNER/DEVELOPER INITIALS/DATE
<p><b>MANDATORY NOTIFICATION:</b> Inspection and approval of each practice is required at these points prior to proceeding with construction. The permittee is required to give the MCDPS Inspector twenty-four (24) hours notice (DPS telephone 240-777-0311). The DPS inspector may waive an inspection, and allow the owner/developer to make the required inspection per a prior scheduled arrangement which has been confirmed with the DPS inspector in writing. Work completed without MCDPS approval may result in the permittee having to remove and reconstruct the unapproved work. <b>Upon completion of the project, a formal Stormwater Management As-Built must be submitted to MCDPS unless a Record Drawing Certification has been allowed instead.</b> Each of the steps listed below must be verified by either the MCDPS Inspector OR the Owner/Developer.</p>		
1. Excavation to subgrade conforms to approved plans		
2. Placement and backfill of any drainage or distribution systems conforms to approved plans		
3. Placement of crushed stone subbase conforms to approved plans		
4. Placement of surface material conforms to approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

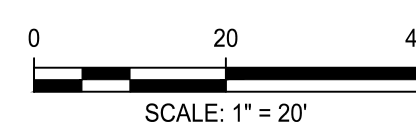
ESD NO.	POI	DRAINAGE AREA (AC)	IMPERV. AREA(AC)	SOIL TYPE	PE REQUIRED (R.O.W)*	PE TREATED**	ESDv PROVIDED (CF)
PP 3-2	POI-3	0.054	0.031	B/C	2.0	1.7	225

\*THE REQUIRED PE IS CALCULATED WITHIN THE R.O.W.

NOTE  
SEE THE DETAIL PLAN SHEETS FOR THE PLANTER BOX (PB) DIMENSIONS AND TYPICAL SECTIONS

**LEGEND**

- BMP-PERVIOUS CONCRETE SIDEWALK
- BMP-GRASS SWALE
- BMP-PLANTER BOX



**Engineers, Architects Development Consultants**  
 2099 Gaither Road, Rockville, MD 20850  
 Phone: 301-560-3939 Fax: 301-946-7174  
 www.sheladia.com

NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
 DEPARTMENT OF TRANSPORTATION  
 100 EDISON PARK DRIVE  
 GAITHERSBURG, MARYLAND

**CONTACT:**  
 DIVISION OF TRANSPORTATION ENGINEERING  
 CONSTRUCTION SECTION  
 240-777-7210  
 DESIGN SECTION  
 240-777-7221

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
 APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
 \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

SMPLF NO. \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEGMENT CONTROL PERMIT NO. \_\_\_\_\_

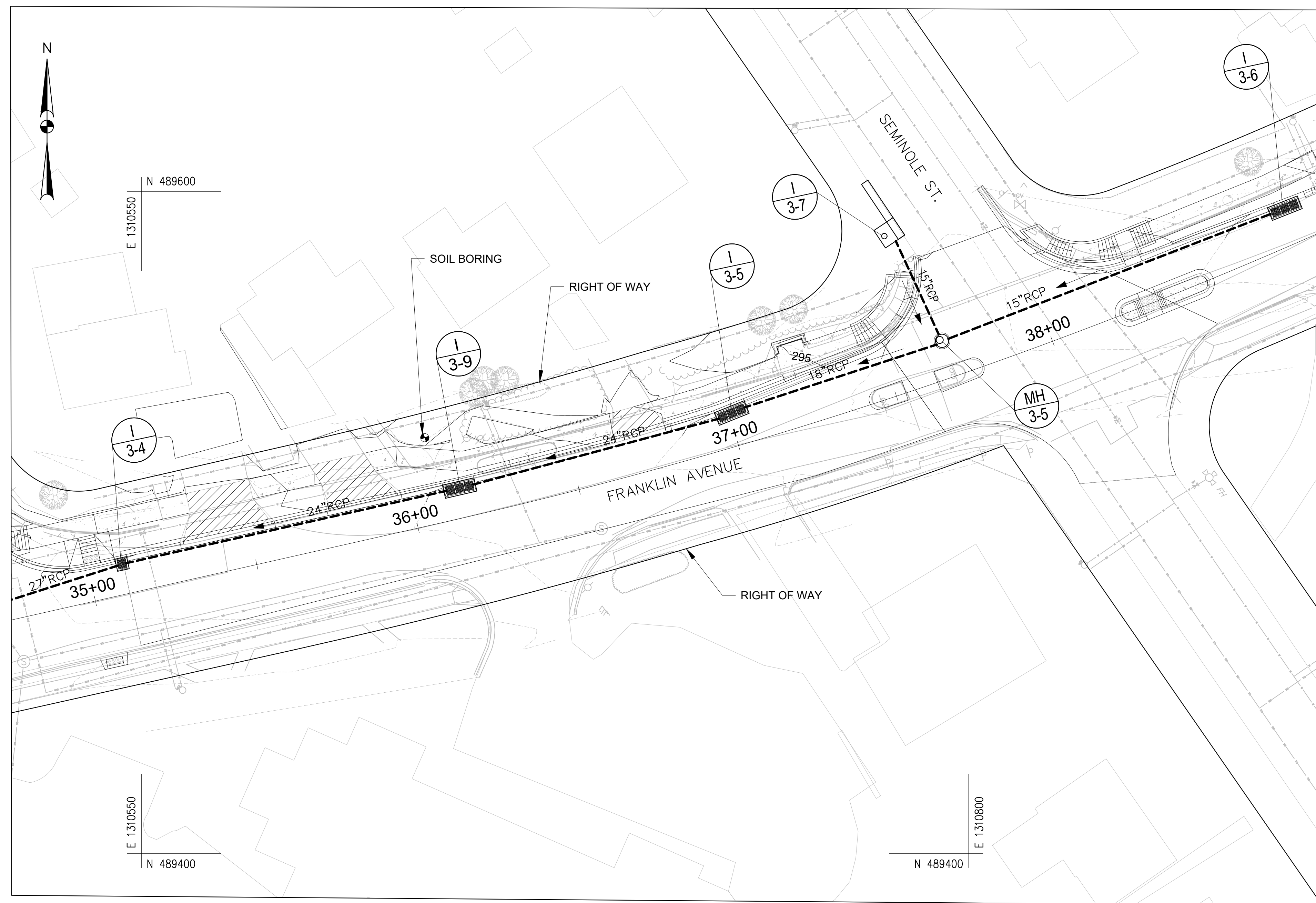
MCDPS APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

**FRANKLIN AVENUE  
 SIDEWALK  
 PERVIOUS CONCRETE  
 PP 3-1 & PP 3-2**

SCALE: AS SHOWN

Project No.: TBD of 109

**SWM-02**

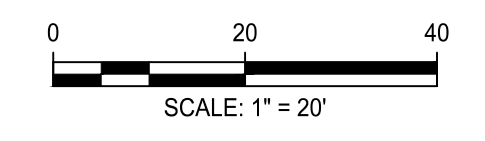


NO BMPS ARE PROPOSED ON THIS SHEET

NOTE:  
NO BMPS PROPOSED ON THIS SHEET

**LEGEND**

	BMP-PERVIOUS CONCRETE SIDEWALK
	BMP-GRASS SWALE
	BMP-PLANTER BOX



**Engineers, Architects  
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SHELDIA  
2039 Gaither Road, Rockville, MD 20850  
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NO.	REVISION	DATE	BY

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100 EDISON PARK DRIVE  
GAITHERSBURG, MARYLAND

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CONSTRUCTION SECTION  
240-777-7210  
DESIGN SECTION  
240-777-7221

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_  
APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

SEE TITLE SHEET  
FOR SIGNATURES

**MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:**

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

SMPLE NO. \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEGMENT CONTROL PERMIT NO. \_\_\_\_\_

MCDPS APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

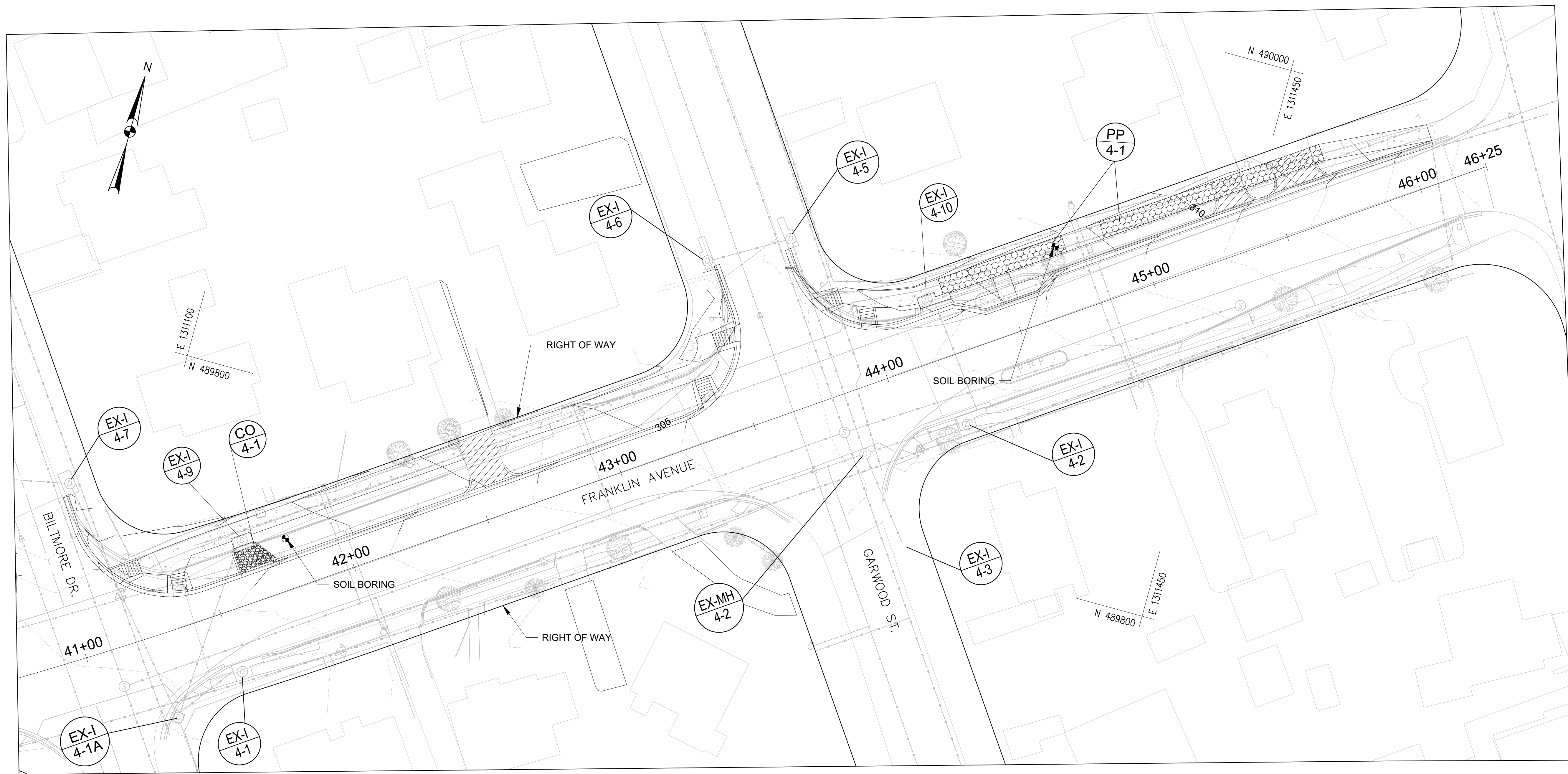
**FRANKLIN AVENUE  
SIDEWALK**

**PERVIOUS CONCRETE  
PP 3-3**

SCALE : AS SHOWN

SWM-03

Project No. : TBD of 109



**CONSTRUCTION INSPECTION CHECK-OFF LIST FOR PERMEABLE PAVEMENTS**

STAGE	MCDPS INSPECTOR INITIALS/DATE	OWNER/DEVELOPER INITIALS/DATE
<b>MANDATORY NOTIFICATION:</b> Inspection and approval of each practice is required at these points prior to proceeding with construction. The permittee is required to give the MCDPS Inspector twenty-four (24) hours notice (DPS telephone 240-777-0311). The DPS inspector may waive an inspection, and allow the owner/developer to make the required inspection per a prior scheduled arrangement which has been confirmed with the DPS inspector in writing. Work completed without MCDPS approval may result in the permittee having to remove and reconstruct the unapproved work. <b>Upon completion of the project, a formal Stormwater Management As-Built must be submitted to MCDPS unless a Record Drawing Certification has been allowed instead.</b> Each of the steps listed below must be verified by either the MCDPS Inspector OR the Owner/Developer.		
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4. Placement of surface material conforms to approved plans		
5. Final grading and permanent stabilization conforms to approved plans		

ESD NO.	POI	DRAINAGE AREA (AC)	IMPERV. AREA(AC)	SOIL TYPE	PE REQUIRED (R.O.W)*	PE TREATED**	ESDv PROVIDED (CF)
PP 4-1	POI-4	0.034	0.026	B	2.2	2.6	210

\*THE REQUIRED PE IS CALCULATED WITHIN THE R.O.W.

NOTE: SEE THE DETAIL PLAN SHEETS FOR THE PLANTER BOX (PB) DIMENTIONS AND TYPICAL SECTIONS

**LEGEND**

- BMP-PERVIOUS CONCRETE SIDEWALK
- BMP-GRASS SWALE
- BMP-PLANTER BOX

0 20 40  
SCALE: 1" = 20'

**Engineers, Architects Development Consultants**  
SHELADIA  
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NO.	REVISION	DATE	BY

OWNER/ADDRESS:  
MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
100 EDISON PARK DRIVE  
GAITHERSBURG, MARYLAND

CONTACT:  
DIVISION OF TRANSPORTATION ENGINEERING  
CONSTRUCTION SECTION  
240-777-7210  
DESIGN SECTION  
240-777-7221

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

**SEE TITLE SHEET FOR SIGNATURES**

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

SEMENT CONTROL PERMIT NO. \_\_\_\_\_

SM FILE NO. \_\_\_\_\_

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Administrative Requirements:

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SEMENT CONTROL PERMIT NO. \_\_\_\_\_

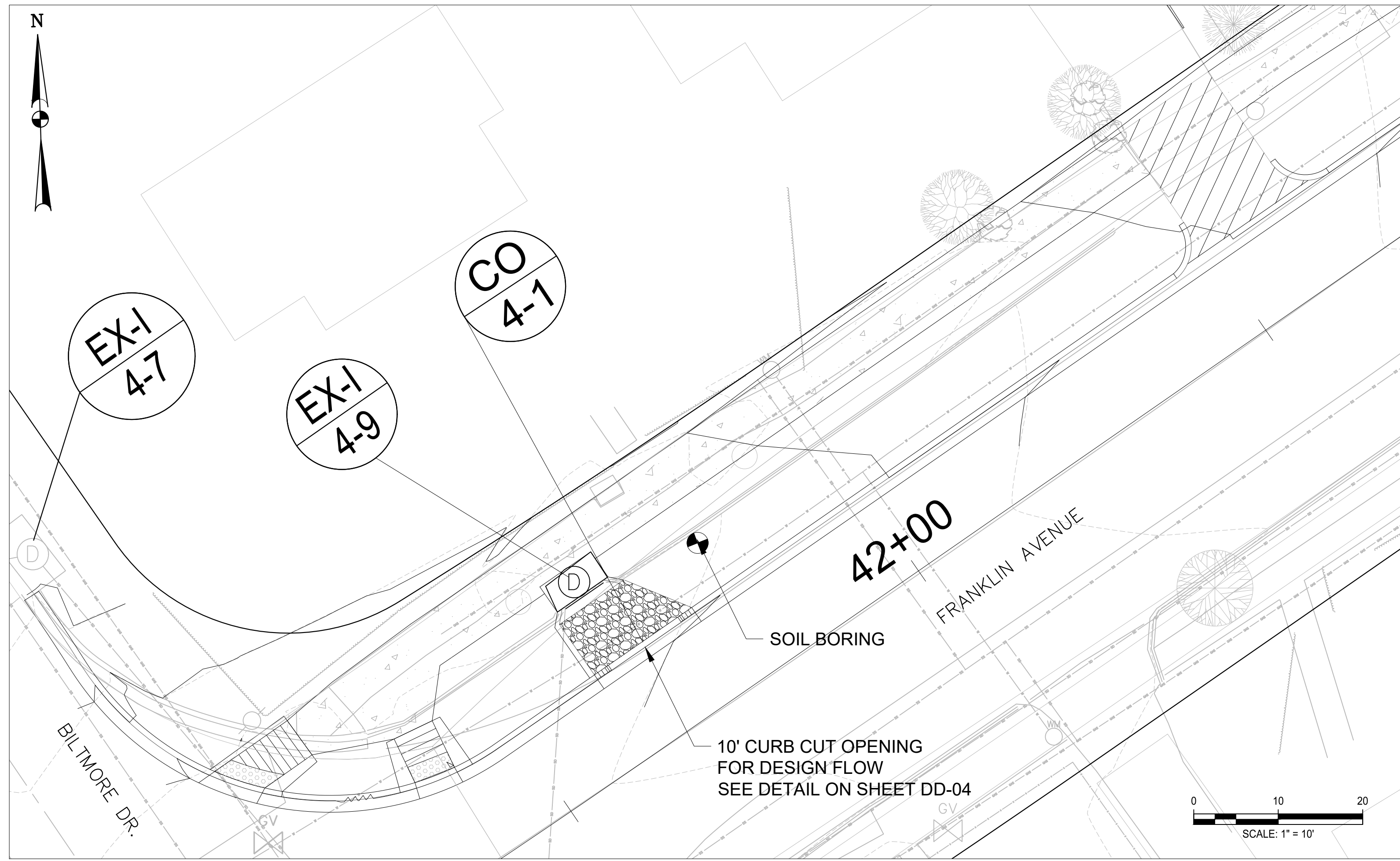
MCDPS APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

**FRANKLIN AVENUE SIDEWALK**  
PERVIOUS CONCRETE & BIOSWALE  
PP 4-1 & BS 4-1

SCALE: AS SHOWN

Project No.: TBD of 109

**SWM-04**



**NO BMPS ARE PROPOSED ON THIS SHEET**



NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
DEPARTMENT OF TRANSPORTATION  
100 EDISON PARK DRIVE  
GAITHERSBURG, MARYLAND

**CONTACT:**  
DIVISION OF TRANSPORTATION ENGINEERING  
CONSTRUCTION SECTION  
240-777-7210  
DESIGN SECTION  
240-777-7221

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

SM FILE NO. \_\_\_\_\_

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Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEEDMENT CONTROL PERMIT NO. \_\_\_\_\_

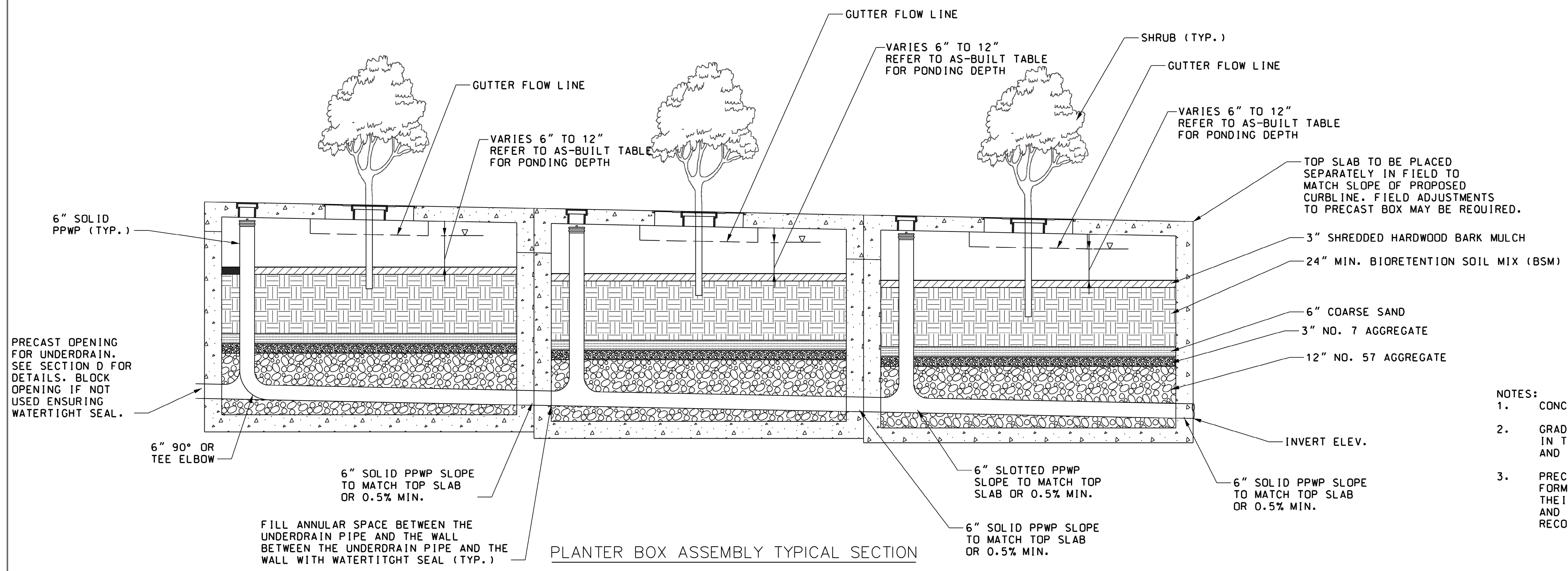
MCDPS APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

**FRANKLIN AVENUE  
SIDEWALK  
BMP  
CROSS SECTION & DETAILS**

SCALE: AS SHOWN

Project No.: TBD of 109

**SWM-05**



- NOTES:**
1. CONCRETE SHALL BE MIX NO.6 (4500 PSI).
  2. GRADE AND SLOPE ADJUSTMENTS SHALL BE COMPLETED IN THE FIELD USING PRECAST ADJUSTMENT COLLAR AND MORTAR.
  3. PRECAST INLET JOINTS - THE MANUFACTURER SHALL FORM MALE AND FEMALE ENDS OF JOINTS USING THEIR OWN DESIGN. THE JOINTS SHALL BE SEALED AND MADE WATERTIGHT USING THE MANUFACTURER'S RECOMMENDED ASTM OR AASHTO APPROVED SEALANT.

**AS-BUILT DATA FOR PLANTER BOX (PB)**

	PB 1-1
FILTER BED AREA (SF)	360
SURFACE VOLUME (CF)	360
OUTLET PIPE/UNDERDRAIN SIZE (INCH)	6
POND DEPTH (INCH)	12
MULCH THICKNESS (INCH)	3
BIORETENTION SOIL MIX THICKNESS (INCH)	24
COARSE SAND THICKNESS (INCH)	6
NO. 7 PEA GRAVEL THICKNESS (INCH)	3
NO.57 GRAVEL THICKNESS (INCH)	12
<b>NUMBER OF CELL (EACH) AND CELL SIZE</b>	
CELL SIZE (LXW):	NUMBER OF CELL
10' LX6' W	6
CLEANOUT (EACH)	7
TREES (EACH)	7
TROUGH OPENING SIZE	4' WX3"H
UPSTREAM TROUGH INVERT ELEV.	N/A
STA.	5+75, 11.3' LT



NO.	REVISION	DATE	BY

**OWNER/ADDRESS:**  
DEPARTMENT OF TRANSPORTATION  
100 EDISON PARK DRIVE  
GAITHERSBURG, MARYLAND

**CONTACT:**  
DIVISION OF TRANSPORTATION ENGINEERING  
CONSTRUCTION SECTION  
240-777-7210  
DESIGN SECTION  
240-777-7221

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering  
APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____

SMPLF NO. \_\_\_\_\_

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

Administrative Requirements:

Reviewed \_\_\_\_\_ Date \_\_\_\_\_

SEGMENT CONTROL PERMIT NO. \_\_\_\_\_

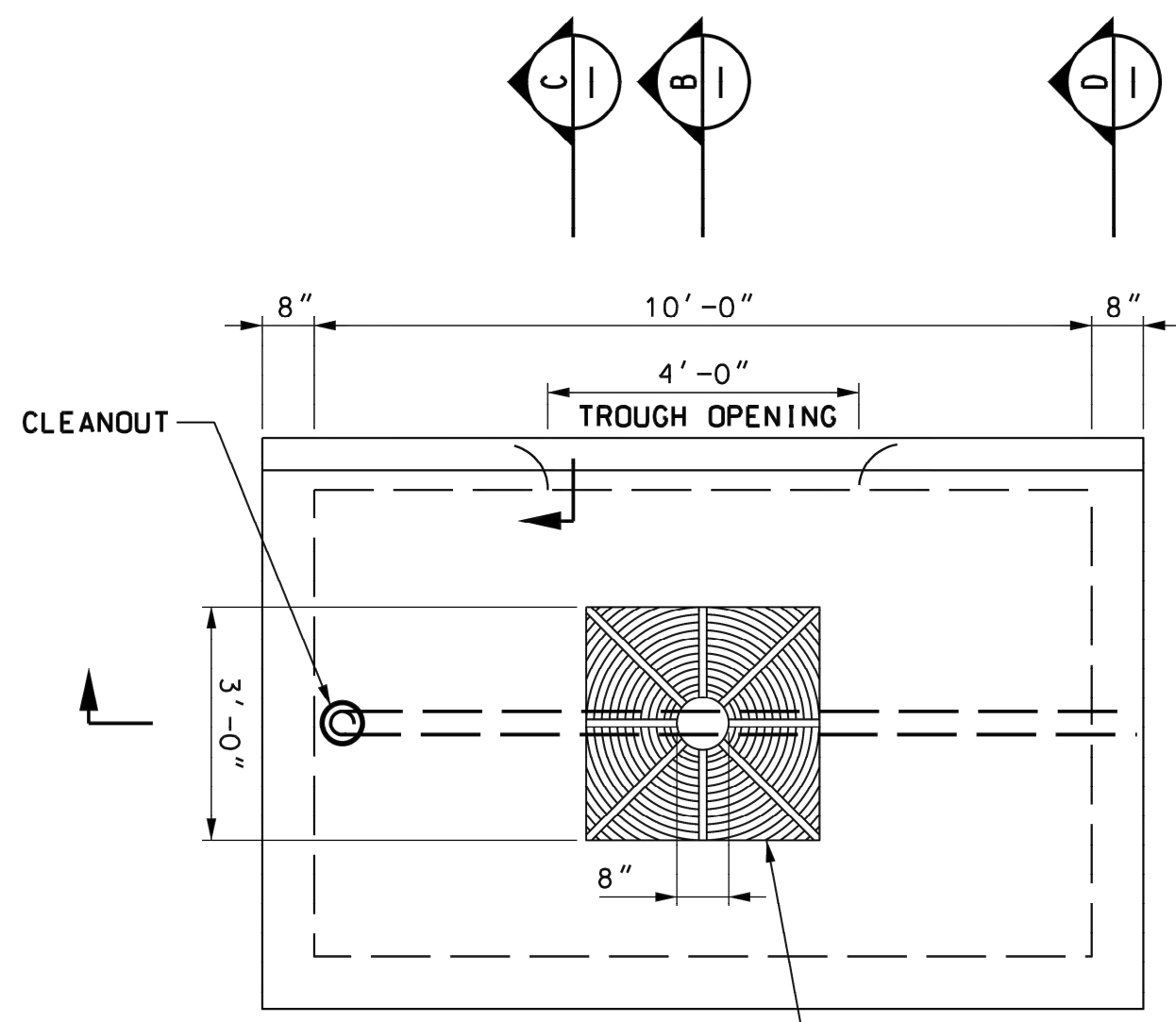
MCDOT APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL, IF THE PROJECT HAS NOT STARTED UNLESS THE PERMIT HAS BEEN EXTENDED

**FRANKLIN AVENUE  
SIDEWALK  
PLANTER BOX DESIGN AND DETAILS**

SCALE : AS SHOWN

Project No. : TBD of 109

**SWM-06**



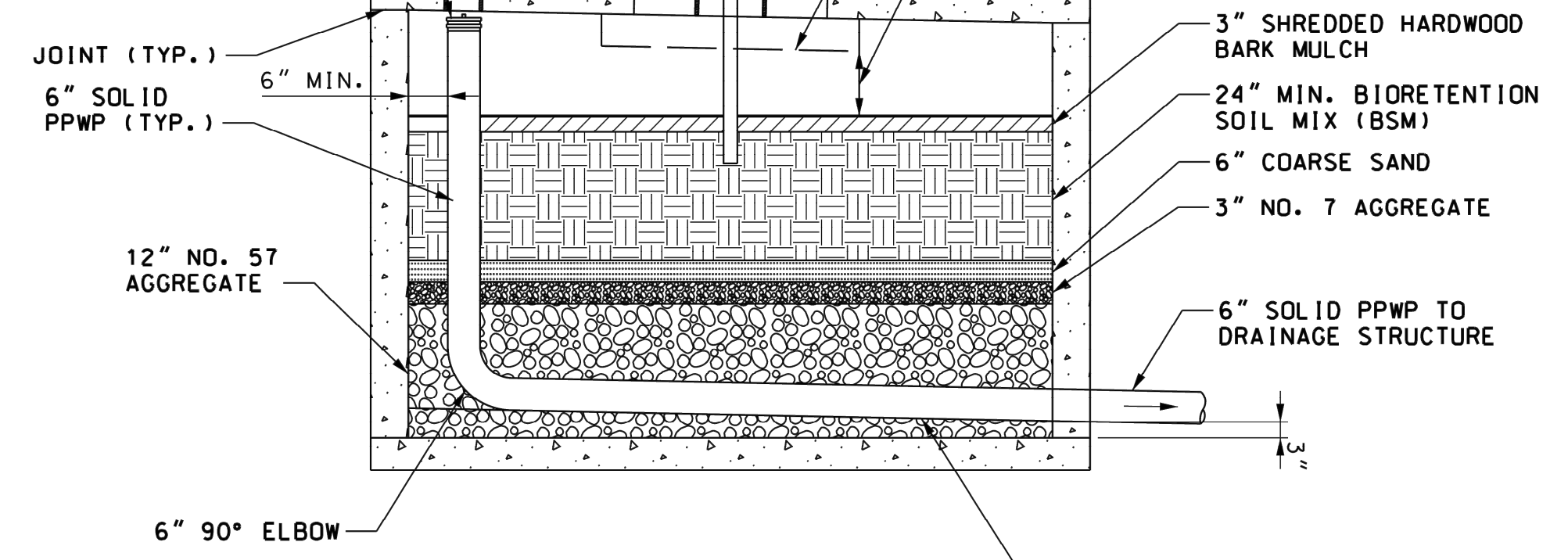
PLAN VIEW  
TYPE A WITH NO OUTLET CHAMBER

NOTE:  
WIDTH VARIES. REFER  
TO CIVIL PLANS.

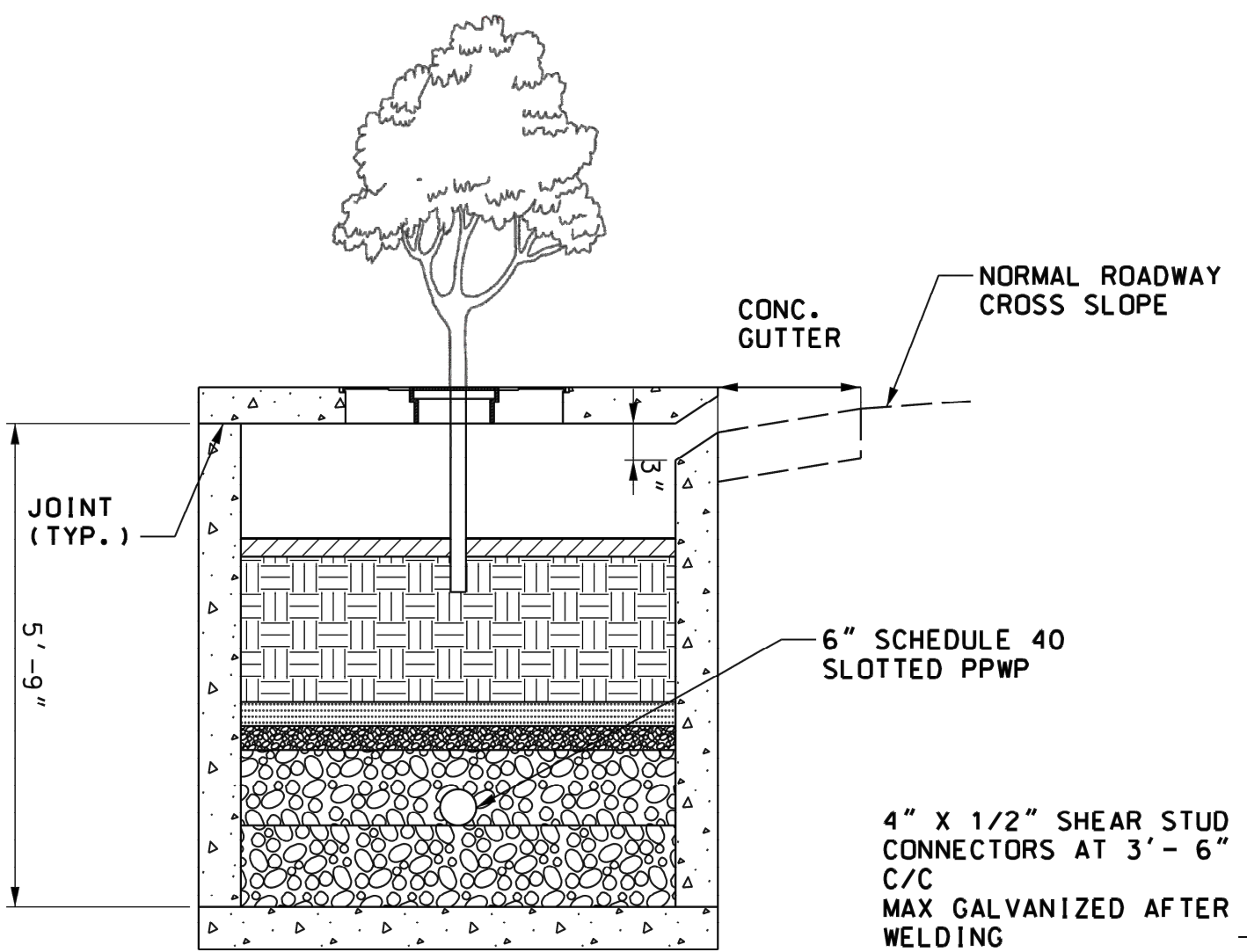
CLEAN-OUT WITH VENTED CAP

SHRUB (TYP.) - SEE LANDSCAPE PACKAGE CW-16A  
GUTTER FLOW LINE  
1' PONDING MIN

SLAB TO BE PLACED  
SEPARATELY IN FIELD TO MATCH  
SLOPE OF PROPOSED CURBLINE.  
FIELD ADJUSTMENTS TO PRECAST  
BOX MAY BE REQUIRED.



SECTION A  
SCALE: NTS



SECTION B  
SCALE: NTS  
REF: S5020PDRW102

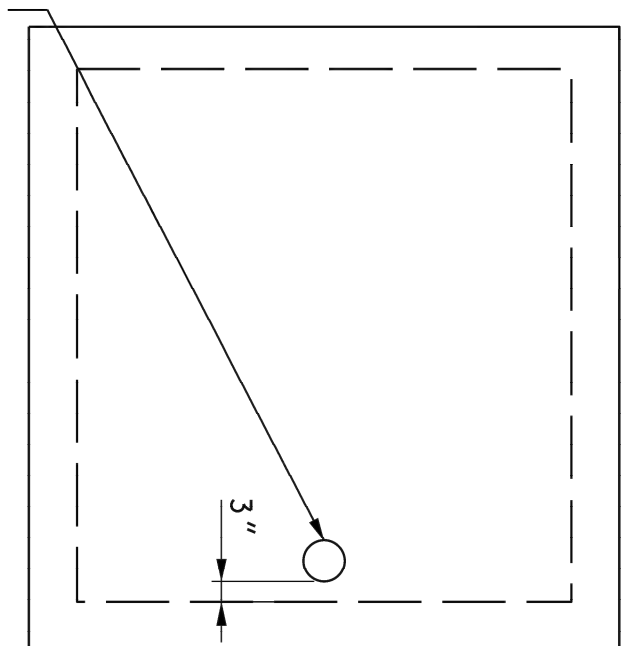
4" x 1/2" SHEAR STUD  
CONNECTORS AT 3' - 6"  
C/C  
MAX GALVANIZED AFTER  
WELDING

ANGLE IRON 4" x 3" x 1/2"  
ALONG FACE OF TROUGH SLAB

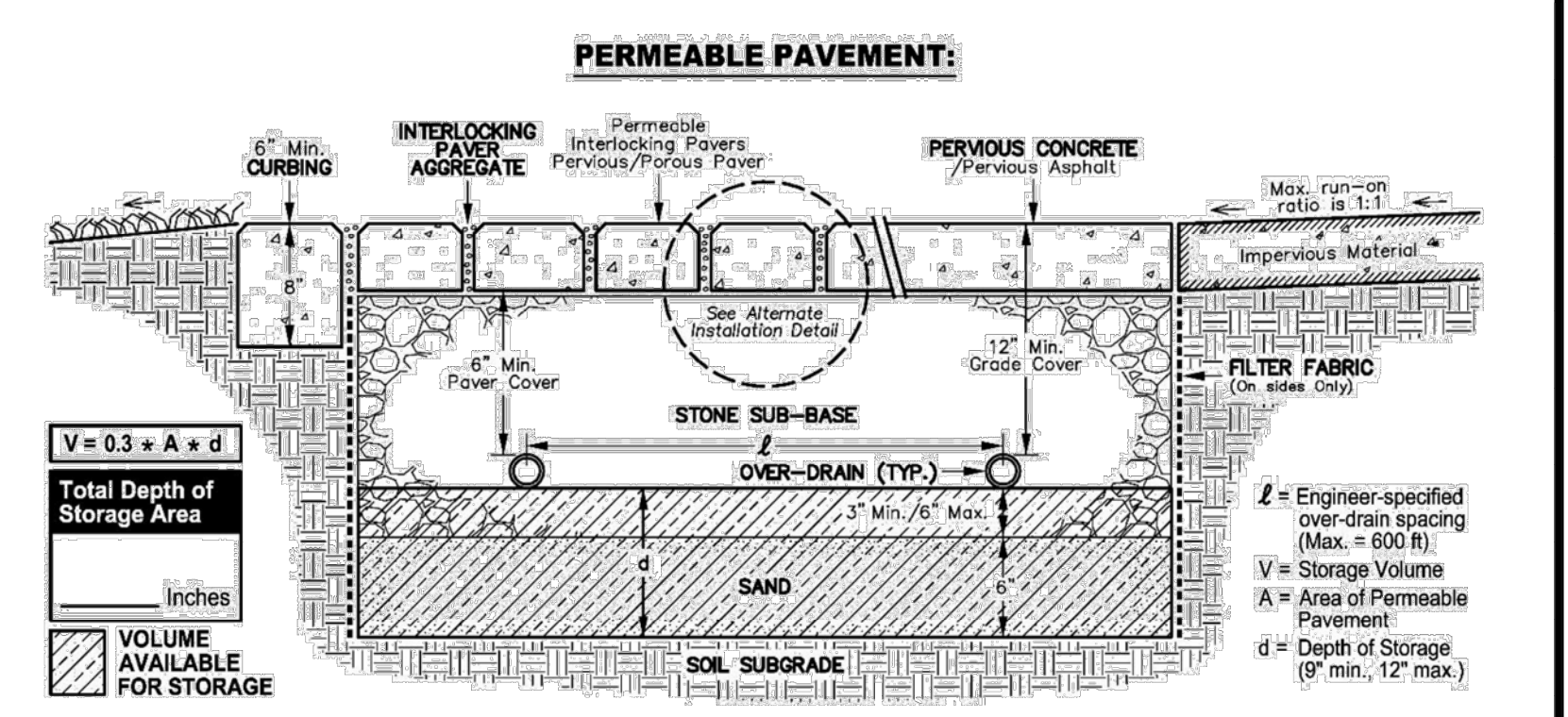
TWO NO. 4 BARS  
@ 3" C/C

SECTION C  
SCALE: NTS  
REF: S5020PDRW102

6" SCHEDULE 40  
SLOTTED PPWP



SECTION D  
SCALE: NTS



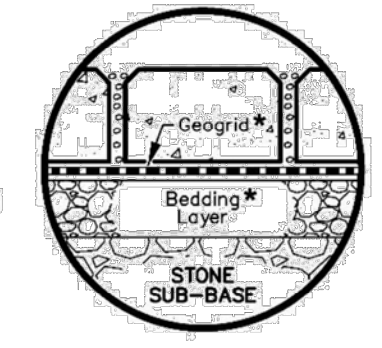
**GENERAL REQUIREMENTS:**  
Within three (3) days of installation, contractor must perform single ring infiltration tests. Poured-in-place concrete must remain free from all light vehicular traffic for a minimum of seven (7) days. Heavy vehicular traffic must be restricted for at least ten (10) days after placement.  
Post construction of infiltration rates required for all surfaces must conform to ASTM C1701 for poured-in-place permeable concrete, or ASTM C1781 for permeable pavers.

**SETBACKS:**

- Pervious Pavements require MD DOT prior written approval before being designed within public rights of way.
- The storage volume for any pervious surface shall be located down gradient of building structures and be setback a minimum of:
  - 100 feet from primary potable water supply or open loop geothermal wells (10' for SF Residential)
  - 50 feet from alternate potable water supply or closed loop geothermal wells (No Setback for S.F. Residential)
  - 25 feet from septic systems (10' for S.F. Residential)
  - 10 feet from buildings
  - Raised mulch/planting beds shall not be placed adjacent to Permeable Pavement

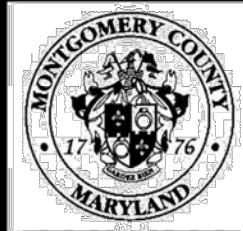
**ALTERNATE INSTALLATION DETAIL:**

Optional engineer-approved installation as per manufacturers recommendations.\*



**LEGEND:**

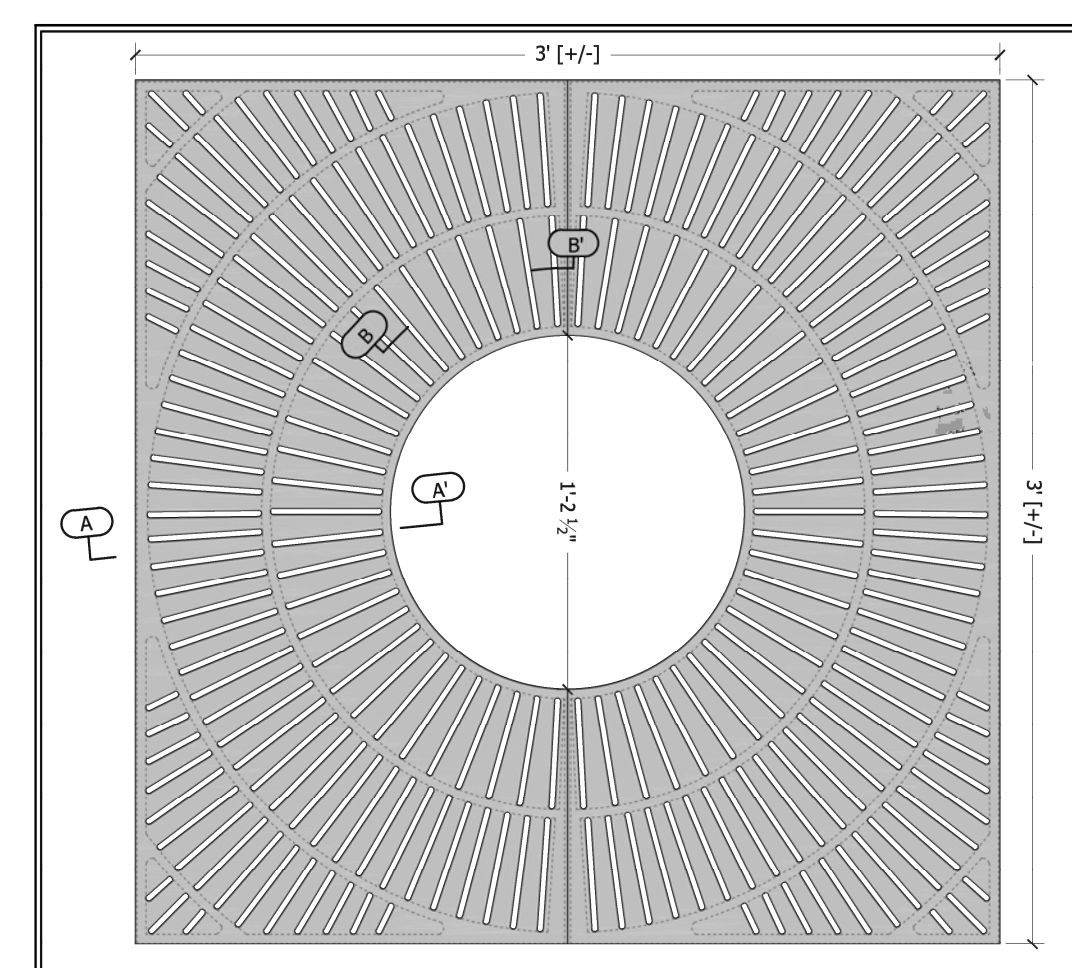
- CURBING:** 6" minimum width. Curbing is not required for sidewalk applications.
- INTERLOCKING PAVER AGGREGATE:** Paver aggregate shall be a silica-based stone per manufacturer's recommendations or meeting ASTM D448 size criteria of No. 8, 89, or 9 stone.
- FILTER FABRIC:** Engineer-approved, permeable, non-woven geotextile fabric. On sides only.
- OVER-DRAIN:** 4" Schedule 40 PVC or HDPE N-12 installed perpendicular to grade. One foot of over-drain is required for every 600 sq. ft. Over-drain may not connect to drywells or any other SWM. Over-drain discharge point must be shown on the plan view.
- OVER-DRAIN PERFORATION:**
  - 3/8 Inch Holes
  - 4 inches on center
  - 90° around pipe
- STONE SUB-BASE:** Clean open graded, washed silica stone meeting MD SHA Course Aggregate 57 grading requirements. Filter cloth shall not be used horizontally between the sub-base material and the soil sub-grade.
- SAND:** See Montgomery County Sand Specifications.
- SOIL SUBGRADE:** Site geotechnical engineer-approved subgrade shall be proof rolled and scarified. Bottom shall be flat or per Stepped/Sloped Permeable Pavement Detail.
- PERVIOUS CONCRETE:** Pervious concrete construction must be performed by National Ready Mixed Association Certified Pervious Concrete Installer. All construction must be done per ACI 522.13.



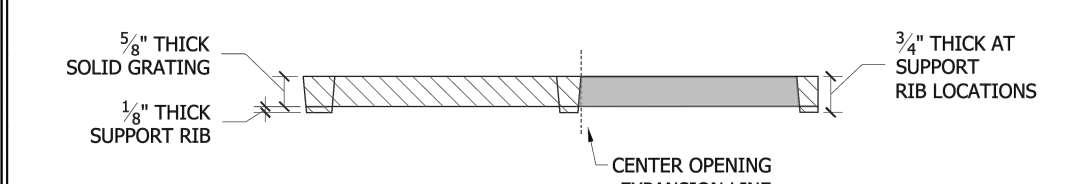
MONTGOMERY COUNTY  
DEPARTMENT OF  
PERMITTING SERVICES  
WATER RESOURCES DIVISION

PERMEABLE  
PAVEMENT DETAIL

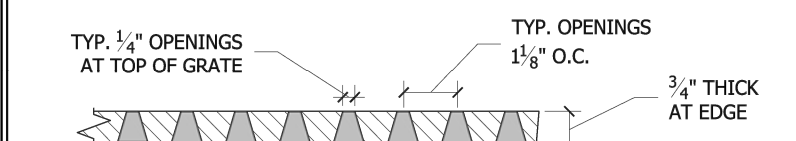
DATE:  
MAY 1, 2017  
SCALE:  
NONE



Plan



Section A-A'



Section B-B'

**SPECIFICATIONS**  
Material will be high quality 100% recycled grey iron; ASTM A48 class 350 or better; hardness 170-223 brinnell (unless specified otherwise; see below).  
Material:  

- Grey iron ASTM A48 (standard)
- Aluminum, ASTM B26
- Ductile iron, (required for all load ratings higher than pedestrian) ASTM A536 class 65-45-12.
- Nickel bronze (ASTM B30)
- Bronze (ASTM B26)

 Finish will be natural patina of raw iron (unless specified otherwise; see below).  
 Finish:  

- Raw (standard)
- Rust conditioner
- Polyester Powder Coat\*
- Liquid Coat (wet paint)\*

 Color:  
 \*Please specify standard UA color or mfr. name and color code.  

- Brush (bronze/nickel/aluminum only)
- Polish (bronze/nickel/aluminum only)
- Galvanized (grey iron and ductile iron only)
- Other:

 - Dimensions are nominal.  
 Notes:  
 1) Cast in two pieces.  
 2) Grate is 3/4" thick at edge.  
 3) Center opening expansion at 2' diameter.  
 4) No openings greater than 3/4", in conformance with ADA Accessibility Guidelines.  
 5) Grate weighs 129 lbs.

Tree Grate  
3' Sq. Kiva

Page 1 of 1 Date: 5/22/12



NO.	REVISION	DATE	BY

OWNER/ADDRESS:  
DEPARTMENT OF TRANSPORTATION  
100 EDISON PARK DRIVE  
GAITHERSBURG, MARYLAND

CONTACT:  
DIVISION OF TRANSPORTATION ENGINEERING  
CONSTRUCTION SECTION  
240-777-7210  
DESIGN SECTION  
240-777-7221

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

MONTGOMERY CO. DEPARTMENT OF  
PERMITTING SERVICES APPROVED FOR:

Stormwater Management:	Sediment Control Technical Requirements:	Administrative Requirements:
Reviewed _____ Date _____	Reviewed _____ Date _____	Reviewed _____ Date _____
Approved _____ Date _____	Approved _____ Date _____	SEGMENT CONTROL PERMIT NO. _____

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT

FRANKLIN AVENUE  
SIDEWALK  
PLANTER BOX DETAILS AND TYPICAL  
PERVIOUS PAVEMENT SECTION

SCALE: AS SHOWN

Project No.: TBD

SWM-07

Page No.: 62 of 109

## MONTGOMERY COUNTY STORMWATER MANAGEMENT FACILITY GUIDELINES

IN ORDER TO FUNCTION PROPERLY, ALL STORMWATER MANAGEMENT FACILITIES REQUIRE MAINTENANCE. MAINTENANCE REQUIREMENTS AND FREQUENCIES MAY VARY FROM SITE TO SITE AND BETWEEN TYPES OF FACILITIES. THE FOLLOWING INFORMATION IS DESIGNED TO PROVIDE GENERAL INFORMATION ABOUT FACILITY TYPES AND MAINTENANCE REQUIREMENTS. FOR SPECIFIC GUIDANCE ON STORMWATER MANAGEMENT FACILITY MAINTENANCE, CONTACT:

THE MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION (MCDEP) AT 240-777-7770.

NOTE: SPECIAL EQUIPMENT MAY BE REQUIRED FOR ANY PERSON ENTERING AN ENCLOSED SPACE. CONTACT MCDEP FOR GUIDANCE PRIOR TO ATTEMPTING TO ENTER INTO ANY ENCLOSED SPACE.

FACILITIES APPLICABLE TO THIS AS-BUILT RECORD DRAWING ARE MARKED WITH AN "X" BELOW:

### A. DRY DETENTION POND

A DRY DETENTION POND SERVES TO PROTECT DOWNSTREAM PROPERTIES AND RECEIVING STREAMS FROM EXCESSIVE EROSION AND FLOODING. IT DOES THIS BY TEMPORARILY STORING WATER DURING A LARGE STORM EVENT, AND RELEASING IT AT A CONTROLLED RATE THROUGH A LOW FLOW ORIFICE. ROUTINE MAINTENANCE FOR DRY PONDS INCLUDES REGULAR MOWING OF THE POND AND EMBANKMENT, AND CHECKING TO ENSURE THAT THE LOW FLOW ORIFICE AND TRASH GRATE DOES NOT BECOME CLOGGED WITH DEBRIS. THIS POND IS NOT DESIGNED TO HOLD A PERMANENT POOL OF WATER. STANDING WATER MAY INDICATE THAT THE LOW FLOW ORIFICE HAS BECOME CLOGGED AND IS IN NEED OF MAINTENANCE.

### B. WET RETENTION POND

A WET RETENTION POND SERVES TO PROTECT DOWNSTREAM PROPERTIES AND RECEIVING STREAMS FROM EXCESSIVE EROSION AND FLOODING. IT DOES THIS BY TEMPORARILY STORING WATER DURING A LARGE STORM EVENT, AND RELEASING IT AT A CONTROLLED RATE THROUGH A LOW FLOW ORIFICE. IN ADDITION, THE POND PROVIDES A MEASURE OF WATER QUALITY BY RETAINING A PERMANENT POOL OF WATER. ROUTINE MAINTENANCE FOR THESE PONDS INCLUDES REGULAR MOWING OF THE POND SLOPES AND EMBANKMENT, AND CHECKING TO ENSURE THAT THE LOW FLOW ORIFICE DOES NOT BECOME CLOGGED WITH DEBRIS. A METAL HOOD OR ELBOW THAT EXTENDS BELOW THE PERMANENT WATER SURFACE ELEVATION TYPICALLY PROTECTS THE LOW FLOW ORIFICE ON THESE PONDS. IF THIS HOOD OR ELBOW IS COMPLETELY SUBMERGED BELOW THE SURFACE OF THE POND, THE ORIFICE IS LIKELY CLOGGED AND IN NEED OF MAINTENANCE.

### C. UNDERGROUND STORAGE

THIS STRUCTURE CONSISTS OF UNDERGROUND STORAGE PIPES DESIGNED TO TEMPORARILY DETAIN STORMWATER RUNOFF AND RELEASE IT AT A CONTROLLED RATE THROUGH A LOW FLOW ORIFICE. ROUTINE MAINTENANCE CONSISTS OF INSPECTING THE ORIFICE TO ENSURE THAT IT DOES NOT BECOME CLOGGED WITH DEBRIS. NOTE: SPECIAL EQUIPMENT MAY BE REQUIRED FOR ANY PERSON ENTERING AN ENCLOSED SPACE. CONTACT MCDEP FOR GUIDANCE PRIOR TO ATTEMPTING TO ENTER INTO ANY ENCLOSED SPACE.

### D. MONTGOMERY COUNTY SAND FILTER

THE PURPOSE OF THE SAND FILTER IS TO INTERCEPT AND TREAT STORMWATER RUNOFF TO IMPROVE THE QUALITY OF WATER LEAVING THE DEVELOPMENT. WATER FLOWS ONTO THE FILTER AND SLOWLY SEEPS THROUGH IT, WHERE IT IS COLLECTED BY AN UNDERDRAIN PIPE AND DIRECTED TO AN OUTFALL. THIS MOVEMENT OF THE WATER THROUGH THE SAND MEDIA FILTERS OUT MANY OF THE POLLUTANTS. THE SAND FILTER SHOULD USUALLY DRY UP WITHIN 48 HOURS. IF WATER STANDS ON THE FILTER FOR LONGER PERIODS OF TIME, MAINTENANCE IS REQUIRED. BECAUSE THE SAND ACTS AS A FILTER, IT WILL EVENTUALLY CLOG. CLOGGING GENERALLY EFFECTS THE TOPMOST PORTION OF THE SAND, LEAVING UNDERLYING SAND UNCLOGGED. TO INCREASE THE LIFE OF THE FILTER, THE TOP LAYER SHOULD BE RAKED ON A REGULAR BASIS IN ORDER TO BREAK UP ANY SURFACE CLOGGING THAT MAY OCCUR. EVENTUALLY THE TOP 3" - 4" OF SAND WILL LIKELY REQUIRE REMOVAL AND REPLACEMENT WITH NEW, CLEAN MATERIAL. IF THE SAND FILTER IS PROVIDED WITH A GRAVEL TOP LAYER, ROUTINE RAKING WILL NOT BE POSSIBLE.

### E. INFILTRATION TRENCH

AN INFILTRATION TRENCH IS AN UNDERGROUND STONE RESERVOIR WHICH COLLECTS STORM RUNOFF AND ALLOWS IT TO SLOWLY SEEP BACK INTO THE GROUND. ON TOP OF THE TRENCH IS A LAYER OF GRAVEL, UNDER WHICH IS A LAYER OF FILTER FABRIC. THE INFILTRATION TRENCH SHOULD APPEAR DRY WITHIN 12-24 HOURS AFTER A STORM EVENT. IF STANDING WATER IS OBSERVED ON THE FACILITY, IT MAY INDICATE THAT THE FILTER FABRIC IS IN NEED OF REMOVAL AND REPLACEMENT. THE PURPOSE OF THE FILTER FABRIC IS TO TRAP SMALL PARTICLES THAT MIGHT OTHERWISE ENTER THE FACILITY AND CAUSE THE BOTTOM OF THE TRENCH TO FAIL.

### F. BIO FILTER

THE PURPOSE OF BIO FILTRATION IS TO INTERCEPT AND TREAT STORMWATER TO IMPROVE WATER LEAVING THE DEVELOPMENT. WATER FLOWS INTO THE FACILITY AND SLOWLY SEEPS THROUGH IT, WHERE IT IS COLLECTED BY AN UNDERDRAIN PIPE AND DIRECTED TO AN OUTFALL. THIS MOVEMENT OF THE WATER THROUGH THE MEDIA FILTERS OUT MANY OF THE POLLUTANTS. THE BIO FILTRATION AREA SHOULD USUALLY DRY UP WITHIN 48 HOURS. IF WATER STANDS ON THE FILTER FOR LONGER PERIODS OF TIME, MAINTENANCE IS REQUIRED. MAINTENANCE OF THIS TYPE OF FACILITY GENERALLY INCLUDES REPLACEMENT OF DEAD OR DISEASED PLANT MATERIAL AND REPLISHMENT OF THE MULCH LAYER AS REQUIRED. IN ADDITION, IT MAY BE NECESSARY TO RAKE THE SURFACE OF THE SAND "WINDOW" TO ENCOURAGE PROPER DRAINAGE. THE BIO FILTER IS INTENDED TO BE AN ACTIVELY MAINTAINED LANDSCAPE AREA.

### G. FLOW SPLITTER

MANY OF THE STORMWATER MANAGEMENT FACILITIES IN MONTGOMERY COUNTY RECEIVE DRAINAGE VIA A DEVICE WHICH IS DESIGNED TO DIVERT ONLY THE FIRST AND DIRTIEST FLUSH OF STORMWATER RUNOFF TO THE WATER QUALITY TREATMENT FACILITY. THIS INCREASES THE EFFICIENCY OF POLLUTANT REMOVAL. LARGER FLOWS ARE DIVERTED AROUND THE FACILITY TO PRESERVE EFFICIENCY. FLOW SPLITTER PIPES AND TRASH GRATES SHOULD BE CHECKED PERIODICALLY TO ENSURE THAT THEY ARE NOT CLOGGED WITH DEBRIS.

NOTE: SPECIAL EQUIPMENT MAY BE REQUIRED FOR ANY PERSON ENTERING AN ENCLOSED SPACE. CONTACT MCDEP FOR GUIDANCE PRIOR TO ATTEMPTING TO ENTER INTO ANY ENCLOSED SPACE.

### H. STORMFILTER

THE STORMFILTER IS A PROPRIETARY DEVICE IN WHICH WATER FLOWS THROUGH A FILTER MEDIA TO REMOVE POLLUTANTS. THE FILTER MEDIA WILL REQUIRE PERIODIC REPLACEMENT, PER THE MANUFACTURER'S RECOMMENDATIONS. IN ADDITION TO FILTER MEDIA REPLACEMENT, THE STRUCTURE SHOULD BE CHECKED PERIODICALLY TO ENSURE THAT IT IS NOT CLOGGED WITH DEBRIS.

### I. STORMCEPTOR, BAY SAVER, VORTECHNICS, OR OTHER HYDRODYNAMIC STRUCTURE

THESE PROPRIETARY STRUCTURES ARE ESSENTIALLY MANHOLES THAT SERVE TO SEPARATE SEDIMENTS FROM FLOATABLE POLLUTANTS, SUCH AS OIL. THE OILS AND SEDIMENTS ARE TRAPPED WITHIN THE FACILITY. THESE STRUCTURES SHOULD BE INSPECTED PERIODICALLY TO ENSURE THAT THE PIPES ARE NOT CLOGGED BY DEBRIS. IN ADDITION, THE POLLUTANT BUILD-UP WITHIN THE FACILITY MUST BE MONITORED REGULARLY AND THE TRAPPED MATERIALS REMOVED ONCE THE STORAGE CAPACITY OF THE DEVICE HAS BEEN REACHED. A LICENSED CONTRACTOR MUST REMOVE THE MATERIALS FROM THE FACILITY.

### J. OTHER FACILITY - DESCRIBED BELOW:

1. THE PERMEABLE PAVEMENT  
THE PERMEABLE PAVEMENT METHODS DESCRIBED IN THIS DOCUMENT ARE BASED ON THE PERMEABLE PAVING DESIGN FOUND IN CHAPTER 5 OF THE MARYLAND STORMWATER DESIGN MANUAL AND THE ENVIRONMENTAL SITE DESIGN (ESD) PROCESS & COMPUTATIONS SUPPLEMENT DATED JULY 2010. WHERE DEEMED APPROPRIATE, THE DESIGN SPECIFICATIONS HAVE BEEN MODIFIED BY THE MONTGOMERY COUNTY DEPARTMENT OF PERMITTING SERVICES (DPS). DPS REQUIRES THAT ALL PERMEABLE PAVEMENTS SHALL INCLUDE AN OVER-DRAIN SYSTEM BUT NO UNDERDRAIN SYSTEM. THESE DESIGN STANDARDS ARE MEANT TO ESTABLISH MINIMUM STORMWATER MANAGEMENT (SWM) TREATMENT REQUIREMENTS AND ARE NOT INTENDED TO PROVIDE GUIDANCE OR REQUIREMENTS FOR ADEQUATE STRUCTURAL DESIGN. APPROPRIATE DESIGN FOR THE ANTICIPATED TRAFFIC LOAD AND USE IS THE RESPONSIBILITY OF THE DESIGN ENGINEER. PERMEABLE PAVEMENTS ARE SUSCEPTIBLE TO CLOGGING. OWNERS ARE TO BE EDUCATED IN PROPER SYSTEM MAINTENANCE, INCLUDING PROPER TREATMENT FOR ICE AND SNOW IN THE WINTER TO ALLOW THE SYSTEM TO FUNCTION PROPERLY. USE OF SALTS ON PERMEABLE PAVEMENT WILL DECREASE THE EXPECTED LIFESPAN OF MATERIALS AND MAY NOT BE USED WITHIN THE FIRST 12 MONTHS OF PLACEMENT OF A POURED-IN PLACE PERMEABLE CONCRETE. ALL OTHER RESTRICTIONS SHOULD BE PER MANUFACTURER'S SPECIFICATIONS. APPLICATION OF COARSE SAND ON TOP OF PERMEABLE PAVEMENT WILL REQUIRE VACUUM CLEANING EACH SPRING.

### 2. MICRO-BIORETENTION

MICRO-BIORETENTION IS A FILTRATION SYSTEM THAT TREATS RUNOFF BY PASSING IT THROUGH A FILTER BED MIXTURE OF SAND, SOIL, AND ORGANIC MATTER. PRINCIPAL COMPONENTS OF THE SYSTEM INCLUDE: A) SURFACE PLANTING WITH WOODY AND HERBACEOUS PLANT SPECIES, B) A SURFACE 3 INCH THICK MULCH LAYER, C) A 2-4 FOOT PLANTING MEDIUM, D) A 6 INCH THICK SAND LAYER, AND E) PERFORATED PVC PIPE UNDERDRAIN WITHIN A GRAVEL BED. THE FACILITIES SHOULD BE WELL LANDSCAPED TO ENHANCE THEIR FUNCTION AND APPEARANCE. WHEN PROVIDING ADDITIONAL STORAGE FOR RECHARGE BELOW THE UNDERDRAIN, REFER TO THE ENHANCED FILTER DESIGN SPECIFICATIONS FOR ADDITIONAL REQUIREMENTS.

## PERMEABL PAVEMENT SPECIFICATIONS AND DETAILS

### 1. SIZING

PERMEABLE PAVEMENTS ARE AN AT-SOURCE PRACTICE FOR REDUCING THE EFFECTS OF IMPERVIOUS COVER. THEY SHOULD BE SIZED TO CAPTURE AND STORE 100% OF THE TARGET TREATMENT VOLUME. THE TOTAL TREATMENT STORAGE PROVIDED IN A FACILITY THAT CAN BE CREDITED TOWARDS MEETING THE ESD REQUIREMENT, ESDV, SHALL BE COMPUTED AS THE STORAGE IN THE STONE SUBBASE AND SAND BRIDGING LAYER BELOW THE OVERDRAIN PIPES. COMPUTATIONS SHALL ACCOUNT FOR THE POROSITY (N = 0.30) OF THE STONE AND SAND, TO ACCOUNT FOR CONTINUAL VEHICULAR COMPACTION THAT PERMEABLE PAVEMENT RECEIVE, THE POROSITY OF PERMEABLE PAVEMENTS IS NOT 40% LIKE ALL OTHER ESD PRACTICES. RUNOFF FROM ADJACENT PAVED AND UNPAVED AREAS ONTO PERMEABLE PAVEMENT SHOULD BE LIMITED AND WHENEVER POSSIBLE DIVERTED AWAY. HOWEVER, IN SOME CASES, THIS IS EITHER UNAVOIDABLE DUE TO SITE LAYOUT AND GRADING OR AN INTENTIONAL ELEMENT OF THE DESIGN (SUCH AS TREATING IMPERVIOUS DRIVE AISLES ADJACENT TO PERMEABLE PAVING.) WHEN THAT IS THE CASE THE AMOUNT OF DRAINAGE AREA THAT CAN BE TREATED BY THE PRACTICE IS LIMITED AS FOLLOWS: THE MAXIMUM RATIO OF ADJACENT CONTRIBUTING DRAINAGE AREA TO PERMEABLE PAVING SURFACE AREAS 1:1. SO THE CONTRIBUTING DRAINAGE AREA CANNOT BE GREATER THAN THE PERMEABLE PAVEMENT SURFACE AREA. RUNOFF FROM LANDSCAPED AREAS, FORESTS, AND OTHER PLANTED AREAS CONTAINS ORGANICS THAT HASTEN PAVEMENT CLOGGING AND INCREASE MAINTENANCE COSTS. RUNOFF FROM ADJACENT AREAS WITH THIS TYPE OF COVER SHOULD BE MINIMIZED AS MUCH AS POSSIBLE. WHEN DESIGNED PROPERLY THE TOTAL STORAGE VOLUME PROVIDED IN THIS PRACTICE, ESDV, CAN INCLUDE THE VOLUME IN STONE AND SAND VOIDS EXTENDED UNDER ADJACENT IMPERVIOUS AREAS. FOR INSTANCE, THE STONE AND SAND VOIDS UNDERNEATH BOTH A PERMEABLE PAVEMENT PARKING BAYS PLUS AN UPLAND ADJACENT IMPERVIOUS ASPHALT DRIVE AISLE CAN COUNT TOWARDS THE TOTAL STORAGE VOLUME PROVIDED. STORAGE IN PERMEABLE PAVEMENTS IN EXCESS OF THAT REQUIRED TO TREAT THE RUNOFF FOR THE 1-YR, 24-HOUR DESIGN STORM (2.6") SHALL NOT BE COUNTED TOWARDS THE ESDV PROVIDED. THEREFORE, AS AN ALTERNATIVE SURFACE WITH A MAXIMUM ALLOWABLE 1:1 ADDITIONAL CONTRIBUTING DRAINAGE AREA, THE MAXIMUM TREATMENT VOLUME IS OFTEN LIMITED TO THE VOLUME ACHIEVED BY THE 1-YR DESIGN STORM.

### 2. LOCATION

HOTSPOT RUNOFF: PERMEABLE PAVEMENTS SHOULD NOT BE USED TO TREAT HOTSPOTS THAT GENERATE HIGHER CONCENTRATIONS OF HYDROCARBONS, TRACE METALS, OR TOXICANTS THAN ARE FOUND IN TYPICAL STORMWATER RUNOFF AND MAY CONTAMINATE GROUNDWATER. SPECIFIC APPROVAL FROM THE FIRE MARSHAL'S OFFICE IS REQUIRED FOR EACH PERMEABLE PAVEMENT PLACEMENT AREA THAT IS PART OF THE PROPOSED FIRE ACCESS ROUTE. THE STORAGE VOLUME FOR ANY PERVIOUS SURFACE SHALL BE LOCATED DOWN GRADIENT OF BUILDING STRUCTURES AND BE SETBACK A MINIMUM OF 100 FEET FROM UNCONFINED WATER SUPPLY WELLS, 25 FEET FROM SEPTIC SYSTEMS, 10 FEET FROM BUILDINGS, AND 10 FEET FROM ANY OTHER INFILTRATING PRACTICE. CLEARANCE FROM SITE UTILITIES SHOULD BE PER THE REQUIREMENTS OF THE RESPECTIVE UTILITY COMPANIES. WHEN PROPOSED ADJACENT TO SLOPES 15% OR GREATER, A GEOTECHNICAL ENGINEER'S RECOMMENDATION ADDRESSING SLOPE STABILITY IS REQUIRED TO BE INCORPORATED INTO THE DESIGN.

### 3. SOILS

PERMEABLE PAVEMENTS SHALL NOT BE USED IN AREAS OF COMPACTED FILL OR KARST TOPOGRAPHY. SOIL TYPING IS REQUIRED TO DETERMINE THAT PERMEABLE PAVEMENT IS AN APPLICABLE SWM PRACTICE; SEE MONTGOMERY COUNTY "SOIL TESTING GUIDELINES FOR STORMWATER MANAGEMENT PRACTICES". IN APPLICATIONS EXCEEDING 10,000 FT.2 OF TREATED AREA (AREA OF PERMEABLE PAVING PLUS ANY OTHER AREAS DRAINING TO IT), UNDERLYING SOILS SHALL HAVE A MEASURED INFILTRATION RATE (F) OF 0.52 IN/HR. OR GREATER.

### 4. TOPOGRAPHY

RUNOFF SHALL SHEETFLOW ACROSS PERMEABLE PAVEMENTS AND THE SURFACE MUST SLOPE GRADUALLY (<5%).

### 5. INSTALLATION

FINAL GRADING FOR INSTALLATION SHALL NOT TAKE PLACE UNTIL THE SURROUNDING SITE IS STABILIZED. IF THIS CANNOT BE ACCOMPLISHED, RUNOFF FROM DISTURBED AREAS SHALL BE DIVERTED AROUND PROPOSED PERMEABLE PAVEMENT LOCATIONS. SOIL SUBGRADES SHALL NOT BE COMPACTED. CONSTRUCTION SHOULD BE PERFORMED WITH LIGHTWEIGHT, WIDE TRACKED EQUIPMENT TO MINIMIZE COMPACTION

### 6. EDGE TREATMENTS

A PERMEABLE NON-WOVEN GEOTEXTILE FILTER FABRIC SHALL LINE THE EXCAVATED SIDES TO PREVENT SOIL MIGRATION. PERMEABLE CONCRETE MUST INCLUDE A 6"RIBBON CURB SURROUNDING ALL EDGES SET AT LEAST AS DEEP AS THE PERMEABLE PAVEMENT LAYER. WHERE SURROUNDED BY CURBING, FULL GUTTER PANS MUST BE INCLUDED. PERMEABLE PAVERS MUST INCLUDE A FULL GUTTER PAN WHEN SURROUNDED BY CURBING. RIBBON CURBS AROUND OTHER EDGES ARE OPTIONAL BUT ENCOURAGED. RIBBON CURBS ARE NOT REQUIRED FOR PERMEABLE SIDEWALKS.

### 7. OVER-DRAIN SYSTEMS

ALL PERMEABLE PAVEMENTS SHALL BE DESIGNED WITH SUFFICIENT SUBSURFACE DEPTH TO ENSURE THAT THE TOTAL TREATMENT VOLUME DOES NOT RISE INTO THE PAVEMENT WHERE THE FREEZE/THAW CYCLE COULD DAMAGE THE PAVEMENT. AN OVER-DRAIN SYSTEM SHALL BE INCORPORATED INTO THE DESIGN TO SAFELY CONVEY THE RUNOFF IN EXCESS OF THE TREATMENT VOLUME TO A STABLE OUTFALL. OVER-DRAIN PIPES SHOULD HAVE A MINIMUM OF 12" OF TOTAL COVER TO THE PAVING SURFACE. A 6" LAYER OF STONE MUST BE PLACED BETWEEN THE BOTTOM OF PAVERS AND THE TOP OF THE OVER-DRAIN PIPE. IN ADDITION TO THE GUIDANCE IN THIS DOCUMENT, PIPE PLACEMENT SHOULD MEET MANUFACTURER'S MINIMUM RECOMMENDATIONS. OVER-DRAIN PIPE SHALL BE 4" SCHEDULE 40 PVC OR HDPE N-12 AND PERFORATED WITH 3/8"HOLES 4 INCH ON CENTER. ALL APPLICATIONS, EXCEPT SIDEWALKS, REQUIRE AN OVER-DRAIN SYSTEM EVEN IF THE AREA AS SMALL AS A FEW PARKING SPACES. THE LOCATION AND LAYOUT OF THE OVER-DRAIN SYSTEM IS LARGELY DEPENDENT ON THE PERMEABLE PAVEMENT CONFIGURATION BUT GENERALLY ONE LINEAR FOOT OF OVER-DRAIN SHOULD COLLECT NO MORE THAN 800 SQ. FT. OF AREA. FOR SLOPED APPLICATIONS THE OVER-DRAIN SYSTEM SHOULD BE PLACED AT THE LOW END OF THE SLOPE. THE TERMINAL END OF ALL OVER-DRAIN PIPES MUST BE CAPPED. THE OVER-DRAIN PIPE MUST HAVE AT LEAST 3"OF STONE SUB-BASE UNDER THE OVER-DRAIN PIPE TO PREVENT MIGRATION OF SAND INTO THE OVER-DRAIN PIPE SYSTEM.

### 8. STONE SUB-BASE

A SUB-BASE LAYER OF CLEAN, OPEN GRADED, WASHED SILICA STONE MEETING MD SHA COARSE AGGREGATE 57 GRADING REQUIREMENTS SHALL BE USED BELOW THE PAVEMENT LAYER. FILTER FABRIC SHALL NEVER BE USED HORIZONTALLY BETWEEN THE SUB-BASE MATERIAL AND SOIL SUBGRADE.

### 9. SAND BRIDGING LAYER

A 6"LAYER OF WASHED ASTM C33 FINE AGGREGATE CONCRETE SAND (SEE MCDPS SAND SPECIFICATIONS) SHALL BE USED AS A BRIDGING LAYER BETWEEN THE TREATMENT STORAGE VOLUME AND SOIL SUBGRADE.

### 10. SOIL SUBGRADE

THE SOIL SUBGRADE SHALL BE PROOF ROLLED PER SITE GEOTECHNICAL ENGINEER'S RECOMMENDATIONS AND SCARIFIED PRIOR TO PLACEMENT OF SUB-BASE MATERIALS. THE BOTTOM OF THE SAND LAYER SHALL BE LEVEL SO THAT RUNOFF WILL BE ABLE TO INFILTRATE EVENLY THROUGH THE ENTIRE SURFACE. IF A LEVEL SOIL SUBGRADE CANNOT BE ACHIEVED, THEN THE SUBGRADE MAY BE STEPPED (SEE STEPPED SOIL SUBGRADE DETAIL) WITH THE USE OF LATERAL FLOW BARRIERS BETWEEN EACH CELL TO CONTAIN RUNOFF AND PREVENT EROSION OF THE SOIL SUBGRADE. IN THIS CASE THE MAXIMUM ALLOWABLE SUBGRADE SLOPE IS 5% AND THE MAXIMUM CREDITABLE AVERAGE DEPTH OF TREATMENT STORAGE IS STILL 12"PER CELL.

### 11. LATERAL FLOW BARRIERS

LATERAL FLOW BARRIERS OF COMPACTED SUITABLE SOIL, FRAMING WRAPPED IN 30-MIL PLASTIC, OR OTHER ENGINEER DESIGN BARRIER TO LATERAL FLOW MUST SEPARATE CELLS THAT DO NOT SHARE THE SAME SOIL SUBGRADE ELEVATION. THE LATERAL FLOW BARRIERS ARE THAT PORTION OF THE PRACTICE THAT FORCE THE PONDING OF WATER ACROSS SLOPPED INSTALLATIONS. SEE STEPPED / SLOPED SOIL SUBGRADE DETAILS. WATER WILL ONLY POND IN THAT PORTION OF THE STONE SUB-BASE THAT IS BELOW THE OVER-DRAIN PIPE. THE MAXIMUM AVERAGE CREDITABLE DEPTH OF STORAGE IS 12" IN SLOPPED APPLICATIONS THE MAXIMUM DEPTH OF WATER PONDING AGAINST A LATERAL FLOW BARRIER IF 24".

### 12. PLANTING

TO MINIMIZE THE POTENTIAL FOR CLOGGING, PLANTING ADJACENT TO PERMEABLE PAVEMENTS SHOULD BE DESIGNED WITH DEBRIS AND MAINTENANCE IN MIND; TREES WITH NEEDLES, AND OTHER EVERGREEN SPECIES SHOULD BE AVOIDED, AS WELL AS PLANTING BEDS THAT REQUIRE FREQUENT MULCHING. PERMEABLE PAVEMENT SHOULD NOT BE PLACED IN APPLICATIONS IN FORESTS OR IMMEDIATELY DOWNSTREAM OF HIGHLY VEGETATED AREAS, E.G. PARK PATHS, WHERE THEY ARE LIKELY TO CLOG.

### 13. MAINTENANCE & SIGNAGE

PERMEABLE PAVEMENTS ARE SUSCEPTIBLE TO CLOGGING. OWNERS ARE TO BE EDUCATED IN PROPER SYSTEM MAINTENANCE, INCLUDING PROPER TREATMENT FOR ICE AND SNOW IN THE WINTER TO ALLOW THE SYSTEM TO FUNCTION PROPERLY. USE OF SALTS ON PERMEABLE PAVEMENT WILL DECREASE THE EXPECTED LIFESPAN OF MATERIALS AND MAY NOT BE USED WITHIN THE FIRST 12 MONTHS OF PLACEMENT OF A POURED-IN PLACE PERMEABLE CONCRETE. ALL OTHER RESTRICTIONS SHOULD BE PER MANUFACTURER'S SPECIFICATIONS. APPLICATION OF COARSE SAND ON TOP OF PERMEABLE PAVEMENT WILL REQUIRE VACUUM CLEANING EACH SPRING. ALL MAINTENANCE AND SIGNAGE SHALL BE DONE IN ACCORDANCE WITH MONTGOMERY COUNTY DEPARTMENT OF ENVIRONMENTAL PROTECTION (DEP) GUIDELINES. SIGNAGE WILL BE REVIEWED AS A PART OF THE SWM PLAN TECHNICAL REVIEW.

### 14. POST-CONSTRUCTION

POURED IN PLACE CONCRETE MUST REMAIN FREE FROM ALL LIGHT VEHICULAR TRAFFIC, FOR A MINIMUM OF 7 DAYS. HEAVY VEHICULAR TRAFFIC MUST BE RESTRICTED FOR AT LEAST 10 DAYS AFTER PLACEMENT. POST CONSTRUCTION INFILTRATION RATES REQUIRED FOR ALL SURFACES MUST CONFORM TO ASTM C1701 FOR POURED IN PLACE PERMEABLE CONCRETE, OR ASTM C1781 FOR PERMEABLE PAVERS. INFILTRATION RATE AND SPECIFIC TEST LOCATIONS MUST BE SUBMITTED ALONG WITH THE STORMWATER MANAGEMENT "ASBUILT PLAN". PERMEABLE PAVEMENT MUST BE VACUUM CLEANED AND PAVER JOINTS REFILLED AS NECESSARY PRIOR TO FINAL INSPECTION.

## MICROBIORETENTION /PLANTER BOX SPECIFICATIONS AND DETAILS

### 1. SIZING

THE FACILITY SHALL BE SIZED TO CAPTURE AND STORE 100% OF THE TARGET TREATMENT VOLUME. A MINIMUM OF 6"AND MAXIMUM OF 12" OF SURFACE PONDING MUST BE PROVIDED ABOVE THE FILTER MEDIA. THE SURFACE AREA (AF) OF A MICRO-BIORETENTION PRACTICE SHALL BE AT LEAST 2% OF THE CONTRIBUTING DRAINAGE AREA. PLANTING MEDIA SHALL BE BETWEEN 24 AND 48 INCHES DEEP. THE TOTAL STORAGE PROVIDED IN THE FACILITY SHALL BE COMPUTED AS THE STORAGE PROVIDED IN THE TEMPORARY PONDING AREA AND THE STORAGE PROVIDED IN THE PLANTING MEDIA AND SAND LAYERS. COMPUTATIONS SHALL ACCOUNT FOR THE POROSITY (N = 0.40) OF THE PLANTING MEDIA AND SAND. STORAGE PROVIDED IN EXCESS OF THATREQUIRED TO TREAT THE RUNOFF FOR THE 1 YEAR, 24-HOUR DESIGN STORM SHALL NOT BE COUNTED TOWARDS THE TOTAL ESDV PROVIDED. SEE "ENHANCED FILTER"DESIGN GUIDELINES IF ADDITIONAL STORAGE IS PROPOSED BELOW THE UNDERDRAIN PIPE. TO THE EXTENT POSSIBLE, FACILITIES SHOULD HAVE IRREGULAR OUTLINES TO BLEND NATURALLY INTO THE ENVIRONMENT. RECTANGULAR IS NOT NATURAL.

### 2. INFLOW DESIGN CRITERIA

RUNOFF SHALL ENTER THE MICRO-BIORETENTION FACILITY IN A NON-EROSIVE MANNER (LESS THAN 2 FPS). INFLOW MAY BE THROUGH DEPRESSED CURBS WITH WHEEL STOPS, CURB CUTS, LEVEL SPREADERS, BUBBLERS, OR CONVEYED DIRECTLY USING DOWNSPOUTS, COVERED DRAINS, CATCH BASINS, OVER GRASS, OR OTHER ACCEPTABLE CONVEYANCE METHODS. PARTICULAR CARE MUST BE TAKEN TO PREVENT EROSION OF THE SURFACE MULCH LAYER.

### 3. OVERFLOW DESIGN CRITERIA

IF AN INTERNAL OVERFLOW DEVICE IS NEEDED, A YARD INLET OR DOME CAP INLET MAY BE USED. DOME INLET CAPS MAY BE STACKED ON TOP OF CLEAN-OUTS TO SERVE AS THE OVERFLOW DEVICES. WHEN THIS METHOD IS USED, THE OVERFLOW INVERT OF THE DOME CAP MUST BE SET AT THE DESIGN STORAGE LEVEL. OVERFLOW DEVICES CANNOT FEED INTO PERFORATED PIPE SECTIONS. A SAFE NON-EROSIVE OUTLET BELOW THE OUTFALL MUST BE PROVIDED. SAFE CONVEYANCE OF THE DEVELOPED 10-YEAR STORM THROUGH THE FACILITY MUST BE DEMONSTRATED.

### 4. UNDERDRAIN PIPE

THE UNDERDRAIN PIPE CONSISTS OF 6-INCH DIAMETER SCHEDULE 40 OR STRONGER PERFORATED PVC PIPE AT 0.00% SLOPE. THE UNDERDRAIN PIPE WILL BE PLACED WITHIN THE GRAVEL LAYER. A MINIMUM OF THREE INCHES OF GRAVEL MUST BE PLACED UNDER THE PIPE, WITH A MINIMUM OF 6 INCHES OF GRAVEL OVER THE PIPE. PERFORATIONS MUST BE 3/8 INCH IN DIAMETER AND MUST BE LOCATED 4 INCHES ON CENTER. EVERY 90 DEGREES AROUND THE PIPE. PERFORATED PIPE MUST BEGAIN AT LEAST 12" INSIDE THE FILTER MEDIA. IF THIS CANNOT BE ACHIEVED, THEN SIDES OF THE FILTER MEDIA MUST BE LINED WITH FILTER FABRIC. FILTER FABRIC MUST NOT BE WRAPPED AROUND THE UNDERDRAIN PIPE. AN ACCEPTABLE ALTERNATIVE TO PERFORATED PIPE IS 6" DIAMETER SCHEDULE 40 SLOTTED PVC PIPE WITH 0.125 INCH SLOTS. SLOTS SHALL BE 0.125 INCHES WIDE AND A MINIMUM OF 1.9 INCHES IN LENGTH, WITH A MINIMUM OF 4 SLOTS PER ROW AND 4 ROWS PER LINEAR FOOT OF PIPE. ACCESS FOR CLEANING ALL UNDERDRAIN PIPING IS NEEDED. WATERTIGHT CLEAN-OUTS FOR EACH PIPE SHALL BE LEVEL WITH THE TOP OF THE MULCH. ALL CLEANOUTS SHALL HAVE A REMOVABLE WATERPROOF CAP. CLEANOUTS MUST BE CAPPED IMMEDIATELY AFTER THE FILTER MEDIUM IS IN PLACE.

THE REQUIRED NUMBER OF PERFORATED UNDERDRAIN PIPES IS PROPORTIONAL TO THE SURFACE AREA OF THE MICRO-BIORETENTION FACILITY. THE LENGTH OF PERFORATED PIPE SHALL BE 0.05 TIMES THE SURFACE AREA OF THE FACILITY, ROUNDED TO THE NEAREST FOOT. IN NO CASE SHALL LESS THAN 2 FT. OF PERFORATED PIPE BE PROVIDED.

### 5. GRAVEL BED

THE GRAVEL LAYER SURROUNDING THE UNDERDRAIN PIPE(S) MUST MEET MSHA SIZE #7 (TABLE 901A), AND MUST PROVIDE A MINIMUM OF 6 INCHES COVER OVER THE PIPE(S), AND MINIMUM 3 INCHES UNDER THE PIPE. NO GEOTEXTILE OR FILTER FABRIC IS ALLOWED TO BE PLACED HORIZONTALLY ANYWHERE WITHIN THE FILTER MEDIA. THE GRAVEL MUST BE CLEAN AND MUST BE STORED AND INSTALLED IN SUCH A MANNER THAT IT DOES NOT BECOME CONTAMINATED WITH SEDIMENT BEFORE OR AFTER INSTALLATION.

### 6. SAND BED

A MINIMUM 6-INCH FINE AGGREGATE SAND LAYER SHALL BE PROVIDED BELOW THE PLANTING MEDIUM. ASTM C33 OR AASHTO M6 FINE AGGREGATE CONCRETE SAND IS REQUIRED PER MONTGOMERY COUNTY SAND SPECIFICATIONS.

### 7. PLANTING MEDIUM

THE PLANTING MEDIUM SHALL BE 24"-48" THICK AND SHALL CONSIST OF 1/3 PERLITE OR SOLITE, 1/3 COMPOST AND 1/3 TOPSOIL. THE PERLITE SHALL BE COARSE GRADE HORTICULTURAL PERLITE. THE COMPOST SHALL BE HIGH GRADE COMPOST FREE OF STONES AND PARTIALLY COMPOSTED WOODY MATERIAL. THE TOPSOIL COMPONENT SHALL MEET THE FOLLOWING CRITERIA: CONTAIN NO MORE THAN 10% CLAY, 10-25% SILT AND 60-75% SAND AND BE FREE OF STONES, STUMPS, ROOTS OR OTHER SIMILAR OBJECTS LARGER THAN 2 INCHES.

THE FIRST LAYER OF THE PLANTING MEDIUM SHALL BE LIGHTLY TILLED TO MIX IT INTO THE 6-INCH SAND LAYER. SO AS NOT TO CREATE A DEFINITIVE BOUNDARY. THE PLANTING BED SHALL BE FLOODED AFTER PLACEMENT. ANY SETTLEMENT THAT OCCURS SHALL BE FILLED BACK TO THE DESIGN ELEVATION.

### 8. MULCH

THE MULCH LAYER IS AN IMPORTANT PART OF THE MICRO-BIORETENTION DEVICE. MUCH OF THE POLLUTANT REMOVAL CAPACITY OF THE MICRO-BIORETENTION SYSTEM IS WITHIN THE MULCH LAYER. THE SURFACE MULCH LAYER WILL CONSIST OF STANDARD DOUBLE SHREDED AGED HARDWOOD MULCH. THE MULCH SHOULD BE APPLIED UNIFORMLY TO A DEPTH OF 3 INCHES. YEARLY REPLISHING MAY BE NECESSARY. PINE BARK IS NOT ACCEPTABLE.

### 9. PLANT MATERIALS

PLANTS, THROUGH THEIR POLLUTANT UPTAKE AND EVAPO-TRANSPIRATION OF STORMWATER RUNOFF, PLAY A KEY ROLE IN THE OVERALL EFFECTIVENESS OF THE MICRO-BIORETENTION DEVICE. BOTH THE NUMBER AND TYPE OF TREE AND SHRUB PLANTINGS FOR THE SYSTEM MAY VARY, ESPECIALLY WHERE AESTHETICS OR OTHER CONSIDERATIONS ARE CRITICAL TO SITE DEVELOPMENT. WHILE NATIVE PLANTS ARE ENCOURAGED, THEY ARE NOT ALWAYS APPROPRIATE IN ALL SITUATIONS. WHILE NO HARD PLANTING RULE EXISTS, THE PLANTS SHOULD BE A MIX OF TREES, SHRUBS AND HERBACEOUS MATERIALS. HOWEVER, THERE SHOULD BE 2 TO 3 SHRUBS PLANTED PER TREE AND HERBACEOUS PLANTINGS SHALL MAKE UP 40% OF THE TOTAL NUMBER OF PLANTS. TREES SHALL BE A MINIMUM OF 1 1/2 IN. CALIPER. SHRUBS SHALL BE MINIMUM 2 GAL. SIZE AND HERBACEOUS PLANTS SHALL BE A MINIMUM 1 GAL. SIZE. MATURE PLANT CANOPY SHOULD COVER 85% OF THE MICRO-BIORETENTION DEVICE. ALTERNATIVE PLANTING SCHEMES, INCLUDING USE OF GRASSES, MAY BE CONSIDERED IN SOME SITUATIONS, SO LONG AS THE PLANTING PLAN IS DESIGNED BY A REGISTERED LANDSCAPE ARCHITECT REGISTERED IN THE STATE OF MARYLAND, HOWEVER LAWN GRASSES ARE NOT APPROPRIATE FOR THESE FACILITIES. ALL PLANTINGS SHALL BE IN ACCORDANCE WITH THE MONTGOMERY COUNTY LANDSCAPE GUIDELINES. ALL LANDSCAPE PLANS MUST BE SEALED BY A REGISTERED LANDSCAPE ARCHITECT. SINCE THE PLANTS ARE AN INTEGRAL PART OF THE MICRO-BIORETENTION SYSTEM, NO CHANGES TO THE APPROVED LANDSCAPE PLAN WILL BE ALLOWED UNLESS AN ALTERNATE PLANT LIST, PREPARED BY A REGISTERED LANDSCAPE ARCHITECT, HAS BEEN APPROVED BY DPS PRIOR TO INSTALLATION. SINCE PLANT AVAILABILITY CAN CHANGE, DPS SUGGESTS INCLUDING AN ALTERNATE PLANT LIST ON THE LANDSCAPING PLANS.

NO.	REVISION	DATE	BY

OWNER/ADDRESS:	MONTGOMERY COUNTY
DEPARTMENT OF TRANSPORTATION 100 EDISON PARK DRIVE GAITHERSBURG, MARYLAND	DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND
CONTACT:	
DIVISION OF TRANSPORTATION ENGINEERING CONSTRUCTION SECTION 240-777-7210 DESIGN SECTION 240-777-7221	

RECOMMENDED FOR APPROVAL	
Chief, Design Section	Date
APPROVED	
Chief, Division of Transportation Engineering	Date
Designed by: _____	Drawn by: _____
Checked by: _____	_____

MONTGOMERY CO. DEPARTMENT OF PERMITTING SERVICES APPROVED FOR:	
Stormwater Management:	Sediment Control Technical Requirements:
_____	Reviewed _____ Date _____
Reviewed _____ Date _____	Approved _____ Date _____
Approved _____ Date _____	_____
SAMPLE NO. _____	

NOTE: MCDPS APPROVAL DOES NOT NEGATE THE NEED OF A MCDPS ACCESS PERMIT	
Administrative Requirements:	
Reviewed _____	Date _____
SEDIMENT CONTROL PERMIT NO. _____	
MCDP APPROVAL OF THIS PLAN SHALL EXPIRE ONE YEAR FROM THE DATE OF APPROVAL UNLESS THE PERMIT HAS BEEN EXTENDED	

<b>FRANKLIN AVENUE SIDEWALK</b>	
<b>STORMWATER MANAGEMENT NOTES</b>	
SCALE : AS SHOWN	<b>SWM-08</b>
Project No. : TBD	63 of 109



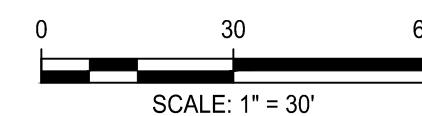
## MAINTENANCE OF TRAFFIC - GENERAL NOTES

1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH THE GENERAL NOTES AND STANDARDS PROVIDED IN CATEGORY "1" OF THE LATEST EDITION OF THE MDT SHA BOOK OF STANDARDS FOR HIGHWAY AND INCIDENTAL STRUCTURES, THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES - 2011 EDITION (MD MUTCD) AND SUBSEQUENT REVISION ADOPTED BY THE STATE OF MARYLAND, AND THE MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION MCDOT STANDARDS SHALL GOVERN OVER THIS MAINTENANCE OF TRAFFIC PLANS.
2. PRIOR TO STARTING ANY LAND DISTURBING ACTIVITIES, THE CONTRACTOR SHALL FIELDMARK THE LIMITS OF DISTURBANCE.
3. PRIOR TO BEGINNING WORK OR NEW CONSTRUCTION STAGE, THE CONTRACTOR SHALL REFER TO THE EROSION AND SEDIMENT CONTROL SHEETS FOR THE REQUIRED EROSION AND SEDIMENT CONTROL MEASURES TO BE INSTALLED.
4. THE CONTRACTOR IS RESPONSIBLE FOR THE EXPEDITING THE MOVEMENT OF TRAFFIC DURING CONSTRUCTION.
5. ALL STANDARD REGULATORY AND WARNING SIGNS USED FOR MAINTENANCE OF TRAFFIC SHALL CONFORM TO THE MARYLAND MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES - 2011 EDITION (MD MUTCD - 2011) AS WELL AS THE MARYLAND STATE HIGHWAY ADMINISTRATION STANDARD SIGN BOOK - STANDARD SIGNS - 2009 REVISION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR FOLLOWING THE LATEST EDITIONS AND SUPPLEMENTS OF THE MUTCD.
6. THE MAINTENANCE OF TRAFFIC PLAN SHALL UTILIZE THE GENERAL NOTES STANDARD NOS. MD 104.00-01 TO MD 104.00-18, MD 104.01-01 TO MD 104.01-81, MD 104.02-02, MD 104.02-06, MD 104.02-10 AND MD 104.02-14
7. FOR INFORMATION ON CHANNELIZING DEVICES, REFER TO STANDARD NOS. MD 104.01-30B AND MD 104.01-30D
8. FOR INFORMATION ON STAGED ROADWAY CONSTRUCTION, REFER TO STANDARD NO. MD 104.01-28.
9. ALL TRAVEL LANES SHALL BE A MINIMUM WIDTH OF 11 FT.
10. ALL EXCAVATION WHICH RESULTS IN A PAVEMENT EDGE DROP-OFF SHALL BE IN ACCORDANCE WITH STANDARD NOS. MD 104.06-15 TO MD 104.06-19. TEMPORARY GRADED AGGREGATE BASE COARSE AND HMA FOR MOT SHALL BE USED AS BACKFILL TO SATISFY THE PAVEMENT EDGE DROP-OFF STANDARDS.
11. EXCAVATIONS SHALL BE BACKFILLED WITH GRADED AGGREGATE BAE PRIOR TO THE END OF THE WORK DAY IN CONFORMANCE WITH STANDARD NO. MD 104.01-28.
12. NO WORK IS TO BEGIN UNTIL ALL ADVANCE WARNING SIGNS, CHANNELIZATION DEVICES AND PAVEMENT MARKING ARE OPERATIONAL.
13. ADVANCE WARNING SIGNS SHALL BE INSTALLED AT THE MINIMUM SPACING OF 200 FEET TO AN EXISTING SIGN, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
14. SIGNS USED FOR THE TEMPORARY TRAFFIC CONTROL THAT ARE NOT APPLICABLE FOR THE PARTICULAR CONSTRUCTION PHASE SHALL BE REMOVED OR COMPLETELY COVERED WITH AN OPAQUE MATERIAL.
15. EXISTING SIGNS THAT ARE LOCATED IN THE WORK AREA NEED TO EITHER REMAIN IN PLACE OR BE RELOCATED AS DIRECTED BY THE ENGINEER.
16. ALL TEMPORARY SIGNAGE AND DEVICES USED DURING LANE CLOSURES SHALL BE REMOVED OR COVERED WHEN LANE CLOSURES ARE PROHIBITED.
17. DURING EACH CONSTRUCTION PHASE THE CONTRACTOR SHALL MAINTAIN ALL APPLICABLE ROUTE MARKERS AND REMOVE OR COVER ANY NON APPLICABLE SIGNS.
18. PAVEMENT MARKINGS NO LONGER APPLICABLE FOR A PARTICULAR PHASE SHALL BE REMOVED OR COVERED AS DIRECTED BY THE ENGINEER.
19. PERMANENT MARKINGS THAT ARE DAMAGED SHALL BE REPAIRED AT THE DISCRETION OF THE ENGINEER.
20. PORTABLE VARIABLE MESSAGE SIGNS AND/OR ARROW PANELS SHALL BE USED AS DIRECTED BY THE CONSTRUCTION PROJECT ENGINEER.

21. STORAGE OF CONSTRUCTION EQUIPMENT AND MATERIAL SHALL BE LOCATED OFF THE TRAVEL LANES AND BEHIND PROTECTION AT ALL TIMES.
22. NO CONSTRUCTION VEHICLES SHALL ENTER THE RESIDENTIAL STREETS OR ROADWAYS ADJACENT TO THE WORK ZONE.
23. WHERE TWO ENTRANCES EXISTS FOR ONE PROPERTY, CONSTRUCTION SHALL BE SEQUENCED SO THAT ONLY ONE ENTRANCE WILL BE DISTURBED AT ANY GIVEN TIME. WHEN ONLY ONE ENTRANCE EXIST FOR A PROPERTY, WHEN NECESSARY, THE CONTRACTOR SHALL PROVIDE FLAGGERS TO CONTROL ENTRANCE CONSTRUCTION.
24. TRAFFIC CONTROL DEVICES AND OTHER CONSTRUCTION MATERIALS SHALL NOT INTRUDE THE USABLE WIDTH OF THE SIDEWALK, TEMPORARY PATHWAY, OR OTHER PEDESTRIAN FACILITY.
25. WHERE A SIDEWALK IS CLOSED DURING A TEMPORARY CONSTRUCTION, THE CONTRACTOR SHALL INSTALL A BARRIER ACROSS THE FULL WIDTH OF THE SIDEWALK APPROACHING THE CLOSURE. THIS BARRIER SHALL BE DETECTABLE BY A VISUALLY IMPAIRED INDIVIDUAL TRAVELLING WITH THE AID OF A CANE.
26. WHERE SIDEWALK INTERSECT A TEMPORARY CONSTRUCTION ACCESS, THE CONTRACTOR SHALL PROVIDE AN ADA COMPLIANT PEDESTRIAN CROSSING THROUGH THE TEMPORARY CONSTRUCTION ACCESS.
27. THE CONTRACTOR SHALL FOLLOW STANDARD NOS. MD 104.06-09C TO MAINTAIN PEDESTRIAN ACCESS THROUGH THE SITE AND SHALL DO SIDEWALK IMPROVEMENTS TO ONE SIDE OF THE ROAD AT A TIME.
28. THE CONTRACTOR SHALL MAINTAIN ACCESS/EGRESS FOR ALL EMERGENCY VEHICLES.

## SEQUENCE OF CONSTRUCTION

1. INSTALL ADVANCE WARNING SIGNS AND TRAFFIC CONTROL DEVICES LIKE CHANNELIZING DEVICES AS SHOWN ON PLANS MT-02 TO MT-12 IN ACCORDANCE WITH MUTCD, SHA AND MCDOT STANDARD NOS. TCP-105.01 TO TCP-105.04 (INTERSECTION FLAGGING OPERATION).
2. INSTALL SEDIMENT AND EROSION CONTROL DEVICES SPECIFIED FOR EACH STAGE IN THE EROSION AND SEDIMENT CONTROL PLANS.
3. PERFORM SIDEWALK WORK, DRIVEWAYS, INSTALL OR REPLACE CURB AND GUTTER WITH FULL DEPTH PAVEMENT AS SHOWN ON TYPICAL SECTIONS DRAWING TS-01. PERFORM STORM DRAINAGE WORK ALONG WITH SWM STRUCTURES AS SHOWN ON STORM DRAIN AND SWM PLANS.
4. CONTRACTOR SHALL FOLLOW CONSTRUCTION STAGING PLANS AS SHOWN ON DRAWINGS MT-02 TO MT-12 (STAGE 1 TO STAGE 11).



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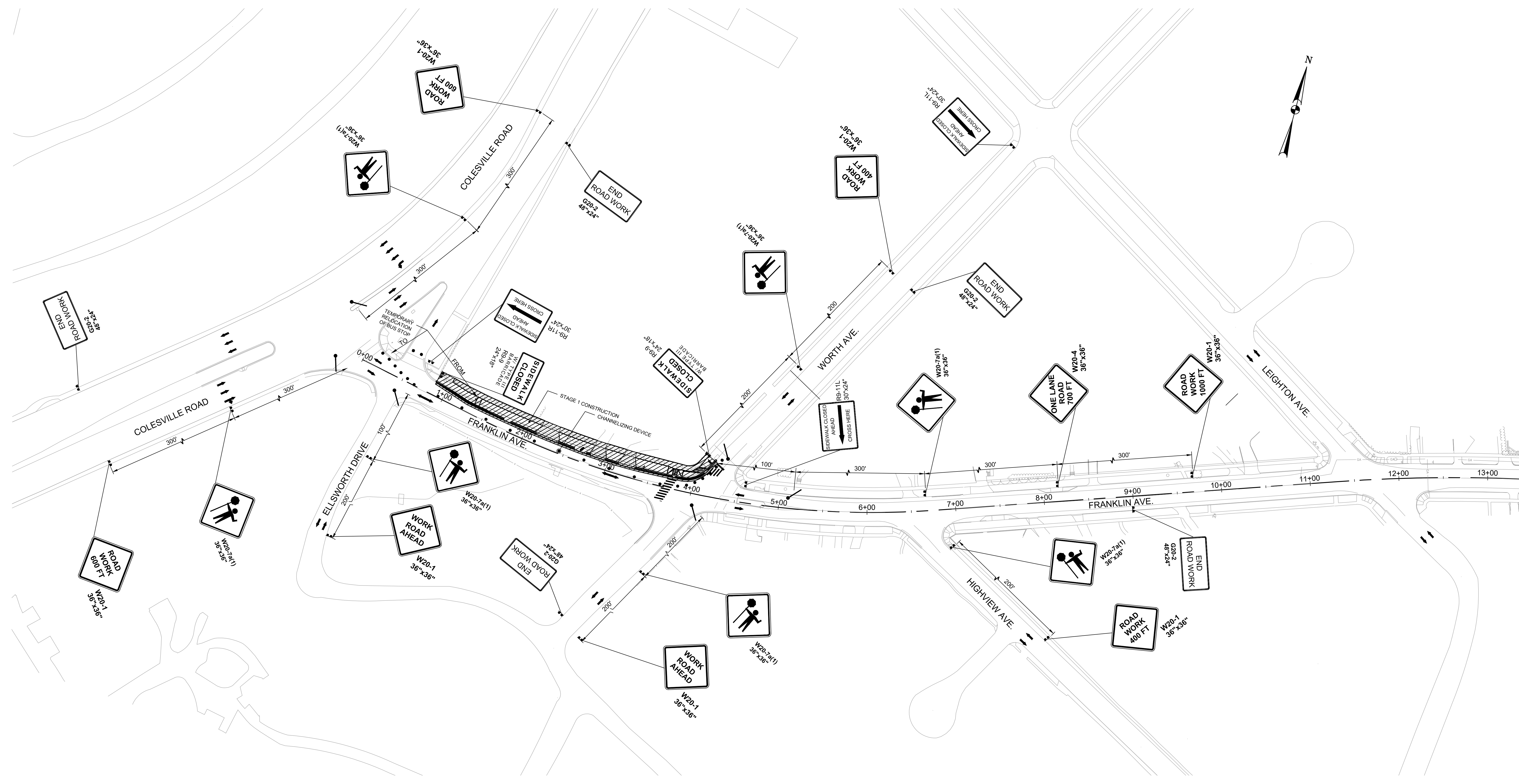
MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND	
RECOMMENDED FOR APPROVAL	
Chief, Design Section	_____ Date _____
APPROVED	
Chief, Division of Transportation Engineering	_____ Date _____
Designed by: _____	Drawn by: _____ Checked by: _____

### FRANKLIN AVENUE SIDEWALK MAINTENANCE OF TRAFFIC GENERAL NOTES

SCALE: N/A

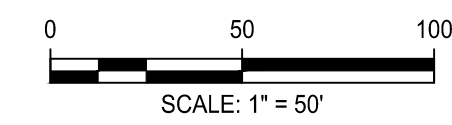
**MT - 01**





**MOT LEGEND:**

- WORK ZONE
- CHANNELIZING DEVICE (DRUMS & CONES)
- SIGN SUPPORT & POST
- TYPE III BARRICADE
- FLAGGER
- DIRECTION OF TRAFFIC DURING CONSTRUCTION



**Engineers, Architects  
Development Consultants**  
 2099 Gaither Road, Rockville, MD 20850  
 Phone: 301-586-3939 Fax: 301-946-7174  
 www.sheladia.com

NO.	REVISION	DATE	BY

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ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL \_\_\_\_\_ Date \_\_\_\_\_

Chief, Design Section

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Chief, Division of Transportation Engineering

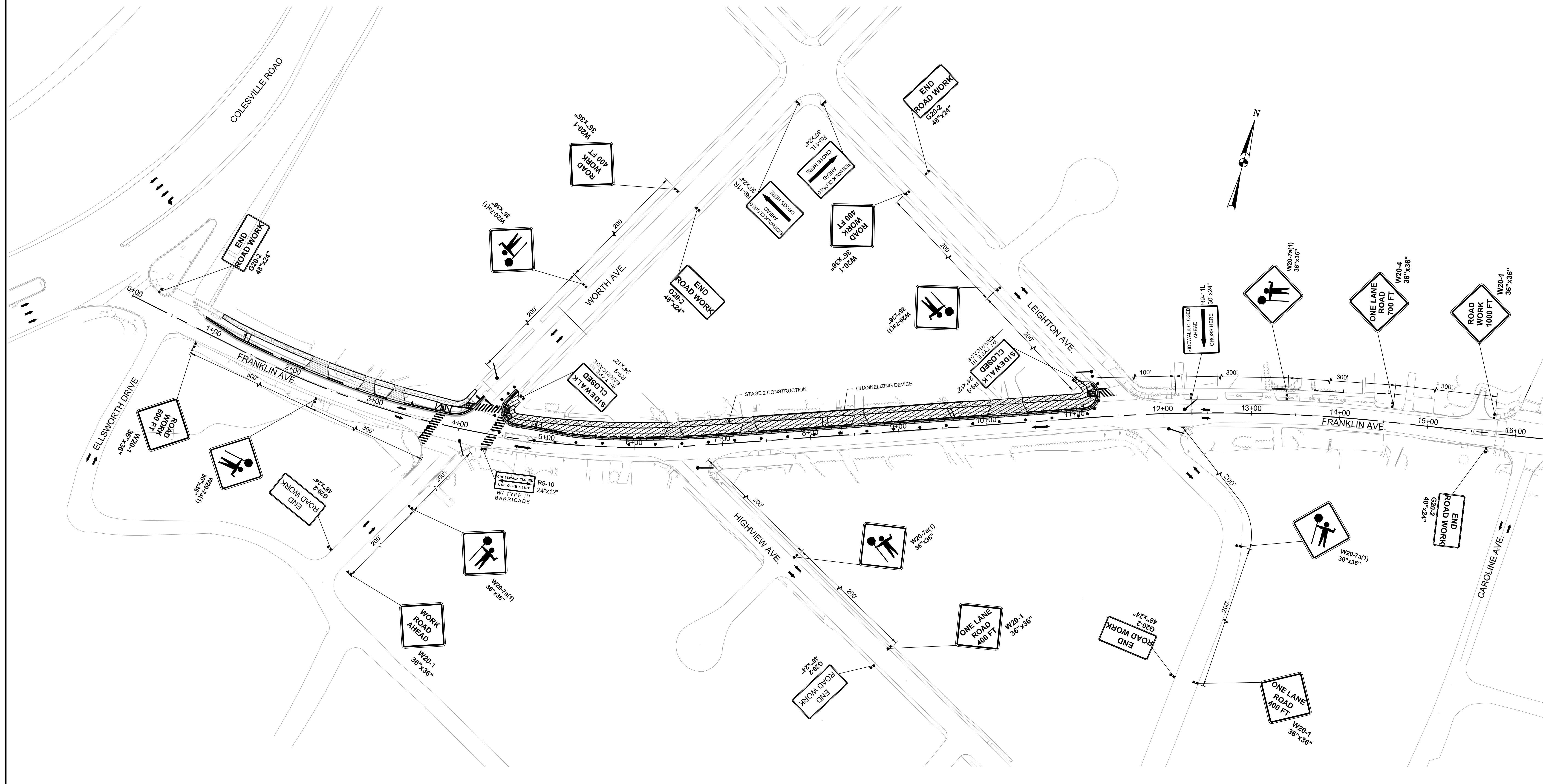
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**FRANKLIN AVENUE  
SIDEWALK  
MAINTENANCE OF TRAFFIC  
STAGE - 1**

SCALE: 1" = 50'

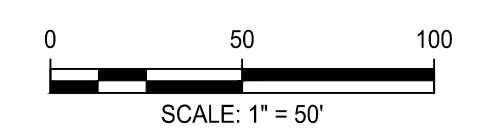
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Project No.: TBD 65 of 109



**MOT LEGEND:**

- WORK ZONE
- CHANNELIZING DEVICE (DRUMS & CONES)
- SIGN SUPPORT & POST
- TYPE III BARRICADE
- FLAGGER
- DIRECTION OF TRAFFIC DURING CONSTRUCTION



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ROCKVILLE, MARYLAND

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Chief, Design Section

APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering

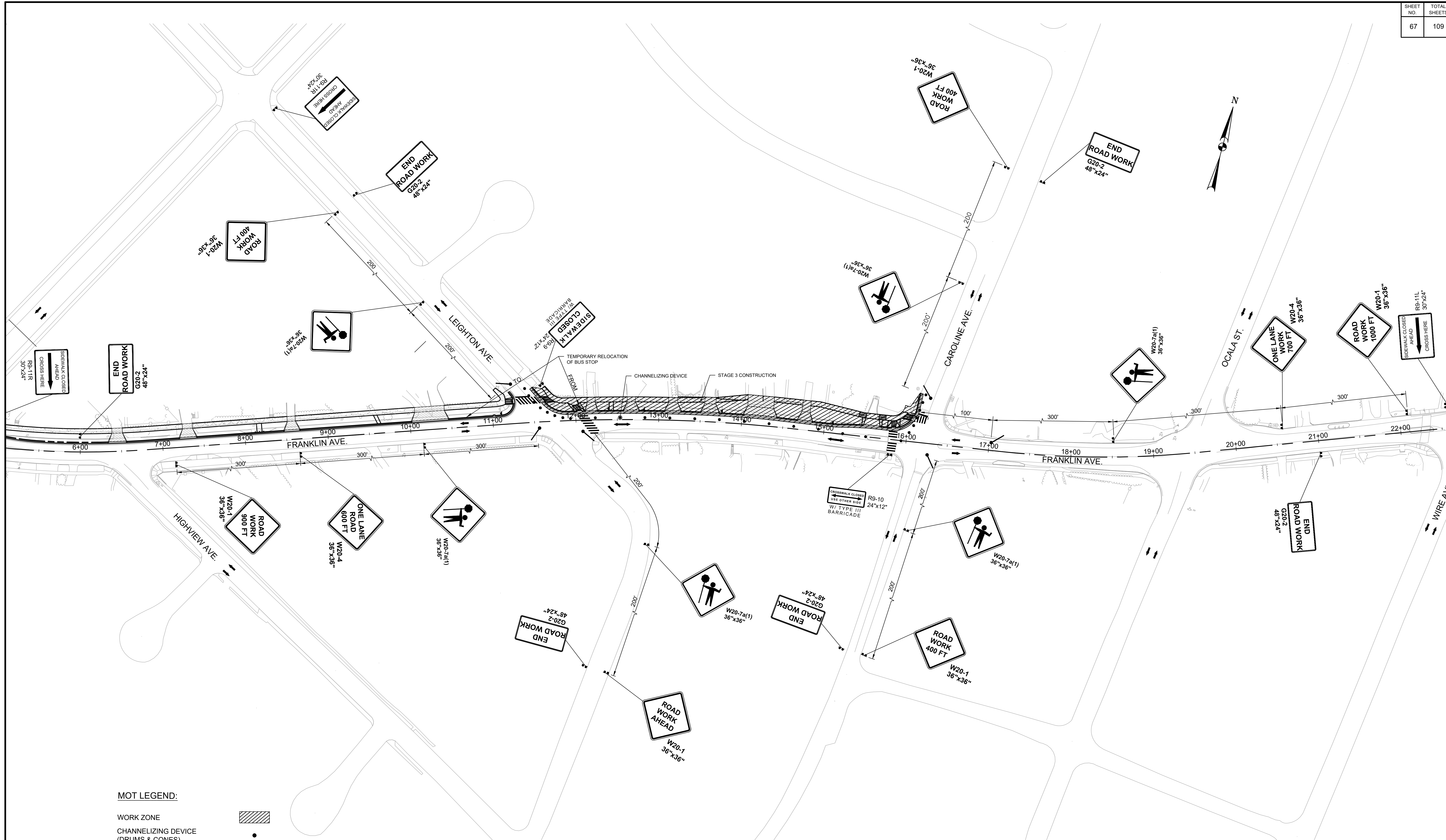
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**FRANKLIN AVENUE  
SIDEWALK  
MAINTENANCE OF TRAFFIC  
STAGE - 2**

SCALE: 1" = 50'

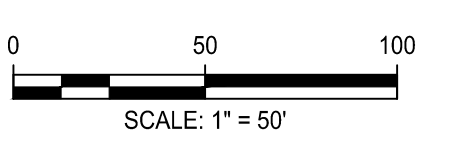
Project No.: TBD 66 of 109

MT - 03



**MOT LEGEND:**

- WORK ZONE
- CHANNELIZING DEVICE (DRUMS & CONES)
- SIGN SUPPORT & POST
- TYPE III BARRICADE
- FLAGGER
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Chief, Design Section

Chief, Division of Transportation Engineering

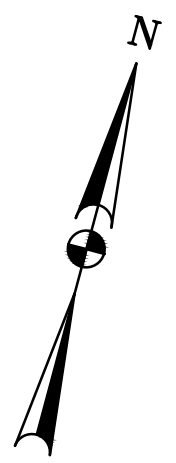
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**FRANKLIN AVENUE  
SIDEWALK  
MAINTENANCE OF TRAFFIC  
STAGE - 3**

SCALE: 1" = 50'

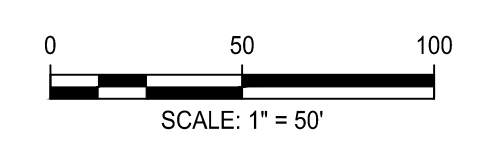
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Project No.: TBD 67 of 109



**MOT LEGEND:**

- WORK ZONE
- CHANNELIZING DEVICE (DRUMS & CONES)
- SIGN SUPPORT & POST
- TYPE III BARRICADE
- FLAGGER
- DIRECTION OF TRAFFIC DURING CONSTRUCTION



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MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL \_\_\_\_\_ Date \_\_\_\_\_

Chief, Design Section

APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

**FRANKLIN AVENUE  
SIDEWALK  
MAINTENANCE OF TRAFFIC  
STAGE - 4**

SCALE: 1" = 50'

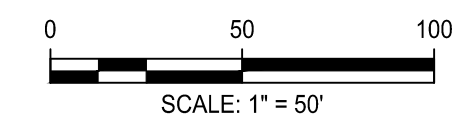
MT - 05

Project No.: TBD 68 of 109



**MOT LEGEND:**

- WORK ZONE
- CHANNELIZING DEVICE (DRUMS & CONES)
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND	
RECOMMENDED FOR APPROVAL	
Chief, Design Section	
APPROVED	
Chief, Division of Transportation Engineering	
Designed by: _____	Checked by: _____
Drawn by: _____	Date: _____

## FRANKLIN AVENUE

### SIDEWALK

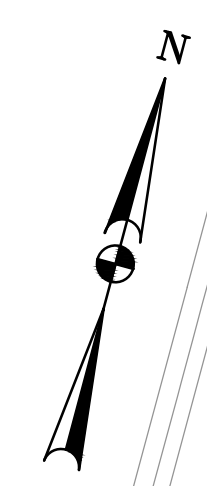
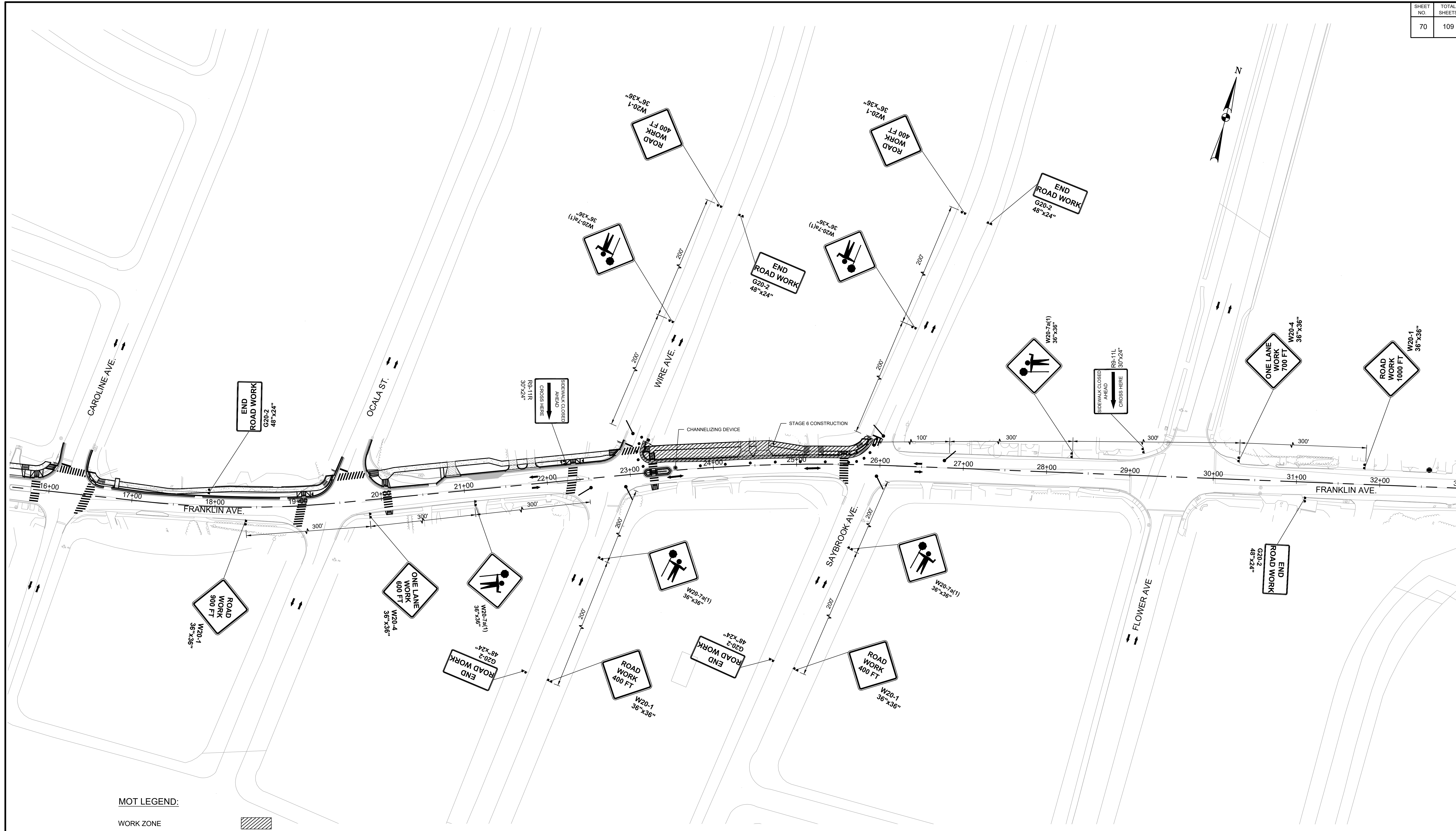
#### MAINTENANCE OF TRAFFIC

#### STAGE - 5

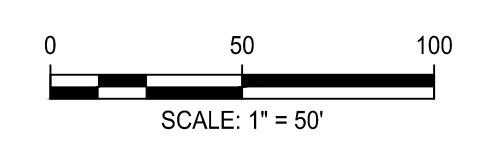
SCALE: 1" = 50'

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Project No.: TBD of 109



- MOT LEGEND:**
- WORK ZONE
  - CHANNELIZING DEVICE (DRUMS & CONES)
  - SIGN SUPPORT & POST
  - TYPE III BARRICADE
  - FLAGGER
  - DIRECTION OF TRAFFIC DURING CONSTRUCTION



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DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

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Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_

APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

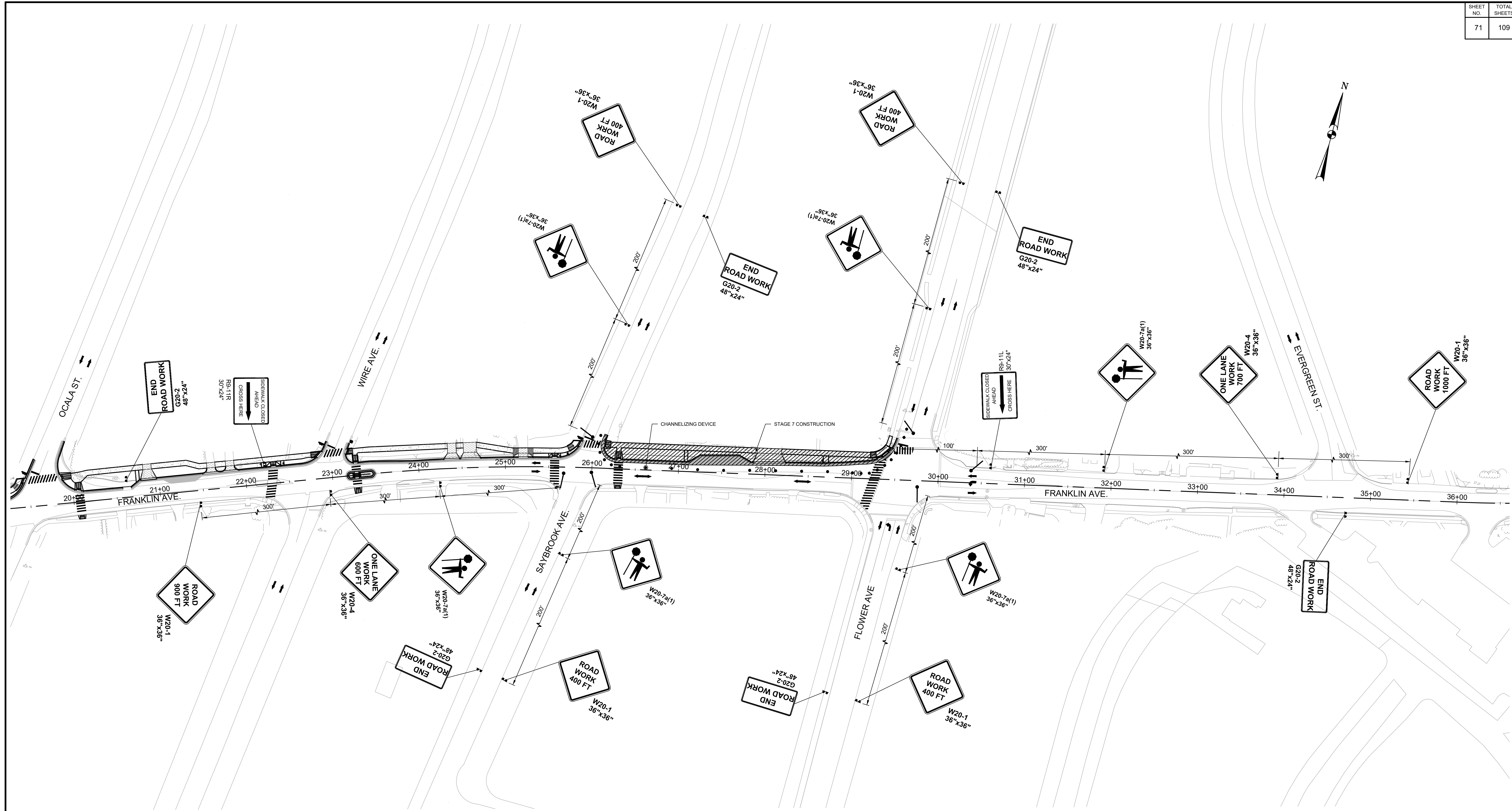
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**FRANKLIN AVENUE  
SIDEWALK  
MAINTENANCE OF TRAFFIC  
STAGE - 6**

SCALE: 1" = 50'

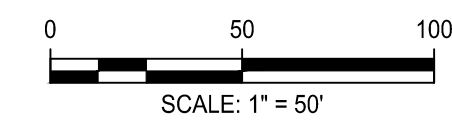
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**MOT LEGEND:**

- WORK ZONE
- CHANNELIZING DEVICE (DRUMS & CONES)
- SIGN SUPPORT & POST
- TYPE III BARRICADE
- FLAGGER
- DIRECTION OF TRAFFIC DURING CONSTRUCTION



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NO.	REVISION	DATE	BY

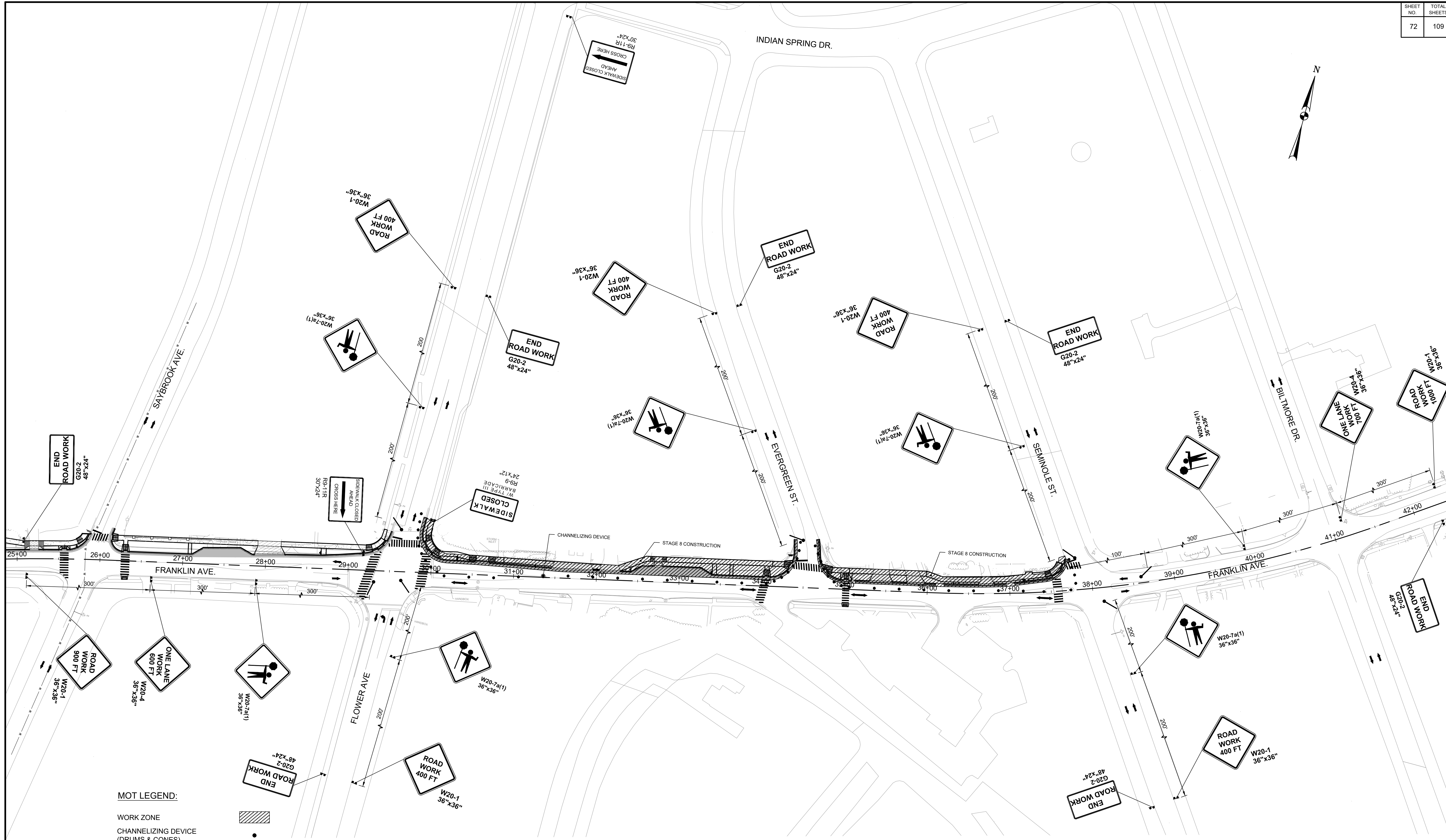
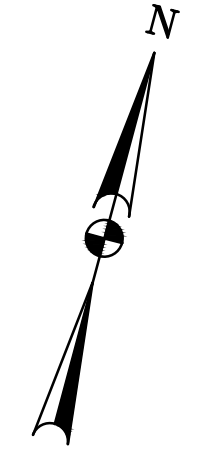
MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND	
RECOMMENDED FOR APPROVAL	
Chief, Design Section	
APPROVED	
Chief, Division of Transportation Engineering	
Designed by: _____	Checked by: _____
Drawn by: _____	Date: _____

## FRANKLIN AVENUE SIDEWALK MAINTENANCE OF TRAFFIC STAGE - 7

SCALE: 1" = 50'

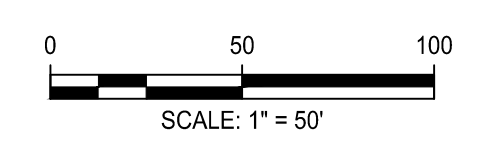
Project No.: TBD of 109

MT - 08



**MOT LEGEND:**

- WORK ZONE
- CHANNELIZING DEVICE (DRUMS & CONES)
- SIGN SUPPORT & POST
- TYPE III BARRICADE
- FLAGGER
- DIRECTION OF TRAFFIC DURING CONSTRUCTION



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 ROCKVILLE, MARYLAND

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Chief, Design Section

APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

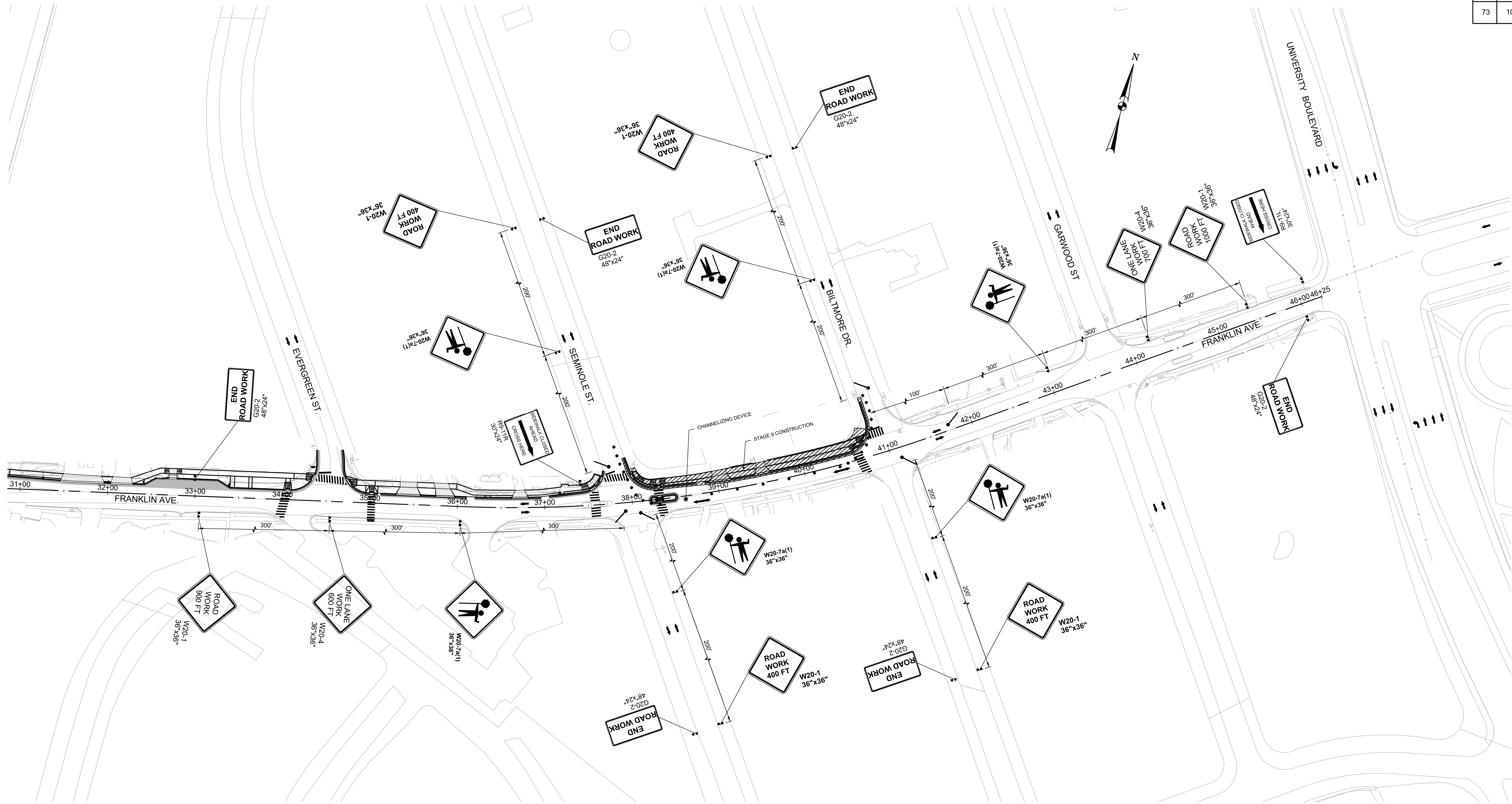
**FRANKLIN AVENUE**  
**SIDEWALK**  
 MAINTENANCE OF TRAFFIC  
 STAGE - 8

SCALE: 1" = 50'

MT - 09

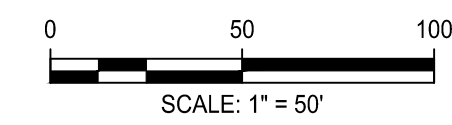
Project No.: TBD 72 of 109





**MOT LEGEND:**

- WORK ZONE
- CHANNELIZING DEVICE (DRUMS & CONES)
- SIGN SUPPORT & POST
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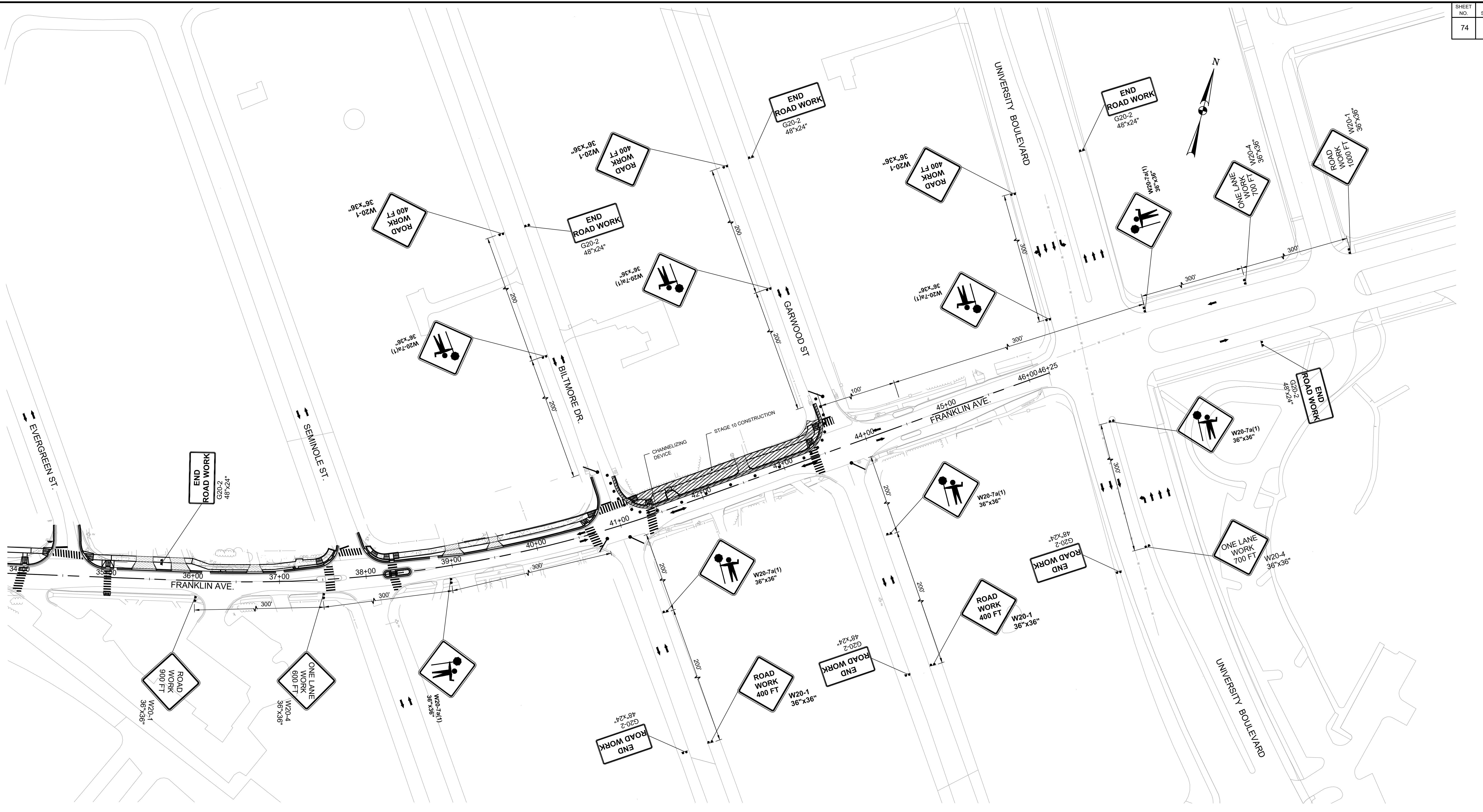
NO.	REVISION	DATE	BY

MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND	
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Chief, Design Section	
APPROVED	
Chief, Division of Transportation Engineering	
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## FRANKLIN AVENUE SIDEWALK MAINTENANCE OF TRAFFIC STAGE - 9

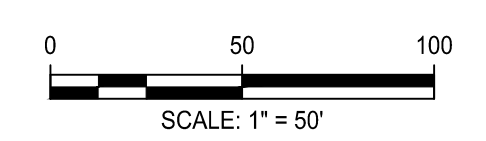
SCALE: 1" = 50'

**MT - 10**



**MOT LEGEND:**

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- CHANNELIZING DEVICE (DRUMS & CONES)
- SIGN SUPPORT & POST
- TYPE III BARRICADE
- FLAGGER
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## FRANKLIN AVENUE SIDEWALK MAINTENANCE OF TRAFFIC STAGE - 10

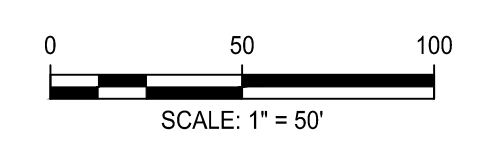
SCALE: 1" = 50'

MT - 11



**MOT LEGEND:**

- WORK ZONE
- CHANNELIZING DEVICE (DRUMS & CONES)
- SIGN SUPPORT & POST
- TYPE III BARRICADE
- FLAGGER
- DIRECTION OF TRAFFIC DURING CONSTRUCTION



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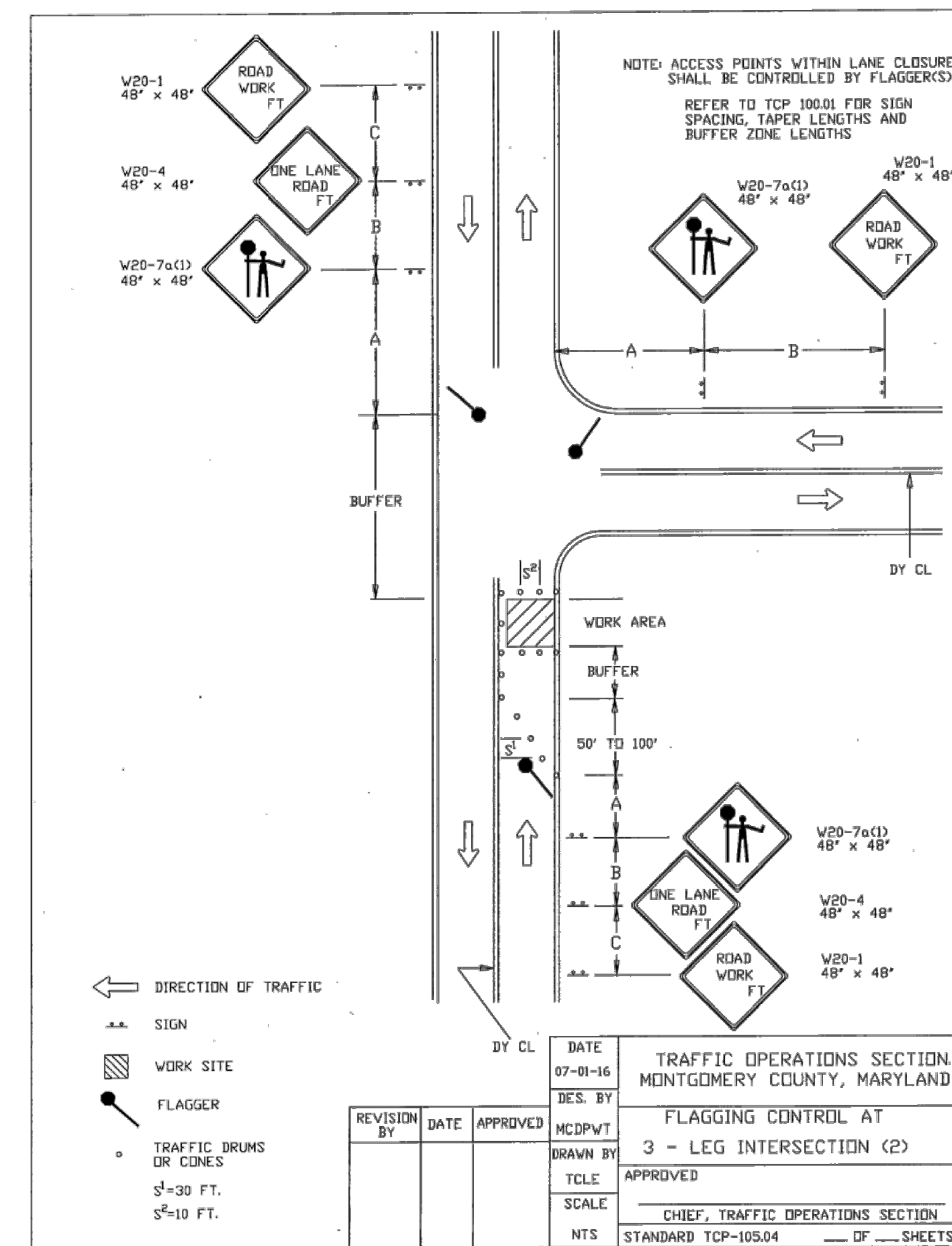
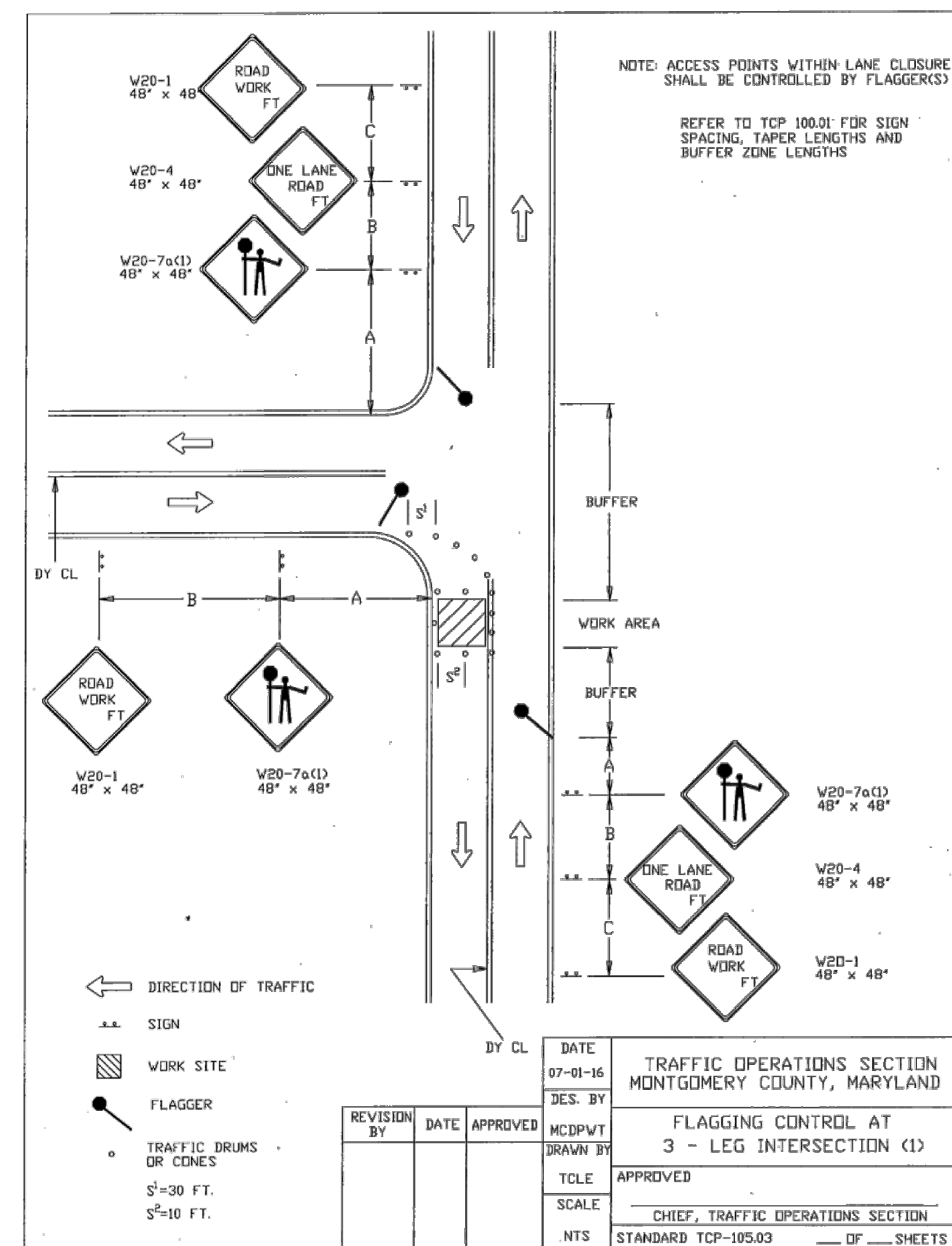
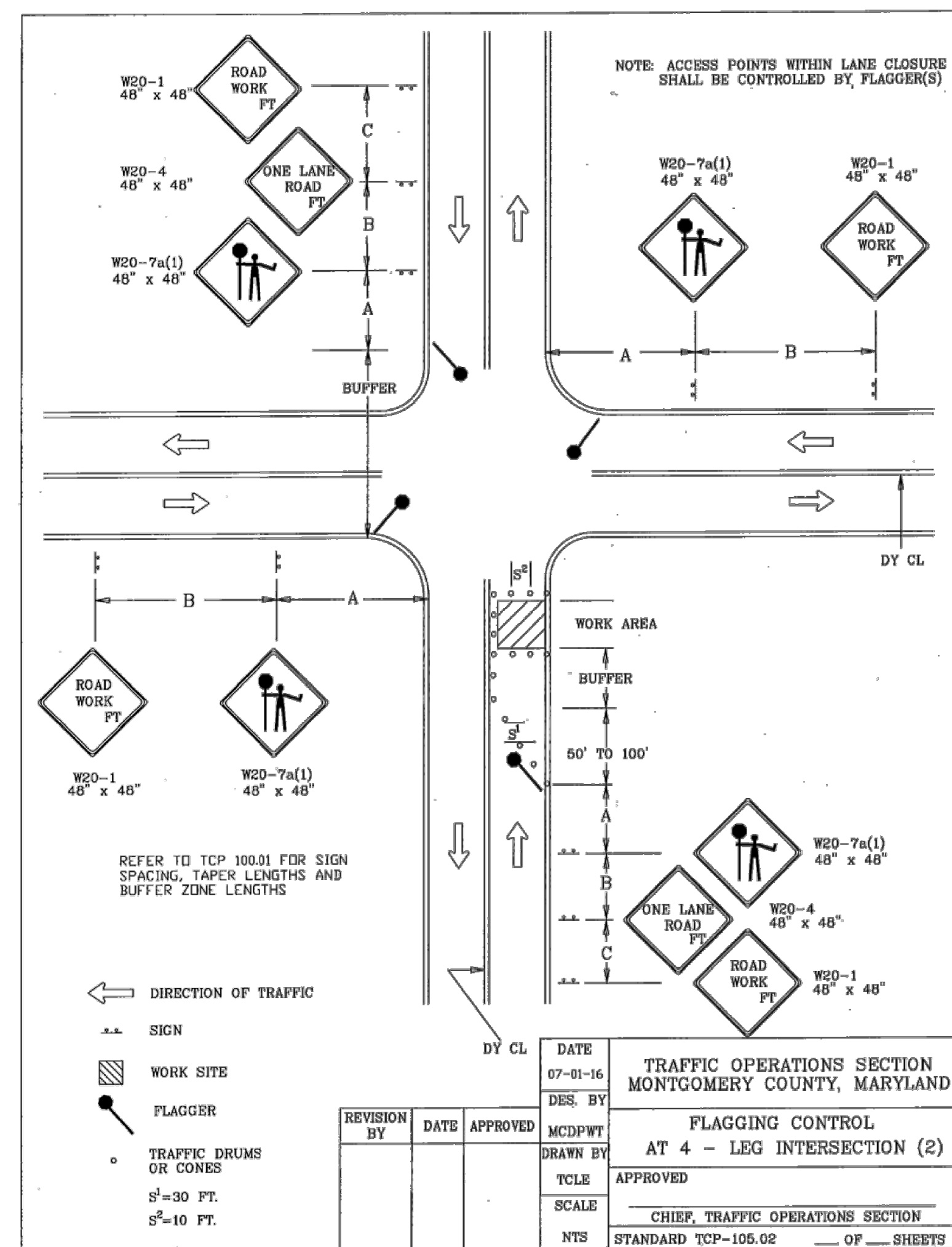
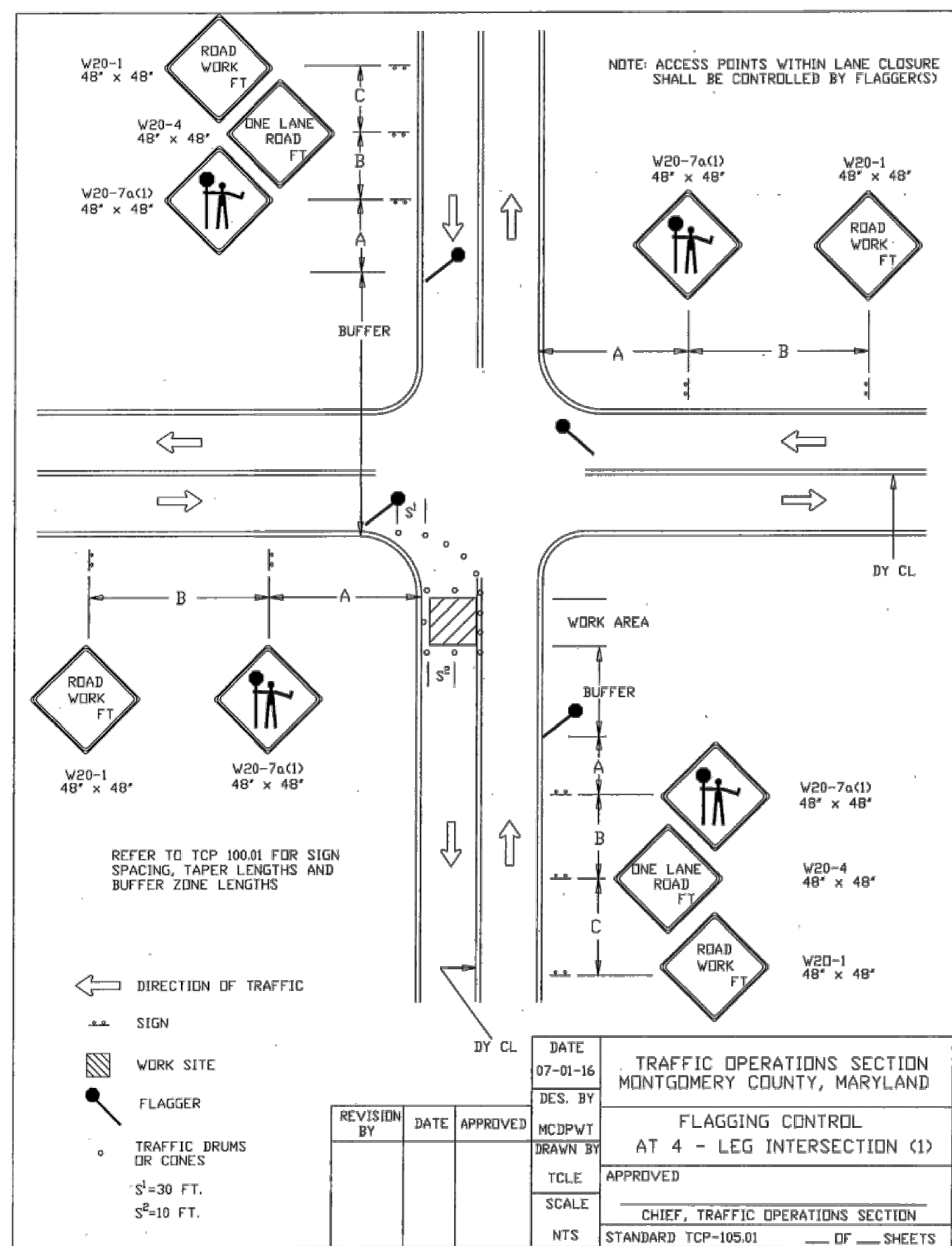
NO.	REVISION	DATE	BY

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Chief, Design Section	_____ Date _____
APPROVED	
Chief, Division of Transportation Engineering	_____ Date _____
Designed by: _____	Drawn by: _____
Checked by: _____	

## FRANKLIN AVENUE SIDEWALK MAINTENANCE OF TRAFFIC STAGE - 11

SCALE: 1" = 50'

MT - 12



NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
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 APPROVED

Chief, Division of Transportation \_\_\_\_\_ Date \_\_\_\_\_

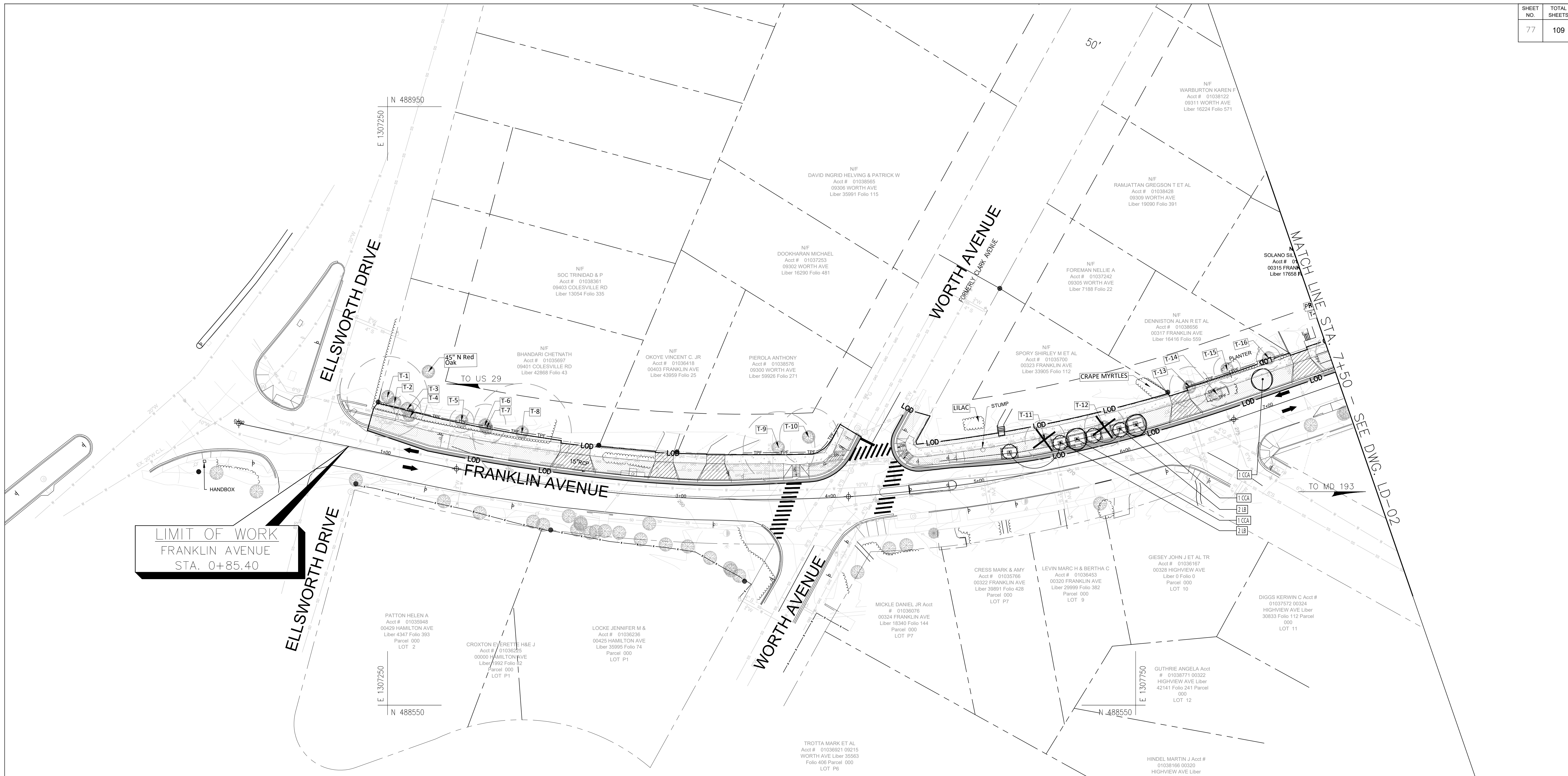
Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

**FRANKLIN AVENUE  
 SIDEWALK  
 MAINTENANCE OF TRAFFIC  
 STANDARD DETAILS**

SCALE: N/A

MT - 13

Project No.: TBD 76 of 109

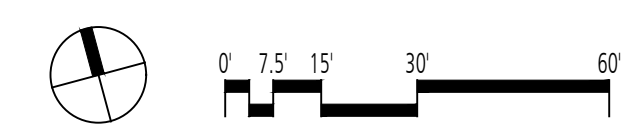
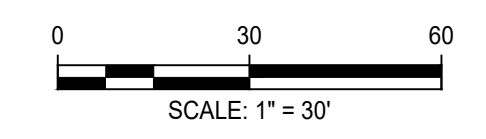


LIMIT OF WORK  
FRANKLIN AVENUE  
STA. 0+85.40

PLANT SCHEDULE (THIS SHEET ONLY)						
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
<b>UNDERSTORY TREES</b>						
CCA	3	<i>Cercis canadensis</i>	Eastern Redbud	2" Cal.	B&B	
<b>SHRUBS</b>						
LB	4	<i>Lindera benzoin var. benzoin</i>	Spicebush	36" Ht.	#7 CONT.	
<b>MISC. ITEMS/SEED MIXES</b>						
SOD	575	Turfgrass Sod Establishment (SY)				
TPF	450	Tree Protection Fence (LF)				

LEGEND:

- UNDERSTORY TREE
- SHRUB
- STORMWATER PLANTING
- LIMIT OF DISTURBANCE
- TREE PROTECTION FENCE
- EXISTING TREE CRITICAL ROOT ZONE
- EXISTING TREE TO BE REMOVED
- TURFGRASS SOD



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RECOMMENDED FOR APPROVAL \_\_\_\_\_ Date \_\_\_\_\_

Chief, Design Section

APPROVED \_\_\_\_\_ Date \_\_\_\_\_

Chief, Division of Transportation Engineering

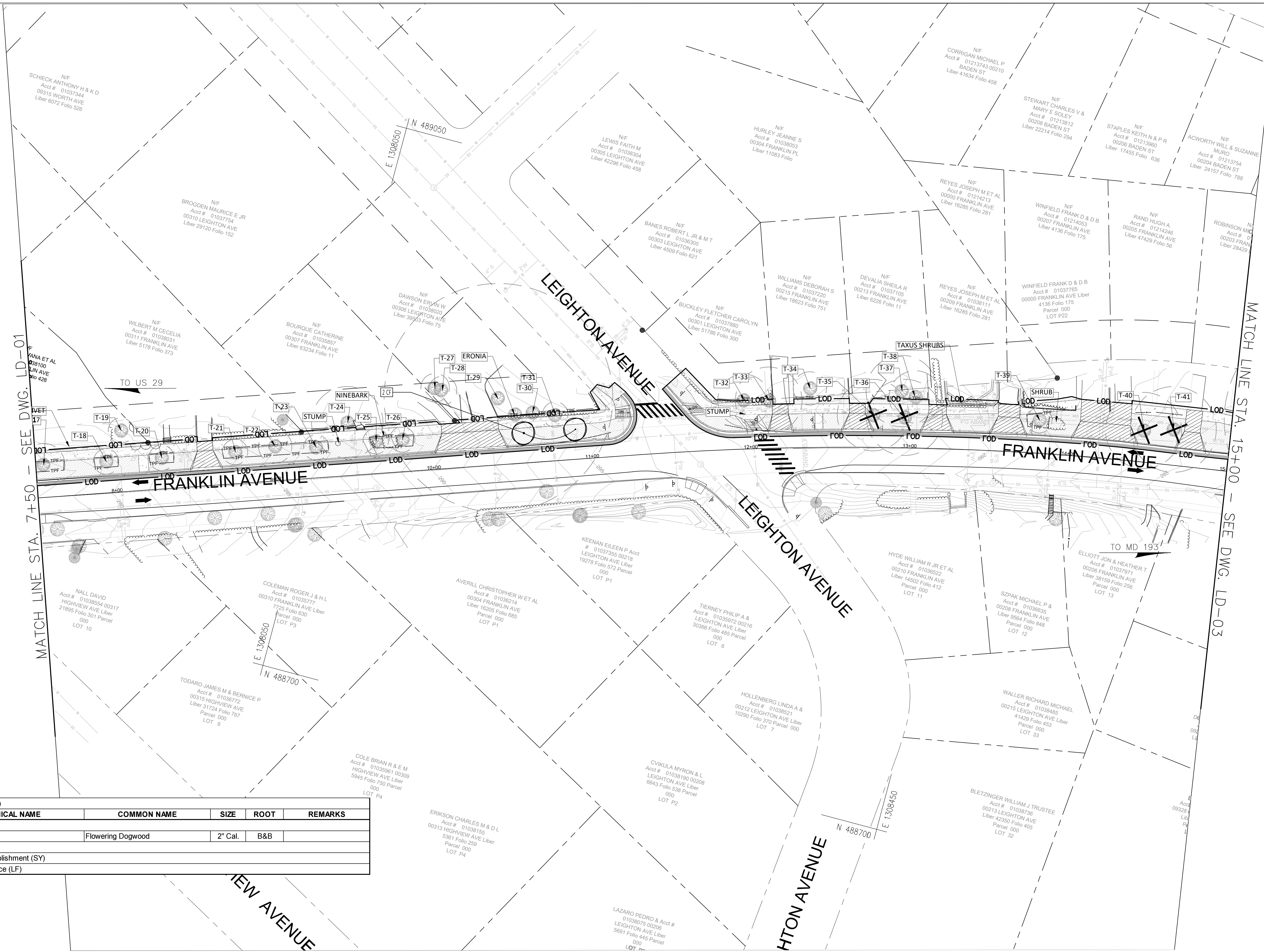
Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

FRANKLIN AVENUE  
SIDEWALK  
LANDSCAPE PLAN

SCALE: 1" = 30'

LD - 01

Project No.: TBD 77 of 109

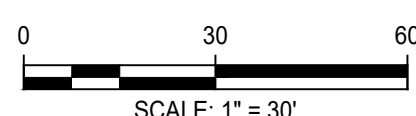


MATCH LINE STA. 7+50 - SEE DWG. LD-01

MATCH LINE STA. 15+00 - SEE DWG. LD-03

PLANT SCHEDULE (THIS SHEET ONLY)						
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
<b>UNDERSTORY TREES</b>						
CF	2	<i>Cornus florida</i>	Flowering Dogwood	2" Cal.	B&B	
<b>MISC. ITEMS/SEED MIXES</b>						
SOD	812	Turfgrass Sod Establishment (SY)				
TPF	628	Tree Protection Fence (LF)				

- LEGEND:**
- UNDERSTORY TREE
  - SHRUB
  - STORMWATER PLANTING
  - LOD - LIMIT OF DISTURBANCE
  - TPF - TREE PROTECTION FENCE
  - EXISTING TREE CRITICAL ROOT ZONE
  - EXISTING TREE TO BE REMOVED
  - TURFGRASS SOD



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ROCKVILLE, MARYLAND

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Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_

APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

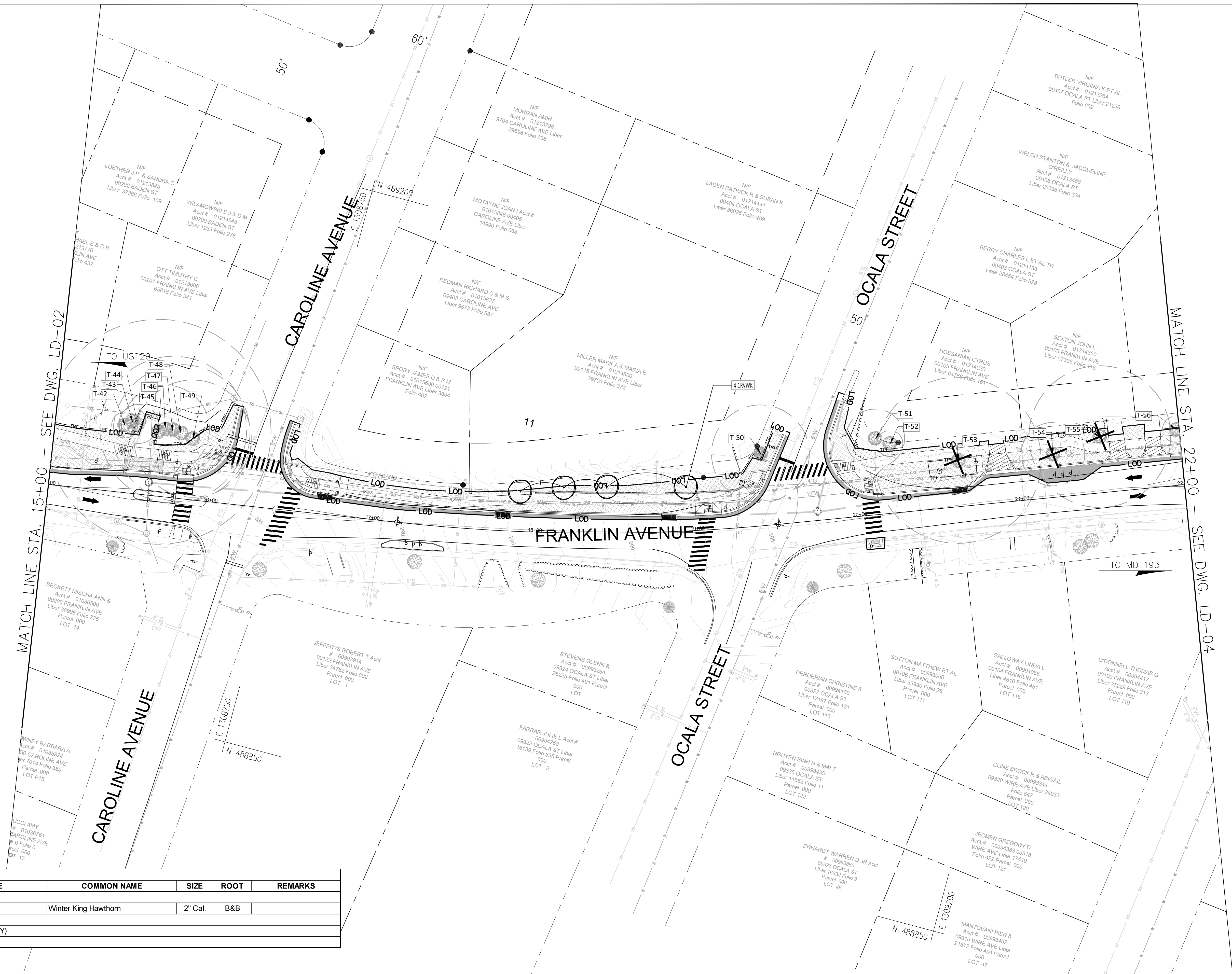
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**FRANKLIN AVENUE  
SIDEWALK  
LANDSCAPE PLAN**

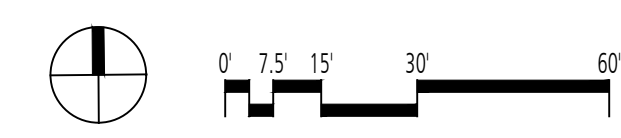
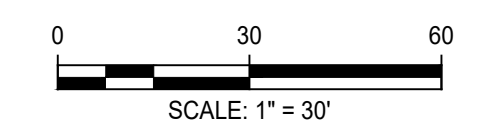
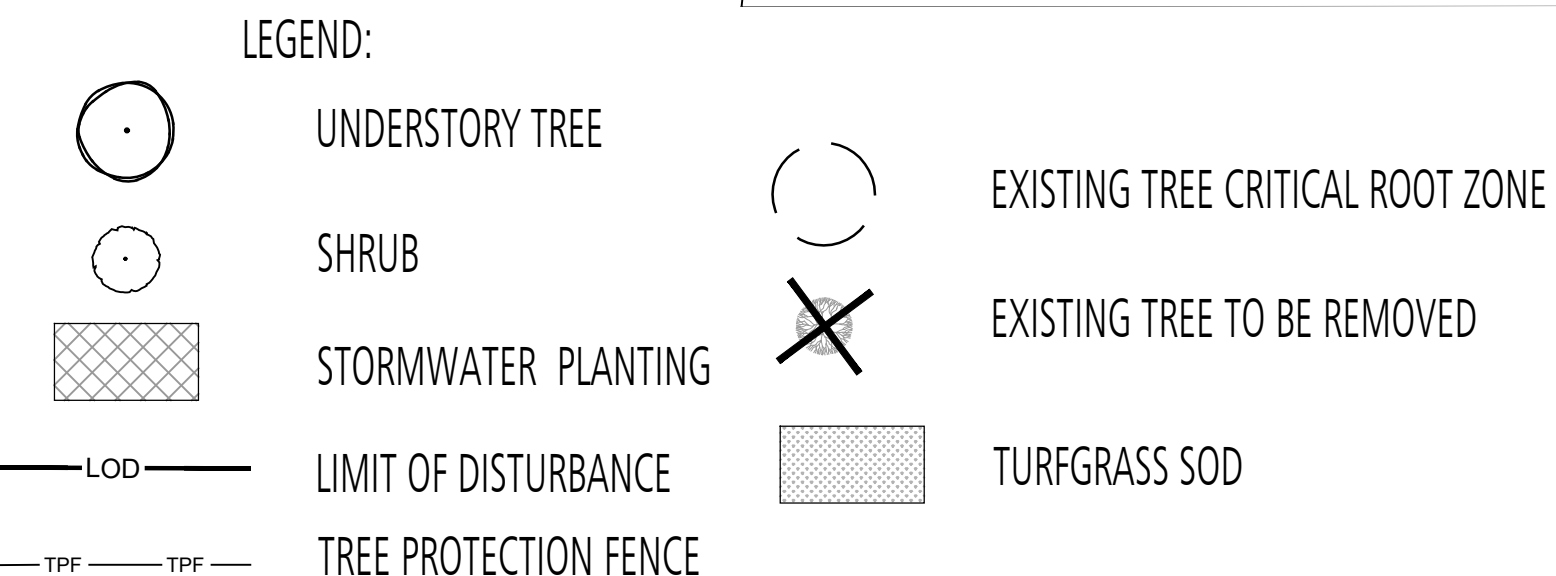
SCALE: 1" = 30'

LD - 02

Project No.: TBD 78 of 109



PLANT SCHEDULE (THIS SHEET ONLY)						
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
<b>UNDERSTORY TREES</b>						
CRWVK	4	<i>Crataegus viridis</i> 'Winter King'	Winter King Hawthorn	2" Cal.	B&B	
<b>MISC. ITEMS/SEED MIXES</b>						
SOD	773	Turfgrass Sod Establishment (SY)				
TPF	301	Tree Protection Fence (LF)				



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Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_

APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

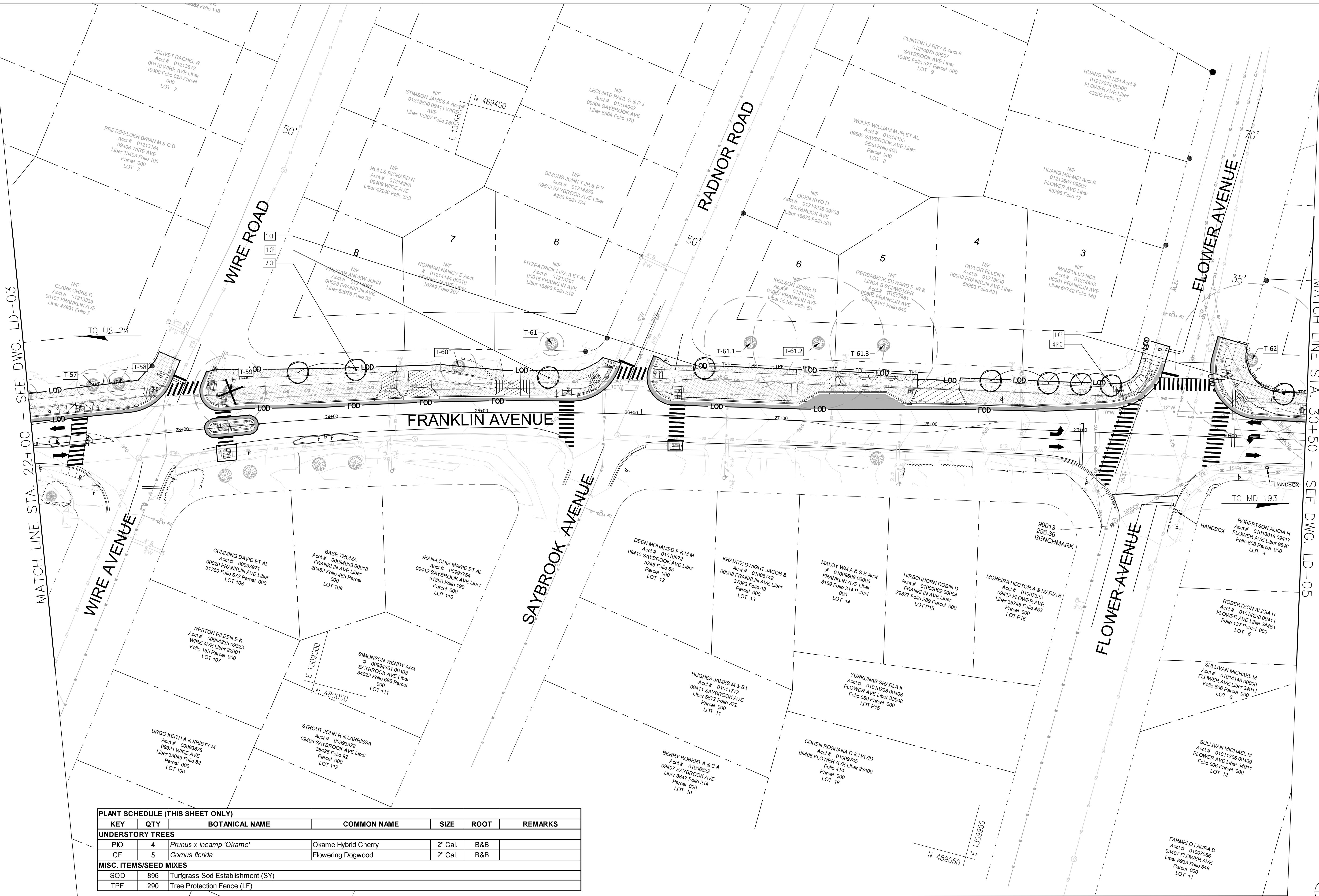
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**FRANKLIN AVENUE  
 SIDEWALK  
 LANDSCAPE PLAN**

SCALE: 1" = 30'

LD - 03

Project No.: TBD 79 of 109

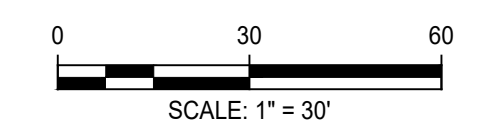


**PLANT SCHEDULE (THIS SHEET ONLY)**

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
<b>UNDERSTORY TREES</b>						
PIO	4	<i>Prunus x incamp 'Okame'</i>	Okame Hybrid Cherry	2" Cal.	B&B	
CF	5	<i>Cornus florida</i>	Flowering Dogwood	2" Cal.	B&B	
<b>MISC. ITEMS/SEED MIXES</b>						
SOD	896	Turfgrass Sod Establishment (SY)				
TPF	290	Tree Protection Fence (LF)				

**LEGEND:**

- UNDERSTORY TREE
- SHRUB
- STORMWATER PLANTING
- LOD - LIMIT OF DISTURBANCE
- TPF - TREE PROTECTION FENCE
- EXISTING TREE CRITICAL ROOT ZONE
- EXISTING TREE TO BE REMOVED
- TURFGRASS SOD



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Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

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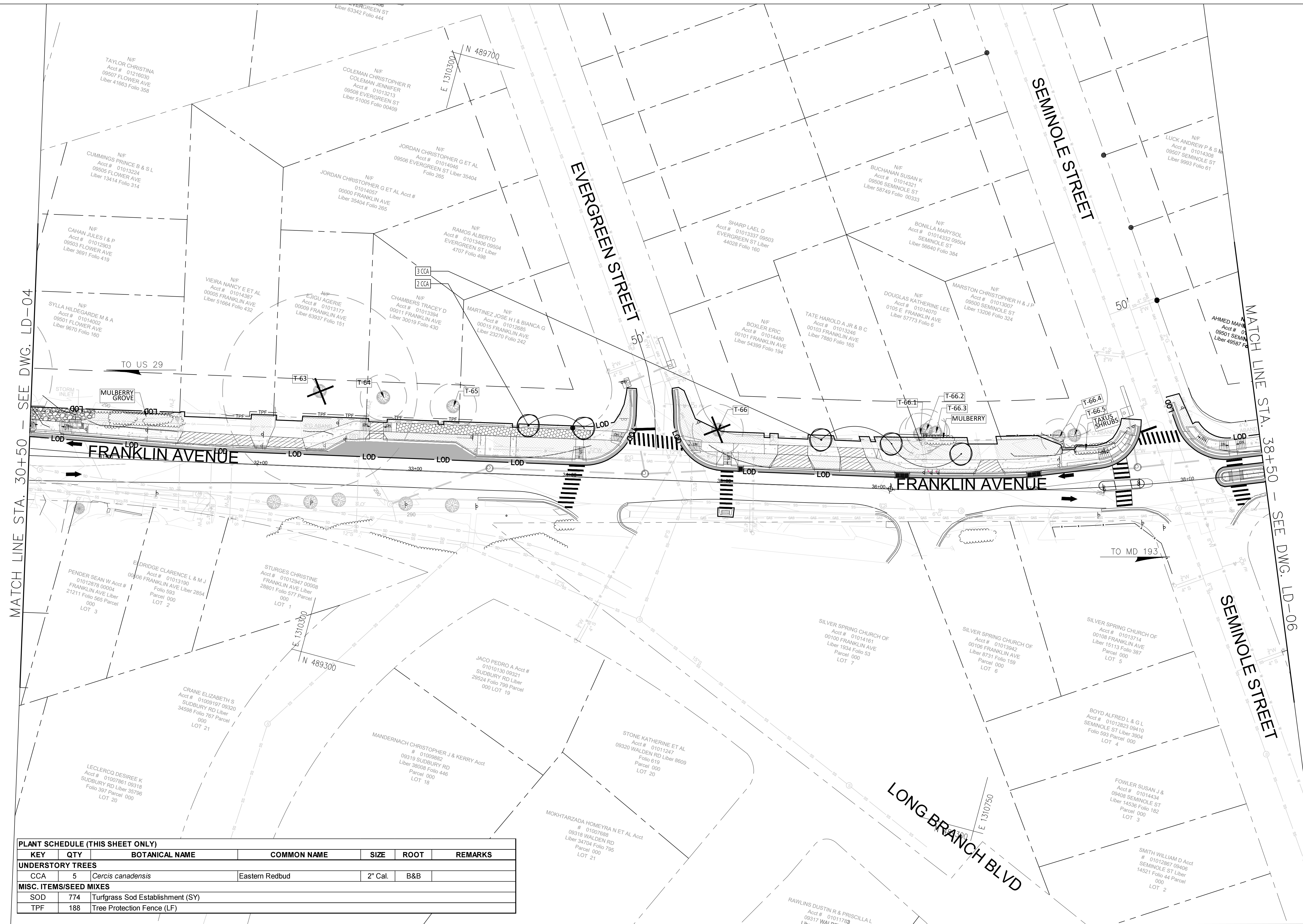
**FRANKLIN AVENUE  
 SIDEWALK  
 LANDSCAPE PLAN**

SCALE: 1" = 30'

Project No.: TBD of 109

**LD - 04**

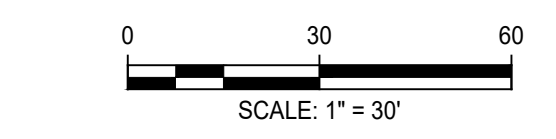




PLANT SCHEDULE (THIS SHEET ONLY)						
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
<b>UNDERSTORY TREES</b>						
CCA	5	<i>Cercis canadensis</i>	Eastern Redbud	2" Cal.	B&B	
<b>MISC. ITEMS/SEED MIXES</b>						
SOD	774	Turfgrass Sod Establishment (SY)				
TPF	188	Tree Protection Fence (LF)				

**LEGEND:**

- UNDERSTORY TREE
- SHRUB
- STORMWATER PLANTING
- LOD - LIMIT OF DISTURBANCE
- TPF - TREE PROTECTION FENCE
- EXISTING TREE CRITICAL ROOT ZONE
- EXISTING TREE TO BE REMOVED
- TURFGRASS SOD



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Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

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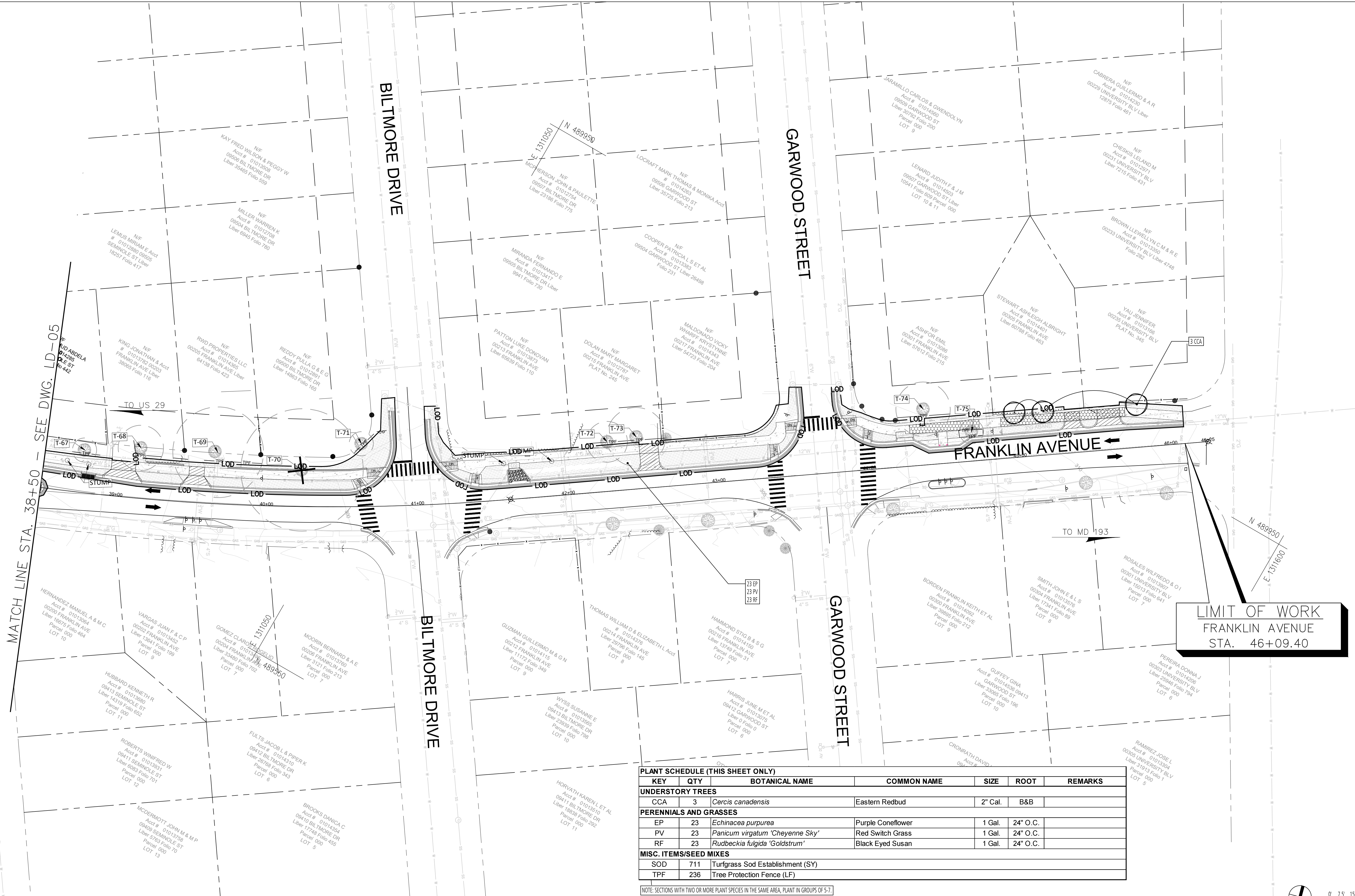
**FRANKLIN AVENUE  
SIDEWALK  
LANDSCAPE PLAN**

SCALE: 1" = 30'

LD - 05

Project No.: TBD

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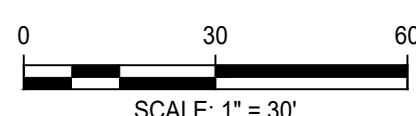
LIMIT OF WORK  
FRANKLIN AVENUE  
STA. 46+09.40

**PLANT SCHEDULE (THIS SHEET ONLY)**

KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
<b>UNDERSTORY TREES</b>						
CCA	3	<i>Cercis canadensis</i>	Eastern Redbud	2" Cal.	B&B	
<b>PERENNIALS AND GRASSES</b>						
EP	23	<i>Echinacea purpurea</i>	Purple Coneflower	1 Gal.	24" O.C.	
PV	23	<i>Panicum virgatum</i> 'Cheyenne Sky'	Red Switch Grass	1 Gal.	24" O.C.	
RF	23	<i>Rudbeckia fulgida</i> 'Goldstrum'	Black Eyed Susan	1 Gal.	24" O.C.	
<b>MISC. ITEMS/SEED MIXES</b>						
SOD	711	Turfgrass Sod Establishment (SY)				
TPF	236	Tree Protection Fence (LF)				

NOTE: SECTIONS WITH TWO OR MORE PLANT SPECIES IN THE SAME AREA, PLANT IN GROUPS OF 5-7.

- LEGEND:**
- UNDERSTORY TREE
  - SHRUB
  - STORMWATER PLANTING
  - LIMIT OF DISTURBANCE
  - TREE PROTECTION FENCE
  - EXISTING TREE CRITICAL ROOT ZONE
  - EXISTING TREE TO BE REMOVED
  - TURFGRASS SOD



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**FRANKLIN AVENUE  
SIDEWALK  
LANDSCAPE PLAN**

SCALE: 1" = 30'

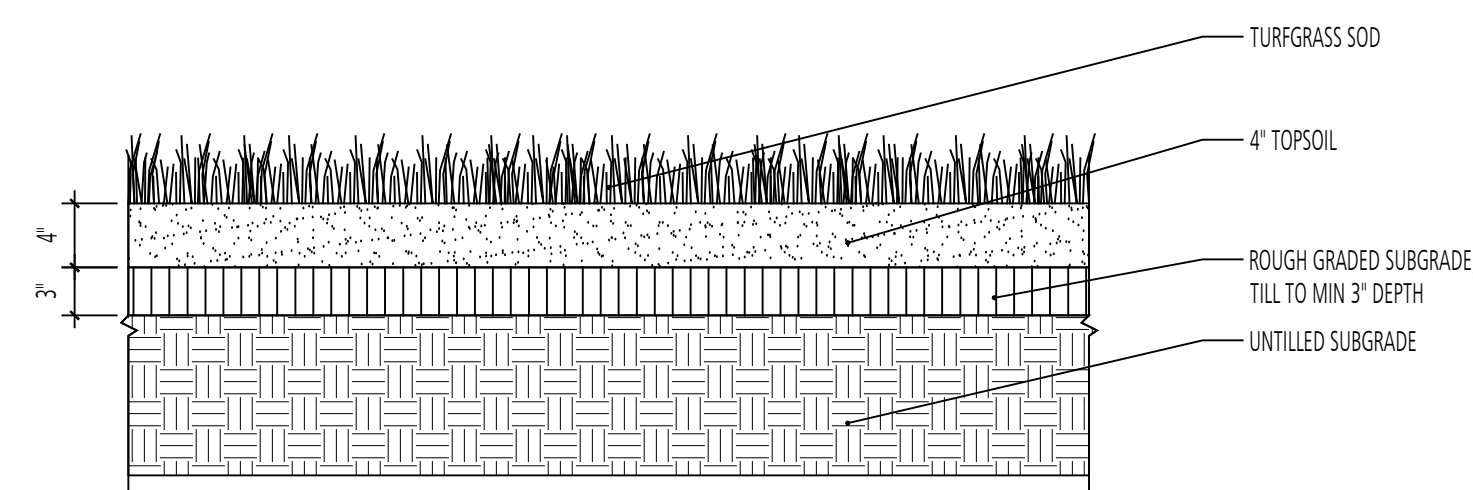
Project No.: T8D \_\_\_\_\_ of 109

**LD - 06**

GENERAL PLANTING NOTES:

- CONTRACTOR MUST CONTACT MISS UTILITY TO LOCATE ALL EXISTING UTILITIES AND PROVIDE PROOF AND WRITTEN CONFIRMATION FOR UTILITY LOCATION TO M-NCPPC. CONTRACTOR TO PROVIDE NOTICE TO UTILITY COMPANIES PRIOR TO BEGINNING ANY WORK.
- IN SOME INSTANCES THE TREE PROTECTION FENCE IS SHOWN OUTSIDE OF THE LIMIT OF DISTURBANCE FOR GRAPHIC PURPOSES ONLY. THE CONTRACTOR SHALL INSTALL TREE PROTECTION FENCE AT THE LIMIT OF DISTURBANCE LINE WHERE THIS OCCURS.
- THE CONTRACTOR SHALL FLAG ALL TREES TO BE REMOVED FOR INSPECTION AND APPROVAL BY THE LANDSCAPE ARCHITECT OR COUNTY ARBORIST AT THE PRE-CONSTRUCTION MEETING. NO CLEARING SHALL OCCUR UNTIL INSPECTION AND APPROVAL HAS BEEN PROVIDED IN WRITING.
- PLANT MATERIAL TYPES AND SIZES MAY VARY DUE TO MARKET AVAILABILITY AT TIME OF CONSTRUCTION. ANY SUBSTITUTIONS ARE TO BE OF EQUIVALENT TYPE AND SIZE, AND MUST BE APPROVED IN WRITING BY THE LANDSCAPE ARCHITECT. FOR SHRUB CONTAINERIZED STOCK, B&B STOCK MAY BE SUBSTITUTED WITH WRITTEN APPROVAL BY THE LANDSCAPE ARCHITECT.
- WHERE THE CONDITION EXISTS THAT B&B TREES ARE DELIVERED IN WIRE BASKETS, THE WIRE BASKETS SHALL BE CUT DOWN THE SIDE OF EACH MESH AND PEELD AWAY FROM THE ROOTBALL OR REMOVED IN ENTIRETY. NO PORTION OF THE WIRE BASKET SHALL REMAIN INTACT AROUND THE SIDES OF THE ROOTBALL OR EXTEND ABOVE FINISHED GRADE.
- ALL WORK SHALL BE IN COMPLIANCE WITH MARYLAND DEPARTMENT OF TRANSPORTATION STATE HIGHWAY ADMINISTRATION STANDARD SPECIFICATIONS FOR CONSTRUCTION.
- PLANTING SHALL ONLY OCCUR DURING ESTABLISHED PLANTING SEASONS:  
A. DECIDUOUS AND EVERGREEN TREES AND SHRUBS: OCTOBER 15 - APRIL 15
- DISTURBANCE SHALL BE LIMITED TO ONLY THE AREA OF WORK THAT CAN BE COMPLETED IN ONE DAY. NO EXPOSED PLANTING PITS SHALL BE EXPOSED OVERNIGHT.
- PLANTS SHALL BE IN ACCORDANCE WITH AMERICAN STANDARD FOR NURSERY STOCK (ANSI Z60.1, LATEST EDITION, AMERICAN NURSERY & LANDSCAPE ASSOCIATION). PLANTS SHALL BE INSPECTED BY LANDSCAPE ARCHITECT OR COUNTY ARBORIST FOR QUALITY AND COMPLIANCE PRIOR TO INSTALLATION.
- ALL INDIVIDUAL TREES SHALL RECEIVE A 2" MIN. LAYER OF SHREDDED HARDWOOD MULCH TO COVER THE ENTIRE EXCAVATED AREA OF THE PLANT PIT.
- ALL PLANTINGS SHALL BE GUARANTEED BY THE CONTRACTOR FOR A TWO-YEAR MAINTENANCE PERIOD.
- ALL AREAS DISTURBED DURING CONSTRUCTION ARE TO BE SODDED UNLESS NOTED OTHERWISE.
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVAL AND PROPER DISPOSAL OF ANY WASTE FROM THE SITE.
- ANY DAMAGE TO THE EXISTING UTILITIES, BUILDINGS, PAVING, CURB, WALLS, AND VEGETATION (NOT SO DESIGNATED FOR REMOVAL ON THESE PLANS) SHALL BE REPAIRED TO PREVIOUS CONDITION OR REPLACED BY THE CONTRACTOR AT HIS EXPENSE.

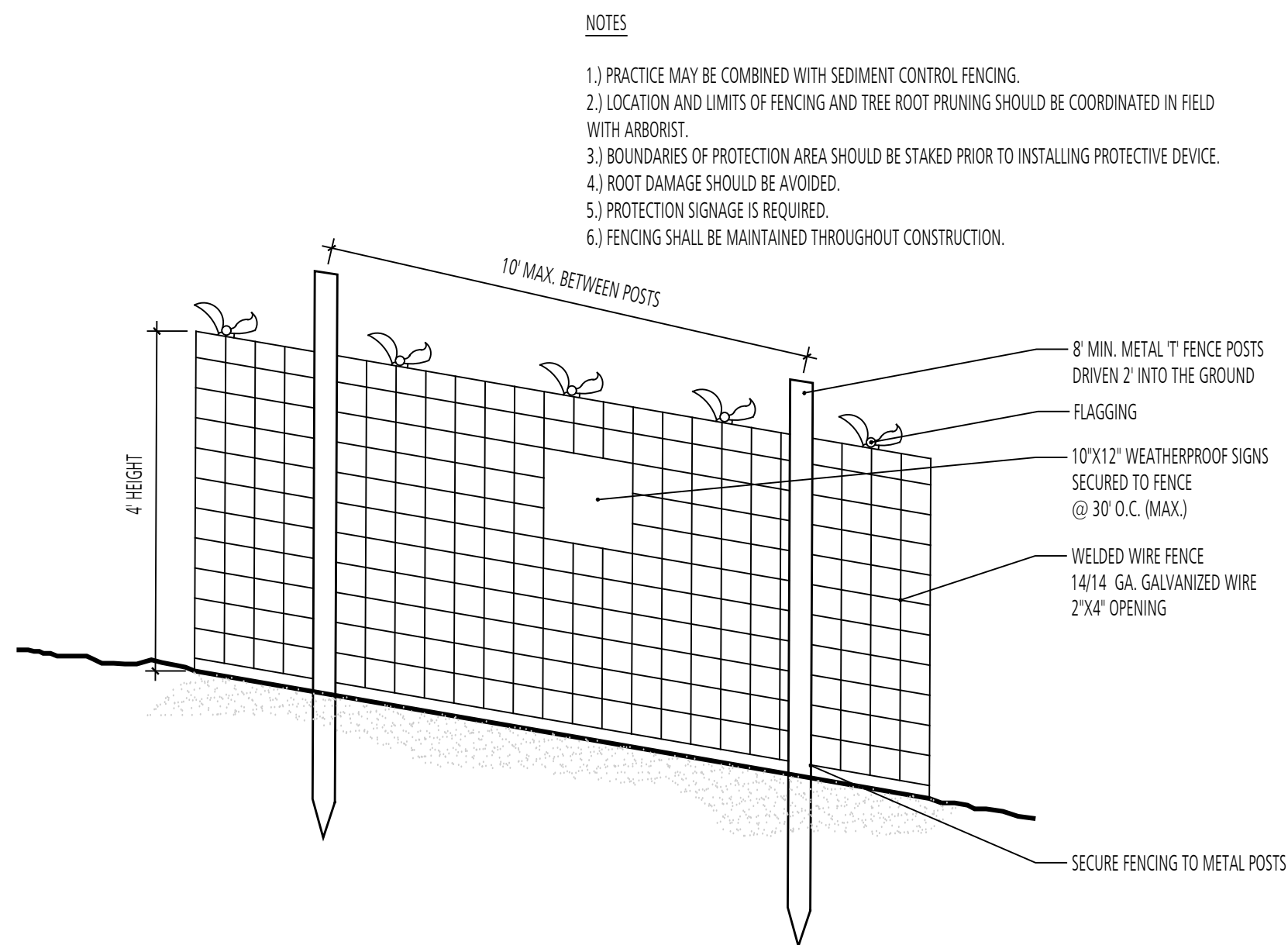
MASTER LANDSCAPE PLANT SCHEDULE						
KEY	QTY	BOTANICAL NAME	COMMON NAME	SIZE	ROOT	REMARKS
<b>UNDERSTORY TREES</b>						
CRVWK	4	<i>Crataegus viridis</i> 'Winter King'	Winter King Hawthorn	2" Cal.	B&B	
CCA	11	<i>Cercis canadensis</i>	Eastern Redbud	2" Cal.	B&B	
CF	7	<i>Comus florida</i>	Flowering Dogwood	2" Cal.	B&B	
PIO	4	<i>Prunus x incamp</i> 'Okame'	Okame Hybrid Cherry	2" Cal.	B&B	
<b>SHRUBS</b>						
LB	4	<i>Lindera benzoin</i> var. <i>benzoin</i>	Spicebush	36" Ht.	#7 CONT.	
<b>PERENNIALS AND GRASSES</b>						
EP	23	<i>Echinacea purpurea</i>	Purple Coneflower	1 Gal.	24" O.C.	
PV	23	<i>Panicum virgatum</i> 'Cheyenne Sky'	Red Switch Grass	1 Gal.	24" O.C.	
RF	23	<i>Rudbeckia fulgida</i> 'Goldstrum'	Black Eyed Susan	1 Gal.	24" O.C.	
<b>MISC. ITEM/SEED MIXES</b>						
SOD	4,541	Turfgrass Sod Establishment (SY)				
TPF	2,093	Tree Protection Fence (LF)				



- LAWN SEEDING PREPARATION NOTES:
- ROTTILL SUBGRADE TO A DEPTH OF 3 INCHES PRIOR TO PLACEMENT OF TOPSOIL.
  - FINE GRADE AREA PRIOR TO SOD INSTALLATION.
  - PROTECT SODDED AREAS FROM SUBSEQUENT CONSTRUCTION ACTIVITY.

1 LAWN DETAIL - SOD (TYP.) SECTION

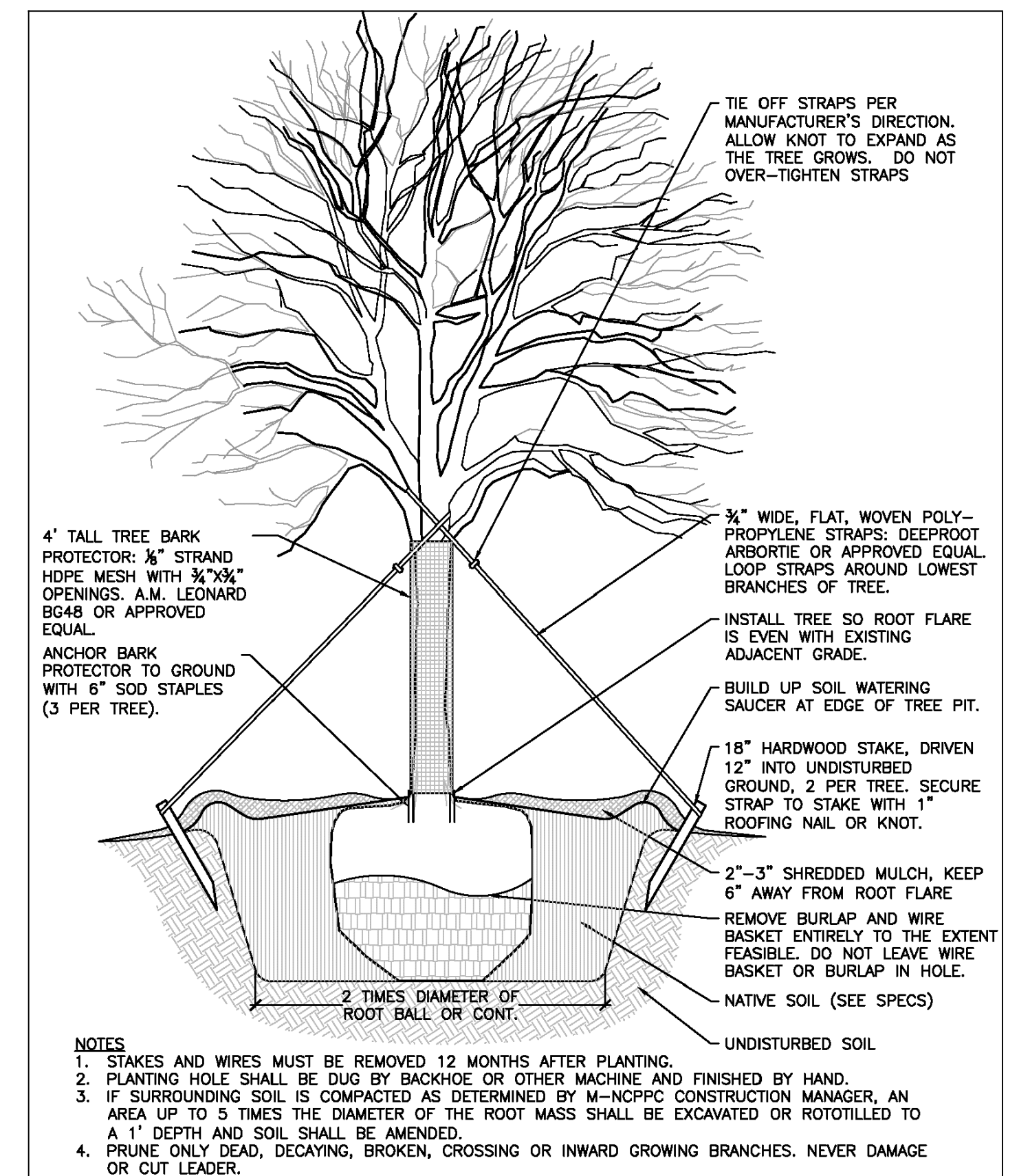
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SCALE: 1"=1'-0"



- NOTES
- PRACTICE MAY BE COMBINED WITH SEDIMENT CONTROL FENCING.
  - LOCATION AND LIMITS OF FENCING AND TREE ROOT PRUNING SHOULD BE COORDINATED IN FIELD WITH ARBORIST.
  - BOUNDARIES OF PROTECTION AREA SHOULD BE STAKED PRIOR TO INSTALLING PROTECTIVE DEVICE.
  - ROOT DAMAGE SHOULD BE AVOIDED.
  - PROTECTION SIGNAGE IS REQUIRED.
  - FENCING SHALL BE MAINTAINED THROUGHOUT CONSTRUCTION.

2 TREE PROTECTION FENCE - MONTGOMERY COUNTY DETAIL

d-TPF.dwg  
SCALE: 1"=1'-0"



- NOTES
- STAKES AND WIRES MUST BE REMOVED 12 MONTHS AFTER PLANTING.
  - PLANTING HOLE SHALL BE DUG BY BACKHOE OR OTHER MACHINE AND FINISHED BY HAND.
  - IF SURROUNDING SOIL IS COMPACTED AS DETERMINED BY M-NCPPC CONSTRUCTION MANAGER, AN AREA UP TO 5 TIMES THE DIAMETER OF THE ROOT MASS SHALL BE EXCAVATED OR ROTOILLED TO A 1' DEPTH AND SOIL SHALL BE AMENDED.
  - PRUNE ONLY DEAD, DECAYING, BROKEN, CROSSING OR INWARD GROWING BRANCHES. NEVER DAMAGE OR CUT LEADER.

3 TREE PLANTING DETAIL SECTION

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SCALE: NTS

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_  
APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

FRANKLIN AVENUE  
SIDEWALK  
LANDSCAPE NOTES AND  
DETAILS

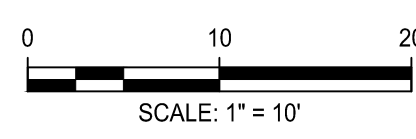
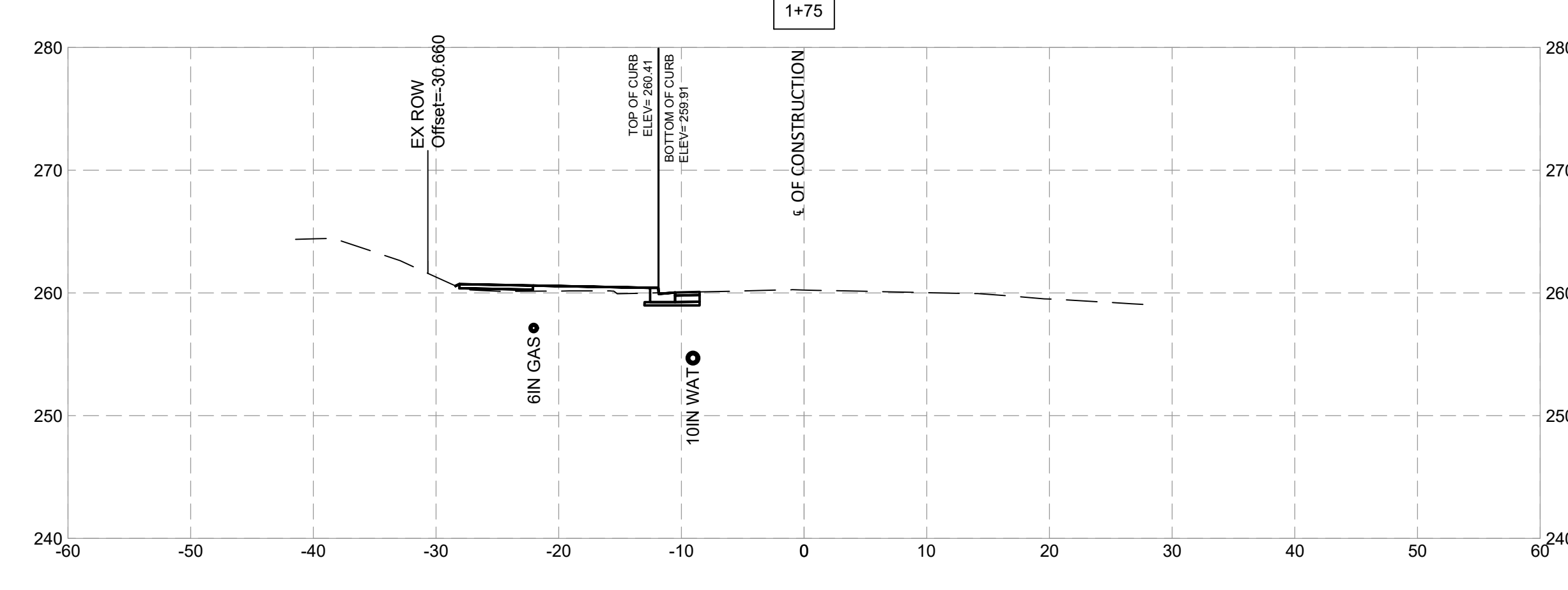
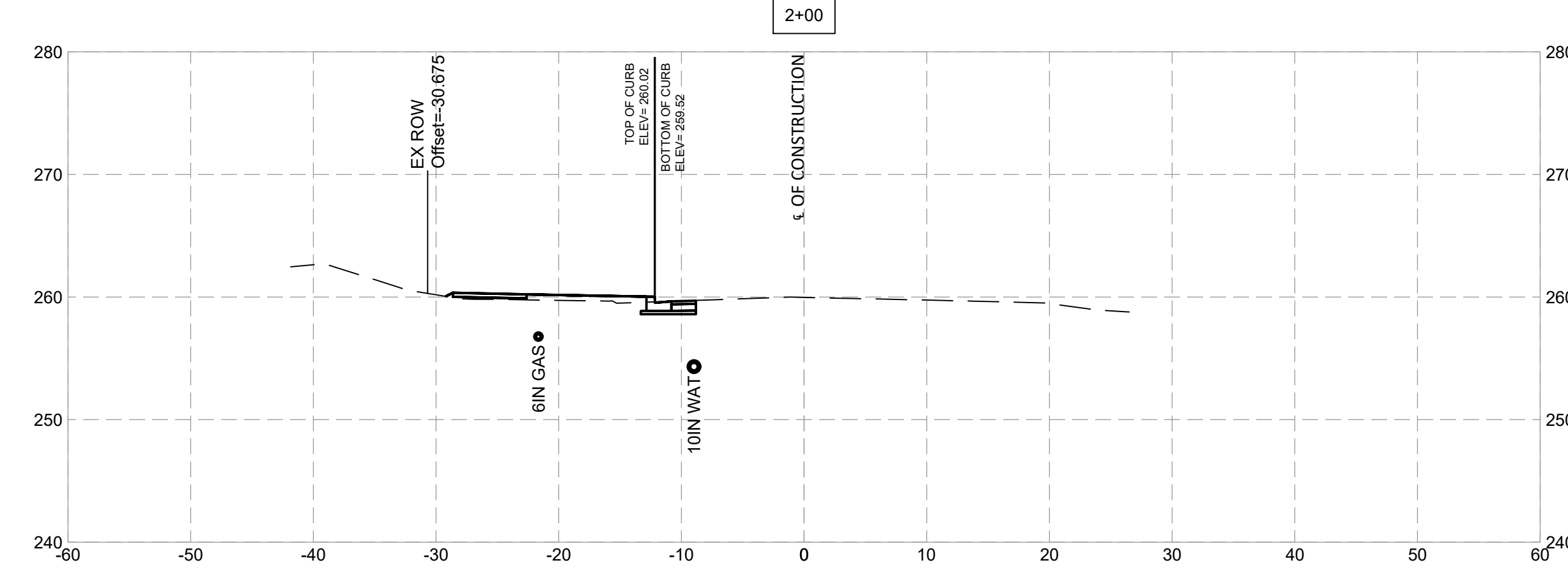
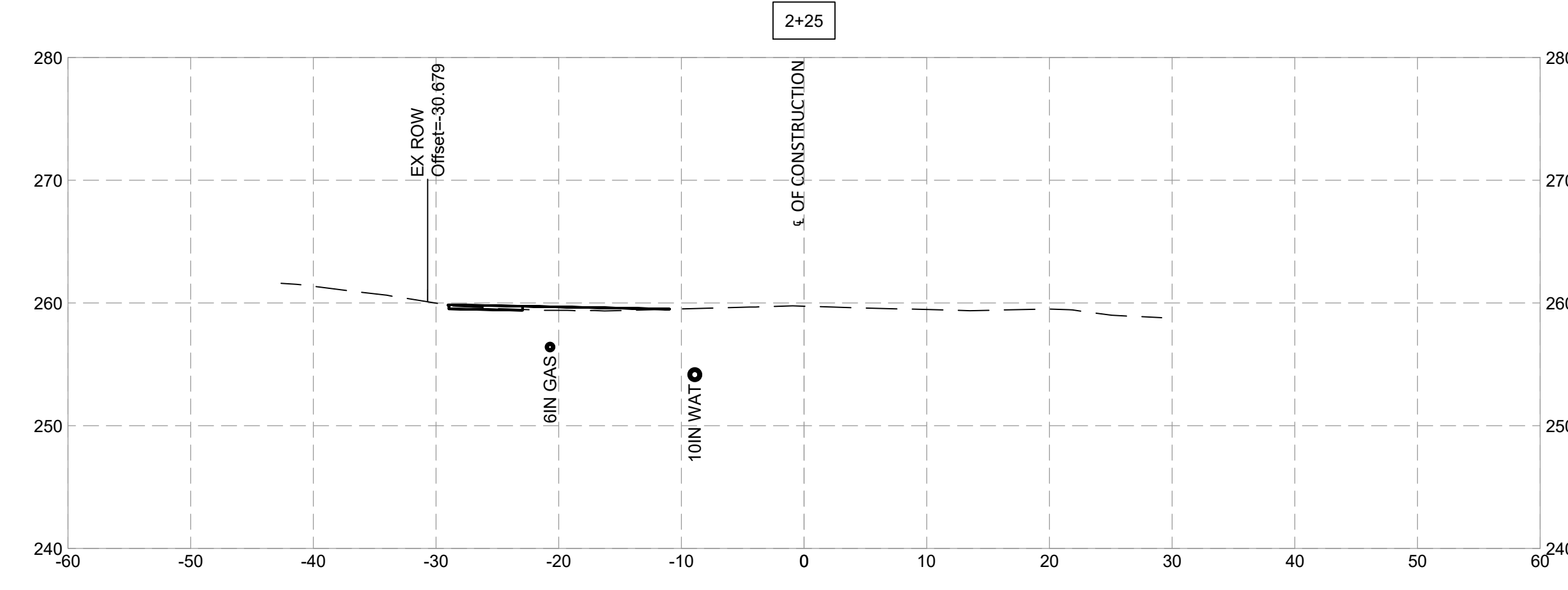
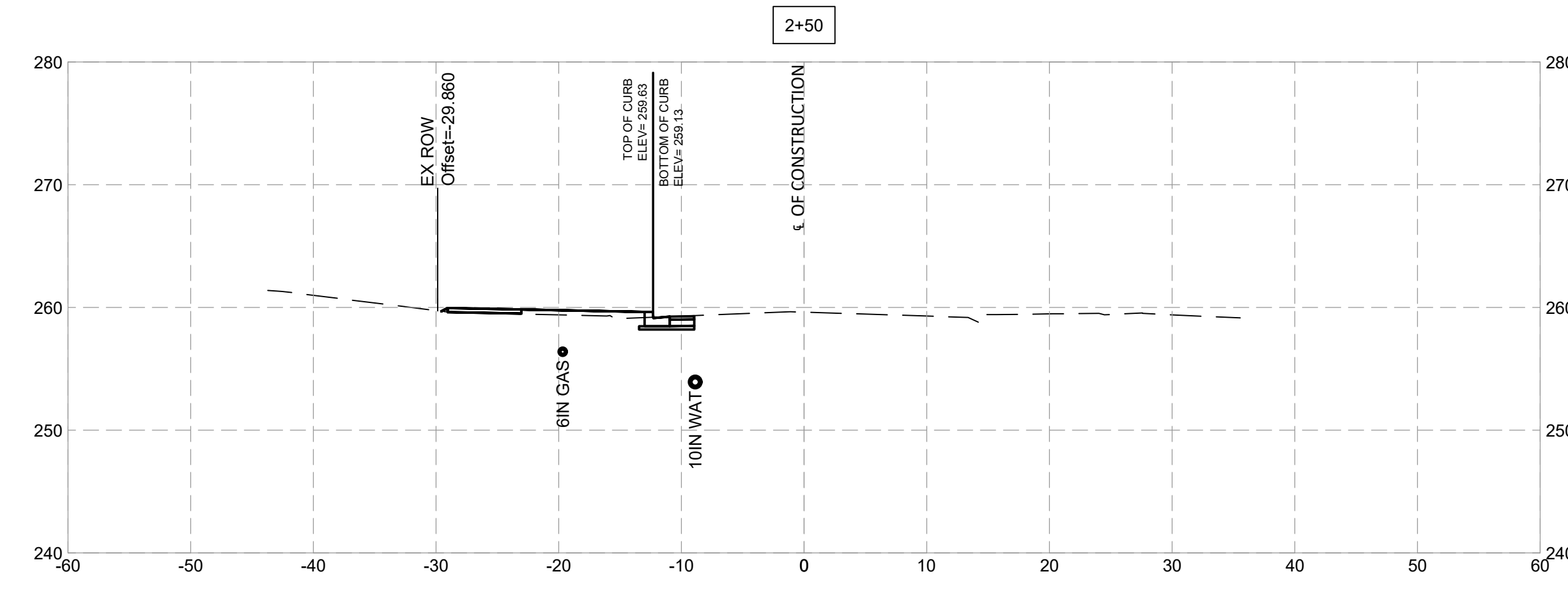
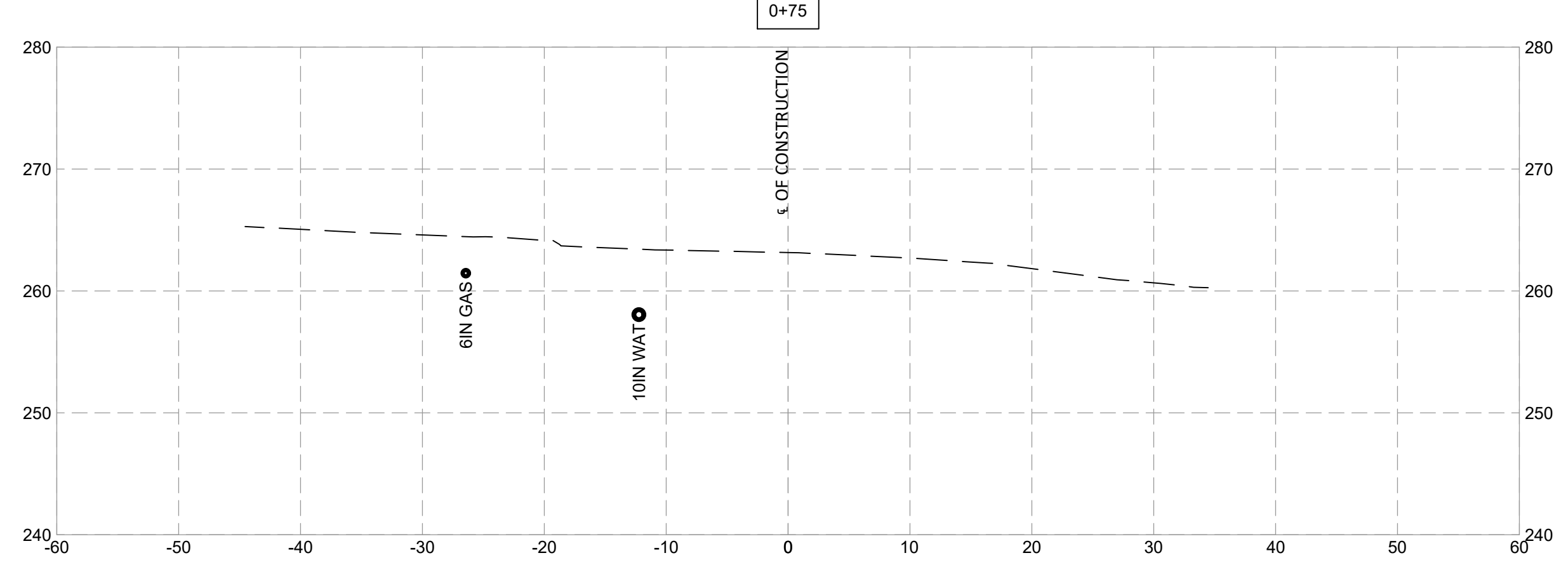
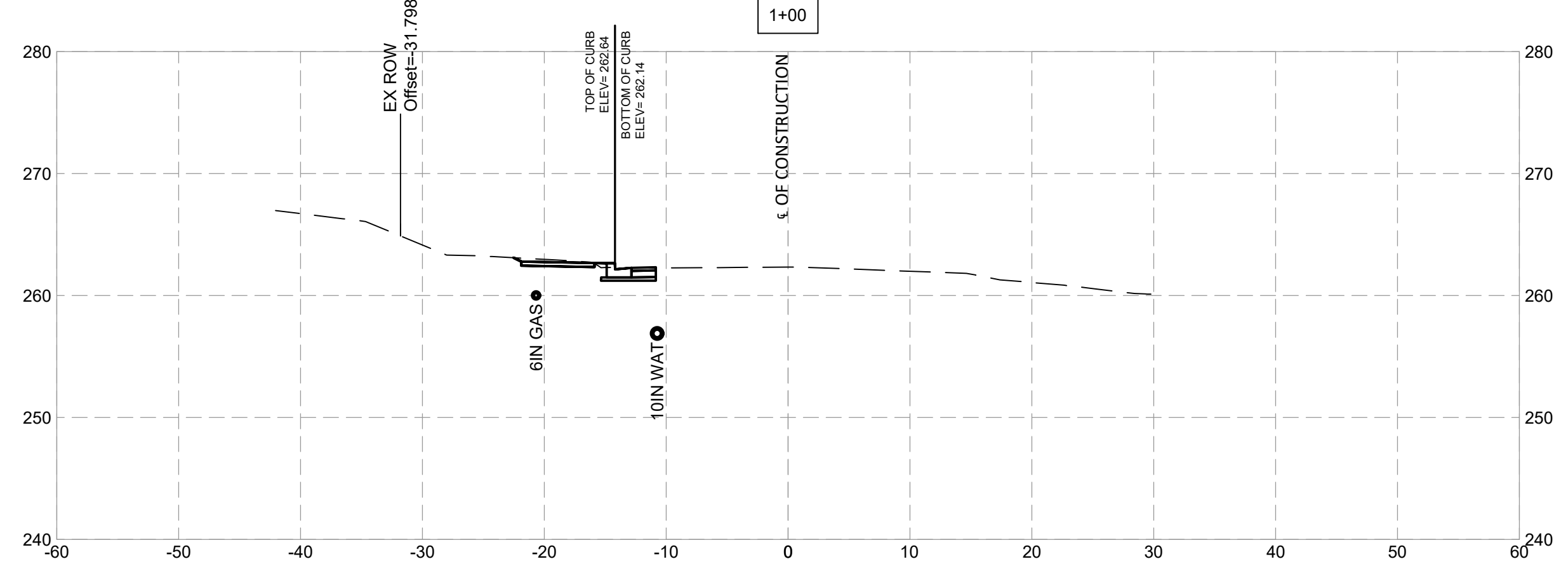
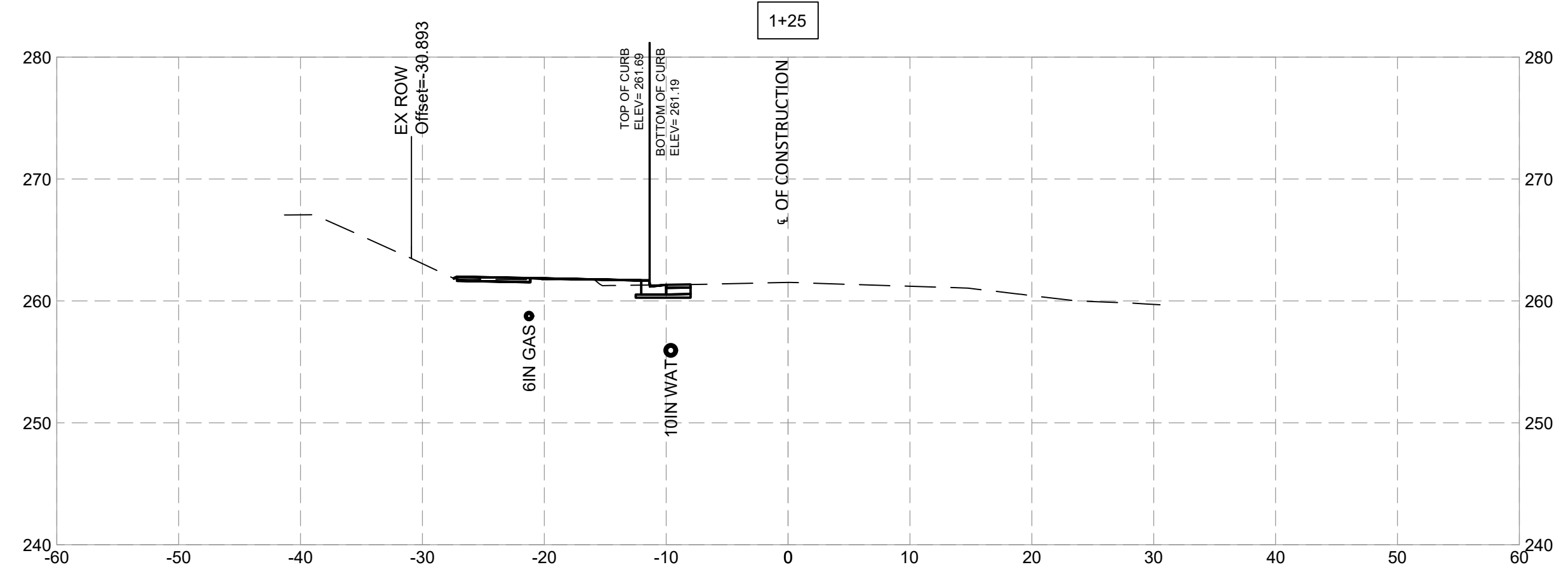
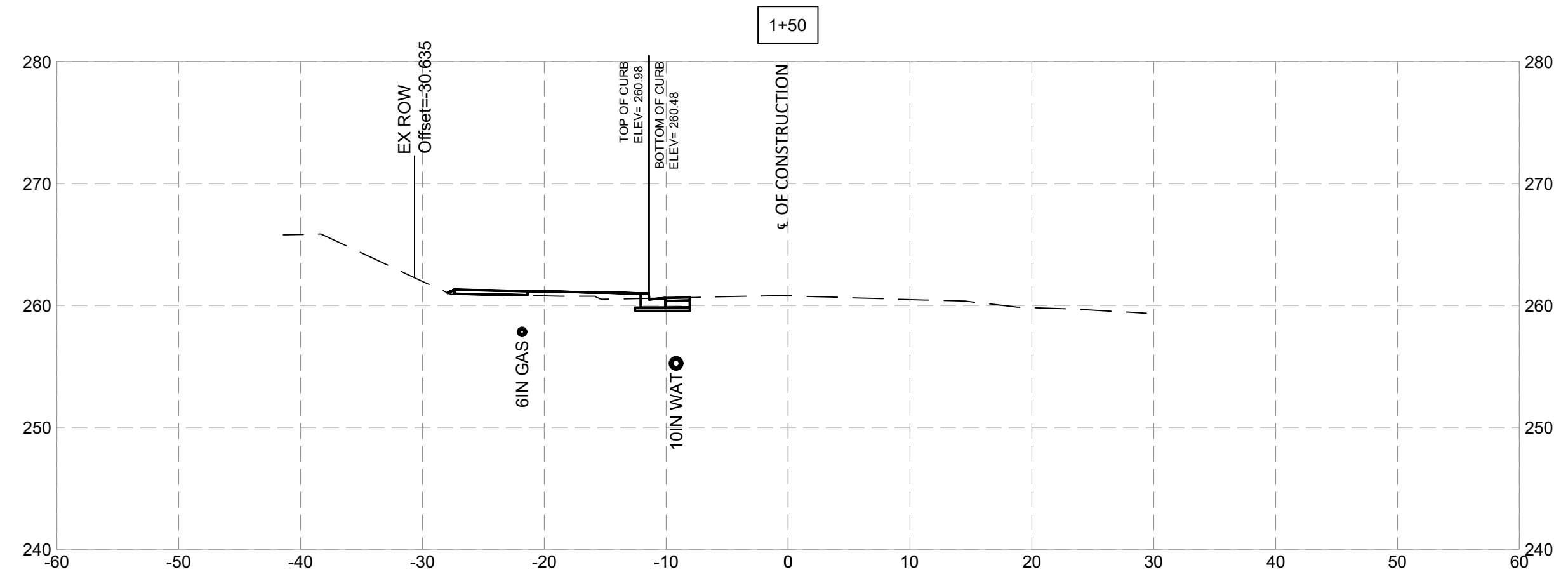
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Project No. : \_\_\_\_\_ 83 of 109

LD - 07







NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_

APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

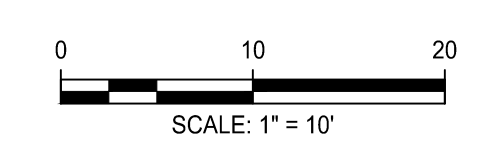
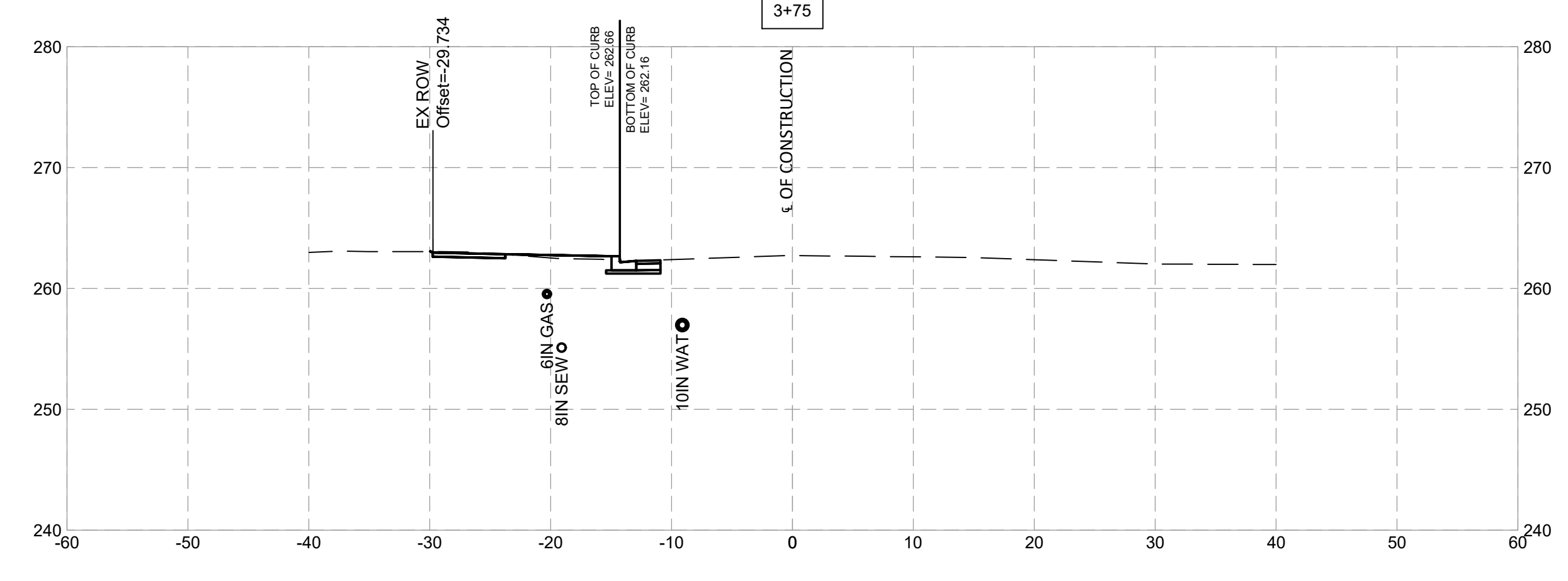
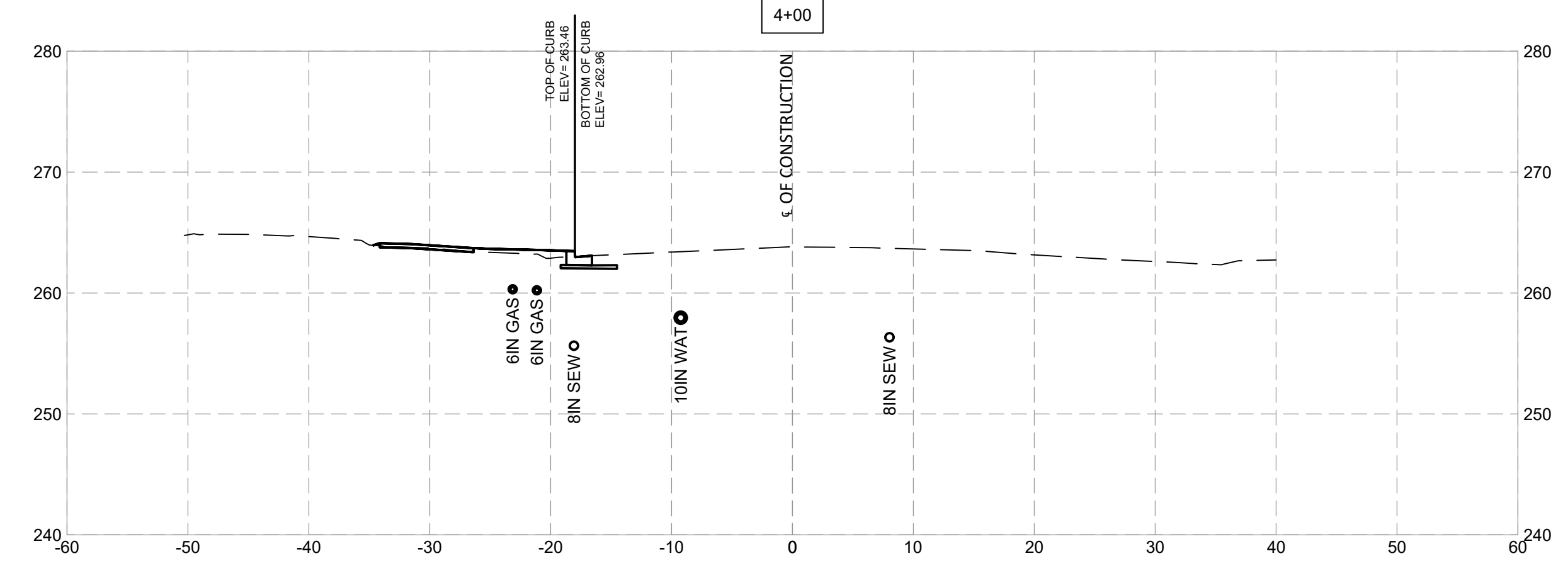
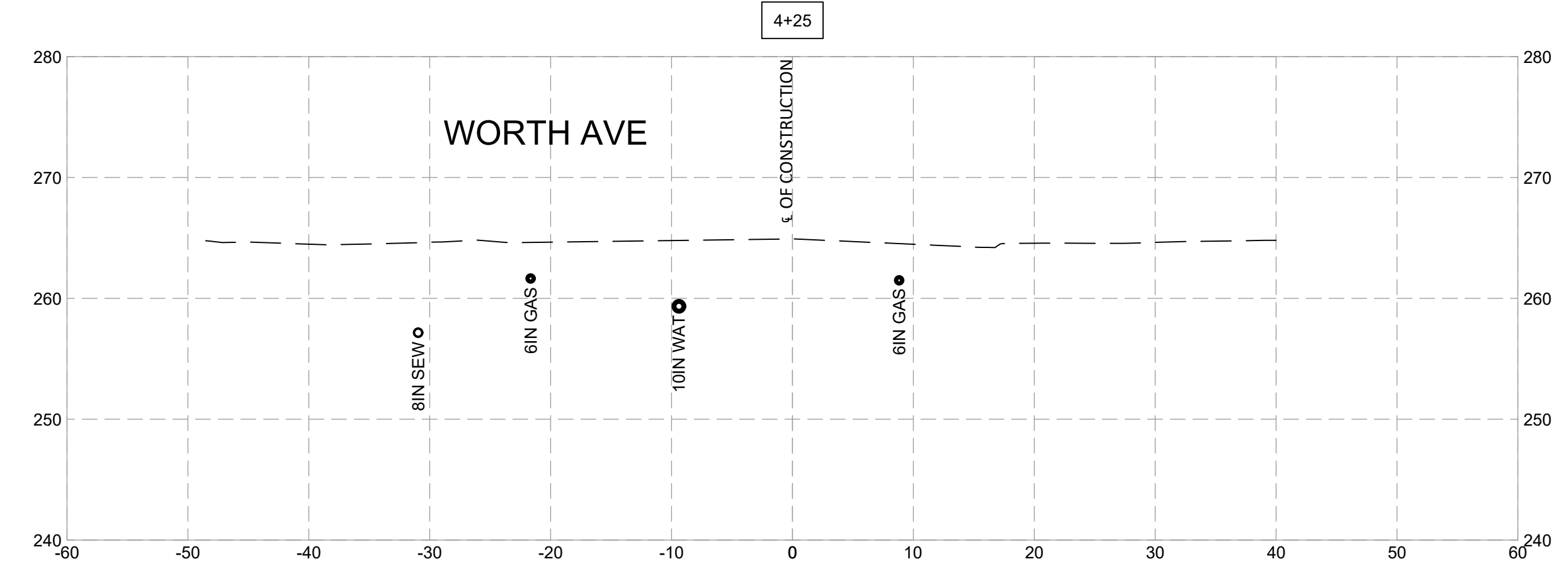
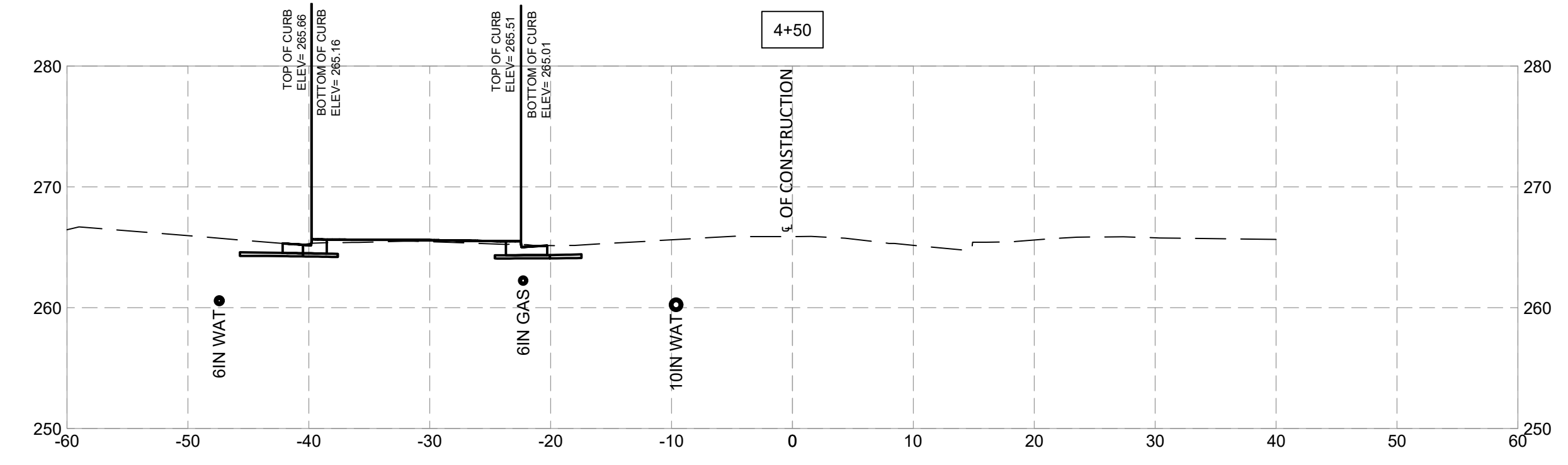
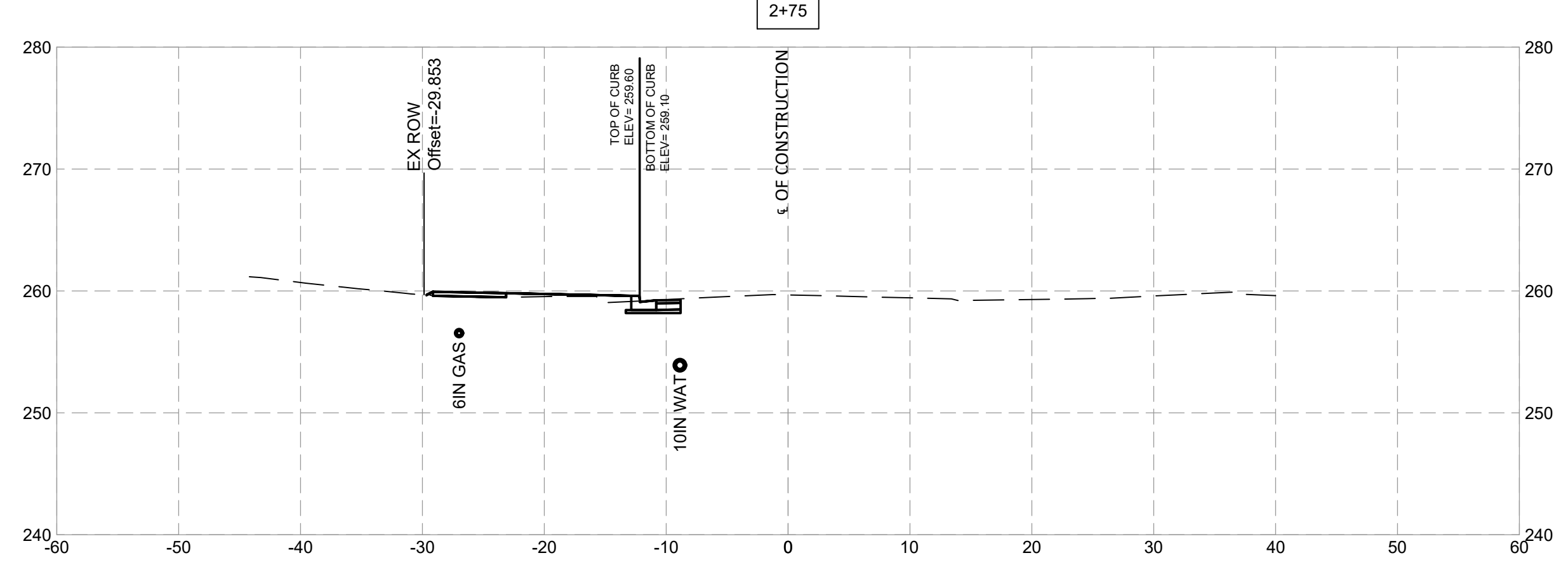
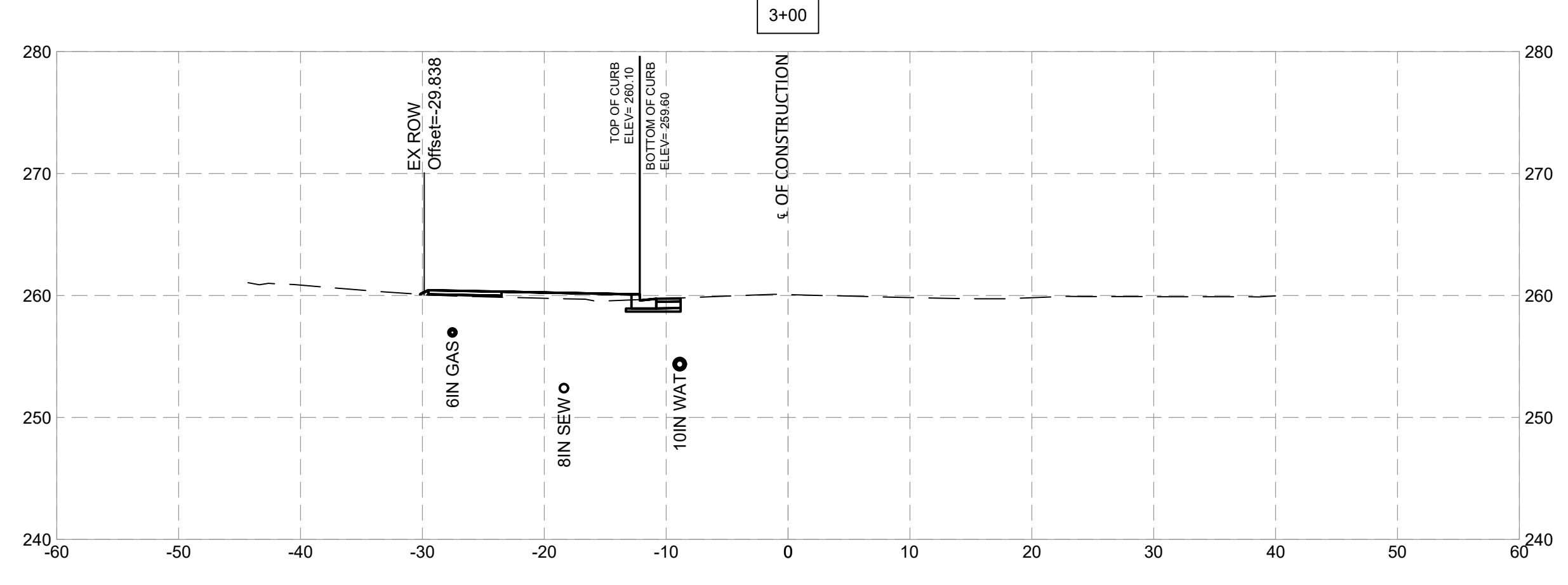
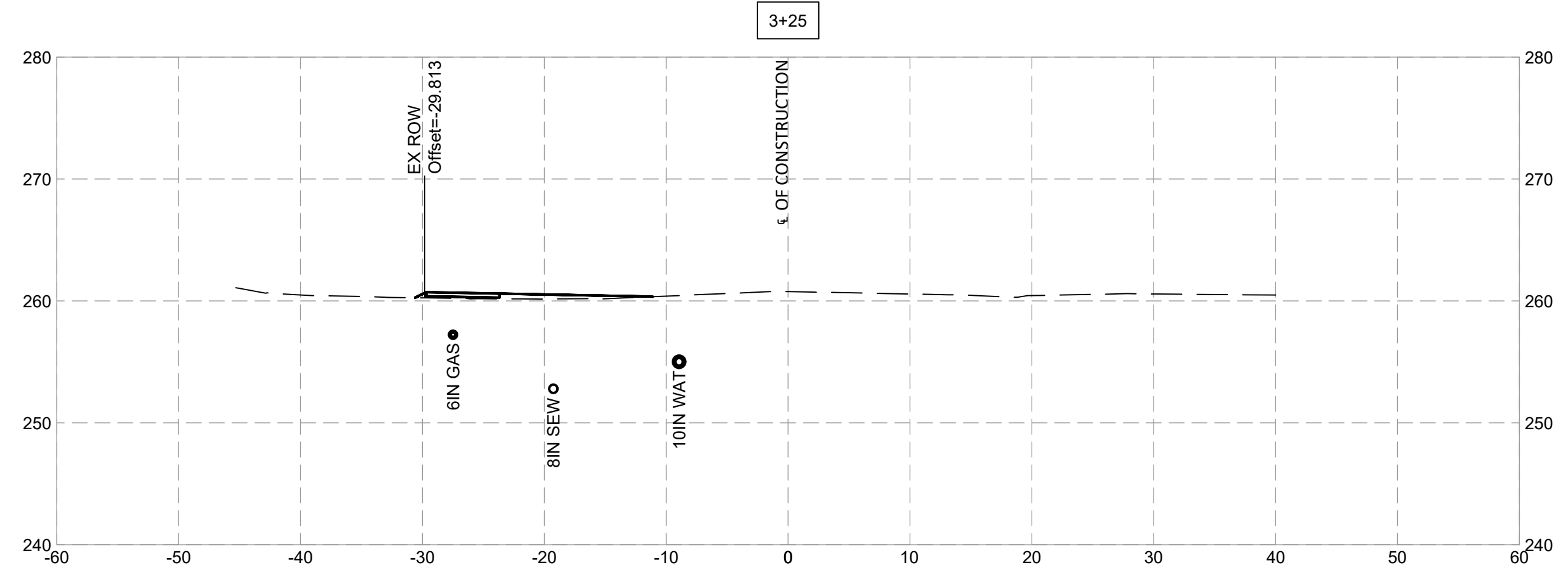
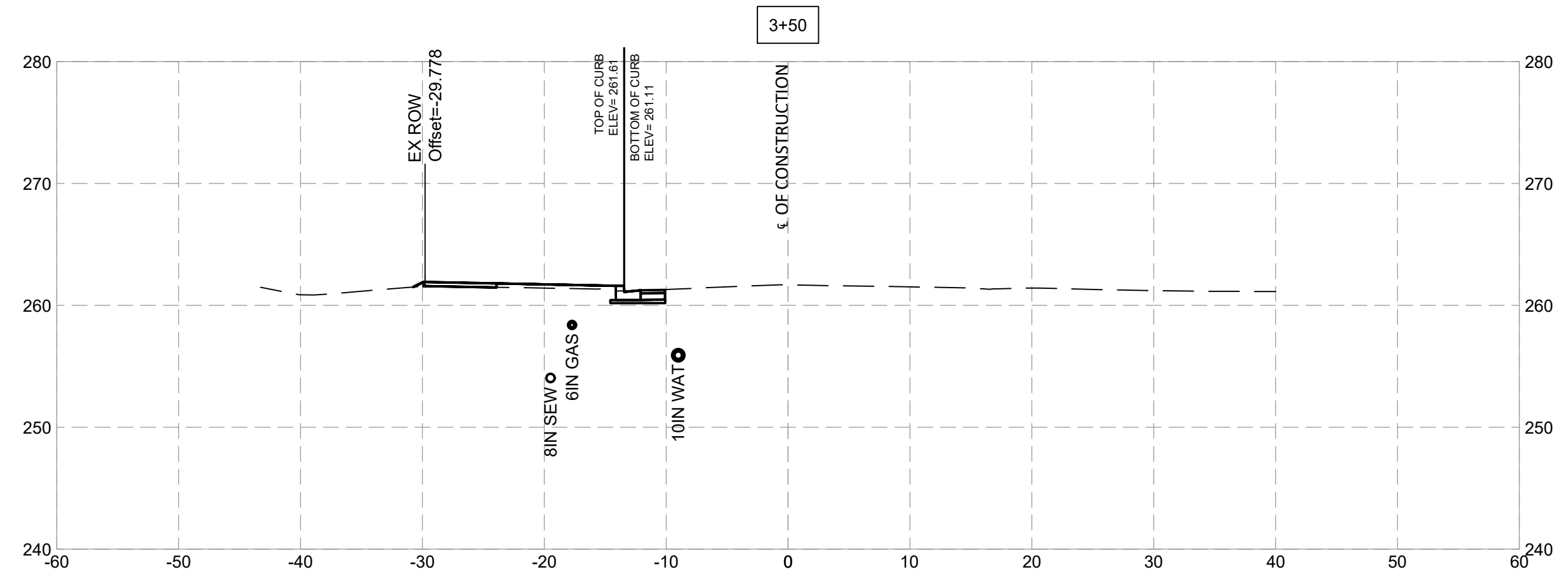
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**FRANKLIN AVENUE  
 SIDEWALK  
 CROSS SECTIONS**

SCALE : \_\_\_\_\_

Project No. : TBD 85 of 109

**XS - 01**



NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_

APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

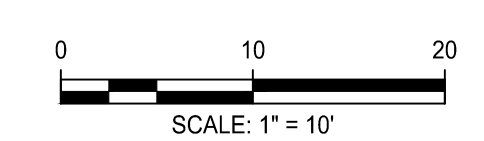
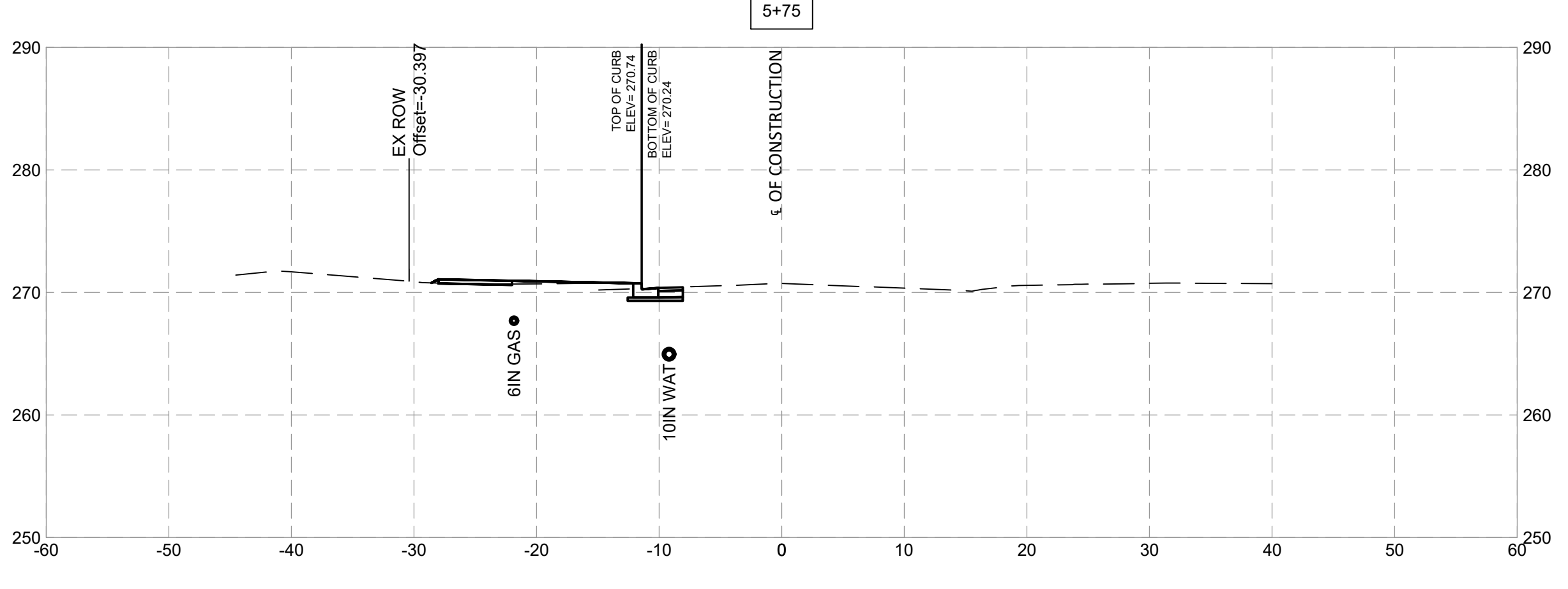
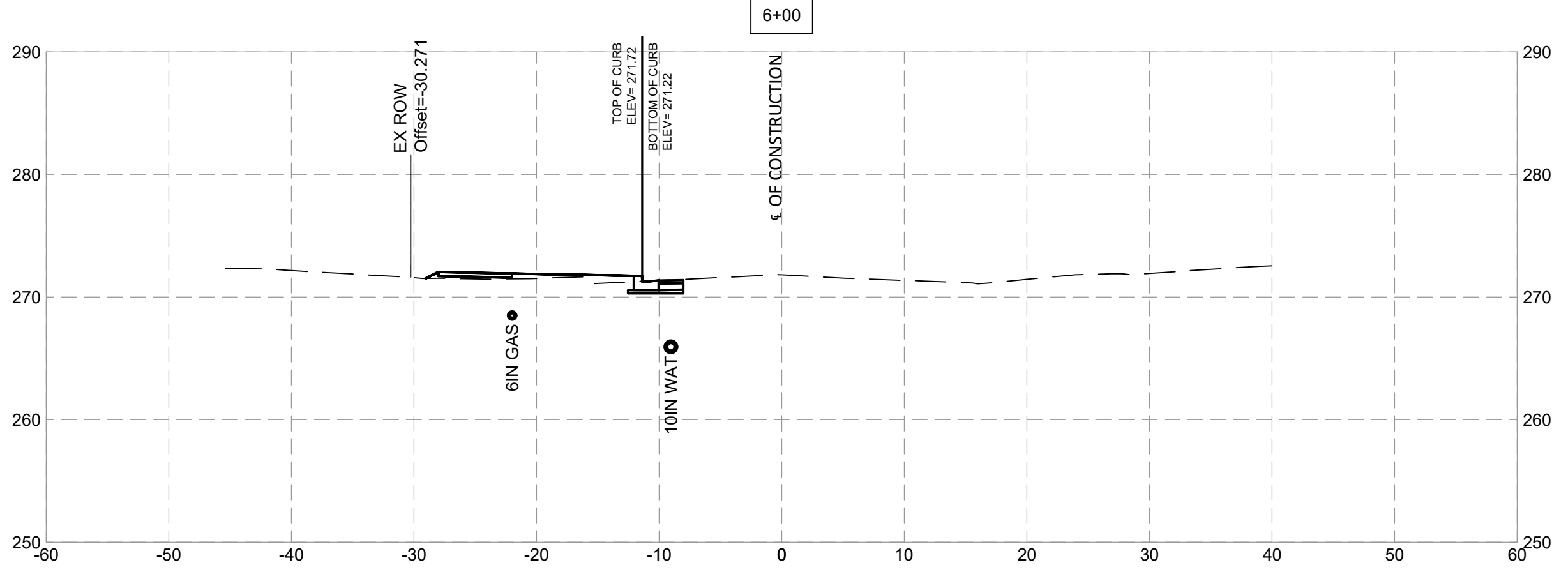
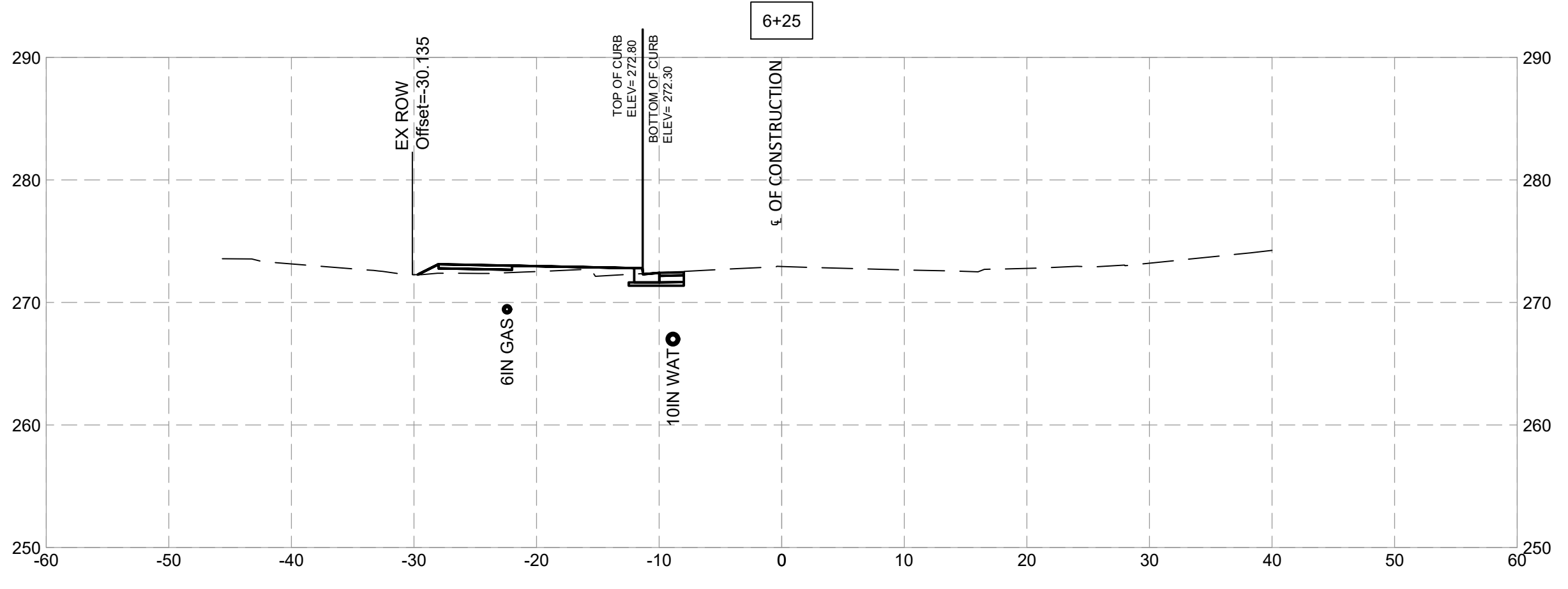
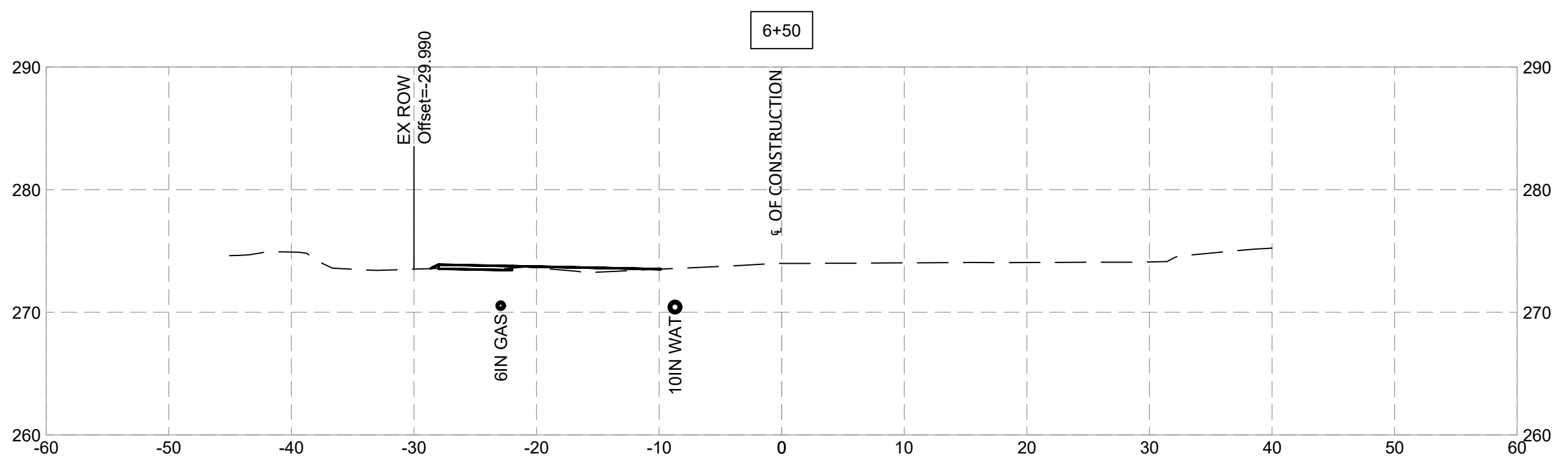
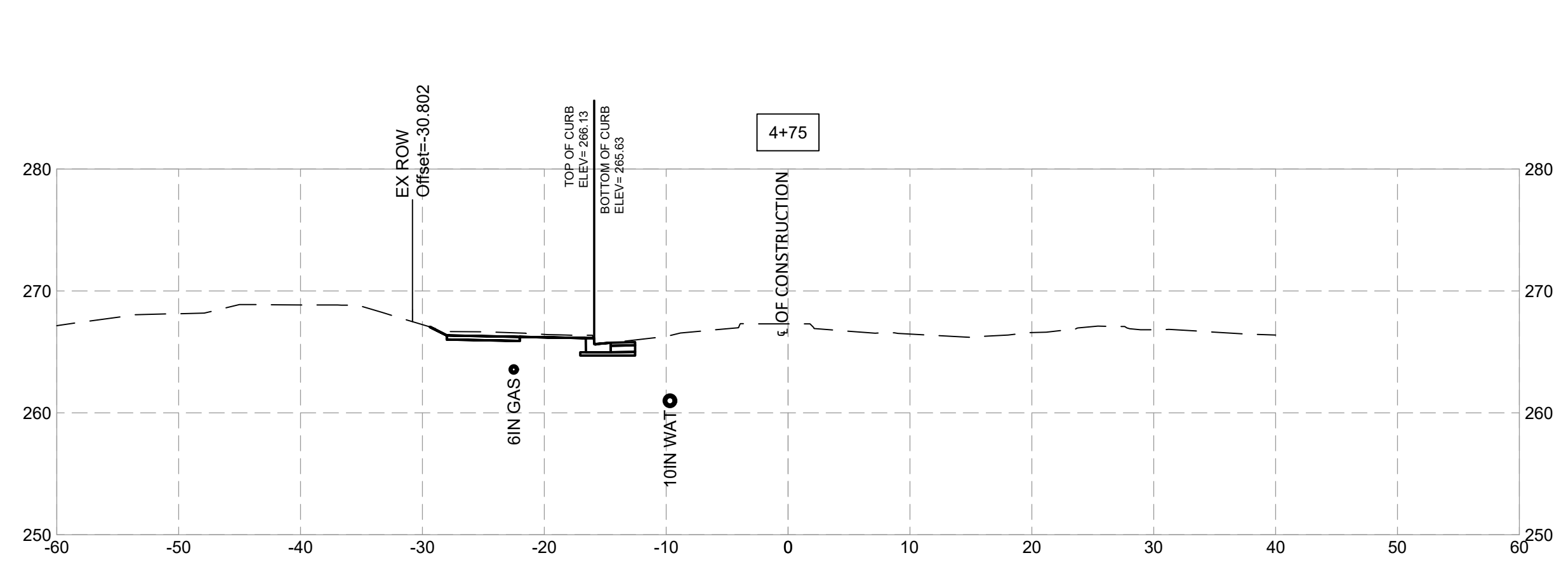
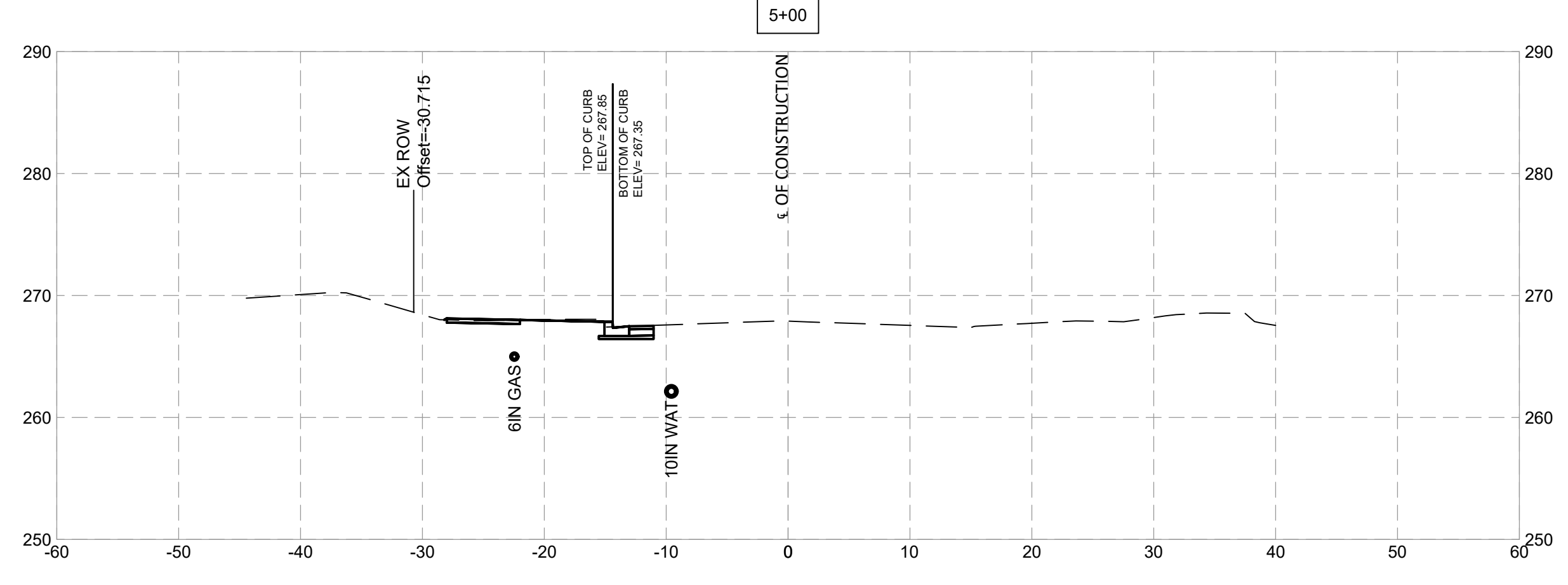
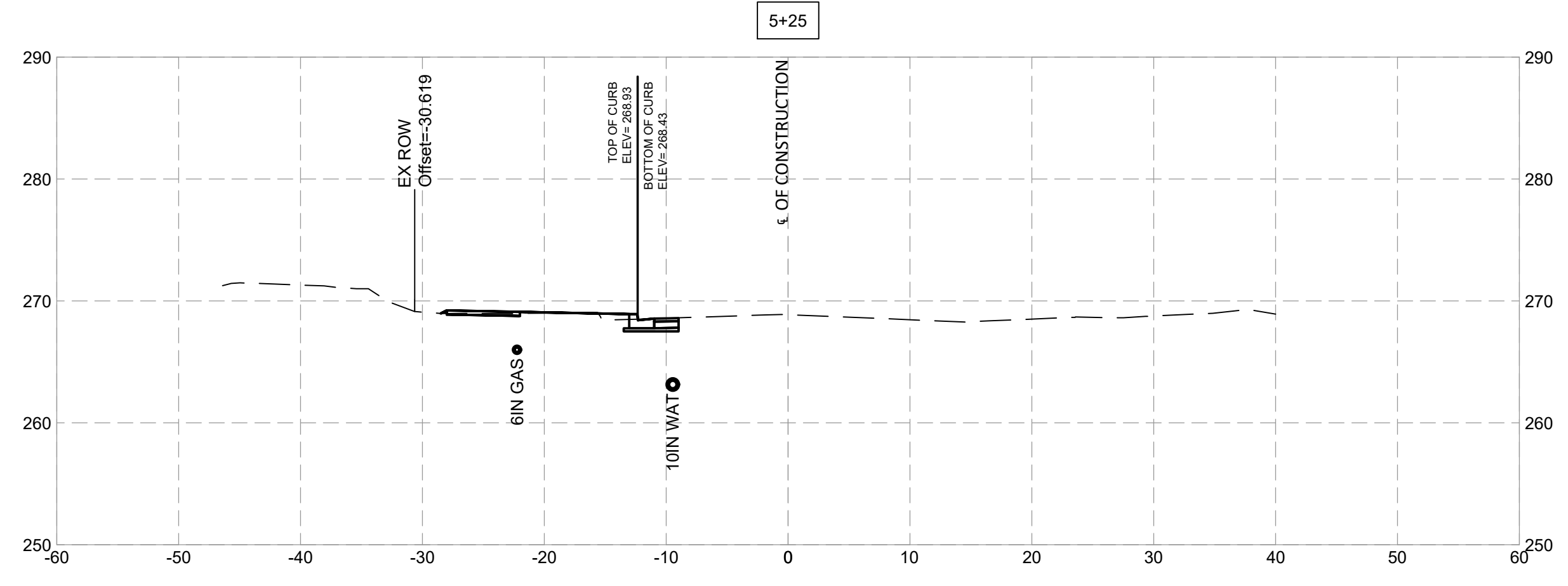
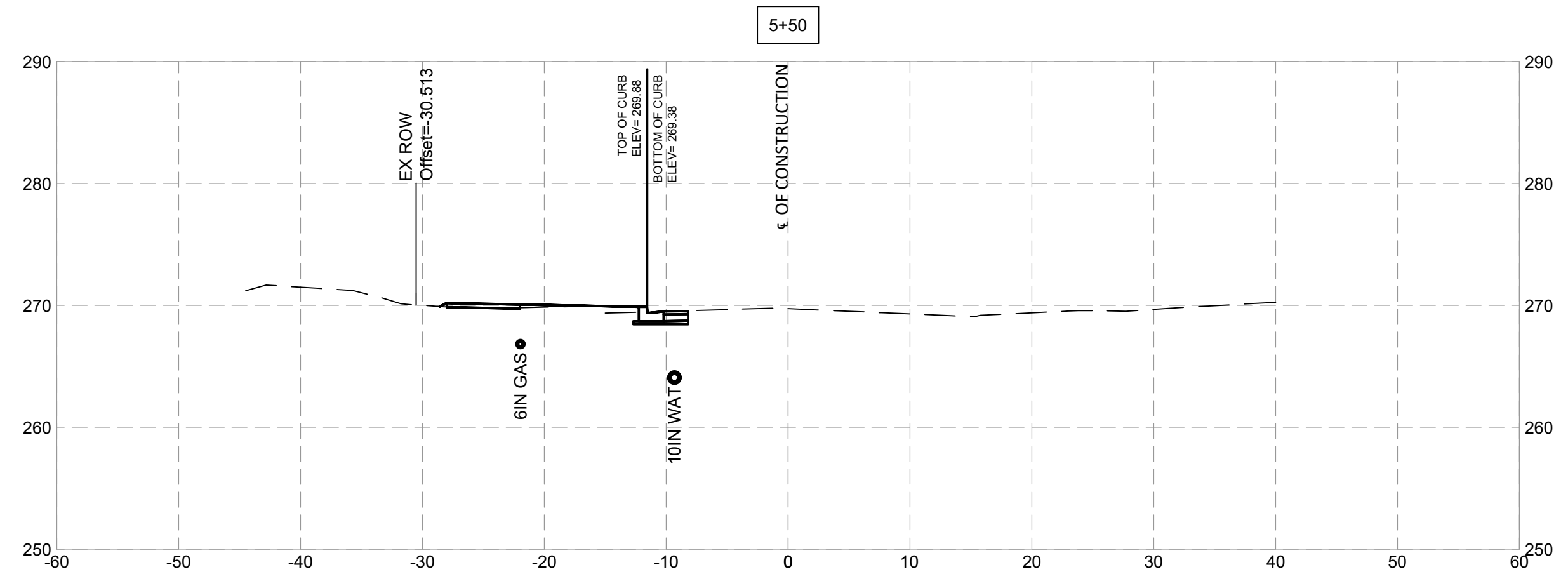
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**FRANKLIN AVENUE  
SIDEWALK  
CROSS SECTIONS**

SCALE : \_\_\_\_\_

Project No. : TBD 86 of 109

**XS - 02**



NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_

APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

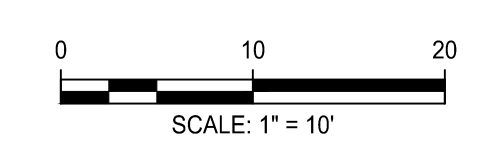
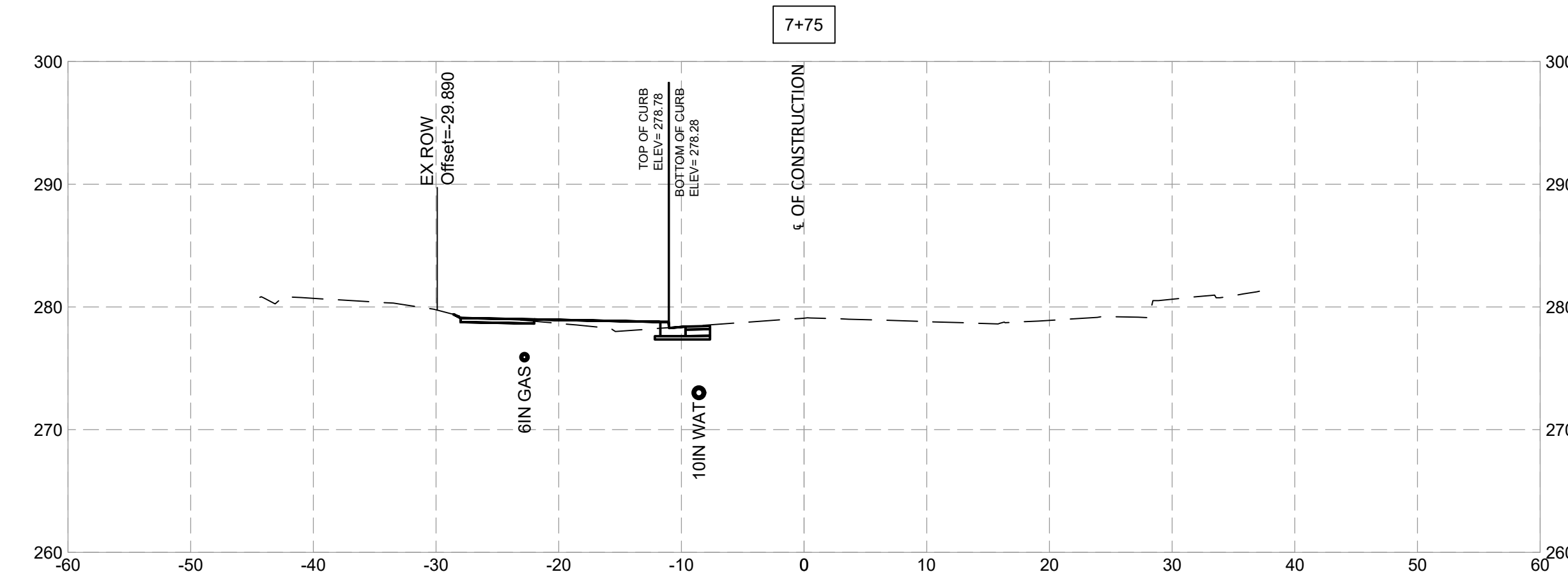
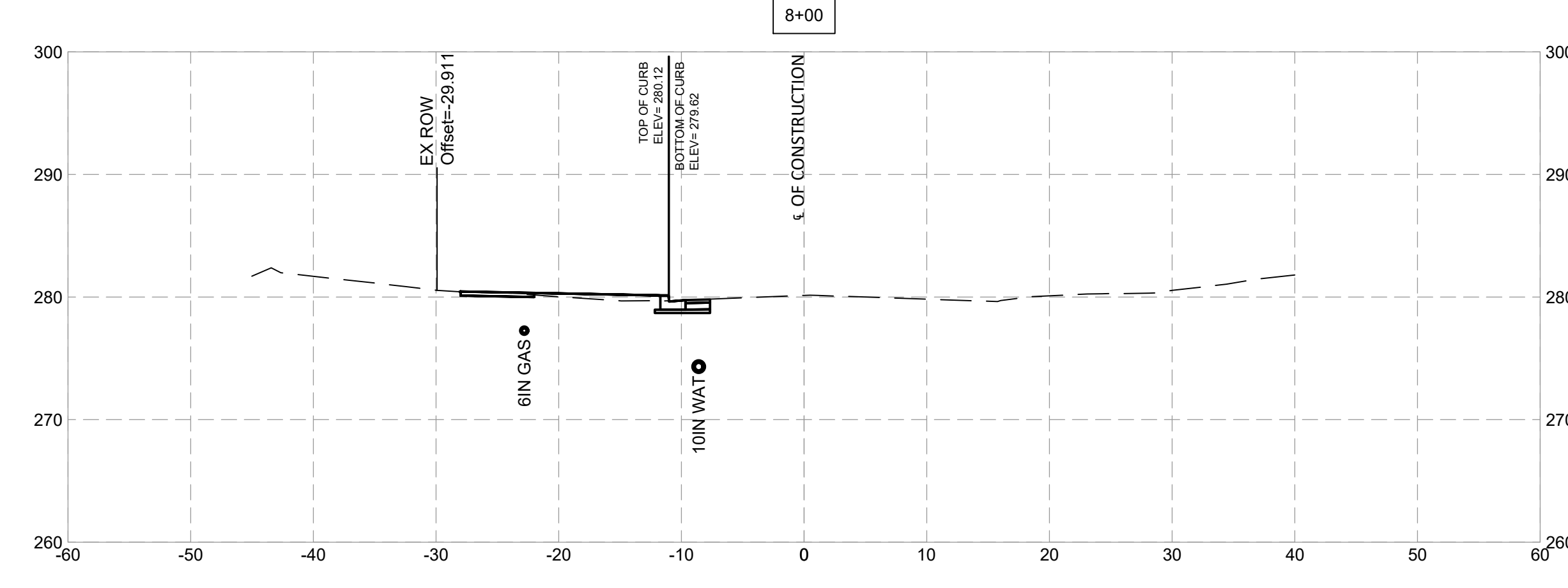
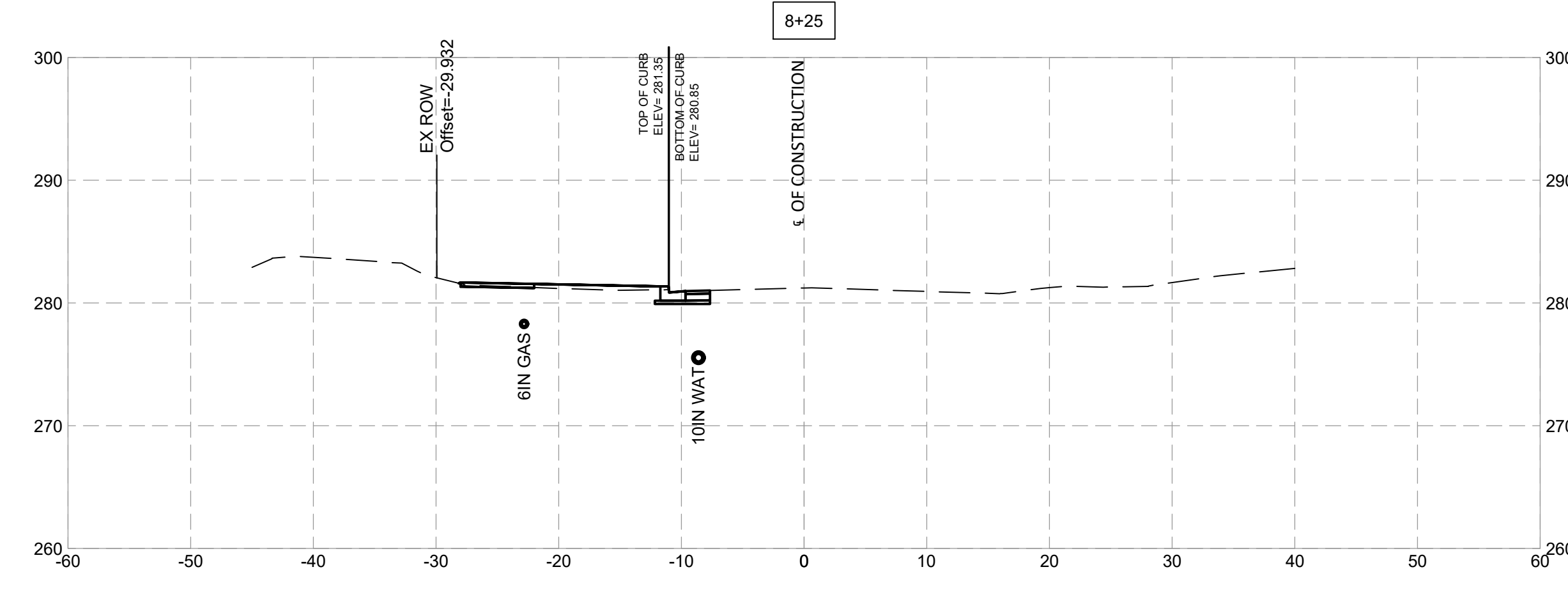
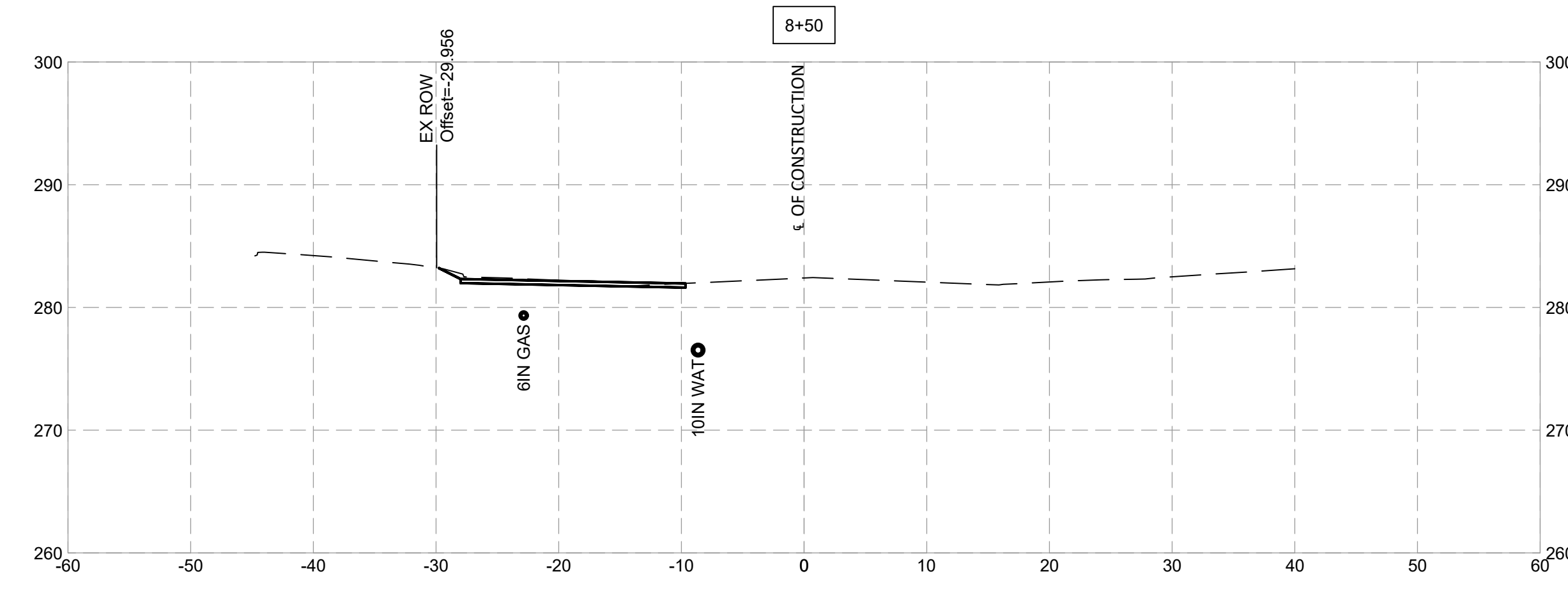
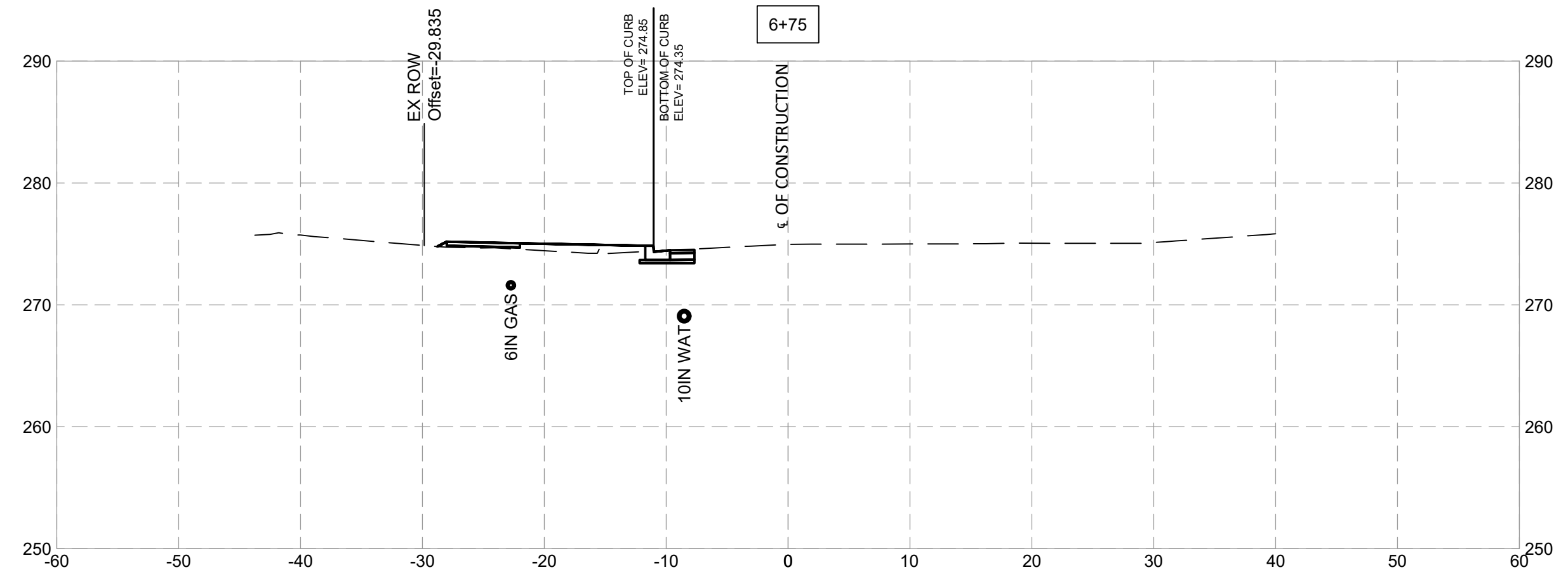
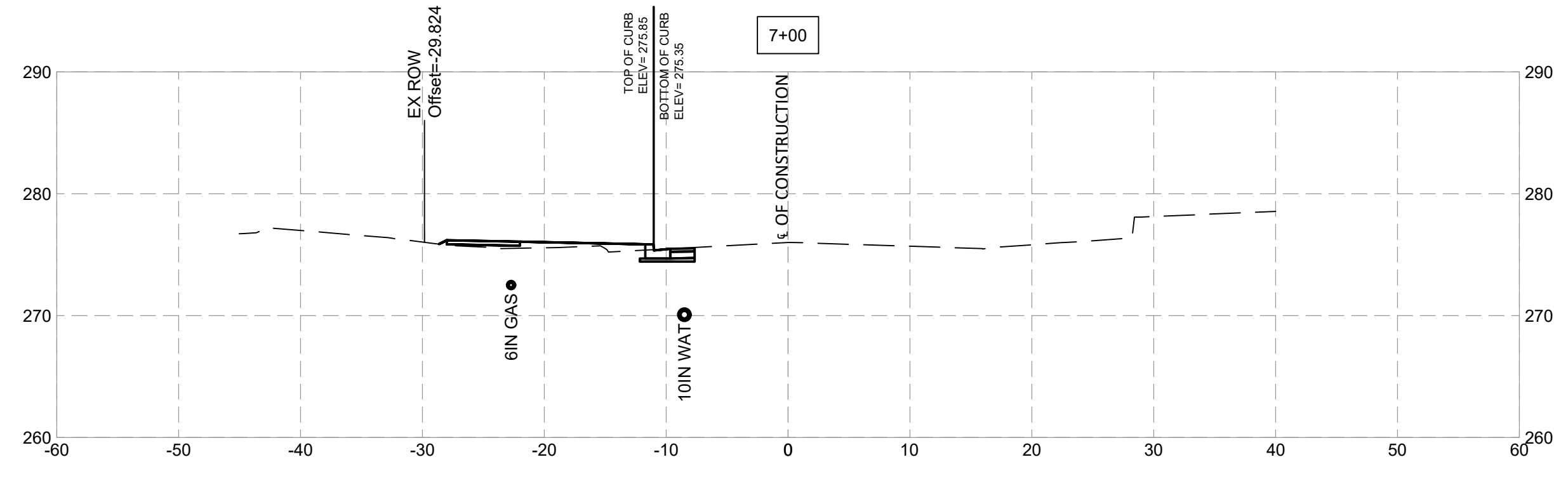
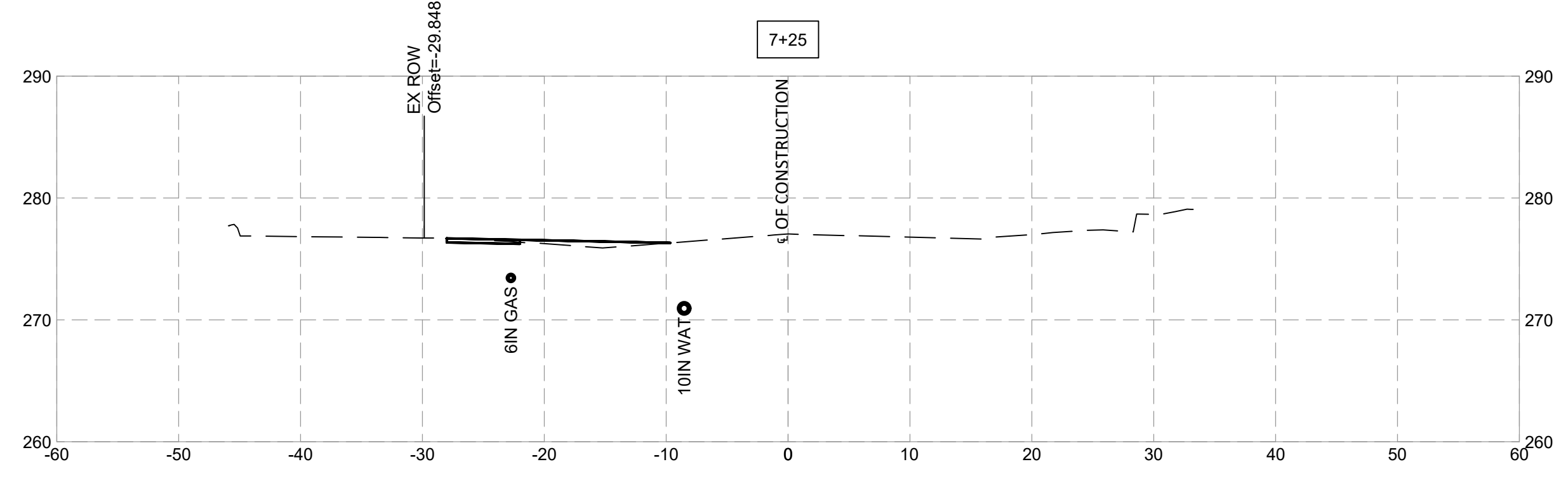
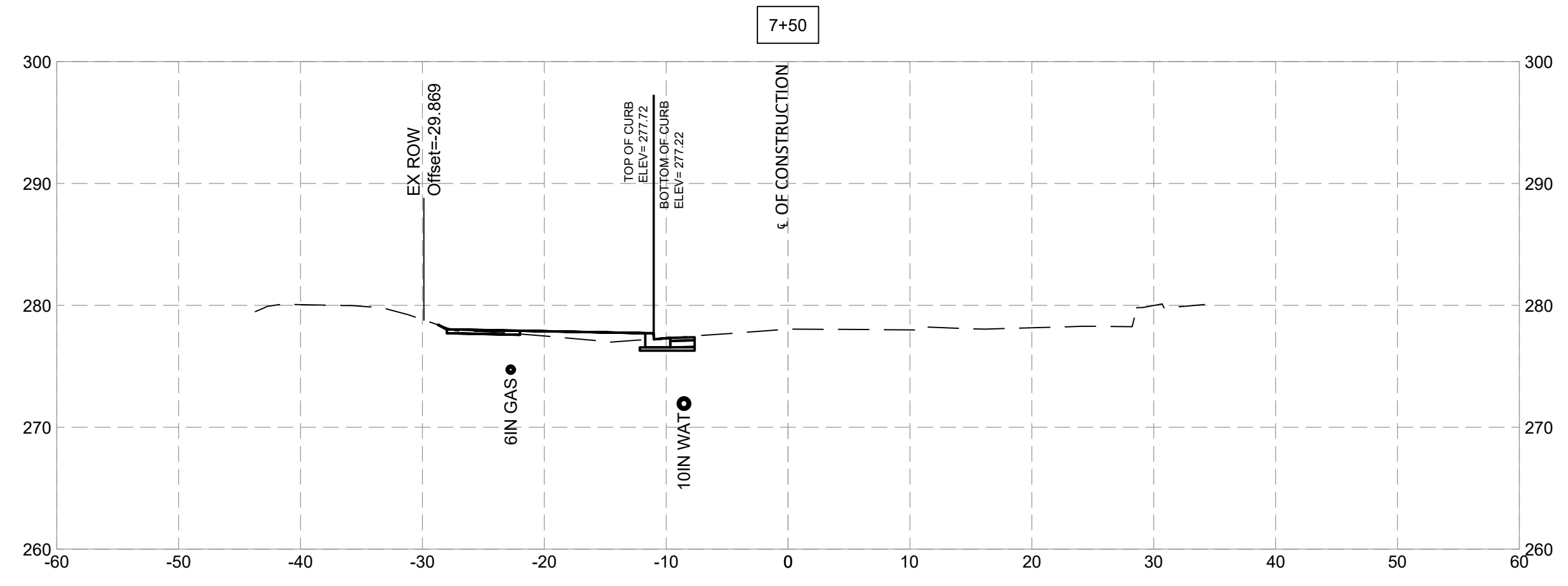
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**FRANKLIN AVENUE  
SIDEWALK  
CROSS SECTIONS**

SCALE : \_\_\_\_\_

Project No. : TBD 87 of 109

**XS - 03**



**SHELADIA** Engineers, Architects  
Development Consultants  
2099 Garner Road, Rockville, MD 20850  
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www.sheladia.com

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_

APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

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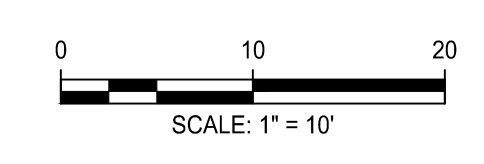
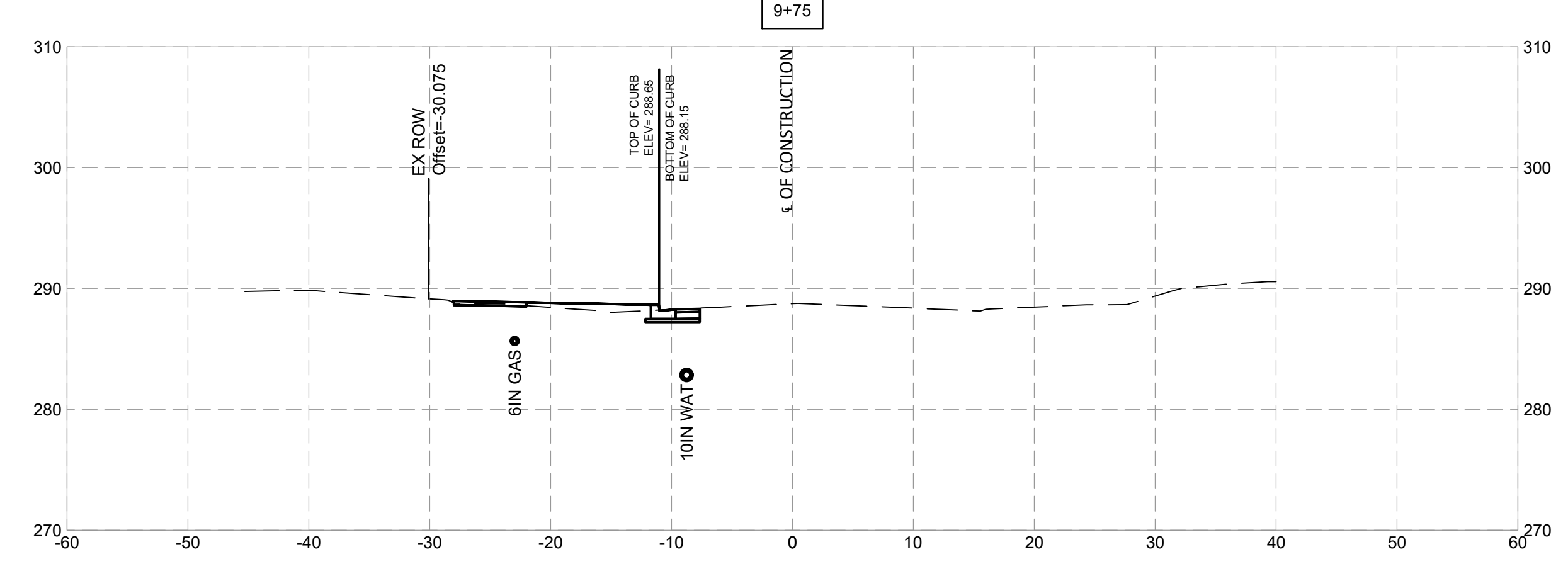
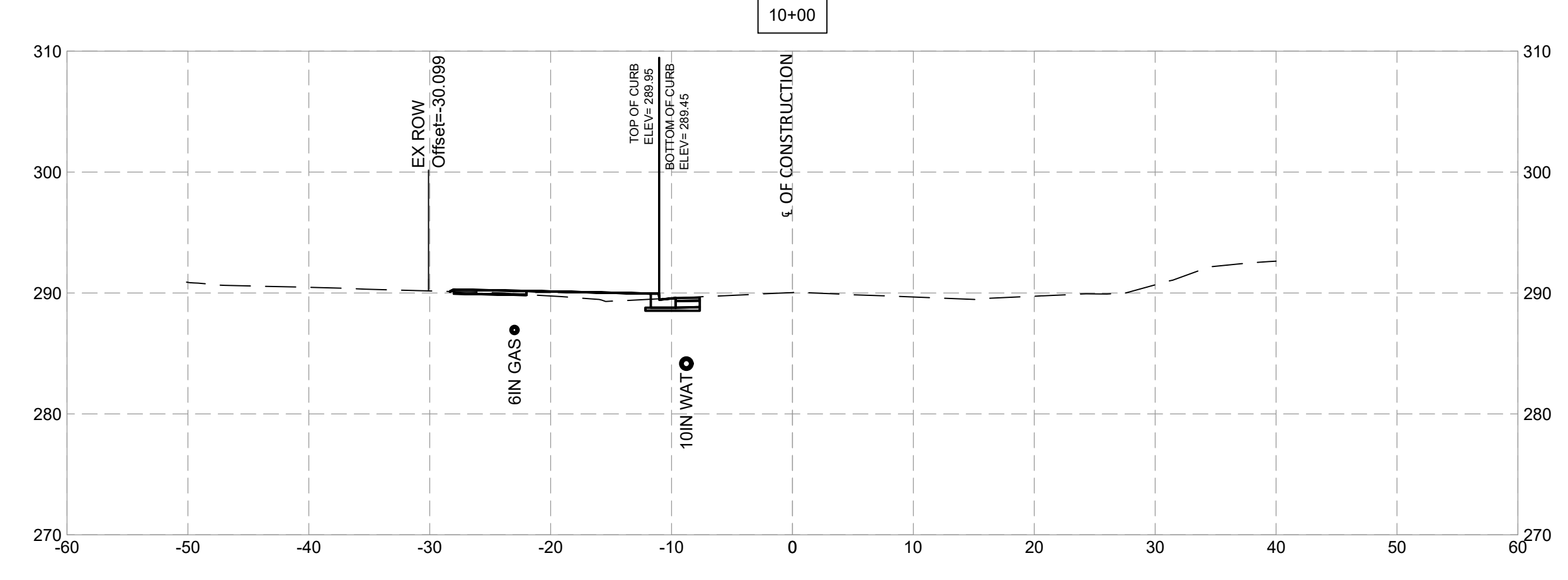
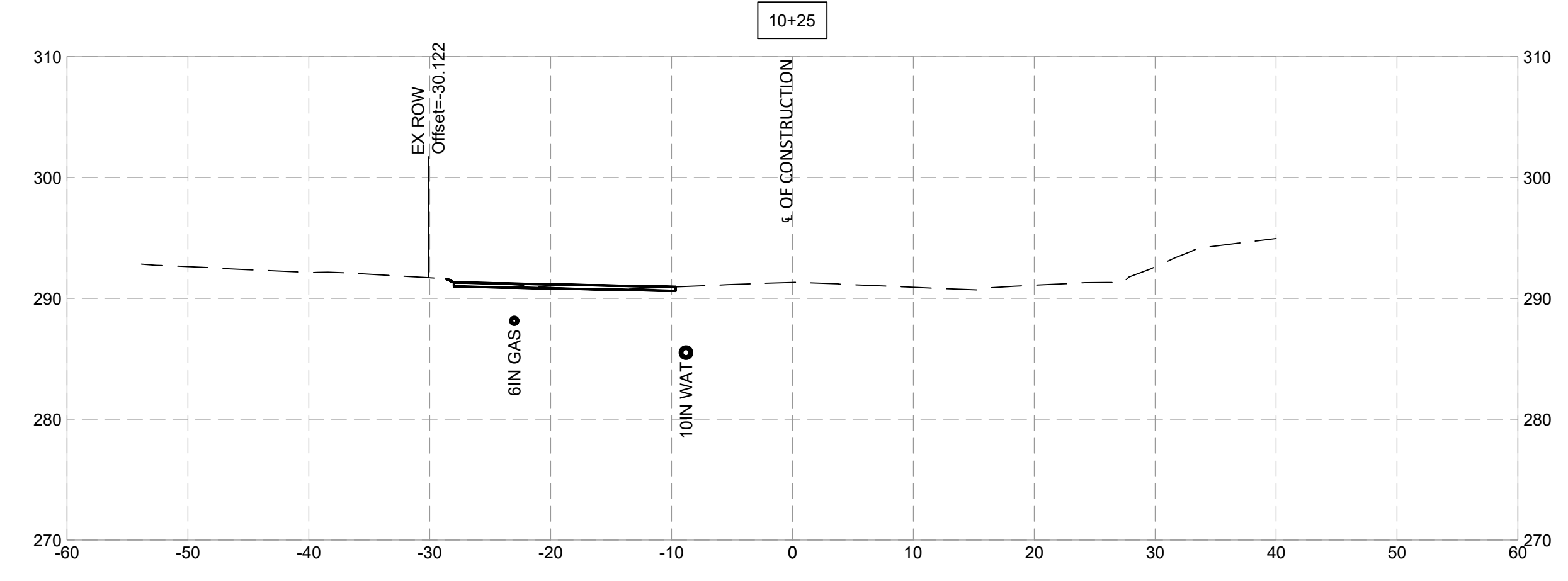
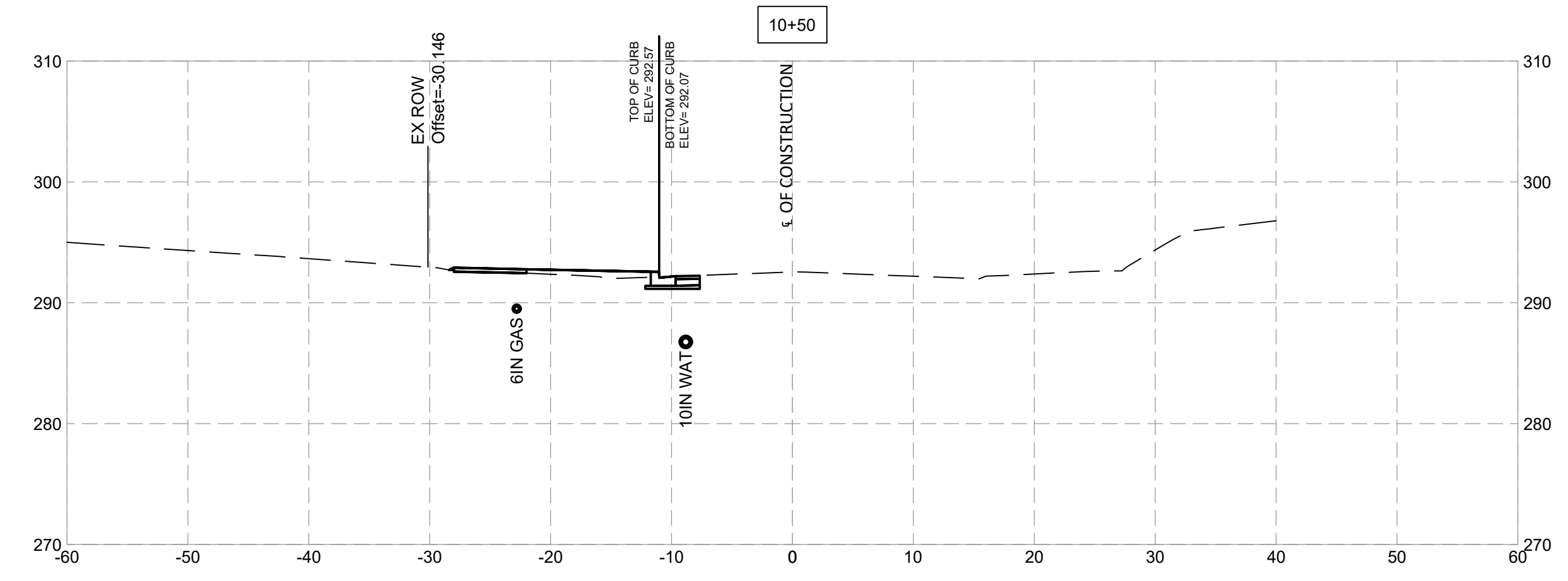
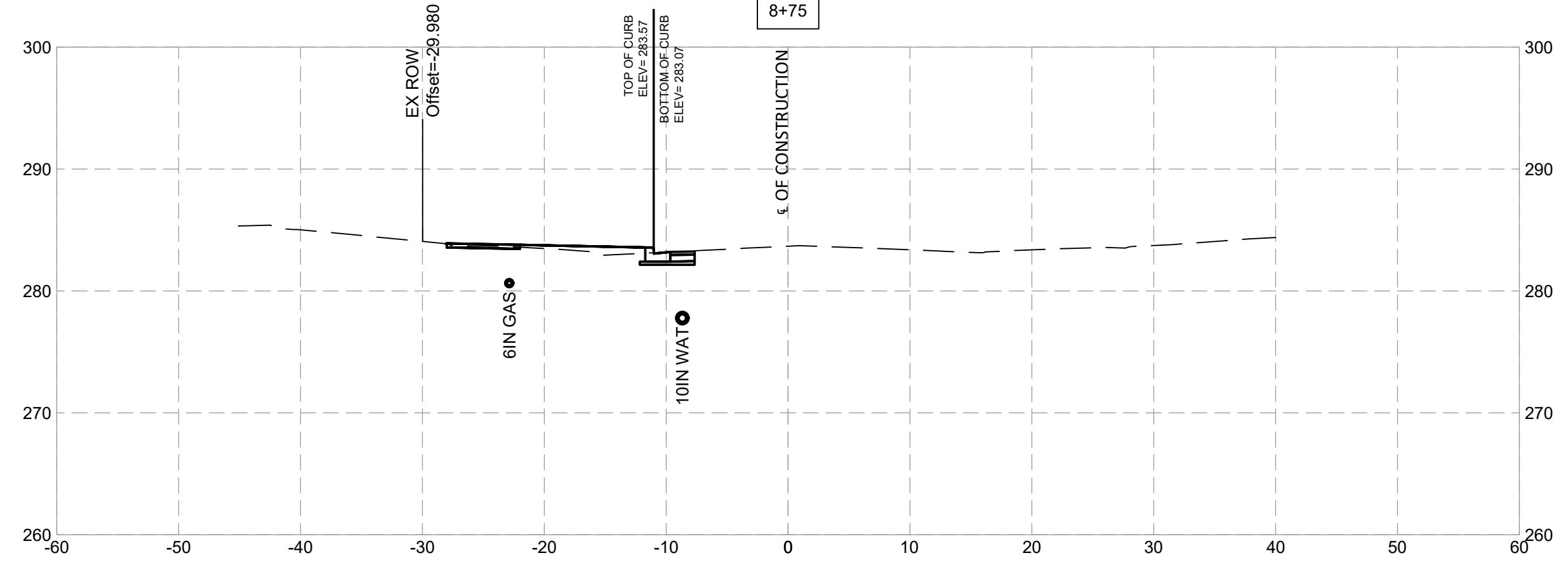
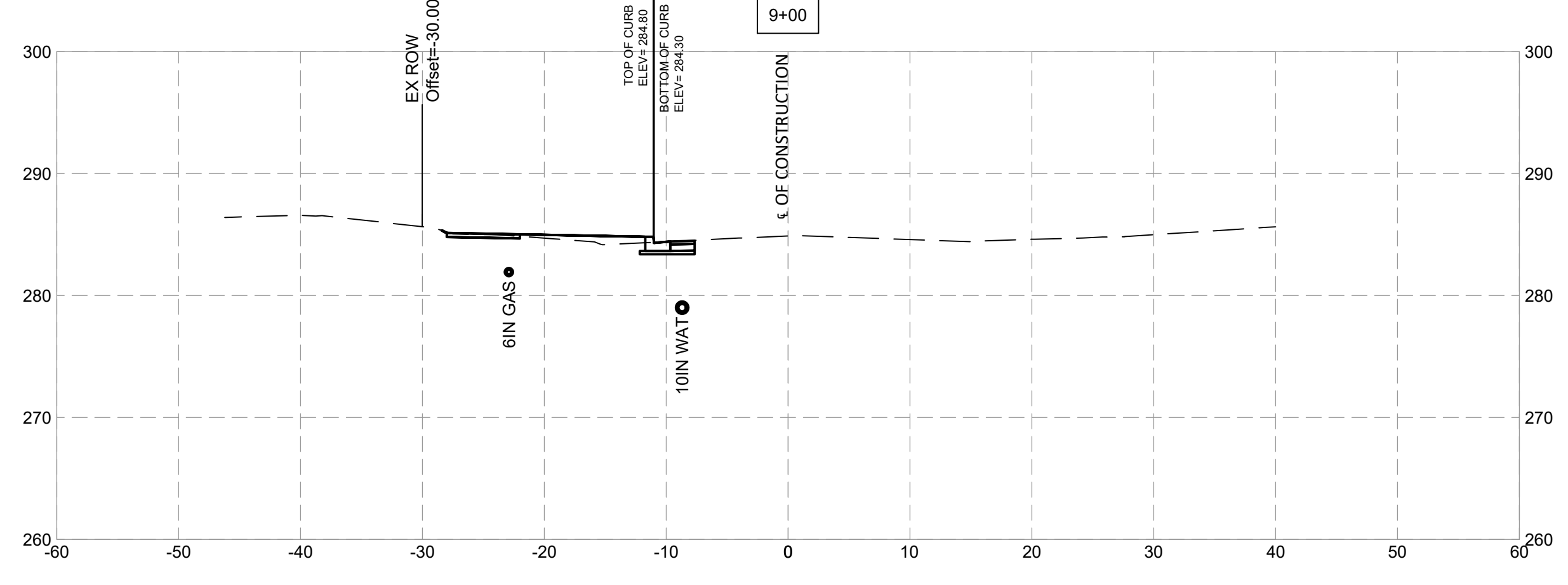
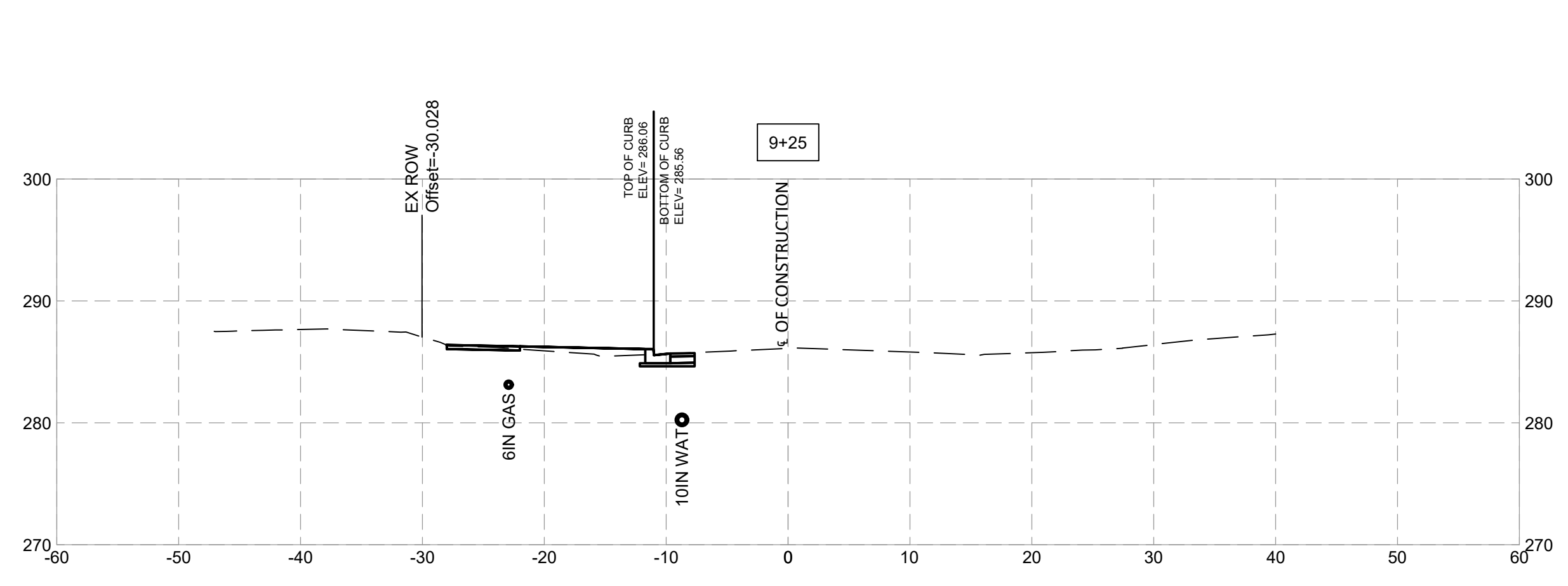
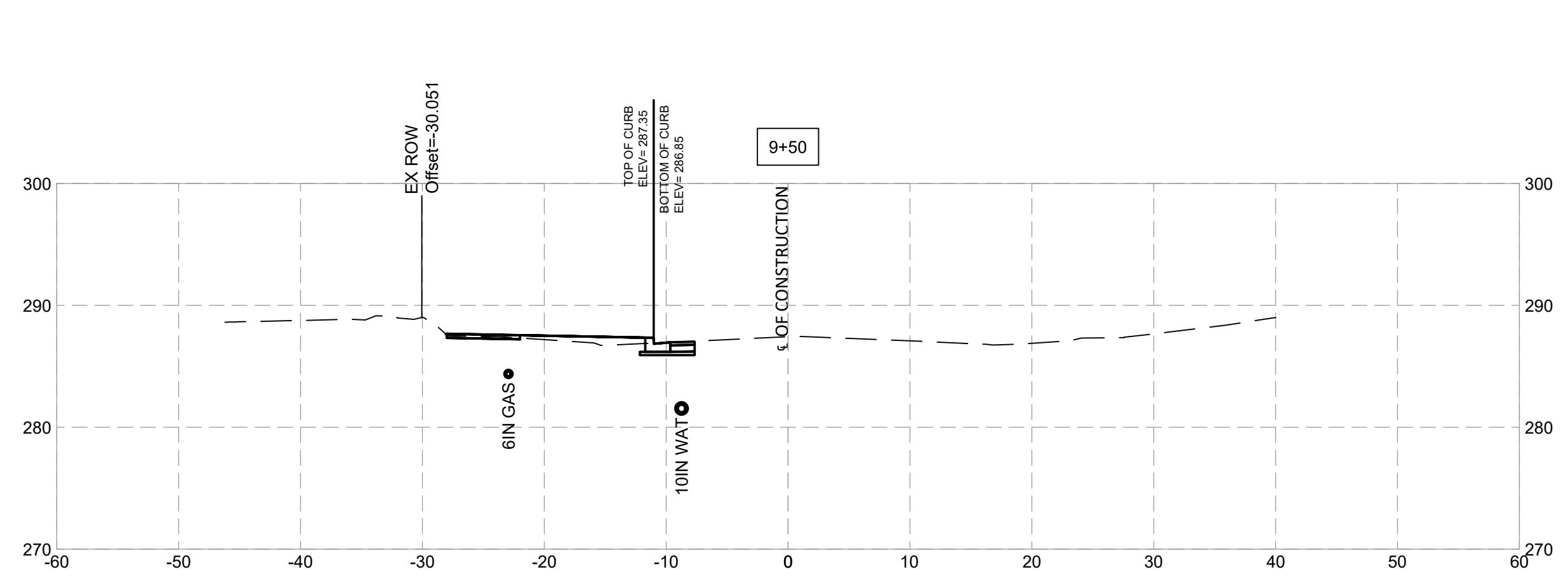
**FRANKLIN AVENUE  
SIDEWALK  
CROSS SECTIONS**

SCALE : \_\_\_\_\_

Project No. : TBD 88 of 109

**XS - 04**





NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_

APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

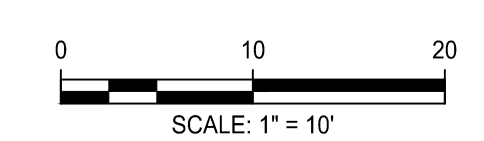
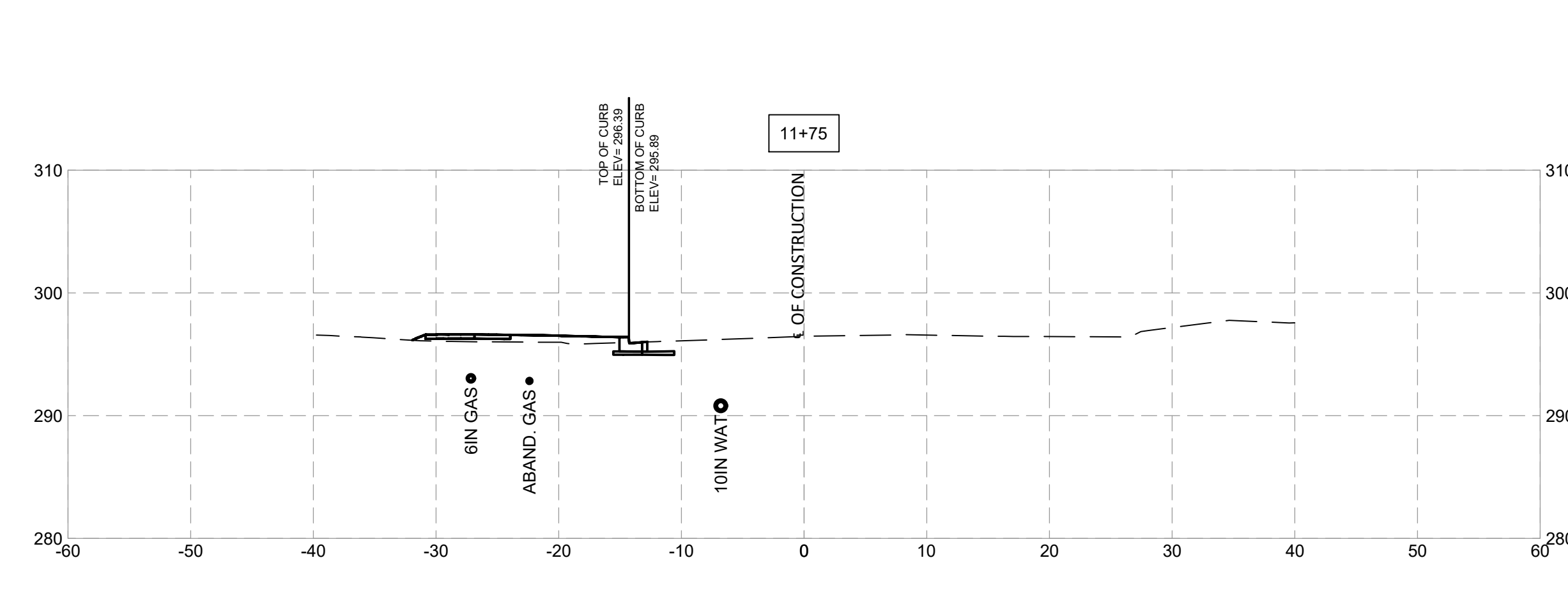
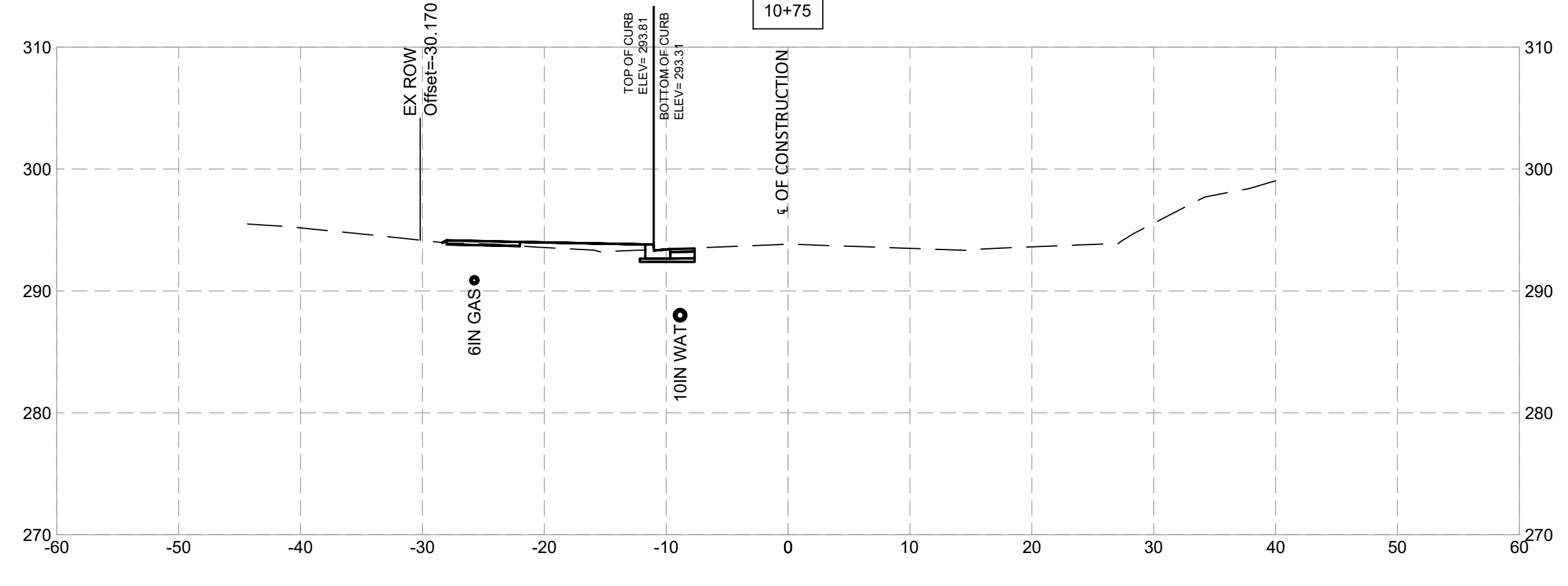
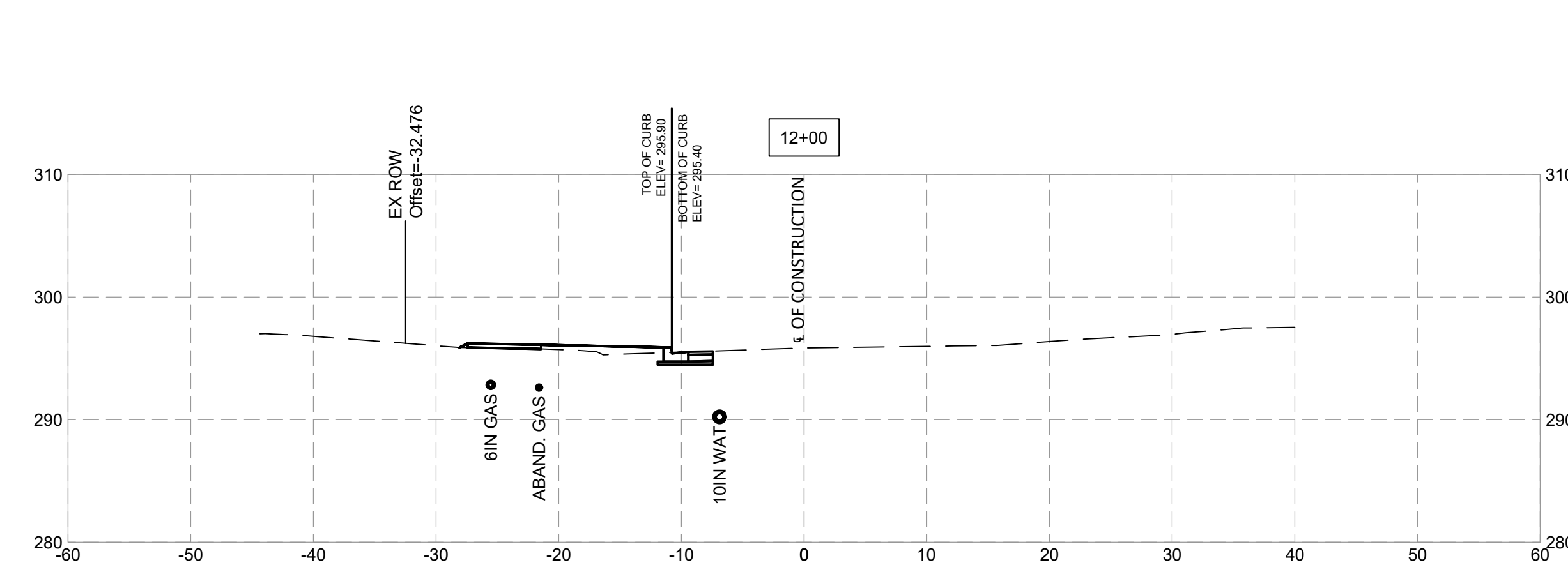
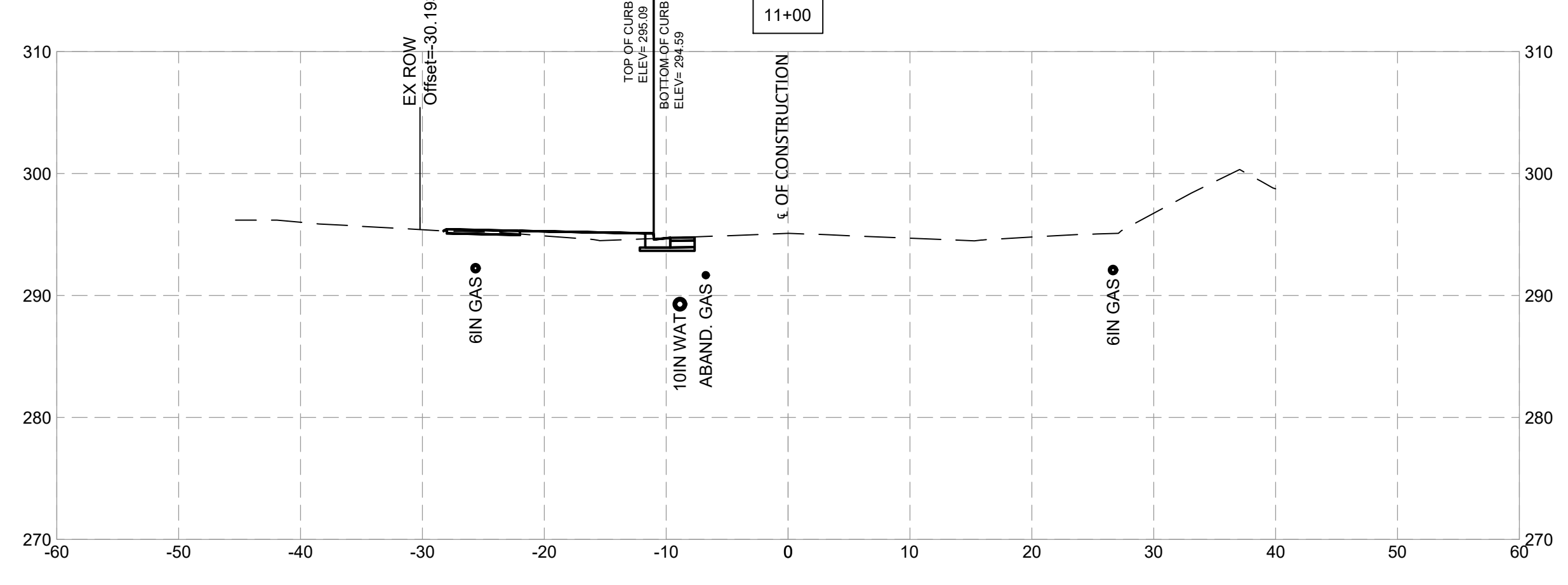
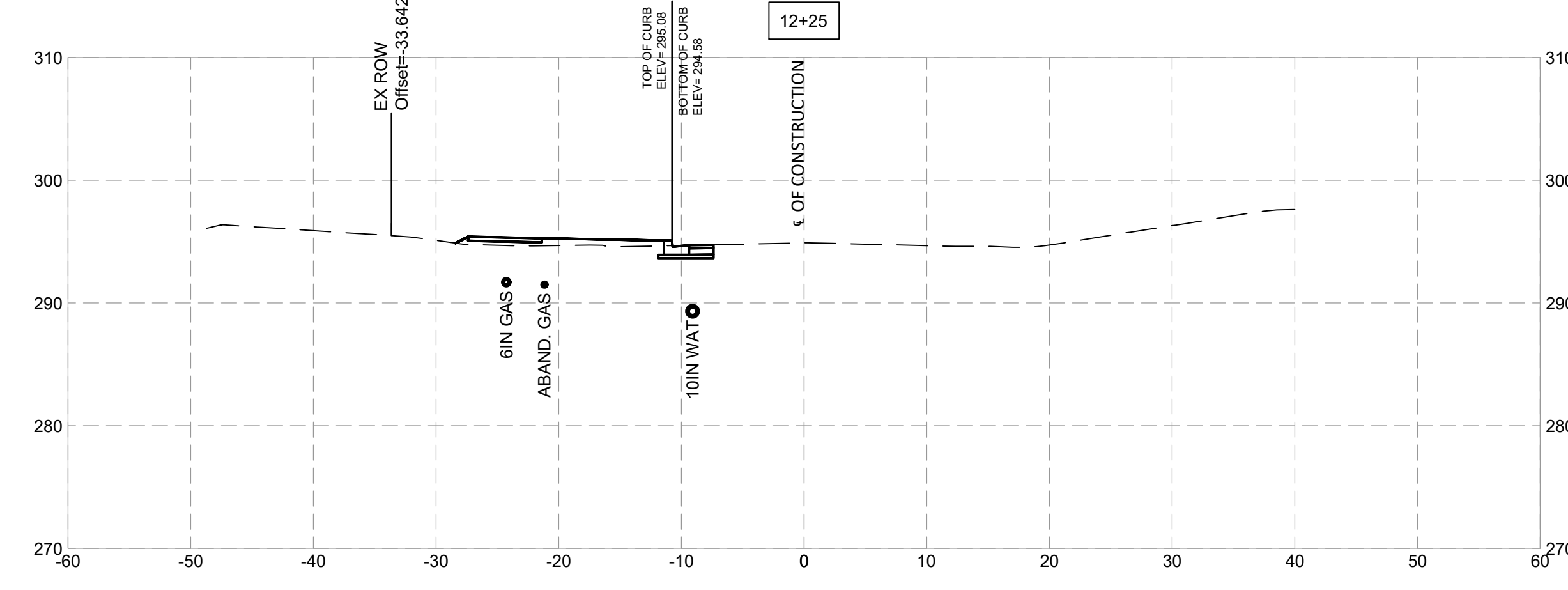
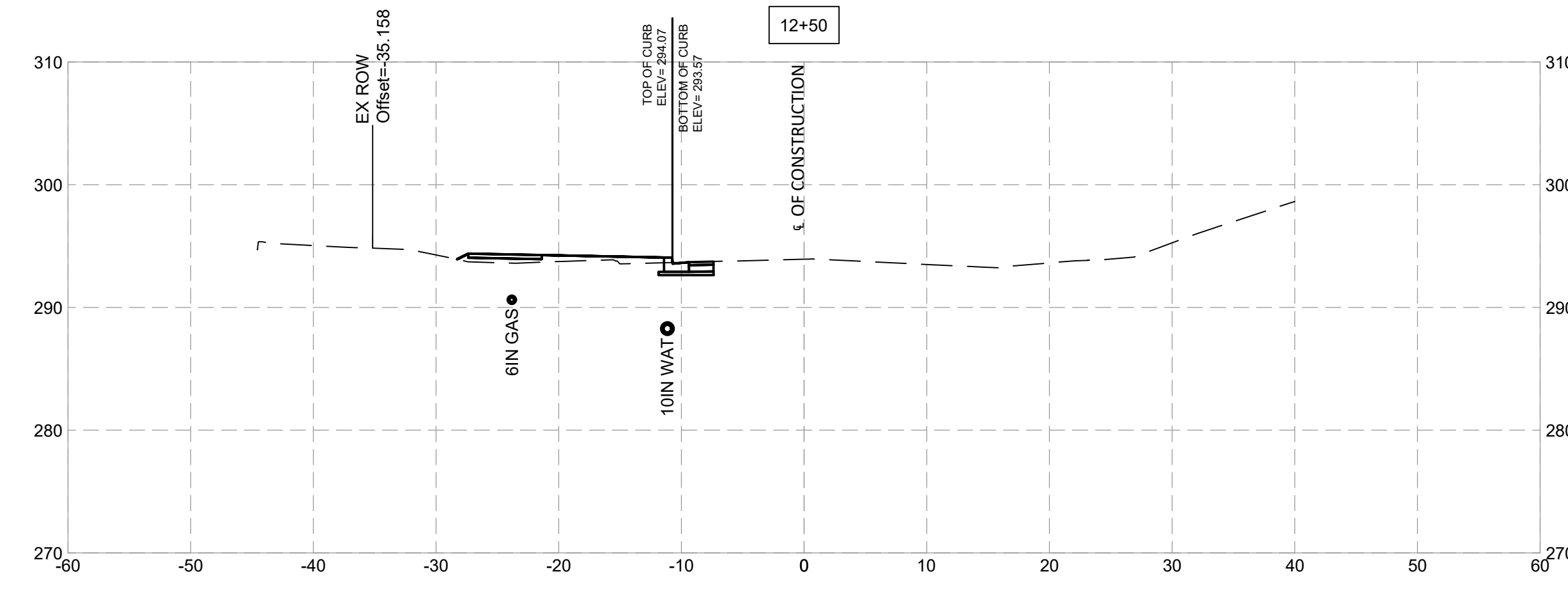
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**FRANKLIN AVENUE  
 SIDEWALK  
 CROSS SECTIONS**

SCALE: \_\_\_\_\_

Project No.: TBD 89 of 109

**XS - 05**




**Engineers, Architects  
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 209 Garner Road, Rockville, MD 20850  
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MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

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 Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_  
 APPROVED  
 Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

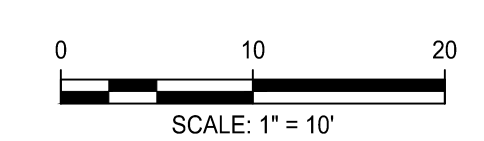
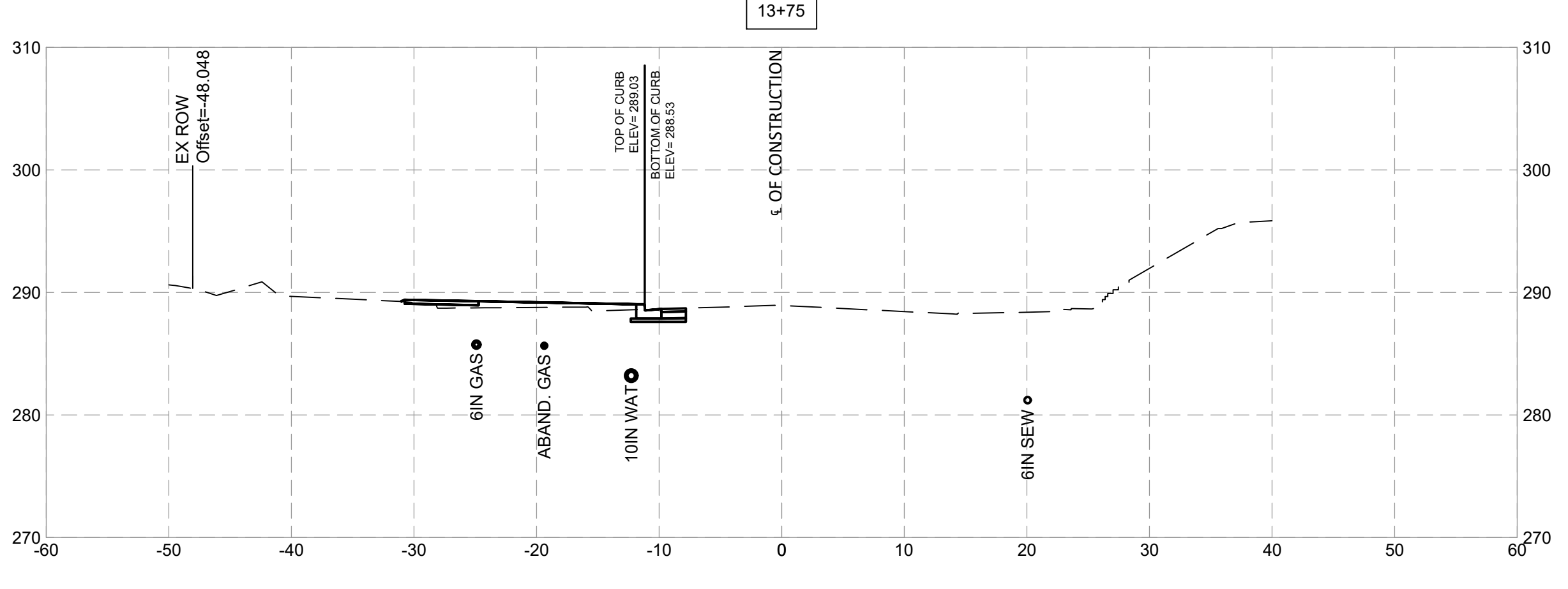
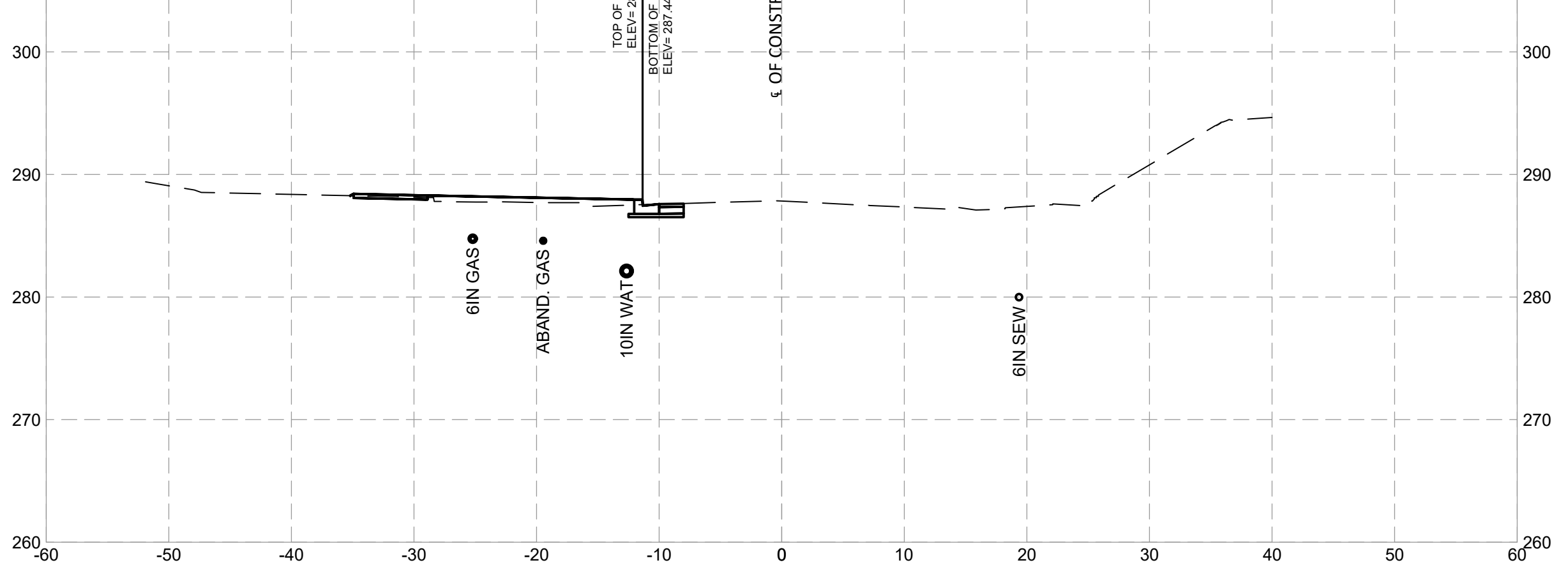
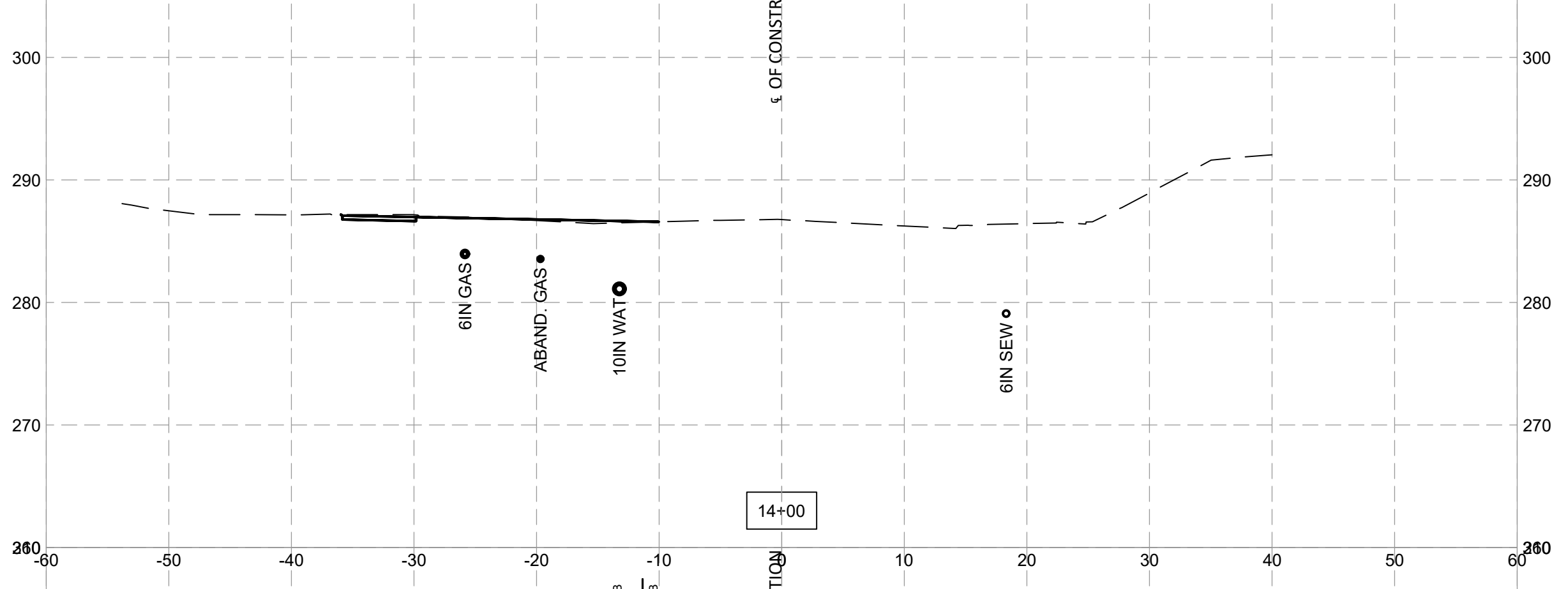
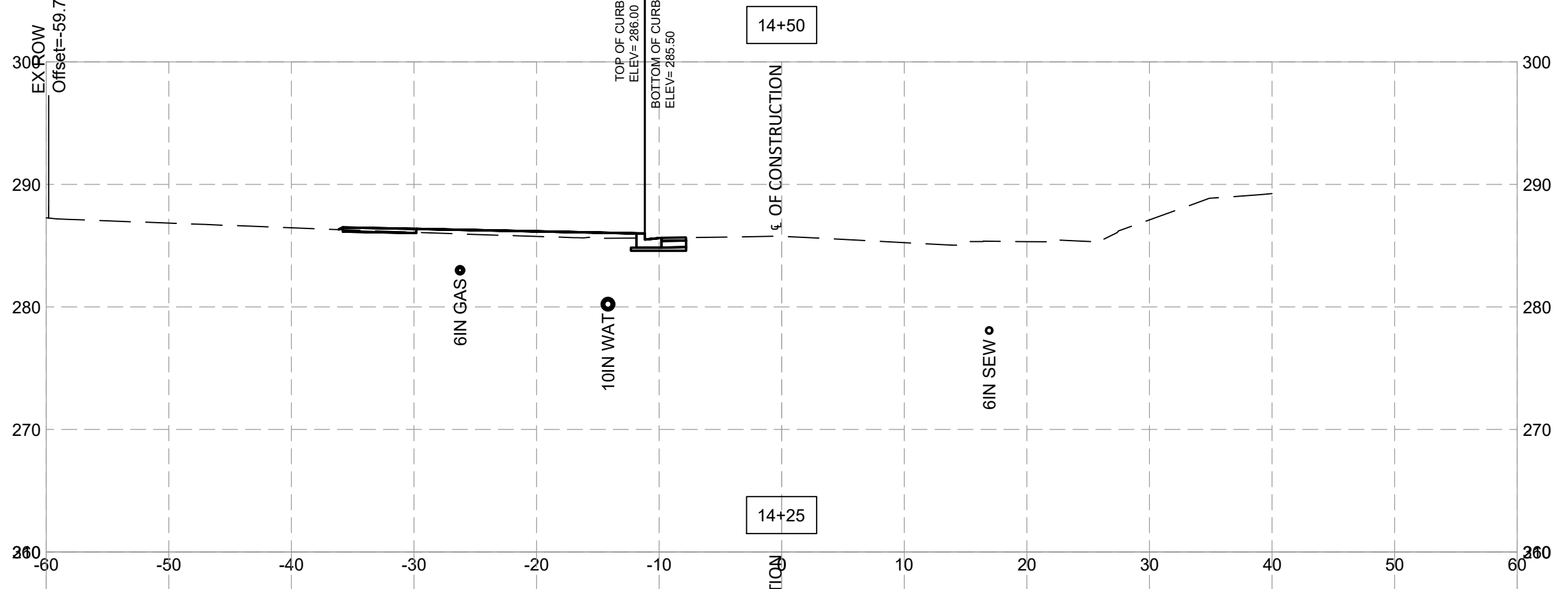
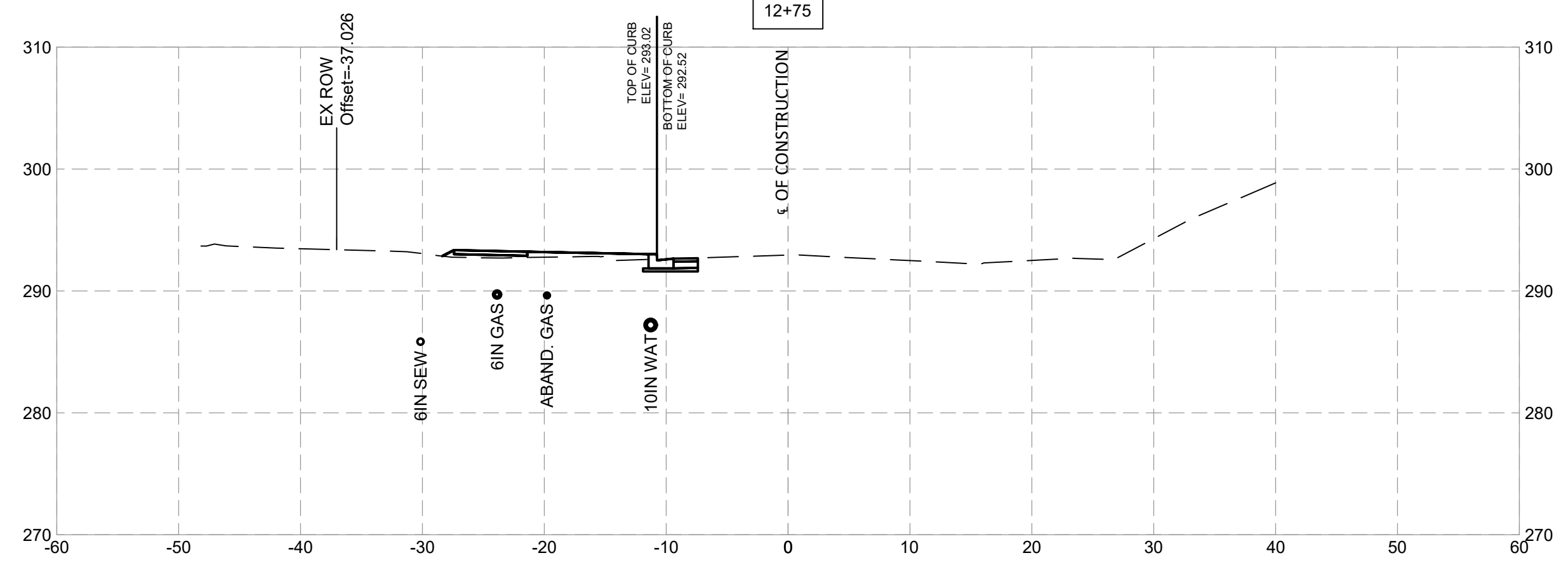
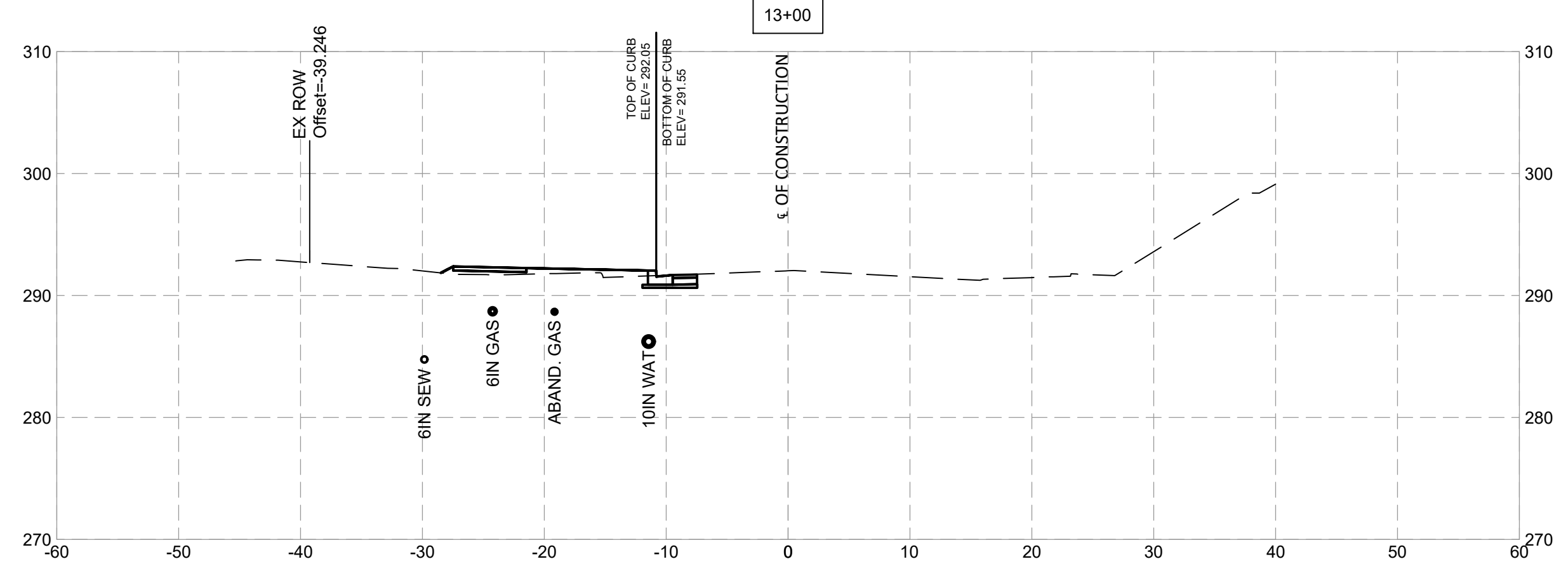
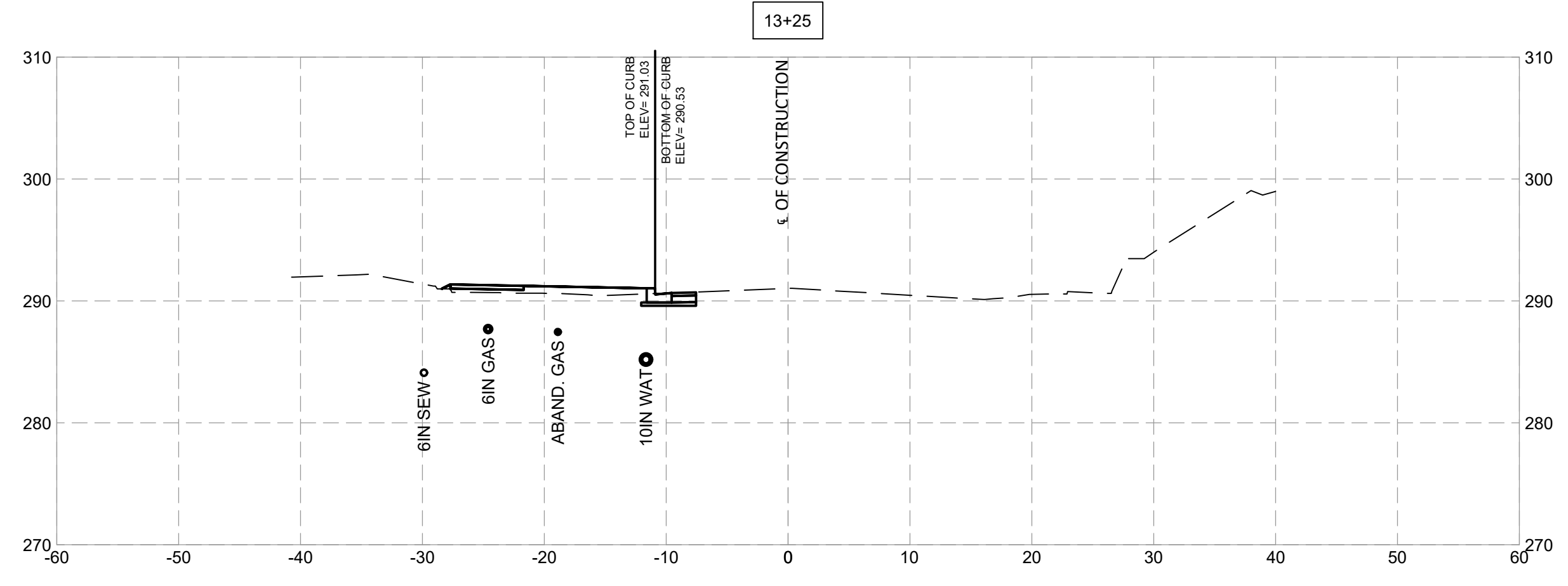
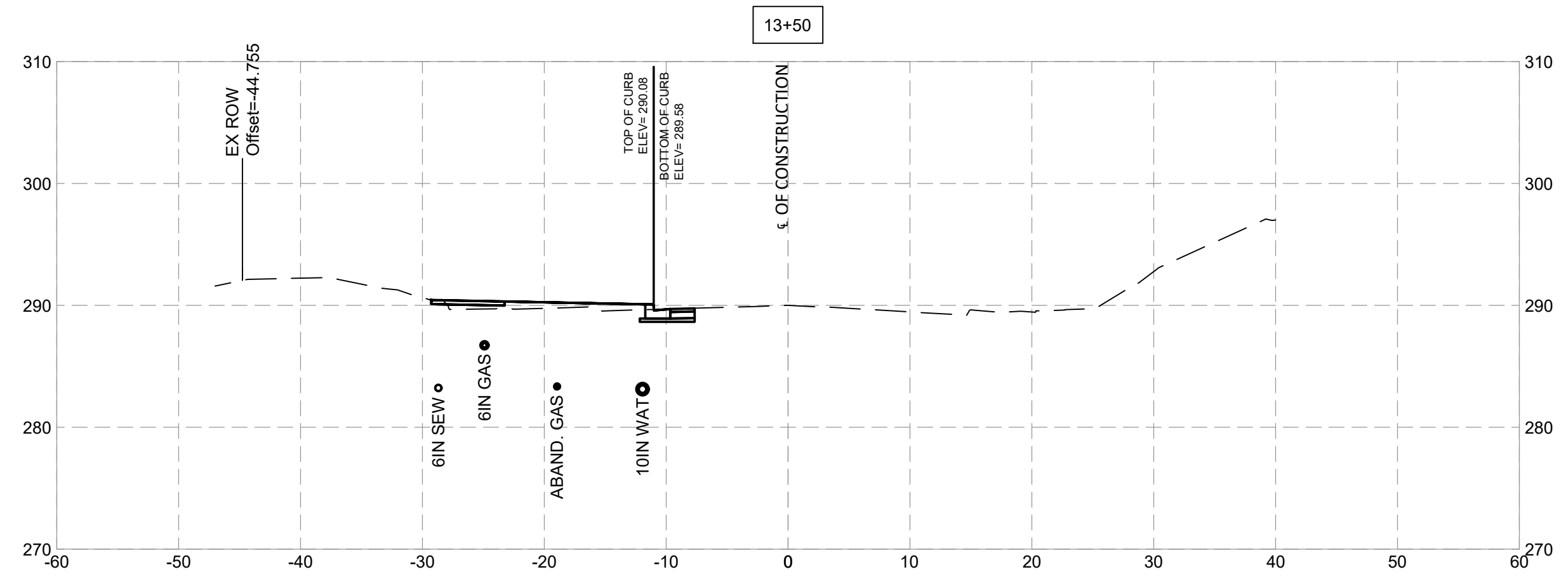
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**FRANKLIN AVENUE  
 SIDEWALK  
 CROSS SECTIONS**

SCALE : \_\_\_\_\_

Project No. : TBD 90 of 109

**XS - 06**




**Engineers, Architects**  
**Development Consultants**  
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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

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 Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_  
 APPROVED  
 Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

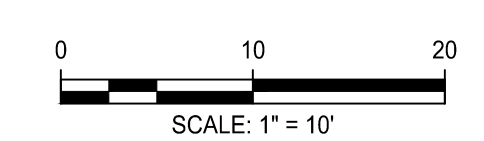
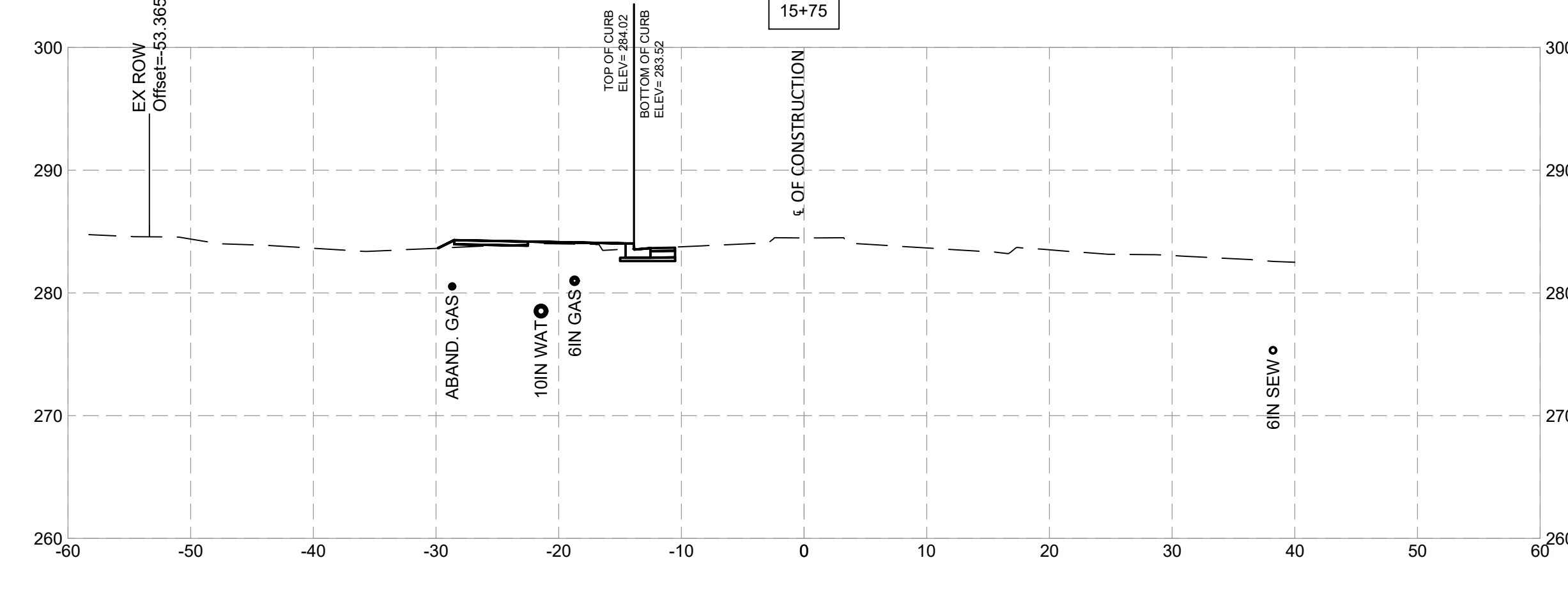
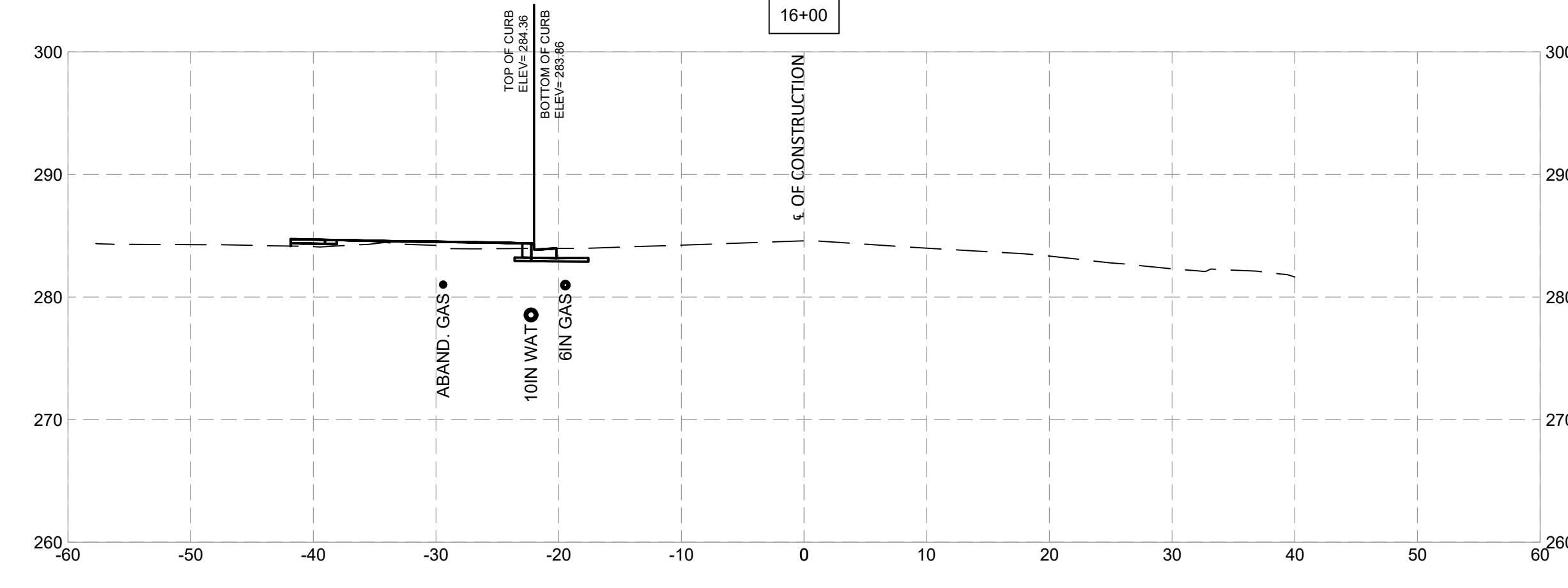
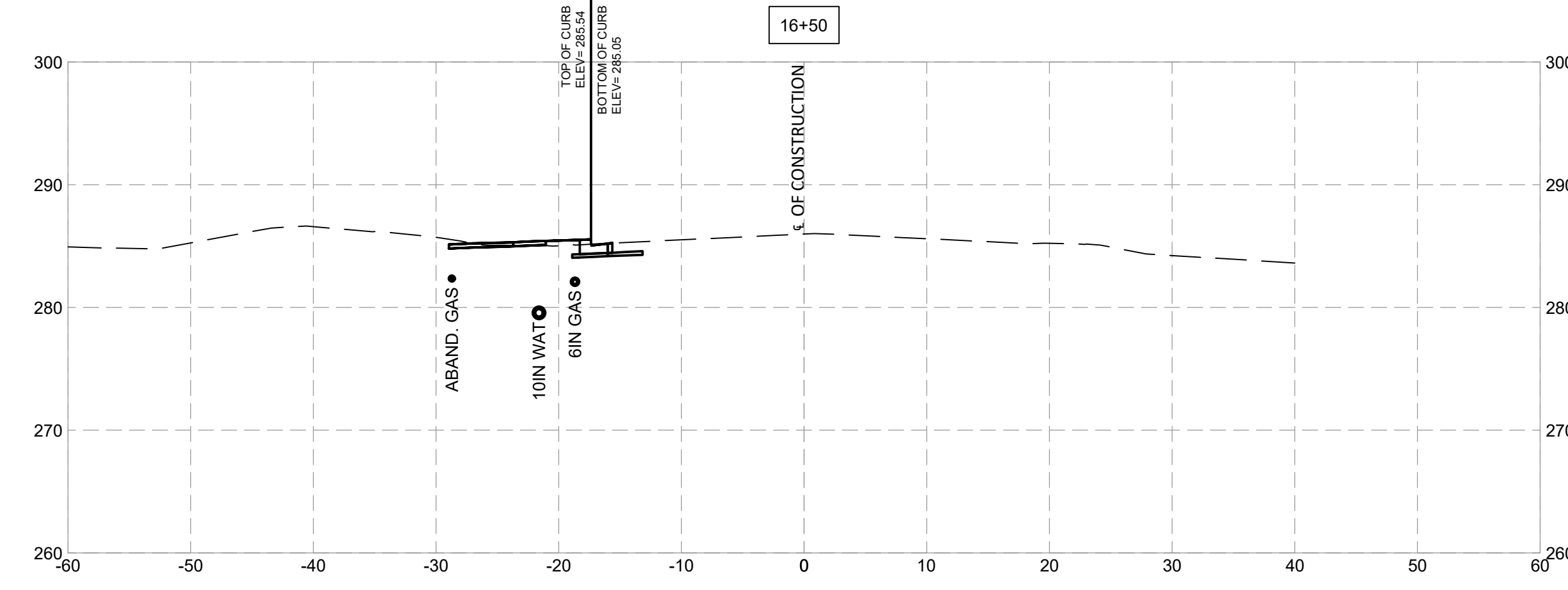
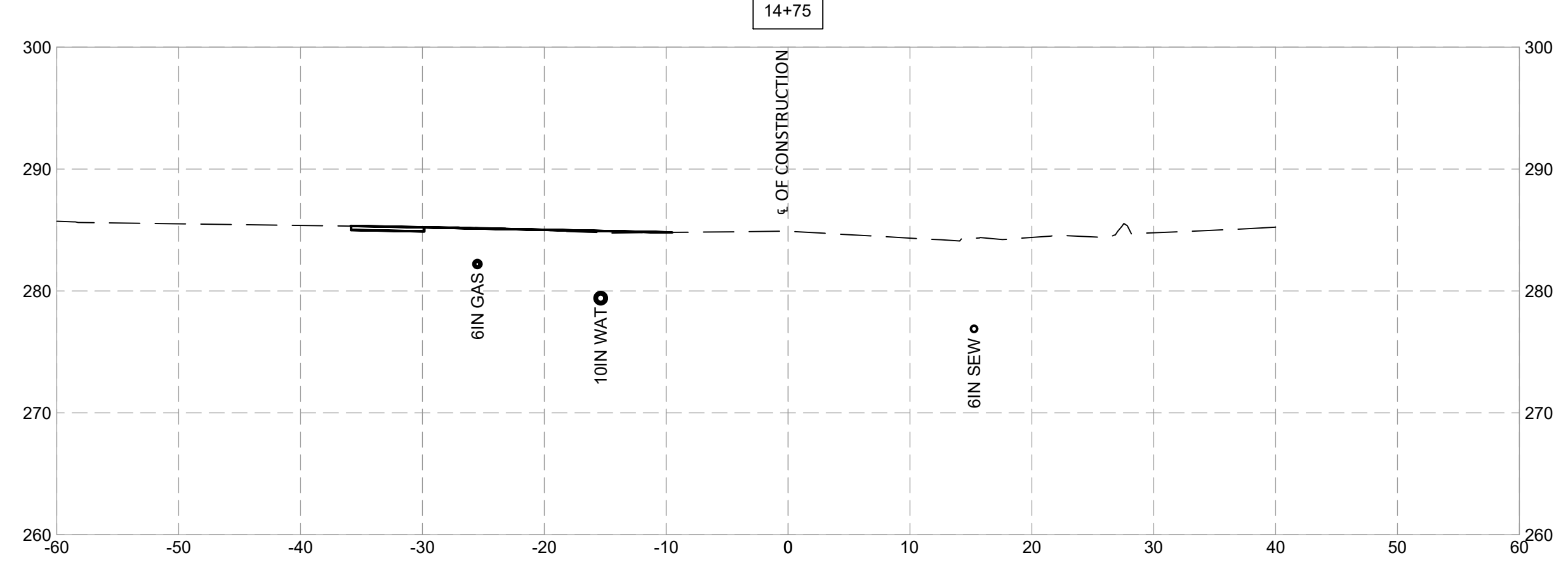
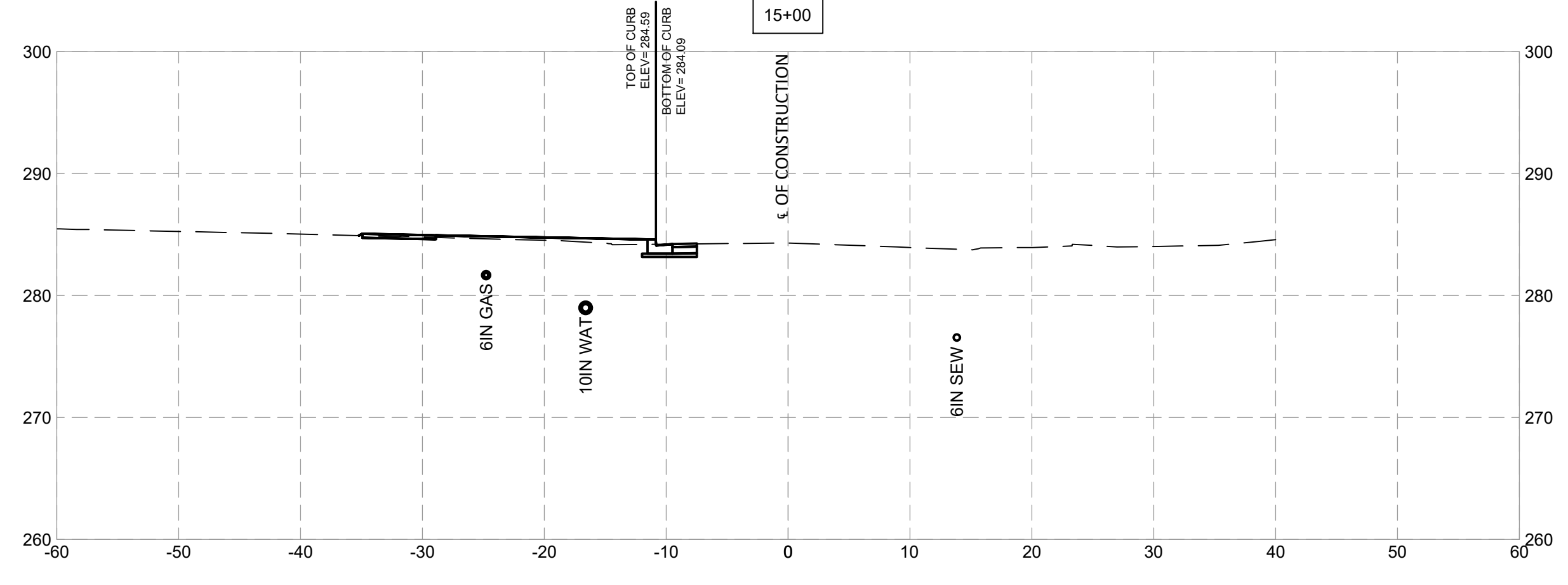
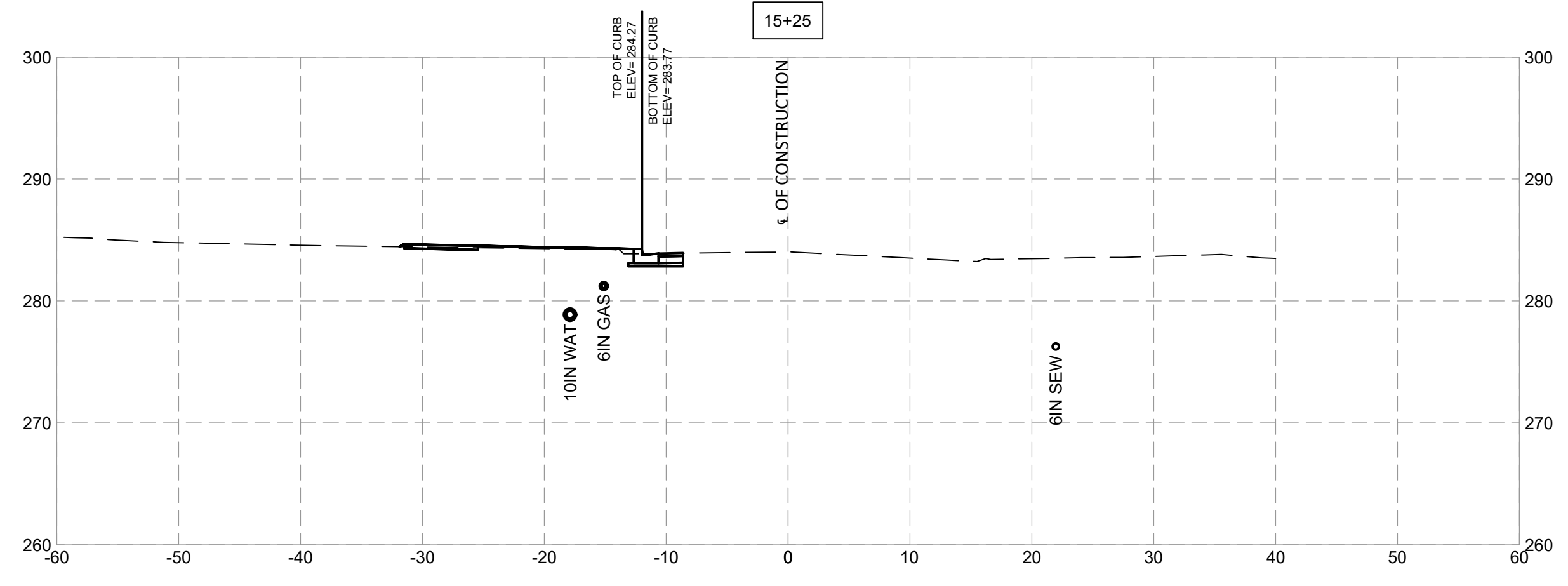
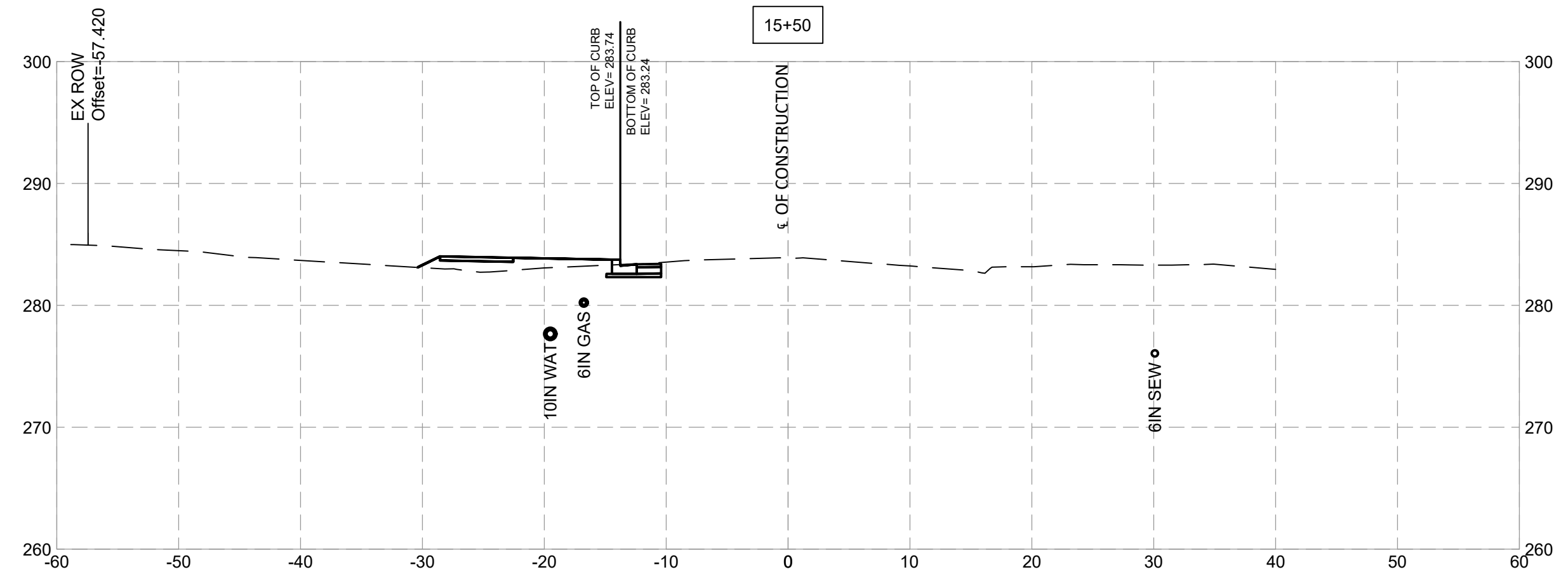
Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

**FRANKLIN AVENUE**  
**SIDEWALK**  
**CROSS SECTIONS**

SCALE : \_\_\_\_\_

Project No. : TBD of 91 of 109

**XS - 07**

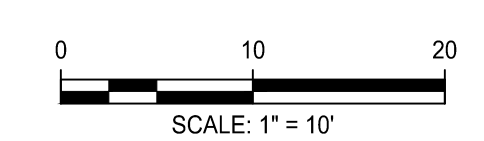
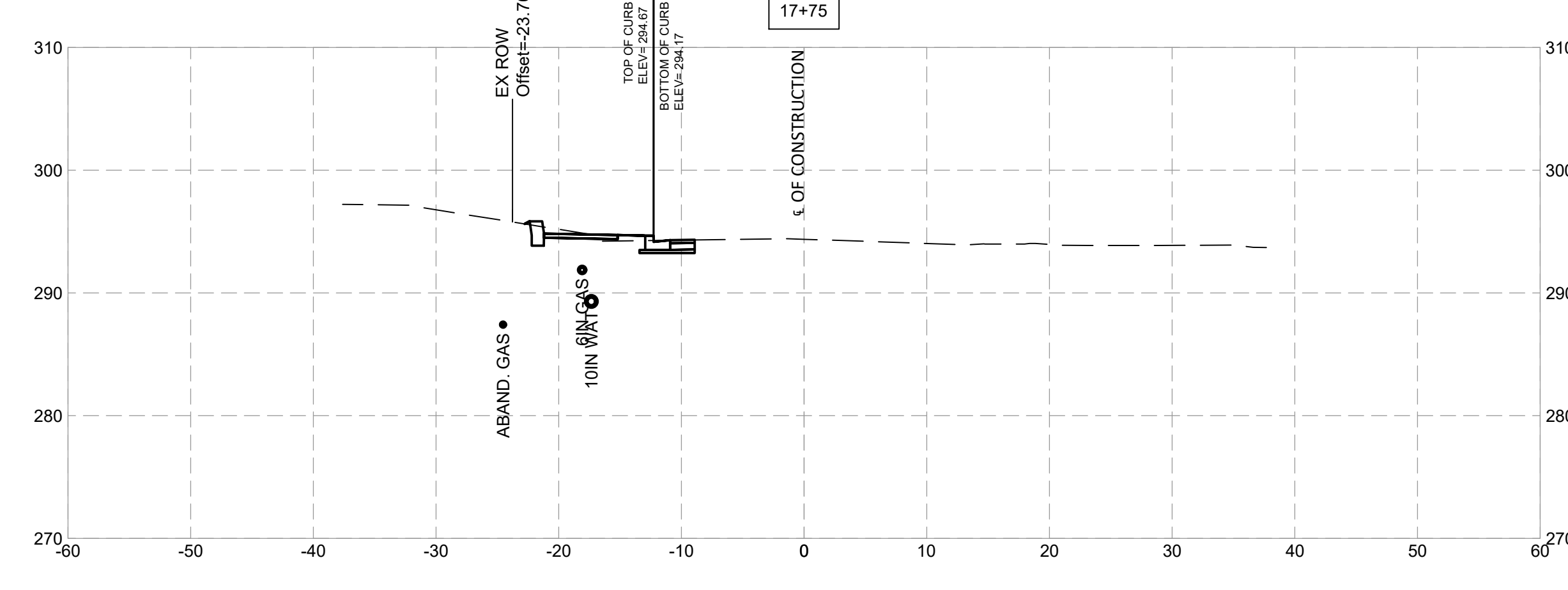
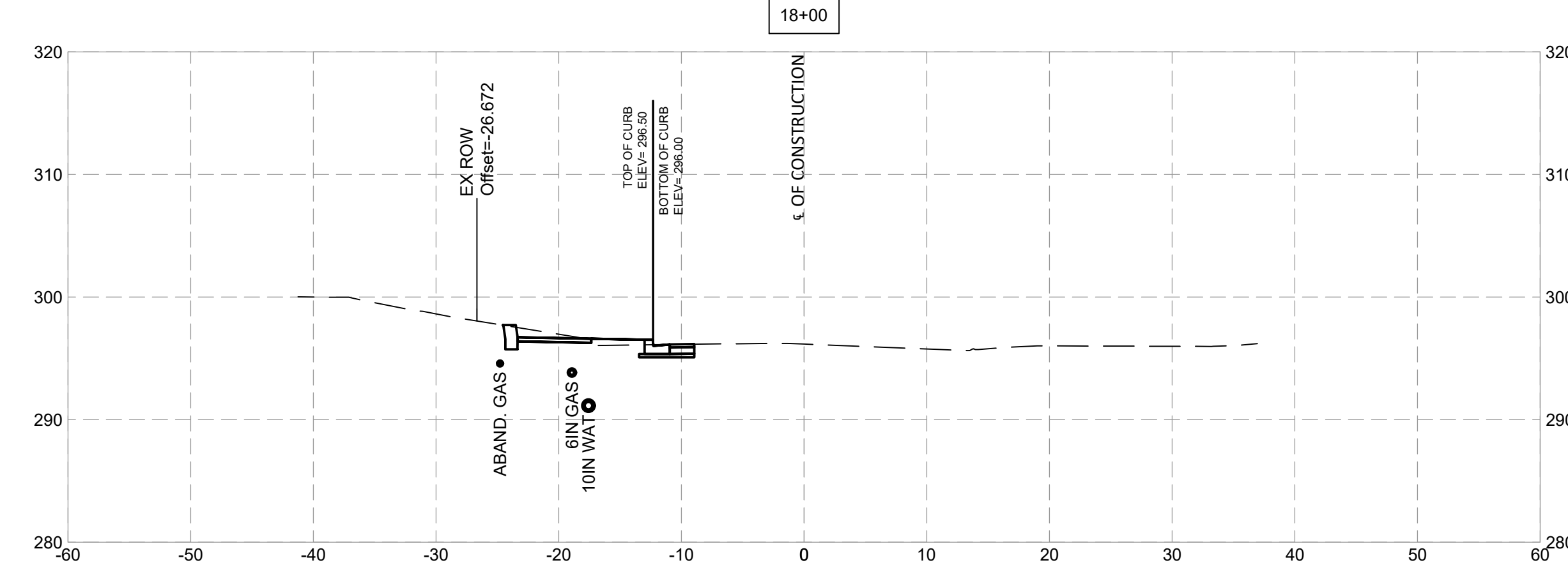
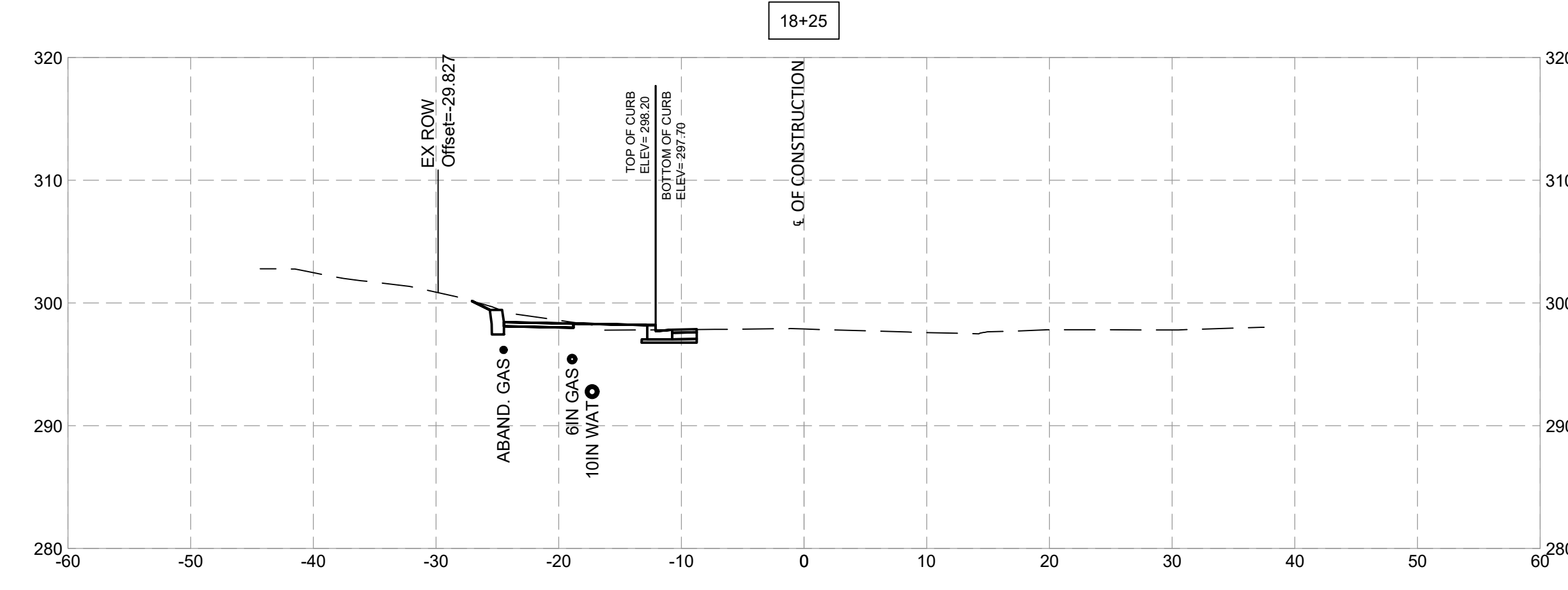
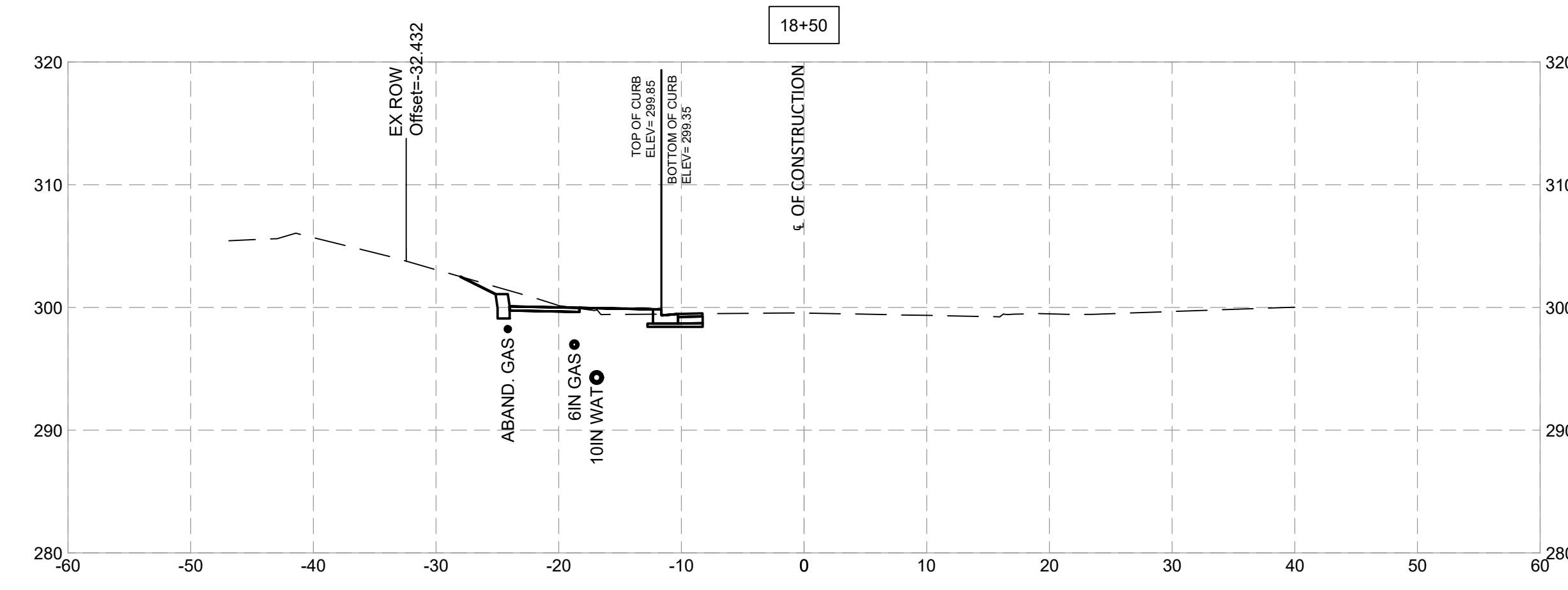
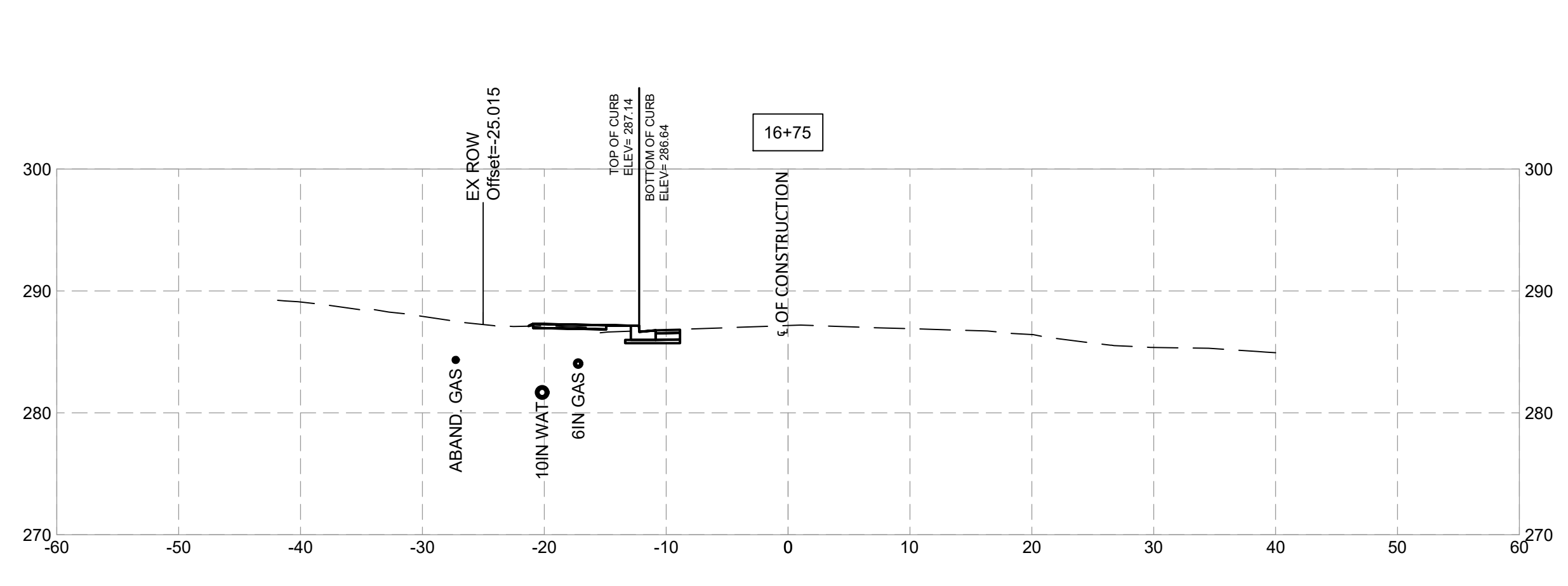
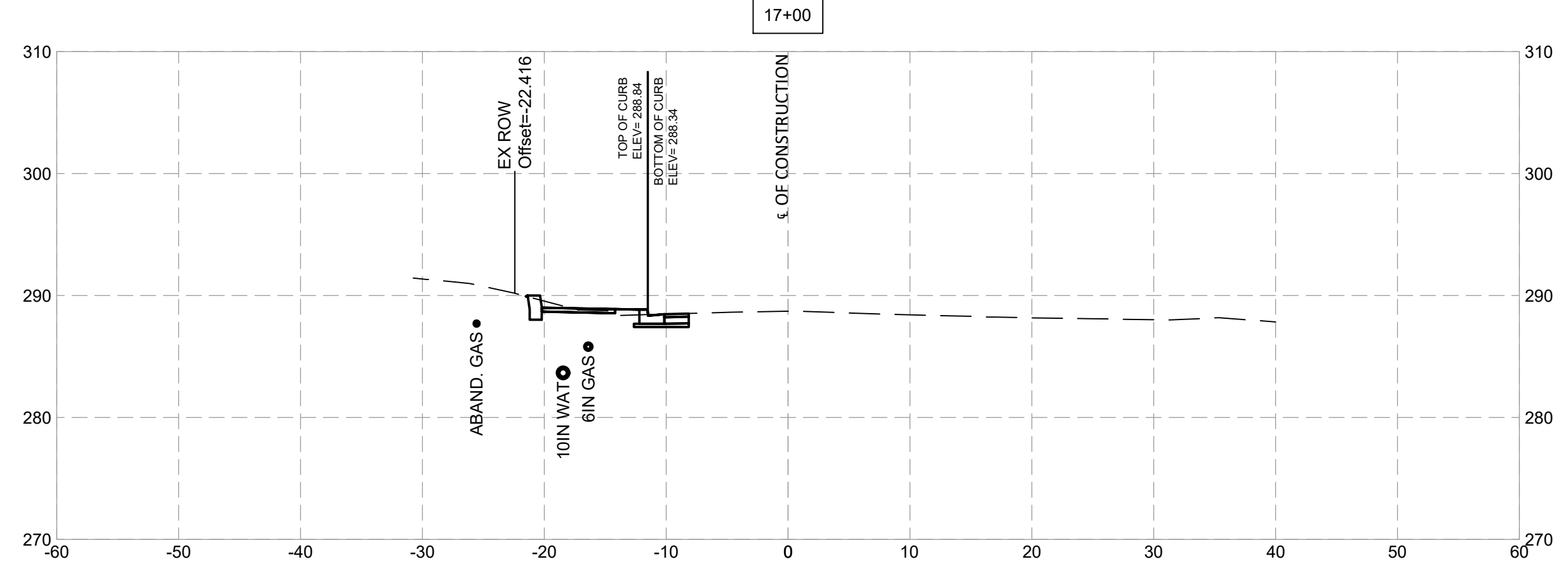
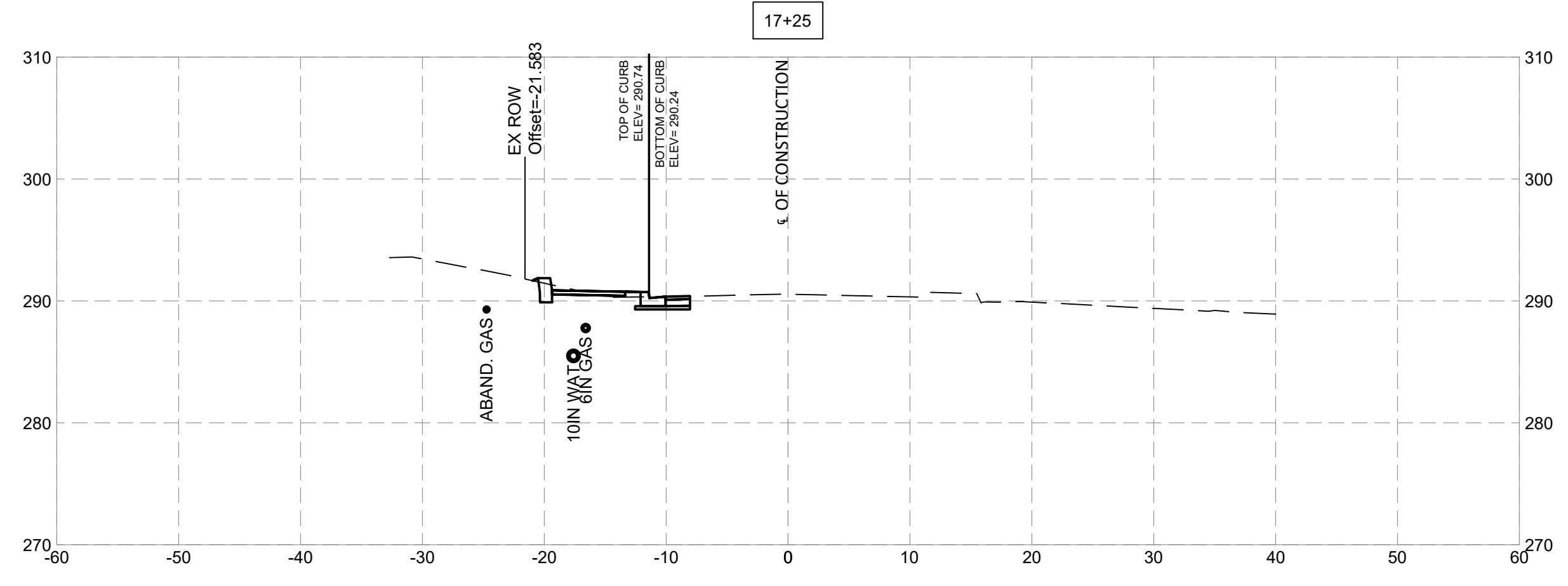
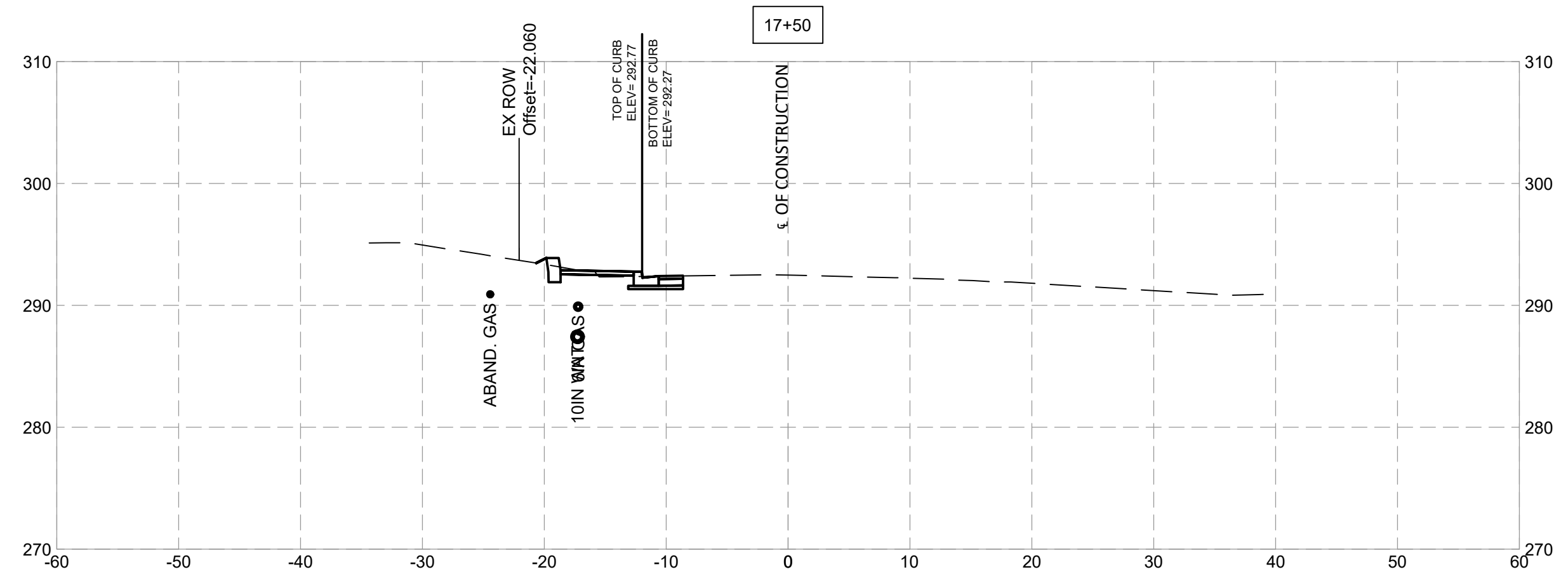


MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND			
RECOMMENDED FOR APPROVAL			
Chief, Design Section	_____	Date	_____
APPROVED			
Chief, Division of Transportation Engineering	_____	Date	_____
Designed by: _____	Drawn by: _____	Checked by: _____	

**FRANKLIN AVENUE  
SIDEWALK  
CROSS SECTIONS**

SCALE : \_\_\_\_\_

Project No. : TBD of 92 **XS - 08**



NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_

APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

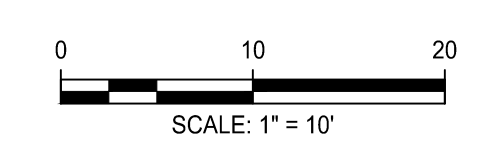
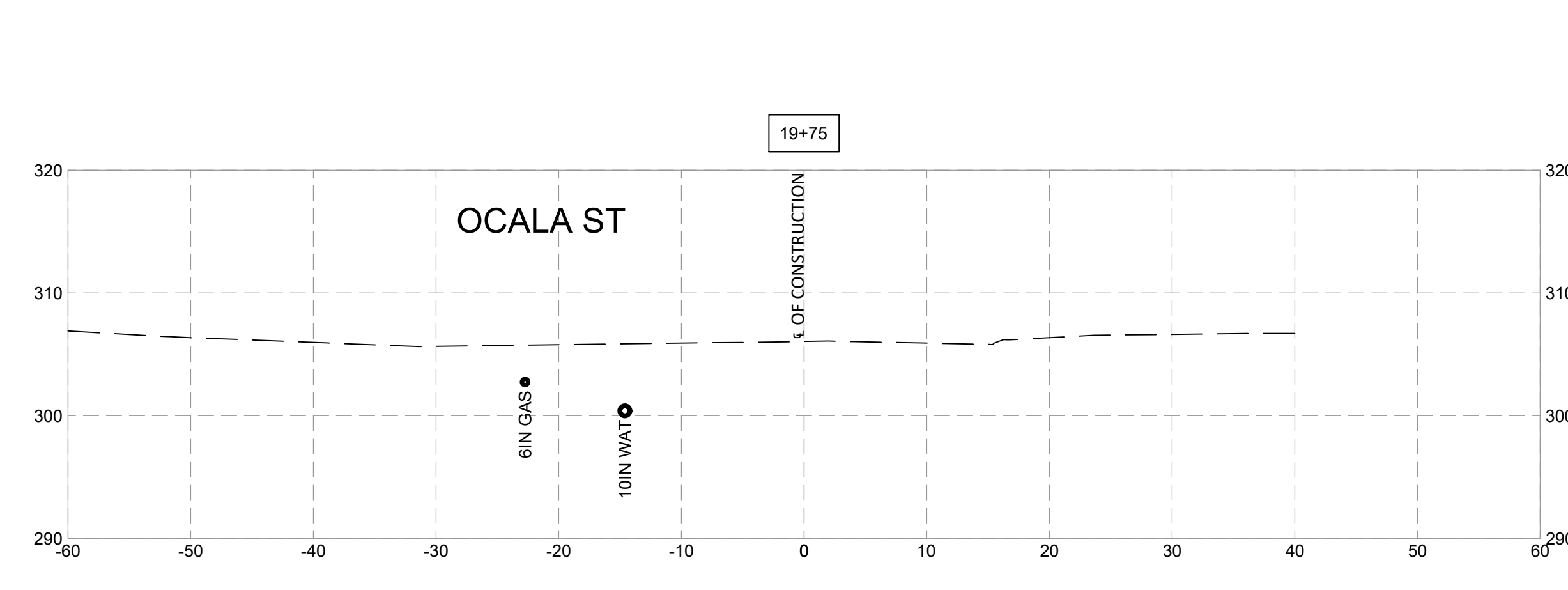
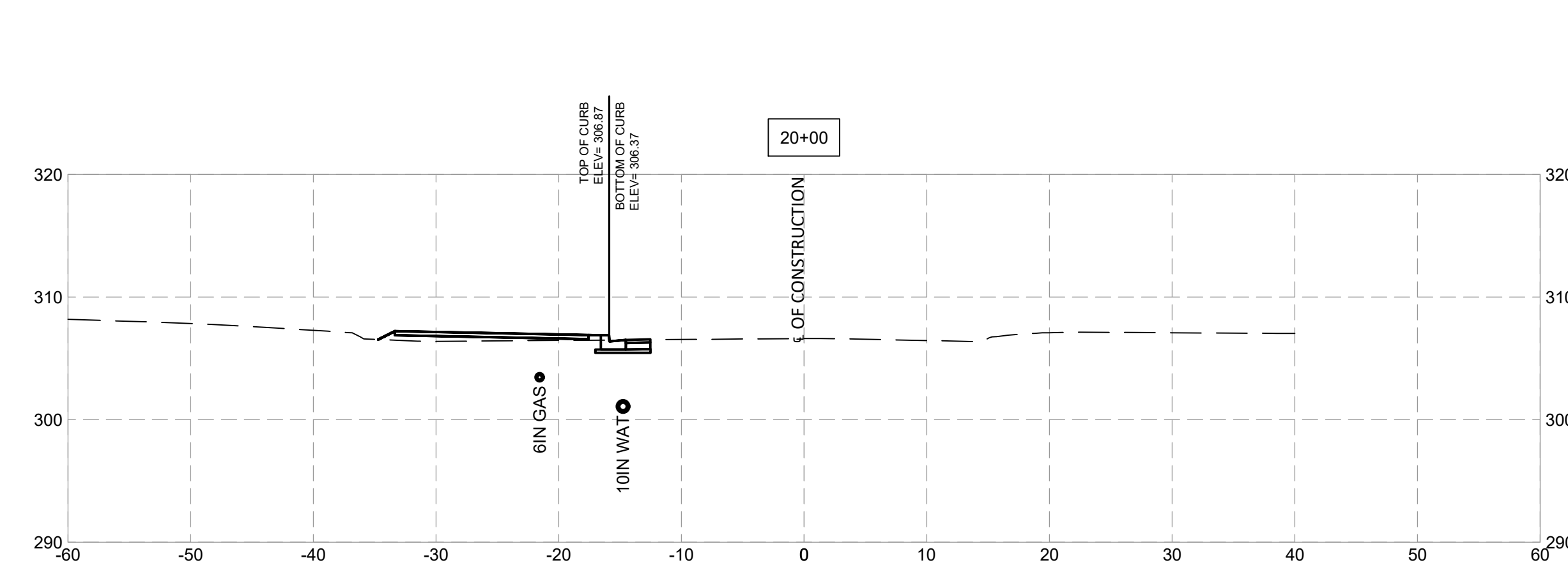
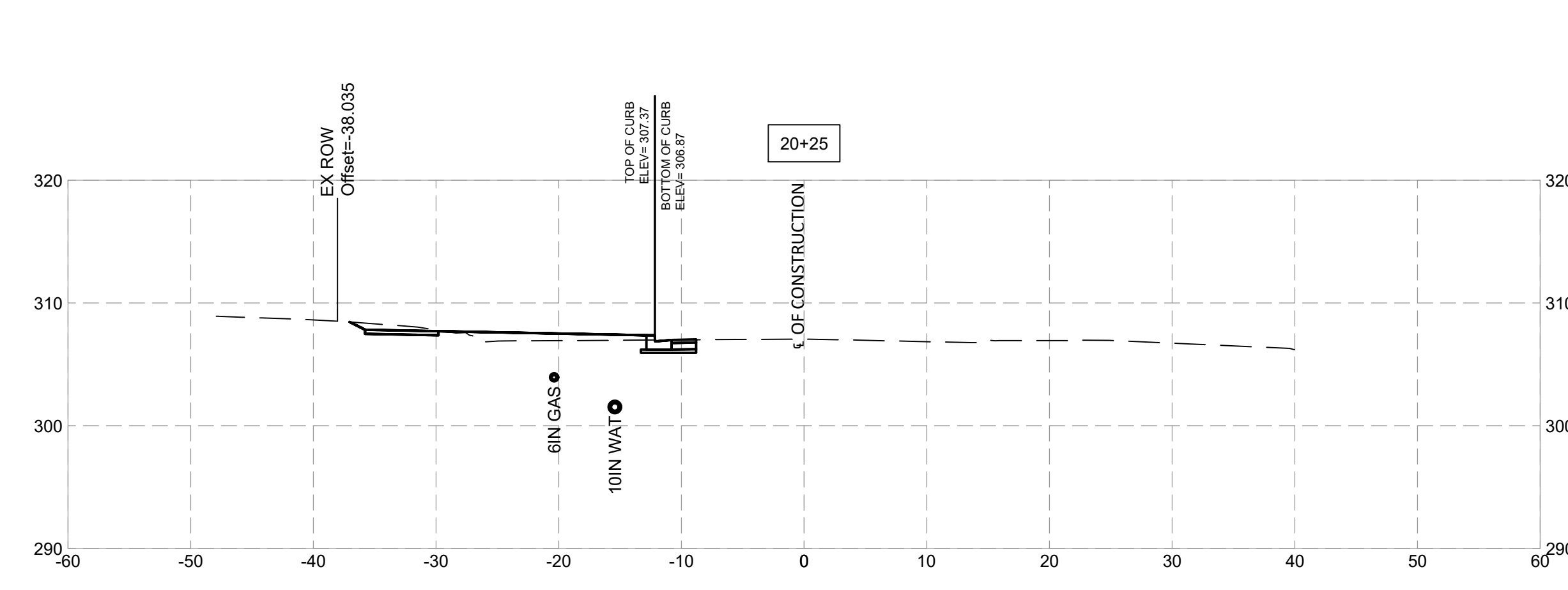
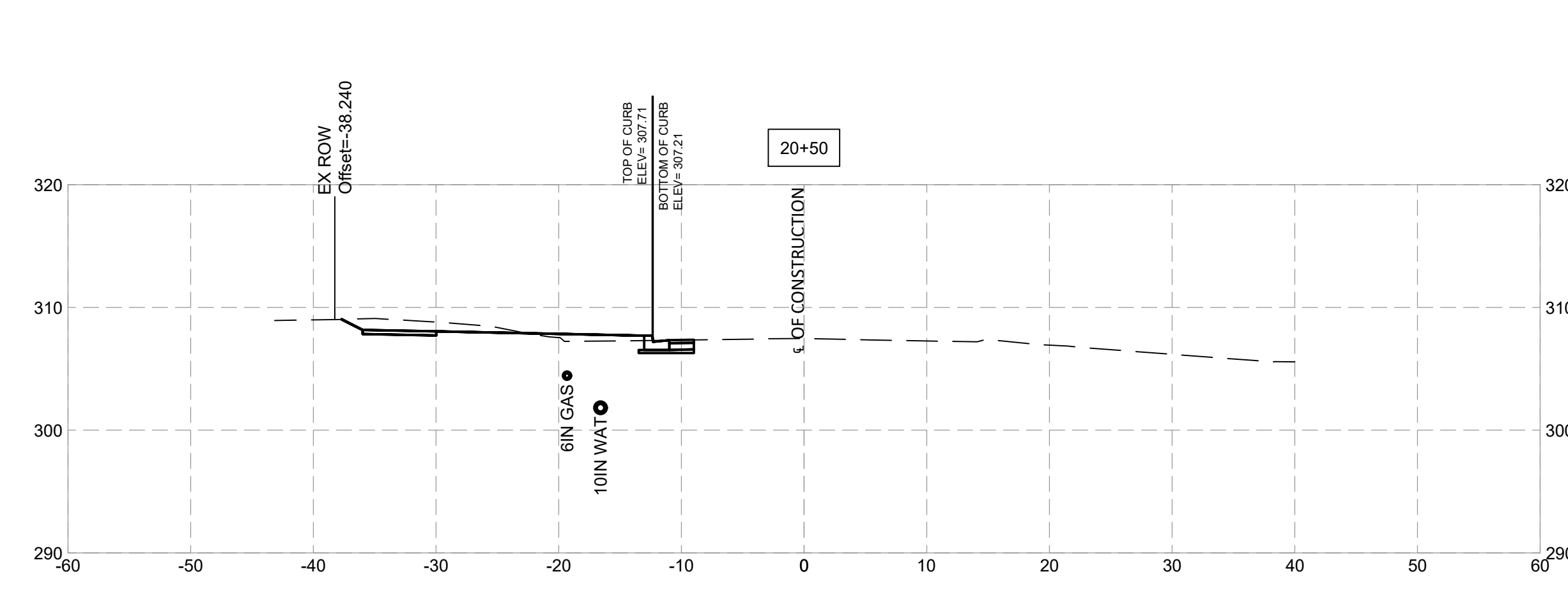
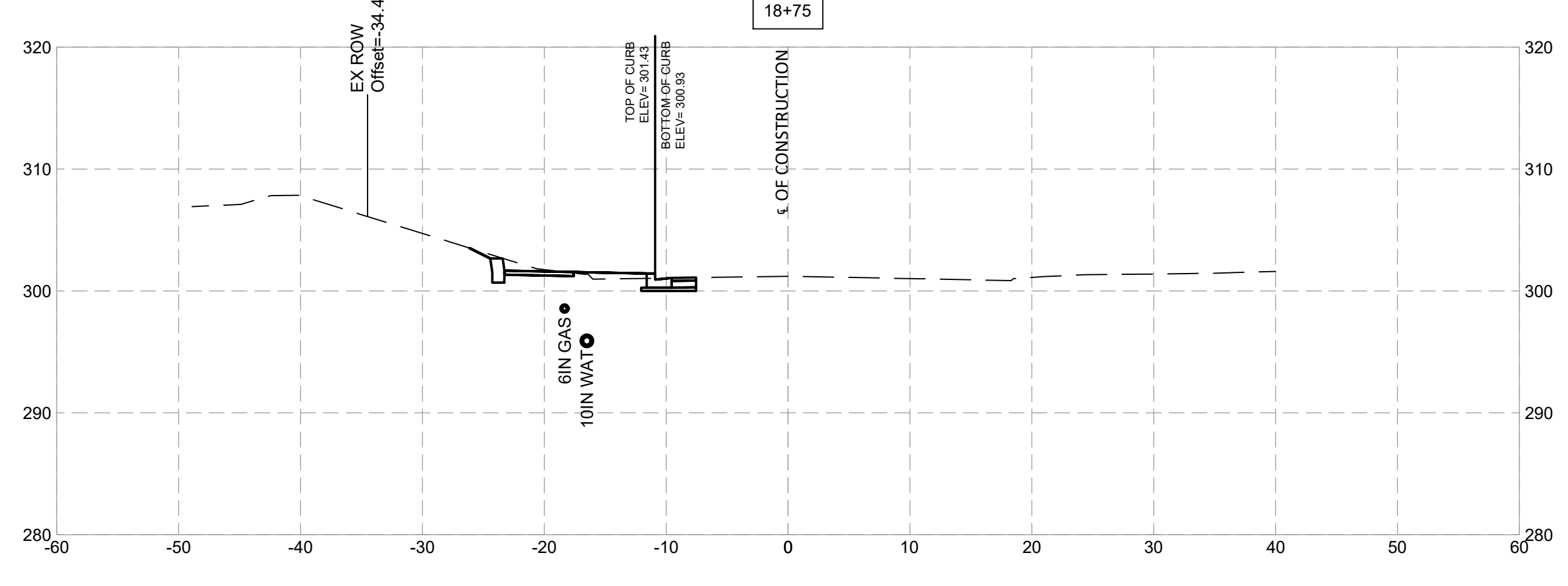
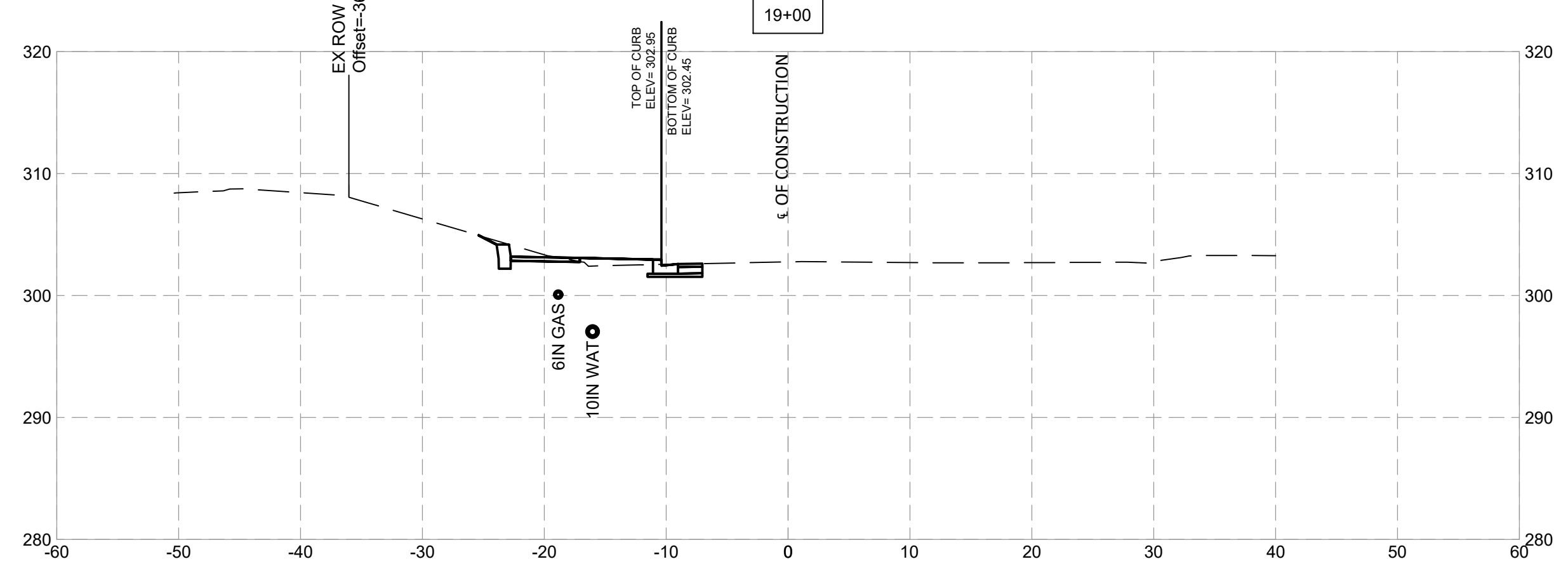
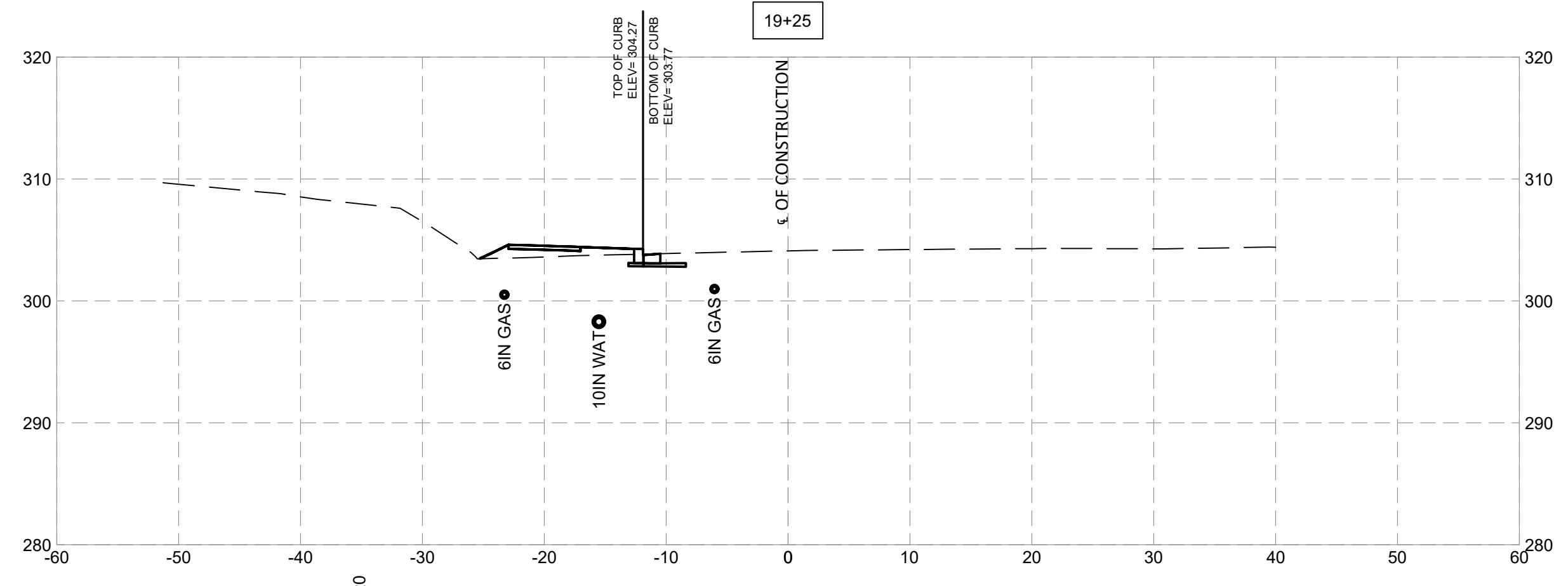
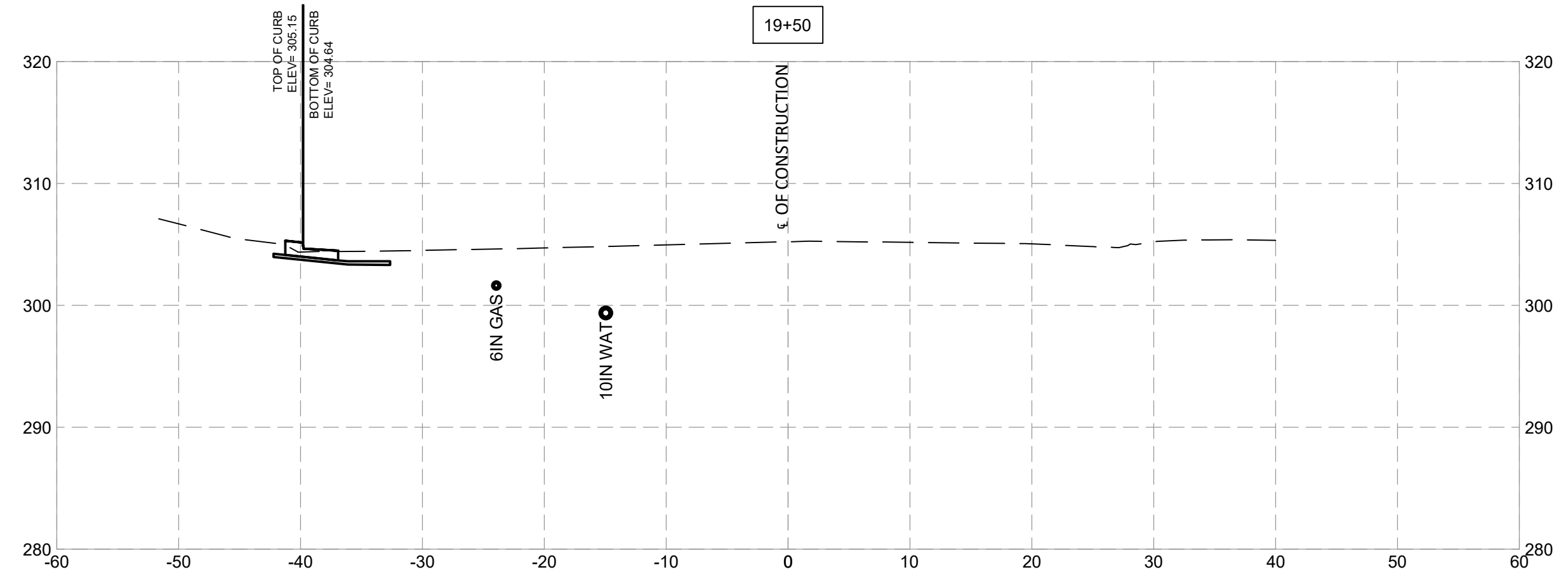
Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

**FRANKLIN AVENUE  
SIDEWALK  
CROSS SECTIONS**

SCALE : \_\_\_\_\_

Project No. : TBD of 93 of 109

**XS - 09**



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MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND			
RECOMMENDED FOR APPROVAL			
Chief, Design Section	_____	Date	_____
APPROVED			
Chief, Division of Transportation Engineering	_____	Date	_____
Designed by: _____	Drawn by: _____	Checked by: _____	

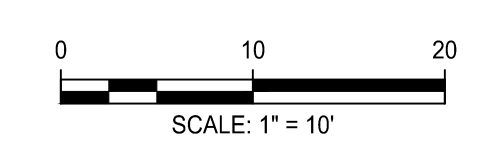
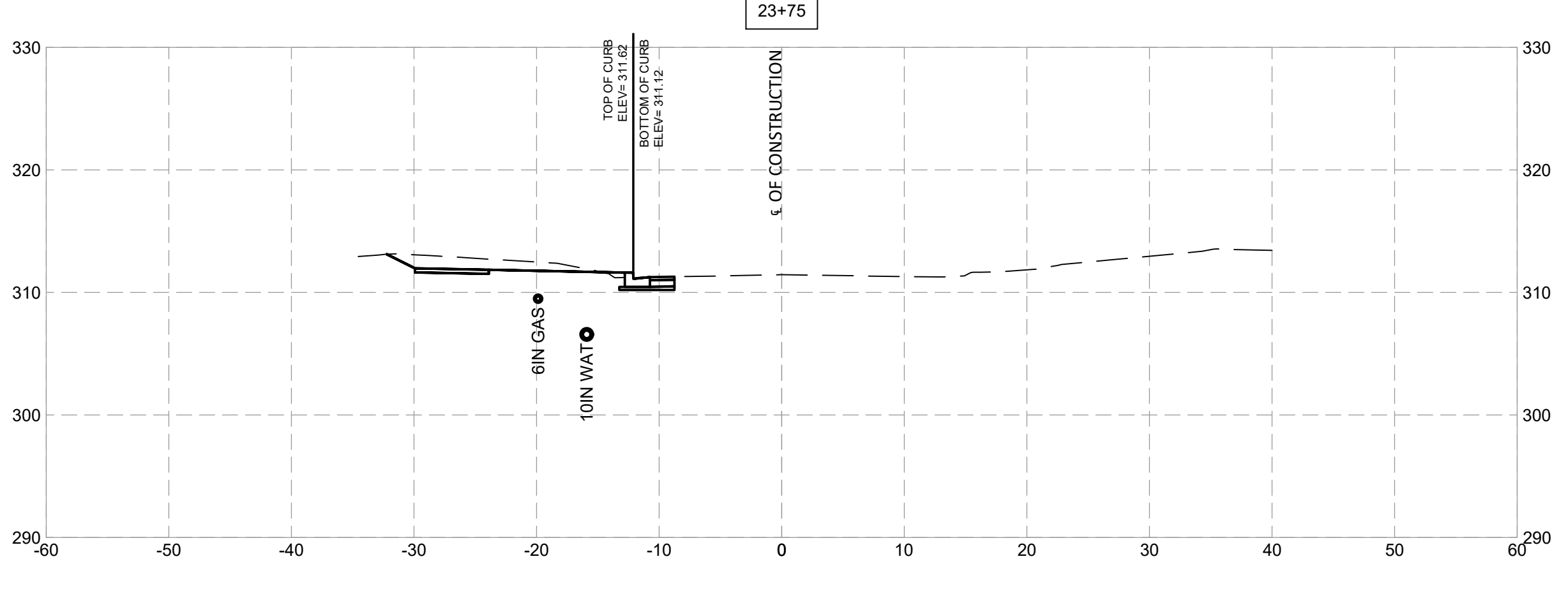
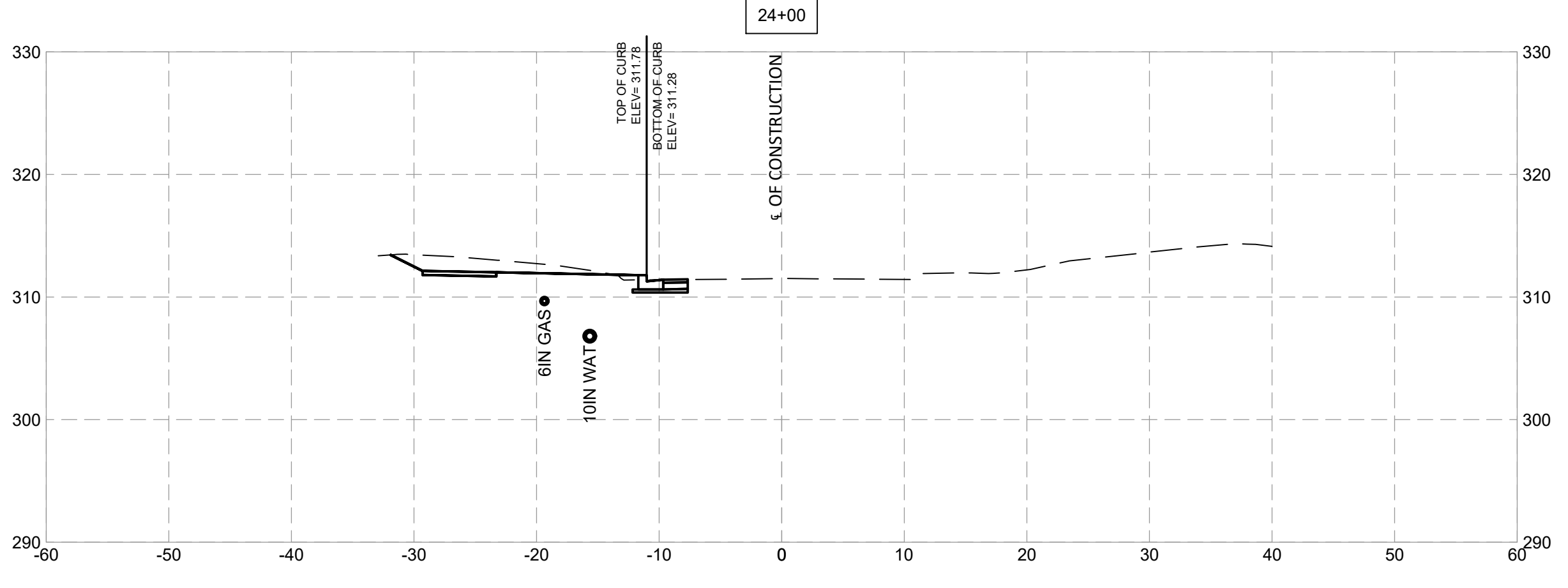
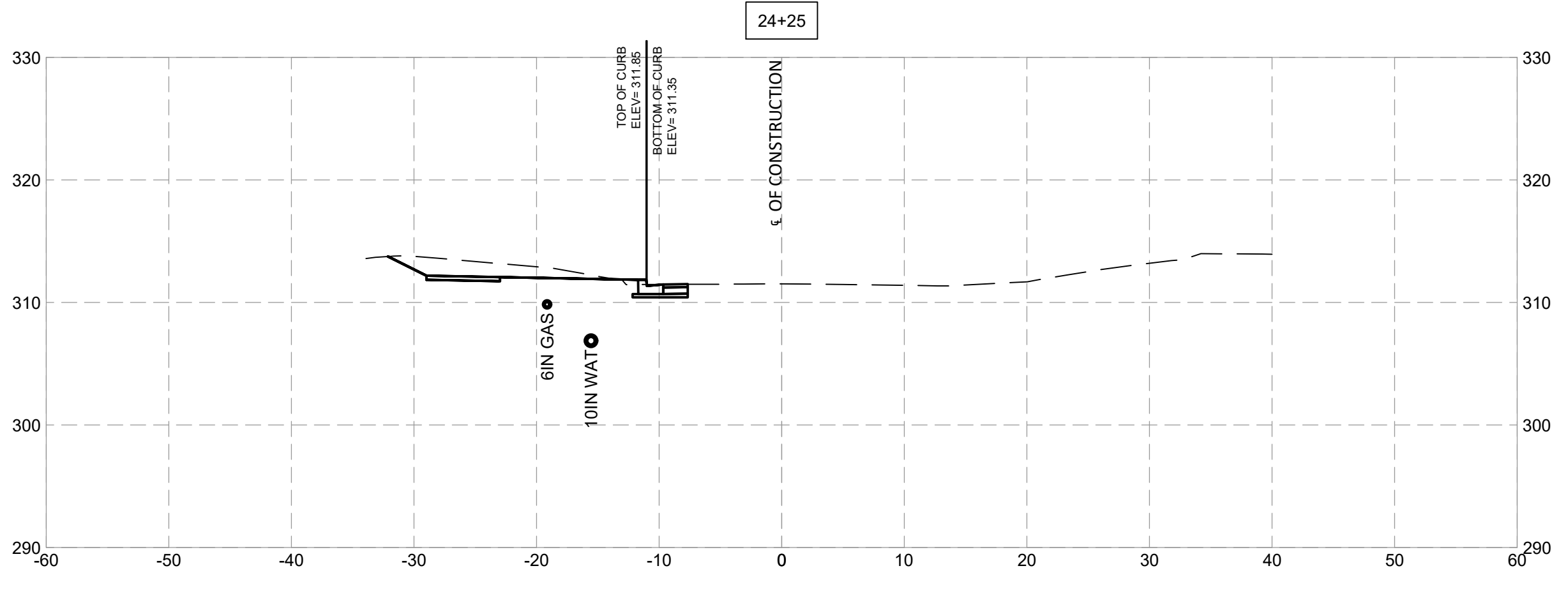
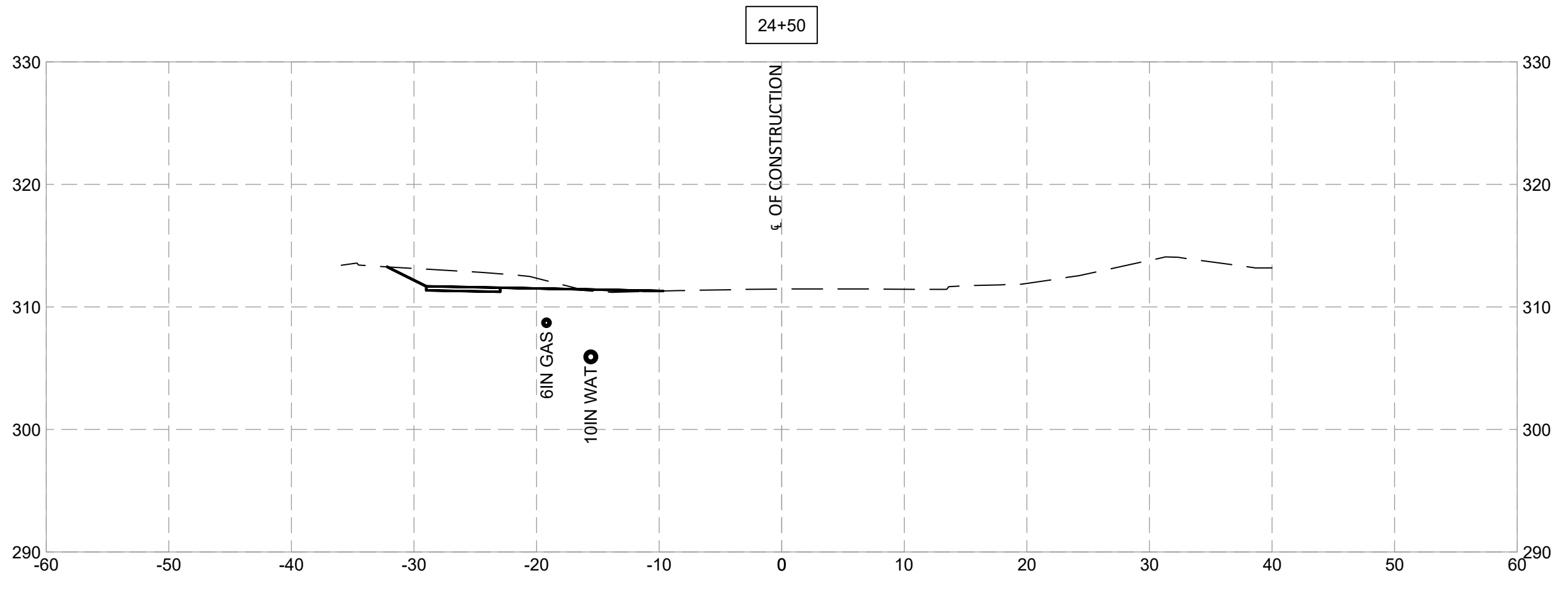
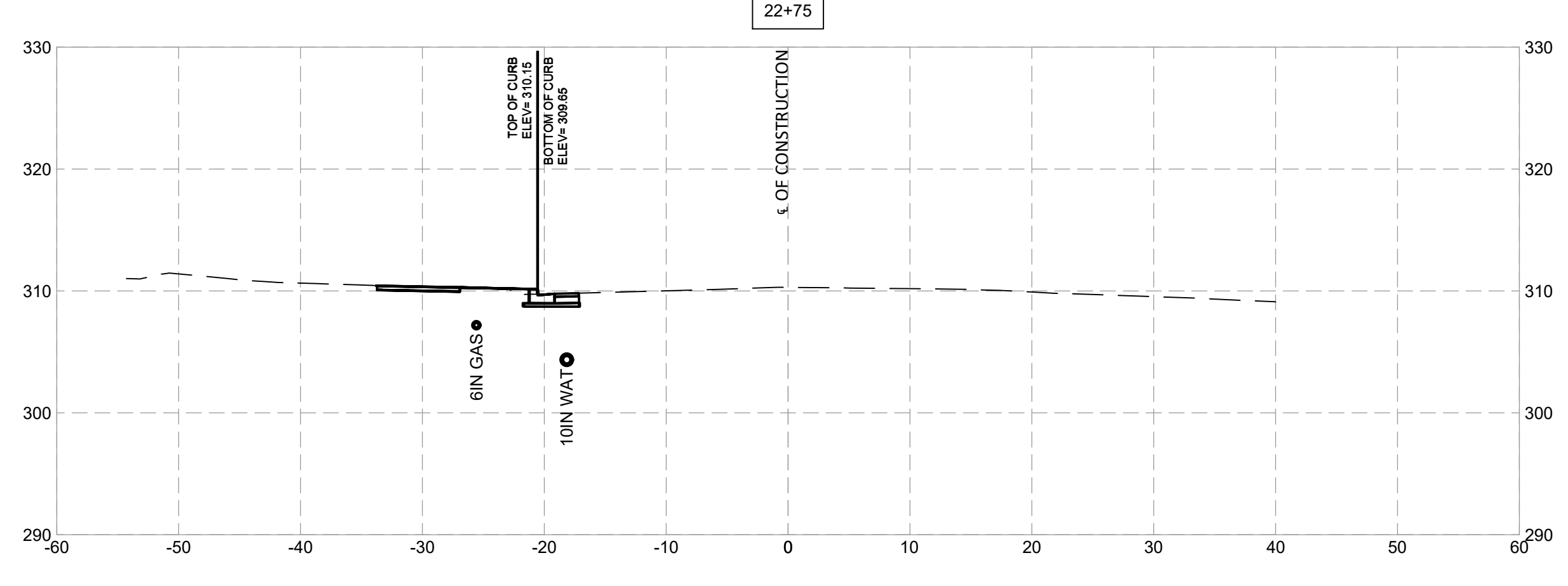
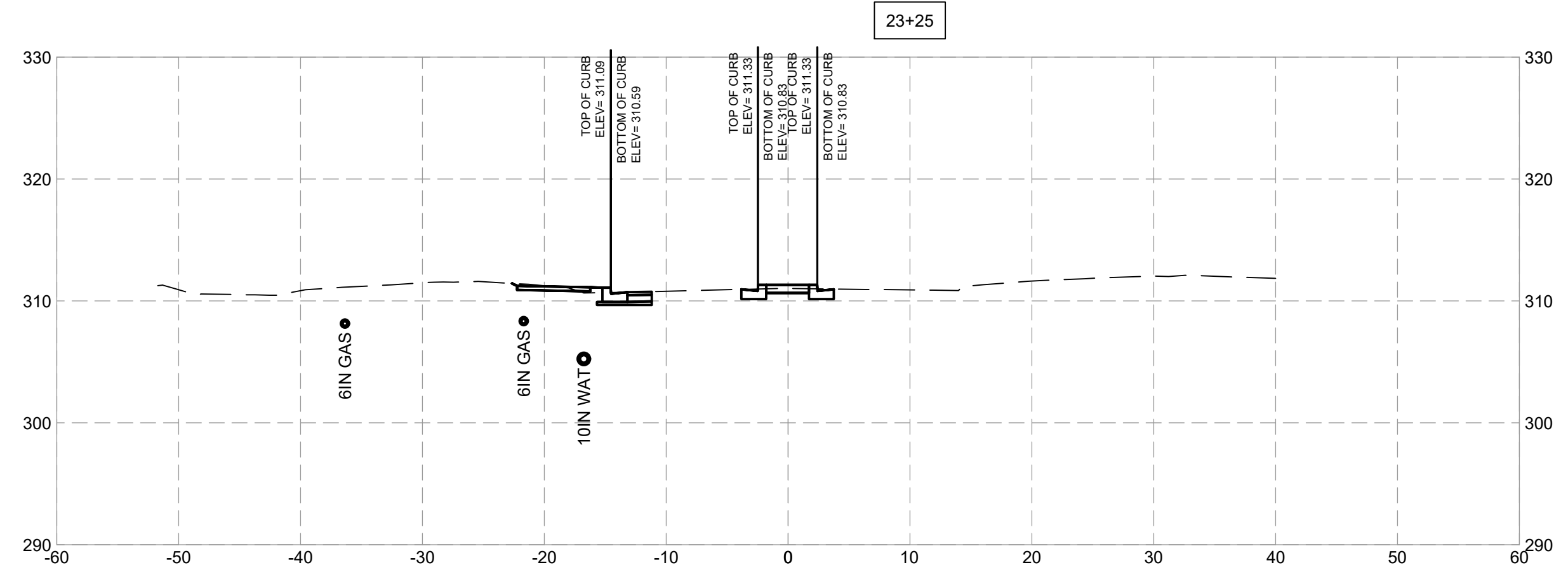
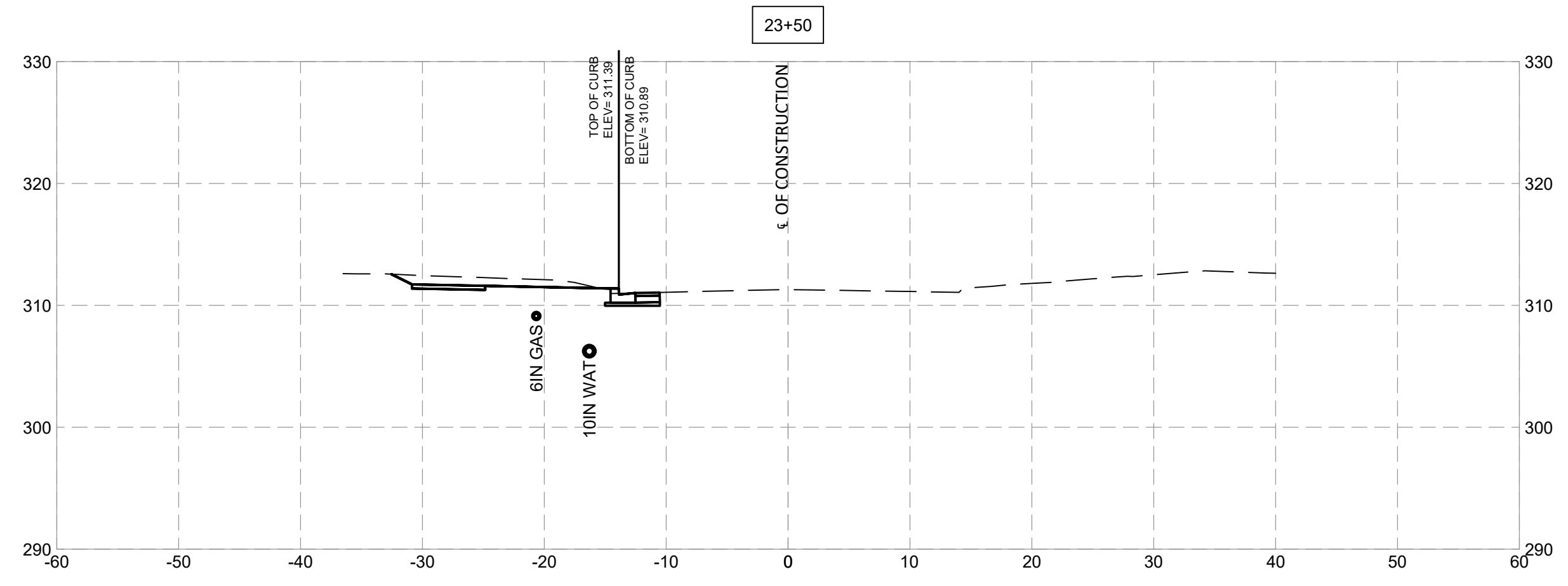
**FRANKLIN AVENUE  
SIDEWALK  
CROSS SECTIONS**

SCALE: \_\_\_\_\_

Project No.: TBD of 94 of 109

XS - 10





NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_

APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

**FRANKLIN AVENUE  
SIDEWALK  
CROSS SECTIONS**

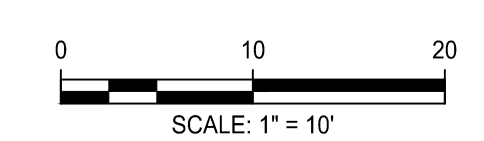
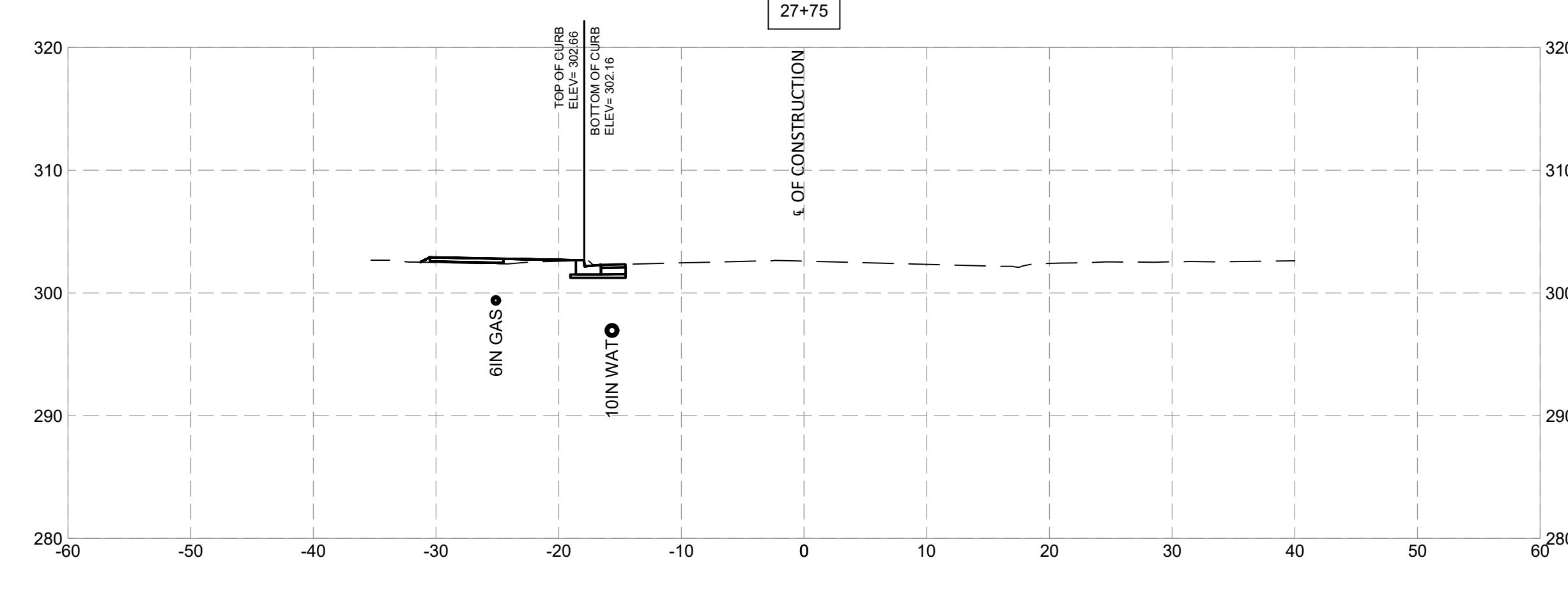
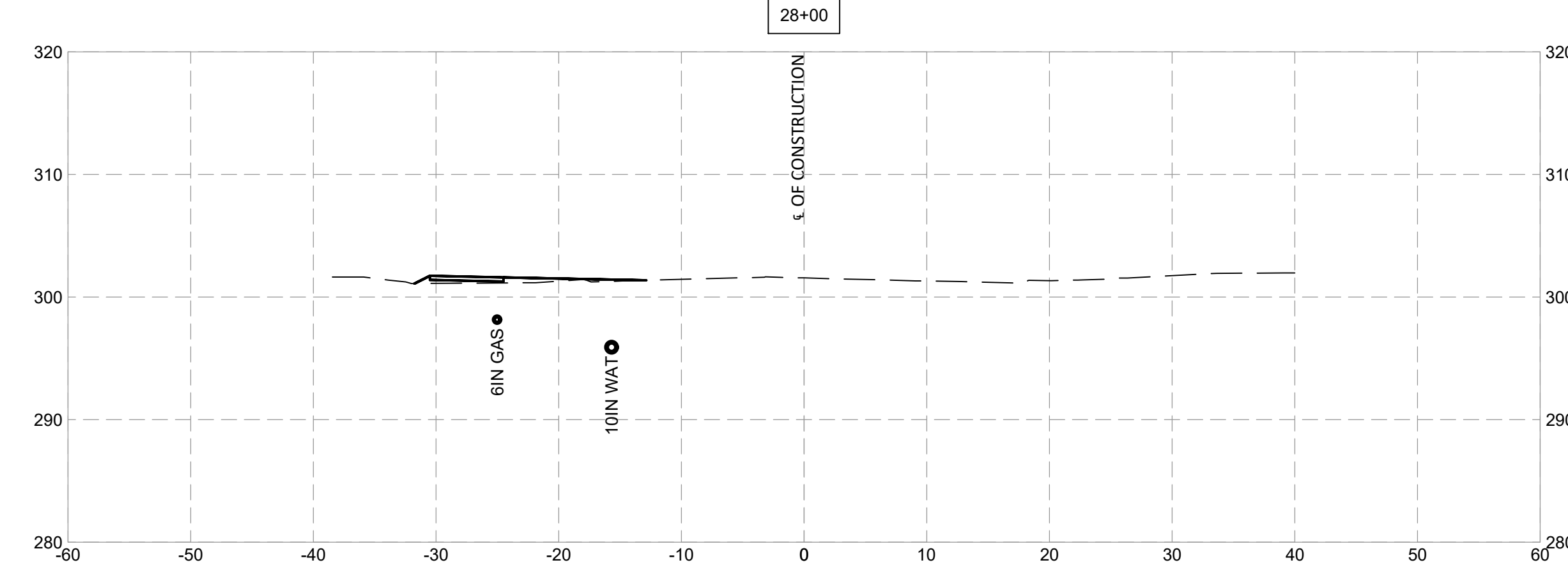
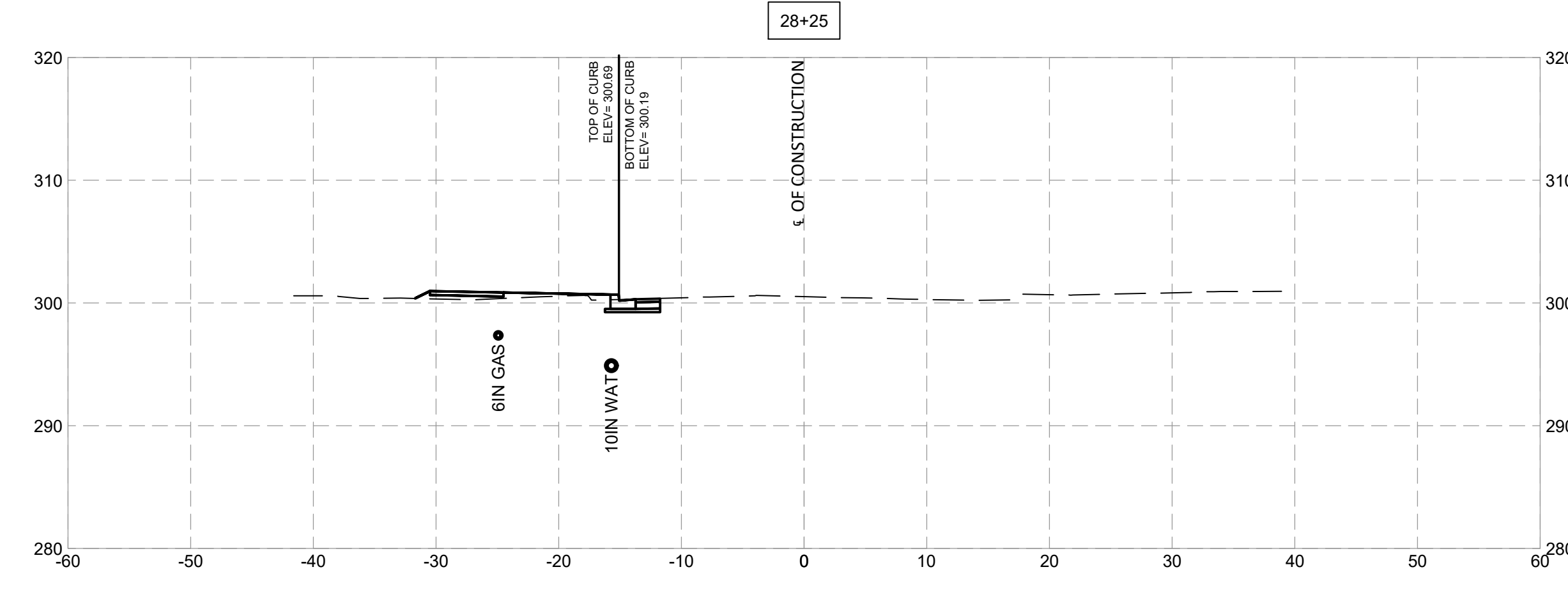
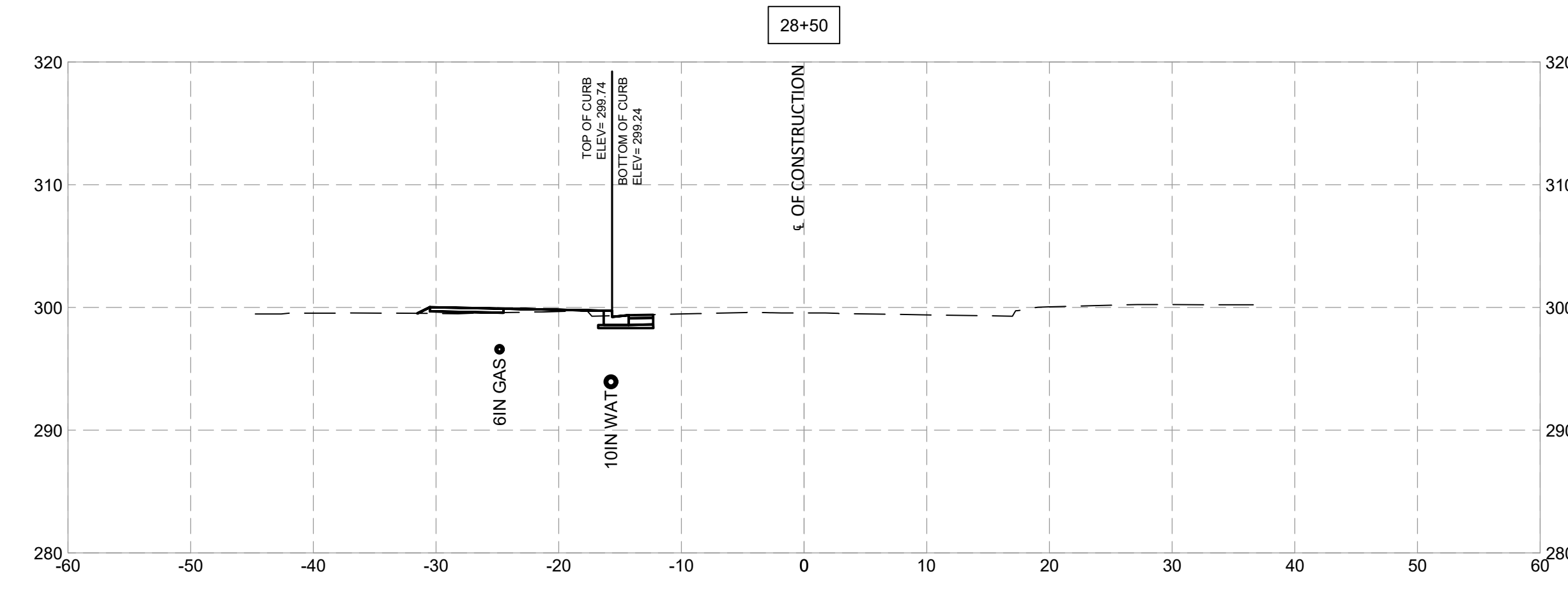
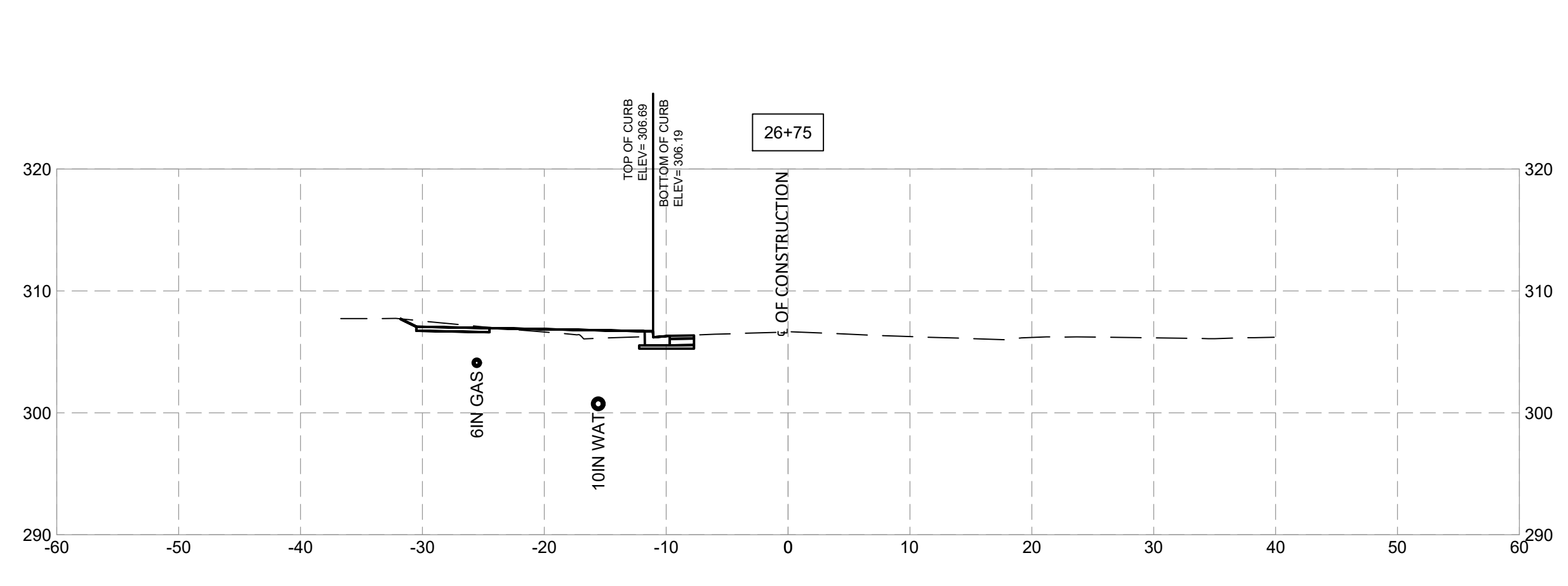
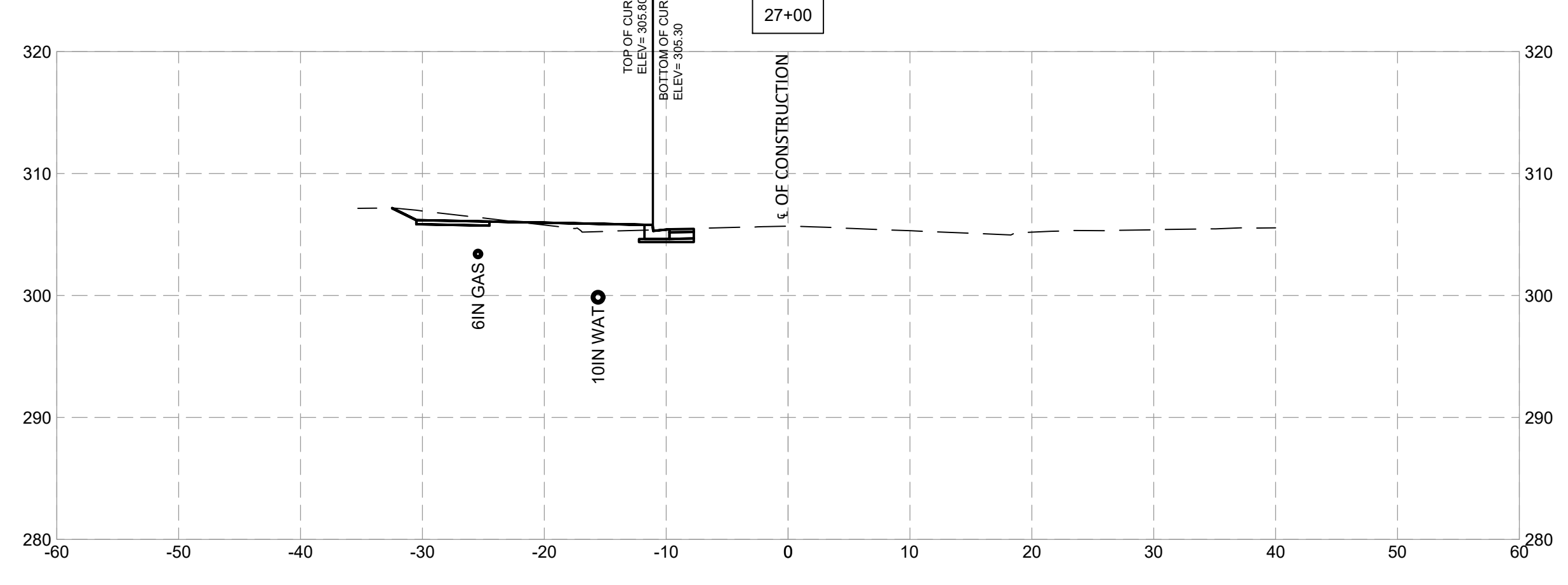
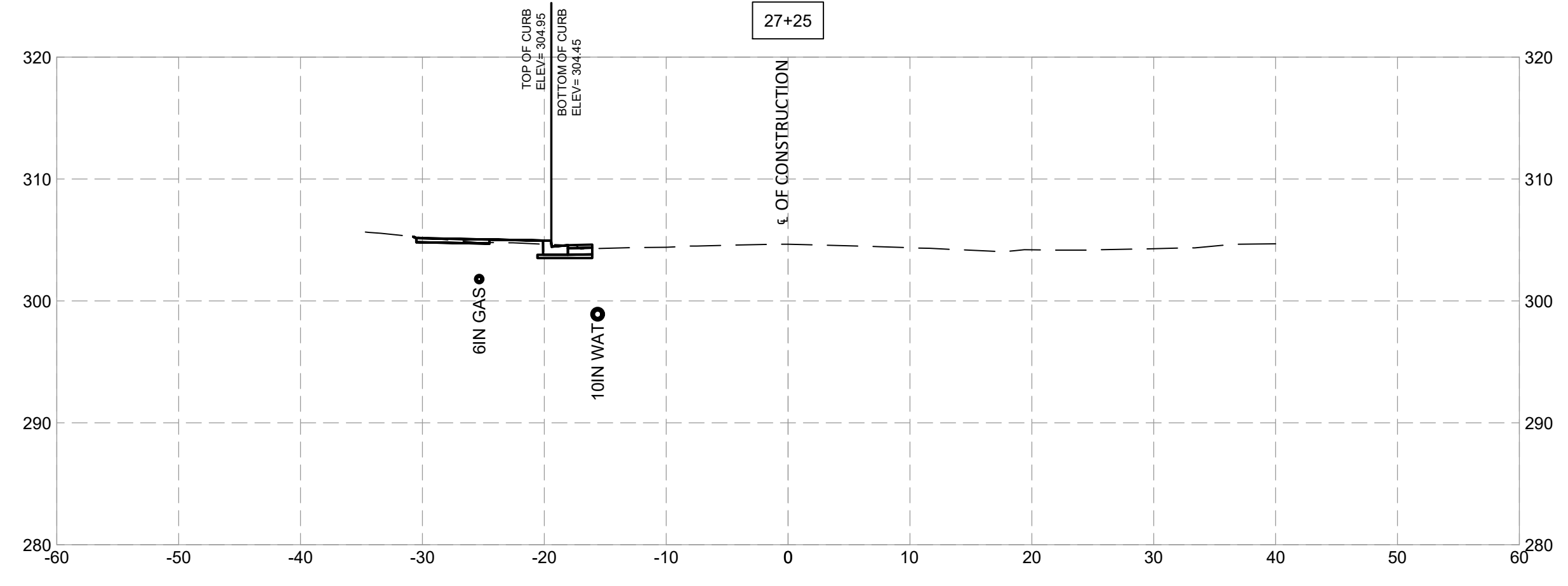
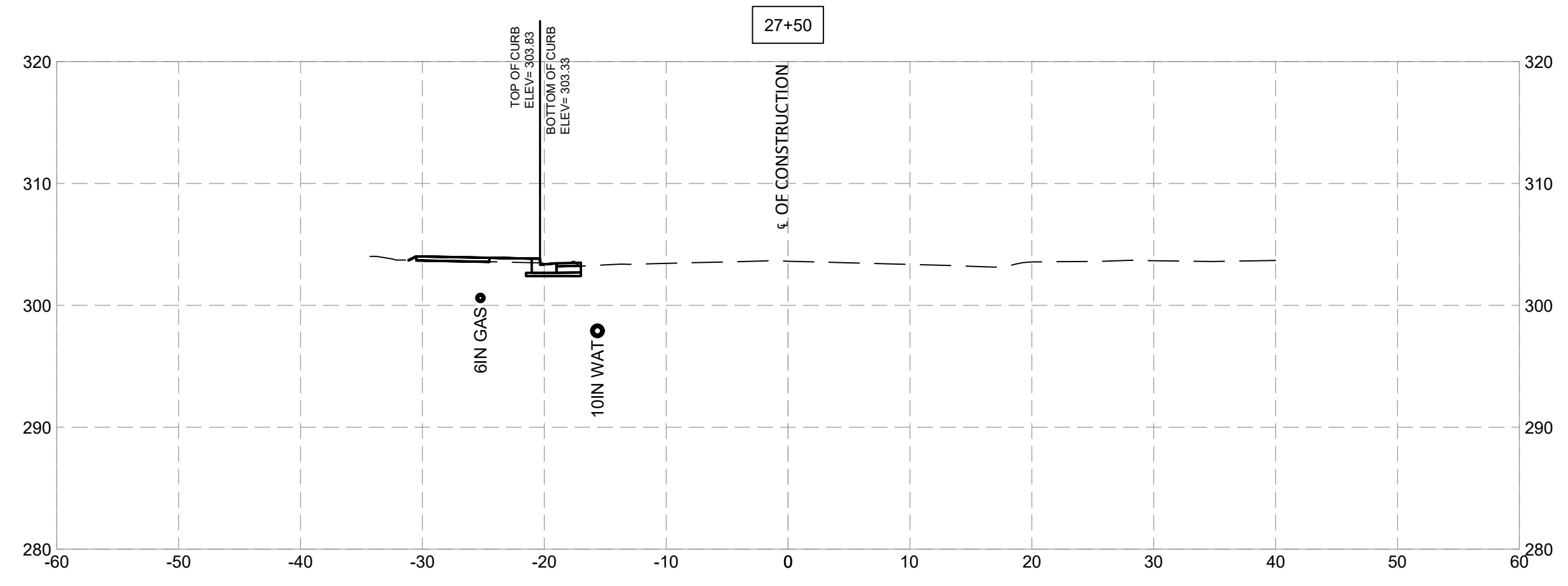
SCALE : \_\_\_\_\_

Project No. : TBD of 96 of 109

**XS - 12**







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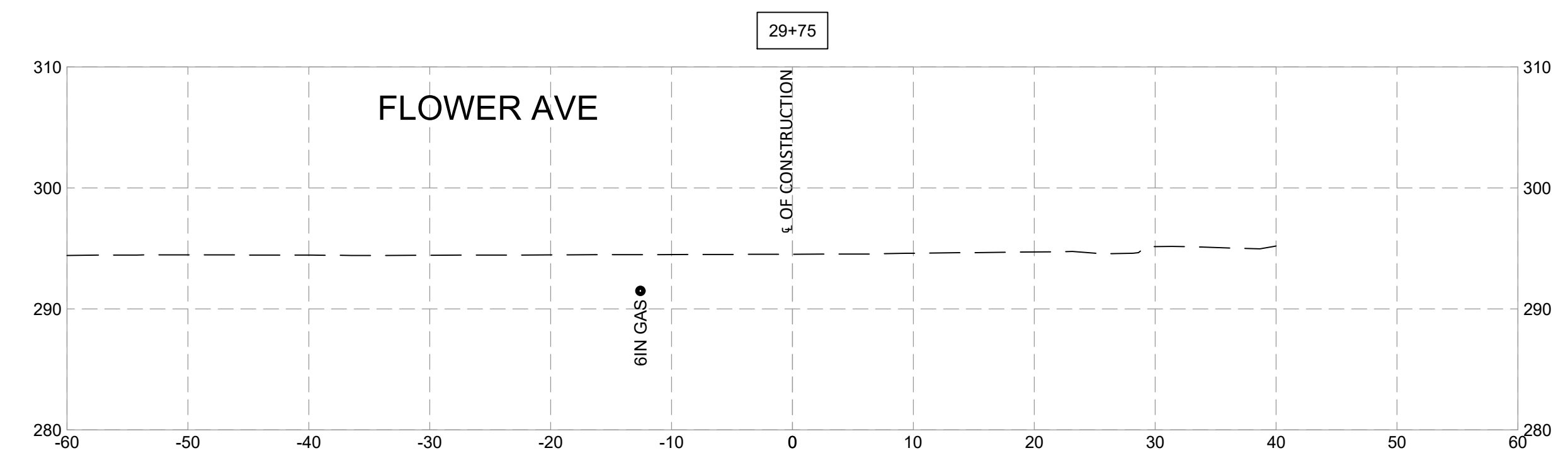
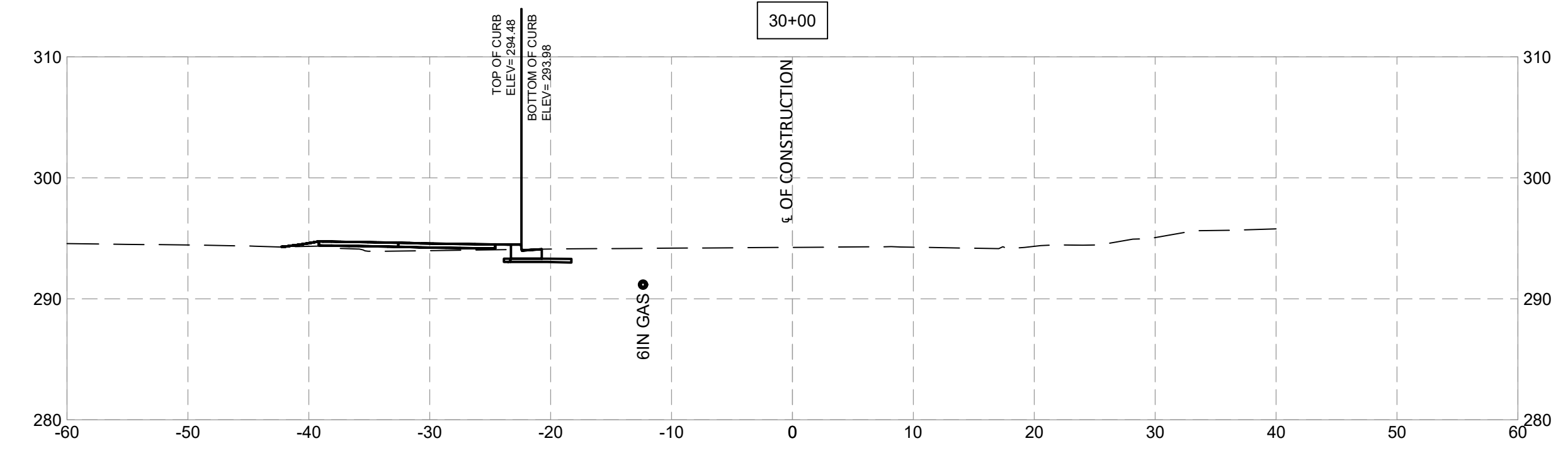
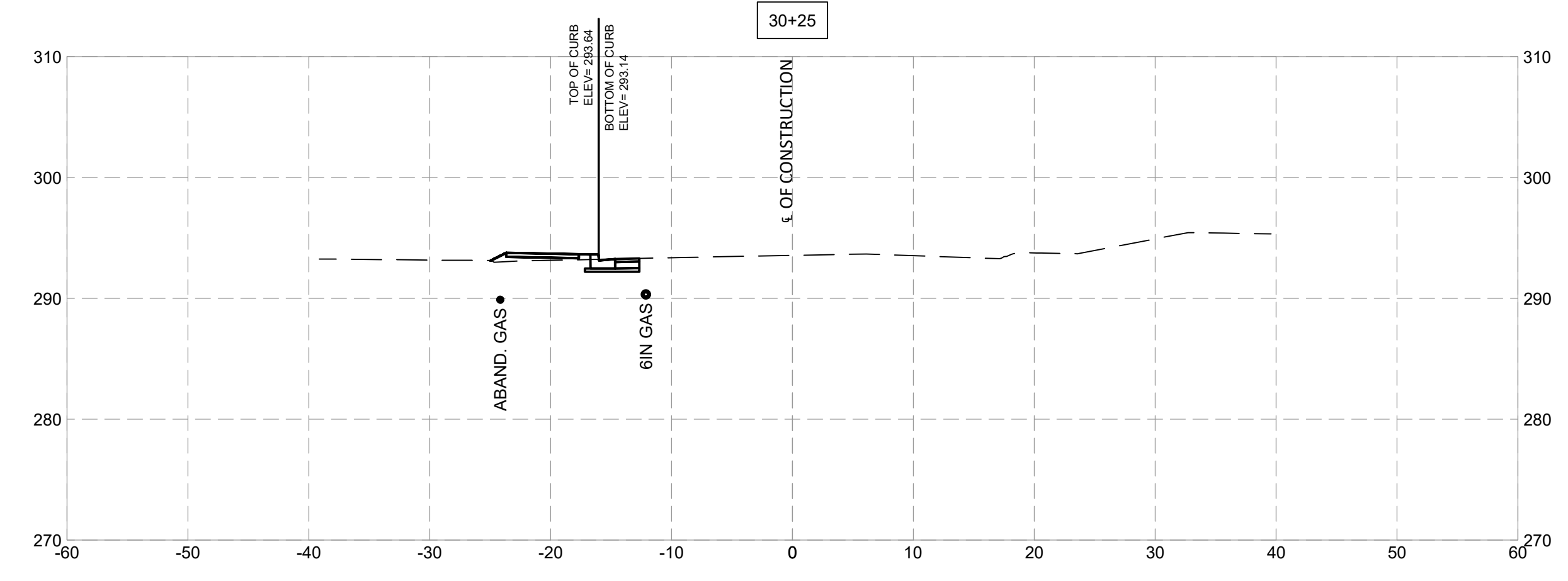
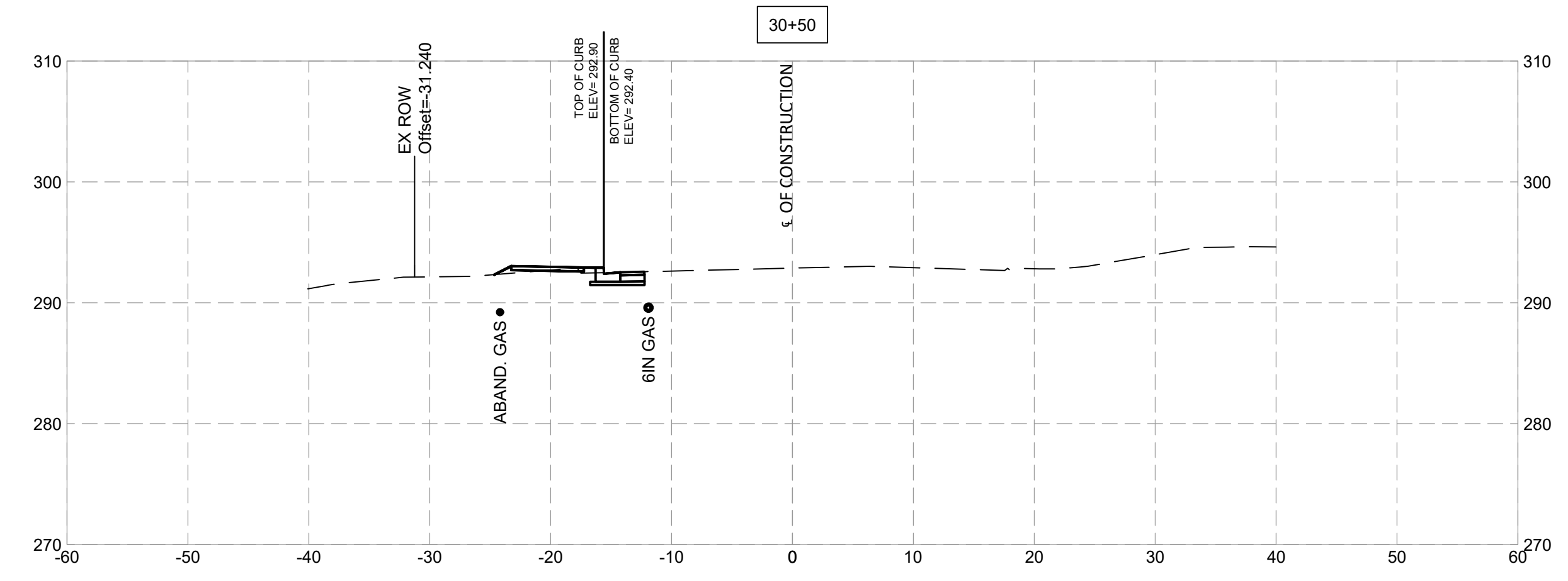
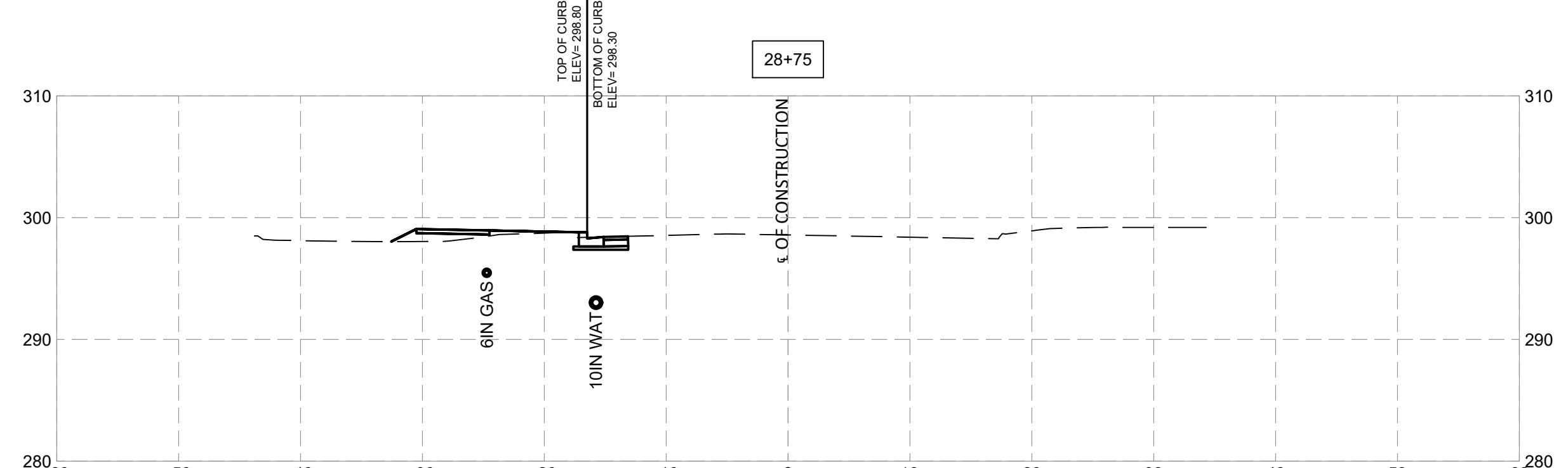
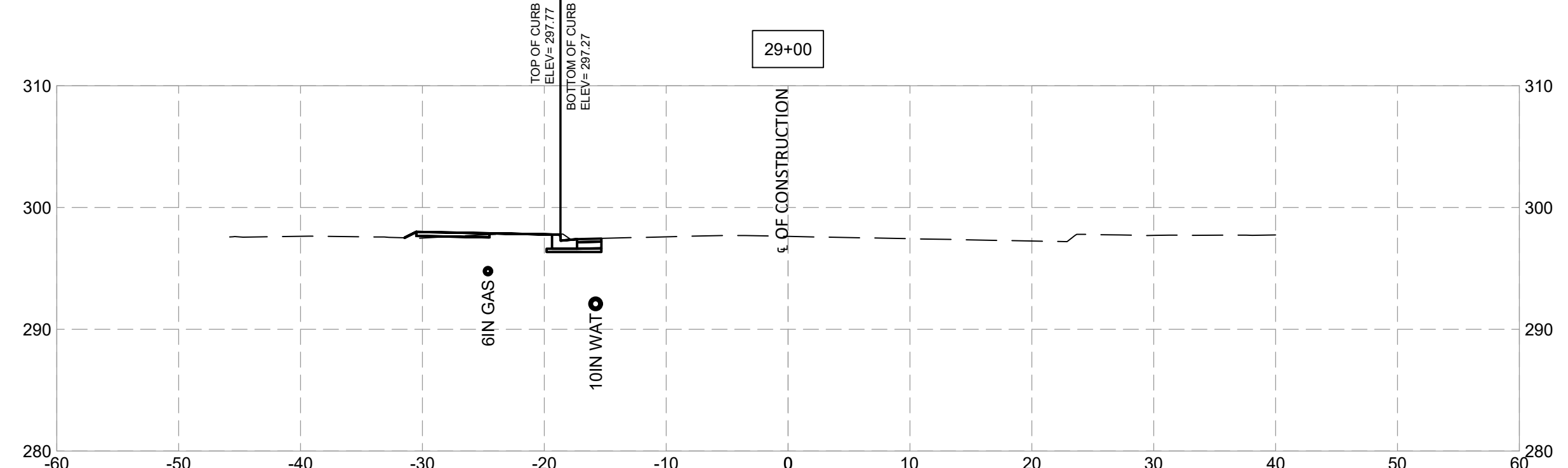
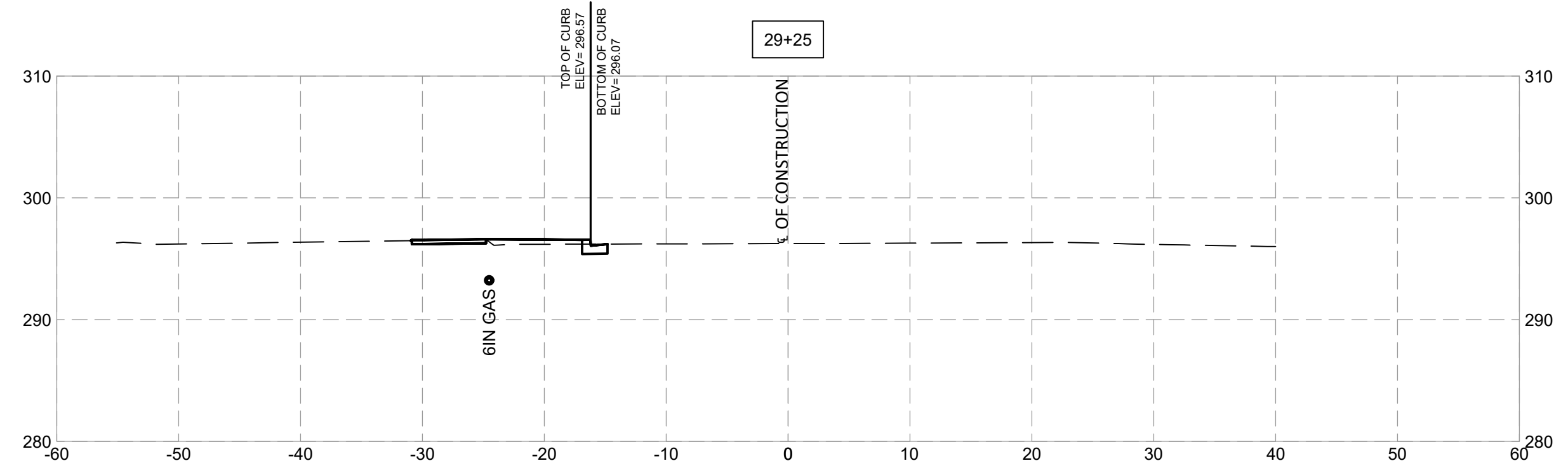
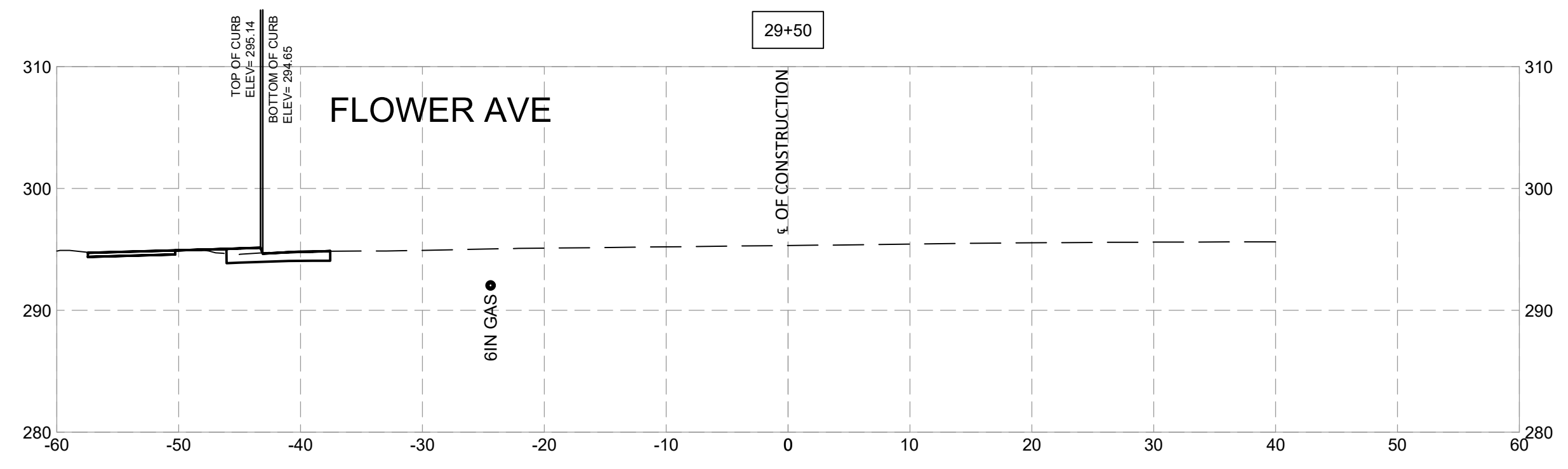
MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND			
RECOMMENDED FOR APPROVAL			
Chief, Design Section	_____	_____	Date
APPROVED			
Chief, Division of Transportation Engineering	_____	_____	Date
Designed by: _____	Drawn by: _____	Checked by: _____	

**FRANKLIN AVENUE  
 SIDEWALK  
 CROSS SECTIONS**

SCALE : \_\_\_\_\_

Project No. : TBD of 98 of 109

**XS - 14**



NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_

APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

**FRANKLIN AVENUE  
SIDEWALK  
CROSS SECTIONS**

SCALE : XS - 15

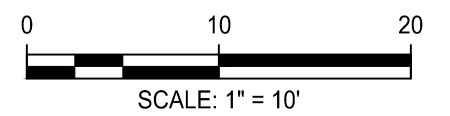
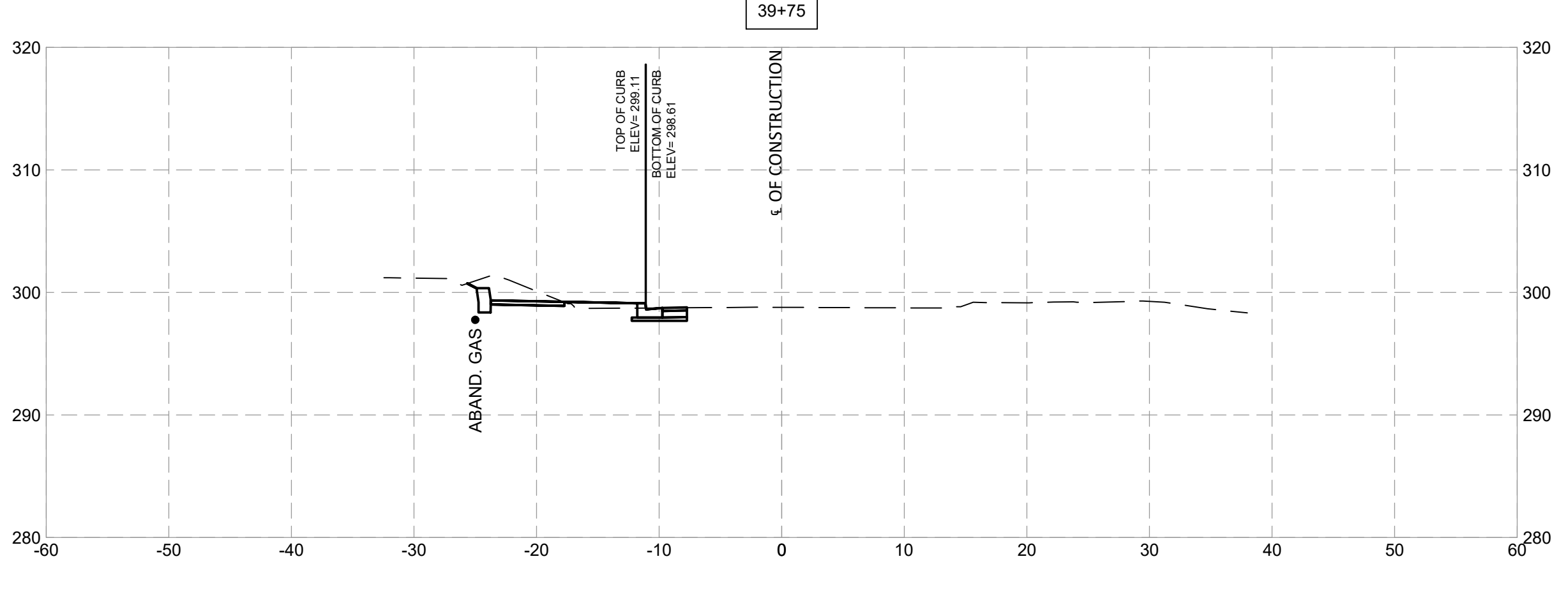
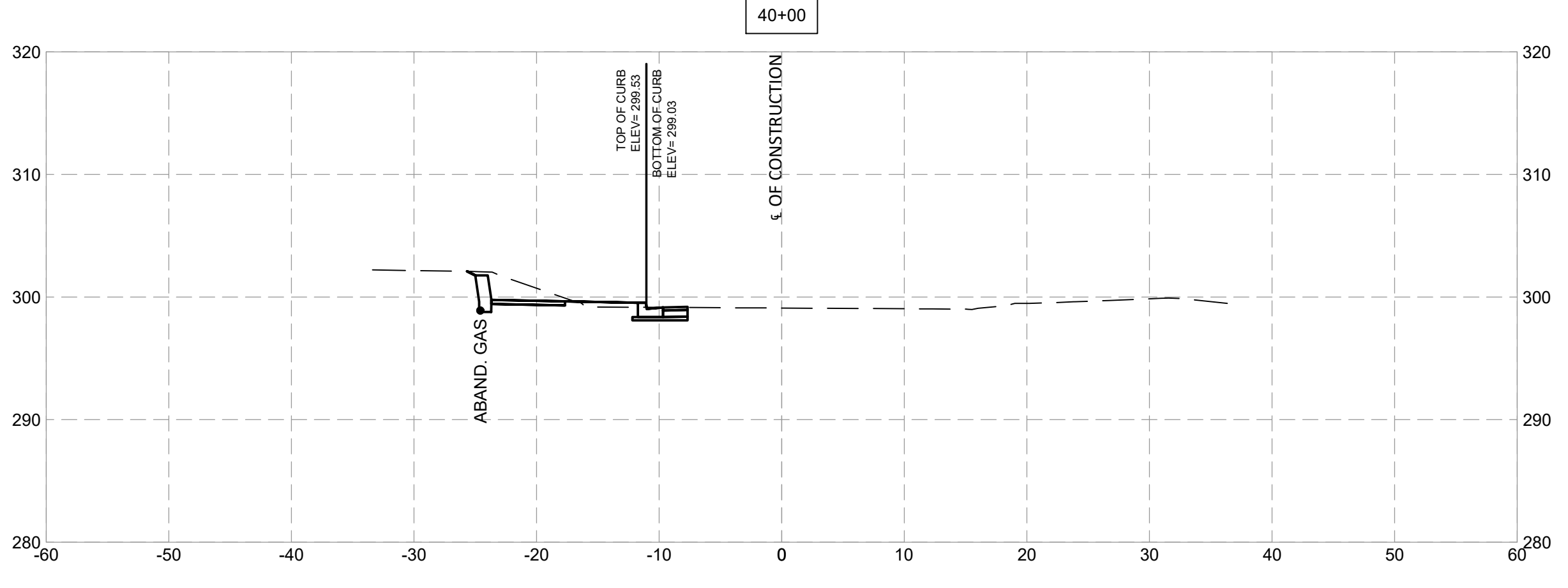
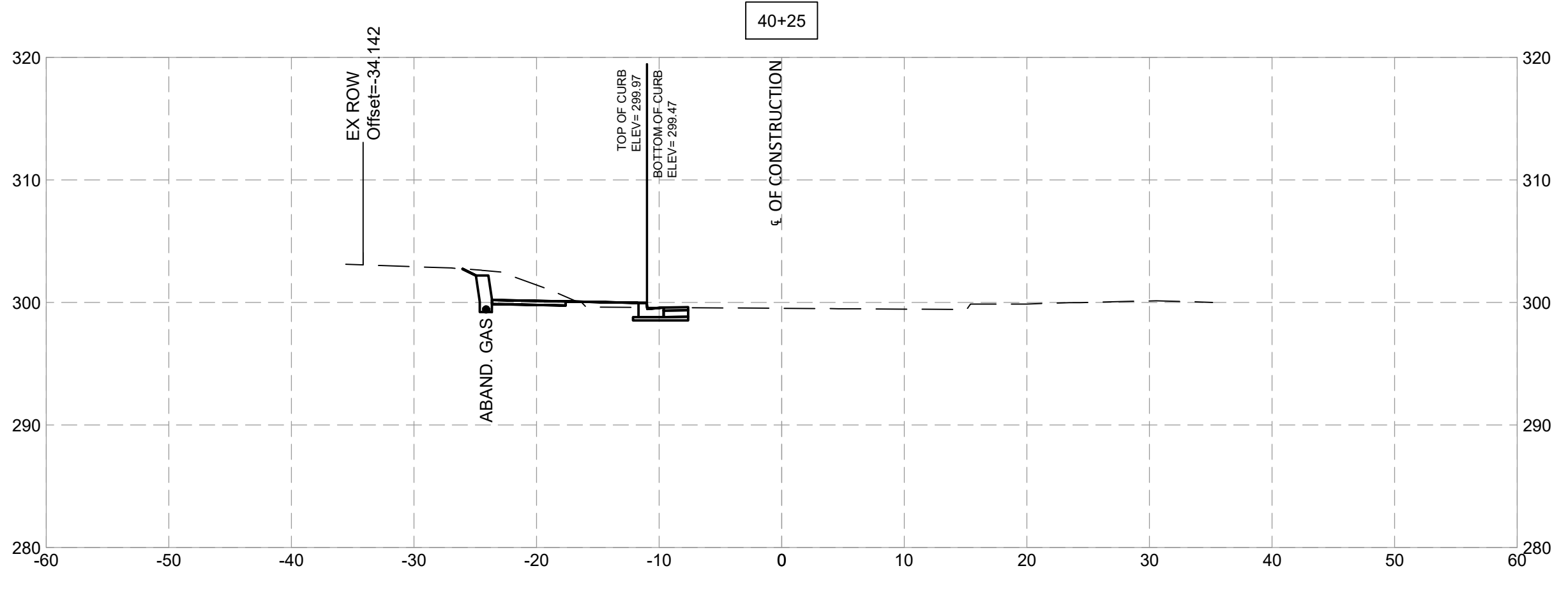
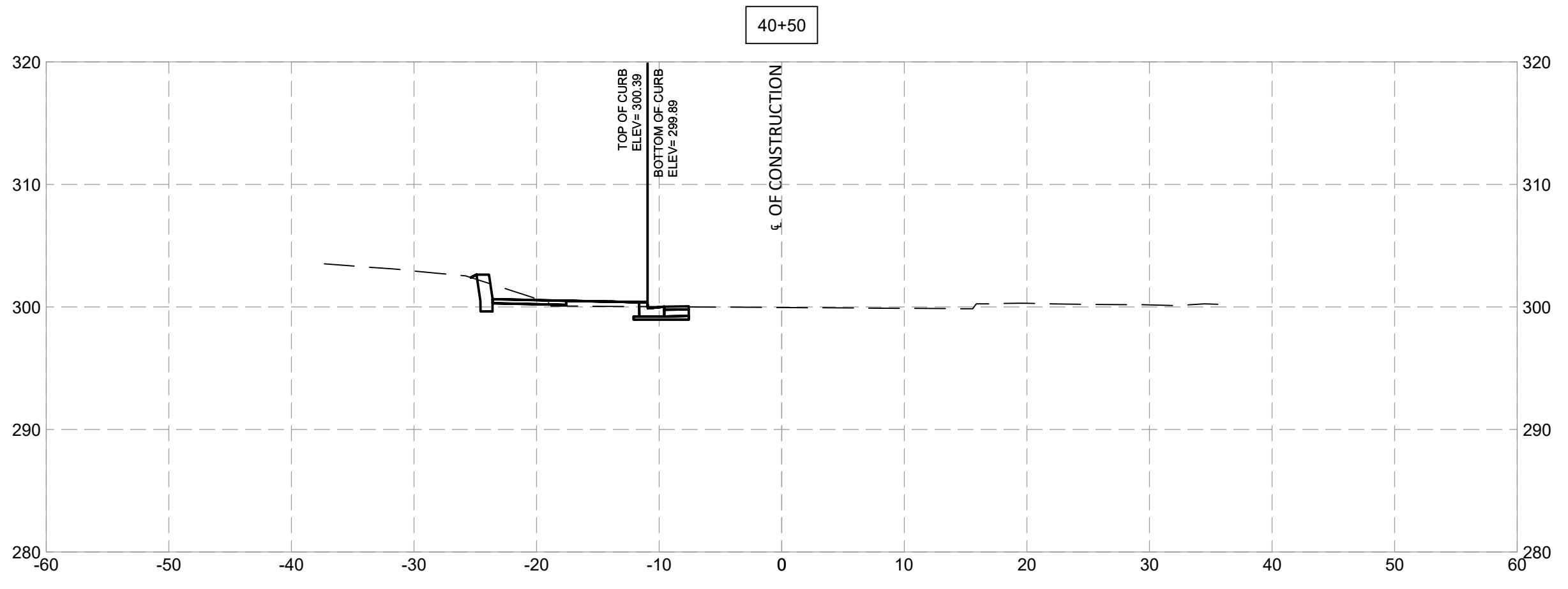
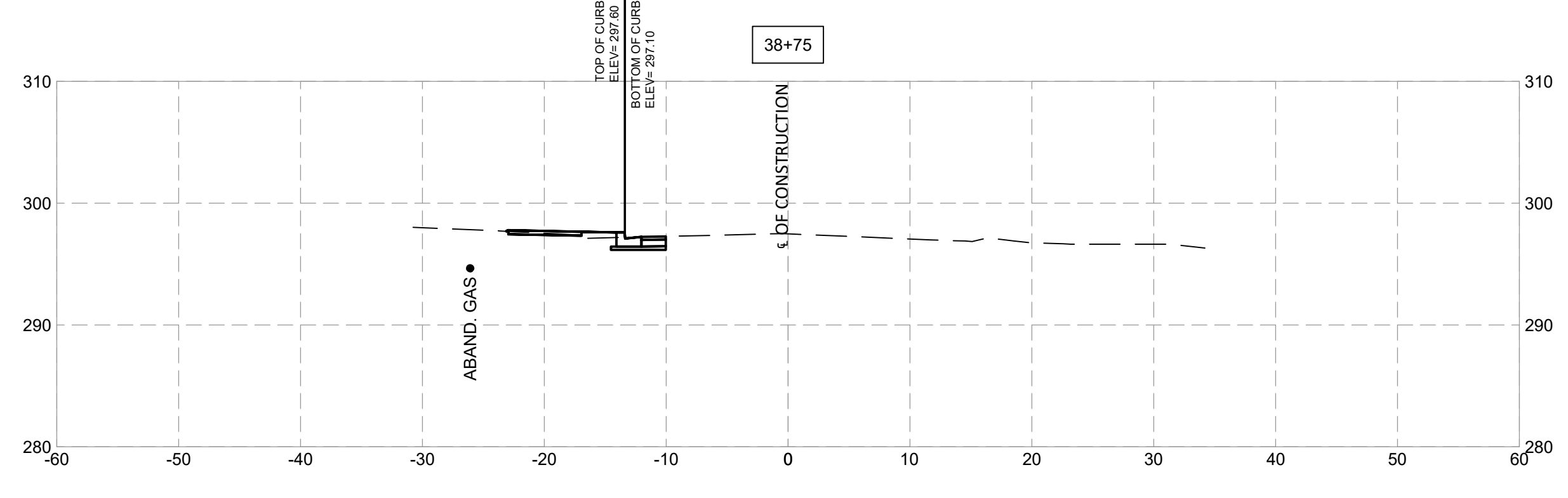
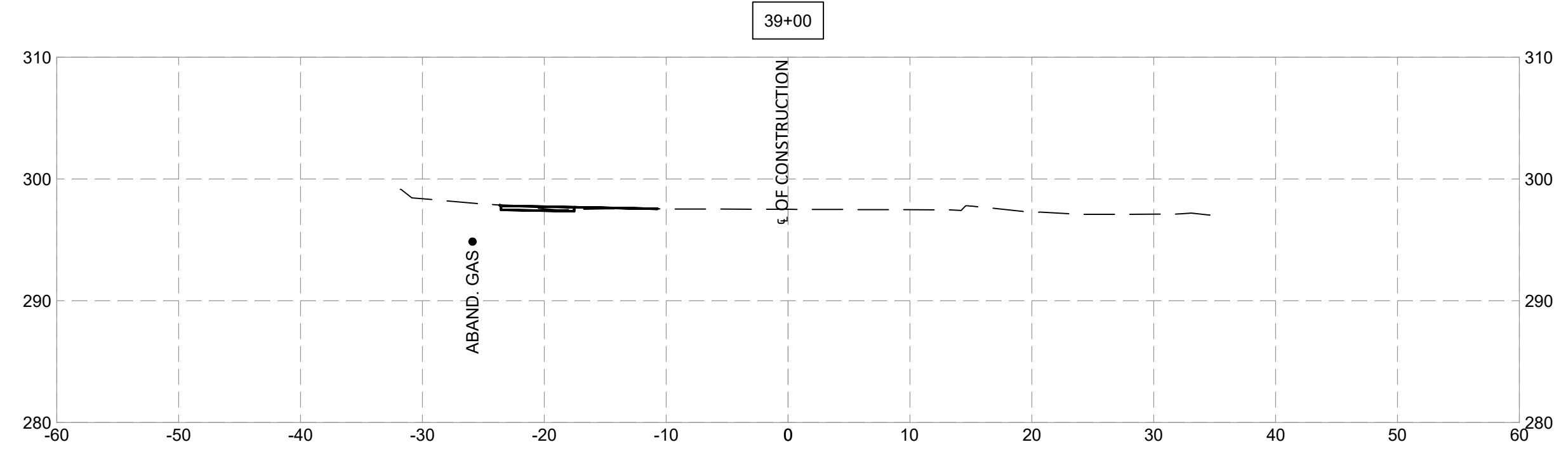
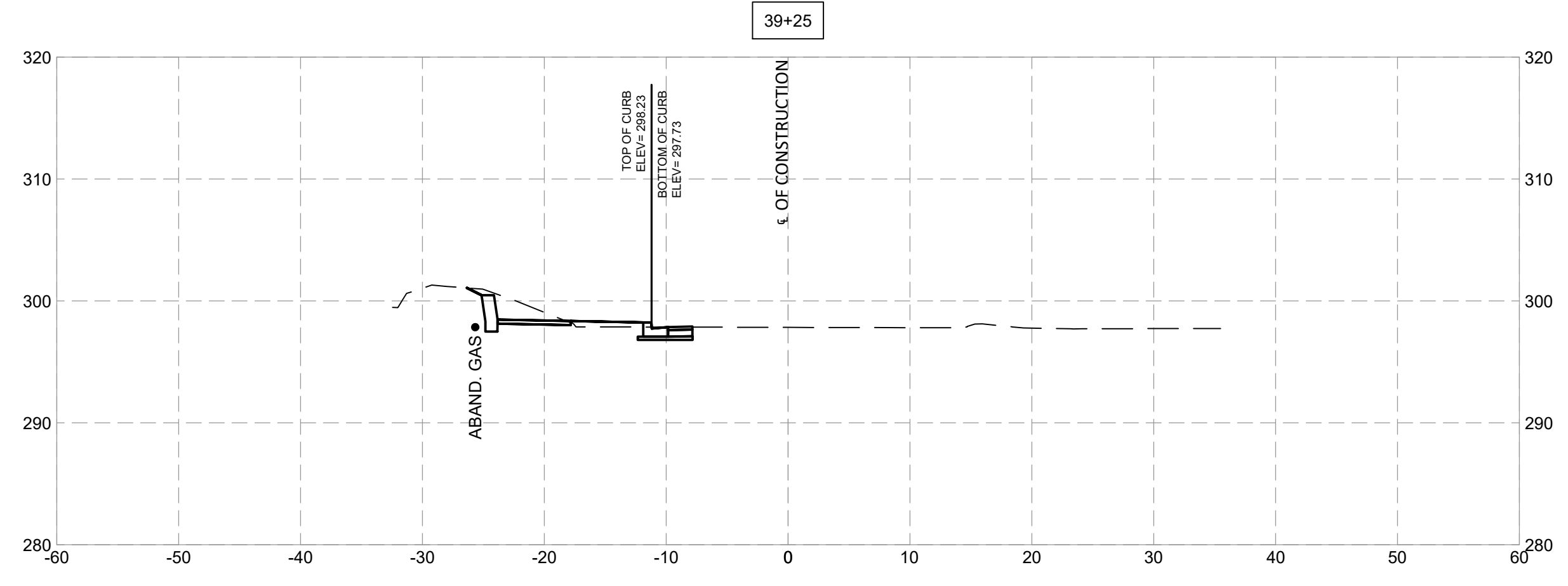
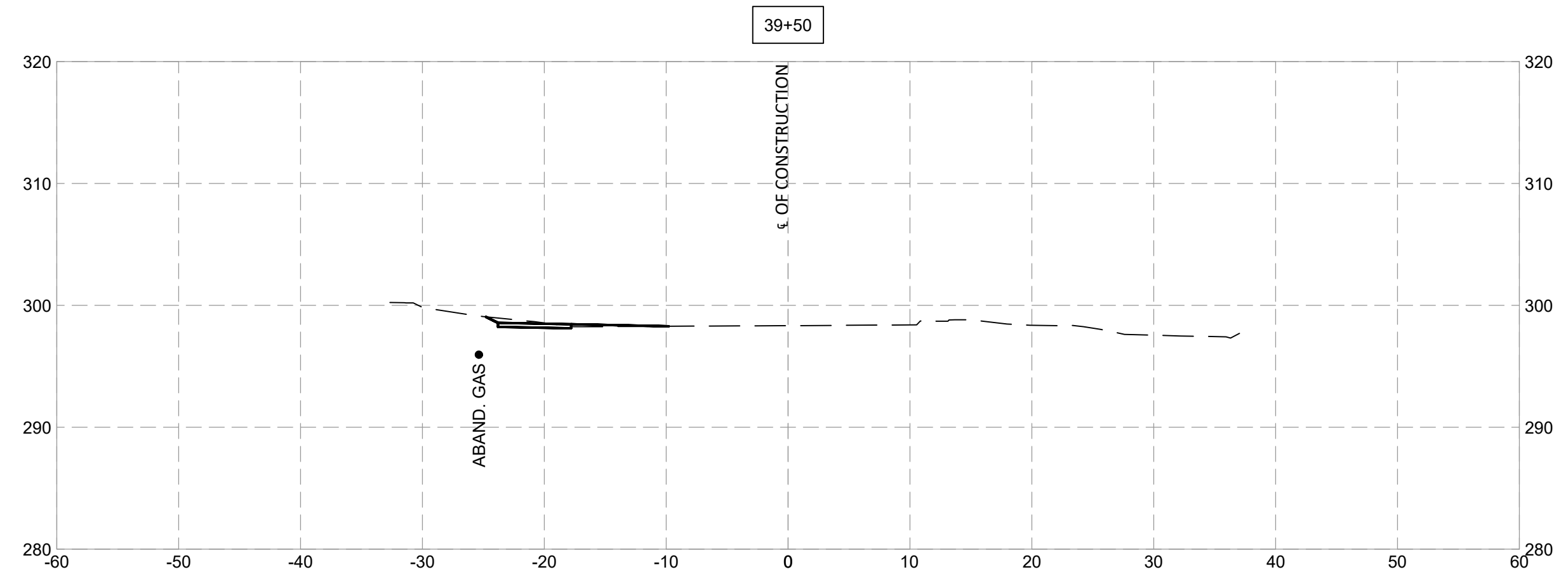
Project No. : TBD 99 of 109











NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_

APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

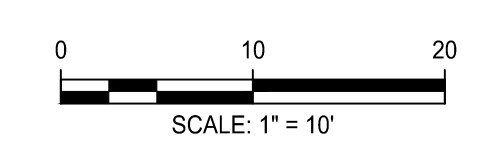
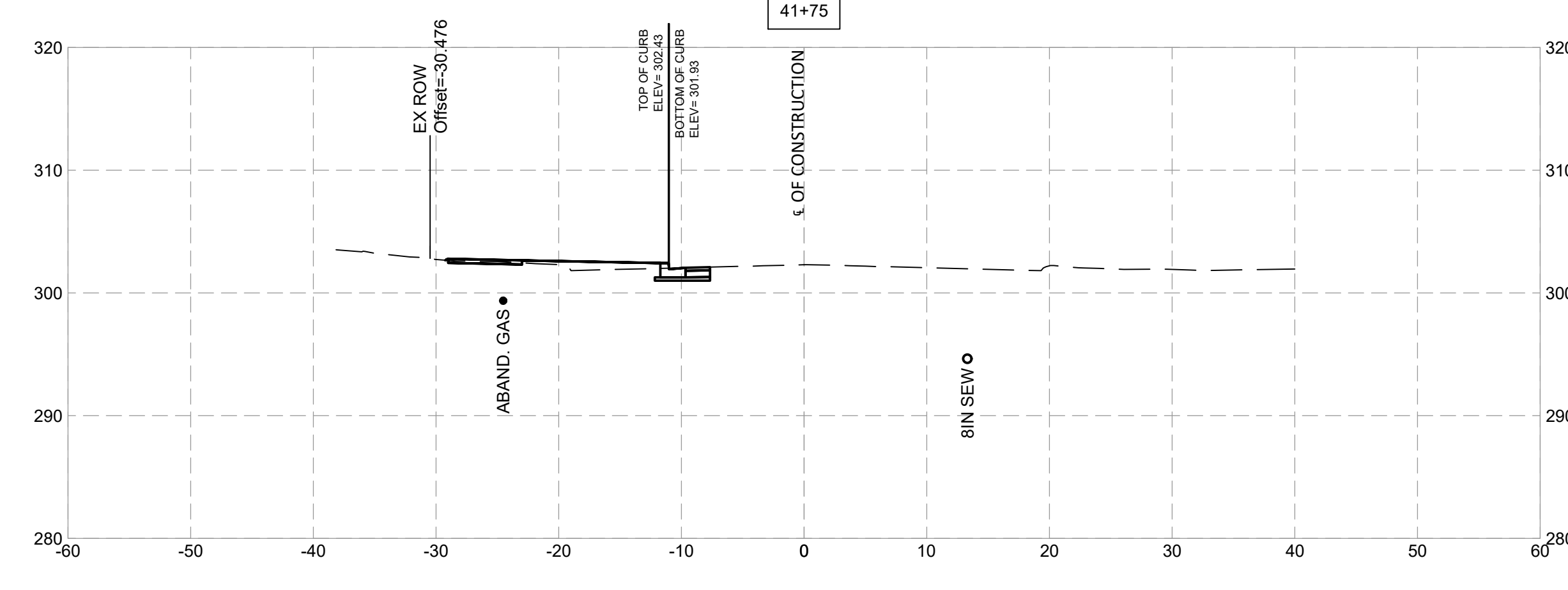
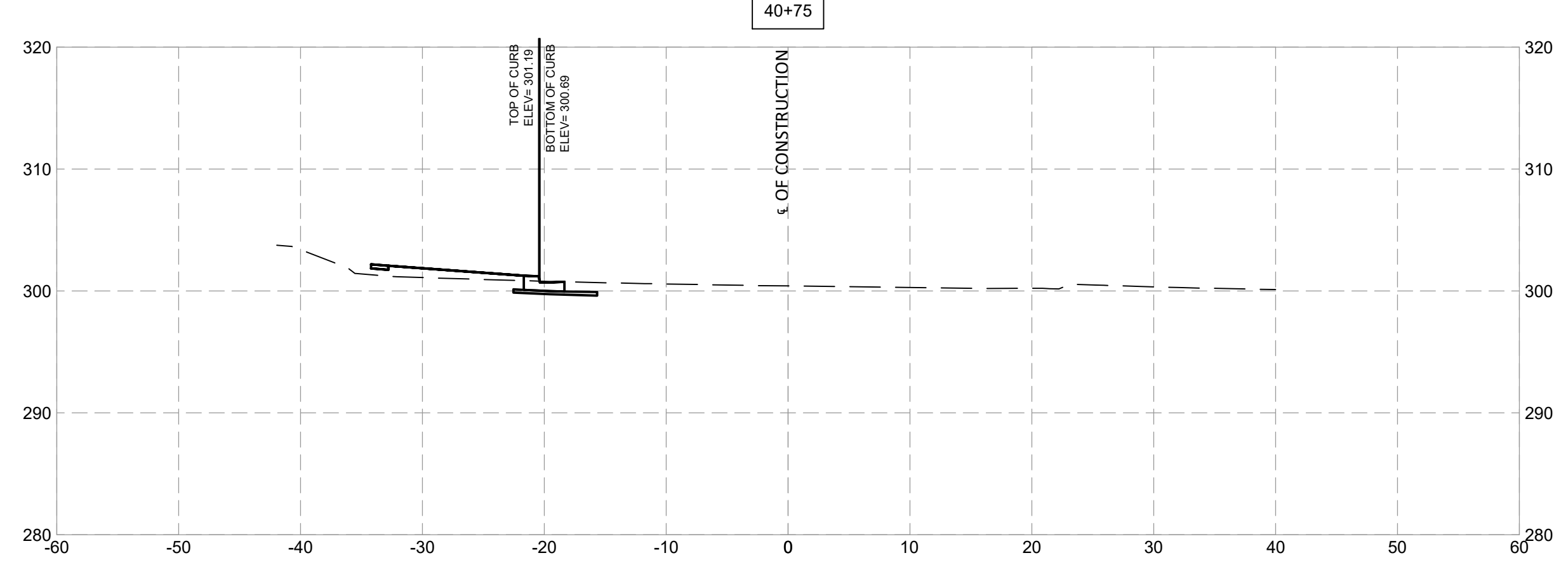
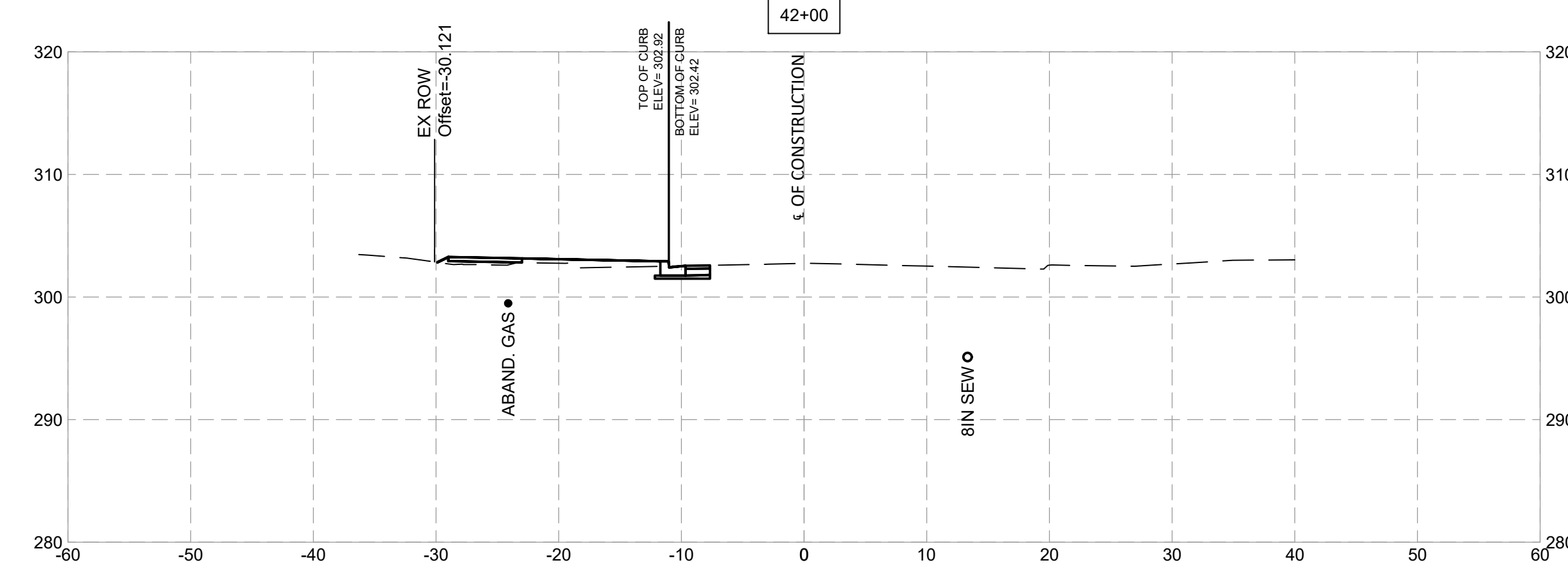
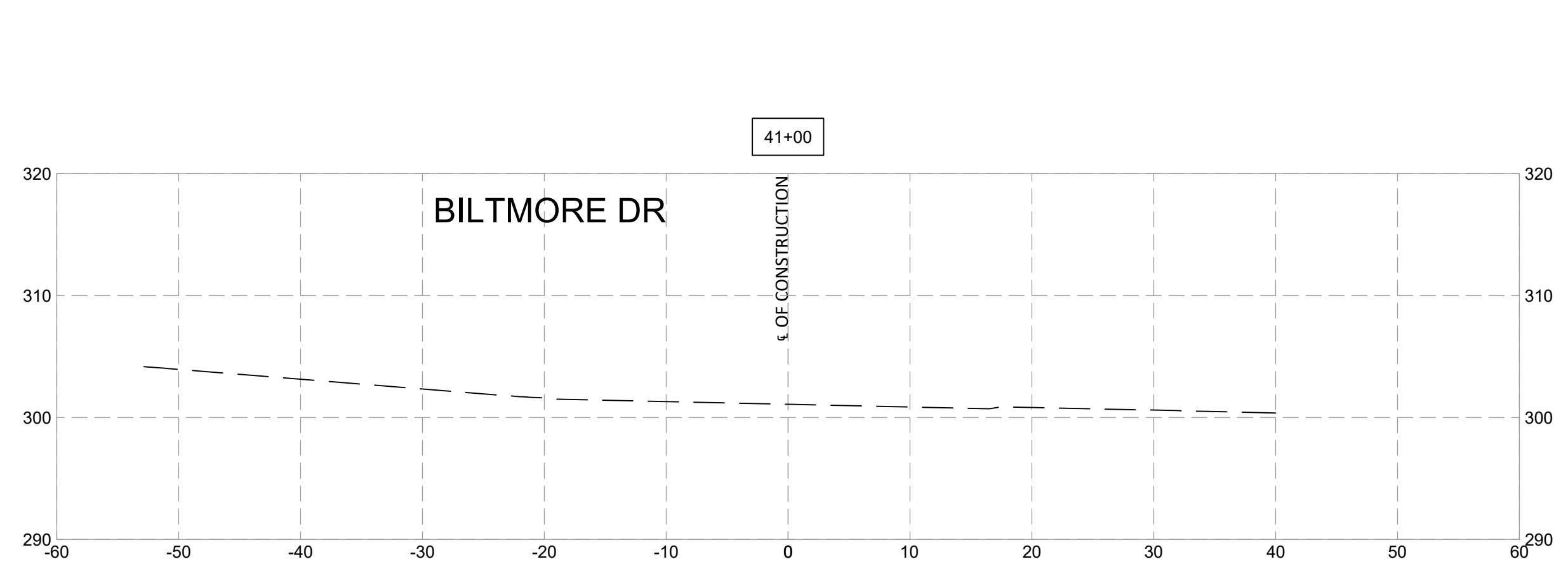
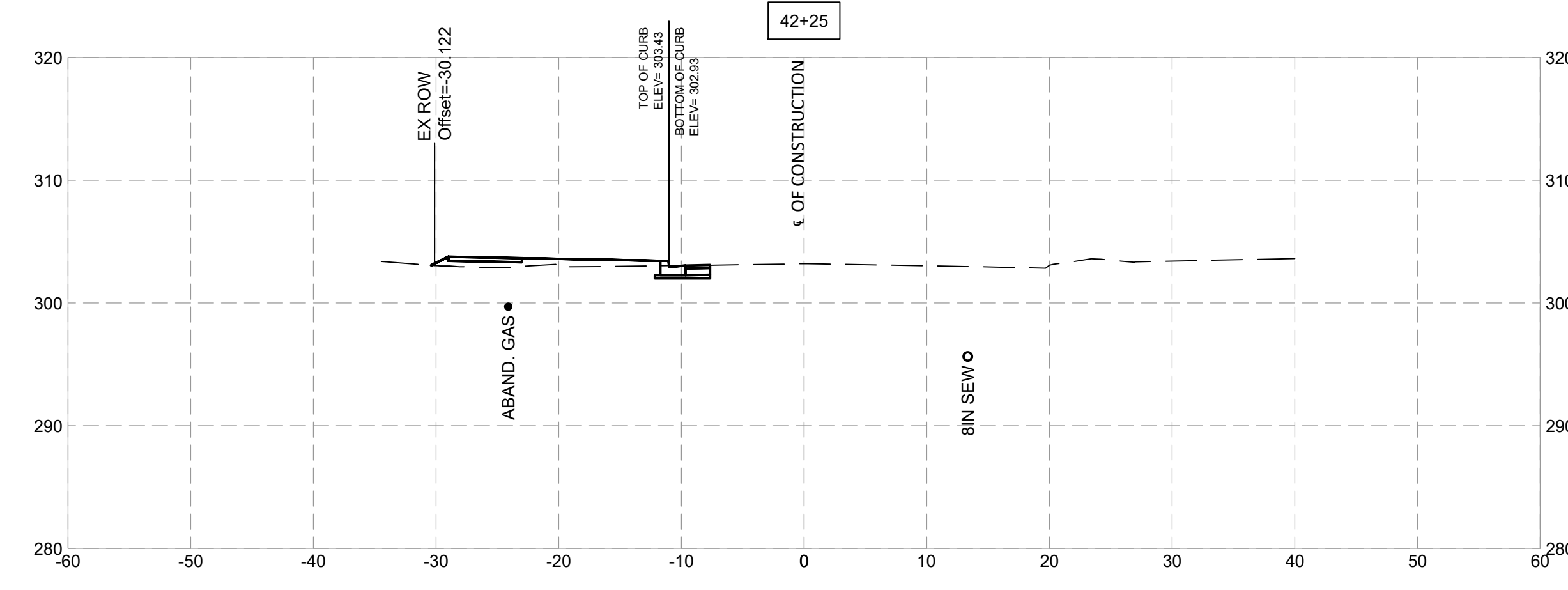
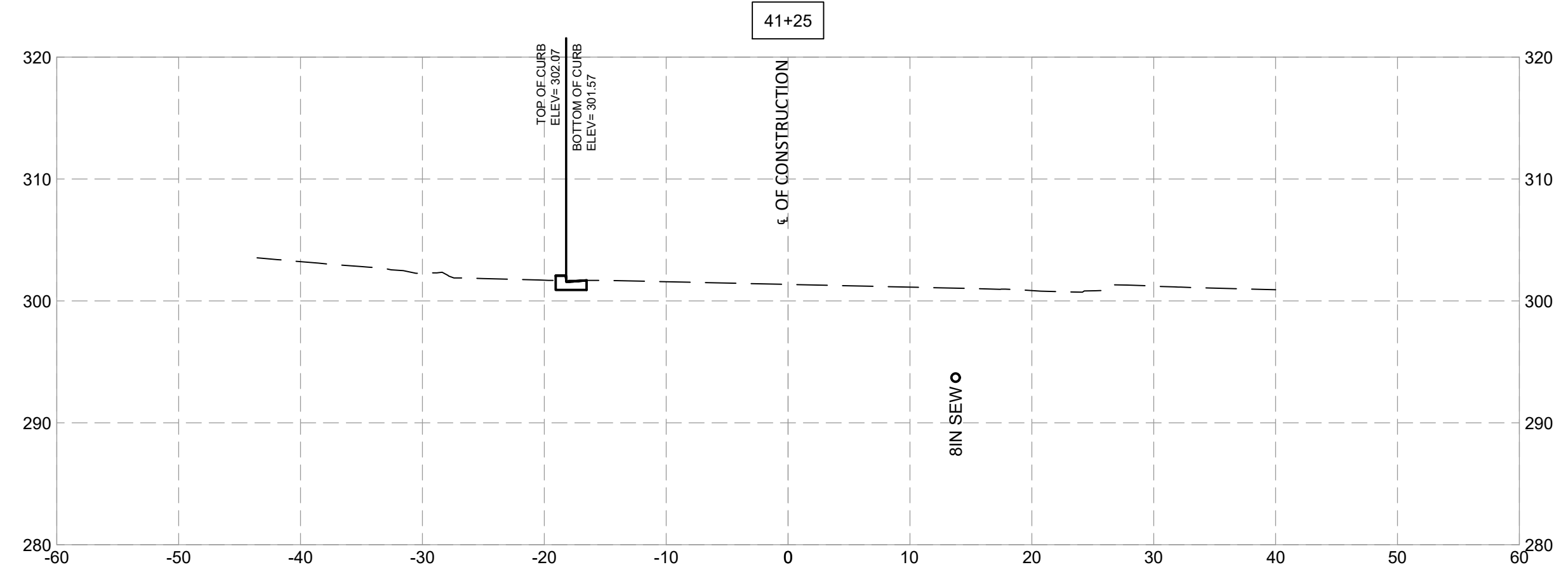
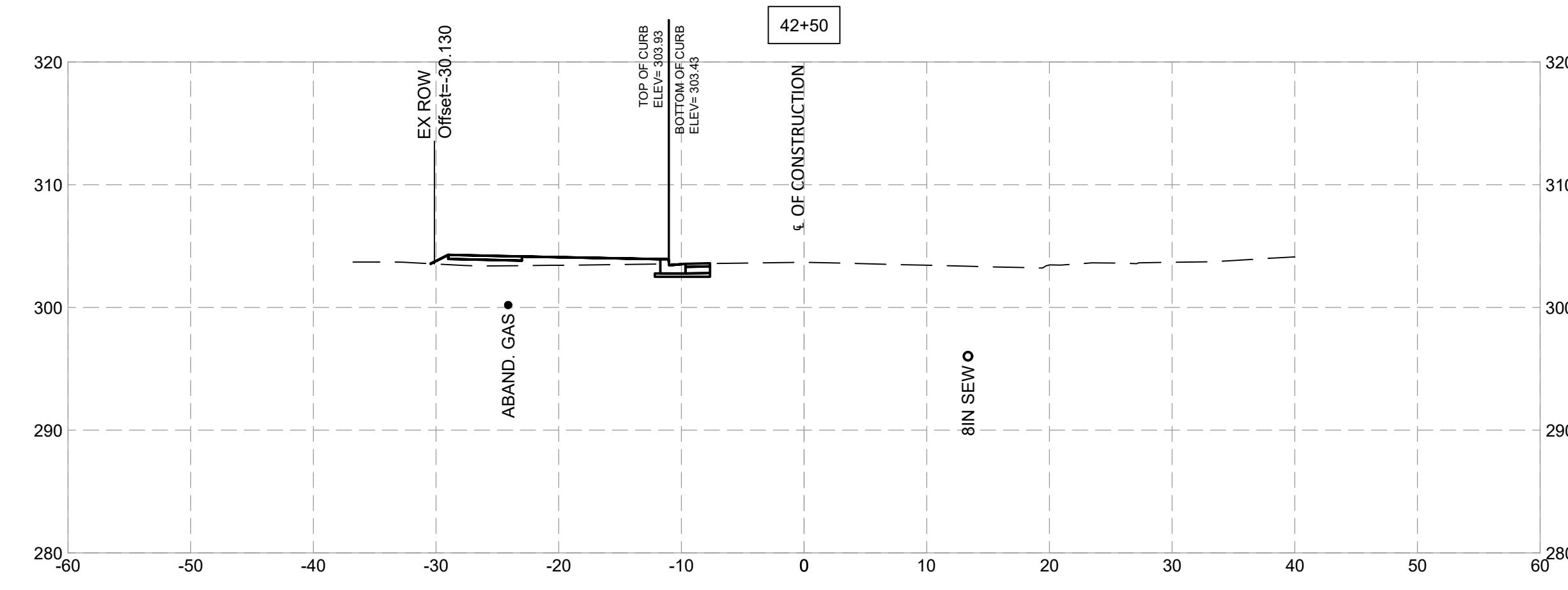
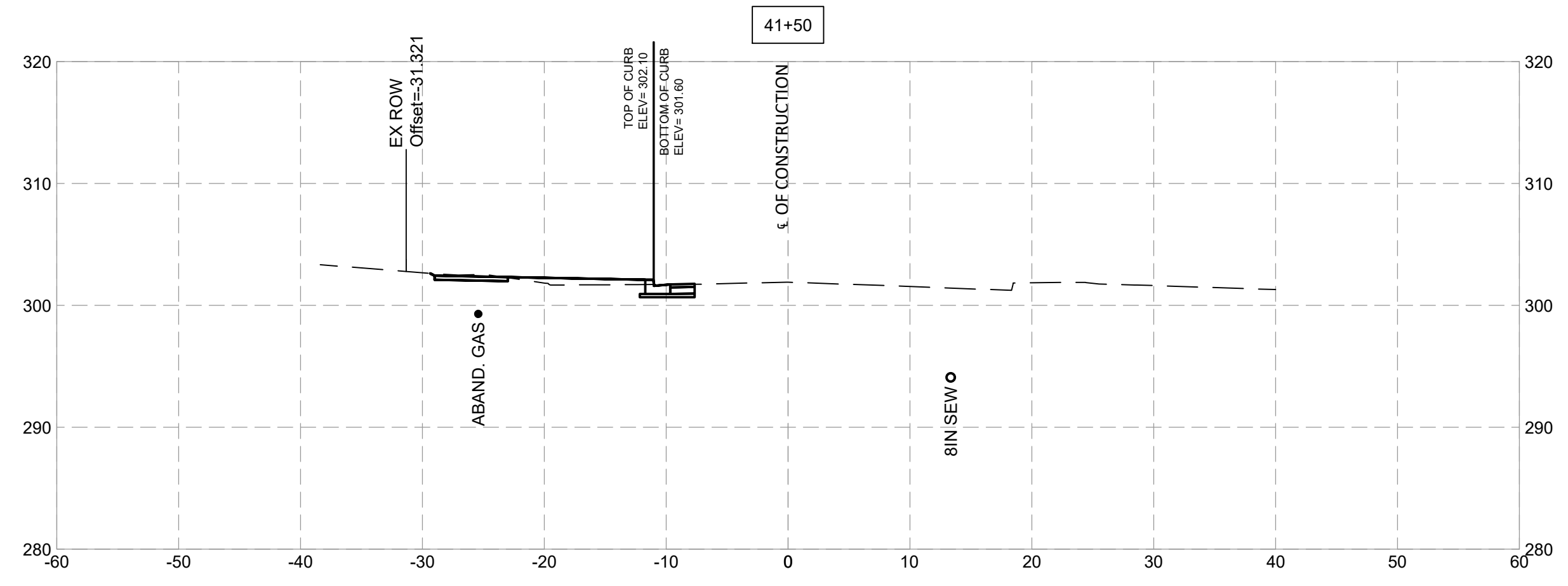
**FRANKLIN AVENUE  
SIDEWALK  
CROSS SECTIONS**

SCALE : \_\_\_\_\_

Project No. : TBD of 109

**XS - 20**





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NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_

APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

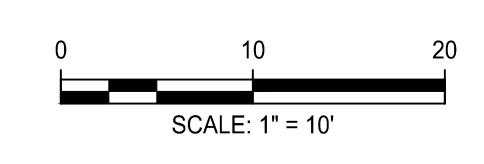
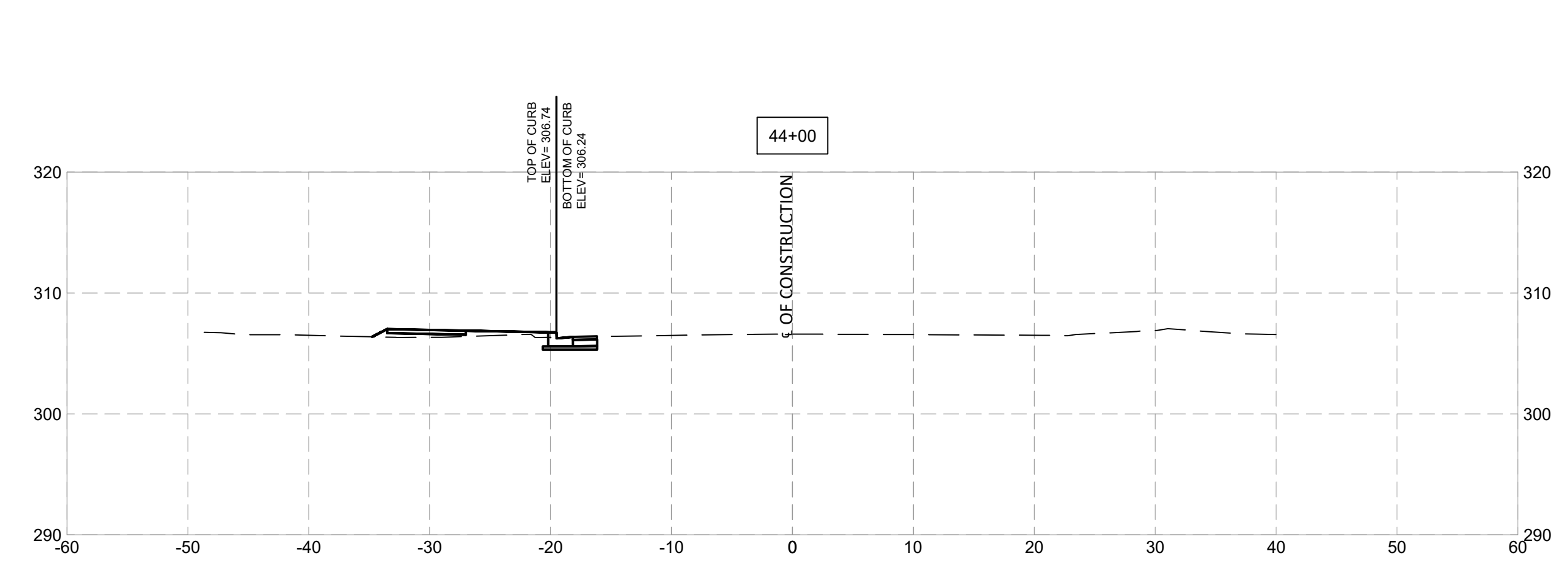
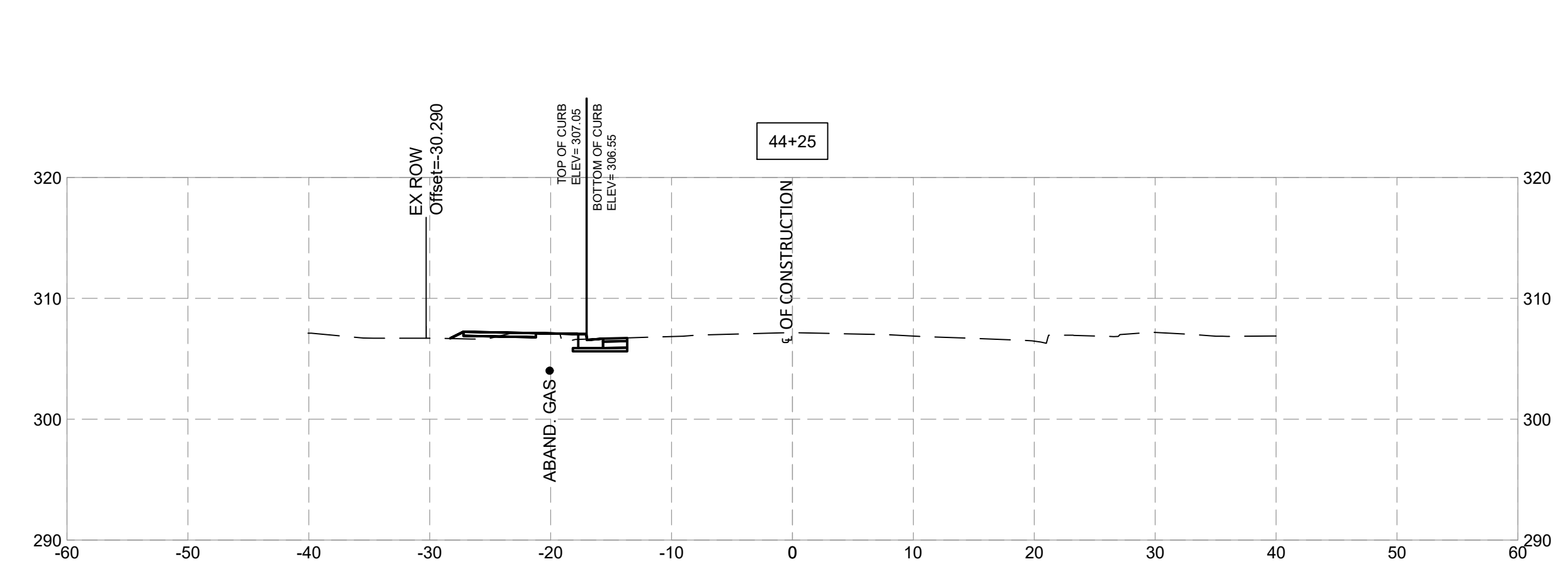
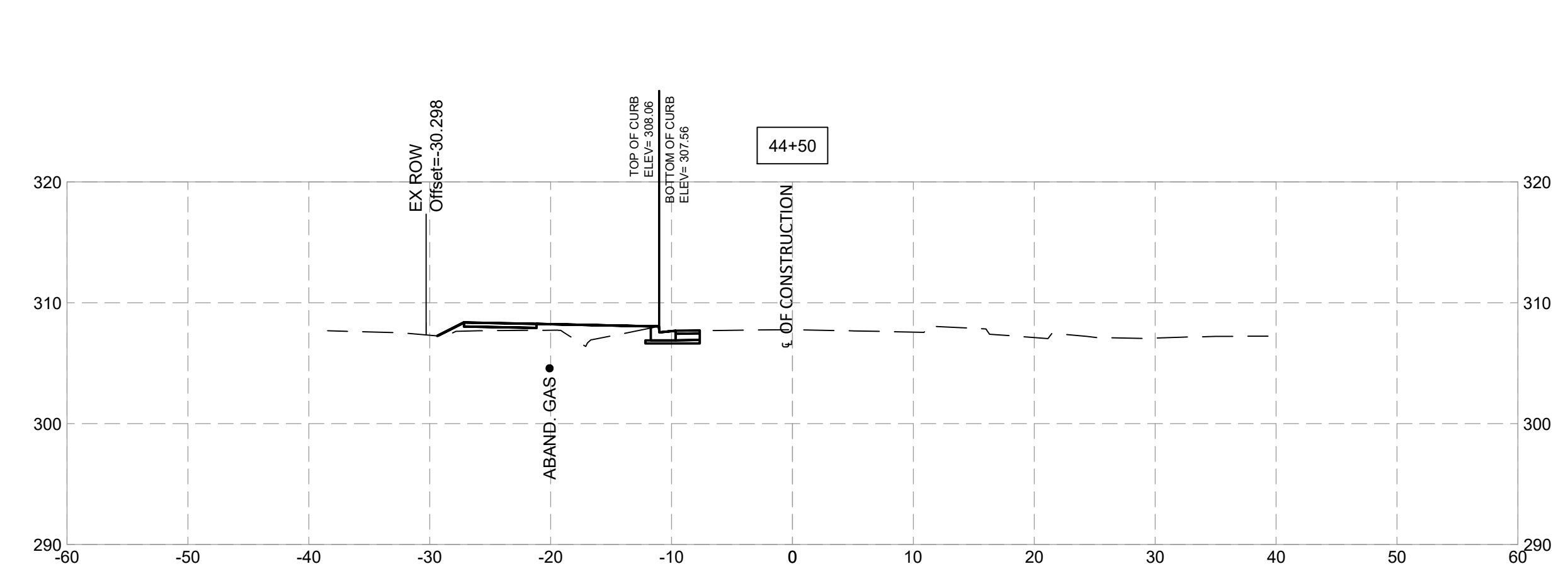
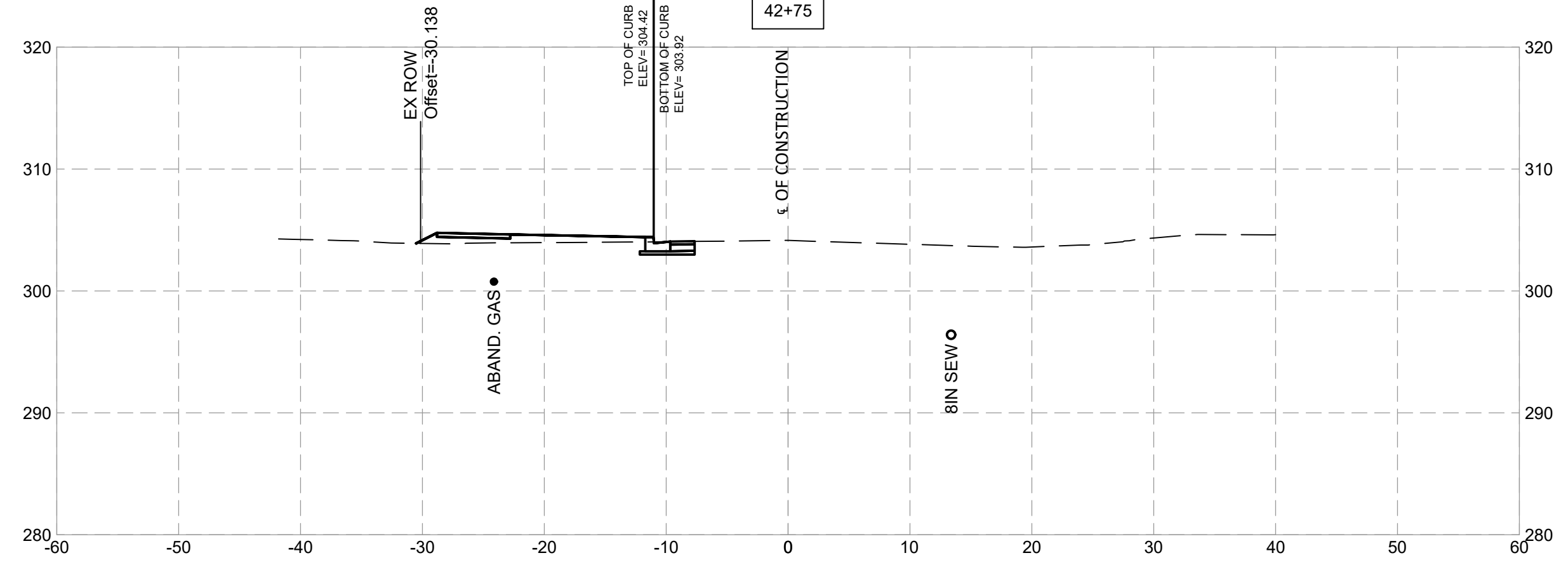
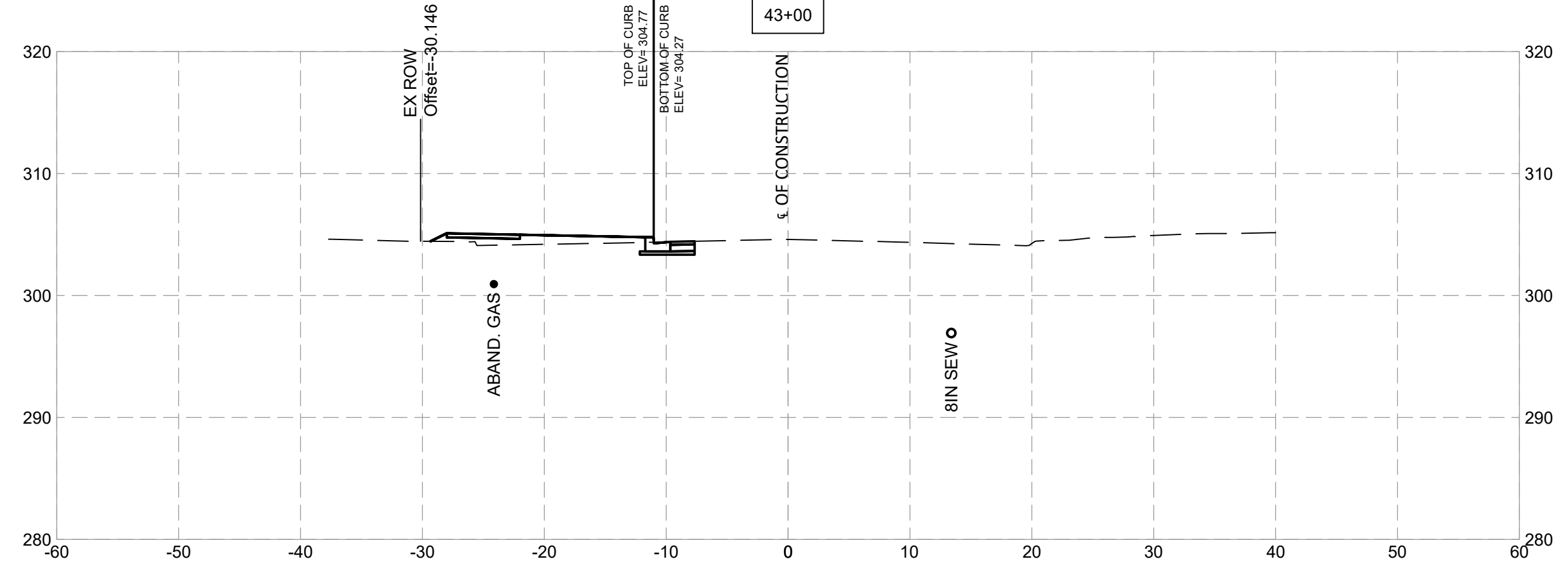
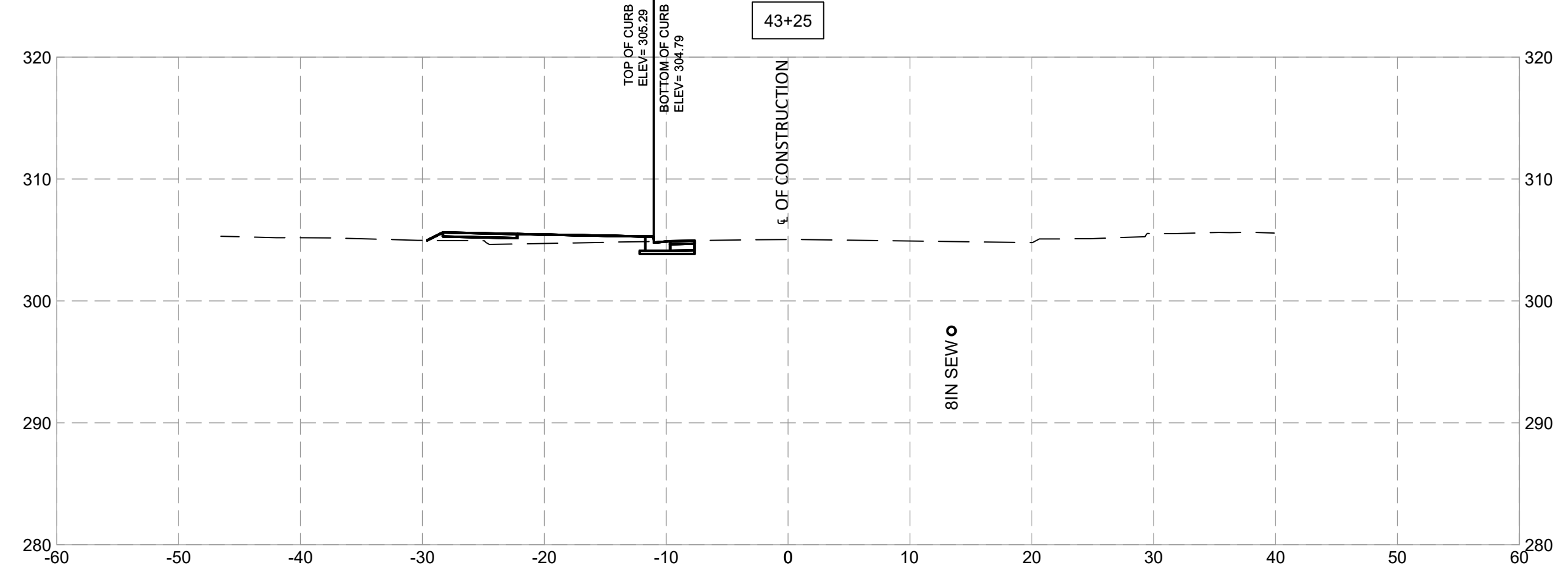
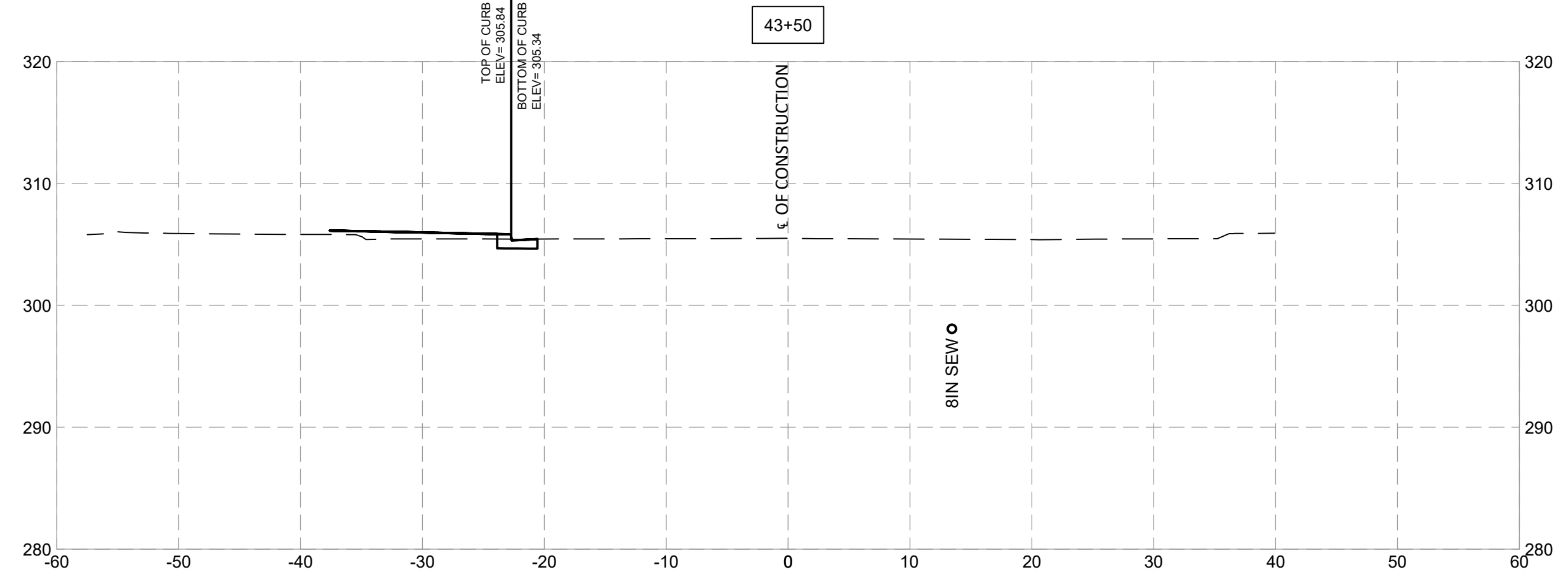
Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

**FRANKLIN AVENUE  
SIDEWALK  
CROSS SECTIONS**

SCALE : \_\_\_\_\_

Project No. : TBD of 105 of 109

**XS - 21**




**Engineers, Architects**  
**Development Consultants**  
 2099 Garner Road, Rockville, MD 20850  
 Phone: 301-586-3939 Fax: 301-946-7174  
 www.sheladia.com

NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
 DEPARTMENT OF TRANSPORTATION  
 ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL  
 Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_  
 APPROVED  
 Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

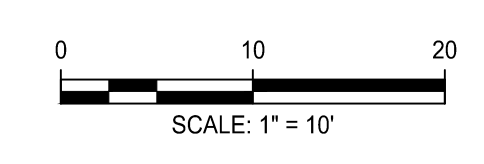
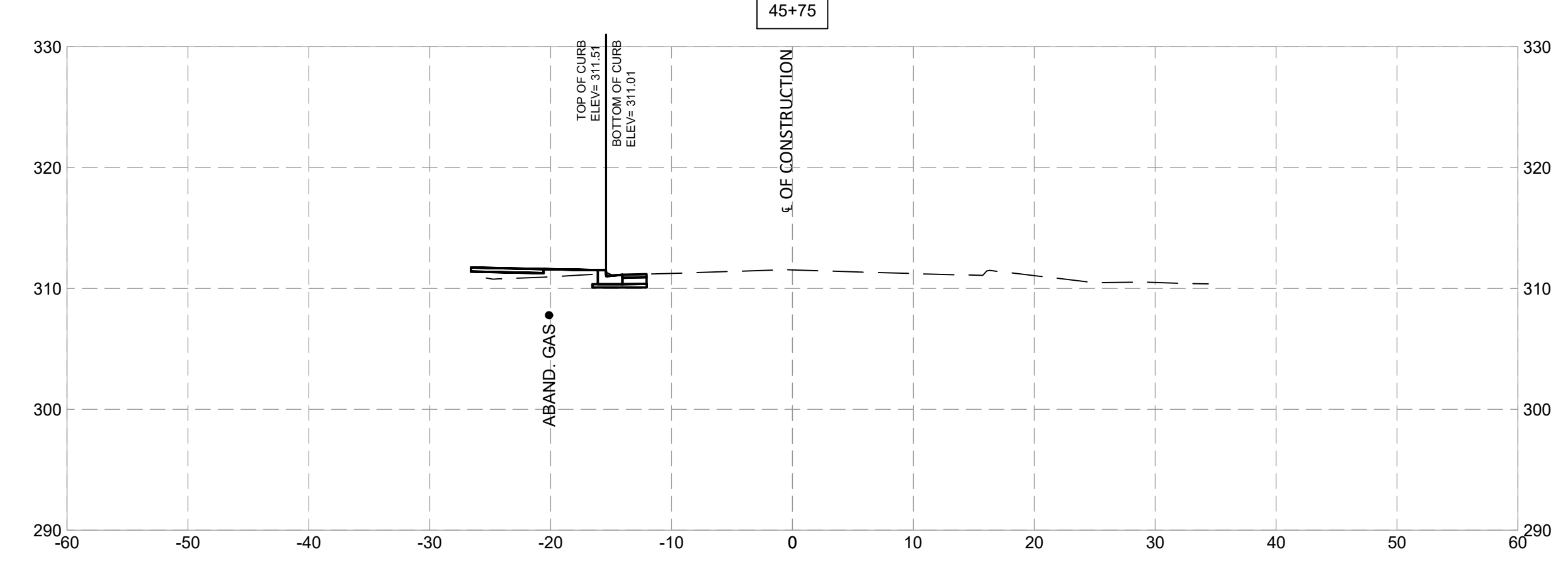
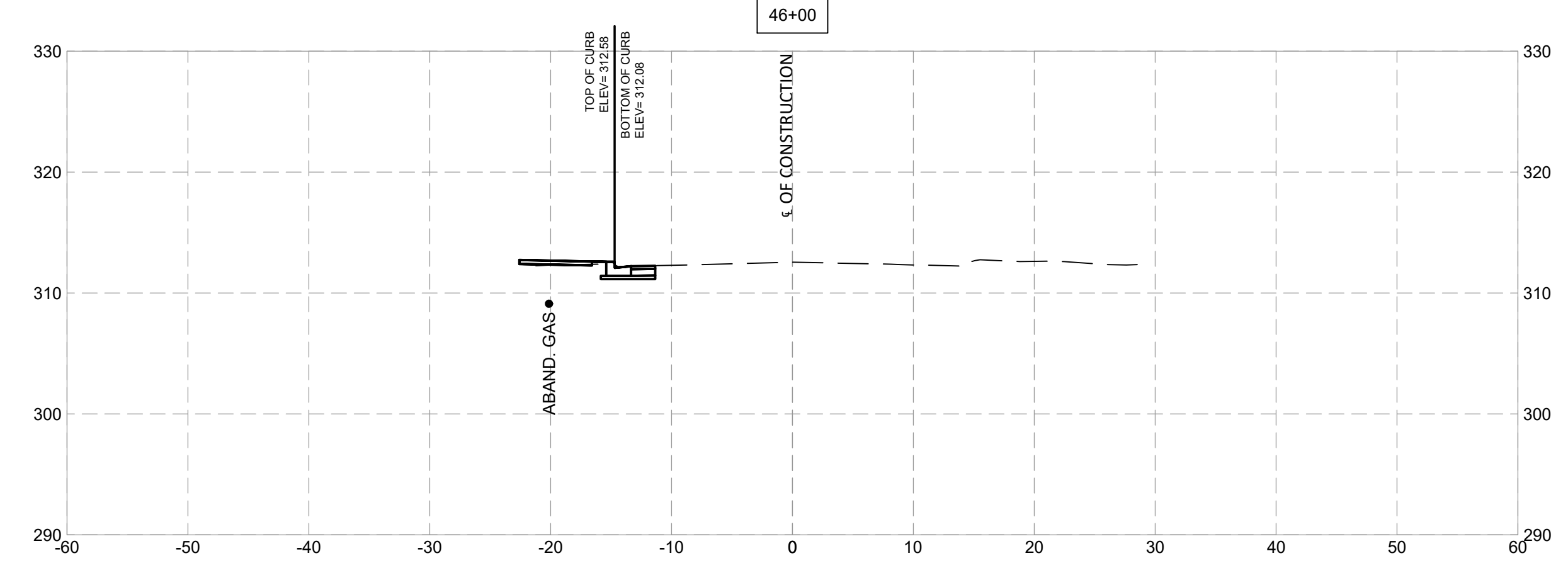
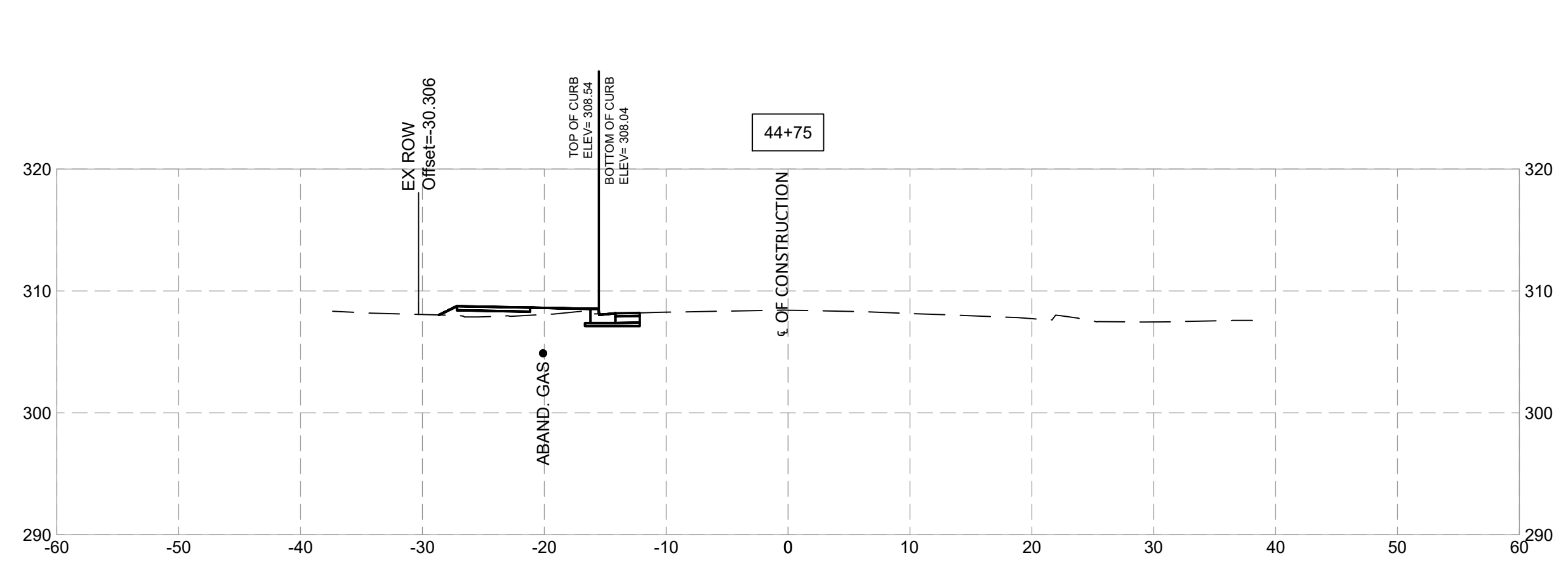
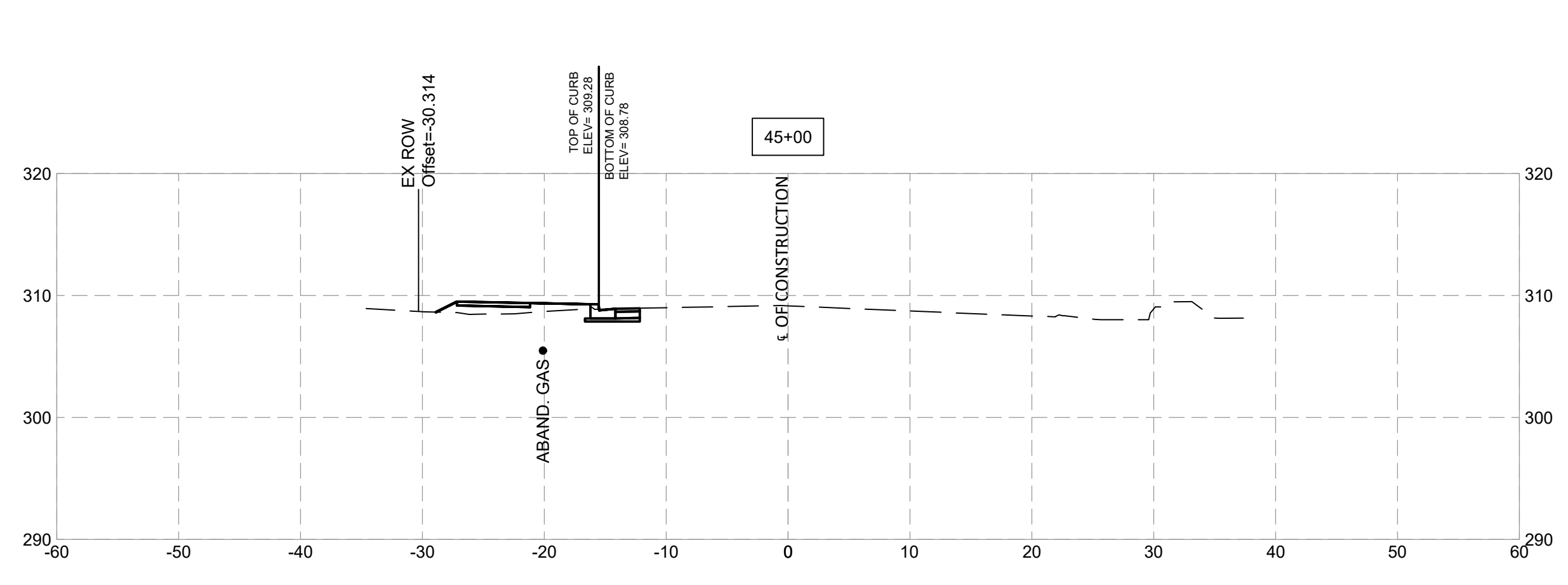
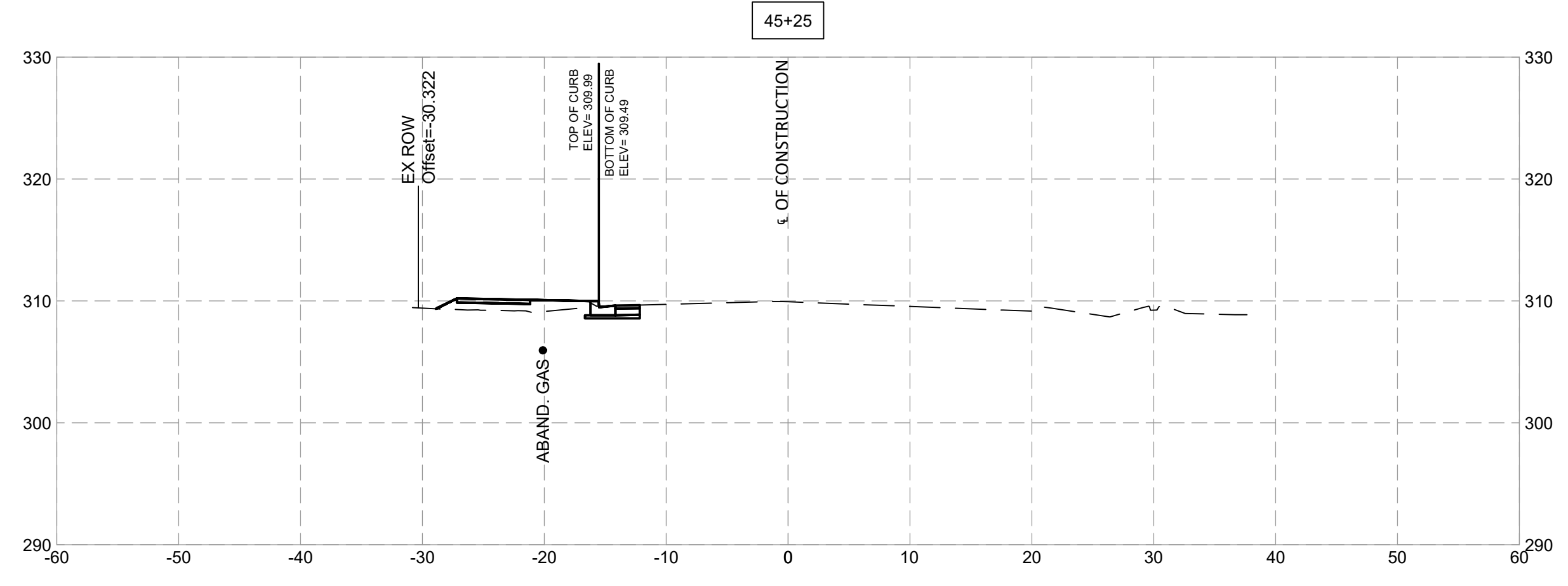
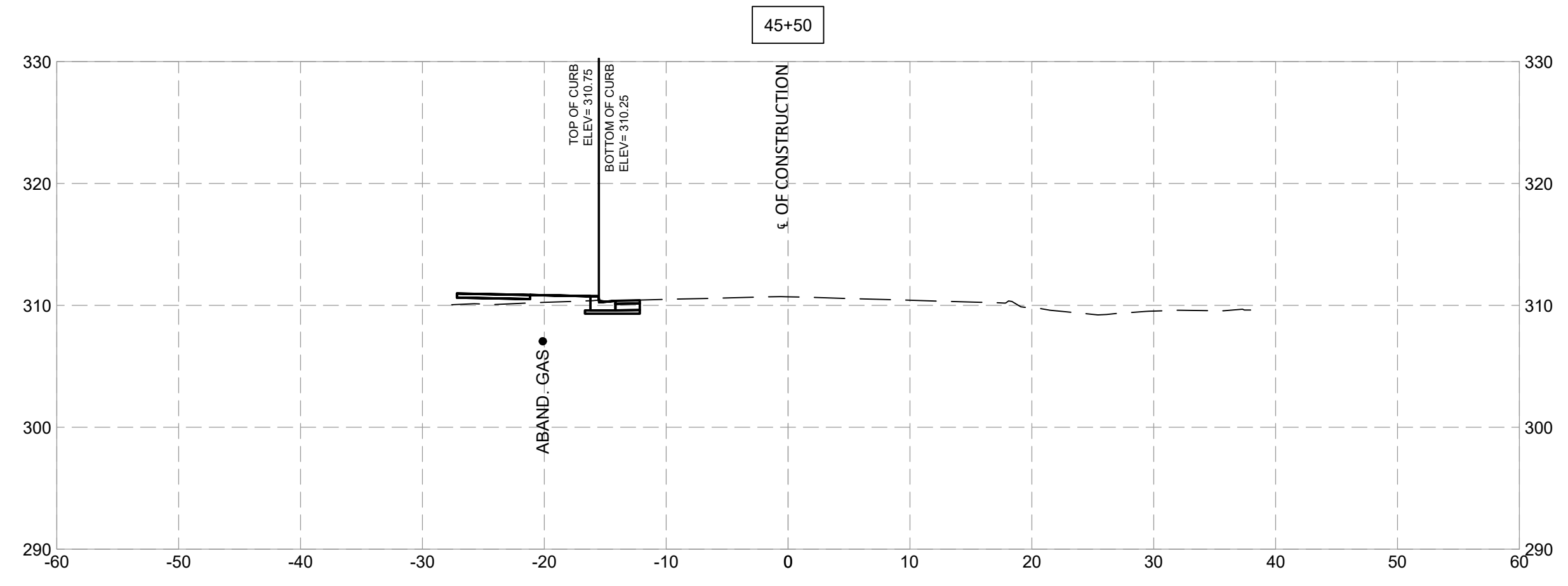
Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

SEE TITLE SHEET  
 FOR SIGNATURES

**FRANKLIN AVENUE**  
**SIDEWALK**  
**CROSS SECTIONS**

SCALE : \_\_\_\_\_ XS - 22

Project No. : TBD 106 of 109



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MONTGOMERY COUNTY DEPARTMENT OF TRANSPORTATION ROCKVILLE, MARYLAND			
RECOMMENDED FOR APPROVAL			
Chief, Design Section	_____	_____	Date
APPROVED			
Chief, Division of Transportation Engineering	_____	_____	Date
Designed by: _____	Drawn by: _____	Checked by: _____	
NO.	REVISION	DATE	BY

**FRANKLIN AVENUE  
SIDEWALK  
CROSS SECTIONS**

SCALE : \_\_\_\_\_

Project No. : TBD of 107 of 109

**XS - 23**



**INFILTRATION TEST DATA SHEET**

Project: East Franklin Ave Sidewalk Improvements Project No: 20C12011  
 Test No: SWM-01 (Profile Boring SB-08) Date: 3/29/2022  
 Location: Sta. 0+80, 31 LF SE Rep. K. Salas  
 Test Depth: 5 ft Sfc EL: 265 ft  
 Test EL: 260 ft Basin EL:

**PRESOAK:** Date: 3/29/2022 24-Hour Reading 3/30/2022  
 Time: 3:00 PM 11:45 AM  
 Depth of Water: 3 ft 5 ft (dry)  
 Soil Description USDA: Lab Results in Progress  
 Soil Description USCS: CLAYEY SAND (VISUAL)

**TEST:**

Run	Date	Begin		End		Infiltration Rate (in/hr)
		Time	Depth (feet)	Time	Depth (feet)	
1	3/30/2022	11:40AM	3.00	12:40PM	4.15	13.80
2	3/30/2022	12:40PM	3.00	1:40 PM	3.96	11.52
3	3/30/2022	1:40 PM	3.00	2:40 PM	4.00	12.00
4	3/30/2022	2:40 PM	3.00	3:40 PM	4.06	12.72
Average Infiltration Rate (in/hr)						12.51



**INFILTRATION TEST DATA SHEET**

Project: East Franklin Ave Sidewalk Improvements Project No: 20C12011  
 Test No: SWM-02 (Profile Boring HA-02) Date: 3/29/2022  
 Location: Sta. 4+97, 20.8 LF SE Rep. K. Salas  
 Test Depth: 5 ft Sfc EL: 267 ft  
 Test EL: 262 ft Basin EL:

**PRESOAK:** Date: 3/29/2022 24-Hour Reading 3/30/2022  
 Time: 2:15 PM 11:30 AM  
 Depth of Water: 3 ft 5 ft (dry)  
 Soil Description USDA: Lab Results in Progress  
 Soil Description USCS: SANDY LEAN CLAY (VISUAL)

**TEST:**

Run	Date	Begin		End		Infiltration Rate (in/hr)
		Time	Depth (feet)	Time	Depth (feet)	
1	3/30/2022	11:35 AM	3.00	12:35 PM	3.00	0.00
2	3/30/2022	12:35 PM	3.00	1:35 PM	2.98	0.24
3	3/30/2022	1:35 PM	2.98	2:35 PM	2.97	0.12
4	3/30/2022	2:35 PM	2.97	3:35 PM	2.97	0.00
Average Infiltration Rate (in/hr)						0.09



**INFILTRATION TEST DATA SHEET**

Project: East Franklin Ave Sidewalk Improvements Project No: 20C12011  
 Test No: SWM-03 (Profile Boring HA-03) Date: 3/29/2022  
 Location: Sta. 31+36, 24.1 LF SE Rep. K. Salas  
 Test Depth: 5 ft Sfc EL: 291 ft  
 Test EL: 286 ft Basin EL:

**PRESOAK:** Date: 3/29/2022 24-Hour Reading 3/30/2022  
 Time: 1:20 PM 11:20 AM  
 Depth of Water: 3 ft 4 ft  
 Soil Description USDA: Lab Results in Progress  
 Soil Description USCS: SILTY SAND (VISUAL)

**TEST:**

Run	Date	Begin		End		Infiltration Rate (in/hr)
		Time	Depth (feet)	Time	Depth (feet)	
1	3/30/2022	11:20 AM	3.00	12:20 PM	3.05	0.60
2	3/30/2022	12:20 PM	3.05	1:20 PM	3.07	0.24
3	3/30/2022	1:20 PM	3.07	2:20 PM	3.11	0.48
4	3/30/2022	2:20 PM	3.11	3:20 PM	3.13	0.24
Average Infiltration Rate (in/hr)						0.39



**INFILTRATION TEST DATA SHEET**

Project: East Franklin Ave Sidewalk Improvements Project No: 20C12011  
 Test No: SWM-04 (Profile Boring HA-04) Date: 3/29/2022  
 Location: Sta. 33+47, 26.3 LF SE Rep. K. Salas  
 Test Depth: 5 ft Sfc EL: 291 ft  
 Test EL: 286 ft Basin EL:

**PRESOAK:** Date: 3/29/2022 24-Hour Reading 3/30/2022  
 Time: 11:30 AM 11:05 AM  
 Depth of Water: 3 ft 5 ft (dry)  
 Soil Description USDA: Lab Results in Progress  
 Soil Description USCS: SILTY SAND (VISUAL)

**TEST:**

Run	Date	Begin		End		Infiltration Rate (in/hr)
		Time	Depth (feet)	Time	Depth (feet)	
1	3/30/2022	11:10 AM	3.00	12:15 PM	3.85	10.20
2	3/30/2022	12:15 PM	3.85	1:15 PM	4.13	3.36
3	3/30/2022	1:15 PM	3.00	2:15 PM	3.36	4.32
4	3/30/2022	2:15 PM	3.36	3:15 PM	3.51	1.80
Average Infiltration Rate (in/hr)						4.92



**INFILTRATION TEST DATA SHEET**

Project: East Franklin Ave Sidewalk Improvements Project No: 20C12011  
 Test No: SWM-06 (Profile Boring SB-06) Date: 3/29/2022  
 Location: Sta. 36+07, 26 LF SE Rep. K. Salas  
 Test Depth: 5 ft Sfc EL: 293 ft  
 Test EL: 288 ft Basin EL:

**PRESOAK:** Date: 3/29/2022 24-Hour Reading 3/30/2022  
 Time: 10:30 AM 10:55 AM  
 Depth of Water: 3 ft 3.54 ft  
 Soil Description USDA: Lab Results in Progress  
 Soil Description USCS: CLAYEY SAND (VISUAL)

**TEST:**

Run	Date	Begin		End		Infiltration Rate (in/hr)
		Time	Depth (feet)	Time	Depth (feet)	
1	3/30/2022	11:00 AM	3.00	12:10 PM	3.03	0.36
2	3/30/2022	12:10 PM	3.03	1:10 PM	3.07	0.48
3	3/30/2022	1:10 PM	3.07	2:10 PM	3.10	0.36
4	3/30/2022	2:10 PM	3.10	3:10 PM	3.15	0.60
Average Infiltration Rate (in/hr)						0.45



**INFILTRATION TEST DATA SHEET**

Project: East Franklin Ave Sidewalk Improvements Project No: 20C12011  
 Test No: SWM-07 (Profile Boring SB-07) Date: 3/29/2022  
 Location: Sta. 44+71, 24.35 LF SE Rep. K. Salas  
 Test Depth: 5 ft Sfc EL: 302 ft  
 Test EL: 297 ft Basin EL:

**PRESOAK:** Date: 3/29/2022 24-Hour Reading 3/30/2022  
 Time: 4:50 PM 10:30 AM  
 Depth of Water: 3 ft 3.79 ft  
 Soil Description USDA: Lab Results in Progress  
 Soil Description USCS: POORLY GRADED SAND (VISUAL)

**TEST:**

Run	Date	Begin		End		Infiltration Rate (in/hr)
		Time	Depth (feet)	Time	Depth (feet)	
1	3/30/2022	10:35 AM	3.00	12:05 PM	3.05	0.60
2	3/30/2022	12:05 PM	3.05	1:05 PM	3.10	0.60
3	3/30/2022	1:05 PM	3.10	2:05 PM	3.17	0.84
4	3/30/2022	2:05 PM	3.17	3:05 PM	3.20	0.36
Average Infiltration Rate (in/hr)						0.60



**INFILTRATION TEST DATA SHEET**

Project: East Franklin Ave Sidewalk Improvements Project No: 20C12011  
 Test No: SWM-08 (Profile Boring SB-08) Date: 3/29/2022  
 Location: Sta. 44+71, 24.35 LF SE Rep. K. Salas  
 Test Depth: 5 ft Sfc EL: 308 ft  
 Test EL: 303 ft Basin EL:

**PRESOAK:** Date: 3/29/2022 24-Hour Reading 3/30/2022  
 Time: 5:00 PM 10:25 AM  
 Depth of Water: 3 ft 3.54 ft  
 Soil Description USDA: Lab Results in Progress  
 Soil Description USCS: LEAN CLAY WITH SAND (VISUAL)

**TEST:**

Run	Date	Begin		End		Infiltration Rate (in/hr)
		Time	Depth (feet)	Time	Depth (feet)	
1	3/30/2022	10:25 AM	3.00	12:00 PM	3.12	1.44
2	3/30/2022	12:00 PM	3.12	1:00 PM	3.17	0.60
3	3/30/2022	1:00 PM	3.17	2:00 PM	3.23	0.72
4	3/30/2022	2:00 PM	3.23	3:00 PM	3.26	0.36
Average Infiltration Rate (in/hr)						0.78



NO.	REVISION	DATE	BY

MONTGOMERY COUNTY  
DEPARTMENT OF TRANSPORTATION  
ROCKVILLE, MARYLAND

RECOMMENDED FOR APPROVAL

Chief, Design Section \_\_\_\_\_ Date \_\_\_\_\_  
 APPROVED

Chief, Division of Transportation Engineering \_\_\_\_\_ Date \_\_\_\_\_

Designed by: \_\_\_\_\_ Drawn by: \_\_\_\_\_ Checked by: \_\_\_\_\_

**FRANKLIN AVENUE  
SIDEWALK**

BORING LOG - 1

SCALE: N/A

SB - 01

Project No.: TBD 108 of 109

