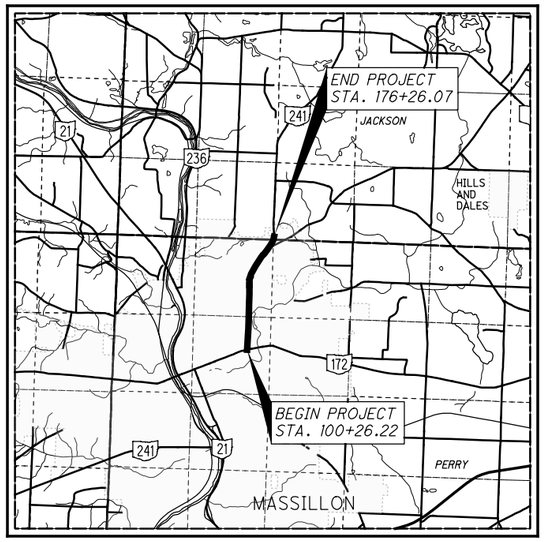


LOCATION MAP

LATITUDE: N40°48'41" LONGITUDE: W81°30'33"

SCALE IN MILES

0 1 2 3 4

N

PORTION TO BE IMPROVED

INTERSTATE HIGHWAY

FEDERAL ROUTES

STATE ROUTES

COUNTY & TOWNSHIP ROADS

OTHER ROADS

DESIGN DESIGNATION

FOR DESIGN DESIGNATIONS, SEE SHEET 2

DESIGN EXCEPTIONS

NONE REQUIRED

ADA DESIGN WAIVERS

NONE REQUIRED

UNDERGROUND UTILITIES

Contact Two Working Days Before You Dig

OHIO811.org Before You Dig

OHIO811, 8-1-1, or 1-800-362-2764
(Non-members must be called directly)

PLANS PREPARED BY:

OHM ADVISORS, INC.
388 S. MAIN STREET, SUITE 301
AKRON, OH 44311
330-913-1080

ENGINEERS SEAL:

STATE OF OHIO
RUTH A. KLEE
E-56481
REGISTERED PROFESSIONAL ENGINEER

SIGNED:

DATE:

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

STA-241-9.71

CITY OF MASSILLON

STARK COUNTY

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PROJECT DESCRIPTION

WIDENING AND MILLING/ RESURFACING OF 1.59 MILES OF SR 241 (WALES ROAD NE) FROM LINCOLN WAY E TO HILLS AND DALES ROAD NE, AND 0.07 MILES OF LAKE AVENUE NE FROM 11TH STREET NE TO WALES ROAD NE. IMPROVEMENTS INCLUDE FULL DEPTH AND PARTIAL DEPTH PAVEMENT REPAIRS, UPGRADING TRAFFIC SIGNALS WITH FIBER INTERCONNECT, REPLACING SIDEWALK AND DRIVE APRONS, NEW CURB AND GUTTER, NEW CATCH BASINS, AND SEWER REPAIRS.

EARTH DISTURBED AREAS

PROJECT EARTH DISTURBED AREA:	5.63 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA:	0.62 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA:	6.25 ACRES

2019 SPECIFICATIONS

THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PLANS AND CHANGES LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

STANDARD CONSTRUCTION DRAWINGS

BP-3.1	1/17/20	RM-1.1	7/18/14	MT-101.60	1/17/20	TC-52.20	7/20/18	
BP-4.1	7/19/13	RM-2.1	7/19/13	MT-101.70	1/17/20	TC-65.10	1/17/14	
BP-5.1	1/18/19	RM-4.2	4/17/20	MT-101.75	1/17/20	TC-65.11	7/21/17	
BP-7.1	7/17/20			MT-101.90	7/17/20	TC-71.10	1/19/18	
		HL-30.11	7/17/20	MT-105.10	1/17/20	TC-81.21	1/18/19	
CB-2.1	7/20/18	HL-30.22	4/17/20	MT-110.10	7/19/13	TC-83.20	7/21/17	
CB-2.2	7/20/18	HL-60.11	7/21/17	MT-120.00	1/19/18	TC-85.10	4/17/20	
CB-2.3	1/15/16	HL-60.12	4/17/20			TC-85.20	7/20/18	
CB-4.2	1/18/13			TC-21.20	7/20/18			
		MT-95.31	7/19/19	TC-22.10	4/17/20			
DM-1.1	7/17/20	MT-95.32	4/19/19	TC-41.20	10/18/13			
DM-1.2	1/18/13	MT-95.60	4/19/19	TC-41.30	10/18/13			
DM-4.4	1/15/16	MT-95.61	4/19/19	TC-41.40	10/18/13			
		MT-97.10	4/19/19	TC-41.41	7/19/19			
MH-1.2	1/15/16	MT-97.12	1/20/17	TC-42.20	10/18/13			
		MT-99.20	4/19/19	TC-52.10	10/18/13			

SUPPLEMENTAL SPECIFICATIONS

800-2019	01/15/21	895	4/18/14
804	7/17/20	903	7/20/12
805	7/16/10	904	7/17/20
809	10/16/20	907	10/18/19
813	10/19/18	909	10/16/20
816	10/18/19	913	4/21/17
821	4/20/12	916	10/16/20
832	10/19/18	921	4/20/12
875	1/18/19	995	7/17/15

SPECIAL PROVISIONS

NONE	

I HEREBY APPROVE THESE PLANS AND DECLARE THAT THE MAKING OF THIS IMPROVEMENT WILL NOT REQUIRE THE CLOSING TO TRAFFIC OF THE HIGHWAY, EXCEPT AS NOTED ON SHEET 26 , AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

APPROVED _____

DATE _____ SAFETY SERVICE DIRECTOR, CITY OF MASSILLON

APPROVED _____

DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____

DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION

FEDERAL PROJECT NO. E160-(859)

PID NO. 100471

CONSTRUCTION PROJECT NO. -----

RAILROAD INVOLVEMENT NONE

STA-241-9.71

1 / 395

P:\3000_3499\3062\70090_STA-241-9.71_Wales_Road\000T\100471_STA-241-9.71\Design\Roadway\Sheets\100471_GT001.dgn 4/7/2021 7:39:14 AM khillegass

DESIGN DESIGNATIONS

	SR 241 - WALES ROAD NE (LINCOLN WAY E TO LAKE AVENUE NE)	SR 241 - WALES ROAD NE (LAKE AVENUE NE TO HILLS AND DALES ROAD NE)	SR 241 - WALES ROAD NE (NORTH OF HILLS AND DALES ROAD NE)	LAKE AVENUE NE
CURRENT ADT (2022)	14,850	20,060	11,550	12,890
DESIGN YEAR ADT (2042)	16,020	21,420	12,720	13,280
DESIGN HOURLY VOLUME (2042)	1,510	2,010	1,080	1,320
DIRECTIONAL DISTRIBUTION	50%	53%	56%	54%
TRUCKS (24 HOUR B&C)	3%	3%	3%	2%
Td	2%	2%	2%	1%
DESIGN SPEED	40	40	40	30
LEGAL SPEED	35	35	35	25
DESIGN FUNCTIONAL CLASSIFICATION	03 PRINCIPAL ARTERIAL (URBAN)	03 PRINCIPAL ARTERIAL (URBAN)	03 PRINCIPAL ARTERIAL (URBAN)	04 MINOR ARTERIAL (URBAN)
NHS PROJECT	YES	YES	YES	NO

LEGEND

EXISTING LINETYPES

- EDGE OF PAVEMENT
- CURB
- COMBINATION CURB AND GUTTER
- WALK
- FENCE
- Ex R/W — RIGHT-OF-WAY
- Ex SH — STANDARD HIGHWAY EASEMENT
- Ex U — STANDARD UTILITY EASEMENT
- PROPERTY LINE
- W — WATER
- DITCH
- G — UNDERGROUND GAS
- E — UNDERGROUND ELECTRIC
- OH-E — OVERHEAD ELECTRIC
- OH-T — OVERHEAD TELECOMMUNICATIONS
- FO† — UNDERGROUND FIBER OPTIC
- T — UNDERGROUND TELECOMMUNICATIONS
- CTV — UNDERGROUND CABLE
- STONE WALL
- FLOWER BED
- EX. LOOP DETECTOR OR SIGNAL WIRING

EXISTING SYMBOLS

- SANITARY MANHOLE
- TREE
- TREE TO BE REMOVED
- ROCK
- STUMP
- STUMP TO BE REMOVED
- BUSH
- BUSH TO BE REMOVED
- TREE OR SHRUB LINE
- SIGN
- CURB INLET OR CATCH BASIN

EXISTING SYMBOLS

- TELECOM MANHOLE
- FIRE HYDRANT
- GUY ANCHOR
- POWER POLE
- LIGHT POLE
- POWER/LIGHT POLE
- TELEPHONE/LIGHT POLE
- TELEPHONE/POWER POLE
- WATER SERVICE VALVE
- MAINLINE WATER VALVE
- WATER METER
- GAS SERVICE VALVE
- GAS METER
- BOX/HAND HOLE

PROPOSED LINETYPES AND SYMBOLS

- BASELINE CONSTRUCTION
- CENTERLINE DRIVE
- CONSTRUCTION LIMITS
- COMBINATION CURB AND GUTTER
- CURB
- SAWCUT LINE
- SIDEWALK
- TMP — TEMPORARY RIGHT OF WAY
- R/W — PROPOSED RIGHT OF WAY
- MANHOLE
- CATCH BASIN
- SIDE DITCH INLET
- SIGN

ABBREVIATIONS

- AATUR.. ABANDONED ACCORDING TO UTILITY RECORDS
- ATG..... ADJUST TO GRADE
- CB..... CATCH BASIN
- DATFI... DEPICTED ACCORDING TO FIELD INSPECTION, NO ELECTRONIC INFORMATION WAS OBTAINED.
- DND..... DO NOT DISTURB
- EOI..... END OF INFORMATION
- EX..... EXISTING
- GTS..... GAS TEST STATION
- MH..... MANHOLE
- NDC..... NORMAL DESIGN CRITERIA
- PB..... PULL BOX
- PD..... PIPE DUCT
- PROP... PROPOSED
- QL-D... DEPICTED ACCORDING TO RECORD INFORMATION. NO ELECTRONIC INFORMATION WAS OBTAINED.
- RTG..... RECONSTRUCT TO GRADE
- SAN..... SANITARY SEWER
- STM..... STORM SEWER
- TBA..... TO BE ABANDONED
- TBR..... TO BE REMOVED
- TBRL.... TO BE RELOCATED
- TEL..... TELEPHONE
- WM..... WATER MAIN
- WV..... WATER VALVE

ROADWAY BALLOON LEGEND

- AB-# — ABANDON
- C-# — CURB
- CR-# — CURB RAMP
- D-# — CATCH BASINS, MANHOLES, AND INLETS
- DJ-# — CATCH BASINS, MANHOLES, AND INLETS ADJUSTED/RECONSTRUCTED TO GRADE
- DR-# — CATCH BASINS, MANHOLES, AND INLETS REMOVED
- DV-# — DRIVEWAYS
- EX-# — EXISTING CATCH BASINS, MANHOLES, AND INLETS
- F-# — FENCE
- FP-# — FILL & PLUG
- FR-# — FENCE REMOVED
- P-# — DRAINAGE PIPES
- PR-# — PIPES REMOVED
- R-# — MISCELLANEOUS REMOVALS
- SJ-# — SANITARY STRUCTURE ADJUSTED/RECONSTRUCTED TO GRADE
- SW-# — SIDEWALK
- UD-# — UNDERDRAINS
- WR-# — SIDEWALKS REMOVED

CALCULATED K.A.H
CHECKED K.R.M

DESIGN DESIGNATIONS AND LEGEND

STA-241-9.71

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THERE ARE NO WETLANDS

CP#2

℄ R/W & CONST. SR 172 (LINCOLN WAY E)

TBM#7

BEGIN WORK STA. 99+51.20

BEGIN PROJECT STA. 100+26.22 E160 (859)

N 76° 46′ 55″ E

CP#1

℄ R/W & CONST. NORTH AVE. NE

BEGIN WORK STA. 9+57.57

TBM#6

PI STA. 105+37.95

P.I.Sta. 105+37.95
Δ = 0° 17′ 33″ (RT)
NO CURVE

℄ R/W & CONST. ANDREW AVE. NE

℄ R/W & CONST. RODMAN AVE. NE

BEGIN WORK STA. 9+62.01

℄ R/W & CONST. GRAY CT. NE

BEGIN WORK STA. 9+57.01

TBM#5

℄ R/W & CONST. STATE AVE. NE

BEGIN WORK STA. 9+62.00

℄ R/W & CONST. ROSLYN AVE. NE

BEGIN WORK STA. 9+56.49

℄ R/W & CONST. WILLIAMS AVE. NE

BEGIN WORK STA. 9+34.98

TBM#8

BEGIN WORK STA. 9+56.10

PI STA. 121+40.24

P.I.Sta. 121+40.24
Δ = 0° 03′ 19″ (LT)
NO CURVE

P.I.Sta. 126+46.77
Δ = 0° 17′ 19″ (LT)
NO CURVE

PI STA. 126+46.17

TBM#3

TBM#2

100 105 110 115 120 125

N 1° 46′ 48″ E

N 2° 04′ 21″ E

N 2° 01′ 02″ E

END WORK STA. 10+45.66

END WORK STA. 10+42.73

END WORK STA. 10+43.78

END WORK STA. 10+38.00

TBM#4

END WORK STA. 10+37.91

END WORK STA. 10+42.05

END WORK STA. 11+02.39

S 87° 49′ 43″ E

S 87° 55′ 39″ E

℄ CONST. SR 241 (WALES RD. NE)

MATCH LINE STA. 128+00 SEE BELOW

STA. 119+30.18, SR 241 = STA. 10+00.00, WILLIAMS AVE.

STA. 105+01.53, SR 241 = STA. 10+00.00, NORTH AVE.

STA. 107+90.18, SR 241 = STA. 10+00.00, ANDREW AVE.

STA. 110+30.18, SR 241 = STA. 10+00.00, RODMAN AVE.

STA. 112+55.18, SR 241 = STA. 10+00.00, GRAY CT.

STA. 114+80.18, SR 241 = STA. 10+00.00, STATE AVE.

STA. 117+05.18, SR 241 = STA. 10+00.00, ROSLYN AVE.

STA. 100+00.00, SR 241 = STA. 304+84.92, SR 172

24″ OUTFALL TO SIPPO RESERVOIR

30″ OUTFALL TO SIPPO RESERVOIR

30″ OUTFALL TO SIPPO RESERVOIR

PERMISSIBLE ON SITE WASTE AND BORROW AREA (CORNER OF STATE AVE. AND RESERVOIR DR.)

BEGIN WORK STA. 195+80.00

℄ R/W & CONST. LAKE AVE. NE

℄ R/W & CONST. BENNINGTON AVE. NE

BEGIN WORK STA. 9+55.89

STA. 149+52.99, SR 241 = STA. 10+00.00, BENNINGTON AVE.

BEGIN WORK STA. 9+54.32

℄ R/W & CONST. COVENTRY RD. NE

STA. 152+99.74, SR 241 = STA. 10+00.00, COVENTRY RD.

TBM#11

N 25° 15′ 39″ E

MATCH LINE STA. 157+00 SEE SHEET 4

℄ CURVE DATA
P.I.Sta. 150+52.07
Δ = 23° 53′ 31″ (RT)
Dc = 16° 02′ 41″
R = 357.10′
T = 75.55′
L = 148.91′
E = 7.90′
C = 147.83′
C.B. = N 13° 18′ 53″ E
e_{MAX} = 0.02

P.I.Sta. 130+29.56
Δ = 0° 17′ 12″ (RT)
NO CURVE

STA. 130+29.56, SR 241 = STA. 10+00.00, KENDAL AVE.

℄ R/W & CONST. KENDAL AVE. NE

BEGIN WORK STA. 9+18.60

MATCH LINE STA. 128+00 SEE ABOVE

S 88° 16′ 17″ E

PI STA. 133+97.17

P.I.Sta. 133+97.17
Δ = 0° 21′ 35″ (LT)
NO CURVE

℄ R/W & CONST. ROTCH AVE. NE

BEGIN WORK STA. 9+51.79

S 88° 37′ 52″ E

PI STA. 140+35.00

P.I.Sta. 140+35.00
Δ = 0° 17′ 12″ (RT)
NO CURVE

PI STA. 142+35.00

P.I.Sta. 142+35.00
Δ = 0° 17′ 12″ (LT)
NO CURVE

S 88° 56′ 43″ E

130 135 140 145 150

N 1° 43′ 43″ E

N 1° 22′ 08″ E

N 1° 39′ 20″ E

N 1° 22′ 08″ E

END WORK STA. 10+64.68

TBM#1

CP#3

TBM#9

TBM#10

STA. 131+11.98, SR 241 = STA. 10+00.00, HANKINS RD.

℄ R/W & ℄ CONST. HANKINS RD. NE

STA. 139+22.18, SR 241 = STA. 10+00.00, ROTCH AVE.

STA. 145+94.98, SR 241 = STA. 200+00.00, LAKE AVE.

STA. 147+85.17, SR 241 = STA. 10+00.00, SPRINGHILL AVE.

℄ R/W SPRINGHILL AVE. NE

S 81° 37′ 33″ E

PC STA. 149+76.52

PT STA. 151+25.43

C1

END WORK STA. 10+49.76

S 64° 44′ 21″ E

S 88° 34′ 57″ E

RESERVOIR DRIVE

54″ OUTFALL TO SIPPO RESERVOIR

FOR PROJECT CONTROL INFORMATION, SEE SHEET 4.

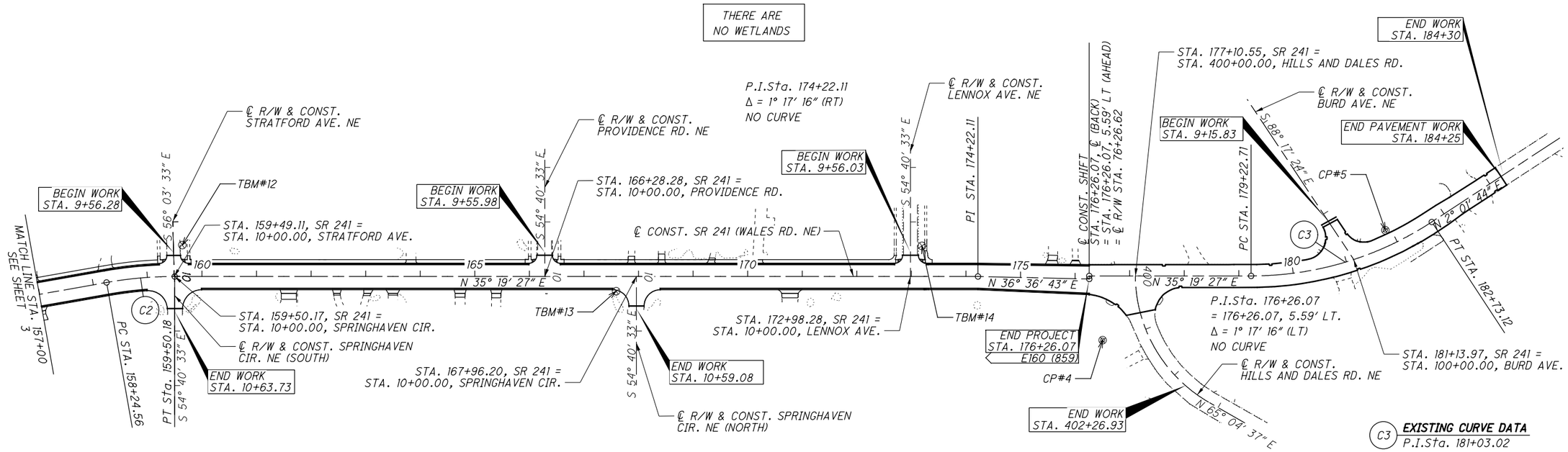
HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED JWG
CHECKED KBM

SCHEMATIC PLAN

STA-241-9.71

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C2 CURVE DATA
P.I.Sta. 158+87.53
Δ = 10° 03' 48" (RT)
Dc = 8° 00' 40"
R = 715.20'
T = 62.97'
L = 125.62'
E = 2.77'
C = 125.45'
C.B. = N 30° 17' 33" E
e_{MAX} = NC

C3 EXISTING CURVE DATA
P.I.Sta. 181+03.02
Δ = 33° 17' 43" (LT)
Dc = 9° 30' 06"
R = 603.00'
T = 180.31'
L = 350.41'
E = 26.38'
C = 345.50'
C.B. = N 18° 40' 35" E
e_{MAX} = 0.033

TEMPORARY BENCHMARK CONTROL INFORMATION

NO.	STATION	OFFSET	SIDE	LOCATION	ELEVATION	NORTHING	EASTING	DESCRIPTION
TBM#1	133+50.68	54.30'	RT	CL CONST SR 241 (WALES RD NE)	1028.12	417857.430	2242992.452	NAIL IN LIGHTPOLE IN FRONT OF CHURCH
TBM#2	126+46.77	19.66'	RT	CL CONST SR 241 (WALES RD NE)	1032.17	417154.844	2242936.588	EAST FLANGE BOLT ON FIRE HYDRANT MARKED WITH AN "X"
TBM#3	122+70.28	19.07'	LT	CL CONST SR 241 (WALES RD NE)	1031.51	416779.893	2242884.632	NAIL IN WEST SIDE OF UTILITY POLE
TBM#4	115+10.64	29.45'	RT	CL CONST SR 241 (WALES RD NE)	1029.19	416019.006	2242905.773	NW BOLT OF WEST SONOCO GAS STATION SIGN POST
TBM#5	110+11.55	40.35'	LT	CL CONST SR 241 (WALES RD NE)	1025.99	415522.772	2242817.964	NAIL IN E SIDE OF UTILITY POLE, SW CORNER OF WALES AND RODMAN
TBM#6	105+22.25	45.86'	LT	CL CONST SR 241 (WALES RD NE)	1018.02	415033.751	2242794.839	NAIL IN E SIDE OF UTILITY POLE, NW CORNER OF WALES AND NORTH
TBM#7	100+09.36	168.27'	LT	CL CONST SR 241 (WALES RD NE)	1022.97	414524.916	2242656.550	NW CORNER OF HANDICAP RAMP WALL OF CVS PARKING LOT NEAR WALES AND LINCOLN WAY
TBM#8	117+99.38	18.76'	LT	CL CONST SR 241 (WALES RD NE)	1029.53	416309.304	2242868.036	NAIL IN W SIDE OF UTILITY POLE
TBM#9	139+55.17	29.85'	RT	CL CONST SR 241 (WALES RD NE)	1026.35	418462.660	2242982.746	NW FLANGE BOLT OF FIRE HYDRANT, NE CORNER OF WALES AND PEBBLE CHASE
TBM#10	145+37.49	28.19'	RT	CL CONST SR 241 (WALES RD NE)	1037.14	419044.834	2242996.006	NW FLANGE BOLT OF FIRE HYDRANT, SE CORNER OF WALES AND LAKE
TBM#11	153+13.62	26.75'	RT	CL CONST SR 241 (WALES RD NE)	1067.67	419787.048	2243116.856	WEST SIDE OF UTILITY POLE #413799
TBM#12	159+64.03	57.59'	LT	CL CONST SR 241 (WALES RD NE)	1095.18	420413.474	2243335.004	E FLANGE BOLT OF FIRE HYDRANT, NW CORNER OF WALES AND STRATFORD
TBM#13	167+59.04	26.96'	RT	CL CONST SR 241 (WALES RD NE)	1110.07	421013.229	2243863.669	W SIDE OF UTILITY POLE, SE CORNER OF WALES AND SPRINGHAVEN NE
TBM#14	173+19.27	56.04'	LT	CL CONST SR 241 (WALES RD NE)	1111.14	421518.306	2244119.870	NE FLANGE BOLT OF FIRE HYDRANT, NW CORNER OF WALES AND LENOX

PRIMARY PROJECT CONTROL INFORMATION

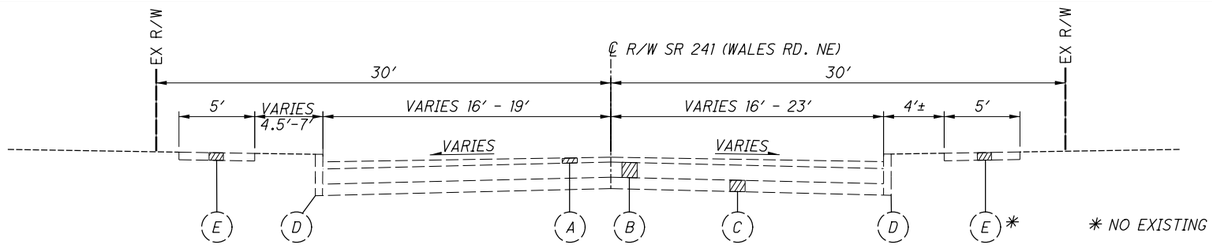
NO.	STATION	OFFSET	SIDE	LOCATION	ELEVATION	US SURVEY FEET (GRID)		US SURVEY FEET (GROUND)		DESCRIPTION
						NORTHING	EASTING	NORTHING	EASTING	
CP#1	304+46.50	37.43'	RT	CL RW & CONST SR 172 (LINCOLN WAY E)	1020.54	414425.835	2242583.319	414465.060	2242795.579	PROJECT CONTROL - 3/4" x 30" STEEL ROD WITH A 2" ALUMINUM CAP
CP#2	299+24.76	36.53'	RT	CL RW & CONST SR 172 (LINCOLN WAY E)	1023.04	414307.474	2242075.285	414346.688	2242287.497	AZIMUTH MARK - 3/4" x 30" STEEL ROD WITH A 2" ALUMINUM CAP
CP#3	135+13.51	34.64'	RT	CL CONST SR 241 (WALES RD NE)	1026.68	417981.455	2242764.709	418021.017	2242976.986	PROJECT CONTROL - 3/4" x 30" STEEL ROD WITH A 2" ALUMINUM CAP
CP#4	176+50.58	117.74'	RT	CL CONST SR 241 (WALES RD NE)	1102.12	421648.767	2244239.959	421688.676	2244452.377	PROJECT CONTROL - 3/4" x 30" STEEL ROD WITH A 2" ALUMINUM CAP
CP#5	181+90.25	28.74'	LT	CL CONST SR 241 (WALES RD NE)	1088.37	422187.973	2244375.029	422227.933	2244587.459	AZIMUTH MARK - 3/4" x 30" STEEL ROD WITH A 2" ALUMINUM CAP

HORIZONTAL SCALE IN FEET
0 50 100 200
CALCULATED JWG CHECKED KBM

SCHEMATIC PLAN

STA-241-9.71

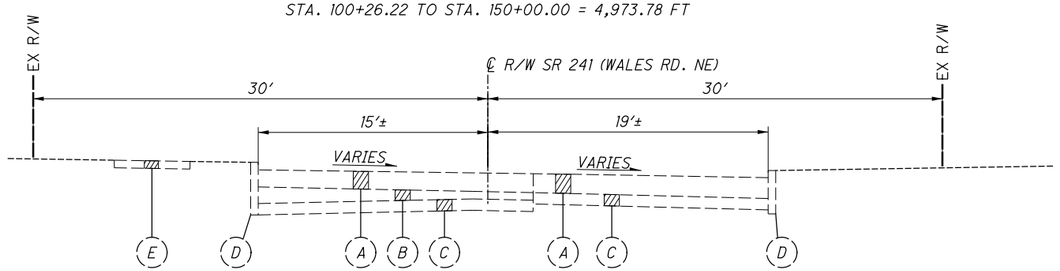
P:\3000_3499\30621T0090_STA-241-9.71_Wales_Road\ODOT\10047L_STA-241-971\Design\Roadway\Sheets\10047L_GB002.dgn 4/7/2021 7:39:18 AM khillegass



* NO EXISTING WALK AFTER STA. 130+94.10

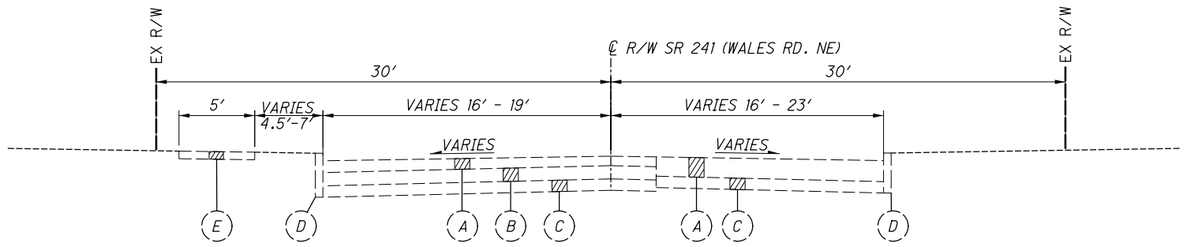
EXISTING NORMAL SECTION - SR 241 (WALES RD. NE)

STA. 100+26.22 TO STA. 150+00.00 = 4,973.78 FT



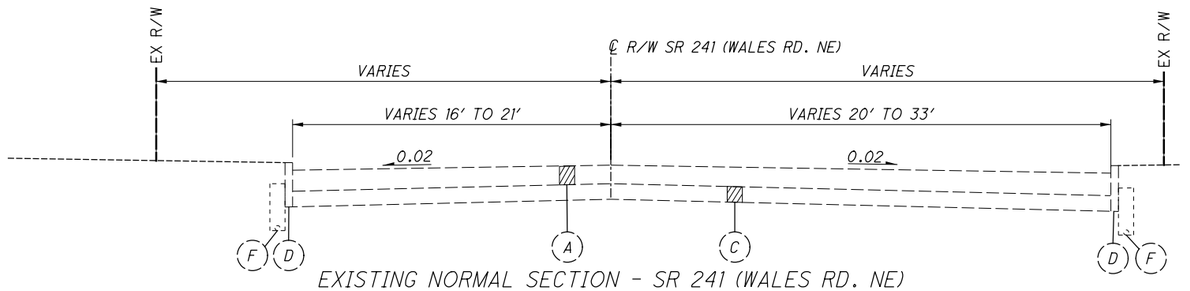
EXISTING SUPERELEVATED SECTION - SR 241 (WALES RD. NE)

STA. 150+00.00 TO STA. 152+50.00 = 250.00 FT



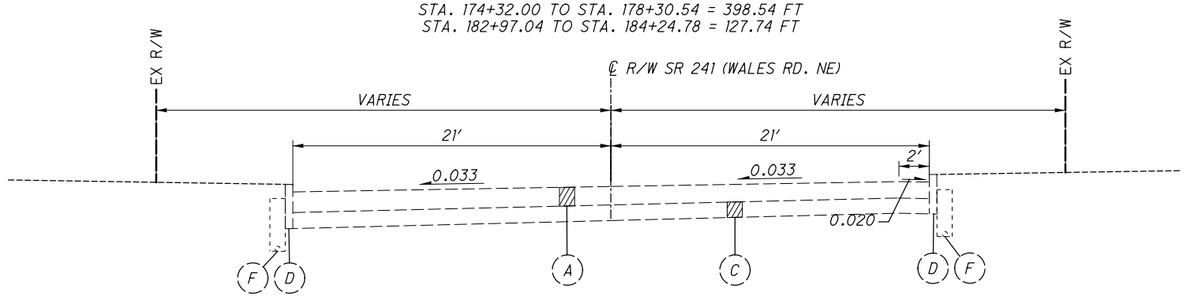
EXISTING NORMAL SECTION - SR 241 (WALES RD. NE)

STA. 152+50.00 TO STA. 174+32.00 = 2,182.00 FT



EXISTING NORMAL SECTION - SR 241 (WALES RD. NE)

STA. 174+32.00 TO STA. 178+30.54 = 398.54 FT
STA. 182+97.04 TO STA. 184+24.78 = 127.74 FT



EXISTING SUPERELEVATED SECTION - SR 241 (WALES RD. NE)

STA. 178+30.54 TO STA. 182+97.04 = 466.50 FT

EXISTING LEGEND

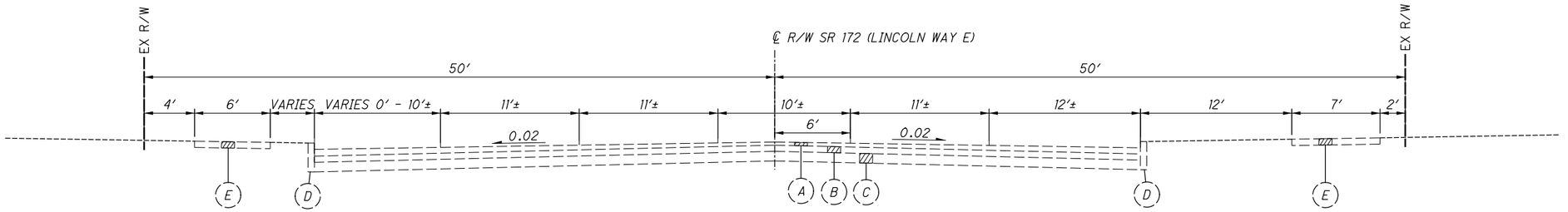
- (A) ASPHALT CONCRETE (10″ TYPICAL, VARIES 2.5″* TO 14″)
- (B) BRICK OR CONCRETE BASE (5″ TYPICAL, VARIES 4″ TO 11″)
- (C) AGGREGATE BASE (0″ TO 9″)
- (D) CONCRETE CURB
- (E) CONCRETE WALK
- (F) 4″ UNDERDRAIN

* SEE NOTE: PAVEMENT PLANING, PORTLAND CEMENT CONCRETE ON SHEET 12.

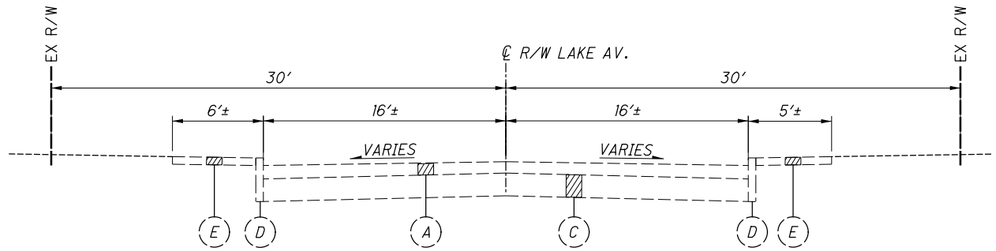
EXISTING TYPICAL SECTIONS

STA-241-9.71

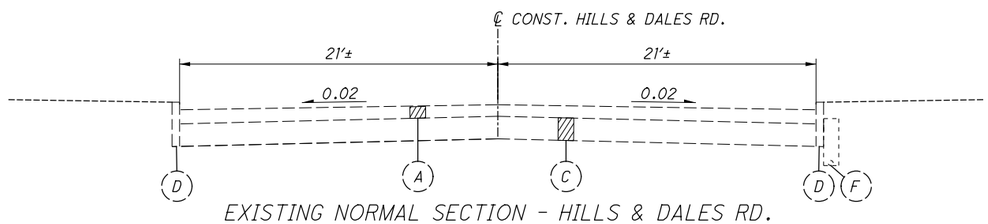
P:\3000_3499\30621T0090_STA-241-9.71_Wales_Road\ODOT\100471L_STA-241-9.71\Design\Roadway\Sheets\100471L_GY001.dgn 4/7/2021 7:39:19 AM khillegass



EXISTING NORMAL SECTION - SR 172 (LINCOLN WAY E)



EXISTING NORMAL SECTION - LAKE AV.



EXISTING NORMAL SECTION - HILLS & DALES RD.

FOR EXISTING LEGEND, SEE SHEET 5 .

EXISTING TYPICAL SECTIONS

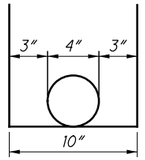
STA-241-9.71

P:\3000_3499\30621T0090_STA-241-9.71_Wales_Road\ODOT\00471L_STA-241-9.71\Design\Roadway\Sheets\00471L_GY002.dgn 4/7/2021 7:39:9 AM khillegass

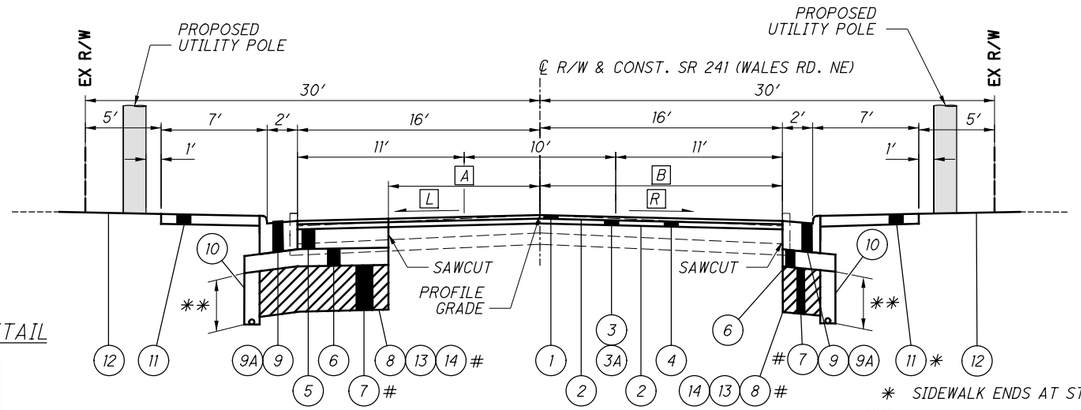
CROSS SLOPE TABLE	
STATION RANGE	[L]
STA 100+44 TO STA 110+61	0.02
STA 110+61 TO STA 110+75	.02 TO .025
STA 110+75 TO STA 112+16	0.025
STA 112+16 TO STA 112+30	.025 TO .02
STA 112+30 TO STA 119+61	0.02
STA 119+61 TO STA 119+89	.02 TO .03
STA 119+89 TO STA 137+00	0.03
STA 137+00 TO STA 137+28	.03 TO .02
STA 137+28 TO STA 138+59	0.02
STA 138+59 TO STA 138+86	.02 TO .03
STA 138+86 TO STA 141+00	0.03
STA 141+00 TO STA 142+00	.03 TO .02
STA 142+00 TO STA 146+60	0.02
STA 146+60 TO STA 146+73	.02 TO .025
STA 146+73 TO STA 148+06	0.025
STA 148+06 TO STA 152+77	VARIES
STA 152+77 TO STA 173+28	0.02
STA 173+28 TO STA 173+46	.02 TO .016
STA 173+46 TO STA 175+89	0.016
STA 175+89 TO STA 176+26	.016 TO EX

FOR CROSS SLOPE TRANSITION TABLE, SEE SHEET 164.

UNDERDRAIN DETAIL



SEE UNDERDRAIN SCHEMATIC PLANS ON SHEETS 261-263 FOR MORE INFORMATION.



PROPOSED NORMAL SECTION - SR 241 (WALES RD. NE)

STA. 100+26.22 TO STA. 140+35.00 = 4,008.78 FT

CROSS SLOPE TABLE	
STATION RANGE	[R]
STA 100+14 TO STA 110+61	0.02
STA 110+61 TO STA 110+89	.02 TO .03
STA 110+89 TO STA 112+03	0.03
STA 112+03 TO STA 112+30	.03 TO .02
STA 112+30 TO STA 115+11	0.02
STA 115+11 TO STA 115+24	.02 TO .025
STA 115+24 TO STA 116+68	0.025
STA 116+68 TO STA 116+82	.025 TO .02
STA 116+82 TO STA 119+62	0.02
STA 119+62 TO STA 119+89	.02 TO .03
STA 119+89 TO STA 134+22	0.03
STA 134+22 TO STA 134+50	.03 TO .02
STA 134+50 TO STA 136+00	0.02
STA 136+00 TO STA 136+28	.02 TO .03
STA 136+28 TO STA 137+22	0.03
STA 137+22 TO STA 137+50	.03 TO .02
STA 137+50 TO STA 148+06	0.02
STA 148+06 TO STA 152+77	VARIES
STA 152+77 TO STA 175+93	0.016
STA 175+93 TO STA 176+26	.016 TO EX

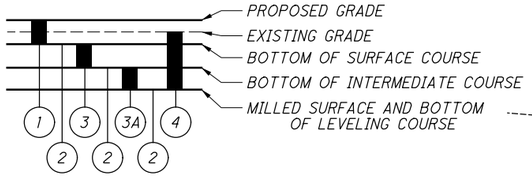
FOR CROSS SLOPE TRANSITION TABLE, SEE SHEET 164.

* SIDEWALK ENDS AT STA. 130+94.10

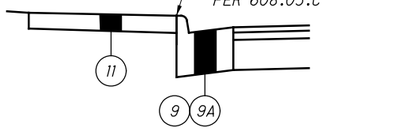
** UNDERDRAIN DEPTH = 18″
UNDERDRAIN TRENCH IS CARRIED TO THE TOP OF THE 304 AGGREGATE BASE
IN AREAS WHERE SUBGRADE STABILIZATION IS >15″, THE TOP OF THE UNDERDRAIN PIPE SHALL BE AT THE BOTTOM OF THE UNDERCUT

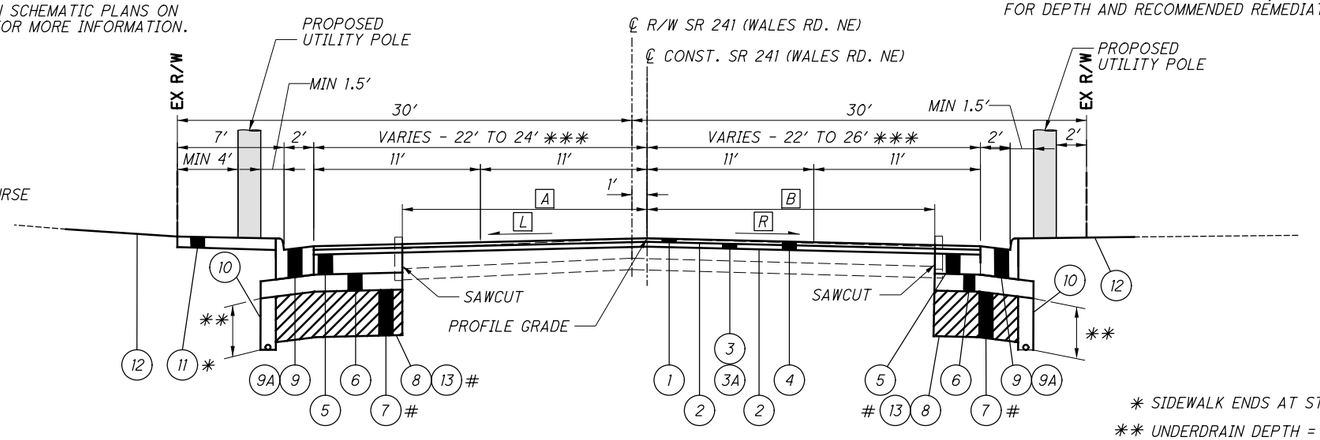
\# SEE SUBGRADE TREATMENT TABLE, THIS SHEET, FOR DEPTH AND RECOMMENDED REMEDIATION

LEVELING COURSE DETAIL



EXPANSION JOINT DETAIL

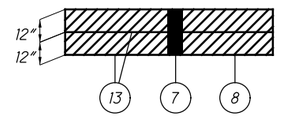




PROPOSED NORMAL SECTION - SR 241 (WALES RD. NE)

STA. 145+36.40 TO STA. 148+06.24 = 269.84 FT
STA. 152+76.79 TO STA. 176+26.07 = 2,349.28 FT

STA. 130+50 TO STA. 134+50 SUBGRADE TREATMENT



NOTE: IN AREAS OF UNSTABLE SUBGRADE >18″, PLACE GEOGRID IN THE MIDDLE AND AT THE BOTTOM OF THE EXCAVATION

* SIDEWALK ENDS AT STA. 173+50.00

** UNDERDRAIN DEPTH = 18″
UNDERDRAIN TRENCH IS CARRIED TO THE TOP OF THE 304 AGGREGATE BASE IN AREAS WHERE SUBGRADE STABILIZATION IS >15″, THE TOP OF THE UNDERDRAIN PIPE SHALL BE AT THE BOTTOM OF THE UNDERCUT

*** 22′ FROM STA. 145+36.40 TO STA. 148+06.24
22′ FROM STA. 152+76.79 TO STA. 174+22.11
22′ TO 24′ FROM STA. 174+22.11 TO STA. 176+26.07, LT
22′ TO 26′ FROM STA. 174+22.11 TO STA. 176+26.07, RT

\# SEE SUBGRADE TREATMENT TABLE, THIS SHEET, FOR DEPTH AND RECOMMENDED REMEDIATION

SAWCUT TABLE		
STATION RANGE	[A]	[B]
STA 100+26 TO STA 133+90	10′	16′
STA 133+90 TO STA 140+35	16′	16′
STA 140+35 TO STA 142+35	VARIES 16′ TO 11′	16′
STA 142+35 TO STA 144+69	11′	VARIES 16′ TO 21′
STA 144+69 TO STA 145+50	11′	21′
STA 145+50 TO STA 146+40	VARIES 11′ TO 22′	21′
STA 146+40 TO STA 148+11	22′	VARIES 21′ TO 16′
STA 148+11 TO STA 148+73	22′	16′
STA 148+73 TO STA 149+80	VARIES 22′ TO 17′	16′
STA 149+80 TO STA 150+82	17′	VARIES 16′ TO 19′
STA 150+82 TO STA 173+30	17′	19′
STA 173+30 TO STA 176+26	VARIES 17′ TO 24′	VARIES 19′ TO 26′

SUBGRADE TREATMENT TABLE		
APPROXIMATE LIMITS	DEPTH (D)	RECOMMENDED REMEDIATION
STA 100+26.22 TO STA 106+50	24″	EXCAVATION AND REPLACEMENT OF UNSUITABLE SUBGRADE WITH GEOTEXTILE FABRIC AT THE BOTTOM OF THE EXCAVATION
STA 110+50 TO STA 114+50	24″	EXCAVATION AND REPLACEMENT OF UNSUITABLE SUBGRADE WITH GEOTEXTILE FABRIC AT THE BOTTOM OF THE EXCAVATION
STA 122+50 TO STA 126+50	36″	EXCAVATION AND REPLACEMENT OF UNSUITABLE SUBGRADE WITH GEOTEXTILE FABRIC AT THE BOTTOM OF THE EXCAVATION
STA 130+50 TO STA 134+50	24″	EXCAVATION AND REPLACEMENT OF UNSTABLE SUBGRADE WITH GEOGRID PLACED AT 12″ DEPTH AND A SECOND LAYER AT THE BOTTOM OF THE EXCAVATION
STA 145+25 TO STA 148+25	12″	EXCAVATION AND REPLACEMENT OF UNSTABLE SUBGRADE WITH GEOGRID AT THE BOTTOM OF THE EXCAVATION
STA 152+25 TO STA 176+26.07	15″	EXCAVATION AND REPLACEMENT OF UNSTABLE SUBGRADE WITH GEOGRID AT THE BOTTOM OF THE EXCAVATION

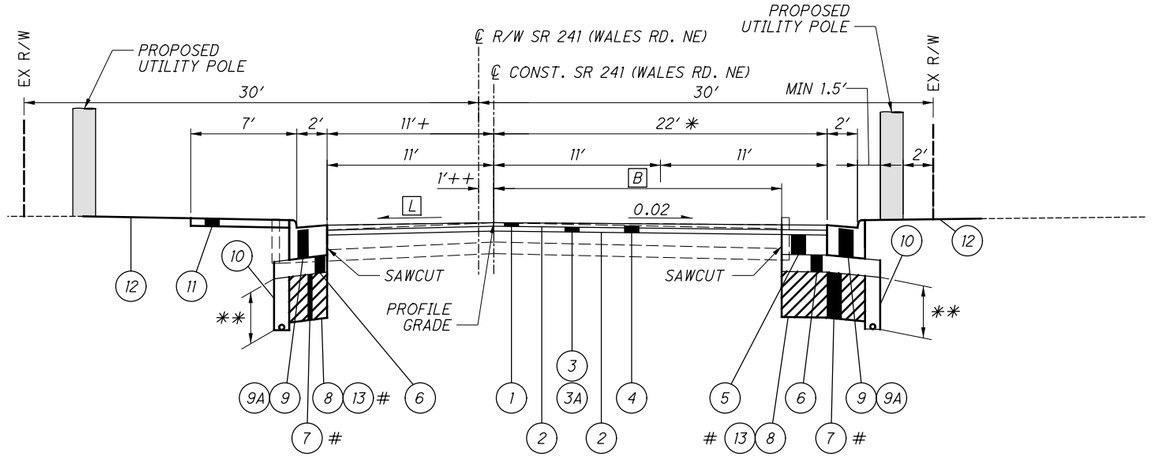
PROPOSED LEGEND

1. ITEM 441 - 1.25″ ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG64-22
2. ITEM 407 - NON-TRACKING TACK COAT, OR ITEM 407 - TACK COAT, 702.13 (ON CONCRETE OR BRICK)
3. ITEM 441 - 1.75″ ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), AS PER PLAN, PG64-22
3A. ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448) AS PER PLAN, PG64-22 (VARIES 0″ TO 5 1/4″) (MAXIMUM LIFT OF 3″ FOR COMPACTION)
4. ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (VARIES 0″ TO 7″)
5. ITEM 301 - 6″ ASPHALT CONCRETE BASE, PG64-22
6. ITEM 304 - 6″ AGGREGATE BASE, AS PER PLAN
7. ITEM 204 - EXCAVATION OF SUBGRADE
   ITEM 204 - GRANULAR MATERIAL, TYPE B
8. ITEM 204 - SUBGRADE COMPACTION, AND
   ITEM 204 - PROOF ROLLING
9. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 2 (T=10″)
9A. ITEM 609 - COMBINATION CURB AND GUTTER, TYPE 4 (T=10″)
   LT - STA. 119+61.15 TO STA. 149+23.49
   RT - STA. 119+61.72 TO STA. 147+54.69
10. ITEM 605 - 4″ BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC
11. ITEM 608 - 4″ CONCRETE WALK
12. ITEM 659 - SEEDING AND MULCHING
13. ITEM 204 - GEOGRID
14. ITEM 204 - GEOTEXTILE FABRIC

PROPOSED TYPICAL SECTIONS

STA-241-9.71

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PROPOSED NORMAL SECTION - SR 241 (WALES RD. NE)

STA. 140+35.00 TO STA. 145+36.40 = 501.40 FT

\+ VARIES 16′ AT STA. 140+35 TO 11′ AT STA. 142+35

++ VARIES 0′ AT STA. 140+35 TO 1′ AT STA. 142+35

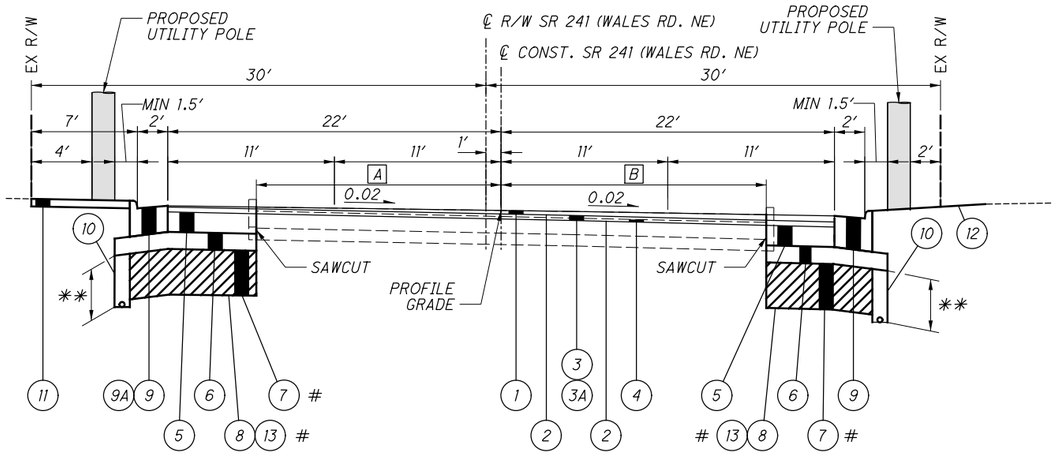
✱ VARIES 16′ AT STA. 140+35 TO 22′ AT STA. 142+35

✱✱ UNDERDRAIN DEPTH = 18″
UNDERDRAIN TRENCH IS CARRIED TO THE TOP OF THE 304 AGGREGATE BASE IN AREAS WHERE SUBGRADE STABILIZATION IS >15″, THE TOP OF THE UNDERDRAIN PIPE SHALL BE AT THE BOTTOM OF THE UNDERCUT

\# SEE SUBGRADE TREATMENT TABLE FOR DEPTH AND RECOMMENDED REMEDIATION ON SHEET 7 .

[A], [B] SEE SHEET 7 FOR SAWCUT TABLE

[L] SEE SHEET 7 FOR CROSS SLOPE TABLE.



PROPOSED SUPERELEVATED SECTION - SR 241 (WALES RD. NE)

STA. 148+06.24 TO STA. 152+76.79 = 470.55 FT

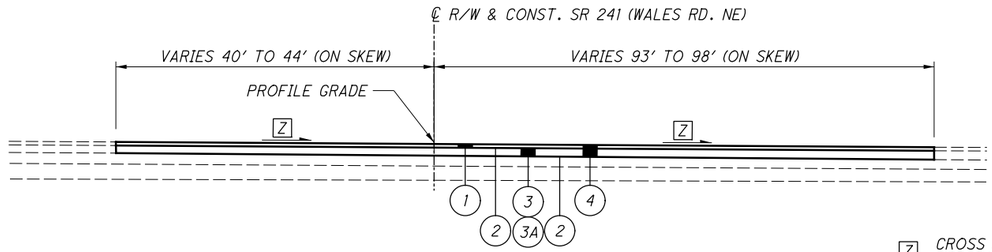
SEE SHEET 163 FOR SUPERELEVATION TABLE.

FOR PROPOSED LEGEND, SEE SHEET 7 .

PROPOSED TYPICAL SECTIONS

STA-241-9.71

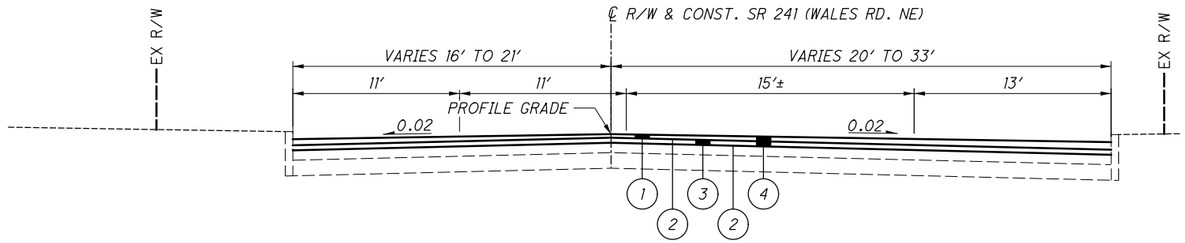
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PROPOSED RESURFACED SECTION - SR 241 (WALES RD. NE)

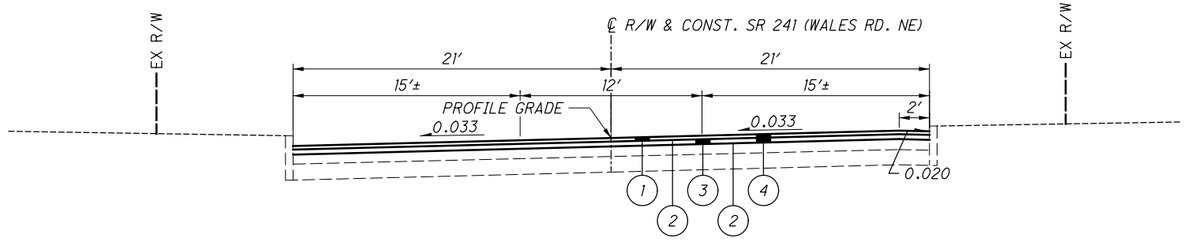
STA. 100+09.47 TO STA. 100+26.22 = 16.75 FT

Z CROSS SLOPE VARIES.
SEE SHEET 167 FOR INTERSECTION DETAILS.



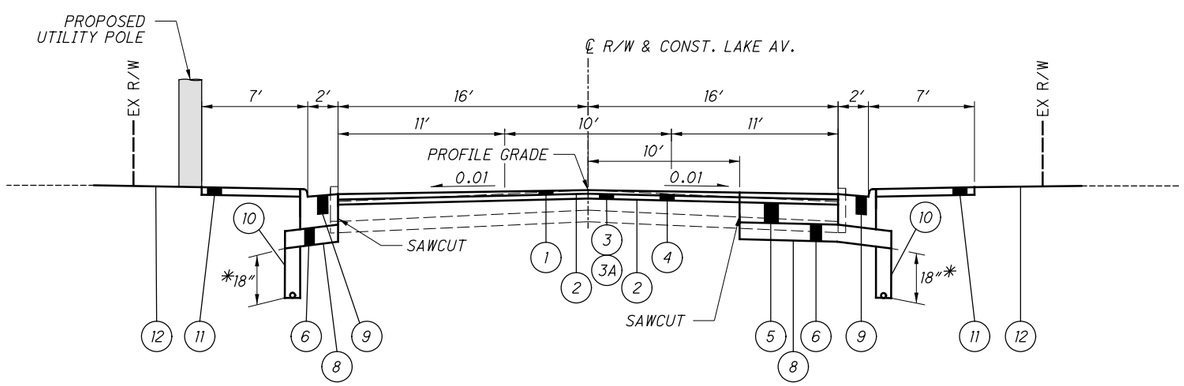
PROPOSED RESURFACED SECTION - SR 241 (WALES RD. NE)

STA. 176+26.07 TO STA. 178+30.54 = 204.47 FT
STA. 182+97.04 TO STA. 184+25.00 = 127.96 FT



PROPOSED RESURFACED SUPERELEVATED SECTION - SR 241 (WALES RD. NE)

STA. 178+30.54 TO STA. 182+97.04 = 466.50 FT



PROPOSED NORMAL SECTION - LAKE AV.

STA. 195+92.50 TO STA. 200+00.00 = 407.50 FT

* UNDERDRAIN BEGINS AT STA. 198+75.00
UNDERDRAIN DEPTH = 18″ IN AREAS OF NO UNDERCUT
UNDERDRAIN DEPTH = VARIES, IN AREAS OF UNDERCUT
UNDERDRAIN TRENCH IS CARRIED TO THE TOP OF THE 304 AGGREGATE BASE

FOR PROPOSED LEGEND, SEE SHEET 7.

PROPOSED TYPICAL SECTIONS

STA-241-9.71

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UTILITIES

LISTED BELOW ARE ALL UTILITIES LOCATED WITHIN THE PROJECT CONSTRUCTION LIMITS TOGETHER WITH THEIR RESPECTIVE OWNERS:

ELECTRIC:
OHIO EDISON/FIRST ENERGY
2600 ERIE STREET SOUTH
MASSILLON, OH 44646
ATTN: KEVIN McCLUSKY
MCCLUSKY@FIRSTENERGYCORP.COM
330.830.7083

GAS:
DOMINION ENERGY OHIO
320 SPRINGSIDE DRIVE, SUITE 320
AKRON, OH 44333
ATTN: RICHARD HOUSEHOLDER
RELOCATION@DOMINIONENERGY.COM
330.664.2409

CABLE:
MASSILLON CABLE TV (MCTV)
814 CABLE COURT NW
MASSILLON, OH 44647
ATTN: JEFF CAMPBELL
JCAMPBELL@MCTVOHIO.COM
330.833.4134 X116

WATER:
AQUA OHIO, INC
870 THIRD STREET NW
MASSILLON, OH 44647
ATTN: JACOB FLANARY
JLFLANARY@AQUAAMERICA.COM
330.832.5764 X50650

TELEPHONE:
AT&T LEGAL MANDATE
50 WEST BOWERY STREET, FLOOR 6
AKRON, OH 44308
ATTN: STEVE HYLTON
SH1513@ATT.COM
330.384.3055

SEWER, SIGNAL/LIGHTING:
CITY OF MASSILLON
401 WALNUT ROAD SE
MASSILLON, OH 44647
ATTN: LEE McBRIDE
LMCBRIDE@MASSILONOHIO.GOV
330.833.5746

AT&T REQUESTS THAT IF AN UNDERGROUND CONFLICT IS DISCOVERED DURING CONSTRUCTION THAT THE CONTRACTOR PROVIDE AT&T THREE (3) DAYS' NOTICE AND AN ADDITIONAL SEVEN (7) WORKING DAYS TO RESOLVE THE CONFLICT, WITH ALLOWANCE FOR ADDITIONAL TIME DEPENDING ON THE SEVERITY AND COMPLEXITY INVOLVED.

THE CROSSING OF DOMINION ENERGY OHIO'S PIPELINE WITH ANOTHER STEEL FACILITY MAY CREATE A POTENTIAL CORROSION ISSUE FOR THE PROPOSED FACILITY AND THE EXISTING DOMINION ENERGY OHIO FACILITY. PLEASE CONTACT DOMINION'S CORROSION DEPARTMENT: DAVE CUTLIP (330-266-2121), RICK MCDONALD (330-266-2122), OR AL HUMRICHOUSER (330-478-3757).

THE UNDERGROUND UTILITIES ON THIS PLAN HAVE BEEN LOCATED BY USING A SUBSURFACE UTILITY ENGINEERING COMPANY [SUE]. IF THERE ARE ANY DISCREPANCIES BETWEEN FIELD MARKINGS AND WHAT THE PLAN INDICATES, PLEASE CONTACT MATTHEW STEELE, DISTRICT UTILITY COORDINATOR 330-786-4832, PRIOR TO ANY SUBSURFACE WORK BEING INITIATED.

EXISTING PLANS

EXISTING PLANS ENTITLED STA-241-(8.83-10.42), STA-241-7.94, AND WALES RD. (S.R. 241) AND HILLS AND DALES RELOCATION MAY BE INSPECTED IN THE ODOT DISTRICT 4 OFFICE IN AKRON.

ROUNDING

THE ROUNDING AT SLOPE BREAKPOINTS SHOWN ON THE TYPICAL SECTIONS APPLIES TO ALL CROSS-SECTIONS EVEN THOUGH OTHERWISE SHOWN.

CONSTRUCTION COORDINATION WITH UTILITY WORK

NO COMPENSABLE DELAYS WILL BE CONSIDERED DUE TO UTILITY RELOCATION INTERFERENCE. TO AVOID CONSTRUCTION DELAY DUE TO UTILITY CONSTRUCTION/RELOCATION, THE CONTRACTOR SHALL WORK IN AN AREA NOT AFFECTED BY ONGOING UTILITY WORK, AS APPROVED BY THE ENGINEER.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSS OVER OR UNDER AN EXISTING SEWER OR UNDERGROUND UTILITY, THE CONTRACTOR SHALL LOCATE THE EXISTING PIPES OR UTILITIES BOTH AS TO LINE AND GRADE BEFORE STARTING TO LAY THE PROPOSED CONDUIT.

IF IT IS DETERMINED THAT THE ELEVATION OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION OR RESULTS IN A CHANGE IN THE PLAN CONDUIT SLOPE, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WILL BE AFFECTED BY THE VARIANCE IN THE EXISTING ELEVATIONS.

IF IT IS DETERMINED THAT THE PROPOSED CONDUIT WILL INTERSECT AN EXISTING SEWER OR UNDERGROUND UTILITY IF CONSTRUCTED AS SHOWN ON THE PLAN, THE ENGINEER SHALL BE NOTIFIED BEFORE STARTING CONSTRUCTION OF ANY PORTION OF THE PROPOSED CONDUIT WHICH WOULD BE AFFECTED BY THE INTERFERENCE WITH AN EXISTING FACILITY.

PAYMENT FOR ALL THE OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEM.

CONSTRUCTION NOISE

ACTIVITIES AND LAND USE ADJACENT TO THIS PROJECT MAY BE AFFECTED BY CONSTRUCTION NOISE. IN ORDER TO MINIMIZE ANY ADVERSE CONSTRUCTION NOISE IMPACTS, DO NOT OPERATE POWER-OPERATED CONSTRUCTION-TYPE DEVICES BETWEEN THE HOURS OF SUNSET AND 7:00AM. IN ADDITION, DO NOT OPERATE AT ANY TIME ANY DEVICE IN SUCH A MANNER THAT THE NOISE CREATED SUBSTANTIALLY EXCEEDS THE NOISE CUSTOMARILY AND NECESSARILY ATTENDANT TO THE REASONABLE AND EFFICIENT PERFORMANCE OF SUCH EQUIPMENT.

AIRWAY/HIGHWAY CLEARANCE FOR AIRPORTS AND HELIPORTS

THIS PROJECT HAS BEEN IDENTIFIED AS BEING WITHIN THE INFLUENCE AREA OF A PRIVATE-USE AIRPORT OR HELIPORT. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT, AT MAXIMUM OPERATING HEIGHT, SHALL EXCEED A HEIGHT OF 50 FT. IF ANY TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT WILL EXCEED THIS HEIGHT, COORDINATION WITH THE AIRPORT OWNER AND THE ODOT OFFICE OF AVIATION WILL BE NECESSARY PRIOR TO ERECTING SUCH TEMPORARY STRUCTURES OR OPERATING SUCH EQUIPMENT ON THE PROJECT. FOR PRIVATE USE AIRPORTS OR HELIPORTS, COORDINATE WITH THE AIRPORT OWNER AND THE ODOT OFFICE OF AVIATION. NO TEMPORARY STRUCTURES OR CONSTRUCTION EQUIPMENT SHALL EXCEED THE PERMISSIBLE HEIGHT, UNTIL COORDINATION IS MET AND DOCUMENTATION HAS BEEN FURNISHED TO THE PROJECT ENGINEER. IF COORDINATION IS NOT OBTAINED, THEN THE PROJECT ENGINEER WILL HAVE THE AUTHORITY TO PROVIDE RESTRICTIONS AS REQUIRED.

GAINEY HELIPORT
ODELL W. GAINEY
1900 ERIE N
MASSILLON, OH 44646
(216) 832-8395

AFFINITY MEDICAL CENTER HELIPORT
875 8TH STREET NE
MASSILLON, OH 44646
(330) 832-8761

SURVEYING PARAMETERS

PRIMARY PROJECT CONTROL MONUMENTS GOVERN ALL POSITIONING ON ODOT PROJECTS. SEE SHEET 4 OF THE PLANS FOR A TABLE CONTAINING PROJECT CONTROL INFORMATION.

USE THE FOLLOWING PROJECT CONTROL, VERTICAL POSITIONING, AND HORIZONTAL POSITIONING PARAMETERS FOR ALL SURVEYING:

PROJECT CONTROL

POSITIONING METHOD:	RTK ODOT VRS (PER 2016 ODOT SPEC.)
MONUMENT TYPE:	TYPE B

VERTICAL POSITIONING

ORTHOMETRIC HEIGHT DATUM:	NAVD88
GEOID:	GEOID 12B

HORIZONTAL POSITIONING

REFERENCE FRAME:	NAD83 (2011)
ELLIPSOID:	GRS80
MAP PROJECTION:	LAMBERT CONFORMAL CONIC
COORDINATE SYSTEM:	OHIO STATE PLANE, NORTH ZONE (3401)
COMBINED SCALE FACTOR:	1.00009465
ORIGIN OF COORDINATE SYSTEM:	0,0

USE THE POSITIONING METHODS AND MONUMENT TYPE USED IN THE ORIGINAL SURVEY TO RESTORE ALL MONUMENTS RELATED TO PRIMARY PROJECT CONTROL THAT ARE DAMAGED OR DESTROYED BY CONSTRUCTION ACTIVITIES. RESTORE THE DAMAGED OR DESTROYED MONUMENTS IN ACCORDANCE WITH CMS 623.

UNITS ARE IN U.S. SURVEY FEET.

CONSTRUCTION STAGING

CONTRACTOR EQUIPMENT AND MATERIAL STORAGE SHALL BE LIMITED TO:

1. THE CITY OF MASSILLON PROPERTY ON THE EAST SIDE OF WALES ROAD NE ADJACENT TO HILLS AND DALES ROAD NE. SEE TEMPORARY CONSTRUCTION FENCE NOTE ON THIS SHEET FOR ADDITIONAL DETAILS.
2. AN OFF-SITE STAGING AREA, THE CITY OF MASSILLON PARK MAINTENANCE FACILITY LOT, IS LOCATED AT STATE AVENUE NE AND RESERVOIR DRIVE NE. THIS AREA IS FENCED. THE GATES SHALL BE LOCKED AT THE END OF EACH WORK DAY. THE CITY SHALL PROVIDE THE CONTRACTOR WITH A KEY. ALL WASHOUT WORK SHALL BE RESTRICTED TO THE OFF-SITE STAGING AREA.

PART-WIDTH CONSTRUCTION

BECAUSE OF THE NECESSITY TO BUILD THIS PROJECT UNDER TRAFFIC AND TO CONSTRUCT THE FULL PAVEMENT WIDTH IN STAGES, EXERCISE CARE TO PREVENT THE CONSTRUCTION OF A BUTT JOINT IN THE BASE COURSES. LAP LONGITUDINAL JOINTS AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1.

WORK LIMITS

THE WORK LIMITS SHOWN ON THESE PLANS ARE FOR PHYSICAL CONSTRUCTION ONLY. PROVIDE THE INSTALLATION AND OPERATION OF ALL WORK ZONE TRAFFIC CONTROL AND WORK ZONE TRAFFIC CONTROL DEVICES REQUIRED BY THESE PLANS WHETHER INSIDE OR OUTSIDE THESE WORK LIMITS.

TEMPORARY CONSTRUCTION FENCE

THE CONTRACTOR SHALL PLACE A CONSTRUCTION FENCE AROUND THE STAGING AREA ON CITY PROPERTY AT THE HILLS AND DALES ROAD NE INTERSECTION AREA UTILIZING FENCES AND GATES THROUGHOUT THE DURATION OF CONSTRUCTION. THE TEMPORARY CONSTRUCTION FENCE AND GATES SHALL BE SIX FEET (6') HIGH CHAIN LINK, INCLUDING A GATE FOR CONTRACTOR ACCESS. THE GATES SHALL BE LOCKED AT THE END OF EACH WORK DAY. THREE (3) KEYS SHALL BE PROVIDED TO THE CITY.

THE CONTRACT UNIT PRICE FOR FENCE, MISC.: TEMPORARY CONSTRUCTION FENCE WITH GATE SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, HARDWARE, WARNING SIGNS, AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK. THE FOLLOWING ESTIMATED QUANTITY IS CARRIED TO THE GENERAL SUMMARY AND IS TO BE USED AS DIRECTED BY THE ENGINEER:

607, FENCE, MISC.: TEMPORARY CONSTRUCTION FENCE WITH GATE	400 FT

CLEARING AND GRUBBING

MANY TREES AND STUMPS SHOWN ON THESE PLANS HAVE BEEN REMOVED PRIOR TO THE START OF CONSTRUCTION. REMOVE ALL REMAINING TREES AND STUMPS SPECIFICALLY MARKED FOR REMOVAL WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201, CLEARING AND GRUBBING. REMOVAL ITEMS SHOWN ON THE RIGHT OF WAY PLAN THAT ARE NOT SPECIFICALLY ITEMIZED FOR REMOVAL SHALL BE INCIDENTAL TO ITEM 201, CLEARING AND GRUBBING.

SEEDING AND MULCHING

THE FOLLOWING QUANTITIES ARE PROVIDED TO PROMOTE GROWTH AND CARE OF PERMANENT SEEDED AREAS:

659, SOIL ANALYSIS TEST	2 EACH
659, TOPSOIL	1,927 CY
659, REPAIR SEEDING AND MULCHING	868 SY
659, INTER-SEEDING	868 SY
659, COMMERCIAL FERTILIZER	2.34 TON
659, LIME	3.59 ACRES
659, WATER	96 MGAL

SEEDING AND MULCHING SHALL BE APPLIED TO ALL AREAS OF EXPOSED SOIL BETWEEN THE RIGHT-OF-WAY LINES, AND WITHIN THE CONSTRUCTION LIMITS FOR AREAS OUTSIDE THE RIGHT-OF-WAY LINES COVERED BY WORK AGREEMENT OR SLOPE EASEMENT. QUANTITY CALCULATIONS FOR SEEDING AND MULCHING ARE BASED ON THESE LIMITS. FOR SEEDING AND MULCHING QUANTITIES SEE SHEET 80. THE ABOVE QUANTITIES ARE CARRIED TO THE GENERAL SUMMARY.

ITEM 202 - PORTIONS OF STRUCTURE REMOVED, AS PER PLAN

THIS LUMP SUM ITEM INCLUDES ALL WORK, LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS TO REMOVE AND DISPOSE OF THE EXISTING LEANING RETAINING WALL BETWEEN STA. 103+72 TO STA. 103+86, LT ON SR 241.

WORK NEAR BUILDING FACES

THE CONTRACTOR SHALL USE EXTREME CARE WHEN WORKING NEAR BUILDING FACES.

CALCULATED KAH
CHECKED RAK

GENERAL NOTES

STA-241-9.71

ITEM 204 - SUBGRADE COMPACTION AND PROOF ROLLING

CONSTRUCT THE SUBGRADE AS FOLLOWS AND IN THE FOLLOWING SEQUENCE:

1. SHAPE THE SUBGRADE TO WITHIN 0.2 FEET OF THE PLAN SUBGRADE ELEVATION.

2. EXCAVATE AND REPLACE UNSUITABLE SUBGRADE BEFORE PROOF ROLLING. THE EXCAVATION LIMITS ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSUITABLE SUBGRADE. UNSUITABLE SUBGRADE INCLUDES UNSUITABLE SOIL (A-4B, A-2-5, A-5, A-7-5, AND SOIL WITH A LIQUID LIMIT GREATER THAN 65) AND ANY COAL, SHALE, OR ROCK WHICH NEEDS TO BE REMOVED ACCORDING TO SECTION 204.05 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS).

   IF THERE IS UNSUITABLE SUBGRADE IN A SHALLOW FILL LOCATION, EXCAVATE AND REPLACE THE UNSUITABLE SUBGRADE BEFORE CONSTRUCTING THE SHALLOW FILL AND SHAPING THE SUBGRADE.

3. COMPACT THE SUBGRADE ACCORDING TO C&MS 204.03.

4. APPROXIMATE LIMITS FOR EXCAVATION OF UNSTABLE SUBGRADE ARE SHOWN AND LABELED ON THE CROSS SECTIONS AS UNSTABLE SUBGRADE. THE ENGINEER WILL IDENTIFY THE ACTUAL LIMITS OF EXCAVATION FOR UNSTABLE SUBGRADE BASED ON THE PROOF ROLLING RESULTS AND VISUAL OBSERVATIONS.

   PROOF ROLL THE COMPACTED SUBGRADE ACCORDING TO C&MS 204.06.

5. EXCAVATE UNSTABLE SUBGRADE AS DIRECTED BY THE ENGINEER AND STABILIZE BY REPLACING WITH THE SPECIFIED MATERIALS ACCORDING TO C&MS 204.07. EXCAVATIONS WILL EXTEND 18 INCHES BEYOND THE EDGE OF THE SURFACE OF THE PAVEMENT, PAVED SHOULDERS, OR PAVED MEDIANS.

6. PROOF ROLL THE STABILIZED AREAS ACCORDING TO C&MS 204.06 TO VERIFY STABILITY.

7. FINE GRADE THE SUBGRADE TO THE SPECIFIED GRADE.

THE QUANTITIES FOR EXCAVATING THE UNSUITABLE SUBGRADE AND UNSTABLE SUBGRADE ARE BOTH PAID UNDER ITEM 204, EXCAVATION OF SUBGRADE.

ITEM 204 - PROOF ROLLING

THE FOLLOWING QUANTITY IS PROVIDED IN THE GENERAL SUMMARY TO ADDRESS LOCATIONS REQUIRING PROOF ROLLING. SEE ABOVE FOR ADDITIONAL INFORMATION.

204, PROOF ROLLING 7 HOUR

ITEM SPECIAL- MISCELLANEOUS METAL

EXISTING CASTINGS MAY PROVE TO BE UNSUITABLE FOR REUSE, AS DETERMINED BY THE ENGINEER. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE THE CASTINGS OF THE REQUIRED TYPE, SIZE AND STRENGTH (HEAVY OR LIGHT DUTY) FOR THE PARTICULAR STRUCTURE IN QUESTION. ALL MATERIAL SHALL MEET ITEM 611 OF THE SPECIFICATIONS AND SHALL HAVE THE PRIOR APPROVAL OF THE ENGINEER.

ITEM SPECIAL- MISCELLANEOUS METAL (CONT.)

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER.

SPECIAL, MISCELLANEOUS METAL 2,000 LB

THE CONTRACTOR IS CAUTIONED TO USE EXTREME CARE IN THE REMOVAL, STORAGE AND REPLACEMENT OF ALL EXISTING CASTINGS. CASTINGS DAMAGED BY THE NEGLIGENCE OF THE CONTRACTOR, AS DETERMINED BY THE ENGINEER, SHALL BE REPLACED WITH THE PROPER NEW CASTINGS AT THE EXPENSE OF THE CONTRACTOR.

ITEM SPECIAL - MAILBOX SUPPORT

THIS WORK SHALL CONSIST OF FURNISHING AND ERECTING MAILBOX SUPPORTS AND ANY ASSOCIATED MOUNTING HARDWARE IN ACCORDANCE WITH PLAN DETAILS, AND ATTACHING AN OWNER-SUPPLIED MAILBOX OR OTHERWISE ESTABLISHED BY THE ENGINEER.

THE MAILBOX IS AT THE FOLLOWING LOCATION:
WALES ROAD STA. 151+26, RT.

WOOD POSTS SHALL BE NOMINAL 4 INCHES BY 4 INCHES SQUARE OR 4.5 INCHES DIAMETER ROUND, AND CONFORM TO 710.14.

STEEL POSTS SHAL BE NOMINAL PIPE SIZE 2 INCHES I.D., AND CONFORM TO AASHTO M 181.

ALL HARDWARE INCLUDING BUT NOT LIMITED TO PLATES, SCREWS, BOLTS, AND ETC. SHALL BE COMMERCIAL-GRADE GALVANIZED STEEL.

POSTS SHALL BE SET PER THE FIRST PARAGRAPH OF 606.03, AND SHALL IN NO INSTANCE BE ENCASED IN CONCRETE.

SUPPORT HARDWARE SHALL ACCOMMODATE EITHER A SINGLE OR A DOUBLE MAILBOX INSTALLATION, AND NO MORE THAN TWO BOXES MAY BE MOUNTED ON A SINGLE POST.

THE MAILBOX SHALL BE SECURELY AND NEATLY ATTACHED BY THE CONTRACTOR TO THE NEW SUPPORT. THE CONTRACTOR SHALL FURNISH ALL NECESSARY ATTACHMENT HARDWARE (NUTS, BOLTS, PLATES, SPACERS, AND WASHERS) AS NECESSARY TO ACCOMMODATE THE COMPLETE INSTALLATION.

IN THE ABSENCE OF A NEW BOX SUPPLIED BY THE OWNER, THE CONTRACTOR SHALL SALVAGE THE EXISTING BOX AND PLACE IT ON THE NEW SUPPORT. DUE CARE SHALL BE EXERCISED IN SUCH AN OPERATION, AND THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIRING OR REPLACING ANY BOX DAMAGED BY IMPROPER HANDLING ON HIS PART, AS JUDGED AND DIRECTED BY THE ENGINEER.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR COORDINATING WITH THE LOCAL POST MASTER REGARDING THE TIMING OF THE MOVEMENT OF ANY MAILBOX TO A NEW LOCATION.

PAYMENT UNDER THIS ITEM SHALL BE LIMITED TO FINAL PERMANENT INSTALLATIONS, TEMPORARY INSTALLATIONS SHALL BE IN ACCORDANCE WITH 107.10. HOWEVER, THE SAME MATERIAL AND SIZE LIMITATIONS AS FOR PERMANENT INSTALLATIONS SHALL APPLY.

MAILBOX SUPPORTS, COMPLETE IN PLACE, WILL BE PAID FOR AT THE CONTRACT UNIT PRICE PER EACH, FOR ITEM SPECIAL MAILBOX SUPPORT SYSTEM, SINGLE. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

SPECIAL, MAILBOX SUPPORT SYSTEM, SINGLE 1 EACH

ITEM 202 - REMOVAL MISC.: POSTS, FOUNDATIONS, AND STONES

EXISTING CONCRETE BOLLARDS, CONCRETE FOUNDATIONS, AND STONES MARKED SHALL EITHER BE REMOVED AND DISPOSED OF OR BE RELOCATED OUTSIDE THE RIGHT OF WAY AS DIRECTED BY THE ENGINEER.

INCLUDED IN THE LUMP SUM COST OF THIS ITEM ARE THE FOLLOWING QUANTITIES AND LOCATIONS LISTED BELOW FOR INFORMATION ONLY:

CONCRETE BOLLARDS
TO BE REMOVED AND DISPOSED OF: 1 EACH
STA. 150+56, 31' LT
CONCRETE FOUNDATIONS
TO BE REMOVED AND DISPOSED OF: 3 EACH
STA. 100+66, 37' RT; STA. 115+18, 31' RT;
STA. 119+61, 19' RT
LARGE STONES
TO BE REMOVED AND DISPOSED OF: 5 EACH
STA. 107+10, 33' LT; STA. 120+19, 28' RT;
STA. 145+63, 38' LT; STA. 198+01, 25' LT;
STA. 199+45, 22' LT
LARGE STONES
TO BE RELOCATED OUTSIDE THE RIGHT OF WAY: 3 EACH
STA. 198+27, 22' RT; STA. 199+33, 24' RT;
STA. 199+60, 31' RT
STONE LANDSCAPE WALL
TO BE REMOVED AND RETURNED TO THE OWNER: 1 EACH
STA. 198+89, 24' LT

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

202, REMOVAL MISC.: POSTS, FOUNDATIONS, AND STONES LS

ITEM 202 - REMOVAL MISC.: BUSINESS SIGN TO BE REMOVED AND STORED

THE BUSINESS SIGN AND FOUNDATION AT 1206 E LINCOLN WAY (NE CORNER OF WALES ROAD/LINCOLN WAY) SHALL BE CAREFULLY REMOVED TAKING CARE NOT TO DAMAGE THE SIGN, AS DIRECTED BY THE ENGINEER. THE SIGN SHALL BE REMOVED UNDER THE APPLICABLE PROVISIONS OF 202.02, EXCEPT THAT THE SIGN SHALL BE STORED ON THE PROPERTY FOR SALVAGE BY THE PROPERTY OWNER. THE CONTRACTOR SHALL COORDINATE THE LOCATION OF THE STORED SIGN WITH THE PROPERTY OWNER. THE SIGN FOUNDATION AND EXISITING SIGN LIGHTING CIRCUIT SHALL BE REMOVED UNDER THE PROVISIONS OF 625.21.C. AND 625.21.E. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

202, REMOVAL MISC.: BUSINESS SIGN
TO BE REMOVED AND STORED 1 EACH

ITEM SPECIAL - PARKING BLOCK REMOVED

EXISTING CONCRETE PARKING BLOCKS MARKED FOR REMOVAL AT STA. 102+97, RT SHALL BE REMOVED AND DISPOSED OF AS DIRECTED BY THE ENGINEER UNDER THE APPLICABLE PROVISIONS OF 202.02.

THE FOLLOWING ESTIMATED QUANTITIES HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

SPECIAL, PARKING BLOCK REMOVED 2 EACH

MONUMENT ASSEMBLIES

CONSTRUCT MONUMENT ASSEMBLIES IN ACCORDANCE WITH THE DETAILS SHOWN ON THE STANDARD CONSTRUCTION DRAWINGS AND AT THE LOCATIONS SHOWN ON SHEET NO. 365.

ITEM SPECIAL - GAS VALVE BOX ADJUSTED TO GRADE

IN ADDITION TO THE REQUIREMENTS OF CMS 638.18 FOR VALVE BOXES, THE CONTRACTOR WILL MAKE A CLEAN CIRCULAR CUT AROUND THE CASTING (A MINIMUM OF 1'-0" OUTSIDE OF THE CASTING) AND ADJUST THE CASTING TO GRADE (ACCORDING TO THE TOLERANCES AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1) AFTER THE PAVEMENT SURFACE COURSE HAS BEEN PLACED.

CMS 499 CLASS QCMS CONCRETE (DYE THE CONCRETE SUCH THAT ITS COLOR CLOSELY MATCHES THE COLOR OF THE SURROUNDING PAVEMENT) WILL BE USED FOR BACKFILLING THE FULL PAVEMENT SECTION AND THE JOINT BETWEEN THE ASPHALT AND CONCRETE WILL BE SEALED WITH CMS 702.01 PG BINDER. EPOXY COATED REBAR SHALL BE PLACED IN THE CONCRETE AT 6" MAXIMUM ON CENTER AND A MINIMUM OF 3.5" CLEARANCE FROM THE TOP, BOTTOM AND SIDES. THE CONCRETE WILL BE VIBRATED SUFFICIENTLY TO ELIMINATE AIR POCKETS UNDER THE FRAME.

PAYMENT WILL INCLUDE REMOVAL OF THE EXISTING MATERIAL, INSTALLATION AND FURNISHING OF A NEW CASTING, AND ALL LABOR AND MATERIALS REQUIRED TO COMPLETE THIS ITEM OF WORK AS DESCRIBED.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

SPECIAL, GAS VALVE BOX ADJUSTED TO GRADE 36 EACH

ITEM 611 - MANHOLE ADJUSTED TO GRADE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF CMS 611.10.D FOR MANHOLES, THE CONTRACTOR WILL MAKE A CLEAN CIRCULAR CUT AROUND THE CASTING (A MINIMUM OF 1'-0" OUTSIDE OF THE CASTING) AND ADJUST THE CASTING TO GRADE (ACCORDING TO THE TOLERANCES AS SHOWN ON STANDARD CONSTRUCTION DRAWING BP-3.1) AFTER THE PAVEMENT SURFACE COURSE HAS BEEN PLACED.

CMS 499 CLASS QCMS CONCRETE (DYE THE CONCRETE SUCH THAT ITS COLOR CLOSELY MATCHES THE COLOR OF THE SURROUNDING PAVEMENT) WILL BE USED FOR BACKFILLING THE FULL PAVEMENT SECTION AND THE JOINT BETWEEN THE ASPHALT AND CONCRETE WILL BE SEALED WITH CMS 702.01 PG BINDER. EPOXY COATED REBAR SHALL BE PLACED IN THE CONCRETE AT 6" MAXIMUM ON CENTER AND A MINIMUM OF 3.5" CLEARANCE FROM THE TOP, BOTTOM AND SIDES. THE CONCRETE WILL BE VIBRATED SUFFICIENTLY TO ELIMINATE AIR POCKETS UNDER THE FRAME.

PAYMENT WILL INCLUDE REMOVAL OF THE EXISTING MATERIAL, INSTALLATION AND FURNISHING OF A NEW CASTING, AND ALL LABOR AND MATERIALS REQUIRED TO COMPLETE THIS ITEM OF WORK AS DESCRIBED.

ITEM 611 - MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN 1

FOR EXISTING SANITARY MANHOLES ADJACENT TO OR WITHIN THE PROPOSED CURB AND GUTTER AREA (STA. 155+87.83, 21' LT; STA. 168+36.88, 22' LT; AND STA. 170+76.52, 22' LT) THAT INTERFERE WITH CONSTRUCTION OF THE CURB AND GUTTER, AS DETERMINED BY THE ENGINEER, THE CONTRACTOR SHALL REMOVE ENOUGH OF THE EXISTING MANHOLE STRUCTURE IN ORDER TO INSTALL EITHER A FLAT SLAB TOP OR AN ECCENTRIC CONE TOP, PER SCD MH-1.2, TO ENSURE THAT THE MANHOLE DOES NOT INTERFERE WITH CONSTRUCTION OF THE CURB AND GUTTER. THE CONTRACTOR SHALL APPLY A WATERTIGHT SEAL TO THE LID.

PAYMENT SHALL BE MADE AT THE UNIT PRICE PER EACH AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE WORK AS DESCRIBED INCLUDING, BUT NOT LIMITED TO, A FLAT SLAB TOP OR ALTERNATE ECCENTRIC CONE TOP.

CALCULATED KAH CHECKED RAK

GENERAL NOTES

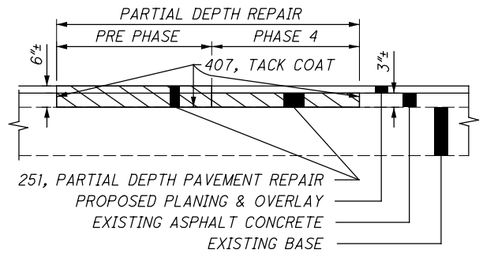
STA-241-9.71

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ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THE ITEM SHALL CONSIST OF REPAIRING EXISTING LOCATIONS EXHIBITING SURFACE DETERIORATION AND PLACING ITEM 301 ASPHALT CONCRETE BASE, PG64-22, AND EITHER ITEM 407 TACK COAT OR ITEM 407 TACK COAT, 702.13, AS DIRECTED BY THE ENGINEER. THE ASPHALT CONCRETE SHALL BE COMPACTED WITH A TYPE I PNEUMATIC TIRE ROLLER AND A STEEL WHEEL ROLLER AS PER 401.13. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED DURING THE PRE PHASE (6"± REPAIR DEPTH) AND DURING PHASE 4 AFTER THE COMPLETION OF MAINLINE PAVEMENT PLANING (3"± REPAIR DEPTH). DURING PHASE 4, THIS ITEM SHALL COMMENCE WITHIN 7 DAYS OF THE COMPLETION OF MAINLINE PAVEMENT PLANING. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REPAIR. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

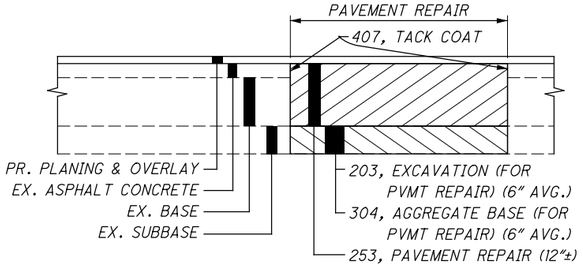
251, PARTIAL DEPTH PAVEMENT REPAIR 2,500 SY



ITEM 253 - PAVEMENT REPAIR

A QUANTITY OF THIS ITEM SHALL BE PROVIDED FOR USE AS DIRECTED BY THE ENGINEER. THIS ITEM SHALL CONSIST OF CUTTING AND REMOVING DETERIORATED PAVEMENT FULL DEPTH AND PLACING 12"± 301 ASPHALT CONCRETE BASE, PG64-22 AND ITEM 407 TACK COAT OR ITEM 407 TACK COAT, 702.13, AS DIRECTED BY THE ENGINEER. THE MAXIMUM COMPACTED DEPTH OF ANY ONE LAYER SHALL BE 6 INCHES. THIS ITEM SHALL ALSO BE PROVIDED WHEN BRICK BASE IS DISTURBED BEYOND REPAIR DUE TO PAVEMENT PLANING ACTIVITIES. UNLESS OTHERWISE DIRECTED BY THE ENGINEER, THIS ITEM SHALL BE PERFORMED AFTER THE COMPLETION OF MAINLINE PAVEMENT PLANING. ALSO, THIS ITEM SHALL COMMENCE WITHIN 7 DAYS OF THE COMPLETION OF MAINLINE PAVEMENT PLANING. IT IS NOT THE INTENT TO REPAIR EVERY DETERIORATED AREA WITHIN THE PROJECT. THE ENGINEER SHALL DETERMINE WHICH AREAS ARE TO BE REPAIRED. PAYMENT SHALL BE BASED ON THE ACTUAL NUMBER OF SQUARE YARDS OF PAVEMENT REMOVED AND REPLACED TO THE LIMITS DESIGNATED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

253, PAVEMENT REPAIR 2,500 SY



ITEM 254 - PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN (VARIES 0" TO 7")

THIS ITEM OF WORK SHALL BE PERFORMED IN CONFORMANCE WITH ITEM 254 IN THE CMS EXCEPT THE DEPTH SHALL VARY FROM 2" TO THE TOP OF THE BRICK WHICHEVER IS FIRST. THIS WORK SHALL BE PERFORMED SO THAT THE BRICK BASE IS NOT DISTURBED. ALL EQUIPMENT, LABOR, TOOLS, AND OTHER INCIDENTALS REQUIRED TO PERFORM THIS WORK SHALL BE INCLUDED IN THE UNIT BID PRICE FOR ITEM 254 PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN.

ITEM 254 - PAVEMENT PLANING, PORTLAND CEMENT CONCRETE

LOCATIONS OF EXISTING CONCRETE BASE WERE OBTAINED FROM EXISTING PLANS AND GEOTECHNICAL EXPLORATION. DURING THE PROPOSED PAVEMENT PLANING OF ASPHALT CONCRETE, ADDITIONAL AREAS OF EXISTING CONCRETE BASE MAY BE ENCOUNTERED. THE FOLLOWING ESTIMATED QUANTITY IS INCLUDED IN THE GENERAL SUMMARY FOR PLANING THE CONCRETE BASE TO THE PROPOSED PAVEMENT CROSS SLOPE INDICATED IN THE PLANS.

254, PAVEMENT PLANING,
PORTLAND CEMENT CONCRETE 200 SY

ITEM 203 - EXCAVATION (FOR PAVEMENT REPAIR)

THIS ITEM OF WORK SHALL CONSIST OF REMOVING AND DISPOSING OF ALL UNSUITABLE MATERIAL BY EXCAVATING THE EXISTING SUBGRADE AND SUBBASE TO AN AVERAGE DEPTH OF 6 INCHES OR AS DIRECTED BY THE ENGINEER. EXACT LIMITS OF REMOVAL SHALL BE DETERMINED BY THE ENGINEER. ALL EQUIPMENT, LABOR, TOOLS, AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM SHALL BE INCLUDED IN THE UNIT PRICE BID FOR ITEM 203 EXCAVATION (FOR PAVEMENT REPAIR).

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

203, EXCAVATION (FOR PAVEMENT REPAIR) 138 CY

ITEM 304 - AGGREGATE BASE, AS PER PLAN (FOR PAVEMENT REPAIR)

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN PROVIDED AND SHALL BE USED AS DIRECTED BY THE ENGINEER TO BACKFILL AREAS WHICH WERE EXCAVATED UNDER ITEM 203 EXCAVATION (FOR PAVEMENT REPAIR).

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

304, AGGREGATE BASE, AS PER PLAN
(FOR PAVEMENT REPAIR) 138 CY

ITEM 304 - AGGREGATE BASE, AS PER PLAN

GRANULATED SLAG (GS) SHALL NOT BE PERMITTED FOR THIS ITEM. ALL OTHER REQUIREMENTS OF SECTIONS 304 AND 703.17 OF THE CONSTRUCTION AND MATERIAL SPECIFICATIONS SHALL STILL BE APPLICABLE.

COSTS FOR ALL WORK, LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE UNIT PRICE FOR THIS ITEM.

ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG64-22
ITEM 441 - ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), (DRIVEWAYS), AS PER PLAN, PG64-22
ITEM 441 - ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), AS PER PLAN, PG64-22

THIS ITEM OF WORK SHALL BE PERFORMED IN CONFORMANCE WITH ITEM 441 IN THE CMS EXCEPT 703.05 DO NOT USE COARSE AGGREGATE FROM A SOURCE DESIGNATED 'SR' OR 'SRH' ACCORDING TO THE OFFICE OF MATERIALS MANAGEMENT (OMM) IN ANY JOB MIX FORMULA (JMF) FOR THIS ITEM.

COSTS FOR ALL WORK, LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE UNIT PRICE FOR THIS ITEM.

PAVEMENT RESTORATION FOR MONUMENT ASSEMBLY INSTALLATIONS

THE FOLLOWING QUANTITY IS PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION OF ITEM 623, MONUMENT ASSEMBLIES AND HAS BEEN CARRIED TO THE GENERAL SUMMARY:

301, ASPHALT CONCRETE BASE, PG64-22 1 CY

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 6 INCHES AND A WIDTH OF TWO FEET AROUND THE PERIMETER OF THE MONUMENT ASSEMBLIES. PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

PAVEMENT RESTORATION FOR PIPE INSTALLATIONS AND/OR REMOVALS

THE FOLLOWING QUANTITY HAS BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION AND/OR REMOVAL OF PIPES AND HAS BEEN CARRIED TO THE GENERAL SUMMARY:

301, ASPHALT CONCRETE BASE, PG64-22 229 CY

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 9 INCHES AND A PAVEMENT RESTORATION WIDTH THAT INCLUDES THE TRENCH WIDTH PLUS TWO FEET ON EACH SIDE OF THE TRENCH. PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

PAVEMENT RESTORATION FOR DRAINAGE STRUCTURE INSTALLATIONS

THE FOLLOWING QUANTITY IS PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION OF ITEM 611, DRAINAGE STRUCTURES AND HAS BEEN CARRIED TO THE GENERAL SUMMARY:

301, ASPHALT CONCRETE BASE, PG64-22 24 CY

THE ABOVE QUANTITY IS BASED ON A 301 THICKNESS OF 6 INCHES AND A WIDTH OF TWO FEET AROUND THE PERIMETER OF THE DRAINAGE STRUCTURE. PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

ITEM SPECIAL - MISC.: BRICK PAVEMENT, FULL DEPTH

THIS ITEM SHALL CONSIST OF FURNISHING THE NECESSARY LABOR, MATERIAL, AND EQUIPMENT REQUIRED TO CONSTRUCT OR RECONSTRUCT BRICK DRIVEWAY PAVEMENT ON A PREPARED BASE. THE REMOVAL OF ANY EXISTING BRICK PAVEMENT AS NECESSARY TO COMPLETE THE WORK SHALL BE PAID FOR UNDER ITEM 202.

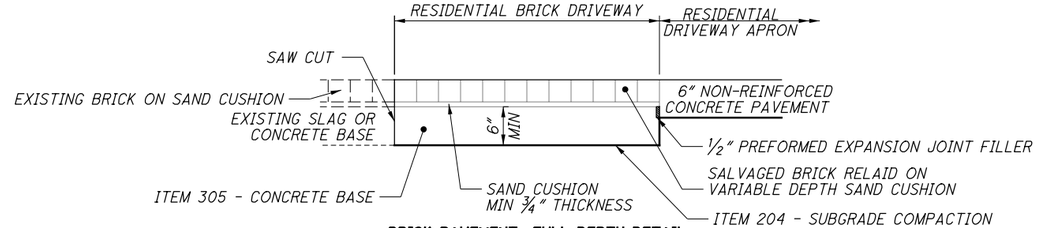
FOR BRICK DRIVEWAY RECONSTRUCTION, THE CONTRACTOR SHALL REUSE AS MUCH OF THE EXISTING SALVAGED BRICK AS POSSIBLE. IF ADDITITIONAL BRICKS ARE NEEDED, BRICKS THAT ARE SALVAGED FROM THE WALES ROAD BRICK BASE MAY BE USED, AS APPROVED BY THE ENGINEER. THE REPLACEMENT BRICKS SHALL BE OF THE SAME COLOR AND THE SAME NOMINAL SIZE TO MATCH THAT OF THE EXISTING BRICK DRIVEWAY. IF NECESSARY, THE CONTRACTOR SHALL CLEAN THE BRICKS PRIOR TO USE.

THE BASE COURSE MATERIAL SHALL BE ITEM 305, CONCRETE BASE. THE CONCRETE BASE SHALL BE THE SAME THICKNESS AS THE ADJOINING CONCRETE BASE, WITH A MINIMUM THICKNESS OF SIX INCHES. THE AGGREGATE FOR CUSHION AND JOINT FILLER SHALL BE CONCRETE SAND PER 703.02.

THE CONTRACTOR SHALL CORRECT DEFICIENCIES IN THE SUBGRADE AS NECESSARY, IN A MANNER ACCEPTABLE TO THE ENGINEER. THE SUBGRADE SHALL BE COMPACTED TO SECURE A FIRM FOUNDATION. THE CONCRETE BASE SHALL THEN BE PLACED AND SCREEDED TO THE PROPER DEPTH AND ELEVATION SO THAT AFTER THE CUSHION MATERIAL AND PAVING BRICKS ARE PLACED AND COMPACTED, THE BRICKS SHALL MEET ADJACENT ELEVATIONS OF SURROUNDING BRICK PAVEMENT OR PROPOSED ELEVATIONS SHOWN ON THE PLANS. AFTER THE CONCRETE BASE IS CURED THE CUSHION MATERIAL SHALL BE SPREAD AND LEVELED AT THE SAME THICKNESS AS THE ADJOINING MATERIAL.

THE BRICKS SHALL BE LAID TO MATCH THE PATTERN OF THE EXISITNG ADJOINING BRICKS, OR AS DIRECTED BY THE ENGINEER, HAND TIGHT, WITH A SMOOTH FINISHED SURFACE. OBJECTIONABLE BRICKS SHALL BE REMOVED AND REPLACED WITH ACCEPTABLE BRICKS. THE BRICKS SHALL BE BROUGHT TO FIRM BEARING AND FINISHED GRADE BY MEANS OF A RUBBER MALLET AND WOOD BLOCKS. DRIVING OR RAMMING OF THE BRICKS SHALL NOT BE PERMITTED. A MAXIMUM OF 1/8 INCH SHALL BE PERMITTED FOR WHOLE OR CUT BRICK JOINTS. CONCRETE SAND PER 703.02 SHALL BE SWEPT OVER THE BRICKS TO FILL ALL JOINTS AND THE AREA SATURATED BY FINE SPRAYING WITH WATER. THE BRICK SURFACE SHALL NOT VARY MORE THAN 1/8 INCH IN TEN FEET.

ALL LABOR, MATERIALS, EQUIPMENT, TOOLS, AND INCIDENTALS REQUIRED TO COMPLETE THIS ITEM OF WORK, INCLUDING ALL EXCAVATION, CONCRETE BASE, CUSHION MATERIAL, PAVING BRICKS, AND JOINT FILLER, SHALL BE INCLUDED IN THE SQUARE YARD UNIT PRICE BID FOR ITEM SPECIAL, MISC.: BRICK PAVEMENT, FULL DEPTH. SEE THE DETAIL FOR BRICK PAVEMENT, FULL DEPTH ON THIS SHEET.



BRICK PAVEMENT, FULL DEPTH DETAIL

STA. 103+13.5, LT
STA. 103+66.5, LT

GENERAL NOTES

CALCULATED KAH CHECKED RAK

STA-241-9.71

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CALCULATED KAH CHECKED RAK

GENERAL NOTES

UNDERDRAIN LOCATIONS

UNDERDRAINS SHALL BE LOCATED ACCORDING TO THE TYPICAL SECTIONS AND UNDERDRAIN DETAILS, EXCEPT WHERE REDIRECTED AROUND UNDERGROUND UTILITIES TO REMAIN, AS DIRECTED BY THE ENGINEER. COSTS TO REDIRECT THE UNDERDRAIN SHALL BE INCIDENTAL TO THE PERTINENT UNDERDRAIN PAY ITEM.

REVIEW OF DRAINAGE FACILITIES

BEFORE ANY WORK IS STARTED ON THE PROJECT AND AGAIN BEFORE FINAL ACCEPTANCE BY THE STATE, REPRESENTATIVES OF THE STATE AND THE CONTRACTOR, ALONG WITH LOCAL REPRESENTATIVES, SHALL MAKE AN INSPECTION OF ALL EXISTING SEWERS WHICH ARE TO REMAIN IN SERVICE AND WHICH MAY BE AFFECTED BY THE WORK. THE CONDITION OF THE EXISTING CONDUITS AND THEIR APPURTENANCE SHALL BE DETERMINED FROM FIELD OBSERVATIONS. RECORDS OF THE INSPECTION SHALL BE KEPT IN WRITING BY THE STATE.

ALL NEW CONDUITS, INLETS, CATCH BASINS, AND MANHOLES CONSTRUCTED AS A PART OF THE PROJECT SHALL BE FREE OF ALL FOREIGN MATTER AND IN A CLEAN CONDITION BEFORE THE PROJECT WILL BE ACCEPTED BY THE STATE.

ALL EXISTING SEWERS INSPECTED INITIALLY BY THE ABOVE MENTIONED PARTIES SHALL BE MAINTAINED AND LEFT IN A CONDITION REASONABLY COMPARABLE TO THAT DETERMINED BY THE ORIGINAL INSPECTION. ANY CHANGE IN THE CONDITION RESULTING FROM THE CONTRACTOR'S OPERATIONS SHALL BE CORRECTED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER.

PAYMENT FOR ALL OPERATIONS DESCRIBED ABOVE SHALL BE INCLUDED IN THE CONTRACT PRICE FOR THE PERTINENT 611 CONDUIT ITEMS.

ITEM 611 - CATCH BASIN, NO. 3, AS PER PLAN
ITEM 611 - CATCH BASIN, NO. 3, 4" CURB, AS PER PLAN
ITEM 611 - CATCH BASIN, NO. 3A, AS PER PLAN
ITEM 611 - CATCH BASIN, NO. 3, 4" CURB, AS PER PLAN

THE CITY OF MASSILLON STRUCTURES CB-MASS7030 AND CB-MASS7031 SHALL BE USED IN PLACE OF ODOT'S CATCH BASIN NO. 3 AND NO. 3A. THE STRUCTURES SHALL BE BUILT ACCORDING TO THE DETAIL SHOWN ON SHEET 260 .

ALL WORK, LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE UNIT PRICE FOR THIS ITEM.

ITEM 202 - MANHOLE ABANDONED, AS PER PLAN

THE EXISTING BURIED MANHOLE AT STA. 114+91.15 SHALL BE ABANDONED PER 202.11 EXCEPT THAT THE MANHOLE SHALL REMAIN IN PLACE AND NOT REMOVED TO ONE FOOT BELOW THE FINISHED SUBGRADE. THE CAVITY SHALL BE BACKFILLED FROM THE PAVEMENT SURFACE ABOVE WITH ITEM 613, LOW STRENGTH MORTAR BACKFILL. ITEM 301, ASPHALT CONCRETE BASE, PG64-22 SHALL BE USED FOR RESTORATION OF THE PAVEMENT. THE ABOVE ITEMS REQUIRED TO PERFORM THIS WORK SHALL NOT BE PAID FOR SEPARATELY. PAYMENT SHALL BE MADE AT THE CONTRACT UNIT PRICE BID FOR ITEM 202, MANHOLE ABANDONED, AS PER PLAN AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE WORK DESCRIBED.

ALL EXISTING PIPE CONNECTIONS TO THE MANHOLE SHALL BE ABANDONED AND PAID FOR SEPARATELY UNDER ITEM SPECIAL, PLUG AND FILL EXISTING CONDUIT.

ITEM SPECIAL - FILL AND PLUG EXISTING CONDUIT

THIS ITEM SHALL CONSIST OF THE CONSTRUCTION OF BULKHEADS IN EXISTING 10, 12, 15, 36, 42, OR 48 IN DIAMETER CONDUITS AND FILLING THE AREA THUS SEALED OFF WITH ITEM 613, SAND OR OTHER MATERIAL APPROVED BY THE ENGINEER.

BULKHEADS SHALL BE LOCATED AT THE LIMITS OF THE AREA TO BE FILLED AS INDICATED ON THE PLANS. THE BULKHEADS SHALL CONSIST OF BRICK OR CONCRETE MASONRY WITH A MINIMUM THICKNESS OF 12 INCHES.

THE FILL MATERIAL SHALL BE PUMPED INTO PLACE, OR PLACED BY OTHER MEANS APPROVED BY THE ENGINEER, SO THAT, AFTER SETTLEMENT, AT LEAST 90 PERCENT OF THE CROSS-SECTIONAL AREA OF THE CONDUIT, FOR ITS ENTIRE LENGTH, SHALL BE FILLED. THE LENGTH OF FILLED AND PLUGGED CONDUIT TO BE PAID FOR SHALL BE THE ACTUAL NUMBER OF FEET (MEASURED ALONG THE CENTERLINE OF EACH CONDUIT FROM OUTER FACE TO OUTER FACE OF BULKHEADS) FILLED AND PLUGGED AS DESCRIBED ABOVE.

IN LIEU OF FILLING AND PLUGGING THE EXISTING CONDUIT, THE PIPE MAY BE CRUSHED AND BACKFILLED IN ACCORDANCE WITH THE PROVISIONS OF 203, OR IT MAY BE REMOVED. THE LENGTH, MEASURED AS PROVIDED ABOVE, SHALL BE PAID FOR AT THE CONTRACT PRICE PER FOOT FOR, ITEM SPECIAL, FILL AND PLUG EXISTING CONDUIT.

ITEM 611 - 8", 10", 12", 15", 18", 36", 42", 48" CONDUIT, TYPE B (ALTERNATE 2)

THIS ITEM OF WORK SHALL BE PERFORMED IN CONFORMANCE WITH ITEM 611 IN THE CMS, EXCEPT MATERIALS SHALL BE LIMITED TO CORRUGATED POLYETHYLENE SMOOTH LINED PIPE (CMS 707.33) OR POLYPROPYLENE CORRUGATED DOUBLE WALL PIPE (707.65).

COSTS FOR ALL WORK, LABOR, EQUIPMENT, AND MATERIAL SHALL BE INCLUDED IN THE UNIT PRICE FOR THIS ITEM.

CONNECTING PROPOSED PIPE TO EXISTING CLAY PIPE

THE FOLLOWING ESTIMATED QUANTITIES ARE INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR REPLACEMENT OF EXISTING VCP STORM SEWER LATERALS THAT MAY BECOME DAMAGED DURING THE CONNECTION OF PROPOSED STORM SEWER CONDUIT TO EXISTING VCP STORM SEWER LATERALS.

611, 12" CONDUIT, TYPE B (ALTERNATE 1)	150 FT
611, 12" CONDUIT, TYPE B, 707.33, 707.65 (ALTERNATE 2)	150 FT

UNRECORDED STORM WATER DRAINAGE

FURNISH A CONTINUANCE FOR ALL UNRECORDED STORM WATER DRAINAGE, SUCH AS ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS, DISTURBED BY THE WORK. FURNISH AN CONTINUANCE TO THE EXISTING OR PROPOSED STORM SEWER.

BETWEEN THE INTERSECTIONS OF WALES ROAD/SPRINGHAVEN CIRCLE NE (SOUTH) AND WALES ROAD/SPRINGHAVEN CIRCLE (NORTH) EXIST MULTIPLE ROOF DRAINS, FOOTER DRAINS, OR YARD DRAINS THAT DISCHARGE THROUGH THE EXISTING CURB. FURNISH AN CONTINUANCE FROM THE EXISTING CURB LOCATION TO THE PROPOSED STORM SEWER.

THE LOCATION, TYPE, SIZE AND GRADE OF THE NEEDED CONDUIT TO REPLACE OR EXTEND AN EXISTING DRAIN WILL BE DETERMINED BY THE ENGINEER.

THE FOLLOWING CONDUIT TYPES MAY BE USED: 707.33, 707.41 NON-PERFORATED, 707.42, 707.43, 707.45, 707.46, 707.47, 707.51, 707.52 SDR35.

THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER FOR THE WORK NOTED ABOVE:

611, 4" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	50 FT
611, 4" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	100 FT

UTILITY PIPE REPLACEMENT

ESTIMATED QUANTITIES ARE PROVIDED FOR PIPE TO BE REPLACED, AS DIRECTED BY THE ENGINEER, WHEN EXISTING STORM AND SANITARY PIPES ARE FOUND TO BE DAMAGED AND THE DAMAGE IS NOT A RESULT OF CONTRACTOR ACTIVITIES. REPLACEMENT OF PIPES DAMAGED DURING CONSTRUCTION DUE TO CONTRACTOR ACTIVITIES SHALL BE THE SOLE RESPONSIBILITY OF THE CONTRACTOR.

THE FOLLOWING QUANTITIES ARE CARRIED TO GENERAL SUMMARY:

611, 8" CONDUIT, TYPE B	50 FT
611, 10" CONDUIT, TYPE B	50 FT
611, 12" CONDUIT, TYPE B	50 FT
611, 15" CONDUIT, TYPE B	20 FT
611, 36" CONDUIT, TYPE B	20 FT
611, 42" CONDUIT, TYPE B	20 FT
611, 48" CONDUIT, TYPE B	20 FT

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT.

MANUFACTURED WATER QUALITY STRUCTURE

THIS PLAN UTILIZES MANUFACTURED WATER QUALITY STRUCTURES FOR WATER QUALITY TREATMENT. AREAS HAVE BEEN SHOWN IN THE PLANS FOR PLACEMENT OF AN OFF-LINE SYSTEM. PAYMENT FOR THESE DEVICES SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR ITEM 895, MANUFACTURED WATER QUALITY STRUCTURE, TYPE 3.

ITEM 875 - LONGITUDINAL JOINT ADHESIVE

THIS ITEM SHALL BE INCIDENTAL TO ALL 441 ASPHALT ITEMS:

441, ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG64-22
441, ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), AS PER PLAN, PG64-22

STA-241-9.71

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ITEM 630 - SIGN, FLAT SHEET

THE PROPOSED STREET NAME SIGNS (D3-1) SHALL HAVE WHITE LETTERING ON A BLUE FIELD.

ITEM 630 - SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN

SIGNS ATTACHED TO TRAFFIC SIGNAL MAST ARMS SHALL BE RIGID MOUNT. THE ATTACHMENT HARDWARE SHALL BE SIMILAR TO TC-22.20, OR EQUAL AS APPROVED BY THE ENGINEER. PAINT THE HANGER ASSEMBLY SEMI-GLOSS BLACK (FEDERAL COLOR #F527038)

PAYMENT FOR ITEM 630 - SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN SHALL INCLUDE ALL LABOR, MATERIALS, AND INCIDENTALS REQUIRED TO RIGIDLY MOUNT THE OVERHEAD SIGN, AS APPROVED BY THE ENGINEER.

ITEM 608 - 4" CONCRETE WALK, AS PER PLAN
ITEM 608 - CONCRETE STEPS, TYPE B, AS PER PLAN

THIS ITEM OF WORK SHALL BE PERFORMED IN ACCORDANCE WITH ITEM 608 IN THE CMS EXCEPT USE CONCRETE CLASS QC MS.

COSTS FOR ALL WORK, LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE UNIT PRICE FOR THIS ITEM.

ITEM SPECIAL - REINFORCEMENT MESH FOR SAW CUT JOINTS

DESCRIPTION:
THIS WORK CONSISTS OF PLACEMENT OF A SELF ADHESIVE GLASS FIBER MESH OVER SAW CUT JOINTS WHERE THERE IS ASPHALT PAVEMENT ON BOTH SIDES OF THE JOINT, AS DIRECTED BY THE ENGINEER. THE MESH SHALL BE PLACED PRIOR TO PLACEMENT OF THE FINAL ASPHALT CONCRETE.

FURNISH GLASGRID FIBERGLASS REINFORCEMENT WITH MODIFIED POLYMER COATING AND PRESSURE-SENSITIVE ADHESIVE BACKING BONDED TO A NONWOVEN POLYPROPYLENE MEETING THE FOLLOWING PROPERTIES:

PROPERTIES	GlasGrid CG100
Material Width	2.5 ft.
Material - Self Adhesive fiberglass strand coated with elastomeric polymer ASTM D4595	25% minimum dry pickup
Tensile Strength ASTM D4595	655 x 655 ± 85 lbs/in
Tensile Elongation ASTM D4595	2.5 ± 0.5%
Melting Point ASTM D276	>450°F
Mass/Unit Area ASTM D5261-92	16 oz/sq yd
Grid pattern	1.0 in x 1.0 in

BEFORE INSTALLATION SUBMIT A LETTER TO THE PROJECT ENGINEER WITH A STATEMENT CERTIFYING MATERIAL RECEIVED MEETS THE ABOVE PROPERTIES. SUBMIT TO THE PROJECT ENGINEER ACTUAL DATED (SALES FLYER DATA NOT ACCEPTABLE) TEST DATA WITH THE CERTIFICATION LETTER.

CONSTRUCTION:
PERFORM ALL REQUIRED REPAIRS PRIOR TO PLACING MESH.

MESH SHALL BE PLACED EITHER ON THE PLANED SURFACE OR BETWEEN INTERMEDIATE/LEVELING COURSE LIFTS TO ENSURE A MINIMUM 1.5" COMPACTED ASPHALT OVERLAY ON THE MESH, OR AS DIRECTED BY THE ENGINEER.

ENSURE ALL AREAS WHERE MESH IS TO BE PLACED ARE FREE OF ALL DIRT AND OTHER LOOSE MATERIALS BY SWEEPING OR OTHERAPPROVED METHOD. PLACE NON-TRACKING TACK COAT AT RATE SPECIFIED IN CMS AND WAIT 2 HOURS BEFORE PLACING THE MESH ON A PAVEMENT SURFACE THAT IS BETWEEN 40° F AND 140° F.

PLACE MESH UNDER TENSION TO PREVENT RIPPLING. REMOVE RIPPLES BY PULLING, OR IF NECESSARY (IN CURVES FOR EXAMPLE), BY CUTTING AND FLATTENING THE MESH. OVERLAP TRANSVERSE JOINTS OF THE MESH 3 TO 6 INCHES. OVERLAP LONGITUDINAL JOINTS OF THE MESH BY 1 INCH MINIMUM. ROLL THE MESH SURFACE 2 PASSES WITH A RUBBER COATED DRUM ROLLER, RUBBER TIRED ROLLER OR OTHER METHOD ACCEPTABLE TO THE MANUFACTURER. CLEAN RUBBER ROLLER IF BUILDUP ON THE RUBBER SURFACE INTERFERES WITH MESH PLACEMENT. DO NOT USE A STEEL DRUM ROLLER. PLACED MESH WILL HANDLE SPEED CONTROLLED EMERGENCY OR CONSTRUCTION TRAFFIC BUT DAMAGED SECTIONS MUST BE REMOVED AND/OR REPAIRED, AT THE CONTRACTOR'S EXPENSE. DO NOT ALLOW MUD OR OTHER MATERIAL TO COLLECT ON THE MESH PRIOR TO ASPHALT CONCRETE PLACEMENT. COVER MESH WITH ASPHALT CONCRETE THE SAME DAY UNLESS WEATHER BECOMES UNSUITABLE.

MEASUREMENT:
MEASURE MESH PLACEMENT BY THE LINEAL FEET OF JOINT COVERED. DO NOT ALLOW FOR MESH OVERLAP.

PAYMENT:
THE DEPARTMENT WILL PAY FOR ACCEPTED QUANTITIES, COMPLETED IN PLACE, AT THE CONTRACT PRICE, AS DESCRIBED ABOVE, AS FOLLOWS:

ITEM	UNIT	DESCRIPTION
SPECIAL	FT	REINFORCEMENT MESH FOR SAW CUT JOINTS

CALCULATED KAH
CHECKED RAK

GENERAL NOTES

STA-241-9.71

ENVIRONMENTAL WORK INVOLVING PETROLEUM CONTAMINATED SOILS AND GROUNDWATER

ENVIRONMENTAL STUDIES HAVE SHOWN THAT PETROLEUM-CONTAMINATED MATERIALS WILL BE ENCOUNTERED IN EXCAVATIONS ON OR ABUTTING THE PROPERTY AT 145 WALES ROAD (STA. 104+84 TO STA. 104+99) AND THE POTENTIAL FORMER GAS STATION PROPERTY AT 852 WALES ROAD (WALES ROAD STA. 119+14 TO STA. 120+20 AND WILLIAMS AVENUE STA. 10+05 TO STA. 11+00).

ALL SOIL MATERIAL EXCAVATED BY THE CONTRACTOR ON AND/OR IMMEDIATELY ADJACENT TO THE 145 WALES ROAD AND/OR THE 852 WALES ROAD PROPERTY SHALL BE ASSUMED CONTAMINATED AND NOT SUITABLE FOR REUSE. THE CONTRACTOR SHALL MANAGE EXCAVATED MATERIALS ACCORDING TO THE FOLLOWING NOTES. ALL EXCAVATIONS ON AND/OR IMMEDIATELY ADJACENT TO THE AFOREMENTIONED LOCATIONS SHALL BE PAID FOR UNDER THE ORIGINAL PLAN BID ITEMS.

ALL SOIL MATERIAL EXCAVATED BY THE CONTRACTOR ON AND/OR IMMEDIATELY ADJACENT TO THE AFOREMENTIONED LIMITS SHALL BE SUBJECT TO INITIAL TESTING BY AN INSPECTOR PROVIDED BY THE PROJECT ENGINEER TO DETERMINE IF EXCAVATED SOIL MATERIAL IS IN FACT PETROLEUM CONTAMINATED. POTENTIAL PETROLEUM CONTAMINATED SOIL MATERIAL SHALL BE TESTED FOR BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENE (BTEX) USING USEPA SW-846, METHOD 8060 AND TOTAL PETROLEUM HYDROCARBONS (TPH) USING USEPA SW-846, METHOD 8015, PER BUSTR GUIDELINES.

LAB ANALYSIS RESULTS FOR CONCENTRATIONS OF POTENTIAL CHEMICALS OF CONCERN DETECTED IN EXCAVATED SOILS SHALL BE COMPARED TO BUSTR'S RE-USE ACTION LEVELS IN TABLE 1 UNDER PARAGRAPH (D)(1) OF OAC 1301:7-9-16 TO DETERMINE IF THE SOIL MATERIAL IS INDEED PETROLEUM CONTAMINATED. THE FINAL DETERMINATION ON THE WASTE STATUS SHALL BE MADE BY THE PROJECT ENGINEER. SOIL REUSE IN FILLS MAY BE CONSIDERED BY THE PROJECT ENGINEER FOLLOWING TESTING AND FINAL DETERMINATION ON THE WASTE STATUS AS SPECIFIED IN THE ODOT CONSTRUCTION AND MATERIALS SPECIFICATIONS. RESULTS OF THE LAB ANALYSIS SHALL BE PROVIDED TO THE CONTRACTOR WITHIN APPROXIMATELY TEN (10) WORKING DAYS OF THE INITIAL SAMPLE SUBMISSION AND FINAL DETERMINATION OF WASTE STATUS SHALL FOLLOW IN APPROXIMATELY THREE (3) ADDITIONAL WORKING DAYS.

EXCAVATED SOIL MATERIAL MAY BE STOCKPILED IN AN AREA PROVIDED BY THE CONTRACTOR AND APPROVED BY THE PROJECT ENGINEER. IF THE STORAGE AREA WILL BE LOCATED OUTSIDE OF THE PROJECT CONSTRUCTION LIMITS AS INDICATED IN THE PLAN, THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL WASTE AREA INVESTIGATION AND APPROVALS REQUIRED. THE PROJECT ENGINEER MAY PERMIT TEMPORARY STORAGE OF THE EXCAVATED MATERIAL IN A LINED AND COVERED ROLL-OFF BOX. THE PROJECT ENGINEER MAY PERMIT TEMPORARY STORAGE OF THE EXCAVATED MATERIAL ON AN IMPERMEABLE MEMBRANE. THE MEMBRANE SHALL BE SURROUNDED BY BALES OF STRAW TO PREVENT THE SUSPECTED SOILS FROM COMING IN CONTACT WITH THE ORIGINAL SOILS. AN IMPERMEABLE MEMBRANE SHALL BE PLACED OVER THE STOCKPILE TO PREVENT CONTACT WITH PRECIPITATION AND/OR SURFACE WATER RUN-OFF.

ENVIRONMENTAL WORK INVOLVING PETROLEUM CONTAMINATED SOILS AND GROUNDWATER (CONTINUED)

THE CONTRACTOR MUST TAKE ALL MEASURES NECESSARY TO PROPERLY STORE/STOCKPILE ALL EXCAVATED MATERIALS WITHIN THE AFOREMENTIONED LIMITS UNTIL A WASTE STATUS DETERMINATION IS PROVIDED AND APPROPRIATE DISPOSAL ARRANGEMENTS ARE MADE. THE PROJECT ENGINEER MAY PERMIT THE CONTRACTOR TO DIRECT LOAD THE EXCAVATED CONTAMINATED MATERIAL INTO TRUCKS FOR IMMEDIATE DISPOSAL AFTER A WASTE STATUS DETERMINATION IS PROVIDED AND APPROPRIATE DISPOSAL ARRANGEMENTS ARE MADE.

THE CONTRACTOR SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT STORMWATER RUNOFF FROM ENTERING EXCAVATION AREAS AT THE AFOREMENTIONED LOCATION. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ALL COSTS ASSOCIATED WITH DEWATERING, STORAGE, INITIAL TESTING, ADDITIONAL TESTING REQUIRED FOR DISPOSAL, AND DISPOSAL OF ALL STORMWATER RUNOFF FROM EXCAVATION AREAS AT THE AFOREMENTIONED LOCATION.

IF GROUNDWATER (NOT STORMWATER) IS ENCOUNTERED AND EXCAVATIONS WITHIN THE AFOREMENTIONED LIMITS REQUIRE DEWATERING FOR CONSTRUCTION PURPOSES, THE CONTRACTOR SHALL DEWATER, STORE AND SUBSEQUENTLY DISPOSE OF WATERS BY METHODS APPROVED BY PROJECT ENGINEER. ANY POTENTIAL PETROLEUM CONTAMINATED GROUNDWATER SHALL BE TESTED FOR BENZENE, TOLUENE, ETHYLBENZENE, AND XYLENE (BTEX) AND METHYL TERT-BUTYL ETHER (MTBE) USING USEPA SW-846, METHOD 8060 AND TOTAL PETROLEUM HYDROCARBONS (TPH) USING USEPA SW-846, METHOD 8015 BY AN INSPECTOR PROVIDED BY THE PROJECT ENGINEER (ODOT). THE CONTRACTOR SHALL OBTAIN ALL THE NECESSARY PERMITS AND/OR AUTHORIZATIONS NEEDED TO STORE, TRANSPORT AND DISPOSE OF THE WATER (TO INCLUDE ALL ADDITIONAL TESTING REQUIRED FOR DISPOSAL) IN ACCORDANCE WITH APPLICABLE LOCAL, STATE OR FEDERAL REGULATIONS.

ALL PETROLEUM CONTAMINATED SOIL AND GROUNDWATER SHALL BE DISPOSED OF IN A LICENSED (BY THE LOCAL HEALTH DEPARTMENT) AND PERMITTED (BY THE OHIO ENVIRONMENTAL PROTECTION AGENCY) WASTE FACILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS AND TO TRANSPORT THE CONTAMINATED SOIL AND GROUNDWATER TO A LICENSED AND PERMITTED DISPOSAL FACILITY.

THE CONTRACTOR SHALL COMPLETE ALL MANIFEST(S) FOR MATERIAL TO BE TRANSPORTED AND PROVIDE TO THE PROJECT ENGINEER FOR SIGNATURE. THE CONTRACTOR SHALL CONTACT THE DISPOSAL FACILITY TO DETERMINE IF ANY ADDITIONAL TESTING IS REQUIRED FOR DISPOSAL. THE CONTRACTOR SHALL PROVIDE ANY ADDITIONAL SAMPLING AND ANALYSIS OF THE MATERIAL AS REQUIRED BY THE DISPOSAL FACILITY. THE CONTRACTOR SHALL OBTAIN ALL SIGNATURES ON THE MANIFEST FOR TRANSPORTING AND DISPOSAL OF THE MATERIAL AND PROVIDE A FINAL COPY TO THE PROJECT ENGINEER.

THE CONTRACTOR SHALL FURNISH ALL THE LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PROPERLY HANDLE, STORE (IF NECESSARY), TEST FOR DISPOSAL, TRANSPORT, AND DISPOSE OF REGULATED MATERIALS, INCLUDING ANY REQUIRED PERMITS, APPROVALS, OR FEES WITHIN THE LIMITS IDENTIFIED ABOVE.

ENVIRONMENTAL WORK INVOLVING PETROLEUM CONTAMINATED SOILS AND GROUNDWATER (CONTINUED)

PAYMENT FOR THIS WORK SHALL BE MADE AT THE CONTRACT PRICE BID PER TON OR GALLON. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

SPECIAL, WORK INVOLVING PETROLEUM CONTAMINATED SOILS	46 TON
690, WORK INVOLVING REGULATED WATER	450 GAL
690, WORK INVOLVING WATER	450 GAL

CO-PERMITTEE NOTICE OF INTENT FOR COVERAGE UNDER OHIO EPA STORMWATER CONSTRUCTION GENERAL PERMIT

BECAUSE OVER 1.0 ACRE OF GROUND DISTURBANCE WILL OCCUR AS A RESULT OF THE PROJECT, A NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM (NPDES) STORMWATER CONSTRUCTION GENERAL PERMIT WILL BE REQUIRED FROM THE OHIO EPA. THE NOTICE OF INTENT (NOI), PREPARED BY ODOT, AND OHIO EPA NPDES CONSTRUCTION STORM WATER GENERAL PERMIT SHALL BE PROVIDED TO THE CONTRACTOR BY ODOT PERSONNEL AT THE PRE CONSTRUCTION MEETING. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COMPLETING THE CO-PERMITTEE NOTICE OF INTENT FOR COVERAGE UNDER OHIO EPA STORMWATER CONSTRUCTION GENERAL PERMIT AND SUBMITTING TO THE OHIO EPA FOR THEIR APPROVAL, ALONG WITH THE DEVELOPMENT OF A STORM WATER POLLUTION PREVENTION PLAN (SWPPP), BEFORE CONSTRUCTION ACTIVITY CAN TAKE PLACE.

SPECIFICATIONS SET FORTH IN THE MOST CURRENT VERSION OF ODOT'S "CONSTRUCTION AND MATERIAL SPECIFICATIONS, LOCATION AND DESIGN MANUAL AND STANDARD DRAWINGS" SHALL BE USED TO ENSURE ADEQUATE EROSION AND SEDIMENT CONTROL, ALONG WITH ADDITIONAL PROTECTIVE MEASURES TO AVOID IMPACTS TO ADJACENT PROPERTIES AND WETLANDS FROM CONSTRUCTION ACTIVITIES. WATER COLUMN AND SEDIMENTATION IMPACTS SHALL BE KEPT TO A MINIMUM THROUGH THE USE OF BEST MANAGEMENT PRACTICES FOR SOIL EROSION AND SEDIMENTATION CONTROL. ALL SOIL EROSION AND SEDIMENT CONTROL MEASURES AS SPECIFIED IN THE STORM WATER POLLUTION PREVENTION PLAN SHALL BE IN PLACE PRIOR TO ANY EXCAVATION, GRADING OR FILLING OPERATIONS AND INSTALLATION OF PROPOSED STRUCTURES OR UTILITIES. THEY SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE, AND THE AREA IS STABILIZED AS ACCEPTED BY THE ENGINEER. THEY SHALL ALSO COMPLY WITH ODOT'S "HANDBOOK FOR SEDIMENT AND EROSION CONTROL".

OHIO HISTORIC HOMES

THE CONTRACTOR SHALL AVOID IMPACTS TO THE HOUSES AT 1051 WALES ROAD, 1119 WALES ROAD, AND 1809 WALES ROAD DUE TO THEIR HISTORIC NATURE AND LISTING BY OHIO'S HISTORIC PRESERVATION OFFICE.

CONSTRUCTION SCHEDULE

THE CONTRACTOR SHALL CLOSELY COORDINATE THE CONSTRUCTION SCHEDULE WITH ODOT AND THE CITY OF MASSILLON.

KENDAL PARK AND KIDDIE KORRAL PARK

SAFE ACCESS SHALL BE MAINTAINED AT ALL TIMES TO KENDAL PARK AND KIDDIE KORRAL PARK. IF ACCESS IS RESTRICTED BY CONSTRUCTION ACTIVITIES, ALTERNATE POINTS OF ACCESS TO THESE PARKS SHALL BE MAINTAINED. APPROPRIATE SIGNAGE SHALL BE INSTALLED WHEN ACCESS IS RESTRICTED TO GUIDE USERS TO SECONDARY ACCESS POINTS. THE LABOR, SIGNS, EQUIPMENT, HARDWARE, AND INCIDENTALS TO INSTALL AND MAINTAIN THESE SIGNS SHALL BE PAID UNDER ITEM 614, MAINTAINING TRAFFIC.

PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR SHALL PLACE A TEMPORARY CONSTRUCTION FENCE ALONG THE PROPOSED CONSTRUCTION LIMITS AT KENDAL PARK AND KIDDIE KORRAL PARK TO PROTECT THE PARKS AND THEIR USERS DURING CONSTRUCTION ACTIVITIES. THE CONTRACT UNIT PRICE FOR ITEM 607, FENCE, MISC: TEMPORARY CONSTRUCTION FENCE SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, HARDWARE, WARNING SIGNS, AND INCIDENTALS TO PERFORM THE DESCRIBED WORK. THE FOLLOWING ESTIMATED QUANTITY IS CARRIED TO THE GENERAL SUMMARY AND SHALL BE USED AS DIRECTED BY THE ENGINEER:

607, FENCE, MISC.: TEMPORARY CONSTRUCTION FENCE	400 FT

CALCULATED KAH
CHECKED RAK

GENERAL NOTES

STA-241-9.71

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ITEM 614 - MAINTAINING TRAFFIC

THIS ITEM SHALL CONSIST OF MAINTENANCE OF TRAFFIC ON EXISTING ROADWAYS AND RAMPS IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES FOR STREETS AND HIGHWAYS, CURRENT EDITION, LATEST REVISION, THE SPECIFICATIONS AND THE FOLLOWING:

1. A MINIMUM OF ONE TEN-FOOT LANE IN EACH DIRECTION (TWO-WAY, TWO LANE TRAFFIC) SHALL BE MAINTAINED ON THE EXISTING PAVEMENT, THE COMPLETED PAVEMENT OR TEMPORARY PAVEMENT DURING CONSTRUCTION. UPON APPROVAL OF THE ENGINEER, TWO-WAY, ONE LANE TRAFFIC UNDER FLAGGER CONTROL WILL BE PERMITTED DURING OFF-PEAK HOURS (9AM-3PM AND 6PM-SUNSET).

2. THE CONTRACTOR SHALL INFORM THE CITY OF MASSILLON (330) 830-1722 AND THE DISTRICT 4 OFFICE (330) 786-2208, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.

3. ALL FULL DEPTH PAVEMENT REMOVAL AND REPLACEMENT OPERATIONS SHALL BE COMPLETED THE SAME DAY THE EXCAVATION IS MADE. IF THE CONTRACTOR CANNOT COMPLETE THE WORK, THE EXCAVATION SHALL BE BACKFILLED OR PROTECTED AS PER STANDARD CONSTRUCTION DRAWING MT-101.90.

4. TRUCK MOUNTED ATTENUATORS [TMA'S] SHALL BE USED AS SHOWN IN THE STANDARD CONSTRUCTION DRAWINGS.

5. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR BE PERMITTED TO HAVE SUCCESSIVE WORK ZONES UNLESS THE DISTANCE BETWEEN THE DRUMS, BARRICADES OR CONES EXCEEDS ONE (1) MILE.

6. THE CONTRACTOR WILL BE ALLOWED SHORT TERM ROAD CLOSURE ON THE SIDE STREETS ALONG SR 241 (WALES) ROAD.

NOTICE OF CLOSURE SIGNS (W20-H13) SHALL BE ERECTED BY THE CONTRACTOR PRIOR TO THE SCHEDULED ROAD CLOSURE IN ACCORDANCE WITH THE NOTICE OF CLOSURE TIME TABLE BELOW. (AT THE APPROVAL OF THE ENGINEER, PORTABLE CHANGEABLE MESSAGE SIGNS MAY BE USED IN LIEU OF THE STANDARD FLATSHEET SIGN FOR CLOSURE DURATIONS OF LESS THAN ONE (1) WEEK.)

THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD FACING TRAFFIC. THEY SHALL BE PLACED SO AS NOT TO INTERFERE WITH THE VISIBILITY OF ANY OTHER TRAFFIC CONTROL SIGNS. ON ROADWAYS, THEY SHOULD BE ERECTED AT OR NEAR THE POINT OF CLOSURE.

NOTICE OF CLOSURE SIGN TIME TABLE

ITEM	DURATION OF CLOSURE	SIGN DISPLAYED TO PUBLIC
RAMP & ROAD CLOSURES	>= 2 WEEKS	14 CALENDER DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	7 CALENDER DAYS PRIOR TO CLOSURE
	< 12 HOURS	2 BUSINESS DAYS PRIOR TO CLOSURE

ITEM 614 - MAINTAINING TRAFFIC (CONT.)

THE SIGN SHALL DISPLAY THE DATE OF THE CLOSURE IN MMM-DD FORMAT AND THE NUMBER OF DAYS OF THE CLOSURE. THE LAST LINE OF THE W20-H13 SIGN LISTS A PHONE NUMBER WHICH A MOTORIST MAY CALL FOR ADDITIONAL INFORMATION (330-786-2208). THIS IS TO BE A SPECIFIC OFFICE WITHIN THE DISTRICT RATHER THAN THE GENERAL SWITCHBOARD NUMBER.

THE ROAD CLOSURES WILL BE LIMITED TO 30 DAYS AND SHALL BE DETOURED TO AN ADJACENT SIDE STREET. CLOSURES OF TWO ADJACENT STREETS WILL NOT BE PERMITTED.

TRAFFIC MUST MAINTAINED AT ALL TIMES ON THE FOLLOWING STREETS:
- SR 172 (LINCOLN WAY)
- STATE AVENUE (WEST LEG)
- HANKINS ROAD
- LAKE AVENUE
- HILLS AND DALES ROAD
- PEBBLE CHASE CIRCLE
- SPRINGHILL LANE
- SPRINGHILL AVENUE
- SPRINGHAVEN CIRCLE (ONE INTERSECTION MUST BE OPENED AT ALL TIMES)

7. ONLY DURING OFF PEAK HOURS (9AM-3PM AND 6PM-SUNSET) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL NECESSARY FOR THE WORK ZONE FOR EACH CONSTRUCTION PHASE.

8. NO WORK SHALL BE PERFORMED AND ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING
(OTHER HOLIDAY OR EVENT)	

THE PERIOD OF TIME THAT THE LANES ARE TO BE OPEN DEPENDS ON THE DAY OF THE WEEK ON WHICH THE HOLIDAY OR EVENT FALLS. THE FOLLOWING SCHEDULE SHALL BE USED TO DETERMINE THIS PERIOD:

DAY OF HOLIDAY OR EVENT	TIME ALL LANES MUST BE OPEN TO TRAFFIC
SUNDAY	12:00N FRIDAY THROUGH 6:00AM MONDAY
MONDAY	12:00N FRIDAY THROUGH 6:00AM TUESDAY
TUESDAY	12:00N MONDAY THROUGH 6:00AM WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH 6:00AM THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH 6:00AM FRIDAY
THURSDAY	(THANKSGIVING ONLY) 6AM WEDNESDAY THROUGH 6:00AM MONDAY
FRIDAY	12:00N THURSDAY THROUGH 6:00AM MONDAY
SATURDAY	12:00N FRIDAY THROUGH 6:00AM MONDAY

9. IN ADDITION TO THE REQUIREMENTS OF 614.11 WORK ZONE PAVEMENT MARKINGS, AT THE END OF EACH DAY OF WORK, THE CONTRACTOR SHALL REPLACE (WITH WORK ZONE MARKINGS) ALL LANE, CENTER, STOP OR CHANNELIZING LINES THAT WERE REMOVED OR COVERED DURING THE PAVEMENT REMOVAL OR PLACEMENT OPERATIONS. QUANTITIES FOR SUCH PLACEMENT ARE CARRIED AS PART OF THE ITEMS LISTED UNDER 614 WORK ZONE PAVEMENT MARKINGS.

ITEM 614 - MAINTAINING TRAFFIC (CONT.)

10. THE CONTRACTOR SHALL PLACE THE SIGNS: W8-1 [BUMP] PER OMUTCD 2C.28 AND W8-11 [UNEVEN LANES] PER OMUCTD 6F.45. PAYMENT FOR THESE SIGNS SHALL BE INCIDENTAL TO THE LUMP SUM ITEM 614 - MAINTAINING TRAFFIC.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH C&MS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

ITEM 615 - ROADS FOR MAINTAINING TRAFFIC

ALL WORK SHALL BE IN ACCORDANCE WITH C&MS 615 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS. PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 615 - ROADS FOR MAINTAINING TRAFFIC.

ACCESS TO PROPERTIES

DRIVEWAY ACCESS SHALL BE MAINTAINED TO ALL RESIDENTIAL AND COMMERCIAL PROPERTIES EXCEPT WHEN A DRIVEWAY MUST BE CLOSED FOR CONSTRUCTION. ALL RESIDENTS AND PROPERTY OWNERS SHALL BE PROVIDED WRITTEN NOTIFICATION BY THE CONTRACTOR A MINIMUM OF 48 HOURS PRIOR TO THE CLOSURE. THE NOTICE SHALL LIST THE TIME THE CLOSURE WILL BE IN EFFECT AND SHALL LIST 24-HOUR EMERGENCY PHONE NUMBERS OF THE CONTRACTOR RESPONSIBLE FOR THE CLOSURE. THE TIMES SHALL BE COORDINATED WITH EACH RESIDENT AND PROPERTY OWNER. EVERY EFFORT MUST BE MADE TO ACCOMMODATE THE RESIDENT OR OWNER'S NEED FOR ACCESS WHICH INCLUDES PROVIDING AN ADEQUATE OPENING IN THE CONSTRUCTION DRUMS. ACCESS MAY BE MAINTAINED WITH THE USE OF ASPHALT, AGGREGATE, OR STEEL PLATES.

WHERE A DRIVEWAY IS WIDE ENOUGH, THE CONTRACTOR SHALL CONSTRUCT THE DRIVEWAY PART-WIDTH WHILE MAINTAINING TWO-WAY TRAFFIC. WHERE A PROPERTY HAS MORE THAN ONE DRIVEWAY, DRIVES SHALL BE CONSTRUCTED ONE AT A TIME.

DRIVE CLOSURES SHALL BE CLOSED A MAXIMUM 10-HOUR PERIOD DURING NORMAL WORK HOURS.

FOR RESIDENCES WITH EXISTING SIDEWALK, THE EXISTING SIDEWALK SHALL NOT BE REMOVED UNLESS THE PROPOSED SIDEWALK IS CONSTRUCTED OR THE DRIVEWAY IS ACCESSIBLE TO VEHICLES.

FOR RESIDENCES WITH NO EXISTING SIDEWALK, A TEMPORARY SIDEWALK SHALL BE CONSTRUCTED WHEN THE PROPERTY IS INACCESSIBLE TO VEHICLES. THE LOCATIONS OF THESE RESIDENCES ARE LIMITED TO THE EAST SIDE OF WALES ROAD FROM SPRINGHILL AVENUE TO SPRINGHAVEN CIRCLE NORTH, AND ON THE WEST SIDE OF WALES ROAD FROM LENNOX AVENUE TO HILLS AND DALES ROAD.

A QUANTITY OF TEMPORARY ASPHALT SIDEWALK (5-FOOT WIDTH AND 3-INCH THICKNESS) HAS BEEN PROVIDED TO BE USED AS DIRECTED BY THE ENGINEER. THE TEMPORARY ASPHALT SIDEWALK MUST BE LOCATED WITHIN THE CONSTRUCTION LIMITS AND SHALL MEET ADA REQUIREMENTS.

ACCESS TO PROPERTIES (CONT.)

THE FOLLOWING ESTIMATED QUANTITIES ARE INCLUDED FOR USE AS DIRECTED BY THE ENGINEER FOR THE MAINTENANCE OF DRIVEWAYS AND SIDEWALKS AND HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 410 - TRAFFIC COMPACTED SURFACE, TYPE A OR TYPE B - 378 CY

ITEM 608 - TEMPORARY ASPHALT CONCRETE WALK, AS PER PLAN - 10,000 SF

ITEM 616 - WATER - 50 MGAL

ITEM 608 - TEMPORARY ASPHALT CONCRETE WALK, AS PER PLAN

THE TEMPORARY ASPHALT CONCRETE WALK SHALL BE IN ACCORDANCE WITH C&MS 608 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, WITH THE FOLLOWING CONDITIONS:

THE CONTRACTOR SHALL USE ITEM 441 - 3" ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448) WHEN PLACING THE TEMPORARY SIDEWALKS.

PAYMENT FOR ALL LABOR, EQUIPMENT, MATERIALS, AND REMOVAL SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 608 - TEMPORARY ASPHALT CONCRETE WALK, AS PER PLAN.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED FOR DUST CONTROL PURPOSES AND HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 616 - WATER - 44 MGAL

DELINEATION OF PORTABLE AND PERMANENT BARRIER

BARRIER REFLECTORS AND OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL; AND, ON PERMANENT CONCRETE BARRIER (INCLUDING BRIDGE PARAPETS) LOCATED WITHIN 5 FEET OF THE EDGE OF THE ADJACENT TRAVEL LANE.

BARRIER REFLECTORS SHALL CONFORM TO C&MS 626, EXCEPT THAT THE SPACING SHALL BE AS PER TRAFFIC SCD MT-101.70. OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO C&MS 614.03 AND SCD MT-101.70. WHEN THE PB CONTAINS GLARE SCREEN, ONE SET OF THREE VERTICAL STRIPES OF SHEETING SHALL BE CONSIDERED EQUIVALENT TO AN OBJECT MARKER, ONE-WAY.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY:

ITEM 614, BARRIER REFLECTOR, TYPE 1, TWO-WAY - 3 EACH

ITEM 614, OBJECT MARKER, TWO-WAY - 3 EACH

PAYMENT SHALL BE FULL COMPENSATION FOR ALL MATERIAL, LABOR, INCIDENTALS AND EQUIPMENT NECESSARY FOR FURNISHING, INSTALLING, MAINTAINING AND REMOVING EACH OF THE ABOVE ITEMS.

CALCULATED SWC CHECKED MJC

MAINTENANCE OF TRAFFIC GENERAL NOTES

STA-241-9.71

TRAFFIC CONTROL INSPECTOR

THE CONTRACTOR SHALL DESIGNATE AN INDIVIDUAL OTHER THAN THE SUPERINTENDENT AND SUBJECT TO THE APPROVAL OF THE ENGINEER, TO CONTINUOUSLY INSPECT ALL TRAFFIC CONTROL DEVICES WHENEVER CONSTRUCTION WORK IS BEING PERFORMED WITHIN THE WORK LIMITS OF THE PROJECT. THE DESIGNATED INDIVIDUAL SHALL ALSO INSPECT ALL TRAFFIC DEVICES AT THE BEGINNING AND AT THE END OF EACH WORK DAY. THE DESIGNATED INDIVIDUAL OR A QUALIFIED REPRESENTATIVE SHALL ALSO BE AVAILABLE ON AN AROUND THE CLOCK BASIS TO REPAIR AND/OR REPLACE DAMAGED OR MISSING TRAFFIC CONTROL DEVICES. THESE INDIVIDUALS SHALL BE EQUIPPED WITH CELLULAR PHONES AND THEIR NAMES AND PHONE NUMBERS SHALL BE GIVEN TO THE PROJECT ENGINEER AT THE PRE-CONSTRUCTION MEETING. THE DESIGNATED INDIVIDUAL SHALL HAVE NO OTHER CONSTRUCTION RELATED DUTIES. PAYMENT FOR THE SERVICES OF THE TRAFFIC CONTROL INSPECTOR SHALL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 MAINTAINING TRAFFIC.

TRAFFIC SIGNAL HEAD ADJUSTMENTS/SIGNAL MODIFICATIONS

THE CONTRACTOR SHALL ADJUST THE LOCATION OF THE EXISTING OR PROPOSED SIGNAL HEADS FOR EACH PHASE OF CONSTRUCTION IN ACCORDANCE WITH THE OMUTCD. THE CONTRACTOR SHALL ENSURE THAT ALL MINIMUM/MAXIMUM SIGNAL HEAD TO PAVEMENT CLEARANCES ARE MAINTAINED AT ALL TIMES AND SHALL FIRST BE APPROVED BY THE ENGINEER. NO REDUCTION IN CLEARANCES SHALL BE PERMITTED.

THE CONTRACTOR SHALL MAKE THE NECESSARY SIGNAL HEAD ADJUSTMENTS AT THE FOLLOWING INTERSECTIONS:
- SR 241 & SR 172
- SR 241 & STATE AVE.
- SR 241 & HANKINS RD.
- SR 241 & LAKE AVE.
- SR 241 & HILLS AND DALES RD.

ALL WORK ASSOCIATED WITH MAINTAINING THE EXISTING SIGNALS AS DESCRIBED ABOVE SHALL BE INCIDENTAL TO THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. FROM THE TIME THE EXCAVATION BEGINS ON THE TRENCH WIDENING, THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS PLACED AT TEN (10) FOOT INTERVALS. THE LENGTH OF WIDENING OPEN AT ANY ONE TIME SHALL NOT BE GREATER THAN WHICH CAN BE COMPLETED WITHIN 14 CALENDAR DAYS. ALL PROPOSED SUBBASE AND ITEM 302 ASPHALT CONCRETE BASE MATERIAL SHALL BE COMPLETED IN A CONTINUOUS OPERATION.

TIME LIMITATION, TRAFFIC ON A MILLED SURFACE

THE MAXIMUM ALLOWABLE TIME FOR TRAFFIC TO BE PLACED ON A MILLED SURFACE SHALL BE SEVEN (7) CONSECUTIVE CALENDAR DAYS. SHOULD THE CONTRACTOR FAIL TO MEET THIS REQUIREMENT, THE CONTRACTOR SHALL BE ASSSESSED A DISINCENTIVE IN THE AMOUNT OF $1,000 PER DAY THAT THE TRAFFIC IS PLACED ON A MILLED SURFACE BEYOND THE SPECIFIED LIMIT.

MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION

THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING TRAFFIC SIGNAL/FLASHER INSTALLATIONS WITHIN THE PROJECT UNDER THE FOLLOWING CONDITIONS:

EXISTING SIGNAL/FLASHER INSTALLATIONS WHICH THE PLANS REQUIRE THE CONTRACTOR TO ADJUST, MODIFY, ADD ONTO OR REMOVE, OR WHICH THE CONTRACTOR ACTUALLY ADJUSTS, MODIFIES OR OTHERWISE DISTURBS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE ENTIRE INSTALLATION (AT AN INTERSECTION) FROM THE TIME HIS OPERATIONS FIRST DISTURB THE INSTALLATION UNTIL THE INSTALLATION HAS BEEN SUBSEQUENTLY REMOVED OR MODIFIED AND THE WORK IS ACCEPTED.

NEW OR REUSED SIGNAL/FLASHER INSTALLATIONS OR DEVICES, INSTALLED BY THE CONTRACTOR. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTENANCE OF THESE FROM THE TIME OF INSTALLATION UNTIL THE WORK IS ACCEPTED.

THE CONTRACTOR SHALL CORRECT AS QUICKLY AS POSSIBLE ALL OUTAGES OR MALFUNCTIONS. HE SHALL PROVIDE THE MAINTAINING AGENCY AND THE ENGINEER SUCH ADDRESSES AND PHONE NUMBERS WHERE HIS MAINTENANCE FORCES CAN BE CONTACTED. THE CONTRACTOR SHALL PROVIDE ONE OR MORE PERSONS TO RECEIVE ALL CALLS AND DISPATCH THE NECESSARY MAINTENANCE FORCES TO CORRECT OUTAGES. SUCH A PERSON OR PERSONS MAY BE USED TO PERFORM OTHER DUTIES AS LONG AS PROMPT ATTENTION IS GIVEN TO THESE CALLS AND A PERSON IS READILY AVAILABLE CONTINUOUSLY 24 HOURS A DAY, 7 DAYS A WEEK. ALL LAMP OUTAGES, CABLE OUTAGES, ELECTRICAL FAILURES, EQUIPMENT MALFUNCTIONS AND MISALIGNED SIGNAL HEADS SHALL BE CORRECTED TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK TO SERVICE WITHIN FOUR HOURS AFTER THE CONTRACTOR HAS BEEN NOTIFIED OF THE OUTAGE.

IN THE EVENT NEW SIGNALS ARE DAMAGED PRIOR TO ACCEPTANCE, ALL DAMAGED EQUIPMENT EXCEPT POLES AND CONTROL EQUIPMENT SHALL BE REPLACED BY THE CONTRACTOR TO THE SATISFACTION OF THE ENGINEER WITH THE SIGNAL BACK IN SERVICE WITHIN 8 HOURS AFTER THE CONTRACTOR'S NOTIFICATION OF THE OUTAGE. THE CONTRACTOR SHALL ARRANGE FOR FULL TRAFFIC CONTROL UNTIL THE SIGNAL IS BACK IN OPERATION. IF POLES AND/OR CONTROL EQUIPMENT ARE DAMAGED AND MUST BE REPLACED, THE CONTRACTOR SHALL MAKE TEMPORARY REPAIRS AS NECESSARY TO BRING THE SIGNAL BACK INTO FULL OPERATION WITHIN THE ALLOWED 8-HOUR PERIOD, AND SHALL MAKE PERMANENT REPAIRS OR REPLACEMENT AS SOON THEREAFTER AS POSSIBLE.

NONE OF THE ABOVE SHALL BE CONSTRUED AS COLLECTIVE OR CONSECUTIVE OUTAGE TIME PERIODS AT ANY ONE LOCATION. THAT IS, WHERE MORE THAN ONE OUTAGE OCCURS AT ANY ONE LOCATION THEN THE ALLOTTED TIME LIMIT SHALL BE FOR THE WORST SINGLE OUTAGE.

WHERE OUTAGES ARE THE DIRECT RESULT OF A VEHICLE ACCIDENT THE RESPONSE OF THE CONTRACTOR SHALL BE AS OUTLINED ABOVE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR COLLECTION OF ANY COMPENSATION FOR THIS WORK FROM THOSE PARTIES RESPONSIBLE FOR THE DAMAGE.

MAINTENANCE OF TRAFFIC SIGNAL/FLASHER INSTALLATION (CONT.)

WHERE THE CONTRACTOR HAS FAILED TO, OR CANNOT RESPOND TO, AN OUTAGE OR SIGNAL EQUIPMENT MALFUNCTION, AT THESE LOCATIONS WITHIN HIS RESPONSIBILITY, WITHIN PERIODS AS SPECIFIED ABOVE, THE ENGINEER MAY INVOKE THE PROVISIONS OF SECTION 105.15 AND ANY SUBSEQUENT BILLINGS TO THE STATE OR THE CITY OF MASSILLON FOR POLICE SERVICES AND MAINTENANCE SERVICES BY CITY FORCES SHALL BE DEDUCTED FROM MONIES DUE OR TO BECOME DUE THE CONTRACTOR IN ACCORDANCE WITH PROVISIONS OF SECTION 105.15.

THE CONTRACTOR SHALL PROVIDE THE MAINTENANCE SERVICE ENTIRELY WITH HIS FORCES OR HE MAY CHOOSE TO ENTER INTO A COOPERATIVE UNDERSTANDING WITH THE LOCAL MAINTAINING AGENCY TO PROVIDE THE MAINTENANCE. THE CONTRACTOR SHALL INFORM THE ENGINEER, IN WRITING, OF THE MAINTENANCE METHOD SELECTED.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DAMAGE TO ANY TRAFFIC SIGNAL COMPONENTS REQUIRED TO BE HANDLED DURING THE RELOCATION OF POLES AND REVISIONS TO THE SIGNAL SYSTEM. WHEN A TRAFFIC SIGNAL MUST BE TAKEN OUT OF SERVICE BY THE CONTRACTOR, DUE TO CONSTRUCTION PROCEDURES, THIS OUTAGE SHALL NOT EXCEED 4 HOURS AND SHALL NOT INCLUDE THE HOURS OF 6-9AM TO 3-6PM. ANY SIGNALIZED INTERSECTION, WHERE THE SIGNAL IS OUT OF SERVICE DUE TO CONSTRUCTION PROCEDURES, OR DUE TO AN OUTAGE OR MALFUNCTION OF EQUIPMENT AS DESCRIBED ABOVE, SHALL BE PROTECTED, BY THE CONTRACTOR, BY THE INSTALLATION OF TEMPORARY "STOP" SIGNS, EXCEPT FOR THE FOLLOWING INTERSECTIONS WHICH SHALL BE PROTECTED BY OFF-DUTY CITY OF MASSILLON POLICE, HIRED BY THE CONTRACTOR:

1. SR 241 (WALES ROAD)/SR 172 (LINCOLN WAY E)
2. SR 241 (WALES ROAD)/STATE AVENUE NE
3. SR 241 (WALES ROAD)/HANKINS AVENUE NE
4. SR 241 (WALES ROAD)/LAKE AVENUE NE
5. SR 241 (WALES ROAD)/HILLS AND DALES ROAD NE

ANY VEHICULAR TRAFFIC SIGNAL HEAD, EITHER NEW OR EXISTING WHICH WILL BE OUT OF OPERATION SHALL BE COVERED IN THE MANNER DESCRIBED IN 632.25.

THE CONTRACTOR SHALL MAINTAIN COMPLETE RECORDS OF MALFUNCTIONS INCLUDING:

1. TIME OF NOTIFICATION OF MALFUNCTION;
2. TIME OF WORK CREWS ARRIVAL TO CORRECT THE MALFUNCTION;
3. ACTIONS TAKEN TO CORRECT THE MALFUNCTION, INCLUDING A LIST OF PARTS REPAIRED OR REPLACED;
4. A DIAGNOSIS OF REASON FOR THE MALFUNCTION AND PROBABILITY OF REOCCURRENCE;
5. TIME OF COMPLETION OF THE REPAIR AND SYSTEM RESTORED TO FULL SERVICE.

A COPY OF THESE RECORDS SHALL BE PROVIDED TO THE ENGINEER WITHIN THREE (3) WORKING DAYS FOLLOWING COMPLETION OF EACH REPAIR.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE CONSIDERED TO BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

ITEM 614 - BUSINESS ENTRANCE (M4-H15) SIGN, AS PER PLAN

THE BUSINESS ENTRANCE (M4-H15) SIGN SHOULD BE PROVIDED AT EACH TEMPORARILY RELOCATED COMMERCIAL DRIVEWAY FOR WHICH THE RELOCATION IS NOT OBVIOUS TO THE MOTORIST. THE PROJECT ENGINEER SHALL DETERMINE WHETHER OR NOT THE DRIVEWAY RELOCATION IS, OR IS NOT, OBVIOUS AND WHETHER OR NOT A SIGN SHOULD BE PROVIDED. ONLY ONE SIGN PER BUSINESS SHALL BE PERMITTED. THE SIGN SHALL BE 36 INCH X 48 INCH IN SIZE WITH TYPE G OR TYPE H ORANGE RETROREFLECTIVE SHEETING. THE SIGN LEGEND SHALL BE PLACED ON BOTH SIDES OF THE SIGN (BACK TO BACK). THE SIGN SHALL HAVE THE STANDARD M4-H15 LEGEND WITH THE WORD "BUSINESS" ON THE TOP LINE, EXCEPT UNDER UNUSUAL CIRCUMSTANCES WHERE IT MAY NOT BE INTUITIVE THAT A DRIVEWAY SERVES A SPECIFIC BUSINESS. IN SUCH UNUSUAL CASES, THE ACTUAL BUSINESS NAME MAY BE SUBSTITUTED FOR THE WORD "BUSINESS".

THE SIGN SHALL BE MOUNTED ON TWO #3 POSTS OR ON TEMPORARY POSTS IN ACCORDANCE WITH SCD MT-105.10 AND IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION. THE SIGN SHALL BE CLEARLY VISIBLE AND SHALL CLEARLY IDENTIFY THE LOCATION OF THE DRIVEWAY. THE SIGN SHOULD BE POSITIONED AT 90 DEGREES TO THE DIRECTION(S) OF TRAFFIC. THE SIGN MAY NEED TO BE MOVED FOR EACH PHASE OF THE MAINTENANCE OF TRAFFIC OPERATIONS.

PAYMENT FOR ALL COSTS ASSOCIATED WITH MANUFACTURING, MOUNTING, RELOCATING, AND REMOVING THE SIGN, INCLUDING ALL LABOR, MATERIALS AND EQUIPMENT SHALL BE INCLUDED IN THE CONTRACT PRICE PER EACH FOR ITEM 614 - BUSINESS ENTRANCE SIGN.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS ITEM:

ITEM 614 - BUSINESS ENTRANCE SIGN - 19 EACH

PEDESTRIAN DETOUR

PEDESTRIANS WILL BE PERMITTED TO CROSS AT SIGNALIZED INTERSECTIONS. PEDESTRIAN FACILITIES AT THESE INTERSECTIONS MUST BE MAINTAINED AT ALL TIMES.

ALL TRAFFIC CONTROL DEVICES FOR THE PEDESTRIAN DETOUR SHALL BE INSTALLED AND MAINTAINED AS DESCRIBED IN ODOT SCD MT-110.10.

SEE SEQUENCE OF CONSTRUCTION NOTE ON SHEET 20 FOR DETAILS.

PAYMENT FOR ALL LABOR, EQUIPMENT AND MATERIALS SHALL BE INCLUDED IN THE LUMP SUM CONTRACT PRICE FOR ITEM 614 - MAINTAINING TRAFFIC, UNLESS SEPARATELY ITEMIZED IN THE PLAN.

CALCULATED SWC CHECKED MJC

GENERAL NOTES OF TRAFFIC MAINTENANCE

STA-241-9.71

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ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, A PORTABLE CHANGEABLE MESSAGE SIGN, THE SIGN SHALL BE OF A TYPE SHOWN ON A LIST OF APPROVED PCMS UNITS AVAILABLE ON THE OFFICE OF MATERIALS MANAGEMENT WEB PAGE. THE LIST CONTAINS CLASS A AND B UNITS WITH MINIMUM LEGIBILITY DISTANCE OF 800 FEET AND 650 FEET RESPECTIVELY.

EACH SIGN SHALL BE TRAILER MOUNTED AND EQUIPPED WITH A FUNCTIONAL DIMMING MECHANISM TO DIM THE SIGN DURING DARKNESS AND A TAMPER AND VANDAL PROOF ENCLOSURE. EACH SIGN SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE ON-SITE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT. THE SIGN SHALL ALSO BE CAPABLE OF BEING POWERED BY AN ELECTRICAL SERVICE DROP FROM A LOCAL UTILITY COMPANY. PCMS TRAILERS SHOULD BE DELINEATED.

PLACEMENT, OPERATION, MAINTENANCE AND ALL ACTIVATION OF THE SIGNS BY THE CONTRACTOR SHALL BE AS DIRECTED BY THE ENGINEER. THE PCMS SHALL BE LOCATED IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE PCMS SHOULD NOT BE LOCATED IN THE MEDIAN OF THE HIGHWAY UNLESS IT IS PROTECTED FROM BOTH DIRECTIONS OF TRAFFIC. THE PCMS SHALL BE LOCATED. IN A HIGHLY VISIBLE POSITION YET PROTECTED FROM TRAFFIC. THE CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE THE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS WILL BE OFF. ADDITIONALLY WHEN NOT IN USE FOR EXTENDED PERIODS OF TIME, THE PCMS SHALL BE TURNED, FACING AWAY FROM ALL TRAFFIC AND SHALL DISPLAY ONE OR MORE TYPE G YELLOW REFLECTIVE SHEETING SURFACES OF 9-INCH BY 15-INCH MINIMUM SIZE FACING TRAFFIC.

THE ENGINEER SHALL BE PROVIDED ACCESS TO EACH SIGN UNIT AND SHALL BE PROVIDED WITH APPROPRIATE TRAINING AND OPERATION INSTRUCTIONS TO ENABLE PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT AND TO REVISE SIGN MESSAGES, IF NECESSARY.

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE CONTRACTOR. A LIST OF ALL PROPOSED PREPROGRAMMED MESSAGES WILL BE GIVEN TO THE ENGINEER PRIOR TO CONSTRUCTION. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PREPROGRAMMED DISPLAYS SHALL NOT BE LOST AS A RESULT OF POWER FAILURES TO THE ON-BOARD COMPUTER. THE SIGN LEGEND SHALL BE CAPABLE OF BEING CHANGED IN THE FIELD. THREE LINE PRESENTATION FORMATS WITH UP TO OF SIX MESSAGE PHASES SHALL BE SUPPORTED. PCMS FORMAT SHALL PERMIT THE COMPLETE MESSAGE FOR EACH PHASE TO BE READ AT LEAST TWICE.

THE PCMS SHALL CONTAIN AN ACCURATE CLOCK AND PROGRAMMING LOGIC WHICH WILL ALLOW THE SIGN TO BE ACTIVATED, DE-ACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATA LINK WHICH WILL [IN ACTIVE CELLULAR AREAS] ALLOW REMOTE SIGN ACTIVATION, DEACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES.

ITEM 614 - PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN (CONT.)

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF 614.07. THE CONTRACTOR SHALL PRIOR TO ACTIVATING THE UNIT, MAKE ARRANGEMENTS WITH AN AUTHORIZED SERVICE AGENT FOR THE PCMS TO ASSURE PROMPT SERVICE IN THE EVENT OF FAILURE. ANY FAILURE SHALL NOT RESULT IN THE SIGN BEING OUT OF SERVICE FOR MORE THAN 12 HOURS INCLUDING WEEKENDS. FAILURE TO COMPLY MAY RESULT IN AN ORDER TO STOP WORK AND OPEN ALL TRAFFIC LANES AND/OR IN THE DEPARTMENT TAKING APPROPRIATE ACTION TO SAFELY CONTROL TRAFFIC. THE ENTIRE COST TO CONTROL TRAFFIC ACCRUED BY THE DEPARTMENT WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24 HOURS PER DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THEIR USE. THE REQUIREMENT TO FURNISH, INSTALL, MAINTAIN AND REMOVE A PCMS UNIT ON THIS PROJECT SHALL NOT IN ANY WAY RELIEVE THE CONTRACTOR OF HIS RESPONSIBILITIES AS OUTLINED IN 614.02.

PAYMENT FOR THE ABOVE DESCRIBED ITEM SHALL BE AT THE CONTRACT UNIT PRICE. PAYMENT SHALL INCLUDE ALL LABOR, MATERIALS, EQUIPMENT, FUELS, LUBRICATING OILS, SOFTWARE, HARDWARE, AND INCIDENTALS TO PERFORM THE ABOVE DESCRIBED WORK.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THIS ITEM:

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN
24 SIGN MONTH
(ASSUMING 2 PCMS SIGNS FOR 12 MONTHS)

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS

USE OF LAW ENFORCEMENT OFFICERS (LEOS) BY CONTRACTORS OTHER THAN THE USES SPECIFIED BELOW WILL NOT BE PERMITTED AT PROJECT COST. LEOS SHOULD NOT BE USED WHERE THE OMUTCD INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHALL BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS:

- DURING THE ENTIRE ADVANCE PREPARATION AND CLOSURE SEQUENCE WHERE COMPLETE BLOCKAGE OF TRAFFIC IS REQUIRED.
- DURING A TRAFFIC SIGNAL INSTALLATION WHEN IMPACTING THE NORMAL FUNCTION OF THE SIGNAL OR THE FLOW OF TRAFFIC, OR WHEN TRAFFIC NEEDS TO BE DIRECTED THROUGH AN ENERGIZED TRAFFIC SIGNAL CONTRARY TO THE SIGNAL DISPLAY (E.G., DIRECTING MOTORISTS THROUGH A RED LIGHT).

IN ADDITION TO THE REQUIREMENT OF C&MS 614 AND THE OMUTCD, A UNIFORMED LEO WITH AN OFFICIAL PATROL CAR (CAR WITH TOP-MOUNTED EMERGENCY FLASHING LIGHTS AND COMPLETE MARKINGS OF THE APPROPRIATE LAW ENFORCEMENT AGENCY) SHOULD BE PROVIDED FOR THE FOLLOWING TRAFFIC CONTROL TASKS AS APPROVED BY THE ENGINEER:

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE DURING CONSTRUCTION OPERATIONS (CONT.)

- FOR LANE CLOSURES: DURING INITIAL SET-UP PERIODS, TEAR DOWN PERIODS, SUBSTANTIAL SHIFTS OF A CLOSURE POINT OR WHEN NEW LANE CLOSURE ARRANGEMENTS ARE INITIATED FOR LONG-TERM LANE CLOSURES/SHIFTS (FOR THE FIRST AND LAST DAY OF MAJOR CHANGES IN TRAFFIC CONTROL SETUP).

IN GENERAL, LEOS SHOULD BE POSITIONED IN ADVANCE OF AND ON THE SAME SIDE AS THE LANE RESTRICTION OR AT THE POINT OF ROAD CLOSURE, AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH SIGNALIZED INTERSECTIONS IN WORK ZONES.

LEOS SHOULD NOT FORGO THEIR TRAFFIC CONTROL RESPONSIBILITIES TO APPREHEND MOTORISTS FOR ROUTINE TRAFFIC VIOLATIONS. HOWEVER, IF A MOTORIST'S ACTIONS ARE CONSIDERED TO BE RECKLESS, THEN PURSUIT OF THE MOTORIST IS APPROPRIATE.

THE LEOS WORK AT THE DIRECTION OF THE CONTRACTOR. THE CONTRACTOR IS RESPONSIBLE FOR SECURING THE SERVICES OF THE LEOS WITH THE APPROPRIATE AGENCIES AND COMMUNICATING THE INTENTIONS OF THE PLANS WITH RESPECT TO DUTIES OF THE LEOS. THE ENGINEER SHALL HAVE FINAL CONTROL OVER THE LEOS DUTIES AND PLACEMENT, AND WILL RESOLVE ANY ISSUES THAT MAY ARISE BETWEEN THE TWO PARTIES.

ENSURE PROVIDED LEOS HAVE BEEN TRAINED APPROPRIATE TO THE JOB DECISIONS THEY ARE REQUIRED TO MAKE WHILE ON THE PROJECT, IN ACCORDANCE WITH C&MS 614.03.

THE LEO SHALL REPORT IN TO THE CONTRACTOR PRIOR TO THE START OF THE SHIFT, IN ORDER TO RECEIVE INSTRUCTIONS REGARDING SPECIFIC WORK ASSIGNMENTS DURING HIS/HER SHIFT. THE LEO IS EXPECTED TO STAY AT THE PROJECT SITE FOR THE ENTIRE DURATION OF HIS/HER SHIFT. THE LEO SHALL REPORT TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT. SHOULD IT BE NECESSARY TO LEAVE THE PROJECT SITE, THE LEO SHALL NOTIFY THE ENGINEER. THE CONTRACTOR SHALL PROVIDE THE LEO WITH A TWO-WAY COMMUNICATION DEVICE WHICH SHALL BE RETURNED TO THE CONTRACTOR AT THE END OF HIS/HER SHIFT.

LEOS (WITH PATROL CAR) REQUIRED BY THE TRAFFIC MAINTENANCE TASKS ABOVE SHALL BE PAID FOR ON A UNIT PRICE (HOURLY) BASIS UNDER ITEM 614, LAW ENFORCEMENT OFFICER (WITH PATROL CAR) FOR ASSISTANCE. THE FOLLOWING ESTIMATED QUANTITIES HAVE BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 614 - LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE - 300 HOURS

THE HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

ANY ADDITIONAL COSTS (ADMINISTRATIVE OR OTHERWISE) INCURRED BY THE CONTRACTOR TO OBTAIN THE SERVICES OF AN LEO ARE INCLUDED WITH THE BID UNIT PRICE FOR ITEM 614, LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE.

ITEM SPECIAL - WORK ZONE TRAFFIC SIGNAL

THE EXISTING STRAIN POLE ON THE NORTHEAST CORNER OF THE SR 241 & HANKINS ROAD WILL BE IMPACTED BY CONSTRUCTION OPERATIONS (PAVEMENT FOR MAINTAINING TRAFFIC IN PHASE 1-3) AND THE CONTRACTOR WILL BE RESPONSIBLE TO MAKE THE NECESSARY ADJUSTMENTS TO THE EXISTING SIGNAL TO ENSURE THE SIGNAL IS FULLY OPERATIONAL FOR THE DURATION OF THE PROJECT. SIGNAL CAN BE MAINTAINED BY MEANS OF EXISTING, TEMPORARY, OR PERMANENT SIGNAL APPURTENANCES. ANY TEMPORARY SIGNAL INSTALLATION MUST BE INSTALLED TO THE SATISFACTION OF THE ENGINEER IN THE FIELD.

ALL WORK ASSOCIATED WITH MAINTAINING OPERATIONS OF THE SIGNAL AS DESCRIBED ABOVE WILL BE INCLUDED IN THE FOLLOWING ITEM. THE ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM SPECIAL - WORK ZONE TRAFFIC SIGNAL - 1 EACH

ITEM 614 - MAINTAINING TRAFFIC, MISC.: 3" PARTIAL DEPTH PAVEMENT REPAIR

THE FOLLOWING QUANTITY HAS BEEN PROVIDED TO REPAIR POTHOLES AND DETERIORATED JOINTS THROUGHOUT THE PROJECT LIMITS FOR THE DURATION OF THE PROJECT. THE WORK WILL BE COMPLETED IN COMPLIANCE WITH ITEM 251 - PARTIAL DEPTH PAVEMENT REPAIR IN THE CONSTRUCTION AND MATERIAL SPECIFICATIONS. THE DEPTH OF THE REPAIR WILL BE 3" MINIMUM FROM THE EXISTING PAVEMENT SURFACE. PAYMENT IS FULL COMPENSATION FOR FURNISHING ALL MATERIALS, INCLUDING PAINT, TACK COAT, ASPHALT CONCRETE AND ALL LABOR, EQUIPMENT AND INCIDENTALS NECESSARY TO COMPLETE THIS WORK. PAYMENT SHALL BE PER S.F. OF ITEM 614 - MAINTAINING TRAFFIC, MISC.: PARTIAL DEPTH PAVEMENT REPAIR.

THIS ITEM IS INTENDED TO BE USED ON THE EXISTING MAINLINE PAVEMENT AND SHOULDER AREAS AND ALL DETOUR ROUTES UNLESS OTHERWISE NOTED. ALL REPAIRS WILL BE PERFORMED AT THE DIRECTION OF THE PROJECT ENGINEER. MATERIAL FOR THE PARTIAL DEPTH PAVEMENT REPAIRS WILL BE ITEM 301 - ASPHALT CONCRETE BASE, PG64-22.

THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR THE ABOVE REFERENCED WORK:

ITEM 614 - MAINTAINING TRAFFIC, MISC.: 3" PARTIAL DEPTH PAVEMENT REPAIR - 3100 SF

ADVANCED NOTICE TO PAVE

THE CONTRACTOR SHALL SUBMIT FOR APPROVAL TO THE DISTRICT CONSTRUCTION ENGINEER A DETAILED SCHEDULE 15 DAYS PRIOR TO THE PLACEMENT OF THE OVERLAY COURSES, ON HOW THEY PROPOSE TO PROSECUTE THE PAVING OPERATIONS. THE DETAILS SHALL SHOW THE ORDER OF PERFORMANCE OF EACH STAGE (START TO FINISH) OF THE WORK INCLUDING THE MAINTENANCE OF TRAFFIC THAT WILL BE USED.

DETOUR NOTIFICATION

THE CONTRACTOR SHALL ADVISE THE CITY OF MASSILLON (330-830-1722) AND THE ODOT DISTRICT 4 OFFICE (330-786-3148) EIGHTEEN (18) DAYS IN ADVANCE OF WHEN THE DETOUR ROUTE SHOULD BE IN EFFECT. ALL WORK ZONE DEVICES REQUIRED SHALL BE FURNISHED, ERECTED, MAINTAINED, AND SUBSEQUENTLY REMOVED BY THE CONTRACTOR. PAYMENT FOR ALL WORK ASSOCIATED WITH THE DETOUR SHALL BE INCLUDED UNDER THE LUMP SUM BID FOR ITEM 614 - DETOUR SIGNING.

CALCULATED SWC CHECKED MJC

GENERAL NOTES OF TRAFFIC

MAINTENANCE

STA-241-9.71

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NOTIFICATION OF TRAFFIC RESTRICTIONS

THROUGHOUT THE DURATION OF THE PROJECT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER IN WRITING OF ALL TRAFFIC RESTRICTIONS AND UPCOMING MAINTENANCE OF TRAFFIC CHANGES. THE CONTRACTOR SHALL ENSURE THE WRITTEN NOTIFICATION IS SUBMITTED IN A TIMELY MANNER TO ALLOW THE PROJECT ENGINEER TO MEET THE REQUIRED TIME FRAMES SET FORTH IN THE TABLE BELOW TO INFORM THE SPECIAL HAULING PERMITS SECTION (HAULING.PERMITS@DOT.OHIO.GOV) AND THE DISTRICT PUBLIC INFORMATION OFFICE (PIO). THIS NOTIFICATION SHALL BE RECEIVED BY THE PROJECT ENGINEER PRIOR TO THE PHYSICAL SETUP OF ANY APPLICABLE SIGNS OR MESSAGE BOARDS.

INFORMATION SHOULD INCLUDE, BUT IS NOT LIMITED TO, ALL CONSTRUCTION ACTIVITIES THAT IMPACT OR INTERFERE WITH TRAFFIC AND SHALL LIST THE SPECIFIC LOCATION, TYPE OF WORK, ROAD STATUS, DATE AND TIME OF RESTRICTION, DURATION OF RESTRICTION, NUMBER OF LANES MAINTAINED, NUMBER OF LANES CLOSED, MINIMUM CLEARANCE, MINIMUM WIDTH OF DRIVABLE PAVEMENT, DETOUR ROUTES, IF APPLICABLE, AND ANY OTHER INFORMATION REQUESTED BY THE PROJECT ENGINEER.

NOTIFICATION TIME FRAME TABLE

ITEM	DURATION OF CLOSURE	NOTICE DUE TO PERMITS & PIO
RAMP & ROAD CLOSURES	>= 2 WEEKS	21 CALENDER DAYS PRIOR TO CLOSURE
	> 12 HOURS & < 2 WEEKS	14 CALENDER DAYS PRIOR TO CLOSURE
	< 12 HOURS	4 BUSINESS DAYS PRIOR TO CLOSURE
LANE CLOSURES & RESTRICTIONS	>= 2 WEEKS	14 CALENDER DAYS PRIOR TO CLOSURE
	< 2 WEEKS	5 BUSINESS DAYS PRIOR TO CLOSURE
START OF CONSTRUCTION & TRAFFIC PATTERN CHANGES	N/A	14 CALENDER DAYS PRIOR TO IMPLEMENTATION

ANY UNFORESEEN CONDITIONS NOT SPECIFIED IN THE PLANS REQUIRING TRAFFIC RESTRICTIONS SHALL ALSO BE REPORTED TO THE PROJECT ENGINEER USING THE NOTIFICATION TIME TABLE.

ITEM 614, WORK ZONE IMPACT ATTENUATOR FOR 24" WIDE HAZARDS (UNIDIRECTIONAL OR BIDIRECTIONAL)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING'S APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS, FROM THE ROADWAY STANDARDS APPROVED PRODUCTS WEB PAGE.

INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

THE CONTRACTOR SHALL REPAIR OR REPLACE A DAMAGED UNIT WITHIN 24 HOURS OF A DAMAGING IMPACT.

WHEN BIDIRECTIONAL DESIGNS ARE SPECIFIED, THE CONTRACTOR SHALL SUPPLY APPROPRIATE TRANSITIONS.

WHEN GATING IMPACT ATTENUATORS ARE DESIRED, THE CONTRACTOR SHALL SUBMIT DOCUMENTATION TO THE ENGINEER FOR ACCEPTANCE.

THE COST FOR THE ADDITIONAL BARRIER REQUIRED FOR A GATING IMPACT ATTENUATOR SHALL BE INCLUDED IN THE COST OF THE GATING IMPACT ATTENUATOR.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT AND MAINTAIN A COMPLETE AND FUNCTIONAL IMPACT ATTENUATOR SYSTEM, INCLUDING ALL RELATED BACKUPS, TRANSITIONS, LEVELING PADS, HARDWARE AND GRADING, NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

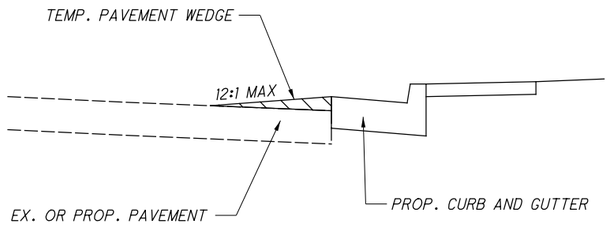
TEMPORARY PAVEMENT WEDGE

TEMPORARY PAVEMENT WEDGES SHALL BE PROVIDED AT ALL TIMES WHERE TRAFFIC IS REQUIRED TO TRAVEL FROM OR ONTO A SURFACE OF A DIFFERENT ELEVATION IN THE DIRECTION OF TRAVEL (JOINTS, MANHOLES, CATCH BASINS, VALVE BOXES, MONUMENT BOXES, ETC.). THE TAPER RATE OF THE TEMPORARY PAVEMENT WEDGES SHALL BE AS PER THE REQUIREMENTS IN THE CHART BELOW. THE MATERIAL USED FOR THE TEMPORARY PAVEMENT WEDGES SHALL MATCH THE SURFACE COURSE SPECIFIED IN THESE PLANS. ADDITIONALLY, TEMPORARY PAVEMENT WEDGES SHALL BE PLACED BETWEEN THE PROPOSED CURB AND GUTTER AND THE CENTERLINE TO PROVIDE POSITIVE DRAINAGE AND TO PREVENT DAMAGE TO THE PROPOSED CURB AND GUTTER DURING THE WINTER MONTHS.

TEMPORARY PAVEMENT WEDGES SHALL BE REMOVED PRIOR TO PLACING THE SPECIFIED PAVEMENT COURSE.

PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE LUMP SUM BID ITEM FOR ITEM FOR ITEM 614 - MAINTAINING TRAFFIC.

		DURATION	
		7 DAYS OR LESS	MORE THAN 7 DAYS
SPEED	LESS THAN 45 MPH	36:1	60:1
	45 MPH OR GREATER	60:1	120:1



TEMPORARY PAVEMENT WEDGE DETAIL

UTILITY COORDINATION

THE CONTRACTOR SHALL COORDINATE HIS OPERATIONS WITH THE WORK FORCES OF UTILITY COMPANIES RELOCATING THEIR FACILITIES SO AS TO COMPLETE ALL SCHEDULED CONSTRUCTION ACTIVITIES WITHOUT UNDUE DELAY OR INTERFERENCE IN ACCORDANCE WITH 105.07 OF THE SPECIFICATIONS. THE CONTRACTOR SHALL ARRANGE WITH OTHER WORK FORCES A MUTUALLY ACCEPTABLE WORK SCHEDULE SUBJECT TO THE APPROVAL OF THE ENGINEER PRIOR TO COMMENCING ANY OPERATIONS. THE CONTRACTOR SHALL PRESENT ANY UNRESOLVED SCHEDULE CONFLICTS WITH THE OTHER WORK FORCES IN WRITING TO THE ENGINEER WITHIN TWO (2) WORKING DAYS OF THE CONFLICT DISCOVERY. COMPENSATION FOR THE ABOVE COOPERATION SHALL BE INCIDENTAL TO THE VARIOUS PAY ITEMS WITHIN THE PROJECT.

ITEM 614 - WORK ZONE MARKING SIGN

THE WORK ZONE MARKING "NO EDGE LINE" (W8-H12a-36) SIGN SHALL BE IN ACCORDANCE WITH THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, LATEST EDITION. THE SIGN SHALL BE CLEARLY VISIBLE AND THE SIGN MAY NEED TO BE MOVED FOR EACH PHASE OF THE MAINTENANCE OF TRAFFIC OPERATIONS.

PAYMENT FOR ALL COSTS ASSOCIATED WITH MANUFACTURING, MOUNTING, RELOCATING, AND REMOVING THE SIGN, INCLUDING ALL LABOR, MATERIALS AND EQUIPMENT SHALL BE INCLUDED IN THE CONTRACT PRICE PER EACH FOR ITEM 614 - WORK ZONE MARKING SIGN.

THE FOLLOWING ESTIMATED QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY AND IS TO BE USED, AS DIRECTED BY THE ENGINEER, THROUGHOUT THE PROJECT LIMITS.

ITEM 614 - WORK ZONE MARKING SIGN - 2 EACH

WINTER TRAFFIC LIMITATIONS

ALL EXISTING LANES SHALL BE OPEN TO TRAFFIC BETWEEN NOVEMBER 1 AND APRIL 1. OCTOBER 31 SHALL BE CONSIDERED TO CONSTITUTE AN INTERIM COMPLETION DATE AND LIQUID DAMAGES OF $2000 SHALL BE ASSESSED FOR EACH CALENDAR DAY THAT THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT. THE CONTRACTOR MAY CLOSE LANES PRIOR TO APRIL 1 WITH WRITTEN APPROVAL FROM THE DISTRICT CONSTRUCTION ENGINEER.

CALCULATED SWC CHECKED MJC

MAINTENANCE OF TRAFFIC GENERAL NOTES

STA-241-9.71

TEMPORARY SIGNAL TIMINGS (SR 241 & HILLS AND DALES RD.)

THE CONTRACTOR SHALL IMPLEMENT THE TEMPORARY SIGNAL TIMINGS AND UTILIZE THROUGHOUT ALL PHASES OF CONSTRUCTION, AS SHOWN IN THE TABLE BELOW.

THE CONTRACTOR SHALL VERIFY THAT THE EXISTING VIDEO DETECTION SYSTEM IS FUNCTIONING PROPERLY AND ADJUST DETECTION ZONES AS NEEDED TO REFLECT THE TEMPORARY LANE CONFIGURATION AS DEPICTED IN THE MAINTENANCE OF TRAFFIC PLANS.

THE CONTRACTOR SHALL VERIFY THAT THE EXISTING PEDESTRIAN PUSH BUTTONS ARE FUNCTION PROPERLY AND THAT THE EXCLUSIVE PEDESTRIAN PHASE IS NOT OPERATING IN RECALL DUE TO A BROKEN/STUCK PUSH BUTTON.

PAYMENT FOR THIS WORK SHALL BE CONSIDERED INCIDENTAL TO THE LUMP SUM BID ITEM FOR ITEM 614 - MAINTAINING TRAFFIC.

INTERSECTION: S.R. 241 (WALES RD. NE) / HILLS AND DALES RD. NE
MAINTAINING AGENCY: CITY OF MASSILLON

START UP		DUAL ENTRY: YES			PHASES:		2,6		
		REST IN RED:			RING 1	-		RING 2	-
START IN:	ALL RED	OVERLAP				A	B	C	D
TIME FOR FLASH OR ALL RED:	9, 6								
FIRST PHASE(S):	ϕ2+ϕ6	PHASES				2 & 3	-	-	-
COLOR DISPLAYED:	GREEN								

INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)			1	2	3	4	5	6	7	8
DIRECTION			SB LT	NB	WB	PED	-	SB	-	-
MINIMUM GREEN (INITIAL)		(SEC.)	7	10	10	-	-	10	-	-
ADDED INITIAL		*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL		(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)		(SEC.)	3.0	3.0	3.0	-	-	3.0	-	-
TIME BEFORE REDUCTION		*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP		*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE		*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I		(SEC.)	7	30	40	-	-	30	-	-
MAXIMUM GREEN II		(SEC.)	-	-	-	-	-	-	-	-
YELLOW CHANGE		(SEC.)	3.0	4.4	3.1	-	-	4.4	-	-
ALL RED CLEARANCE		(SEC.)	2.4	1.0	2.1	-	-	1.0	-	-
WALK		(SEC.)	-	-	-	7	-	-	-	-
PEDESTRIAN CLEARANCE		(SEC.)	-	-	-	23	-	-	-	-
RECALL	MAXIMUM	(ON/OFF)	-	-	-	-	-	-	-	-
	MINIMUM	(ON/OFF)	-	ON	-	-	-	ON	-	-
	PEDESTRIAN	(ON/OFF)	-	-	-	-	-	-	-	-
MEMORY		(ON/OFF)	-	-	-	-	-	-	-	-

*VOLUME DENSITY CONTROLS

CALCULATED SWC
CHECKED MJC

MAINTENANCE OF TRAFFIC GENERAL NOTES

STA-241-9.71

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SEQUENCE OF CONSTRUCTION

PRE PHASE:

CONTRACTOR WILL PERFORM PARTIAL DEPTH PAVEMENT REPAIRS ALONG WEST SIDE OF WALES ROAD (SR 241) AS DIRECTED BY THE ENGINEER PRIOR TO INSTALLING PHASE 1 TRAFFIC CONTROL ITEMS.

CONTRACTOR SHALL PERFORM THE WORK WITH USE OF FLAGGER DURING OFF PEAK HOURS (9AM-3PM AND 6PM-SUNSET).

ALL PRIVATE UTILITIES SHALL BE RELOCATED PRIOR TO INSTALLING PHASE 1 TRAFFIC CONTROL ITEMS.

PHASE 1 WALES ROAD:

PRIOR TO THE START OF PHASE 1 CONSTRUCTION, PLACE ALL TEMPORARY TRAFFIC CONTROL DEVICE, TEMPORARY PAVEMENT (PER MT-97.10), AND TEMPORARY PAVEMENT MARKINGS (PER MT-99.20) REQUIRED FOR PHASE 1 CONSTRUCTION.

CONTRACTOR SHALL ESTABLISH THE TRUCK DETOUR AS DETAILED ON THE TRUCK DETOUR PLAN PRIOR TO PLACING THE PHASE 1 MARKINGS. THE TRUCK DETOUR SHALL REMAIN IN PLACE FOR THE DURATION OF THE PROJECT.

CONTRACTOR SHALL CONSTRUCT THE ROADWAY IMPROVEMENTS ON THE EAST SIDE OF WALES ROAD (SR 241), DRAINAGE IMPROVEMENTS, AND TEMPORARY PAVEMENT AS DESCRIBED IN THE PHASE 1 MOT TYPICAL SECTIONS. PROPOSED PAVEMENT WILL BE CONSTRUCTED UP TO AND INCLUDING THE ASPHALT INTERMEDIATE COURSE.

TRAFFIC WILL BE MAINTAINED ON THE WEST SIDE OF WALES ROAD ON EXISTING PAVEMENT.

STORM LATERALS AND THE WATER MAIN SIDE STREET CROSSINGS SHALL BE CONSTRUCTED DURING OFF PEAK HOURS (9AM-3PM AND 6PM-SUNSET), WHILE MAINTAINING TWO-WAY, ONE-LANE TRAFFIC UNDER FLAGGER CONTROL. ALL TRENCHES MUST BE COVERED EACH DAY AFTER WORK IS COMPLETED.

STORM LATERALS AT THE FOLLOWING LOCATIONS WILL BE INSTALLED PART WIDTH:
- STA. 117+35 (NORTH OF ROSLYN AVE.)
- STA. 118+95 (SOUTH OF WILLIAMS AVE.)
- STA. 130+25 (KENDAL AVE.)
- STA. 160+02 (NORTH OF STRATFORD AVE.)
- STA. 166+75 (NORTH OF PROVIDENCE RD.)

STORM LATERALS NOT CONNECTED WILL BE PLUGGED AT THE PHASE LINE AND CATCH BASINS NOT CONNECTED TO AN EXISTING OR PROPOSED SYSTEM SHALL BE COVERED UNTIL THEY CAN BE CONNECTED.

THE WATER MAIN SIDE STREET CROSSINGS MAY BE PERFORMED IN PHASE 1 AND/OR PHASE 2 FULL-WIDTH OR PART-WIDTH. THE CROSSINGS SHALL BE CAPPED NEAR THE TIE-IN POINT. THE TIE-IN SHALL OCCUR IN PHASE 2 AFTER THE WALES ROAD WATER MAIN IS TESTED AND APPROVED.

CONTRACTOR WILL BE REQUIRED TO MAINTAIN THE EXISTING TURN LANES ON WALES ROAD AT LINCOLN WAY, HANKINS ROAD, LAKE AVENUE, AND HILLS AND DALES ROAD. TWO-WAY ONE-LANE TRAFFIC UNDER FLAGGER CONTROL WILL BE PERMITTED DURING OFF PEAK HOURS (9AM-3PM AND 6PM-SUNSET).

SEQUENCE OF CONSTRUCTION (CONT.)

PHASE 1 WALES ROAD (CONT.):

PEDESTRIAN TRAFFIC WILL BE MAINTAINED ON THE WEST SIDE OF WALES ROAD ON THE EXISTING SIDEWALK.

PEDESTRIAN TRAFFIC ON THE EAST SIDE OF THE STREET WILL BE DETOURED TO ADJACENT SIDESTREETS AS NEEDED AS PER ODOT SCD MT-110.10 TO CONSTRUCT THE NEW SIDEWALK ON THE EAST SIDE OF THE STREET. SIDEWALK REPLACEMENT WILL BE LIMITED TO 300' MAX. SIDEWALK CLOSURES ON CONSECUTIVE BLOCKS WILL NOT BE PERMITTED.

SUGGESTED DETOUR ROUTES TO CONSTRUCT SIDEWALK BETWEEN SIDE STREETS CAN BE SEEN BELOW. THE BLOCK BETWEEN STREET A AND STREET B WILL BE DETOURED TO STREET C:

PHASE 1 PEDESTRIAN DETOUR CHART		
STREET A	STREET B	STREET C
NORTH AVE.	ANDREW AVE.	LEWIS PL.
ANDREW AVE.	RODMAN AVE.	LEWIS PL.
RODMAN AVE.	GRAY CT.	HARMON PL.
GRAY CT.	STATE AVE.	HARMON PL.

PEDESTRIANS WILL BE DETOURED TO THE WEST SIDE OF WALES ROAD DURING SIDEWALK CONSTRUCTION BETWEEN STATE AVE. AND HANKINS RD AT THE SIGNALIZED INTERSECTIONS.

THE PEDESTRIAN CROSSING AT THE EAST SIDE OF WALES ROAD AT LINCOLN WAY WILL BE CLOSED TO CONSTRUCT THE NEW SIDEWALK. PEDESTRIANS ON THE NORTH SIDE OF LINCOLN APPROACHING FROM THE WEST WILL CROSS AT HESS BOULEVARD. SIGNING SHALL BE AS PER ODOT SCD MT-110.10.

PEDESTRIANS WILL BE PERMITTED TO CROSS AT SIGNALIZED INTERSECTIONS. PEDESTRIAN FACILITIES AT THESE INTERSECTIONS MUST BE MAINTAINED AT ALL TIMES.

PHASE 2 WALES ROAD:

PRIOR TO THE START OF PHASE 2 CONSTRUCTION, PLACE ALL TEMPORARY TRAFFIC CONTROL DEVICE, TEMPORARY PAVEMENT (PER MT-97.10), AND TEMPORARY PAVEMENT MARKINGS (PER MT-99.20) REQUIRED FOR PHASE 2 CONSTRUCTION.

CONTRACTOR SHALL CONSTRUCT THE ROADWAY IMPROVEMENTS ON THE WEST SIDE OF WALES ROAD (SR 241) AND THE WATER MAIN AS DESCRIBED IN THE PHASE 2 MOT TYPICAL SECTIONS. PROPOSED PAVEMENT WILL BE CONSTRUCTED UP TO AND INCLUDING THE ASPHALT INTERMEDIATE COURSE.

TRAFFIC WILL BE MAINTAINED ON THE EAST SIDE OF WALES ROAD ON EXISTING, PROPOSED, AND TEMPORARY PAVEMENT.

THE REMAINING STORM LATERALS AND WATER MAIN SIDE STREET CROSSINGS AND THE WATER SERVICE CONNECTIONS (ON BOTH SIDES OF THE STREET) SHALL BE CONSTRUCTED DURING OFF PEAK HOURS (9AM-3PM AND 6PM-SUNSET) WHILE MAINTAINING TWO-WAY, ONE-LANE TRAFFIC UNDER FLAGGER CONTROL (PER MT-97.10). ALL TRENCHES MUST BE COVERED EACH DAY AFTER WORK IS COMPLETED.

CONTRACTOR WILL BE REQUIRED TO MAINTAIN THE EXISTING TURN LANES ON WALES ROAD AT LINCOLN WAY, HANKINS ROAD, LAKE AVENUE, AND HILLS AND DALES ROAD. TWO-WAY ONE-LANE TRAFFIC UNDER FLAGGER CONTROL WILL BE PERMITTED DURING OFF PEAK HOURS (9AM-3PM AND 6PM-SUNSET).

THE REMAINING STORM SEWER LATERALS WILL BE CONSTRUCTED AND CATCH BASINS NOT FULLY CONSTRUCTED IN PHASE 1 SHALL BE CONSTRUCTED.

SEQUENCE OF CONSTRUCTION (CONT.)

PHASE 2 WALES ROAD (CONT.):

PEDESTRIAN TRAFFIC WILL BE MAINTAINED ON THE EAST SIDE OF WALES ROAD ON THE PROPOSED SIDEWALK.

PEDESTRIAN TRAFFIC ON THE WEST SIDE OF THE STREET WILL BE DETOURED TO ADJACENT SIDESTREETS AS NEEDED AS PER ODOT SCD MT-110.10 TO CONSTRUCT THE NEW SIDEWALK ON THE WEST SIDE OF THE STREET. SIDEWALK REPLACEMENT WILL BE LIMITED TO 300' MAX. SIDEWALK CLOSURES ON CONSECUTIVE BLOCKS WILL NOT BE PERMITTED.

SUGGEST DETOUR ROUTES TO CONSTRUCT SIDEWALK BETWEEN SIDE STREETS CAN BE SEEN BELOW. THE BLOCK BETWEEN STREET A AND STREET B WILL BE DETOURED TO STREET C.

PHASE 2 PEDESTRIAN DETOUR CHART		
STREET A	STREET B	STREET C
NORTH AVE.	ANDREW AVE.	PARKVIEW ST.
ANDREW AVE.	RODMAN AVE.	PARKVIEW ST.
RODMAN AVE.	GRAY CT.	PARKVIEW ST.
GRAY CT.	STATE AVE.	PARKVIEW ST.
STATE AVE.	ROSLYN AVE.	PARKVIEW ST.
ROSLYN AVE.	WILLIAMS AVE.	PARKVIEW ST.
WILLIAMS AVE.	KENDAL AVE.	11TH ST.
KENDAL AVE.	ROTCH AVE.	11TH ST.
ROTCH AVE.	LAKE AVE.	11TH ST.
LAKE AVE.	BENNINGTON AVE.	11TH ST.
BENNINGTON AVE.	COVENTRY RD.	11TH ST.
COVENTRY RD.	STRATFORD AVE.	COVENTRY RD.
STRATFORD AVE.	PROVIDENCE RD.	COVENTRY RD.
PROVIDENCE RD.	LENNOX AVE.	COVENTRY RD.

THE PEDESTRIAN CROSSING AT THE WEST SIDE OF WALES SHALL BE CLOSED. PEDESTRIANS ON THE NORTH SIDE OF LINCOLN APPROACHING FROM THE EAST WILL BE REQUIRED TO CROSS AT 8TH STREET. SIGNING WILL BE AS PER ODOT SCD MT-110.10.

PEDESTRIANS WILL BE PERMITTED TO CROSS AT SIGNALIZED INTERSECTIONS. PEDESTRIAN FACILITIES AT THESE INTERSECTIONS MUST BE MAINTAINED AT ALL TIMES.

PHASE 2A LAKE AVENUE:

CONTRACTOR SHALL CONSTRUCT THE ROADWAY IMPROVEMENTS ON THE SOUTH SIDE OF LAKE AVE INCLUDING THE WATER MAIN AND SERVICE CONNECTIONS CONCURRENTLY WITH THE PHASE 2 OPERATIONS OF WALES ROAD. PROPOSED PAVEMENT WILL BE CONSTRUCTED UP TO AND INCLUDING THE ASPHALT INTERMEDIATE COURSE. TRAFFIC WILL BE MAINTAINED AS SHOWN IN THE PHASE 2A TYPICAL SECTIONS.

STORM LATERALS AND WATER SERVICE CONNECTIONS SHALL BE CONSTRUCTED DURING OFF PEAK HOURS (9AM-3PM AND 6PM-SUNSET) WHILE MAINTAINING TWO-WAY, ONE-LANE TRAFFIC UNDER FLAGGER CONTROL. ALL TRENCHES MUST BE COVERED EACH DAY AFTER WORK IS COMPLETED.

SEQUENCE OF CONSTRUCTION (CONT.)

PHASE 2B LAKE AVENUE:

CONTRACTOR SHALL CONSTRUCT THE REMAINING ROADWAY IMPROVEMENTS ON THE NORTH SIDE OF LAKE AVE CONCURRENTLY WITH PHASE 2 OPERATIONS OF WALES ROAD. PROPOSED PAVEMENT WILL BE CONSTRUCTED UP TO AND INCLUDING THE ASPHALT INTERMEDIATE COURSE. TRAFFIC WILL BE MAINTAINED AS SHOWN IN THE PHASE 2B TYPICAL SECTIONS.

PHASE 3 WALES ROAD:

CONTRACTOR SHALL REMOVE THE TEMPORARY PAVEMENT PLACED IN PHASE 1 AND CONSTRUCT THE REMAINING PAVEMENT, CURB AND GUTTER, AND WALK ON THE EAST SIDE OF WALES ROAD. PHASE 2 PAVEMENT MARKINGS WILL REMAIN IN LOCATIONS OUTSIDE OF THE PHASE 3 WORK LIMITS.

PHASE 4 WALES ROAD AND LAKE AVENUE:

THE CONTRACTOR SHALL PERFORM PAVEMENT PLANING, PLACE THE FINAL ASPHALT SURFACE COURSE, AND PLACE FINAL PAVEMENT MARKINGS THROUGHOUT THE PROJECT LIMITS. DURING PAVEMENT PLANING AND PLACEMENT OF THE ASPHALT SURFACE COURSE, TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH MT-95.31, MT-95.32, MT-95.60, MT-95.61, AND MT-97.12. DURING PLACEMENT OF FINAL PAVEMENT MARKINGS, TRAFFIC SHALL BE MAINTAINED IN ACCORDANCE WITH MT-99.20. ALL WORK IN THIS PHASE SHALL BE COMPLETED DURING OFF PEAK HOURS (9AM-3PM AND 6PM-SUNSET).

UPON COMPLETION OF THE FINAL ASPHALT SURFACE COURSE BUT BEFORE THE PERMANENT STRIPING IS PLACED. THE CONTRACTOR SHALL STRIPE THE PROPOSED ROADWAY IN ACCORDANCE TO THE TRAFFIC CONTROL PLANS, AS DIRECTED BY THE ENGINEER.

THE FOLLOWING QUANTITIES SHALL BE USED FOR THE COMPLETION OF THIS WORK AND HAVE BEEN CARRIED TO THE GENERAL SUMMARY:

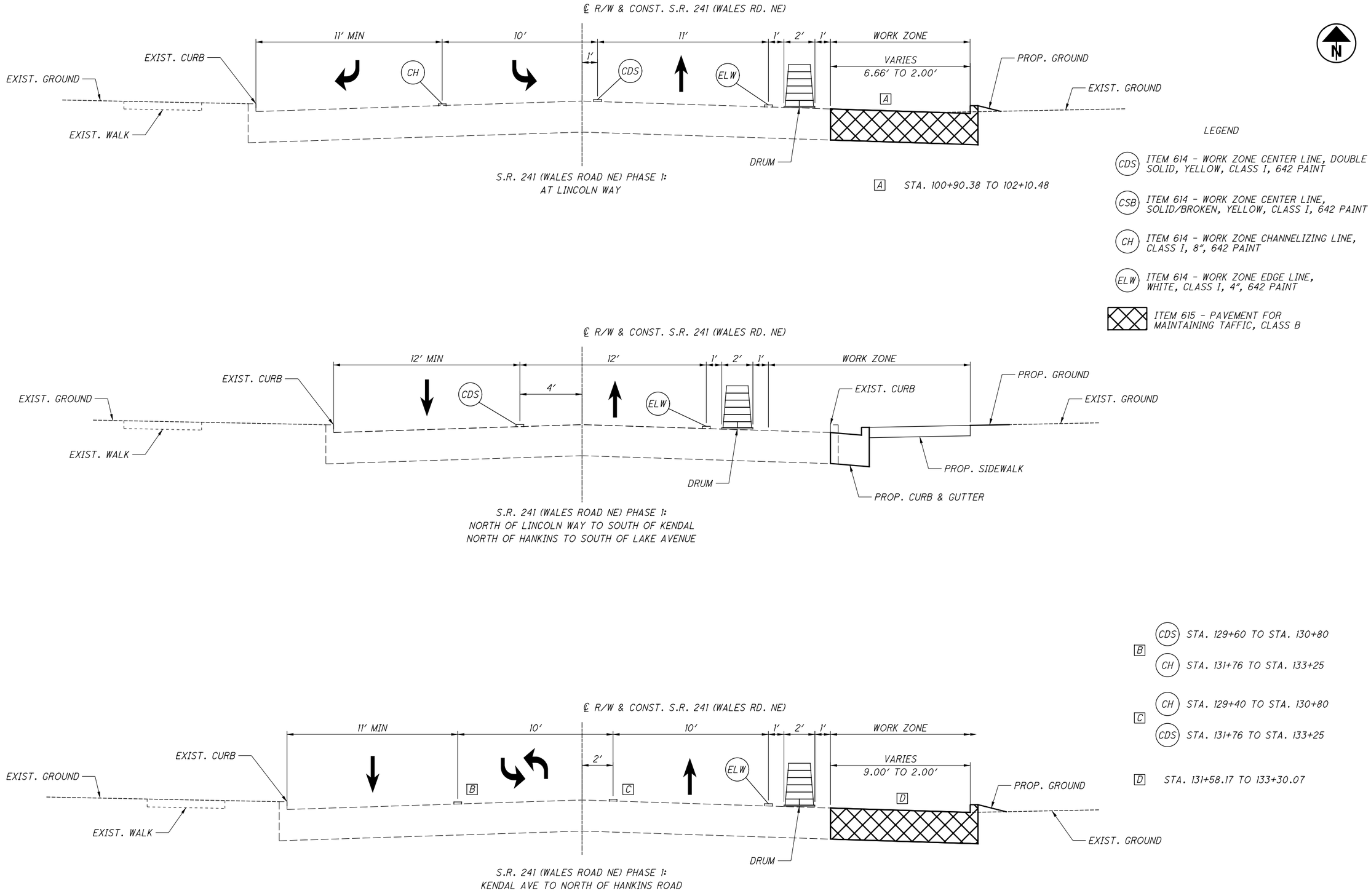
ITEM 614 - WORK ZONE LANE LINE, CLASS III, 4", 642 PAINT - 0.44 MILE
ITEM 614 - WORK ZONE CENTER LINE, YELLOW, CLASS III, 642 PAINT - 2.74 MILE
ITEM 604 - WORK ZONE EDGE LINE, WHITE, CLASS III, 4", 642 PAINT - 0.04 MILE
ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS III, 8", 642 PAINT - 2,242 FT
ITEM 614 - WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS III, 642 PAINT - 52 FT
ITEM 614 - WORK ZONE STOP LINE, CLASS III, 642 PAINT - 364 FT
ITEM 614 - WORK ZONE CROSSWALK LINE, CLASS III, 642 PAINT - 1,262 FT
ITEM 614 - WORK ZONE ARROW, CLASS III, 642 PAINT - 83 EA

CALCULATED SWC
CHECKED MJC

MAINTENANCE OF TRAFFIC GENERAL NOTES

STA-241-9.71

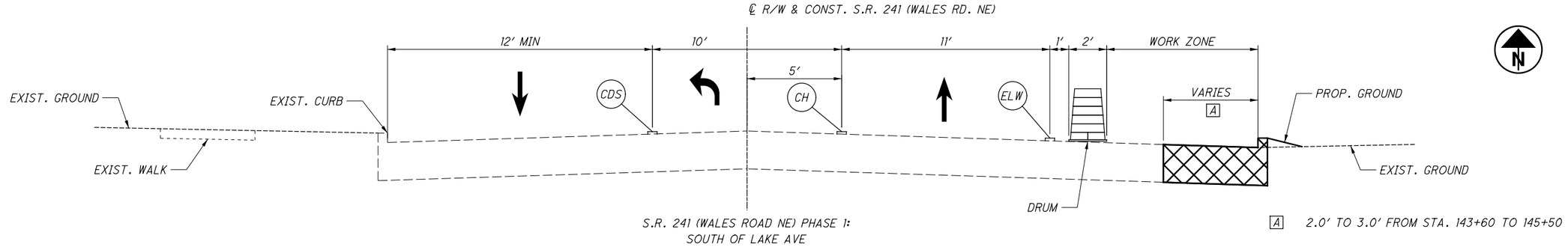
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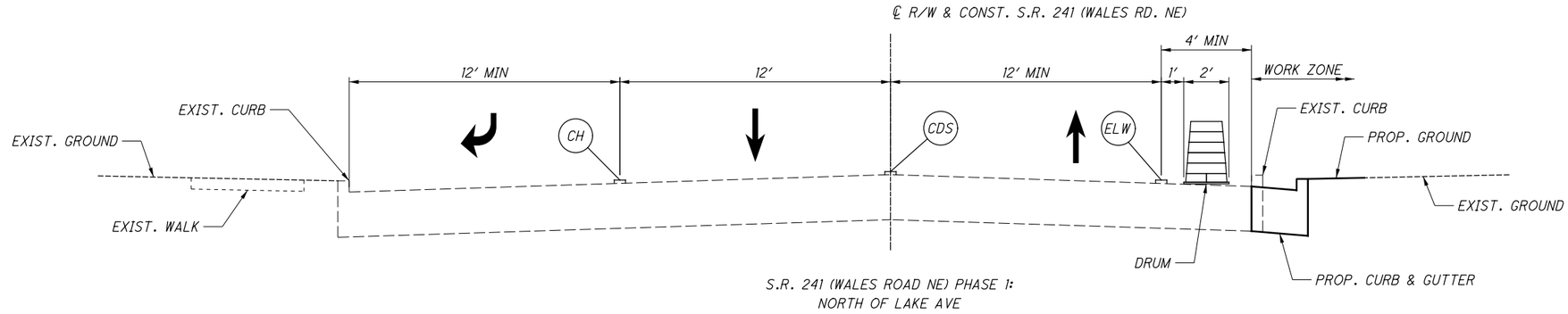


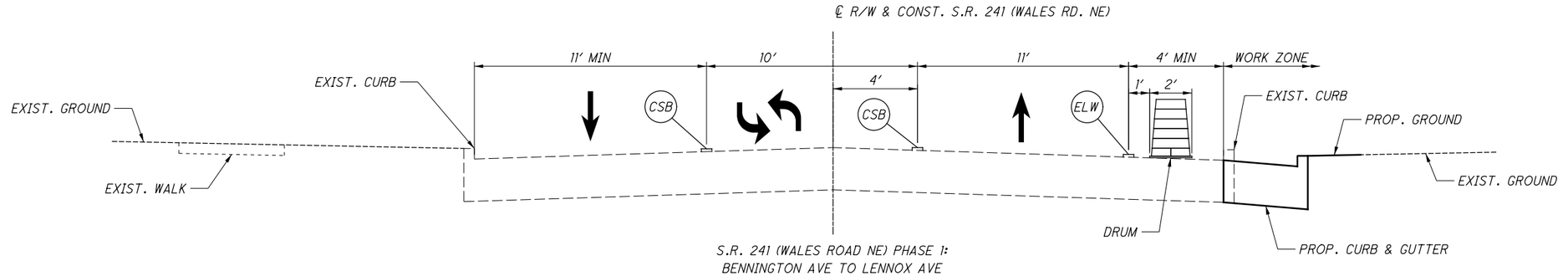
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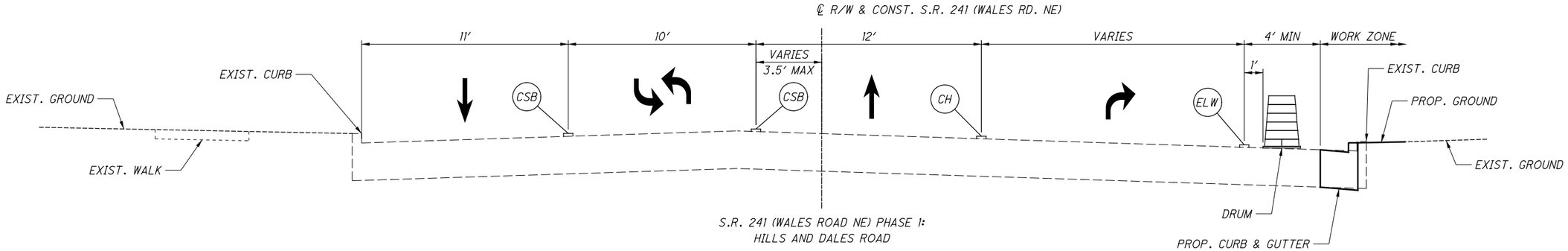
MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 1

STA-241-9.71







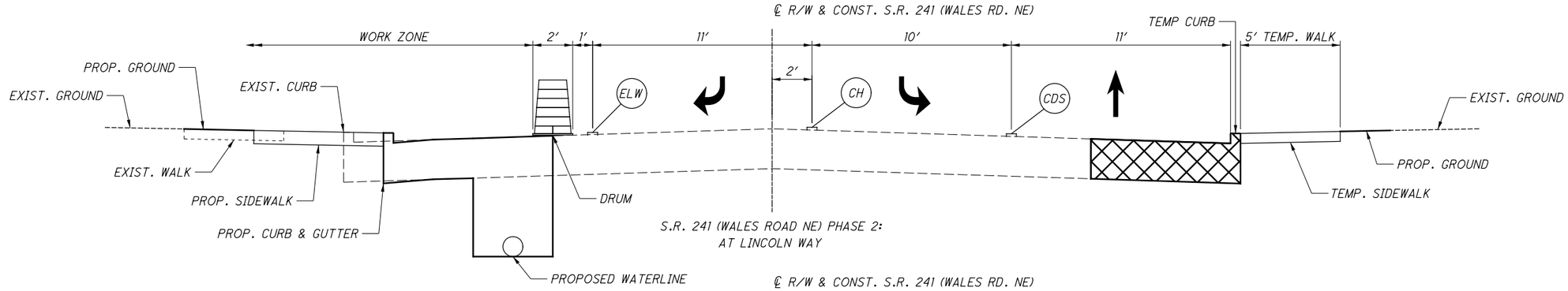


FOR LEGEND SEE SHEET 21.

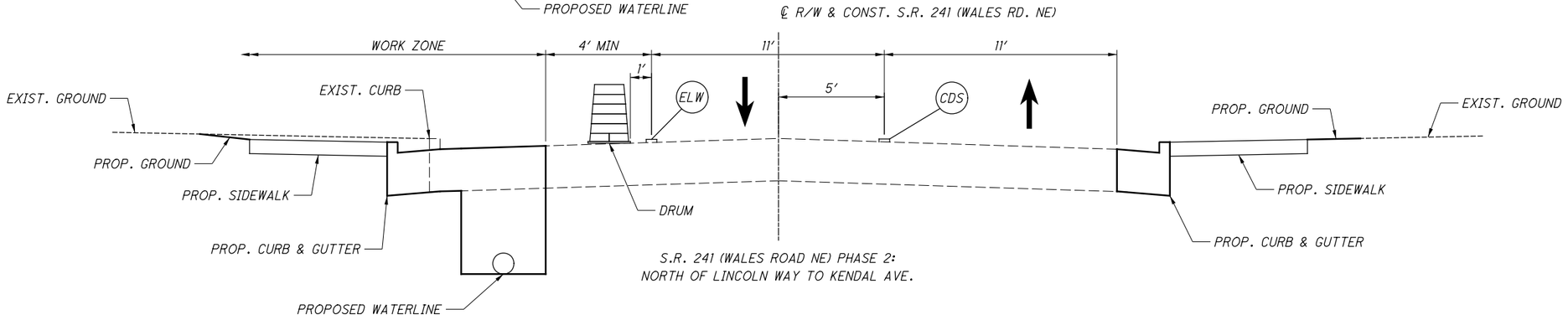
MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 1

STA-241-9.71

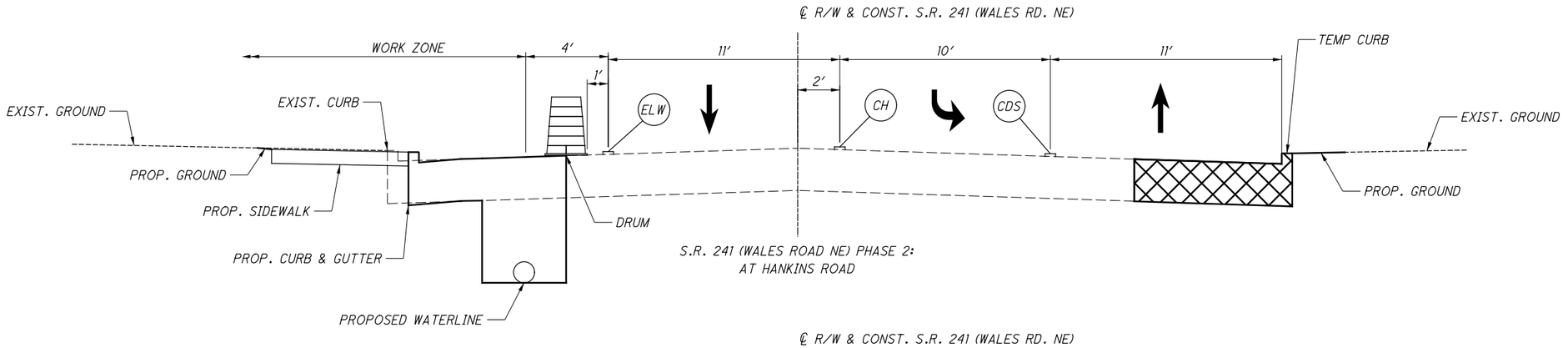
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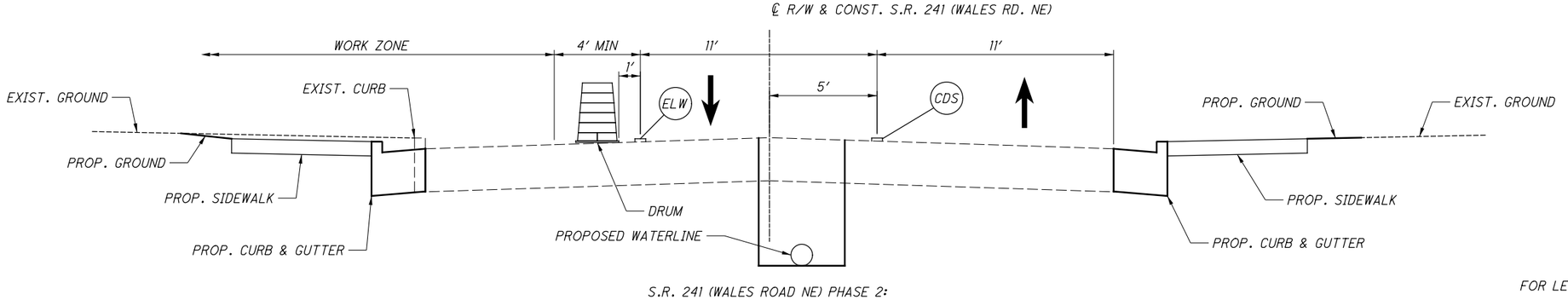
S.R. 241 (WALES ROAD NE) PHASE 2:
AT LINCOLN WAY



S.R. 241 (WALES ROAD NE) PHASE 2:
NORTH OF LINCOLN WAY TO KENDAL AVE.



S.R. 241 (WALES ROAD NE) PHASE 2:
AT HANKINS ROAD



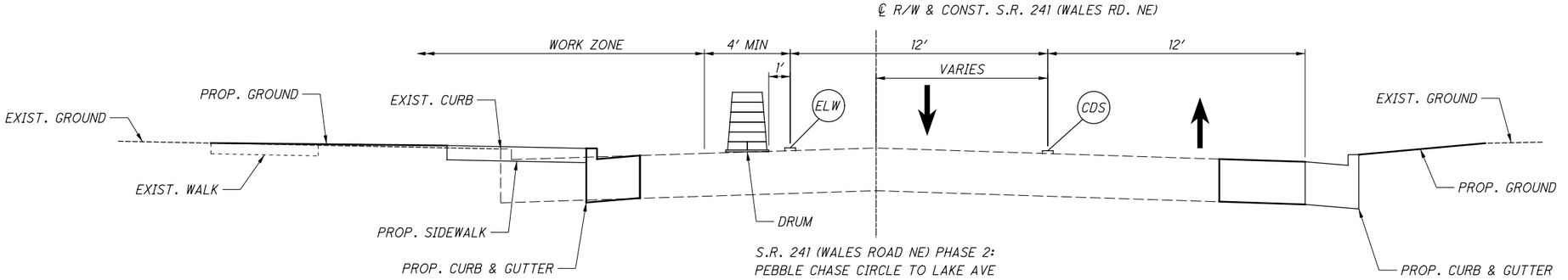
S.R. 241 (WALES ROAD NE) PHASE 2:
NORTH OF HANKINS ROAD TO PEBBLE CHASE CIRCLE

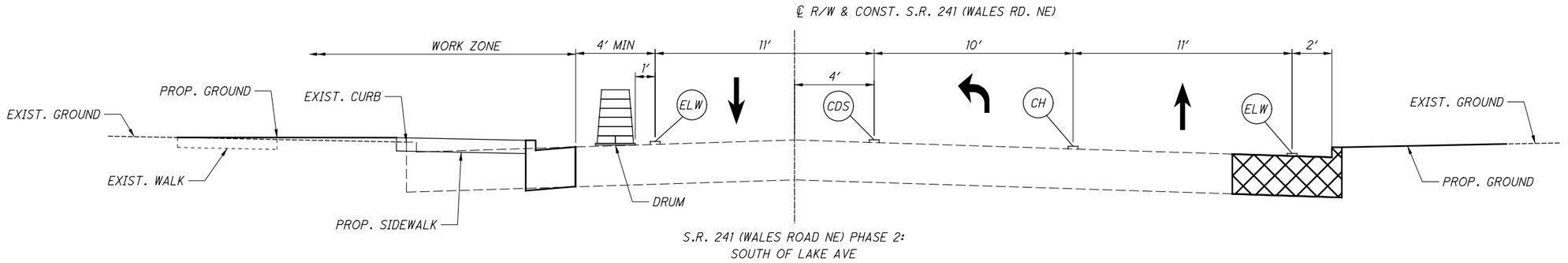
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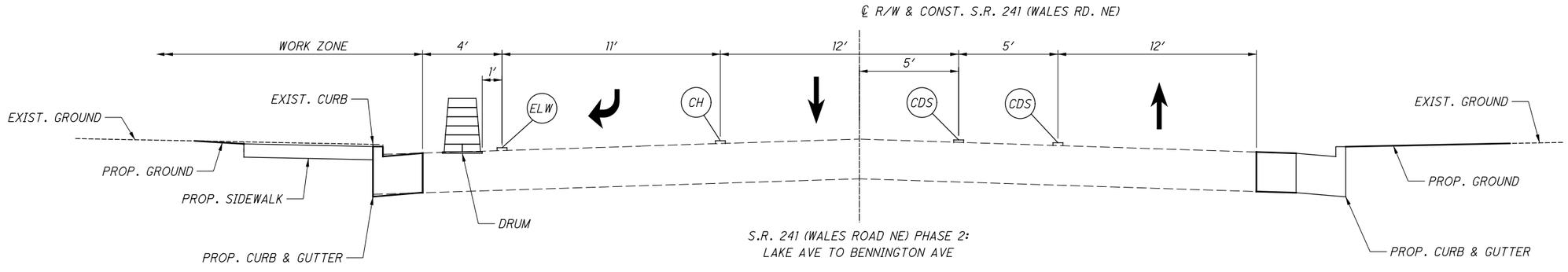
MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 2

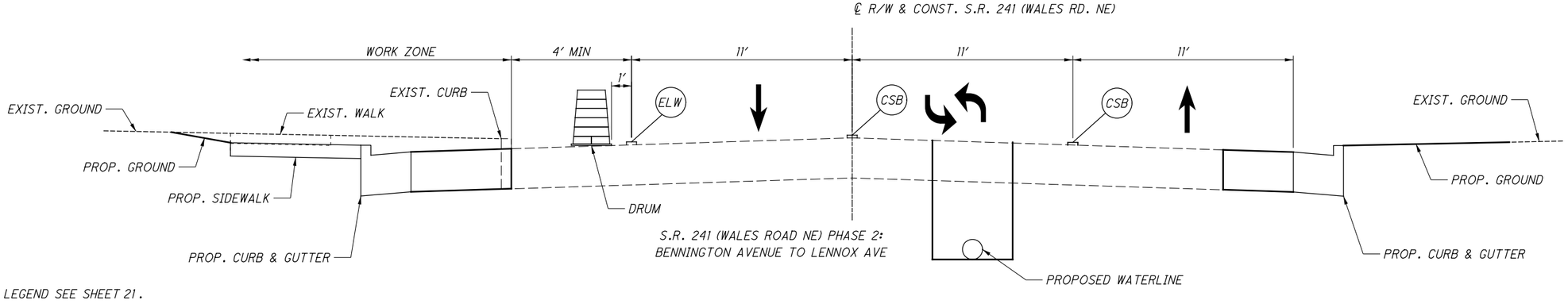
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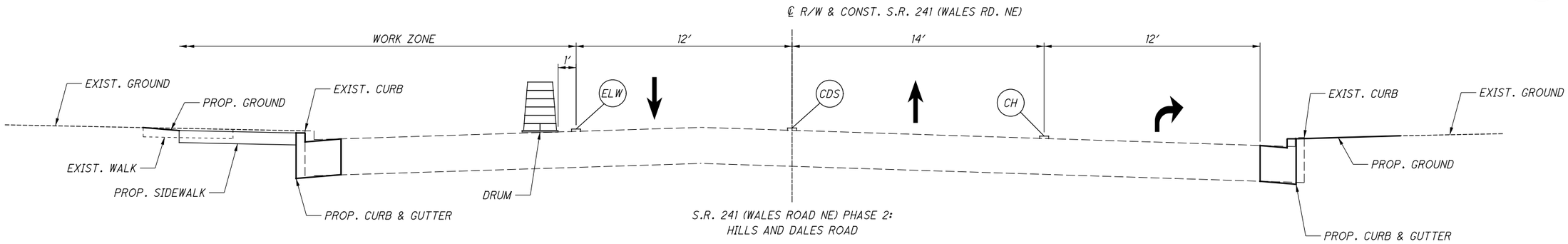


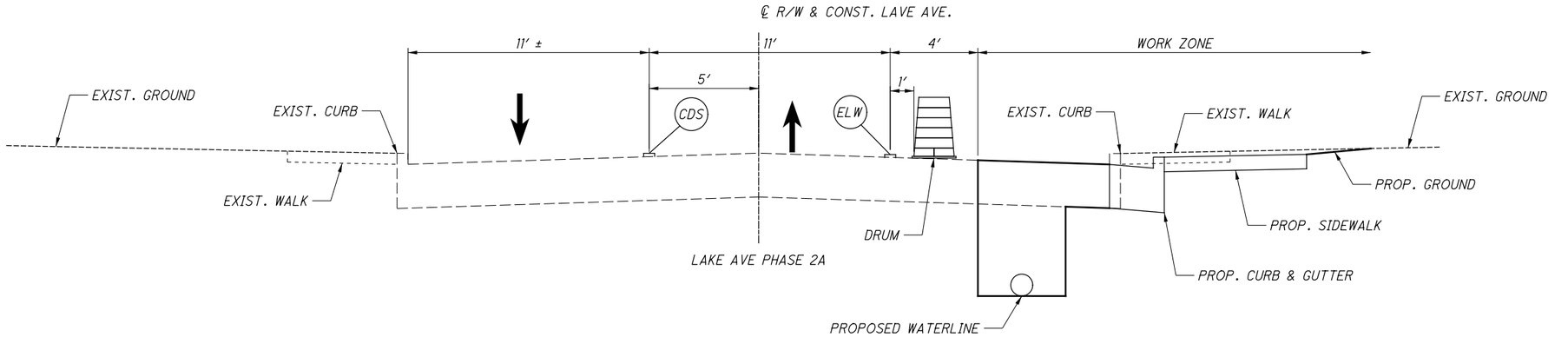
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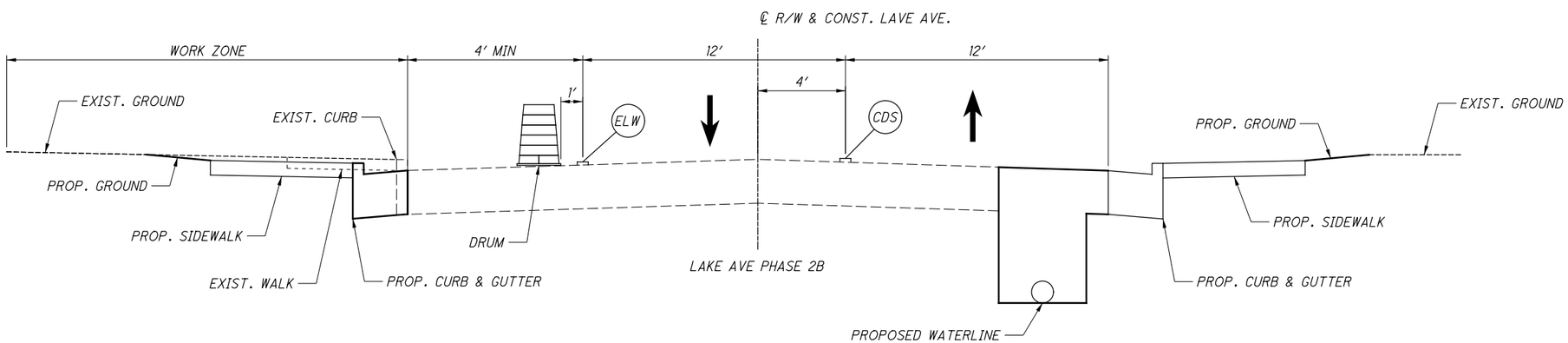
MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 2

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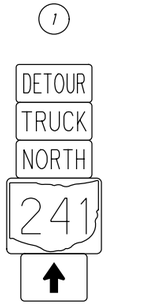


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MAINTENANCE OF TRAFFIC TYPICAL SECTIONS - PHASE 2

STA-241-9.71

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M4-8-30
M4-4-30
M3-1-30
M1-5-30-3
M6-3-30



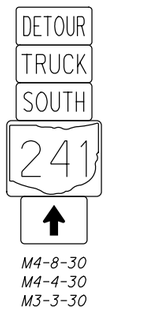
M4-8-30
M4-4-30
M3-1-30
M1-5-30-3
M6-1-30



M4-8-30
M4-4-30
M3-1-30
M1-5-30-3
M6-1-30



M4-8a-24
M3-1-30
M1-5-30-3



M4-8-30
M4-4-30
M3-3-30
M1-5-30-3
M6-3-30



M4-8-30
M4-4-30
M3-3-30
M1-5-30-3
M6-1-30



M4-8-30
M4-4-30
M3-3-30
M1-5-30-3
M6-1-30



M4-8a-24
M3-3-30
M1-5-30-3



M4-8-30
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M3-3-30
M1-5-30-3
M5-2-30



M4-8-30
M4-4-30
M3-1-30
M1-5-30-3
M5-2-30

TYPE B
WARNING LIGHT



M4-4-30
W20-2-36

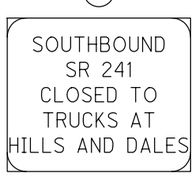
TYPE B
WARNING LIGHT



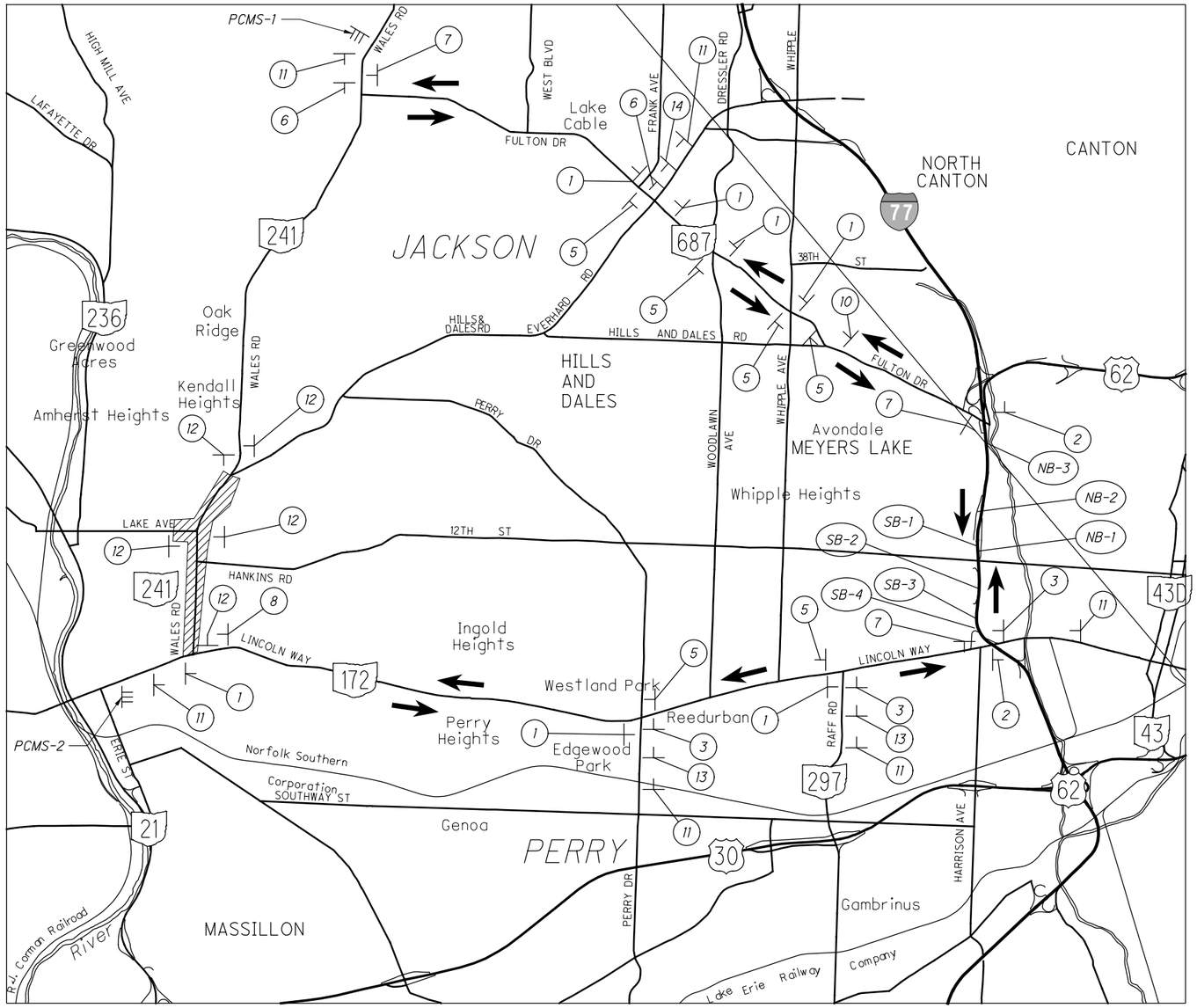
R5-2a-36



SPECIAL
(8' X 7' SIGN)
(BLACK ON ORANGE)



SPECIAL
(8' X 7' SIGN)
(BLACK ON ORANGE)



(NOT TO SCALE)

PORTABLE CHANGEABLE MESSAGE SIGNS RECOMMENDED MESSAGES		
	FLASH 1	FLASH 2
PCMS-1	SR 241 CLOSED TO TRUCKS	FOLLOW TRUCK DETOUR
PCMS-2	SR 241 CLOSED TO TRUCKS	FOLLOW TRUCK DETOUR

LEGEND

DIRECTION OF TRAVEL

WORK ZONE
(TRUCKS PROHIBITED)

NOTES

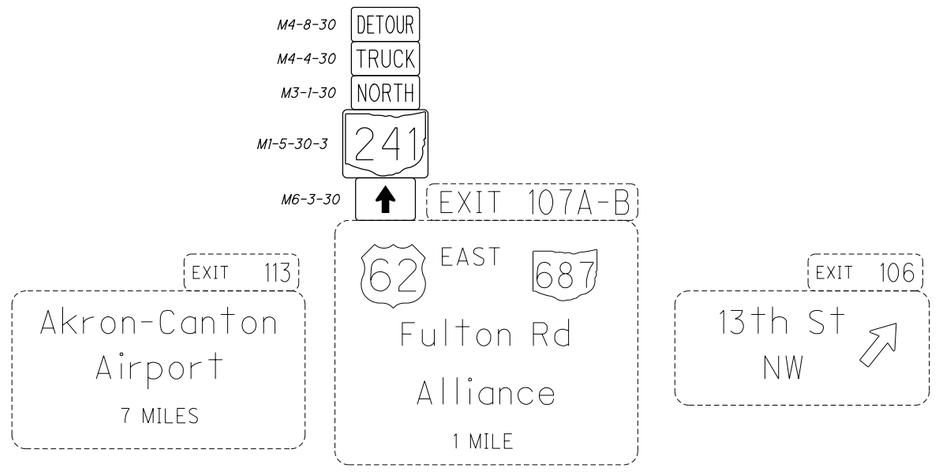
1. DETOUR SIGNING LOCATIONS SHALL BE PER OMUTCD.
2. FOR IR 77 NORTHBOUND OVERHEAD SIGNS SEE SHEET 27
3. FOR IR 77 SOUTHBOUND OVERHEAD SIGNS SEE SHEET 28
4. ALL DETOUR SIGNING IS INCLUDED IN THE LUMP SUM ITEM 614 - DETOUR SIGNING.

CALCULATED SWC
CHECKED MLL

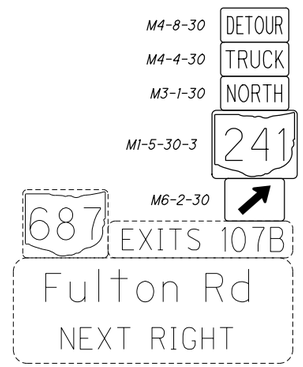
TRUCK DETOUR

STA-241-9.71

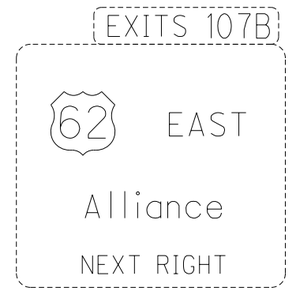
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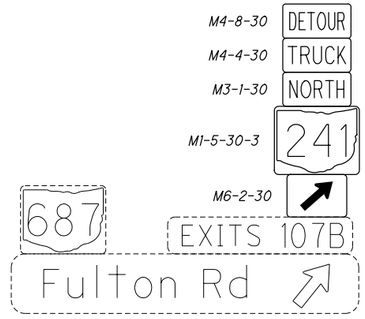
NB-1



NB-2



NB-3



NOTES

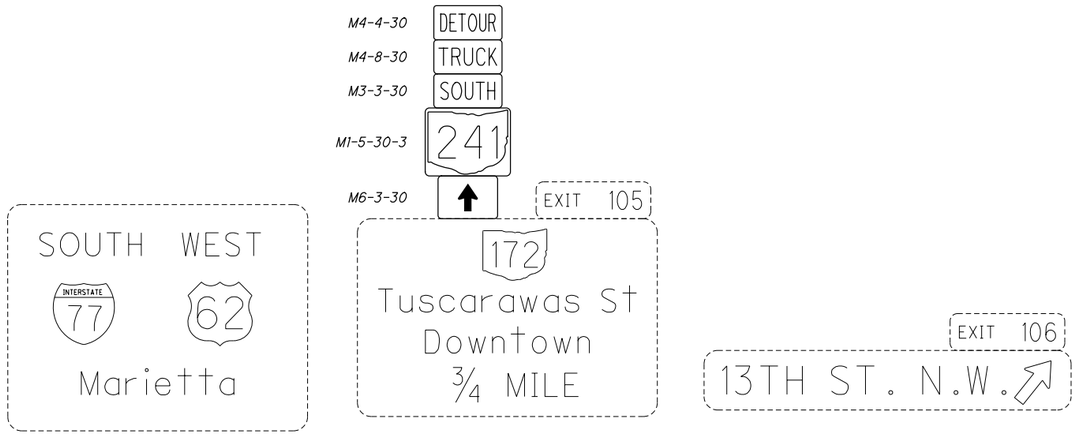
1. FOR TRUCK DETOUR SEE SHEET 26.

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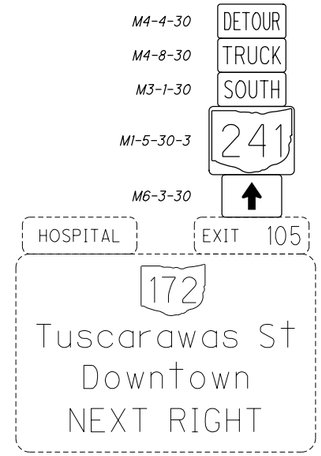
CALCULATED SWC
CHECKED MLL

TRUCK DETOUR - NORTHBOUND IR 77 OVERHEAD SIGNS

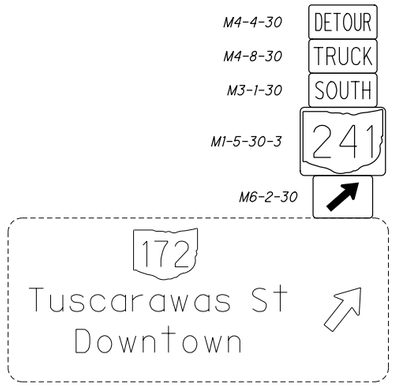
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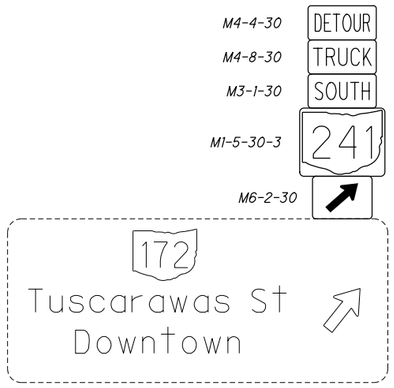
SB-1



SB-2



SB-3



SB-4

NOTES

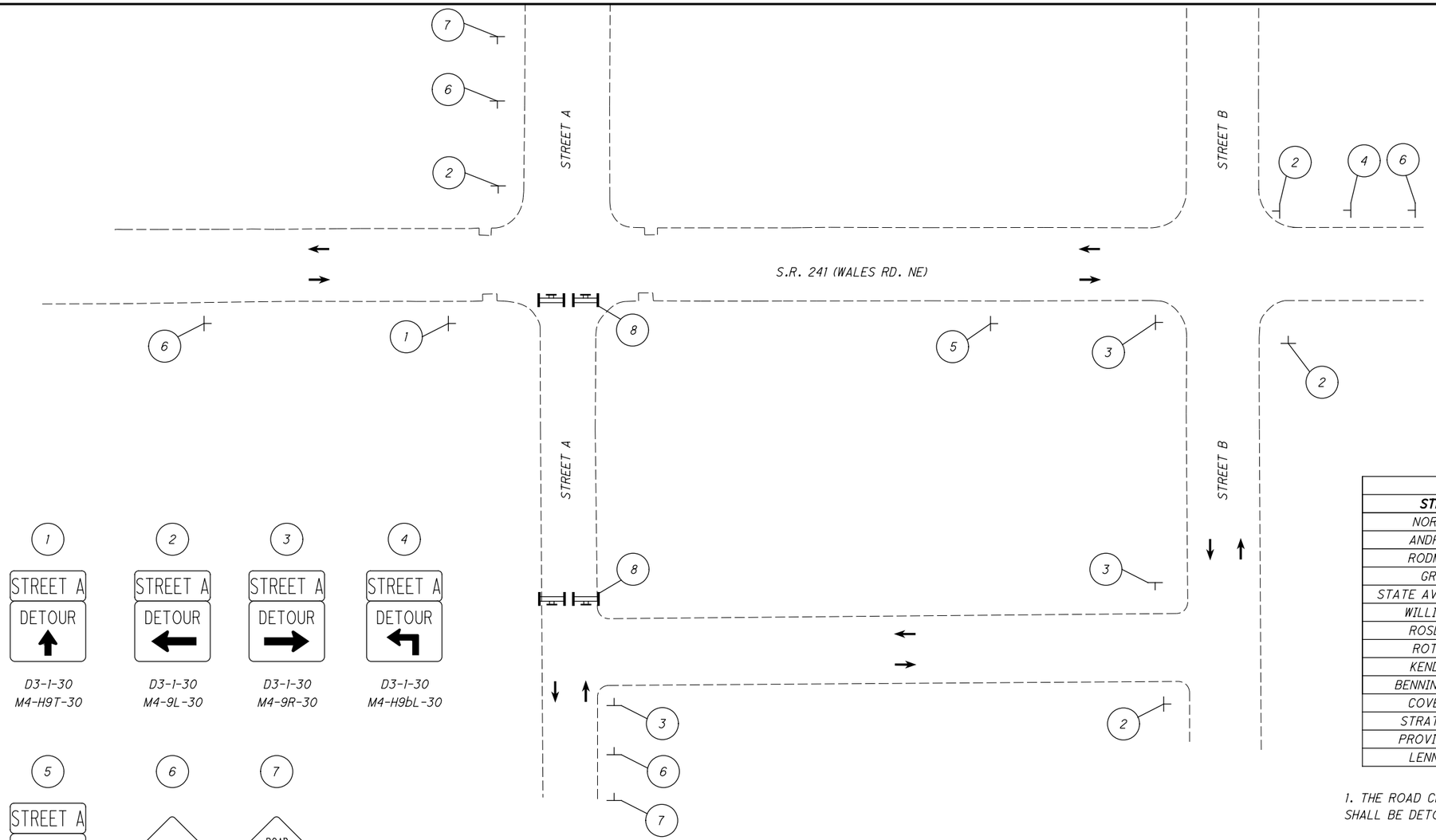
1. FOR TRUCK DETOUR SEE SHEET 26.

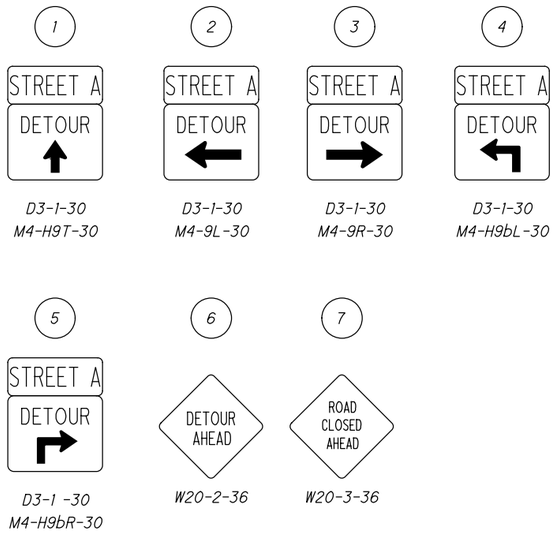
CALCULATED SWC
CHECKED MLL

TRUCK DETOUR - SOUTHBOUND IR 77 OVERHEAD SIGNS

STA-241-9.71

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SIDE STREET CLOSURE DETOUR	
STREET A	**SUGGESTED DETOUR**
NORTH AVE.	ANDREW AVE.
ANDREW AVE.	RODMAN AVE.
RODMAN AVE.	GRAY CT.
GRAY CT.	RODMAN AVE.
STATE AVE. (EAST LEG)	GRAY CT.
WILLIAMS AVE.	ROSLYN AVE.
ROSLYN AVE.	WILLIAMS AVE.
ROTCH AVE.	LAKE AVE.
KENDAL AVE.	ROTCH AVE.
BENNINGTON AVE.	LAKE AVE.
COVENTRY RD.	STRATFORD AVE.
STRATFORD AVE.	COVENTRY RD.
PROVIDENCE RD.	LENNOX AVE.
LENNOX AVE.	PROVIDENCE RD.

1. THE ROAD CLOSURES WILL BE LIMITED TO 30 DAYS AND SHALL BE DETOURED TO AN ADJACENT SIDE STREET.

2. CLOSURES OF TWO ADJACENT STREETS WILL NOT BE PERMITTED.

LEGEND:

- DIRECTION OF TRAVEL
- SINGLE POST SIGN
- TYPE 3 BARRICADE WITH SIGN

CALCULATED KRM
CHECKED SWC

SIDE STREET CLOSURE DETOUR

STA-241-9.71

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SHEET NO.	REFERENCE NO.	STATION FROM	STATION TO	SIDE	608 4" CONCRETE WALK SF	609 CURB, TYPE 2-B FT	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL) EA	614 WORK ZONE CENTER LINE, DOUBLE SOLID, YELLOW, CLASS I, 642 PAINT MILE	614 WORK ZONE CENTER LINE, SOLID/BROKEN, YELLOW, CLASS I, 642 PAINT MILE	614 WORK ZONE EDGE LINE, WHITE, CLASS I, 4", 642 PAINT MILE	614 WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT FT	614 WORK ZONE DOTTED LINE, WHITE, CLASS I, 4", 642 PAINT FT	614 WORK ZONE DOTTED LINE, YELLOW, CLASS I, 4", 642 PAINT FT	614 WORK ZONE STOP LINE, CLASS 1, 642 PAINT FT	614 WORK ZONE CROSSWALK LINE, CLASS I, 642 PAINT FT	614 WORK ZONE ARROW, CLASS I, 642 PAINT EA	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B SY	622 PORTABLE BARRIER, UNANCHORED FT
STA-241-9.71 - PHASE 1																		
35	SL-1	100+50.31		RT/LT										24				
35	A-1	100+69.30		LT												1		
35	A-2	100+69.30		LT												1		
35	CH-1	100+47.39	101+03.30	LT							56							
35	ELW-1	307+87.00 (S.R. 172)	103+00.00	LT/RT						0.10								
35	CDS-1	100+50.64	103+00.00	RT/LT				0.05										
35	CDS-2	101+03.30	102+28.30	RT/LT				0.02										
35	TP-1	100+98.38	102+10.48	RT													52	
36	CDS-1	103+00.00	114+00.00	LT				0.21										
36	ELW-1	103+00.00	114+00.00	RT						0.21								
37	CDS-1	114+00.00	125+00.00	LT				0.21										
37	ELW-1	114+00.00	125+00.00	RT						0.21								
37	CDS-3	114+80.18		RT				0.01										
37	SL-2	114+48.21		RT/LT										14				
37	SL-3	114+80.18	114+91.18	RT										11				
37	SL-4	115+10.72		LT										13				
37	PB-1	119+00.00	119+60.00	RT			1											60
38	CDS-1	125+00.00	135+00.00	LT/RT				0.19										
38	ELW-1	125+00.00	135+00.00	RT						0.19								
38	DLW-1	128+60.00	129+40.00	LT/RT								80						
38	CH-2	129+40.00	129+94.00	RT							54							
38	A-3	129+84.00		LT												1		
38	A-4	130+56.69		LT												1		
38	SL-5	129+94.00		RT/LT										10				
38	SL-5A	130+66.69		RT										10				
38	SL-5B	130+86.98		RT										10				
38	CH-2A	130+45.59	130+86.98	RT							41							
38	SL-6	131+79.13		RT/LT										21				
38	A-5	131+90.00		LT												1		
38	A-6	132+90.00		LT												1		
38	CH-3	131+79.13	133+25.00	LT							146							
38	TP-2	131+58.17	133+30.00	RT													98	
39	CDS-1	135+00.00	145+00.00	LT				0.19										
39	ELW-1	135+00.00	145+00.00	RT						0.19								
39	DLW-2	143+35.98	144+45.00	LT/RT								109						
39	CH-4	144+45.00	144+92.77	RT							48							
39	A-7	144+82.48		LT												1		
39	SL-7	144+92.77		RT/LT										21				
39	DLY-1	144+92.77	145+00.00	LT/CL									7					
39	TP-3	143+59.77	145+00.00	RT													51	
40	DLY-1	145+00.00	146+60.29	LT/CL									160					
40	CDS-1	145+00.00	151+00.00	CL/RT				0.11										
40	CDS-4	148+00.00	150+25.00	LT				0.04										
40	CSB-1	150+25.00	155+00.00	LT					0.09									
40	CSB-2	151+00.00	155+00.00	RT					0.08									
40	ELW-1	145+00.00	155+00.00	RT						0.19								
40	CH-5	198+30.00 (LAKE AVE.)	199+46.91 (LAKE AVE.)	RT							117							
40	CDS-5	198+30.00 (LAKE AVE.)	199+36.96 (LAKE AVE.)	LT				0.02										
40	SL-8	199+46.91 (LAKE AVE.)		RT										11				
		SUBTOTAL						1.05	0.17			189	167					
TOTALS CARRIED TO SHEET 34					0	0	1	1.22		1.09	462	356		145	0	7	201	60

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CALCULATED MLL CHECKED SWC

MAINTENANCE OF TRAFFIC SUBSUMMARY

STA-241-9.71

SHEET NO.	REFERENCE NO.	STATION FROM	STATION TO	SIDE	608 4" CONCRETE WALK	609 CURB, TYPE 2-B	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	614 WORK ZONE CENTER LINE, DOUBLE SOLID, YELLOW, CLASS I, 642 PAINT	614 WORK ZONE CENTER LINE, SOLID/BROKEN, YELLOW, CLASS I, 642 PAINT	614 WORK ZONE EDGE LINE, WHITE, CLASS I, 4", 642 PAINT	614 WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT	614 WORK ZONE DOTTED LINE, WHITE, CLASS I, 4", 642 PAINT	614 WORK ZONE DOTTED LINE, YELLOW, CLASS I, 4", 642 PAINT	614 WORK ZONE STOP LINE, CLASS I, 642 PAINT	614 WORK ZONE CROSSWALK LINE, CLASS I, 642 PAINT	614 WORK ZONE ARROW, CLASS I, 642 PAINT	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B		622 PORTABLE BARRIER, UNANCHORED		
					SF	FT	EA	MILE	MILE	MILE	FT	FT	FT	FT	FT	EA	SY		FT		
STA-241-9.71 - PHASE 1																					
40	SL-9	199+36.96 (LAKE AVE.)		RT/LT										10							
40	SL-10	146+60.29		LT										24							
40	A-8	146+70.00		LT												1					
40	CH-6	146+60.29	148+00.00	LT							140										
40	A-9	147+70.00		LT												1					
40	DLW-3	148+00.00	149+82.56	LT								183									
40	TP-3	145+00.00	145+50.15	RT													15				
40	TW-1	151+56.00		LT												2					
40	TW-2	154+38.00		LT												2					
41	CSB-1	155+00.00	165+00.00	LT					0.19												
41	CSB-2	155+00.00	165+00.00	RT					0.19												
41	ELW-1	155+00.00	165+00.00	RT						0.19											
41	TW-3	158+01.00		LT												2					
41	TW-4	160+98.00		LT												2					
41	TW-5	164+80.00		LT												2					
42	CSB-1	165+00.00	175+00.00	LT					0.19												
42	CSB-2	165+00.00	175+00.00	RT					0.19												
42	ELW-1	165+00.00	175+00.00	RT						0.19											
42	DLW-4	173+54.44	175+00.00	RT								146									
42	TW-6	167+13.00		LT												2					
42	TW-7	169+44.50		LT												2					
42	TW-8	171+56.00		LT												2					
42	TW-9	174+48.00		LT												2					
43	CSB-1	175+00.00	176+27.40	LT					0.02												
43	CSB-2	175+00.00	176+27.40	RT/LT					0.02												
43	ELW-1	175+00.00	176+26.25	RT/LT						0.02											
43	A-10	175+41.00		RT												1					
43	DLW-4	175+00.00	175+35.63	RT								36									
43	A-11	175+87.57		RT												1					
43	CH-7	175+35.63	176+26.87	RT							91										
43	SL-11	176+26.82		RT/LT										26							
43	DLY-2	176+27.40	177+85.27	LT									158								
STA-241-9.71 - PHASE 2																					
44	XW-1	305+48.23 (S.R. 172)	305+54.23 (S.R. 172)	RT/LT											151						
44	SL-12	305+58.23 (S.R. 172)	305+66.00 (S.R. 172)	LT										18							
44	C-1	100+91.46	102+10.48	RT		119															
44	SW-1	100+93.95	101+73.65	RT	413																
44	SL-13	100+60.00		RT/LT										21							
44	A-12	100+69.00		LT												1					
44	A-13	100+69.00		RT												1					
44	CH-8	100+60.00	101+10.00	RT							50										
44	ELW-2	304+51.70 (S.R. 172)	103+00.00	LT						0.06											
44	ELW-3	101+74.29	102+00.00	RT						0.01											
44	CDS-6	100+60.00	103+00.00	RT				0.05													
44	CDS-7	101+10.00	102+00.00	RT				0.02													
45	ELW-2	103+00.00	114+00.00	LT						0.21											
45	CDS-6	103+00.00	114+00.00	RT				0.21													
		SUBTOTAL						0.28	0.80			365	158								
TOTALS CARRIED TO SHEET 34					413	119	0	1.08		0.68	281	523		99	151	24	15		0		

CALCULATED MLL
CHECKED SWC

MAINTENANCE OF TRAFFIC SUBSUMMARY

STA-241-9.71

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SUMMARY OF TRAFFIC MAINTENANCE SUBSUMMARY

CALCULATED MLL CHECKED SWC

STA-241-9.71

SHEET NO.	REFERENCE NO.	STATION FROM	STATION TO	SIDE	608 4" CONCRETE WALK (SF)	609 CURB, TYPE 2-B (FT)	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL) (EA)	614 WORK ZONE CENTER LINE, DOUBLE SOLID, YELLOW, CLASS I, 642 PAINT (MILE)	614 WORK ZONE CENTER LINE, SOLID/BROKEN, YELLOW, CLASS I, 642 PAINT (MILE)	614 WORK ZONE EDGE LINE, WHITE, CLASS I, 4", 642 PAINT (MILE)	614 WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT (FT)	614 WORK ZONE DOTTED LINE, WHITE, CLASS I, 4", 642 PAINT (FT)	614 WORK ZONE DOTTED LINE, YELLOW, CLASS I, 4", 642 PAINT (FT)	614 WORK ZONE STOP LINE, CLASS I, 642 PAINT (FT)	614 WORK ZONE CROSSWALK LINE, CLASS I, 642 PAINT (FT)	614 WORK ZONE ARROW, CLASS I, 642 PAINT (EA)	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B (SY)	622 PORTABLE BARRIER, UNANCHORED (FT)
STA-241-9.71 - PHASE 2																		
46	ELW-2	114+00.00	125+00.00	LT						0.21								
46	CDS-6	114+00.00	125+00.00	RT				0.21										
46	SL-14	114+48.21		RT										11				
46	SL-15	114+80.18	114+95.62	RT										15				
46	SL-16	115+16.68		RT/LT										11				
46	SL-17	114+67.68	114+80.18	LT										13				
46	CDS-8	114+80.18		LT				0.01										
47	ELW-2	125+00.00	135+00.00	LT						0.19								
47	CDS-6	125+00.00	135+00.00	RT				0.19										
47	SL-18	130+79.72		RT										12				
47	DLY-3	130+79.72	131+75.00	RT									95					
47	DLW-5	130+79.72	131+75.00	RT								95						
47	SL-19	131+75.00		RT/LT										21				
47	C-2	131+62.64	133+30.07	RT		167												
47	A-14	131+93.47		RT												1		
47	CH-9	131+75.00	132+25.00	RT							50							
47	CDS-9	132+25.00	133+20.00	RT				0.02										
47	ELW-4	132+93.00	133+20.00	RT						0.01								
48	CDS-6	135+00.00	145+00.00	RT				0.19										
48	ELW-2	135+00.00	145+00.00	LT						0.19								
48	ELW-5	143+59.84	143+86.49	RT						0.01								
48	CDS-10	143+59.92	144+50.00	RT				0.02										
48	CH-10	144+50.00	144+92.77	RT							43							
48	A-15	144+82.42		RT												1		
48	SL-20	144+92.77		RT										21				
48	C-3	143+59.84	145+00.00	RT		140												
49	ELW-2	145+00.00	155+00.00	LT						0.19								
49	C-3	145+00.00	145+50.15	RT		50												
49	ELW-6	145+13.24	145+40.00	RT						0.01								
49	SL-21	146+60.29		RT/LT										28				
49	CDS-6	145+00.00	149+25.00	RT/CL				0.08										
49	CDS-11	146+60.29	147+95.00	RT				0.03										
49	A-16	146+70.00		LT												1		
49	CH-11	146+60.29	147+95.00	LT							135							
49	A-17	147+70.00		LT												1		
49	DLW-6	147+95.00	148+75.00	LT								80						
49	DLW-7	147+95.00	148+75.00	RT								80						
49	CH-12	148+75.00	149+25.00	RT							50							
49	A-18	149+09.00		RT												1		
49	CSB-3	149+76.52	155+00.00	LT					0.10									
49	CSB-4	149+76.52	155+00.00	RT					0.10									
49	TW-10	151+22.00		RT												2		
49	TW-11	154+40.00		RT												2		
		SUBTOTAL						0.75	0.20			255	95					
TOTALS CARRIED TO SHEET 34					0	357	0	0.95		0.81	278	350		132	0	9	0	0

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SHEET NO.	REFERENCE NO.	STATION FROM	STATION TO	SIDE	608 4" CONCRETE WALK (SF)	609 CURB, TYPE 2-B (FT)	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL) (EA)	614 WORK ZONE CENTER LINE, DOUBLE SOLID, YELLOW, CLASS I, 642 PAINT (MILE)	614 WORK ZONE CENTER LINE, SOLID/BROKEN, YELLOW, CLASS I, 642 PAINT (MILE)	614 WORK ZONE EDGE LINE, WHITE, CLASS I, 4", 642 PAINT (MILE)	614 WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT (FT)	614 WORK ZONE DOTTED LINE, WHITE, CLASS I, 4", 642 PAINT (FT)	614 WORK ZONE DOTTED LINE, YELLOW, CLASS I, 4", 642 PAINT (FT)	614 WORK ZONE STOP LINE, CLASS I, 642 PAINT (FT)	614 WORK ZONE CROSSWALK LINE, CLASS I, 642 PAINT (FT)	614 WORK ZONE ARROW, CLASS I, 642 PAINT (EA)	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B (SY)		622 PORTABLE BARRIER, UNANCHORED (FT)		
STA-241-9.71 - PHASE 2																					
50	ELW-2	155+00.00	165+00.00	LT						0.19											
50	CSB-3	155+00.00	165+00.00	CL					0.19												
50	CSB-4	155+00.00	165+00.00	RT					0.19												
50	TW-12	157+84.00		RT												2					
50	TW-13	161+13.00		RT												2					
50	TW-14	164+80.00		RT												2					
51	ELW-2	165+00.00	175+00.00	LT						0.19											
51	CSB-3	165+00.00	172+70.00	CL					0.15												
51	CSB-4	165+00.00	172+70.00	RT					0.15												
51	CDS-12	173+35.00	175+00.00	CL				0.03													
51	CDS-13	173+35.00	174+76.84	RT				0.03													
51	DLW-8	174+22.11	175+00.00	RT								78									
51	TW-15	167+13.00		RT												2					
51	TW-16	169+44.50		RT												2					
51	TW-17	171+57.00		RT												2					
52	ELW-2	175+00.00	177+85.35	LT						0.05											
52	DLW-8	175+00.00	175+26.95	RT								27									
52	CDS-12	175+00.00	176+27.24	CL				0.02													
52	CH-13	175+26.95	176+26.60	RT							100										
52	A-19	175+85.88		RT												1					
52	SL-22	176+26.65		RT										27							
52	DLY-4	176+27.24	177+85.21	RT									158								
52	DLW-9	176+26.60	177+90.72	RT								164									
STA-241-9.71 - PHASE 2A																					
53	ELW-7	194+83.70 (LAKE AVE.)	199+52.44 (LAKE AVE.)	RT						0.09											
53	DLY-5	195+24.91 (LAKE AVE.)	196+00.00 (LAKE AVE.)	CL/LT									75								
53	DLW-10	195+24.91 (LAKE AVE.)	195+88.74 (LAKE AVE.)	RT								64									
53	CDS-13	196+00.00 (LAKE AVE.)	199+36.96 (LAKE AVE.)	LT				0.06													
53	SL-23	199+36.96 (LAKE AVE.)		RT/LT										11							
STA-241-9.71 - PHASE 2B																					
54	ELW-8	194+72.63 (LAKE AVE.)	199+42.57 (LAKE AVE.)	LT						0.09											
54	DLW-11	195+24.91 (LAKE AVE.)	195+90.60 (LAKE AVE.)	LT								66									
54	DLY-6	195+24.91 (LAKE AVE.)	196+00.00 (LAKE AVE.)	CL/RT									75								
54	CDS-14	196+00.00 (LAKE AVE.)	199+46.91 (LAKE AVE.)	RT				0.07													
54	SL-24	199+46.91 (LAKE AVE.)		RT										12							
STA-241-9.71 - PHASE 3																					
55	ELW-9	305+72.15 (S.R. 172)	103+45.50	LT/RT						0.06											
55	SL-25	101+10.00		RT/LT										18							
55	A-20	101+14.24		LT												1					
55	A-21	101+14.24		LT												1					
55	CH-14	101+10.00	101+60.00	LT							50										
55	CDS-15	101+10.00	103+60.48	RT				0.05													
55	CDS-16	101+60.00	103+60.48	RT/LT				0.04													
55	ELW-10	102+10.50	103+60.48	LT						0.03											
		SUBTOTAL						0.30	0.68			399	308								
TOTALS CARRIED TO SHEET 34					0	0	0	0.98		0.70	150	707		68	0	15	0		0		

CALCULATED MLL
CHECKED SWC

MAINTENANCE OF TRAFFIC SUBSUMMARY

STA-241-9.71

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SHEET NO.	REFERENCE NO.	STATION FROM	STATION TO	SIDE	608 4" CONCRETE WALK (SF)	609 CURB, TYPE 2-B (FT)	614 WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL) (EA)	614 WORK ZONE CENTER LINE, DOUBLE SOLID, YELLOW, CLASS I, 642 PAINT (MILE)	614 WORK ZONE CENTER LINE, SOLID/BROKEN, YELLOW, CLASS I, 642 PAINT (MILE)	614 WORK ZONE EDGE LINE, WHITE, CLASS I, 4", 642 PAINT (MILE)	614 WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT (FT)	614 WORK ZONE DOTTED LINE, WHITE, CLASS I, 4", 642 PAINT (FT)	614 WORK ZONE DOTTED LINE, YELLOW, CLASS I, 4", 642 PAINT (FT)	614 WORK ZONE STOP LINE, CLASS I, 642 PAINT (FT)	614 WORK ZONE CROSSWALK LINE, CLASS I, 642 PAINT (FT)	614 WORK ZONE ARROW, CLASS I, 642 PAINT (EA)	615 PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B (SY)	622 PORTABLE BARRIER, UNANCHORED (FT)
STA-241-9.71 - PHASE 3																			
55	CDS-17	130+19.12	134+90.00	RT				0.09											
55	ELW-11	130+45.59	131+38.67	LT						0.02									
55	SL-26	130+79.72		RT										14					
55	DLW-12	130+59.12	131+79.12	RT/LT								120							
55	DLW-13	130+79.72	131+79.12	RT								99							
55	SL-27	131+79.12		RT/LT										18					
55	ELW-12	131+79.12	134+15.00	RT						0.04									
55	A-22	131+92.49		LT												1			
55	CH-15	131+79.12	132+79.12	LT							100								
55	CDS-18	132+79.12	134+89.97	RT/LT				0.04											
55	ELW-13	133+57.30	134+90.00	LT						0.03									
56	ELW-14	140+35.00	143+50.00	LT						0.06									
56	CDS-19	141+02.00	144+95.00	RT/LT				0.07											
56	ELW-15	141+02.00	147+69.60	RT						0.13									
56	CH-16	143+49.94	144+95.00	RT							145								
56	A-23	143+82.46		RT												1			
56	A-24	144+82.45		RT												1			
56	SL-28	144+95.00		RT/LT										19					
			SUBTOTAL					0.20	0.00			219	0						
TOTAL THIS SHEET					0	0	0	0.20		0.28	245	219		51	0	3	0		0
TOTALS FROM SHEET 30					0	0	1	1.22		1.09	462	356		145	0	7	201		60
TOTALS FROM SHEET 31					413	119	0	1.08		0.68	281	523		99	151	24	15		0
TOTALS FROM SHEET 32					0	357	0	0.95		0.81	278	350		132	0	9	0		0
TOTALS FROM SHEET 33					0	0	0	0.98		0.70	150	707		68	0	15	0		0
TOTALS CARRIED TO GENERAL SUMMARY					413	476	1	4.43		3.56	1416	2155		495	151	58	216		60

CALCULATED MLL CHECKED SWC

SUMMARY OF TRAFFIC MAINTENANCE

STA-241-9.71

P:\3000_3499\30621T0090_STA-241-9.71_Wales_Road\ODOT\00471_STA-241-9.71\Design\MOT\Sheets\00471_MS005.dgn 2/2/2021 10:11:55 AM khillegass

LEGEND

- TYPE 3 BARRICADE
- FLAGS
- TYPE A WARNING LIGHT
- DRUMS - SPACED AT 10' C/C UNLESS OTHERWISE NOTED
- TRAFFIC FLOW DIRECTION
- WORK ZONE
- ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, PLACED THIS PHASE TEMPORARY PAVEMENT COMPLETED IN PRIOR PHASE
- PROPOSED PAVEMENT COMPLETED IN PRIOR PHASE
- WORK TO BE COMPLETED UNDER FLAGGER CONTROL, SEE NOTE 4.

SW	ITEM 608 - 4" CONCRETE WALK
C	ITEM 609 - CURB, TYPE 2-B
CDS	ITEM 614 - WORK ZONE CENTER LINE, DOUBLE SOLID, YELLOW, CLASS I, 642 PAINT
CBS	ITEM 614 - WORK ZONE CENTER LINE, SOLID/BROKEN, YELLOW, CLASS I, 642 PAINT
ELW	ITEM 614 - WORK ZONE EDGE LINE, WHITE, CLASS I, 4", 642 PAINT
CH	ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT
DLW	ITEM 614 - WORK ZONE DOTTED LINE, WHITE, CLASS I, 4", 642 PAINT
DLY	ITEM 614 - WORK ZONE DOTTED LINE, YELLOW, CLASS I, 4", 642 PAINT
SL	ITEM 614 - WORK ZONE STOP LINE, CLASS I, 642 PAINT
XW	ITEM 614 - WORK ZONE CROSSWALK LINE, CLASS I, 642 PAINT
A	ITEM 614 - WORK ZONE ARROW, CLASS I, 642 PAINT
TW	ITEM 614 - WORK ZONE ARROW, CLASS I, 642 PAINT (TWO-WAY ARROWS)
TP	ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B
PB	ITEM 622 - PORTABLE BARRIER, UNANCHORED
	ITEM 614 - WORK ZONE IMPACT ATTENUATOR

MATCHLINE STA. 103+00 SEE SHEET 36

℄ CONSTRUCTION - S.R. 241 (WALES RD. NE)

STA. 102+28.30, 4.0' LT
END SHIFT
END TAPER

EX. CURB

STA. 102+23.60, 8.0' RT
END SHIFT

STA. 102+10.48, 18.5' RT
END TEMP PAVEMENT

STA. 101+03.30, 1.0' RT
BEGIN SHIFT
BEGIN TAPER

STA. 100+74
18.5' RT

STA. 100+98.77, 12.0' RT
BEGIN SHIFT

STA. 100+90.38, 23.5' RT
BEGIN TEMP PAVEMENT

EX. STOP LINE

DRUMS (40' C/C)

REMOVE CROSSWALK

STA. 307+87.00, 32.4' LT
BEGIN EDGE LINE

S.R. 172 (LINCOLN WAY E)

N 76° 46' 55" E

N 82° 56' 07" E

N 1° 46' 48" E

W1-H16-36

D3-1-30
W20-1-36
ROAD WORK AHEAD
WALES ROAD

NOTES:

1. FOR SEQUENCE OF CONSTRUCTION NOTES, SEE SHEET 20.
2. FOR MOT TYPICAL SECTIONS, SEE SHEETS 21 TO 22.
3. THE CONTRACTOR SHALL COVER EXISTING SIGNAGE IN CONFLICT WITH THE PROPOSED MOT LANE CONFIGURATION.
4. FOR ADDITIONAL AREAS TO BE COMPLETED UNDER FLAGGER CONTROL, SEE MAINTENANCE OF TRAFFIC GENERAL NOTES SHEETS 15 TO 20

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SWC
CHECKED MLL

MOT PHASE 1 - SR 241 (WALES RD. NE)
BEGIN WORK TO STA. 103+00

STA-241-9.71

35
395

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1. SHORT TERM CLOSURES PERMITTED AT NORTH AVE, ANDREW AVE, RODMAN AVE, AND GRAY CT. SEE CLOSURE DETAIL ON SHEET 29

FOR MOT LEGEND AND NOTES, SEE SHEET 35

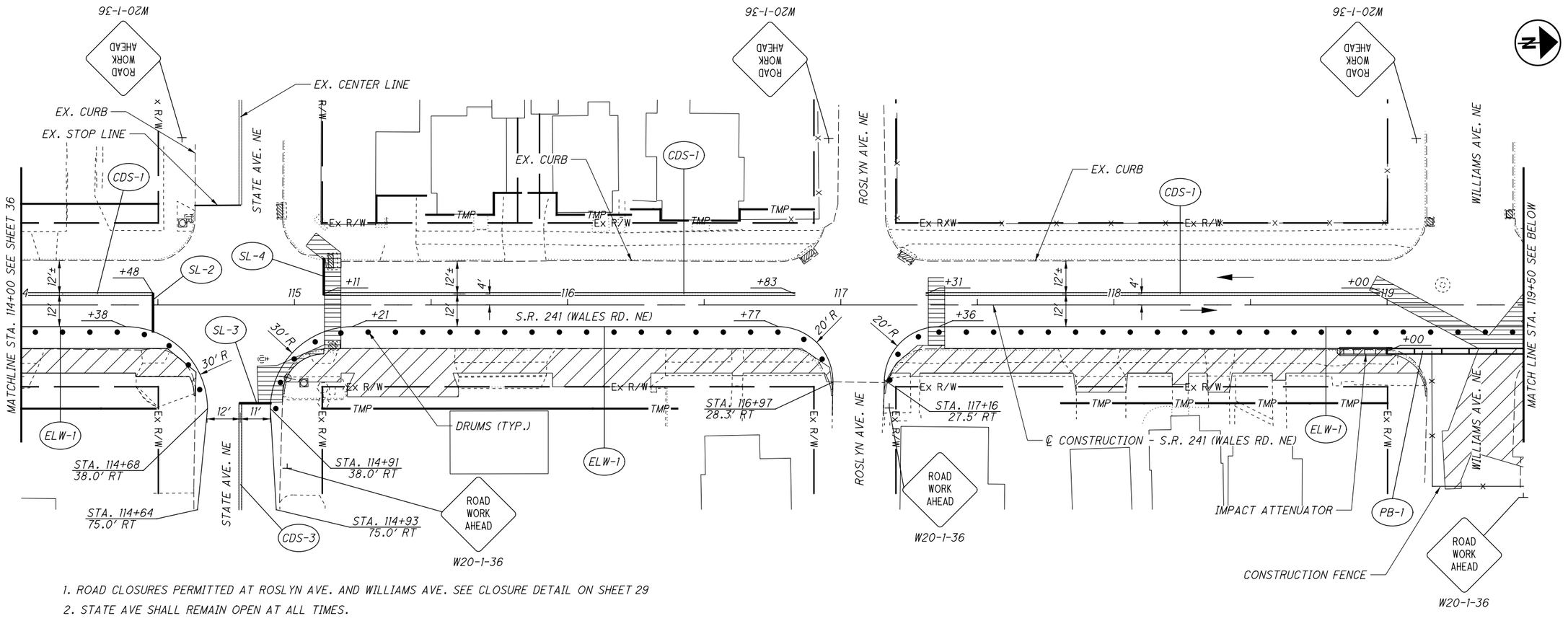
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SWC
CHECKED MLL

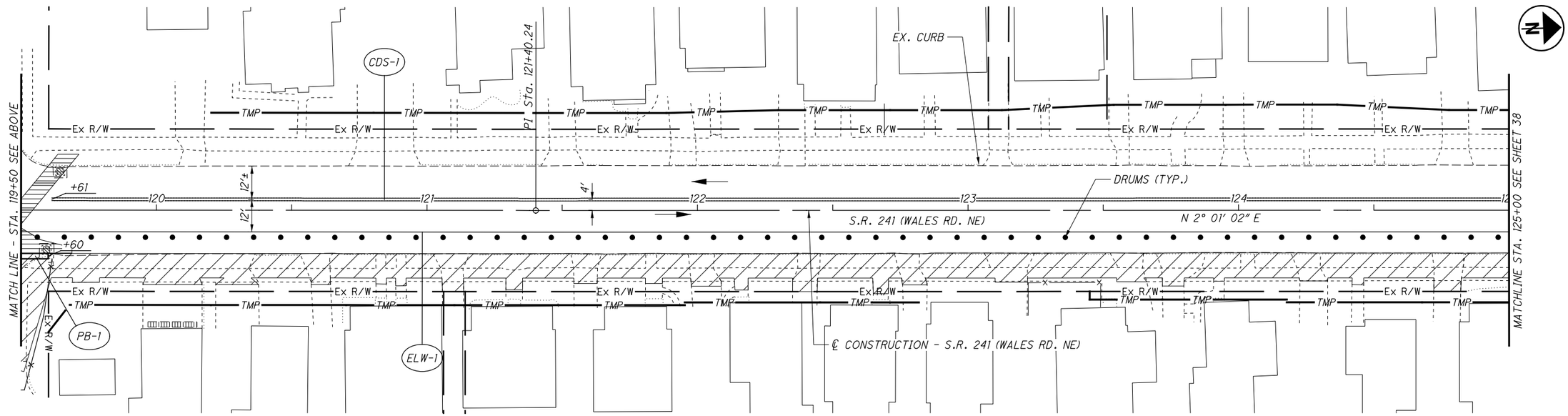
MOT PHASE 1 - SR 241 (WALES RD. NE)
STA. 103+00 TO STA. 114+00

STA-241-9.71

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1. ROAD CLOSURES PERMITTED AT ROSLYN AVE. AND WILLIAMS AVE. SEE CLOSURE DETAIL ON SHEET 29
2. STATE AVE SHALL REMAIN OPEN AT ALL TIMES.



FOR MOT LEGEND AND NOTES, SEE SHEET 35

MOT PHASE 1 - SR 241 (WALES RD. NE)
STA. 114+00 TO STA. 125+00

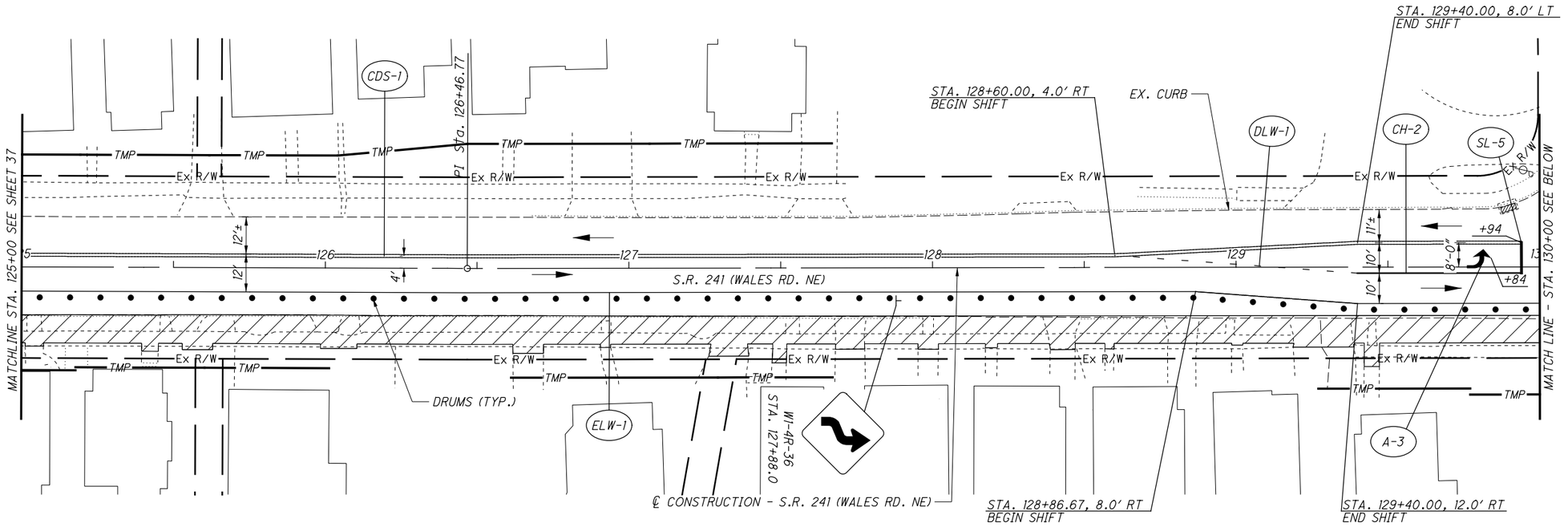
STA-241-9.71

HORIZONTAL SCALE IN FEET
0 10 20 40

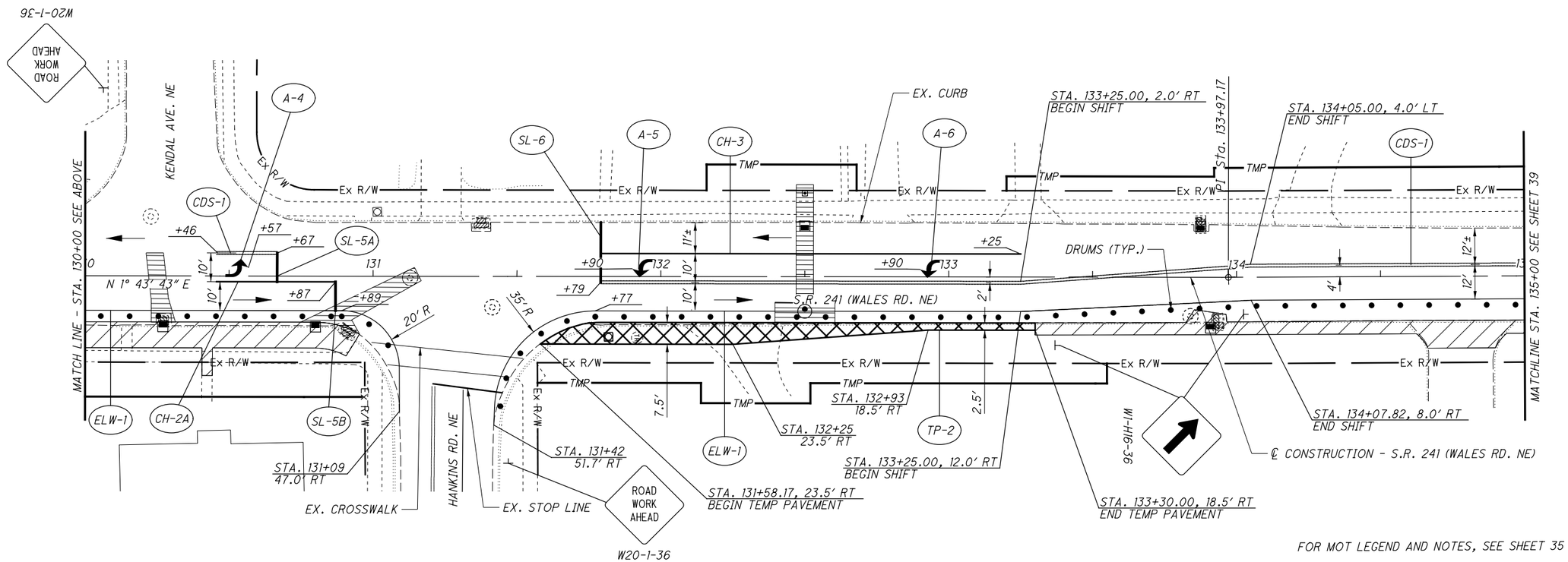
CALCULATED SWC
CHECKED MLL

37
395

P:\00471_WALES_ROAD\Design\MOT\Sheets\00471_MPI03.dgn 9/28/2020 10:27:21 AM mlutes



1. HANKINS ROAD SHALL REMAIN OPEN AT ALL TIMES.



FOR MOT LEGEND AND NOTES, SEE SHEET 35

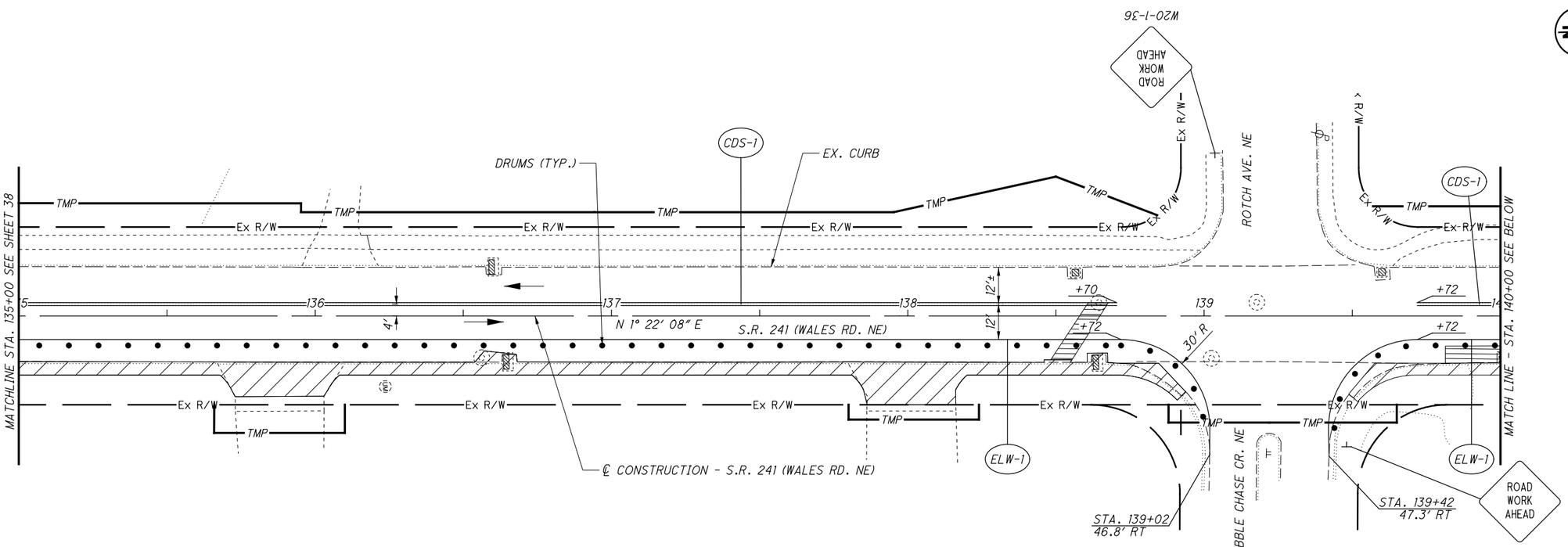
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SWC
CHECKED MLL

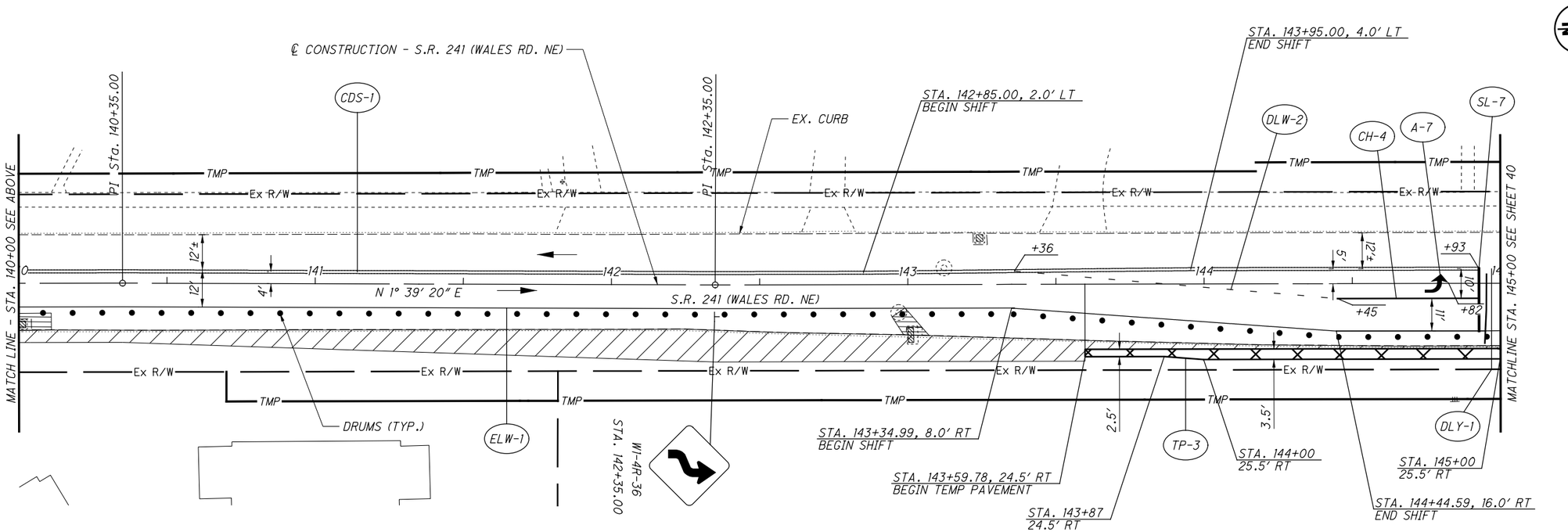
MOT PHASE 1 - SR 241 (WALES RD. NE)
STA 125+00 TO STA 135+00

STA-241-9.71

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1. PEBBLE CASE CR. SHALL REMAIN OPEN AT ALL TIMES



FOR MOT LEGEND AND NOTES, SEE SHEET 35

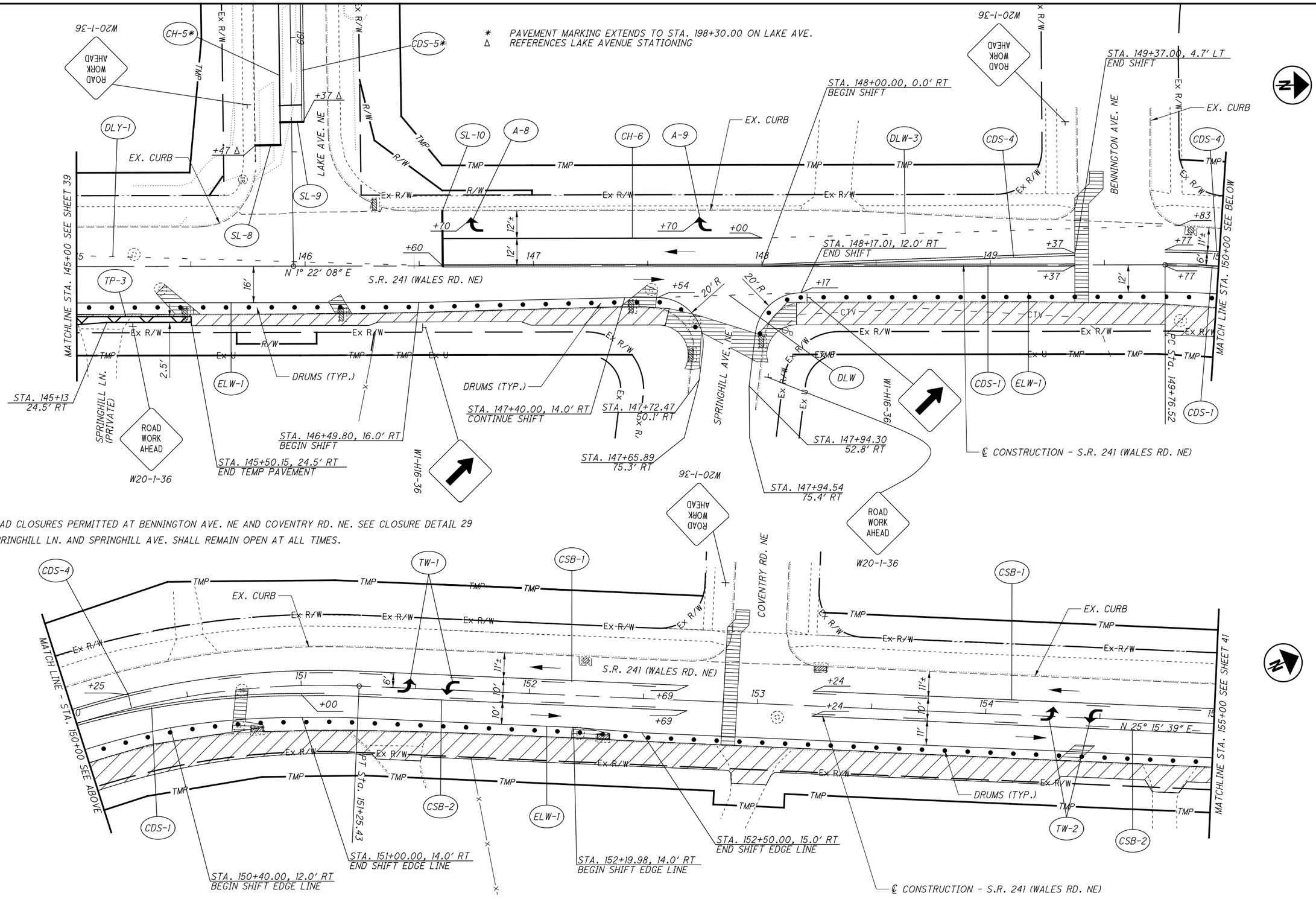
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SWC
CHECKED MLL

MOT PHASE 1 - SR 241 (WALES RD. NE)
STA 135+00 TO STA 145+00

STA-241-9.71

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FOR MOT LEGEND AND NOTES, SEE SHEET 35

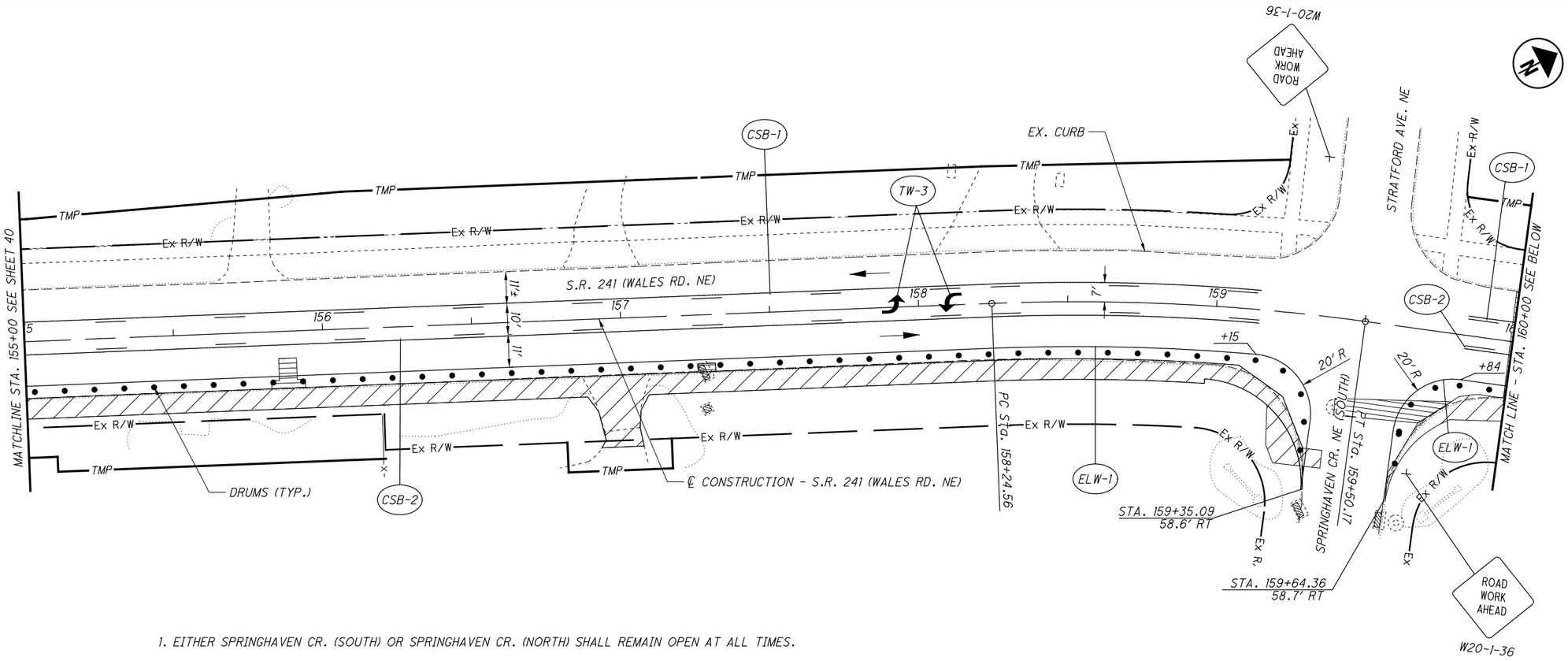
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SWC
CHECKED MLL

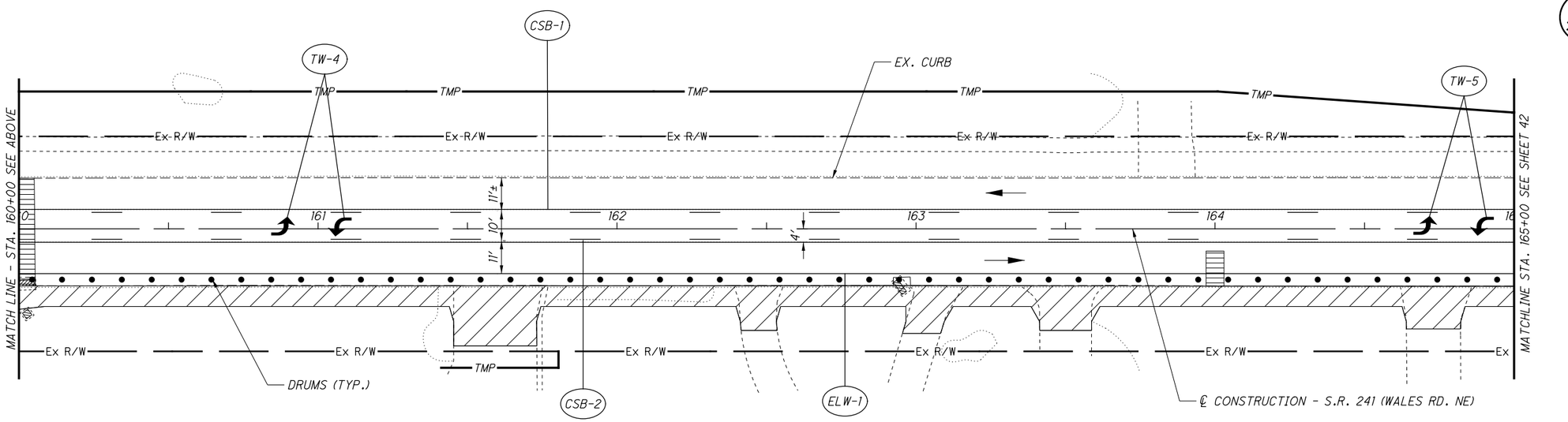
MOT PHASE 1 - SR 241 (WALES RD. NE)
STA. 145+00 TO STA 155+00

STA-241-9.71

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1. EITHER SPRINGHAVEN CR. (SOUTH) OR SPRINGHAVEN CR. (NORTH) SHALL REMAIN OPEN AT ALL TIMES.



FOR MOT LEGEND AND NOTES, SEE SHEET 35

HORIZONTAL SCALE IN FEET
0 10 20 40

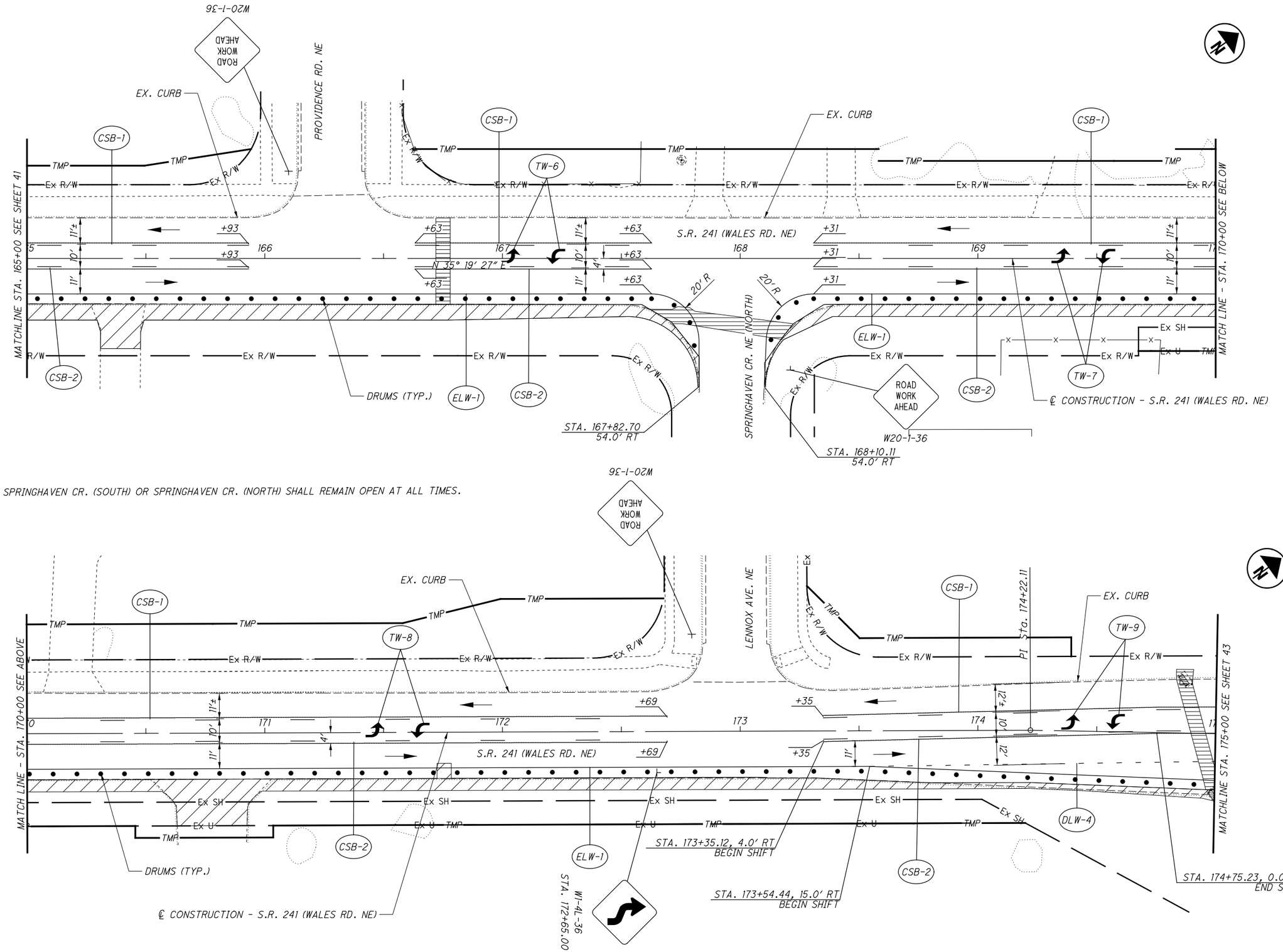
CALCULATED SWC
CHECKED MLL

MOT PHASE 1 - SR 241 (WALES RD. NE)
STA 155+00 TO STA 165+00

STA-241-9.71

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1. EITHER SPRINGHAVEN CR. (SOUTH) OR SPRINGHAVEN CR. (NORTH) SHALL REMAIN OPEN AT ALL TIMES.



FOR MOT LEGEND AND NOTES, SEE SHEET 35

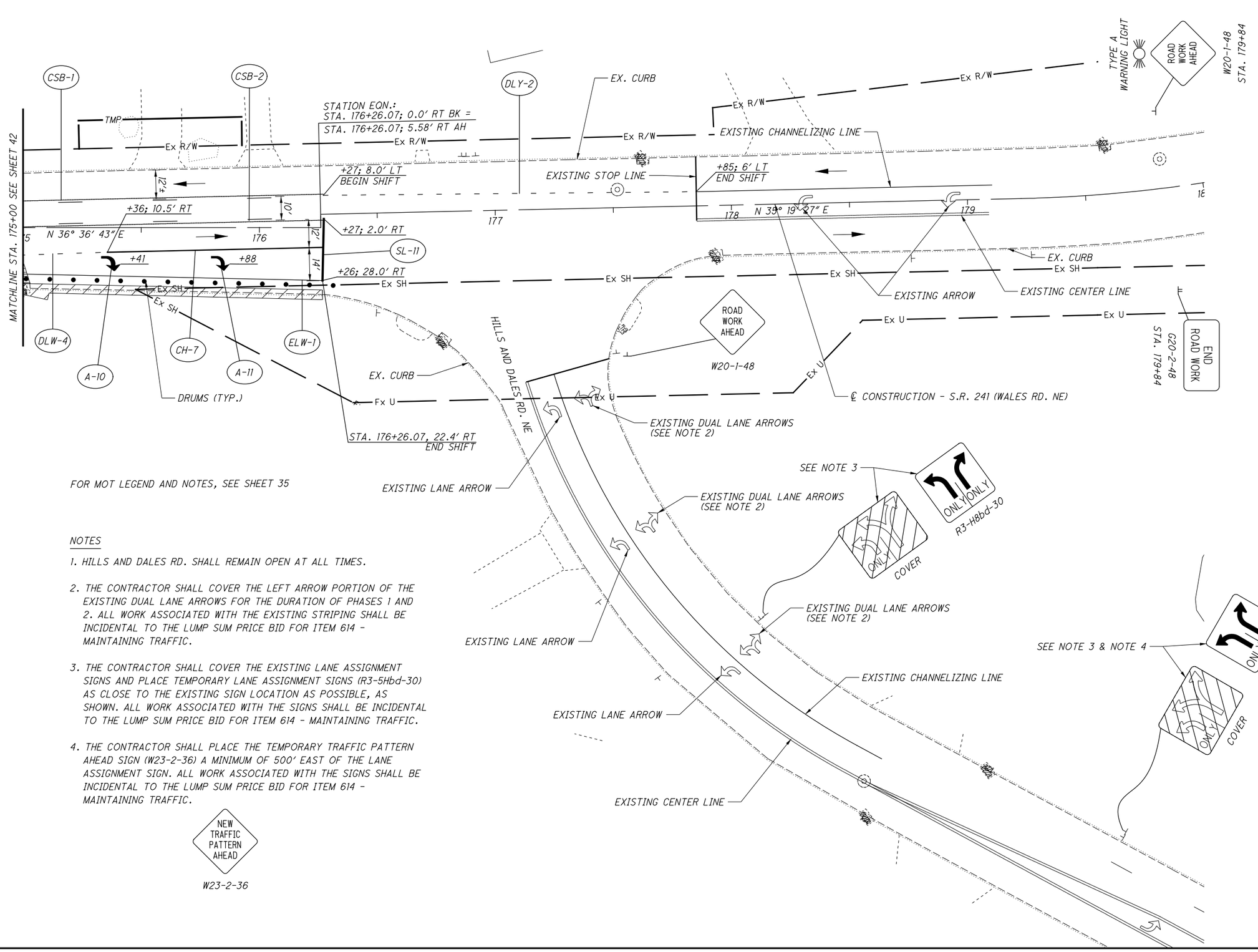
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SWC
CHECKED MLL

MOT PHASE 1 - SR 241 (WALES RD. NE)
STA 165+00 TO STA 175+00

STA-241-9.71

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FOR MOT LEGEND AND NOTES, SEE SHEET 35

NOTES

1. HILLS AND DALES RD. SHALL REMAIN OPEN AT ALL TIMES.

2. THE CONTRACTOR SHALL COVER THE LEFT ARROW PORTION OF THE EXISTING DUAL LANE ARROWS FOR THE DURATION OF PHASES 1 AND 2. ALL WORK ASSOCIATED WITH THE EXISTING STRIPING SHALL BE INCIDENTAL TO THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

3. THE CONTRACTOR SHALL COVER THE EXISTING LANE ASSIGNMENT SIGNS AND PLACE TEMPORARY LANE ASSIGNMENT SIGNS (R3-5Hbd-30) AS CLOSE TO THE EXISTING SIGN LOCATION AS POSSIBLE, AS SHOWN. ALL WORK ASSOCIATED WITH THE SIGNS SHALL BE INCIDENTAL TO THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

4. THE CONTRACTOR SHALL PLACE THE TEMPORARY TRAFFIC PATTERN AHEAD SIGN (W23-2-36) A MINIMUM OF 500' EAST OF THE LANE ASSIGNMENT SIGN. ALL WORK ASSOCIATED WITH THE SIGNS SHALL BE INCIDENTAL TO THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

NEW TRAFFIC PATTERN AHEAD

W23-2-36

HORIZONTAL SCALE IN FEET
0 10 20 40

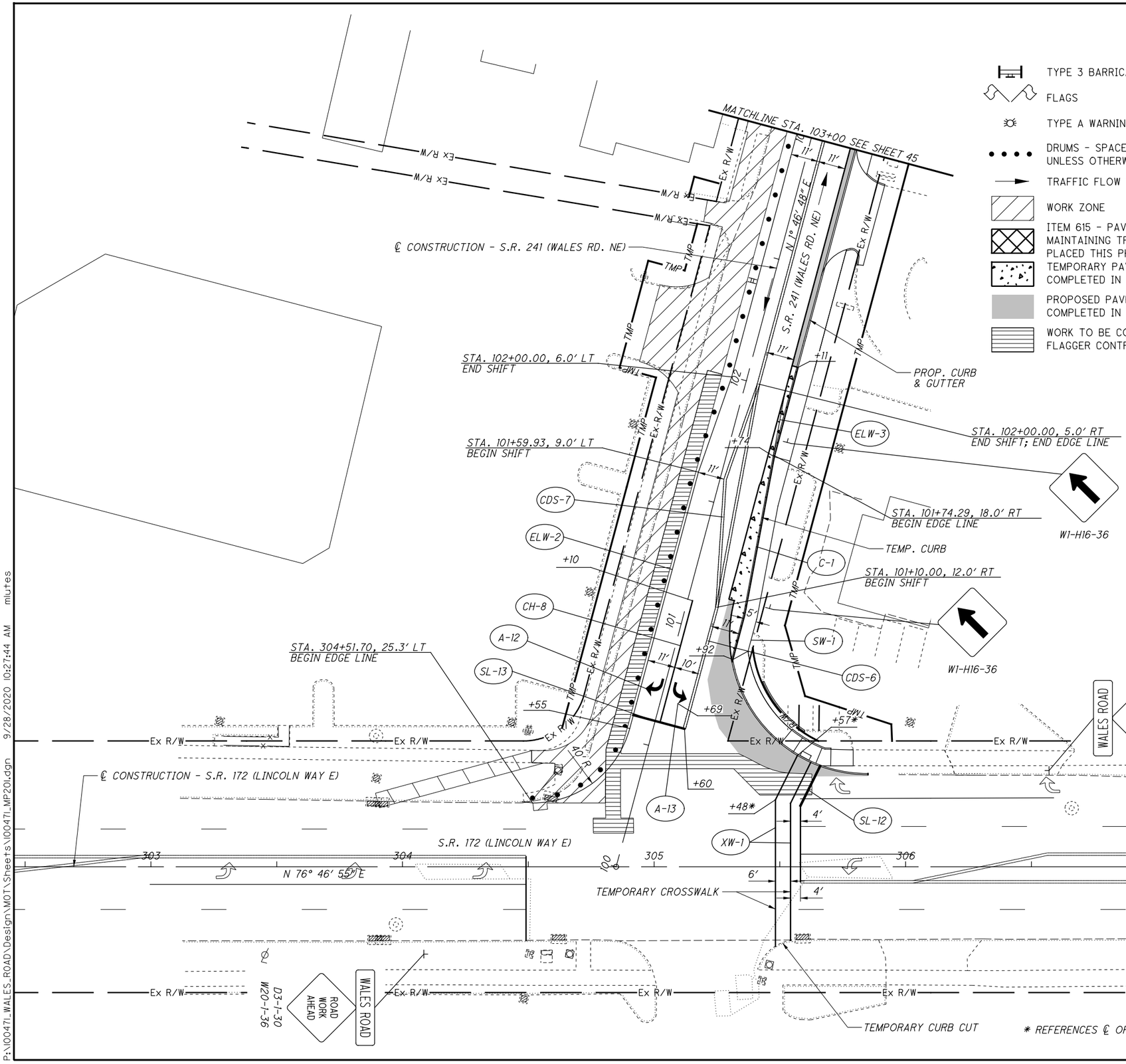
CALCULATED SWC
CHECKED MLL

MOT PHASE 1 - SR 241 (WALES RD. NE)
STA. 175+00 TO STA 180+00

STA-241-9.71

43
395

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LEGEND

- TYPE 3 BARRICADE
- FLAGS
- TYPE A WARNING LIGHT
- DRUMS - SPACED AT 10' C/C UNLESS OTHERWISE NOTED
- TRAFFIC FLOW DIRECTION
- WORK ZONE
- ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, PLACED THIS PHASE
- TEMPORARY PAVEMENT COMPLETED IN PRIOR PHASE
- PROPOSED PAVEMENT COMPLETED IN PRIOR PHASE
- WORK TO BE COMPLETED UNDER FLAGGER CONTROL, SEE NOTE 4.

SW	ITEM 608 - 4" CONCRETE WALK
C	ITEM 609 - CURB, TYPE 2-B
CDS	ITEM 614 - WORK ZONE CENTER LINE, DOUBLE SOLID, YELLOW, CLASS I, 642 PAINT
CBS	ITEM 614 - WORK ZONE CENTER LINE, SOLID/BROKEN, YELLOW, CLASS I, 642 PAINT
ELW	ITEM 614 - WORK ZONE EDGE LINE, WHITE, CLASS I, 4", 642 PAINT
CH	ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT
DLW	ITEM 614 - WORK ZONE DOTTED LINE, WHITE, CLASS I, 4", 642 PAINT
DLY	ITEM 614 - WORK ZONE DOTTED LINE, YELLOW, CLASS I, 4", 642 PAINT
SL	ITEM 614 - WORK ZONE STOP LINE, CLASS I, 642 PAINT
XW	ITEM 614 - WORK ZONE CROSSWALK LINE, CLASS I, 642 PAINT
A	ITEM 614 - WORK ZONE ARROW, CLASS I, 642 PAINT
TW	ITEM 614 - WORK ZONE ARROW, CLASS I, 642 PAINT (TWO-WAY ARROWS)
TP	ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B
PB	ITEM 622 - PORTABLE BARRIER, UNANCHORED
	ITEM 614 - WORK ZONE IMPACT ATTENUATOR

NOTES:

1. FOR SEQUENCE OF CONSTRUCTION NOTES, SEE SHEET 20.
2. FOR MOT TYPICAL SECTIONS, SEE SHEETS 23 TO 25.
3. THE CONTRACTOR SHALL COVER EXISTING SIGNAGE IN CONFLICT WITH THE PROPOSED MOT LANE CONFIGURATION.
4. FOR ADDITIONAL AREAS TO BE COMPLETED UNDER FLAGGER CONTROL, SEE MAINTENANCE OF TRAFFIC GENERAL NOTES SHEETS 15 TO 20

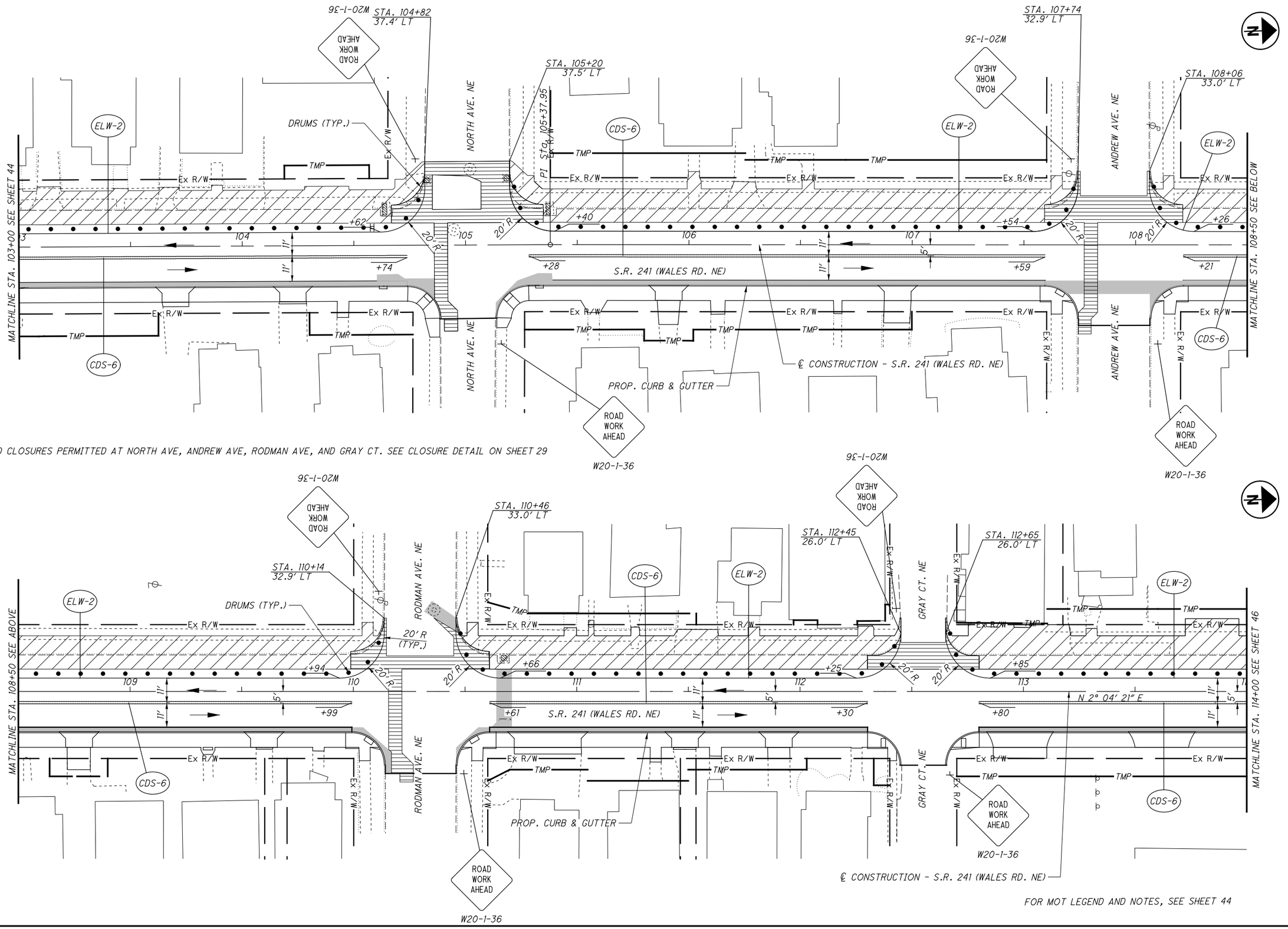
N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SWC
CHECKED MLL

MOT PHASE 2 - SR 241 (WALES RD. NE)
BEGIN WORK TO STA. 103+00
STA-241-9.71

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1. ROAD CLOSURES PERMITTER AT NORTH AVE, ANDREW AVE, RODMAN AVE, AND GRAY CT. SEE CLOSURE DETAIL ON SHEET 29

FOR MOT LEGEND AND NOTES, SEE SHEET 44

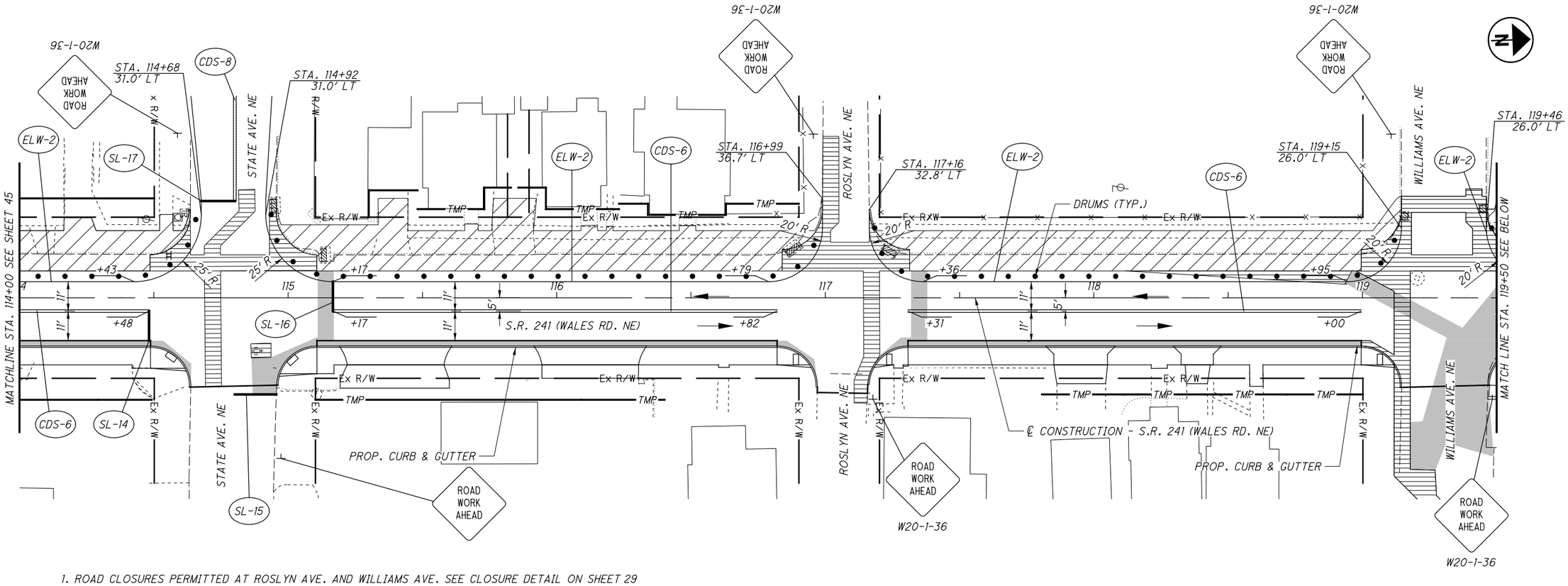
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SWC
CHECKED MLL

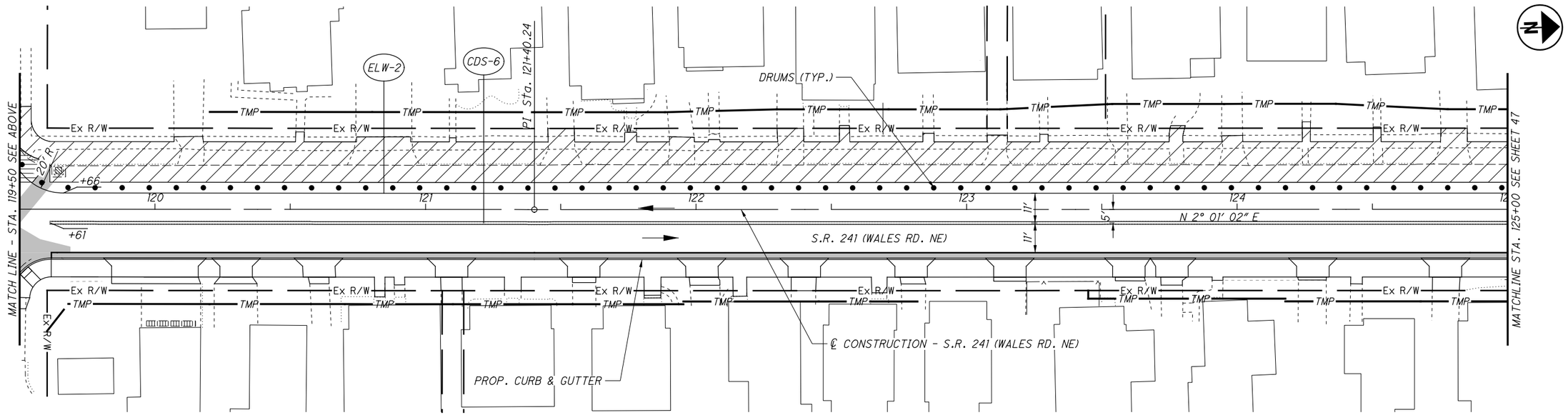
MOT PHASE 2 - SR 241 (WALES RD. NE)
STA. 103+00 TO STA. 114+00

STA-241-9.71

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1. ROAD CLOSURES PERMITTED AT ROSLYN AVE. AND WILLIAMS AVE. SEE CLOSURE DETAIL ON SHEET 29
2. STATE AVE SHALL REMAIN OPEN AT ALL TIMES.



FOR MOT LEGEND AND NOTES, SEE SHEET 44

HORIZONTAL SCALE IN FEET
0 10 20 40

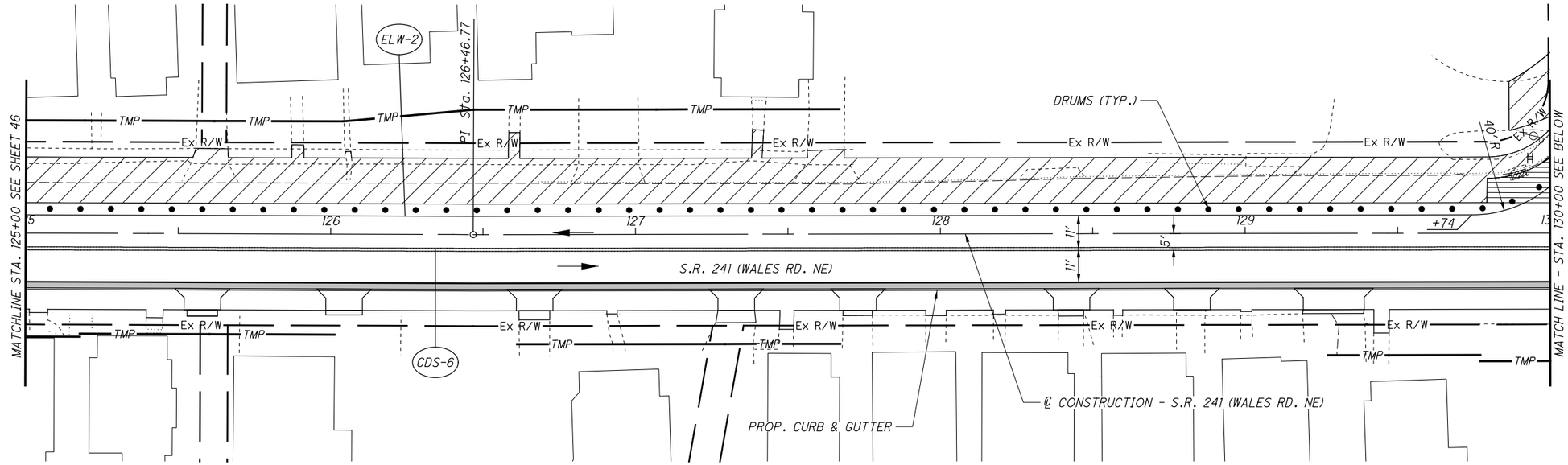
CALCULATED SWC
CHECKED MLL

MOT PHASE 2 - SR 241 (WALES RD. NE)
STA. 114+00 TO STA. 125+00

STA-241-9.71

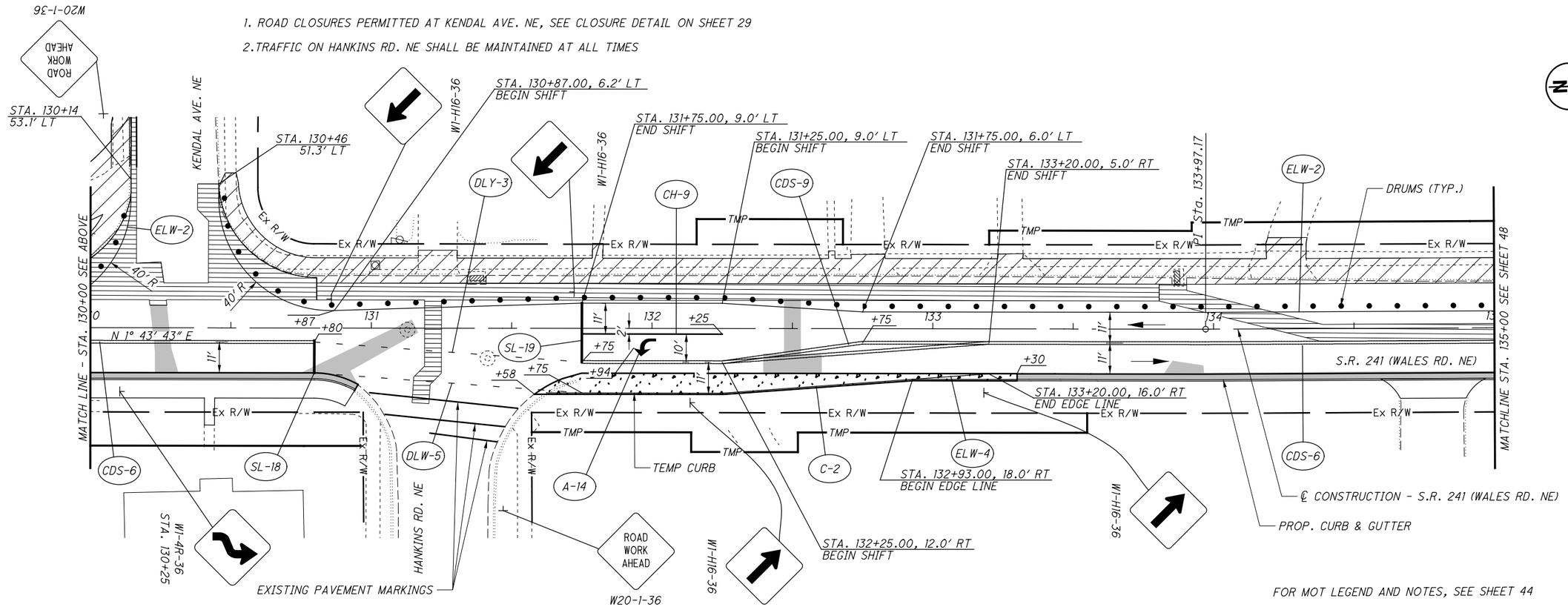
46
395

P:\10047I_WALES_ROAD\Design\MOT\Sheets\10047I_MP203.dgn 9/28/2020 10:27:49 AM mlutes



1. ROAD CLOSURES PERMITTED AT KENDAL AVE. NE, SEE CLOSURE DETAIL ON SHEET 29

2.TRAFFIC ON HANKINS RD. NE SHALL BE MAINTAINED AT ALL TIMES



FOR MOT LEGEND AND NOTES, SEE SHEET 44

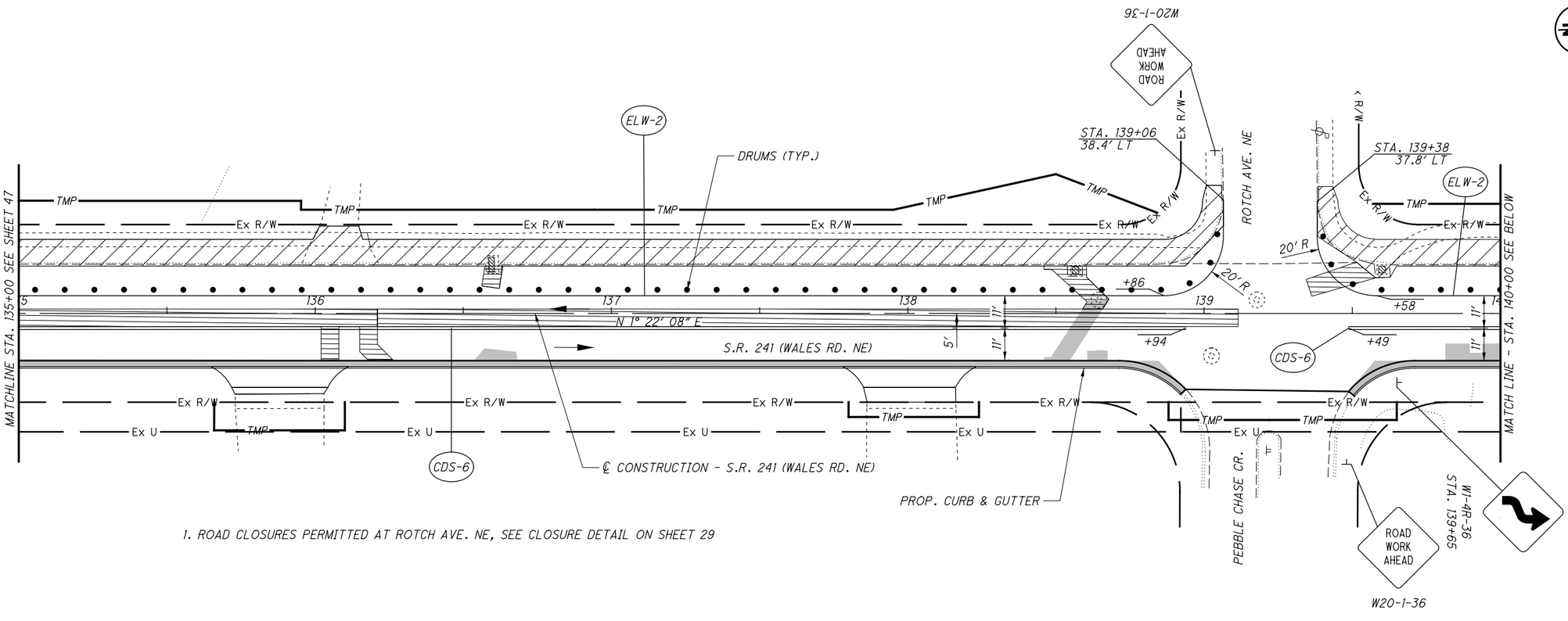
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SWC
CHECKED MLL

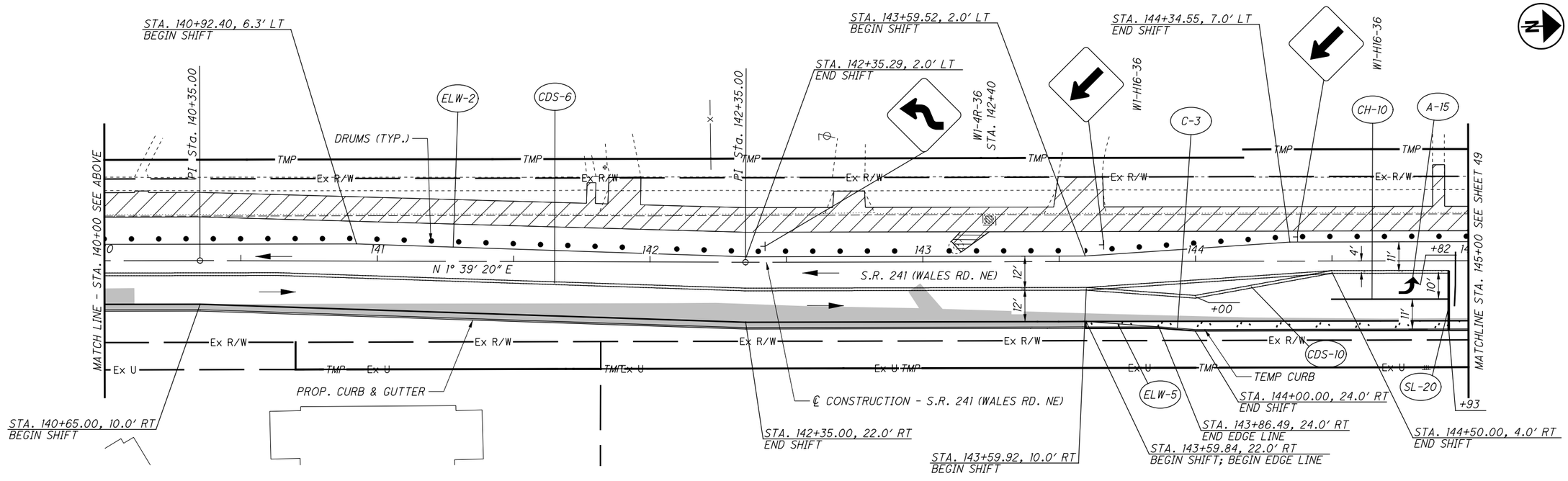
MOT PHASE 2 - SR 241 (WALES RD. NE)
STA 125+00 TO STA 135+00

STA-241-9.71

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1. ROAD CLOSURES PERMITTED AT ROTCH AVE. NE, SEE CLOSURE DETAIL ON SHEET 29



FOR MOT LEGEND AND NOTES, SEE SHEET 44

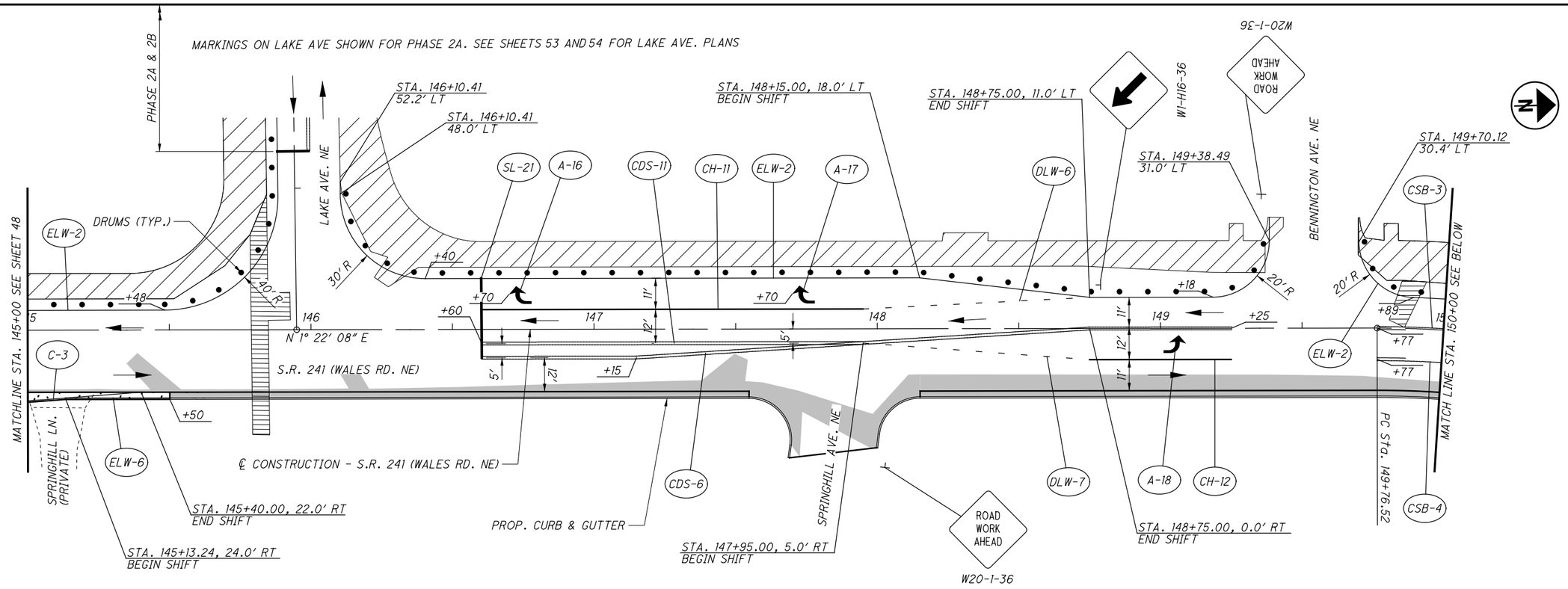
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SWC
CHECKED MLL

MOT PHASE 2 - SR 241 (WALES RD. NE)
STA 135+00 TO STA 145+00

STA-241-9.71

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FOR MOT LEGEND AND NOTES, SEE SHEET 44

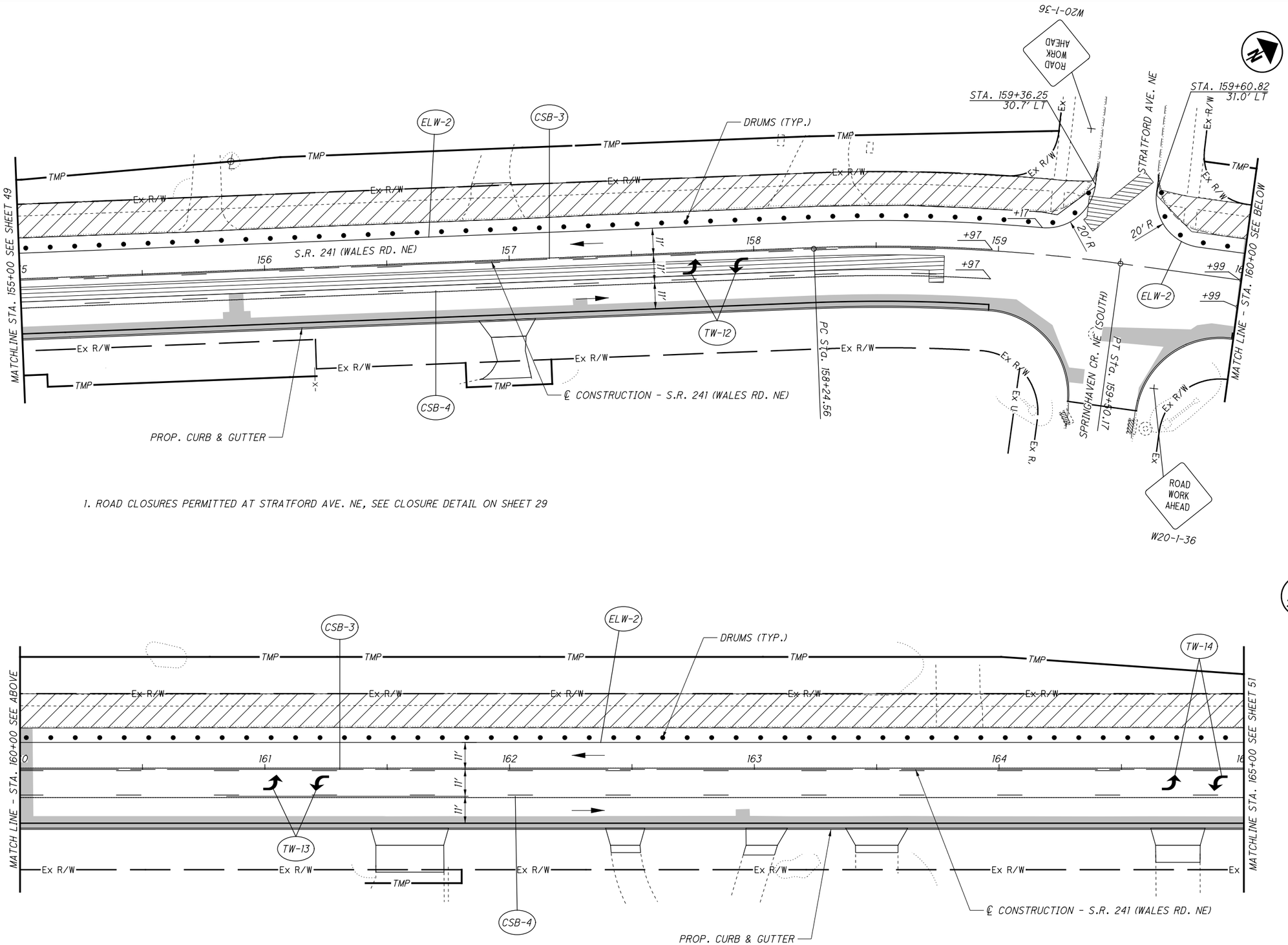
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SWC
CHECKED MLL

MOT PHASE 2 - SR 241 (WALES RD. NE)
STA. 145+00 TO STA 155+00

STA-241-9.71

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1. ROAD CLOSURES PERMITTED AT STRATFORD AVE. NE, SEE CLOSURE DETAIL ON SHEET 29

FOR MOT LEGEND AND NOTES, SEE SHEET 44

HORIZONTAL SCALE IN FEET
0 10 20 40

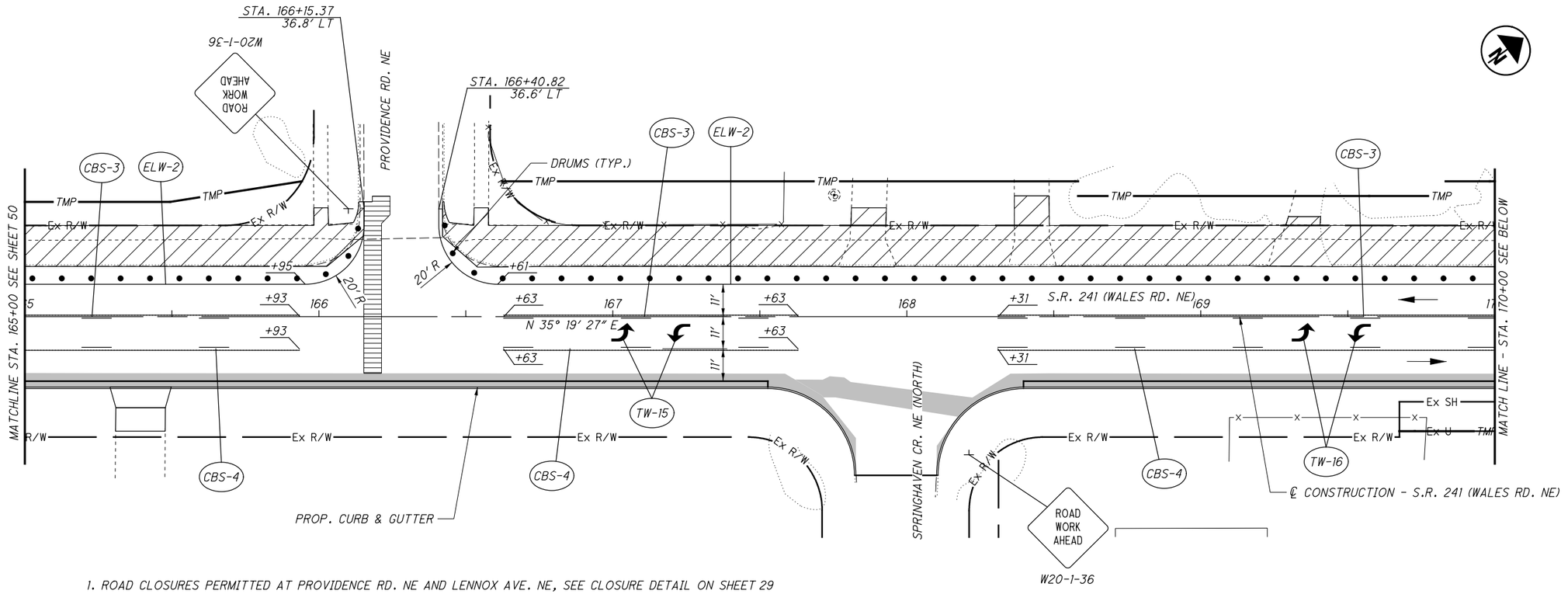
CALCULATED SWC
CHECKED MLL

MOT PHASE 2 - SR 241 (WALES RD. NE)
STA 155+00 TO STA 165+00

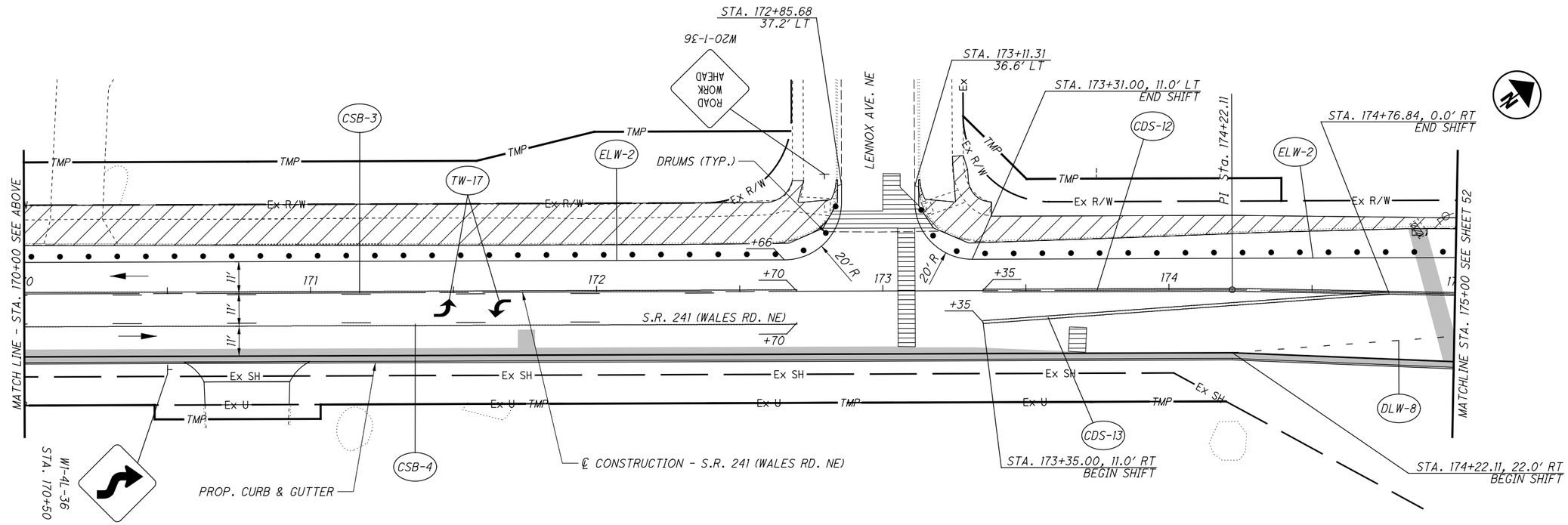
STA-241-9.71

50
395

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1. ROAD CLOSURES PERMITTED AT PROVIDENCE RD. NE AND LENNOX AVE. NE, SEE CLOSURE DETAIL ON SHEET 29



FOR MOT LEGEND AND NOTES, SEE SHEET 44

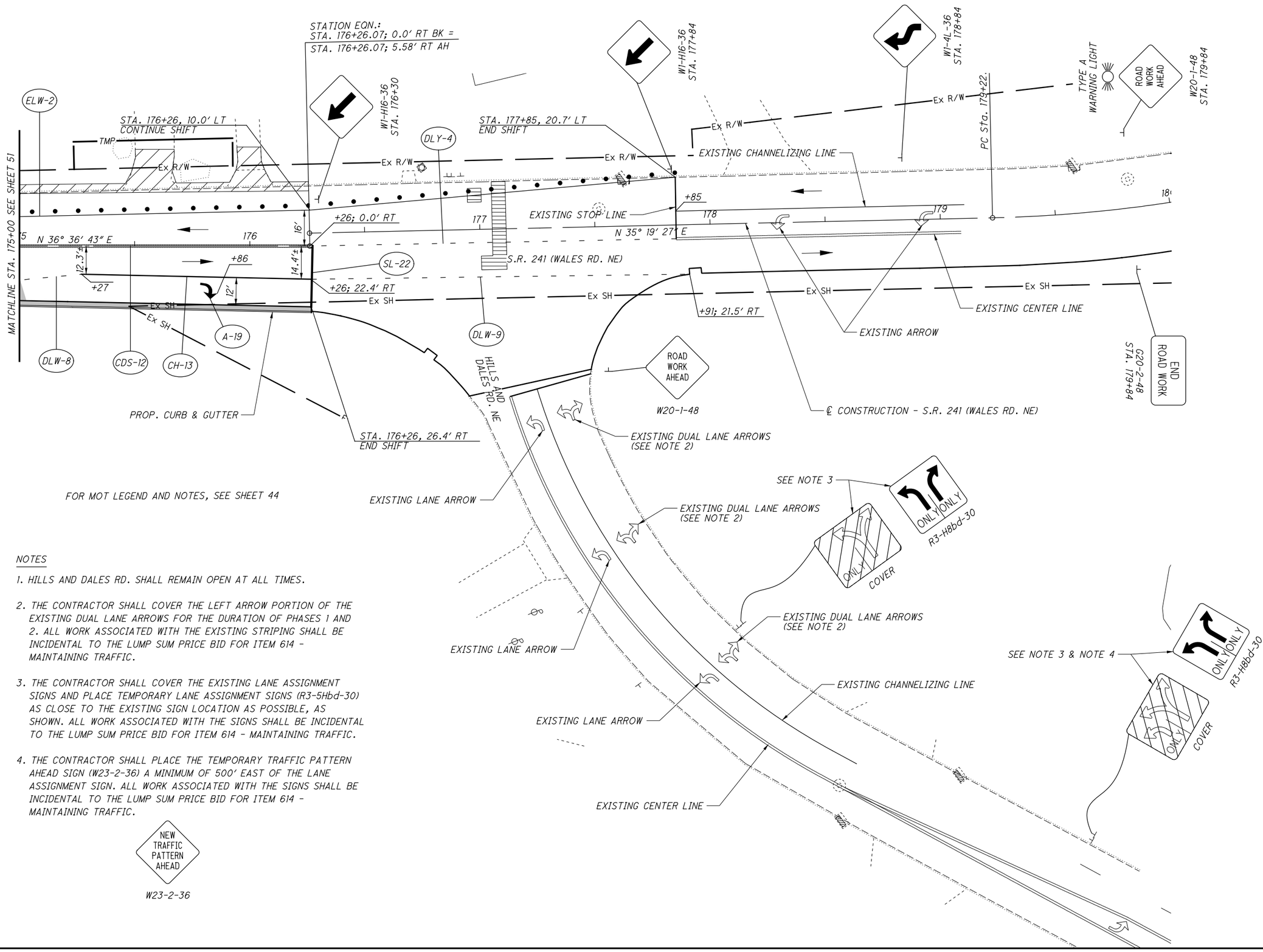
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SWC
CHECKED MLL

MOT PHASE 2 - SR 241 (WALES RD. NE)
STA 165+00 TO STA 175+00

STA-241-9.71

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FOR MOT LEGEND AND NOTES, SEE SHEET 44

NOTES

1. HILLS AND DALES RD. SHALL REMAIN OPEN AT ALL TIMES.
2. THE CONTRACTOR SHALL COVER THE LEFT ARROW PORTION OF THE EXISTING DUAL LANE ARROWS FOR THE DURATION OF PHASES 1 AND 2. ALL WORK ASSOCIATED WITH THE EXISTING STRIPING SHALL BE INCIDENTAL TO THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.
3. THE CONTRACTOR SHALL COVER THE EXISTING LANE ASSIGNMENT SIGNS AND PLACE TEMPORARY LANE ASSIGNMENT SIGNS (R3-5Hbd-30) AS CLOSE TO THE EXISTING SIGN LOCATION AS POSSIBLE, AS SHOWN. ALL WORK ASSOCIATED WITH THE SIGNS SHALL BE INCIDENTAL TO THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.
4. THE CONTRACTOR SHALL PLACE THE TEMPORARY TRAFFIC PATTERN AHEAD SIGN (W23-2-36) A MINIMUM OF 500' EAST OF THE LANE ASSIGNMENT SIGN. ALL WORK ASSOCIATED WITH THE SIGNS SHALL BE INCIDENTAL TO THE LUMP SUM PRICE BID FOR ITEM 614 - MAINTAINING TRAFFIC.

NEW TRAFFIC PATTERN AHEAD

W23-2-36

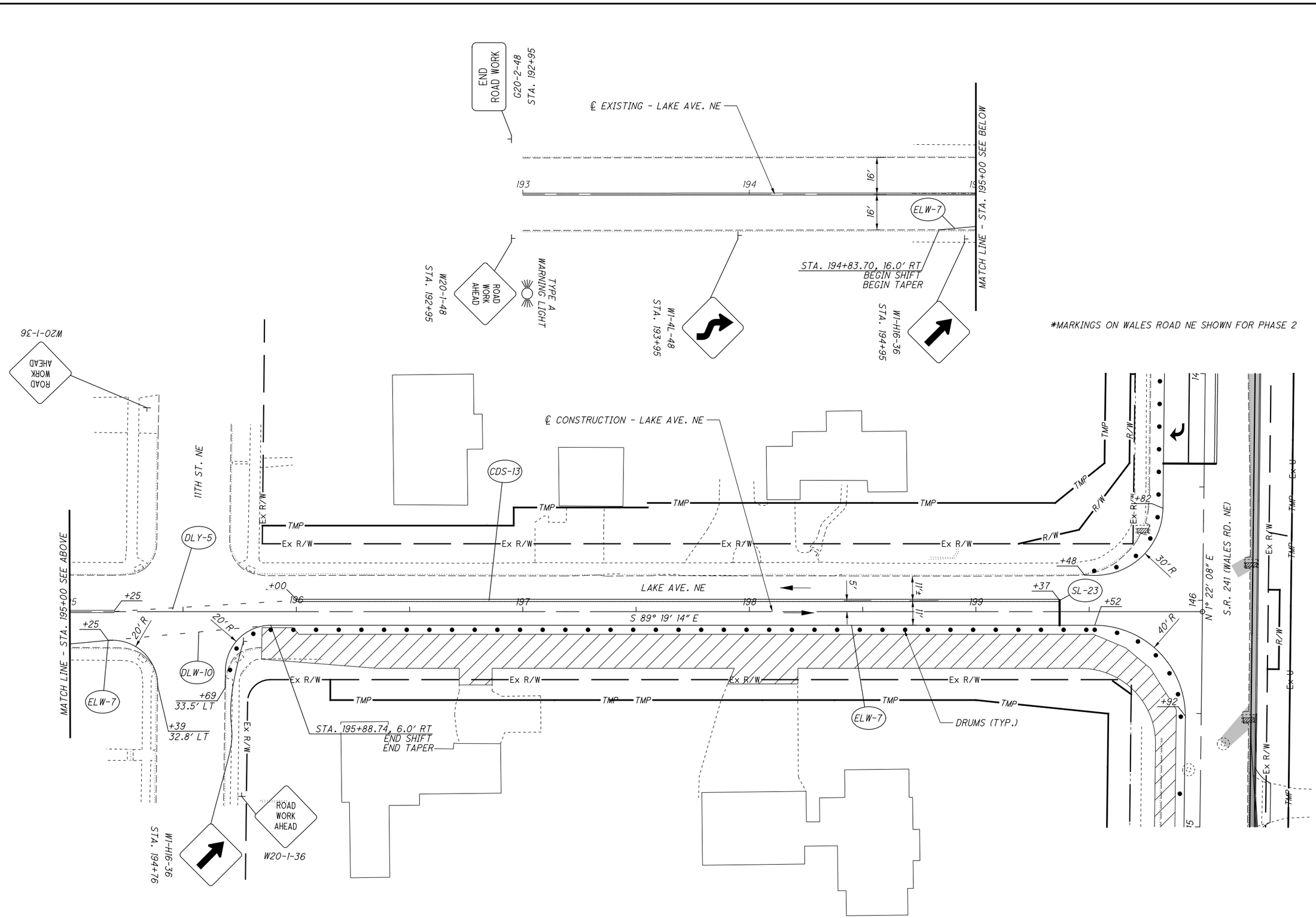
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SWC
CHECKED MLL

MOT PHASE 2 - SR 241 (WALES RD. NE)
STA. 175+00 TO STA 176+26

STA-241-9.71

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HORIZONTAL SCALE IN FEET
0 10 20 40

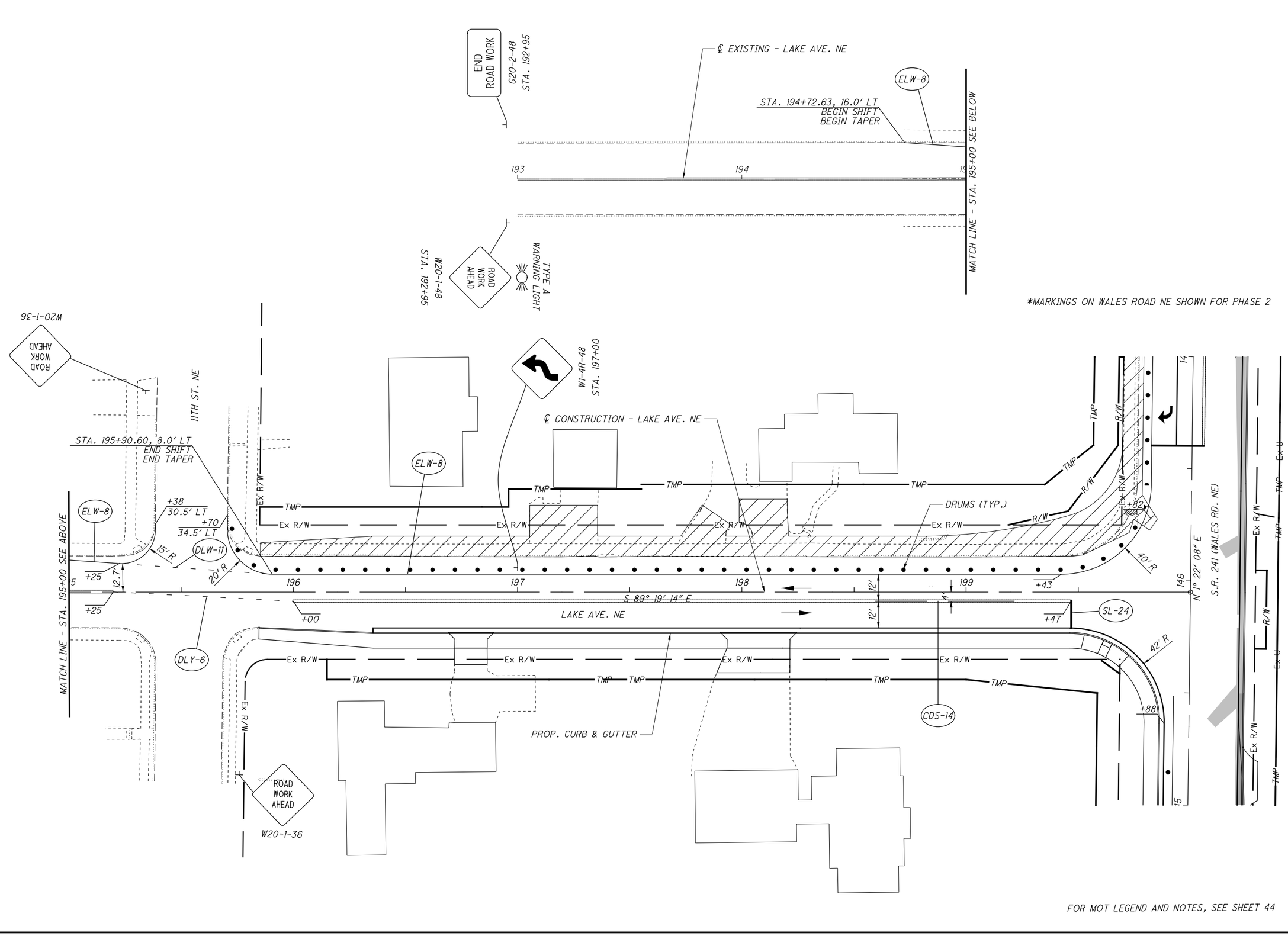
CALCULATED SWC
CHECKED MLL

MOT PHASE 2A - LAKE AV. NE
STA. 193+00 TO STA. 200+00

STA-241-9.71

53
395

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FOR MOT LEGEND AND NOTES, SEE SHEET 44

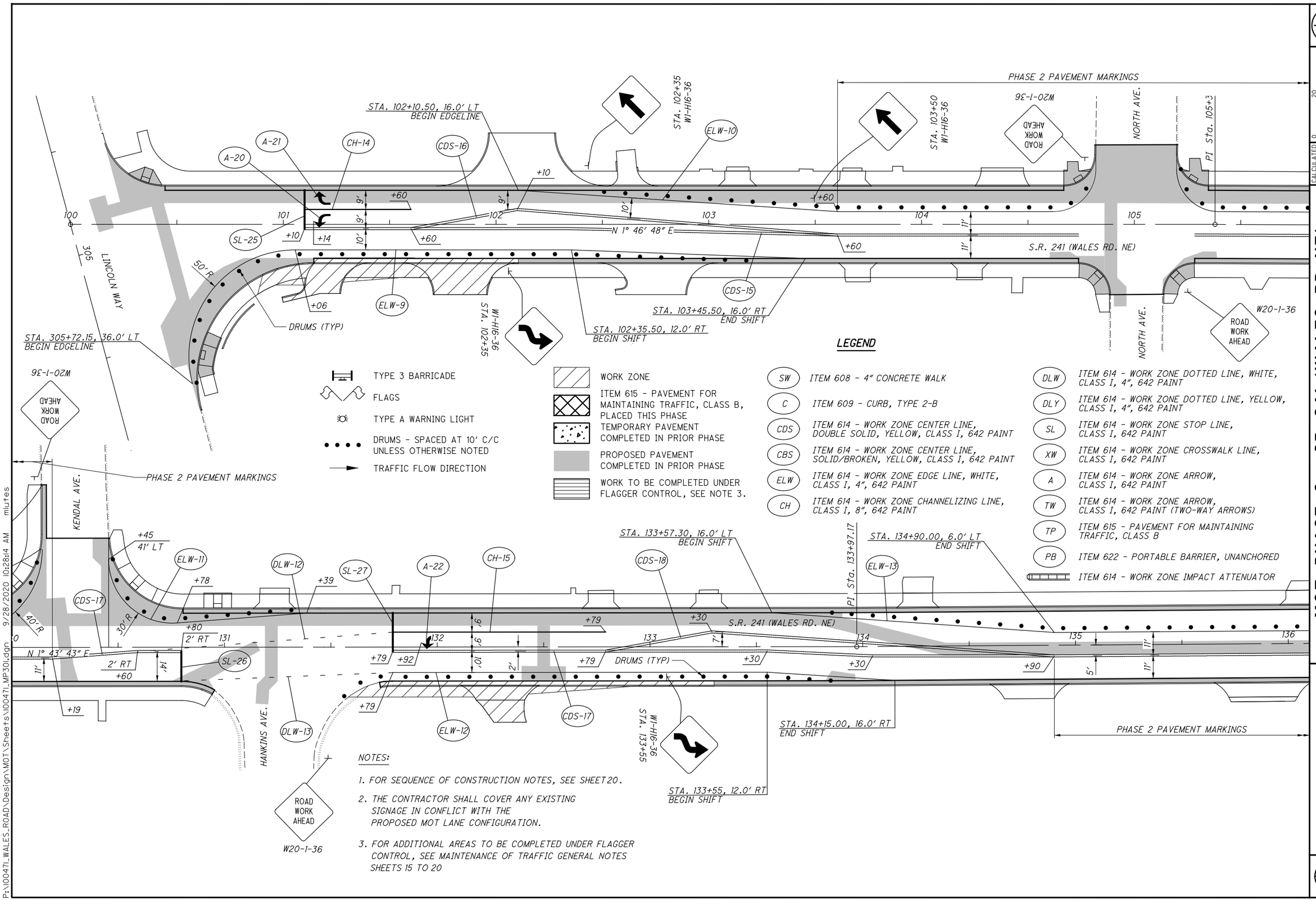
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SWC
CHECKED MLL

MOT PHASE 2B - LAKE AV. NE
STA. 193+00 TO STA. 200+00

STA-241-9.71

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TYPE 3 BARRICADE
FLAGS
TYPE A WARNING LIGHT
DRUMS - SPACED AT 10' C/C UNLESS OTHERWISE NOTED
TRAFFIC FLOW DIRECTION

WORK ZONE
ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B, PLACED THIS PHASE
TEMPORARY PAVEMENT COMPLETED IN PRIOR PHASE
PROPOSED PAVEMENT COMPLETED IN PRIOR PHASE
WORK TO BE COMPLETED UNDER FLAGGER CONTROL, SEE NOTE 3.

LEGEND

SW	ITEM 608 - 4" CONCRETE WALK
C	ITEM 609 - CURB, TYPE 2-B
CDS	ITEM 614 - WORK ZONE CENTER LINE, DOUBLE SOLID, YELLOW, CLASS I, 642 PAINT
CBS	ITEM 614 - WORK ZONE CENTER LINE, SOLID/BROKEN, YELLOW, CLASS I, 642 PAINT
ELW	ITEM 614 - WORK ZONE EDGE LINE, WHITE, CLASS I, 4", 642 PAINT
CH	ITEM 614 - WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT
DLW	ITEM 614 - WORK ZONE DOTTED LINE, WHITE, CLASS I, 4", 642 PAINT
DLY	ITEM 614 - WORK ZONE DOTTED LINE, YELLOW, CLASS I, 4", 642 PAINT
SL	ITEM 614 - WORK ZONE STOP LINE, CLASS I, 642 PAINT
XW	ITEM 614 - WORK ZONE CROSSWALK LINE, CLASS I, 642 PAINT
A	ITEM 614 - WORK ZONE ARROW, CLASS I, 642 PAINT
TW	ITEM 614 - WORK ZONE ARROW, CLASS I, 642 PAINT (TWO-WAY ARROWS)
TP	ITEM 615 - PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B
PB	ITEM 622 - PORTABLE BARRIER, UNANCHORED

ITEM 614 - WORK ZONE IMPACT ATTENUATOR

NOTES:

1. FOR SEQUENCE OF CONSTRUCTION NOTES, SEE SHEET 20.
2. THE CONTRACTOR SHALL COVER ANY EXISTING SIGNAGE IN CONFLICT WITH THE PROPOSED MOT LANE CONFIGURATION.
3. FOR ADDITIONAL AREAS TO BE COMPLETED UNDER FLAGGER CONTROL, SEE MAINTENANCE OF TRAFFIC GENERAL NOTES SHEETS 15 TO 20

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SWC
CHECKED MLL

MOT PHASE 3 - SR 241 (WALES RD. NE)
STA. 100+00 TO STA 135+75

STA-241-9.71

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PHASE 2 PAVEMENT MARKINGS

℄ CONSTRUCTION - S.R. 241 (WALES RD. NE)

ROTCH AVE. NE

DRUMS (TYP)

DRUMS (TYP)

PI Sta. 140+35.00

STA. 140+35.00, 6.0' LT
BEGIN EDGE LINE

ELW-14

PI Sta. 142+35.00

137 138 139 140 141 142

6'

N 1° 22' 08" E

S.R. 241 (WALES RD. NE)

6'

12'

+02

12'

N 1° 39' 20" E

PEBBLE CHASE CIR.

STA. 141+02.00, 18.0' LT
BEGIN EDGE LINE

CDS-19

ELW-15

MATCHLINE STA. 142+50 SEE BELOW

* REMOVE EDGE LINE ON NORTH SIDE OF LAKE AVE

MATCHLINE STA. 142+50 SEE ABOVE

ELW-14

STA. 142+88.00, 6.0' LT
BEGIN SHIFT

STA. 143+50.00, 11.0' LT
END SHIFT

℄ CONSTRUCTION - S.R. 241 (WALES RD. NE)

CDS-19

CH-16

SL-28

LAKE AVE

PHASE 2 PAVEMENT MARKINGS *

DRUMS (TYP)

12'

6'

12'

143 144 145 146 147 148

+50

+96

+82

10'

9'

10'

12"

+82

+95

+50

20' R

N 1° 22' 08" E

S.R. 241 (WALES RD. NE)

A-23

A-24

ELW-15

SPRINGHILL LN.
(PRIVATE)

STA. 147+69.50, 41.1' LT
END EDGE LINE

1. SPRINGHILL LN. SHALL REMAIN OPEN AT ALL TIMES

FOR MOT LEGEND AND NOTES, SEE SHEET 55

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED SWC
CHECKED MLL

MOT PHASE 3 - SR 241 (WALES RD. NE)
STA. 135+75 TO STA 147+37

STA-241-9.71

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SHEET NUM.																PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS	10	11	14A	63	64	65	79	80	85	86	186	187	259	364	365	01/NHS/PV	02/NHS/OT/AQUA						
																						ROADWAY	
																LS		201	11000	LS		CLEARING AND GRUBBING	
1,615									3,482		267	857				2,739	3,482	202	23000	6,221	SY	PAVEMENT REMOVED	
							54,185									54,185		202	30000	54,185	SF	WALK REMOVED	
							15,804									15,804		202	32000	15,804	FT	CURB REMOVED	
				621	396	489			367							1,506	367	202	35100	1,873	FT	PIPE REMOVED, 24" AND UNDER	
				15	39											54		202	35200	54	FT	PIPE REMOVED, OVER 24"	
		2														2		SPECIAL	20252990	2	EACH	PARKING BLOCK REMOVED	11
					1											1		202	58000	1	EACH	MANHOLE REMOVED	
									1								1	202	58001	1	EACH	MANHOLE REMOVED, AS PER PLAN	258
				22	17	9										48		202	58100	48	EACH	CATCH BASIN REMOVED	
				1												1		202	58701	1	EACH	MANHOLE ABANDONED, AS PER PLAN	13
				79												79		SPECIAL	20270000	79	FT	FILL AND PLUG EXISTING CONDUIT	13
									30								30	202	75610	30	EACH	VALVE BOX REMOVED	
		LS														LS		202	98000	LS		REMOVAL MISC.: POSTS, FOUNDATIONS, AND STONES	11
		1														1		202	98100	1	EACH	REMOVAL MISC.: BUSINESS SIGN TO BE REMOVED AND STORED	11
									9,387								9,387	202	98700	9,387	FT	ABANDON MISC.: WATER MAIN ABANDONED IN PLACE	258
								2,565								2,565		203	10000	2,565	CY	EXCAVATION	
								312								312		203	20000	312	CY	EMBANKMENT	
11,982											1,158	1,285				14,425		204	10000	14,425	SY	SUBGRADE COMPACTION	
								3,714								3,714		204	13000	3,714	CY	EXCAVATION OF SUBGRADE	
								3,714								3,714		204	30010	3,714	CY	GRANULAR MATERIAL, TYPE B	
		7														7		204	45000	7	HOUR	PROOF ROLLING	
								2,103								2,103		204	50000	2,103	SY	GEOTEXTILE FABRIC	
								5,481								5,481		204	51000	5,481	SY	GEOGRID	
			400													400		607	98000	400	FT	FENCE, MISC.: TEMPORARY CONSTRUCTION FENCE	14A
	400															400		607	98000	400	FT	FENCE, MISC.: TEMPORARY CONSTRUCTION FENCE WITH GATE	10
							54,848									54,848		608	10000	54,848	SF	4" CONCRETE WALK	
							359									359		608	10001	359	SF	4" CONCRETE WALK, AS PER PLAN	14
							9									9		608	40000	9	FT	CONCRETE STEPS, TYPE A	
							48									48		608	41000	48	FT	CONCRETE STEPS, TYPE B	
							7									7		608	41001	7	FT	CONCRETE STEPS, TYPE B, AS PER PLAN	14
							5,018									5,018		608	52000	5,018	SF	CURB RAMP	
		36														36		SPECIAL	61199700	36	EACH	GAS VALVE BOX ADJUSTED TO GRADE	11
															11	11		623	38500	11	EACH	MONUMENT ASSEMBLY	
														13	100	113		623	40520	113	EACH	RIGHT-OF-WAY MONUMENT	
		1														1		SPECIAL	69050100	1	EACH	MAILBOX SUPPORT SYSTEM, SINGLE	11
			46										4			46	4	SPECIAL	69065016	50	TON	WORK INVOLVING PETROLEUM CONTAMINATED SOIL	14A
			450										50			450	50	SPECIAL	69065020	500	GAL	WORK INVOLVING WATER	14A
			450										50			450	50	SPECIAL	69065024	500	GAL	WORK INVOLVING REGULATED WATER	14A
																						EROSION CONTROL	
	2															2		659	00100	2	EACH	SOIL ANALYSIS TEST	
	1,927															1,927		659	00300	1,927	CY	TOPSOIL	
								17,360								17,360		659	10000	17,360	SY	SEEDING AND MULCHING	
	868															868		659	14000	868	SY	REPAIR SEEDING AND MULCHING	
	868															868		659	15000	868	SY	INTER-SEEDING	
	2.34															2.34		659	20000	2.34	TON	COMMERCIAL FERTILIZER	
	3.59															3.59		659	31000	3.59	ACRE	LIME	
	96															96		659	35000	96	MGAL	WATER	
																LS		832	15000	LS		STORM WATER POLLUTION PREVENTION PLAN	
																LS		832	15002	LS		STORM WATER POLLUTION PREVENTION INSPECTIONS	
																LS		832	15010	LS		STORM WATER POLLUTION PREVENTION INSPECTION SOFTWARE	
123,000																123,000		832	30000	123,000	EACH	EROSION CONTROL	
										1						1		895	10030	1	EACH	MANUFACTURED WATER QUALITY STRUCTURE, TYPE 3	

CALCULATED KAH
CHECKED RAK

GENERAL SUMMARY

STA-241-9.71

5.7
395

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SHEET NUM.												PART.		ALT	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE
OFFICE CALCS	11	12	13	66	67	68	69	70	85	186	187	01/NHS/PV	02/NHS/OT/AQUA	(X)	ITEM	EXT	TOTAL			SHEET NO.
																			DRAINAGE	
								2,226				2,226			605	05110	2,226	FT	4" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
								3,569				3,569			605	05210	3,569	FT	4" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
								7,300				7,300			605	06020	7,300	FT	4" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	
								292				292			611	00100	292	FT	4" CONDUIT, TYPE B	
			50									50			611	00100	50	FT	4" CONDUIT, TYPE B, FOR DRAINAGE CONNECTION	
			100									100			611	00200	100	FT	4" CONDUIT, TYPE C, FOR DRAINAGE CONNECTION	
								460				460			611	00410	460	FT	4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	
				1	8	2						11			611	98151	11	EACH	CATCH BASIN, NO. 3, AS PER PLAN	13
				17	1	9	12					39			611	98181	39	EACH	CATCH BASIN, NO. 3A, AS PER PLAN	13
						2						2			611	98370	2	EACH	CATCH BASIN, NO. 6	
							1					1			611	98630	1	EACH	CATCH BASIN ADJUSTED TO GRADE	
					1							1			611	98700	1	EACH	INLET, SIDE DITCH	
				4	2	2	1					9			611	99574	9	EACH	MANHOLE, NO. 3	
				8	8	10	5					31			611	99655	31	EACH	MANHOLE ADJUSTED TO GRADE, AS PER PLAN	11
				1	8	6	4					19			611	99660	19	EACH	MANHOLE RECONSTRUCTED TO GRADE	
	2,000											2,000			SPECIAL	61199820	2,000	LB	MISCELLANEOUS METAL	11
																			DRAINAGE ALTERNATES	
			50									50		X	611	01800	50	FT	8" CONDUIT, TYPE B (ALTERNATE 1)	
			50									50		X	611	01800	50	FT	8" CONDUIT, TYPE B 707.33, 707.65 (ALTERNATE 2)	
			50									50		X	611	03100	50	FT	10" CONDUIT, TYPE B (ALTERNATE 1)	
			50									50		X	611	03100	50	FT	10" CONDUIT, TYPE B 707.33, 707.65 (ALTERNATE 2)	
			200	587	376	262	405					1,830		X	611	04400	1,830	FT	12" CONDUIT, TYPE B (ALTERNATE 1)	
			200	587	376	262	405					1,830		X	611	04400	1,830	FT	12" CONDUIT, TYPE B 707.33, 707.65 (ALTERNATE 2)	
			20				732					752		X	611	05900	752	FT	15" CONDUIT, TYPE B (ALTERNATE 1)	
			20				732					752		X	611	05900	752	FT	15" CONDUIT, TYPE B 707.33, 707.65 (ALTERNATE 2)	
				5	44							49		X	611	07400	49	FT	18" CONDUIT, TYPE B (ALTERNATE 1)	
				5	44							49		X	611	07400	49	FT	18" CONDUIT, TYPE B 707.33, 707.65 (ALTERNATE 2)	
			20		14							34		X	611	16400	34	FT	36" CONDUIT, TYPE B (ALTERNATE 1)	
			20		14							34		X	611	16400	34	FT	36" CONDUIT, TYPE B 707.33, 707.65 (ALTERNATE 2)	
			20			23						43		X	611	19400	43	FT	42" CONDUIT, TYPE B (ALTERNATE 1)	
			20			23						43		X	611	19400	43	FT	42" CONDUIT, TYPE B 707.33, 707.65 (ALTERNATE 2)	
			20		14							34		X	611	20900	34	FT	48" CONDUIT, TYPE B (ALTERNATE 1)	
			20		14							34		X	611	20900	34	FT	48" CONDUIT, TYPE B 707.33, 707.65 (ALTERNATE 2)	
																			PAVEMENT	
		138										138			203	10000	138	CY	EXCAVATION (FOR PAVEMENT REPAIR)	
		2,500										2,500			251	01000	2,500	SY	PARTIAL DEPTH PAVEMENT REPAIR (441)	
		2,500										2,500			253	01000	2,500	SY	PAVEMENT REPAIR	
									3,482				3,482		253	90100	3,482	SY	PAVEMENT REPAIR, MISC.: WATER MAIN TRENCH REPAIR	257
31,977												31,977			254	01001	31,977	SY	PAVEMENT PLANING, ASPHALT CONCRETE, AS PER PLAN	12
		200										200			254	01010	200	SY	PAVEMENT PLANING, PORTLAND CEMENT CONCRETE	
1,320		254										1,574			301	46000	1,574	CY	ASPHALT CONCRETE BASE, PG64-22	
										36	13	49			301	48000	49	CY	ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS), 3.5" AND 5"	
		138										138			304	20001	138	CY	AGGREGATE BASE, AS PER PLAN (FOR PAVEMENT REPAIR)	12
2,182										16	4	2,202			304	20001	2,202	CY	AGGREGATE BASE, AS PER PLAN	12
										13	5	18			407	10000	18	GAL	TACK COAT	
1,710												1,710			407	13900	1,710	GAL	TACK COAT, 702.13	
4,631												4,631			407	20000	4,631	GAL	NON-TRACKING TACK COAT	
1,395												1,395			441	50101	1,395	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), AS PER PLAN, PG64-22	12
2,172												2,172			441	50301	2,172	CY	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, (448), AS PER PLAN, PG64-22	12
										9	4	13			441	50401	13	CY	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, (448), (DRIVEWAYS), AS PER PLAN, 1.25"	12
										554	927	1,481			452	10050	1,481	SY	6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	
										264	234	498			452	13040	498	SY	9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	

CALCULATED KAH
CHECKED RAK

GENERAL SUMMARY

STA-241-9.71

5.8
395

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SHEET NUM.								PART.		ALT	ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
OFFICE CALCS	69	79	85	186	257	308		01/NHS/PV	02/NHS/OT/AQUA	(X)						
															PAVEMENT (CONT.)	
		8,706						8,706			609	12000	8,706	FT	COMBINATION CURB AND GUTTER, TYPE 2	
		5,414						5,414			609	23000	5,414	FT	COMBINATION CURB AND GUTTER, TYPE 4	
		776		108				884			609	26000	884	FT	CURB, TYPE 6	
17,895								10,131	7,764		SPECIAL	69098100	17,895	FT	REINFORCEMENT MESH FOR SAW CUT JOINTS	14
				4				4			SPECIAL	69098300	4	SY	MISC.: BRICK PAVEMENT, FULL DEPTH	12
															WATER WORK	
			3,799						3,799		638	04900	3,799	FT	1" COPPER SERVICE BRANCH	
			106						106		638	05100	106	FT	2" COPPER SERVICE BRANCH	
			6,268						6,268		638	06200	6,268	FT	POLYETHYLENE ENCASEMENT	
			102						102		SPECIAL	63820046	102	FT	6" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS (AQUA OHIO TO PROVIDE PIPE ONLY)	259
			3,852						3,852		SPECIAL	63820086	3,852	FT	8" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS (AQUA OHIO TO PROVIDE PIPE ONLY)	259
			1,913						1,913		SPECIAL	63820174	1,913	FT	12" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS (AQUA OHIO TO PROVIDE PIPE ONLY)	259
			399						399		SPECIAL	63820214	399	FT	16" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS (AQUA OHIO TO PROVIDE PIPE ONLY)	259
			1						1		SPECIAL	63820498	1	EACH	VALVE BOX	259
			2						2		SPECIAL	63820500	2	EACH	VALVE BOX ADJUSTED TO GRADE	259
			1						1		SPECIAL	63820506	1	EACH	2" GATE VALVE WITH VALVE BOX	259
			6						6		SPECIAL	63820538	6	EACH	6" GATE VALVE WITH VALVE BOX (AQUA OHIO TO PROVIDE VALVE ONLY)	259
			18						18		SPECIAL	63820554	18	EACH	8" GATE VALVE WITH VALVE BOX (AQUA OHIO TO PROVIDE VALVE ONLY)	259
			4						4		SPECIAL	63820586	4	EACH	12" GATE VALVE WITH VALVE BOX (AQUA OHIO TO PROVIDE VALVE ONLY)	259
			4						4		SPECIAL	63820622	4	EACH	16" GATE VALVE WITH VALVE BOX (AQUA OHIO TO PROVIDE VALVE ONLY)	259
			1						1		SPECIAL	63820694	1	EACH	8" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX (AQUA OHIO TO PROVIDE VALVE ONLY)	259
			1						1		SPECIAL	63820718	1	EACH	16" X 6" TAPPING SLEEVE, VALVE AND VALVE BOX (AQUA OHIO TO PROVIDE VALVE ONLY)	259
			2						2		SPECIAL	63820720	2	EACH	16" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX (AQUA OHIO TO PROVIDE VALVE ONLY)	259
			1						1		SPECIAL	63820724	1	EACH	16" X 12" TAPPING SLEEVE, VALVE AND VALVE BOX (AQUA OHIO TO PROVIDE VALVE ONLY)	259
			6						6		SPECIAL	63820750	6	EACH	6" FIRE HYDRANT (AQUA OHIO TO PROVIDE HYDRANT ASSEMBLY AND 6" GATE VALVE ONLY)	259
			6						6		SPECIAL	63820760	6	EACH	FIRE HYDRANT REMOVED AND DISPOSED OF	259
			3						3		SPECIAL	63820876	3	EACH	CUT AND PLUG EXISTING 4" WATER LINE	258
			19						19		SPECIAL	63820878	19	EACH	CUT AND PLUG EXISTING 6" WATER LINE	258
			22						22		SPECIAL	63820880	22	EACH	CUT AND PLUG EXISTING 8" WATER LINE	258
			3						3		SPECIAL	63820884	3	EACH	CUT AND PLUG EXISTING 12" WATER LINE	258
			2						2		SPECIAL	63820886	2	EACH	CUT AND PLUG EXISTING 16" WATER LINE	258
			112						112		SPECIAL	63820912	112	EACH	1" CURB VALVE AND BOX	259
			2						2		SPECIAL	63820916	2	EACH	2" CURB VALVE AND BOX	259
			1						1		638	98000	1	EACH	WATER WORK, MISC.: 14" X 12" TAPPING SLEEVE, VALVE AND VALVE BOX (AQUA OHIO TO PROVIDE VALVE ONLY)	259
			1						1		638	98000	1	EACH	WATER WORK, MISC.: 18" X 6" TAPPING SLEEVE, VALVE AND VALVE BOX (AQUA OHIO TO PROVIDE VALVE ONLY)	259
			1						1		638	98000	1	EACH	WATER WORK, MISC.: 18" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX (AQUA OHIO TO PROVIDE VALVE ONLY)	259
			2						2		638	98000	2	EACH	WATER WORK, MISC.: 20" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX (AQUA OHIO TO PROVIDE VALVE ONLY)	259
			3						3		638	98000	3	EACH	WATER WORK, MISC.: CUT AND PLUG EXISTING 14" WATER LINE	258
			2						2		638	98000	2	EACH	WATER WORK, MISC.: CUT AND PLUG EXISTING 18" WATER LINE	258
			10						10		638	98600	10	FT	WATER WORK, MISC.: 14" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS (AQUA OHIO TO PROVIDE PIPE ONLY)	259
									LS		SPECIAL	69091000	LS		AS-BUILT CONSTRUCTION PLANS	259
					2				2		SPECIAL	69098700	2	CY	NON-REINFORCED CONCRETE FOR VERTICAL CLEARANCE OF WATER MAIN	257
															SANITARY SEWER	
	3							3			611	99661	3	EACH	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN 1	11
	1							1			611	99661	1	EACH	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN 2	232
	2							2			611	99661	2	EACH	MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN 3	232
															LIGHTING	
						13		13			625	00450	13	EACH	CONNECTION, FUSED PULL APART	
						13		13			625	00460	13	EACH	CONNECTION, UNFUSED PULL APART	
						3,378		3,378			625	23302	3,378	FT	NO. 6 AWG 2400 VOLT DISTRIBUTION CABLE	
						1,911		1,911			625	23400	1,911	FT	NO. 10 AWG POLE AND BRACKET CABLE	
															LIGHTING ALTERNATES	
						26		26		X	625	27551	26	EACH	LUMINAIRE, DECORATIVE, AS PER PLAN (ALTERNATE 1)	307
						26		26		X	625	27551	26	EACH	LUMINAIRE, DECORATIVE, AS PER PLAN (ALTERNATE 2)	307

CALCULATED KAH
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GENERAL SUMMARY

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SHEET NUM.											PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
275	276	277	278	279	280	281	282	308	309		01/NHS/PV	02/NHS/OT/AQUA						
																	TRAFFIC CONTROL	
		10									10		621	00100	10	EACH	RPM	
				52	103.5	118	130				403.5		630	02100	403.5	FT	GROUND MOUNTED SUPPORT, NO. 2 POST	
				81.1	52.5	94.1	28.3				256		630	03100	256	FT	GROUND MOUNTED SUPPORT, NO. 3 POST	
						23					23		630	08510	23	FT	STREET NAME SIGN SUPPORT, NO. 2 POST	
				44	58	44	103				249		630	08530	249	FT	STREET NAME SIGN SUPPORT, NO. 4 POST	
				8	8	4	8				28		630	08600	28	EACH	SIGN POST REFLECTOR	
				8	11	12	1				32		630	79101	32	EACH	SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN	14
				5							5		630	79500	5	EACH	SIGN SUPPORT ASSEMBLY, POLE MOUNTED	
				114.8	117	155.9	55.2				442.9		630	80100	442.9	SF	SIGN, FLAT SHEET	
				7	22	9	7				45		630	84900	45	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL	
				10	11	11	23				55		630	85100	55	EACH	REMOVAL OF GROUND MOUNTED SIGN AND REERECTION	
				9	22	12	15				58		630	86002	58	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL	
							1				1		630	87100	1	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION	
				6	1	2					9		630	87400	9	EACH	REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL	
				12	4	4	1				21		630	87500	21	EACH	REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL	
					2	2					4		630	87520	4	EACH	REMOVAL OF POLE MOUNTED SIGN AND REERECTION	
0.81	0.72	0.97	0.24								2.74		643	00300	2.74	MILE	CENTER LINE	
		0.04									0.04		644	00100	0.04	MILE	EDGE LINE, 4"	
		0.36	0.08								0.44		644	00200	0.44	MILE	LANE LINE, 4"	
274	763	872	333								2,242		644	00400	2,242	FT	CHANNELIZING LINE, 8"	
145	99	65	55								364		644	00500	364	FT	STOP LINE	
580	383		299								1,262		644	00600	1,262	FT	CROSSWALK LINE	
		52									52		644	00700	52	FT	TRANSVERSE/DIAGONAL LINE	
22	18	28	15								83		644	01300	83	EACH	LANE ARROW	
																	TRAFFIC SIGNALS	
									6,763		6,763		625	25300	6,763	FT	CONDUIT, 1-1/2", 725.04	
								96			96		625	25400	96	FT	CONDUIT, 2", 725.04	
								192			192		625	25500	192	FT	CONDUIT, 3", 725.04	
								72			72		625	25600	72	FT	CONDUIT, 4", 725.04	
									702		702		625	25902	702	FT	CONDUIT, JACKED OR DRILLED, 725.04, 3"	
								741			741		625	25902	741	FT	CONDUIT, JACKED OR DRILLED, 725.04, 4"	
								282	6,687		6,969		625	29000	6,969	FT	TRENCH	
								42	76		118		625	29400	118	FT	TRENCH IN PAVED AREA	
								7			7		625	30700	7	EACH	PULL BOX, 725.08, 18"	
								6	34		40		625	30706	40	EACH	PULL BOX, 725.08, 24"	
								5	4		9		625	31600	9	EACH	PULL BOX, MISC.: PULL BOX, 24" X 35" X 26"	303
								28			28		625	32000	28	EACH	GROUND ROD	
								324	6,763		7,087		625	36010	7,087	FT	UNDERGROUND WARNING/MARKING TAPE	
								22			22		632	05007	22	EACH	VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	304
								2			2		632	05065	2	EACH	VEHICULAR SIGNAL HEAD, (LED), 4-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	304
								11			11		632	05087	11	EACH	VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	304
								22			22		632	20731	22	EACH	PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	304
								29			29		632	25000	29	EACH	COVERING OF VEHICULAR SIGNAL HEAD	
								18			18		632	25010	18	EACH	COVERING OF PEDESTRIAN SIGNAL HEAD	
								22			22		632	26001	22	EACH	PEDESTRIAN PUSHBUTTON, AS PER PLAN	304
								2,449			2,449		632	40500	2,449	FT	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	
								2,978			2,978		632	40700	2,978	FT	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	
									5		5		632	62820	5	EACH	INTERCONNECT, MISC.: LAYER 2 ETHERNET SWITCH	307
								13			13		632	64010	13	EACH	SIGNAL SUPPORT FOUNDATION	
								7			7		632	64020	7	EACH	PEDESTAL FOUNDATION	
								2,361			2,361		632	65200	2,361	FT	LOOP DETECTOR LEAD-IN CABLE	
								4			4		632	70001	4	EACH	POWER SERVICE, AS PER PLAN	304
								1			1		632	77013	1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.21 DESIGN 3 POLE, WITH MAST ARMS TC-81.21 DESIGN 2	305
																	AND DESIGN 1, AS PER PLAN	
								3			3		632	80971	3	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 1, AS PER PLAN	305

CALCULATED KAH
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GENERAL SUMMARY

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SHEET NUM.											PART.		ALT	ITEM	ITEM	GRAND	UNIT	DESCRIPTION	SEE SHEET NO.
15	17	18	20	26	34	79	304	308	309		01/NHS/PV	02/NHS/OT/AQUA	(X)		EXT	TOTAL			
																		TRAFFIC SIGNALS (CONT.)	
								4			4			632	80981	4	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 2, AS PER PLAN	305
								2			2			632	81001	2	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 4, AS PER PLAN	305
								1			1			632	81071	1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 11, AS PER PLAN	305
								1			1			632	81081	1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 12, AS PER PLAN	305
								1			1			632	81091	1	EACH	COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 13, AS PER PLAN	305
								7			7			632	89901	7	EACH	PEDESTAL, 8', TRANSFORMER BASE, AS PER PLAN	305
								5			5			632	90101	5	EACH	REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	304
							4				4			632	90400	4	EACH	SIGNALIZATION, MISC.: TEST HOLE PERFORMED	304
								4			4			633	65511	4	EACH	CABINET, TYPE TS-2, AS PER PLAN	305
								4			4			633	67101	4	EACH	CABINET FOUNDATION, AS PER PLAN	305
								5			5			633	75001	5	EACH	UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN	307
								1			1			633	99000	1	EACH	CONTROLLER ITEM, MISC.: UNINTERRUPTIBLE POWER SUPPLY CABINET FOUNDATION AND	307
																		WORK PAD EXPANSION	
									9,122		9,122			804	15020	9,122	FT	FIBER OPTIC CABLE, 48 FIBER	
									5		5			804	32000	5	EACH	DROP CABLE, 6 FIBER	
									5		5			804	34000	5	EACH	FIBER TERMINATION PANEL, 6 FIBER	
									6		6			804	37000	6	EACH	SPLICE ENCLOSURE, BUTT STYLE	
								4			4			809	69123	4	EACH	ATC V6.24 CONTROLLER, AS PER PLAN	305
								407			407			809	69220	407	FT	PREEMPT DETECTOR CABLE	
								17			17			809	69241	17	EACH	PREEMPT CONFIRMATION LIGHT, AS PER PLAN	307
								5			5			816	30001	5	EACH	VIDEO DETECTION SYSTEM, AS PER PLAN	307
																		TRAFFIC SIGNALS ALTERNATES	
								1			1		X	809	69201	1	EACH	EMERGENCY VEHICLE PREEMPTION, AS PER PLAN (ALTERNATE 1)	306
								1			1		X	809	69201	1	EACH	EMERGENCY VEHICLE PREEMPTION, AS PER PLAN (ALTERNATE 2)	306
								5			5		X	809	69211	5	EACH	PREEMPT RECEIVING UNIT, AS PER PLAN (ALTERNATE 1)	306
								5			5		X	809	69211	5	EACH	PREEMPT RECEIVING UNIT, AS PER PLAN (ALTERNATE 2)	306
								5			5		X	809	69230	5	EACH	PREEMPT PHASE SELECTOR (ALTERNATE 1)	306
								5			5		X	809	69230	5	EACH	PREEMPT PHASE SELECTOR (ALTERNATE 2)	306
																		MISCELLANEOUS STRUCTURE	
						LS					LS			202	11201	LS		PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	10
																		MAINTENANCE OF TRAFFIC	
378											378			410	12000	378	CY	TRAFFIC COMPACTED SURFACE, TYPE A OR B	
					413						413			608	10000	413	SF	4" CONCRETE WALK	
10,000											10,000			608	21201	10,000	SF	TEMPORARY ASPHALT CONCRETE WALK, AS PER PLAN	15
					476						476			609	16000	476	FT	CURB, TYPE 2-B	
	300										300			614	11110	300	HOUR	LAW ENFORCEMENT OFFICER WITH PATROL CAR FOR ASSISTANCE	
	1										1			SPECIAL	61411300	1	EACH	WORK ZONE TRAFFIC SIGNAL	17
					1						1			614	12384	1	EACH	WORK ZONE IMPACT ATTENUATOR, 24" WIDE HAZARDS, (BIDIRECTIONAL)	
				LS							LS			614	12420	LS		DETOUR SIGNING	
		2									2			614	12460	2	EACH	WORK ZONE MARKING SIGN	18
3											3			614	13310	3	EACH	BARRIER REFLECTOR, TYPE 1, TWO-WAY	
3											3			614	13360	3	EACH	OBJECT MARKER, TWO WAY	
	3,100										3,100			614	18010	3,100	SF	MAINTAINING TRAFFIC, MISC.: 3" PARTIAL DEPTH PAVEMENT REPAIR	17
	24										24			614	18601	24	SNMT	PORTABLE CHANGEABLE MESSAGE SIGN, AS PER PLAN	17
			0.44								0.44			614	20550	0.44	MILE	WORK ZONE LANE LINE, CLASS III, 4", 642 PAINT	
					4.43						4.43			614	21100	4.43	MILE	WORK ZONE CENTER LINE, CLASS I, 642 PAINT	
			2.74								2.74			614	21550	2.74	MILE	WORK ZONE CENTER LINE, CLASS III, 642 PAINT	
					3.56						3.56			614	22100	3.56	MILE	WORK ZONE EDGE LINE, CLASS I, 4", 642 PAINT	
			0.04								0.04			614	22350	0.04	MILE	WORK ZONE EDGE LINE, CLASS III, 4", 642 PAINT	
					1,416						1,416			614	23200	1,416	FT	WORK ZONE CHANNELIZING LINE, CLASS I, 8", 642 PAINT	
			2,242								2,242			614	23680	2,242	FT	WORK ZONE CHANNELIZING LINE, CLASS III, 8", 642 PAINT	
					2,155						2,155			614	24200	2,155	FT	WORK ZONE DOTTED LINE, CLASS I, 4", 642 PAINT	
			52								52			614	25620	52	FT	WORK ZONE TRANSVERSE/DIAGONAL LINE, CLASS III, 642 PAINT	

CALCULATED K.A.H
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GENERAL SUMMARY

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SHEET NUM.												PART.		ITEM	ITEM EXT	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
15	16	20	34									01/NHS/PV	02/NHS/OT/AQUA						
																		MAINTENANCE OF TRAFFIC (CONT.)	
			495									495		614	26200	495	FT	WORK ZONE STOP LINE, CLASS I, 642 PAINT	
		364										364		614	26610	364	FT	WORK ZONE STOP LINE, CLASS III, 642 PAINT	
			151									151		614	27200	151	FT	WORK ZONE CROSSWALK LINE, CLASS I, 642 PAINT	
		1,262										1,262		614	27620	1,262	FT	WORK ZONE CROSSWALK LINE, CLASS III, 642 PAINT	
			58									58		614	30200	58	EACH	WORK ZONE ARROW, CLASS I, 642 PAINT	
		83										83		614	30650	83	EACH	WORK ZONE ARROW, CLASS III, 642 PAINT	
	19											19		614	40051	19	EACH	BUSINESS ENTRANCE SIGN, AS PER PLAN	16
LS												LS		615	10000	LS		ROADS FOR MAINTAINING TRAFFIC	
			216									216		615	25000	216	SY	PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B	
94												84	10	616	10000	94	MGAL	WATER	
			60									60		622	41100	60	FT	PORTABLE BARRIER, UNANCHORED	
																		INCIDENTALS	
LS												LS	LS	614	11000	LS		MAINTAINING TRAFFIC	
												24	4	619	16010	28	MNTH	FIELD OFFICE, TYPE B	
												LS	LS	623	10000	LS		CONSTRUCTION LAYOUT STAKES AND SURVEYING	
												LS	LS	624	10000	LS		MOBILIZATION	

CALCULATED KAH
CHECKED RAK

GENERAL SUMMARY

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REF NO.	SHEET NO.	STATION TO STATION			SIDE	202 PIPE REMOVED, 24" AND UNDER	202 PIPE REMOVED, OVER 24"	202 MANHOLE REMOVED	202 CATCH BASIN REMOVED	202 MANHOLE ABANDONED, AS PER PLAN	SPECIAL FILL AND PLUG EXISTING CONDUIT															
			TO			FT	FT	EACH	EACH	EACH	FT															
DR1	88	100+20.44			LT.				1																	
PR1	88	303+90.07		304+34.90	LT.	66																				
DR2	89	104+64.51			LT.				1																	
DR3	89	104+66.48			RT.				1																	
DR4	89	104+82.76			LT.				1																	
DR5	89	105+18.53			LT.				1																	
DR6	89	105+35.12			RT.				1																	
DR7	89	105+37.72			LT.				1																	
PR2	89	104+64.51		105+02.19	LT.	39																				
PR3	89	104+66.48		104+74.17	RT.	7																				
PR4	89	104+82.76		105+02.19	LT.	17																				
PR5	89	105+02.19		105+18.53	LT.	14																				
PR6	89	105+24.91		105+35.12	RT.	10																				
PR7	89	105+02.19		105+37.72	LT.	37																				
DR8	90	110+67.37			LT.				1																	
DR9	90	110+68.04			RT.				1																	
PR8	90	110+36.19		110+67.37	LT.	34																				
PR9	90	110+67.37		110+68.04	LT/RT	26																				
AB1	91	114+91.15			LT.					1																
DR10	91	115+13.92			LT.				1																	
DR11	91	115+14.11			RT.				1																	
DR12	91	116+87.61			LT.				1																	
DR13	91	117+24.29			LT.				1																	
FP-1	91	114+91.09		114+91.50							25															
FP-2	91	114+91.09		115+14.11							29															
FP-3	91	114+91.09		115+13.92							25															
PR10	91	114+95.29		115+07.97	LT.	7																				
PR11	91	116+87.61		117+24.29	LT.	35																				
PR12	91	117+24.29		119+20.37	LT.	196																				
DR14	92	119+15.65			LT.				1																	
DR15	92	119+44.86			LT.				1																	
DR16	92	119+59.45			RT.				1																	
DR17	92	119+64.41			LT.				1																	
PR13	92	119+15.65		119+20.37	LT.	23																				
PR14	92	119+15.65		119+44.86	LT.	27																				
PR15	92	119+20.37		119+59.45	LT/RT	42																				
PR16	92	119+20.37		119+64.41	LT.	41																				
PR17	92	10+48.98		10+63.80	RT.		15																			
DR18	94	129+89.63			LT.				1																	
DR19	94	130+27.27			RT.				1																	
DR20	94	130+91.20			RT.				1																	
DR21	94	131+37.63			LT.				1																	
DR22	94	133+87.60			LT.				1																	
TOTALS CARRIED TO GENERAL SUMMARY						621	15		22	1	79															

CALCULATED KAH CHECKED RAK

DRAINAGE SUBSUMMARY

STA-241-9.71

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REF NO.	SHEET NO.	STATION TO STATION			SIDE	202 PIPE REMOVED, 24" AND UNDER	202 PIPE REMOVED, OVER 24"	202 MANHOLE REMOVED	202 CATCH BASIN REMOVED	202 MANHOLE ABANDONED, AS PER PLAN	SPECIAL FILL AND PLUG EXISTING CONDUIT															
						FT	FT	EACH	EACH	EACH	FT															
			TO																							
DR23	94	133+93.93			RT.				1																	
PR18	94	129+89.63		130+22.76	LT.	30																				
PR19	94	130+22.76		130+22.76	LT/RT	33																				
PR20	94	130+91.20		131+12.92	RT.	28																				
PR21	94	131+12.92		131+37.63	LT.	26																				
PR22	94	132+42.49		132+57.55	RT.		15																			
PR23	94	133+86.99		133+87.60	LT.	5																				
PR24	94	133+91.10		133+93.93	RT.	8																				
DR24	95	136+60.46			LT.				1																	
DR25	95	136+65.41			RT.				1																	
PR25	95	136+59.57		136+60.46	LT.	5																				
PR26	95	136+65.40		136+65.41	RT.	8																				
DR26	96	138+56.57			LT.				1																	
DR27	96	138+64.02			RT.				1																	
DR28	96	139+60.01			LT.				1																	
DR29	96	140+01.18			RT.				1																	
PR27	96	138+56.57		138+64.47	LT.	10																				
PR28	96	138+64.02		138+64.47	RT.	17																				
PR29	96	139+37.80		139+60.01	LT.	22																				
PR30	96	139+84.41		140+07.93	RT.		24																			
DR30	97	143+01.64			RT.				1																	
DR31	97	143+24.35			LT.				1																	
DR32	97	145+48.42			RT.				1																	
DR33	97	146+16.48			RT.				1																	
DR34	97	146+30.99			LT.				1																	
PR31	97	142+96.86		143+01.64	RT.	6																				
PR32	97	143+12.29		143+24.35	LT.	13																				
PR33	97	145+48.42		145+52.92	RT.	11																				
PR34	97	146+14.16		146+16.48	RT.	5																				
PR35	97	146+26.18		146+30.99	LT.	8																				
DR35	98	147+43.38			RT.				1																	
DR36	98	147+69.51			RT.				1																	
DR37	98	148+00.29			RT.				1																	
DR38	98	149+83.77			RT.			1																		
DR39	98	149+87.49			LT.				1																	
DR40	98	150+79.14			RT.				1																	
PR36	98	147+43.38		147+46.25	RT.	7																				
PR37	98	147+69.51		147+70.71	RT.	11																				
PR38	98	147+70.71		148+00.29	RT.	30																				
PR39	98	148+00.29		148+07.56	RT.	8																				
PR40	98	149+83.03		149+83.77	RT.	10																				
PR41	98	149+84.49		149+87.49	LT.	11																				
PR42	98	147+70.71		150+70.89	RT.	78																				
PR43	98	150+70.89		150+79.14	RT.	6																				
TOTALS CARRIED TO GENERAL SUMMARY						396	39	1	17																	

CALCULATED K.A.H
CHECKED R.A.K

DRAINAGE SUBSUMMARY

STA-241-9.71

6.4
395

P:\3000_3499\3062170090_STA-241-97L_Wales_Road\000TN\00471_STA-241-97N\Design\Drainage\Sheets\00471_DS003.dgn 4/7/2021 7:39:51 AM khillegass

REF NO.	SHEET NO.	STATION TO STATION			SIDE	202 PIPE REMOVED, 24" AND UNDER	202 PIPE REMOVED, OVER 24"	202 MANHOLE REMOVED	202 CATCH BASIN REMOVED	202 MANHOLE ABANDONED, AS PER PLAN	SPECIAL FILL AND PLUG EXISTING CONDUIT
			TO			FT	FT	EACH	EACH	EACH	FT
DR41	99	152+23.99			LT.				1		
DR42	99	152+33.03			RT.				1		
DR43	99	153+27.02			LT.				1		
PR44	99	152+22.27		152+23.99	LT/RT	31					
PR45	99	152+22.27		152+33.03	RT.	10					
PR46	99	153+14.61		153+27.02	LT/RT	26					
DR44	100	157+27.93			RT.				1		
DR45	100	160+02.75			RT.				1		
DR46	100	160+02.59			RT.				1		
PR47	100	157+27.93		157+27.93	RT.	10					
PR48	100	159+43.52		160+02.59	RT.	58					
PR49	100	160+02.59		160+02.75	RT.	8					
PR50	100	160+02.75		162+95.02	RT.	290					
DR47	101	162+95.02			RT.				1		
DR48	103	174+86.81			LT.				1		
DR49	103	174+99.84			RT.				1		
PR51	103	174+86.81		174+99.84	LT/RT	48					
PR52	103	174+99.84		175+08.15	RT.	8					
TOTALS CARRIED TO GENERAL SUMMARY						489			9		

CALCULATED KAH
CHECKED RAK

DRAINAGE SUBSUMMARY

STA-241-9.71

P:\3000_3499\3062170090_STA-241-97I_Wales_Road\000T\00471_STA-241-97I\Design\Drainage\Sheets\00471_DS004.dgn 4/7/2021 7:39:52 AM khillegass

REF NO.	SHEET NO.	STATION TO STATION			611 12" CONDUIT, TYPE B	611 15" CONDUIT, TYPE B	611 18" CONDUIT, TYPE B	611 36" CONDUIT, TYPE B	611 42" CONDUIT, TYPE B	611 48" CONDUIT, TYPE B	611 CATCH BASIN, NO. 3, AS PER PLAN	611 CATCH BASIN, NO. 3, 4" CURB, AS PER PLAN	611 CATCH BASIN, NO. 3A, AS PER PLAN	611 CATCH BASIN, NO. 3A, 4" CURB, AS PER PLAN	611 CATCH BASIN, NO. 6	611 INLET, SIDE DITCH	611 MANHOLE, NO. 3	611 CATCH BASIN ADJUSTED TO GRADE	611 MANHOLE ADJUSTED TO GRADE, AS PER PLAN	611 MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN 1	611 MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN 2	611 MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN 3	611 MANHOLE RECONSTRUCTED TO GRADE		
			TO		FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH		
D1	88	100+48.00									1															
P1	88	100+48.00		303+90.07	94																					
SJ1	88	101+31.69																	1							
SJ2	88	102+13.54																						1		
D2	89	104+64.00											1													
D3	89	104+63.00											1													
D4	89	104+81.85											1													
D5	89	105+19.85											1													
D6	89	105+33.00											1													
D7	89	105+38.00											1													
DJ1	89	105+02.19																	1							
P2	89	104+64.00		104+81.85	25																					
P3	89	104+63.00		104+74.15	11																					
P4	89	104+81.85		105+02.19	20																					
P5	89	105+02.19		105+19.85	17																					
P6	89	105+19.85		105+38.00	25																					
P7	89	105+24.91		105+33.00	8																					
SJ3	89	104+94.90																	1							
SJ4	89	107+89.24																	1							
D8	90	110+67.00											1													
D9	90	110+67.00											1													
D10	90	110+46.10											1													
P8	90	110+46.10		110+67.00	25																					
P9	90	110+67.00		110+67.00	35																					
P10	90	110+36.19		110+46.10	11																					
SJ5	90	110+28.75																	1							
SJ6	90	112+54.67																	1							
D11	91	115+14.00											1													
D12	91	115+14.00											1													
D13	91	114+91.50															1									
D14	91	116+80.50											1													
D15	91	117+35.00											1													
D16	91	117+35.00											1													
D17	91	118+95.00															1									
P11	91	115+07.97		115+14.00	7																					
P12	91	115+14.00		115+14.00	35																					
P13	91	114+91.50		115+14.00	25																					
P14	91	114+91.50		114+94.68			5																			
P15	91	116+80.50		117+35.00	54																					
P16	91	117+35.00		117+35.00	35																					
P17	91	117+35.00		118+95.00	160																					
SJ7	91	114+79.13																	1							
SJ8	91	117+04.24																	1							
D18	92	119+14.50													1											
D19	92	119+46.15													1											
D20	92	119+65.00													1											
D21	92	119+35.95															1									
D22	92	119+33.75															1									
				SUBTOTAL							1	0	14	3												
TOTALS CARRIED TO GENERAL SUMMARY					587		5				1		17				4		8					1		

CALCULATED KAH
CHECKED RAK

DRAINAGE SUBSUMMARY

STA-241-9.71

P:\3000_3499\306270090_STA-241-97L_Wales_Road\000TN\00047L_STA-241-97N\Design\Drainage\Sheets\00047L_DS005.dgn 4/7/2021 7:39:53 AM khillegass

REF NO.	SHEET NO.	STATION TO STATION			611 12" CONDUIT, TYPE B	611 15" CONDUIT, TYPE B	611 18" CONDUIT, TYPE B	611 36" CONDUIT, TYPE B	611 42" CONDUIT, TYPE B	611 48" CONDUIT, TYPE B	611 CATCH BASIN, NO. 3, AS PER PLAN	611 CATCH BASIN, NO. 3, 4" CURB, AS PER PLAN	611 CATCH BASIN, NO. 3A, AS PER PLAN	611 CATCH BASIN, NO. 3A, 4" CURB, AS PER PLAN	611 CATCH BASIN, NO. 6	611 INLET, SIDE DITCH	611 MANHOLE, NO. 3	611 CATCH BASIN ADJUSTED TO GRADE	611 MANHOLE ADJUSTED TO GRADE, AS PER PLAN	611 MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN 1	611 MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN 2	611 MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN 3	611 MANHOLE RECONSTRUCTED TO GRADE		
			TO		FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH		
D23	92	119+23.70															1									
D24	92	119+65.00												1												
DJ2	92	119+20.37																	1							
P18	92	119+14.50		119+46.15	31																					
P19	92	118+95.00		119+14.50	33																					
P20	92	118+95.00		119+35.95	47																					
P21	92	119+35.95		119+65.00	44																					
P22	92	119+33.75		119+35.95			19																			
P23	92	119+23.70		119+33.75			25																			
P24	92	10+48.98		10+56.39				7																		
P25	92	10+56.39		10+63.80				7																		
P26	92	119+35.95		119+65.00	29																					
SJ9	92	119+26.13																	1							
SJ10	92	122+00.47																	1							
SJ11	93	124+91.03																	1							
SJ12	93	127+86.39																	1							
D25	94	129+76.00										1														
D26	94	130+27.00										1														
D27	94	130+80.00										1														
D28	94	132+50.00										1														
D29	94	132+50.00														1										
D30	94	132+50.00															1									
D31	94	133+87.50										1														
D32	94	133+91.00										1														
DJ3	94	130+22.76																							1	
DJ4	94	131+12.92																							1	
DJ5	94	131+41.49																	1							
DJ6	94	133+84.03																	1							
P27	94	129+76.00		130+22.76	47																					
P28	94	130+22.76		130+27.00	39																					
P29	94	130+80.00		131+12.92	37																					
P30	94	132+50.00		132+50.00	30																					
P31	94	132+50.00		132+50.00	11																					
P32	94	133+84.03		133+91.00	8																					
P33	94	132+42.49		132+50.00						7																
P34	94	132+50.00		132+57.55						7																
P35	94	133+86.99		133+87.50	4																					
SJ13	94	130+30.76																							1	
SJ14	94	130+32.36																							1	
SJ15	94	130+38.25																							1	
SJ16	94	131+03.08																							1	
SJ17	94	131+15.57																							1	
SJ18	94	133+80.97																	1							
D33	95	136+60.50										1														
D34	95	136+65.50										1														
DJ7	95	136+55.83																							1	
P36	95	136+59.57		136+60.50	6																					
P37	95	136+55.83		136+65.50	10																					
				SUBTOTAL							0	8	0	1												
TOTALS CARRIED TO GENERAL SUMMARY					376		44	14		14	8		1			1	2		8				8			

CALCULATED KAH CHECKED RAK

DRAINAGE SUBSUMMARY

STA-241-9.71

P:\3000_3499\3062170090_STA-241-97I_Wales_Road\000TN\00471_STA-241-97I\Design\Drainage\Sheets\00471_DS006.dgn 4/7/2021 7:39:54 AM khillegass

REF NO.	SHEET NO.	STATION TO STATION			611 12" CONDUIT, TYPE B	611 15" CONDUIT, TYPE B	611 18" CONDUIT, TYPE B	611 36" CONDUIT, TYPE B	611 42" CONDUIT, TYPE B	611 48" CONDUIT, TYPE B	611 CATCH BASIN, NO. 3, AS PER PLAN	611 CATCH BASIN, NO. 3, 4" CURB, AS PER PLAN	611 CATCH BASIN, NO. 3A, AS PER PLAN	611 CATCH BASIN, NO. 3A, 4" CURB, AS PER PLAN	611 CATCH BASIN, NO. 6	611 INLET, SIDE DITCH	611 MANHOLE, NO. 3	611 CATCH BASIN ADJUSTED TO GRADE	611 MANHOLE ADJUSTED TO GRADE, AS PER PLAN	611 MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN 1	611 MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN 2	611 MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN 3	611 MANHOLE RECONSTRUCTED TO GRADE		
			TO		FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	
SJ19	95	134+56.93																	1						
SJ20	95	136+62.05																	1						
D35	96	138+50.00										1													
D36	96	138+50.00										1													
D37	96	139+61.50												1											
D38	96	139+91.83															1								
D39	96	140+02.00												1											
DJ8	96	138+64.47																	1						
DJ9	96	139+02.47																	1						
DJ10	96	139+17.78																	1						
DJ11	96	142+96.86																						1	
P38	96	138+50.00		138+64.47	20																				
P39	96	138+50.00		138+64.47	26																				
P40	96	139+37.80		139+61.50	25																				
P41	96	139+91.83		140+02.00	11																				
P42	96	139+84.41		139+91.83					7																
P43	96	139+91.83		140+07.93					16																
SJ21	96	139+22.23																	1						
SJ22	96	142+25.14																						1	
D40	97	143+06.50												1											
D41	97	143+20.00												1											
D42	97	145+50.00													1										
D43	97	146+18.50													1										
D44	97	146+40.89												1											
DJ12	97	143+12.29																	1						
DJ13	97	145+25.18																	1						
DJ14	97	145+36.78																						1	
P44	97	142+96.86		143+06.50	17																				
P45	97	143+12.29		143+20.00	10																				
P46	97	145+36.78		145+50.00	19																				
P47	97	146+14.16		146+18.50	8																				
P48	97	146+26.18		146+40.89	18																				
SJ23	97	145+94.00																	1						
D45	98	147+50.00												1											
D46	98	147+69.30												1											
D47	98	148+00.00												1											
D48	98	149+93.00															1								
D49	98	150+79.00											1												
DJ15	98	147+51.64																						1	
DJ16	98	147+70.71																	1						
DJ17	98	150+70.89																						1	
DJ18	98	150+73.99																						1	
P49	98	147+50.00		148+51.64	13																				
P50	98	147+69.30		147+70.71	18																				
P51	98	147+70.71		148+00.00	32																				
P52	98	147+99.63		148+07.56	8																				
P53	98	149+84.49		149+93.00	21																				
P54	98	150+70.89		150+73.99	16																				
				SUBTOTAL							0	2	1	8											
TOTALS CARRIED TO GENERAL SUMMARY					262				23		2		9		2		2		10					6	

CALCULATED KAH CHECKED RAK

DRAINAGE SUBSUMMARY

STA-241-9.71

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REF NO.	SHEET NO.	STATION TO STATION			611 12" CONDUIT, TYPE B (ALTERNATE 1)	611 15" CONDUIT, TYPE B (ALTERNATE 1)	611 18" CONDUIT, TYPE B (ALTERNATE 1)	611 36" CONDUIT, TYPE B (ALTERNATE 1)	611 42" CONDUIT, TYPE B (ALTERNATE 1)	611 48" CONDUIT, TYPE B (ALTERNATE 1)	611 CATCH BASIN, NO. 3, AS PER PLAN	611 CATCH BASIN, NO. 3, 4" CURB, AS PER PLAN	611 CATCH BASIN, NO. 3A, AS PER PLAN	611 CATCH BASIN, NO. 3A, 4" CURB, AS PER PLAN	611 CATCH BASIN, NO. 6	611 INLET, SIDE DITCH	611 MANHOLE, NO. 3	611 CATCH BASIN ADJUSTED TO GRADE	611 MANHOLE ADJUSTED TO GRADE, AS PER PLAN	611 MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN 1	611 MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN 2	611 MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN 3	611 MANHOLE RECONSTRUCTED TO GRADE		
			TO		FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH		
P55	98	150+70.89		150+79.00	11																					
SJ24	98	147+90.76																	1							
SJ25	98	150+70.77																					1			
D50	99	152+24.50											1													
D51	99	152+35.00											1													
D52	99	153+35.00											1													
DJ19	99	152+22.27																							1	
DJ20	99	153+08.87																							1	
P56	99	152+22.27		152+24.50	40																					
P57	99	152+22.27		152+35.00	15																					
P58	99	153+08.87		153+35.00	39																					
SJ26	99	152+98.90																							1	
SJ27	99	155+87.83																			1					
SJ28	99	155+88.01																				1				
D53	100	160+02.00											1													
D54	100	160+02.50											1													
DJ21	100	157+27.93											1													
DJ22	100	159+43.52																1								
P59	100	159+43.52		160+02.50		59																				
P60	100	160+02.00		160+02.50	47																					
P61	100	160+02.50		163+25.00		323																				
SJ29	100	158+85.42																						1		
SJ30	100	159+52.35																	1							
D55	101	163+25.00											1													
D56	101	166+75.00											1													
D57	101	166+75.00											1													
P62	101	163+25.00		166+75.00		350																				
P63	101	166+75.00		166+75.00	47																					
SJ31	101	166+27.82																							1	
D58	102	167+76.00															1									
D59	102	168+20.30											1													
P64	102	166+75.00		167+76.00	101																					
P65	102	167+76.00		168+20.30	45																					
SJ32	102	167+98.59																	1							
SJ33	102	168+36.88																			1					
SJ34	102	170+76.52																			1					
D60	103	174+85.81											1													
D61	103	175+00.00											1													
P66	103	174+85.81		175+00.00	52																					
P67	103	175+00.00		175+08.15	8																					
DJ23	104	177+51.91																	1							
DJ24	105	179+83.05																	1							
				SUBTOTAL									12													
TOTALS CARRIED TO GENERAL SUMMARY					405	732					0		12				1	1	5	3	1	2	4			

CALCULATED KAH CHECKED RAK

DRAINAGE SUBSUMMARY

STA-241-9.71

6.9
395

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REF NO.	SHEET NO.	STATION TO STATION			SIDE	605 4" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	605 4" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	605 4" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	611 4" CONDUIT, TYPE B	611 4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET	BENDS AND BRANCHES FOR INFO ONLY	
											4" X 4" TEE	4" X 90° BEND
			TO			FT	FT	FT	FT	FT	EACH	EACH
UD1	261	100+48		104+64	LT.	406				10		
UD2	261	101+14		104+63	RT.	339				10		
UD3	261	105+33		109+99	LT.		401		55	10		
UD4	261	105+38		109+99	RT.		396		55	10		
UD5	261	110+67		114+49	LT.	330			42	10		
UD6	261	110+67		114+49	RT.	330			42	10		
UD7	261	115+14		116+81	LT.			157		10		
UD8	261	115+14		116+82	RT.			158		10		
UD9	261	117+35		119+00	LT.			155		10		
UD10	261	117+35		119+00	RT.			155		10		
UD11	261	119+65		125+03	LT.		528			10		
UD12	261	119+65		125+03	RT.		528			10		
UD13	261	125+03		129+76	LT.		463			10		
UD14	261	125+03		130+27	RT.		514			10		
UD15	262	130+27		130+80	RT.	43				10		
UD16	262	130+81		132+50	LT.	159				10		
UD17	262	131+73		133+91	RT.	218				10		
UD18	262	132+50		133+88	LT.	138				10		
UD19	262	133+88		136+61	LT.	263				10		
UD20	262	133+91		136+65	RT.		264			10		
UD21	262	136+61		138+50	LT.			179		10		
UD22	262	136+65		138+50	RT.			175		10		
UD23	262	138+50		138+88	LT.			28		10		
UD24	262	138+50		138+92	RT.			32		10		
UD25	262	139+51		140+02	RT.			54				
UD26	262	139+62		143+20	LT.			348		10		
UD27	262	140+02		143+07	RT.			295		10		
UD28	262	143+20		199+50	LT.		265			10		
UD29	262	143+07		145+50	RT.			233		10		
UD30	262	198+75		199+50	RT.		75				1	
UD31	262	198+75		199+50	LT.		76					1
UD32	262	199+50		199+50	LT&RT				48			
UD33	262	145+50		146+19	RT.		59			10		
UD34	262	146+19		147+50	RT.			121		10		
UD35	262	146+41		149+23	LT.			283		10		
UD36	262	147+50		147+68	RT.			30		10		
UD37	262	148+00		150+79	RT.			269		10		
UD38	262	149+93		152+24	LT.			221		10		
UD39	262	150+79		152+35	RT.			146		10		
UD40	262	152+24		152+73	LT.			39		10		
UD41	262	152+35		158+98	RT.			659		10		
UD42	262	153+35		159+23	LT.			590		10		
UD43	263	160+02		165+99	LT.			587		10		
UD44	263	160+02		163+25	RT.			313		10		
UD45	263	163+25		166+75	RT.			340		10		
UD46	263	166+75		167+53	RT.			68		10		
UD47	263	166+75		171+38	LT.			453		10		
UD48	263	168+21		171+38	RT.			307		10		
UD49	263	171+38		174+86	LT.			288	50	10		
SUBTOTAL						2,226	3,569	6,683	292	450		

REF NO.	SHEET NO.	STATION TO STATION			SIDE	605 4" SHALLOW PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	605 4" UNCLASSIFIED PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	605 4" BASE PIPE UNDERDRAINS WITH GEOTEXTILE FABRIC	611 4" CONDUIT, TYPE B	611 4" CONDUIT, TYPE F FOR UNDERDRAIN OUTLET
			TO			FT	FT	FT	FT	FT
UD50	263	171+38		175+00	RT.			352		10
UD51	263	174+86		176+25	LT.			139		
UD52	263	175+00		176+26	RT.			126		
SUBTOTAL						0	0	617	0	10
SUBTOTAL FROM LEFT						2,226	3,569	6,683	292	450
TOTALS CARRIED TO GENERAL SUMMARY						2,226	3,569	7,300	292	460

CALCULATED K.A.H. CHECKED R.A.K.

UNDERDRAIN SUBSUMMARY

STA-241-9.71

7.0
395

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REF NO.	SHEET NO.	STATION TO STATION			SIDE	202 WALK REMOVED (SF)	202 CURB REMOVED (FT)	202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (LS)	608 4" CONCRETE WALK (SF)	608 4" CONCRETE WALK, AS PER PLAN (SF)	608 CONCRETE STEPS, TYPE A (FT)	608 CONCRETE STEPS, TYPE B (FT)	608 CONCRETE STEPS, TYPE B, AS PER PLAN (FT)	608 CURB RAMP (SF)	609 COMBINATION CURB AND GUTTER, TYPE 2 (FT)	609 COMBINATION CURB AND GUTTER, TYPE 4 (FT)	609 CURB, TYPE 6 (FT)
			TO														
C-1	88	100+15		100+27	LT.												23
C-2	88	100+44		104+00	LT.										356		
C-3	88	100+61		100+60	RT.												18
C-4	88	100+64		101+14	RT.												63
C-5	88	101+14		104+00	RT.										286		
R-1	88	100+15		100+44	LT.		39										
R-2	88	100+44		104+00	LT.		356										
R-3	88	100+61		100+60	RT.		40										
R-4	88	100+64		101+14	RT.		79										
R-5	88	101+14		104+00	RT.		286										
R-5A	88	103+72		103+86	LT.			LS									
SW-1	88	100+20		101+89	LT.				1,161								
SW-2	88	100+63		100+67	RT.				57								
SW-3	88	100+65		101+14	RT.				376								
SW-4	88	101+29		101+69	RT.				219								
SW-5	88	101+98		102+61	RT.				367								
SW-6	88	102+35		102+57	LT.				109								
SW-7	88	102+67		103+08	LT.				255								
SW-8	88	102+91		103+64	RT.				447								
SW-9	88	103+20		103+62	LT.				274								
SW-10	88	103+74		104+28	LT.				356								
SW-11	88	103+76		104+17	RT.				258								
WR-1	88	100+16		107+79	LT.	2,397											
WR-2	88	100+54		104+88	RT.	2,602											
C-6	89	104+00		104+67	LT.										67		
C-7	89	104+00		104+74	RT.										74		
C-8	89	104+79		104+82	LT.												13
C-9	89	105+20		105+23	LT.												13
C-10	89	105+28		107+57	RT.										225		
C-11	89	105+35		107+59	LT.										224		
C-12	89	107+71		107+75	LT.												9
C-13	89	107+72		107+74	RT.												9
C-14	89	108+06		108+09	RT.												9
C-15	89	108+06		108+09	LT.												9
C-16	89	108+22		109+00	LT.										78		
C-17	89	108+22		109+00	RT.										78		
R-6	89	104+00		104+67	LT.		68										
R-7	89	104+00		104+89	RT.		100										
R-8	89	104+67		104+82	LT.		29										
R-9	89	105+20		105+35	LT.		32										
R-10	89	105+13		107+72	RT.		256										
R-11	89	105+35		107+59	LT.		224										
R-12	89	107+59		107+75	LT.		25										
R-13	89	107+72		107+74	RT.		26										
R-14	89	108+06		108+21	RT.		26										
R-15	89	108+06		108+21	LT.		25										
R-16	89	108+21		109+00	LT.		79										
R-17	89	108+21		109+00	RT.		79										
SW-12	89	104+29		107+74	RT.				330								
SUBTOTAL						4,999	1,769	LS	4,209						1,388		166

CALCULATED KAH
CHECKED RAK

ROADWAY SUBSUMMARY

STA-241-9.71

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REF NO.	SHEET NO.	STATION TO STATION			SIDE	202 WALK REMOVED	202 CURB REMOVED	202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	608 4" CONCRETE WALK	608 4" CONCRETE WALK, AS PER PLAN	608 CONCRETE STEPS, TYPE A	608 CONCRETE STEPS, TYPE B	608 CONCRETE STEPS, TYPE B, AS PER PLAN	608 CURB RAMP	609 COMBINATION CURB AND GUTTER, TYPE 2	609 COMBINATION CURB AND GUTTER, TYPE 4	609 CURB, TYPE 6
			TO			SF	FT	LS	SF	SF	FT	FT	FT	SF	FT	FT	FT
SW-13	89	104+48		104+67	LT.				117								
SW-14	89	104+82		104+88	RT.				46								
SW-15	89	105+14		105+20	RT.				24								
SW-16	89	105+28		105+85	RT.				412								
SW-17	89	105+35		106+19	LT.				578			5					
SW-18	89	105+97		106+88	RT.				634			4					
SW-19	89	106+31		107+56	LT.				831								
SW-20	89	107+00		107+57	RT.				372								
SW-21	89	108+23		109+98	LT.				1,136								
SW-22	89	108+24		108+71	RT.				306								
WR-3	89	105+14		107+73	RT.	1,373											
WR-4	89	105+21		107+73	LT.	1,349											
C-18	90	109+00		109+99	RT.										99		
C-19	90	109+00		109+99	LT.										99		
C-20	90	110+11		110+14	RT.												9
C-21	90	110+11		110+14	LT.												9
C-22	90	110+46		110+49	RT.												9
C-23	90	110+46		110+49	LT.												9
C-24	90	110+62		112+32	LT.										169		
C-25	90	110+64		112+30	RT.										169		
C-26	90	112+42		112+45	LT.												9
C-27	90	112+43		112+45	RT.												9
C-28	90	112+65		112+68	RT.												9
C-29	90	112+65		112+68	LT.												9
C-30	90	112+80		114+00	RT.										120		
C-31	90	112+80		114+00	LT.										120		
R-18	90	109+00		109+99	RT.		99										
R-19	90	109+00		109+99	LT.		99										
R-20	90	109+99		110+14	RT.		25										
R-21	90	109+99		110+14	LT.		25										
R-22	90	110+46		110+61	RT.		25										
R-23	90	110+46		110+61	LT.		25										
R-24	90	110+61		112+32	LT.		169										
R-25	90	110+61		112+30	RT.		169										
R-26	90	112+30		112+45	LT.		27										
R-27	90	112+30		112+45	RT.		27										
R-28	90	112+65		112+80	RT.		27										
R-29	90	112+65		112+80	LT.		27										
R-30	90	112+80		114+00	RT.		120										
R-31	90	112+80		114+00	LT.		120										
SW-23	90	108+83		109+54	RT.				459			4					
SW-24	90	109+66		109+97	RT.				204								
SW-25	90	110+62		111+44	LT.				579			2					
SW-26	90	110+64		110+72	RT.				49								
SW-27	90	111+02		111+43	RT.				290								
SW-28	90	111+55		111+85	RT.				209								
SW-29	90	111+64		112+33	LT.				493								
SUBTOTAL						2,722	984		6,739			15			776		72

CALCULATED KAH
CHECKED RAK

ROADWAY SUBSUMMARY

STA-241-9.71

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REF NO.	SHEET NO.	STATION TO STATION			SIDE	202 WALK REMOVED (SF)	202 CURB REMOVED (FT)	202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (LS)	608 4" CONCRETE WALK (SF)	608 4" CONCRETE WALK, AS PER PLAN (SF)	608 CONCRETE STEPS, TYPE A (FT)	608 CONCRETE STEPS, TYPE B (FT)	608 CONCRETE STEPS, TYPE B, AS PER PLAN (FT)	608 CURB RAMP (SF)	609 COMBINATION CURB AND GUTTER, TYPE 2 (FT)	609 COMBINATION CURB AND GUTTER, TYPE 4 (FT)	609 CURB, TYPE 6 (FT)
			TO														
SW-30	90	111+97		112+30	RT.				218								
SW-31	90	112+75		113+10	LT.					359			7				
SW-32	90	112+80		112+87	RT.				34								
SW-33	90	113+11		113+50	RT.				244								
SW-34	90	113+22		113+73	LT.				330			5					
WR-5	90	108+07		110+13	LT.	1,048											
WR-6	90	108+08		110+12	RT.	1,100											
WR-7	90	110+47		112+45	LT.	1,014											
WR-8	90	110+48		112+44	RT.	1,031											
WR-9	90	112+65		114+63	LT.	1,890											
WR-10	90	112+66		114+63	RT.	1,096											
C-32	91	114+00		114+49	LT.										49		
C-33	91	114+00		114+49	RT.										49		
C-34	91	114+61		114+64	LT.												9
C-35	91	114+62		114+64	RT.												7
C-36	91	114+96		114+97	RT.												4
C-37	91	114+96		114+97	LT.												6
C-38	91	115+11		116+82	RT.										171		
C-39	91	115+11		116+84	LT.										173		
C-40	91	116+94		116+97	RT.												9
C-41	91	116+96		116+99	LT.												12
C-42	91	117+16		117+19	RT.												8
C-43	91	117+16		117+19	LT.												8
C-44	91	117+31		119+00	RT.										169		
C-45	91	117+31		119+00	LT.										168		
R-32	91	114+00		114+49	LT.		49										
R-33	91	114+00		114+49	RT.		49										
R-34	91	114+49		114+64	LT.		25										
R-35	91	114+49		114+64	RT.		25										
R-36	91	114+96		115+11	RT.		25										
R-37	91	114+96		115+11	LT.		25										
R-38	91	115+11		116+82	RT.		171										
R-39	91	115+11		116+84	LT.		173										
R-40	91	116+82		116+97	RT.		25										
R-41	91	116+84		116+99	LT.		25										
R-42	91	117+16		117+31	RT.		25										
R-43	91	117+16		117+31	LT.		25										
R-44	91	117+31		119+00	RT.		169										
R-45	91	117+31		119+00	LT.		168										
SW-35	91	113+74		114+49	RT.				488								
SW-36	91	113+97		114+17	LT.				117								
SW-37	91	114+29		114+46	LT.				108								
SW-38	91	115+11		115+34	LT.				191								
SW-39	91	115+11		115+22	RT.				87								
SW-40	91	115+46		115+76	LT.				194			5					
SW-41	91	115+58		115+95	RT.				224								
SUBTOTAL						7,179	979		2,235	359		10	7		779		63

CALCULATED KAH
CHECKED RAK

ROADWAY SUBSUMMARY

STA-241-9.71

7.3
395

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REF NO.	SHEET NO.	STATION TO STATION			SIDE	202 WALK REMOVED	202 CURB REMOVED	202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	608 4" CONCRETE WALK	608 4" CONCRETE WALK, AS PER PLAN	608 CONCRETE STEPS, TYPE A	608 CONCRETE STEPS, TYPE B	608 CONCRETE STEPS, TYPE B, AS PER PLAN	608 CURB RAMP	609 COMBINATION CURB AND GUTTER, TYPE 2	609 COMBINATION CURB AND GUTTER, TYPE 4	609 CURB, TYPE 6
			TO			SF	FT	LS	SF	SF	FT	FT	FT	SF	FT	FT	FT
SW-42	91	115+92		116+84	LT.				624			6					
SW-43	91	116+31		116+82	RT.				332								
SW-44	91	117+31		118+99	LT.				1,092								
SW-45	91	117+31		117+85	RT.				349								
SW-46	91	118+05		118+33	RT.				197								
SW-47	91	118+45		119+00	RT.				368								
WR-11	91	114+97		116+94	RT.	1,011											
WR-12	91	114+97		116+93	LT.	1,186											
WR-13	91	117+18		119+13	LT.	990											
WR-14	91	117+18		119+14	RT.	1,071											
C-46	92	119+12		119+15	RT.												9
C-47	92	119+12		119+15	LT.												13
C-48	92	119+46		119+47	LT.												5
C-49	92	119+61		124+00	LT.											439	
C-50	92	119+62		124+00	RT.											438	
R-46	92	119+00		119+47	RT.		25										
R-47	92	119+00		119+15	LT.		29										
R-48	92	119+46		119+61	LT.		30										
R-49	92	119+61		124+00	LT.		439										
R-50	92	119+46		124+00	RT.		463										
SW-48	92	119+47		119+54	LT.				24								
SW-49	92	119+47		119+54	RT.				24								
SW-50	92	119+61		120+07	LT.				291								
SW-51	92	119+62		119+84	RT.				142								
SW-53	92	120+16		120+24	RT.				46								
SW-54	92	120+19		120+75	LT.				369								
SW-55	92	120+36		120+55	RT.				115								
SW-56	92	120+67		121+04	RT.				254								
SW-57	92	120+95		121+44	LT.				321								
SW-58	92	121+16		121+52	RT.				260								
SW-59	92	121+56		121+89	LT.				218								
SW-60	92	121+64		121+96	RT.				212			6					
SW-61	92	122+05		122+29	LT.				157								
SW-62	92	122+08		122+34	RT.				184								
SW-63	92	122+41		123+06	LT.				449			4					
SW-64	92	122+46		122+74	RT.				205								
SW-65	92	122+86		123+10	RT.				153								
SW-66	92	123+18		123+50	LT.				214			3					
SW-67	92	123+22		123+54	RT.				202								
SW-68	92	123+62		123+92	LT.				220								
SW-69	92	123+66		123+70	RT.				21								
WR-15	92	119+47		130+14	LT.	5,090											
WR-16	92	119+47		130+93	RT.	5,729											
C-51	93	124+00		129+00	RT.											500	
C-52	93	124+00		129+00	LT.											500	
R-51	93	124+00		129+00	RT.		500										
R-52	93	124+00		129+00	LT.		500										
SW-70	93	123+82		124+22	RT.				259								
SUBTOTAL						15,077	1,986		7,302			19				1,877	27

CALCULATED K.A.H. CHECKED R.A.K.

ROADWAY SUBSUMMARY

STA-241-9.71

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REF NO.	SHEET NO.	STATION TO STATION			SIDE	202 WALK REMOVED	202 CURB REMOVED	202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN	608 4" CONCRETE WALK	608 4" CONCRETE WALK, AS PER PLAN	608 CONCRETE STEPS, TYPE A	608 CONCRETE STEPS, TYPE B	608 CONCRETE STEPS, TYPE B, AS PER PLAN	608 CURB RAMP	609 COMBINATION CURB AND GUTTER, TYPE 2	609 COMBINATION CURB AND GUTTER, TYPE 4	609 CURB, TYPE 6
			TO			SF	FT	LS	SF	SF	FT	FT	FT	SF	FT	FT	FT
SW-71	93	124+04		124+75	LT.				490								
SW-72	93	124+34		124+71	RT.				245								
SW-73	93	124+83		125+52	RT.				463								
SW-74	93	124+87		125+55	LT.				447								
SW-75	93	125+64		125+99	RT.				218								
SW-76	93	125+67		126+82	LT.				783			4					
SW-77	93	126+11		126+61	RT.				322								
SW-78	93	126+73		127+27	RT.				349								
SW-79	93	127+01		127+57	LT.				387								
SW-80	93	127+39		127+67	RT.				205								
SW-81	93	127+69		129+21	LT.				983								
SW-82	93	127+79		128+37	RT.				388								
SW-83	93	128+49		128+77	RT.				178								
C-53	94	129+00		130+95	RT.											196	
C-54	94	129+00		129+79	LT.											79	
C-55	94	129+79		130+14	LT.												56
C-56	94	130+46		130+81	LT.												31
C-57	94	130+81		134+00	LT.											319	
C-58	94	131+73		134+00	RT.											227	
R-53	94	129+00		130+95	RT.		196										
R-54	94	129+00		129+79	LT.		79										
R-55	94	129+79		130+14	LT.		78										
R-56	94	130+46		130+81	LT.		53										
R-57	94	130+81		134+00	LT.		319										
R-58	94	131+73		134+00	RT.		227										
SW-84	94	128+89		129+19	RT.				194								
SW-85	94	129+39		130+91	RT.				1,071								
SW-86	94	129+67		129+92	LT.				167								
SW-87	94	130+04		130+13	LT.				29								
SW-88	94	130+07		130+14	LT.				35								
SW-89	94	130+46		130+56	LT.				109								
SW-90	94	130+69		130+90	LT.				153								
SW-91	94	131+03		131+17	LT.				82								
SW-92	94	131+31		132+71	LT.				928								
SW-93	94	132+83		133+22	LT.				245								
SW-94	94	133+34		134+19	LT.				548								
WR-17	94	130+48		139+06	LT.	4,230											
C-59	95	134+00		138+00	RT.											400	
C-60	95	134+00		138+00	LT.											400	
R-59	95	134+00		138+00	RT.		400										
R-60	95	134+00		138+00	LT.		400										
SW-95	95	134+33		135+99	LT.				1,073								
SW-96	95	136+17		138+89	LT.				1,772								
C-61	96	138+00		138+94	RT.											96	
C-62	96	138+00		138+86	LT.											87	
C-63	96	138+86		139+06	LT.												10
C-64	96	139+38		139+58	LT.												8
C-65	96	139+50		143+00	RT.											354	
SUBTOTAL						4,230	1,752		11,864			4				2,158	105

CALCULATED K.A.H
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ROADWAY SUBSUMMARY

STA-241-9.71

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REF NO.	SHEET NO.	STATION TO STATION			SIDE	202 WALK REMOVED SF	202 CURB REMOVED FT	202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN LS	608 4" CONCRETE WALK SF	608 4" CONCRETE WALK, AS PER PLAN SF	608 CONCRETE STEPS, TYPE A FT	608 CONCRETE STEPS, TYPE B FT	608 CONCRETE STEPS, TYPE B, AS PER PLAN FT	608 CURB RAMP SF	609 COMBINATION CURB AND GUTTER, TYPE 2 FT	609 COMBINATION CURB AND GUTTER, TYPE 4 FT	609 CURB, TYPE 6 FT
			TO														
C-66	96	139+58		143+00	LT.											342	
R-61	96	138+00		138+94	RT.		96										
R-62	96	138+00		138+86	LT.		87										
R-63	96	138+86		139+06	LT.		32										
R-64	96	139+38		139+58	LT.		31										
R-65	96	139+50		143+00	RT.		353										
R-66	96	139+58		143+00	LT.		342										
SW-97	96	138+99		139+06	LT.				53								
SW-98	96	139+39		139+46	LT.				51								
SW-99	96	139+54		141+85	LT.				1,518								
SW-100	96	141+97		142+67	LT.				451								
SW-101	96	142+79		143+47	LT.				435								
WR-18	96	139+39		145+78	LT.	3,319											
C-67	97	143+00		145+78	LT.											272	
C-68	97	143+00		147+00	RT.											400	
C-69	97	146+23		147+00	LT.											86	
R-67	97	143+00		145+67	LT.		272										
R-68	97	143+00		147+00	RT.		400										
R-69	97	146+39		147+00	LT.		56										
SW-102	97	143+67		145+66	LT.				1,369								
SW-103	97	146+40		148+23	LT.				1,183								
WR-19	97	146+11		149+38	LT.	1,685											
C-70	98	147+00		149+23	LT.											224	
C-71	98	147+00		147+55	RT.											55	
C-72	98	147+55		147+69	RT.												30
C-73	98	148+00		148+15	RT.												26
C-74	98	148+15		152+00	RT.										375		
C-75	98	149+36		149+38	LT.												9
C-76	98	149+70		149+72	LT.												8
C-77	98	149+84		152+00	LT.										225		
R-70	98	147+00		149+23	LT.		222										
R-71	98	147+00		147+55	RT.		55										
R-72	98	147+55		147+69	RT.		33										
R-73	98	148+00		148+15	RT.		32										
R-74	98	148+15		152+00	RT.		377										
R-75	98	149+23		149+38	LT.		28										
R-76	98	149+70		149+84	LT.		28										
R-77	98	149+84		152+00	LT.		223										
SW-104	98	148+39		149+18	LT.				513								
SW-105	98	149+84		150+50	LT.				459								
SW-106	98	150+61		152+69	LT.				1,382								
WR-20	98	149+71		152+87	LT.	1,669											
C-78	99	152+00		152+73	LT.										73		
C-79	99	152+00		157+00	RT.										500		
C-80	99	152+85		152+88	LT.												7
C-81	99	153+11		153+13	LT.												7
C-82	99	153+32		157+00	LT.										368		
SUBTOTAL						6,673	2,667		7,414						1,541	1,379	87

CALCULATED K.A.H
CHECKED R.A.K

ROADWAY SUBSUMMARY

STA-241-9.71

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REF NO.	SHEET NO.	STATION TO STATION			SIDE	202 WALK REMOVED SF	202 CURB REMOVED FT	202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN LS	608 4" CONCRETE WALK SF	608 4" CONCRETE WALK, AS PER PLAN SF	608 CONCRETE STEPS, TYPE A FT	608 CONCRETE STEPS, TYPE B FT	608 CONCRETE STEPS, TYPE B, AS PER PLAN FT	608 CURB RAMP SF	609 COMBINATION CURB AND GUTTER, TYPE 2 FT	609 COMBINATION CURB AND GUTTER, TYPE 4 FT	609 CURB, TYPE 6 FT
			TO														
R-78	99	152+00		152+73	LT.		73										
R-79	99	152+00		157+00	RT.		500										
R-80	99	152+73		152+88	LT.		29										
R-81	99	153+11		153+26	LT.		29										
R-82	99	153+26		157+00	LT.		374										
SW-107	99	153+32		155+71	LT.				1,553								
SW-108	99	155+83		156+86	LT.				658								
WR-21	99	153+12		159+34	LT.	3,119											
C-83	100	157+00		159+23	LT.										226		
C-84	100	157+00		158+98	RT.										195		
C-85	100	158+98		159+36	RT.												55
C-86	100	159+23		159+37	LT.												9
C-87	100	159+60		159+75	LT.												9
C-88	100	159+64		159+99	RT.												54
C-89	100	159+75		162+00	LT.										225		
C-90	100	159+99		162+00	RT.										201		
R-83	100	157+00		159+23	LT.		226										
R-84	100	157+00		158+98	RT.		195										
R-85	100	158+98		159+36	RT.		60										
R-86	100	159+23		159+37	LT.		25										
R-87	100	159+60		159+75	LT.		25										
R-88	100	159+64		159+99	RT.		58										
R-89	100	159+75		162+00	LT.		225										
R-90	100	159+99		162+00	RT.		201										
SW-109	100	157+01		158+15	LT.				728								
SW-110	100	158+40		159+25	LT.				542								
SW-111	100	159+73		163+74	LT.				2,559								
WR-22	100	159+63		166+13	LT.	3,238											
C-91	101	162+00		165+99	LT.										399		
C-92	101	162+00		167+00	RT.										500		
C-93	101	166+12		166+14	LT.												8
C-94	101	166+42		166+44	LT.												8
C-95	101	166+64		167+00	LT.										36		
R-91	101	162+00		165+99	LT.		399										
R-92	101	162+00		167+00	RT.		500										
R-93	101	165+99		166+14	LT.		28										
R-94	101	166+42		166+57	LT.		29										
R-95	101	166+57		167+00	LT.		43										
SW-112	101	163+92		165+92	LT.				1,297								
WR-23	101	166+43		172+84	LT.	3,173											
C-96	102	167+00		172+00	LT.										500		
C-97	102	167+00		167+53	RT.										53		
C-98	102	167+53		167+83	RT.												47
C-99	102	168+10		168+40	RT.												46
C-100	102	168+40		172+00	RT.										360		
SUBTOTAL						9,530	3,019		7,337						2,695		236

CALCULATED KAH
CHECKED RAK

ROADWAY SUBSUMMARY

STA-241-9.71

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REF NO.	SHEET NO.	STATION TO STATION			SIDE	202 WALK REMOVED (SF)	202 CURB REMOVED (FT)	202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN (LS)	608 4" CONCRETE WALK (SF)	608 4" CONCRETE WALK, AS PER PLAN (SF)	608 CONCRETE STEPS, TYPE A (FT)	608 CONCRETE STEPS, TYPE B (FT)	608 CONCRETE STEPS, TYPE B, AS PER PLAN (FT)	608 CURB RAMP (SF)	609 COMBINATION CURB AND GUTTER, TYPE 2 (FT)	609 COMBINATION CURB AND GUTTER, TYPE 4 (FT)	609 CURB, TYPE 6 (FT)
R-96	102	167+00	TO	172+00	LT.		500										
R-97	102	167+00		167+53	RT.		52										
R-98	102	167+53		167+83	RT.		49										
R-99	102	168+10		168+40	RT.		48										
R-100	102	168+40		172+00	RT.		360										
SW-113	102	166+64		167+81	LT.				759								
SW-114	102	167+93		168+37	LT.				278								
SW-115	102	168+49		169+28	LT.				504								
SW-116	102	169+40		170+10	LT.				447								
SW-117	102	170+27		172+72	LT.				1,624								
C-101	103	172+00		172+69	LT.										69		
C-102	103	172+00		176+00	RT.										400		
C-103	103	172+69		172+84	LT.												10
C-104	103	173+13		173+28	LT.												10
C-105	103	173+28		176+00	LT.										273		
R-101	103	172+00		172+69	LT.		70										
R-102	103	172+00		176+00	RT.		400										
R-103	103	172+69		172+84	LT.		28										
R-104	103	173+13		173+28	LT.		27										
R-105	103	173+28		176+00	LT.		273										
SW-118	103	173+24		173+38	LT.				171								
WR-24	103	173+14		173+38	LT.	171											
C-106	104	176+00		176+26	LT.										26		
C-107	104	176+00		176+26	RT.										26		
R-106	104	176+00		176+26	LT.		26										
R-107	104	176+00		176+26	RT.		26										
C-108	107	195+85		196+36	RT.										51		
C-109	107	195+85		196+36	LT.										50		
C-110	107	196+36		199+53	RT.										318		
C-111	107	196+36		199+54	LT.										314		
R-108	107	195+85		196+36	RT.		51										
R-109	107	195+85		196+36	LT.		50										
R-110	107	195+85		199+73	RT.		340										
R-111	107	195+85		199+72	LT.		348										
SW-119	107	195+85		197+05	LT.				740								
SW-120	107	195+85		196+72	RT.				520								
SW-121	107	196+86		197+93	RT.				689								
SW-122	107	197+36		197+73	LT.				235								
SW-123	107	197+93		198+05	LT.				72								
SW-124	107	198+21		199+53	RT.				846								
SW-125	107	198+21		199+54	LT.				863		9						
WR-25	107	195+85		199+45	LT.	1,858											
WR-26	107	195+85		199+45	RT.	1,746											
CR-1	167	100+27		100+43	LT.									77			
CR-2	167	100+61		100+71	RT.									148			
CR-3	168	104+67		104+79	LT.									90			
CR-4	168	104+74		104+89	RT.									123			
CR-5	168	105+13		105+28	RT.									123			
SUBTOTAL						3,775	2,648		7,748		9			561	1,527		20

CALCULATED K.A.H
CHECKED R.A.K

ROADWAY SUBSUMMARY

STA-241-9.71

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REF NO.	SHEET NO.	STATION TO STATION			SIDE	202 WALK REMOVED SF	202 CURB REMOVED FT	202 PORTIONS OF STRUCTURE REMOVED, AS PER PLAN LS	608 4" CONCRETE WALK SF	608 4" CONCRETE WALK, AS PER PLAN SF	608 CONCRETE STEPS, TYPE A FT	608 CONCRETE STEPS, TYPE B FT	608 CONCRETE STEPS, TYPE B, AS PER PLAN FT	608 CURB RAMP SF	609 COMBINATION CURB AND GUTTER, TYPE 2 FT	609 COMBINATION CURB AND GUTTER, TYPE 4 FT	609 CURB, TYPE 6 FT
			TO														
CR-6	168	105+22		105+35	LT.									100			
CR-7	169	107+56		107+72	LT.									121			
CR-8	169	107+57		107+72	RT.									113			
CR-9	169	108+09		108+24	RT.									114			
CR-10	169	108+09		108+23	LT.									114			
CR-11	170	109+97		110+12	RT.									117			
CR-12	170	109+98		110+11	LT.									109			
CR-13	170	110+48		110+62	LT.									118			
CR-14	170	110+49		110+64	RT.									109			
CR-15	171	112+30		112+44	RT.									91			
CR-16	171	112+32		112+43	LT.									54			
CR-17	171	112+68		112+80	LT.									67			
CR-18	171	112+68		112+80	RT.									70			
CR-19	172	114+46		114+61	LT.									116			
CR-20	172	114+49		114+62	RT.									86			
CR-21	172	114+96		115+11	RT.									114			
CR-22	172	114+97		115+11	LT.									98			
CR-23	173	116+82		116+95	RT.									69			
CR-24	173	116+84		116+96	LT.									69			
CR-25	173	117+18		117+31	RT.									71			
CR-26	173	117+19		117+31	LT.									69			
CR-27	174	118+99		119+12	LT.									70			
CR-28	174	119+00		119+12	RT.									69			
CR-29	174	119+46		119+61	LT.									134			
CR-30	174	119+47		119+62	RT.									124			
CR-31	175	129+92		130+11	LT.									141			
CR-32	175	130+50		130+69	LT.									141			
CR-33	175	130+90		131+03	LT.									98			
CR-34	176	138+89		139+06	LT.									131			
CR-35	176	139+39		139+55	LT.									131			
CR-36	177	145+61		145+76	LT.									144			
CR-37	177	146+24		146+43	LT.									142			
CR-38	179	149+18		149+36	LT.									136			
CR-39	179	149+72		149+84	LT.									91			
CR-40	180	152+69		152+86	LT.									122			
CR-41	180	153+13		153+32	LT.									136			
CR-42	181	159+25		159+35	LT.									120			
CR-43	181	159+62		159+73	LT.									137			
CR-44	182	165+92		166+12	LT.									147			
CR-45	182	166+44		166+64	LT.									146			
CR-46	184	172+71		172+82	LT.									54			
CR-47	184	173+15		173+26	LT.									54			
				SUBTOTAL THIS SHEET										4,457			
				SUBTOTAL SHEET 71		4,999	1,769	LS	4,209						1,388		166
				SUBTOTAL SHEET 72		2,722	984		6,739			15			776		72
				SUBTOTAL SHEET 73		7,179	979		2,235	359		10	7		779		63
				SUBTOTAL SHEET 74		15,077	1,986		7,302			19				1,877	27
				SUBTOTAL SHEET 75		4,230	1,752		11,864			4				2,158	105
				SUBTOTAL SHEET 76		6,673	2,667		7,414						1,541	1,379	87
				SUBTOTAL SHEET 77		9,530	3,019		7,337						2,695		236
				SUBTOTAL SHEET 78		3,775	2,648		7,748		9			561	1,527		20
				TOTALS CARRIED TO GENERAL SUMMARY		54,185	15,804	LS	54,848	359	9	48	7	5,018	8,706	5,414	776

CALCULATED KAH
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ROADWAY SUBSUMMARY

STA-241-9.71

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SHEET NO.	STATION TO STATION		203 EXCAVATION	203 EMBANKMENT	659 SEEDING AND MULCHING	
	FROM	TO	CY	CY	SY	
	WALES ROAD					
108	100+00.00	101+00.00	55	9	115	
109	101+00.00	103+00.00	91	28	543	
110	103+00.00	104+50.00	54	12	311	
111	104+50.00	106+00.00	41	12	320	
112	106+00.00	107+50.00	69	7	430	
113	107+50.00	109+00.00	54	11	227	
114	109+00.00	110+50.00	52	21	310	
115	110+50.00	112+00.00	67	9	270	
116	112+00.00	113+50.00	52	6	172	
117	113+50.00	115+00.00	66	10	361	
118	115+00.00	116+50.00	114	1	209	
119	116+50.00	118+00.00	65	6	115	
120	118+00.00	119+50.00	73	9	175	
121	119+50.00	121+00.00	82	5	253	
122	121+00.00	122+50.00	80	4	300	
123	122+50.00	124+00.00	66	6	333	
124	124+00.00	125+50.00	65	11	347	
125	125+50.00	127+00.00	79	6	342	
126	127+00.00	128+50.00	70	3	275	
127	128+50.00	130+00.00	65	6	287	
128	130+00.00	131+50.00	94	8	222	
129	131+50.00	133+00.00	154	12	394	
130	133+00.00	134+50.00	109	3	406	
131	134+50.00	136+00.00	87	4	358	
132	136+00.00	138+00.00	96	11	445	
133	138+00.00	140+00.00	74	24	441	
134	140+00.00	141+50.00	71	20	467	
135	141+50.00	143+50.00	99	65	681	
136	143+50.00	145+00.00	47	52	516	
137	145+00.00	146+50.00	68	21	488	
138	146+50.00	148+00.00	88	7	389	
139	148+00.00	149+50.00	106	7	372	
140	149+50.00	151+00.00	144	5	417	
141	151+00.00	153+00.00	169	5	594	
142	153+00.00	155+00.00	183	21	499	
143	155+00.00	156+50.00	259	14	522	
144	156+50.00	158+00.00	222	11	447	
145	158+00.00	159+50.00	173	5	447	
146	159+50.00	161+00.00	134	28	424	
147	161+00.00	163+00.00	230	12	563	
148	163+00.00	165+00.00	212	19	577	
149	165+00.00	166+50.00	145	1	336	
150	166+50.00	168+50.00	175	4	571	
151	168+50.00	170+50.00	175	10	618	
152	170+50.00	172+50.00	163	18	764	
153	172+50.00	174+50.00	137	6	595	
154	174+50.00	176+26.07	108	0	260	
		TOTALS CARRIED TO RIGHT	5,082	575	18,508	

SHEET NO.	STATION TO STATION		203 EXCAVATION	203 EMBANKMENT	659 SEEDING AND MULCHING	
	FROM	TO	CY	CY	SY	
	LAKE AVENUE					
160	195+85.00	197+00.00	95	3	358	
161	197+00.00	199+00.00	208	3	764	
162	199+00.00	199+50.00	87	13	225	
		TOTALS FROM ABOVE	390	19	1,347	
		TOTALS FROM LEFT	5,082	575	18,508	
		DEDUCT FOR DRIVEWAYS FROM SHEET 186	-1,042	-142	-1,184	
		DEDUCT FOR DRIVEWAYS FROM SHEET 187	-1,865	-140	-1,311	
	TOTALS CARRIED TO GENERAL SUMMARY		2,565	312	17,360	

LOCATION	STATION TO STATION		204 EXCAVATION OF SUBGRADE	204 GRANULAR MATERIAL, TYPE B	204 GEOTEXTILE FABRIC	204 GEOGRID
	FROM	TO	CY	CY	SY	SY
WALES ROAD	100+26.22	106+50	693	693	1,039	
WALES ROAD	110+50	114+50	383	383	575	
WALES ROAD	122+50	126+50	489	489	489	
WALES ROAD	130+50	134+50	387	387		1,161
WALES ROAD	145+25	148+25	148	148		445
WALES ROAD	152+25	176+26.07	1,614	1,614		3,875
TOTALS CARRIED TO GENERAL SUMMARY			3,714	3,714	2,103	5,481

SUBGRADE STABILIZATION CALCULATIONS CAN BE FOUND IN THE OFFICE CALCS.

EARTHWORK AND SUBGRADE · STABILIZATION SUBSUMMARY

CALCULATED KAH CHECKED RAK

STA-241-9.71

P:\3000_3499\30621T0090_STA-241-9.71_Wales_Road\ODOT\10047L_STA-241-9.71\Design\Roadway\Sheets\10047L_GSO10.dgn 4/7/2021 7:40:10 AM khillegass

WATER WORK · SUBSUMMARY

CALCULATED JAM CHECKED CML

STA-241-9.71

81 / 395

SHEET NO.	STATION FROM	STATION TO	SIDE	REFERENCE BALLOON	202 PAVEMENT REMOVED	202 PIPE REMOVED, 24" AND UNDER	202 MANHOLE REMOVED, AS PER PLAN	202 VALVE BOX REMOVED	202 ABANDON MISC: WATER MAIN ABANDONED IN PLACE	253 PAVEMENT REPAIR, MISC.: WATER MAIN TRENCH REPAIR	638 1" COPPER SERVICE BRANCH	638 2" COPPER SERVICE BRANCH	638 POLYETHELENE ENCASEMENT	638 WATER WORK, MISC.: 14" X 12" TAPPING SLEEVE, VALVE AND VALVE BOX	638 WATER WORK, MISC.: 18" X 6" TAPPING SLEEVE, VALVE AND VALVE BOX	638 WATER WORK, MISC.: 18" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX	638 WATER WORK, MISC.: 20" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX	638 WATER WORK, MISC.: CUT AND PLUG EXISTING 14" WATER LINE	638 WATER WORK, MISC.: CUT AND PLUG EXISTING 18" WATER LINE	638 WATER WORK, MISC.: 14" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS	SPECIAL 6" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS	SPECIAL 8" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS	SPECIAL 12" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS	SPECIAL 16" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS	SPECIAL VALVE BOX	SPECIAL VALVE BOX ADJUSTED TO GRADE	SPECIAL 2" GATE VALVE WITH VALVE BOX	SPECIAL 6" GATE VALVE AND VALVE BOX	SPECIAL 8" GATE VALVE AND VALVE BOX	SPECIAL 12" GATE VALVE AND VALVE BOX	SPECIAL 16" GATE VALVE AND VALVE BOX	SPECIAL 8" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX	SPECIAL 16" X 6" TAPPING SLEEVE, VALVE AND VALVE BOX	SPECIAL 16" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX	SPECIAL 16" X 12" TAPPING SLEEVE, VALVE AND VALVE BOX	SPECIAL 6" FIRE HYDRANT	SPECIAL FIRE HYDRANT REMOVED AND DISPOSED OF	SPECIAL CUT AND PLUG EXISTING 4" WATER LINE	SPECIAL CUT AND PLUG EXISTING 6" WATER LINE	SPECIAL CUT AND PLUG EXISTING 8" WATER LINE	SPECIAL CUT AND PLUG EXISTING 12" WATER LINE	SPECIAL CUT AND PLUG EXISTING 16" WATER LINE	SPECIAL 1" CURB VALVE AND BOX	SPECIAL 2" CURB VALVE AND BOX
			RT/LT		SY	FT	EACH	EACH	FT	SY	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
	100+15.80		LT	WV-100	6	14				6			10	1						10																												
	100+11.83	100+44.42	LT	WM-100	19					19			33										33																								
	100+13.26		LT	WR-100				1																																							
	100+15.44	104+00.00	LT	AB-100					386																																						
	100+15.44		LT	WW-100														1																												
	100+32.21		LT	WR-101				1																																							
	100+52.37		LT	WV-101																													1												
	100+40.20		LT/RT	WM-101	67					67			81											81																						
	100+40.20	104+00.00	LT	WM-102	200					200			360										360																								
237	100+44.10		RT	WR-102	4			1		4																																				
	100+44.16		RT	WW-101		28.5																																						1		
	100+49.83		RT	WV-102																																										
	100+49.83		RT	WR-103				1																																							
	101+56.19		RT	WS-100							44																																			1	
	102+89.33		LT	WS-101							18																																			1	
	103+36.40		LT	WS-102							18																																			1	
	103+36.69		RT	WS-103							44																																			1	
	103+82.90		LT	WS-104							18																																			1	
	103+88.00		RT	WS-105							44																																			1	
	104+00.00	107+80.00	LT	WM-103	212					212			380										380																								
	104+00.00	107+80.00	LT	AB-101					380																																						
	104+71.00		LT	WV-103																																											
	104+89.00		LT/RT	WM-104	28	7			32	28			50											50																								
	104+89.00		RT	WV-104																																											
	104+92.45		RT	WR-104				1																																							
	105+10.00		LT	WM-105	15	7			25	15			27											27																								
	105+13.44		LT	WV-105																																											
	105+32.50		LT	WR-105				1	15																																						
	105+44.90		LT	WH-100																																											
	105+44.93		LT	WV-106																																										
238	105+65.00		RT	WS-106							44																																			1	
	106+06.70		RT	WS-107							44																																			1	
	106+08.75		LT	WS-108							18																																			1	
	106+49.00		LT	WS-109							18																																			1	
	106+70.70		RT	WS-110							44																																			1	
	107+16.50		LT	WS-111							18																																			1	
	107+77.00		RT	WR-106	10			1		10																																				
	107+80.00		RT	WM-106	29	20			30	29			51											51																								
	107+80.00		RT	WV-107																																											
	107+80.00	109+00.00	LT	WM-107	100					100			120										120																								
	107+80.00	109+00.00	LT	AB-102					120																																						
	108+50.00		RT	WS-112							44																																			1	
	108+99.00		RT	WS-113							44																																			1	
	109+00.00	110+18.75	RT	WM-108	67					67			119										119																								
	109+00.00	114+00.00	LT	AB-103					500																																						
	109+44.00		RT	WS-114							44																																			1	
	109+79.00		RT	WS-115							44																																			1	
	109+90.90		LT	WH-101																																											
	109+90.90		LT	WV-108																																											
	109+98.00		LT	WR-107		6		1																																							
	110+18.75		LT/RT	WM-109	35	7			35	35			53											53																								
	110+18.80		RT	WV-109																																											
239	110+18.75	114+00.00	LT	WM-110	212					212			381										381																								
	110+25.00		LT	WR-108				1																																							
	110+65.00	110+71.00	LT	WR-109		6												2																												
	110+83.50		RT	WS-116							44																																			1	
	110+86.00		LT	WS-117							18																																			1	
	111+28.50		RT	WS-118							44																																			1	
	111+33.00		LT	WS-119							18																																			1	
	111+73.50		RT	WS-120							44																																			1	
	111+75.00		LT	WS-121							18																																			1	
	112+18.50		RT	WS-122							44																																			1	
	112+20.00		LT	WS-123							18																																			1	
	112+92.00		LT	WS-124							18																																			1	
	SUBTOTAL				1,004	96	0	9	1,523	1,004	814	0	1,665	1	0	0	0	3	0	10	0	181	1,393	81	0	0	0	2	4	2	1	0	0	0	0	2	2	0	0	0	0	1	25	0

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| SHEET NO. | STATION FROM | STATION TO | SIDE | REFERENCE BALLOON | 202 | | | | | 253 | 638 | | | | | | | | | | | | SPECIAL | | | | | | | | | | | |

WATER WORK - SUBSUMMARY

CALCULATED JAM
CHECKED CML

SHEET NO.	STATION FROM	STATION TO	SIDE	REFERENCE BALLOON	202 PAVEMENT REMOVED	202 PIPE REMOVED, 24" AND UNDER	202 MANHOLE REMOVED, AS PER PLAN	202 VALVE BOX REMOVED	202 ABANDON MISC: WATER MAIN ABANDONED IN PLACE	253 PAVEMENT REPAIR, MISC.: WATER MAIN TRENCH REPAIR	638 1" COPPER SERVICE BRANCH	638 2" COPPER SERVICE BRANCH	638 POLYETHELENE ENCASEMENT	638 WATER WORK, MISC.: 14" X 12" TAPPING SLEEVE, VALVE AND VALVE BOX	638 WATER WORK, MISC.: 18" X 6" TAPPING SLEEVE, VALVE AND VALVE BOX	638 WATER WORK, MISC.: 18" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX	638 WATER WORK, MISC.: 20" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX	638 WATER WORK, MISC.: CUT AND PLUG EXISTING 14" WATER LINE	638 WATER WORK, MISC.: CUT AND PLUG EXISTING 18" WATER LINE	638 WATER WORK, MISC.: 14" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS	SPECIAL 6" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS	SPECIAL 8" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS	SPECIAL 12" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS	SPECIAL 16" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS	SPECIAL VALVE BOX	SPECIAL VALVE BOX ADJUSTED TO GRADE	SPECIAL 2" GATE VALVE WITH VALVE BOX	SPECIAL 6" GATE VALVE AND VALVE BOX	SPECIAL 8" GATE VALVE AND VALVE BOX	SPECIAL 12" GATE VALVE AND VALVE BOX	SPECIAL 16" GATE VALVE AND VALVE BOX	SPECIAL 8" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX	SPECIAL 16" X 6" TAPPING SLEEVE, VALVE AND VALVE BOX	SPECIAL 16" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX	SPECIAL 16" X 12" TAPPING SLEEVE, VALVE AND VALVE BOX	SPECIAL 6" FIRE HYDRANT	SPECIAL FIRE HYDRANT REMOVED AND DISPOSED OF	SPECIAL CUT AND PLUG EXISTING 4" WATER LINE	SPECIAL CUT AND PLUG EXISTING 6" WATER LINE	SPECIAL CUT AND PLUG EXISTING 8" WATER LINE	SPECIAL CUT AND PLUG EXISTING 12" WATER LINE	SPECIAL CUT AND PLUG EXISTING 16" WATER LINE	SPECIAL 1" CURB VALVE AND BOX	SPECIAL 2" CURB VALVE AND BOX
					SY	FT	EACH	EACH	FT	SY	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
241	123+34.50		LT	WS-152							18																																	1	
	123+48.00		RT	WS-153							44																																	1	
	123+73.00		LT	WS-154							18																																	1	
	123+98.00		RT	WS-155							44																																	1	
	124+00.00	129+00.00	LT	WM-118	278					278			500								500																							
	124+00.00	129+00.00	LT/RT	AB-108					500																																			
	124+17.00		LT	WS-156							18																																	1	
	124+39.50		RT	WS-157							44																																	1	
	124+58.50		LT	WS-158							18																																	1	
	124+97.50		RT	WS-159							44																																	1	
	125+00.00		LT	WS-160							18																																	1	
	125+37.50		RT	WS-161							44																																	1	
	125+41.50		LT	WS-162							18																																	1	
	125+82.00		RT	WS-163							44																																	1	
	125+84.00		LT	WS-164							18																																	1	
242	126+26.50		LT	WS-165							18																																	1	
	126+39.99		LT	WV-122																							1																
	126+39.99		LT	WH-103	5					5											8																							
	126+47.00		RT	WR-118				1	19																															1					
	126+78.00		LT	WS-166							18																																	1	
	126+97.00		RT	WS-167							44																																	1	
	127+34.50		LT	WS-168							18																																	1	
	127+45.50		RT	WS-169							44																																	1	
	127+91.50		RT	WS-170							44																																	1	
	128+28.50		RT	WS-171							44																																	1	
	128+66.50		LT	WS-172							18																																	1	
	128+68.50		RT	WS-173							44																																	1	
	129+00.00	134+00.00	LT	WM-119	278					278			500								500																							
	129+00.00	134+00.00	LT/RT	AB-108					481																																			
	129+08.00		RT	WS-174							44																																	1	
	129+12.00		LT	WS-175							18																																	1	
	129+53.00		RT	WS-176							44																																	1	
	130+05.00		LT	WV-123																													1										
	130+23.50	130+28.50	RT	WR-119		5																																		2				
	130+41.00		LT	WR-120				1																																				
	130+45.00		LT	WM-120	47	7			48	47			37								37																							
	130+45.00		LT	WV-124																													1										
	130+51.00		RT	WS-177								44																																	1
243	130+87.00		LT	WS-178							18																																	1	
	130+96.00	131+04.00	RT	WR-121		9																																		2				
	131+13.00		RT	WR-122				1																																				
	131+22.00		RT	WM-121	22	7		1	7	22			38								38																							
	131+22.00		RT	WV-125																													1										
	131+45.50		LT	WS-179							18																																	1	
	131+50.00		LT	WV-126																													1										
	131+91.00		LT	WS-180							18																																	1	
	132+43.00		LT	WS-181							18																																	1	
	132+48.00	132+53.00	RT	WR-123		5																																		2				
	132+95.00		LT	WS-182							18																																	1	
	133+57.00		LT	WS-184							18																																	1	
	134+00.00	138+00.00	RT	WM-121	223					223			401								401																							
	134+00.00	138+00.00	RT	AB-109					400																																			
	134+95.00		LT	WS-185							32																																	1	
	136+01.50		RT	AB-110		3			16																																			
244	136+05.00		RT	WV-127	14					14			25									25						1															
	136+18.00		RT	WV-128	9					9			15									15						1															
	136+21.50		RT	AB-111		3			6																																			
	136+25.00		RT	WS-186							29																																	1	
	136+96.00		LT	WS-187							32																																	1	
	SUBTOTAL				876	39	0	4	1,477	876	989	44	1,516	0	0	0	0	0	0	0	48	1,476	0	0	0	0	0	3	4	0	0	0	0	0	0	1	1	0	6	0	0	0	34	1

STA-241-9.71

8,3
395

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WATER WORK · SUBSUMMARY

CALCULATED JAM | CHECKED CML

STA-241-9.71

SHEET NO.	STATION FROM	STATION TO	SIDE	REFERENCE BALLOON	202 PAVEMENT REMOVED	202 PIPE REMOVED, 24" AND UNDER	202 MANHOLE REMOVED, AS PER PLAN	202 VALVE BOX REMOVED	202 ABANDON MISC: WATER MAIN ABANDONED IN PLACE	253 PAVEMENT REPAIR, MISC.: WATER MAIN TRENCH REPAIR	638 1" COPPER SERVICE BRANCH	638 2" COPPER SERVICE BRANCH	638 POLYETHELENE ENCASEMENT	638 WATER WORK, MISC.: 14" X 12" TAPPING SLEEVE, VALVE AND VALVE BOX	638 WATER WORK, MISC.: 18" X 6" TAPPING SLEEVE, VALVE AND VALVE BOX	638 WATER WORK, MISC.: 18" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX	638 WATER WORK, MISC.: 20" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX	638 WATER WORK, MISC.: CUT AND PLUG EXISTING 14" WATER LINE	638 WATER WORK, MISC.: CUT AND PLUG EXISTING 18" WATER LINE	638 WATER WORK, MISC.: 14" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS	SPECIAL 6" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS	SPECIAL 8" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS	SPECIAL 12" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS	SPECIAL 16" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS	SPECIAL VALVE BOX	SPECIAL VALVE BOX ADJUSTED TO GRADE	SPECIAL 2" GATE VALVE WITH VALVE BOX	SPECIAL 6" GATE VALVE AND VALVE BOX	SPECIAL 8" GATE VALVE AND VALVE BOX	SPECIAL 12" GATE VALVE AND VALVE BOX	SPECIAL 16" GATE VALVE AND VALVE BOX	SPECIAL 8" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX	SPECIAL 16" X 6" TAPPING SLEEVE, VALVE AND VALVE BOX	SPECIAL 16" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX	SPECIAL 16" X 12" TAPPING SLEEVE, VALVE AND VALVE BOX	SPECIAL 6" FIRE HYDRANT	SPECIAL FIRE HYDRANT REMOVED AND DISPOSED OF	SPECIAL CUT AND PLUG EXISTING 4" WATER LINE	SPECIAL CUT AND PLUG EXISTING 6" WATER LINE	SPECIAL CUT AND PLUG EXISTING 8" WATER LINE	SPECIAL CUT AND PLUG EXISTING 12" WATER LINE	SPECIAL CUT AND PLUG EXISTING 16" WATER LINE	SPECIAL 1" CURB VALVE AND BOX	SPECIAL 2" CURB VALVE AND BOX
					SY	FT	EACH	EACH	FT	SY	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
245	138+00.00	139+08.50	RT	WM-122	61					61			109								109																												
	138+00.00	143+00.00	RT	AB-112					495																																								
	138+54.50	138+59.50	RT	WR-124		5																																										
	139+08.47		RT	WV-129																																													
	140+92.00		LT	WS-188							67																																							
	142+61.00		LT	WS-189							67																																							
246	143+00.00	147+00.00	LT/RT	AB-113					400																																								
	143+35.00		LT	WS-190							67																																							
	144+96.00		LT	WS-191							67																																							
	145+82.38		RT	WV-130																																													
	146+91.00		LT	WS-192	2					2	52																																						
247	147+00.00	152+00.00	LT	AB-114					510																																								
	147+70.50		LT	WS-193							49																																							
	148+84.50		LT	WS-194							54																																							
	149+40.00		RT	WV-131																																													
	149+40.00		LT/RT	WM-123	55	6				55			65								65																												
	149+46.43		LT	WW-104					28																																								
	149+46.50		LT	WR-125				1																																									
	149+60.34	149+60.87	RT	AB-115				1	40																																							
	149+60.00		RT	WS-195							2																																							
	149+64.34		LT	WR-125A			1																																										
	149+66.00		RT	WW-105					32																																								
	149+76.50	152+00.00	RT	WM-124									225								225																												
	149+76.89		RT	WW-106															1																														
	149+77.00	150+45.50	RT	AB-116					71																																								
	149+79.00		RT	WV-132																																												
	150+45.50		RT	WW-107															1																														
	150+64.53		RT	WS-196							4																																							
	151+50.00		LT	WS-197							58																																							
248	152+00.00	157+00.00	RT	WM-125	150					150			507								507																												
	152+00.00	157+00.00	LT	AB-117					479																																								
	152+20.00	152+28.00	LT	WR-126		8																																										
	152+87.65		LT/RT	WM-126	37	7				37			66								66																												
	152+88.37		LT	WV-133																																													
	152+91.50		LT	WR-127		8		1																																									
	153+32.50	153+38.50	LT	WR-128		6																																										
	153+72.50		RT	WS-198							7																																							
	155+48.50		RT	WS-199							24																																							
	155+54.50		LT	WS-200							37																																							
	156+62.50		LT	WS-201							37																																							
	156+71.00		RT	WS-202							36																																							
249	157+00.00	159+37.48	RT	WM-127	132					132			237								237																												
	157+00.00	162+00.00	LT	AB-118					480																																								
	157+66.00		RT	WS-203							36																																							
	158+26.00		LT	WS-204							38																																							
	159+23.59		RT	WV-134	4					4							1																																
	159+31.60		RT	WV-135																																													
	159+34.64		LT	WW-108																																													
	159+37.33	159+54.77	LT	WM-128	20	12				20			26								26																												
	159+37.33		LT	WR-129				1																																									
	159+39.08		LT	WW-109																																												
	159+50.53		LT	WV-136																																												
	159+55.00		LT	WR-130	3			1		3																																						
	159+55.00		LT	WW-110																																												
	159+96.00	160+08.00	LT	WR-131		12																																									
	160+17.00		LT	WS-205	4					4	44																																					
250	162+00.00	167+00.00	LT	AB-119					495																																								
	162+10.00		LT	WS-206	4					4	39																																						
	163+50.00		LT	WS-207	4					4	39																																						
	SUBTOTAL				476	64	1	5	3,030	476	824	0	1,235	0	0	0	1	0	2	0	0	1,235	0	0	0	0	0	0	3	0	0	1	0	2	1	0	0	0	4	9	0	0	20	0

P:\3000_3499\30621700\90_STA-241-9.71_Wales_Road\00T\10047L_STA-241-9.71\Design\Utilities\Sheets\10047L_US004.dgn 4/7/2021 7:40:15 AM khillegass

SHEET NO.	STATION FROM	STATION TO	SIDE	REFERENCE BALLOON	202 PAVEMENT REMOVED	202 PIPE REMOVED, 24" AND UNDER	202 MANHOLE REMOVED, AS PER PLAN	202 VALVE BOX REMOVED	202 ABANDON MISC: WATER MAIN ABANDONED IN PLACE	253 PAVEMENT REPAIR, MISC.: WATER MAIN TRENCH REPAIR	638 1" COPPER SERVICE BRANCH	638 2" COPPER SERVICE BRANCH	638 POLYETHELENE ENCASEMENT	638 WATER WORK, MISC.: 14" X 12" TAPPING SLEEVE, VALVE AND VALVE BOX	638 WATER WORK, MISC.: 18" X 6" TAPPING SLEEVE, VALVE AND VALVE BOX	638 WATER WORK, MISC.: 18" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX	638 WATER WORK, MISC.: 20" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX	638 WATER WORK, MISC.: CUT AND PLUG EXISTING 14" WATER LINE	638 WATER WORK, MISC.: CUT AND PLUG EXISTING 18" WATER LINE	638 WATER WORK, MISC.: 14" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS	SPECIAL 6" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS	SPECIAL 8" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS	SPECIAL 12" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS	SPECIAL 16" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS	SPECIAL VALVE BOX	SPECIAL VALVE BOX ADJUSTED TO GRADE	SPECIAL 2" GATE VALVE WITH VALVE BOX	SPECIAL 6" GATE VALVE AND VALVE BOX	SPECIAL 8" GATE VALVE AND VALVE BOX	SPECIAL 12" GATE VALVE AND VALVE BOX	SPECIAL 16" GATE VALVE AND VALVE BOX	SPECIAL 8" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX	SPECIAL 16" X 6" TAPPING SLEEVE, VALVE AND VALVE BOX	SPECIAL 16" X 8" TAPPING SLEEVE, VALVE AND VALVE BOX	SPECIAL 16" X 12" TAPPING SLEEVE, VALVE AND VALVE BOX	SPECIAL 6" FIRE HYDRANT	SPECIAL FIRE HYDRANT REMOVED AND DISPOSED OF	SPECIAL CUT AND PLUG EXISTING 4" WATER LINE	SPECIAL CUT AND PLUG EXISTING 6" WATER LINE	SPECIAL CUT AND PLUG EXISTING 8" WATER LINE	SPECIAL CUT AND PLUG EXISTING 12" WATER LINE	SPECIAL CUT AND PLUG EXISTING 16" WATER LINE	SPECIAL 1" CURB VALVE AND BOX	SPECIAL 2" CURB VALVE AND BOX
			RT/LT		SY	FT	EACH	EACH	FT	SY	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH
250	163+99.00		LT	WR-130		6		1																																				
	164+00.00		RT	WH-104	9					9			16		1					16																								
	165+59.00		LT	WS-208							39																																	
	166+18.28		LT	WM-129	27	6				27			47								47																								
	166+18.28		LT	WV-137																					1																			
	166+18.28		RT	WV-138													1																											
	166+21.50		LT	WR-131				1	15																																		
	166+72.50	166+77.50	LT	WR-132		5																																			2			
251	167+00.00	172+00.00	LT	AB-120					536																																			
	168+26.00		LT	WS-209	4					4	39																																1	
	169+20.00		LT	WS-210	4					4	40																																1	
	170+33.00		LT	WS-211	5					5	47																																1	
	171+68.00		RT	WR-133				1																																			
	171+71.23		RT	WV-139	2.5	4				2.5		12														1																		1
252	172+00.00	176+00.00	LT	AB-121					400																																			
	173+03.00		LT	WR-134				1	18																																			
	173+08.28		LT/RT	WM-130	40	10				40			56								56																								
	173+08.28		LT	WV-140																																								
	173+08.28		RT	WV-141												1																												
	173+61.00		LT/RT	AB-122					80																																			
	173+61.00		RT	WR-135	20			1		20																																		
	173+68.07		RT	WW-111																																						1			
	174+18.65		RT	WJ-100																																								
	174+85.50	174+90.50	LT	WR-136		5																																			2			
	175+31.00		LT	WS-212	4					4	46																																	1	
253	176+00.00	179+00.00	LT	AB-123					302																																			
	176+96.55		LT	WW-112																																						1			
	176+98.00		LT	WR-137	4	8		1		4																																		
	177+03.50		LT	WS-213							46																																	1	
	177+06.13		LT	WW-113																																						1			
	117+08.44		LT	WH-105	28					28			38							38																								
	17708+44.00		RT	WV-142																																								
	178+02.31		RT	WJ-101																																								
	178+38.00		LT	WS-214	4					4	63																																	1	
254	179+00.00	181+20.50	LT	AB-124					207																																			
	181+20.50		LT	WW-114																																						1			
256	195+90.61	200+37.00	RT	WM-131	249	8				249			448								448																								
	195+99.00	200+04.00	RT	AB-125					405																																				
	195+98.94		RT	WW-115																																						1			
	196+03.00		RT	WV-143																																								
	199+86.39		RT	WW-116																																						1			
	199+89.80		RT	WR-138		7		1																																				
	199+93.36		RT	WW-117																																						1			
	199+93.36		RT	WR-137		6		1																																				
	199+95.39		RT	WW-118																																						1			
				SUBTOTAL THIS SHEET	401	65	0	8	1,963	401	320	12	605	0	1	1	1	0	0	0	54	103	448	0	1	2	0	0	2	1	0	0	1	0	0	2	2	0	0	12	0	0	7	1
				SUBTOTAL SHEET 81	1,004	96	0	9	1,523	1,004	814	0	1,665	1	0	0	0	3	0	10	0	181	1,393	81	0	0	0	2	4	2	1	0	0	0	0	2	2	0	0	0	0	1	25	0
				SUBTOTAL SHEET 82	725	103	0	4	1,394	725	852	50	1,247	0	0	0	0	0	0	0	0	857	72	318	0	0	1	1	5	1	3	0	0	0	0	1	1	3	9	1	3	1	26	0
				SUBTOTAL SHEET 83	876	39	0	4	1,477	876	989	44	1,516	0	0	0	0	0	0	0	48	1,476	0	0	0	0	0	3	4	0	0	0	0	0	0	1	1	0	6	0	0	0	34	1
				SUBTOTAL SHEET 84	476	64	1	5	3,030	476	824	0	1,235	0	0	0	1	0	2	0	0	1,235	0	0	0	0	0	0	3	0	0	1	0	2	1	0	0	0	4	9	0	0	20	0
				TOTALS CARRIED TO GENERAL SUMMARY	3,482	367	1	30	9,387	3,482	3,799	106	6,268	1	1	1	2	3	2	10	102	3,852	1,913	399	1	2	1	6	18	4	4	1	1	2	1	6	6	3	19	22	3	2	112	2

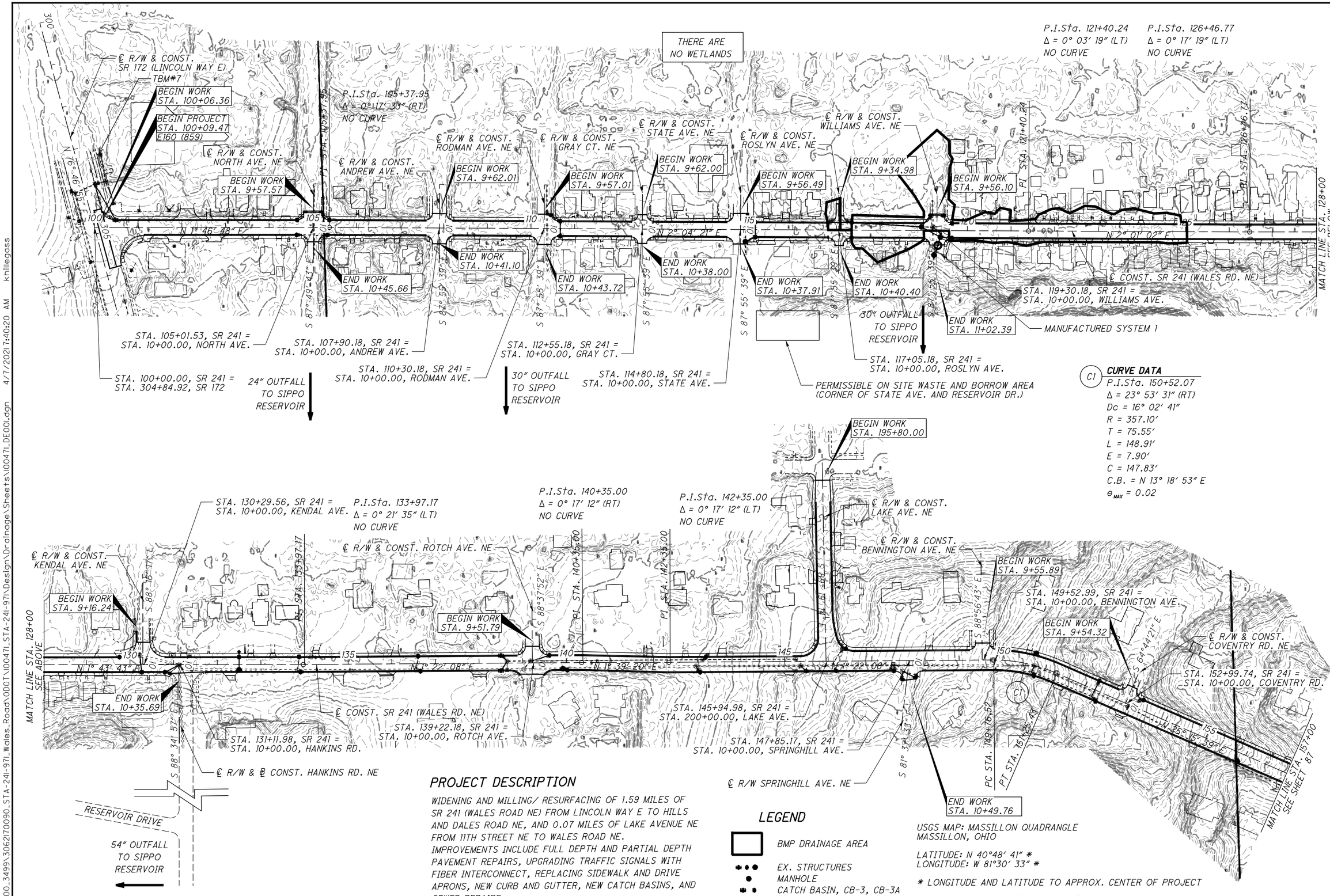
CALCULATED JAM
CHECKED CML

WATER WORK · SUBSUMMARY

STA-241-9.71

8.5
395

P:\3000_3499\306217009O_STA-241-97L_Wales_Road\ODOT\00471L_STA-241-97L\Design\Utilities\Sheets\00471L_US005.dgn 4/7/2021 7:40:17 AM khillegass



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N

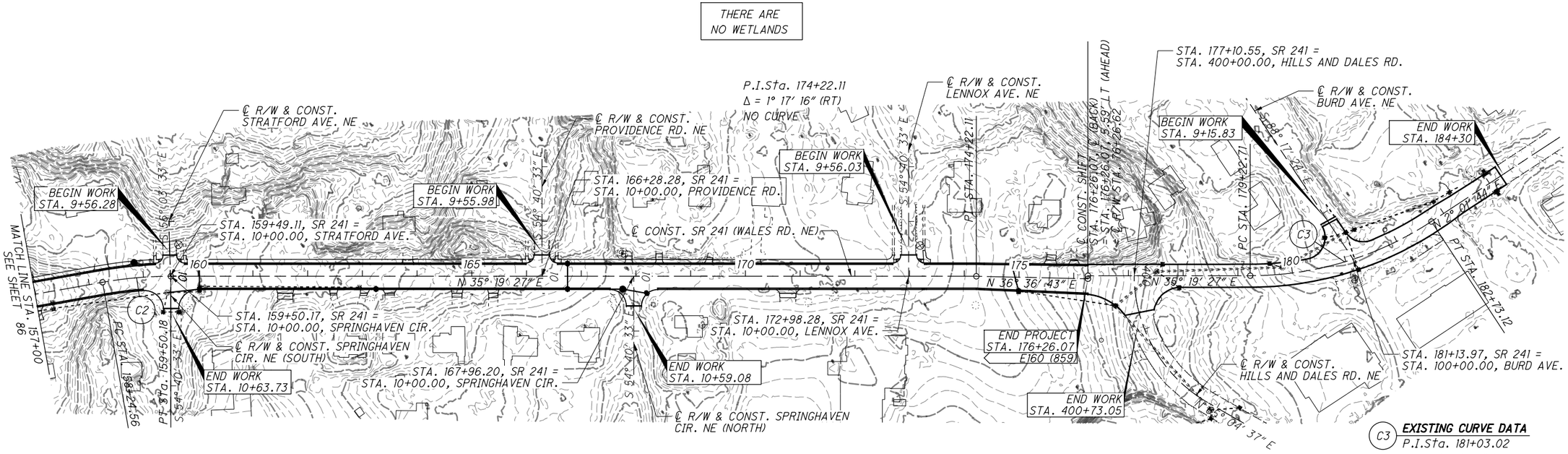
HORIZONTAL SCALE IN FEET
0 50 100 200

CALCULATED KAH CHECKED BLS

PROJECT SITE PLAN - BEGIN TO STA 157+00

STA-241-9.71

8.6
395



C2 CURVE DATA

P.I.Sta. 158+87.53
Δ = 10° 03' 48" (RT)
Dc = 8° 00' 40"
R = 715.20'
T = 62.97'
L = 125.62'
E = 2.77'
C = 125.45'
C.B. = N 30° 17' 33" E
e_{MAX} = NC

P.I.Sta. 176+26.07
= 176+26.07, 5.59' LT.
Δ = 1° 17' 16" (LT)
NO CURVE

C3 EXISTING CURVE DATA

P.I.Sta. 181+03.02
Δ = 33° 17' 43" (LT)
Dc = 9° 30' 06"
R = 603.00'
T = 180.31'
L = 350.41'
E = 26.38'
C = 345.50'
C.B. = N 18° 40' 35" E
e_{MAX} = 0.033

PROJECT DATA			
TOTAL AREA (RIGHT-OF-WAY) (ACRE)	13.95	IMPERVIOUS (PAVED) AREA FOR POST CONSTRUCTION SITE (ACRE)	13.11
PROJECT EARTH DISTURBED AREA (ACRE)	5.63	RUNOFF COEFFICIENT FOR PRE-CONSTRUCTION SITE	0.4-0.9
ESTIMATED CONTRACTOR EARTH DISTURBED AREA (ACRE)	0.62	RUNOFF COEFFICIENT FOR POST CONSTRUCTION SITE	0.4-0.9
NOTICE OF INTENT EARTH DISTURBED AREA (ACRE)	6.25	IMMEDIATE RECEIVING WATERS	SIPPO CREEK
IMPERVIOUS (PAVED) AREA FOR PRE-CONSTRUCTION SITE (ACRE)	13.07	SUBSEQUENT RECEIVING WATERS	TUSCARAWAS RIVER

BMP TYPE	LATITUDE/LONGITUDE		EDA TREATMENT CREDIT
	BEGIN		(ACRES)
MANUFACTURED SYSTEM 1	40.805530	-81.524560	1.23
	TREATMENT PROVIDED		1.23
	TREATMENT REQUIRED*		1.14
	*CALCULATED PER L & D VOL. 2, SEC. 1115.7		

LEGEND

- BMP DRAINAGE AREA
- EX. STRUCTURES
- MANHOLE
- CATCH BASIN, CB-3, CB-3A
- SIDE DITCH INLET

HORIZONTAL SCALE IN FEET
0 50 100 200

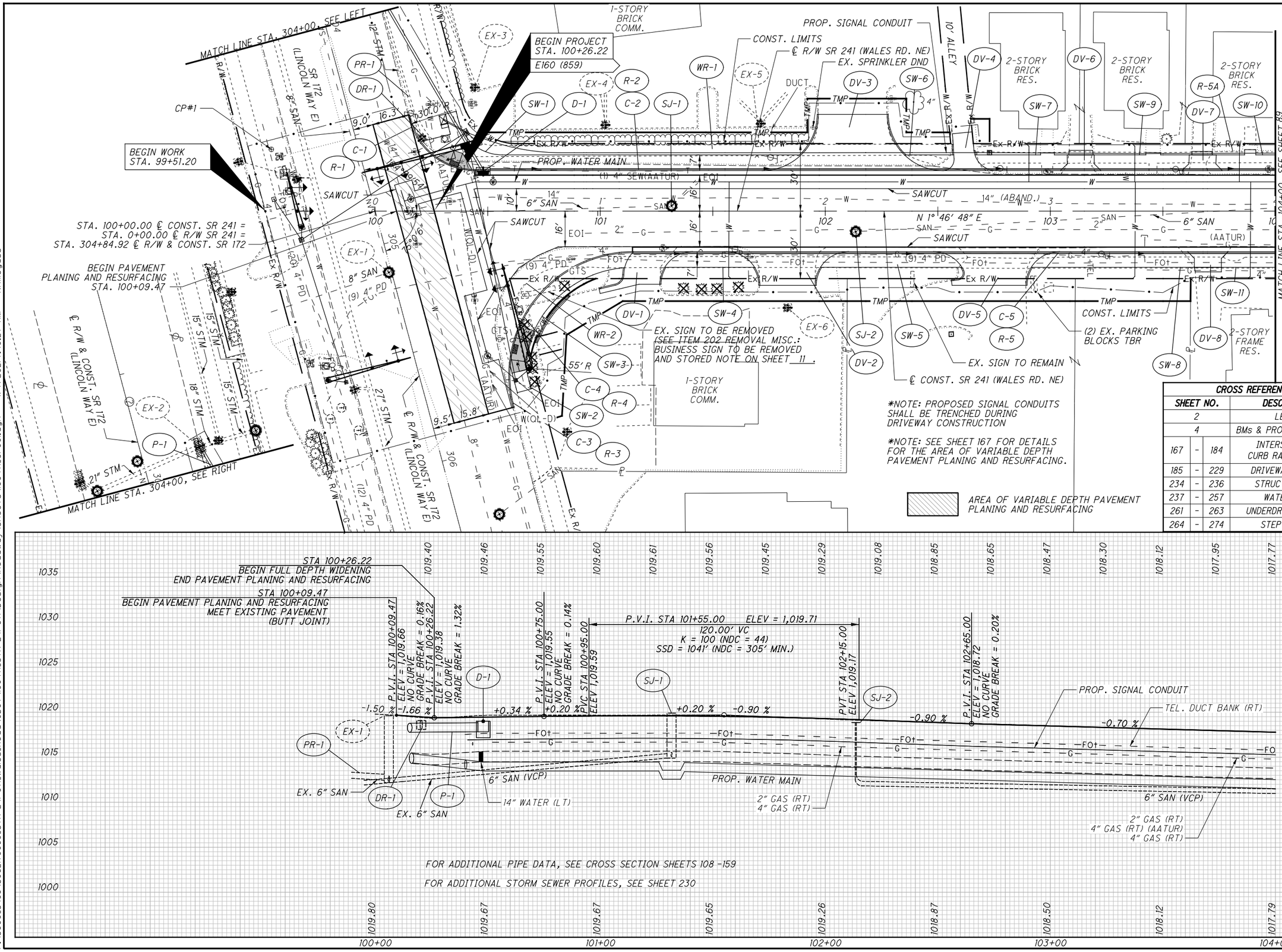
CALCULATED KAH CHECKED BLS

PROJECT SITE PLAN - STA. 157+00 TO END

STA-241-9.71

8.7
395

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CROSS REFERENCES			
SHEET NO.			DESCRIPTION
2			LEGEND
4			BMs & PROJECT CONTROL
167	-	184	INTERSECTION & CURB RAMP DETAILS
185	-	229	DRIVEWAY DETAILS
234	-	236	STRUCTURE DATA
237	-	257	WATER WORK
261	-	263	UNDERDRAIN DETAILS
264	-	274	STEP DETAILS

HORIZONTAL SCALE IN FEET
0 10 20 40

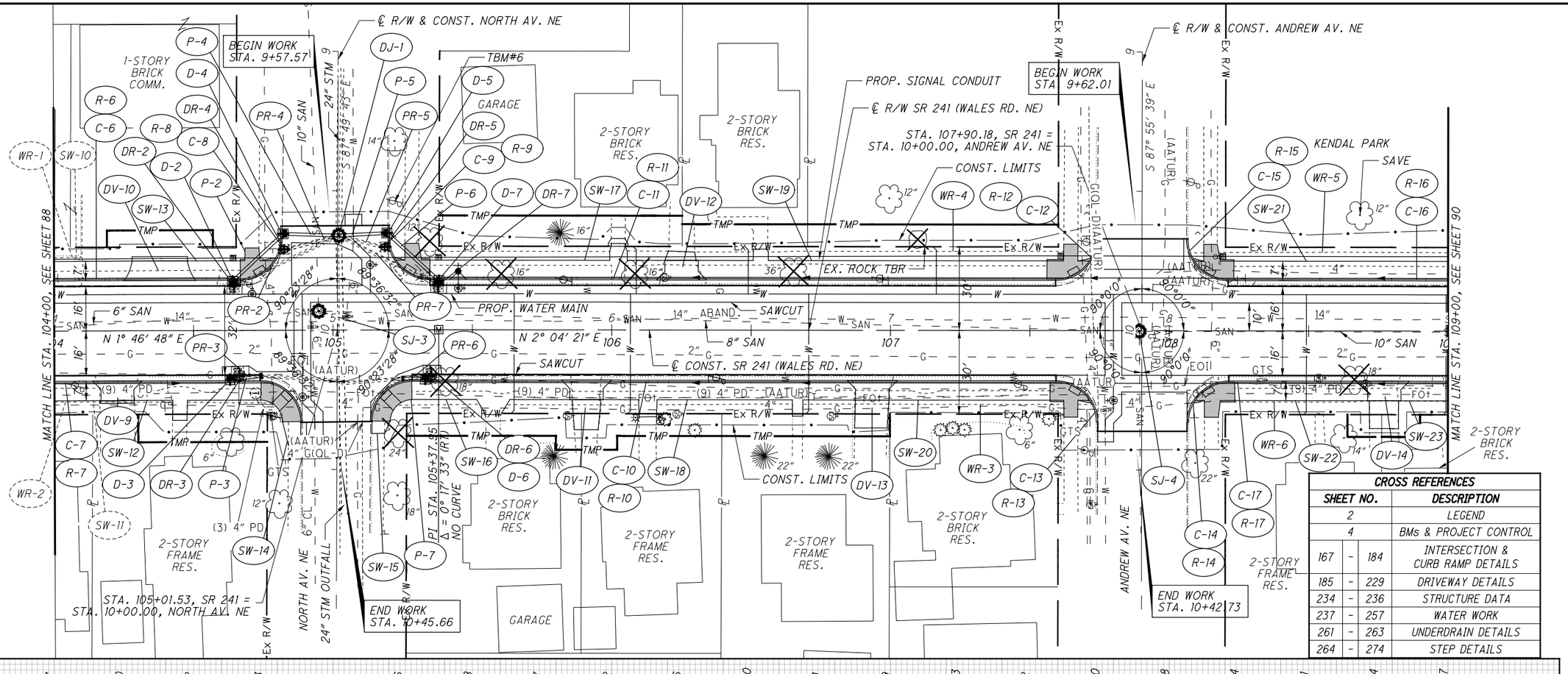
CALCULATED KAH
CHECKED KBM

PLAN AND PROFILE - SR 241 (WALES RD. NE)
BEGIN TO STA. 104+00

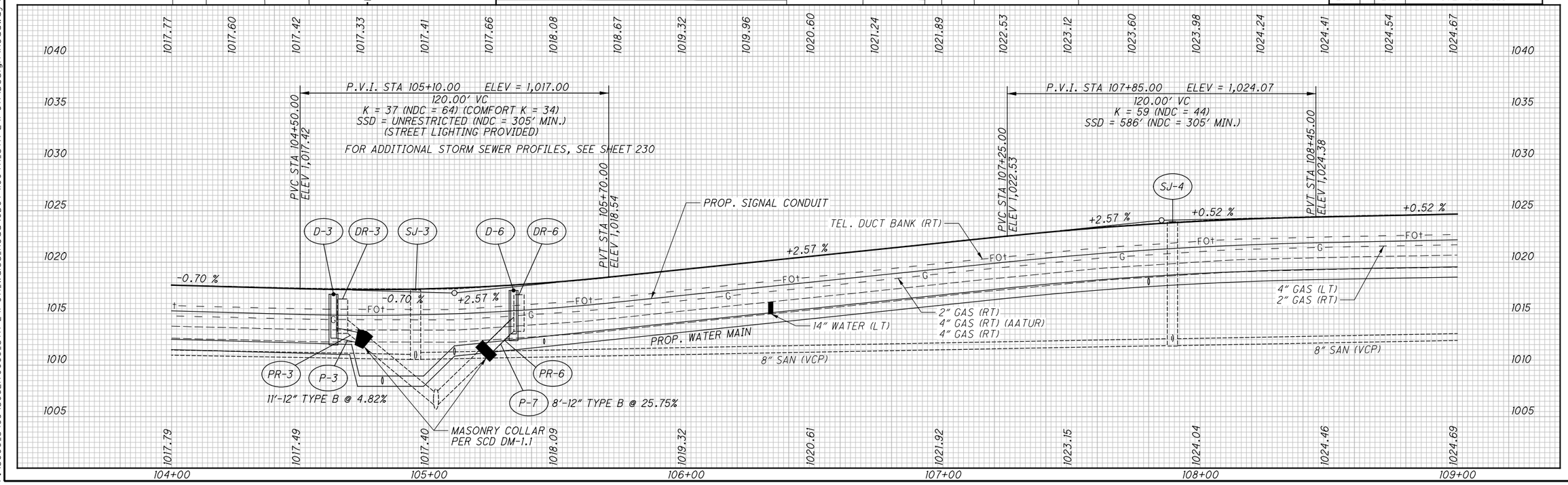
STA-241-9.71

8,8
395

P:\3000_3499\3062170090_STA-241-9.71_Wales_Road\ODOT\100471_STA-241-9.71\Design\Roadway\Sheets\100471_GP001.dgn 4/7/2021 7:40:27 AM khillegass



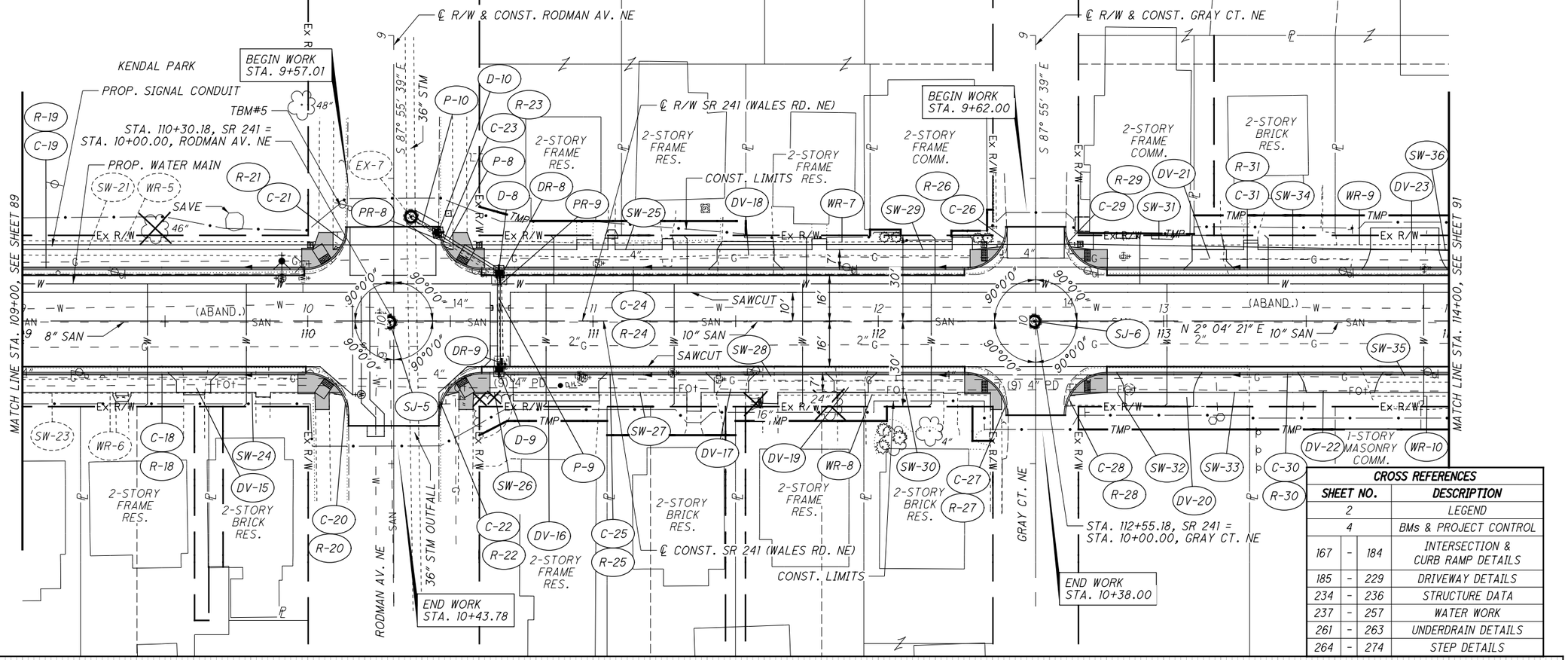
CROSS REFERENCES			
SHEET NO.			DESCRIPTION
2			LEGEND
4			BMs & PROJECT CONTROL
167	-	184	INTERSECTION & CURB RAMP DETAILS
185	-	229	DRIVEWAY DETAILS
234	-	236	STRUCTURE DATA
237	-	257	WATER WORK
261	-	263	UNDERDRAIN DETAILS
264	-	274	STEP DETAILS



PLAN AND PROFILE - SR 241 (WALES RD. NE)
STA. 104+00 TO STA. 109+00

STA-241-9.71

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CROSS REFERENCES			
SHEET NO.			DESCRIPTION
2			LEGEND
4			BMs & PROJECT CONTROL
167	-	184	INTERSECTION & CURB RAMP DETAILS
185	-	229	DRIVEWAY DETAILS
234	-	236	STRUCTURE DATA
237	-	257	WATER WORK
261	-	263	UNDERDRAIN DETAILS
264	-	274	STEP DETAILS

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAH
CHECKED KBM

PLAN AND PROFILE - SR 241 (WALES RD. NE)
STA. 109+00 TO STA. 114+00

STA-241-9.71

9.0
395

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BEGIN WORK STA. 9+56.49

℄ R/W & CONST. STATE AV. NE

BEGIN WORK STA. 9+34.98

℄ R/W & CONST. ROSLYN AV. NE

STA. 117+05.18, SR 241 = STA. 10+00.00, ROSLYN AV. NE

MATCH LINE STA. 114+00, SEE SHEET 90

MATCH LINE STA. 119+00, SEE SHEET 92

STA. 114+80.18, SR 241 = STA. 10+00.00, STATE AV. NE

END WORK STA. 10+37.91

END WORK STA. 10+42.05

CONST. LIMITS

KIDDIE KORRAL PARK

℄ R/W SR 241 (WALES RD. NE)

TBM#8

PROP. SIGNAL CONDUIT

PROP. WATER MAIN

℄ CONST. SR 241 (WALES RD. NE)

SAWCUT

PROP. WATER MAIN 6" (ABAND.)

10" SAN

15" STM

CONST. LIMITS

TBM#4

CANOPY

2-STORY BRICK COMM.

2-STORY FRAME RES.

2-STORY BRICK RES.

GARAGE

1-STORY MASONRY COMM.

ROSLYN AV. NE

18" STM OUTLET

CROSS REFERENCES			
SHEET NO.			DESCRIPTION
2			LEGEND
4			BMs & PROJECT CONTROL
167	-	184	INTERSECTION & CURB RAMP DETAILS
185	-	229	DRIVEWAY DETAILS
234	-	236	STRUCTURE DATA
237	-	257	WATER WORK
261	-	263	UNDERDRAIN DETAILS
264	-	274	STEP DETAILS

FOR ADDITIONAL PIPE DATA, SEE CROSS SECTION SHEETS 108 -159

FOR ADDITIONAL STORM SEWER PROFILES, SEE SHEET 230

P.V.I. STA 116+70.00
ELEV. = 1028.20
NO CURVE
GRADE BREAK = 0.15%

+0.50 %

+0.35 %

4" GAS (LT)
2" GAS (RT)
4" GAS (RT)

6" GAS (LT)
2" GAS (RT)
4" GAS (RT)

6" WATER (LT)

TEL. DUCT BANK (RT)

PROP. SIGNAL CONDUIT

PROP. WATER MAIN

14" WATER (LT)

6" WATER (LT)
16" WATER (RT)

MASONRY COLLAR PER SCD DM-1.1

12" VCP

15" STM (PLASTIC)

7'-12" TYPE B @ 0.71%

54'-12" TYPE B @ 2.72%

160'-12" TYPE B @ 0.63%

10" SAN (VCP)

114+00 115+00 116+00 117+00 118+00 119+00

PLAN AND PROFILE - SR 241 (WALES RD. NE) STA. 114+00 TO STA. 119+00

STA-241-9.71

BEGIN WORK STA. 9+56.10

℄ R/W & CONST. WILLIAMS AV. NE

MATCH LINE STA. 119+00. SEE SHEET 91

MATCH LINE STA. 124+00, SEE SHEET 93

PROP. SIGNAL CONDUIT

℄ R/W SR 241 (WALES RD. NE)

CONST. LIMITS

PROP. WATER MAIN

SAWCUT

10" SAN

N 2° 04' 21" E

N 2° 01' 02" E

(ABAND.)

TBM#3

(9) 4" PD

EX. FENCE (DND)

CONST. LIMITS

℄ CONST. SR 241 (WALES RD. NE)

PI STA. 121+40.24
Δ = 0° 03' 19" (LT)
NO CURVE

2-STORY FRAME RES.

1-STORY BRICK RES.

GARAGE

DV-31 NOT USED

SW-52 NOT USED

AREA FOR MANUFACTURED SYSTEM

36" STM OUTFALL

STA. 10+35, 15.98' LT.
MANUFACTURED WATER
QUALITY STRUCTURE, TYPE 3

STA. 119+30.18, SR 241 =
STA. 10+00.00, WILLIAMS AV. NE

END WORK
STA. 11+02.39

CROSS REFERENCES			
SHEET NO.			DESCRIPTION
2			LEGEND
4			BMs & PROJECT CONTROL
167	-	184	INTERSECTION & CURB RAMP DETAILS
185	-	229	DRIVEWAY DETAILS
234	-	236	STRUCTURE DATA
237	-	257	WATER WORK
261	-	263	UNDERDRAIN DETAILS
264	-	274	STEP DETAILS

HORIZONTAL SCALE IN FEET

CALCULATED KAH

CHECKED KRM

PLAN AND PROFILE - SR 241 (WALES RD. NE)
STA. 119+00 TO STA. 124+00

STA-241-9.71

FOR ADDITIONAL STORM SEWER PROFILES, SEE SHEET 230

+0.35 %

+0.42 %

P.V.I. STA 123+70.00
ELEV = 1030.65
NO CURVE
GRADE BREAK = 0.07%

TEL. DUCT BANK (RT)

6" WATER (LT)

6" GAS (LT)
2" GAS (RT)
4" GAS (RT)

47'-12" TYPE B @ 1.06%

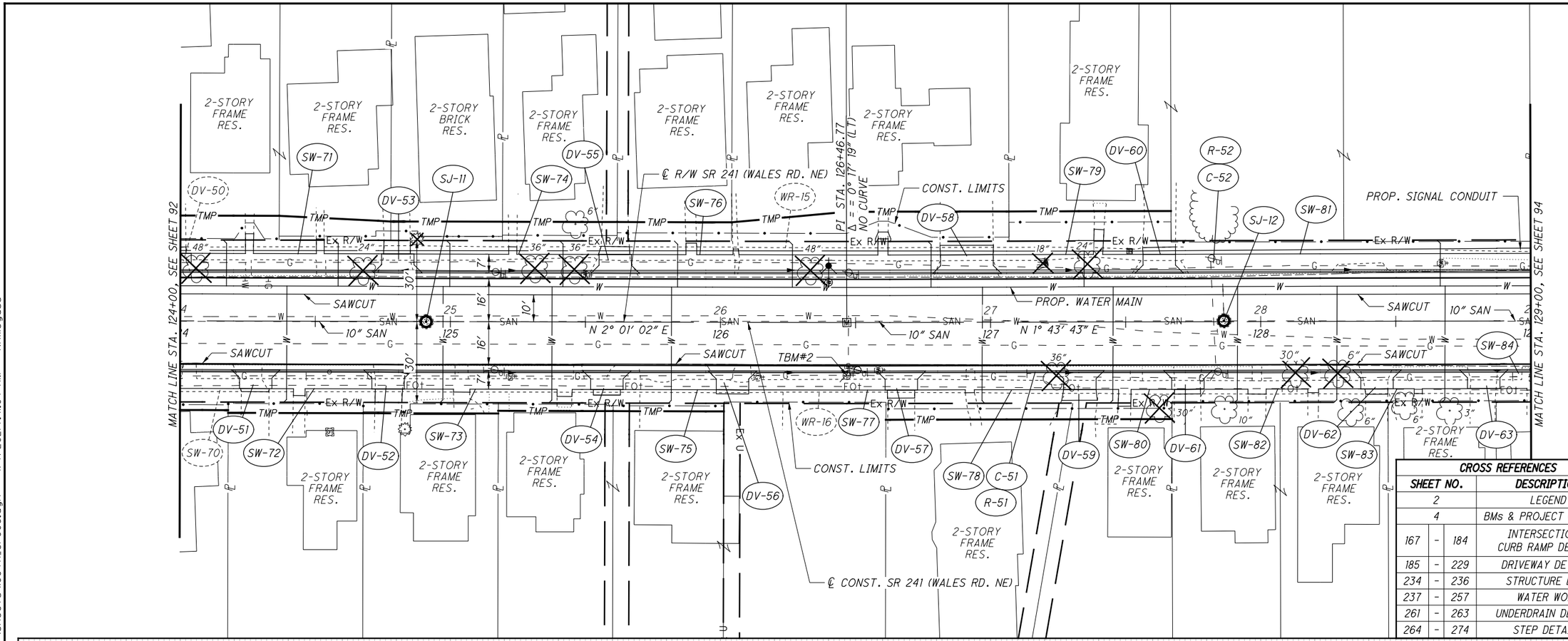
29'-12" TYPE B @ 0.79%

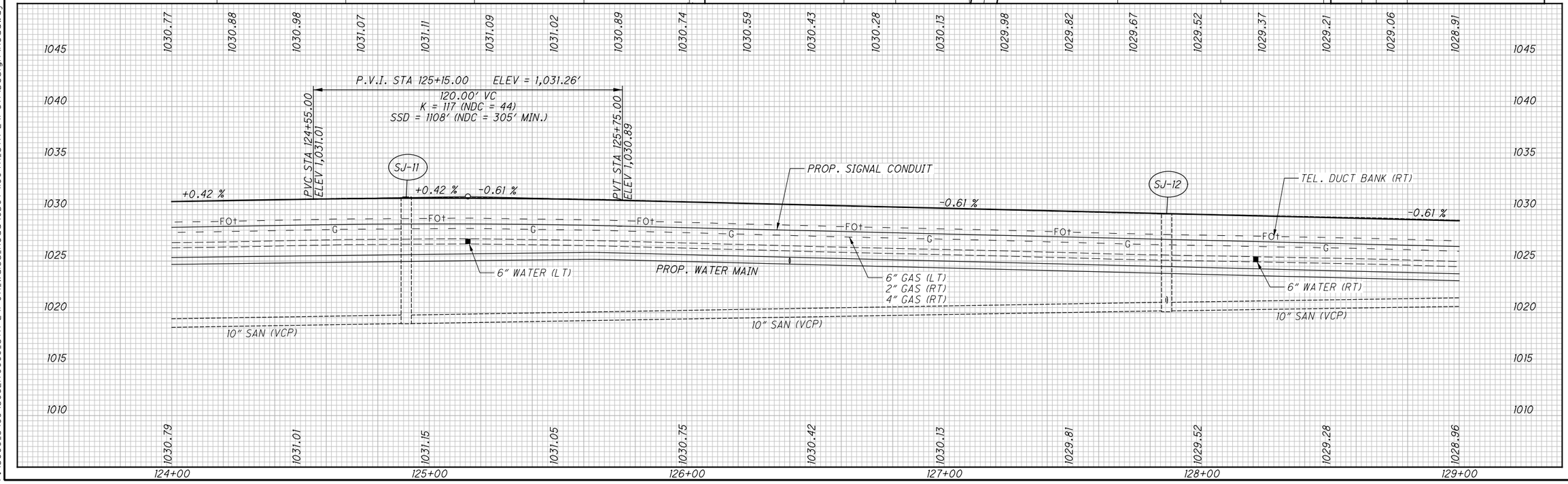
10" SAN (VCP)

STA. 10+35, 15.98' LT.
MANUFACTURED WATER
QUALITY STRUCTURE, TYPE 3

119+00 120+00 121+00 122+00 123+00 124+00

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CROSS REFERENCES			
SHEET NO.			DESCRIPTION
2			LEGEND
4			BMs & PROJECT CONTROL
167	-	184	INTERSECTION & CURB RAMP DETAILS
185	-	229	DRIVEWAY DETAILS
234	-	236	STRUCTURE DATA
237	-	257	WATER WORK
261	-	263	UNDERDRAIN DETAILS
264	-	274	STEP DETAILS

HORIZONTAL SCALE IN FEET
0 10 20 40

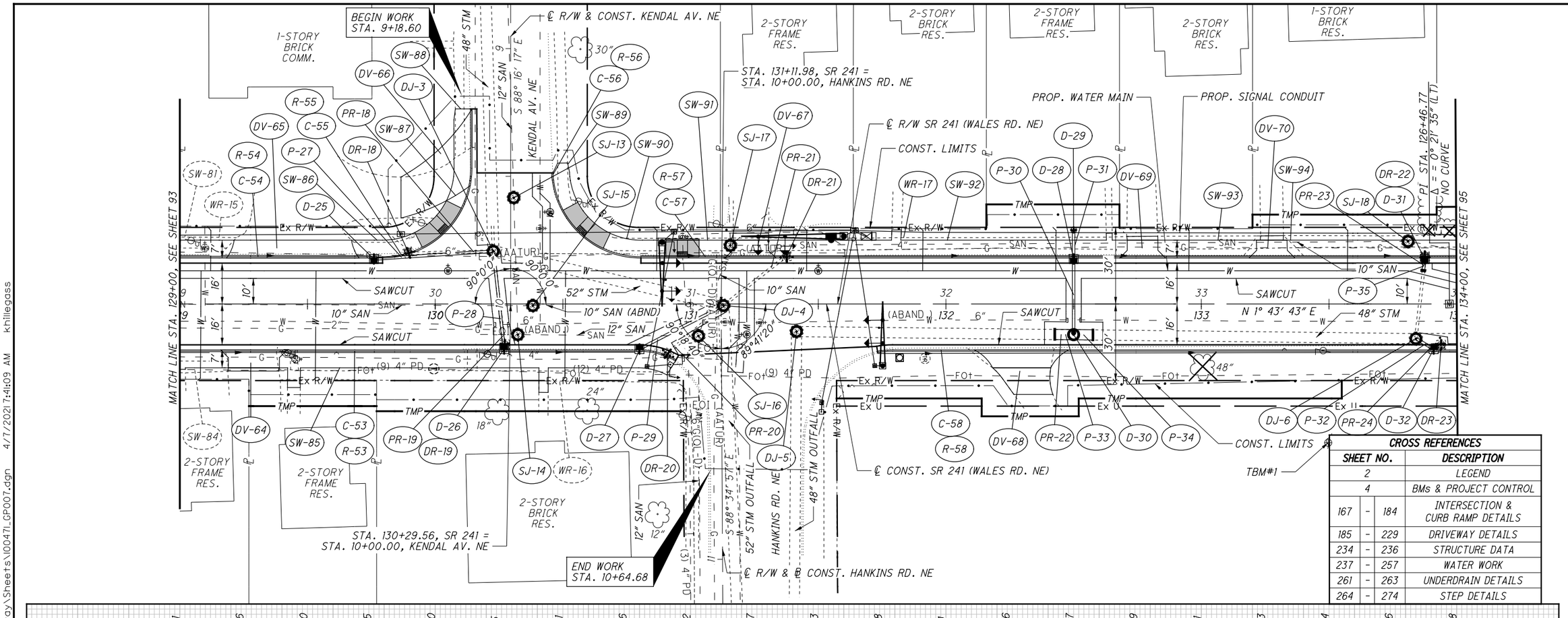
CALCULATED KAH CHECKED KBM

PLAN AND PROFILE - SR 241 (WALES RD. NE) STA. 124+00 TO STA. 129+00

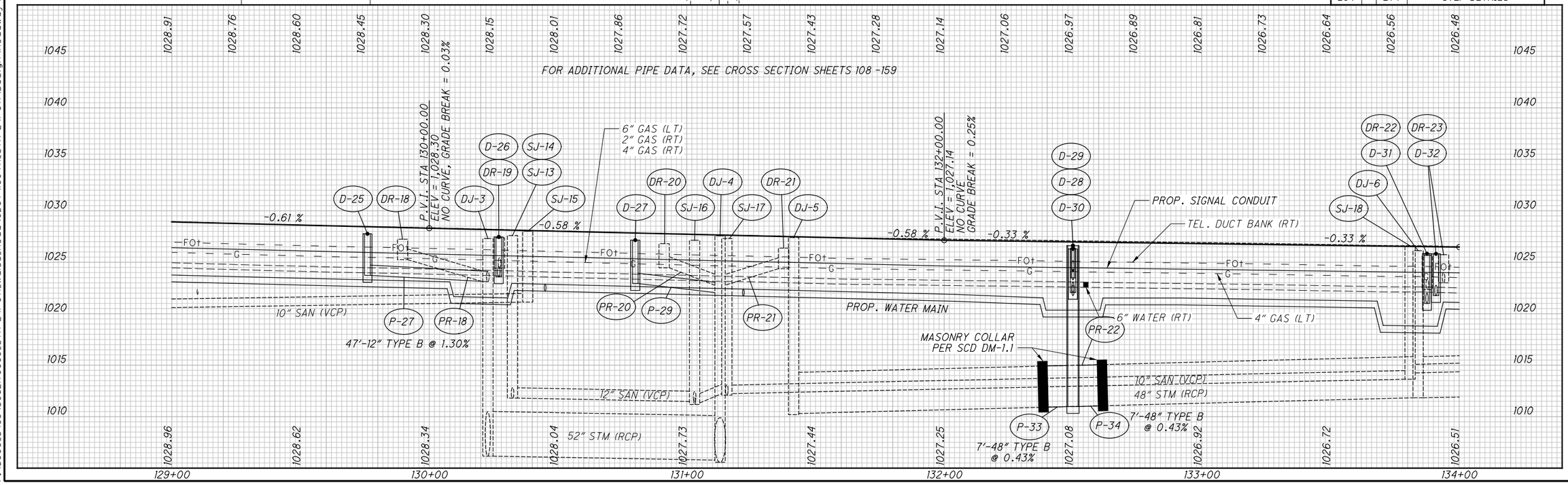
STA-241-9.71

9.3
395

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CROSS REFERENCES			
SHEET NO.			DESCRIPTION
2			LEGEND
4			BMs & PROJECT CONTROL
167	-	184	INTERSECTION & CURB RAMP DETAILS
185	-	229	DRIVEWAY DETAILS
234	-	236	STRUCTURE DATA
237	-	257	WATER WORK
261	-	263	UNDERDRAIN DETAILS
264	-	274	STEP DETAILS



P:\3000_3499\3062170090_STA-241-97I_Wales_Road\000T\I0047I_GP007.dgn 4/7/2021 7:41:09 AM khillegass

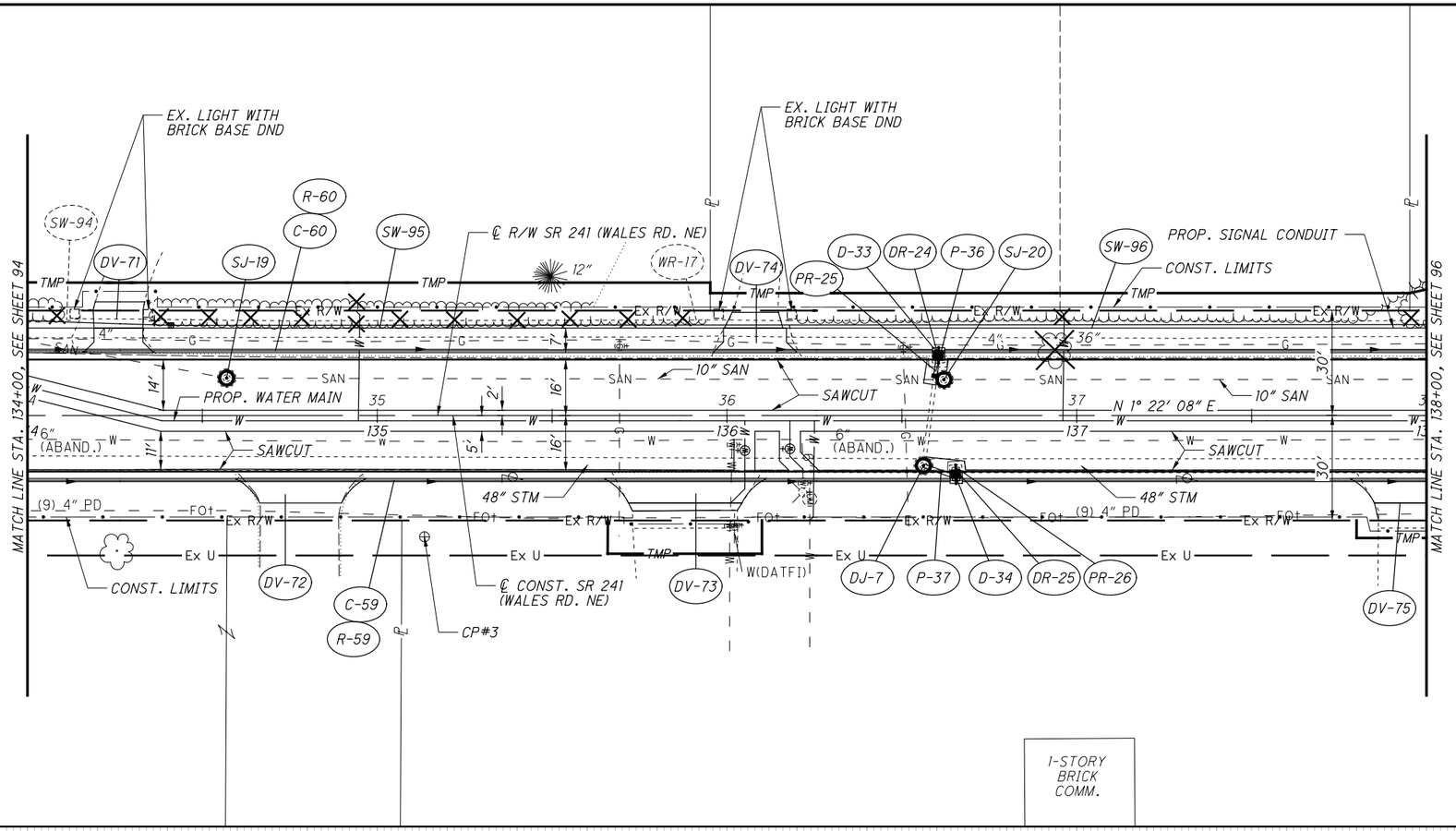
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAH
CHECKED KBM

PLAN AND PROFILE - SR 241 (WALES RD. NE)
STA. 129+00 TO STA. 134+00

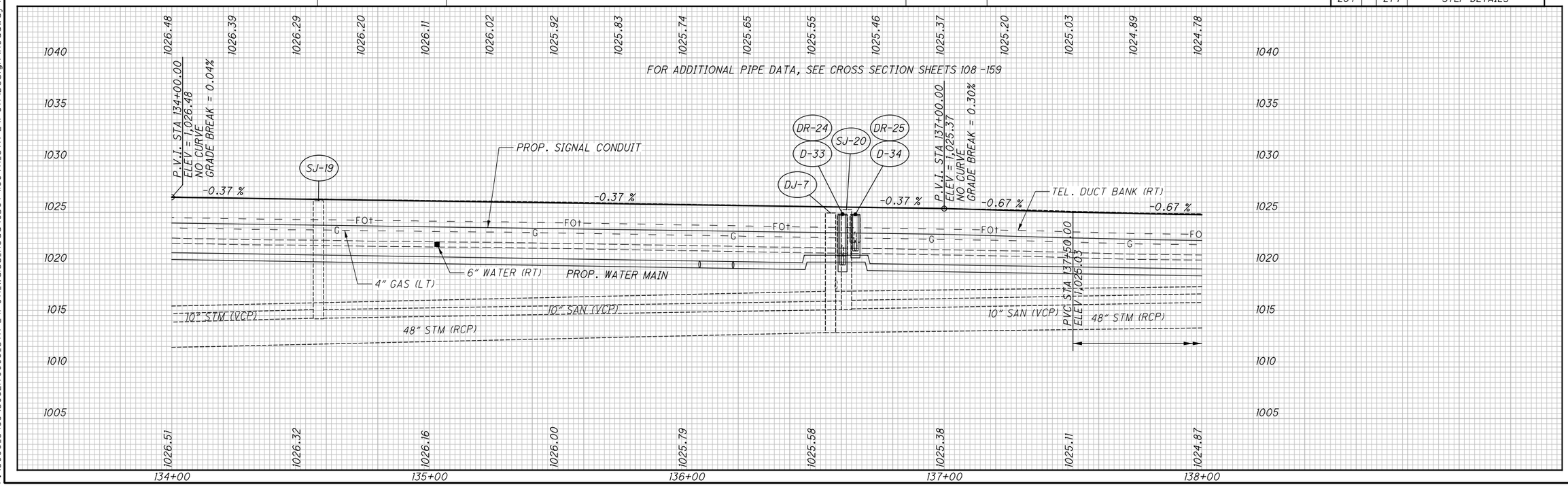
STA-241-9.71

9.4
395



CROSS REFERENCES			
SHEET NO.			DESCRIPTION
2			LEGEND
4			BMs & PROJECT CONTROL
167	-	184	INTERSECTION & CURB RAMP DETAILS
185	-	229	DRIVEWAY DETAILS
234	-	236	STRUCTURE DATA
237	-	257	WATER WORK
261	-	263	UNDERDRAIN DETAILS
264	-	274	STEP DETAILS

1-STORY BRICK COMM.



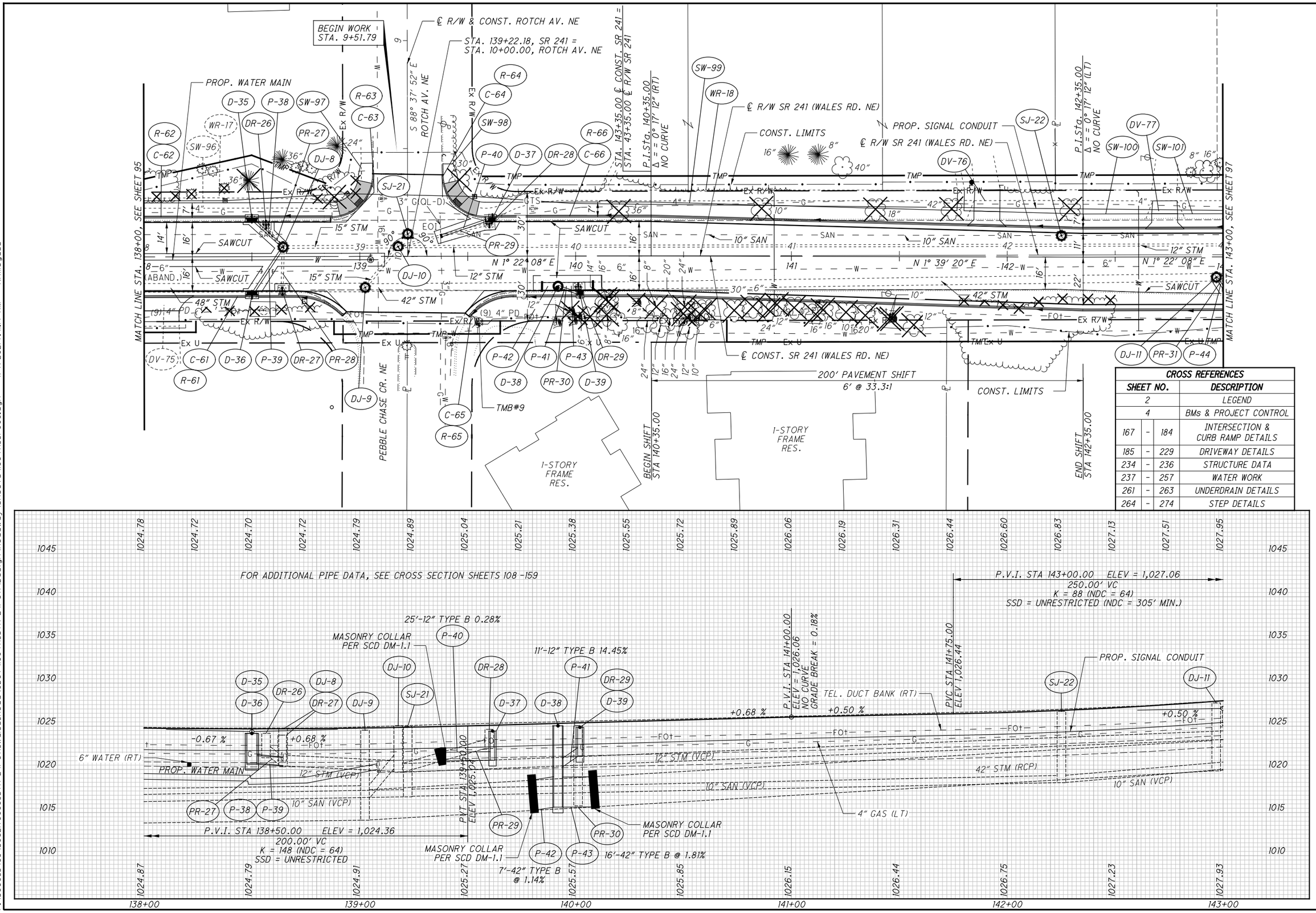
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED K.A.H
CHECKED K.B.M

PLAN AND PROFILE - SR 241 (WALES RD. NE) STA. 134+00 TO STA. 138+00

STA-241-9.71

P:\3000_3499\3062I70090_STA-241-9.71_Wales_Road\000T\00471L_STA-241-9.71\Design\Roadway\Sheets\00471L_GP008.dgn 4/7/2021 7:41:13 AM khillegass



CROSS REFERENCES			
SHEET NO.			DESCRIPTION
2			LEGEND
4			BMs & PROJECT CONTROL
167	-	184	INTERSECTION & CURB RAMP DETAILS
185	-	229	DRIVEWAY DETAILS
234	-	236	STRUCTURE DATA
237	-	257	WATER WORK
261	-	263	UNDERDRAIN DETAILS
264	-	274	STEP DETAILS

HORIZONTAL SCALE IN FEET

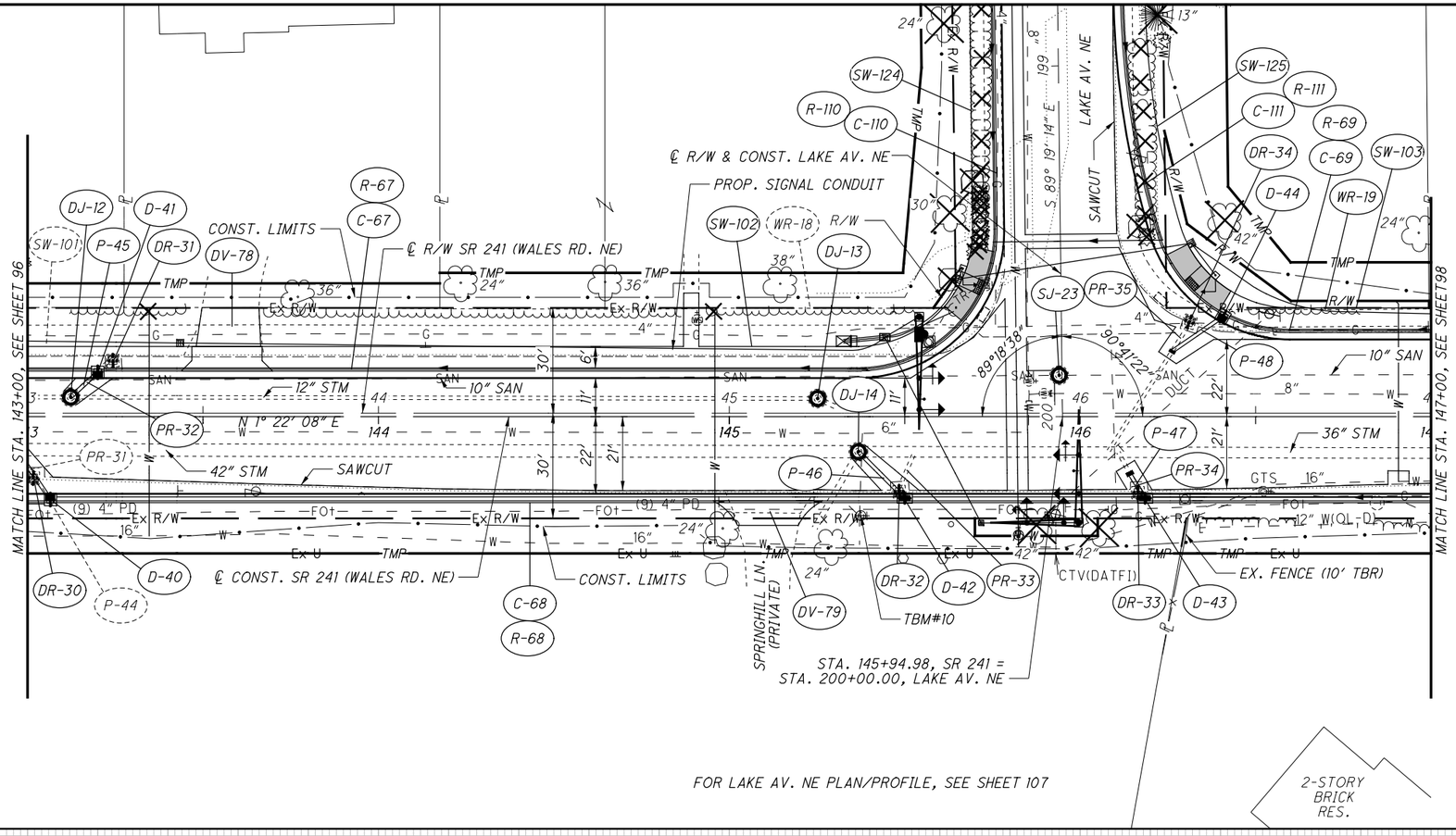
CALCULATED KAH CHECKED KBM

PLAN AND PROFILE - SR 241 (WALES RD. NE)
STA. 138+00 TO STA. 143+00

STA-241-9.71

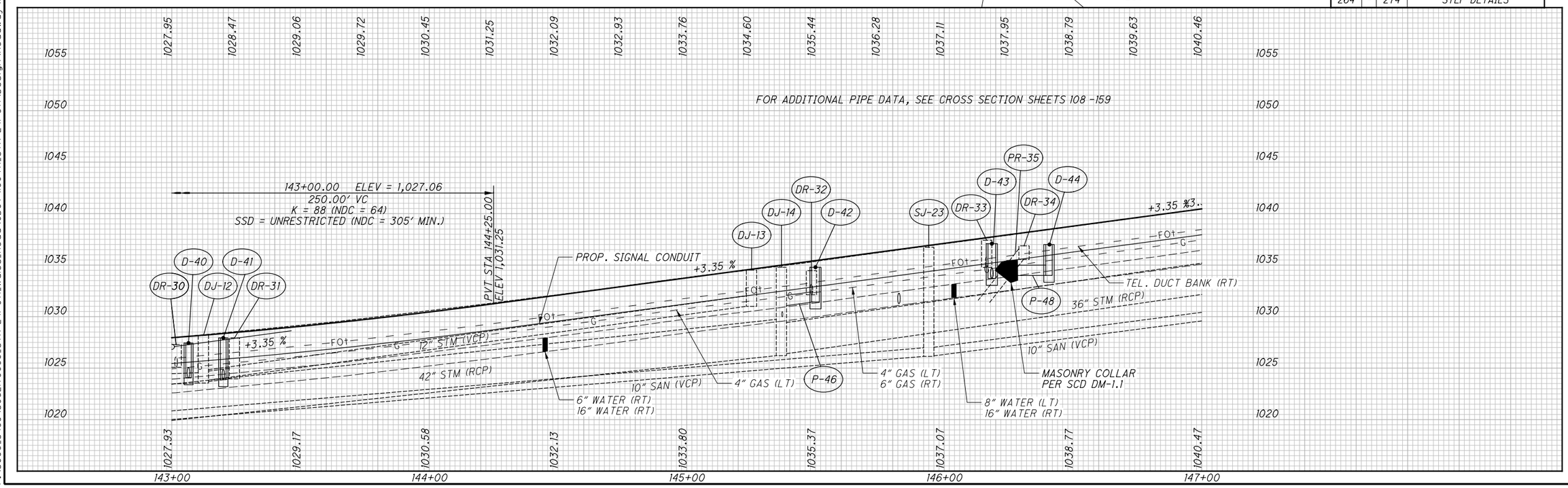
9.6
395

P:\3000_3499\3062170090_STA-241-9.71_Wales_Road\000T\10047L_STA-241-9.71\Design\Roadway\Sheets\10047L_GP009.dgn 4/7/2021 7:41:14 AM khillegass



FOR LAKE AV. NE PLAN/PROFILE, SEE SHEET 107

CROSS REFERENCES			
SHEET NO.			DESCRIPTION
2			LEGEND
4			BMs & PROJECT CONTROL
167	-	184	INTERSECTION & CURB RAMP DETAILS
185	-	229	DRIVEWAY DETAILS
234	-	236	STRUCTURE DATA
237	-	257	WATER WORK
261	-	263	UNDERDRAIN DETAILS
264	-	274	STEP DETAILS



HORIZONTAL SCALE IN FEET

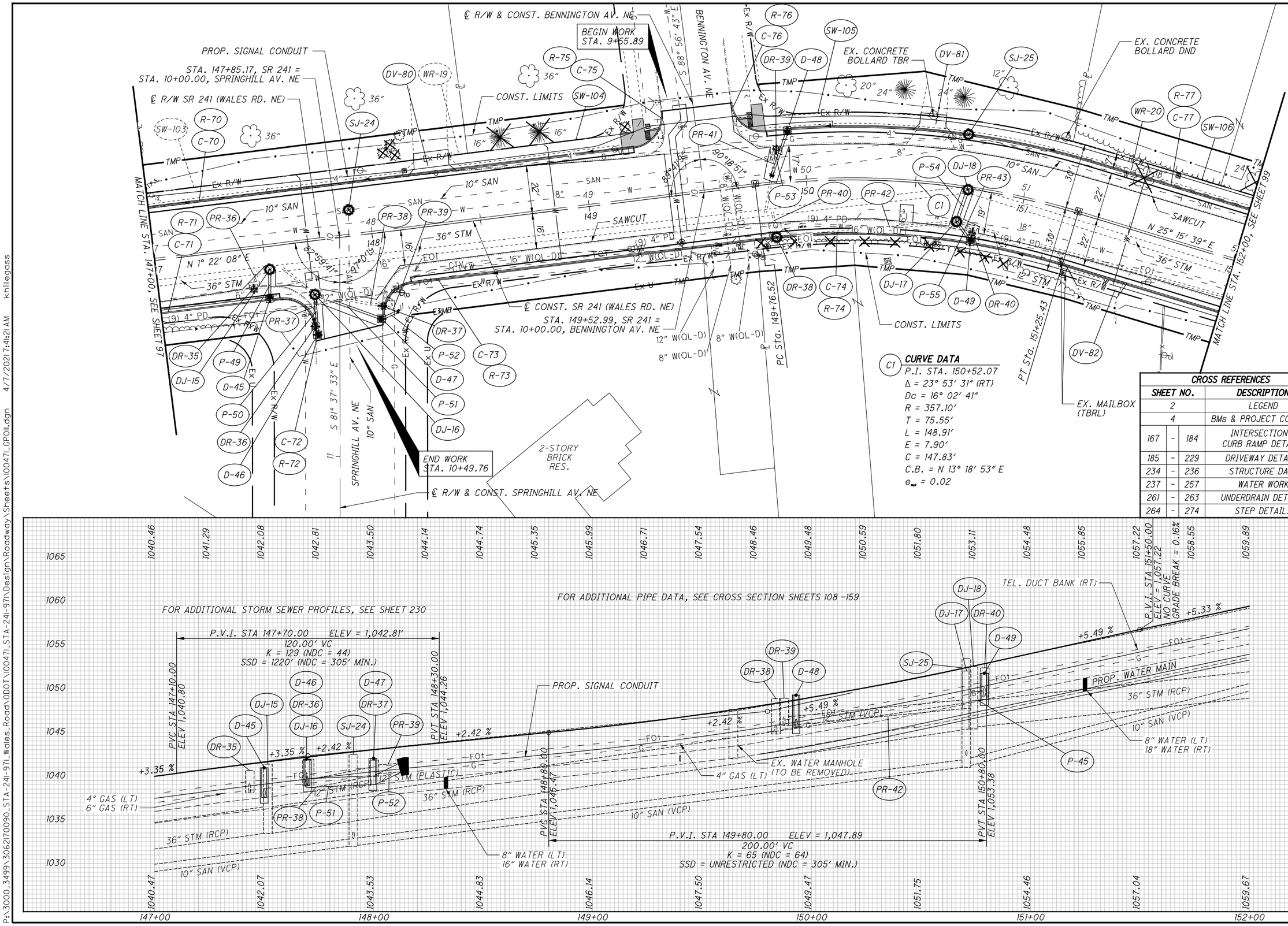
CALCULATED KAH CHECKED KBM

PLAN AND PROFILE - SR 241 (WALES RD. NE)
STA. 143+00 TO STA. 147+00

STA-241-9.71

9.7
395

P:\3000_3499\3062I70090_STA-241-97I_Wales_Road\DOT\I0047I_STA-241-97I\Design\Roadway\Sheets\I0047I_GPOI0.dgn 4/7/2021 7:41:17 AM khillegass



HORIZONTAL SCALE IN FEET

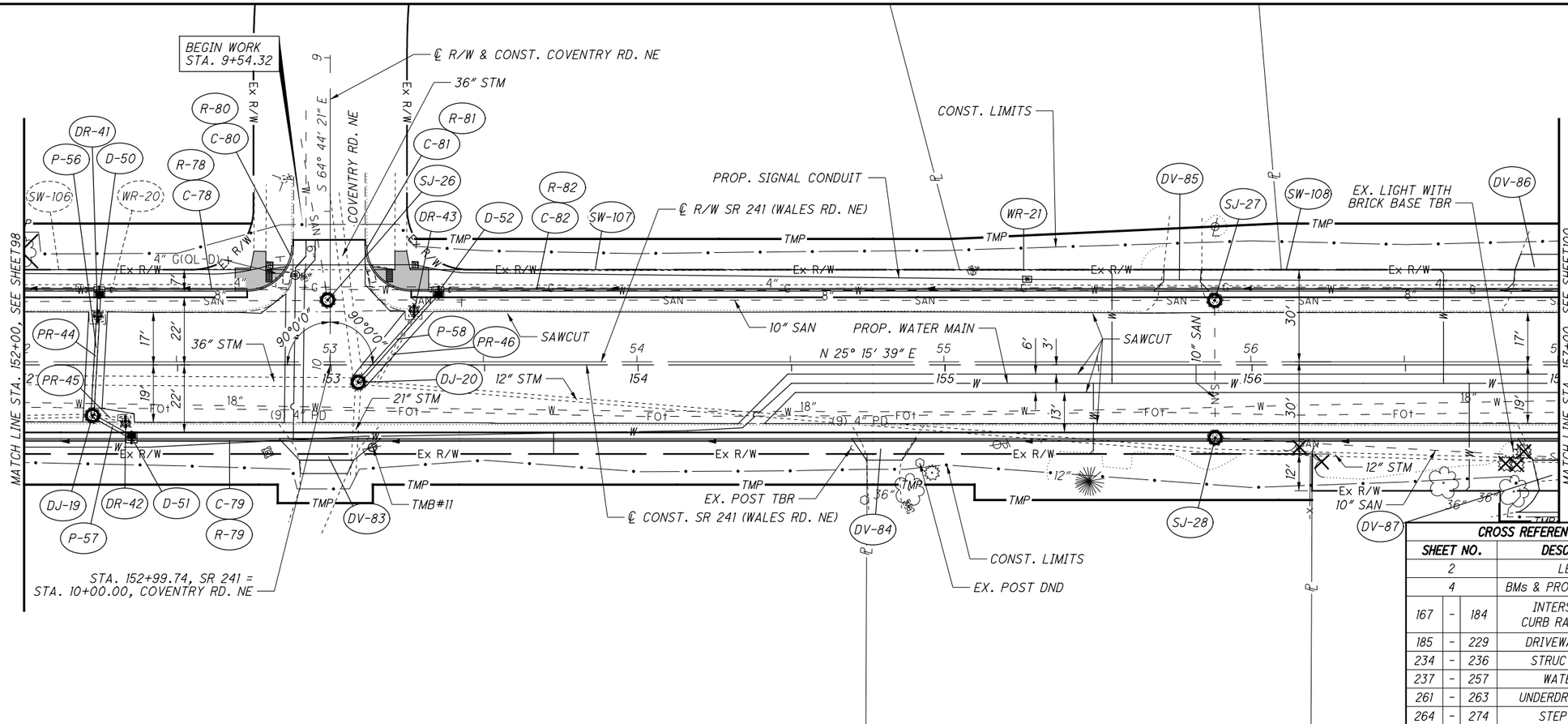
CALCULATED KAH | CHECKED KBM

PLAN AND PROFILE - SR 241 (WALES RD. NE) STA. 147+00 TO STA. 152+00

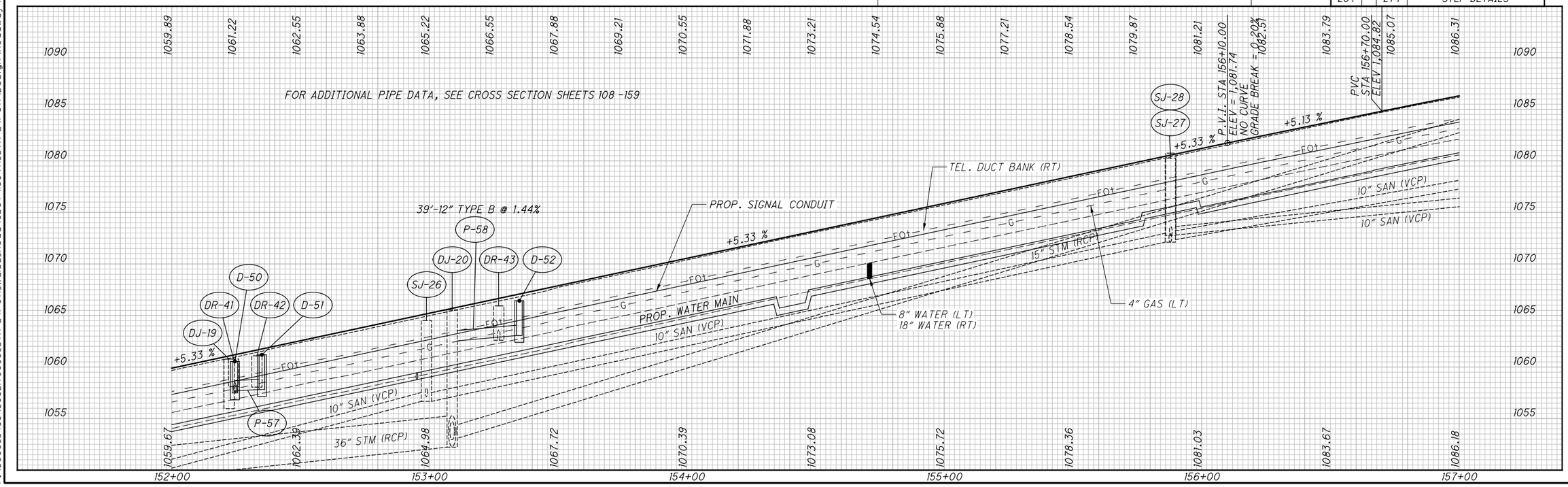
STA-241-9.71

9.8
395

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CROSS REFERENCES			
SHEET NO.			DESCRIPTION
2			LEGEND
4			BMs & PROJECT CONTROL
167	-	184	INTERSECTION & CURB RAMP DETAILS
185	-	229	DRIVEWAY DETAILS
234	-	236	STRUCTURE DATA
237	-	257	WATER WORK
261	-	263	UNDERDRAIN DETAILS
264	-	274	STEP DETAILS



CALCULATED KAH CHECKED KBM

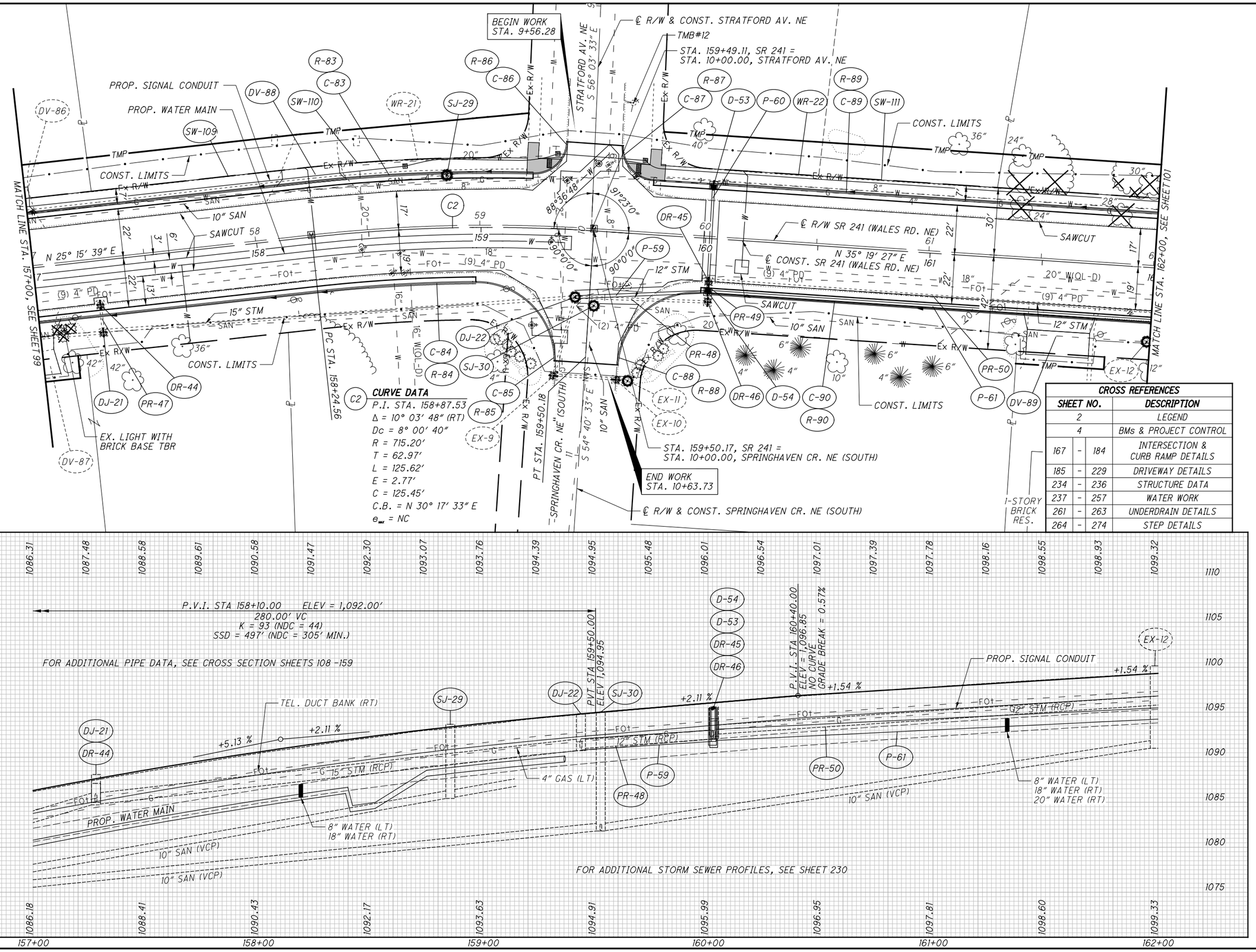
HORIZONTAL SCALE IN FEET

PLAN AND PROFILE - SR 241 (WALES RD. NE) STA. 152+00 TO STA. 157+00

STA-241-9.71

9.9
395

P:\3000_3499\3062I70090_STA-241-97L_Wales_Road\ODOT\100471_STA-241-97\Design\Roadway\Sheets\100471L_GP012.dgn 4/7/2021 7:41:25 AM khillegass



CROSS REFERENCES			
SHEET NO.			DESCRIPTION
2			LEGEND
4			BMs & PROJECT CONTROL
167	-	184	INTERSECTION & CURB RAMP DETAILS
185	-	229	DRIVEWAY DETAILS
234	-	236	STRUCTURE DATA
237	-	257	WATER WORK
261	-	263	UNDERDRAIN DETAILS
264	-	274	STEP DETAILS

CALCULATED KAH CHECKED KRM

HORIZONTAL SCALE IN FEET

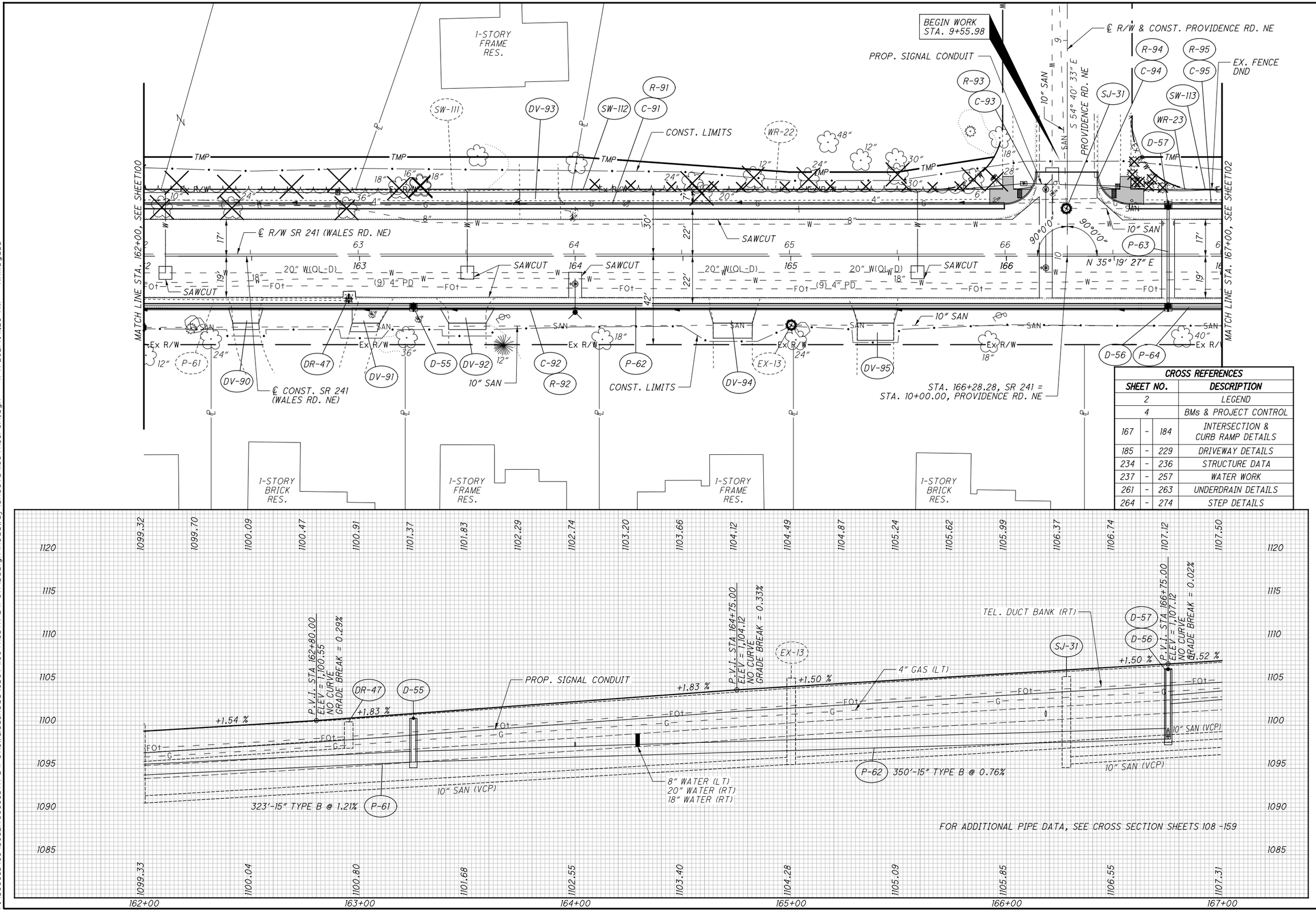
PLAN AND PROFILE - SR 241 (WALES RD. NE)
STA. 157+00 TO STA. 162+00

STA-241-9.71

100
395

P:\3000_3499\3062170090_STA-241-9.71_Wales_Road\ODOT\00471L_STA-241-9.71\Design\Roadway\Sheets\00471L_GP013.dgn 4/7/2021 7:41:27 AM khillegass

P:\3000_3499\3062170090_STA-241-9.71_Wales_Road\ODOT\100471_STA-241-9.71\Design\Roadway\Sheets\100471_GP014.dgn 4/7/2021 7:41:29 AM khillegass

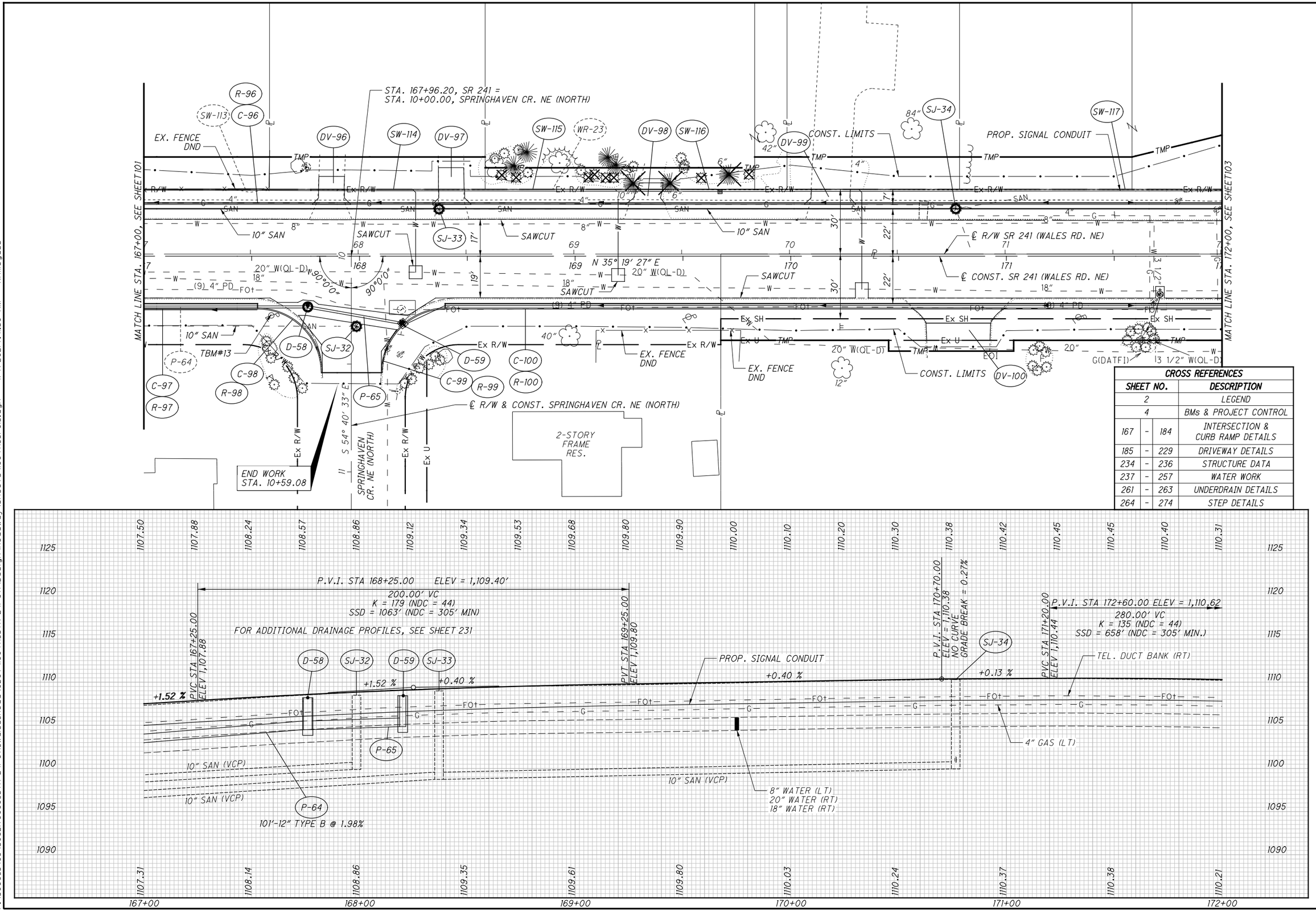


CROSS REFERENCES			
SHEET NO.			DESCRIPTION
2			LEGEND
4			BMs & PROJECT CONTROL
167	-	184	INTERSECTION & CURB RAMP DETAILS
185	-	229	DRIVEWAY DETAILS
234	-	236	STRUCTURE DATA
237	-	257	WATER WORK
261	-	263	UNDERDRAIN DETAILS
264	-	274	STEP DETAILS

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED KAH
CHECKED KBM

PLAN AND PROFILE - SR 241 (WALES RD. NE)
STA. 162+00 TO STA. 167+00

STA-241-9.71



CROSS REFERENCES			
SHEET NO.			DESCRIPTION
2			LEGEND
4			BMs & PROJECT CONTROL
167	-	184	INTERSECTION & CURB RAMP DETAILS
185	-	229	DRIVEWAY DETAILS
234	-	236	STRUCTURE DATA
237	-	257	WATER WORK
261	-	263	UNDERDRAIN DETAILS
264	-	274	STEP DETAILS

HORIZONTAL SCALE IN FEET
0 10 20 40

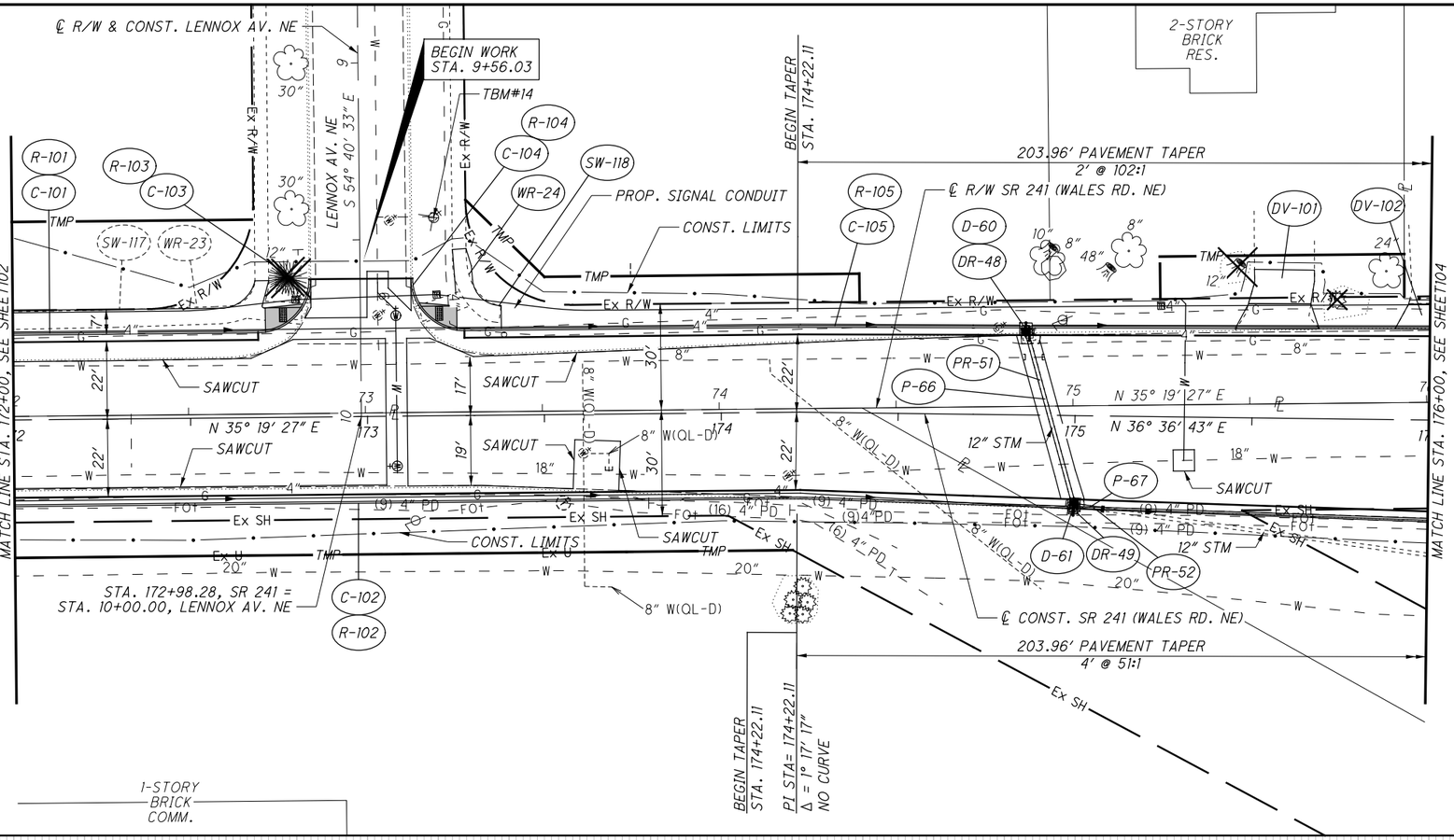
CALCULATED KAH
CHECKED KBM

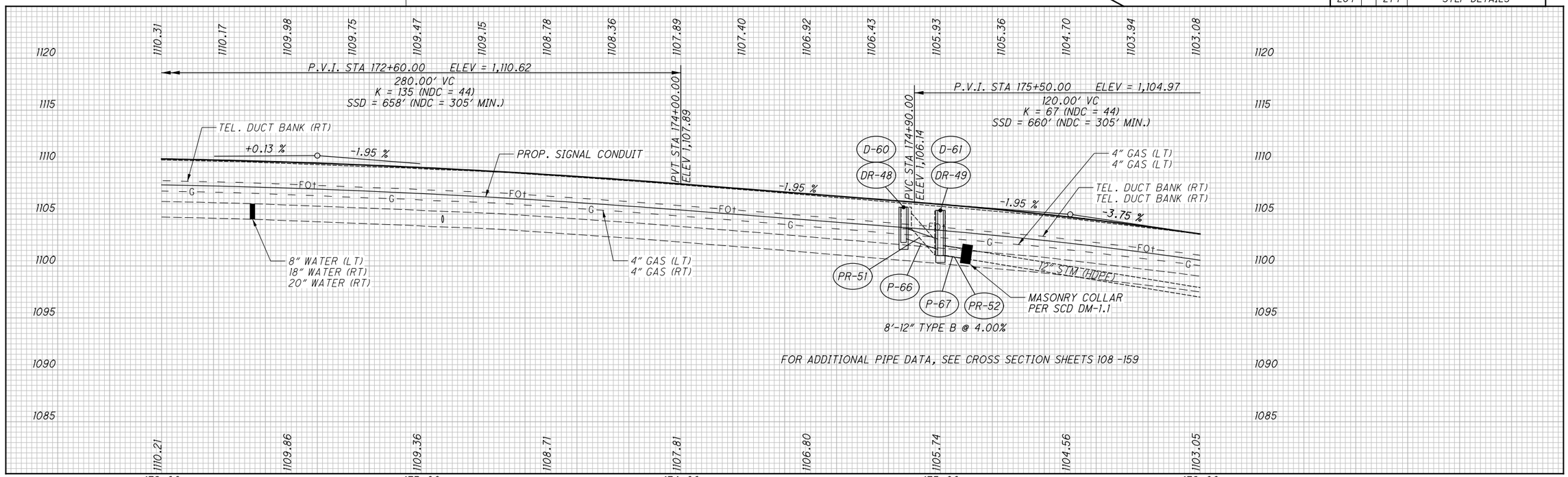
PLAN AND PROFILE - SR 241 (WALES RD. NE)
STA. 167+00 TO STA. 172+00

STA-241-9.71

102
395

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FOR ADDITIONAL PIPE DATA, SEE CROSS SECTION SHEETS 108 -159

CROSS REFERENCES			
SHEET NO.			DESCRIPTION
2			LEGEND
4			BMs & PROJECT CONTROL
167	-	184	INTERSECTION & CURB RAMP DETAILS
185	-	229	DRIVEWAY DETAILS
234	-	236	STRUCTURE DATA
237	-	257	WATER WORK
261	-	263	UNDERDRAIN DETAILS
264	-	274	STEP DETAILS

HORIZONTAL SCALE IN FEET
0 10 20 40

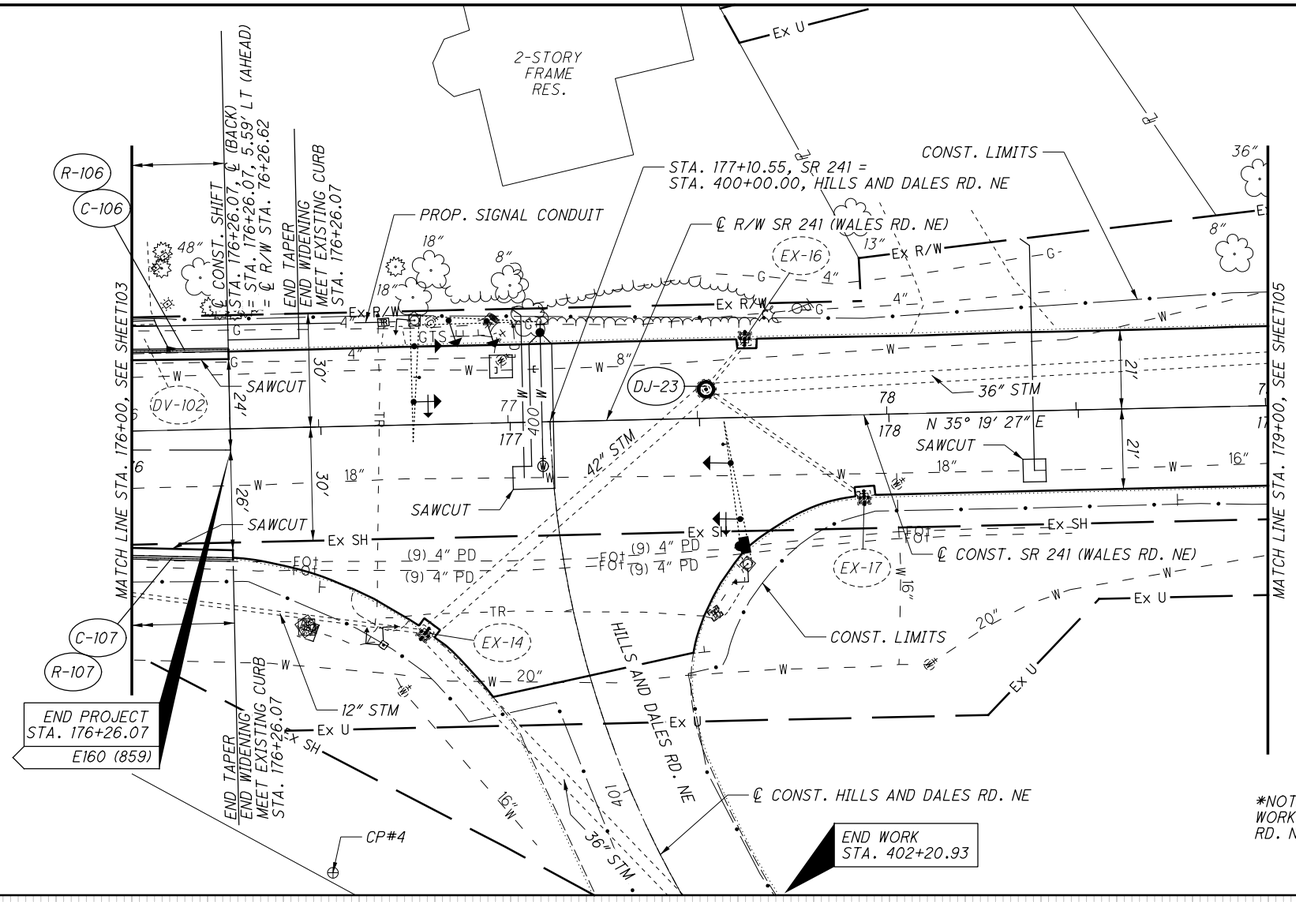
CALCULATED KAH
CHECKED KBM

PLAN AND PROFILE - SR 241 (WALES RD. NE)
STA. 172+00 TO STA. 176+00

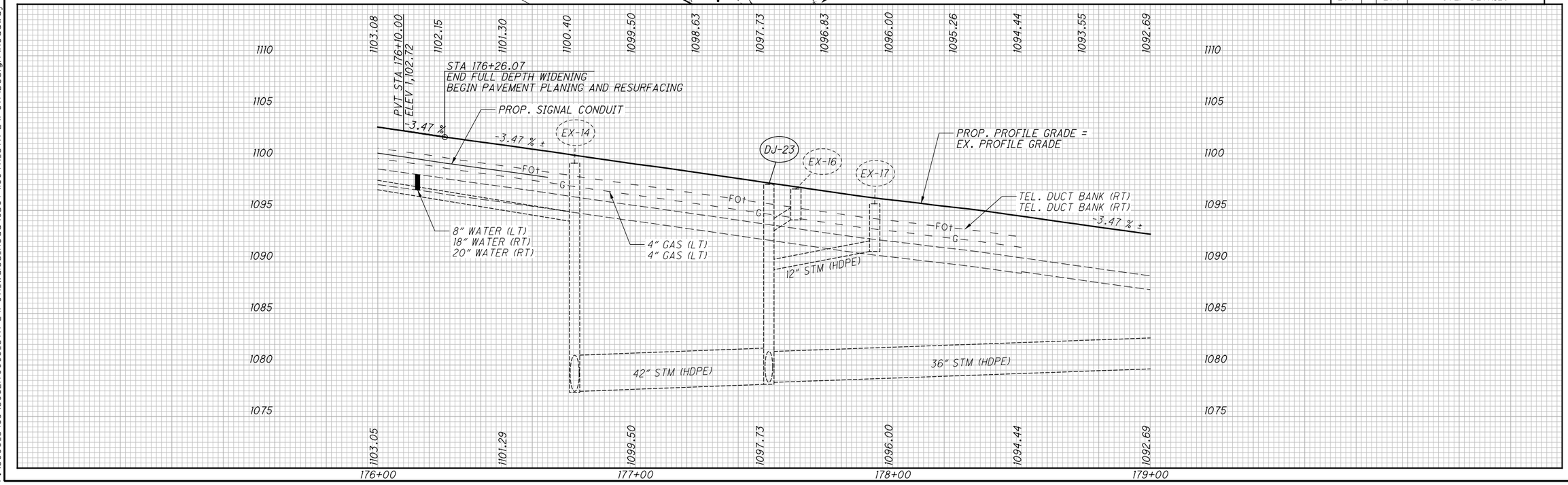
STA-241-9.71

103
395

P:\3000_3499\306210090_STA-241-97I_Wales_Road\ODOT\100471_STA-241-97I\Design\Roadway\Sheets\100471_GP016.dgn 4/7/2021 7:41:32 AM khillegass



CROSS REFERENCES			
SHEET NO.			DESCRIPTION
2			LEGEND
4			BMs & PROJECT CONTROL
167	-	184	INTERSECTION & CURB RAMP DETAILS
185	-	229	DRIVEWAY DETAILS
234	-	236	STRUCTURE DATA
237	-	257	WATER WORK
261	-	263	UNDERDRAIN DETAILS
264	-	274	STEP DETAILS



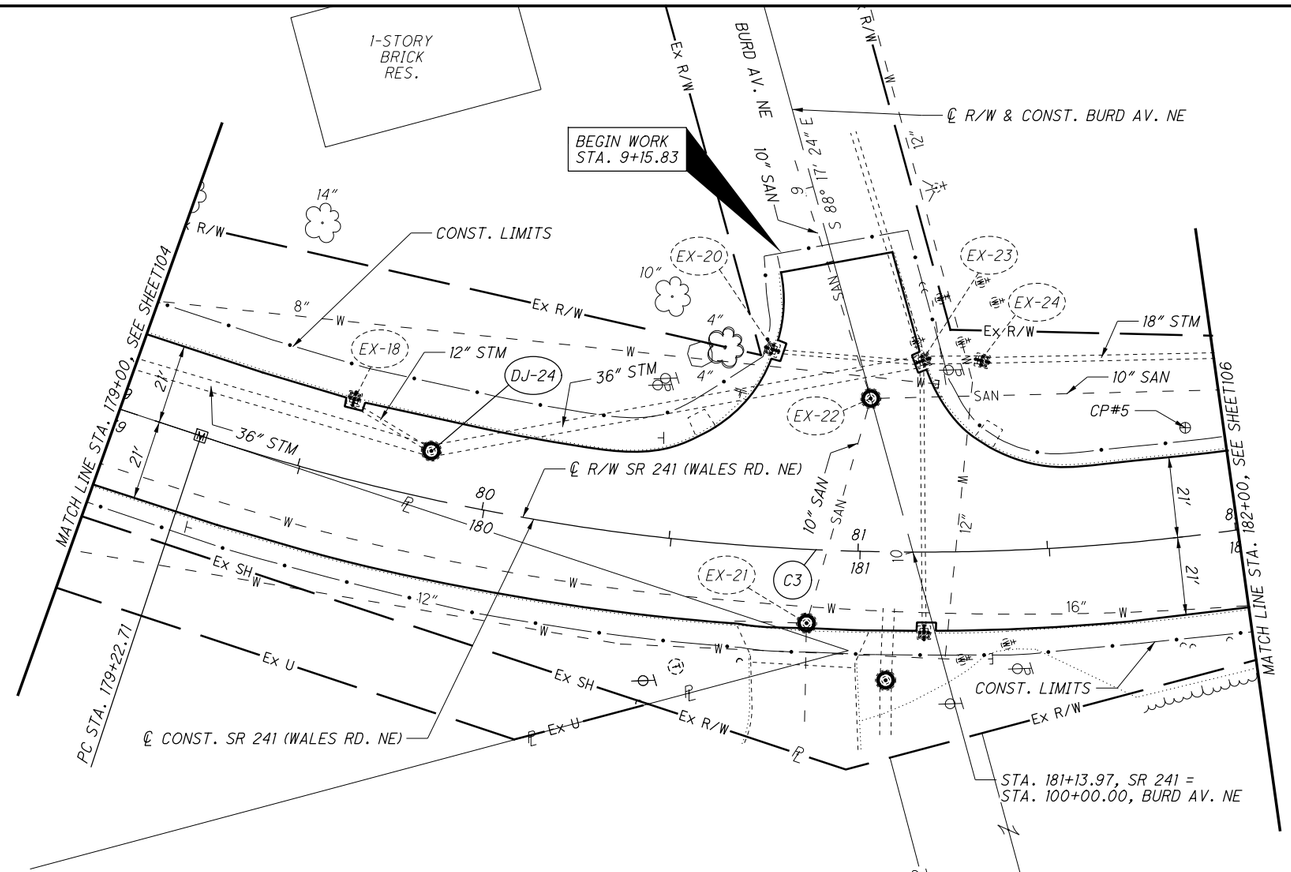
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAH
CHECKED KBM

PLAN AND PROFILE - SR 241 (WALES RD. NE) STA. 176+00 TO STA. 179+00

STA-241-9.71

P:\3000_3499\3062170090_STA-241-9.71_Wales_Road\ODOT\10047L_STA-241-9.71\Design\Roadway\Sheets\10047L_GPOI7.dgn 4/7/2021 7:41:32 AM khillegass

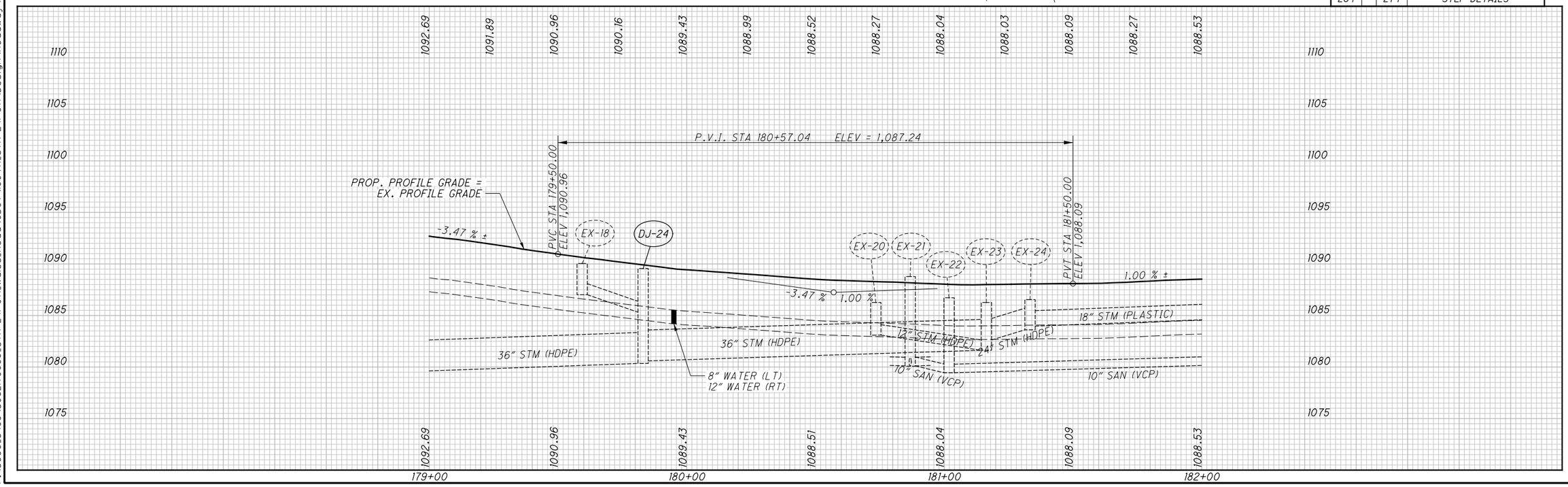


EX-19 NOT USED

C3 EXISTING CURVE DATA

P.I.Sta. 181+03.02
Δ = 33° 17′ 43″ (LT)
Dc = 9° 30′ 06″
R = 603.00′
T = 180.31′
L = 350.41′
E = 26.38′
C = 345.50′
C.B. = N 18° 40′ 35″ E
e_{max} = 0.0333

CROSS REFERENCES			
SHEET NO.			DESCRIPTION
2			LEGEND
4			BMs & PROJECT CONTROL
167	-	184	INTERSECTION & CURB RAMP DETAILS
185	-	229	DRIVEWAY DETAILS
234	-	236	STRUCTURE DATA
237	-	257	WATER WORK
261	-	263	UNDERDRAIN DETAILS
264	-	274	STEP DETAILS



HORIZONTAL SCALE IN FEET
0 10 20 40

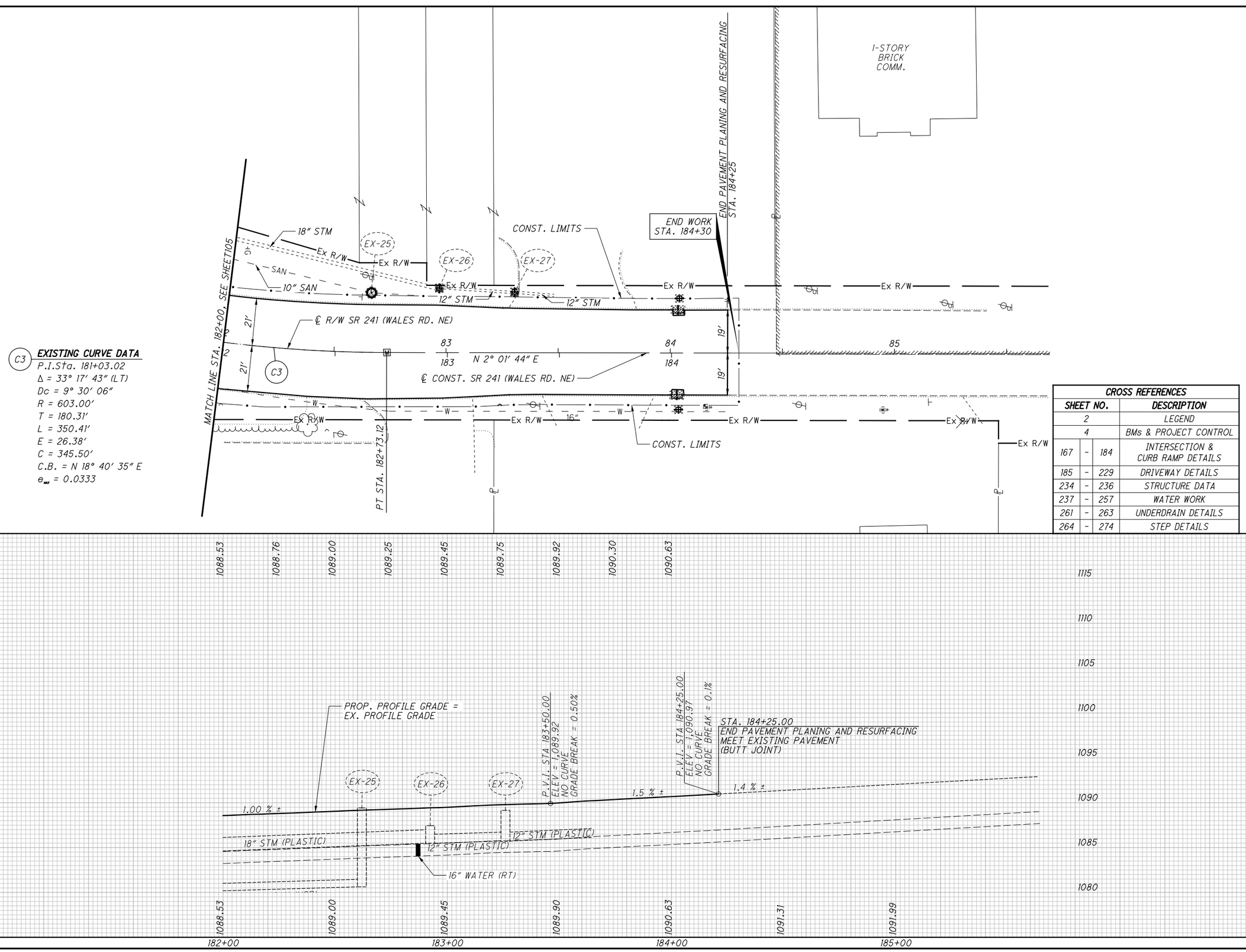
CALCULATED K&H
CHECKED KBM

PLAN AND PROFILE - SR 241 (WALES RD. NE)
STA. 179+00 TO STA. 182+00

STA-241-9.71

105
395

P:\3000_3499\3062170090_STA-241-9.71_Wales_Road\DOT\00471L_STA-241-9.71\Design\Roadway\Sheets\00471LGP018.dgn 4/7/2021 7:41:33 AM khillegass



CROSS REFERENCES			
SHEET NO.			DESCRIPTION
2			LEGEND
4			BMs & PROJECT CONTROL
167	-	184	INTERSECTION & CURB RAMP DETAILS
185	-	229	DRIVEWAY DETAILS
234	-	236	STRUCTURE DATA
237	-	257	WATER WORK
261	-	263	UNDERDRAIN DETAILS
264	-	274	STEP DETAILS

HORIZONTAL SCALE IN FEET
0 10 20 40

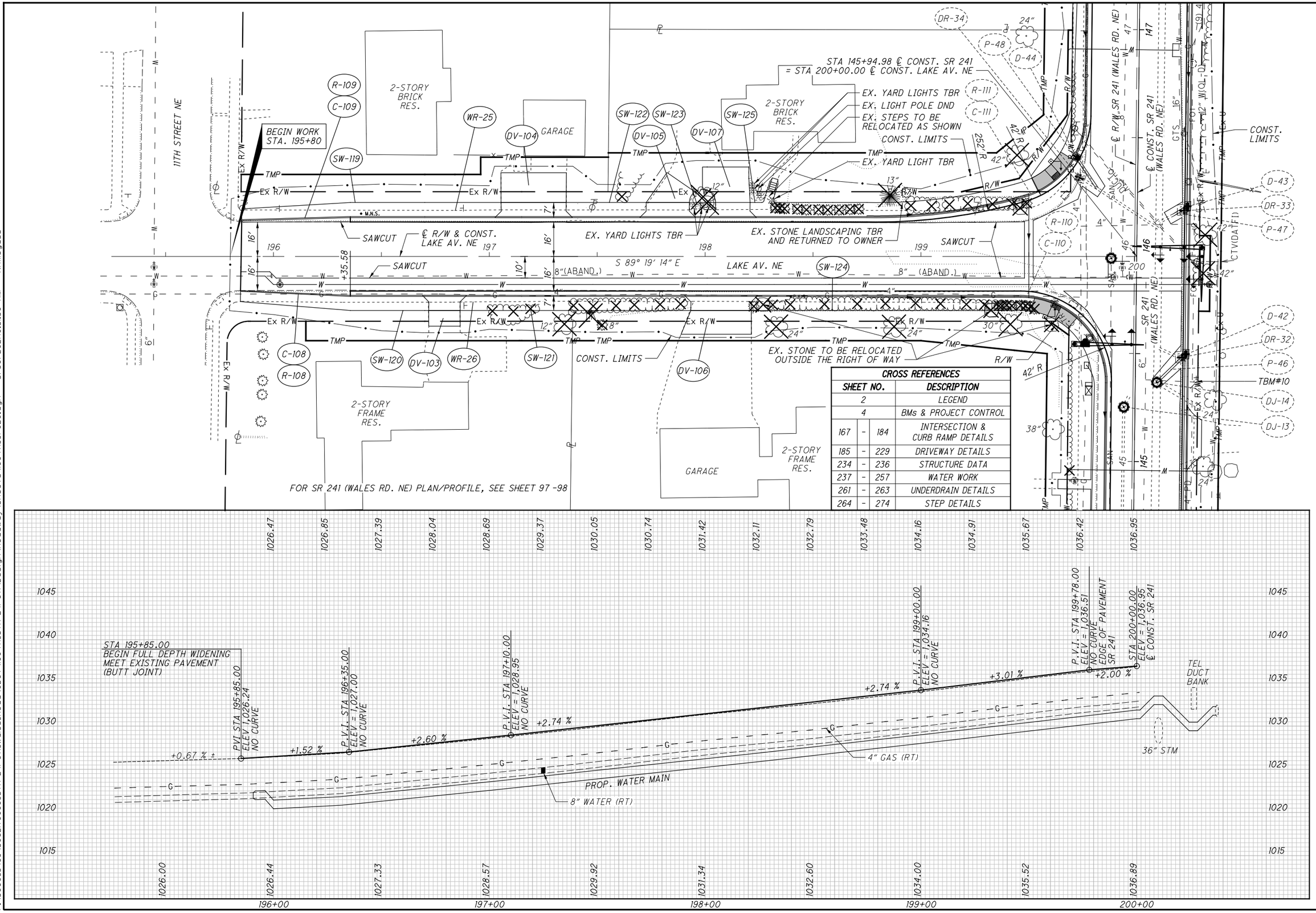
CALCULATED KAH
CHECKED KRM

PLAN AND PROFILE - SR 241 (WALES RD. NE) STA. 182+00 TO END

STA-241-9.71

106
395

P:\3000_3499\3062170090_STA-241-9.71_Wales_Road\ODOT\00471_GP019.dgn 4/7/2021 7:41:34 AM khillegass



CROSS REFERENCES			
SHEET NO.			DESCRIPTION
2			LEGEND
4			BMs & PROJECT CONTROL
167	-	184	INTERSECTION & CURB RAMP DETAILS
185	-	229	DRIVEWAY DETAILS
234	-	236	STRUCTURE DATA
237	-	257	WATER WORK
261	-	263	UNDERDRAIN DETAILS
264	-	274	STEP DETAILS

HORIZONTAL SCALE IN FEET

CALCULATED KAH CHECKED KBM

PLAN AND PROFILE - LAKE AV. NE
BEGIN TO END

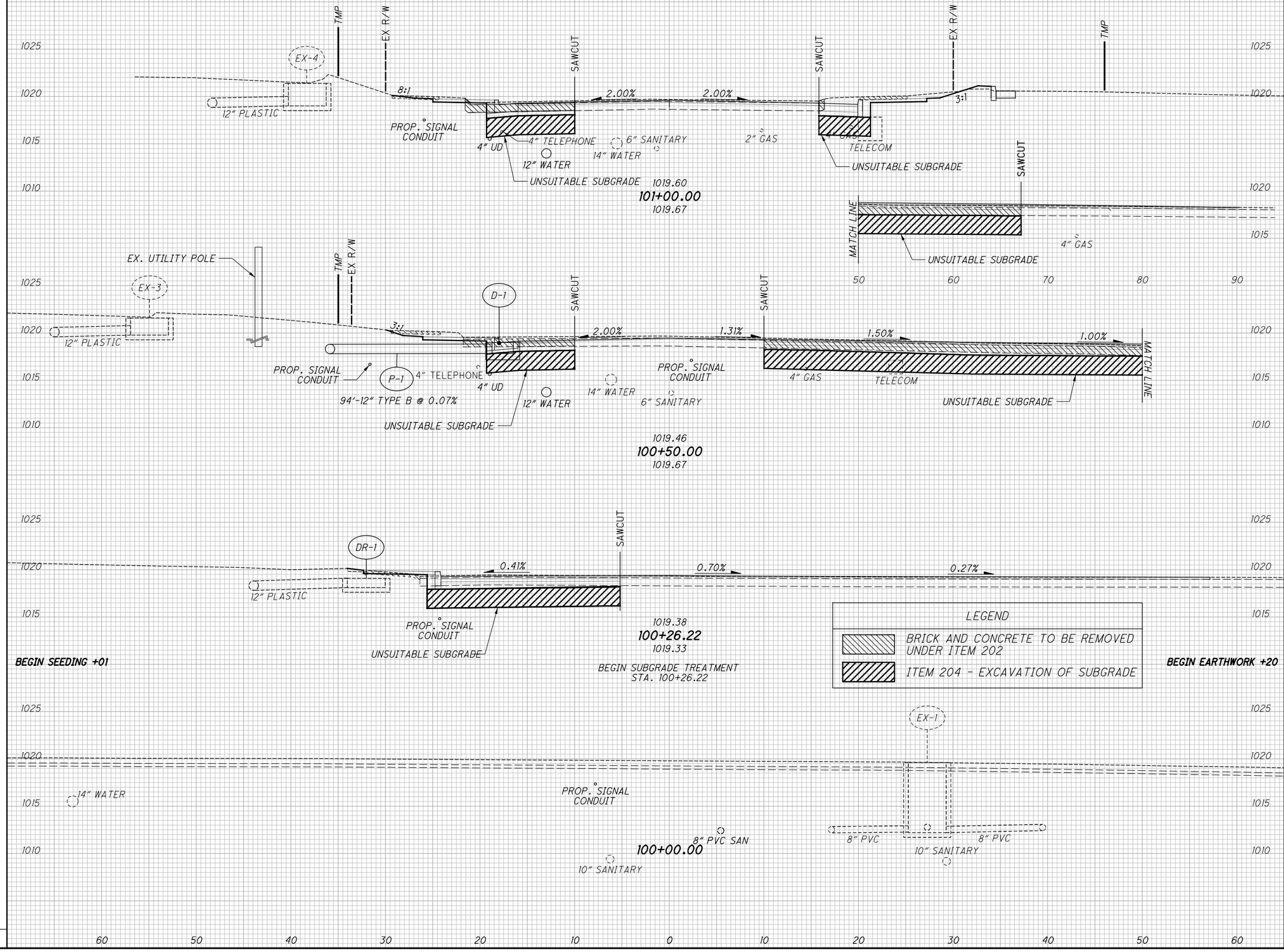
STA-241-9.71

107
395

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SEEDING	
END WIDTH	SQ. YDS.
26	97
9	15
2	3
0	
37	115

SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.



END AREA	
CUT	FILL
20	4
16	2
27	2
0	0
63	8

VOLUME	
CUT	FILL
33	6
19	2
3	1
55	9

CALCULATED KRM
CHECKED RAK

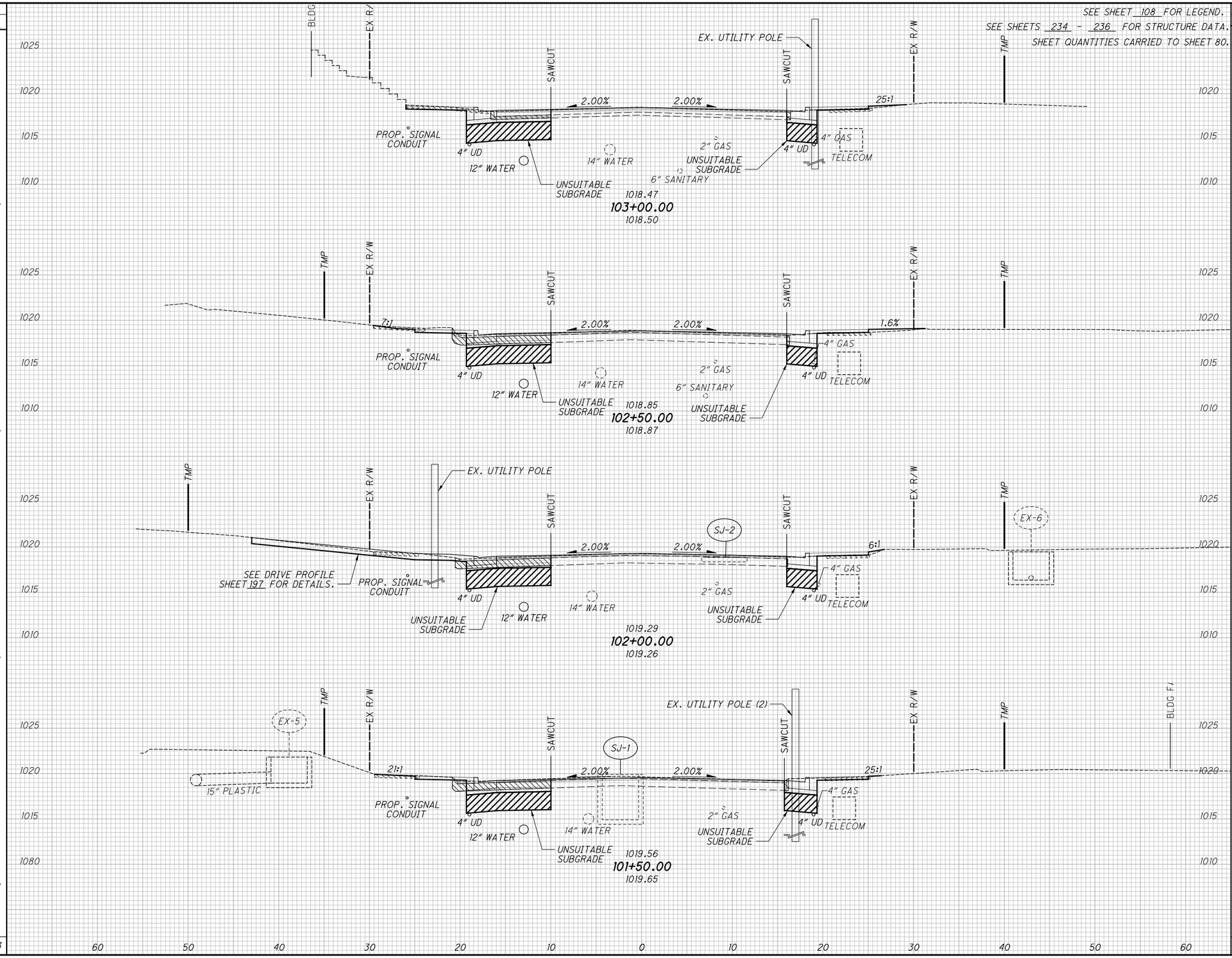
CROSS SECTIONS S.R. 241
STA. 100+00 TO STA. 101+00

STA-241-9.71

108
395

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SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.



SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
22	133	10	2	17	7
26	133	8	6	23	8
22	133	17	3	24	6
26	144	9	4	27	7
96	543	44	15	91	28

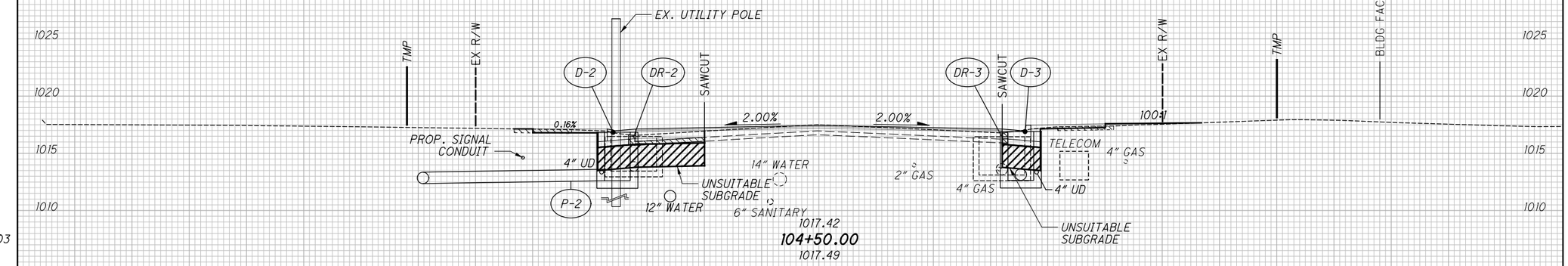
CALCULATED KRM
CHECKED RAK

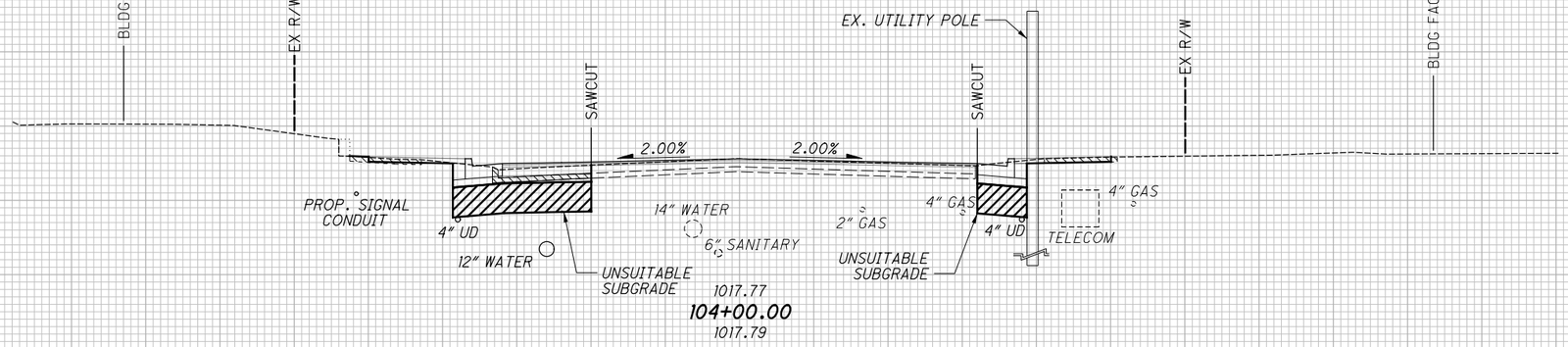
CROSS SECTIONS S.R. 241
STA. 101+50 TO 103+00

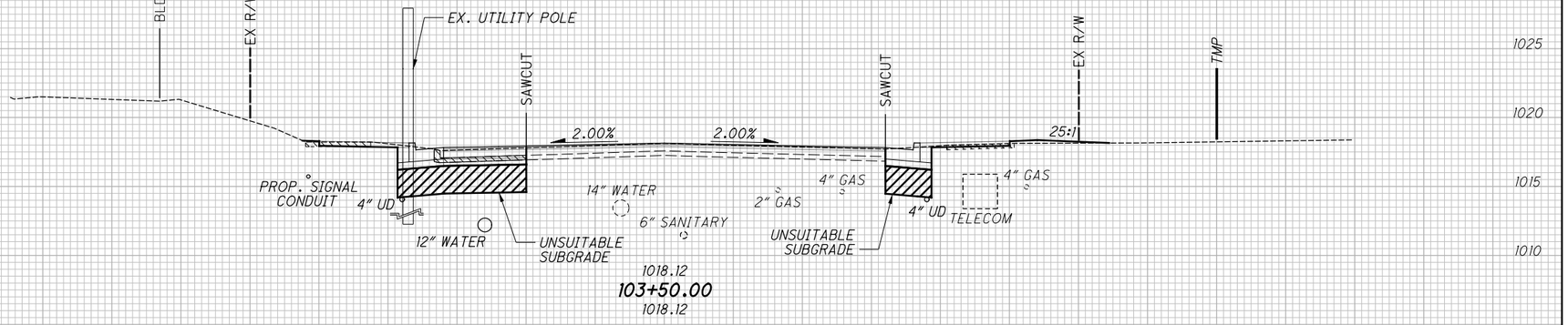
STA-241-9.71

P:\3000_3499\3062170090_STA-241-97L_Wales_Road\ODOT\10047L_STA-241-97L\Design\Roadway\Sheets\10047L_XS001.dgn 4/7/2021 7:41:40 AM khillegoss

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
26	103	7	3	16	4
11	86	10	1	19	3
5	ADDITIONAL SEEDING FROM +72 TO +86 DUE TO RETAINING WALL REMOVAL				1
20	117	10	2	19	4
57	311	27	6	54	12







ADDITIONAL EARTHWORK FROM +72 TO +86 DUE TO RETAINING WALL REMOVAL

60 50 40 30 20 10 0 10 20 30 40 50 60

CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 103+50 TO STA. 104+50

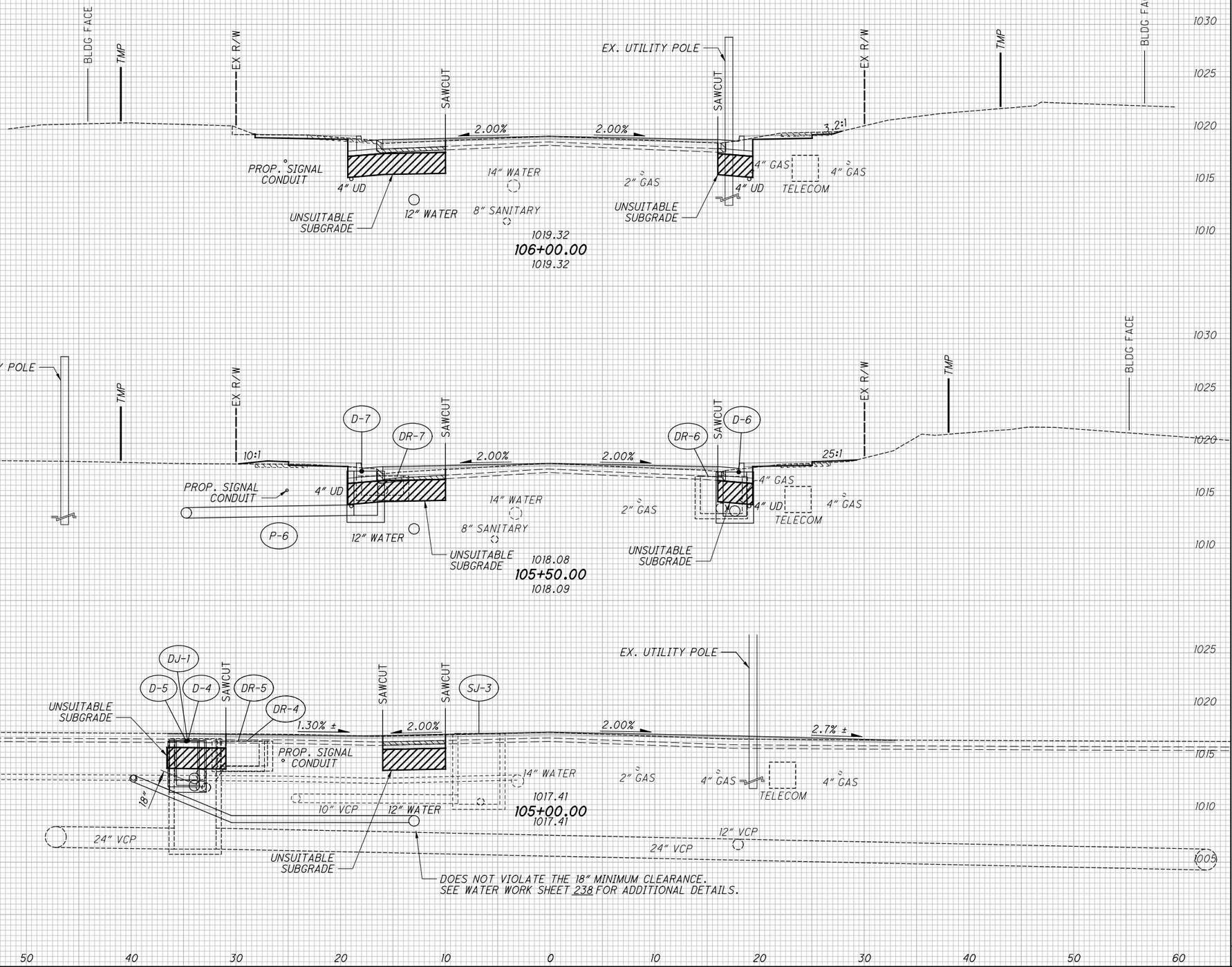
STA-241-9.71

110
395

P:\3000_3499\3062\T0090_STA-241-9.71_Wales_Road\ODOT\100471_STA-241-9.71\Design\Roadway\Sheets\100471_XS001.dgn 4/7/2021 7:41:42 AM khillegass

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
31	167	11	1	18	5
29	81	8	4	12	4
0	72	5	0	11	3
60	320	24	5	41	12



CALCULATED KRM
CHECKED RAK

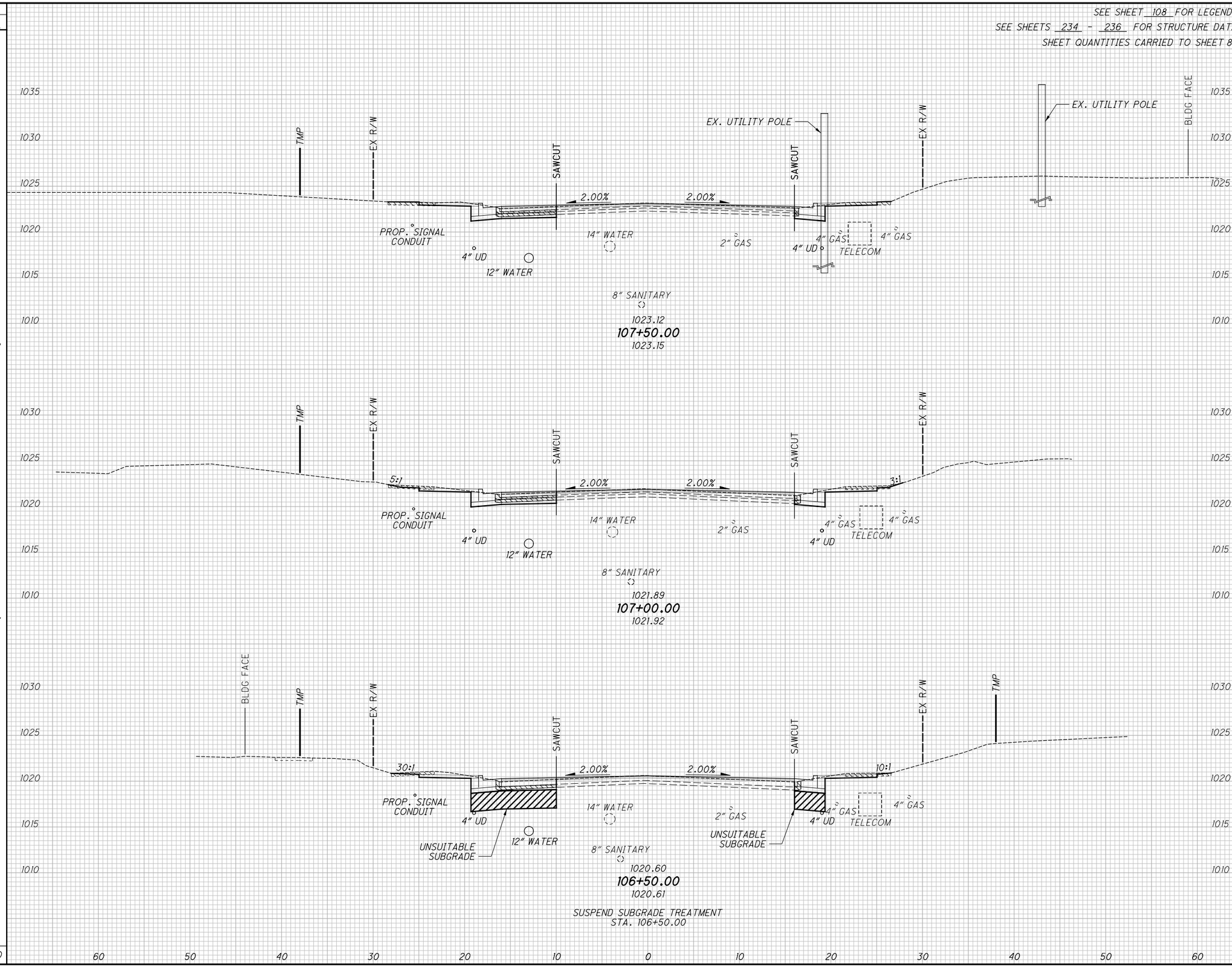
CROSS SECTIONS S.R. 241
STA. 105+00 TO STA. 106+00

STA-241-9.71

P:\3000_3499\3062170090_STA-241-9.71_Wales_Road\000T\10047L_STA-241-9.71\Design\Roadway\Sheets\10047L_XS001.dgn 4/7/2021 7:41:44 AM khillegass

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
18	122	12	2	23	3
26	147	13	1	24	2
27	161	13	1	22	2
71	430	38	4	69	7



CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 106+50 TO STA. 107+50

STA-241-9.71

P:\3000_3499\3062\T0090_STA-241-9.71_Wales_Road\ODOT\00471_STA-241-9.71\Design\Roadway\Sheets\00471_XS001.dgn 4/7/2021 7:41:46 AM khillegass

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.
22	119
21	0
0	58
0	50
43	227

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
9	4	19	6
11	3		
7	0	17	3
7	0	18	2
27	7	54	11

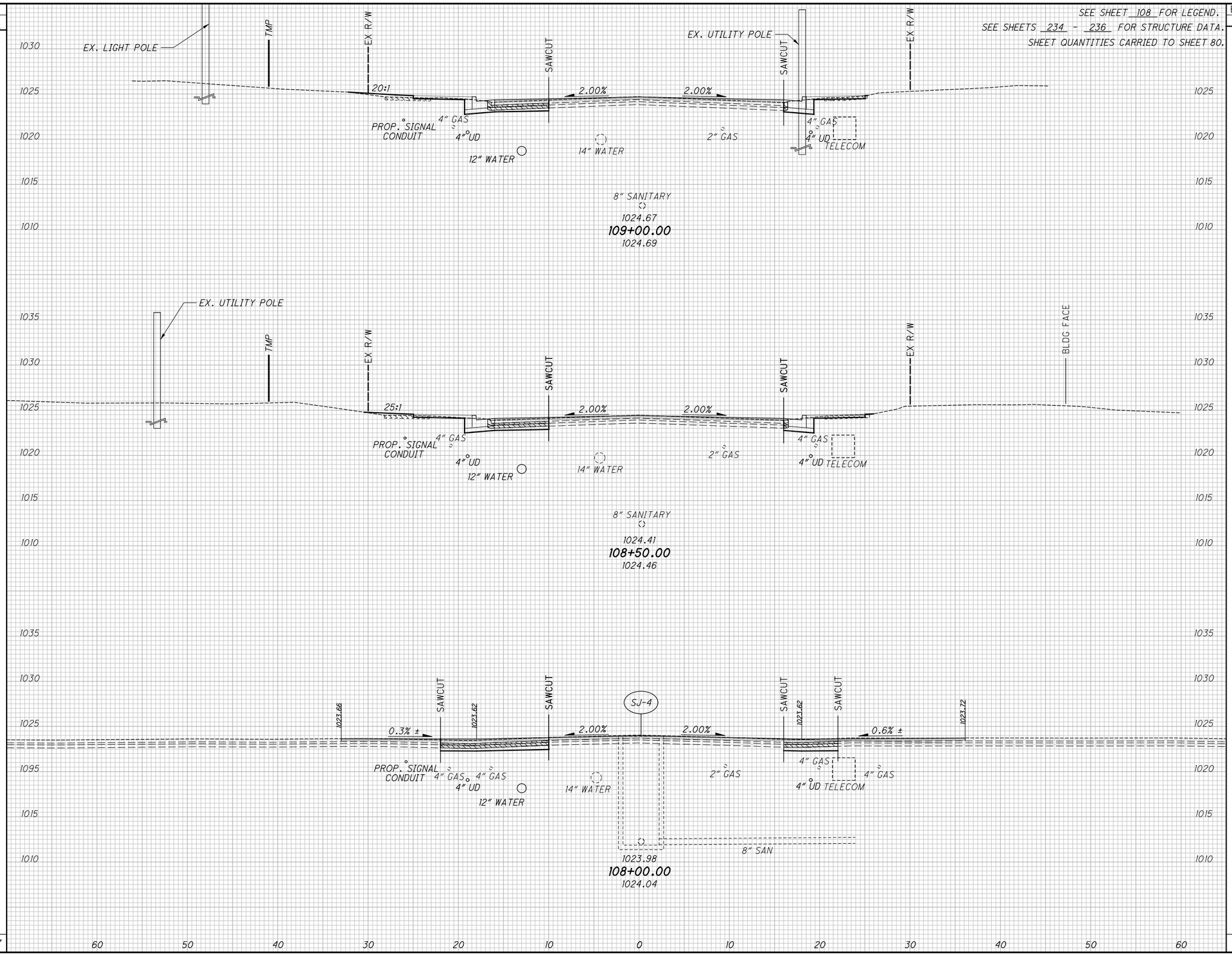
CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 108+00 TO STA. 109+00

STA-241-9.71

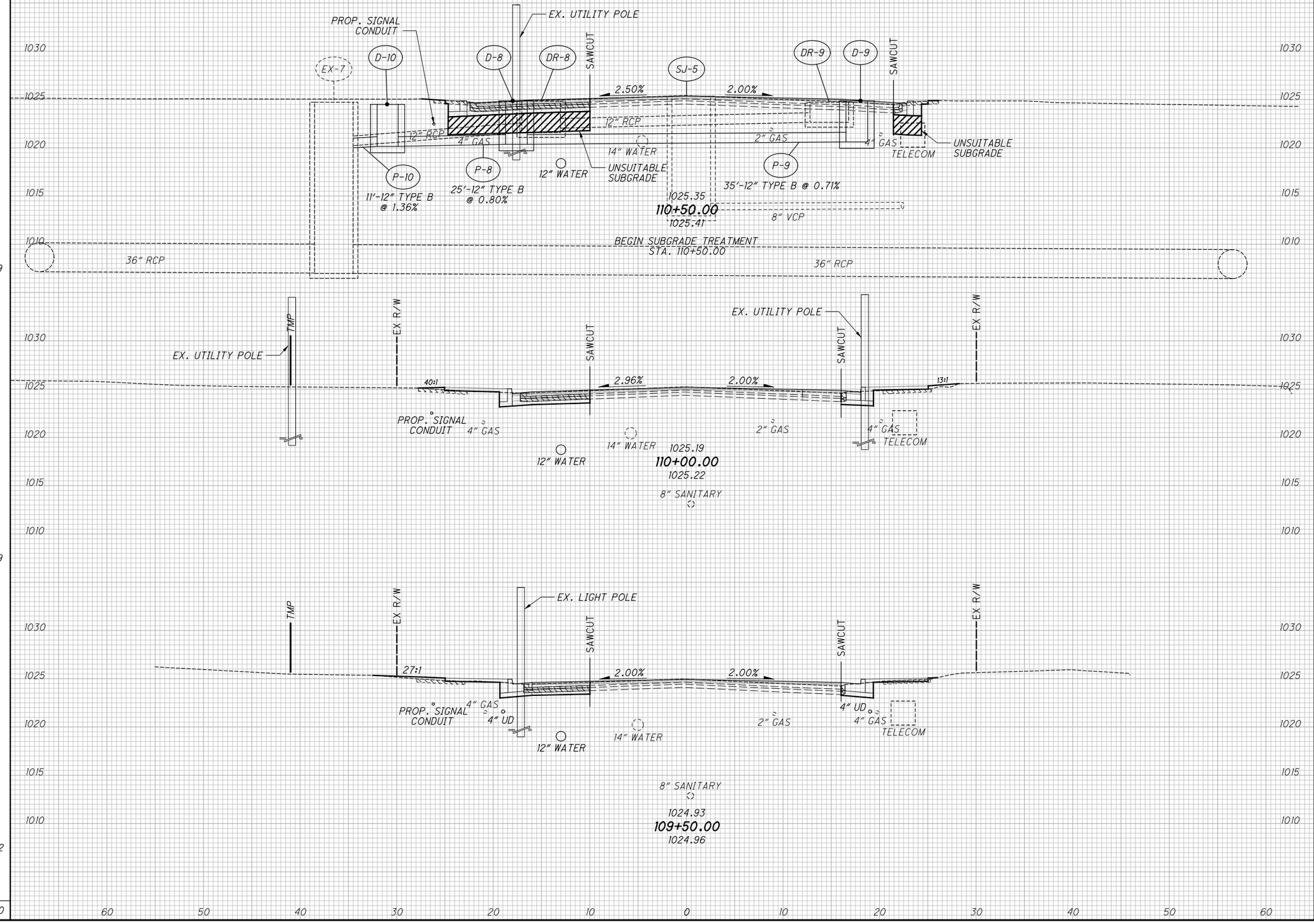
113
395

P:\3000_3499\3062170090_STA-241-97L_Wales_Road\ODOT\00471L_STA-241-97L\Design\Roadway\Sheets\00471L_XS001.dgn 4/7/2021 7:41:48 AM khillegass



SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.
4	69
21	119
22	122
47	310



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
10	1		
9	5		
9	4	18	6
28	10	17	8
		52	21
		17	7

CALCULATED KRM
CHECKED RAK

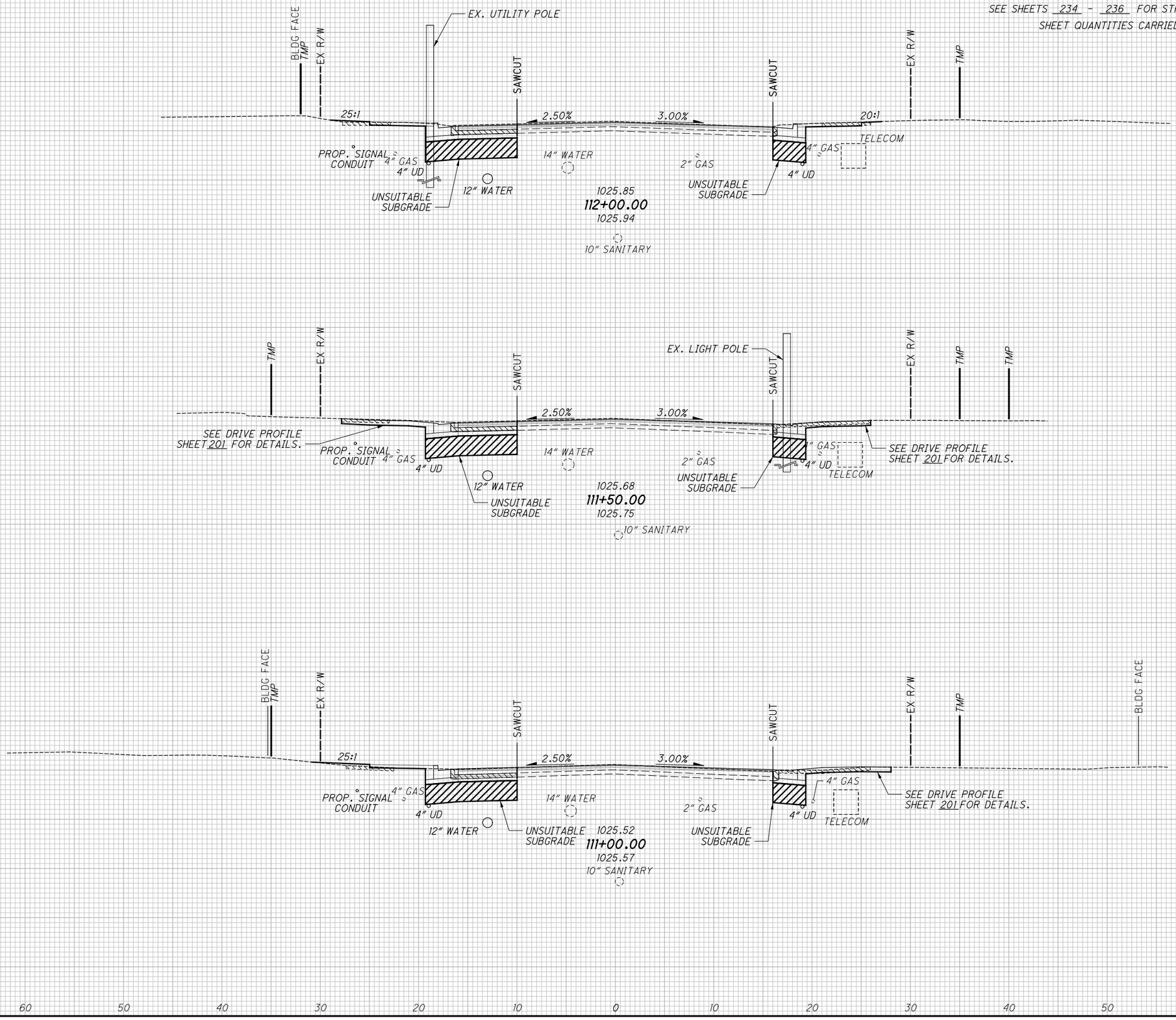
CROSS SECTIONS S.R. 241
STA. 109+50 TO STA. 110+50

STA-241-9.71

114
395

P:\3000_3499\3062170090_STA-241-9.71_Wales_Road\ODOT\00471L_STA-241-9.71\Design\Roadway\Sheets\00471L_XS001.dgn 4/7/2021 7:41:50 AM khillegoss

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.



SEEDING END WIDTH	SEEDING SQ. YDS.
17	106
21	106
17	58
55	270

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
13	2	25	2
14	0	23	3
11	3	19	4
38	5	67	9

CALCULATED KRM
CHECKED RAK

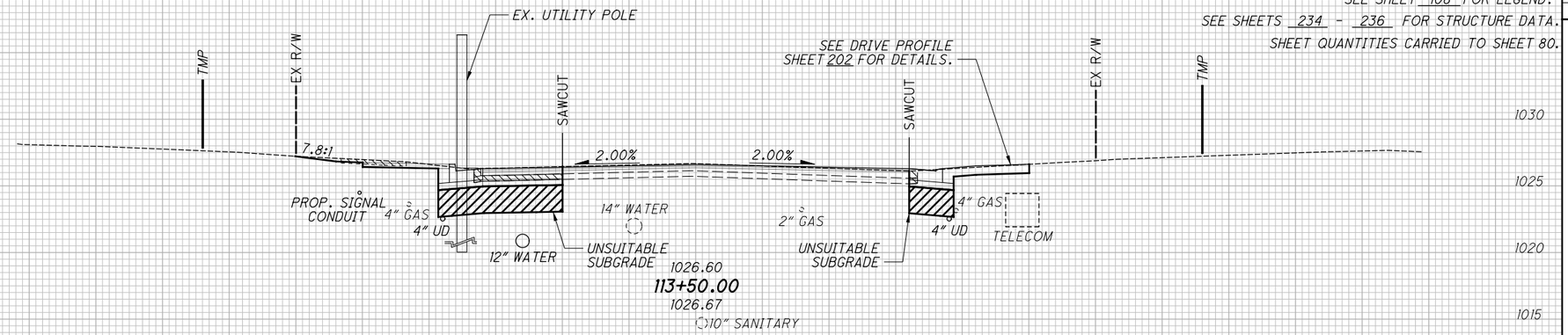
CROSS SECTIONS S.R. 241
STA. 111+00 TO STA. 112+00

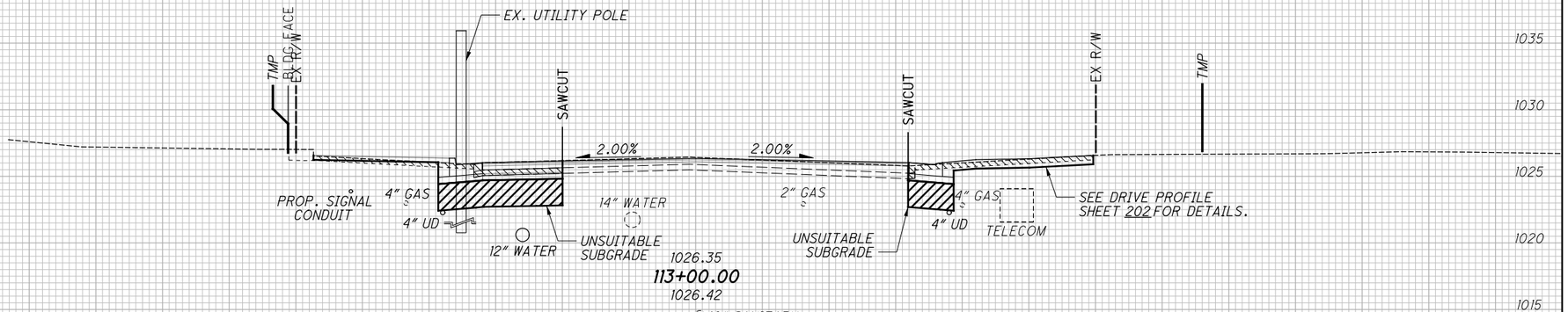
STA-241-9.71

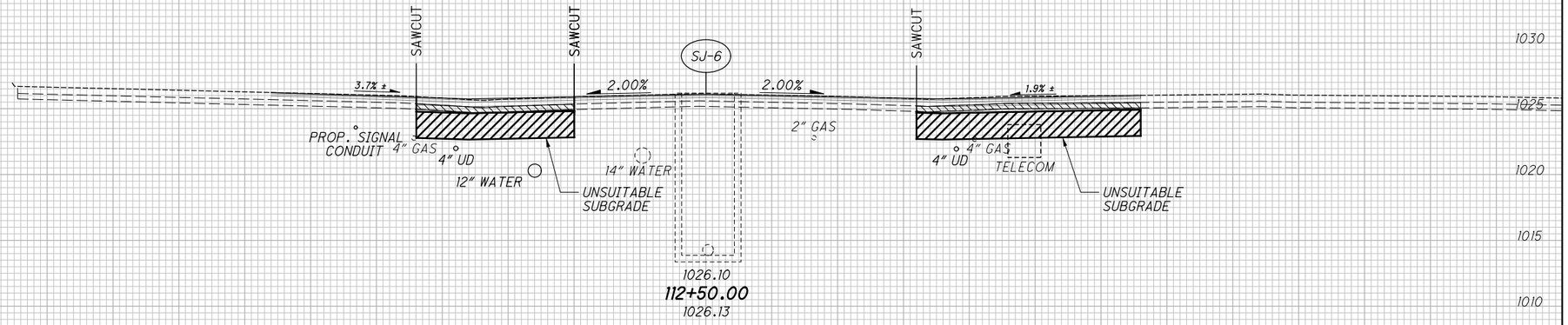
115
395

P:\3000_3499\30621\70090_STA-241-9.71_Wales_Road\ODOT\10047L_STA-241-9.71\Design\Roadway\Sheets\10047L_XS001.dgn 4/7/2021 7:41:51 AM khillegass

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.







SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
25	97	15	0	23	2
10	28	10	2	13	2
0	47	4	0	16	2
35	172	29	2	52	6

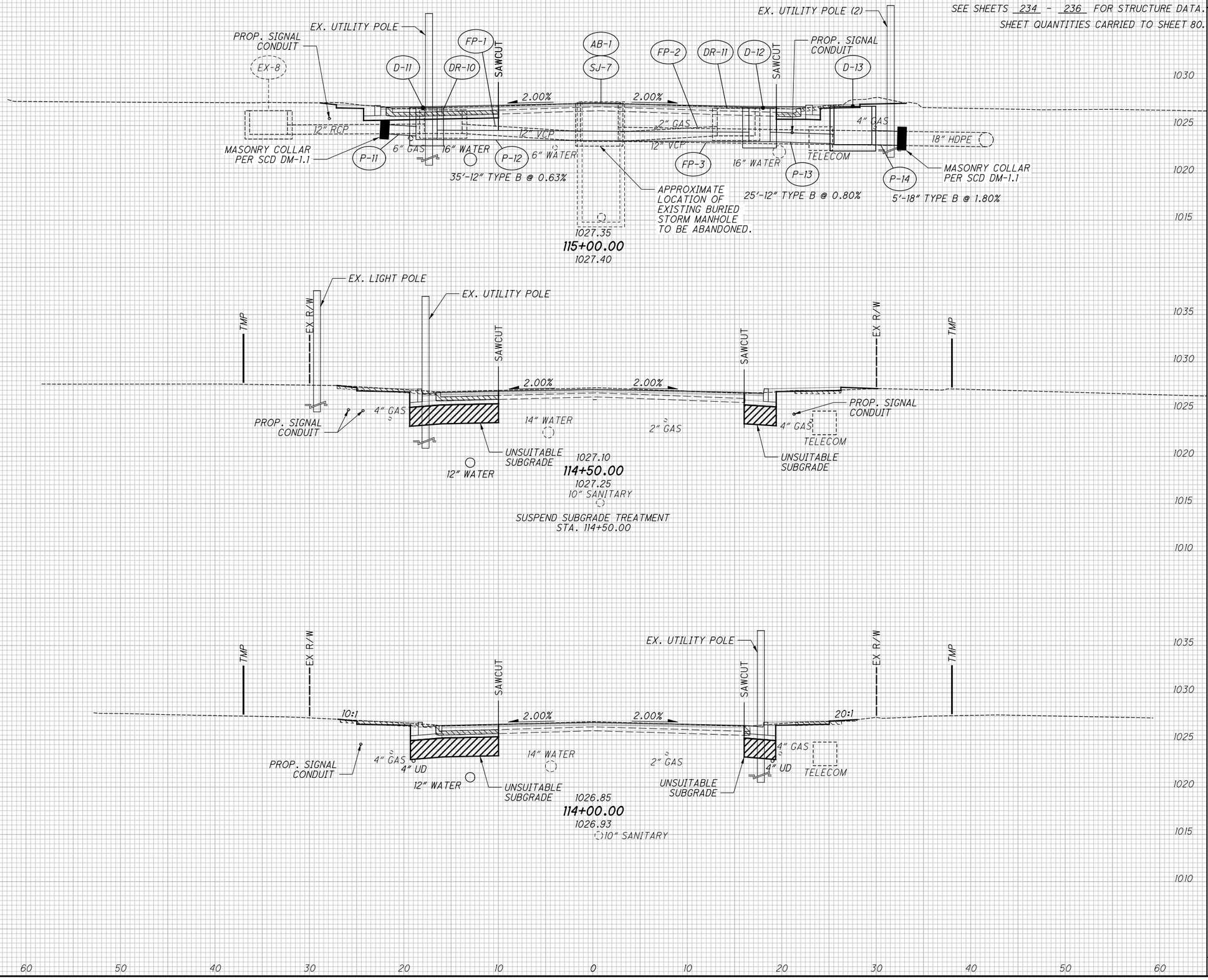
CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 112+50 TO STA. 113+50

STA-241-9.71

P:\3000_3499\3062\T0090_STA-241-9.71_Wales_Road\ODOT\100471_STA-241-9.71\Design\Roadway\Sheets\100471_XS001.dgn 4/7/2021 7:41:53 AM khillegass

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.



SEEDING END WIDTH	SEEDING SQ. YDS.
	7
	86
	24
	136
	25
	139
56	361

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
15	0		
		24	3
11	3		
		19	5
10	2		
		23	2
36	5	66	10

CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 114+00 TO STA. 115+00

STA-241-9.71

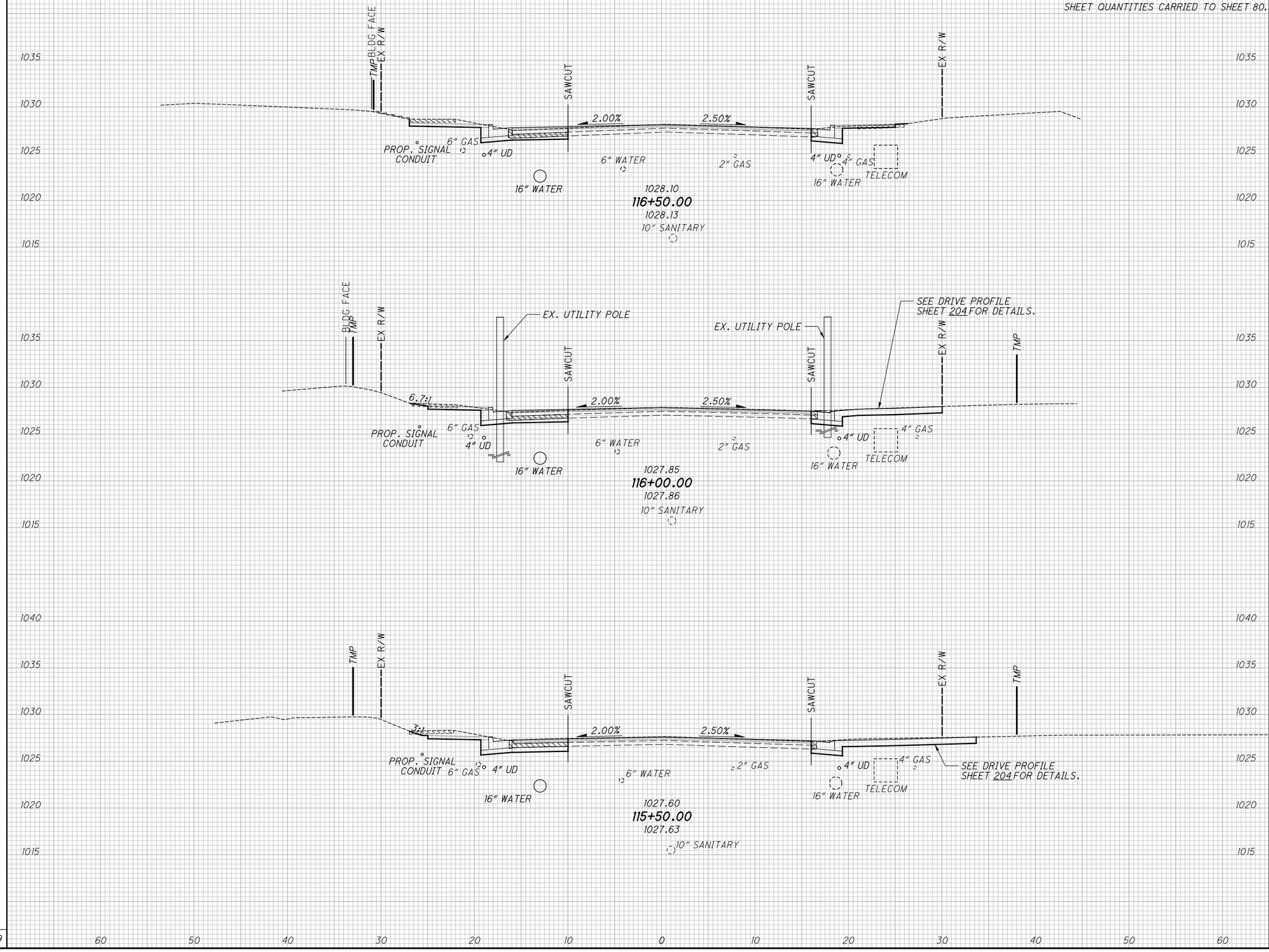
117
395

P:\3000_3499\30621\70090_STA-241-9.71_Wales_Road\ODOT\10047L_STA-241-9.71\Design\Roadway\Sheets\10047L_XS001.dgn 4/7/2021 7:41:55 AM khillegass

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SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
10	72	15	1	31	1
16	81	18	0	43	0
13	56	28	0	40	0
39	209	61	1	114	1



CALCULATED KRM
CHECKED RAK

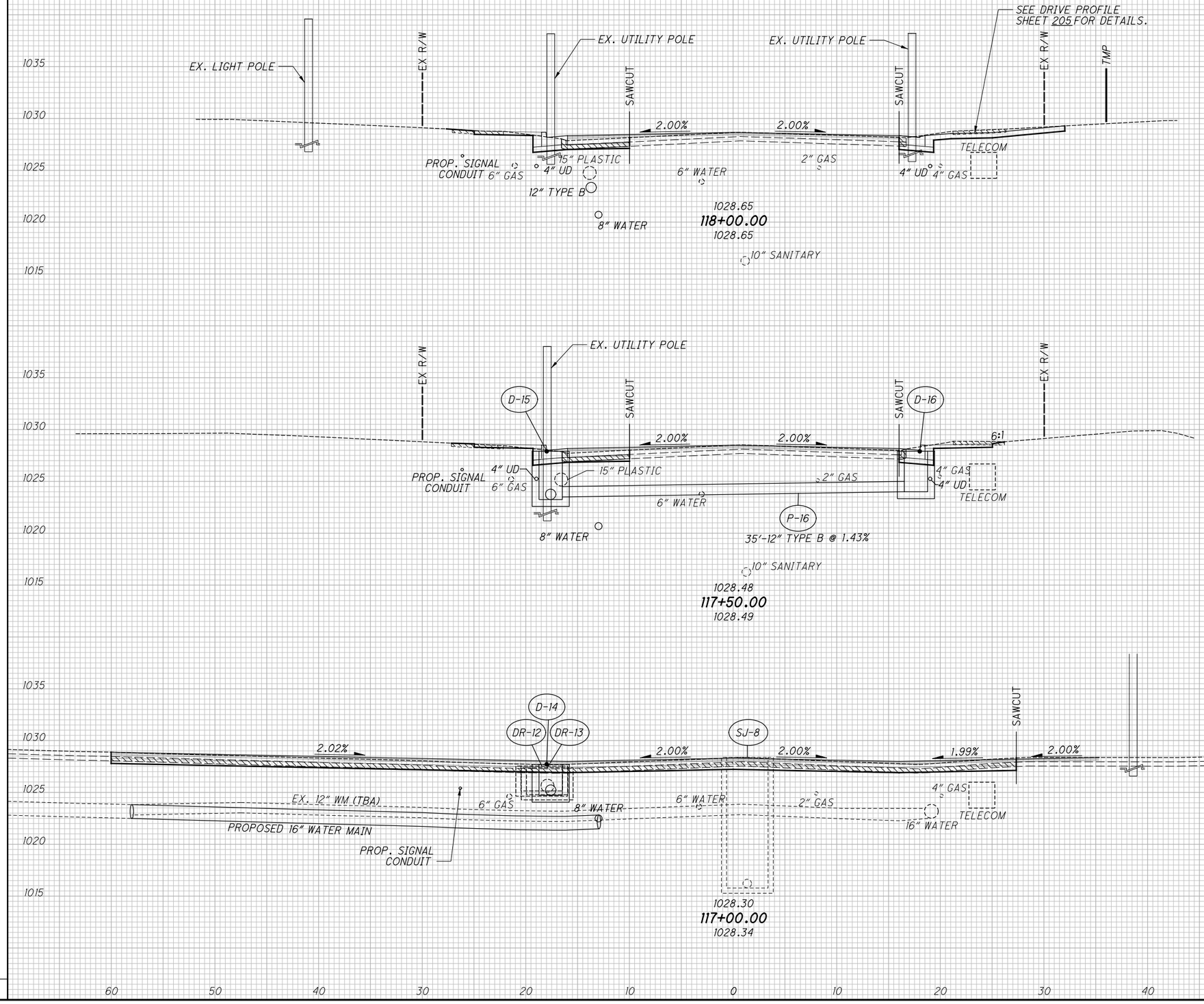
CROSS SECTIONS S.R. 241
STA. 115+50 TO STA. 116+50

STA-241-9.71

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.
9	56
11	31
0	28
20	115

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
14	1	23	2
11	1	19	2
10	1	23	2
35	3	65	6



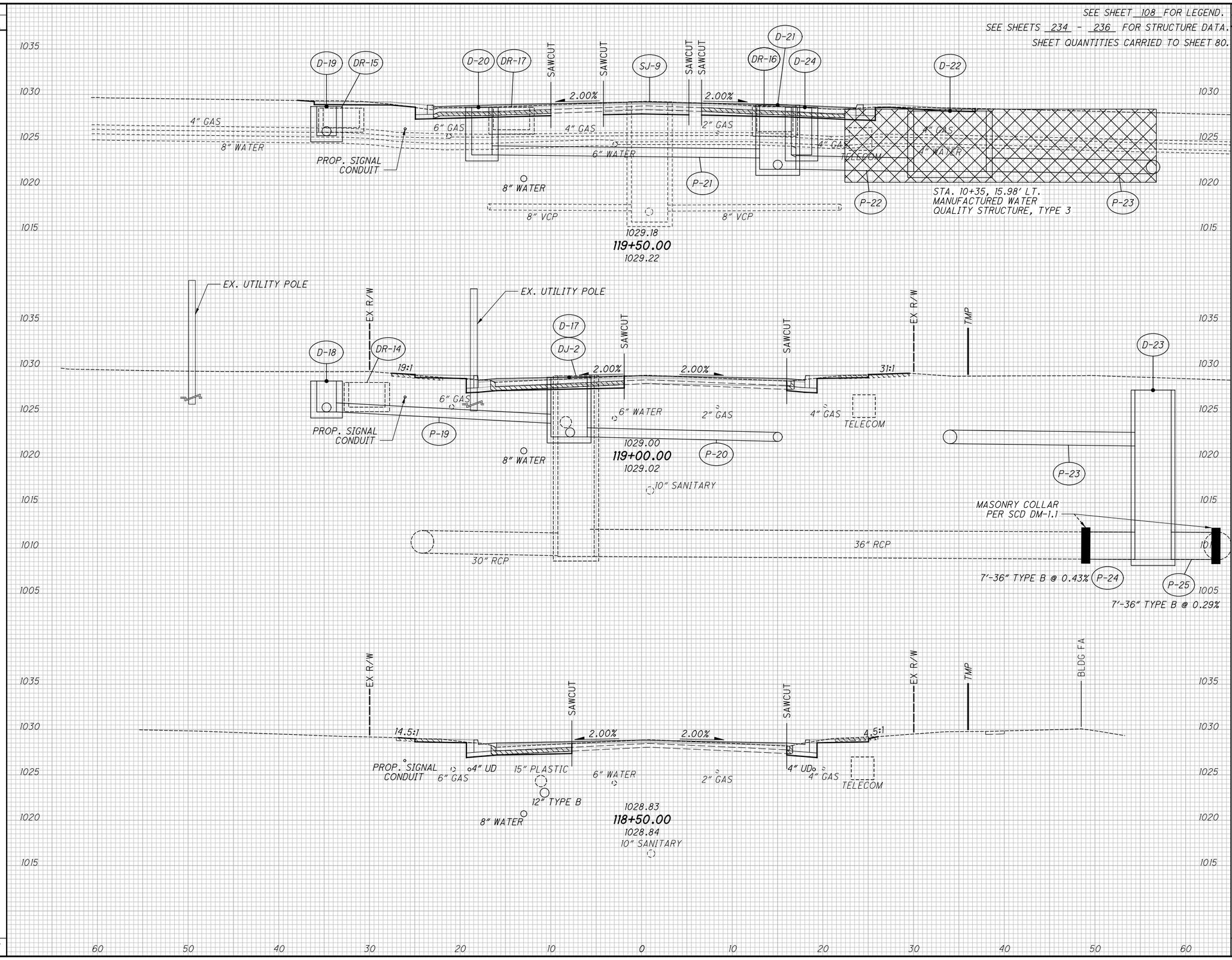
CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 117+00 TO STA. 118+00

STA-241-9.71

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SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.



SEEDING END WIDTH	SEEDING SQ. YDS.
2	50
16	72
10	53
28	175

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
23	0		
		31	3
10	3		
		19	4
11	1		
		23	2
44	4	73	9

CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 118+50 TO STA. 119+50

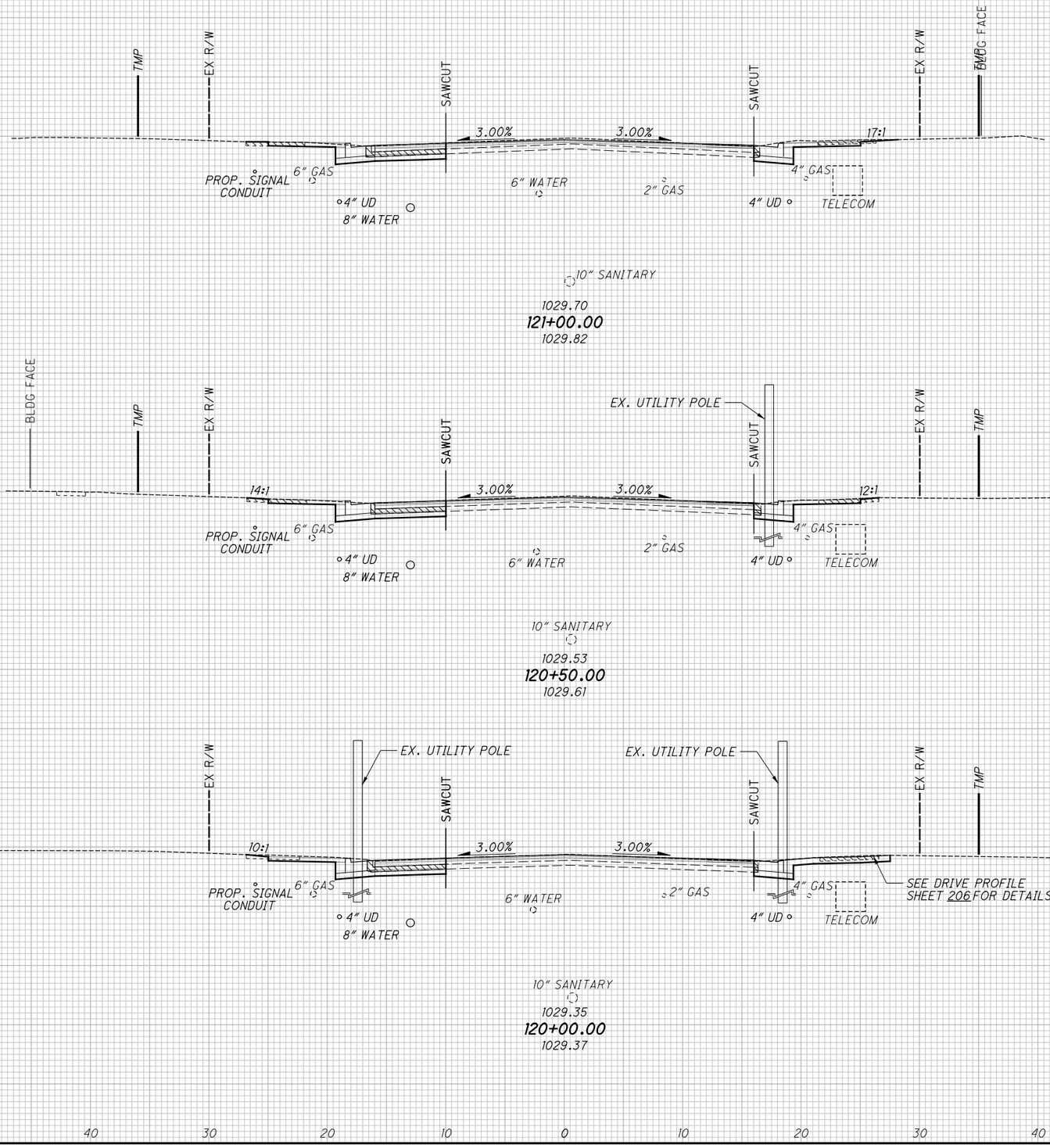
STA-241-9.71

120
395

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SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
21	117	14	1	24	2
21	94	12	1	24	2
13	42	14	1	34	1
55	253	40	3	82	5



CALCULATED KRM
CHECKED RAK

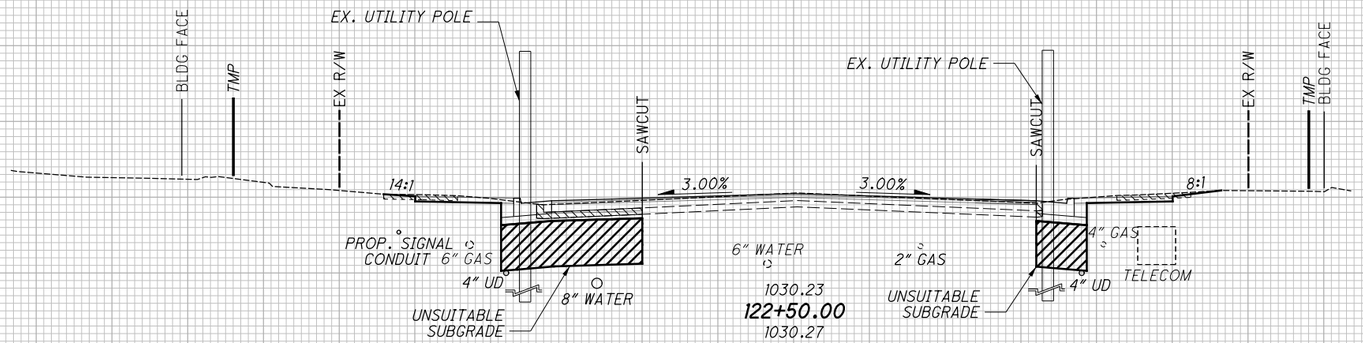
CROSS SECTIONS S.R. 241
STA. 120+00 TO STA. 121+00

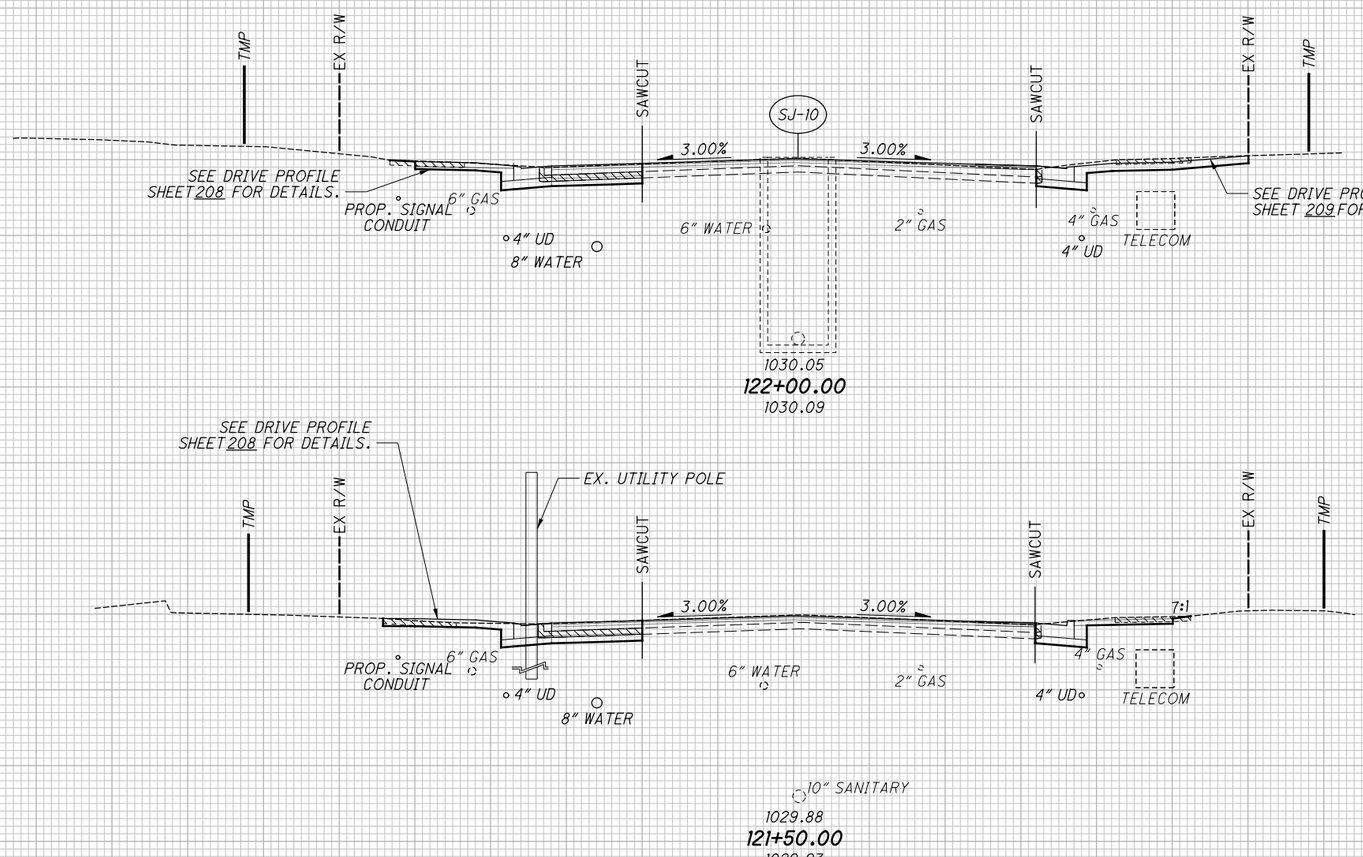
STA-241-9.71

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SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
21	97	10	1	26	2
14	92	18	1	29	1
19	111	13	0	25	1
54	300	41	2	80	4





CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 121+50 TO STA. 122+50

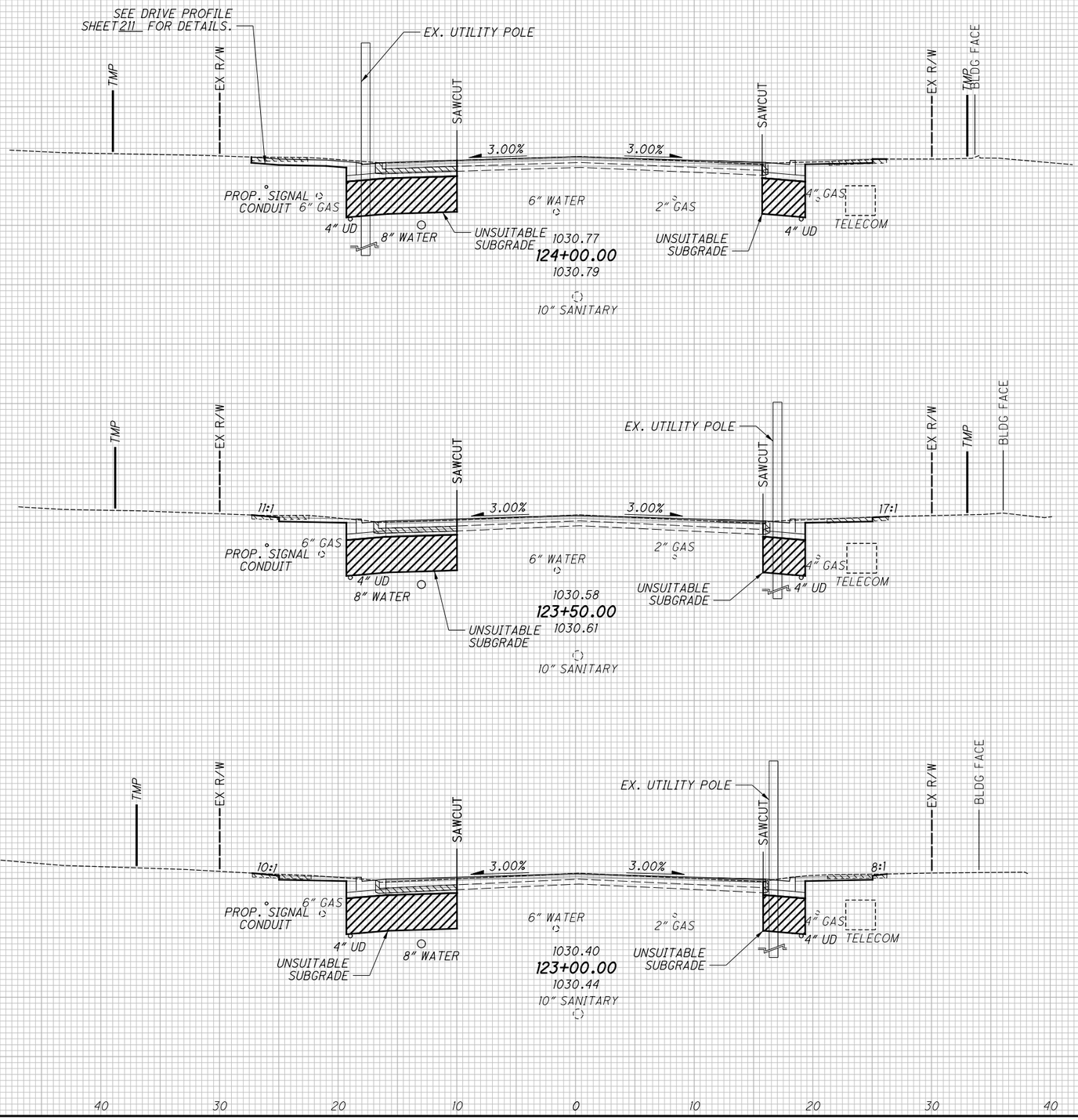
STA-241-9.71

122
395

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SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.
19	114
22	111
18	108
59	333



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
14	1		
12	1		
		24	2
12	1		
		22	2
		20	2
38	3	66	6

CALCULATED KRM
CHECKED RAK

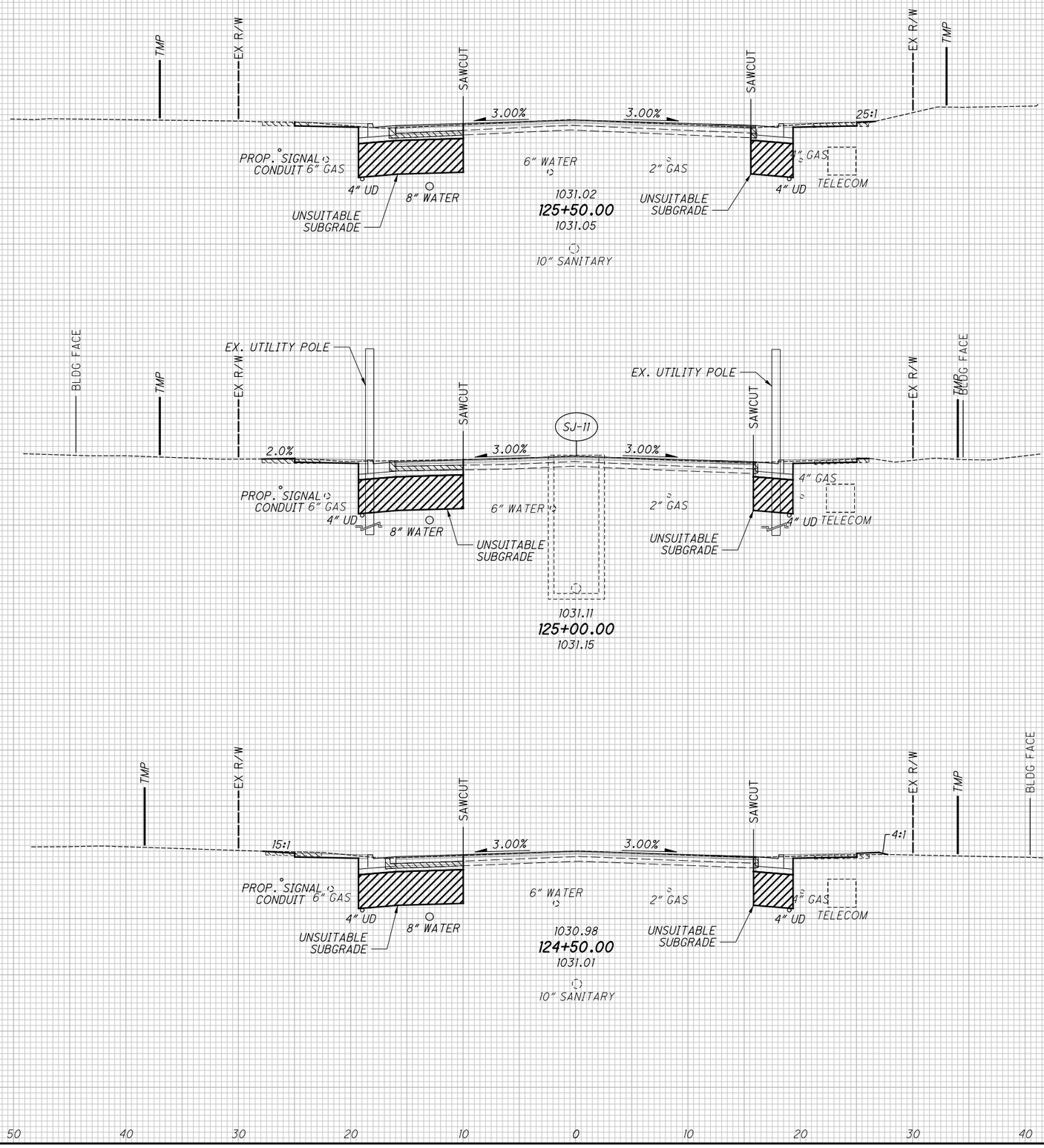
CROSS SECTIONS S.R. 241
STA. 123+00 TO STA. 124+00

STA-241-9.71

123
395

P:\3000_3499\3062170090_STA-241-97L_Wales_Road\ODOT\100471_STA-241-97N\Design\Roadway\Sheets\100471L_XS001.dgn 4/7/2021 7:42:07 AM khillegoss

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.



SEEDING	
END WIDTH	SQ. YDS.
18	108
21	
23	122
	117
62	347

END AREA	
CUT	FILL
11	2
11	2
12	2
34	6

VOLUME	
CUT	FILL
20	4
21	4
24	3
65	11

CALCULATED KRM
CHECKED RAK

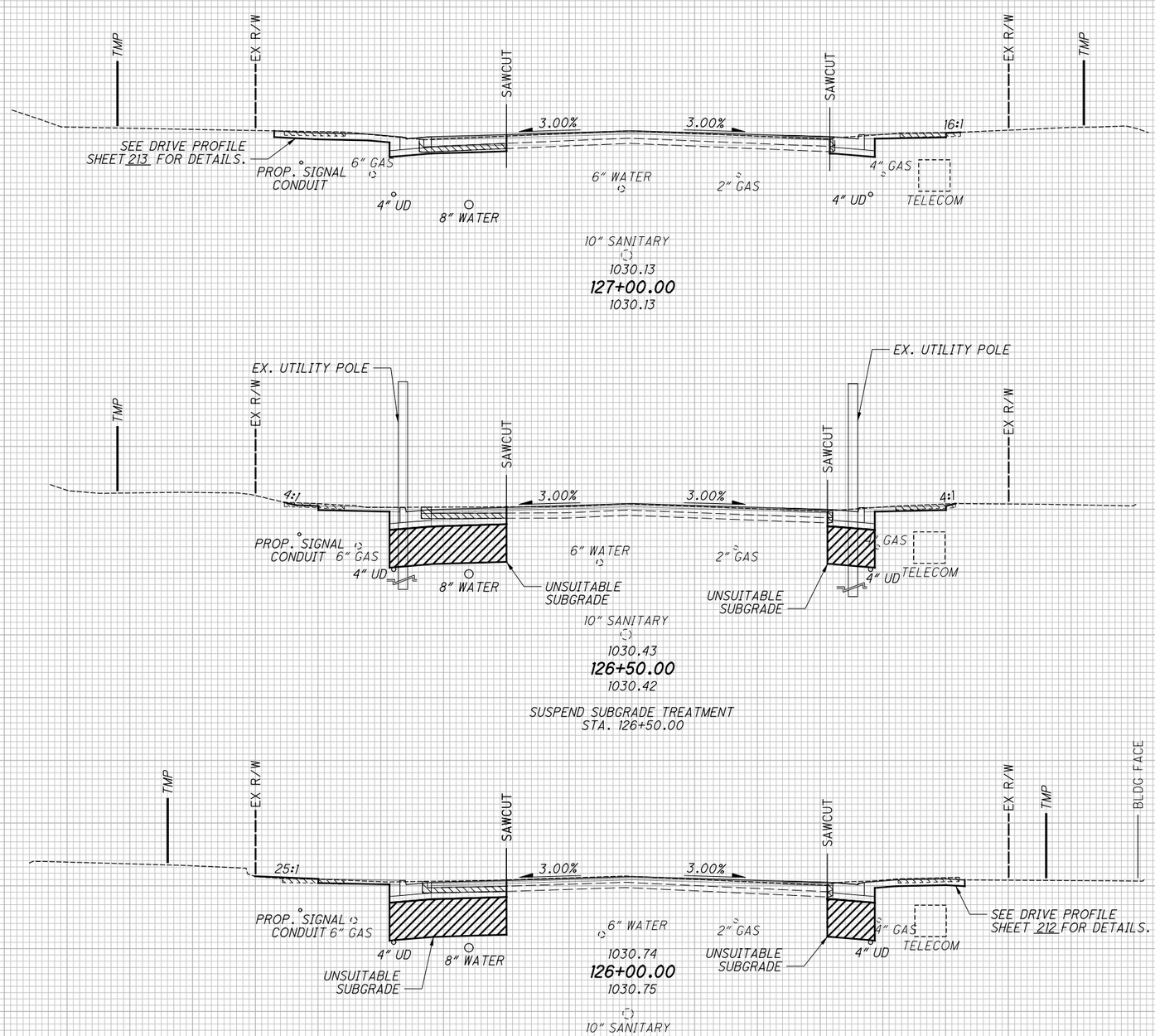
CROSS SECTIONS S.R. 241
STA. 124+50 TO STA. 125+50

STA-241-9.71

P:\3000_3499\30621\70090_STA-241-9.71_Wales_Road\ODOT\10047L_STA-241-9.71\Design\Roadway\Sheets\10047L_XS001.dgn 4/7/2021 7:42:09 AM khillegass

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.
23	125
22	114
19	103
64	342



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
14	0	26	1
14	1	28	2
16	1	25	3
44	2	79	6

CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 126+00 TO STA. 127+00

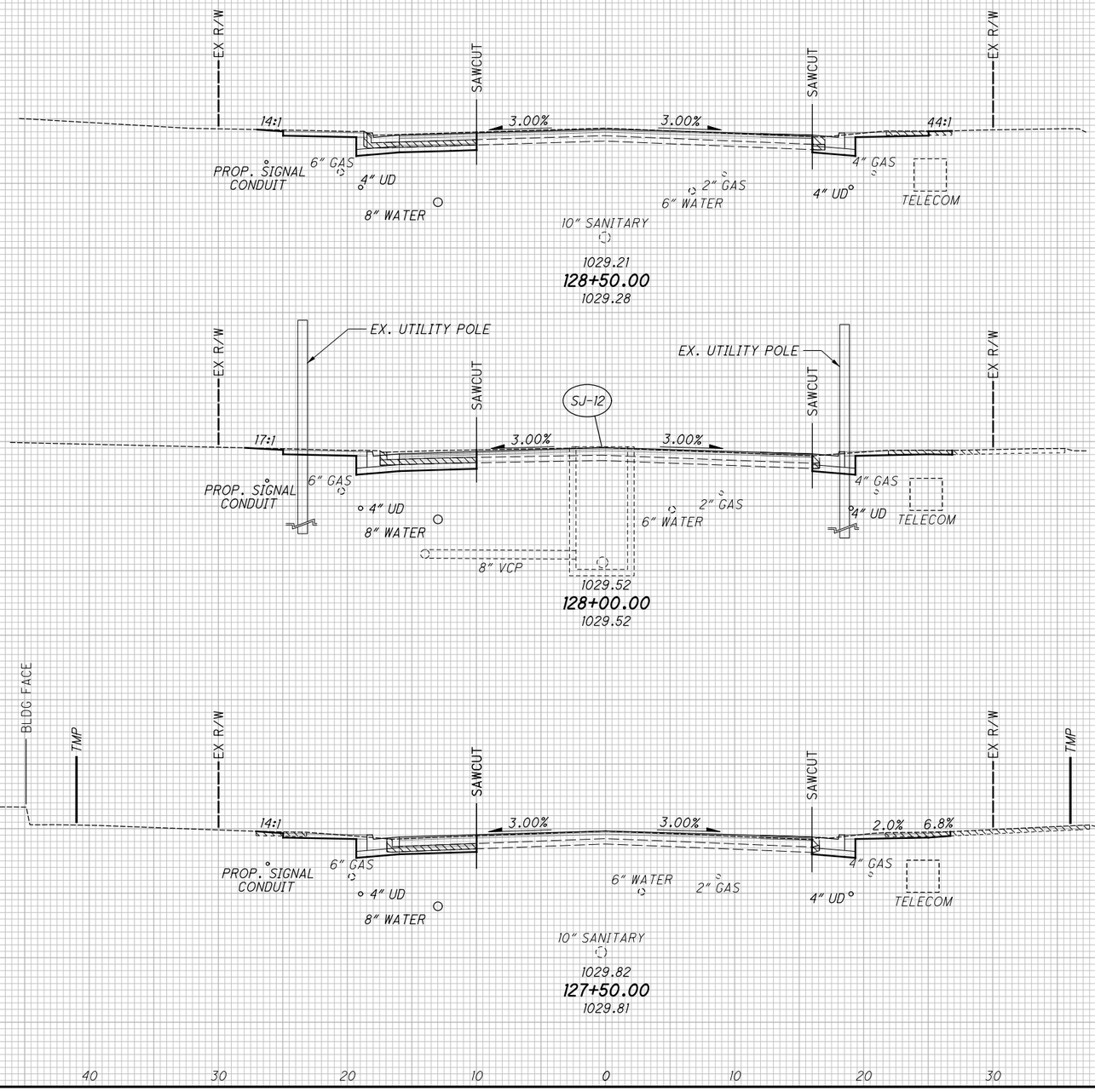
STA-241-9.71

125
395

P:\3000_3499\3062170090_STA-241-9.71_Wales-Road\ODOT\100471L_STA-241-9.71\Design\Roadway\Sheets\100471L_XS001.dgn 4/7/2021 7:42:10 AM khillegoss

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING	
END WIDTH	SQ. YDS.
10	50
8	92
25	133
43	275



END AREA	
CUT	FILL
12	1
13	0
12	1
37	2

VOLUME	
CUT	FILL
23	1
23	1
24	1
70	3

CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 127+50 TO STA. 128+50

STA-241-9.71

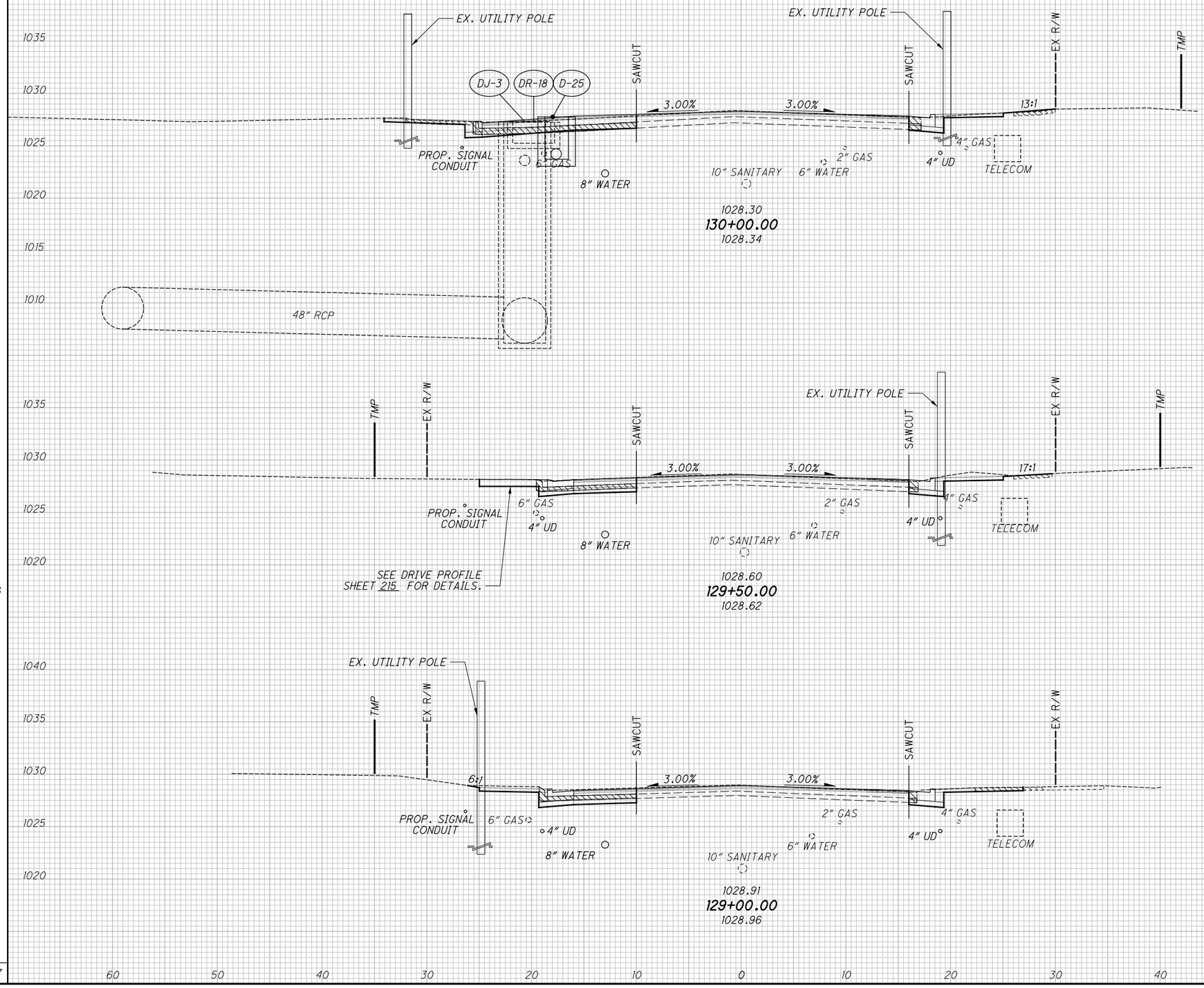
126
395

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SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.
17	117
25	106
13	64
55	287

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
7	3	19	4
14	1	24	1
12	0	22	1
33	4	65	6



CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 129+00 TO STA. 130+00

STA-241-9.71

127
395

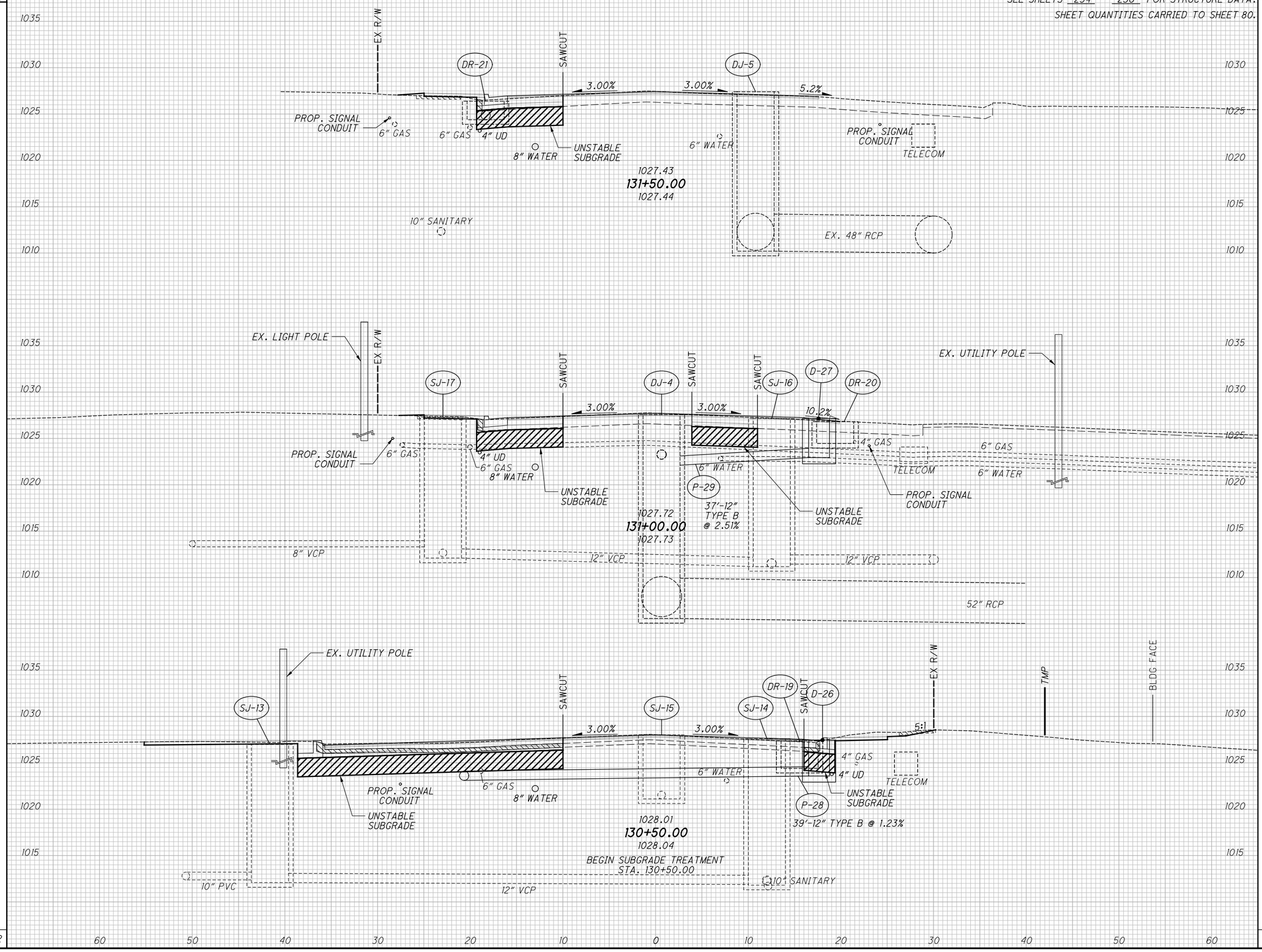
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SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.
5	47
12	81
17	94
34	222

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
10	3	28	4
20	1	39	1
22	0	27	3
52	4	94	8

CALCULATED KRM
CHECKED RAK



CROSS SECTIONS S.R. 241
STA. 130+50 TO STA. 131+50

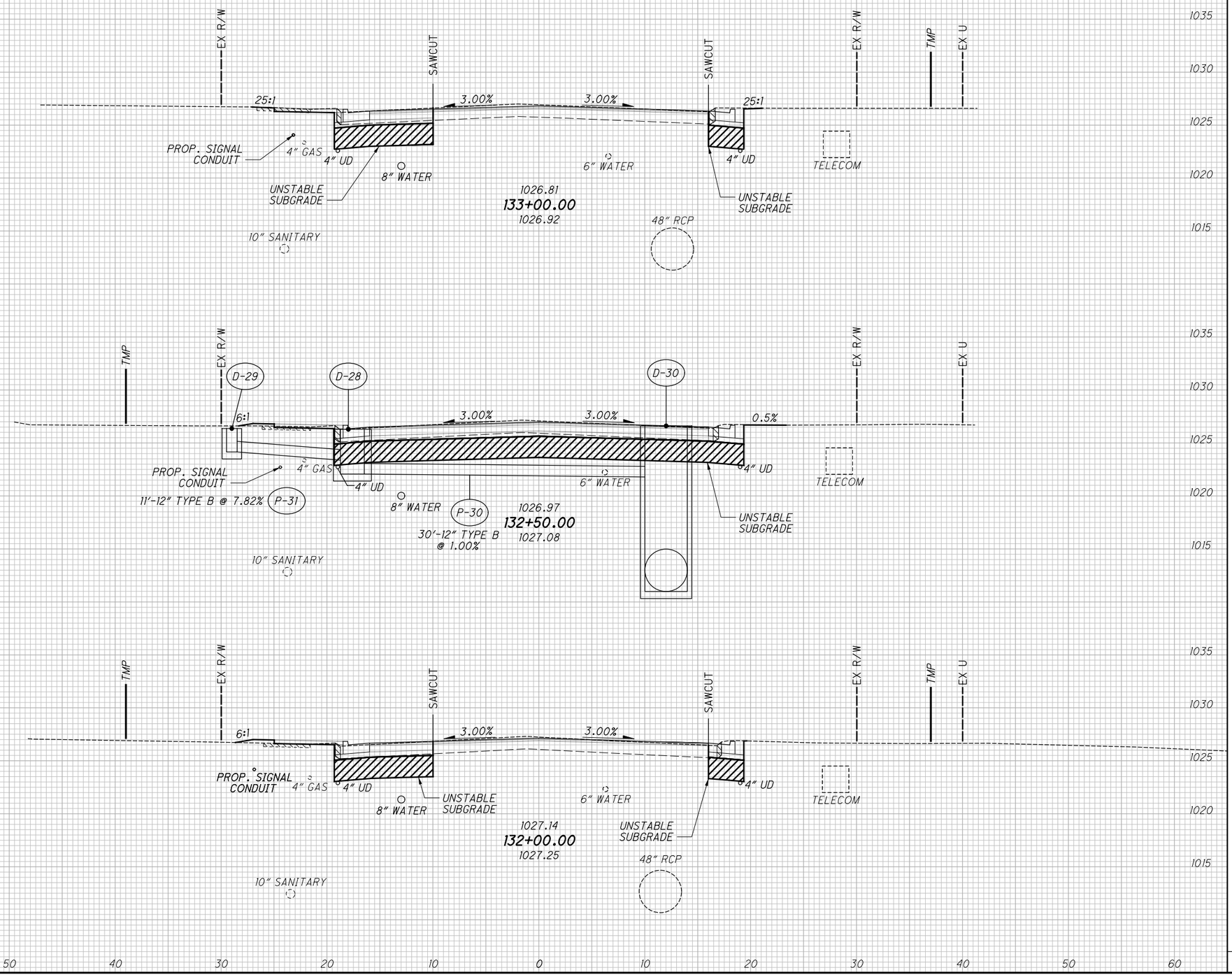
STA-241-9.71

128
395

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SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.
23	133
25	158
32	103
80	394



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
18	1	66	3
53	2	64	4
16	2	24	5
87	5	154	12

CALCULATED KRM
CHECKED RAK

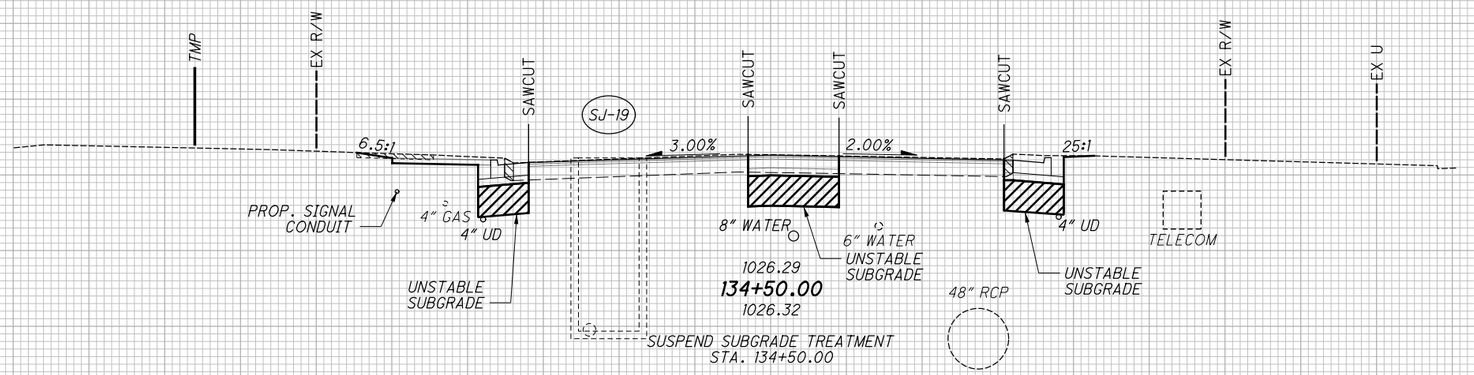
CROSS SECTIONS S.R. 241
STA. 132+00 TO STA. 133+00

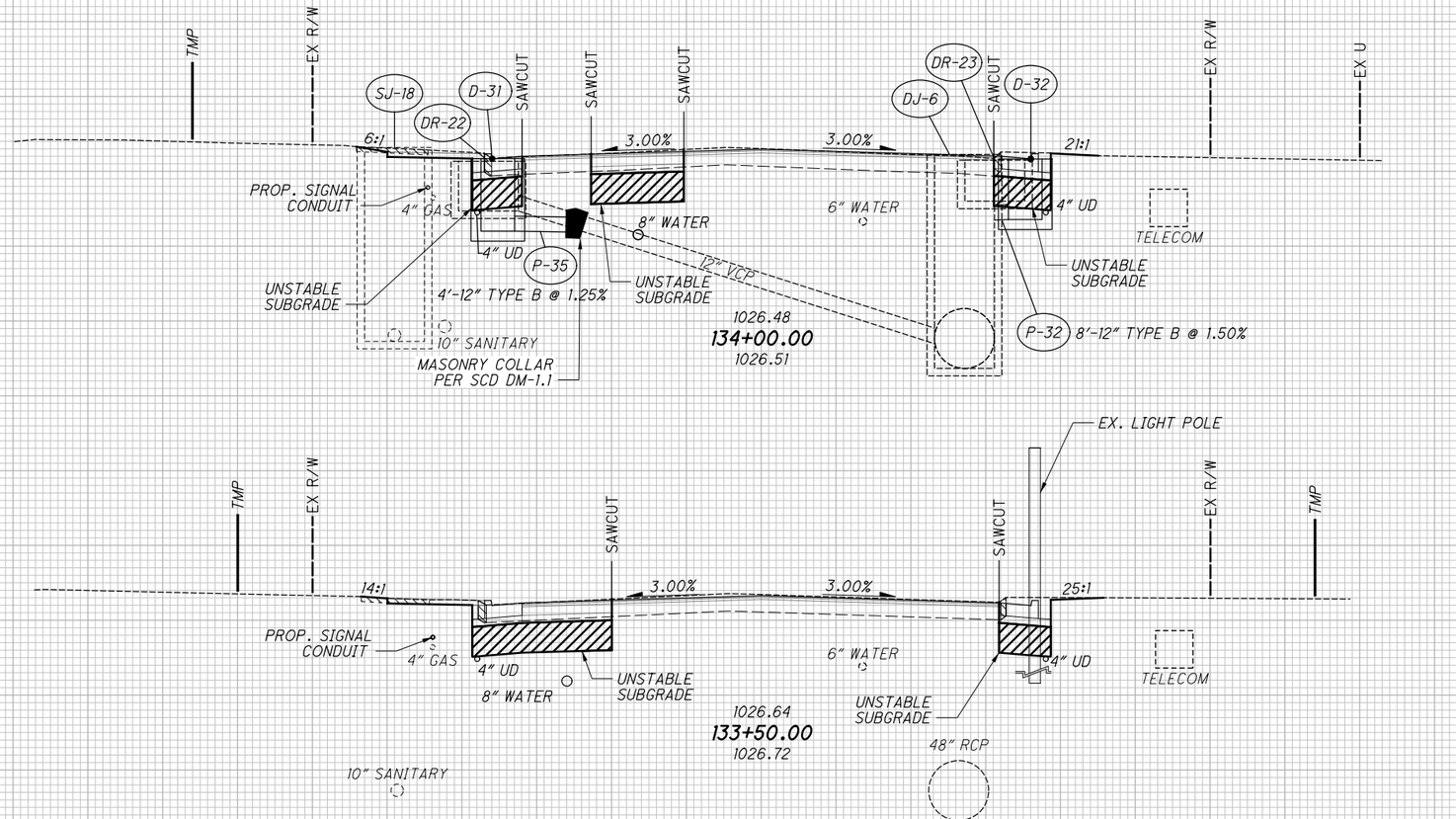
STA-241-9.71

129
395

P:\3000_3499\3062170090_STA-241-9.71_Wales-Road\ODOT\100471L_STA-241-9.71\Design\Roadway\Sheets\100471L_XS001.dgn 4/7/2021 7:42:18 AM khillegass

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
23	128	22	0	40	0
23	139	21	0	36	1
27	139	18	1	33	2
73	406	61	1	109	3





60 50 40 30 20 10 0 10 20 30 40 50 60

CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 133+50 TO STA. 134+50

STA-241-9.71

130
395

P:\3000_3499\3062\70090_STA-241-9.71_Wales-Road\ODOT\00471L_STA-241-9.71\Design\Roadway\Sheets\00471L_XS001.dgn 4/7/2021 7:42:20 AM khillegass

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.
18	108
21	122
23	128
62	358

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
18	0	28	1
12	1	25	2
15	1	34	1
45	2	87	4

CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 135+00 TO STA. 136+00

STA-241-9.71

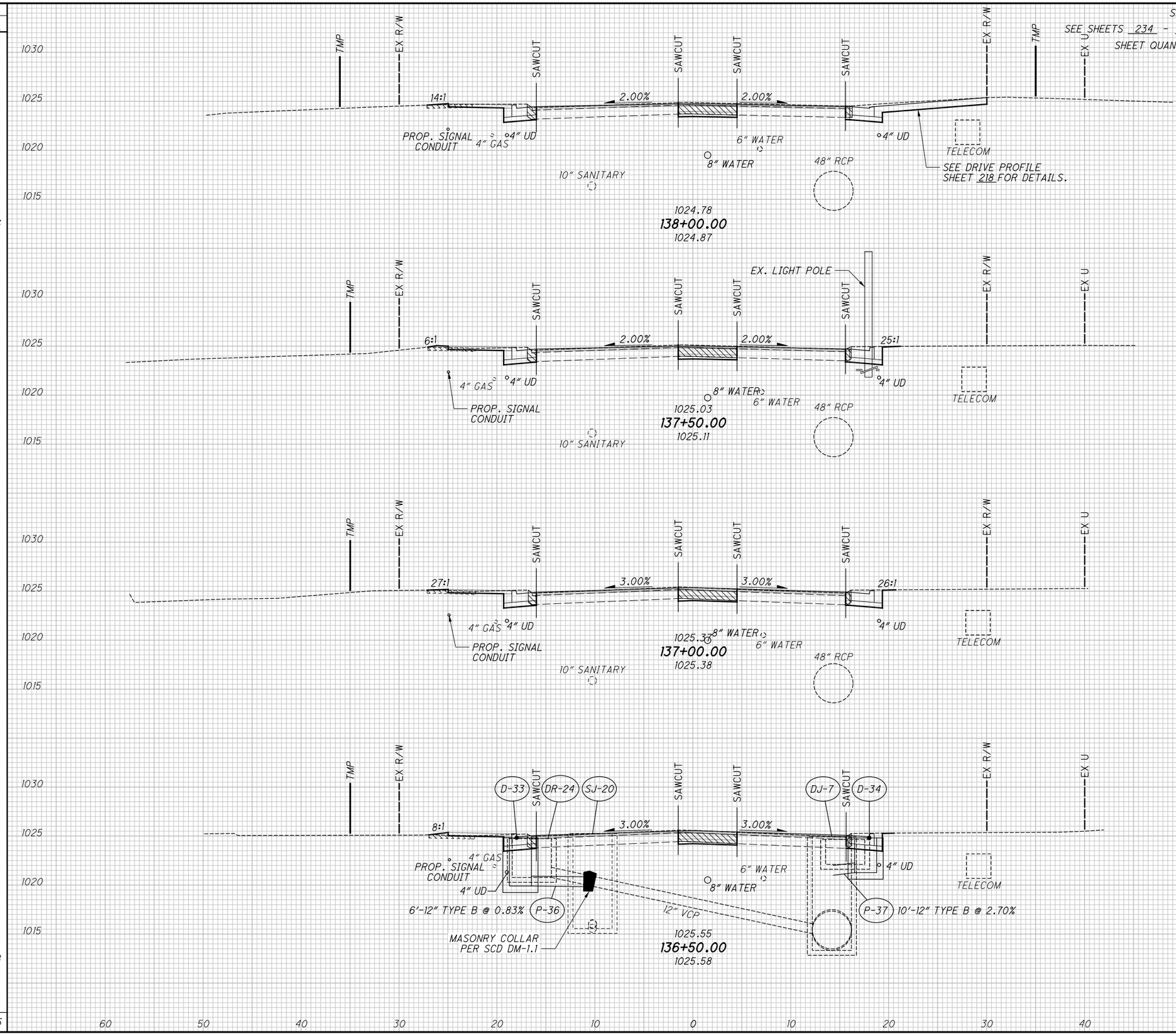
131
395

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SEEDING END WIDTH	SEEDING SQ. YDS.
16	103
21	117
21	108
79	445

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
20	1	28	3
10	2	20	3
12	1	21	3
11	2	27	2
53	6	96	11

CALCULATED KRM
CHECKED RAK

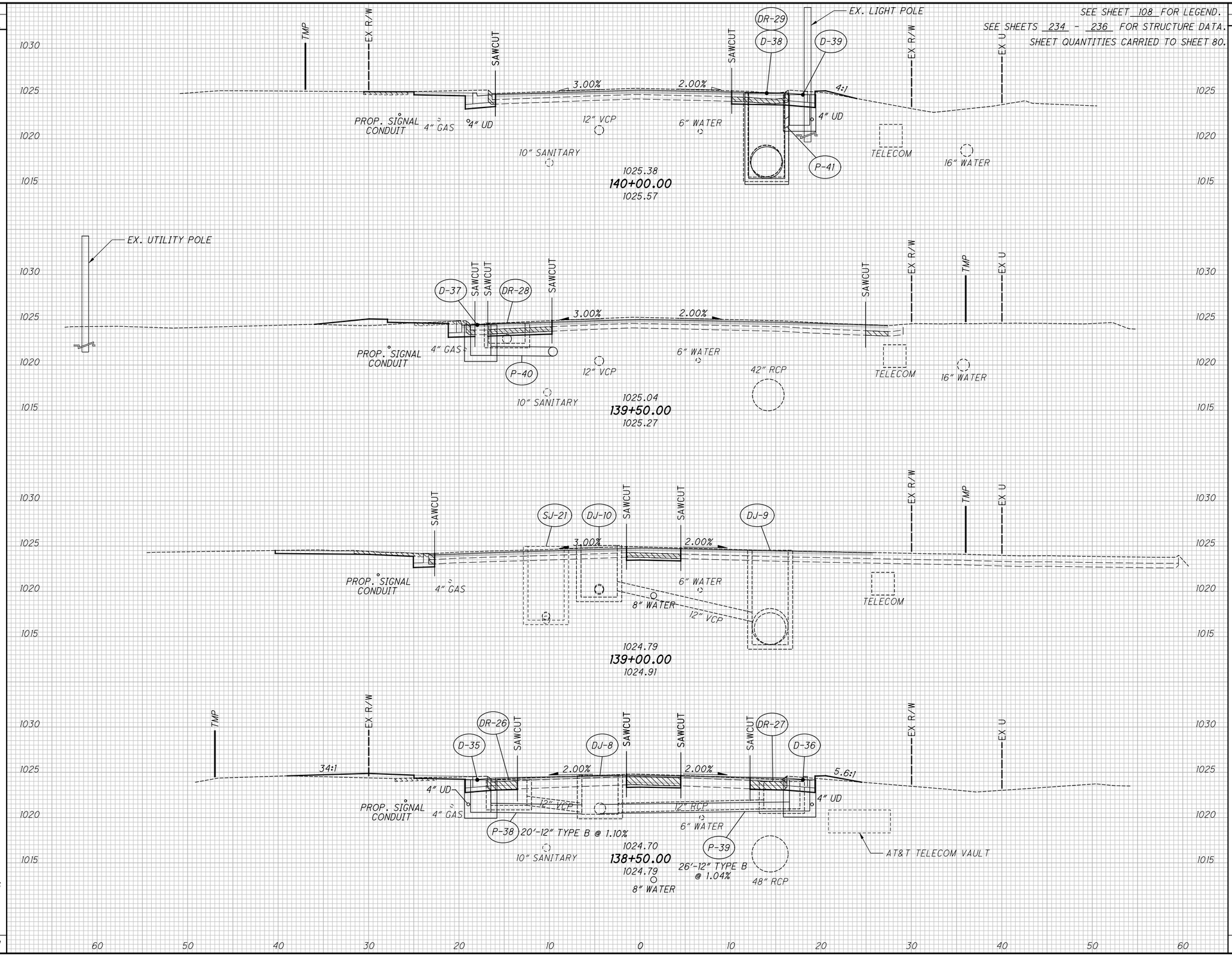


CROSS SECTIONS S.R. 241
STA. 136+50 TO STA. 138+00

STA-241-9.71

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SEEDING	
END WIDTH	SQ. YDS.
23	111
17	75
10	119
33	136
83	441



END AREA		VOLUME	
CUT	FILL	CUT	FILL
13	2		
5	5	17	6
7	0	11	5
11	7	17	6
36	14	74	24

CALCULATED KRM
CHECKED RAK

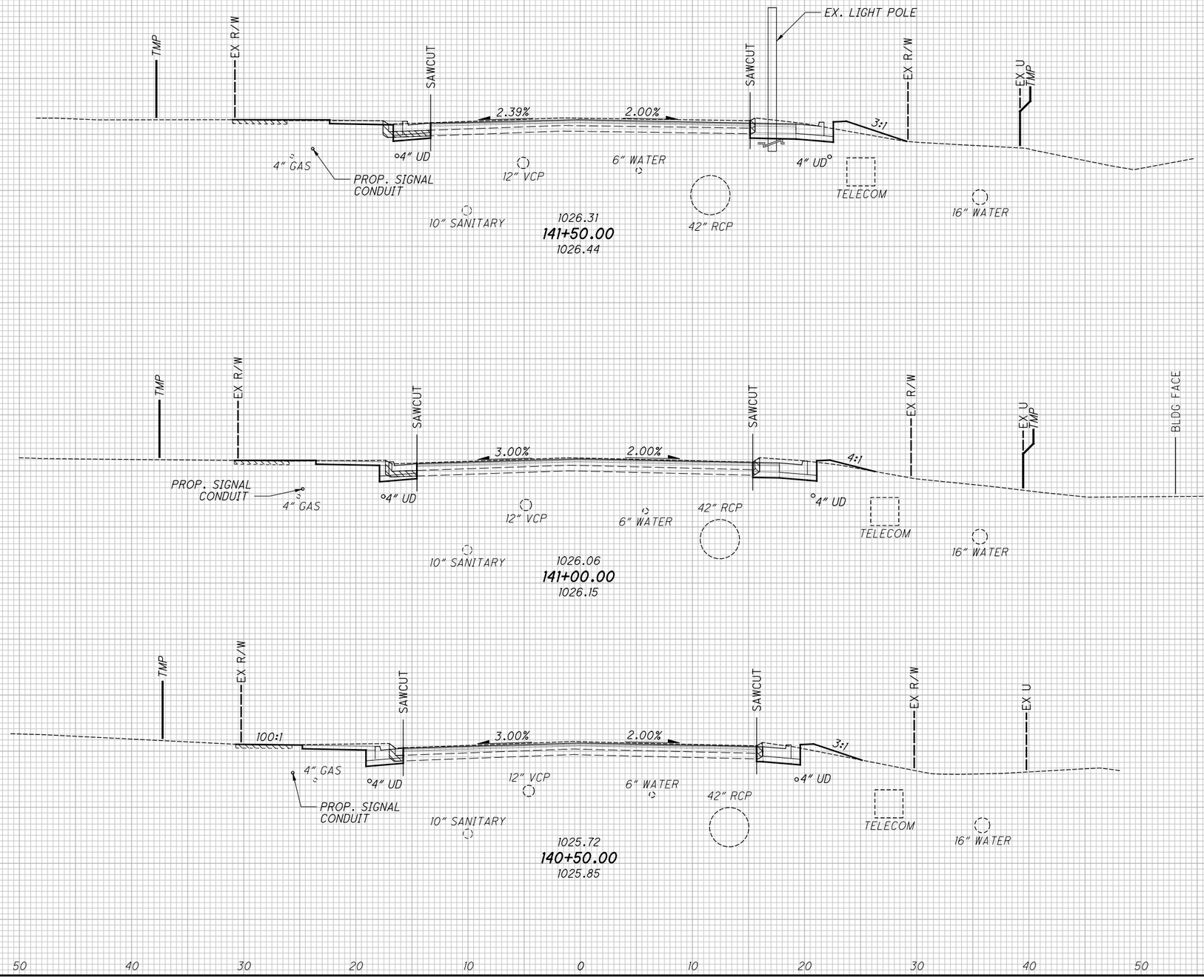
CROSS SECTIONS S.R. 241
STA. 138+50 TO STA. 140+00

STA-241-9.71

133
395

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SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
33		12	6		
	183			23	8
33		13	3		
	156			24	6
23		13	4		
	128			24	6
89	467	38	13	71	20



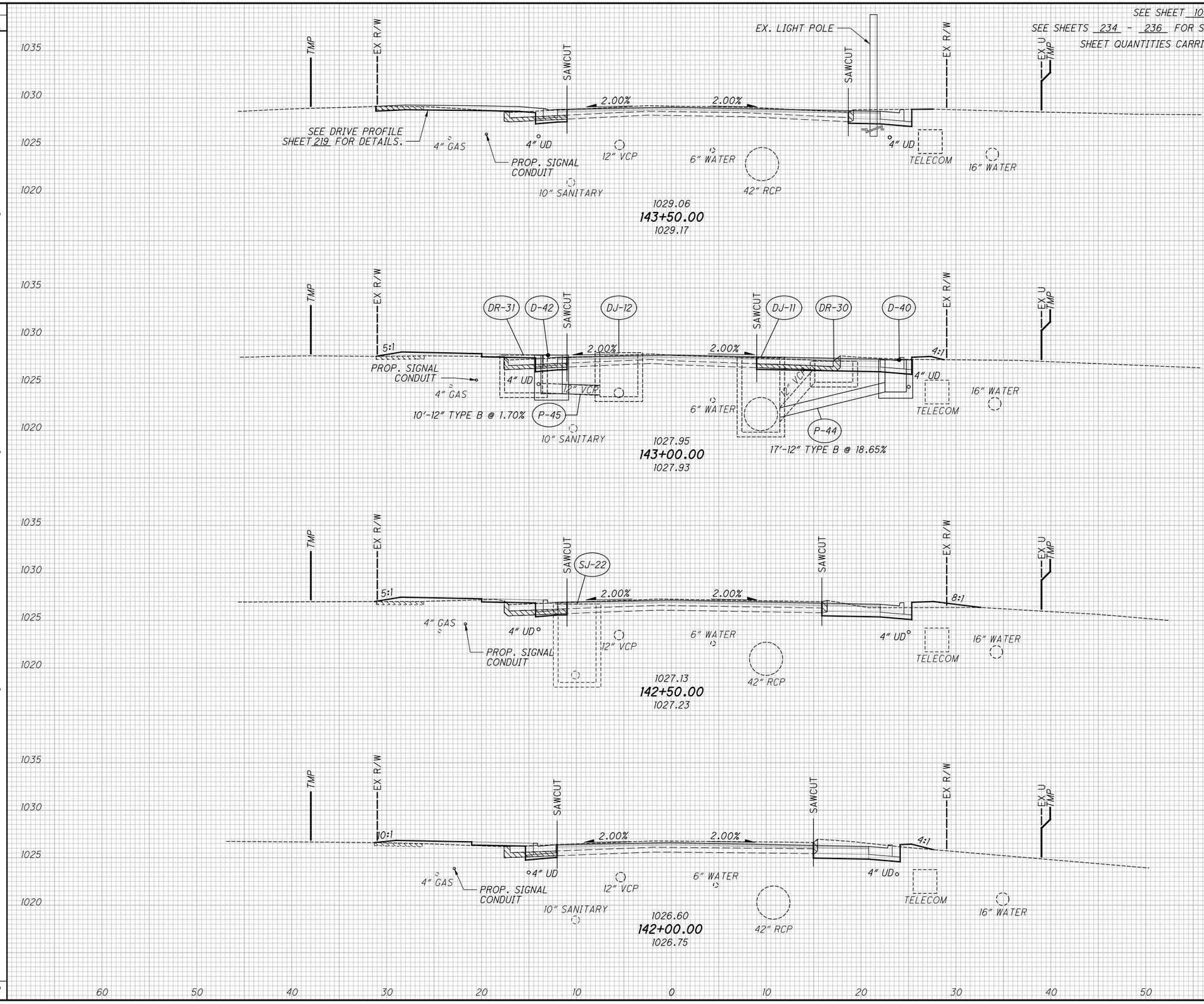
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CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 140+50 TO STA. 141+50

STA-241-9.71

SEEDING END WIDTH	SEEDING SQ. YDS.
20	144
32	178
32	178
32	181
116	681



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
11	4		
13	10	22	13
12	12	27	19
17	8	27	13
53	34	99	65

CALCULATED KRM
CHECKED RAK

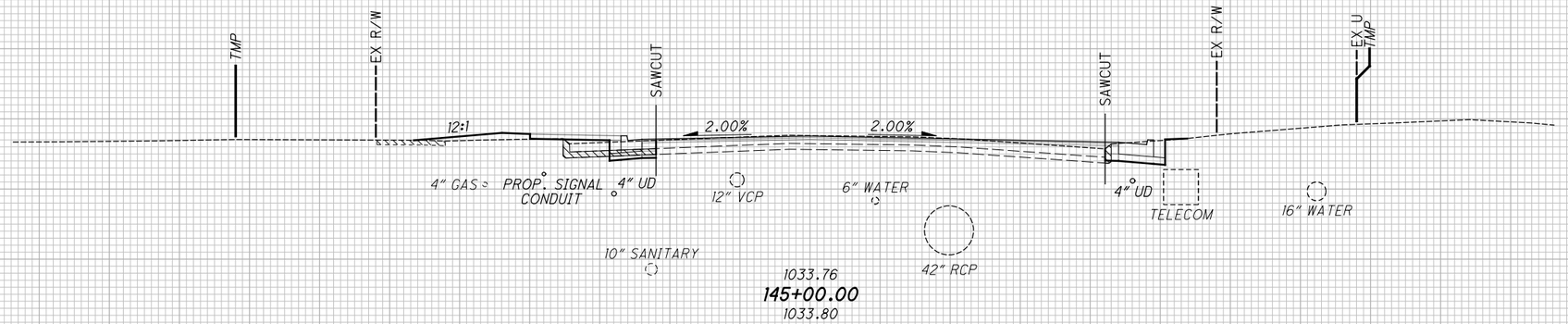
CROSS SECTIONS S.R. 241
STA. 142+00 TO STA. 143+50

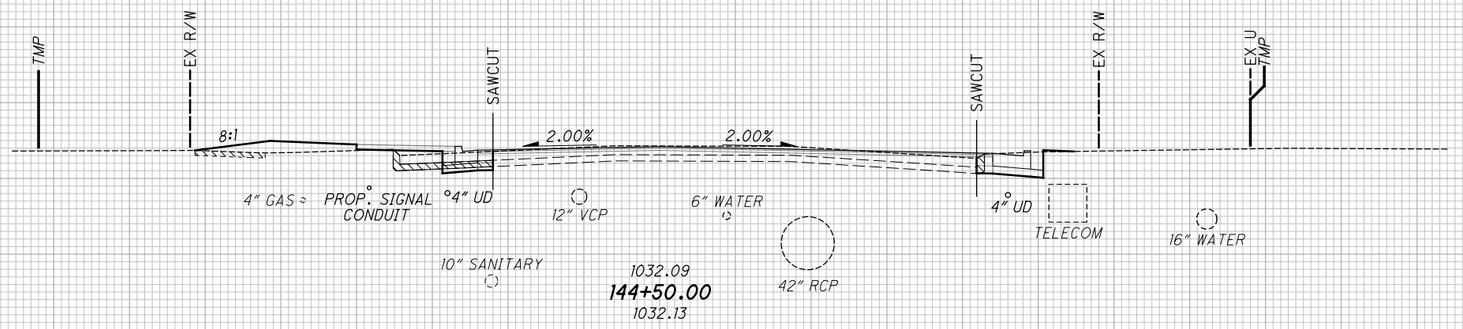
STA-241-9.71

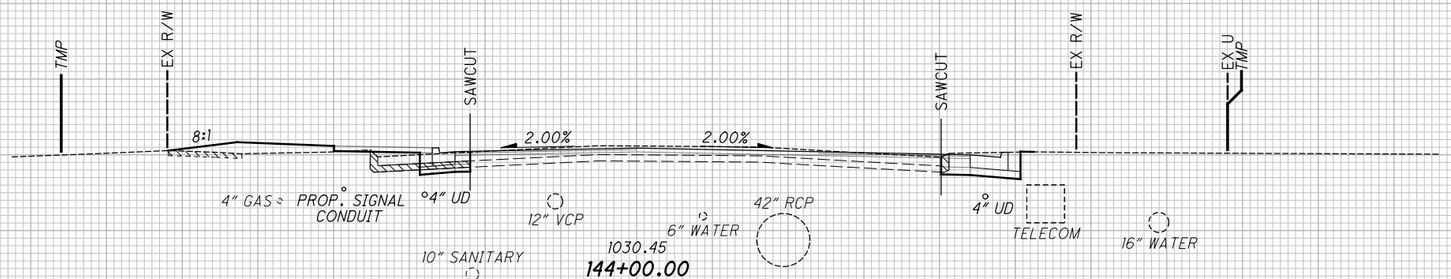
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SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
32	186	7	8	13	18
35	186	7	11	15	20
32	144	9	11	19	14
99	516	23	30	47	52







CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 144+00 TO STA. 145+00

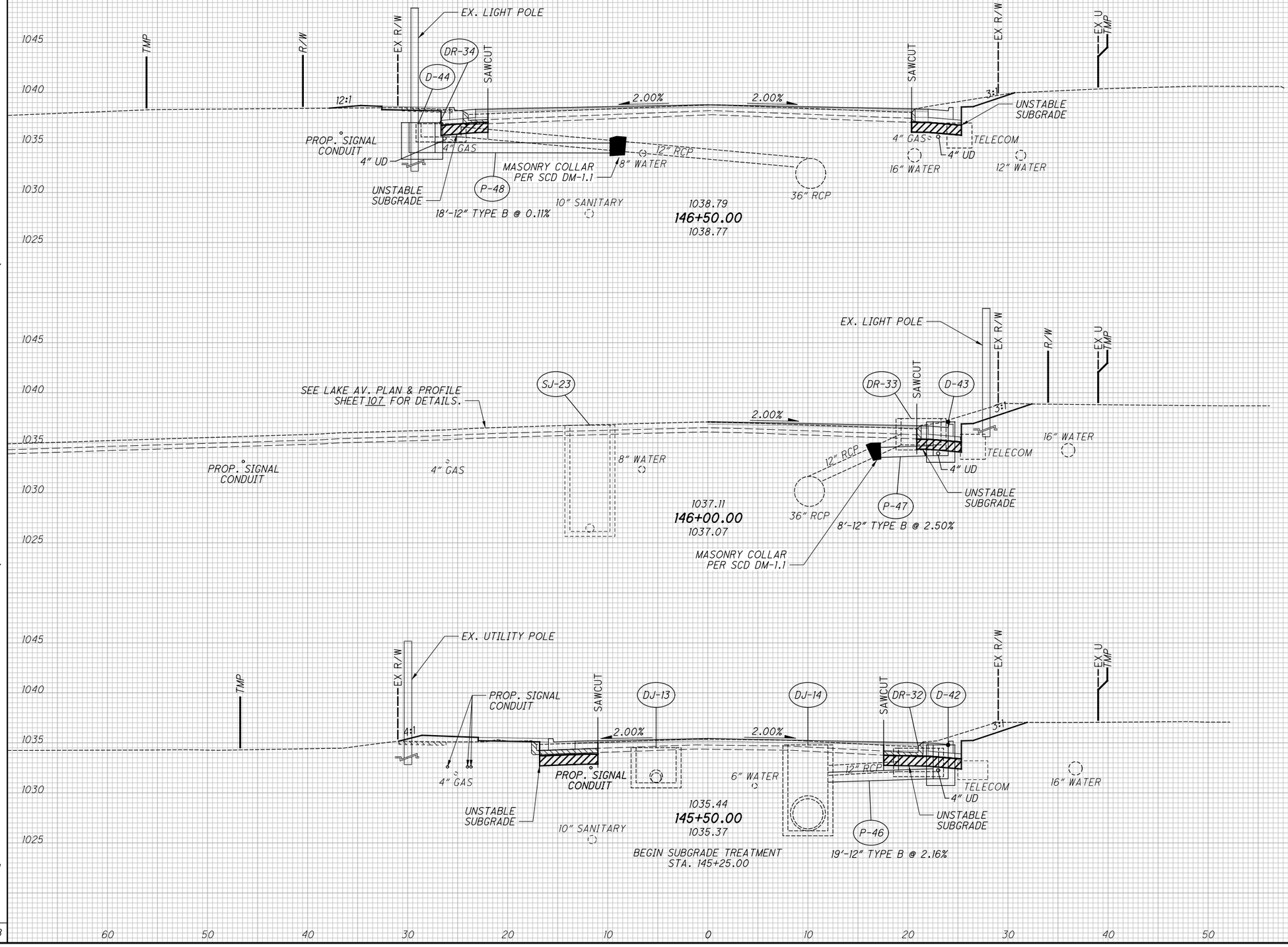
STA-241-9.71

136
395

P:\3000_3499\3062\70090_STA-241-9.71_Wales-Road\ODOT\100471L_STA-241-9.71\Design\Roadway\Sheets\100471L_XS001.dgn 4/7/2021 7:42:31 AM khillegass

60 50 40 30 20 10 0 10 20 30 40 50 60

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
38	147	14	2	25	2
15	147	13	0	24	6
38	194	13	6	19	13
91	488	40	8	68	21



CALCULATED KRM
CHECKED RAK

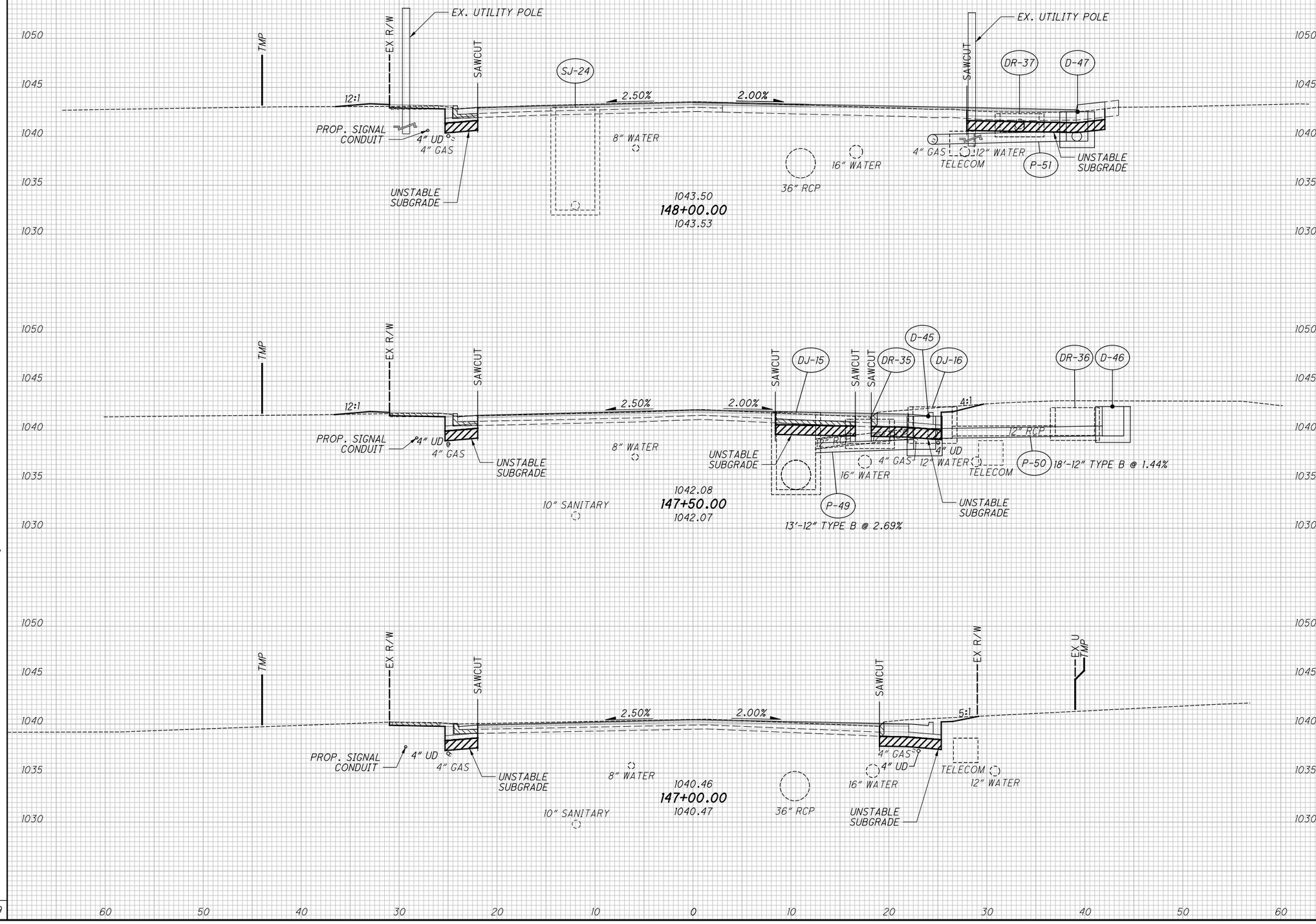
CROSS SECTIONS S.R. 241
STA. 145+50 TO STA. 146+50

STA-241-9.71

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SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
14	86	16	3	31	4
17	122	17	1	30	1
27	181	15	0	27	2
58	389	48	4	88	7



CALCULATED KRM
CHECKED RAK

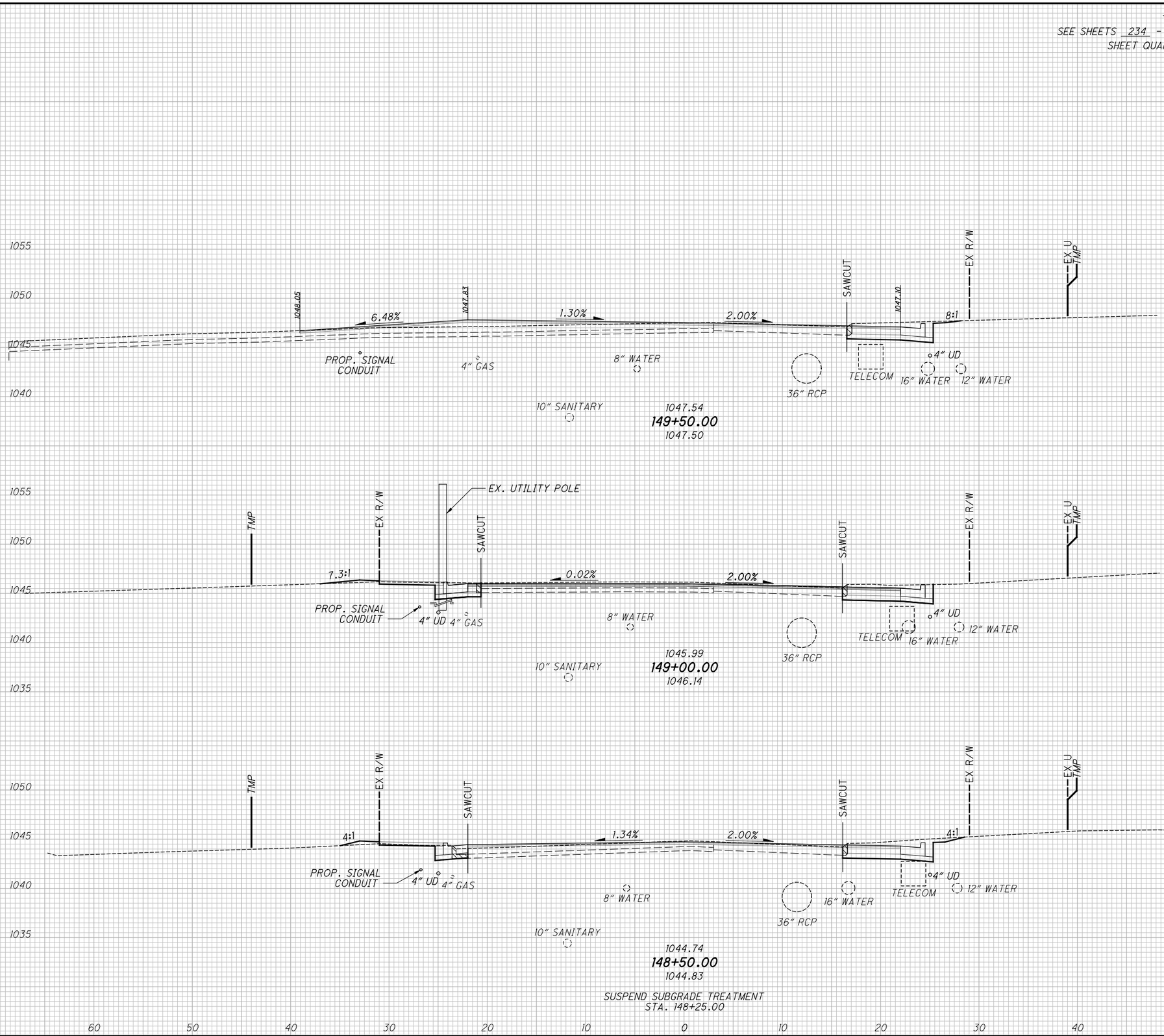
CROSS SECTIONS S.R. 241
STA. 147+00 TO STA. 148+00

STA-241-9.71

138
395

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SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
14	114	15	0	34	1
27	147	22	1	39	2
26	111	20	1	33	4
67	372	57	2	106	7



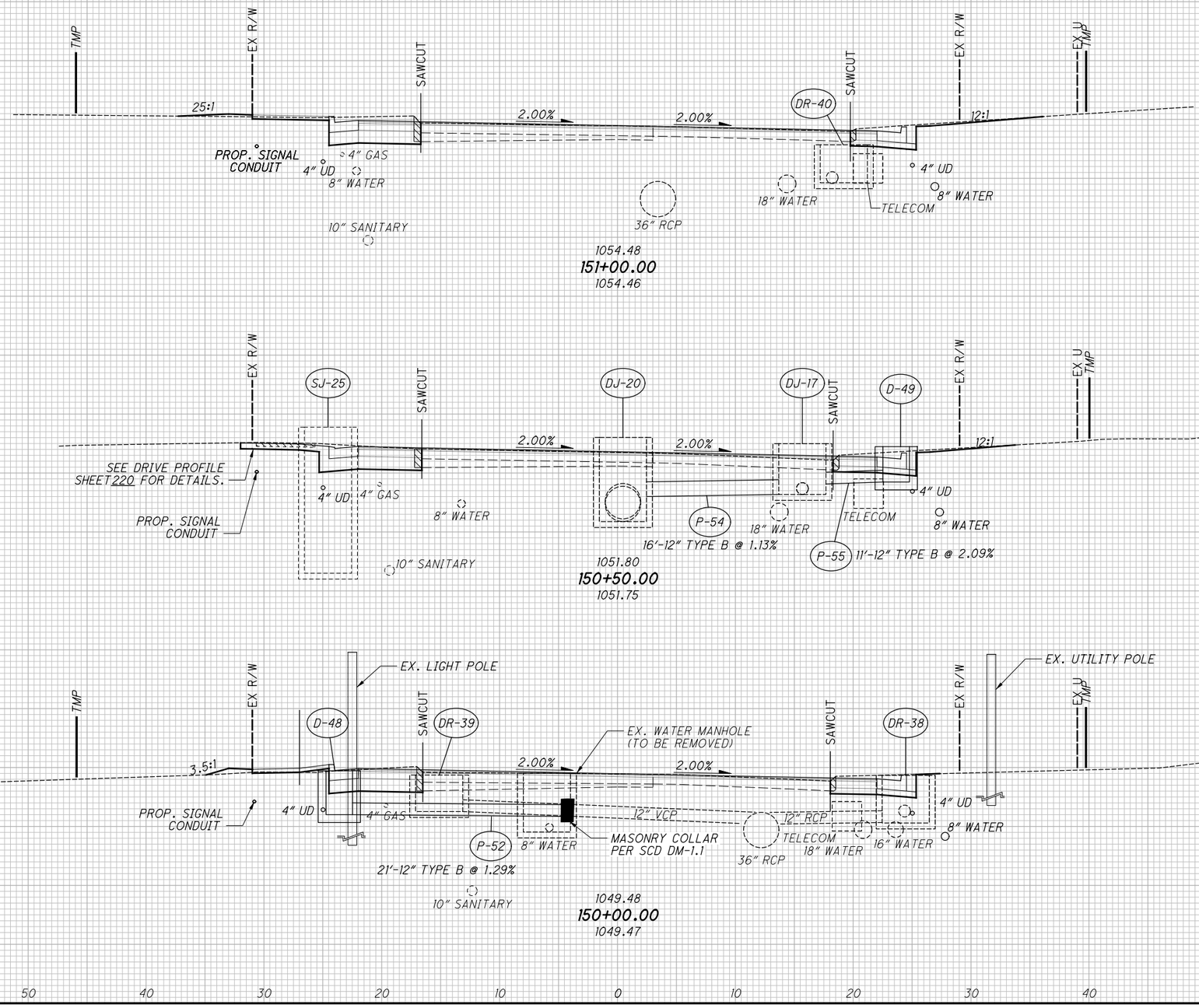
CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 148+50 TO STA. 149+50

STA-241-9.71

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SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
	38				
		28	1		
	164			55	1
	21	31	0		
				52	2
	136				
	28	25	2		
				37	2
	117				
87	417	84	3	144	5



CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 150+00 TO STA. 151+00

STA-241-9.71

140
395

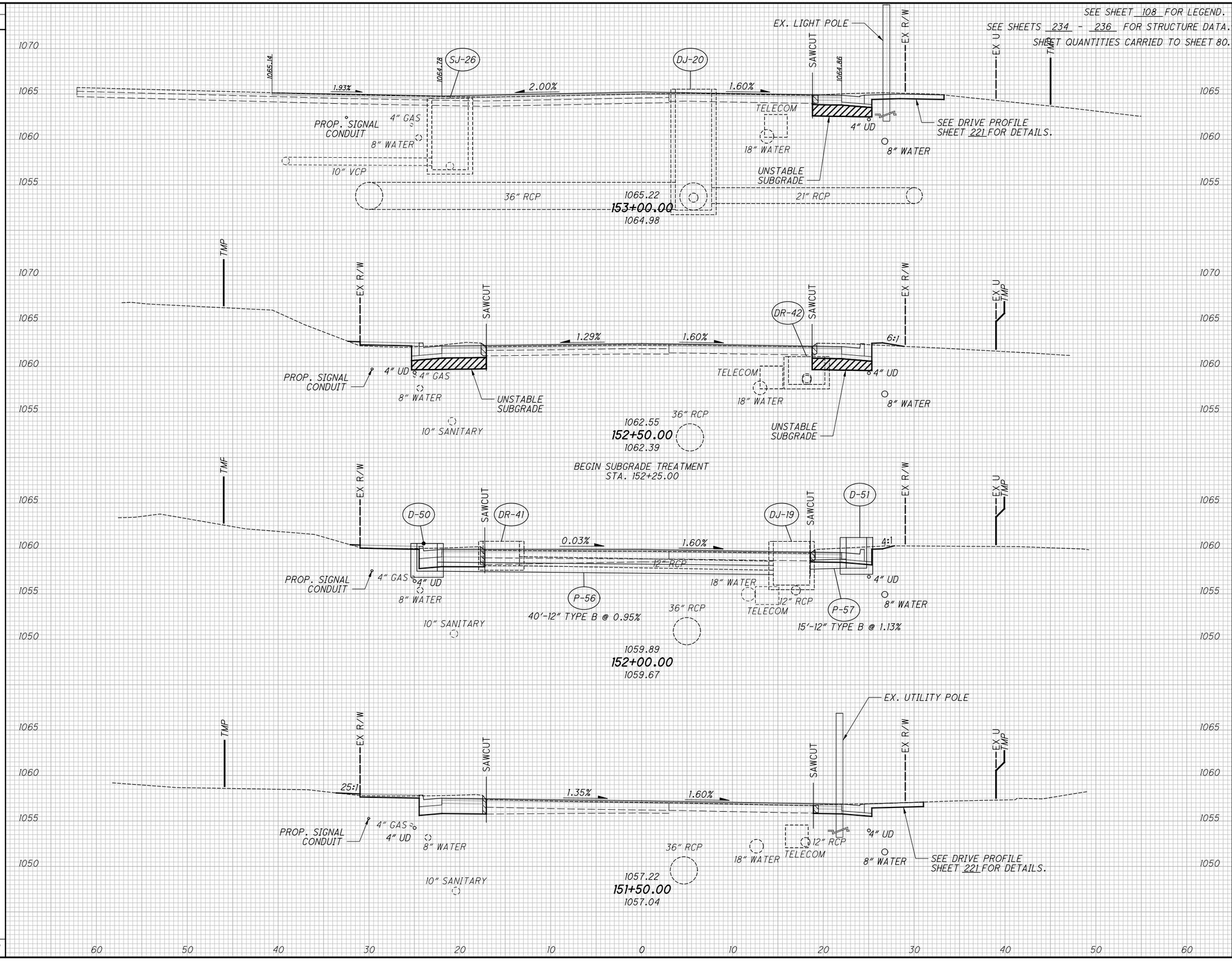
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SEEDING END WIDTH	SEEDING SQ. YDS.
12	117
30	164
29	144
23	169
94	594

SEE SHEET 108 FOR LEGEND.

SEE SHEETS 234 - 236 FOR STRUCTURE DATA.

SHEET QUANTITIES CARRIED TO SHEET 80.



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
12	0		
22	2		
		31	2
26	0		
24	0		
		44	2
		46	0
		48	1
84	2	169	5

CALCULATED KRM

CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 151+50 TO STA. 153+00

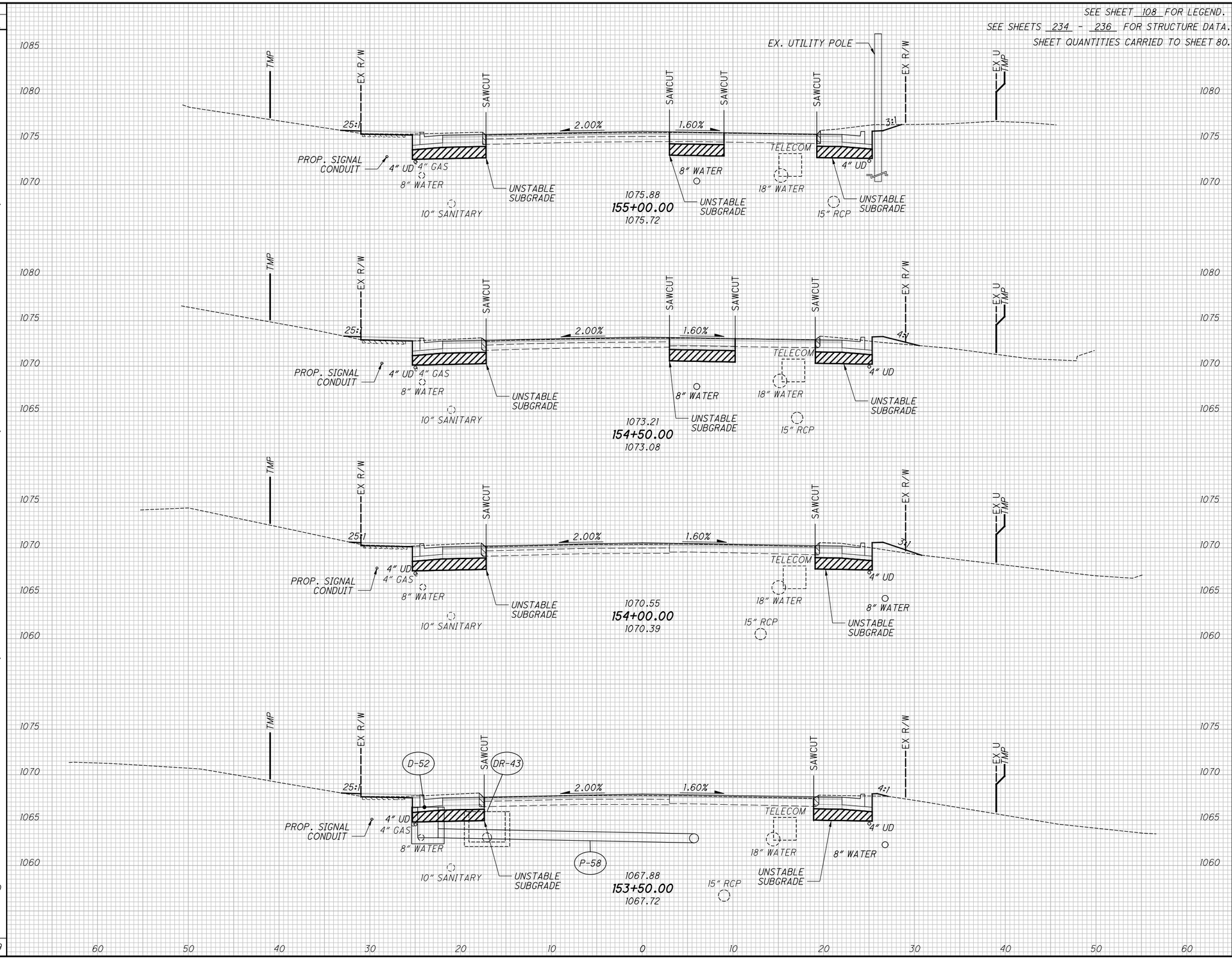
STA-241-9.71

141
395

P:\3000_3499\30621T0090_STA-241-9TL_Wales_Road\ODOT\10047L_STA-241-9TL\Design\Roadway\Sheets\10047L_XS001.dgn 4/7/2021 7:42:41 AM khillegass

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
24	133	34	2	60	6
24	133	31	4	49	7
24	133	22	4	42	6
24	100	23	2	32	2
96	499	110	12	183	21



CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 153+50 TO STA. 155+00

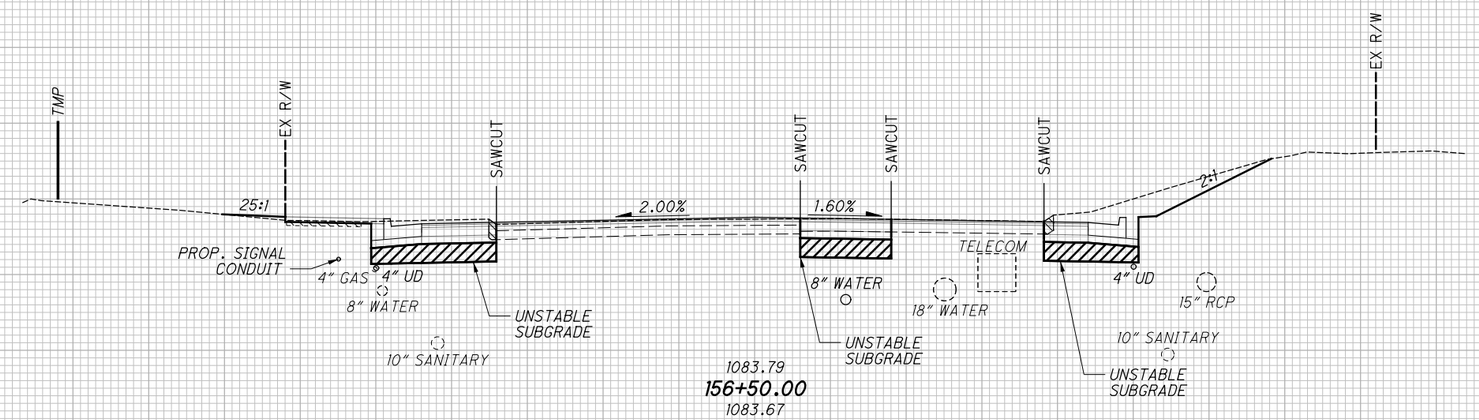
STA-241-9.71

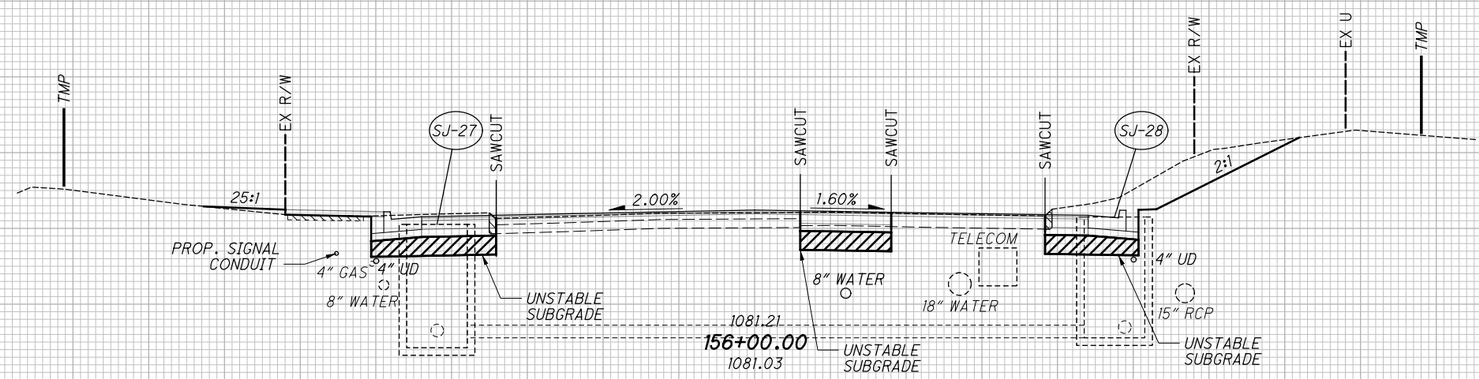
142
395

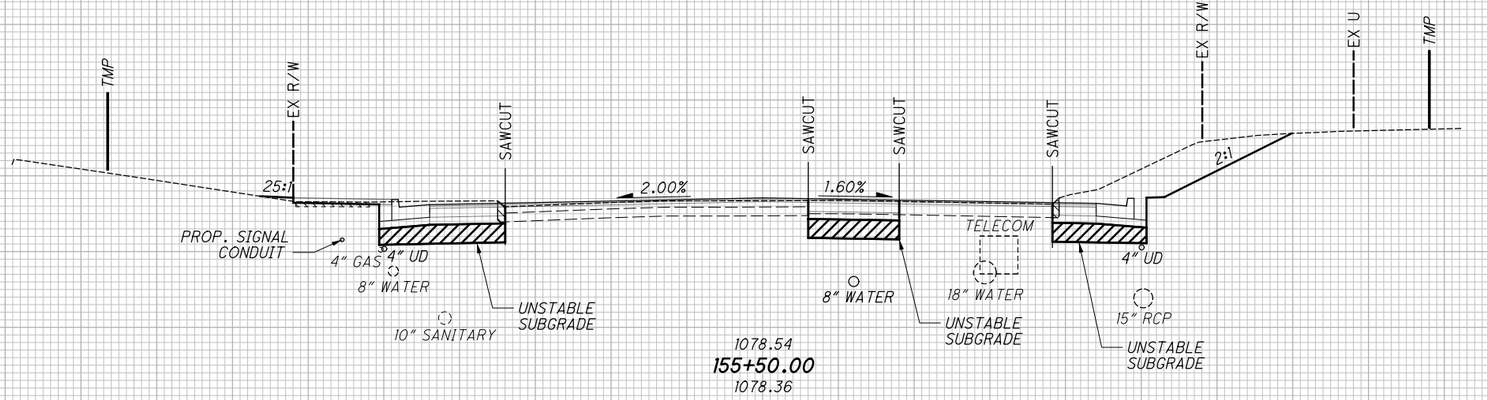
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SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
32	183	42	2	85	5
34	183	50	3	94	5
32	156	52	2	80	4
98	522	144	7	259	14







60 50 40 30 20 10 0 10 20 30 40 50 60

CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 155+50 TO STA. 156+50

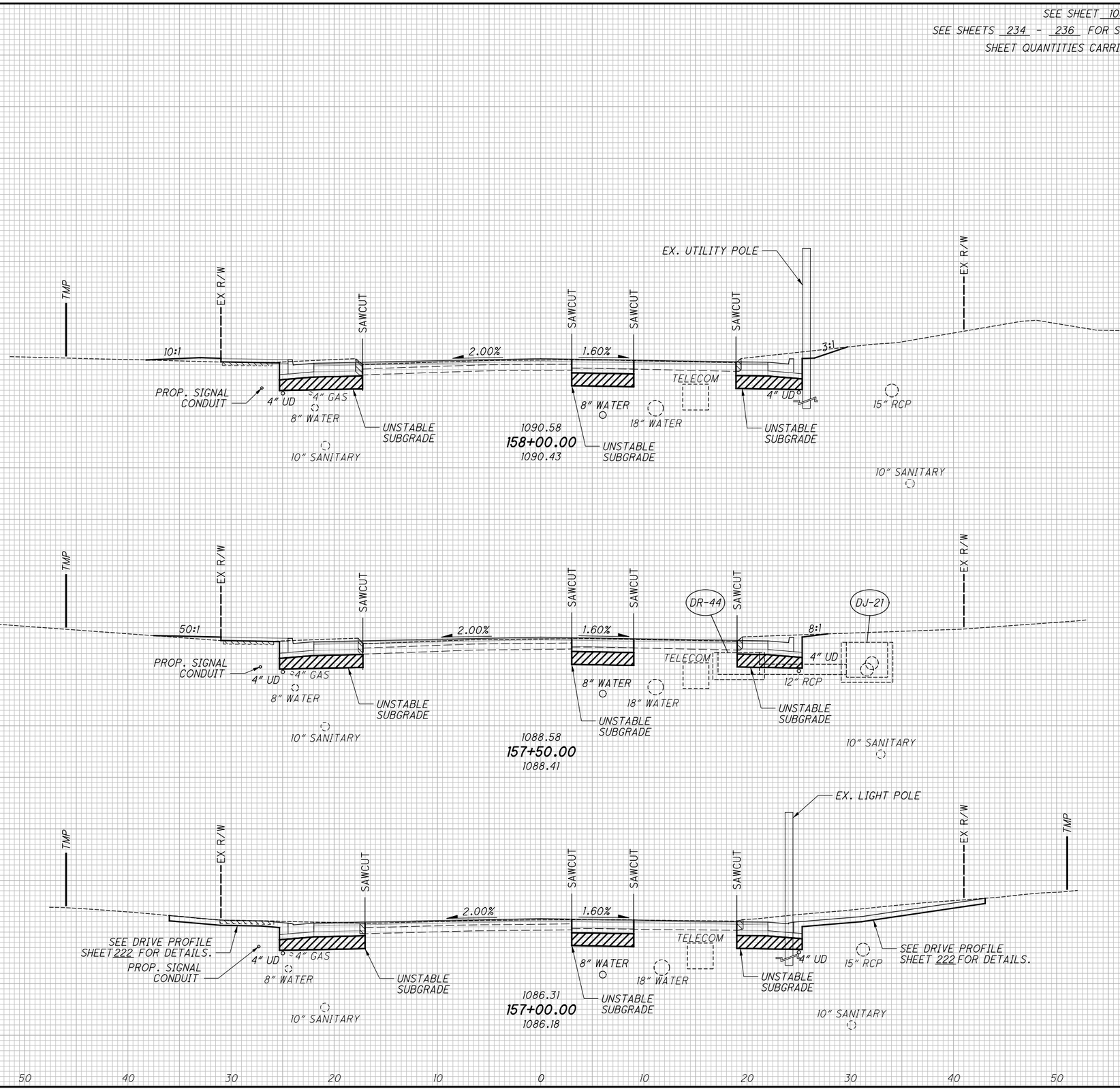
STA-241-9.71

143
395

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SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
31	172	34	3	60	6
31	136	31	3	76	3
18	139	51	0	86	2
80	447	116	6	222	11



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CALCULATED KRM CHECKED RAK

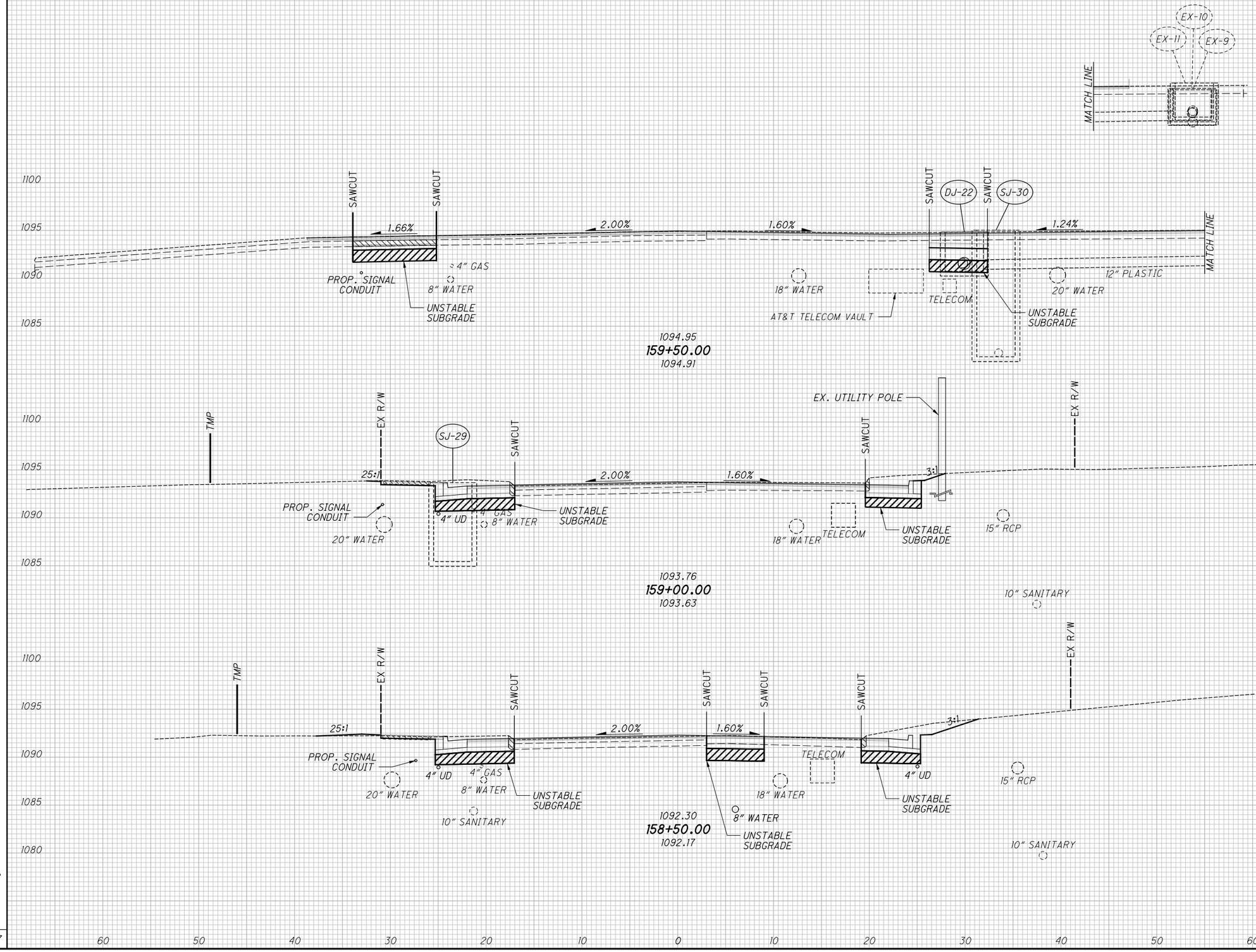
CROSS SECTIONS S.R. 241
STA. 157+00 TO STA. 158+00

STA-241-9.71

144
395

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
0	94	16	0	43	0
34	181	30	0	63	1
31	172	38	1	67	4
65	447	84	1	173	5



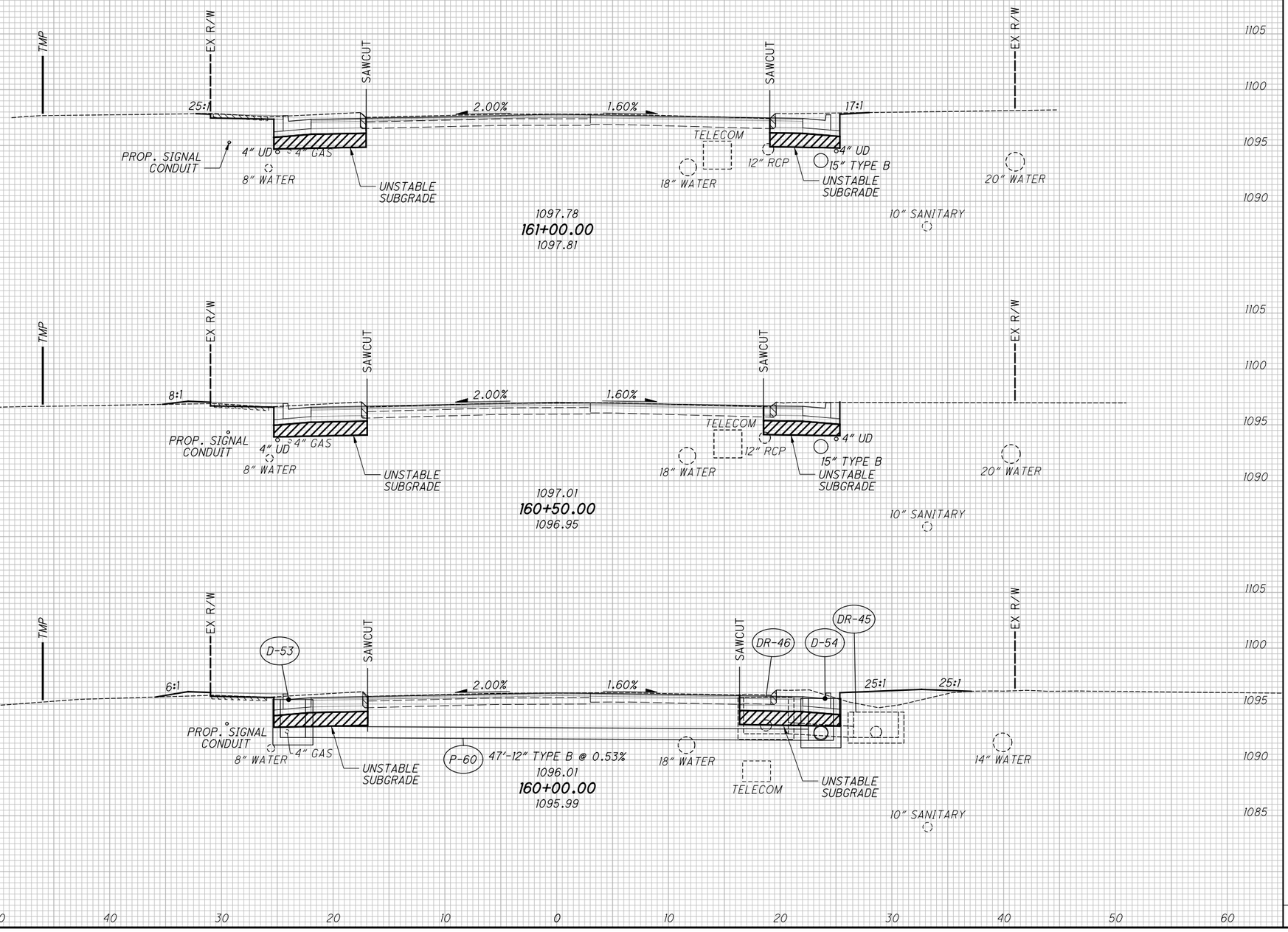
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CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 158+50 TO STA. 159+50

STA-241-9.71

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
31	169	25	0	45	2
30	169	24	2	48	14
31	86	28	13	41	12
92	424	77	15	134	28



CROSS SECTIONS S.R. 241 STA. 160+00 TO STA. 161+00

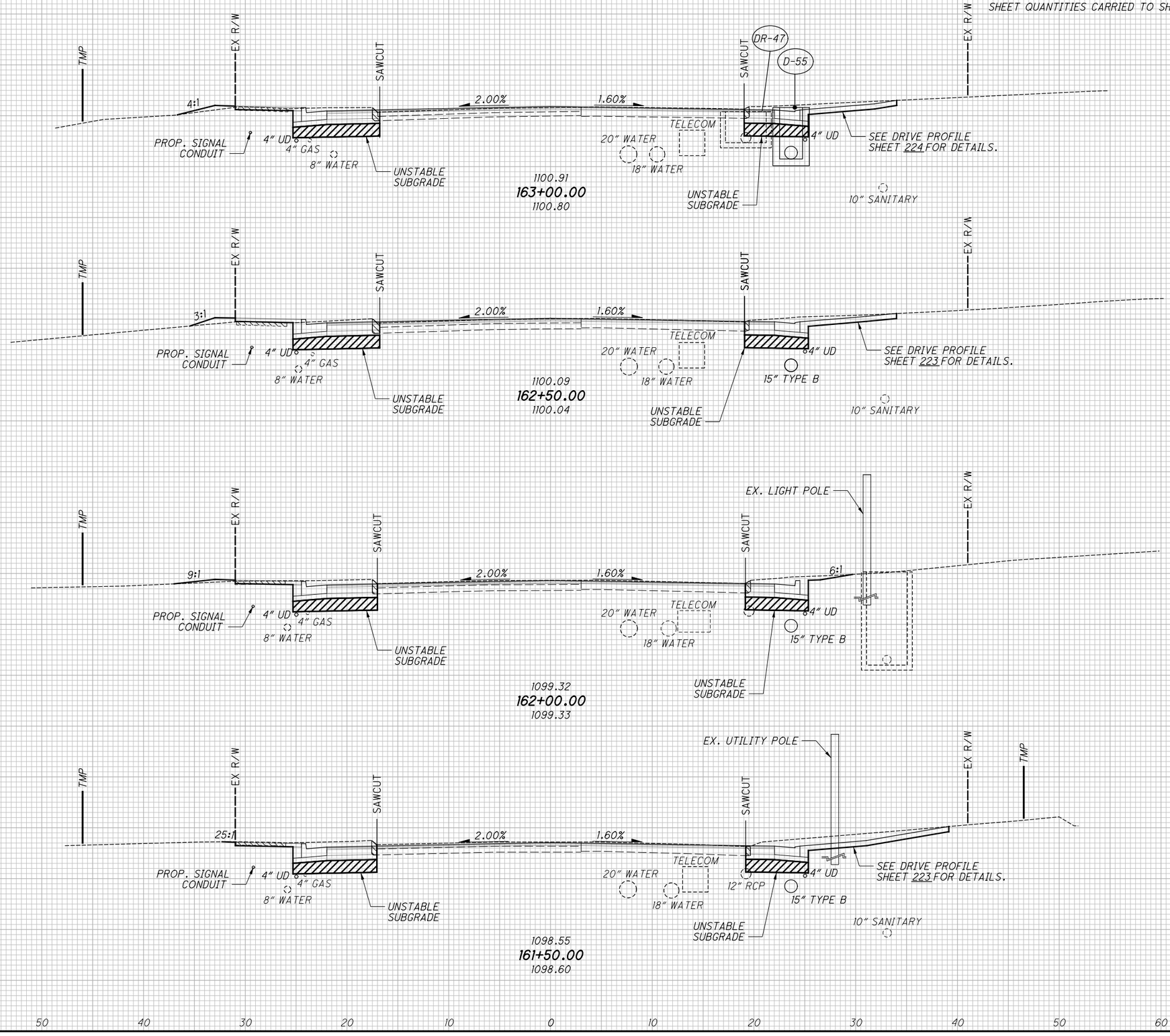
STA-241-9.71

CALCULATED KRM
CHECKED RAK

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SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
22	125	31	2	56	6
23	147	29	4	52	5
30	144	27	1	62	1
22	147	40	0	60	0
97	563	127	7	230	12



CALCULATED KRM
CHECKED RAK

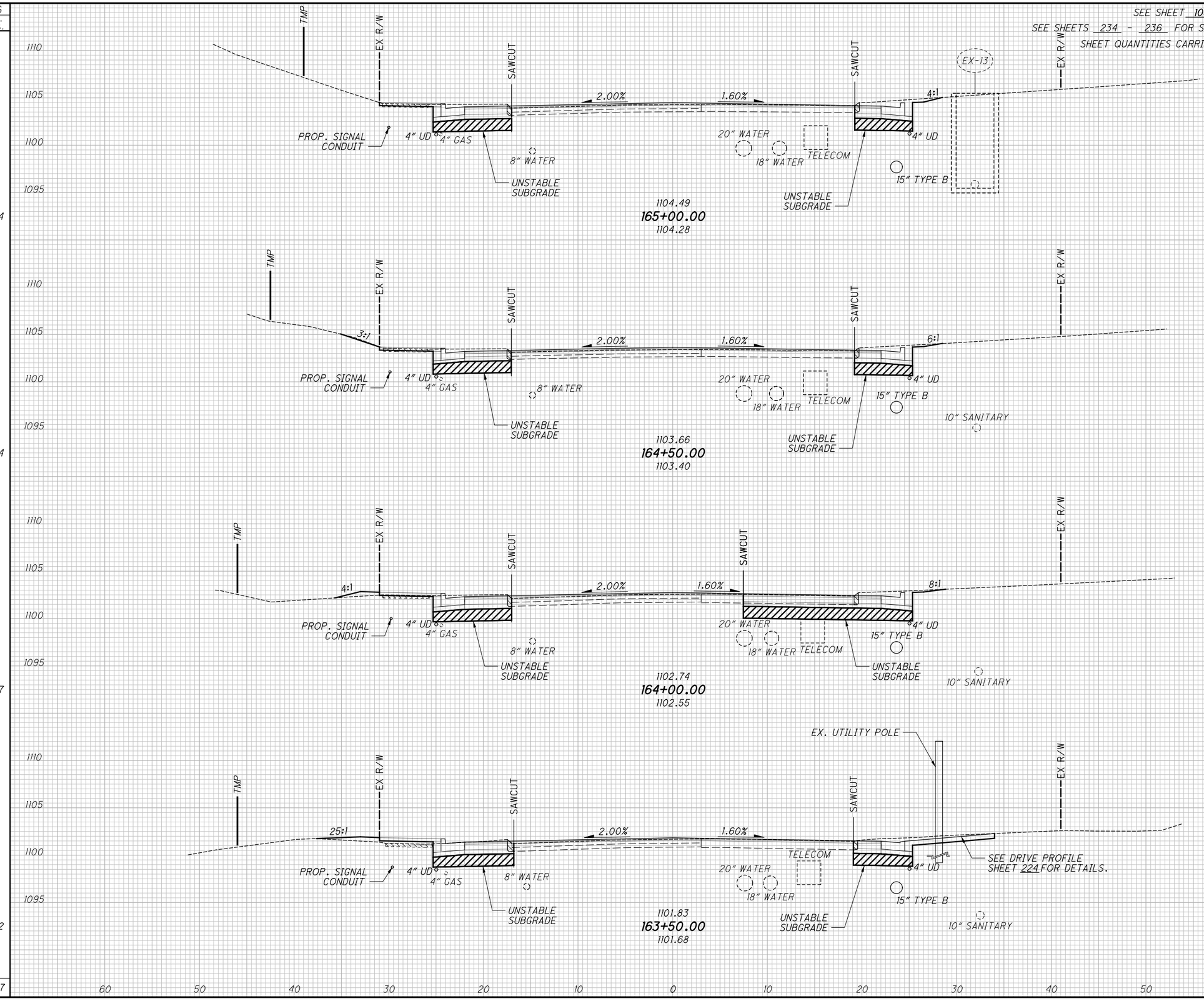
CROSS SECTIONS S.R. 241
STA. 161+50 TO STA. 163+00

STA-241-9.71

147
395

P:\3000_3499\3062170090_STA-241-9.71_Wales_Road\ODOT\00471_STA-241-9.71\Design\Roadway\Sheets\00471_XS001.dgn 4/7/2021 7:43:03 AM khillegoss

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
24		25	1		
	144			44	2
28		22	1		
	164			56	4
31		38	3		
	147			59	7
22		26	5		
	122			53	6
105	577	111	10	212	19



CALCULATED KRM
CHECKED RAK

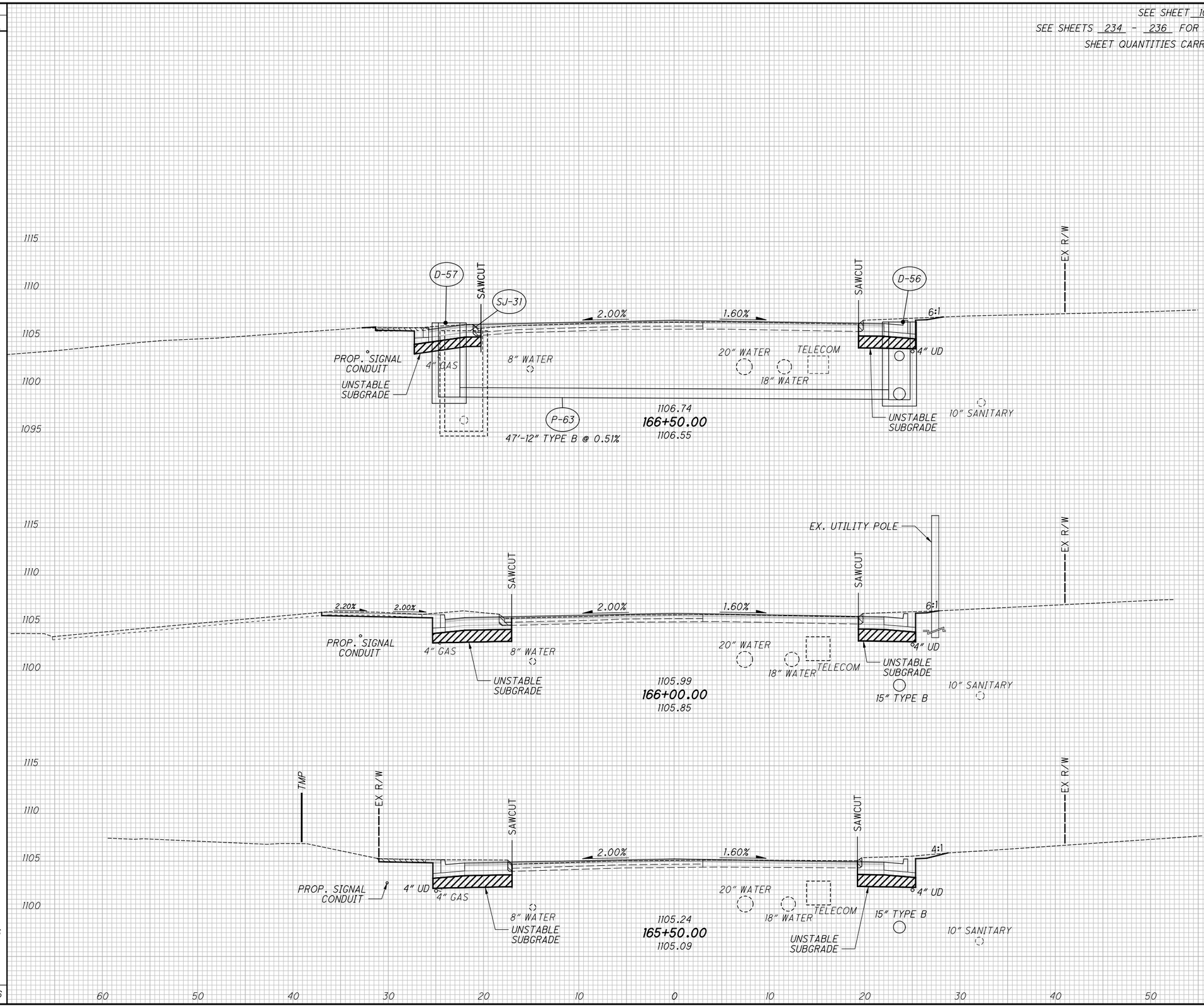
CROSS SECTIONS S.R. 241
STA. 163+50 TO STA. 165+00

STA-241-9.71

148
395

P:\3000_3499\3062170090_STA-241-9.71_Wales-Road\ODOT\100471L_STA-241-9.71\Design\Roadway\Sheets\100471L_XS001.dgn 4/7/2021 7:43:05 AM khillegoss

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
17		20	0		
	89			46	0
15		30	0		
	111			52	0
25		26	0		
	136			47	1
57	336	76	0	145	1



CROSS SECTIONS S.R. 241
STA. 165+50 TO STA. 166+50

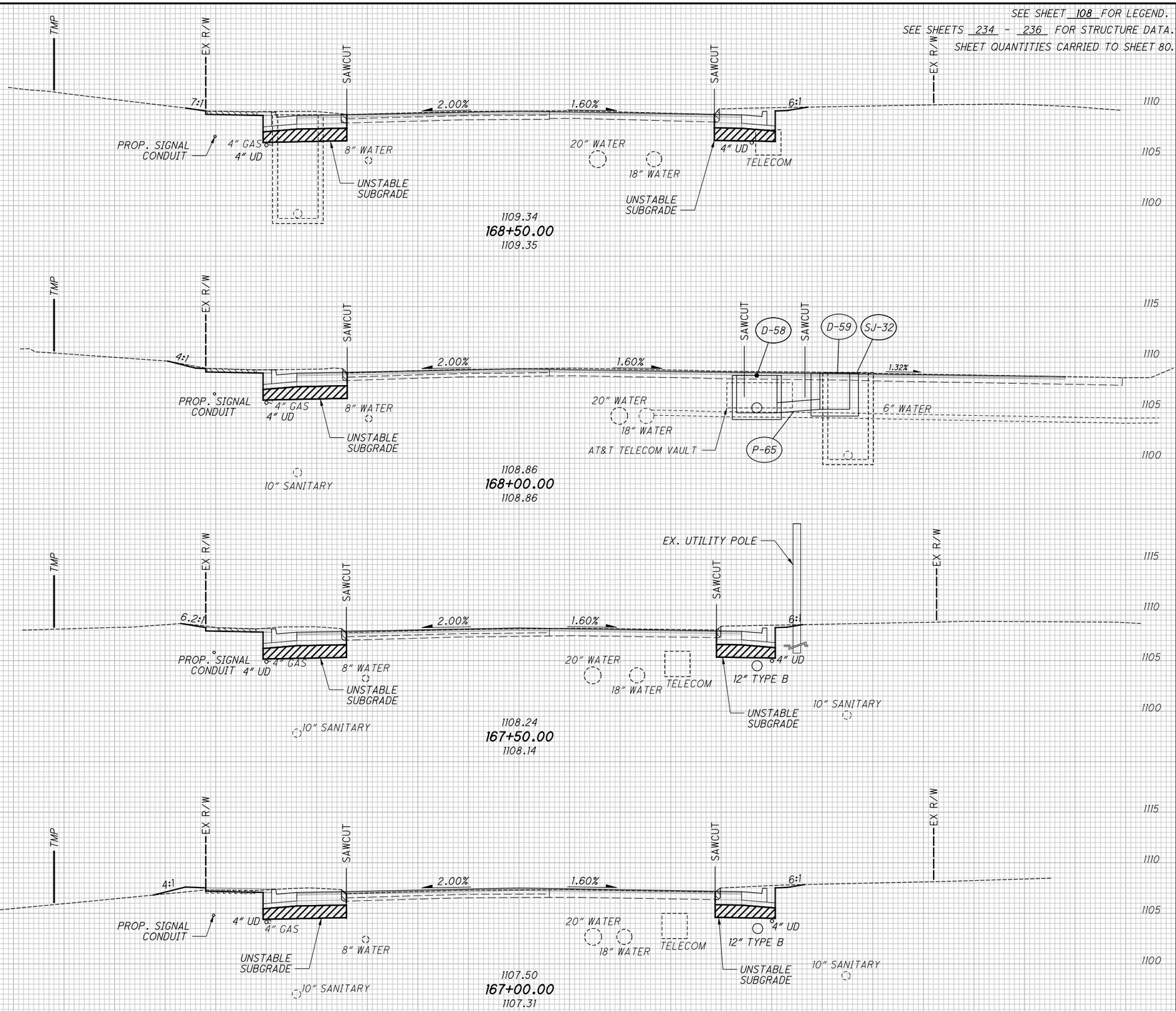
CALCULATED KRM
CHECKED RAK

STA-241-9.71

P:\3000_3499\30621\70090_STA-241-9.71_Wales_Road\DOT\00471L_STA-241-9.71\Design\Roadway\Sheets\00471L_XS001.dgn 4/7/2021 7:43:07 AM khillegoss

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
31	133	26	0	42	0
17	133	19	0	43	0
31	172	27	0	48	2
31	133	25	2	42	2
110	571	97	2	175	4



CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 167+00 TO STA. 168+50

STA-241-9.71

150
395

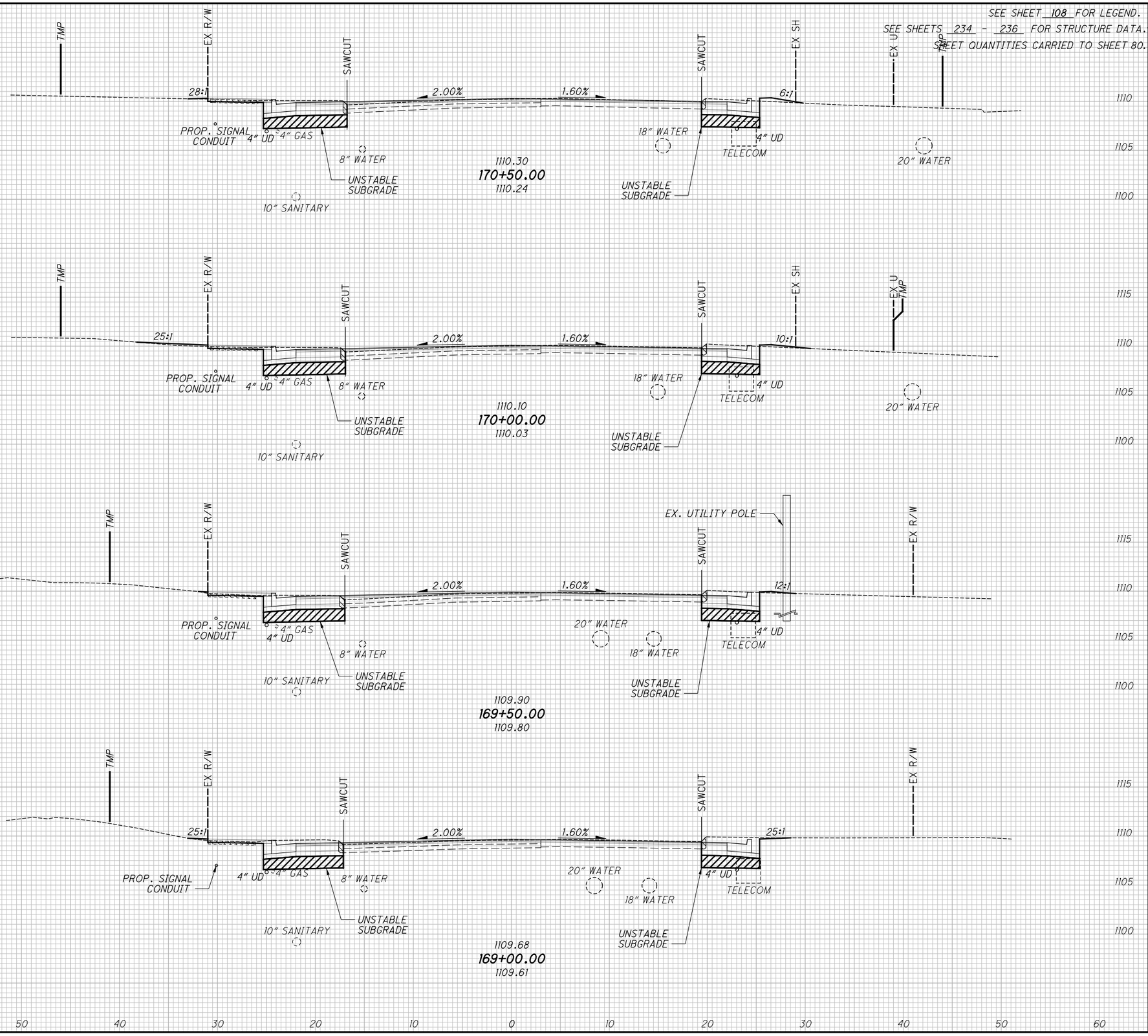
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SEE SHEET 108 FOR LEGEND.

SEE SHEETS 234 - 236 FOR STRUCTURE DATA.

SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
34	169	22	2	42	4
27	147	23	2	42	3
26	144	22	1	44	2
26	158	25	1	47	1
113	618	92	6	175	10



CALCULATED KRM

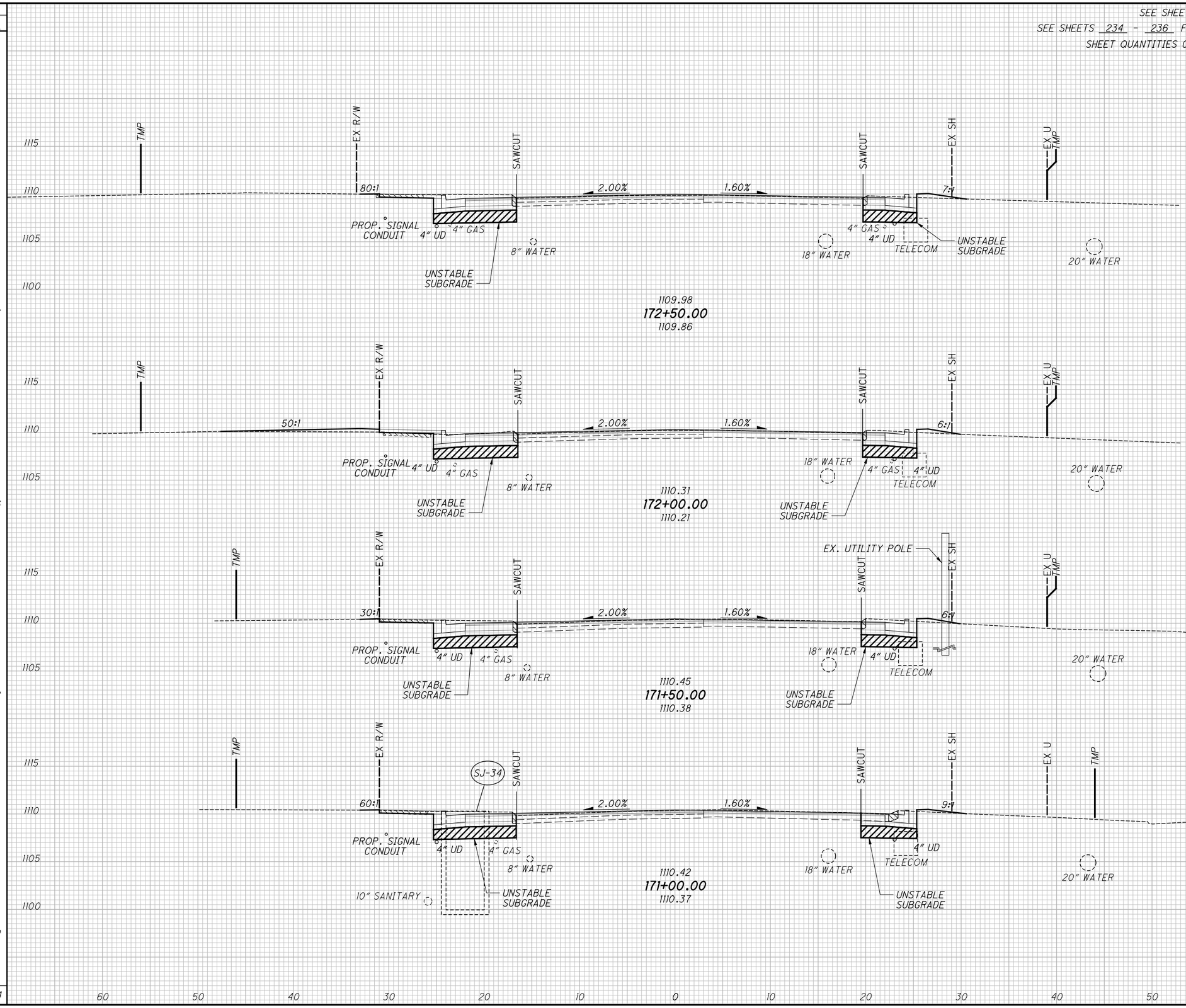
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 169+00 TO STA. 170+50

STA-241-9.71

P:\3000_3499\3062\T0090_STA-241-9.71_Wales_Road\ODOT\100471_STA-241-9.71\Design\Roadway\Sheets\100471_XS001.dgn 4/7/2021 7:43:11 AM khillegass

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
39		23	2		
	217			40	7
39		20	6		
	186			40	6
28		23	1		
	172			42	2
34		22	1		
	189			41	3
140	764	88	10	163	18



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CALCULATED KRM CHECKED RAK

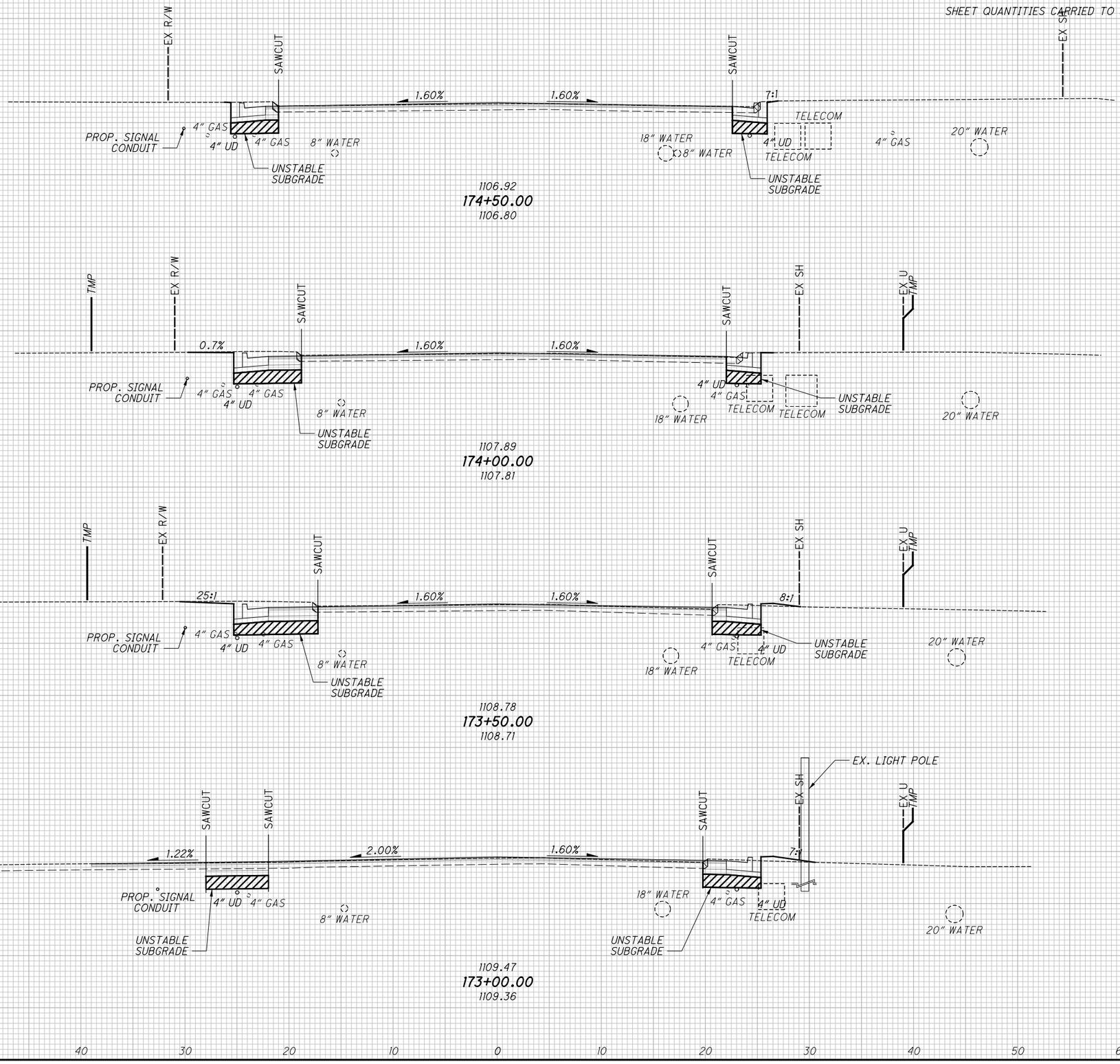
CROSS SECTIONS S.R. 241
STA. 171+00 TO STA. 172+50

STA-241-9.71

152
395

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
35		13	0		
	175			28	0
28		17	0		
	156			37	1
28		23	1		
	117			36	2
14		16	1		
	147			36	3
105	595	69	2	137	6



CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 173+00 TO STA. 174+50

STA-241-9.71

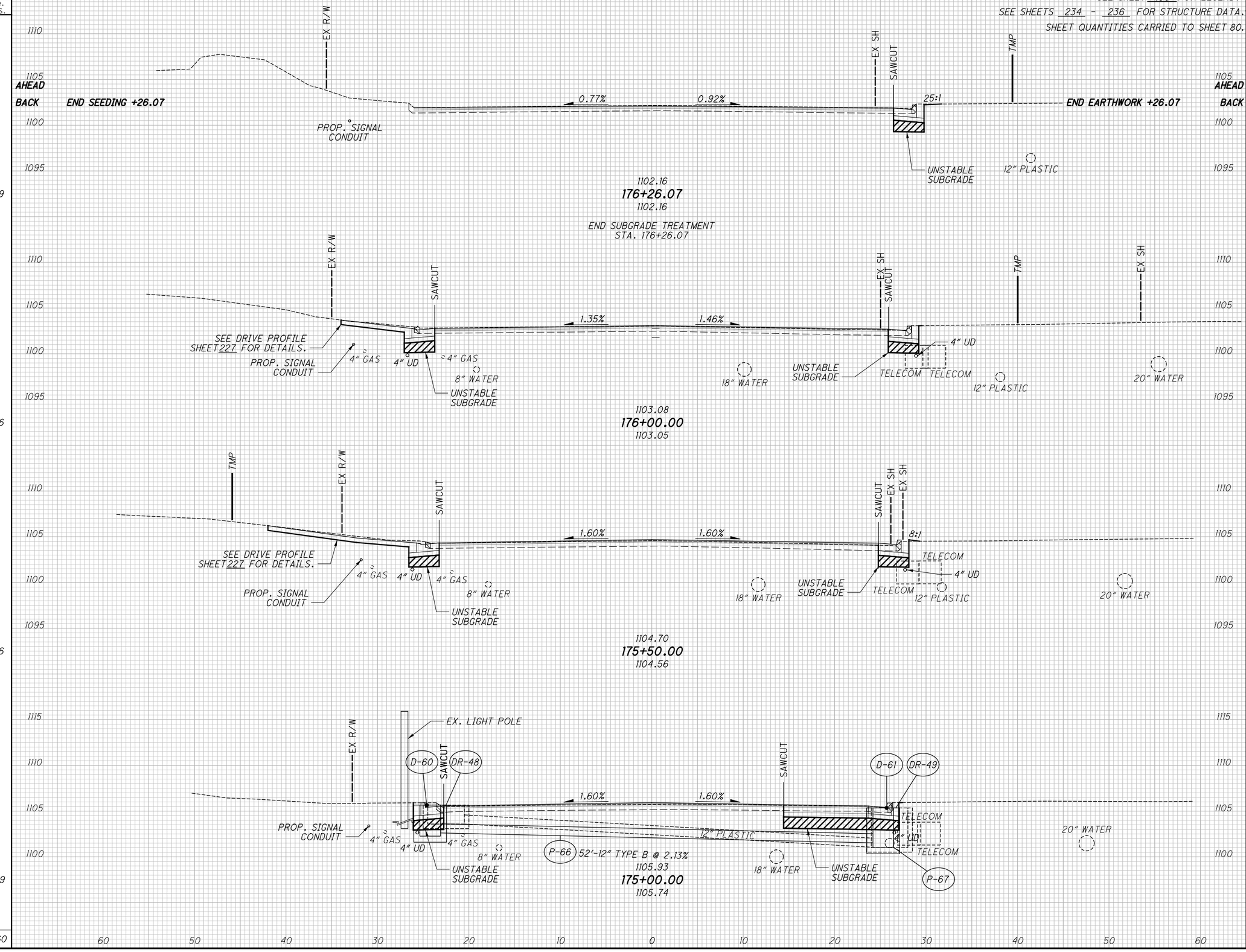
153
395

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SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.	
0		AHEAD
19		BACK END SEEDING +26.07
	49	
15		
	56	
5		
	36	
8		
119		
47	260	

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL	
				AHEAD
0	0			AHEAD
5	0			BACK END EARTHWORK +26.07
		9	0	
14	0			
		30	0	
18	0			
		37	0	
22	0			
		32	0	
59	0	108	0	



CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 175+00 TO STA. 176+26.07

STA-241-9.71

154
395

P:\3000_3499\3062170090_STA-241-97L_Wales_Road\ODOT\100471_STA-241-97N\Design\Roadway\Sheets\100471_XS001.dgn 4/7/2021 7:43:18 AM khillegass

SEEDING	
END WIDTH	SQ. YDS.

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED KRM
CHECKED RAK

CROSS SECTIONS S.R. 241
STA. 176+50 TO STA. 177+50

STA-241-9.71

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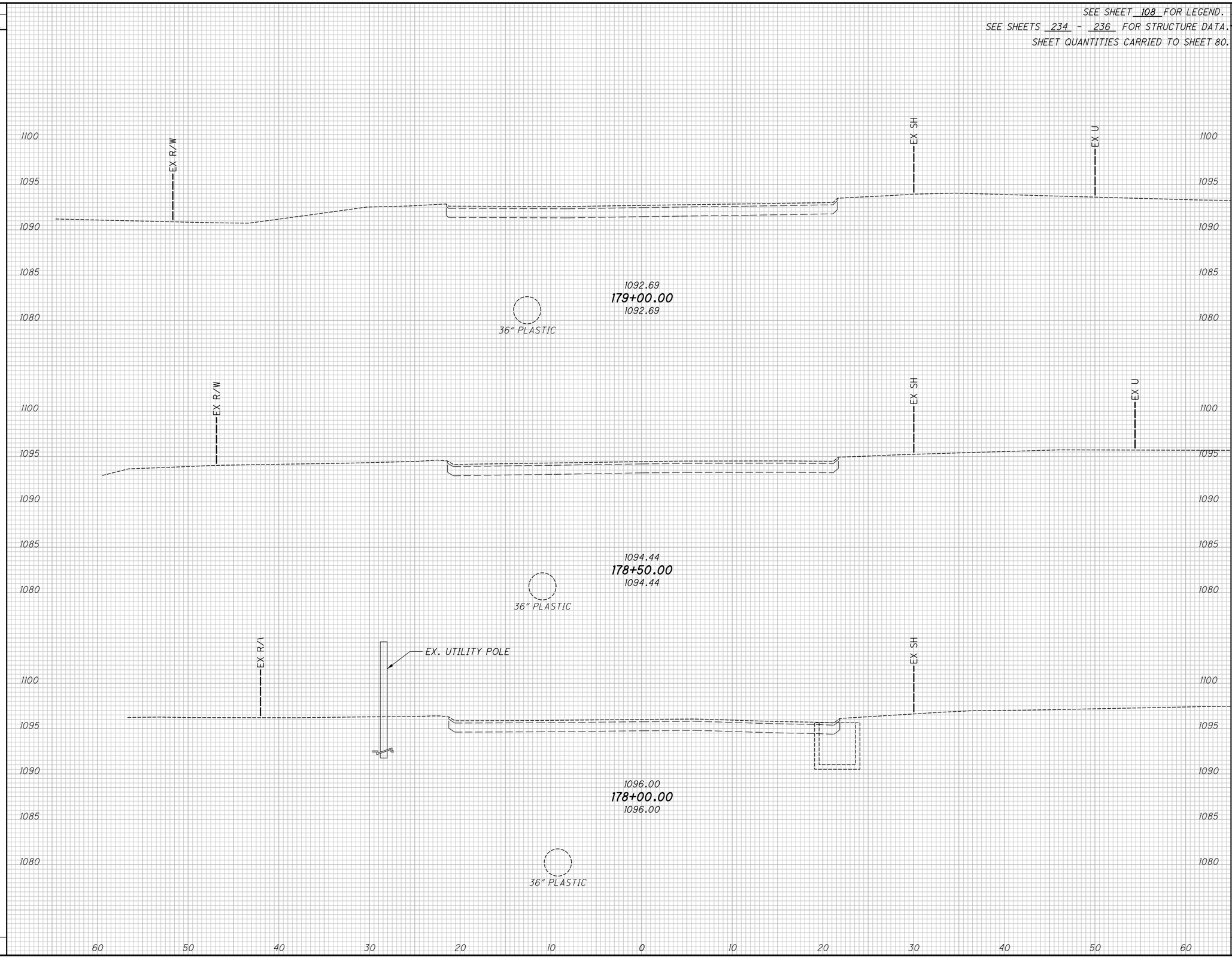
SEEDING	
END WIDTH	SQ. YDS.

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED KRM
CHECKED RAK



CROSS SECTIONS S.R. 241
STA. 178+00 TO STA. 179+00

STA-241-9.71

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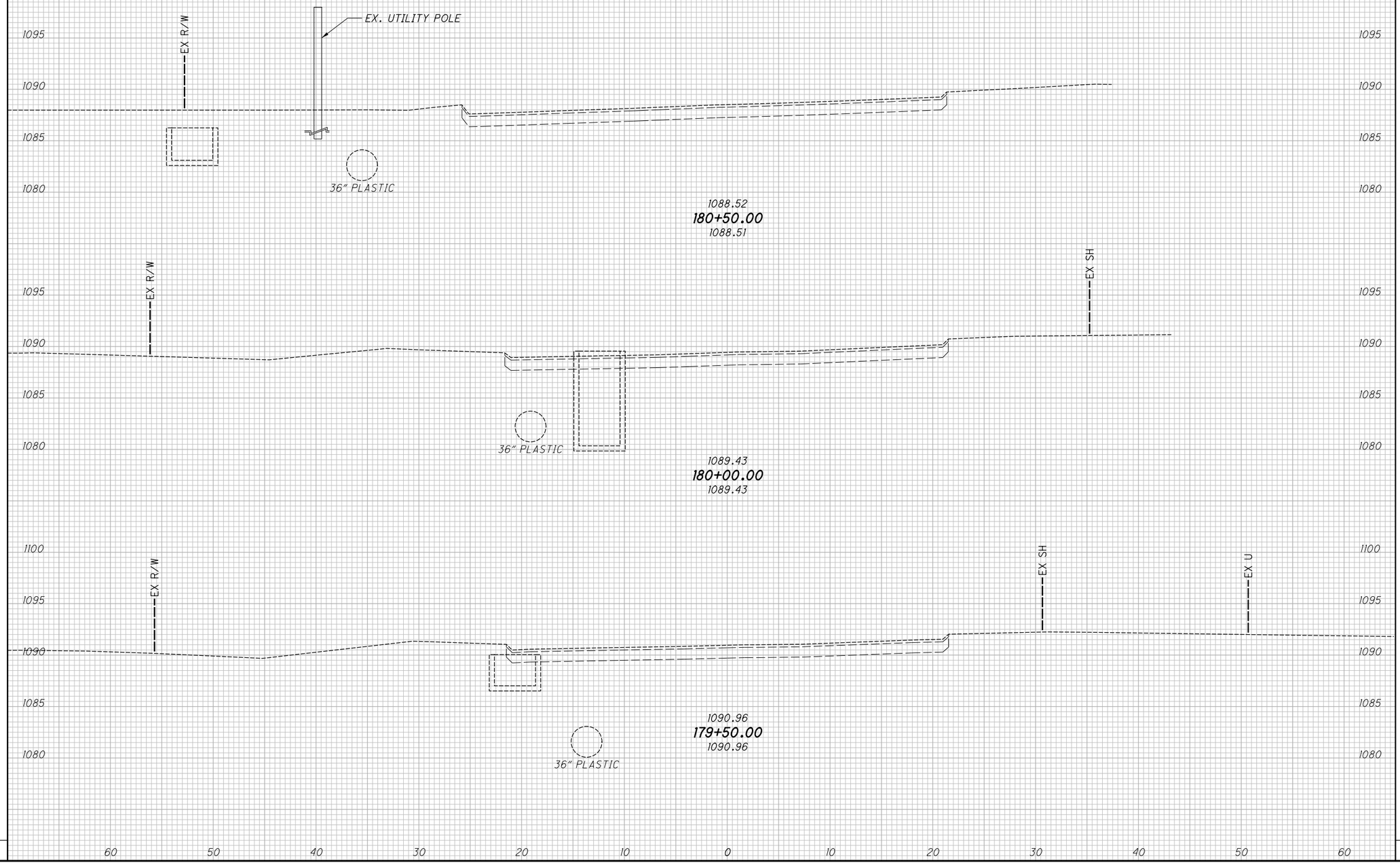
SEEDING	
END WIDTH	SQ. YDS.

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED KRM
CHECKED RAK



CROSS SECTIONS S.R. 241
STA. 179+50 TO STA. 180+50

STA-241-9.71

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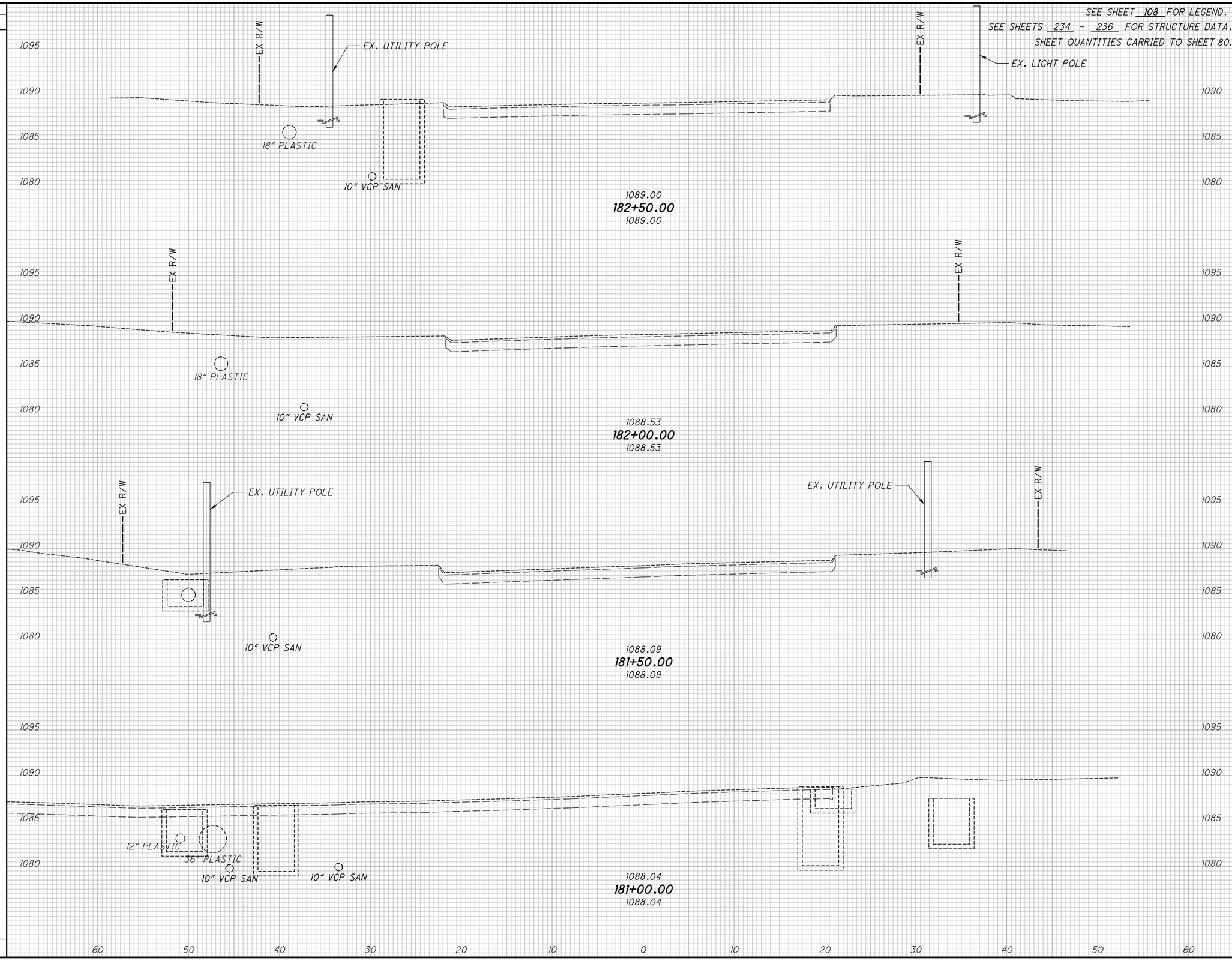
SEEDING

END WIDTH	SQ. YDS.

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

END AREA		VOLUME	
CUT	FILL	CUT	FILL

CALCULATED KRM
CHECKED RAK



CROSS SECTIONS S.R. 241
STA. 181+00 TO STA. 182+50

STA-241-9.71

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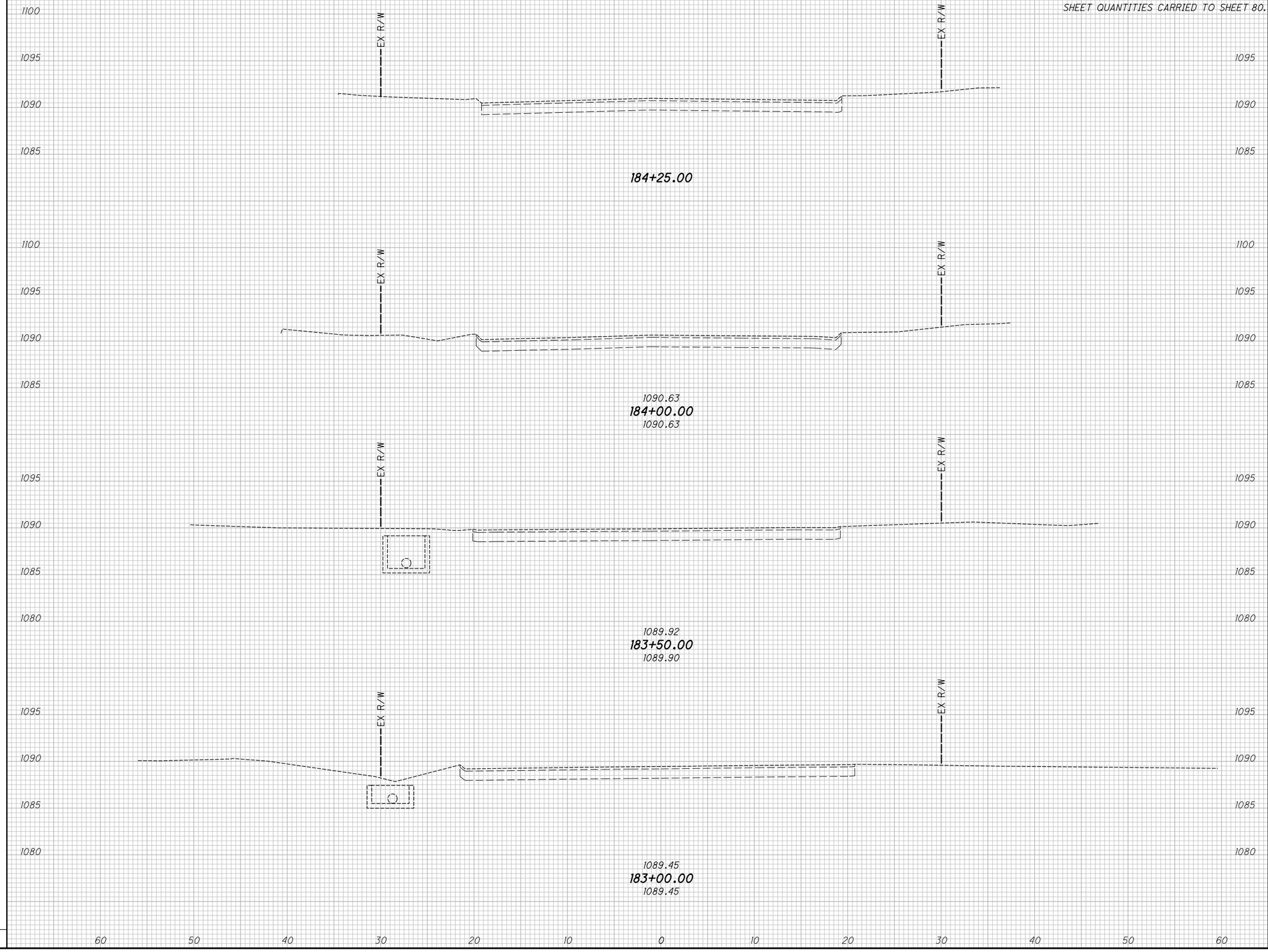
SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 - 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL

VOLUME	
CUT	FILL

CALCULATED KRM
CHECKED RAK



CROSS SECTIONS S.R. 241
STA. 183+00 TO STA. 184+25

STA-241-9.71

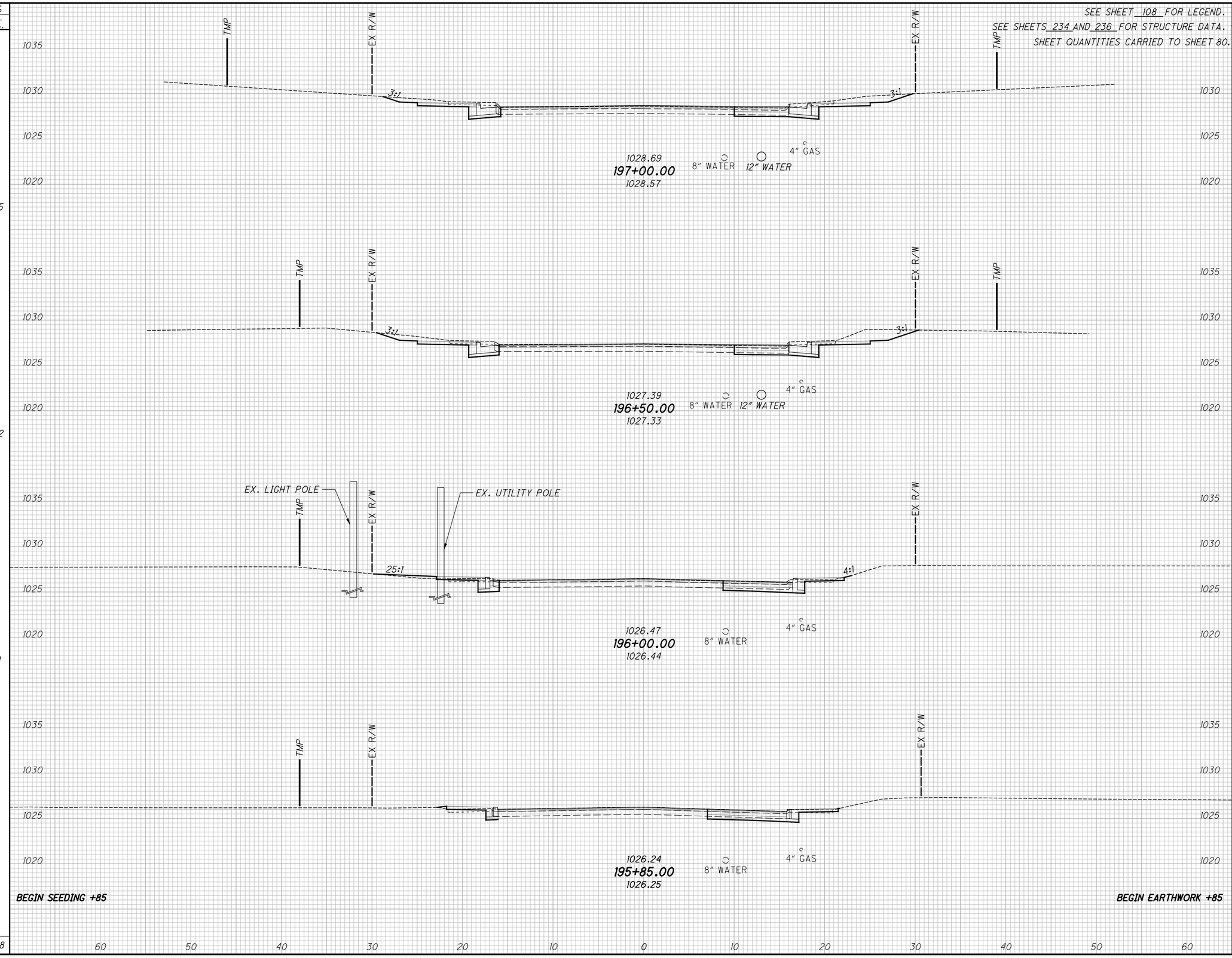
159
395

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SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 AND 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
36	175	26	0	50	0
27	142	28	0	38	2
24	41	13	2	7	1
25		13	2		
112	358	80	4	95	3



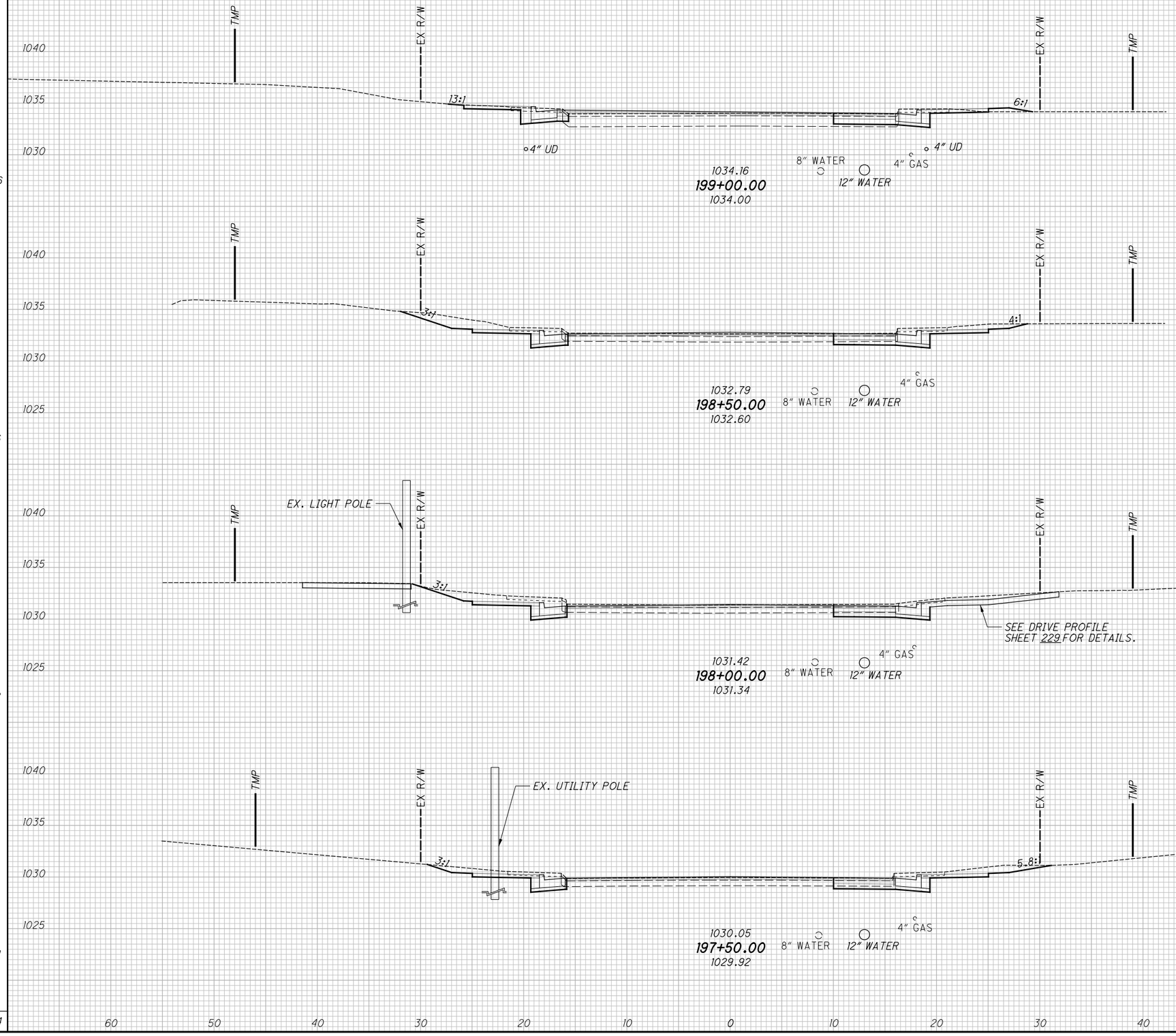
CALCULATED KRM
CHECKED RAK

CROSS SECTIONS LAKE AV. NE
STA. 195+85 TO STA. 197+00

STA-241-9.71

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 AND 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.

SEEDING END WIDTH	SEEDING SQ. YDS.	END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
37	206	18	3	44	3
37	186	30	0	59	0
30	178	34	0	56	0
34	194	27	0	49	0
138	764	109	3	208	3



CALCULATED KRM
CHECKED RAK

CROSS SECTIONS LAKE AV. NE
STA. 197+50 TO STA. 199+00

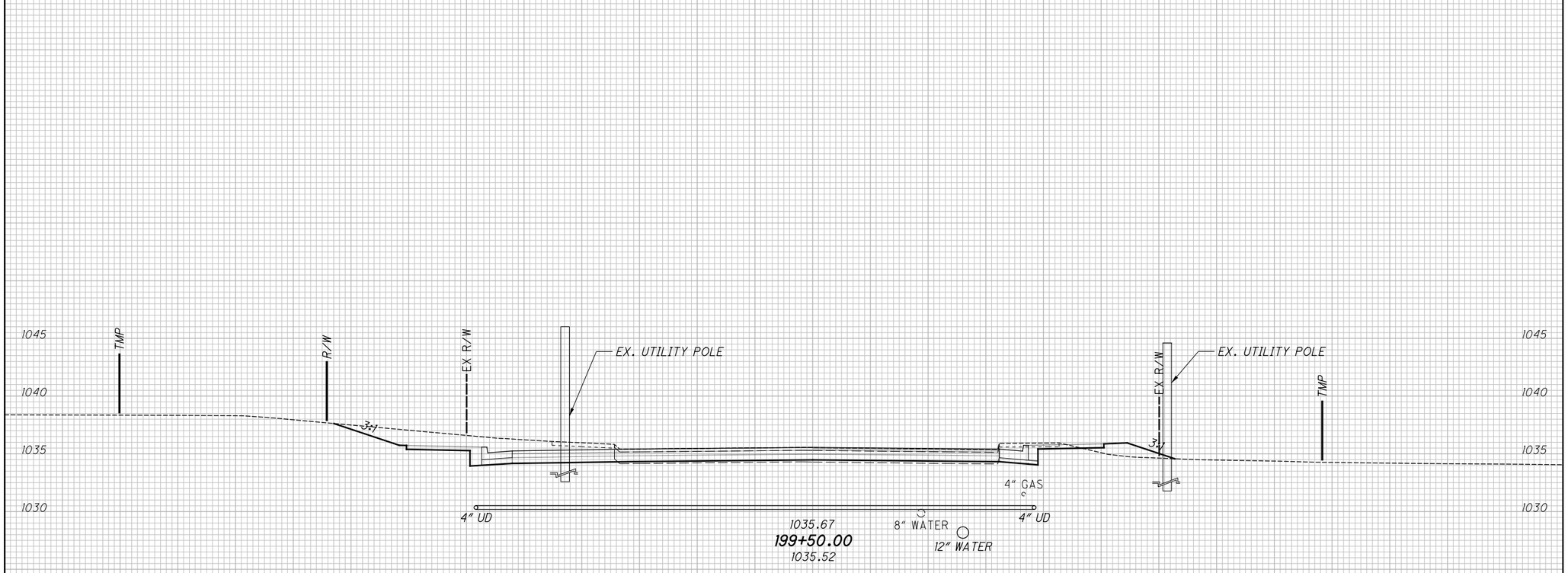
STA-241-9.71

161
395

P:\3000_3499\3062170090_STA-241-97I_Wales_Road\ODOT\00471L_STA-241-97I\Design\Roadway\Sheets\00471L_XS002.dgn 4/7/2021 7:43:31 AM khillegass

SEEDING	
END WIDTH	SQ. YDS.
44	225

SEE SHEET 108 FOR LEGEND.
SEE SHEETS 234 AND 236 FOR STRUCTURE DATA.
SHEET QUANTITIES CARRIED TO SHEET 80.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
76	11	87	13

CALCULATED KRM
CHECKED RAK

CROSS SECTIONS LAKE AV. NE
STA. 199+50

STA-241-9.71

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SUPERELEVATION TABLE

PI STATION = 150+52.07 | Dc = 16° 02′ 41″

LEFT SIDE					CENTERLINE CONTROL		RIGHT SIDE					
EDGE ELEVATION	TRANSITION RATE	*ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	*ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	REMARKS
1043.11	↑	-0.55	-0.0250	22.00	148+06.24	1043.66	22.00	-0.0200	-0.44		1043.22	N.C
1043.70		-0.44	-0.0200	22.00	148+25.00	1044.14	22.00	-0.0200	-0.44		1043.70	
1044.45		-0.29	-0.0134	22.00	148+50.00	1044.74	22.00	-0.0200	-0.44		1044.30	
1045.20		-0.15	-0.0068	22.00	148+75.00	1045.35	22.00	-0.0200	-0.44		1044.91	
1045.99	172:1	-0.00	-0.0002	22.00	149+00.00	1045.99	22.00	-0.0200	-0.44		1045.55	
1046.01		0.00	0.0000	22.00	149+00.84	1046.01	22.00	-0.0200	-0.44		1045.57	1/2 LEVEL
1046.86		+0.14	+0.0064	22.00	149+25.00	1046.72	22.00	-0.0200	-0.44		1046.28	
1047.83		+0.29	+0.0130	22.00	149+50.00	1047.54	22.00	-0.0200	-0.44		1047.10	
1048.89		+0.43	+0.0196	22.00	149+75.00	1048.46	22.00	-0.0200	-0.44		1048.02	
1048.96	↓	+0.44	+0.0200	22.00	149+76.52	1048.52	22.00	-0.0200	-0.44		1048.08	R.C.
1049.92		+0.44	+0.0200	22.00	150+00.00	1049.48	22.00	-0.0200	-0.44		1049.04	
1051.03		+0.44	+0.0200	22.00	150+25.00	1050.59	22.00	-0.0200	-0.44		1050.15	
1052.24		+0.44	+0.0200	22.00	150+50.00	1051.80	22.00	-0.0200	-0.44		1051.36	
1053.55		+0.44	+0.0200	22.00	150+75.00	1053.11	22.00	-0.0200	-0.44		1052.67	
1054.92		+0.44	+0.0200	22.00	151+00.00	1054.48	22.00	-0.0200	-0.44		1054.04	
1056.29		+0.44	+0.0200	22.00	151+25.00	1055.85	22.00	-0.0200	-0.44		1055.41	
1056.31	↑	+0.44	+0.0200	22.00	151+25.43	1055.87	22.00	-0.0200	-0.44	172:1	1055.43	R.C.
1057.05		+0.35	+0.0160	22.00	151+40.57	1056.70	22.00	-0.0160	-0.35	↓	1056.35	
1057.52		+0.30	+0.0135	22.00	151+50.00	1057.22	22.00	-0.0160	-0.35		1056.87	
1058.70		+0.15	+0.0069	22.00	151+75.00	1058.55	22.00	-0.0160	-0.35		1058.20	
1059.90	172:1	+0.01	+0.0003	22.00	152+00.00	1059.89	22.00	-0.0160	-0.35		1059.54	
1059.95		0.00	0.0000	22.00	152+01.11	1059.95	22.00	-0.0160	-0.35		1059.60	1/2 LEVEL
1061.08		-0.14	-0.0063	22.00	152+25.00	1061.22	22.00	-0.0160	-0.35		1060.87	
1062.27		-0.28	-0.0129	22.00	152+50.00	1062.55	22.00	-0.0160	-0.35		1062.20	
1063.45		-0.43	-0.0195	22.00	152+75.00	1063.88	22.00	-0.0160	-0.35		1063.53	
1063.54	↓	-0.44	-0.0200	22.00	152+76.79	1063.98	22.00	-0.0160	-0.35		1063.63	N.C.

* NEGATIVE CORRECTIONS MEANING BELOW PROFILE GRADE, POSITIVE CORRECTIONS MEANING ABOVE PROFILE GRADE.

CALCULATED KRM
CHECKED RAK

SUPERELEVATION TABLE

STA-241-9.71

P:\3000_3499\3062170090_STA-241-97L_Wales_Road\ODOT\100471L_STA-241-97L\Design\Roadway\Sheets\100471L_GE001.dgn 4/7/2021 7:43:31 AM khillegass

PAVEMENT ELEVATION AND CROSS SLOPE TRANSITION TABLES

LEFT SIDE					CENTERLINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	*ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	*ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
1019.38		INTERSECTION			100+26.22	1019.38	INTERSECTION					MEET EXISTING
1019.16		-0.32	-0.0200	16.00	100+44.42	1019.48	INTERSECTION					
1019.18		-0.32	-0.0200	16.00	100+50.00	1019.50	INTERSECTION					
1019.23		-0.32	-0.0200	16.00	100+75.00	1019.55	INTERSECTION					
1019.28		-0.32	-0.0200	16.00	101+00.00	1019.60	INTERSECTION					
1019.32	35↑1	-0.29	-0.0180	16.00	101+14.35	1019.61	16.00	-0.0200	-0.32		1019.29	
1019.35	27↑1	-0.26	-0.0160	16.00	101+25.00	1019.61	16.00	-0.0200	-0.32		1019.29	
1019.24		-0.32	-0.0200	16.00	101+50.00	1019.56	16.00	-0.0200	-0.32		1019.24	
1019.13		-0.32	-0.0200	16.00	101+75.00	1019.45	16.00	-0.0200	-0.32		1019.13	
1018.97		-0.32	-0.0200	16.00	102+00.00	1019.29	16.00	-0.0200	-0.32		1018.97	
1018.76		-0.32	-0.0200	16.00	102+25.00	1019.08	16.00	-0.0200	-0.32		1018.76	
1018.53		-0.32	-0.0200	16.00	102+50.00	1018.85	16.00	-0.0200	-0.32		1018.53	
1018.33		-0.32	-0.0200	16.00	102+75.00	1018.65	16.00	-0.0200	-0.32		1018.33	
1018.15		-0.32	-0.0200	16.00	103+00.00	1018.47	16.00	-0.0200	-0.32		1018.15	
1017.98		-0.32	-0.0200	16.00	103+25.00	1018.30	16.00	-0.0200	-0.32		1017.98	
1017.80		-0.32	-0.0200	16.00	103+50.00	1018.12	16.00	-0.0200	-0.32		1017.80	
1017.63		-0.32	-0.0200	16.00	103+75.00	1017.95	16.00	-0.0200	-0.32		1017.63	
1017.45		-0.32	-0.0200	16.00	104+00.00	1017.77	16.00	-0.0200	-0.32		1017.45	
1017.28		-0.32	-0.0200	16.00	104+25.00	1017.60	16.00	-0.0200	-0.32		1017.28	
1017.10		-0.32	-0.0200	16.00	104+50.00	1017.42	16.00	-0.0200	-0.32		1017.10	
1017.01		-0.32	-0.0200	16.00	104+75.00	1017.33	16.00	-0.0200	-0.32		1017.01	
1017.09		-0.32	-0.0200	16.00	105+00.00	1017.41	16.00	-0.0200	-0.32		1017.09	
1017.34		-0.32	-0.0200	16.00	105+25.00	1017.66	16.00	-0.0200	-0.32		1017.34	
1017.77		-0.32	-0.0200	16.00	105+50.00	1018.09	16.00	-0.0200	-0.32		1017.77	
1018.35		-0.32	-0.0200	16.00	105+75.00	1018.67	16.00	-0.0200	-0.32		1018.35	
1019.00		-0.32	-0.0200	16.00	106+00.00	1019.32	16.00	-0.0200	-0.32		1019.00	
1019.64		-0.32	-0.0200	16.00	106+25.00	1019.96	16.00	-0.0200	-0.32		1019.64	
1020.28		-0.32	-0.0200	16.00	106+50.00	1020.60	16.00	-0.0200	-0.32		1020.28	
1020.92		-0.32	-0.0200	16.00	106+75.00	1021.24	16.00	-0.0200	-0.32		1020.92	
1021.57		-0.32	-0.0200	16.00	107+00.00	1021.89	16.00	-0.0200	-0.32		1021.57	
1022.21		-0.32	-0.0200	16.00	107+25.00	1022.53	16.00	-0.0200	-0.32		1022.21	
1022.80		-0.32	-0.0200	16.00	107+50.00	1023.12	16.00	-0.0200	-0.32		1022.80	
1023.28		-0.32	-0.0200	16.00	107+75.00	1023.60	16.00	-0.0200	-0.32		1023.28	
1023.66		-0.32	-0.0200	16.00	108+00.00	1023.98	16.00	-0.0200	-0.32		1023.66	
1023.92		-0.32	-0.0200	16.00	108+25.00	1024.24	16.00	-0.0200	-0.32		1023.92	
1024.09		-0.32	-0.0200	16.00	108+50.00	1024.41	16.00	-0.0200	-0.32		1024.09	
1024.22		-0.32	-0.0200	16.00	108+75.00	1024.54	16.00	-0.0200	-0.32		1024.22	
1024.35		-0.32	-0.0200	16.00	109+00.00	1024.67	16.00	-0.0200	-0.32		1024.35	
1024.48		-0.32	-0.0200	16.00	109+25.00	1024.80	16.00	-0.0200	-0.32		1024.48	
1024.61		-0.32	-0.0200	16.00	109+50.00	1024.93	16.00	-0.0200	-0.32		1024.61	
1024.72	172↑1	-0.32	-0.0200	16.00	109+71.29	1025.04	16.00	-0.0200	-0.32		1024.72	
1024.72		-0.34	-0.0213	16.00	109+75.00	1025.06	16.00	-0.0200	-0.32		1024.74	
1024.70		-0.48	-0.0300	16.00	109+98.81	1025.18	16.00	-0.0200	-0.32		1024.86	
1024.71	172↑1	-0.47	-0.0296	16.00	110+00.00	1025.19	16.00	-0.0200	-0.32		1024.87	
1024.83		-0.40	-0.0250	16.00	110+12.57	1025.23	16.00	-0.0200	-0.32		1024.91	
1024.87		-0.40	-0.0250	16.00	110+25.00	1025.27	16.00	-0.0200	-0.32		1024.95	
1024.95		-0.40	-0.0250	16.00	110+50.00	1025.35	16.00	-0.0200	-0.32		1025.03	
1024.99		-0.40	-0.0250	16.00	110+60.94	1025.39	16.00	-0.0200	-0.32		1025.07	
1024.99		-0.40	-0.0250	16.00	110+61.01	1025.39	16.00	-0.0200	-0.32		1025.07	
1025.04		-0.40	-0.0250	16.00	110+74.70	1025.44	16.00	-0.0250	-0.40	172↑1	1025.04	
1025.04		-0.40	-0.0250	16.00	110+75.00	1025.44	16.00	-0.0251	-0.40		1025.03	
1025.08		-0.40	-0.0250	16.00	110+88.53	1025.48	16.00	-0.0300	-0.48		1025.00	
1025.12		-0.40	-0.0250	16.00	111+00.00	1025.52	16.00	-0.0300	-0.48		1025.04	
1025.20		-0.40	-0.0250	16.00	111+25.00	1025.60	16.00	-0.0300	-0.48		1025.12	
1025.28		-0.40	-0.0250	16.00	111+50.00	1025.68	16.00	-0.0300	-0.48		1025.20	
1025.37		-0.40	-0.0250	16.00	111+75.00	1025.77	16.00	-0.0300	-0.48		1025.29	
1025.45		-0.40	-0.0250	16.00	112+00.00	1025.85	16.00	-0.0300	-0.48		1025.37	

LEFT SIDE					CENTERLINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	*ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	*ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
1025.46		-0.40	-0.0250	16.00	112+02.73	1025.86	16.00	-0.0300	-0.48		1025.38	
1025.53	172↑1	-0.40	-0.0250	16.00	112+16.42	1025.93	16.00	-0.0250	-0.40		1025.53	
1025.62		-0.35	-0.0219	16.00	112+25.00	1025.97	16.00	-0.0219	-0.35	172↑1	1025.62	
1025.68		-0.32	-0.0200	16.00	112+30.18	1026.00	16.00	-0.0200	-0.32		1025.68	
1025.68		-0.32	-0.0200	16.00	112+30.25	1026.00	16.00	-0.0200	-0.32		1025.68	
1025.78		-0.32	-0.0200	16.00	112+50.00	1026.10	16.00	-0.0200	-0.32		1025.78	
1025.90		-0.32	-0.0200	16.00	112+75.00	1026.22	16.00	-0.0200	-0.32		1025.90	
1026.03		-0.32	-0.0200	16.00	113+00.00	1026.35	16.00	-0.0200	-0.32		1026.03	
1026.15		-0.32	-0.0200	16.00	113+25.00	1026.47	16.00	-0.0200	-0.32		1026.15	
1026.28		-0.32	-0.0200	16.00	113+50.00	1026.60	16.00	-0.0200	-0.32		1026.28	
1026.40		-0.32	-0.0200	16.00	113+75.00	1026.72	16.00	-0.0200	-0.32		1026.40	
1026.53		-0.32	-0.0200	16.00	114+00.00	1026.85	16.00	-0.0200	-0.32		1026.53	
1026.65		-0.32	-0.0200	16.00	114+25.00	1026.97	16.00	-0.0200	-0.32		1026.65	
1026.78		-0.32	-0.0200	16.00	114+50.00	1027.10	16.00	-0.0200	-0.32		1026.78	
1026.90		-0.32	-0.0200	16.00	114+75.00	1027.22	16.00	-0.0200	-0.32		1026.90	
1027.03		-0.32	-0.0200	16.00	115+00.00	1027.35	16.00	-0.0200	-0.32		1027.03	
1027.08		-0.32	-0.0200	16.00	115+10.72	1027.40	16.00	-0.0200	-0.32	172↑1	1027.08	
1027.15		-0.32	-0.0200	16.00	115+24.48	1027.47	16.00	-0.0250	-0.40		1027.07	
1027.15		-0.32	-0.0200	16.00	115+25.00	1027.47	16.00	-0.0250	-0.40		1027.07	
1027.28		-0.32	-0.0200	16.00	115+50.00	1027.60	16.00	-0.0250	-0.40		1027.20	
1027.40		-0.32	-0.0200	16.00	115+75.00	1027.72	16.00	-0.0250	-0.40		1027.32	
1027.53		-0.32	-0.0200	16.00	116+00.00	1027.85	16.00	-0.0250	-0.40		1027.45	
1027.65		-0.32	-0.0200	16.00	116+25.00	1027.97	16.00	-0.0250	-0.40		1027.57	
1027.78		-0.32	-0.0200	16.00	116+50.00	1028.10	16.00	-0.0250	-0.40		1027.70	
1027.87		-0.32	-0.0200	16.00	116+68.28	1028.19	16.00	-0.0250	-0.40	172↑1	1027.79	
1027.90		-0.32	-0.0200	16.00	116+75.00	1028.22	16.00	-0.0226	-0.36		1027.85	
1027.92		-0.32	-0.0200	16.00	116+82.04	1028.24	16.00	-0.0200	-0.32		1027.92	
1027.98		-0.32	-0.0200	16.00	117+00.00	1028.30	16.00	-0.0200	-0.32		1027.98	
1028.07		-0.32	-0.0200	16.00	117+25.00	1028.39	16.00	-0.0200	-0.32		1028.07	
1028.16		-0.32	-0.0200	16.00	117+50.00	1028.48	16.00	-0.0200	-0.32		1028.16	
1028.25		-0.32	-0.0200	16.00	117+75.00	1028.57	16.00	-0.0200	-0.32		1028.25	
1028.33		-0.32	-0.0200	16.00	118+00.00	1028.65	16.00	-0.0200	-0.32		1028.33	
1028.42		-0.32	-0.0200	16.00	118+25.00	1028.74	16.00	-0.0200	-0.32		1028.42	
1028.51		-0.32	-0.0200	16.00	118+50.00	1028.83	16.00	-0.0200	-0.32		1028.51	
1028.60		-0.32	-0.0200	16.00	118+75.00	1028.92	16.00	-0.0200	-0.32		1028.60	
1028.68		-0.32	-0.0200	16.00	119+00.00	1029.00	16.00	-0.0200	-0.32		1028.68	
1028.77		-0.32	-0.0200	16.00	119+25.00	1029.09	16.00	-0.0200	-0.32		1028.77	
1028.86		-0.32	-0.0200	16.00	119+50.00	1029.18	16.00	-0.0200	-0.32		1028.86	
1028.90	592↑1	-0.32	-0.0200	16.00	119+61.15	1029.22	16.00	-0.0200	-0.32		1028.90	
1028.92		-0.35	-0.0216	16.00	119+75.00	1029.27	16.00	-0.0216	-0.35	592↑1	1028.92	
1028.96		-0.39	-0.0244	16.00	120+00.00	1029.35	16.00	-0.0244	-0.39		1028.96	
1029.01		-0.44	-0.0272	16.00	120+25.00	1029.44	16.00	-0.0272	-0.44		1029.01	
1029.05		-0.48	-0.0300	16.00	120+50.00	1029.53	16.00	-0.0300	-0.48		1029.05	
1029.14		-0.48	-0.0300	16.00	120+75.00	1029.62	16.00	-0.0300	-0.48		1029.14	
1029.22		-0.48	-0.0300	16.00	121+00.00	1029.70	16.00	-0.0300	-0.48		1029.22	
1029.31		-0.48	-0.0300	16.00	121+25.00	1029.79	16.00	-0.0300	-0.48		1029.31	
1029.40		-0.48	-0.0300	16.00	121+50.00	1029.88	16.00	-0.0300	-0.48		1029.40	

CALCULATED KRM CHECKED RAK

PAVEMENT ELEVATION AND CROSS SLOPE TRANSITION TABLES

STA-241-9.71

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PAVEMENT ELEVATION AND CROSS SLOPE TRANSITION TABLES

LEFT SIDE					CENTERLINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	*ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	*ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
1029.49		-0.48	-0.0300	16.00	121+75.00	1029.97	16.00	-0.0300	-0.48		1029.49	
1029.57		-0.48	-0.0300	16.00	122+00.00	1030.05	16.00	-0.0300	-0.48		1029.57	
1029.66		-0.48	-0.0300	16.00	122+25.00	1030.14	16.00	-0.0300	-0.48		1029.66	
1029.75		-0.48	-0.0300	16.00	122+50.00	1030.23	16.00	-0.0300	-0.48		1029.75	
1029.84		-0.48	-0.0300	16.00	122+75.00	1030.32	16.00	-0.0300	-0.48		1029.84	
1029.92		-0.48	-0.0300	16.00	123+00.00	1030.40	16.00	-0.0300	-0.48		1029.92	
1030.01		-0.48	-0.0300	16.00	123+25.00	1030.49	16.00	-0.0300	-0.48		1030.01	
1030.10		-0.48	-0.0300	16.00	123+50.00	1030.58	16.00	-0.0300	-0.48		1030.10	
1030.19		-0.48	-0.0300	16.00	123+75.00	1030.67	16.00	-0.0300	-0.48		1030.19	
1030.29		-0.48	-0.0300	16.00	124+00.00	1030.77	16.00	-0.0300	-0.48		1030.29	
1030.40		-0.48	-0.0300	16.00	124+25.00	1030.88	16.00	-0.0300	-0.48		1030.40	
1030.50		-0.48	-0.0300	16.00	124+50.00	1030.98	16.00	-0.0300	-0.48		1030.50	
1030.59		-0.48	-0.0300	16.00	124+75.00	1031.07	16.00	-0.0300	-0.48		1030.59	
1030.63		-0.48	-0.0300	16.00	125+00.00	1031.11	16.00	-0.0300	-0.48		1030.63	
1030.61		-0.48	-0.0300	16.00	125+25.00	1031.09	16.00	-0.0300	-0.48		1030.61	
1030.54		-0.48	-0.0300	16.00	125+50.00	1031.02	16.00	-0.0300	-0.48		1030.54	
1030.41		-0.48	-0.0300	16.00	125+75.00	1030.89	16.00	-0.0300	-0.48		1030.41	
1030.26		-0.48	-0.0300	16.00	126+00.00	1030.74	16.00	-0.0300	-0.48		1030.26	
1030.11		-0.48	-0.0300	16.00	126+25.00	1030.59	16.00	-0.0300	-0.48		1030.11	
1029.95		-0.48	-0.0300	16.00	126+50.00	1030.43	16.00	-0.0300	-0.48		1029.95	
1029.80		-0.48	-0.0300	16.00	126+75.00	1030.28	16.00	-0.0300	-0.48		1029.80	
1029.65		-0.48	-0.0300	16.00	127+00.00	1030.13	16.00	-0.0300	-0.48		1029.65	
1029.50		-0.48	-0.0300	16.00	127+25.00	1029.98	16.00	-0.0300	-0.48		1029.50	
1029.34		-0.48	-0.0300	16.00	127+50.00	1029.82	16.00	-0.0300	-0.48		1029.34	
1029.19		-0.48	-0.0300	16.00	127+75.00	1029.67	16.00	-0.0300	-0.48		1029.19	
1029.04		-0.48	-0.0300	16.00	128+00.00	1029.52	16.00	-0.0300	-0.48		1029.04	
1028.89		-0.48	-0.0300	16.00	128+25.00	1029.37	16.00	-0.0300	-0.48		1028.89	
1028.73		-0.48	-0.0300	16.00	128+50.00	1029.21	16.00	-0.0300	-0.48		1028.73	
1028.58		-0.48	-0.0300	16.00	128+75.00	1029.06	16.00	-0.0300	-0.48		1028.58	
1028.43		-0.48	-0.0300	16.00	129+00.00	1028.91	16.00	-0.0300	-0.48		1028.43	
1028.28		-0.48	-0.0300	16.00	129+25.00	1028.76	16.00	-0.0300	-0.48		1028.28	
1028.12		-0.48	-0.0300	16.00	129+50.00	1028.60	16.00	-0.0300	-0.48		1028.12	
1027.97		-0.48	-0.0300	16.00	129+75.00	1028.45	16.00	-0.0300	-0.48		1027.97	
1027.82		-0.48	-0.0300	16.00	130+00.00	1028.30	16.00	-0.0300	-0.48		1027.82	
1027.67		-0.48	-0.0300	16.00	130+25.00	1028.15	16.00	-0.0300	-0.48		1027.67	
1027.53		-0.48	-0.0300	16.00	130+50.00	1028.01	16.00	-0.0300	-0.48		1027.53	
1027.38		-0.48	-0.0300	16.00	130+75.00	1027.86	16.00	-0.0300	-0.48		1027.38	
1027.24		-0.48	-0.0300	16.00	131+00.00	1027.72	16.00	-0.0300	-0.48		1027.24	
1027.09		-0.48	-0.0300	16.00	131+25.00	1027.57	16.00	-0.0300	-0.48		1027.09	
1026.95		-0.48	-0.0300	16.00	131+50.00	1027.43	16.00	-0.0300	-0.48		1026.95	
1026.80		-0.48	-0.0300	16.00	131+75.00	1027.28	16.00	-0.0300	-0.48		1026.80	
1026.66		-0.48	-0.0300	16.00	132+00.00	1027.14	16.00	-0.0300	-0.48		1026.66	
1026.58		-0.48	-0.0300	16.00	132+25.00	1027.06	16.00	-0.0300	-0.48		1026.58	
1026.49		-0.48	-0.0300	16.00	132+50.00	1026.97	16.00	-0.0300	-0.48		1026.49	
1026.41		-0.48	-0.0300	16.00	132+75.00	1026.89	16.00	-0.0300	-0.48		1026.41	
1026.25		-0.48	-0.0300	16.00	133+25.00	1026.73	16.00	-0.0300	-0.48		1026.25	
1026.16		-0.48	-0.0300	16.00	133+50.00	1026.64	16.00	-0.0300	-0.48		1026.16	
1026.08		-0.48	-0.0300	16.00	133+75.00	1026.56	16.00	-0.0300	-0.48		1026.08	
1026.00		-0.48	-0.0300	16.00	134+00.00	1026.48	16.00	-0.0300	-0.48		1026.00	
1025.92		-0.48	-0.0300	16.00	134+22.48	1026.40	16.00	-0.0300	-0.48	1:72	1025.92	
1025.91		-0.48	-0.0300	16.00	134+25.00	1026.39	16.00	-0.0291	-0.47		1025.92	
1025.81		-0.48	-0.0300	16.00	134+50.00	1026.29	16.00	-0.0200	-0.32		1025.97	
1025.72		-0.48	-0.0300	16.00	134+75.00	1026.20	16.00	-0.0200	-0.32		1025.88	
1025.63		-0.48	-0.0300	16.00	135+00.00	1026.11	16.00	-0.0200	-0.32		1025.79	
1025.54		-0.48	-0.0300	16.00	135+25.00	1026.02	16.00	-0.0200	-0.32		1025.70	
1025.44		-0.48	-0.0300	16.00	135+50.00	1025.92	16.00	-0.0200	-0.32		1025.60	
1025.35		-0.48	-0.0300	16.00	135+75.00	1025.83	16.00	-0.0200	-0.32		1025.51	

LEFT SIDE					CENTERLINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	*ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	*ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
1025.26		-0.48	-0.0300	16.00	136+00.00	1025.74	16.00	-0.0200	-0.32		1025.42	
1025.17		-0.48	-0.0300	16.00	136+25.00	1025.65	16.00	-0.0291	-0.47	1:72	1025.18	
1025.16		-0.48	-0.0300	16.00	136+27.52	1025.64	16.00	-0.0300	-0.48		1025.16	
1025.07		-0.48	-0.0300	16.00	136+50.00	1025.55	16.00	-0.0300	-0.48		1025.07	
1024.98		-0.48	-0.0300	16.00	136+75.00	1025.46	16.00	-0.0300	-0.48		1024.98	
1024.89		-0.48	-0.0300	16.00	137+00.00	1025.37	16.00	-0.0300	-0.48		1024.89	
1024.87	1:72	-0.35	-0.0218	16.00	137+22.48	1025.22	16.00	-0.0300	-0.48		1024.74	
1024.87		-0.33	-0.0209	16.00	137+25.00	1025.20	16.00	-0.0291	-0.47	1:72	1024.74	
1024.86		-0.32	-0.0200	16.00	137+27.52	1025.18	16.00	-0.0282	-0.45		1024.73	
1024.71		-0.32	-0.0200	16.00	137+50.00	1025.03	16.00	-0.0200	-0.32		1024.71	
1024.57		-0.32	-0.0200	16.00	137+75.00	1024.89	16.00	-0.0200	-0.32		1024.57	
1024.46		-0.32	-0.0200	16.00	138+00.00	1024.78	16.00	-0.0200	-0.32		1024.46	
1024.40		-0.32	-0.0200	16.00	138+25.00	1024.72	16.00	-0.0200	-0.32		1024.40	
1024.38		-0.32	-0.0200	16.00	138+50.00	1024.70	16.00	-0.0200	-0.32		1024.38	
1024.38		-0.32	-0.0200	16.00	138+58.96	1024.70	16.00	-0.0200	-0.32		1024.38	
1024.31	1:72	-0.41	-0.0258	16.00	138+75.00	1024.72	16.00	-0.0200	-0.32		1024.40	
1024.27		-0.48	-0.0300	16.00	138+86.48	1024.75	16.00	-0.0200	-0.32		1024.43	
1024.31		-0.48	-0.0300	16.00	139+00.00	1024.79	16.00	-0.0200	-0.32		1024.47	
1024.41		-0.48	-0.0300	16.00	139+25.00	1024.89	16.00	-0.0200	-0.32		1024.57	
1024.56		-0.48	-0.0300	16.00	139+50.00	1025.04	16.00	-0.0200	-0.32		1024.72	
1024.73		-0.48	-0.0300	16.00	139+75.00	1025.21	16.00	-0.0200	-0.32		1024.89	
1024.90		-0.48	-0.0300	16.00	140+00.00	1025.38	16.00	-0.0200	-0.32		1025.06	
1025.07		-0.48	-0.0300	16.00	140+25.00	1025.55	16.00	-0.0200	-0.32		1025.23	
1025.24		-0.48	-0.0300	16.00	140+50.00	1025.72	16.00	-0.0200	-0.32		1025.40	
1025.41		-0.48	-0.0300	16.00	140+75.00	1025.89	16.00	-0.0200	-0.32		1025.57	
1025.58		-0.48	-0.0300	16.00	141+00.00	1026.06	16.00	-0.0200	-0.32		1025.74	
1025.73		-0.40	-0.0250	16.00	141+13.76	1026.13	16.00	-0.0200	-0.32		1025.81	
1025.79		-0.39	-0.0246	16.00	141+25.00	1026.19	16.00	-0.0200	-0.32		1025.87	
1025.93	1:72	-0.38	-0.0239	16.00	141+50.00	1026.31	16.00	-0.0200	-0.32		1025.99	
1026.07		-0.37	-0.0231	16.00	141+75.00	1026.44	16.00	-0.0200	-0.32		1026.12	
1026.19		-0.36	-0.0225	16.00	141+93.12	1026.55	16.00	-0.0200	-0.32		1026.23	
1026.28		-0.32	-0.0200	16.00	142+00.00	1026.60	16.00	-0.0200	-0.32		1026.28	
1026.51		-0.32	-0.0200	16.00	142+25.00	1026.83	16.00	-0.0200	-0.32		1026.51	
1026.81		-0.32	-0.0200	16.00	142+50.00	1027.13	16.00	-0.0200	-0.32		1026.81	
1027.19		-0.32	-0.0200	16.00	142+75.00	1027.51	16.00	-0.0200	-0.32		1027.19	
1027.63		-0.32	-0.0200	16.00	143+00.00	1027.95	16.00	-0.0200	-0.32		1027.63	
1028.15		-0.32	-0.0200	16.00	143+25.00	1028.47	16.00	-0.0200	-0.32		1028.15	
1028.74		-0.32	-0.0200	16.00	143+50.00	1029.06	16.00	-0.0200	-0.32		1028.74	
1030.13		-0.32	-0.0200	16.00	144+00.00	1030.45	16.00	-0.0200	-0.32		1030.13	
1030.93		-0.32	-0.0200	16.00	144+25.00	1031.25	16.00	-0.0200	-0.32		1030.93	
1031.77		-0.32	-0.0200	16.00	144+50.00	1032.09	16.00	-0.0200	-0.32		1031.77	
1032.61		-0.32	-0.0200	16.00	144+75.00	1032.93	16.00	-0.0200	-0.32		1032.61	
1033.44		-0.32	-0.0200	16.00	145+00.00	1033.76	16.00	-0.0200	-0.32		1033.44	
1034.28		-0.32	-0.0200	16.00	145+25.00	1034.60	16.00	-0.0200	-0.32		1034.28	
1035.12		-0.32	-0.0200	16.00	145+50.00	1035.44	16.00	-0.0200	-0.32		1035.12	
1035.96		-0.32	-0.0200	16.00	145+75.00	1036.28	16.00	-0.0200	-0.32		1035.96	
1036.79		-0.32	-0.0200	16.00	146+00.00	1037.11	16.00	-0.0200	-0.32		1036.79	
1037.63		-0.32	-0.0200	16.00	146+25.00	1037.95	16.00	-0.0200	-0.32		1037.63	
1038.47		-0.32	-0.0200	16.00	146+50.00	1038.79	16.00	-0.0200	-0.32		1038.47	

CALCULATED KRM CHECKED RAK

PAVEMENT ELEVATION AND CROSS SLOPE TRANSITION TABLES

STA-241-9.71

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PAVEMENT ELEVATION AND CROSS SLOPE TRANSITION TABLES

LEFT SIDE					CENTERLINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	*ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	*ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
1038.67	172:1	-0.44	-0.0200	22.00	146+59.70	1039.11	22.00	-0.0200	-0.44		1038.67	
1039.02		-0.55	-0.0250	22.00	146+73.46	1039.57	22.00	-0.0200	-0.44		1039.13	
1043.11		-0.55	-0.0250	22.00	148+06.24	1043.66	22.00	-0.0200	-0.44		1043.22	
SEE SUPERELEVATION TABLE ON SHEET 163 .												
1063.54		-0.44	-0.0200	22.00	152+76.79	1063.98	22.00	-0.0160	-0.35		1063.63	
1064.78		-0.44	-0.0200	22.00	153+00.00	1065.22	22.00	-0.0160	-0.35		1064.87	
1066.11		-0.44	-0.0200	22.00	153+25.00	1066.55	22.00	-0.0160	-0.35		1066.20	
1067.44		-0.44	-0.0200	22.00	153+50.00	1067.88	22.00	-0.0160	-0.35		1067.53	
1068.77		-0.44	-0.0200	22.00	153+75.00	1069.21	22.00	-0.0160	-0.35		1068.86	
1070.11		-0.44	-0.0200	22.00	154+00.00	1070.55	22.00	-0.0160	-0.35		1070.20	
1071.44		-0.44	-0.0200	22.00	154+25.00	1071.88	22.00	-0.0160	-0.35		1071.53	
1072.77		-0.44	-0.0200	22.00	154+50.00	1073.21	22.00	-0.0160	-0.35		1072.86	
1074.10		-0.44	-0.0200	22.00	154+75.00	1074.54	22.00	-0.0160	-0.35		1074.19	
1075.44		-0.44	-0.0200	22.00	155+00.00	1075.88	22.00	-0.0160	-0.35		1075.53	
1076.77		-0.44	-0.0200	22.00	155+25.00	1077.21	22.00	-0.0160	-0.35		1076.86	
1078.10		-0.44	-0.0200	22.00	155+50.00	1078.54	22.00	-0.0160	-0.35		1078.19	
1079.43		-0.44	-0.0200	22.00	155+75.00	1079.87	22.00	-0.0160	-0.35		1079.52	
1080.77		-0.44	-0.0200	22.00	156+00.00	1081.21	22.00	-0.0160	-0.35		1080.86	
1082.07		-0.44	-0.0200	22.00	156+25.00	1082.51	22.00	-0.0160	-0.35		1082.16	
1083.35		-0.44	-0.0200	22.00	156+50.00	1083.79	22.00	-0.0160	-0.35		1083.44	
1084.63		-0.44	-0.0200	22.00	156+75.00	1085.07	22.00	-0.0160	-0.35		1084.72	
1085.87		-0.44	-0.0200	22.00	157+00.00	1086.31	22.00	-0.0160	-0.35		1085.96	
1087.04		-0.44	-0.0200	22.00	157+25.00	1087.48	22.00	-0.0160	-0.35		1087.12	
1088.14		-0.44	-0.0200	22.00	157+50.00	1088.58	22.00	-0.0160	-0.35		1088.22	
1089.17		-0.44	-0.0200	22.00	157+75.00	1089.61	22.00	-0.0160	-0.35		1089.26	
1090.14		-0.44	-0.0200	22.00	158+00.00	1090.58	22.00	-0.0160	-0.35		1090.22	
1091.03		-0.44	-0.0200	22.00	158+25.00	1091.47	22.00	-0.0160	-0.35		1091.12	
1091.86		-0.44	-0.0200	22.00	158+50.00	1092.30	22.00	-0.0160	-0.35		1091.95	
1092.63		-0.44	-0.0200	22.00	158+75.00	1093.07	22.00	-0.0160	-0.35		1092.72	
1093.32		-0.44	-0.0200	22.00	159+00.00	1093.76	22.00	-0.0160	-0.35		1093.41	
1093.95		-0.44	-0.0200	22.00	159+25.00	1094.39	22.00	-0.0160	-0.35		1094.04	
1094.51		-0.44	-0.0200	22.00	159+50.00	1094.95	22.00	-0.0160	-0.35		1094.60	
1095.04		-0.44	-0.0200	22.00	159+75.00	1095.48	22.00	-0.0160	-0.35		1095.13	
1095.57		-0.44	-0.0200	22.00	160+00.00	1096.01	22.00	-0.0160	-0.35		1095.66	
1096.10		-0.44	-0.0200	22.00	160+25.00	1096.54	22.00	-0.0160	-0.35		1096.18	
1096.57		-0.44	-0.0200	22.00	160+50.00	1097.01	22.00	-0.0160	-0.35		1096.66	
1096.95		-0.44	-0.0200	22.00	160+75.00	1097.39	22.00	-0.0160	-0.35		1097.04	
1097.34		-0.44	-0.0200	22.00	161+00.00	1097.78	22.00	-0.0160	-0.35		1097.43	
1097.72		-0.44	-0.0200	22.00	161+25.00	1098.16	22.00	-0.0160	-0.35		1097.81	
1098.11		-0.44	-0.0200	22.00	161+50.00	1098.55	22.00	-0.0160	-0.35		1098.20	
1098.49		-0.44	-0.0200	22.00	161+75.00	1098.93	22.00	-0.0160	-0.35		1098.58	
1098.88		-0.44	-0.0200	22.00	162+00.00	1099.32	22.00	-0.0160	-0.35		1098.97	
1099.26		-0.44	-0.0200	22.00	162+25.00	1099.70	22.00	-0.0160	-0.35		1099.35	
1100.03		-0.44	-0.0200	22.00	162+75.00	1100.47	22.00	-0.0160	-0.35		1100.12	
1100.48		-0.44	-0.0200	22.00	163+00.00	1100.92	22.00	-0.0160	-0.35		1100.56	
1100.93		-0.44	-0.0200	22.00	163+25.00	1101.37	22.00	-0.0160	-0.35		1101.02	
1101.39		-0.44	-0.0200	22.00	163+50.00	1101.83	22.00	-0.0160	-0.35		1101.48	
1101.85		-0.44	-0.0200	22.00	163+75.00	1102.29	22.00	-0.0160	-0.35		1101.94	
1102.31		-0.44	-0.0200	22.00	164+00.00	1102.75	22.00	-0.0160	-0.35		1102.39	
1102.76		-0.44	-0.0200	22.00	164+25.00	1103.20	22.00	-0.0160	-0.35		1102.85	
1103.22		-0.44	-0.0200	22.00	164+50.00	1103.66	22.00	-0.0160	-0.35		1103.31	
1103.68		-0.44	-0.0200	22.00	164+75.00	1104.12	22.00	-0.0160	-0.35		1103.77	
1104.05		-0.44	-0.0200	22.00	165+00.00	1104.49	22.00	-0.0160	-0.35		1104.14	
1104.43		-0.44	-0.0200	22.00	165+25.00	1104.87	22.00	-0.0160	-0.35		1104.52	
1104.80		-0.44	-0.0200	22.00	165+50.00	1105.24	22.00	-0.0160	-0.35		1104.89	
1105.18		-0.44	-0.0200	22.00	165+75.00	1105.62	22.00	-0.0160	-0.35		1105.27	
1105.55		-0.44	-0.0200	22.00	166+00.00	1105.99	22.00	-0.0160	-0.35		1105.64	
1105.93		-0.44	-0.0200	22.00	166+25.00	1106.37	22.00	-0.0160	-0.35		1106.02	
1106.30		-0.44	-0.0200	22.00	166+50.00	1106.74	22.00	-0.0160	-0.35		1106.39	

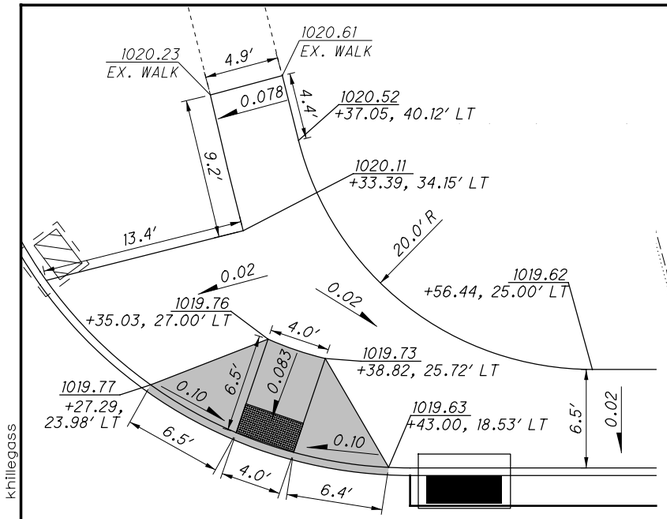
LEFT SIDE					CENTERLINE CONTROL		RIGHT SIDE					REMARKS
EDGE ELEVATION	TRANSITION RATE	*ELEVATION CORRECTION	CROSS SLOPE	WIDTH	STATION	PROFILE GRADE	WIDTH	CROSS SLOPE	*ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	
1106.68		-0.44	-0.0200	22.00	166+75.00	1107.12	22.00	-0.0160	-0.35		1106.77	
1107.06		-0.44	-0.0200	22.00	167+00.00	1107.50	22.00	-0.0160	-0.35		1107.15	
1107.44		-0.44	-0.0200	22.00	167+25.00	1107.88	22.00	-0.0160	-0.35		1107.53	
1107.80		-0.44	-0.0200	22.00	167+50.00	1108.24	22.00	-0.0160	-0.35		1107.89	
1108.13		-0.44	-0.0200	22.00	167+75.00	1108.57	22.00	-0.0160	-0.35		1108.22	
1108.42		-0.44	-0.0200	22.00	168+00.00	1108.86	22.00	-0.0160	-0.35		1108.51	
1108.68		-0.44	-0.0200	22.00	168+25.00	1109.12	22.00	-0.0160	-0.35		1108.77	
1108.90		-0.44	-0.0200	22.00	168+50.00	1109.34	22.00	-0.0160	-0.35		1108.99	
1109.09		-0.44	-0.0200	22.00	168+75.00	1109.53	22.00	-0.0160	-0.35		1109.18	
1109.24		-0.44	-0.0200	22.00	169+00.00	1109.68	22.00	-0.0160	-0.35		1109.33	
1109.36		-0.44	-0.0200	22.00	169+25.00	1109.80	22.00	-0.0160	-0.35		1109.45	
1109.46		-0.44	-0.0200	22.00	169+50.00	1109.90	22.00	-0.0160	-0.35		1109.55	
1109.56		-0.44	-0.0200	22.00	169+75.00	1110.00	22.00	-0.0160	-0.35		1109.65	
1109.66		-0.44	-0.0200	22.00	170+00.00	1110.10	22.00	-0.0160	-0.35		1109.75	
1109.76		-0.44	-0.0200	22.00	170+25.00	1110.20	22.00	-0.0160	-0.35		1109.85	
1109.86		-0.44	-0.0200	22.00	170+50.00	1110.30	22.00	-0.0160	-0.35		1109.95	
1109.94		-0.44	-0.0200	22.00	170+75.00	1110.38	22.00	-0.0160	-0.35		1110.03	
1109.98		-0.44	-0.0200	22.00	171+00.00	1110.42	22.00	-0.0160	-0.35		1110.06	
1110.01		-0.44	-0.0200	22.00	171+25.00	1110.45	22.00	-0.0160	-0.35		1110.10	
1110.01		-0.44	-0.0200	22.00	171+50.00	1110.45	22.00	-0.0160	-0.35		1110.10	
1109.96		-0.44	-0.0200	22.00	171+75.00	1110.40	22.00	-0.0160	-0.35		1110.05	
1109.87		-0.44	-0.0200	22.00	172+00.00	1110.31	22.00	-0.0160	-0.35		1109.96	
1109.73		-0.44	-0.0200	22.00	172+25.00	1110.17	22.00	-0.0160	-0.35		1109.82	
1109.54		-0.44	-0.0200	22.00	172+50.00	1109.98	22.00	-0.0160	-0.35		1109.63	
1109.31		-0.44	-0.0200	22.00	172+75.00	1109.75	22.00	-0.0160	-0.35		1109.40	
1109.03		-0.44	-0.0200	22.00	173+00.00	1109.47	22.00	-0.0160	-0.35		1109.12	
1108.71		-0.44	-0.0200	22.00	173+25.00	1109.15	22.00	-0.0160	-0.35		1108.80	
1108.67	172:1	-0.44	-0.0200	22.00	173+27.63	1109.11	22.00	-0.0160	-0.35		1108.76	
1108.49		-0.35	-0.0160	22.00	173+45.52	1108.85	22.00	-0.0160	-0.35		1108.49	
1108.42		-0.35	-0.0160	22.00	173+50.00	1108.78	22.00	-0.0160	-0.35		1108.42	
1108.01		-0.35	-0.0160	22.00	173+75.00	1108.36	22.00	-0.0160	-0.35		1108.01	
1107.54		-0.35	-0.0160	22.00	174+00.00	1107.89	22.00	-0.0160	-0.35		1107.54	
1107.05		-0.35	-0.0160	22.00	174+25.00	1107.40	22.00	-0.0160	-0.35		1107.05	
1106.56		-0.35	-0.0160	22.00	174+50.00	1106.92	22.00	-0.0160	-0.35		1106.56	
1106.08		-0.35	-0.0160	22.00	174+75.00	1106.43	22.00	-0.0160	-0.35		1106.08	
1105.58		-0.35	-0.0160	22.00	175+00.00	1105.93	22.00	-0.0160	-0.35		1105.58	
1105.01		-0.35	-0.0160	22.00	175+25.00	1105.36	22.00	-0.0160	-0.35		1105.01	
1104.34		-0.35	-0.0160	22.00	175+50.00	1104.70	22.00	-0.0160	-0.35		1104.34	
1103.58		-0.35	-0.0160	22.00	175+75.00	1103.94	22.00	-0.0160	-0.35		1103.58	
1103.12	172:1	-0.35	-0.0160	22.00	175+88.95	1103.47	22.00	-0.0160	-0.35	172:1	1103.12	
1102.99		-0.33	-0.0150	22.00	175+93.32	1103.32	22.00	-0.0160	-0.35		1102.97	
1102.79		-0.30	-0.0135	22.00	176+00.00	1103.08	22.00	-0.0146	-0.32		1102.76	
1101.94		-0.17	-0.0077	22.00	176+26.07	1102.11	22.00	-0.0092	-0.20		1101.91	MEET EXISTING

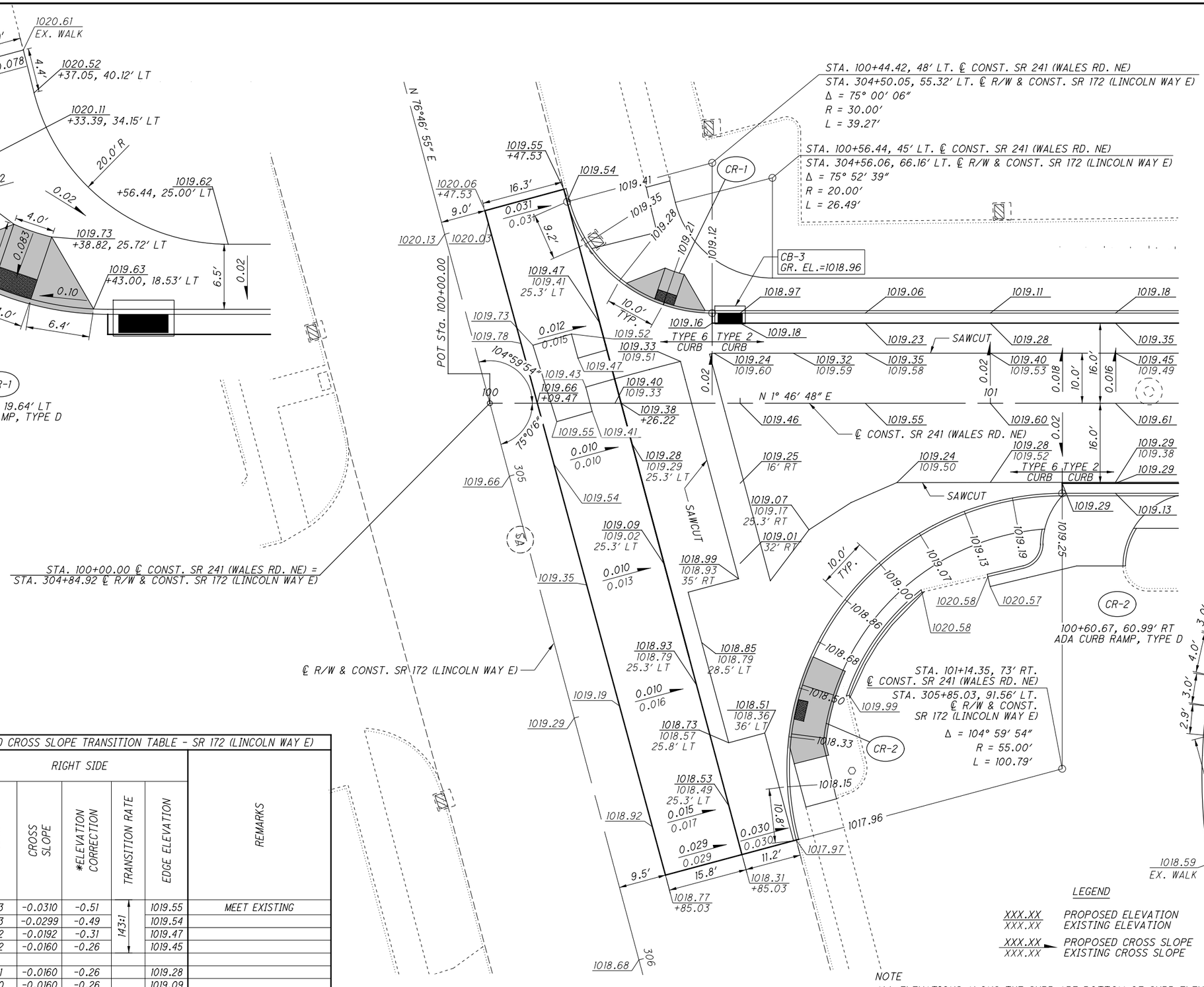
CALCULATED KRM CHECKED RAK

PAVEMENT ELEVATION AND CROSS SLOPE TRANSITION TABLES

STA-241-9.71

P:\3000_3499\3062170090_STA-241-9.71_Wales_Road\ODOT\100471L_STA-241-9.71\Design\Roadway\Sheets\100471L_CE004.dgn 4/7/2021 7:43:52 AM khillegass





LEGEND

XXX.XX / XXX.XX — PROPOSED ELEVATION / EXISTING ELEVATION

XXX.XX / XXX.XX — PROPOSED CROSS SLOPE / EXISTING CROSS SLOPE

NOTE

ALL ELEVATIONS ALONG THE CURB ARE BOTTOM OF CURB ELEVATIONS.
ADD 0.50' IN AREAS OF TYPE 2 AND TYPE 6 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
ADD 0.33' IN AREAS OF TYPE 4 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
SEE SCD BP-7.1 FOR ALL OTHER INFORMATION NOT SHOWN ON THE SHEET.

PAVEMENT ELEVATION AND CROSS SLOPE TRANSITION TABLE - SR 172 (LINCOLN WAY E)

CENTERLINE CONTROL		RIGHT SIDE					
STATION	PROFILE GRADE @ PROP. EOP	WIDTH	CROSS SLOPE	*ELEVATION CORRECTION	TRANSITION RATE	EDGE ELEVATION	REMARKS
304+47.53	1020.06	16.3	-0.0310	-0.51	143:1	1019.55	MEET EXISTING
304+50.00	1020.03	16.3	-0.0299	-0.49		1019.54	
304+75.00	1019.78	16.2	-0.0192	-0.31		1019.47	
304+82.39	1019.71	16.2	-0.0160	-0.26		1019.45	
305+00.00	1019.54	16.1	-0.0160	-0.26		1019.28	
305+25.00	1019.35	16.0	-0.0160	-0.26		1019.09	
305+50.00	1019.19	16.0	-0.0160	-0.26		1018.93	
305+55.56	1019.54	15.9	-0.0160	-0.25	143:1	1019.29	
305+75.00	1018.92	15.9	-0.0247	-0.39		1018.53	
305+85.03	1018.77	15.8	-0.0290	-0.46		1018.31	MEET EXISTING

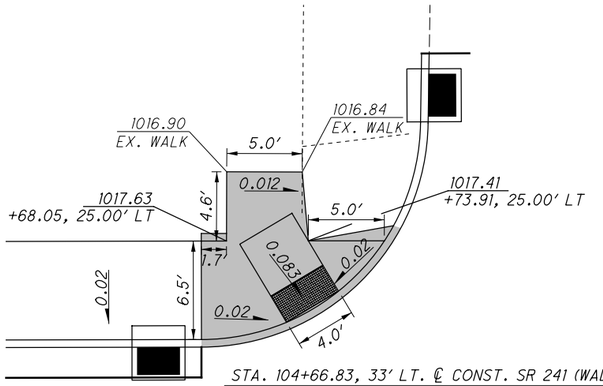
N

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED KRM
CHECKED RAK

INTERSECTION DETAIL
S.R.241 (WALES RD. NE) & LINCOLN WAY
STA-241-9.71

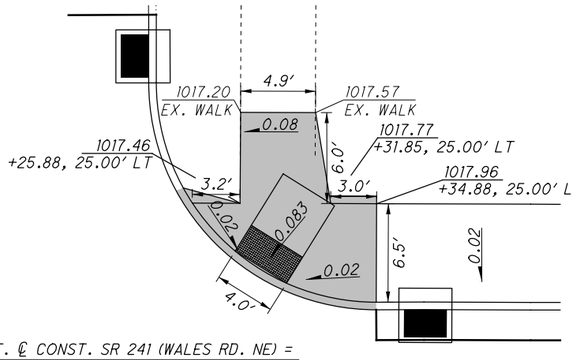
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STA. 104+66.83, 33′ LT. ℄ CONST. SR 241 (WALES RD. NE) =
STA. 9+67.24, 34.92′ RT. ℄ R/W & CONST. NORTH AV. NE
Δ = 89° 04′ 34″
R = 15.00′
L = 23.32′

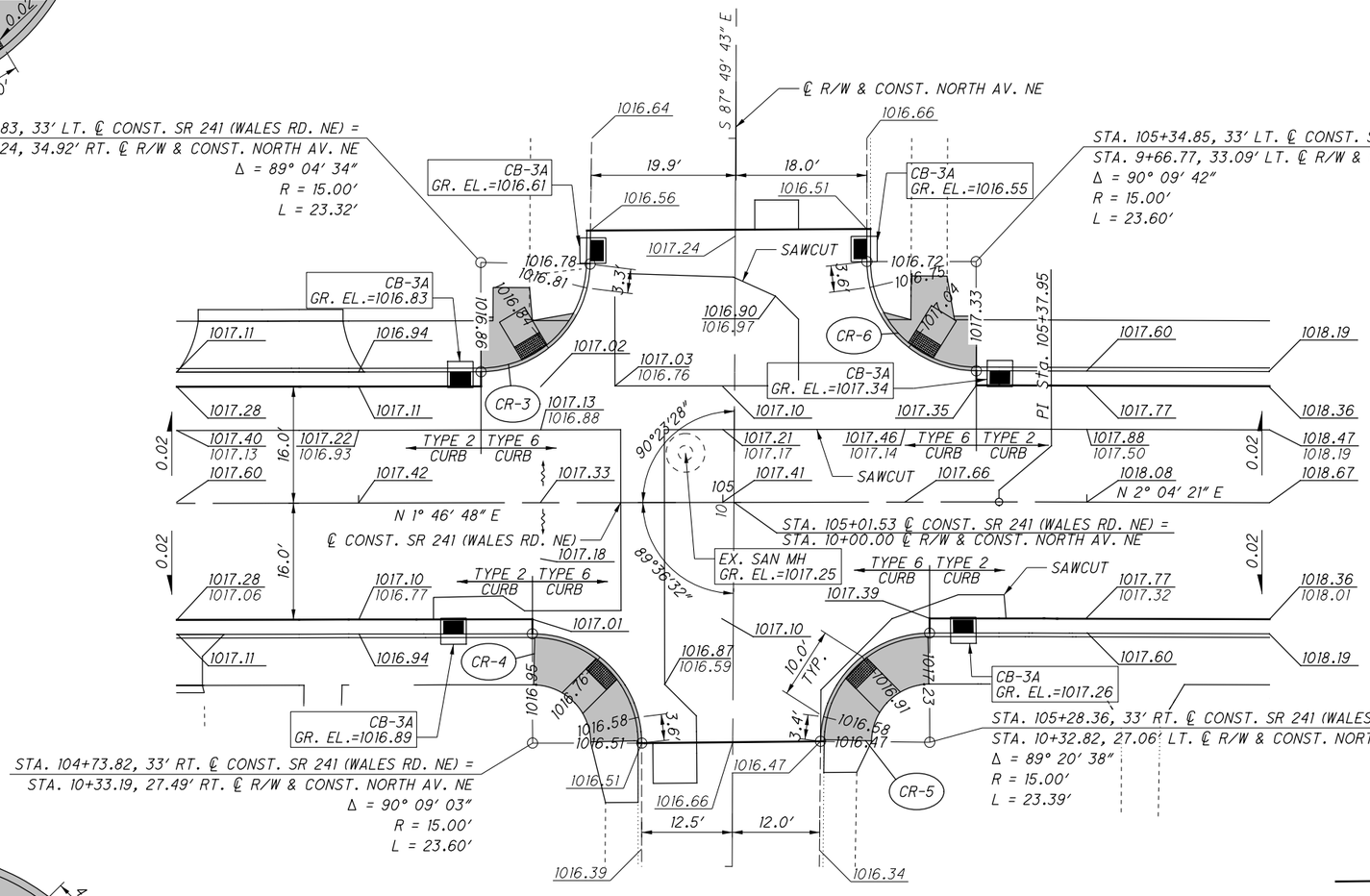
CR-3

104+74.50, 20.10′ LT
ADA CURB RAMP, TYPE D

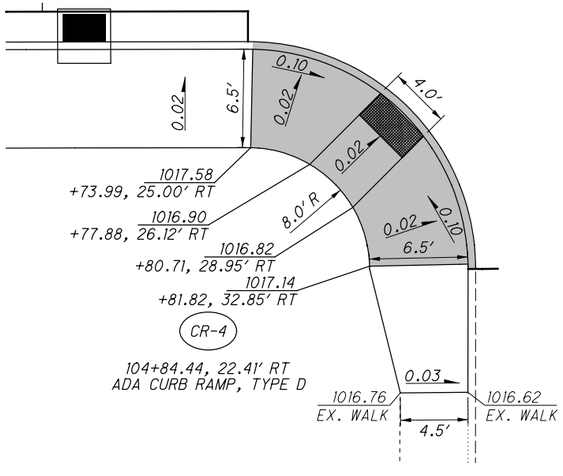


CR-6

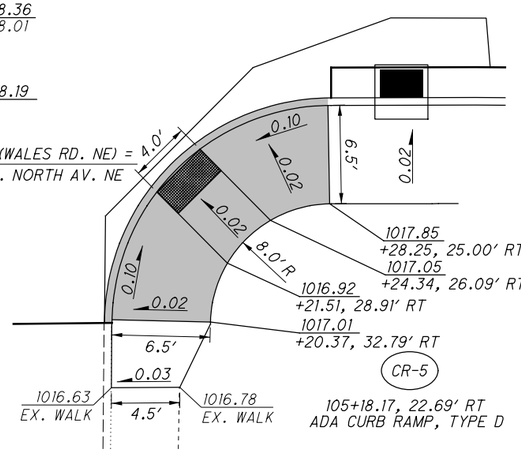
105+26.89, 20.28′ LT
ADA CURB RAMP, TYPE D



STA. 105+34.85, 33′ LT. ℄ CONST. SR 241 (WALES RD. NE) =
STA. 9+66.77, 33.09′ LT. ℄ R/W & CONST. NORTH AV. NE
Δ = 90° 09′ 42″
R = 15.00′
L = 23.60′



104+84.44, 22.41′ RT
ADA CURB RAMP, TYPE D



105+18.17, 22.69′ RT
ADA CURB RAMP, TYPE D

LEGEND

XXX.XX PROPOSED ELEVATION
XXX.XX EXISTING ELEVATION

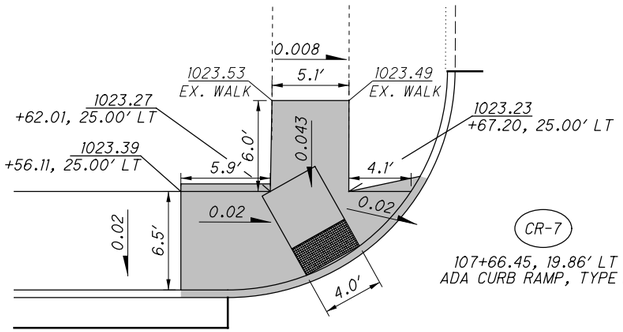
NOTE
ALL ELEVATIONS ALONG THE CURB ARE BOTTOM OF CURB ELEVATIONS.
ADD 0.50′ IN AREAS OF TYPE 2 AND TYPE 6 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
ADD 0.33′ IN AREAS OF TYPE 4 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
SEE SCD BP-7.1 FOR ALL OTHER INFORMATION NOT SHOWN ON THE SHEET.

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED KRM
CHECKED RAK

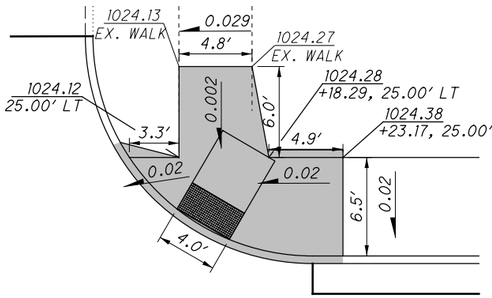
INTERSECTION DETAIL
S.R.241 (WALES RD. NE) & NORTH AV. NE
STA-241-9.71

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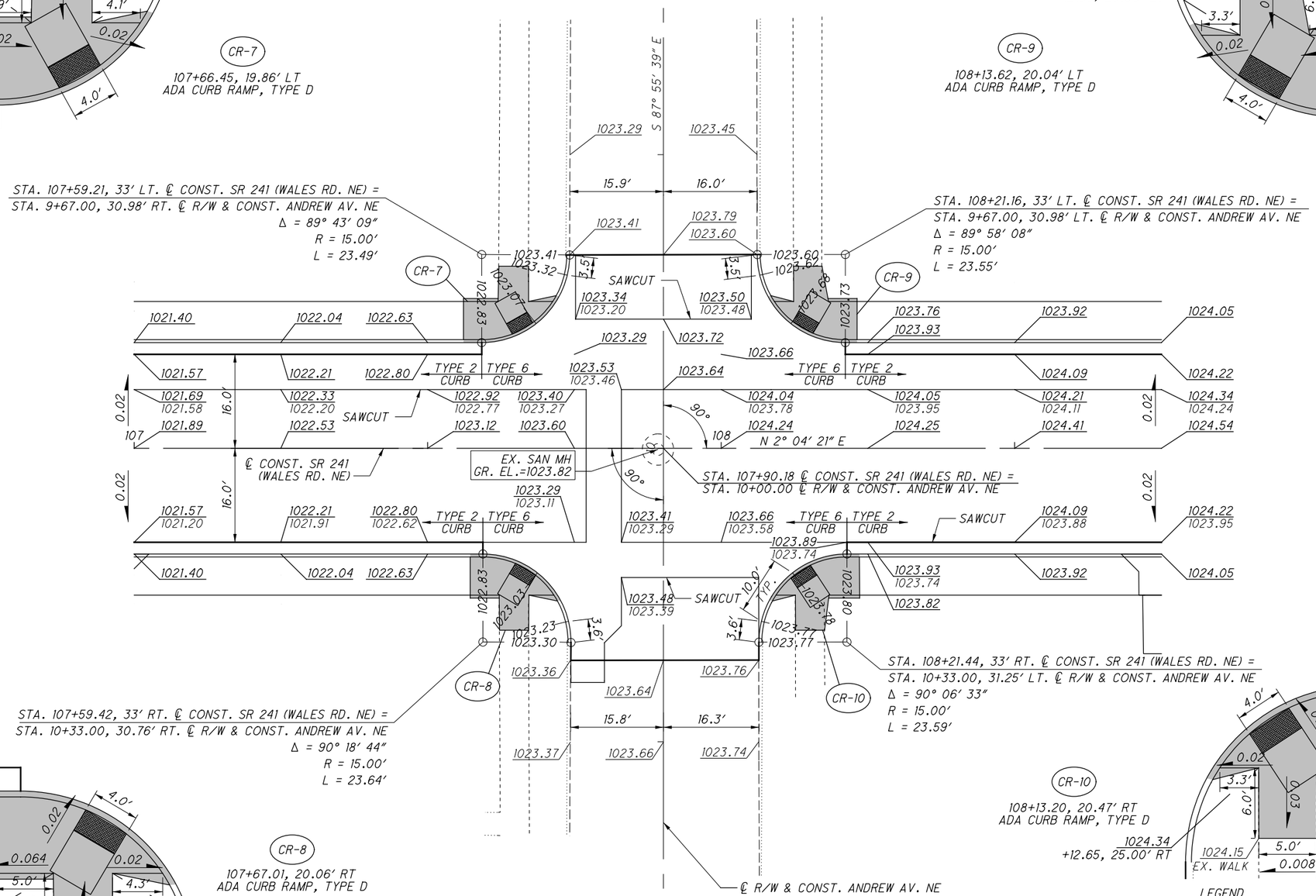
CR-7

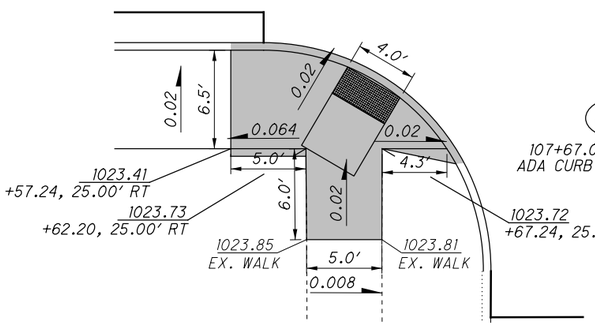
107+66.45, 19.86' LT
ADA CURB RAMP, TYPE D



CR-9

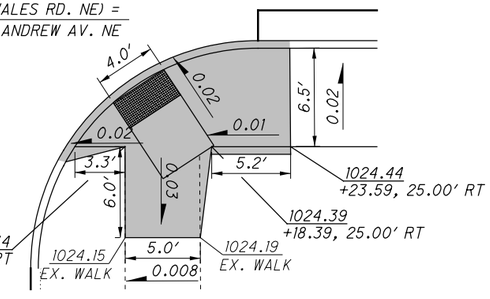
108+13.62, 20.04' LT
ADA CURB RAMP, TYPE D





CR-8

107+67.01, 20.06' RT
ADA CURB RAMP, TYPE D



CR-10

108+13.20, 20.47' RT
ADA CURB RAMP, TYPE D

LEGEND

XXX.XX / XXX.XX — PROPOSED ELEVATION / EXISTING ELEVATION

NOTE
ALL ELEVATIONS ALONG THE CURB ARE BOTTOM OF CURB ELEVATIONS.
ADD 0.50' IN AREAS OF TYPE 2 AND TYPE 6 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
ADD 0.33' IN AREAS OF TYPE 4 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
SEE SCD BP-7.1 FOR ALL OTHER INFORMATION NOT SHOWN ON THE SHEET.

HORIZONTAL SCALE IN FEET
0 5 10 20

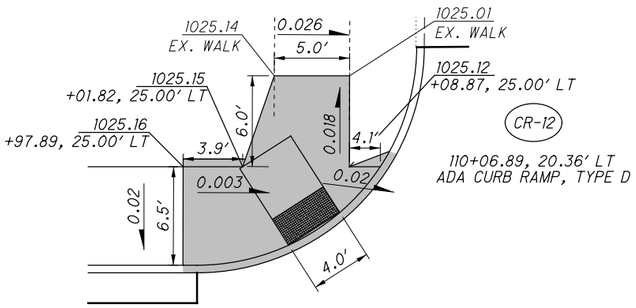
CALCULATED KRM CHECKED RAK

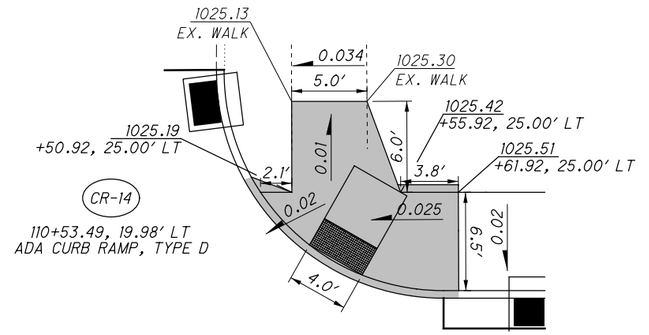
INTERSECTION DETAIL
S.R.241 (WALES RD. NE) & ANDREW AV. NE

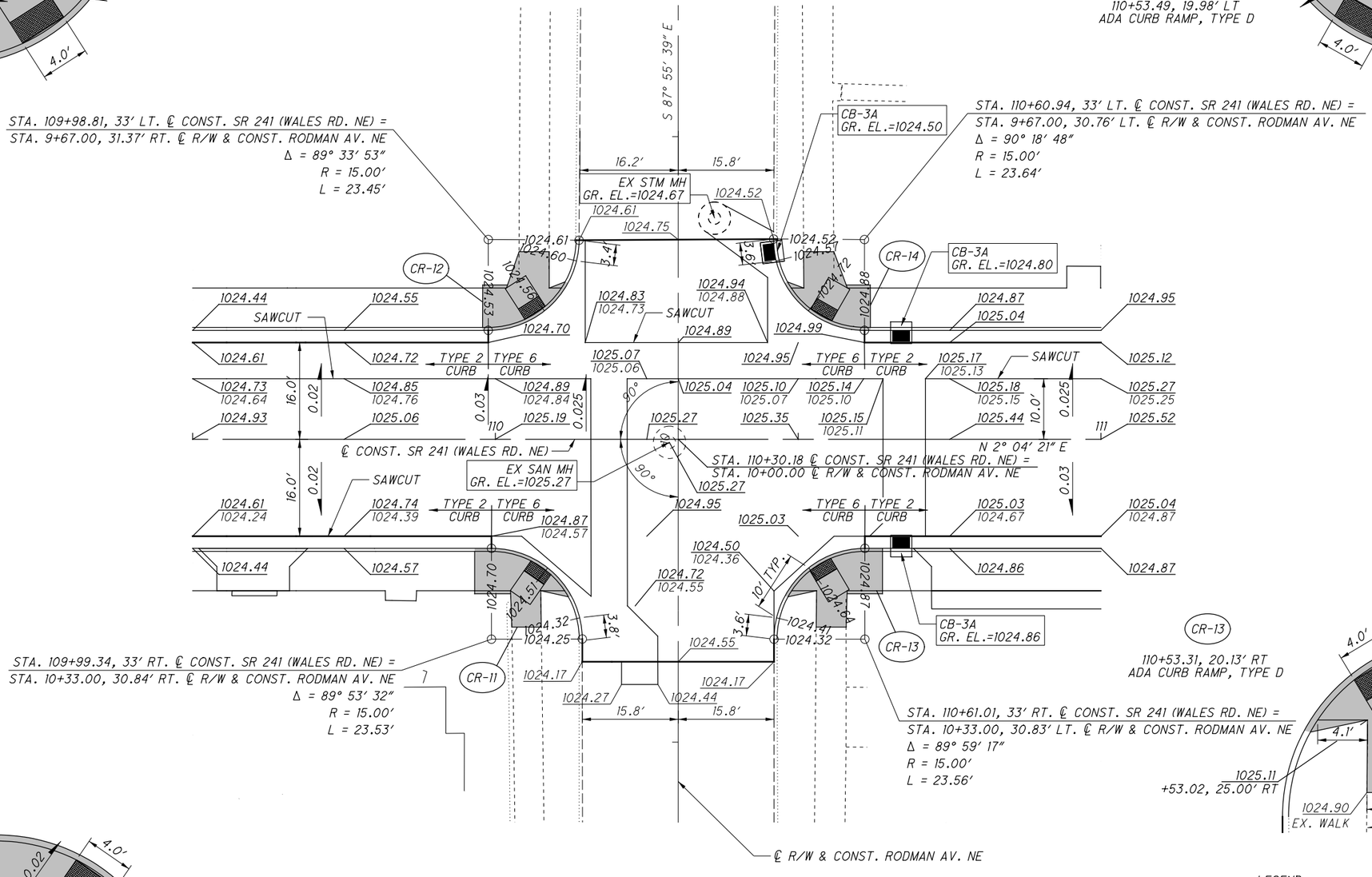
STA-241-9.71

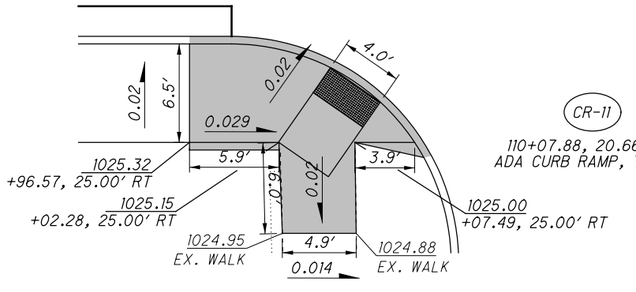
169
395

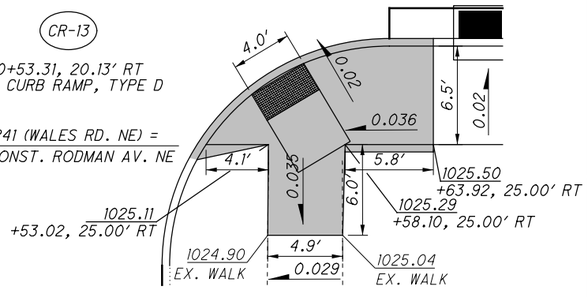
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LEGEND

XXX.XX PROPOSED ELEVATION
XXX.XX EXISTING ELEVATION

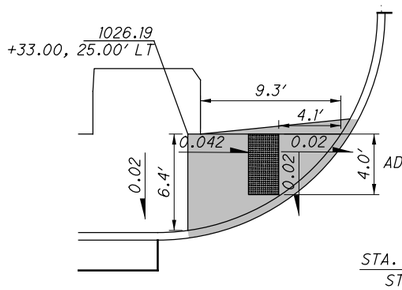
NOTE
ALL ELEVATIONS ALONG THE CURB ARE BOTTOM OF CURB ELEVATIONS.
ADD 0.50' IN AREAS OF TYPE 2 AND TYPE 6 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
ADD 0.33' IN AREAS OF TYPE 4 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
SEE SCD BP-7.1 FOR ALL OTHER INFORMATION NOT SHOWN ON THE SHEET.

HORIZONTAL SCALE IN FEET
0 5 10 20
CALCULATED KRM
CHECKED RAK

INTERSECTION DETAIL
S.R.241 (WALES RD. NE) & RODMAN AV. NE
STA-241-9.71

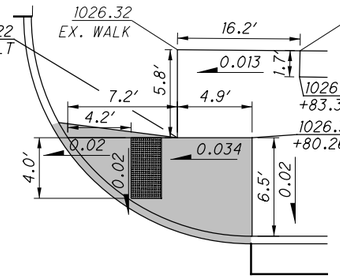
170
395

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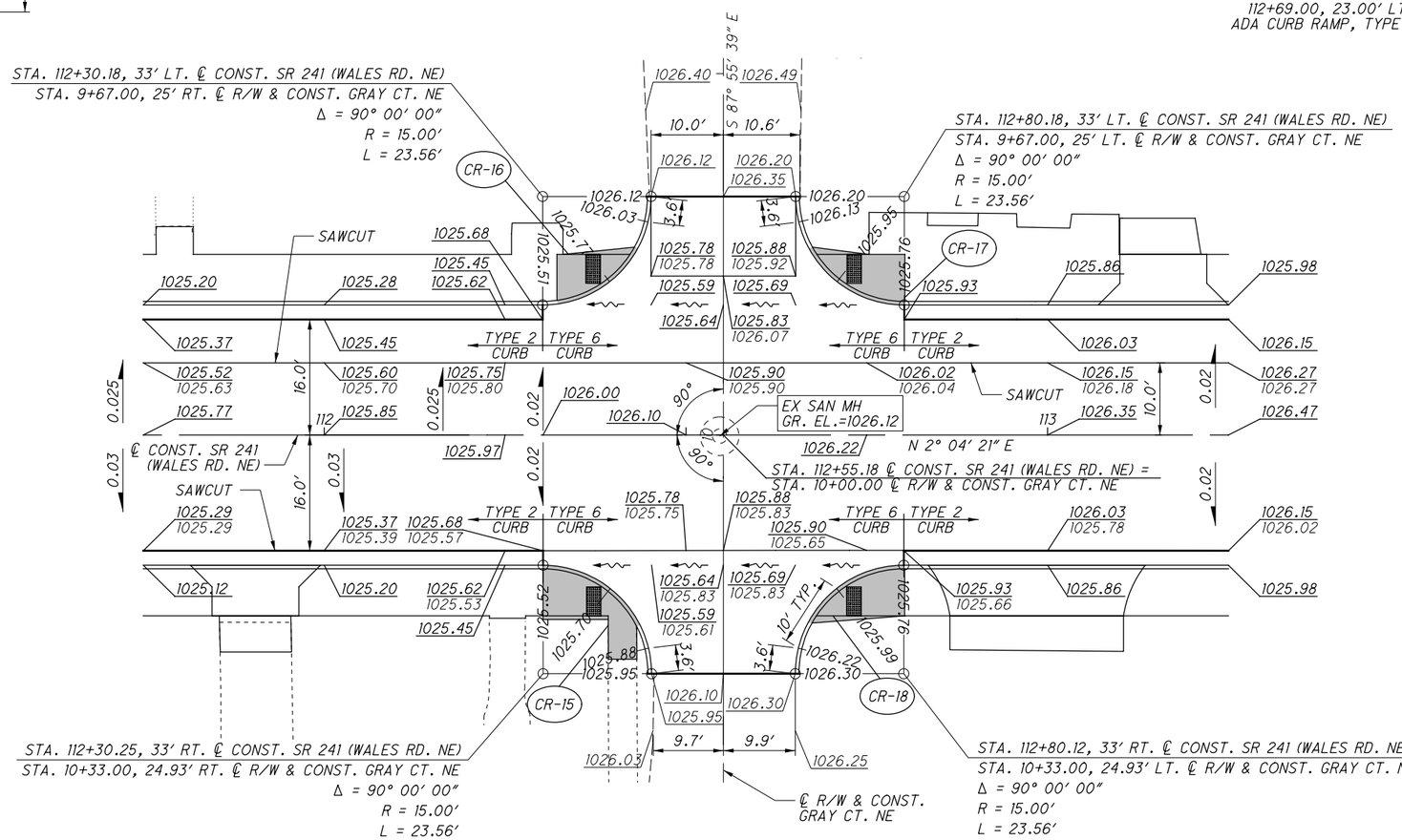
CR-16

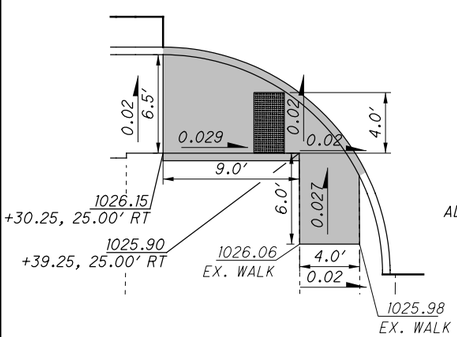
112+41.36, 23.00' LT
ADA CURB RAMP, TYPE B3



CR-17

112+69.00, 23.00' LT
ADA CURB RAMP, TYPE B3



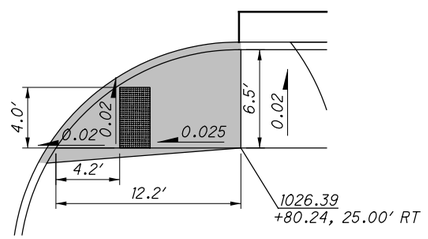


CR-15

112+41.43, 23.00' RT
ADA CURB RAMP, TYPE B3

CR-18

112+68.94, 23.00' RT
ADA CURB RAMP, TYPE B3



LEGEND

XXX.XX — PROPOSED ELEVATION
XXX.XX — EXISTING ELEVATION

NOTE
ALL ELEVATIONS ALONG THE CURB ARE BOTTOM OF CURB ELEVATIONS.
ADD 0.50' IN AREAS OF TYPE 2 AND TYPE 6 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
ADD 0.33' IN AREAS OF TYPE 4 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
SEE SCD BP-7.1 FOR ALL OTHER INFORMATION NOT SHOWN ON THE SHEET.

N

HORIZONTAL SCALE IN FEET
0 5 10 20

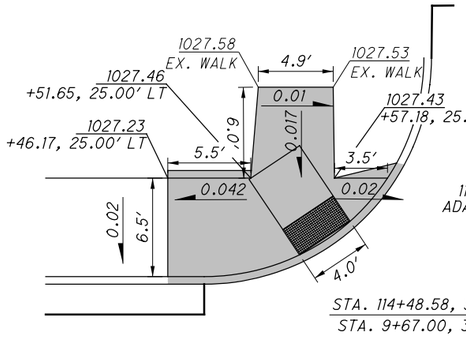
CALCULATED KRM
CHECKED RAK

INTERSECTION DETAIL
S.R.241 (WALES RD. NE) & GRAY CT. NE

STA-241-9.71

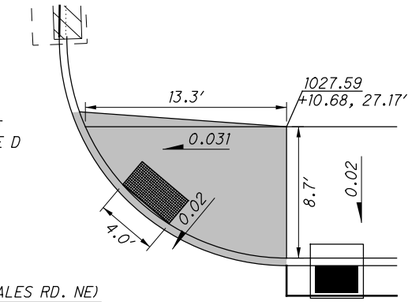
171
395

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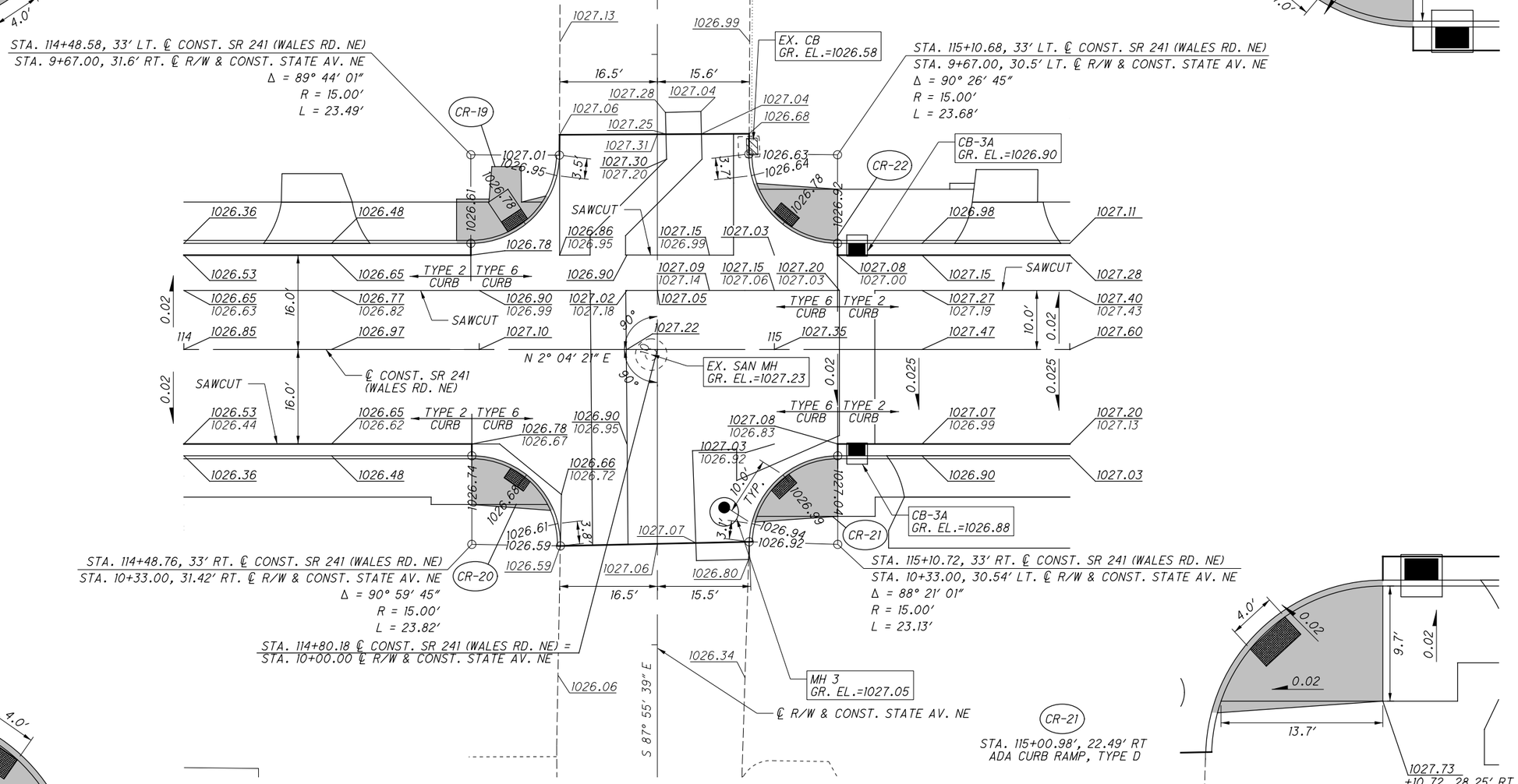
CR-19

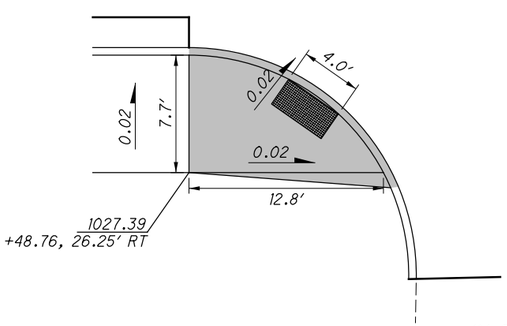
114+56.89, 20.51' LT
ADA CURB RAMP, TYPE D



CR-22

115+00.98, 21.56' LT
ADA CURB RAMP, TYPE D





CR-20

114+57.35, 20.70' RT
ADA CURB RAMP, TYPE D

CR-21

STA. 115+00.98', 22.49' RT
ADA CURB RAMP, TYPE D

LEGEND

XXX.XX / XXX.XX — PROPOSED ELEVATION / EXISTING ELEVATION

NOTE
ALL ELEVATIONS ALONG THE CURB ARE BOTTOM OF CURB ELEVATIONS.
ADD 0.50' IN AREAS OF TYPE 2 AND TYPE 6 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
ADD 0.33' IN AREAS OF TYPE 4 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
SEE SCD BP-7.1 FOR ALL OTHER INFORMATION NOT SHOWN ON THE SHEET.

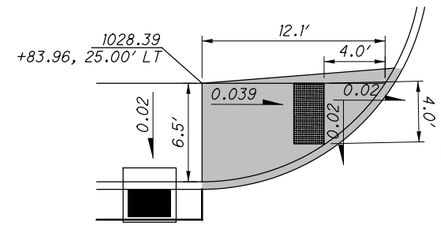
HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED KRM
CHECKED RAK

INTERSECTION DETAIL
S.R.241 (WALES RD. NE) & STATE AV. NE
STA-241-9.71

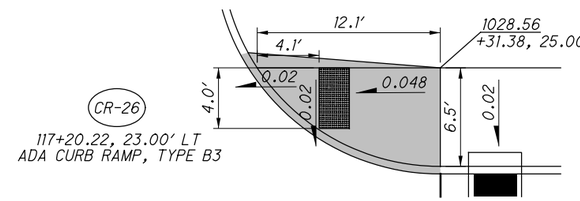
172
395

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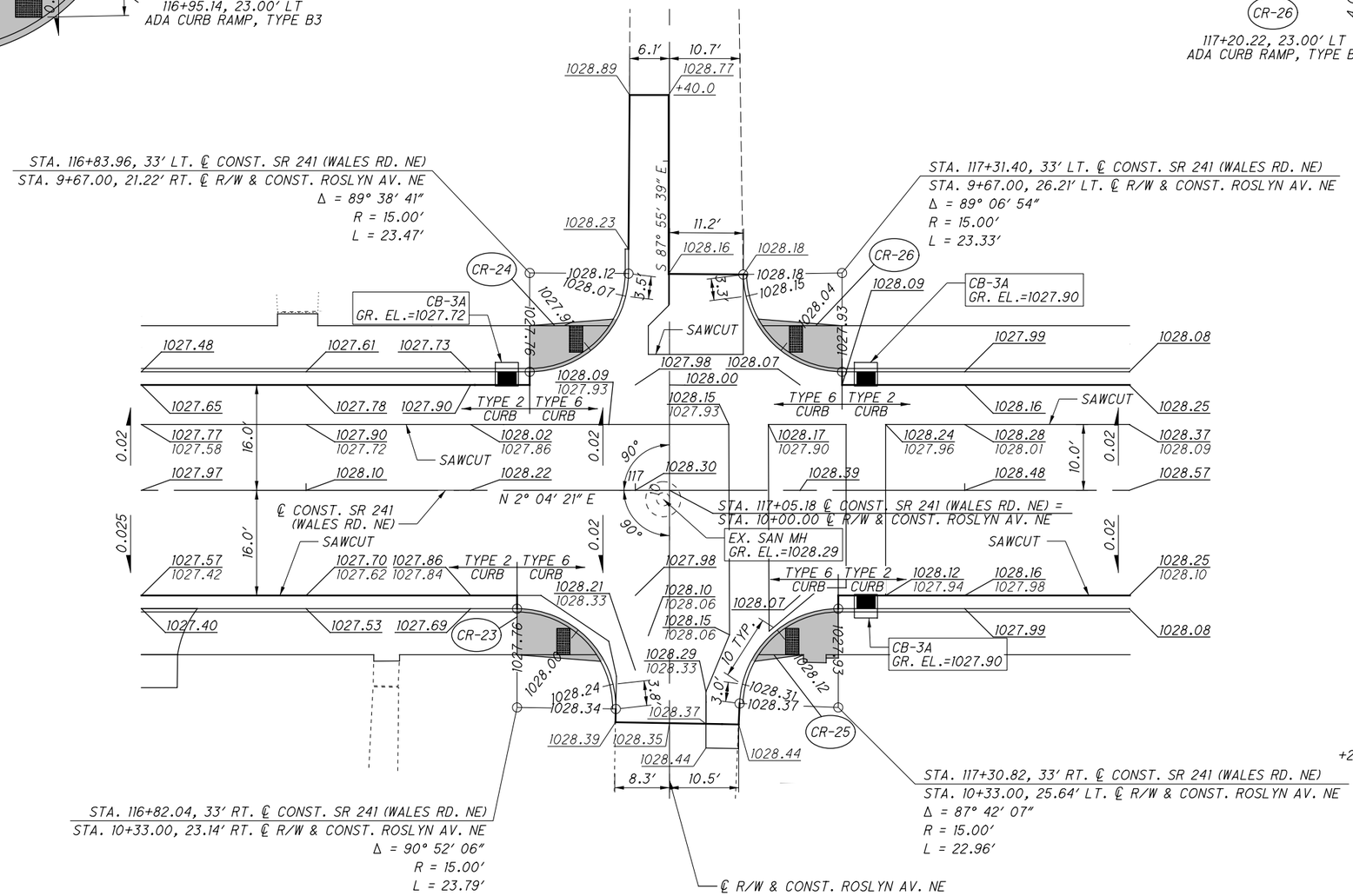
CR-24

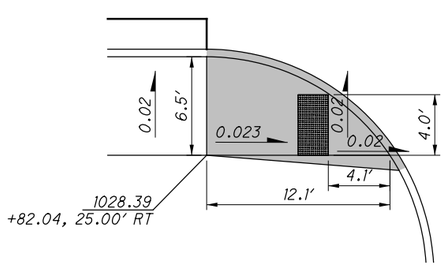
116+95.14, 23.00' LT
ADA CURB RAMP, TYPE B3



CR-26

117+20.22, 23.00' LT
ADA CURB RAMP, TYPE B3



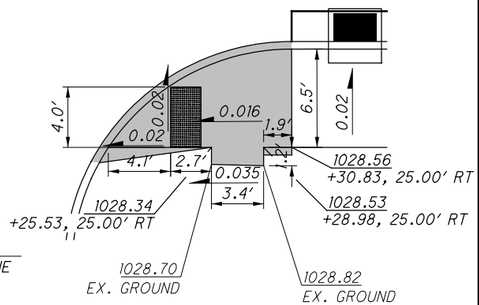


CR-23

116+93.22, 23.00' RT
ADA CURB RAMP, TYPE B3

CR-25

117+19.64, 23.00' RT
ADA CURB RAMP, TYPE B3



LEGEND

XXX.XX PROPOSED ELEVATION
XXX.XX EXISTING ELEVATION

NOTE
ALL ELEVATIONS ALONG THE CURB ARE BOTTOM OF CURB ELEVATIONS.
ADD 0.50' IN AREAS OF TYPE 2 AND TYPE 6 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
ADD 0.33' IN AREAS OF TYPE 4 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
SEE SCD BP-7.1 FOR ALL OTHER INFORMATION NOT SHOWN ON THE SHEET.

HORIZONTAL SCALE IN FEET
0 5 10 20

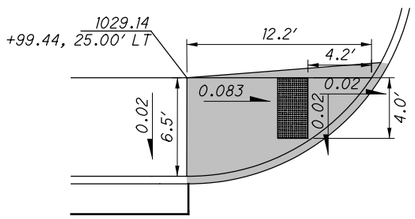
CALCULATED KRM
CHECKED RAK

INTERSECTION DETAIL
S.R.241 (WALES RD. NE) & ROSLYN AV. NE

STA-241-9.71

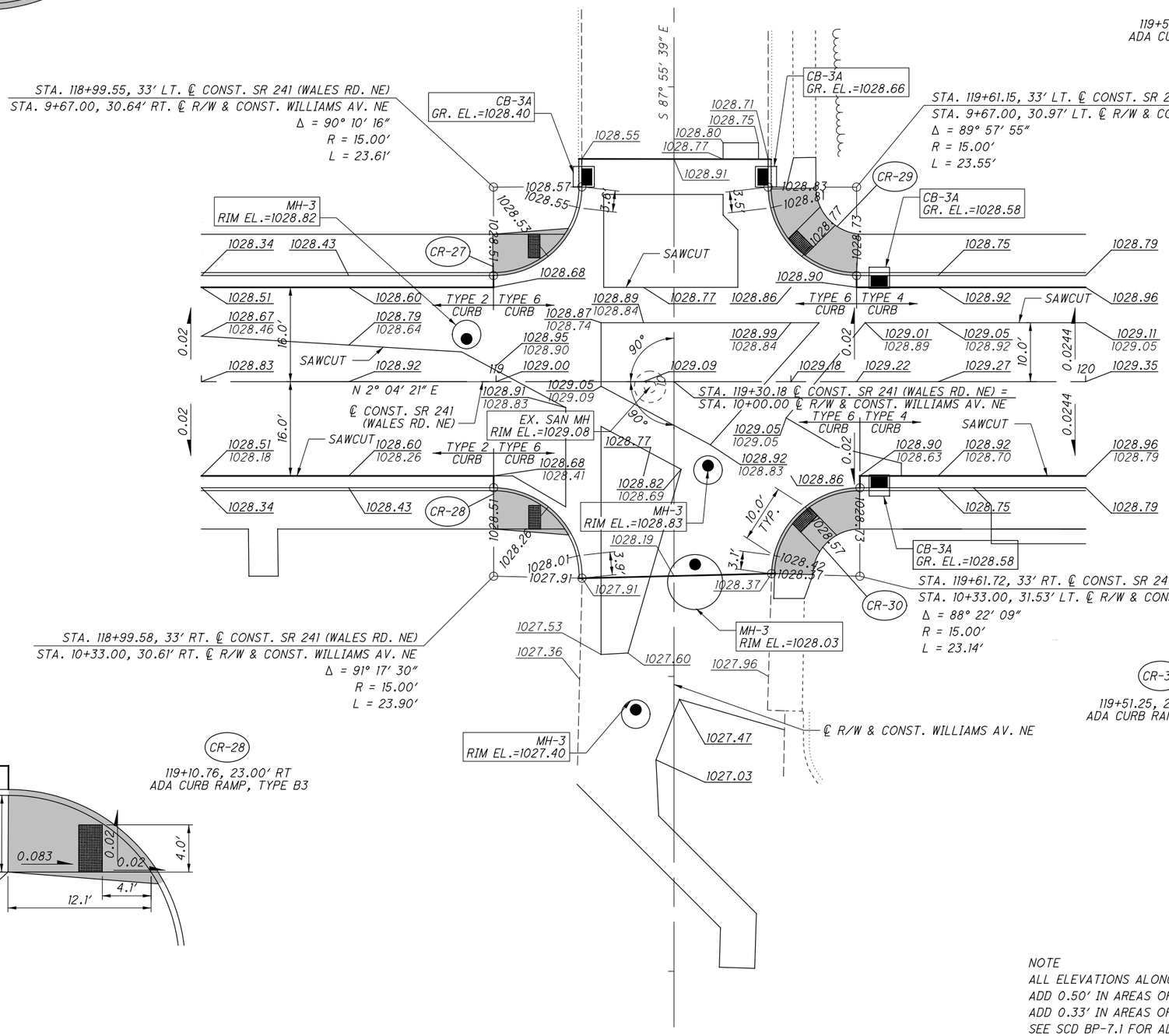
173
395

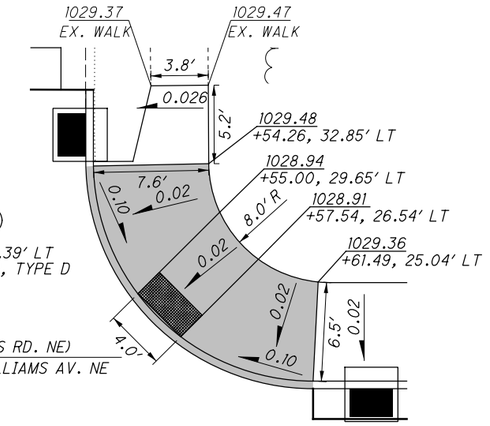
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CR-27

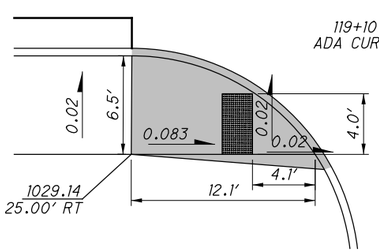
119+10.73, 23.00' LT
ADA CURB RAMP, TYPE B3





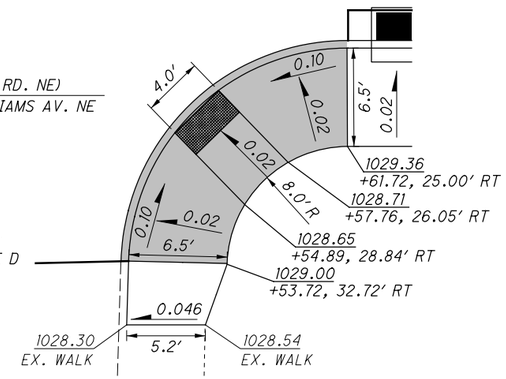
CR-29

119+50.55, 22.39' LT
ADA CURB RAMP, TYPE D



CR-28

119+10.76, 23.00' RT
ADA CURB RAMP, TYPE B3



CR-30

119+51.25, 22.25' RT
ADA CURB RAMP, TYPE D

LEGEND

XXX.XX / XXX.XX — PROPOSED ELEVATION / EXISTING ELEVATION

NOTE
ALL ELEVATIONS ALONG THE CURB ARE BOTTOM OF CURB ELEVATIONS.
ADD 0.50' IN AREAS OF TYPE 2 AND TYPE 6 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
ADD 0.33' IN AREAS OF TYPE 4 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
SEE SCD BP-7.1 FOR ALL OTHER INFORMATION NOT SHOWN ON THE SHEET.

HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED KRM
CHECKED RAK

INTERSECTION DETAIL
S.R.241 (WALES RD. NE) & WILLIAMS AV. NE

STA-241-9.71

174
395

P:\3000_3499\3062\T0090_STA-241-9.71_Wales_Road\ODOT\00471_STA-241-9.71\Design\Roadway\Sheets\00471_GI008.dgn 4/7/2021 7:44:03 AM khillegass

INTERSECTION DETAIL - S.R.241 (WALES RD. NE) & KENDAL AV. NE / HANKINS RD. NE

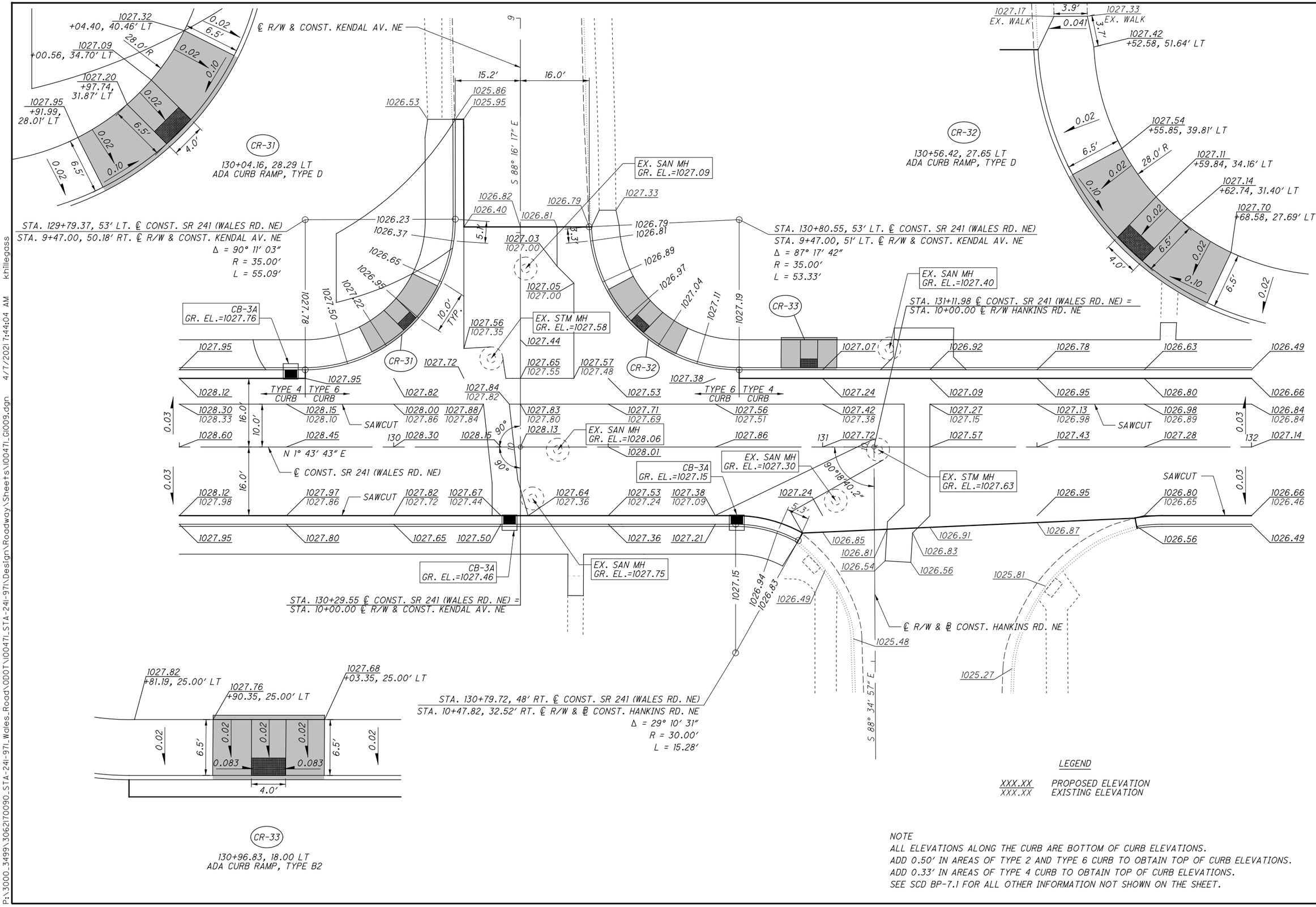
STA-241-9.71

HORIZONTAL SCALE IN FEET: 0, 5, 10, 20

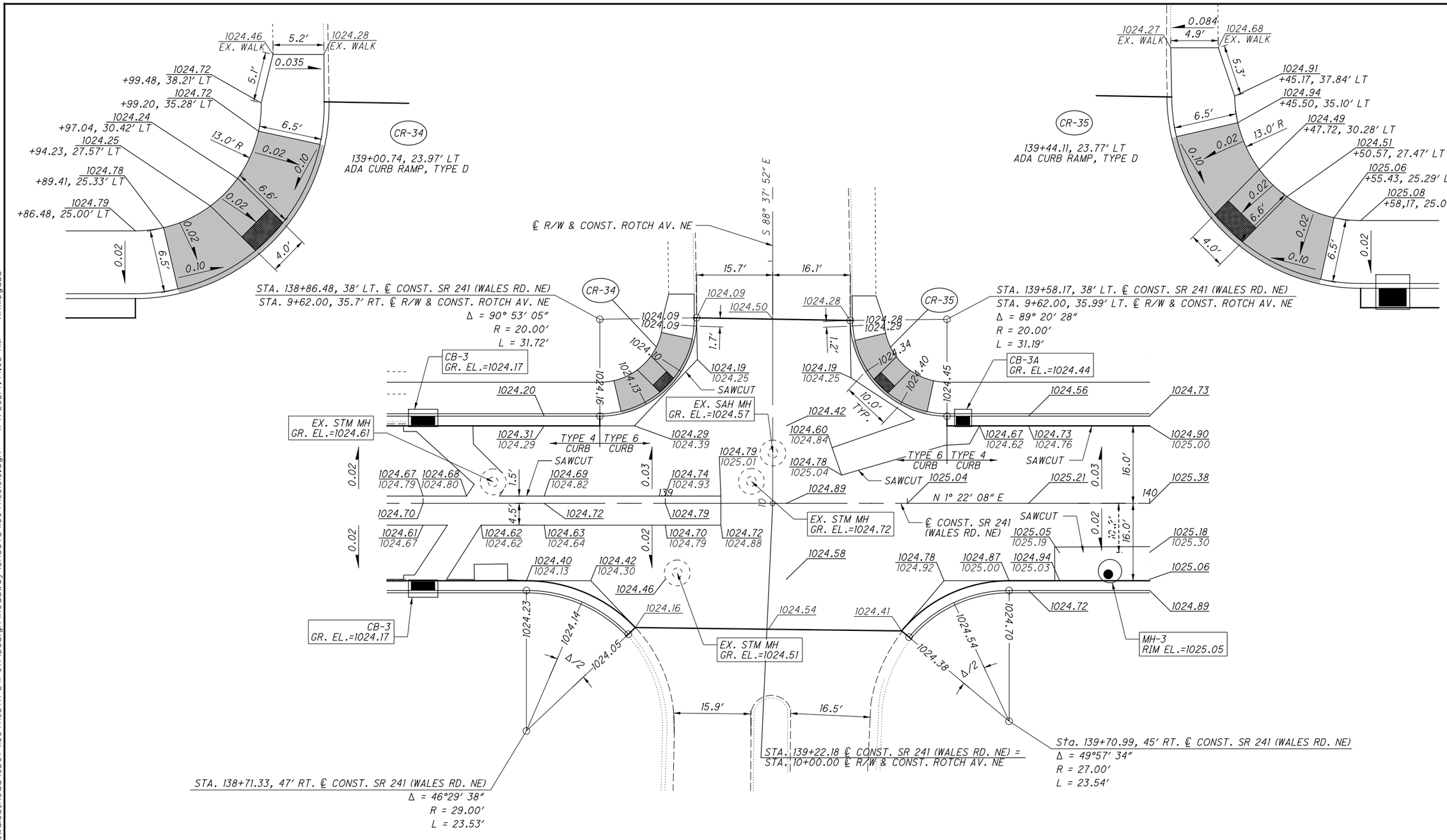
CALCULATED KRM CHECKED RAK

175 / 395

P:\3000_3499\3062170090_STA-241-97I_Wales-Road\ODOT\00471L_STA-241-97I\Design\Roadway\Sheets\00471L_GI009.dgn 4/7/2021 7:44:04 AM khillegoss



NOTE
ALL ELEVATIONS ALONG THE CURB ARE BOTTOM OF CURB ELEVATIONS.
ADD 0.50' IN AREAS OF TYPE 2 AND TYPE 6 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
ADD 0.33' IN AREAS OF TYPE 4 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
SEE SCD BP-7.1 FOR ALL OTHER INFORMATION NOT SHOWN ON THE SHEET.



LEGEND

XXX.XX / XXX.XX — PROPOSED ELEVATION / EXISTING ELEVATION

NOTE
ALL ELEVATIONS ALONG THE CURB ARE BOTTOM OF CURB ELEVATIONS.
ADD 0.50′ IN AREAS OF TYPE 2 AND TYPE 6 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
ADD 0.33′ IN AREAS OF TYPE 4 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
SEE SCD BP-7.1 FOR ALL OTHER INFORMATION NOT SHOWN ON THE SHEET.

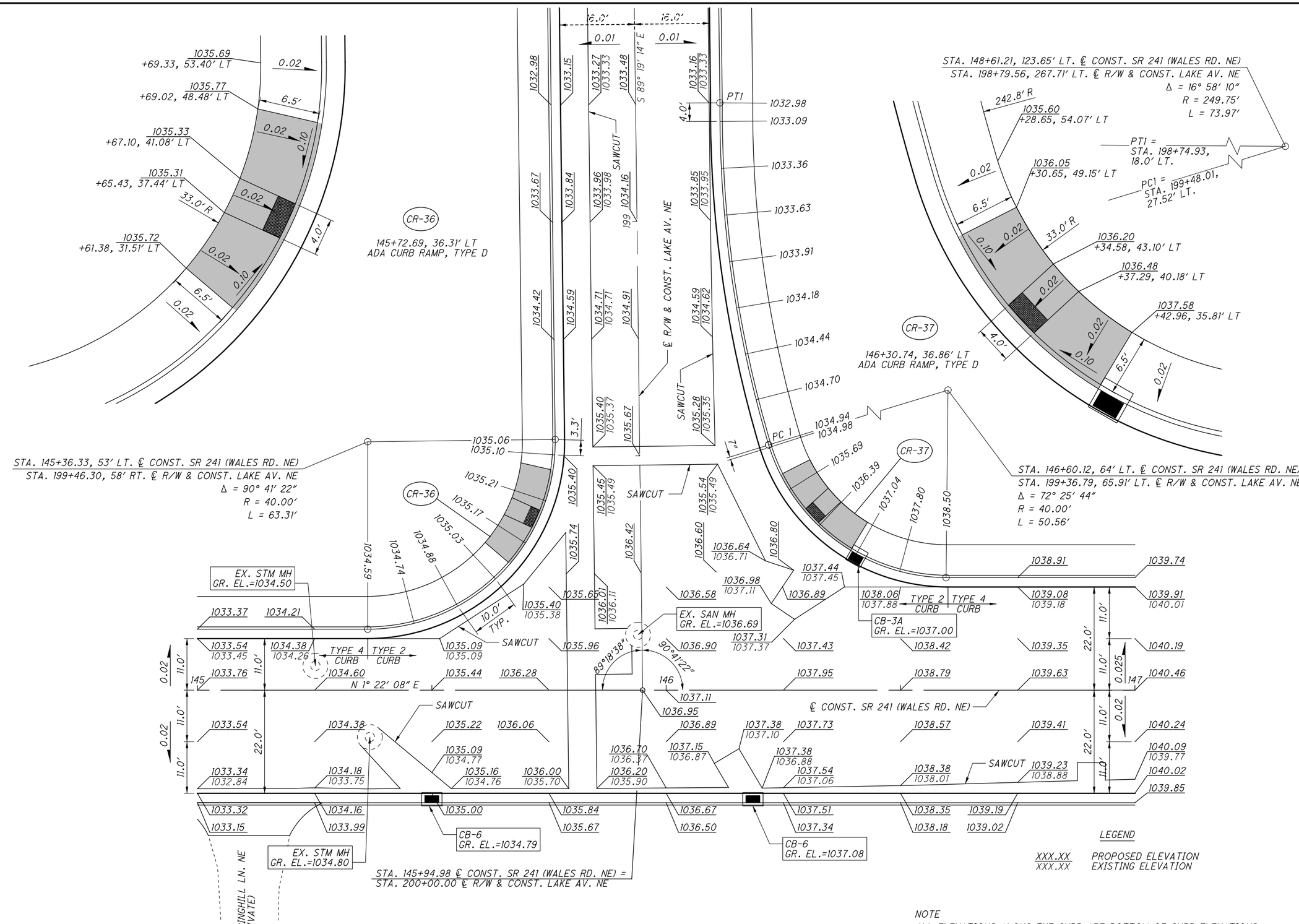
HORIZONTAL SCALE IN FEET
0 5 10 20
CALCULATED KRM
CHECKED RAK

INTERSECTION DETAIL
S.R.241 (WALES RD. NE) & ROTCH AV. NE

STA-241-9.71

176
395

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NOTE
ALL ELEVATIONS ALONG THE CURB ARE BOTTOM OF CURB ELEVATIONS.
ADD 0.50' IN AREAS OF TYPE 2 AND TYPE 6 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
ADD 0.33' IN AREAS OF TYPE 4 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
SEE SCD BP-7.1 FOR ALL OTHER INFORMATION NOT SHOWN ON THE SHEET.

HORIZONTAL SCALE IN FEET
0 5 10 20

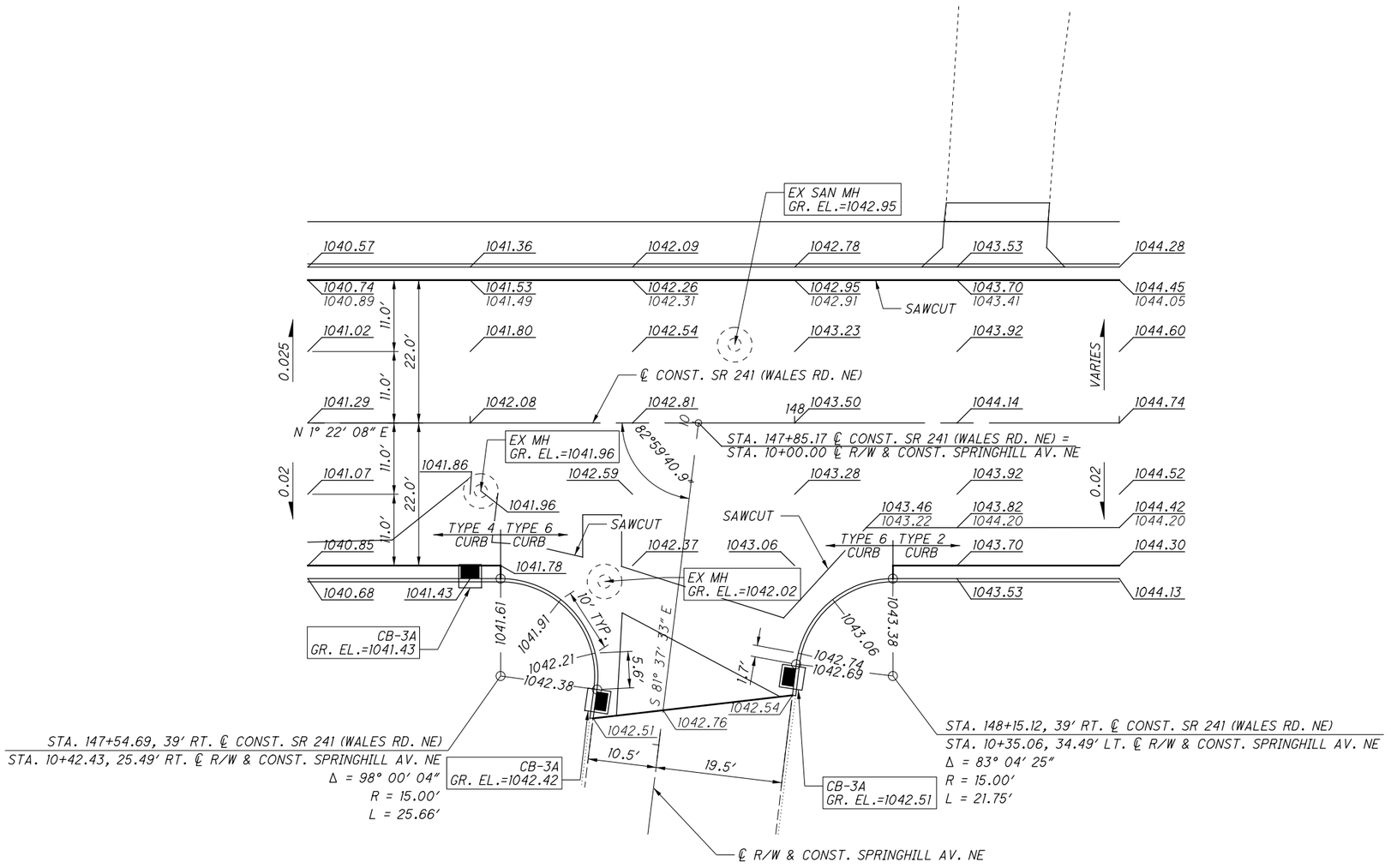
CALCULATED KRM
CHECKED RAK

INTERSECTION DETAIL
S.R.241 (WALES RD. NE) & LAKE AV. NE

STA-241-9.71

177
395

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LEGEND

XXX.XX	*PROPOSED ELEVATION*
XXX.XX	*EXISTING ELEVATION*

NOTE
ALL ELEVATIONS ALONG THE CURB ARE BOTTOM OF CURB ELEVATIONS.
ADD 0.50' IN AREAS OF TYPE 2 AND TYPE 6 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
ADD 0.33' IN AREAS OF TYPE 4 CURB TO OBTAIN TOP OF CURB ELEVATIONS.

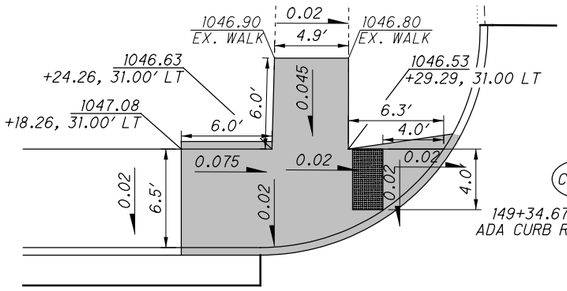
HORIZONTAL SCALE IN FEET
0 5 10 20

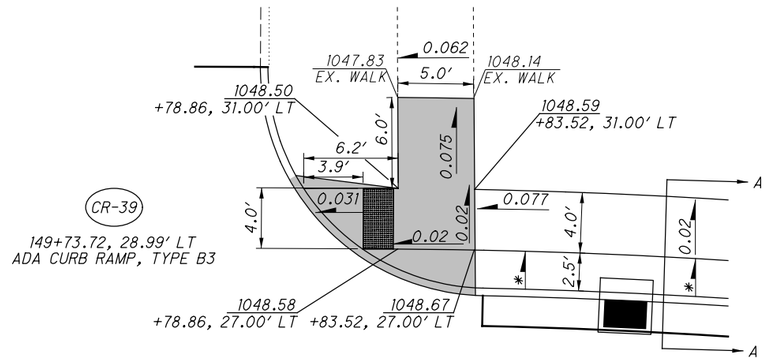
CALCULATED KRM
CHECKED RAK

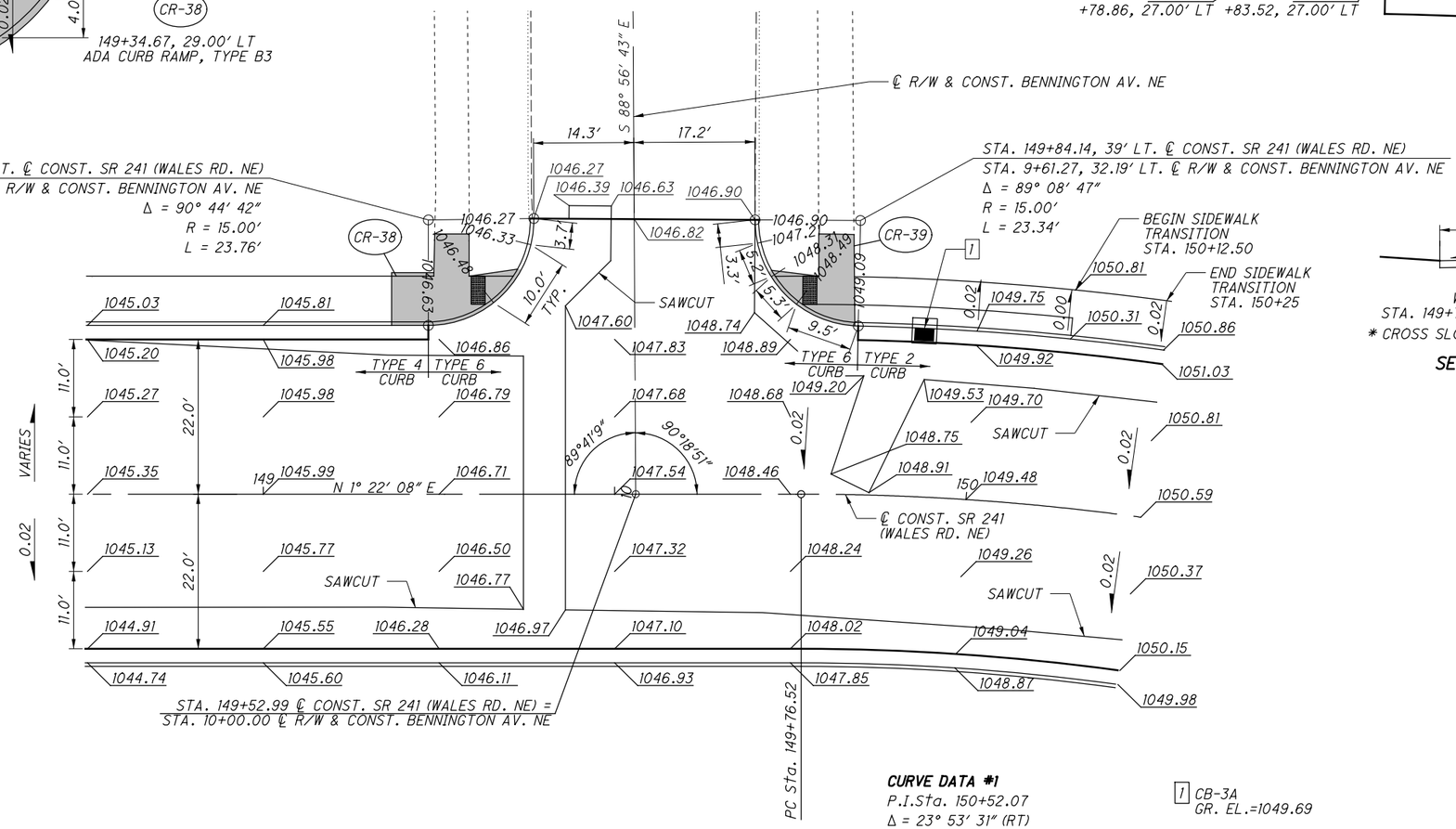
INTERSECTION DETAIL
S.R.241 (WALES RD. NE) & SPRINGHILL AV. NE

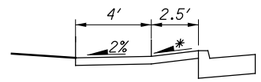
STA-241-9.71

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WALK DETAIL
STA. 149+75 TO STA. 150+12.50
* CROSS SLOPE VARIES 0.00 TO 0.28

SECTION A-A

CURVE DATA #1
P.I.Sta. 150+52.07
Δ = 23° 53' 31" (RT)
Dc = 16° 02' 41"
R = 357.10'
T = 75.55'
L = 148.91'
E = 7.90'
C = 147.83'
C.B. = N 13° 18' 53" E
e_{max} = 0.02

[1] *CB-3A*
GR. EL.=1049.69

LEGEND

XXX.XX	*PROPOSED ELEVATION*
XXX.XX	*EXISTING ELEVATION*

NOTE
ALL ELEVATIONS ALONG THE CURB ARE BOTTOM OF CURB ELEVATIONS.
ADD 0.50' IN AREAS OF TYPE 2 AND TYPE 6 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
ADD 0.33' IN AREAS OF TYPE 4 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
SEE SCD BP-7.1 FOR ALL OTHER INFORMATION NOT SHOWN ON THE SHEET.

N

HORIZONTAL SCALE IN FEET
0 5 10 20

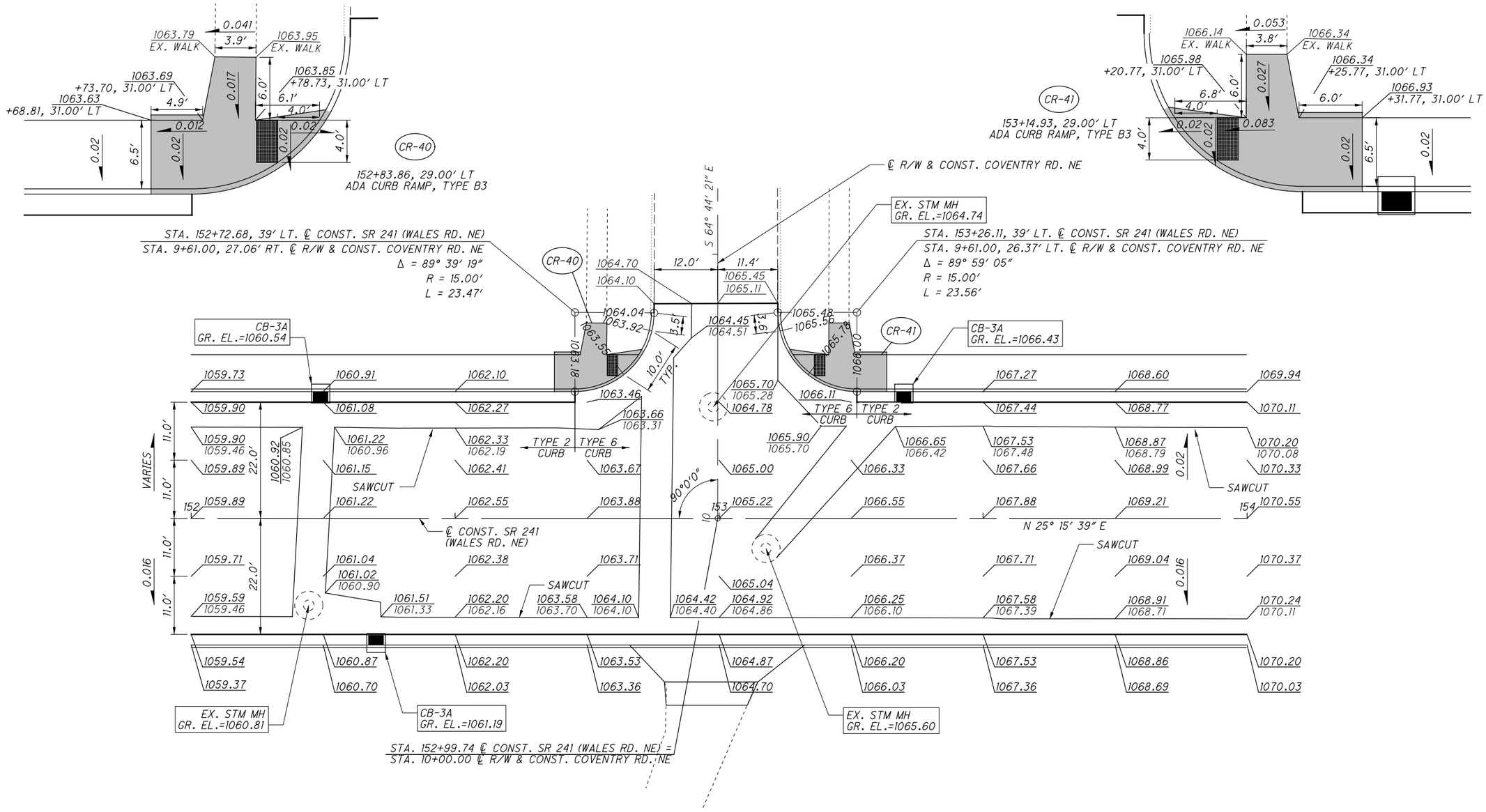
CALCULATED KRM
CHECKED RAK

INTERSECTION DETAIL
S.R.241 (WALES RD. NE) & BENNINGTON AV. NE

STA-241-9.71

179
395

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LEGEND

XXX.XX — PROPOSED ELEVATION
XXX.XX — EXISTING ELEVATION

NOTE
ALL ELEVATIONS ALONG THE CURB ARE BOTTOM OF CURB ELEVATIONS.
ADD 0.50' IN AREAS OF TYPE 2 AND TYPE 6 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
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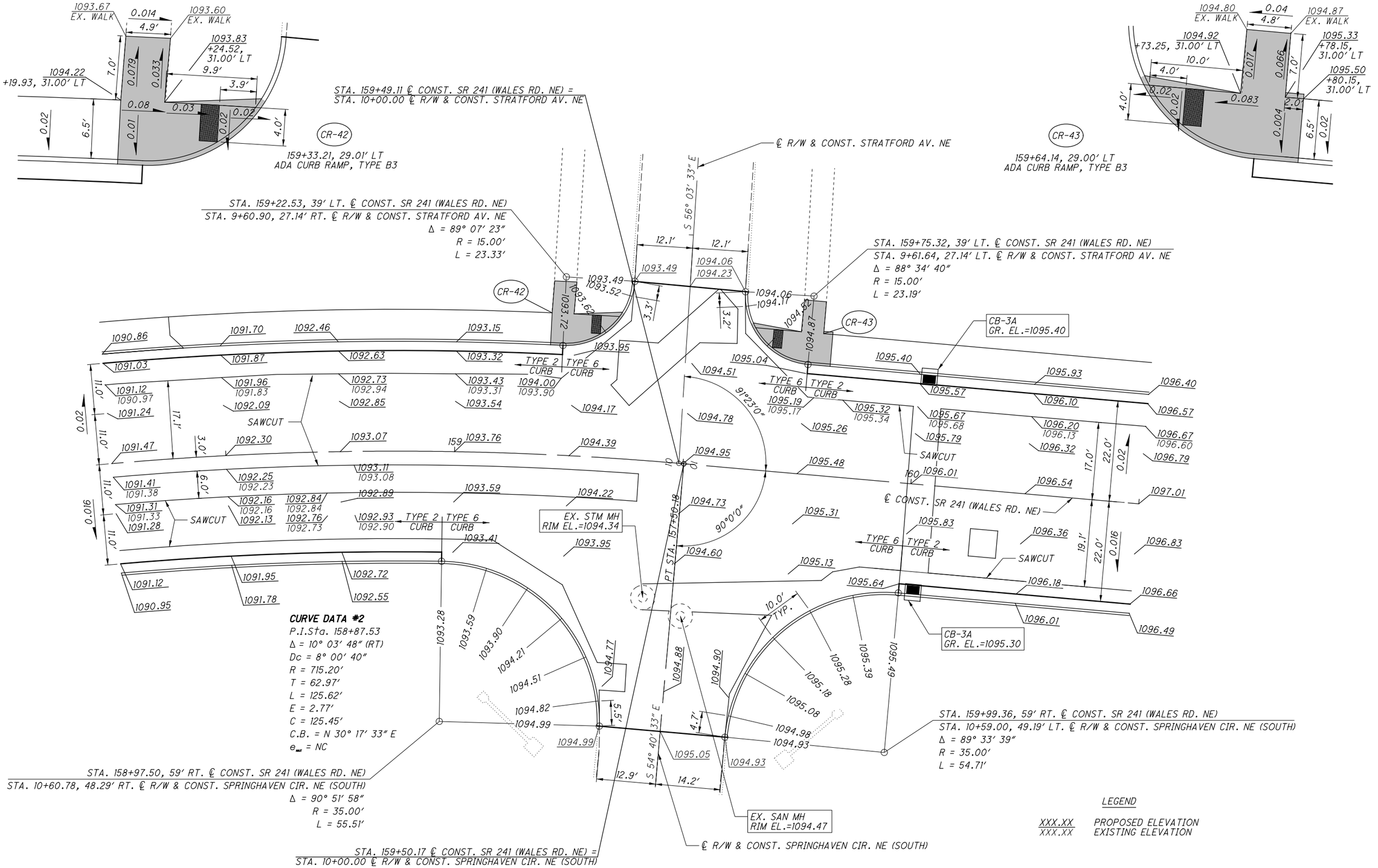
HORIZONTAL SCALE IN FEET
0 5 10 20
CALCULATED KRM
CHECKED RAK

INTERSECTION DETAIL
S.R.241 (WALES RD. NE) & COVENTRY RD. NE

STA-241-9.71

180
395

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LEGEND

XXX.XX / XXX.XX — PROPOSED ELEVATION / EXISTING ELEVATION

NOTE
ALL ELEVATIONS ALONG THE CURB ARE BOTTOM OF CURB ELEVATIONS.
ADD 0.50′ IN AREAS OF TYPE 2 AND TYPE 6 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
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HORIZONTAL SCALE IN FEET
0 5 10 20

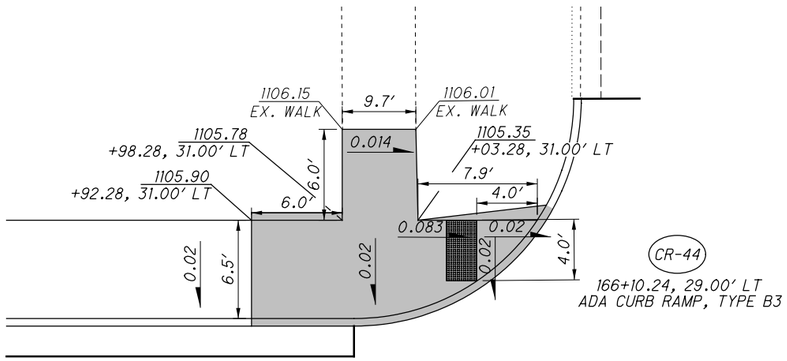
CALCULATED KRM
CHECKED RAK

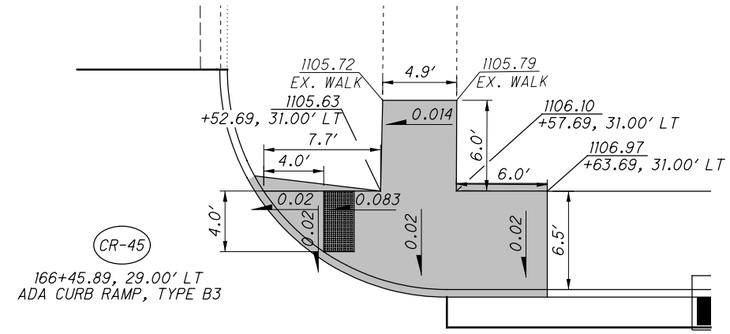
INTERSECTION DETAIL
S.R.241 (WALES RD. NE) & STRATFORD AV. NE

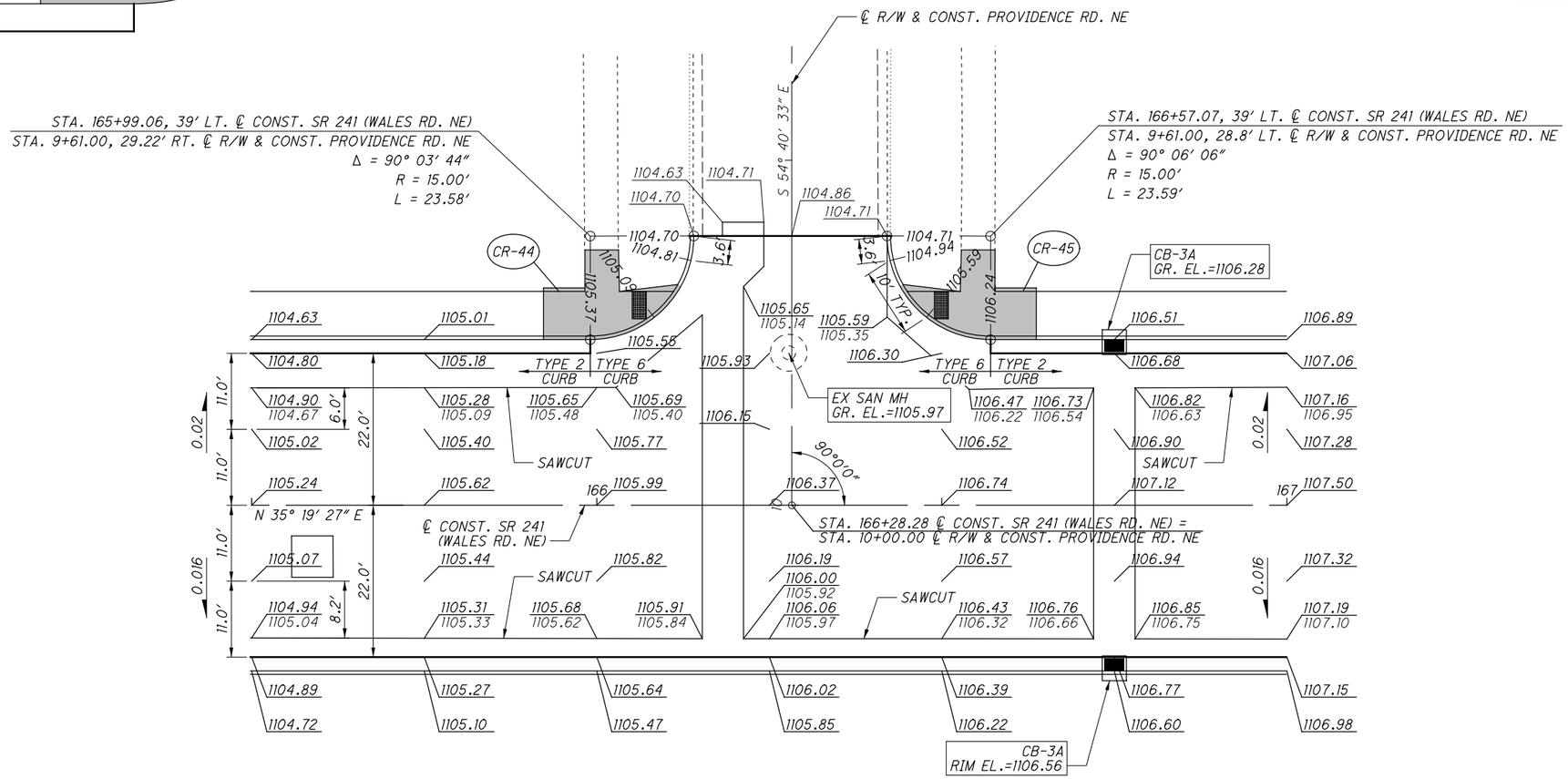
STA-241-9.71

181
395

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LEGEND

XXX.XX	PROPOSED ELEVATION
XXX.XX	EXISTING ELEVATION

NOTE
ALL ELEVATIONS ALONG THE CURB ARE BOTTOM OF CURB ELEVATIONS.
ADD 0.50′ IN AREAS OF TYPE 2 AND TYPE 6 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
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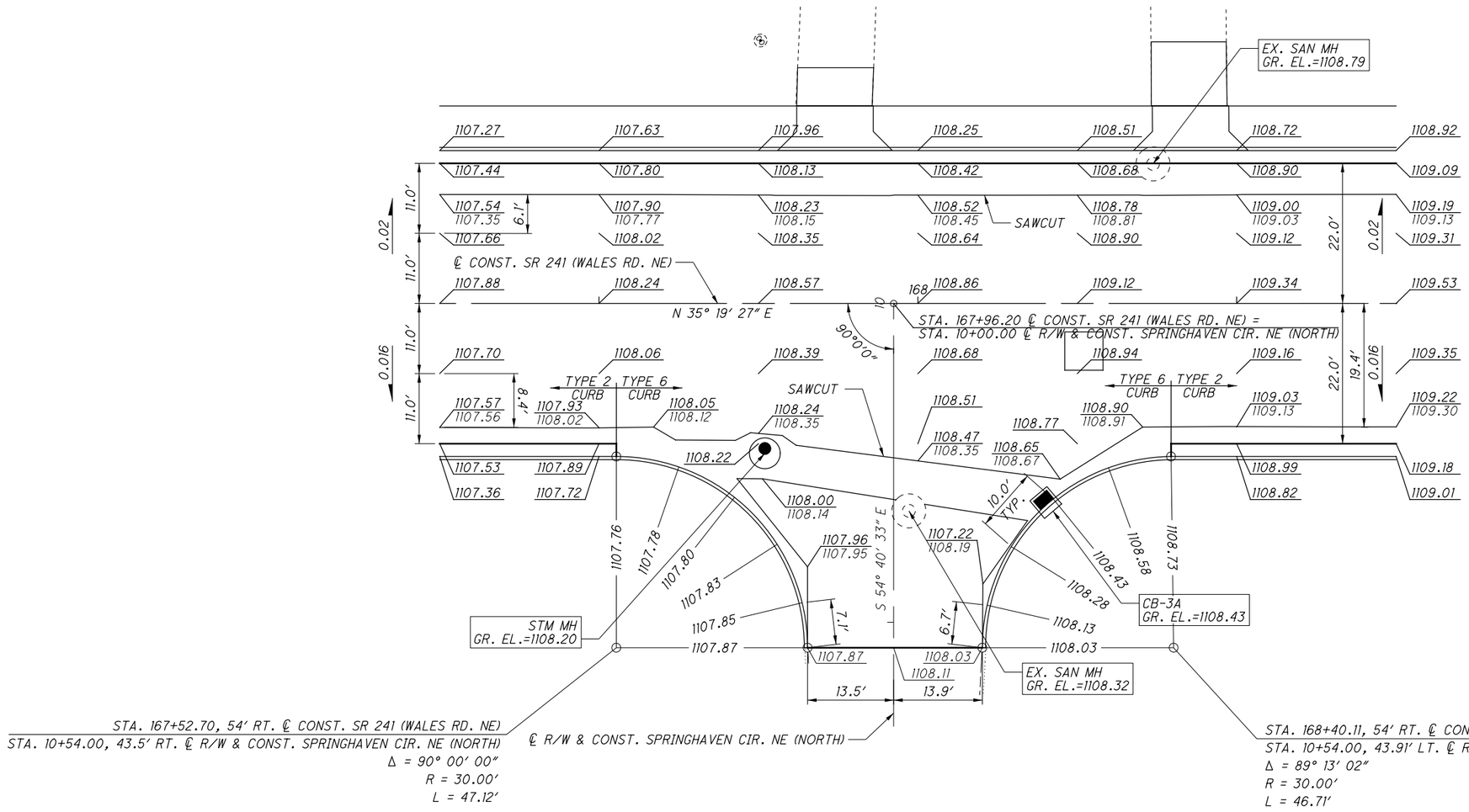
HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED KRM
CHECKED RAK

INTERSECTION DETAIL
S.R.241 (WALES RD.℄ NE) & PROVIDENCE RD.℄ NE

STA-241-9.71

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STA. 167+52.70, 54' RT. ℄ CONST. SR 241 (WALES RD. NE)
STA. 10+54.00, 43.5' RT. ℄ R/W & CONST. SPRINGHAVEN CIR. NE (NORTH)
Δ = 90° 00' 00"
R = 30.00'
L = 47.12'

℄ R/W & CONST. SPRINGHAVEN CIR. NE (NORTH)

STA. 168+40.11, 54' RT. ℄ CONST. SR 241 (WALES RD. NE)
STA. 10+54.00, 43.91' LT. ℄ R/W & CONST. SPRINGHAVEN CIR. NE (NORTH)
Δ = 89° 13' 02"
R = 30.00'
L = 46.71'

LEGEND

XXX.XX — PROPOSED ELEVATION
XXX.XX — EXISTING ELEVATION

NOTE
ALL ELEVATIONS ALONG THE CURB ARE BOTTOM OF CURB ELEVATIONS.
ADD 0.50' IN AREAS OF TYPE 2 AND TYPE 6 CURB TO OBTAIN TOP OF CURB ELEVATIONS.
ADD 0.33' IN AREAS OF TYPE 4 CURB TO OBTAIN TOP OF CURB ELEVATIONS.

HORIZONTAL SCALE IN FEET
0 5 10 20

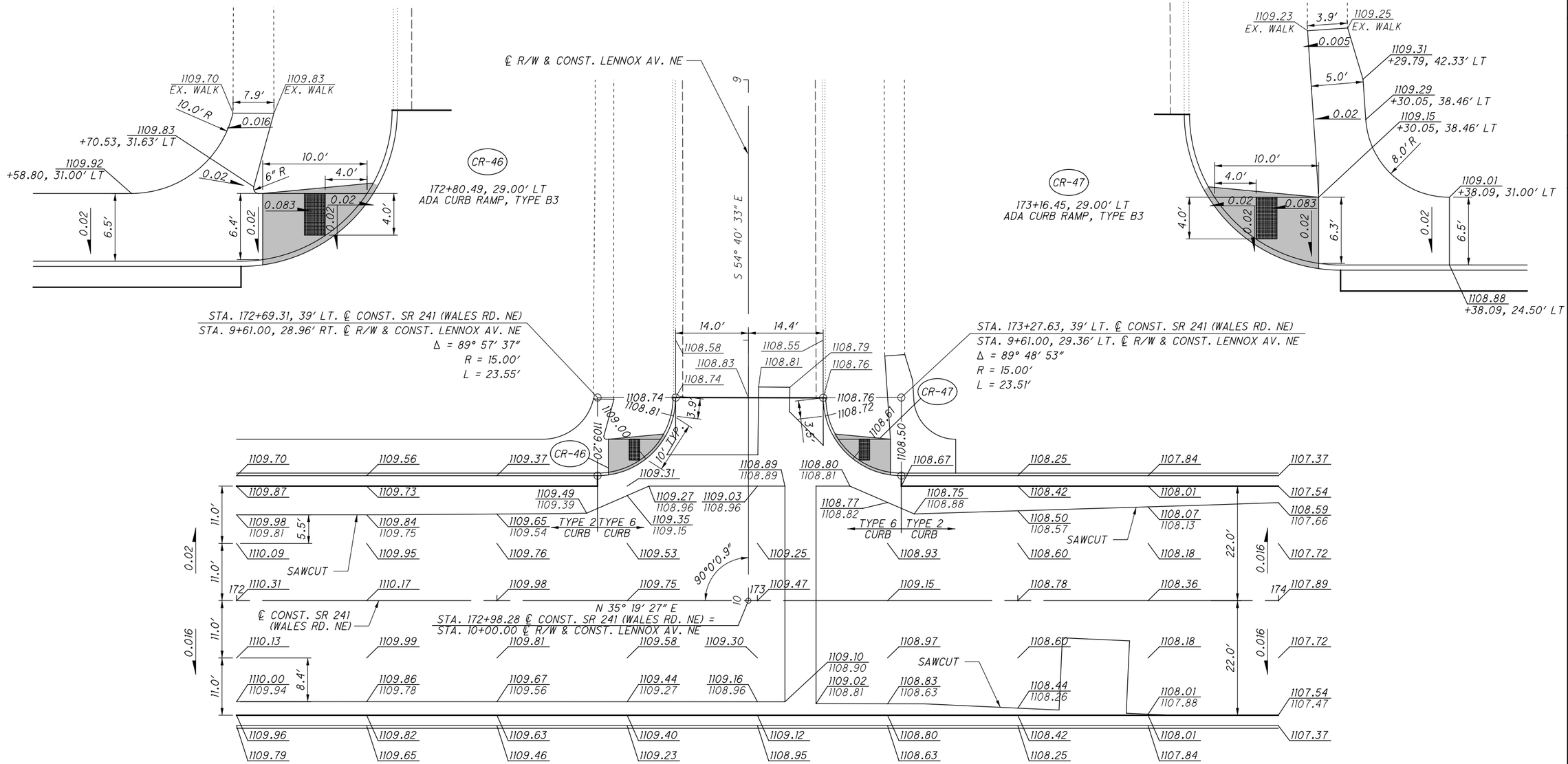
CALCULATED KRM
CHECKED RAK

INTERSECTION DETAIL
S.R.241 (WALES RD. NE) & SPRINGHAVEN CIR. NE

STA-241-9.71

183
395

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LEGEND

XXX.XX	PROPOSED ELEVATION
XXX.XX	EXISTING ELEVATION

NOTE
ALL ELEVATIONS ALONG THE CURB ARE BOTTOM OF CURB ELEVATIONS.
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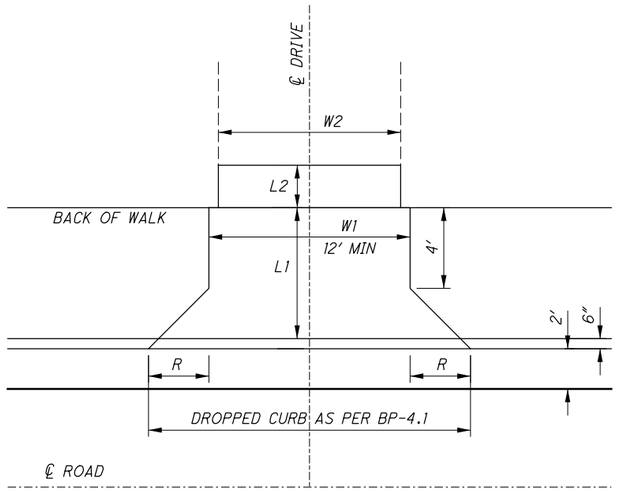
HORIZONTAL SCALE IN FEET
0 5 10 20

CALCULATED KRM CHECKED RAK

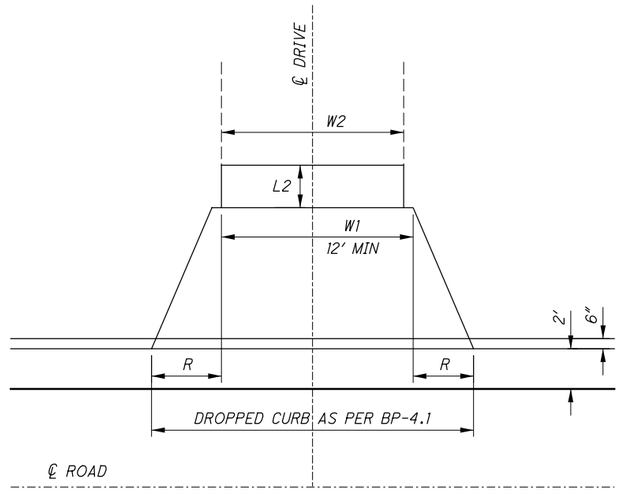
INTERSECTION DETAIL
S.R.241 (WALES RD. NE) & LENNOX AV. NE

STA-241-9.71

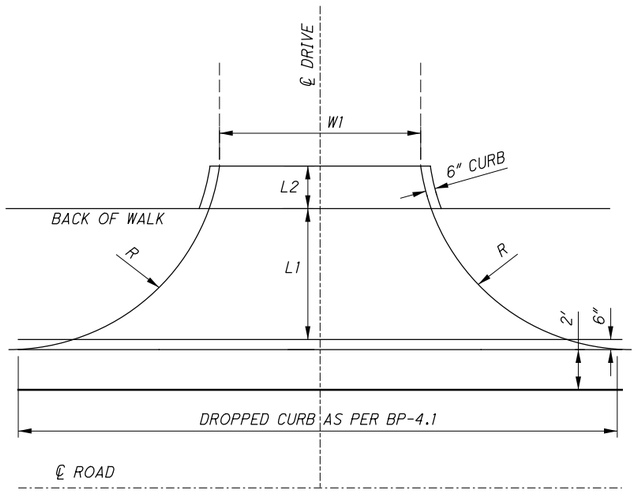
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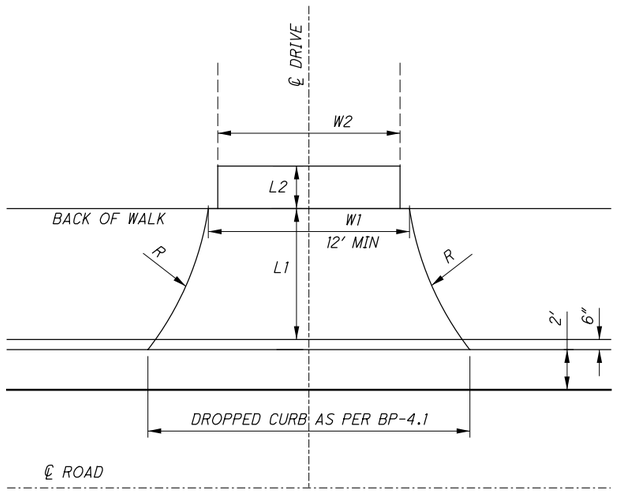
TYPE 1 RESIDENTIAL DRIVEWAY PLAN VIEW



TYPE 2 RESIDENTIAL DRIVEWAY PLAN VIEW



TYPE 3 COMMERCIAL OR ALLEY DRIVEWAY PLAN VIEW



TYPE 4 COMMERCIAL DRIVEWAY PLAN VIEW

RESIDENTIAL DRIVES

APRON: ITEM 452 - 6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS
ITEM 204 - SUBGRADE COMPACTION

EXISTING AGGREGATE DRIVES
ITEM 304 - 8" AGGREGATE BASE, AS PER PLAN
ITEM 204 - SUBGRADE COMPACTION

EXISTING ASPHALT DRIVES
ITEM 441 - 1.25" AC SURFACE COURSE, TYPE 1, (448), PG64-22 (DRIVEWAYS), AS PER PLAN
ITEM 407 - TACK COAT
ITEM 301 - 3.5" ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS)
ITEM 204 - SUBGRADE COMPACTION

EXISTING BRICK DRIVES
ITEM SPECIAL - MISC.: BRICK PAVEMENT, FULL DEPTH
ITEM 204 - SUBGRADE COMPACTION

EXISTING CONCRETE DRIVES
ITEM 452 - 6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS
ITEM 204 - SUBGRADE COMPACTION

COMMERCIAL DRIVES

APRON: ITEM 452 - 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS
ITEM 204 - SUBGRADE COMPACTION

EXISTING AGGREGATE DRIVES
ITEM 304 - 8" AGGREGATE BASE, AS PER PLAN
ITEM 204 - SUBGRADE COMPACTION

EXISTING ASPHALT DRIVES
ITEM 441 - 1.25" AC SURFACE COURSE, TYPE 1, (448), PG64-22, (DRIVEWAYS), AS PER PLAN
ITEM 407 - TACK COAT
ITEM 301 - 5" ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS)
ITEM 204 - SUBGRADE COMPACTION

EXISTING CONCRETE DRIVES
ITEM 452 - 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS
ITEM 204 - SUBGRADE COMPACTION

SEE SHEETS 186 - 187 FOR DRIVEWAY QUANTITIES.

CALCULATED KAH
CHECKED KRM

DRIVEWAY DETAILS

STA-241-9.71

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SHEET NO.	REFERENCE NO.	STATION	SIDE	USAGE	DRIVEWAY TYPE	DRIVEWAY MATERIAL	APRON AREA	DRIVE AREA	APRON LENGTH "L1"	DRIVEWAY LENGTH "L2"	APRON WIDTH "W1"	DRIVEWAY WIDTH "W2"	RADIUS OR FLARE "R"	202 PAVEMENT REMOVED	203 EXCAVATION	203 EMBANKMENT	204 SUBGRADE COMPACTION	301 ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS), 3.5"	301 ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS), 5"	304 AGGREGATE BASE, AS PER PLAN	407 TACK COAT	441 ASPHALT CONCRETE SURFACE COURSE, TYPE I, (448), (DRIVEWAYS), AS PER PLAN, 1.25"	452 6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	452 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	609 CURB, TYPE 6	SPECIAL MISC.: BRICK PAVEMENT, FULL DEPTH	659 SEEDING AND MULCHING
							SF	SF	FT	FT	FT	FT	FT	SY	CY	CY	SY	CY	CY	CY	GAL	CY	SY	SY	FT	SY	SY
188	DV-1	101+27.45	RT	COMM.	3	ASPHALT	128	154		SEE SHEET	188	FOR DETAIL			-6	-2	31.32		2.37		0.85	0.59		14.23	25		-32
188	DV-2	101+83.00	RT	COMM.	3	ASPHALT	232	208	6.5	8	24.5	24.5	15		-13	-6	48.92		3.22		1.16	0.8		25.76	17		-49
188	DV-3	102+12.00	LT	COMM.	3	ASPHALT	360	636	6.5	18	30.5	30.5	25		-9	-7	110.70		9.82		3.53	2.45		40.01	40.5		-111
188	DV-4	102+64.50	LT	ALLEY	3	ASPHALT	78	89		SEE SHEET	188	FOR DETAIL			-12	-7	18.53	0.96			0.49	0.34	8.68		6.5		-19
188	DV-5	102+76.00	RT	COMM.	3	ASPHALT	242	241		SEE SHEET	188	FOR DETAIL			-8	-7	53.65		3.72		1.34	0.93		26.87	18.5		-54
188	DV-6	103+13.50	LT	RES.	1	BRICK	84	21	6.5	2	12	10.5	3	7.77	-18	-4	11.73						9.36			2	-12
188	DV-7	103+66.50	LT	RES.	1	BRICK	84	14	6.5	1.5	12	9	3	4.82	-18	-2	10.88						9.37			2	-11
188	DV-8	103+70.00	RT	RES.	1	AGGR.	84	24	6.5	2	12	11.5	3		-16	-3	11.98			0.58			9.36				-12
188	DV-9	104+22.50	RT	RES.	1	CONC.	83	12	6.5	1	12	12.5	3	7.83	-15	-4	10.57						10.57				-11
188	DV-10	104+38.00	LT	COMM.	4	CONC.	142	31	6.5	1.5	20	20	15	11.34	-15	-3	19.26							19.26			-20
189	DV-11	105+91.00	RT	RES.	1	AGGR.	84	102	6.5	10.5	12	8.5	3		-12	-5	20.65			2.51			9.36				-21
189	DV-12	106+25.00	LT	RES.	1	ASPHALT	84	33	6.5	3	12	9.5	3		-20	-2	13.02	0.36			0.18	0.13	9.35				-14
189	DV-13	106+93.50	RT	RES.	1	ASPHALT	84	118	6.5	10	12	12	3		-18	-2	22.52	1.28			0.66	0.46	9.36				-23
189	DV-14	108+77.00	RT	RES.	1	AGGR.	84	104	6.5	10	12	10.5	3		-13	-6	20.91			2.57			9.36				-21
189	DV-15	109+60.00	RT	RES.	1	CONC.	84	6	6.5	1	12	7.5	3	4.59	-16	-8	10.06						10.06				-11
189	DV-16	110+87.00	RT	RES.	1	AGGR.	201	90	6.5	3	30	30	3		-15	-3	32.39			2.23			22.36				-33
189	DV-17	111+48.50	RT	RES.	1	CONC.	84	9	6.5	1	12	10	3	10.92	-22	-3	10.41						10.41				-11
189	DV-18	111+53.50	LT	RES.	1	AGGR.	136	54	6.5	3	20	18	3		-19	-2	21.14			1.33			15.15				-22
189	DV-19	111+90.50	RT	RES.	1	CONC.	84	49	6.5	5	12	10	3	9.86	-23	-2	14.85						14.85				-15
189	DV-20	112+98.50	RT	COMM.	4	ASPHALT	169	115	6.5	5	24	24	15		-9	-2	31.59		1.78		0.64	0.44		18.8			-32
189	DV-21	113+16.00	LT	RES.	1	CONC.	84	54	6.5	5	12	10.5	3	16.26	-21	-2	15.37						15.37				-16
189	DV-22	113+62.00	RT	COMM.	4	ASPHALT	169	0	6.5	0	24	0	15		-18	-2	18.80							18.8			-19
190	DV-23	113+84.50	LT	COMM.	4	ASPHALT	169	183	6.5	7.5	24	24	15		-11	-2	39.12		2.82		1.02	0.71		18.8			-40
190	DV-24	114+21.50	LT	COMM.	4	ASPHALT	91	53	6.5	5	12	10	15		-14	-5	16.04		0.82		0.3	0.21		10.13			-17
190	DV-25	115+39.50	LT	COMM.	4	CONC.	91	59	6.5	12	12	11	15	21.91	-35	0	16.69							16.69			-17
190	DV-26	115+40.00	RT	COMM.	4	ASPHALT	247	339	6.5	8.5	36	41	15		-23	0	65.08		5.22		1.88	1.31		27.46			-66
190	DV-27	115+83.50	LT	RES.	1	CONC.	110	224	6.5	14	16	16.5	3	30.64	-38	0	37.19						37.19				-38
190	DV-28	116+12.50	RT	COMM.	4	ASPHALT	247	180	6.5	5	36	36	15		-18	-1	47.45		2.78		1	0.69		27.46			-48
190	DV-29	117+95.00	RT	RES.	1	CONC.	136	133	6.5	7	20	18	3	22.60	-19	-2	29.97						29.97				-30
190	DV-30	118+38.50	RT	RES.	1	CONC.	84	60	6.5	7	12	8	3	11.10	-21	-2	16.01						16.01				-17
190	DV-32	120+00.00	RT	RES.	1	CONC.	233	81	6.5	2.5	32	33	3	15.23	-19	-2	34.91						34.91				-35
190	DV-33	120+12.50	LT	RES.	1	AGGR.	84	20	6.5	2	12	10.5	3		-21	-2	11.64			0.51			9.36				-12
190	DV-34	120+30.00	RT	RES.	1	CONC.	84	35	6.5	2.5	12	16	3	10.49	-22	-2	13.23						13.23				-14
190	DV-35	120+59.50	RT	RES.	1	AGGR.	84	18	6.5	2.5	12	7	3		-21	-2	11.43			0.46			9.37				-12
191	DV-36	120+84.50	LT	RES.	1	AGGR.	136	37	6.5	2	20	20	3		-19	-2	19.23			0.91			15.14				-20
191	DV-37	121+09.50	RT	RES.	1	CONC.	84	39	6.5	5	12	8	3	9.72	-23	-1	13.75						13.75				-14
191	DV-38	121+51.00	LT	RES.	1	CONC.	84	49	6.5	5	12	10	3	7.95	-28	0	14.80						14.8				-15
191	DV-39	121+58.50	RT	RES.	1	CONC.	84	17	6.5	2	12	8.5	3	5.41	-28	-1	11.29						11.29				-12
191	DV-40	121+96.50	LT	RES.	1	ASPHALT	121	16	6.5	2	16	9	3		-24	-1	15.27	0.18			0.09	0.06	13.44				-16
191	DV-41	122+01.50	RT	RES.	1	CONC.	84	33	6.5	3	12	11	3	7.28	-24	-1	13.03						13.03				-14
191	DV-42	122+35.00	LT	RES.	1	CONC.	84	49	6.5	5	12	10	3	6.19	-25	-2	14.75						14.75				-15
191	DV-43	122+40.00	RT	RES.	1	CONC.	84	46	6.5	5	12	9	3	8.38	-24	-2	14.45						14.45				-15
191	DV-44	122+79.50	RT	RES.	1	AGGR.	84	22	6.5	2.5	12	9	3		-17	-2	11.85			0.55			9.36				-12
191	DV-45	123+11.50	LT	RES.	1	CONC.	84	19	6.5	2.5	12	7.5	3	4.97	-21	-1	11.46						11.46				-12
191	DV-46	123+16.00	RT	RES.	1	CONC.	84	18	6.5	1.5	12	12	3	8.72	-21	-2	11.37						11.37				-12
191	DV-47	123+56.50	LT	RES.	1	CONC.	84	0	6.5	0	12	0	3	3.03	-23	-1	9.36						9.36				-10
192	DV-48	123+60.00	RT	RES.	1	CONC.	83	15		SEE SHEET	192	FOR DETAIL		20.03	-23	-2	10.90						10.9				-11
192	DV-49	123+75.50	RT	RES.	1	CONC.	83	25		SEE SHEET	192	FOR DETAIL			-23	-1	12.01						12.01				-13
192	DV-50	123+98.00	LT	RES.	1	ASPHALT	84	18	6.5	2.5	12	8	3		-20	-2	11.31	0.19			0.1	0.07	9.36				-12
192	DV-51	124+28.00	RT	RES.	1	AGGR.	84	12	6.5	1	12	10	3		-22	-3	10.66			0.29			9.36				-11
192	DV-52	124+77.00	RT	RES.	1	AGGR.	84	50	6.5	5	12	10	3		-17	-4	14.93			1.24			9.36				-15
192	DV-53	124+80.50	LT	RES.	1	AGGR.	84	49	6.5	5	12	10	3		-18	-4	14.80			1.21			9.36				-15
192	DV-54	125+58.00	RT	RES.	1	AGGR.	84	20	6.5	2	12	10	3		-22	-3	11.63			0.5			9.36				-12
192	DV-55	125+61.00	LT	RES.	1	AGGR.	84	33	6.5	3	12	10.5	3		-22	-3	12.97			0.8			9.36				-13
		NOT USED: DV-31																									
EXCAVATION, EMBANKMENT, AND SEEDING AND MULCHING QUANTITES CARRIED TO SHEET 80																											
TOTALS CARRIED TO GENERAL SUMMARY														267	-1042	-142	1158	36		16	13	9	554	264	108	4	-1184

CALCULATED KAH
CHECKED KRM

DRIVEWAY DETAILS

STA-241-9.71

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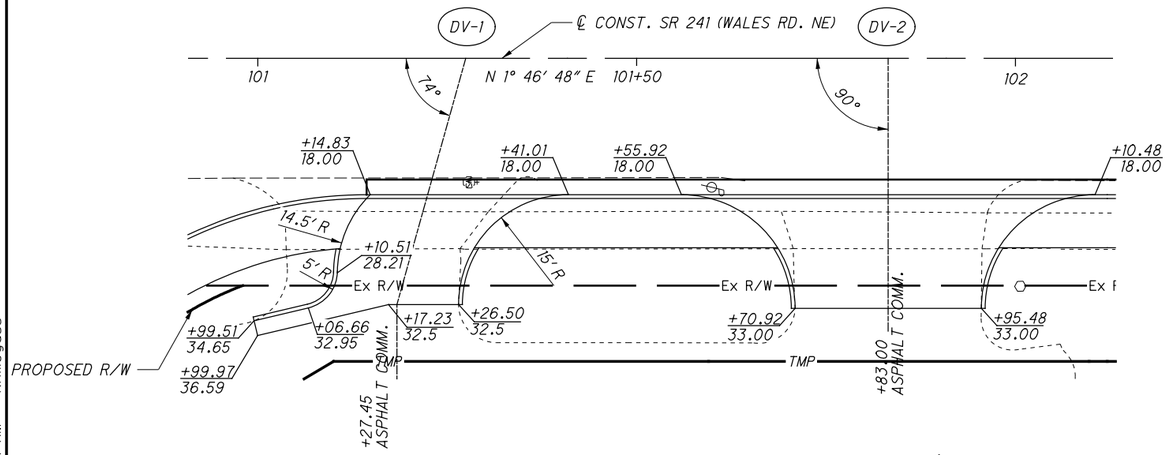
SHEET NO.	REFERENCE NO.	STATION	SIDE	USAGE	DRIVEWAY TYPE	DRIVEWAY MATERIAL	APRON AREA	DRIVE AREA	APRON LENGTH "L1"	DRIVEWAY LENGTH "L2"	APRON WIDTH "W1"	DRIVEWAY WIDTH "W2"	RADIUS OR FLARE "R"	202 PAVEMENT REMOVED	203 EXCAVATION	203 EMBANKMENT	204 SUBGRADE COMPACTION	301 ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS), 3.5"	301 ASPHALT CONCRETE BASE, PG64-22 (DRIVEWAYS), 5"	304 AGGREGATE BASE, AS PER PLAN	407 TACK COAT	441 ASPHALT CONCRETE SURFACE COURSE, TYPE I, (448), (DRIVEWAYS), AS PER PLAN, 1.25"	452 6" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	452 9" NON-REINFORCED CONCRETE PAVEMENT, CLASS QC MS	609 CURB, TYPE 6	SPECIAL MISC.: BRICK PAVEMENT, FULL DEPTH	659 SEEDING AND MULCHING
							SF	SF	FT	FT	FT	FT	FT	SY	CY	CY	SY	CY	CY	CY	GAL	CY	SY	SY	FT	SY	SY
192	DV-56	126+04.50	RT	RES.	1	AGGR.	84	18	6.5	1.5	12	12	3		-25	-2	11.36			0.44			9.36					-12
192	DV-57	126+67.00	RT	RES.	1	AGGR.	84	30	6.5	3	12	10	3		-22	-1	12.72			0.75			9.36					-13
192	DV-58	126+91.50	LT	RES.	1	CONC.	133	69	6.5	3.5	19.5	20	3	12.88	-25	0	22.41						22.41					-23
192	DV-59	127+33.00	RT	RES.	1	AGGR.	84	50	6.5	4	12	13	3		-20	-1	14.96			1.24			9.36					-15
193	DV-60	127+62.50	LT	RES.	1	ASPHALT	84	31	6.5	2.5	12	12	3		-21	-1	12.84	0.34			0.17	0.12	9.36					-13
193	DV-61	127+73.00	RT	RES.	1	ASPHALT	84	17	6.5	2	12	10	3		-20	-1	11.23	0.18			0.09	0.06	9.36					-12
193	DV-62	128+43.00	RT	RES.	1	CONC.	84	17	6.5	2	12	8	3	6.38	-22	-1	11.21						11.21					-12
193	DV-63	128+82.50	RT	RES.	1	CONC.	84	0	6.5	0	12	0	3	6.05	-21	-1	9.36						9.36					-10
193	DV-64	129+29.00	RT	RES.	1	ASPHALT	136	25	6.5	1	20	20	3		-22	0	17.97	0.28			0.14	0.1	15.14					-18
193	DV-65	129+44.00	LT	COMM.	4	CONC.	312	0	6.5	0	46	0	15	32.78	-21	1	34.63							34.63				-35
193	DV-66	9+27.50 (KENDAL)	RT	COMM.	4	CONC.	181	403	SEE SHEET		193	FOR DETAIL		39.88	1	-4	64.87							64.87				-65
193	DV-67	131+23.50	LT	RES.	1	CONC.	97	38	6.5	3	14	14	3	5.48	-18	-2	15.02						15.02					-16
193	DV-68	132+08.50	RT	COMM.	4	ASPHALT	180	190	SEE SHEET		193	FOR DETAIL			-55	-3	41.14		2.94		1.06	0.73		20.01				-42
193	DV-69	132+77.00	LT	RES.	1	CONC.	84	18	6.5	1.5	12	12	3	4.98	-66	-3	11.39						11.39					-12
193	DV-70	133+28.00	LT	RES.	1	CONC.	84	16	6.5	1.5	12	9	3	6.68	-33	-1	11.10						11.1					-12
193	DV-71	134+26.00	LT	RES.	1	CONC.	97	106	6.5	7.5	14	14	3	19.74	-34	0	22.62						22.62					-23
194	DV-72	134+78.00	RT	COMM.	4	ASPHALT	184	0	6.5	0	23.5	0	15		-26	0	20.42							20.42				-21
194	DV-73	135+88.00	RT	COMM.	4	ASPHALT	242	68	6.5	2	32.5	30	15		-16	0	34.49		1.05		0.38	0.26		26.94				-35
194	DV-74	136+07.00	LT	RES.	1	ASPHALT	123	67	6.5	4.5	18	12	3		-24	-1	21.19	0.73			0.37	0.26	13.69					-22
194	DV-75	138+01.00	RT	COMM.	4	ASPHALT	233	152	6.5	5	31	30	15		-14	-7	42.84		2.35		0.85	0.59		25.9				-43
194	DV-76	141+90.50	LT	RES.	1	ASPHALT	84	118	6.5	10	12	12	3		-23	-13	22.45	1.27			0.65	0.45	9.36					-23
194	DV-77	142+73.00	LT	RES.	1	AGGR.	84	70	6.5	6	12	11	3		-20	-20	17.14			1.73			9.36					-18
194	DV-78	143+57.00	LT	RES.	1	CONC.	136	193	6.5	11	20	16	3	28.20	-18	-11	36.60						36.6					-37
194	DV-79	145+11.00	RT	COMM.	4	ASPHALT	144	0	6.5	0	17	0	15		-14	-12	16.00							16				-16
194	DV-80	148+29.00	LT	RES.	1	CONC.	110	46	6.5	3	16	16	3	5.20	-32	-3	17.42						17.42					-18
194	DV-81	150+55.50	LT	RES.	1	CONC.	84	12	6.5	1	12	12	3	1.65	-52	-1	10.64						10.64					-11
194	DV-82	151+39.00	RT	RES.	2	AGGR.	169	0	SEE SHEET		194	FOR DETAIL			-40	0	18.82						18.82					-19
194	DV-83	153+14.50	RT	RES.	2	CONC.	162	73	SEE SHEET		194	FOR DETAIL		39.31	-29	-1	26.04						26.04					-27
195	DV-84	154+79.50	RT	RES.	2	CONC.	104	0	6.5	0	11.5	0	4.75	21.45	-58	-6	11.54						11.54					-12
195	DV-85	155+75.50	LT	RES.	1	CONC.	84	0	6.5	0	12	0	3	17.10	-92	-5	9.39						9.39					-10
195	DV-86	156+93.50	LT	RES.	1	CONC.	111	75	6.5	5	16	14	3	28.44	-82	-2	20.65						20.65					-21
195	DV-87	156+96.00	RT	RES.	2	CONC.	120	239	SEE SHEET		195	FOR DETAIL		16.99	-76	-1	39.85						39.85					-40
195	DV-88	158+27.50	LT	RES.	1	CONC.	172	0	6.5	0	25.5	0	3	33.98	-62	-3	19.14						19.14					-20
195	DV-89	161+59.00	RT	RES.	2	CONC.	192	306	6.5	11	28	28	2	70.04	-49	-1	55.34						55.34					-56
195	DV-90	162+47.00	RT	RES.	2	CONC.	91	36	6.5	3	12	12	2	20.83	-48	-5	14.09						14.09					-15
195	DV-91	163+12.00	RT	RES.	2	CONC.	96	51	SEE SHEET		195	FOR DETAIL		23.64	-49	-6	16.36						16.36					-17
195	DV-92	163+50.00	RT	RES.	2	CONC.	137	52	6.5	3	17.5	17.5	4	30.63	-54	-7	21.00						21					-21
195	DV-93	163+83.50	LT	RES.	1	CONC.	123	0	6.5	0	18	0	3	17.29	-56	-6	13.69						13.69					-14
195	DV-94	164+73.00	RT	RES.	2	CONC.	131	127	6.5	7	18	18	2	40.09	-39	-2	28.62						28.62					-29
195	DV-95	165+39.50	RT	RES.	2	CONC.	122	135	6.5	8	17	17	2	39.64	-39	-1	28.54						28.54					-29
196	DV-96	167+87.00	LT	RES.	1	CONC.	84	71	6.5	6	12	12	3	23.04	-39	0	17.28						17.28					-18
196	DV-97	168+43.00	LT	RES.	1	CONC.	84	119	6.5	10	12	12	3	26.47	-38	0	22.55						22.55					-23
196	DV-98	169+26.50	LT	RES.	1	ASPHALT	87	34	6.5	3	12	11.5	3		-40	-2	13.44	0.37			0.19	0.13	9.66					-14
196	DV-99	170+17.00	LT	RES.	1	ASPHALT	123	0	6.5	0	18	0	3		-35	-3	13.71						13.71					-14
196	DV-100	170+77.50	RT	COMM.	4	ASPHALT	226	237	6.5	8	30	29	15		-31	-3	51.53		3.66		1.32	0.92		25.14				-52
196	DV-101	175+57.50	LT	RES.	2	CONC.	133	165	SEE SHEET		196	FOR DETAIL		34.17	-26	0	33.15						33.15					-34
196	DV-102	176+00.00	LT	RES.	2	ASPHALT	105	15	SEE SHEET		196	FOR DETAIL			-6	0	13.29	0.16			0.08	0.06	11.62					-14
196	DV-103	196+79.50	RT	RES.	1	CONC.	101	106	6.5	7.3	14.5	14.5	3	18.11	-44	1	22.94						22.94					-23
196	DV-104	197+20.50	LT	RES.	1	CONC.	202	416	6.5	13.5	30	30	3	57.93	-36	1	68.61						68.61					-69
196	DV-105	197+65.50	LT	RES.	1	CONC.	136	180	SEE SHEET		196	FOR DETAIL		28.41	-43	0	35.18						35.18					-36
196	DV-106	198+07.50	RT	RES.	1	CONC.	188	333	SEE SHEET		196	FOR DETAIL		49.99	-42	0	57.93						57.93					-58
196	DV-107	198+13.00	LT	RES.	1	CONC.	110	328	SEE SHEET		196	FOR DETAIL		49.27	-49	0	48.68						48.68					-49
EXCAVATION, EMBANKMENT, AND SEEDING AND MULCHING QUANTITES CARRIED TO SHEET 80																											
TOTALS CARRIED TO GENERAL SUMMARY														857	-1865	-140	1285	13		4	5	4	927	234			-1311

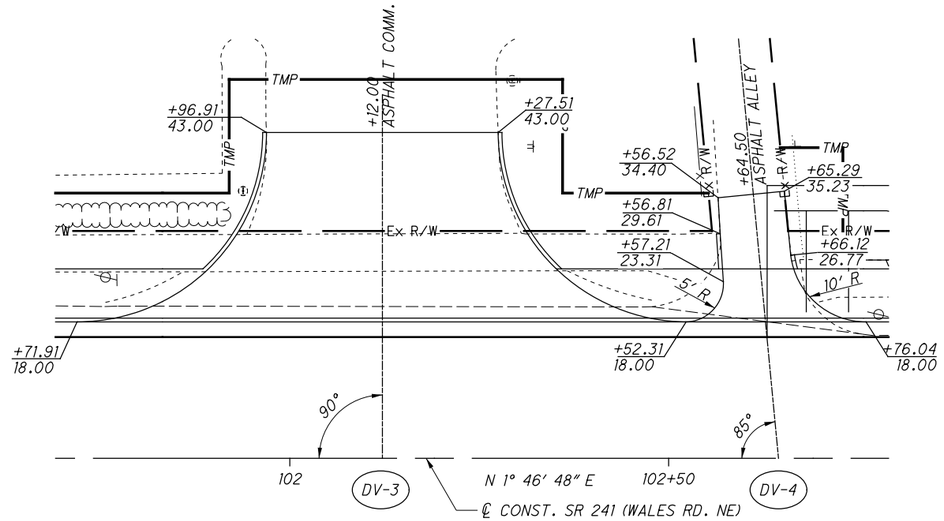
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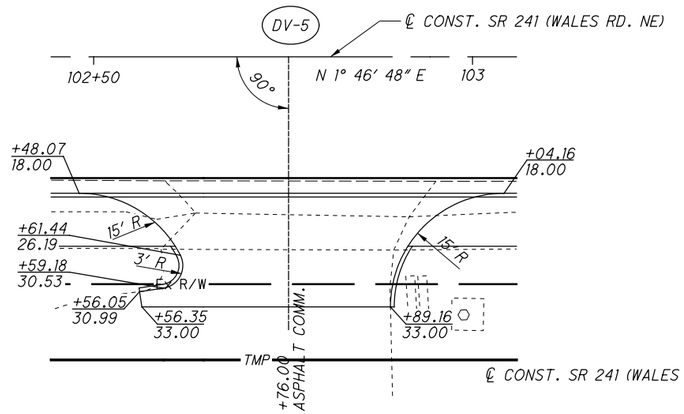
DRIVEWAY DETAILS

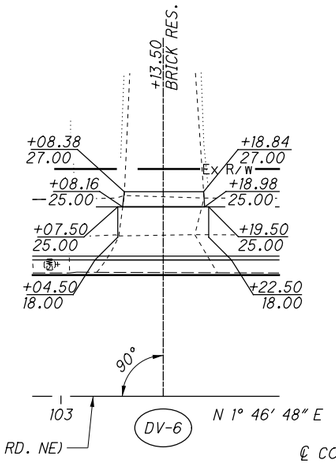
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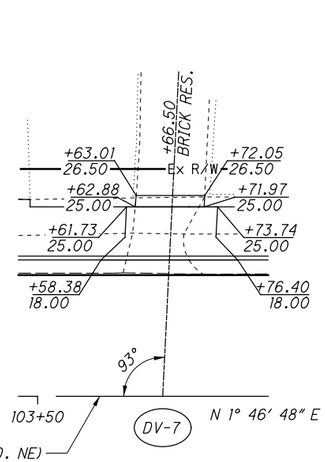
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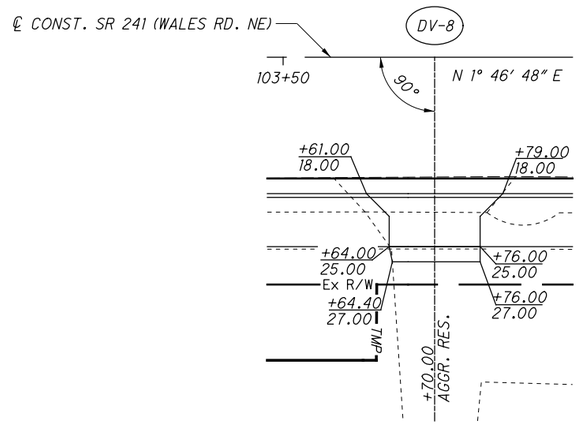


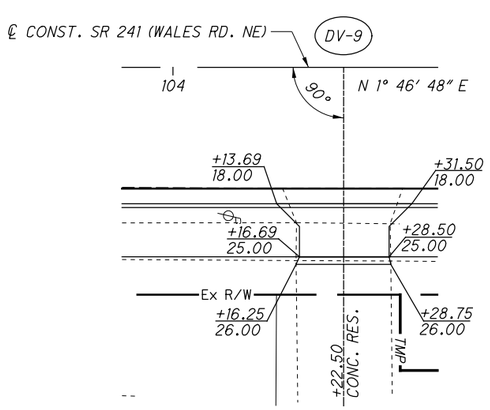


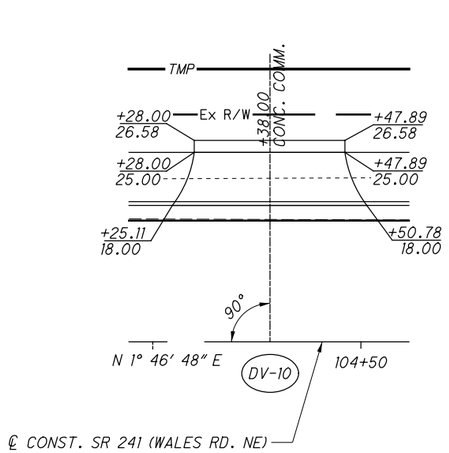












LEGEND

+XX.XX / XX.XX — STATION / OFFSET

SEE SHEETS 197 -229 FOR DRIVE PROFILES.

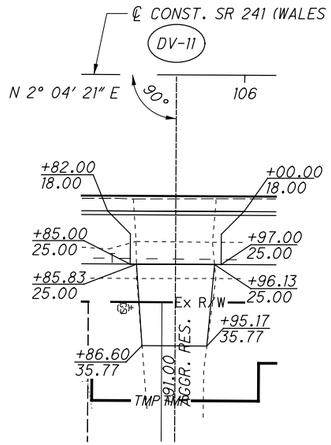
HORIZONTAL SCALE IN FEET
0 5 10 20

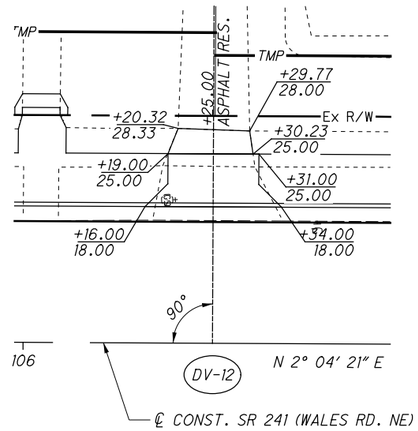
CALCULATED KAH
CHECKED KBM

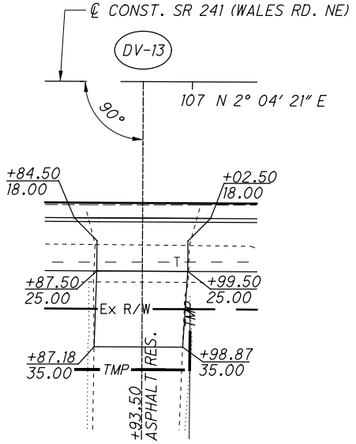
DRIVEWAY PLAN
DV-1 TO DV-10

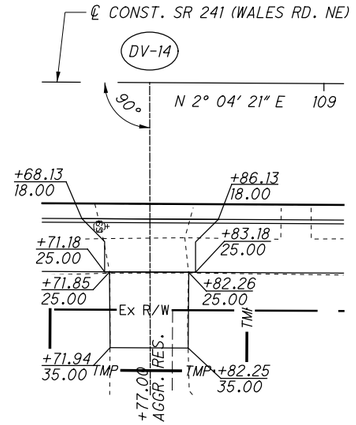
STA-241-9.71

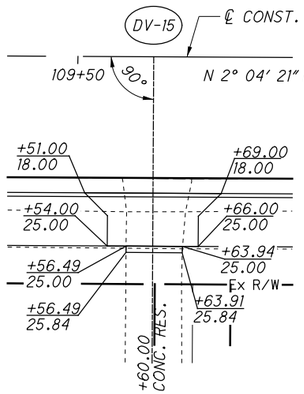
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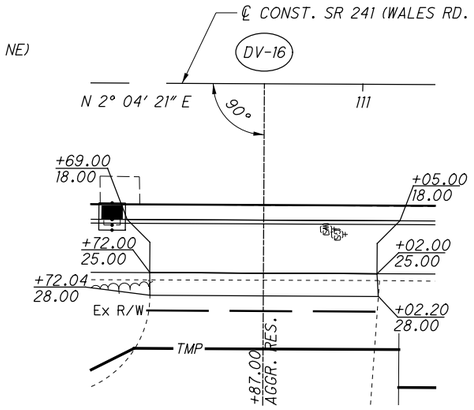


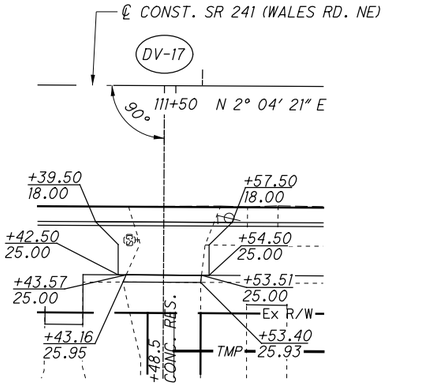


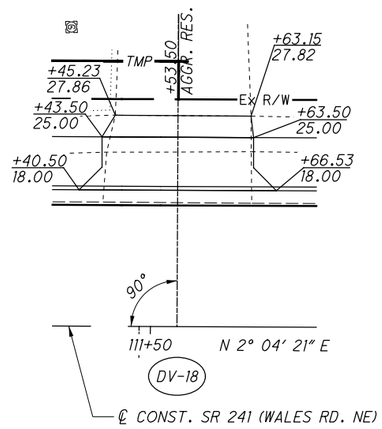


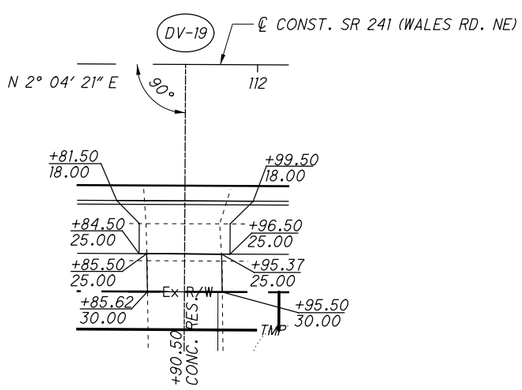


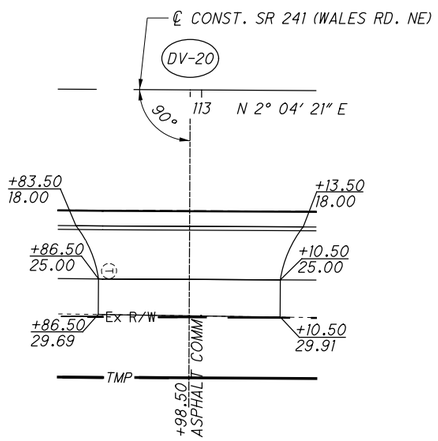


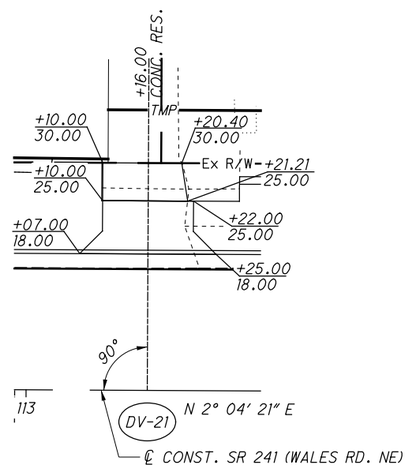


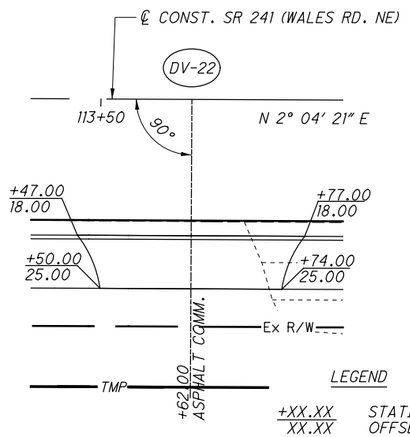












SEE SHEETS 197 -229 FOR DRIVE PROFILES.

HORIZONTAL SCALE IN FEET
0 5 10 20

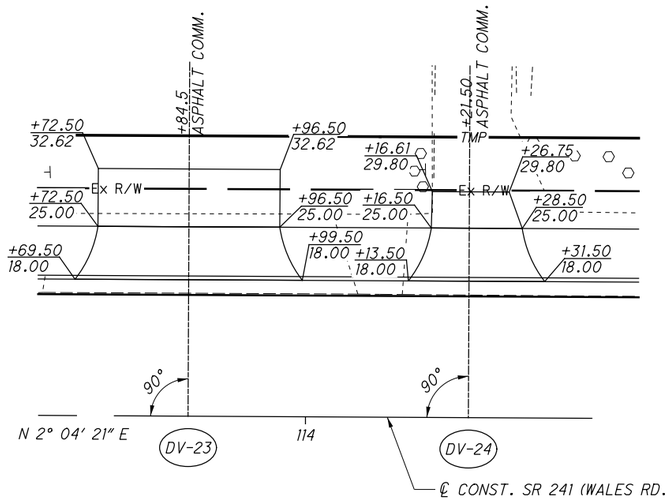
CALCULATED KAH
CHECKED KBM

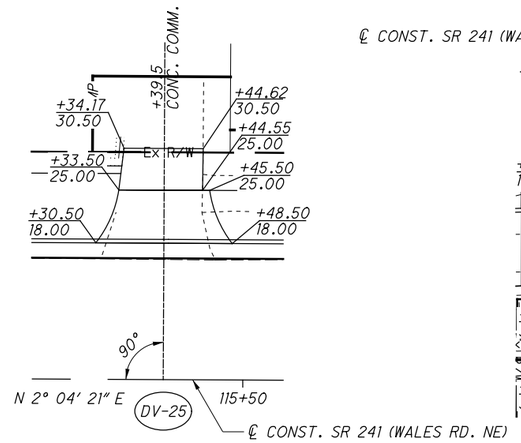
DRIVEWAY PLAN
DV-11 TO DV-22

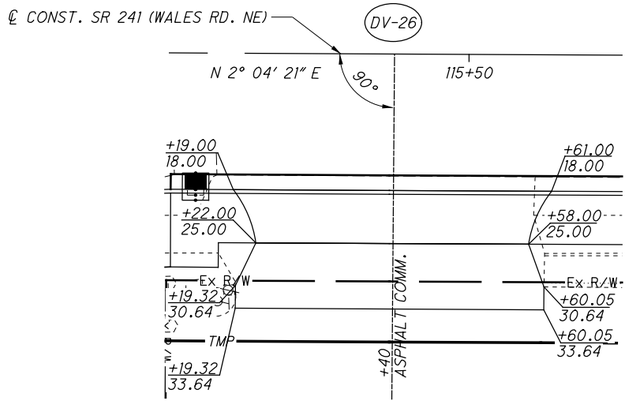
STA-241-9.71

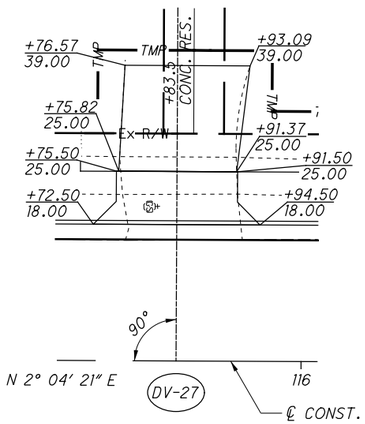
189
395

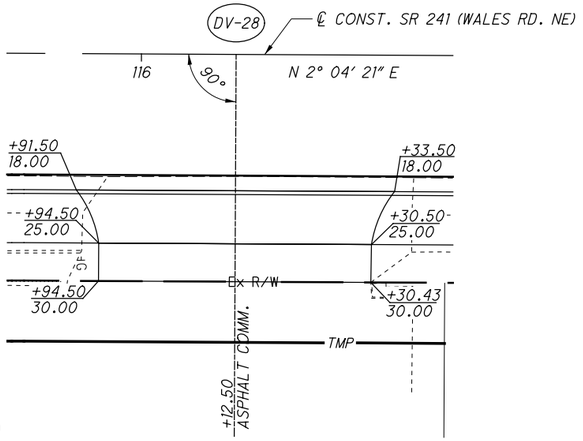
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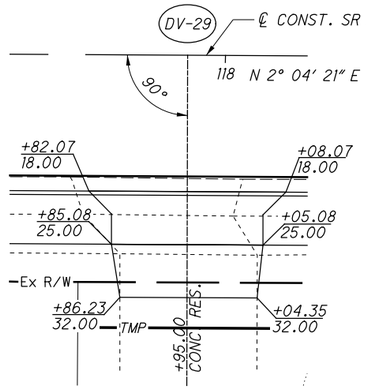


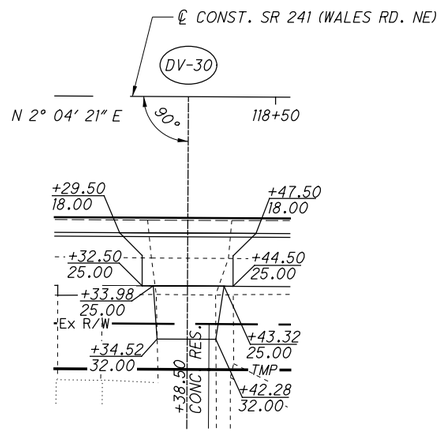




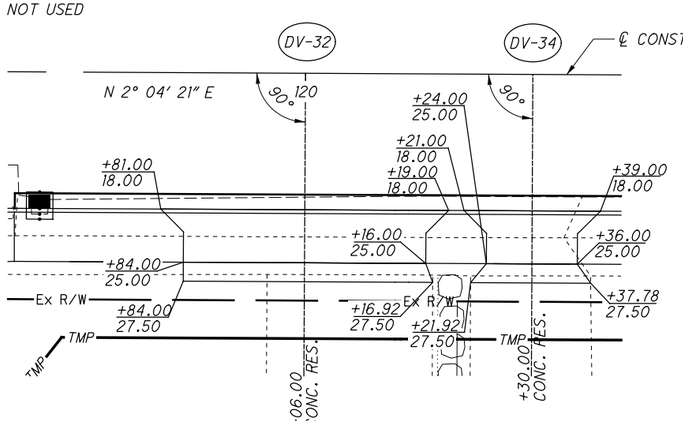


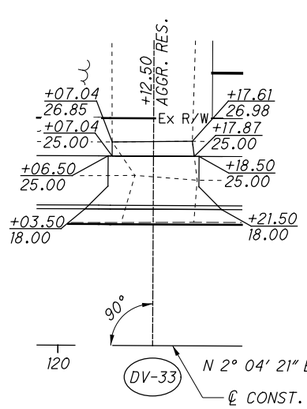


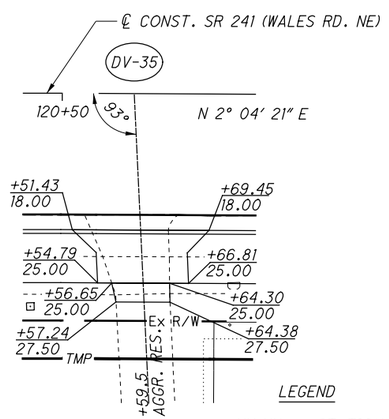




DV-31 NOT USED







SEE SHEETS 197 -229 FOR DRIVE PROFILES.

HORIZONTAL SCALE IN FEET
0 5 10 20

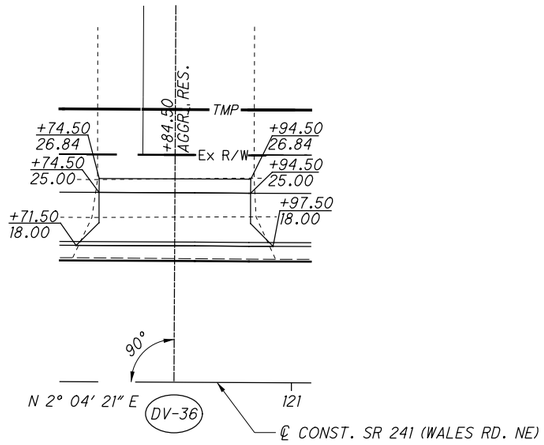
CALCULATED KAH
CHECKED KBM

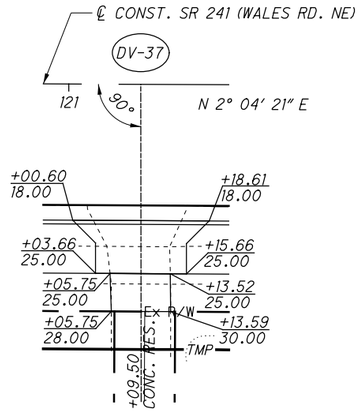
DRIVEWAY PLAN
DV-23 TO DV-35

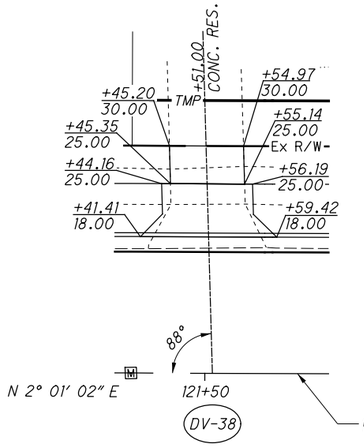
STA-241-9.71

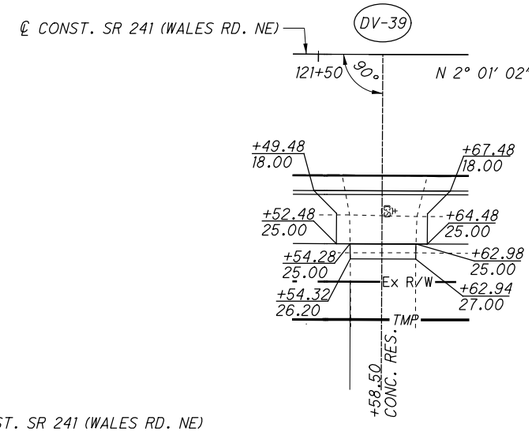
190
395

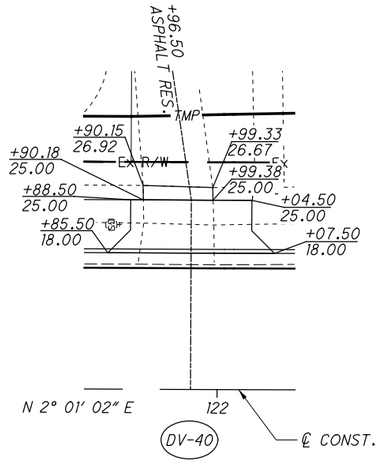
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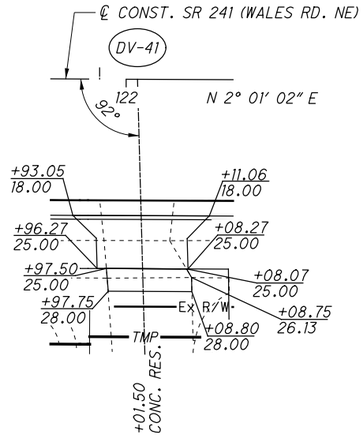


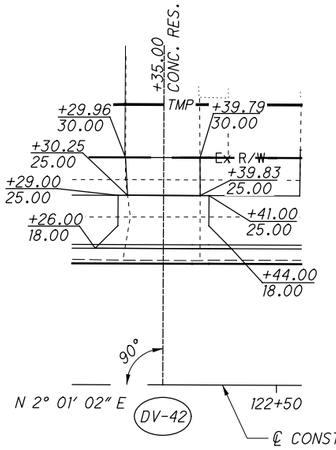


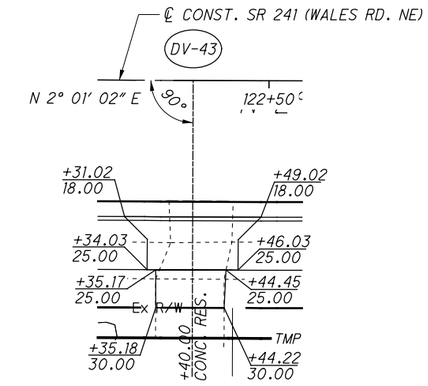


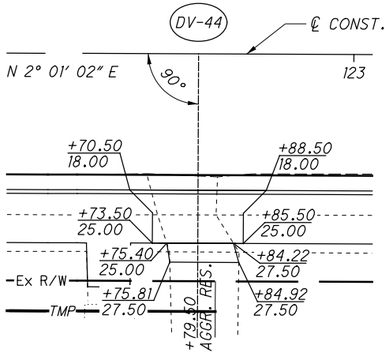


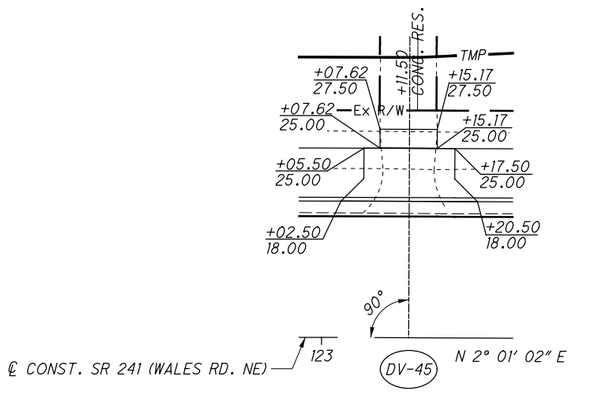


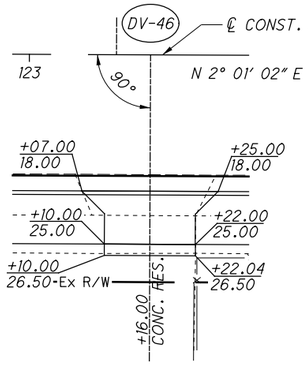


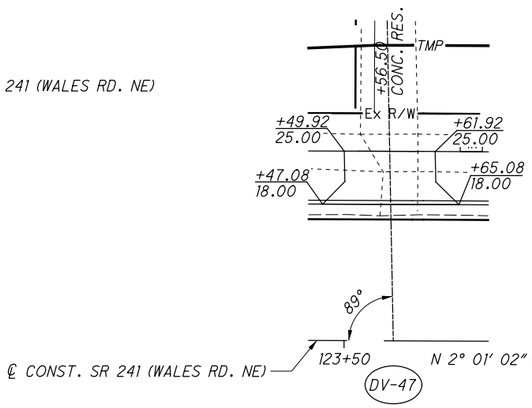












LEGEND

+XX.XX / XX.XX STATION / OFFSET

SEE SHEETS 197 -229 FOR DRIVE PROFILES.

HORIZONTAL SCALE IN FEET
0 5 10 20

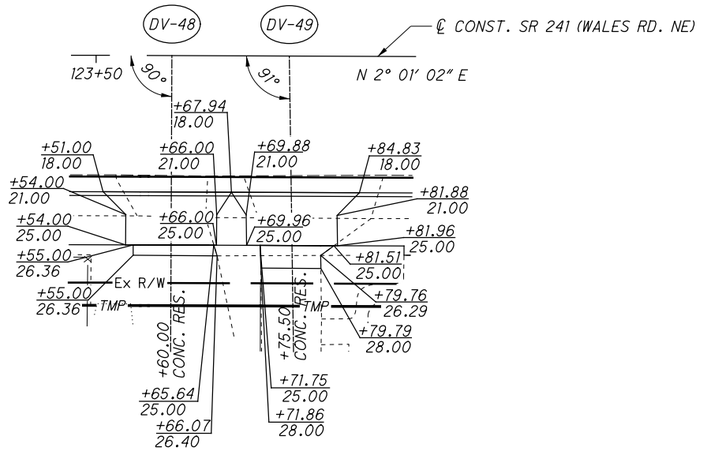
CALCULATED KΔH
CHECKED KBM

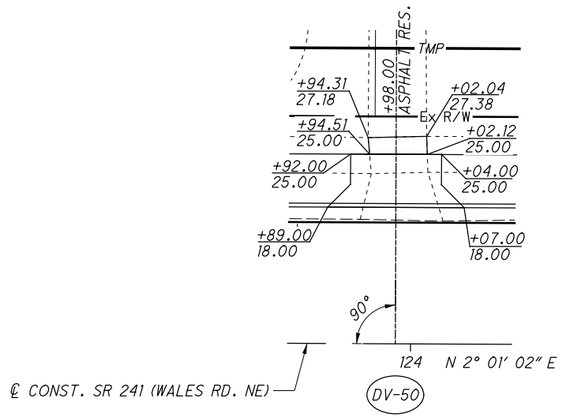
DRIVEWAY PLAN
DV-36 TO DV-47

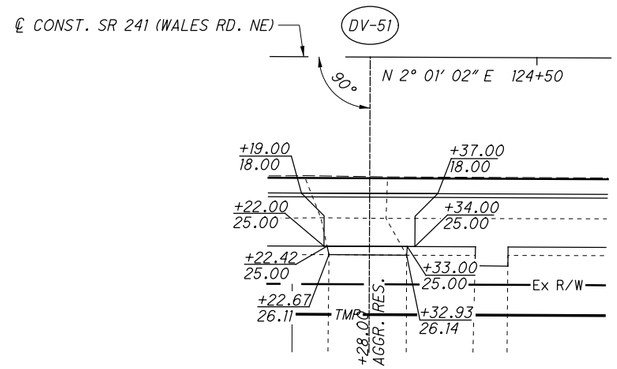
STA-241-9.71

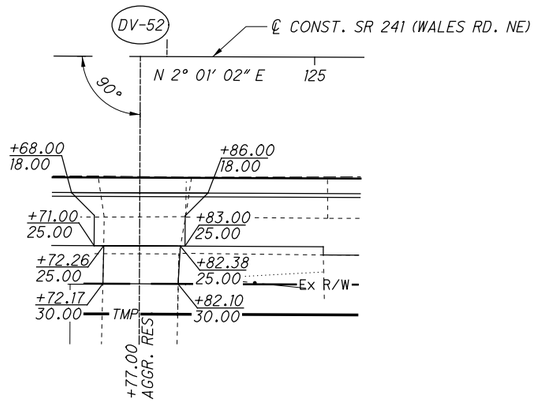
191
395

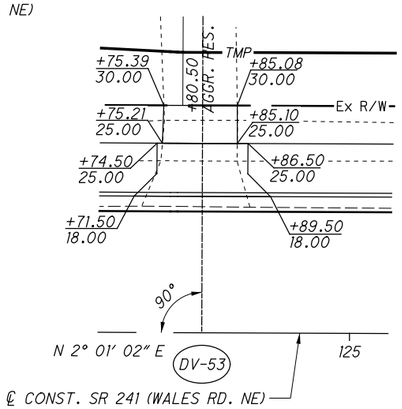
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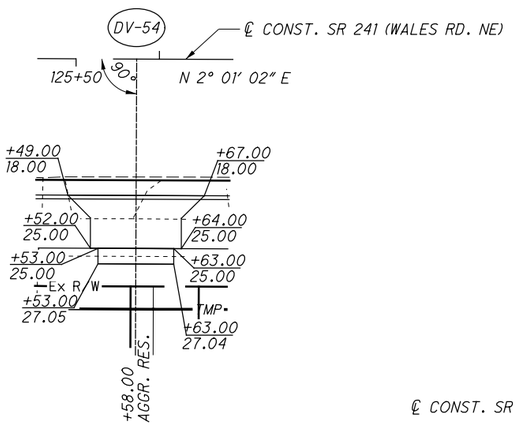


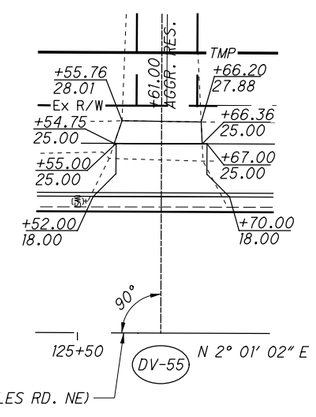


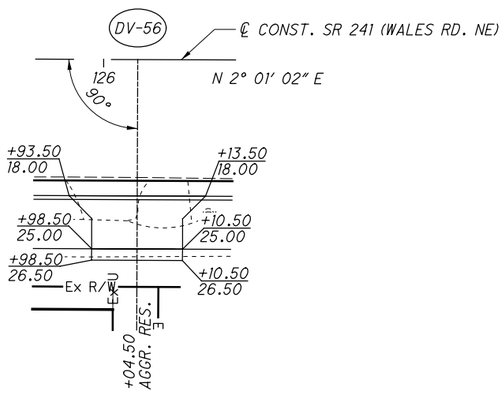


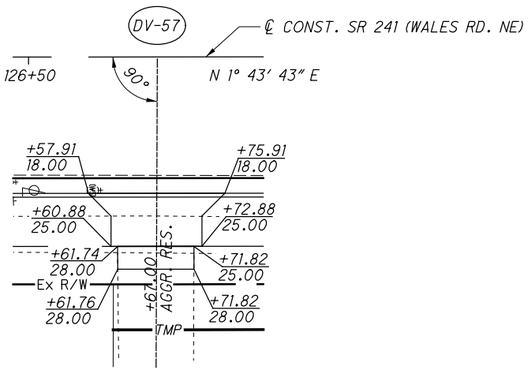


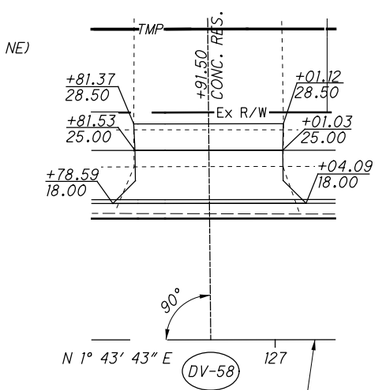


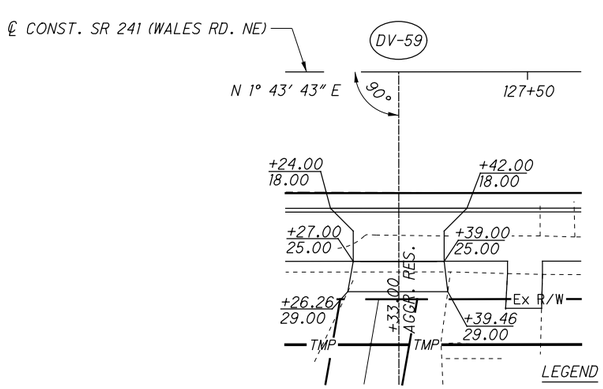












SEE SHEETS 197 -229 FOR DRIVE PROFILES.

HORIZONTAL SCALE IN FEET
0 5 10 20

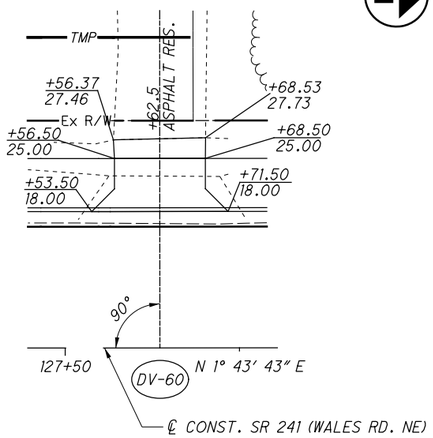
CALCULATED KAH
CHECKED KBM

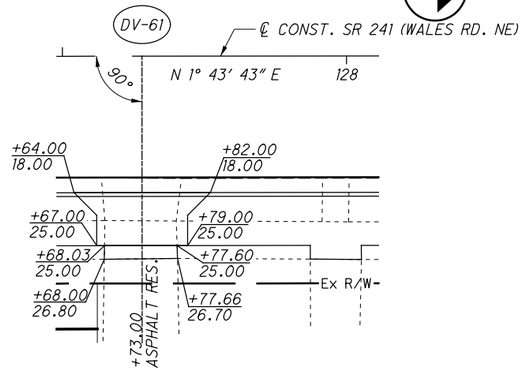
DRIVEWAY PLAN
DV-48 TO DV-59

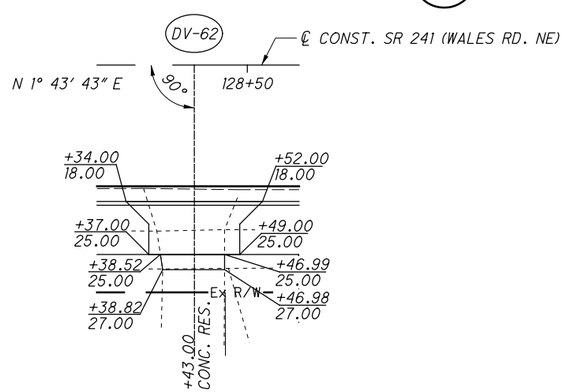
STA-241-9.71

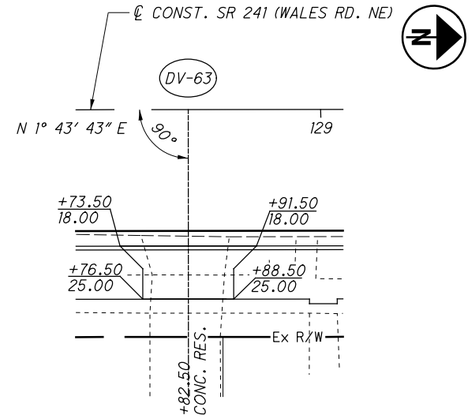
192
395

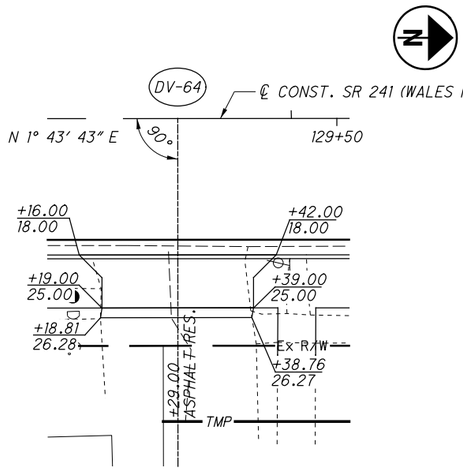
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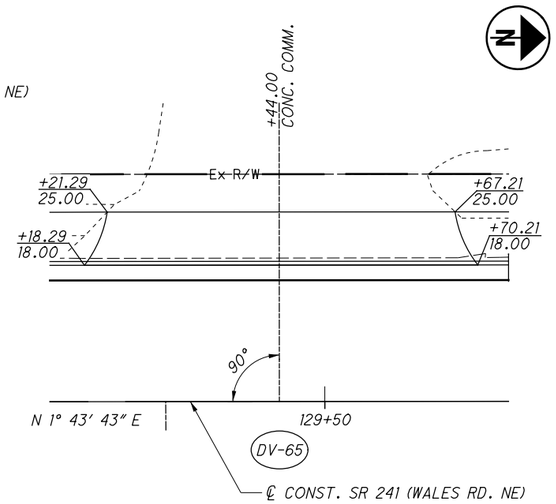


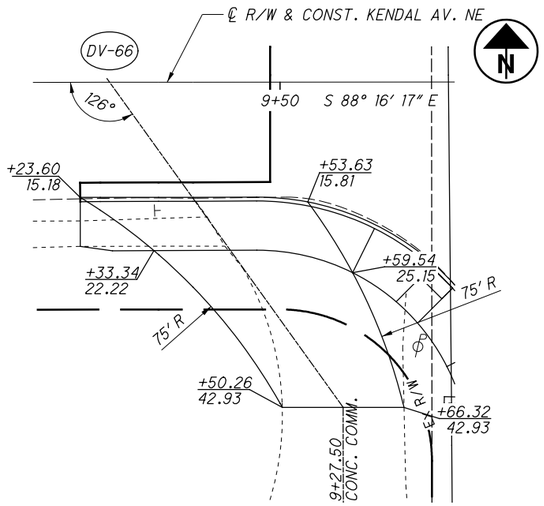


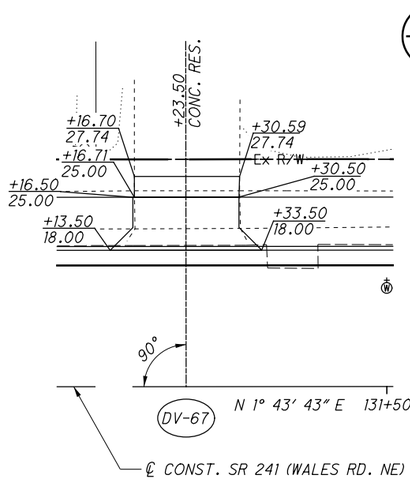


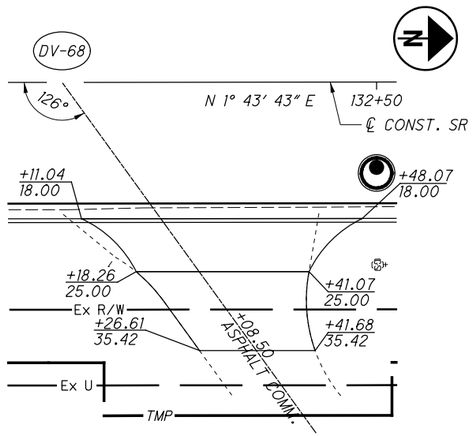


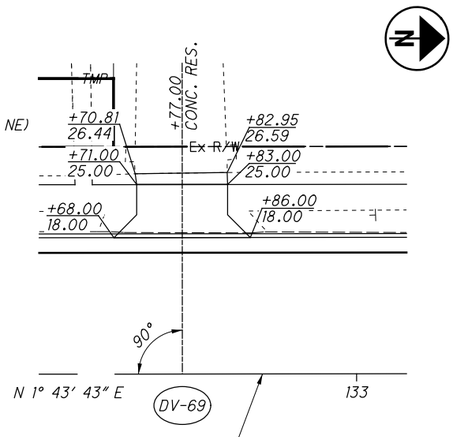


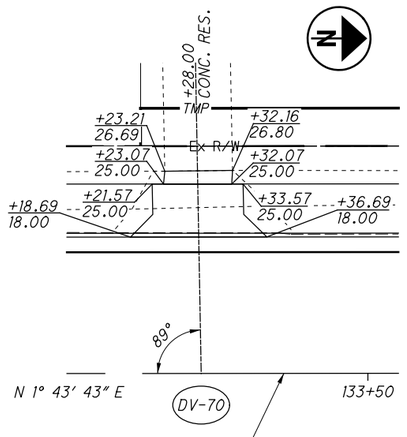


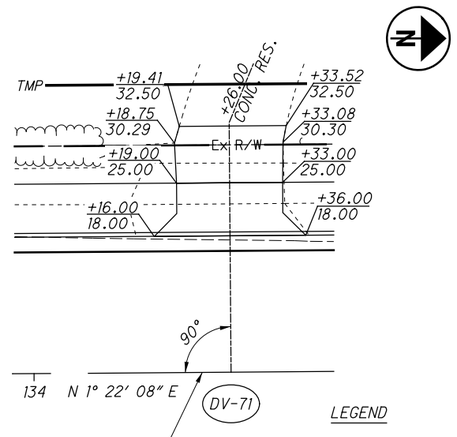












LEGEND

+XX.XX / XX.XX STATION OFFSET

SEE SHEETS 197 -229 FOR DRIVE PROFILES.

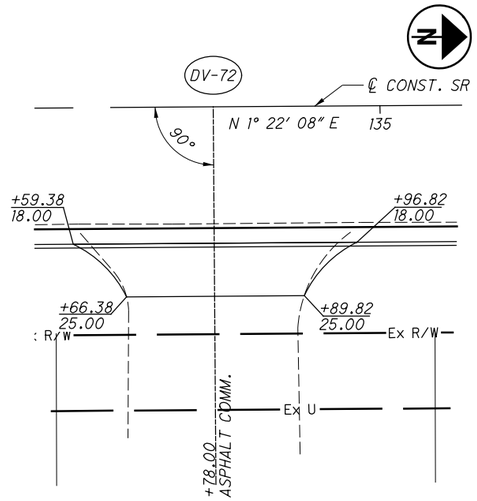
HORIZONTAL SCALE IN FEET
0 5 10 20

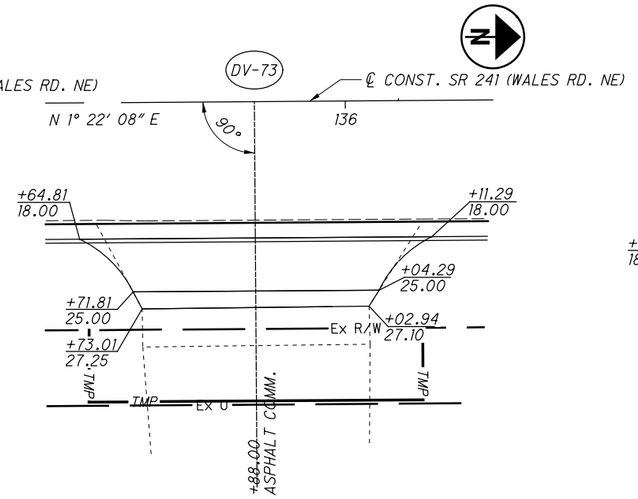
CALCULATED KAH
CHECKED KRM

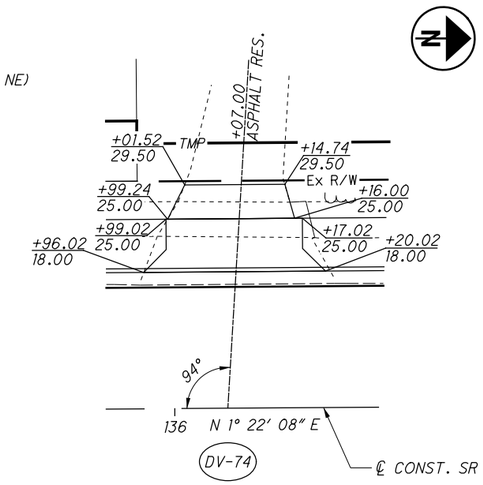
DRIVEWAY PLAN
DV-60 TO DV-71

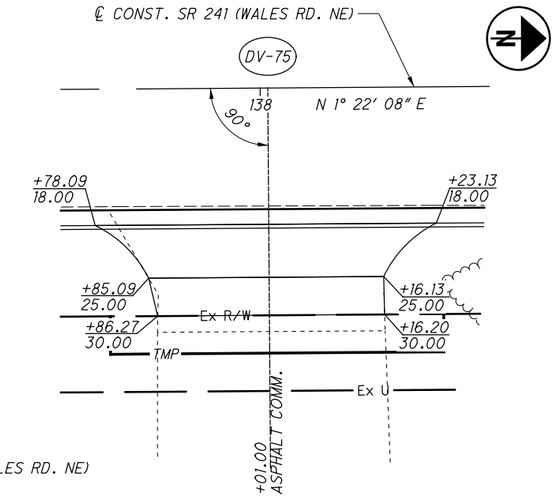
STA-241-9.71

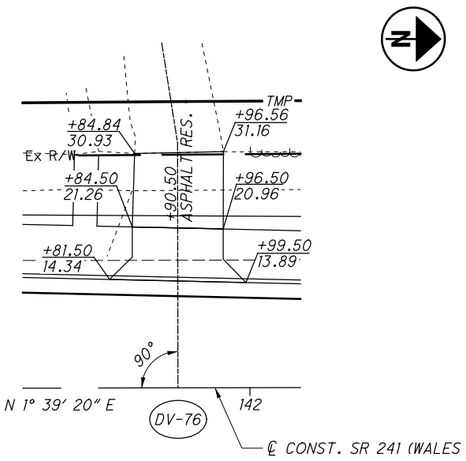
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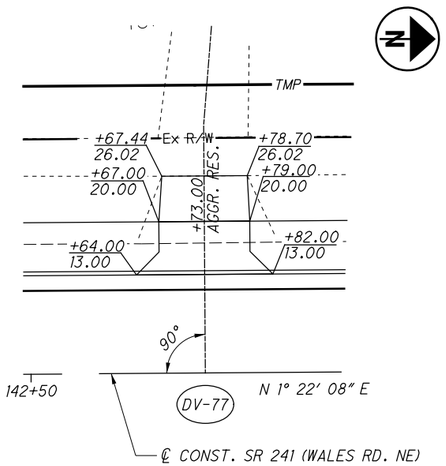


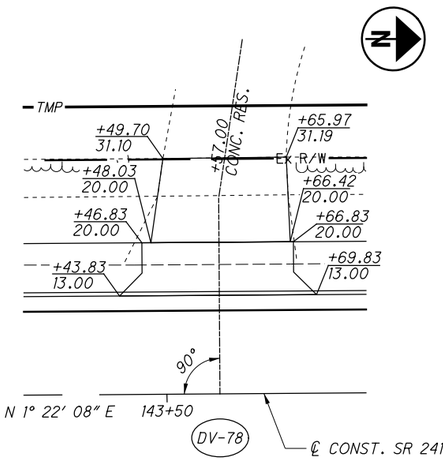


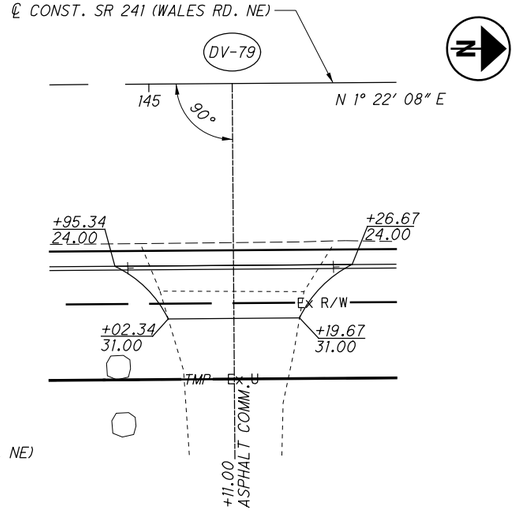


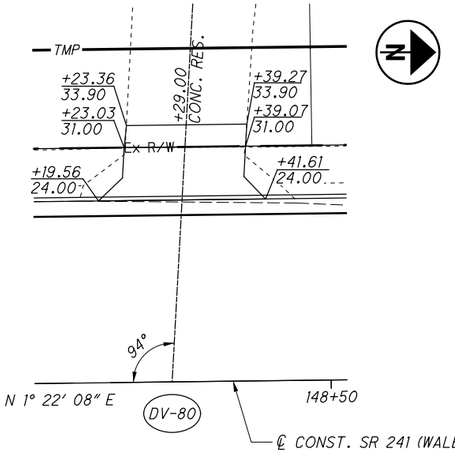


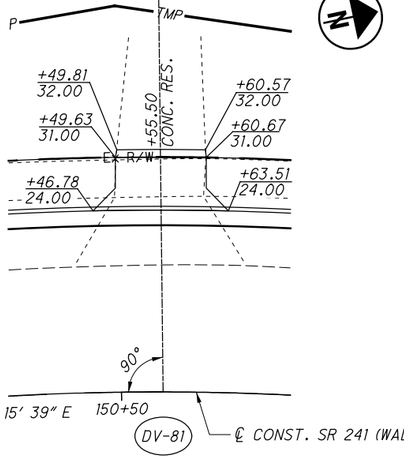


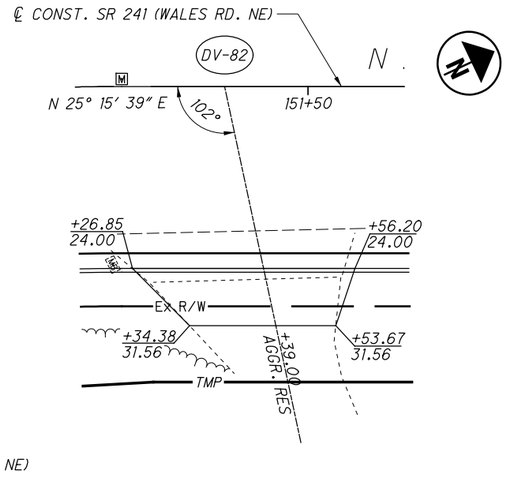


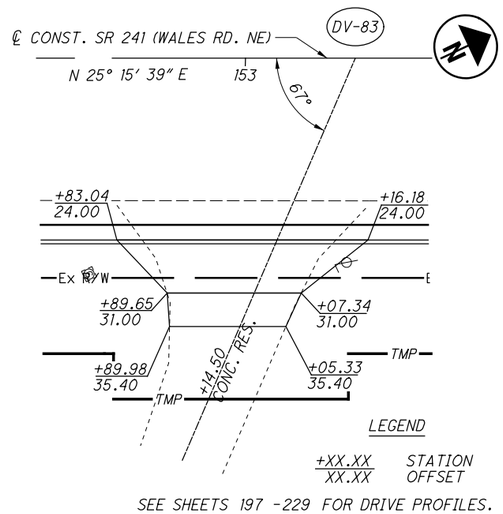












SEE SHEETS 197 -229 FOR DRIVE PROFILES.

HORIZONTAL SCALE IN FEET
0 5 10 20

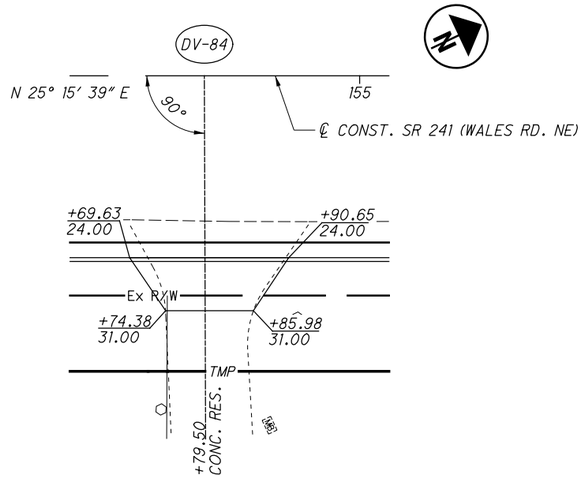
CALCULATED KAH
CHECKED KRM

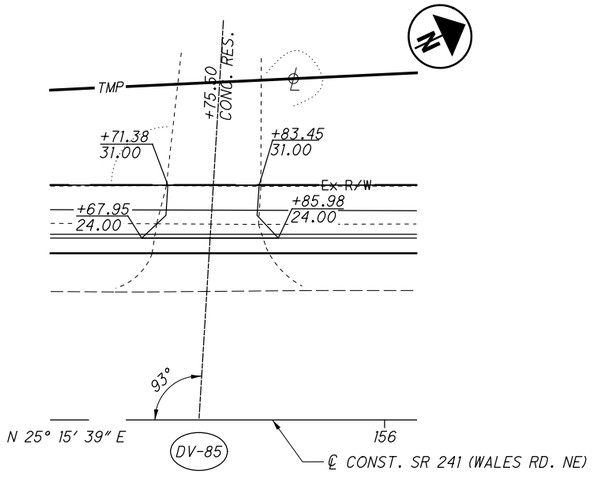
DRIVEWAY PLAN
DV-72 TO DV-83

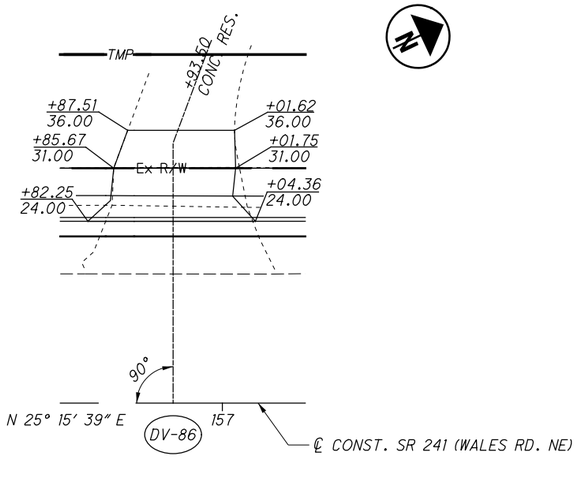
STA-241-9.71

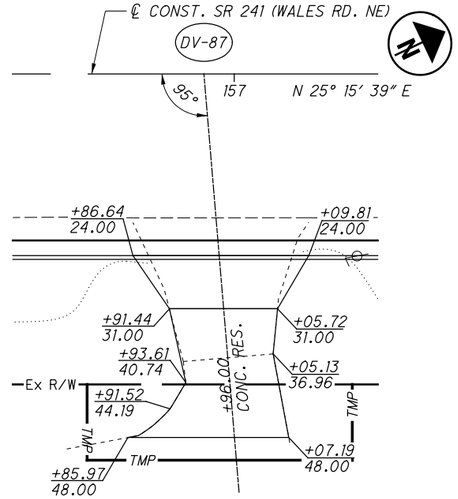
194
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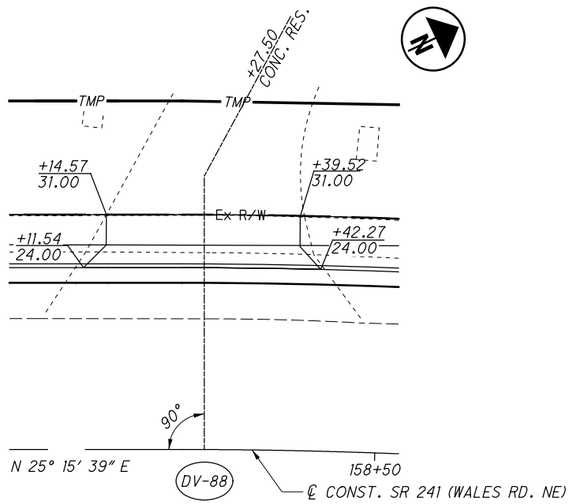
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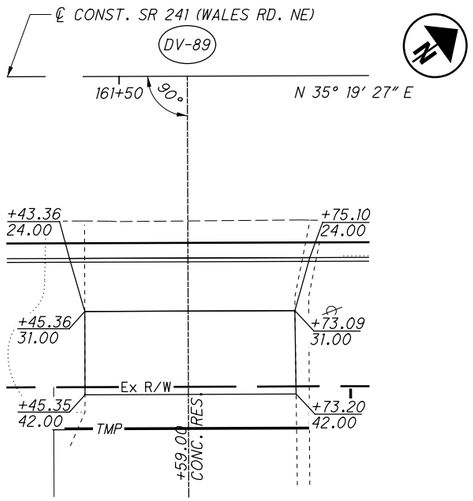


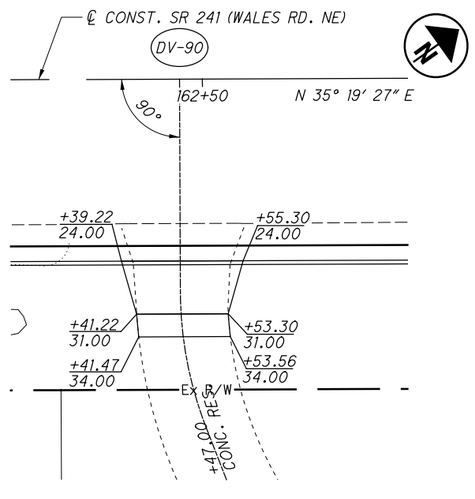


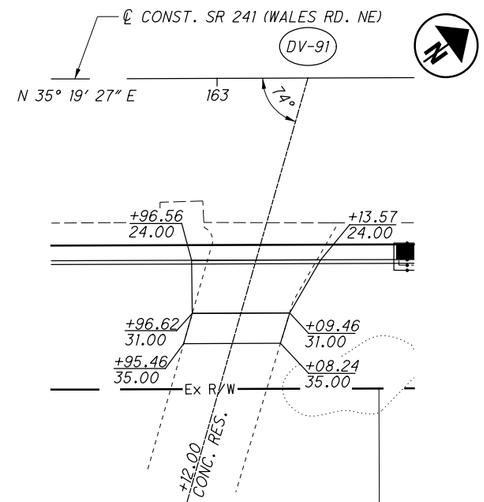


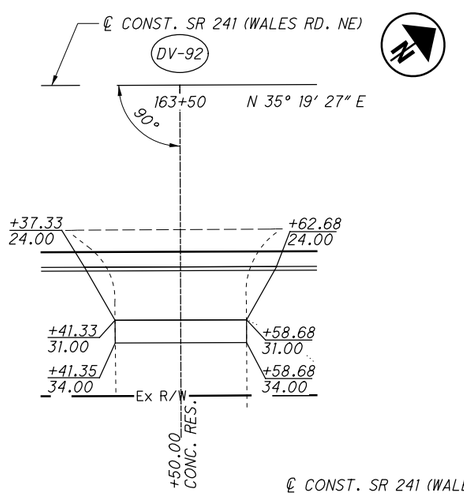


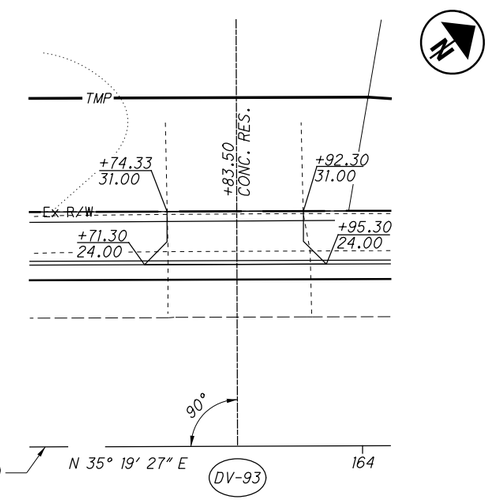


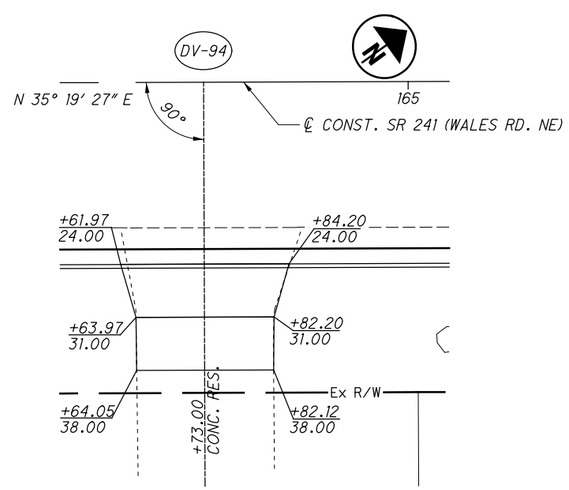


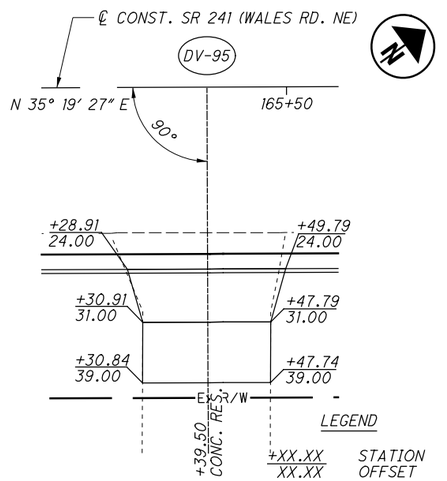












SEE SHEETS 197 -229 FOR DRIVE PROFILES.

HORIZONTAL SCALE IN FEET
0 5 10 20

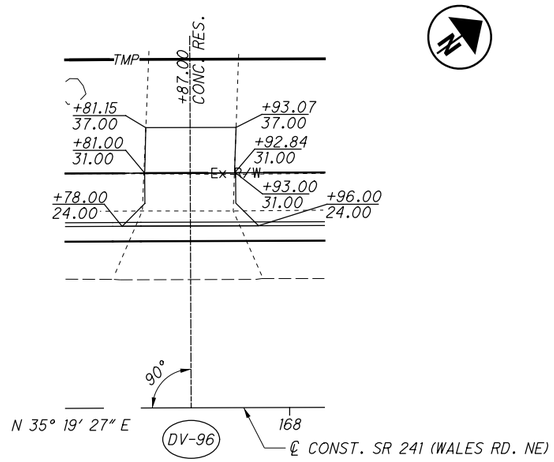
CALCULATED KAH
CHECKED KRM

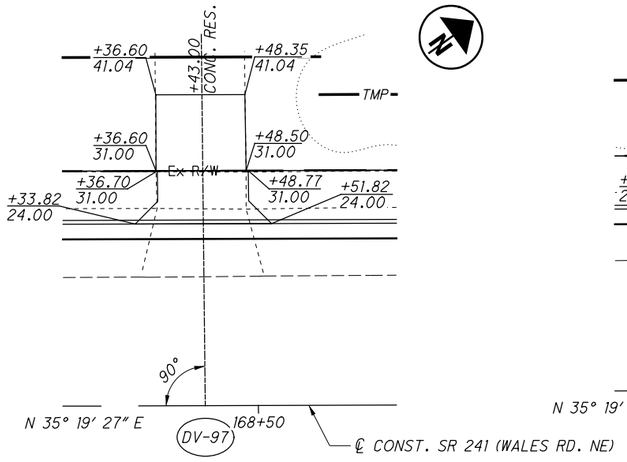
DRIVEWAY PLAN
DV-84 TO DV-95

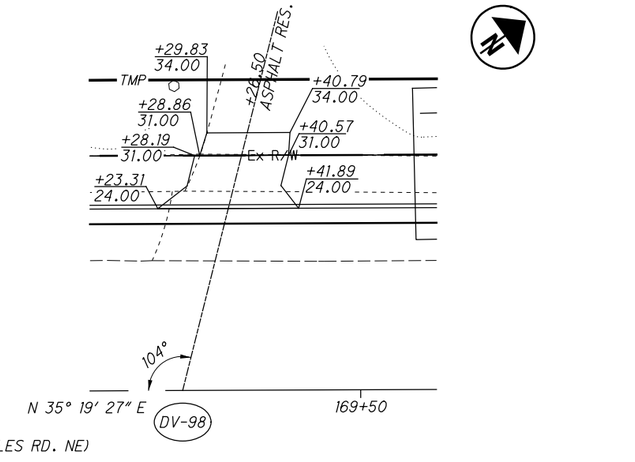
STA-241-9.71

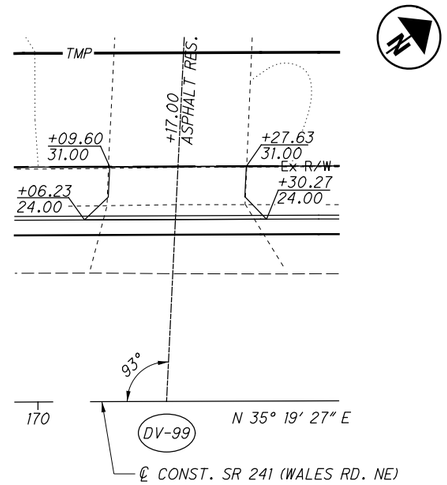
195
395

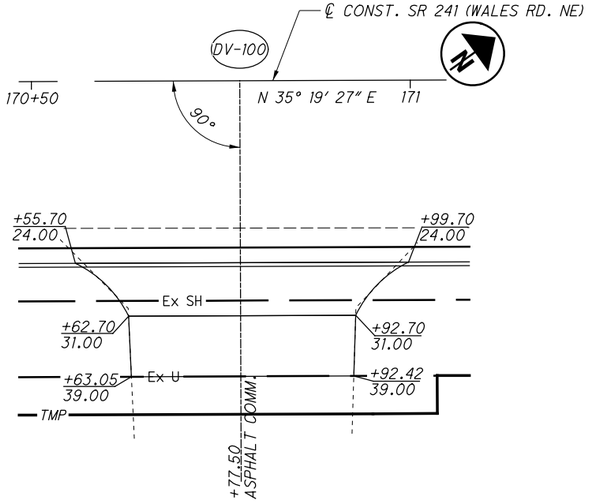
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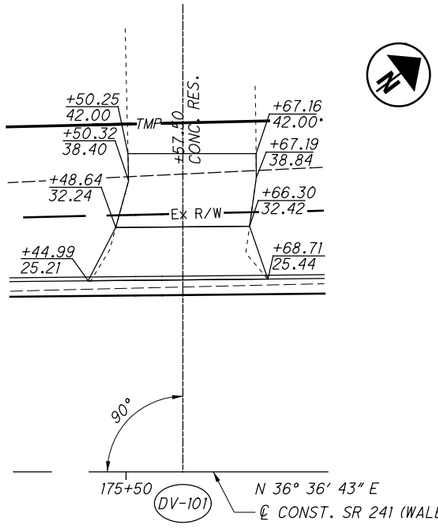


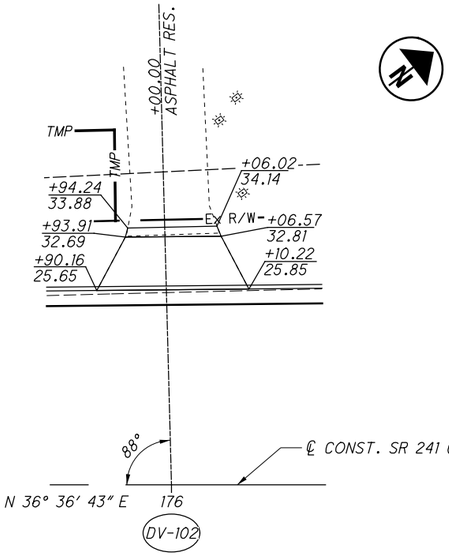


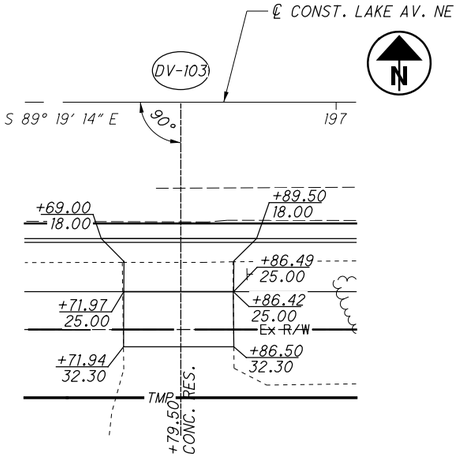


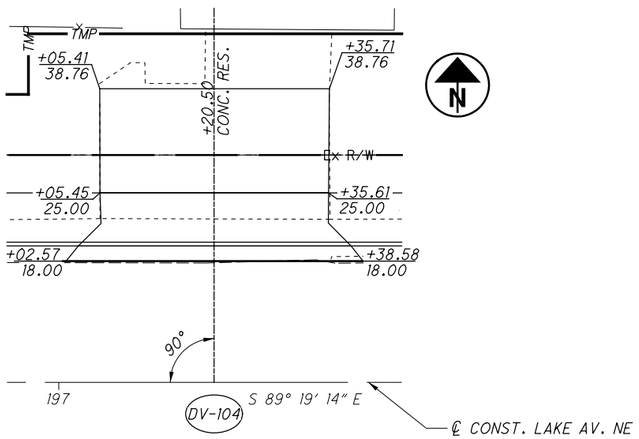


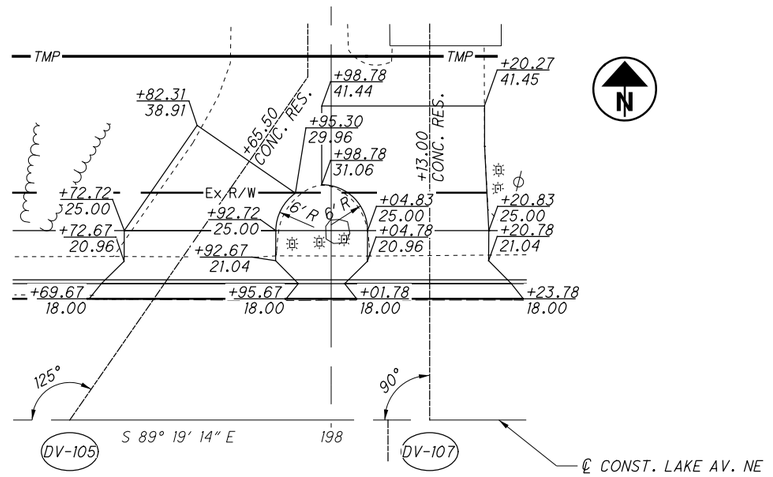


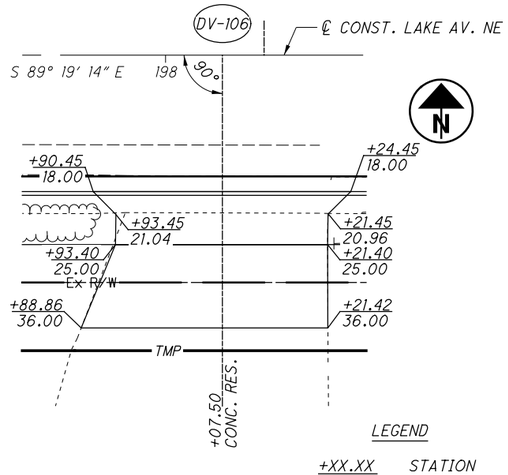












LEGEND

+XX.XX / XX.XX STATION / OFFSET

SEE SHEETS 197 -229 FOR DRIVE PROFILES.

HORIZONTAL SCALE IN FEET
0 5 10 20

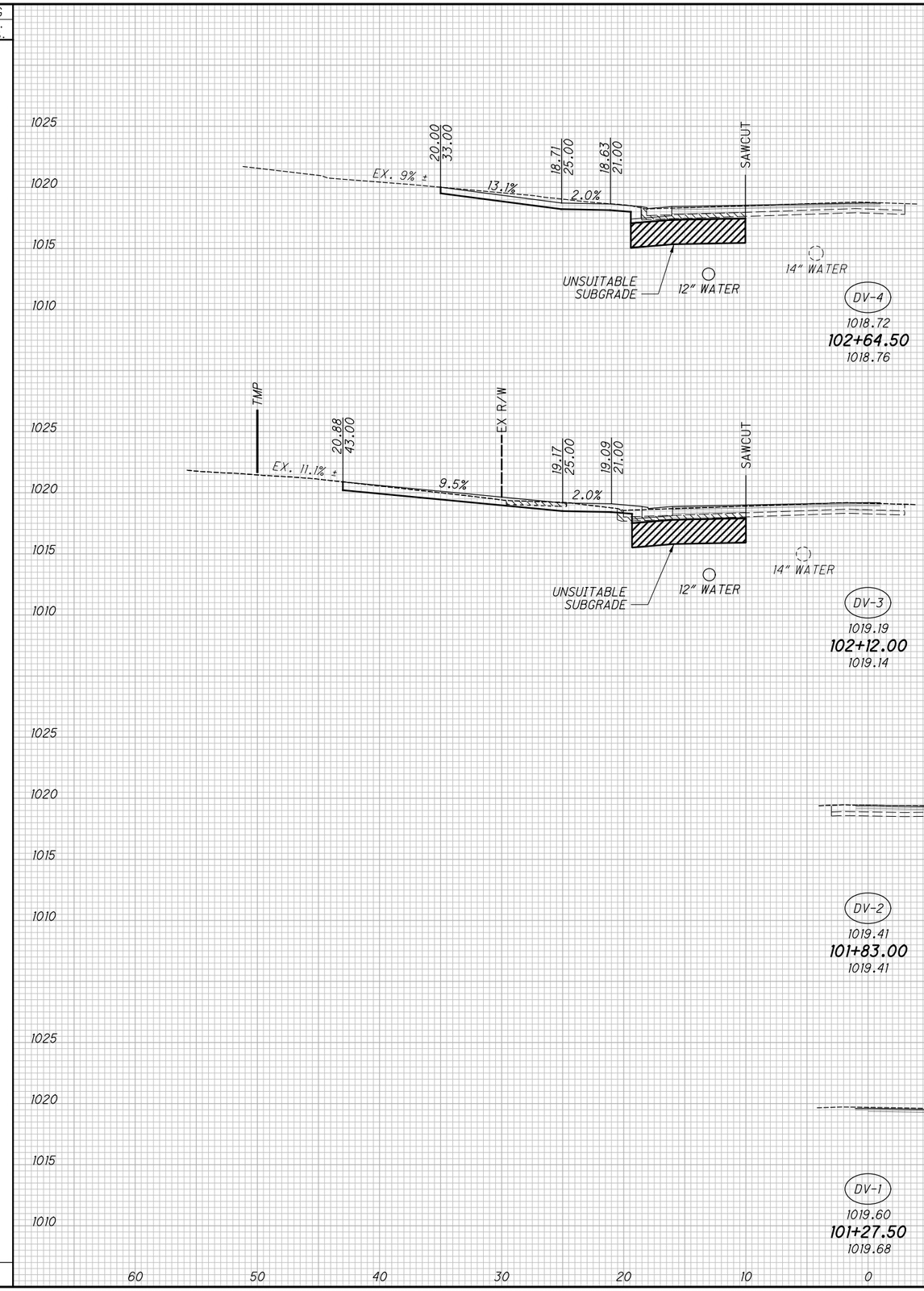
CALCULATED KAH
CHECKED KBM

DRIVEWAY PLAN
DV-96 TO DV-107

STA-241-9.71

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SEEDING	
END WIDTH	SQ. YDS.



LEGEND

BRICK AND CONCRETE TO BE REMOVED UNDER ITEM 202

ITEM 204 - EXCAVATION OF SUBGRADE

SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.

XX.XX
XX.XX
ELEVATION
OFFSET

END AREA		VOLUME	
CUT	FILL	CUT	FILL
13	0		
12	1		
12	0		
18	0		

CALCULATED KRM
CHECKED RAK

DRIVE PROFILES - SR 241
STA. 101+15.25 TO STA. 102+64

STA-241-9.71

197
395

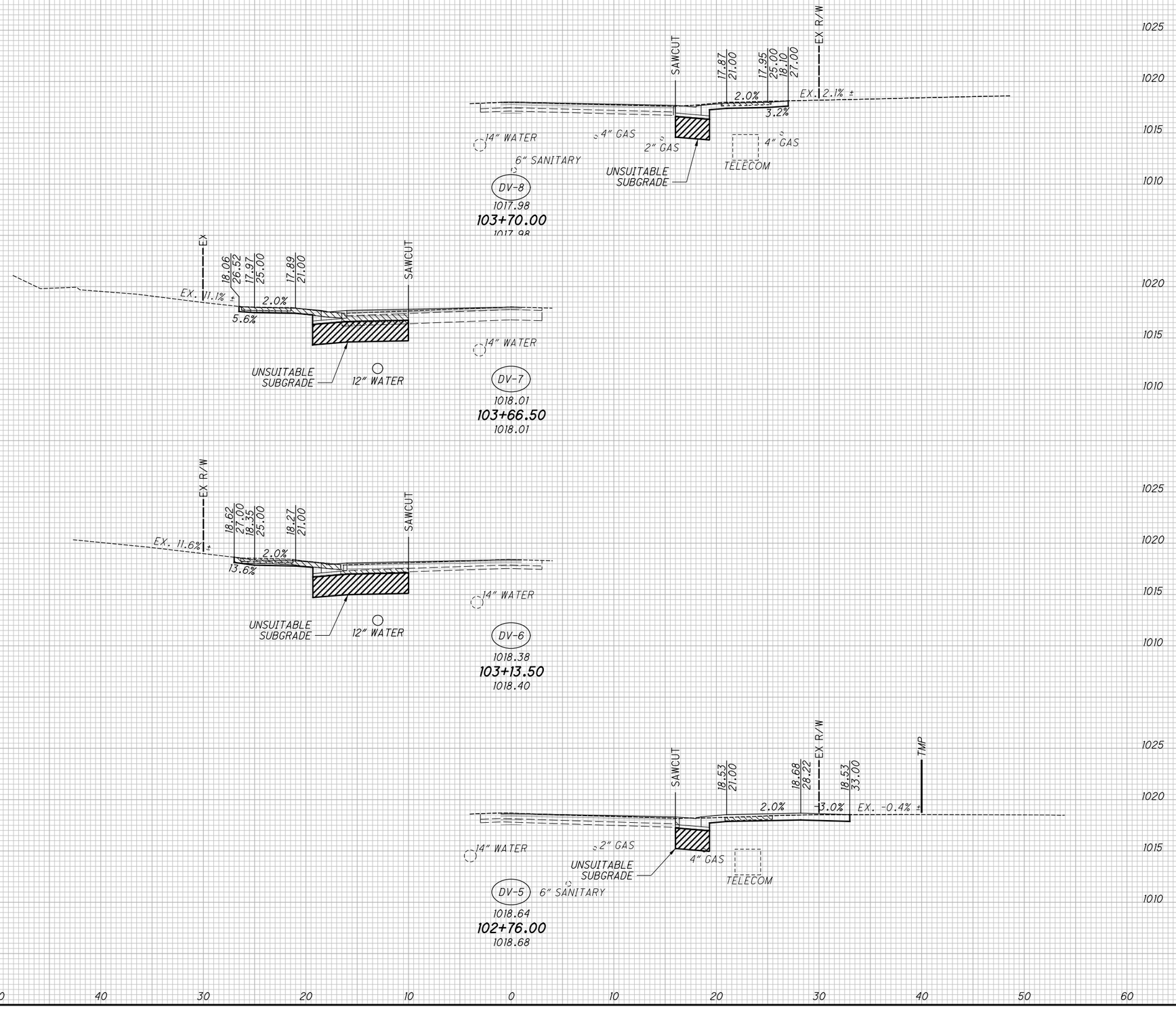
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SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
7	0		
2	3		
3	0		
9	0		

CALCULATED KRM
CHECKED RAK



DRIVE PROFILES - SR 241
STA. 102+76 TO STA. 103+70

STA-241-9.71

198
395

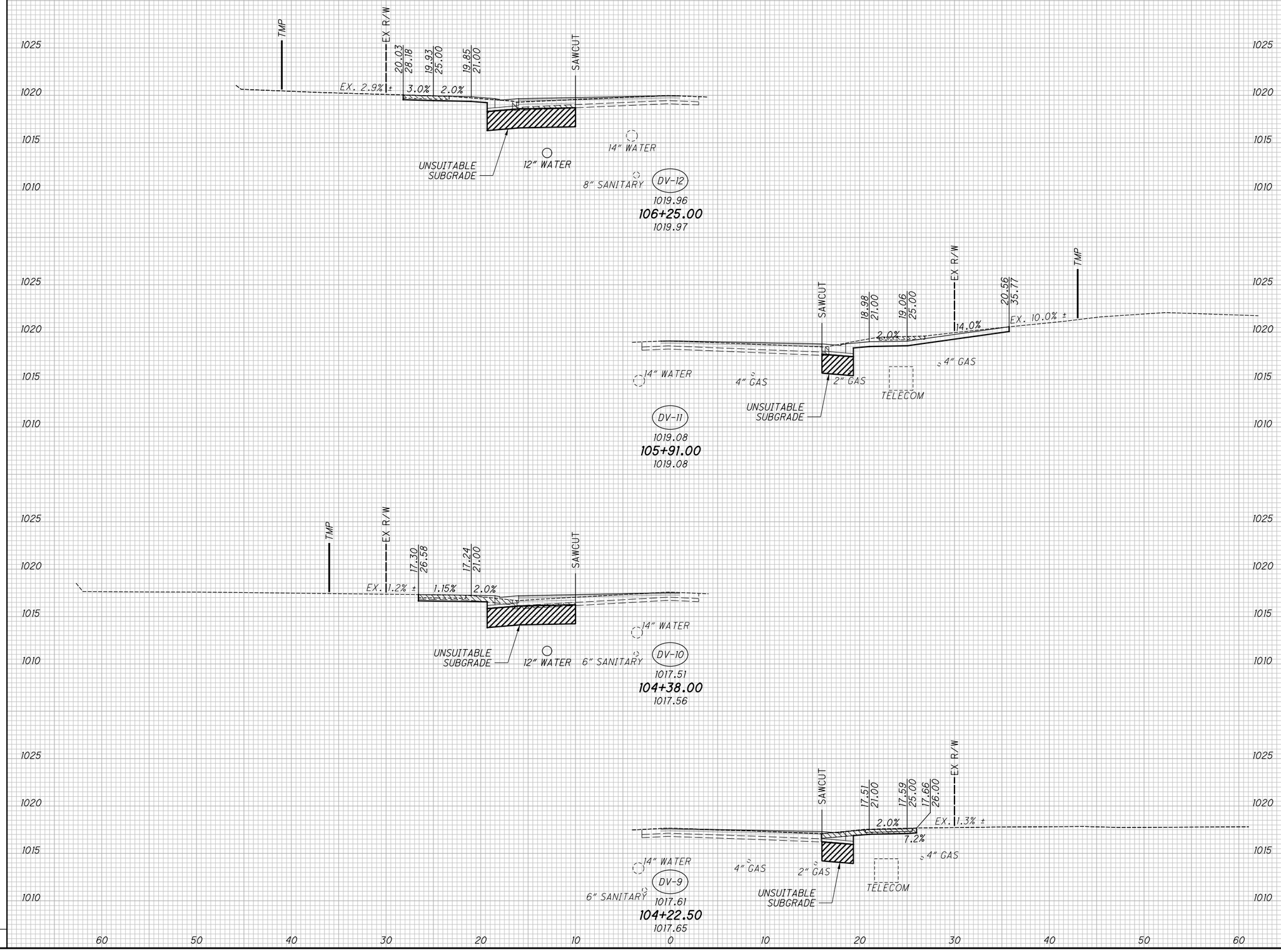
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SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
5	1		
14	1		
2	1		
2	0		

CALCULATED KRM
CHECKED RAK



DRIVE PROFILES - SR 241
STA. 104+22.5 TO STA. 106+25

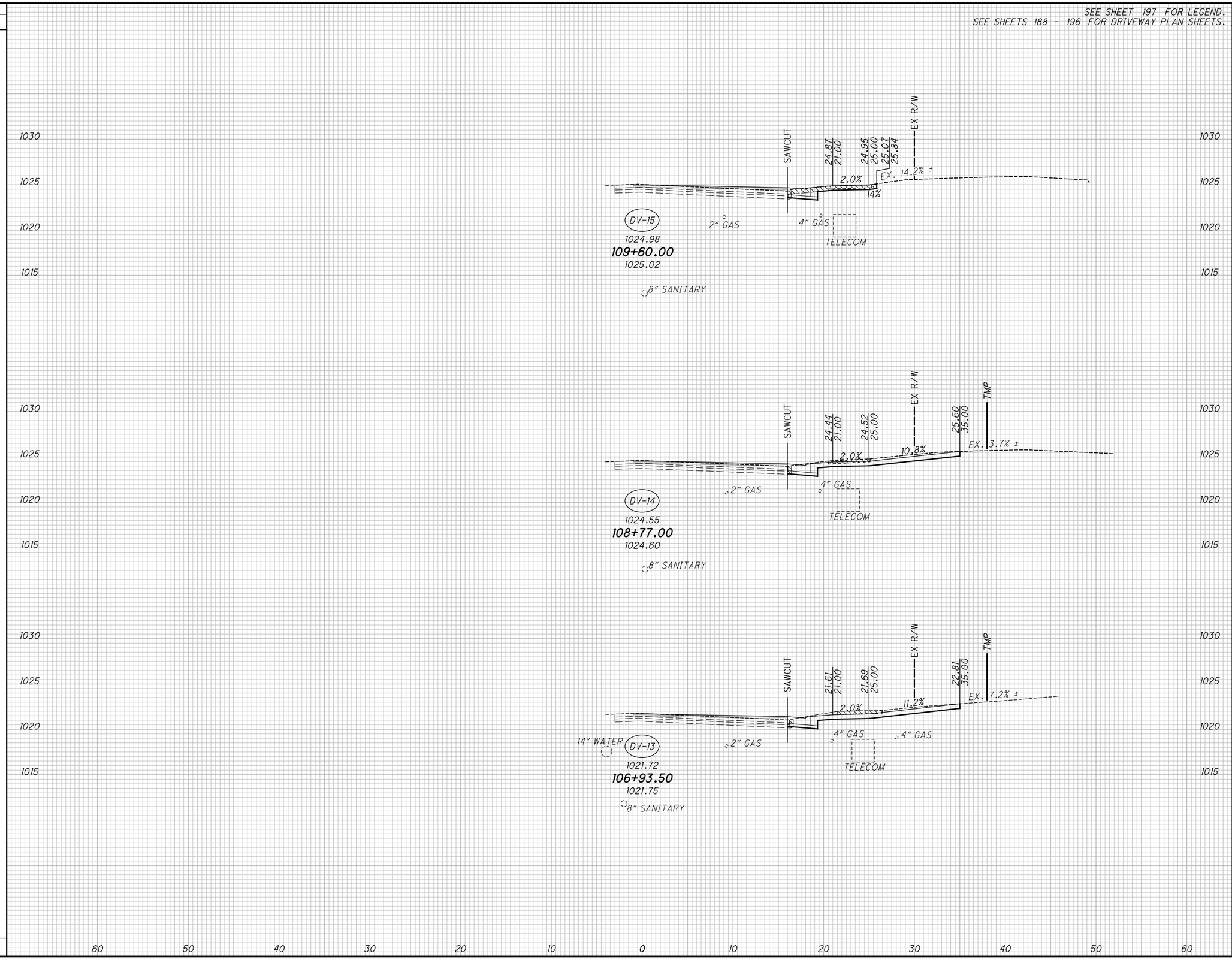
STA-241-9.71

199
395

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SEEDING	
END WIDTH	SQ. YDS.

SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
2	1		
13	0		
13	1		

CALCULATED KRM
CHECKED RAK

DRIVE PROFILES - SR 241
STA. 106+93.5 TO STA. 109+60

STA-241-9.71

200
395

P:\3000_3499\3062170090_STA-241-97L_Wales_Road\ODOT\00471L_STA-241-97I\Design\Roadway\Sheets\00471L_XS100.dgn 4/7/2021 7:44:27 AM khillegass

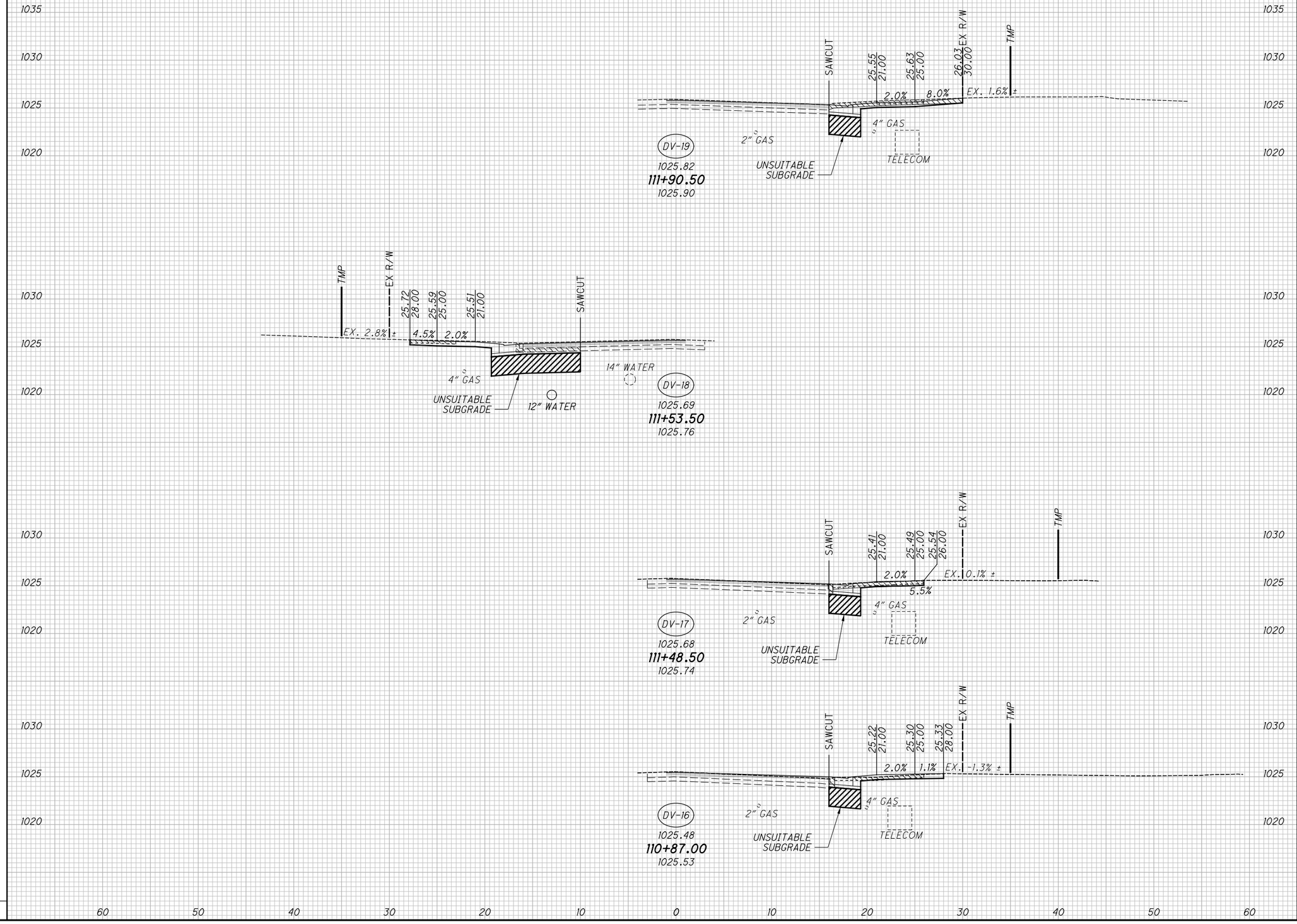
SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL
5	0
8	0
2	1
4	1

VOLUME	
CUT	FILL

CALCULATED KRM
CHECKED RAK

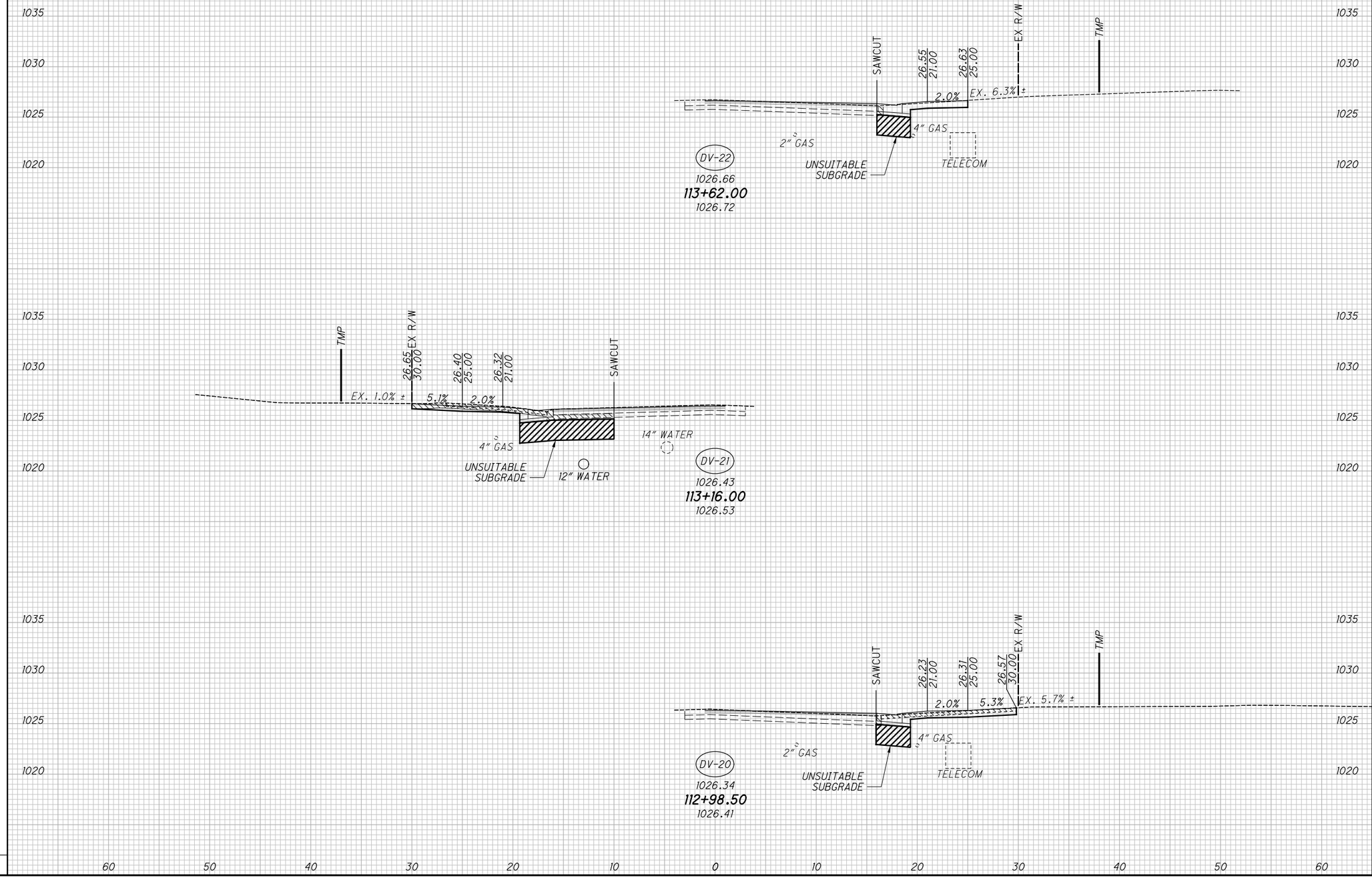


DRIVE PROFILES - SR 241
STA. 110+87 TO STA. 111+90.5

STA-241-9.71

P:\3000_3499\3062170090_STA-241-9.71_Wales_Road\ODOT\10047L_STA-241-9.71\Design\Roadway\Sheets\10047L_XS100.dgn 4/7/2021 7:44:27 AM khillegoss

SEEDING		END AREA		VOLUME		
END WIDTH	SQ. YDS.	CUT	FILL	CUT	FILL	
						CALCULATED KRM
						CHECKED RAK
		6	0			
		4	0			
		5	0			



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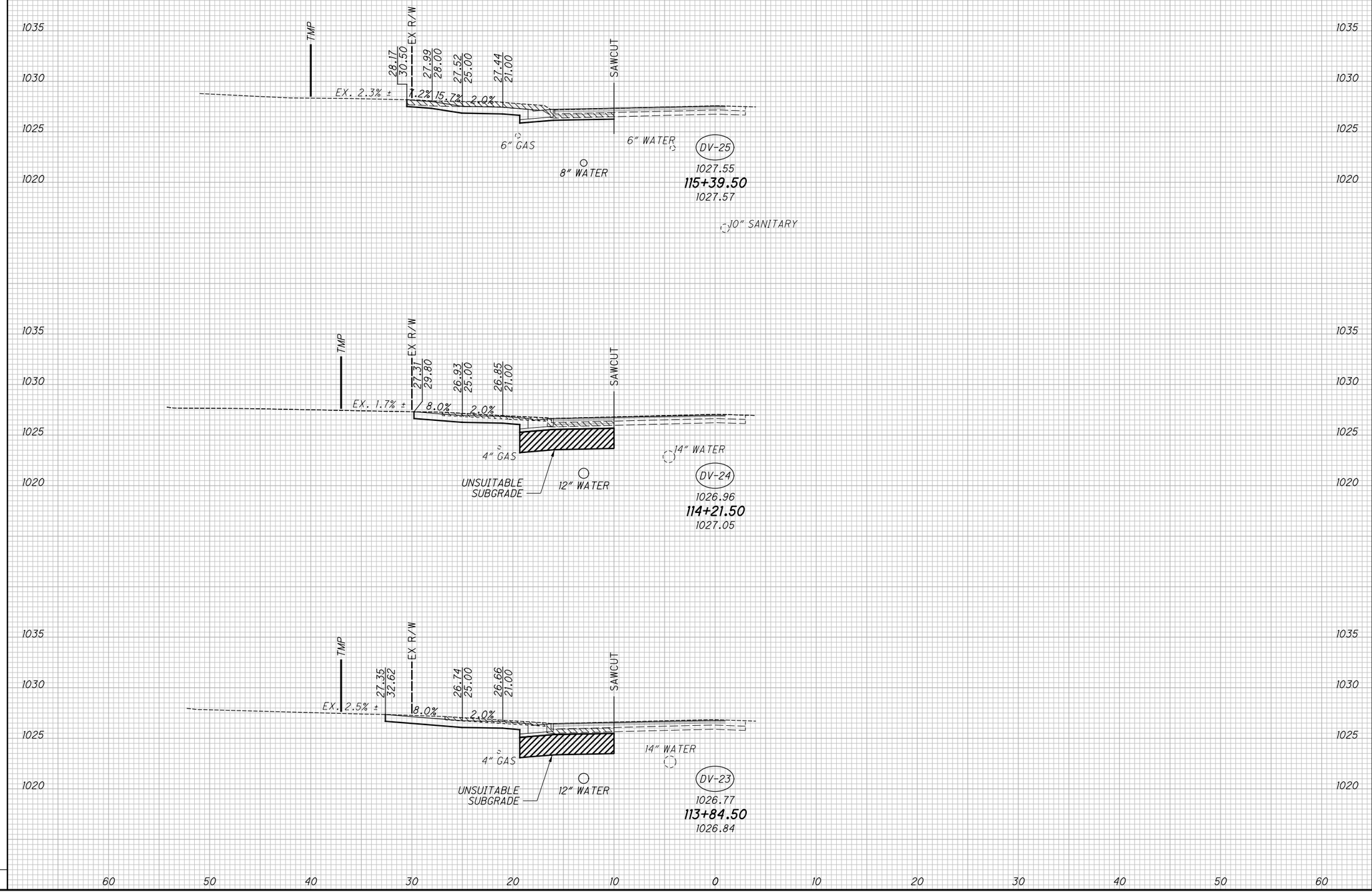
DRIVE PROFILES - SR 241
STA. 112+98.5 TO STA. 113+62

STA-241-9.71

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
11	0		
11	0		
13	0		

CALCULATED KRM
CHECKED RAK



DRIVE PROFILES - SR 241
STA. 113+84.5 TO STA. 115+39.5

STA-241-9.71

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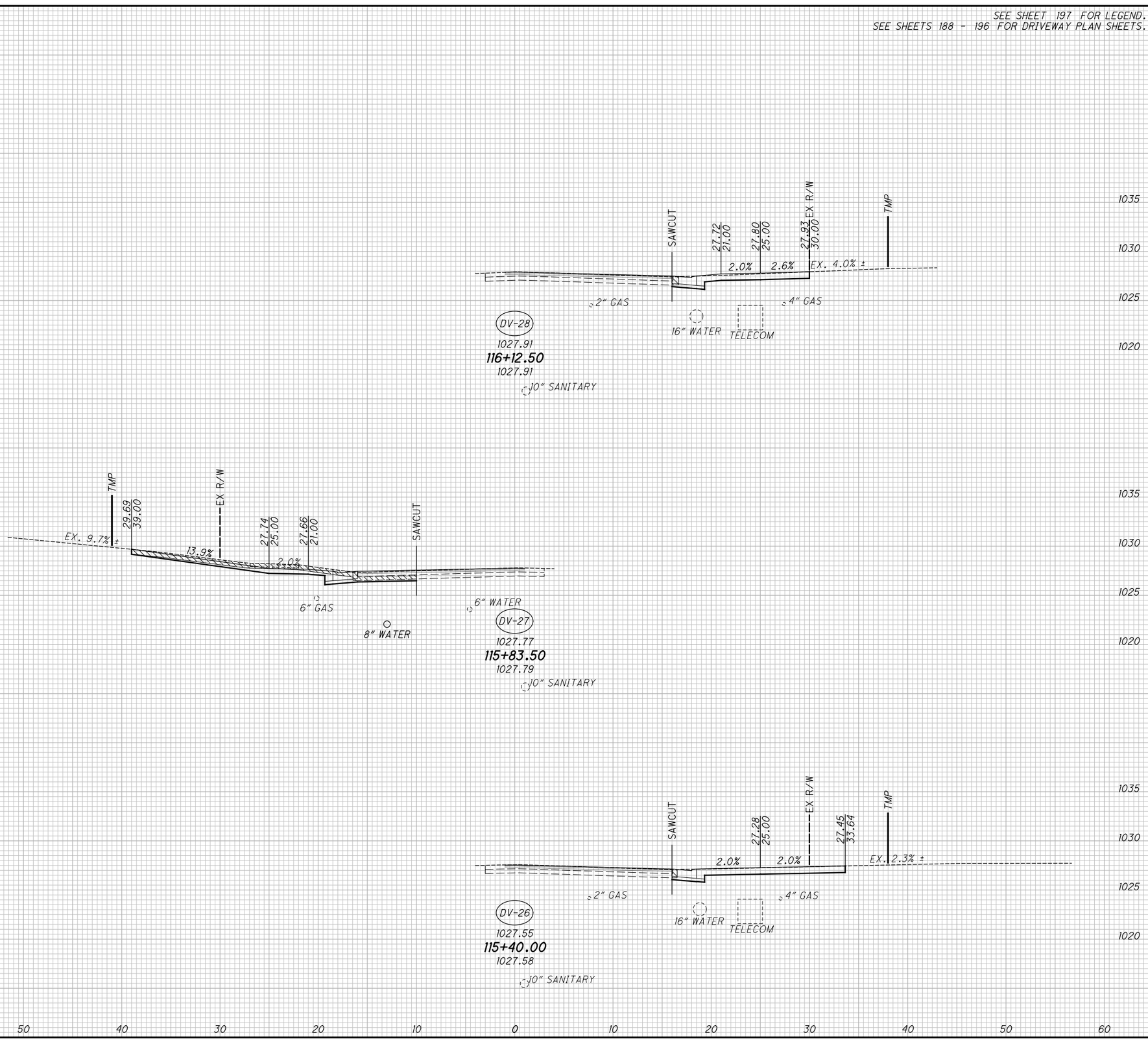
SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL
10	0
8	0
13	0

VOLUME	
CUT	FILL

CALCULATED KRM
CHECKED RAK



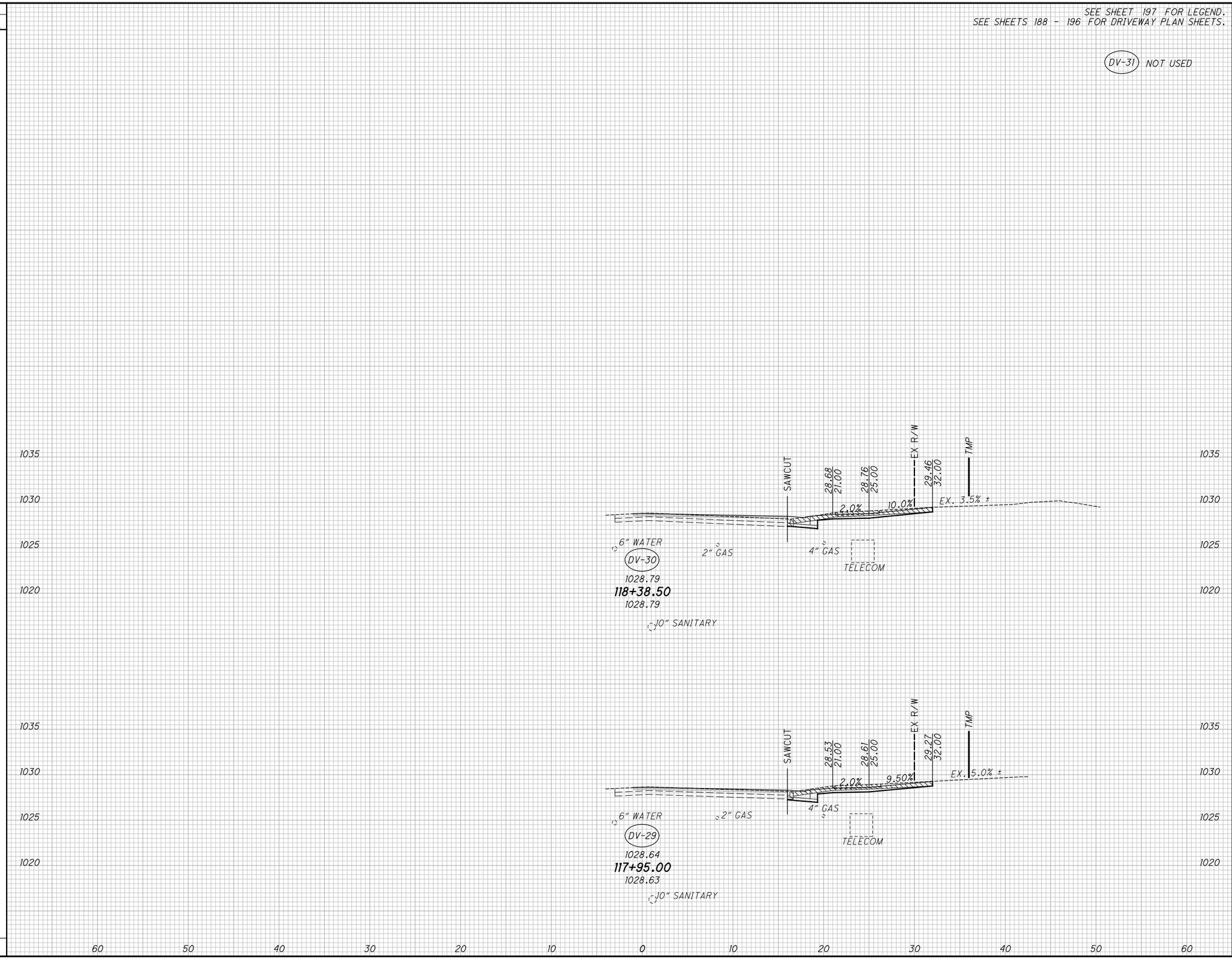
DRIVE PROFILES - SR 241
STA. 115+40 TO STA. 116+12.5

STA-241-9.71

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SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.

DV-31 NOT USED



SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL
4	0
5	0

VOLUME	
CUT	FILL

CALCULATED KRM
CHECKED RAK

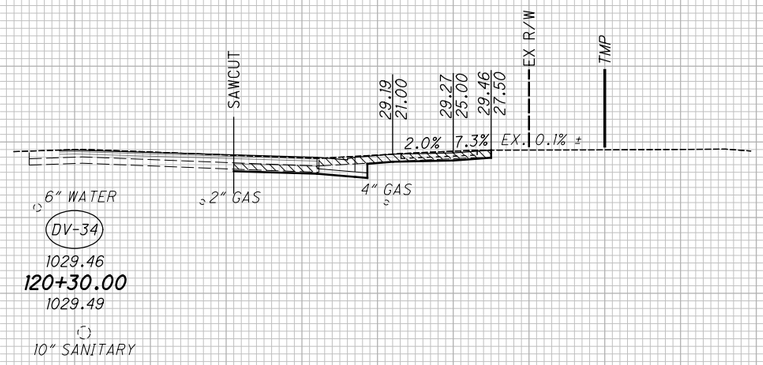
DRIVE PROFILES - SR 241
STA. 117+95 TO STA. 118+38.50

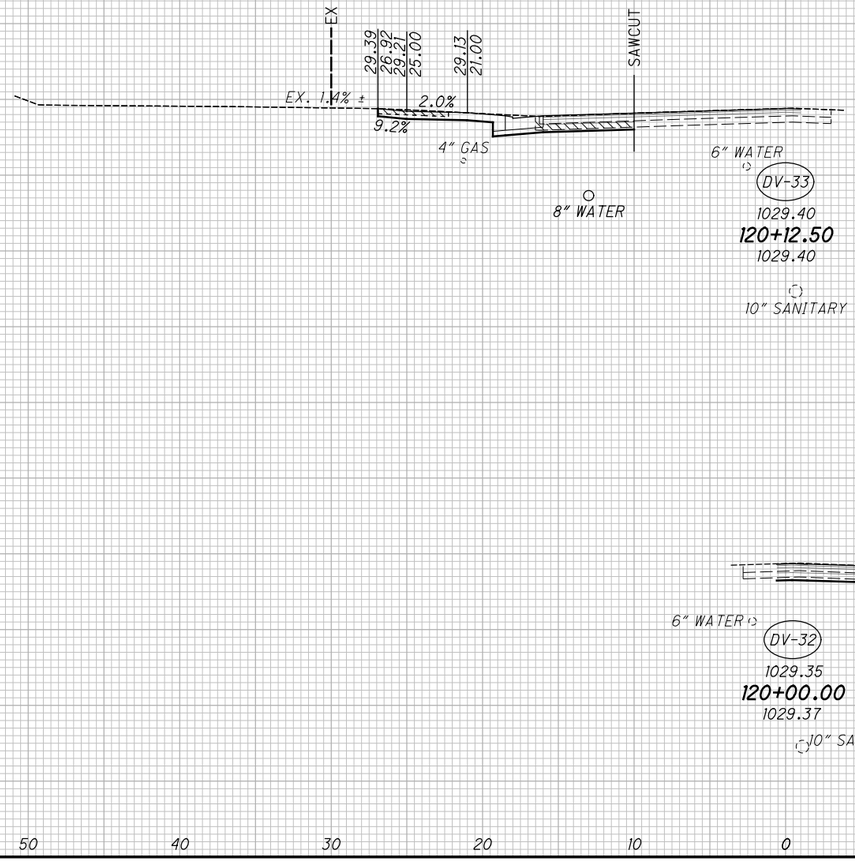
STA-241-9.71

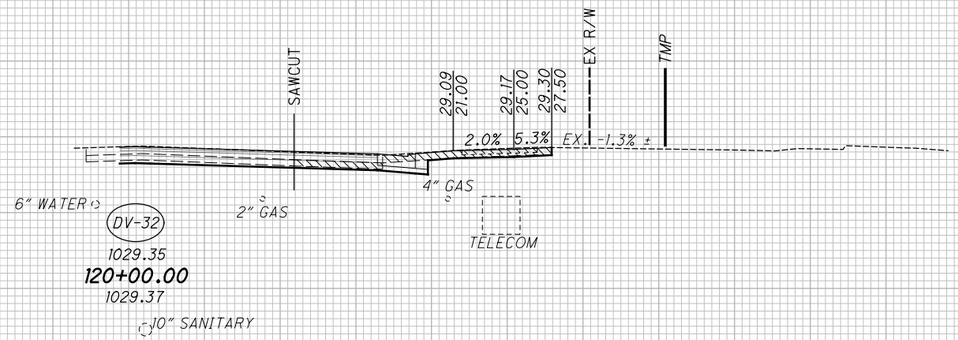
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SEEDING	
END WIDTH	SQ. YDS.

SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.







60 50 40 30 20 10 0 10 20 30 40 50 60

END AREA		VOLUME	
CUT	FILL	CUT	FILL
4	0		
7	0		
4	0		

CALCULATED KRM
CHECKED RAK

DRIVE PROFILES - SR 241
STA. 120+00 TO STA. 120+30

STA-241-9.71

206
395

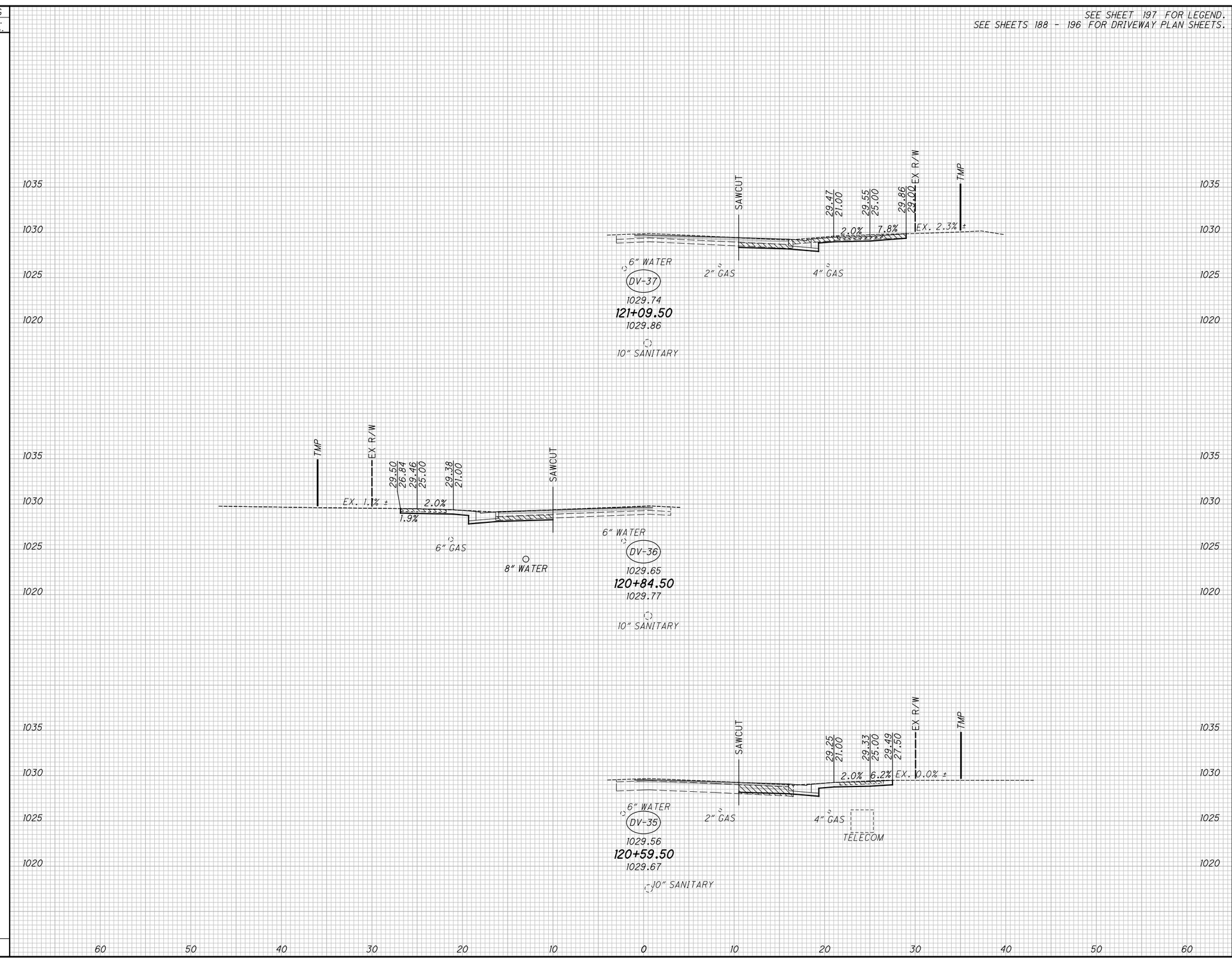
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SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
4	0		
7	0		
6	1		

CALCULATED KRM
CHECKED RAK

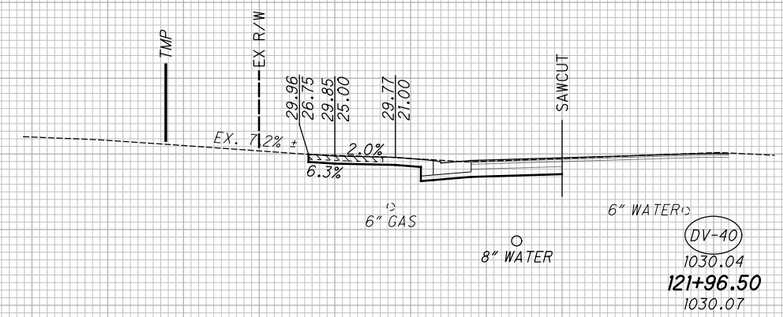


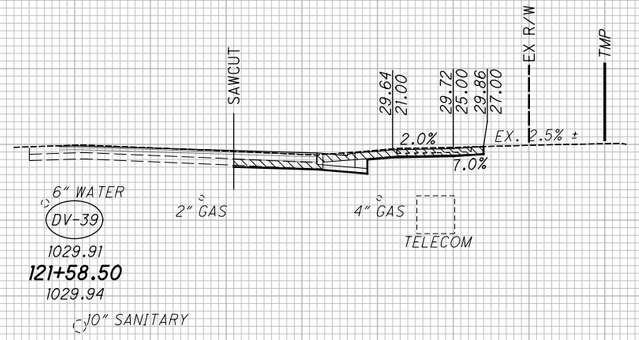
DRIVE PROFILES - SR 241
STA. 120+59.5 TO STA. 121+09.5

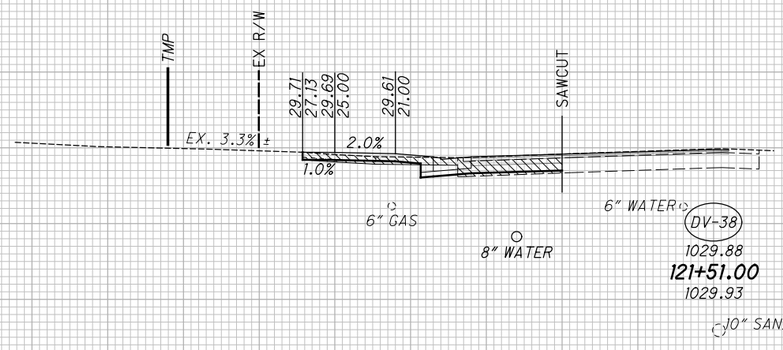
STA-241-9.71

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SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.







1035 1030 1025 1020

60 50 40 30 20 10 0 10 20 30 40 50 60

SEEDING END WIDTH	SEEDING SQ. YDS.

END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
12	0		
3	0		
2	2		

CALCULATED KRM
CHECKED RAK

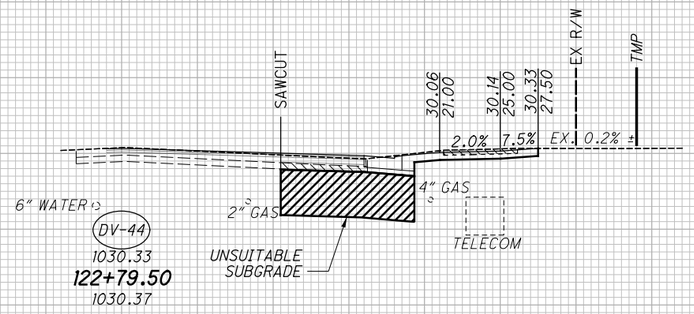
DRIVE PROFILES - SR 241
STA. 121+51 TO STA. 121+96.5

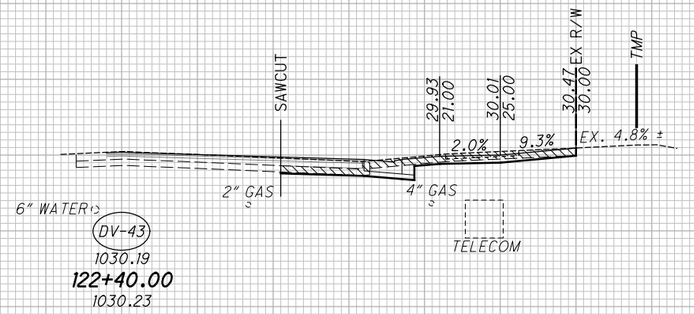
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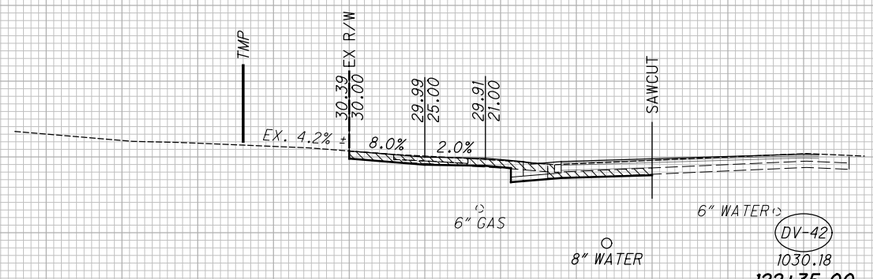
208
395

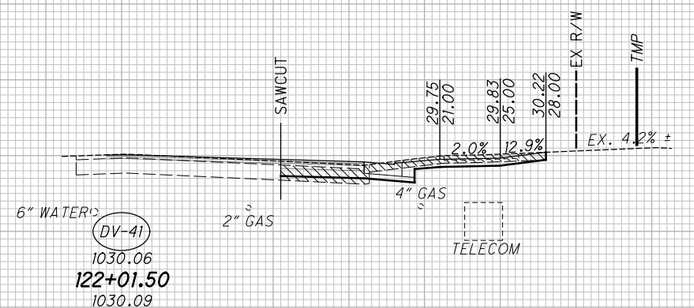
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SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.









SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL
7	1
4	0
2	1
4	2

VOLUME	
CUT	FILL

CALCULATED KRM
CHECKED RAK

DRIVE PROFILES - SR 241
STA. 122+01.5 TO STA. 122+79.5

STA-241-9.71

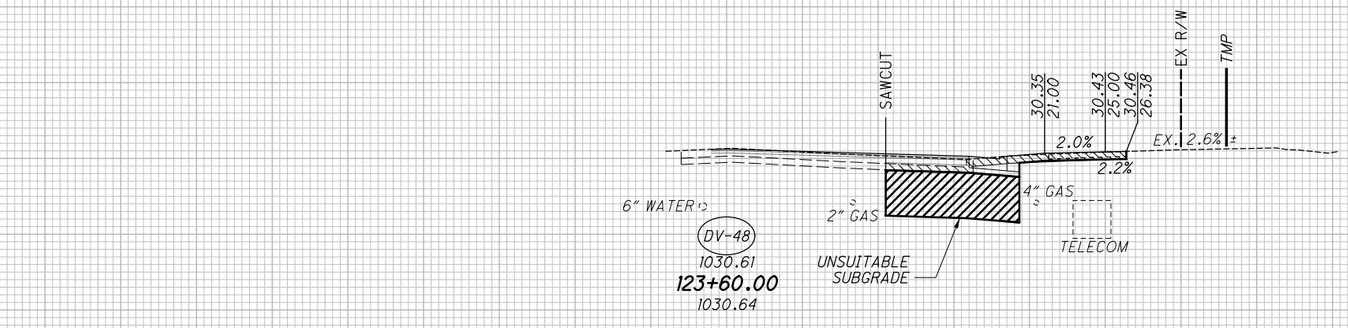
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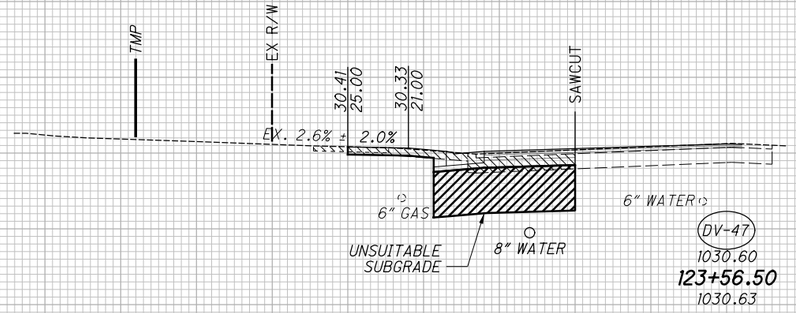
SEEDING	
END WIDTH	SQ. YDS.

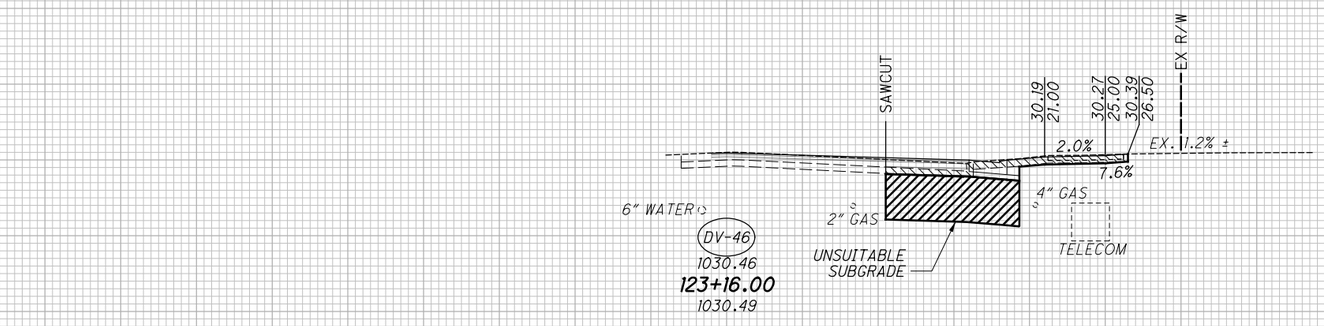
END AREA	
CUT	FILL
2	1
2	2
3	1
2	3

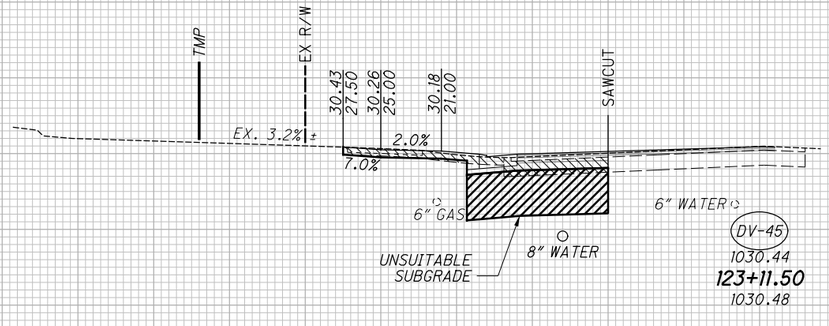
VOLUME	
CUT	FILL

CALCULATED KRM
CHECKED RAK









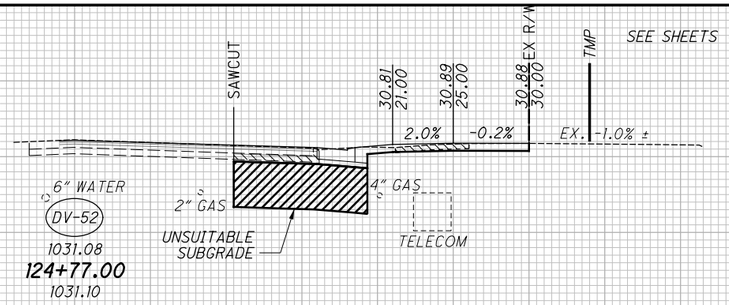
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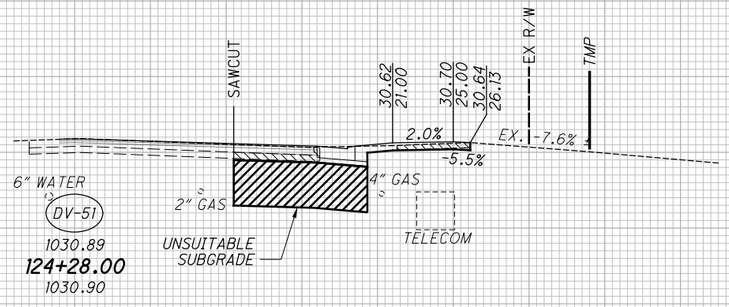
DRIVE PROFILES - SR 241
STA. 123+11.5 TO STA. 123+60

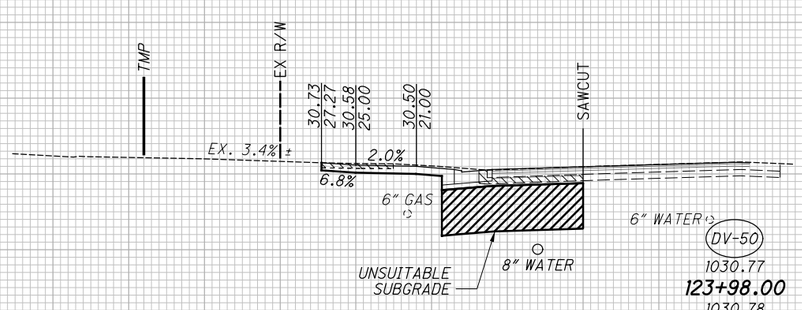
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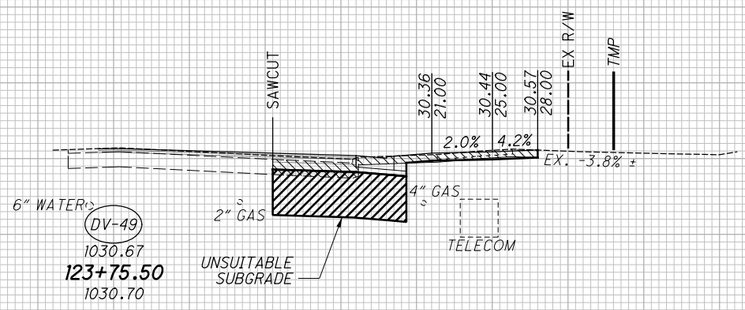
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SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.









SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL
8	0
5	0
8	0
3	2

VOLUME	
CUT	FILL

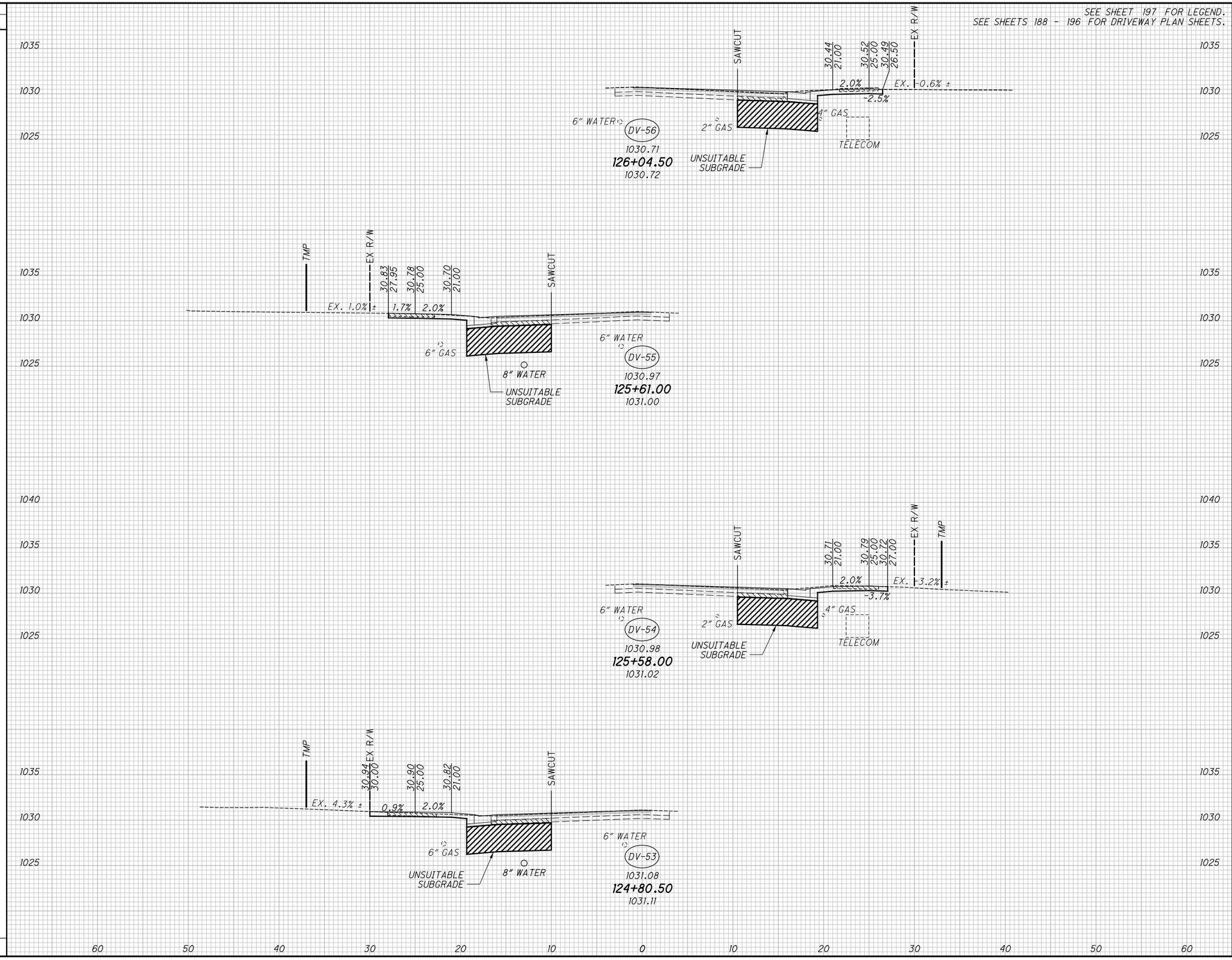
CALCULATED KRM
CHECKED RAK

DRIVE PROFILES - SR 241
STA. 123+75.5 TO STA. 124+77

STA-241-9.71

P:\3000_3499\3062170090_STA-241-9.71_Wales_Road\ODOT\00471L_STA-241-9.71\Design\Roadway\Sheets\00471L_XS100.dgn 4/7/2021 7:44:36 AM khillegass

SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.



SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL
7	1
6	0
7	0
6	0

VOLUME	
CUT	FILL

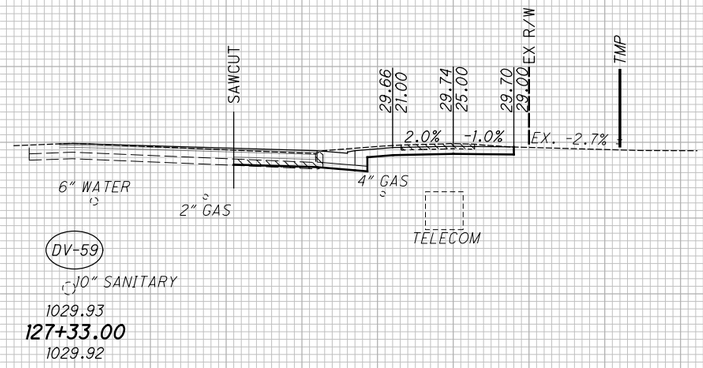
CALCULATED KRM
CHECKED RAK

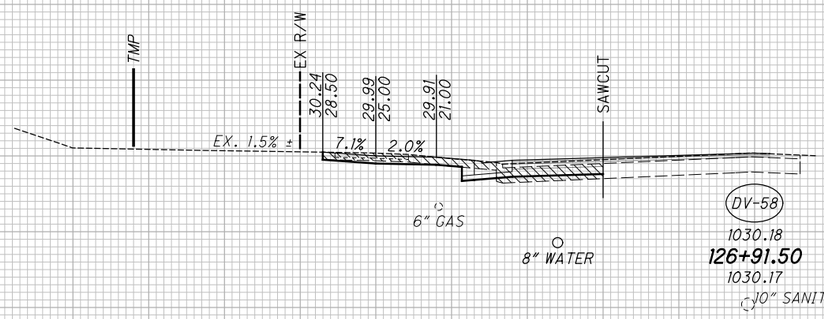
DRIVE PROFILES - SR 241
STA. 124+80.5 TO STA. 126+04.5

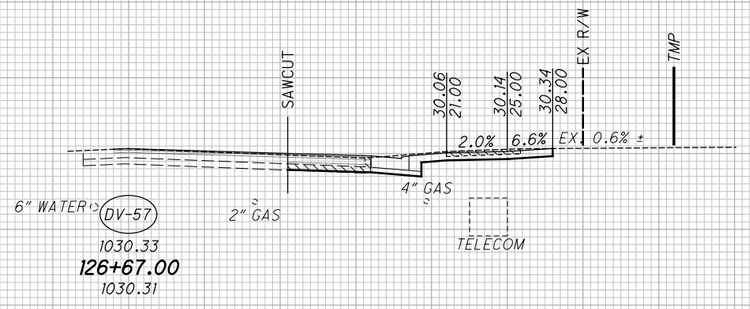
STA-241-9.71

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SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.







SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL
9	1
2	2
8	1

VOLUME	
CUT	FILL

CALCULATED KRM
CHECKED RAK

DRIVE PROFILES - SR 241
STA. 126+67 TO STA. 127+33

STA-241-9.71

213
395

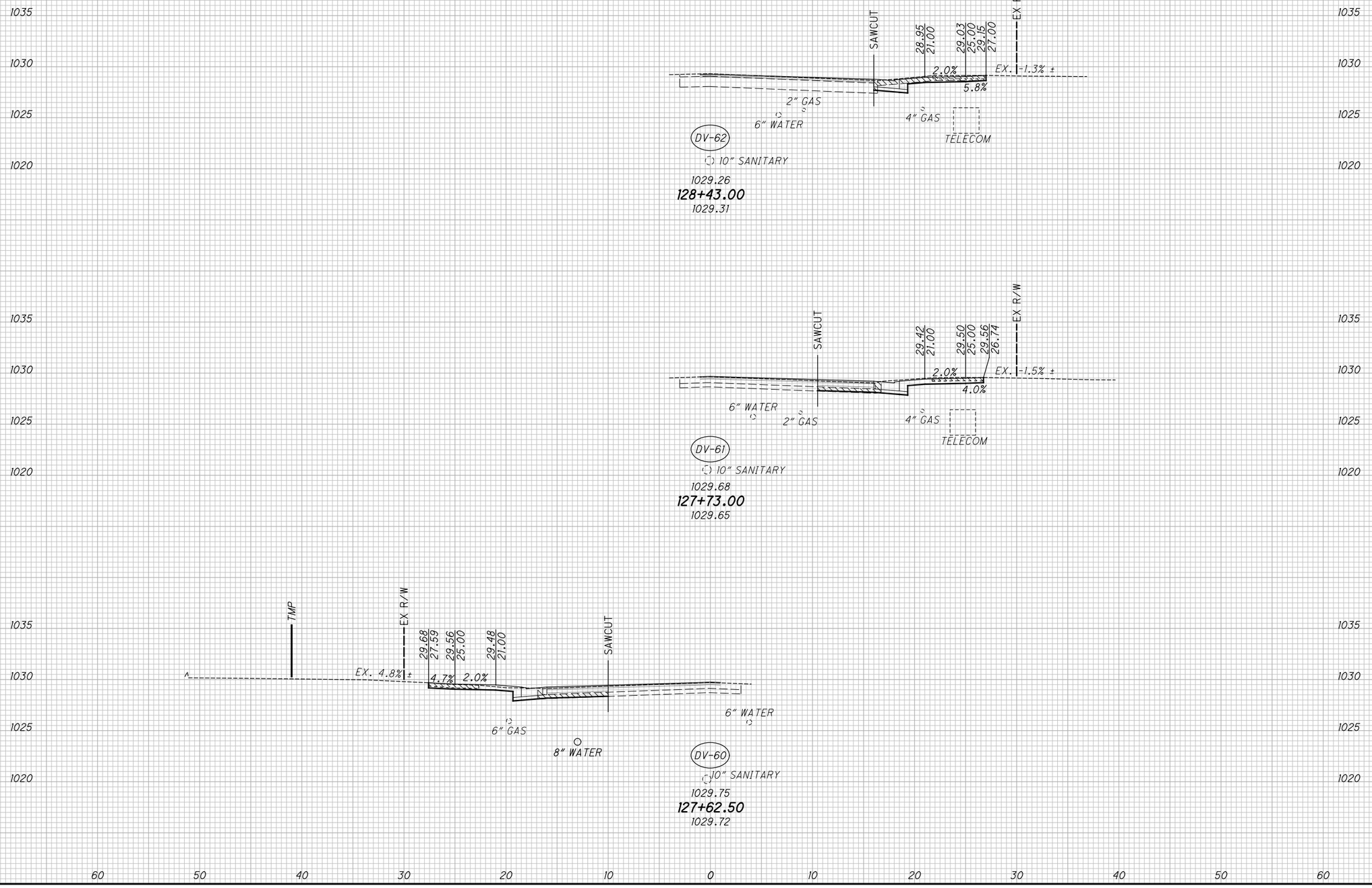
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SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
3	1		
6	1		
5	1		

CALCULATED KRM
CHECKED RAK



DRIVE PROFILES - SR 241
STA. 127+62.5 TO STA. 128+43

STA-241-9.71

214
395

P:\3000_3499\30621T0090_STA-241-9TL_Wales_Road\ODOT\100471L_STA-241-9TL\Design\Roadway\Sheets\100471L_XS100.dgn 4/7/2021 7:44:40 AM khillegass

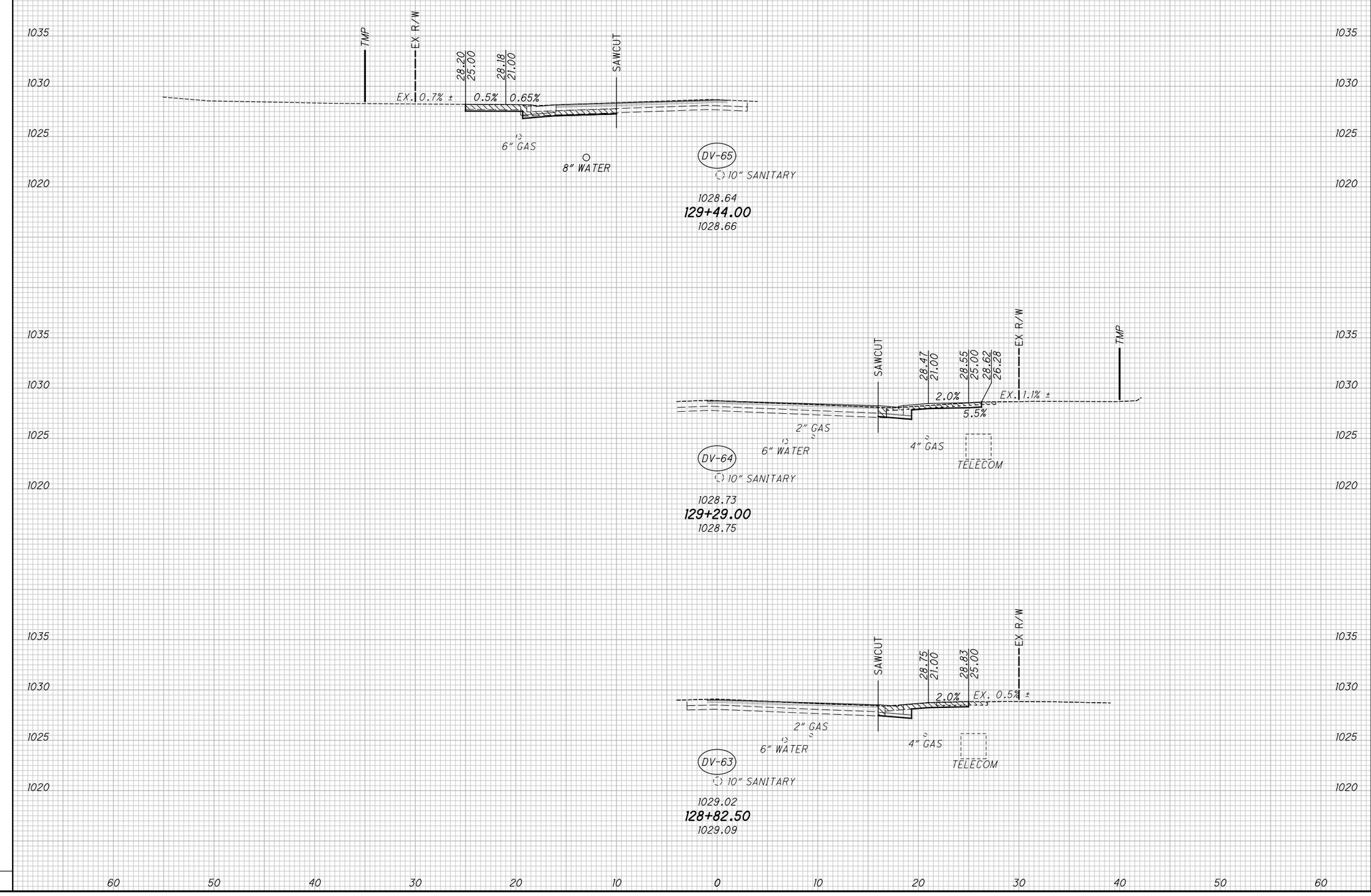
SEEDING

END WIDTH	SQ. YDS.

SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
2	1		
3	1		
2	0		

CALCULATED KRM
CHECKED RAK



DRIVE PROFILES - SR 241
STA. 128+82.5 TO STA. 129+44

STA-241-9.71

P:\3000_3499\3062170090_STA-241-9.71_Wales_Road\ODOT\10047L_STA-241-9.71\Design\Roadway\Sheets\10047L_XS100.dgn 4/7/2021 7:44:41 AM khillegass

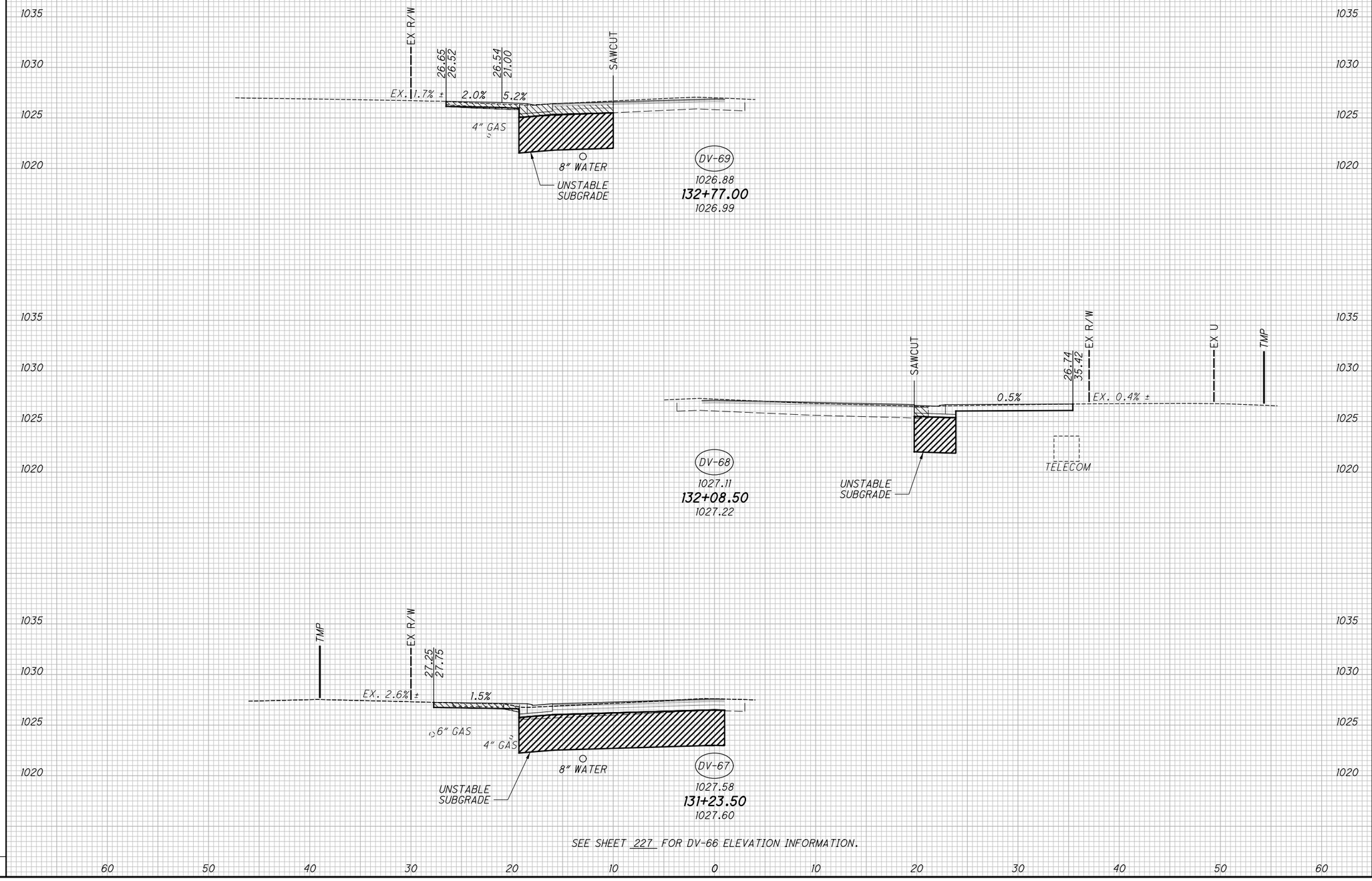
SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL
0	1
10	1
20	4

VOLUME	
CUT	FILL

CALCULATED KRM
CHECKED RAK



SEE SHEET 227 FOR DV-66 ELEVATION INFORMATION.

DRIVE PROFILES - SR 241
STA. 131+23.5 TO STA. 132+77

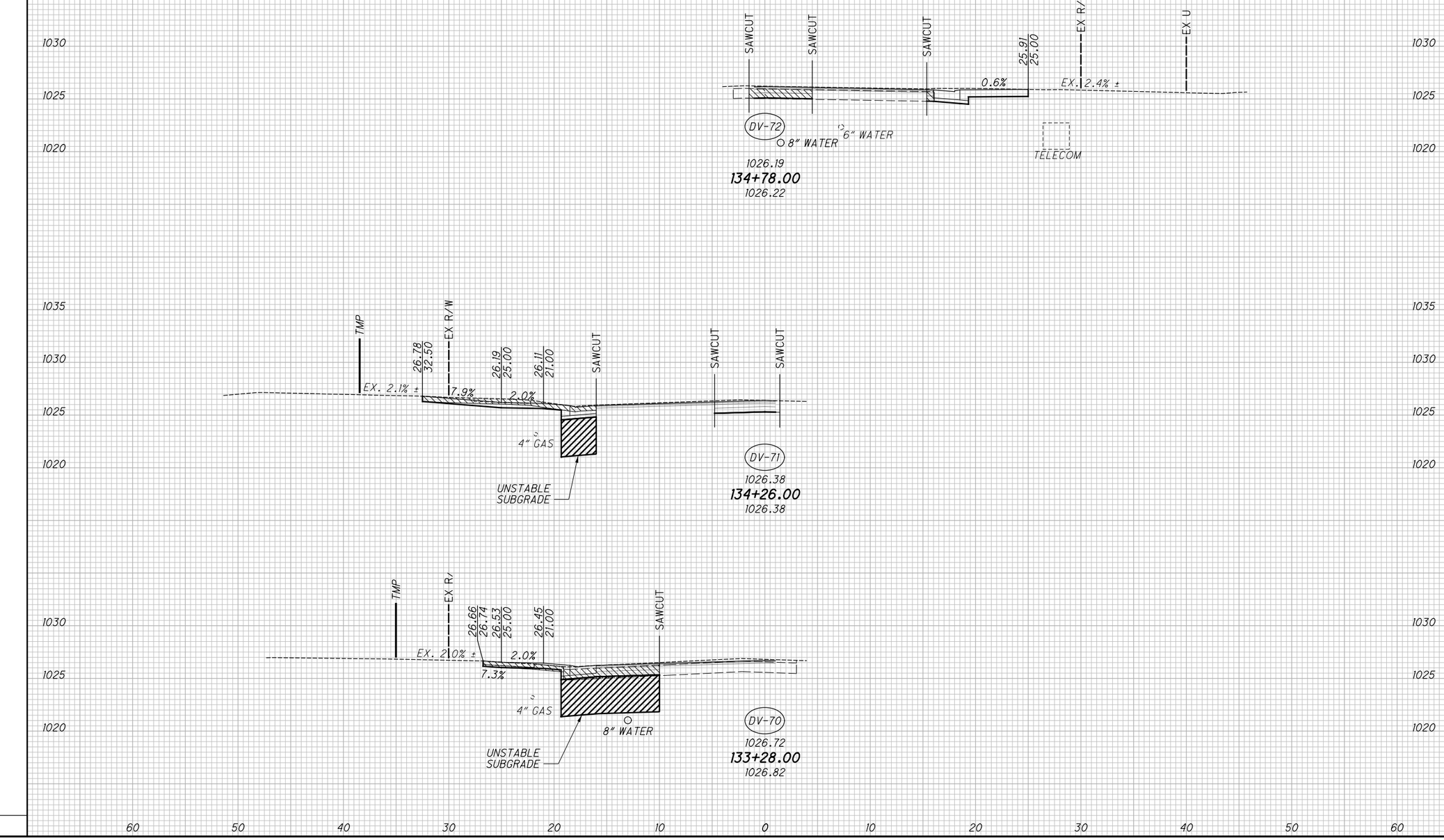
STA-241-9.71

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SEEDING

END WIDTH	SQ. YDS.

SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
9	1		
12	0		
1	2		

CALCULATED KRM
CHECKED RAK

DRIVE PROFILES - SR 241
STA. 133+28 TO STA. 134+78

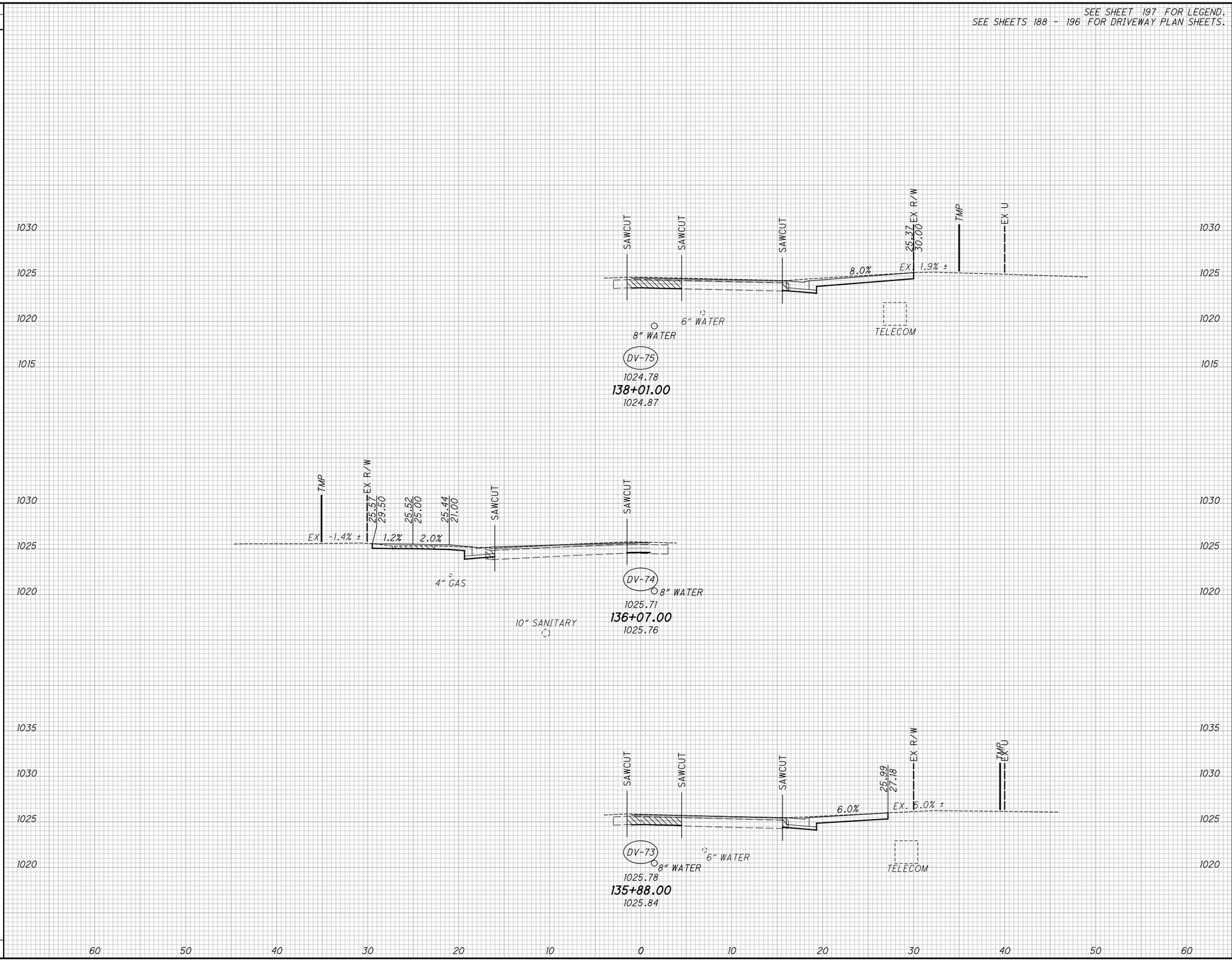
STA-241-9.71

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SEEDING	
END WIDTH	SQ. YDS.

SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
13	0		
5	1		
10	1		

CALCULATED KRM
CHECKED RAK

DRIVE PROFILES - SR 241
STA. 135+88 TO STA. 138+01

STA-241-9.71

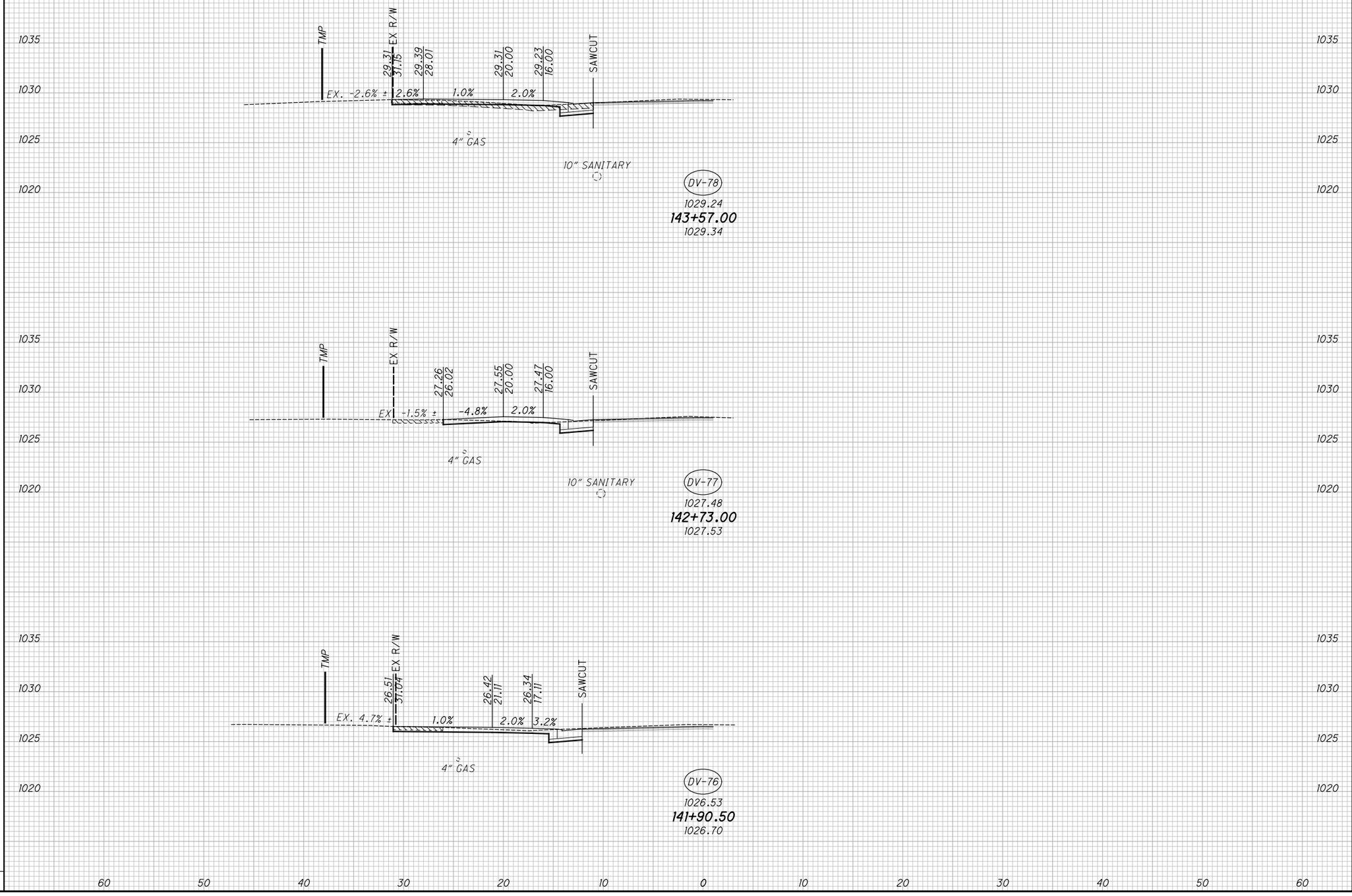
SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL
2	4
6	1
8	0

VOLUME	
CUT	FILL

CALCULATED KRM
CHECKED RAK



DRIVE PROFILES - SR 241
STA. 141+90.5 TO STA. 143+57

STA-241-9.71

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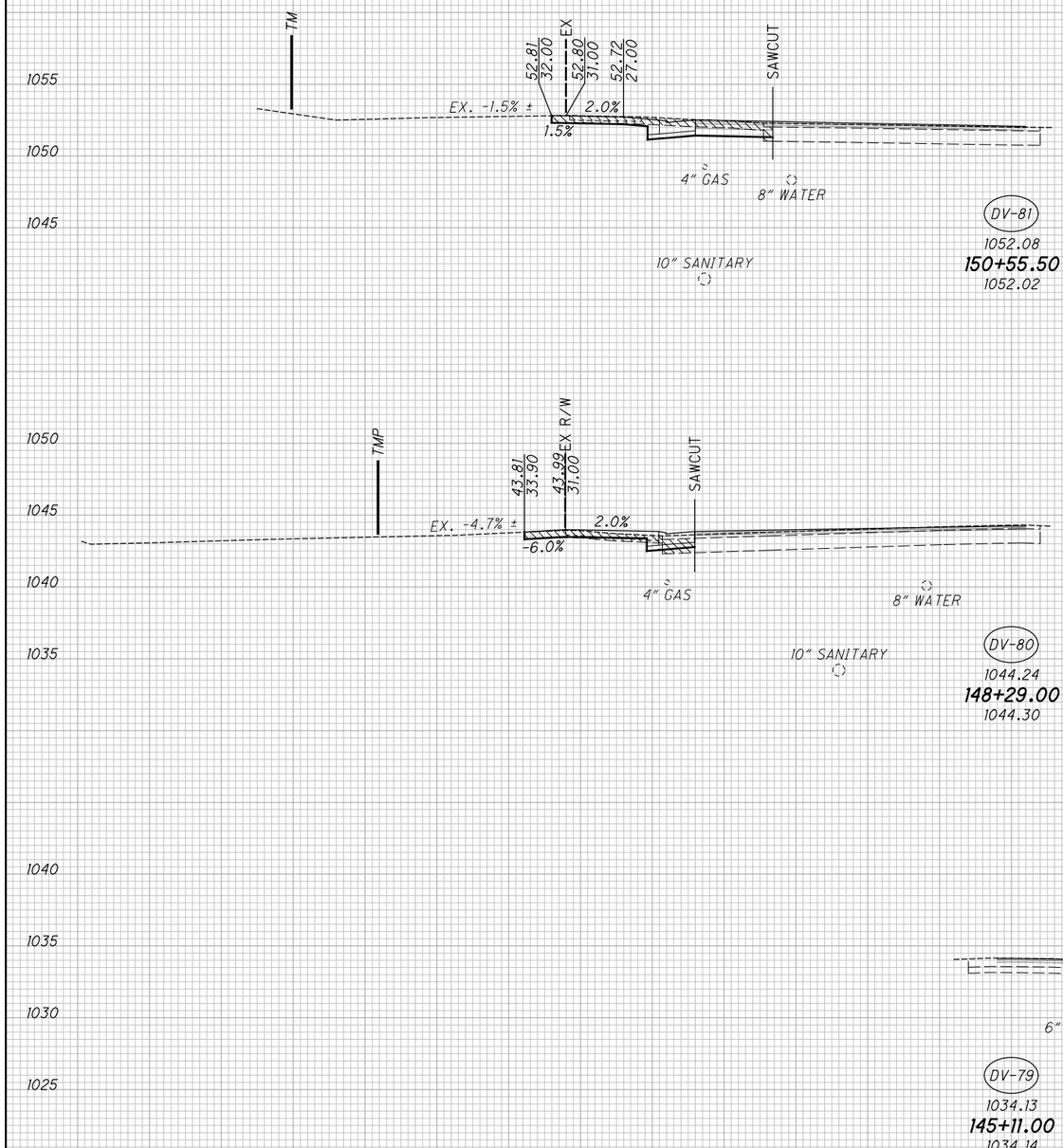
SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL
6	1
1	2
8	1

VOLUME	
CUT	FILL

CALCULATED KRM
CHECKED RAK



DRIVE PROFILES - SR 241
STA. 145+11 TO STA. 150+55.5

STA-241-9.71

220
395

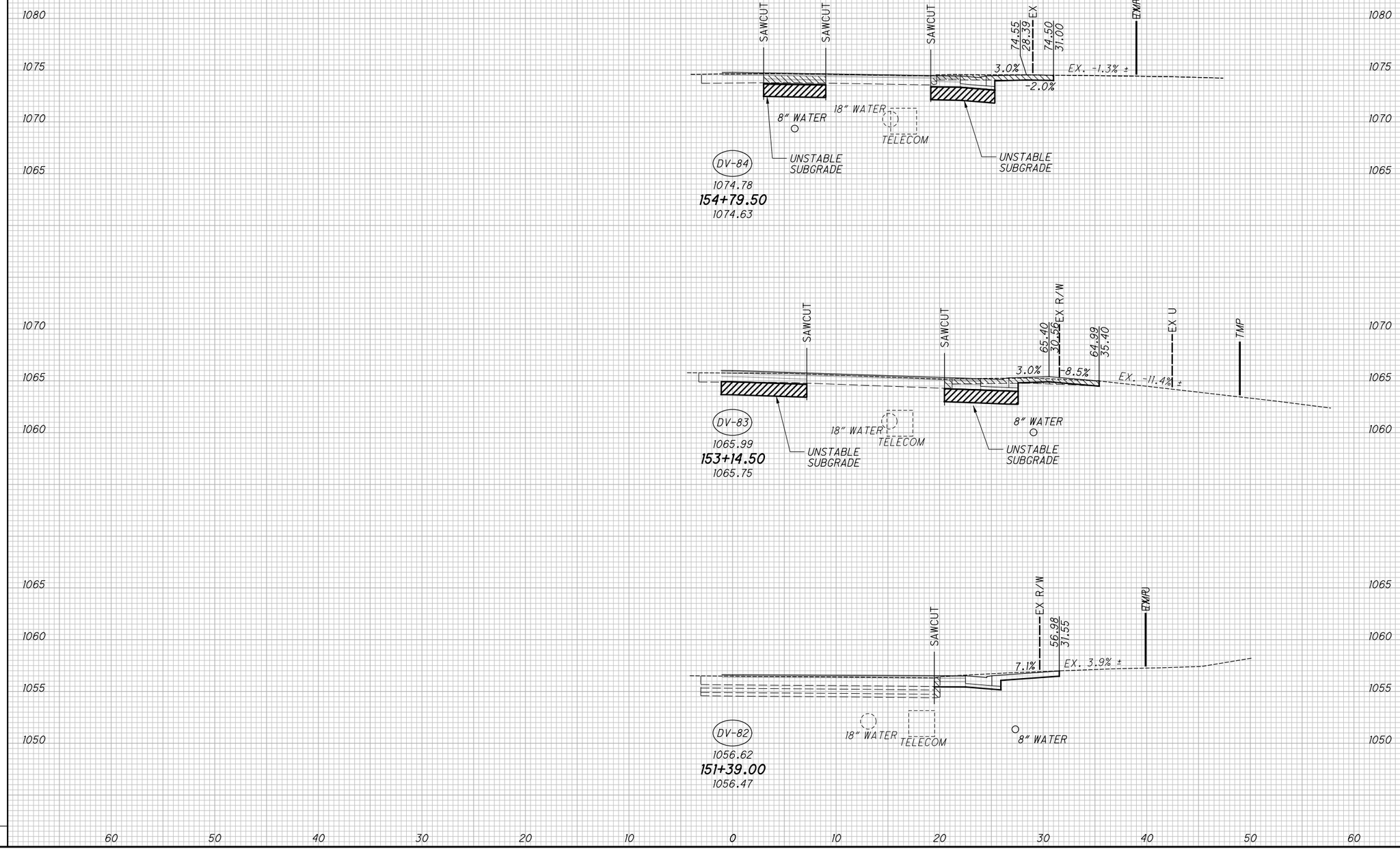
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SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
5	0		
4	1		
11	1		

CALCULATED KRM
CHECKED RAK



DRIVE PROFILES - SR 241
STA. 151+39 TO STA. 154+79.5

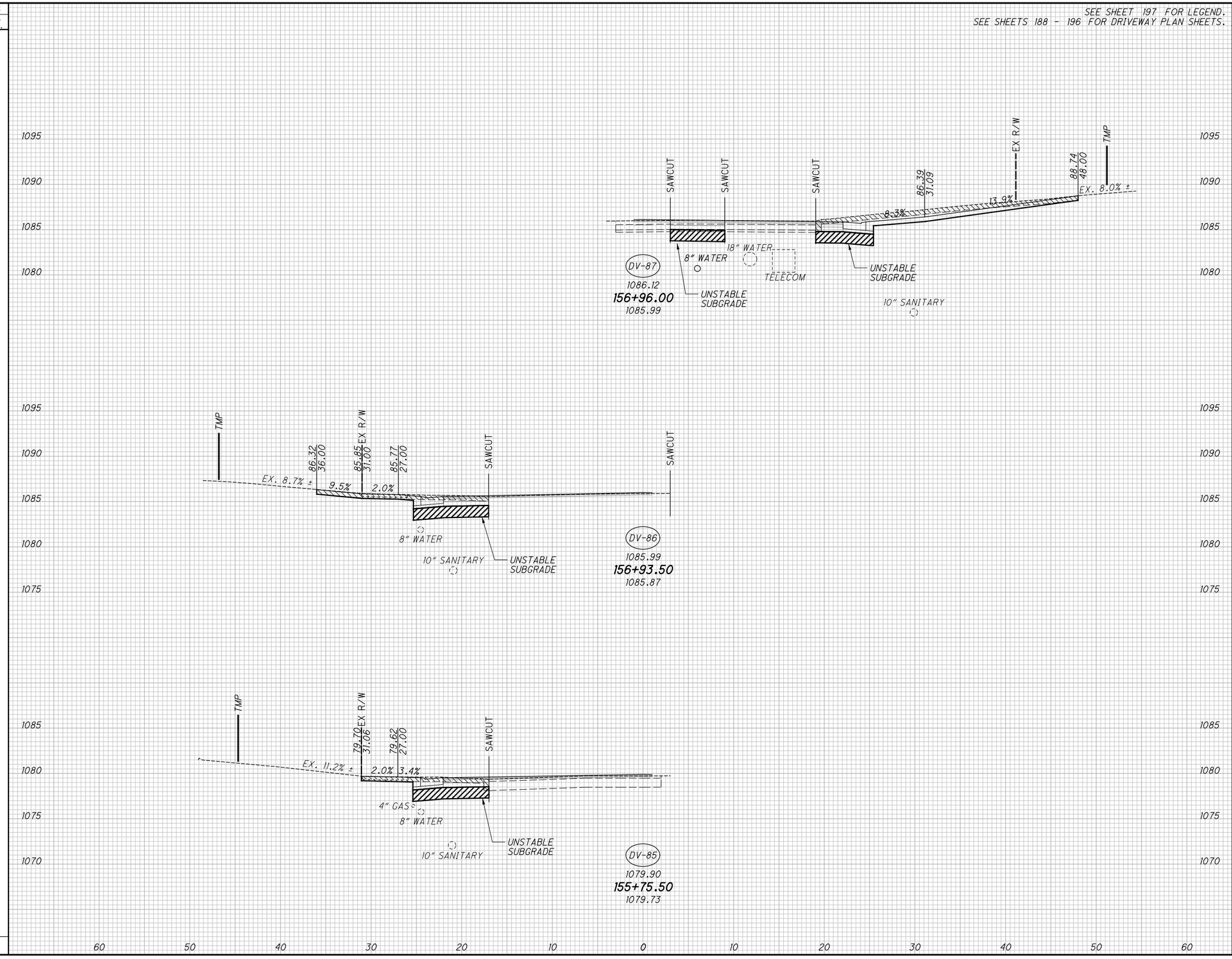
STA-241-9.71

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SEEDING

END WIDTH	SQ. YDS.

SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.



END AREA CUT	END AREA FILL	VOLUME CUT	VOLUME FILL
19	1		
6	0		
5	1		

CALCULATED KRM
CHECKED RAK

DRIVE PROFILES - SR 241
STA. 155+75.5 TO STA. 156+96

STA-241-9.71

222
395

P:\3000_3499\3062170090_STA-241-9.71_Wales_Road\ODOT\10047L_STA-241-9.71\Design\Roadway\Sheets\10047L_XS100.dgn 4/7/2021 7:44:45 AM khillegoss

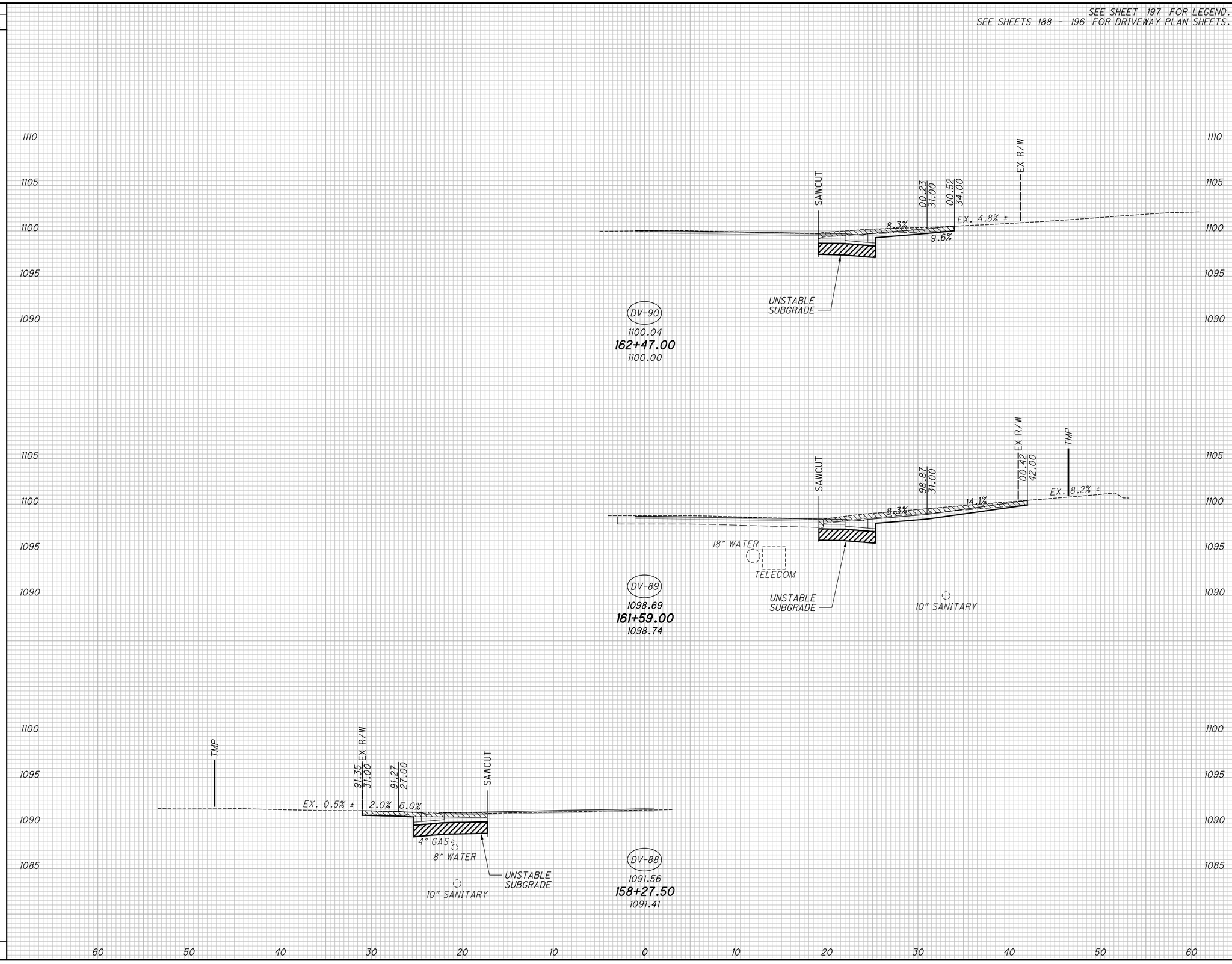
SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL
8	0
13	0
5	1

VOLUME	
CUT	FILL

CALCULATED KRM
CHECKED RAK



DRIVE PROFILES - SR 241
STA. 158+27.5 TO STA. 162+47

STA-241-9.71

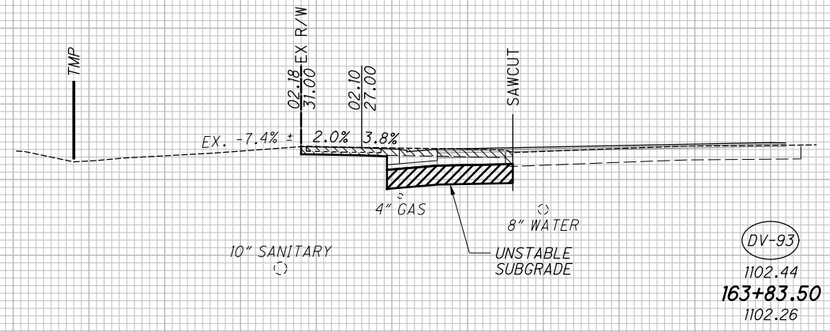
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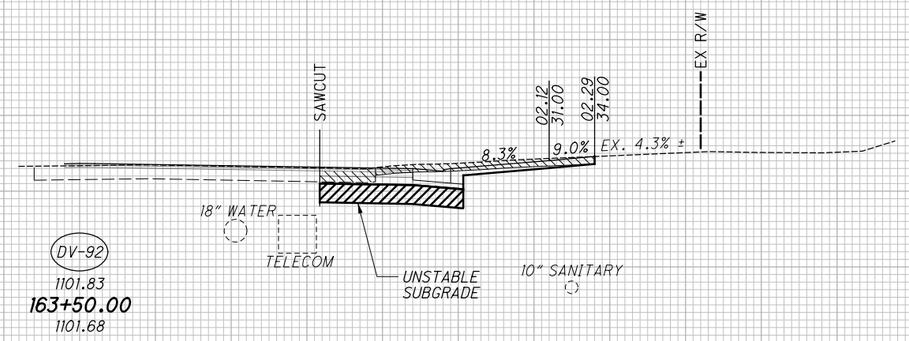
SEEDING	
END WIDTH	SQ. YDS.

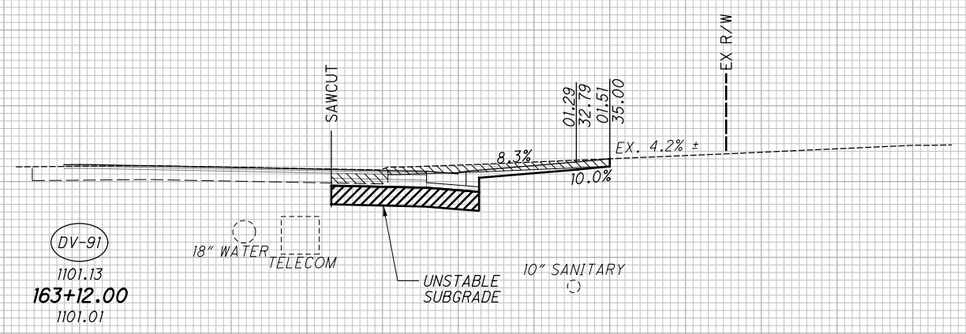
END AREA	
CUT	FILL
5	1
7	0
9	0

VOLUME	
CUT	FILL

CALCULATED KRM
CHECKED RAK







60 50 40 30 20 10 0 10 20 30 40 50 60

DRIVE PROFILES - SR 241
STA. 163+12 TO STA. 163+83.5

STA-241-9.71

224
395

P:\3000_3499\3062\T0090_STA-241-9.71_Wales_Road\ODOT\10047L_STA-241-9.71\Design\Roadway\Sheets\10047L_XS100.dgn 4/7/2021 7:44:46 AM khillegass

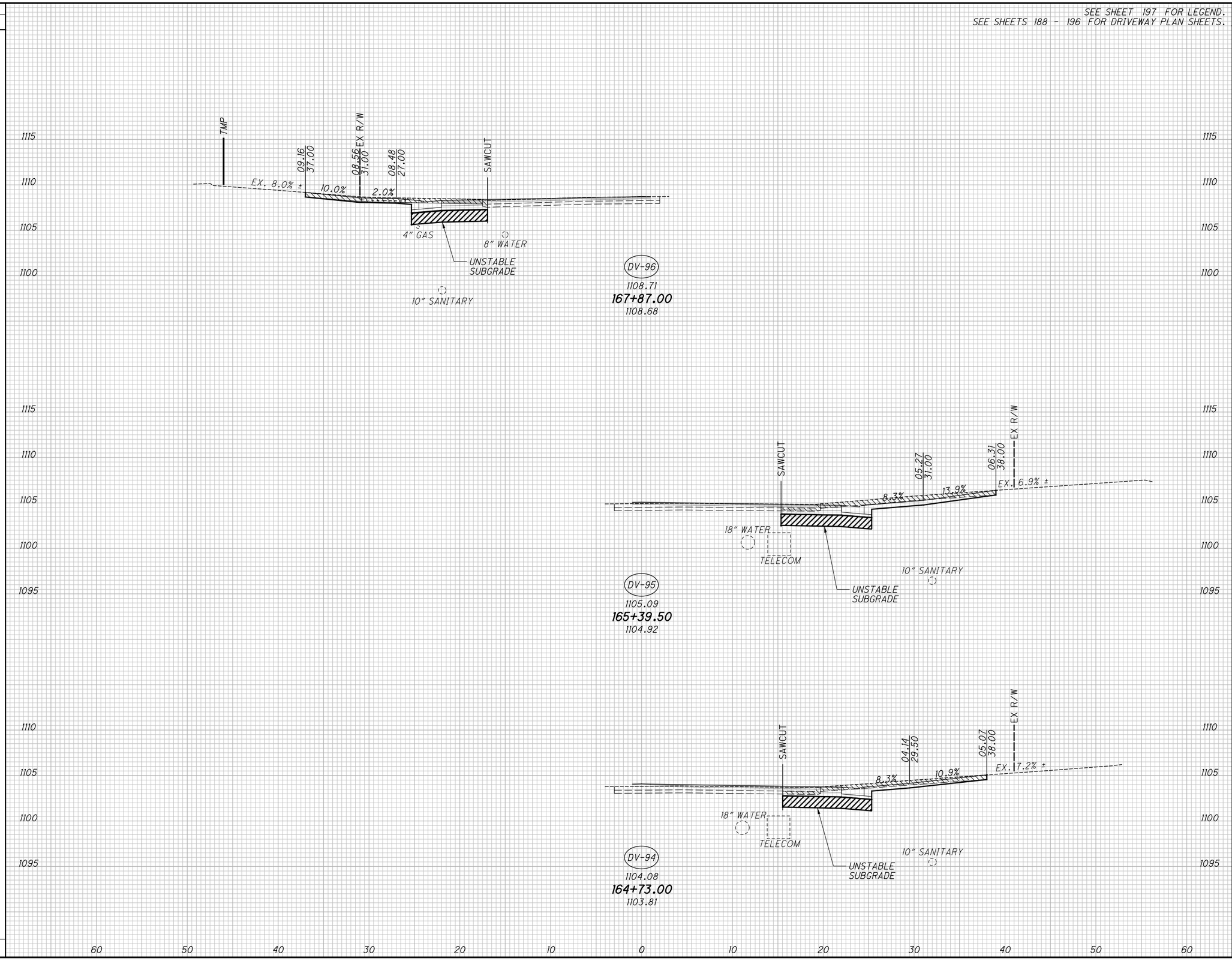
SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.

SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL
8	0
13	0
8	0

VOLUME	
CUT	FILL

CALCULATED KRM
CHECKED RAK

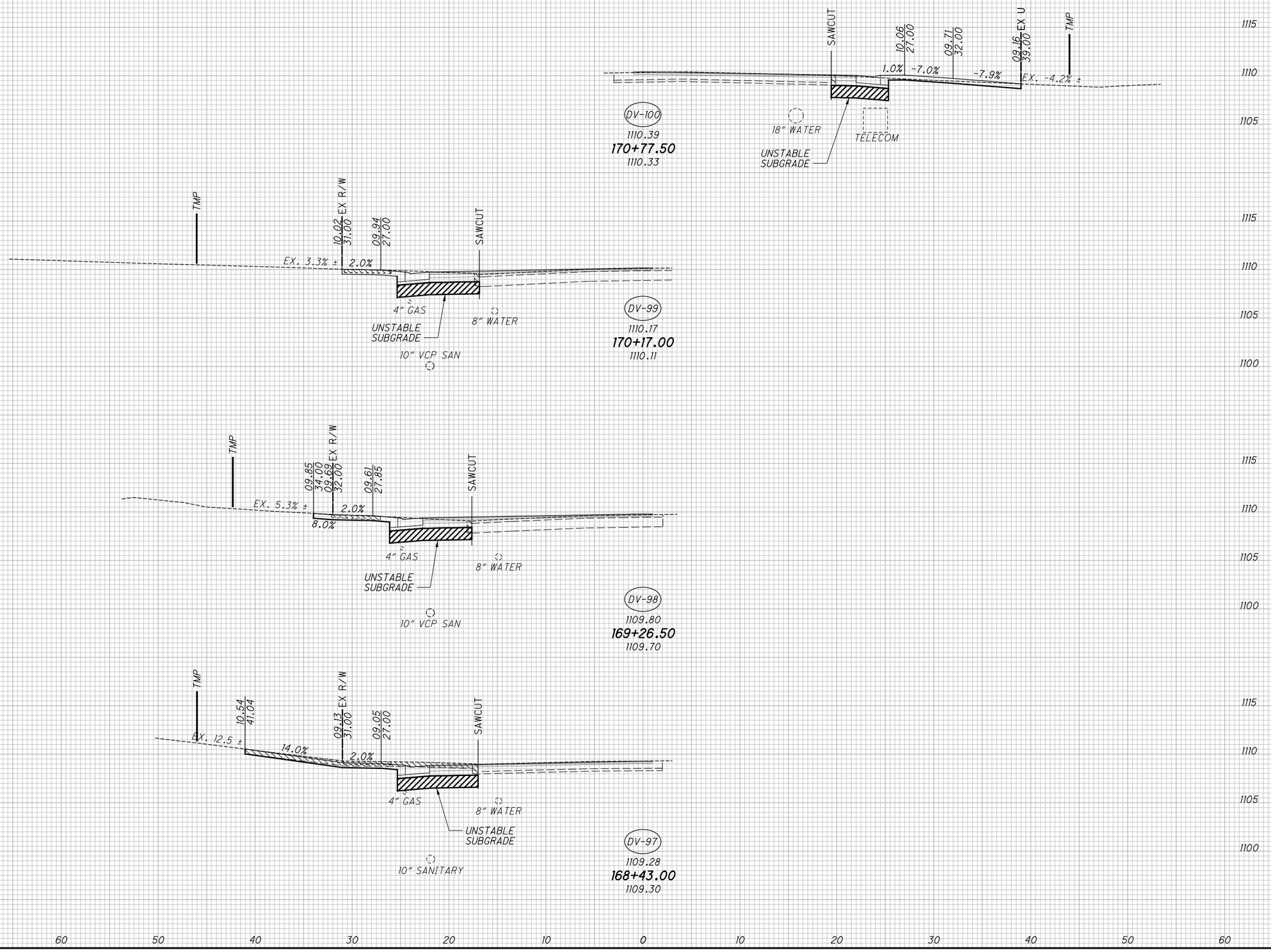


DRIVE PROFILES - SR 241
STA. 164+73 TO STA. 167+87

STA-241-9.71

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SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.



END AREA		VOLUME	
CUT	FILL	CUT	FILL
9	0		
10	1		
10	1		
9	0		

CALCULATED KRM
CHECKED RAK

DRIVE PROFILES - SR 241
STA. 168+43 TO STA. 170+77.5

STA-241-9.71

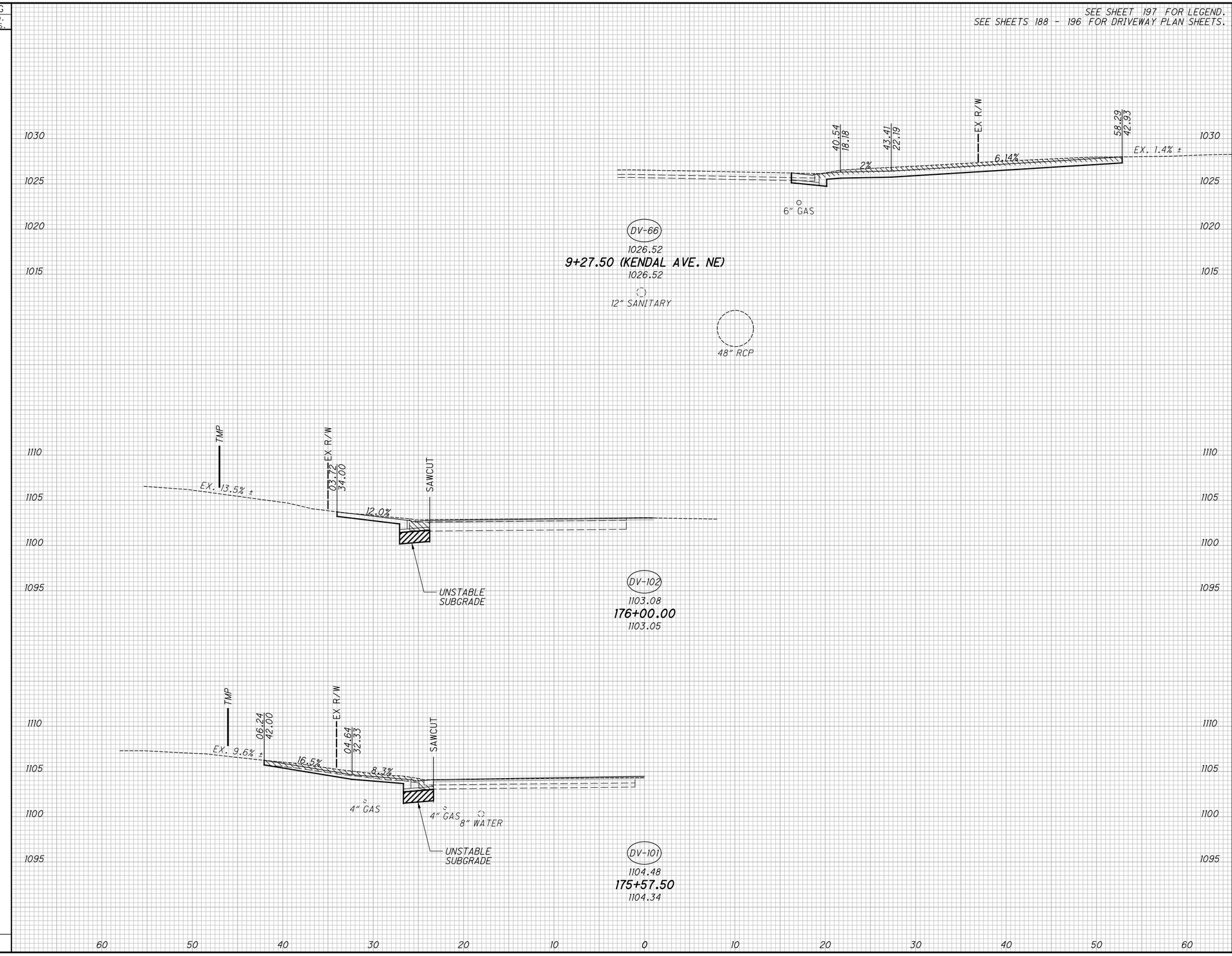
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SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.

SEEDING	
END WIDTH	SQ. YDS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
18	0		
6	1		
6	0		

CALCULATED KRM
CHECKED RAK



DRIVE PROFILES - SR 241 & KENDAL AVE. NE

STA. 175+57.5 TO STA. 176+00 AND 9+27.50 (KENDAL AVE. NE)

STA-241-9.71

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SEEDING	
END WIDTH	SQ. YDS.

SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.

END AREA		VOLUME	
CUT	FILL	CUT	FILL
18	0		
12	1		
11	2		

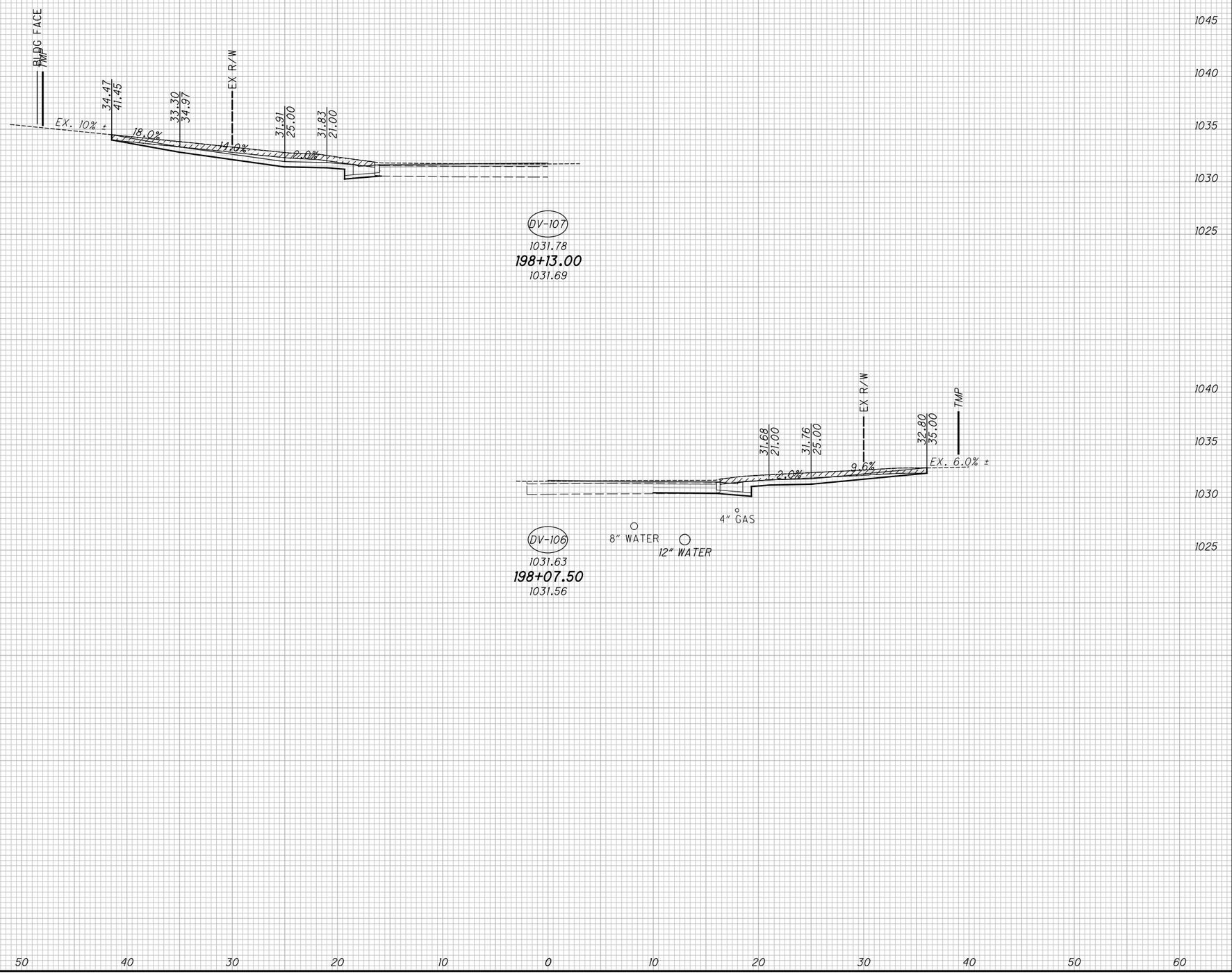
CALCULATED KRM
CHECKED RAK

DRIVE PROFILES - LAKE AV. NE
STA. 196+79.5 TO STA. 197+65.5

STA-241-9.71

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SEE SHEET 197 FOR LEGEND.
SEE SHEETS 188 - 196 FOR DRIVEWAY PLAN SHEETS.



SEEDING	
END WIDTH	SQ. YDS.

END AREA	
CUT	FILL
16	1
12	1

VOLUME	
CUT	FILL

CALCULATED KRM
CHECKED RAK

DRIVE PROFILES - LAKE AV. NE
STA. 198+07.5 TO STA. 198+13

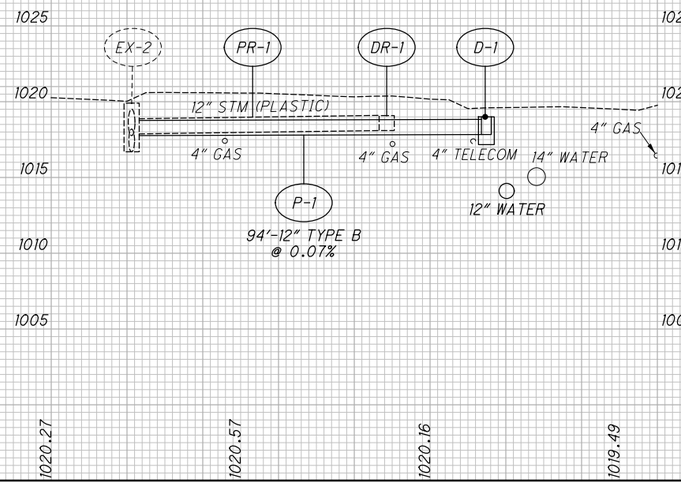
STA-241-9.71

229
395

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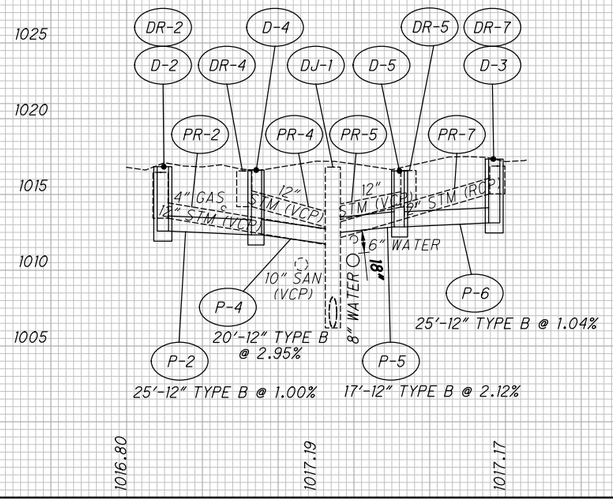
FOR PLAN VIEW, SEE SHEET 88

LINCOLN WAY E WEST SIDE OF SR 241 (WALES RD. NE)



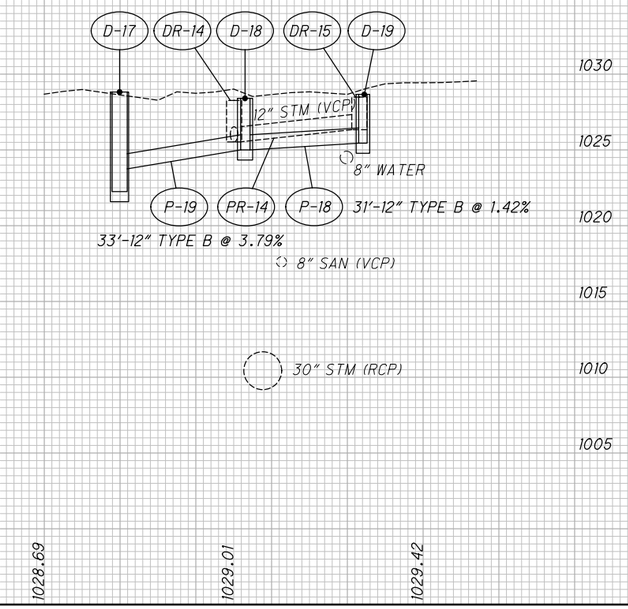
FOR PLAN VIEW, SEE SHEET 89

NORTH AV. NE WEST SIDE OF SR 241 (WALES RD. NE)



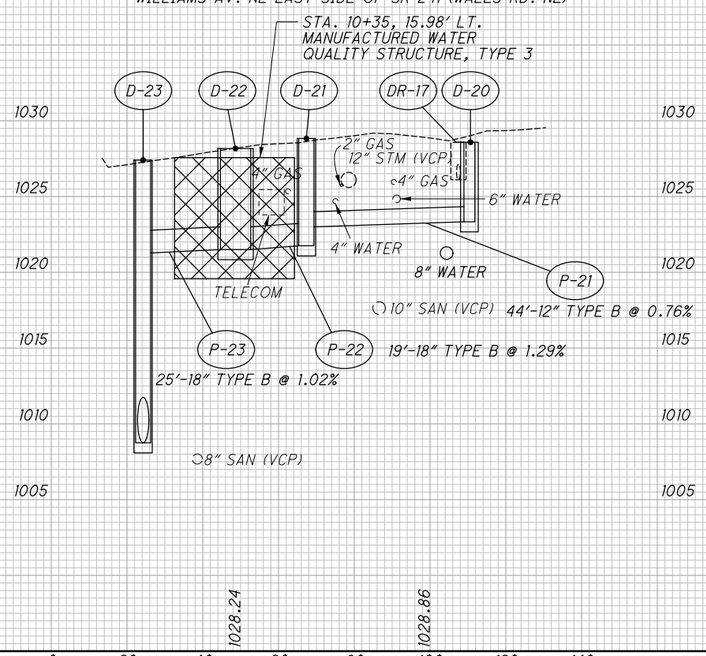
FOR PLAN VIEW, SEE SHEETS 91 & 92

WILLIAMS AV. NE WEST SIDE OF SR 241 (WALES RD. NE)



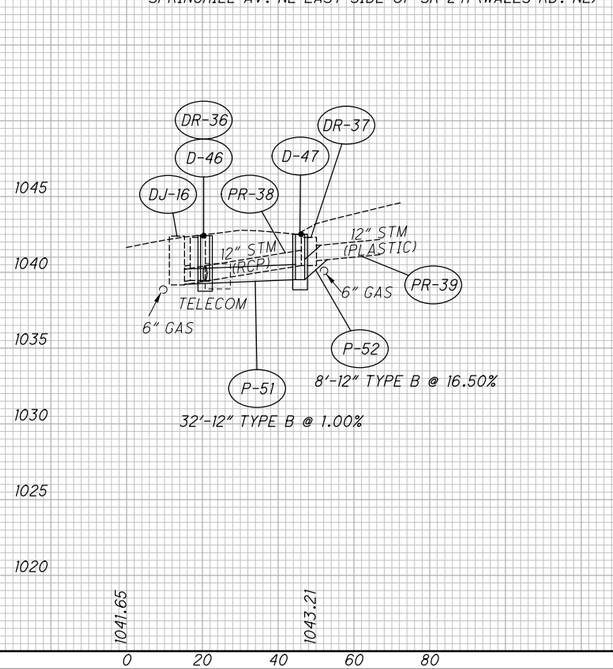
FOR PLAN VIEW, SEE SHEET 92

WILLIAMS AV. NE EAST SIDE OF SR 241 (WALES RD. NE)



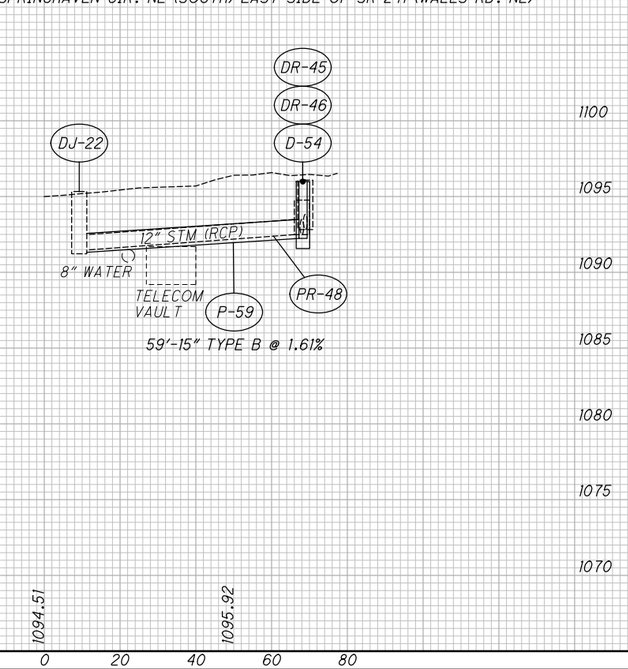
FOR PLAN VIEW, SEE SHEET 98

SPRINGHILL AV. NE EAST SIDE OF SR 241 (WALES RD. NE)



FOR PLAN VIEW, SEE SHEET 100

SPRINGHAVEN CIR. NE (SOUTH) EAST SIDE OF SR 241 (WALES RD. NE)



CALCULATED KAH
CHECKED RAK

STORM SEWER PROFILES

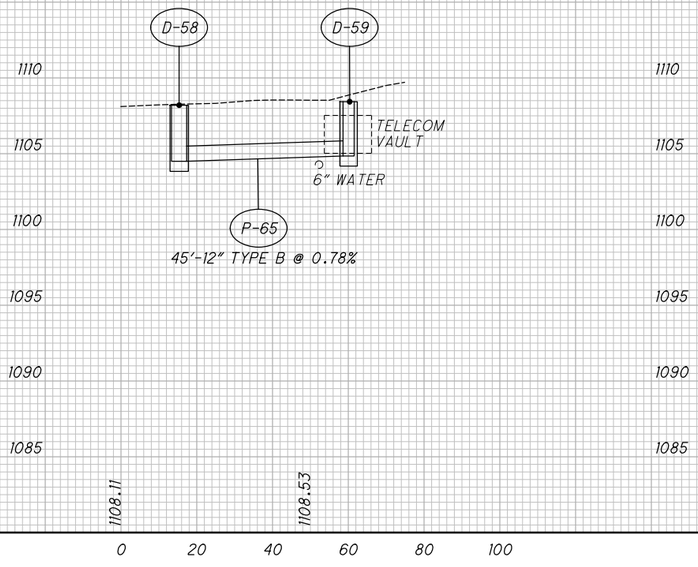
STA-241-9.71

230
395

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FOR PLAN VIEW, SEE SHEET 102

SPRINGHAVEN CIR. NE (NORTH) EAST SIDE OF SR 241 (WALES RD. NE)

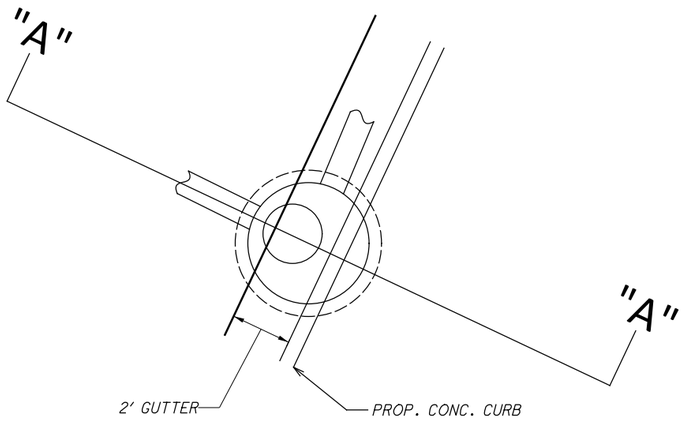


CALCULATED K.A.H
CHECKED R.A.K

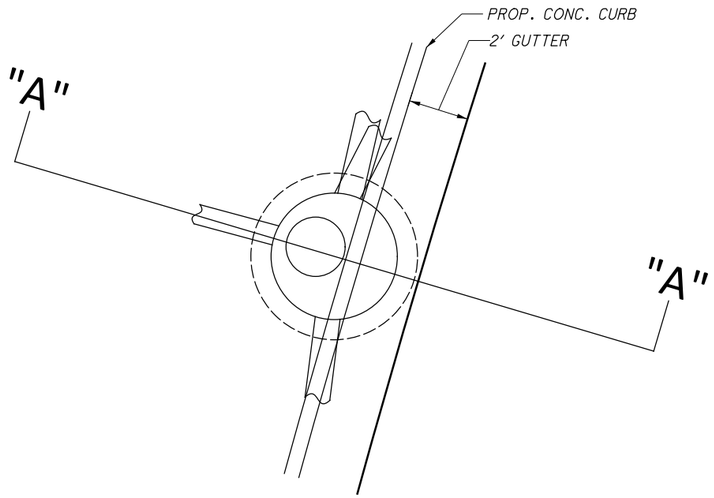
STORM SEWER PROFILES

STA-241-9.71

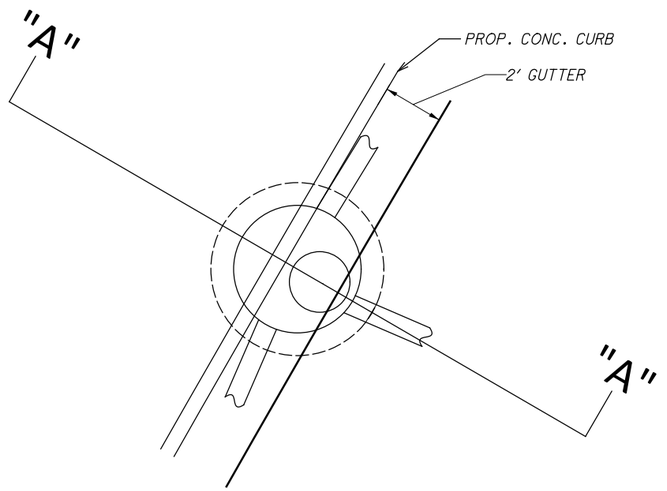
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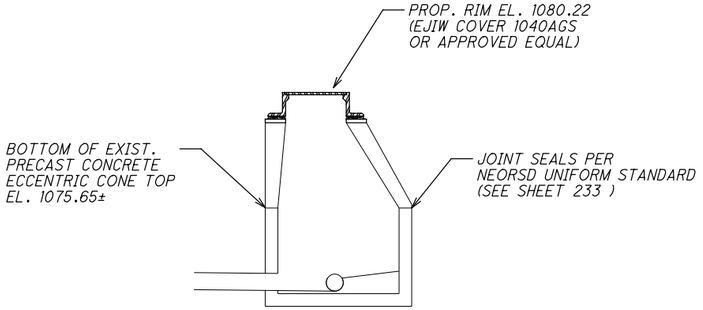
SJ-28 PLAN VIEW



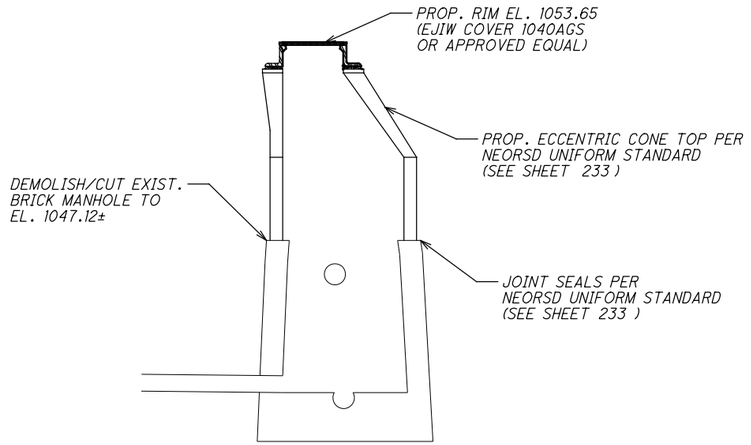
SJ-25 PLAN VIEW



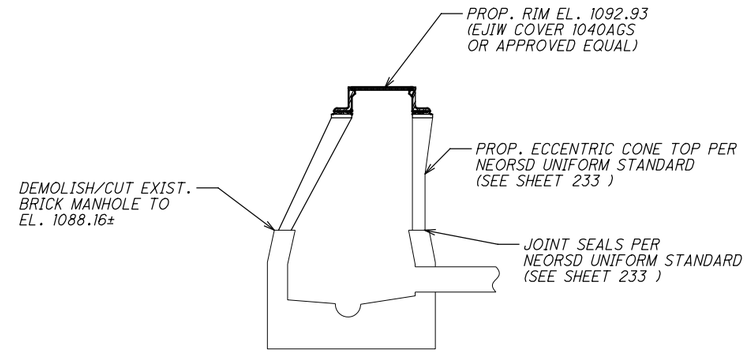
SJ-29 PLAN VIEW



SJ-28 SECTION "A"-"A"



SJ-25 SECTION "A"-"A"



SJ-29 SECTION "A"-"A"

ITEM 611 - MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN 2

THE EXISTING SANITARY PRECAST MANHOLE AT STA. 155+88.01, 23.74' RT. SHALL BE CAREFULLY DECONSTRUCTED TO THE BOTTOM OF EXISTING ECCENTRIC CONE TOP AT EL. 1075.65±.

THE EXISTING ECCENTRIC CONE TOP SHALL BE RECONSTRUCTED AND ROTATED TO ENSURE THE CASTING DOES NOT INTERFERE WITH THE PROPOSED CONCRETE CURB.

THE CONTRACTOR SHALL RECONSTRUCT THE CASTING TO THE PROPOSED GRADE AND APPLY A WATERTIGHT SEAL TO THE LID.

PAYMENT SHALL BE MADE AT THE UNIT PRICE PER EACH AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE WORK AS DESCRIBED.

ITEM 611 - MANHOLE RECONSTRUCTED TO GRADE, AS PER PLAN 3

THE EXISTING SANITARY BRICK MANHOLES AT STA. 150+70.77, 24.58' LT. AND STA. 158+85.42, 23.5' LT. SHALL BE DEMOLISHED/CUT DOWN AND RECONSTRUCTED TO ACCOMMODATE A NEW ECCENTRIC CONE TOP AND CASTING AT THE PROPOSED RIM ELEVATION. SEE DETAIL ON THIS SHEET.

THE NEW ECCENTRIC CONE TOP SHALL BE ROTATED TO ENSURE THE CASTING DOES NOT INTERFERE WITH THE CONCRETE CURB.

THE CONTRACTOR SHALL APPLY A WATERTIGHT SEAL TO THE LID.

PAYMENT SHALL BE MADE AT THE UNIT PRICE PER EACH AND SHALL INCLUDE ALL LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO COMPLETE THE WORK AS DESCRIBED, INCLUDING, BUT NOT LIMITED TO, AN ECCENTRIC CONE TOP.

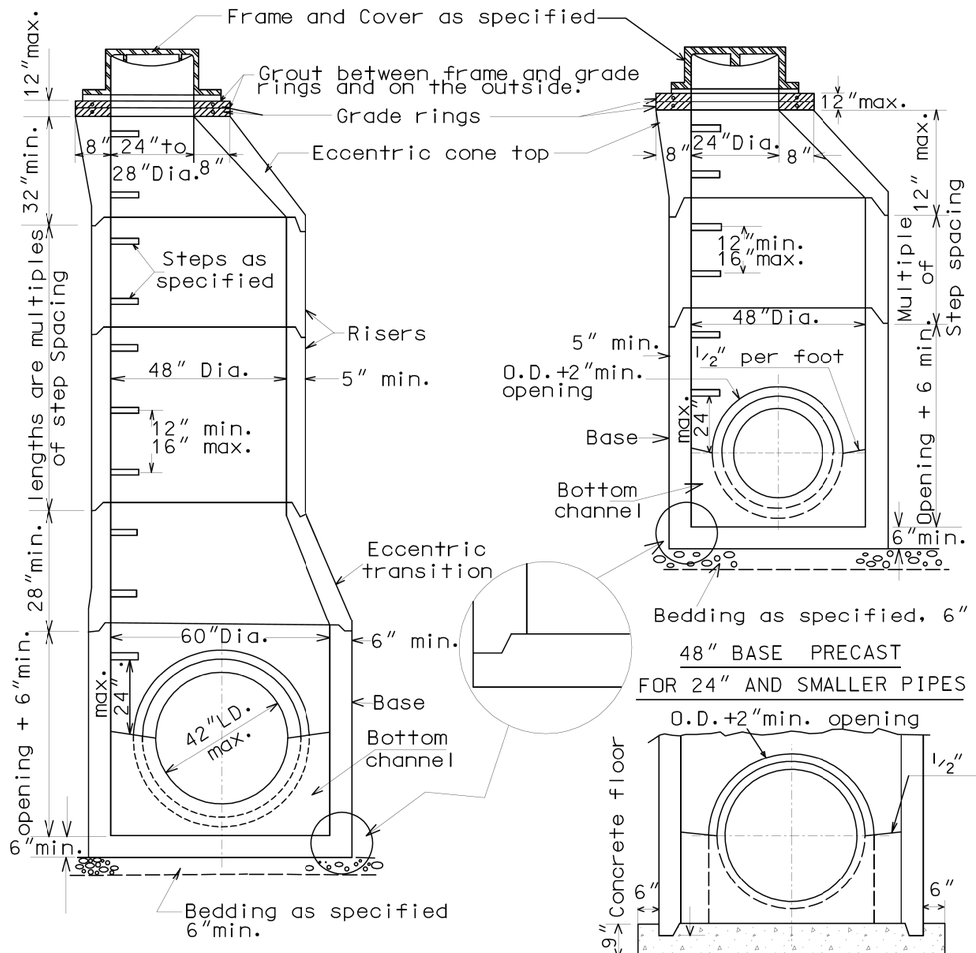
HORIZONTAL SCALE IN FEET
0 2.5 5

CALCULATED BVB
CHECKED RAK

SANITARY SEWER DETAILS

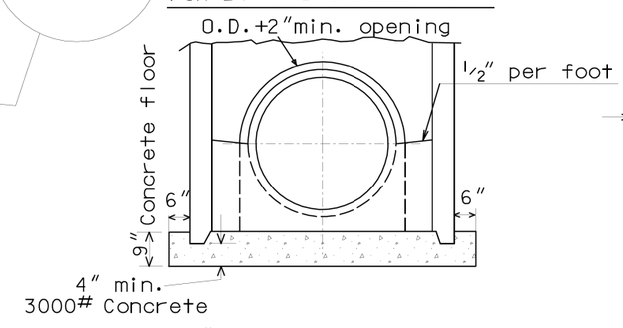
STA-241-9.71

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60" BASE FOR PRECAST

42" AND SMALLER PIPES



60" BASE FOR CAST IN PLACE

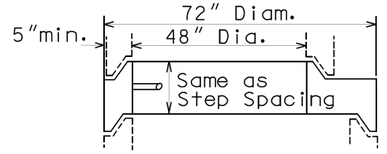
36" AND SMALLER PIPES

48" BASE FOR CAST IN PLACE

18" AND SMALLER PIPES

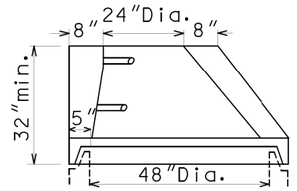
48" BASE PRECAST

FOR 24" AND SMALLER PIPES



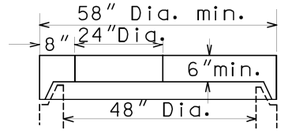
FLAT SLAB

TRANSITION

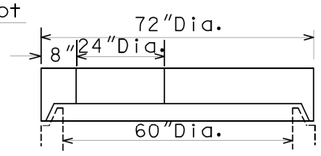


ALTERNATE

ECCENTRIC CONE TOP



FLAT SLAB TOP



FLAT SLAB TOP

NOTES

Sections of the precast manhole shall be cast and assembled with either all tongue or all groove ends up. Lift holes may be provided in each section for handling.

TOP AND TRANSITION /or reducer/
Sections may be either eccentric cone, concentric cone or flat slab.
BASES for Manholes are shown with monolithic floor and riser which may be cast in one or two operations.
A permissible alternate is to cast and ship the floor and barrel separately.Openings for inlet and outlet pipes shall be provided, either when the unit is cast or later, to meet project requirements.Bottom channels may be formed of concrete precast in the base or by field construction. Floors may also be poured in place.

OPENINGS IN RISER SECTIONS for 18" and smaller inlet pipes shall be prefabricated. Flexible connections shall be provided for sanitary and combined sewers. Premium seals shall meet A.S.T.M C-923.

JOINT SEALS between precast manhole sections and sewers shall be resilient and flexible gasket joints shall meet A.S.T.M C-443, FEDERAL SPECIFICATIONS SS-S-00210 (210 A) and AASHTO M-198

MANHOLE JOINTS and GRADE RINGS shall be sealed externally and between the grade rings with a layer of mastic compound such as Faberlite, Kent Seal or equal.

MATERIALS for bases and other precast sections including reinforcement not specified hereon, shall comply with the specifications.

PRECAST MANHOLES shall conform to the requirements of A.S.T.M C-478.

SEAL all lift holes with approved concrete plugs.

LANDING PLATFORMS as shown on the LANDING DETAILS shall be installed in manholes that are over 28 feet deep to the invert with a maximum vertical spacing of 20 feet.

MANHOLE FRAMES - chimney seals will be required on all new sanitary manholes.

A minimum 3" vertical wall is required below the casting for installation of chimney seals.

PRECAST CONCRETE MANHOLE

42" PIPE OR SMALLER

REVISIONS:

SCALE NO SCALE

DATE : DEC. 1998

UNIFORM STANDARDS: CLEVELAND --- CUYAHOGA COUNTY --- NORTHEAST OHIO REGIONAL SEWER DISTRICT

Sheet No. 4/27

SANITARY SEWER DETAILS

STA-241-9.71

233
395

P:\3000_3499\3062\T0090_STA-241-97L_Wales_Road\ODOT\N0047L_STA-241-97N\Design\Utilities\Sheets\N0047L_UD004A.dgn 4/7/2021 7:44:54 AM khillegass

D-1
STA 100+48.00, 18.00' LT
CB-3, GRATE ELEV 1018.96
12" (SW) 1017.83

D-2
STA 104+64.00, 18.00' LT
CB-3A, GRATE ELEV 1016.83
12" (N) 1012.59
4" UD (S) 1013.09

D-3
STA 104+63.00, 18.00' RT
CB-3A, GRATE ELEV 1016.89
12" (N) 1012.63
4" UD (S) 1013.13

D-4
STA 104+81.85, 34.60' LT
CB-3A, GRATE ELEV 1016.61
12" (N) 1012.34
12" (SE) 1012.34

D-5
STA 105+19.85, 34.75' LT
CB-3A, GRATE ELEV 1016.55
12" (S) 1012.86
12" (NE) 1012.86

D-6
STA 105+33.00, 18.00' RT
CB-3A, GRATE ELEV 1017.26
12" (S) 1013.04
4" UD (N) 1013.54

D-7
STA 105+38.00, 18.00' LT
CB-3A, GRATE ELEV 1017.34
12" (S) 1013.12
4" UD (N) 1013.62

D-8
STA 110+67.00, 18.00' LT
CB-3A, GRATE ELEV 1024.86
12" (E) 1020.35
12" (SW) 1020.35
4" UD (N) 1021.13

D-9
STA 110+67.00, 18.00' RT
CB-3A, GRATE ELEV 1024.86
12" (W) 1020.60
4" UD (N) 1021.10

D-10
STA 110+46.10, 31.00' LT
CB-3A, GRATE ELEV 1024.50
12" (NE) 1020.15
12" (SW) 1020.15

D-11
STA 115+14.00, 18.00' LT
CB-3A, GRATE ELEV 1026.90
12" (SW) 1023.90
12" (SE) 1023.52
4" UD (N) 1024.02

D-12
STA 115+14.00, 18.00' RT
CB-3A, GRATE ELEV 1026.88
12" (S) 1023.30
12" (W) 1023.30
4" UD (N) 1024.00

D-13
STA 114+91.50, 27.50' RT
MH-3, RIM ELEV 1027.05
12" (N) 1023.10
18" (E) 1022.98

D-14
STA 116+80.50, 18.00' LT
CB-3A, GRATE ELEV 1027.72
12" (N) 1024.72

D-15
STA 117+35.00, 18.00' LT
CB-3A, GRATE ELEV 1027.90
12" (S) 1023.25
12" (E) 1023.50
12" (N) 1023.25
4" UD (N) 1025.03

D-16
STA 117+35.00, 18.00' RT
CB-3A, GRATE ELEV 1027.90
12" (W) 1024.00
4" UD (N) 1025.03

D-17
STA 118+95.00, 8.00' LT
MH-3, GRATE ELEV 1028.82
12" (SW) 1023.75
12" (NE) 1022.25
12" (S) 1022.25

D-18
STA 119+14.50, 34.75' LT
CB-3A, GRATE ELEV 1028.40
12" (N) 1025.00
12" (SE) 1025.00

D-19
STA 119+46.15, 34.75' LT
CB-3A, GRATE ELEV 1028.66
12" (S) 1025.44

D-20
STA 119+65.00, 18.00' LT
CB-3A, GRATE ELEV 1028.58
12" (SE) 1023.33
4" UD (N) 1023.83

D-21
STA 119+35.95, 15.00' RT
MH-3, RIM ELEV 1028.83
12" (SW) 1021.75
18" (E) 1021.75
12" (NW) 1023.00
12" (N) 1023.10

D-22
STA 119+33.75, 34.00' RT
MH-3, RIM ELEV 1028.17
18" (W) 1021.50
18" (SE) 1021.50

D-23
STA 119+23.70, 56.39' RT
MH-3, RIM ELEV 1027.40
18" (NW) 1021.25
36" (W) 1008.75
36" (E) 1008.75

D-24
STA 119+65.00, 18.00' RT
CB-3A, GRATE ELEV 1028.58
12" (S) 1023.33
4" UD (N) 1023.83

D-25
STA 129+76.00, 18.00' LT
CB-3A, GRATE ELEV 1027.76
12" (N) 1023.72
4" UD (S) 1024.22

D-26
STA 130+27.00, 18.00' RT
CB-3A, GRATE ELEV 1027.46
12" (W) 1023.59
4" UD (S) 1024.09

D-27
STA 130+80.00, 18.00' RT
CB-3A, GRATE ELEV 1027.15
12" (NW) 1022.93
4" UD (S) 1023.43

D-28
STA 132+50.00, 18.00' LT
CB-3A, GRATE ELEV 1026.29
12" (E) 1022.07
12" (W) 1023.29
4" UD (S) 1022.57

D-29
STA 132+50.00, 29.00' LT
SIDE DITCH INLET,
GRATE ELEV 1026.36
12" (E) 1024.15

D-30
STA 132+50.00, 12.00' RT
MH-3, RIM ELEV 1026.61
12" (W) 1021.77
48" (N) 1010.98
48" (S) 1010.98

D-31
STA 133+87.50, 18.00' LT
CB-3A, GRATE ELEV 1025.84
12" (E) 1021.00
4" UD (S) 1022.12

D-32
STA 133+91.00, 18.00' RT
CB-3A, GRATE ELEV 1025.82
12" (SW) 1021.77
4" UD (S) 1022.11

D-33
STA 136+60.50, 18.00' LT
CB-3A, GRATE ELEV 1024.83
12" (E) 1019.90
4" UD (S) 1021.11

D-34
STA 136+65.50, 18.00' RT
CB-3A, GRATE ELEV 1024.81
12" (S) 1021.27
4" UD (S) 1021.88

D-35
STA 138+50.00, 18.00' LT
CB-3, GRATE ELEV 1024.17
12" (NE) 1020.59
4" UD (S) 1021.30
4" UD (N) 1021.30

D-36
STA 138+50.00, 18.00' RT
CB-3, GRATE ELEV 1024.17
12" (NW) 1020.72
4" UD (S) 1021.29
4" UD (N) 1021.29

D-37
STA 139+61.50, 18.00' LT
CB-3A, GRATE ELEV 1024.44
12" (S) 1021.06
4" UD (N) 1021.56

D-38
STA 139+91.83, 14.00' RT
MH-3, RIM ELEV 1025.05
12" (N) 1019.91
42" (N) 1015.62
42" (S) 1015.62

D-39
STA 140+02.00, 18.00' RT
CB-3A, GRATE ELEV 1024.87
12" (S) 1021.50
4" UD (N) 1022.00

D-40
STA 143+06.50, 24.00' RT
CB-3A, GRATE ELEV 1027.43
12" (SW) 1024.06
4" UD (N) 1024.72

D-41
STA 143+20.00, 13.00' LT
CB-3A, GRATE ELEV 1027.93
12" (SE) 1023.87
4" UD (N) 1025.05

D-42
STA 145+50.00, 24.00' RT
CB-6, GRATE ELEV 1034.79
12" (SW) 1031.41
4" UD (N) 1032.08

D-43
STA 146+18.50, 24.00' RT
CB-6, GRATE ELEV 1037.08
12" (SW) 1033.71
4" UD (N) 1034.37

D-44
STA 146+40.89, 28.90' LT
CB-3A, GRATE ELEV 1037.00
12" (SE) 1034.00
4" UD (N) 1034.83

D-45
STA 147+50.00, 24.00' RT
CB-3A, GRATE ELEV 1041.43
12" (W) 1038.05
4" UD (N) 1038.55

D-46
STA 147+69.30, 42.80' RT
CB-3A, GRATE ELEV 1042.42
12" (W) 1039.43

D-47
STA 148+00.00, 39.25' RT
CB-3A, GRATE ELEV 1042.51
12" (N) 1039.51
12" (SW) 1039.51
4" UD (N) 1040.01

D-48
STA 149+93.00, 24.00' LT
CB-3A, GRATE ELEV 1049.73
12" (SE) 1046.00
4" UD (N) 1046.54

D-49
STA 150+79.00, 24.00' RT
CB-3A, GRATE ELEV 1052.23
12" (SW) 1049.23
4" UD (N) 1049.80

D-50
STA 152+24.50, 24.00' LT
CB-3A, GRATE ELEV 1060.54
12" (SE) 1057.48
4" UD (N) 1057.98

D-51
STA 152+35.00, 24.00' RT
CB-3A, GRATE ELEV 1061.19
12" (SW) 1057.82
4" UD (N) 1058.32

D-52
STA 153+35.00, 24.00' LT
CB-3A, GRATE ELEV 1066.43
12" (SE) 1063.06
4" UD (N) 1063.56

D-53
STA 160+02.00, 24.00' LT
CB-3A, GRATE ELEV 1095.40
12" (SE) 1092.00
4" UD (N) 1092.53

D-54
STA 160+02.50, 24.00' RT
CB-3A, GRATE ELEV 1095.50
15" (SW) 1091.75
15" (NE) 1091.85
12" (NW) 1091.75
4" UD (N) 1092.63

D-55
STA 163+25.00, 24.00' RT
CB-3A, GRATE ELEV 1100.81
15" (SW) 1095.75
15" (NE) 1095.75
4" UD (N) 1097.94

D-56
STA 166+75.00, 24.00' RT
CB-3A, GRATE ELEV 1106.56
15" (SW) 1098.40
12" (NW) 1098.45
12" (NE) 1102.50
4" UD (N) 1103.69

D-57
STA 166+75.00, 24.00' LT
CB-3A, GRATE ELEV 1106.47
12" (SE) 1098.69
4" UD (N) 1103.60

D-58
STA 167+76.00, 23.50' LT
MH-3, GRATE ELEV 1108.20
12" (SW) 1104.50
12" (NE) 1104.50

D-59
STA 168+20.30, 31.50' RT
CB-3A, GRATE ELEV 1108.43
12" (SW) 1104.85
4" UD (N) 1105.35

D-60
STA 174+85.81, 24.62' LT
CB-3A, GRATE ELEV 1105.65
12" (E) 1102.61
4" UD (S) 1102.77

D-61
STA 175+00.00, 25.67' RT
CB-3A, GRATE ELEV 1105.35
12" (W) 1101.50
12" (NE) 1101.00
4" UD (S) 1102.49

DJ-1
STA 105+02.19, 33.90' LT
EX. MH, ADJUST TO GRADE
PROP. RIM ELEV 1016.79
EX. RIM ELEV 1016.80
EX. 12" VCP N 1013.35 (REMOVED)
EX. 12" VCP NE 1012.15 (REMOVED)
EX. 12" VCP SE 1011.70 (REMOVED)
EX. 12" VCP S 1012.85 (REMOVED)
EX. 24" VCP W 1006.25
EX. 24" VCP E 1006.20
12" (N) 1012.50
12" (S) 1011.75

DJ-2
STA 119+20.37, 7.24' LT
EX. MH, ADJUST TO GRADE
PROP. RIM ELEV 1028.82
EX. RIM ELEV 1028.97
EX. 36" RCP E 1009.07
EX. 30" RCP W 1009.17
EX. 12" VCP NE 1024.27 (REMOVED)
EX. 12" VCP N 1022.32 (REMOVED)
EX. 12" VCP NW 1023.24 (REMOVED)
EX. 15" PLASTIC S 1023.07 (REMOVED)
EX. 12" VCP W 1022.37 (REMOVED)

DJ-3
STA 130+22.76, 20.67' LT
EX. MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1027.58
EX. RIM ELEV 1027.31
EX. 12" PVC E 1023.11 (REMOVED)
EX. 52" RCP E 1006.16
EX. 12" VCP S 1023.11 (REMOVED)
EX. 48" RCP W 1006.56
12" (S) 1023.11
12" (E) 1023.11

DJ-4
STA 131+12.92, 0.63' RT
EX. MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1027.63
EX. RIM ELEV 1027.57
EX. 52" RCP E 1005.57
EX. 12" VCP SE 1022.77 (REMOVED)
EX. 52" RCP SW 1005.77
EX. 12" VCP NW 1022.76 (REMOVED)
12" (SE) 1022.00

DJ-5
STA 131+41.49, 10.78' RT
EX. MH, ADJUST TO GRADE
PROP. RIM ELEV 1027.15
EX. RIM ELEV 1027.40
EX. 48" RCP N 1010.30
EX. 48" RCP E 1010.20

DJ-6
STA 133+84.03, 13.57' RT
EX. MH, ADJUST TO GRADE
PROP. RIM ELEV 1026.12
EX. RIM ELEV 1026.13
EX. 48" RCP N 1011.83
EX. 48" RCP S 1011.83
EX. 12" RCP W 1013.48
12" (NE) 1021.65

DJ-7
STA 136+55.83, 14.18' RT
EX. MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1025.10
EX. RIM ELEV 1024.94
EX. 48" RCP N 1013.49
EX. 48" RCP S 1013.34
EX. 12" VCP W 1015.04
12" (NE) 1021.00

DJ-8
STA 138+64.47, 4.43' LT
EX. MH, ADJUST TO GRADE
PROP. RIM ELEV 1024.61
EX. RIM ELEV 1024.68
EX. 15" VCP N 1020.37
EX. 12" VCP E 1020.51 (REMOVED)
EX. 12" VCP W 1020.58 (REMOVED)
12" (SW) 1020.37
12" (SE) 1020.45

DJ-9
STA 139+02.47, 14.37' RT
EX. MH, ADJUST TO GRADE
PROP. RIM ELEV 1024.51
EX. RIM ELEV 1024.54
EX. 48" RCP N 1014.14
EX. 48" RCP S 1014.11
EX. 12" VCP W 1016.65

DJ-10
STA 139+17.78, 4.53' LT
EX. MH, ADJUST TO GRADE
PROP. RIM ELEV 1024.72
EX. RIM ELEV 1025.07
EX. 12" VCP N 1019.66
EX. 12" VCP SE 1020.07
EX. 12" VCP S 1019.78

DJ-11
STA 142+96.86, 9.42' RT
EX. MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1027.71
EX. RIM ELEV 1027.69
EX. 42" RCP N 1019.89
EX. 12" VCP E 1020.89 (REMOVED)
EX. 42" RCP S 1019.82
12" (NE) 1020.89

DJ-12
STA 143+12.29, 5.54' LT
EX. MH, ADJUST TO GRADE
PROP. RIM ELEV 1028.09
EX. RIM ELEV 1028.20
EX. 12" VCP N 1023.84
EX. 12" VCP S 1023.56
EX. 12" VCP NW 1023.70 (REMOVED)
12" (NW) 1023.70

DJ-13
STA 145+25.18, 5.18' LT
EX. MH, ADJUST TO GRADE
PROP. RIM ELEV 1034.50
EX. RIM ELEV 1034.52
EX. 15" VCP NE 1031.05
EX. 12" VCP S 1031.00

DJ-14
STA 145+36.78, 9.99' RT
EX. MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1034.80
EX. RIM ELEV 1034.79
EX. 36" RCP N 1026.40
EX. 42" RCP S 1026.21
12" (NE) 1031.00

DJ-15
STA 147+51.64, 10.50' RT
EX. MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1041.92
EX. RIM ELEV 1041.85
EX. 36" RCP N 1033.95
EX. 36" RCP S 1033.93
12" (SE) 1037.70

DJ-16
STA 147+70.71, 24.44' RT
EX. MH, ADJUST TO GRADE
PROP. RIM ELEV 1042.02
EX. RIM ELEV 1042.39
EX. 12" VCP N 1039.19 (REMOVED)
EX. 12" RCP E 1039.40 (REMOVED)
EX. 12" RCP SW 1039.17
12" (NE) 1039.19
12" (E) 1039.17

DJ-17
STA 150+70.89, 15.67' RT
EX. MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1052.57
EX. RIM ELEV 1052.48
EX. 12" RCP N 1048.18
EX. 12" RCP NE 1049.08 (REMOVED)
EX. 12" RCP S 1048.18 (REMOVED)
12" (NE) 1049.00
15" (W) 1048.18

DJ-18
STA 150+73.99, 0.44' RT
EX. MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1053.04
EX. RIM ELEV 1053.01
EX. 36" RCP N 1046.11
EX. 36" RCP S 1045.87
15" (E) 1048.00

DJ-19
STA 152+22.27, 16.49' RT
EX. MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1060.81
EX. RIM ELEV 1060.76
EX. 12" RCP N 1057.95 (REMOVED)
EX. 12" RCP S 1055.96
EX. 12" RCP W 1057.59 (REMOVED)
12" (NE) 1057.65
12" (W) 1057.10

DJ-20
STA 153+08.87, 5.70' RT
EX. MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1065.60
EX. RIM ELEV 1065.53
EX. 12" RCP N 1053.09
EX. 21" RCP E 1052.94
EX. 36" RCP S 1052.22
EX. 36" RCP W 1052.28
12" (NW) 1062.50

DJ-21
STA 157+27.93, 31.60' RT
EX. CB-3A, ADJUST TO GRADE
PROP. GRATE ELEV 1088.11
EX. GRATE ELEV 1088.08
EX. 15" RCP N 1084.81
EX. 15" RCP S 1084.71
EX. 12" RCP W 1084.95 (REMOVED)

DJ-22
STA 159+43.52, 29.89' RT
EX. MH, ADJUST TO GRADE
PROP. RIM ELEV 1094.34
EX. RIM ELEV 1094.84
EX. 12" RCP N 1090.99 (REMOVED)
EX. 12" RCP SE 1090.94
EX. 15" RCP S 1090.74
15" (N) 1090.80

DJ-23
STA 177+51.91, 7.62' LT
EX. MH, ADJUST TO GRADE
PROP. RIM ELEV 1097.60
EX. RIM ELEV 1097.53
EX. 36" HDPE N 1078.32
EX. 12" HDPE NE 1089.25
EX. 42" HDPE SE 1078.13
EX. 12" HDPE NW 1093.03

DJ-24
STA 179+83.05, 12.44' LT
EX. MH, ADJUST TO GRADE
PROP. RIM ELEV 1089.61
EX. RIM ELEV 1089.55
EX. 36" HDPE N 1080.60
EX. 36" HDPE S 1080.35
EX. 12" HDPE SW 1085.32

CALCULATED KAH
CHECKED RAK

STRUCTURE DATA

STA-241-9.71

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SJ-1
STA 101+31.69, 2.34' LT
EX. SAN MH, ADJUST TO GRADE
PROP. RIM ELEV 1019.55
EX. RIM ELEV 1019.90
EX. 6" VCP S 1014.90
EX. 6" VCP NW 1015.05
EX. 6" VCP NW 1015.00

SJ-2
STA 102+13.54, 9.12' RT
SAN CLEAN OUT, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1019.00
EX. RIM ELEV 1018.86
EX. 6" VCP N 1018.86

SJ-3
STA 104+94.90, 6.81' LT
EX. SAN MH, ADJUST TO GRADE
PROP. RIM ELEV 1017.25
EX. RIM ELEV 1017.30
EX. 8" VCP N 1010.57
EX. 8" VCP E 1010.60
EX. 6" VCP S 1010.55
EX. 10" VCP W 1010.60

SJ-4
STA 107+89.24, 0.21' RT
EX. SAN MH, ADJUST TO GRADE
PROP. RIM ELEV 1023.82
EX. RIM ELEV 1023.94
EX. 8" VCP S 1011.90
EX. 8" VCP N 1011.86
EX. 8" VCP E 1012.29

SJ-5
STA 110+28.75, 0.49' RT
EX. SAN MH, ADJUST TO GRADE
PROP. RIM ELEV 1025.27
EX. RIM ELEV 1025.34
EX. 10" VCP N 1012.99
EX. 8" VCP E 1013.58
EX. 8" VCP S 1012.94

SJ-6
STA 112+54.67, 0.15' RT
EX. SAN MH, ADJUST TO GRADE
PROP. RIM ELEV 1026.12
EX. RIM ELEV 1026.19
EX. 10" VCP N 1013.93
EX. 10" VCP S 1013.86

SJ-7
STA 114+79.13, 0.85' RT
EX. SAN MH, ADJUST TO GRADE
PROP. RIM ELEV 1027.23
EX. RIM ELEV 1027.53
EX. 10" VCP N 1014.78
EX. 10" VCP S 1014.78

SJ-8
STA 117+04.24, 1.36' RT
EX. SAN MH, ADJUST TO GRADE
PROP. RIM ELEV 1028.29
EX. RIM ELEV 1028.38
EX. 10" VCP N 1015.78
EX. 10" VCP S 1015.80

SJ-9
STA 119+26.13, 0.87' RT
EX. SAN MH, ADJUST TO GRADE
PROP. RIM ELEV 1029.08
EX. RIM ELEV 1029.18
EX. 10" VCP N 1016.53
EX. 8" VCP E 1017.13
EX. 10" VCP S 1015.93
EX. 8" VCP W 1017.18

SJ-10
STA 122+00.47, 0.28' RT
EX. SAN MH, ADJUST TO GRADE
PROP. RIM ELEV 1030.05
EX. RIM ELEV 1030.16
EX. 10" VCP N 1017.77
EX. 10" VCP S 1017.76

SJ-11
STA 124+91.03, 0.07' RT
EX. SAN MH, ADJUST TO GRADE
PROP. RIM ELEV 1031.10
EX. RIM ELEV 1031.23
EX. 10" VCP N 1018.93
EX. 10" VCP S 1018.92

SJ-12
STA 127+86.39, 0.31' LT
EX. SAN MH, ADJUST TO GRADE
PROP. RIM ELEV 1029.59
EX. RIM ELEV 1029.59
EX. 10" VCP N 1020.17
EX. 10" VCP S 1020.09
EX. 8" VCP W 1020.89

SJ-13
STA 130+30.76, 41.62' LT
EX. SAN MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1027.09
EX. RIM ELEV 1026.98
EX. 12" VCP E 1012.08
EX. 10" PVC W 1012.38

SJ-14
STA 130+32.36, 12.00' RT
EX. SAN MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1027.75
EX. RIM ELEV 1027.60
EX. 12" VCP N 1011.80
EX. 10" VCP S 1011.87
EX. 12" VCP W 1011.87

SJ-15
STA 130+38.25, 0.64' RT
EX. SAN MH, RECONSTRUCTED TO GRADE
PROP. RIM 1028.06
EX. RIM ELEV 1028.02
EX. 10" VCP N 1021.12
EX. 10" VCP S 1021.12

SJ-16
STA 131+03.08, 12.53' RT
EX. SAN MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1027.30
EX. RIM ELEV 1027.14
EX. 12" VCP E 1011.44
EX. 12" VCP S 1011.47
EX. 8" VCP W 1011.18

SJ-17
STA 131+15.57, 22.95' LT
EX. SAN MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1027.40
EX. RIM ELEV 1027.30
EX. 10" VCP N 1012.24
EX. 12" VCP SE 1012.10
EX. 8" VCP W 1013.30
EX. 8" PVC NW 1018.80

SJ-18
STA 133+80.97, 24.53' LT
EX. SAN MH, ADJUST TO GRADE
PROP. RIM ELEV 1026.28
EX. RIM ELEV 1026.60
EX. 10" VCP N 1014.25
EX. 10" VCP S 1013.64

SJ-19
STA 134+56.93, 10.70' LT
EX. SAN MH, ADJUST TO GRADE
PROP. RIM ELEV 1025.95
EX. RIM ELEV 1026.12
EX. 10" VCP N 1014.73
EX. 10" VCP S 1014.68

SJ-20
STA 136+62.05, 10.25' LT
EX. SAN MH, ADJUST TO GRADE
PROP. RIM ELEV 1025.20
EX. RIM ELEV 1025.27
EX. 10" VCP N 1015.64
EX. 10" VCP S 1015.57

SJ-21
STA 139+22.23, 10.39' LT
EX. SAN MH, ADJUST TO GRADE
PROP. RIM ELEV 1024.57
EX. RIM ELEV 1024.97
EX. 10" VCP N 1016.88
EX. 10" VCP S 1016.82

SJ-22
STA 142+25.14, 9.94' LT
EX. SAN MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1026.63
EX. RIM ELEV 1026.72
EX. 10" VCP N 1018.48
EX. 10" VCP S 1018.46

SJ-23
STA 145+94.00, 11.80' LT
EX. SAN MH, ADJUST TO GRADE
PROP. RIM ELEV 1036.69
EX. RIM ELEV 1036.74
EX. 10" VCP N 1026.19
EX. 10" VCP S 1026.14

SJ-24
STA 147+90.76, 12.04' LT
EX. SAN MH, ADJUST TO GRADE
PROP. RIM ELEV 1042.95
EX. RIM ELEV 1042.97
EX. 10" VCP N 1032.58
EX. 10" VCP E 1033.34
EX. 10" VCP S 1032.47

SJ-25
STA 150+70.77, 24.58' LT
EX. SAN MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1053.65
EX. RIM ELEV 1053.89
EX. 10" VCP N 1041.69
EX. 10" VCP S 1041.49
EX. 8" VCP W 1042.78

SJ-26
STA 152+98.90, 21.11' LT
EX. SAN MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1064.74
EX. RIM ELEV 1064.52
EX. 10" VCP N 1056.67
EX. 10" VCP S 1056.67
EX. 10" VCP W 1057.12

SJ-27
STA 155+87.83, 20.98' LT
EX. SAN MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1080.14
EX. RIM ELEV 1080.27
EX. 10" VCP N 1072.37
EX. 10" VCP S 1072.12
EX. 10" VCP E 1072.77

SJ-28
STA 155+88.01, 23.74' RT
EX. SAN MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1080.22
EX. RIM ELEV 1080.75
EX. 10" VCP N 1072.80
EX. 10" VCP W 1072.77

SJ-29
STA 158+85.42, 23.50' LT
EX. SAN MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1092.93
EX. RIM ELEV 1093.66
EX. 10" VCP N 1085.42
EX. 10" VCP S 1085.42

SJ-30
STA 159+52.35, 33.20' RT
EX. SAN MH, ADJUST TO GRADE
PROP. RIM ELEV 1094.47
EX. RIM ELEV 1095.03
EX. 10" VCP N 1087.28
EX. 10" VCP N 1081.83
EX. 10" VCP E 1081.81
EX. 10" VCP S 1081.81

SJ-31
STA 166+27.82, 22.10' LT
EX. SAN MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1105.97
EX. RIM ELEV 1105.65
EX. 10" VCP N 1095.51
EX. 10" VCP W 1095.10

SJ-32
STA 167+98.59, 32.53' RT
EX. SAN MH, ADJUST TO GRADE
PROP. RIM ELEV 1108.32
EX. RIM ELEV 1108.49
EX. 10" VCP S 1099.88

SJ-33
STA 168+36.88, 21.89' LT
EX. SAN MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1108.79
EX. RIM ELEV 1108.98
EX. 10" VCP N 1098.73
EX. 10" VCP S 1098.73

SJ-34
STA 170+76.52, 22.01' LT
EX. SAN MH, RECONSTRUCTED TO GRADE
PROP. RIM ELEV 1109.95
EX. RIM ELEV 1110.30
EX. 10" VCP N 1100.08
EX. 8" VCP E 1100.68
EX. 10" VCP S 1099.95

DR-1
STA 100+20.44, 32.05' LT
EX. CB-3A, GRATE ELEV 1019.08
12" HDPE W 1018.10

DR-2
STA 104+64.51, 16.19' LT
EX. CB-3A, GRATE ELEV 1016.46
10" VCP NW 1013.43

DR-3
STA 104+66.48, 15.97' RT
EX. CB-3A, GRATE ELEV 1016.43
12" VCP N 1013.10

DR-4
STA 104+82.76, 29.00' LT
EX. CB-3A, GRATE ELEV 1016.56
12" VCP N 1014.20

DR-5
STA 105+18.53, 29.79' LT
EX. CB-3A, GRATE ELEV 1016.58
12" VCP S 1014.16

DR-6
STA 105+35.12, 16.33' RT
EX. CB-3A, GRATE ELEV 1016.85
12" VCP S 1013.29

DR-7
STA 105+37.72, 16.01' LT
EX. CB-3A, GRATE ELEV 1016.87
12" RCP SW 1015.04

DR-8
STA 110+67.37, 15.06' LT
EX. CB-3A, GRATE ELEV 1024.83
12" RCP E 1022.04
12" RCP SW 1021.58

DR-9
STA 110+68.04, 14.78' RT
EX. CB-3A, GRATE ELEV 1024.71
12" RCP W 1022.63

DR-10
STA 115+13.92, 15.86' LT
EX. CB-3A, GRATE ELEV 1026.66
12" VCP SE 1024.16
12" RCP SW 1024.16

AB-1
STA 114+91.15, 0' LT
EX. BURIED MH, TO BE ABANDONED

DR-11
STA 115+14.11, 15.16' RT
EX. CB-3A, GRATE ELEV 1026.84
12" VCP S 1023.91

DR-12
STA 116+87.61, 18.48' LT
EX. CB-3A, GRATE ELEV 1027.55
15" HDPE N 1025.14

DR-13
STA 117+24.29, 17.95' LT
EX. CB-3A, GRATE ELEV 1027.38
15" HDPE N 1024.78
15" HDPE S 1024.78

DR-14
STA 119+15.65, 30.30' LT
EX. CB-3A, GRATE ELEV 1028.26
12" VCP N 1025.54
12" VCP E 1025.53

DR-15
STA 119+44.86, 33.13' LT
EX. CB-3A, GRATE ELEV 1028.49
12" VCP S 1026.33

DR-16
STA 119+59.45, 14.69' RT
EX. CB-3A, GRATE ELEV 1028.64
12" VCP SW 1025.89

DR-17
STA 119+64.41, 14.36' LT
EX. CB-3A, GRATE ELEV 1028.58
12" VCP S 1026.11

DR-18
STA 129+89.63, 19.82' LT
EX. CB-3A, GRATE ELEV 1027.24
8" VCP SW 1025.76
12" RCP N 1025.25

DR-19
STA 130+27.27, 15.53' RT
EX. CB-3A, GRATE ELEV 1027.36
12" VCP W 1024.41

DR-20
STA 130+91.20, 19.37' RT
EX. CB-3A, GRATE ELEV 1026.80
12" HDPE NW 1024.46

DR-21
STA 131+37.63, 18.35' LT
EX. CB-3A, GRATE ELEV 1026.38
12" RCP E 1024.38

DR-22
STA 133+87.60, 18.25' LT
EX. CB-3A, GRATE ELEV 1025.67
12" VCP E 1022.34

DR-23
STA 133+93.93, 15.60' RT
EX. CB-3A, GRATE ELEV 1025.73
12" VCP W 1023.00

DR-24
STA 136+60.46, 16.45' LT
EX. CB-3A, GRATE ELEV 1024.74
12" VCP E 1020.78

DR-25
STA 136+65.41, 15.54' RT
EX. CB-3A, GRATE ELEV 1024.66
12" VCP S 1022.11

DR-26
STA 138+56.57, 14.51' LT
EX. CB-3A, GRATE ELEV 1024.18
12" VCP NE 1021.35

DR-27
STA 138+64.02, 15.67' RT
EX. CB-3A, GRATE ELEV 1023.97
12" RCP W 1020.96

DR-28
STA 139+60.01, 14.72' LT
EX. CB-3A, GRATE ELEV 1024.64
12" VCP S 1022.41

DR-29
STA 140+01.18, 13.93' RT
EX. CB-3A, GRATE ELEV 1025.07
42" RCP N 1015.82
42" RCP S 1015.78

DR-30
STA 143+01.64, 17.12' RT
EX. CB-3A, GRATE ELEV 1027.29
12" VCP S 1025.09

DR-31
STA 143+24.35, 15.59' LT
EX. CB-3A, GRATE ELEV 1027.93
12" VCP SE 1023.96

DR-32
STA 145+48.42, 21.04' RT
EX. CB-3A, GRATE ELEV 1034.46
12" RCP NW 1032.13

DR-33
STA 146+16.48, 21.30' RT
EX. CB-3A, GRATE ELEV 1037.41
12" RCP SW 1034.78

DR-34
STA 146+30.99, 26.68' LT
EX. CB-3A, GRATE ELEV 1036.88
12" RCP SE 1035.56

DR-35
STA 147+43.38, 18.04' RT
EX. CB-3A, GRATE ELEV 1041.12
12" RCP W 1038.64

DR-36
STA 147+69.51, 38.97' RT
EX. CB-3A, GRATE ELEV 1042.31
12" RCP W 1039.46

DR-37
STA 148+00.29, 33.32' RT
EX. CB-3A, GRATE ELEV 1042.31
12" PLASTIC NNE 1040.76
12" RCP SW 1040.44

DR-38
STA 149+83.77, 24.44' RT
EX. MH-1, GRATE ELEV 1049.34
12" RCP N 1045.34
12" VCP W 1045.29

DR-39
STA 149+87.49, 15.15' LT
EX. CB-3A, GRATE ELEV 1049.37
12" VCP SE 1046.26

DR-40
STA 150+79.14, 19.19' RT
EX. CB-3A, GRATE ELEV 1052.85
12" RCP SW 1049.63

DR-41
STA 152+23.99, 15.45' LT
EX. CB-3A, GRATE ELEV 1060.78
12" RCP E 1058.10

DR-42
STA 152+33.03, 18.16' RT
EX. CB-3A, GRATE ELEV 1061.10
12" RCP N 1058.23
12" RCP S 1058.05

DR-43
STA 153+27.02, 17.11' LT
EX. CB-3A, GRATE ELEV 1065.93
12" VCP SE 1062.60

DR-44
STA 157+27.93, 19.17' RT
EX. CB-3A, GRATE ELEV 1087.10
12" RCP E 1084.97

DR-45
STA 160+02.75, 28.56' RT
EX. CB-3A, GRATE ELEV 1094.28
12" RCP W 1092.00
12" RCP S 1092.00

DR-46
STA 160+02.59, 18.71' RT
EX. CB-3A, GRATE ELEV 1095.60
12" RCP N 1092.59
12" RCP E 1092.33

DR-47
STA 162+95.02, 19.18' RT
EX. CB-3A, GRATE ELEV 1100.40
12" RCP S 1097.34

DR-48
STA 174+86.81, 22.51' LT
EX. CB-3A, GRATE ELEV 1105.66
12" HDPE NE 1103.58

DR-49
STA 174+99.84, 25.99' RT
EX. CB-3A, GRATE ELEV 1105.35
12" HDPE N 1101.01
12" HDPE W 1101.05

STRUCTURE DATA

CALCULATED K.A.H
CHECKED R.A.K

STA-241-9.71

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EX-1
STA 100+06.08, 27.25' RT
EX. SAN MH, GRATE ELEV 1019.61
EX. 8" PVC E 1012.21
EX. 8" PVC S 1012.45
EX. 8" PVC W 1012.26

EX-2
STA 303+90.07, 26.07' LT
EX. CB, GRATE ELEV 1019.90
EX. 18" PLASTIC N 1016.69
EX. 12" PLASTIC E 1017.88 (REMOVED)
EX. 21" PLASTIC S 1017.76
12" (NE) 1017.76

EX-3
STA 304+43.40, 57.00' LT
EX. CB-3A, GRATE ELEV 1021.59
EX. 12" PLASTIC W 1019.78

EX-4
STA 101+02.70, 38.27' LT
EX. CB-3A, GRATE ELEV 1021.37
EX. 12" PLASTIC W 1019.00

EX-5
STA 101+71.70, 38.87' LT
EX. CB-3A, GRATE ELEV 1021.82
EX. 15" PLASTIC W 1018.95
EX. 15" PLASTIC SW 1019.18

EX-6
STA 101+83.64, 42.95' RT
EX. CB-3A, GRATE ELEV 1019.45
EX. 6" VCP S 1016.35

EX-7
STA 110+36.19, 36.52' LT
EX. MH, GRATE ELEV 1024.72
EX. 12" RCP NE 1020.22 (REMOVED)
EX. 36" RCP E 1006.97
EX. 36" RCP W 1007.02
15" (NE) 1020.22

EX-8
STA 114+95.29, 34.35' LT
EX. CB-3A, GRATE ELEV 1026.58
EX. 12" RCP NE 1024.08

EX-9
STA 159+35.56, 65.29' RT
EX. CB-3A, GRATE ELEV 1094.82
EX. 12" PLASTIC N 1091.78
EX. 12" PLASTIC NW 1091.47

EX-10
STA 159+63.91, 65.39' RT
EX. CB-3A, GRATE ELEV 1094.68
EX. 12" PLASTIC N 1091.83
EX. 12" PLASTIC S 1092.00

EX-11
STA 159+69.50, 65.54' RT
EX. MH, GRATE ELEV 1095.39
EX. 12" PLASTIC E 1091.64
EX. 12" PLASTIC S 1091.51

EX-12
STA 161+98.63, 33.05' RT
EX. SAN MH, GRATE ELEV 1100.15
EX. 10" VCP N 1091.00
EX. 10" VCP S 1091.00

EX-13
STA 165+00.22, 31.92' RT
EX. SAN MH, GRATE ELEV 1105.48
EX. 10" VCP N 1095.47
EX. 10" VCP S 1095.45

EX-14
STA 176+76.47, 54.96' RT
EX. CB-3A, GRATE ELEV 1099.59
EX. 36" HDPE E 1077.33
EX. 12" HDPE S 1093.87
EX. 42" HDPE NW 1077.45

EX-15
NOT USED

EX-16
STA 177+62.39, 20.42' LT
EX. CB-3A, GRATE ELEV 1097.08
EX. 12" HDPE SE 1094.08

EX-17
STA 177+92.98, 21.57' RT
EX. CB-3A, GRATE ELEV 1095.64
EX. 12" HDPE SW 1091.02

EX-18
STA 179+59.38, 20.66' LT
EX. CB-3A, GRATE ELEV 1090.04
EX. 12" HDPE NE 1087.02

EX-19
NOT USED

EX-20
STA 180+73.46, 52.06' LT
EX. CB-3A, GRATE ELEV 1086.26
EX. 12" HDPE N 1083.10

EX-21
STA 180+86.79, 19.49' RT
EX. SAN MH, GRATE ELEV 1088.78
EX. 10" VPC N 1080.08
EX. 10" VCP E 1080.11
EX. 10" VCP S 1080.19
EX. 10" VCP W 1080.08

EX-22
STA 181+01.91, 40.38' LT
EX. SAN MH, GRATE ELEV 1086.72
EX. 10" VCP N 1079.44
EX. 10" VCP SE 1079.44
EX. 10" VCP W 1079.44

EX-23
STA 181+16.41, 50.45' LT
EX. CB-3A, GRATE ELEV 1086.27
EX. 24" HDPE N 1082.62
EX. 12" HDPE E 1083.67
EX. 36" HDPE S 1081.62
EX. 12" HDPE SW 1082.27
EX. 18" HDPE W 1082.23

EX-24
STA 181+33.34, 50.36' LT
EX. CB-3A, GRATE ELEV 1086.54
EX. 18" PLASTIC N 1083.97
EX. 24" PLASTIC S 1083.61
EX. 8" PLASTIC W 1083.77

EX-25
STA 182+65.88, 26.57' LT
EX. SAN MH, GRATE ELEV 1089.42
EX. 10" VCP N 1080.81
EX. 6" VCP S 1080.62

EX-26
STA 182+96.42, 28.97' LT
EX. CB-3A, GRATE ELEV 1087.44
EX. 12" PLASTIC N 1085.49
EX. 18" PLASTIC S 1085.49

EX-27
STA 183+29.97, 27.27' LT
EX. CB-3A, GRATE ELEV 1089.15
EX. 12" PLASTIC N 1085.67
EX. 12" PLASTIC S 1085.72

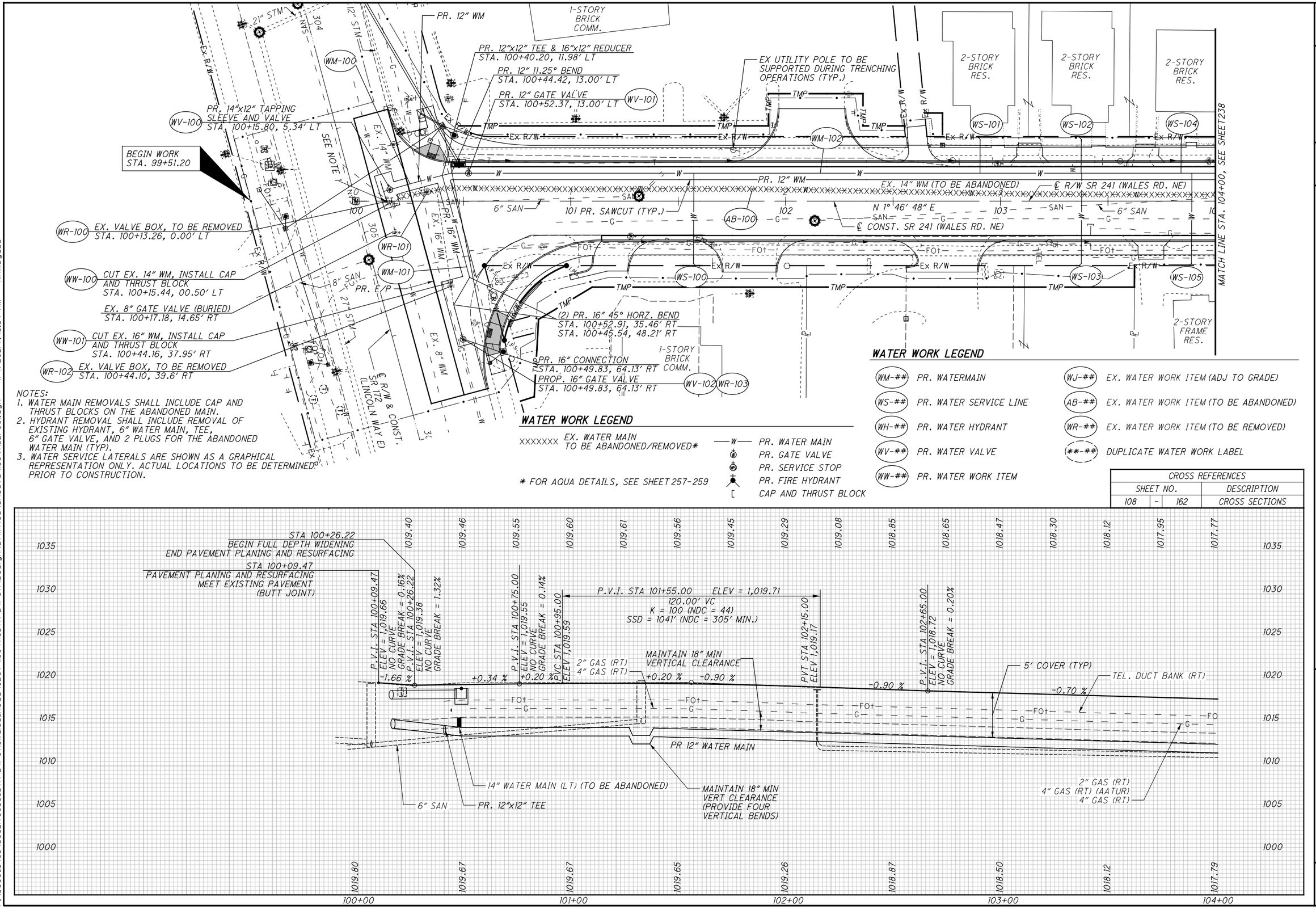
STRUCTURE DATA

CALCULATED KAH
CHECKED RAK

STA-241-9.71

236
395

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NOTES:
1. WATER MAIN REMOVALS SHALL INCLUDE CAP AND THRUST BLOCKS ON THE ABANDONED MAIN.
2. HYDRANT REMOVAL SHALL INCLUDE REMOVAL OF EXISTING HYDRANT, 6" WATER MAIN, TEE, 6" GATE VALVE, AND 2 PLUGS FOR THE ABANDONED WATER MAIN (TYP).
3. WATER SERVICE LATERALS ARE SHOWN AS A GRAPHICAL REPRESENTATION ONLY. ACTUAL LOCATIONS TO BE DETERMINED PRIOR TO CONSTRUCTION.

WATER WORK LEGEND

XXXXXXX	EX. WATER MAIN TO BE ABANDONED/REMOVED*
—W—	PR. WATER MAIN
	PR. GATE VALVE
	PR. SERVICE STOP
	PR. FIRE HYDRANT
[	CAP AND THRUST BLOCK

* FOR AQUA DETAILS, SEE SHEET 257-259

WATER WORK LEGEND

WM-##	PR. WATERMAIN
WS-##	PR. WATER SERVICE LINE
WH-##	PR. WATER HYDRANT
WV-##	PR. WATER VALVE
WW-##	PR. WATER WORK ITEM
WJ-##	EX. WATER WORK ITEM (ADJ TO GRADE)
AB-##	EX. WATER WORK ITEM (TO BE ABANDONED)
WR-##	EX. WATER WORK ITEM (TO BE REMOVED)
(**-##)	DUPLICATE WATER WORK LABEL

CROSS REFERENCES			
SHEET NO.			DESCRIPTION
108	-	162	CROSS SECTIONS

HORIZONTAL SCALE IN FEET
0 10 20 40

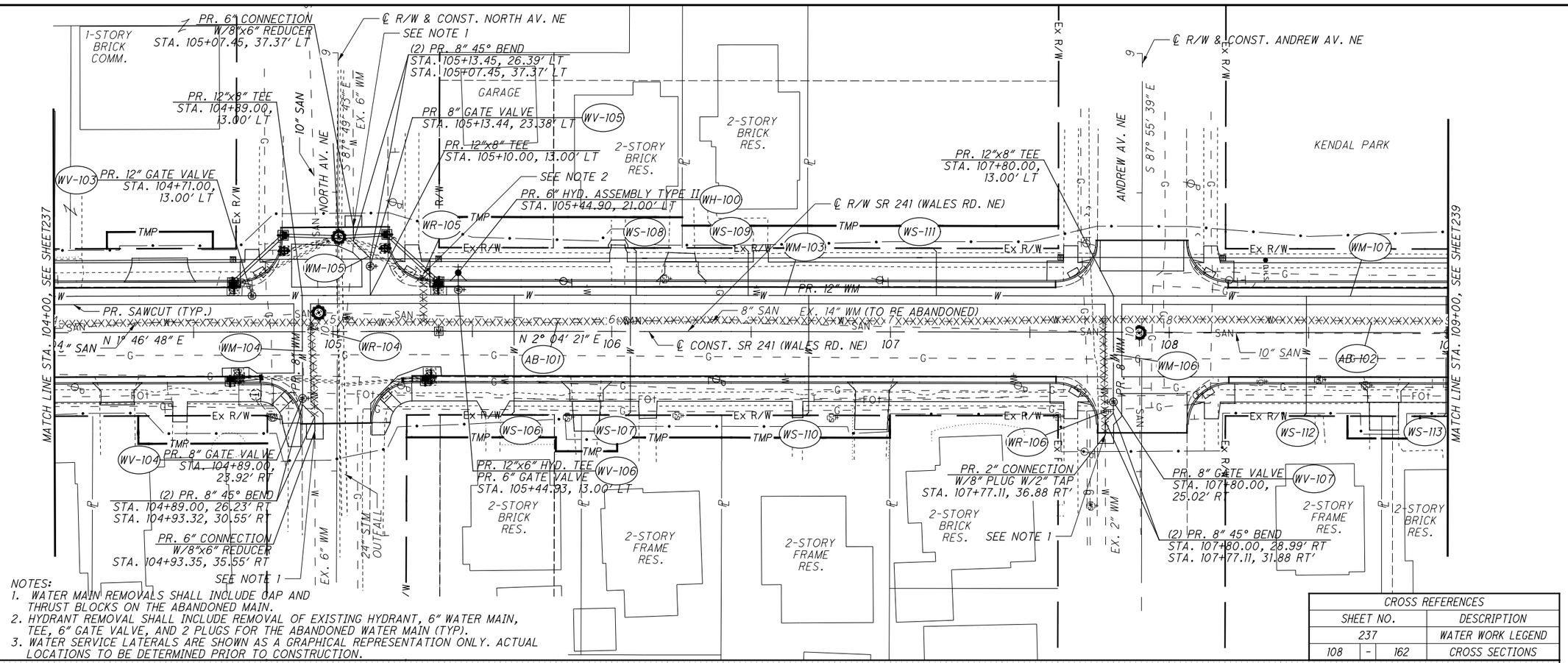
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CHECKED CML

WATER WORK - SR 241 (WALES RD. NE)
BEGIN TO STA. 104+00

STA-241-9.71

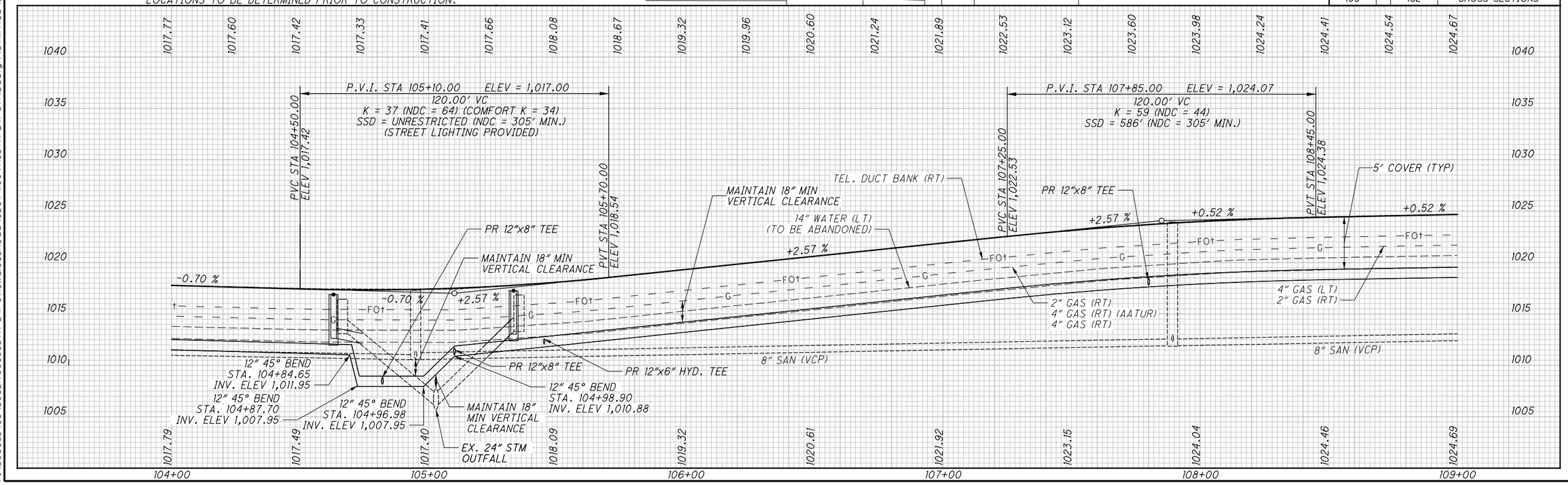
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395

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NOTES:
1. WATER MAIN REMOVALS SHALL INCLUDE CAP AND THRUST BLOCKS ON THE ABANDONED MAIN.
2. HYDRANT REMOVAL SHALL INCLUDE REMOVAL OF EXISTING HYDRANT, 6" WATER MAIN, TEE, 6" GATE VALVE, AND 2 PLUGS FOR THE ABANDONED WATER MAIN (TYP).
3. WATER SERVICE LATERALS ARE SHOWN AS A GRAPHICAL REPRESENTATION ONLY. ACTUAL LOCATIONS TO BE DETERMINED PRIOR TO CONSTRUCTION.

CROSS REFERENCES			
SHEET NO.			DESCRIPTION
237			WATER WORK LEGEND
108	-	162	CROSS SECTIONS



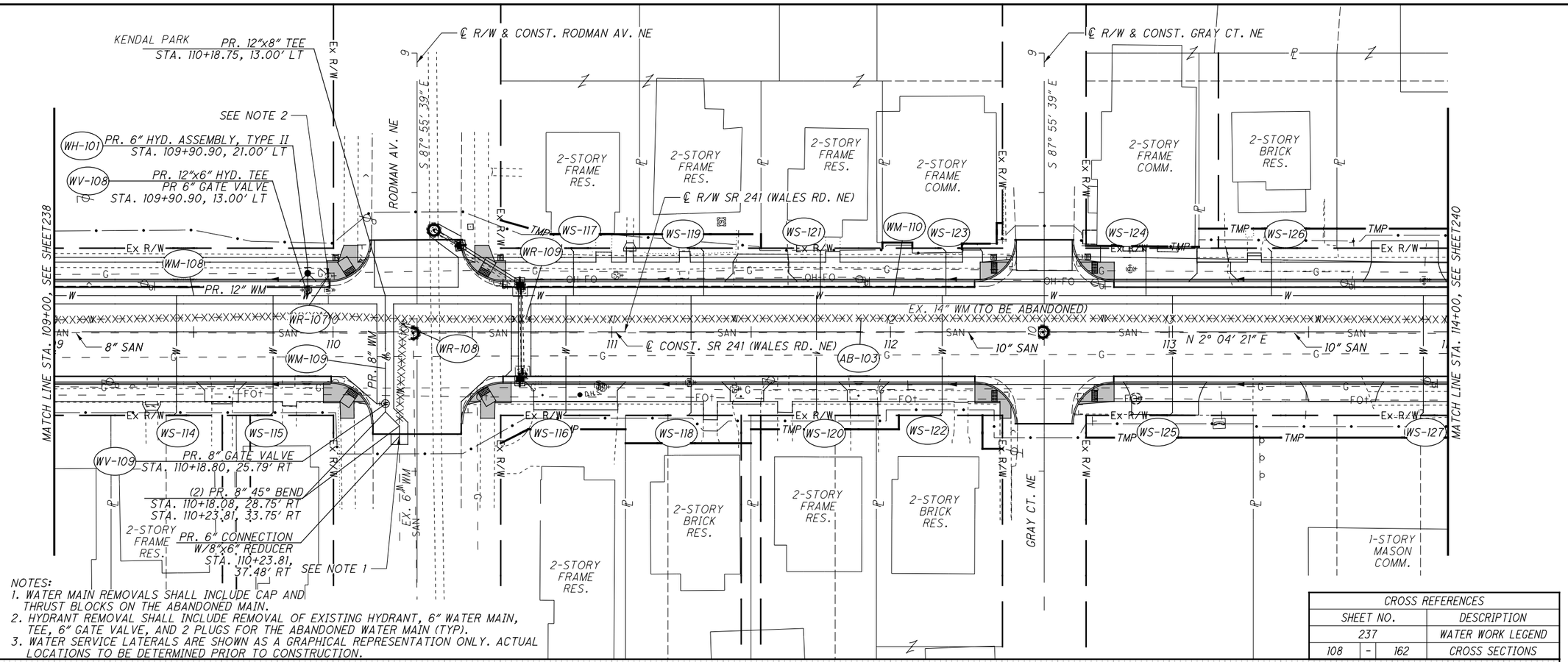
HORIZONTAL SCALE IN FEET
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CALCULATED JAM
CHECKED CML

WATER WORK - SR 241 (WALES RD. NE)
STA. 104+00 TO STA. 109+00

STA-241-9.71

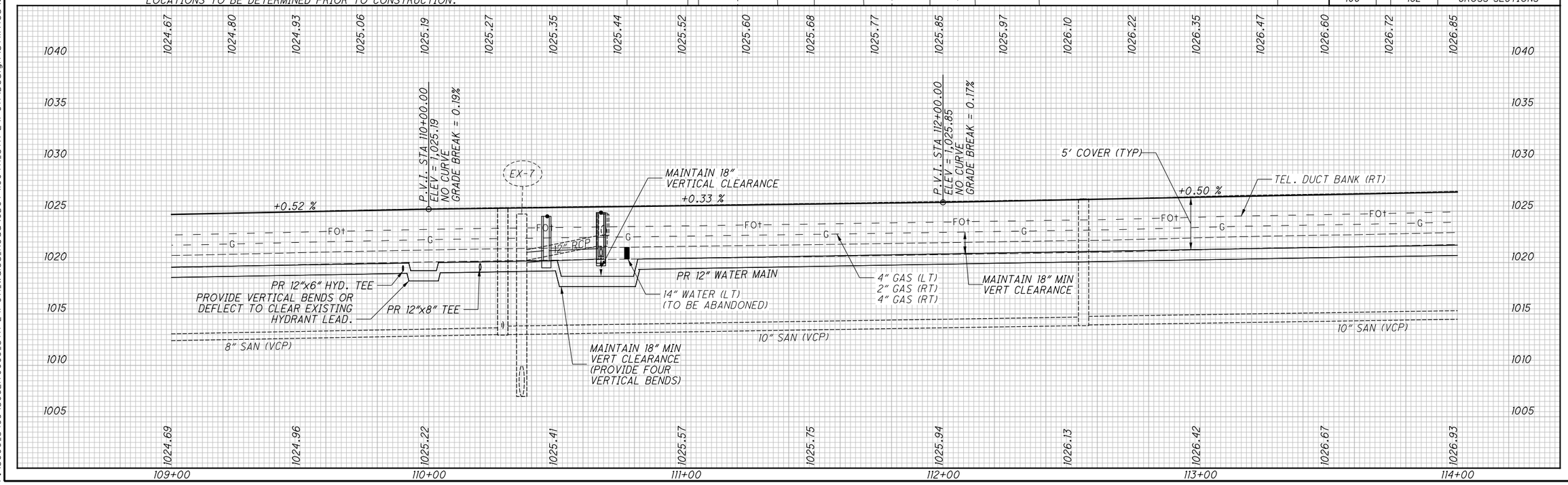
238
395

P:\3000_3499\3062\T0090_STA-241-9.71_Wales_Road\ODOT\00471_STA-241-9.71\Design\Utilities\Sheets\00471_UP002.dgn 4/7/2021 7:45:37 AM khillegass



NOTES:
1. WATER MAIN REMOVALS SHALL INCLUDE CAP AND THRUST BLOCKS ON THE ABANDONED MAIN.
2. HYDRANT REMOVAL SHALL INCLUDE REMOVAL OF EXISTING HYDRANT, 6" WATER MAIN, TEE, 6" GATE VALVE, AND 2 PLUGS FOR THE ABANDONED WATER MAIN (TYP).
3. WATER SERVICE LATERALS ARE SHOWN AS A GRAPHICAL REPRESENTATION ONLY. ACTUAL LOCATIONS TO BE DETERMINED PRIOR TO CONSTRUCTION.

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
237	WATER WORK LEGEND
108 - 162	CROSS SECTIONS



HORIZONTAL SCALE IN FEET
0 10 20 40

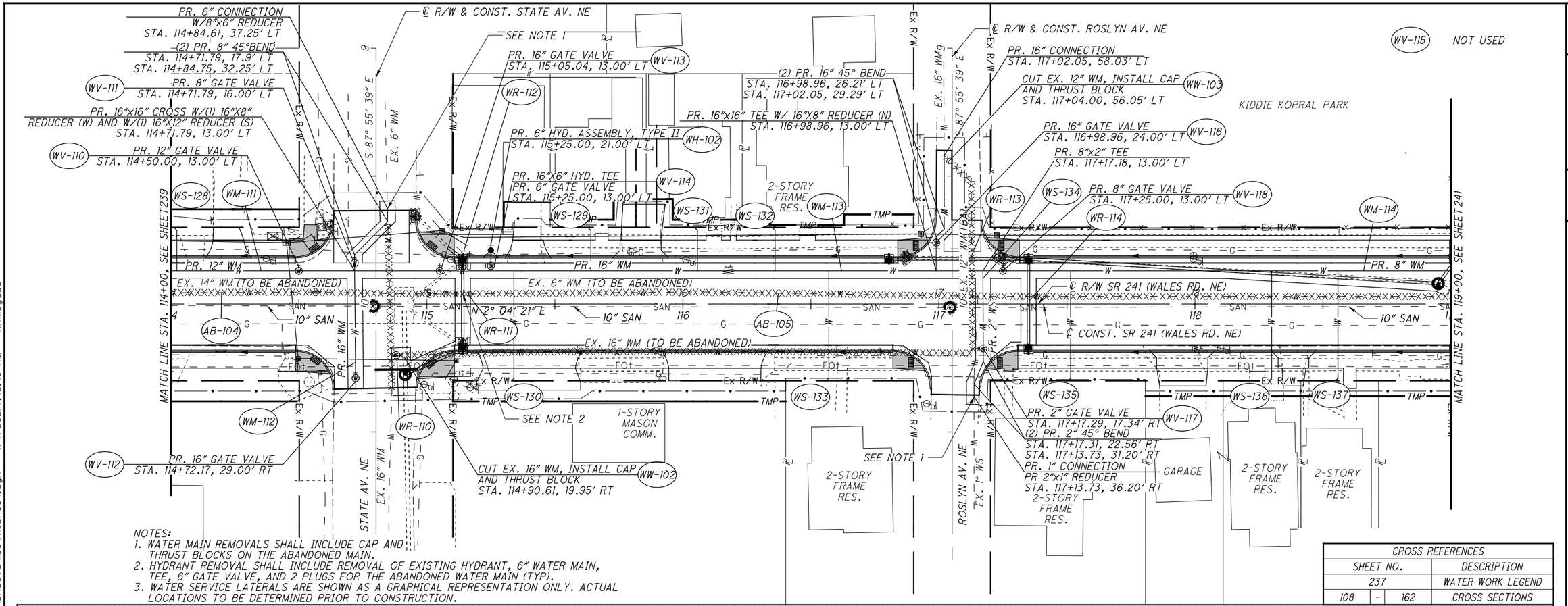
CALCULATED JAM
CHECKED CML

WATER WORK - SR 241 (WALES RD. NE)
STA. 109+00 TO STA. 114+00

STA-241-9.71

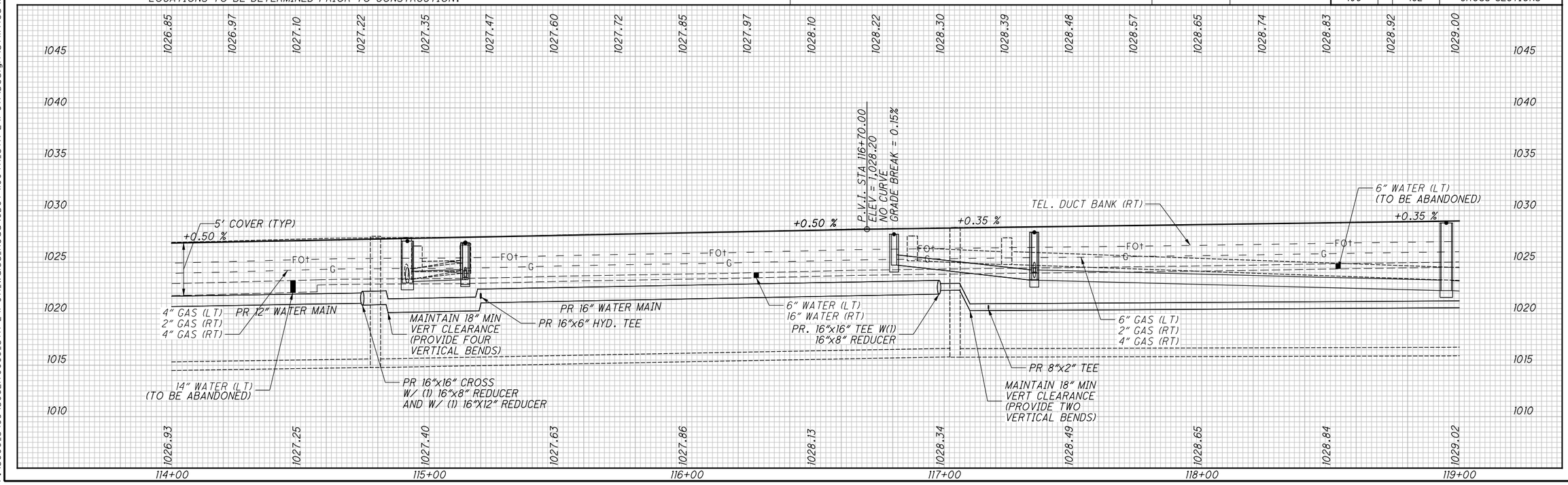
239
395

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NOTES:
1. WATER MAIN REMOVALS SHALL INCLUDE CAP AND THRUST BLOCKS ON THE ABANDONED MAIN.
2. HYDRANT REMOVAL SHALL INCLUDE REMOVAL OF EXISTING HYDRANT, 6" WATER MAIN, TEE, 6" GATE VALVE, AND 2 PLUGS FOR THE ABANDONED WATER MAIN (TYP).
3. WATER SERVICE LATERALS ARE SHOWN AS A GRAPHICAL REPRESENTATION ONLY. ACTUAL LOCATIONS TO BE DETERMINED PRIOR TO CONSTRUCTION.

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
237	WATER WORK LEGEND
108 - 162	CROSS SECTIONS



WATER WORK - SR 241 (WALES RD. NE) STA. 114+00 TO STA. 119+00

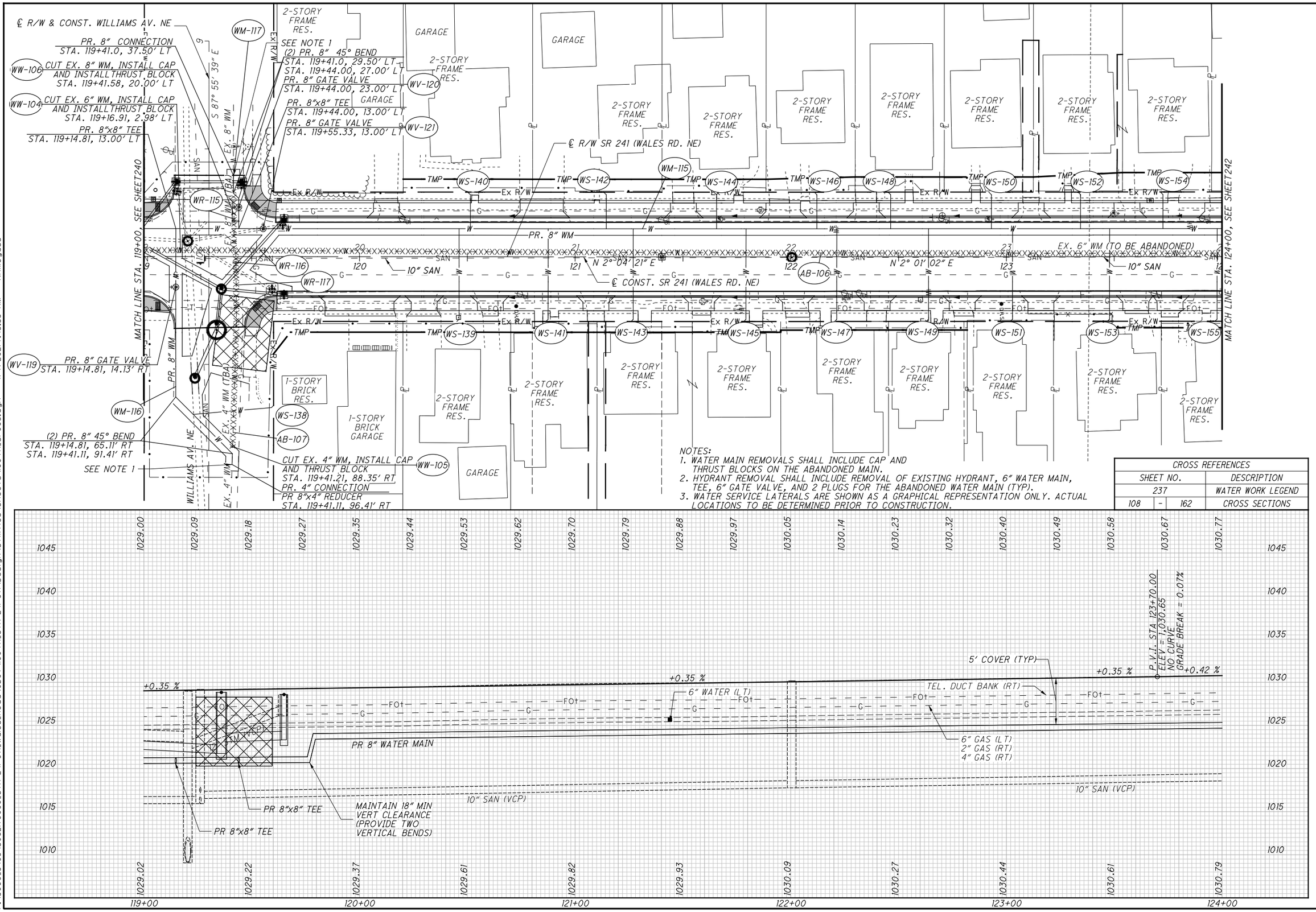
HORIZONTAL SCALE IN FEET 0 10 20 40

CALCULATED JAM CHECKED CML

STA-241-9.71

240 / 395

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CROSS REFERENCES	
SHEET NO.	DESCRIPTION
237	WATER WORK LEGEND
108 - 162	CROSS SECTIONS

HORIZONTAL SCALE IN FEET
0 10 20 40

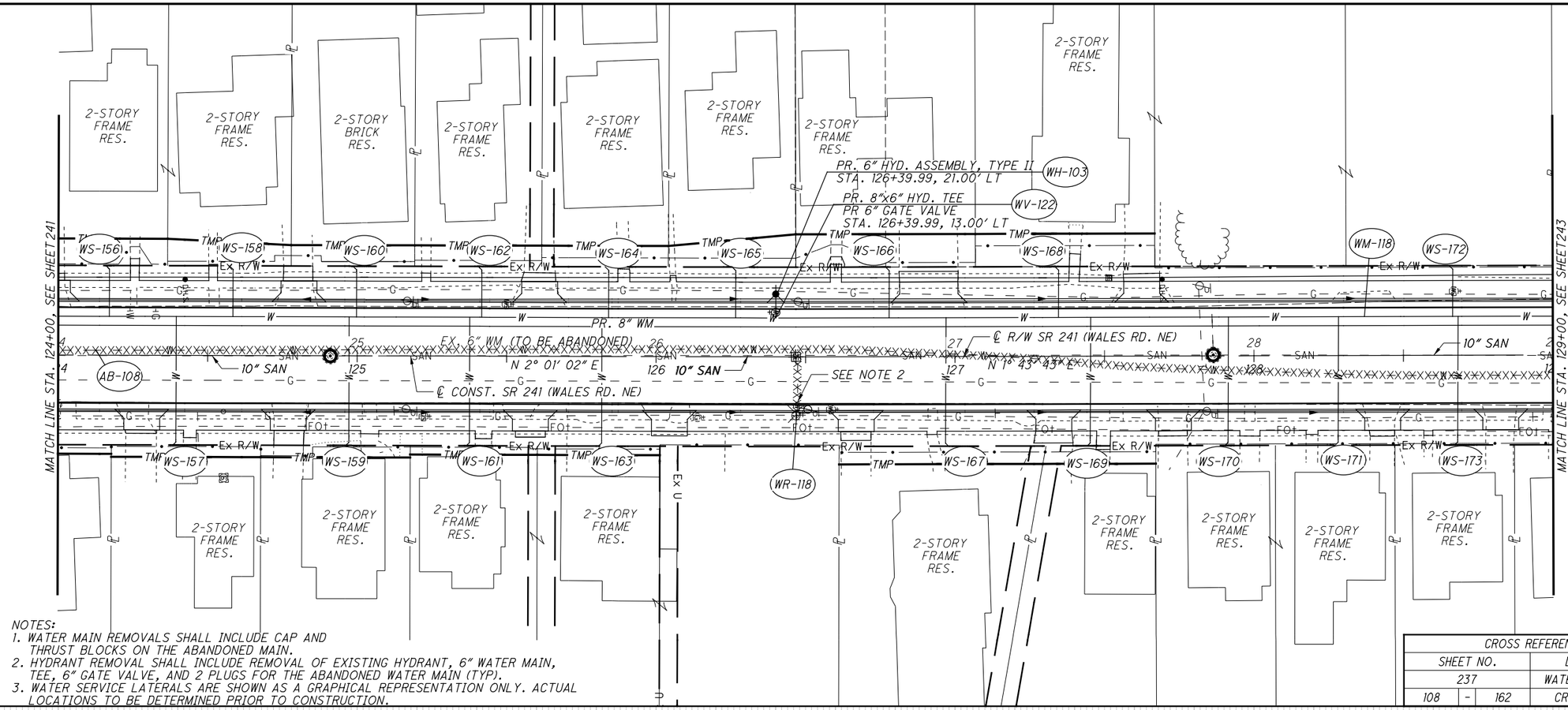
CALCULATED JAM
CHECKED CML

WATER WORK - SR 241 (WALES RD. NE)
STA. 119+00 TO STA. 124+00

STA-241-9.71

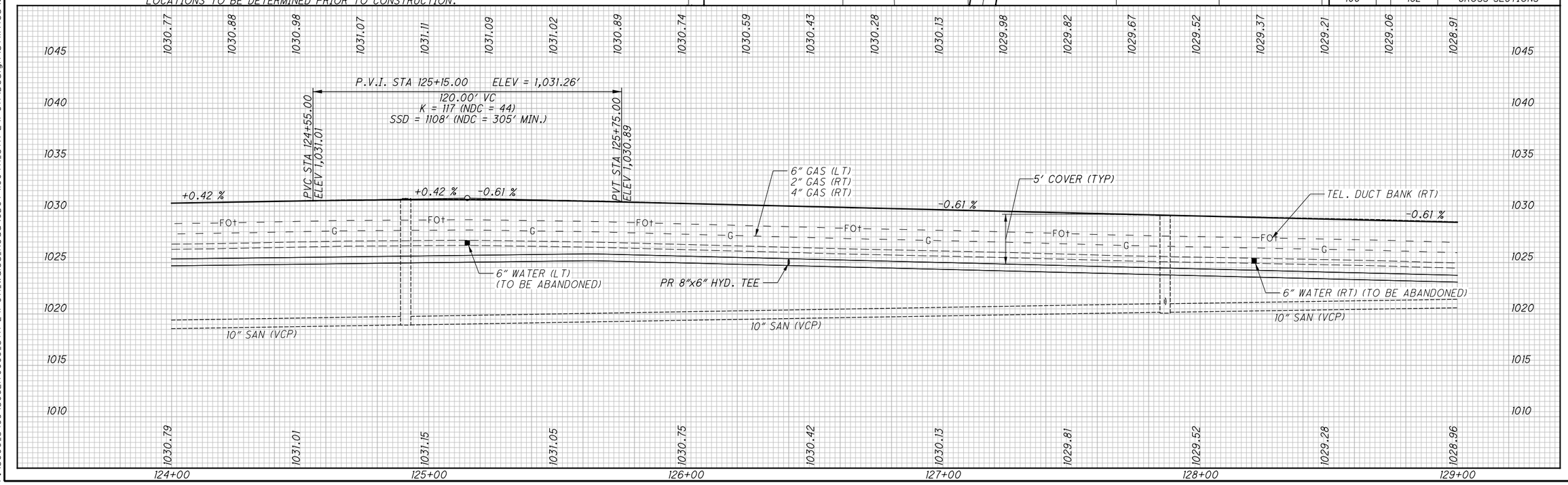
241
395

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NOTES:
1. WATER MAIN REMOVALS SHALL INCLUDE CAP AND THRUST BLOCKS ON THE ABANDONED MAIN.
2. HYDRANT REMOVAL SHALL INCLUDE REMOVAL OF EXISTING HYDRANT, 6" WATER MAIN, TEE, 6" GATE VALVE, AND 2 PLUGS FOR THE ABANDONED WATER MAIN (TYP).
3. WATER SERVICE LATERALS ARE SHOWN AS A GRAPHICAL REPRESENTATION ONLY. ACTUAL LOCATIONS TO BE DETERMINED PRIOR TO CONSTRUCTION.

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
237	WATER WORK LEGEND
108 - 162	CROSS SECTIONS



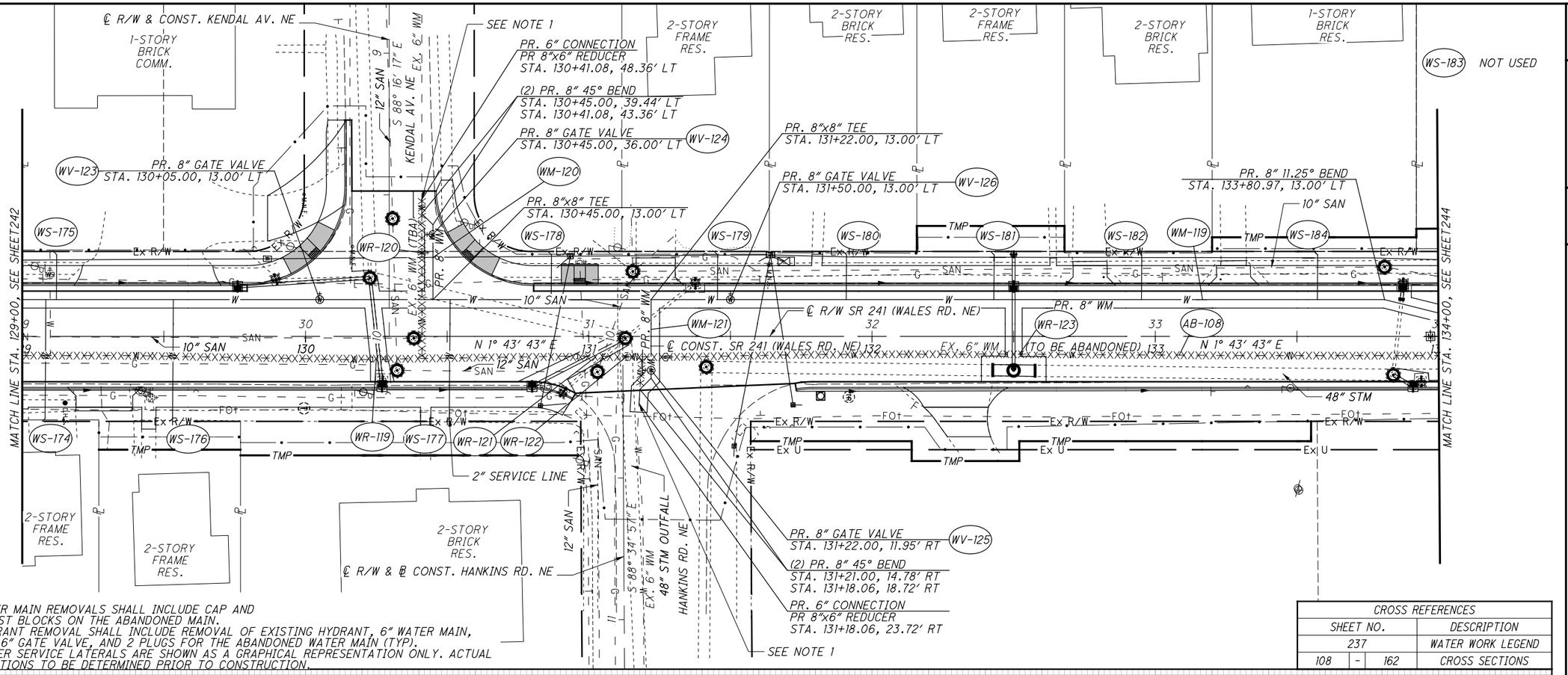
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JAM
CHECKED CML

WATER WORK - SR 241 (WALES RD. NE)
STA. 124+00 TO STA. 129+00

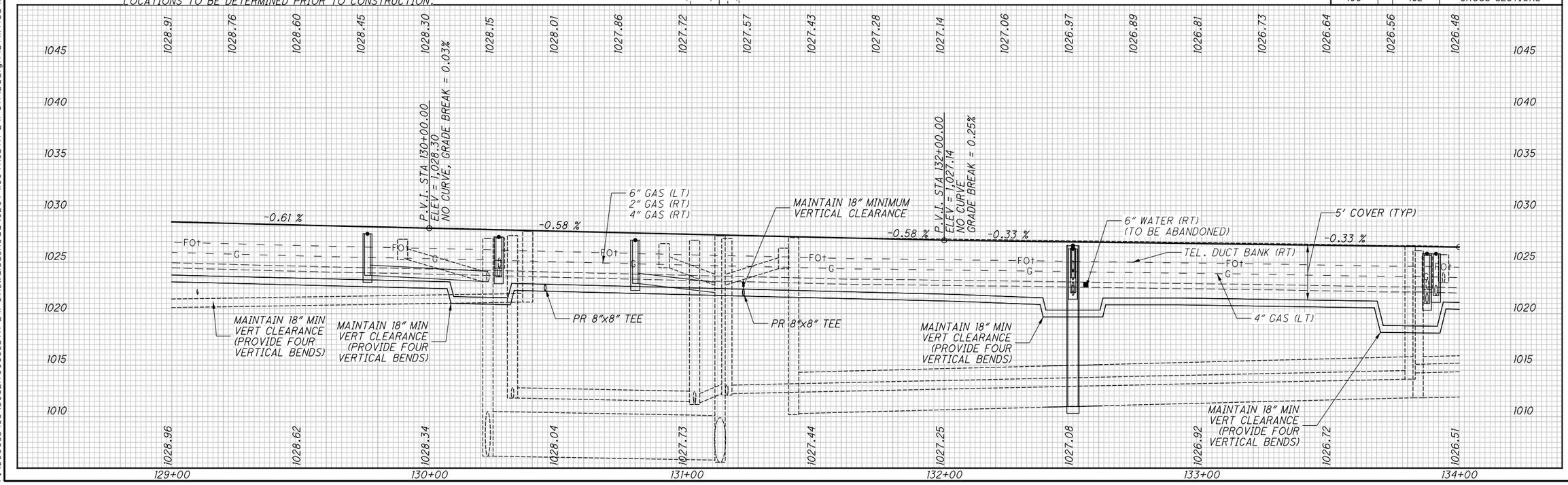
STA-241-9.71

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NOTES:
1. WATER MAIN REMOVALS SHALL INCLUDE CAP AND THRUST BLOCKS ON THE ABANDONED MAIN.
2. HYDRANT REMOVAL SHALL INCLUDE REMOVAL OF EXISTING HYDRANT, 6" WATER MAIN, TEE, 6" GATE VALVE, AND 2 PLUGS FOR THE ABANDONED WATER MAIN (TYP).
3. WATER SERVICE LATERALS ARE SHOWN AS A GRAPHICAL REPRESENTATION ONLY. ACTUAL LOCATIONS TO BE DETERMINED PRIOR TO CONSTRUCTION.

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
237	WATER WORK LEGEND
108 - 162	CROSS SECTIONS



WATER WORK - SR 241 (WALES RD. NE)
STA. 129+00 TO STA. 134+00

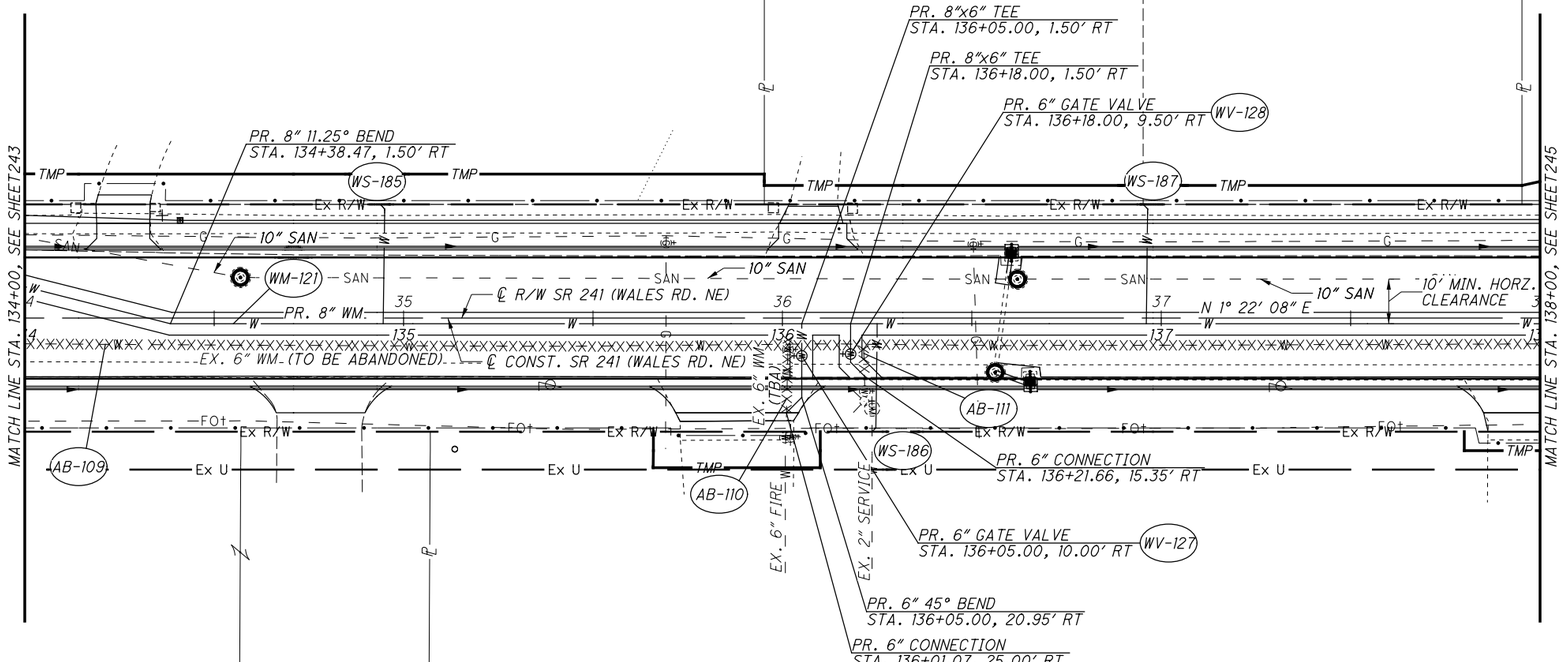
STA-241-9.71

243
395

HORIZONTAL SCALE IN FEET
0 10 20 40

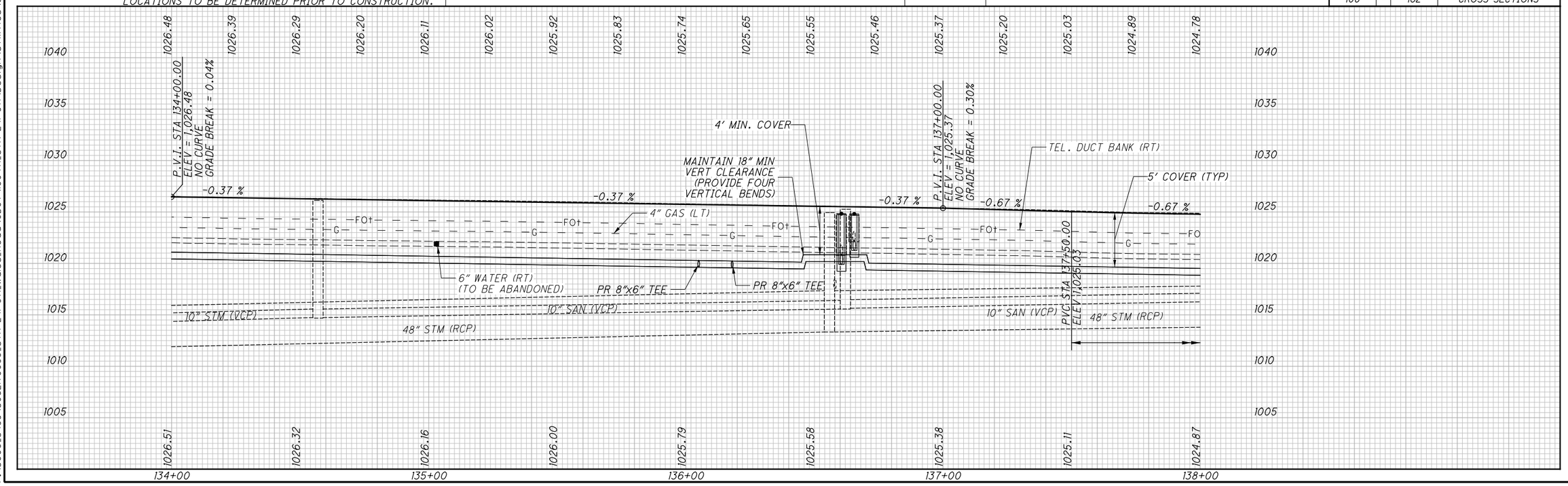
CALCULATED JAM
CHECKED CML

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NOTES:
1. WATER MAIN REMOVALS SHALL INCLUDE CAP AND THRUST BLOCKS ON THE ABANDONED MAIN.
2. HYDRANT REMOVAL SHALL INCLUDE REMOVAL OF EXISTING HYDRANT, 6" WATER MAIN, TEE, 6" GATE VALVE, AND 2 PLUGS FOR THE ABANDONED WATER MAIN (TYP).
3. WATER SERVICE LATERALS ARE SHOWN AS A GRAPHICAL REPRESENTATION ONLY. ACTUAL LOCATIONS TO BE DETERMINED PRIOR TO CONSTRUCTION.

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
237	WATER WORK LEGEND
108 - 162	CROSS SECTIONS



WATER WORK - SR · 241 (WALES RD. NE)
STA. 134+00 TO STA. 138+00

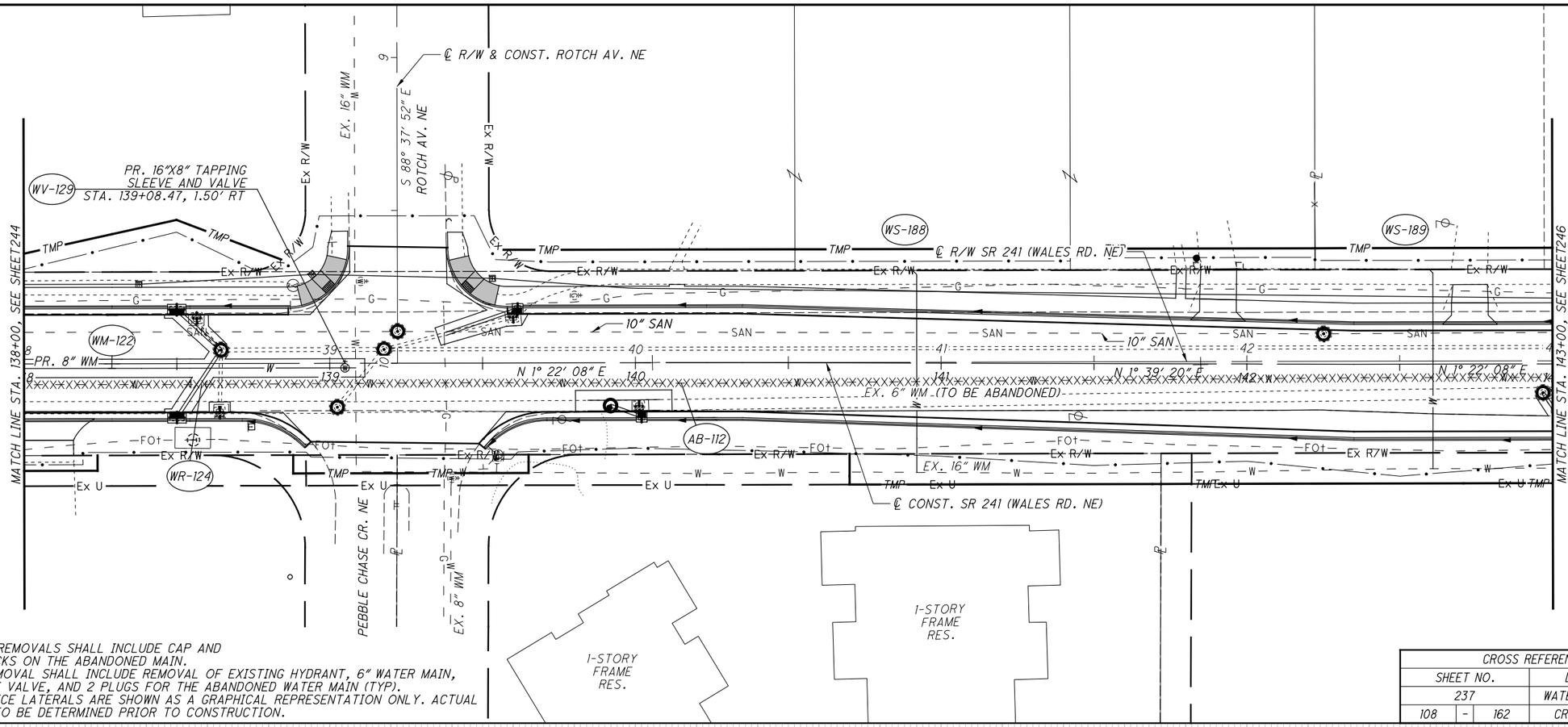
CALCULATED JAM
CHECKED CML

HORIZONTAL SCALE IN FEET
0 10 20 40

STA-241-9.71

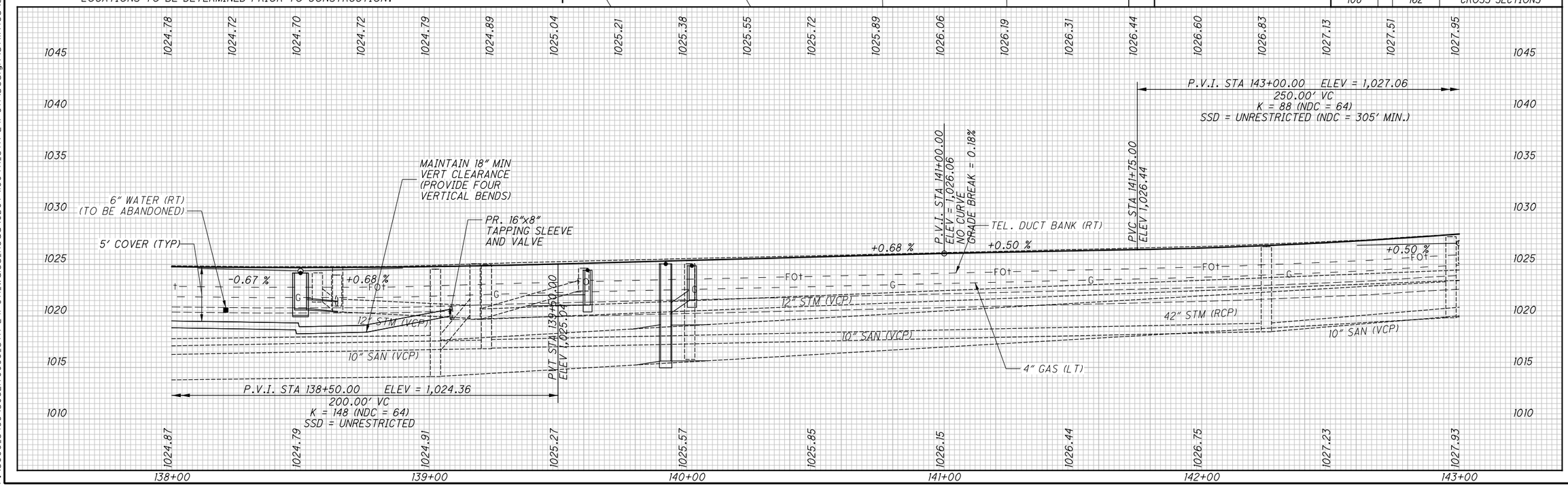
244
395

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NOTES:
1. WATER MAIN REMOVALS SHALL INCLUDE CAP AND THRUST BLOCKS ON THE ABANDONED MAIN.
2. HYDRANT REMOVAL SHALL INCLUDE REMOVAL OF EXISTING HYDRANT, 6" WATER MAIN, TEE, 6" GATE VALVE, AND 2 PLUGS FOR THE ABANDONED WATER MAIN (TYP).
3. WATER SERVICE LATERALS ARE SHOWN AS A GRAPHICAL REPRESENTATION ONLY. ACTUAL LOCATIONS TO BE DETERMINED PRIOR TO CONSTRUCTION.

CROSS REFERENCES			
SHEET NO.			DESCRIPTION
237			WATER WORK LEGEND
108	-	162	CROSS SECTIONS



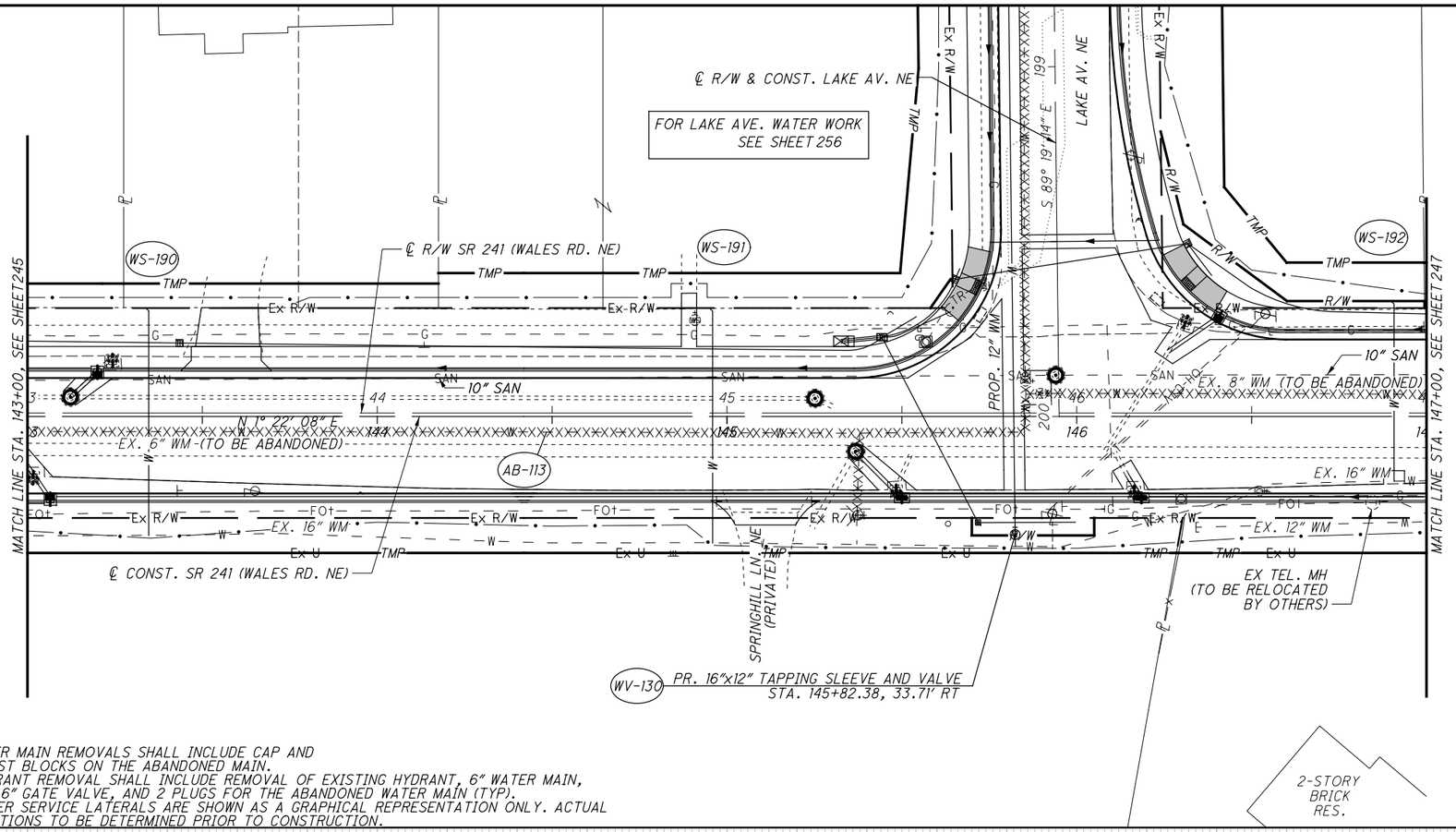
HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED JAM
CHECKED CML

WATER WORK - SR · 241 (WALES RD. NE)
STA. 138+00 TO STA. 143+00

STA-241-9.71

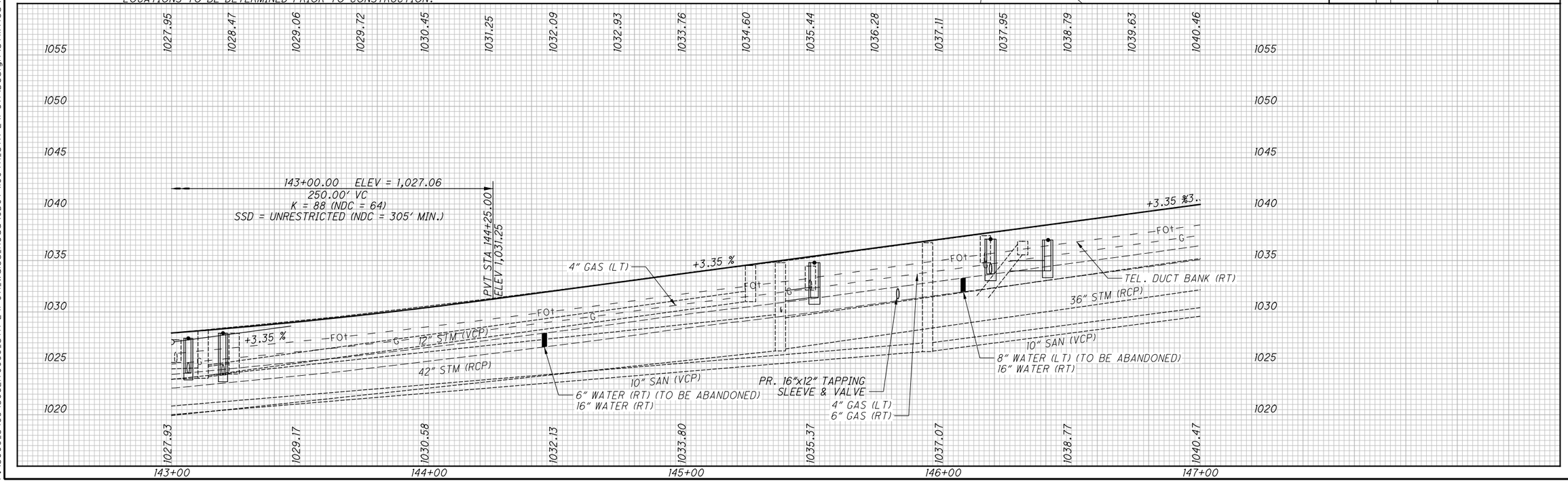
245
395

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NOTES:
1. WATER MAIN REMOVALS SHALL INCLUDE CAP AND THRUST BLOCKS ON THE ABANDONED MAIN.
2. HYDRANT REMOVAL SHALL INCLUDE REMOVAL OF EXISTING HYDRANT, 6" WATER MAIN, TEE, 6" GATE VALVE, AND 2 PLUGS FOR THE ABANDONED WATER MAIN (TYP).
3. WATER SERVICE LATERALS ARE SHOWN AS A GRAPHICAL REPRESENTATION ONLY. ACTUAL LOCATIONS TO BE DETERMINED PRIOR TO CONSTRUCTION.

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
237	WATER WORK LEGEND
108 - 162	CROSS SECTIONS



WATER WORK - SR 241 (WALES RD. NE)
STA. 143+00 TO STA. 147+00

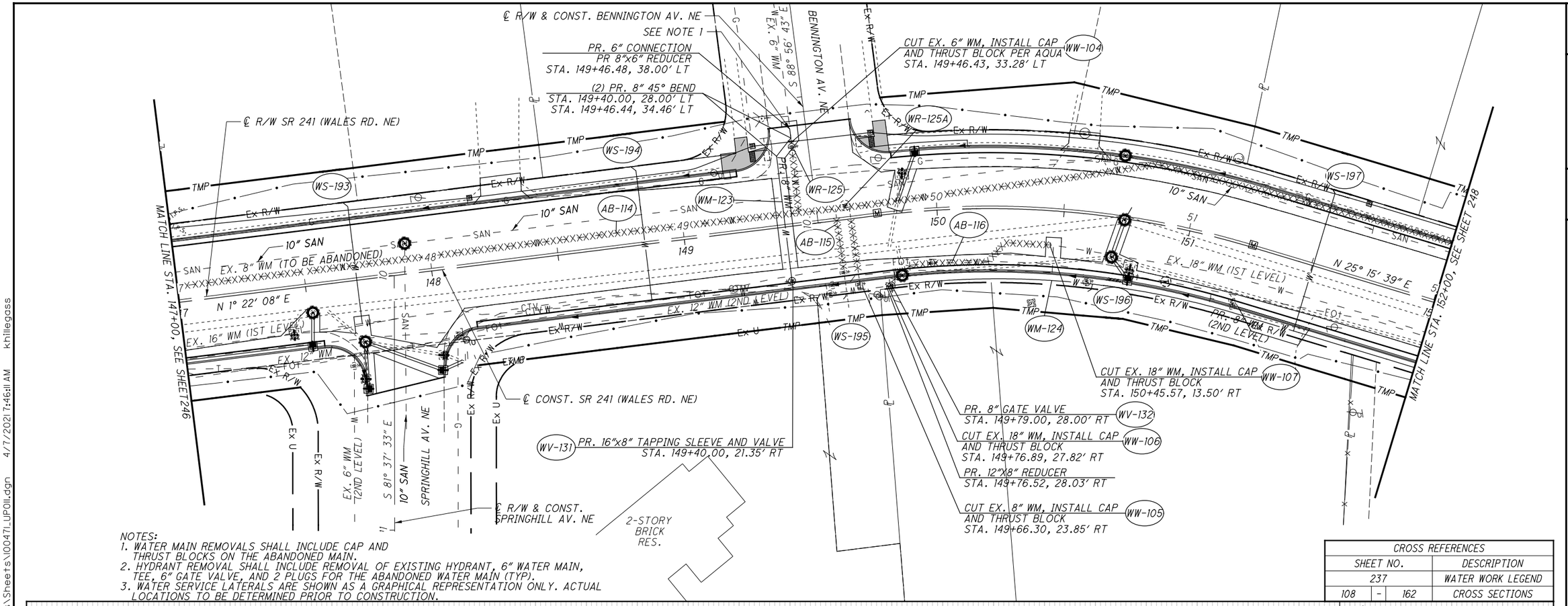
STA-241-9.71

246
395

HORIZONTAL SCALE IN FEET
0 10 20 40

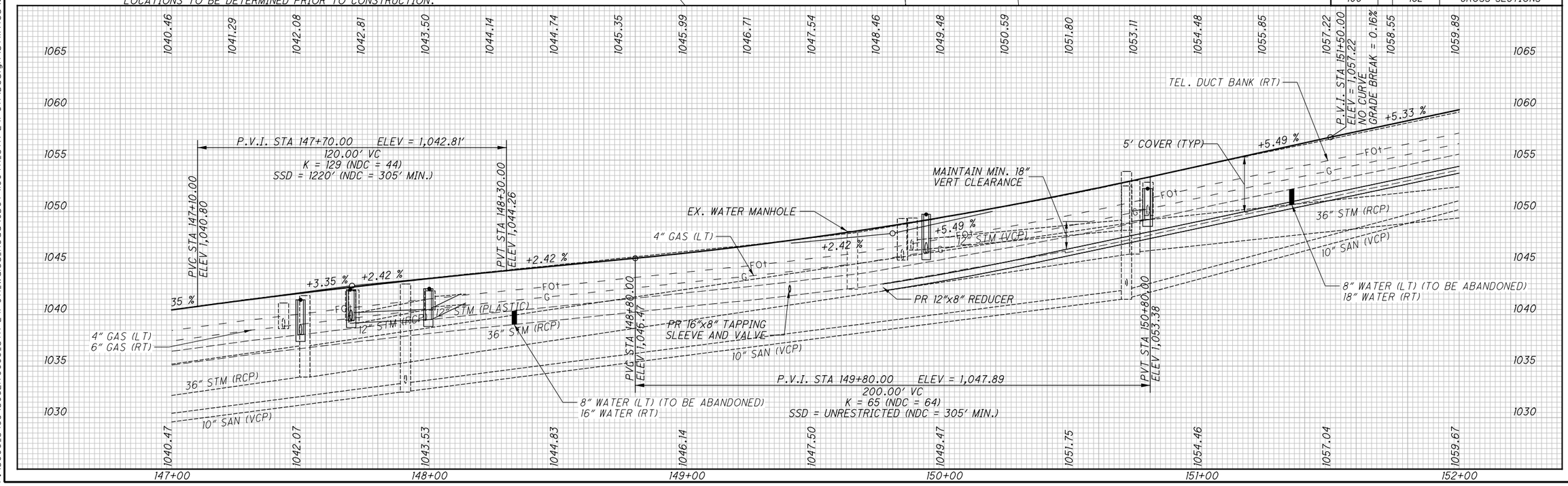
CALCULATED JAM
CHECKED CML

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NOTES:
1. WATER MAIN REMOVALS SHALL INCLUDE CAP AND THRUST BLOCKS ON THE ABANDONED MAIN.
2. HYDRANT REMOVAL SHALL INCLUDE REMOVAL OF EXISTING HYDRANT, 6" WATER MAIN, TEE, 6" GATE VALVE, AND 2 PLUGS FOR THE ABANDONED WATER MAIN (TYP).
3. WATER SERVICE LATERALS ARE SHOWN AS A GRAPHICAL REPRESENTATION ONLY. ACTUAL LOCATIONS TO BE DETERMINED PRIOR TO CONSTRUCTION.

CROSS REFERENCES			
SHEET NO.			DESCRIPTION
237			WATER WORK LEGEND
108	-	162	CROSS SECTIONS



WATER WORK - SR 241 (WALES RD. NE)
STA. 147+00 TO STA. 152+00

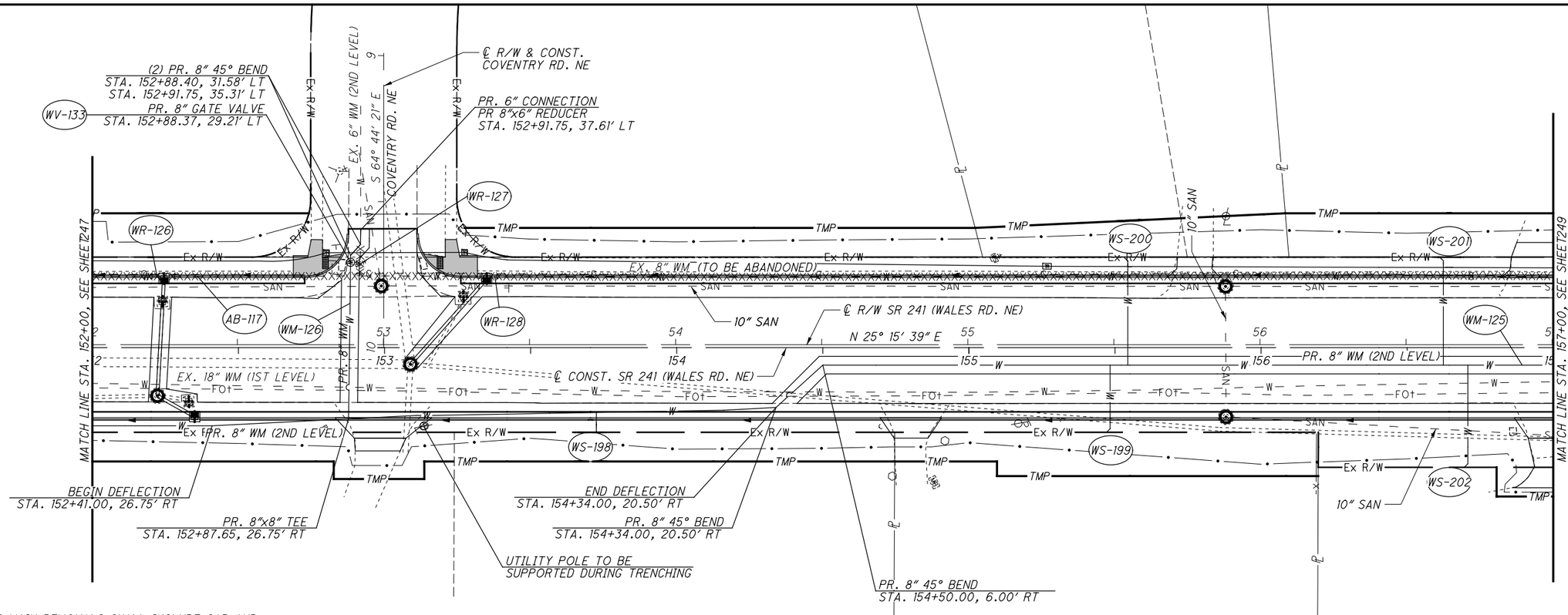
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JAM
CHECKED CML

STA-241-9.71

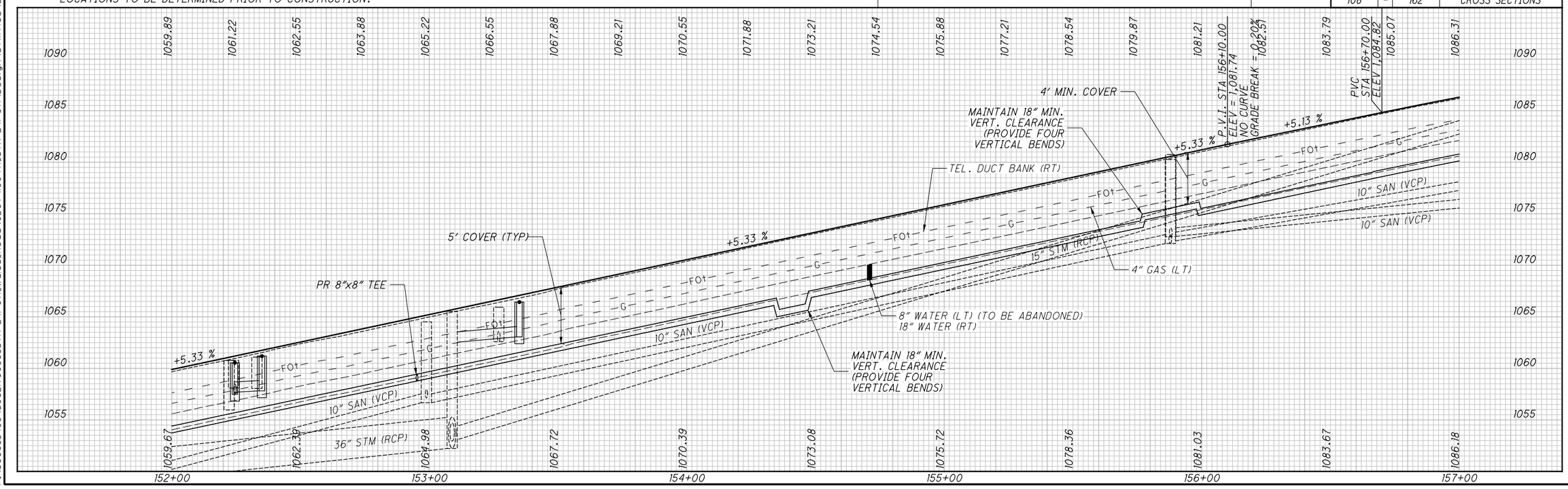
247
395

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NOTES:
1. WATER MAIN REMOVALS SHALL INCLUDE CAP AND THRUST BLOCKS ON THE ABANDONED MAIN.
2. HYDRANT REMOVAL SHALL INCLUDE REMOVAL OF EXISTING HYDRANT, 6" WATER MAIN, TEE, 6" GATE VALVE, AND 2 PLUGS FOR THE ABANDONED WATER MAIN (TYP).
3. WATER SERVICE LATERALS ARE SHOWN AS A GRAPHICAL REPRESENTATION ONLY. ACTUAL LOCATIONS TO BE DETERMINED PRIOR TO CONSTRUCTION.

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
237	WATER WORK LEGEND
108 - 162	CROSS SECTIONS



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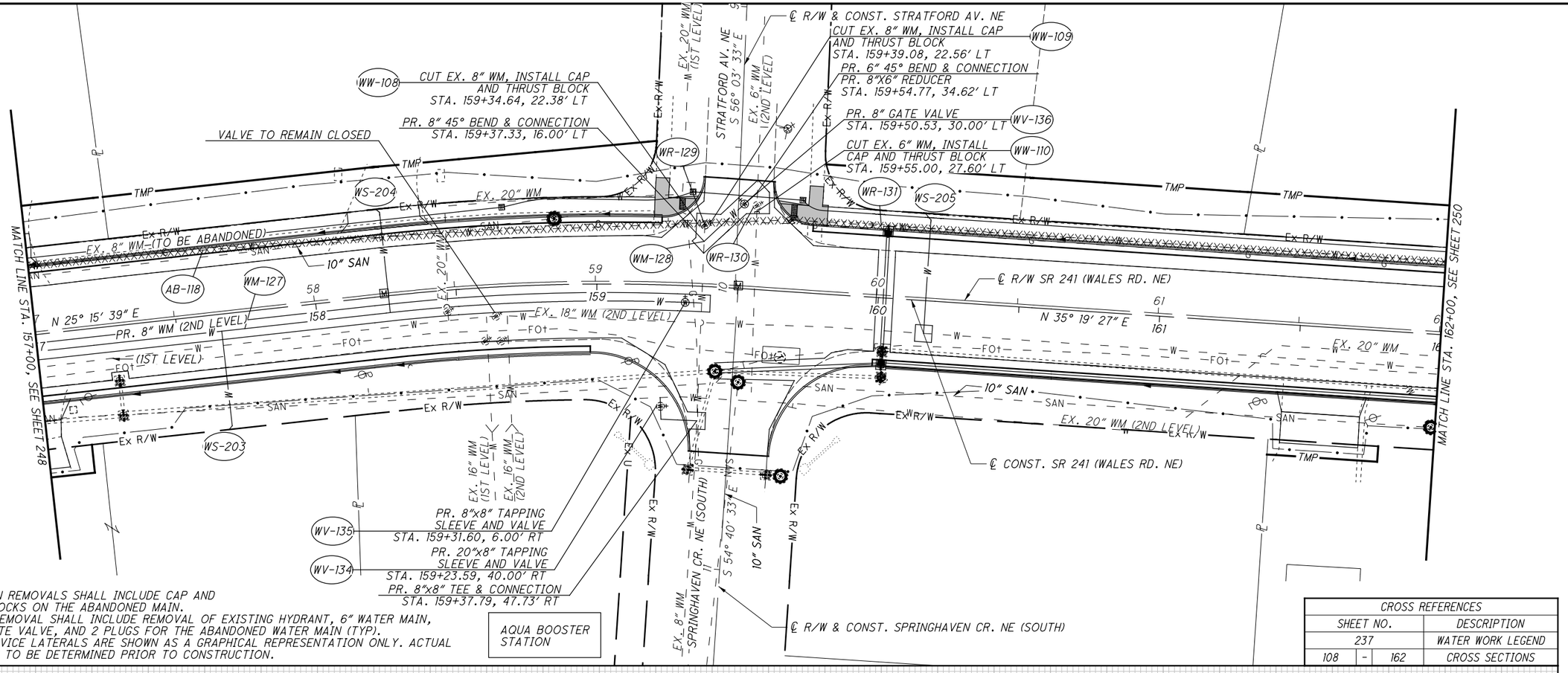
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JAM
CHECKED CML

WATER WORK - SR 241 (WALES RD. NE)
STA. 152+00 TO STA. 157+00

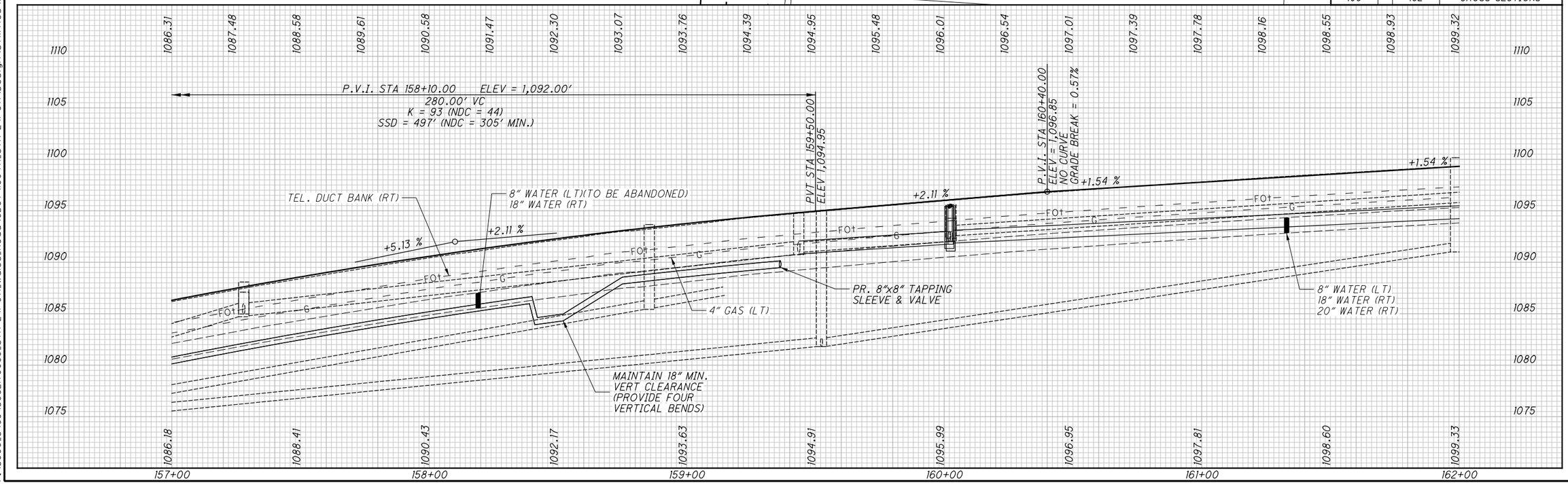
STA-241-9.71

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NOTES:
1. WATER MAIN REMOVALS SHALL INCLUDE CAP AND THRUST BLOCKS ON THE ABANDONED MAIN.
2. HYDRANT REMOVAL SHALL INCLUDE REMOVAL OF EXISTING HYDRANT, 6" WATER MAIN, TEE, 6" GATE VALVE, AND 2 PLUGS FOR THE ABANDONED WATER MAIN (TYP).
3. WATER SERVICE LATERALS ARE SHOWN AS A GRAPHICAL REPRESENTATION ONLY. ACTUAL LOCATIONS TO BE DETERMINED PRIOR TO CONSTRUCTION.

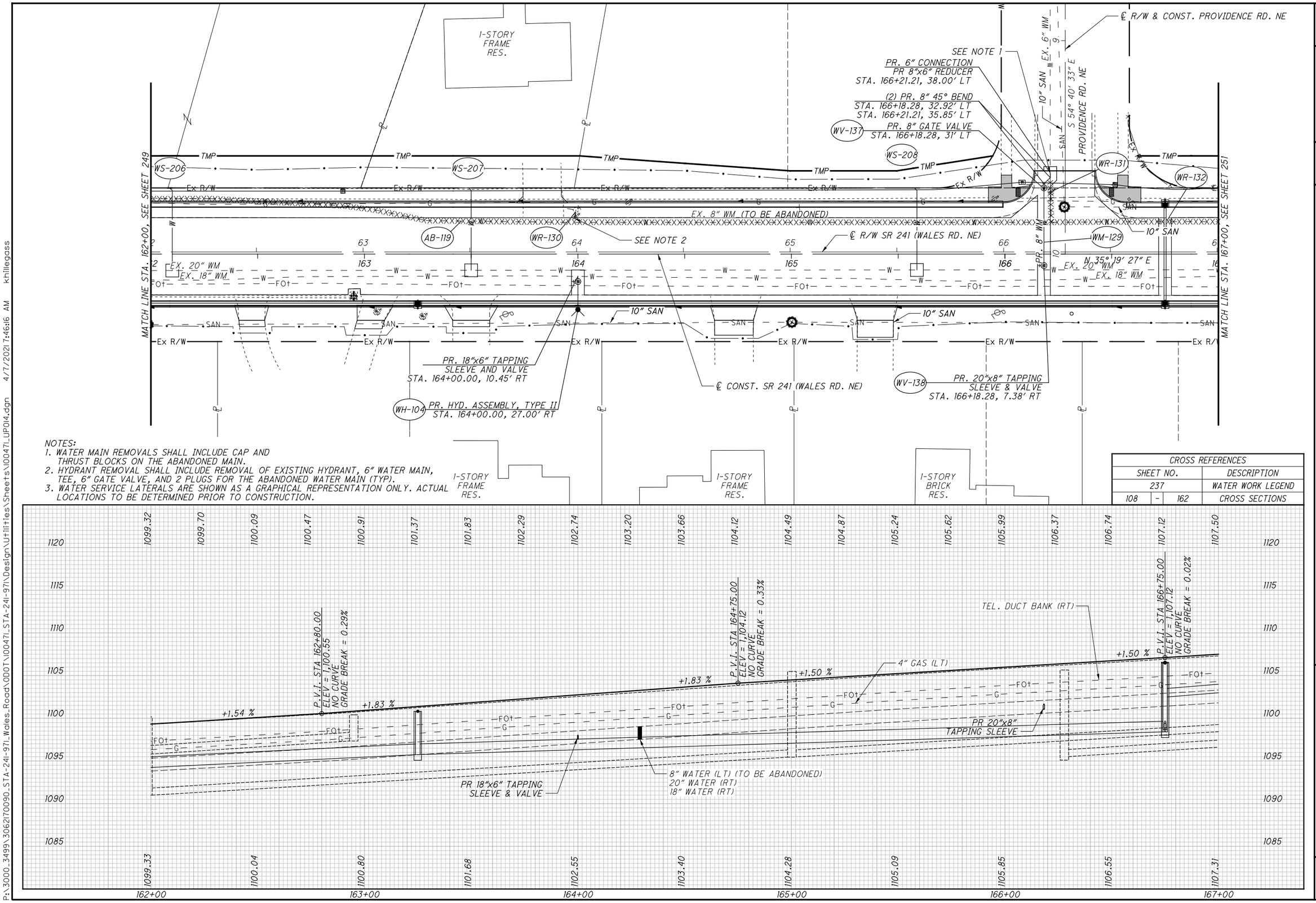
CROSS REFERENCES	
SHEET NO.	DESCRIPTION
237	WATER WORK LEGEND
108 - 162	CROSS SECTIONS



HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED JAM
CHECKED CML

WATER WORK - SR 241 (WALES RD. NE)
STA. 157+00 TO STA. 162+00

STA-241-9.71



NOTES:
1. WATER MAIN REMOVALS SHALL INCLUDE CAP AND THRUST BLOCKS ON THE ABANDONED MAIN.
2. HYDRANT REMOVAL SHALL INCLUDE REMOVAL OF EXISTING HYDRANT, 6" WATER MAIN, TEE, 6" GATE VALVE, AND 2 PLUGS FOR THE ABANDONED WATER MAIN (TYP).
3. WATER SERVICE LATERALS ARE SHOWN AS A GRAPHICAL REPRESENTATION ONLY. ACTUAL LOCATIONS TO BE DETERMINED PRIOR TO CONSTRUCTION.

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
237	WATER WORK LEGEND
108 - 162	CROSS SECTIONS

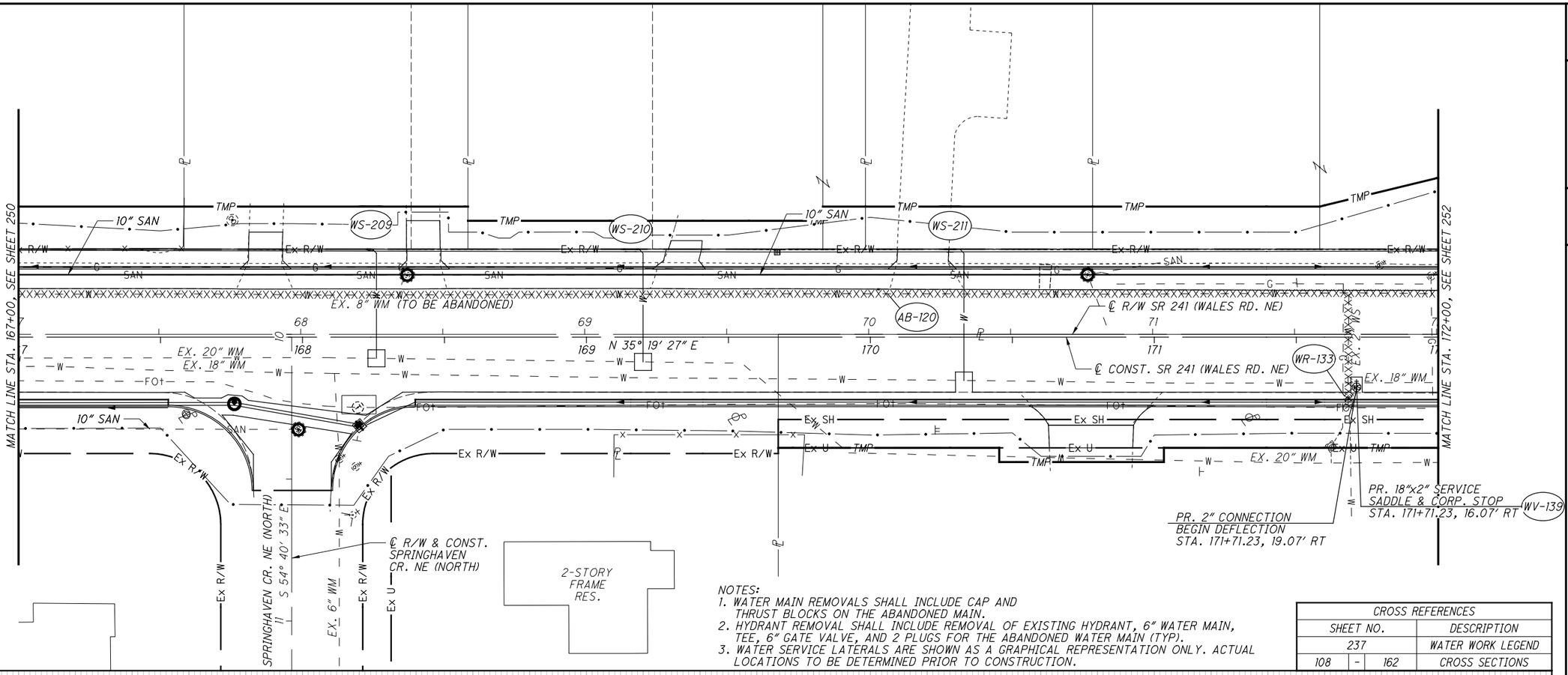
HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED JAM
CHECKED CML

WATER WORK - SR 241 (WALES RD. NE)
STA. 162+00 TO STA. 167+00

STA-241-9.71

250
395

P:\3000_3499\306217009O_STA-241-97I_Wales_Road\ODOT\00471L-STA-241-97I\Design\Utilities\Sheets\00471LUP014.dgn 4/7/2021 7:46:16 AM khillegass



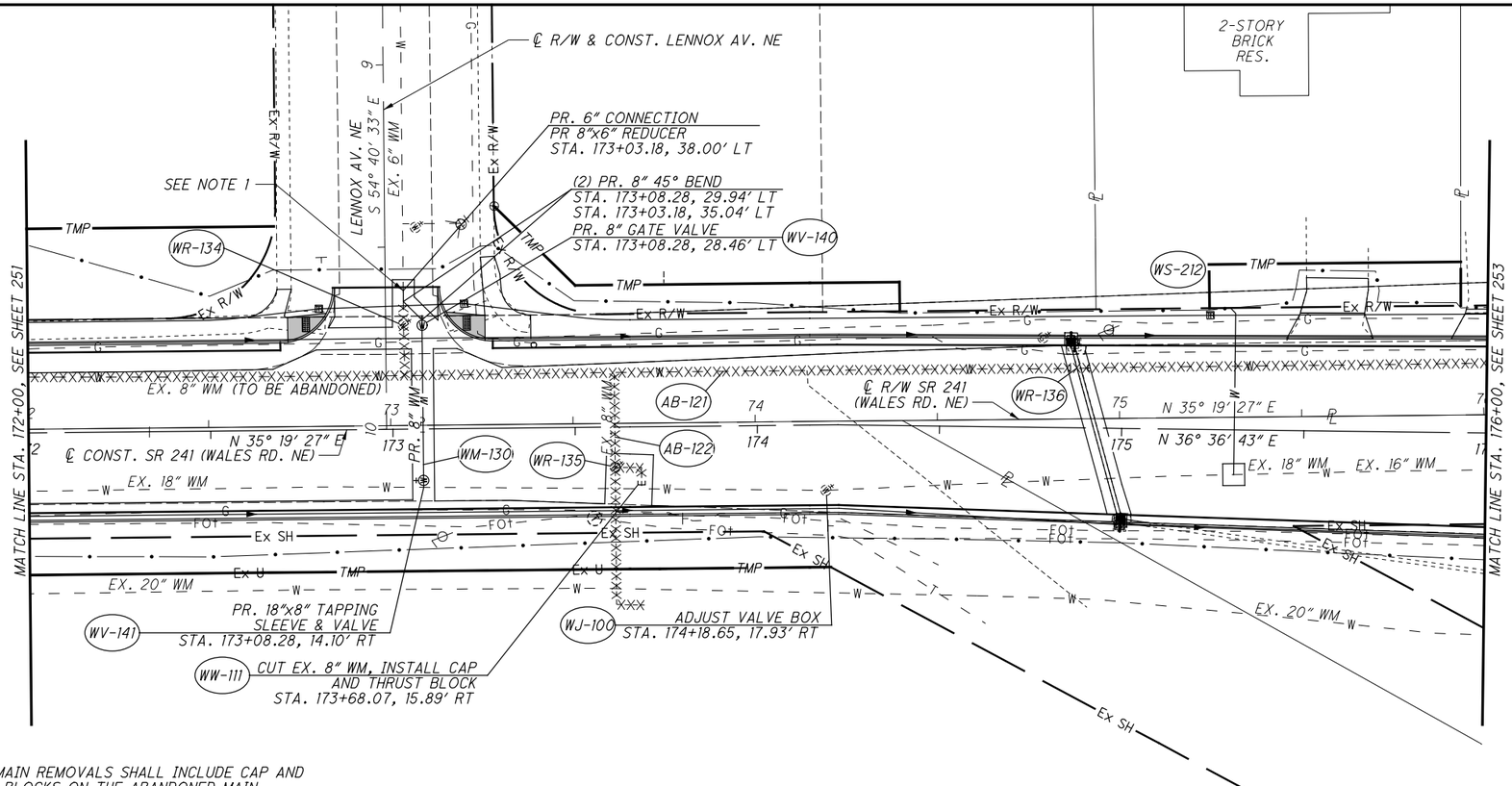
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JAM
CHECKED CML

WATER WORK - SR 241 (WALES RD. NE)
STA. 167+00 TO STA. 172+00

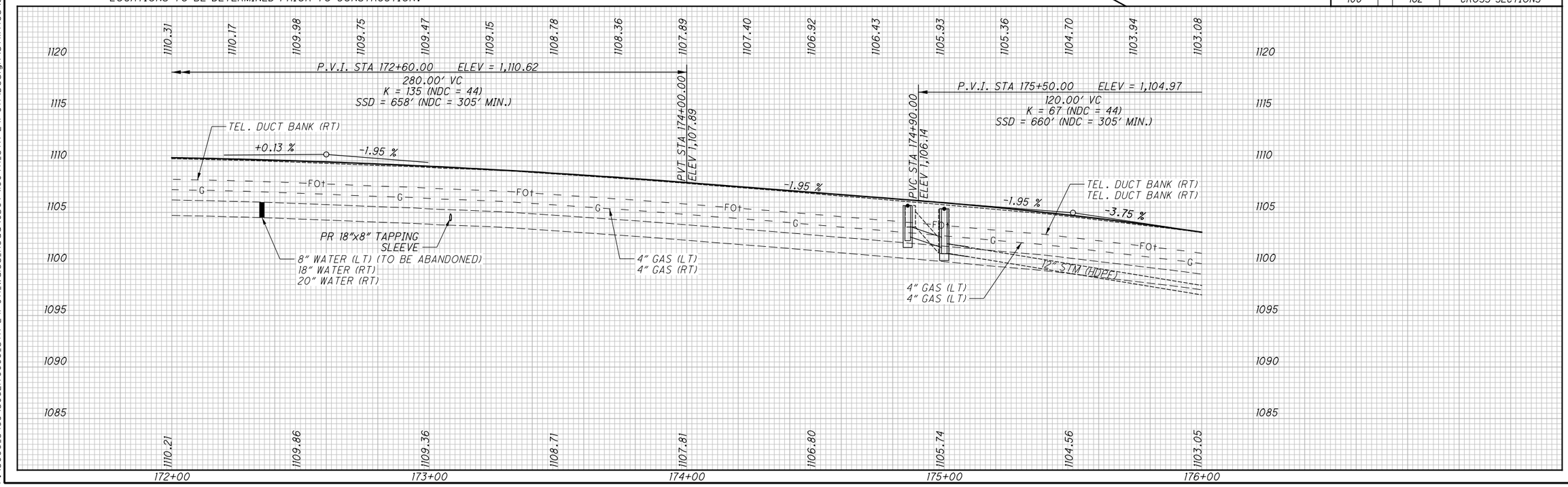
STA-241-9.71

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NOTES:
1. WATER MAIN REMOVALS SHALL INCLUDE CAP AND THRUST BLOCKS ON THE ABANDONED MAIN.
2. HYDRANT REMOVAL SHALL INCLUDE REMOVAL OF EXISTING HYDRANT, 6" WATER MAIN, TEE, 6" GATE VALVE, AND 2 PLUGS FOR THE ABANDONED WATER MAIN (TYP).
3. WATER SERVICE LATERALS ARE SHOWN AS A GRAPHICAL REPRESENTATION ONLY. ACTUAL LOCATIONS TO BE DETERMINED PRIOR TO CONSTRUCTION.

CROSS REFERENCES			
SHEET NO.			DESCRIPTION
237			WATER WORK LEGEND
108	-	162	CROSS SECTIONS



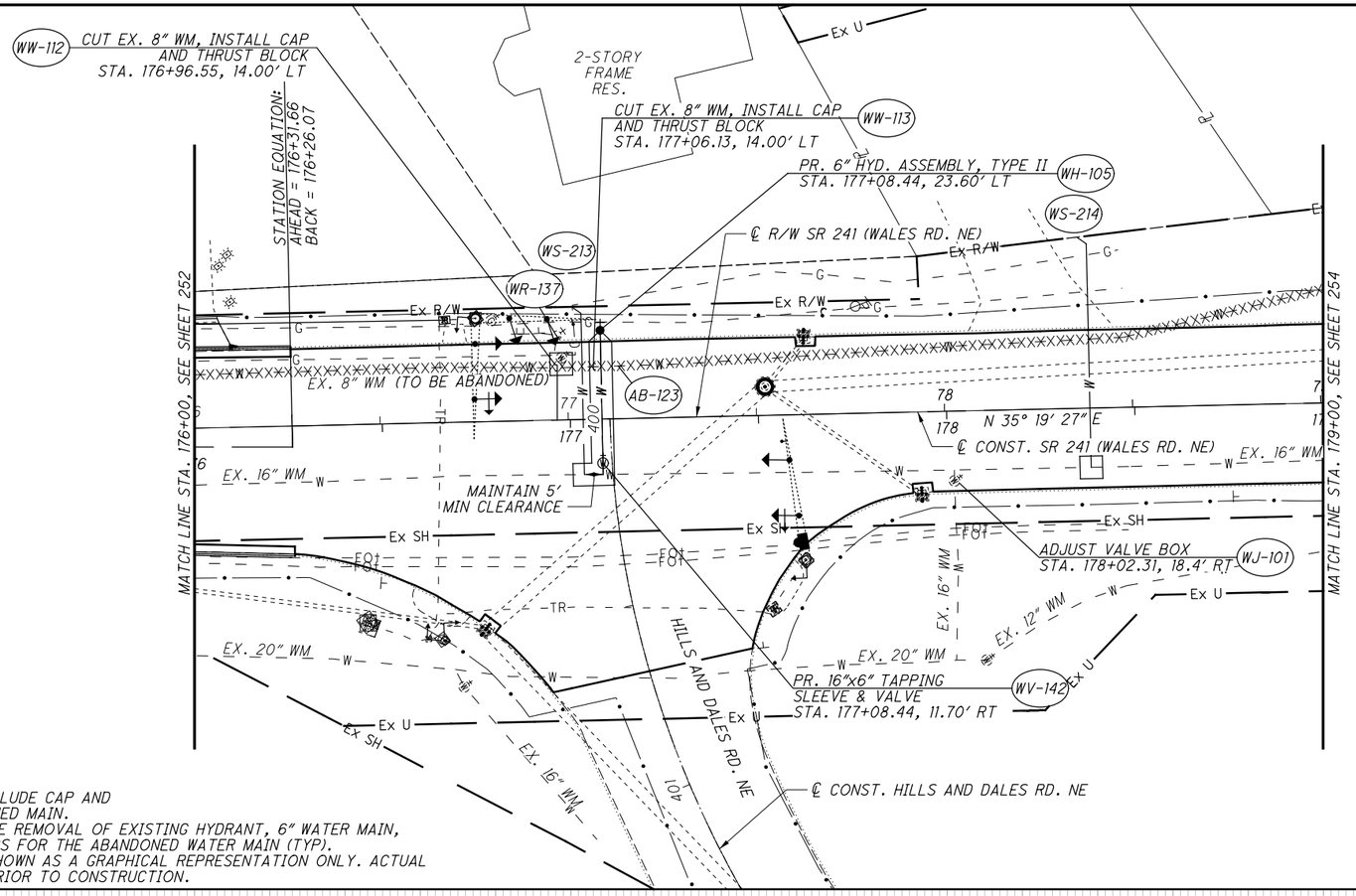
HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED JAM
CHECKED CML

WATER WORK - SR 241 (WALES RD. NE)
STA. 172+00 TO STA. 176+00

STA-241-9.71

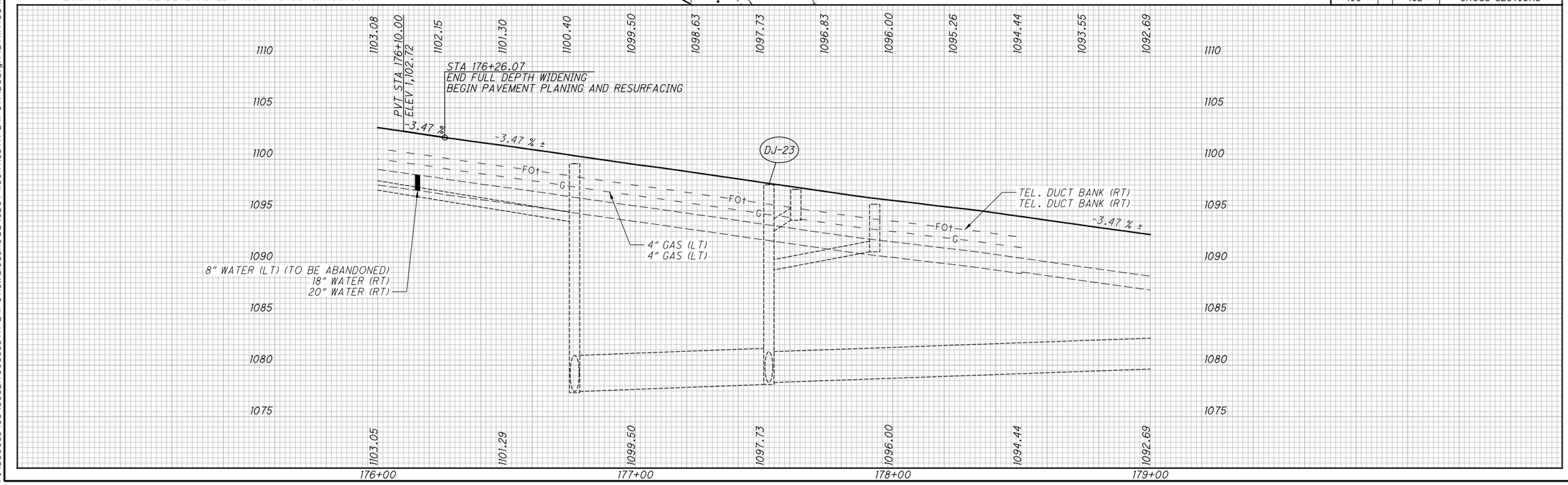
252
395

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NOTES:
1. WATER MAIN REMOVALS SHALL INCLUDE CAP AND THRUST BLOCKS ON THE ABANDONED MAIN.
2. HYDRANT REMOVAL SHALL INCLUDE REMOVAL OF EXISTING HYDRANT, 6" WATER MAIN, TEE, 6" GATE VALVE, AND 2 PLUGS FOR THE ABANDONED WATER MAIN (TYP).
3. WATER SERVICE LATERALS ARE SHOWN AS A GRAPHICAL REPRESENTATION ONLY. ACTUAL LOCATIONS TO BE DETERMINED PRIOR TO CONSTRUCTION.

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
237	WATER WORK LEGEND
108 - 162	CROSS SECTIONS



CALCULATED JAM
CHECKED CML

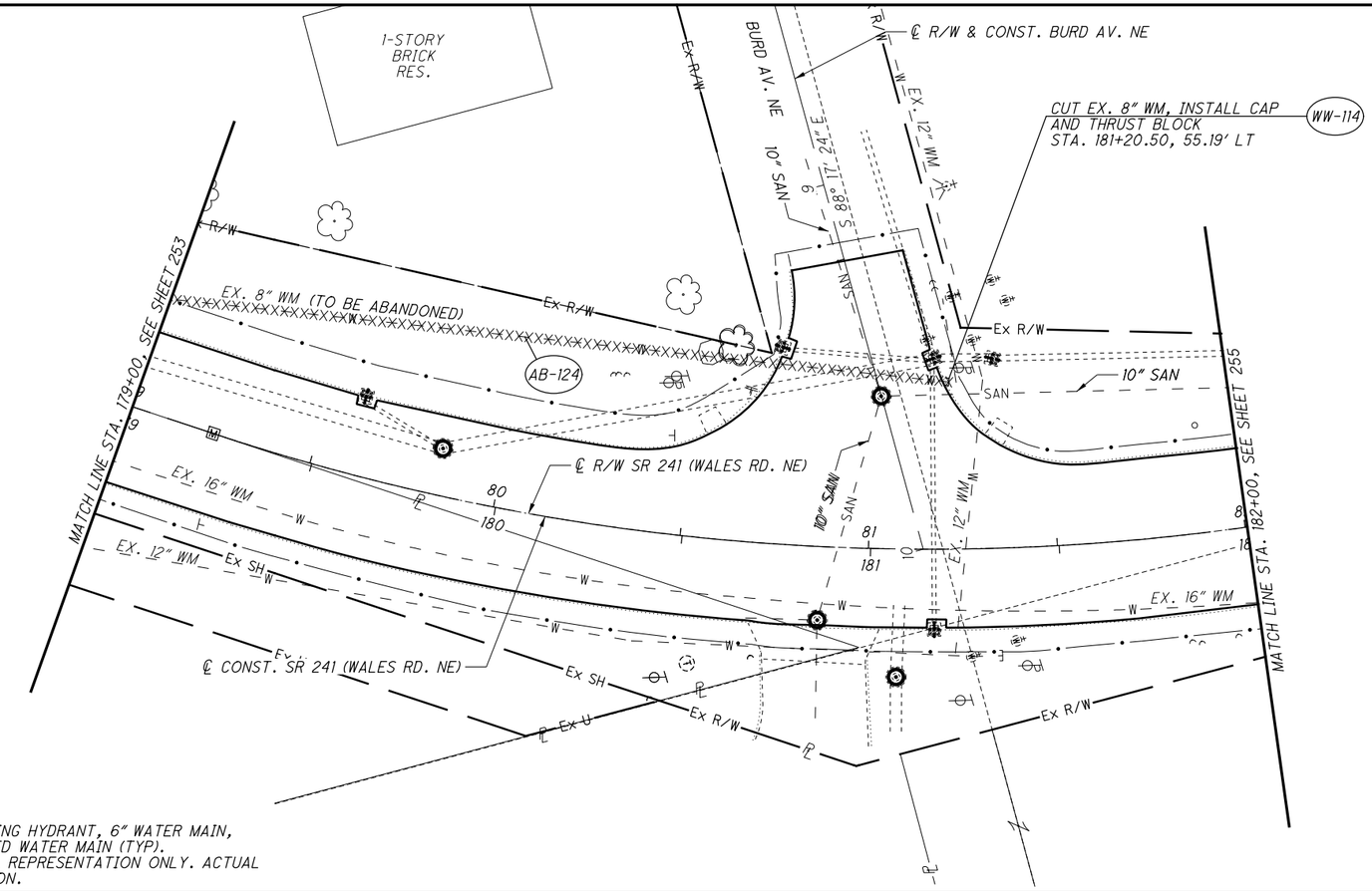
HORIZONTAL SCALE IN FEET
0 10 20 40

WATER WORK - SR 241 (WALES RD. NE)
STA. 176+00 TO STA. 179+00

STA-241-9.71

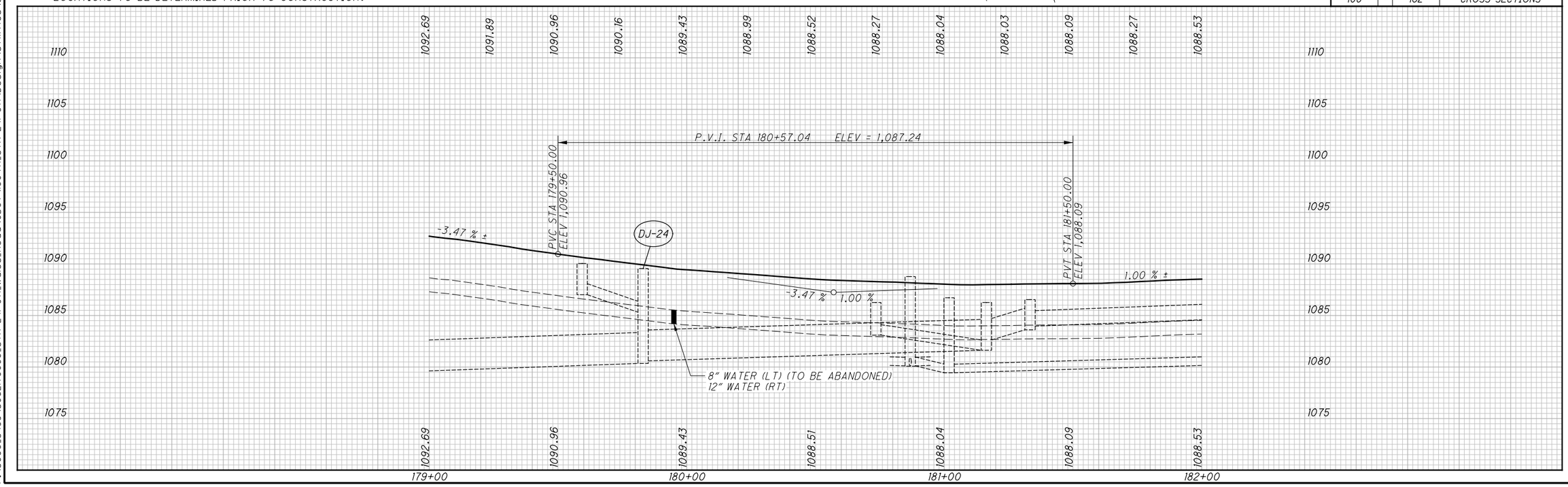
253
395

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NOTES:
1. WATER MAIN REMOVALS SHALL INCLUDE CAP AND THRUST BLOCKS ON THE ABANDONED MAIN.
2. HYDRANT REMOVAL SHALL INCLUDE REMOVAL OF EXISTING HYDRANT, 6" WATER MAIN, TEE, 6" GATE VALVE, AND 2 PLUGS FOR THE ABANDONED WATER MAIN (TYP).
3. WATER SERVICE LATERALS ARE SHOWN AS A GRAPHICAL REPRESENTATION ONLY. ACTUAL LOCATIONS TO BE DETERMINED PRIOR TO CONSTRUCTION.

CROSS REFERENCES			
SHEET NO.			DESCRIPTION
237			WATER WORK LEGEND
108	-	162	CROSS SECTIONS



HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JAM
CHECKED CML

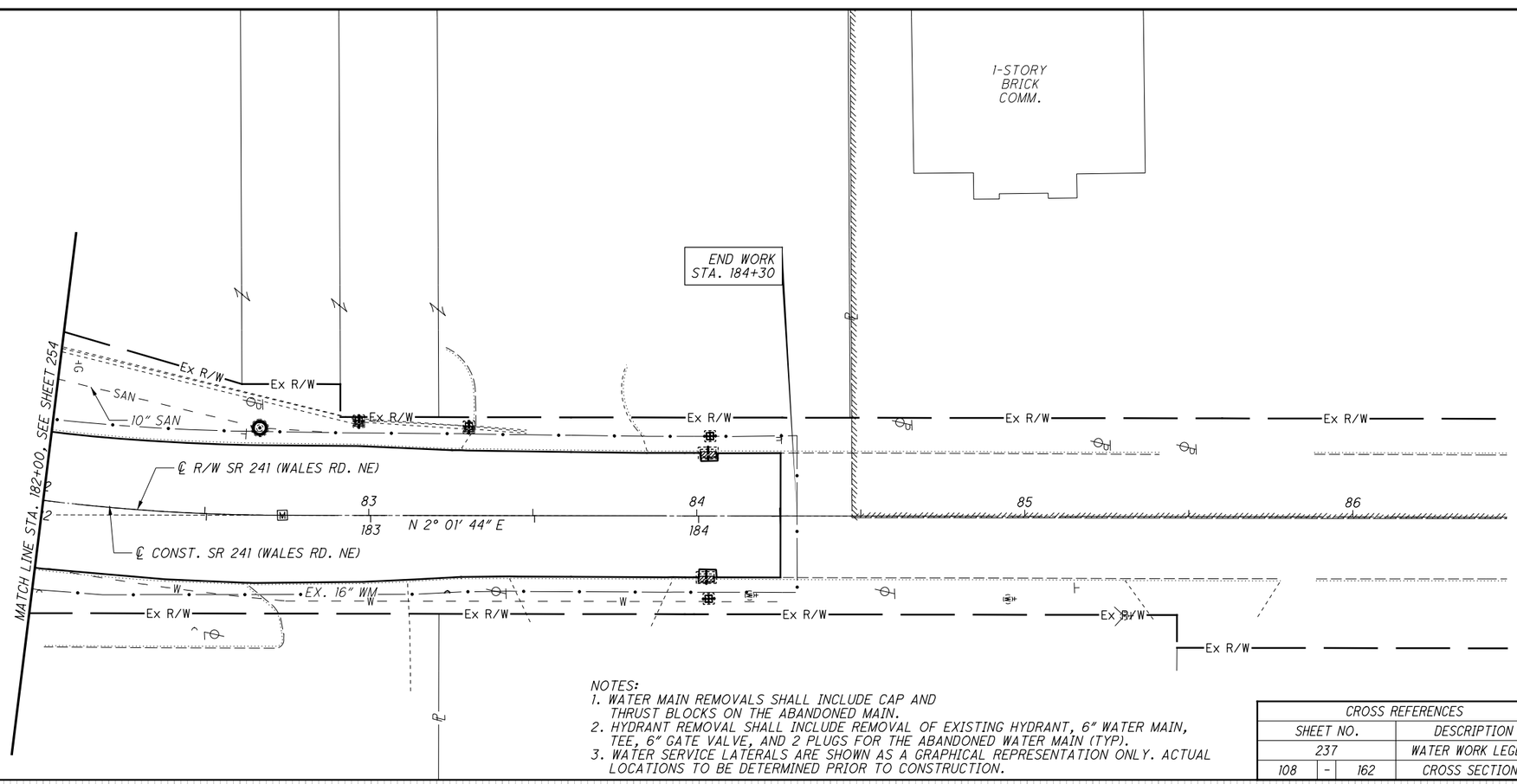
WATER WORK - SR 241 (WALES RD. NE)
STA. 179+00 TO STA. 182+00

STA-241-9.71

254
395

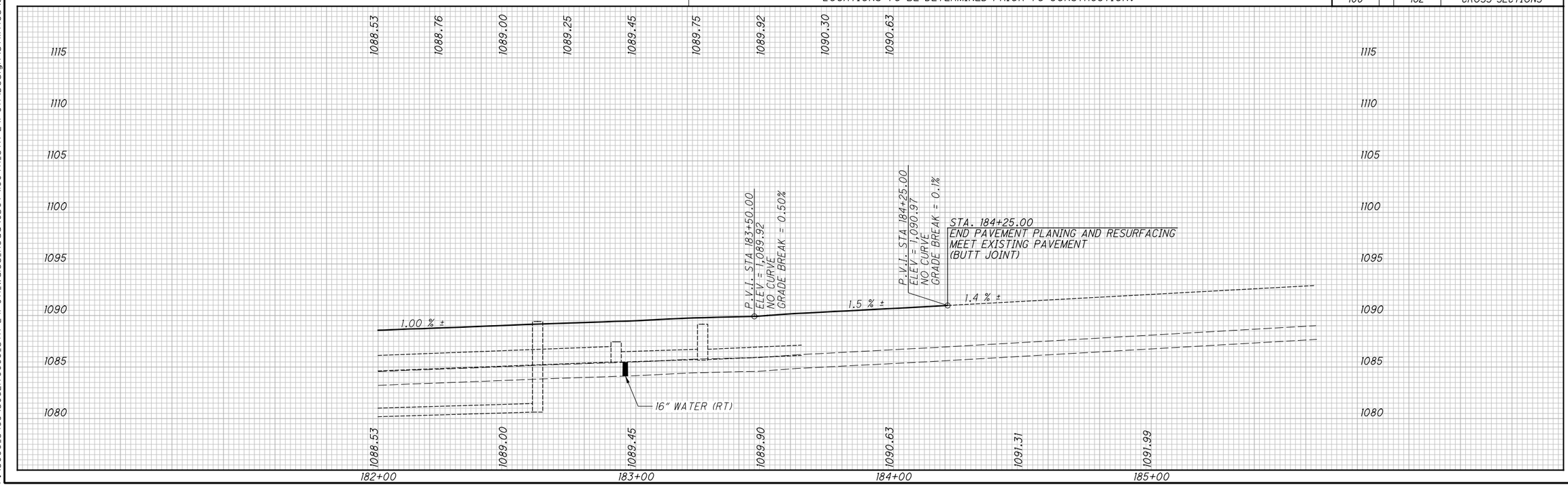
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NOTES:
1. WATER MAIN REMOVALS SHALL INCLUDE CAP AND THRUST BLOCKS ON THE ABANDONED MAIN.
2. HYDRANT REMOVAL SHALL INCLUDE REMOVAL OF EXISTING HYDRANT, 6" WATER MAIN, TEE, 6" GATE VALVE, AND 2 PLUGS FOR THE ABANDONED WATER MAIN (TYP).
3. WATER SERVICE LATERALS ARE SHOWN AS A GRAPHICAL REPRESENTATION ONLY. ACTUAL LOCATIONS TO BE DETERMINED PRIOR TO CONSTRUCTION.

CROSS REFERENCES			
SHEET NO.			DESCRIPTION
237			WATER WORK LEGEND
108	-	162	CROSS SECTIONS

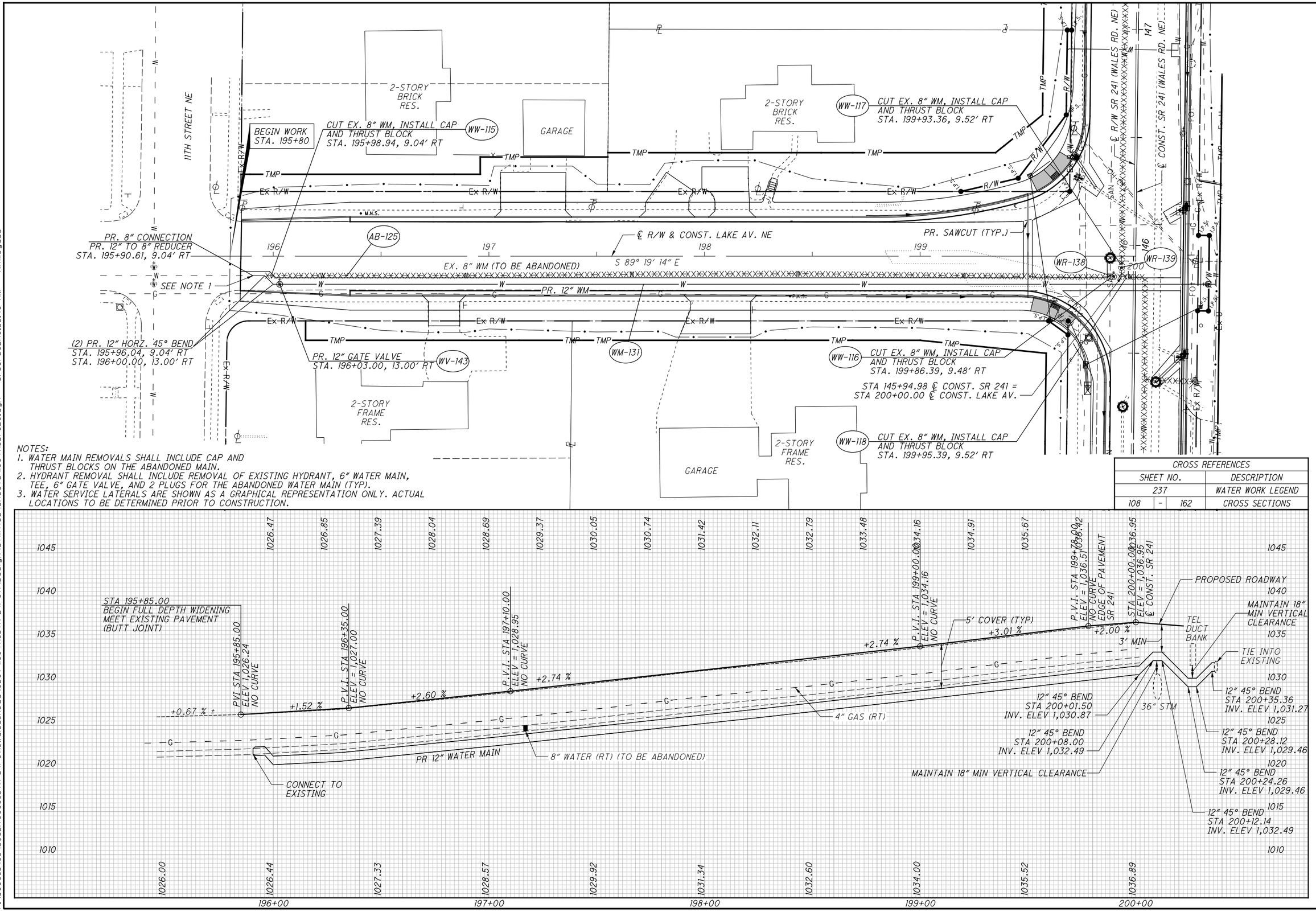


HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED JAM
CHECKED CML

WATER WORK - SR 241 (WALES RD. NE)
STA. 182+00 TO END

STA-241-9.71



NOTES:
1. WATER MAIN REMOVALS SHALL INCLUDE CAP AND THRUST BLOCKS ON THE ABANDONED MAIN.
2. HYDRANT REMOVAL SHALL INCLUDE REMOVAL OF EXISTING HYDRANT, 6" WATER MAIN, TEE, 6" GATE VALVE, AND 2 PLUGS FOR THE ABANDONED WATER MAIN (TYP).
3. WATER SERVICE LATERALS ARE SHOWN AS A GRAPHICAL REPRESENTATION ONLY. ACTUAL LOCATIONS TO BE DETERMINED PRIOR TO CONSTRUCTION.

CROSS REFERENCES	
SHEET NO.	DESCRIPTION
237	WATER WORK LEGEND
108 - 162	CROSS SECTIONS

CALCULATED JAM
CHECKED CML

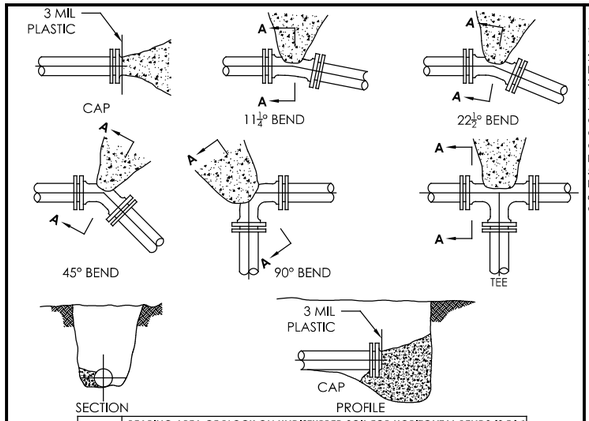
HORIZONTAL SCALE IN FEET
0 10 20 40

WATER WORK - LAKE AVE. NE
BEGIN TO END

STA-241-9.71

256
395

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FITTINGS SIZES	BEARING AREA OF BLOCK ON UNDISTURBED SOIL FOR HORIZONTAL BENDS (S.F.) *				
	TEES & ENDS	90° BEND	45° BEND	22½° BEND	11¼° BEND
4	1.5	2	1.5	1.5	1.5
6	3	4	2	1.5	1.5
8	4.5	7	3.5	2	1.5
10	7.5	10.5	5	3	1.5
12	10.5	15	8	4	2.5

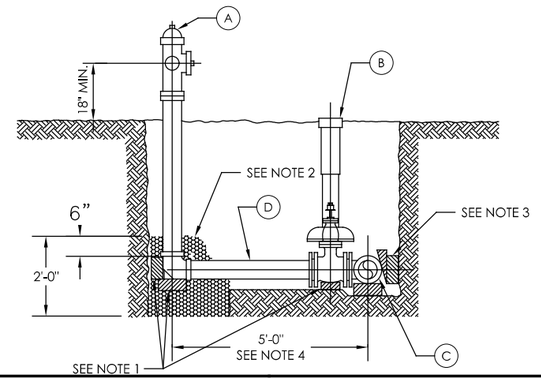
* AND VERTICAL BENDS UP

NOTES:
1). ALL BLOCKING SHALL BE POURED AGAINST FIRM, UNDISTURBED SOIL.
2). BEARING AREA AT FITTINGS NOT GIVEN IN BEARING TABLE SHALL BE AS DIRECTED BY THE ENGINEER.
3). WHEN POURING AGAINST PLUGS AND BLIND FLANGES SET A PIECE OF 3 MIL PLASTIC AGAINST FITTING, TO KEEP CONCRETE OFF BOLTS.
4). LAYOUT TO BE APPROVED BY ENGINEER PRIOR TO CONCRETE POUR.
5). BASED ON 150 PSI STATIC PRESSURE PLUS 50 PSI WATER HAMMER AND 2000 PSF SOIL BEARING.
6). PIPE JOINTS AND BOLTS MUST BE ACCESSIBLE AFTER CONCRETE IS POURED.
7). THRUST BLOCK DETAILS ARE SHOWN AS MINIMUM AND MAY REQUIRE ADDITIONAL BLOCKING.
8). CONCRETE CINDER BLOCKS MAY BE USED IN PLACE OF POURED CONCRETE FOR WATER MAINS 12" AND SMALLER.

CONCRETE THRUST BLOCKING DETAILS

NOTES:
1. SOLID CONCRETE BLOCK TO BE USED UNDER ALL TEES, VALVES, ALSO BEHIND AND UNDER HYDRANT ELBOW.
2. CLEAN CRUSHED STONE FILL AROUND HYDRANT DRAIN TO A DEPTH OF 2'-0".
3. SOLID CONCRETE BLOCK WITH OAK WEDGES. (BRACED AGAINST UNDISTURBED SOIL)
4. THE DISTANCE FROM THE CENTERLINE OF MAIN TO THE CENTERLINE OF HYDRANT WILL BE 5' EXCEPT WHEN INDIVIDUAL CIRCUMSTANCES PROVE IT TO BE INFEASIBLE. WHEN SUCH CIRCUMSTANCES OCCUR, THE LENGTH OF THE LEAD WILL BE NOTED ON THE DRAWINGS WITH THE STATIONING.
5. ALL HYDRANTS SHALL STAND PLUMB AND HAVE PUMPER NOZZLE FACING THE CURB.
6. PUMPER NOZZLE SHALL BE OUTFITTED WITH 5" STORZ STEAMER CONNECTION.

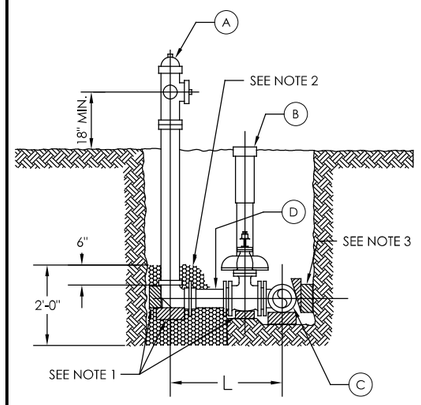
ITEM	DESCRIPTION
A	HYDRANT ASSEMBLY PER STANDARDS BY AQUA OHIO INC.
B	6" M.J. GATE VALVE, (3) PIECE VALVE BOX
C	ANCHOR TEE (CLOW F-1217)
D	6" DUCTILE IRON PIPE WITH MEGA-LUGS FOR RETAINERS



TYPICAL FIRE HYDRANT ASSEMBLY TYPE I

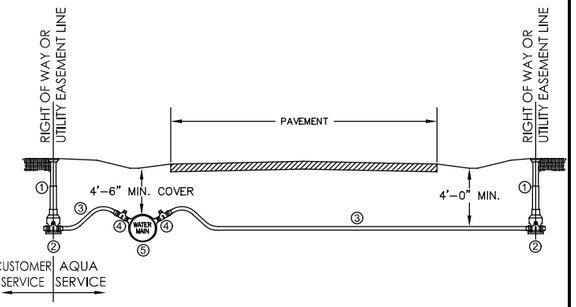
NOTES:
1. SOLID CONCRETE BLOCK TO BE USED UNDER ALL TEES, VALVES, ALSO BEHIND AND UNDER HYDRANT ELBOW.
2. CLEAN CRUSHED STONE FILL AROUND HYDRANT DRAIN TO A DEPTH OF 2'-0".
3. SOLID CONCRETE BLOCK WITH OAK WEDGES. (BRACED AGAINST UNDISTURBED SOIL)
4. ALL HYDRANTS SHALL STAND PLUMB AND HAVE PUMPER NOZZLE FACING THE CURB.
5. PUMPER NOZZLE SHALL BE OUTFITTED WITH 5" STORZ STEAMER CONNECTION.

ITEM	DESCRIPTION
A	HYDRANT ASSEMBLY PER STANDARDS BY AQUA OHIO INC.
B	6" M.J. GATE VALVE, (3) PIECE VALVE BOX
C	ANCHOR TEE (CLOW F-1217)
D	M.J. ANCHOR COUPLING x 12"L



DISTANCE FROM MAIN TO HYDRANT	
MAIN LINE SIZE	L - MIN. DISTANCE (INCHES)
6"	38"
8"	40"
10"	42"
12"	43"
16"	46"
20"	58"
24"	61"

TYPICAL FIRE HYDRANT ASSEMBLY TYPE II

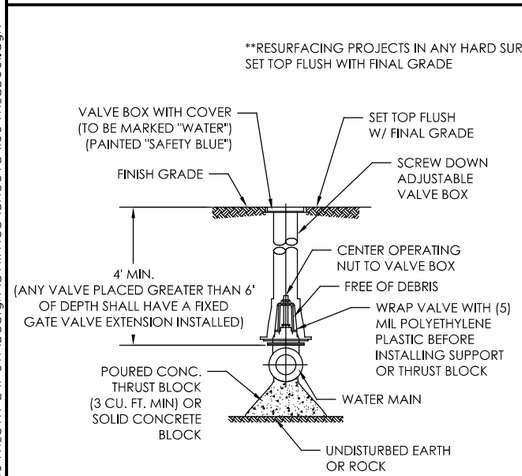


FITTINGS AND TYPE OF MATERIALS REQUIRED BY AQUA OHIO, INC.

1. CURB BOX
2. 1" BRASS CURB STOP
3. SERVICE LINE
4. 1" BRASS CORPORATION STOP 4
5. MAXIMUM DIRECT TAP SHALL BE 1" FOR 8" AND 12" DIA. D.I.P. AND 2" FOR 16" DIA. D.I.P. BRASS SERVICE SADDLE WITH STAINLESS STEEL STRAP TO BE USED OTHERWISE

*** RESIDENTS TO BE NOTIFIED BEFORE SHUT OFF**

AQUA OHIO, INC. TYPICAL SERVICE LINE INSTALLATION



GATE VALVE INSTALLATION DETAIL

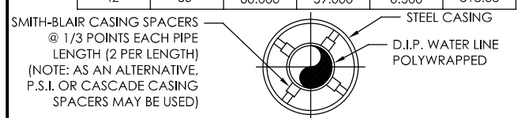
1. ALL VALVE BOXES MUST BE KEPT FREE OF DEBRIS DURING CONSTRUCTION.

~PIPE CROSSING DATA SHEET~

PIPE DATA	CARRIER PIPE	CASING PIPE
MATERIAL	DUCTILE IRON	STEEL
PROCESS OF MANUFACTURE	SPIN CAST	ELECTRIC
WELD SPECIFICATION	ANSI.A21.51	ASTM A53
GRADE OF CLASS	SEE SPEC	GRADE B TEST
PRESSURE	SEE SPEC	35,000 PSI, YIELD
TYPE OF JOINT	PUSH ON FIELD LOK RUBBER GASKET	WELDED
TYPE OF COATING	ASPHALTIC PRIMER	NONE
CATHODIC PROTECTION	NONE	NONE
SEAL AT END OF CASING	N/A	MOLDED SYN. RUBBER END SEAL
METHOD OF INSTALLATION	PUSH ON SKIDS	JACK AND BORE

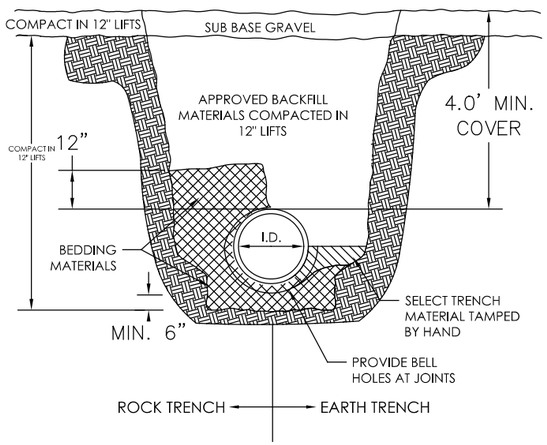
CASING PIPE SIZING

WATER MAIN SIZE	NOMINAL SIZE OF CASING PIPE	OUTSIDE DIAMETER	INSIDE DIAMETER	WALL THICKNESS (MIN.)	WEIGHT PER FOOT
6"	16"	16.000	15.250	0.375	62.64
8"	18"	18.000	17.250	0.375	70.65
12"	24"	24.000	23.000	0.500	125.61
16"	30"	30.000	29.000	0.500	157.68
20"	36"	36.000	35.000	0.500	189.75
24"	42"	42.000	41.000	0.500	221.82
30"	48"	48.000	47.000	0.500	253.89
36"	54"	54.000	53.000	0.500	285.96
42"	60"	60.000	59.000	0.500	318.03



FILL CASING PIPE WITH SAND AFTER CARRIER PIPE IS IN PLACE. ENDS TO BE CLOSED OFF SUFFICIENTLY TO RETAIN THE SAND. FIELD-LOK GASKETS TO BE USED AT ALL PIPE JOINTS WITHIN CASING PIPE.

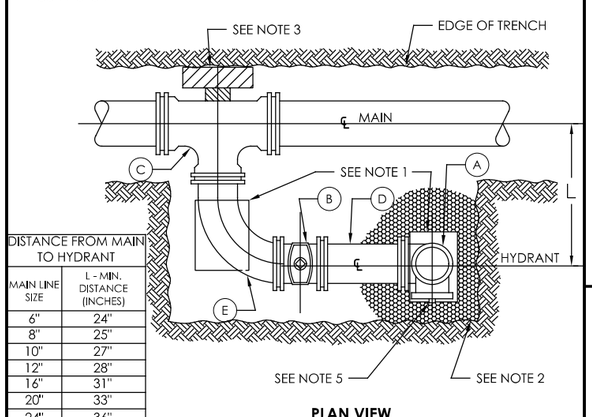
CASING PIPE DETAIL



TYPICAL TRENCH DETAIL OUTSIDE OF PAVEMENT

NOTES:
1. SOLID CONCRETE BLOCK TO BE USED UNDER ALL TEES, BENDS, ALSO BEHIND AND UNDER HYDRANT ELBOW.
2. CLEAN CRUSHED STONE FILL AROUND HYDRANT DRAIN TO A DEPTH OF 2'-0".
3. SOLID CONCRETE BLOCK WITH OAK WEDGES. (BRACED AGAINST UNDISTURBED SOIL)
4. THE DISTANCE FROM THE CENTERLINE OF MAIN TO THE CENTERLINE OF HYDRANT WILL BE 5' EXCEPT WHEN INDIVIDUAL CIRCUMSTANCES PROVE IT TO BE INFEASIBLE. WHEN SUCH CIRCUMSTANCES OCCUR, THE LENGTH OF THE LEAD WILL BE NOTED ON THE DRAWINGS WITH THE STATIONING.
5. ALL HYDRANTS SHALL STAND PLUMB AND HAVE PUMPER NOZZLE FACING THE CURB.
6. PUMPER NOZZLE SHALL BE OUTFITTED WITH 5" STORZ STEAMER CONNECTION.

ITEM	DESCRIPTION
A	HYDRANT ASSEMBLY PER STANDARDS BY AQUA OHIO, INC.
B	8" M.J. GATE VALVE, (3) PIECE VALVE BOX
C	STANDARD M.J. TEE
D	M.J ANCHOR COUPLING (F-1211)
E	M.J ANCHOR ELBOW (F-1218)



DISTANCE FROM MAIN TO HYDRANT	
MAIN LINE SIZE	L - MIN. DISTANCE (INCHES)
6"	24"
8"	25"
10"	27"
12"	28"
16"	31"
20"	33"
24"	36"

PLAN VIEW

TYPICAL FIRE HYDRANT ASSEMBLY TYPE III

ITEM SPECIAL - NON-REINFORCED CONCRETE FOR VERTICAL CLEARANCE OF WATER MAIN

THE CONTRACTOR SHALL FIELD VERIFY THE VERTICAL CLEARANCE BETWEEN THE PROPOSED 12 INCH STORM PIPE AND THE EXISTING 16 INCH WATER MAIN AT STA. 147+50, 17.5' RT. IF THE VERTICAL CLEARANCE IS NOT AT LEAST 18 INCHES, THE CONTRACTOR SHALL ENCASE THE EXISTING WATER MAIN IN 12" THICK NON-REINFORCED CONCRETE, AS APPROVED BY THE ENGINEER. THE ENCASEMENT SHALL CLEAR THE CROSSING BY 12" ON BOTH SIDES. COST FOR ALL WORK, LABOR, EQUIPMENT, AND MATERIALS SHALL BE INCLUDED IN THE UNIT PRICE FOR THIS ITEM. THE FOLLOWING QUANTITY HAS BEEN CARRIED TO THE GENERAL SUMMARY FOR USE AS DIRECTED BY THE ENGINEER:

SPECIAL, NON-REINFORCED CONCRETE FOR VERTICAL CLEARANCE OF WATER MAIN 2 CY

PAVEMENT RESTORATION FOR PIPE INSTALLATIONS AND/OR REMOVALS

THE FOLLOWING ITEM HAS BEEN PROVIDED FOR PAVEMENT RESTORATION FOLLOWING INSTALLATION AND/OR REMOVAL OF WATER PIPES:

253, PAVEMENT REPAIR, MISC.: WATER MAIN TRENCH REPAIR

WORK SHALL BE PERFORMED IN ACCORDANCE WITH ITEM 253 - PAVEMENT REPAIR AS DESCRIBED IN THE GENERAL NOTE ON SHEET 12, EXCEPT THAT THE ABOVE ITEM INCLUDES A PAVEMENT RESTORATION AREA THAT INCLUDES THE TRENCH WIDTH PLUS ONE FOOT ON EACH SIDE OF THE TRENCH.

PROVIDE ANY MATERIALS USED OUTSIDE THE LIMITS STATED ABOVE AT NO ADDITIONAL COST.

CALCULATED JAM CHECKED CML

WATER WORK - AQUA DETAILS

STA-241-9.71

257 395

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- FIELD-LOK GASKETS OR OTHER APPROVED PIPE RESTRAINT SYSTEMS WILL BE USED TO RESTRAIN PIPE, OR WITH PRIOR APPROVAL BY AQUA FOR THE FOLLOWING SITUATIONS:
  1. FOR VERTICAL BENDS IN LIEU OF DEAD-MAN CONCRETE RESTRAINT
  2. FOR VERTICAL AND HORIZONTAL BENDS INSTALLED IN POOR SOIL CONDITIONS
  3. FOR HYDRANTS OR BENDS WITH SLOPING GROUND BEHIND THE POINT OF THRUST

NOTE: MEG-A-LUGS OR APPROVED EQUAL SHALL BE USED TO RESTRAIN FITTINGS AND VALVES

- THRUST BLOCKS WILL NORMALLY BE USED FOR ALL HORIZONTAL BENDS. THE CONTRACTOR WILL GET WRITTEN PRIOR APPROVAL FROM AQUA TO SUBSTITUTE A RESTRAINT SYSTEM IN LIEU OF THRUST BLOCKING FOR HORIZONTAL BENDS.

- CONTRACTOR WILL SUPPLY ALL FIELD-LOK GASKETS

LINEAR FEET OF MECHANICAL PIPE RESTRAINT REQUIRED (EITHER SIDE OF FITTING)

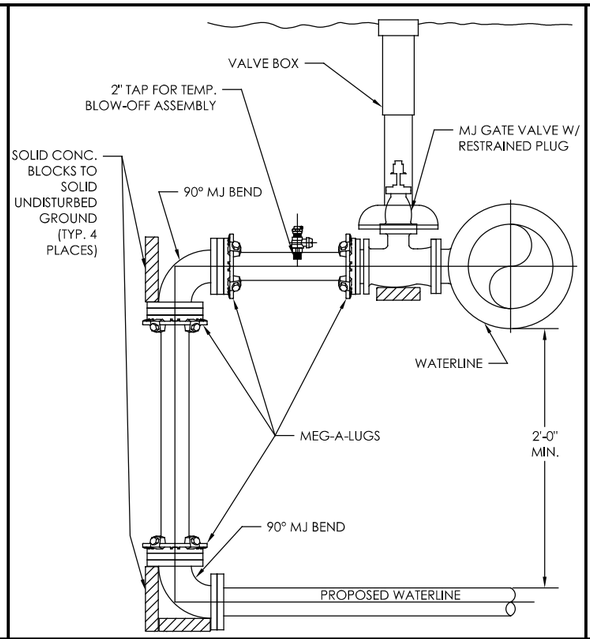
PIPE DIA. (IN.)	DEAD END	90°	45°	22.5°	11.25°	VERT. UP	VERT. DOWN	TEE BRANCH
4	36	16	8	0	0	4	16	18
6	60	28	13	0	0	10	24	35
8	108	54	18	0	0	18	36	90
12	162	90	36	18	0	36	72	144
16	214	118	49	23	12	12	21	200
24	304	165	68	33	16	16	30	289

CONSTRUCTION CRITERIA:

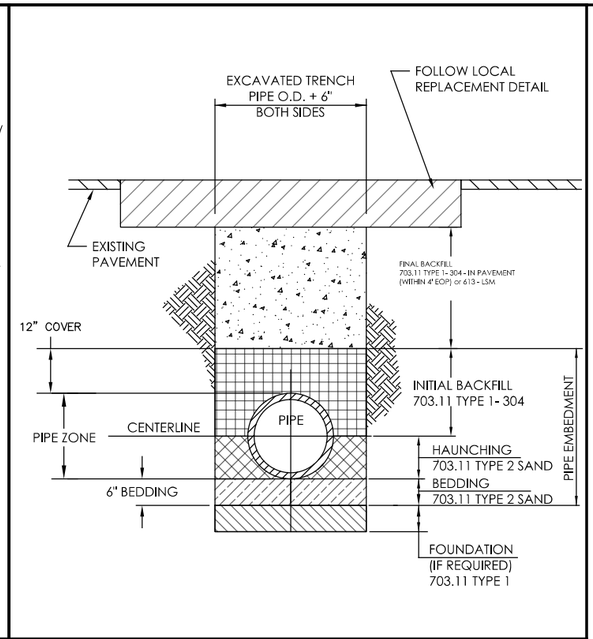
1. FOR WORKING AND/OR TEST PRESSURES< 150 PSI.
2. TYPE 2 TRENCH WITH MINIMUM OF 4.0 FT. OF COVER
3. POLYWRAPPED PIPE
4. 18 FT. PIPE LENGTHS
5. FITTINGS RESTRAINED WITH MEG-A-LUGS OR APPROVED EQUAL

NOTE: IF FIELD CONDITIONS DO NOT CONFORM TO THE NOTED CONSTRUCTION CRITERIA, THE CONTRACTOR SHALL GET WRITTEN APPROVAL FROM AQUA FOR THE NUMBER OF RESTRAINED JOINTS.

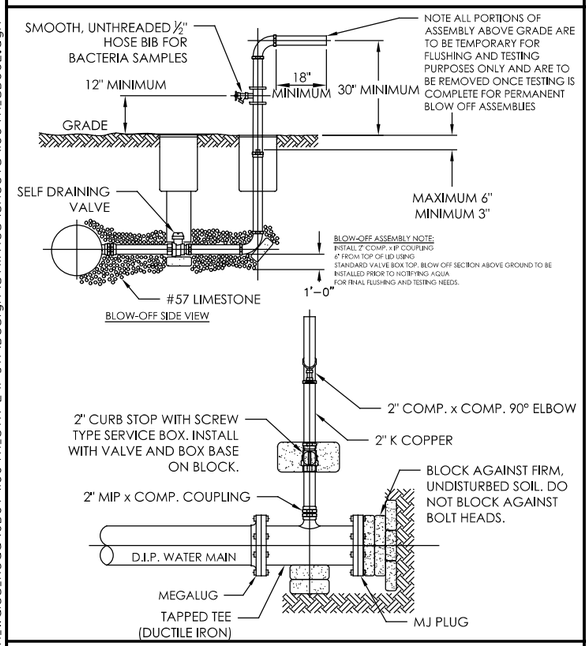
THRUST RESTRAINT WITH FIELD-LOK GASKETS



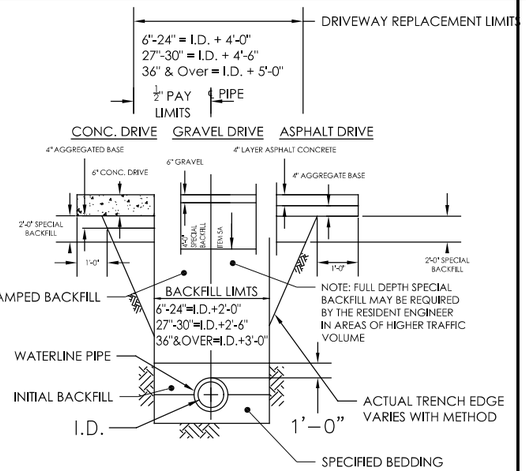
BACKSIDE TAP DETAIL



TYPICAL TRENCH DETAIL INSIDE OF PAVEMENT



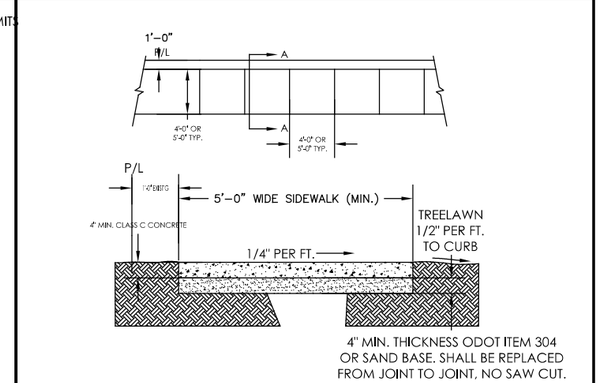
2" ADAPTOR & BLOW OFF ASSEMBLY



DRIVEWAY RESTORATIONS SHALL BE AS FOLLOWS: CONCRETE DRIVEWAYS WILL BE REPLACED FROM THE NEAREST EXISTING JOINT TO THE STREET, FULL SLAB REPLACEMENT. ASPHALT DRIVEWAYS WILL BE REPLACED FROM THE FARTHEST TRENCH CUT LINE TO THE STREET. REPAIRING ONLY THE TRENCH WIDTH CUT ACROSS A DRIVEWAY IS NOT ACCEPTABLE.

NOTE: THE CONTRACTOR SHALL MAINTAIN ALL DRIVEWAYS PRIOR TO DRIVEWAY REPLACEMENT.

DRIVEWAY ~ PRIVATE DRIVE RESTORATION



1. EXPANSION JOINTS OF APPROVED PREFORMED ASPHALT FIBRE, 1/4" THICK SHALL BE PROVIDED AT INTERVALS OF NOT MORE THAN TWENTY-FIVE FEET AND AS DEEMED NECESSARY, SUCH AS AT MANHOLES OR UTILITY POLES BETWEEN THE SIDEWALK AND ADJOINING STRUCTURES.
2. MINIMUM FALL FROM TOP OF SIDEWALK TO TOP OF CURB IS 6".
3. SIDEWALK THICKNESS SHALL BE 6" MINIMUM AT DRIVE APPROACHES.
4. CONCRETE SHALL BE 4000 PSI @ 28 DAYS CONFORMING TO ODOT SPECIFICATION #499.

TYPICAL SIDEWALK DETAIL

ITEM 202 - ABANDON MISC.: WATER MAIN ABANDONED IN PLACE

THIS PAY ITEM IS TO ACCOUNT FOR ANY INCIDENTAL REMOVALS AND/OR PLUGGING ENCOUNTERED DURING THE ABANDONMENT OF THE EXISTING WATER MAINS INCLUDING, BUT NOT LIMITED TO, CORPORATION STOPS AND SERVICE LINES.

ITEM SPECIAL - CUT AND PLUG EXISTING X" WATER LINE
ITEM 638 - WATER WORK MISC.: CUT AND PLUG EXISTING X" WATER LINE

THE EXISTING WATER MAINS REMAINING IN PLACE ARE TO BE BULKHEADED WITH CONCRETE OR SAKRETE AT LEAST 24" INTO THE END OF THE EXISTING PIPE OR BULKHEADED WITH 12" OF BRICK AND 12" OF CONCRETE/SAKRETE.

MATERIAL SPECIFICATION

DUCTILE IRON PIPE

TYPE REQUIRED: PUSH-ON JOINTS, CEMENT LINED, THICKNESS CLASS 52 FOR 4 INCH THROUGH 16 INCH, MANUFACTURING STANDARDS AWWA C150 AND C151. POLYETHYLENE ENCASEMENT SHALL BE INSTALLED ON ALL DUCTILE PIPE AND FITTINGS.

DUCTILE IRON FITTINGS

(TEES, CROSSES, BENDS, REDUCERS, SLEEVES, COUPLINGS AND PLUGS.) TYPE REQUIRED: MECHANICAL JOINT, TEES, CROSSES, BENDS AND REDUCERS ARE TO BE CEMENT LINED; WORKING PRESSURE RATING 250 PSI, MANUFACTURING STANDARDS ANSI A21.53, ANSI 21.4 AND ANSI A21.10. COMPACT STYLE IS ACCEPTABLE. RETAINER GLANDS SHALL BE INSTALLED ON ALL MECHANICAL JOINTS.

FIRE HYDRANTS

TYPE REQUIRED: POST TYPE, BREAKABLE FLANGE DESIGN FOR TRAFFIC COLLISIONS, 5 1/4" DIAMETER MAIN VALVE, ONE 5" STORZ CONNECTION AND TWO 2 1/2" HOSE NOZZLES, 6" MJ INLET, MAIN VALVE TO OPEN LEFT, DIRECTION OF OPENING TO BE INDICATED WITH ARROW CAST ON HYDRANT, TO BE DESIGNED FOR 5 FOOT TRENCH, NATIONAL STANDARD THREADS ON NOZZLES, O-RING PACKING PREFERRED, TYPE 304 STAINLESS STEEL BOLTS AND NUTS, OPERTAING NUT AND NUT ON CAPS: 1 1/2" PENTAGON, COLOR YELLOW PAINT ON BODY TRIMMED WITH RED PAINT ON BONNET AND CAPS, AWWA STANDARD C502, MUELLER CENTURION A423-539382, US PIPE M-94 OR CLOW MEDALLION.

TAPPING VALVE

TYPE REQUIRED: RESILIENT SEAT, IRON BODY, STAINLESS STEEL BONNET BOLTS AND NUTS, MECHANICAL JOINT ACCESSORIES, NON-RISING STEM, FOR UNDERGROUND SERVICE, O-RING PACKING PREFERRED, OPEN RIGHT (CLOCKWISE) 2 INCH SQUARE OPERATING NUT, MANUFACTURING STANDARDS AND PRESSURE RATINGS AWWA SPECIFICATION C500.

4" THROUGH 12" GATE VALVES

TYPE REQUIRED: RESILIENT SEAT, IRON BODY, STAINLESS STEEL BONNET BOLTS AND NUTS, MECHANICAL JOINT ACCESSORIES, NON-RISING STEM, FOR UNDERGROUND SERVICE, O-RING PACKING PREFERRED, OPEN RIGHT (CLOCKWISE), 2 INCH SQUARE OPERATING NUT, MANUFACTURING STANDARDS AND PRESSURE RATINGS AWWA C509, MUELLER A-2360 OR EQUAL.

VALVE BOXES

TYPE REQUIRED: TWO PIECE, CAST IRON, SCREW TYPE FOR ADJUSTABLE HEIGHT, HEIGHT RANGE TO BE APPROXIMATELY 36 TO 60 INCHES. THEY ARE TO INCLUDE A WELL FITTING CAST IRON LID, THE WORD "WATER" TO BE CAST ON LID.

2" WATER MAIN

2" WATER MAIN SHALL BE SOFT DRAWN TYPE "K" COPPER TUBING OR HIGH DENSITY POLYETHYLENE PLASTIC (HDPE), COPPER TUBE SIZE, AS CALLED OUT ON THE PLAN. IF HDPE IS USED, IT SHALL BE 200 PSI, SDR 9 WITH MARKING TAPE AND A 12 GAGE COPPER TRACER WIRE LAID IN THE TRENCH. BRASS COMPRESSION FITTINGS SHALL BE USED. STAINLESS STEEL STIFFENERS ARE NECESSARY AT EACH JOINT.

POLYETHYLENE ENCASEMENT

TYPE REQUIRED: EIGHT MIL THICK POLYETHYLENE TUBE MANUFACTURED IN ACCORDANCE WITH ANSI/AWWA C105/A21.5. POLYETHYLENE ADHESIVE TAPE, 1 1/2" WIDE IS TO SEAL JOINTS.

BLOW OFF ASSEMBLIES

TYPE REQUIRED: KUPFERLE FOUNDRY TF500 OR APPROVED EQUAL. INSTALL VALVE BOX. INSTALL 2" CURB STOP WITH CURB BOX AHEAD OF EACH BLOW OFF.

ITEM 202 - MANHOLE REMOVED, AS PER PLAN

THIS ITEM INCLUDES ALL WORK, LABOR, EQUIPMENT, MATERIALS, AND INCIDENTALS FOR THE REMOVAL OF THE WATER MANHOLE/VAULT AT STA. 149+64.34, 6' LT. THIS ITEM ALSO INCLUDES THE REMOVAL OF 3 VALVES WITHIN THE MANHOLE/VAULT.

CALCULATED JAM CHECKED CML

WATER WORK - AQUA DETAILS

STA-241-9.71

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GENERAL CONSTRUCTION NOTES:

1. PRE-CONSTRUCTION MEETING WILL BE SCHEDULED PRIOR TO CONSTRUCTION WITH ALL APPROVING AGENCIES INVITED.
2. PRE-CONSTRUCTION VIDEOTAPE WILL BE MADE TO DOCUMENT EXISTING CONDITIONS PRIOR TO CONSTRUCTION. THIS WORK SHALL BE INCIDENTAL TO THE WATER MAIN WORK.
3. THE CONTRACTOR SHALL COORDINATE THE CROSSING OF RESIDENTIAL DRIVEWAYS TO MAINTAIN ACCESS.
4. TRAFFIC CONTROL WILL CONFORM TO STATE AND LOCAL REGULATIONS.
5. CONTRACTOR WILL PROVIDE AQUA WITH A SET OF AS BUILT DRAWINGS ONCE ALL WATER WORK RELATED WORK IS COMPLETED. THIS WILL BE INCLUDED IN THE LUMP SUM PRICE BID FOR ITEM SPECIAL, AS-BUILT CONSTRUCTION PLANS.

WHEN A LEAD WATER SERVICE IS UNCOVERED (CUSTOMER'S OR AQUA'S), THE CONTRACTOR SHALL NOTIFY THE AQUA CONSTRUCTION INSPECTOR FOR COORDINATION OF WORK.

PROHIBITION ON USING CUT-OFF SAWS. CONTRACTOR IS PROHIBITED FROM USING CUT-OFF SAWS TO PERFORM SERVICES FOR AQUA WHILE IN THE EXCAVATION TRENCH. A CUT-OFF SAW IS A POWER TOOL WHICH IS TYPICALLY USED TO CUT HARD MATERIALS, SUCH AS METALS. THE CUTTING ACTION IS PERFORMED BY AN ABRASIVE DISC, SIMILAR TO A GRINDING WHEEL OR A DIAMOND TIP STEEL BLADE. THESE TYPES OF SAWS CAN BE GASOLINE, HYDRAULIC OR PNEUMATIC POWERED. THIS TYPE OF SAW IS SOMETIMES REFERRED TO AS A DEMO SAW.

ENVIRONMENTAL WORK INVOLVING PETROLEUM CONTAMINATED SOILS AND GROUNDWATER

ENVIRONMENTAL STUDIES HAVE SHOWN THAT PETROLEUM-CONTAMINATED MATERIALS WILL BE ENCOUNTERED IN EXCAVATIONS ON OR ABUTTING THE PROPERTY AT 145 WALES ROAD (STA. 104+84 TO STA. 104+99), WHICH IS IN THE AREA OF CUT FOR WATER MAIN CONSTRUCTION. THE FOLLOWING QUANTITIES ARE INCLUDED FOR PAYMENT BY AQUA OHIO FOR REMEDIATION OF PETROLEUM CONTAMINATED SOILS AND GROUNDWATER. SEE THE PLAN NOTE ON SHEET 14 FOR A COMPLETE DESCRIPTION AND PAYMENT FOR THE WORK.

SPECIAL, WORK INVOLVING PETROLEUM CONTAMINATED SOILS	4 TON
690, WORK INVOLVING REGULATED WATER	50 GAL
690, WORK INVOLVING WATER	50 GAL

ITEM SPECIAL & 638 - _____ PAY ITEMS

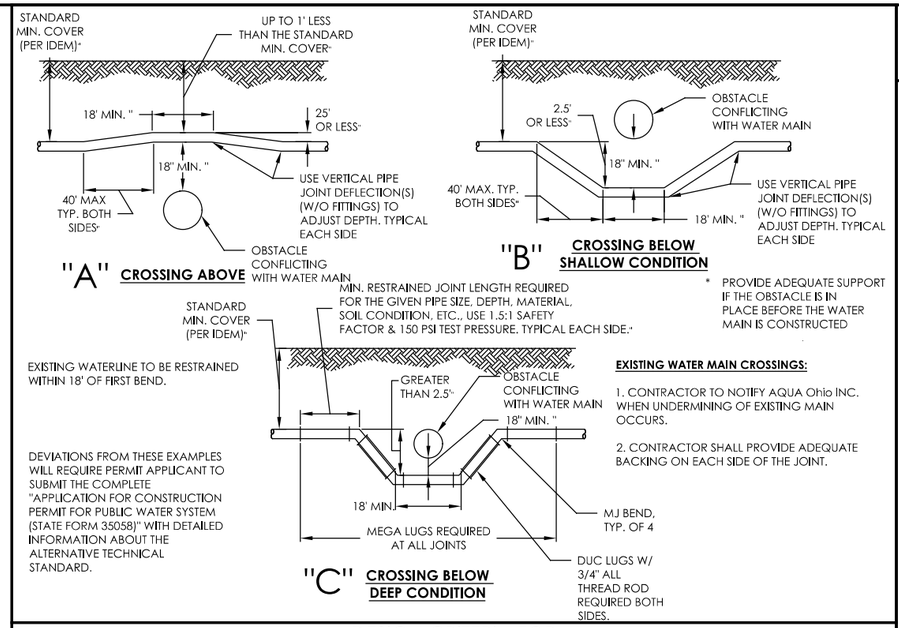
ALL ITEM SPECIAL & 638 PAY ITEMS SHALL BE PERFORMED IN ACCORDANCE WITH ITEM 638 IN THE CMS, EXCEPT AS MODIFIED HEREIN.

AQUA OHIO WILL PROVIDE ALL WATER MAIN PIPE, FIRE HYDRANTS AND ASSEMBLY, 6" HYDRANT VALVES, AND WATER MAIN GATE VALVES TO THE CONTRACTOR AT NO ADDITIONAL COST. THIS AFFECTS THE FOLLOWING PAY ITEMS:

SPECIAL, 6" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS
SPECIAL, 8" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS
SPECIAL, 12" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS
638, WATER WORK, MISC.: 14" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS
SPECIAL, 16" WATER MAIN DIP CLASS 52 PUSH ON JOINTS AND FITTINGS
SPECIAL, 6" GATE VALVE WITH VALVE BOX
SPECIAL, 8" GATE VALVE WITH VALVE BOX
SPECIAL, 12" GATE VALVE WITH VALVE BOX
SPECIAL, 16" GATE VALVE WITH VALVE BOX
SPECIAL, 8"x8" TAPPING SLEEVE, VALVE AND VALVE BOX
638, WATER WORK, MISC.: 14"x12" TAPPING SLEEVE, VALVE AND VALVE BOX
SPECIAL, 16"x6" TAPPING SLEEVE, VALVE AND VALVE BOX
SPECIAL, 16"x8" TAPPING SLEEVE, VALVE AND VALVE BOX
SPECIAL, 16"x12" TAPPING SLEEVE, VALVE AND VALVE BOX
638, WATER WORK, MISC.: 18"x6" TAPPING SLEEVE, VALVE AND VALVE BOX
638, WATER WORK, MISC.: 18"x8" TAPPING SLEEVE, VALVE AND VALVE BOX
638, WATER WORK, MISC.: 20"x8" TAPPING SLEEVE, VALVE AND VALVE BOX
SPECIAL, 6" FIRE HYDRANT

COST FOR ALL WORK, LABOR, EQUIPMENT, AND ANY INCIDENTAL MATERIALS, INCLUDING FITTINGS, BENDS, TEES, CROSSES, MECHANICAL JOINT RESTRAINTS, TAPPING SLEEVES, VALVE BOXES, ETC. SHALL BE INCLUDED IN THE UNIT PRICES BID FOR THESE ITEMS. THE AQUA SUPPLIED MATERIALS WILL BE AVAILABLE FOR CONTRACTOR PICK-UP FROM THE FOLLOWING LOCATION:

D.I. PIPE WILL BE DELIVERED TO JOB SITE YARD. CONTRACTOR TO UNLOAD. VALVES AND HYDRANTS TO BE PICKED UP BY CONTRACTOR AT 870 3RD ST. NW, MASSILLON, OH.



DESIGN CRITERIA FOR UTILITY CONFLICTS/CROSSINGS

GENERAL WATERLINE INSTALLATION NOTES

1. CONTRACTOR TO PROVIDE LINE AND GRADE STAKES AT 100' INTERVALS FOR WATER MAIN AND FOR EACH FITTING AND APPURTENANCE. A COPY OF CUT SHEET SHALL BE PROVIDED TO FIELD INSPECTOR PRIOR TO INSTALLATION. THIS WORK IS TO BE INCIDENTAL TO ALL PERTAINING ITEM 638 PAY ITEMS.
2. WATER WORK SHALL NOT BEGIN UNTIL AREAS OF WATERLINE CONSTRUCTION ARE ROUGH GRADED (WITHIN 1 FT. OF FINISHED GRADE AND FILL AREAS ARE COMPLETED AND COMPACTED.)
3. NO WATER SERVICE CONNECTIONS TO ANY BUILDINGS SHALL BE PERMITTED PRIOR TO FINAL ACCEPTANCE BY AQUA OHIO, INC. WHICH SHALL INCLUDE APPROVED RECTIFICATION OF ALL PUNCH LIST ITEMS. ONCE PUNCH LIST ITEMS ARE COMPLETED, THE BUILDER SHALL BE RESPONSIBLE FOR GRADE ADJUSTMENTS TO WATER FACILITIES AT TIME OF BUILDING CONSTRUCTION AND DURING FINAL SITE GRADING.
4. A MINIMUM OF 5 FEET HORIZONTAL SEPARATION SHALL BE MAINTAINED BETWEEN UTILITY CONDUIT CROSSOVERS AND WATERLINE APPURTENANCES, I.E. HYDRANTS, VALVES, TEES, ETC.
5. WATER LINE MATERIALS AND INSTALLATION PROCEDURES SHALL MEET OR EXCEED ALL APPLICABLE A.W.W.A. STANDARDS INCLUDING BUT NOT LIMITED TO THE MOST RECENT VERSIONS OF C600 AND C651.
6. WATERLINE MATERIAL AND INSTALLATION PROCEDURES SHALL BE IN ACCORDANCE WITH AQUA OHIO SPECIFICATIONS. CLASS 52 D.I.P. POLYWRAPPED, FITTINGS CLASS 53 CEMENT LINED POLYWRAPPED AND 1" K COPPER TUBING WITH COMPRESSION FITTINGS FOR DOMESTIC SERVICES OR 2" HDPE SDR 9 POLYETHYLENE 3408 PIPE AROUND CUL-DE-SAC. IF POLYETHYLENE IS USED, A 12 GAUGE WIRE AND METALLIC CAUTION TAPE MUST BE USED.
7. ALL PIPE AND APPURTENANCES INSTALLED ON A DEPRESSURIZED WATER MAIN ARE TO BE WIPED CLEAN AND ALL INTERIOR SURFACES SATURATED WITH A MINIMUM 1% CHLORINE SOLUTION.
8. ALL MECHANICAL JOINTS ARE TO BE RESTRAINED USING MEGALUG OR "FORD" EQUIVALENT. FIRE LINE RISERS TO INCLUDE (2) 5/8" ALL THREAD RODS EXTENDING FROM LOWER BEND TO RISER FLANGE.
9. A RESTRAINT GASKET (FIELD-LOK OR APPROVED EQUAL) SHALL BE UTILIZED ON PUSH-ON JOINTS AS REQUIRED BY AQUA OHIO STANDARDS.
10. ALL DUCTILE IRON PIPE AND FITTINGS TO BE POLYWRAPPED AND TAPED AS PER DUCTILE IRON PIPE RESEARCH ASSOCIATION RECOMMENDATIONS.
11. DUCTILE IRON IN CASING SHALL BE CLASS 52, POLYWRAPPED AND ALL PUSH-ON JOINTS SHALL BE EQUIPPED WITH RESTRAINT GASKETS (FIELD-LOK OR APPROVED EQUAL) AND STAINLESS STEEL CASING SPACERS ARE REQUIRED.
12. ALL THRUST BLOCKING WILL BE SOLID CONCRETE BLOCKS WITH OAK WEDGES OR POURED CONCRETE, PER AQUA STANDARDS DRAWING.
13. ALL VALVES ARE OPEN RIGHT AND ALL MAIN LINE VALVES ARE TO BE PLACED ON A MINIMUM OF ONE 4" SOLID CONCRETE BLOCK. ALL VALVES TO HAVE #57 LIMESTONE UP TO OPERATING NUT OF VALVE.
14. ALL FIRE HYDRANTS TO HAVE A MINIMUM OF 1/2 CUBIC YARD OF #57 LIMESTONE 6" ABOVE DRAIN HOLE OR EQUIVALENT SIZE BANK RUN GRAVEL. PLASTIC SHALL BE PLACED OVER STONE PRIOR TO BACKFILL. ALL HYDRANTS TO BE TURNED WITH 4-1/2" NOZZLE FACING STREET WITH 5" STORZ FITTING AND MEETING FIRE DEPARTMENT SPECIFICATIONS.
15. ALL VALVE BOX COVERS ARE TO BE PAINTED BLUE. CONTRACTOR IS RESPONSIBLE FOR ADJUSTMENTS TO VALVE BOXES, CURB BOXES, AND FIRE HYDRANTS WITH RESPECT TO FINAL GRADING. ALL VALVES BOXES IN NEW OR PROPOSED PAVEMENT SHALL BE SCREW TYPE.
16. WATERLINE WILL NOT BE ACCEPTED OR PLACED IN SERVICE UNTIL CONTRACTOR CONDUCTS AND OBTAINS SATISFACTORY RESULTS OF PRESSURE AND CHLORINE TESTS. BACTERIA TEST WILL THEN BE CONDUCTED BY AQUA OHIO. ALL VALVES, HYDRANTS, AND CURB BOXES ARE TO BE AT PROPER GRADE PRIOR TO ACCEPTANCE.
17. THE CONTRACTOR SHALL TAKE PRECAUTIONARY MEASURES TO ENSURE SAFETY OF THE PUBLIC ON AND SURROUNDING THE SITE DURING CONSTRUCTION.
18. THE LOCATION OF EXISTING UTILITIES AND STRUCTURES, BOTH ABOVE GROUND AND UNDERGROUND ARE SHOWN ON THE PLANS FROM DATA AVAILABLE AT THE TIME OF THE SURVEY AND ARE NOT NECESSARILY COMPLETE AND/OR CORRECT. THE EXACT LOCATION AND PROTECTION OF EXISTING UTILITIES AND STRUCTURES IS THE RESPONSIBILITY OF THE CONTRACTOR. DURING CONSTRUCTION, THE CONTRACTOR SHALL USE DUE DILIGENCE IN PROTECTING FROM DAMAGE ALL EXISTING UTILITIES AND STRUCTURES WHETHER SHOWN ON PLANS OR NOT. IF DAMAGE IS CAUSED, THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR RESTORATION OF SAME IN ACCORDANCE WITH THE DIRECTIONS OF THE OWNER. THE CONTRACTOR SHALL CONTACT OHIO UTILITIES PROTECTION SERVICE, AT 1-800-362-2764, TWO WORKING DAYS PRIOR TO START OF CONSTRUCTION AS REQUIRED BY OHIO LAW.
19. THE WATERLINE SHALL BE INSTALLED AT 4'-0" OF COVER FROM EXISTING/PROPOSED GRADE TO TOP OF THE WATERLINE. THIS 4' SHALL BE MAINTAINED UNLESS OTHERWISE NOTED.
20. A MINIMUM 10'-0" HORIZONTAL SEPARATION MUST BE MAINTAINED BETWEEN ALL STORM AND SANITARY SEWERS AND WATERLINE,OUT TO OUT.
21. A MINIMUM 18" VERTICAL SEPARATION MUST BE MAINTAINED BETWEEN ALL STORM AND SANITARY SEWERS AND WATERLINE, OUT TO OUT.
22. DRIVEWAY RESTORATION SHALL BE AS FOLLOWS: CONCRETE DRIVEWAYS WILL BE REPLACED FROM THE NEAREST EXISTING JOINT TO THE STREET, FULL SLAB REPLACEMENT. ASPHALT DRIVEWAYS WILL BE REPLACED FROM THE FARTHEST TRENCH CUT LINE TO THE STREET. REPAIRING ONLY THE TRENCH WIDTH CUT ACROSS A DRIVEWAY ONLY IS NOT ACCEPTABLE.
23. THE CONTRACTOR SHALL VISIT THE SITE TO PERSONALLY ASCERTAIN THE NATURE OF THE WORK INVOLVED AND THOROUGHLY BECOME FAMILIAR WITH THE SITE PRIOR TO THE SUBMISSION OF HIS OR HER BID.
24. THE CONTRACTOR SHALL CAREFULLY LAYOUT THE WATERLINE AND ALL RELATED FACILITIES TO ENSURE THAT THEY ARE LOCATED WITHIN THE PUBLIC RIGHT-OF-WAY AND/OR ACQUIRED EASEMENTS AS INDICATED.
25. THE CONTRACTOR IS RESPONSIBLE FOR RESTORING THE SITE (YARDS, DITCHES, DRIVEWAYS, ETC.) TO ITS ORIGINAL OR BETTER CONDITION UPON COMPLETION OF THE WATERLINE INSTALLATION.
26. THE CONTRACTOR MAY DEFLECT THE WATERLINE AS PER MANUFACTURER'S SPECS WITH PERMISSION FROM AQUA AS NEEDED TO MAINTAIN MINIMUM HORIZONTAL AND VERTICAL SEPARATION DISTANCES.
27. THE CONTRACTOR SHALL CAREFULLY PRESERVE BENCHMARKS, PROPERTY CORNERS, REFERENCE POINTS, AND ANY BENCHMARK, PROPERTY CORNER, OR SURVEY MARKER DAMAGED OR DISTURBED BY THE CONTRACTOR SHALL BE RESET BY AN OHIO REGISTERED PROFESSIONAL SURVEYOR AT THE CONTRACTORS EXPENSE.
28. ALL MAIL BOXES, TRAFFIC CONTROL SIGNS AND ADVERTISING SIGNS ENCOUNTERED DURING CONSTRUCTION SHALL BE REPLACED IMMEDIATELY AFTER THE WATER MAIN HAS BEEN INSTALLED AND BACKFILLED. TEMPORARY SIGNS TO BE USED AS NEEDED.
29. WATER SERVICE LINE CONNECTIONS ARE NOT TO BE INSTALLED UNTIL PRESSURE TEST AND BACTERIA TESTS HAVE BEEN APPROVED.
30. THE NORMAL WORKING PRESSURE IN WATER LINES SHALL NOT BE LESS THAN 35 PSI.
31. COMPACTION TESTING REQUIREMENTS AS PER ITEM 611.06 AND CONSTRUCTION INSPECTION FORMS SUBMITTALS AS PER ITEM 611.04.C APPLY AND INCIDENTAL TO ANY PERTAINING ITEM 638 WATER WORK PAY ITEM.

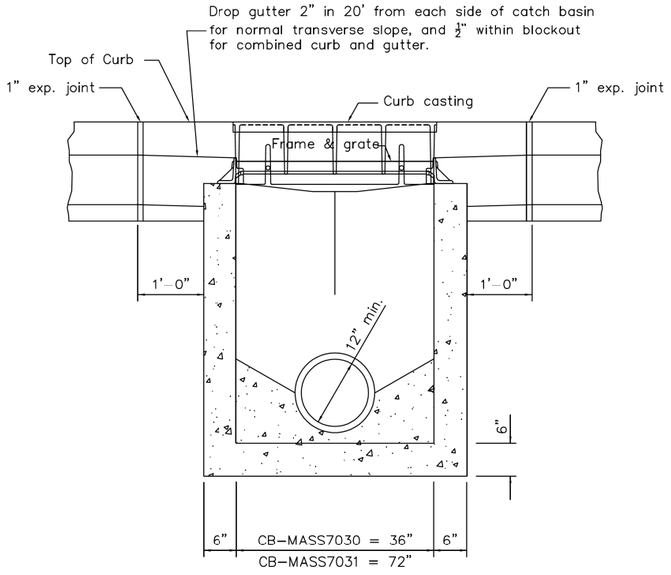
NOTE: THIS LIST DOES NOT SUPERCEDE CONTRACT SPECIFICATIONS AND IS INTENDED ONLY AS A GUIDELINE TO INSTALLING WATERLINES WITHIN THE AQUA OHIO SERVICE AREA. ANY QUESTIONS SPECIFIC TO YOUR PROJECT, SHOULD BE DISCUSSED WITH THE ONSITE INSPECTOR.

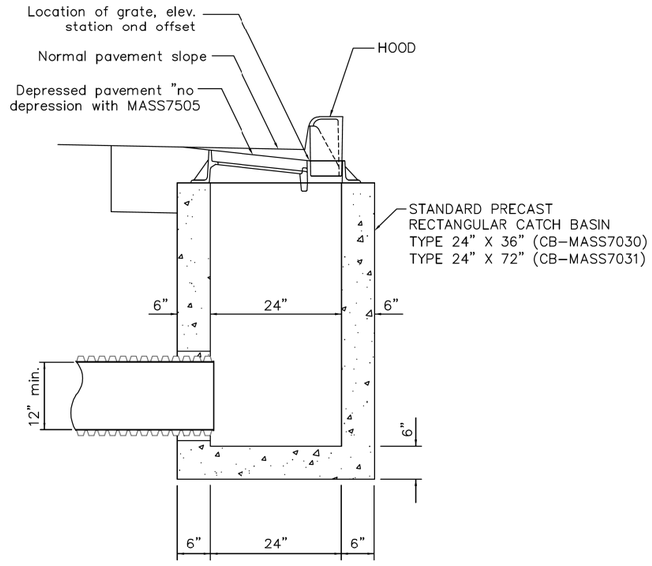
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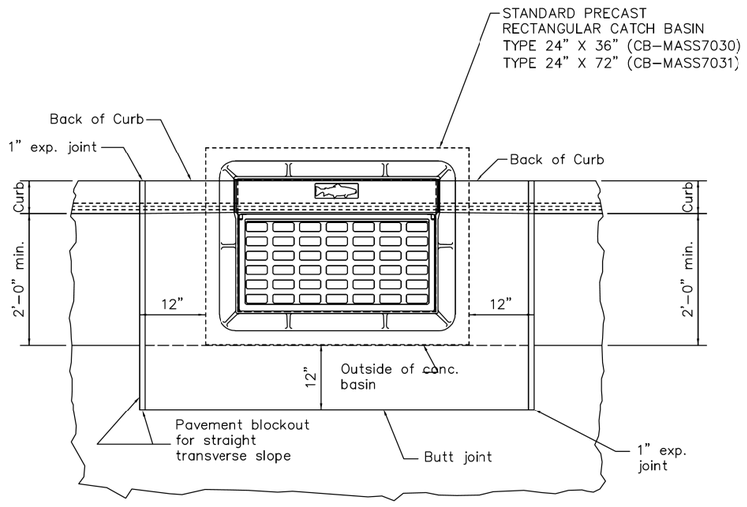
WATER WORK - AQUA DETAILS

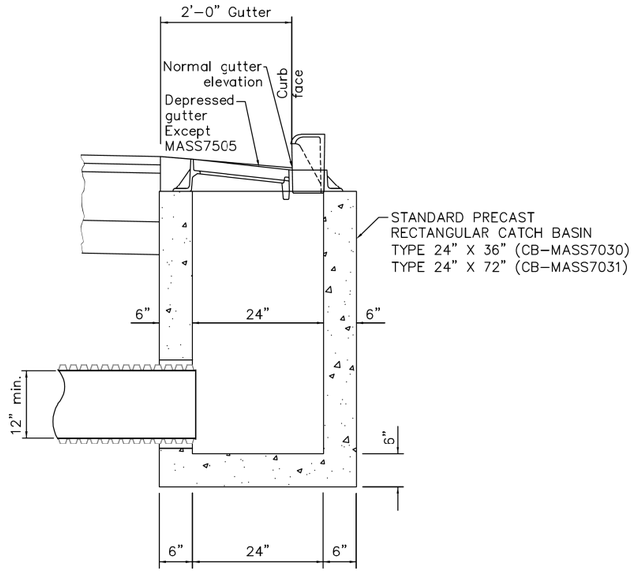
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GRATES: Two required. For details, see EJ 7030Z. provide Grate M2 unless the plans specifically require the bicycle safety grate.

CASTINGS: Provide a design essentially the same and equally as strong as the the one shown. Below is a list of approved EJ

Frame	=	7030 Z, 7031 Z, 7505
Grate	=	7030 M2, 7505
	=	7030 M3 for bicycle safety
Hood	=	7030 T1, 7505
		7030 T3 for drop curb areas

BEARING AREAS: Fit and finish the frame and grate to provide a firm seat and even seat. No projections are permitted on bearing areas, and grate must seat in its frame without rocking.

PRECAST CONSTRUCTION: Meet CMS 706.13 concrete requirements. Provide precast walls at least 6" thick with sufficient reinforcing to permit shipping and placement without damage. Reduce the wall thickness from the outside.

MINIMUM DEPTH: The minimum depth is per the cover requirements for that pipe type.

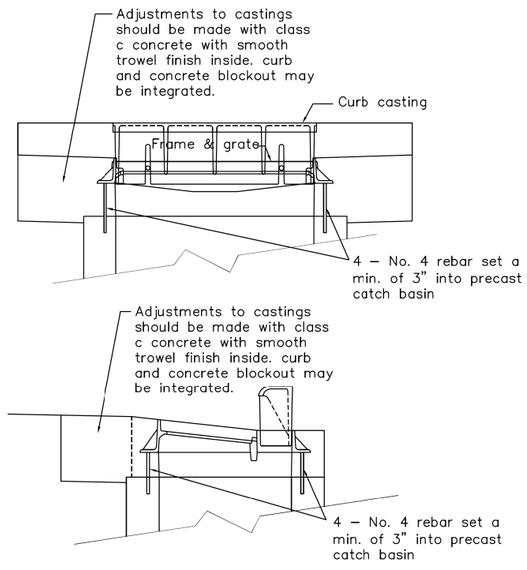
OPENINGS: Obtain the Engineer's approval for any pipe opening greater than 4" from the outside of the pipe to the structure. Fill all voids per CMS 611.

DOWELS: Furnish four 1"x18" dowels for concrete pavement or gutter blockout. See SCD BP–2.2 for dowel details.

BLOCKOUT: Pave blockouts with 4000 psi compressive strength concrete in PCC pavement or gutter. Blockouts are paid for as part of the catch basin quantities because of the castings. Cast a 4000 psi compressive strength concrete apron, the size of the 2'–0" gutter blockout, in place in asphalt pavement (no dowels required) with the cost included in the catch basin bid price. No deduction is made in curb quantities.

PAYMENT: All materials and labor, including excavation and backfilling, are paid for under Item 611Spec – Catch Basin, Mass7030.

ADJUSTMENT: No brick shall be used to adjust castings height. See Adjustment detail this sheet.



CASTING ADJUSTMENT

NW NE SW SE N

VERTICAL FEET 200 100 0

200 100 0 HORIZONTAL SCALE IN FEET

CHECKED BY: KAD
DATE: MAY, 2012
DRAWN BY: FPW
DATE: MAY, 2012

REVISIONS:

DATE	DESCRIPTION

Massillon Standard Construction Details
CB–MASS7505, CB–MASS7030 AND CB–MASS7031
City of Massillon
Stark County, Ohio

Kathy Catazaro-Perry, Mayor
Massillon
City Council

DRAWING NAME: Drainagedet.DWG
CITY NUMBER: 2015

CALCULATED KAH
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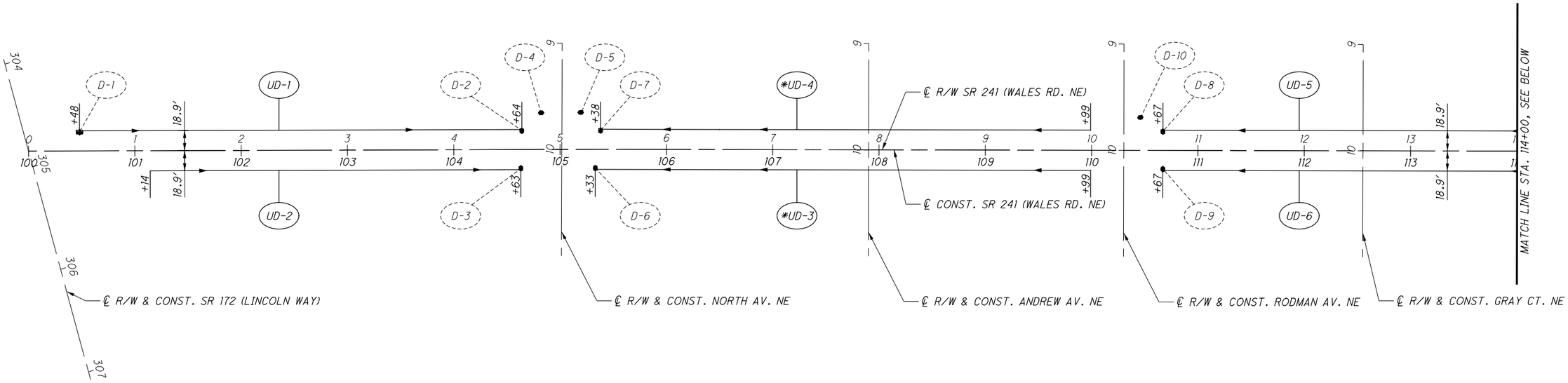
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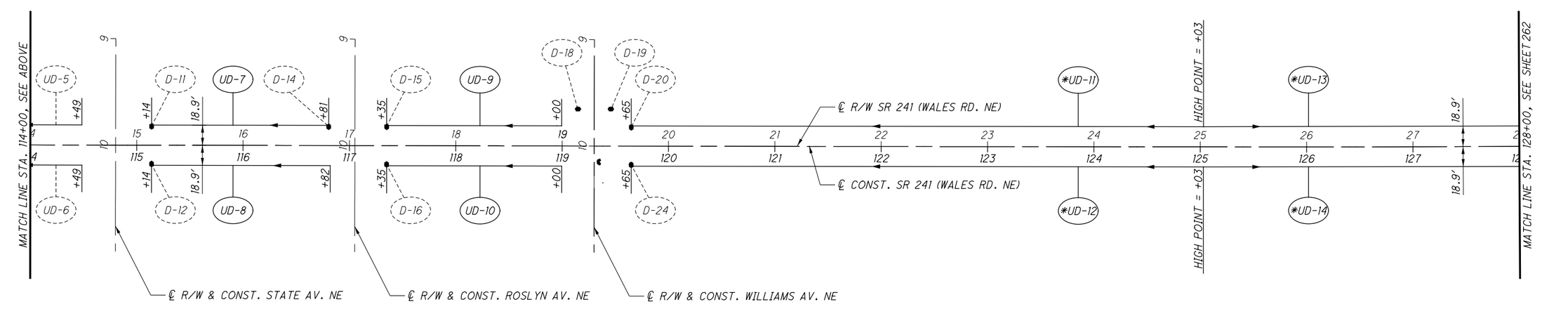
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FOR DRAINAGE STRUCTURE DATA, SEE SHEET 234





UNCLASSIFIED UNDERDRAIN TABLE								
UD CODE	BEGIN			LENGTH	OUTLET			SLOPE
	STA.	OFFSET	ELEV.		STRUCTURE NO.	STA.	ELEV.	
UD-3	109+99	18.9' RT	1022.28	466'	D-6	105+33	1013.54	1.88%
UD-4	109+99	18.9' LT	1022.28	461'	D-7	105+38	1013.62	1.88%
UD-11	125+03	18.9' LT	1025.71	538'	D-20	119+65	1023.83	0.35%
UD-12	125+03	18.9' RT	1025.71	538'	D-24	119+65	1023.83	0.35%
UD-13	125+03	18.9' LT	1025.71	473'	D-25	129+76	1024.22	0.32%
UD-14	125+03	18.9' RT	1025.71	524'	D-26	130+27	1024.09	0.31%

(UD-#) BASE, SHALLOW, OR UNCLASSIFIED UNDERDRAINS

* SEE UNCLASSIFIED UNDERDRAIN TABLE FOR DATA ON THIS SHEET.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KAH
CHECKED KBM

UNDERDRAIN SCHEMATIC PLAN
BEGIN TO STA. 128+00

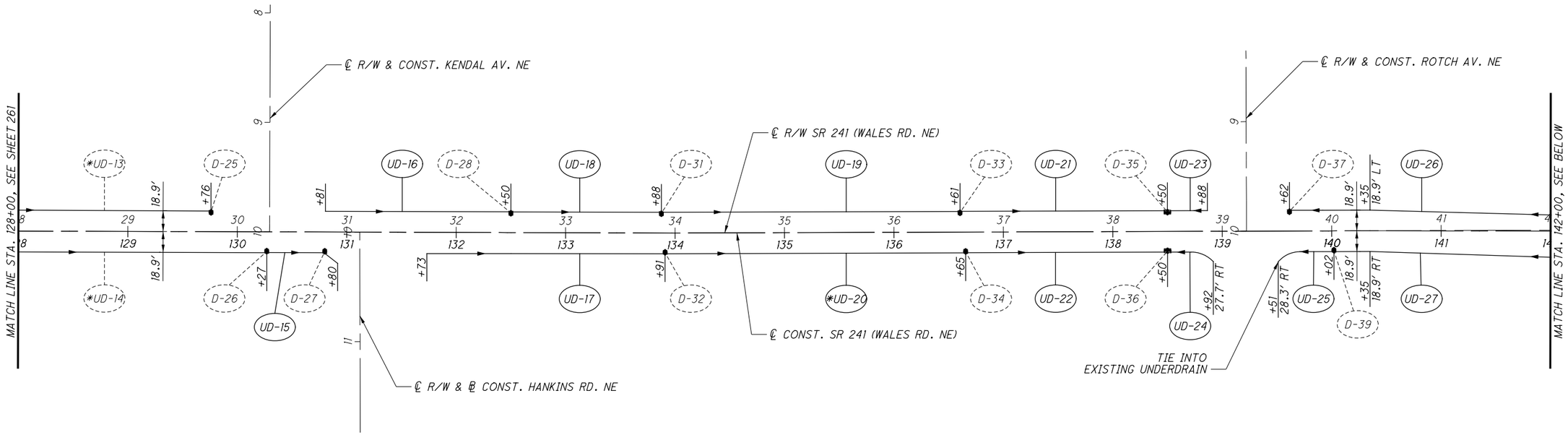
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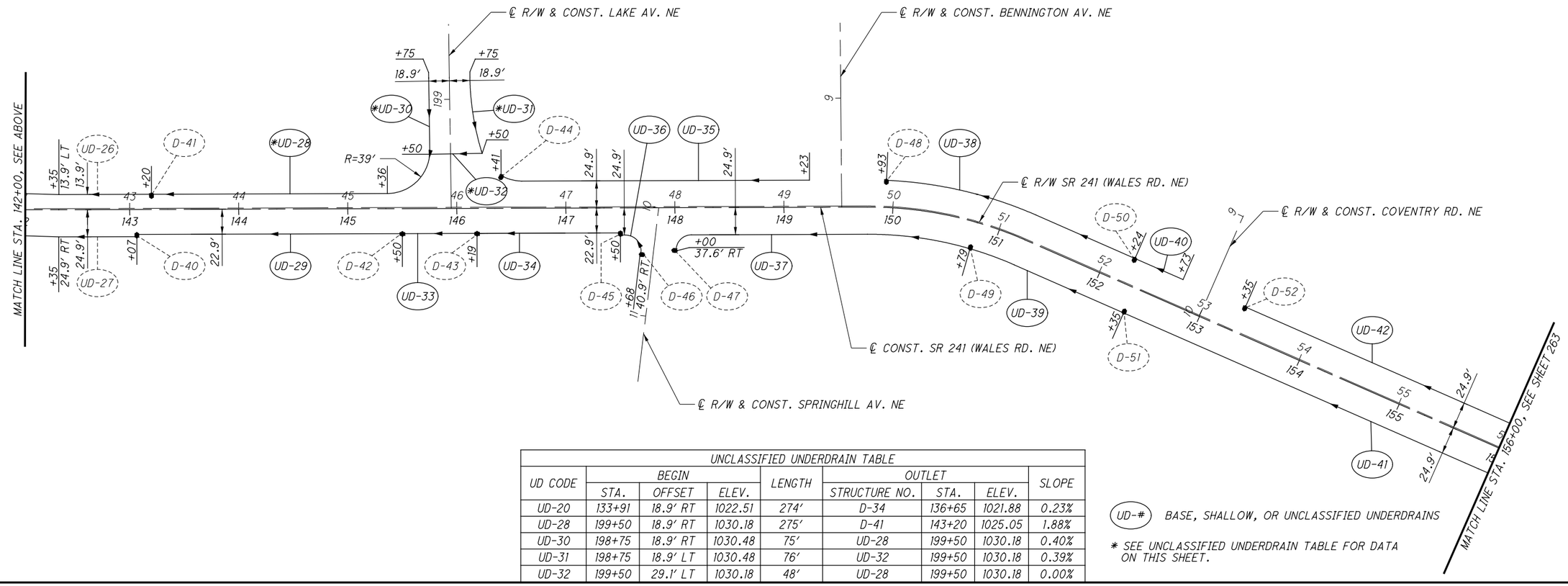
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FOR DRAINAGE STRUCTURE DATA, SEE SHEET 234





UNCLASSIFIED UNDERDRAIN TABLE								
UD CODE	BEGIN			LENGTH	OUTLET			SLOPE
	STA.	OFFSET	ELEV.		STRUCTURE NO.	STA.	ELEV.	
UD-20	133+91	18.9′ RT	1022.51	274′	D-34	136+65	1021.88	0.23%
UD-28	199+50	18.9′ RT	1030.18	275′	D-41	143+20	1025.05	1.88%
UD-30	198+75	18.9′ RT	1030.48	75′	UD-28	199+50	1030.18	0.40%
UD-31	198+75	18.9′ LT	1030.48	76′	UD-32	199+50	1030.18	0.39%
UD-32	199+50	29.1′ LT	1030.18	48′	UD-28	199+50	1030.18	0.00%

UD-# BASE, SHALLOW, OR UNCLASSIFIED UNDERDRAINS

* SEE UNCLASSIFIED UNDERDRAIN TABLE FOR DATA ON THIS SHEET.

HORIZONTAL SCALE IN FEET
0 25 50 100

CALCULATED KAH
CHECKED KBM

UNDERDRAIN SCHEMATIC PLAN
STA. 128+00 TO STA. 156+00

STA-241-9.71

FOR DRAINAGE STRUCTURE DATA, SEE SHEET 234

℄ R/W & CONST. STRATFORD AV. NE

℄ R/W SR 241 (WALES RD. NE)

℄ R/W & CONST. PROVIDENCE RD. NE

MATCH LINE STA. 156+00, SEE SHEET 262

MATCH LINE STA. 170+00, SEE BELOW

UD-41 UD-42 UD-43 UD-44 UD-45 UD-46 UD-47 UD-48

D-53 D-54 D-55 D-56 D-57 D-59

+23 +98 +02 +02 +25 +75 +53 +99 +75 +21 +40

24.9' 24.9' 24.9' 24.9' 24.9' 22.9'

℄ CONST. SR 241 (WALES RD. NE)

℄ R/W & CONST. SPRINGHAVEN CR. NE (SOUTH)

℄ R/W & CONST. SPRINGHAVEN CR. NE (NORTH)

℄ R/W & CONST. LENNOX AV. NE

℄ R/W SR 241 (WALES RD. NE)

MATCH LINE STA. 170+00, SEE ABOVE

UD-47 UD-48 UD-49 UD-50 UD-51 UD-52

HIGH POINT = +38 HIGH POINT = +38

TIE INTO EXISTING UNDERDRAIN

TIE INTO EXISTING UNDERDRAIN

D-60 D-61

+22 24.9' LT +86 +25 26.9' LT

+22 22.9' RT +00 +26 29.4' RT

24.9' 22.9'

℄ R/W SR 241 (WALES RD. NE)

℄ CONST. HILLS AND DALES RD. NE

HORIZONTAL SCALE IN FEET
0 25 50 100

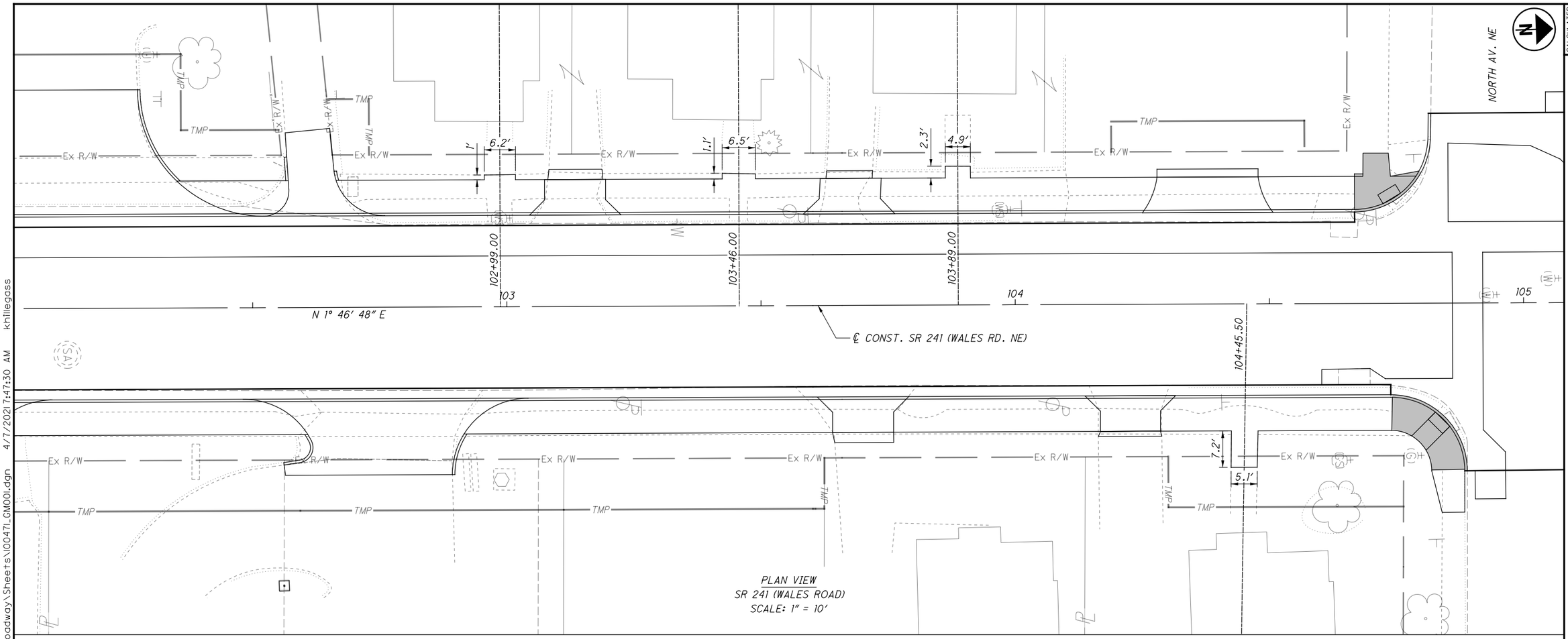
CALCULATED KAH CHECKED KBM

UNDERDRAIN SCHEMATIC PLAN
STA. 156+00 TO END

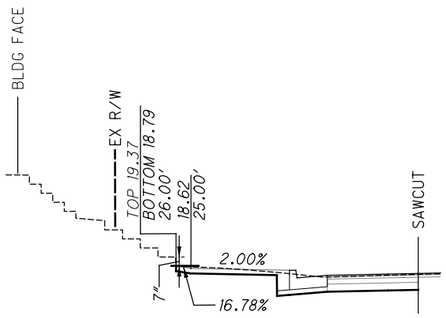
STA-241-9.71

263
395

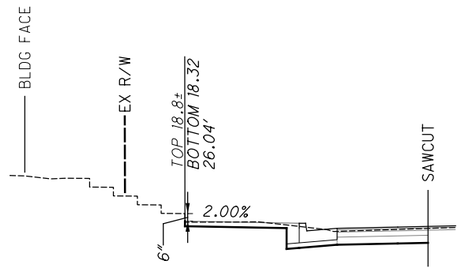
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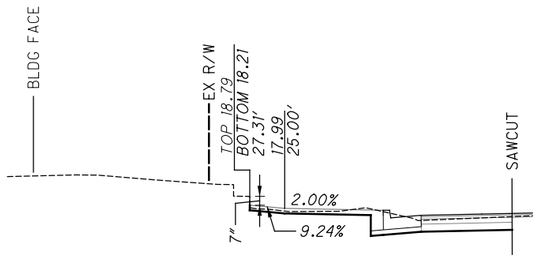
PLAN VIEW
SR 241 (WALES ROAD)
SCALE: 1" = 10'



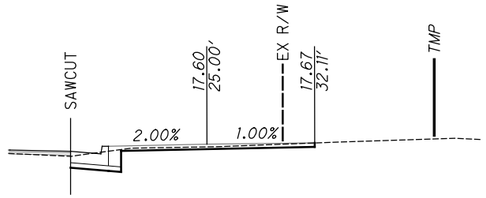
SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 102+99.00 LT.
SCALE: 1" = 5'



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 103+46.00 LT.
SCALE: 1" = 5'



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 103+89.00 LT.
SCALE: 1" = 5'



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 104+45.50 RT.
SCALE: 1" = 5'

LEGEND
XX.XX
XX.XX'
ELEVATION
OFFSET

ADD 1000.00 TO ELEVATIONS SHOWN FOR ACTUAL ELEVATION.

CALCULATED KRM
CHECKED RAK

SIDEWALK & STEP DETAILS -- SR 241 (WALES ROAD, NE)

STA-241-9.71

264
395

P:\3000_3499\3062170090_STA-241-9.71_Wales_Road\000T\10047L_STA-241-9.71\Design\Roadway\Sheets\10047L.GM001.dgn 4/7/2021 7:47:30 AM khillegass

NORTH AV. NE

ANDREW AV. NE

TMP

Ex R/W

PI Sta. 105+37.95

2.8′ 5.0′ 1.6′ 3.2′

5.0′ 4.1′

106+02.50

106+53.50

106 107 108

℄ CONST. SR 241 (WALES RD. NE)

105+58.00 106+13.00 106+66.50

5.4′ 5.4′ 6.2′ 6.2′ 5.8′ 3.7′

TMP TMP TMP TMP TMP

Ex R/W

PLAN VIEW
SR 241 (WALES ROAD)
SCALE: 1″ = 10′

SAWCUT 18.39 25.00′ 2.00% 4.90% 6″ EX R/W TOP 19.2± BOTTOM 18.66 30.46′ TMP BLDG FACE

SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 105+58.00 RT.
SCALE: 1″ = 5′

TMP 20.41 32.79′ TOP 20.39 BOTTOM 19.81 30.83′ EX R/W 19.52 25.00′ SAWCUT 2′ 7″ 4.97% 2.00%

STEP PROFILE
SR 241 (WALES ROAD)
STA. 106+02.50 LT.
SCALE: 1″ = 5′

SAWCUT 19.79 25.00′ 2.00% 5.00% EX R/W TOP 20.6± BOTTOM 20.06 30.43′ TMP 7″

SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 106+13.00 RT.
SCALE: 1″ = 5′

BLDG FACE TMP EX R/W TOP 21.5± BOTTOM 20.94 29.09′ 20.83 25.00′ SAWCUT 7″ 2.62% 2.00%

SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 106+53.50 LT.
SCALE: 1″ = 5′

SAWCUT 21.17 25.00′ TOP 21.79 BOTTOM 21.29 30.00′ EX R/W TOP 22.3± BOTTOM 21.80 30.84′ TMP 11″ 2.00% 2.39% 6″ 6″

STEP PROFILE
SR 241 (WALES ROAD)
STA. 106+66.50 RT.
SCALE: 1″ = 5′

LEGEND
XX.XX / XX.XX′ ELEVATION / OFFSET

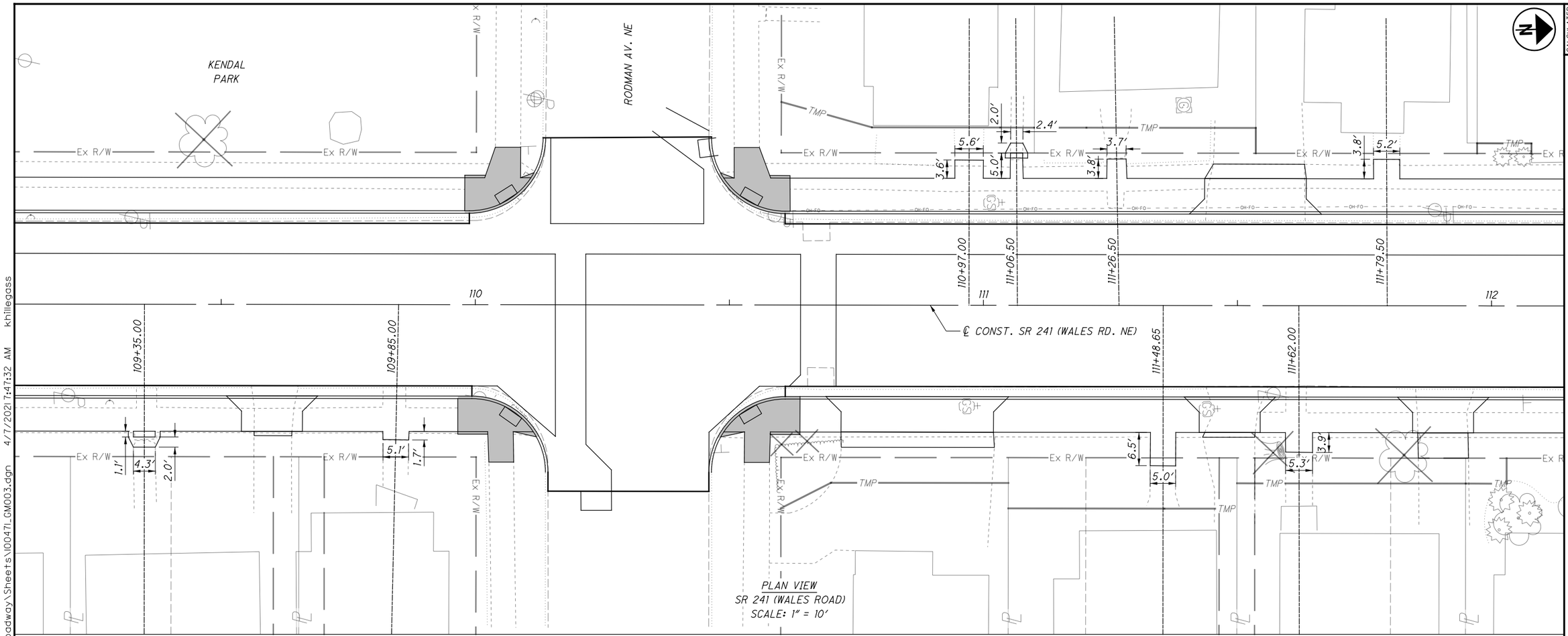
ADD 1000.00 TO ELEVATIONS SHOWN FOR ACTUAL ELEVATION.

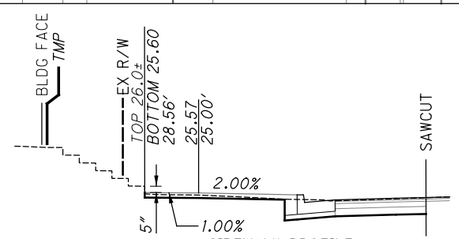
CALCULATED KRM
CHECKED RAK

SIDEWALK & STEP DETAILS -- SR 241 (WALES ROAD, NE)

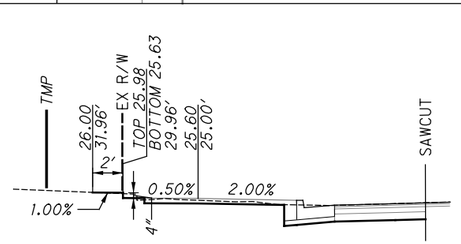
STA-241-9.71

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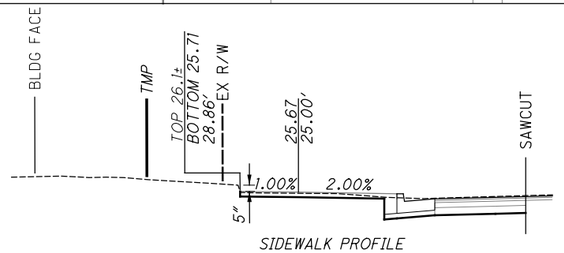




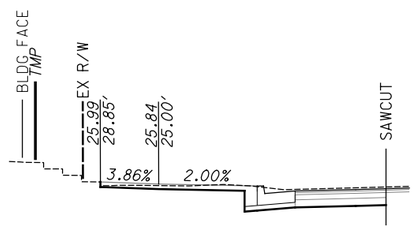
SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 110+97.00 LT.
SCALE: 1" = 5'



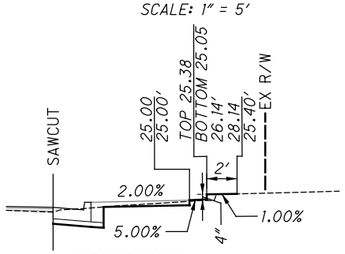
STEP PROFILE
SR 241 (WALES ROAD)
STA. 111+06.50 LT.
SCALE: 1" = 5'



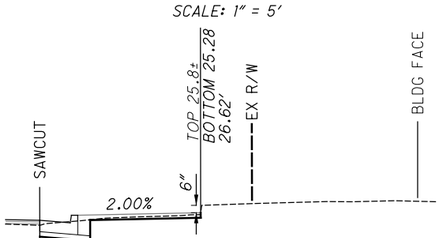
SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 111+26.50 LT.
SCALE: 1" = 5'



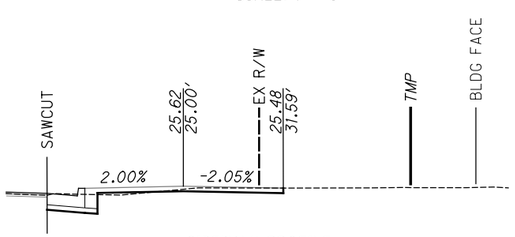
SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 111+79.50 LT.
SCALE: 1" = 5'



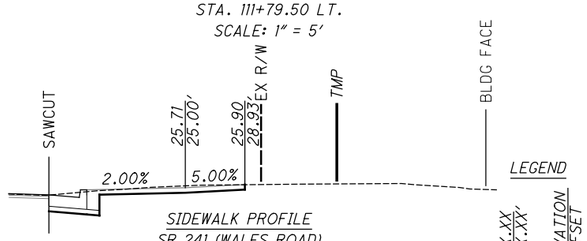
STEP PROFILE
SR 241 (WALES ROAD)
STA. 109+35.00 RT.
SCALE: 1" = 5'



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 109+85.00 RT.
SCALE: 1" = 5'



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 111+48.65 RT.
SCALE: 1" = 5'



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 111+62.00 RT.
SCALE: 1" = 5'

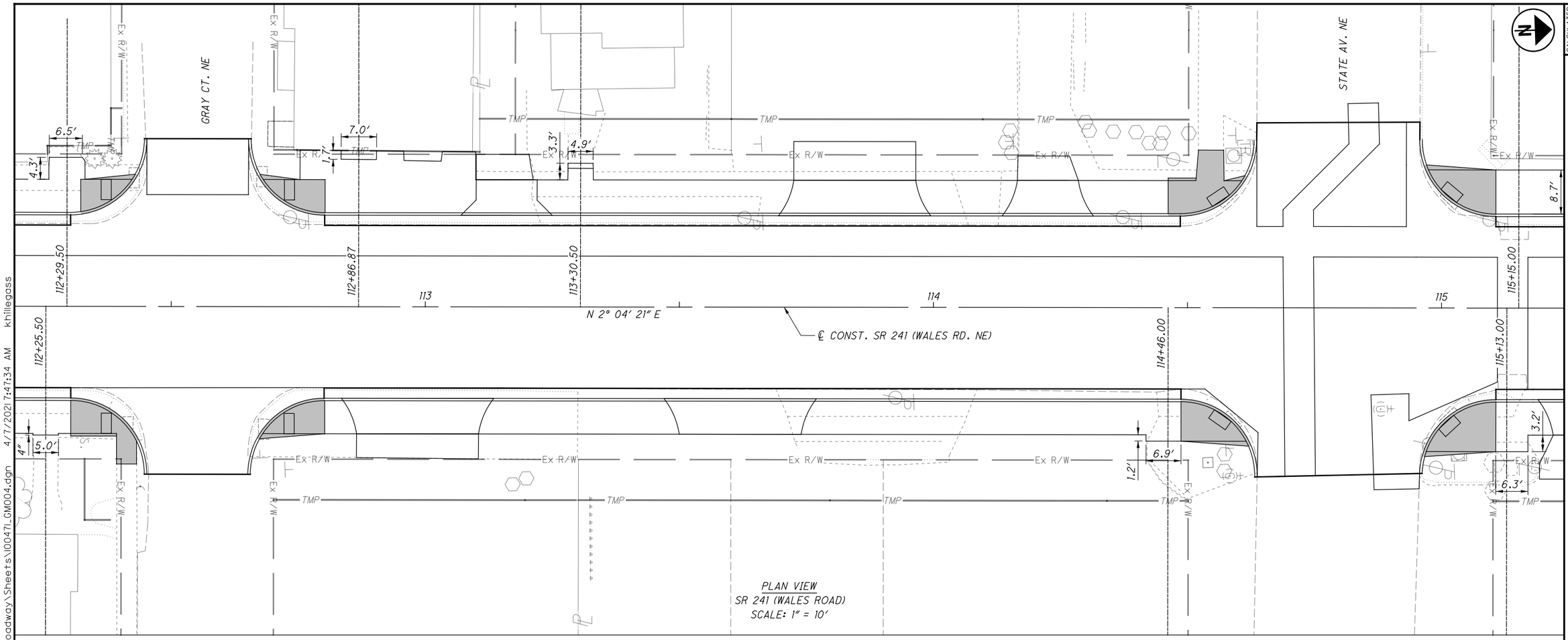
ADD 1000.00 TO ELEVATIONS SHOWN FOR ACTUAL ELEVATION.

CALCULATED KRM
CHECKED RAK

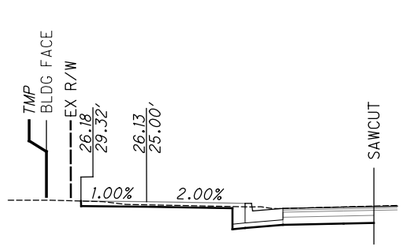
SIDEWALK & STEP DETAILS -- SR 241 (WALES ROAD, NE)

STA-241-9.71

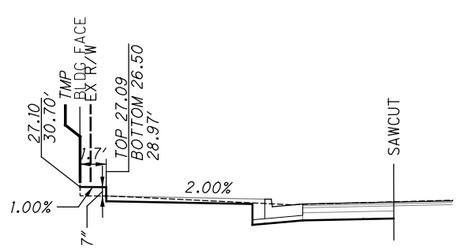
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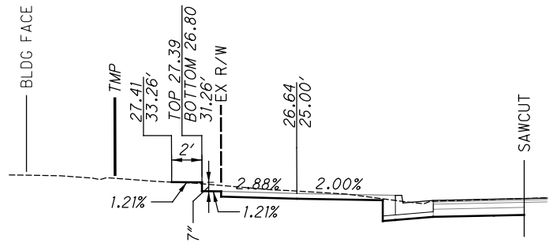
PLAN VIEW
SR 241 (WALES ROAD)
SCALE: 1″ = 10′



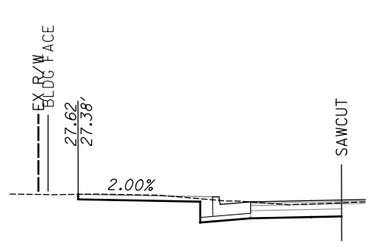
SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 112+29.50 LT.
SCALE: 1″ = 5′



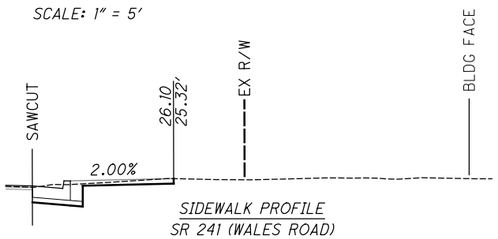
STEP PROFILE
SR 241 (WALES ROAD)
STA. 112+86.87 LT.
SCALE: 1″ = 5′



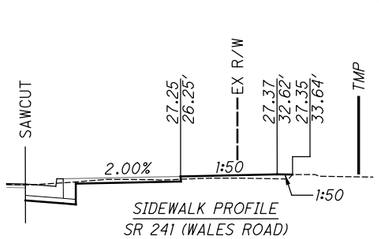
STEP PROFILE
SR 241 (WALES ROAD)
STA. 113+30.50 LT.
SCALE: 1″ = 5′



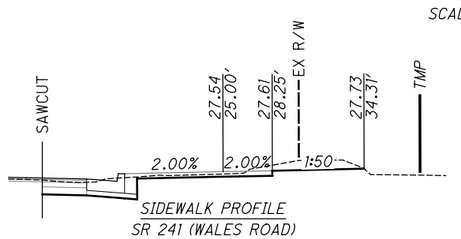
SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 115+15.00 LT.
SCALE: 1″ = 5′



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 112+25.50 RT.
SCALE: 1″ = 5′



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 114+46.00 RT.
SCALE: 1″ = 5′



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 115+13.00 RT.
SCALE: 1″ = 5′

LEGEND

XX.XX
XX.XX′
ELEVATION
OFFSET

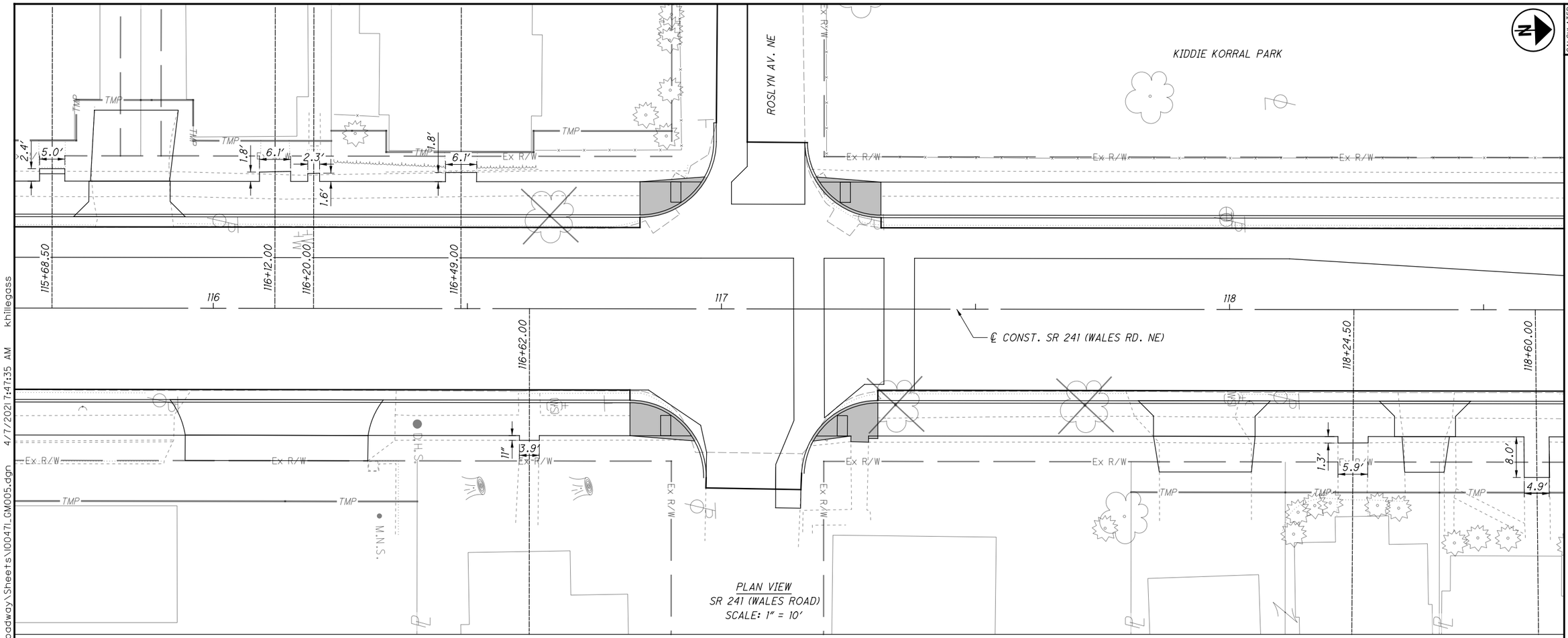
ADD 1000.00 TO ELEVATIONS SHOWN FOR ACTUAL ELEVATION.

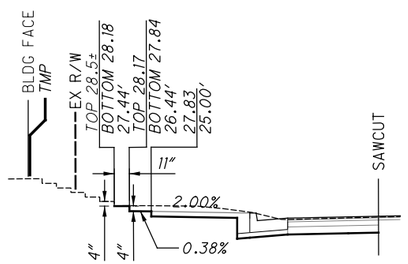
CALCULATED KRM
CHECKED RAK

SIDEWALK & STEP DETAILS - SR 241 (WALES ROAD, NE)

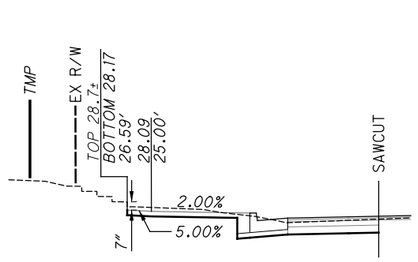
STA-241-9.71

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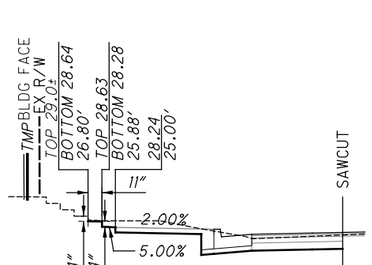




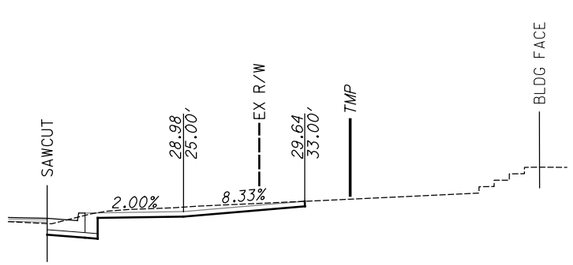
STEP PROFILE
SR 241 (WALES ROAD)
STA. 115+68.50 LT.
SCALE: 1" = 5'



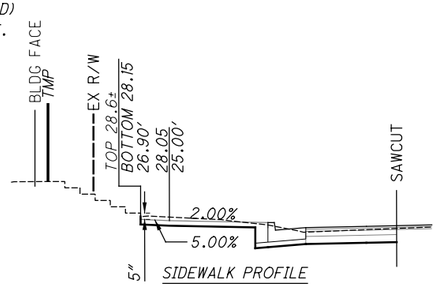
SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 116+20.00 LT.
SCALE: 1" = 5'



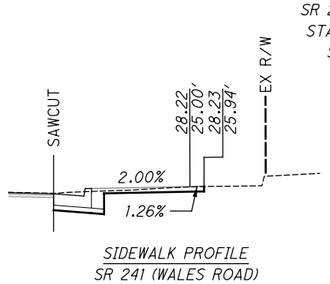
STEP PROFILE
SR 241 (WALES ROAD)
STA. 116+49.00 LT.
SCALE: 1" = 5'



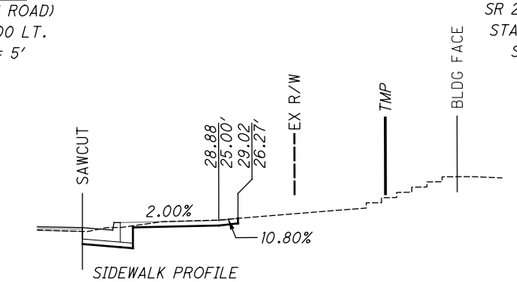
SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 118+60.00 RT.
SCALE: 1" = 5'



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 116+12.00 LT.
SCALE: 1" = 5'



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 116+62.00 RT.
SCALE: 1" = 5'



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 118+24.50 RT.
SCALE: 1" = 5'

LEGEND

XX.XX / XX.XX' — ELEVATION / OFFSET

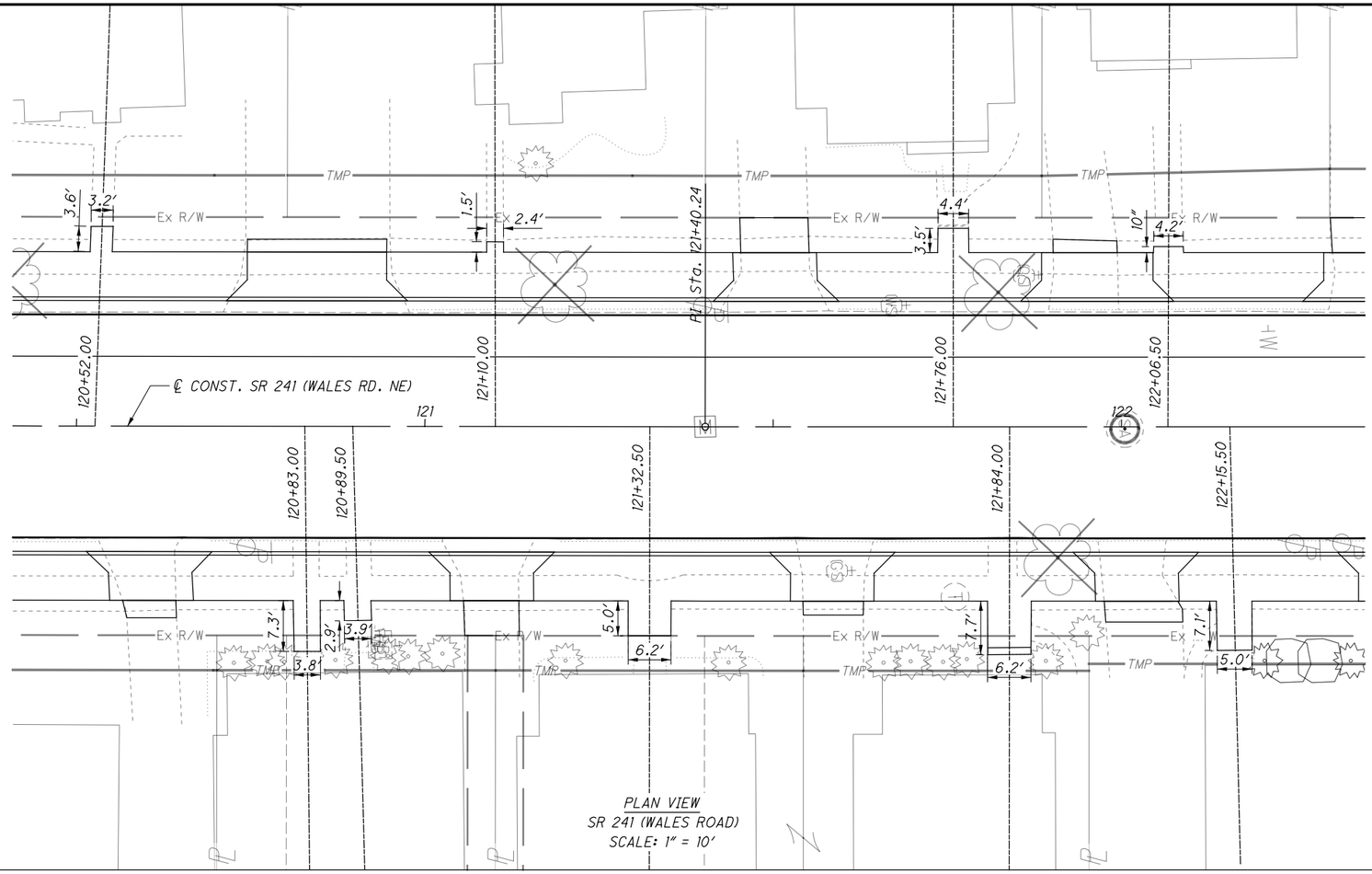
ADD 1000.00 TO ELEVATIONS SHOWN FOR ACTUAL ELEVATION.

CALCULATED KRM
CHECKED RAK

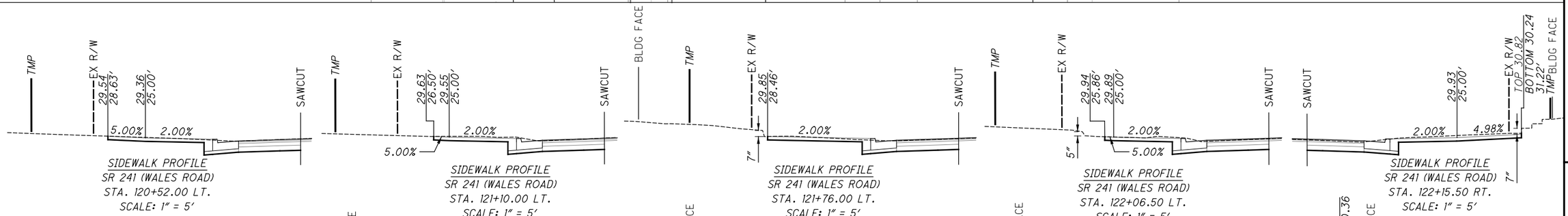
SIDEWALK & STEP DETAILS - SR 241 (WALES ROAD, NE)

STA-241-9.71

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PLAN VIEW
SR 241 (WALES ROAD)
SCALE: 1″ = 10′



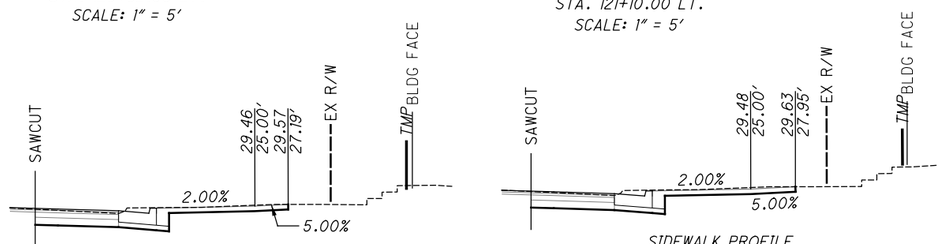
SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 120+52.00 LT.
SCALE: 1″ = 5′

SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 121+10.00 LT.
SCALE: 1″ = 5′

SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 121+76.00 LT.
SCALE: 1″ = 5′

SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 122+06.50 LT.
SCALE: 1″ = 5′

SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 122+15.50 RT.
SCALE: 1″ = 5′



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 120+83.00 RT.
SCALE: 1″ = 5′

SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 120+89.50 RT.
SCALE: 1″ = 5′

SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 121+32.50 RT.
SCALE: 1″ = 5′

STEP PROFILE
SR 241 (WALES ROAD)
STA. 121+84.00 RT.
SCALE: 1″ = 5′

LEGEND
XX.XX′ / XX.XX′ — ELEVATION / OFFSET

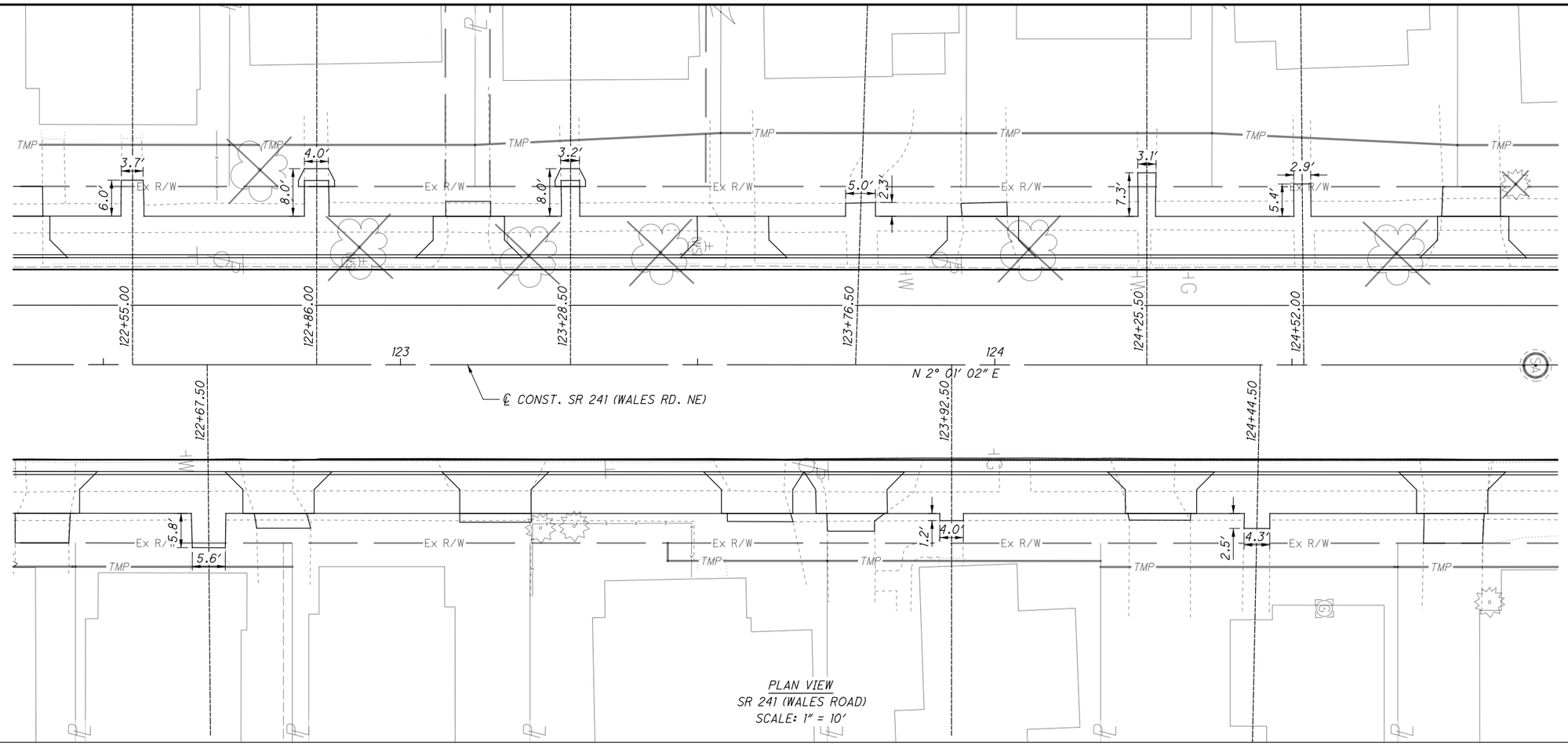
ADD 1000.00 TO ELEVATIONS SHOWN FOR ACTUAL ELEVATION.

CALCULATED KRM
CHECKED RAK

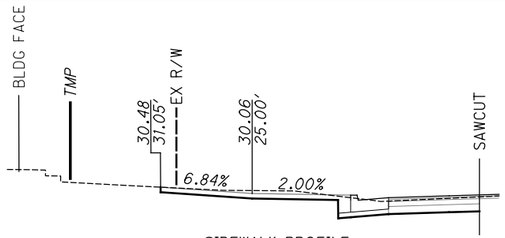
SIDEWALK & STEP DETAILS - SR 241 (WALES ROAD, NE)

STA-241-9.71

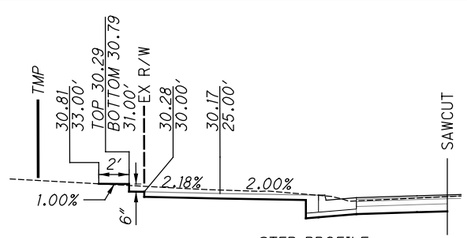
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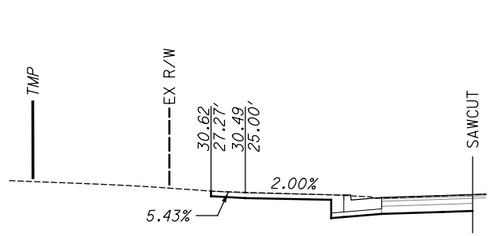
PLAN VIEW
SR 241 (WALES ROAD)
SCALE: 1" = 10'



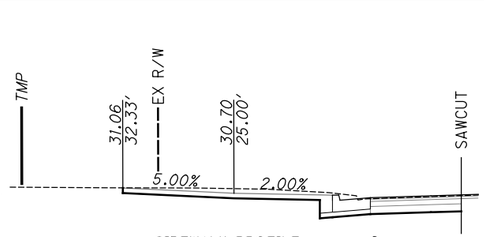
SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 122+55.00 LT.
SCALE: 1" = 5'



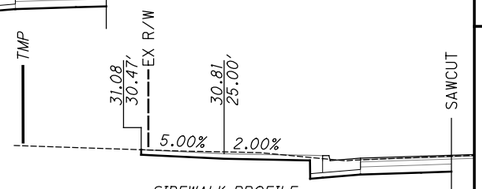
STEP PROFILE
SR 241 (WALES ROAD)
STA. 122+86.00 LT.
SCALE: 1" = 5'



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 123+76.50 LT.
SCALE: 1" = 5'

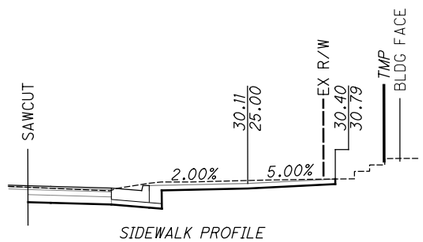


SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 124+25.50 LT.
SCALE: 1" = 5'

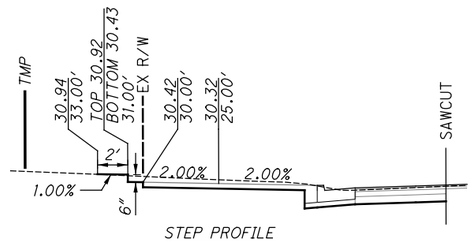


SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 124+52.00 LT.
SCALE: 1" = 5'

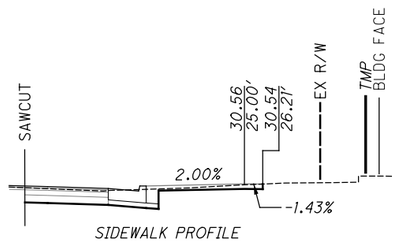
LEGEND
XX.XX'
XX.XX'
ELEVATION
OFFSET



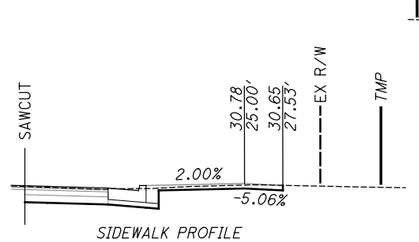
SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 122+67.50 RT.
SCALE: 1" = 5'



STEP PROFILE
SR 241 (WALES ROAD)
STA. 123+28.50 LT.
SCALE: 1" = 5'



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 123+92.50 RT.
SCALE: 1" = 5'



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 124+44.50 RT.
SCALE: 1" = 5'

ADD 1000.00 TO ELEVATIONS SHOWN FOR ACTUAL ELEVATION.

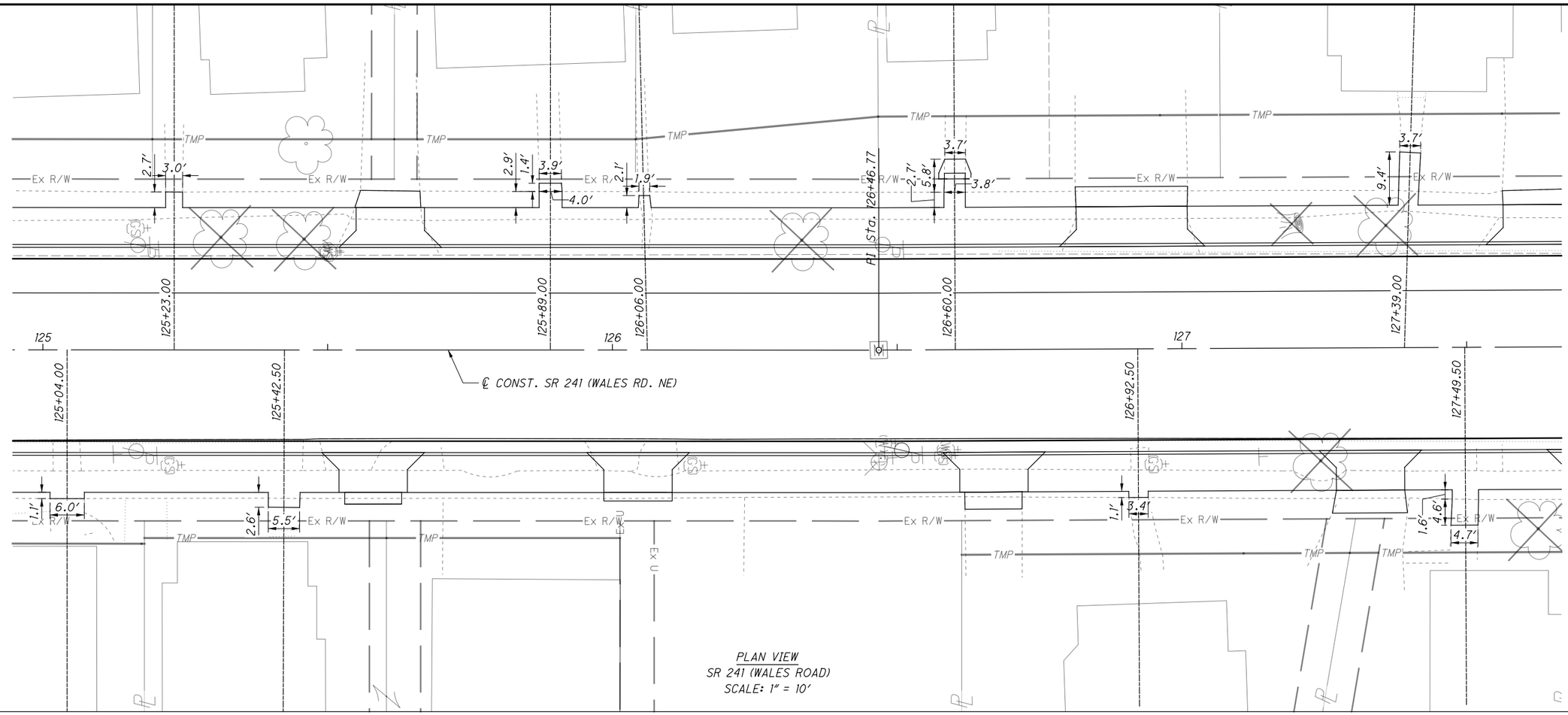
CALCULATED KRM
CHECKED RAK

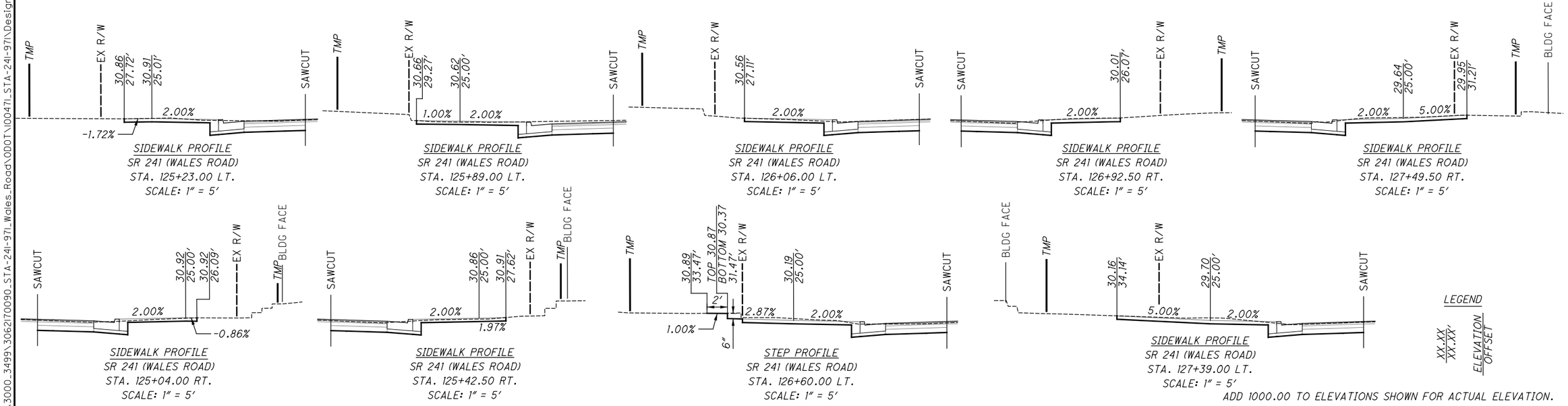
SIDEWALK & STEP DETAILS - SR 241 (WALES ROAD, NE)

STA-241-9.71

270
395

P:\3000_3499\3062I70090_STA-241-9.71_Wales_Road\ODOT\I0047I_STA-241-9.71\Design\Roadway\Sheets\I0047I_GM0007.dgn 4/7/2021 7:47:38 AM khillegass





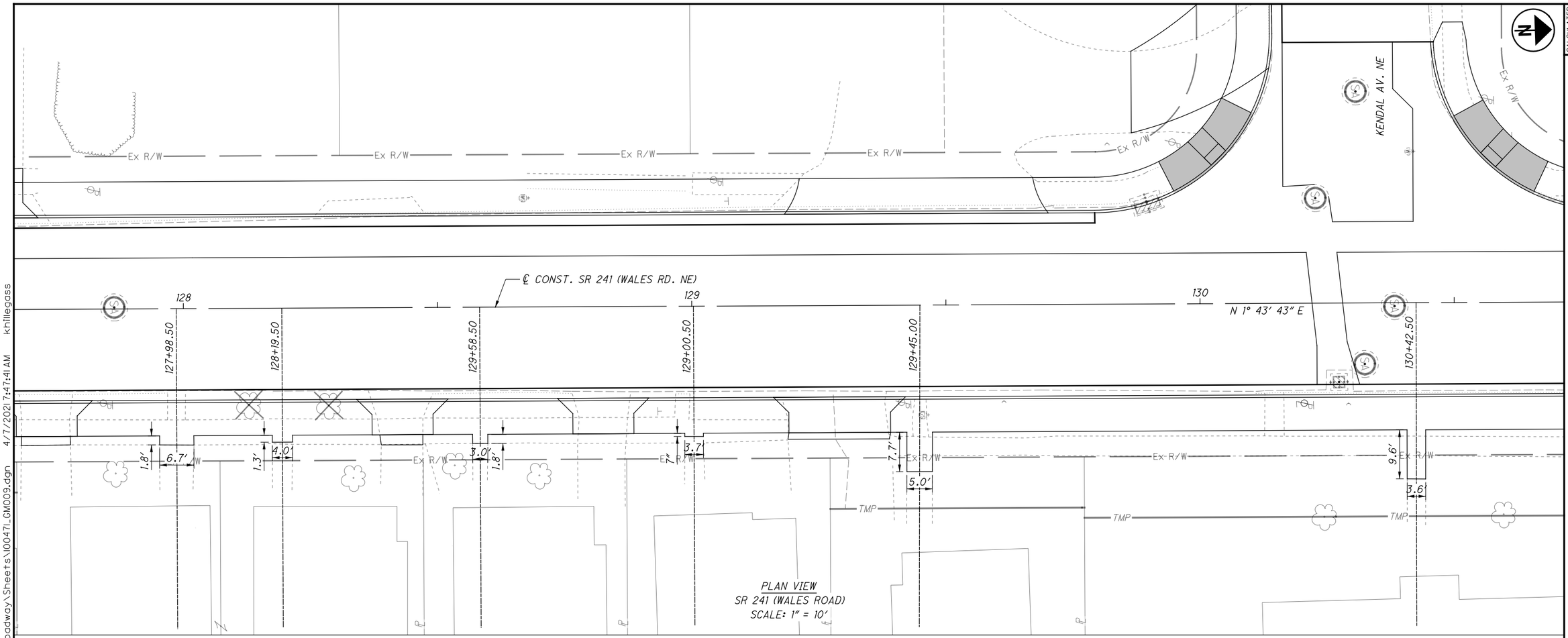
SIDEWALK & STEP DETAILS - SR 241 (WALES ROAD, NE)

CALCULATED KRM
CHECKED RAK

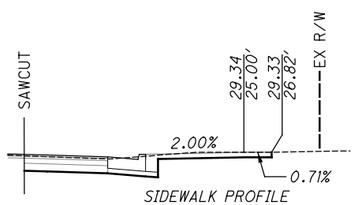
STA-241-9.71

271
395

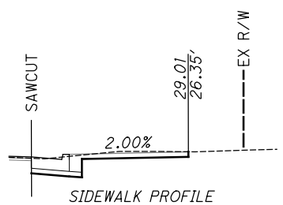
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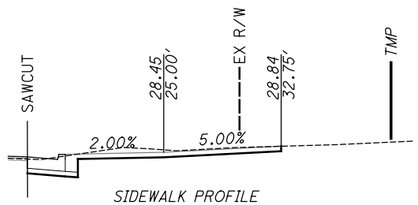
PLAN VIEW
SR 241 (WALES ROAD)
SCALE: 1" = 10'



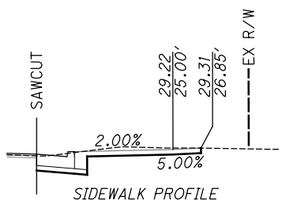
SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 127+98.50 RT.
SCALE: 1" = 5'



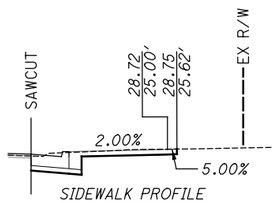
SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 129+58.50 RT.
SCALE: 1" = 5'



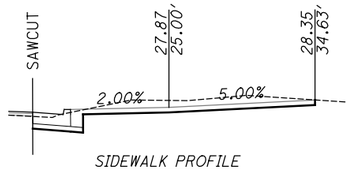
SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 129+45.00 RT.
SCALE: 1" = 5'



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 128+19.50 RT.
SCALE: 1" = 5'



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 129+00.50 RT.
SCALE: 1" = 5'



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 130+42.50 RT.
SCALE: 1" = 5'

LEGEND

XX.XX
XX.XX'
ELEVATION
OFFSET

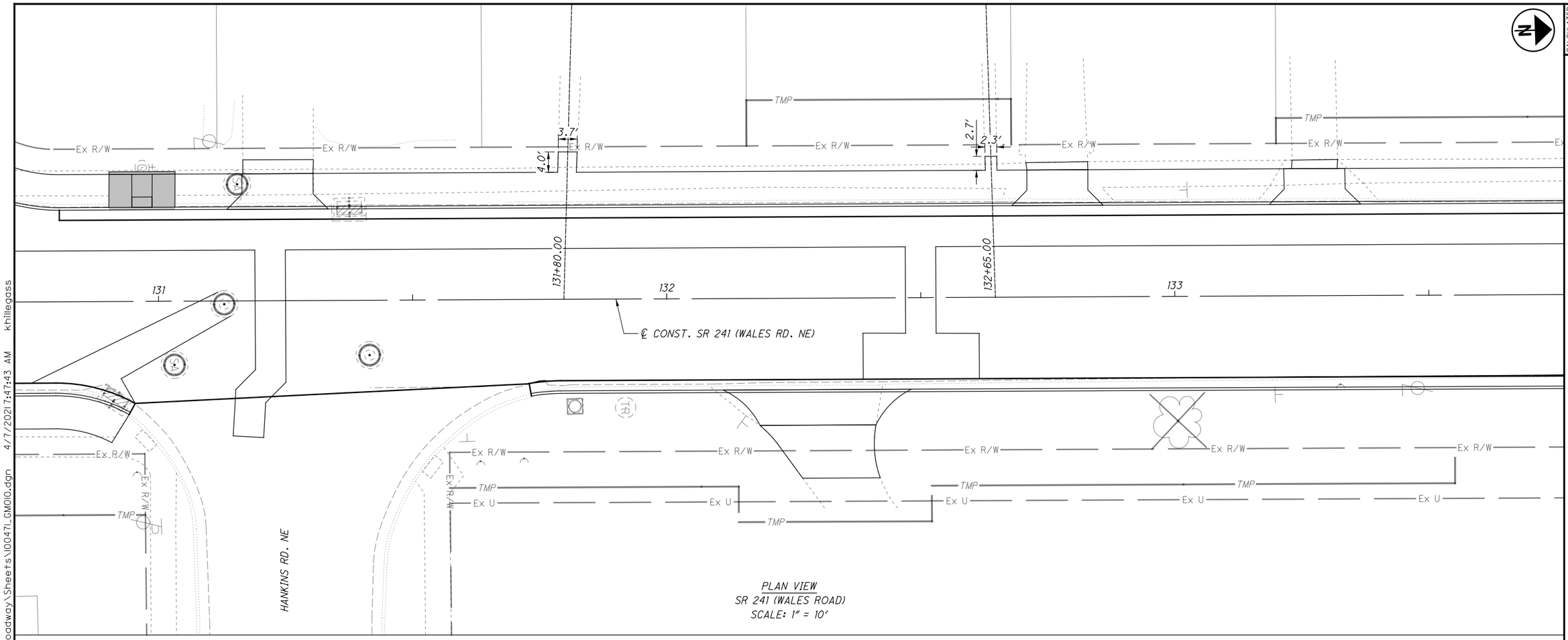
ADD 1000.00 TO ELEVATIONS SHOWN FOR ACTUAL ELEVATION.

CALCULATED KRM
CHECKED RAK

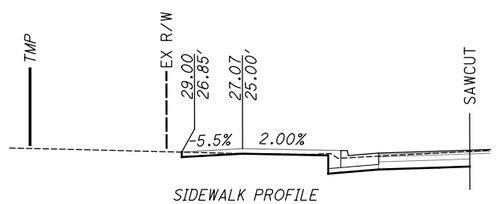
SIDEWALK & STEP DETAILS - SR 241 (WALES ROAD, NE)

STA-241-9.71

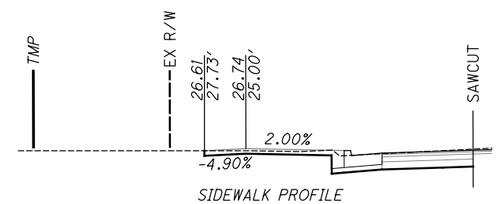
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PLAN VIEW
SR 241 (WALES ROAD)
SCALE: 1" = 10'



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 131+80.00 LT.
SCALE: 1" = 5'



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 132+65.00 LT.
SCALE: 1" = 5'

LEGEND

XX.XX
XX.XX' — ELEVATION / OFFSET

ADD 1000.00 TO ELEVATIONS SHOWN FOR ACTUAL ELEVATION.

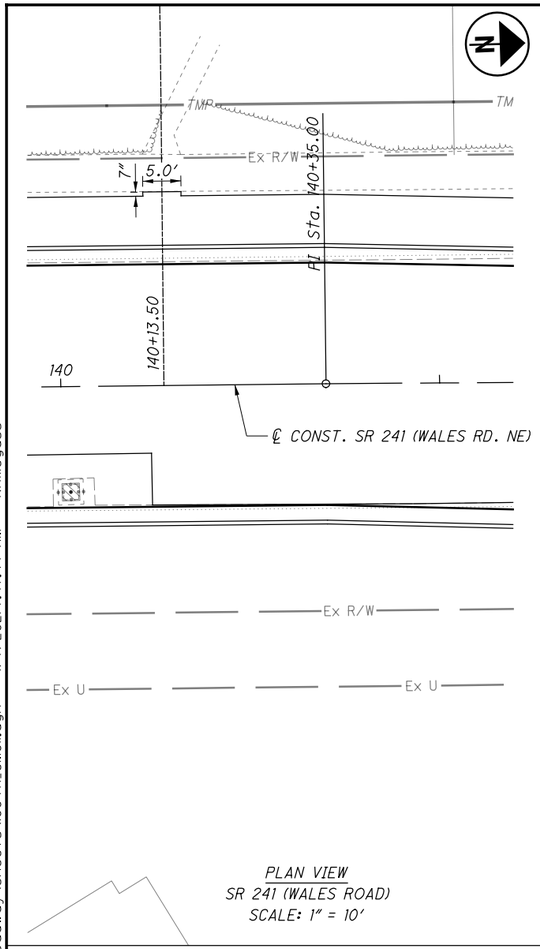
CALCULATED KRM
CHECKED RAK

SIDEWALK & STEP DETAILS -- SR 241 (WALES ROAD, NE)

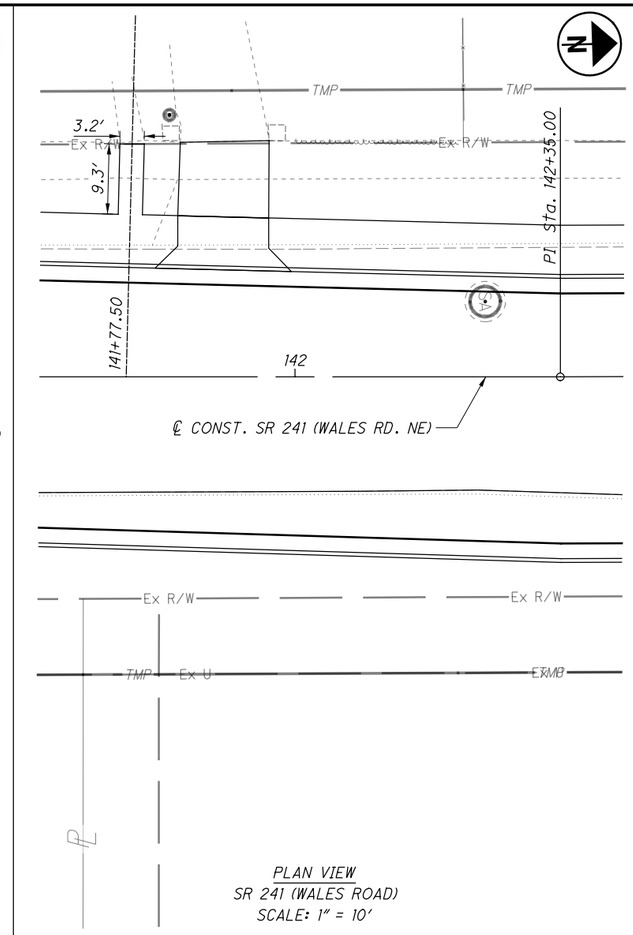
STA-241-9.71

273
395

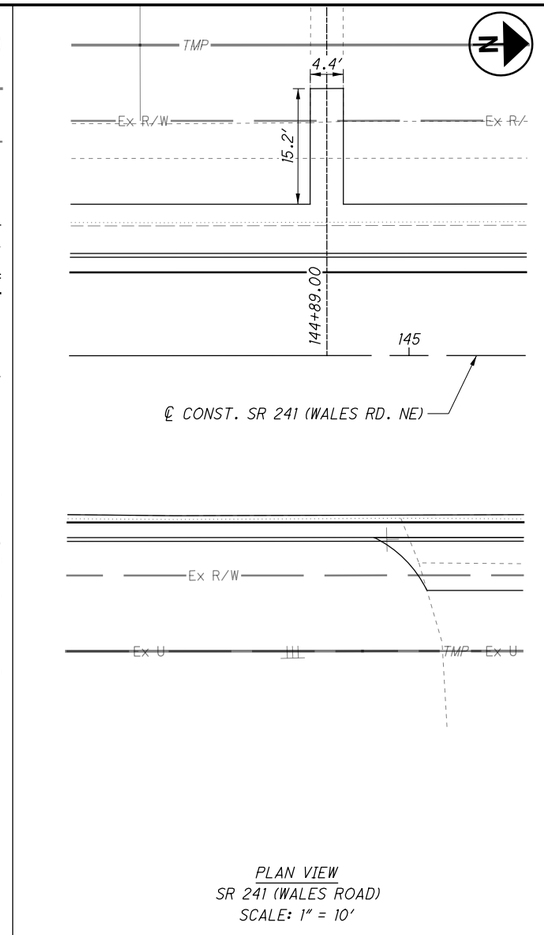
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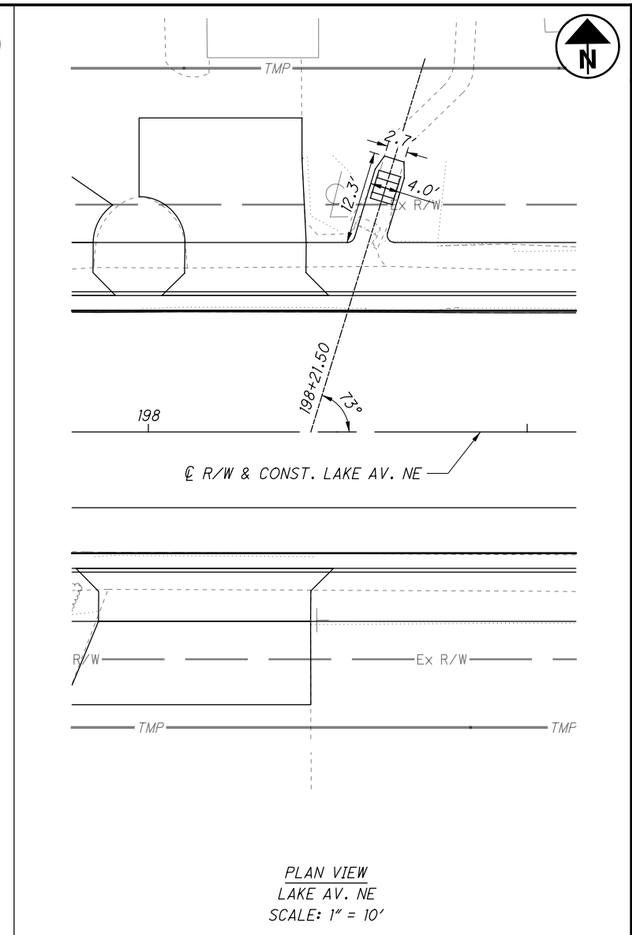
PLAN VIEW
SR 241 (WALES ROAD)
SCALE: 1" = 10'



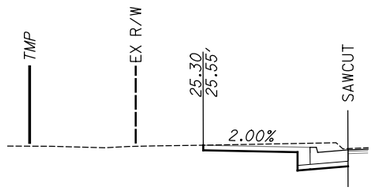
PLAN VIEW
SR 241 (WALES ROAD)
SCALE: 1" = 10'



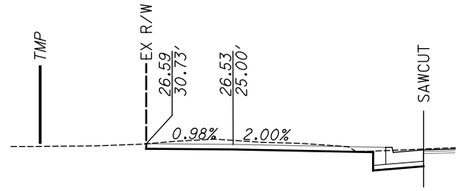
PLAN VIEW
SR 241 (WALES ROAD)
SCALE: 1" = 10'



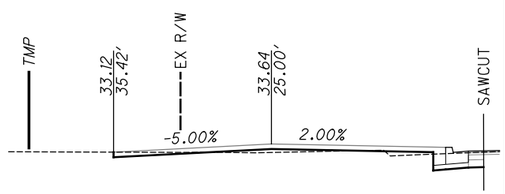
PLAN VIEW
LAKE AV. NE
SCALE: 1" = 10'



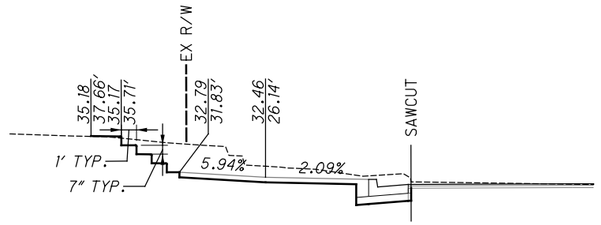
SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 140+13.50 LT.
SCALE: 1" = 5'



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 141+77.50 LT.
SCALE: 1" = 5'



SIDEWALK PROFILE
SR 241 (WALES ROAD)
STA. 144+89.00 LT.
SCALE: 1" = 5'



STEP PROFILE
LAKE AV. NE
STA. 198+21.50 LT. (ON SKEW)
SCALE: 1" = 5'

LEGEND
XX.XX
XX.XX'
ELEVATION
OFFSET

ADD 1000.00 TO ELEVATIONS SHOWN FOR ACTUAL ELEVATION.

CALCULATED KRM
CHECKED RAK

SIDEWALK & STEP DETAILS - SR 241 (WALES ROAD, NE)

STA-241-9.71

274
395

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REF NO.	SHEET NO.	STATION TO STATION			SIDE	643 CENTER LINE	644 EDGE LINE, 4"	644 LANE LINE, 4"	644 CHANNELIZING LINE, 8"	644 STOP LINE	644 CROSSWALK LINE	644 TRANSVERSE/DIAGONAL LINE	644 LANE ARROW		621 RPM (TWO-WAY, YELLOW)
			TO			MILE	MILE	MILE	FT	FT	FT	FT	EACH		EACH
CH	283	100+49		102+43	LT.				194						
CL	283	100+52		104+00	RT.	0.07									
CL	283	102+53		104+00	LT/RT	0.03									
CW	283	100+37			LT/RT						164				
CW	283	304+77		304+78	LT/RT						126				
LA	283	100+57			LT.								1		
LA	283	100+61			℄								1		
LA	283	101+23			LT.								1		
LA	283	101+26			℄								1		
LA	283	101+89			LT.								1		
LA	283	101+92			℄								1		
LA	283	103+74			℄								2		
SL	283	100+50			LT/RT					22					
SL	283	305+85			LT/RT					44					
CL	284	104+00		109+00	LT.	0.09									
CL	284	104+00		109+00	RT.	0.09									
LA	284	106+50			℄								2		
CL	285	109+00		114+00	LT.	0.09									
CL	285	109+00		113+98	LT/RT	0.09									
LA	285	109+14			℄								2		
LA	285	111+50			℄								2		
CH	286	114+08		114+48	RT.				40						
CH	286	115+11		115+51	LT.				40						
CL	286	9+64		9+70	℄	0.01									
CL	286	114+00		119+00	LT/RT	0.09									
CL	286	115+11		119+00	RT.	0.07									
CW	286	9+82			LT/RT						73				
CW	286	10+18			LT/RT						74				
CW	286	114+60			LT/RT						71				
CW	286	114+99			LT/RT						72				
LA	286	114+38			℄								1		
LA	286	115+21			℄								1		
LA	286	116+46			℄								2		
LA	286	118+10			℄								2		
SL	286	9+70			RT.					17					
SL	286	10+30			LT.					16					
SL	286	114+48			LT/RT					23					
SL	286	115+11			LT/RT					23					
CL	287	119+00		124+00	LT.	0.09									
CL	287	119+00		124+00	RT.	0.09									
LA	287	120+58			℄								2		
TOTALS CARRIED TO GENERAL SUMMARY						0.81			274	145	580		22		

CALCULATED K.A.H
CHECKED R.A.K

PAVEMENT MARKING SUBSUMMARY

STA-241-9.71

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REF NO.	SHEET NO.	STATION TO STATION			SIDE	643 CENTER LINE	644 EDGE LINE, 4"	644 LANE LINE, 4"	644 CHANNELIZING LINE, 8"	644 STOP LINE	644 CROSSWALK LINE	644 TRANSVERSE/DIAGONAL LINE	644 LANE ARROW		621 RPM (TWO-WAY, YELLOW)
			TO			MILE	MILE	MILE	FT	FT	FT	FT	EACH		EACH
CH	288	128+74		129+00	RT.				26						
CL	288	124+00		129+00	LT.	0.09									
CL	288	124+00		128+64	LT/RT	0.09									
LA	288	126+99			℄								2		
CH	289	10+39		10+64	LT.				25						
CH	289	129+00		130+87	RT.				187						
CH	289	131+79		132+69	LT.				90						
CL	289	10+37		10+64	LT.	0.01									
CL	289	129+00		130+67	LT.	0.03									
CL	289	131+79		134+00	RT.	0.04									
CL	289	132+79		134+00	LT/RT	0.02									
CW	289	9+75			LT/RT						104				
CW	289	10+24			LT/RT						94				
CW	289	131+02			LT/RT						78				
LA	289	10+48			LT.								1		
LA	289	10+50			LT.								1		
LA	289	129+18			℄								1		
LA	289	129+84			℄								1		
LA	289	130+57			℄								1		
LA	289	131+89			℄								1		
LA	289	132+55			℄								1		
LA	289	134+00			℄								2		
SL	289	9+63			RT.					20					
SL	289	10+37			LT.					24					
SL	289	129+94			LT/RT					11					
SL	289	130+67			LT/RT					11					
SL	289	130+87			RT.					12					
SL	289	131+79			LT/RT					21					
CL	290	134+00		138+00	RT.	0.08									
CL	290	134+00		138+00	LT.	0.08									
LA	290	137+00			℄								2		
CH	291	142+45		143+00	RT.				55						
CL	291	138+00		143+00	LT.	0.09									
CL	291	138+00		142+35	LT/RT	0.07									
LA	291	140+58			℄								2		
LA	291	142+85			RT.								1		
CH	292	143+00		144+93	RT.				193						
CH	292	146+60		147+00	LT.				40						
CH	292	198+00		199+47	RT.				147						
CL	292	143+00		147+00	℄	0.08									
CL	292	146+60		147+00	℄	0.01									
CL	292	198+00		199+37	LT.	0.03									
CW	292	199+67			LT/RT						107				
LA	292	143+51			RT.								1		
LA	292	144+17			RT.								1		
TOTALS CARRIED TO GENERAL SUMMARY						0.72			763	99	383		18		

CALCULATED K.A.H
CHECKED R.A.K

PAVEMENT MARKING SUBSUMMARY

STA-241-9.71

P:\3000_3499\306270090_STA-241-97L_Wales_Road\000TN\0047L_STA-241-97N\Design\Traffic\Sheets\0047L_TS002.dgn 4/7/2021 7:47:47 AM khillegoss

REF NO.	SHEET NO.	STATION TO STATION			SIDE	643 CENTER LINE	644 EDGE LINE, 4"	644 LANE LINE, 4"	644 CHANNELIZING LINE, 8"	644 STOP LINE	644 CROSSWALK LINE	644 TRANSVERSE/DIAGONAL LINE	644 LANE ARROW		621 RPM (TWO-WAY, YELLOW)										
			TO			MILE	MILE	MILE	FT	FT	FT	FT	EACH		EACH										
LA	292	144+83			RT.								1											
LA	292	146+70			LT.								1											
LA	292	198+61			℄								1											
LA	292	198+61			RT.								1											
LA	292	199+27			℄								1											
LA	292	199+27			RT.								1											
SL	292	144+93			RT.					22														
SL	292	146+60			LT.					22														
SL	292	199+37			LT/RT					10														
SL	292	199+47			RT.					11														
CH	293	147+00		147+55	LT.				55															
CH	293	148+15		149+23	LT.				108															
CH	293	149+84		152+00	LT.				220															
CL	293	147+00		152+00	℄	0.09									5									
CL	293	147+00		152+00	RT.	0.09									5									
LA	293	147+36			LT.								1											
LA	293	148+15			LT.								1											
LA	293	148+69			RT.								2											
LA	293	148+80			LT.								1											
LA	293	149+94			LT.								1											
LA	293	150+72			LT.								1											
LA	293	151+23			RT.								2											
LA	293	151+50			LT.								1											
CH	294	152+00		152+50	LT.				50															
CL	294	152+00		157+00	℄	0.09																		
CL	294	152+00		157+00	RT.	0.09																		
LA	294	152+30			LT.								1											
LA	294	154+22			RT.								2											
LL	294	152+50		157+00	LT.			0.09																
CL	295	157+00		162+00	℄	0.09																		
CL	295	157+00		162+00	RT.	0.09																		
LA	295	157+91			RT.								2											
LL	295	157+00		162+00	LT.			0.09																
CL	296	162+00		167+00	RT.	0.09																		
CL	296	162+00		167+00	℄	0.09																		
LA	296	162+91			RT.								2											
LL	296	162+00		167+00	LT.			0.09																
CH	297	171+61		172+00	RT.				39															
CL	297	167+00		172+00	RT.	0.09																		
CL	297	167+00		171+01	℄	0.08																		
ELW	297	169+51		171+51	RT.		0.04																	
LA	297	168+95			RT.								2											
LL	297	167+00		172+00	LT.			0.09																
TW	297	169+75		171+12	RT.							52												
CH	298	172+00		176+00	RT.				400															
CL	298	172+00		176+00	℄	0.08																		
LA	298	172+21			RT.								1											
LA	298	172+87			RT.								1											
LA	298	173+53			RT.								1											
TOTALS CARRIED TO GENERAL SUMMARY						0.97	0.04	0.36	872	65		52	28		10									

CALCULATED K.A.H
CHECKED R.A.K

PAVEMENT MARKING SUBSUMMARY

STA-241-9.71

P:\3000_3499\30621\70090_STA-241-97L_Wales_Road\ODOT\00471_STA-241-97I\Design\Traffic\Sheets\00471_TS003.dgn 4/7/2021 7:47:49 AM khillegass

REF NO.	SHEET NO.	STATION TO STATION			SIDE	643 CENTER LINE	644 EDGE LINE, 4"	644 LANE LINE, 4"	644 CHANNELIZING LINE, 8"	644 STOP LINE	644 CROSSWALK LINE	644 TRANSVERSE/DIAGONAL LINE	644 LANE ARROW		621 RPM (TWO-WAY, YELLOW)
			TO			MILE	MILE	MILE	FT	FT	FT	FT	EACH		EACH
LA	298	174+19			RT.								1		
LA	298	174+85			RT.								1		
LA	298	175+51			RT.								1		
LL	298	172+00		176+00	LT.			0.08							
CH	299	176+00		176+27	RT.				27						
CH	299	177+85		179+00	LT.				115						
CL	299	176+00		179+00	RT.	0.06									
CW	299	176+72			LT/RT						129				
CW	299	400+42			LT/RT						170				
LA	299	176+17			RT.								1		
LA	299	177+95			℄								1		
LA	299	178+61			℄								1		
LA	299	400+82			LT.								1		
LA	299	401+49			LT.								1		
LA	299	402+16			LT.								1		
SL	299	176+28			RT.					28					
SL	299	177+85			LT/RT					27					
CH	300	179+00		179+38	LT.				38						
CH	300	180+19		180+59	RT.				40						
CH	300	181+60		182+00	LT.				40						
CL	300	179+00		182+00	LT/RT	0.06									
LA	300	180+49			℄								1		
LA	300	181+70			℄								1		
CL	301	182+00		184+25	RT.	0.04									
CL	301	182+18		184+25	LT/RT	0.04									
LA	301	183+64			℄								2		
CH	302	197+27		198+00	RT.				73						
CL	302	195+85		198+00	LT.	0.04									
LA	302	197+95			RT.								1		
LA	302	197+95			℄								1		
TOTALS CARRIED TO GENERAL SUMMARY						0.24		0.08	333	55	299		15		

CALCULATED K.A.H
CHECKED R.A.K

PAVEMENT MARKING SUBSUMMARY

STA-241-9.71

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REF NO.	SHEET NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630 GROUND MOUNTED SUPPORT, NO. 2 POST FT	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 STREET NAME SIGN SUPPORT, NO. 2 POST FT	630 STREET NAME SIGN SUPPORT, NO. 3 POST FT	630 STREET NAME SIGN SUPPORT, NO. 4 POST FT	630 SIGN POST REFLECTOR EACH	630 SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN EACH	630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH	630 SIGN, FLAT SHEET EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF POLE MOUNTED SIGN AND REERECTION EACH		
R1	283	LINCOLN WAY	304+65	RT.																1	2			
R2	283	LINCOLN WAY	304+65	RT.																1				
R3	283	LINCOLN WAY	304+64	RT.																1				
R4	283	LINCOLN WAY	305+45	LT.																1				
R5	283	LINCOLN WAY	305+45	LT.																1				
R6	283	LINCOLN WAY	304+60	LT.																	2			
R7	283	LINCOLN WAY	305+17	RT.																1				
R8	283	LINCOLN WAY	305+17	RT.																1				
R9	283	WALES ROAD	103+17	RT.																	1			
S1	283	LINCOLN WAY	304+65	RT.	M1-5-24-3	30" X 24"								1	5.00									
					M6-1-21	21" X 15"								1	2.19									
S2	283	LINCOLN WAY	304+67	LT.	R3-5R-30	30" X 36"							1		7.50									
S3	283	LINCOLN WAY	304+73	RT.	R3-5R-30	30" X 36"							1		7.50									
S4	283	LINCOLN WAY	304+73	RT.	D3-1-54	54" X 12"							1		4.50									
S5	283	LINCOLN WAY	305+50	LT.	D3-1-54	54" X 12"							1		4.50									
S6	283	LINCOLN WAY	304+68	LT.	R3-5L-30	30" X 36"							1		7.50									
S7	283	LINCOLN WAY	305+51	RT.	R3-5L-30	30" X 36"							1		7.50									
S8	283	LINCOLN WAY	304+69	LT.	D3-1-48	48" X 12"							1		4.00									
S9	283	LINCOLN WAY	305+50	RT.	D3-1-48	48" X 12"							1		4.00									
S10	283	WALES ROAD	100+30	LT.	M1-5-24-3	30" X 24"								1	5.00									
					M6-6-21	21" X 15"								1	2.19									
S11	283	WALES ROAD	101+07	RT.	R5-1-30	30" X 30"		13.0				1			6.25									
S12	283	WALES ROAD	101+30	RT.	R5-1-30	30" X 30"		13.0				1			6.25									
					R10-H5AR-24	24" X 30"									5.00									
S13	283	WALES ROAD	102+25	RT.	M3-1-24	24" X 12"		13.5							2.00									
					M1-5-24-3	30" X 24"									5.00									
S14	283	WALES ROAD	102+90	LT.	R3-H8bj-36	36" X 30"		13.0							7.50									
S15	283	WALES ROAD	103+85	RT.	R2-1-24	24" X 30"	13.0							1	5.00									
R10	284	WALES ROAD	104+01	LT.												3		1						
R11	284	WALES ROAD	104+41	RT.												2		1						
R12	284	NORTH AVENUE	9+71	RT.									15.0	1			3	1						
R13	284	NORTH AVENUE	10+31	LT.			13.0							1			1	1						
R14	284	WALES ROAD	105+84	LT.																	1			
R15	284	WALES ROAD	106+97	LT.																	1			
R16	284	WALES ROAD	107+45	RT.																	1			
R17	284	ANDREW AVENUE	9+66	RT.			13.0					1					1	1						
R18	284	ANDREW AVENUE	10+31	LT.								1	14.0				1	1						
R19	284	WALES ROAD	108+27	LT.												2		1						
R20	284	WALES ROAD	108+23	LT.																	1			
S16	284	WALES ROAD	104+15	LT.	M3-3-24	24" X 12"		14.8							2.00									
					M1-5-24-3	30" X 24"									5.00									
					M5-1-21	21" X 15"									2.19									
S17	284	WALES ROAD	105+50	LT.	M2-1-21	21" X 15"		13.8							2.19									
					M1-5-24-3	30" X 24"									5.00									
R21	285	WALES ROAD	109+19	RT.																	1			
R22	285	RODMAN AVENUE	9+69	RT.			13.0					1					1	1						
R23	285	RODMAN AVENUE	10+29	LT.								1	15.0				3	1						
R24	285	WALES ROAD	111+56	RT.																	1			
R25	285	WALES ROAD	111+91	LT.																	1			
TOTALS CARRIED TO GENERAL SUMMARY							52.0	81.1			44.0	8	8	5	114.8	7	10	9		6	12			

CALCULATED K.A.H. CHECKED R.A.K.

SIGNING SUBSUMMARY

STA-241-9.71

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REF NO.	SHEET NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630 GROUND MOUNTED SUPPORT, NO. 2 POST FT	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 STREET NAME SIGN SUPPORT, NO. 2 POST FT	630 STREET NAME SIGN SUPPORT, NO. 3 POST FT	630 STREET NAME SIGN SUPPORT, NO. 4 POST FT	630 SIGN POST REFLECTOR EACH	630 SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN EACH	630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH	630 SIGN, FLAT SHEET EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF POLE MOUNTED SIGN AND REERECTION EACH		
R26	285	WALES ROAD	112+06	RT.												1		1						
R27	285	GRAY COURT	9+69	RT.			13.0					1					1	1						
R28	285	GRAY COURT	10+29	LT.							14.0	1					2	1						
R29	285	WALES ROAD	112+75	LT.																		1		
S18	285	WALES ROAD	113+45	RT.	R3-H8bh-36	36" X 30"		13.0							7.50									
R30	286	STATE AVENUE	10+28	RT.												2		1						
R31	286	STATE AVENUE	9+66	RT.												1		1						
R32	286	WALES ROAD	115+11	LT.																		1		
R33	286	WALES ROAD	116+77	RT.												2		1						
R34	286	ROSLYN AVENUE	9+71	RT.							14.0	1					1	1						
R35	286	ROSLYN AVENUE	9+71	LT.																			1	
R36	286	WALES ROAD	118+01	LT.																		1		
R37	286	WALES ROAD	118+69	RT.												1		1						
S19	286	WALES ROAD	114+52	LT.	D3-1-48	48" X 12"							1		4.00									
S20	286	WALES ROAD	115+06	RT.	D3-1-48	48" X 12"							1		4.00									
S21	286	WALES ROAD	114+52	LT.	R3-5L-30	30" X 36"							1		7.50									
S22	286	WALES ROAD	115+06	RT.	R3-5L-30	30" X 36"							1		7.50									
S23	286	STATE AVENUE	9+66	RT.	R7-1-12	12" X 18"	12.0								1.50									
S24	286	WALES ROAD	114+57	RT.	D3-1-48	48" X 12"							1		4.00									
S25	286	WALES ROAD	115+06	LT.	D3-1-48	48" X 12"							1		4.00									
S26	286	WALES ROAD	116+06	LT.	R3-H8bh-36	36" X 30"		13.0							7.50									
S27	286	WALES ROAD	116+75	RT.	W15-1-30	30" X 30"	13.0					1			6.25									
R38	287	WILLIAMS AVENUE	9+71	RT.							15.0	1					3	1						
R39	287	WILLIAMS AVENUE	10+31	LT.			13.0					1				1	1	1						
R40	287	WALES ROAD	119+57	RT.																		1		
R41	287	WALES ROAD	119+72	LT.												2		1						
R42	287	WALES ROAD	122+66	LT.												1		1						
R43	287	WALES ROAD	123+35	RT.												1		1						
S28	287	WALES ROAD	119+75	LT.	W15-1-30	30" X 30"	13.0					1			6.25									
R44	288	WALES ROAD	125+12	RT.												1		1						
R45	288	WALES ROAD	125+19	LT.												1		1						
R46	288	WALES ROAD	127+13	RT.												1		1						
R47	288	WALES ROAD	128+93	RT.												2		1						
S29	288	WALES ROAD	128+15	RT.	R3-H8bh-36	36" X 30"		13.0							7.50									
R48	289	WALES ROAD	129+07	LT.												2		1						
R49	289	KENDAL AVENUE	9+63	RT.							15.0	1					1	1						
R50	289	KENDAL AVENUE	9+63	LT.													2	1						
R51	289	WALES ROAD	130+90	LT.			13.5																1	
R52	289	WALES ROAD	131+57	RT.																	1			
R53	289	WALES ROAD	133+20	RT.												2		1						
R54	289	WALES ROAD	133+03	LT.												1		1						
S30	289	WALES ROAD	129+00	LT.	M3-3-24	24" X 12"		13.5							2.00									
					M1-5-24-3	30" X 24"									5.00									
S31	289	WALES ROAD	129+94	RT.	R10-7-24	24" X 30"	13.0								5.00									
S32	289	WALES ROAD	9+21	RT.	R10-7a-24	24" X 30"	13.0								5.00									
S33	289	WALES ROAD	130+88	LT.	R3-5L-30	30" X 36"							1		7.50									
S34	289	WALES ROAD	130+90	LT.	R3-5L-30	30" X 36"							1		7.50									
S35	289	WALES ROAD	131+23	LT.	R3-5L-30	30" X 36"							1		7.50									
S36	289	WALES ROAD	130+91	LT.	D3-1-60	60" X 12"							1		5.00									
S37	289	WALES ROAD	131+74	RT.	D3-1-60	60" X 12"							1		5.00									
TOTALS CARRIED TO GENERAL SUMMARY							103.5	52.5			58.0	8	11		117.0	22	11	22		1	4	2		

CALCULATED K.A.H. CHECKED R.A.K.

SIGNING SUBSUMMARY

STA-241-9.71

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REF NO.	SHEET NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630 GROUND MOUNTED SUPPORT, NO. 2 POST FT	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 STREET NAME SIGN SUPPORT, NO. 2 POST FT	630 STREET NAME SIGN SUPPORT, NO. 3 POST FT	630 STREET NAME SIGN SUPPORT, NO. 4 POST FT	630 SIGN POST REFLECTOR EACH	630 SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN EACH	630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH	630 SIGN, FLAT SHEET SF	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF POLE MOUNTED SIGN AND REERECTION EACH		
S38	289	WALES ROAD	131+43	LT.	R3-5R-30	30" X 36"							1		7.50									
S39	289	WALES ROAD	131+51	LT.	D3-1-48	48" X 12"							1		4.00									
S40	289	WALES ROAD	131+74	RT.	R10-11b-36	36" X 36"							1		9.00									
S41	289	WALES ROAD	133+00	RT.	M3-1-24	24" X 12"		13.5							2.00									
					M1-5-24-3	30" X 24"									5.00									
S42	289	WALES ROAD	133+15	LT.	R3-H8bh-36	36" X 30"		13.0							7.50									
R55	291	WALES ROAD	138+73	RT.					11.5								1	1					1	
R56	291	ROTCH AVENUE	9+65	RT.							15.0	1					2	1						
R57	291	ROTCH AVENUE	9+65	RT.													1	1						
R57A	291	WALES/PEBBLE CHASE	139+50	RT.								1												
R58	291	WALES ROAD	139+75	RT.			13.5																1	
S43	291	WALES ROAD	141+85	RT.	R3-H8ba-30	30" X 30"	13.0								6.25									
R59	292	WALES ROAD	143+43	RT.												3		1						
R60	292	WALES ROAD	144+97	RT.												1		1						
R61	292	WALES ROAD	145+25	RT.					11.5								1	1						
R62	292	WALES ROAD	145+58	LT.																		2		
R63	292	WALES ROAD	145+72	LT.																	1			
R64	292	WALES ROAD	145+63	LT.																		2		
R65	292	WALES ROAD	145+95	RT.			13.5																1	
R66	292	WALES ROAD	146+17	RT.																	1			
R67	292	LAKE AVENUE	198+25	RT.			13.0										1	1						
R68	292	WALES ROAD	146+99	LT.												3		1						
S44	292	WALES ROAD	143+00	LT.	R2-1-24	24" X 30"	13.0								5.00									
S45	292	WALES ROAD	143+45	RT.	D9-2-24	24" X 24"		13.8							4.00									
					M6-1-21	21" X 15"									2.19									
S46	292	WALES ROAD	144+50	LT.	M3-3-24	24" X 12"		13.5							2.00									
					M1-5-24-3	30" X 24"									5.00									
S47	292	WALES ROAD	144+93	RT.	R10-6a-24	24" X 30"	13.0								5.00									
S48	292	WALES ROAD	145+50	RT.	R2-2-24-SPECIAL	24" X 30"	13.0								5.00									
S49	292	WALES ROAD	145+55	LT.	D9-2-24	24" X 24"		13.8							4.00									
					M6-1-21	21" X 15"									2.19									
S50	292	WALES ROAD	145+56	LT.	R3-5R-30	30" X 36"							1		7.50									
S51	292	WALES ROAD	145+79	RT.	R3-5R-30	30" X 36"							1		7.50									
S52	292	WALES ROAD	145+56	LT.	D3-1-48	48" X 12"							1		4.00									
S53	292	WALES ROAD	145+98	RT.	D3-1-48	48" X 12"							1		4.00									
S54	292	WALES ROAD	145+56	LT.	R3-1-30-SPECIAL	30" X 36"							1		7.50									
S55	292	WALES ROAD	145+93	RT.	D3-1-48	48" X 12"							1		4.00									
S56	292	WALES ROAD	145+97	RT.	R3-5L-30	30" X 36"							1		7.50									
S57	292	WALES ROAD	145+98	RT.	R3-5L-30	30" X 36"							1		7.50									
S58	292	WALES ROAD	145+99	RT.	R3-2-30-SPECIAL	30" X 36"							1		7.50									
S59	292	WALES ROAD	147+00	LT.	R2-2-24-SPECIAL	24" X 30"	13.0								5.00									
R69	293	SPRINGHILL AVENUE	10+31	RT.							14.0	1					2	1						
R70	293	BENNINGTON AVENUE	9+64	RT.							15.0	1					3	1						
R71	293	WALES ROAD	151+15	RT.												1		1						
R72	293	WALES ROAD	151+69	LT.												1		1						
S60	293	WALES ROAD	147+50	LT.	R3-7-30	30" X 30"		13.0							6.25									
S61	293	WALES ROAD	147+50	RT.	M3-1-24	24" X 12"		13.5							2.00									
					M1-5-24-3	30" X 24"									5.00									
S62	293	WALES ROAD	149+00	RT.	R2-1-24	24" X 30"	13.0								5.00									
TOTALS CARRIED TO GENERAL SUMMARY							118.0	94.1	23.0		44.0	4	12		155.9	9	11	12		2	4	2		

CALCULATED K.A.H. CHECKED R.A.K.

SIGNING SUBSUMMARY

STA-241-9.71

P:\3000_3499\3062170090_STA-241-971_Wales_Road\ODOT\00471_STA-241-971\Design\Traffic\Sheets\00471_TS007.dgn 4/7/2021 7:47:54 AM khillegass

REF NO.	SHEET NO.	LOCATION	STATION	SIDE	CODE	SIZE (INCHES)	630 GROUND MOUNTED SUPPORT, NO. 2 POST FT	630 GROUND MOUNTED SUPPORT, NO. 3 POST FT	630 STREET NAME SIGN SUPPORT, NO. 2 POST FT	630 STREET NAME SIGN SUPPORT, NO. 3 POST FT	630 STREET NAME SIGN SUPPORT, NO. 4 POST FT	630 SIGN POST REFLECTOR EACH	630 SIGN HANGER ASSEMBLY, MAST ARM, AS PER PLAN EACH	630 SIGN SUPPORT ASSEMBLY, POLE MOUNTED EACH	630 SIGN, FLAT SHEET SF	630 REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF GROUND MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND REERECTION EACH	630 REMOVAL OF OVERHEAD MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF POLE MOUNTED SIGN AND DISPOSAL EACH	630 REMOVAL OF POLE MOUNTED SIGN AND REERECTION EACH		
R73	294	COVENTRY ROAD	9+64	RT.							15.0	1					3	1						
R74	294	WALES ROAD	153+43	LT.												1		1						
S63	294	WALES ROAD	152+65	LT.	R3-H8bb-30	30" X 30"	13.0								6.25									
S64	294	WALES ROAD	153+35	LT.	W3-3-30	30" X 30"	13.0					1			6.25									
R75	295	STRATFORD AVENUE	9+63	RT.							15.0	1					2	1						
R76	295	SPRINGHAVEN CR	10+38	LT.							14.0	1					2	1						
R77	296	WALES ROAD	165+97	LT.							15.0						4	1						
R78	296	PROVIDENCE AVENUE	9+64	RT.							15.0	1					3	1						
R79	297	SPRINGHAVEN CR	10+34	LT.							14.0	1					2	1						
R80	297	WALES ROAD	171+50	LT.												2		1						
S65	297	WALES ROAD	171+61	RT.	R3-H8bb-30	30" X 30"	13.0								6.25									
R81	298	LENNOX AVENUE	9+64	RT.							15.0	1					3	1						
R82	298	WALES ROAD	173+79	RT.												1		1						
R83	298	WALES ROAD	174+19	RT.												2		1						
R84	298	WALES ROAD	174+97	LT.																		1		
S66	298	WALES ROAD	172+69	RT.	R3-1L-24	24" X 24"	12.5								4.00									
S67	298	WALES ROAD	173+50	LT.	R2-1-24	24" X 30"	13.0								5.00									
S68	298	WALES ROAD	174+20	RT.	M3-1-24	24" X 12"		14.8							2.00									
					M1-5-24-3	30" X 24"									5.00									
					M6-3-21	21" X 15"									2.19									
S69	298	WALES ROAD	175+00	LT.	M3-3-24	24" X 12"		13.5							2.00									
					M1-5-24-3	30" X 24"									5.00									
R85	299	WALES ROAD	177+60	RT.									1						1					
S70	299	WALES ROAD	176+27	RT.	R3-H8bb-30	30" X 30"	13.0								6.25									
R86	300	WALES ROAD	179+26	RT.			13.0										1	1						
R87	300	WALES ROAD	180+45	LT.			13.0										1	1						
R87A	300	WALES/BURD	180+65	LT.								1												
R88	302	LAKE AVENUE	196+90	RT.			13.5										2	1						
R89	302	LAKE AVENUE	196+88	LT.												1		1						
S71	302	LAKE AVENUE	196+85	LT.	R2-1-24	24" X 30"	13.0								5.00									
TOTALS CARRIED TO GENERAL SUMMARY							130.0	28.3			103.0	8	1		55.2	7	23	15	1			1		

CALCULATED KAH CHECKED RAK

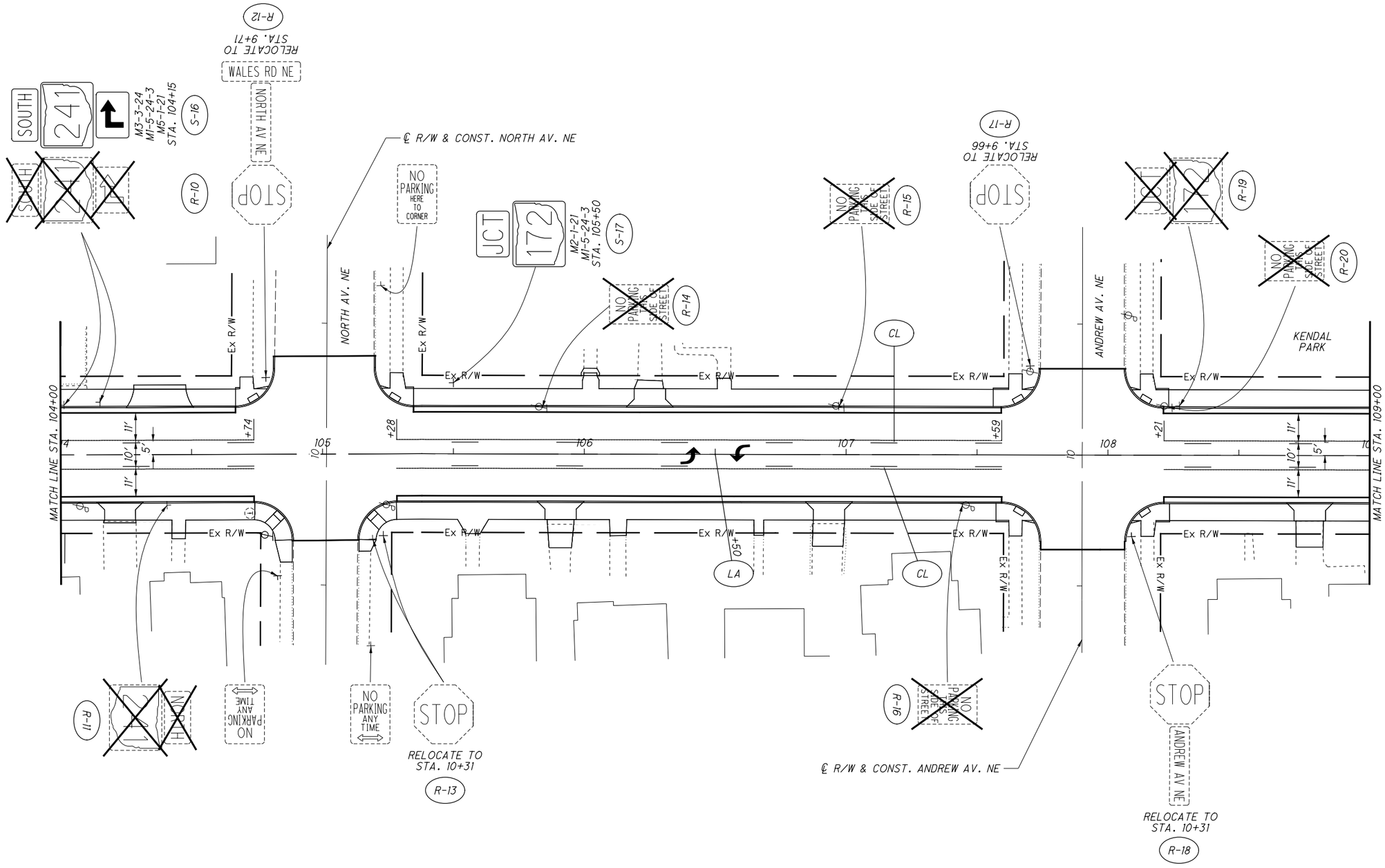
SIGNING SUBSUMMARY

STA-241-9.71

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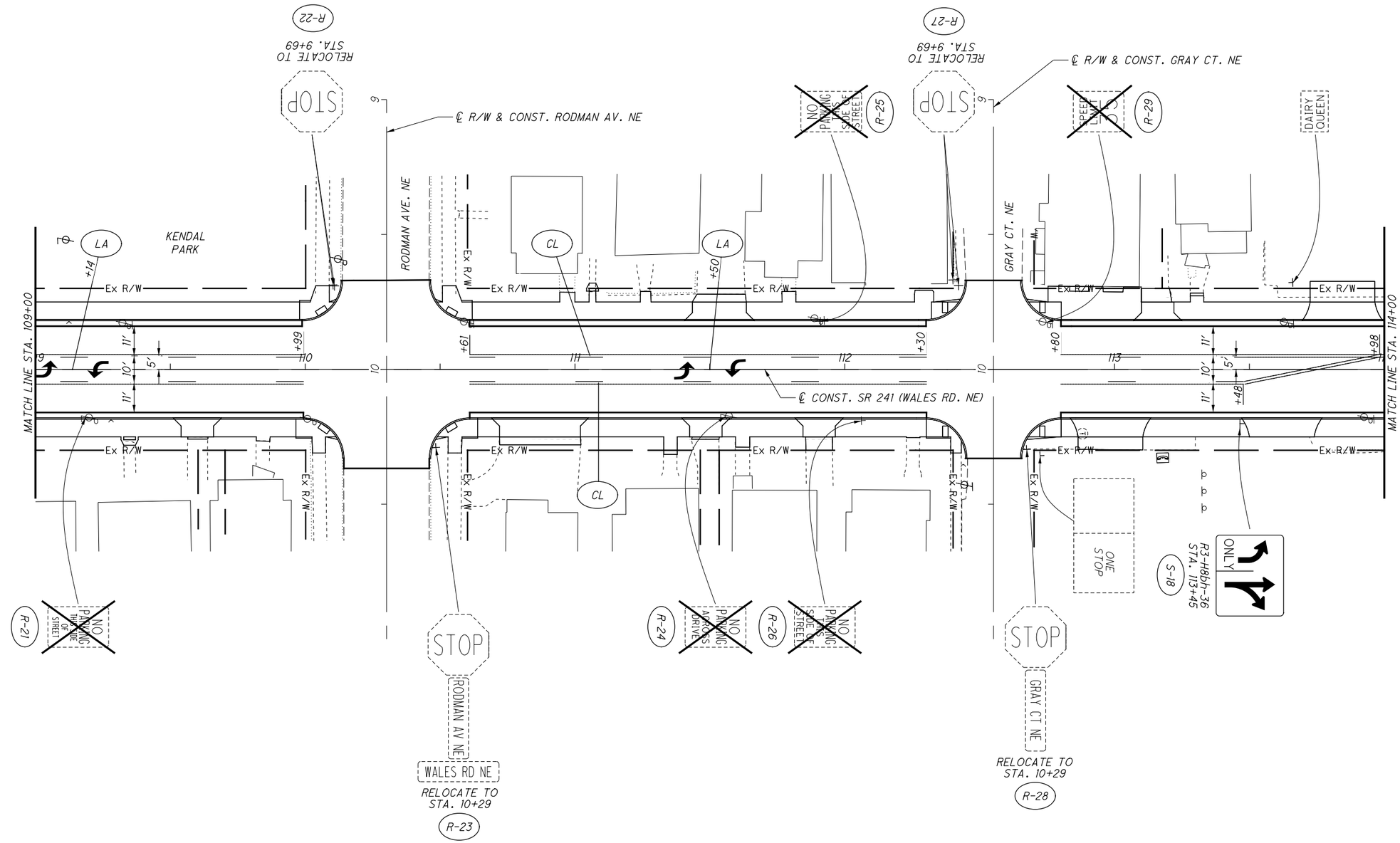
SEE SHEET 283 FOR TRAFFIC CONTROL LEGEND.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAH
CHECKED KBM

SIGNING AND PAVEMENT MARKING PLAN
STA. 104+00 TO STA. 109+00

STA-241-9.71



SEE SHEET 283 FOR TRAFFIC CONTROL LEGEND.

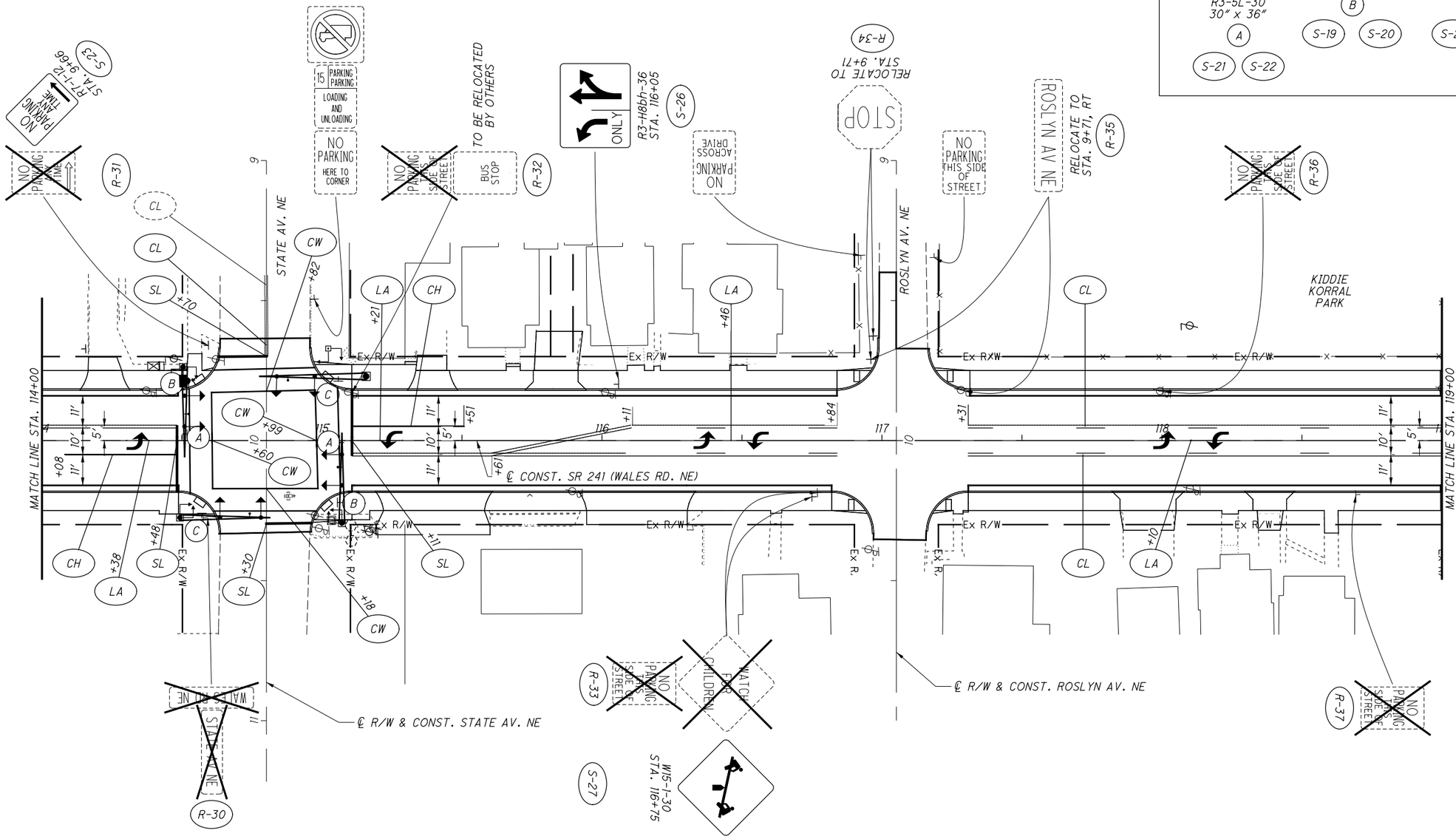
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAH
CHECKED KRM

SIGNING AND PAVEMENT MARKING PLAN
STA. 109+00 TO STA. 114+00

STA-241-9.71

P:\3000_3499\3062\T0090_STA-241-9.71_Wales_Road\ODOT\100471_STA-241-9.71\Design\Traffic\Sheets\100471_TP003.dgn 4/7/2021 7:48:00 AM khillegass

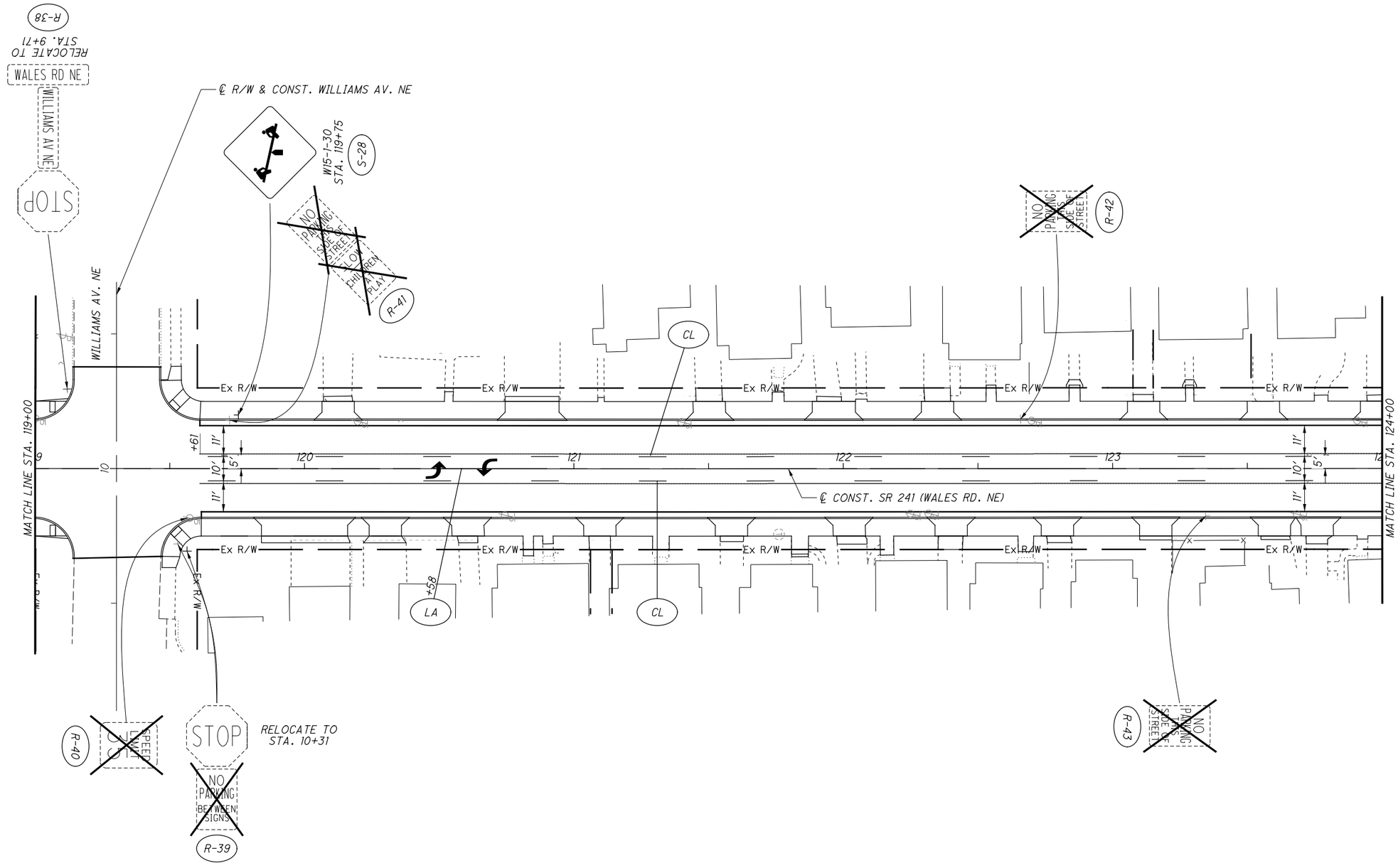


SIGNING AND PAVEMENT MARKING PLAN
STA. 114+00 TO STA. 119+00

STA-241-9.71

286
395

P:\3000_3499\3062170090_STA-241-9.71_Wales_Road\DOT\100471_STA-241-9.71\Design\Traffic\Sheets\100471_TP004.dgn 4/7/2021 7:48:01 AM khillegass



SEE SHEET 283 FOR TRAFFIC CONTROL LEGEND.

HORIZONTAL SCALE IN FEET
0 10 20 40

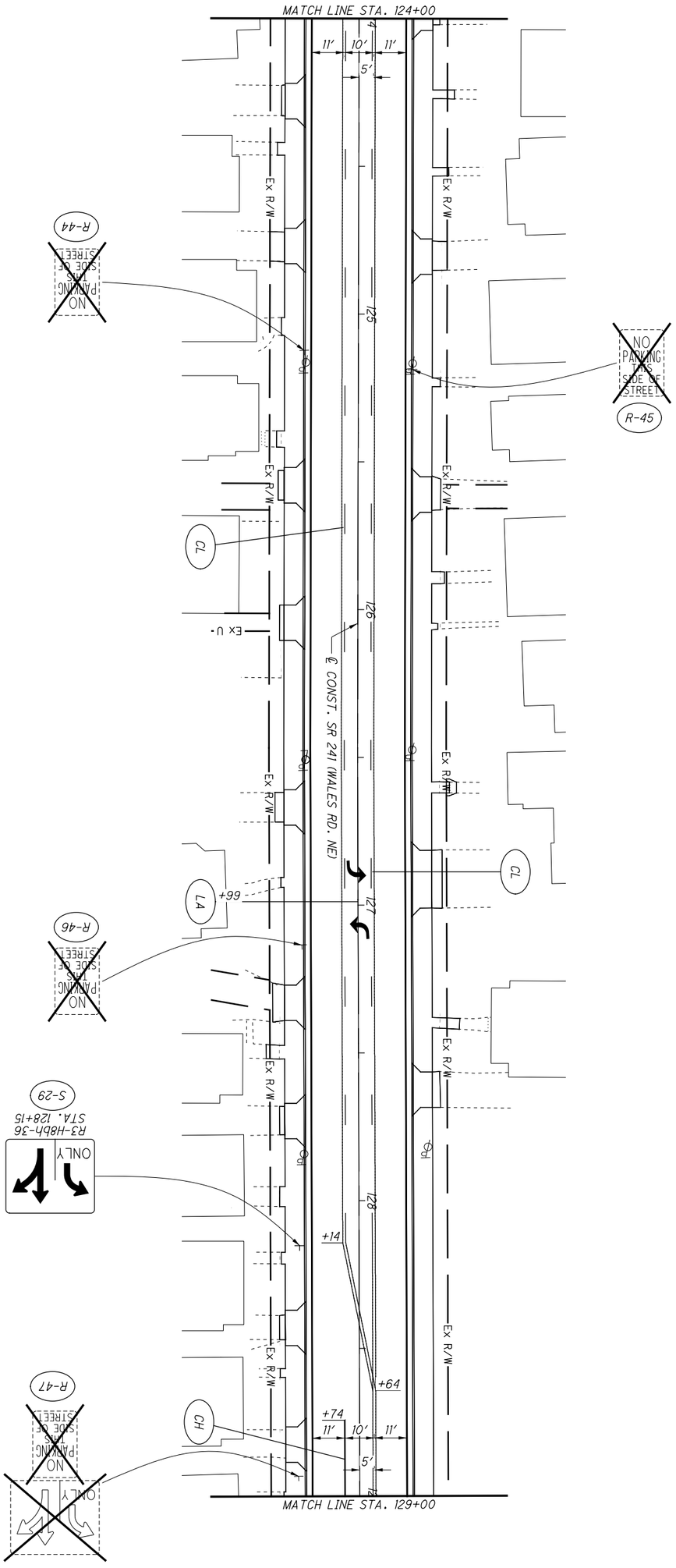
CALCULATED KAH
CHECKED KRM

SIGNING AND PAVEMENT MARKING PLAN
STA. 119+00 TO STA. 124+00

STA-241-9.71

287
395

P:\3000_3499\3062170090_STA-241-9.71_Wales_Road\ODOT\100471_STA-241-9.71\Design\Traffic\Sheets\100471_TP005.dgn 4/7/2021 7:48:12 AM khillegass



SEE SHEET 283 FOR TRAFFIC CONTROL LEGEND.

STA-241-9.71

SIGNING AND PAVEMENT MARKING PLAN
STA. 124+00 TO STA. 129+00

CALCULATED KAH
CHECKED KBM

0 20
10 40
HORIZONTAL SCALE IN FEET

N

SIGNING AND PAVEMENT MARKING PLAN
STA. 129+00 TO STA. 134+00

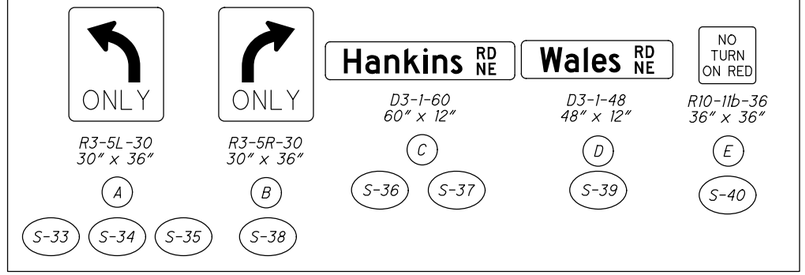
CALCULATED KAH | CHECKED KBM

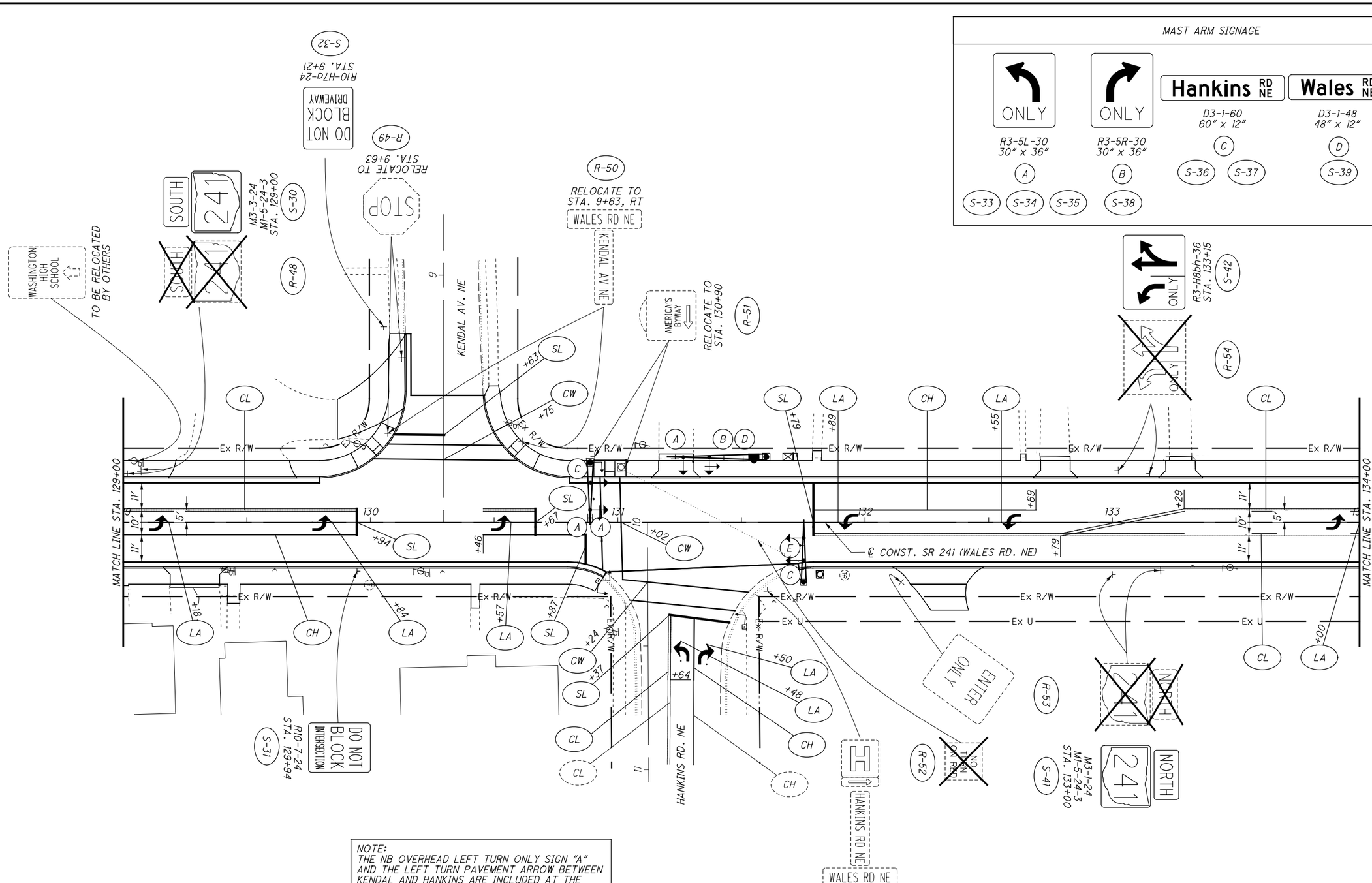
HORIZONTAL SCALE IN FEET
0 10 20 40

N

STA-241-9.71

MAST ARM SIGNAGE

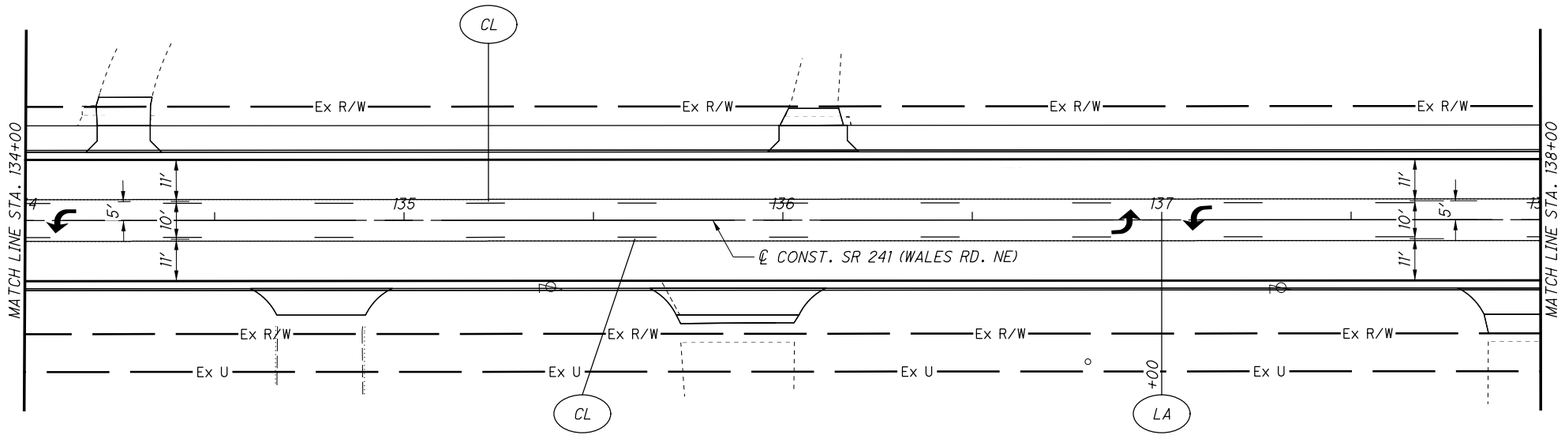




NOTE:
THE NB OVERHEAD LEFT TURN ONLY SIGN "A" AND THE LEFT TURN PAVEMENT ARROW BETWEEN KENDAL AND HANKINS ARE INCLUDED AT THE REQUEST OF THE CITY TO PROVIDE REFUGE FOR A NB VEHICLE TURNING LEFT INTO THE RESIDENTIAL DRIVEWAY ACROSS FROM HANKINS.

SEE SHEET 283 FOR TRAFFIC CONTROL LEGEND.

P:\3000_3499\306270090_STA-241-9.71_Wales_Road\DOT\0047L_STA-241-9.71\Design\Traffic\Sheets\0047L_TP007.dgn 4/7/2021 7:48:14 AM khillegass



SEE SHEET 283 FOR TRAFFIC CONTROL LEGEND.

SIGNING AND PAVEMENT MARKING PLAN
STA. 134+00 TO STA. 138+00

CALCULATED KAH
CHECKED KBM

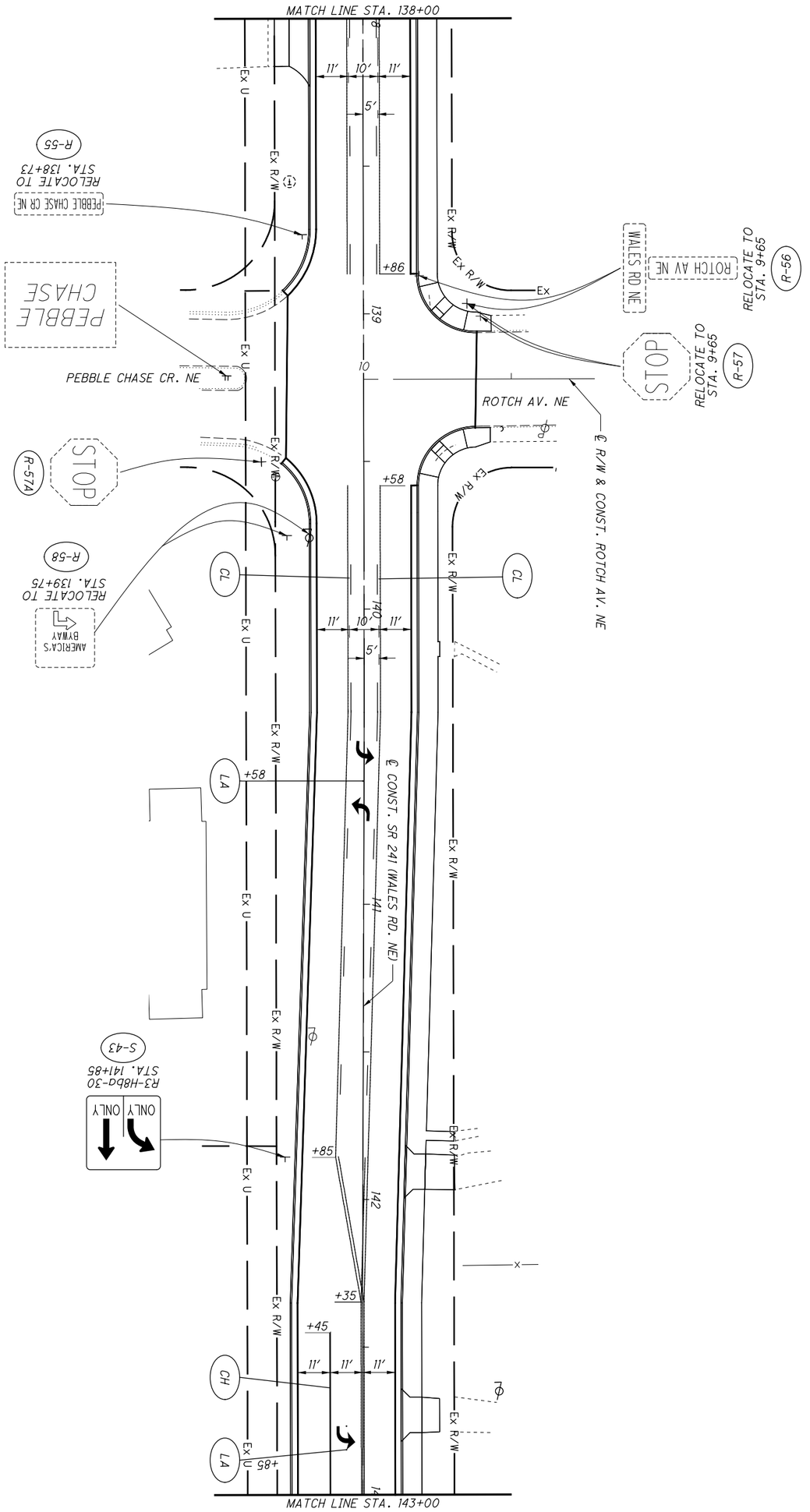
HORIZONTAL SCALE IN FEET
0 10 20 40

STA-241-9.71

290
395

P:\3000_3499\3062170090_STA-241-9.71_Wales_Road\000T\0047L_STA-241-9.71\Design\Traffic\Sheets\0047L_TP008.dgn 4/7/2021 7:48:15 AM khillegass

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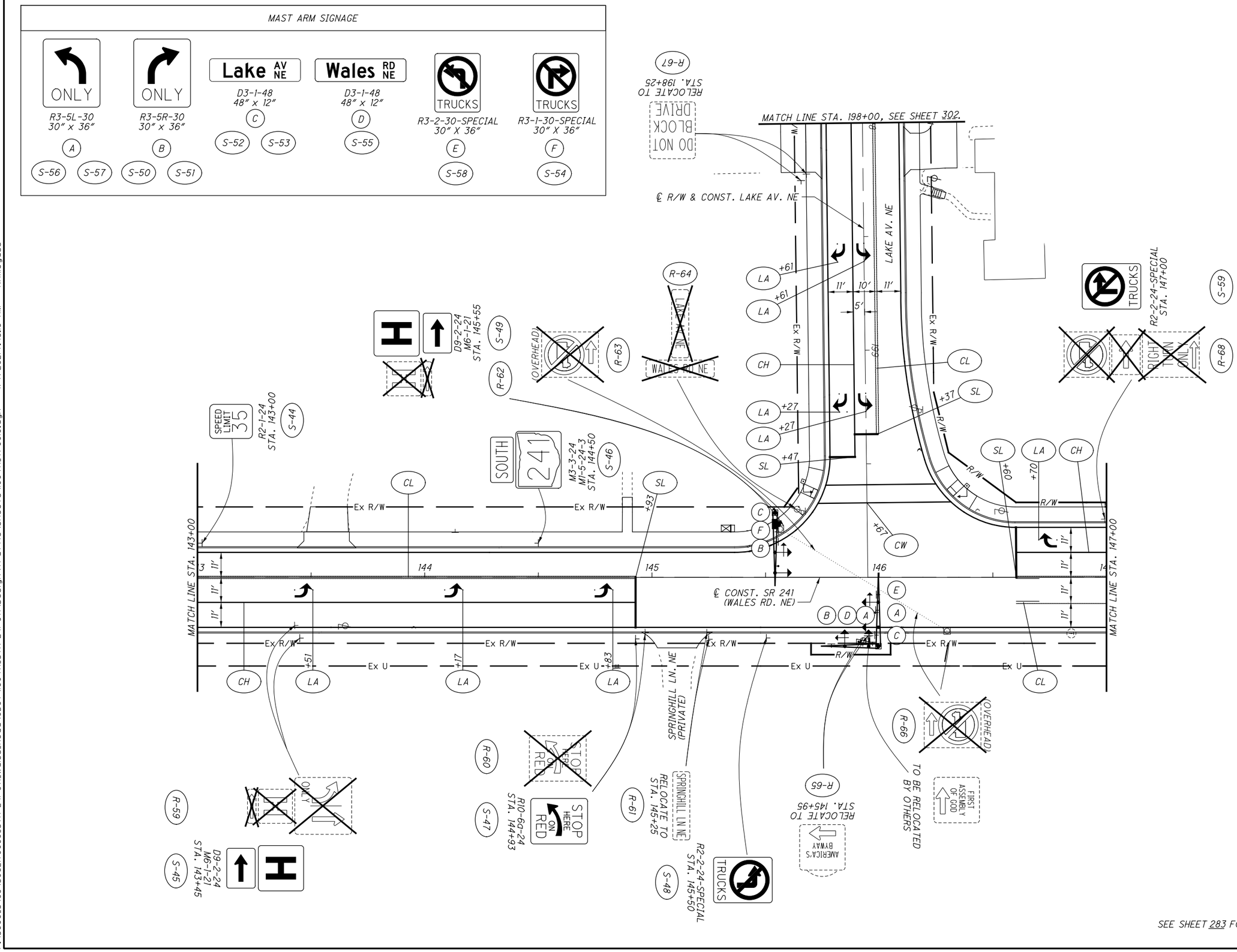
SEE SHEET 283 FOR TRAFFIC CONTROL LEGEND.

STA-241-9.71

SIGNING AND PAVEMENT MARKING PLAN
STA. 138+00 TO STA. 143+00

CALCULATED KAH
CHECKED KBM

0 20
10 40
HORIZONTAL SCALE IN FEET



P:\3000_3499\30621T0090_STA-241-9.71_Wales_Road\ODOT\00471_STA-241-9.71\Design\Traffic\Sheets\00471_TP0010.dgn 4/7/2021 7:48:16 AM khillegass

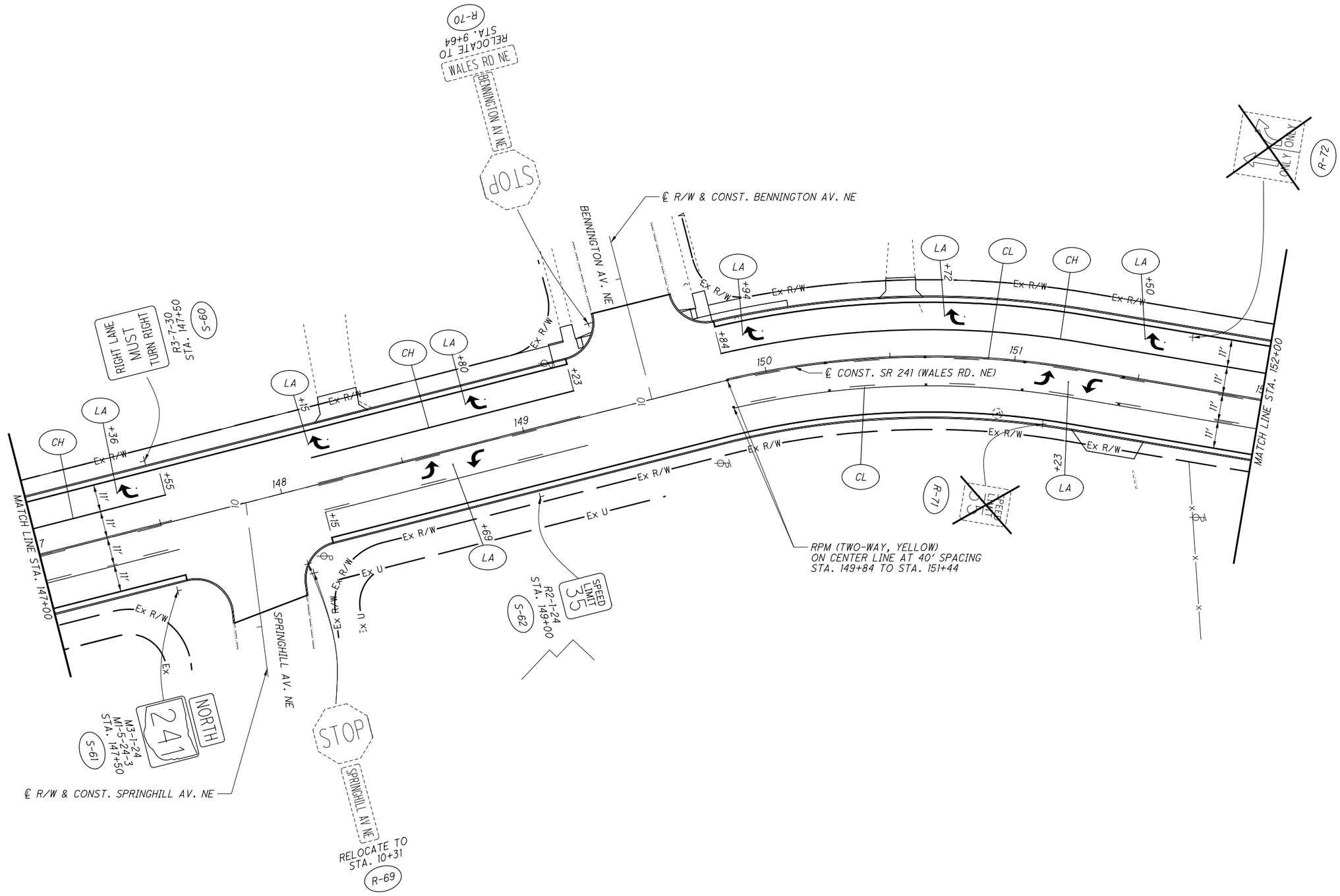
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAH
CHECKED KBM

SIGNING AND PAVEMENT MARKING PLAN
STA. 143+00 TO STA. 147+00

STA-241-9.71

292
395



SEE SHEET 283 FOR TRAFFIC CONTROL LEGEND.

HORIZONTAL SCALE IN FEET
0 10 20 40

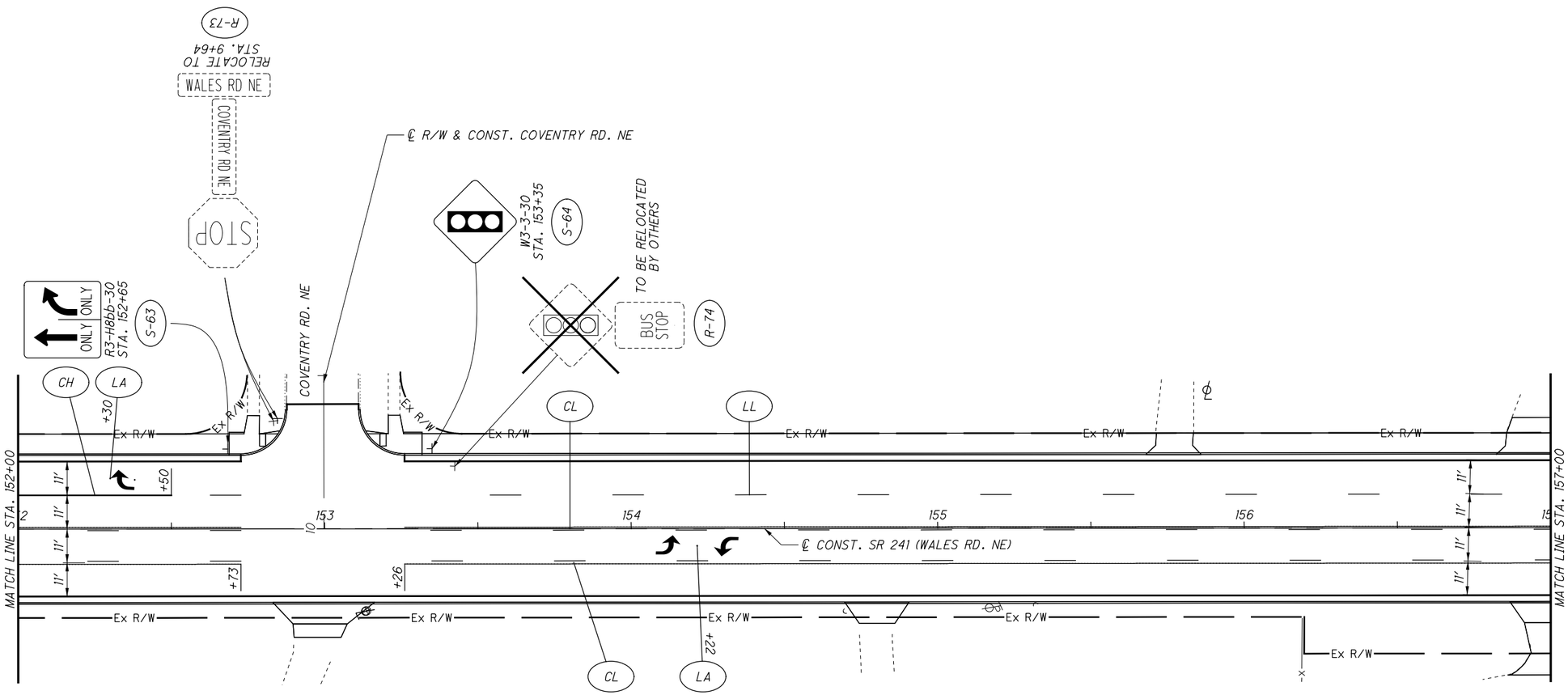
CALCULATED KAH
CHECKED KBM

SIGNING AND PAVEMENT MARKING PLAN
STA. 147+00 TO STA. 152+00

STA-241-9.71

293
395

P:\3000_3499\3062170090_STA-241-9.71_Wales_Road\ODOT\100471_STA-241-9.71\Design\Traffic\Sheets\100471_TP001.dgn 4/7/2021 7:48:16 AM khillegass



SEE SHEET 283 FOR TRAFFIC CONTROL LEGEND.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAH
CHECKED KBM

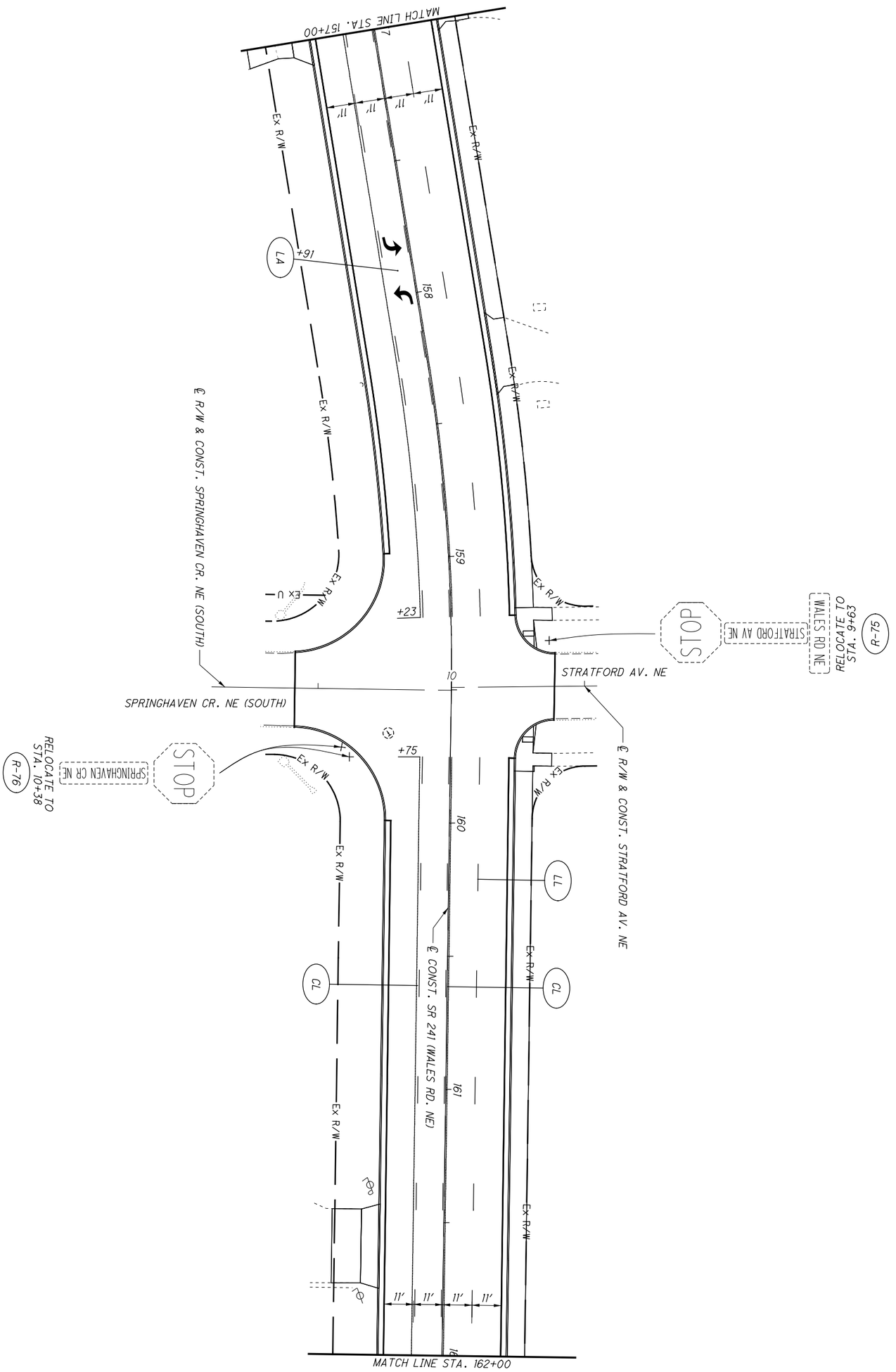
SIGNING AND PAVEMENT MARKING PLAN
STA. 152+00 TO STA. 157+00

STA-241-9.71

294
395

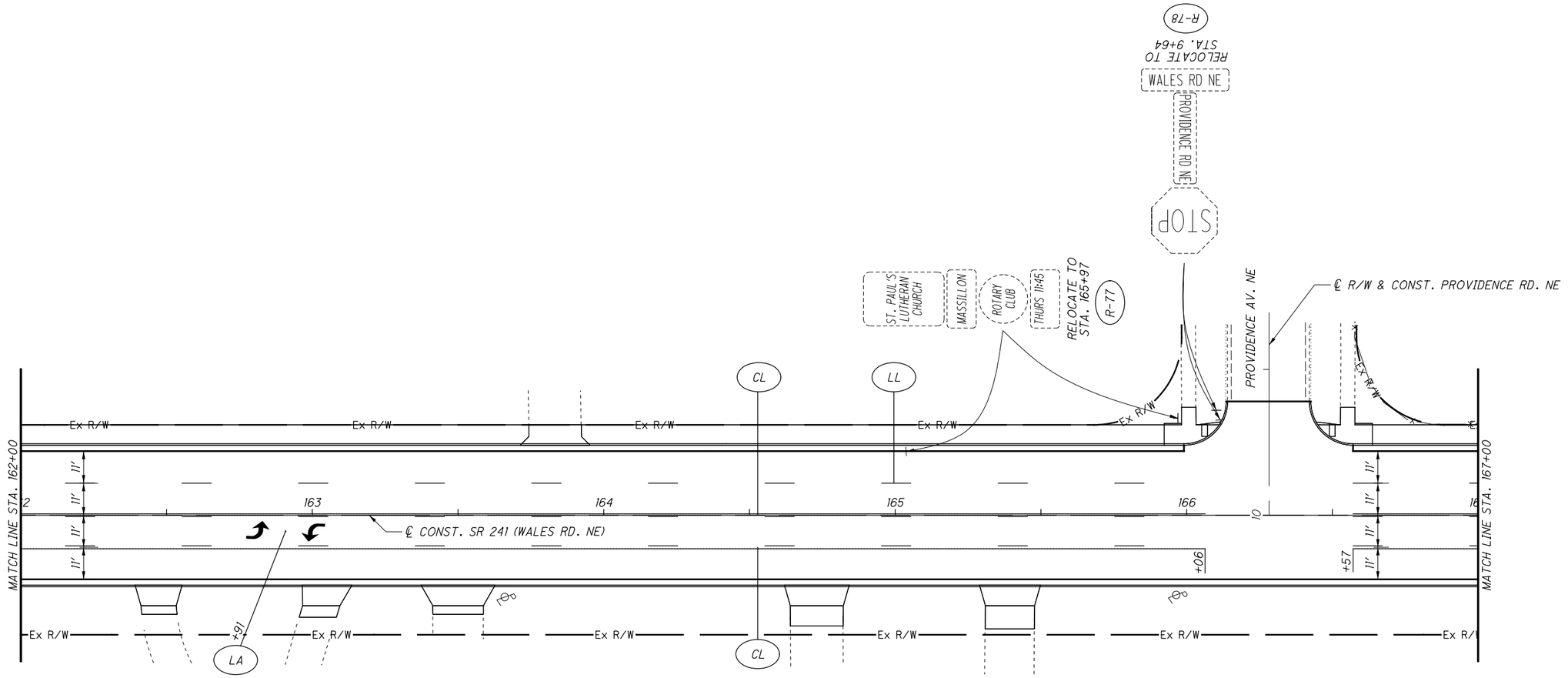
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SEE SHEET 283 FOR TRAFFIC CONTROL LEGEND.

295 / 395	STA-241-9.71	SIGNING AND PAVEMENT MARKING PLAN STA. 157+00 TO STA. 162+00	CALCULATED KAH CHECKED KBM	0 20 10 40 HORIZONTAL SCALE IN FEET



SEE SHEET 283 FOR TRAFFIC CONTROL LEGEND.

HORIZONTAL SCALE IN FEET
0 10 20 40

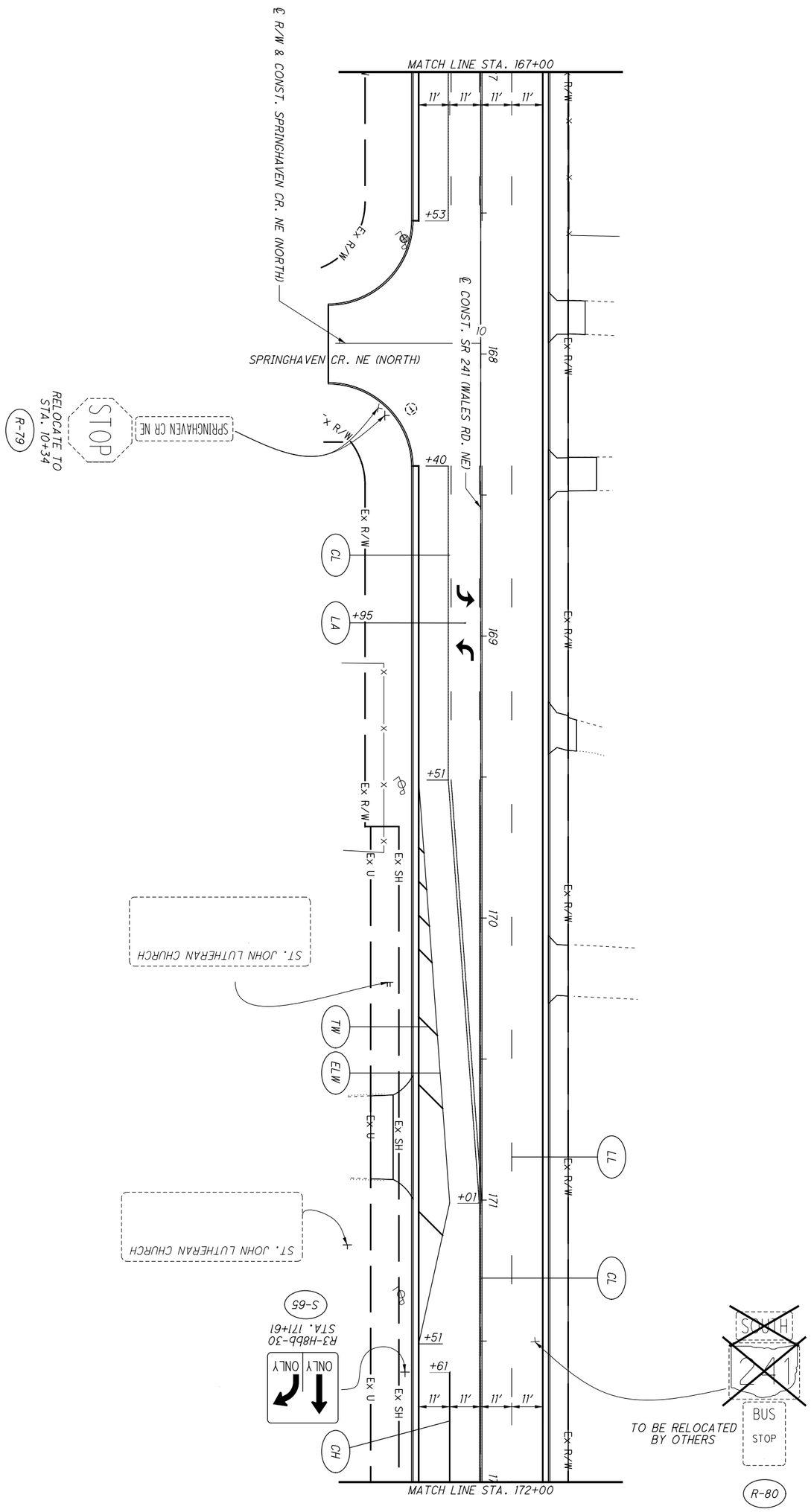
CALCULATED KAH
CHECKED KBM

SIGNING AND PAVEMENT MARKING PLAN
STA. 162+00 TO STA. 167+00

STA-241-9.71

296
395

P:\3000_3499\30621\70090_STA-241-97L_Wales_Road\ODOT\100471_STA-241-97I\Design\Traffic\Sheets\100471_TP0014.dgn 4/7/2021 7:48:18 AM khillegass



SEE SHEET 283 FOR TRAFFIC CONTROL LEGEND.

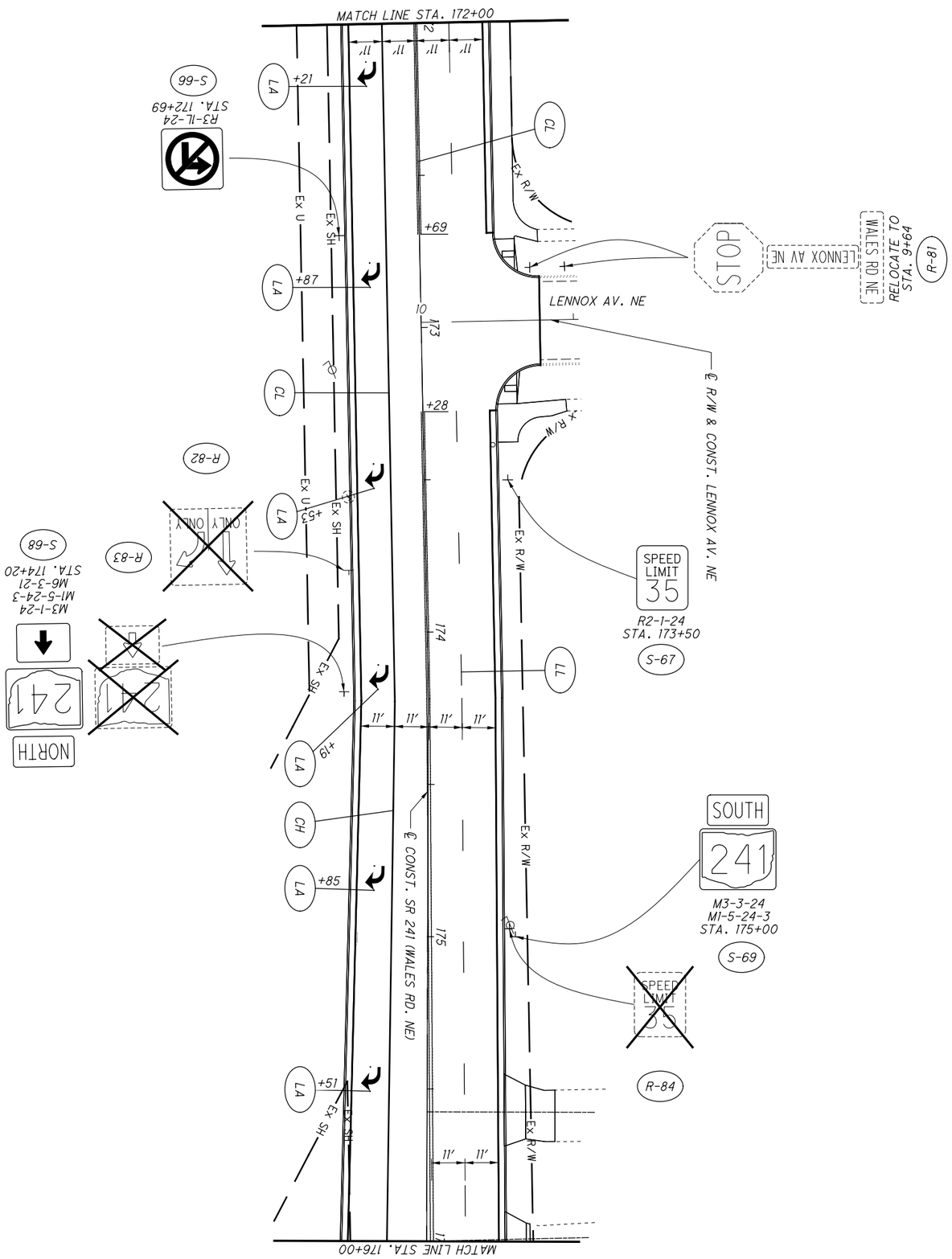
297
395

STA-241-9.71

SIGNING AND PAVEMENT MARKING PLAN
STA. 167+00 TO STA. 172+00

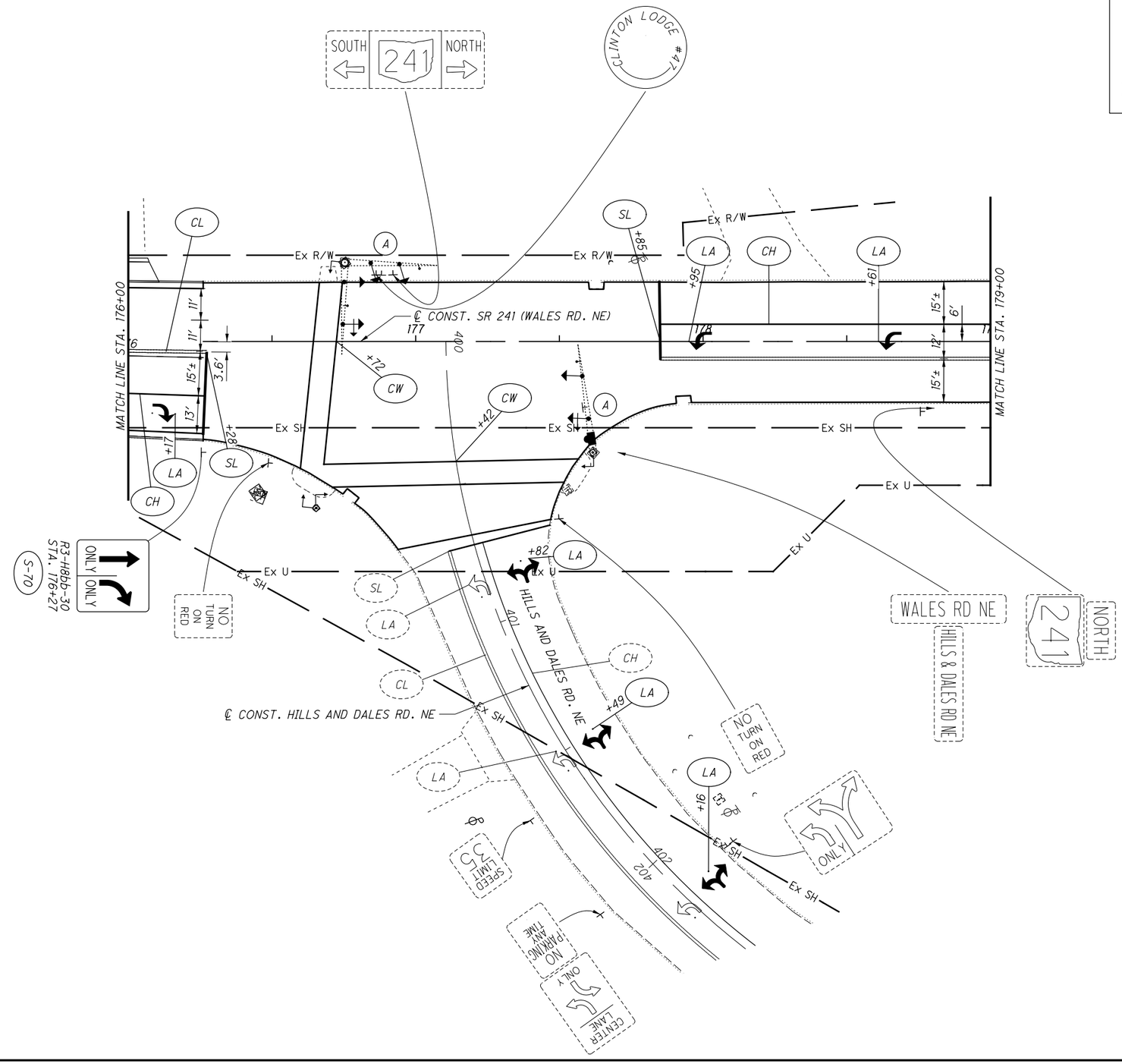
CALCULATED KAH
CHECKED KBM

0 20
10 40
HORIZONTAL SCALE IN FEET



SEE SHEET 283 FOR TRAFFIC CONTROL LEGEND.

298 / 395	STA-241-9.71	SIGNING AND PAVEMENT MARKING PLAN STA. 172+00 TO STA. 176+00	CALCULATED KAH CHECKED KBM	0 20 10 40 HORIZONTAL SCALE IN FEET



MAST ARM SIGNAGE

ON RED

A

R-85

RELOCATE LEFT OF FIVE SECTION HEAD

SEE SHEET 283 FOR TRAFFIC CONTROL LEGEND.

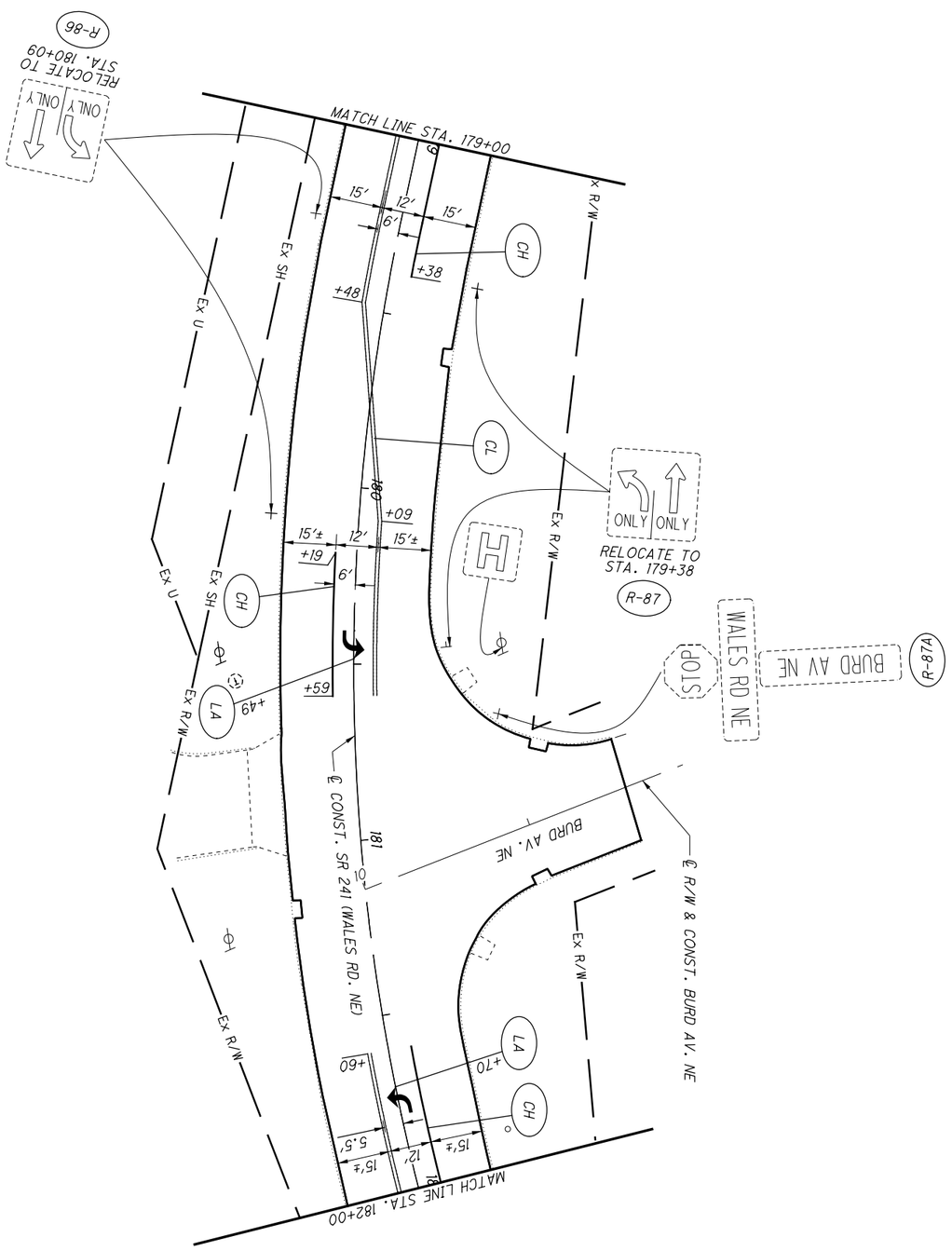
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED KAH
CHECKED KBM

SIGNING AND PAVEMENT MARKING PLAN
STA. 176+00 TO STA. 179+00

STA-241-9.71

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SEE SHEET 283 FOR TRAFFIC CONTROL LEGEND.

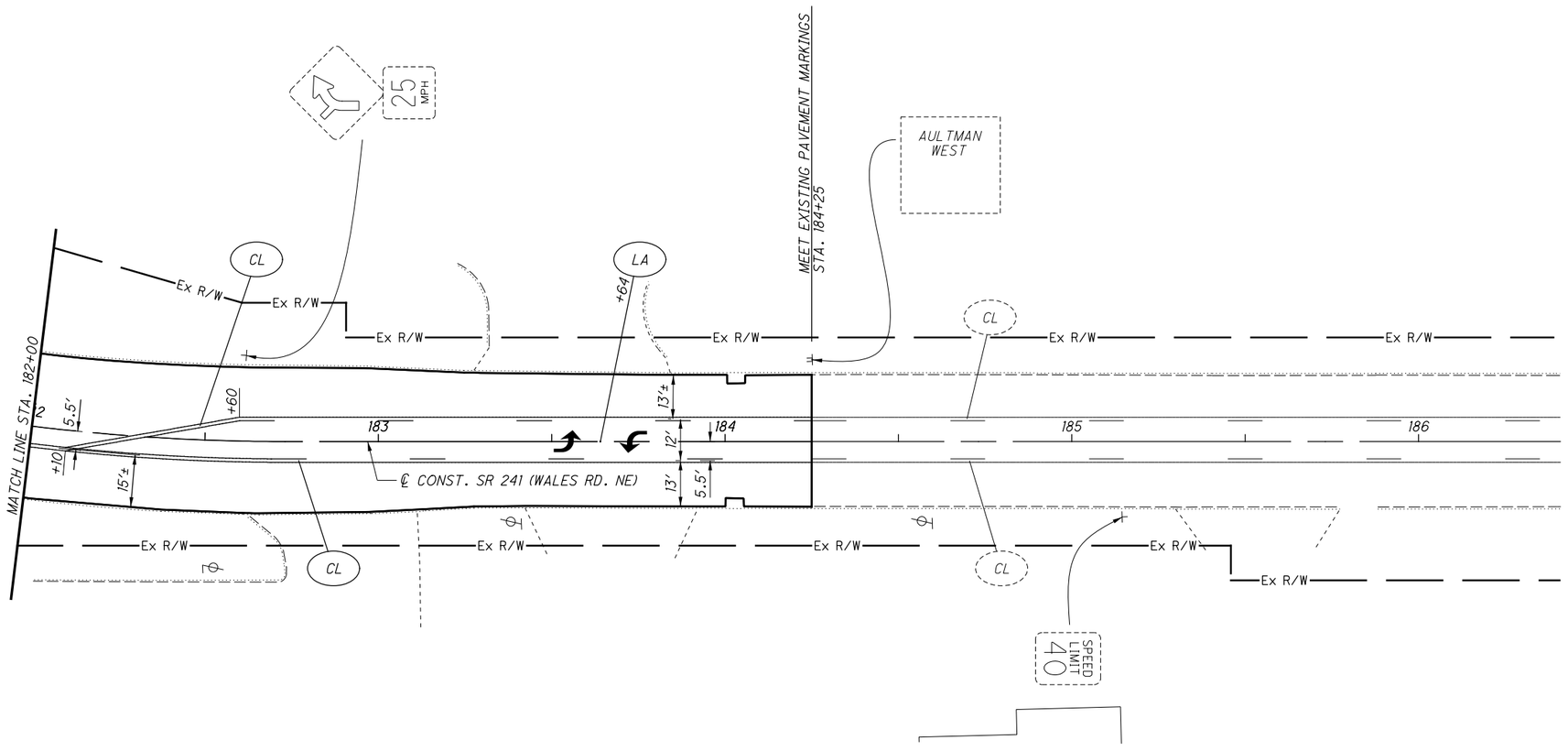
300
395

STA-241-9.71

SIGNING AND PAVEMENT MARKING PLAN
STA. 179+00 TO STA. 182+00

CALCULATED KAH
CHECKED KBM

0 20
10 40
HORIZONTAL SCALE IN FEET



SEE SHEET 283 FOR TRAFFIC CONTROL LEGEND.

HORIZONTAL SCALE IN FEET
0 10 20 40

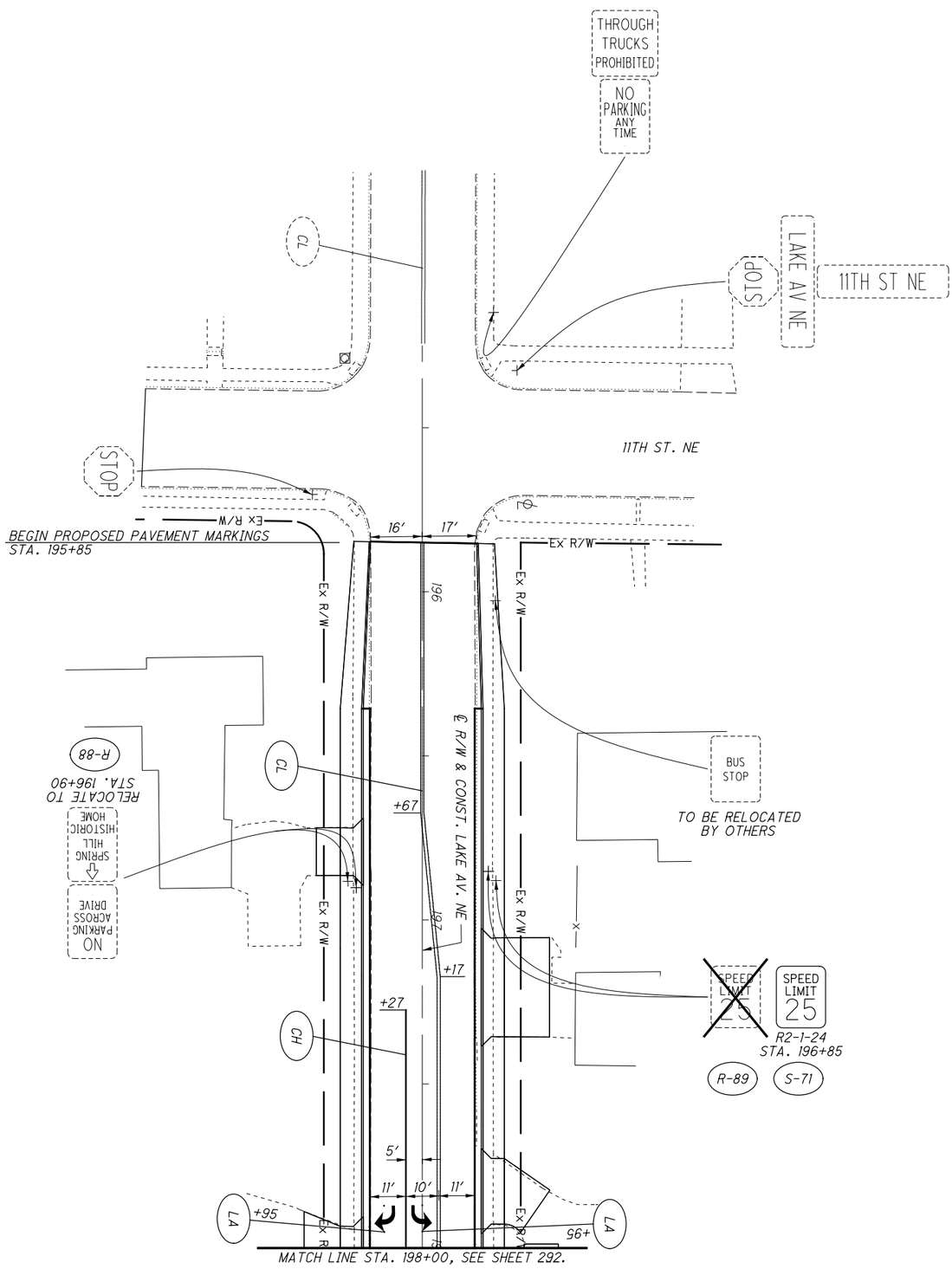
CALCULATED KAH
CHECKED KBM

SIGNING AND PAVEMENT MARKING PLAN
STA. 182+00 TO END

STA-241-9.71

301
395

P:\3000_3499\3062170090_STA-241-97L_Wales_Road\ODOT\00471L_STA-241-97\Design\Traffic\Sheets\00471L_TP0019.dgn 4/7/2021 7:48:21 AM khillegass



SEE SHEET 283 FOR TRAFFIC CONTROL LEGEND.

302
395

STA-241-9.71

SIGNING AND PAVEMENT MARKING PLAN BEGIN TO STA. 198+00

CALCULATED KAH
CHECKED KBM

0 20
10 40
HORIZONTAL SCALE IN FEET

N

NOTIFICATION

THE CONTRACTOR SHALL GIVE THE CITY OF MASSILLON, (330)-830-5746, 10 WORKING DAYS NOTICE PRIOR TO THE NEW SIGNAL BEING PLACED IN OPERATION.

THE SIGNAL INSTALLATION SHALL BE INSPECTED BY CITY OF MASSILLON PERSONNEL. ALL DEFICIENCIES SHALL BE CORRECTED BY THE CONTRACTOR AND APPROVED BY THE CITY OF MASSILLON.

GUARANTEE

THE CONTRACTOR SHALL GUARANTEE THAT THE TRAFFIC SIGNAL SYSTEMS INSTALLED AS PART OF THIS CONTRACT SHALL OPERATE SATISFACTORILY FOR A PERIOD OF 120 DAYS FOLLOWING COMPLETION OF THE 10-DAY PERFORMANCE TEST. IN THE EVENT OF UNSATISFACTORY OPERATION, THE CONTRACTOR SHALL CORRECT FAULTY INSTALLATIONS, MAKE REPAIRS, AND REPLACE DEFECTIVE PARTS WITH NEW PARTS OF EQUAL OR BETTER QUALITY. EQUIPMENT, MATERIAL, AND LABOR COSTS INCURRED IN CORRECTING AN UNSATISFACTORY OPERATION SHALL BE BORNE BY THE CONTRACTOR.

THE GUARANTEE SHALL COVER ALL ITEMS ASSOCIATED WITH THE TRAFFIC SIGNAL SYSTEMS.

CUSTOMARY MANUFACTURER'S GUARANTEES FOR ALL TRAFFIC SIGNAL SYSTEM ITEMS SHALL BE TURNED OVER TO THE CITY OF MASSILLON FOLLOWING ACCEPTANCE OF THE EQUIPMENT.

THE COST OF GUARANTEEING THE TRAFFIC SIGNAL SYSTEMS WILL BE INCIDENTAL TO AND INCLUDED IN THE CONTRACT UNIT PRICE OF THE VARIOUS ITEMS MAKING UP THE SYSTEM.

WORK INSPECTION

THE CONTRACTOR SHALL PROVIDE THE PROJECT ENGINEER AND THE CITY OF MASSILLON WITH 72 HOUR NOTICE OF ANY SIGNAL WORK TO BE PERFORMED AT THE INTERSECTION SITE(S) SO THAT INSPECTION SERVICES CAN BE SUPPLIED.

DETECTION MAINTENANCE

IF VEHICLE DETECTION BECOMES UNEXPECTEDLY DISABLED, REQUIRES MODIFICATION, OR IS SCHEDULED TO BE TEMPORARILY REMOVED DURING THE CONSTRUCTION PROJECT, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE PROJECT ENGINEER AND THE CITY OF MASSILLON.

IF THE LOSS OF VEHICLE DETECTION IS KNOWN PRIOR TO THE START OF CONSTRUCTION, IT SHALL BE DISCUSSED AT THE PRECONSTRUCTION MEETING. AT SUCH TIME, THE CITY OF MASSILLON SHALL ADVISE THE PROJECT ENGINEER AND CONTRACTOR ON THE APPROPRIATE ACTION TO RECTIFY ANY LOSS OF VEHICLE DETECTION. THIS MAY INCLUDE PLACING THE TRAFFIC SIGNAL ON MINIMUM OR MAXIMUM RECALL, MODIFYING THE MINIMUM GREEN TIMES, AND REMOVING THE MALFUNCTIONING DETECTION FROM SERVICE. WHERE NONINTRUSIVE DETECTION (I.E. VIDEO, RADAR) ALREADY EXISTS, THE CONTRACTOR SHALL INSURE THAT DETECTION IS OPERATING AND MAINTAINED BY RECONFIGURING THE DETECTION UNITS ACCORDINGLY DURING ALL CONSTRUCTION PHASES. THIS IS TO AVOID THE SIGNAL FROM MAXING OUT THE EFFECTED SIGNAL PHASE AND CREATING UNNECESSARY DELAYS.

LOCATIONS WHERE NON-INTRUSIVE DETECTION IS PROPOSED AND THE EXISTING VEHICLE DETECTION IS TO BE ABANDONED, THE NON-INTRUSIVE VEHICLE DETECTION SHALL BE INSTALLED, CONFIGURED AND MADE FULLY FUNCTIONAL PRIOR TO THE EXISTING DETECTION BEING DISABLED. THE CONTRACTOR SHALL CONTINUE TO MAINTAIN AND MODIFY THE DETECTION UNTIL FINAL ACCEPTANCE OF THE TRAFFIC SIGNAL. THIS IS TO ENSURE VEHICLE DETECTION REMAINS FULLY FUNCTIONAL THROUGHOUT CONSTRUCTION.

GROUNDING AND BONDING

THE REQUIREMENTS OF THE ODOT CONSTRUCTION AND MATERIAL SPECIFICATIONS (C&MS) AND THE TC SERIES OF STANDARD CONSTRUCTION DRAWINGS ARE MODIFIED AS FOLLOWS:

1. ALL METALLIC PARTS CONTAINING ELECTRICAL CONDUCTORS SHALL BE PERMANENTLY JOINED TO FORM AN EFFECTIVE GROUND FAULT CURRENT PATH BACK TO THE GROUNDED CONDUCTOR IN THE POWER SERVICE DISCONNECT SWITCH.
   - A. PROVIDE AN EQUIPMENT GROUNDING CONDUCTOR IN METALLIC CONDUITS (725.04) IN ADDITION TO THE CONDUCTORS SPECIFIED AND BOND THE CONDUIT TO THIS GROUNDING CONDUCTOR.
   - B. WHEN AN EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED IN PLASTIC CONDUIT (725.05), THE INSTALLATION SHALL INCLUDE A SEPARATE EQUIPMENT GROUNDING CONDUCTOR IN ADDITION TO THE CONDUCTORS SPECIFIED.
   - C. METALLIC CONDUIT CARRYING THE LOOP WIRES FROM IN THE PAVEMENT TO THE PULL BOX SPLICE LOCATION WILL ONLY BE BONDED AT THE PULL BOX END, AND WILL NOT CONTAIN AN EQUIPMENT GROUNDING CONDUCTOR.
   - D. IF MULTIPLE CONDUIT RUNS BEGIN AND END AT THE SAME POINTS, ONLY ONE EQUIPMENT GROUNDING CONDUCTOR IS REQUIRED.
   - E. IF AN EQUIPMENT GROUNDING CONDUCTOR IS NEEDED IN CONDUIT BETWEEN SIGNALIZED INTERSECTIONS FOR UNDERGROUND INTERCONNECT CABLE, THE GROUNDING SYSTEM FOR EACH SIGNALIZED INTERSECTION WILL BE SEPARATED ABOUT MIDWAY BETWEEN THE INTERSECTIONS.
   - F. THE MESSENGER WIRE AT SIGNALIZED INTERSECTIONS WILL BE USED AS THE CONDUCTIVE PATH FROM CORNER TO CORNER IF CONDUIT IS NOT PROVIDED UNDER THE ROADWAY. WHEN CONDUIT CONNECTS THE CORNERS OF AN INTERSECTION, AN EQUIPMENT GROUNDING CONDUCTOR SHALL BE USED IN THE CONDUIT.

2. CONDUITS.
   - A. THE 725.04 CONDUIT SHALL HAVE GROUNDING BUSHINGS INSTALLED AT ALL TERMINATION POINTS. THE BUSHING MATERIAL SHALL BE COMPATIBLE WITH GALVANIZED STEEL CONDUIT AND THE GROUNDING LUG MATERIAL SHALL BE COMPATIBLE FOR USE WITH COPPER WIRE. THREADED OR COMPRESSION TYPE BUSHINGS MAY BE USED.
   - B. THE 725.05 CONDUIT SHALL HAVE THE INSIDE AND OUTSIDE DIAMETERS OF THE CONDUIT DEBURRED AT ALL TERMINATION POINTS.
   - C. BOTH ENDS OF METALLIC CONDUIT SHALL BE BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.
   - D. METALLIC CONDUIT MAY BE BONDED TO METALLIC BOXES THROUGH THE USE OF CONDUIT FITTINGS UL APPROVED FOR THIS TYPE OF CONNECTION, WITH THE BOX BONDED TO THE EQUIPMENT GROUNDING CONDUCTOR.

3. WIRE FOR GROUNDING AND BONDING.
   - A. USE INSULATED, COPPER WIRE FOR THE EQUIPMENT GROUNDING CONDUCTOR. BONDING JUMPERS IN BOXES AND ENCLOSURES MAY BE BARE OR INSULATED COPPER WIRE. WIRE SIZE SHALL BE AS FOLLOWS:
     - I. USE 4 AWG BETWEEN THE POWER SERVICE AND SUPPORTS, POLES, PEDESTALS, CONTROLLER OR FLASHER CABINETS.
     - II. USE A MINIMUM 8 AWG BETWEEN LOOP DETECTOR PULL BOXES AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.

GROUNDING AND BONDING (CONT.)

   - III. USE A MINIMUM 8 AWG BETWEEN THE "PREPARE TO STOP WHEN FLASHING" INSTALLATION (INCLUDING SUPPORT) AND THE FIRST CONDUIT THAT REQUIRES A LARGER SIZE AS SPECIFIED IN 3.A.I ABOVE.
     - IV. THE INSULATION SHALL BE GREEN OR GREEN WITH YELLOW STRIPE(S). FOR 4 AWG OR LARGER, INSULATION MAY ALSO BE BLACK WITH GREEN TAPE/LABELS INSTALLED AT ALL ACCESS POINTS.
   - B. IN A HIGHWAY LIGHTING SYSTEM, THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE THE SAME WIRE SIZE AS THE DUCT CABLE OR DISTRIBUTION CABLE CIRCUIT CONDUCTORS, WITH THE MINIMUM CONDUCTOR SIZE OF 4 AWG. BONDING JUMPERS WILL BE MINIMUM SIZE 4 AWG.

4. GROUND ROD.
   - A. A ¾ INCH SCHEDULE 40 PVC CONDUIT WILL BE USED IN FOUNDATIONS AND CONCRETE WALLS FOR THE GROUNDING CONDUCTOR (GROUND WIRE) RACEWAY TO THE GROUND ROD. SHOULD METALLIC CONDUIT BE USED, BOTH ENDS OF THE CONDUIT SHALL BE BONDED TO THE GROUNDING CONDUCTOR.
   - B. THE TYPICAL GROUNDING CONDUCTOR (GROUND WIRE) SHALL BE 4 AWG INSULATED, COPPER.

5. THE GREEN CONDUCTOR IN SIGNAL CABLES (CONDUCTOR #4) SHALL NOT BE USED TO SUPPLY POWER TO A SIGNAL INDICATION. IT WILL BE CONNECTED TO THE SIGNAL BODY AS AN EQUIPMENT GROUND IN ALUMINUM HEADS AND IT WILL BE UNUSED IN PLASTIC HEADS. UNUSED CONDUCTORS SHALL BE GROUNDED IN THE CABINET. TYPICAL USE OF CONDUCTORS IS AS FOLLOWS:

COND. NO.	COLOR	VEHICLE SIGNAL	PEDESTRIAN SIGNAL
1	BLACK	GREEN BALL	#1 WALK
2	WHITE	AC NEUTRAL	AC NEUTRAL
3	RED	RED BALL	#1 DW/FDW
4	GREEN	EQUIPMENT GROUND	EQUIPMENT GROUND
5	ORANGE	YELLOW BALL	#2 DW/FDW
6	BLUE	GREEN ARROW	#2 WALK
7	WHITE/BLACK STRIPE	YELLOW ARROW	NOT USED

6. POWER SERVICE AND DISCONNECT SWITCH.
   - A. AT THE POWER SERVICE LOCATION, THE GROUNDING CONDUCTOR (GROUND WIRE) FROM THE DISCONNECT SWITCH NEUTRAL (AC-) BAR TO THE GROUND ROD SHALL BE A CONTINUOUS, UNSPLICED CONDUCTOR. IF SPLICED, IT SHALL BE AN EXOTHERMIC WELD BUTT SPLICE.
   - B. THE SERVICE NEUTRAL (AC-) SHALL ONLY BE CONNECTED TO GROUND AT THE PRIMARY POWER SERVICE DISCONNECT SWITCH.
     - I. NEMA CONTROLLER CABINETS: IF A POWER SERVICE DISCONNECT SWITCH IS LOCATED BEFORE THE CONTROLLER CABINET, THE NEUTRAL (AC-) AND THE GROUNDING BARS IN THE CONTROLLER CABINET SHALL NOT BE CONNECTED TOGETHER AS SHOWN IN NEMA TS-2, FIGURE 5-4.
     - II. IF SECONDARY DISCONNECT SWITCHES ARE CONNECTED AFTER THE PRIMARY DISCONNECT SWITCH, THE NEUTRAL (AC) SHALL ONLY BE GROUNDED AT THE PRIMARY SWITCH. EQUIPMENT GROUNDING CONDUCTORS SHALL BE BROUGHT TO THE PRIMARY SWITCH, BUT SHALL BE GROUNDED AT BOTH SECONDARY AND PRIMARY SWITCHES.

7. PAYMENT- ALL MATERIAL AND WORK REQUIRED TO COMPLETE THE EFFECTIVE GROUND FAULT CURRENT PATH SYSTEM ARE INCIDENTAL TO THE CONDUCTORS INSTALLED BY CONTRACT.

SIGNAL ACTIVATION

PRIOR TO ACTIVATING THE NEW TRAFFIC SIGNAL TO STOP-AND-GO MODE AND/OR REMOVING THE EXISTING TRAFFIC SIGNAL FROM SERVICE, ALL ITEMS IN THE PROPOSED SIGNAL PLAN SHALL BE FULLY COMPLETED, (I.E., VEHICLE DETECTION, PEDESTRIAN SIGNAL HEADS, ETC). IF THERE ARE CONSTRUCTABILITY ISSUES (I.E., ROADWAY WIDENING, ETC.) THAT PREVENT THE SIGNAL FROM BEING COMPLETED PRIOR TO ACTIVATION, IT SHALL BE BROUGHT TO THE ATTENTION OF THE PROJECT ENGINEER AND THE CITY OF MASSILLION. THE CITY OF MASSILLION WILL THEN REVIEW, APPROVE OR REJECT PROPOSALS TO ACTIVATE THE TRAFFIC SIGNAL PRIOR TO COMPLETION.

THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER AND THE CITY OF MASSILLION AT LEAST 10 WORKING DAYS PRIOR TO SCHEDULING THE FINAL INSPECTION OF THE SIGNAL INSTALLATION. FINAL INSPECTION IS NOT CONSIDERED COMPLETE UNTIL DESIGNATED CITY OF MASSILLION PERSONNEL INSPECT THE TRAFFIC SIGNAL AND ISSUE WRITTEN APPROVAL. IF ISSUES ARE FOUND DURING THE FINAL INSPECTION THAT EFFECT THE SAFETY OF THE TRAVELING PUBLIC AND/OR THE EFFICIENCY OF THE INTERSECTION, THE SIGNAL SHALL NOT BE ACTIVATED ON THE PROPOSED DATE. ANY PUNCH LIST ITEMS THAT ARE FOUND SHALL BE CORRECTED AND REINSPECTED BY THE CITY OF MASSILLION PRIOR TO FINAL ACCEPTANCE. THE CITY OF MASSILLION SHALL ONLY ASSUME DAY TO DAY MAINTENANCE OF THE TRAFFIC SIGNAL AFTER FINAL WRITTEN ACCEPTANCE HAS BEEN ISSUED.

ITEM 625 - PULL BOX, MISC.: PULL BOX, 24" X 35" X 26"

PULL BOXES SHALL HAVE NOMINAL OPENING DIMENSIONS OF 24 INCHES BY 35 INCHES. MATERIALS SHALL CONFORM TO C&MS 725.08. THE WORD "TRAFFIC" SHALL BE INTEGRALLY CAST AS PART OF THE COVER OR SECURELY FASTENED WITH CORROSION RESISTANT HARDWARE. THE SUPPLIED PULL BOXES SHALL SUPPORT A 20,000 POUND MINIMUM VERTICAL LOADING WITHOUT PERMANENT DAMAGE OR DEFLECTION TO THE UNIT. DISPOSE OF SURPLUS MATERIAL AND RESTORE DISTURBED FACILITIES AND SURFACES.

THE LARGEST BEND RADIUS POSSIBLE SHALL BE MAINTAINED FOR THE FIBER OPTIC CABLE.

ALL COSTS RESULTING FROM THE ABOVE REQUIREMENTS SHALL BE INCLUDED IN THE UNIT PRICE BID PER EACH FOR ITEM 625 - PULL BOX, MISC.: PULL BOX, 24" X 35" X 26".

CALCULATED MBK
CHECKED KMG

TRAFFIC SIGNAL NOTES

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ITEM 632 - REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN

TRAFFIC SIGNAL INSTALLATIONS, INCLUDING SIGNAL HEADS, CABLE, MESSENGER WIRE, STRAIN POLES, CABINET, PULL BOXES, CONTROLLER, ETC., SHALL BE REMOVED IN ACCORDANCE WITH C&MS 632.26 AND AS INDICATED ON THE PLANS. THE CONTRACTOR SHALL REMOVE THE EXISTING POWER SERVICE IN ACCORDANCE WITH C&MS 625.21F. REMOVED ITEMS SPECIFIED FOR STORAGE SHALL BE STORED ON THE PROJECT FOR SALVAGE BY THE CITY OF MASSILLON. THE CONTRACTOR SHALL CONTACT THE CITY OF MASSILLON TO ARRANGE A MUTUALLY AGREEABLE TIME TO DELIVER THE SIGNAL MATERIALS.

ITEMS TO BE REUSED:
NONE

THE ITEMS TO BE DELIVERED OR DISPOSED OF SHALL BE PER THE TRAFFIC SIGNAL PLANS FOR THE FOLLOWING INTERSECTIONS:

1. S.R. 241 (WALES RD. NE) / S.R. 172 (LINCOLN WAY E)
2. S.R. 241 (WALES RD. NE) / STATE AVE. NE
3. S.R. 241 (WALES RD. NE) / HANKINS RD. NE
4. S.R. 241 (WALES RD. NE) / LAKE AVE. NE
5. S.R. 241 (WALES RD. NE) / HILLS AND DALES RD. NE

IN THE EVENT THE ITEMS STORED ON THE PROJECT FOR SALVAGE BY THE CITY OF MASSILLON ARE NOT REMOVED, THE CONTRACTOR SHALL, WHEN DIRECTED BY THE ENGINEER IN WRITING, REMOVE AND DISPOSE OF THE ITEMS AT NO ADDITIONAL COST TO THE PROJECT.

ITEMS NOT SPECIFIED FOR STORAGE SHALL BE DISPOSED OF BY THE CONTRACTOR.

ITEM 632 - PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&MS 632 AND 732 THE FOLLOWING SHALL APPLY:

1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC AND MEET ITE SPECIFICATIONS.
2. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.
3. PIPE, SPACERS AND FITTINGS CONSTRUCTED OF POLYCARBONATE PLASTIC MAY BE USED IN LIEU OF GALVANIZED STEEL OR ALUMINUM.
4. THE PEDESTRIAN SIGNAL HEAD SHALL BE OF THE LED COUNTDOWN TYPE.
5. NEW ATTACHMENT HARDWARE AND FITTINGS SHALL BE USED AND SHALL BE BLACK IN COLOR. BRACKETS USED TO MOUNT THE PEDESTRIAN SIGNAL HEADS TO THE SIGNAL SUPPORT AND PEDESTALS SHALL BE BOLTED. ALUMINUM BANDING IS NOT PERMITTED.
6. THE LIGHT EMITTING DIODE (LED) SIGNAL LAMP UNITS SHALL MEET THE REQUIREMENTS OF C&MS 732.04-C. THE CONTRACTOR SHALL PROVIDE THE CITY OF MASSILLON, IN WRITING, WITH THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS THAT ARE TO BE USED IN THE SIGNAL HEAD PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES.

ITEM 632 - PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN SHALL BE MADE FOR THE NUMBER OF COMPLETE SIGNAL HEAD FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS AND NEW ATTACHMENT HARDWARE.

ITEM 632 - VEHICULAR SIGNAL HEAD, (LED), BY SIZE, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&MS 632 AND 732, THE FOLLOWING REQUIREMENTS SHALL APPLY:

1. SIGNAL HEADS AND VISORS SHALL BE CONSTRUCTED OF BLACK POLYCARBONATE PLASTIC WITH VISORS AS SPECIFIED AND MEET ITE SPECIFICATIONS.
2. PROPER EXTERIOR COLORS SHALL BE OBTAINED BY USE OF COLORED PLASTIC MATERIAL RATHER THAN PAINTING.
3. THE ENTRANCE FITTING SHALL BE OF THE TRI-STUD DESIGN WITH SERRATED RINGS IN ORDER TO ACHIEVE POSITIVE LOCKING.
4. ALL SIGNAL HEADS SHALL BE RIGIDLY MOUNTED TO THE MAST ARM WITH THE (YELLOW) LENS LOCATED IN FRONT OF THE MAST ARM.
5. ALUMINUM BACKPLATES SHALL BE IN ACCORDANCE WITH THE C&MS AND INCLUDE A FLUORESCENT YELLOW REFLECTIVE BORDER.
6. THE LIGHT EMITTING DIODE (LED) SIGNAL LAMP UNITS SHALL MEET THE REQUIREMENTS OF C&MS 732.04-C. THE CONTRACTOR SHALL PROVIDE THE CITY OF MASSILLON, IN WRITING, WITH THE LED MANUFACTURER NAME, SERIAL NUMBER, PART NUMBER, DESCRIPTION OF LAMP, AND DATE OF MANUFACTURE FOR ALL LED UNITS THAT ARE TO BE USED IN THE SIGNAL HEAD PRIOR TO INSTALLATION, FOR ACCEPTANCE AND WARRANTY PURPOSES.
7. SIGNAL HEADS SHALL HAVE A MINIMUM WALL THICKNESS OF 0.117 INCHES.
8. SIGNAL HEADS SHALL INCLUDE CUTAWAY TYPE VISORS UNLESS OTHERWISE SPECIFIED IN THE PLANS.
9. APPLY A BEAD OF SILICONE TO THE SIGNAL HEAD, WASHER, AND ENTRANCE ADAPTER SERRATIONS TO PREVENT WATER INTRUSION. ALSO, FILL THE SPACE BETWEEN CONCENTRIC SERRATION RINGS ON THE TOP OF THE SIGNAL HEAD TO COMPLETELY EXCLUDE WATER FROM THE SPACE BETWEEN THE CONCENTRIC RINGS.

ITEM 632 - VEHICULAR SIGNAL HEAD, (LED), BY SIZE, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN, SHALL BE MADE FOR THE NUMBER OF COMPLETE SIGNAL HEAD FURNISHED AND INSTALLED, INCLUDING ALL LABOR, EQUIPMENT, MATERIALS AND NEW ATTACHMENT HARDWARE.

ITEM 632 - PEDESTRIAN PUSHBUTTON, AS PER PLAN

IN ORDER TO CONFORM TO THE AMERICANS WITH DISABILITIES ACT (ADA), THE REQUIREMENTS OF C&MS ITEMS 632.09 AND 732.06 ARE MODIFIED AS FOLLOWS:

1. THE PUSHBUTTON SHALL BE RAISED AND SHALL BE A MINIMUM OF 2 INCHES (50 MILLIMETERS) AT ITS SMALLEST DIMENSION.
2. THE PUSHBUTTON SHALL BE EQUIPPED TO EMIT AN AUDIBLE CHIRP AS THE BUTTON IS PUSHED TO CONFIRM THAT THE PEDESTRIAN CALL HAS BEEN PLACED.
3. THE PUSHBUTTON SHALL BE EQUIPPED WITH A RED INDICATOR LIGHT.
4. THE PUSHBUTTON HOUSING AND ALL ATTACHMENT HARDWARE SHALL BE BLACK IN COLOR.

THIS ITEM SHALL INCLUDE ALL LABOR AND MATERIAL COSTS ASSOCIATED WITH THE PROVISION AND INSTALLATION OF THE PUSHBUTTON AS OUTLINED ABOVE. PAYMENT FOR THIS WORK SHALL BE AT THE CONTRACT UNIT PRICE FOR ITEM 632 - PEDESTRIAN PUSHBUTTON, AS PER PLAN AND WILL BE MEASURED BY THE NUMBER OF COMPLETE UNITS FURNISHED, INSTALLED AND ACCEPTED.

ITEM 632 - SIGNAL SUPPORT FOUNDATION

PRIOR TO ORDERING THE SIGNAL SUPPORTS, THE CONTRACTOR SHALL CONTACT OHIO811 TO HAVE ALL UTILITIES LOCATED IN THE FIELD AND THEN MEET WITH THE PROJECT ENGINEER TO LOCATE THE PROPOSED SUPPORT LOCATIONS TO ENSURE THERE ARE NO CONFLICTS WITH UTILITIES. IF THERE ARE POTENTIAL CONFLICTS, THE PROJECT ENGINEER SHALL PROVIDE GUIDANCE AS TO THE RELOCATION OF THE SIGNAL SUPPORTS.

PAYMENT WILL BE AT THE CONTRACT UNIT PRICE AND WILL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND OTHER INCIDENTALS NECESSARY FOR EACH FOUNDATION FURNISHED, IN PLACE, COMPLETE AND ACCEPTED.

ITEM 632 - SIGNALIZATION, MISC.: TEST HOLE PERFORMED

IT IS ANTICIPATED THAT THE CONTRACTOR WILL ENCOUNTER UNDERGROUND UTILITIES WHILE EXCAVATING FOR SIGNAL SUPPORT FOUNDATIONS. IF, AFTER ACCURATELY IDENTIFYING THE PROPOSED LOCATION OF THE FOUNDATION, AS SHOWN IN THE PLAN, AND AFTER MODIFYING THAT LOCATION, IF NECESSARY, BASED ON THE FIELD MARKING OF UNDERGROUND UTILITY LOCATION, THE CONTRACTOR DISCOVERS A UTILITY CONFLICT DURING HIS EXCAVATION OPERATION, HE WILL BE COMPENSATED FOR THE LABOR AND EQUIPMENT COST ASSOCIATED FOR EACH PARTIAL FOUNDATION EXCAVATION ACCORDING TO THIS BID PRICE.

BEFORE THE CONTRACTOR BEGINS THE EXCAVATION AT THE MODIFIED LOCATION, HE SHALL VERIFY THAT THERE WILL BE NO OVERHEAD UTILITY CONFLICTS RESULTING FROM THE NEW SIGNAL SUPPORT LOCATION.

THE CONTRACTOR'S WORK UNDER THIS BID ITEM SHALL INCLUDE BACKFILLING, COMPACTING, AND RESTORATION OF THE EXCAVATION TO ITS ORIGINAL CONDITION.

EXCAVATIONS SHALL NOT BE LEFT OPEN OVERNIGHT.

PAYMENT FOR THIS ITEM SHALL BE AT THE UNIT PRICE BID PER EACH ITEM 632 - SIGNALIZATION, MISC.: TEST HOLE PERFORMED." A QUANTITY OF 4 HAS BEEN CARRIED TO THE GENERAL SUMMARY.

ITEM 632 - POWER SERVICE, AS PER PLAN

POWER SERVICE SHALL BE AS PER CMS ITEM 632.24, 732.20 AND SCD TC-83.10 WITH THE FOLLOWING EXCEPTIONS:

1. ALL POWER SERVICES SHALL BE METERED. THE METER SHALL HAVE A LEVER OPERATED BYPASS.
2. THE CONTRACTOR SHALL SUPPLY THE NECESSARY METER BASES.
3. THE METER BASE MOUNTING HEIGHT SHALL BE NO MORE THAN 5 FEET HIGH TO THE CENTER OF THE METER BASE FROM THE GROUND.
4. THE METER BASE AND DISCONNECT SWITCHES SHALL BE MOUNTED ON THE CONTROLLER CABINET AS DETAILED ON SHEET 361. FIELD ADJUSTMENTS MAY BE MADE IN MOUNTING THE METER BASE AND DISCONNECT SWITCHES WITH THE APPROVAL OF THE ENGINEER.
5. THE POWER SERVICE SHALL RUN EXTERNAL AND SEPARATE FROM ALL TRAFFIC SIGNAL CABLE, UNTIL IT ENTERS THE TRAFFIC SIGNAL DISCONNECT SWITCH IN THE CONTROLLER CABINET.
6. THE POWER SERVICE CONDUIT SHALL RUN EXTERNAL TO THE CONTROL CABINET UNTIL IT ENTERS THE METER BASE. THE CONDUIT SHALL BE NEATLY MOUNTED TO THE CABINET, IN A FASHION AS APPROVED BY THE ENGINEER.

THE CONTRACTOR SHALL OBTAIN A METER PROVIDED BY THE POWER COMPANY WITH TWO CIRCUIT CONNECTIONS ON THE OUTPUT SIDE OF THE METER. THE CIRCUIT TO THE TRAFFIC SIGNAL DISCONNECT SHALL BE CONNECTED TO ONE OUTGOING TERMINAL AND THE CIRCUIT TO THE LIGHTING DISCONNECT SHALL BE CONNECTED TO THE OTHER OUTGOING TERMINAL. DISCONNECT SWITCH ENCLOSURES FURNISHED IN ACCORDANCE WITH CMS 632.24 SHALL INCLUDE A PADLOCK EQUAL TO MASTER NO. 4BKA OR WILSON BOHANNON 660, WITH LOCK BODY OF BRONZE OR BRASS AND KEYING SHALL BE TO THE STATE MASTER.

THE CONTRACTOR SHALL CONTACT THE METER SECTION OF THE POWER COMPANY FOR INFORMATION REGARDING THE METER BASE INSTALLATION PRIOR TO ORDERING POLES. THE CONTRACTOR WILL BE RESPONSIBLE FOR REQUESTING AND SCHEDULING ANY INSPECTIONS THE POWER COMPANY MAY REQUIRE FOR THE POWER SERVICE HOOK UP. THE CONTRACTOR SHALL BE RESPONSIBLE TO CONTACT THE POWER COMPANY FOR THE ELECTRICAL SERVICE CONNECTION. UNDER NO CIRCUMSTANCES SHALL THE CONTRACTOR SPLICE POWER CABLE INTO THE POWER COMPANY'S CIRCUITS. THE VOLTAGE SUPPLIED SHALL BE NOMINALLY 120 VOLTS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ANY NECESSARY PERMITS AND THE PAYING OF ALL FEES. THE CONTRACTOR SHALL PAY ALL POWER CHARGES UNTIL THE SIGNAL IS ACCEPTED BY THE CITY OF MASSILLON.

DUE TO THE INTENDED RELOCATION OF EXISTING UTILITY POLES, THE PROPOSED POWER SOURCE LOCATION HAS NOT BEEN IDENTIFIED AT ALL PROJECT INTERSECTIONS. DURING CONSTRUCTION, THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING THE POWER SOURCE LOCATION AT ANY INTERSECTION THAT HAS NOT BEEN PREVIOUSLY IDENTIFIED IN THE PLANS. ALL POWER SOURCE LOCATIONS SHALL BE APPROVED BY THE ENGINEER. REGARDLESS OF WHETHER THE POWER SOURCE LOCATION HAS BEEN IDENTIFIED IN THE PLANS OR NOT, ALL ITEMS ASSOCIATED WITH THE POWER SERVICE THAT ARE NECESSARY TO PROVIDE COMPLETE ELECTRICAL SERVICE TO EACH TRAFFIC SIGNAL INSTALLATION, INCLUDING, BUT NOT LIMITED TO CONDUIT RISERS, CONDUIT, TRENCHING, PULL BOXES AND POWER SERVICE CABLE, SHALL BE INCIDENTAL TO AND INCLUDED UNDER ITEM 632 - POWER SERVICE, AS PER PLAN, AS PER C&MS 632.24.

THE COST FOR ALL NECESSARY ITEMS AND ASSOCIATED LABOR SHALL BE INCLUDED IN THE CONTRACT BID PRICE FOR ITEM 632 - POWER SERVICE, AS PER PLAN.

CALCULATED MBK
CHECKED KMG

TRAFFIC SIGNAL NOTES

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ITEM 632 - COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, (BY DESIGN), AS PER PLAN

ITEM 632 - PEDESTAL, TRANSFORMER BASE, 8', AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF 632, 732.11, SIGNAL SUPPORTS SHALL MEET THE FOLLOWING REQUIREMENTS:

THE CONTRACTOR SHALL OBTAIN WRITTEN APPROVAL FROM THE CITY FOR ALL MODEL NUMBERS, POLE FABRICATION AND ORIENTATION DATA, AND PAINTING SPECIFICATIONS, PRIOR TO ORDERING THE POLES.

SIGNAL SUPPORTS (MAST ARM POLE AND ARMS) SHALL BE EITHER MILLERBERND (BASE:BSDO) OR VALMONT (BASE: STERLING ST) OR UNION METAL (NOSTALGIA, BASE: 729) PAINTED SEMI-GLOSS BLACK (FEDERAL COLOR CODE FS 27038) (WET COATED OR POWDER COATED) AND MANUFACTURED BY:

MILLERBERND
OHIO TRAFFIC & LIGHTING SOLUTIONS
2688 SAWBURY BLVD
COLUMBUS, OH 43235
PHONE: (614) 219-7341
WWW.MILLERBERNDMFG.COM

VALMONT
SIGNAL SERVICES, INC.
1020 ANDREW DRIVE
WEST CHESTER, PA 19380
WWW.VALMONT.COM

UNION METAL
1432 MAPLE AVE NE
CANTON, OH 44705
PHONE: (833) 919-7653
WWW.UNIONMETAL.COM

THE CONTRACTOR SHALL FURNISH AND INSTALL COMBINATION SIGNAL SUPPORTS AS PER THE PLAN DETAILS. ALL THE HARDWARE AND RELATED EQUIPMENT SHALL BE INCLUDED WITH THIS ITEM.

COMBINATION SIGNAL SUPPORTS SHALL INCLUDE BRACKET ARMS BY EITHER KING LUMINAIRE (KA14-T-2), OR UNION METAL (ALUMINUM BISHOP'S CROOK ASSEMBLY STYLE 895), OR APPROVED EQUAL. BRACKET ARMS WILL MATCH THE OVERALL APPEARANCE AND FUNCTION OF THE DETAIL IN THE PLANS AND PAINTED SEMI-GLOSS BLACK (FEDERAL COLOR CODE FS 27038).

KING LUMINAIRE
1153 STATE ROUTE 46 N
JEFFERSON, OHIO 44047
(440) 576-9073
WWW.STRESSCRETEGROUP.COM

UNION METAL
1432 MAPLE AVE NE
CANTON, OH 44705
PHONE: (833) 919-7653
WWW.UNIONMETAL.COM

ITEM 632 - COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, (BY DESIGN), AS PER PLAN (CONTINUED)

ITEM 632 - PEDESTAL, TRANSFORMER BASE, 8', AS PER PLAN (CONTINUED)

THE MANUFACTURER SHALL PROVIDE WRITTEN CERTIFICATION TO THE CITY THAT THE ACCEPTED POLE, ARM, AND DECORATIVE SHROUD, IS OR WILL BECOME A STOCK ITEM, READILY AVAILABLE WITH REPLACEMENT PARTS FOR A MINIMUM TEN (10) YEAR PERIOD. ALL MATERIAL SUPPLIES SHALL BE WARRANTED BY THE MANUFACTURER FOR FIVE (5) YEARS AFTER DELIVERY AGAINST FAULTY MATERIALS AND WORKMANSHIP. THE POLE TOP SHALL BE MECHANICALLY ATTACHED TO THE TOP OF THE POLE SHAFT TO PROVIDE ACCESS FOR WIRING SIGNALS SECURED BY A J-HOOK WIRE SUPPORT. AN OUTLET FRAME SHALL BE INTEGRALLY WELDED INTO THE POLE SHAFT TO ACCOMMODATE A 20A 125V GFCI DUPLEX RECEPTACLE WHICH IS ALSO INCLUDED. THE RECEPTACLE COVER SHALL BE WEATHER PROOF WHILE IN USE AND PAINTED TO MATCH POLE.

THE MAST ARM SHALL BE DRILLED IN THE FIELD 1 FOOT FROM REQUIRED SIGNAL LOCATIONS. TWO (2) RUBBER GROMMETS SHALL BE FURNISHED WITH EACH MAST ARM. SIGNAL HANGER CLAMPS SHALL BE SUPPLIED BY THE SIGNAL SUPPLIER OR MANUFACTURER, AS REQUIRED. A PERMANENT LEGIBLE MARKING INDICATION SHALL BE INCLUDED ON EACH SIGNAL SUPPORT AND ARM. THE FOLLOWING INDICATIONS SHALL BE REQUIRED AS A MINIMUM:

A. POLE INDICATIONS: MONTH/DATE OF FABRICATION, POLE GAUGE, BOTTOM DIAMETER, POLE HEIGHT, BOLT CIRCLE, ANCHOR BOLT DIAMETER, FLANGE BOLT DIAMETER AND INTERSECTION LOCATION INCLUDING CORNER QUADRANT.

B. ARM INDICATIONS: MONTH/DATE OF FABRICATION, ARM GUAGE, ARM DIAMETER, ARM LENGTH, CONNECTING FLANGE BOLT DIAMETER, AND INTERSECTION LOCATION INCLUDING CORNER QUADRANT.

THE FOUNDATION SURFACE SHALL BE LEVEL IN ORDER TO ACCEPT THE BASE ASSEMBLY. ALL PROPOSED EXTERIOR CONNECTINGS (PEDESTRIAN SIGNAL HEADS, ETC.) TO SIGNAL POLES AND PEDESTALS SHALL BE FIELD DRILLED. BANDING OR STRAPPING ON THE SIGNAL POLES AND PEDESTALS SHALL NOT BE PERMITTED.

THE DECORATIVE SIGNAL SUPPORTS SHALL BE DESIGNED BY THE MANUFACTURER TO MEET THE DESIGN REQUIREMENTS OF THE POLE. THE SIGNAL SUPPORT DESIGNER SHALL PROVIDE DRAWINGS AND SUPPORTING CALCULATIONS OF EACH SIGNAL SUPPORT WITH THE STRUCTURAL ASPECTS OF THE DESIGN AND MATERIALS IN COMPLIANCE WITH THE AASHTO STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINAIRES, AND TRAFFIC SIGNALS. THE SIGNAL SUPPORT SHALL BE ASTM A595 GRADE A WITH A MINIMUM YIELD STRENGTH OF 55 KSI (OR THE EQUIVALENT ODOT DESIGN NUMBER, WHICHEVER IS GREATER).

THE FOLLOWING DESIGN PARAMETERS SHALL BE USED FOR DESIGN PURPOSES:

1. BASIC WIND SPEED = 90 MPH
2. DESIGN LIFE = 25 YEARS
3. FATIGUE CATEGORY = III
4. GALLOPING: NO
5. TRUCK INDUCED GUST: NO

SUBMIT, TO THE ENGINEER PRIOR TO INCORPORATION: TWO COPIES OF THE SIGNAL SUPPORT DRAWINGS AND SHOP DRAWINGS , WHICH IDENTIFY AND DESCRIBE EACH MANUFACTURED SIGNAL SUPPORT AND SIGNAL SUPPORT ITEM WHICH IS BEING INCORPORATED INTO THE CONSTRUCTION. THE SIGNAL SUPPORT DRAWINGS AND SHOP DRAWINGS SHALL EACH BE REVIEWED, SEALED, STAMPED AND DATED BY AN OHIO REGISTERED PROFESSIONAL ENGINEER.

ITEM 632 - COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, (BY DESIGN No.), AS PER PLAN (CONTINUED)

ITEM 632 - PEDESTAL, TRANSFORMER BASE, 8', AS PER PLAN (CONTINUED)

ANCHOR BOLTS SHALL BE PROVIDED AND INSTALLED PER POLE MANUFACTURER RECOMMENDATIONS.

PAYMENT FOR THIS ITEM WILL BE MADE AT THE UNIT BID PRICE FOR EACH POLE, FURNISHED, INSTALLED, AND APPROVED.

ITEM 633 - CABINET FOUNDATION, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF ODOT C&MS 633, 733 AND SCD TC-83.20, THE CONTROLLER FOUNDATION SHALL BE CONSTRUCTED PER THE DETAIL ON SHEET 360.

ITEM 809 - ATC V6.24 CONTROLLER, AS PER PLAN

THE CONTROLLER UNIT PROVIDED AS PART OF THIS CONTRACT SHALL BE ON THE OFFICE OF TRAFFIC OPERATIONS TRAFFIC APPROVED PRODUCTS (TAP) LIST.

THE CONTROLLER UNIT SHALL BE EITHER A SIEMENS M60 MODEL AS MANUFACTURED BY SIEMENS INDUSTRY INC., A COBALT MODEL AS MANUFACTURED BY ECONOLITE CONTROL PRODUCTS, OR APPROVED EQUAL.

SIEMENS INDUSTRY INC.
9225 BEE CAVE ROAD, BUILDING B SUITE 101
AUSTIN, TEXAS 78733
(512)-873-8300

ECONOLITE CONTROL PRODUCTS, INC.
1250 N. TUSTIN AVENUE
ANAHEIM, CALIFORNIA 92807
(714)-630-3700

PAYMENT FOR ITEM 809 - ATC V6.24 CONTROLLER, AS PER PLAN WILL BE AT THE CONTRACT BID PRICE PER EACH COMPLETE AND IN PLACING INCLUDING ALL CONNECTIONS TESTED AND ACCEPTED.

ITEM 633 - CABINET, TYPE TS-2, AS PER PLAN

THE GROUND-MOUNTED CABINET SHALL BE A NEMA TS2 CABINET SIZE 6 AND SHALL HAVE A MINIMUM OF TWO SHELVES.

THE CABINET SHALL BE FURNISHED WITH AN EDI MMU AS ALLOWED ON THE TAP / APPROVED PRODUCTS LIST.

EACH CABINET SHALL COME EQUIPPED WITH TWO 16-CHANNEL CABINET DETECTOR RACKS (CDR) INCLUDING BUS INTERFACE UNITS (BIU). THE LOOP DETECTOR TERMINATION PANEL FOR THE SECOND DETECTOR RACK SHALL BE OMITTED.

THE CONTROLLER CABINET SHALL ALSO INCLUDE:

1. A SLIDE-OUT LAPTOP SHELF.
2. INTERIOR, UNDERSHELF LED CABINET LIGHTING, INCLUDING A MINIMUM OF 2 PANELS OF 6 HIGH-INTENSITY LED'S EACH AND A DOOR-ACTIVATED SWITCH. THE LED PANELS SHALL BE MOUNTED IN LOCATIONS TO MAXIMIZE LIGHT ON THE CABINET EQUIPMENT.
3. A GOOSENECK/ADJUSTABLE LIGHT FIXTURE WITH AN LED LAMP. THE ADJUSTABLE LIGHT FIXTURE SHALL BE MOUNTED ON THE LOWER RIGHT SIDE OF THE CONTROLLER CABINET.
4. A MINIMUM OF TWO (2) GFCI PROTECTED RECEPTACLES.
5. A MINIMUM OF SIX (6) SURGE PROTECTOR (NON-GFCI) RECEPTACLES.

THE CONTROLLER CABINET SHALL HAVE A SEMI-GLOSS BLACK FINISH (FEDERAL COLOR 27038). THIS SHALL BE ACCOMPLISHED THROUGH THE SAME PROCESS UTILIZED FOR THE COMBINATION SIGNAL SUPPORTS.

PAYMENT FOR ITEM 633 - CABINET, TYPE TS-2, AS PER PLAN WILL BE AT THE CONTRACT BID PRICE PER EACH COMPLETE AND IN PLACING INCLUDING ALL CONNECTIONS TESTED AND ACCEPTED.

CALCULATED MBK CHECKED KMG

TRAFFIC SIGNAL NOTES

STA-241-9.71

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ITEM 809 - EMERGENCY VEHICLE PREEMPTION, AS PER PLAN (ALTERNATE 1)

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AND INSTALLING PREEMPTION EQUIPMENT IN THE LOCATIONS AND LOCAL CONTROLLERS AS SHOWN IN THE PLANS. THE PREEMPTION SHALL CONFORM TO ODOT SUPPLEMENTAL SPECIFICATION 809 AND SHALL UTILIZE COMMUNICATIONS TO IDENTIFY THE PRESENCE OF AN EMERGENCY PRIORITY VEHICLE. IT SHALL CAUSE THE TRAFFIC SIGNAL CONTROLLER TO SELECT A PRE-PROGRAMMED PREEMPTION PLAN THAT WILL DISPLAY AND HOLD THE DESIRED SIGNAL PHASE FOR THE DIRECTION OF THE EMERGENCY VEHICLE.

THE COMMUNICATIONS MEDIUM SHALL EMPLOY GPS DETECTION TECHNIQUES TO DETERMINE AND LOG THE PRESENCE OF THE EMERGENCY VEHICLE. THE SYSTEM SHALL DETECT THE PRESENCE OF THE VEHICLE THROUGH AN EMITTING DEVICE LOCATED ON THE EMERGENCY VEHICLE. THE SYSTEM SHALL ACTIVATE THE PREEMPTION SEQUENCE BY APPLYING A SIGNAL TO ONE OF THE CONTROLLER'S PREEMPT DISCRETE INPUTS. THE SYSTEM SHALL BE COMPLETELY COMPATIBLE WITH THE CONTROLLER.

THE EQUIPMENT SHALL BE SHELF OR RACK MOUNTED AND EASILY REMOVABLE AND REPLACEABLE WITHIN THE CABINET. SUPPLY EQUIPMENT COMPLETELY WIRED IN THE CONTROLLER CABINET AND TESTED. THE SYSTEM SHALL BE CAPABLE OF PREEMPTING AND RECEIVING PRIORITY FOR EACH APPROACH TO THE INTERSECTION. IT SHALL BE POSSIBLE TO DETECT THE EMERGENCY VEHICLE AT LEAST 2000 FEET FROM THE INTERSECTION IN AN 80DB-A NOISE ENVIRONMENT.

ALL PREEMPTION PLANS SHOULD BE PROGRAMMED TO PREVENT THE YELLOW TRAP, UNLESS AS DIRECTED BY THE DISTRICT TRAFFIC ENGINEER. YELLOW TRAP PREVENT WILL FORCE THE TRANSITION THROUGH YELLOW CHANGE AND RED CLEARANCE FOR RESOLUTION OF YELLOW TRAP IF ANY PHASE OPPOSING THE PREEMPTION CLEARANCE PHASE(S) IS ACTIVE AND DISPLAYING A GREEN OR FLASHING YELLOW ARROW INDICATION WHEN THE PREEMPTION PLAN IS ACTIVATED AND THE PREEMPTION CLEARANCE PHASE(S) ARE GREEN.

SUPPLY EACH INTERSECTION SHOWN IN THE PLANS WITH THE FOLLOWING COMPONENTS, EACH BID SEPARATELY:

1. PREEMPT RADIO GPS UNIT.
2. PREEMPT DETECTOR CABLE.
3. PREEMPT PHASE SELECTOR ASSEMBLY AND INTERFACE WIRING PANEL.
4. CONFIRMATION LIGHT.

THE CONTRACTOR SHALL INVENTORY THE CITY'S EXISTING GPS EMITTERS TO DETERMINE COMPATIBILITY WITH THE PROPOSED GPS PREEMPTION SYSTEM. THE CONTRACTOR SHALL SUPPLY 20 EMITTERS FOR THE CITY OF MASSILLON'S EMERGENCY VEHICLES AT COST INCIDENTAL TO THE SYSTEM. THE EMITTERS SUPPLIED TO THE CITY OF MASSILLON SHALL BE BLACK IN COLOR.

THE CONTRACTOR SHALL COORDINATE WITH THE CITY OF MASSILLON TO DETERMINE WHICH PRIORITY LEVEL EMITTERS ARE NECESSARY PRIOR TO ORDERING.

THE CITY SHALL BE SUPPLIED WITH SOFTWARE REQUIRED TO CALIBRATE, LOG, AND OPERATE THE SYSTEM. TWO (2) OPERATING AND INSTRUCTION MANUALS SHALL BE SUPPLIED WITH THE SOFTWARE.

ITEM 809 - EMERGENCY VEHICLE PREEMPTION, AS PER PLAN (ALTERNATE 1) (CONTINUED)

THE CONTRACTOR SHALL THOROUGHLY TEST THE INSTALLED SYSTEM. AS A MINIMUM, THE CONTRACTOR SHALL VERIFY THAT ALL CONNECTIONS ARE PROPERLY MADE TO THE CONTROLLER CABINETS. THE CONTRACTOR SHALL CHECK THAT THE RANGE SETTING IS PROPER FOR EACH INTERSECTION. THE CONTRACTOR SHALL DETERMINE THAT ALL PHASE SELECTORS ARE SELECTING THE PROPER PHASE AND TIMING ACCURATELY. THE CONTRACTOR SHALL VERIFY THAT ALL VEHICLE EMITTERS ARE BEING PROPERLY DETECTED.

THE CONTRACTOR SHALL PROVIDE TRAINING FOR UP TO FIFTEEN (15) PERSONS IN THE OPERATION OF THE SYSTEM. IT SHALL BE PROVIDED WITHIN 48 HOURS OF THE INSTALLATION OF THE SYSTEM. IT SHALL CONSIST OF HANDS-ON INSTRUCTION FOR A MINIMUM OF SIXTEEN (16) HOURS. THE CONTRACTOR SHALL PROVIDE TRAINING FOR UP TO FOUR (4) PERSONS IN THE INSTALLATION AND MAINTENANCE OF THE SYSTEM. IT SHALL CONSIST OF A MINIMUM OF EIGHT (8) HOURS OF INSTRUCTION. TRAINING SHALL BE SUPPLIED WITHIN SEVEN (7) DAYS OF THE INSTALLATION OF THE SYSTEM. ALL TRAINING SHALL BE HELD IN A CITY SUPPLIED LOCATION. TRAINING SHALL BE CONDUCTED BY SOMEONE WHO HAS PERFORMED THIS WITHIN THE LAST YEAR AND DOES IT ON A REGULAR BASIS. THE COST OF TRAINING, INCLUDING COURSE MATERIAL, TRAVEL SUBSISTENCE AND RELATED COSTS, SHALL BE ENTIRELY BORNE BY THE CONTRACTOR AND SHALL BE INCIDENTAL TO THE PREEMPTION EQUIPMENT.

PAYMENT FOR ITEM 809 - EMERGENCY VEHICLE PREEMPTION, AS PER PLAN (ALTERNATE 1) SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH PREEMPTION IN PLACE AND FULLY OPERATIONAL AS SHOWN IN THE PLANS, EXCEPT FOR THOSE ITEMS BID SEPARATELY.

ITEM 809 - EMERGENCY VEHICLE PREEMPTION, AS PER PLAN (ALTERNATE 2)

IN ADDITION TO MEETING THE REQUIREMENTS OF THE BASE BID ITEM, THE PREEMPT SYSTEM SHALL BE AN OPTICOM GPS PRIORITY CONTROL SYSTEM AS MANUFACTURED BY GLOBAL TRAFFIC TECHNOLOGIES, LLC. 7800 THIRD STREET NORTH BUILDING 100, ST. PAUL, MINNESOTA, 55128-5441 (800-258-4610).

PAYMENT FOR ITEM 809 - EMERGENCY VEHICLE PREEMPTION, AS PER PLAN (ALTERNATE 2) SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH PREEMPTION SYSTEM IN PLACE AND FULLY OPERATION AS SHOWN IN THE PLANS, EXCEPT FOR THOSE ITEMS BID SEPARATELY.

ITEM 809 - PREEMPT RECEIVING UNIT, AS PER PLAN (ALTERNATE 1)

RECEIVING UNITS SHALL CONSIST OF A LIGHTWEIGHT, WEATHERPROOF AND DIRECTIONAL ASSEMBLY. EACH RECEIVING UNIT SHALL BE 360 DEGREE ADJUSTABLE. THE RECEIVING UNIT SHALL BE CAPABLE OF SENDING THE PROPER ELECTRICAL SIGNAL TO THE TRAFFIC SIGNAL CONTROLLER VIA THE PREEMPTION DETECTOR CABLE. RECEIVING UNITS SHALL BE SUPPLIED WITH MAST ARM MOUNTING HARDWARE AS SHOWN IN THE PLANS.

FURNISH PREEMPTION RECEIVING UNITS WITH 60-MONTH WARRANTIES OR FOR THE MANUFACTURER'S STANDARD WARRANTY WHICHEVER IS GREATER. ENSURE THAT THE WARRANTY PERIOD BEGINS ON THE DATE OF SHIPMENT TO THE PROJECT. ENSURE THAT EACH UNIT HAS A PERMANENT LABEL OR STAMP INDICATING THE DATE OF SHIPMENT.

IN ADDITION, THE RECEIVING UNIT FINISH, THE RISER EXTENSIONS, MOUNTING HARDWARE AND ANY EXPOSED SURFACES SHALL BE BLACK IN COLOR.

PAYMENT FOR ITEM 809 - PREEMPT RECEIVING UNIT, AS PER PLAN (ALTERNATE 1) SHALL BE AT THE CONTRACT UNIT FOR EACH RECEIVING UNIT IN PLACE, COMPLETELY INSTALLED AT THE LOCATION SHOWN IN THE PLANS, WIRED, TESTED AND ACCEPTED.

ITEM 809 - PREEMPT RECEIVING UNIT, AS PER PLAN (ALTERNATE 2)

IN ADDITION TO MEETING THE REQUIREMENTS OF THE BASE BID ITEM, THE PREEMPTION RECEIVING UNIT SHALL BE OPTICOM MODEL 3100 GPS RADIO UNIT AS MANUFACTURED BY GLOBAL TRAFFIC TECHNOLOGIES, LLC.

PAYMENT FOR ITEM 809 - PREEMPT RECEIVING UNIT, AS PER PLAN (ALTERNATE 2) SHALL BE AT THE CONTRACT UNIT PRICE FOR EACH RECEIVING UNIT IN PLACE, COMPLETELY INSTALLED AT THE LOCATION SHOWN IN THE PLANS, WIRED, TESTED AND ACCEPTED.

ITEM 809 - PREEMPT DETECTOR CABLE

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING PREEMPTION DETECTOR HOME RUN CABLE IN THE LOCATIONS SHOWN IN THE PLANS. IT SHALL CONNECT THE PREEMPT RECEIVING UNITS TO THE PHASE SELECTORS IN THE LOCAL CONTROLLER CABINET.

PREEMPTION DETECTOR CABLE SHALL CONFORM TO ODOT SPECIFICATION 632. ONLY ONE EXTERNAL SPLICE SHALL BE PERMITTED BETWEEN PREEMPTION RECEIVER UNIT AND CONTROLLER CABINET. THIS SPLICE SHALL MEET THE REQUIREMENTS OF C&MS 632.23 USING A WATERPROOF EPOXY SPLICE KIT. THE CABLE SHALL BE APPROVED FOR BOTH OVERHEAD AND UNDERGROUND USE. THE JACKET SHALL WITHSTAND EXPOSURE TO SUNLIGHT AND ATMOSPHERIC TEMPERATURES AND STRESSES REASONABLY EXPECTED IN NORMAL INSTALLATIONS.

PAYMENT FOR ITEM 809 - PREEMPT DETECTOR CABLE SHALL BE MADE AT THE CONTRACT UNIT PRICE PER FOOT FOR THE CABLE FURNISHED, IN PLACE, ALL CONNECTIONS MADE AND WIRING COMPLETED, TESTED AND ACCEPTED.

ITEM 809 - PREEMPT PHASE SELECTOR (ALTERNATE 1)

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING PREEMPT PHASE SELECTORS INCLUDING WIRING INTERFACE PANELS IN THE LOCAL CONTROLLER CABINET AND ALL OTHER ACCESSORIES THAT ARE NECESSARY TO MAKE THE PREEMPT PHASE SELECTORS COMPLETELY FUNCTIONAL AND OPERATIONAL AS SHOWN IN THE PLANS. THIS ITEM SHALL INCLDUE THE EXTRA CABINET SPACE NECESSARY TO BE LOCATED IN THE LOCAL CONTROLLER CABINETS WHERE INDICATED IN THE PLANS.

THE PHASE SELECTORS SHALL CONSIST OF A MODULE OR MODULES THAT WILL PROVIDE THE NECESSARY INPUTS TO THE CONTROLLER. PHASE SELECTORS SHALL BE SUPPLIED WITH SUFFICIENT QUANTITIES OF CHANNELS TO PROVIDE PREEMPTION FOR ALL APPROACHES TO THE INTERSECTION SEPARATELY. POWER SHALL BE OBTAINED FROM THE PHASE SELECTOR OR PHASE SELECTOR POWER SUPPLY AND NOT FROM THE LOCAL CONTROLLER TIMER.

THE PHASE SELECTORS SHALL HAVE FRONT PANEL INDICATORS FOR ACTIVE PREEMPT CHANNEL STATUS. IT SHALL HAVE TEST SWITCHES TO ACTIVATE ALL PREEMPT CHANNELS.

FURNISH PREEMPT PHASE SELECTORS WITH 60-MONTH WARRANTIES OR FOR THE MANUFACTURER'S STANDARD WARRANTY WHICHEVER IS GREATER. ENSURE THAT THE WARRANTY PERIOD BEGINS ON THE DATE OF SHIPMENT TO THE PROJECT. ENSURE THAT EACH UNIT HAS A PERMANENT LABEL OR STAMP INDICATING THE DATE OF SHIPMENT.

PAYMENT FOR ITEM 809 - PREEMPT PHASE SELECTOR (ALTERNATE 1) SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH PHASE SELECTOR IN PLACE, COMPLETELY INSTALLED IN THE LOCAL CONTROLLER SHOWN IN THE PLANS, WIRED, TESTED AND ACCEPTED.

ITEM 809 - PREEMPT PHASE SELECTOR (ALTERNATE 2)

IN ADDITION TO MEETING THE REQUIREMENTS OF THE BASE BID ITEM, THE PREEMPTION PHASE SELECTOR SHALL BE OPTICOM MODEL 764 MULTIMODE PHASE SELECTOR AS MANUFACTURED BY GLOBAL TRAFFIC TECHNOLOGIES, LLC.

PAYMENT FOR ITEM 809 - PREEMPT PHASE SELECTOR (ALTERNATE 2) SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH PHASE SELECTOR IN PLACE, COMPLETELY INSTALLED IN THE LOCAL CONTROLLER SHOWN IN THE PLANS, WIRED, TESTED AND ACCEPTED.

CALCULATED MBK CHECKED KMG

TRAFFIC SIGNAL NOTES

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ITEM 809 - PREEMPT CONFIRMATION LIGHT, AS PER PLAN

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING PREEMPT CONFIRMATION LIGHTS INCLUDING HARDWARE AND ALL OTHER ACCESSORIES THAT ARE NECESSARY TO MAKE THE PREEMPT CONFIRMATION LIGHT COMPLETELY FUNCTIONAL AND OPERATIONAL AS SHOWN IN THE PLANS.

A CONFIRMATION LIGHT SHALL BE SUPPLIED FOR EACH INTERSECTION TO INDICATE THAT THE EMERGENCY VEHICLE HAS ACHIEVED CONTROL OF THE TRAFFIC SIGNAL.

THE CONFIRMATION LIGHT SHALL BE A WEATHER TIGHT LIGHTING FIXTURE. IT SHALL BE SUPPLIED WITH A CLEAR GLOBE, LED LAMP AND MOUNTING HARDWARE TO ATTACH TO THE TRAFFIC SIGNAL MAST ARM. THE CONFIRMATION LIGHT SHALL BE POWERED BY A LOAD SWITCH IN THE TRAFFIC SIGNAL CONTROLLER. SIGNAL CABLE CONFORMING TO 732.19 SHALL BE USED FOR CONFIRMATION LIGHTS. A MINIMUM OF 2-CONDUCTOR CABLE SHALL BE USED WITH THE GREEN WIRE SERVING AS THE SAFETY GROUND CONDUCTOR.

IN ADDITION, THE CONFIRMATION LIGHT FINISH, THE RISER EXTENSIONS, MOUNTING HARDWARE AND ANY EXPOSED SURFACES SHALL BE BLACK IN COLOR.

PAYMENT FOR ITEM 809 - PREEMPT CONFIRMATION LIGHT, AS PER PLAN SHALL BE MADE AT THE CONTRACT UNIT PRICE FOR EACH LIGHT IN PLACE, COMPLETELY INSTALLED IN THE LOCATION SHOWN IN THE PLANS, WIRED, TESTED AND ACCEPTED.

ITEM 816 - VIDEO DETECTION SYSTEM, AS PER PLAN

IN ADDITION TO MEETING THE REQUIREMENTS OF ODOT SUPPLEMENTAL SPECIFICATIONS 816 AND 907, THE CAMERA, RISER EXTENSIONS, MOUNTING HARDWARE AND ANY EXPOSED SURFACES SHALL BE BLACK IN COLOR.

PAYMENT FOR ITEM 816 - VIDEO DETECTION SYSTEM, AS PER PLAN SHALL BE MADE AT THE CONTRACT BID PRICE PER EACH AND SHALL INCLUDE THE COST OF ALL MATERIALS, EQUIPMENT, TOOLS, LABOR, TESTING AND CERTIFICATION NECESSARY TO PROVIDE A VIDEO DETECTION SYSTEM COMPLETE IN PLACE.

ITEM 633 - UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN

IN ADDITION TO THE REQUIREMENTS OF C&MS 633 AND 733, A CABINET RISER (8 INCH MINIMUM) AND ANCHOR BOLTS WILL BE PROVIDED FOR BASE-MOUNTED CABINETS.

THE UPS CABINET SHALL INCLUDE A GENERATOR POWER PANEL WITH A HEAVY DUTY POWER RELAY VERSUS THE LINE VOLTAGE GENERATOR SWITCH. THE GENERATOR INLET SHALL BE A RECESSED PANEL WITH A DOOR THAT IS FLUSH WITH THE EXTERNAL SIDE OF THE UPS CABINET. IT SHALL INCLUDE A RECESSED PLUG, AUTOMATIC TRANSFER SWITCH AND A DOOR THAT SECURELY CLOSES OVER THE POWER CORD.

THE UPS CABINET SHALL HAVE A MATTE BLACK FINISH (FEDERAL COLOR 17038). THIS SHALL BE ACCOMPLISHED THROUGH THE SAME PROCESS UTILIZED FOR THE COMBINATION SIGNAL SUPPORTS.

THE UPS OUTPUT NOTIFICATIONS FOR ON BATTERY, BATTERY 2-HOUR TIMER, AND LOW BATTERY SHALL BE WIRED INTO THE TRAFFIC SIGNAL CABINET BACK PANEL TO PROVIDE SPECIAL STATUS ALARMS FOR EACH OUTPUT INTO THE SIGNAL CONTROLLER.

THIS ITEM SHALL INCLUDE A RED LED STATUS INDICATOR LAMP TO ALLOW MAINTENANCE PERSONNEL AND LAW ENFORCEMENT TO QUICKLY ASSESS WHETHER A TRAFFIC SIGNAL CABINET IS BEING POWERED BY A UPS. THE LED HOUSING SHALL BE NEMA 4X, IP65 OR IP66, RATED FOR OUTDOOR USE AND BE TAMPER/ SHATTER RESISTANT. IT SHALL BE A DOMED ENCLOSURE CONTAINING A RED LENS WITH LED THAT IS VISIBLE FROM 100 FOOT MINIMUM. THE ENCLOSURE AND LED LAMP UNIT SHOULD BE PLACED AND CENTERED ON THE TOP SURFACE OF THE UPS CABINET AND SEALED FROM WATER INTRUSION. IT SHOULD BE WIRED USING MINIMUM 20GA STRANDED, INSULATED HOOKUP WIRE TO THE STATUS RELAY OUTPUTS OF THE UPS. THE WIRES SHALL BE TERMINATED BY LUGS AT THE DISPLAY END AND PERMANENTLY LABELED BACKUP POWER STATUS DISPLAY,WITH WIRE POLARITY INDICATED. THE RED LED SHALL ONLY ILLUMINATE TO INDICATE THE CABINET IS OPERATING UNDER UPS BACKUP POWER (THE BACKUP OPERATING CONDITION). THIS ITEM INCLUDES PROGRAMMING THE UPS STATUS RELAY OUTPUTS TO PRODUCE THE LAMP STATUS DISPLAYS. THESE STATUS DISPLAYS WILL BE SOLID 100% DUTY CYCLE (NOT FLASHING) DISPLAYS. THE OPERATING VOLTAGE OF THE LED LAMP SHALL BE 120V AC UNLESS OTHERWISE INDICATED.

PAYMENT FOR ITEM 633 - UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN SHALL BE MADE AT THE UNIT CONTRACT PRICE BID PER EACH. PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT, TESTING, CERTIFICATIONS AND OTHER INCIDENTALS NECESSARY TO FURNISH COMPLETE IN PLACE. ALL CONNECTIONS MADE AND WRING COMPLETE, TESTED AND ACCEPTED.

ITEM 632 - INTERCONNECT, MISC.: LAYER 2 ETHERNET SWITCH

THIS ITEM OF WORK SHALL CONSIST OF FURNISHING AN INDUSTRY HARDENED, FULLY MANAGED LAYER 2 ETHERNET SWITCH PROVIDING A MINIMUM OF EIGHT (8) FAST ETHERNET (10/100 BASE TX) RJ45 COPPER PORTS. THE SWITCH SHALL OPERATE ON 120VAC, 10 WATTS, AND SHALL MEET AND/OR EXCEED NEMA TS2 ENVIRONMENTAL REQUIREMENTS.

THE ETHERNET SWITCH SHALL BE PROVIDED WITH TWO (2) 10' CAT5E ETHERNET PATCH CABLES WITH RJ45 TERMINATIONS, COMPATIBLE POWER SUPPLY, AND ALL ACCESSORIES NEEDED TO BE FULLY FUNCTIONAL.

THE ETHERNET SWITCH SHALL CONNECT TO ALL ETHERNET DEVICES IN THE CONTROLLER CABINET INCLUDING THE CONTROLLER, MMU, BATTERY BACKUP SYSTEM, VIDEO DETECTION SYSTEM AND ANY OTHER ETHERNET DEVICES USING PROPERLY RATED CAT5E CABLES WITH RJ45 CONNECTORS.

LAYER 2 ETHERNET SWITCHES SHALL BE DESIGNED TO BE CONFIGURABLE IN POINT-TO-POINT, DAISY-CHAIN, RING, AND MESH TOPOLOGIES FOR CONNECTIVITY INTO NEW AND EXISTING ETHERNET NETWORKS, ENABLING APPLICATIONS TO OPERATE RELIABLY, AND WITH LOW LATENCY.

ALL EQUIPMENT SHALL INCLUDE LICENSES, WHERE REQUIRED, FOR ANY SOFTWARE OR HARDWARE IN THE SYSTEM.

THE COST FOR THIS ITEM SHALL INCLUDE ALL LABOR, EQUIPMENT, MATERIAL AND INCIDENTALS REQUIRED TO ASSEMBLE A FUNCTIONAL, ETHERNET SYSTEM INCLUDING CONNECTIONS, TESTED AND ACCEPTED.

ITEM 633 - CONTROLLER ITEM, MISC.: UNINTERRUPTIBLE POWER SUPPLY CABINET FOUNDATION AND WORK PAD EXPANSION

THE CONTRACTOR SHALL PROVIDE A FOUNDATION AND WORK PAD EXTENSION FOR THE UNINTERRUPTIBLE POWER SUPPLY CABINET INSTALLATION AT THE S.R. 241 (WALES RD.) / HILLS AND DALES RD. INTERSECTION.

THE CABINET FOUNDATION SHALL BE INSTALLED PER THE REQUIREMENTS OF C&MS 633 AND 733, SCD TC-83.20 AND AS DETAILED ON SHEET 360 .

ADDITIONALLY THE CONTRACTOR SHALL EXTEND THE EXISTING CONTROLLER WORK PAD IN ACCORDANCE WITH C&MS 633.11.

PAYMENT FOR ITEM 633 - CONTROLLER ITEM, MISC.: UNINTERRUPTIBLE POWER SUPPLY CABINET FOUNDATION AND WORK PAD EXPANSION SHALL BE MADE AT THE UNIT CONTRACT PRICE BID PER EACH. PAYMENT SHALL BE FULL COMPENSATION FOR ALL LABOR, MATERIALS, TOOLS, EQUIPMENT AND OTHER INCIDENTALS NECESSARY TO FURNISH THE FOUNDATION AND WORK PAD COMPLETE AND IN PLACE.

ITEM 625 - LUMINAIRE, DECORATIVE, AS PER PLAN (ALTERNATE 1)

IN ADDITION TO THE REQUIREMENTS OF C&MS 625 AND 725, THE DECORATIVE LUMINAIRE SHALL CONFORM TO THE FOLLOWING:

1. THE LUMINAIRE SHALL BE A PENDANT STYLE, DOWN LIGHT FIXTURE WITH A SHALLOW LENS.
2. THE LUMINAIRE SHALL USE HIGH OUTPUT, MULTIPLE LIGHT EMITTING DIODES (LED) WITH A TYPE V DISTRIBUTION, MVOLT, AND HAVE AN OUTPUT BETWEEN 6,500 - 7,500 LUMENS.
3. THE PHOTOCELL SHALL BE A 7-PIN PHOTOCELL/DIMMING RECEPTACLE.
4. THE FIXTURE AND ALL ATTACHMENT HARDWARE SHALL BE POWDER COATED BLACK IN COLOR TO MEET FEDERAL SPECIFICATION 595B AND CONFORM TO COLOR 27038. THE COATING SHALL INCLUDE A 5 YEAR WARRANTY.
5. SELECTED LUMINAIRE SHALL BE PROVIDED TO THE CITY OF MASSILLON FOR APPROVAL PRIOR TO ORDERING.

PAYMENT SHALL BE MADE AT THE UNIT PRICE PER EACH ITEM 625 - LUMINAIRE, DECORATIVE, AS PER PLAN (ALTERNATE 1) AND SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

ITEM 625 - LUMINAIRE, DECORATIVE, AS PER PLAN (ALTERNATE 2)

IN ADDITION TO MEETING THE REQUIREMENTS OF THE BASE BID ITEM, THE LUMINAIRE SHALL BE A UNION METAL NLJ1-110-A13-Y5F WITH 110 TYPE GLOBE AND RELUME LED PENDANT, AS MANUFACTURED BY:

UNION METAL
1432 MAPLE AVE NE
CANTON, OH 44705
PHONE: (833) 919-7653
WWW.UNIONMETAL.COM

PAYMENT SHALL BE MADE AT THE UNIT PRICE PER EACH ITEM 625 - LUMINAIRE, DECORATIVE, AS PER PLAN (ALTERNATE 2) AND SHALL INCLUDE ALL LABOR, MATERIALS AND INCIDENTALS NECESSARY TO COMPLETE THIS ITEM IN A SATISFACTORY AND WORKMANLIKE MANNER.

CALCULATED MBK
CHECKED KMG

TRAFFIC SIGNAL NOTES

STA-241-9.71

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TRAFFIC SIGNAL SUBSUMMARY

CALCULATED BEB
CHECKED KMG

SHEET	LOCATION	625 CONNECTION, FUSED PULL APART	625 CONNECTION, UNFUSED PULL APART	625 NO. 6 AWG 2400 VOLT DISTRIBUTION CABLE	625 NO. 10 AWG POLE AND BRACKET CABLE	625 CONDUIT, 2", 725.04	625 CONDUIT, 3", 725.04	625 CONDUIT, 4", 725.04	625 CONDUIT, JACKED OR DRILLED, 725.04, 4"	625 LUMINAIRE, DECORATIVE, AS PER PLAN	625 TRENCH	625 TRENCH IN PAVED AREA	625 PULL BOX, 725.08, 18"	625 PULL BOX, 725.08, 24"	625 PULL BOX, MISC.: PULL BOX, 24" X 35" X 26"	625 GROUND ROD	625 UNDERGROUND WARNING/MARKING TAPE	632 VEHICULAR SIGNAL HEAD, (LED), 3-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	632 VEHICULAR SIGNAL HEAD, (LED), 4-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	632 VEHICULAR SIGNAL HEAD, (LED), 5-SECTION, 12" LENS, 1-WAY, POLYCARBONATE, AS PER PLAN	632 PEDESTRIAN SIGNAL HEAD (LED), TYPE D2, COUNTDOWN, AS PER PLAN	632 COVERING OF VEHICULAR SIGNAL HEAD	632 COVERING OF PEDESTRIAN SIGNAL HEAD	632 PEDESTRIAN PUSHBUTTON, AS PER PLAN	632 SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	632 SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	632 SIGNAL SUPPORT FOUNDATION	632 PEDESTAL FOUNDATION
		EACH	EACH	FT	FT	FT	FT	FT	FT	EACH	FT	FT	EACH	EACH	EACH	EACH	FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	FT	EACH	EACH
310	S.R. 241 (WALES RD. NE) / S.R. 172 (LINCOLN WAY E)	4	4	1263	588	31	31	24	268	8	52	22	2	1	1	8	74	3	2	4	4	9	4	4	420	1001	4	2
318	S.R. 241 (WALES RD. NE) / STATE AVE. NE	4	4	939	588	6	34	12	169	8	40	6	1	2	1	7	46	8			8	8	8	8	798	580	4	1
326	S.R. 241 (WALES RD. NE) / HANKINS RD. NE	3	3	684	441	14	87	12	177	6	93	14	3	1	1	7	107	4		2	4	6	4	4	587	375	3	2
333	S.R. 241 (WALES RD. NE) / LAKE AVE. NE	2	2	492	294	45	40	24	127	4	97		1	2	1	6	97	3		3	2	6	2	2	235	432	2	2
339	S.R. 241 (WALES RD. NE) / HILLS AND DALES RD. NE														1			4		2	4			4	409	590		
TOTALS CARRIED TO GENERAL SUMMARY		13	13	3378	1911	96	192	72	741	26	282	42	7	6	5	28	324	22	2	11	22	29	18	22	2449	2978	13	7

SHEET	LOCATION	632 LOOP DETECTOR LEAD-IN CABLE	632 POWER SERVICE, AS PER PLAN	632 COMBINATION SIGNAL SUPPORT, TYPE TC-81.21 DESIGN 3 POLE, WITH MAST ARMS TC-81.21 DESIGN 2 AND DESIGN 1, AS PER PLAN	632 COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 1, AS PER PLAN	632 COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 2, AS PER PLAN	632 COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 4, AS PER PLAN	632 COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 11, AS PER PLAN	632 COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 12, AS PER PLAN	632 COMBINATION SIGNAL SUPPORT, TYPE TC-81.21, DESIGN 13, AS PER PLAN	632 PEDESTAL, 8', TRANSFORMER BASE, AS PER PLAN	632 REMOVAL OF TRAFFIC SIGNAL INSTALLATION, AS PER PLAN	633 CABINET, TYPE TS-2, AS PER PLAN	633 CABINET FOUNDATION, AS PER PLAN	633 UNINTERRUPTIBLE POWER SUPPLY (UPS), 1000 WATT, AS PER PLAN	633 CONTROLLER ITEM, MISC.: UNINTERRUPTIBLE POWER SUPPLY CABINET FOUNDATION AND WORK PAD EXPANSION	809 ATC V6.24 CONTROLLER, AS PER PLAN	809 EMERGENCY VEHICLE PREEMPTION, AS PER PLAN	809 PREEMPT RECEIVING UNIT, AS PER PLAN	809 PREEMPT DETECTOR CABLE	809 PREEMPT PHASE SELECTOR	809 PREEMPT CONFIRMATION LIGHT, AS PER PLAN	816 VIDEO DETECTION SYSTEM, AS PER PLAN					
		FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH	FT	EACH	EACH	EACH					
310	S.R. 241 (WALES RD. NE) / S.R. 172 (LINCOLN WAY E)	404	1		1		1		1	1	2	1	1	1	1		1	1	1	59	1	4	1					
318	S.R. 241 (WALES RD. NE) / STATE AVE. NE	766	1			3	1				1	1	1	1	1		1		1	52	1	4	1					
326	S.R. 241 (WALES RD. NE) / HANKINS RD. NE	571	1		2			1			2	1	1	1	1		1		1	51	1	3	1					
333	S.R. 241 (WALES RD. NE) / LAKE AVE. NE	227	1	1		1					2	1	1	1	1		1		1	64	1	3	1					
339	S.R. 241 (WALES RD. NE) / HILLS AND DALES RD. NE	393										1			1	1			1	181	1	3	1					
TOTALS CARRIED TO GENERAL SUMMARY		2361	4	1	3	4	2	1	1	1	7	5	4	4	5	1	4	1	5	407	5	17	5					

STA-241-9.71

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SHEET	LOCATION	625 CONDUIT, 1-1/2", 725.04 FT	625 CONDUIT, JACKED OR DRILLED, 725.04, 3" FT	625 TRENCH FT	625 TRENCH IN PAVED AREA FT	625 PULL BOX, 725.08, 24" EACH	625 PULL BOX, MISC.: PULL BOX, 24" X 35" X 26" EACH	625 UNDERGROUND WARNING/MARKING TAPE FT	632 INTERCONNECT, MISC.: LAYER 2 ETHERNET SWITCH EACH	804 FIBER OPTIC CABLE, 48 FIBER FT	804 DROP CABLE, 6 FIBER EACH	804 FIBER TERMINATION PANEL, 6 FIBER EACH	804 SPLICE ENCLOSURE, BUTT STYLE EACH
343	BEGIN TO STA. 104+50	412		412		1		412	1	567	1	1	1
344	STA. 104+50 TO STA. 109+50	370	133	370		4		370		523			
345	STA. 109+50 TO STA. 114+50	404	94	404		4		404	1	678	1	1	1
346	STA. 114+50 TO STA. 120+00	408	89	408		4		408		579			
347	STA. 120+00 TO STA. 125+00	501		492	9		1	501		656			
348	STA. 125+00 TO STA. 130+00	488	14	444	44	1	1	488		661			1
349	STA. 130+00 TO STA. 135+00	337	94	314	23	1		337	1	667	1	1	1
350	STA. 135+00 TO STA. 140+00	443	59	443		3		443		517			
351	STA. 140+00 TO STA. 145+00	501		501		1		501		506			
352	STA. 145+00 TO STA. 150+00	375	47	375		3		375	1	697	1	1	1
353	STA. 150+00 TO STA. 155+00	466	48	466		3		466		529			
354	STA. 155+00 TO STA. 160+00	469	40	469		3	1	469		679			
355	STA. 160+00 TO STA. 165+00	501		501		1		501		506			
356	STA. 165+00 TO STA. 170+00	458	44	458		2	1	458		667			
357	STA. 170+00 TO STA. 175+00	462	40	462		2		462		512			
358	STA. 175+00 TO END	168		168		1		168	1	178	1	1	1
TOTALS CARRIED TO GENERAL SUMMARY		6763	702	6687	76	34	4	6763	5	9122	5	5	6

SHEET	LOCATION												
TOTALS CARRIED TO GENERAL SUMMARY													

CALCULATED BEB
CHECKED KMG

INTERCONNECT SUBSUMMARY

STA-241-9.71

309
395

bbinsley
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SP-1, TYPE TC-81.21 DESIGN 13 WITH A 53' MAST ARM AND GPS PREEMPTION RECEIVING UNIT
STA. 304+67.1, 52.1' LT.

(1)-3" CONDUIT WITH (2)-7C, (1)-VIDEO, (1)-PREEMPT AND (2)-LIGHTING
IN TRENCH = 7'

PB-1

(1)-2" CONDUIT WITH (2)-5C AND (2)-2C LEAD-IN
IN TRENCH = 9'

PS-1 WITH (2)-PEDESTRIAN SIGNAL HEADS AND (2)-PUSHBUTTONS 'P3A' AND 'P6B'
STA. 304+66.7, 40.7' LT.

(2)-4" CONDUITS WITH (6)-7C, (4)-5C, (8)-2C LEAD-IN, (4)-VIDEO, (1)-PREEMPT AND (2)-LIGHTING
IN TRENCH = 12'

PROPOSED GROUND MOUNTED CONTROLLER WITH UNINTERRUPTIBLE POWER SUPPLY
STA. 304+53.4, 39.8' LT.

(1)-4" CONDUIT WITH (3)-7C, (1)-5C, (3)-2C LEAD-IN, (2)-VIDEO AND (1)-LIGHTING
JACKED OR DRILLED = 88'

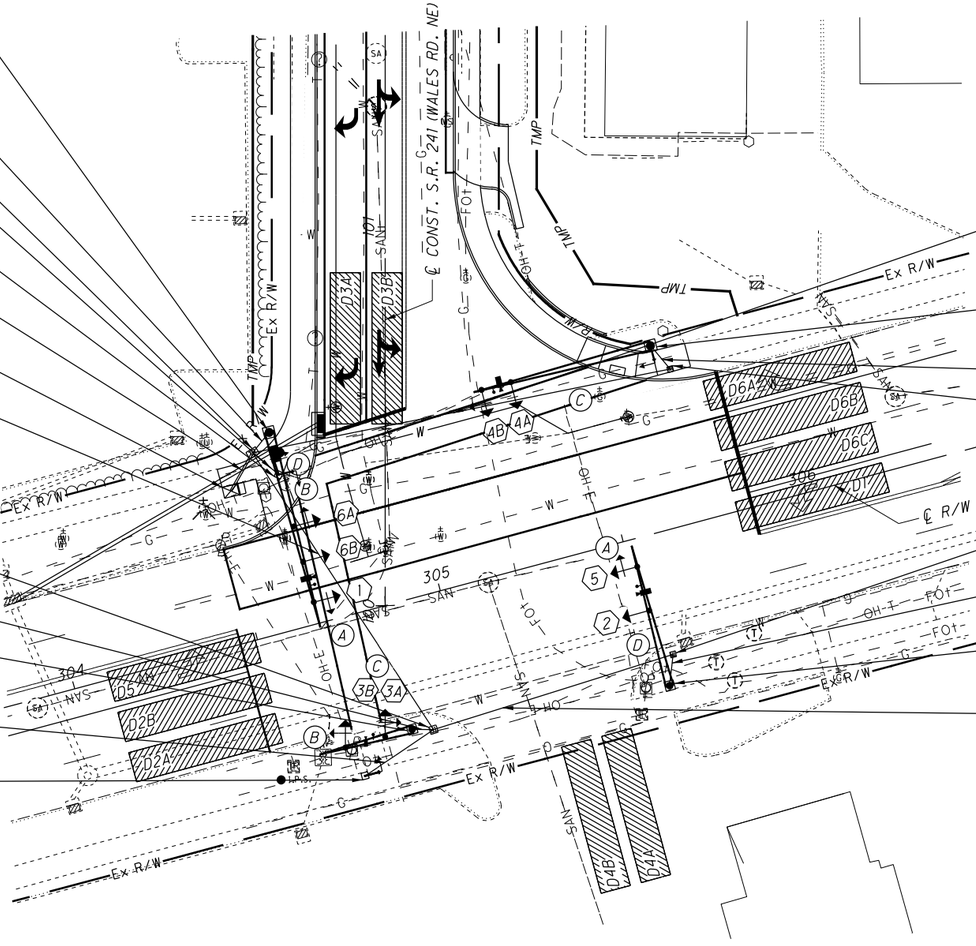
PB-2

(1)-3" CONDUIT WITH (2)-7C, (1)-2C LEAD-IN, (1)-VIDEO AND (2)-LIGHTING
IN TRENCH = 6'

SP-2, TYPE TC-81.21 DESIGN 1 WITH A 25' MAST ARM
STA. 304+83.3, 33.4' RT.

(1)-2" CONDUIT WITH (1)-5C AND (1)-2C LEAD-IN
IN TRENCH IN PAVED AREA = 22'

PS-2 WITH A PEDESTRIAN SIGNAL HEAD AND PUSHBUTTON 'P3B'
STA. 304+68.2, 42.1' RT.



(1)-4" CONDUIT WITH (1)-7C, (1)-5C, (2)-2C LEAD-IN, (1)-VIDEO AND (1)-LIGHTING
JACKED OR DRILLED = 113'

SP-3, TYPE TC-81.21 DESIGN 12 WITH A 48' MAST ARM, (1)-PEDESTRIAN SIGNAL HEAD AND PEDESTRIAN PUSHBUTTON 'P6A'
STA. 305+70.4, 48.2' LT.

(1)-3" CONDUIT WITH (1)-7C, (1)-5C, (2)-2C LEAD-IN, (1)-VIDEO AND (1)-LIGHTING
IN TRENCH = 9'

PB-3

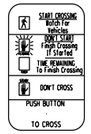
PB-4

(1)-3" CONDUIT WITH (1)-7C, (1)-2C LEAD-IN, (1)-VIDEO AND (1)-LIGHTING
IN TRENCH = 9'

SP-4, TYPE TC-81.21 DESIGN 4 WITH A 38' MAST ARM
STA. 305+52.0, 39.9' RT.

(1)-4" CONDUIT WITH (1)-7C, (1)-2C LEAD-IN, (1)-VIDEO AND (1)-LIGHTING
JACKED OR DRILLED = 67'

PEDESTRIAN SIGNS

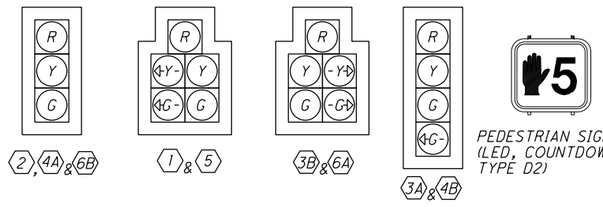


R10-3e-9
3 - LEFT ARROWS (SP-3, PS-1, PS-1)
1 - RIGHT ARROW (PS-2)

NOTES:

1. THE CONTRACTOR SHALL ENSURE THAT ALL SIGNAL FACES ARE CLEARLY VISIBLE TO ALL ONCOMING VEHICLES; CLEAR OF ANY OBSTRUCTION ONCE MOUNTED TO THE MAST ARMS.
2. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF ALL UTILITIES AND EXISTING SIGNAL HARDWARE AND APPARATUSES PRIOR TO EXCAVATION.
3. POWER SERVICE LOCATION TO BE VERIFIED IN THE FIELD AND APPROVED BY THE ENGINEER. ALL ITEMS ASSOCIATED WITH THE POWER SOURCE THAT ARE NECESSARY TO PROVIDE COMPLETE ELECTRICAL SERVICE TO THE TRAFFIC SIGNAL INSTALLATION, INCLUDING, BUT NOT LIMITED TO CONDUIT RISERS, CONDUIT, TRENCHING, PULL BOXES AND POWER SERVICE CABLE, SHALL BE CONSIDERED INCIDENTAL TO AND INCLUDED UNDER ITEM 632 - POWER SERVICE, AS PER PLAN, AS PER C&MS 632.24.
4. FOR REFERENCE TO SIGNS (A), (B), (C) & (D) SEE SHEET 283 .

SIGNAL TYPES



1. ALL SIGNAL HEADS SHALL HAVE 12" LED LENSES.
2. ALL SIGNAL HEADS SHALL BE BLACK IN COLOR AND HAVE BACKPLATES.
3. ALL SIGNAL HEAD VISORS SHALL BE CUTAWAY TYPE.

PULL BOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB-1	304+61.5	LT	48.0'	24 X 35 X 26
PB-2	304+88.8	RT	35.0'	24
PB-3	305+73.8	LT	40.9'	18
PB-4	305+55.0	RT	32.1'	18

REMOVAL ITEMS

QUANTITY	REMOVED ITEM DESCRIPTION	DELIVERED	DISPOSED
8	VEHICULAR SIGNAL HEADS	-	X
1	CONTROLLER	X	-
1	GROUND MOUNTED CONTROLLER CABINET	-	X
4	PEDESTRIAN SIGNAL HEADS	-	X
1	BRACKET ARM	X	-
1	LUMINAIRE	X	-
4	STRAIN POLE SUPPORTS	X	-
4	STRAIN POLE FOUNDATIONS	-	X
1	POWER SERVICE	-	X
LUMP	PULL BOX	-	X
LUMP	SIGNAL CABLES	-	X

LEGEND

	PROP.	EXIST.
TRAFFIC SIGNAL, 3 UNIT HEAD, 12"	●	
TRAFFIC SIGNAL, 4 OR 5 UNIT HEAD, 12"	✚	
SIGNAL SUPPORT POLE	◉	◎
PEDESTRIAN SIGNAL	⌐	
PEDESTRIAN PUSHBUTTON	⊢	
PEDESTAL SUPPORT	⊡	⊡
CONTROLLER CABINET	⊠	⊠
TRAFFIC PULL BOX	TR	TR
VIDEO DETECTION CAMERA	▬●	
PREEMPTION CONFIRMATION LIGHT	●—	
PREEMPTION RECEIVING UNIT	▟	
DETECTION ZONE	▨	

N

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MBK
CHECKED KMG

TRAFFIC SIGNAL PLAN
S.R. 241 (WALES RD. NE) / S.R. 172 (LINCOLN WAY E)

STA-241-9.71

310
395

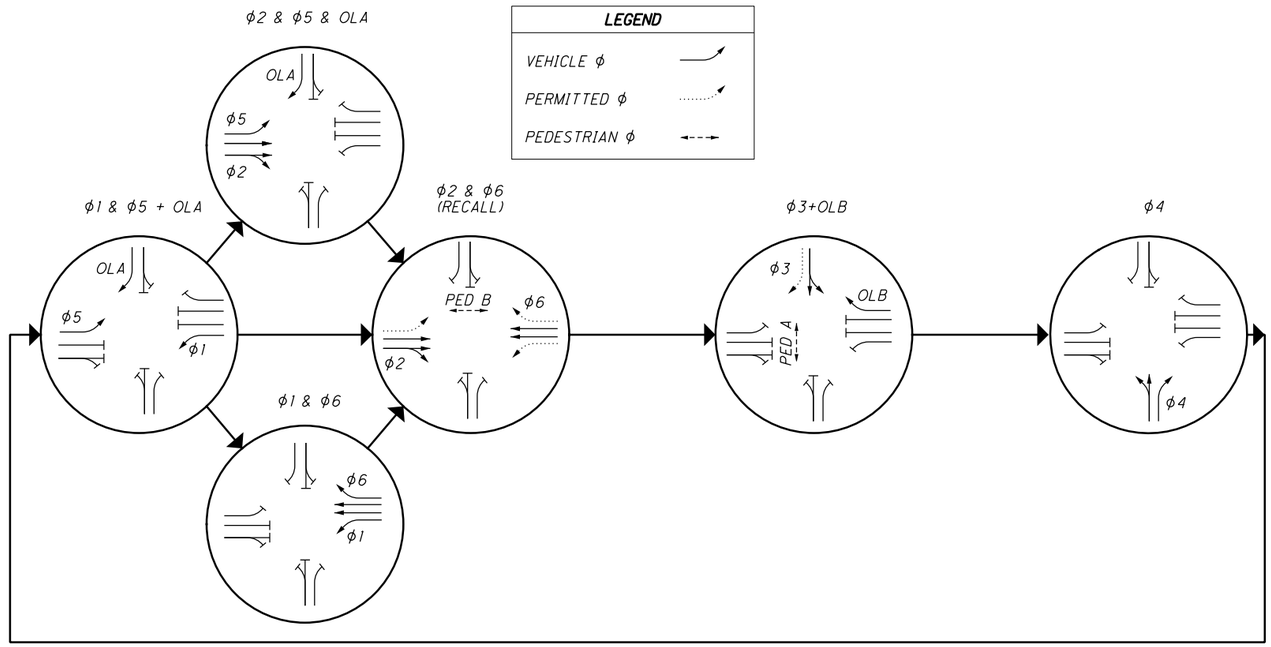
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SIGNAL TIMING CHART

INTERSECTION: S.R. 241 (WALES RD. NE) / S.R. 172 (LINCOLN WAY E) MAINTAINING AGENCY: CITY OF MASSILLON									
START UP START IN: ALL RED TIME FOR FLASH, ALL RED: 9, 6 FIRST PHASE(S): ϕ2+ϕ6 COLOR DISPLAYED: GREEN			DUAL ENTRY: YES REST IN RED:		PHASES: 2,6 RING 1 -			RING 2 -	
			OVERLAP			A	B	C	D
			PHASES			5	3	-	-
INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.						
INTERSECTION MOVEMENT (PHASE)			1	2	3	4	5	6	7	8
DIRECTION			WB LT	EB	SB	NB	EB LT	WB	-	-
MINIMUM GREEN (INITIAL)		(SEC.)	7	20	10	7	7	20	-	-
ADDED INITIAL		*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL		(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)		(SEC.)	3.0	3.0	3.0	3.0	3.0	3.0	-	-
TIME BEFORE REDUCTION		*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP		*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE		*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I		(SEC.)	20	60	30	30	20	60	-	-
MAXIMUM GREEN II		(SEC.)	-	-	-	-	-	-	-	-
YELLOW CHANGE		(SEC.)	3.0	3.2	3.2	3.0	3.0	3.2	-	-
ALL RED CLEARANCE		(SEC.)	2.4	1.6	2.1	2.0	2.4	1.6	-	-
WALK		(SEC.)	-	-	10	-	-	10	-	-
PEDESTRIAN CLEARANCE		(SEC.)	-	-	17	-	-	22	-	-
RECALL	MAXIMUM	(ON/OFF)	-	-	-	-	-	-	-	-
	MINIMUM	(ON/OFF)	-	ON	-	-	-	ON	-	-
	PEDESTRIAN	(ON/OFF)	-	-	-	-	-	-	-	-
MEMORY		(ON/OFF)	-	-	-	-	-	-	-	-

*VOLUME DENSITY CONTROLS

PHASING DIAGRAM



PREEMPT CHANNELS

CHANNEL 1 = ϕ(2&5) (EASTBOUND ONLY)
CHANNEL 2 = ϕ(1&6)+OLB (WESTBOUND ONLY)
CHANNEL 3 = ϕ(3)+OLA (SOUTHBOUNDND ONLY)
CHANNEL 4 = ϕ(4) (NORTHBOUND ONLY)

PREEMPT NOTES:

1. UPON PREEMPTION, ACTIVE WALK INDICATIONS SHALL IMMEDIATELY BE TERMINATED, FOLLOWED BY THE TIMING OF THE PEDESTRIAN CLEARANCE INTERVAL.
2. IF ANY ACTIVE PHASE OPPOSES THE PREEMPT PHASE, ALL ACTIVE PHASES SHALL TIME THEIR YELLOW AND ALL RED CLEARANCE INTERVALS UPON COMPLETION OF ANY PEDESTRIAN INTERVALS PRIOR TO TRANSITIONING TO THE PREEMPT PHASE IN ORDER TO AVOID THE POTENTIAL FOR YELLOW BALL TRAP.
3. AFTER RELEASE FROM PREEMPT, YELLOW AND ALL RED CLEARANCE INTERVALS SHALL BE DISPLAYED AND RETURN TO NORMAL COORDINATED TIMING PROGRESSION PER CURRENT COORDINATION RECOVERY SETTINGS.

NOTES:

- ALL MOVEMENTS SHALL BE ACTUATED. THE PRIMARY THRU MOVEMENT SHOULD HAVE MIN RECALL ACTIVE TO REST IN GREEN.
- FOR PROTECTED/PERMISSIVE PHASES, IMPLEMENT CALL OMITS TO AVOID YELLOW BALL TRAP.
- COUNTDOWN PEDESTRIAN SIGNALS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.
- ALL DETECTOR DELAYS SHALL BE PLACED IN THE CONTROLLER.

VIDEO DETECTION CHART

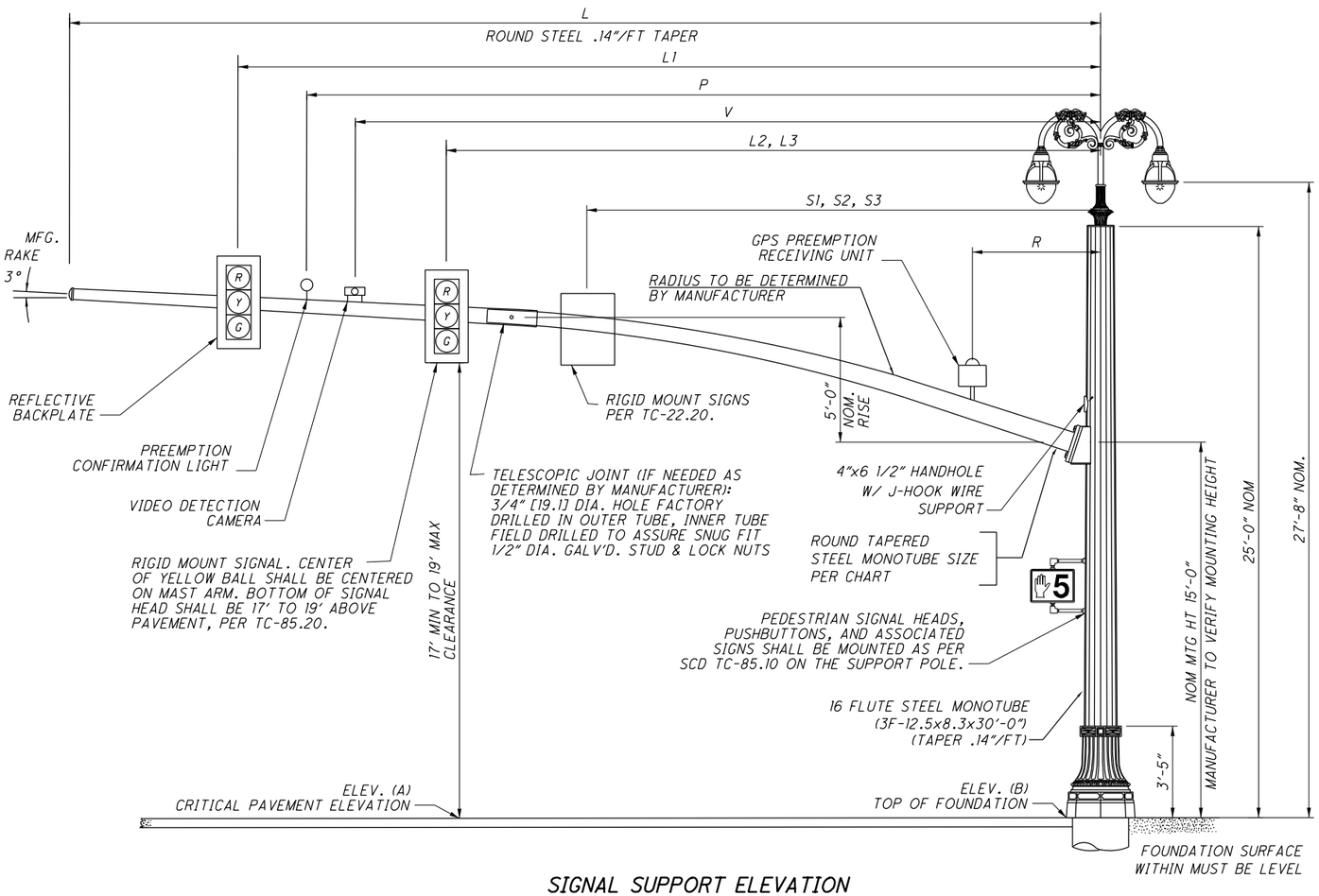
DETECTION ZONE	SIZE (FT.)	PULSE OR PRESENCE	DELAY (SEC)	ASSOCIATED CONTROLLER PHASE	DESCRIPTION
D1	8 X 40	PRESENCE	5	ϕ1	WB LEFT CALL
D2A	8 X 40	PRESENCE	-	ϕ2	EB CALL
D2B	8 X 40	PRESENCE	-	ϕ2	EB CALL
D3A	8 X 40	PRESENCE	10	ϕ3	SB CALL
D3B	8 X 40	PRESENCE	-	ϕ3	SB CALL
D4A	8 X 40	PRESENCE	10	ϕ4	NB CALL
D4B	8 X 40	PRESENCE	-	ϕ4	NB CALL
D5	8 X 40	PRESENCE	5	ϕ5	EB LEFT CALL
D6A	8 X 40	PRESENCE	-	ϕ6	WB CALL
D6B	8 X 40	PRESENCE	-	ϕ6	WB CALL
D6C	8 X 40	PRESENCE	-	ϕ6	WB CALL

CALCULATED MBK
CHECKED KMG

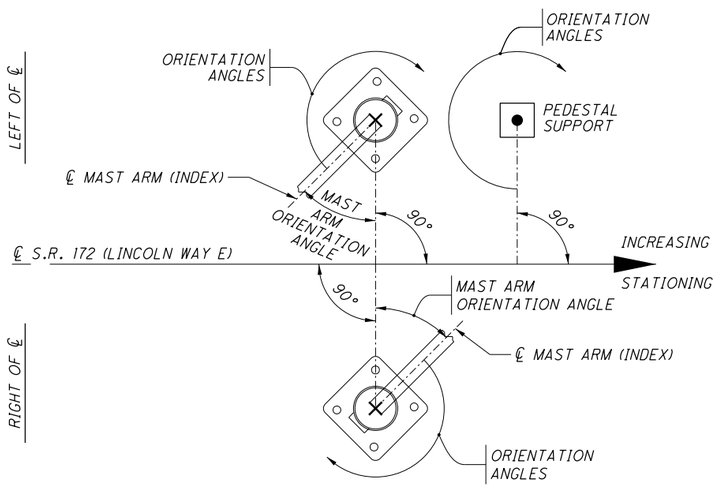
TRAFFIC SIGNAL DETAIL
S.R. 241 (WALES RD. NE) / S.R. 172 (LINCOLN WAY E)

STA-241-9.71

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SIGNAL SUPPORT ELEVATION (TYPICAL)



POLE ORIENTATION

MAST ARM TABLE

SUPPORT NO.	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS												MAST ARM A ANGLE	ORIENTATION ANGLES FROM MAST ARM 'A' / INDEX LINE		
			A (PAVEMENT ELEVATION)	B (TOP OF FOUNDATION)	DESIGN TYPE	DESIGN NO.	POLE HEIGHT	L	L1	L2	L3	R	P	V	S1	S2	S3		PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	HANDHOLE
			FT	FT			FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	DEG	DEG	DEG	DEG
SP-1	304+67.1	52.1' LT	1019.90	1019.87	TC-81.21	13	25	53	46.5	35.5	25.5	5	41	39	50	21	12.5	0	-	-	180
SP-2	304+83.3	33.4' RT	1019.88	1020.02	TC-81.21	1	25	25	18.5	7.5*	-	-	15	11	22.5	13	-	270	-	-	270
SP-3**	305+70.4	48.2' LT	1019.06	1019.66	TC-81.21	12	25	48	45	37	-	-	42	40	18.5	-	-	90	270	270	180
SP-4	305+52.0	39.9' RT	1019.31	1019.45	TC-81.21	4	25	38	32.5	20.5	-	-	27.5	25.5	35.5	10	-	0	-	-	180
PS-1	304+66.7	40.7' LT	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	180/270	180/270	180
PS-2	304+68.2	42.1' RT	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	90	90	180

* SIGNAL HEAD SHALL BE MOUNTED ON GREEN BALL

** FOUNDATION SHALL BE LEVEL WITH TOP OF CURB AT THE BACK OF THE CURB RAMP

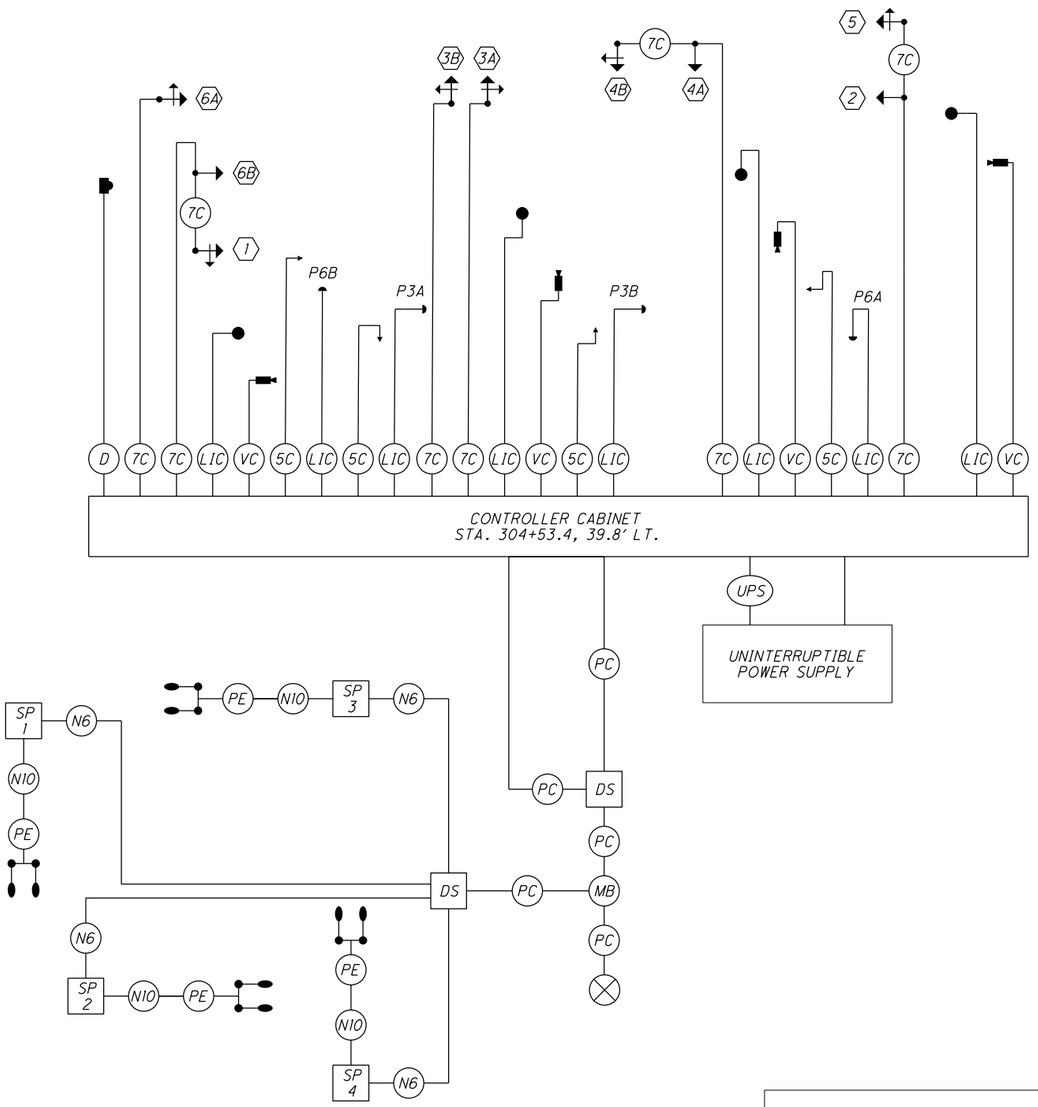
CALCULATED MBK
CHECKED KMG

TRAFFIC SIGNAL DETAIL
S.R. 241 (WALES RD. NE) / S.R. 172 (LINCOLN WAY E)

STA-241-9.71

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WIRING DIAGRAM



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
1 (WB LT)	R	ϕ6 R	Y
	Y	ϕ6 Y	
	G	ϕ6 G	
	<--Y---	ϕ1 Y	
	<--G---	ϕ1 G	
2 (EB)	R	ϕ2 R	Y
	Y	ϕ2 Y	
	G	ϕ2 G	
3A (SB)	R	ϕ3 R	R
	Y	ϕ3 Y	
	G	ϕ3 G	
	<--G---	ϕ3 G	
3B (SB RT)	R	ϕ3 R	R
	Y	ϕ3 Y	
	G	ϕ3 G	
	---Y-->	ϕ5 Y / LS 13 Y	
	---G-->	ϕ5 G / LS 13 G	
4A (NB)	R	ϕ4 R	R
	Y	ϕ4 Y	
	G	ϕ4 G	
4B (NB)	R	ϕ4 R	R
	Y	ϕ4 Y	
	G	ϕ4 G	
	<--G---	ϕ4 G	

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
5 (EB LT)	R	ϕ2 R	Y
	Y	ϕ2 Y	
	G	ϕ2 G	
	<--Y---	ϕ5 Y	
	<--G---	ϕ5 G	
6A (WB RT)	R	ϕ6 R	Y
	Y	ϕ6 Y	
	G	ϕ6 G	
	---Y-->	ϕ3 Y / LS 14 Y	
	---G-->	ϕ3 G / LS 14 G	
6B (WB)	R	ϕ6 R	Y
	Y	ϕ6 Y	
	G	ϕ6 G	
PEDESTRIAN MOVEMENTS			
PED A	W	ϕ3 PED / LS 9 G	OUT
	DW	ϕ3 PED / LS 9 R	
PED B	W	ϕ6 PED / LS 10 G	OUT
	DW	ϕ6 PED / LS 10 R	
OVERLAPS			
OLA	---Y-->	ϕ5 Y / LS 13 Y	OUT
	---G-->	ϕ5 G / LS 13 G	
OLB	---Y-->	ϕ3 Y / LS 14 Y	OUT
	---G-->	ϕ3 G / LS 14 G	
LS = LOAD SWITCH			

LEGEND

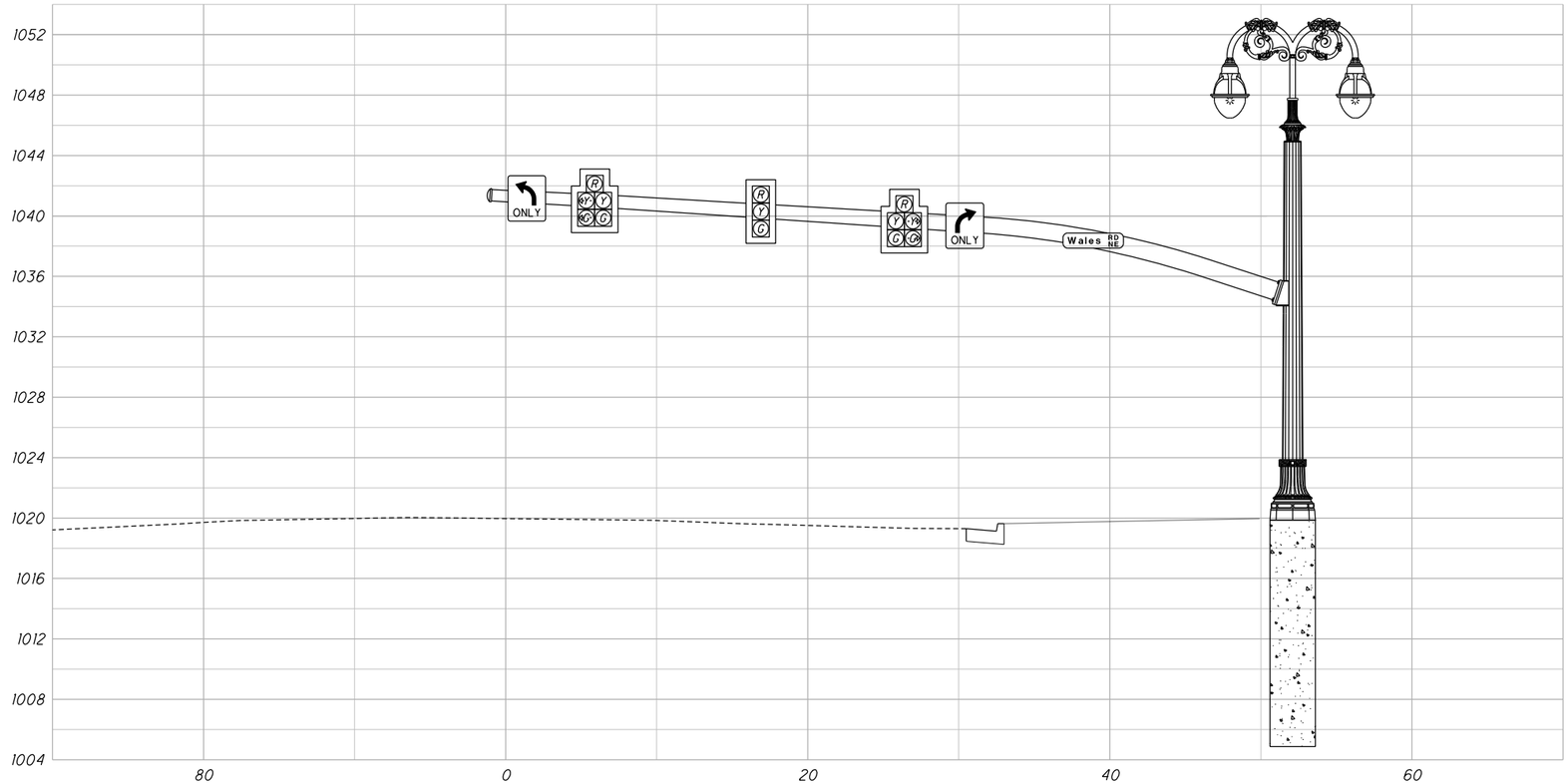
	4 OR 5 SECTION VEHICULAR SIGNAL HEAD, 1-WAY	LIC	2/C NO. 14 AWG (LEAD-IN CABLE)	MB	METER BASE
	3 SECTION VEHICULAR SIGNAL HEAD, 1-WAY	5C	SIGNAL CABLE, 5 CONDUCTOR, NO. 14 AWG	N6	NO. 6 AWG DISTRIBUTION CABLE
	PEDESTRIAN SIGNAL HEAD	7C	SIGNAL CABLE, 7 CONDUCTOR, NO. 14 AWG	N10	NO. 10 AWG POLE & BRACKET CABLE
	PEDESTRIAN PUSHBUTTON	VC	VIDEO CAMERA CABLE	DS	DISCONNECT SWITCH
	VIDEO DETECTION CAMERA		POWER SOURCE	UPS	UNINTERRUPTIBLE POWER SUPPLY CABLE
	LUMINAIRE, DECORATIVE, SOLID STATE (LED) , AS PER PLAN	PC	POWER CABLE, 3 CONDUCTOR, NO. 4 AWG	SP 1	SIGNAL SUPPORT POLE NO. __
	PREEMPTION CONFIRMATION LIGHT	PE	PHOTOELECTRIC CELL		
	GPS PREEMPTION RECEIVING UNIT	D	PREEMPTION DETECTOR CABLE		

CALCULATED MBK
CHECKED KMG

TRAFFIC SIGNAL DETAIL
S.R. 241 (WALES RD. NE) / S.R. 172 (LINCOLN WAY E)

STA-241-9.71

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SIGNAL SUPPORT SP-1, TYPE TC-81.21, DESIGN 13
STA. 304+67.1, 52.1' LT. ℄ R/W & CONST. S.R. 172 (LINCOLN WAY E)
LOOKING WEST

NOTE:

1. UNDERGROUND UTILITIES ARE NOT SHOWN, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF ALL UTILITIES AND EXISTING SIGNAL HARDWARE AND APPARATUSES PRIOR TO EXCAVATION.

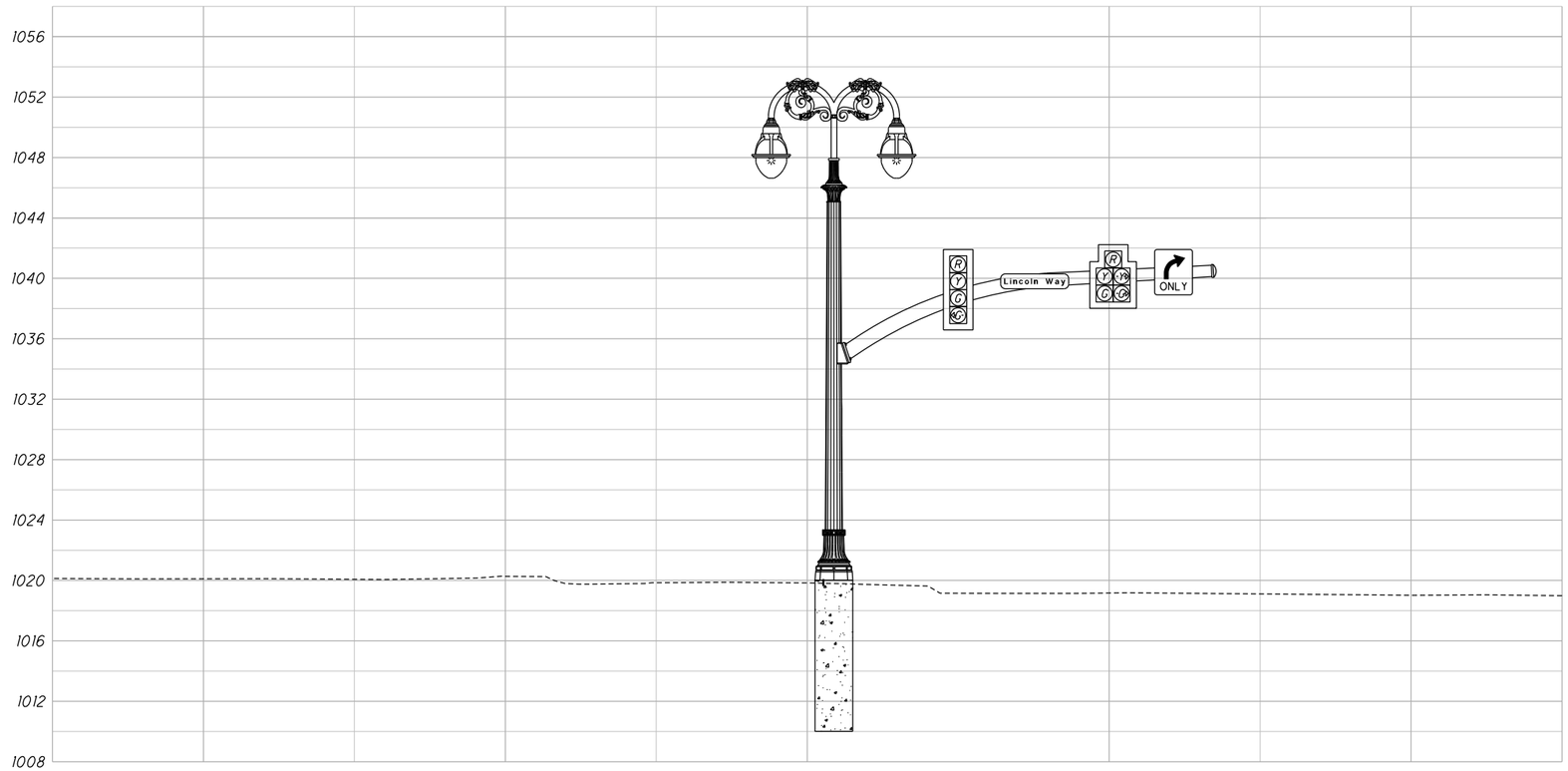
TRAFFIC SIGNAL ELEVATION DETAIL
S.R. 241 (WALES RD. NE) / S.R. 172 (LINCOLN WAY E)

CALCULATED BEB
CHECKED KMG

0 2.5 5 10
HORIZONTAL SCALE IN FEET

STA-241-9.71

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SIGNAL SUPPORT SP-2, TYPE TC-81.21, DESIGN 1
STA. 304+83.3, 33.4' RT. ℄ R/W & CONST. S.R. 172 (LINCOLN WAY E)
LOOKING SOUTH

NOTE:

1. *UNDERGROUND UTILITIES ARE NOT SHOWN, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF ALL UTILITIES AND EXISTING SIGNAL HARDWARE AND APPARATUSES PRIOR TO EXCAVATION.*

TRAFFIC SIGNAL ELEVATION DETAIL
S.R. 241 (WALES RD. NE) / S.R. 172 (LINCOLN WAY E)

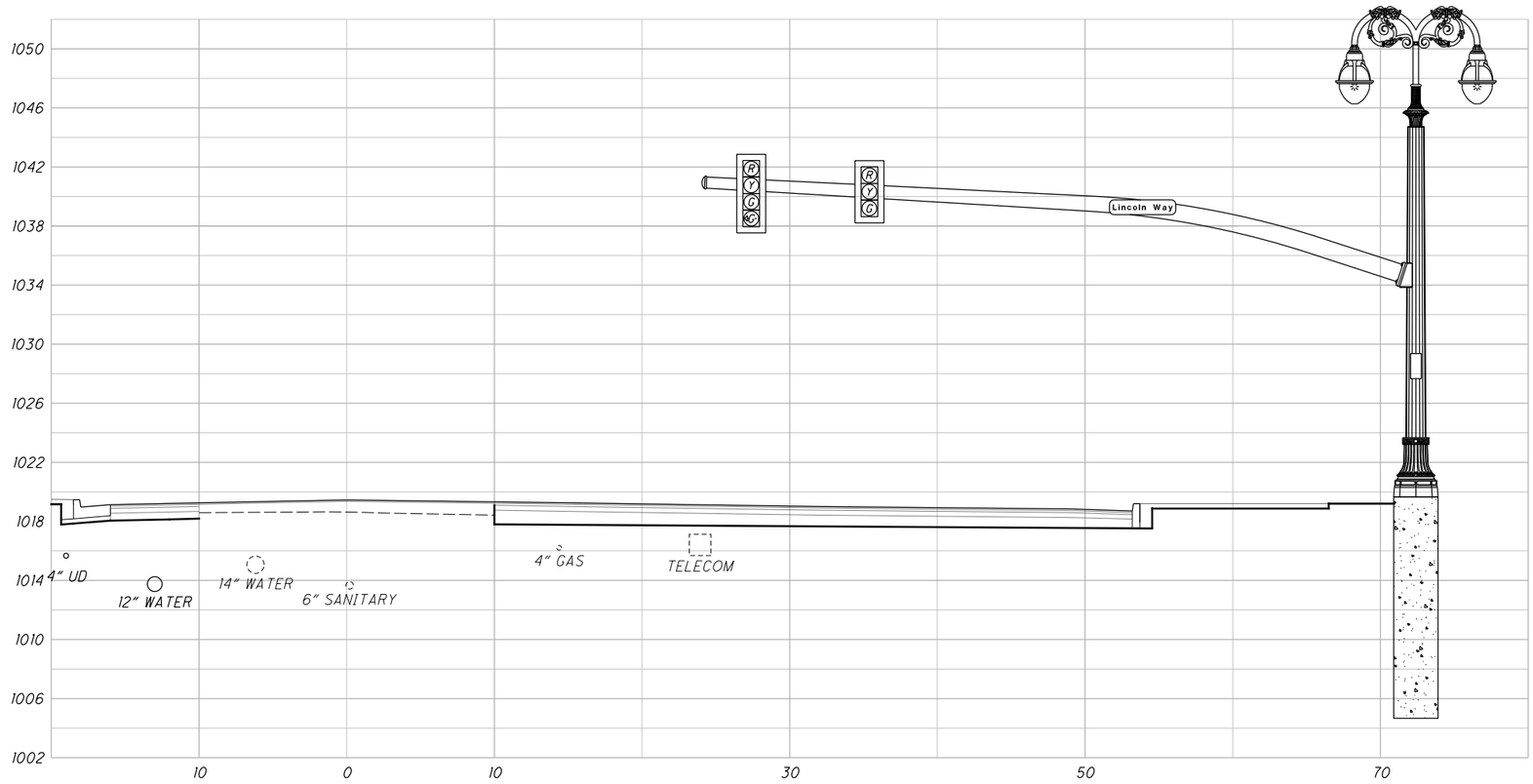
CALCULATED BEB
CHECKED KMG

0 2.5 5 10
HORIZONTAL SCALE IN FEET

STA-241-9.71

315
395

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SIGNAL SUPPORT SP-3, TYPE TC-81.21, DESIGN 12
STA. 305+70.4, 48.2' LT. ℄ R/W & CONST. S.R. 172 (LINCOLN WAY E)
LOOKING NORTH (STA. 100+50.2, 72.4' RT. ℄ R/W & CONST. S.R. 241 (WALES RD. NE)

TRAFFIC SIGNAL ELEVATION DETAIL

S.R. 241 (WALES RD. NE) / S.R. 172 (LINCOLN WAY E)

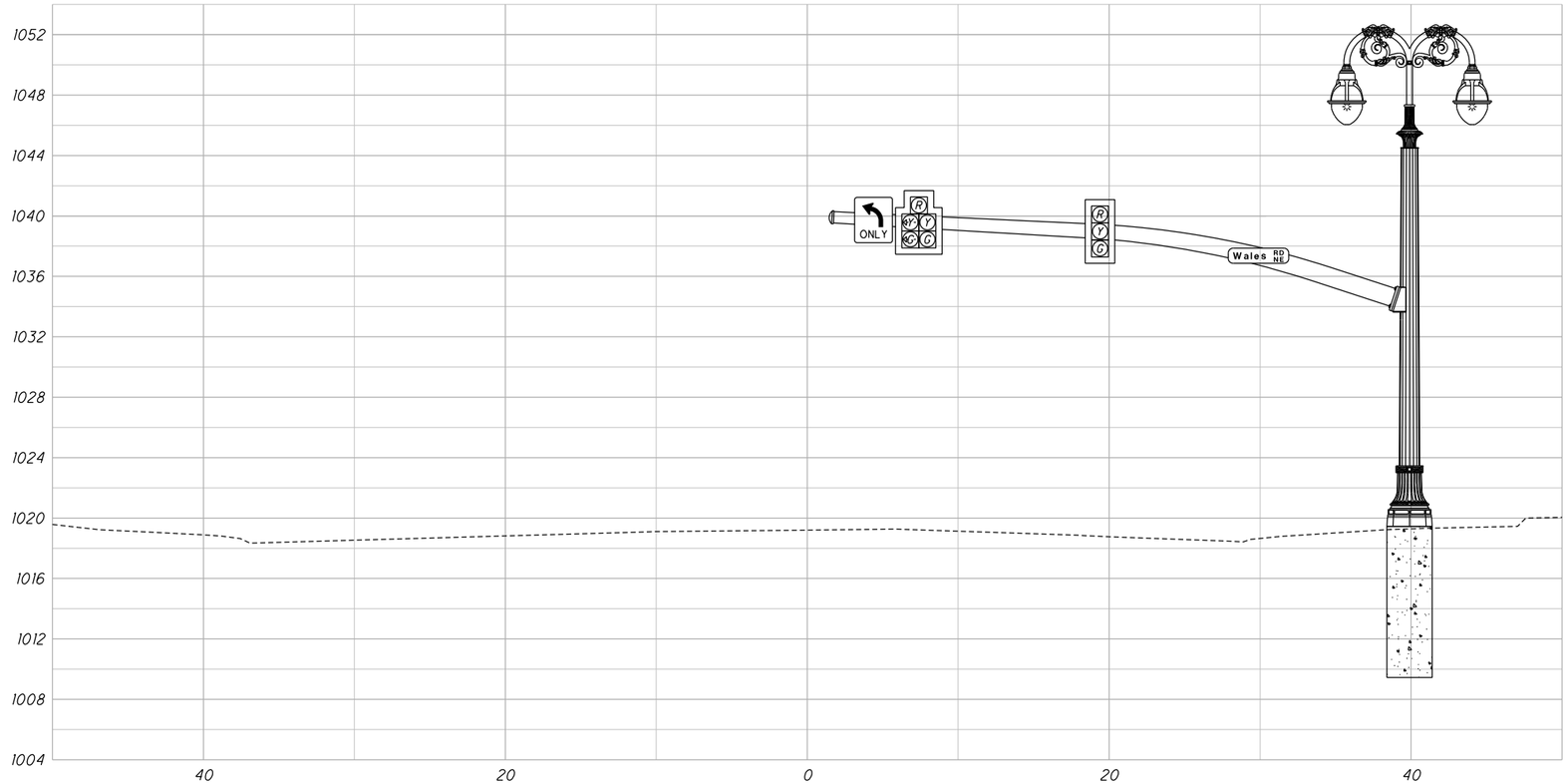
CALCULATED BEB
CHECKED KMG

0 2.5 5 10
HORIZONTAL SCALE IN FEET

STA-241-9.71

316
395

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SIGNAL SUPPORT SP-4, TYPE TC-81.21, DESIGN 4
STA. 305+52.0, 39.9' RT. ℄ R/W & CONST. S.R. 172 (LINCOLN WAY E)
LOOKING EAST

NOTE:

1. *UNDERGROUND UTILITIES ARE NOT SHOWN, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF ALL UTILITIES AND EXISTING SIGNAL HARDWARE AND APPARATUSES PRIOR TO EXCAVATION.*

TRAFFIC SIGNAL ELEVATION DETAIL
S.R. 241 (WALES RD. NE) / S.R. 172 (LINCOLN WAY E)

CALCULATED BEB
CHECKED KMG

0 2.5 5 10
HORIZONTAL SCALE IN FEET

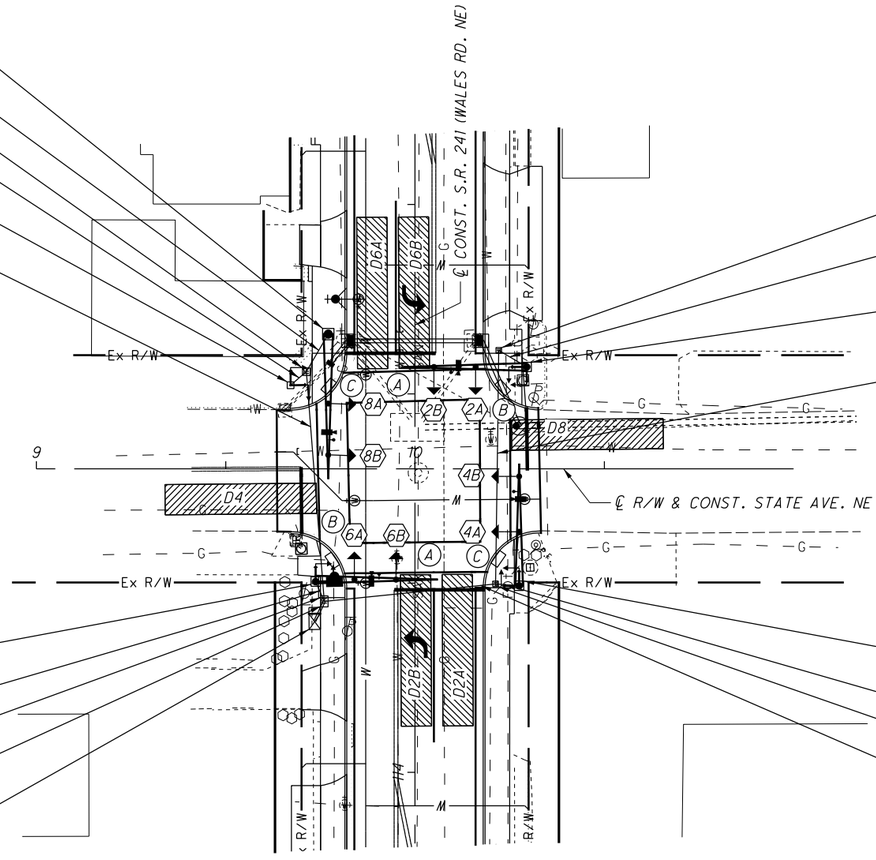
STA-241-9.71

317
395

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NOTES:

1. THE CONTRACTOR SHALL ENSURE THAT ALL SIGNAL FACES ARE CLEARLY VISIBLE TO ALL ONCOMING VEHICLES; CLEAR OF ANY OBSTRUCTION ONCE MOUNTED TO THE MAST ARMS.
2. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF ALL UTILITIES AND EXISTING SIGNAL HARDWARE AND APPARATUSES PRIOR TO EXCAVATION.
3. POWER SERVICE LOCATION TO BE VERIFIED IN THE FIELD AND APPROVED BY THE ENGINEER. ALL ITEMS ASSOCIATED WITH THE POWER SOURCE THAT ARE NECESSARY TO PROVIDE COMPLETE ELECTRICAL SERVICE TO THE TRAFFIC SIGNAL INSTALLATION, INCLUDING, BUT NOT LIMITED TO CONDUIT RISERS, CONDUIT, TRENCHING, PULL BOXES AND POWER SERVICE CABLE, SHALL BE CONSIDERED INCIDENTAL TO AND INCLUDED UNDER ITEM 632 - POWER SERVICE, AS PER PLAN, AS PER C&MS 632.24.
4. FOR REFERENCE TO SIGNS (A), (B) & (C), SEE SHEET 286 .



SP-1, TYPE TC-81.21 DESIGN 4 WITH A 38' MAST ARM
STA. 115+15.8, 22.9' LT.

(1)-3" CONDUIT WITH (1)-7C, (1)-2C LEAD-IN, (1)-VIDEO AND (1)-LIGHTING
IN TRENCH = 12'

PB-1

(1)-2" CONDUIT WITH (2)-5C AND (2)-2C LEAD-IN
IN TRENCH IN PAVED AREA = 6'

PS-1 WITH (2)-PEDESTRIAN SIGNAL HEADS AND (2)-PUSHBUTTONS 'P6A' AND 'P8B'
STA. 115+02.2, 32.9' LT.

(1)-4" CONDUIT WITH (1)-7C, (2)-5C, (3)-2C LEAD-IN, (1)-VIDEO AND (1)-LIGHTING
JACKED OR DRILLED = 61'

PB-3

(1)-3" CONDUIT WITH (1)-7C, (2)-5C, (3)-2C LEAD-IN, (1)-VIDEO AND (1)-LIGHTING
IN TRENCH = 9'

SP-3, TYPE TC-81.21 DESIGN 2 WITH A 32' MAST ARM, (2)-PEDESTRIAN SIGNAL HEADS AND (2)-PUSHBUTTONS 'P2B' AND 'P8A'
STA. 115+07.1, 29.5' RT.

(1)-4" CONDUIT WITH (1)-7C, (2)-5C, (3)-2C LEAD-IN, (1)-VIDEO AND (1)-LIGHTING
JACKED OR DRILLED = 62'

SP-2, TYPE TC-81.21 DESIGN 2 WITH A 32' MAST ARM, (2)-PEDESTRIAN SIGNAL HEADS, (2)-PUSHBUTTONS 'P4A' AND 'P6B' AND GPS PREEMPTION RECEIVING UNIT
STA. 114+50.4, 26.3' LT.

(1)-3" CONDUIT WITH (1)-7C, (2)-5C, (3)-2C LEAD-IN, (1)-VIDEO, (1)-PREEMPT AND (2)-LIGHTING
IN TRENCH = 6'

PB-2

(2)-4" CONDUITS WITH (4)-7C, (8)-5C, (12)-2C LEAD-IN, (4)-VIDEO, (1)-PREEMPT AND (2)-LIGHTING
IN TRENCH = 6'

PROPOSED GROUND MOUNTED CONTROLLER WITH UNINTERRUPTIBLE POWER SUPPLY
STA. 114+39.9, 26.5' LT.

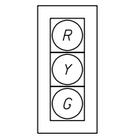
SP-4, TYPE TC-81.21 DESIGN 2 WITH A 32' MAST ARM, (2)-PEDESTRIAN SIGNAL HEADS AND (2)-PUSHBUTTONS 'P2A' AND 'P4B'
STA. 114+49.3, 27.5' RT.

(1)-3" CONDUIT WITH (1)-7C, (2)-5C, (3)-2C LEAD-IN, (1)-VIDEO AND (2)-LIGHTING
IN TRENCH = 7'

PB-4

(1)-4" CONDUIT WITH (2)-7C, (4)-5C, (6)-2C LEAD-IN, (2)-VIDEO AND (1)-LIGHTING
JACKED OR DRILLED = 46'

SIGNAL TYPES



2A, 2B, 4A, 4B, 6A, 6B, 8A & 8B



PEDESTRIAN SIGNAL (LED, COUNTDOWN, TYPE D2)

1. ALL SIGNAL HEADS SHALL HAVE 12" LED LENSES.
2. ALL SIGNAL HEADS SHALL BE BLACK IN COLOR AND HAVE BACKPLATES.
3. ALL SIGNAL HEAD VISORS SHALL BE CUTAWAY TYPE.

PULL BOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB-1	115+05.9	LT	28.7'	24
PB-2	114+45.2	LT	24.0'	24 X 35 X 26
PB-3	115+11.5	RT	22.1'	18
PB-4	114+49.8	RT	21.3'	24

REMOVAL ITEMS

QUANTITY	REMOVED ITEM DESCRIPTION	DELIVERED	DISPOSED
8	VEHICULAR SIGNAL HEADS	X	-
1	CONTROLLER	X	-
1	POLE MOUNTED CONTROLLER CABINET	X	-
2	STRAIN POLE SUPPORTS	X	-
2	STRAIN POLE FOUNDATIONS	-	X
1	POWER SERVICE	-	X
LUMP	PULL BOX	-	X
LUMP	SIGNAL CABLES	-	X

PEDESTRIAN SIGNS



R10-3e-9
5 - LEFT ARROWS
(SP-2, SP-3, SP-4, PS-1, PS-1)
3 - RIGHT ARROWS
(SP-2, SP-3, SP-4)

FOR TRAFFIC SIGNAL LEGEND, SEE SHEET 310 .

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HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MBK
CHECKED KMG

TRAFFIC SIGNAL PLAN
S.R. 241 (WALES RD. NE) / STATE AVE. NE

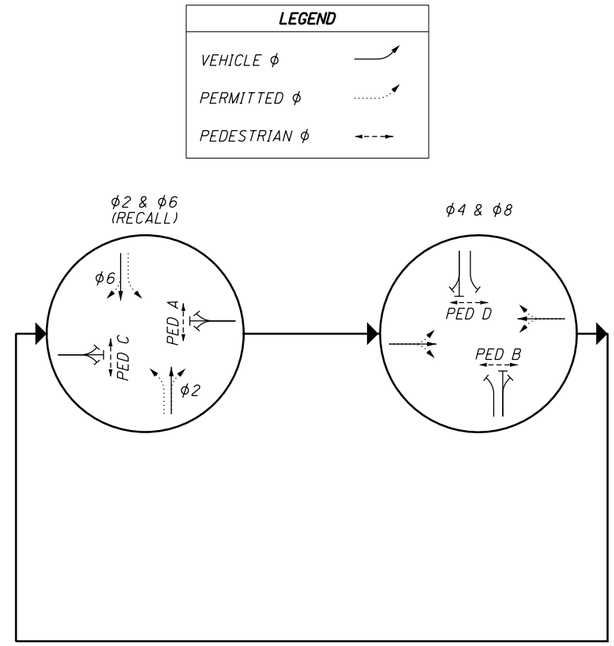
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SIGNAL TIMING CHART

INTERSECTION: S.R. 241 (WALES RD. NE) / STATE AVE. NE MAINTAINING AGENCY: CITY OF MASSILLON									
START UP START IN: ALL RED TIME FOR FLASH, ALL RED: 9, 6 FIRST PHASE(S): ϕ2 + ϕ6 COLOR DISPLAYED: GREEN			DUAL ENTRY: YES		PHASES:		2,4,6,8		
			REST IN RED:		RING 1	-	RING 2	-	
			OVERLAP			A	B	C	D
			PHASES			-	-	-	-
INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.						
INTERSECTION MOVEMENT (PHASE)			1	2	3	4	5	6	7	8
DIRECTION			SB LT	NB	WB LT	EB	NB LT	SB	EB LT	WB
MINIMUM GREEN (INITIAL)		(SEC.)	-	20	-	10	-	20	-	10
ADDED INITIAL		*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL		(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)		(SEC.)	-	3.0	-	3.0	-	3.0	-	3.0
TIME BEFORE REDUCTION		*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP		*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE		*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I		(SEC.)	-	60	-	30	-	60	-	30
MAXIMUM GREEN II		(SEC.)	-	-	-	-	-	-	-	-
YELLOW CHANGE		(SEC.)	-	4.1	-	3.4	-	4.1	-	3.4
ALL RED CLEARANCE		(SEC.)	-	1.0	-	1.0	-	1.0	-	1.0
WALK		(SEC.)	-	9	-	10	-	9	-	10
PEDESTRIAN CLEARANCE		(SEC.)	-	10	-	10	-	10	-	10
RECALL	MAXIMUM	(ON/OFF)	-	-	-	-	-	-	-	-
	MINIMUM	(ON/OFF)	-	ON	-	-	-	ON	-	-
	PEDESTRIAN	(ON/OFF)	-	-	-	-	-	-	-	-
MEMORY		(ON/OFF)	-	-	-	-	-	-	-	-

*VOLUME DENSITY CONTROLS

PHASING DIAGRAM



NOTES:

- ALL MOVEMENTS SHALL BE ACTUATED. THE PRIMARY THRU MOVEMENT SHOULD HAVE MIN RECALL ACTIVE TO REST IN GREEN.
- COUNTDOWN PEDESTRIAN SIGNALS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.
- ALL DETECTOR DELAYS SHALL BE PLACED IN THE CONTROLLER.

VIDEO DETECTION CHART

DETECTION ZONE	SIZE (FT.)	PULSE OR PRESENCE	DELAY (SEC)	ASSOCIATED CONTROLLER PHASE	DESCRIPTION
D2A	8 X 40	PRESENCE	-	ϕ2	NB CALL
D2B	8 X 40	PRESENCE	-	ϕ2	NB CALL
D4	8 X 40	PRESENCE	10	ϕ4	EB CALL
D6A	8 X 40	PRESENCE	-	ϕ6	SB CALL
D6B	8 X 40	PRESENCE	-	ϕ6	SB CALL
D8	8 X 40	PRESENCE	10	ϕ8	WB CALL

PREEMPT CHANNELS

CHANNEL 1 = ϕ(2) (NORTHBOUND ONLY)
CHANNEL 2 = ϕ(4) (EASTHBOUND ONLY)
CHANNEL 3 = ϕ(6) (SOUTHBOUND ONLY)
CHANNEL 4 = ϕ(8) (WESTHBOUND ONLY)

PREEMPT NOTES:

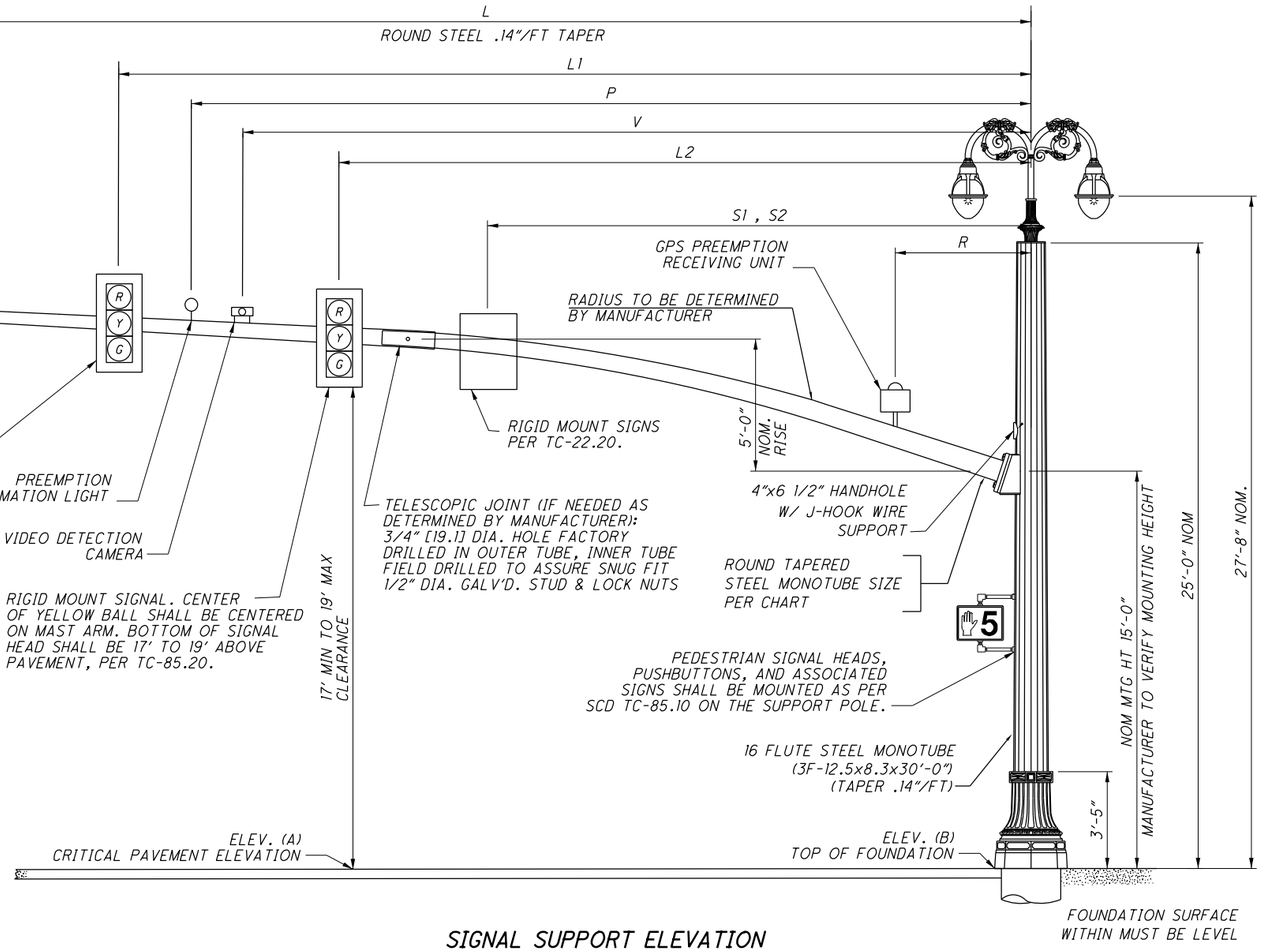
1. UPON PREEMPTION, ACTIVE WALK INDICATIONS SHALL IMMEDIATELY BE TERMINATED, FOLLOWED BY THE TIMING OF THE PEDESTRIAN CLEARANCE INTERVAL.
2. IF ANY ACTIVE PHASE OPPOSES THE PREEMPT PHASE, ALL ACTIVE PHASES SHALL TIME THEIR YELLOW AND ALL RED CLEARANCE INTERVALS UPON COMPLETION OF ANY PEDESTRIAN INTERVALS PRIOR TO TRANSITIONING TO THE PREEMPT PHASE IN ORDER TO AVOID THE POTENTIAL FOR YELLOW BALL TRAP.
3. AFTER RELEASE FROM PREEMPT, YELLOW AND ALL RED CLEARANCE INTERVALS SHALL BE DISPLAYED AND RETURN TO NORMAL COORDINATED TIMING PROGRESSION PER CURRENT COORDINATION RECOVERY SETTINGS.

CALCULATED MBK
CHECKED KMG

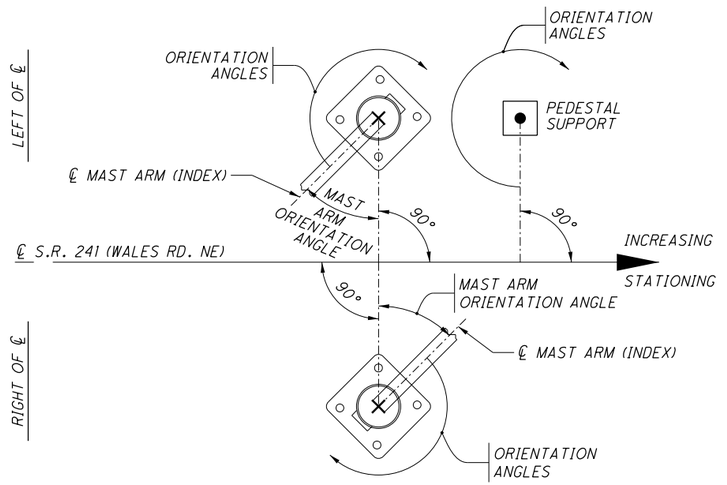
TRAFFIC SIGNAL DETAIL
S.R. 241 (WALES RD. NE) / STATE AVE. NE

STA-241-9.71

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SIGNAL SUPPORT ELEVATION (TYPICAL)



POLE ORIENTATION

MAST ARM TABLE

SUPPORT NO.	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS											MAST ARM A ANGLE	ORIENTATION ANGLES FROM MAST ARM 'A' / INDEX LINE		
			A (PAVEMENT ELEVATION)	B (TOP OF FOUNDATION)	DESIGN TYPE	DESIGN NO.	POLE HEIGHT	L	L1	L2	R	P	V	S1	S2		PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	HANDHOLE
							FT	FT	FT	FT	FT	FT	FT	FT	FT	DEG	DEG	DEG	DEG
SP-1	115+15.8	22.9' LT	1027.09	1027.54	TC-81.21	4	25	38	32	18.5	-	28	26	9	-	90	-	-	90
SP-2*	114+50.4	26.3' LT	1027.00	1027.96	TC-81.21	2	25	32	21.5	10.5	5	17	15	25	5	0	0/270	0/270	180
SP-3	115+07.1	29.5' RT	1027.28	1027.65	TC-81.21	2	25	32	24.5	13.5	-	20	18	28	7	0	0/270	0/270	180
SP-4	114+49.3	27.5' RT	1027.06	1027.39	TC-81.21	2	25	32	29	14.5	-	25	23	7	-	90	0/270	0/270	0
PS-1	115+02.2	32.9' LT	-	-	-	-	8	-	-	-	-	-	-	-	-	-	0/270	0/270	180

* FOUNDATION SHALL BE LEVEL WITH TOP OF CURB AT THE BACK OF CURB RAMP

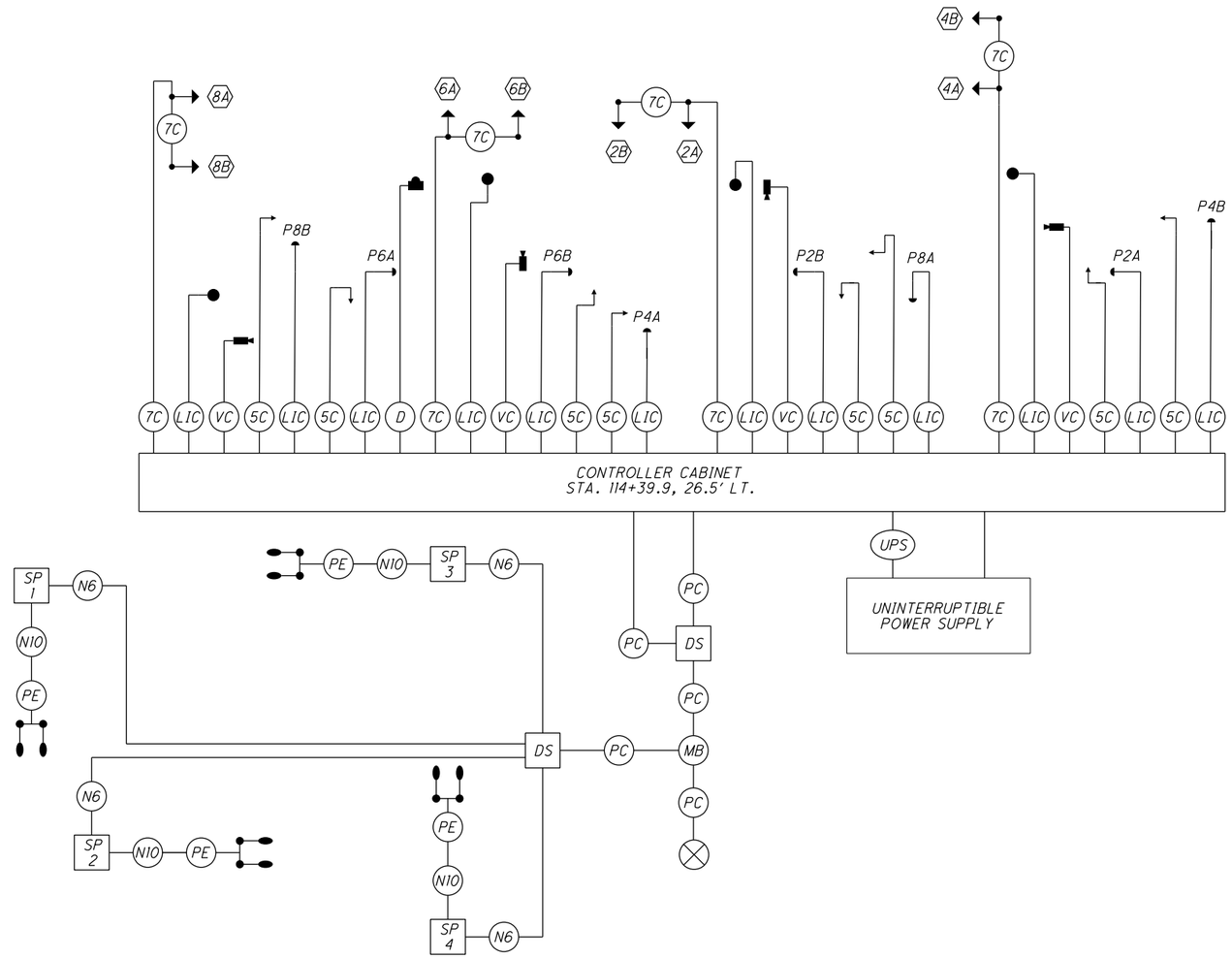
CALCULATED MBK
CHECKED KMG

TRAFFIC SIGNAL DETAIL
S.R. 241 (WALES RD. NE) / STATE AVE. NE

STA-241-9.71

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WIRING DIAGRAM



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
2A,2B (NB)	R	ϕ2 R	Y
	Y	ϕ2 Y	
	G	ϕ2 G	
4A,4B (EB)	R	ϕ4 R	R
	Y	ϕ4 Y	
	G	ϕ4 G	
6A,6B (SB)	R	ϕ6 R	Y
	Y	ϕ6 Y	
	G	ϕ6 G	
8A,8B (WB)	R	ϕ8 R	R
	Y	ϕ8 Y	
	G	ϕ8 G	
PEDESTRIAN MOVEMENTS			
PED A	W	ϕ2 PED / LS 9 G	OUT
	DW	ϕ2 PED / LS 9 R	
PED B	W	ϕ4 PED / LS 10 G	OUT
	DW	ϕ4 PED / LS 10 R	
PED C	W	ϕ6 PED / LS 11 G	OUT
	DW	ϕ6 PED / LS 11 R	
PED D	W	ϕ8 PED / LS 12 G	OUT
	DW	ϕ8 PED / LS 12 R	
LS = LOAD SWITCH			

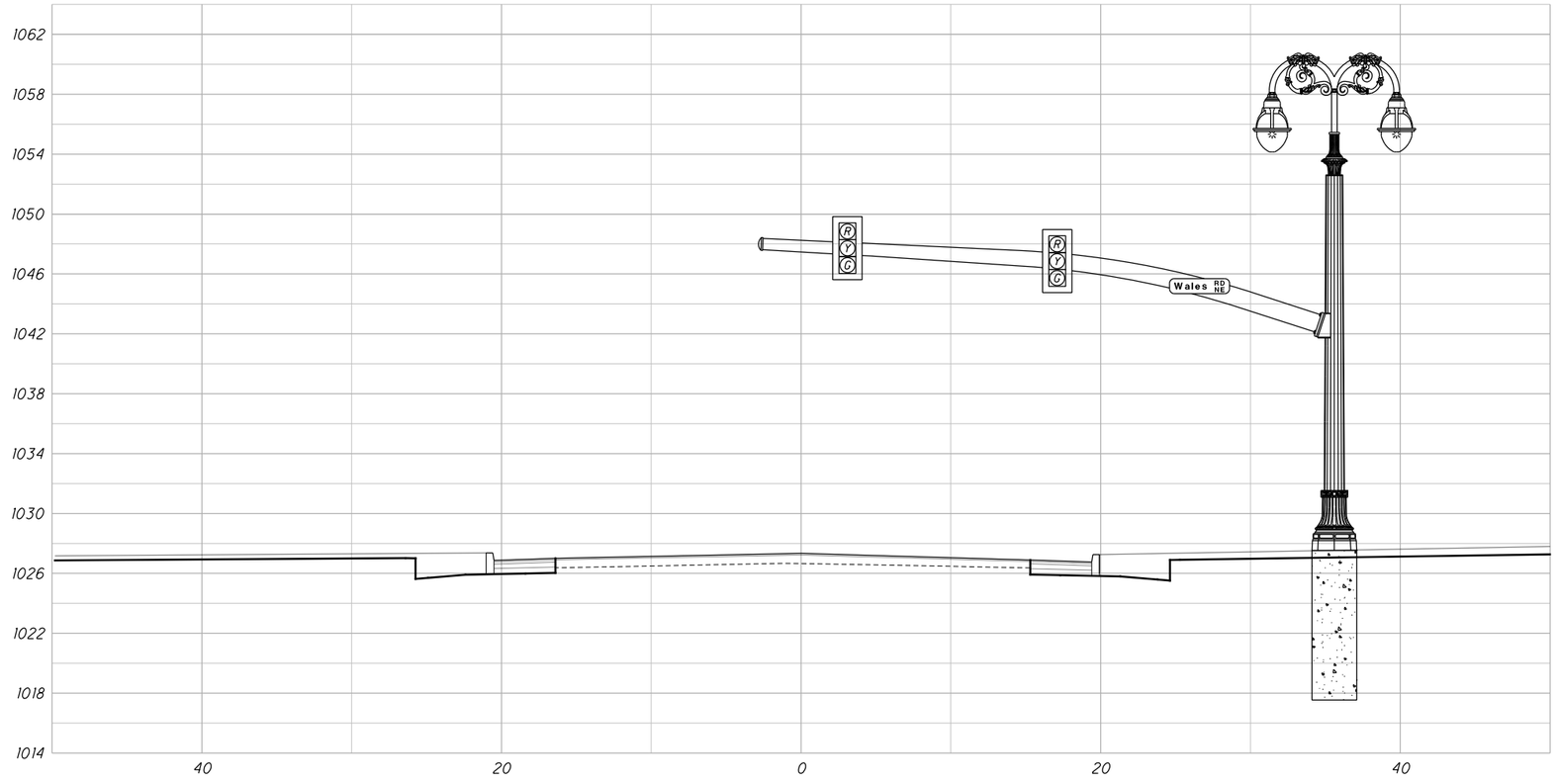
FOR WIRING DIAGRAM LEGEND, SEE SHEET 313 .

CALCULATED MBK
CHECKED KMG

TRAFFIC SIGNAL DETAIL
S.R. 241 (WALES RD. NE) / STATE AVE. NE

STA-241-9.71

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SIGNAL SUPPORT SP-1, TYPE TC-81.21, DESIGN 4
STA. 115+15.8, 22.9' LT., ℄ CONST. S.R. 241 (WALES RD. NE)
LOOKING WEST (STA. 9+77.1, 35.1' LT., ℄ R/W & CONST. STATE AVE. NE)

NOTE:

1. UNDERGROUND UTILITIES ARE NOT SHOWN, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF ALL UTILITIES AND EXISTING SIGNAL HARDWARE AND APPARATUSES PRIOR TO EXCAVATION.

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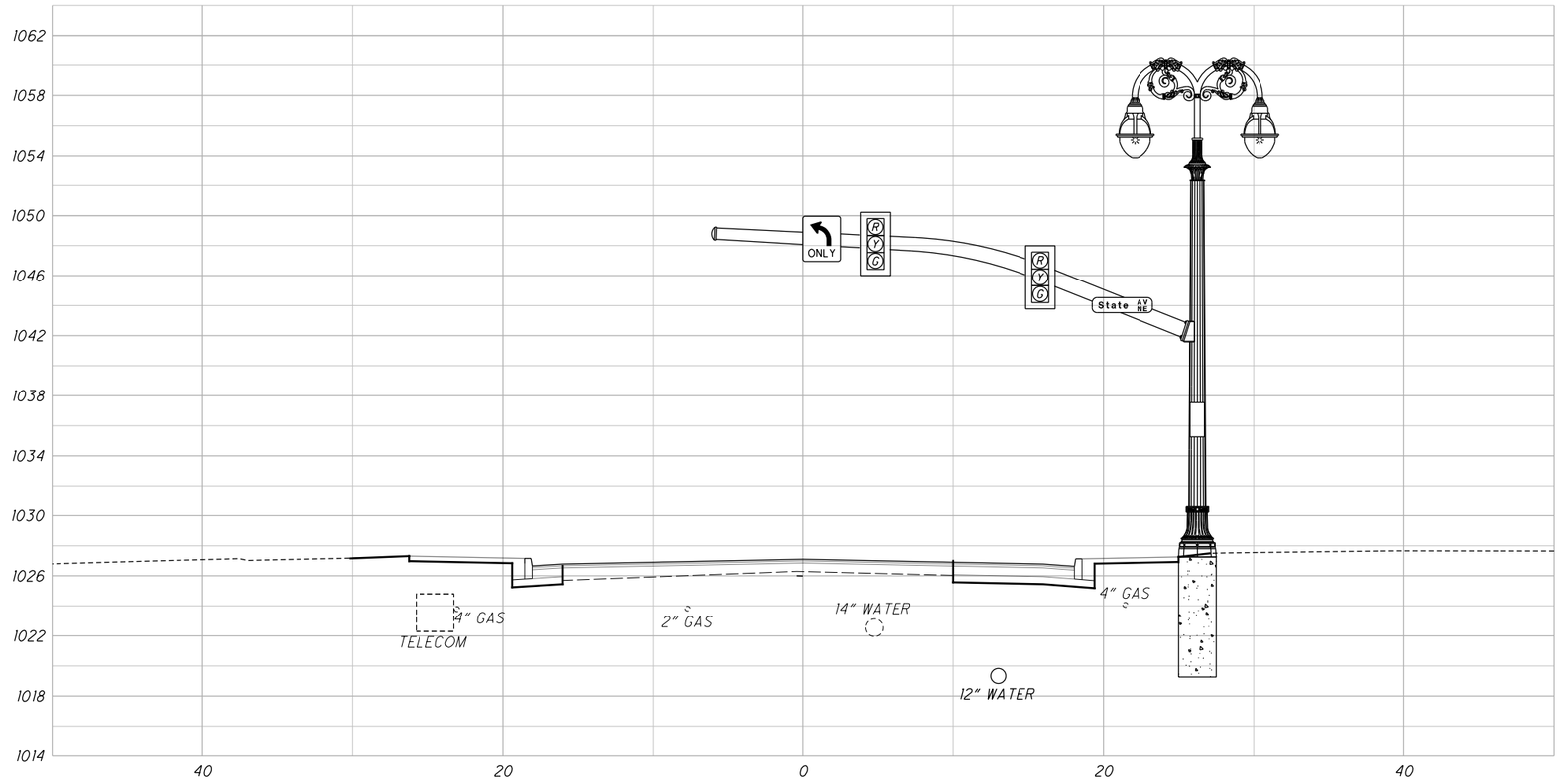
0 2.5 5 10
HORIZONTAL SCALE IN FEET

CALCULATED BEB
CHECKED KMG

TRAFFIC SIGNAL ELEVATION DETAIL
S.R. 241 (WALES RD. NE) / STATE AVE. NE

STA-241-9.71

322
395



SIGNAL SUPPORT SP-2, TYPE TC-81.21, DESIGN 2
STA. 114+50.9, 26.3' LT., ℄ CONST. S.R. 241 (WALES RD. NE)
LOOKING SOUTH

CALCULATED BEB
CHECKED KMG

0 2.5 5 10
HORIZONTAL SCALE IN FEET

TRAFFIC SIGNAL ELEVATION DETAIL
S.R. 241 (WALES RD. NE) / STATE AVE. NE

STA-241-9.71

323
395

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SIGNAL SUPPORT SP-3, TYPE TC-81.21, DESIGN 2
STA. 115+07.1, 29.5' RT., ℄ CONST. S.R. 241 (WALES RD. NE)
LOOKING NORTH

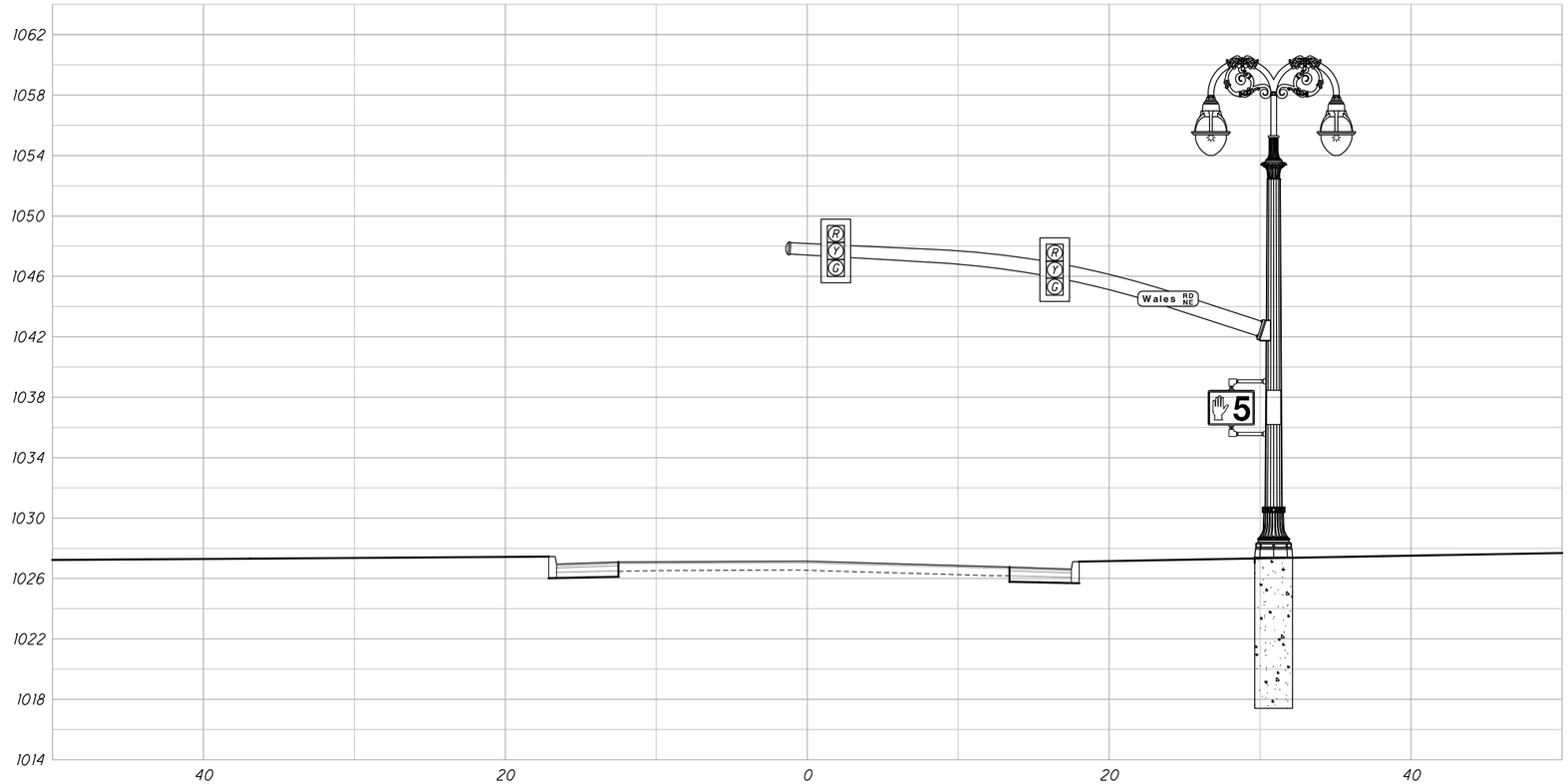
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0 2.5 5 10
HORIZONTAL SCALE IN FEET

CALCULATED BEB
CHECKED KMG

TRAFFIC SIGNAL ELEVATION DETAIL
S.R. 241 (WALES RD. NE) / STATE AVE. NE

STA-241-9.71



SIGNAL SUPPORT SP-4, TYPE TC-81.21, DESIGN 2
STA. 114+49.3, 27.5' RT., ℄ CONST. S.R. 241 (WALES RD. NE)
LOOKING EAST (STA. 10+27.5, 30.9' RT., ℄ R/W & CONST. STATE AVE. NE)

NOTE:

1. UNDERGROUND UTILITIES ARE NOT SHOWN, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF ALL UTILITIES AND EXISTING SIGNAL HARDWARE AND APPARATUSES PRIOR TO EXCAVATION.

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0 2.5 5 10
HORIZONTAL SCALE IN FEET

CALCULATED BEB
CHECKED KMG

TRAFFIC SIGNAL ELEVATION DETAIL
S.R. 241 (WALES RD. NE) / STATE AVE. NE

STA-241-9.71

(1)-4" CONDUIT WITH (1)-7C, (1)-2C LEAD-IN,
(1)-VIDEO AND (1)-LIGHTING
JACKED OR DRILLED = 54'

PROPOSED GROUND MOUNTED CONTROLLER WITH
UNINTERRUPTIBLE POWER SUPPLY
STA. 131+68.9, 26.5' LT.

(2)-4" CONDUITS WITH (3)-7C, (4)-5C, (7)-2C LEAD-IN,
(3)-VIDEO, (1)-PREEMPT AND (2)-LIGHTING
IN TRENCH = 6'

PB-1

(1)-3" CONDUIT WITH (1)-7C, (1)-2C LEAD-IN,
(1)-VIDEO, (1)-PREEMPT AND (2)-LIGHTING
IN TRENCH = 5'

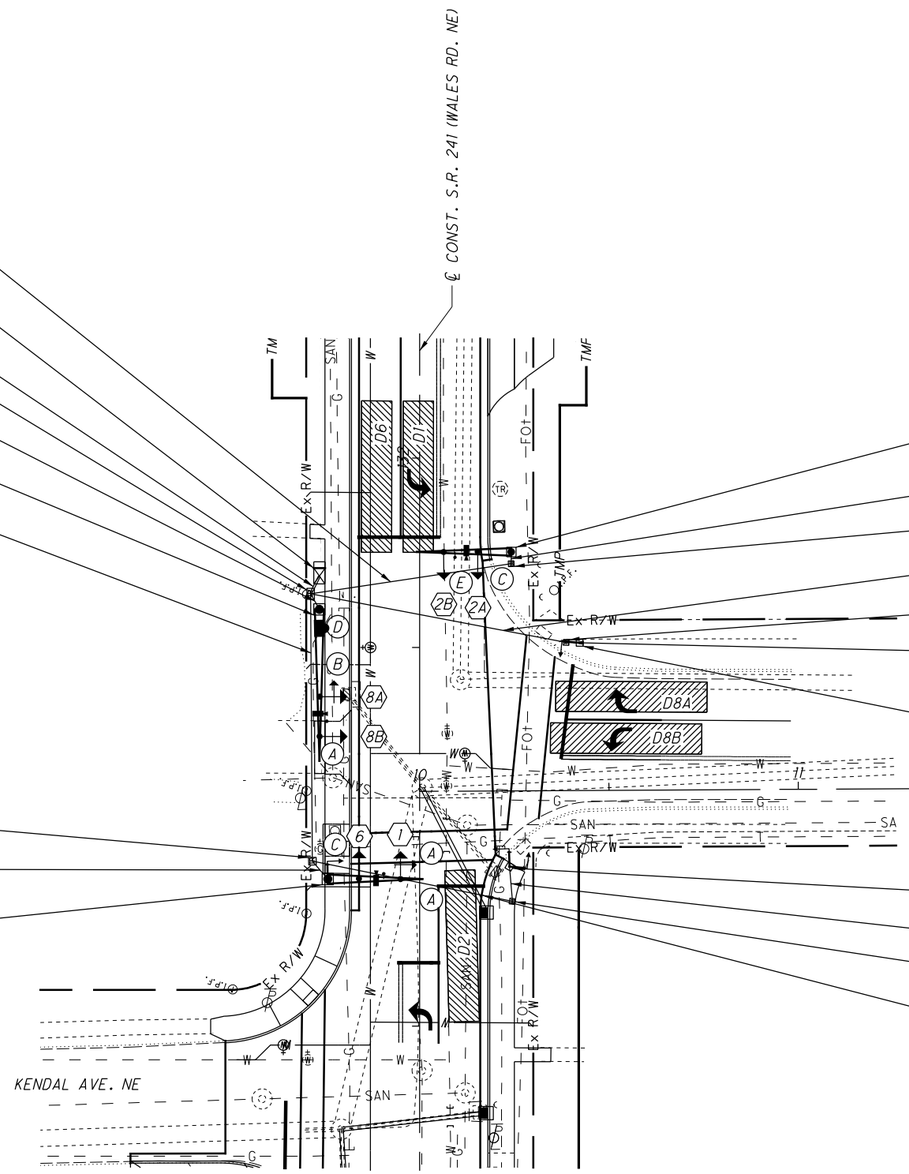
SP-1, TYPE TC-81.21 DESIGN 11 WITH A 40' MAST ARM
AND GPS RECEIVING UNIT
STA. 131+60.1, 26.5' LT.

(1)-3" CONDUIT WITH (1)-7C, (3)-5C, (4)-2C LEAD-IN,
(1)-VIDEO AND (1)-LIGHTING
IN TRENCH = 57'
IN TRENCH IN PAVED AREA = 14'
TOTAL = 71'

PB-2

(1)-3" CONDUIT WITH (1)-7C, (1)-5C, (2)-2C LEAD-IN,
(1)-VIDEO AND (1)-LIGHTING
IN TRENCH = 7'

SP-2, TYPE TC-81.21 DESIGN 1 WITH A 25' MAST ARM,
PEDESTRIAN SIGNAL HEAD AND PUSHBUTTON 'P8B'
STA. 130+88.8, 24.3' LT.



SP-3, TYPE TC-81.21 DESIGN 1 WITH A 25' MAST ARM
STA. 131+75.2, 24.2' RT.

(1)-3" CONDUIT WITH (1)-7C, (1)-2C LEAD-IN,
(1)-VIDEO AND (1)-LIGHTING
IN TRENCH = 4'

PB-3

(1)-4" CONDUIT WITH (1)-5C AND (1)-2C LEAD-IN
JACKED OR DRILLED = 69'

PB-4

(1)-2" CONDUIT WITH (1)-5C AND (1)-2C LEAD-IN
IN TRENCH = 4'

PS-1 WITH A PEDESTRIAN SIGNAL HEAD AND PUSHBUTTON 'P2B'
STA. 131+51.2, 42.3' RT.

PS-2 WITH (2)-PEDESTRIAN SIGNAL HEADS AND
PUSHBUTTONS 'P2A' AND 'P8A'
STA. 130+92.1, 23.7' RT.

(1)-2" CONDUIT WITH (2)-5C AND (2)-2C LEAD-IN
IN TRENCH = 10'

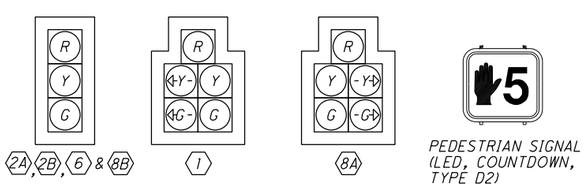
PB-5

(1)-4" CONDUIT WITH (2)-5C AND (2)-2C LEAD-IN
JACKED OR DRILLED = 54'

NOTES:

1. THE CONTRACTOR SHALL ENSURE THAT ALL SIGNAL FACES ARE CLEARLY VISIBLE TO ALL ONCOMING VEHICLES; CLEAR OF ANY OBSTRUCTION ONCE MOUNTED TO THE MAST ARMS.
2. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF ALL UTILITIES AND EXISTING SIGNAL HARDWARE AND APPARATUSES PRIOR TO EXCAVATION.
3. POWER SERVICE LOCATION TO BE VERIFIED IN THE FIELD AND APPROVED BY THE ENGINEER. ALL ITEMS ASSOCIATED WITH THE POWER SOURCE THAT ARE NECESSARY TO PROVIDE COMPLETE ELECTRICAL SERVICE TO THE TRAFFIC SIGNAL INSTALLATION, INCLUDING, BUT NOT LIMITED TO CONDUIT RISERS, CONDUIT, TRENCHING, PULL BOXES AND POWER SERVICE CABLE, SHALL BE CONSIDERED INCIDENTAL TO AND INCLUDED UNDER ITEM 632 - POWER SERVICE, AS PER PLAN, AS PER C&MS 632.24.
4. FOR REFERENCE TO SIGNS (A), (B), (C), (D) & (E) SEE SHEET 289 .

SIGNAL TYPES



1. ALL SIGNAL HEADS SHALL HAVE 12" LED LENSES.
2. ALL SIGNAL HEADS SHALL BE BLACK IN COLOR AND HAVE BACKPLATES.
3. ALL SIGNAL HEAD VISORS SHALL BE CUTAWAY TYPE.

PULL BOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB-1	131+64.2	LT	28.8'	24 X 35 X 26
PB-2	130+93.6	LT	28.3'	24
PB-3	131+72.2	RT	24.2'	18
PB-4	131+51.3	RT	38.7'	18
PB-5	130+83.0	RT	24.5'	18

REMOVAL ITEMS

QUANTITY	REMOVED ITEM DESCRIPTION	DELIVERED	DISPOSED
6	VEHICULAR SIGNAL HEADS	-	X
1	CONTROLLER	X	-
1	POLE MOUNTED CONTROLLER CABINET	-	X
2	STRAIN POLE SUPPORTS	X	-
2	STRAIN POLE FOUNDATIONS	-	X
1	POWER SERVICE	-	X
LUMP	PULL BOX	-	X
LUMP	SIGNAL CABLES	-	X

PEDESTRIAN SIGNS



R10-3e-9
1 - LEFT ARROW (SP-2)
3 - RIGHT ARROWS (PS-1, PS-2, PS-2)

NOTE: FOR TRAFFIC SIGNAL LEGEND, SEE SHEET 310 .



CALCULATED MBK
CHECKED KMG

TRAFFIC SIGNAL PLAN
S.R. 241 (WALES RD. NE) / HANKINS RD. NE

STA-241-9.71

326
395

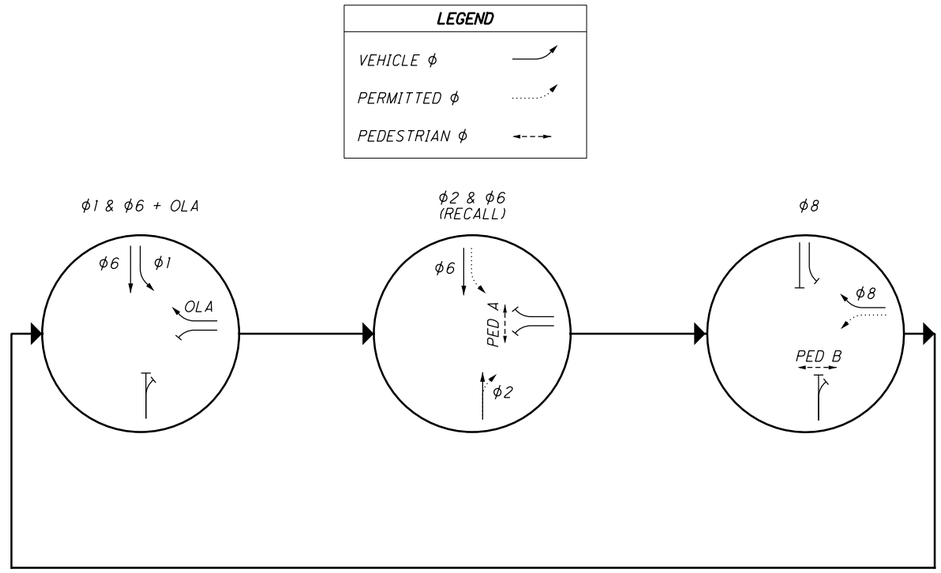
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SIGNAL TIMING CHART

INTERSECTION: S.R. 241 (WALES RD. NE) / HANKINS RD. NE MAINTAINING AGENCY: CITY OF MASSILLON									
START UP		DUAL ENTRY: YES		PHASES:			2,6		
		REST IN RED:		RING 1	-		RING 2	-	
START IN: ALL RED		OVERLAP				A	B	C	D
TIME FOR FLASH, ALL RED: 9, 6									
FIRST PHASE(S): ϕ2 + ϕ6		PHASES				1	-	-	-
COLOR DISPLAYED: GREEN									
INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8
DIRECTION		SB LT	NB	WB LT	EB	NB LT	SB	EB LT	WB
MINIMUM GREEN (INITIAL)	(SEC.)	7	20	-	-	-	20	-	10
ADDED INITIAL	*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL	(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)	(SEC.)	3.0	3.0	-	-	-	3.0	-	3.0
TIME BEFORE REDUCTION	*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP	*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE	*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I	(SEC.)	20	60	-	-	-	60	-	30
MAXIMUM GREEN II	(SEC.)	-	-	-	-	-	-	-	-
YELLOW CHANGE	(SEC.)	3.2	4.1	-	-	-	4.1	-	3.0
ALL RED CLEARANCE	(SEC.)	1.6	1.0	-	-	-	1.0	-	1.2
WALK	(SEC.)	-	10	-	-	-	-	-	9
PEDESTRIAN CLEARANCE	(SEC.)	-	13	-	-	-	-	-	10
RECALL — MAXIMUM	(ON/OFF)	-	-	-	-	-	-	-	-
RECALL — MINIMUM	(ON/OFF)	-	ON	-	-	-	ON	-	-
RECALL — PEDESTRIAN	(ON/OFF)	-	-	-	-	-	-	-	-
MEMORY	(ON/OFF)	-	-	-	-	-	-	-	-

*VOLUME DENSITY CONTROLS

PHASING DIAGRAM



NOTES:

- ALL MOVEMENTS SHALL BE ACTUATED. THE PRIMARY THRU MOVEMENT SHOULD HAVE MIN RECALL ACTIVE TO REST IN GREEN.
- FOR PROTECTED/PERMISSIVE PHASES, IMPLEMENT CALL OMITS TO AVOID YELLOW BALL TRAP.
- COUNTDOWN PEDESTRIAN SIGNALS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.
- ALL DETECTOR DELAYS SHALL BE PLACED IN THE CONTROLLER.

VIDEO DETECTION CHART

DETECTION ZONE	SIZE	PULSE OR PRESENCE	ASSOCIATED CONTROLLER PHASE	DELAY (SEC)	DESCRIPTION
D1	8 X 40	PRESENCE	ϕ1	5	SB LEFT CALL
D2	8 X 40	PRESENCE	ϕ2	-	NB CALL
D6	8 X 40	PRESENCE	ϕ6	-	SB CALL
D8A	8 X 40	PRESENCE	ϕ8	10	WB CALL
D8B	8 X 40	PRESENCE	ϕ8	-	WB CALL

PREEMPT CHANNELS

CHANNEL 1 = ϕ(2) (NORTHBOUND ONLY)
CHANNEL 2 = ϕ(1&6) (SOUTHBOUND ONLY)
CHANNEL 3 = ϕ(8)+OLA (WESTBOUND ONLY)

PREEMPT NOTES:

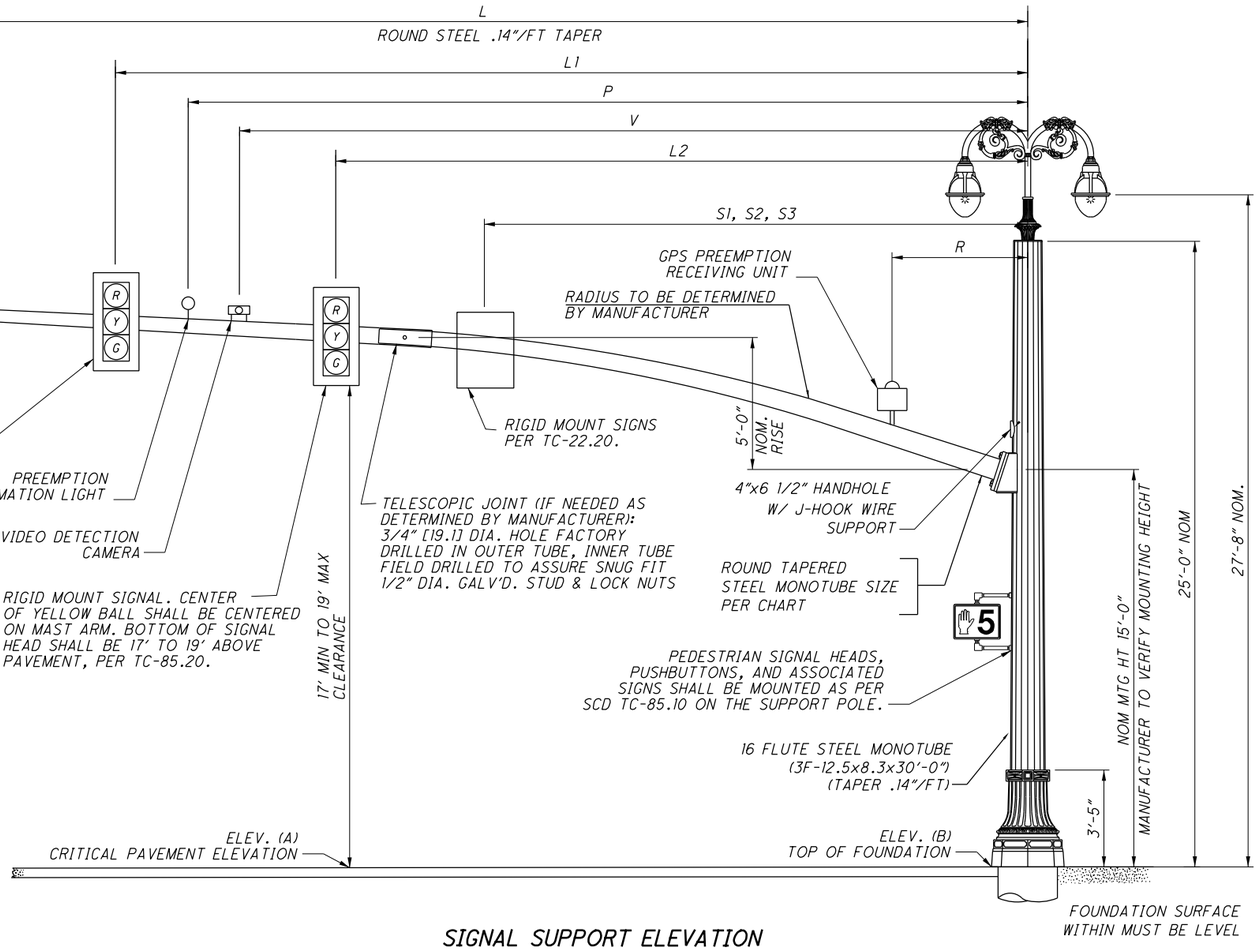
1. UPON PREEMPTION, ACTIVE WALK INDICATIONS SHALL IMMEDIATELY BE TERMINATED, FOLLOWED BY THE TIMING OF THE PEDESTRIAN CLEARANCE INTERVAL.
2. IF ANY ACTIVE PHASE OPPOSES THE PREEMPT PHASE, ALL ACTIVE PHASES SHALL TIME THEIR YELLOW AND ALL RED CLEARANCE INTERVALS UPON COMPLETION OF ANY PEDESTRIAN INTERVALS PRIOR TO TRANSITIONING TO THE PREEMPT PHASE IN ORDER TO AVOID THE POTENTIAL FOR YELLOW BALL TRAP.
3. AFTER RELEASE FROM PREEMPT, YELLOW AND ALL RED CLEARANCE INTERVALS SHALL BE DISPLAYED AND RETURN TO NORMAL COORDINATED TIMING PROGRESSION PER CURRENT COORDINATION RECOVERY SETTINGS.

CALCULATED MBK
CHECKED KMG

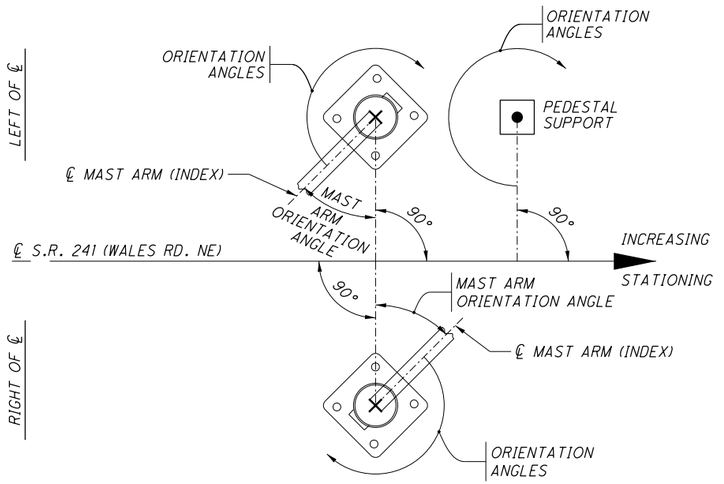
TRAFFIC SIGNAL DETAIL
S.R. 241 (WALES RD. NE) / HANKINS RD. NE

STA-241-9.71

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SIGNAL SUPPORT ELEVATION (TYPICAL)



POLE ORIENTATION

MAST ARM TABLE

SUPPORT NO.	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS											MAST ARM A ANGLE	ORIENTATION ANGLES FROM MAST ARM 'A' / INDEX LINE		
			A (PAVEMENT ELEVATION)	B (TOP OF FOUNDATION)	DESIGN TYPE	DESIGN NO.	POLE HEIGHT	L	L1	L2	R	P	V	S1	S2	S3		PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON	HANDHOLE
							FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	DEG	DEG	DEG	DEG
SP-1	131+60.1	26.5' LT	1027.66	1027.19	TC-81.21	11	25	40	33.5	23	5	29.5	27.5	37	19.5	15	90	-	-	90
SP-2	130+88.8	24.3' LT	1027.63	1027.76	TC-81.21	1	25	25	19	8	-	15	13	22.5	22.5	4	0	270	270	180
SP-3	131+75.2	24.2' RT	1027.09	1027.46	TC-81.21	1	25	25	18	9	-	15	12	13.5	4.5	-	0	-	-	180
PS-1	131+51.2	42.3' RT	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	0	0	90
PS-2	130+92.1	23.7' RT	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	90/180	90/180	180

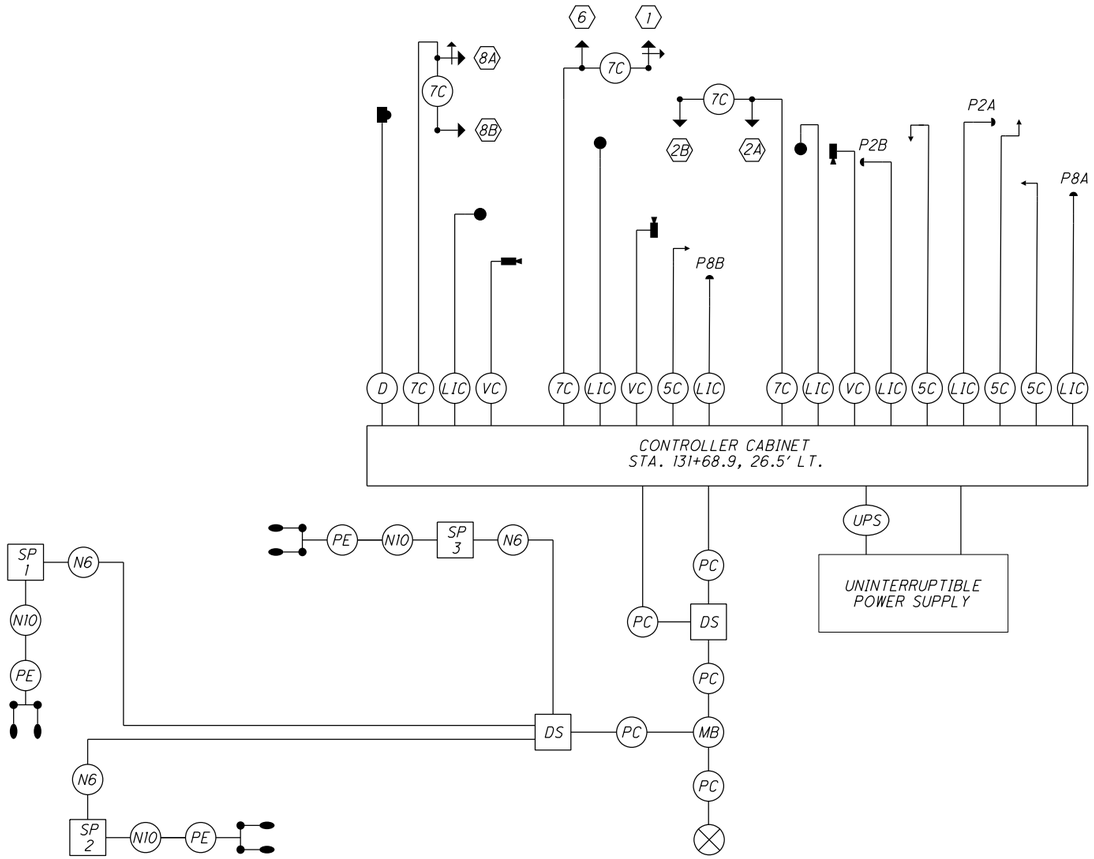
CALCULATED MBK
CHECKED KMG

TRAFFIC SIGNAL DETAIL
S.R. 241 (WALES RD. NE) / HANKINS RD. NE

STA-241-9.71

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WIRING DIAGRAM



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
1 (SB LT)	R	ϕ6 R	Y
	Y	ϕ6 Y	
	G	ϕ6 G	
	<--Y---	ϕ1 Y	
	<--G---	ϕ1 G	
2A,2B (NB)	R	ϕ2 R	Y
	Y	ϕ2 Y	
	G	ϕ2 G	
6 (SB)	R	ϕ6 R	Y
	Y	ϕ6 Y	
	G	ϕ6 G	
8A (WB RT)	R	ϕ8 R	R
	Y	ϕ8 Y	
	G	ϕ8 G	
	---Y-->	ϕ1 Y / LS 13 Y	
	---G-->	ϕ1 G / LS 13 G	
8B (WB LT)	R	ϕ8 R	R
	Y	ϕ8 Y	
	G	ϕ8 G	
PEDESTRIAN MOVEMENTS			
PED A	W	ϕ2 PED / LS 9 G	OUT
	DW	ϕ2 PED / LS 9 R	
PED B	W	ϕ8 PED / LS 12 G	OUT
	DW	ϕ8 PED / LS 12 R	
OVERLAPS			
OLA	---Y-->	ϕ1 Y / LS 13 Y	OUT
	---G-->	ϕ1 G / LS 13 G	
LS = LOAD SWITCH			

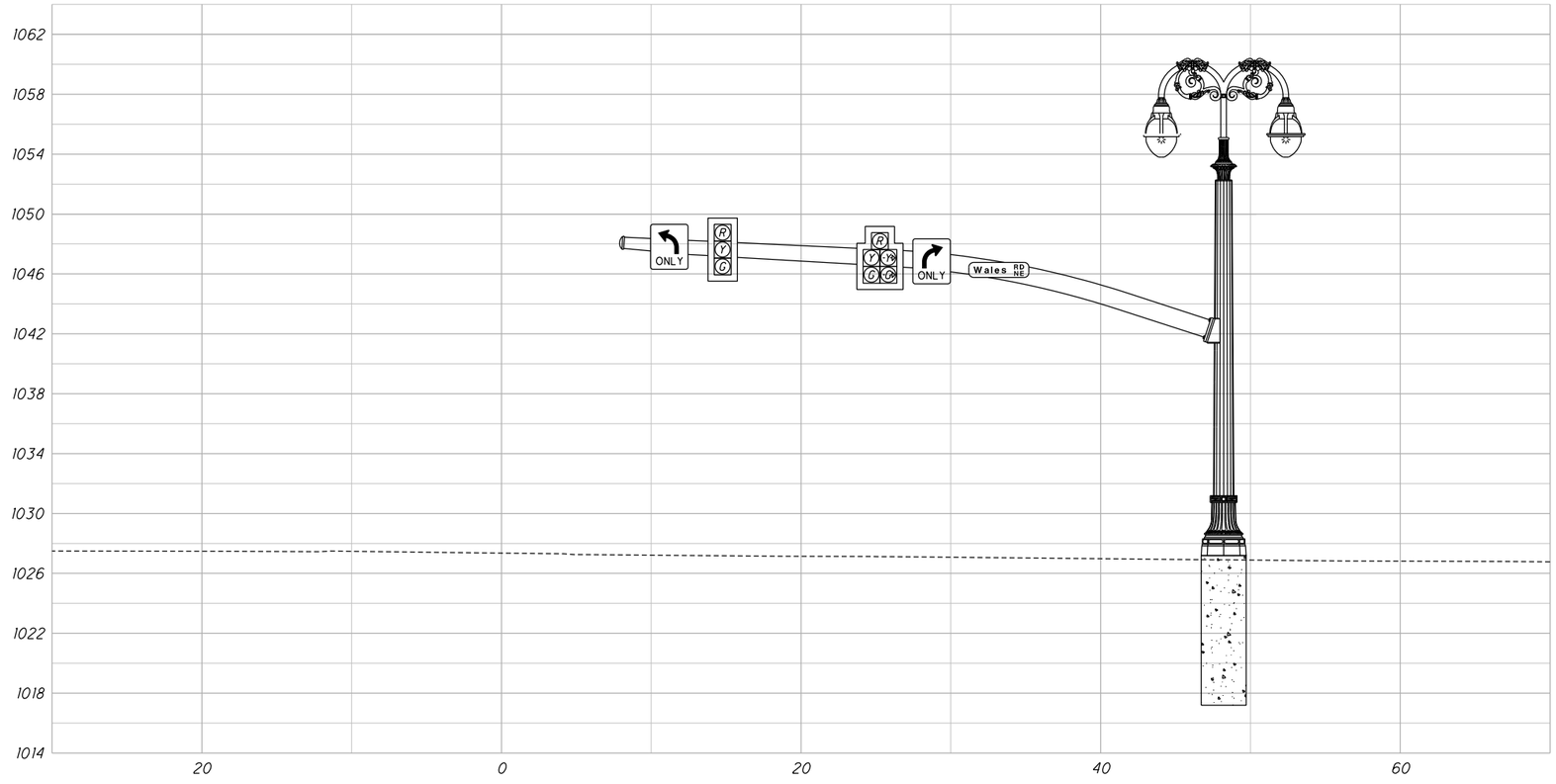
FOR WIRING DIAGRAM LEGEND, SEE SHEET 313 .

CALCULATED MBK
CHECKED KMG

TRAFFIC SIGNAL DETAIL
S.R. 241 (WALES RD. NE) / HANKINS RD. NE

STA-241-9.71

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SIGNAL SUPPORT SP-1, TYPE TC-81.21, DESIGN 11
STA. 131+60.1, 26.5' LT., ℄ CONST. S.R. 241 (WALES RD. NE)
LOOKING WEST (℄ R/W & ℄ CONST. HANKINS AVE. NE)

NOTE:

1. UNDERGROUND UTILITIES ARE NOT SHOWN, THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF ALL UTILITIES AND EXISTING SIGNAL HARDWARE AND APPARATUSES PRIOR TO EXCAVATION.

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HORIZONTAL SCALE IN FEET
0 2.5 5 10

CALCULATED BEB
CHECKED KMG

TRAFFIC SIGNAL ELEVATION DETAIL
S.R. 241 (WALES RD. NE) / HANKINS RD. NE

STA-241-9.71

330
395



SIGNAL SUPPORT SP-2, TYPE TC-81.21, DESIGN 1
STA. 130+88.8, 24.3' LT., ℄ CONST. S.R. 241 (WALES RD. NE)
LOOKING SOUTH

TRAFFIC SIGNAL ELEVATION DETAIL
S.R. 241 (WALES RD. NE) / HANKINS RD. NE

CALCULATED BEB
CHECKED KMG

0 2.5 5 10
HORIZONTAL SCALE IN FEET

STA-241-9.71

331
395

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SIGNAL SUPPORT SP-3, TYPE TC-81.21, DESIGN 1
STA. 131+75.2, 24.2' RT., ℄ CONST. S.R. 241 (WALES RD. NE)
LOOKING NORTH

TRAFFIC SIGNAL ELEVATION DETAIL
S.R. 241 (WALES RD. NE) / HANKINS RD. NE

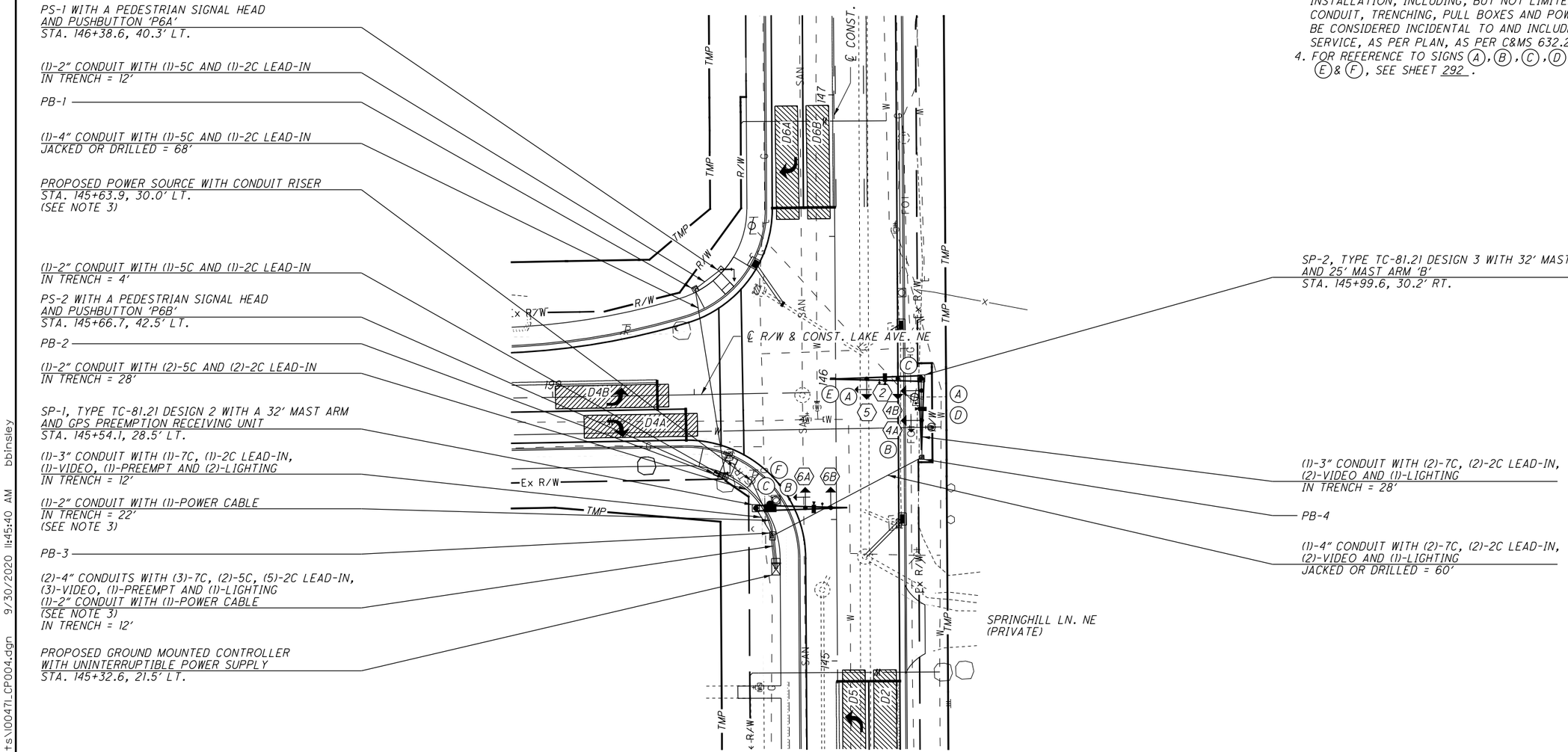
CALCULATED BEB
CHECKED KMG

0 2.5 5 10
HORIZONTAL SCALE IN FEET

STA-241-9.71

332
395

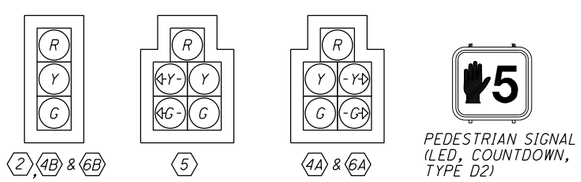
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NOTES:

1. THE CONTRACTOR SHALL ENSURE THAT ALL SIGNAL FACES ARE CLEARLY VISIBLE TO ALL ONCOMING VEHICLES; CLEAR OF ANY OBSTRUCTION ONCE MOUNTED TO THE MAST ARMS.
2. THE CONTRACTOR SHALL FIELD VERIFY THE LOCATIONS OF ALL UTILITIES AND EXISTING SIGNAL HARDWARE AND APPARATUSES PRIOR TO EXCAVATION.
3. ALL ITEMS ASSOCIATED WITH THE POWER SOURCE THAT ARE NECESSARY TO PROVIDE COMPLETE ELECTRICAL SERVICE TO THE TRAFFIC SIGNAL INSTALLATION, INCLUDING, BUT NOT LIMITED TO CONDUIT RISERS, CONDUIT, TRENCHING, PULL BOXES AND POWER SERVICE CABLE, SHALL BE CONSIDERED INCIDENTAL TO AND INCLUDED UNDER ITEM 632 - POWER SERVICE, AS PER PLAN, AS PER C&MS 632.24.
4. FOR REFERENCE TO SIGNS (A), (B), (C), (D), (E) & (F), SEE SHEET 292 .

SIGNAL TYPES



1. ALL SIGNAL HEADS SHALL HAVE 12" LED LENSES.
2. ALL SIGNAL HEADS SHALL BE BLACK IN COLOR AND HAVE BACKPLATES.
3. ALL SIGNAL HEAD VISORS SHALL BE CUTAWAY TYPE.

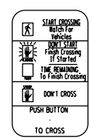
PULL BOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE (IN.)
PB-1	146+31.7	LT	49.4'	24
PB-2	145+65.2	LT	39.2'	24
PB-3	145+44.3	LT	22.7'	24 X 35 X 26
PB-4	145+71.8	RT	30.3'	18

REMOVAL ITEMS

QUANTITY	REMOVED ITEM DESCRIPTION	DELIVERED	DISPOSED
6	VEHICULAR SIGNAL HEADS	-	X
1	CONTROLLER	X	-
1	POLE MOUNTED CONTROLLER CABINET	-	X
2	STRAIN POLE SUPPORTS	-	X
2	STRAIN POLE FOUNDATIONS	-	X
1	POWER SERVICE	-	X
LUMP	SIGNAL CABLES	-	X

PEDESTRIAN SIGNS



R10-3e-9
1 - LEFT ARROW (PS-1)
1 - RIGHT ARROW (PS-2)

NOTE: FOR TRAFFIC SIGNAL LEGEND, SEE SHEET 310 .

HORIZONTAL SCALE IN FEET
0 10 20 40
CALCULATED MBK
CHECKED KMG

TRAFFIC SIGNAL PLAN
S.R. 241 (WALES RD. NE) / LAKE AVE. NE

STA-241-9.71

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SIGNAL TIMING CHART

INTERSECTION: S.R. 241 (WALES RD. NE) / LAKE AVE. NE
MAINTAINING AGENCY: CITY OF MASSILLON

START UP
START IN: ALL RED
TIME FOR FLASH, ALL RED: 9, 6
FIRST PHASE(S): ϕ2 + ϕ6
COLOR DISPLAYED: GREEN

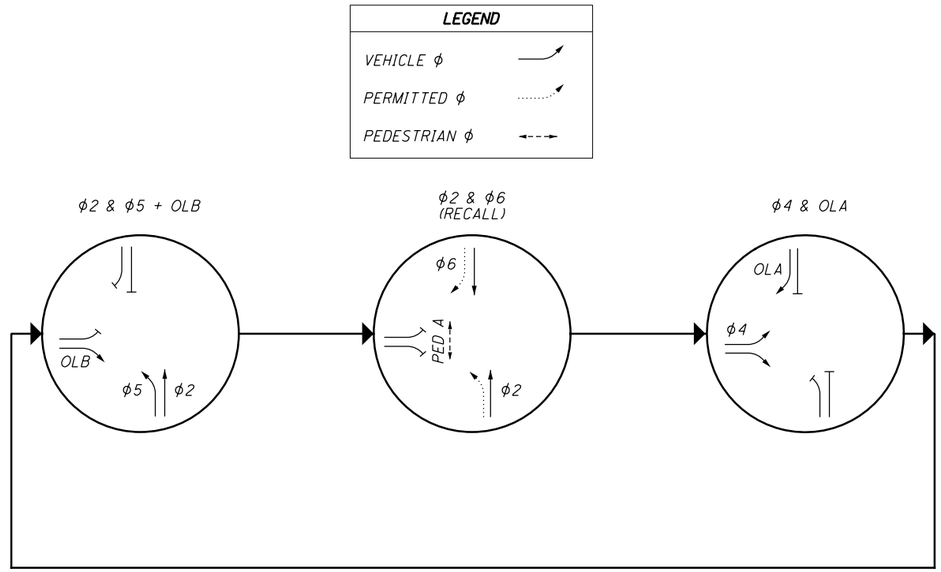
DUAL ENTRY: YES | PHASES: 2,6
REST IN RED: RING 1 - | RING 2 -

	A	B	C	D
OVERLAP				
PHASES	4	5	-	-

INTERVAL OR FEATURE		CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)		1	2	3	4	5	6	7	8
DIRECTION		SB LT	NB	WB LT	EB	NB LT	SB	EB LT	WB
MINIMUM GREEN (INITIAL)	(SEC.)	-	20	-	10	7	20		-
ADDED INITIAL	*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL	(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)	(SEC.)	-	3.0	-	3.0	3.0	3.0		-
TIME BEFORE REDUCTION	*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP	*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE	*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I	(SEC.)	-	60	-	30	20	60		-
MAXIMUM GREEN II	(SEC.)	-	-	-	-	-	-	-	-
YELLOW CHANGE	(SEC.)	-	4.4	-	3.0	3.0	4.4		-
ALL RED CLEARANCE	(SEC.)	-	1.0	-	1.7	2.9	1.0		-
WALK	(SEC.)	-	-	-	-	-	9	-	-
PEDESTRIAN CLEARANCE	(SEC.)	-	-	-	-	-	14	-	-
RECALL	MAXIMUM (ON/OFF)	-	-	-	-	-	-	-	-
	MINIMUM (ON/OFF)	-	ON	-	-	-	ON	-	-
	PEDESTRIAN (ON/OFF)	-	-	-	-	-	-	-	-
MEMORY	(ON/OFF)	-	-	-	-	-	-	-	-

*VOLUME DENSITY CONTROLS

PHASING DIAGRAM



NOTES:

- ALL MOVEMENTS SHALL BE ACTUATED. THE PRIMARY THRU MOVEMENT SHOULD HAVE MIN RECALL ACTIVE TO REST IN GREEN.
- COUNTDOWN PEDESTRIAN SIGNALS SHALL GO TO ZERO ON YELLOW PER OMUTCD FIGURE 4E-2.
- ALL DETECTOR DELAYS SHALL BE PLACED IN THE CONTROLLER.

VIDEO DETECTION CHART

DETECTION ZONE	SIZE (FT.)	PULSE OR PRESENCE	ASSOCIATED CONTROLLER PHASE	DELAY (SEC)	DESCRIPTION
D2	8 X 40	PRESENCE	ϕ2	-	NB CALL
D4A	8 X 40	PRESENCE	ϕ4	10	EB CALL
D4B	8 X 40	PRESENCE	ϕ4	-	EB CALL
D5	8 X 40	PRESENCE	ϕ5	5	NB LEFT CALL
D6A	8 X 40	PRESENCE	ϕ6	-	SB CALL
D6B	8 X 40	PRESENCE	ϕ6	-	SB CALL

PREEMPT CHANNELS

CHANNEL 1 = ϕ(2&5) (NORTHBOUND ONLY)
CHANNEL 2 = ϕ(6)+OLA (SOUTHBOUND ONLY)
CHANNEL 3 = ϕ(4)+OLB (EASTBOUND ONLY)

PREEMPT NOTES:

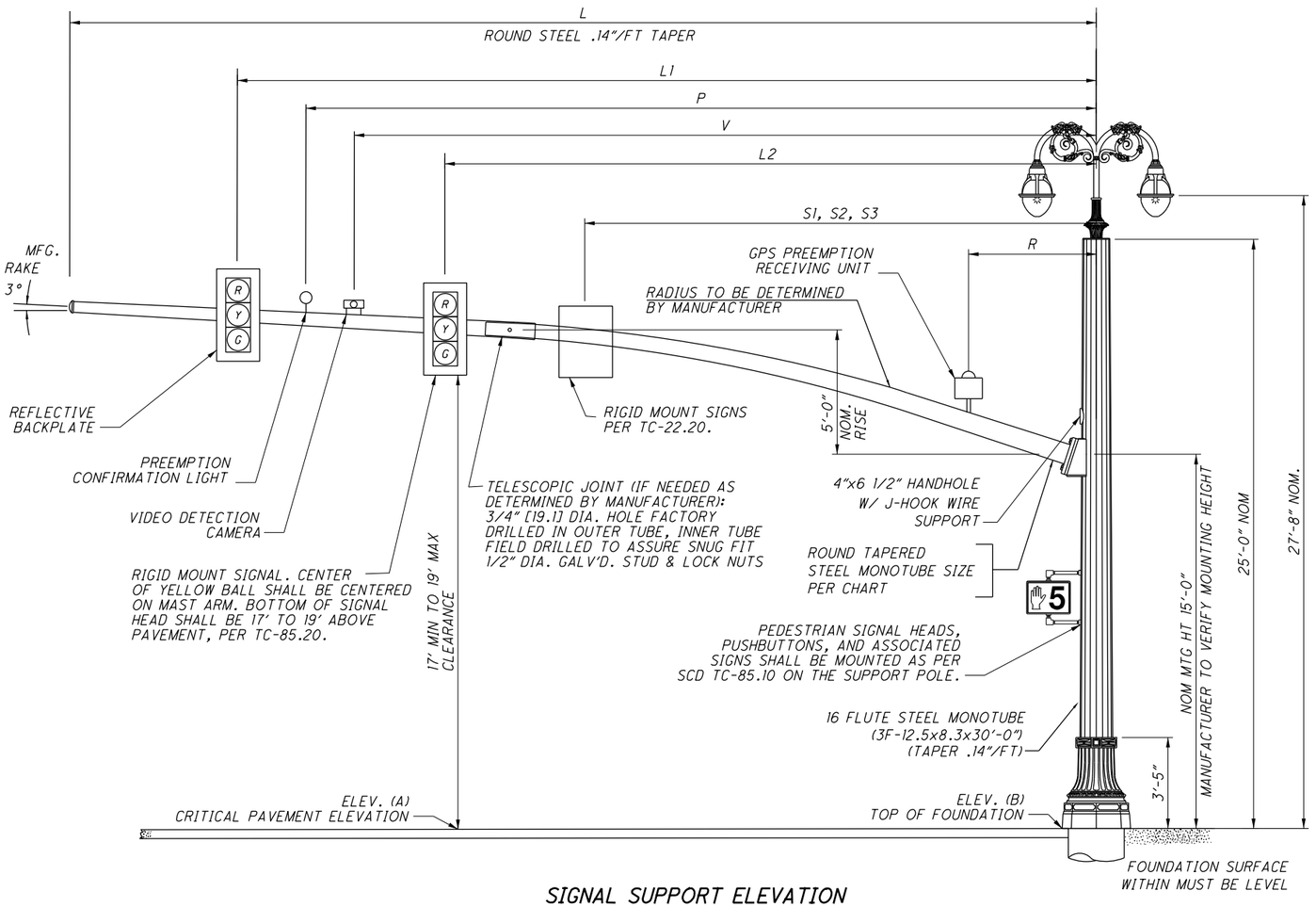
1. UPON PREEMPTION, ACTIVE WALK INDICATIONS SHALL IMMEDIATELY BE TERMINATED, FOLLOWED BY THE TIMING OF THE PEDESTRIAN CLEARANCE INTERVAL.
2. IF ANY ACTIVE PHASE OPPOSES THE PREEMPT PHASE, ALL ACTIVE PHASES SHALL TIME THEIR YELLOW AND ALL RED CLEARANCE INTERVALS UPON COMPLETION OF ANY PEDESTRIAN INTERVALS PRIOR TO TRANSITIONING TO THE PREEMPT PHASE IN ORDER TO AVOID THE POTENTIAL FOR YELLOW BALL TRAP.
3. AFTER RELEASE FROM PREEMPT, YELLOW AND ALL RED CLEARANCE INTERVALS SHALL BE DISPLAYED AND RETURN TO NORMAL COORDINATED TIMING PROGRESSION PER CURRENT COORDINATION RECOVERY SETTINGS.

CALCULATED MBK
CHECKED KMG

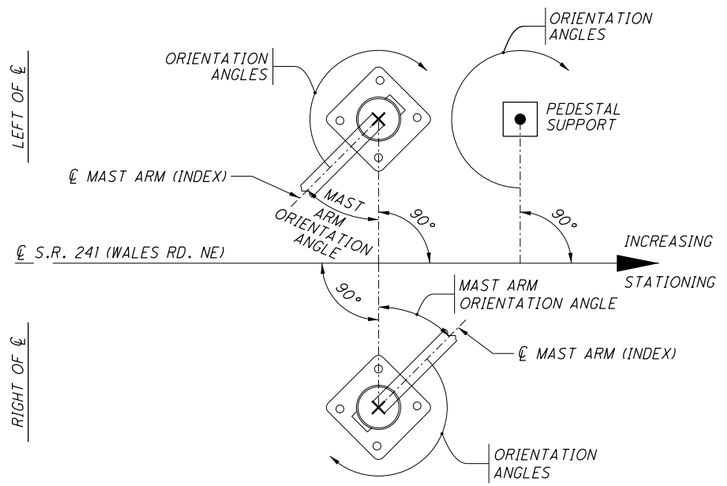
TRAFFIC SIGNAL DETAIL
S.R. 241 (WALES RD. NE) / LAKE AVE. NE

STA-241-9.71

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SIGNAL SUPPORT ELEVATION (TYPICAL)



POLE ORIENTATION

MAST ARM TABLE

SUPPORT NO.	MAST ARM	STATION	OFFSET	ELEVATION		SIGNAL SUPPORT DETAILS												MAST ARM A ANGLE	ORIENTATION ANGLES FROM MAST ARM 'A' / INDEX LINE			
				A (PAVEMENT ELEVATION)	B (TOP OF FOUNDATION)	DESIGN TYPE	DESIGN NO.	POLE HEIGHT	ARM HEIGHT	L	L1	L2	R	P	V	S1	S2	S3		MAST ARM B ANGLE	PEDESTRIAN SIGNAL	PUSHBUTTON	HANDHOLE
								FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	FT	DEG	DEG	DEG	DEG	DEG
SP-1	-	145+54.1	28.5' LT	1035.51	1035.86	TC-81.21	2	25	15	32	26.5	17.5	5	23.5	20.5	14	10.5	4	0	-	-	-	90
SP-2	A	145+99.6	30.2' RT	1036.89	1038.32	TC-81.21	3	25	15	32	19.5	8.5	-	14.5	12.5	27	24	4	0	-	-	-	180
-	B	-	-	1038.00	-	-	-	25	17	25	15	4	-	8.5	12	19.5	11	7	-	270	-	-	-
PS-1	-	146+38.6	40.3' LT	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	0	0	180
PS-2	-	145+66.7	42.5' LT	-	-	-	-	8	-	-	-	-	-	-	-	-	-	-	-	-	0	0	180

CALCULATED MBK
CHECKED KMG

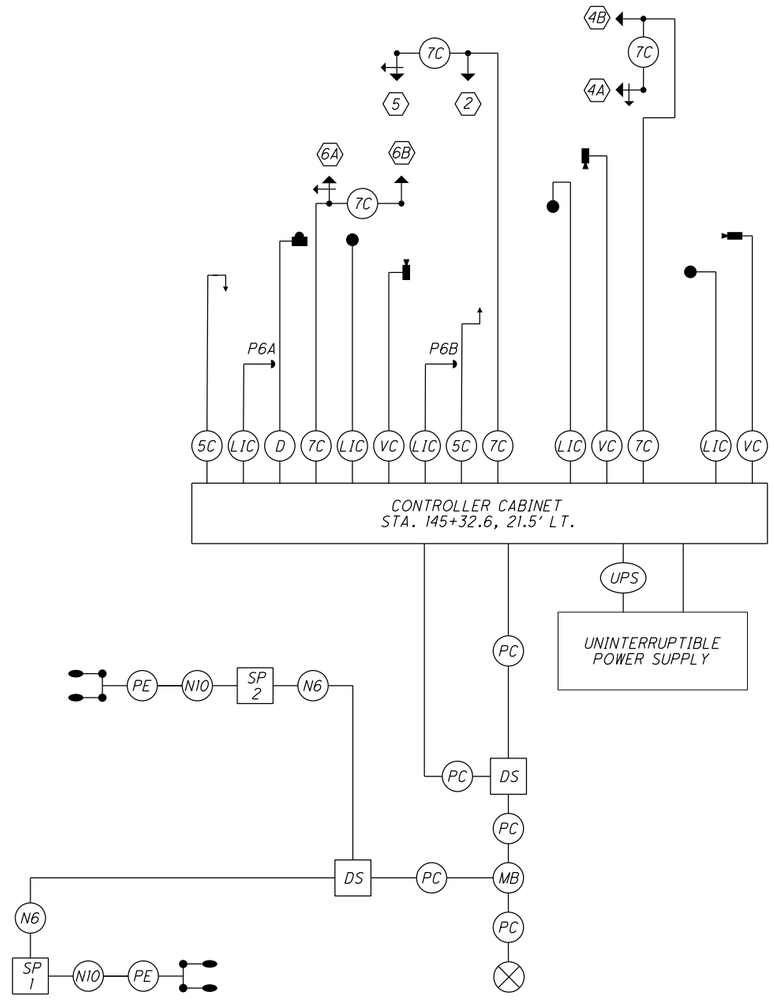
TRAFFIC SIGNAL DETAIL
S.R. 241 (WALES RD. NE) / LAKE AVE. NE

STA-241-9.71

335
395

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WIRING DIAGRAM



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
2	R	ϕ2 R	Y
	Y	ϕ2 Y	
(NB)	G	ϕ2 G	
4A	R	ϕ4 R	R
	Y	ϕ4 Y	
	G	ϕ4 G	
(EB RT)	---Y-->	ϕ5 Y / LS 14 Y	
	---G-->	ϕ5 G / LS 14 G	
4B	R	ϕ4 R	R
	Y	ϕ4 Y	
(EB LT)	G	ϕ4 G	
5	R	ϕ2 R	Y
	Y	ϕ2 Y	
	G	ϕ2 G	
(NB LT)	<--Y---	ϕ5 Y	
	<--G---	ϕ5 G	
6A	R	ϕ6 R	Y
	Y	ϕ6 Y	
	G	ϕ6 G	
(SB RT)	---Y-->	ϕ4 Y / LS 13 Y	
	---G-->	ϕ4 G / LS 13 Y	
6B	R	ϕ6 R	Y
	Y	ϕ6 Y	
(SB)	G	ϕ6 G	
PEDESTRIAN MOVEMENTS			
PED A	W	ϕ6 PED / LS 9 G	OUT
	DW	ϕ6 PED / LS 9 R	
OVERLAPS			
OLA	---Y-->	ϕ4 Y / LS 13 Y	OUT
	---G-->	ϕ4 G / LS 13 G	
OLB	---Y-->	ϕ5 Y / LS 14 Y	OUT
	---G-->	ϕ5 G / LS 14 G	
LS = LOAD SWITCH			

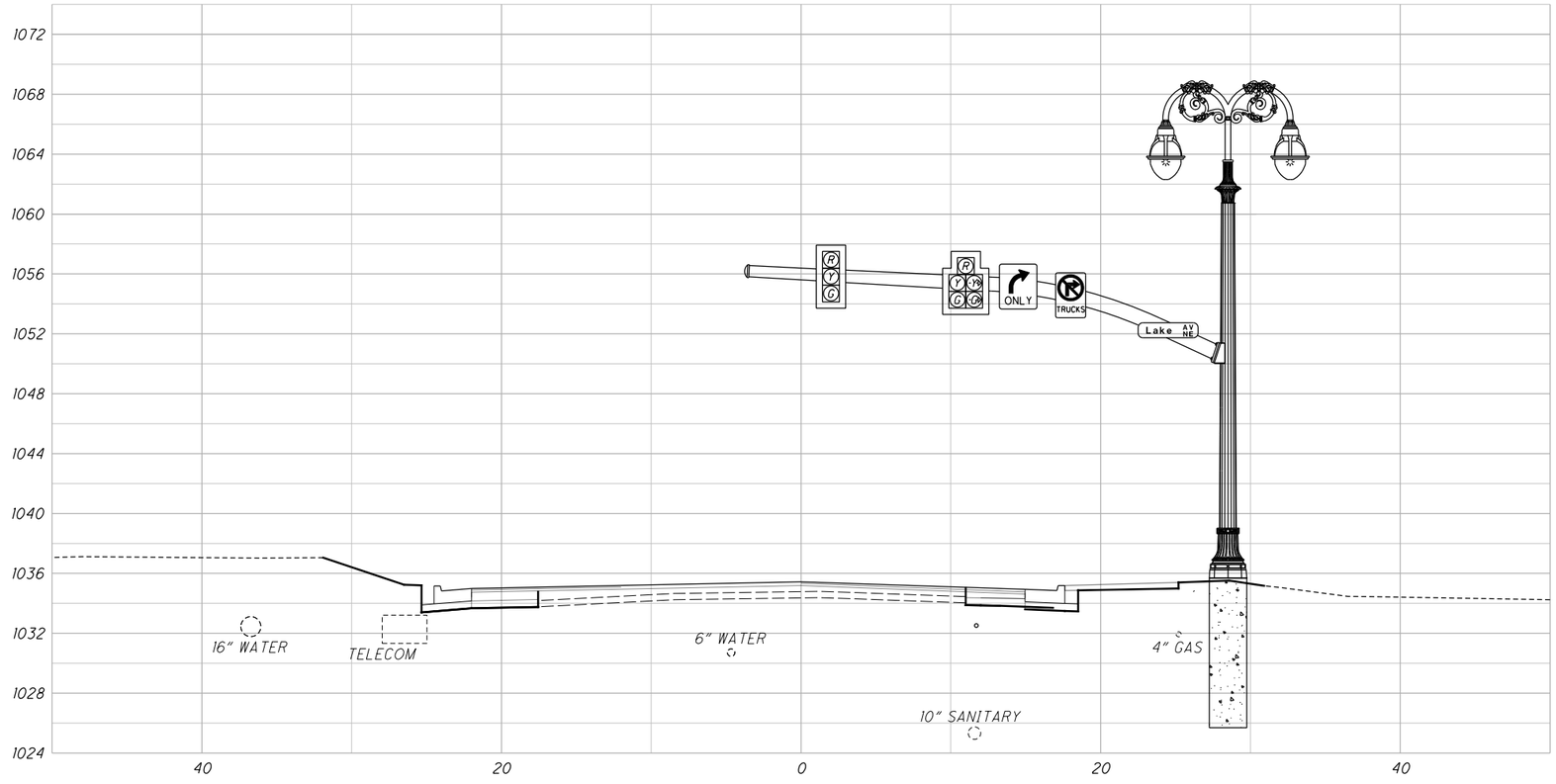
FOR WIRING DIAGRAM LEGEND, SEE SHEET 313 .

CALCULATED MBK
CHECKED KMG

TRAFFIC SIGNAL DETAIL
S.R. 241 (WALES RD. NE) / LAKE AVE. NE

STA-241-9.71

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SIGNAL SUPPORT SP-1, TYPE TC-81.21, DESIGN 2
STA. 145+54.1, 28.5' LT., ℄ CONST. S.R. 241 (WALES RD. NE)
LOOKING SOUTH

TRAFFIC SIGNAL ELEVATION DETAIL
S.R. 241 (WALES RD. NE) / LAKE AVE. NE

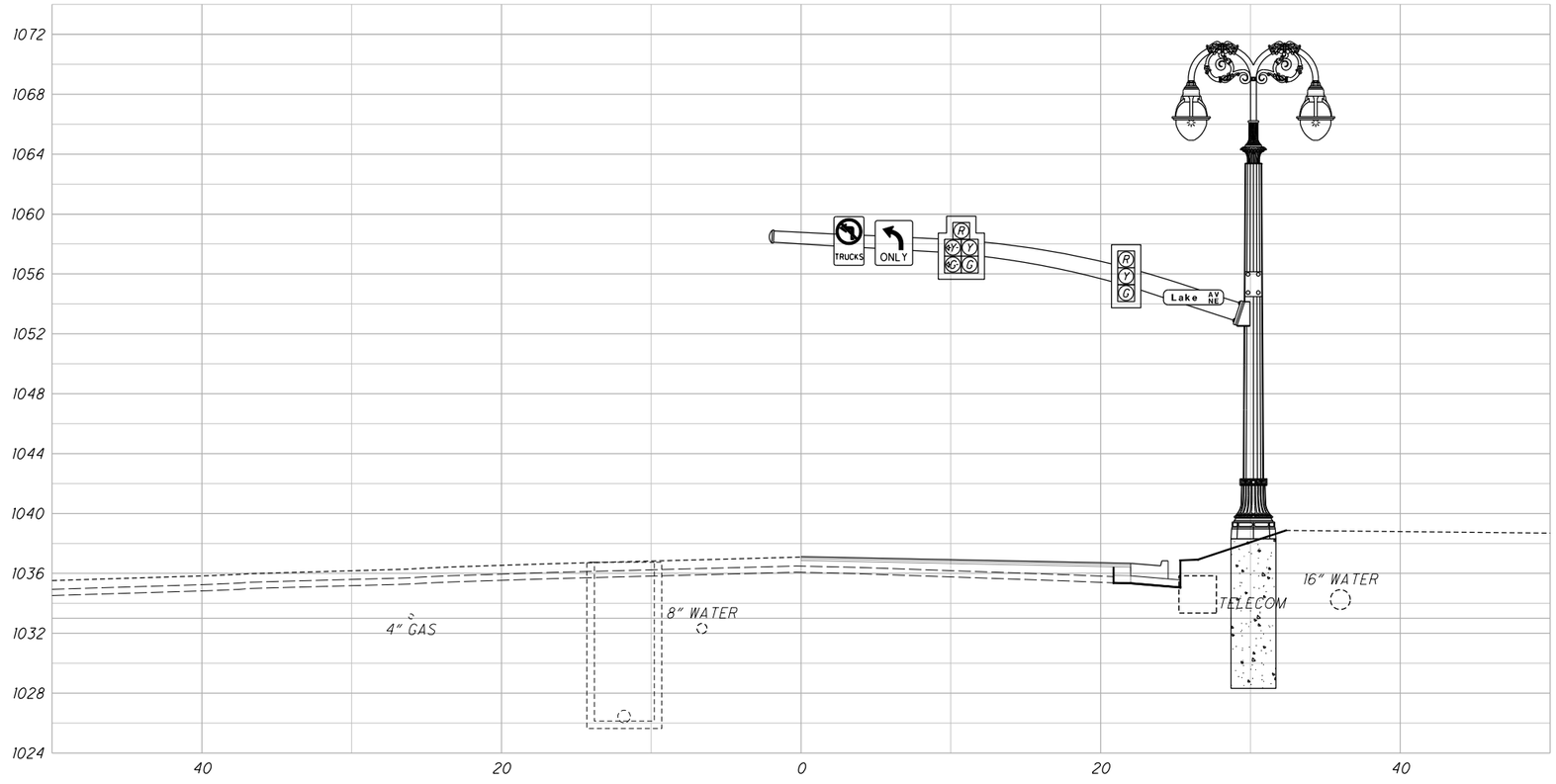
CALCULATED BEB
CHECKED KMG

0 2.5 5 10
HORIZONTAL SCALE IN FEET

STA-241-9.71

337
395

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SIGNAL SUPPORT SP-2, TYPE TC-81.21, DESIGN 3, MAST ARM A
STA. 145+99.6, 30.2' RT., ℄ CONST. S.R. 241 (WALES RD. NE)
LOOKING NORTH

TRAFFIC SIGNAL ELEVATION DETAIL
S.R. 241 (WALES RD. NE) / LAKE AVE. NE

CALCULATED BEB
CHECKED KMG

0 2.5 5 10
HORIZONTAL SCALE IN FEET

STA-241-9.71

338
395

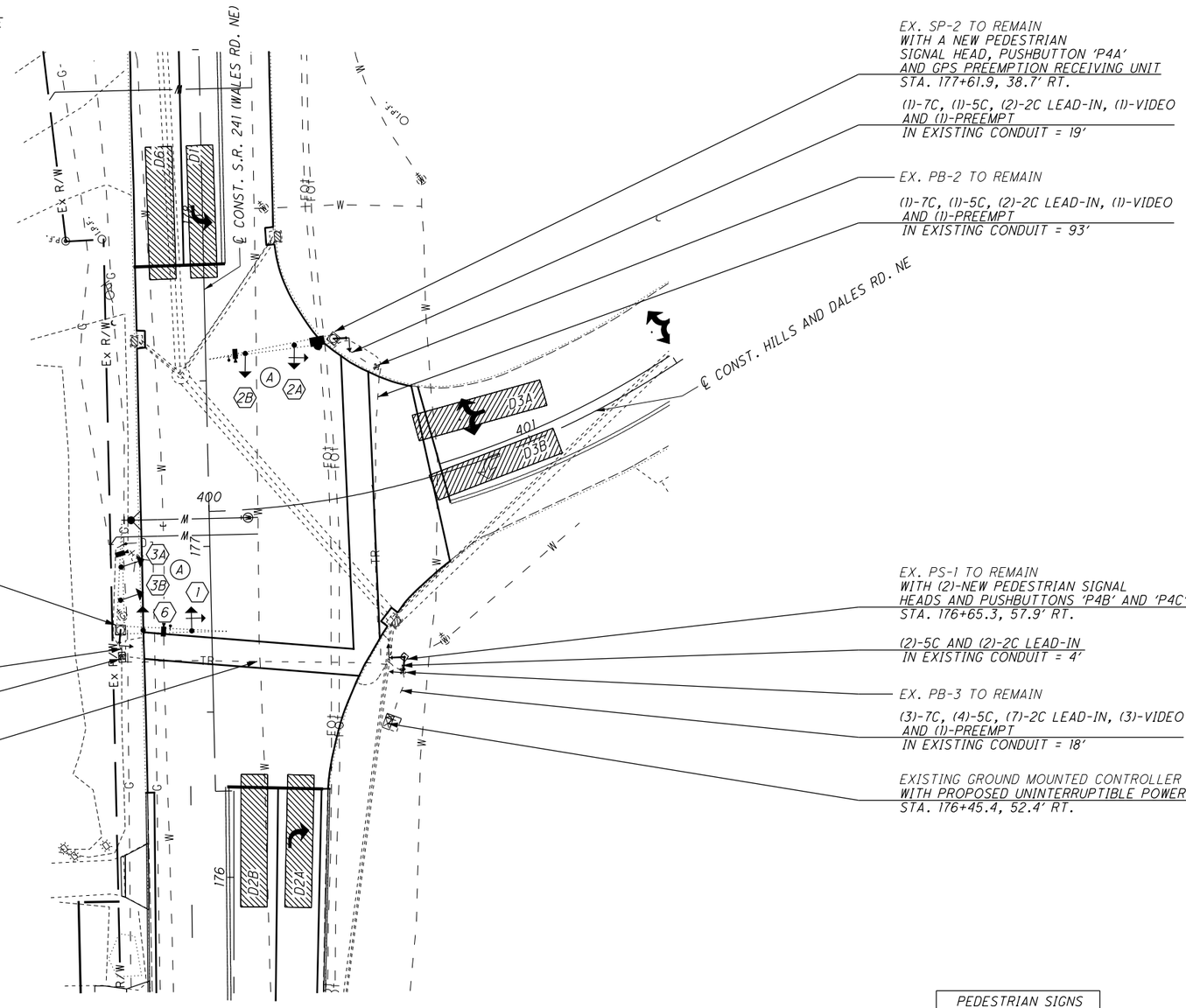
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NOTES:

1. THE CONTRACTOR SHALL ENSURE THAT ALL SIGNAL FACES ARE CLEARLY VISIBLE TO ALL ONCOMING VEHICLES; CLEAR OF ANY OBSTRUCTION ONCE MOUNTED TO THE MAST ARMS.

2. THE EXISTING PULL BOX SHALL BE REMOVED IN ITS ENTIRETY PRIOR TO INSTALLING THE PROPOSED PULL BOX AT THE SAME LOCATION. THE CONTRACTOR SHALL TAKE GREAT CARE AS TO NOT DAMAGE THE EXISTING CONDUITS AND SIGNAL EQUIPMENT CONTAINED WITHIN THE EXISTING CONDUIT. IF IT DETERMINED, BY THE ENGINEER, THAT THE CONDUIT IS DAMAGED THE CONTRACTOR SHALL REPLACE THE CONDUIT IN LIKE KIND AS THE COST OF THE CONTRACTOR.

3. FOR REFERENCE TO SIGN (A) , SEE SHEET 299.



EX. SP-2 TO REMAIN
WITH A NEW PEDESTRIAN
SIGNAL HEAD, PUSHBUTTON 'P4A'
AND GPS PREEMPTION RECEIVING UNIT
STA. 177+61.9, 38.7' RT.

(1)-7C, (1)-5C, (2)-2C LEAD-IN, (1)-VIDEO
AND (1)-PREEMPT
IN EXISTING CONDUIT = 19'

EX. PB-2 TO REMAIN

(1)-7C, (1)-5C, (2)-2C LEAD-IN, (1)-VIDEO
AND (1)-PREEMPT
IN EXISTING CONDUIT = 93'

EX. SP-1 TO REMAIN
WITH A NEW PEDESTRIAN
SIGNAL HEAD AND PUSHBUTTON 'P4D'
STA. 176+75.4, 27.5' LT.

(2)-7C, (1)-5C, (3)-2C LEAD-IN AND (2)-VIDEO
IN EXISTING CONDUIT = 9'

PB-1
(SEE NOTE 2)

(2)-7C, (1)-5C, (3)-2C LEAD-IN AND (2)-VIDEO
IN EXISITNG CONDUIT = 86'

EX. PS-1 TO REMAIN
WITH (2)-NEW PEDESTRIAN SIGNAL
HEADS AND PUSHBUTTONS 'P4B' AND 'P4C'
STA. 176+65.3, 57.9' RT.

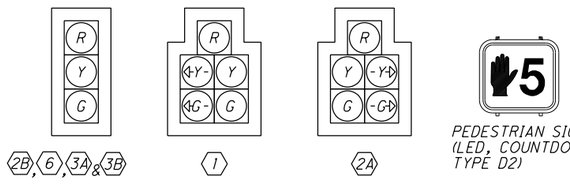
(2)-5C AND (2)-2C LEAD-IN
IN EXISTING CONDUIT = 4'

EX. PB-3 TO REMAIN

(3)-7C, (4)-5C, (7)-2C LEAD-IN, (3)-VIDEO
AND (1)-PREEMPT
IN EXISTING CONDUIT = 18'

EXISTING GROUND MOUNTED CONTROLLER
WITH PROPOSED UNINTERRUPTIBLE POWER SUPPLY
STA. 176+45.4, 52.4' RT.

SIGNAL TYPES



1. ALL SIGNAL HEADS SHALL HAVE 12" LED LENSES.
2. ALL SIGNAL HEADS SHALL BE BLACK IN COLOR AND HAVE BACKPLATES.
3. ALL SIGNAL HEAD VISORS SHALL BE CUTAWAY TYPE.

REMOVAL ITEMS

QUANTITY	REMOVED ITEM DESCRIPTION	DELIVERED	DISPOSED
6	VEHICULAR SIGNAL HEADS	X	-
4	PEDESTRIAN SIGNAL HEADS	X	-
4	PUSHBUTTON	X	-
1	PULL BOX	-	X
LUMP	SIGNAL CABLES	-	X

PULL BOX TABLE

PULL BOX #	STATION	SIDE	OFFSET	SIZE
PB-1	176+67.2	LT	27.2'	24 X 35 X 26
EX. PB-2	177+53.0	RT	51.5'	-
EX. PB-3	176+61.1	RT	57.3'	-

PEDESTRIAN SIGNS



R10-3e-9
3 - LEFT ARROWS
(SP-2, PS-1, PS-1)
1 - RIGHT ARROW
(SP-1)

NOTE: FOR TRAFFIC SIGNAL LEGEND, SEE SHEET 310 .

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MBK
CHECKED KMG

TRAFFIC SIGNAL PLAN
S.R. 241 (WALES RD. NE) / HILLS AND DALES RD. NE

STA-241-9.71

339
395

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SIGNAL TIMING CHART

INTERSECTION: S.R. 241 (WALES RD. NE) / HILLS AND DALES RD. NE
MAINTAINING AGENCY: CITY OF MASSILLON

START UP
START IN: ALL RED
TIME FOR FLASH, ALL RED: 9, 6
FIRST PHASE(S): ϕ2+ϕ6
COLOR DISPLAYED: GREEN

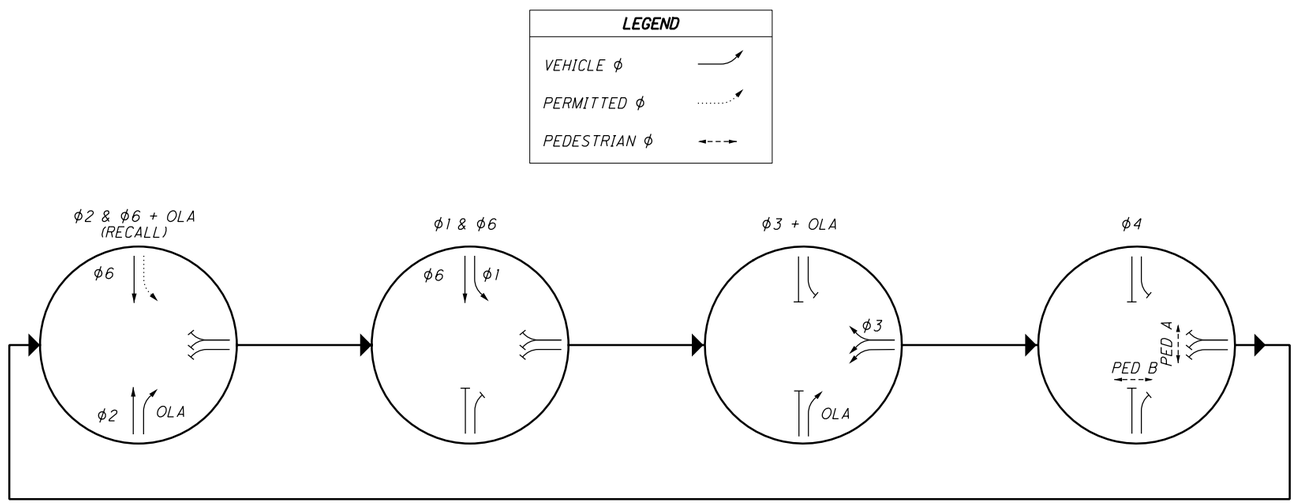
DUAL ENTRY: YES PHASES: 2,6
REST IN RED: RING 1 - RING 2 -

OVERLAP	A	B	C	D
PHASES	2 & 3	-	-	-

INTERVAL OR FEATURE			CONTROLLER MOVEMENT NO.							
INTERSECTION MOVEMENT (PHASE)			1	2	3	4	5	6	7	8
DIRECTION			SB LT	NB	WB	PED	-	SB	-	-
MINIMUM GREEN (INITIAL)		(SEC.)	7	20	10	-	-	20	-	-
ADDED INITIAL		*(SEC./ACTUATION)	-	-	-	-	-	-	-	-
MAXIMUM INITIAL		(SEC.)	-	-	-	-	-	-	-	-
PASSAGE TIME (PRESET GAP)		(SEC.)	3.0	3.0	3.0	-	-	3.0	-	-
TIME BEFORE REDUCTION		*(SEC.)	-	-	-	-	-	-	-	-
MINIMUM GAP		*(SEC.)	-	-	-	-	-	-	-	-
TIME TO REDUCE		*(SEC.)	-	-	-	-	-	-	-	-
MAXIMUM GREEN I		(SEC.)	20	60	30	-	-	60	-	-
MAXIMUM GREEN II		(SEC.)	-	-	-	-	-	-	-	-
YELLOW CHANGE		(SEC.)	3.0	4.4	3.1	-	-	4.4	-	-
ALL RED CLEARANCE		(SEC.)	2.4	1.0	2.1	2.0	-	1.0	-	-
WALK		(SEC.)	-	-	-	7	-	-	-	-
PEDESTRIAN CLEARANCE		(SEC.)	-	-	-	23	-	-	-	-
RECALL	MAXIMUM	(ON/OFF)	-	-	-	-	-	-	-	-
	MINIMUM	(ON/OFF)	-	ON	-	-	-	ON	-	-
	PEDESTRIAN	(ON/OFF)	-	-	-	-	-	-	-	-
MEMORY		(ON/OFF)	-	-	-	-	-	-	-	-

*VOLUME DENSITY CONTROLS

PHASING DIAGRAM



NOTES:

- ALL MOVEMENTS SHALL BE ACTUATED. THE PRIMARY THRU MOVEMENT SHOULD HAVE MIN RECALL ACTIVE TO REST IN GREEN.
- ALL DETECTOR DELAYS SHALL BE PLACED IN THE CONTROLLER.

VIDEO DETECTION CHART

DETECTION ZONE	SIZE (FT.)	PULSE OR PRESENCE	DELAY (SEC.)	ASSOCIATED CONTROLLER PHASE	DESCRIPTION
D1	8 X 40	PRESENCE	5	ϕ1	SB LEFT CALL
D2A	8 X 40	PRESENCE	-	ϕ2	NB CALL
D2B	8 X 40	PRESENCE	-	ϕ2	NB CALL
D3A	8 X 40	PRESENCE	-	ϕ3	WB CALL
D3B	8 X 40	PRESENCE	-	ϕ3	WB CALL
D6	8 X 40	PRESENCE	-	ϕ6	SB CALL

PREEMPT CHANNELS

CHANNEL 1 = ϕ(1&6) (SOUTHBOUND ONLY)
CHANNEL 2 = ϕ2+OLA (NORTHBOUND ONLY)
CHANNEL 3 = ϕ3 (WESTBOUND ONLY)

PREEMPT NOTES:

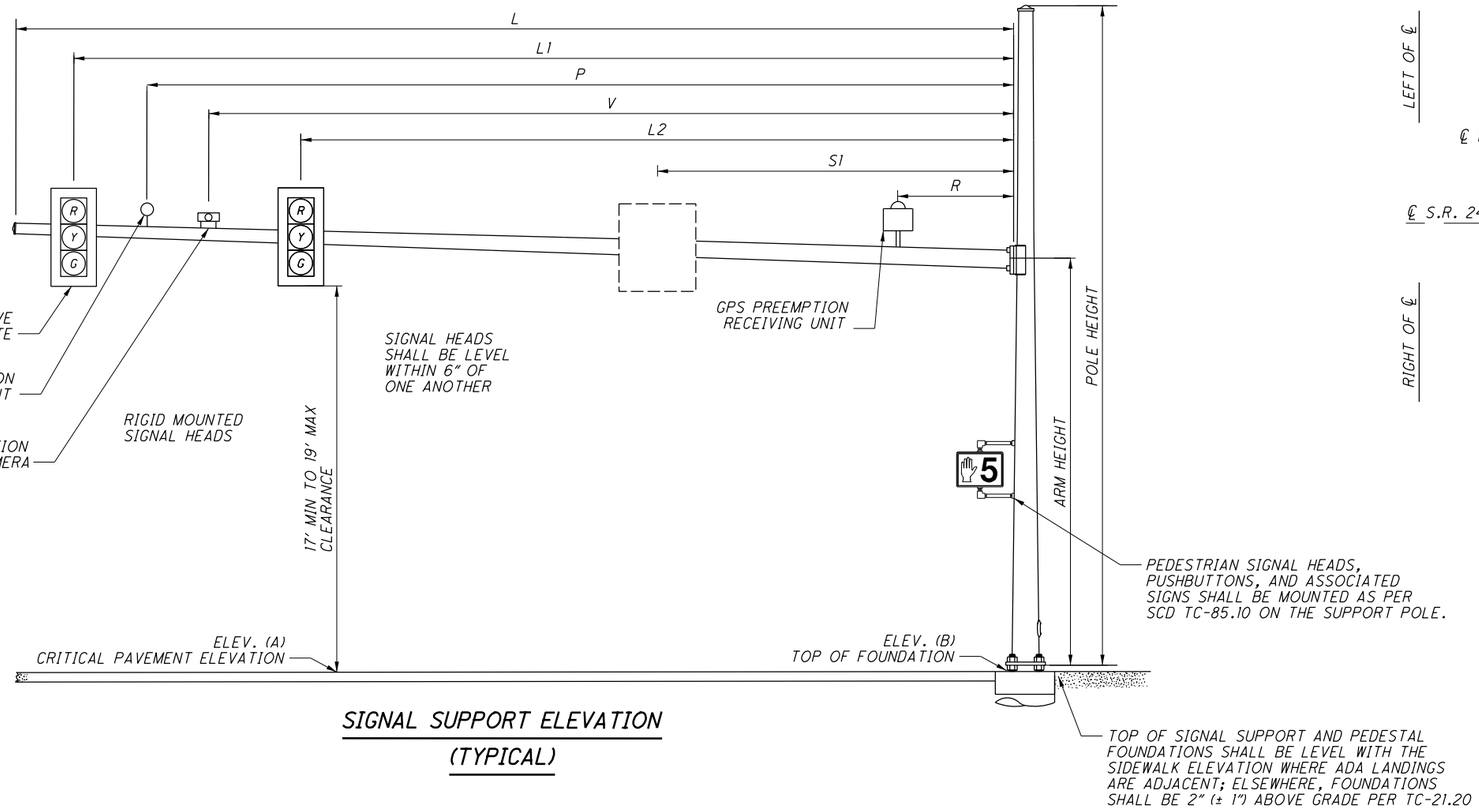
1. UPON PREEMPTION, ACTIVE WALK INDICATIONS SHALL IMMEDIATELY BE TERMINATED, FOLLOWED BY THE TIMING OF THE PEDESTRIAN CLEARANCE INTERVAL.
2. IF ANY ACTIVE PHASE OPPOSES THE PREEMPT PHASE, ALL ACTIVE PHASES SHALL TIME THEIR YELLOW AND ALL RED CLEARANCE INTERVALS UPON COMPLETION OF ANY PEDESTRIAN INTERVALS PRIOR TO TRANSITIONING TO THE PREEMPT PHASE IN ORDER TO AVOID THE POTENTIAL FOR YELLOW BALL TRAP.
3. AFTER RELEASE FROM PREEMPT, YELLOW AND ALL RED CLEARANCE INTERVALS SHALL BE DISPLAYED AND RETURN TO NORMAL COORDINATED TIMING PROGRESSION PER CURRENT COORDINATION RECOVERY SETTINGS.

CALCULATED MBK CHECKED KMG

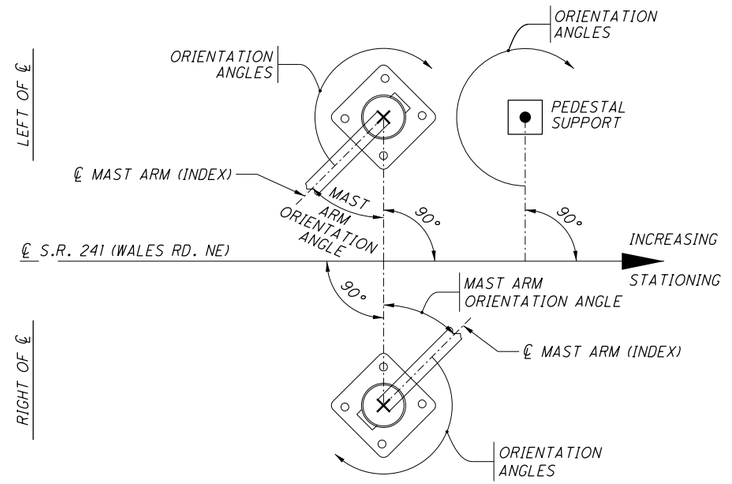
TRAFFIC SIGNAL DETAIL
S.R. 241 (WALES RD. NE) / HILLS AND DALES RD. NE

STA-241-9.71

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SIGNAL SUPPORT ELEVATION (TYPICAL)



POLE ORIENTATION

MAST ARM TABLE

SUPPORT NO.	MAST ARM	STATION	OFFSET	SIGNAL SUPPORT DETAILS							ORIENTATION ANGLES FROM MAST ARM 'A' / INDEX LINE	
				L	L1	L2	R	P	V	S1	PEDESTRIAN SIGNAL	PEDESTRIAN BUTTON
				FT	FT	FT	FT	FT	FT	FT	DEG	DEG
EX. SP-1	A	176+75.4	27.5' LT	32	21.5	7	-	15	13	-	90	90
-	B	-	-	32	19	9	-	25	22	14	-	-
EX. SP-2	A	177+61.9	38.7' RT	38	27	12	5	33	30	19.5	180	180
EX. PS-1	-	176+65.3	57.9' RT	-	-	-	-	-	-	-	0/270	0/270

CALCULATED MBK
CHECKED KMG

TRAFFIC SIGNAL DETAIL

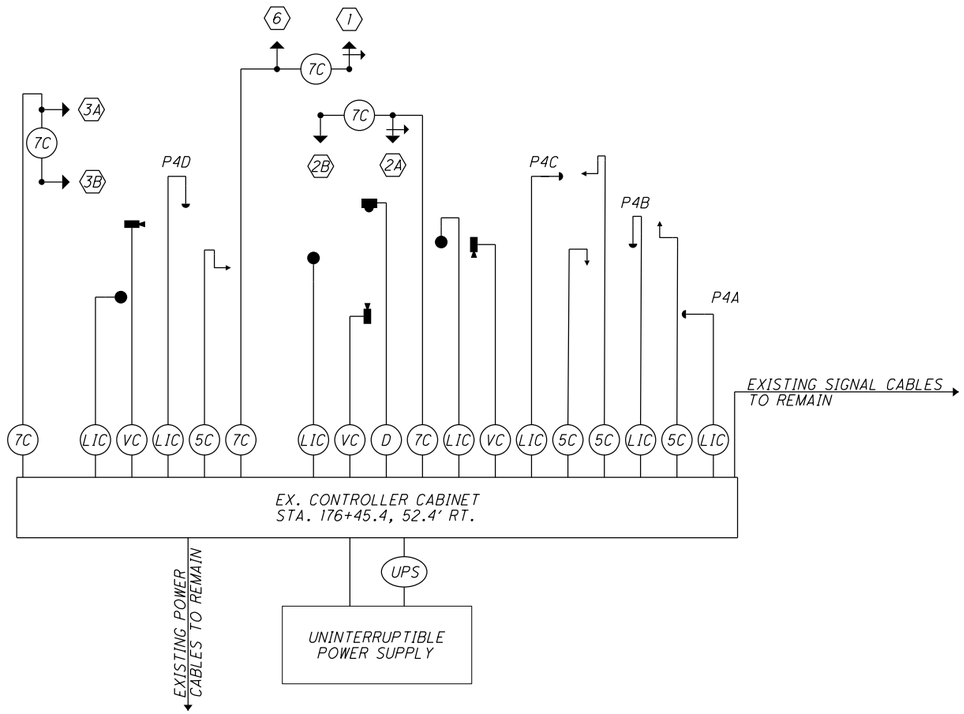
S.R. 241 (WALES RD. NE) / HILLS AND DALES RD. NE

STA-241-9.71

341
395

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WIRING DIAGRAM



FIELD WIRING HOOK-UP CHART

SIGNAL HEAD	INDICATION	FIELD TERMINAL	FLASH
1 (SB LT)	R	ϕ6 R	Y
	Y	ϕ6 Y	
	G	ϕ6 G	
	<--Y---	ϕ1 Y	
	<--G---	ϕ1 G	
2A (NB RT)	R	ϕ2 R	Y
	Y	ϕ2 Y	
	G	ϕ2 G	
	---Y-->	ϕ2 & ϕ3 Y / LS 9 Y	
	---G-->	ϕ2 & ϕ3 G / LS 9 G	
2B (NB)	R	ϕ2 R	Y
	Y	ϕ2 Y	
	G	ϕ2 G	
3A,3B (WB)	R	ϕ3 R	R
	Y	ϕ3 Y	
	G	ϕ3 G	
6 (SB)	R	ϕ6 R	Y
	Y	ϕ6 Y	
	G	ϕ6 G	
PEDESTRIAN MOVEMENTS			
PED A	W	ϕ4 PED / LS 4 G	OUT
	DW	ϕ4 PED / LS 4 R	
PED B	W	ϕ4 PED / LS 4 G	OUT
	DW	ϕ4 PED / LS 4 R	
OVERLAPS			
OLA	---Y-->	ϕ2 & ϕ3 Y / LS 9 Y	OUT
	---G-->	ϕ2 & ϕ3 G / LS 9 G	
LS = LOAD SWITCH			

FOR WIRING DIAGRAM LEGEND, SEE SHEET 313 .

CALCULATED MBK
CHECKED KMG

TRAFFIC SIGNAL DETAIL
S.R. 241 (WALES RD. NE) / HILLS AND DALES RD. NE

STA-241-9.71

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PROPOSED GROUND MOUNTED CONTROLLER
STA. 304+53.4, 39.8' LT.
(SEE SIGNAL PLANS)

14' OF DROP CABLE
(IN SIGNAL CONDUIT)

24" x 35" x 26" PULL BOX
STA. 304+63.0, 48.6' LT.
(SEE SIGNAL PLANS)

(1)-1.5" CONDUIT WITH (1)-INTERCONNECT
IN TRENCH = 234'

PB-1

(1)-1.5" CONDUIT WITH (1)-INTERCONNECT
IN TRENCH = 178'

℄ CONST. S.R. 241 (WALES RD. NE)

℄ R/W & CONST. S.R. 172 (LINCOLN WAY E)

MATCH LINE STA. 104+50

PULL BOX TABLE

PULL BOX #	STATION	OFFSET	SIDE	SIZE (IN.)
PB-1	102+73.0	26.0'	LT.	24

LEGEND

- SIGNAL SUPPORT POLE
- CONTROLLER CABINET
- PROPOSED PULL BOX (725.08)
- PROPOSED CONDUIT (725.04)
- SPLICE ENCLOSURE
- SLACK INSTALLATION

HORIZONTAL SCALE IN FEET
0 10 20 40

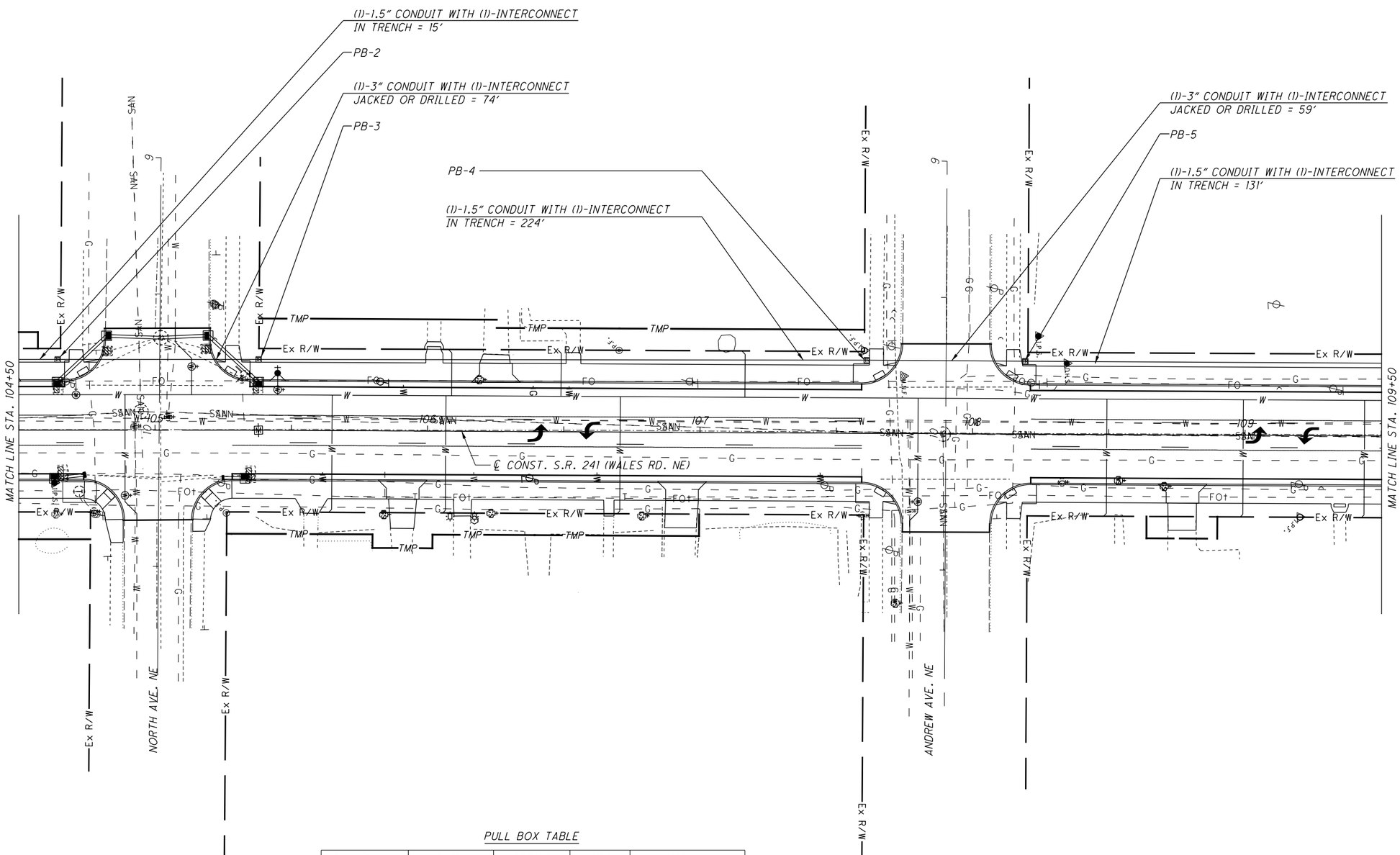
CALCULATED MBK
CHECKED KMG

TRAFFIC INTERCONNECT PLAN
BEGIN TO STA. 104+50

STA-241-9.71

343
395

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PULL BOX TABLE

PULL BOX #	STATION	OFFSET	SIDE	SIZE (IN.)
PB-2	104+64.3	26.0'	LT.	24
PB-3	105+38.0	26.0'	LT.	24
PB-4	107+61.1	26.8'	LT.	24
PB-5	108+19.2	26.7'	LT.	24

FOR LEGEND SEE SHEET 343 .

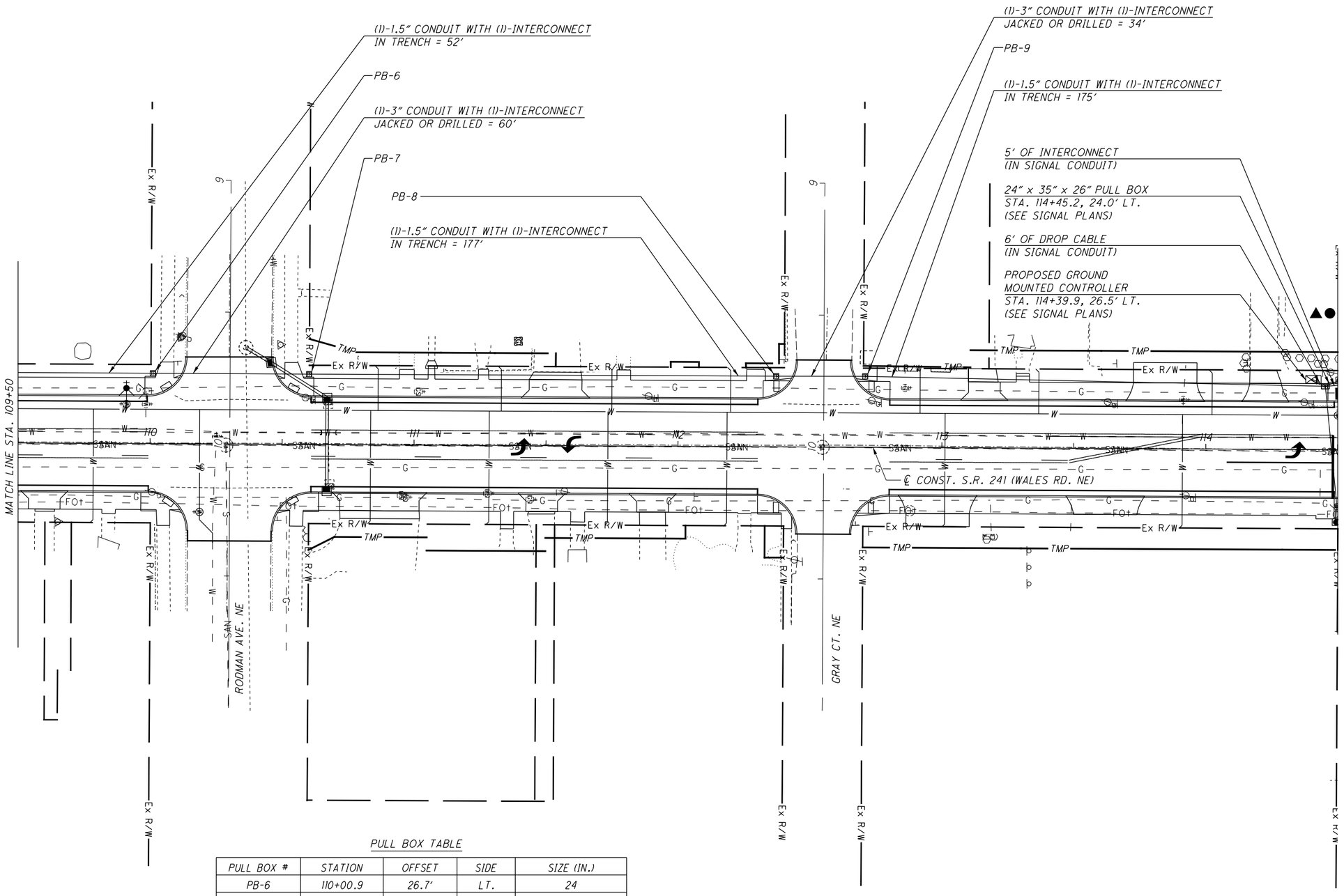
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MBK
CHECKED KMG

TRAFFIC INTERCONNECT PLAN
STA. 104+50 TO STA. 109+50

STA-241-9.71

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PULL BOX TABLE

PULL BOX #	STATION	OFFSET	SIDE	SIZE (IN.)
PB-6	110+00.9	26.7'	LT.	24
PB-7	110+60.1	26.6'	LT.	24
PB-8	112+37.0	26.8'	LT.	24
PB-9	112+70.8	26.9'	LT.	24

FOR LEGEND SEE SHEET 343 .

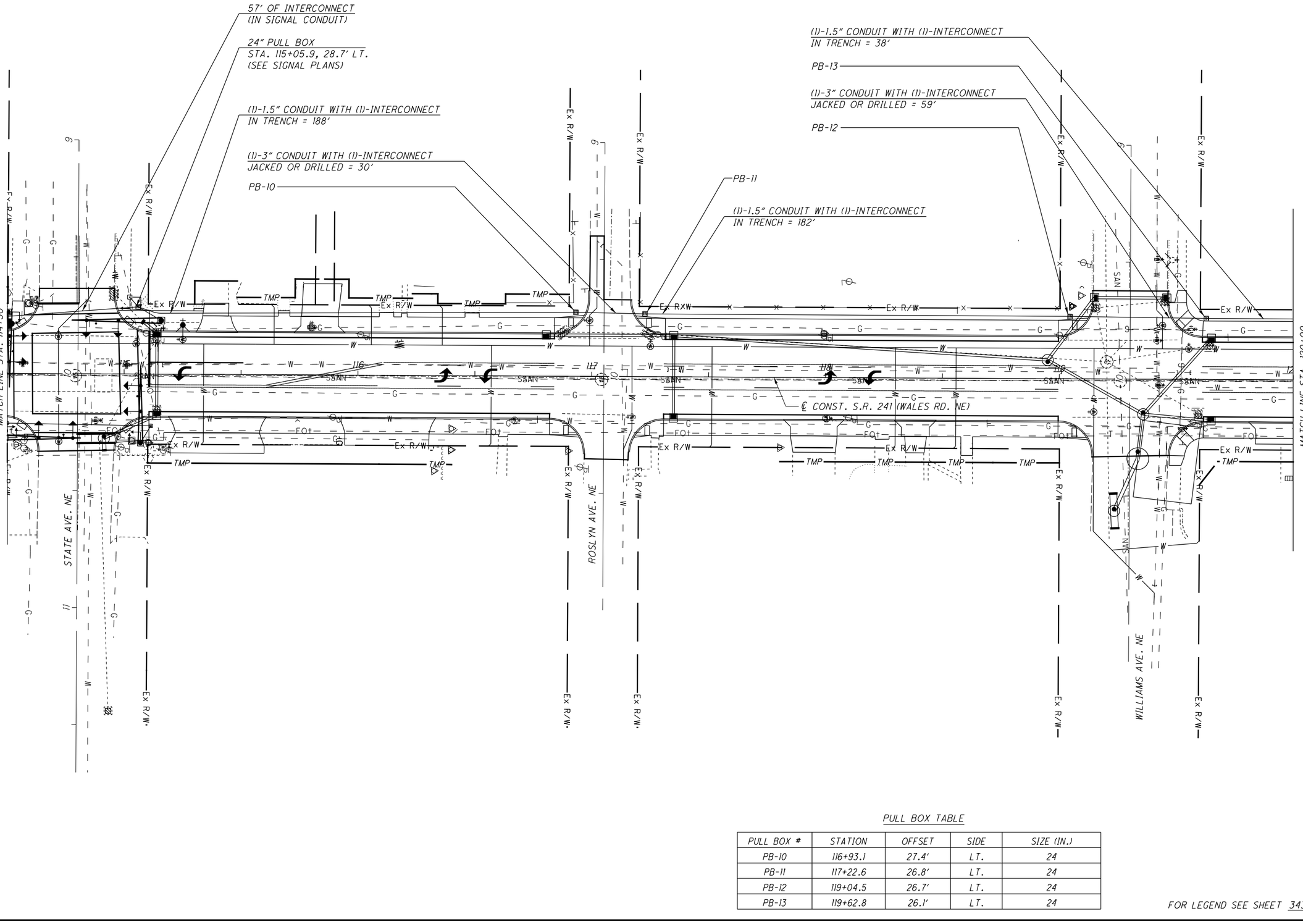
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MBK
CHECKED KMG

TRAFFIC INTERCONNECT PLAN
STA. 109+50 TO STA. 114+50

STA-241-9.71

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PULL BOX TABLE

PULL BOX #	STATION	OFFSET	SIDE	SIZE (IN.)
PB-10	116+93.1	27.4'	LT.	24
PB-11	117+22.6	26.8'	LT.	24
PB-12	119+04.5	26.7'	LT.	24
PB-13	119+62.8	26.1'	LT.	24

FOR LEGEND SEE SHEET 343 .

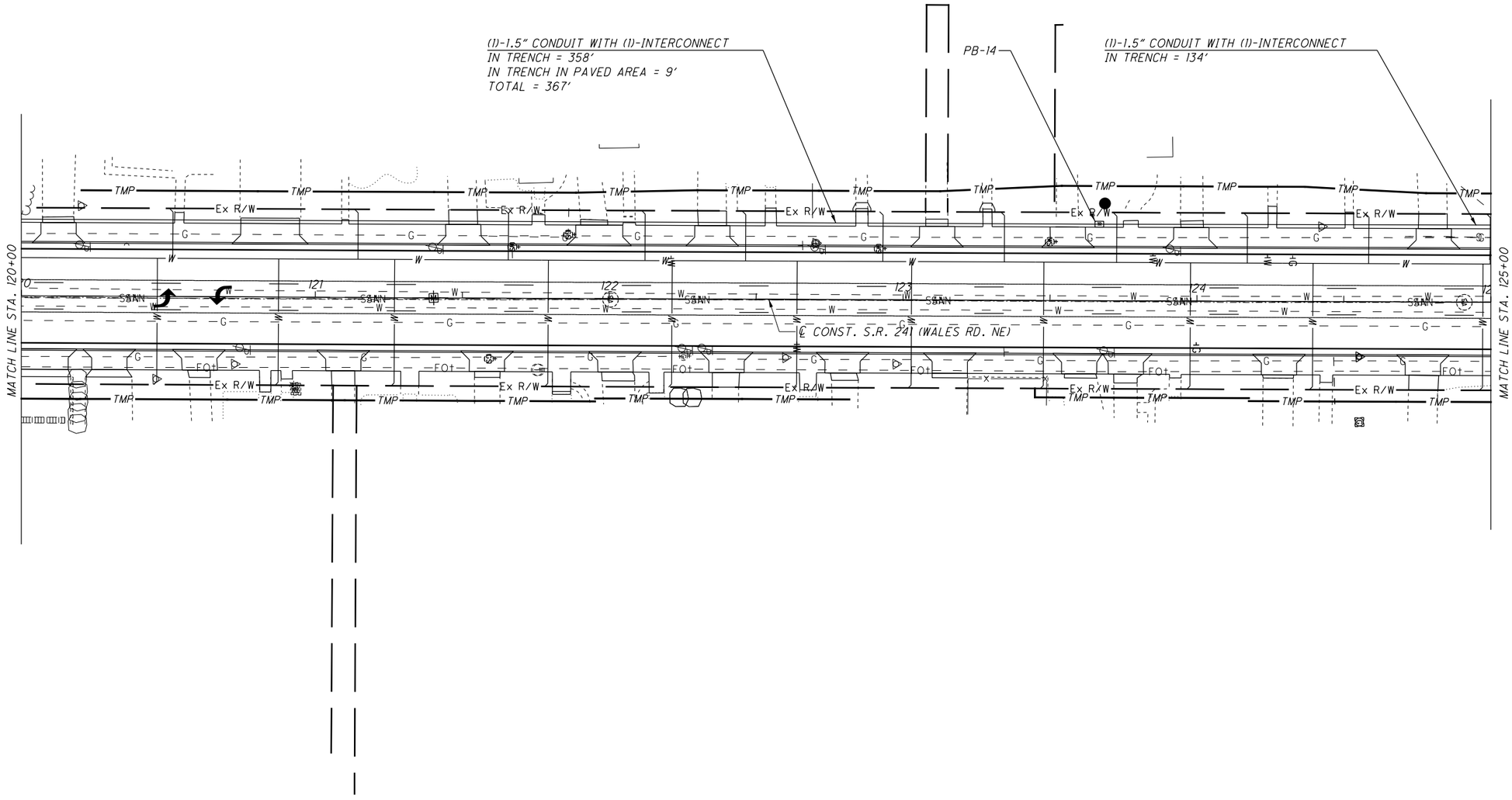
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MBK
CHECKED KMG

TRAFFIC INTERCONNECT PLAN
STA. 114+50 TO STA. 120+00

STA-241-9.71

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PULL BOX TABLE

PULL BOX #	STATION	OFFSET	SIDE	SIZE (IN.)
PB-14	123+66.7	26.0'	LT.	24 X 35 X 26

FOR LEGEND SEE SHEET 343 .

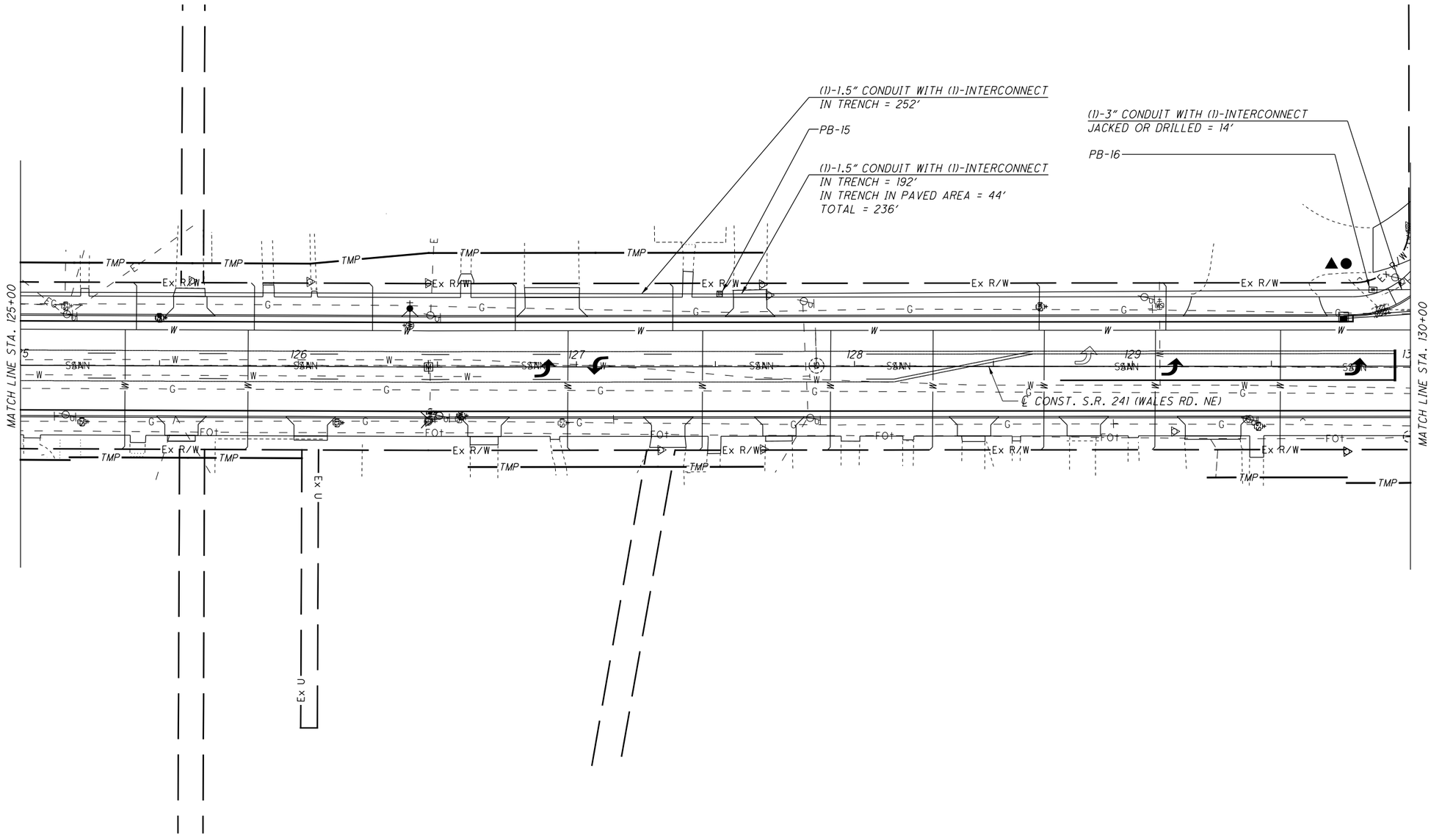
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MBK
CHECKED KMG

TRAFFIC INTERCONNECT PLAN
STA. 120+00 TO STA. 125+00

STA-241-9.71

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PULL BOX TABLE

PULL BOX #	STATION	OFFSET	SIDE	SIZE (IN.)
PB-15	127+51.6	26.2'	LT.	24
PB-16	129+86.5	27.4'	LT.	24 X 35 X 26

FOR LEGEND SEE SHEET 343 .

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MBK
CHECKED KMG

TRAFFIC INTERCONNECT PLAN
STA. 125+00 TO STA. 130+00

STA-241-9.71

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(1)-3" CONDUIT WITH (1)-INTERCONNECT
JACKED OR DRILLED = 94'

24" PULL BOX
STA. 130+93.6, 28.3' LT.
(SEE SIGNAL PLANS)

71' OF INTERCONNECT
(IN SIGNAL CONDUIT)

24" x 35" x 26" PULL BOX
STA. 131+64.2, 28.8' LT.
(SEE SIGNAL PLANS)

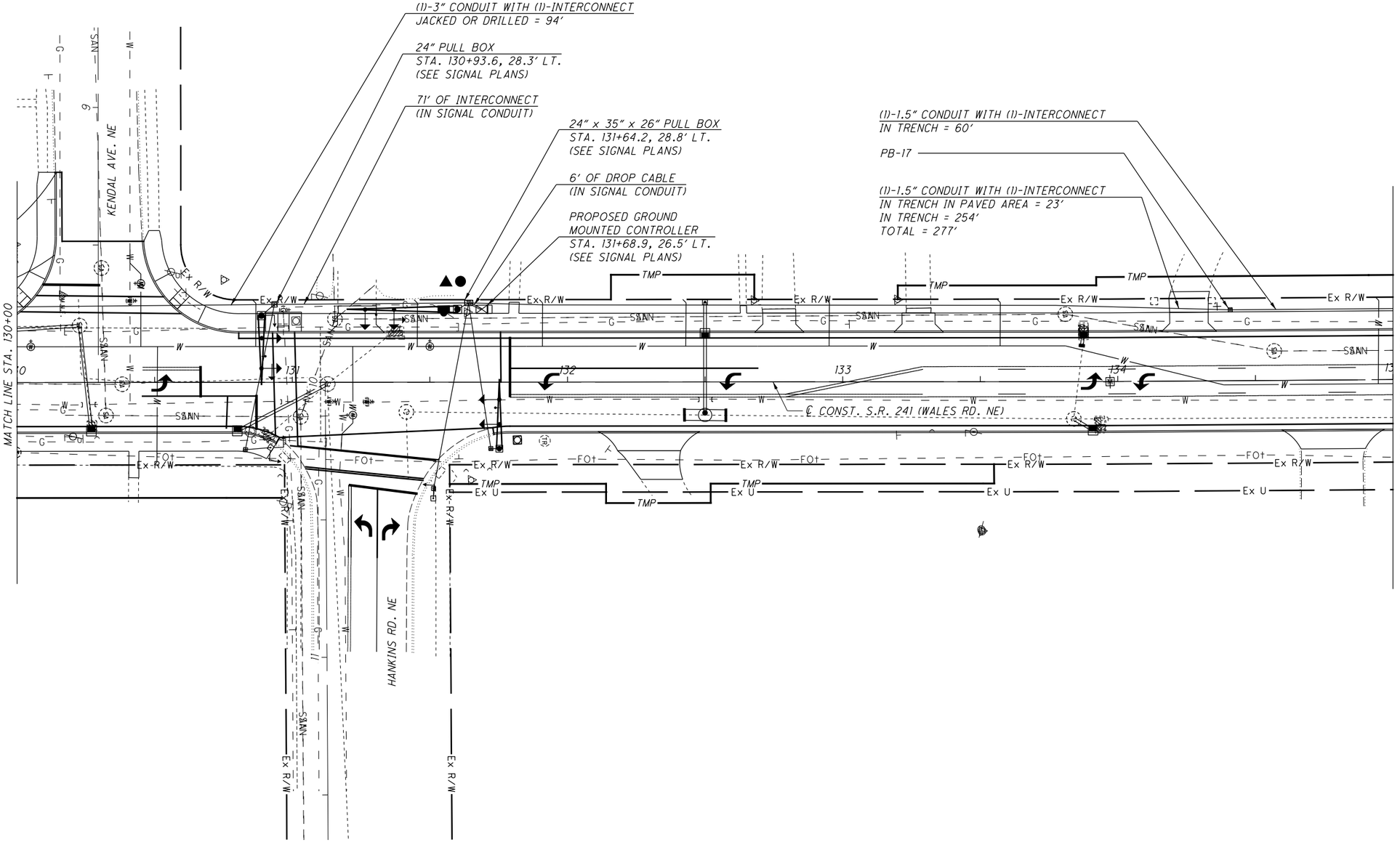
6' OF DROP CABLE
(IN SIGNAL CONDUIT)

PROPOSED GROUND
MOUNTED CONTROLLER
STA. 131+68.9, 26.5' LT.
(SEE SIGNAL PLANS)

(1)-1.5" CONDUIT WITH (1)-INTERCONNECT
IN TRENCH = 60'

PB-17

(1)-1.5" CONDUIT WITH (1)-INTERCONNECT
IN TRENCH IN PAVED AREA = 23'
IN TRENCH = 254'
TOTAL = 277'



PULL BOX TABLE

PULL BOX #	STATION	OFFSET	SIDE	SIZE (IN.)
PB-17	134+41.0	25.8'	LT.	24

FOR LEGEND SEE SHEET 343 .

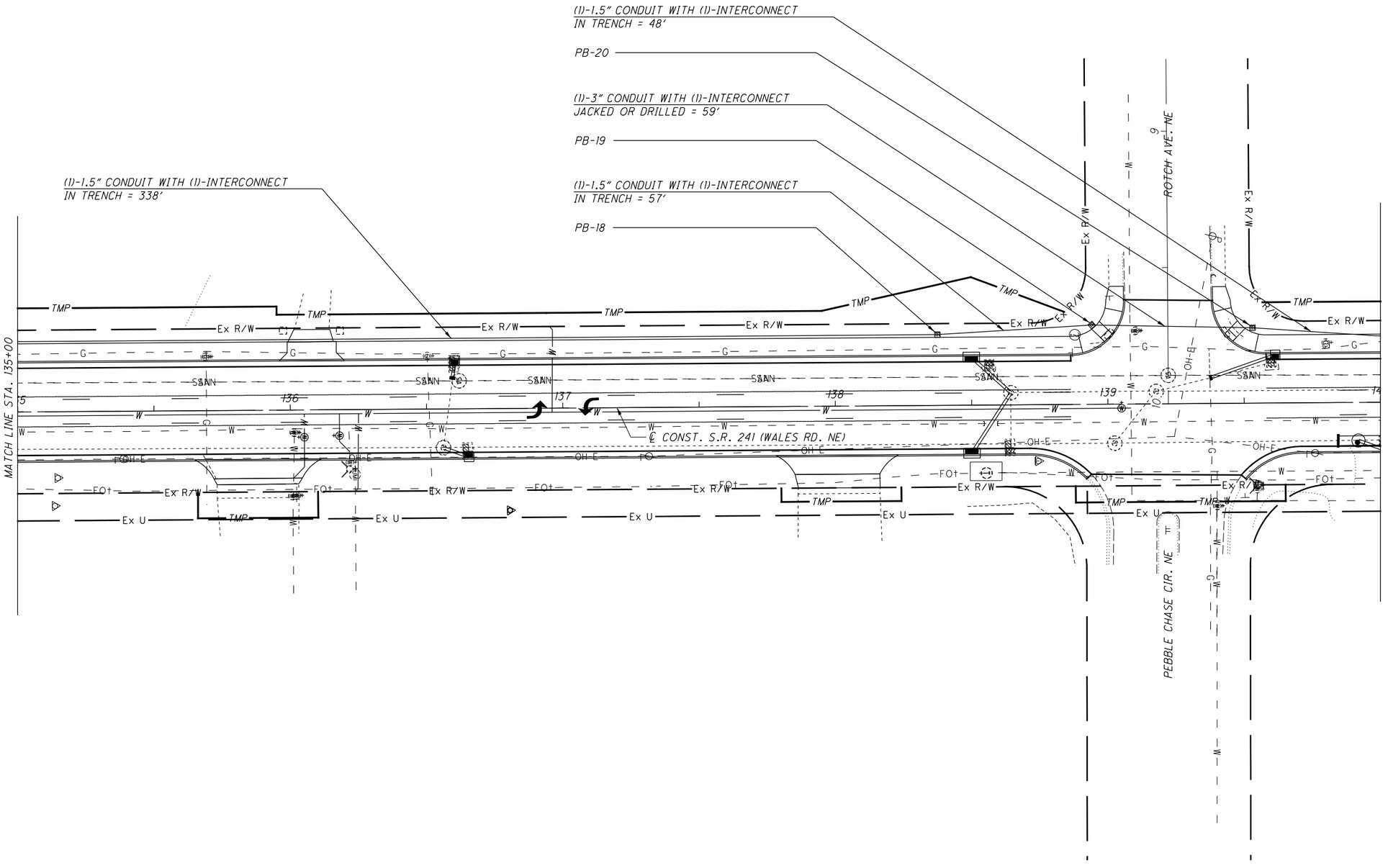
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MBK
CHECKED KMG

TRAFFIC INTERCONNECT PLAN
STA. 130+00 TO STA. 135+00

STA-241-9.71

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PULL BOX TABLE

PULL BOX #	STATION	OFFSET	SIDE	SIZE (IN.)
PB-18	138+37.6	26.0'	LT.	24
PB-19	138+94.3	29.1'	LT.	24
PB-20	139+53.3	27.7'	LT.	24

FOR LEGEND SEE SHEET 343 .

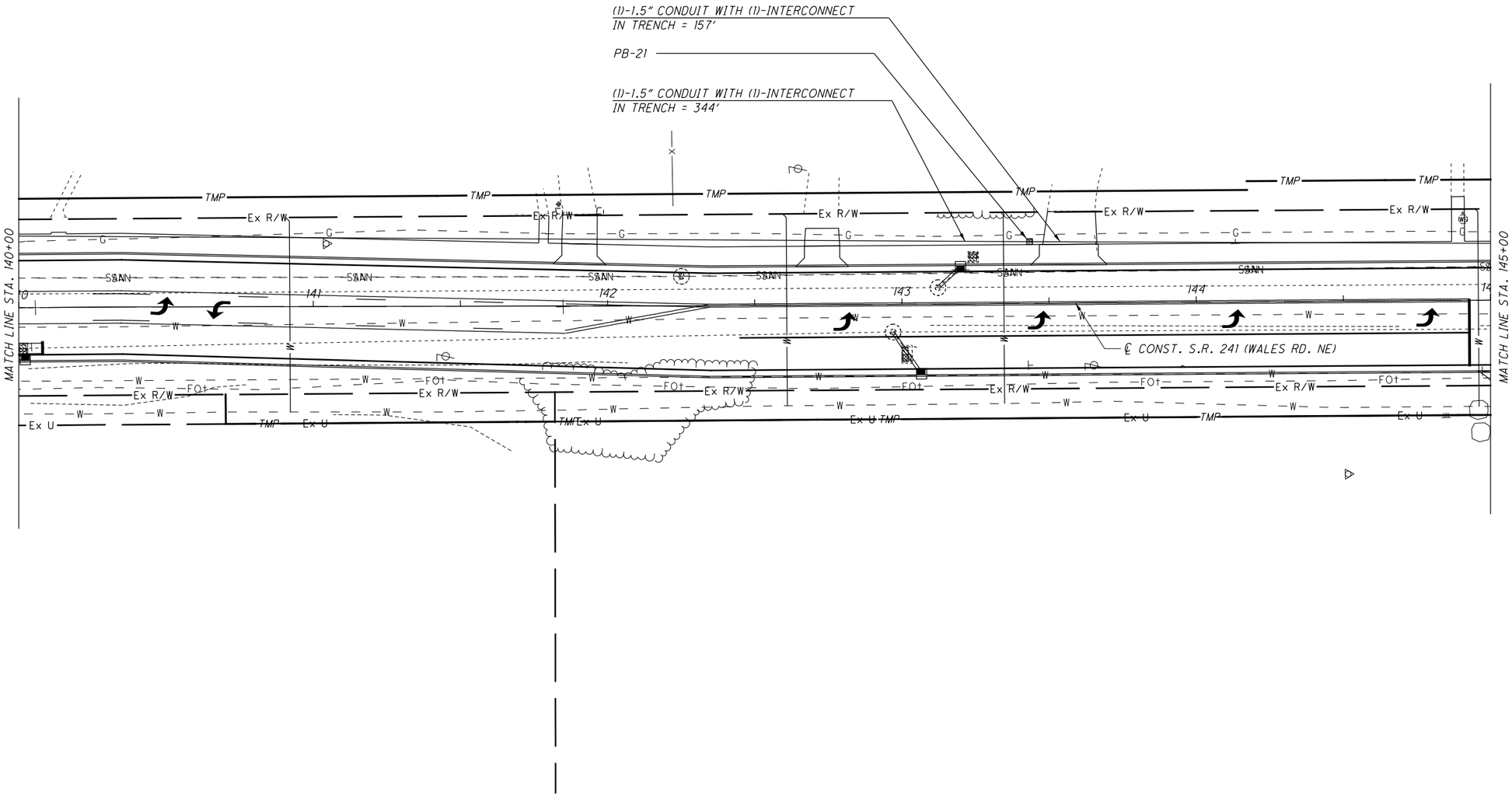
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MBK
CHECKED KMG

TRAFFIC INTERCONNECT PLAN
STA. 135+00 TO STA. 140+00

STA-241-9.71

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PULL BOX TABLE

PULL BOX #	STATION	OFFSET	SIDE	SIZE (IN.)
PB-21	143+43.5	21.0'	LT.	24

FOR LEGEND SEE SHEET 343 .

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MBK
CHECKED KMG

TRAFFIC INTERCONNECT PLAN
STA. 140+00 TO STA. 145+00

STA-241-9.71

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24" PULL BOX
STA. 145+65.2, 39.2' LT.
(SEE SIGNAL PLANS)

27' OF INTERCONNECT
(IN SIGNAL CONDUIT)

12' OF DROP CABLE
(IN SIGNAL CONDUIT)

(I)-1.5" CONDUIT WITH (I)-INTERCONNECT
IN TRENCH = 46'

68' OF INTERCONNECT
(IN SIGNAL CONDUIT)

24" PULL BOX
STA. 146+31.7, 49.4' LT.
(SEE SIGNAL PLANS)

(I)-1.5" CONDUIT WITH (I)-INTERCONNECT
IN TRENCH = 192'

(I)-1.5" CONDUIT WITH (I)-INTERCONNECT
IN TRENCH = 23'

PB-24

(I)-3" CONDUIT WITH (I)-INTERCONNECT
JACKED OR DRILLED = 47'

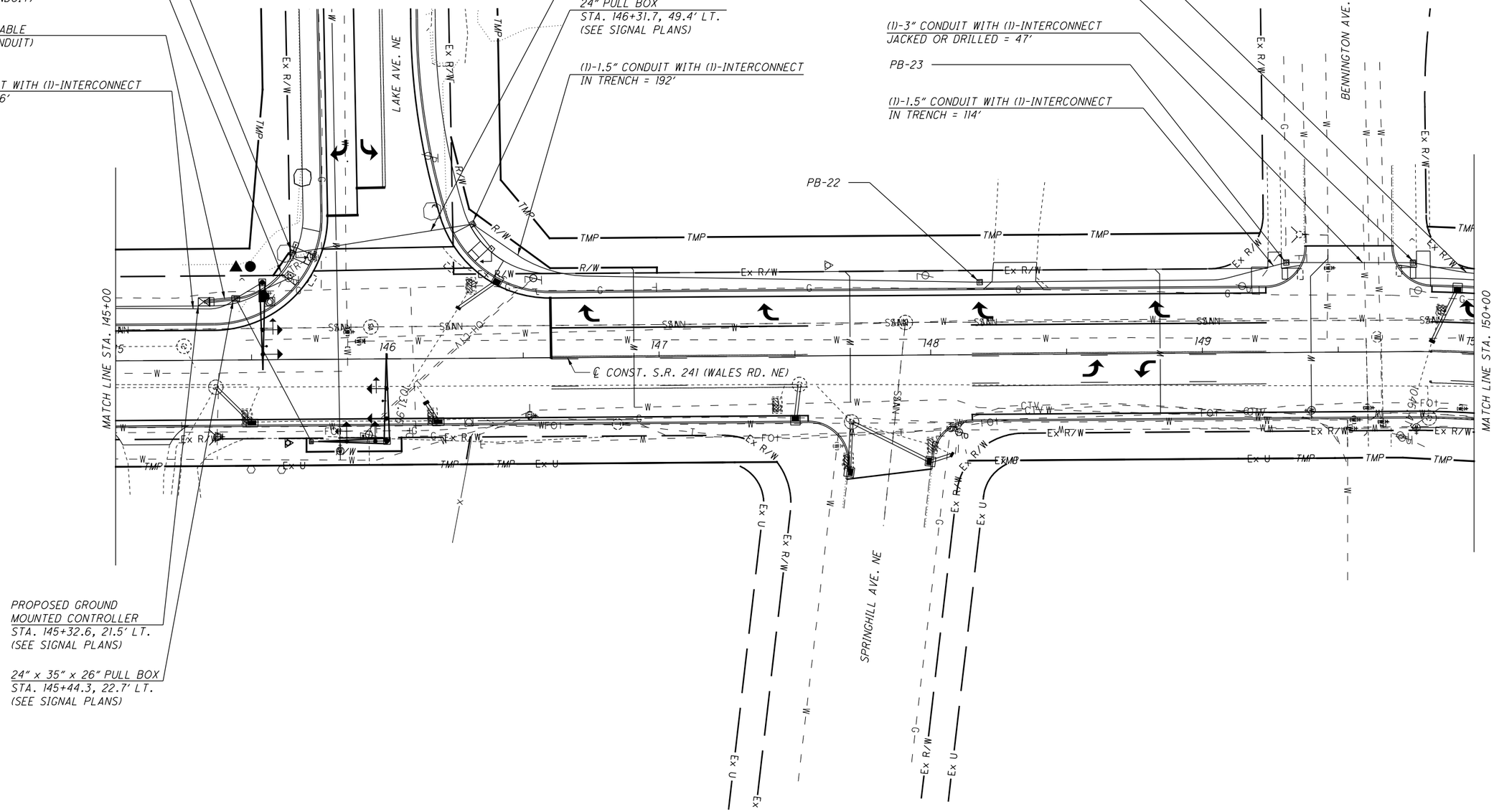
PB-23

(I)-1.5" CONDUIT WITH (I)-INTERCONNECT
IN TRENCH = 114'

PB-22

PROPOSED GROUND
MOUNTED CONTROLLER
STA. 145+32.6, 21.5' LT.
(SEE SIGNAL PLANS)

24" x 35" x 26" PULL BOX
STA. 145+44.3, 22.7' LT.
(SEE SIGNAL PLANS)



PULL BOX TABLE

PULL BOX #	STATION	OFFSET	SIDE	SIZE (IN.)
PB-22	148+18.2	26.7'	LT.	24
PB-23	149+31.1	33.1'	LT.	24
PB-24	149+77.6	32.7'	LT.	24

FOR LEGEND SEE SHEET 343 .

N

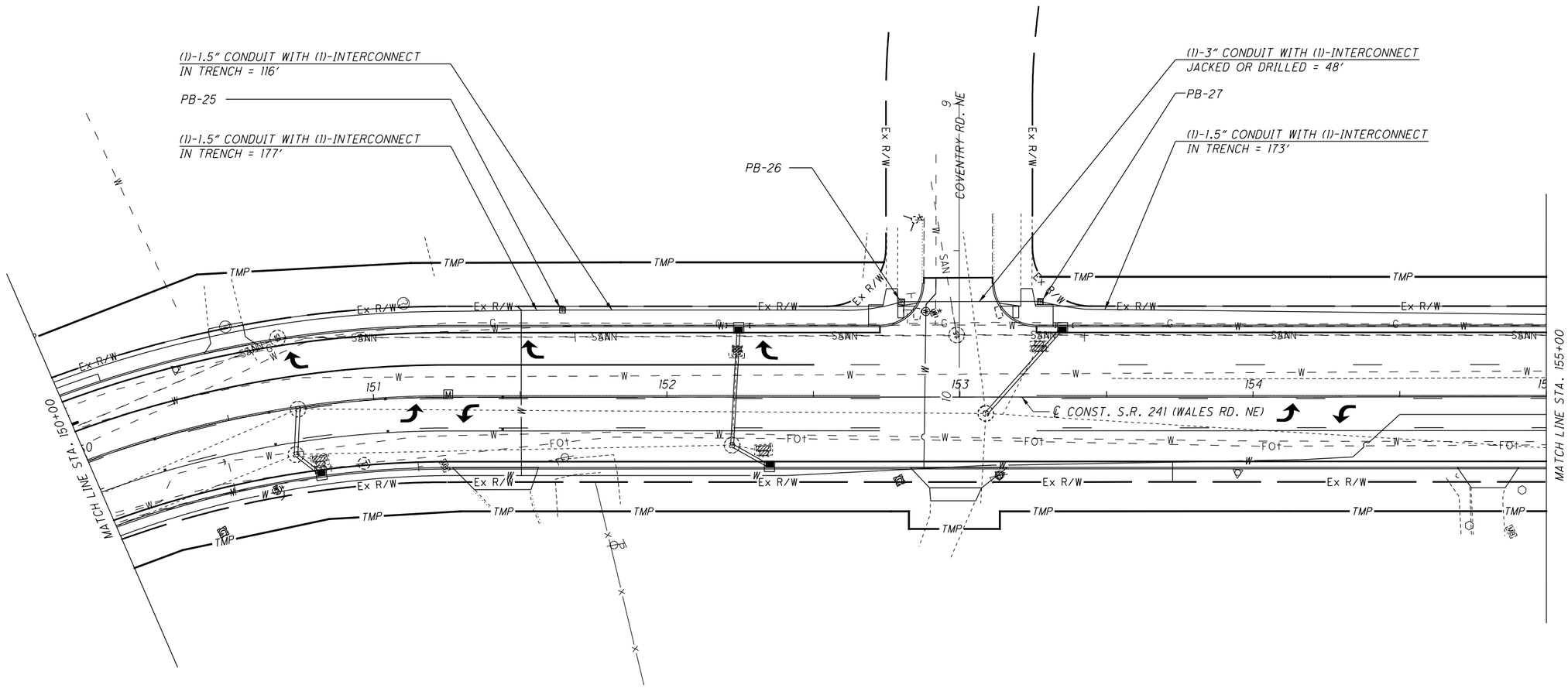
0 10 20 40
HORIZONTAL
SCALE IN FEET

CALCULATED MBK
CHECKED KMG

TRAFFIC INTERCONNECT PLAN
STA. 145+00 TO STA. 150+00

STA-241-9.71

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PULL BOX TABLE

PULL BOX #	STATION	OFFSET	SIDE	SIZE (IN.)
PB-25	151+64.4	29.7'	LT.	24
PB-26	152+80.1	32.5'	LT.	24
PB-27	153+27.4	32.6'	LT.	24

FOR LEGEND SEE SHEET 343 .

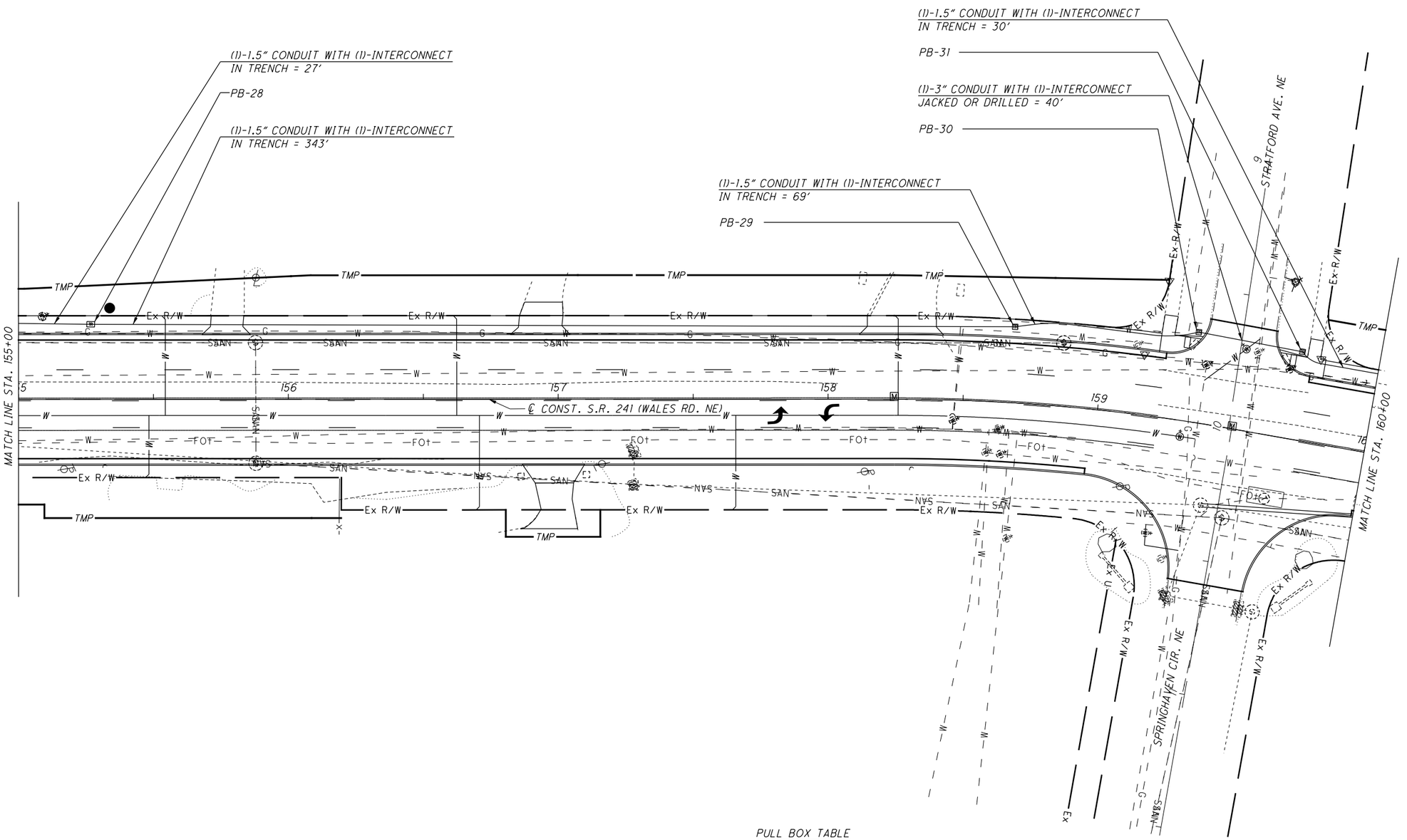
CALCULATED MBK
CHECKED KMG

HORIZONTAL SCALE IN FEET
0 10 20 40

TRAFFIC INTERCONNECT PLAN
STA. 150+00 TO STA. 155+00

STA-241-9.71

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PULL BOX TABLE

PULL BOX #	STATION	OFFSET	SIDE	SIZE (IN.)
PB-28	155+26.7	27.8'	LT.	24 X 35 X 26
PB-29	158+67.7	28.2'	LT.	24
PB-30	159+32.8	33.4'	LT.	24
PB-31	159+71.1	32.7'	LT.	24

FOR LEGEND SEE SHEET 343.

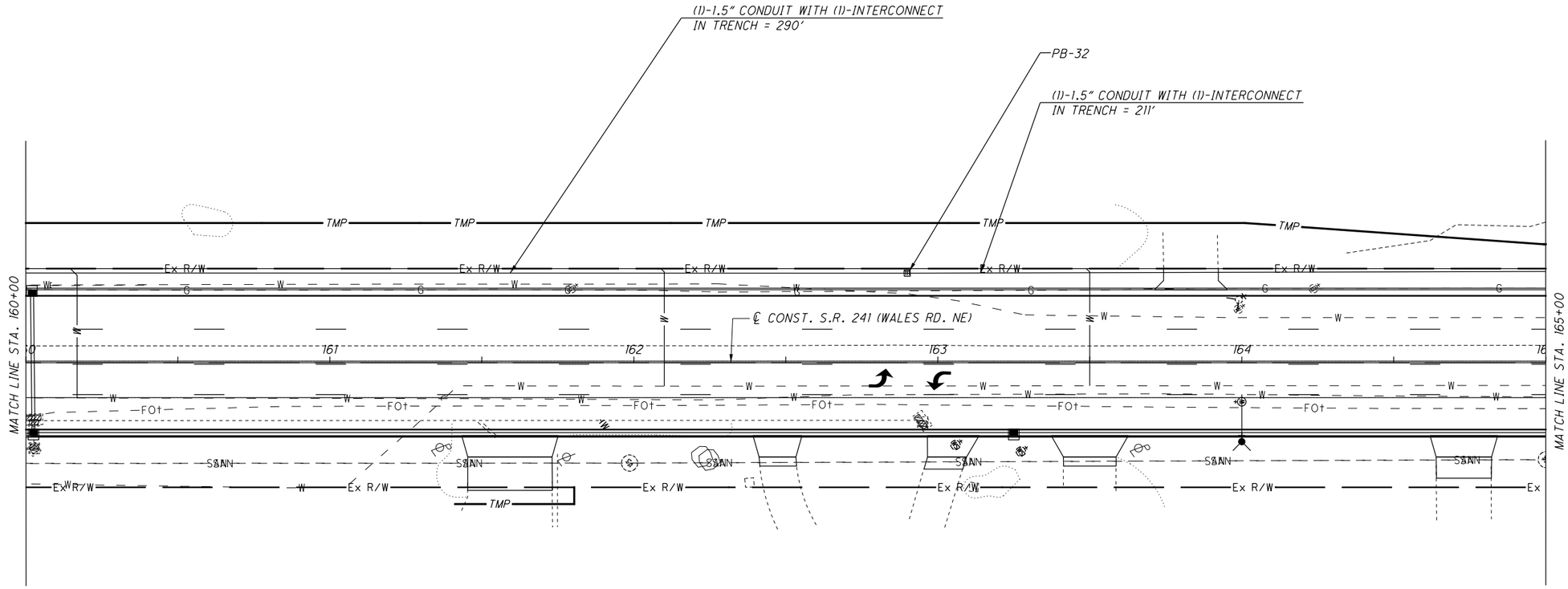
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MBK
CHECKED KMG

TRAFFIC INTERCONNECT PLAN
STA. 155+00 TO STA. 160+00

STA-241-9.71

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PULL BOX TABLE

PULL BOX #	STATION	OFFSET	SIDE	SIZE (IN.)
PB-32	162+89.9	29.5'	LT.	24

NOTE: PB-33 IS NOT USED.

FOR LEGEND SEE SHEET 343 .

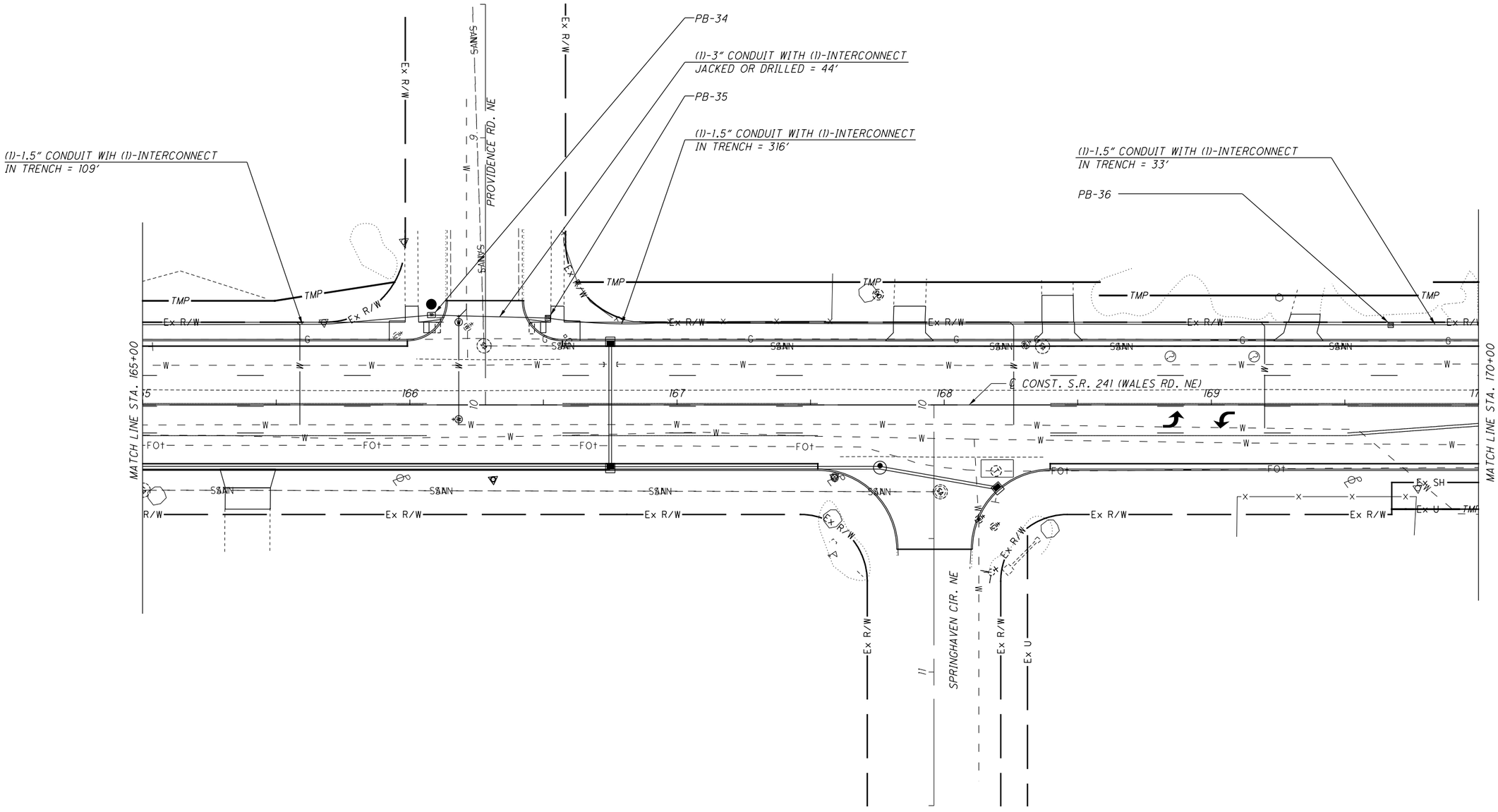
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MBK
CHECKED KMG

TRAFFIC INTERCONNECT PLAN
STA. 160+00 TO STA. 165+00

STA-241-9.71

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PULL BOX TABLE

PULL BOX #	STATION	OFFSET	SIDE	SIZE (IN.)
PB-34	166+08.1	33.6'	LT.	24 X 35 X 26
PB-35	166+51.6	32.5'	LT.	24
PB-36	169+67.2	30.0'	LT.	24

NOTE: PB-37 IS NOT USED.

FOR LEGEND SEE SHEET 343 .

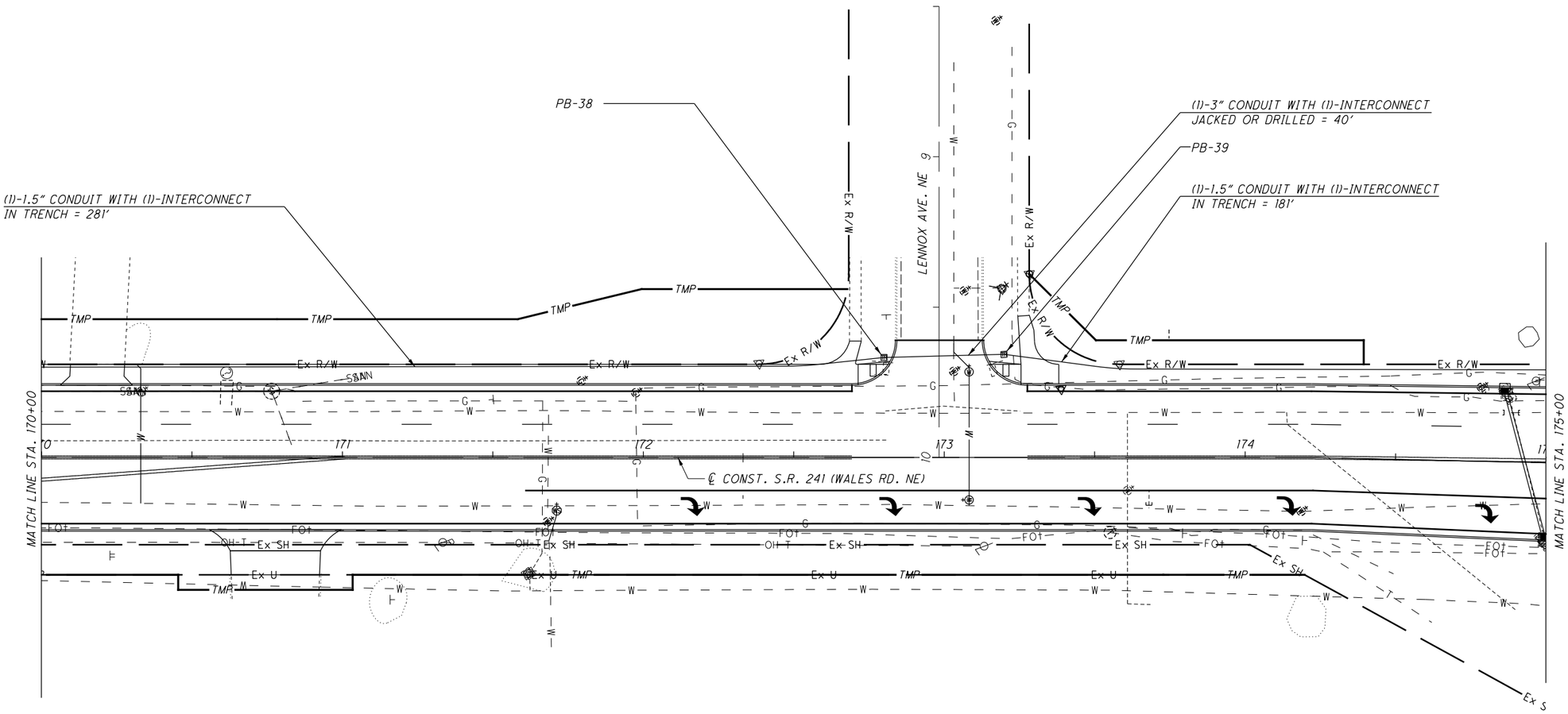
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MBK
CHECKED KMG

TRAFFIC INTERCONNECT PLAN
STA. 165+00 TO STA. 170+00

STA-241-9.71

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PULL BOX TABLE

PULL BOX #	STATION	OFFSET	SIDE	SIZE (IN.)
PB-38	172+80.0	33.3'	LT.	24
PB-39	173+19.9	34.3'	LT.	24

FOR LEGEND SEE SHEET 343 .

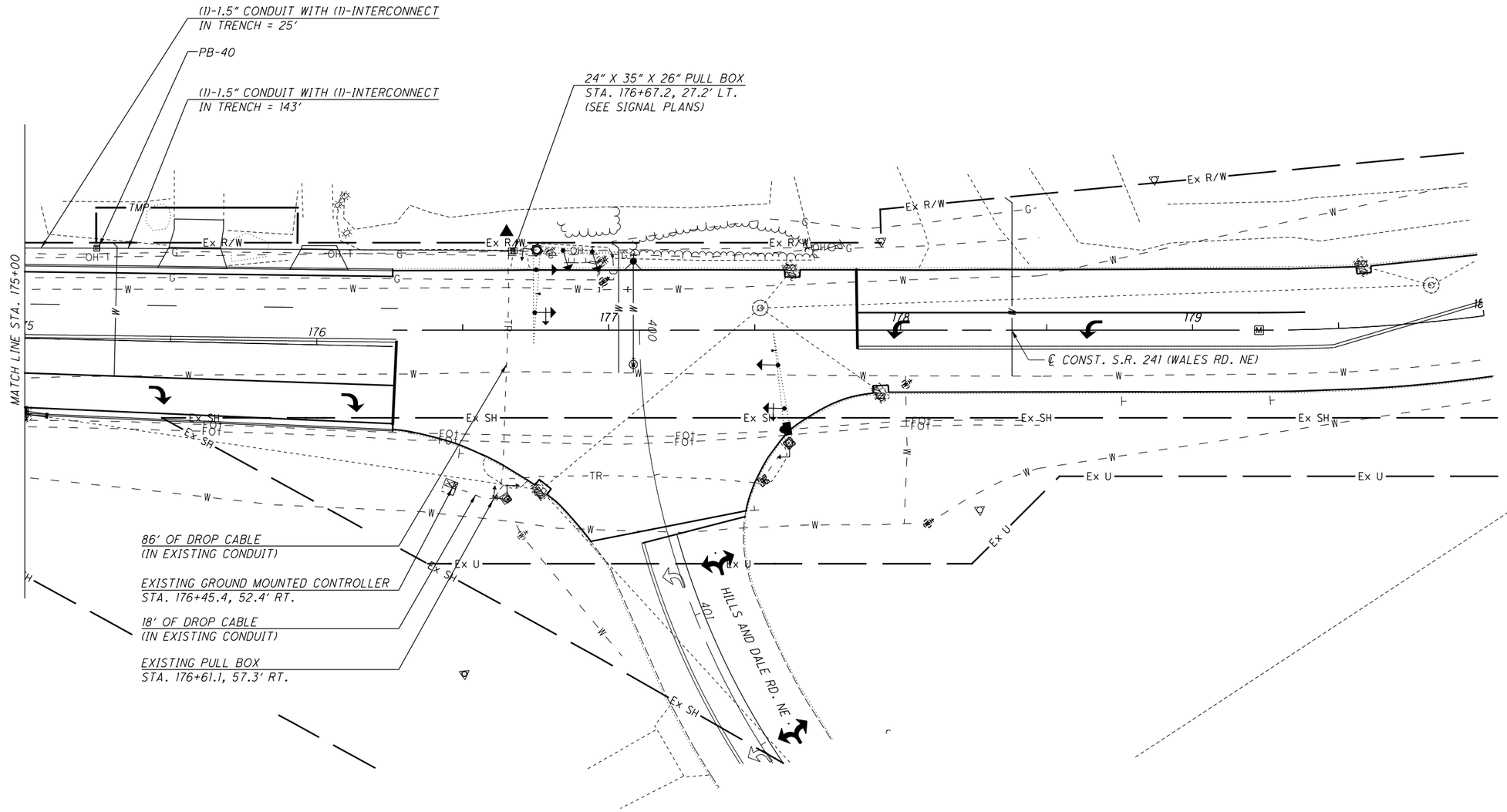
HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MBK
CHECKED KMG

TRAFFIC INTERCONNECT PLAN
STA. 170+00 TO STA. 175+00

STA-241-9.71

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PULL BOX TABLE

PULL BOX #	STATION	OFFSET	SIDE	SIZE (IN.)
PB-40	175+24.0	31.4'	LT.	24

FOR LEGEND SEE SHEET 343.

HORIZONTAL SCALE IN FEET
0 10 20 40

CALCULATED MBK
CHECKED KMG

TRAFFIC INTERCONNECT PLAN
STA. 175+00 TO END

STA-241-9.71

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COORDINATION TIMING CHART

	SPLITS (G+Y+AR) IN SECONDS								CYCLE LENGTH (SEC)	OFFSET 1 (SEC)
PHASE	1	2	3	4	5	6	7	8		
DIRECTION	WB LT	EB	SB	NB	EB LT	WB	-	-		
PLAN NO.	S.R. 241 (WALES RD. NE) / S.R. 172 (LINCOLN WAY E)									
1/1/1	15	38	34	13	15	38	-	-	100	0
2/2/2	15	38	34	13	15	38	-	-	100	0
3/3/3	15	45	35	15	20	40	-	-	110	0

NOTES: DURING COORDINATION THE SIGNAL SHALL OPERATE WITH FIXED FORCE-OFFS AND PHASE 3 SHALL OPERATE IN MINIMUM RECALL.

	SPLITS (G+Y+AR) IN SECONDS								CYCLE LENGTH (SEC)	OFFSET 1 (SEC)
PHASE	1	2	3	4	5	6	7	8		
DIRECTION	-	NB	-	EB	-	SB	-	WB		
PLAN NO.	S.R. 241 (WALES RD. NE) / STATE AVE. NE									
1/1/1	-	65	-	35	-	65	-	35	100	25
2/2/2	-	65	-	35	-	65	-	35	100	35
3/3/3	-	70	-	40	-	70	-	40	110	25

	SPLITS (G+Y+AR) IN SECONDS								CYCLE LENGTH (SEC)	OFFSET 1 (SEC)
PHASE	1	2	3	4	5	6	7	8		
DIRECTION	SB LT	NB	-	-	-	SB	-	WB		
PLAN NO.	S.R. 241 (WALES RD. NE) / HANKINS RD. NE									
1/1/1	20	50	-	-	-	70	-	30	100	20
2/2/2	20	50	-	-	-	70	-	30	100	25
3/3/3	20	60	-	-	-	80	-	30	110	20

	SPLITS (G+Y+AR) IN SECONDS								CYCLE LENGTH (SEC)	OFFSET 1 (SEC)
PHASE	1	2	3	4	5	6	7	8		
DIRECTION	-	NB	-	EB	NB LT	SB	-	-		
PLAN NO.	S.R. 241 (WALES RD. NE) / LAKE AVE. NE									
1/1/1	-	60	-	40	20	40	-	-	100	55
2/2/2	-	65	-	35	20	45	-	-	100	65
3/3/3	-	70	-	40	20	50	-	-	110	65

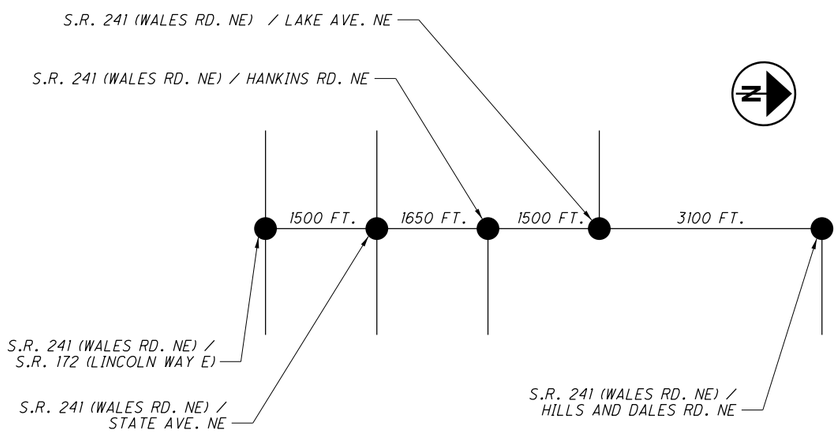
	SPLITS (G+Y+AR) IN SECONDS								CYCLE LENGTH (SEC)	OFFSET 1 (SEC)
PHASE	1	2	3	4	5	6	7	8		
DIRECTION	SB LT	NB	WB	PED	-	SB	-	-		
PLAN NO.	S.R. 241 (WALES RD. NE) / HILLS AND DALES RD. NE									
1/1/1	15	30	30	25	-	45	-	-	100	45
2/2/2	15	30	30	25	-	45	-	-	100	45
3/3/3	15	30	40	25	-	45	-	-	110	65

NOTE: DURING COORDINATION, IT IS ANTICIPATED THAT THIS SIGNAL WILL DROP OUT OF COORDINATION UPON SERVING THE EXCLUSIVE PEDESTRIAN PHASE 4.

COORDINATION TIMING PLANS

DAY(S) OF WEEK	PLAN NAME	HOURS	CYCLE/SPLIT/OFFSET	CYCLE LENGTH (SEC)
MON-FRI	FREE	00:00 - 06:30	-	-
MON-FRI	PATTERN 1	06:30 - 11:30	1/1/1	100
MON-FRI	PATTERN 2	011:30 - 14:30	2/2/2	100
MON-FRI	PATTERN 3	14:30 - 18:00	3/3/3	110
MON-FRI	PATTERN 2	18:00 - 21:00	2/2/2	100
MON-FRI	FREE	21:00 - 24:00	-	-
SAT-SUN	FREE	00:00 - 08:00	-	-
SAT-SUN	PATTERN 2	08:00 - 20:00	2/2/2	100
SAT-SUN	FREE	20:00 - 24:00	-	-

CORRIDOR LAYOUT



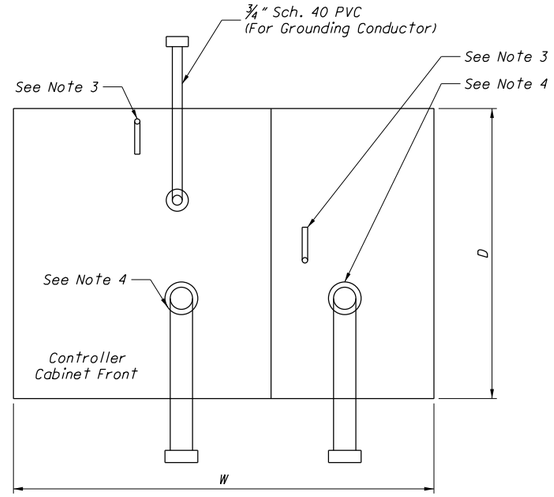
N.T.S.

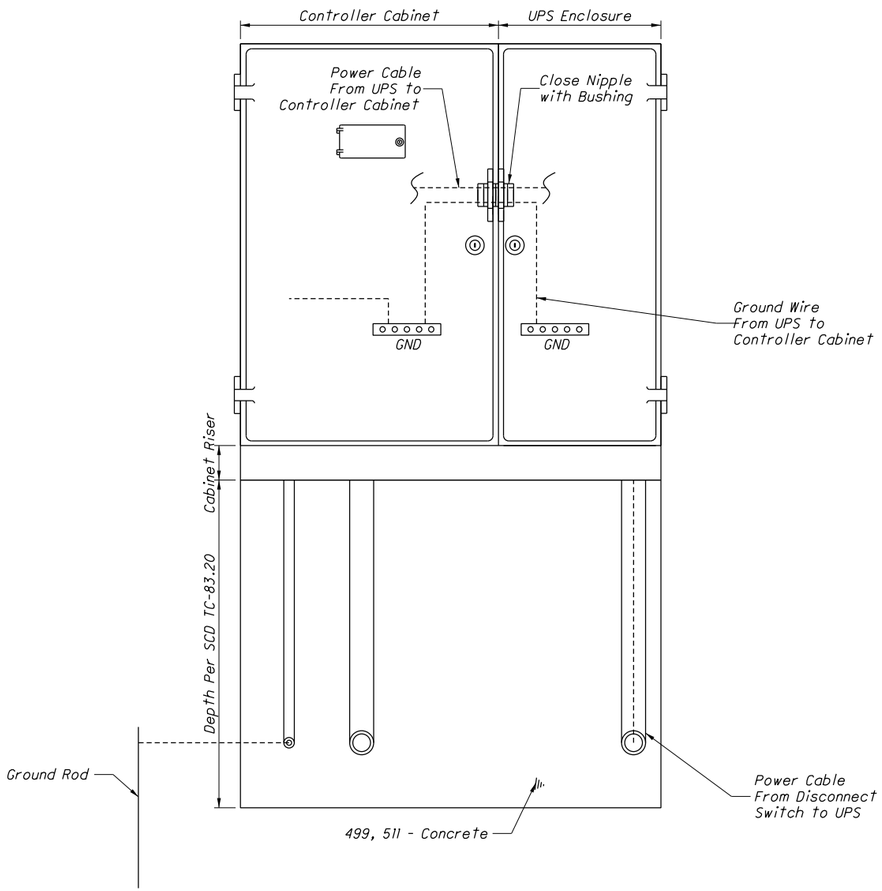
CALCULATED BEB
CHECKED KMG

TRAFFIC SIGNAL COORDINATION PLAN

STA-241-9.71

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NOTES:

1. The Uninterruptible Power Supply (UPS) enclosure shall be mounted flush up against the traffic signal cabinet and sealed with silicone. The Contractor shall be responsible for providing the necessary power cable between the UPS unit and signal cabinet.
2. The UPS should be placed on the opposite side of the pull box on a 332/336 cabinet (per Standard Construction Drawing (SCD) TC-83.20). The UPS placement for a NEMA cabinet varies, placement should provide adequate access with respect to slope, guardrail spacing, etc.
3. The size, number, and location of anchor bolts shall be in accordance with the manufacturer's recommendations.
4. The size, number, and orientation of conduit ells shall be as shown in the plan, except that a ¾" schedule 40 PVC shall be installed in each foundation.
5. 1/2" preformed joint filler as per CMS 705.03 shall be used between foundations and adjacent paved areas.
6. See SCD TC-83.20 for further details.

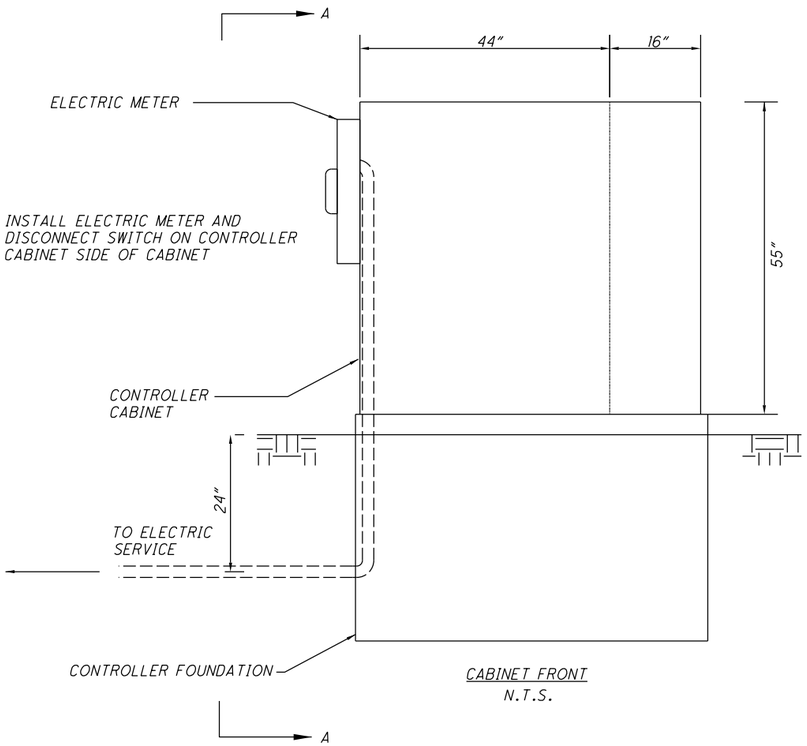
TYPE	W (IN.)	D (IN.)	FOUNDATION CONCRETE (CU. YD.)
TS-1	60	24	1.23
TS-2	70	36	2.16
2070/170	50	36	1.54

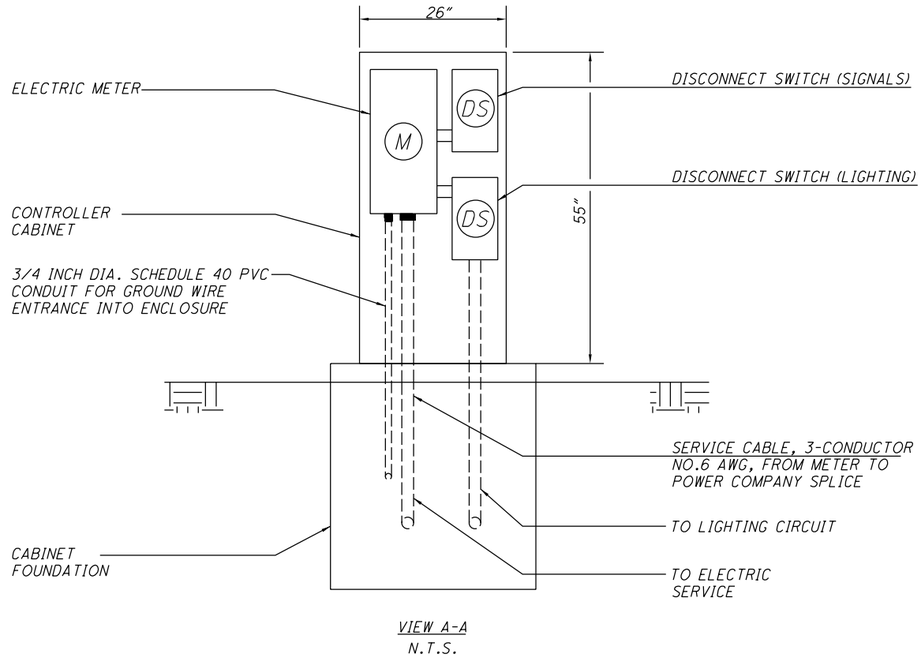
CALCULATED BEB
CHECKED RMG

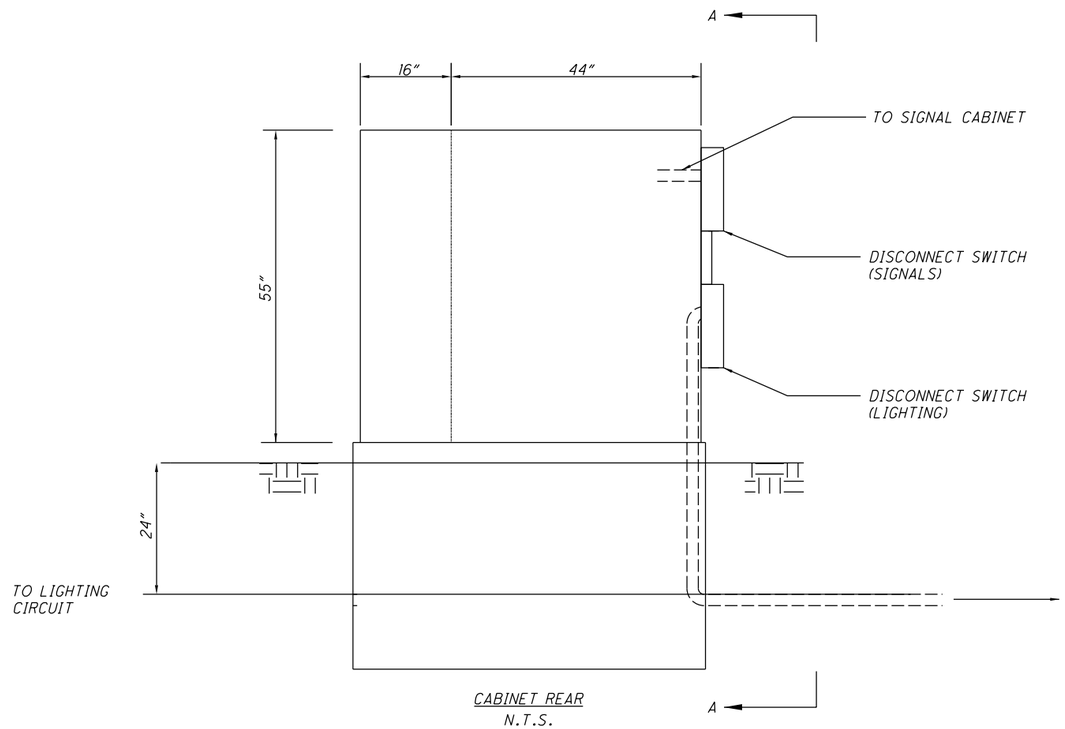
TRAFFIC SIGNAL DETAIL

STA-241-9.71

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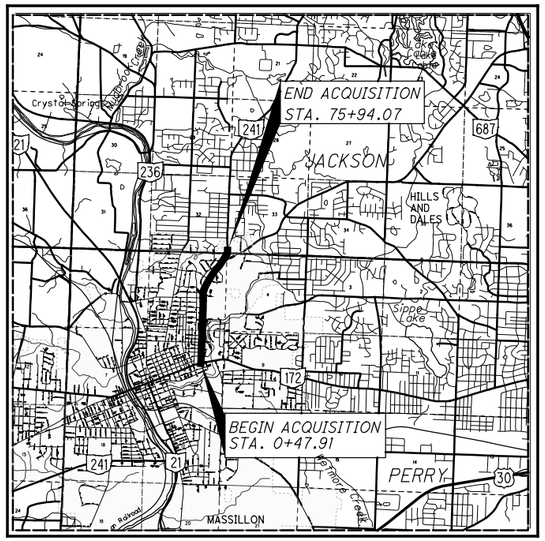


CALCULATED BEB
CHECKED RMG

TRAFFIC SIGNAL DETAIL

STA-241-9.71

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LOCATION MAP

LATITUDE: N40°48'41" LONGITUDE: W81°30'33"

RIGHT OF WAY LEGEND SHEET STA - 241 - 9.71

STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON

UTILITY OWNERS		UTILITY OWNERS	
TYPE	NAME & ADDRESS	TYPE	NAME & ADDRESS
GAS	RICHARD HOUSEHOLDER DOMINION ENERGY OHIO 330-664-2409 320 SPRINGSIDE DRIVE, SUITE 320 AKRON, OH 44333	TELEPHONE	STEVE HYLTON 330-384-3055 AT&T LEGAL MANDATE 50 W. BOWERY STREET, FLOOR 6 AKRON, OH 44308
CABLE	JEFF CAMPBELL 330-833-4134 X116 MASSILLON CABLE TV 814 CABLE COURT NW MASSILLON, OH 44647	SEWERS & SINGNAL & LIGHTING	LEE MCBRIDE 330-833-5746 CITY OF MASSILLON 401 WALNUT ROAD SE MASSILLON, OH 44647
ELECTRIC	KEVIN MCCLUSKY 330-830-7083 OHIO EDISON/FIRST ENERGY 2600 ERIE STREET SOUTH MASSILLON, OH 44646	WATER	JACOB FLANARY 330-832-5764 X50650 AQUA OHIO, INC. 870 THIRD STREET NW MASSILLON, OH 44647

NOTES: THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE OBTAINED FROM THE OWNER OF THE UTILITIES AS REQUIRED BY SECTION 153.64 O.R.C.

CONVENTIONAL SYMBOLS

County Line
Township Line
Section Line
Corporation Line or
Fence Line (Ex) (Pr)
Center Line
Right of Way (Ex) Ex R/W
Right of Way (Pr) R/W
Standard Highway Ease.(Ex) Ex SH
Temporary Right of Way TMP
Channel Ease. (Pr) CH
Utility Ease. (Ex) Ex U
Railroad or
Guardrail (Ex) (Pr)
Construction Limits
Edge of Pavement (Ex)
Edge of Pavement (Pr)
Edge of Shoulder (Ex)
Edge of Shoulder (Pr)

Ditch / Creek (Ex)
Ditch / Creek (Pr)
Tree Line (Ex)
Ownership Hook Symbol , Example
Property Line Symbol , Example
Break Line Symbol , Example
Tree (Pr) , Tree (Ex) , Shrub (Ex)
Tree (Remove) , Shrub (Remove)
Evergreen (Ex) , Stump
Evergreen (Remove) , Stump (Remove)
Wetland (Pr) , Grass (Pr) , Aerial Target
Post (Ex) , Mailbox (Ex) , Mailbox (Pr)
Light (Ex) , Telephone Marker (Ex)
Fire Hydrant (Ex) , Water Meter (Ex)
Water Valve (Ex) , Utility Valve Unknown (Ex.)
Telephone Pole (Ex) , Power Pole (Ex)
Light Pole (Ex) , Electric Transformer (Ex)
Storm Manhole (Ex) , Storm Catchbasin (Ex)
Telephone Pedestal (Ex)

INDEX OF SHEETS:

LEGEND SHEET	1
CENTERLINE PLAT	2-4
PROPERTY MAP	5-7
SUMMARY OF ADDITONAL R/W	8-14
R/W DETAILS	15-34

PROJECT DESCRIPTION

THIS PROJECT CONSISTS OF WIDENING AND MILLING/ RESURFACING OF 1.59 MILES OF SR 241 (WALES ROAD NE) FROM LINCOLN WAY E TO HILLS AND DALES ROAD NE, AND 0.07 MILES OF LAKE AVENUE NE FROM 11TH STREET NE TO WALES ROAD NE. IMPROVEMENTS INCLUDE FULL DEPTH AND PARTIAL DEPTH PAVEMENT REPAIRS, UPGRADING TRAFFIC SIGNALS WITH FIBER INTERCONNECT, REPLACING SIDEWALK AND DRIVE APRONS, NEW CURB AND GUTTER, NEW CATCH BASINS, AND SEWER REPAIRS.

PLANS PREPARED BY:

FIRM NAME : OHM ADVISORS
R/W DESIGNER: STEPHANIE HICKEY
R/W REVIEWER: JOHN RAAB
FIELD REVIEWER: KENT MONAS AND KYLE KING
PRELIMINARY FIELD REVIEW DATE: NOV. 8 2018
TRACINGS FIELD REVIEW DATE: JULY 10, 2019
OWNERSHIP UPDATED BY: STEPHANIE HICKEY
DATE COMPLETED: AUGUST 14, 2019
PLAN COMPLETION DATE: AUGUST 14, 2019

PLANS PREPARED BY:

OHM ADVISORS, INC.
388 S. MAIN STREET, SUITE 301
AKRON, OH 44311
330-913-1080

STRUCTURE KEY

RESIDENTIAL
COMMERCIAL
OUT-BUILDING

TYPES OF TITLE LEGEND:
WD = WARRANTY DEED
T = TEMPORARY EASEMENT

I, John J. Raab, P. S. have conducted a survey of the existing conditions for the Ohio Department of Transportation in June 2018. The results of that survey are contained herein. The horizontal coordinates expressed herein are based on the Ohio State Plane Coordinates System North Zone on NAD 83 2011 datum. The Project Coordinates (US Survey Feet) are relative to State Plane Grid Coordinates (US Survey Feet) by a Project Adjustment Factor of 1.00009465. As a part of this project I have reestablished the locations of the existing property lines and the existing centerline of Right of Way for property takes contained herein. As a part of this project I have established the proposed property lines, calculated the Gross Take, present roadway occupied (PRO), Net Take and Net Residue; as well as prepared the legal descriptions necessary to acquire the parcels as shown herein. As a part of this work I have set right of way monuments at the property corners, property line intersection, points along the right of way and/or angle points on the right of way, Section Corners and other points as shown herein. All of my work contained herein was conducted in accordance with Ohio Administrative Code 4733-37 commonly known as "Minimum Standards for Boundary Surveys in the State of Ohio" unless noted. The words I and my as used herein are to mean either myself or someone working under my direct supervision.

SURVEYORS SEAL

_____
John J. Raab, Professional Land Surveyor 7863,
OHM ADVISORS, INC.
388 S. Main Street, Suite 301
Akron, Ohio 44311, Phone: 330-913-1080

Date:

FEDERAL PROJECT NO. E160-(859)
PID NO. 100471
CALCULATED SEH CHECKED BVB/JJR
RIGHT OF WAY LEGEND SHEET
STA-241-9.71
1 / 34
362 395

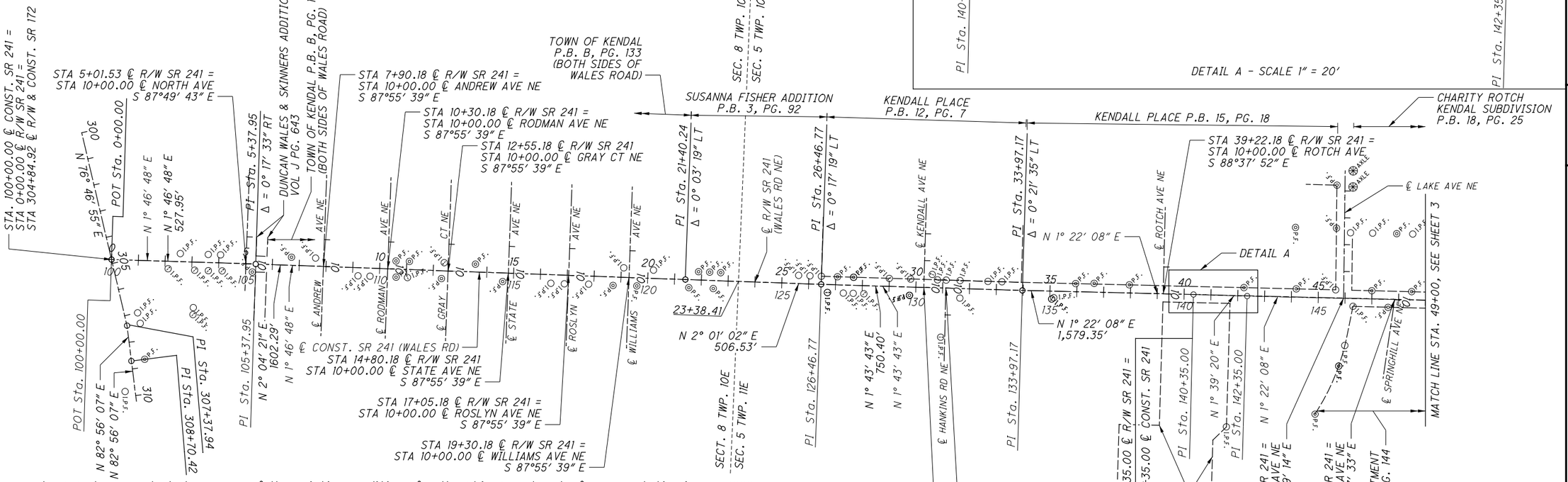
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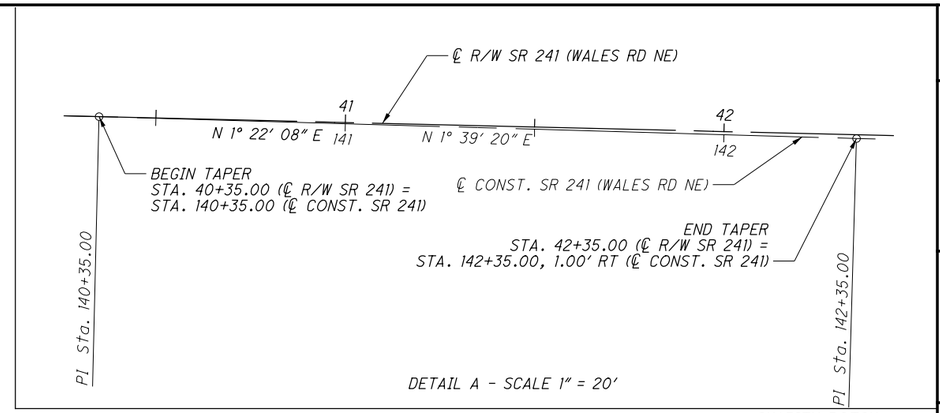
MONUMENT LEGEND

- ▣ PROPOSED R/W MONUMENT BOX
- ◎ EXISTING CONCRETE MONUMENT
- ● PROPOSED CONCRETE MONUMENT
- ○I.R.F. IRON PIN FOUND
- ⊙I.R.F. IRON PIN FOUND W/ ID CAP
- ●I.R.S. IRON PIN SET W/ ID CAP
- ◎P.F. IRON PIPE FOUND
- ⊛ AXLE FOUND

NOTE: MONUMENT TABLES ARE ON SHEET 4

STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON





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_____
John J. Raab, Professional Land Surveyor 7863

Date:

SURVEYORS SEAL

BASIS FOR BEARINGS:

ALL BEARINGS SHOWN ARE FOR PROJECT USE ONLY. BEARINGS ARE BASED ON THE OHIO STATE PLANE COORDINATE SYSTEM, NORTH ZONE AND NORTH AMERICAN DATUM OF 1983 (2011), AS ESTABLISHED BY A SURVEY PERFORMED BY OHM ADVISORS IN JUNE 2018

BASIS OF EXISTING CENTERLINE OF R/W AND R/W WITH:
THE EXISTING R/W WIDTH AND LOCATION WERE DETERMINED FROM EXISTING COUNTY RECORDS, DEEDS, PRIVATE SURVEYS, PRIOR RIGHT OF WAY PLANS, AND EXISTING MONUMENTATION

THE PROPOSED RIGHT OF WAY SHALL BE REFERENCED FROM THE EXISTING CENTERLINE OF RIGHT OF WAY

RECEIVED _____, 20____
RECORDED _____, 20____
BOOK _____ PAGE _____
_____
COUNTY RECORDER

N

SCALE: 1" = 200'
SCALE IN FEET
0 100 200 400

PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

CENTERLINE PLAT (SHEET 1 OF 3)

STA-241-9.71

2 / 34

363
395

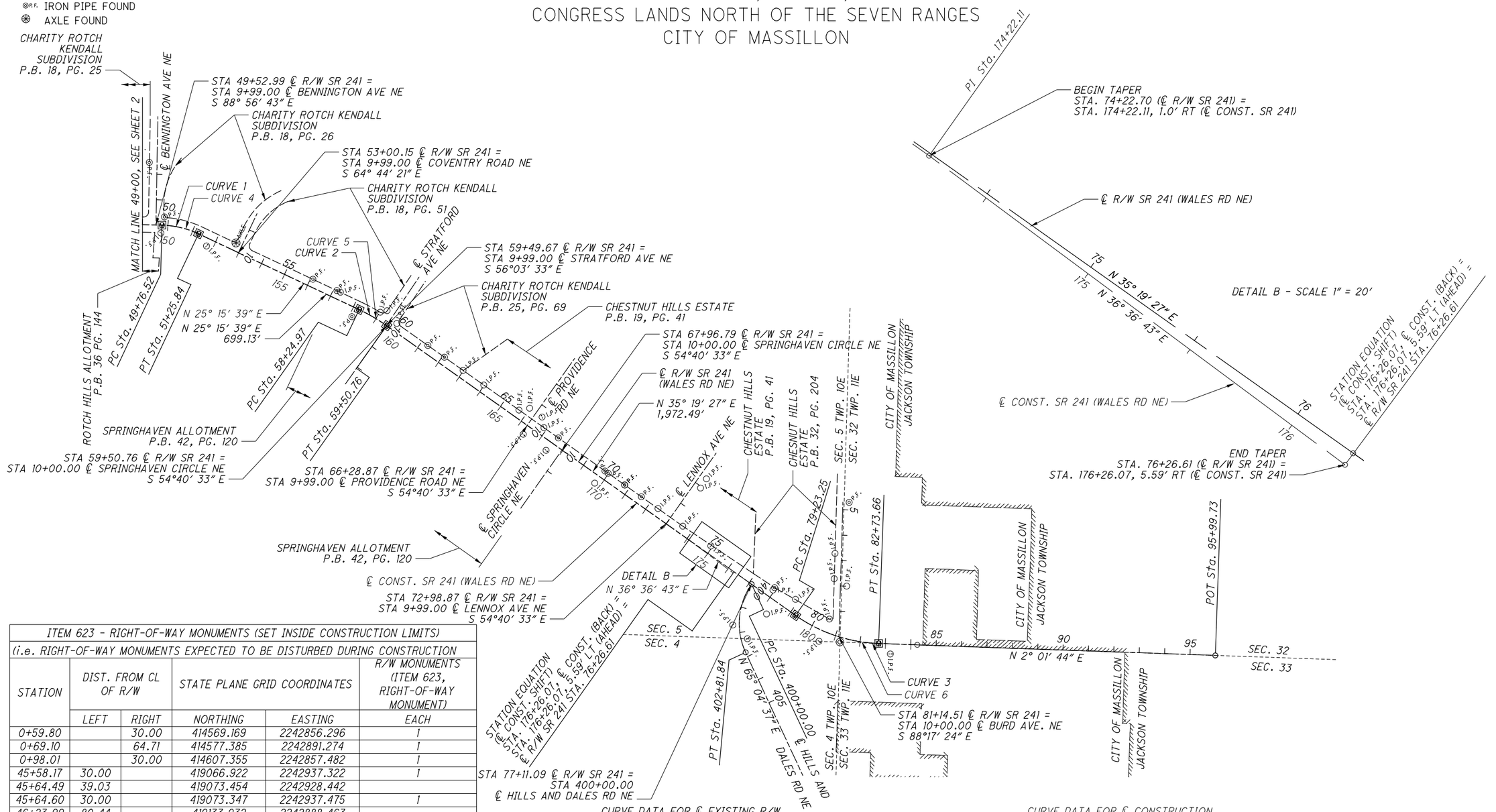
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MONUMENT LEGEND

- ▣ PROPOSED R/W MONUMENT BOX
- ◎ EXISTING CONCRETE MONUMENT
- ○ I.R.F. IRON PIN FOUND
- ⊙ I.R.F. IRON PIN FOUND W/ ID CAP
- ● I.R.S. IRON PIN SET W/ ID CAP STAMPED "OHM"
- ◎ P.F. IRON PIPE FOUND
- ⊛ AXLE FOUND

NOTE: MONUMENT TABLES ARE ON SHEET 4.

STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON



ITEM 623 - RIGHT-OF-WAY MONUMENTS (SET INSIDE CONSTRUCTION LIMITS)					
(i.e. RIGHT-OF-WAY MONUMENTS EXPECTED TO BE DISTURBED DURING CONSTRUCTION					
STATION	DIST. FROM CL OF R/W		STATE PLANE GRID COORDINATES		R/W MONUMENTS (ITEM 623, RIGHT-OF-WAY MONUMENT)
	LEFT	RIGHT	NORTHING	EASTING	EACH
0+59.80		30.00	414569.169	2242856.296	1
0+69.10		64.71	414577.385	2242891.274	1
0+98.01		30.00	414607.355	2242857.482	1
45+58.17	30.00		419066.922	2242937.322	1
45+64.49	39.03		419073.454	2242928.442	
45+64.60	30.00		419073.347	2242937.475	1
46+23.99	80.44		419133.932	2242888.463	
46+24.60	30.00		419133.334	2242938.909	1
46+30.47	53.95		419139.774	2242915.109	
46+60.12	32.00		419168.890	2242937.758	1
46+99.44	30.00		419208.146	2242940.697	1
46+99.44	32.00		419208.194	2242938.697	1
45+70.00		30.00	419077.314	2242997.587	1
45+70.00		35.00	419077.195	2243002.586	1
46+05.00		30.00	419112.304	2242998.424	1
46+05.00		35.00	419112.185	2243003.422	1
TOTAL CARRIED TO GENERAL SUMMARY SHEET					13

CURVE DATA FOR ℄ EXISTING R/W

CURVE DATA 1
P.I. Sta. 50+52.28
Δ = 23° 53' 30" (RT)
R = 358.10'
L = 149.32'
C = 148.24'
C.B. = N 13° 18' 53" E

CURVE DATA 2
P.I. Sta. 58+88.03
Δ = 10° 03' 48" (RT)
R = 716.20'
L = 125.79'
C = 125.63'
C.B. = N 30° 17' 33" E

CURVE DATA 3
P.I. Sta. 81+03.56
Δ = 33° 17' 43" (LT)
R = 603.00'
L = 350.41'
C = 345.50'
C.B. = N 18° 40' 35" E

CURVE DATA FOR ℄ CONSTRUCTION

CURVE DATA 4
P.I. Sta. 150+52.07
Δ = 23° 53' 30" (RT)
R = 357.10'
L = 148.91'
C = 147.83'
C.B. = N 13° 18' 53" E

CURVE DATA 5
P.I. Sta. 158+87.53
Δ = 10° 03' 48" (RT)
R = 715.20'
L = 125.62'
C = 125.45'
C.B. = N 30° 17' 33" E

CURVE DATA 6
P.I. Sta. 181+03.02
Δ = 33° 17' 43" (LT)
R = 603.00'
L = 350.41'
C = 345.50'
C.B. = N 18° 40' 35" E

RECEIVED _____, 20___
RECORDED _____, 20___
BOOK _____ PAGE _____
COUNTY RECORDER

SCALE: 1" = 200'
SCALE IN FEET

PID NO. 100471

R/W DESIGNER IAV
R/W REVIEWER BVB/JJR

CENTERLINE PLAT (SHEET 2 OF 3)

STA-241-9.71

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ITEM 623 - MONUMENT ASSEMBLY

CL OF R/W SR 241 WALES RD NE	PROJECT COORDINATES SEE SURVEY CERTIFICATION		CL MON TO BE SET DURING CONSTRUCTION (ITEM 623, MONUMENT ASSEMBLY)	
STATION, OFFSET	NORTHING	EASTING	EACH	DESCRIPTION
0+00.00, ℄	414510.329	2242824.452	1	MON. ASSY. SET ON CENTERLINE OF R/W
5+37.95, ℄	415048.017	2242841.163	1	MON. ASSY. SET ON CENTERLINE OF R/W
21+40.24, ℄	416649.262	2242899.111	1	MON. ASSY. SET ON CENTERLINE OF R/W
26+46.77, ℄	417155.481	2242916.941	1	MON. ASSY. SET ON CENTERLINE OF R/W
33+97.17, ℄	417905.540	2242939.576	1	MON. ASSY. SET ON CENTERLINE OF R/W
49+76.52, ℄	419484.434	2242977.308	1	MON. ASSY. SET ON CENTERLINE OF R/W
51+25.84, ℄	419628.694	2243011.449	1	MON. ASSY. SET ON CENTERLINE OF R/W
58+24.97, ℄	420260.968	2243309.794	1	MON. ASSY. SET ON CENTERLINE OF R/W
59+50.76, ℄	420369.446	2243373.163	1	MON. ASSY. SET ON CENTERLINE OF R/W
79+23.26, ℄	421978.793	2244513.659	1	MON. ASSY. SET ON CENTERLINE OF R/W
82+73.67, ℄	422306.099	2244624.296	1	MON. ASSY. SET ON CENTERLINE OF R/W
TOTAL CARRIED TO GENERAL SUMMARY SHEET			11	

STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON

SETTING OF ALL MONUMENTS SHALL BE PERFORMED BY A SURVEYOR REGISTERED IN THE STATE OF OHIO. THE MONUMENT ASSEMBLIES AND REFERENCE MONUMENTS WILL BE INSTALLED BY THE CONTRACTOR AT THE TIME OF CONSTRUCTION. THE IRON PIN AND CAP (WHEN REQUIRED) ARE TO BE INSTALLED BY THE CONTRACTOR'S SURVEYOR.

CHANGES OR ALTERATIONS TO THE LOCATION OF ANY MONUMENTS SHOWN IN THIS TABLE, REQUIRE PRIOR APPROVAL FROM THE DISTRICT REAL ESTATE ADMINISTRATOR OF THE OHIO DEPARTMENT OF TRANSPORTATION. IN THE EVENT THAT CHANGES OR ALTERATIONS ARE APPROVED, A REVISED CENTERLINE PLAT WITH THE NEW LOCATIONS SHALL BE RECORDED IN THE APPLICABLE COUNTY RECORDS AND THE OHIO DEPARTMENT OF TRANSPORTATION. SPECIFICATIONS FOR MONUMENT ASSEMBLIES, REFERENCE MONUMENTS AND RIGHT OF WAY MONUMENTS ARE SHOWN ON STANDARD CONSTRUCTION DRAWING RM-1.1.

ITEM 623 - RIGHT-OF-WAY MONUMENTS

MON. NO.	CL OF R/W SR 241 WALES RD NE		PROJECT COORDINATES SEE SURVEY CERTIFICATION		R/W MON. EXPECTED TO BE DISTURBED (ITEM 623, R/W MONUMENT)	DESCRIPTION
	STATION	OFFSET	NORTHING	EASTING	EACH	
1	0+66.03	489.77 R	414561.110	2243316.041		5/8" IPIN
2	1+03.60	195.25 R	414607.817	2243022.822		5/8" IPIN
3	1+14.47	234.05 R	414617.473	2243061.947		5/8" DISTURBED IPIN
4	1+35.25	367.61 R	414634.097	2243196.087		1" IPIPE
5	2+12.11	27.77 R	414721.476	2242858.793	1	5/8" IPIN CAMPBELL AND
6	2+55.84	30.00 L	414766.976	2242802.410	1	5/8" IPIN
7	3+10.02	195.63 R	414814.122	2243029.614		5/8" JIM SHAMP - 6088
8	3+10.21	169.40 R	414815.132	2243003.404		1/5" IPIN
9	3+11.11	30.10 R	414820.355	2242864.207	1	FERRIS - 6970
10	3+59.90	29.95 L	414870.985	2242805.701	1	1" IPIN
11	3+62.28	30.19 R	414871.494	2242865.885	1	FERRIS - 6970
12	4+05.84	29.90 L	414916.904	2242807.174	1	1" IPIN
13	4+13.47	29.50 R	414922.682	2242866.778	1	HARPR - 7901
14	5+26.24	30.49 R	415035.370	2242871.272	1	IPIPE 3/8" I.D.
15	6+70.21	29.84 L	415181.276	2242816.122	1	5/8" IPIPE
16	7+60.18	30.25 L	415271.202	2242818.967	1	5/8" IPIN
17	9+20.36	30.06 R	415429.088	2242885.036	1	3/4" IPIN
18	9+65.25	29.89 R	415473.937	2242886.489	1	5/8" IPIN
19	10+59.91	30.11 L	415570.731	2242829.947	1	1 1/8" ID
20	10+62.43	30.15 R	415571.062	2242890.263	1	1 7/8" IPIPE
21	11+04.94	30.00 R	415613.552	2242891.591	1	5/8" CG DEIBEL - 6673
22	11+09.98	30.22 L	415620.772	2242831.655	1	1 1/4IN W5/8IN PIN INSIDE
23	12+31.67	29.09 R	415740.231	2242895.322	1	1" ID
24	12+39.82	30.21 L	415750.519	2242836.361	1	C&A 5096
25	13+56.23	29.02 L	415866.812	2242841.753	1	1" PIPE BENT SE
26	14+60.03	31.99 R	415968.344	2242906.482	1	1 1/4" PIPE
27	16+39.97	31.86 R	416148.179	2242912.872	1	1 1/2"
28	16+90.08	32.05 R	416198.240	2242914.864	1	1.5" PIPE
29	17+80.68	30.17 R	416288.847	2242916.259	1	7/8" IPIN
30	18+71.70	31.69 R	416379.755	2242921.067	1	2" PIPE
31	19+09.19	35.47 L	416419.646	2242855.305	1	1/2" IPIN
32	19+60.18	30.29 R	416468.219	2242922.872	1	5/8" IPIN
33	20+20.24	30.75 L	416530.452	2242864.045	1	1/2" IPIN
34	21+54.33	29.62 R	416662.304	2242929.210	1	1/2" PIPE
35	21+88.54	30.93 L	416698.616	2242869.899	1	1 1/8" PIPE
36	22+29.81	30.82 L	416739.861	2242871.464	1	1 1/4" PIPE
37	22+45.41	29.92 R	416753.311	2242932.712	1	1/2" PIPE
38	22+71.13	30.36 L	416781.140	2242873.379	1	1/2" PIPE
39	25+61.68	30.56 L	417071.515	2242883.407	1	1 1/4" IPIN
40	26+04.04	30.38 L	417113.846	2242885.072	1	5/8" IPIN
41	26+46.64	30.12 L	417156.404	2242886.837	1	1" IPIN
42	26+71.07	29.65 R	417178.868	2242947.312	1	5/8" IPID
43	27+06.90	30.00 L	417216.458	2242888.746	1	3/4" IPIN
44	27+30.35	30.00 R	417238.106	2242949.473	1	3/8" IPIN
TOTAL CARRIED TO GENERAL SUMMARY SHEET					38	

ITEM 623 - RIGHT-OF-WAY MONUMENTS

MON. NO.	CL OF R/W SR 241 WALES RD NE		PROJECT COORDINATES SEE SURVEY CERTIFICATION		R/W MON. EXPECTED TO BE DISTURBED (ITEM 623, R/W MONUMENT)	DESCRIPTION
	STATION	OFFSET	NORTHING	EASTING	EACH	
45	27+66.90	29.48 L	417276.439	2242891.093	1	1 3/4" IPIN
46	27+66.94	30.08 L	417276.496	2242890.504	1	3/4" PIPE
47	27+67.18	29.81 R	417274.937	2242950.368	1	1/2" IPIN
48	28+07.10	30.29 R	417314.823	2242952.057	1	1/2" IPID
49	28+99.87	29.71 L	417409.354	2242894.876	1	5/8" H&A LTD.
50	29+76.99	30.89 R	417484.615	2242957.773	1	1" PINCHED IPIPE
51	29+77.13	30.73 R	417484.765	2242957.619	1	5/8" IPIN
52	29+79.53	29.73 L	417488.982	2242897.261	1	5/8" H&A LTD.
53	29+99.47	50.18 L	417509.532	2242877.421	1	MAG NAIL
54	30+59.62	49.30 L	417569.628	2242880.115		NICHOLS 7349
55	30+79.66	29.81 L	417589.067	2242900.198	1	CAPPED PIN, CANT READ
56	30+97.98	183.23 R	417600.952	2243113.702		HARPER - 7901
57	31+12.05	29.78 L	417621.442	2242901.208	1	NICHOLS 7349
58	31+63.94	29.69 L	417673.305	2242902.862	1	7349
59	31+65.06	35.58 R	417672.458	2242968.136	1	5/8" PIN
60	32+67.92	29.67 L	417777.235	2242906.026	1	1" IPIN
61	33+19.99	29.84 L	417829.290	2242907.418	1	3/4" IPIN
62	35+07.15	29.56 R	418014.774	2242971.756	1	5/8 IPIN UNREADABLE CAP
63	35+14.63	24.37 R	418022.385	2242966.747	1	5/8" IPIN
64	35+95.08	30.30 L	418104.113	2242914.013	1	3/4" PINCHED PIPE
65	36+64.04	32.72 L	418173.115	2242913.237	1	1.5" IPIPE
66	37+95.18	30.12 L	418304.157	2242918.861	1	3/4" PIPE
67	41+69.37	489.69 R	418665.816	2243447.576		5/8" IPIN
68	42+22.38	30.31 L	418731.232	2242928.987	1	1" PIPE
69	44+09.39	258.73 L	418923.652	2242705.098		1" PIPE
70	44+17.59	30.12 L	418926.383	2242933.842	1	1" PIPE
71	44+98.66	434.53 R	418996.332	2243400.300		3/4" IPIN
72	45+60.15	419.91 L	419078.219	2242547.570		3/4" IPIPE
73	45+61.97	259.89 L	419076.210	2242707.590		3/8" PIPE
74	45+64.60	30.02 L	419073.347	2242937.457	1	3/4" IPIN
75	45+82.71	253.53 R	419084.650	2243221.284		1/2" O.D. IPIPE
76	46+03.40	176.25 R	419107.213	2243144.598		1" ALUMINUM
77	46+14.72	243.75 L	419128.557	2242724.982		IRON BAR
78	46+19.19	474.75 L	419138.549	2242494.153		AXLE
79	46+19.96	414.68 L	419137.883	2242554.231		AXLE
80	46+30.34	29.64 R	419137.648	2242998.668	1	5/8 IPIN UNREADABLE CAP
81	46+97.30	244.48 L	419211.139	2242726.227		3/4" IPIPE
82	46+99.44	29.93 L	419208.145	2242940.768	1	1" IPIPE
83	47+61.22	30.41 R	419268.475	2243002.562	1	3/4" IPIPE
84	47+87.02	244.72 L	419300.838	2242728.131		PINCHED IPIPE
85	48+46.67	244.59 L	419360.466	2242729.687		3/8" IPIN
86	48+47.82	30.10 L	419356.490	2242944.138	1	1/2" IPIPE
87	49+21.60	244.97 L	419435.381	2242731.093		1/2" LEAD FILLED PIPE
88	49+74.01	31.85 R	419481.167	2243009.087	1	5/8" DEBOS 5823
89	49+85.35	31.90 L	419494.808	2242945.764	1	3/4" IPIPE
TOTAL CARRIED TO GENERAL SUMMARY SHEET					29	

ITEM 623 - RIGHT-OF-WAY MONUMENTS

MON. NO.	CL OF R/W SR 241 WALES RD NE		PROJECT COORDINATES SEE SURVEY CERTIFICATION		R/W MON. EXPECTED TO BE DISTURBED (ITEM 623, R/W MONUMENT)	DESCRIPTION
	STATION	OFFSET	NORTHING	EASTING	EACH	
90	51+75.37	30.26 R	419660.569	2243059.945	1	BLR 7774
91	52+75.15	30.00 L	419776.528	2243048.034	1	2" AXLE
92	56+09.95	30.00 L	420079.318	2243190.941	1	3/4" PIPE
93	57+14.35	30.01 L	420173.731	2243235.447	1	2" PIPE
94	57+29.82	30.00 L	420187.708	2243242.102	1	CAMPELL & ASSOCIATES
95	58+11.47	37.76 R	420232.648	2243338.181	1	1" IPIPE
96	59+01.90	30.13 L	420344.353	2243320.576	1	5/8" CAMPELL AND ASSOC INC
97	59+20.59	49.50 L	420371.362	2243314.685		5/8" IPIN
98	59+78.96	30.10 L	420409.849	2243364.907	1	5/8" IPIN
99	61+28.55	29.92 L	420531.805	2243451.546	1	1/2" IPIPE
100	62+08.61	30.00L	420597.170	2243497.768	1	1" PINCHED IPIPE
101	62+98.53	30.00 L	420670.537	2243549.763	1	5/8" BROEMSEN SURVEYING
102	65+68.50	29.91 L	420890.744	2243705.936	1	5/8" IPIN
103	65+98.51	60.10 L	420932.684	2243698.655		5/8" IPIN
104	66+37.02	37.93 R	420907.425	2243800.908	1	5/8" HOLDEN 5870
105	66+58.48	60.11 L	420981.625	2243733.325		UNREADABLE IPID
106	66+88.44	30.09 L	420988.714	2243775.136	1	UNREADABLE IPID
107	67+47.02	37.92 R	420997.179	2243864.501	1	5/8" HOLDEN 5870
108	67+58.40	30.07 L	421045.779	2243815.605	1	1/2" IPIPE
109	69+77.93	32.21 R	421188.881	2243993.350	1	1/2" IPIN
110	69+83.38	29.93 L	421229.259	2243945.803	1	1/2" IPIPE
111	69+98.55	29.96 L	421241.650	2243954.550	1	3/8" IPIPE
112	70+78.33	29.99 L	421306.757	2244000.652	1	5/8" IPIPE
113	70+78.70	29.91 L	421307.014	2244000.932	1	5/8" IPIN
114	71+58.73	29.99 L	421372.362	2244047.146	1	5/8" IPIPE
115	72+39.11	30.23 L	421438.075	2244093.422	1	2" IPIN
116	73+26.96	235.59 L	421628.498	2243976.665		5/8" IPIN
117	73+29.01	192.64 L	421605.331	2244012.889		5/8" IPIPE
118	73+58.87	30.00 L	421535.645	2244162.865	1	5/8" IPIN
119	74+93.91	30.13 L	421645.911	2244240.831	1	5/8" IPID
120	77+44.55	173.90 R	421732.435	2244552.213		5/8" H&A LTD.
121	77+93.53	41.37 L	421896.866	2244404.899	1	2" IPIPE
122	77+93.84	30.43 L	421890.797	2244413.999	1	5/8" IPIN
123	78+22.32	184.46 R	421789.787	2244605.801		5/8" CAMPELL
124	78+27.61	61.55 R	421865.167	2244508.577	1	5/8" IPIN
125	78+38.94	484.99 L	422190.417	2244069.206		PINCHED IPIPE
126	78+87.37	51.57 L	421979.332	2244450.840	1	5/8" IPIN
127	79+09.66	288.82 L	422134.699	2244270.152		5/8" IPIN
128	79+85.76	203.61 L	422131.473	2244369.681		5/8" IPIN
129	80+49.76	43.93 R	422071.519	2244615.830	1	5/8" CAMPELL AND ASSOC INC
130	80+53.23	52.53 L	422112.589	2244528.486	1	5/8" - RED CAP
131	80+70.94	198.14 L	422180.438	2244398.902		5/8" IPIN
132	81+24.58	18.91 R	422153.997	2244618.908	1	CMON
133	83+21.52	39.86 R	422352.513	2244665.827	1	MCSTEEN - CA 96-026
TOTAL CARRIED TO GENERAL SUMMARY SHEET					33	

RECEIVED _____, 20___
RECORDED _____, 20___
BOOK _____ PAGE _____
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COUNTY RECORDER

FEDERAL PROJECT NO. E160-(859)
PID NO. 100471
STATE JOB NO. N/A
R/W DESIGNER IAV
R/W REVIEWER BVB/JJR

CENTERLINE PLAT
(SHEET 3 OF 3)

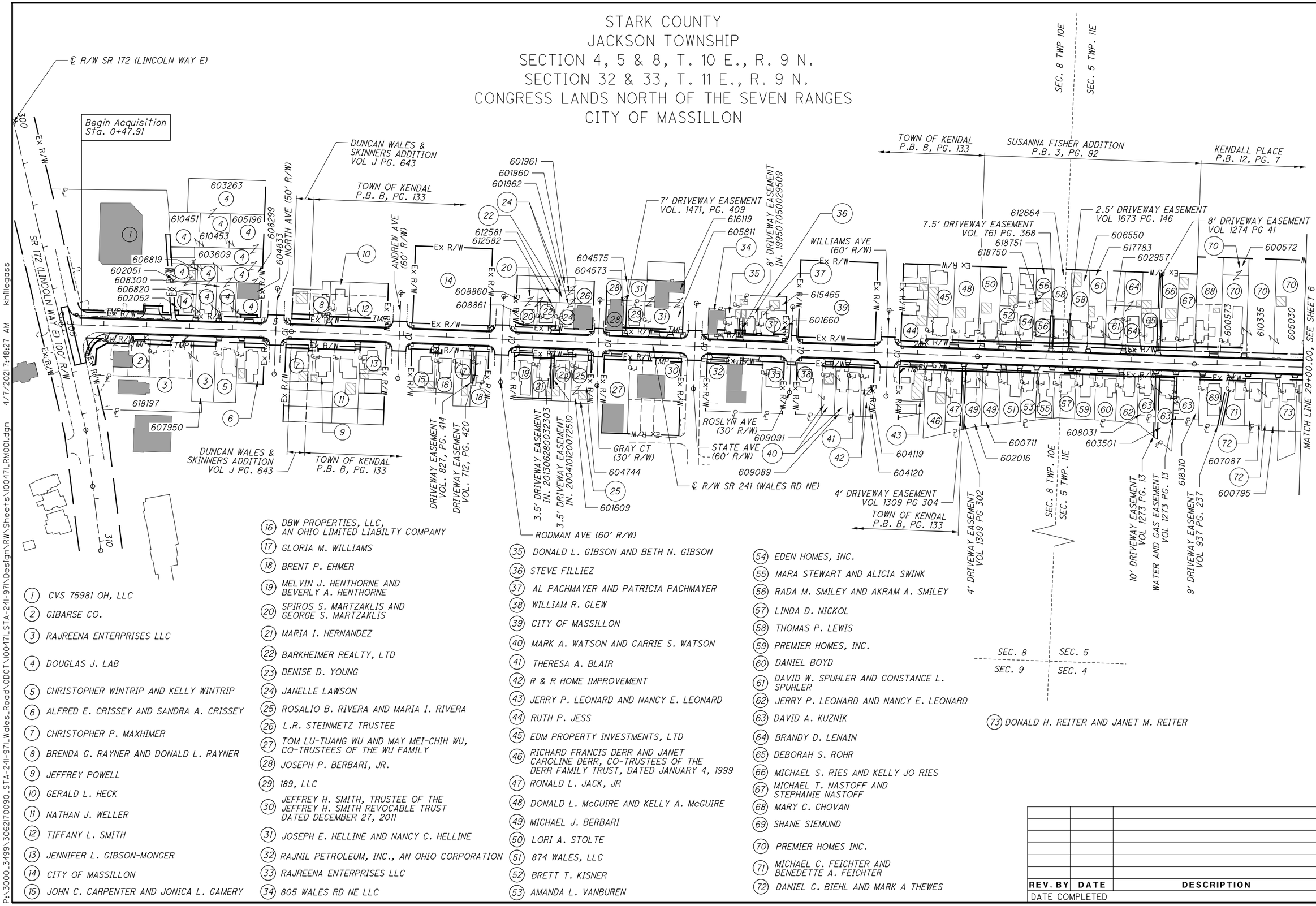
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STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON



1. CVS 75981 OH, LLC
2. GIBARSE CO.
3. RAJREENA ENTERPRISES LLC
4. DOUGLAS J. LAB
5. CHRISTOPHER WINTRIP AND KELLY WINTRIP
6. ALFRED E. CRISSEY AND SANDRA A. CRISSEY
7. CHRISTOPHER P. MAXHIMER
8. BRENDA G. RAYNER AND DONALD L. RAYNER
9. JEFFREY POWELL
10. GERALD L. HECK
11. NATHAN J. WELLER
12. TIFFANY L. SMITH
13. JENNIFER L. GIBSON-MONGER
14. CITY OF MASSILLON
15. JOHN C. CARPENTER AND JONICA L. GAMERY
16. DBW PROPERTIES, LLC, AN OHIO LIMITED LIABILTY COMPANY
17. GLORIA M. WILLIAMS
18. BRENT P. EHMER
19. MELVIN J. HENTHORNE AND BEVERLY A. HENTHORNE
20. SPIROS S. MARTZAKLIS AND GEORGE S. MARTZAKLIS
21. MARIA I. HERNANDEZ
22. BARKHEIMER REALTY, LTD
23. DENISE D. YOUNG
24. JANELLE LAWSON
25. ROSALIO B. RIVERA AND MARIA I. RIVERA
26. L.R. STEINMETZ TRUSTEE
27. TOM LU-TUANG WU AND MAY MEI-CHIH WU, CO-TRUSTEES OF THE WU FAMILY
28. JOSEPH P. BERBARI, JR.
29. 189, LLC
30. JEFFREY H. SMITH, TRUSTEE OF THE JEFFREY H. SMITH REVOCABLE TRUST DATED DECEMBER 27, 2011
31. JOSEPH E. HELLINE AND NANCY C. HELLINE
32. RAJNIL PETROLEUM, INC., AN OHIO CORPORATION
33. RAJREENA ENTERPRISES LLC
34. 805 WALES RD NE LLC
35. DONALD L. GIBSON AND BETH N. GIBSON
36. STEVE FILLIEZ
37. AL PACHMAYER AND PATRICIA PACHMAYER
38. WILLIAM R. GLEW
39. CITY OF MASSILLON
40. MARK A. WATSON AND CARRIE S. WATSON
41. THERESA A. BLAIR
42. R & R HOME IMPROVEMENT
43. JERRY P. LEONARD AND NANCY E. LEONARD
44. RUTH P. JESS
45. EDM PROPERTY INVESTMENTS, LTD
46. RICHARD FRANCIS DERR AND JANET CAROLINE DERR, CO-TRUSTEES OF THE DERR FAMILY TRUST, DATED JANUARY 4, 1999
47. RONALD L. JACK, JR
48. DONALD L. McGUIRE AND KELLY A. McGUIRE
49. MICHAEL J. BERBARI
50. LORI A. STOLTE
51. 874 WALES, LLC
52. BRETT T. KISNER
53. AMANDA L. VANBUREN
54. EDEN HOMES, INC.
55. MARA STEWART AND ALICIA SWINK
56. RADA M. SMILEY AND AKRAM A. SMILEY
57. LINDA D. NICKOL
58. THOMAS P. LEWIS
59. PREMIER HOMES, INC.
60. DANIEL BOYD
61. DAVID W. SPUHLER AND CONSTANCE L. SPUHLER
62. JERRY P. LEONARD AND NANCY E. LEONARD
63. DAVID A. KUZNIK
64. BRANDY D. LENAIN
65. DEBORAH S. ROHR
66. MICHAEL S. RIES AND KELLY JO RIES
67. MICHAEL T. NASTOFF AND STEPHANIE NASTOFF
68. MARY C. CHOVAN
69. SHANE SIEMUND
70. PREMIER HOMES INC.
71. MICHAEL C. FEICHTER AND BENEDETTE A. FEICHTER
72. DANIEL C. BIEHL AND MARK A THEWES
73. DONALD H. REITER AND JANET M. REITER

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

SCALE: 1" = 100'
SCALE IN FEET

PID NO. 100471

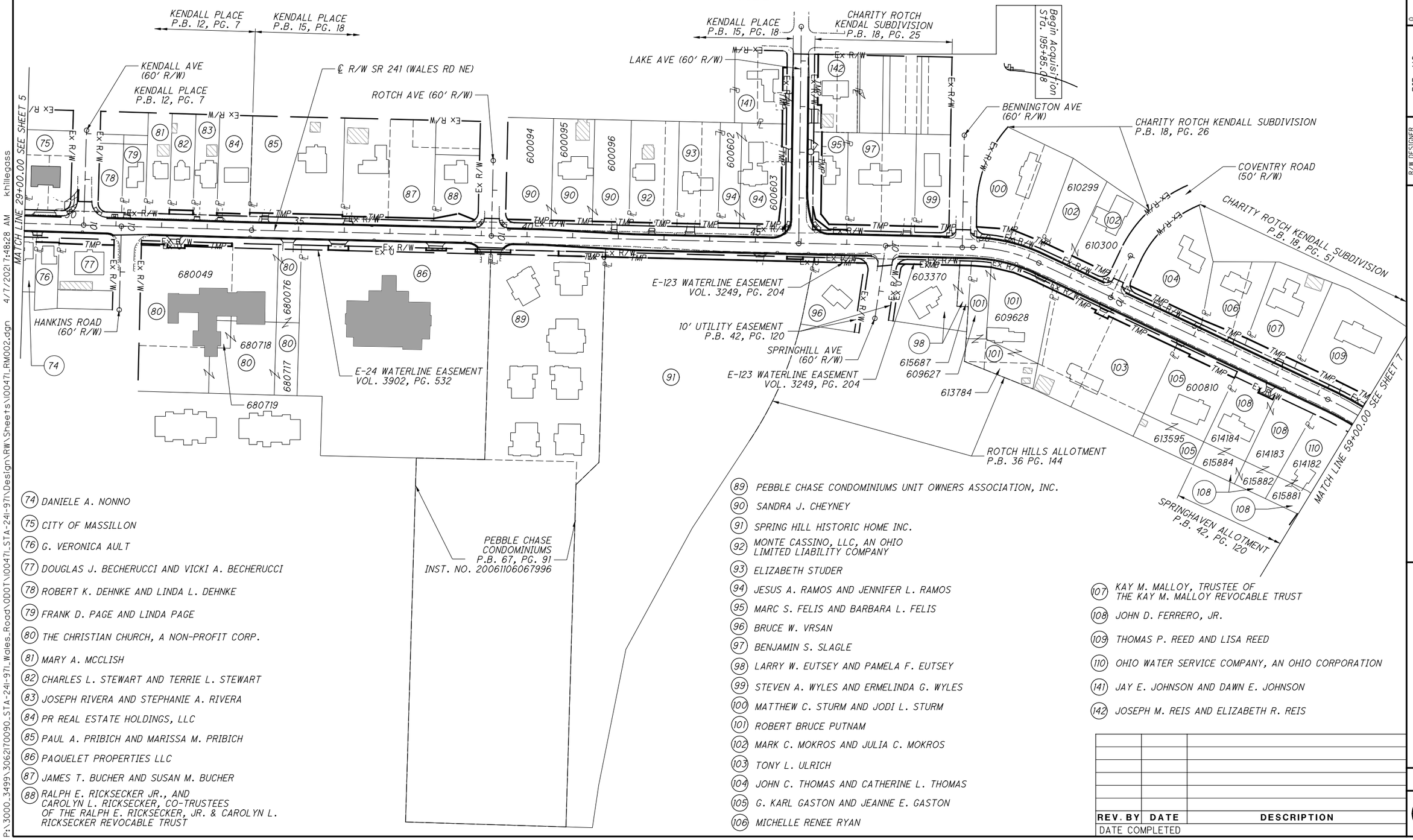
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PROPERTY MAP

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STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON



74 DANIELE A. NONNO

75 CITY OF MASSILLON

76 G. VERONICA AULT

77 DOUGLAS J. BECHERUCCI AND VICKI A. BECHERUCCI

78 ROBERT K. DEHNKE AND LINDA L. DEHNKE

79 FRANK D. PAGE AND LINDA PAGE

80 THE CHRISTIAN CHURCH, A NON-PROFIT CORP.

81 MARY A. MCCLISH

82 CHARLES L. STEWART AND TERRIE L. STEWART

83 JOSEPH RIVERA AND STEPHANIE A. RIVERA

84 PR REAL ESTATE HOLDINGS, LLC

85 PAUL A. PRIBICH AND MARISSA M. PRIBICH

86 PAQUELET PROPERTIES LLC

87 JAMES T. BUCHER AND SUSAN M. BUCHER

88 RALPH E. RICKSECKER JR., AND CAROLYN L. RICKSECKER, CO-TRUSTEES OF THE RALPH E. RICKSECKER, JR. & CAROLYN L. RICKSECKER REVOCABLE TRUST

89 PEBBLE CHASE CONDOMINIUMS UNIT OWNERS ASSOCIATION, INC.

90 SANDRA J. CHEYNEY

91 SPRING HILL HISTORIC HOME INC.

92 MONTE CASSINO, LLC, AN OHIO LIMITED LIABILITY COMPANY

93 ELIZABETH STUDER

94 JESUS A. RAMOS AND JENNIFER L. RAMOS

95 MARC S. FELIS AND BARBARA L. FELIS

96 BRUCE W. VRSAN

97 BENJAMIN S. SLAGLE

98 LARRY W. EUTSEY AND PAMELA F. EUTSEY

99 STEVEN A. WYLES AND ERMELINDA G. WYLES

100 MATTHEW C. STURM AND JODI L. STURM

101 ROBERT BRUCE PUTNAM

102 MARK C. MOKROS AND JULIA C. MOKROS

103 TONY L. ULRICH

104 JOHN C. THOMAS AND CATHERINE L. THOMAS

105 G. KARL GASTON AND JEANNE E. GASTON

106 MICHELLE RENEE RYAN

107 KAY M. MALLOY, TRUSTEE OF THE KAY M. MALLOY REVOCABLE TRUST

108 JOHN D. FERRERO, JR.

109 THOMAS P. REED AND LISA REED

110 OHIO WATER SERVICE COMPANY, AN OHIO CORPORATION

141 JAY E. JOHNSON AND DAWN E. JOHNSON

142 JOSEPH M. REIS AND ELIZABETH R. REIS

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

SCALE: 1" = 100'
SCALE IN FEET

PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

PROPERTY MAP

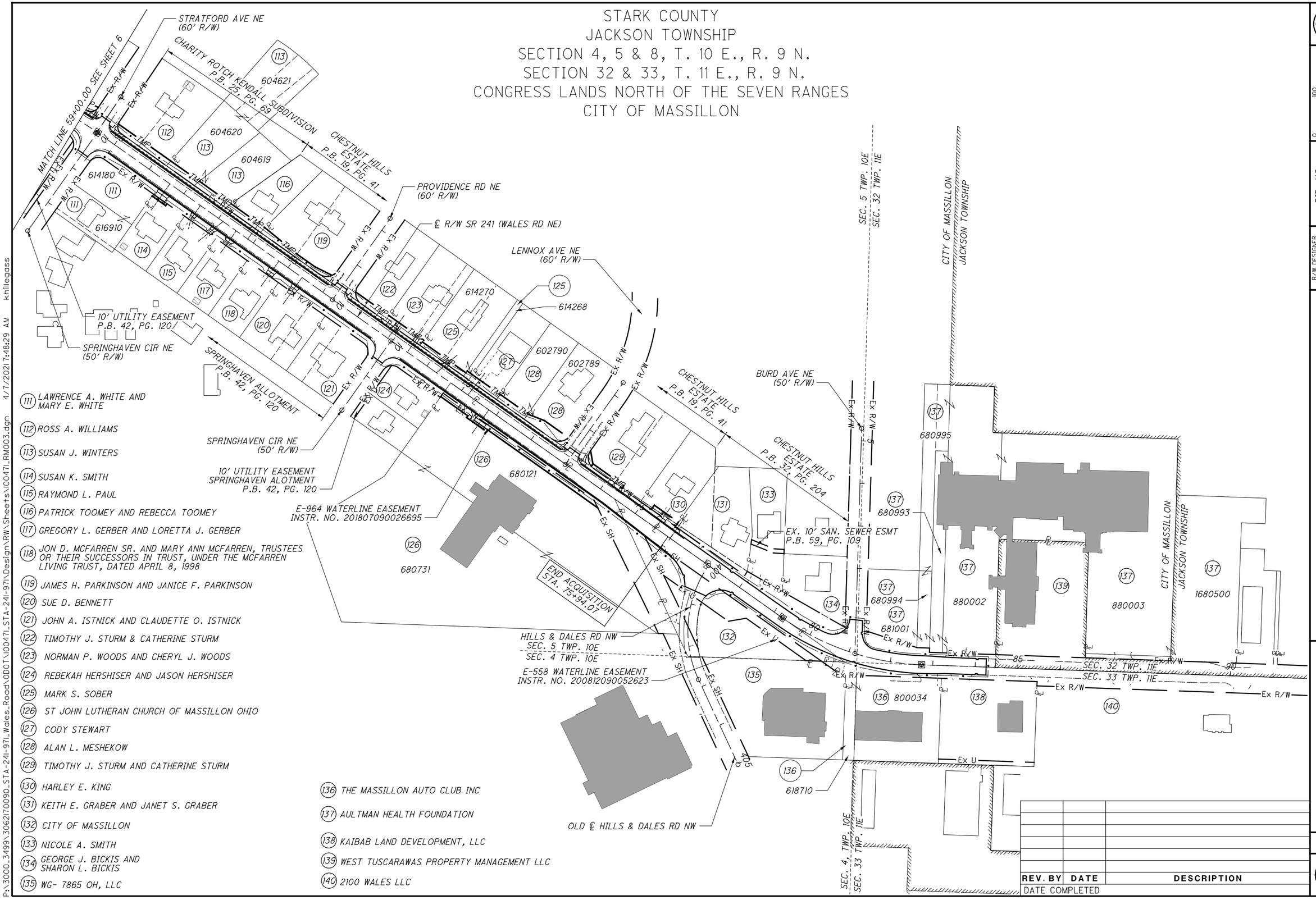
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STARK COUNTY
JACKSON TOWNSHIP
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SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON



(111) LAWRENCE A. WHITE AND MARY E. WHITE

(112) ROSS A. WILLIAMS

(113) SUSAN J. WINTERS

(114) SUSAN K. SMITH

(115) RAYMOND L. PAUL

(116) PATRICK TOOMEY AND REBECCA TOOMEY

(117) GREGORY L. GERBER AND LORETTA J. GERBER

(118) JON D. MCFARREN SR. AND MARY ANN MCFARREN, TRUSTEES OR THEIR SUCCESSORS IN TRUST, UNDER THE MCFARREN LIVING TRUST, DATED APRIL 8, 1998

(119) JAMES H. PARKINSON AND JANICE F. PARKINSON

(120) SUE D. BENNETT

(121) JOHN A. ISTNICK AND CLAUDETTE O. ISTNICK

(122) TIMOTHY J. STURM & CATHERINE STURM

(123) NORMAN P. WOODS AND CHERYL J. WOODS

(124) REBEKAH HERSHISER AND JASON HERSHISER

(125) MARK S. SOBER

(126) ST JOHN LUTHERAN CHURCH OF MASSILLON OHIO

(127) CODY STEWART

(128) ALAN L. MESHEKOW

(129) TIMOTHY J. STURM AND CATHERINE STURM

(130) HARLEY E. KING

(131) KEITH E. GRABER AND JANET S. GRABER

(132) CITY OF MASSILLON

(133) NICOLE A. SMITH

(134) GEORGE J. BICKIS AND SHARON L. BICKIS

(135) WG- 7865 OH, LLC

(136) THE MASSILLON AUTO CLUB INC

(137) AULTMAN HEALTH FOUNDATION

(138) KAIBAB LAND DEVELOPMENT, LLC

(139) WEST TUSCARAWAS PROPERTY MANAGEMENT LLC

(140) 2100 WALES LLC

SCALE: 1" = 100'
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PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

PROPERTY MAP

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TOTAL NUMBER OF :

142 OWNERSHIPS 0 TOTAL TAKES

186 PARCELS 0 OWNERSHIPS W/ STRUCTURES INVOLVED

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE

NET TAKE = GROSS TAKE - PRO IN TAKE

ALL AREAS IN ACRES

GRANTEE:

ALL RIGHT OF WAY ACQUIRED IN THE NAME OF CITY OF MASSILLON UNLESS OTHERWISE SHOWN.

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED INSTRUMENT	AS ACQUIRED NUMBER
1-T	CVS 75981 OH, LLC	15	INSTR. NO. 201004270015275	10000719	1.590	0.000	0.038	0.000	0.038				90% STATE	TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
			INSTR. NO. 201004270015276										10% LOCAL	1 "ENTER" SIGN (TAKE)		
			INSTR. NO. 201004270015277													
			INSTR. NO. 201201170001929													
2-WD	GIBARSE CO.	15	O.R. 1650, PG. 602	614480	0.272	0.000	0.011	0.000	0.011	S(1)		0.261		TO CONSTRUCT INTERSECTION AND WALK		
														1 'PAPA JOHNS' SIGN (TAKE)		
2-T						0.000	0.045	0.000	0.045					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
														7 SHRUBS		
3-T1	RAJREENA ENTERPRISES LLC	15	INSTR. NO. 201212210058752	618197	0.624	0.000	0.023	0.000	0.023					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
														2 EX. PARKING BLOCKS (TAKE), EX. CASH AND LOAN SIGN		
														(PARTIAL ENCROACHMENT) SEE NOTE THIS SHEET		
3-T2			INSTR. NO. 201303040010949	607950	0.164	0.000	0.012	0.000	0.012					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
4-T1	DOUGLAS J. LAB	15-16	INSTR. NO. 200002170009139	602052	0.094	0.000	0.002	0.000	0.002					TO CONSTRUCT DRIVE, TO COMPLETE GRADING		
				606820	0.086											
				608300	0.084											
4-T2				604833	0.110	0.000	0.005	0.000	0.005					TO CONSTRUCT DRIVE		
				608299	0.097											
				602051	0.055											
				606819	0.040											
				603609	0.193											
				605196	0.147											
				610453	0.129											
				610451	0.127											
				603263	0.331											
5	CHRISTOPHER WINTRIP AND KELLY WINTRIP	15-16	INSTR. NO. 200709210051455	603791	0.164									NO TAKE		
6-T	ALFRED E. CRISSEY AND SANDRA A. CRISSEY	16	INSTR. NO. 201103170010866	606362	0.137	0.000	0.011	0.000	0.011					TO CONSTRUCT WALK, TO COMPLETE GRADING		
7-T	CHRISTOPHER P. MAXHIMER	16	INSTR. NO. 201107200028126	600111	0.122	0.000	0.013	0.000	0.013					TO CONSTRUCT DRIVE AND WALK, TO COMPELTE GRADING		
8-T	BRENDA G. RAYNER AND DONALD L. RAYNER	16	INSTR. NO. 200608310053996	606361	0.149	0.000	0.022	0.000	0.022					TO CONSTRUCT DRIVE AND WALK, TO COMPELTE GRADING		
9-T	JEFFREY POWELL	16	INSTR. NO. 202007060027229	606485	0.099	0.000	0.011	0.000	0.011					TO CONSTRUCT DRIVE AND WALK, TO COMPELTE GRADING		
10-T	GERALD L. HECK	16	INSTR. NO. 200003090013445	612608	0.093	0.000	0.008	0.000	0.008					TO CONSTRUCT DRIVE, WALK, TO COMPELTE GRADING		
11-T	NATHAN J. WELLER	16	INSTR. NO. 201610190042105	606553	0.207	0.000	0.011	0.000	0.011					TO CONSTRUCT DRIVE AND WALK, TO COMPELTE GRADING		
12-T	TIFFANY L. SMITH	16	INSTR. NO. 201501300003720	606018	0.186	0.000	0.017	0.000	0.017					TO CONSTRUCT WALK, TO COMPLETE GRADING, 1 STONE		
13	JENNIFER L. GIBSON-MONGER	16	INSTR. NO. 200210220085101	612568	0.085									NO TAKE		
14	CITY OF MASSILLON	16-17	P.B. B, PG. 133	680401	0.744									NO TAKE		
15-T	JOHN C. CARPENTER AND JONICA L. GAMERY	16	O.R. 1997041500	606964	0.129	0.000	0.002	0.000	0.002					TO CONSTRUCT DRIVE		
16-T	DBW PROPERTIES, LLC, AN OHIO LIMITED LIABILITY COMPANY	16-17	INSTR. NO. 200711150060923	610118	0.101	0.000	0.003	0.000	0.003					TO CONSTRUCT DRIVE		
17	GLORIA M. WILLIAMS	17	INSTR. NO. 200408310062421	618196	0.129									NO TAKE		
18	BRENT P. EHMER	17	INSTR. NO. 201801040000399	607935	0.057									NO TAKE		
19-T	MELVIN J. HENTHORNE AND BEVERLY A. HENTHORNE	17	INSTR. NO. 201210050045495	601585	0.113	0.000	0.006	0.000	0.006				90% STATE 10% LOCAL	TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING *EX. HEDGE		

TYPES OF TITLE LEGEND:
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NOTE: ALL TEMPORARY PARCELS TO BE OF 24 MONTH DURATION.

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* DENOTES RIGHT OF WAY ENCROACHMENT

NOTE: EXISTING 'CASH AND LOANS' SIGN IS A PARTIAL ENCROACHMENT AND WILL REMAIN PER CITY OF MASSILLON'S REQUEST.

REV. BY	DATE	DESCRIPTION

DATE COMPLETED

FEDERAL PROJECT NO. E160-(859)

PID NO. 100471

STATE JOB NO. N/A

R/W DESIGNER SEH

R/W REVIEWER BVB/JJR

SUMMARY OF ADDITIONAL RIGHT OF WAY

STA-241-9.71

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NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE
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ALL AREAS IN ACRES

GRANTEE:
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PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED INSTRUMENT	AS ACQUIRED NUMBER
20-T	SPIROS S. MARTZAKLIS AND	17	O.R. 833, PG. 405	608861	0.069	0.000	0.007	0.000	0.007				90% STATE	TO CONSTRUCT WALK AND STEPS, TO COMPLETE GRADING		
	GEORGE S. MARTZAKLIS			608860	0.034								10% LOCAL			
21-T	MARIA I. HERNANDEZ	17	INSTR. NO. 201306280032303	610974	0.113	0.000	0.010	0.000	0.010					TO CONSTRUCT WALK, TO COMPLETE GRADING		
22-T	BARKHEIMER REALITY, LTD	17	INSTR. NO. 201408010028998	612582	0.059	0.000	0.005	0.000	0.005					TO CONSTRUCT DRIVE, WALK AND STEPS, TO COMPLETE GRADING		
				612581	0.034											
23-T	DENISE D. YOUNG	17	INSTR. NO. 200410120072510	609388	0.113	0.000	0.005	0.000	0.005					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
24	JANELLE LAWSON	17	INSTR. NO. 201811290048108	601962	0.061									NO TAKE		
				601961	0.024											
				601960	0.024											
25-T1	ROSALIO B. RIVERA AND MARIA I. RIVERA	17	INSTR. NO. 200701180003094	604744	0.086	0.000	0.001	0.000	0.001					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
25-T2						0.000	0.002	0.000	0.002					TO CONSTRUCT WALK, TO COMPLETE GRADING		
				601609	0.030											
26-T1	L.R. STEINMETZ TRUSTEE	17	INSTR. NO. 201211210053782	617626	0.115	0.000	0.001	0.000	0.001					TO CONSTRUCT WALK		
26-T2		17				0.000	0.001	0.000	0.001					TO CONSTRUCT WALK		
27-T	TOM LU-TAUNG WU AND MAY MEI-CHIH WU, CO-TRUSTEES OF THE WU FAMILY	17	INSTR. NO. 200209040070383	609753	0.262	0.000	0.011	0.000	0.011					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
28-T	JOSEPH P. BERBARI, JR.	17	INSTR. NO. 200801100001167	604573	0.064	0.000	0.001	0.000	0.001					TO CONSTRUCT DRIVE AND WALK, EX. STEP TO BE REPLACED		
				604575	0.052											
29-T	189, LLC	17	INSTR. NO. 201704210016572	610544	0.080	0.000	0.008	0.000	0.008					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
30-T	JEFFREY H. SMITH, TRUSTEE OF THE JEFFREY H. SMITH REVOCABLE TRUST DATED DECEMBER 27, 2011	17-18	INSTR. NO. 201201060000644	616285	0.496	0.000	0.022	0.000	0.022					TO COMPLETE GRADING		
31-T	JOSEPH E. HELLINE AND NANCY C. HELLINE	17-18	INSTR. NO. 200306270061167	605811	0.145	0.000	0.015	0.000	0.015					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
				616119	0.155											
32-T	RAJNIL PETROLEUM, INC AN OHIO CORPORATION	18	INSTR. NO. 201703240012336	605395	0.361	0.000	0.024	0.000	0.024					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING 1 LIGHT POLE, 1 STEEL POLE WITH CONCRETE FOUNDATION		
33	RAJREENA ENTERPRISES LLC	18	INSTR. NO. 201411100043115	610472	0.138									NO TAKE		
34-T	805 WALES RD NE LLC	18	INSTR. NO. 201809110036280	606866	0.052	0.000	0.004	0.000	0.004					TO CONSTRUCT DRIVE		
35-T	DONALD L. GIBSON AND BETH N. GIBSON	18	O.R. 1995028488	601610	0.052	0.000	0.005	0.000	0.005					TO CONSTRUCT DRIVE, WALK AND STEPS, TO COMPLETE GRADING		
36-T	STEVE FILLIEZ	18	INSTR. NO. 200807180032541	612057	0.052	0.000	0.005	0.000	0.005					TO CONSTRUCT DRIVE, WALK AND STEPS, TO COMPLETE GRADING		
37-T	AL PACHMAYER AND PATRICIA PACHMAYER	18	INSTR. NO. 201905210018032	601660	0.092	0.000	0.005	0.000	0.005					TO CONSTRUCT DRIVE, WALK AND STEPS, TO COMPLETE GRADING		
				615465	0.091											
38	WILLIAM R. GLEW	18	VOL. 1116, PG. 997	606549	0.165									NO TAKE		
39	CITY OF MASSILLON	18	P.B. B, PG. 133	680402	0.744									NO TAKE		
40-T1	MARK A. WATSON AND CARRIE S. WATSON	18	INSTR. NO. 200404190026450	609091	0.083	0.000	0.004	0.000	0.004					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
40-T2		18		609089	0.083	0.000	0.004	0.000	0.004					TO CONSTRUCT DRIVE, WALK AND STEPS, TO COMPLETE GRADING		
41-T	THERESA A. BLAIR	18	INSTR. NO. 202004150014759	603810	0.083	0.000	0.004	0.000	0.004				90% STATE 10% LOCAL	TO CONSTRUCT DRIVE, WALK AND STEPS, TO COMPLETE GRADING		

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PID NO. 100471
STATE JOB NO. N/A
R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

SUMMARY OF ADDITIONAL RIGHT OF WAY

STA-241-9.71

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42-T	R & R HOME IMPROVEMENT	18	D.V. 4113, PG. 492	604119	0.041	0.000	0.004	0.000	0.004				90% STATE	TO CONSTRUCT WALK, TO COMPLETE GRADING		
													10% LOCAL			
				604120	0.041											
43-T	JERRY P. LEONARD AND NANCY E. LEONARD	19	O.R. 1995021212	607948	0.110	0.000	0.008	0.000	0.008					TO CONSTRUCT DRIVE, WALK, TO COMPLETE GRADING		
														* 1 ROCK		
44	RUTH P. JESS	19	INSTR. NO. 200208300069160	615578	0.134									NO TAKE		
45-T	EDM PROPERTY INVESTMENTS, LTD	19	INSTR. NO. 201711270050152	601788	0.248	0.000	0.008	0.000	0.008					TO CONSTRUCT DRIVE, WALK, TO COMPLETE GRADING		
46-T	RICHARD FRANCIS DERR AND JANET	19	INSTR. NO. 199901070000955	609962	0.178	0.000	0.006	0.000	0.006					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
	CAROLINE DERR, CO-TRUSTEES, THE DERR															
	FAMILY TRUST, DATED JANUARY 4, 1999															
47-T	RONALD L. JACK, JR	19	O.R. 580, PG. 682	609911	0.115	0.000	0.005	0.000	0.005					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
48-T	DONALD L. MCGUIRE AND	19	O.R. 991, PG. 224	610801	0.248	0.000	0.008	0.000	0.008					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
	KELLY A. MCGUIRE		INSTR. NO. 97059564													
49-T1	MICHAEL J. BERBARI	19	INSTR. NO. 200712210066459	602016	0.131	0.000	0.005	0.000	0.005					TO CONSTRUCT DRIVE, WALK, STEPS, TO COMPLETE GRADING		
49-T2		19		600711	0.118	0.000	0.005	0.000	0.005					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
50-T	LORI A. STOLTE	19	INSTR. NO. 200909160037943	608235	0.169	0.000	0.007	0.000	0.007					TO CONSTRUCT DRIVE, WALK, TO COMPLETE GRADING		
51-T	874 WALES, LLC	19	INSTR. NO. 201912110048866	610859	0.143	0.000	0.005	0.000	0.005					TO CONSTRUCT DRIVE, WALK, STEPS, TO COMPLETE GRADING		
52-T	BRETT T. KISNER	19	INSTR. NO. 201604010012130	603649	0.085	0.000	0.006	0.000	0.006					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
53-T	AMANDA L. VANBUREN	19	INSTR. NO. 201809140036829	602030	0.099	0.000	0.003	0.000	0.003					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
54-T	EDEN HOMES, INC.	19	O.R. 1997005145	601765	0.094	0.000	0.007	0.000	0.007					TO CONSTRUCT DRIVE, WALK, STEPS, TO COMPLETE GRADING		
														*FENCE (TAKE)		
55	MARA STEWART AND ALICIA SWINK	19	INSTR. NO. 201712220054469	609008	0.099									NO TAKE		
56-T	RADA M. SMILEY AND AKRAM A. SMILEY	19	O.R. 200005281I	618750	0.094	0.000	0.007	0.000	0.007					TO CONSTRUCT DRIVE, WALK, TO COMPLETE GRADING		
				618751	0.075									1 TREE		
57-T	LINDA D. NICKOL	19	O.R. 788, PG. 539	600906	0.121	0.000	0.002	0.000	0.002					TO CONSTRUCT DRIVE		
			INSTR. NO. 201812040048732													
58-T1	THOMAS P. LEWIS	19	INSTR. NO. 200309080086762	612664	0.169	0.000	0.008	0.000	0.008					TO CONSTRUCT DRIVE, WALK, STEPS, TO COMPLETE GRADING		
58-T2		19	INSTR. NO. 200308210080963	606550	0.169	0.000	0.009	0.000	0.009					TO CONSTRUCT DRIVE, WALK, STEPS, TO COMPLETE GRADING		
59-T	PREMIER HOMES, INC.	19-20	INSTR. NO. 201911120044364	610206	0.109	0.000	0.003	0.000	0.003					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
60-T	DANIEL BOYD	20	INSTR. NO. 201004070012312	607328	0.123	0.000	0.005	0.000	0.005					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
61-T1	DAVID W. SPUHLER AND	20	INSTR. NO. 200503240018143	617783	0.169	0.000	0.009	0.000	0.009					TO CONSTRUCT DRIVE, WALK, TO COMPLETE GRADING		
	CONSTANCE L. SPUHLER															
61-T2		20	INSTR. NO. 200307140066788	602957	0.094	0.000	0.008	0.000	0.008					TO CONSTRUCT DRIVE, WALK, TO COMPLETE GRADING		
62-T	JERRY P. LEONARD AND NANCY E. LEONARD	20	O.R. 388, PG. 145	606287	0.132	0.000	0.005	0.000	0.005					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
63-T1	DAVID A. KUZNIK	20	O.R. 756, PG. 201	608031	0.087	0.000	0.003	0.000	0.003					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
63-T2		20	INSTR. NO. 199702210008617	603501	0.157	0.000	0.003	0.000	0.003				90% STATE	TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
		20	INSTR. NO. 200202060009761	618310	0.138								10% LOCAL	NO TAKE		

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PID NO. 100471
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64-T	BRANDY D. LENAIN	20	INSTR. NO. 202004070013699	604482	0.094	0.000	0.007	0.000	0.007				90% STATE	TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
				604481	0.075	0.000	0.000	0.000	0.000				10% LOCAL	1 SHRUB		
65-T	DEBORAH S. ROHR	20	INSTR. NO. 200610020060605	605144	0.089	0.000	0.007	0.000	0.007					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
66-T	MICHAEL S. RIES AND KELLY JO RIES	20	INSTR. NO. 98011280	609932	0.169	0.000	0.007	0.000	0.007					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
67-T	MICHAEL T. NASTOFF AND STEPHANIE NASTOFF	20	INSTR. NO. 200708290047630	607178	0.169	0.000	0.009	0.000	0.009					TO CONSTRUCT WALK, TO COMPLETE GRADING		
68-T	MARY C. CHOVAN	20	INSTR. NO. 199809080062943	617844	0.318	0.000	0.015	0.000	0.015					TO CONSTRUCT DRIVE, WALK, STEPS, TO COMPLETE GRADING		
69-T	SHANE SIEMUND	20	INSTR. NO. 201611230047582	617080	0.130	0.000	0.010	0.000	0.010					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
70-T	PREMIER HOMES INC.	20	INSTR. NO. 201706060023483	600573	0.248	0.000	0.015	0.000	0.015					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
				610335	0.327											
				605030	0.347											
				600572	0.055											
71-T	MICHAEL C. FEICHTER AND BENEDETTE A. FEICHTER	20	VOL. 4006, PG. 388	614848	0.110	0.000	0.005	0.000	0.005					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
72	DANIEL C. BIEHL AND MARK A. THEWES	20	O.R. 722, PG. 861	607087	0.101									NO TAKE		
				600795	0.110											
73	DONALD H. REITER AND JANET M. REITER	20	O.R. 1999065061	600166	0.168									NO TAKE		
74	DANIELE A. NONNO	20-21	INSTR. NO. 201504080012605	603818	0.110									NO TAKE		
75	CITY OF MASSILLON	21	D.V. 1091, PG. 294 D.V. 1489, PG. 340	680301	0.402									NO TAKE		
76-T	G. VERONICA AULT	21	INSTR. NO. 201011180046452	611085	0.178	0.000	0.012	0.000	0.012					TO CONSTRUCT WALK, TO COMPLETE GRADING		
77-T	DOUGLAS J. BECHERUCCI AND VICKI A. BECHERUCCI	21	INSTR. NO. 200701190003325	603911	0.313	0.000	0.033	0.000	0.033					TO CONSTRUCT WALK, TO COMPLETE GRADING		
78	ROBERT K. DEHNKE AND LINDA L. DEHNKE	21	INSTR. NO. 200507070044360	610996	0.179									NO TAKE		
79	FRANK D. PAGE AND LINDA PAGE	21	INSTR. NO. 201707280031496	610997	0.179									NO TAKE		
80-T	THE CHRISTIAN CHURCH, A NON-PROFIT CORP.	21-22	D.V. 1810, PG. 314 D.V. 2292, PG. 404	680049	1.740	0.000	0.038	0.000	0.038					TO CONSTRUCT DRIVE, TO COMPLETE GRADING		
			D.V. 2292, PG. 404	680718	0.470											
			D.V. 1810, PG. 314	680719	0.060											
			D.V. 3117, PG. 434	680076	0.200											
			D.V. 3117, PG. 434	680717	0.180											
81	MARY A. MCCLISH	21	INSTR. NO. 201708010032167	610883	0.263									NO TAKE		
82-T	CHARLES L. STEWART AND TERRIE L. STEWART	21	INSTR. NO. 201106080022063	606981	0.263	0.000	0.011	0.000	0.011					TO CONSTRUCT WALK, TO COMPLETE GRADING		
83	JOSEPH RIVERA AND STEPHANIE A. RIVERA	21	O.R. 1996033452	605074	0.263									NO TAKE		
84-T	PR REAL ESTATE HOLDINGS, LLC	21	INSTR. NO. 201706260026549	611593	0.364	0.000	0.008	0.000	0.008					TO CONSTRUCT WALK, TO COMPLETE GRADING *EX. HEDGE		
85-T	PAUL A. PRIBICH AND MARISSA M. PRIBICH	22	INSTR. NO. 201810050040135	609784	1.025	0.000	0.037	0.000	0.037				90% STATE 10% LOCAL	TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING *EX. HEDGE		

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86-T1	PAQUELET PROPERTIES LLC	22	INSTR. NO. 200209180074389	618131	4.210	0.000	0.010	0.000	0.010				90% STATE 10% LOCAL	TO CONSTRUCT DRIVE, TO COMPLETE GRADING		
86-T2		22				0.000	0.005	0.000	0.005					TO CONSTRUCT DRIVE, TO COMPLETE GRADING *EX. HEDGE		
86-T3	PAQUELET PROPERTIES LLC	22	INSTR. NO. 200209180074389	618131	4.210	0.000	0.005	0.000	0.005					TO CONSTRUCT DRIVE, TO COMPLETE GRADING		
87-T	JAMES T. BUCHER AND SUSAN M. BUCHER	22	INSTR. NO. 200103260018929	617091	1.010	0.000	0.023	0.000	0.023					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING *EX. HEDGE		
88-T	RALPH E. RICKSECKER, JR., AND CAROLYN L. RICKSECKER, CO-TRUSTEES OF THE RALPH E. RICKSECKER, JR. AND CAROLYN L. RICKSECKER REVOCABLE TRUST	23	INSTR. NO. 201609230037793	615506	0.323	0.000	0.022	0.000	0.022					TO CONSTRUCT WALK, TO COMPLETE GRADING 1 SHRUB, 1 TREE, *EX. HEDGE		
89-T1	PEBBLE CHASE CONDOMINIUMS UNIT OWNERS ASSOCIATION, INC.	23	INSTR. NO. 200611060067996	10002053	9.090	0.000	0.006	0.000	0.006					TO CONSTRUCT DRIVE, TO COMPLETE GRADING		
89-T2						0.000	0.023	0.000	0.023					TO COMPLETE GRADING		
90-T1	SANDRA J. CHEYNEY	23	O.R. 204, PG. 244 O.R. 1999024763	600094	0.528	0.000	0.015	0.000	0.015					TO CONSTRUCT WALK, TO COMPLETE GRADING		
90-T2				600095	0.475	0.000	0.015	0.000	0.015					TO CONSTRUCT WALK, TO COMPLETE GRADING		
90-T3				600096	0.422	0.000	0.013	0.000	0.013					TO CONSTRUCT WALK, TO COMPLETE GRADING		
91-WD	SPRING HILL HISTORIC HOME INC.	23-24	INSTR. NO. 200001280004941 INSTR. NO. 200907220029799	681106	7.340	0.000	0.004	0.000	0.004			7.336		TO CONSTRUCT SIGNAL POLE, 2 TREES		
91-T						0.000	0.101	0.000	0.101					TO CONSTRUCT DRIVE, TO COMPLETE GRADING, *EX. HEDGE		
92-T	MONTE CASSINO, LLC, AN OHIO LIMITED LIABILITY COMPANY	23-24	INSTR. NO. 201901300003260	618111	0.554	0.000	0.017	0.000	0.017					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
93-T	ELIZABETH STUDER	24	INSTR. NO. 200006080033567 INSTR. NO. 200404200026753	618112	0.475	0.000	0.015	0.000	0.015					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING EX. HEDGE (TAKE)		
94-WD	JESUS A. RAMOS AND JENNIFER L. RAMOS	24, 34	INSTR. NO. 202006260025951	600603	0.439	0.000	0.001	0.000	0.001		0.438			TO CONSTRUCT WALK		
94-T1				600602	0.248	0.000	0.011	0.000	0.011					TO CONSTRUCT WALK, TO COMPLETE GRADING		
94-T2				600603	0.439	0.000	0.072	0.000	0.072					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING, 3 TREES *3 STONES TO BE RELOCATED OUTSIDE THE R/W, *EX. HEDGE AND EX. HEDGE (TAKE)		
95-WD	MARC S. FELIS AND BARBARA L. FELIS	24, 34	INSTR. NO. 201704120015010	607061	0.370	0.000	0.016	0.000	0.016		0.354			TO CONSTRUCT WALK		
95-T						0.000	0.094	0.000	0.094					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING 1 TREE, *2 STONES, *EX. YARD LIGHTS, *EX. STEPS TO BE RELOCATED *EX. HEDGE AND *EX. STONE LANDSCAPING, EX. YARD LIGHT (TAKE)		
96-T	BRUCE W. VRSAN	23-24	D.V. 4264, PG. 474	603367	0.330	0.000	0.025	0.000	0.025					TO COMPLETE GRADING 10' OF EX. FENCE (TAKE)		
97-T	BENJAMIN S. SLAGLE	24	INSTR. NO. 201103250011981	607117	0.740	0.000	0.044	0.000	0.044					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING, 3 SHRUBS		
98-T1	LARRY W. EUTSEY AND PAMELA F. EUTSEY	24	INSTR. NO. 201005070016854	603370	0.540	0.000	0.030	0.000	0.030					TO COMPLETE GRADING		
98-T2			INSTR. NO. 201008020028971	615687	0.057	0.000	0.006	0.000	0.006					TO COMPLETE GRADING		
99-T	STEVEN A. WYLES AND ERMELINDA G. WYLES	24	INSTR. NO. 201109160036905	604268	0.370	0.000	0.021	0.000	0.021					TO CONSTRUCT WALK, TO COMPLETE GRADING, 2 TREES		
100-T	MATTHEW C. STURM AND JODI L. STURM	24	INSTR. NO. 200410290077085	615989	0.848	0.000	0.053	0.000	0.053				90% STATE 10% LOCAL	TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING EX. CONCRETE BOLLARD (TAKE)		

TYPES OF TITLE LEGEND:
WD = WARRANTY DEED
T = TEMPORARY EASEMENT

NOTE: ALL TEMPORARY PARCELS TO BE OF 24 MONTH DURATION.

NOTE: UNDER NO CIRCUMSTANCES ARE TEMPORARY EASEMENTS TO BE USED FOR STORAGE OF MATERIAL OR EQUIPMENT BY THE CONTRACTOR UNLESS NOTED OTHERWISE.

* DENOTES RIGHT OF WAY ENCROACHMENT

REV. BY	DATE	DESCRIPTION

DATE COMPLETED

FEDERAL PROJECT NO. E160-(859)

PID NO. 100471

STATE JOB NO. N/A

R/W DESIGNER SEH

R/W REVIEWER BVB/JJR

SUMMARY OF ADDITIONAL RIGHT OF WAY

STA-241-9.71

P:\3000_3499\3062170090_STA-241-97L_Wales_Road\ODOT\100471_STA-241-97N\Design\RW\Sheets\100471_RS005.dgn 4/7/2021 7:48:32 AM khillegoss

NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE
NET TAKE = GROSS TAKE - PRO IN TAKE

ALL AREAS IN ACRES

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF
CITY OF MASSILLON
UNLESS OTHERWISE SHOWN.

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED INSTRUMENT	AS ACQUIRED NUMBER
101-T1	ROBERT BRUCE PUTNAM	25	INSTR. NO. 200607200044202	609627	0.129	0.000	0.011	0.000	0.011				90% STATE	TO COMPLETE GRADING, *EX. HEDGE		
													10% LOCAL			
101-T2				609628	0.716	0.000	0.035	0.000	0.035					TO CONSTRUCT DRIVE, TO COMPLETE GRADING, *EX. HEDGE		
				613784	0.204											
102-T1	MARK C. MOKROS AND JULIA C. MOKROS	25-26	INSTR. NO. 201608120031631	610299	0.371	0.000	0.024	0.000	0.024					TO CONSTRUCT WALK, TO COMPLETE GRADING		
102-T2				610300	0.382	0.000	0.029	0.000	0.029					TO CONSTRUCT WALK, TO COMPLETE GRADING, 1 TREE		
103-T	TONY L. ULRICH	25-26	INSTR. NO. 201611210047132	10000679	1.370	0.000	0.073	0.000	0.073					TO CONSTRUCT DRIVE, TO COMPLETE GRADING		
			INSTR. NO. 201006020020607													
104-T	JOHN C. THOMAS AND CATHERINE L. THOMAS	26	INSTR. NO. 202001290003940	605569	0.651	0.000	0.039	0.000	0.039					TO CONSTRUCT WALK, TO COMPLETE GRADING		
			INSTR. NO. 202001290003941													
105-T	G. KARL GASTON AND JEANNE E. GASTON	26	INSTR. NO. 200306160056318	600810	0.566	0.000	0.046	0.000	0.046					TO CONSTRUCT DRIVE, TO COMPLETE GRADING		
				613595	0.183	0.000	0.000	0.000	0.000					15' OF FENCE (TAKE)		
106-T	MICHELLE RENEE RYAN	26	O.R. 1996062362	610315	0.441	0.000	0.030	0.000	0.030					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
107-T	KAY M. MALLOY, TRUSTEE OF THE KAY M. MALLOY	26-27	INSTR. NO. 201312190060598	619199	0.555	0.000	0.041	0.000	0.041					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
	REVOCABLE TRUST															
108-T	JOHN D. FERRERO, JR.	26-27	O.R. 2002025407	614184	0.363	0.000	0.008	0.000	0.008					TO CONSTRUCT DRIVE, TO COMPLETE GRADING		
			O.R. 2002025407	615884	0.126									*TWO LIGHTS WITH BRICK BASE, TO BE REMOVED (TBR)		
			O.R. 2002025408	614183	0.326									*EX. LANDSCAPING		
			O.R. 2002025408	615882	0.100											
109-T	THOMAS P. REED AND LISA REED	27	INSTR. NO. 201504280015493	619197	0.945	0.000	0.069	0.000	0.069					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
110	OHIO WATER SERVICE COMPANY,	27	O.R. 824, PG. 344	614182	0.363									NO TAKE		
	AN OHIO CORPORATION			615881	0.109											
111	LAWRENCE A. WHITE AND MARY E. WHITE	27	O.R. 1996030406	616910	0.305									NO TAKE		
			O.R. 1066, PG. 595	614180	0.335											
112-T	ROSS A. WILLIAMS	27	INSTR. NO. 201703100010469	607799	0.748	0.000	0.050	0.000	0.050					TO CONSTRUCT WALK, TO COMPLETE GRADING		
113-T1	SUSAN J. WINTERS	27-28	INSTR. NO. 201403280010673	604620	0.428	0.000	0.028	0.000	0.028					TO CONSTRUCT WALK, TO COMPLETE GRADING		
														1 TREE, SHRUBS, SMALL TREES AND BUSHES		
113-T2			INSTR. NO. 201403280010673	604619	0.416	0.000	0.031	0.000	0.031					TO CONSTRUCT WALK, TO COMPLETE GRADING		
			INSTR. NO. 201403280010672	604621	0.528									1 TREE		
114-T	SUSAN K. SMITH	27-28	INSTR. NO. 201106080022066	614179	0.326	0.000	0.005	0.000	0.005					TO CONSTRUCT DRIVE, TO COMPLETE GRADING, *EX. LIGHTPOLE		
														*EX. LANDSCAPING		
115	RAYMOND L. PAUL	29	O.R. 1083, PG. 290	614178	0.326									NO TAKE		
116-T	PATRICK TOOMEY AND REBECCA TOOMEY	29	O.R. 1999057849	617082	0.434	0.000	0.034	0.000	0.034					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
														3 TREES		
117	GREGORY L. GERBER AND LORETTA J. GERBER	29	INSTR. NO. 200910130041873	614177	0.326									NO TAKE		
118	JON D. MCFARREN, SR. AND MARY ANN MCFARREN,	29	INSTR. NO. 200210020079368	614176	0.326									NO TAKE		
	TRUSTEES OR THEIR SUCCESSORS IN TRUST, UNDER															
	THE MCFARREN LIVING TRUST, DATED APRIL 8, 1998															
119-T	JAMES H. PARKINSON AND JANICE F. PARKINSON	29	O.R. 1452, PG. 957	617083	0.848	0.000	0.045	0.000	0.045				90% STATE	TO CONSTRUCT WALK, TO COMPLETE GRADING		
													10% LOCAL	5 TREES, SHRUBS		

TYPES OF TITLE LEGEND:
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NOTE: ALL TEMPORARY PARCELS TO BE OF 24 MONTH DURATION.

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* DENOTES RIGHT OF WAY ENCROACHMENT

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

FEDERAL PROJECT NO. E160-(859)
PID NO. 100471
STATE JOB NO. N/A
R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

SUMMARY OF ADDITIONAL RIGHT OF WAY

STA-241-9.71

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NET RESIDUE = RECORD AREA - TOTAL PRO - NET TAKE
NET TAKE = GROSS TAKE - PRO IN TAKE

ALL AREAS IN ACRES

GRANTEE:
ALL RIGHT OF WAY ACQUIRED IN THE NAME OF
CITY OF MASSILLON
UNLESS OTHERWISE SHOWN.

PARCEL NO.	OWNER	SHEET NO.	OWNERS RECORD	AUDITOR'S PARCEL	RECORD AREA	TOTAL P.R.O.	GROSS TAKE	P.R.O. IN TAKE	NET TAKE	STRUCTURE	NET RESIDUE LEFT	NET RESIDUE RIGHT	TYPE FUND	REMARKS	AS ACQUIRED INSTRUMENT	AS ACQUIRED NUMBER
120	SUE D. BENNETT	29	INSTR. NO. 201601140001526	617298	0.490								90% STATE 10% LOCAL	NO TAKE		
121	JOHN A. ISTNICK AND CLAUDETTE O. ISTNICK	28-29	INSTR. NO. 200503180016678	616760	0.490									NO TAKE		
122-T	TIMOTHY J. STURM AND CATHERINE STURM	28-29	INSTR. NO. 201906190022079	600971	0.505	0.000	0.030	0.000	0.030					TO CONSTRUCT WALK, TO COMPLETE GRADING		
123-T	NORMAN P. WOODS AND CHERYL J. WOODS	29	O.R. 1626, PG. 338	617332	0.530	0.000	0.034	0.000	0.034					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
124	REBEKAH HERSHISER AND JASON HERSHISER	29	INSTR. NO. 201404110012693	614171	0.258									NO TAKE; *EX. FENCE (SEE NOTE THIS SHEET)		
125-T1	MARC S. SOBER	29	INSTR. NO. 201805220019886	614270	0.606	0.000	0.029	0.000	0.029					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
														3 TREES, 8 SHRUBS, EX. LANDSCAPING (TAKE)		
125-T2				614268	0.076	0.000	0.005	0.000	0.005					TO CONSTRUCT WALK, TO COMPLETE GRADING		
126-T	ST. JOHN LUTHERAN CHURCH	29	VOL 3040, PG. 497	680121	2.790	0.649	0.108	0.000	0.108					TO CONSTRUCT DRIVE, TO COMPLETE GRADING		
	OF MASSILLON, OHIO			680731	4.170									*EX. FENCE (SEE NOTE THIS SHEET)		
127-T	CODY STEWART	29	INSTR. NO. 202003180011198	608020	0.404	0.000	0.028	0.000	0.028					TO CONSTRUCT WALK, TO COMPLETE GRADING		
128-T1	ALAN L. MESHEKOW	29-30	INSTR. NO. 201809170036976	602790	0.404	0.000	0.028	0.000	0.028					TO CONSTRUCT WALK, TO COMPLETE GRADING		
128-T2			INSTR. NO. 201802140005558	602789	0.551	0.000	0.054	0.000	0.054					TO CONSTRUCT WALK, TO COMPLETE GRADING		
129-T	TIMOTHY J. STURM AND CATHERINE STURM	30	INSTR. NO. 201512230051636	603792	0.774	0.000	0.022	0.000	0.022					TO CONSTRUCT WALK, TO COMPLETE GRADING		
130-T	HARLEY E. KING	30	INSTR. NO. 201912200050786	617127	0.471	0.000	0.019	0.000	0.019					TO CONSTRUCT DRIVE, TO COMPLETE GRADING, 1 STUMP		
131	KEITH E. GRABER AND JANET S. GRABER	30-31	O.R. 1999091082	617126	0.752									NO TAKE		
132	CITY OF MASSILLON	30-32	VOL. 3539, PG. 484	680397	1.580									NO TAKE		
133	NICOLE A. SMITH	31	INSTR. NO. 201305060022403	617125	0.537									NO TAKE		
134	GEORGE J. BICKIS AND SHARON L. BICKIS	31-32	INSTR. NO. 201408280032913	600792	0.486									NO TAKE		
135	WG-7865 OH, LLC	32	INSTR. NO. 200506130037775	618709	1.460									NO TAKE		
136	THE MASSILLON AUTO CLUB INC	32-33	D.V. 3540, PG. 1	800034	0.880									NO TAKE		
				618710	0.120											
137	AULTMAN HEALTH FOUNDATION	32-33	O.R. 1999014624	681001	0.450									NO TAKE		
			O.R. 1996050192	680995	0.410											
			O.R. 1996050192	680994	0.250											
			O.R. 1996050192	680993	0.330											
			O.R. 1996050192	880003	3.580											
			INSTR. NO. 199802200010100	880002	1.850											
			INSTR. NO. 199802200010100	1680500	1.570											
138	KAIBAB LAND DEVELOPMENT, LLC	33	INSTR. NO. 201510230042580	800038	1.190									NO TAKE		
139	WEST TUSCARAWAS	33	INSTR. NO. 201610180041896	1621916	1.460									NO TAKE		
	PROPERTY MANAGEMENT LLC															
140	2100 WALES LLC	33	INSTR. NO. 201506160022987	800039	8.430									NO TAKE		
141-T	JAY E. JOHNSON AND DAWN E. JOHNSON	34	INSTR. NO. 200504290027128	607334	0.419	0.000	0.026	0.000	0.026					TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		
														1 TREE, *EX. HEDGE		
													90% STATE			
142-T	JOSEPH M. RIES AND ELIZABETH R. RIES	34	INSTR. NO. 201807200028493	612124	0.375	0.000	0.042	0.000	0.042				10% LOCAL	TO CONSTRUCT DRIVE AND WALK, TO COMPLETE GRADING		

TYPES OF TITLE LEGEND:
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NOTE: ALL TEMPORARY PARCELS TO BE OF 24 MONTH DURATION.

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* DENOTES RIGHT OF WAY ENCROACHMENT

NOTE: EXISTING FENCE IS AN ENCROACHMENT AND WILL REMAIN PER CITY OF MASSILLON'S REQUEST.

REV. BY	DATE	DESCRIPTION

DATE COMPLETED

FEDERAL PROJECT NO. E160-(859)
PID NO. 100471
STATE JOB NO. N/A
R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

SUMMARY OF ADDITIONAL RIGHT OF WAY

STA-241-9.71

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STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON

	Bearing	Distance
L1	N 88° 13′ 12″ W	15.00′
L2	S 88° 13′ 12″ E	15.00′
L3	N 01° 46′ 48″ E	19.25′
L4	N 86° 19′ 44″ E	5.02′
L5	N 86° 19′ 44″ E	11.05′
L6	N 01° 46′ 48″ E	8.28′
L7	S 88° 13′ 12″ E	11.00′
L8	N 01° 46′ 48″ E	7.23′
L9	S 15° 46′ 45″ E	6.63′
L10	S 29° 11′ 01″ E	29.15′
L11	S 87° 57′ 53″ E	10.00′
L12	S 87° 49′ 43″ E	10.00′
L13	S 87° 49′ 43″ E	10.00′

(1) CVS 75981 OH, LLC
1130 E LINCOLN WAY,
MASSILLON, OH 44646-6951
PARCEL NO. 10000719
INSTR. NO. 201004270015275,
INSTR. NO. 201004270015276,
INSTR. NO. 201004270015277
INSTR. NO. 201201170001929
PT LOT 1079

(4) DOUGLAS J. LAB
131 WALES RD NE,
MASSILLON, OH 44646-5868
PARCEL NO. 602052
INSTR. NO. 200002170009139

(4) PARCEL NO. 603609
INSTR. NO. 200002170009139

(4) PARCEL NO. 602051
INSTR. NO. 200002170009139

(4) PARCEL NO. 606819
INSTR. NO. 200002170009139

(4) PARCEL NO. 608299
INSTR. NO. 200002170009139

(4) PARCEL NO. 608300
INSTR. NO. 200002170009139

(4) PARCEL NO. 606820
INSTR. NO. 200002170009139

(2) GIBARSE CO.
1206 E LINCOLN WAY,
MASSILLON, OH 44646-6901
PARCEL NO. 614480
OR 1650, PG 602

(3) RAJREENA ENTERPRISES LLC
1220 E LINCOLN WAY,
MASSILLON, OH 44646-6901
PARCEL NO. 618197
INSTR. NO. 201212210058752

(3) RAJREENA ENTERPRISES LLC
PARCEL NO. 607950
INSTR. NO. 201303040010949

(5) CHRISTOPHER WINTRIP AND
KELLY WINTRIP
138 WALES RD NE,
MASSILLON, OH 44646-5869
PARCEL NO. 603791
INSTR. NO. 200709210051455

BEGIN WORK
STA. -0+48.80

BEGIN ACQUISITION
STA. 0+47.91

STA. 0+00.00 ℄ R/W SR 241 =
STA. 304+84.92 ℄ R/W & CONST. SR 172

MATCH LINE STA. 4+00, SEE SHEET 16

NOTE

1. STATION AND OFFSET INFORMATION FOR EXISTING PINS CAN BE FOUND ON SHEET 4.
2. EXISTING CASH AND LOANS SIGN WILL BE SAVED PER CITY OF MASSILLON'S REQUEST.

LEGEND

[X] MONUMENT NUMBER

CURVE	CENTRAL ANGLE	RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING
C1	36° 52′ 12″	25.00′	16.09′	15.81′	S 20° 12′ 54″ W
C2	58° 48′ 22″	46.00′	47.21′	45.17′	N 48° 25′ 47″ W

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

SCALE: 1″ = 20′
SCALE IN FEET

PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/CJR

RIGHT OF WAY · PLAN
STA. 0+00 TO STA. 4+00

STA-241-9.71

15 / 34

376
395

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STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON

	Bearing	Distance		Bearing	Distance
L1	N 88° 13' 12" W	6.00'	L14	N 87° 55' 39" W	5.00'
L2	S 88° 13' 12" E	6.00'	L15	N 87° 49' 43" W	8.00'
L3	N 87° 49' 43" W	11.00'	L16	N 87° 55' 39" W	8.00'
L4	S 87° 55' 39" E	11.00'	L17	S 02° 04' 21" W	12.28'
L5	S 87° 55' 39" E	8.00'	L18	N 87° 55' 39" W	8.00'
L6	N 87° 55' 39" W	8.00'	L19	N 02° 04' 21" E	12.28'
L7	S 87° 55' 39" E	8.00'	L20	S 87° 55' 39" E	8.00'
L8	N 88° 13' 12" W	10.00'	L21	S 02° 04' 21" W	13.72'
L9	S 87° 49' 43" E	10.00'	L22	N 02° 04' 21" E	13.72'
L10	N 87° 49' 43" W	8.00'	L23	N 01° 46' 48" E	11.54'
L11	N 87° 55' 39" W	5.00'	L24	S 87° 49' 43" E	13.00'
L12	S 02° 04' 21" W	9.21'	L25	N 87° 49' 43" W	8.00'
L13	S 02° 04' 21" W	12.79'			

NOTE

STATION AND OFFSET INFORMATION FOR EXISTING PINS CAN BE FOUND ON SHEET 4.

LEGEND

[X] MONUMENT NUMBER

SCALE: 1" = 20'
SCALE IN FEET

PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

RIGHT OF WAY PLAN - SR 241
STA. 4+00 TO STA. 9+00

STA-241-9.71

16 / 34

377 / 395

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

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STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON

	Bearing	Distance
L1	N 87° 55' 39" W	10.00'
L2	N 17° 44' 57" E	18.50'
L3	S 87° 55' 39" E	5.00'
L4	S 87° 55' 39" E	5.00'
L5	S 87° 55' 39" E	2.00'
L6	N 02° 04' 21" E	10.69'
L7	S 87° 07' 33" E	2.00'
L8	N 02° 04' 21" E	10.69'
L9	N 89° 00' 36" W	1.59'
L10	N 01° 52' 27" E	12.52'
L11	N 87° 07' 33" W	7.36'
L12	N 01° 52' 27" E	2.08'
L13	S 87° 55' 39" E	9.00'
L14	S 02° 04' 21" W	14.55'
L15	N 87° 55' 39" W	0.85'
L16	N 87° 55' 39" W	0.50'
L17	N 87° 55' 39" W	7.00'

	Bearing	Distance
L18	N 87° 55' 39" W	7.00'
L19	N 87° 55' 39" W	10.00'
L20	S 24° 55' 12" E	11.02'
L21	S 87° 55' 39" E	5.00'
L22	S 87° 55' 39" E	10.00'
L23	S 87° 55' 39" E	5.00'
L24	S 87° 55' 39" E	10.00'
L25	N 87° 55' 39" W	5.00'
L26	N 02° 04' 21" E	8.06'
L27	S 87° 55' 39" E	5.00'
L28	S 02° 04' 21" W	8.06'
L29	N 87° 55' 39" W	12.00'
L30	N 02° 04' 21" E	7.18'
L31	S 02° 04' 21" W	7.18'
L32	N 87° 55' 39" W	12.00'
L33	N 87° 55' 39" W	8.00'
L34	S 87° 55' 39" E	8.00'

22 BARKHEIMER REALTY, LTD
435 WALES RD NE,
MASSILLON, OH 44646-5874
PARCEL NO. 612582
INSTR. NO. 201408010028998

20 SPIROS S. MARTZAKLIS AND
GEORGE S. MARTZAKLIS
431 WALES RD NE,
MASSILLON, OH 44646-5874
PARCEL NO. 608861
OR 833, PG 405

℄ R/W & CONST. RODMAN AV. NE

14 CITY OF MASSILLON
WALES RD NE,
MASSILLON, OH 44646
PARCEL NO. 680401
PB. B PG. 133
KENDAL PARK

PARK
LOT 1348

CONSTRUCTION LIMITS
EX. STONE, DND
EX. WALL DND
RODMAN AV. NE (60' R/W)
EX R/W
60.00'
S 87° 55' 39" E
4" EX. GAS
PROP. 12" DIP WATER
10" SAN
2" EX. GAS
EX. TELECOM
4" EX. GAS
℄ R/W SR 241 (WALES RD. NE)
MATCH LINE STA. 9+00, SEE SHEET 16
48"
36" STM
246"
30.35'
44.07'

60'
POT Sta. 9+00.00
PARCEL NO. 608860
OR 833, PG 405
20
PARCEL NO. 612581
INSTR. NO. 201408010028998
22
24 PARCEL NO. 601961
INSTR. NO. 201811290048108
TOWN OF KENDAL
P.B. B, PG. 133

LOT 1347
LOT 1346
LOT 1345
2-STORY FRAME RES.
20-T
22-T
+53.5 ℄ RES. DRIVE AGGR.
S 02° 04' 21" W 43.57'
N 02° 04' 21" E 43.57'
11+09.98 35.00 LT
11+29.98 30.00 LT
11+53.55 35.00 LT
11+97.12 32.00 LT
10+60.18 40.00 LT
10+78.00 35.00 LT
10+60.18 30.00 LT
49.80'
31.98'
32.36'
L1 L2 L3 L4 L5 L6 L8
11+53.55 30.00 LT
11+97.12 30.00 LT
12+07.82 30.00 LT
12+25.63 30.00 LT
12+40.18 30.00 LT
DND
EX. WALL DND
STA. 10+30.18 (R/W SR 241) =
STA. 10+00.00 (RODMAN AV. NE)

PT LOT 15446
2-STORY FRAME COMM.
26-TI
26-T2
26 L.R. STEINMETZ TRUSTEE
443 WALES RD NE,
MASSILLON, OH 44646-5878
PARCEL NO. 617626
INSTR. NO. 201211210053782
S 87° 55' 39" E
12+07.81 32.00 LT
12+25.60 31.59 LT
L7 L9 L10 L11 L12
12+70.18 30.85 LT
12+38.10 38.99 LT
12+40.18 39.00 LT
12+38.12 31.63 LT
12+70.18 30.00 LT
EX. STEPS TO BE REPLACED
STA. 12+55.18 (R/W SR 241) = N 2° 04' 21" E
STA. 10+00.00 (GRAY CT. NE)

28 PARCEL NO. 604575
INSTR. NO. 200801100001167
24 JANELLE LAWSON
439 WALES RD NE,
MASSILLON, OH 44646-5874
PARCEL NO. 601962
INSTR. NO. 201811290048108
30'
28 JOSEPH P. BERBARI, JR.
705 WALES RD NE,
MASSILLON, OH 44646-4740
PARCEL NO. 604573
INSTR. NO. 200801100001167
POT Sta. 9+00.00
S 87° 55' 39" E
PT LOT 1336
2-STORY FRAME COMM.
28-T
70.50'
13+10.68 37.00 LT
13+10.68 30.50 LT
40.50'
EX R/W
7' DRIVEWAY EASEMENT VOL. 1471 PG 409
+16 ℄ RES. DRIVE
CONC.
N 02°04'21" E 49.50'
TMP
2-STORY BRICK RES.
29-T
13+60.18 37.00 LT
90.00'
S 02°04'21" W 90.00'
49.50'
120.00'
13+60.18 30.00 LT
EX. SIGN
EX. STEPS
10" SAN
13+10.68 30.00 LT
L16 L15 L17 L18

31 PARCEL NO. 616119
INSTR. NO. 200306270061167
1-STORY MASON COMM.
29 I89, LLC
709 WALES RD NE,
MASSILLON, OH 44646-4740
PARCEL NO. 610544
INSTR. NO. 201704210016572
31 JOSEPH E. HELLINE AND
NANCY C. HELLINE
717 WALES RD NE,
MASSILLON, OH 44646-4740
PARCEL NO. 605811
INSTR. NO. 200306270061167
1-STORY MASONRY
PT LOT 1336
LOT 1335
+84.5 ℄ COMM. DRIVE
ASPHALT
COMM.
31-T
MATCH LINE STA. 14+00, SEE SHEET 18

LOT 1174
2-STORY FRAME RES.
2-STORY BRICK RES.
+60 ℄ RES. DRIVE
CONC.
EX. FLAG POLE
DND
*EX. HEDGE
10+00.18 30.00 RT
9+60.29 30.00 RT
10+60.18 40.00 RT
10+70.00 35.00 RT
11+04.94 35.00 RT
11+04.94 40.00 RT
11+49.94 40.00 RT
11+49.94 35.00 RT
12+03.00 35.00 RT
12+33.00 42.00 RT
12+40.18 42.00 RT
12+70.18 38.00 RT
13+30.18 38.00 RT
S 02°04'21" W 34.94'
N 02°04'21" E 44.75'
S 2°04'21" W 45.00'
N 02° 04' 21" E 45.00'
S 02° 04' 21" W 45.00'
N 02° 04' 21" E 60.00'
S 02° 04' 21" W 60.00'
S 2° 04' 21" W 120.00'
45.00'
60.00'
120.00'
L19 L20 L21 L22 L23 L24 L25 L26 L27 L28 L29 L30 L31 L32 L33 L34
TMP
EX R/W
17 18 19 20 21 22 23 24 25 26 27 28 29 30 31
+87 ℄ RES. DRIVE AGGR.
+48.5 ℄ RES. DRIVE
+90.5 ℄ RES. DRIVE
+98.5 ℄ COMM. DRIVE
+62 ℄ COMM. DRIVE
ASPHALT
19-T
21-T
23-T
25-T1
27-T
30-T
PT LOT 1176
PT LOT 1175
PT LOT 1179
PT LOT 1183
2-STORY FRAME RES.
2-STORY BRICK RES. LOT 1180
I-STORY MASONRY COMM.
POT Sta. 11+00.00
GRAY CT. NE (30' R/W)
℄ R/W & CONST. GRAY CT. NE
POT Sta. 11+00.00
EX. PHONEBOOTH (SAVE)
E. GUARDRAIL DND
DND
EX. SIGN, DND
LOT 1181
LOT 1182
PT LOT 1182
LOT 1168
LOT 16202
DRIVEWAY EASEMENT VOL. 827 PG. 414
9+60.34 104.87 RT
9+65.34 104.87 RT
GARAGE
DRIVEWAY EASEMENT VOL. 712 PG. 420
3.5' DRIVEWAY EASEMENT IN. 201306280032303
3.5' DRIVEWAY EASEMENT IN. 200410120072510
4' DRIVEWAY EASEMENT IN. 201306280032303
4.5' DRIVEWAY EASEMENT VOL. 2750 PG. 334
TOWN OF KENDAL P.B. B, PG. 133

18 BRENT P. EHMER
420 WALES RD NE,
MASSILLON, OH 44646-5897
PARCEL NO. 607935
INSTR. NO. 201801040000399

17 GLORIA M. WILLIAMS
414 WALES RD NE,
MASSILLON, OH 44646-5897
PARCEL NO. 618196
INSTR. NO. 200408310062421

16 DBW PROPERTIES, LLC,
AN OHIO LIMITED LIABILITY COMPANY
410 WALES RD NE,
MASSILLON, OH 44646-5897
PARCEL NO. 610118
INSTR. NO. 200711150060923

19 MELVIN J. HENTHORNE AND
BEVERLY A. HENTHRONE
1206 RODMAN AVE NE,
MASSILLON, OH 44646-5861
PARCEL NO. 601585
INSTR. NO. 201210050045495

21 MARIA I. HERNANDEZ
434 WALES RD NE,
MASSILLON, OH 44646-5875
PARCEL NO. 610974
INSTR. NO. 201306280032303

23 DENISE D. YOUNG
438 WALES RD NE,
MASSILLON, OH 44646-5875
PARCEL NO. 609388
INSTR. NO. 200410120072510

25 ROSALIO B. RIVERA
AND MARIA I. RIVERA
444 WALES RD NE,
MASSILLON, OH 44646-5875
PARCEL NO. 604744
INSTR. NO. 200701180003094

27 TOM LU-TAUNG WU AND
MAY MEI-CHIH WU,
CO-TRUSTEES OF
THE WU FAMILY
704 WALES RD NE,
MASSILLON, OH 44646-4741
PARCEL NO. 609753
INSTR. NO. 200209040070383

25 PARCEL NO. 601609
INSTR. NO. 200701180003094
1-STORY MASONRY COMM.

30 JEFFREY H. SMITH, TRUSTEE OF THE
JEFFREY H. SMITH REVOCABLE TRUST
DATED DECEMBER 27, 2011
712 WALES RD NE,
MASSILLON, OH 44646-4741
PARCEL NO. 616285
INSTR. NO. 201201060000644

NOTE

STATION AND OFFSET INFORMATION FOR EXISTING PINS CAN BE FOUND ON SHEET 4.

LEGEND

X MONUMENT NUMBER

REV. BY	DATE	DESCRIPTION

DATE COMPLETED

SCALE: 1" = 20'
SCALE IN FEET

PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

RIGHT OF WAY · PLAN
STA. 9+00 TO STA. 14+00

STA-241-9.71

17 / 34

378
395

P:\3000_3499\3062\70090_STA-241-97L_Wales_Road\ODOT\100471_STA-241-97I\Design\RW\Sheets\100471_RD003.dgn 4/7/2021 7:48:39 AM khillegoss

STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON

	Bearing	Distance		Bearing	Distance
L1	S 87° 55' 39" E	7.00'	L12	S 87° 55' 39" E	8.00'
L2	N 87° 55' 39" W	10.00'	L13	N 02° 04' 21" E	27.18'
L3	N 02° 04' 21" E	18.18'	L14	S 87° 55' 39" E	3.00'
L4	S 87° 55' 39" E	10.00'	L15	N 87° 55' 39" W	5.00'
L5	N 87° 55' 39" W	3.00'	L16	N 02° 04' 21" E	10.82'
L6	N 02° 04' 21" E	24.82'	L17	S 87° 55' 39" E	4.20'
L7	N 87° 55' 39" W	8.00'	L18	N 02° 04' 21" E	29.00'
L8	N 02° 04' 21" E	12.68'	L19	N 87° 55' 39" W	4.20'
L9	S 87° 55' 39" E	11.00'	L20	N 02° 04' 21" E	27.18'
L10	S 02° 04' 21" W	37.50'	L21	S 87° 55' 39" E	5.00'
L11	N 02° 04' 21" E	10.32'	L22	S 87° 55' 39" E	6.00'

31 — PARCEL NO. 616119
INSTR. NO. 200306270061167
1-STORY BLOCK COMM.

31 — JOSEPH E. HELLINE AND NANCY C. HELLINE
717 WALES RD NE,
MASSILLON, OH 44646-4740
PARCEL NO. 605811
INSTR. NO. 200306270061167
1-STORY MASONRY COMM.

35 — DONALD L. GIBSON AND BETH N. GIBSON
809 WALES RD NE,
MASSILLON, OH 44646-4721
PARCEL NO. 601610
OR 1995028488

34 — 805 WALES RD NE LLC
805 WALES RD NE,
MASSILLON, OH 44646-4721
PARCEL NO. 606866
INSTR. NO. 201809110036280

36 — STEVE FILLIEZ
815 WALES RD NE,
MASSILLON, OH 44646-4721
PARCEL NO. 612057
INSTR. NO. 200807180032541

37 — PARCEL NO. 615465
VOL. 4352 PG. 186

37 — FLOYD L. CHAPMAN AND WANDA J. CHAPMAN
817 WALES RD NE,
MASSILLON, OH 44646-4721
PARCEL NO. 601660
VOL. 4352 PG. 186

39 — CITY OF MASSILLON
WALES RD NE,
MASSILLON, OH 44646
PARCEL NO. 680402
PB. B PG. 133

KIDDIE KORRAL PARK
LOT 1366

TOWN OF KENDAL P.B. B, PG. 133

℄ R/W & CONST. STATE AVE. NE

℄ R/W & CONST. ROSLYN AV. NE

8' DRIVEWAY EASEMENT IN. 199507050029509

POT Sta. 9+00.00

LOT 1330 · LOT 1331 · LOT 1332 · LOT 1333 · LOT 1334 · LOT 1335 · LOT 1337 · LOT 1338 · LOT 1328

COMM. DRIVE · 2-STORY BRICK COMM. · 2-STORY FRAME RES. · 2-STORY BRICK RES. · GARAGE

EX. POSTS DND · EX. FENCE DND · EX. HEDGE DND · EX. STEPS AND RAIL DND · EX. STAIRS & HANDRAIL DND · EX. 'AFFINITY' SIGN DND · EX. 'SUNOCO' SIGN DND

EX. R/W · 3" EX. GAS · 2" EX. GAS · 6" EX. WATER · 14" EX. WATER · 10" SAN · 12" TYPE B · 15" STM · 12" TYPE B · PROP. 12" DIP WATER · PROP. 8" DIP WATER · 6" EX. WATER · EX. TELECOM 4" EX. GAS · 16" EX. WATER · EX. GAS · EX. STEEL POLE (TAKE) · EX. LIGHT POLE (TAKE) · CONSTRUCTION LIMITS · ℄ R/W SR 241 (WALES RD. NE)

STA. 14+80.18 (R/W SR 241) = STA. 10+00.00 (STATE AVE. NE)

STA. 17+05.18 (R/W SR 241) = STA. 10+00.00 (ROSLYN AV. NE)

MATCH LINE STA. 14+00, SEE SHEET 17

MATCH LINE STA. 19+00, SEE SHEET 19

26 — JEFFREY H. SMITH, TRUSTEE OF THE JEFFREY H. SMITH REVOCABLE TRUST DATED DECEMBER 27, 2011
712 WALES RD NE,
MASSILLON, OH 44646-4741
PARCEL NO. 616285
INSTR. NO. 201201060000644

27 — LOT 1185 · +40 ℄ COMM. DRIVE ASPHALT · 1-STORY MASONRY COMM.

28 — 2-STORY FRAME RES.

29 — 2-STORY FRAME RES. · GARAGE · +95 ℄ RES. DRIVE CONC.

30 — 2-STORY FRAME RES. · +38.5 ℄ RES. DRIVE CONC.

30 — 1-STORY MASON COMM. · PT LOT 1184

32 — RAJNIL PETROLEUM, INC AN OHIO CORPORATION
804 WALES RD NE,
MASSILLON, OH 44646-4722
PARCEL NO. 605395
INSTR. NO. 201703240012336

33 — RAJREENA ENTERPRISES LLC
820 WALES RD NE,
MASSILLON, OH 44646-4722
PARCEL NO. 610472
INSTR. NO. 201411100043115

38 — WILLIAM R. GLEW
824 WALES RD NE,
MASSILLON, OH 44646-4722
PARCEL NO. 606549
VOL. 1116, PG. 997

40 — MARK A. WATSON AND CARRIE S. WATSON
834 WALES RD NE,
MASSILLON, OH 44646
PARCEL NO. 609091
INSTR. NO. 200404190026450

40 — PARCEL NO. 609089

41 — THERESA A. BLAIR
838 WALES RD NE,
MASSILLON, OH 44646-4722
PARCEL NO. 603810
INSTR. NO. 202004150014759

42 — PARCEL NO. 604120
DV. 4113 PG. 492

42 — R&R HOME IMPROVEMENT
WALES RD NE,
MASSILLON, OH 44646
PARCEL NO. 604119
DV. 4113 PG. 492

LOT 1186 · LOT 1187 · LOT 1188 · LOT 1189 · LOT 1190 · LOT 1191 · LOT 1192 · LOT 1193 · LOT 1194 · PT LOT 1193 · RES.

NOTE

STATION AND OFFSET INFORMATION FOR EXISTING PINS CAN BE FOUND ON SHEET 4.

LEGEND

X — MONUMENT NUMBER

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

SCALE: 1" = 20'
SCALE IN FEET

PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

RIGHT OF WAY · PLAN
STA. 14+00 TO STA. 19+00

STA-241-9.71

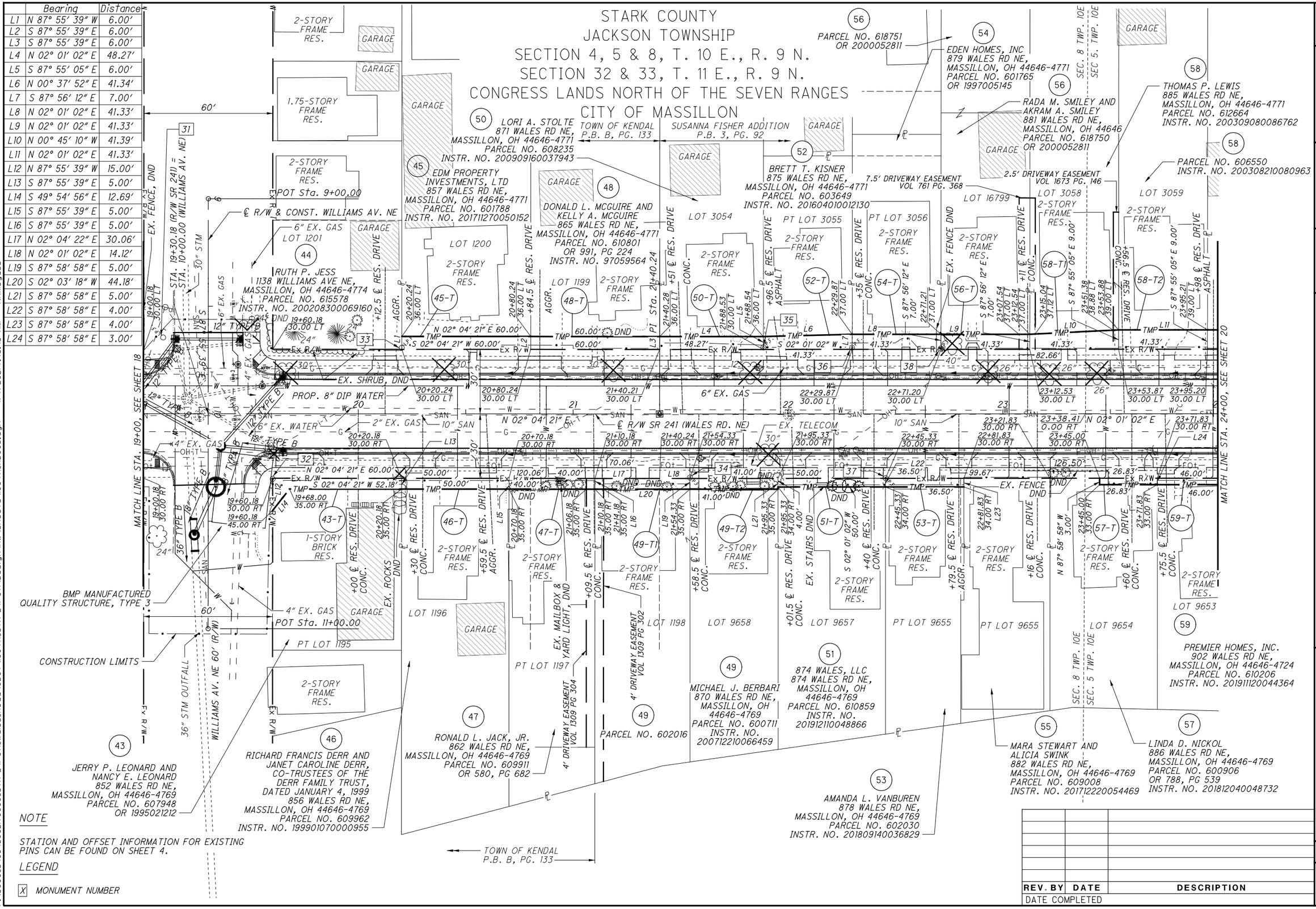
18 / 34

379
395

P:\3000_3499\30621700090_STA-241-97L_Wales_Road\000T\100471_STA-241-97\Design\RW\Sheets\100471_RD004.dgn 4/7/2021 7:48:43 AM khillegoss

STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON

	Bearing	Distance
L1	N 87° 55' 39" W	6.00'
L2	S 87° 55' 39" E	6.00'
L3	S 87° 55' 39" E	6.00'
L4	N 02° 01' 02" E	48.27'
L5	S 87° 55' 05" E	6.00'
L6	N 00° 37' 52" E	41.34'
L7	S 87° 56' 12" E	7.00'
L8	N 02° 01' 02" E	41.33'
L9	N 02° 01' 02" E	41.33'
L10	N 00° 45' 10" W	41.39'
L11	N 02° 01' 02" E	41.33'
L12	N 87° 55' 39" W	15.00'
L13	S 87° 55' 39" E	5.00'
L14	S 49° 54' 56" E	12.69'
L15	S 87° 55' 39" E	5.00'
L16	S 87° 55' 39" E	5.00'
L17	N 02° 04' 22" E	30.06'
L18	N 02° 01' 02" E	14.12'
L19	S 87° 58' 58" E	5.00'
L20	S 02° 03' 18" W	44.18'
L21	S 87° 58' 58" E	5.00'
L22	S 87° 58' 58" E	4.00'
L23	S 87° 58' 58" E	4.00'
L24	S 87° 58' 58" E	3.00'



NOTE

STATION AND OFFSET INFORMATION FOR EXISTING PINS CAN BE FOUND ON SHEET 4.

LEGEND

[X] MONUMENT NUMBER

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

SCALE: 1" = 20'
SCALE IN FEET

PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/CJR

RIGHT OF WAY · PLAN - SR 241
STA. 19+00 TO STA. 24+00

STA-241-9.71

19 / 34

380 / 395

P:\3000_3499\3062\70090_STA-241-97L_Wales_Road\ODOT\00471L_STA-241-97L\Design\RW\Sheets\00471L_RD005.dgn 4/7/2021 7:48:45 AM khillegoss

NOTE

STATION AND OFFSET INFORMATION FOR EXISTING PINS CAN BE FOUND ON SHEET 4.

LEGEND

[X] MONUMENT NUMBER

STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON

	Bearing	Distance		Bearing	Distance
L1	S 87° 54' 14" E	9.00'	L12	S 02° 01' 02" W	46.00'
L2	N 04° 47' 16" E	41.38'	L13	N 87° 58' 58" W	4.00'
L3	S 87° 55' 05" E	7.00'	L14	S 87° 58' 58" E	4.00'
L4	N 02° 01' 02" E	41.33'	L15	S 87° 58' 58" E	4.00'
L5	S 87° 55' 05" E	7.00'	L16	N 87° 58' 58" W	3.00'
L6	S 87° 55' 05" E	7.00'	L17	S 87° 58' 58" E	3.00'
L7	S 87° 55' 05" E	7.00'	L18	S 87° 58' 58" E	3.00'
L8	S 88° 16' 17" E	11.00'	L19	S 87° 58' 58" E	6.00'
L9	S 88° 16' 17" E	11.00'	L20	S 78° 19' 39" E	6.09'
L10	S 88° 16' 17" E	11.00'	L21	S 88° 16' 17" E	6.00'
L11	S 87° 58' 58" E	3.00'			

SCALE: 1" = 20'
SCALE IN FEET

PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/JUR

RIGHT OF WAY PLAN
STA. 24+00 TO STA. 29+00

STA-241-9.71

20 / 34

381 / 395

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

P:\3000_3499\30621700090_STA-241-9.71_Wales_Road\000T\100471_STA-241-9.71\Design\RW\Sheets\100471_RD006.dgn 4/7/2021 7:48:47 AM khillegass

	Bearing	Distance
L1	S 88° 16′ 17 E	9.00′
L2	S 88° 16′ 17 E	9.00′
L3	N 88° 16′ 17 W	5.00′
L4	S 88° 16′ 17 E	5.00′
L5	N 88° 16′ 17″ W	8.00′
L6	N 88° 16′ 17″ W	10.00′
L7	S 88° 16′ 17 E	10.00′
L8	N 88° 16′ 17″ W	12.00′
L9	S 88° 34′ 57″ E	12.00′
L10	N 88° 34′ 57″ W	2.00′
L11	N 88° 34′ 57″ W	7.00′

STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON

℄ R/W & CONST. KENDALL AV. NE

PT LOT 6794

75 CITY OF MASSILLON
955 WALES RD NE,
MASSILLON, OH 44646-4723
PARCEL NO. 680301
DV. 1091 PG. 294, DV. 1489 PG. 340

1-STORY BRICK COMM.

CONC. DRIVE

MASSILLON FIRE STATION #3

79 FRANK D. PAGE AND LINDA PAGE
1011 WALES RD NE,
MASSILLON, OH 44646-4429
PARCEL NO. 610997
INSTR. NO. 201707280031496

81 MARY A. MCCLISH
1015 WALES RD NE,
MASSILLON, OH 44646-4429
PARCEL NO. 610883
INSTR. NO. 201708010032167

82 CHARLES L. STEWART AND TERRIE L. STEWART
1021 WALES RD NE,
MASSILLON, OH 44646-4429
PARCEL NO. 606981
INSTR. NO. 201106080022063

83 JOSEPH RIVERA AND STEPHANIE A. RIVERA
1027 WALES RD NE,
MASSILLON, OH 44646-4429
PARCEL NO. 605074
OR 1996033452

KENDALL PLACE P.B. 12, PG. 7

KENDALL PLACE P.B. 15, PG. 18

84 PR REAL ESTATE HOLDINGS, LLC
1033 WALES RD NE,
MASSILLON, OH 44646-4429
PARCEL NO. 611593
INSTR. NO. 201706260026549

85 PAUL A. PRIBICH AND MARISSA M. PRIBICH
1051 WALES RD NE,
MASSILLON,
OH 44646-4429
PARCEL NO. 609784
INSTR. NO.
201810050040135

78 ROBERT K. DEHNKE AND LINDA L. DEHNKE
WALES RD NE,
MASSILLON, OH 44646-4429
PARCEL NO. 610996
INSTR. NO. 200507070044360

PT LOT 6796

RES.

2-STORY FRAME RES.

2-STORY BRICK RES.

2-STORY FRAME RES.

2-STORY BRICK RES.

1-STORY BRICK RES.

PT LOT 6798

KENDALL PLACE P.B. 12, PG. 7

LOT 6799

LOT 6800

LOT 6801

LOT 6802

60′

6″ EX. GAS

48″ STM

12″ SAN

KENDALL AVE. NE 60′ (R/W)

S 88° 16′ 17″ E

Ex R/W

30″

3-HO

+44 ℄ COMM. DRIVE CONC.

+27.50 ℄ COMM. DRIVE CONC.

+23.5 ℄ RES. DRIVE CONC.

+77 ℄ RES. DRIVE CONC.

+28 ℄ RES. DRIVE CONC.

82-T

84-T

STA. 30+29.55 (R/W SR 241) = STA. 10+00.00 (KENDALL AV. NE)

STA. 31+11.98 (R/W SR 241) = STA. 10+00.00 (HANKINS RD. NE) 32

℄ R/W SR 241 (WALES RD. NE) 33

PI Sta. 33+97.17

MATCH LINE STA. 29+00, SEE SHEET 20

MATCH LINE STA. 34+00, SEE SHEET 22

PROP. 8″ DIP WATER

10″ SAN

4″ EX. GAS

2″ EX. GAS

N 1° 43′ 43″ E

52″ STM

10″ SAN (ABND)

12″ SAN

12″ TYPE B

6″ EX. GAS

4″ EX. GAS

10″ SAN

*EX. HEDGE

6″ EX. WATER

EX. TELECOM

48″ TYPE B

48″ STM

CONSTRUCTION LIMITS

12″ TYPE B

50.00′

S 01° 43′ 43″ W 120.07″

S 01° 43′ 43″ W 120.14″

18″ DND

24″ DND

N 01° 43′ 43″ E 197.85′

S 01° 43′ 43″ W 56.82′

S 01° 43′ 43″ W 103.00′

42.17′

52.10′ TMP

72.13′

4.90′

38.00′ TMP

50.00′ TMP

40.00′

29+27.07 30.00 RT

29+27.07 40.00 RT

29+77.07 30.00 RT

29+77.07 40.00 RT

29+77.07 42.00 RT

30+97.14 30.00 RT

30+97.21 42.00 RT

31+57.15 30.00 RT

31+57.15 40.00 RT

31+57.15 37.00 RT

32+14.00 37.00 RT

32+14.00 40.00 RT

32+14.00 44.00 RT

32+15.85 30.00 LT

32+15.85 33.00 LT

32+67.95 30.00 LT

32+67.95 39.00 LT

32+52.00 44.00 RT

32+52.00 40.00 RT

32+52.00 37.00 RT

33+20.05 30.00 LT

33+20.05 35.00 LT

33+92.18 30.00 LT

33+92.18 35.00 LT

33+92.18 38.00 LT

33+55.00 37.00 RT

33+55.00 30.00 RT

33+97.17 30.00 RT

33+97.08 30.00 LT

+29 ℄ RES. DRIVE ASPHALT

+08.5 ℄ COMM. DRIVE ASPHALT

2-STORY FRAME RES.

2-STORY FRAME RES.

74 LOT 9644

DANIELE A. NONNO
952 WALES RD NE,
MASSILLON, OH 44646-4724
PARCEL NO. 603818
INSTR. NO. 201504080012605

LOT 9643

76 G. VERONICA AULT
956 WALES RD NE,
MASSILLON, OH 44646-4724
PARCEL NO. 611085
INSTR. NO. 201011180046452

76-T

77-T

LOT 9641

2-STORY BRICK RES.

77 DOUGLAS J. BECHERUCCI AND VICKI A. BECHERUCCI
964 WALES RD NE,
MASSILLON, OH 44646-4768
PARCEL NO. 603911
INSTR. NO. 200701190003325

12″

EX. TELECOM

12″ SAN

48″ STM OUTFALL

HANKINS RD. NE 60′ (R/W)

S 88° 34′ 57″ E

℄ R/W HANKINS RD. NE

80 THE CHRISTIAN CHURCH, A NON-PROFIT CORP.
1020 WALES RD NE,
MASSILLON, OH 44646-4430
PARCEL NO. 680049
DV. 2292 PG. 404, DV. 1810 PG. 314,
DV. 3117 PG. 434

80-T

(E-24) 10′ WATERLINE EASEMENT VOL. 3902, PG. 532

PT OL 345

PT OL 345

1-STORY BRICK COMM.

60′

POT Sta. 11+83.16

56

NOTE

STATION AND OFFSET INFORMATION FOR EXISTING PINS CAN BE FOUND ON SHEET 4.

LEGEND

X MONUMENT NUMBER

REV. BY	DATE	DESCRIPTION

DATE COMPLETED

SCALE: 1″ = 20′
SCALE IN FEET

PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

RIGHT OF WAY PLAN - SR 241
STA. 29+00 TO STA. 34+00

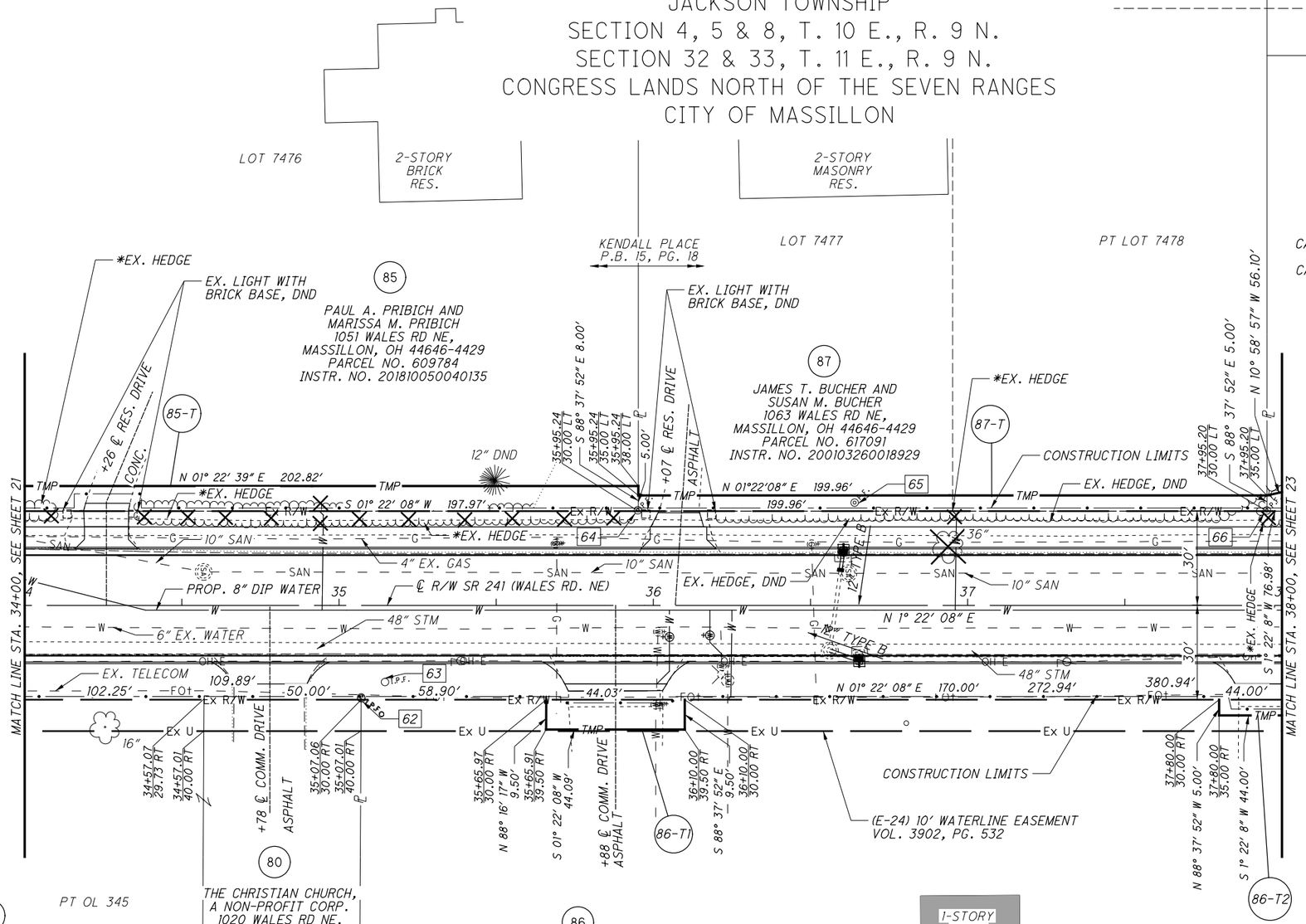
STA-241-9.71

21 / 34

382
395

P:\3000_3499\3062170090_STA-241-97L_Wales_Road\ODOT\100471L_STA-241-97L\Design\RW\Sheets\100471L_RD007.dgn 4/7/2021 7:48:50 AM khillegass

STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON



80
PARCEL NO. 680049
DV. 2292 PG. 404, DV. 1810 PG. 00314, DV. 3117 PG. 434
PT OL 345

80
THE CHRISTIAN CHURCH, A NON-PROFIT CORP. 1020 WALES RD NE, MASSILLON, OH 44646-4430 PARCEL NO. 680076 DV. 2292 PG. 404, DV. 1810 PG. 00314, DV. 3117 PG. 434
PT OL 345

1-STORY BRICK COMM.
COMM.

86
PAQUELET PROPERTIES LLC 1100 WALES RD NE, MASSILLON, OH 44646 PARCEL NO. 618131 INSTR. NO. 200209180074389
OL 854

1-STORY BRICK COMM.

NOTE

STATION AND OFFSET INFORMATION FOR EXISTING PINS CAN BE FOUND ON SHEET 4.

LEGEND

[X] MONUMENT NUMBER

REV. BY	DATE	DESCRIPTION

DATE COMPLETED

SCALE: 1" = 20'
SCALE IN FEET

PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

RIGHT OF WAY - PLAN - SR 241
STA. 34+00 TO STA. 38+00

STA-241-9.71

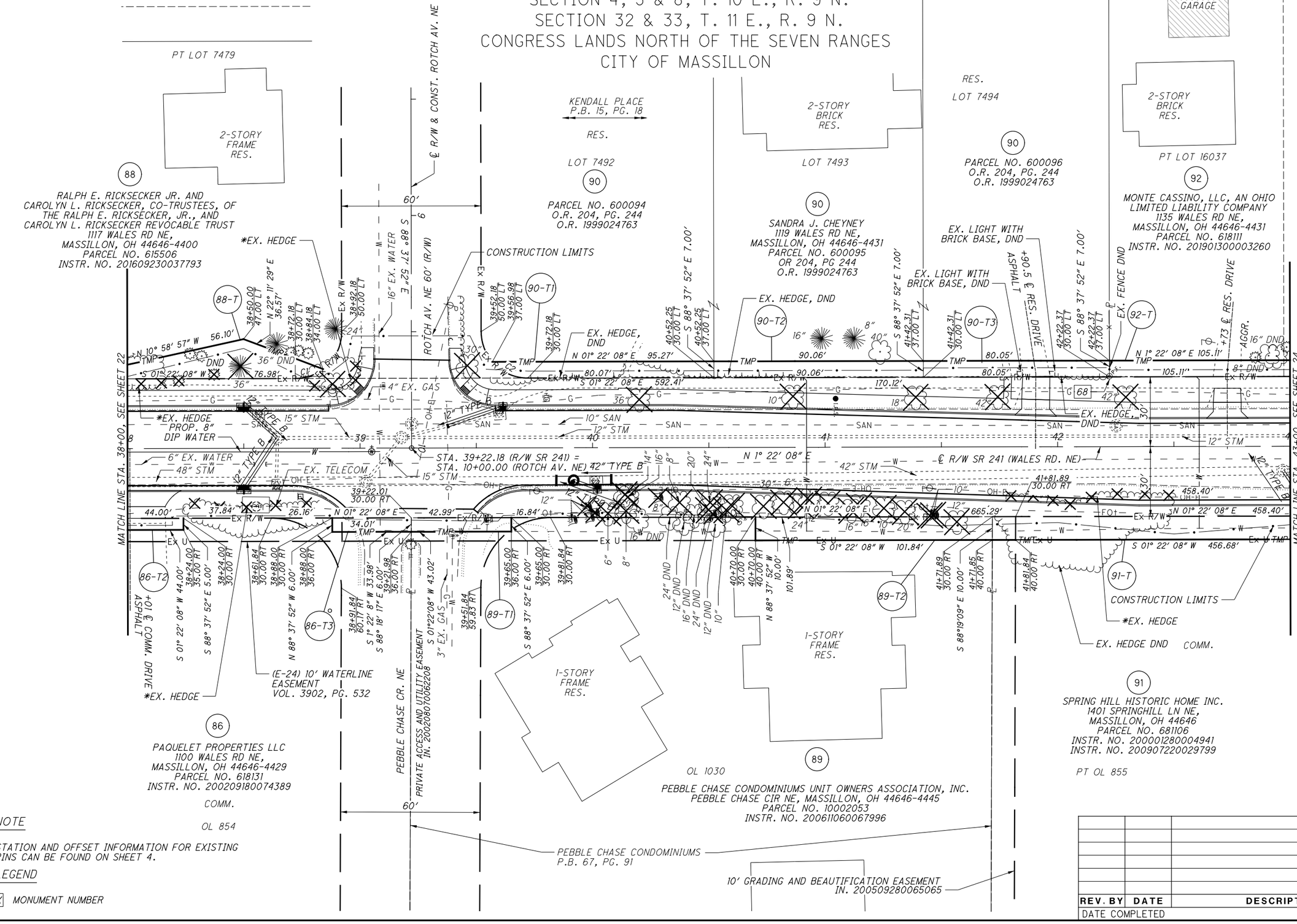
22 / 34

383 / 395

P:\3000_3499\3062\70090_STA-241-9.71_Wales_Road\00DT\10047L_STA-241-9.71\Design\RW\Sheets\10047L_RD008.dgn 4/7/2021 7:48:51 AM khillegass

CURVE	CENTRAL ANGLE	RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING
C1	36° 52′ 12″	20.00′	12.87′	12.65′	S 17° 03′ 58″ E
C2	49° 27′ 30″	20.00′	17.26′	16.73′	S 26° 05′ 53″ W

STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON



NOTE

STATION AND OFFSET INFORMATION FOR EXISTING PINS CAN BE FOUND ON SHEET 4.

LEGEND

[X] MONUMENT NUMBER

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

SCALE: 1″ = 20′
SCALE IN FEET

PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

RIGHT OF WAY · PLAN - SR 241
STA. 38+00 TO STA. 43+00

STA-241-9.71

23 / 34

384 / 395

P:\3000_3499\3062\70090_STA-241-9.71_Wales_Road\ODOT\100471_STA-241-9.71\Design\R/W\Sheets\100471_RD009.dgn 4/7/2021 7:48:52 AM khillegass

STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON

	Bearing	Distance
L1	N 53° 39′ 51″ W	11.02′
L2	S 89° 19′ 14″ E	9.03′
L3	S 01° 22′ 08″ W	6.43′
L4	N 51° 49′ 40″ E	27.97′
L5	N 89° 19′ 14″ W	163.90′
L6	S 78° 32′ 40″ E	10.16′
L7	S 89° 12′ 02″ E	2.00′

PT LOT 16037
PT LOT 16038
PT LOT 16038
RES.
2-STORY FRAME RES.
92
MONTE CASSINO, LLC, AN OHIO LIMITED LIABILITY COMPANY
1135 WALES RD NE,
MASSILLON, OH 44646-4431
PARCEL NO. 618111
INSTR. NO. 201901300003260
93
ELIZABETH STUDER
1155 WALES RD NE,
MASSILLON, OH 44646-4431
PARCEL NO. 618112
INSTR. NO. 200006080033567
INSTR. NO. 200404200026753
94
PARCEL NO. 600602
INSTR. NO. 202006260025951
2-STORY FRAME RES.
94
JESUS A. RAMOS AND
JENNIFER L. RAMOS
1221 WALES RD NE,
MASSILLON, OH 44646-4407
PARCEL NO. 600603
INSTR. NO. 202006260025951
95
MARC S. FELIS AND
BARBARA L. FELIS
1126 LAKE AVE NE,
MASSILLON, OH 44646-4467
PARCEL NO. 607061
INSTR. NO. 201704120015010
CHARITY ROTCH KENDAL SUBDIVISION P.B. 18, PG. 25
1.5-STORY BRICK RES.
*EX. HEDGE RES.
LOT 7497
LOT 7498
LOT 8320
MATCH LINE STA. 199+00, SEE SHEET 34
199+00.00
39.00 RT
*EX. HEDGE
TMP
*EX. STONE TO BE RELOCATED OUTSIDE THE R/W
KENDALL PLACE P.B. 15, PG. 18
LAKE AV. NE
199+18.91
30.00 LT
199+35.00
48.00 LT
95-T
46+99.31
43.00 LT
46+60.00
43.00 LT
46+60.12
32.00 LT
46+99.42
32.00 LT
46+99.44
30.00 LT
L5
L7
179.81′
N 89°19′14″ W
S 77°38′02″ W 27.28′
N 83° 27′ 36″ W
58.76′
N 89°19′14″ W 50.45′
S 01°22′08″ W 39.31′
S 01°22′08″ W 39.30′
S 37°52′45″ W
36.89′
199+45.48
36.16 LT
46+24.60
30.00 LT
45+64.49
39.03 LT
45+49.48
40.00 LT
45+58.17
30.00 LT
45+64.60
30.00 LT
74
S 01°22′08″ W
74.83′
92-T
93-T
94-T1
94-T2
95-T
96-T
91-T
91-WD
94-WD
95-WD
96-WD
43+27.47
37.00 LT
105.11′
S 88° 37′ 52″ E 7.00′
EX. HEDGE (TAKE)
+57 ℄ RES. DRIVE
CONC.
36″ DND
90.03′
EX. HEDGE, DND
S 01° 22′ 08″ W
S 88° 37′ 52″ E 7.00′
44+17.50
37.00 LT
44+17.50
40.00 LT
N 88° 37′ 52″ W 10.00′
RES.
47.03′
S 01° 22′ 08″ W 47.03′
S 88° 37′ 52″ E 10.00′
44+64.53
40.00 LT
36″ DND 84.95′
N 01° 22′ 08″ E
24″ DND
93.64′
38″ DND
EX. R/W
43+27.47
30.00 LT
44+17.50
30.00 LT
44+64.53
30.00 LT
70
4″ EX. GAS
EX. HEDGE, DND
12″ TYPE B
EX. HEDGE, DND
12″ STM
SAN
10″ SAN
EX. HEDGE, DND
EX. HEDGE (TAKE)
44
45
46
℄ R/W SR 241 (WALES RD. NE)
N 1° 22′ 08″ E
PROP. 8″ DIP WATER
℄ R/W & CONST. LAKE AV. NE
8″ EX. WATER
10″ SAN
*EX. HEDGE
8″ EX. WATER
STA. 45+94.96 (R/W SR 241) =
STA. 199+99.00 (LAKE AV. NE)
6″ EX. WATER
42″ STM
EX. TELECOM
4″ EX. GAS
46+30.29
30.00 RT
36″ STM
458.40′
S 01° 22′ 08″ W
665.29′
398.15′
35.00′
N 01° 22′ 08″ E 92.83
S 01° 22′ 08″ W 114.66′
16″ EX. WATER
S 01°22′08″ W 456.68′
24″ DND
DND
24″ DND
10′ OF EX. FENCE (TAKE)
EX. HEDGE DND
45+70.00
30.00 RT
45+70.00
35.00 RT
46+05.00
30.00 RT
46+05.00
35.00 RT
46+48.51
40.00 RT
N 88° 37′ 52″ W 5.00′
S 1° 22′ 08″ W 35.00′
S 88° 37′ 52″ E 5.00′
S 78° 32′ 40″ E 117.42′
MATCH LINE STA. 43+00, SEE SHEET 23
MATCH LINE STA. 47+00, SEE SHEET 25
CONSTRUCTION LIMITS
91
SPRING HILL HISTORIC HOME INC
1401 SPRINGHILL LN NE,
MASSILLON, OH 44646
PARCEL NO. 681106
INSTR. NO. 200001280004941
INSTR. NO. 200907220029799
+11 ℄ COMM. DRIVE
ASPHALT SPRINGHILL LN. NE (PRIVATE)
COMM.
96
BRUCE W. VRSAN
1211 SPRINGHILL AVE NE,
MASSILLON, OH 44646-2572
PARCEL NO. 603367
D.V. 4264 PG. 474
2-STORY BRICK RES.
(E-123) 10′ WATERLINE EASEMENT
VOL. 3249, PG. 204
LOT 12857
PT OL 855
ROTCH HILLS ALLOTMENT P.B. 36 PG. 144
76

NOTE

STATION AND OFFSET INFORMATION FOR EXISTING PINS CAN BE FOUND ON SHEET 4.

LEGEND

[X] MONUMENT NUMBER

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

SCALE: 1″ = 20′
SCALE IN FEET

PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

RIGHT OF WAY · PLAN - SR 241
STA. 43+00 TO STA. 47+00

STA-241-9.71

24 / 34

385 / 395

P:\3000_3499\3062170090_STA-241-97L_Wales_Road\000T\00047L_STA-241-97\Design\RW\Sheets\00047L_RD010.dgn 4/7/2021 7:48:53 AM khillegass

STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON

CHARITY ROTCH KENDAL SUBDIVISION P.B. 18, PG. 25
1-STORY BRICK RES.
LOT 8319
LOT 8318
LOT 8317
LOT 8327
LOT 8328
LOT 8329
LOT 12857
LOT 12877

97 BENJAMIN S. SLAGLE
1417 WALES RD NE,
MASSILLON, OH 44646-4470
PARCEL NO. 607117
INSTR. NO. 201103250011981

99 STEVEN A. WYLES AND ERMELINDA G. WYLES
1429 WALES RD NE,
MASSILLON, OH 44646-4470
PARCEL NO. 604268
INSTR. NO. 201109160036905

100 MATTHEW C. STURM AND JODI L. STURM
1507 WALES RD NE,
MASSILLON, OH 44646-4165
PARCEL NO. 615989
INSTR. NO. 200410290077085

102 PARCEL NO. 610300
INSTR. NO. 201608120031631
RES.

102 MARK C. MOKROS AND JULIA C. MOKROS
1615 COVENTRY RD NE,
MASSILLON, OH 44646-4129
PARCEL NO. 610299
INSTR. NO. 201608120031631

STA. 49+52.99 (R/W SR 241) = STA. 9+99.00 (BENNINGTON AV. NE)

℄ R/W SR 241 (WALES RD. NE)
℄ R/W & CONST. BENNINGTON AV. NE
℄ RES. DRIVE CONC.
CONSTRUCTION LIMITS
EX. CONCRETE BOLLARD (TAKE)
EX. HEDGE, DND
EX. CONCRETE BOLLARD, DND
EX. TELECOM
4" EX. GAS
6" EX. GAS
8" EX. WATER
10" SAN
12" SAN
36" STM
12" STM
EX. 6" WATER
EX. GAS
PROP. 6" DIP WATER
PROP. 8" DIP WATER
EX. HEDGE
EX. HEDGE (SAVE)
EX. FENCE DND
*EX. HEDGE
Ex R/W
TMP
POT
MATCH LINE STA. 47+00, SEE SHEET 24
MATCH LINE STA. 52+00 SEE SHEET 26

(E-123) WATERLINE EASEMENT VOL. 3249, PG. 204

96 BRUCE W. VRSAN
1211 SPRINGHILL AVE NE,
MASSILLON, OH 44646-2572
PARCEL NO. 603367
D.V. 4264, PG. 474

98 LARRY W. EUTSEY AND PAMELA F. EUTSEY,
1210 SPRINGHILL AVE NE,
MASSILLON, OH 44646-2573
PARCEL NO. 603370
INSTR. NO. 201005070016854
INSTR. NO. 201008020028971

98 PARCEL NO. 615687
INSTR. NO. 201005070016854

101 ROBERT BRUCE PUTNAM
1308 WALES RD NE,
MASSILLON, OH 44646-4469
PARCEL NO. 609628
INSTR. NO. 200607200044202

101 PARCEL NO. 609627
INSTR. NO. 200607200044202

103 TONY L. ULRICH
1600 WALES RD NE,
MASSILLON, OH 44646-4168
PARCEL NO. 10000679
INSTR. NO. 201611210047132
INSTR. NO. 201006020020607

2-STORY BRICK RES.
1-STORY BRICK AND FRAME RES.
10' UTILITY EASEMENT PB 42 PG. 120
SPRINGHILL AV. NE 60' (R/W)
℄ R/W & CONST. SPRINGHILL AV. NE
ROTCH HILLS ALLOTMENT P.B. 36 PG. 144
POT Sta. 11+60.55
PC Sta. 49+76.52
PT Sta. 51+26.84
PT OL 345
PT OL 346
RES.

	Bearing	Distance
L1	N 01° 22′ 08″ E	92.83′
L2	S 01° 22′ 08″ W	114.66′
L3	N 25° 15′ 39″ E	89.80′
L4	S 25° 15′ 39″ W	70.44′

CURVE	CENTRAL ANGLE	RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING
C2	69° 30′ 46″	20.00′	24.26′	22.80′	S 33° 23′ 15″ E
C3	18° 31′ 05″	388.10′	125.44′	124.89′	S 14° 18′ 31″ W
C4	74° 09′ 32″	20.00′	25.89′	24.12′	S 42° 07′ 44″ W
C5	53° 15′ 14″	25.00′	23.24′	22.41′	N 27° 52′ 20″ E
C6	53° 07′ 48″	25.00′	23.18′	22.36′	N 25° 11′ 46″ W
C7	07° 11′ 25″	328.10′	41.18′	41.15′	N 04° 57′ 51″ E
C8	16° 42′ 05″	328.10′	95.64′	95.30′	N 16° 54′ 36″ E
C9	01° 41′ 35″	388.10′	11.47′	11.47′	S 24° 24′ 51″ W
C10	23° 53′ 30″	328.10′	136.81	135.83	S 13° 18′ 54″ W

CURVE DATA
C1
P.I. Sta. 50+52.28
Δ = 23° 53′ 30″ (RT)
R = 358.10′
L = 149.32′
C = 148.24′
C.B. = N 13° 18′ 53″ E

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

SCALE: 1" = 20'
SCALE IN FEET

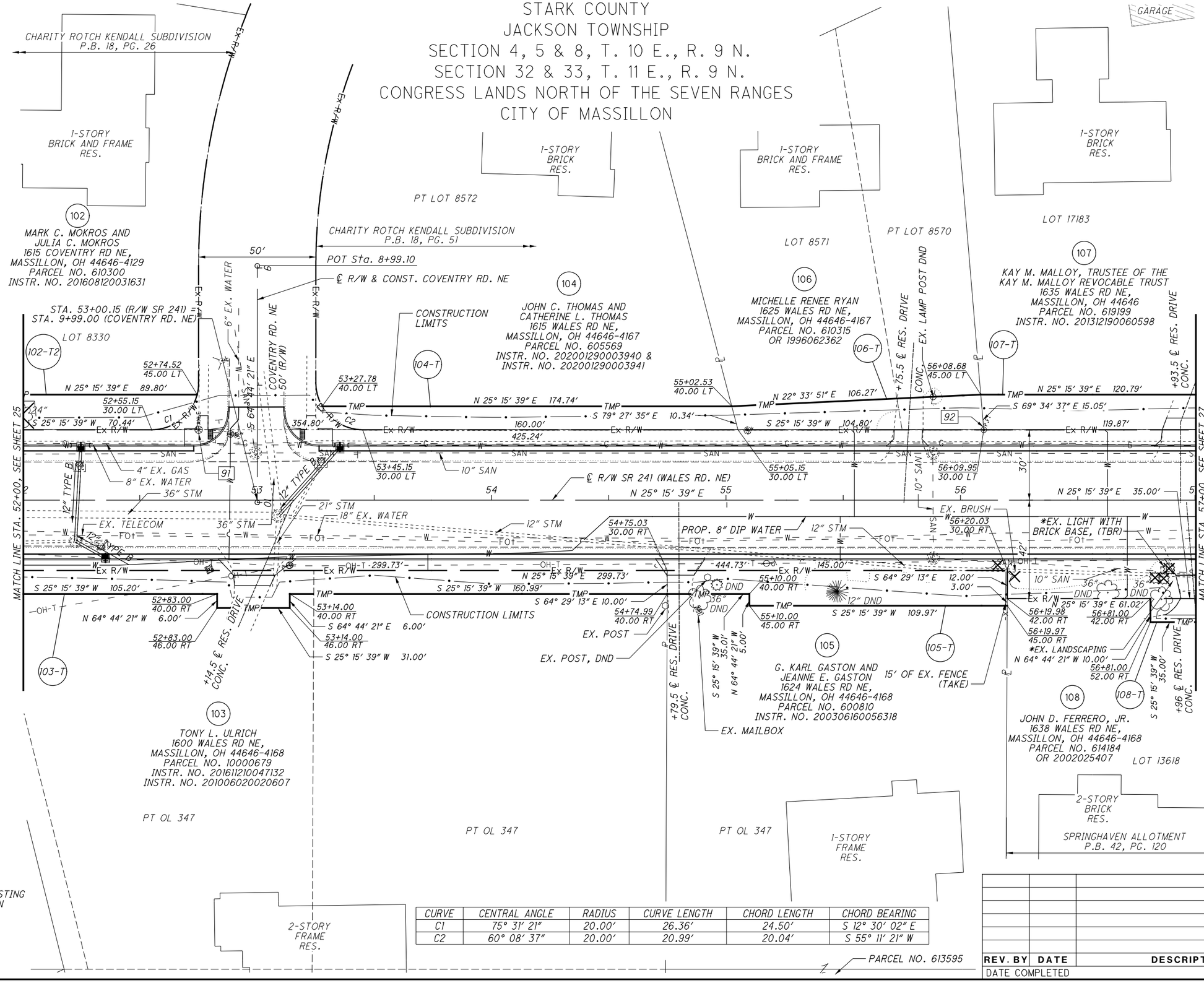
PID NO. 100471
R/W DESIGNER SEH
R/W REVIEWER BVB/CJR

RIGHT OF WAY PLAN - SR 241
STA. 47+00 TO STA. 52+00
*STA-241-9.71

25 / 34
386
395

P:\3000_3499\3062170090_STA-241-97L Wales_Road\ODOT\100471_STA-241-97L\Design\RW\Sheets\100471_RD01.dgn 4/7/2021 7:48:55 AM khillegass

STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON



NOTE

STATION AND OFFSET INFORMATION FOR EXISTING PINS CAN BE FOUND ON SHEET 4.

LEGEND

[X] MONUMENT NUMBER

CURVE	CENTRAL ANGLE	RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING
C1	75° 31' 21"	20.00'	26.36'	24.50'	S 12° 30' 02" E
C2	60° 08' 37"	20.00'	20.99'	20.04'	S 55° 11' 21" W

REV. BY	DATE	DESCRIPTION

DATE COMPLETED

SCALE: 1" = 20'
SCALE IN FEET

PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

RIGHT OF WAY · PLAN - SR 241
STA. 52+00 TO STA. 57+00

STA-241-9.71

26 / 34

387 / 395

P:\3000_3499\3062170090_STA-241-97L-Wales_Road\ODOT\0047L_STA-241-97L\Design\RW\Sheets\0047L_RD012.dgn 4/7/2021 7:48:56 AM khillegass

STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON

NOTE

STATION AND OFFSET INFORMATION FOR EXISTING PINS CAN BE FOUND ON SHEET 4.

LEGEND

[X] MONUMENT NUMBER

CURVE	CENTRAL ANGLE	RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING
C1	89° 16′ 45″	20.00′	31.16′	28.11′	S 13° 11′ 58″ E
C2	06° 09′ 06″	746.20′	80.12′	80.08′	S 28° 20′ 12″ W
C3	75° 31′ 21″	20.00′	26.36′	24.49′	S 73° 05′ 07″ W

	Bearing	Distance
L1	N 25° 15′ 39″ E	35.00′

SCALE: 1″ = 20′
SCALE IN FEET

LOT 17183
RES.
107
KAY M. MALLOY, TRUSTEE OF THE KAY M. MALLOY REVOCABLE TRUST
1635 WALES RD NE,
MASSILLON, OH 44646
PARCEL NO. 619199
INSTR. NO. 201312190060598

1-STORY FRAME RES.
109
LOT 17184
THOMAS P. REED AND LISA REED
1655 WALES RD NE,
MASSILLON, OH 44646
PARCEL NO. 619197
INSTR. NO. 201504280015493

CHARITY ROTCH KENDALL SUBDIVISION P.B. 18, PG. 51
CHARITY ROTCH KENDALL SUBDIVISION P.B. 25, PG. 69
60′
LOT 10603
1-STORY BRICK RES.
LOT 10602
RES.
LOT 10601
POT Sta. 8+98.76
℄ R/W & CONST. STRATFORD AV. NE
STRATFORD AV. NE 60′ (R/W)
S 56° 03′ 33″ E
112
ROSS A. WILLIAMS
1711 WALES RD NE,
MASSILLON, OH 44646-4169
PARCEL NO. 607799
INSTR. NO. 201703100010469
113
SUSAN J. WINTERS
WALES RD NE,
MASSILLON, OH 44646-4132
PARCEL NO. 604620
INSTR. NO. 201403280010673

107-T
109-T
112-T
113-T
108-T
114-T
+27.5 ℄ RES. DRIVE CONC.
+59 ℄ RES. DRIVE CONC.
EX. BRICK SHOULDER
MATCH LINE STA. 57+00, SEE SHEET 26
MATCH LINE STA. 62+00, SEE SHEET 28

20″ EX. WATER
6″ EX. WATER
8″ EX. WATER
18″ EX. WATER
10″ SAN
4″ EX. GAS
2″ EX. GAS
EX. STATUE, DND
EX. LANDSCAPING, DND
EX. SMALL TREES AND BUSHES
EX. BRICK WALL, DND
EX. HEDGE, DND
EX. TREES
EX. SHRUBS
EX. TELECOM
12″ STM
10″ STM
15″ TYPE-B
12″ TYPE-B
16″ EX. WATER
PROP. 8″ DIP WATER
*EX. LIGHT WITH BRICK BASE, (TBR)
*EX. LANDSCAPING
*EX. LIGHTPOLE
CONSTRUCTION LIMITS
Ex R/W
Ex U
℄ R/W SR 241 (WALES RD. NE)
STA. 59+50.76 (R/W SR 241) = STA. 9+99.00 (SPRINGHAVEN CR. NE)
PC Sta. 58+24.97
PT Sta. 59+50.76
℄ R/W & CONST. SPRINGHAVEN CR. NE (SOUTH)
SPRINGHAVEN CR. NE (SOUTH) 50′ (R/W)
SPRINGHAVEN ALLOTMENT P.B. 42, PG. 120

N 25° 15′ 39″ E 95.50′
N 25° 15′ 39″ E 120.79′
S 25° 15′ 39″ W 119.87′
S 66° 05′ 17″ E 15.00′
S 25° 15′ 39″ W 95.15′
N 26° 16′ 51″ E 101.99′
N 35° 19′ 27″ E 151.03′
S 48° 37′ 44″ E 15.08′
S 35° 19′ 27″ W 130.07′
N 35° 19′ 27″ E 82.70′
N 35° 19′ 27″ E 80.06′
N 35° 19′ 27″ E 61
N 35° 19′ 27″ E 39.21′
S 54° 40′ 33″ E 5.50′
N 54° 40′ 33″ W 5.50′
S 35° 19′ 27″ W 39.21′
S 64° 44′ 21″ E 10.00′
S 25° 15′ 39″ W 35.00′

57+29.47 45.00 LT
58+24.97 45.00 LT
58+24.97 30.00 LT
57+29.82 30.00 LT
59+20.57 50.00 LT
59+01.87 30.00 LT
59+79.12 45.00 LT
59+98.48 30.00 LT
61+30.14 45.00 LT
61+28.55 30.00 LT
57+16.00 42.00 RT
57+16.00 52.00 RT
61+41.79 42.00 RT
61+41.79 47.50 RT
61+81.00 47.50 RT
61+81.00 42.00 RT

42″ DND
36″ DND
40″ DND
24″ DND
4″ DND
6″ DND
10″ DND
12″ DND
30″
28″
24″

93 94 95 96 97 98 99

108
JOHN D. FERRERO, JR.
WALES RD NE,
MASSILLON, OH 44646-4168
PARCEL NO. 614183
OR 2002025408
PARCEL NO. 614184
OR 2002025407
RES.
LOT 13617
2-STORY BRICK RES.

110
OHIO WATER SERVICE COMPANY, AN OHIO CORPORATION
1654 WALES RD NE,
MASSILLON, OH 44646-4168
PARCEL NO. 614182
OR 824, PG 344
LOT 13616
1-STORY FRAME PUBLIC UTILITY
PARCEL NO. 615881
OR 824, PG 344
LOT 13618
PARCEL NO. 615884
OR 2002025407
PARCEL NO. 615882
OR 2002025407
10′ UTILITY EASEMENT PB 42 PG. 120

111
LAWRENCE A. WHITE AND MARY E. WHITE
1316 SPRINGHAVEN CIR NE,
MASSILLON, OH 44646-2563
PARCEL NO. 614180
OR 1996030406
LOT 13614
RES.
LOT 13615
2-STORY FRAME RES.
PARCEL NO. 616910
OR 1066, PG 595
LOT 14372
LOT 14370
1-STORY FRAME RES.

114
SUSAN K. SMITH
1726 WALES RD NE,
MASSILLON, OH 44646-4170
PARCEL NO. 614179
INSTR. NO. 201106080022066
1-STORY FRAME RES.
LOT 13613

CURVE DATA
C2
P.I. Sta. 58+88.03
Δ = 10° 03′ 48″ (RT)
Dc = 8° 00′ 00″
R = 716.20′
T = 63.06′
L = 125.79′
E = 2.77′
C = 125.63′
C.B. = N 30° 17′ 33″ E

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

R/W DESIGNER SEH
R/W REVIEWER BVB/CJR
PID NO. 100471

RIGHT OF WAY · PLAN - SR 241
STA. 57+00 TO STA. 62+00

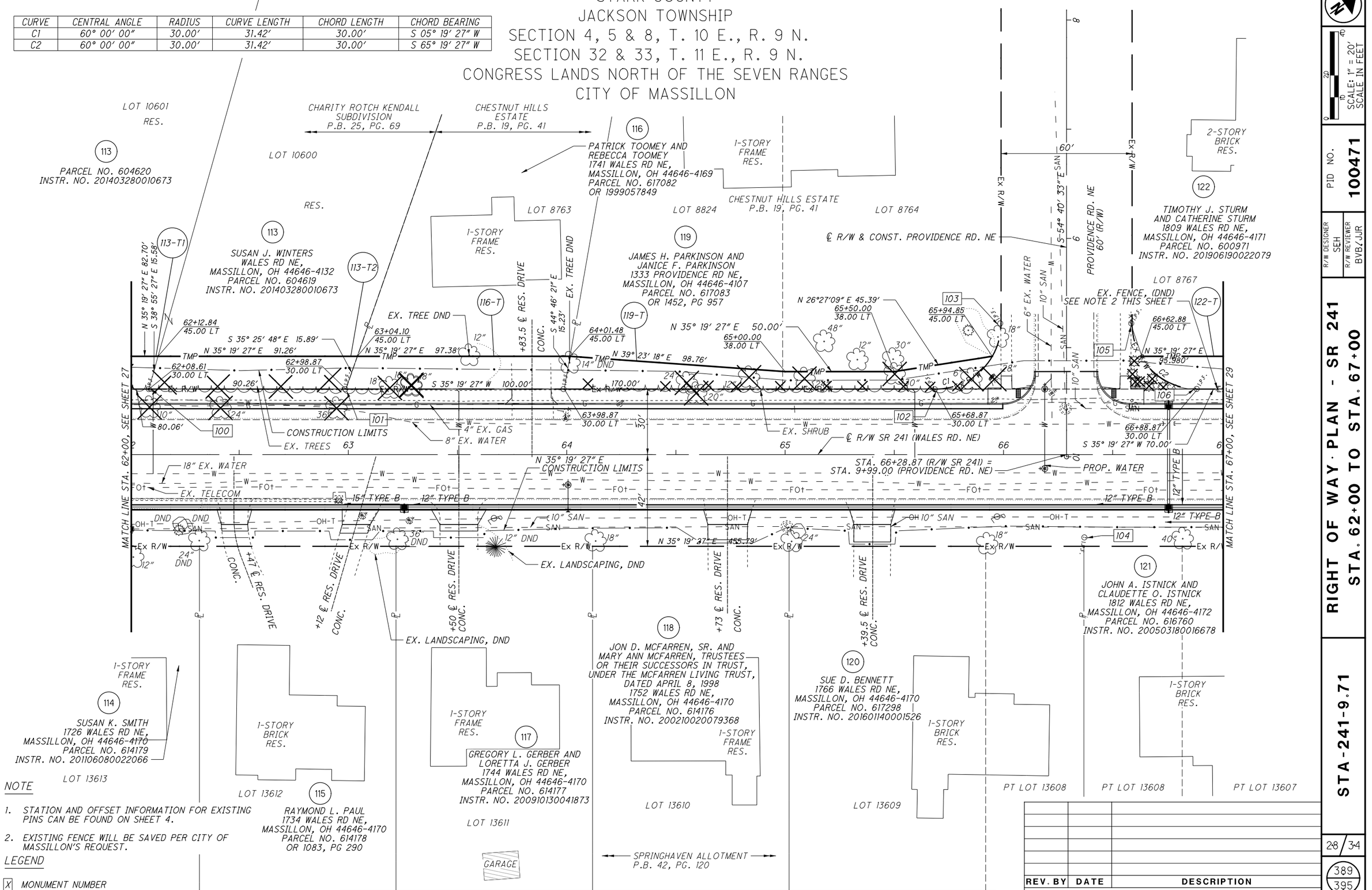
STA-241-9.71

27 / 34
388
395

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STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON

CURVE	CENTRAL ANGLE	RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING
C1	60° 00′ 00″	30.00′	31.42′	30.00′	S 05° 19′ 27″ W
C2	60° 00′ 00″	30.00′	31.42′	30.00′	S 65° 19′ 27″ W



NOTE

1. STATION AND OFFSET INFORMATION FOR EXISTING PINS CAN BE FOUND ON SHEET 4.
2. EXISTING FENCE WILL BE SAVED PER CITY OF MASSILLON'S REQUEST.

LEGEND

[X] MONUMENT NUMBER

REV. BY	DATE	DESCRIPTION

DATE COMPLETED

SCALE: 1″ = 20′
SCALE IN FEET

PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

RIGHT OF WAY · PLAN - SR 241
STA. 62+00 TO STA. 67+00

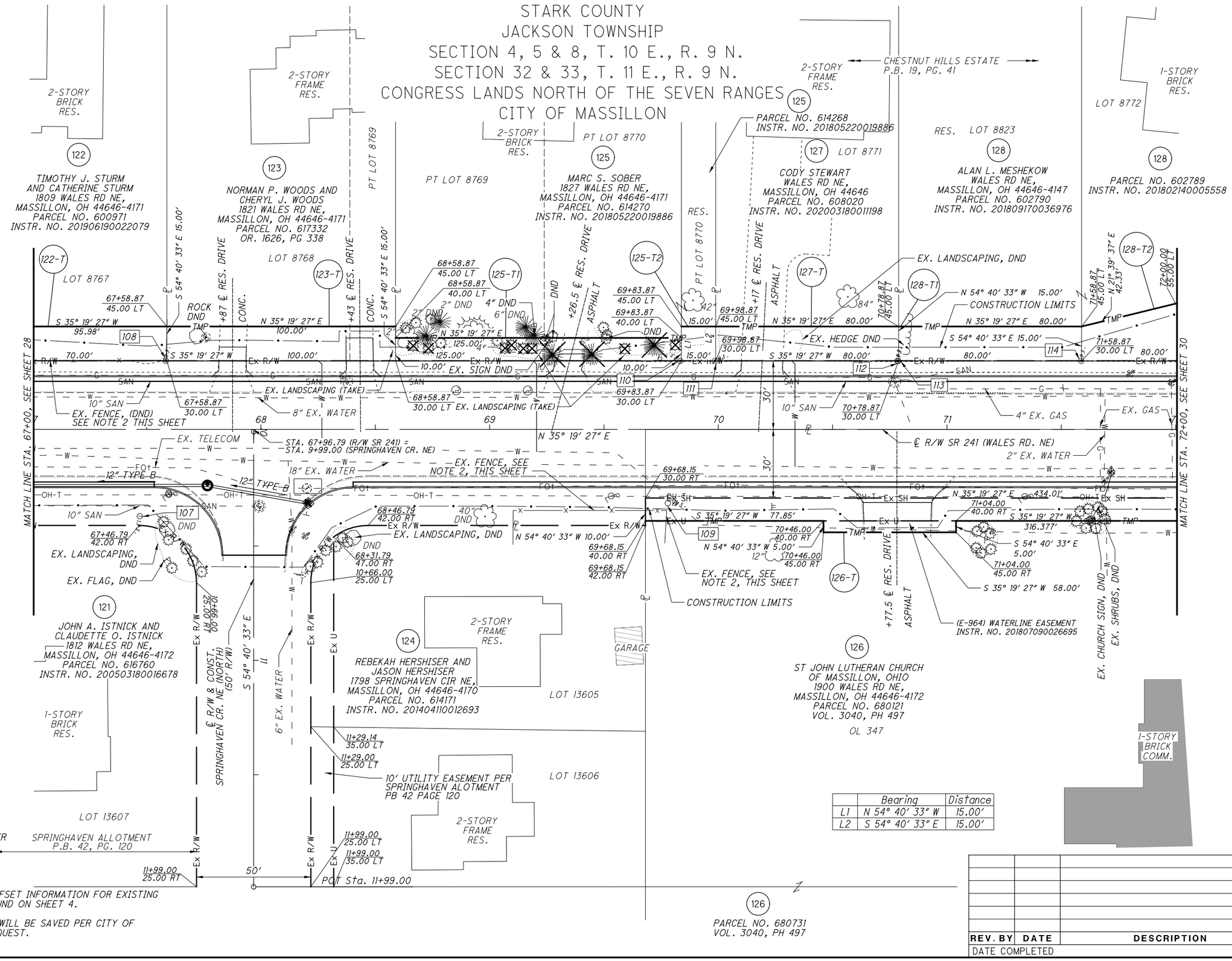
STA-241-9.71

28 / 34

389 / 395

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STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON



	Bearing	Distance
L1	N 54° 40' 33" W	15.00'
L2	S 54° 40' 33" E	15.00'

LEGEND

[X] MONUMENT NUMBER

NOTE

1. STATION AND OFFSET INFORMATION FOR EXISTING PINS CAN BE FOUND ON SHEET 4.
2. EXISTING FENCE WILL BE SAVED PER CITY OF MASSILLON'S REQUEST.

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

SCALE: 1" = 20'
SCALE IN FEET

PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

RIGHT OF WAY PLAN
STA. 67+00 TO STA. 72+00

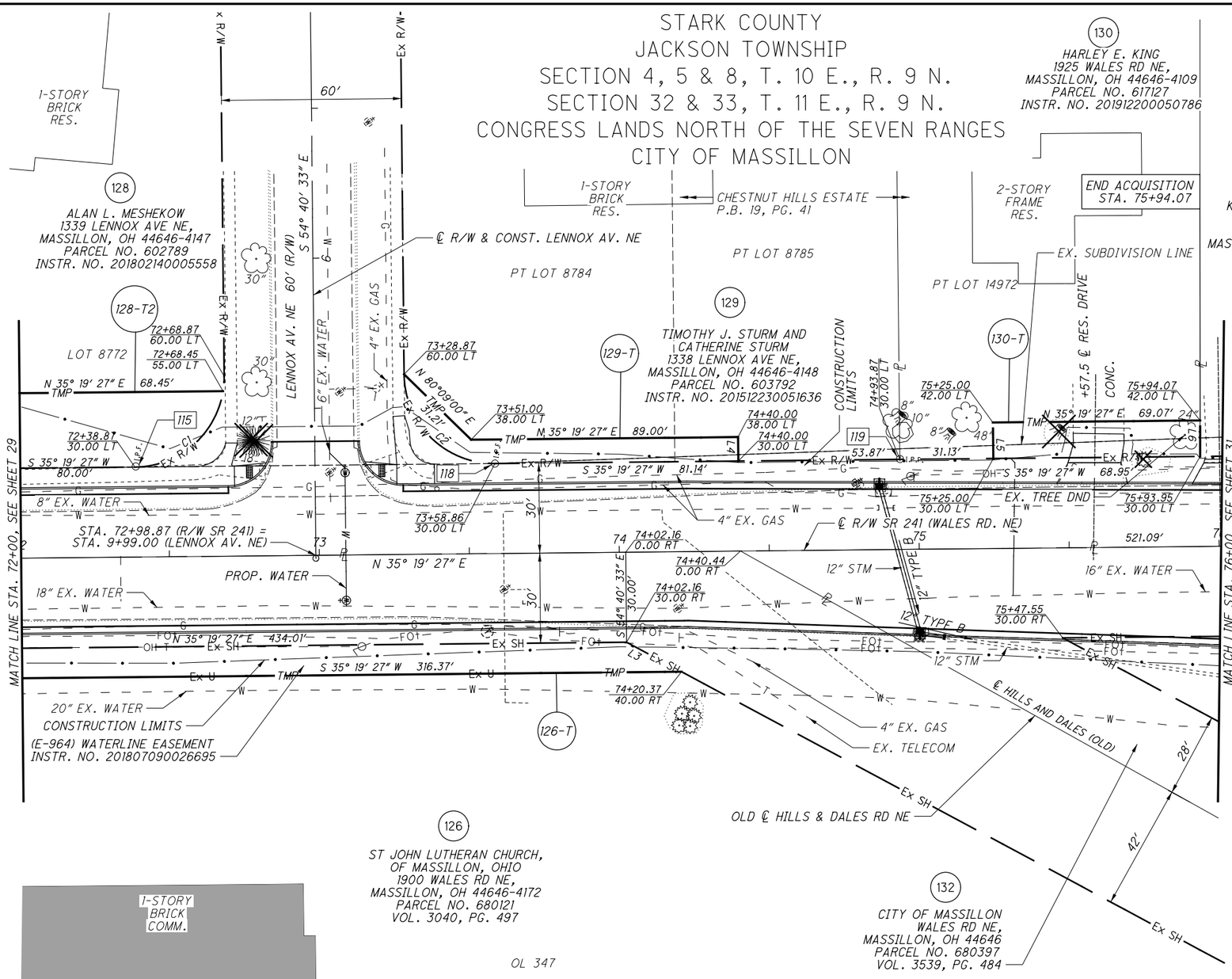
STA-241-9.71

29 / 34

390
395

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STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON



	Bearing	Distance
L1	S 35° 19' 26" W	55.91'
L2	S 64° 06' 18" W	31.16'
L3	N 64° 06' 18" E	20.77'
L4	S 54° 40' 33" E	8.00'
L5	N 54° 40' 33" W	12.00'
L6	S 54° 06' 37" E	12.00'

CURVE	CENTRAL ANGLE	RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING
C1	80° 24' 21"	30.00'	42.10'	38.73'	S 04° 52' 44" E
C2	89° 59' 52"	30.00'	47.12'	42.43'	S 80° 19' 32" W

NOTE

STATION AND OFFSET INFORMATION FOR EXISTING PINS CAN BE FOUND ON SHEET 4.

LEGEND

[X] MONUMENT NUMBER

REV. BY	DATE	DESCRIPTION

DATE COMPLETED

SCALE: 1" = 20'
SCALE IN FEET

PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

RIGHT OF WAY · PLAN - SR 241
STA. 72+00 TO STA. 76+00

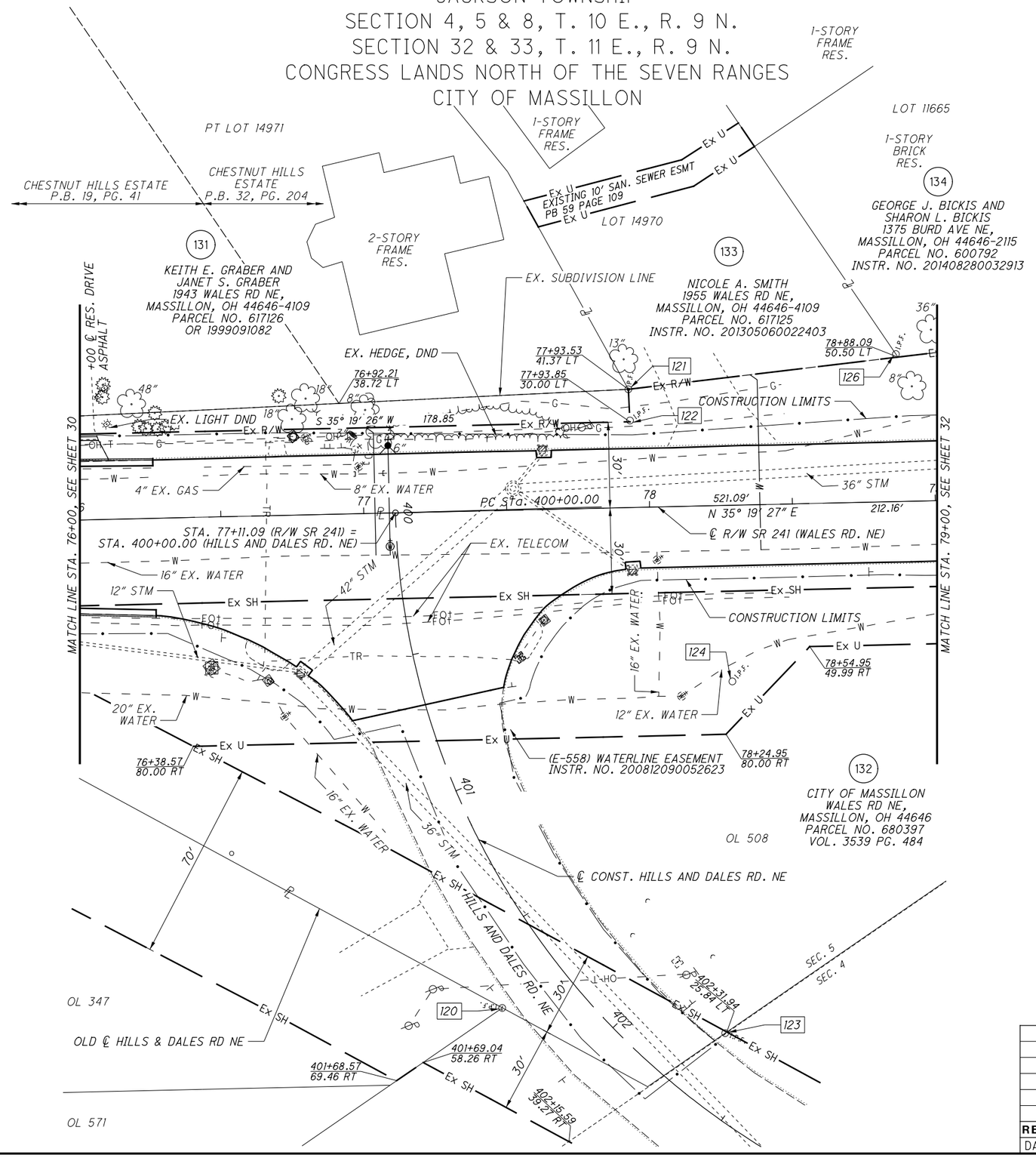
STA-241-9.71

30 / 34

391 / 395

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STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON



NOTE

STATION AND OFFSET INFORMATION FOR EXISTING PINS CAN BE FOUND ON SHEET 4.

LEGEND

[X] MONUMENT NUMBER

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

SCALE: 1" = 20'
SCALE IN FEET

PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

RIGHT OF WAY · PLAN - SR 241
STA. 76+00 TO STA. 79+00

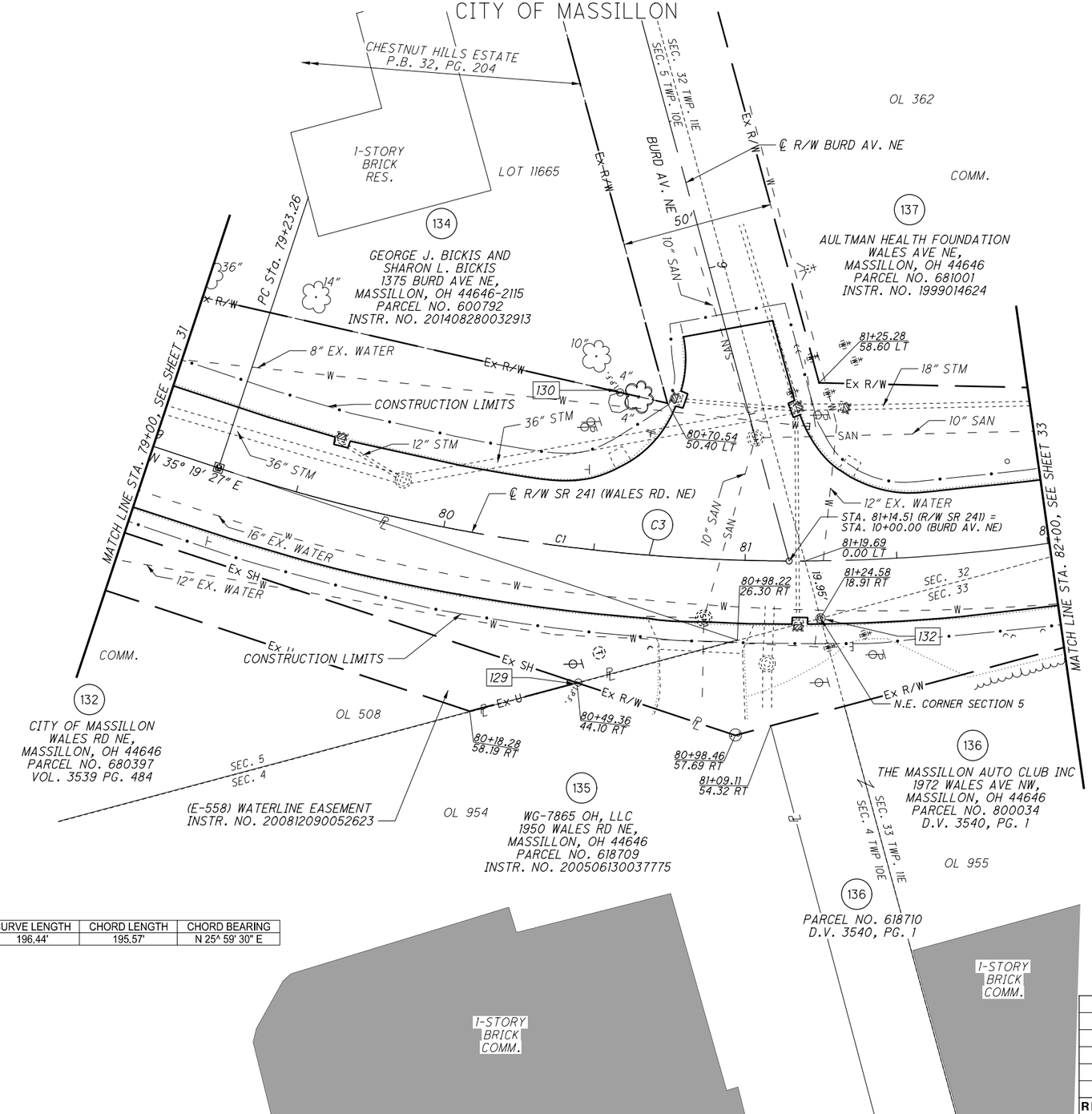
STA-241-9.71

31 / 34

392
395

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STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON



CURVE DATA

C3

P.I. Sta. 81+03.56
Δ = 33° 17' 43" (LT)
R = 603.00'
L = 350.41'
C = 350.41'
C.B. = N 18° 40' 35" E

CURVE	CENTRAL ANGLE	RADIUS	CURVE LENGTH	CHORD LENGTH	CHORD BEARING
C1	18^ 39' 54"	603.00'	196.44'	195.57'	N 25^ 59' 30" E

NOTE

STATION AND OFFSET INFORMATION FOR EXISTING PINS CAN BE FOUND ON SHEET 4.

LEGEND

[X] MONUMENT NUMBER

REV. BY	DATE	DESCRIPTION

DATE COMPLETED

SCALE: 1" = 20'
SCALE IN FEET

PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

RIGHT OF WAY PLAN - SR 241
STA. 79+00 TO STA. 82+00

STA-241-9.71

32 / 34

393
395

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STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON

NOTE

STATION AND OFFSET INFORMATION FOR EXISTING PINS CAN BE FOUND ON SHEET 4.

LEGEND

[X] *MONUMENT NUMBER*

CURVE DATA

C3

P.I. Sta. 81+03.56
Δ = 33° 17′ 43″ (LT)
Dc = 9° 30′ 06″
R = 603.00′
T = 180.31′
L = 350.41′
E = 26.38′
C = 350.41′
C.B. = N 18° 40′ 35″ E

137 *PARCEL NO. 680994 OR 1996050192*

137 *PARCEL NO. 681001 OR 1999014624*

137 *PARCEL NO. 680993 OR 1996050192*

137 *AULTMAN HEALTH FOUNDATION WALES AVE NE, MASSILLON, OH 44646 PARCEL NO. 880002 INSTR. NO. 199802200010100*

1-STORY BRICK COMM.

COMM. *COMM.* *COMM.* *COMM.*

PT OL 363

OL 362 *LOT 10170* *OL 749*

END WORK STA. 84+30

CITY OF MASSILLON / *JACKSON TOWNSHIP*

139 *WEST TUSCARAWAS PROPERTY MANAGEMENT LLC 2047 WALES AVE NW, MASSILLON, OH 44646-4111 PARCEL NO. 1621916 INSTR. NO. 201610180041896*

OL 777

137 *PARCEL NO. 880003 INSTR. NO. 199802200010100*

18″ STM *Ex R/W* *16″ SAN* *10″ SAN* *Ex R/W* *PT Sta. 82+73.67*

82+60.43 39.86 LT *82+91.30 40.00 LT* *82+91.30 30.00 LT* *83+21.30 30.00 LT*

CONSTRUCTION LIMITS *Ex R/W* *84+46.67 30.00 LT* *Ex R/W* *Ex R/W* *86+57.09 30.00 LT*

12″ STM *12″ STM*

C3

℄ *R/W SR 241 (WALES RD. NE)*

MATCH LINE STA. 82+00, SEE SHEET 32

83 *SEC. 32* / *SEC. 33* 84 *N 2° 01′ 44″ E* 85 *JACKSON TOWNSHIP* / *CITY OF MASSILLON* 86

30′ 30′

83+21.44 30.00 RT

W *W* *W* *Ex R/W* *Ex R/W* *Ex R/W* *Ex R/W* *Ex R/W*

12″ *16″ EX. WATER*

CONSTRUCTION LIMITS

133

85+46.44 30.00 RT *85+46.43 40.00 RT*

136 *THE MASSILLON AUTO CLUB INC 1972 WALES AVE NW, MASSILLON, OH 44646 PARCEL NO. 800034 DV 3540, PG. 1*

OL 955

1-STORY BRICK COMM.

138 *KAIBAB LAND DEVELOPMENT, LLC 2030 WALES AVE NW MASSILLON, OH 44646-4112 PARCEL NO. 800038 INSTR. NO. 201510230042580*

OL 852

1-STORY STEEL COMM.

140 *2100 WALES LLC 2040 WALES AVE NW, MASSILLON, OH 44646-4112 PARCEL NO. 800039*

OL 853

1-STORY STEEL COMM.

REV. BY	DATE	DESCRIPTION

DATE COMPLETED

SCALE: 1" = 20'
SCALE IN FEET

PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

RIGHT OF WAY · PLAN - SR 241
STA. 82+00 TO STA. 84+30

STA-241-9.71

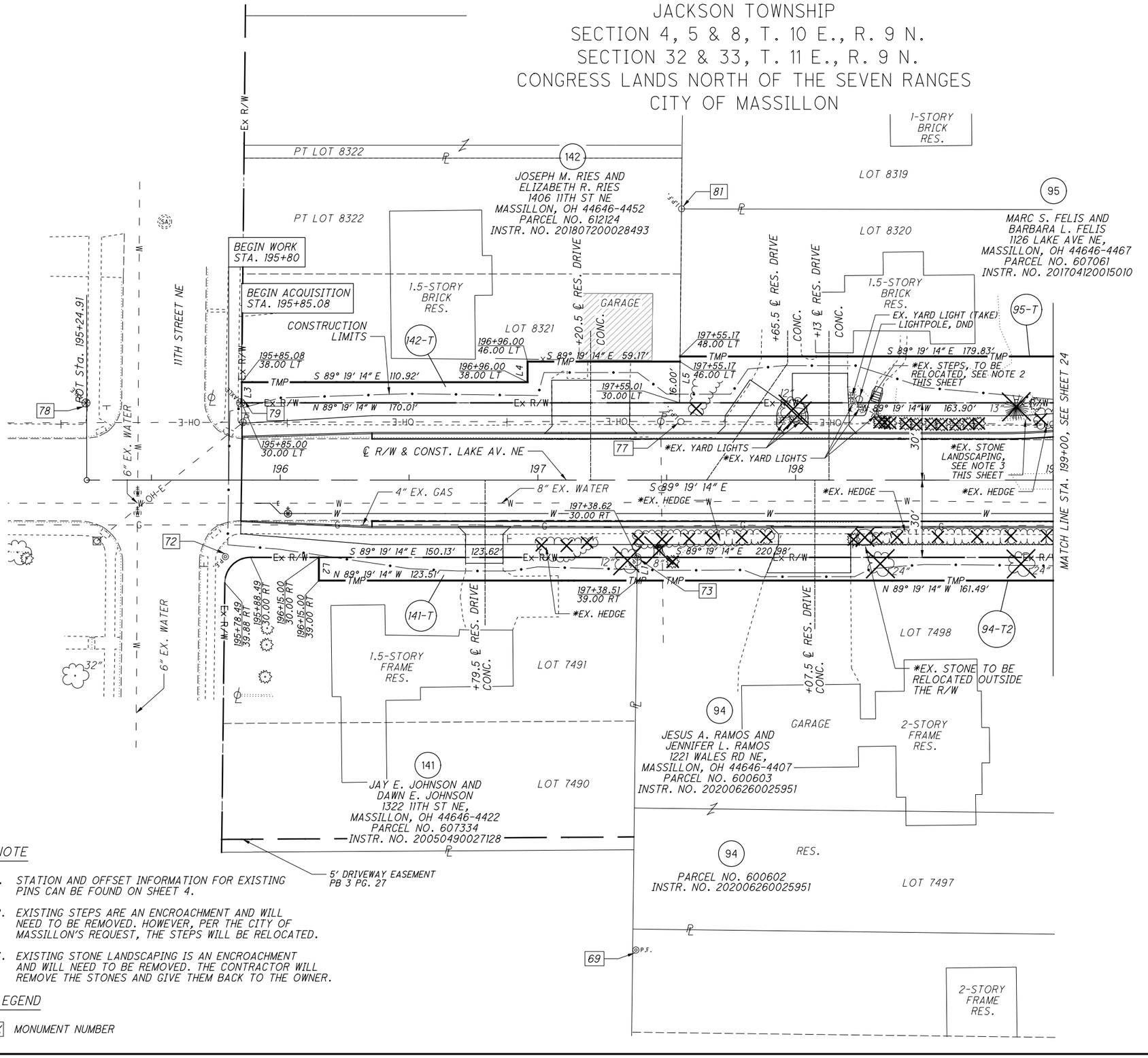
33 / 34

394
395

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STARK COUNTY
JACKSON TOWNSHIP
SECTION 4, 5 & 8, T. 10 E., R. 9 N.
SECTION 32 & 33, T. 11 E., R. 9 N.
CONGRESS LANDS NORTH OF THE SEVEN RANGES
CITY OF MASSILLON

	Bearing	Distance
L1	N 01° 22′ 08″ E	9.00′
L2	N 00° 40′ 46″ E	9.00′
L3	N 01° 14′ 40″ E	8.00′
L4	N 00° 40′ 46″ E	8.00′
L5	N 01° 14′ 40″ E	18.00′



NOTE

1. STATION AND OFFSET INFORMATION FOR EXISTING PINS CAN BE FOUND ON SHEET 4.
2. EXISTING STEPS ARE AN ENCROACHMENT AND WILL NEED TO BE REMOVED. HOWEVER, PER THE CITY OF MASSILLON'S REQUEST, THE STEPS WILL BE RELOCATED.
3. EXISTING STONE LANDSCAPING IS AN ENCROACHMENT AND WILL NEED TO BE REMOVED. THE CONTRACTOR WILL REMOVE THE STONES AND GIVE THEM BACK TO THE OWNER.

LEGEND

[X] MONUMENT NUMBER

REV. BY	DATE	DESCRIPTION
DATE COMPLETED		

SCALE: 1″ = 20′
SCALE IN FEET

PID NO. 100471

R/W DESIGNER SEH
R/W REVIEWER BVB/JJR

RIGHT OF WAY PLAN - LAKE AVE
STA. 195+80 TO STA. 199+00

STA-241-9.71

3-4 / 3-4

395
395

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PROJECT DESCRIPTION

THE PROPOSED CONSTRUCTION WILL CONSIST OF THE RESURFACING AND WIDENING OF WALES ROAD (SR 241) FROM LINCOLN WAY TO TAGGART STREET IN MASSILLON, STARK COUNTY, OHIO. THE PROJECT LENGTH IS ABOUT 1.8 MILES. THE PROJECT COMPONENTS WILL INCLUDE WIDENING FOR TWO-WAY LEFT TURN LANE, PARTIAL AND FULL DEPTH PAVEMENT REPAIR, PAVEMENT PLANING AND RESURFACING, ASPHALT AND CONCRETE DRIVE REPLACEMENT, REPLACEMENT OF EXISTING CURB WITH CURB AND GUTTER. UNDERGROUND UTILITIES IMPROVEMENTS, AND TRAFFIC SIGNAL IMPROVEMENTS.

HISTORIC RECORDS

NO HISTORIC RECORDS WERE FOUND FOR THIS PROJECT.

GEOLOGY

THE PROJECT SITE IS LOCATED NEAR THE WESTERN BOUNDARY OF STARK COUNTY, OHIO. GEOLOGIC MAPPING INDICATES THAT THE OVERBURDEN SOILS ACROSS THE SITE ARE WISCONSINAN AGE GLACIATION AND CONSISTS PRIMARILY OF SILT, SILTY CLAY, SANDY CLAY, AND CLAY. GLACIAL TILLS IN THIS PORTION OF OHIO ARE TYPICALLY LOW TO MODERATE PLASTICITY SOILS. THE DEPTH OF GLACIAL TILL IN THE VICINITY OF THE PROPOSED CONSTRUCTION SITE CAN VARY BETWEEN 40 TO MORE THAN 100 FEET. THE OHIO DEPARTMENT OF NATURAL RESOURCES (ODNR) PUBLICATION, "OHIO'S GEOLOGY IN CORE AND OUTCROP", INDICATES THAT PENNSYLVANIAN BEDROCK IS PRESENT BELOW THE OVERBURDEN GLACIAL TILL SOIL. THE PENNSYLVANIAN BEDROCK CONSISTS OF WHITE TO LIGHT GRAY, SANDSTONE IN MEDIUM TO THICK BEDS.

RECONNAISSANCE

DHDC MADE A SITE RECONNAISSANCE ON APRIL 11, 2018. DURING THE SITE RECONNAISSANCE DHDC STAKED THE BORING LOCATIONS. SOME AREAS OF THE EXISTING ROAD CAN BE DESCRIBED AS GOOD TO FAIR IN CONDITION AND SOME AREAS CAN BE DESCRIBED AS FAIR TO POOR. SOME AREAS OF ROAD SHOW SEVERE ALLIGATOR CRACKS, ISOLATED POT HOLES, DISTRESS, EDGE CRACKING, AND EDGE FAILING. DHDC ALSO OBSERVED SETTLEMENT AND SUBGRADE ISSUES AT SOME AREAS OF THE ROAD. SOME AREAS OF THE ROAD SHOW PERIODIC MAINTENANCE IN THE FORM OF SURFACE COATING AND CRACK SEALING.

SUBSURFACE EXPLORATION

DHDC PERFORMED TWENTY (20) SOIL BORINGS AND TWO (2) PAVEMENT CORES FOR THIS INVESTIGATION. NINETEEN (19) BORINGS WERE DRILLED THROUGH THE EXISTING ROADWAY PAVEMENT AND ONE (1) BORING THROUGH THE GRASSY AREA.

THE SOIL BORINGS WERE DRILLED USING AN ATV-MOUNTED ROTARY DRILL RIG. SPLIT-SPOON SAMPLES WERE OBTAINED BY THE STANDARD PENETRATION TEST (SPT) METHOD (ASTM D 1586), WHICH CONSISTS OF DRIVING A 2.5-INCH OUTSIDE DIAMETER SPLIT-SPOON SAMPLER INTO THE SOIL WITH A 140-POUND WEIGHT FALLING FREELY THROUGH A DISTANCE OF 30 INCHES. THE SAMPLER WAS DRIVEN IN THREE OR FOUR SUCCESSIVE 6-INCH INCREMENTS WITH THE NUMBER OF BLOWS PER INCREMENT BEING RECORDED. THE SUM OF THE NUMBER OF BLOWS REQUIRED TO ADVANCE THE SAMPLER THE SECOND AND THIRD 6-INCH INCREMENTS IS TERMED THE STANDARD PENETRATION RESISTANCE (N-VALUE). THE HAMMER SYSTEM USED FOR THIS INVESTIGATION WAS CALIBRATED ON FEBRUARY 2, 2016 AND THE AVERAGE DRILL ROD ENERGY RATIO (ER) IS 79%.

TEST BORINGS WERE MONITORED FOR THE PRESENCE OF GROUNDWATER DURING THE DRILLING OPERATIONS. SOIL CONDITIONS ENCOUNTERED IN THE TEST BORINGS ARE PRESENTED IN THE LOGS OF TEST BORINGS, ALONG WITH INFORMATION RELATED TO SAMPLE DATA, SPT RESULTS, WATER CONDITIONS OBSERVED IN THE BORINGS, AND LABORATORY TEST DATA.

EXPLORATION FINDINGS

DHDC PERFORMED PAVEMENT CORING AT TWO (2) LOCATIONS. THE THICKNESS OF ASPHALTIC CONCRETE AT THE PAVEMENT CORED LOCATIONS RANGED FROM 9.5 TO 10.25 INCHES. SOIL BORING B-013-0-18 WAS DRILLED THROUGH THE RIGHT OF WAY GRASSY AREA. THE OTHER NINETEEN (19) SOIL BORINGS WERE DRILLED THROUGH THE EXISTING ASPHALTIC CONCRETE PAVEMENT. BELOW THE ASPHALTIC CONCRETE, RIGID PAVEMENT (CONCRETE SLAB) AND BRICK WAS ENCOUNTERED IN FEW BORINGS. THE THICKNESS OF THE ASPHALTIC CONCRETE AT THE BORING LOCATIONS VARIED CONSIDERABLY FROM ABOUT 2.5 TO 11.0 INCHES. RIGID PAVEMENT THICKNESS VARIED FROM ABOUT 2.5 TO 11.0 INCHES. THE THICKNESS OF BRICK RANGED FROM 4.0 TO 9.0 INCHES BUT WERE MOSTLY IN THE RANGE OF 4.0 TO 5.0 INCHES. GRANULAR BASE MATERIAL WAS ENCOUNTERED ONLY IN FEW BORINGS. THE THICKNESS OF GRANULAR BASE MATERIAL RANGED FROM 3.0 TO 9.0 INCHES.

BELOW THE PAVEMENT MATERIALS, MAN-MADE FILL MATERIAL WAS ENCOUNTERED IN MOST OF THE BORINGS. THE DEPTH OF MAN-MADE FILL MATERIAL RANGED FROM ABOUT 1.5 FEET TO THE MAXIMUM DEPTH EXPLORED OF 6.0 FEET. THE MAN-MADE FILL MATERIALS WERE MOSTLY COHESIVE SOILS CONSISTING OF SILTY CLAY (A-6b), SILT (A-4b), SILT AND CLAY (A-6a), AND SANDY SILT (A-4a). THE COHESIONLESS MAN-MADE FILL MATERIALS CONSISTED OF FINE SAND (A-3), COARSE AND FINE SAND (A-3a), AND GRAVEL WITH SAND AND SILT (A-2-4). SOME OF THE FILL MATERIALS ENCOUNTERED LIGHT ORGANIC STAINING AND ODOR. OVERALL THE FILL MATERIALS WERE FREE OF ANY ABUNDANCE OF ORGANICS AND DELETERIOUS MATERIALS AND WERE MEDIUM STIFF TO VERY STIFF IN CONSISTENCY.

THE NATURALLY OCCURRING SOILS ENCOUNTERED IN THE BORINGS WERE MOSTLY FINE GRAINED COHESIVE SOIL. THE COHESIVE SOILS CONSISTED OF SILT AND CLAY (A-6a), SILTY CLAY (A-6b), SANDY SILT (A-4a), AND SILT (A-4b). THE TOP THREE (3) FEET OF SUBGRADE SOILS WERE GENERALLY STIFF IN CONSISTENCY. THE NATURALLY OCCURRING COHESIVE SOILS ARE MEDIUM STIFF TO VERY STIFF IN CONSISTENCY. THIN TO THICK LAYERS OF COHESIONLESS SOILS WERE ENCOUNTERED IN FEW BORINGS AT VARIOUS DEPTHS. THE COHESIONLESS SOILS ARE LOOSE TO MEDIUM DENSE IN RELATIVE DENSITY.

NO GROUNDWATER WAS ENCOUNTERED AT ANY OF THE ROADWAY BORINGS DRILLED FOR THIS INVESTIGATION. ALTHOUGH NOT ENCOUNTERED DURING DHDC'S FIELD INVESTIGATIONS, IT IS POSSIBLE THAT SOME PERCHED OR TRAPPED GROUNDWATER CAN BE ENCOUNTERED AT ANY DEPTHS WITHIN THE COHESIONLESS SEAM OR LAYERS WITHIN THE COHESIVE SOIL MATRIX AND AT THE INTERFACE OF MAN-MADE FILL AND NATURALLY OCCURRING SOIL.

LEGEND

DESCRIPTION	ODOT CLASS	PROJECT CLASSIFIED MECH./VISUAL	
GRAVEL AND/OR STONE FRAGMENTS WITH SAND	A-1-b	1	-
GRAVEL AND/OR ST. FRAG. WITH SAND AND SILT	A-2-4	1	3
GRAVEL AND/OR ST. FRAG. WITH SAND,SILT AND CLAY	A-2-6	-	2
FINE SAND	A-3	-	1
COARSE AND FINE SAND	A-3a	-	1
SANDY SILT	A-4a	12	10
SILT	A-4b	3	-
SILT AND CLAY	A-6a	4	17
SILTY CLAY	A-6b	-	7
	TOTAL	21	41

PAVEMENT OR BASE = X = APPROXIMATE THICKNESS — VISUAL

SOD AND TOPSOIL = X = APPROXIMATE THICKNESS — VISUAL

BORING LOCATION - PLAN VIEW

DRIVE SAMPLE AND/OR ROCK CORE BORING PLOTTED TO VERTICAL SCALE ONLY. HORIZONTAL BAR INDICATES A CHANGE IN STRATIGRAPHY.

WC — INDICATES WATER CONTENT IN PERCENT.

N_{60} — INDICATES STANDARD PENETRATION RESISTANCE NORMALIZED TO 60% DRILL ROD ENERGY RATIO.

X/Y/D" — NUMBER OF BLOWS FOR STANDARD PENETRATION TEST (SPT):
X= NUMBER OF BLOWS FOR FIRST 6 INCHES (UNCORRECTED)
Y/D" = NUMBER OF BLOWS (UNCORRECTED) FOR D" OF PENETRATION AT REFUSAL

* — INDICATES A SAMPLE TAKEN WITHIN 3 FT OF PROPOSED GRADE.

SS — INDICATES A SPLIT SPOON SAMPLE.

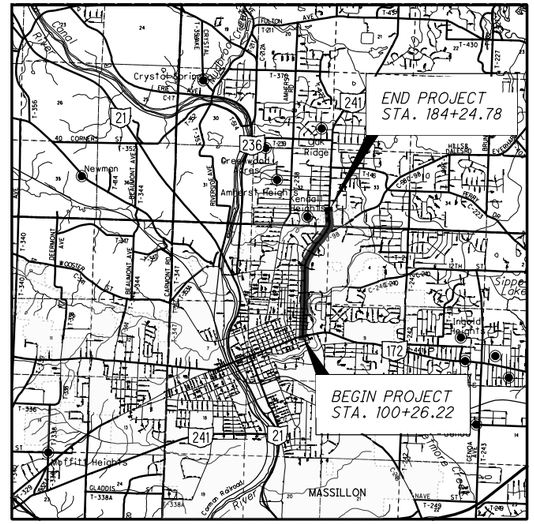
NP — INDICATES A NON-PLASTIC SAMPLE.

SPECIFICATIONS

THIS GEOTECHNICAL EXPLORATION WAS PERFORMED IN ACCORDANCE WITH THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, OFFICE OF GEOTECHNICAL ENGINEERING, SPECIFICATIONS FOR GEOTECHNICAL EXPLORATIONS, DATED JULY 2017.

AVAILABLE INFORMATION

ALL AVAILABLE SOIL AND BEDROCK INFORMATION THAT CAN BE CONVENIENTLY SHOWN ON THE GEOTECHNICAL EXPLORATION SHEETS HAS BEEN SO REPORTED. ADDITIONAL EXPLORATIONS MAY HAVE BEEN MADE TO STUDY SOME SPECIAL ASPECT OF THE PROJECT. COPIES OF THIS DATA, IF ANY, MAY BE INSPECTED IN THE DISTRICT DEPUTY DIRECTOR'S OFFICE OR THE OFFICE OF GEOTECHNICAL ENGINEERING AT 1980 WEST BROAD STREET.



LOCATION MAP
SCALE IN MILES
0 1 2 3 4

N

PARTICLE SIZE DEFINITIONS

12"		3"	2.0 mm		0.42 mm		0.074 mm	0.005 mm
BOULDERS	COBBLES		GRAVEL	COARSE SAND		FINE SAND	SILT	CLAY
				No. 10 SIEVE		No. 40 SIEVE	No. 200 SIEVE	

INDEX OF SHEETS

LOCATION FROM STA.	TO STA.	PLAN VIEW SHEET	PROFILE SHEET	CROSS-SECTION SHEET	CUT MAX.	FILL EMB. MAX.
SR 241						
100+26.22	113+50	3	3	N/A	N/A FT	N/A FT
113+50	127+50	4	4	N/A	N/A FT	N/A FT
127+50	141+50	5	5	N/A	N/A FT	N/A FT
141+50	152+50	6	6	N/A	N/A FT	N/A FT
152+50	163+50	7	7	N/A	N/A FT	N/A FT
163+50	177+50	8	8	N/A	N/A FT	N/A FT
177+50	184+24.78	9	9	N/A	N/A FT	N/A FT

RECON. - MOH 04/2018
DRILLING - DHDC 4/2018-5/2018
DRAWN - SM 7/2018
REVIEWED - PAN 7/2018

DHDC Engineering Consulting Services, Inc.

PID NO. 100471

SOIL PROFILE

STA-241-9.71

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SUMMARY OF SOIL TEST DATA

SR 241

EXPLORATION NO. / STATION & OFFSET	FROM	TO	SAMPLE ID	N60	% REC	tsf HP	% GR	% CS	% FS	% SILT	% CLAY	LL	PL	PI	% WC	ODOT CLASS (GI)	ppm SO4
B-001-0-18	1.20	2.10	SS-1	2/50/2"	63	1.75	BROWN, SILTY CLAY, SOME SAND, TRACE GRAVEL								20	A-6b (VISUAL) *	-
STA. 100+60, 28' RT																	
LATITUDE = 40.800206																	
LONGITUDE = -81.509767																	
B-002-0-18	1.00	3.00	SS-1	8	83	1.50	6	5	6	64	19	27	21	6	20	A-4b (8) *	200
STA. 104+58, 12' RT	3.00	4.50	SS-2	12	100	1.25	2	1	2	58	37	36	22	14	22	A-6a (10)	-
LATITUDE = 40.801298	4.50	6.00	SS-3	12	100	1.50	SAME AS SS-2								27	A-6a (VISUAL)	-
LONGITUDE = -81.509763																	
B-003-0-18	1.00	2.00	SS-1A	24	67	-	BROWN, FINE SAND, SOME SILT, TRACE GRAVEL								12	A-3 (VISUAL) *	-
STA. 108+74, 9' LT	2.00	3.00	SS-1B	-	-	3.00	BROWN, SILTY CLAY, LITTLE SAND, LITTLE GRAVEL								-	A-6b (VISUAL) *	-
LATITUDE = 40.802441	3.00	4.50	SS-2	11	6	-	SAME AS SS-1B								11	A-6b (VISUAL)	-
LONGITUDE = -81.509768	4.50	6.00	SS-3	8	61	-	DARK BROWN COARSE AND FINE SAND, SOME SILT								16	A-3a (VISUAL)	-
B-004-0-18	1.00	2.00	SS-1A	8	92	-	7	10	11	53	19	26	20	6	19	A-4b (7) *	-
STA. 112+30, 12' RT	2.00	3.00	SS-1B	-	-	2.50	BROWN, SILT AND CLAY, LITTLE SAND, TRACE GRAVEL								-	A-6a (VISUAL) *	-
LATITUDE = 40.803415	3.00	4.50	SS-2	14	72	2.50	SAME AS SS-1B								21	A-6a (VISUAL)	-
LONGITUDE = -81.509630	4.50	6.00	SS-3	11	67	1.00	SAME AS SS-1B								15	A-6a (VISUAL)	-
B-005-0-18	1.00	3.00	SS-1	14	38	3.50	BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL								14	A-6b (VISUAL) *	-
STA. 116+40, 9' LT	3.00	4.50	SS-2	9	72	-	BROWN, STONE FRAGMENTS, WITH SAND, SILT AND CLAY								15	A-2-6 (VISUAL)	-
LATITUDE = 40.804542	4.50	6.00	SS-3	11	67	-	SAME AS SS-2								13	A-2-6 (VISUAL)	-
LONGITUDE = -81.509635																	
B-006-0-18	1.00	1.50	SS-1A	9	92	-	BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL								19	A-6b (VISUAL) *	-
STA. 120+23, 9' RT	1.50	3.00	SS-1B	-	-	2.00	BR. SILT AND CLAY, LITTLE TO SOME SAND, TRACE GRAVEL								-	A-6a (VISUAL) *	<100
LATITUDE = 40.805588	3.00	4.50	SS-2	13	72	1.50	SAME AS SS-1B								23	A-6a (VISUAL)	-
LONGITUDE = -81.509506	4.50	6.00	SS-3	17	83	1.50	SAME AS SS-1B								23	A-6a (VISUAL)	-
B-007-0-18	1.00	3.00	SS-1	8	67	1.50	DARK BROWN, SANDY SILT, LITTLE CLAY, TRACE GRAVEL								14	A-4a (VISUAL) *	-
STA. 124+33, 8' LT	3.00	4.50	SS-2	18	67	2.00	10	10	12	50	18	24	19	5	14	A-4b (7)	-
LATITUDE = 40.806716	4.50	6.00	SS-3	12	100	1.50	BROWN, SILTY CLAY, LITTLE SAND, TRACE GRAVEL								23	A-6b (VISUAL)	-
LONGITUDE = -81.509496																	
B-008-0-18	1.00	2.50	SS-1A	14	100	-	34	27	16	13	10	26	21	5	-	A-1-b (0) *	-
STA. 128+45, 10' RT	2.50	3.00	SS-1B	-	-	-	28	23	14	20	15	27	20	7	13	A-2-4 (0) *	-
LATITUDE = 40.807843	3.00	4.50	SS-2	12	67	-	SAME AS SS-1B								13	A-2-4 (VISUAL)	-
LONGITUDE = -81.509367	4.50	6.00	SS-3	8	78	-	SAME AS SS-1B								14	A-2-4 (VISUAL)	-
B-009-0-18	1.50	3.00	SS-1	3	100	0.50	10	13	11	40	26	30	20	10	23	A-4a (6) *	<100
STA. 132+42, 16' LT	3.00	4.50	SS-2	0	81	-	10	9	10	44	27	32	20	12	26	A-6a (8)	-
LATITUDE = 40.808935	4.50	6.00	SS-3	7	67	1.25	6	6	9	51	28	32	20	12	22	A-6a (9)	-
LONGITUDE = -81.509401																	
B-010-0-18	1.50	3.00	SS-1	47	72	-	GRAY, GRAVEL WITH SAND AND SILT								14	A-2-4 (VISUAL) *	-
STA. 136+30, 10' RT	3.00	4.50	SS-2	11	22	0.75	7	16	24	32	21	24	18	6	16	A-4a (4)	-
LATITUDE = 40.809995	4.50	6.00	SS-3	4	28	0.50	SAME AS SS-2							-	17	A-4a (VISUAL)	-
LONGITUDE = -81.509254																	
B-011-0-18	1.50	3.00	SS-1	18	100	2.50	8	15	16	36	25	25	18	7	16	A-4a (5) *	-
STA. 140+34, 12' LT	3.00	4.50	SS-2	24	83	2.50	7	16	17	45	15	23	18	5	14	A-4a (5)	-
LATITUDE = 40.811105	4.50	6.00	SS-3	20	100	3.00	MOTTLED BROWN AND GRAY, SANDY SILT, LITTLE CLAY								19	A-4a (VISUAL)	-
LONGITUDE = -81.509283																	
B-012-0-18	1.00	3.00	SS-1	34	83	3.00	19	19	15	30	17	26	17	9	16	A-4a (2) *	-
STA. 144+60, 1' RT	3.00	4.50	SS-2	32	83	-	13	11	16	39	21	24	17	7	16	A-4a (5)	-
LATITUDE = 40.812274	4.50	6.00	SS-3	25	67	3.50	DARK BROWN, SANDY SILT, LITTLE CLAY, TRACE GRAVEL								12	A-4a (VISUAL)	-
LONGITUDE = -81.509177																	
B-013-0-18	0.00	1.50	SS-1	9	17	-	BROWN, SANDY SILT, TRACE GRAVEL, TRACE CLAY								15	A-4a (VISUAL) *	-
STA. 146+21, 46' LT	1.50	3.00	SS-2	12	94	2.00	2	9	43	31	15	NP	NP	NP	14	A-4a (2) *	-
LATITUDE = 40.812720	3.00	4.50	SS-3	24	33	2.50	BROWN, SANDY SILT, LITTLE CLAY, TRACE GRAVEL								13	A-4a (VISUAL)	-
LONGITUDE = -81.509326	4.50	6.00	SS-4	22	67	-	SAME AS SS-3								13	A-4a (VISUAL)	-
B-014-0-18	2.00	4.00	SS-1	22	75	2.50	14	14	15	36	21	26	18	8	13	A-4a (4) *	-
STA. 150+25, 13' LT	4.00	6.00	SS-2	18	67	1.50	BROWN WITH TRACE GRAY, SILT AND CLAY, LITTLE SAND								22	A-6a (VISUAL)	-
LATITUDE = 40.813828																	
LONGITUDE = -81.509144																	
B-015-0-18	1.00	3.00	SS-1	9	4	-	18	19	18	31	14	26	19	7	16	A-4a (2) *	-
STA. 154+18, 13' RT	3.00	4.50	SS-2	11	0	-	BR. SILT AND CLAY, LITTLE SAND, TRACE GRAVEL								17	A-6a (VISUAL)	-
LATITUDE = 40.814789	4.50	6.00	SS-3	11	0	-	SAME AS SS-2 (ALL SAMPLES FROM AUGER CUTTINGS)								15	A-6a (VISUAL)	-
LONGITUDE = -81.508483																	
B-016-0-18	1.50	3.00	SS-1	11	67	2.00	9	11	21	38	21	23	16	7	18	A-4a (5) *	-
STA. 158+02, 13' LT	3.00	4.50	SS-2	20	100	3.00	12	8	19	39	22	24	17	7	13	A-4a (5)	-
LATITUDE = 40.815768	4.50	6.00	SS-3	25	83	3.00	SAME AS SS-2								15	A-4a (VISUAL)	-
LONGITUDE = -81.507961																	
B-017-0-18	1.00	3.00	SS-1	8	71	1.25	DARK BROWN, SANDY SILT, LITTLE CLAY, TRACE GRAVEL								16	A-4a (VISUAL) *	-
STA. 162+09, 17' RT	3.00	4.50	SS-2	5	83	1.00	MOTTLED BROWN AND GRAY, SILT AND CLAY, LITTLE SAND								24	A-6a (VISUAL)	-
LATITUDE = 40.816652	4.50	6.00	SS-3	16	100	2.00	SAME AS SS-2								22	A-6a (VISUAL)	-
LONGITUDE = -81.507052																	
B-018-0-18	1.50	3.00	SS-1	11	72	1.50	6	7	12	49	26	27	19	8	21	A-4a (8) *	-
STA. 165+99, 12' LT	3.00	4.50	SS-2	12	89	-	8	7	12	43	30	31	19	12	22	A-6a (8)	-
LATITUDE = 40.817565	4.50	6.00	SS-3	18	83	3.00	SAME AS SS-2								23	A-6a (VISUAL)	-
LONGITUDE = -81.506306																	
B-019-0-18	1.00	2.00	SS-1	13	71	1.50	BLUISH BR. SILT AND CLAY, LITTLE SAND, TRACE GRAVEL								12	A-6a (VISUAL) *	-
STA. 170+09, 17' RT	2.00	4.50	SS-2	9	89	1.75	MOTTLED BROWN AND GRAY, SILT AND CLAY LITTLE SAND								21	A-6a (VISUAL)	<100
LATITUDE = 40.818429	4.50	6.00	SS-3	17	100	2.50	MOTTLED BROWN AND GRAY, SILTY CLAY LITTLE SAND								26	A-6b (VISUAL)	-
LONGITUDE = -81.505354																	
B-020-0-18	1.00	3.00	SS-1	4	63	1.00	BR. AND GRAY, SANDY SILT, LITTLE GRAVEL								17	A-4a (VISUAL) *	-
STA. 173+59, 15' LT	3.00	4.50	SS-2	7	50	0.50	BR. AND GRAY, SILT AND CLAY, LITTLE SAND								20	A-6a (VISUAL)	-
LATITUDE = 40.819258	4.50	6.00	SS-3	16	89	2.50	BR. AND GRAY, SILT AND CLAY, LITTLE SAND								16	A-6a (VISUAL)	-
LONGITUDE = -81.504703																	

BEGIN PROJECT
STA. 100+26.22

℄ R/W & CONST. NORTH AV. NE

℄ R/W & CONST. RODMAN AV. NE

℄ R/W & CONST. ANDREW AV. NE

℄ R/W & CONST. GRAY CT. NE

℄ R/W & CONST. SR 172 (LINCOLN WAY E)

℄ CONST. SR 241 (WALES RD. NE)

MATCH LINE STA. 113+50, SEE SHEET 4

B-001-0-18
28' RT
ASPHALTIC CONCRETE (0.2')
CONCRETE (0.8')
2/50/2" 20
N_{60} WC
AUGER REFUSAL
ON CONCRETE PAVEMENT

B-002-0-18
12' RT
ASPHALTIC CONCRETE (0.5')
BRICK (0.3')
8 20
12 22
12 27
N_{60} WC

B-003-0-18
9' LT
ASPHALTIC CONCRETE (0.3')
CONCRETE (0.2')
BRICK (0.3')
24 12
11 11
8 16
N_{60} WC

B-004-0-18
12' RT
ASPHALTIC CONCRETE (0.5')
BRICK (0.4')
8 19
14 21
11 15
N_{60} WC

1050
1040
1030
1020
1010
1000
990
980

1019.80 1019.33 1019.67 1019.68 1019.67 1019.68 1019.65 1019.46 1019.26 1019.05 1018.87 1018.68 1018.50 1018.31 1018.12 1017.95 1017.79 1017.64 1017.49 1017.42 1017.40 1017.66 1018.09 1018.66 1019.32 1019.97 1020.61 1021.26 1021.92 1022.55 1023.15 1023.64 1024.04 1024.31 1024.46 1024.59 1024.69 1024.82 1024.96 1025.10 1025.22 1025.33 1025.41 1025.49 1025.57 1025.66 1025.75 1025.84 1025.94 1026.04 1026.13 1026.25 1026.42 1026.57 1026.67

100+00 101+00 102+00 103+00 104+00 105+00 106+00 107+00 108+00 109+00 110+00 111+00 112+00 113+00

HORIZONTAL SCALE IN FEET
0 25 50 100

DRAWN SM
CHECKED PAN

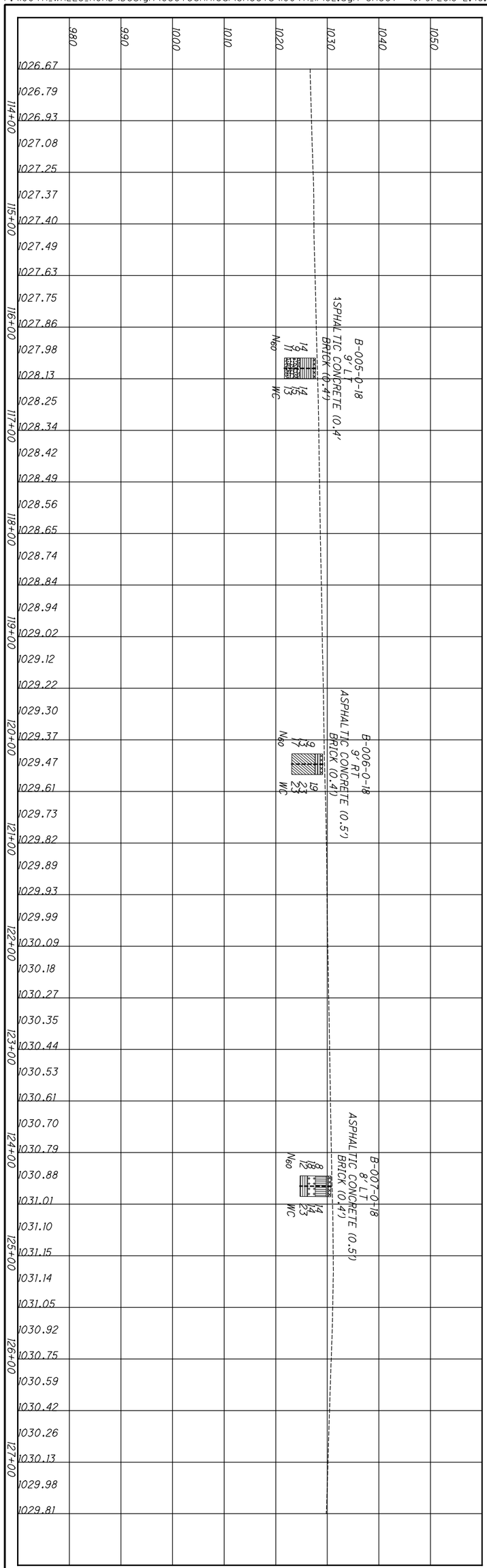
SOIL PROFILE
STA. 100+26.22 TO 113+50 SR 241

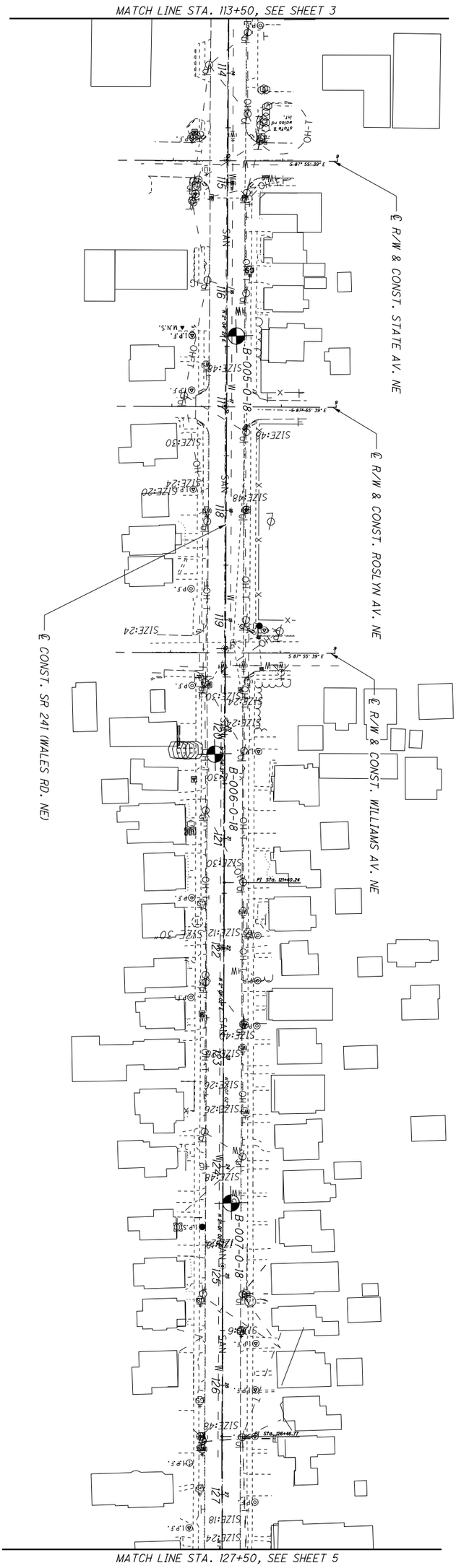
STA-241-9.71

3 / 9

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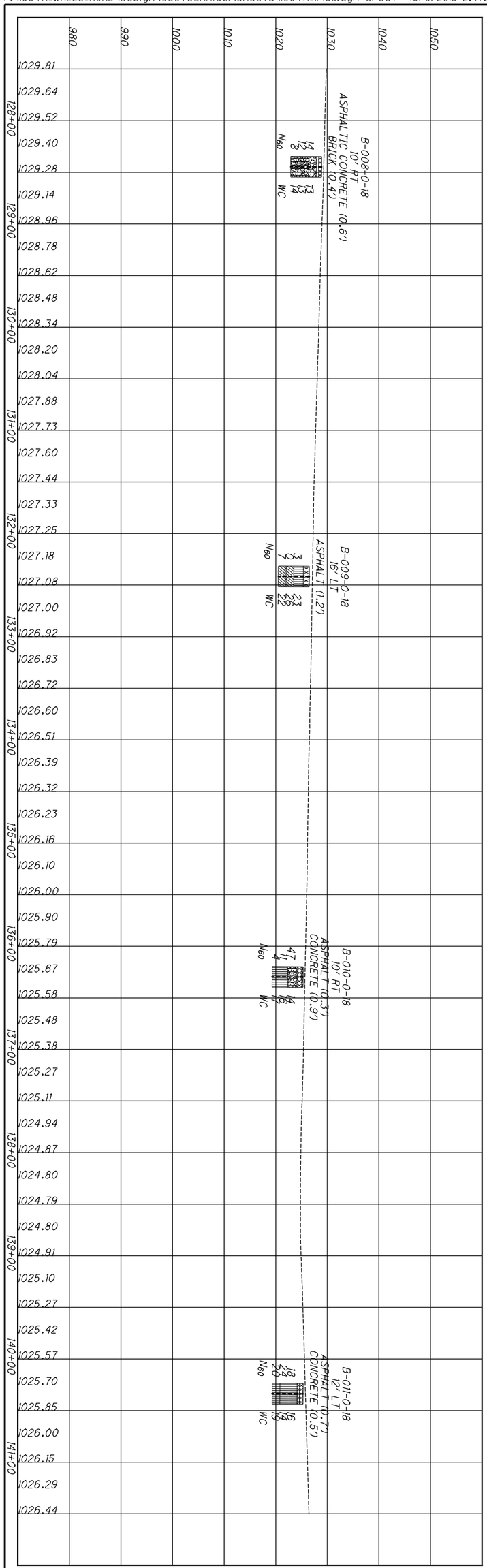
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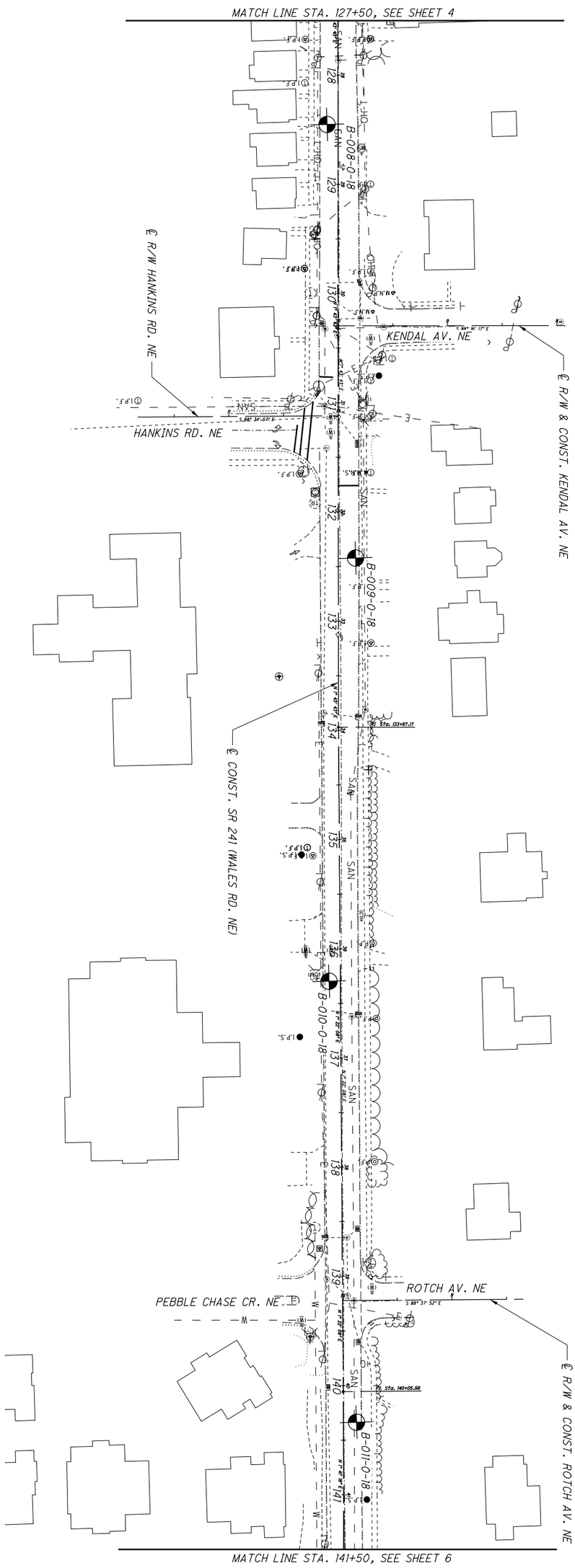




4/9	STA-241-9.71	SOIL PROFILE STA. 113+50 TO 127+50 SR 241	DRAWN SM CHECKED PAN	0 50 25 HORIZONTAL SCALE IN FEET	N

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5/9

STA-241-9.71

SOIL PROFILE

STA. 127+50 TO 141+50 SR 241

DRAWN SM

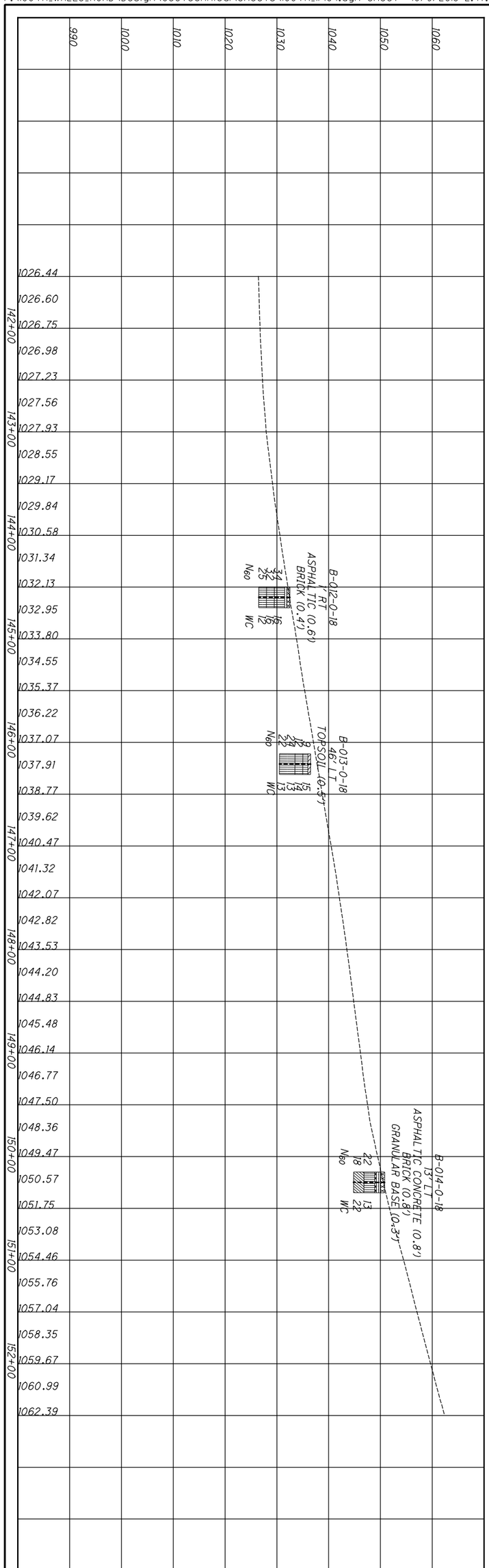
CHECKED PAN

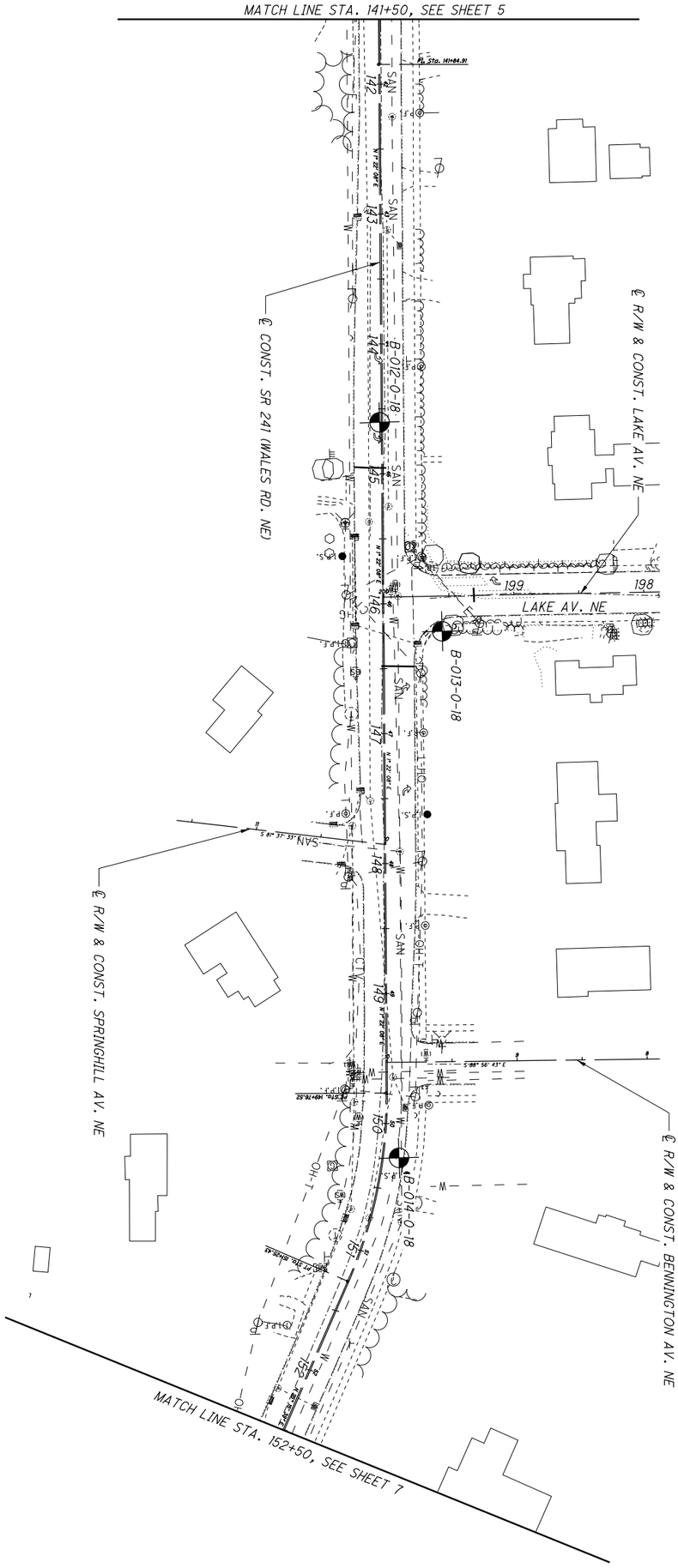
0 50

25 100

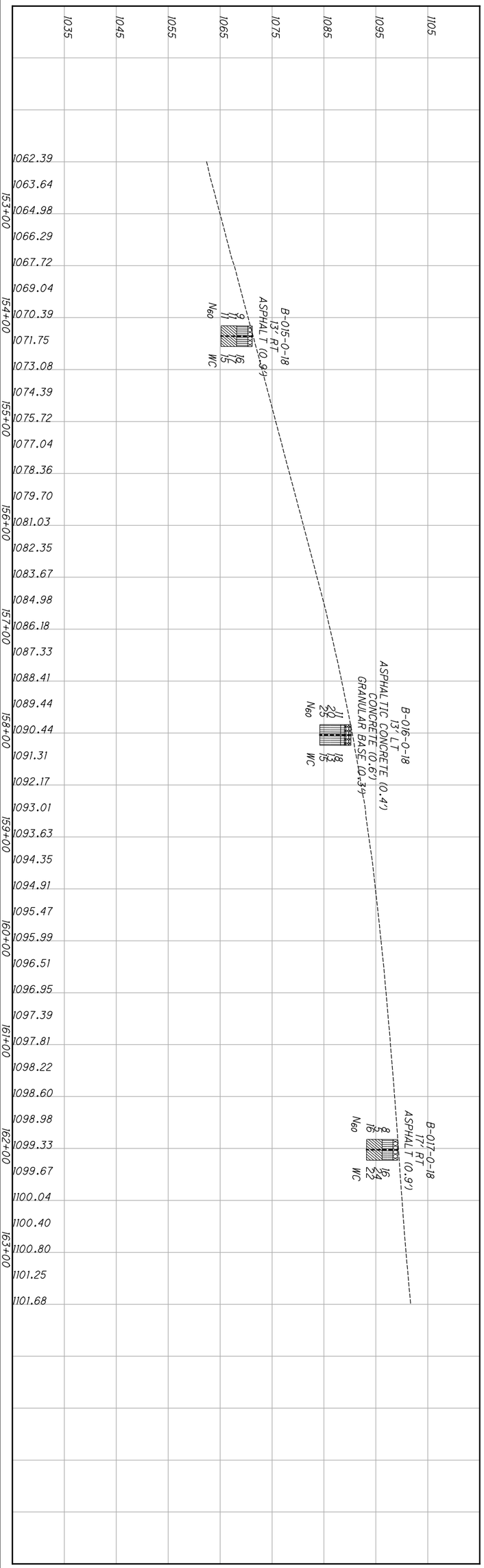
HORIZONTAL SCALE IN FEET

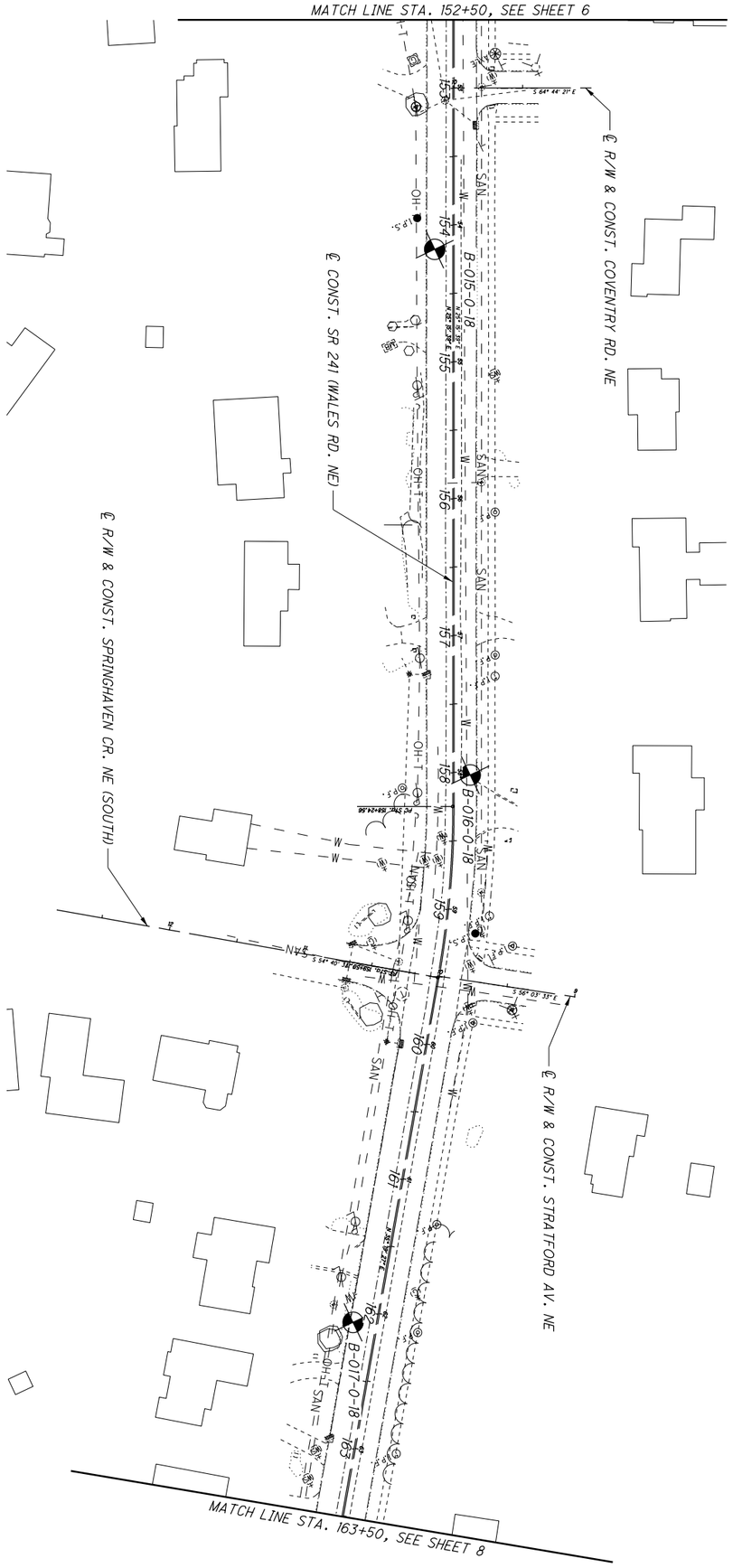
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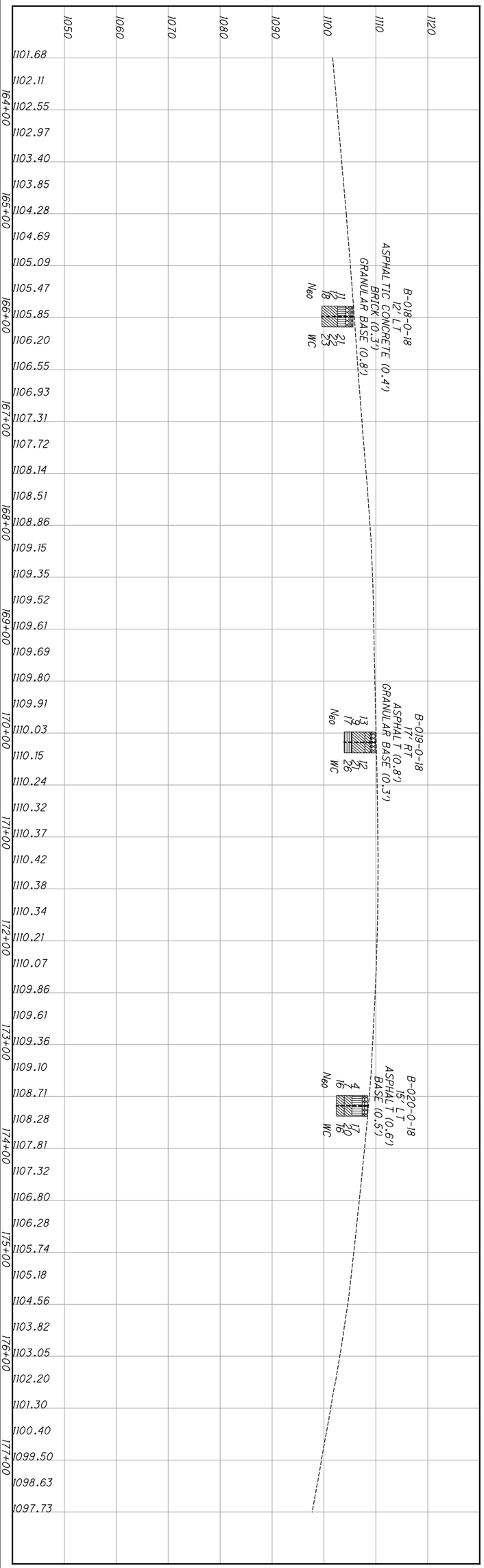
6/9	STA-241-9.71	SOIL PROFILE STA. 141+50 TO 152+50 SR 241	DRAWN SM CHECKED PAN	0 50 25 100 HORIZONTAL SCALE IN FEET	N

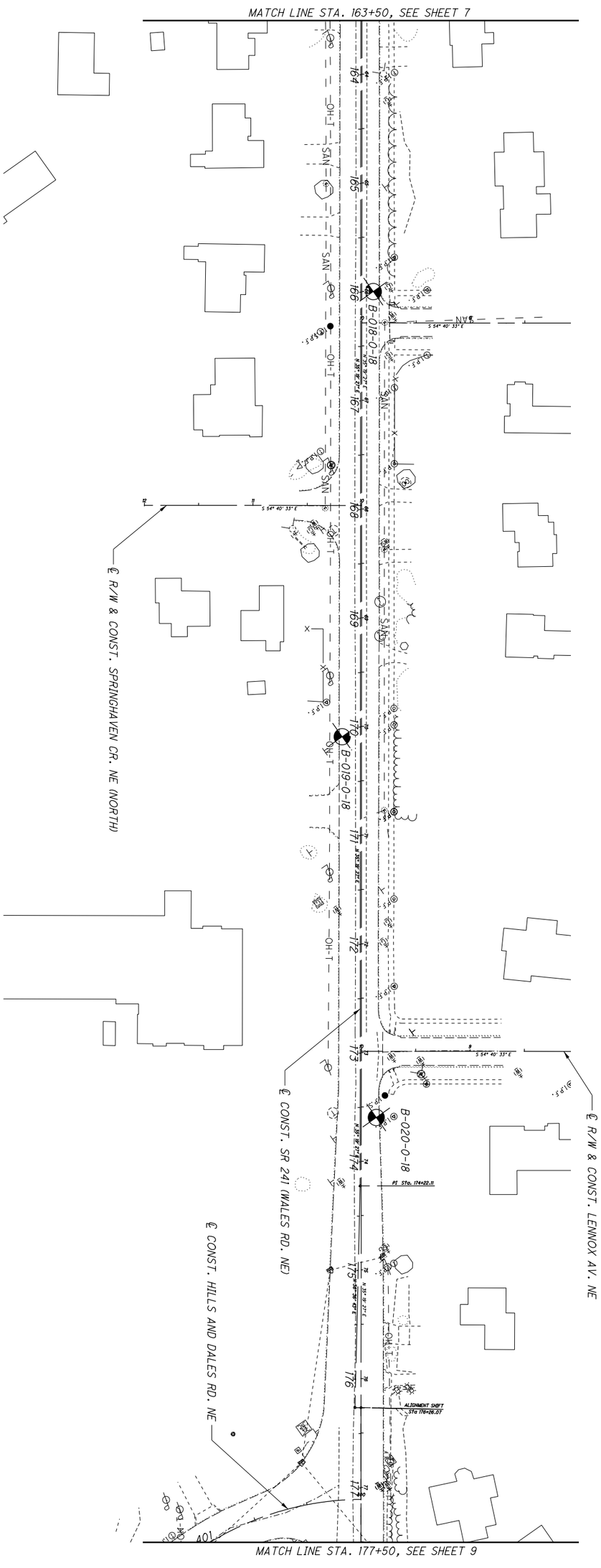




7 / 9	STA-241-9.71	SOIL PROFILE STA. 152+50 TO 163+50 SR 241	DRAWN SM CHECKED PAN	0 50 25 100 HORIZONTAL SCALE IN FEET	

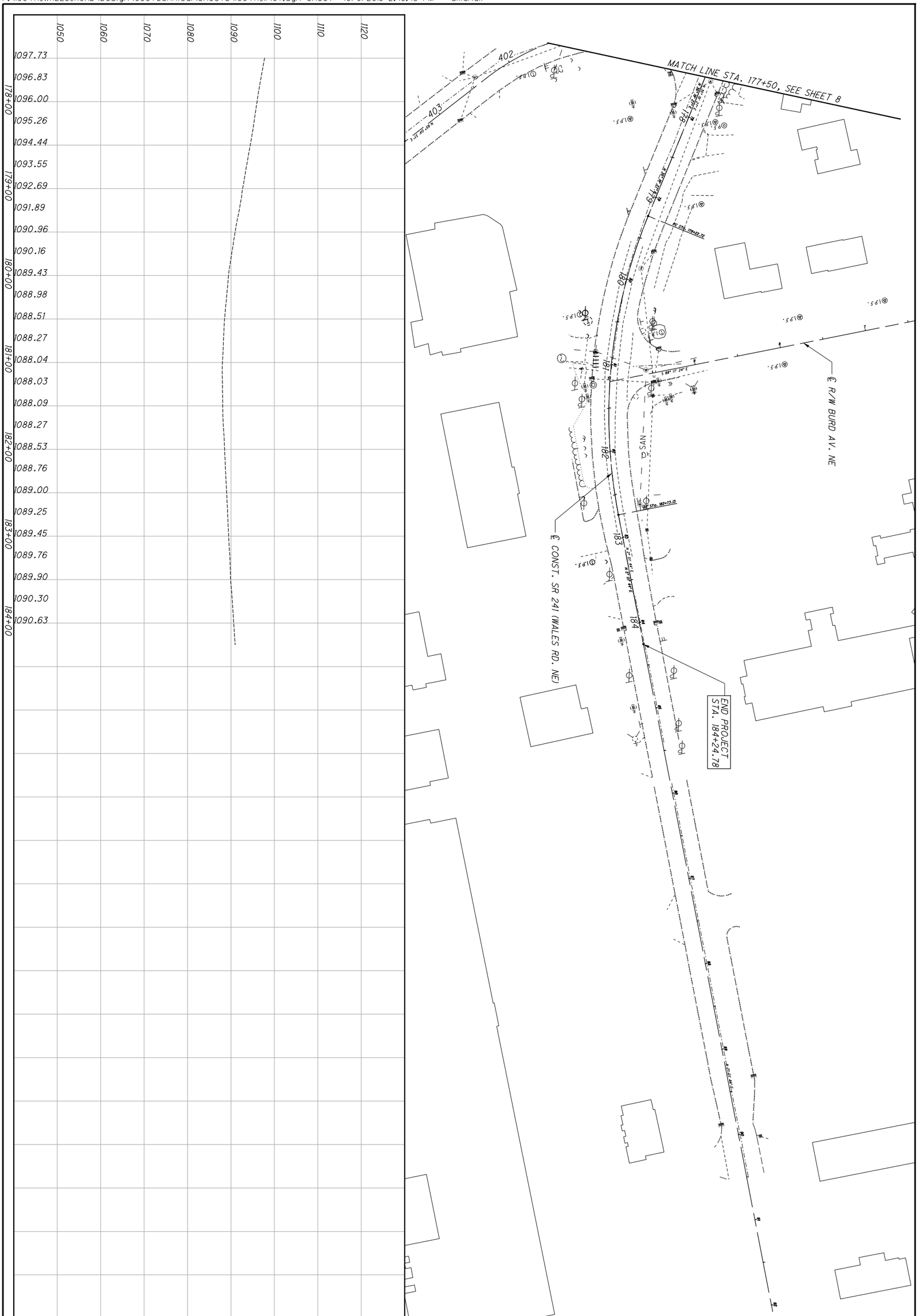
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	8/9	STA-241-9.71	SOIL PROFILE STA. 163+50 TO 177+50 SR 241	DRAWN SM CHECKED PAN	0 50 25 100 HORIZONTAL SCALE IN FEET

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9/9	STA-241-9.71	SOIL PROFILE STA. 177+50 TO 184+24.78 SR 241	DRAWN SM CHECKED PAN	0 50 25 100 HORIZONTAL SCALE IN FEET	