TENN.	YEAR	SHEET NO.
	2016	1
FED. AID PROJ. NO.	STP-M-4350(10)	
STATE PROJ. NO.	53LPLM-F1-039	

LOCALLY MANAGED PROJECT

SHEET INDEX

1	TITLE SHEET
2	TYPICAL SECTIONS
2A	SPECIAL DETAILS
3-3D	PROPERTY MAPS
4-8	PLAN AND PROFILE SHEETS
9	DRIVEWAY PROFILES
10-12	DRAINAGE MAPS
13-17	EROSION PREVENTION AND SEDIMENT CONTROL PLANS
18-32	CROSS SECTIONS

TDOT STANDARD ROADWAY DRAWINGS

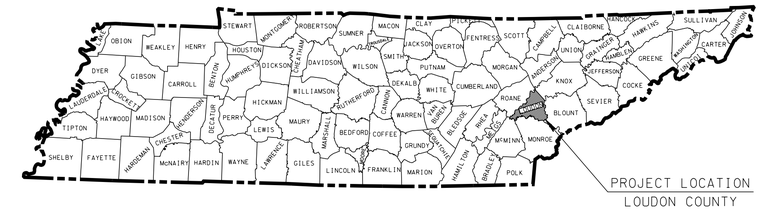
DWG. NO.	REV. DATE	TITLE
RD-A-1	12-18-99	STANDARD ABBREVIATIONS
RD-L-1	10-26-94	STANDARD LEGEND
RD01-S-11	04-04-03	DESIGN AND CONSTRUCTION DETAILS FOR ROADSIDE SLOPE DEVELOPMENT
RD01-S-11A	10-15-02	ROADSIDE DITCH DETAILS FOR DESIGN AND CONSTRUCTION
RD01-TS-2	10-15-02	DESIGN STANDARDS FOR COLLECTOR ROADS AND STREETS
D-PB-1	01-02-13	STANDARD DETAILS FOR CONCRETE PIPE INSTALLATION
D-PE-24A	01-06-15	24" CONCRETE ENDWALL CROSS DRAIN
D-PE-24B		24" CONCRETE ENDWALL CROSS DRAIN
D-CB-12LP	08-01-12	LOW PROFILE 32" X 32" SQUARE CONCRETE NO. 12LP CATCH BASIN
D-CB-14P	03-11-14	STANDARD PRECAST RECTANGULAR CONCRETE NO. 14 CATCH BASIN
D-CBB-12A	05-27-01	TYPE "B" CAST IRON FRAME, GRATE & NONMOUNTABLE INLET DETAILS FOR NOS. 10, 12, 14, 16 & 17 TYPE CATCH BASINS
D-MH-2	08-01-12	STANDARD MASONRY & PRECAST NO. 3 MANHOLE
D-MH-3	04-21-14	STANDARD PRECAST CIRCULAR LID DETAILS FOR NO. 3 MANHOLE
D-MH-4	08-01-12	STANDARD NO. 3 MANHOLE CASTINGS AND STEPS
RP-D-16	07-15-08	DETAILS OF LOWERED STANDARD CONCRETE DRIVEWAYS
RP-H-3	01-30-15	CURB RAMP AND TRUNCATED DOME SURFACE DETAIL
RP-H-9	01-30-15	PARALLEL CURB RAMP IN CURVE
RP-S-7	06-04-13	DETAILS FOR STANDARD CONCRETE SIDEWALKS
S-F-10	06-01-09	STANDARD RIGHT-OF-WAY STOCK FENCE
T-M-1	07-24-14	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS AND MARKING ABBREVIATIONS
T-M-2	07-24-14	DETAILS OF PAVEMENT MARKINGS FOR CONVENTIONAL ROADS
T-M-3	07-24-14	MARKING STANDARDS FOR TRAFFIC ISLANDS, MEDIANS & PAVED SHOULDERS ON CONVENTIONAL ROADS
T-M-4	07-24-14	STANDARD INTERSECTION PAVEMENT MARKINGS MARKINGS
EL-W-2	05-27-01	STANDARD GRAVITY-TYPE RETAINING WALLS

ESTABLISHED 1907
LENOIR CITY
TENNESSEE

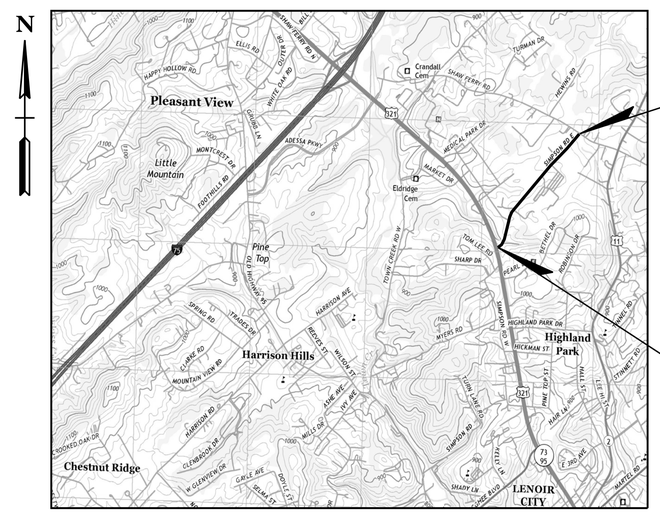
HONORABLE TONY R. AIKENS, MAYOR

SIMPSON ROAD IMPROVEMENTS PROJECT

EAST SIMPSON ROAD
FROM: S.R. 73 (U.S. 321)
TO: SHAW FERRY ROAD



NO EXCLUSIONS
NO EQUATIONS

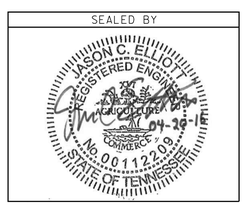


END PROJECT
STATE NO. 53LPLM-F1-039
STA. 48+71.83 (R.O.W.)
N 547351.5466
E 2485525.9809

BEGIN PROJECT
STATE NO. 53LPLM-F1-039
STA. 12+05.57 (R.O.W.)
N 544498.8722
E 2483326.4482

R.O.W. PLANS

SEALED BY



SPECIAL NOTES

PROPOSALS MAY BE REJECTED BY THE CITY OF LENOIR CITY IF ANY OF THE UNIT PRICES CONTAINED THEREIN ARE OBVIOUSLY UNBALANCED, EITHER EXCESSIVE OR BELOW THE REASONABLE COST ANALYSIS VALUE.

THIS PROJECT TO BE CONSTRUCTED UNDER THE TDOT STANDARD SPECIFICATIONS FOR ROAD AND BRIDGE CONSTRUCTION DATED JANUARY 1, 2015, AND ADDITIONAL SPECIFICATIONS AND SPECIAL PROVISIONS CONTAINED IN THE PLANS AND IN THE PROPOSAL CONTRACT.

DESIGNED BY VAUGHN & MELTON CONSULTING ENGINEERS
DESIGNER JASON ELLIOTT, P.E.
CHECKED BY BRENTLEY JOHNSON, P.E.
P.E. NO. 53LPLM-F1-039
PIN NO. 120439.00

TOTAL PROJECT LENGTH: 0.711 MILES

APRIL 2016

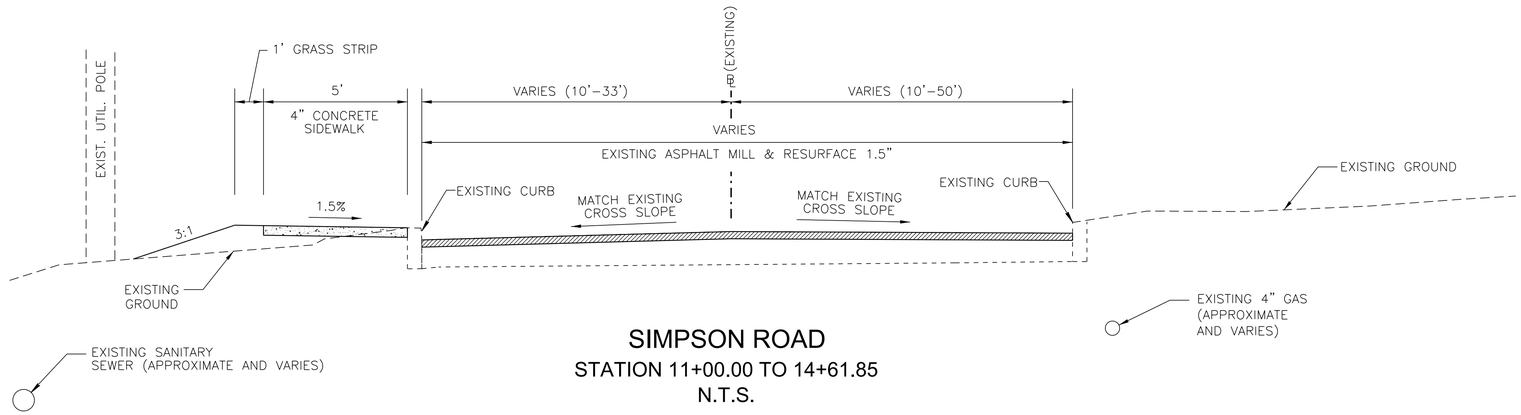
CITY OF LENOIR CITY
600 EAST BROADWAY
LENOIR CITY, TENNESSEE 37771

DATE OF ORIGINAL SURVEY DEC. 2014

DESIGN EXCEPTIONS:
1. HORIZ. ALIGNMENT, SUPERELEVATION, SHOULDER WIDTH, CROSS SLOPES; APPROVED 01-15-16.
2. VERTICAL ALIGNMENT; APPROVED 04-18-16.

TRAFFIC DATA	
AADT (2015)	3,972
DHV (2015)	477
D	51-49
V	30 MPH

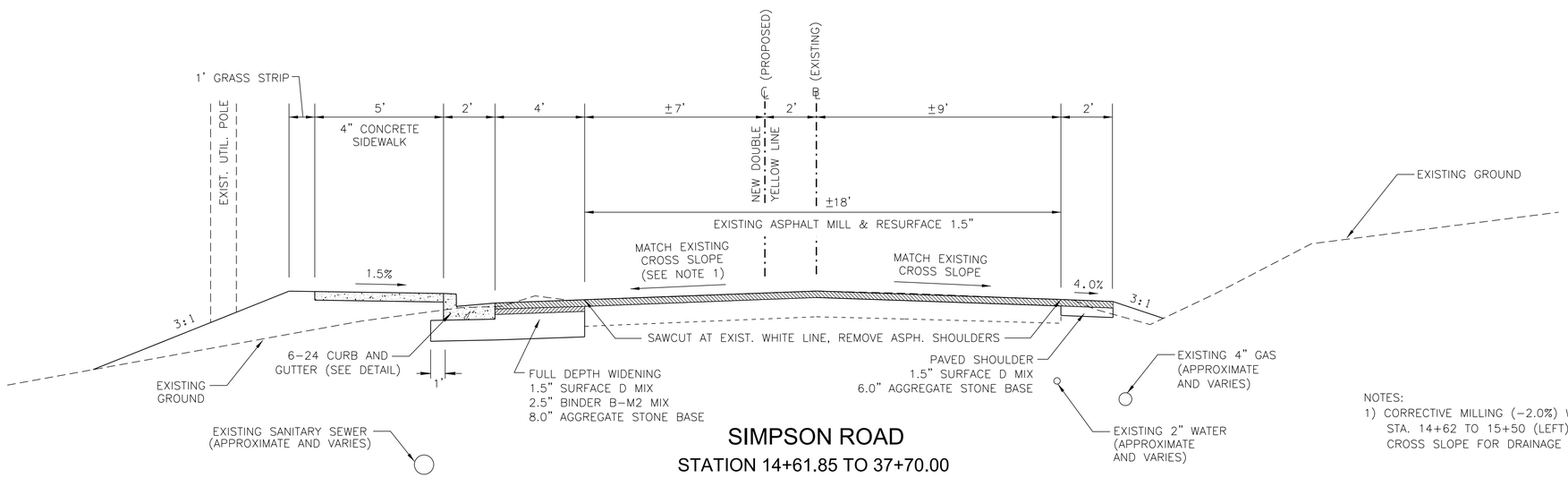
Vaughn & Melton
Consulting Engineers, Inc.
1909 AILOR AVENUE
KNOXVILLE, TENNESSEE 37921
PHONE: (865) 546-5800
KENTUCKY - TENNESSEE - NORTH CAROLINA - SOUTH CAROLINA - GEORGIA



SIMPSON ROAD

STATION 11+00.00 TO 14+61.85

N.T.S.



NOTES:

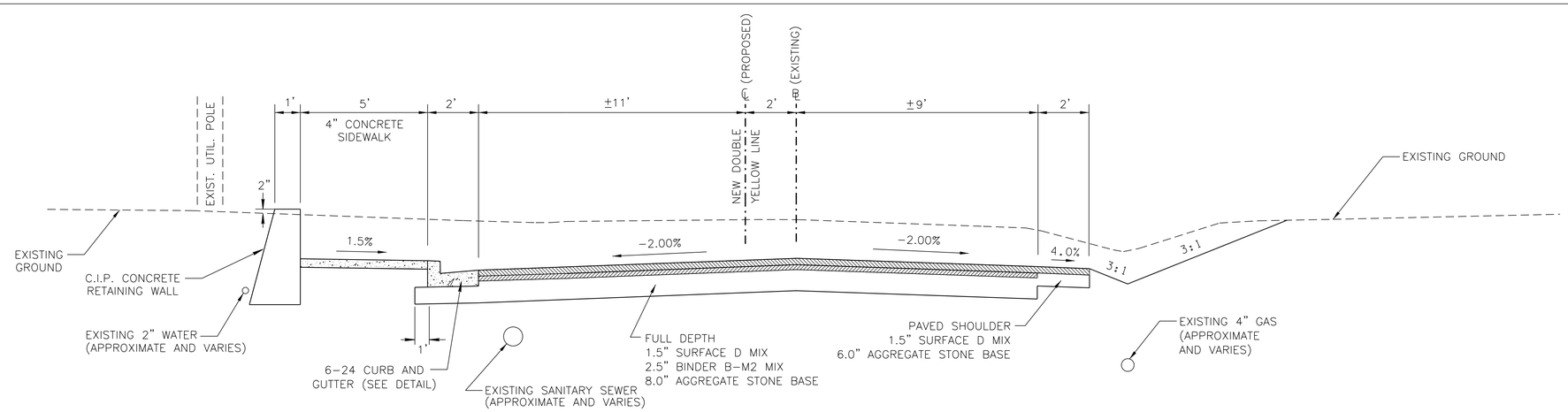
1) CORRECTIVE MILLING (-2.0%) WILL BE REQUIRED FROM STA. 14+62 TO 15+50 (LEFT) TO PROVIDE ADEQUATE CROSS SLOPE FOR DRAINAGE AT CATCH BASIN NO. 2.

SIMPSON ROAD

STATION 14+61.85 TO 37+70.00

STATION 40+40.00 TO 48+55.00

N.T.S.



SIMPSON ROAD

STATION 37+70.00 TO 40+40.00

N.T.S.

REVISIONS

NO.	DATE	DESCRIPTION

SIMPSON ROAD IMPROVEMENTS PROJECT

CITY OF LENOIR CITY

LENOIR CITY, TENNESSEE

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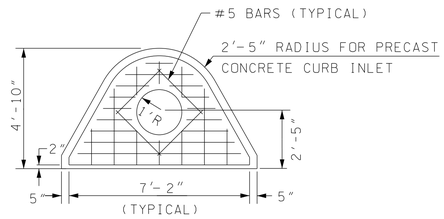
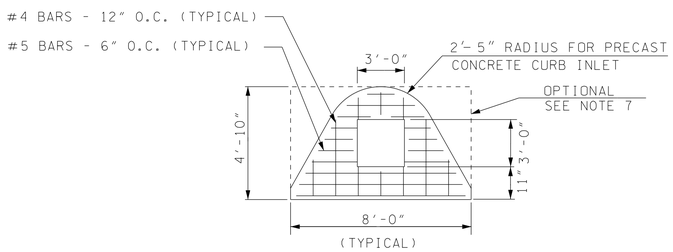
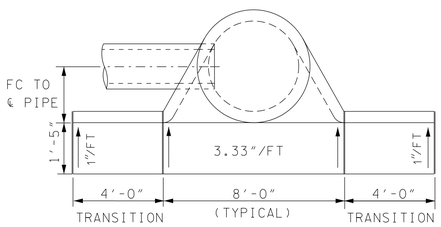
CHECKED:	J.C.E.
JOB NO:	51420-44
SCALE:	
DATE:	APRIL 2016
FILE NAME:	
DRAWING TITLE:	TYPICAL SECTIONS
SHEET OF	DRAWING NO: 2



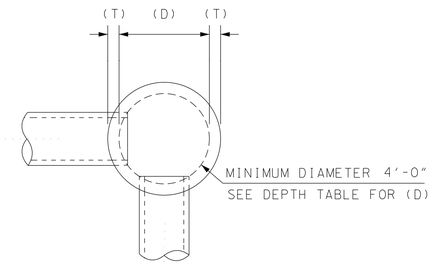
TOP SECTION



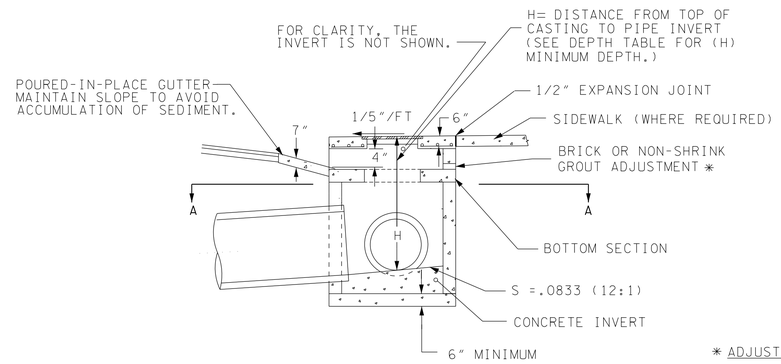
BOTTOM SECTION



PLAN VIEW



SECTION A-A



SIDE VIEW

DEPTH TABLE

	PIPE SIZE	(D)LOWER PORTION INLET DIAMETER **	(T) WALL THICKNESS CONCRETE	(H) MINIMUM DEPTH
	12"	4'	5"	3'-9"
	15"	4'	5"	4'-0"
	18"	4'	5"	4'-3"
	21"	4'	5"	4'-9"
	24"	4'	5"	5'-0"
	30"	4'	5"	5'-6"
**	36"	5'	6"	6'-9"
**	42"	6'	7"	7'-3"
**	48"	6'	8"	7'-9"
	SPAN RISE			
	23"x14"	4'	5"	4'-0"
	30"x19"	4'	6"	4'-3"
**	38"x24"	5'	6"	5'-9"
**	45"x29"	6'	7"	6'-3"

SPAN-RISE DENOTES ELLIPTICAL AND ARCHED PIPES.

** DIAMETER OF LOWER PORTION SHALL MEET MINIMUM DIAMETER (D) AS LISTED ABOVE. DIAMETER IS BASED ON PROPOSED PIPE SIZE. A PRECAST TRANSITION SLAB WILL BE UTILIZED TO ACCOMMODATE THE USE OF THE TOP PORTION AS SHOWN AND DIMENSIONED ON THIS DETAIL.

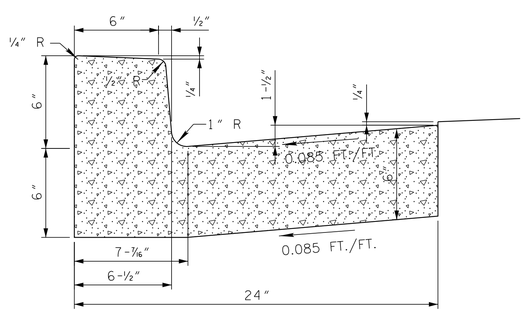
NOTES:

1. THE LOWER PORTION (ROUND, PRE-CAST MANHOLE) SHALL BE CONSTRUCTED TO MEET ASTM C-478.
2. THE TOP SURFACE OF THE TOP SECTION SHALL HAVE A BROOM FINISH TO MATCH THE EXISTING OR PROPOSED SIDEWALK.
3. CONCRETE INVERTS SHALL BE CONSTRUCTED IN THE FIELD AS TO PROVIDE POSITIVE FLOW.
4. EACH SECTION OF THE PRECAST STRUCTURE SHALL HAVE NOT MORE THAN THREE HOLES FOR THE PURPOSE OF HANDLING AND LAYING.
5. LIFTING DEVICE HOLES SHALL BE TAPERED AND PLUGGED WITH STOPPERS OR MORTAR AFTER INSTALLATION.
6. THE SUMP INLET BOTTOM SECTION MAY BE RECTANGULAR.

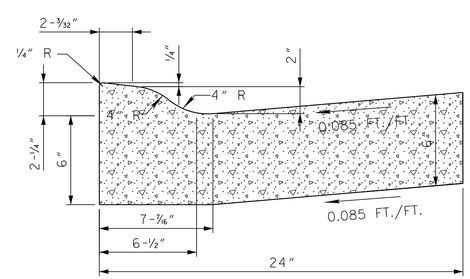
* ADJUSTMENTS

FOR BRICK ADJUSTMENT CONSTRUCTION, JOINTS SHALL ALWAYS BE COMPLETELY FILLED WITH MORTAR. VERTICAL MORTAR JOINTS SHALL NOT BE MORE THAN 3/8" THICK AND HORIZONTAL MORTAR JOINTS NOT LESS THAN 3/8" THICK AT THE INSIDE FACE. INSIDE JOINTS SHALL BE TROWEL STRUCK, FLUSH JOINTS TO PROVIDE A SMOOTH, CLEAN SURFACE, WHILE OUTSIDE WALLS SHALL BE ENTIRELY COVERED WITH MORTAR FOR A SMOOTH, CLEAN SURFACE.

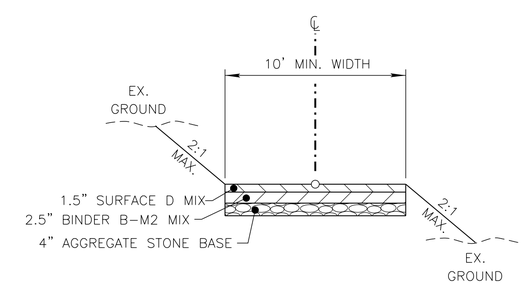
THROATED CURB INLET
(PRECAST CONCRETE)
N.T.S.



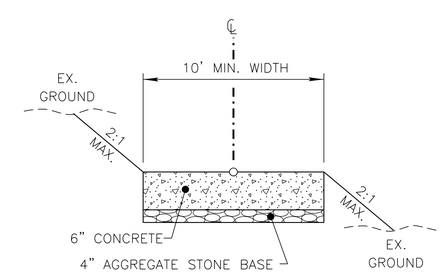
6-24 CONCRETE COMBINED
CURB AND GUTTER
N.T.S.



LOWERED CONCRETE COMBINED
CURB AND GUTTER
N.T.S.



ASPHALT DRIVEWAY
TYPICAL SECTION
N.T.S.



CONCRETE DRIVEWAY
TYPICAL SECTION
N.T.S.

REVISIONS

NO.	DATE	DESCRIPTION

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CITY OF LENOIR CITY
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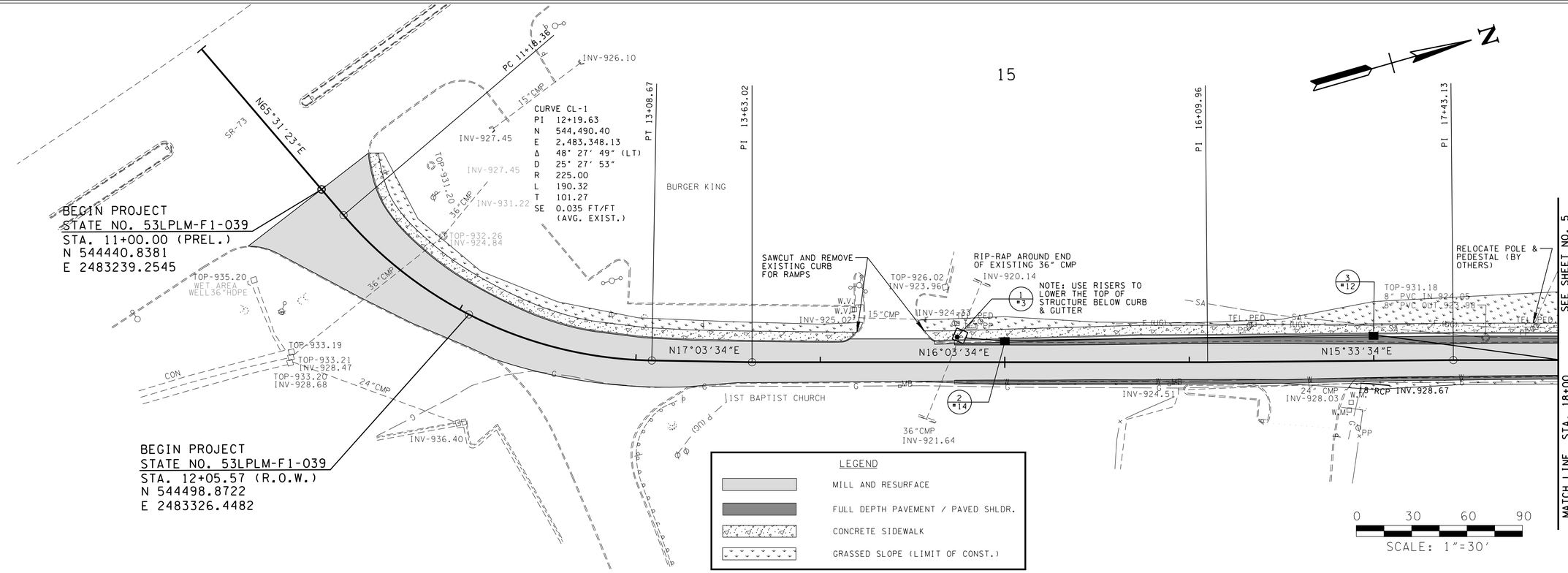
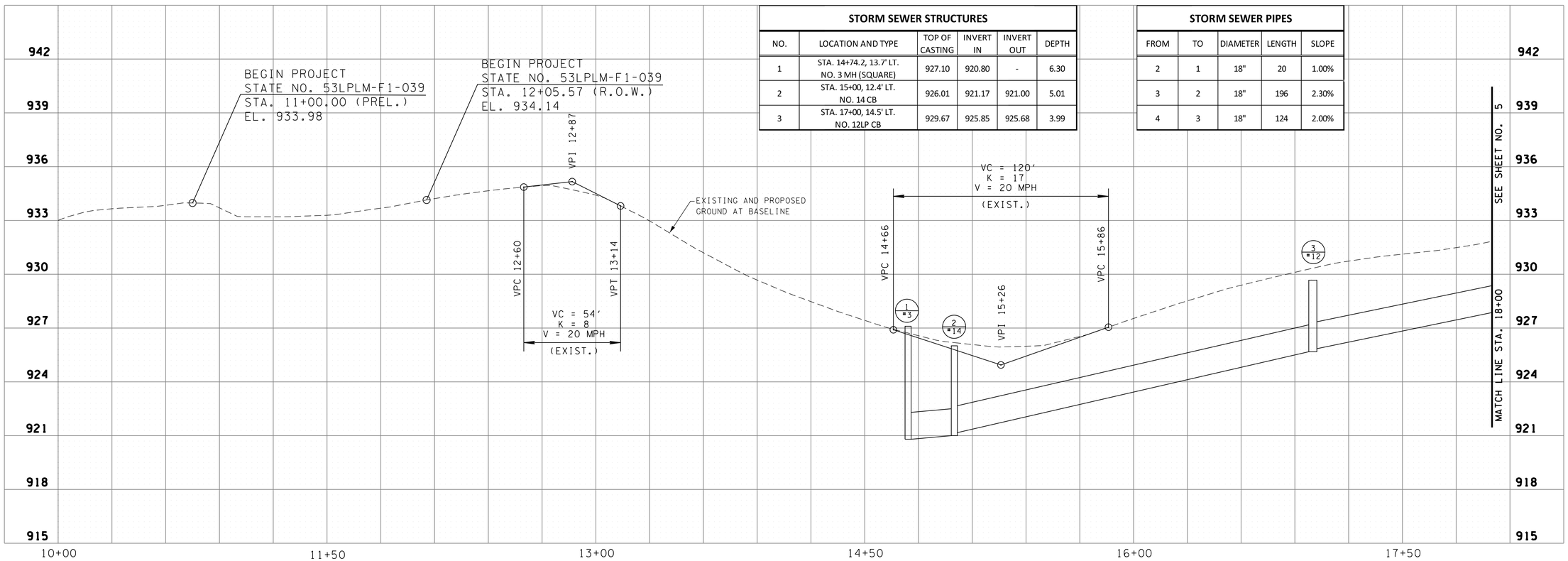
JOB NO: 51420-44
SCALE:
DATE: APRIL 2016
FILE NAME:
DRAWING TITLE:
SPECIAL DETAILS
SHEET OF
DRAWING NO: 2A



STORM SEWER STRUCTURES					
NO.	LOCATION AND TYPE	TOP OF CASTING	INVERT IN	INVERT OUT	DEPTH
1	STA. 14+74.2, 13.7' LT. NO. 3 MH (SQUARE)	927.10	920.80	-	6.30
2	STA. 15+00, 12.4' LT. NO. 14 CB	926.01	921.17	921.00	5.01
3	STA. 17+00, 14.5' LT. NO. 12LP CB	929.67	925.85	925.68	3.99

STORM SEWER PIPES				
FROM	TO	DIAMETER	LENGTH	SLOPE
2	1	18"	20	1.00%
3	2	18"	196	2.30%
4	3	18"	124	2.00%



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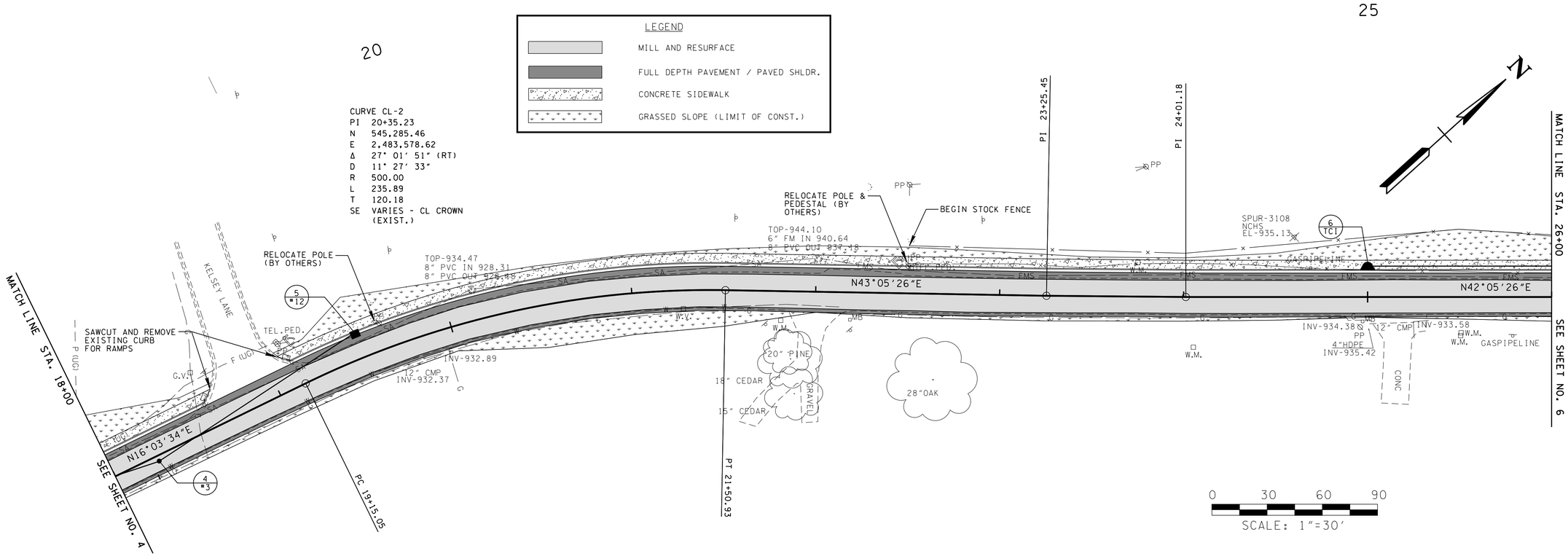
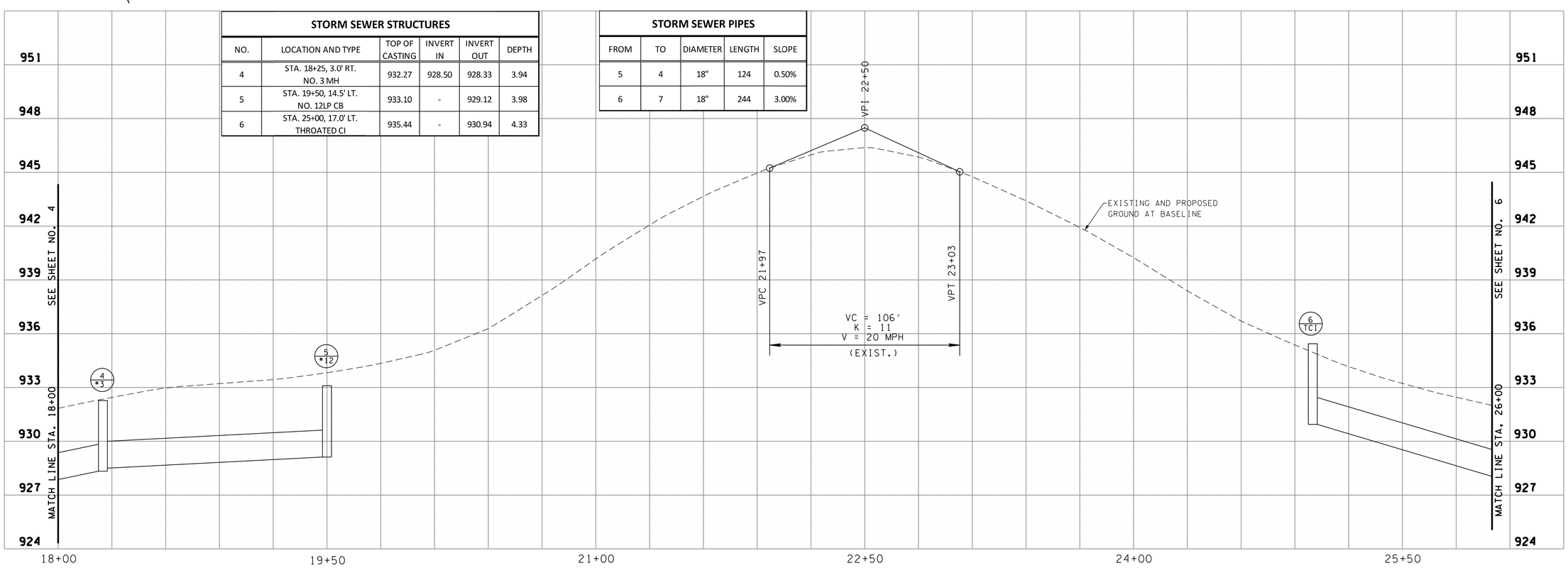


STORM SEWER STRUCTURES

NO.	LOCATION AND TYPE	TOP OF CASTING	INVERT IN	INVERT OUT	DEPTH
4	STA. 18+25, 3.0' RT. NO. 3 MH	932.27	928.50	928.33	3.94
5	STA. 19+50, 14.5' LT. NO. 12LP CB	933.10	-	929.12	3.98
6	STA. 25+00, 17.0' LT. THROATED CI	935.44	-	930.94	4.33

STORM SEWER PIPES

FROM	TO	DIAMETER	LENGTH	SLOPE
5	4	18"	124	0.50%
6	7	18"	244	3.00%



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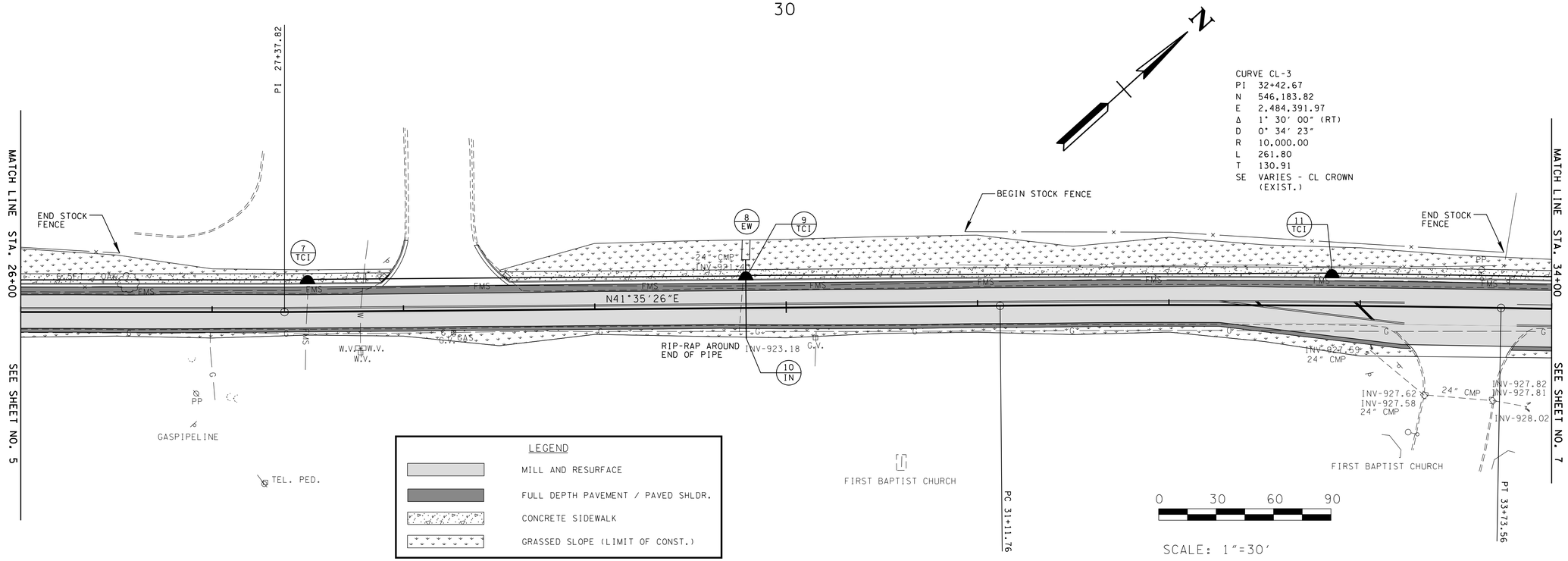


CURVE CL-3
PI 32+42.67
N 546,183.82
E 2,484,391.97
Δ 1° 30' 00" (RT)
D 0° 34' 23"
R 10,000.00
L 261.80
T 130.91
SE VARIES - CL CROWN (EXIST.)

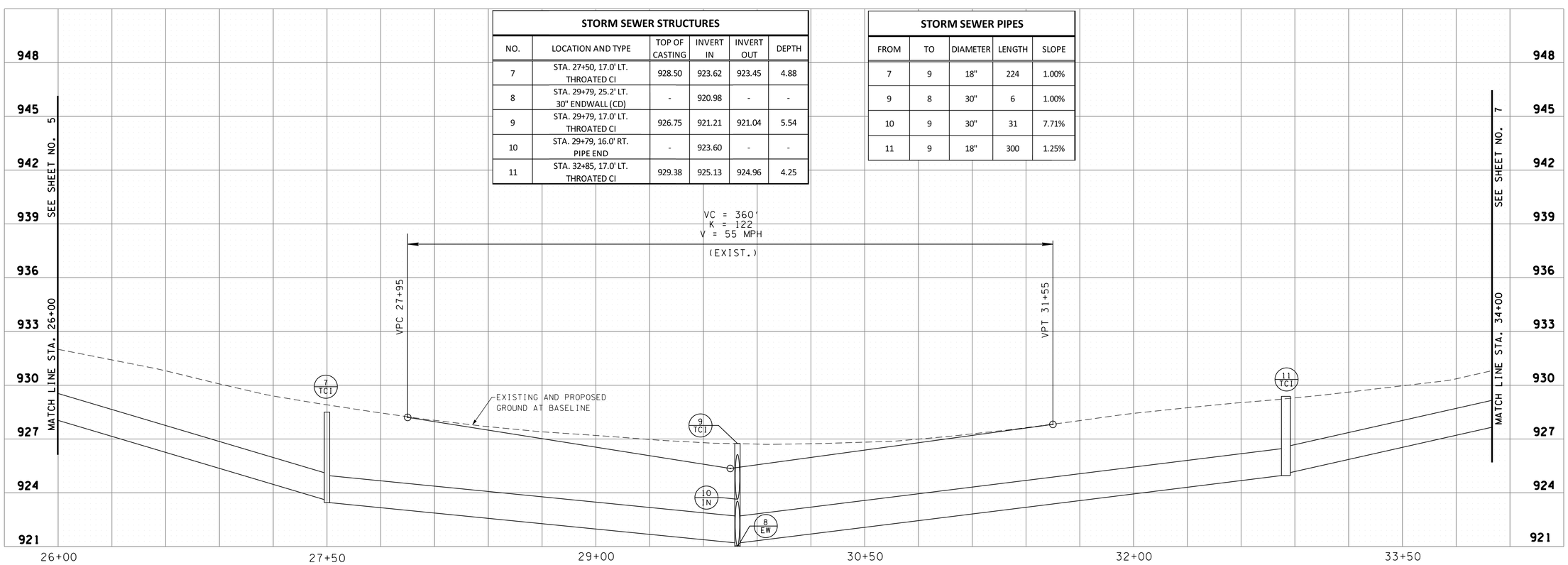
LEGEND
- MILL AND RESURFACE
- FULL DEPTH PAVEMENT / PAVED SHLDR.
- CONCRETE SIDEWALK
- GRASSED SLOPE (LIMIT OF CONST.)

STORM SEWER STRUCTURES

NO.	LOCATION AND TYPE	TOP OF CASTING	INVERT IN	INVERT OUT	DEPTH
7	STA. 27+50, 17.0' LT. THROATED CI	928.50	923.62	923.45	4.88
8	STA. 29+79, 25.2' LT. 30" ENDWALL (CD)	-	920.98	-	-
9	STA. 29+79, 17.0' LT. THROATED CI	926.75	921.21	921.04	5.54
10	STA. 29+79, 16.0' RT. PIPE END	-	923.60	-	-
11	STA. 32+85, 17.0' LT. THROATED CI	929.38	925.13	924.96	4.25

STORM SEWER PIPES

FROM	TO	DIAMETER	LENGTH	SLOPE
7	9	18"	224	1.00%
9	8	30"	6	1.00%
10	9	30"	31	7.71%
11	9	18"	300	1.25%



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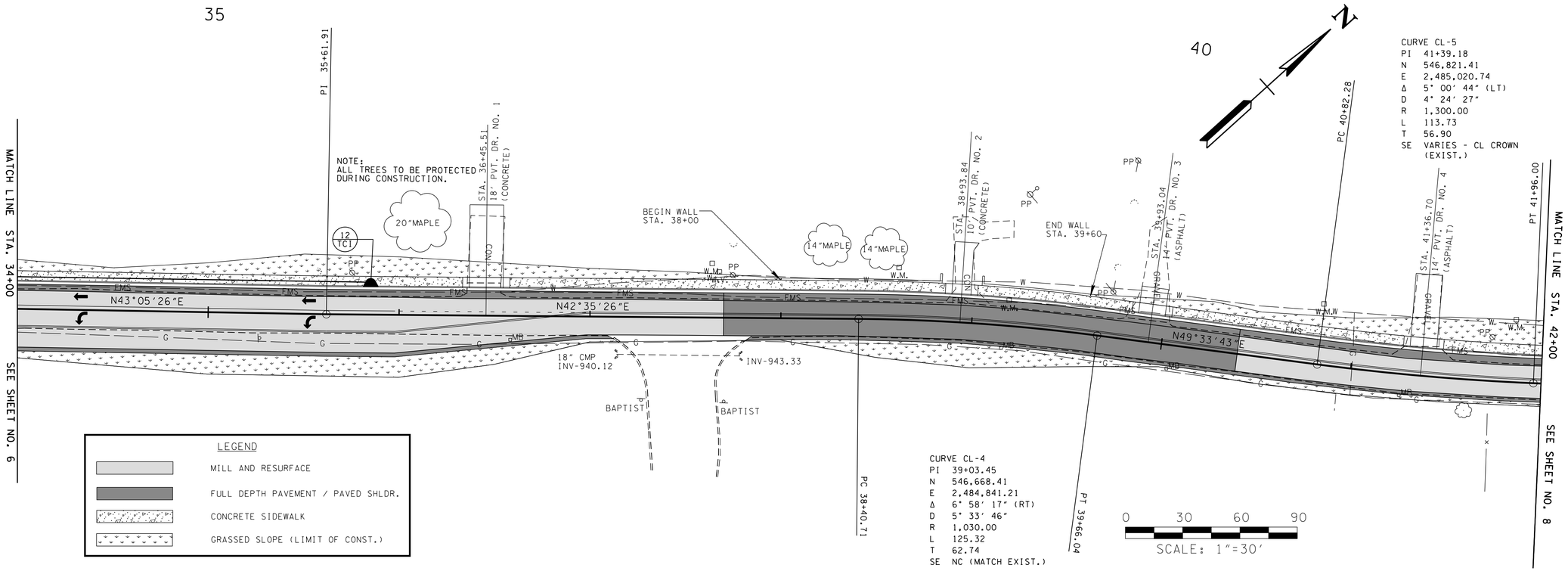
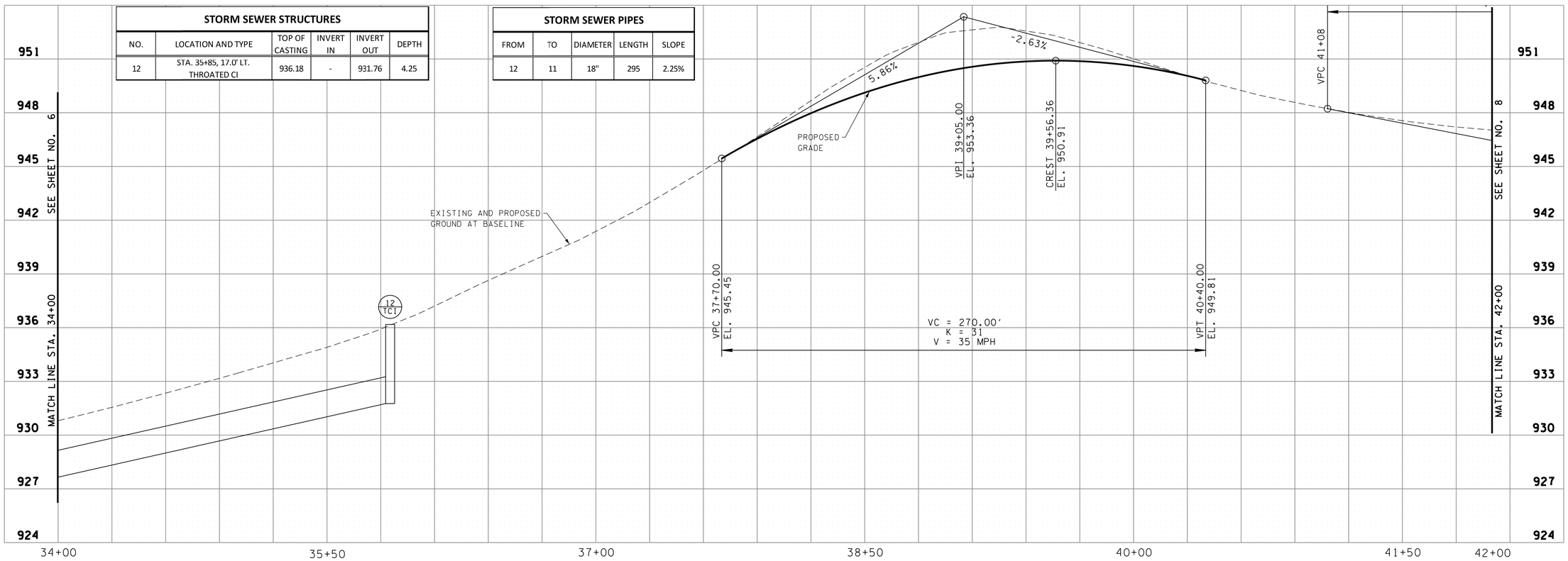


STORM SEWER STRUCTURES					
NO.	LOCATION AND TYPE	TOP OF CASTING	INVERT IN	INVERT OUT	DEPTH
12	STA. 35+85, 17.0' LT. THROATED CI	936.18	-	931.76	4.25

STORM SEWER PIPES				
FROM	TO	DIAMETER	LENGTH	SLOPE
12	11	18"	295	2.25%



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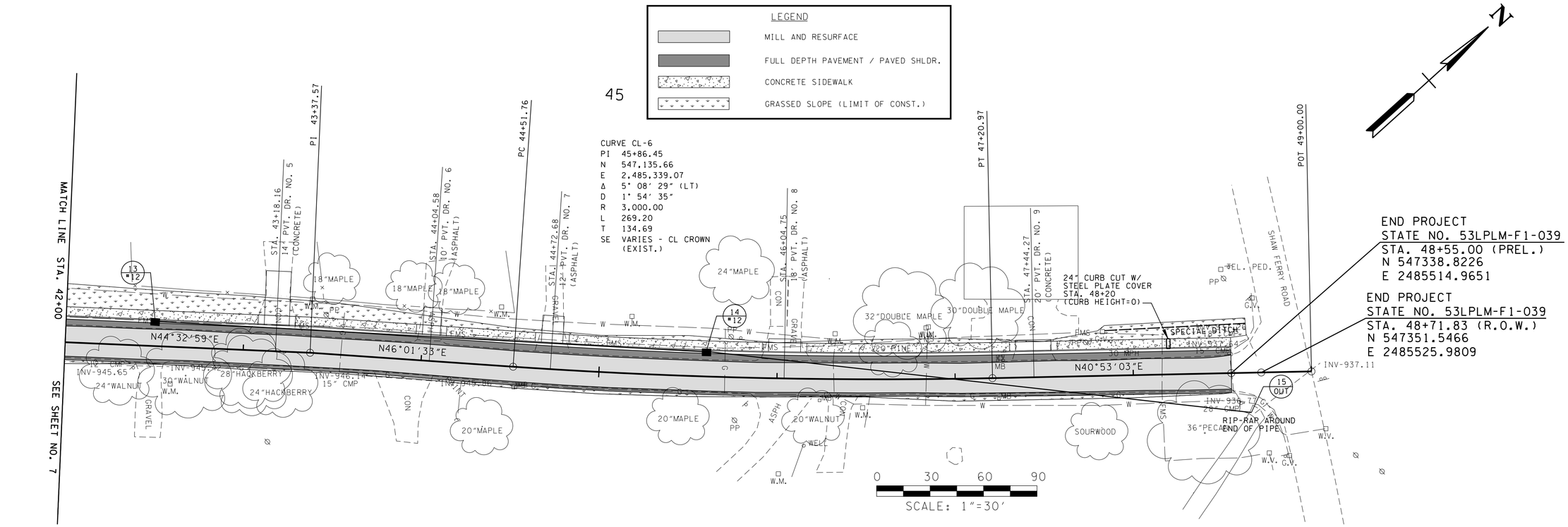
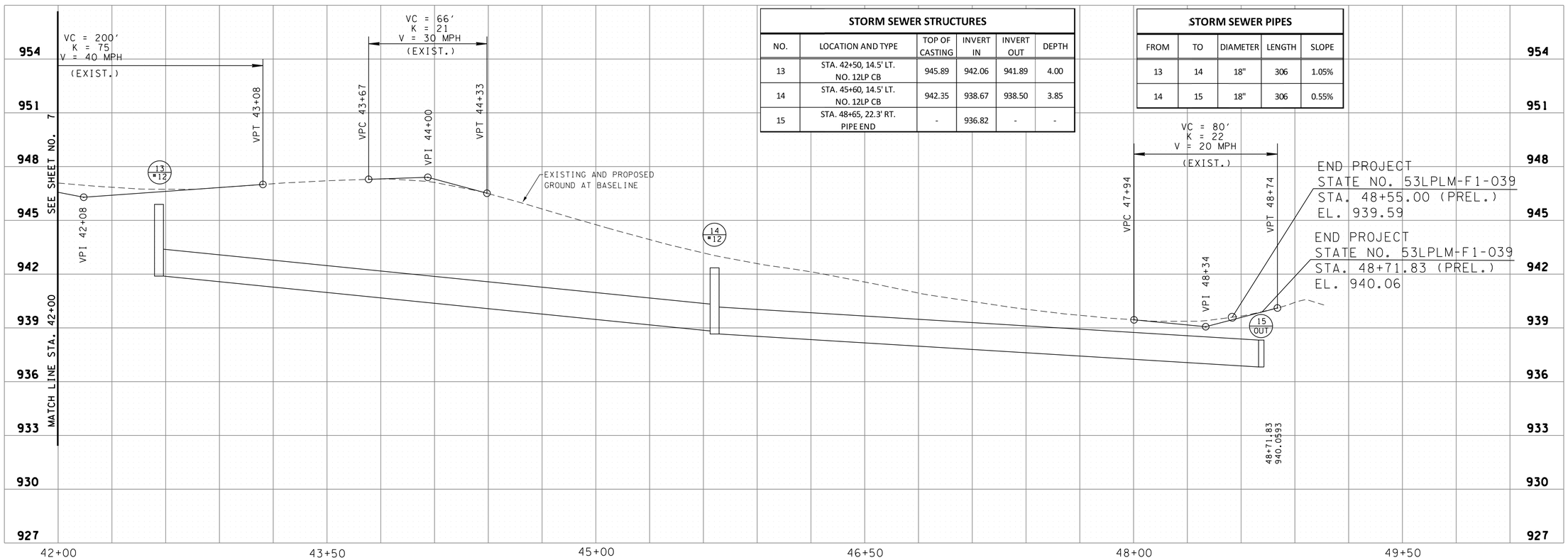
SHEET OF
DRAWING NO: 7





STORM SEWER STRUCTURES

NO.	LOCATION AND TYPE	TOP OF CASTING	INVERT IN	INVERT OUT	DEPTH
13	STA. 42+50, 14.5' LT. NO. 12LP CB	945.89	942.06	941.89	4.00
14	STA. 45+60, 14.5' LT. NO. 12LP CB	942.35	938.67	938.50	3.85
15	STA. 48+65, 22.3' RT. PIPE END	-	936.82	-	-

STORM SEWER PIPES

FROM	TO	DIAMETER	LENGTH	SLOPE
13	14	18"	306	1.05%
14	15	18"	306	0.55%

REVISIONS

NO.	DATE	DESCRIPTION

SIMPSON ROAD IMPROVEMENTS PROJECT
CITY OF LENOIR CITY
LENOIR CITY, TENNESSEE

Vaughn & Melton
Consulting Engineers, Inc.
KENTUCKY 606-248-6600
TENNESSEE 865-546-5800
NORTH CAROLINA 828-253-2796
SOUTH CAROLINA 864-574-4775
GEORGIA 770-627-3590
www.vaughnmelton.com

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DRAWN: D.E.H.
CHECKED: J.C.E.
JOB NO: 51420-44
SCALE:
DATE: APRIL 2016
FILE NAME:
DRAWING TITLE:
PLAN & PROFILE

SHEET OF
DRAWING NO: 8