

STATE OF OHIO
DEPARTMENT OF TRANSPORTATION

MAD-70-10.27

JEFFERSON TOWNSHIP MADISON COUNTY

PROJECT DESCRIPTION

THE PROJECT CONSISTS OF IMPROVEMENTS FOR THE NORTH INTERSECTION OF THE INTERCHANGE AT INTERSTATE 70 AND STATE ROUTE 29 BY REPLACING THE EXISTING INTERSECTION WITH A MODERN ROUNDABOUT. IMPROVEMENTS WILL ALSO INCLUDE THE WIDENING OF STATE ROUTE 29, REALIGNMENT OF SNYDER ROAD AND WIDENING OF EASTBOUND EXIT RAMP.

PROJECT EARTH DISTURBED AREA: 33.9 ACRES
ESTIMATED CONTRACTOR EARTH DISTURBED AREA: 6.4 ACRES
NOTICE OF INTENT EARTH DISTURBED AREA: 40.3 ACRES

LIMITED ACCESS

THIS IMPROVEMENT IS ESPECIALLY DESIGNED FOR THROUGH TRAFFIC AND HAS BEEN DECLARED A LIMITED ACCESS HIGHWAY OR FREEWAY BY ACTION OF THE DIRECTOR IN ACCORDANCE WITH THE PROVISIONS OF SECTION 5511.02 OF THE OHIO REVISED CODE.

2010 SPECIFICATIONS

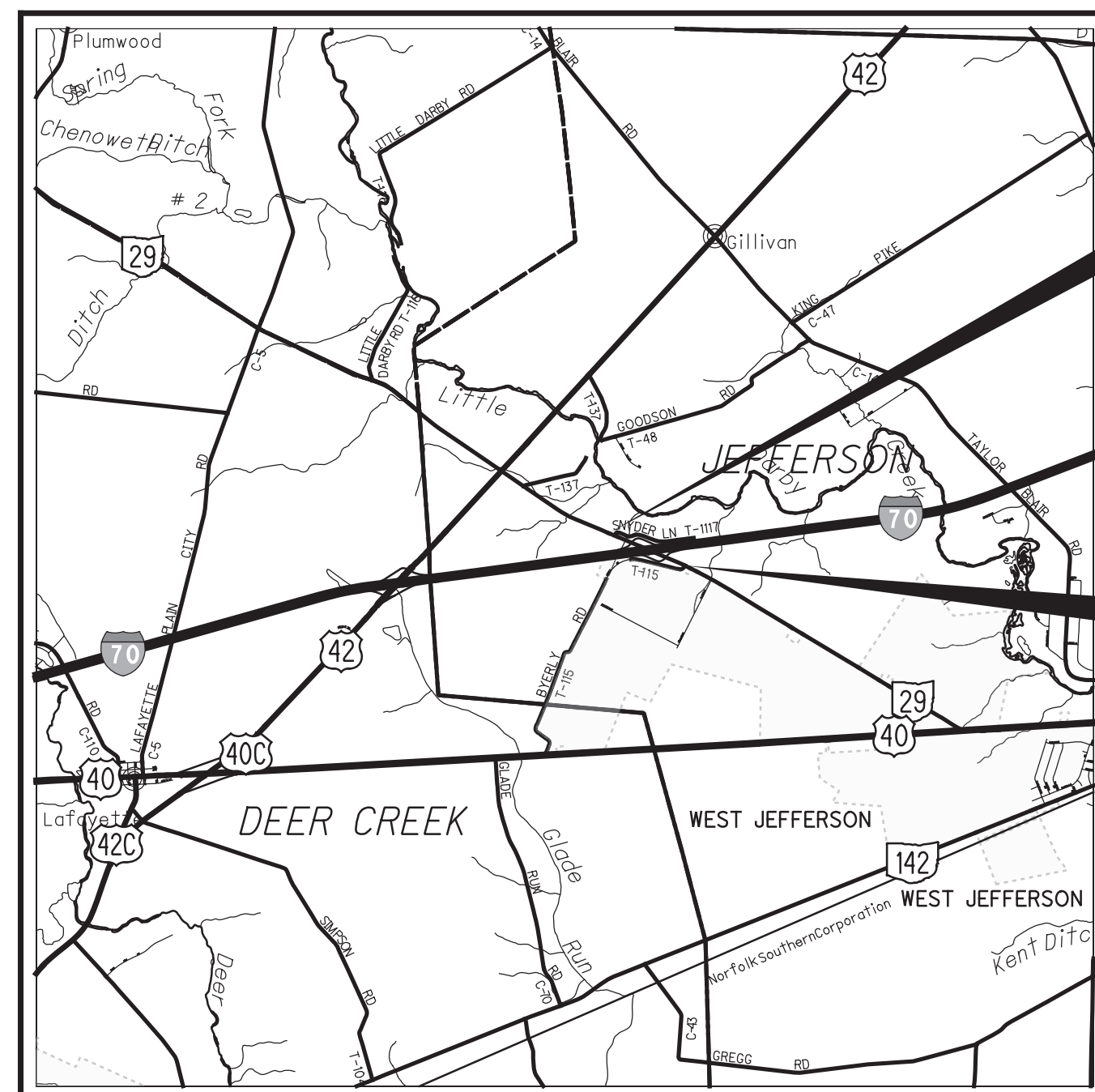
THE STANDARD SPECIFICATIONS OF THE STATE OF OHIO, DEPARTMENT OF TRANSPORTATION, INCLUDING CHANGES AND SUPPLEMENTAL SPECIFICATIONS LISTED IN THE PROPOSAL SHALL GOVERN THIS IMPROVEMENT.

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 17, AND THAT PROVISIONS FOR THE MAINTENANCE AND SAFETY OF TRAFFIC WILL BE AS SET FORTH ON THE PLANS AND ESTIMATES.

UNDER AUTHORITY OF SECTION 4511.21, DIVISION (H) OF THE OHIO REVISED CODE, THE REVISED PRIMA FACIE SPEED LIMITS AS INDICATED HEREIN ARE DETERMINED TO BE REASONABLE AND SAFE, AND ARE HEREBY ESTABLISHED FOR THE DURATION OF THIS PROJECT. THE PRIMA FACIE SPEED LIMIT OF LIMITS HEREBY ESTABLISHED SHALL BECOME EFFECTIVE WHEN APPROPRIATE SIGNS GIVING NOTICE THEREOF ARE ERECTED.

APPROVED _____
DATE _____ DISTRICT DEPUTY DIRECTOR

APPROVED _____
DATE _____ DIRECTOR, DEPARTMENT OF TRANSPORTATION



LOCATION MAP

LATITUDE: 39°57'47" LONGITUDE: 83°20'40"



PORTION TO BE IMPROVED	—————
INTERSTATE HIGHWAY	—————
FEDERAL ROUTES	—————
STATE ROUTES	—————
COUNTY & TOWNSHIP ROADS	—————
OTHER ROADS	—————

DESIGN DESIGNATION

CURRENT ADT (2013)	7942
DESIGN YEAR ADT (2033)	11182
DESIGN HOURLY VOLUME (2033)	1076
DIRECTIONAL DISTRIBUTION	56%
TRUCKS (24 HOUR B&C)	20%
DESIGN SPEED	60
LEGAL SPEED	55
DESIGN FUNCTIONAL CLASSIFICATION:	
RURAL MAJOR COLLECTOR	
NHS PROJECT	NO

DESIGN EXCEPTIONS

NONE

UNDERGROUND UTILITIES

CONTACT BOTH SERVICES
CALL TWO WORKING DAYS
BEFORE YOU DIG

CALL
1-800-362-2764
(TOLL FREE)

OHIO UTILITIES PROTECTION SERVICE
NON-MEMBERS
MUST BE CALLED DIRECTLY

OIL & GAS PRODUCERS UNDERGROUND
PROTECTION SERVICE CALL: **1-800-925-0988**

PLAN PREPARED BY:
Gannett Fleming
4151 EXECUTIVE PARKWAY, SUITE 350
WESTERVILLE, OHIO 43081

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REVISION HISTORY:

REV.	DATE	SHEET(S)	DESCRIPTION
1	6-10-13	7	CHANGE PAVT BUILDUP TO CONC

AS BUILT PLANS:

SIGNED: *Philip R. Schroeder*
DATE: 2-10-2014

ENGINEERS SEAL:

SIGNED: *Jerry F. Mills*
DATE: 6-11-2013

AS BUILT 2-10-2014

STANDARD CONSTRUCTION DRAWINGS										SUPPLEMENTAL SPECIFICATIONS	SPECIAL PROVISIONS	
BP-2.1	7/18/08	DM-1.1	1/18/13	MGS-5.3	1/18/13	MT-102.10	1/18/13	TC-52.10	1/18/13	800	7/20/12	WATERWAY PERMIT
BP-2.2	7/18/08	DM-1.2	1/18/13			MT-105.10	7/20/12	TC-52.20	1/18/13			CONDITIONS 5/24/13
BP-2.3	7/16/04	DM-1.4	1/18/13	RM-4.2	10/15/10			TC-61.10	4/20/12			
BP-3.1	4/20/12	DM-2.1	1/18/13	RM-7.1	7/15/05	TC-7.65	1/21/11	TC-65.10	4/20/12	878	7/15/11	
BP-4.1	7/16/04	DM-4.2	7/20/12			TC-15.115	1/21/11	TC-65.11	4/20/12			
BP-5.1	7/28/00	DM-4.3	1/18/13	LA-1.1	10/15/10	TC-21.10	1/19/07	TC-71.10	10/19/12			
BP-9.1	4/15/05	DM-4.4	7/20/12	LA-1.2	1/16/09	TC-22.20	1/18/13	TC-72.20	7/20/12			
						TC-41.10	10/19/07	TC-73.10	4/20/12			
CB-1.1	1/18/13	F-2.1	7/28/00	MT-95.41	1/18/13	TC-41.20	1/19/07					
CB-2.1	1/18/13	F-3.3	7/28/00	MT-97.10	7/20/12	TC-41.30	1/19/07					
CB-2.2	1/18/13	F-3.4	7/28/00	MT-98.28	7/20/12	TC-41.40	7/16/04					
				MT-98.29	7/20/12	TC-41.50	1/18/13					
HW-2.1	1/18/13	MGS-1.1	1/18/13	MT-99.20	7/20/12	TC-42.10	1/19/07					
HW-2.2	1/18/13	MGS-2.1	1/18/13	MT-101.60	7/20/12	TC-42.20	1/21/11					
		MGS-3.1	1/18/13	MT-101.70	4/15/11	TC-51.11	1/21/11					
MH-1.2	1/18/13	MGS-4.2	1/18/13	MT-101.90	10/19/12	TC-51.12	10/21/11					

FEDERAL PROJECT NO. 83245
CONSTRUCTION PROJECT NO. NONE
RAILROAD INVOLVEMENT NONE
MAD-70-10.27
1/97

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50
100
200
HORIZONTAL
SCALE IN FEET

SCHEMATIC PLAN

MAD-70-10.27

2
97

CURVE B1
P.I. STA 41+14.30
 $\Delta = 27^\circ 47' 50''$ (LT)
 $Dc = 57^\circ 17' 45''$
 $R = 100.00'$
 $T = 24.74'$
 $L = 48.52'$
 $E = 3.02'$
 $emax = 0.02$
 $C = 48.04'$
AHD = N $50^\circ 41' 27''$ E

CURVE B2
P.I. STA 42+93.99
 $\Delta = 62^\circ 57' 20''$ (RT)
 $Dc = 22^\circ 30' 00''$
 $R = 254.65'$
 $T = 155.91'$
 $L = 279.80'$
 $E = 43.94'$
 $emax = 0.04$
 $C = 265.94'$
BK = N $50^\circ 41' 27''$ E

ROUNDABOUT CURVE DATA
 $Dc = 56^\circ 10' 20''$
 $R = 102.00'$
 $L = 640.88'$

BEGIN WORK
STA 534+00.00

BEGIN PROJECT
STA 534+20.00

END WORK
STA 52+00.00

END WORK
STA 15+30.00

END WORK
46+60.00

END PROJECT
STA 559+47.82

PC STA 40+89.56
STA 555+89.56 SR-29
81.79' LT

PRC STA 41+38.08

PT STA 44+17.88

N $22^\circ 48' 27''$ E

STA 51+49.80, \oslash SNYDER LANE CONNECTOR =
STA 10+00.00, \oslash SNYDER LANE

S $67^\circ 11' 33''$ E

\oslash CONST SNYDER LANE

S $67^\circ 10' 25''$ E

STA 13+81.09
STA 545+94.41 SR-29, 30' RT

PC STA 14+84.72

S $75^\circ 47' 29''$ E

PT STA 20+14.95

PC STA 21+25.27
PCC STA 22+67.44

PT STA 24+51.35

S $72^\circ 20' 41''$ W

END WORK
STA 25+75.00

DI

S $66^\circ 21' 13''$ E

IR 70 (WB)

IR 70 (EB)

IR 70

IR 70

IR 70

IR 70

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CURVE A1
P.I. STA 16+83.23
 $\Delta = 5^\circ 59' 15''$ (RT)
 $Dc = 1^\circ 30' 34''$
 $R = 3,795.72'$
 $T = 198.51'$
 $L = 396.66'$
 $E = 5.19'$
 $emax = 0.035$
 $C = 396.48'$
AHD = S $61^\circ 11' 10''$ E

CURVE A2
P.I. STA 19+48.53
 $\Delta = 14^\circ 36' 19''$ (LT)
 $Dc = 10^\circ 56' 04''$
 $R = 524.00'$
 $T = 67.15'$
 $L = 133.57'$
 $E = 4.29'$
 $emax = NC$
 $C = 133.21'$
BK = S $61^\circ 11' 10''$ E

CURVE A3
P.I. STA 22+00.59
 $\Delta = 46^\circ 48' 55''$ (RT)
 $Dc = 32^\circ 55' 43''$
 $R = 174.00'$
 $T = 75.32'$
 $L = 142.17'$
 $E = 15.60'$
 $emax = 0.02$
 $C = 138.25'$
AHD = S $28^\circ 58' 34''$ E

CURVE A4
P.I. STA 23+94.32
 $\Delta = 101^\circ 19' 15''$ (RT)
 $Dc = 55^\circ 05' 32''$
 $R = 104.00'$
 $T = 126.88'$
 $L = 183.91'$
 $E = 60.06'$
 $emax = 0.02$
 $C = 160.87'$
BK = S $28^\circ 58' 34''$ E

FOR ROUNDABOUT GEOMETRY SEE SHEET 80 TO 84

CURVE 1 (SR-29)
P.I. STA 574+20.38
 $\Delta = 3^\circ 59' 49''$ (RT)
 $Dc = 1^\circ 30' 00''$
 $R = 3,819.72'$
 $T = 133.29'$
 $L = 266.46'$
 $E = 2.32'$
 $C = 266.41'$

CURVE 2 (SR-29)
P.I. STA 584+78.09
 $\Delta = 4^\circ 09' 33''$ (RT)
 $Dc = 0^\circ 30' 00''$
 $R = 11,459.16'$
 $T = 416.09'$
 $L = 831.81'$
 $E = 7.55'$
 $C = 831.63'$

MATCH LINE STA 561+50, SEE ABOVE

POT STA 48+00.00

48

S $66^\circ 21' 13''$ E

RAMP B

IR 70 (WB)

IR 70 (EB)

IR 70

IR 70

IR 70

IR 70

IR 70

IR 70

IR 70

IR 70

IR 70

IR 70

IR 70

IR 70

IR 70

IR 70

IR 70

IR 70

STA 562+48.00 \oslash SR-29 =
STA 542+56.83 \oslash IR-70

B CONST RAMP D

PT STA 541+59.04

PC STA 545+24.23

BEGIN WORK
STA 543+40.00

BYERLY ROAD

PT STA 548+30.42

END WORK
STA 569+80.00

END WORK
STA 548+79.00

PC STA 572+87.09

PT STA 575+53.55

CURVE D1
P.I. STA 536+02.02
 $\Delta = 8^\circ 17' 46''$ (RT)
 $Dc = 1^\circ 30' 00''$
 $R = 3,819.72'$
 $T = 277.02'$
 $L = 553.07'$
 $E = 10.03'$
 $C = 552.59'$

CURVE D2
P.I. STA 540+20.39
 $\Delta = 22^\circ 28' 40''$ (RT)
 $Dc = 8^\circ 00' 00''$
 $R = 716.20'$
 $T = 142.32'$
 $L = 280.97'$
 $E = 14.00'$
 $C = 279.17'$

CURVE D3
P.I. STA 547+00.04
 $\Delta = 70^\circ 25' 26''$ (LT)
 $Dc = 23^\circ 00' 00''$
 $R = 249.11'$
 $T = 175.81'$
 $L = 306.19'$
 $E = 55.79'$
 $C = 287.28'$

STA 568+83.74, \oslash SR-29
STA 549+16.16, \oslash RAMP D

\oslash CONST SR-29

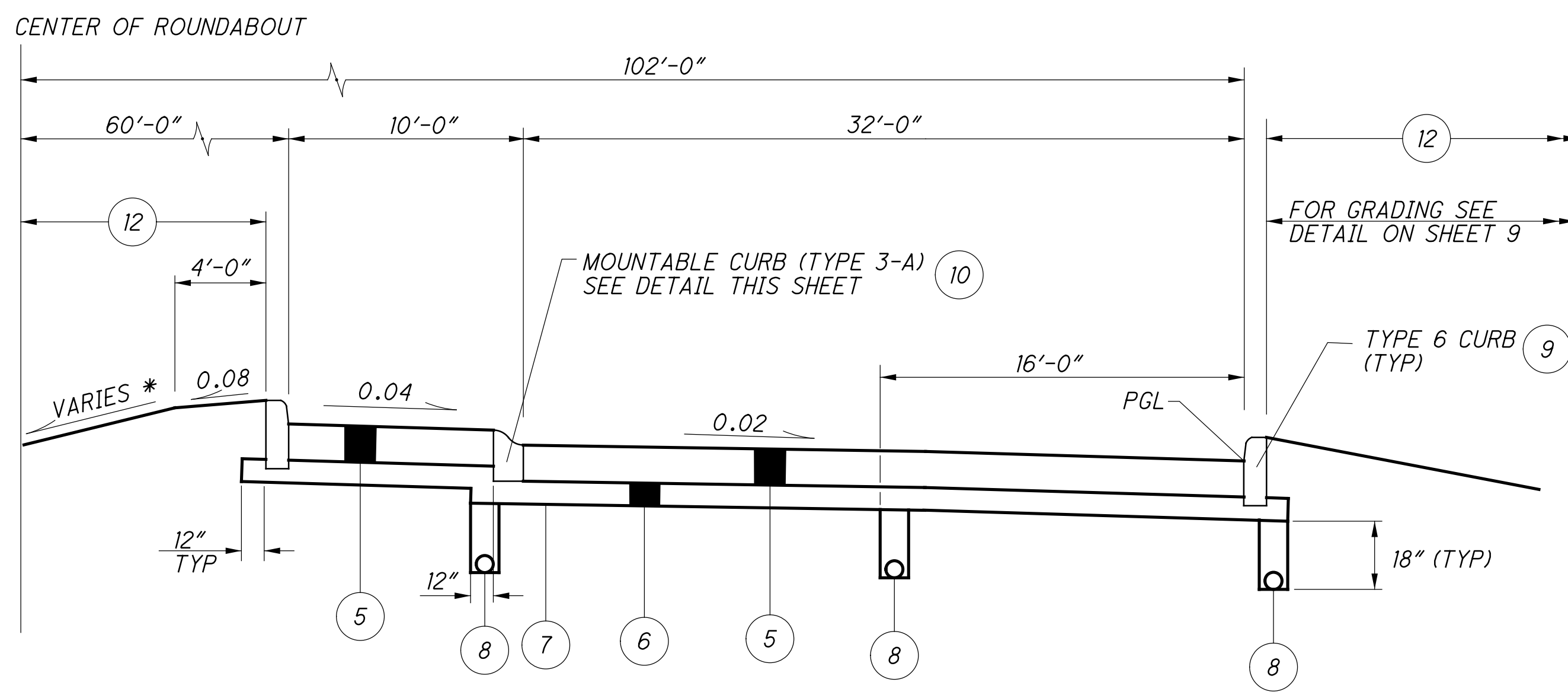
PC STA 580+62.00

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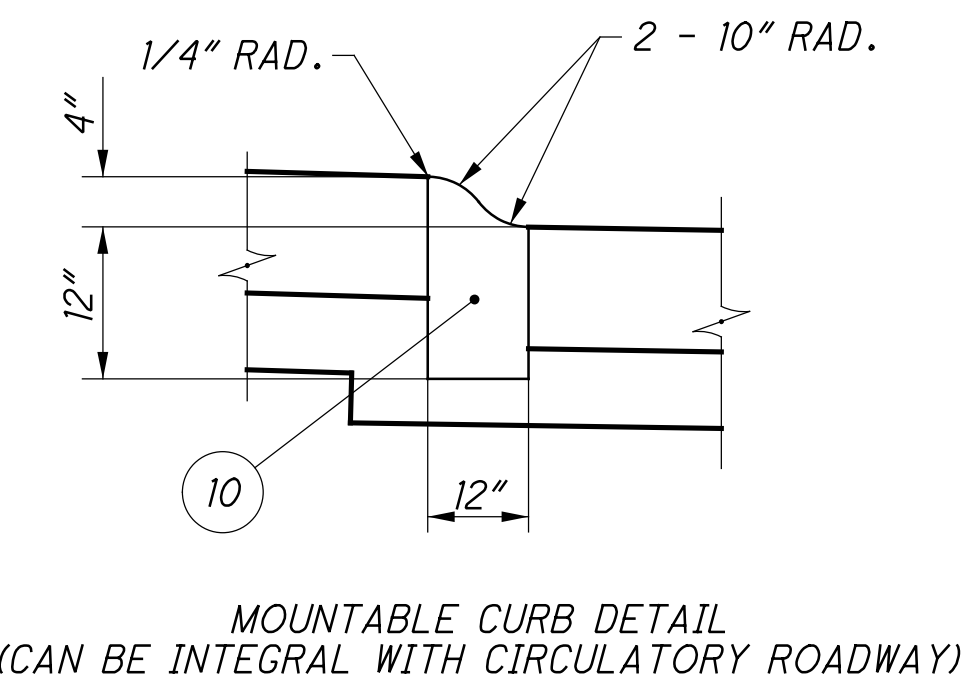
AS BUILT 2-10-2014

PAVEMENT LEGEND

- 1 ITEM 442 - 1.5" ASPHALT SURFACE, 12.5MM, TYPE A, (446)
- 2 ITEM 442 - 2" ASPHALT INTERMEDIATE COURSE, 19MM, TYPE A, (446)
- 3 ITEM 301 - 6.5" ASPHALT BASE, PG64-22
- 4 ITEM 407 - TACK COAT FOR INTERMEDIATE COURSE (0.04 GAL/SY)
- 5 ITEM 452 - 9.5" NON-REINFORCED CONCRETE
- 6 ITEM 304 - 6" AGGREGATE BASE
- 7 ITEM 204 - SUBGRADE COMPACTION
- 8 ITEM 605 - 6" BASE PIPE UNDERDRAIN
- 9 ITEM 609 - CURB, TYPE 6
- 10 ITEM 609 - CURB, TYPE 3-A
- 11 ITEM 606 - GUARDRAIL, TYPE MGS WITH LONG POSTS
- 12 ITEM 659 - SEEDING AND MULCHING
- 13 ITEM 254 - 3.5" PAVEMENT PLANING, ASPHALT CONCRETE
- 14 ITEM 609 - 4" CONCRETE MEDIAN
- 15 ITEM 407 - TACK COAT (0.075 GAL/SY)
- 16 ITEM 452 - 13" NON-REINFORCED CONCRETE

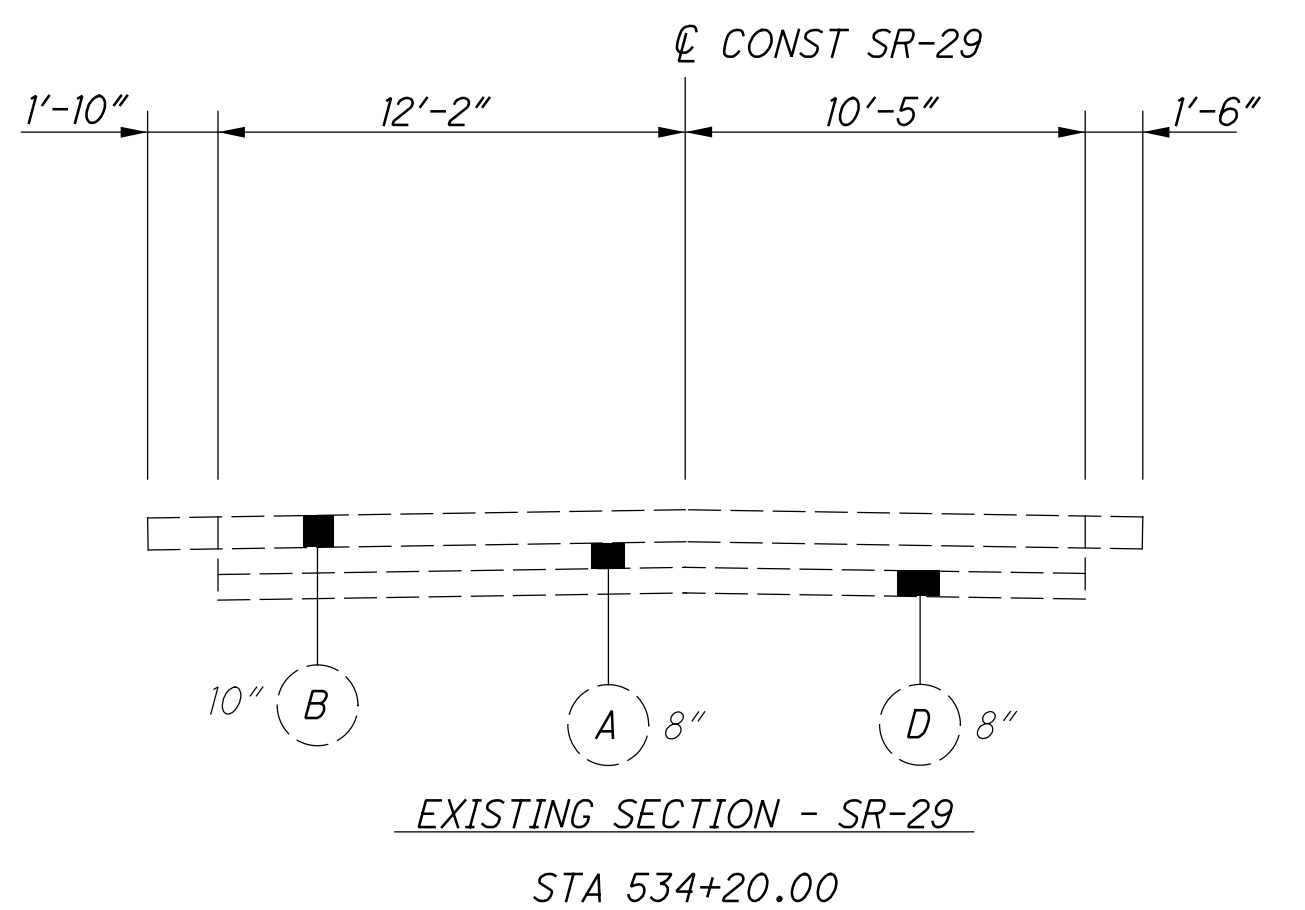


* GRADE TO CB-5 IN CENTRAL ISLAND
ROUNDABOUT SECTION
STA 0+00.00 TO STA 6+40.88



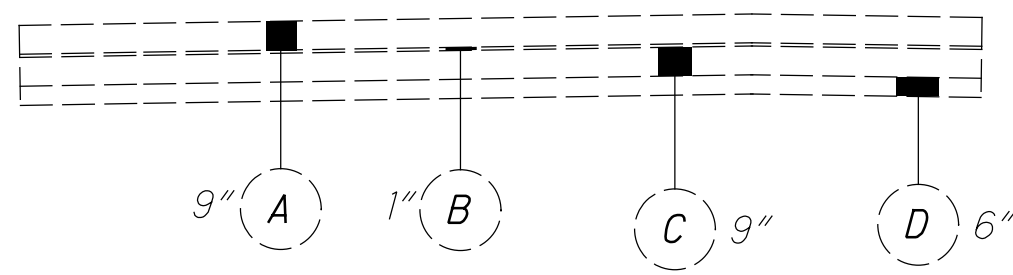
EXISTING PAVEMENT LEGEND

- (A) PLAIN CONCRETE
- (B) ASPHALT
- (C) REINFORCED CONCRETE
- (D) BASE
- (E) SHALLOW UNDERDRAIN



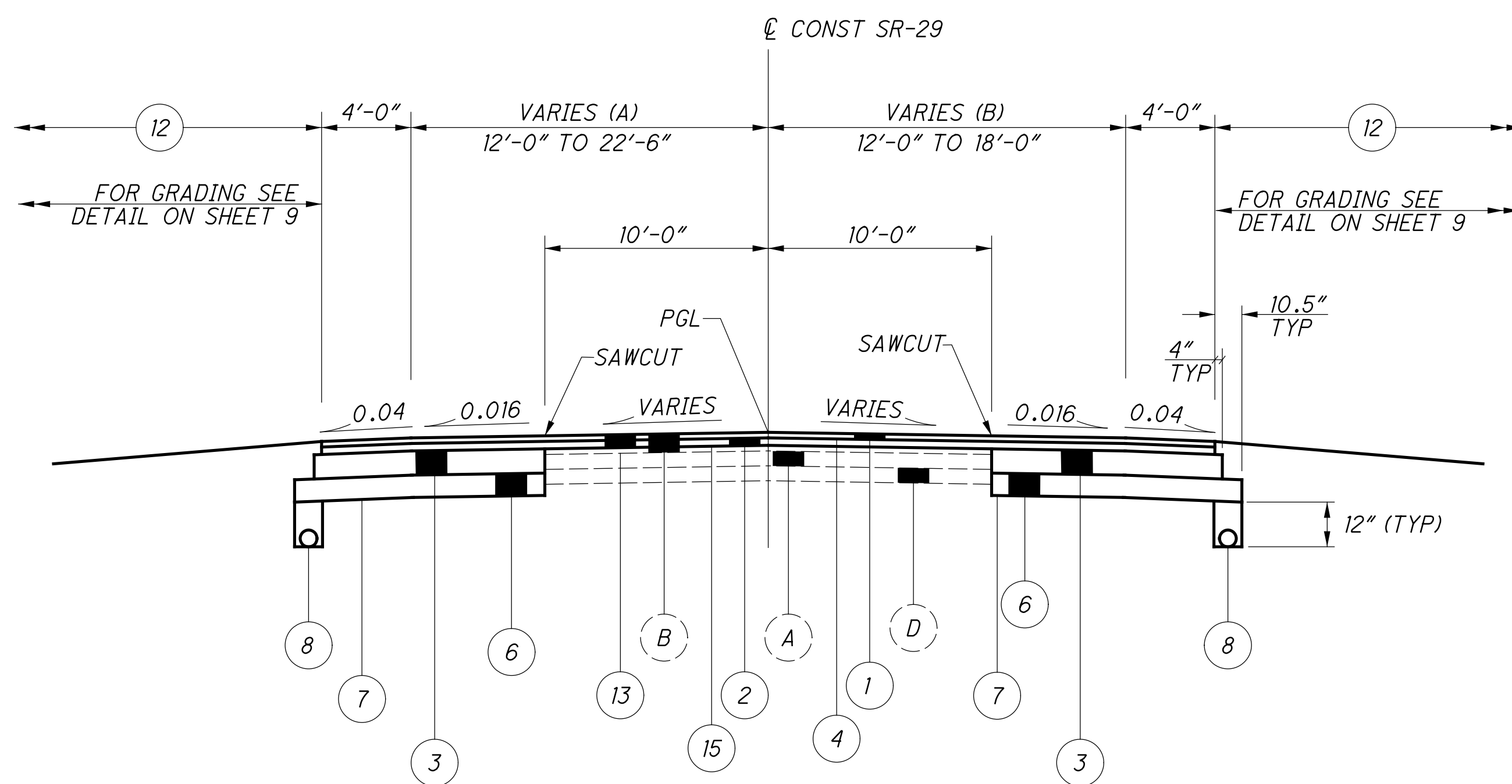
EXISTING SECTION - SR-29
STA 534+20.00

RAMP	STATION	SHLDR	RAMP	SHLDR
A	25+00.00	3'-4"	15'-4"	6'-3"
B	46+50.00	3'-3"	16'-0"	6'-0"
D	543+50.00	3'-0"	15'-4"	6'-8"
C - NO WORK				

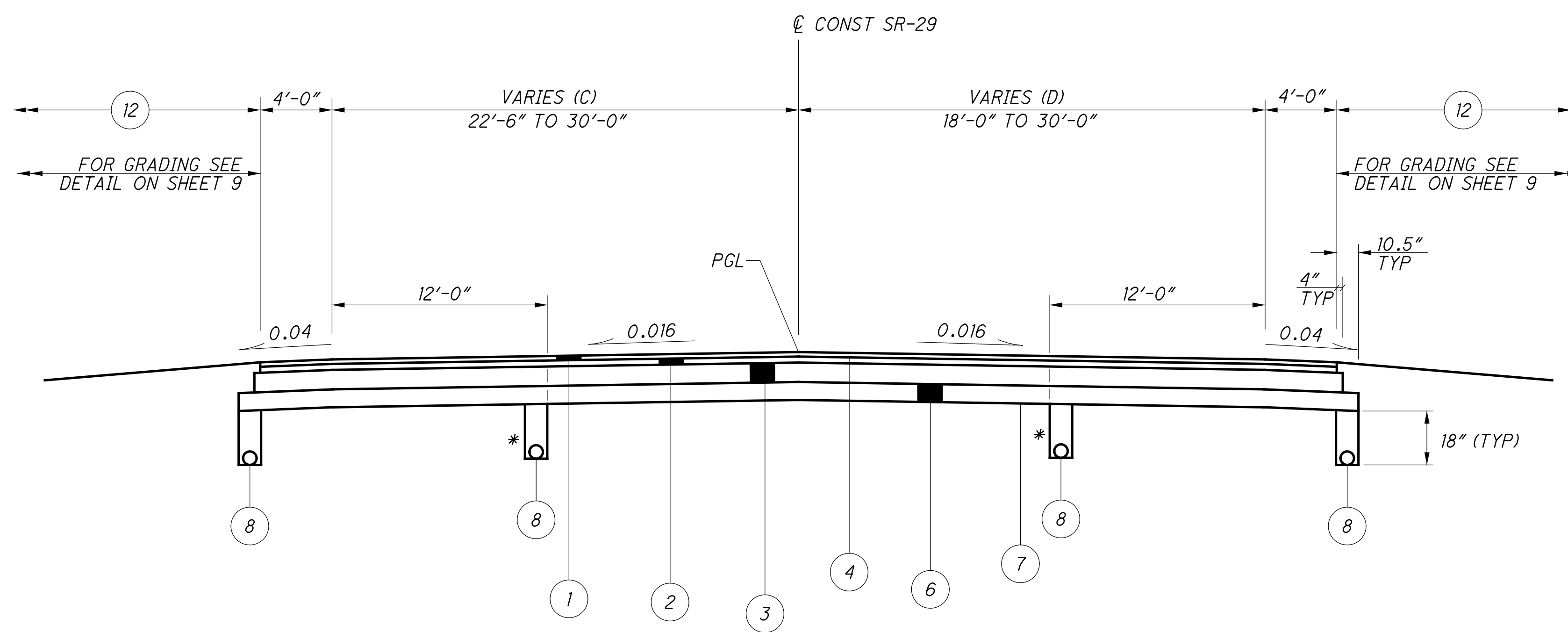


EXISTING SECTION - RAMPS

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NORMAL SECTION
STA 534+20.00 TO 540+50.00



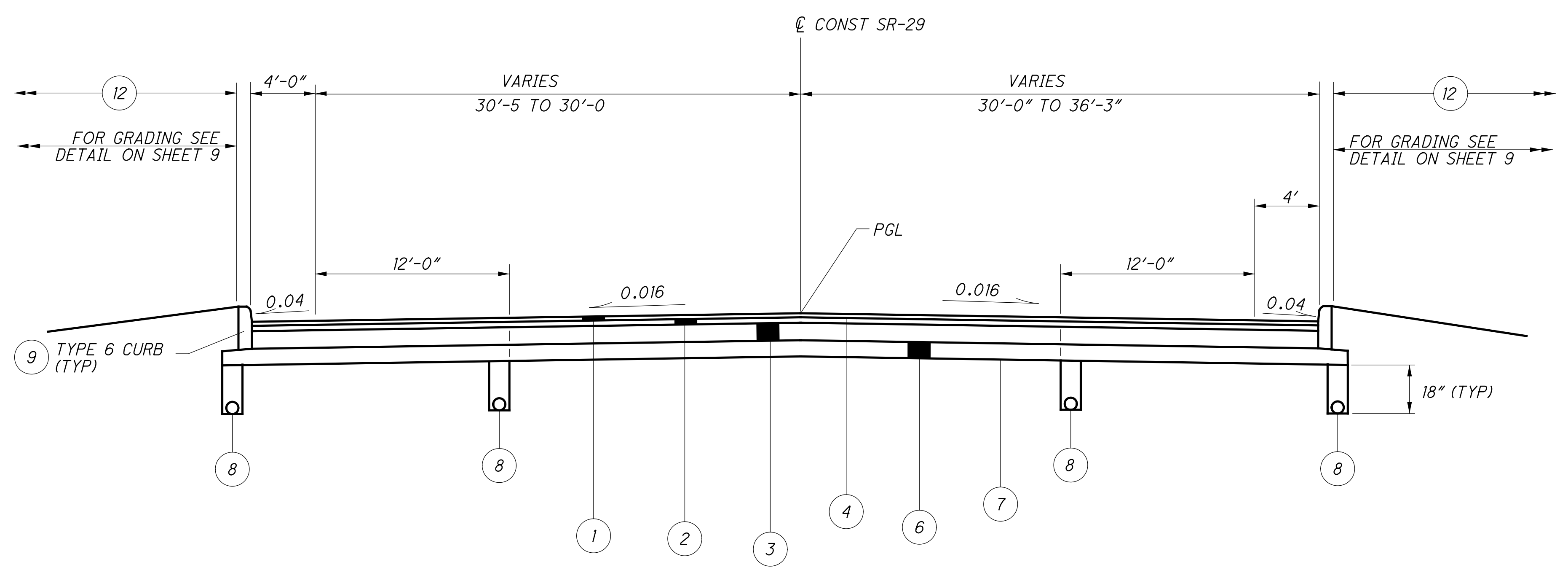
NORMAL SECTION
STA 540+50.00 TO 546+50.00

* INSIDE UNDERDRAINS BEGIN AT STA 541+00.00

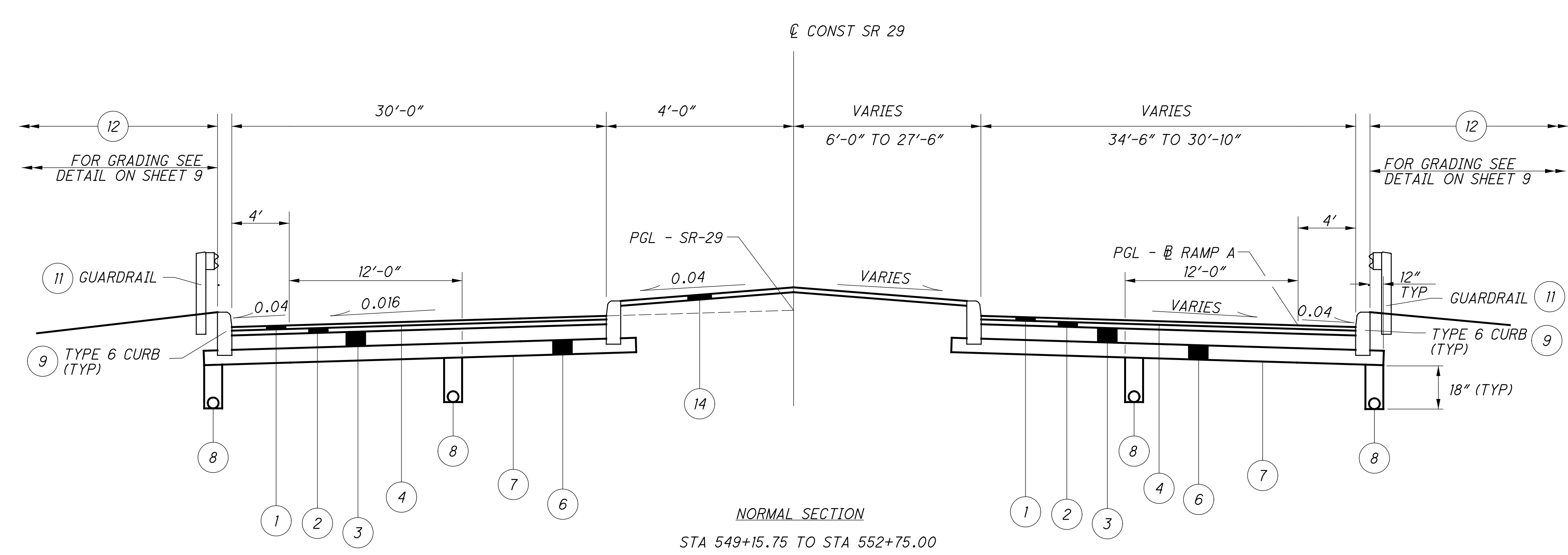
STA TO STA	A	B
534+20 TO 540+50	12'-0" TO 22'-6"	-
534+20 TO 537+80	-	12'-0" TO 18'-0"
537+80 TO 540+50	-	18'-0"
	C	D
540+50 TO 541+00	-	18'-0" TO 30'-0"
540+50 TO 545+00	22'-6" TO 30'-0"	-
541+00 TO 546+50	-	30'-0"
545+00 TO 546+50	30'-0"	-

FOR PAVEMENT LEGEND, SEE SHEET 3

AS BUILT 2-10-2014



NORMAL SECTION SR-29
STA 546+50.00 TO STA 549+15.75

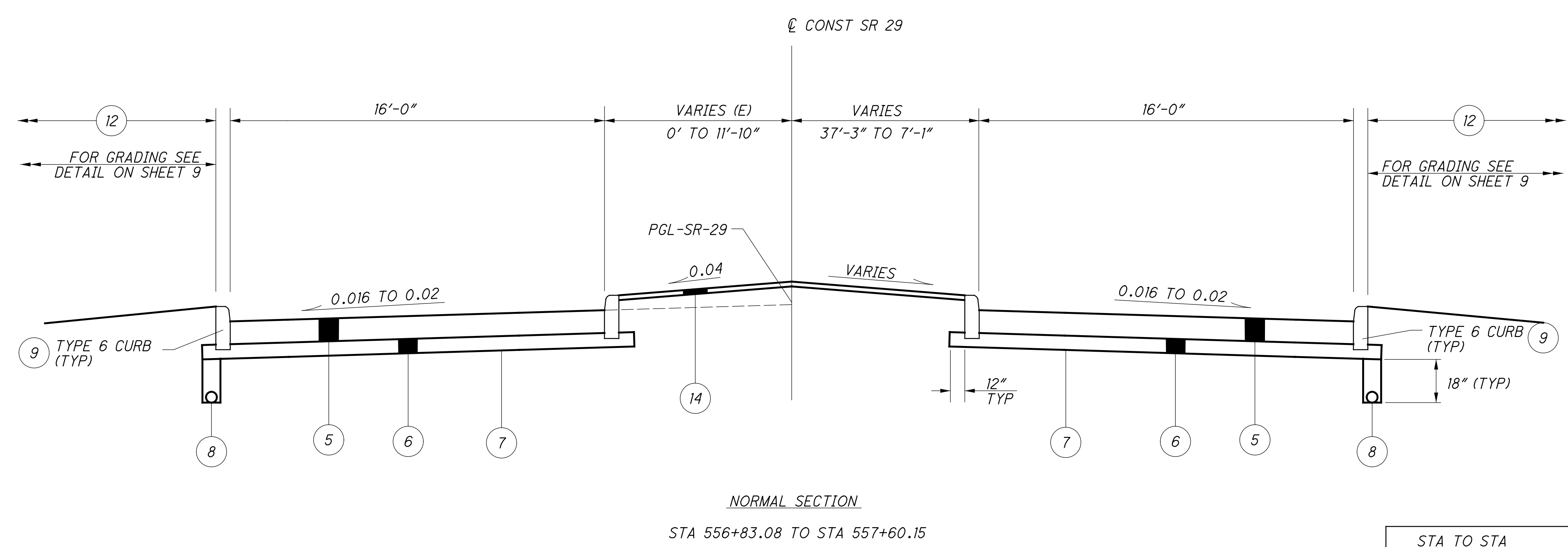
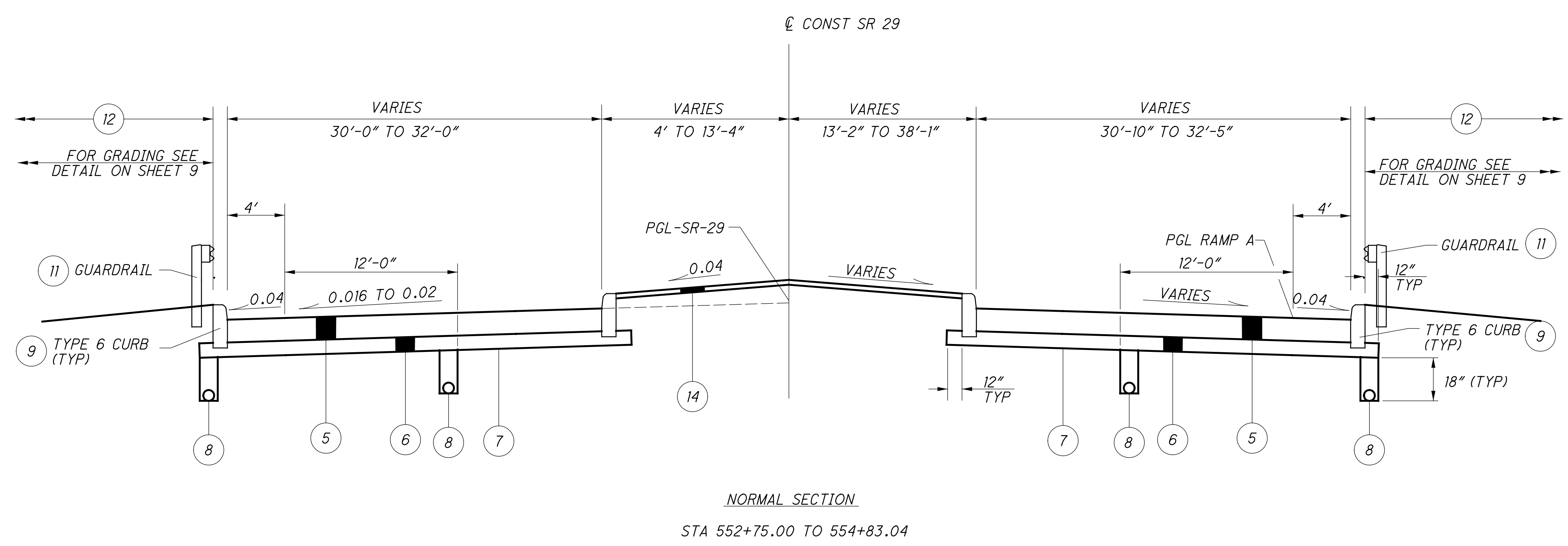


NORMAL SECTION
STA 549+15.75 TO STA 552+75.00

AS BUILT 2-10-2014

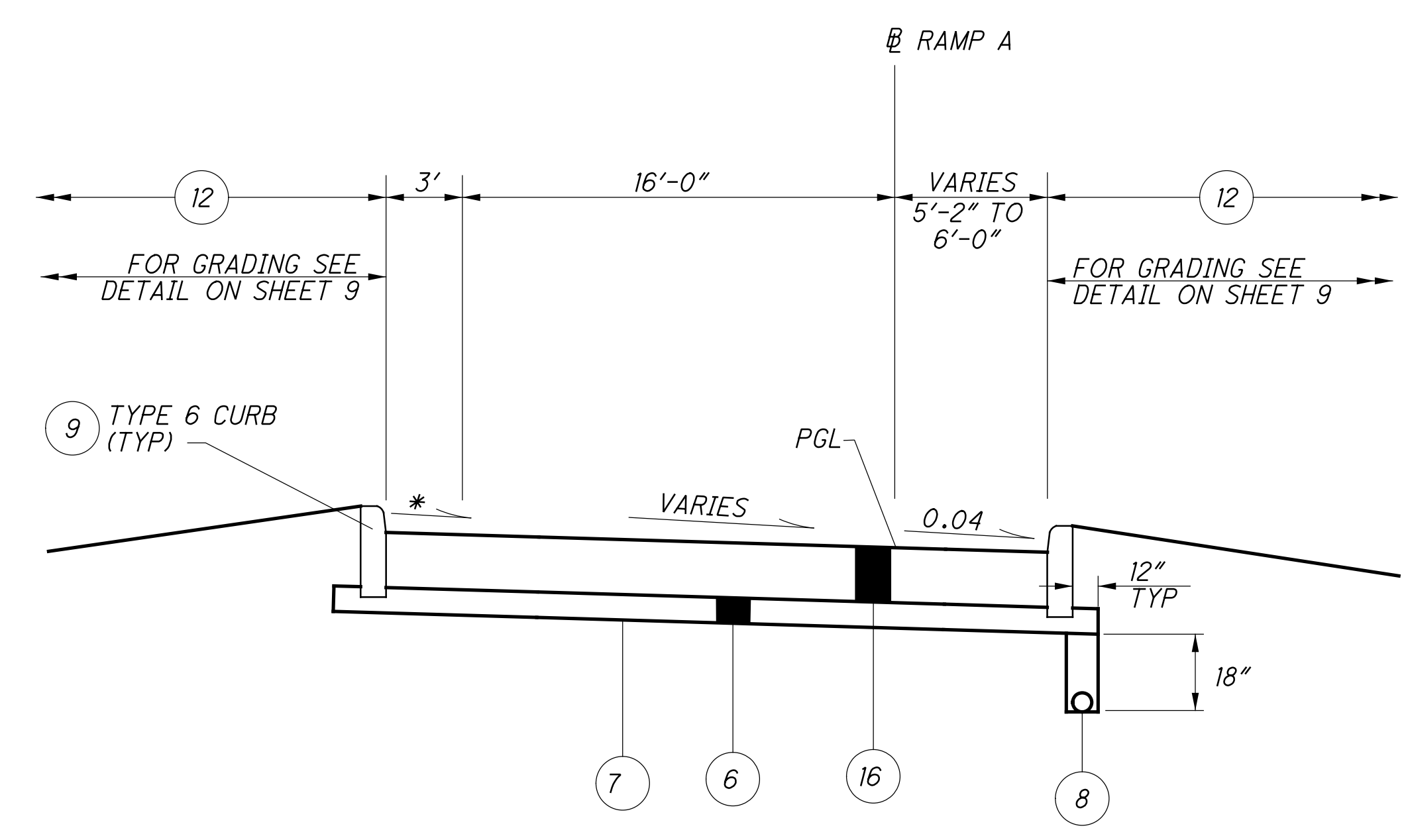
FOR PAVEMENT LEGEND, SEE SHEET 3

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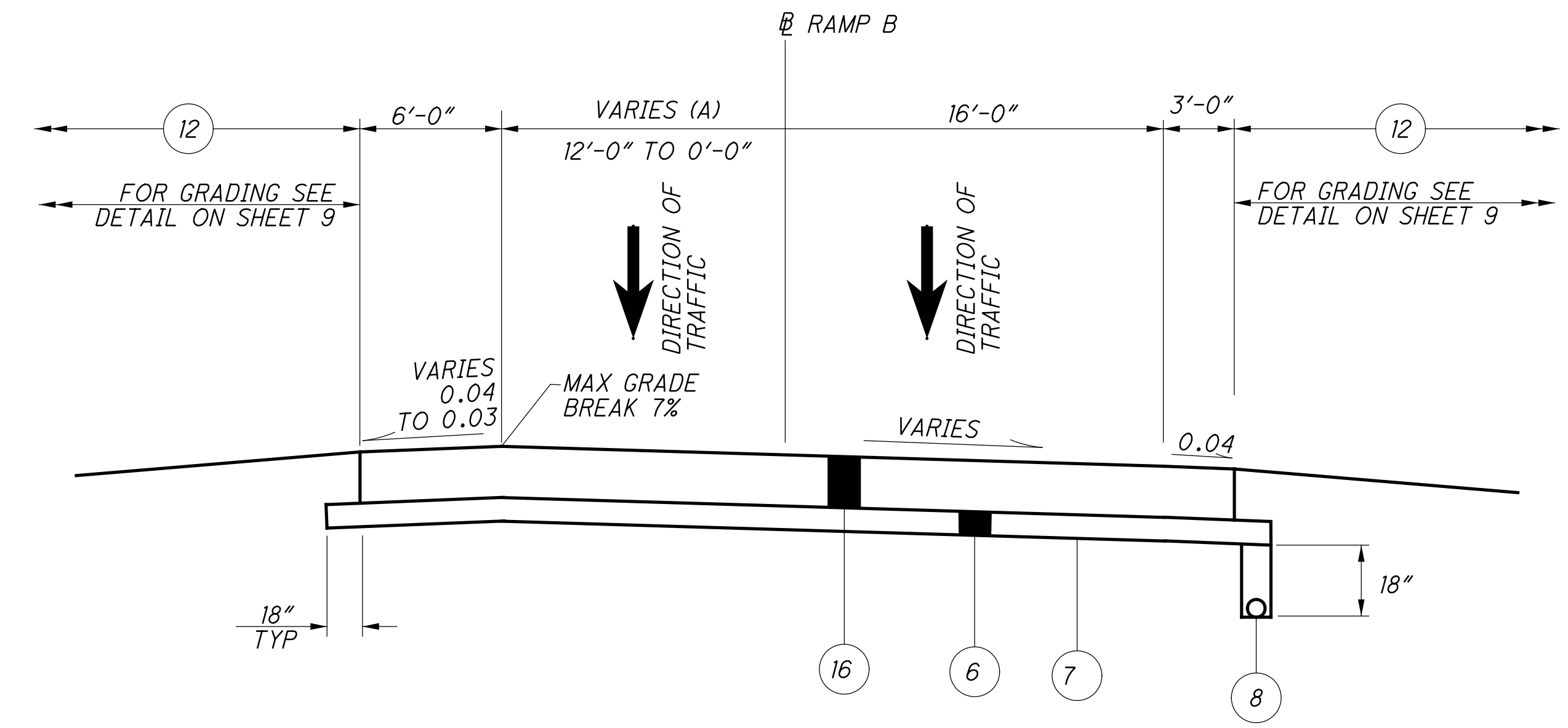


STA TO STA	E
556+83.08 TO 557+20.08	11'-10" TO 0'
557+20.08 TO 557+60.15	0' TO (-) 1'-3"

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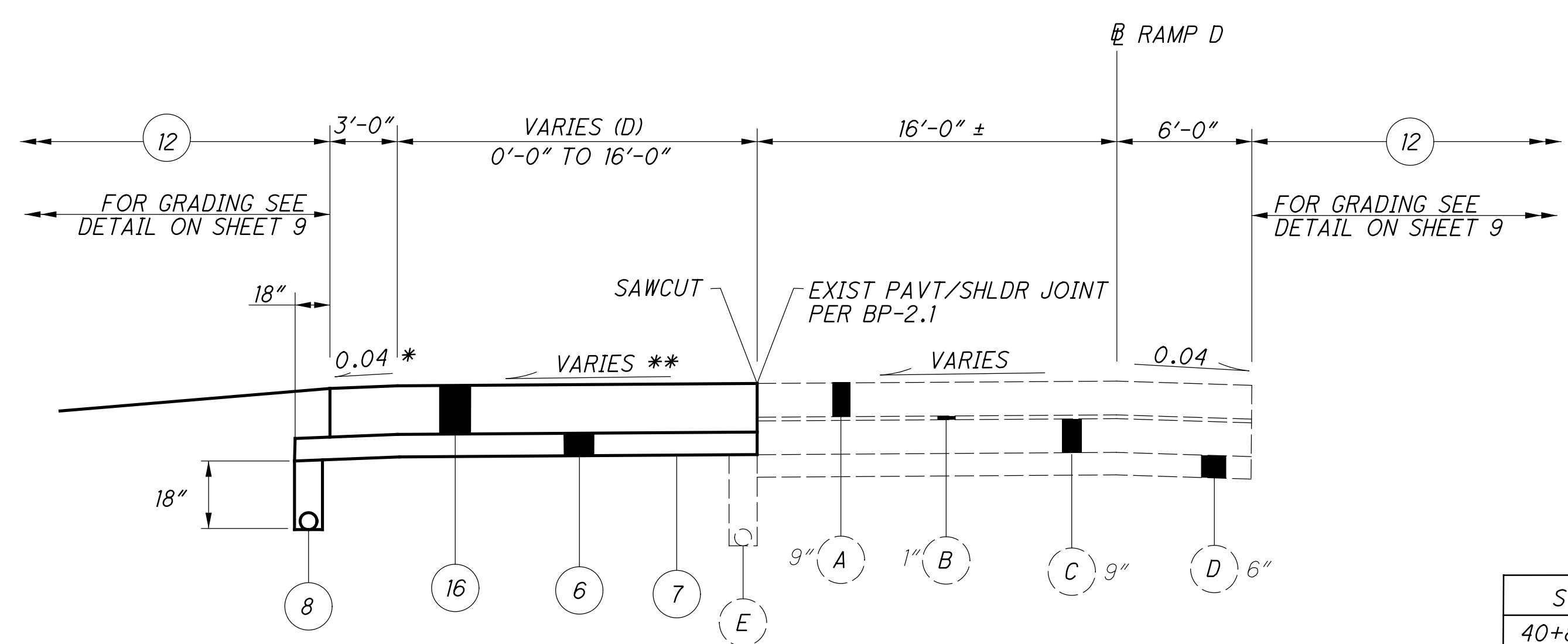


TYPICAL RAMP SECTION
STA 23+25.39 TO STA 25+60.00
* PAVEMENT SLOPE (0.02 MAX)



TYPICAL RAMP SECTION
STA 44+17.88 TO STA 46+50.00

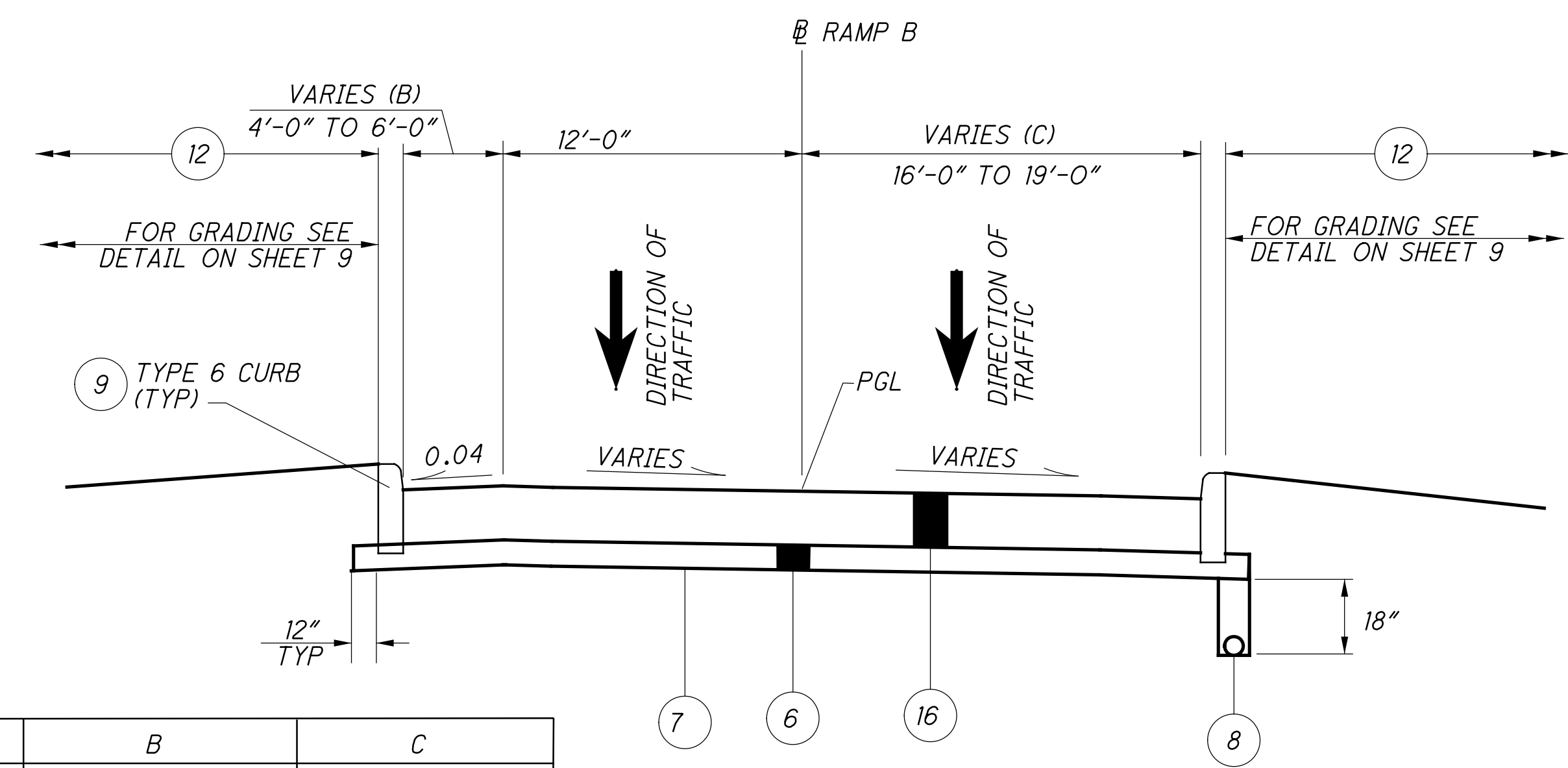
STA TO STA	A
44+17.88 TO 46+00.00	12'-0"
46+00.00 TO 46+50.00	12'-0" TO 0'-0"



* OR MATCH EXISTING CROSS SLOPE IF GREATER
** CONTINUATION OF EXISTING PAVEMENT CROSS SLOPE

TYPICAL RAMP SECTION
STA 543+50.00 TO STA 549+03.39

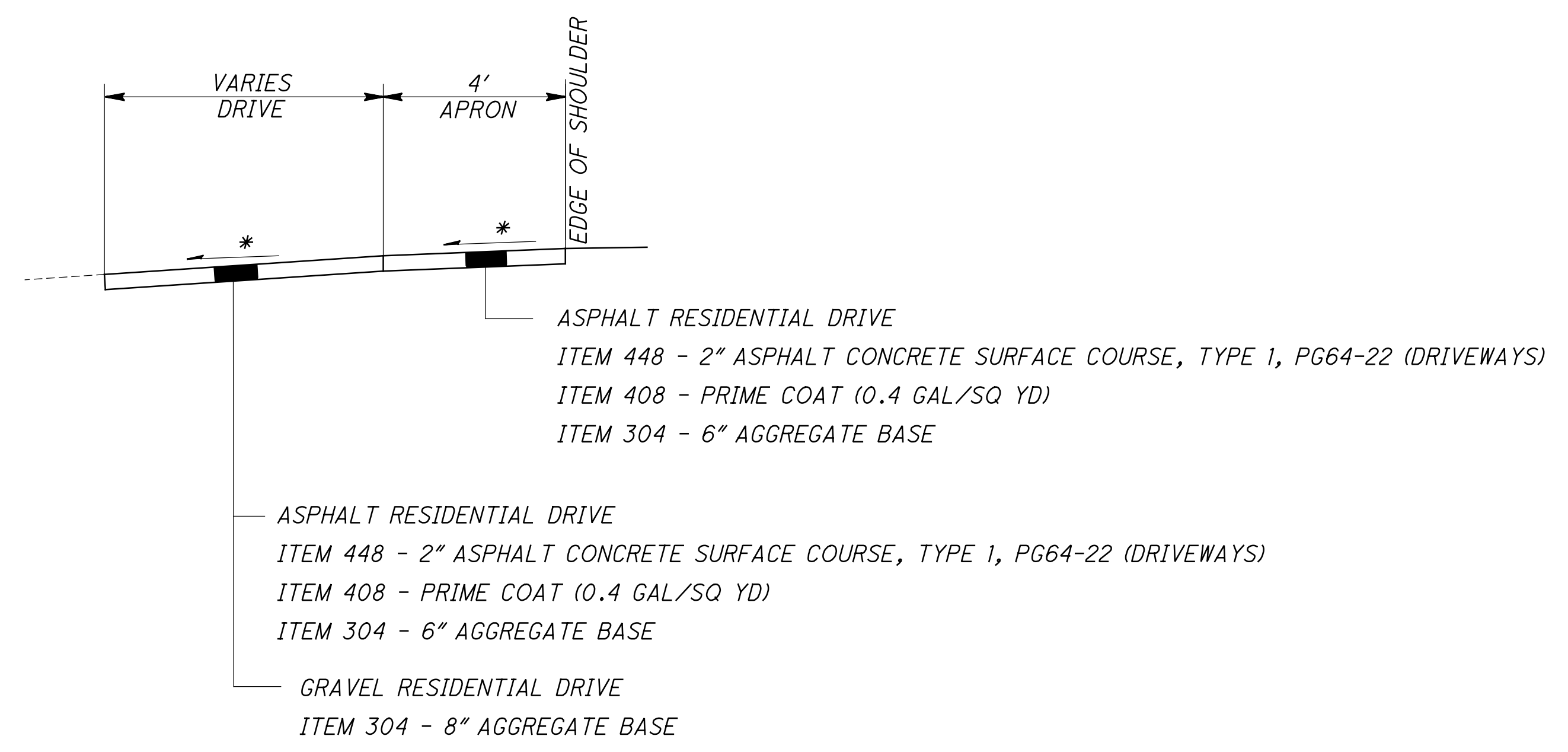
STA TO STA	D
543+50.00 TO 544+00.00	0' TO 16'-0"
544+00.00 TO 578+79.00	16'-0"



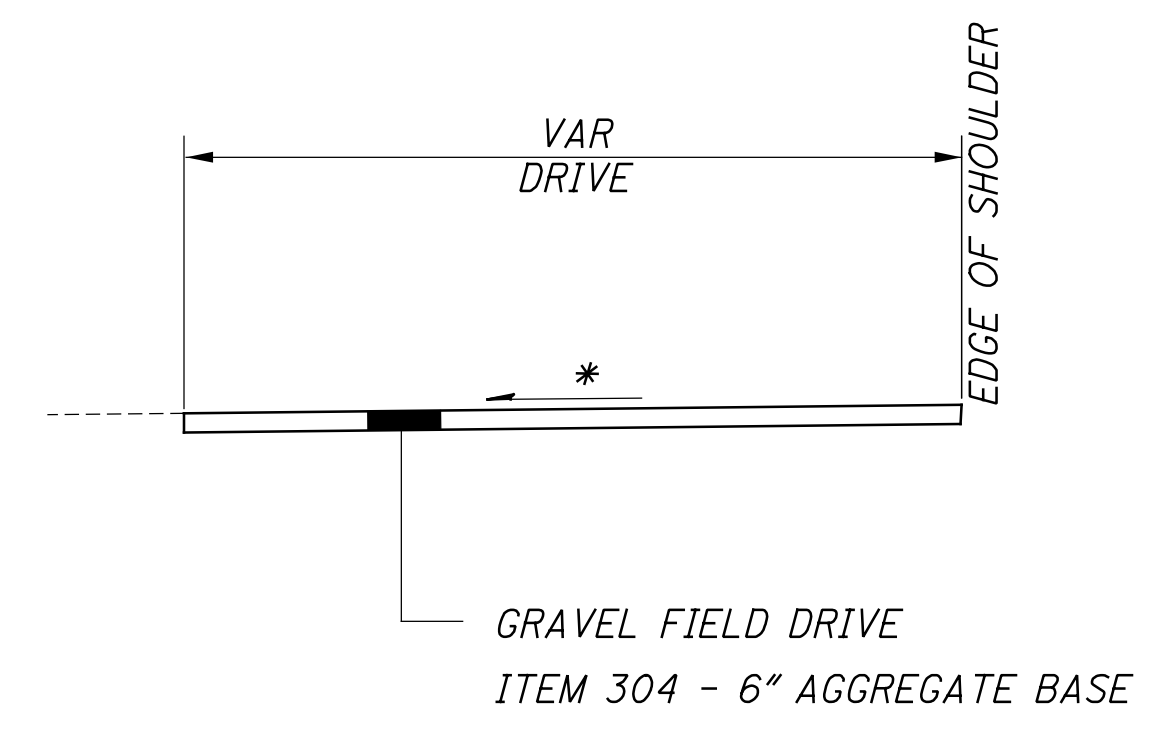
TYPICAL RAMP SECTION
STA 40+89.56 TO STA 44+17.88

STA TO STA	B	C
40+89.56 TO 43+67.88	4'-0"	-
40+89.56 TO 43+42.88	-	16'-0"
43+67.88 TO 44+17.88	4'-0" TO 6'-0"	-
43+42.88 TO 44+17.88	-	16'-0" TO 19'-0"

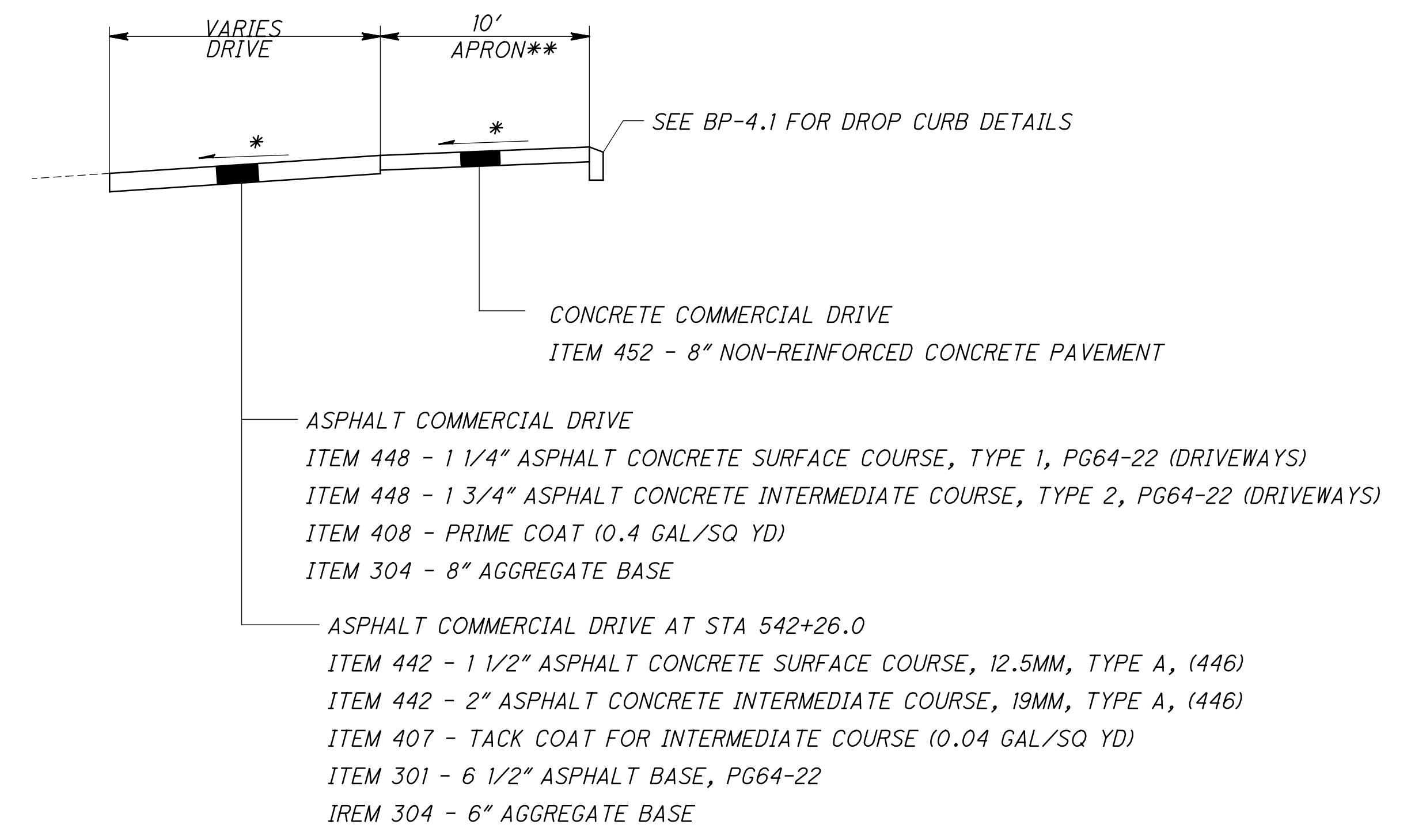
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RESIDENTIAL DRIVEWAY SECTION

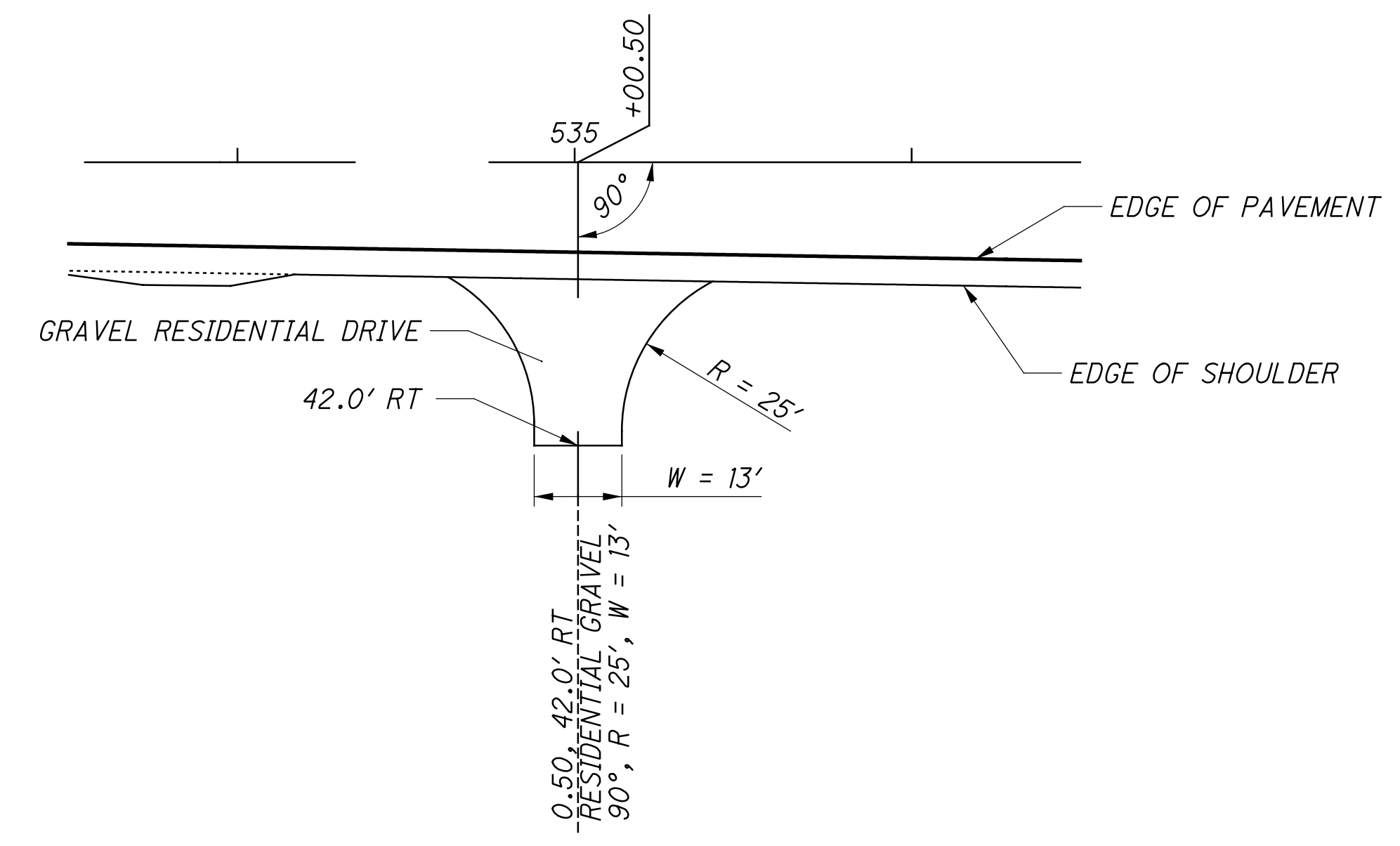


FIELD DRIVEWAY SECTION



COMMERCIAL DRIVEWAY SECTION

** 10' APRON FOR DRIVES ADJACENT TO CURB



EXAMPLE DRIVEWAY DESIGNATION DETAIL

* SEE CROSS SECTIONS FOR DRIVE PROFILES FOR PAVEMENT LEGEND, SEE SHEET 3

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ROUNDING

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

UTILITIES

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

AT&T
111 N. FOURTH STREET, 8TH FLOOR
COLUMBUS, OH 43215
(614) 223-7162

TIME WARNER CABLE
3760 INTERCHANGE DRIVE
P.O. BOX 2553
COLUMBUS, OH 43216
(614) 481-5262/(614) 348-2979

CENTURY LINK QCC
700 W. MINERAL AVE., UTD2734
LITTLETON, CO 80120-4511
(303) 992-9931

MADISON COUNTY ENGINEER'S OFFICE
825 U.S. 42 NE
LONDON, OH 43140
(740) 852-9404

FIRST ENERGY (OHIO EDISON)
420 SOUTH YORK STREET
SPRINGFIELD, OH 45505
(937) 327-1272

THE LOCATION OF THE UNDERGROUND UTILITIES SHOWN ON THE PLANS ARE AS OBTAINED FROM THE OWNERS AS REQUIRED BY SECTION 153.64 O.R.C.

SURVEYING PARAMETERS

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

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

THE HORIZONTAL COORDINATES EXPRESSED HEREIN ARE BASED ON THE FOLLOWING: COORDINATE SYSTEM: OHIO STATE PLANE SOUTH ZONE NAD 83 (CORS 96) CONTROL POINTS REFERENCED: FRANK 55 (PID JY1622) AND FRANK 55 AZ MK (PID JY1663) COMBINED SCALE FACTOR: 1.00006047

THE VERTICAL BENCHMARK ELEVATIONS WERE SET BASED ON HOLDING ELEVATIONS ESTABLISHED BY OTHERS ON CONTROL POINT MN513 (CEC #10001), ELEVATION 993.34 (NAVD 88).

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 SUPPLEMENTAL SPECIFICATION 823.

UNITS ARE IN U.S. SURVEY FEET. USE THE FOLLOWING CONVERSION FACTOR: 1 METER = 3.280833333 U.S. SURVEY FEET.

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.

CLEARING AND GRUBBING

THE DEPARTMENT HAS NOT MARKED INDIVIDUAL TREES AND STUMPS FOR REMOVAL. UNLESS SPECIFICALLY DESIGNATED AS "DO NOT DISTURB" IN THE PLANS, REMOVE ALL TREES AND STUMPS WITHIN THE CONSTRUCTION LIMITS UNDER THE LUMP SUM BID FOR ITEM 201 CLEARING AND GRUBBING.

NOTIFICATION OF CONSTRUCTION INITIATION

AT LEAST FOURTEEN DAYS PRIOR TO ANY CONSTRUCTION ACTIVITIES, THE CONTRACTOR SHALL ADVISE THE DISTRICT OFFICE OF COMMUNICATIONS VIA EMAIL AT d06.pio@dot.state.oh.us AND THE DISTRICT WORK ZONE TRAFFIC MANAGER VIA EMAIL AT d06.mot@dot.state.oh.us OF THE ANTICIPATED START DATE OF ANY CONSTRUCTION ACTIVITIES, INCLUDING BUT NOT LIMITED TO THE PLACING OF WORK ZONE SIGNS. THE NOTIFICATION SHALL ALSO INCLUDE THE PROJECT NUMBER, PID, NAME AND PHONE NUMBER OF THE CONTRACTOR, A POINT OF CONTACT AND THE ANTICIPATED IMPACT ON TRAFFIC. THE CONTRACTOR WILL IMMEDIATELY INFORM THE DISTRICT OFFICE OF COMMUNICATIONS AND THE DISTRICT WORK ZONE TRAFFIC MANAGER OF ANY AND ALL DELAYS AND/OR CHANGES REGARDING THE CONSTRUCTION INITIATION DATE.

PROTECTION OF RIGHT-OF-WAY LANDSCAPING

PRIOR TO BEGINNING WORK, THE CONTRACTOR, THE PROJECT ENGINEER, AND A REPRESENTATIVE OF THE MAINTAINING AGENCY WILL REVIEW AND RECORD ALL LANDSCAPING ITEMS WITHIN THE RIGHT OF WAY (BOTH WITHIN AND OUTSIDE THE CONSTRUCTION LIMITS) A RECORD OF THIS REVIEW WILL BE KEPT IN THE PROJECT ENGINEER'S FILES. PRIOR TO FINAL ACCEPTANCE, A FINAL REVIEW OF LANDSCAPING ITEMS WILL BE MADE.

CONSTRUCT ALL ACTIVITIES, EQUIPMENT STORAGE, AND STAGING TO WITHIN THE CONSTRUCTION LIMITS. UNLESS OTHERWISE IDENTIFIED IN THE PLANS OR PROPOSAL, THE CONSTRUCTION LIMITS ARE IDENTIFIED AS 30 FEET FROM THE EDGE OF PAVEMENT

SUBMIT A WRITTEN REQUEST TO THE PROJECT ENGINEER TO USE ANY AREA OUTSIDE THESE LIMITS. THE DOCUMENT SUBMITTED MUST CLEARLY IDENTIFY THE AREA AND EXPLAIN THE PROPOSED USE AND RESTORATION OF THE AREA. USE OF THESE AREAS FOR DISPOSAL OF WASTE MATERIAL AND CONSTRUCTION DEBRIS, EXCAVATION OF BORROW MATERIAL AND PLACEMENT OF PORTABLE PLANTS IS PROHIBITED. THE REQUEST MUST BE APPROVED, IN WRITING, BEFORE THE CONTRACTOR HAS PERMISSION TO USE THE AREA.

ANY ITEMS DAMAGED BEYOND THE CONSTRUCTION LIMITS AS DEFINED ABOVE WILL BE REPLACED IN KIND OR AS APPROVED BY THE PROJECT ENGINEER.

FENCE LENGTHS

THE LENGTHS OF FENCE SHOWN IN THE PLANS ARE HORIZONTAL DIMENSIONS. MEASUREMENTS OF THE FINAL QUANTITIES WILL BE IN ACCORDANCE WITH ITEM 607.

ITEM 606 - ANCHOR ASSEMBLY, TYPE B

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING ANY OF THE GUARDRAIL END TERMINALS AS LISTED ON ROADWAY ENGINEERING'S WEB PAGE UNDER ROADSIDE SAFETY DEVICES FOR APPROVED GUARDRAIL END TREATMENTS. INSTALLATION SHALL BE AT THE LOCATIONS SPECIFIED IN THE PLANS, IN ACCORDANCE WITH THE MANUFACTURER'S SPECIFICATIONS.

REFER TO THE MANUFACTURER'S INSTRUCTIONS REGARDING THE INSTALLATION OF, AND THE GRADING AROUND, THE FOUNDATION TUBES AND GROUND STRUT. THE TOP OF ANY FOUNDATION TUBE SHOULD BE LESS THAN 4 INCHES ABOVE THE GROUND. THE PLACEMENT OF THE FOUNDATION TUBES SHOULD BE AN APPROPRIATE DEPTH BELOW THE LEVEL LINE IN ORDER TO MAINTAIN THE FINISHED GUARDRAIL HEIGHT OF 27.75 INCHES FROM THE EDGE OF THE SHOULDER.

ON-SITE GRADING IS REQUIRED IF THE TOP OF THE FOUNDATION TUBES OR TOP OF THE GROUND STRUT DOES PROJECT MORE THAN 4 INCHES ABOVE THE GROUND LINE.

THE FACE OF THE TYPE B IMPACT HEAD SHALL BE COVERED WITH TYPE G REFLECTIVE SHEETING, PER CMS 730.19.

PAYMENT FOR THE ABOVE WORK SHALL BE MADE AT THE UNIT PRICE BID FOR ITEM 606, ANCHOR ASSEMBLY, TYPE B, EACH, AND SHALL INCLUDE ALL LABOR, TOOLS, EQUIPMENT AND MATERIALS NECESSARY TO CONSTRUCT A COMPLETE AND FUNCTIONAL ANCHOR ASSEMBLY SYSTEM, INCLUDING REFLECTIVE SHEETING AND ALL RELATED HARDWARE, GRADING, EMBANKMENT AND EXCAVATION NOT SEPARATELY SPECIFIED, AS REQUIRED BY THE MANUFACTURER.

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 603 CONDUIT ITEMS.

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT. ENHANCED BANKFULL WIDTH DITCHES WILL BE CONSTRUCTED AS SHOWN IN THE TABLE BELOW.

CROSSINGS AND CONNECTIONS TO EXISTING PIPES AND UTILITIES

WHERE PLANS PROVIDE FOR A PROPOSED CONDUIT TO BE CONNECTED TO, OR CROSSOVER 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, AND/OR LOCATION, OF THE EXISTING CONDUIT, OR EXISTING APPURTENANCE TO BE CONNECTED, DIFFERS FROM THE PLAN ELEVATION, AND/OR LOCATION, 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 LOCATION AND/OR 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 603 CONDUIT OR 604 MANHOLE ITEM.

PIPE CONNECTIONS TO CORRUGATED METAL STRUCTURES

CONNECTIONS OF PROPOSED LONGITUDINAL DRAINAGE TO CORRUGATED METAL STRUCTURES SHALL BE MADE BY MEANS OF A SHOP FABRICATED OR FIELD WELDED STUB ON THE STRUCTURE. THE STUB SHALL MEET THE REQUIREMENTS OF 707 AND HAVE A MINIMUM LENGTH OF 2 FEET AND A MINIMUM WALL THICKNESS OF 0.064 INCHES.

THE LOCATION AND ELEVATION OF THE STUB ARE TO BE CONSIDERED APPROXIMATE AND MAY BE ADJUSTED BY THE ENGINEER TO AVOID CUTTING THROUGH JOINTS IN THE STRUCTURE.

THE FIELD WELDED JOINT, IF USED, SHALL BE THOROUGHLY CLEANED AND REGALVANIZED OR OTHERWISE SUITABLY REPAIRED. WELDING SHALL MEET THE REQUIREMENTS OF 513.21.

A MASONRY COLLAR, AS PER STANDARD DRAWING DM-1.1, WILL BE REQUIRED TO CONNECT THE LONGITUDINAL DRAINAGE TO THE STUB, WHEN PIPE OTHER THAN CORRUGATED METAL IS PROVIDED FOR THE LONGITUDINAL DRAINAGE.

PAYMENT FOR CUTTING INTO THE STRUCTURE AND PROVIDING THE CONNECTION DESCRIBED, SHALL BE INCLUDED IN THE CONTRACT PRICE FOR ITEM 603 OR 522.

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 AT LOCATIONS SPECIFIED IN THE PLAN, OR OTHERWISE ESTABLISHED BY THE ENGINEER.

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

STEEL POSTS SHALL 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.

GENERAL NOTES

MAD-70-10.27

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NOTIFICATION OF ASBESTOS DEMOLITION AND RENOVATION

THE DBT IS TO FOLLOW THE "INSTRUCTIONS FOR NOTIFICATION OF ASBESTOS DEMOLITION AND RENOVATION" BY THE ENVIRONMENTAL PROTECTION AGENCY.

ODOT HAS PERFORMED A REGULATED MATERIAL INSPECTION AND IS PROVIDING INSPECTION REPORTS AS ATTACHMENT 13 FOR PARCEL NUMBER 08-00989.000 OR OTHERWISE KNOWN AS PARCEL 6 AS SHOWN IN THE MAD-70-10.27 RIGHT OF WAY PLANS. THE DBT IS RESPONSIBLE FOR ABATEMENT ACTIVITIES REQUIRED FOR THE BUILDINGS DETERMINED TO CONTAIN REGULATED MATERIALS FROM THE DEPARTMENT'S INSPECTION. PAYMENT FOR THE REMOVAL AND DISPOSAL OF REGULATED MATERIALS FOR ABATEMENTS SHALL BE BASED ON C&MS 109.05 - FORCE ACCOUNT AND IS CONSIDERED AN EXCUSABLE, NON-COMPENSABLE DELAY AS PER ITEM 108.06.B.7. ITEMS USED TO IMPLEMENT THE DBT'S REGULATED MATERIAL REMOVAL ACTIVITIES FOR ABATEMENTS SHALL BE PAID FROM THE ENCUMBERED AMOUNT INCLUDED IN THE PROPOSAL AS REGULATED MATERIALS REMOVAL AND DISPOSAL.

THE DBT SHALL OBTAIN ALL NECESSARY PERMITS AND PERFORM ALL NECESSARY NOTIFICATIONS AS LEGALLY REQUIRED. ABATEMENTS OF REGULATED MATERIALS SHALL BE PERFORMED BY LICENSED REMOVAL PROFESSIONAL AS APPLICABLE. THE DBT SHALL TAKE OWNERSHIP AND DISPOSE OF ANY REGULATED MATERIAL IN A MANNER THAT CONFORMS TO THE REQUIREMENT OF THE STATE AND LOCAL BOARDS OF HEALTH OR OTHER AUTHORITIES HAVING JURISDICTION.

THE DBT SHALL ENSURE THAT ALL SUSPECT MATERIALS SHALL BE REMOVED AND PROPERLY DISPOSED OF BY A CERTIFIED ASBESTOS REMOVAL PROFESSIONAL IN ACCORDANCE WITH OAC 3745-20. AN INDIVIDUAL TRAINED IN THE PROVISIONS OF NESHAPS (40 CFR PART 61, SUBPART M) WILL BE ON SITE DURING THE DEMOLITION OR RENOVATION OF ANY STRUCTURE WITH ACM AND EVIDENCE THAT THE REQUIRED TRAINING HAS BEEN ACCOMPLISHED BY THIS PERSON WILL BE AVAILABLE DURING NORMAL BUSINESS HOURS.

A QUANTITY FOR ITEM 690 - SPECIAL REGULATED MATERIALS REMOVAL AND DISPOSAL HAS BEEN ADDED TO THE BID ITEMS LIST WITH A BID UNIT COST OF \$1 PER EACH. THE FIXED AMOUNT REPRESENTS THE DEPARTMENT'S ESTIMATE OF THE TOTAL COST OF THE ABATEMENT ACTIVITIES FOR THESE BUILDINGS.

690E98000 ITEM SPECIAL - MISC.: REGULATED MATERIALS REMOVAL AND DISPOSAL 20,000 EACH

PETROLEUM CONTAMINATED SOIL

ENVIRONMENTAL STUDIES HAVE SHOWN THAT THERE IS A POTENTIAL OF ENCOUNTERING PETROLEUM CONTAMINATED MATERIALS DURING EXCAVATIONS FOR CONSTRUCTION ACTIVITIES AT 4525 SR 29, TAX PARCEL ID 08-01026.000, OTHERWISE KNOWN AS PARCEL 5 AS SHOWN IN THE MAD-70-10.27 RIGHT OF WAY PLANS. THE ESTIMATED QUANTITIES HAVE BEEN INCLUDED IN THE GENERAL SUMMARY FOR THIS WORK. ALL EXCAVATIONS AT THE AFOREMENTIONED LOCATION SHALL BE PAID FOR UNDER THE ORIGINAL PLAN BID ITEMS.

PETROLEUM CONTAMINATED SOIL

ALL EXCAVATED MATERIALS WITHIN THE AFOREMENTIONED LIMITS MAY BE STOCKPILED IN AN AREA PROVIDED BY THE CONTRACTOR AND APPROVED BY THE ENGINEER. THE ENGINEER MAY PERMIT TEMPORARY STORAGE OF THE SUSPECTED CONTAMINATED SOILS ON AN IMPERMEABLE MEMBRANE. THE MEMBRANE WILL BE SURROUNDED BY BALES OF STRAW TO PREVENT THE SUSPECTED SOILS FROM COMING IN CONTACT WITH THE ORIGINAL SOILS. AN IMPERMEABLE MEMBRANE WILL BE PLACED OVER THE STOCKPILE TO PREVENT CONTACT WITH PRECIPITATION AND/OR SURFACE RUN-OFF. AS A TEMPORARY STORAGE ALTERNATIVE, THE ENGINEER MAY PERMIT THE CONTRACTOR TO DIRECT LOAD THE EXCAVATED SOILS INTO TRUCKS. OR AS A THIRD ALTERNATIVE, THE CONTRACTOR MAY PLACE THE MATERIAL IN LEAK-PROOF, COVERED CONTAINERS PROVIDED BY THE CONTRACTOR. THE MATERIAL WILL REMAIN ON-SITE UNTIL ANALYTICAL RESULTS ARE RECEIVED BY THE ENGINEER.

THIS MATERIAL WILL BE PROPERLY TESTED (FOR DISPOSAL), TRANSPORTED, AND DISPOSED OF IN A LICENSED (BY THE LOCAL HEALTH DEPARTMENT) AND PERMITTED (BY THE OHIO ENVIRONMENTAL PROTECTION AGENCY) SOLID WASTE FACILITY.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS AND APPROVALS AND TO TRANSPORT THE MATERIALS TO A LICENSED AND PERMITTED SOLID WASTE DISPOSAL FACILITY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONDUCTING ANY ADDITIONAL SAMPLING AND ANALYSIS OF THIS MATERIAL.

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. PAYMENT FOR SUCH WORK SHALL BE MADE AT THE CONTRACT PRICE PER TON. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTE ABOVE:

BASIS OF PAYMENT

THE CONTRACTOR WILL FURNISH ALL THE LABOR, EQUIPMENT, AND MATERIALS NECESSARY TO PROPERLY HANDLE, STORE, TEST (FOR DISPOSAL), TRANSPORT, AND DISPOSAL; INCLUDING ANY REQUIRED PERMITS, APPROVALS, OR FEES WITHIN THE AFOREMENTIONED LOCATION. PAYMENT FOR THIS WORK WILL BE MADE AT THE CONTRACT PRICE BID PER TON, PER GALLON, PER CUBIC YARD AND PER UST. THE FOLLOWING ESTIMATED QUANTITY HAS BEEN INCLUDED IN THE GENERAL SUMMARY FOR THE WORK NOTED ABOVE:

690E65016 ITEM SPECIAL - WORK INVOLVING PETROLEUM CONTAMINATED SOIL 750 TONS

SEEDING AND MULCHING

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

659, SOIL ANALYSIS TEST 1 EACH
 659, TOPSOIL 3455 CU. YD.
 659, SEEDING AND MULCHING 31120 SQ. YD.
 659, REPAIR SEEDING AND MULCHING 1556 SQ. YD.
 659, INTER-SEEDING 1556 SQ. YD.
 659, COMMERCIAL FERTILIZER 4.20 TON
 659, LIME 6.43 ACRES
 659, WATER 85 M. GAL.

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.

ITEM 605 - AGGREGATE DRAINS

AGGREGATE DRAINS SHALL BE PLACED AT 50 FOOT INTERVALS ON EACH SIDE OF NORMAL CROWNED SECTIONS OF SNYDER LANE AND THE SNYDER LANE CONNECTOR, STAGGERED SO THAT EACH DRAIN IS 25 FEET FROM THE ADJACENT DRAIN ON THE OPPOSITE SIDE, AND AT 25 FOOT INTERVALS ON THE LOW SIDE ONLY OF SUPERELEVATED SECTIONS. AN AGGREGATE DRAIN SHALL BE PLACED AT THE LOW POINT OF EACH SAG VERTICAL CURVE.

605 AGGREGATE DRAINS 200 FT

EXISTING UNDERDRAINS

PROVIDE UNOBSTRUCTED OUTLETS FOR ALL EXISTING UNDERDRAINS ENCOUNTERED ON RAMP A, B AND D DURING CONSTRUCTION.

PROVIDE AN OUTLET PER STANDARD CONSTRUCTION DRAWING DM-1.1 FOR ALL UNDERDRAINS THAT OUTLET TO A SLOPE.

UNDERDRAINS THAT CAN BE CONNECTED TO THE NEW OR EXISTING UNDERDRAINS AT THE END OF THE PROJECT LIMITS AS WELL AS ALL NECESSARY BENDS OR BRANCHES REQUIRED FOR CONNECTION ARE INCLUDED IN THE BASIS OF PAYMENT FOR UNCLASSIFIED PIPE UNDERDRAINS.

POST CONSTRUCTION STORM WATER TREATMENT

THIS PLAN UTILIZES STRUCTURAL BEST MANAGEMENT PRACTICES (BMP'S) FOR POST CONSTRUCTION STORM WATER TREATMENT. ENHANCED BANKFULL WIDTH DITCHES WILL BE CONSTRUCTED AS SHOWN IN THE TABLE BELOW.

VEGETATED BIOFILTER LOCATIONS							
ROAD	STATION RANGE		SIDE (LT/RT)	LENGTH (FT)	WIDTH (FT)	DRAINAGE AREA (SQ FT)	DRAINAGE AREA W/IN ODOT R/W (SQ FT)
	BEGIN STATION	END STATION					
SR 29	534+50.00	539+00.00	LT	450	10	31554	31554
SR 29	535+50.00	536+41.00	RT	91	10	5850	5091
SR 29	536+70.00	540+00.00	RT	330	10	34877	26203
SR 29	540+00.00	545+59.75	LT	559.75	10	71596	53447
SR 29	540+00.00	541+89.50	RT	189.5	10	30895	16630
SR 29	542+62.50	544+13.40	RT	150.9	10	52346	17052
SR 29	544+63.40	547+47.10	RT	283.7	10	76332	26355
SR 29	546+30.50	553+40.00	LT	709.5	10	83925	83288
SR 29	549+54.50	553+19.00	RT	364.5	10	80860	77626
SR 29	553+30.00	554+50.00	RT	120	10	12115	12115
SNYDER	10+50.00	15+00.00	RT	450	10	32581	32581
SNYDER	10+50.00	15+00.00	LT	450	10	27153	27153
Total (acres)						12.40	9.39

SURVEY CONTROL

NUMBER	NORTHING	EASTING	ELEVATION	DESCRIPTION
10000	714464.7097	1732443.9989	984.50	IPS (1/2"rebar w/cap)
10001	714616.0574	1732081.4814	993.34	old MN513 (5/8"REBAR,"CO TRAV")
10002	714896.4717	1731430.6386	992.39	IPS (1/2"rebar w/cap)
10003	715135.9694	1730859.9073	978.37	IPS (1/2"rebar w/cap)
10004	715330.6762	1730129.4397	976.55	IPS (1/2"rebar w/cap)
10005	715654.7254	1729629.4522	979.84	MNS (Mag Nail Set)
10006	714701.3110	1730541.1605	975.81	old MN510
10010	715719.0126	1729334.0286	979.57	old MN501
10026	715831.2802	1729100.6374	976.51	IPS (1/2"rebar w/cap)
10027	715899.3394	1728959.1380	971.97	IPS (1/2"rebar w/cap)
10028	715982.8023	1728808.2811	975.12	IPS (1/2"rebar w/cap)
10031	715006.6905	1730485.3746	973.69	IPS (1/2"rebar w/cap)
10032	714158.5739	1732987.8306	971.45	IPS (1/2"rebar w/cap)
10033	714159.5419	1732381.9660	975.84	IPS (1/2"rebar w/cap)
10035	714095.7647	1732651.5796	976.74	IPS (1/2"rebar w/cap)
10037	713915.1358	1733448.8539	970.32	IPS (1/2"rebar w/cap)
10038	713816.7748	1733777.0592	968.17	IPS (1/2"rebar w/cap)
10039	713778.3619	1733697.9885	967.03	IPS (1/2"rebar w/cap)
10042	715251.1540	1731174.6773	975.23	IPS (1/2"rebar w/cap)
10043	715254.9821	1731460.7181	976.97	IPS (1/2"rebar w/cap)
10060	715040.8469	1731998.5596	971.49	MNS (Mag Nail Set)
10061	715055.4272	1732545.5587	966.45	MNS (Mag Nail Set)

HORIZONTAL CONTROL WAS ESTABLISHED TO THE STATE PLANE COORDINATE SYSTEM - OHIO SOUTH ZONE (NAD 83) BY CONVENTIONAL TRAVERSE AND ADJUSTED TO PRE-ESTABLISHED POINTS SET BY OTHERS.

GENERAL NOTES

MAD-70-10.27

ENVIRONMENTAL COMMITMENTS

THE ODNR SCENIC RIVER MANAGER, MR. BOB GABLE MUST BE INVITED TO ANY PRE-CONSTRUCTION MEETINGS. HE CAN BE CONTACTED AT 2045 MORSE RD., BUILDING F-1, COLUMBUS, OH 43229, TELEPHONE (614) 265-6814, FAX (614) 267-3096.

THE SCENIC RIVER COORDINATOR WILL BE NOTIFIED 15 CALENDAR DAYS PRIOR TO COMMENCEMENT OF WORK.

1. A SEDIMENT AND EROSION CONTROL PLAN SHALL BE DEVELOPED FOR THE SITE AND IMPLEMENTED BEFORE EARTHWORK COMMENCES. PROPERLY INSTALLED (FRAMED AND ENTRENCHED) SEDIMENT FENCE SHALL BE PROPERLY MAINTAINED UNTIL FINAL SITE STABILIZATION IS ACHIEVED. ALL SEDIMENT AND EROSION CONTROLS SHALL BE REMOVED UPON STABILIZATION OF THE PROJECT AREA WITH VEGETATION. STRAW BALES SHALL NOT BE PERMITTED AS A FORM OF EROSION CONTROL. ALL DENUDED AREAS SHALL BE PERMANENTLY SEEDED AND MULCHED (OR FIBER MAT) IMMEDIATELY UPON COMPLETION OF EARTHWORK OR TEMPORARILY SEEDED AND MULCHED (OR FIBER MAT) WITHIN 7 DAYS IF THE AREA IS TO REMAIN IDLE FOR MORE THAN 30 DAYS.
2. IDLE EQUIPMENT, PETROCHEMICALS AND TOXIC/HAZARDOUS MATERIALS SHOULD NOT BE STORED IN THE FLOODPLAIN OR NEAR ANY DRAINAGE WAYS, DITCHES OR STREAMS THAT COULD CONVEY SUCH MATERIALS TO THE DARBY CREEK STATE SCENIC RIVER. PETROCHEMICALS AND TOXIC/HAZARDOUS MATERIALS SHALL NOT BE DISCHARGED INTO THE DARBY CREEK STATE SCENIC RIVER, ITS FLOODPLAINS OR ANY OF ITS TRIBUTARY DRAINAGE WAYS, DITCHES OR STREAMS. REFUELING OR EQUIPMENT SHALL NOT OCCUR IN THE FLOODPLAIN OR NEAR ANY TRIBUTARY DRAINAGE WAYS, DITCHES OR STREAMS.
3. THE CONTRACTOR SHALL DEVELOP A SPILL PREVENTION COUNTERMEASURE AND CONTINGENCY PLAN (SPCC) IN THE EVENT OF A SPILL OR BREAK IN AN EQUIPMENT HYDRAULIC LINE, WHICH MAY DISCHARGE INTO WATERS OF THE STATE. ALL SPILLS MUST BE REPORTED TO THE OHIO SPILL LINE (1-800-282-9378) IN ACCORDANCE WITH OAC 3750.06.
4. ANY AND ALL CONSTRUCTION DEBRIS, EARTHEN DEBRIS, EXCESS ASPHALT OR CONCRETE, EXCESS FILL MATERIAL AND TRASH SHALL BE DISPOSED OF AT AN APPROVED UPLAND SITE OR LANDFILL ABOVE THE 100 YEAR FLOOD ELEVATIONS. DISPOSAL OF ANY SUCH MATERIALS IN WETLANDS, FLOODPLAINS OR WITHIN 1,000 FEET OF THE DARBY CREEK STATE SCENIC RIVER IS PROHIBITED.
5. NO WASTEWATER OF ANY KIND SHALL BE DIRECTLY DISCHARGED INTO THE DARBY CREEK STATE SCENIC RIVER OR ANY OF ITS TRIBUTARY STREAMS, DRAINAGE WAYS OR DITCHES. IF DEWATERING IS NECESSARY TO FACILITATE IN-STREAM WORK, ALL WASTEWATER SHALL BE PUMPED ONTO A VEGETATED AREA A SUFFICIENT DISTANCE FROM THE RIVER TO ALLOW FOR COMPLETE INFILTRATION. ALL STORMWATER DRAINAGE SHALL BE DIRECTED ONTO A VEGETATED AREA TO ALLOW FOR COMPLETE INFILTRATION. IF DISCHARGE TO A VEGETATED AREA IS NOT FEASIBLE, THEN WASTEWATER SHALL BE DISCHARGED INTO A SEDIMENT FILTER BAG OR INTO A TEMPORARY DETENTION/RETENTION POND WITH SUFFICIENT RETENTION TIME TO PERMIT FOR THE SETTLING OF ALL SUSPENDED SOLIDS.
6. TREES REMOVED WITHIN THE PROJECT AREA SHALL BE RE-PLANTED WITH NATIVE TREE SPECIES AT A 10 TO 1 RATIO. A NATIVE TREE SPECIES LIST CAN BE PROVIDED BY THE CENTRAL REGION SCENIC RIVERS MANAGER. CARE SHALL BE TAKEN NOT TO GIRDLE OR SCUFF TREE TRUNKS OR DAMAGE ANY STANDING TREES. THE CONTRACTOR SHALL CONTACT THE CENTRAL OHIO REGIONAL MANAGER, NATALIE PIRVU AT NATALIE.PIRVU@DNR.STATE.OH.US OR 740-548-5490 AT LEAST 14 DAYS PRIOR TO THE SEEDLINGS ARRIVING AT THE PROJECT SITE IN ORDER TO COORDINATE THE PLANTING LOCATION ON THE ODNR PARCEL ALONG SNYDER LANE.
7. A REPRESENTATIVE OF THE OHIO DEPARTMENT OF NATURAL RESOURCES DIVISION OF WATERCRAFT, SCENIC RIVERS, SHALL BE INVITED TO A PRE-CONSTRUCTION MEETING WITH THE CONTRACTOR PRESENT AND BE NOTIFIED OF THE PROJECT START DATE ONE WEEK PRIOR TO THE COMMENCEMENT OF WORK. PERIODIC INSPECTIONS OF THE PROJECT SHALL TAKE PLACE TO ENSURE SCENIC RIVER REQUIREMENTS ARE BEING MET. THE REPRESENTATIVE SHALL ALSO BE CONTACTED ONE WEEK PRIOR TO THE COMPLETION OF THE PROJECT TO CONDUCT A FINAL SITE INSPECTION. THE FINAL SITE INSPECTION SHALL BE SCHEDULED WHILE THE CONTRACTOR IS PRESENT TO ENSURE THAT THE FINAL SITE STABILIZATION HAS BEEN ACHIEVED. THE CONTRACTOR SHALL CONTACT THE CENTRAL OHIO REGIONAL MANAGER, NATALIE PIRVU AT natalie.pirvu@dnr.state.oh.us OR 740-548-5490.
8. SCENIC RIVERS CONDITIONS SHALL BE INCLUDED IN THE FINAL PLAN SET AND MUST BE MADE AVAILABLE TO ALL CONSTRUCTION PERSONNEL THROUGHOUT THE DURATION OF THE PROJECT TO ENSURE THAT THE CONTRACTORS UNDERSTAND THE SCENIC RIVER REQUIREMENTS.
9. THE SPECIFICATION SET FORTH IN THE MOST CURRENT VERSION OF ODOT'S CONSTRUCTION AND MATERIALS SPECIFICATION, SUPPLEMENTAL SPECIFICATIONS, LOCATION AND DESIGN MANUAL AND STANDARD CONSTRUCTION DRAWINGS WILL BE USED TO ENSURE ADEQUATE EROSION AND SEDIMENT EROSION CONTROL DURING CONSTRUCTION.

SOURCE WATER PROTECTION

THE PROJECT IS LOCATED NEAR THE M.H. EBY'S DRINKING WATER SOURCE AREA. IN ORDER TO MINIMIZE THE POTENTIAL FOR A RELEASE IN THIS SENSITIVE AREA, PROJECT RELATED REFUELING AND MAINTENANCE ACTIVITIES SHALL NOT BE PERFORMED FROM STA 538+20.71 RIGHT TO STA 545+24.16 RIGHT SPILLS OF FUELS, OILS, CHEMICALS OR OTHER MATERIALS WHICH COULD POSE A THREAT TO THE DRINKING WATER SOURCE AREA SHALL BE CLEANED UP IMMEDIATELY BY THE CONTRACTOR. IF THE SPILL IS A REPORTABLE AMOUNT, THE CONTRACTOR SHOULD CONTACT THE JEFFERSON TOWNSHIP FIRE DEPARTMENT AT (614) 879-8265 FOR CLEAN-UP OF THE SPILL.

WATER QUALITY PROTECTION

NO TOXIC OR HAZARDOUS MATERIALS SUCH AS SEALANTS, SOLVENTS, CLEANING AGENTS, WASTE-WATER, FUELS OR DEBRIS OF ANY KIND SHALL BE DISCHARGED TO ANY STREAMS, DRAINAGE COURSES, OR BODIES OF WATER. NO DEBRIS SHALL BE PLACED WITHIN THE 100-YEAR FLOODPLAIN BOUNDARY OF ANY WATERCOURSE.

THE CONTRACTOR SHALL TAKE GREAT CARE TO MINIMIZE THE POTENTIAL TO CONTAMINATE THE PUBLIC DRINKING WATER SUPPLY. ALL PROJECT RELATED REFUELING AND MAINTENANCE ACTIVITIES SHALL BE PERFORMED IN AN ENVIRONMENTALLY RESPONSIBLE MANNER.

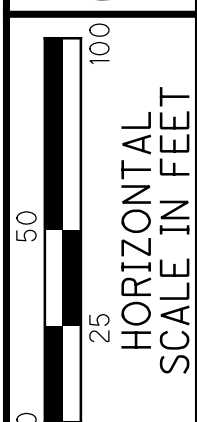
THE CONTRACTOR SHALL TAKE THE APPROPRIATE ACTIONS IN THE EVENT OF A RELEASE AND WILL BE HELD RESPONSIBLE FOR THE CLEAN-UP AND REMEDIATION OF ANY AND ALL SPILLS.

CALCULATED
PRS
CHECKED
SSC

GENERAL NOTES

MAD-70-10.27

12
97



CALCULATED
PEK
CHECKED
PRS

77 TREES TO BE REMOVED
WITHIN CONSTRUCTION LIMITS
BASED ON THE SURVEY BASEMAP
PROVIDED BY ODOT FOR
PROJECT BID

END WORK
STA 52+00.00

BEGIN PROJECT
STA 534+20.00

BEGIN WORK
STA 534+00.00

#4400
DEBNANDALE FARM, LLC

CONST SNYDER LANE CONNECTOR
STA 51+49.80 @ SNYDER LANE CONNECTOR =
STA 10+00.00 @ SNYDER LANE

CONST SR-29

CONST LIMITS

STA 545+94.40 @ SR 29
STA 50+00.00 @ SNYDER LANE CONNECTOR

POT STA 13+81.09

PC STA 14+84.72

#4269
STEVEN E. DURBAN &
JOYCE C. DURBAN

#4175
BERTHA SANTOS &
FRANCISCO CRUZ

#4435
MENNO H. EBY &
KAREN LYNN EBY

#4525
MATTHIAS TOEBBEN, TRUSTEE
HARRY L. MARINEAU, TRUSTEE

PROJECT TREE COUNT
STA 553+00 TO STA 547+00

MAD-70-10.27

13
97

AS BUILT 2-10-2014

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61 TREES TO BE REMOVED
WITHIN CONSTRUCTION LIMITS
BASED ON THE SURVEY BASEMAP
PROVIDED BY ODOT FOR
PROJECT BID



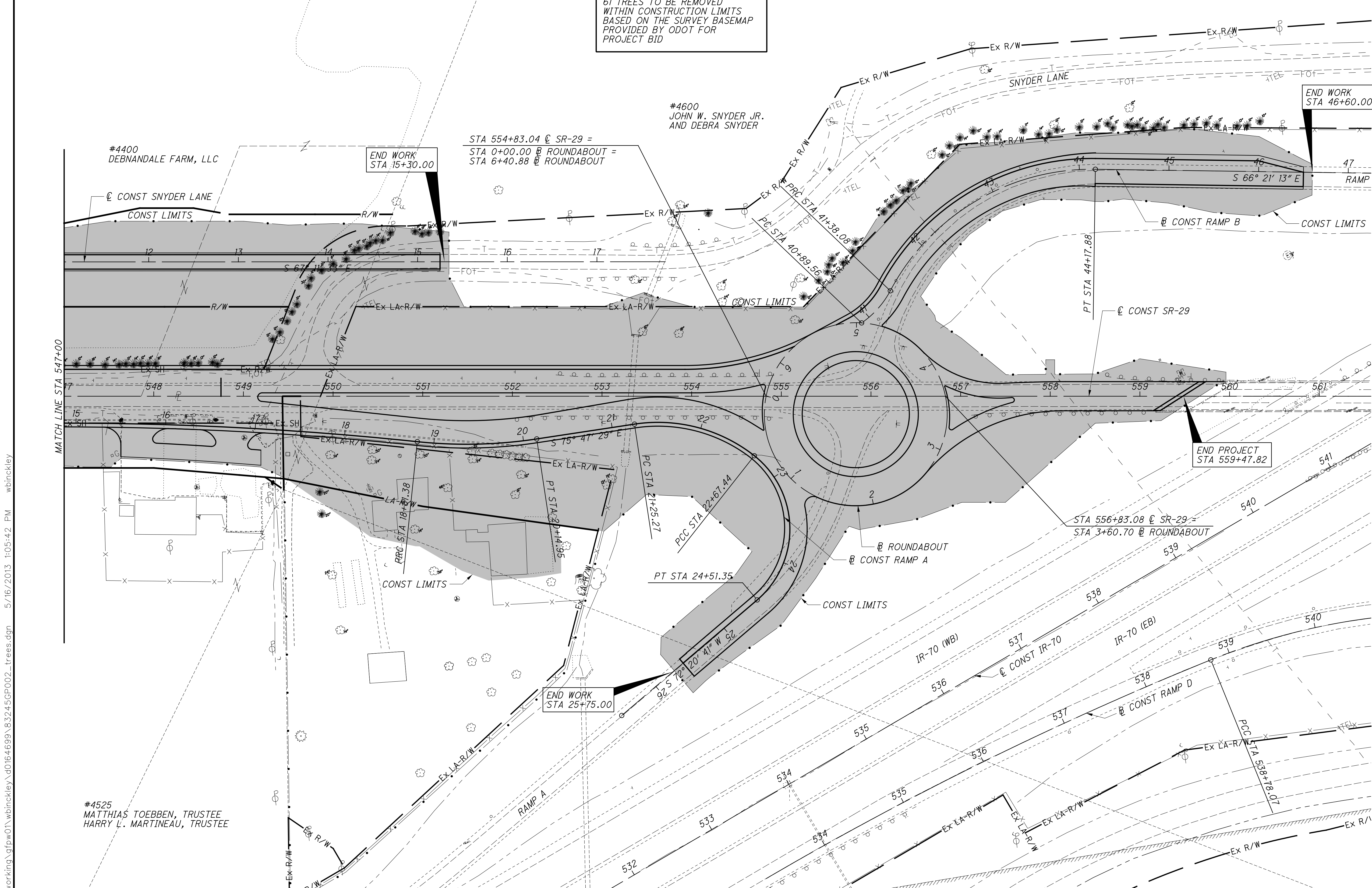
0 25 50 100
HORIZONTAL
SCALE IN FEET

CALCULATED PEK CHECKED PRS

PROJECT TREE COUNT
STA 547+00 TO STA 561+50

MAD-70-10.27

14
97



#4400
DEBNANDALE FARM, LLC

#4600
JOHN W. SNYDER JR.
AND DEBRA SNYDER

#4525
MATTHIAS TOEBBEN, TRUSTEE
HARRY L. MARTINEAU, TRUSTEE

STA 554+83.04 @ SR-29 =
STA 0+00.00 @ ROUNDABOUT =
STA 6+40.88 @ ROUNDABOUT

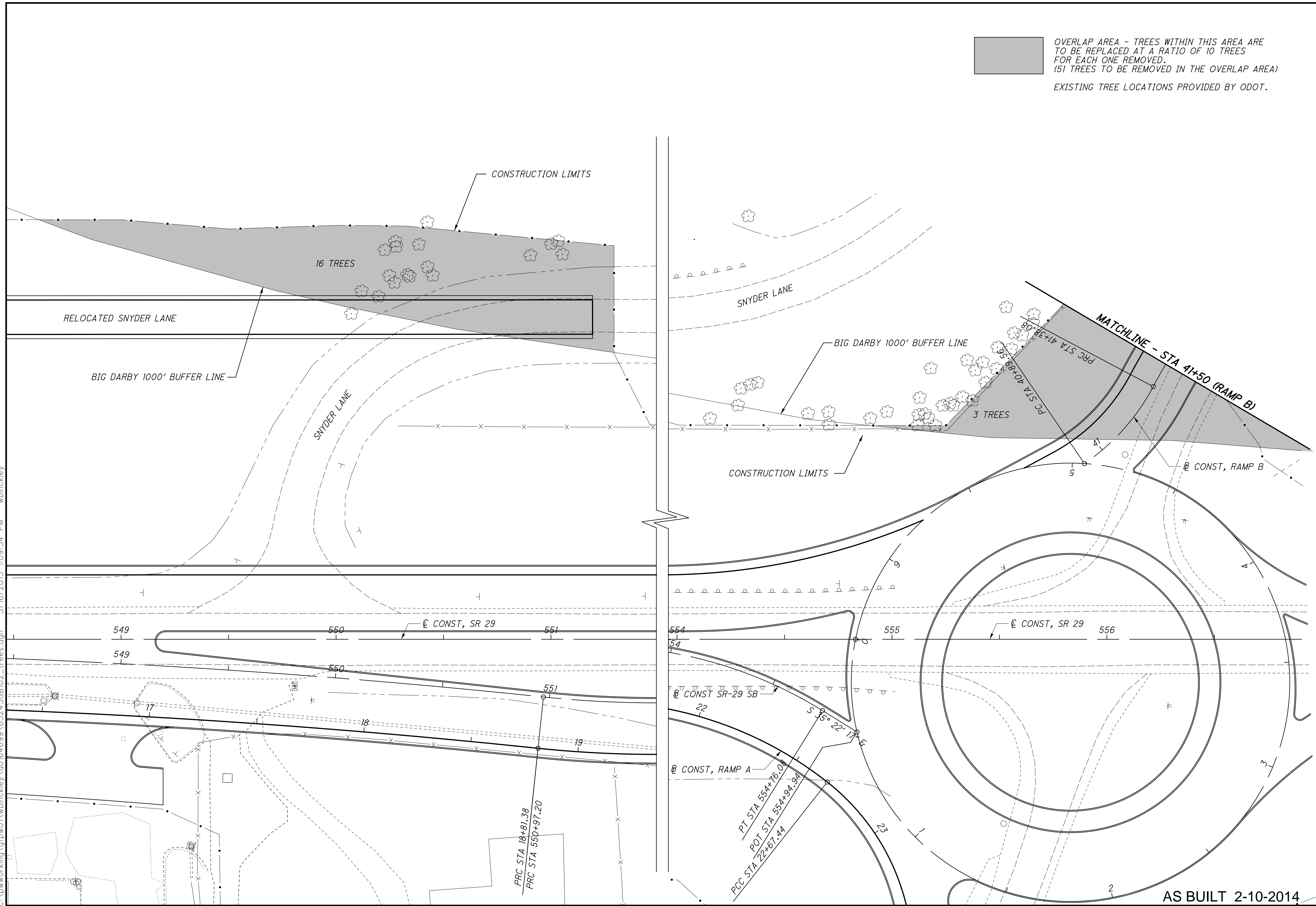
STA 556+83.08 @ SR-29 =
STA 3+60.70 @ ROUNDABOUT

MATCH LINE STA 547+00

AS BUILT 2-10-2014

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OVERLAP AREA - TREES WITHIN THIS AREA ARE TO BE REPLACED AT A RATIO OF 10 TREES FOR EACH ONE REMOVED. (51 TREES TO BE REMOVED IN THE OVERLAP AREA)
 EXISTING TREE LOCATIONS PROVIDED BY ODOT.

CALCULATED PEK
 CHECKED PRS

PROJECT TREE COUNT

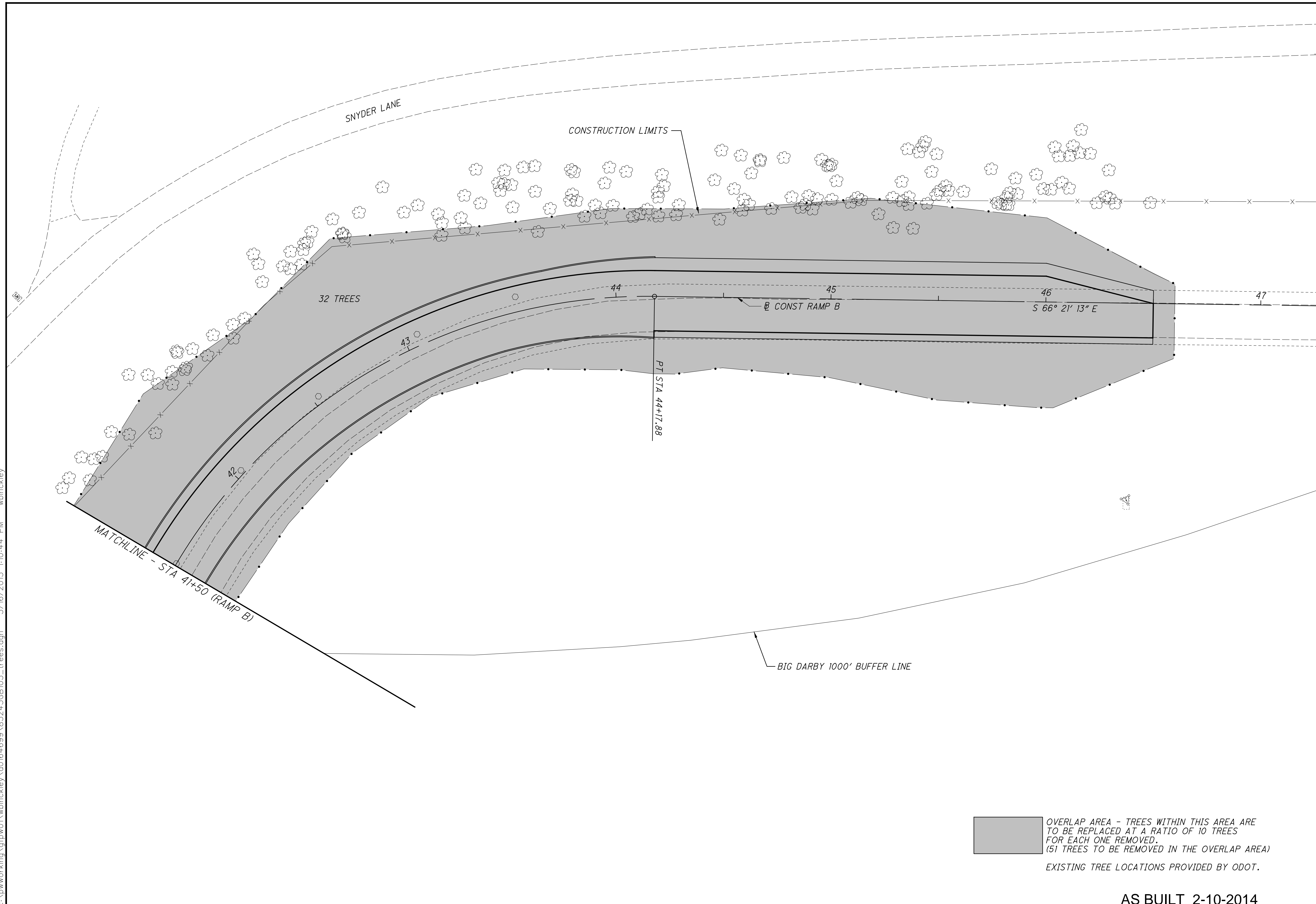
MAD-70-10.27
 15
 97

AS BUILT 2-10-2014

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CALCULATED PRS
CHECKED JFM

HORIZONTAL SCALE IN FEET



OVERLAP AREA - TREES WITHIN THIS AREA ARE TO BE REPLACED AT A RATIO OF 10 TREES FOR EACH ONE REMOVED. (51 TREES TO BE REMOVED IN THE OVERLAP AREA)

EXISTING TREE LOCATIONS PROVIDED BY ODOT.

PROJECT TREE COUNT

MAD-70-10.27

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. THE CONTRACTOR SHALL PROVIDE, ERECT, MAINTAIN AND SUBSEQUENTLY REMOVE SIGNS, SIGN SUPPORTS AND TYPE III BARRICADES, AS DETAILED IN THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, AND AS SHOWN IN THE PLANS.
2. THE CONTRACTOR SHALL INFORM THE DISTRICT OFFICE (740) 833-8000, EIGHTEEN (18) DAYS PRIOR TO THE BEGINNING OF WORK.
3. LENGTH AND DURATION OF LANE CLOSURES AND RESTRICTIONS SHALL BE AT THE APPROVAL OF THE DISTRICT MOT ENGINEER. IT IS THE INTENT TO MINIMIZE THE IMPACT TO THE TRAVELING PUBLIC. LANE CLOSURES OR RESTRICTIONS OVER SEGMENTS OF THE PROJECT IN WHICH NO WORK IS ANTICIPATED WITHIN A REASONABLE TIME FRAME, AS DETERMINED BY THE ENGINEER, SHALL NOT BE PERMITTED. THE LEVEL OF UTILIZATION OF MAINTENANCE OF TRAFFIC DEVICES SHALL BE COMMENSURATE WITH THE WORK IN PROGRESS.
4. NOTICE OF CLOSURE SIGNS, AS DETAILED BELOW, SHALL BE ERECTED BY THE CONTRACTOR AT LEAST ONE WEEK IN ADVANCE OF THE SCHEDULED ROAD OR RAMP CLOSURE. THE SIGNS SHALL BE ERECTED ON THE RIGHT-HAND SIDE OF THE ROAD/RAMP 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 THE POINT OF CLOSURE. THE SIGNS MAY BE ERECTED ANYWHERE ON RAMPS AS LONG AS THEY ARE VISIBLE TO THE MOTORISTS USING THE RAMP. ON ENTRANCE RAMPS, THE SIGN SHALL BE ERECTED WELL IN ADVANCE OF THE MERGE AREA TO AVOID DISTRACTING MOTORISTS.



5. ONLY DURING OFF-PEAK PERIODS (IE, ANY PERIOD OTHER THAN 6-8AM AND 3-6PM) SHALL THE CONTRACTOR INSTALL AND SUBSEQUENTLY RESET ALL TRAFFIC CONTROL NECESSARY FOR THE WORK ZONE FOR EACH CONSTRUCTION PHASE.
6. PRIOR TO OPENING TO TRAFFIC EACH LANE SHALL BE IN A SAFE, PASSABLE CONDITION. ALL TRANSVERSE JOINTS SHALL EXTEND ACROSS THE FULL LANE AND SHOULDER WIDTH AND EACH LANE SHALL BE FREE FROM UNEVEN LONGITUDINAL JOINTS. THE CONTRACTOR SHALL PROVIDE ASPHALT WEDGES FOR TRANSVERSE JOINTS WHEREVER THERE ARE PAVEMENT ELEVATION DIFFERENCES.

ALL WORK AND TRAFFIC CONTROL DEVICES SHALL BE IN ACCORDANCE WITH CMS 614 AND OTHER APPLICABLE PORTIONS OF THE SPECIFICATIONS, AS WELL AS THE OHIO MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES.

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON EB SR-29 DETOUR)

A MINIMUM OF ONE LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 45 CONSECUTIVE CALENDAR DAYS, WHEN EB SR-29 TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 21. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$1000 FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON RAMP A DETOUR)

A MINIMUM OF ONE LANE OF TRAFFIC SHALL BE MAINTAINED ON RAMP A AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 10 CONSECUTIVE CALENDAR DAYS, WHEN THE RAMP TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 22. THIS CLOSURE SHALL TAKE PLACE DURING PHASE-2 CONSTRUCTION AS SHOWN IN THE PLANS. A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$2000 FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

ITEM 614, MAINTAINING TRAFFIC (TIME LIMITATION ON RAMP B DETOUR)

A MINIMUM OF ONE LANE OF TRAFFIC SHALL BE MAINTAINED ON RAMP B AT ALL TIMES, EXCEPT FOR A PERIOD NOT TO EXCEED 14 CONSECUTIVE CALENDAR DAYS, WHEN THE RAMP TRAFFIC MAY BE DETOURED AS SHOWN ON SHEET 23. THIS CLOSURE SHALL BE CONCURRENT WITH THE CONSTRUCTION WORK ON SR-29 BETWEEN RAMPS A & B AND THE BRIDGE OVER I-70 (PHASE 3A & 3B WORK). A DISINCENTIVE SHALL BE ASSESSED IN THE AMOUNT OF \$7000 FOR EACH CALENDAR DAY THE ROADWAY REMAINS CLOSED TO TRAFFIC BEYOND THE SPECIFIED LIMIT.

SEQUENCE OF CONSTRUCTION

BEFORE ANY ROADWAY CONSTRUCTION BEGINS THE CONTRACTOR SHALL CONSTRUCT THE TRANSVERSE DRAINAGE CROSSING AT APPROXIMATE STATION 537+25. IT SHALL BE THE CONTRACTOR'S RESPONSIBILITY TO MAINTAIN ADEQUATE DRAINAGE THROUGHOUT ALL PHASES OF CONSTRUCTION. THIS MAY REQUIRE CONSTRUCTION OF TEMPORARY CONDUITS AND/OR TEMPORARY DITCHING. TRAFFIC CONTROL DURING THIS OPERATION SHALL BE AS PER STANDARD DRAWING MT-97.10. ANY LANE RESTRICTIONS CAUSED BY THE TRANSVERSE DRAINAGE CROSSING WORK SHALL BE LIMITED TO BETWEEN THE HOURS OF 8:00AM AND 4:00PM OR 6:00PM AND 6:00AM TO MINIMIZE THE IMPACT TO TRAFFIC.

PHASE 1

TRAFFIC ON SR-29 SHALL BE MAINTAINED ON THE EXISTING LANES. A MINIMUM OF ONE 10' LANE OF TRAFFIC IN EACH DIRECTION SHALL BE MAINTAINED ON SR-29, EXCEPT AS NOTED BELOW. ALL RAMPS SHALL REMAIN OPENED TO TRAFFIC. THE FOLLOWING WORK SHALL BE PERFORMED:

- 1) CONSTRUCT PROPOSED PAVEMENT ON THE SOUTH SIDE OF SR-29 BEHIND PORTABLE CONCRETE BARRIER (PCB) FROM APPROX. STA. 535+30 TO STA. 558+00. RAMP A SHALL REMAIN OPENED TO TRAFFIC.
- 2) RESURFACE THE SOUTH SIDE OF SR-29 (EXISTING EB LANE) DURING OFF-PEAK HOURS (ANY PERIOD OTHER THAN 6-8AM AND 4-6PM) BETWEEN STA. 534+20 AND STA. 540+50. ONE LANE, TWO-WAY TRAFFIC SHALL BE MAINTAINED WITHIN THE ABOVE STATION LIMITS BY USE OF FLAGGERS AND SCD MT-97.12. CONSTRUCT PROPOSED PAVEMENT FROM STA. 534+00 TO STA. 535+30 DURING THIS WORK.
- 3) CONSTRUCT PROPOSED PAVEMENT FOR RIGHT SIDE OF RAMP A.
- 4) PLACE PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B WITHIN THE PROPOSED ROUNDABOUT AREA AS SHOWN ON SHEET 25.
- 5) PERFORM EXCAVATION AND GRADING ON THE NORTH SIDE OF SR-29 OUTSIDE OF THE EXISTING PAVEMENT FROM STA. 542+00 TO APPROX. STA. 558+00. CLEAR ZONE DISTANCES SHALL BE MAINTAINED TO ELIMINATE THE NEED FOR PCB'S FOR THIS WORK.
- 6) SHIFT TRAFFIC TO THE LEFT (SOUTH) SIDE OF RAMP B AND CONSTRUCT PROPOSED PAVEMENT TO THE RIGHT BEHIND PCB.
- 7) CONSTRUCT PROPOSED SNYDER LN. EXTENSION TO THE NORTH OF EXISTING SNYDER LN. ACCESS TO EXISTING SNYDER LN. SHALL BE MAINTAINED AT ALL TIMES. FLAGGERS AND SCD MT-97.10.00 MAY BE USED DURING CONSTRUCTION OF "TIE-IN" BETWEEN THE PROPOSED AND EXISTING SNYDER LN.
- 8) RESTRICT RAMP D TO 11' WIDTH PLUS SHOULDERS AS SHOWN AND PLACE PROPOSED PAVEMENT FOR WIDENING.

PHASE 2

CLOSE EB SR-29 FROM APPROX. STA. 530+00 TO STA. 555+00 FOR A PERIOD NOT TO EXCEED 45 CONSECUTIVE CALENDAR DAYS AND DETOUR EB SR-29 TRAFFIC PER SHEET 21. SHIFT WB SR-29 TRAFFIC WITHIN THE ABOVE STATION LIMITS TO THE SOUTH SIDE AS SHOWN AND PERFORM THE FOLLOWING WORK. ACCESS TO SNYDER LN. SHALL BE MAINTAINED AT ALL TIMES ON THE PROPOSED EXTENSION.

- 1) CONSTRUCT PROPOSED PAVEMENT ON THE NORTH SIDE OF SR-29 FROM STA. 534+00 TO APPROX. STA. 553+50.
- 2) FINISH PAVEMENT RESURFACING ON THE NORTH SIDE OF SR-29 (EXISTING WB LANES) FROM STA. 534+20 TO STA. 540+50.
- 3) SHIFT RAMP B TRAFFIC TO THE NORTH (RIGHT) SIDE AND CONSTRUCT PROPOSED PAVEMENT AND PORTION OF THE ROUNDABOUT TO THE LEFT.
- 4) CLOSE RAMP A FOR A PERIOD NOT TO EXCEED 10 CONSECUTIVE CALENDAR DAYS AND CONSTRUCT PROPOSED PAVEMENT. PLACE ROAD CLOSED SIGNS AND BARRICADES AS SHOWN. TRAFFIC SHALL BE DETOURED AS SHOWN ON SHEET 22.
- 5) REMOVE EXISTING SNYDER LN.

PHASE 3A & 3B

THE DETOUR PLAN AND SIGNS SHOWN ON SHEET 21 SHALL REMAIN IN PLACE DURING PHASES 3A & 3B. TRAFFIC ON SR-29 BETWEEN STA. 534+00 AND STA. 553+00 SHALL BE MAINTAINED IN ITS FINAL CONDITION. CLOSE RAMP B FOR A PERIOD NOT TO EXCEED FOURTEEN (14) CONSECUTIVE CALENDAR DAYS AND DETOUR TRAFFIC PER SHEET 23.

PHASE 3A

CLOSE THE NORTH SIDE OF SR-29 BETWEEN STA. 555+00 AND STA. 559+00 FOR A PERIOD NOT TO EXCEED 7 CONSECUTIVE CALENDAR DAYS. MAINTAIN ONE WB LANE ON THE SOUTH SIDE WITHIN THE ABOVE STATIONS. EB SR-29 SHALL BE MAINTAINED TO RAMP A ONLY. THE FOLLOWING WORK SHALL BE PERFORMED:

- 1) PLACE FINAL SURFACE COURSE ON SR-29 BETWEEN STA. 534+00 AND STA. 552+75 AND APPLY PROPOSED PAVEMENT MARKINGS PER SIGNING AND PAVEMENT MARKINGS PLAN SHEETS.
- 2) CONSTRUCT PROPOSED PAVEMENT IN THE EXISTING WB SR-29 LANES BETWEEN STA. 556+35 AND STA. 559+00.
- 3) CONSTRUCT REMAINING PAVEMENT ON RAMP B.

PHASE 3B

THIS PHASE SHALL IMMEDIATELY FOLLOW PHASE 3A. CLOSE THE SOUTH SIDE OF EXISTING SR-29 BETWEEN APPROX. STA. 555+00 AND STA. 559+00 FOR A PERIOD NOT TO EXCEED 7 CONSECUTIVE CALENDAR DAYS. MAINTAIN ONE WB LANE ON THE NORTH SIDE WITHIN THE ABOVE STATIONS. WB SR-29 SHALL USE THE PROPOSED ROUNDABOUT TO ACCESS WB SR-29 AND IR-70 EB RAMP. EB SR-29 SHALL BE MAINTAINED TO RAMP A ONLY. THE FOLLOWING WORK SHALL BE PERFORMED:

- 1) CONSTRUCT REMAINING PROPOSED PAVEMENT ON SR 29 AS SHOWN.
- 2) REMOVE TEMPORARY PAVEMENT WITHIN THE CIRCLE OF THE ROUNDABOUT AND PLACE PROPOSED CURBS/TRUCK APRONS.
- 3) FINISH PROPOSED ISLAND BETWEEN STA. 554+00 AND 554+80
- 4) FINISH REMAINING PAVEMENT REMOVAL ON RAMP A.
- 5) CONSTRUCT REMAINING PAVEMENT ON RAMP B AND ERECT PROPOSED SIGN TRUSS.

TRENCH FOR WIDENING

TRENCH EXCAVATION FOR BASE WIDENING SHALL BE ONLY ON ONE SIDE OF THE PAVEMENT AT A TIME. THE OPEN TRENCH SHALL BE ADEQUATELY MAINTAINED AND PROTECTED WITH DRUMS OR BARRICADES AT ALL TIMES. PLACEMENT OF PROPOSED SUBBASE AND BASE MATERIAL SHALL FOLLOW AS CLOSELY AS POSSIBLE BEHIND EXCAVATION OPERATIONS. THE LENGTH OF WIDENING TRENCH WHICH IS OPEN AT ANY ONE TIME SHALL BE HELD TO A MINIMUM AND SHALL AT ALL TIMES BE SUBJECT TO APPROVAL OF THE ENGINEER.

OVERNIGHT TRENCH CLOSING

THE BASE WIDENING SHALL BE COMPLETED TO A DEPTH OF NO MORE THAN 5 INCHES BELOW THE EXISTING PAVEMENT BY THE END OF EACH WORK DAY. NO TRENCH SHALL BE LEFT OPEN OVERNIGHT EXCEPT FOR A SHORT LENGTH (25 FEET OR LESS) OF A WORK SECTION AT THE END OF THE TRENCH. IN CASE WORK MUST BE SUSPENDED BECAUSE OF INCLEMENT WEATHER OR OTHER REASONS, THE TRENCH FOR THE UNCOMPLETED BASE WIDENING SHALL BE BACKFILLED AT THE DIRECTION OF THE ENGINEER.

DUST CONTROL

THE CONTRACTOR SHALL FURNISH AND APPLY WATER FOR DUST CONTROL AS DIRECTED BY THE ENGINEER.

ITEM 614, WORK ZONE SPEED LIMIT SIGN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN, COVER DURING SUSPENSION OF WORK, AND SUBSEQUENTLY REMOVE WORK ZONE SPEED LIMIT (R2-1) (45 SPEED LIMIT) SIGNS AND SUPPORTS WITHIN THE WORK LIMITS ON SR-29 IN ACCORDANCE WITH THE FOLLOWING REQUIREMENTS:

THE CONTRACTOR SHALL COVER OR REMOVE ANY EXISTING SPEED LIMIT SIGNS WITHIN THE REDUCED SPEED ZONE(S). THESE SIGNS SHALL BE RESTORED DURING SUSPENSION OR TERMINATION OF THE REDUCED SPEED LIMIT. THE EXPENSE OF COVERING OR REMOVAL AND RESTORATION OF EXISTING SPEED LIMIT OR MINIMUM SPEED LIMIT SIGNS SHALL BE INCLUDED IN THE PAY ITEM FOR THE WORK ZONE SPEED LIMIT SIGNS.

THE WORK ZONE SPEED LIMIT SIGNS MAY BE ERECTED OR UNCOVERED NO MORE THAN FOUR HOURS BEFORE THE ACTUAL START OF WORK THAT CAUSES THE WARRANTING CONDITION(S) TO OCCUR. THE SIGNS SHALL BE REMOVED OR COVERED NO LATER THAN FOUR HOURS FOLLOWING REMOVAL OF THE WARRANTING CONDITION(S), OR SOONER AS DIRECTED BY THE ENGINEER. TEMPORARY SIGN COVERING AND UNCOVERING DUE TO TEMPORARY REMOVAL OF WARRANTING CONDITION(S) SHALL BE GUIDED BY THE FOUR HOUR LIMITATIONS STATED ABOVE.

THE CONTRACTOR SHALL ERECT A WORK ZONE SPEED LIMIT SIGN IN ADVANCE OF THE WARRANTING CONDITION, AS DETAILED IN THE PLANS OR AS DIRECTED BY THE ENGINEER. THE FIRST WORK ZONE SPEED LIMIT SIGN SHALL BE PLACED APPROXIMATELY 500 FEET IN ADVANCE OF THE LANE REDUCTION, SHIFT TAPER, OR OTHER ROADWAY OR SHOULDER RESTRICTION THAT WARRANTED THE WORK ZONE SPEED ZONE. ON UNDIVIDED HIGHWAYS THE SIGN SHALL BE MOUNTED ON THE RIGHT SIDE, APPROXIMATELY 250 FEET IN ADVANCE OF SUCH RESTRICTIONS. THE SIGN SHALL BE REPEATED EVERY 1 MILE FOR 55 MPH ZONES AND EVERY ONE-HALF MILE FOR 50 MPH AND 45 MPH ZONES. THESE SIGNS SHALL ALSO BE ERECTED IMMEDIATELY AFTER EACH OPEN ENTRANCE RAMP WITHIN THE ZONE.

THE SPEED LIMIT REDUCTION SHALL BE LIMITED TO ONLY THE PORTION OF THE PROJECT AND THE WORK THAT WARRANTED THE WORK ZONE SPEED LIMIT REDUCTION.

SPEED REDUCTION (SPEED ZONE AHEAD SYMBOL) SIGNS (W3-5) SHALL BE ERECTED IN ADVANCE OF THE SPEED REDUCTION, APPROXIMATELY 500 FEET ON TWO-LANE HIGHWAYS.

A SIGN(S) TO INDICATE THE RESUMPTION OF THE STATUTORY SPEED LIMIT SHALL BE ERECTED AT THE END OF ANY REDUCED SPEED ZONE. THE CONTRACTOR MAY USE SIGNS AND SUPPORTS IN USED, BUT GOOD CONDITION, PROVIDED THE SIGNS MEET CURRENT ODOT SPECIFICATIONS. SIGN FACES SHALL BE RETROREFLECTORIZED WITH TYPE G SHEETING COMPLYING WITH THE REQUIREMENTS OF CMS 730.19.

WORK ZONE SPEED LIMIT SIGNS SHALL BE MOUNTED ON TWO ITEM 630, GROUND MOUNTED SUPPORTS, NO. 3 POSTS, UNLESS MOUNTED ON A TEMPORARY SIGN SUPPORT PER SCD MT 105.10. WORK ZONE SPEED LIMIT AND RELATED SIGN SIZES, PLACEMENT, SUPPORTS, ETC. SHALL BE PER THE ODOT, WITH TWO EXCEPTIONS: 1) EXPRESSWAY SIZE SPEED LIMIT SIGNS MAY BE USED ON FREEWAYS AND EXPRESSWAYS, IF NECESSARY; 2) THE HEIGHT OF SIGNS MOUNTED ON PORTABLE SUPPORTS SHOULD BE THE HEIGHT REQUIRED FOR GROUND-MOUNTED SIGNS BUT SHALL NOT BE MORE THAN 1 FOOT LOWER THAN THE HEIGHT REQUIRED BY THE ODOT, OR AS DIRECTED BY THE ENGINEER. PORTABLE SUPPORTS SHOULD NOT BE USED FOR A DURATION OF MORE THAN 3 DAYS.

WORK ZONE SPEED LIMIT SIGNS AND SUPPORTS WILL BE MEASURED AS THE NUMBER OF SIGN INSTALLATIONS, INCLUDING THE SIGNS AND NECESSARY SUPPORTS. IF A SIGN AND SUPPORT COMBINATION IS REMOVED AND REERECTED AT ANOTHER LOCATION WITHIN THE PROJECT DUE TO CHANGES IN THE SPEED ZONE AS DETAILED IN THE PLANS OR AS DIRECTED BY THE ENGINEER, IT SHALL BE CONSIDERED ANOTHER UNIT.

ITEM 614, BARRIER REFLECTORS AND OBJECT MARKERS

BARRIER REFLECTORS AND/OR OBJECT MARKERS SHALL BE INSTALLED ON ALL PORTABLE BARRIER (PB) USED FOR TRAFFIC CONTROL. BARRIER REFLECTORS, OBJECT MARKERS AND THEIR INSTALLATION SHALL CONFORM TO CMS 626, EXCEPT THAT THE SPACING SHALL BE 50 FEET. AN ESTIMATED QUANTITY OF 132 EACH OF ITEM 614 BARRIER REFLECTOR, TYPE B AND 132 EACH OF ITEM 614 OBJECT MARKER, 2-WAY HAVE BEEN PROVIDED AND CARRIED TO SHEET 20.

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

THIS ITEM SHALL CONSIST OF FURNISHING AND INSTALLING A NON-GATING IMPACT ATTENUATOR. FURNISH AN IMPACT ATTENUATOR FROM THE OFFICE OF ROADWAY ENGINEERING APPROVED LIST FOR WORK ZONE IMPACT ATTENUATORS. THE APPROVED LIST IS AVAILABLE AT THE "ROADWAY STANDARDS: PROPRIETARY ROADSIDE SAFETY DEVICES" WEB PAGE ON THE OFFICE OF ROADWAY ENGINEERING WEBSITE.

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 AGATING 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.

ITEM 614, PORTABLE CHANGEABLE MESSAGE SIGNS, AS PER PLAN

THE CONTRACTOR SHALL FURNISH, INSTALL, MAINTAIN AND REMOVE, WHEN NO LONGER NEEDED, 2 CHANGEABLE MESSAGE SIGNS. 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 DISTANCES OF 650 FEET AND 475 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 SHALL BE DELINEATED ON A PERMANENT BASIS BY AFFIXING CONSPICUITY TAPE CONFORMING TO CMS 614.03, IN A CONTINUOUS LINE ON THE FACE OF THE TRAILER AS SEEN BY ONCOMING ROAD USERS.

THE PROBABLE PCMS LOCATIONS, 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 CONTRACTOR SHALL, AT THE DIRECTION OF THE ENGINEER, RELOCATE THE PCMS TO IMPROVE VISIBILITY OR ACCOMMODATE CHANGED CONDITIONS. WHEN NOT IN USE, THE PCMS SHALL BE TURNED 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 RETROREFLECTIVE 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 ODOT PERSONNEL TO OPERATE AND TROUBLESHOOT THE UNIT, AND TO REVISE SIGN MESSAGES, IF NECESSARY.

(THE CONTRACTOR SHALL IMPLEMENT A SYSTEM WHEREBY CHANGEABLE MESSAGES WILL BE IMPLEMENTED WITHIN 3 HOURS FOLLOWING TELEPHONE NOTIFICATION FROM THE PROJECT ENGINEER TO A DESIGNATED PHONE.)

ALL MESSAGES TO BE DISPLAYED ON THE SIGN WILL BE PROVIDED BY THE ENGINEER. A LIST OF ALL REQUIRED PRE-PROGRAMMED MESSAGES WILL BE GIVEN TO THE CONTRACTOR AT THE PROJECT PRECONSTRUCTION CONFERENCE. THE SIGN SHALL HAVE THE CAPABILITY TO STORE UP TO 99 MESSAGES. MESSAGE MEMORY OR PRE-PROGRAMMED 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 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, DEACTIVATED OR MESSAGES CHANGED AUTOMATICALLY AT DIFFERENT TIMES OF THE DAY FOR DIFFERENT DAYS OF THE WEEK.

(THE PCMS SHALL CONTAIN A CELLULAR TELEPHONE DATALINK WHICH WILL (IN ACTIVE CELLULAR PHONE AREAS) ALLOW REMOTE SIGN ACTIVATION, MESSAGE CHANGES, MESSAGE ADDITIONS AND REVISIONS TO TIME OF DAY PROGRAMS. THE SYSTEM SHALL ALSO PERMIT VERIFICATION OF CURRENT AND PROGRAMMED MESSAGES. ONE REMOTE DATA INPUT DEVICE (LAPTOP COMPUTER PLUS MODEM OR EQUIVALENT) SHALL BE FURNISHED FOR USE BY THE DISTRICT TRAFFIC ENGINEER, OR EQUIVALENT, AND SHALL BE INSURED AGAINST THEFT.)

THE PCMS UNIT SHALL BE MAINTAINED IN GOOD WORKING ORDER BY THE CONTRACTOR IN ACCORDANCE WITH THE PROVISIONS OF CMS 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 DUE TO THE CONTRACTOR'S NONCOMPLIANCE, WILL BE DEDUCTED FROM MONEYS DUE, OR TO BECOME DUE THE CONTRACTOR ON HIS CONTRACT.

THE CONTRACTOR SHALL BE RESPONSIBLE FOR 24-HOUR-PER-DAY OPERATION AND MAINTENANCE OF THESE SIGNS ON THE PROJECT FOR THE DURATION OF THE PHASES WHEN THE PLAN REQUIRES THEIR USE.

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 ODOT INTENDS THAT FLAGGERS BE USED.

IN ADDITION TO THE REQUIREMENTS OF CMS 614 AND THE ODOT, 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.

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 AT THE POINT OF LANE RESTRICTION OR ROAD CLOSURE AND TO MANUALLY CONTROL TRAFFIC MOVEMENTS THROUGH 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.

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. ONCE THE LEO HAS COMPLETED THE DUTIES DESCRIBED ABOVE AND STILL HAS TIME REMAINING ON HIS/HER SHIFT, THE LEO MAY BE ASKED TO PATROL THROUGH THE WORK ZONE (WITH FLASHING LIGHTS OFF) OR BE PLACED AT A LOCATION TO DETER MOTORISTS FROM SPEEDING. 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 HOURS PAID SHALL INCLUDE ANY MINIMUM SHOW-UP TIME REQUIRED BY THE LAW ENFORCEMENT AGENCY INVOLVED.

PERMITTED LANE CLOSURE HOURS (PLCH)

ADDITIONAL TEMPORARY REDUCTIONS IN THE NUMBER OF THROUGH LANES ON I-70 MAY OCCUR EXCEPT DURING THE HOURS AS NOTED IN THE CHART BELOW.

EXISTING NUMBER OF LANES PER DIRECTION	I-70 LANE REDUCTIONS ARE PERMITTED ANYTIME, EXCEPT:			
	LANE REDUCTION	MON TO FRI	SATURDAY	SUNDAY
3	3 to 2	NO RESTRICTION	NO RESTRICTION	NO RESTRICTION
3	3 to 1	6A-7P	7A-8P	7A-10P

ITEM 614, MAINTAINING TRAFFIC (LANES OPEN DURING HOLIDAYS OR SPECIAL EVENTS)

NO WORK SHALL BE PERFORMED AND THREE (3) LANES PER DIRECTION ON I-70, AT LEAST ONE (1) LANE ON SR-29 AND ALL RAMPS SHALL BE OPEN TO TRAFFIC DURING THE FOLLOWING DESIGNATED HOLIDAYS OR EVENTS:

CHRISTMAS	FOURTH OF JULY
NEW YEARS	LABOR DAY
MEMORIAL DAY	THANKSGIVING

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 (6:00 AM OR 12:00N) MONDAY
MONDAY	12:00N FRIDAY THROUGH (6:00 AM OR 12:00N) TUESDAY
TUESDAY	12:00N MONDAY THROUGH (6:00 AM OR 12:00N) WEDNESDAY
WEDNESDAY	12:00N TUESDAY THROUGH (6:00 AM OR 12:00N) THURSDAY
THURSDAY	12:00N WEDNESDAY THROUGH (6:00 AM OR 12:00N) FRIDAY
THURSDAY (THANKSGIVING ONLY)	12:00N WEDNESDAY THROUGH (6:00 AM OR 12:00N) MONDAY
FRIDAY	12:00N THURSDAY THROUGH (6:00 AM OR 12:00N) MONDAY
SATURDAY	12:00N FRIDAY THROUGH (6:00 AM OR 12:00N) MONDAY

NO EXTENSIONS OF TIME SHALL BE GRANTED FOR DELAYS IN MATERIAL DELIVERIES, UNLESS SUCH DELAYS ARE INDUSTRY-WIDE, OR FOR LABOR STRIKES, UNLESS SUCH STRIKES ARE AREA-WIDE.

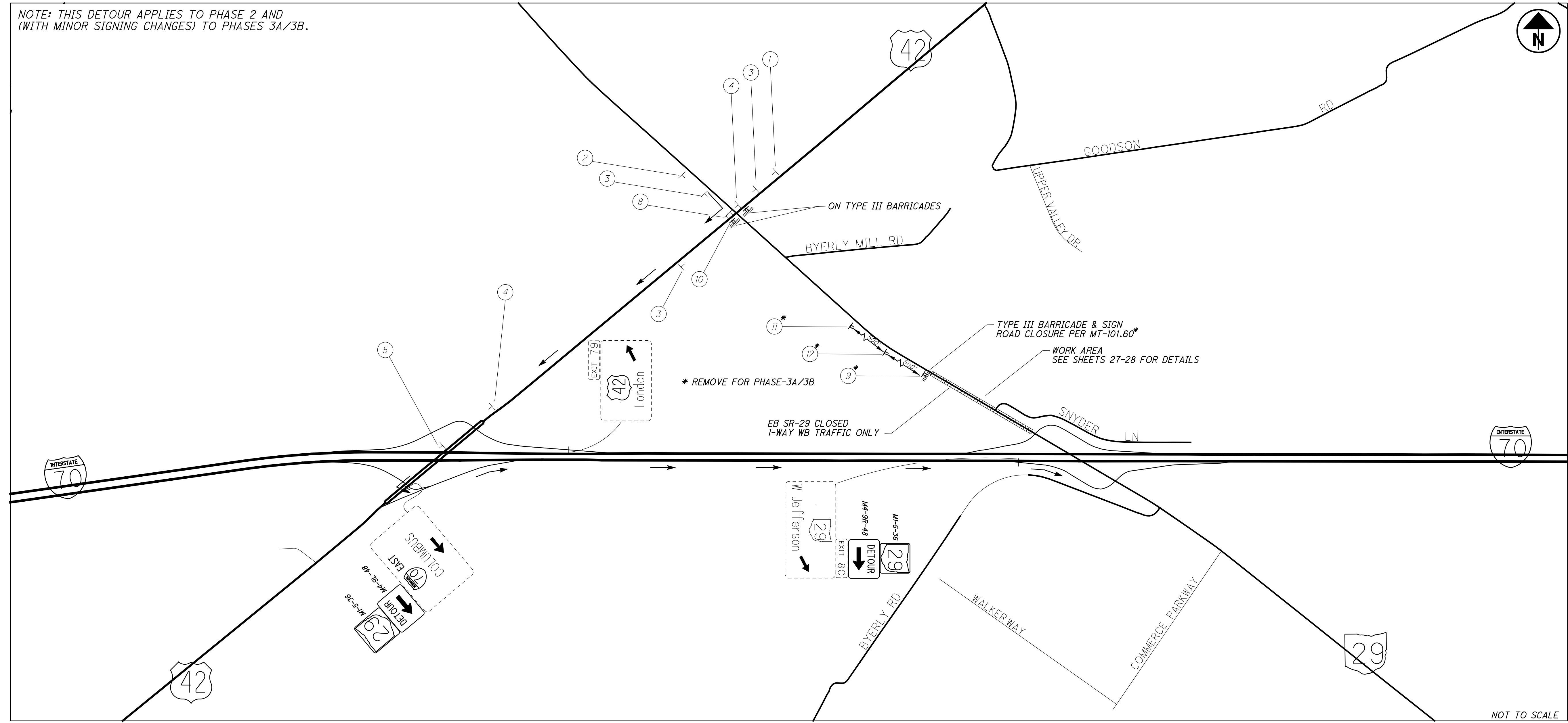
SHOULD THE CONTRACTOR FAIL TO MEET ANY OF THESE REQUIREMENTS, THE CONTRACTOR SHALL BE ASSESSED A DISINCENTIVE IN THE AMOUNT OF \$75 FOR EACH MINUTE THE ABOVE DESCRIBED LANE CLOSURE RESTRICTIONS ARE VIOLATED.

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MAINTENANCE OF TRAFFIC NOTES

MAD-70-10.27

NOTE: THIS DETOUR APPLIES TO PHASE 2 AND (WITH MINOR SIGNING CHANGES) TO PHASES 3A/3B.



<p>1</p> <p>W20-1-36</p>	<p>2</p> <p>W20-3-36</p>	<p>3</p> <p>SR-29 EAST CLOSED AT US-42 NO ACCESS TO I-70 <i>(SPECIAL)</i> <DISPLAY IN PHASE 2></p>	<p>4</p> <p>SR-29 EAST CLOSED AT I-70 NO ACCESS TO I-70E <i>(SPECIAL)</i> <DISPLAY IN PHASE 3A/3B></p>	<p>5</p> <p>EAST 29 DETOUR ↑ M3-2-24 M1-5-24 M4-9c</p>	<p>6</p> <p>EAST 29 DETOUR ← M3-2-24 M1-5-24 M4-9L-36</p>	<p>7</p> <p>EAST 29 DETOUR → M3-2-24 M1-5-24 M4-9R-36</p>	<p>8</p> <p>EAST 29 DETOUR → M3-2-24 M1-5-24 M4-9R-36</p>
<p>9</p> <p>ROAD CLOSED R11-2*</p>	<p>10</p> <p>ROAD CLOSED LOCAL TRAFFIC ONLY DETOUR R11-3 M4-10R</p>	<p>11</p> <p>ROAD CLOSED 1000FT W20-3-36*</p>	<p>12</p> <p>ROAD CLOSED 500FT W20-3-36*</p>				

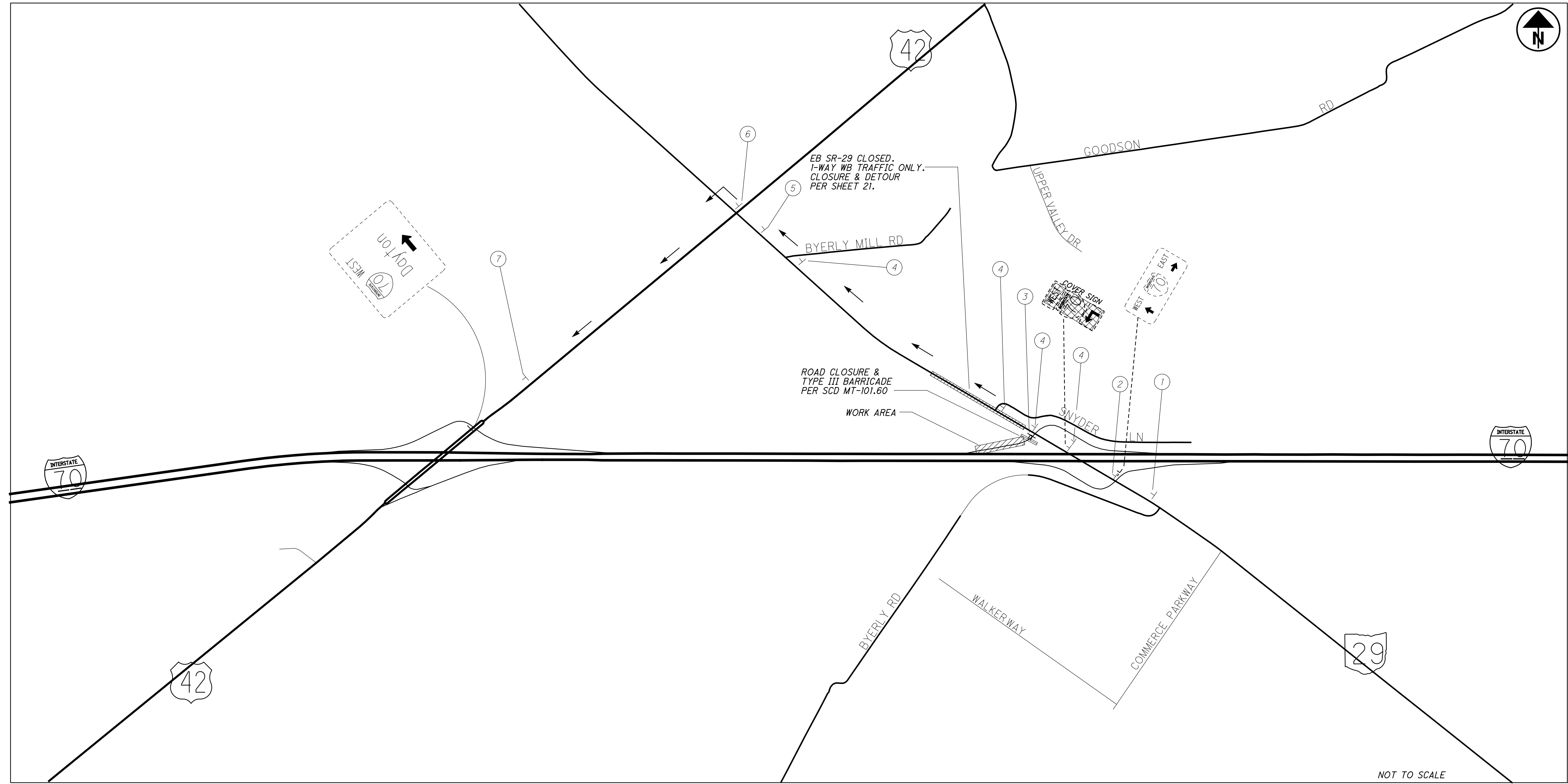
DETOUR MAP FOR EB SR-29 CLOSURE

MAD-70-10.27

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DETOUR MAP FOR SR-29 TO WB IR-70 RAMP CLOSURE

MAD-70-10.27

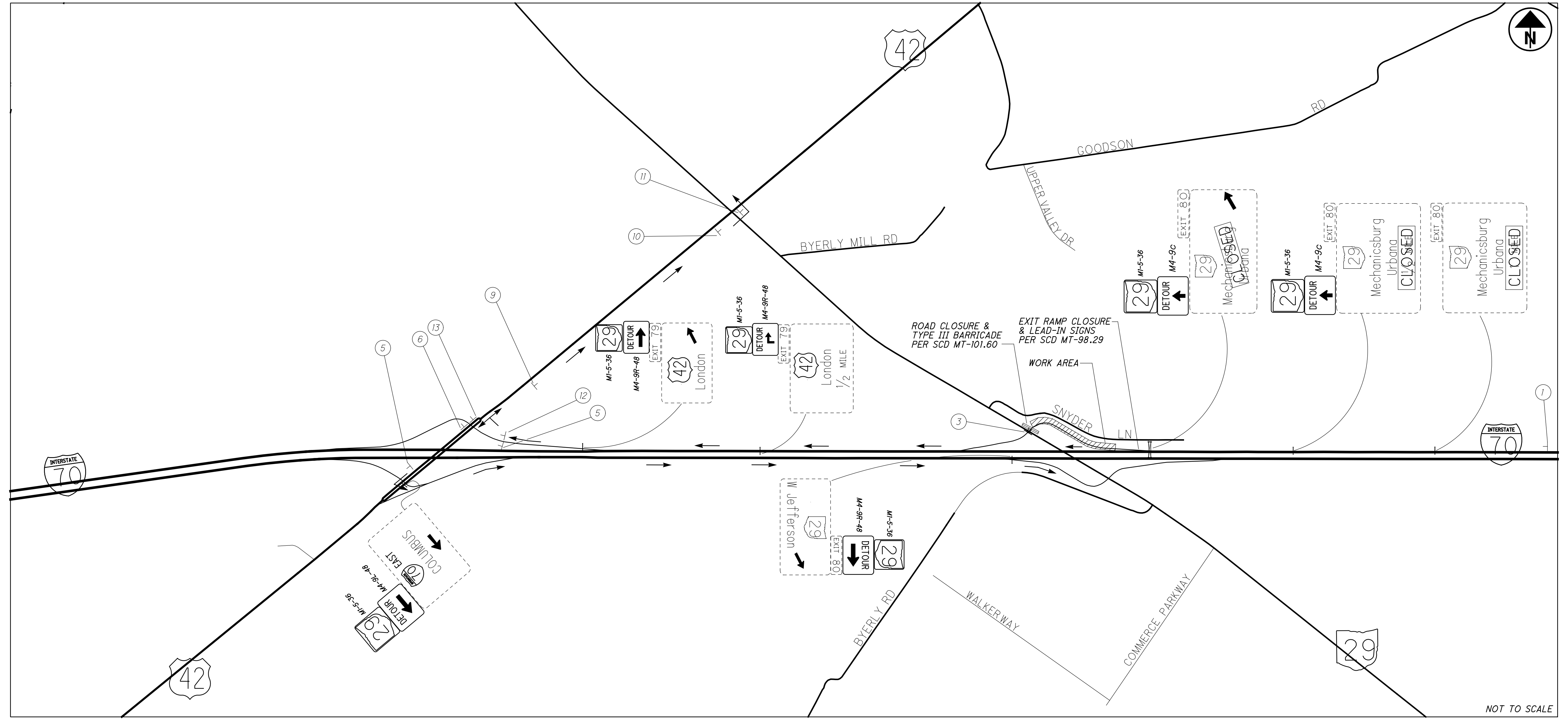


- 1 ROAD WORK AHEAD
W20-1-36
- 2 RAMP TO I-70W
CLOSED
FOLLOW DETOUR
(SPECIAL)
- 3 ROAD
CLOSED
DETOUR
- 4 WEST
INTERSTATE
70
DETOUR
↑
M3-4-24
M1-1-24
M4-9c
- 5 WEST
INTERSTATE
70
DETOUR
↶
M3-4-24
M1-1-24
M4-9L-48
- 6 WEST
INTERSTATE
70
DETOUR
↶
M3-4-24
M1-1-24
M4-9L-36
- 7 WEST
INTERSTATE
70
DETOUR
↷
M3-4-24
M1-1-24
M4-9R-36
- 8 WEST
INTERSTATE
70
DETOUR
↷
M3-4-24
M1-1-24
M4-9R-36

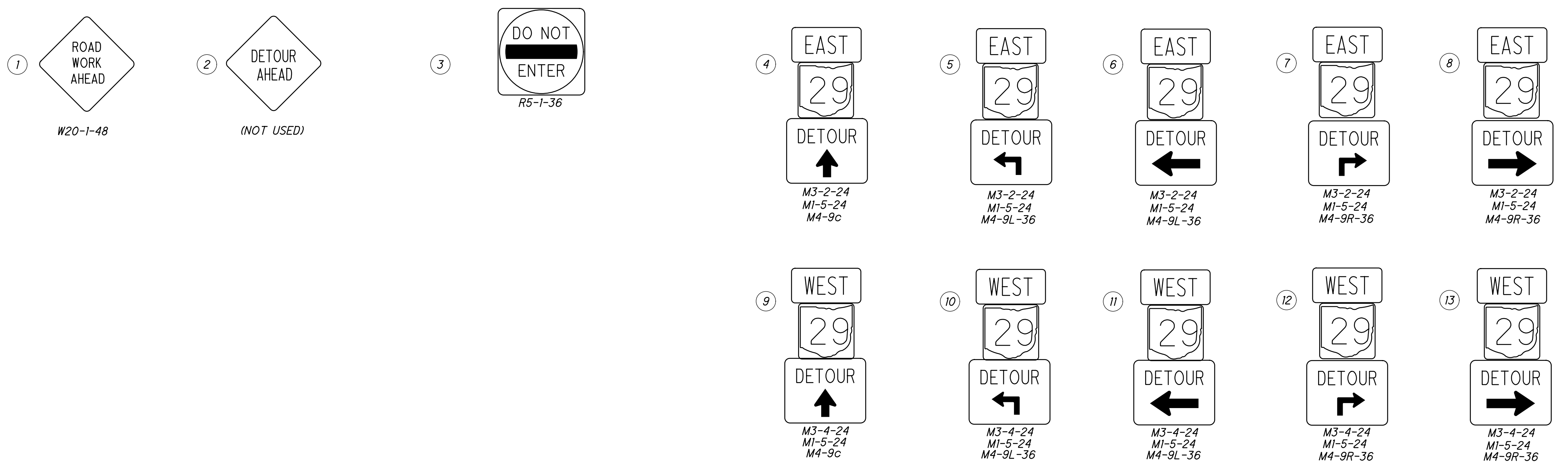
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DETOUR MAP FOR WB IR-70 TO SR-29 RAMP CLOSURE

MAD-70-10.27



NOT TO SCALE



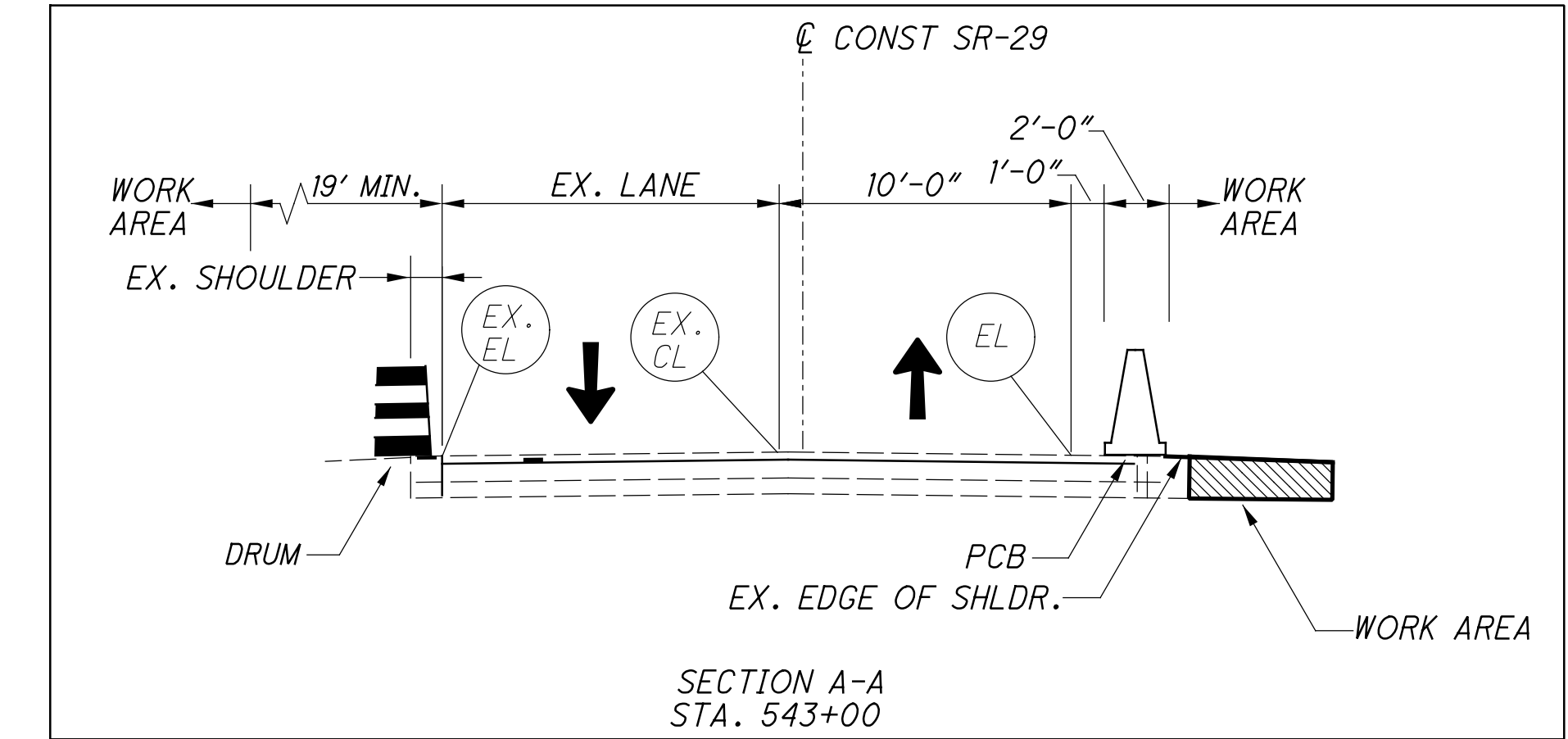
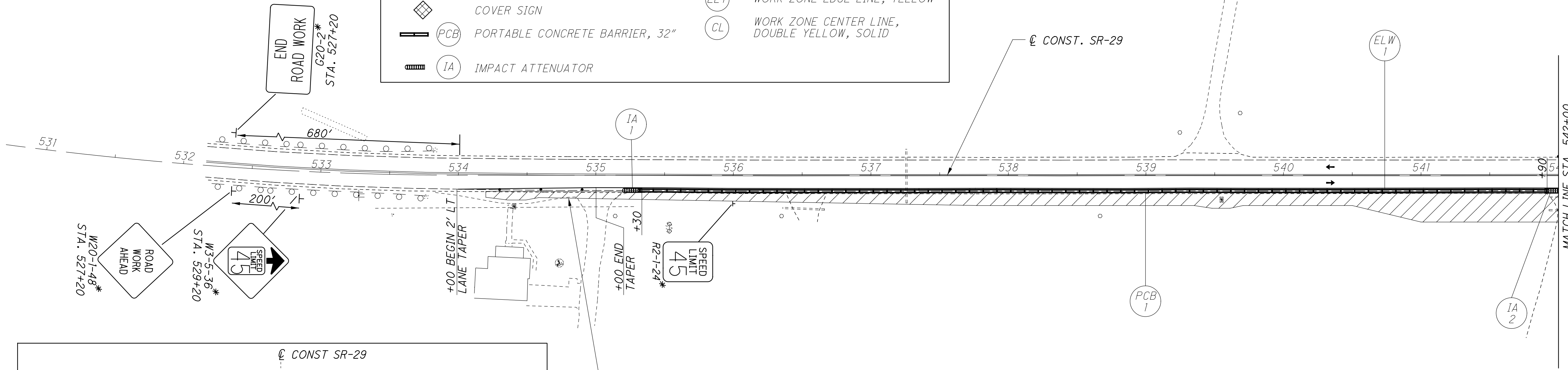
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* SIGNS TO REMAIN, ALL PHASES

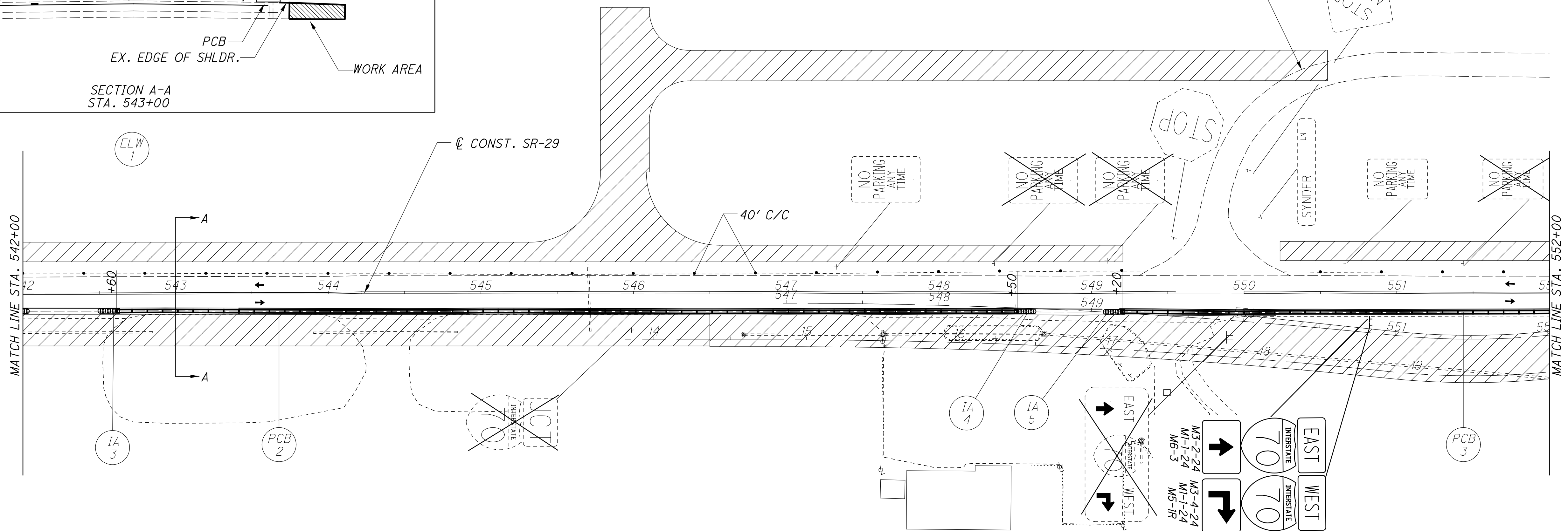
LEGEND

	EXISTING SIGN, TO REMAIN		WORK AREA
	EXISTING SIGN, TO BE REMOVED		DRUMS, SPACING AS NOTED
	PROPOSED SIGN		WORK ZONE EDGE LINE, WHITE
	REMOVE AND RE-ERECT SIGN		WORK ZONE EDGE LINE, YELLOW
	COVER SIGN		WORK ZONE CENTER LINE, DOUBLE YELLOW, SOLID
	PORTABLE CONCRETE BARRIER, 32"		
	IMPACT ATTENUATOR		



CONSTRUCT PAVEMENT FROM STA. 534+00 TO STA. 535+30 DURING PAVEMENT RESURFACING WORK, USING SCD MT-97.12 & FLAGGERS.

- CONSTRUCT TIE-IN USING FLAGGERS PER SCD-97.10
- MAINTAIN ACCESS TO SNYDER LANE.



CALCULATED AT CHECKED JFM

0 20 40 80
HORIZONTAL SCALE IN FEET

**MAINTENANCE OF TRAFFIC
PHASE 1**

MAD-70-10.27

AS BUILT 2-10-2014

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LEGEND

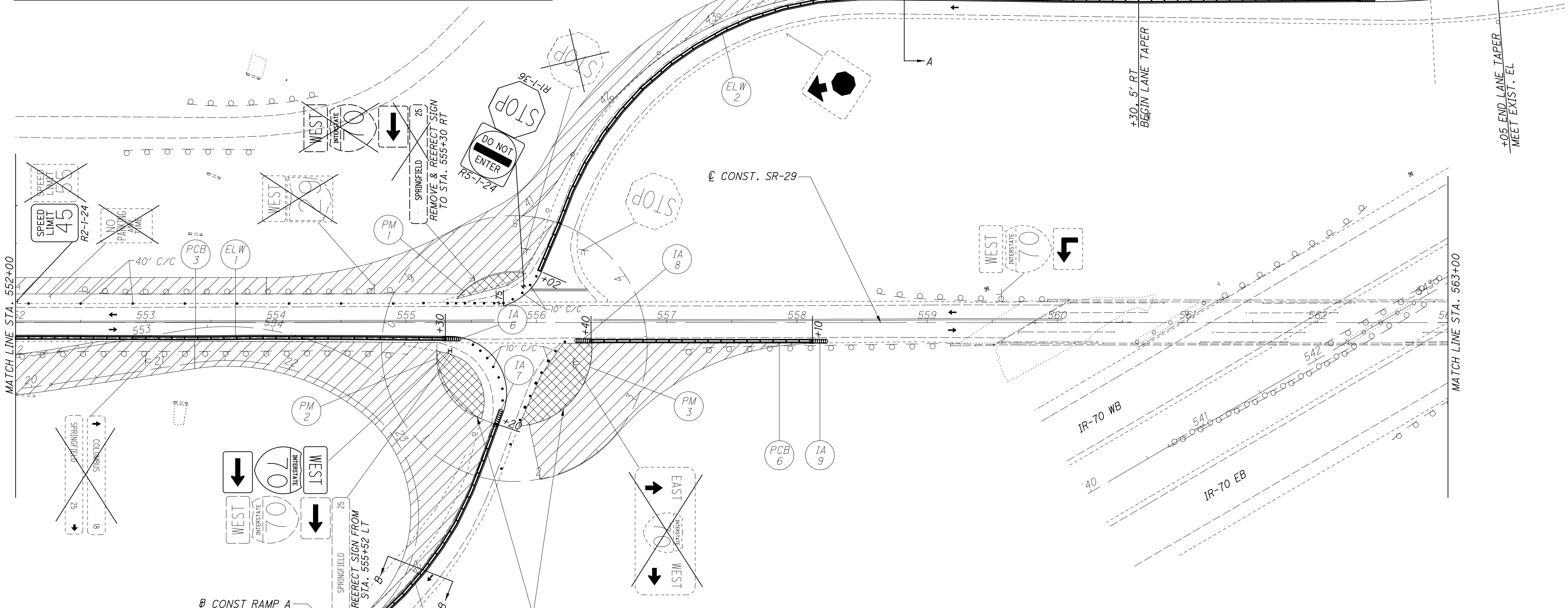
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	PROPOSED SIGN		WORK ZONE EDGE LINE, WHITE
	REMOVE AND RE-ERECT SIGN		WORK ZONE EDGE LINE, YELLOW
	COVER SIGN		WORK ZONE CENTER LINE, DOUBLE YELLOW, SOLID
	PCB PORTABLE CONCRETE BARRIER, 32"		IA IMPACT ATTENUATOR

* SIGNS TO REMAIN THRU PHASE 2

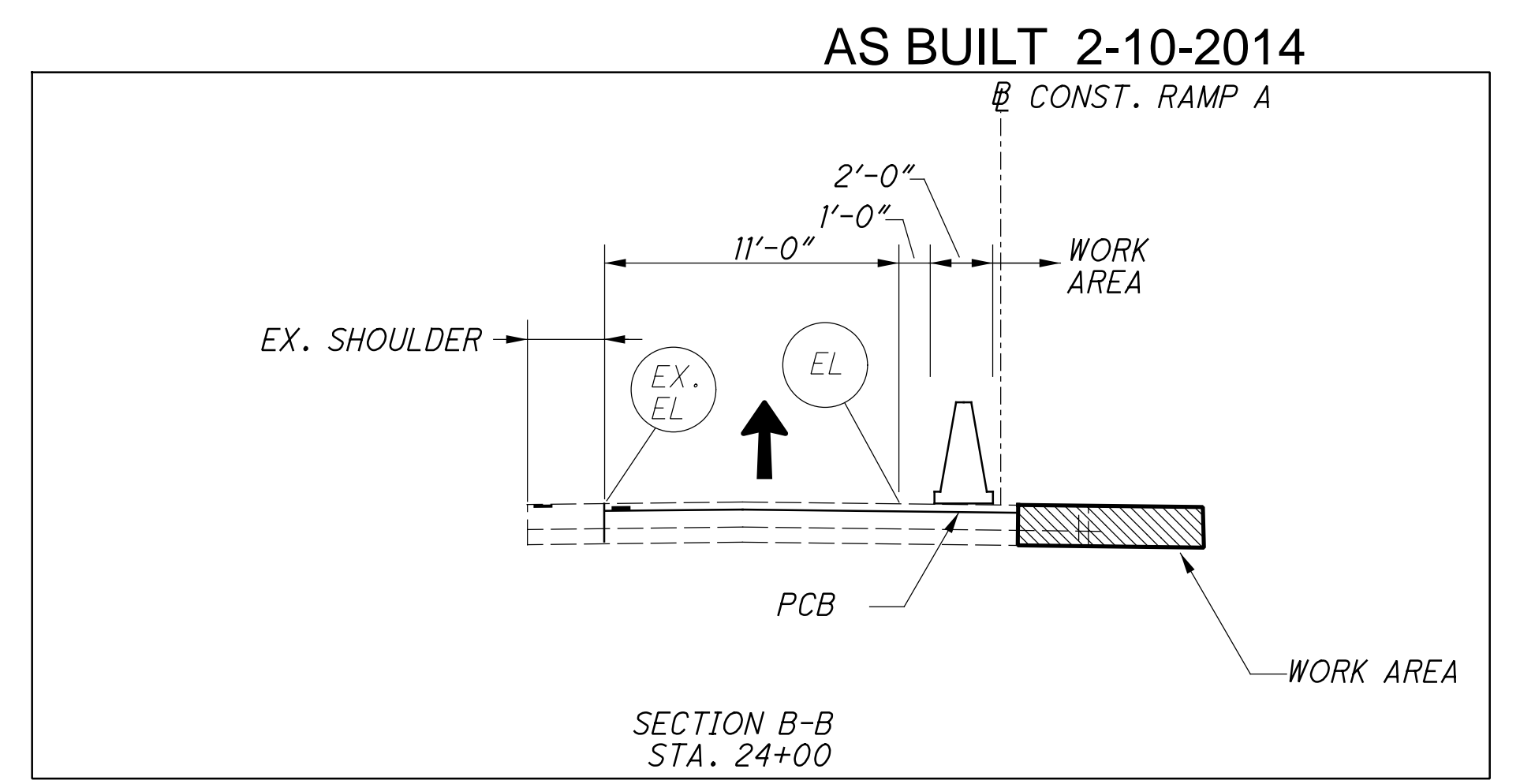
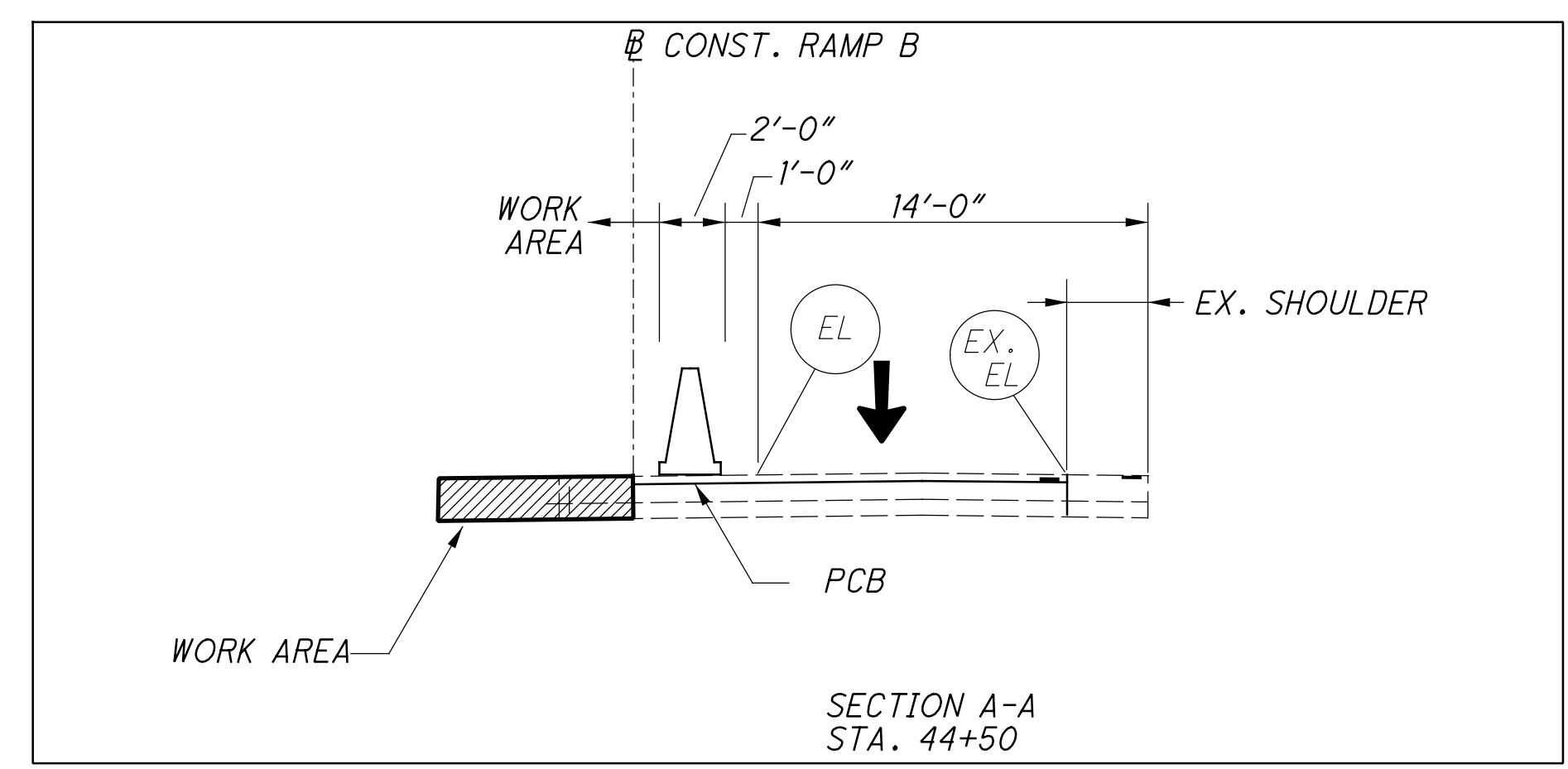
CALCULATED AT CHECKED JFM

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HORIZONTAL SCALE IN FEET



PLACE PAVEMENT FOR MAINTAINING TRAFFIC, CLASS B



**MAINTENANCE OF TRAFFIC
PHASE 1**

MAD-70-10.27

* SIGNS TO REMAIN, ALL PHASES



0 20 40 60 80
HORIZONTAL
SCALE IN FEET

CALCULATED
AT
CHECKED
JFM

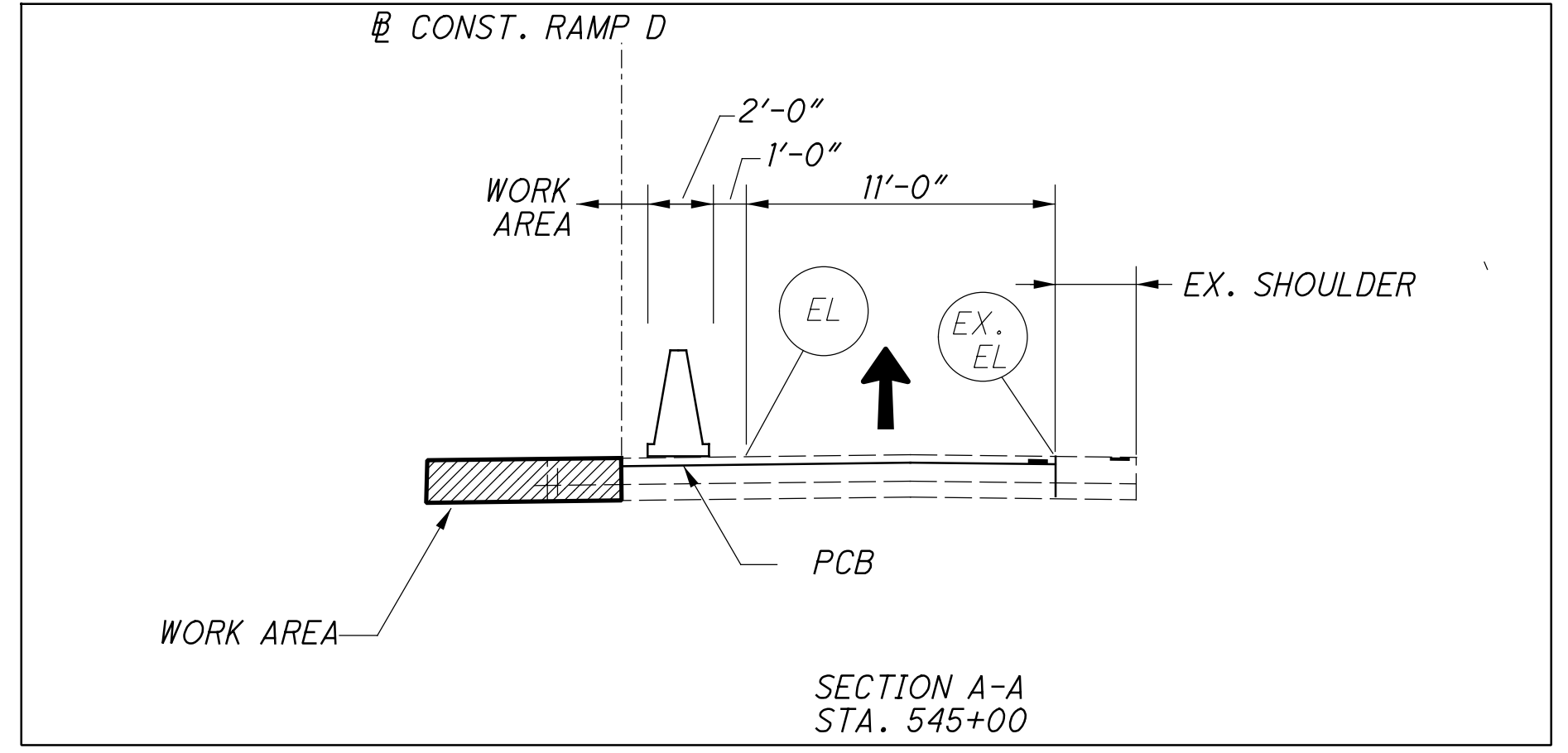
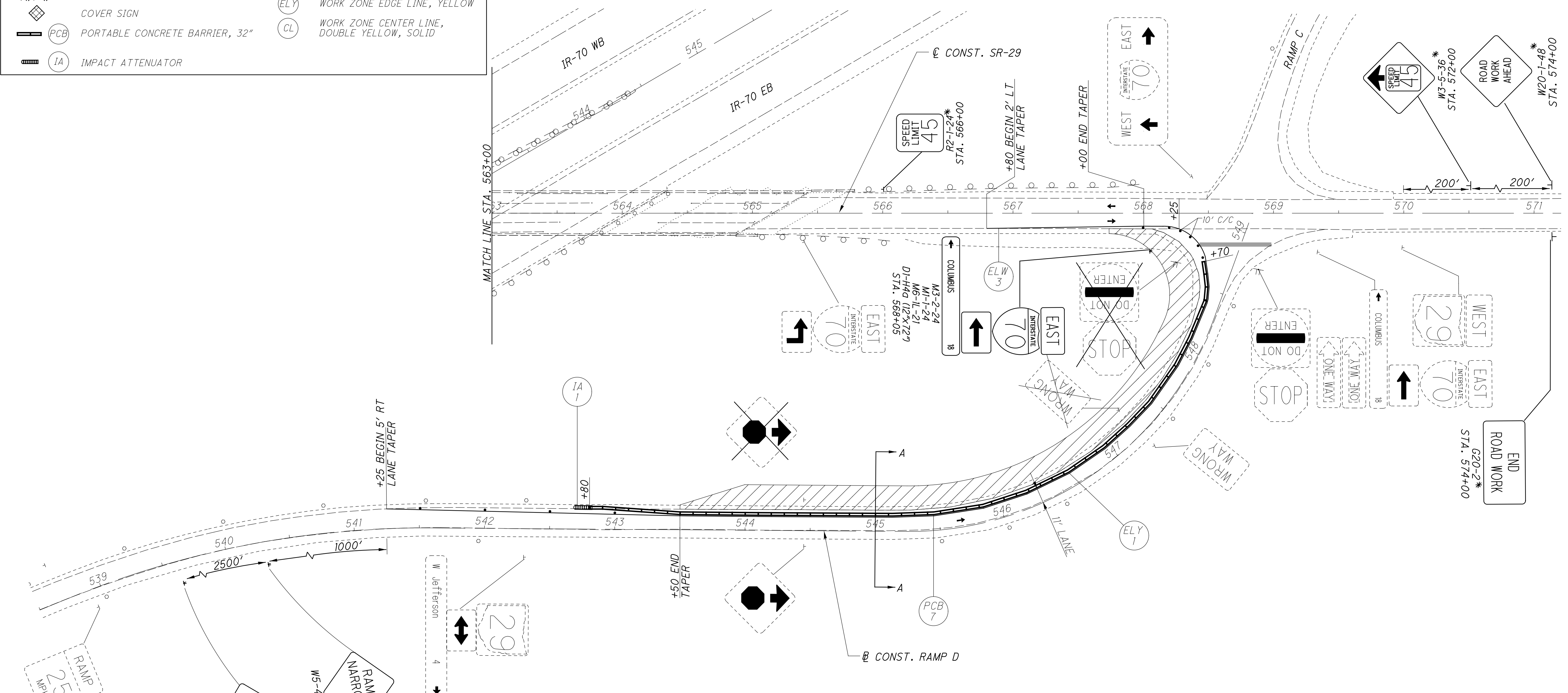
**MAINTENANCE OF TRAFFIC
PHASE 1**

MAD-70-10.27

26
97

LEGEND

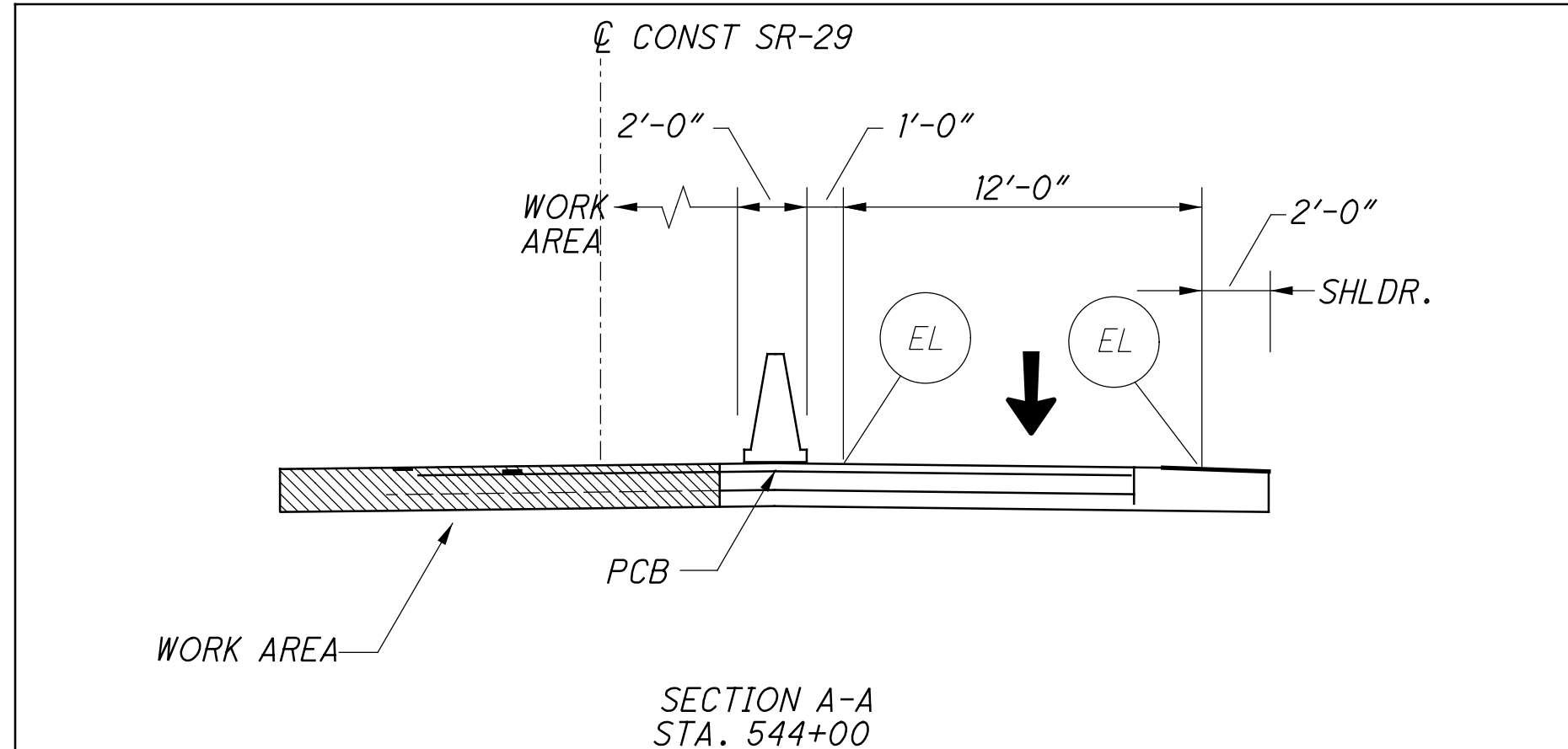
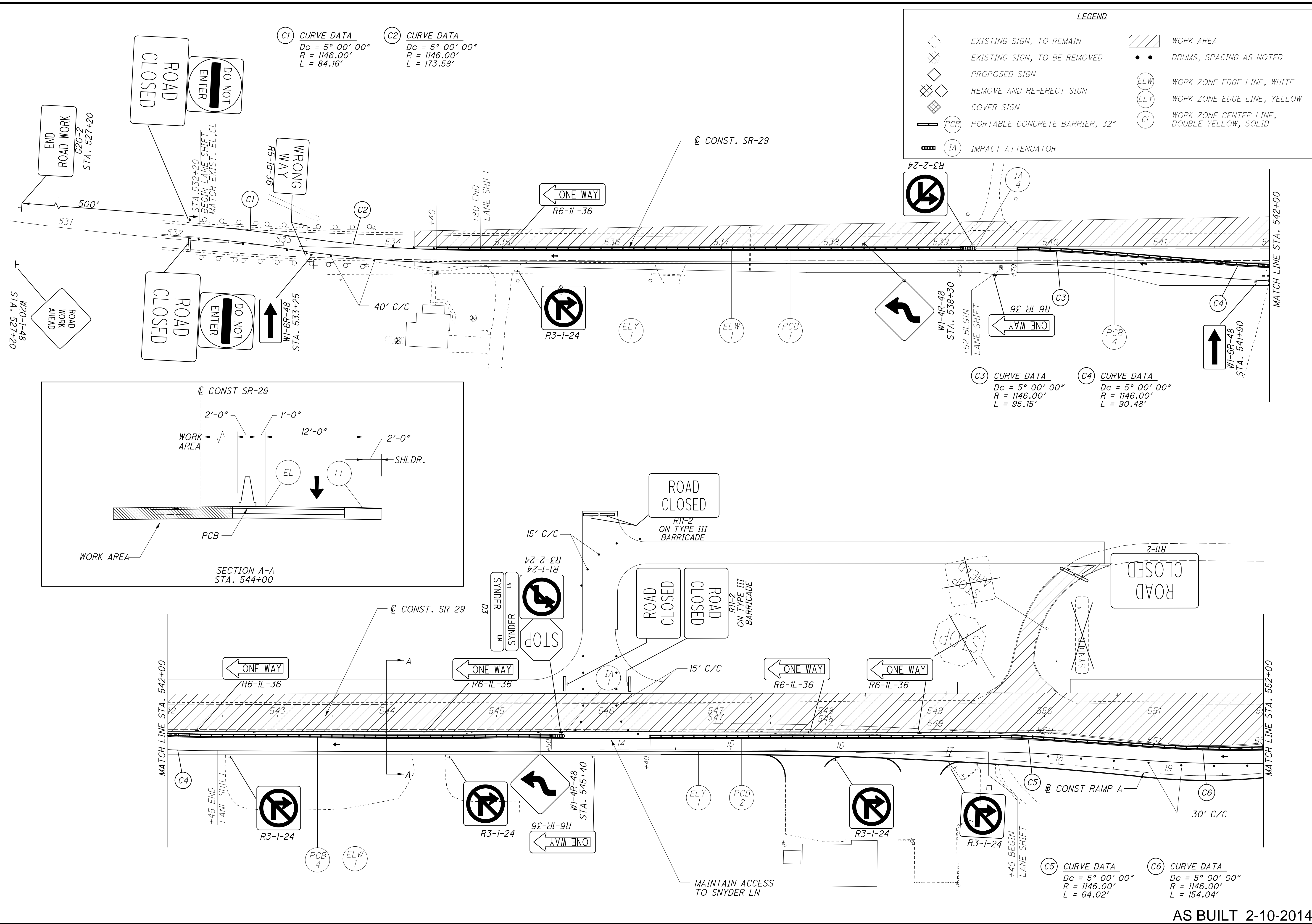
	EXISTING SIGN, TO REMAIN		WORK AREA
	EXISTING SIGN, TO BE REMOVED		DRUMS, SPACING AS NOTED
	PROPOSED SIGN		WORK ZONE EDGE LINE, WHITE
	REMOVE AND RE-ERECT SIGN		WORK ZONE EDGE LINE, YELLOW
	COVER SIGN		WORK ZONE CENTER LINE, DOUBLE YELLOW, SOLID
	PCB PORTABLE CONCRETE BARRIER, 32"		
	IA IMPACT ATTENUATOR		



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**MAINTENANCE OF TRAFFIC
PHASE 2**

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AS BUILT 2-10-2014



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HORIZONTAL SCALE IN FEET
0 20 40 80

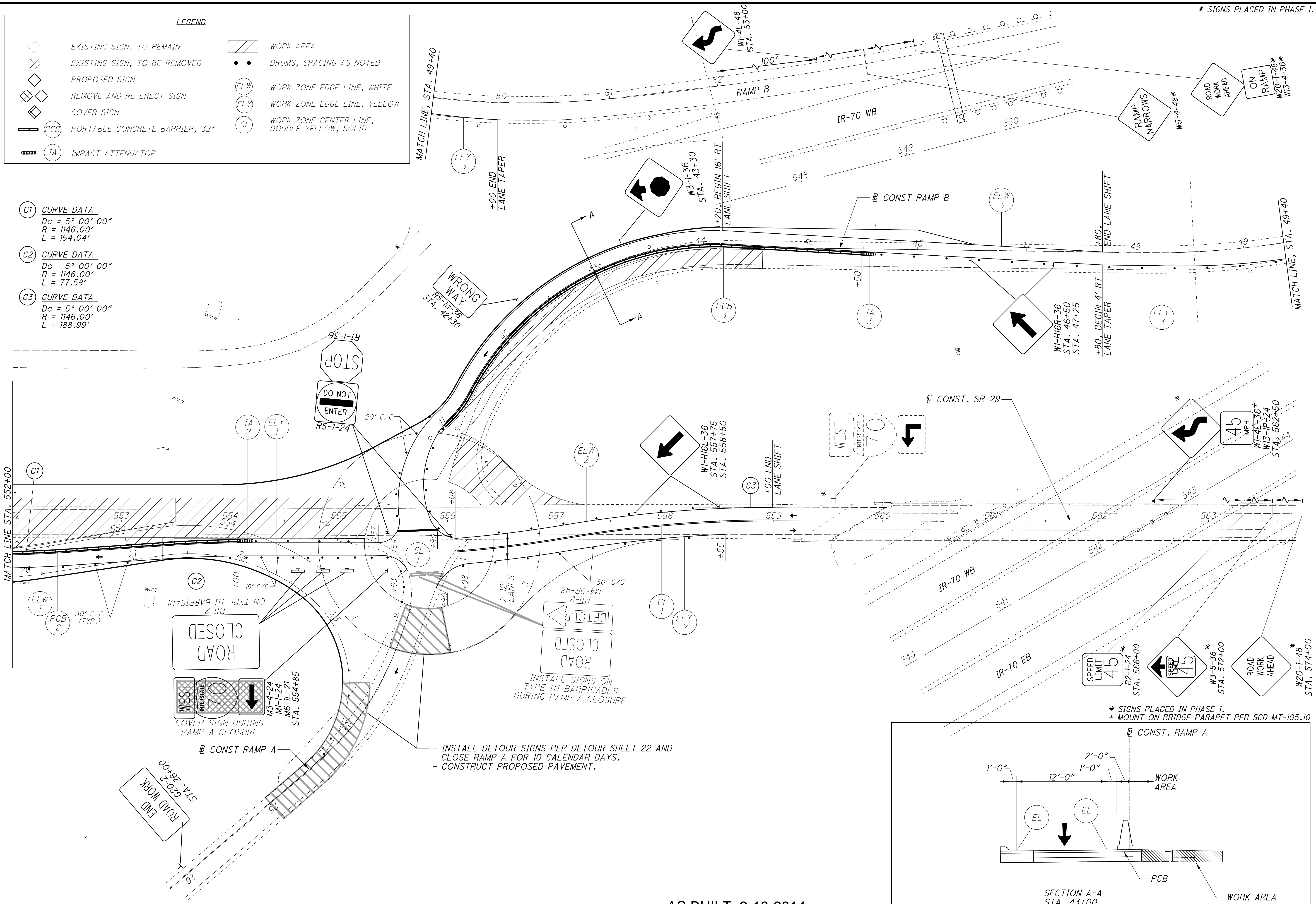
MAINTENANCE OF TRAFFIC PHASE 2

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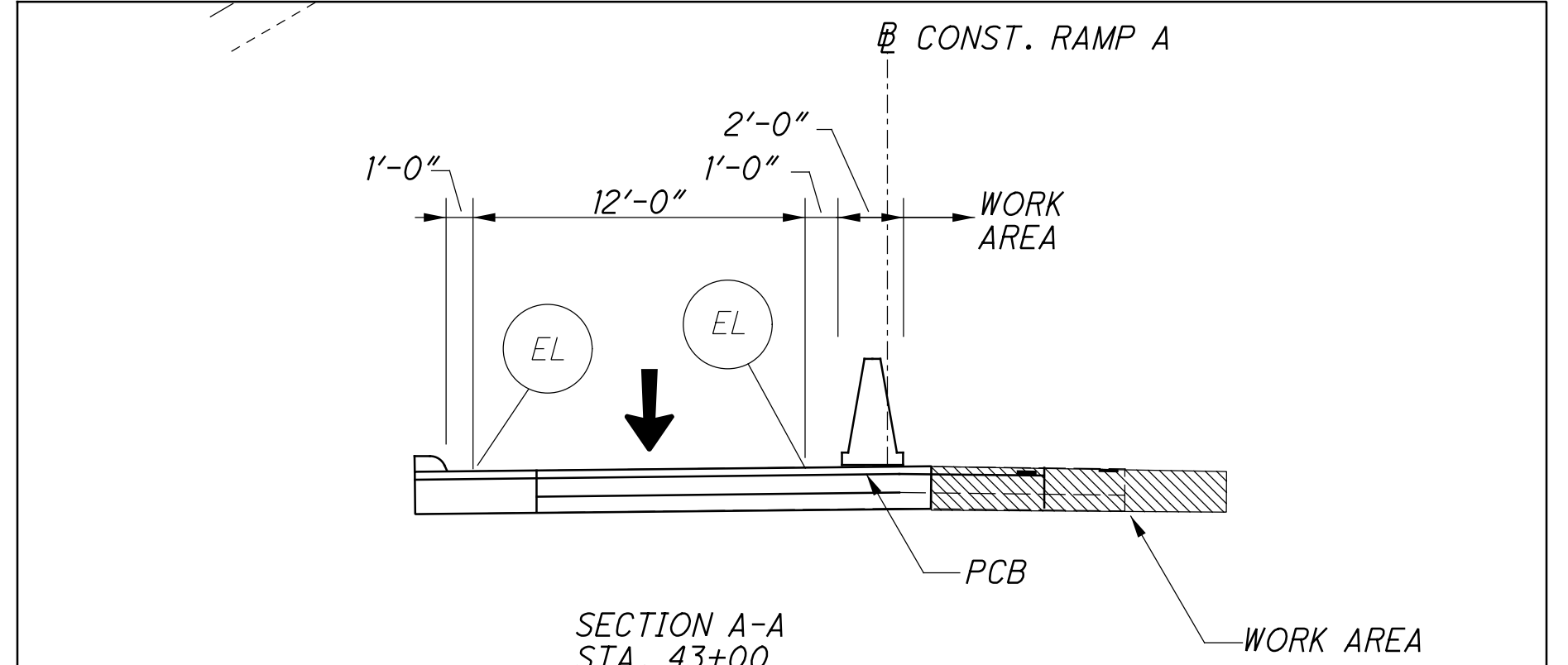
LEGEND

	EXISTING SIGN, TO REMAIN		WORK AREA
	EXISTING SIGN, TO BE REMOVED		DRUMS, SPACING AS NOTED
	PROPOSED SIGN		WORK ZONE EDGE LINE, WHITE
	REMOVE AND RE-ERECT SIGN		WORK ZONE EDGE LINE, YELLOW
	COVER SIGN		WORK ZONE CENTER LINE, DOUBLE YELLOW, SOLID
	PORTABLE CONCRETE BARRIER, 32"		
	IMPACT ATTENUATOR		

- (C1) CURVE DATA**
Dc = 5° 00' 00"
R = 1146.00'
L = 154.04'
- (C2) CURVE DATA**
Dc = 5° 00' 00"
R = 1146.00'
L = 77.58'
- (C3) CURVE DATA**
Dc = 5° 00' 00"
R = 1146.00'
L = 188.99'



- INSTALL DETOUR SIGNS PER DETOUR SHEET 22 AND CLOSE RAMP A FOR 10 CALENDAR DAYS.
- CONSTRUCT PROPOSED PAVEMENT.



AS BUILT 2-10-2014

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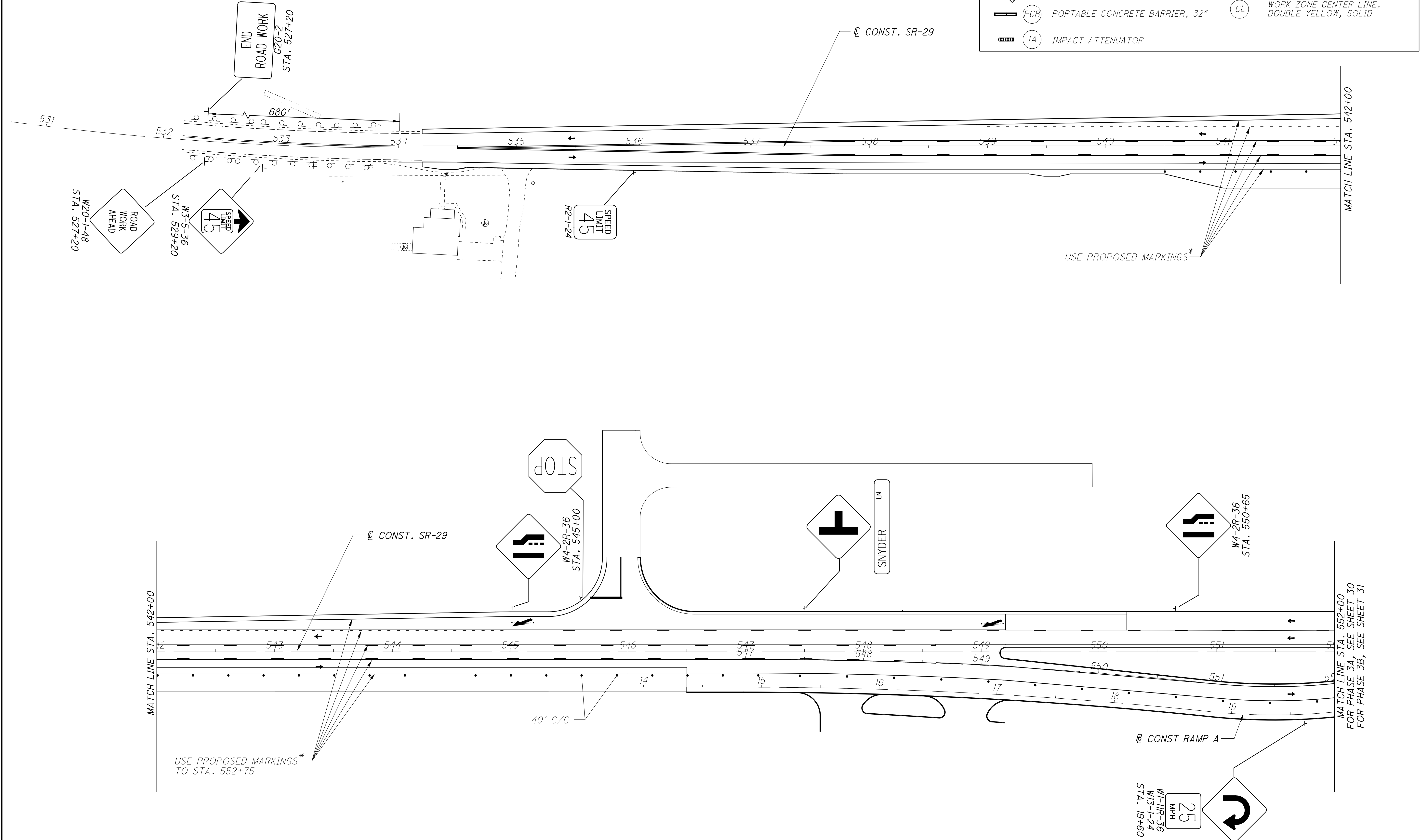
* FOR PROPOSED MARKINGS, SEE SIGNING AND PAVEMENT MARKING PLAN SHEETS 91 TO 96.

LEGEND

	EXISTING SIGN, TO REMAIN		WORK AREA
	EXISTING SIGN, TO BE REMOVED		DRUMS, SPACING AS NOTED
	PROPOSED SIGN		WORK ZONE EDGE LINE, WHITE
	REMOVE AND RE-ERECT SIGN		WORK ZONE EDGE LINE, YELLOW
	COVER SIGN		WORK ZONE CENTER LINE, DOUBLE YELLOW, SOLID
	PORTABLE CONCRETE BARRIER, 32"		
	IMPACT ATTENUATOR		

CALCULATED AT CHECKED JFM

0 20 40 60 80
HORIZONTAL SCALE IN FEET



**MAINTENANCE OF TRAFFIC
PHASE 3A / 3B**

MAD-70-10.27

AS BUILT 2-10-2014

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- CLOSE RAMP B FOR A PERIOD NOT TO EXCEED 14 CONSECUTIVE CALENDAR DAYS.
 - INSTALL DETOUR SIGNS AND DETOUR TRAFFIC PER SHEET 23.

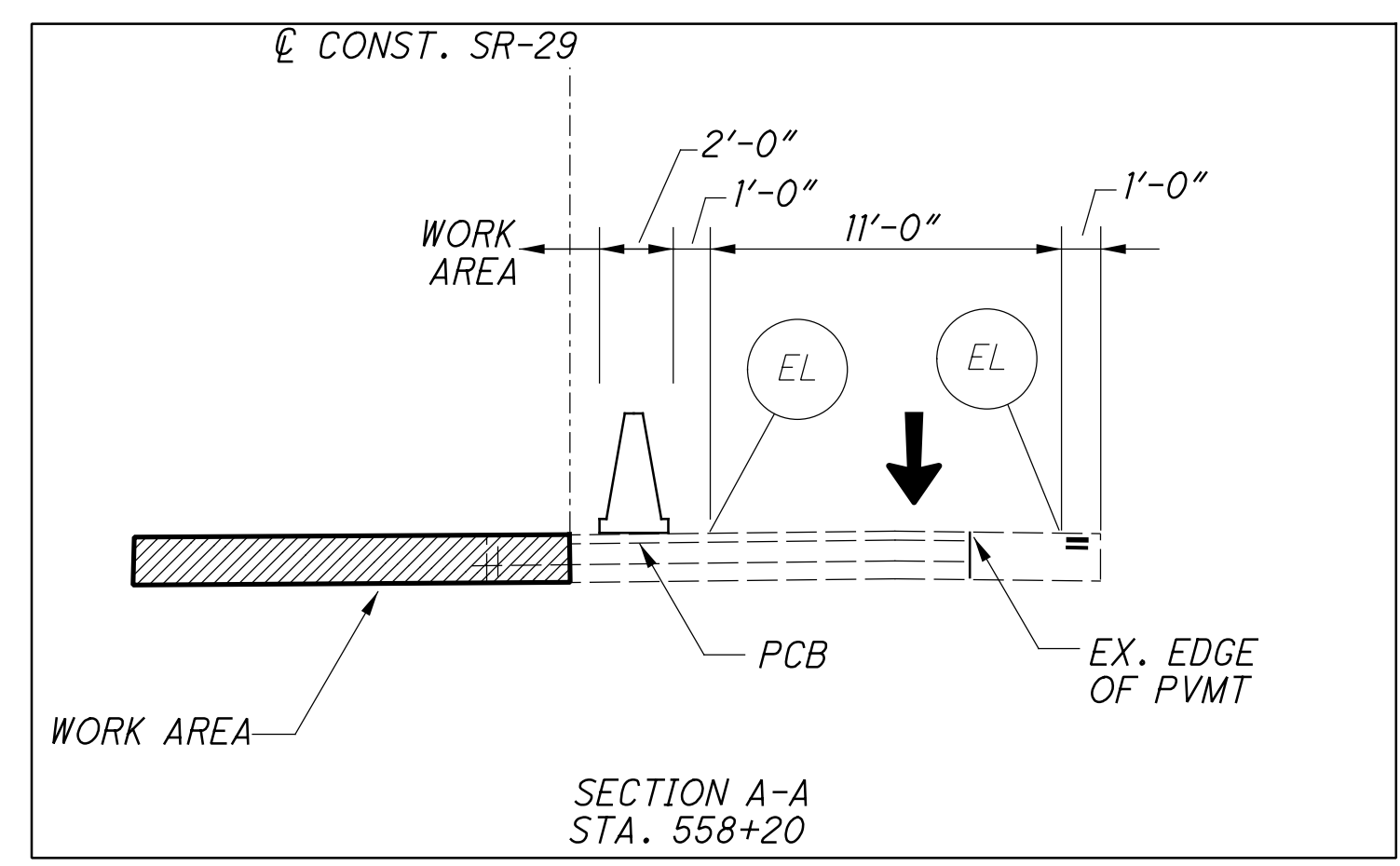
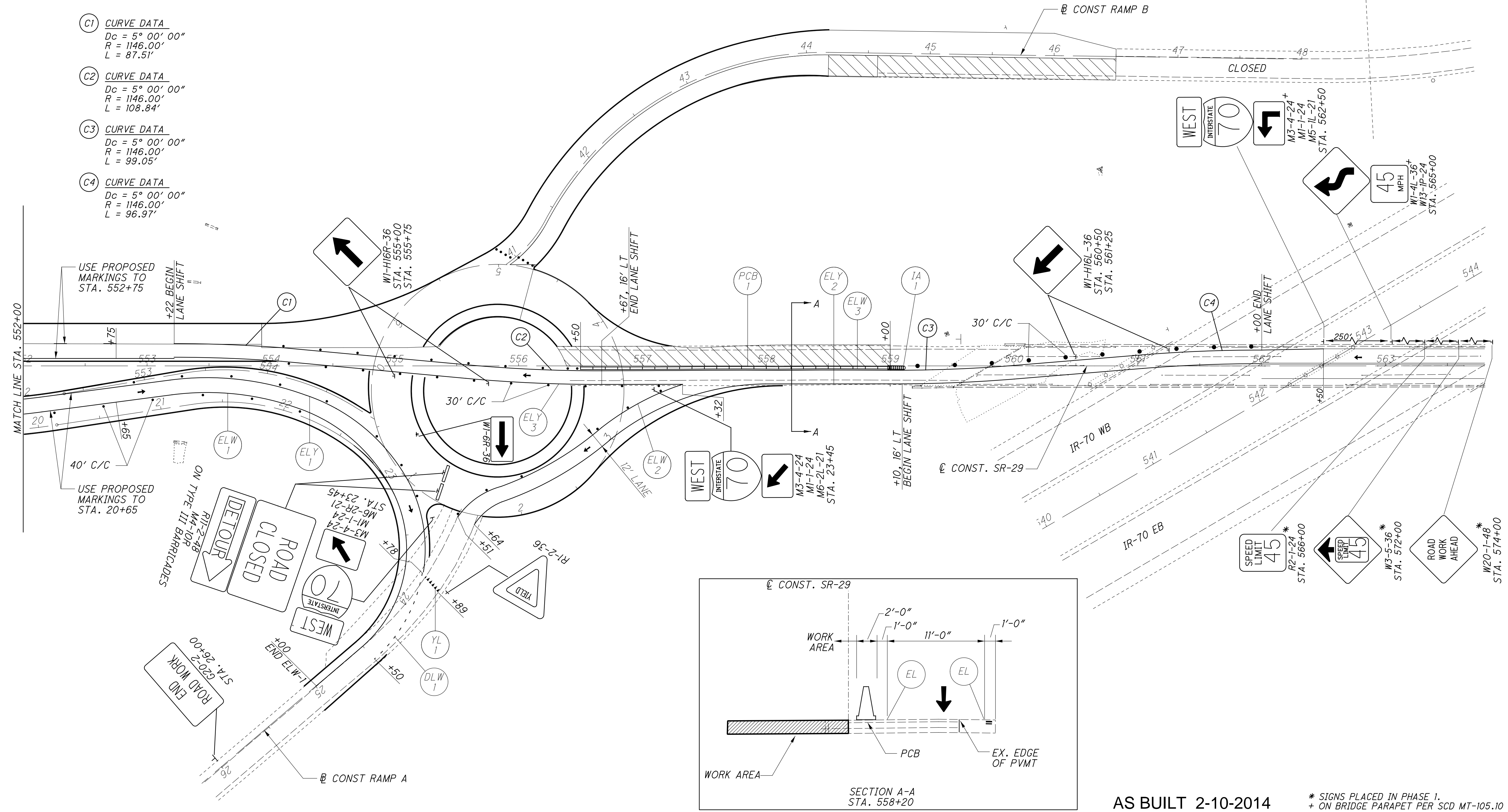
CALCULATED AT CHECKED JFM

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 HORIZONTAL SCALE IN FEET

LEGEND

	EXISTING SIGN, TO REMAIN		WORK AREA
	EXISTING SIGN, TO BE REMOVED		DRUMS, SPACING AS NOTED
	PROPOSED SIGN		WORK ZONE EDGE LINE, WHITE
	REMOVE AND RE-ERECT SIGN		WORK ZONE EDGE LINE, YELLOW
	COVER SIGN		WORK ZONE DOTTED LINE, WHITE
	PORTABLE CONCRETE BARRIER, 32"		YIELD LINE
	IMPACT ATTENUATOR		

- (C1) CURVE DATA
 $D_c = 5^\circ 00' 00''$
 $R = 1146.00'$
 $L = 87.51'$
- (C2) CURVE DATA
 $D_c = 5^\circ 00' 00''$
 $R = 1146.00'$
 $L = 108.84'$
- (C3) CURVE DATA
 $D_c = 5^\circ 00' 00''$
 $R = 1146.00'$
 $L = 99.05'$
- (C4) CURVE DATA
 $D_c = 5^\circ 00' 00''$
 $R = 1146.00'$
 $L = 96.97'$



AS BUILT 2-10-2014

* SIGNS PLACED IN PHASE 1.
 + ON BRIDGE PARAPET PER SCD MT-105.10

MAINTENANCE OF TRAFFIC PHASE 3A

MAD-70-10.27

30
97

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MATCH LINE STA. 552+00
SEE SHEET 29

USE PROPOSED MARKINGS TO STA. 20+75

USE PROPOSED MARKINGS TO STA. 20+65

ON TYPE III BARRICADES
R17-2-48
M4-109
STA. 26+00

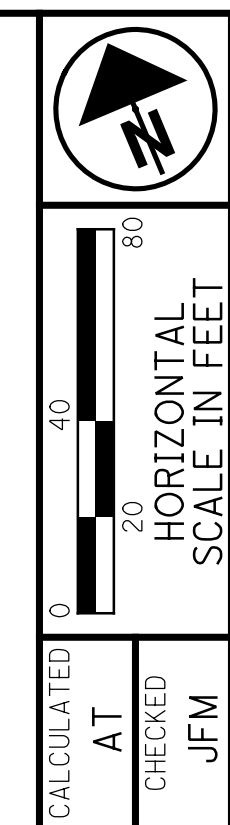
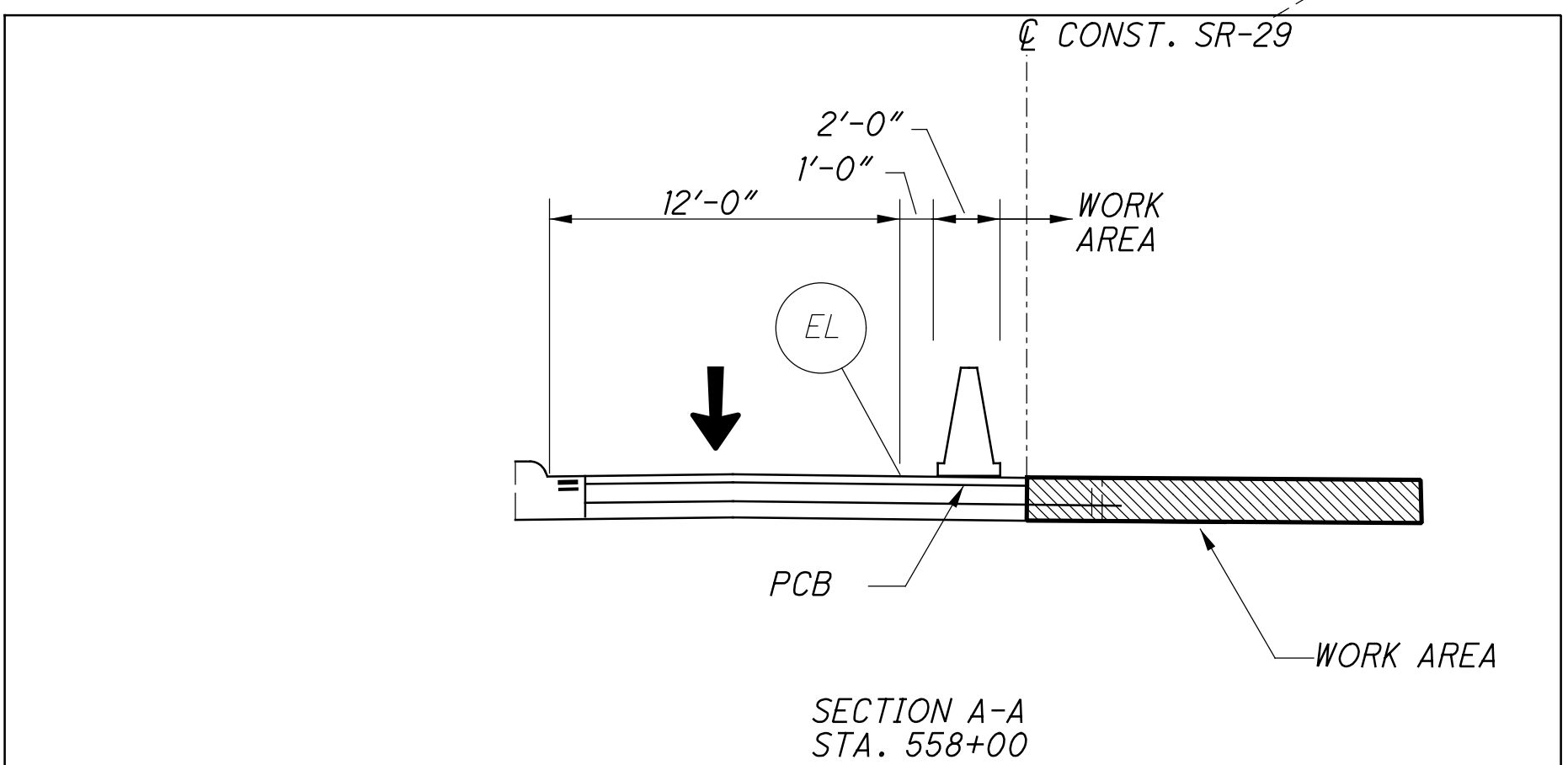
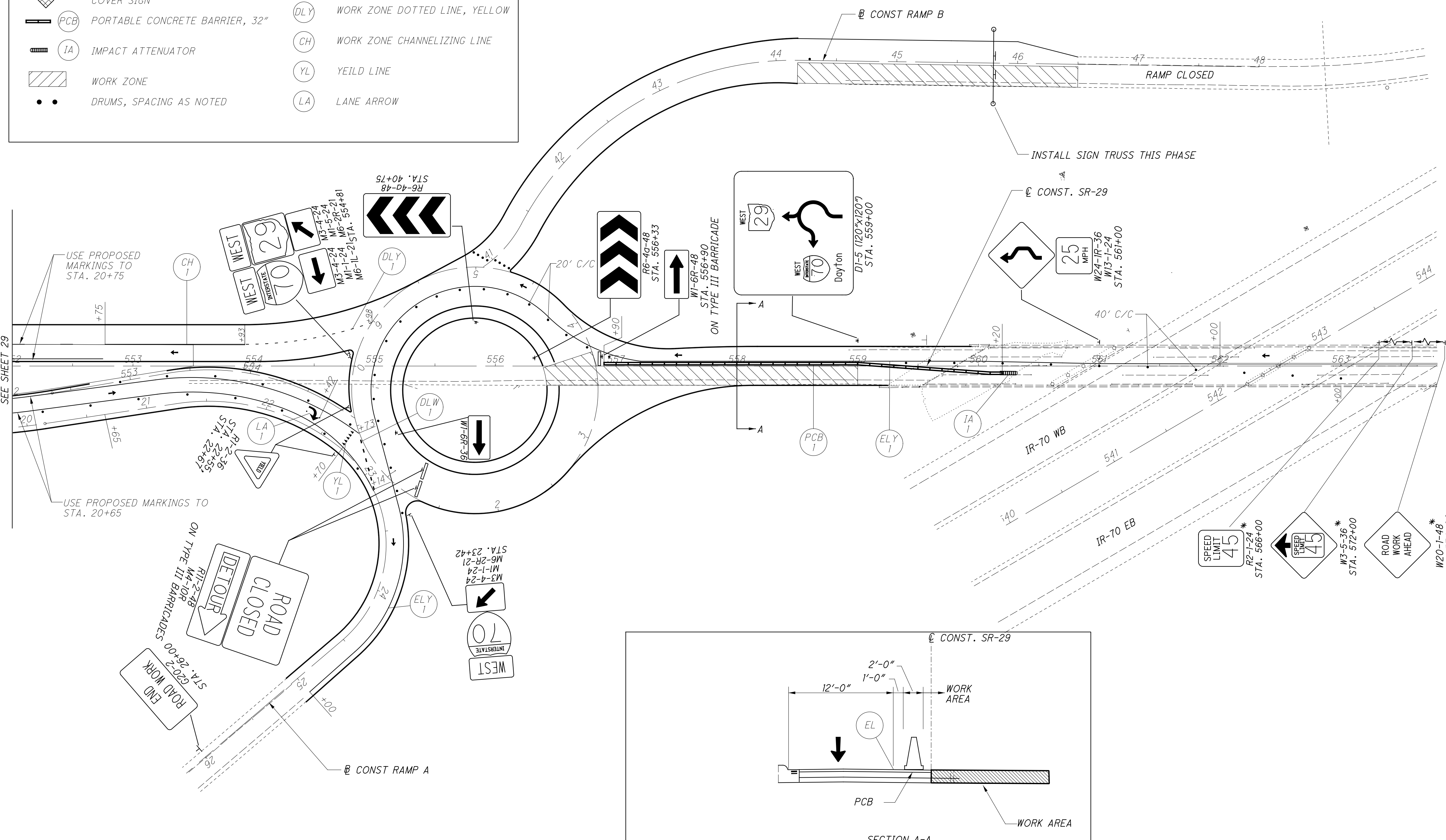
ROAD WORK
ROAD WORK
STA. 26+00

ROAD CLOSED
DETOUR

ST. R1-2-36
STA. 22+55
ST. R1-2-36
STA. 22+67

LEGEND

	EXISTING SIGN, TO REMAIN		ELW WORK ZONE EDGE LINE, WHITE
	EXISTING SIGN, TO BE REMOVED		ELY WORK ZONE EDGE LINE, YELLOW
	PROPOSED SIGN		DLW WORK ZONE DOTTED LINE, WHITE
	REMOVE AND RE-ERECT SIGN		DLY WORK ZONE DOTTED LINE, YELLOW
	COVER SIGN		CH WORK ZONE CHANNELIZING LINE
	PCB PORTABLE CONCRETE BARRIER, 32"		YL YEILD LINE
	IA IMPACT ATTENUATOR		LA LANE ARROW
	WORK ZONE		
	DRUMS, SPACING AS NOTED		



CALCULATED AT
CHECKED JFM

**MAINTENANCE OF TRAFFIC
PHASE 3B**

MAD-70-10.27

AS BUILT 2-10-2014

* SIGNS PLACED IN PHASE 1.

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OC = OFFICE CALCULATIONS

SHEET NUMBER														ITEM	ITEM EXT.	GRAND TOTAL	UNIT	DESCRIPTION	SEE SHEET NO.
0C	11	19	20	35	36	37	38	62	87	88	89	90	97						
DRAINAGE - CONTINUED FROM PREVIOUS PAGE																			
						6									604	00400	6	EACH	CATCH BASIN, NO. 3
						4									604	00800	4	EACH	CATCH BASIN, NO. 3A
						1									604	01600	1	EACH	CATCH BASIN, NO. 5
						1									604	31500	1	EACH	MANHOLE, NO. 3
							4								604	36600	4	EACH	PRECAST REINFORCED CONCRETE OUTLET
							9230								605	14000	9230	FT	6" BASE PIPE UNDERDRAINS
	200														605	31100	200	FT	AGGREGATE DRAINS
PAVEMENT																			
583															252	01500	583	FT	FULL DEPTH PAVEMENT SAWING
1400															254	01000	1400	SQ YD	PAVEMENT PLANING, ASPHALT CONCRETE
2275															301	46000	2275	CU YD	ASPHALT CONCRETE BASE, PG64-22
3965															304	20000	3965	CU YD	AGGREGATE BASE
105															407	10000	105	GALLON	TACK COAT
555															407	14000	555	GALLON	TACK COAT FOR INTERMEDIATE COURSE
236															408	10000	236	GALLON	PRIME COAT
578															442	10000	578	CU YD	ASPHALT CONCRETE SURFACE COURSE, 12.5MM, TYPE A (446)
770															442	10100	770	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, 19MM, TYPE A (446)
26															448	46024	26	CU YD	ASPHALT CONCRETE INTERMEDIATE COURSE, TYPE 2, PG64-22 (DRIVEWAYS)
22															448	48020	22	CU YD	ASPHALT CONCRETE SURFACE COURSE, TYPE 1, PG64-22 (DRIVEWAYS)
					60										SPECIAL	45130000	60	FT	PRESSURE RELIEF JOINT, TYPE A
108															452	12000	108	SQ YD	8" NON-REINFORCED CONCRETE PAVEMENT
5034															452	13050	5034	SQ YD	9-1/2" NON-REINFORCED CONCRETE PAVEMENT
3891															452	15010	3891	SQ YD	13" NON-REINFORCED CONCRETE PAVEMENT
					440										609	20000	440	FT	CURB, TYPE 3-A
					36										609	24510	36	FT	CURB, TYPE 4-C
					5720										609	26000	5720	FT	CURB, TYPE 6
					1386										609	70000	1386	SQ YD	4" CONCRETE MEDIAN
TRAFFIC CONTROL																			
										130					621	00100	130	EACH	RPM
										30					621	54000	30	EACH	RAISED PAVEMENT MARKER REMOVED
											1				625	32000	1	EACH	GROUND ROD
											265				630	02100	265	FT	GROUND MOUNTED SUPPORT, NO. 2 POST
											500				630	03100	500	FT	GROUND MOUNTED SUPPORT, NO. 3 POST
												31.6			630	06400	31.6	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, S4X7.7
												94.2			630	07000	94.2	FT	GROUND MOUNTED STRUCTURAL BEAM SUPPORT, W8X18
												15			630	08520	15	FT	STREET NAME SIGN SUPPORT, NO. 3 POST
												20			630	08600	20	EACH	SIGN POST REFLECTOR
												6			630	09000	6	EACH	BREAKAWAY STRUCTURAL BEAM CONNECTION
												1			630	35500	1	EACH	OVERHEAD SIGN SUPPORT, TYPE TC-7.65, DESIGN 6
												2			630	75000	2	EACH	SIGN ATTACHMENT ASSEMBLY
												1			630	79604	1	EACH	SIGN SUPPORT ASSEMBLY, BRIDGE MOUNTED, TYPE 2
												398.1			630	80100	398.1	SQ FT	SIGN, FLAT SHEET
												200			630	80200	200	SQ FT	SIGN, GROUND MOUNTED EXTRUSHEET
												119			630	80224	119	SQ FT	SIGN, OVERHEAD EXTRUSHEET
												1			630	80500	1	EACH	SIGN, DOUBLE FACED, STREET NAME
												6			630	84500	6	EACH	GROUND MOUNTED STRUCTURAL BEAM SUPPORT FOUNDATION
												2			630	84510	2	EACH	RIGID OVERHEAD SIGN SUPPORT FOUNDATION
												13	31		630	84900	44	EACH	REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL
												1	2		630	85400	3	EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL
												8	24		630	86002	32	EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL
												2	4		630	86102	6	EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL
												1166			642	00690	1166	FT	TRANSVERSE/DIAGONAL LINE
												1.06			644	00100	1.06	MILE	EDGE LINE, 4"
												0.15			644	00200	0.15	MILE	LANE LINE, 4"
												0.69			644	00300	0.69	MILE	CENTER LINE
												37			644	00500	37	FT	STOP LINE
												118			644	00700	118	FT	TRANSVERSE/DIAGONAL LINE
												6			644	01300	6	EACH	LANE ARROW

CALCULATED
PEK
CHECKED
PRS

GENERAL SUMMARY

MAD-70-10.27

33
97

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REF NO.	SHEET NO.	STATION			SIDE	451 SPECIAL - PRESSURE RELIEF JOINT, TYPE A FT	606 GUARDRAIL, MISC.: GUARDRAIL, TYPE MGS WITH LONG POSTS FT	606 GUARDRAIL, MISC.: ANCHOR ASSEMBLY, MGS TYPE T EACH	606 GUARDRAIL, MISC.: ANCHOR ASSEMBLY, MGS TYPE B EACH	606 GUARDRAIL, MISC.: MGS BRIDGE TERMINAL ASSEMBLY, TYPE 1 EACH	607 FENCE, TYPE 47 FT	609 CURB, TYPE 3-A FT	609 CURB, TYPE 4-C FT	609 CURB, TYPE 6 FT	609 4" CONCRETE MEDIAN SQ YD	626 BARRIER REFLECTOR EACH	690 SPECIAL - MAILBOX SUPPORT SYSTEM, SINGLE EACH	690 SPECIAL - MISC.: MONITORING WELL ADJUSTED TO GRADE EACH					
		FROM	TO																				
F1	40	29	549+47.00	29	549+53.00	RT				473													
F2	40	29	550+25.00	29	553+38.00	LT				322													
F3	40, 66	29	553+43.00	B	47+17.00	LT				688													
GR1	40	29	552+50.00	29	554+36.80	LT		137.50	1	1					3								
GR2	40	29	552+02.60	29	554+00.00	RT		150.00	1	1					3								
GR3	40	29	559+20.30	29	559+95.10	LT		12.50		1	1				1								
GR4	40	29	557+83.10	29	559+20.40	RT		75.00		1	1				2								
GR5	39, 76	SNY	51+88.00			LT/RT		25.00															
P1	39-40, 63	29	546+50.00	A	25+50.00	RT							1102										
P2	39-40, 66	29	546+56.35	B	44+17.88	LT							1275										
P3	40	29	549+15.00	29	554+80.00	LT/RT							1200										
P4	40	29	549+15.00	29	554+81.00	LT/RT							1216										
P5	40	29	547+44.00	29	547+63.00	RT							44										
P6	40	29	547+98.00	29	548+70.00	RT							125										
P7	40	29	549+05.00	29	549+24.00	RT							44										
P8	40	29	556+82.00	29	557+60.00	LT/RT							213										
P9	40	29	556+82.00	29	557+60.00	LT/RT							170										
P10	40, 63	A	25+60.00	29	559+01.00	LT/RT							656										
P11	40, 66	B	44+17.88	29	559+76.00	LT/RT							684										
P12	40	29	555+13.00	29	556+53.00	LT/RT					440												
P13	40	29	555+24.00	29	556+43.00	LT/RT							377										
P14	40	29	559+76.00	29	559+94.00	LT						18											
P15	40	29	559+01.00	29	559+19.00	RT						18											
P16	40	29	559+15.00	29	559+73.00	LT/RT	60																
M1	40	29	549+01.00			RT														1			
MB1	39	29	534+42.00			RT														1			
MB2	39	29	539+55.00			RT														1			
MB3	40	29	548+36.00			RT														1			
SUBTOTAL						60	400.00	2	4	2	1483	440	36	5720	1386	9	3	1					
TOTALS CARRIED TO GENERAL SUMMARY						60	400.00	2	4	2	1483	440	36	5720	1386	9	3	1					

CALCULATED
PEK
CHECKED
PRS

ROADWAY QUANTITIES

MAD-70-10.27

36
97

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REF NO.	SHEET NO.	STATION		SIDE	ITEM DESCRIPTION																
		FROM	TO		TIED CONCRETE BLOCK MAT, TYPE 1	ROCK CHANNEL PROTECTION, TYPE C WITH FABRIC FILTER	CONCRETE MASONRY	12" CONDUIT, TYPE B	12" CONDUIT, TYPE C	12" CONDUIT, TYPE D	18" CONDUIT, TYPE A, 706.02	21" CONDUIT, TYPE D	CATCH BASIN, NO. 3	CATCH BASIN, NO. 3A	CATCH BASIN, NO. 5	MANHOLE, NO. 3	DITCH EROSION PROTECTION MAT, TYPE A	SEEDING AND EROSION CONTROL WITH TURF REINFORCING MAT, TYPE 1			
					601	601	602	603	603	603	603	603	603	604	604	604	604	670	836		
					SQ YD	CU YD	CU YD	FT	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	SQ YD	SQ YD		
D1	39	29	536+41.00	29	536+70.00			0.40				29									
D2	39	29	537+25.00					0.62				70									
D3	39	29	541+89.50	29	542+62.50			0.40				68									
D4	39	29	544+13.40	29	544+63.40			0.40				50									
D5	39, 76	29	545+59.75	29	546+30.50			0.40			71										
D6	40	29	547+47.10	29	549+54.50			0.74			29			208	1			1			
D7	40	29	549+00.00					0.20				18			1						
D8	40	29	550+12.62					0.6				19			1						
D9	40	29	550+25.00					0.20				18			1						
D10	40	29	552+13.00					1.7				31				1					
D11	40	29	554+79.00	29	555+50.00			0.20			233			1	1	1					
D12	40	29	556+18.00	29	556+65.00			0.6				48			1						
D13	40	29	558+00.00					0.20			32	23			2						
EC1	39	29	535+50.00	29	536+41.00													111			
EC2	39	29	535+50.00	29	539+00.00													428			
EC3	39	29	536+70.00	29	541+89.50													636			
EC4	39	29	540+00.00	29	545+59.75													685			
EC5	39	29	542+62.50	29	544+13.40													184			
EC6	39-40	29	544+63.40	29	547+47.10													347			
EC7	39-40	29	546+30.50	29	552+00.00													696			
EC8	39-40, 76	29	10+50.00	29	15+00.00													550			
EC9	39-40, 76	29	10+50.00	29	15+00.00													550			
EC10	40	29	549+54.50	29	552+00.00													301			
EC11	40	29	552+00.00	29	553+19.00														185		
EC12	40	29	552+00.00	29	553+42.00													221			
EC13	40	29	553+30.00	29	554+00.00			86													
EC14	40	29	554+00.00	29	554+54.00													70			
EC15	63	A	25+50.00	A	25+60.00			18													
EC16	66	B	44+18.00	B	44+28.00			18													
EC17	66	B	44+18.00	B	44+28.00			18													
SUBTOTAL					140	2.9	4.16	365	157	147	70	208		6	4	1	1	4558	406		
TOTALS CARRIED TO GENERAL SUMMARY					140	3	4.2	365	157	147	70	208		6	4	1	1	4558	406		

CALCULATED
PEK
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DRAINAGE QUANTITIES

MAD-70-10.27

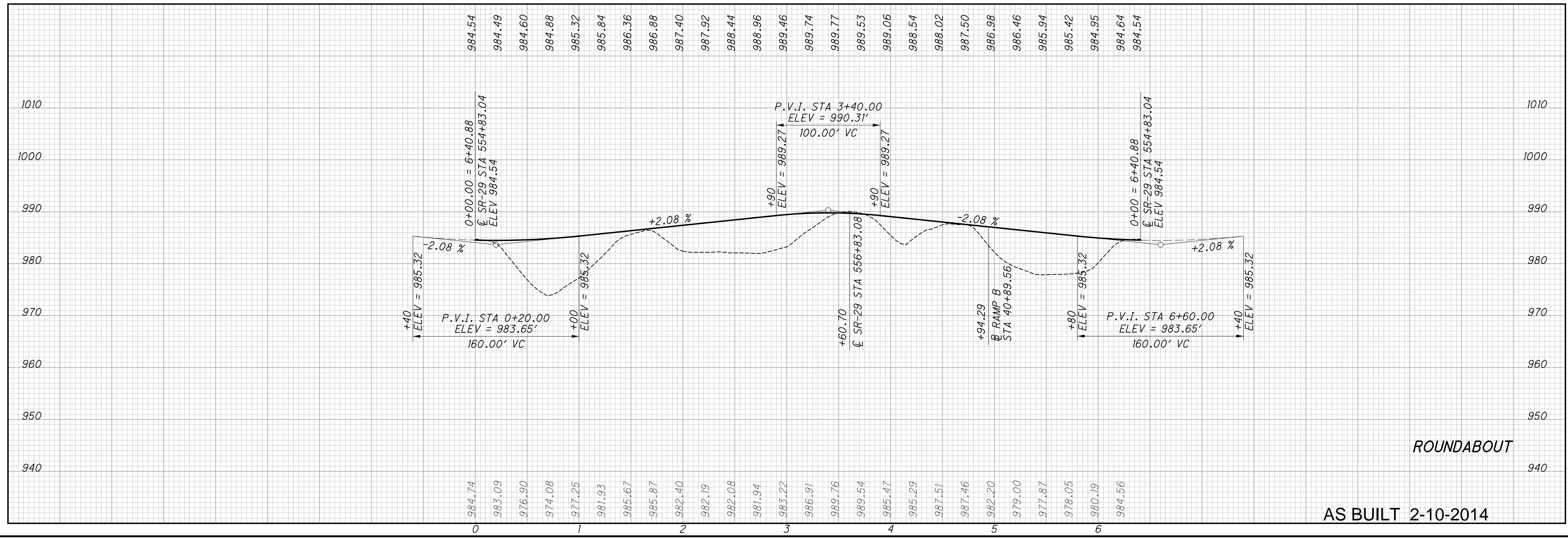
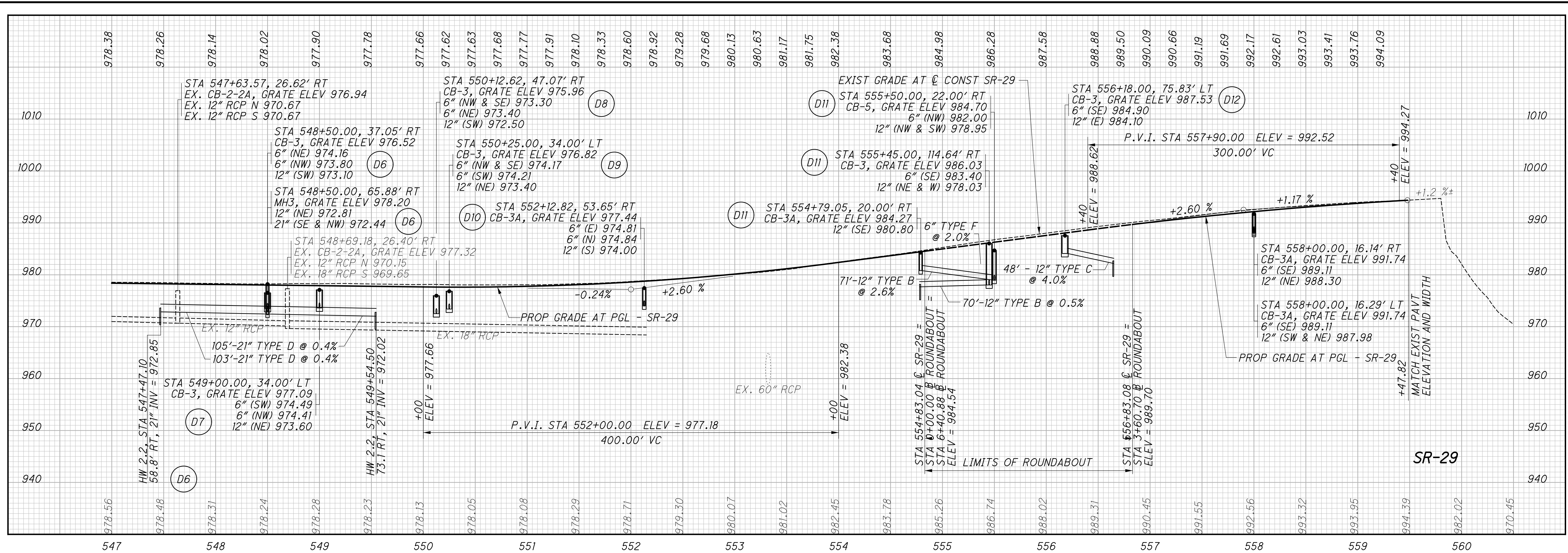
37
97

REF. NO.	SHEET NO.	UNDERDRAIN LOCATION					BEGIN ELEVATION	END ELEVATION	HIGH POINT STATION	601	603	604	605	FOR INFORMATION ONLY				OUTLET NO. 1 STATION	OUTLET NO. 1 INVERT ELEVATION	OUTLET NO. 1 OFFSET FT	OUTLET NO. 2 STATION	OUTLET NO. 2 INVERT ELEVATION	OUTLET NO. 2 OFFSET FT		
		BEGIN STATION	END STATION	NORMAL OFFSET (FT)	TIED CONCRETE BLOCK MAT, TYPE 1	6" CONDUIT, TYPE F FOR UNDERDRAIN OUTLETS				PRECAST REINFORCED CONCRETE OUTLET	6" BASE PIPE UNDERDRAINS	OUTLET INTO CATCH BASIN	6" END CAP	6" TEE CONNECTION	6" 90° ELL CONNECTION										
					SQ YD	FT				EACH	FT	EACH	EACH	EACH	EACH										
U1	39-40	29	537+50	29	548+50	VARIES RT	977.40	973.80	540+00	1.8	13	1	1100	1	2		1	537+50	977.27	35.6	548+50	973.8	37		
U2	39-40	29	537+50	29	549+00	VARIES LT	977.40	974.41	540+00	1.8	13	1	1150	1	2		1	537+50	977.27	-35.9	549+00	974.4	-34		
U3	39-40	29	541+00	29	548+50	VARIES RT	977.47	974.45			15		750	1	1		1	548+50	974.16	37.0					
U4	39-40	29	541+00	29	549+00	-18.0	977.47	974.78			15		800	1	1		1	549+00	974.49	-34.0					
U5	40	29	549+05	29	550+25	-18.0	974.78	974.50			15		120	1	1	1		550+25	974.21	-34.0					
U6	40	29	549+05	29	550+25	-34.0	974.50	974.17					120	1	1			550+25	974.17	-34.0					
U7	40	29	548+55	29	550+13	VARIES RT	974.45	973.69			15		158	1	1	1		550+13	973.40	47.0					
U8	40	29	548+55	29	550+13	VARIES RT	973.80	973.30					158	1	1			550+13	973.30	47.0					
U9	40, 63	29	550+13	A	25+50	VARIES RT	974.81	976.98	23+50	1.8	18	1	535	1	2		1	552+13	974.84	54.0	25+50	976.8	23.75		
U10	40	29	550+13	29	556+69	VARIES RT	975.16	987.31					533	1	1	1		552+13	974.81	54.0					
U11	40	29	550+25	29	556+69	VARIES LT	974.50	987.31					702	1	1	1		550+25	974.21	-34.0					
U12	40	29	550+25	29	555+72	VARIES LT	974.17	983.82					559	1	1			550+25	974.17	-34.0					
U13	40	29	555+15	29	556+53	VARIES LT/RT	982.38	987.63			37		430	1	2	1		555+50	982.00	22.0					
U14	40	29	556+18	29	557+95	VARIES LT	984.90	989.11					196	1	1			556+18	984.90	-75.8					
U15	40	29	555+45	29	557+95	VARIES RT	983.40	989.11					284	1	1			555+45	983.40	114.6					
U16	40	29	558+00	29	559+18	16.0	989.11	990.90					118	1	1			558+00	989.11	16.1					
U17	40	29	558+00	29	559+73	-16.0	989.11	991.60					173	1	1			558+00	989.11	-16.3					
U18	66	B	41+06	B	46+00	VARIES RT	984.10	975.17		1.8	12	1	482		1		1	46+00	975.02	36.0					
U19	71	D	543+50	D	548+50	VARIES LT	977.00	986.00					462		1		1	543+50	977.00	-20.5					
U20	40	29	550+13	29	552+13	VARIES RT	973.30	974.81					200					550+13	973.40	47.0					
U21	40	29	550+13	29	552+13	VARIES RT	973.69				15		200					550+13	973.40	47.0					
SUBTOTAL										7.2	168	4	9230	17	23	5	7								
TOTALS CARRIED TO GENERAL SUMMARY										8	168	4	9230												

UNDERDRAIN QUANTITIES

MAD-70-10.27

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CALCULATED
PRS

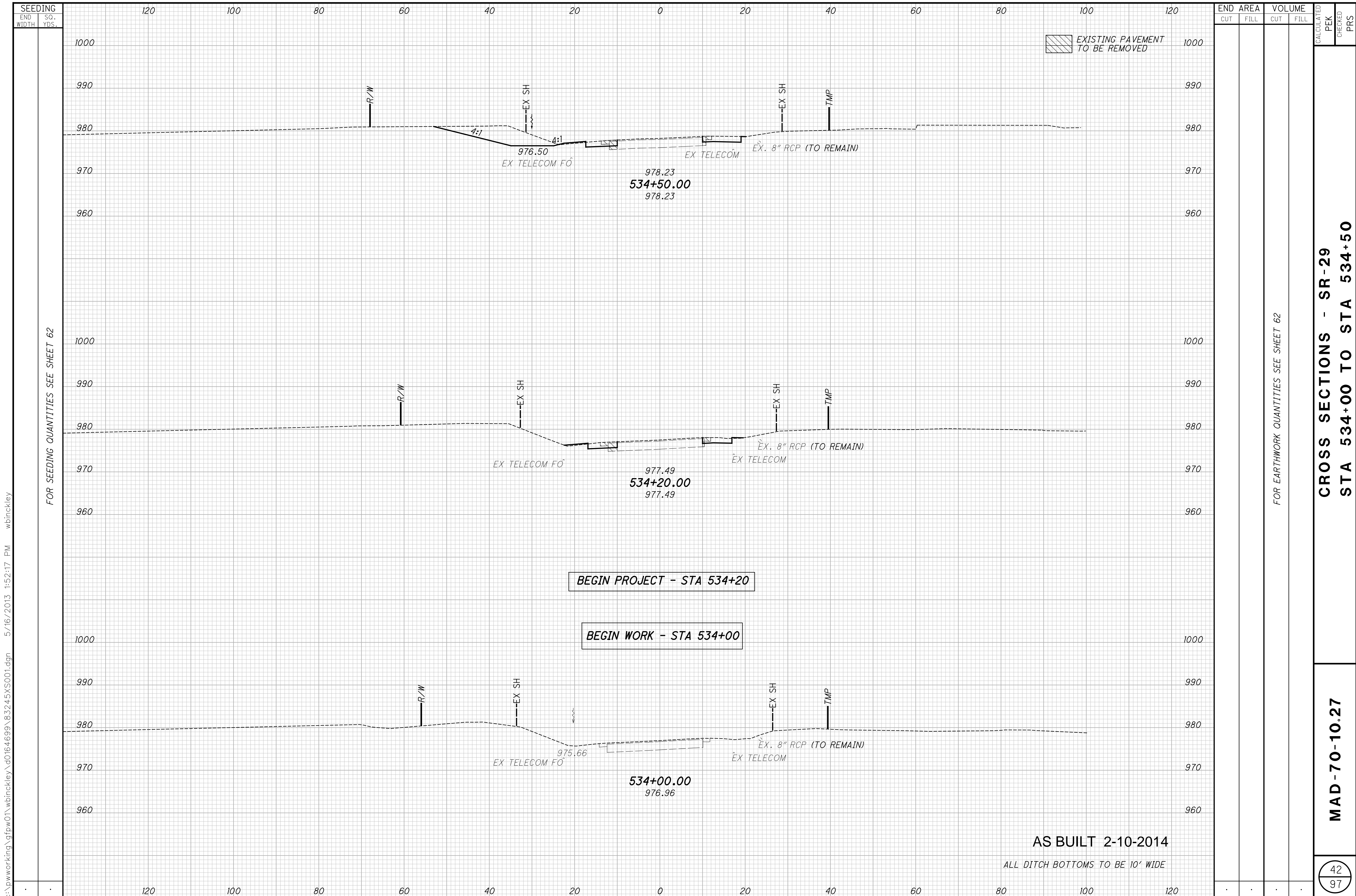
CHECKED
PEK

PROFILE - SR-29
STA 547+00 TO STA 561+50

MAD-70-10.27

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97

AS BUILT 2-10-2014



EXISTING PAVEMENT TO BE REMOVED

BEGIN PROJECT - STA 534+20

BEGIN WORK - STA 534+00

AS BUILT 2-10-2014

ALL DITCH BOTTOMS TO BE 10' WIDE

SEEDING
 END SO.
 WIDTH YDS.
 FOR SEEDING QUANTITIES SEE SHEET 62
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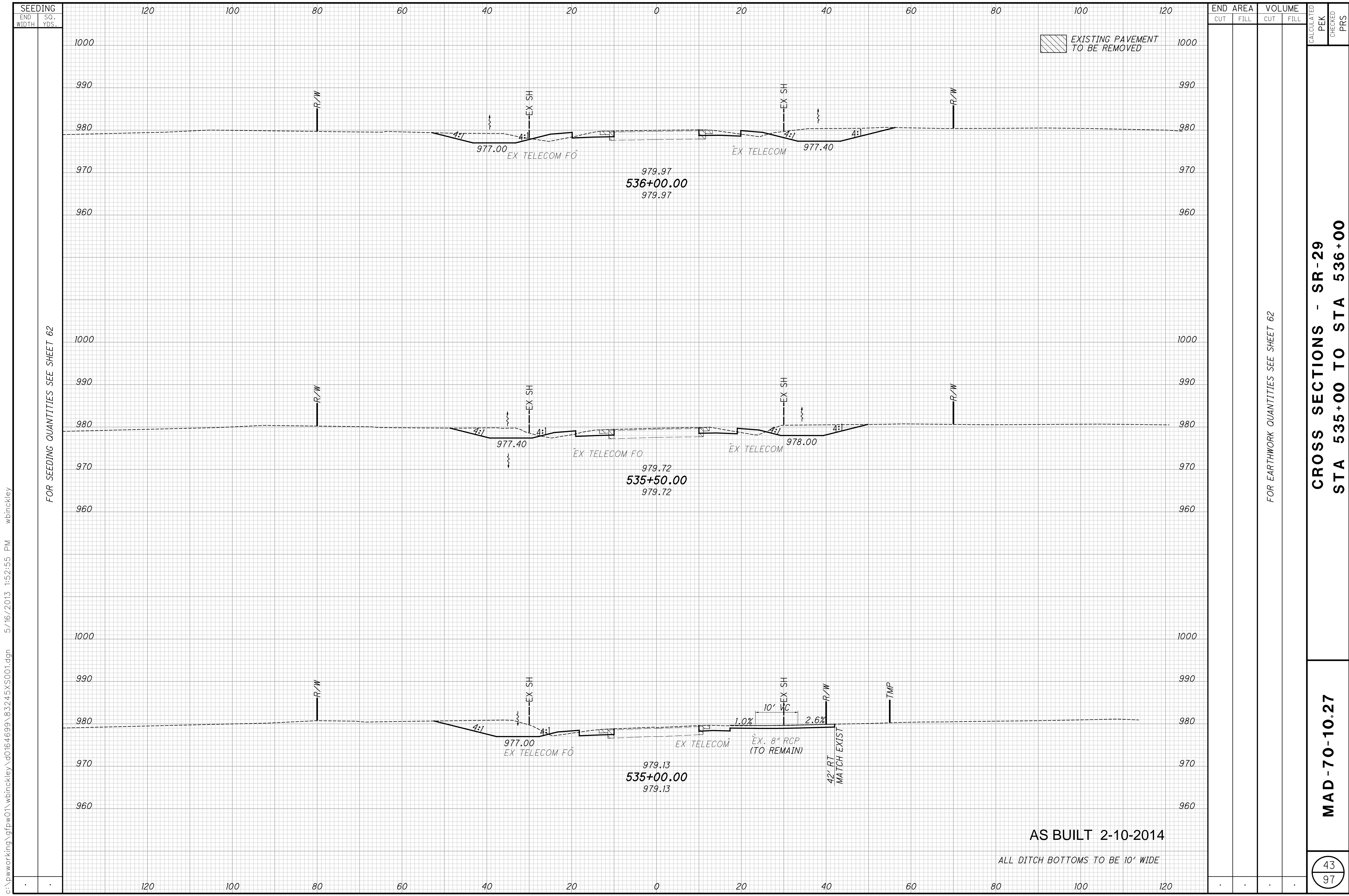
END AREA	VOLUME		CALCULATED	PEK	CHECKED	PRS
	CUT	FILL				

FOR EARTHWORK QUANTITIES SEE SHEET 62

CROSS SECTIONS - SR-29
STA 534+00 TO STA 534+50

MAD-70-10.27

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97



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FOR SEEDING QUANTITIES SEE SHEET 62

FOR EARTHWORK QUANTITIES SEE SHEET 62

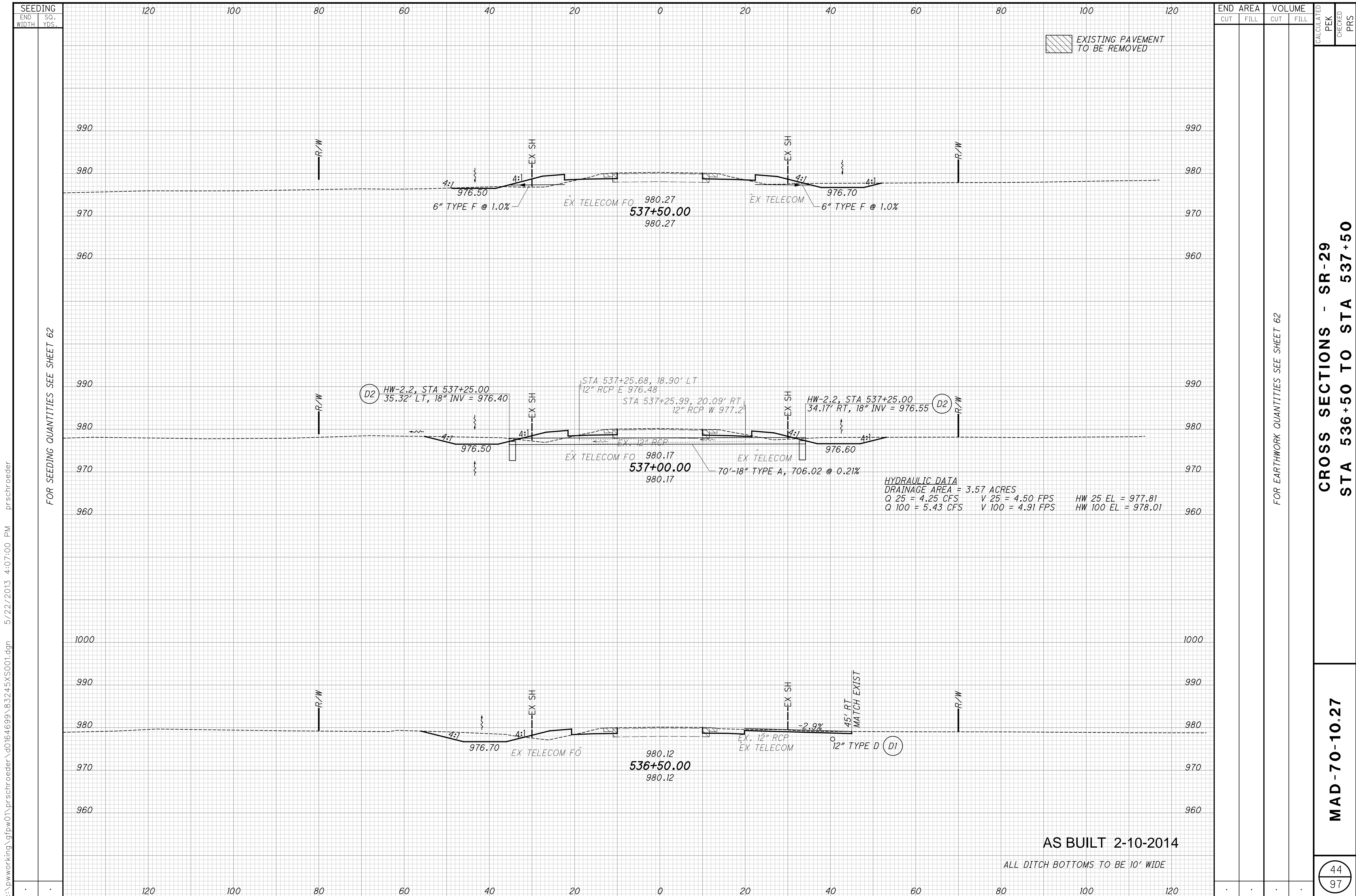
CROSS SECTIONS - SR-29
STA 535+00 TO STA 536+00

MAD-70-10.27

AS BUILT 2-10-2014

ALL DITCH BOTTOMS TO BE 10' WIDE

SEEDING		END AREA		VOLUME		CALCULATED		
END WIDTH	SO. YDS.	CUT	FILL	CUT	FILL	PEK	CHECKED	PRS

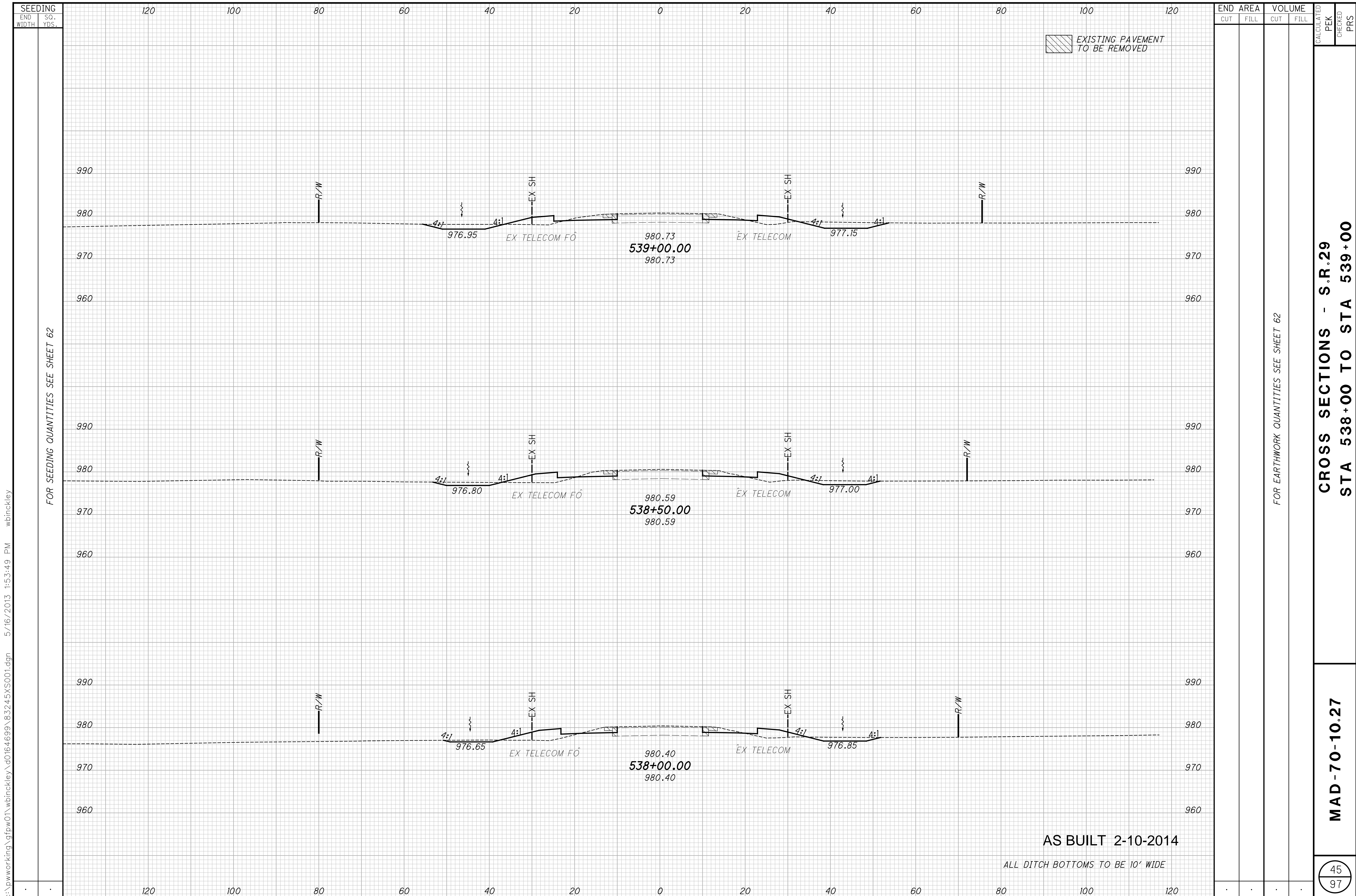


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CROSS SECTIONS - SR-29
STA 536+50 TO STA 537+50

MAD-70-10.27

44
97

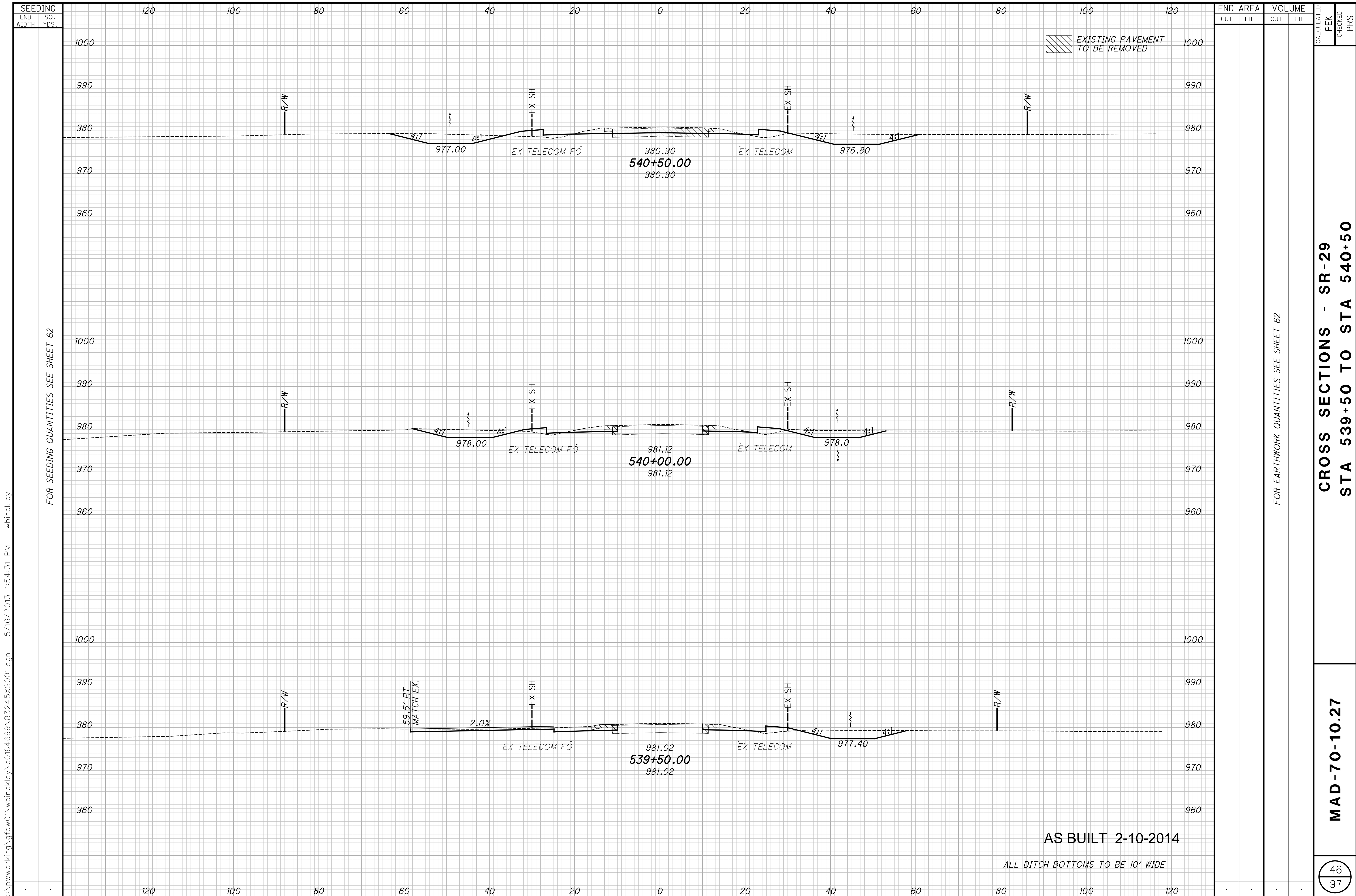


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CROSS SECTIONS - S.R.29
STA 538+00 TO STA 539+00

MAD-70-10.27

45
97



FOR SEEDING QUANTITIES SEE SHEET 62

FOR EARTHWORK QUANTITIES SEE SHEET 62

AS BUILT 2-10-2014

ALL DITCH BOTTOMS TO BE 10' WIDE

SEEDING	
END WIDTH	SO. YDS.

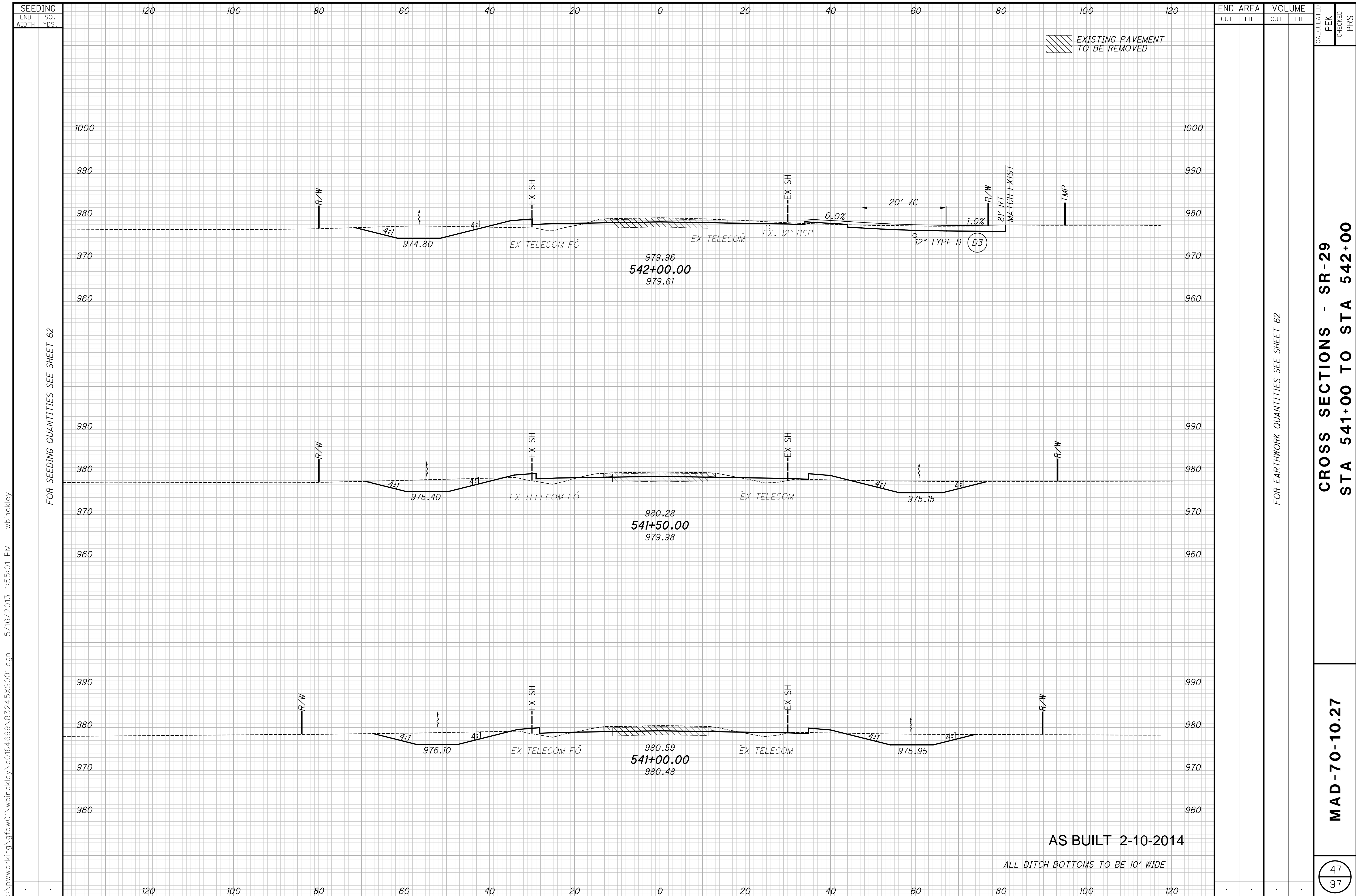
END AREA		VOLUME		CALCULATED		
CUT	FILL	CUT	FILL	PEK	CHECKED	PRS

CROSS SECTIONS - SR-29
STA 539+50 TO STA 540+50

MAD-70-10.27

46
97

c:\pwworking\gfpw01\wbinckley\40164699\83245XS001.dgn 5/16/2013 1:54:31 PM wbinckley



SEEDING
END WIDTH SO. YDS.

FOR SEEDING QUANTITIES SEE SHEET 62

c:\pwworking\gfpw01\wbinckley\d0164699\832445S001.dgn 5/16/2013 1:55:01 PM wbinckley

STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
542+00.00				
541+50.00				
541+00.00				

EXISTING PAVEMENT TO BE REMOVED

FOR EARTHWORK QUANTITIES SEE SHEET 62

CROSS SECTIONS - SR-29
STA 541+00 TO STA 542+00

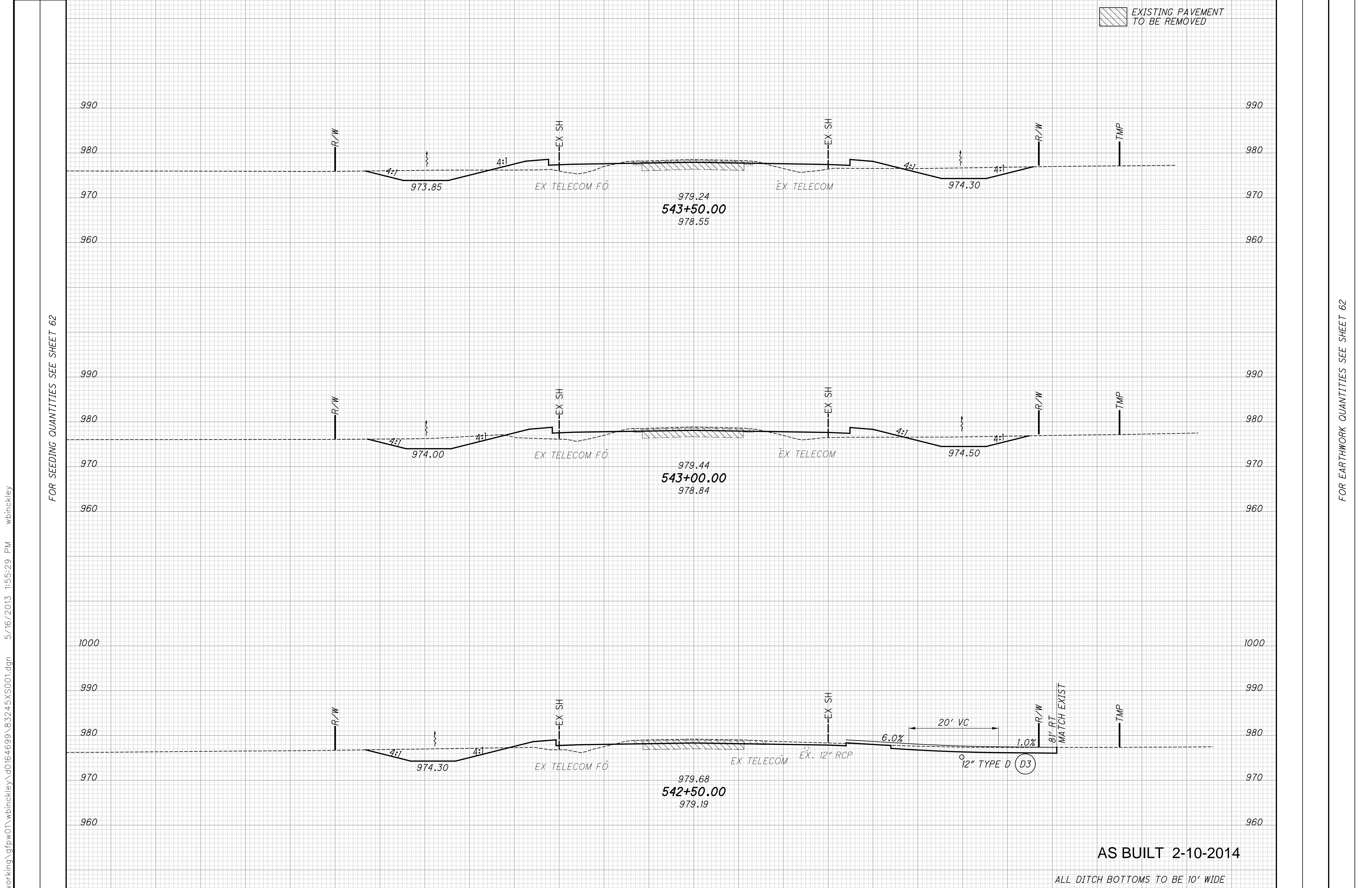
MAD-70-10.27

AS BUILT 2-10-2014

ALL DITCH BOTTOMS TO BE 10' WIDE

CALCULATED PEK CHECKED PRS

47
97



EXISTING PAVEMENT TO BE REMOVED

FOR SEEDING QUANTITIES SEE SHEET 62

FOR EARTHWORK QUANTITIES SEE SHEET 62

AS BUILT 2-10-2014

ALL DITCH BOTTOMS TO BE 10' WIDE

SEEDING	
END WIDTH	SO. YDS.

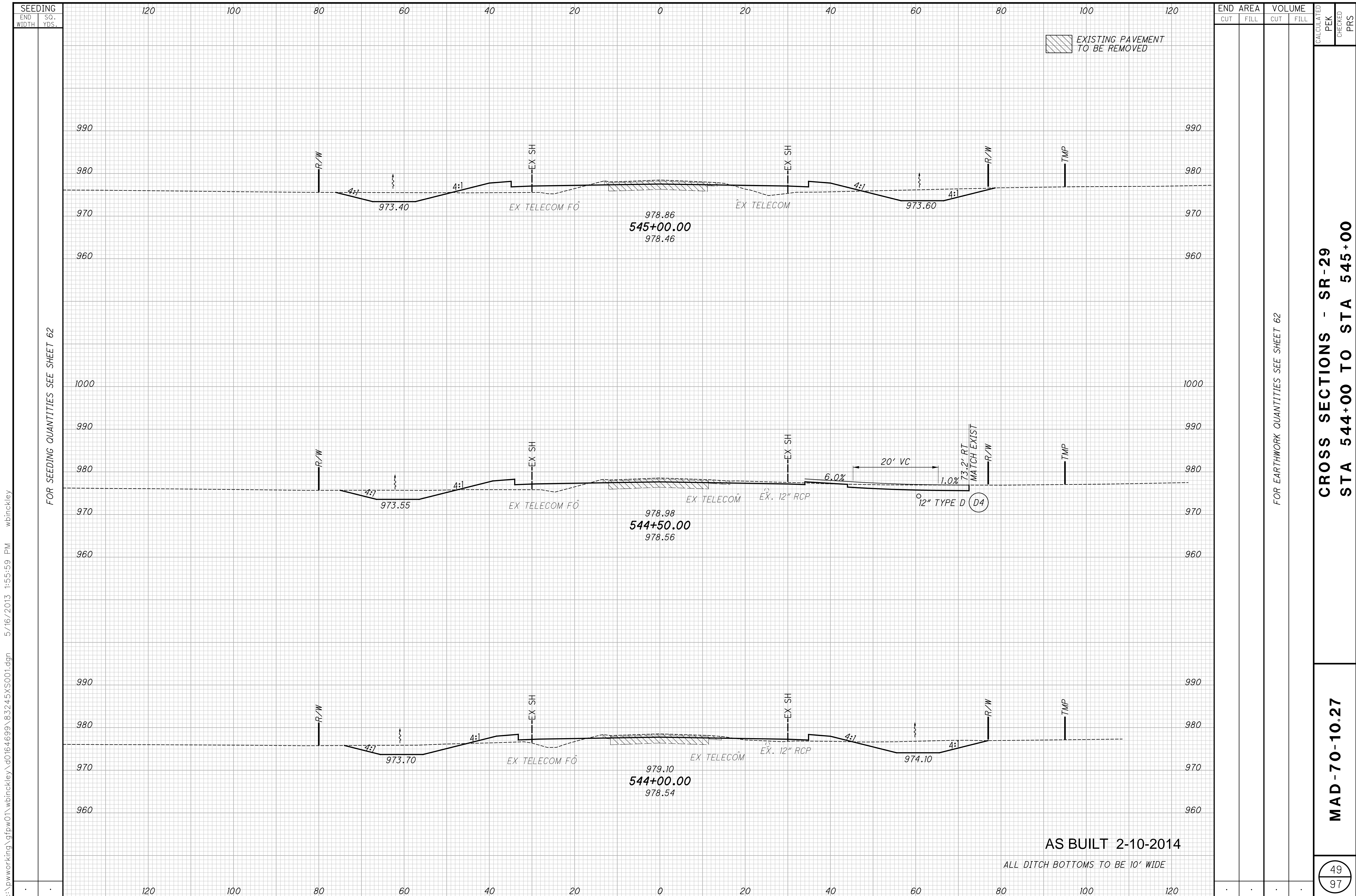
END AREA		VOLUME		CALCULATED	
CUT	FILL	CUT	FILL	PEK	PRS

CROSS SECTIONS - SR-29
STA 542+50 TO STA 543+50

MAD-70-10.27

48
97

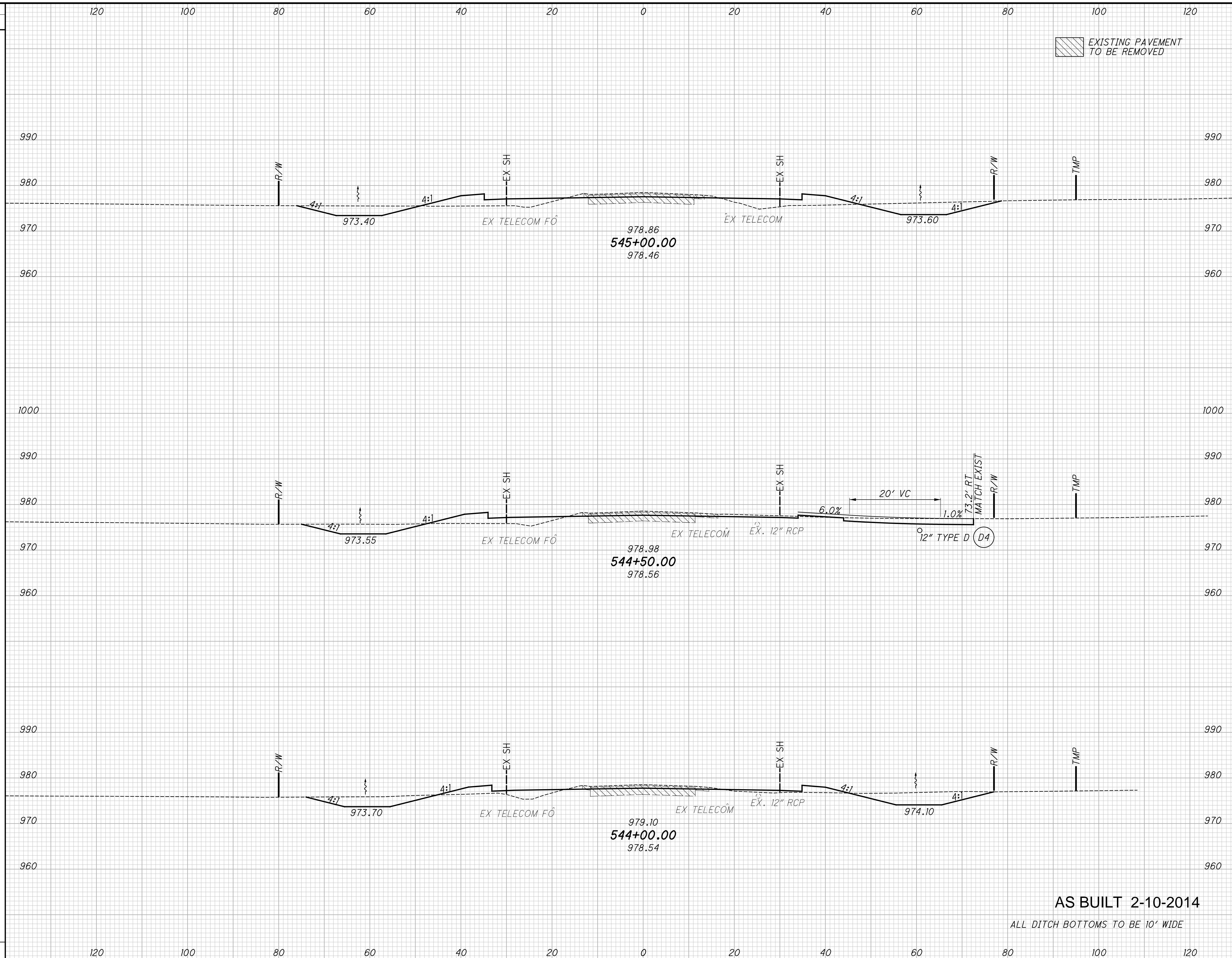
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SEEDING
END SO.
WIDTH YDS.

FOR SEEDING QUANTITIES SEE SHEET 62

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END AREA		VOLUME		CALCULATED	PEK	CHECKED	PRS
CUT	FILL	CUT	FILL				

FOR EARTHWORK QUANTITIES SEE SHEET 62

CROSS SECTIONS - SR-29
STA 544+00 TO STA 545+00

MAD-70-10.27

AS BUILT 2-10-2014
ALL DITCH BOTTOMS TO BE 10' WIDE

49
97

c:\pwworking\gfpw01\wbinkley\40164699\83245XS001.dgn 5/16/2013 1:56:30 PM wbinkley

SEEDING	
END WIDTH	SO. YDS.

END AREA		VOLUME		CALCULATED	PEK	CHECKED	PRS
CUT	FILL	CUT	FILL				

 EXISTING PAVEMENT TO BE REMOVED

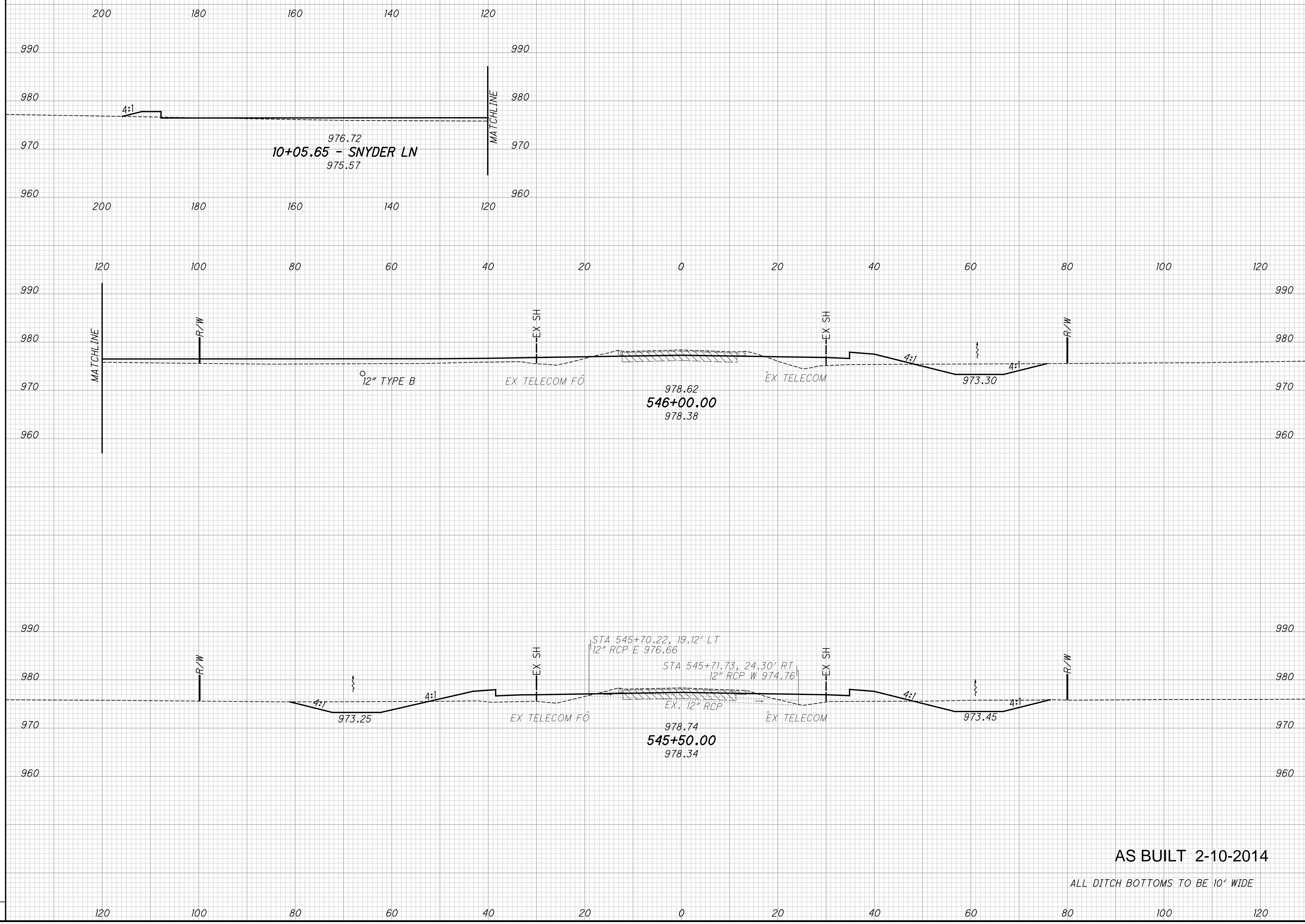
FOR SEEDING QUANTITIES SEE SHEET 62

FOR EARTHWORK QUANTITIES SEE SHEET 62

CROSS SECTIONS - SR-29
STA 545+50 TO STA 546+00

MAD-70-10.27

50
97



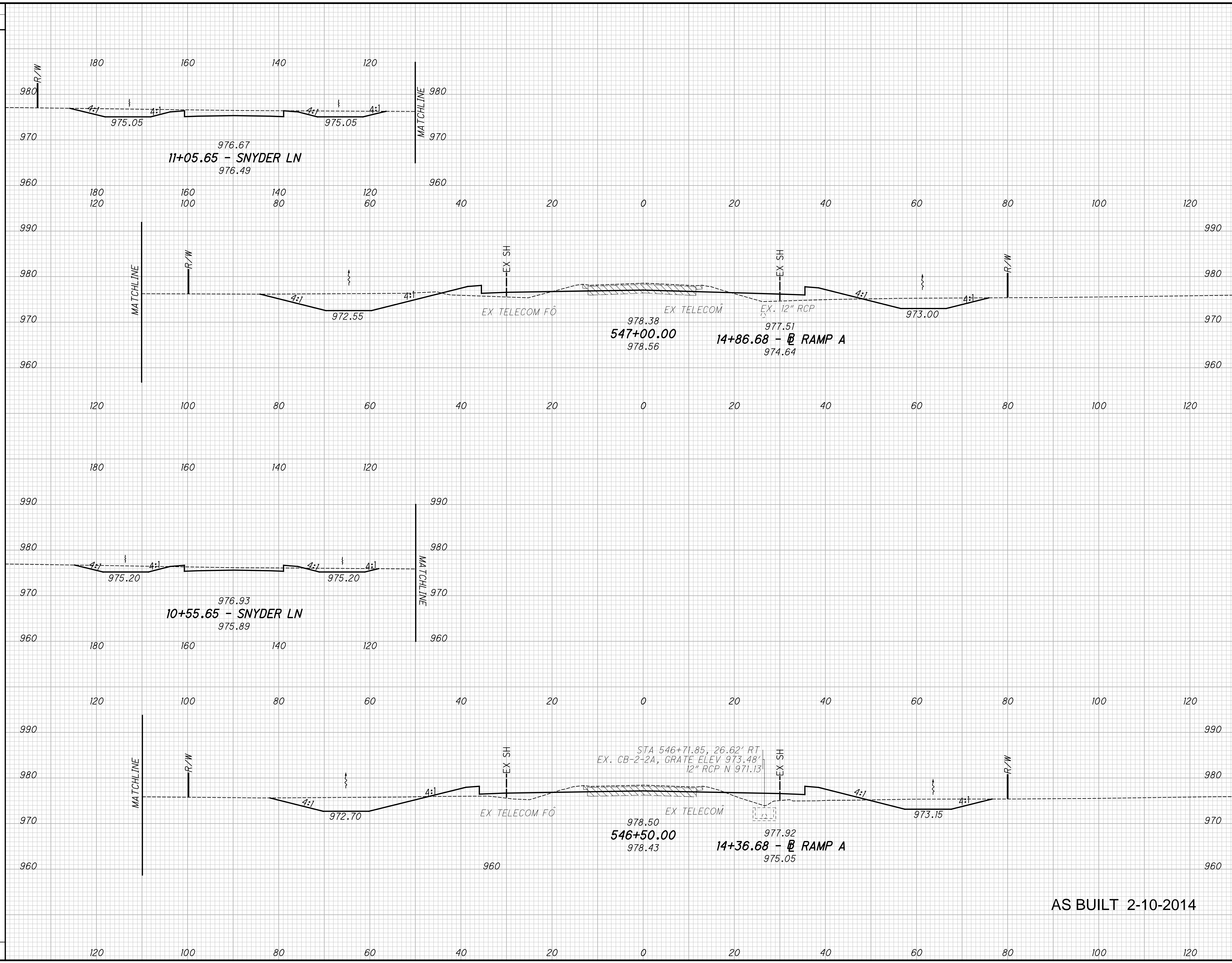
AS BUILT 2-10-2014

ALL DITCH BOTTOMS TO BE 10' WIDE

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SEEDING	
END WIDTH	SO. YDS.

FOR SEEDING QUANTITIES SEE SHEET 62



AS BUILT 2-10-2014

END AREA		VOLUME		CALCULATED	PEK	CHECKED	PRS
CUT	FILL	CUT	FILL				

FOR EARTHWORK QUANTITIES SEE SHEET 62

CROSS SECTIONS - SR-29
STA 546+50 TO STA 547+00

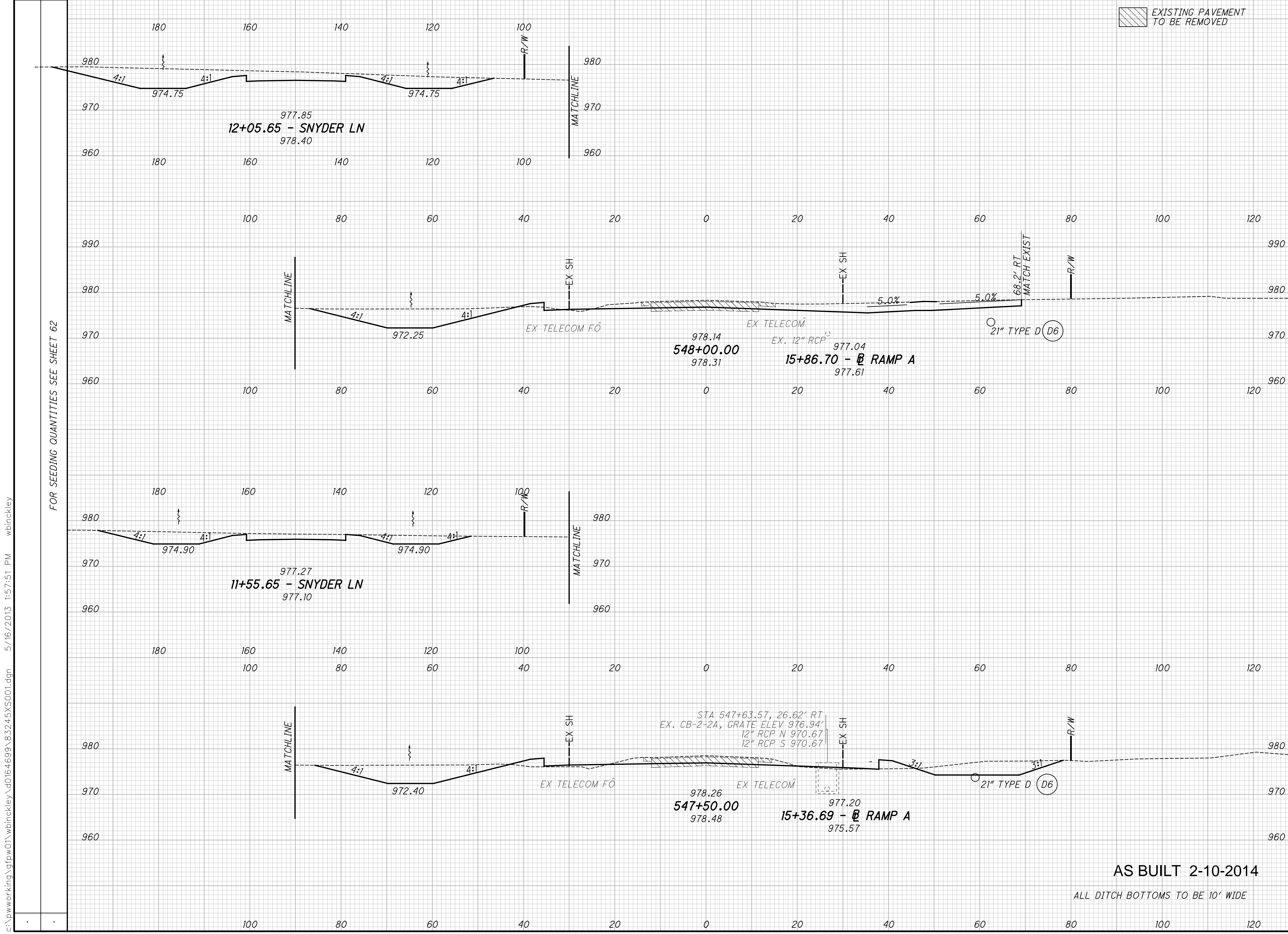
MAD-70-10.27

51
97

SEEDING
END WIDTH SO. YDS.

END AREA VOLUME
CUT FILL CUT FILL
CALCULATED PEK CHECKED PRS

EXISTING PAVEMENT TO BE REMOVED



AS BUILT 2-10-2014

ALL DITCH BOTTOMS TO BE 10' WIDE

CROSS SECTIONS - SR-29
STA 547+50 TO STA 548+00

MAD-70-10.27

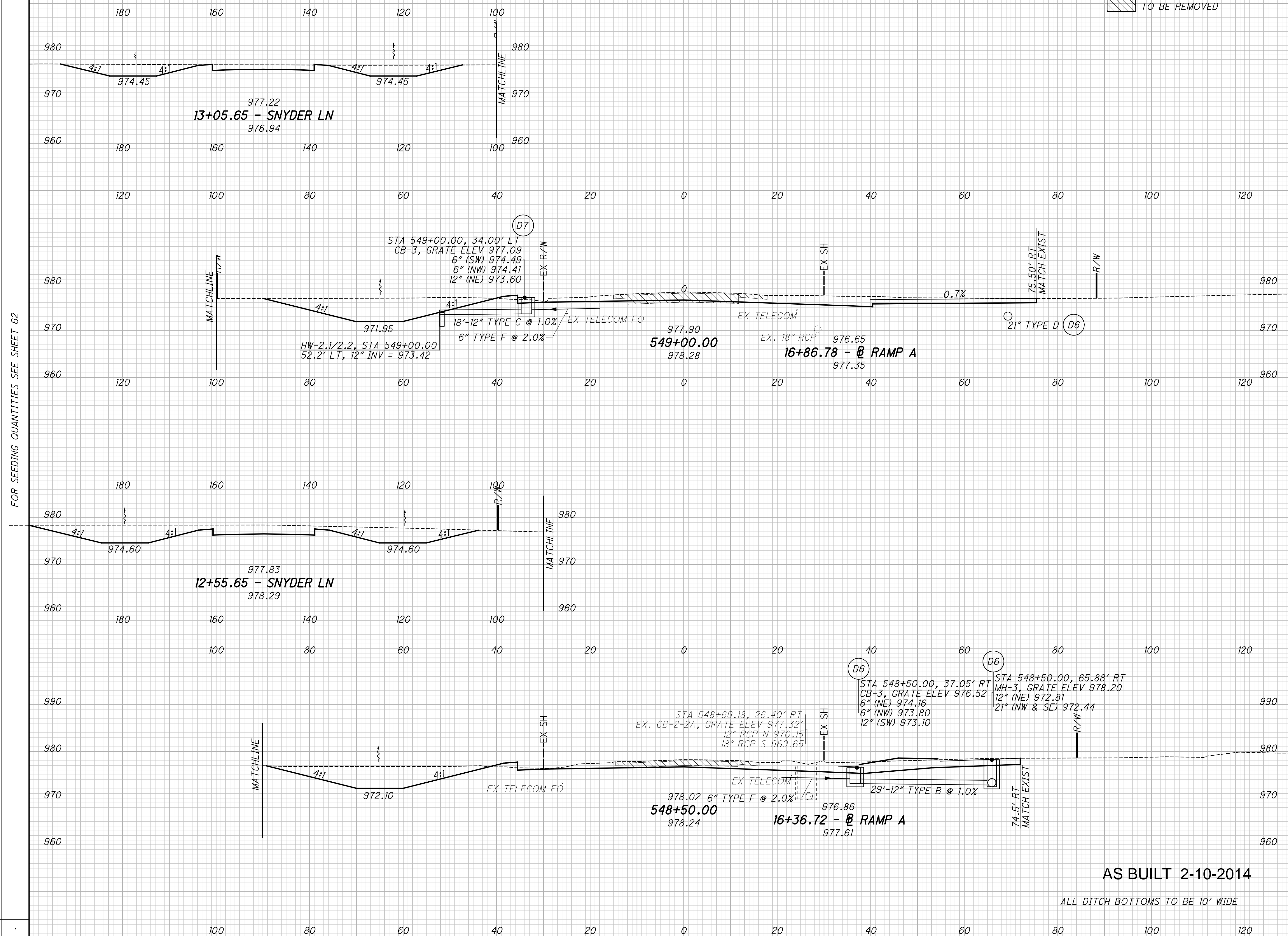
52
97

c:\pwworking\gfpw01\wbinckley\d0164699\83245XS001.dgn 5/16/2013 1:57:51 PM wbinckley

SEEDING
END WIDTH SO. YDS.

END AREA VOLUME
CUT FILL CUT FILL
CALCULATED PEK CHECKED PRS

EXISTING PAVEMENT TO BE REMOVED



FOR SEEDING QUANTITIES SEE SHEET 62

FOR EARTHWORK QUANTITIES SEE SHEET 62

CROSS SECTIONS - SR-29
STA 548+50 TO STA 549+00

MAD-70-10.27

AS BUILT 2-10-2014

ALL DITCH BOTTOMS TO BE 10' WIDE

53
97

c:\pwworking\gfpw01\wbinckley\d0164699\83245XS001.dgn 5/16/2013 1:58:19 PM wbinckley

c:\pwworking\gfpw01\wbinckley\d0164699\83245XS001.dgn 5/16/2013 1:58:50 PM wbinckley

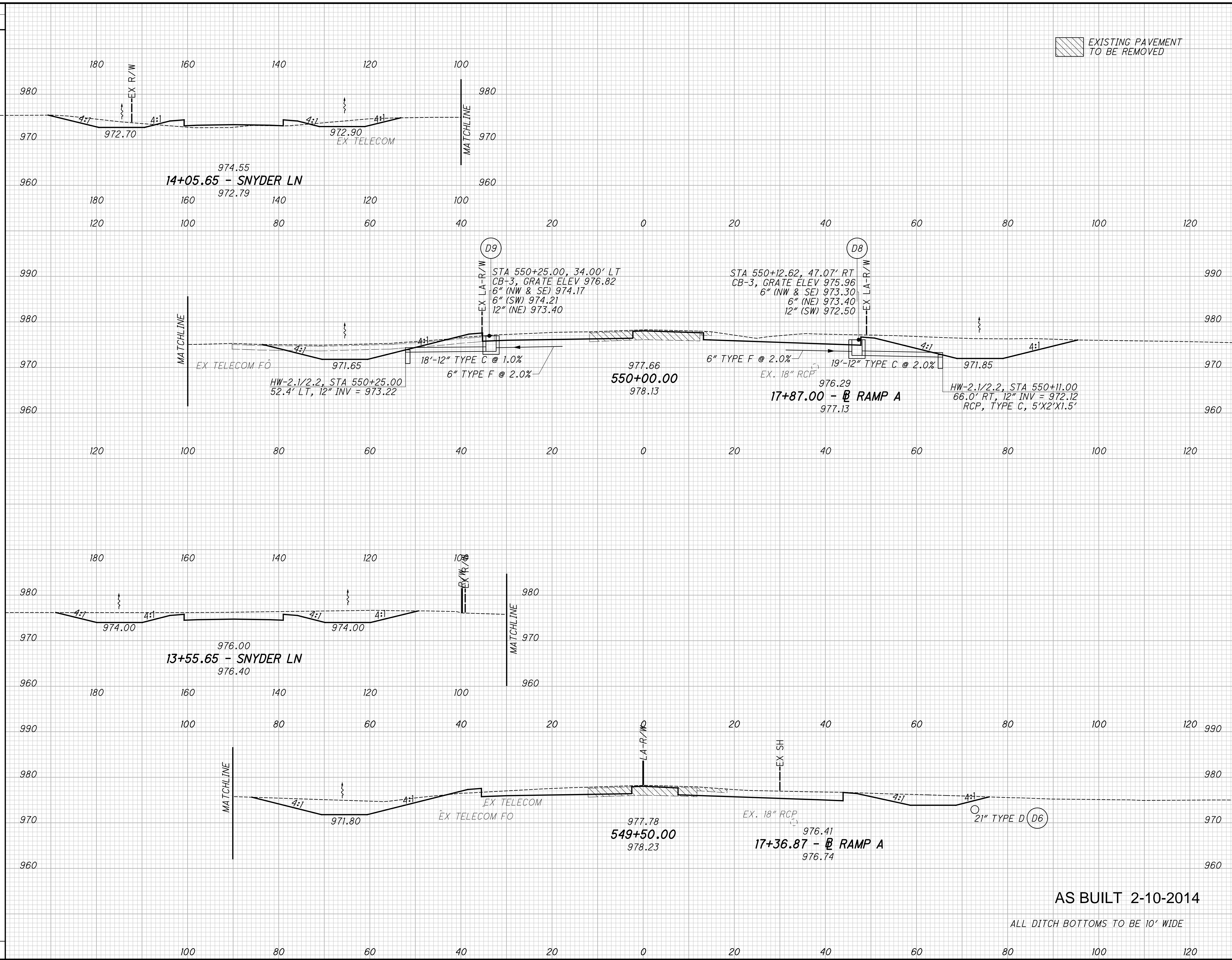
SEEDING
END WIDTH SO. YDS.

R/W

FOR SEEDING QUANTITIES SEE SHEET 62

FOR SEEDING QUANTITIES SEE SHEET 62

FOR SEEDING QUANTITIES SEE SHEET 62



EXISTING PAVEMENT TO BE REMOVED

END AREA		VOLUME		CALCULATED	PEK	CHECKED	PRS
CUT	FILL	CUT	FILL				

FOR EARTHWORK QUANTITIES SEE SHEET 62

**CROSS SECTIONS - SR-29
STA 549+50 TO STA 550+00**

MAD-70-10.27

AS BUILT 2-10-2014
ALL DITCH BOTTOMS TO BE 10' WIDE

54
97

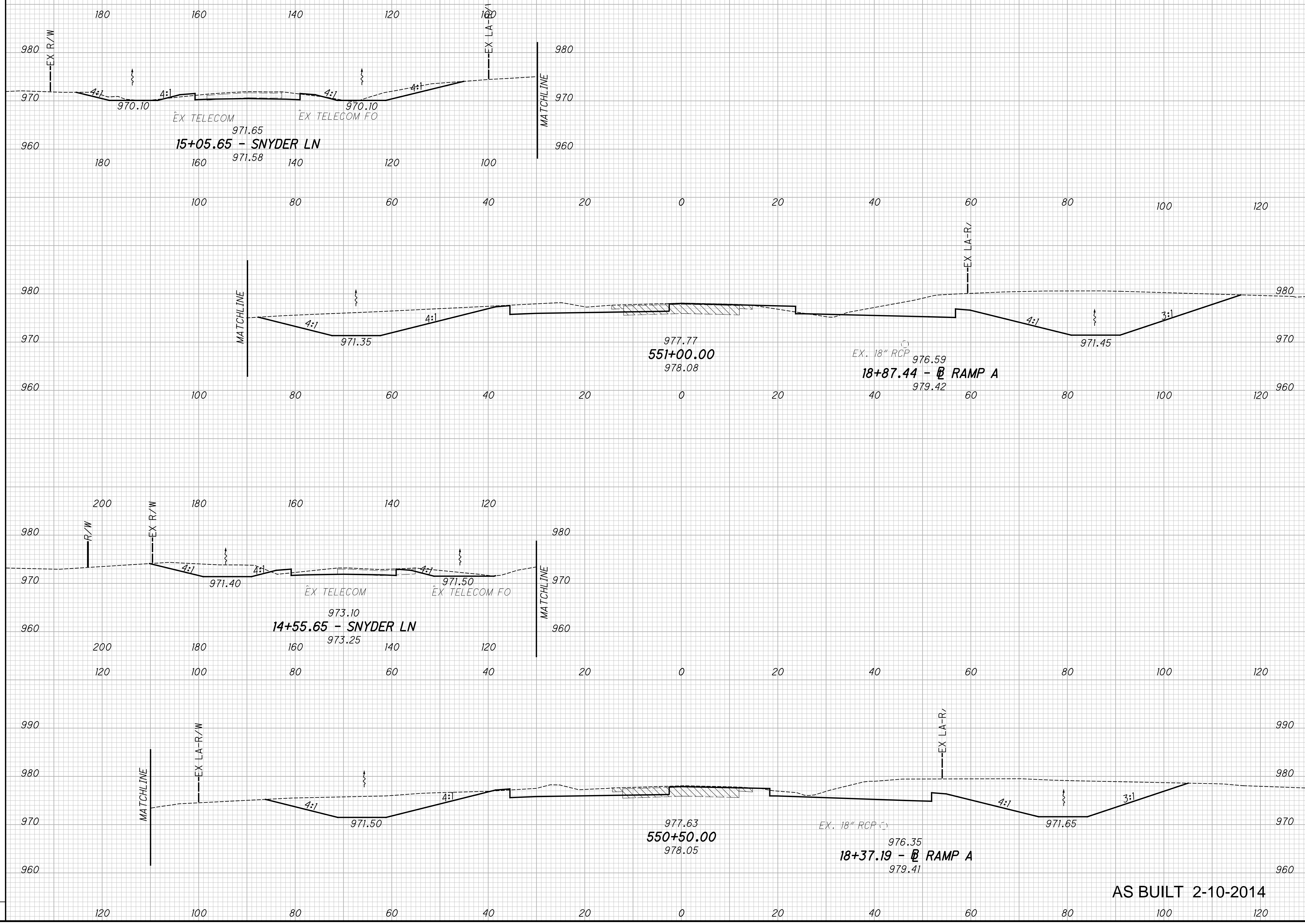
SEEDING
END WIDTH SO. YDS.

END AREA VOLUME
CUT FILL CUT FILL
CALCULATED PEK CHECKED PRS

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FOR SEEDING QUANTITIES SEE SHEET 62

FOR EARTHWORK QUANTITIES SEE SHEET 62

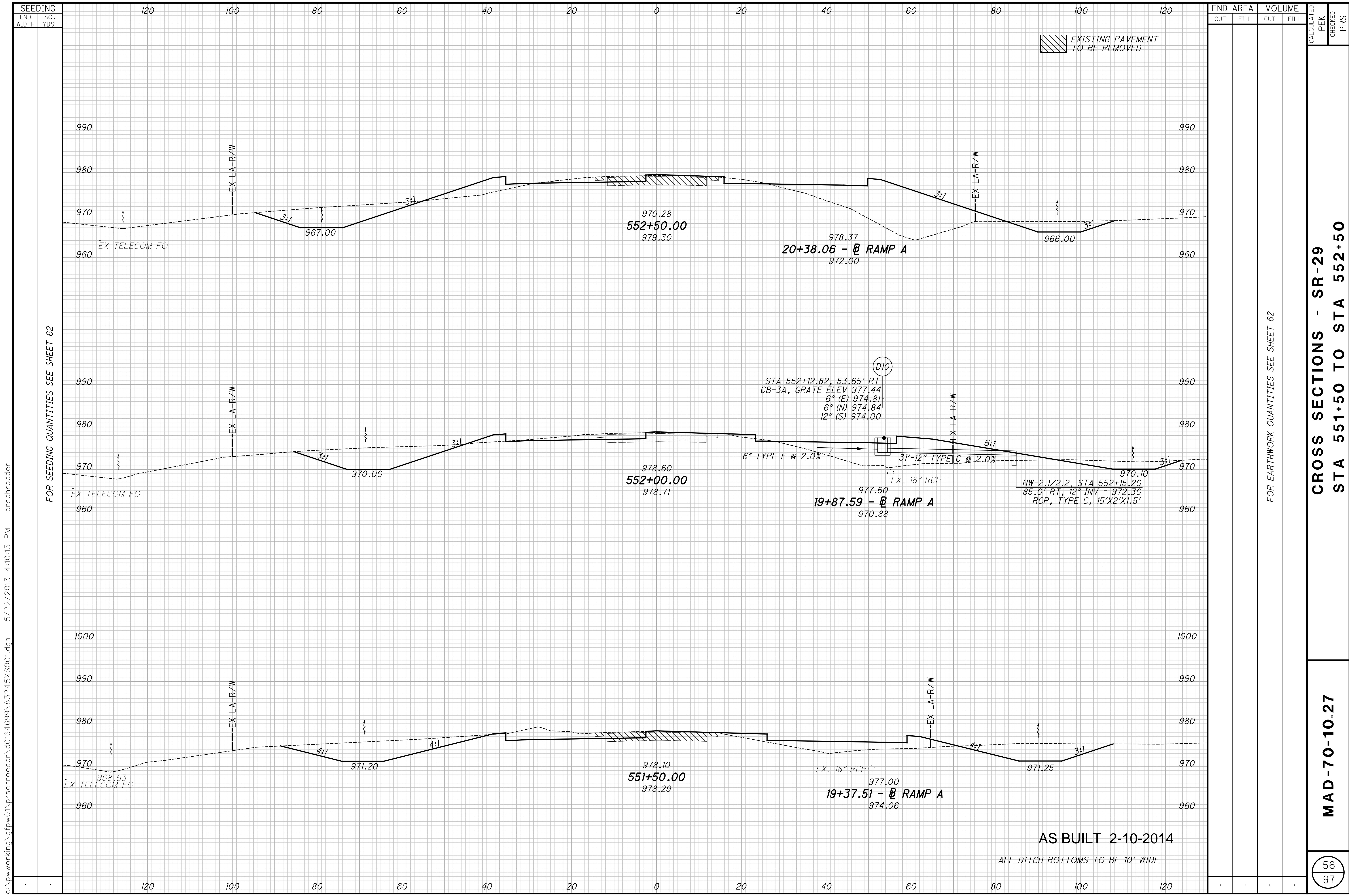


CROSS SECTIONS - SR-29
STA 550+50 TO STA 551+00

MAD-70-10.27

AS BUILT 2-10-2014

55
97



EXISTING PAVEMENT TO BE REMOVED

FOR SEEDING QUANTITIES SEE SHEET 62

FOR EARTHWORK QUANTITIES SEE SHEET 62

END AREA	VOLUME	CALCULATED	PEK	CHECKED	PRS

CROSS SECTIONS - SR-29
STA 551+50 TO STA 552+50

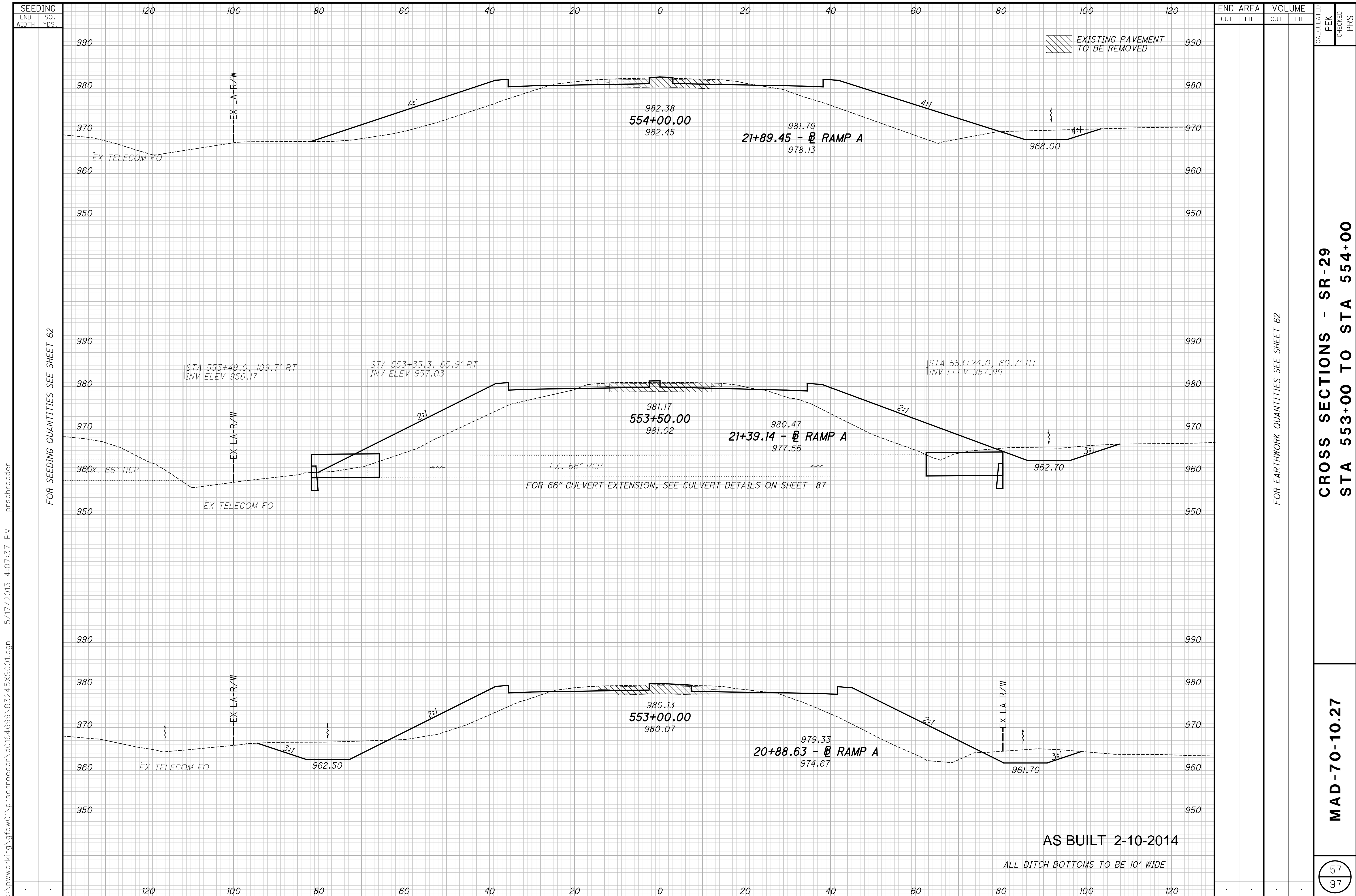
MAD-70-10.27

56
97

AS BUILT 2-10-2014

ALL DITCH BOTTOMS TO BE 10' WIDE

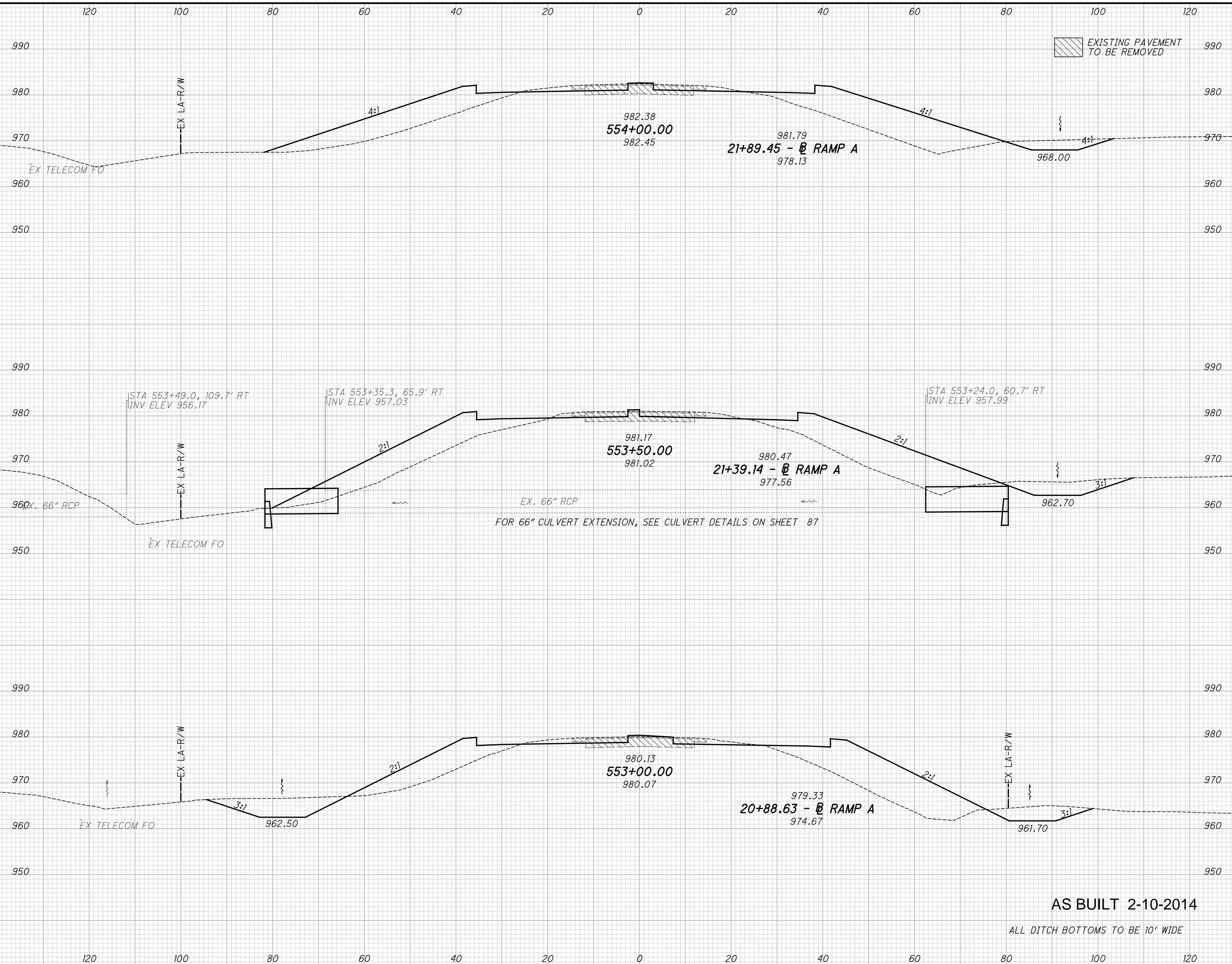
c:\pwworking\gfpw01\prschroeder\d0164699\83245X5001.dgn 5/22/2013 4:10:13 PM prschroeder



SEEDING
END WIDTH SO. YDS.

FOR SEEDING QUANTITIES SEE SHEET 62

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END AREA		VOLUME		CALCULATED	PEK	CHECKED	PRS
CUT	FILL	CUT	FILL				

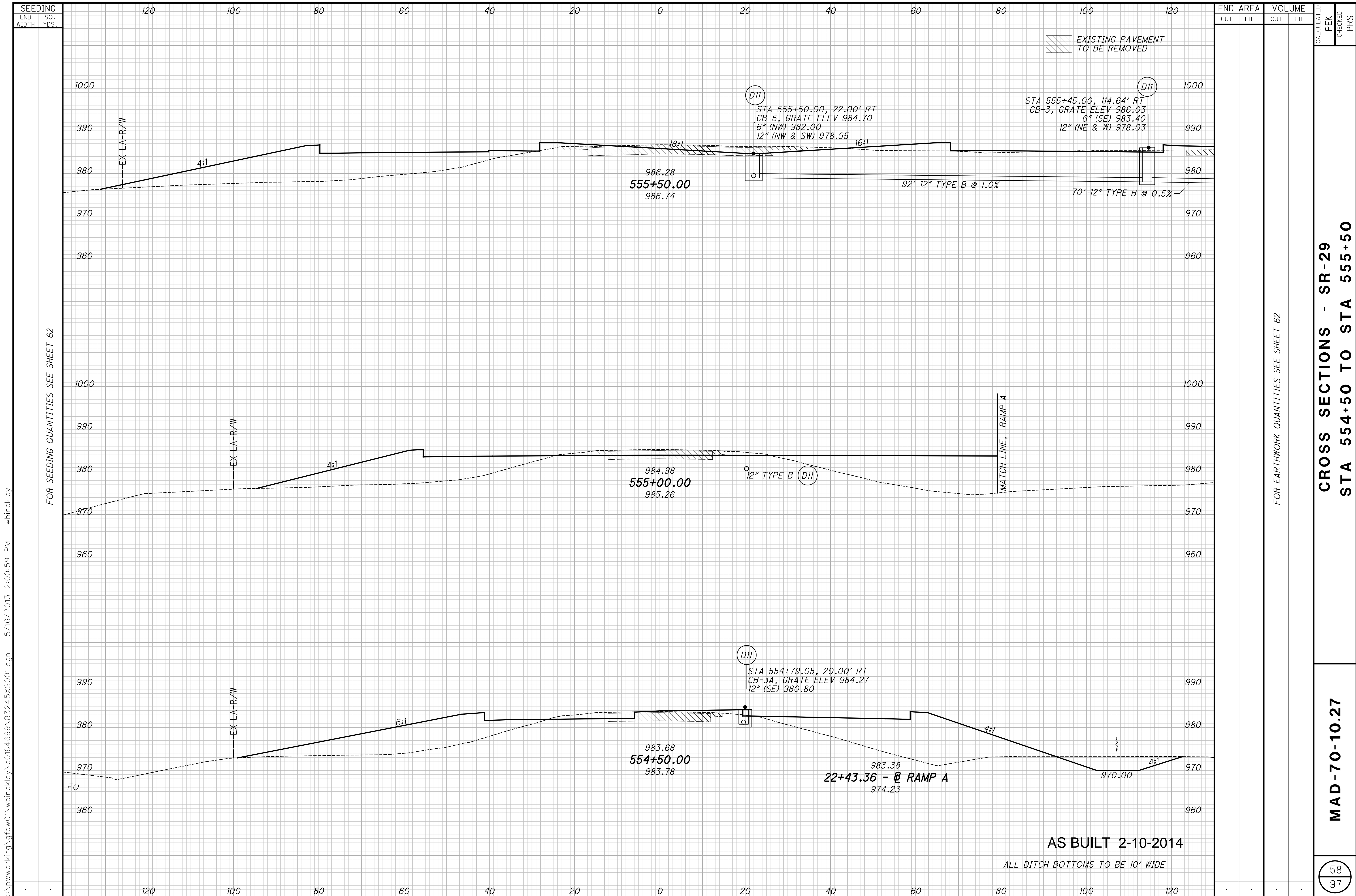
FOR EARTHWORK QUANTITIES SEE SHEET 62

CROSS SECTIONS - SR-29
STA 553+00 TO STA 554+00

MAD-70-10.27

AS BUILT 2-10-2014
ALL DITCH BOTTOMS TO BE 10' WIDE

57
97



FOR SEEDING QUANTITIES SEE SHEET 62

FOR EARTHWORK QUANTITIES SEE SHEET 62

CROSS SECTIONS - SR-29
STA 554+50 TO STA 555+50

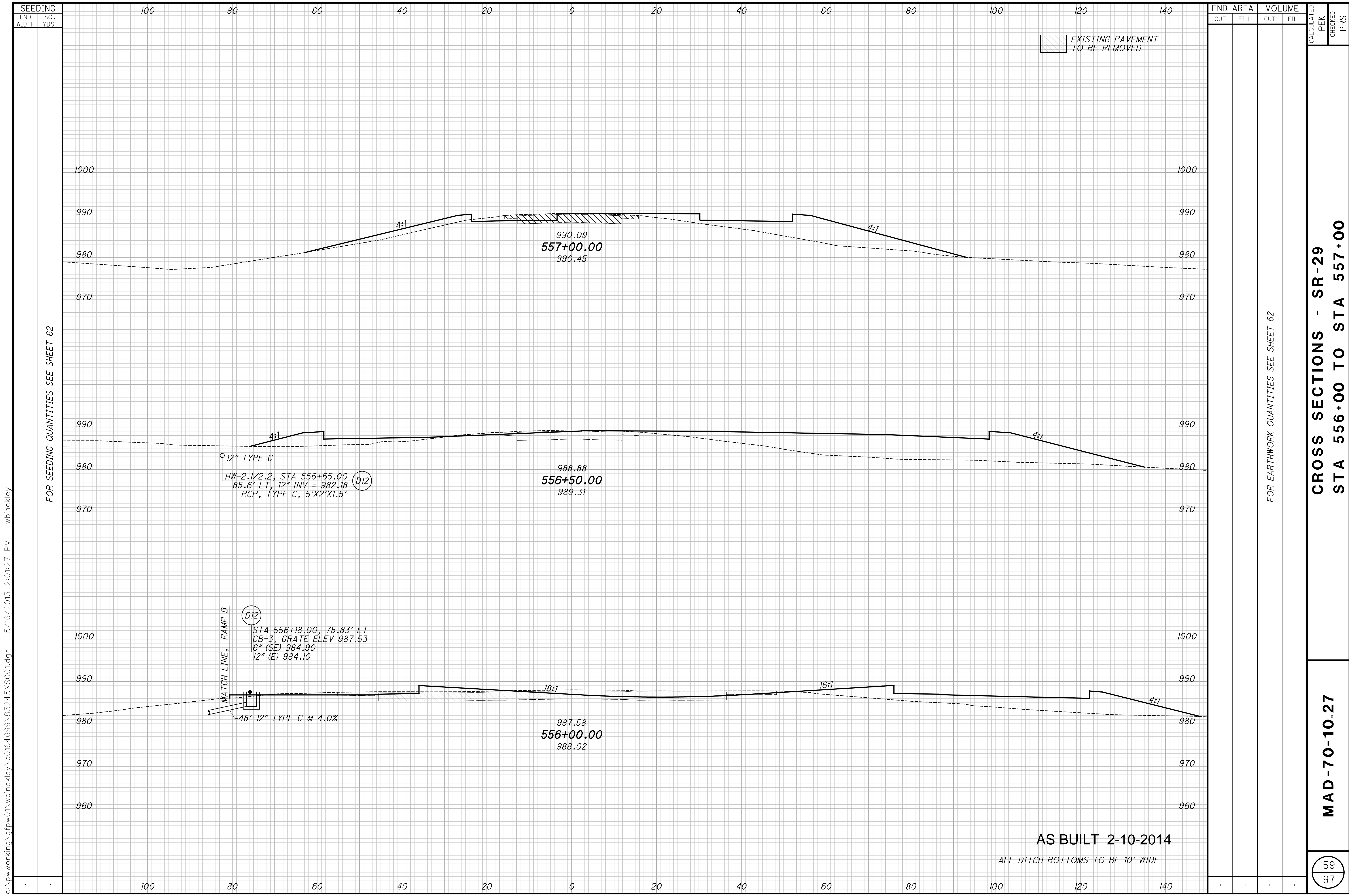
MAD-70-10.27

AS BUILT 2-10-2014

ALL DITCH BOTTOMS TO BE 10' WIDE

58
97

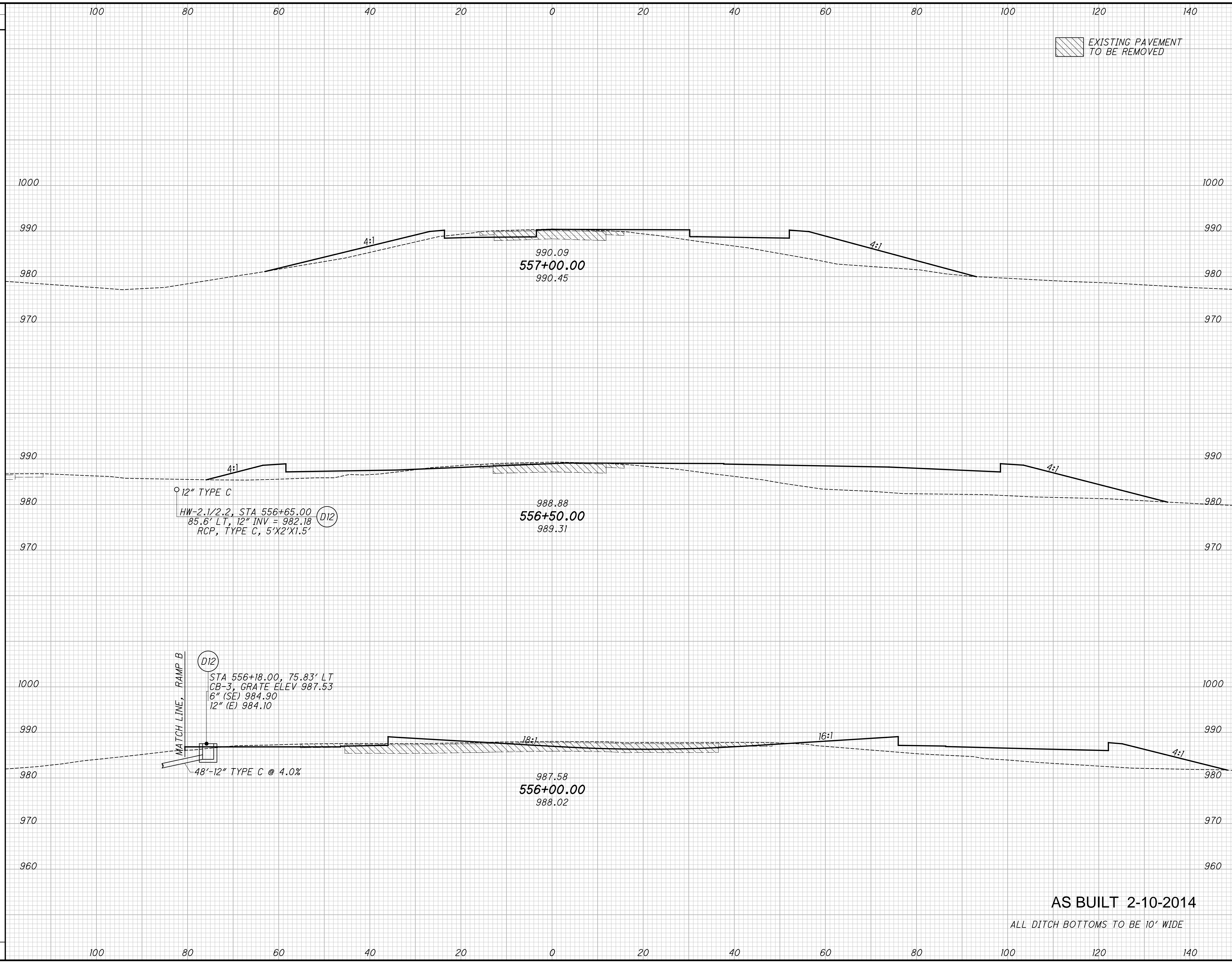
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SEEDING
END WIDTH SO. YDS.

FOR SEEDING QUANTITIES SEE SHEET 62

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END AREA		VOLUME		CALCULATED	PEK	CHECKED	PRS
CUT	FILL	CUT	FILL				

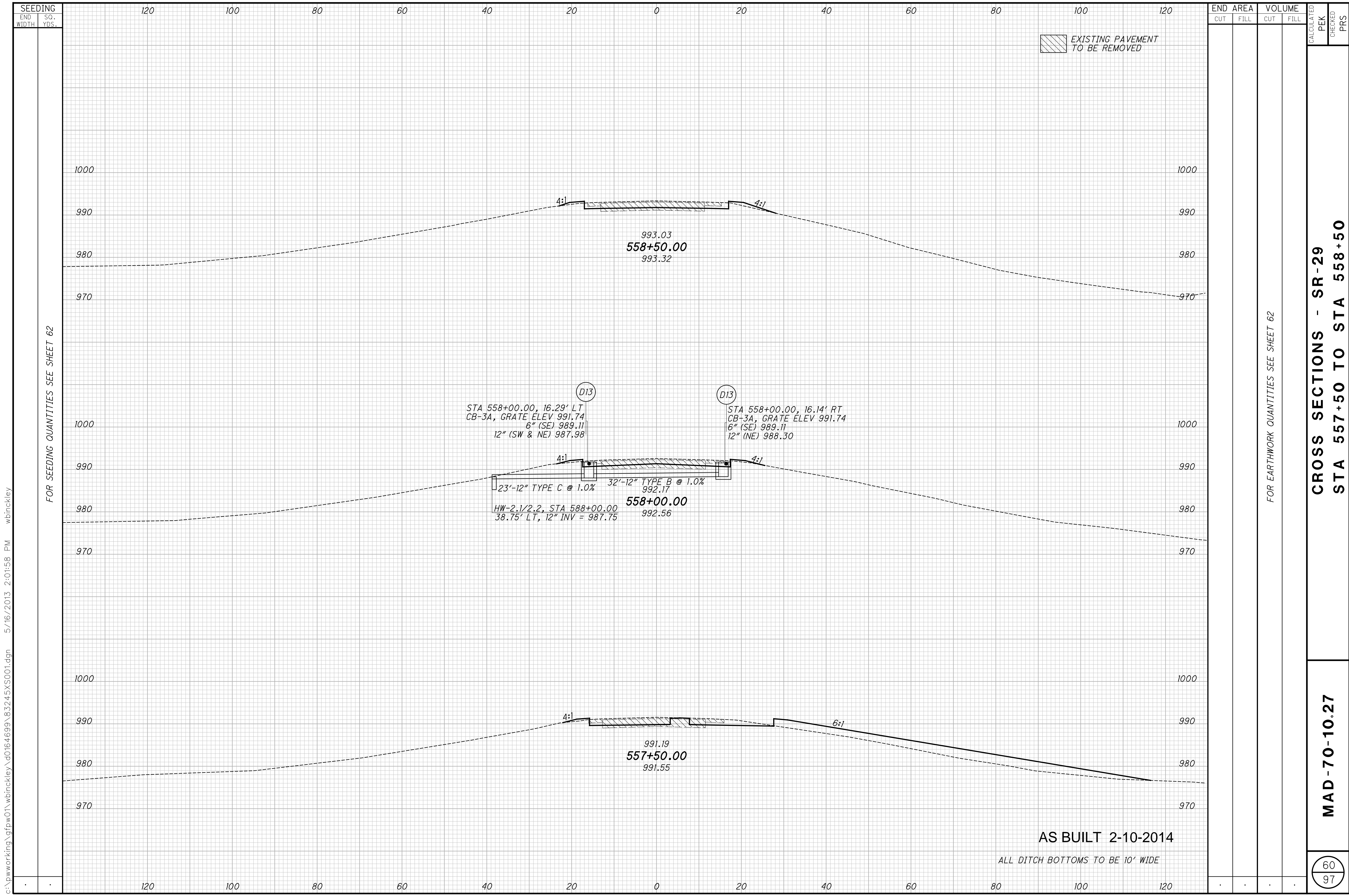
FOR EARTHWORK QUANTITIES SEE SHEET 62

CROSS SECTIONS - SR-29
STA 556+00 TO STA 557+00

MAD-70-10.27

AS BUILT 2-10-2014
ALL DITCH BOTTOMS TO BE 10' WIDE

59
97

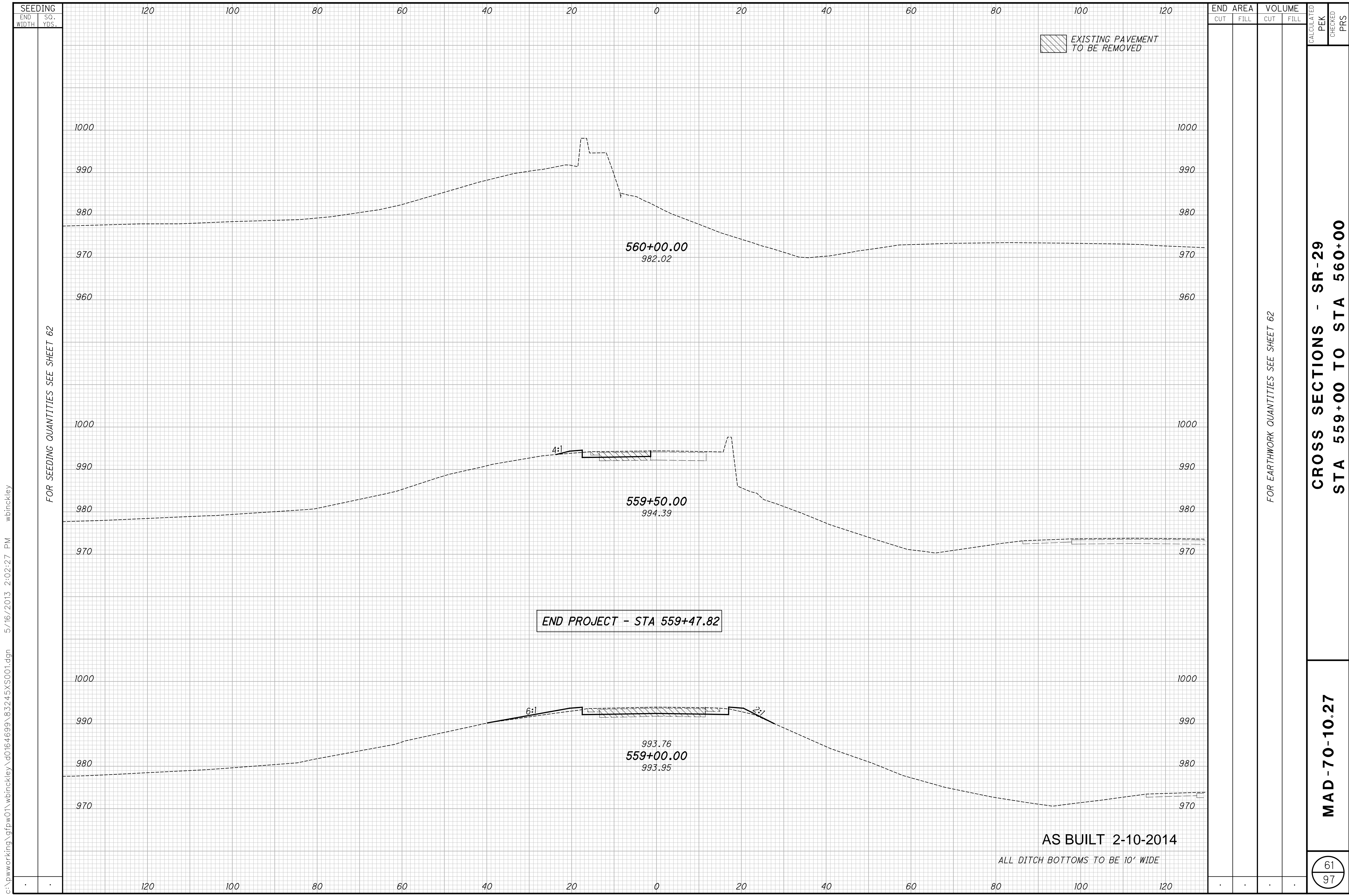


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CROSS SECTIONS - SR-29
STA 557+50 TO STA 558+50

MAD-70-10.27

60
97



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CROSS SECTIONS - SR-29
STA 559+00 TO STA 560+00

MAD-70-10.27

61
97

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STATION	NOMINAL CUT		NOMINAL FILL		203	203	ITEM	659
	END AREA	VOLUME	END AREA	VOLUME	EXCAVATION	EMBANKMENT	SEEDING AND MULCHING	
							END LENGTH	AREA
	SF	CY	SF	CY	CU YD	CU YD	FT	SQ YD
534+00.00	0.00		0.00				0.0	
534+20.00	11.00	4.08	4.00	1.49	5.0	2.0	14.0	16.0
534+50.00	83.00	52.23	4.00	4.45	53.0	5.0	43.0	95.0
535+00.00	92.00	162.04	6.00	9.26	163.0	10.0	40.0	231.0
535+50.00	89.00	167.60	16.00	20.38	168.0	21.0	67.0	298.0
536+00.00	106.00	180.56	19.00	32.41	181.0	33.0	76.0	398.0
536+50.00	56.00	150.00	18.00	34.26	150.0	35.0	76.0	325.0
537+00.00	61.00	108.34	33.00	47.23	109.0	48.0	41.0	314.0
537+50.00	26.00	80.56	44.00	71.30	81.0	72.0	63.0	375.0
538+00.00	26.00	48.15	45.00	82.41	49.0	83.0	63.0	350.0
538+50.00	33.00	54.63	40.00	78.71	55.0	79.0	65.0	356.0
539+00.00	51.00	77.78	32.00	66.67	78.0	67.0	68.0	370.0
539+50.00	65.00	107.41	10.00	38.89	108.0	39.0	68.0	298.0
540+00.00	75.00	129.63	16.00	24.08	130.0	25.0	71.0	306.0
540+50.00	102.00	163.89	43.00	54.63	164.0	55.0	81.0	423.0
541+00.00	117.00	202.78	44.00	80.56	203.0	81.0	85.0	462.0
541+50.00	122.00	221.30	58.00	94.45	222.0	95.0	89.0	484.0
542+00.00	106.00	211.12	57.00	106.49	212.0	107.0	89.0	378.0
542+50.00	109.00	199.08	57.00	105.56	200.0	106.0	47.0	264.0
543+00.00	92.00	186.12	107.00	151.86	187.0	152.0	48.0	378.0
543+50.00	91.00	169.45	112.00	202.78	170.0	203.0	88.0	492.0
544+00.00	102.00	178.71	85.00	182.41	179.0	183.0	89.0	498.0
544+50.00	80.00	168.52	77.00	150.00	169.0	150.0	90.0	381.0
545+00.00	95.00	162.04	124.00	186.12	163.0	187.0	47.0	387.0
545+50.00	91.00	172.23	124.00	229.63	173.0	230.0	92.0	512.0
546+00.00	47.00	127.78	206.00	305.56	128.0	306.0	55.0	409.0
546+50.00	164.00	195.38	107.00	289.82	196.0	290.0	142.0	548.0
547+00.00	224.00	359.26	86.00	178.71	360.0	179.0	147.0	803.0
547+50.00	300.00	485.19	44.00	120.38	486.0	121.0	162.0	859.0
548+00.00	437.00	682.41	21.00	60.19	683.0	61.0	162.0	823.0
SUBTOTAL					5225	3025		11833

AS BUILT 2-10-2014

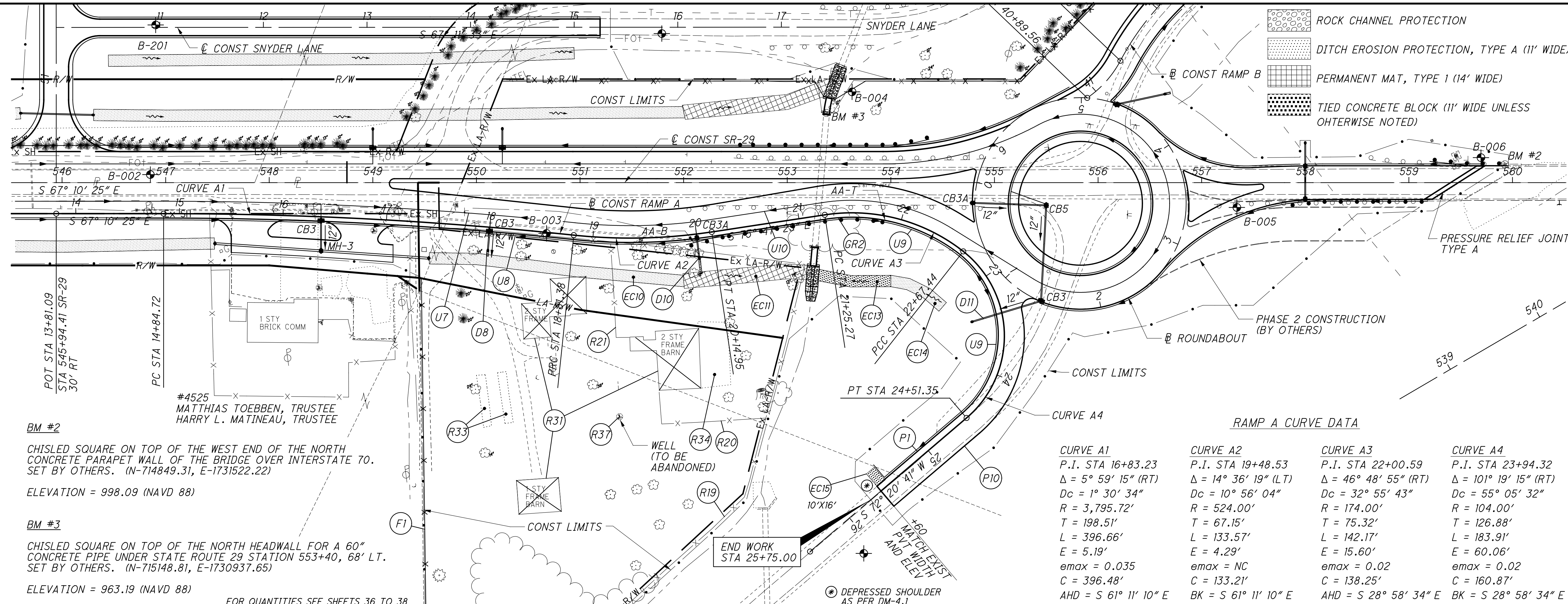
STATION	NOMINAL CUT		NOMINAL FILL		203	203	ITEM	659
	END AREA	VOLUME	END AREA	VOLUME	EXCAVATION	EMBANKMENT	SEEDING AND MULCHING	
							END LENGTH	AREA
	SF	CY	SF	CY	CU YD	CU YD	FT	SQ YD
548+00.00	437.00		21.00				134.0	
548+50.00	476.00	845.38	4.20	23.34	846.0	24.0	136.0	750.0
549+00.00	376.00	788.89	15.00	17.78	789.0	18.0	128.0	734.0
549+50.00	332.00	655.56	29.00	40.75	656.0	41.0	151.0	775.0
550+00.00	344.00	625.93	54.00	76.86	626.0	77.0	162.0	870.0
550+50.00	602.00	875.93	40.00	87.04	876.0	88.0	165.0	909.0
551+00.00	655.00	1163.89	40.00	83.34	1164.0	84.0	165.0	964.0
551+50.00	272.00	858.34	131.00	167.60	859.0	168.0	182.0	812.0
552+00.00	180.00	418.52	289.00	388.89	419.0	389.0	110.0	656.0
552+50.00	182.00	335.19	397.00	635.19	336.0	636.0	126.0	706.0
553+00.00	154.00	311.12	445.00	779.63	312.0	780.0	128.0	720.0
553+50.00	71.00	208.34	544.00	915.75	209.0	916.0	131.0	731.0
554+00.00	51.00	112.97	495.00	962.04	113.0	963.0	132.0	706.0
554+50.00	78.00	119.45	729.00	1133.34	120.0	1134.0	122.0	703.0
555+00.00	14.00	85.19	608.00	1237.97	86.0	1238.0	131.0	484.0
555+50.00	13.00	25.00	506.00	1031.49	25.0	1032.0	43.0	689.0
556+00.00	7.00	18.52	375.00	815.75	19.0	816.0	205.0	970.0
556+50.00	4.00	10.19	576.00	880.56	11.0	881.0	144.0	570.0
557+00.00	8.00	11.12	292.00	803.71	12.0	804.0	61.0	417.0
557+50.00	15.00	21.30	292.00	435.19	22.0	436.0	89.0	531.0
558+00.00	9.00	22.23	25.00	187.97	23.0	188.0	102.0	339.0
558+50.00	8.00	15.75	23.00	44.45	16.0	45.0	20.0	120.0
559+00.00	9.00	15.75	30.00	49.08	16.0	50.0	23.0	175.0
559+47.82	4.00	11.52	13.00	38.08	12.0	39.0	40.0	131.0
RAMP A					46.0	776.0		1276.0
RAMP B					284.0	1459.0		2678.0
RAMP D					353.0	166.0		871.0
SUBTOTAL					8250	13248		19287
GRAND TOTAL CARRIED TO GENERAL SUMMARY					13475	16273		
GRAND TOTAL CARRIED TO SHEET II								31120

CALCULATED
PEK
CHECKED
PRS

CROSS SECTION QUANTITIES

MAD - 70 - 10.27

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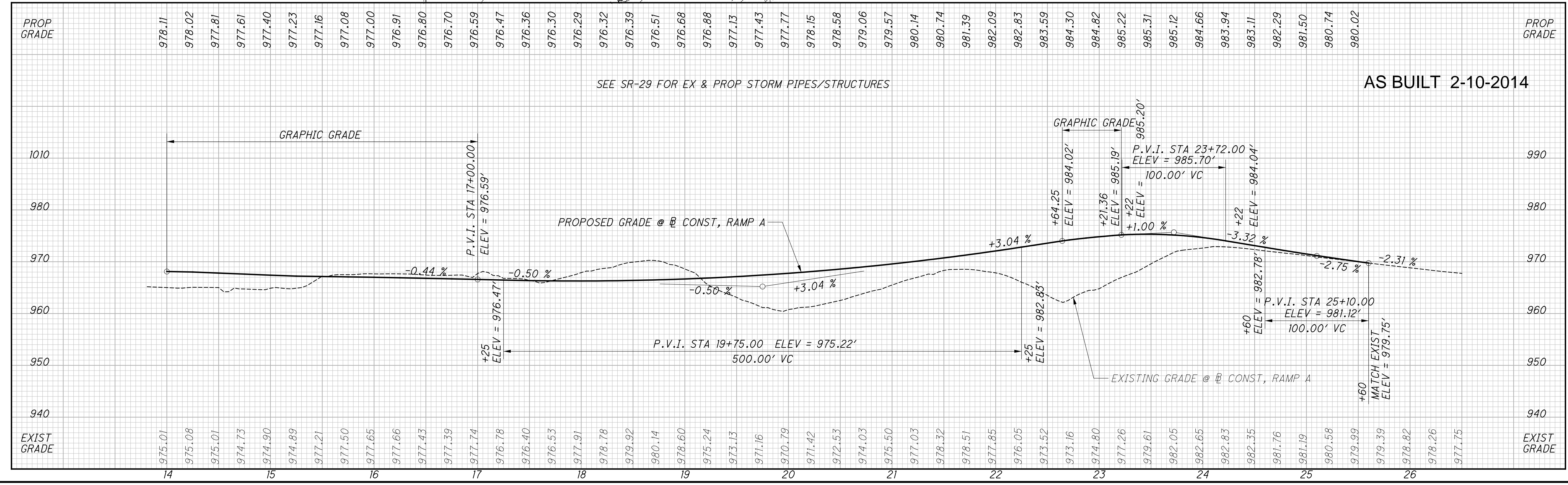


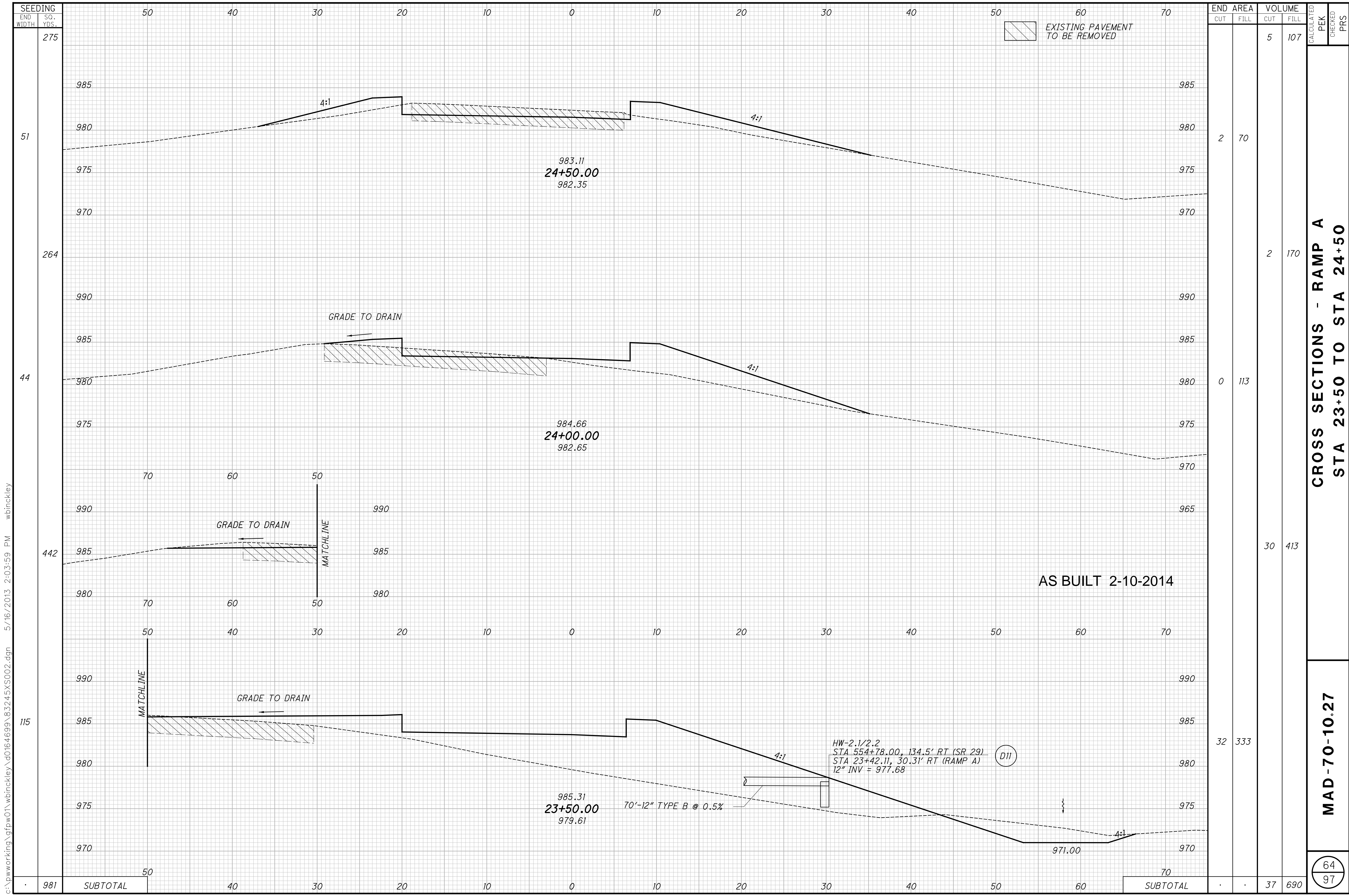
BM #2
CHISLED SQUARE ON TOP OF THE WEST END OF THE NORTH CONCRETE PARAPET WALL OF THE BRIDGE OVER INTERSTATE 70. SET BY OTHERS. (N-714849.31, E-1731522.22)
ELEVATION = 998.09 (NAVD 88)

BM #3
CHISLED SQUARE ON TOP OF THE NORTH HEADWALL FOR A 60" CONCRETE PIPE UNDER STATE ROUTE 29 STATION 553+40, 68' LT. SET BY OTHERS. (N-715148.81, E-1730937.65)
ELEVATION = 963.19 (NAVD 88)

RAMP A CURVE DATA

CURVE A1	CURVE A2	CURVE A3	CURVE A4
P.I. STA 16+83.23	P.I. STA 19+48.53	P.I. STA 22+00.59	P.I. STA 23+94.32
$\Delta = 5^\circ 59' 15''$ (RT)	$\Delta = 14^\circ 36' 19''$ (LT)	$\Delta = 46^\circ 48' 55''$ (RT)	$\Delta = 101^\circ 19' 15''$ (RT)
$Dc = 1^\circ 30' 34''$	$Dc = 10^\circ 56' 04''$	$Dc = 32^\circ 55' 43''$	$Dc = 55^\circ 05' 32''$
$R = 3,795.72'$	$R = 524.00'$	$R = 174.00'$	$R = 104.00'$
$T = 198.51'$	$T = 67.15'$	$T = 75.32'$	$T = 126.88'$
$L = 396.66'$	$L = 133.57'$	$L = 142.17'$	$L = 183.91'$
$E = 5.19'$	$E = 4.29'$	$E = 15.60'$	$E = 60.06'$
$emax = 0.035$	$emax = NC$	$emax = 0.02$	$emax = 0.02$
$C = 396.48'$	$C = 133.21'$	$C = 138.25'$	$C = 160.87'$
AHD = S 61° 11' 10" E	BK = S 61° 11' 10" E	AHD = S 28° 58' 34" E	BK = S 28° 58' 34" E





EXISTING PAVEMENT TO BE REMOVED

AS BUILT 2-10-2014

HW-2.1/2.2
 STA 554+78.00, 134.5' RT (SR 29)
 STA 23+42.11, 30.31' RT (RAMP A)
 12" INV = 977.68

985.31
23+50.00
 979.61

983.11
24+50.00
 982.35

984.66
24+00.00
 982.65

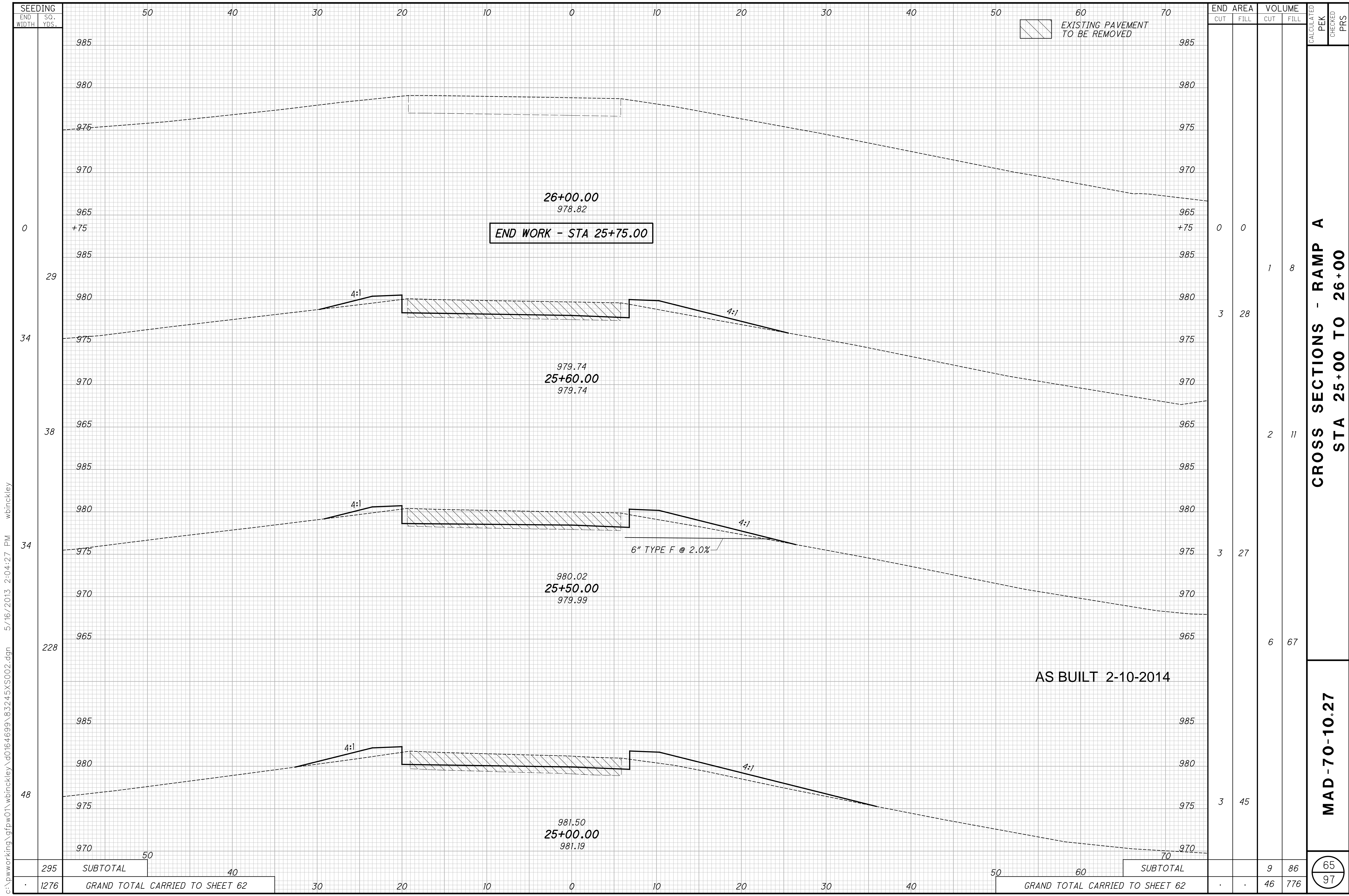
END STA	AREA		VOLUME		CALCULATED	PEK	CHECKED	PRS
	CUT	FILL	CUT	FILL				
275			5	107				
264	2	70	2	170				
44	0	113						
442			30	413				
115	32	333						
981	SUBTOTAL		37	690				

CROSS SECTIONS - RAMP A
 STA 23+50 TO STA 24+50

MAD-70-10.27

64
97

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EXISTING PAVEMENT TO BE REMOVED

END WORK - STA 25+75.00

26+00.00
978.82

25+60.00
979.74

25+50.00
980.02

25+00.00
981.50

6" TYPE F @ 2.0%

AS BUILT 2-10-2014

END AREA	VOLUME	CALCULATED	PEK	CHECKED	PRS
0	0				
3	28	1			8
2	11				
3	27				
6	67				
3	45				
SUBTOTAL		9	86		
GRAND TOTAL CARRIED TO SHEET 62		46	776		

CROSS SECTIONS - RAMP A
STA 25+00 TO 26+00

MAD-70-10.27

65
97

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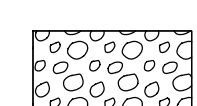
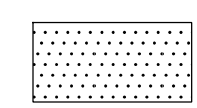
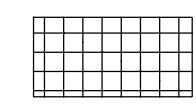
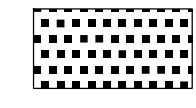
CURVE B1
 P.I. STA 41+14.30
 $\Delta = 27^\circ 47' 50''$ (LT)
 $D_c = 57^\circ 17' 45''$
 $R = 100.00'$
 $T = 24.74'$
 $L = 48.52'$
 $E = 3.02'$
 $e_{max} = 0.02$
 $C = 48.04'$
 AHD = N $50^\circ 41' 27''$ E BK = N $50^\circ 41' 27''$ E

CURVE B2
 P.I. STA 42+93.99
 $\Delta = 62^\circ 57' 20''$ (RT)
 $D_c = 22^\circ 30' 00''$
 $R = 254.65'$
 $T = 155.91'$
 $L = 279.80'$
 $E = 43.94'$
 $e_{max} = 0.04$
 $C = 265.94'$

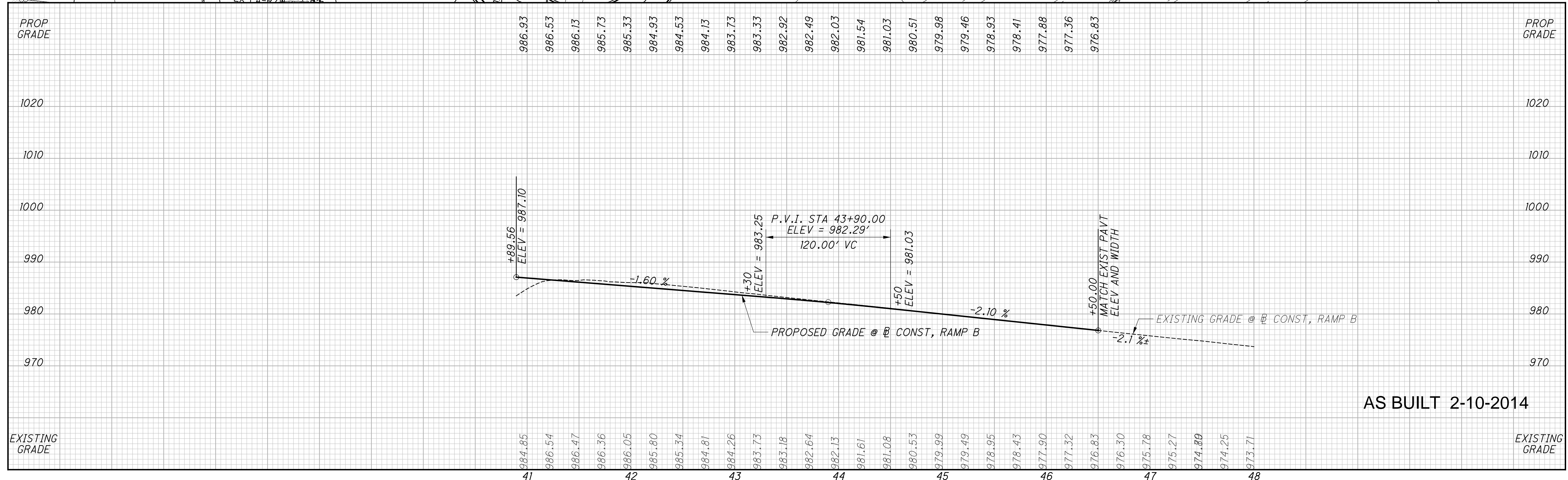
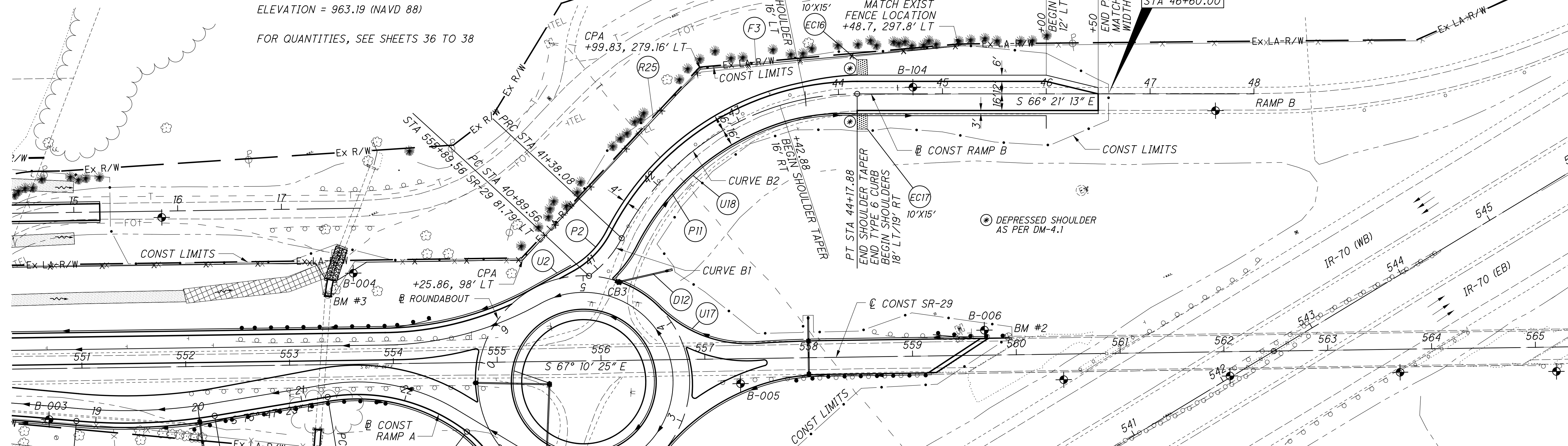
BM #2
 CHISLED SQUARE ON TOP OF THE WEST END OF THE NORTH CONCRETE PARAPET WALL OF THE BRIDGE OVER INTERSTATE 70. SET BY OTHERS. (N-714849.31, E-1731522.22)
 ELEVATION = 998.09 (NAVD 88)

BM #3
 CHISLED SQUARE ON TOP OF THE NORTH HEADWALL FOR A 60" CONCRETE PIPE UNDER STATE ROUTE 29 STATION 553+40, 68' LT. SET BY OTHERS. (N-715148.81, E-1730937.65)
 ELEVATION = 963.19 (NAVD 88)

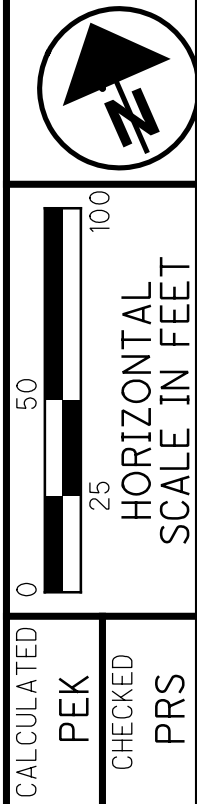
FOR QUANTITIES, SEE SHEETS 36 TO 38

-  ROCK CHANNEL PROTECTION
-  DITCH EROSION PROTECTION, TYPE A (11' WIDE)
-  PERMANENT MAT, TYPE 1 (14' WIDE)
-  TIED CONCRETE BLOCK (11' WIDE UNLESS OTHERWISE NOTED)

#4600
 JOHN W. SNYDER, JR.
 AND DEBRA SNYDER



AS BUILT 2-10-2014

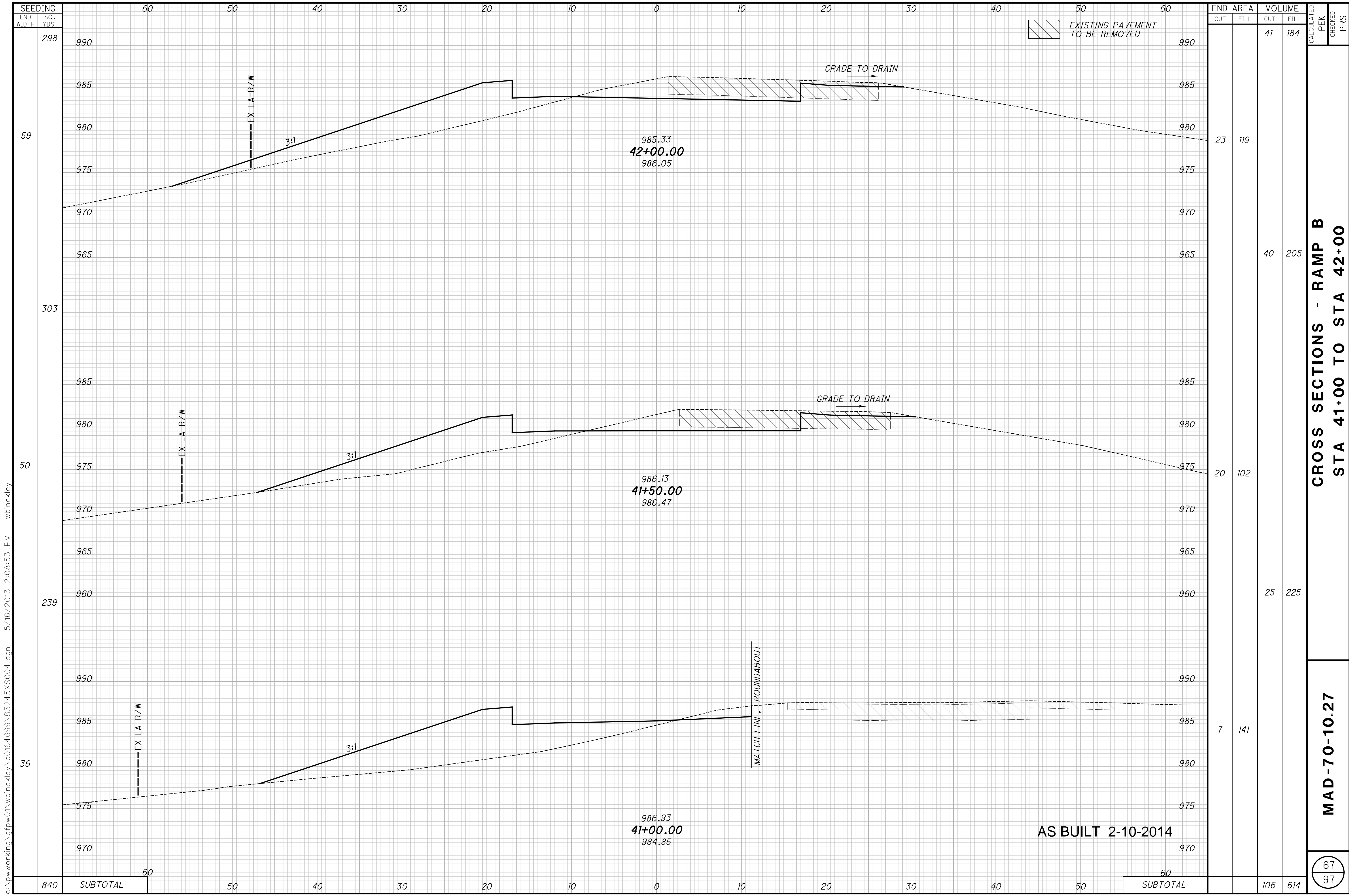


PLAN AND PROFILE - RAMP B
 STA 40+89.56 TO STA 48+00.00

MAD-70-10.27

66
97

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SEEDING	END WIDTH	
	SO. YDS.	
298	60	60
59	60	60
303	60	60
50	60	60
239	60	60
36	60	60
840	60	60

END AREA	VOLUME		CALCULATED PEK	CHECKED PRS
	CUT	FILL		
23	41	119		
40	205			
20	102			
25	225			
7	141			
	106	614		

EXISTING PAVEMENT TO BE REMOVED

GRADE TO DRAIN

985.33
42+00.00
986.05

986.13
41+50.00
986.47

986.93
41+00.00
984.85

MATCH LINE, ROUNDABOUT

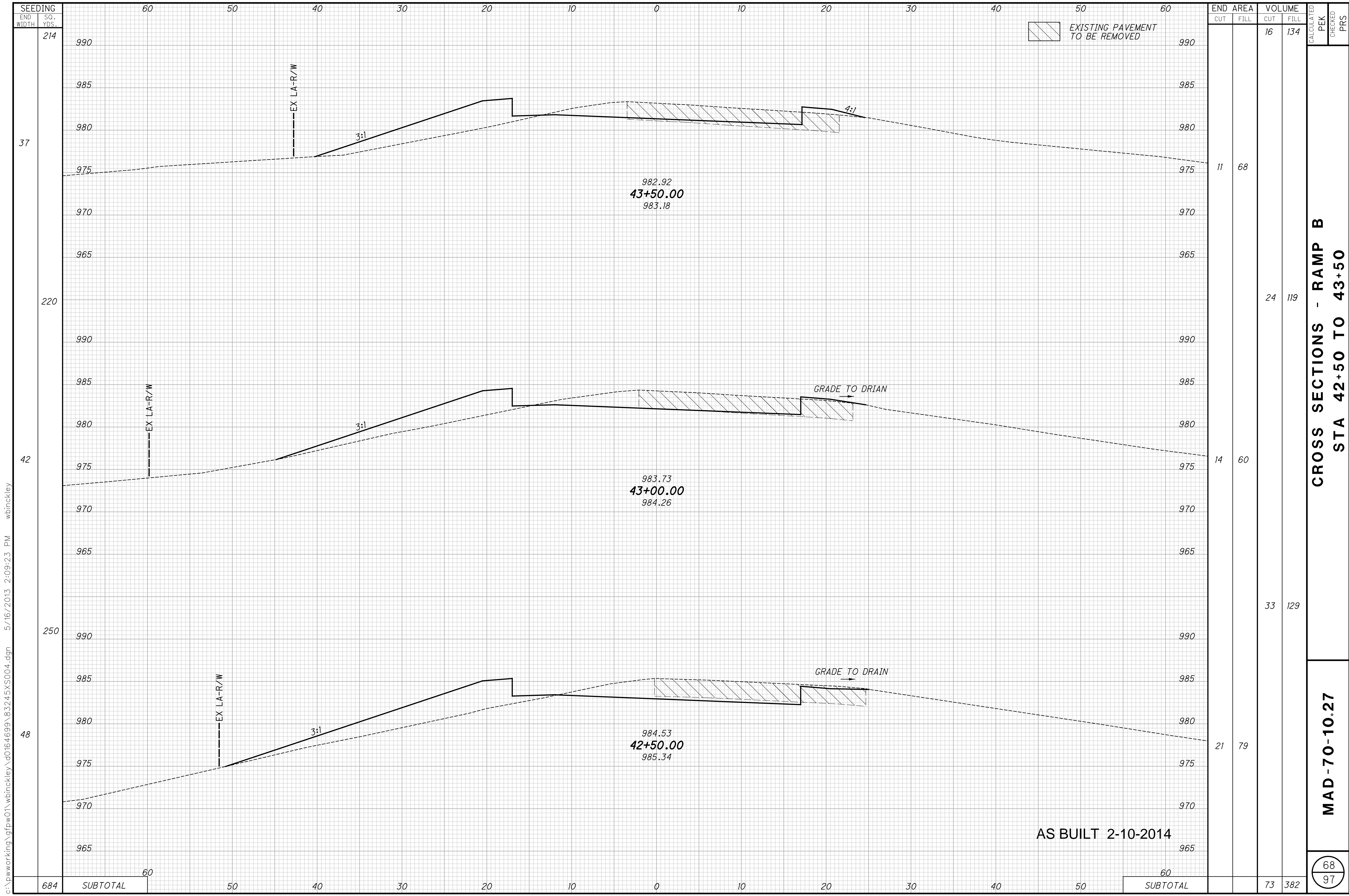
AS BUILT 2-10-2014

CROSS SECTIONS - RAMP B
STA 41+00 TO STA 42+00

MAD-70-10.27

67
97

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EXISTING PAVEMENT TO BE REMOVED

END STA	AREA		VOLUME		CALCULATED PEK	CHECKED PRS
	CUT	FILL	CUT	FILL		
214			16	134		
37	11	68				
220			24	119		
42	14	60				
250			33	129		
48	21	79				
684	SUBTOTAL		73	382		

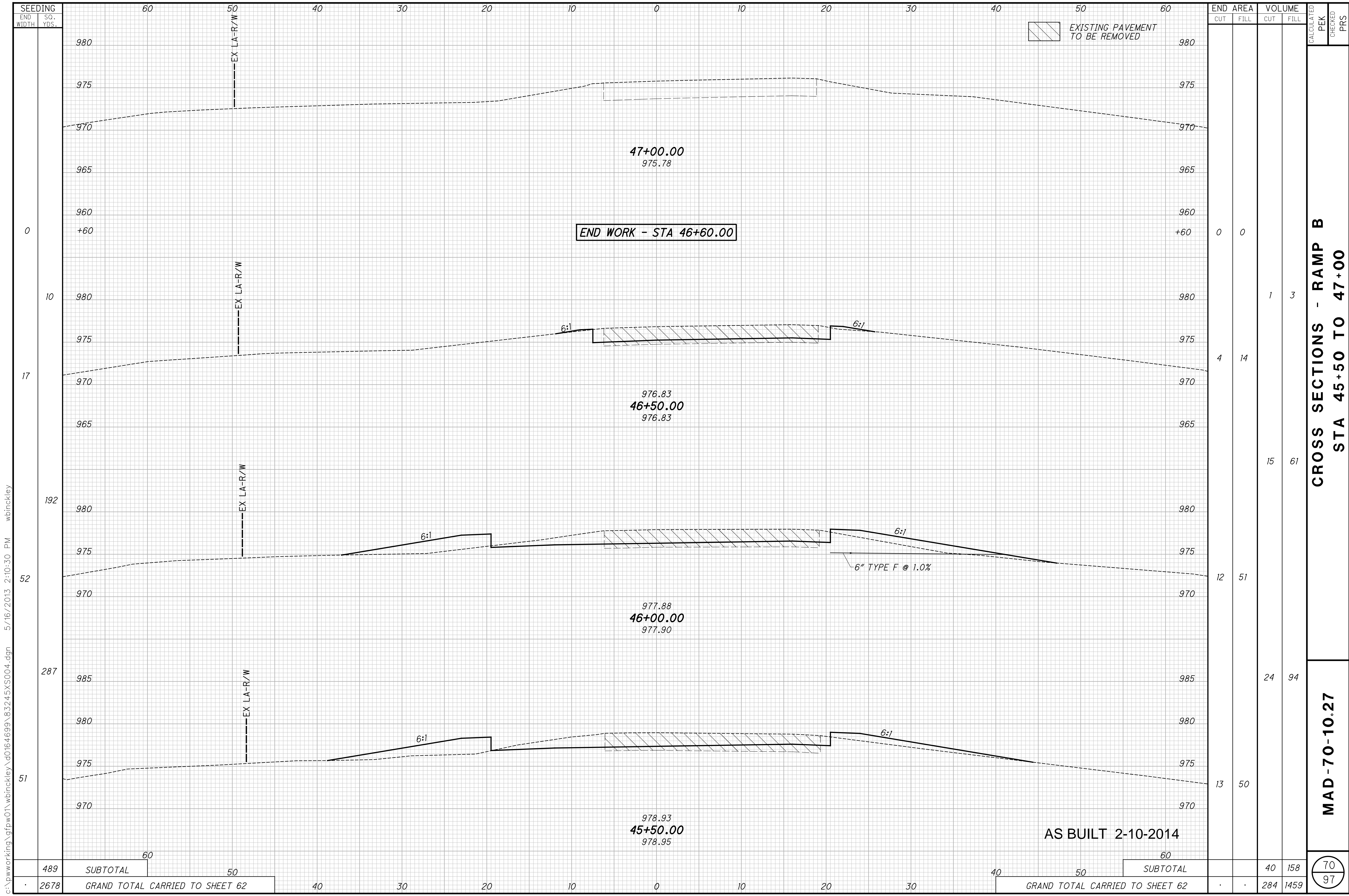
CROSS SECTIONS - RAMP B
STA 42+50 TO 43+50

MAD-70-10.27

68
97

AS BUILT 2-10-2014

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END AREA	VOLUME	CALCULATED	PEK	CHECKED	PRS
0	0				
4	14	1	3		
12	51	15	61		
13	50	24	94		
		40	158		
		284	1459		

CROSS SECTIONS - RAMP B
STA 45+50 TO 47+00

MAD-70-10.27

AS BUILT 2-10-2014

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489	SUBTOTAL	60	50
2678	GRAND TOTAL CARRIED TO SHEET 62	40	30

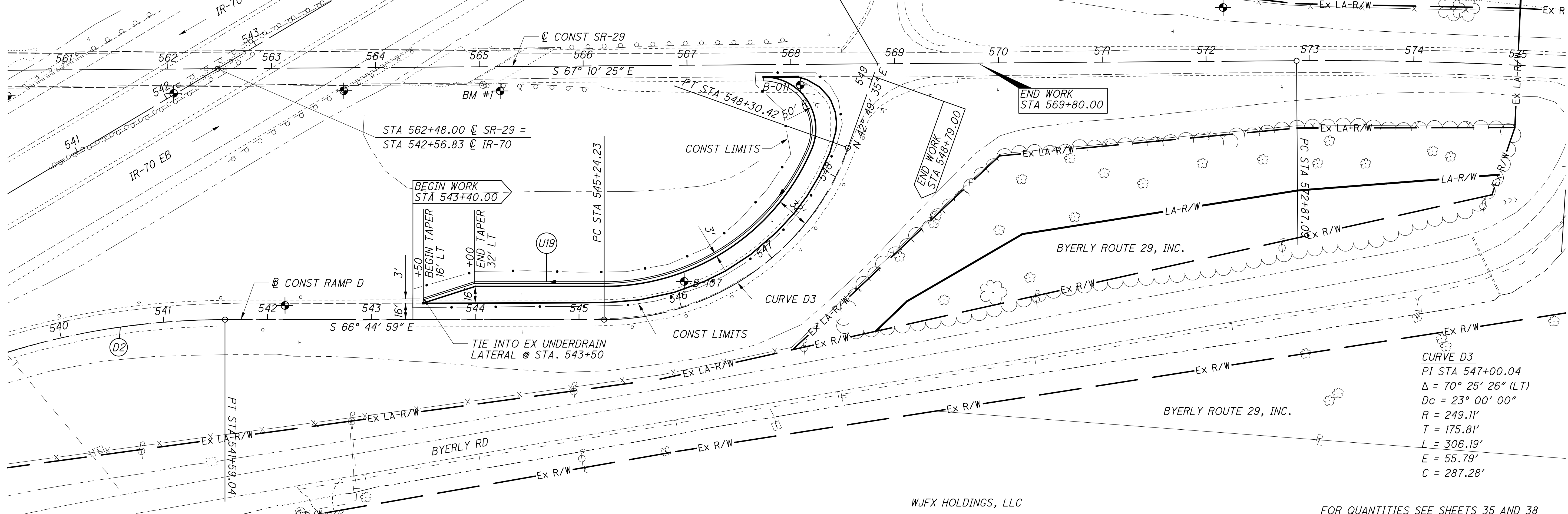
40	50	60	SUBTOTAL
			GRAND TOTAL CARRIED TO SHEET 62

70
97

BM #1

CHISLED SQUARE ON TOP OF THE EAST END OF THE SOUTH CONCRETE PARAPET WALL OF THE BRIDGE OVER INTERSTATE 70. SET BY OTHERS. (N-714618.71, E-1731979.44)

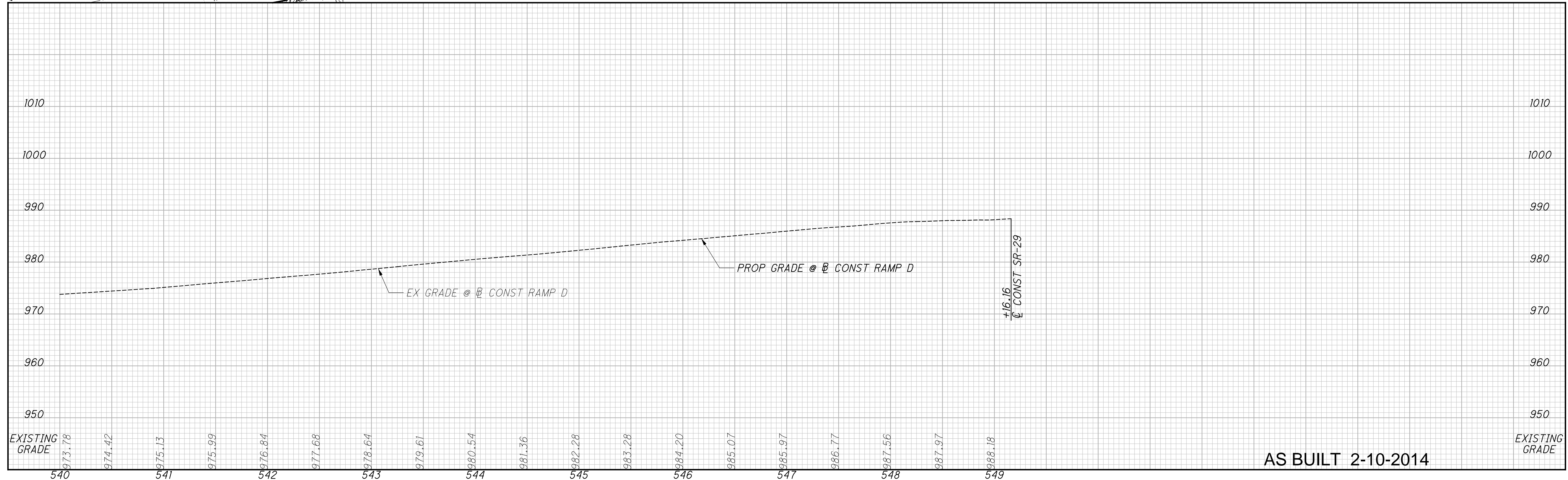
ELEVATION = 998.08 (NAVD 88)



CURVE D3
 PI STA 547+00.04
 $\Delta = 70^\circ 25' 26''$ (LT)
 $D_c = 23^\circ 00' 00''$
 $R = 249.11'$
 $T = 175.81'$
 $L = 306.19'$
 $E = 55.79'$
 $C = 287.28'$

WJFX HOLDINGS, LLC

FOR QUANTITIES SEE SHEETS 35 AND 38



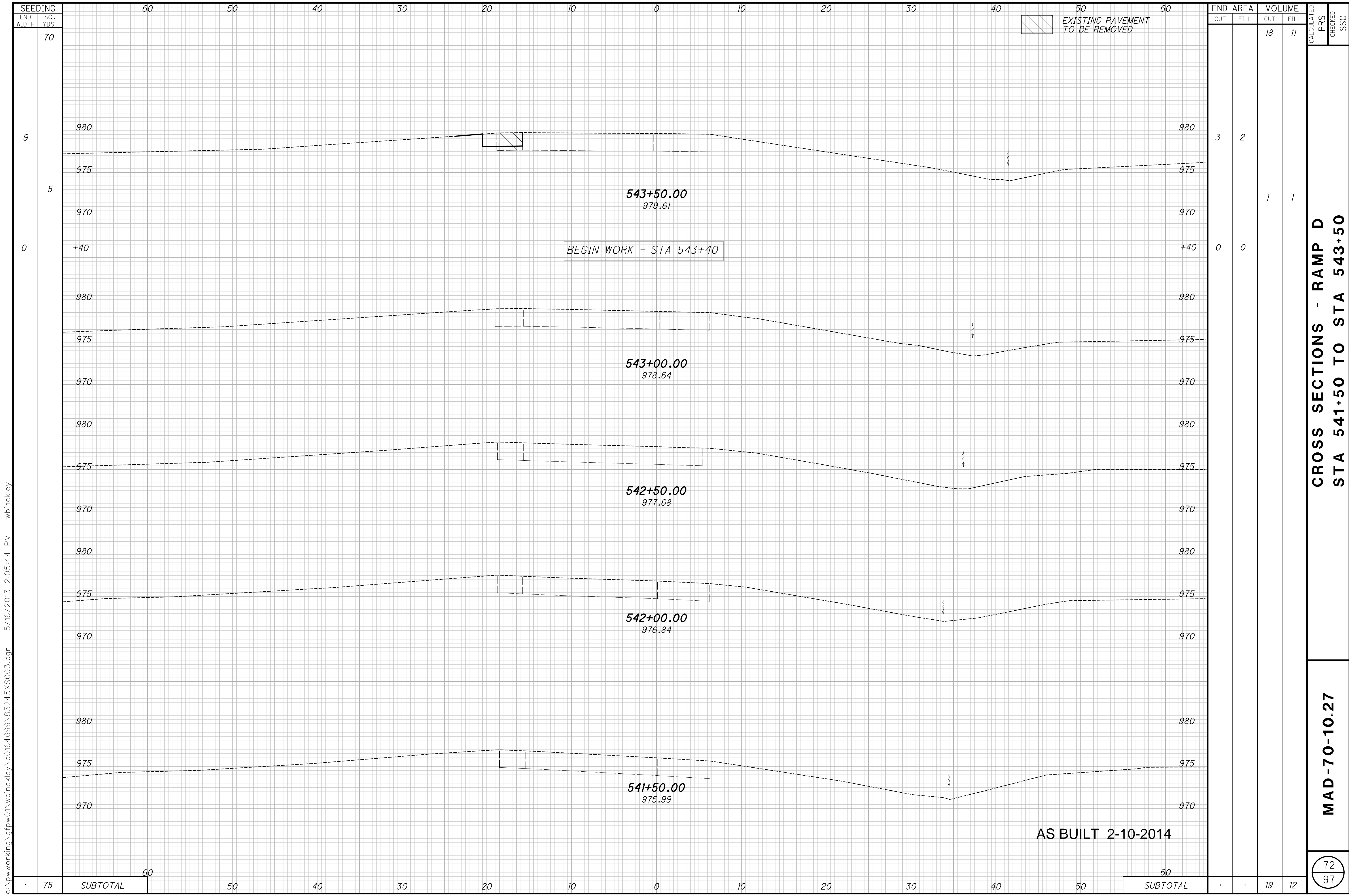
AS BUILT 2-10-2014

CALCULATED
 PEK
 CHECKED
 PRS

PLAN AND PROFILE - RAMP D
STA 540+00.00 TO STA 549+16.16

MAD-70-10.27

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EXISTING PAVEMENT TO BE REMOVED

BEGIN WORK - STA 543+40

AS BUILT 2-10-2014

END AREA	VOLUME	CALCULATED	CHECKED	SSC
3	2			
0	0			
18	11			
19	12			

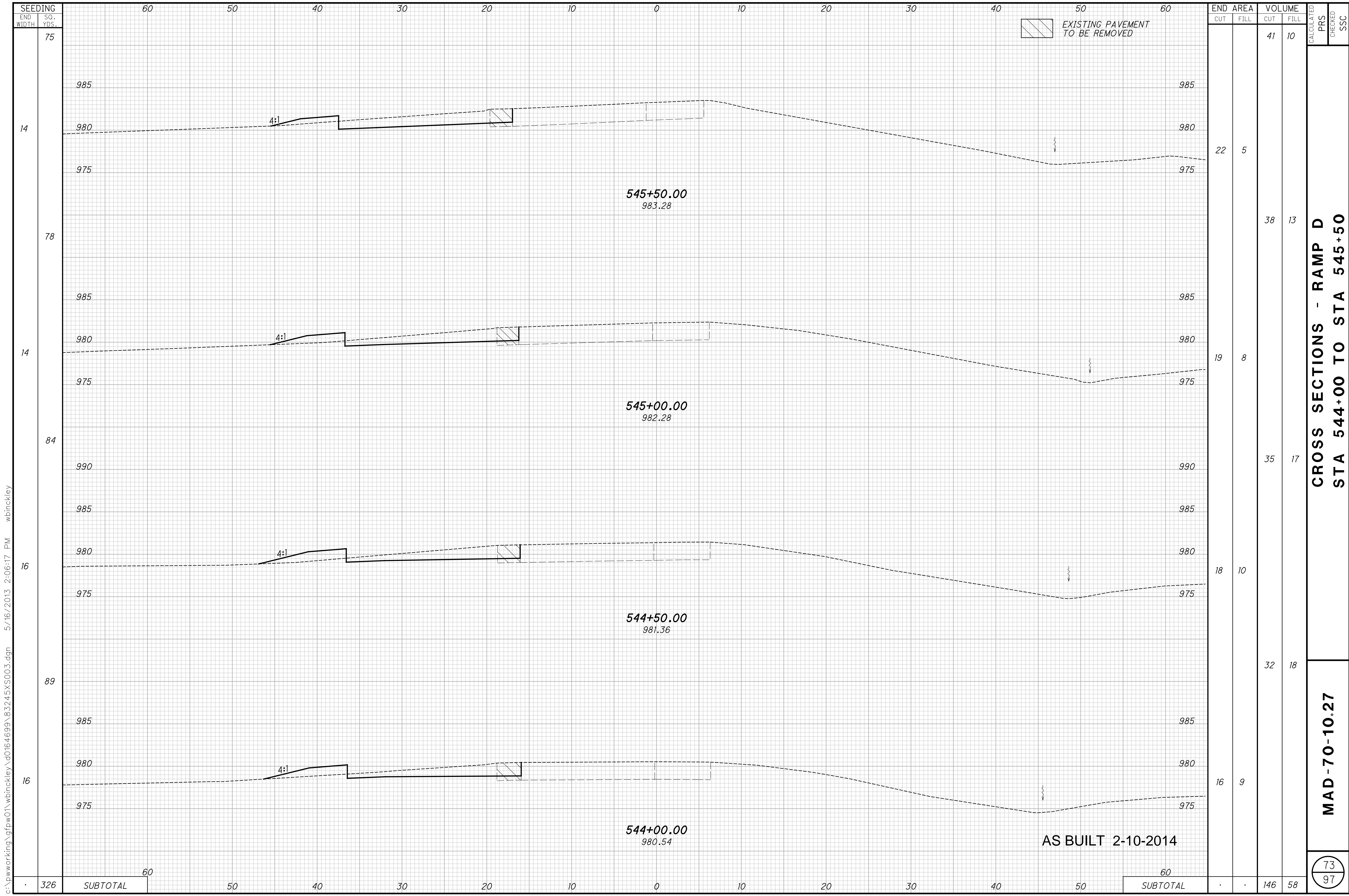
CROSS SECTIONS - RAMP D
STA 541+50 TO STA 543+50

MAD-70-10.27

72
97

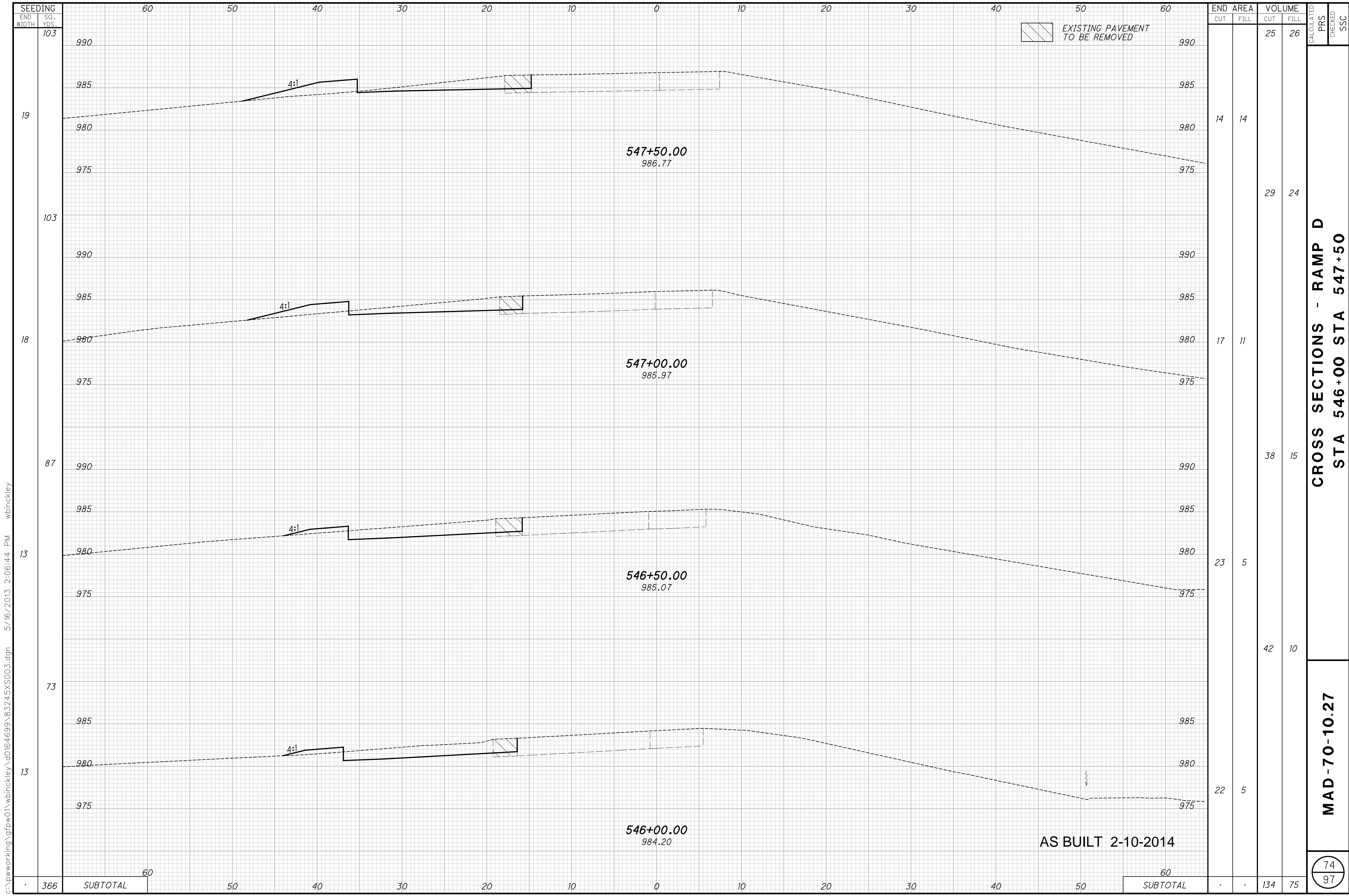
SEEDING
END WIDTH SO. YDS.
70
9
5
0
75

60 50 40 30 20 10 0 10 20 30 40 50 60
980 975 970 +40 980 975 970 980 975 970 980 975 970 980 975 970
543+50.00 979.61
543+00.00 978.64
542+50.00 977.68
542+00.00 976.84
541+50.00 975.99
SUBTOTAL 60 SUBTOTAL



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73
97



EXISTING PAVEMENT TO BE REMOVED

END STA	AREA		VOLUME		CALCULATED PRS	CHECKED SSC
	CUT	FILL	CUT	FILL		
547+50.00	14	14	25	26		
547+00.00	17	11	29	24		
546+50.00	23	5	38	15		
546+00.00	22	5	42	10		
SUBTOTAL			134	75		

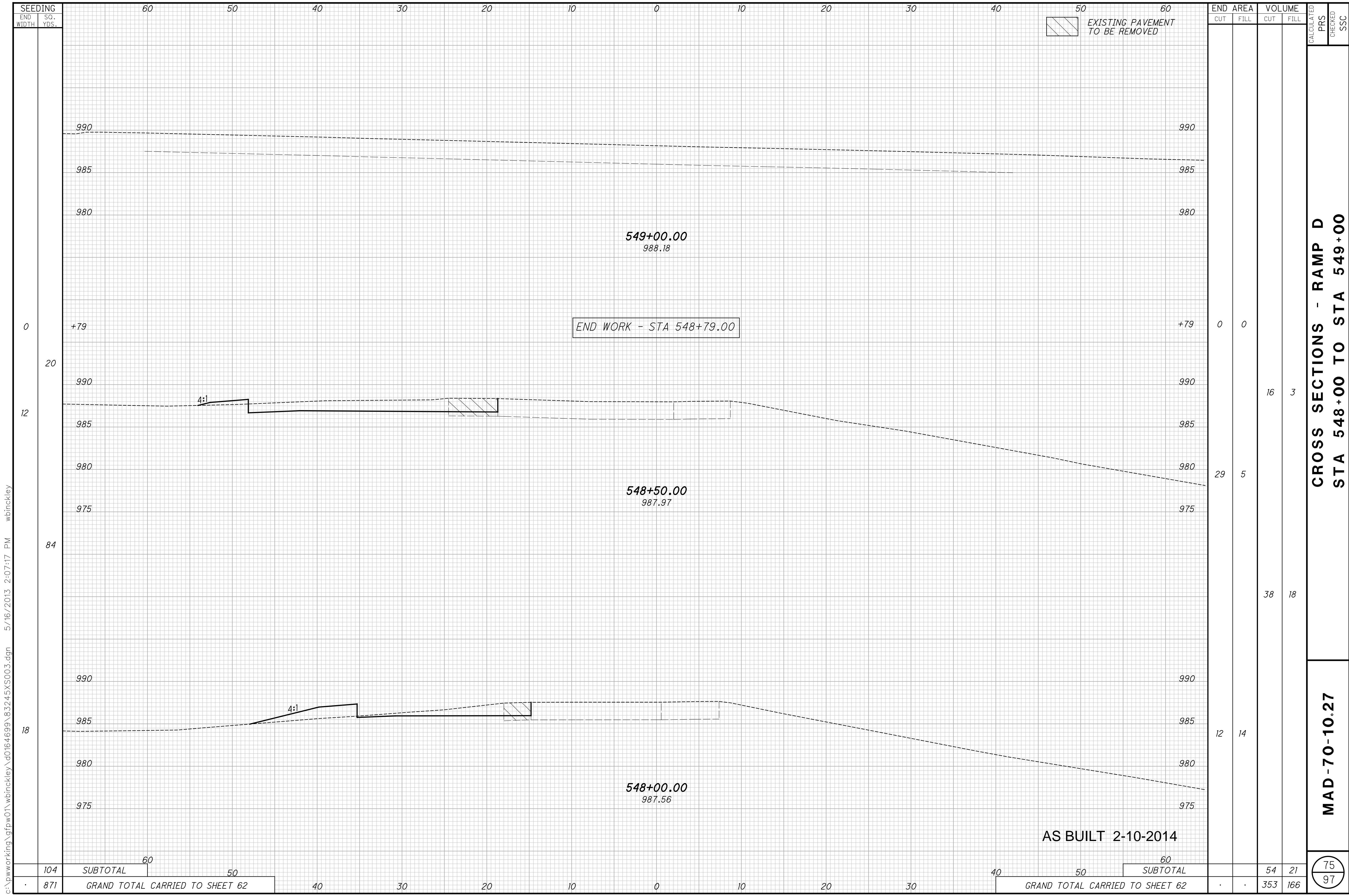
CROSS SECTIONS - RAMP D
STA 546+00 STA 547+50

MAD-70-10.27

74
97

AS BUILT 2-10-2014

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EXISTING PAVEMENT TO BE REMOVED

END WORK - STA 548+79.00

AS BUILT 2-10-2014

SEEDING
END WIDTH SQ. YDS.
104
871

STATION	END AREA		VOLUME	
	CUT	FILL	CUT	FILL
549+00.00 988.18				
548+50.00 987.97	29	5	16	3
548+00.00 987.56	12	14	38	18
SUBTOTAL	60	50	54	21
GRAND TOTAL CARRIED TO SHEET 62	60	50	54	21

CALCULATED
PRS
CHECKED
SSC
CROSS SECTIONS - RAMP D
STA 548+00 TO STA 549+00
MAD-70-10.27
75
97

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BM #3

CHISLED SQUARE ON TOP OF THE NORTH HEADWALL FOR A 60" CONCRETE PIPE UNDER STATE ROUTE 29 STATION 553+40, 68' LT. SET BY OTHERS. (N-715148.81, E-1730937.65)

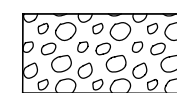
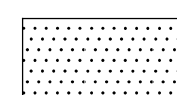
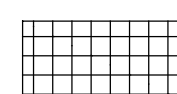
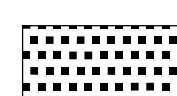
ELEVATION = 963.19 (NAVD 88)

#4400 DEBNANDALE FARMS, LLC

BM #4

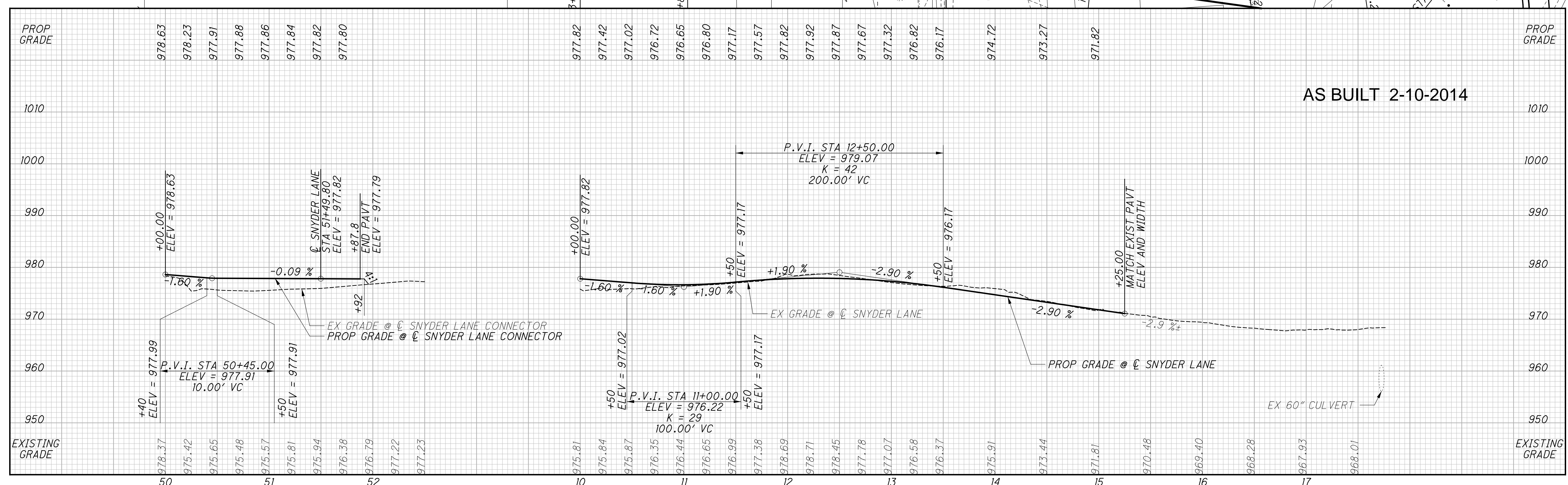
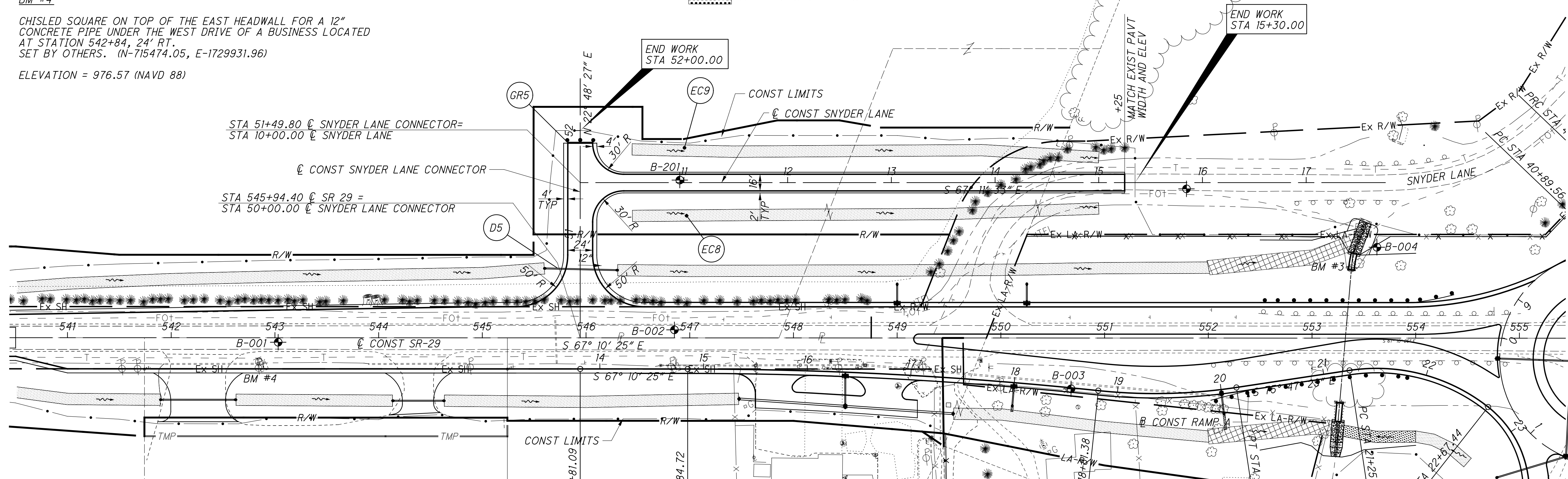
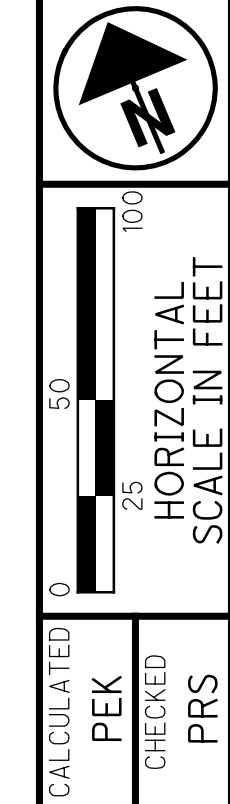
CHISLED SQUARE ON TOP OF THE EAST HEADWALL FOR A 12" CONCRETE PIPE UNDER THE WEST DRIVE OF A BUSINESS LOCATED AT STATION 542+84, 24' RT. SET BY OTHERS. (N-715474.05, E-1729931.96)

ELEVATION = 976.57 (NAVD 88)

-  ROCK CHANNEL PROTECTION
-  DITCH EROSION PROTECTION, TYPE A
-  PERMANENT MAT, TYPE 1
-  TIED CONCRETE BLOCK

FOR SNYDER LANE CROSS SECTIONS SEE SHEETS 50 TO 55 FOR QUANTITIES SEE SHEET 37

#4600 JOHN W. SNYDER, JR. AND DEBRA SNYDER



PLAN AND PROFILE - SNYDER LANE
STA 10+00.00 TO STA 15+25.00

MAD-70-10.27

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LEFT LANE					PROFILE GRADE LINE		REMARKS
PAV'T ELEV	RATE "G"	ELEV CORR	X-SLOPE	WIDTH	STATION	ELEVATION	
978.63		0.48	0.016	30.00	13+81.09	978.15	MEET EX / BEGIN TRANSITION (0.0160)
978.59		0.48	0.016	30.00	14+00.00	978.11	PC CURVE
978.54		0.48	0.016	30.00	14+19.97	978.06	BEGIN TRANSITION (0.016)
978.53	1:213	0.51	0.017	30.00	14+25.00	978.02	
978.47	1:213	0.66	0.022	30.00	14+50.00	977.81	
978.41	1:213	0.80	0.027	30.00	14+75.00	977.61	
978.35	1:213	0.95	0.032	30.03	15+00.00	977.40	
978.31		1.05	0.035	30.14	15+17.10	977.26	END TRANSITION (0.035)
978.29		1.06	0.035	30.22	15+25.00	977.23	
978.23		1.07	0.035	30.57	15+50.00	977.16	
978.17		1.09	0.035	31.08	15+75.00	977.08	
978.11		1.11	0.035	31.77	16+00.00	977.00	
978.05		1.14	0.035	32.61	16+25.00	976.91	
977.98		1.18	0.035	33.63	16+50.00	976.80	
977.92		1.22	0.035	34.81	16+75.00	976.70	
977.86		1.27	0.035	36.16	17+00.00	976.59	
977.50		1.03	0.035	29.57	17+25.00	976.47	
977.36		1.00	0.035	28.56	17+50.00	976.36	
977.28		0.97	0.035	27.72	17+75.00	976.30	
977.24		0.95	0.035	27.05	18+00.00	976.29	
977.25		0.93	0.035	26.54	18+25.00	976.32	
977.31		0.92	0.035	26.32	18+39.20	976.39	BEGIN TRANSITION (0.035)
977.24	1:185	0.85	0.033	26.20	18+50.00	976.39	
977.22	1:185	0.70	0.027	26.02	18+75.00	976.51	
977.23	1:185	0.55	0.021	26.00	19+00.00	976.68	
977.29		0.42	0.016	26.00	19+23.56	976.87	END TRANSITION (0.016)
977.30		0.42	0.016	26.00	19+25.00	976.88	
977.55		0.42	0.016	26.00	19+50.00	977.13	
977.85		0.42	0.016	26.00	19+75.00	977.43	
978.19		0.42	0.016	26.00	20+00.00	977.77	
978.57		0.42	0.016	26.10	20+25.00	978.15	
979.01		0.43	0.016	26.58	20+50.00	978.58	
979.49		0.43	0.016	27.06	20+75.00	979.06	
980.01		0.44	0.016	27.54	21+00.00	979.57	BEGIN TRANSITION (0.016)
980.69		0.55	0.020	27.70	21+25.00	980.14	END TRANSITION (0.02)
981.30		0.56	0.020	28.00	21+50.00	980.74	
981.95		0.56	0.020	28.00	21+75.00	981.39	
982.65		0.56	0.020	28.00	22+00.00	982.09	
983.39		0.56	0.020	28.00	22+25.00	982.83	

CALCULATED
PRS
CHECKED
PRS

SUPERELEVATION TABLE - RAMP A

MAD-70-10.27

77
97

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LEFT LANE					PROFILE GRADE LINE		REMARKS
PAV'T ELEV	RATE "G"	ELEV CORR	X-SLOPE	WIDTH	STATION	ELEVATION	
984.15		0.56	0.020	28.00	22+50.00	983.59	
984.86		0.56	0.020	28.00	22+75.00	984.30	
985.19		0.37	0.020	18.64	23+00.00	984.82	
985.49		0.26	0.020	13.05	23+25.00	985.22	
985.60		0.38	0.020	19.00	23+25.00	985.22	
985.69		0.38	0.020	19.00	23+50.00	985.31	
985.50		0.38	0.020	19.00	23+75.00	985.12	
985.04		0.38	0.020	19.00	24+00.00	984.66	
984.32		0.38	0.020	19.00	24+25.00	983.94	
983.49		0.38	0.020	19.00	24+50.00	983.11	
982.58		0.30	0.016	19.00	24+75.00	982.29	
981.79		0.30	0.016	19.00	25+00.00	981.50	
981.04		0.30	0.016	19.00	25+25.00	980.74	
980.32		0.30	0.016	19.00	25+50.00	980.02	
980.04		0.30	0.016	19.00	25+60.00	979.74	

CALCULATED
PRS
CHECKED
PEK

SUPERELEVATION TABLE - RAMP A

MAD-70-10.27

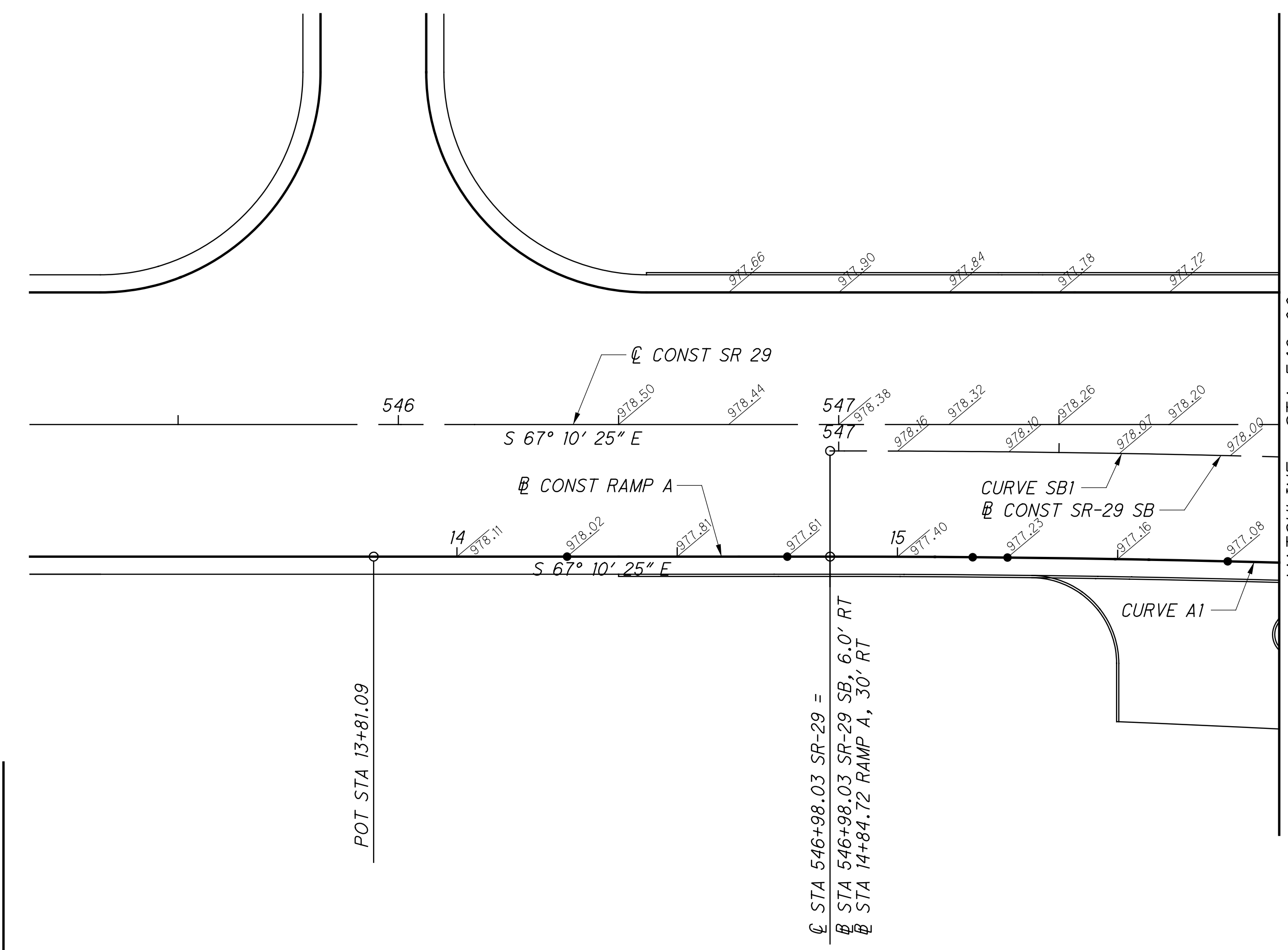
78
97

LEFT LANE No. 1					PROFILE GRADE LINE		RIGHT LANE No. 1					REMARKS
PAV'T ELEV	RATE "G"	ELEV CORR	X-SLOPE	WIDTH	STATION	ELEVATION	WIDTH	X-SLOPE	ELEV CORR	RATE "G"	PAV'T ELEV	
986.86		-0.24	-0.020	12.00	40+89.56	987.10	MATCH ROUNDABOUT BASELINE ELEVATIONS					
986.84		-0.24	-0.020	12.00	40+90.78	987.08						PC CURVE
986.73		-0.24	-0.020	12.00	40+97.62	986.97						
986.69		-0.24	-0.020	12.00	41+00.00	986.93						
986.65		-0.24	-0.020	12.00	41+02.94	986.89						BEGIN TRANSITION (0.020)
986.40	1:152	-0.13	-0.011	12.00	41+25.00	986.53	16.00	0.011	0.17	1:152	986.71	
986.26	1:152	-0.07	-0.006	12.00	41+38.08	986.32	16.00	0.006	0.09	1:152	986.41	PC CURVE
986.12	1:152	-0.01	-0.001	12.00	41+50.00	986.13	16.00	0.001	0.01	1:152	986.14	
985.85	1:152	0.12	0.010	12.00	41+75.00	985.73	16.00	-0.010	-0.15	1:152	985.58	
985.57	1:152	0.24	0.020	12.00	42+00.00	985.33	16.00	-0.020	-0.32	1:152	985.01	
985.29	1:152	0.36	0.030	12.00	42+25.00	984.93	16.00	-0.030	-0.48	1:152	984.45	
985.03		0.48	0.040	12.00	42+48.86	984.55	16.00	-0.040	-0.64		983.91	END TRANSITION (0.040)
985.01		0.48	0.040	12.00	42+50.00	984.53	16.00	-0.040	-0.64		983.89	
984.61		0.48	0.040	12.00	42+75.00	984.13	16.00	-0.040	-0.64		983.49	
984.21		0.48	0.040	12.00	43+00.00	983.73	16.00	-0.040	-0.64		983.09	
983.81		0.48	0.040	12.00	43+25.00	983.33	16.00	-0.040	-0.64		982.69	
983.40		0.48	0.040	12.00	43+50.00	982.92	16.15	-0.040	-0.65		982.28	
983.06		0.48	0.040	12.00	43+69.80	982.58	16.00	-0.040	-0.64		981.94	END FULL SE (.040)
982.94	1:161	0.46	0.038	12.00	43+75.00	982.49	16.91	-0.038	-0.64	1:161	981.85	
982.37	1:161	0.34	0.028	12.00	44+00.00	982.03	18.01	-0.028	-0.51	1:161	981.52	
981.96	1:161	0.28	0.021	13.00	44+17.88	981.68	16.00	-0.021	-0.34	1:161	981.34	PT CURVE
981.76	1:161	0.22	0.019	12.00	44+25.00	981.54	16.00	-0.019	-0.30	1:161	981.24	
981.14	1:161	0.11	0.009	12.00	44+50.00	981.03	16.00	-0.009	-0.14	1:161	980.89	
980.49	1:161	-0.01	-0.001	12.00	44+75.00	980.51	16.00	0.001	0.01	1:161	980.52	
979.85	1:161	-0.13	-0.011	12.00	45+00.00	979.98	16.00	0.011	0.17	1:161	980.15	
979.49		-0.19	-0.016	12.00	45+14.06	979.68	16.00	0.016	0.26		979.94	END TRANSITION (.016)
979.26		-0.19	-0.016	12.00	45+25.00	979.46	16.00	0.016	0.26		979.71	
978.74		-0.19	-0.016	12.00	45+50.00	978.93	16.00	0.016	0.26		979.19	
978.21		-0.19	-0.016	12.00	45+75.00	978.41	16.00	0.016	0.26		978.66	
977.69		-0.19	-0.016	12.00	46+00.00	977.88	16.00	0.016	0.26		978.14	
977.26		-0.10	-0.016	6.00	46+25.00	977.36	16.00	0.016	0.26		977.61	
					46+50.00	976.83						MATCH EXISTING

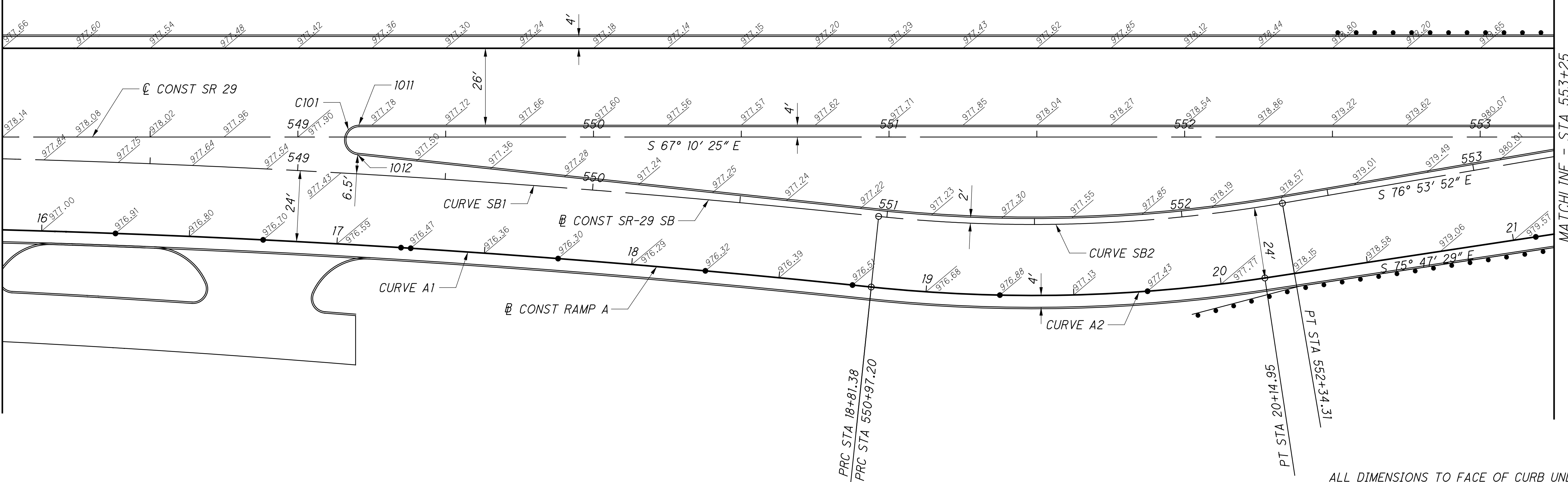
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MATCHLINE - STA 548+00
SEE MATCHLINE THIS SHEET



MATCHLINE - STA 548+00
SEE MATCHLINE THIS SHEET



AS BUILT 2-10-2014

ALL DIMENSIONS TO FACE OF CURB UNLESS OTHERWISE NOTED
FOR CURVE AND POINT DATA SEE SHEETS 83 AND 84

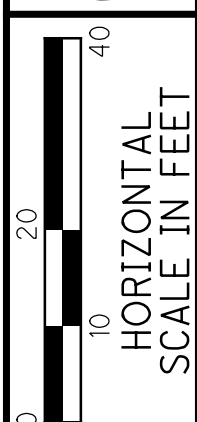
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HORIZONTAL
SCALE IN FEET

ROUNDABOUT DETAILS

MAD-70-10.27

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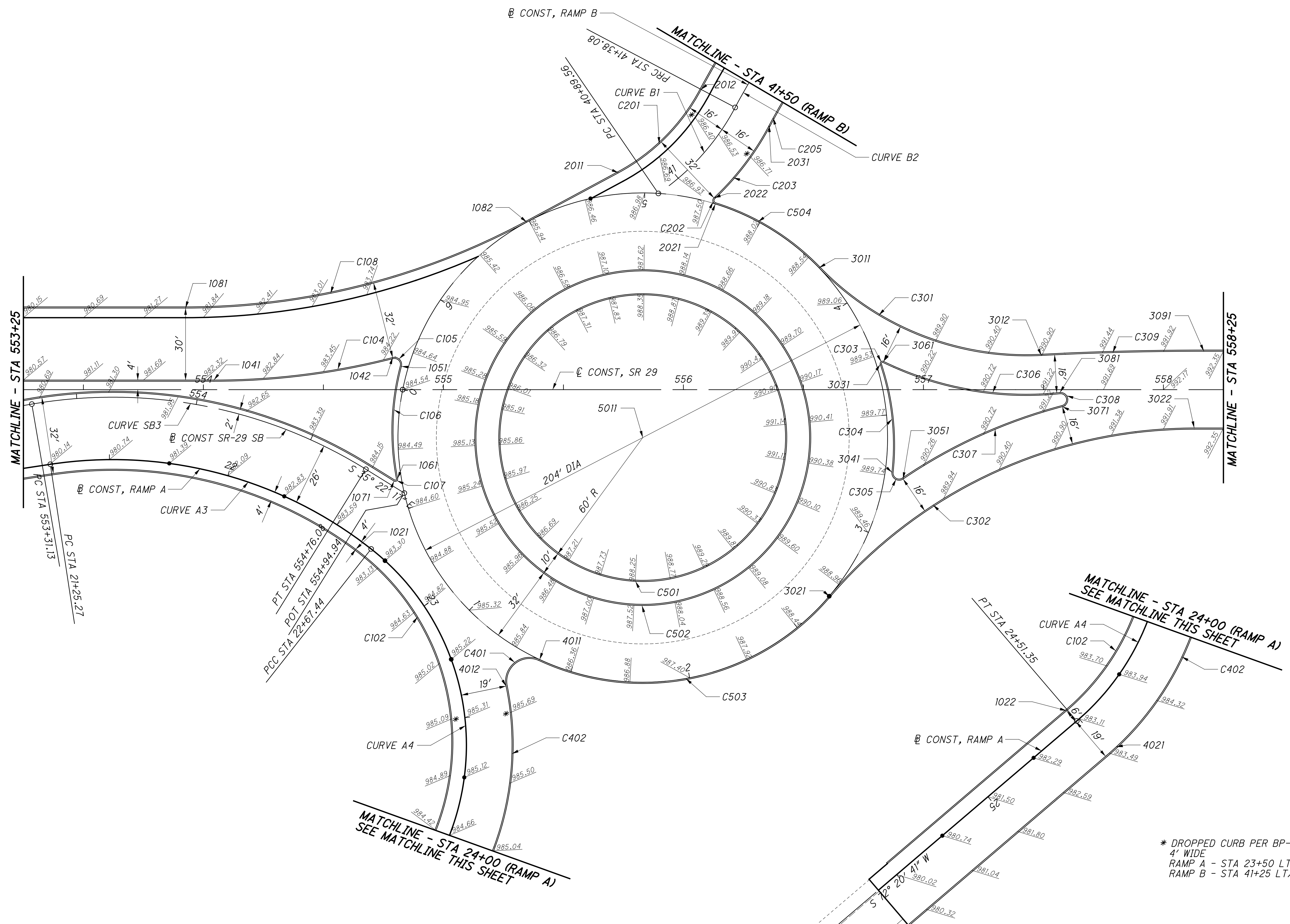


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ROUNDABOUT DETAILS

MAD-70-10.27

81
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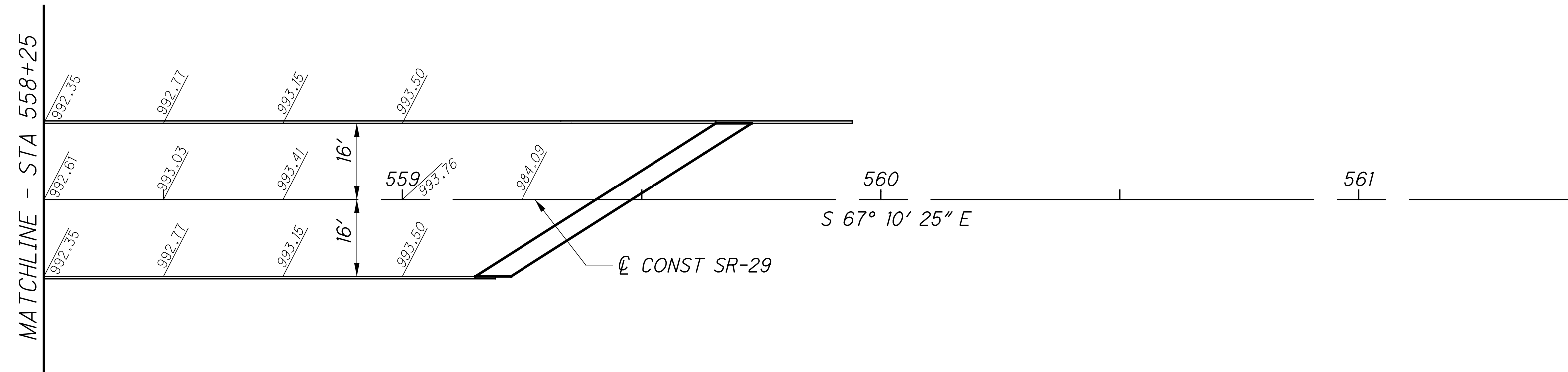
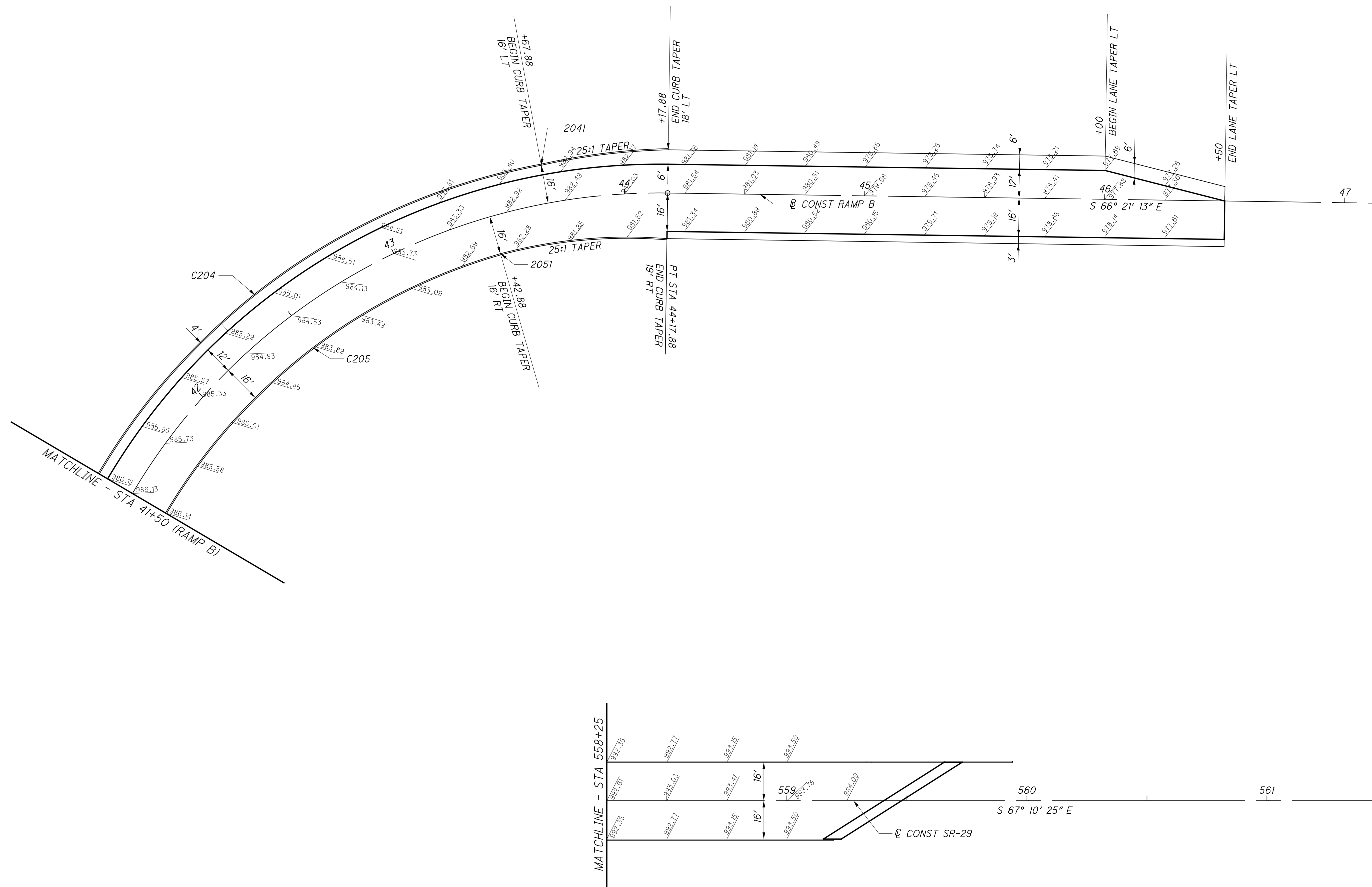


AS BUILT 2-10-2014

ALL DIMENSIONS TO FACE OF CURB UNLESS OTHERWISE NOTED FOR CURVE AND POINT DATA SEE SHEETS 83 AND 84

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HORIZONTAL
SCALE IN FEET

ROUNDABOUT DETAILS

MAD-70-10.27

AS BUILT 2-10-2014

ALL DIMENSIONS TO FACE OF CURB UNLESS OTHERWISE NOTED
FOR CURVE AND POINT DATA SEE SHEETS 83 AND 84

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BASELINE GEOMETRY									
CURVE #	POINT	STATION	NORTHING	EASTING	DELTA	Dc	R (FT)	T (FT)	L (FT)
SB SR-29 SPLITTER ISLAND (2' OFFSET)									
SB1	PC	546+98.03	715329.71	1730319.69	5° 59' 15"	1° 30' 00"	3819.72	199.77	399.17
	PI	548+97.80	715252.21	1730503.81					
	CC		711809.13	1728837.87					
	PRC	550+97.20	715155.93	1730678.85					
SB2	PI	551+66.19	715122.68	1730739.29	15° 42' 42"	11° 27' 33"	500.00	68.99	137.11
	PT	552+34.31	715107.04	1730806.49					
	CC		715594.03	1730919.83					
SB3	PC	553+31.13	715085.10	1730900.79	41° 31' 35"	28° 38' 52"	200.00	75.83	144.95
	PI	554+06.96	715067.91	1730974.64					
	CC		714890.30	1730855.45					
	PT	554+76.08	715006.08	1731018.53					
		554+94.94	714990.70	1731029.45					
RAMP A									
		13+81.09	715347.79	1730214.87					
A1	PC	14+84.72	715307.59	1730310.38	5° 59' 15"	1° 30' 34"	3795.72	198.51	396.66
	PI	16+83.23	715230.58	1730493.35					
	CC		711809.13	1728837.87					
	PRC	18+81.38	715134.90	1730667.28					
A2	PI	19+48.53	715102.54	1730726.12	14° 36' 19"	10° 56' 04"	524.00	67.15	133.57
	CC		715594.03	1730791.21					
	PT	20+14.95	715086.06	1730791.21					
A3	PC	21+25.27	715058.98	1730898.16	46° 48' 55"	32° 55' 43"	174.00	75.32	142.17
	PI	22+00.59	715040.49	1730971.18					
	CC		714890.30	1730855.45					
	PCC	22+67.44	714974.60	1731007.67					
A4	PI	23+94.33	714863.60	1731069.14	101° 19' 15"	55° 05' 32"	104.00	126.88	183.91
	PT	24+51.35	714825.11	1730948.23					
	CC		714924.21	1730916.69					
		26+50.00	714764.87	1730758.94					
RAMP B									
B1	PC	40+89.56	715064.77	1731175.46	27° 47' 50"	57° 17' 45"	100.00	24.74	48.52
	PI	41+14.30	715069.71	1731199.71					
	CC		715162.76	1731155.50					
	PRC	41+38.08	715085.38	1731218.85					
B2	PI	42+93.99	715184.15	1731339.49	62° 57' 20"	22° 30' 00"	254.65	155.91	279.80
	PT	44+17.88	715121.62	1731482.31					
	CC		714888.35	1731380.17					
		48+00.00	714968.3535	1731832.347					
ROUNDAABOUT									
	CC		714973.47	1731129.98		56° 10' 20"	102.00		640.88

ROUNDAABOUT CURVE DATA TABLE			
CXXX CURVE NO.	CURVE DATA		
	DELTA	RADIUS (FT)	LENGTH (FT)
C101	173° 56' 60"	5.00	15.18
C102	102° 59' 42"	100.00	179.76
C103	NOT USED		
C104	14° 22' 25"	300.00	75.26
C105	119° 10' 31"	3.00	6.24
C106	25° 45' 1"	105.00	47.19
C107	132° 55' 34"	1.00	2.32
C108	28° 17' 6"	300.00	148.10
C201	33° 51' 8"	84.00	49.63
C202	119° 33' 26"	1.50	3.13
C203	18° 50' 18"	116.00	38.14
C204	51° 42' 18"	270.65	244.24
C205	46° 4' 45"	238.65	191.93
C301	49° 2' 8"	120.00	102.70
C302	49° 31' 56"	200.00	172.90
C303	134° 38' 42"	1.00	2.35
C304	24° 53' 57"	105.00	45.63
C305	130° 26' 36"	3.00	6.83
C306	31° 49' 43"	136.00	75.55
C307	19° 25' 58"	216.00	73.26
C308	171° 7' 24"	3.00	8.96
C309	2° 59' 5"	1300.00	67.72
C401	126° 23' 40"	10.00	22.06
C402	61° 2' 11"	123.00	131.03
C501	N/A	60.00	376.99
C502	N/A	70.00	439.82
C503	74° 30' 25"	102.00	132.64
C504	28° 48' 39"	102.00	51.29

CALCULATED
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ROUNDAABOUT DETAILS

MAD-70-10.27

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97

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POINT DATA TABLE			
POINT NO.	POINT DATA		DESCRIPTION
	NORTHING	EASTING	
1011	715252.5245	1730528.8516	PC OF C101
1012	715243.5402	1730524.4931	PT OF C101
1021	714976.9696	1731001.6972	PC OF C102
1022	714830.6994	1730945.9971	PT OF C102
1041	715064.9036	1730974.6097	PC OF C104
1042	715044.6677	1731046.8937	PRC OF C104/C105
1051	715039.8678	1731048.8280	PRC OF C105/C106
1061	714997.3793	1731029.2176	PRC OF C106/C107
1071	714997.0067	1731027.4236	PRC OF C107/SB3
1081	715097.1401	1730975.3525	PC OF C108
1082	715075.0062	1731120.2753	PT OF C108

POINT DATA TABLE			
POINT NO.	POINT DATA		DESCRIPTION
	NORTHING	EASTING	
2011	715079.1367	1731163.4950	PC OF C201
2012	715097.7616	1731208.7179	PRC OF C201/C204
2021	715051.5290	1731195.6345	PRC OF C504/C202
2022	715054.0822	1731196.0754	PRC OF C202/C203
2031	715073.0019	1731228.9900	PRC OF C203/C205
2041	715152.6888	1731438.2747	PT OF C204
2051	715125.3340	1731408.3123	PT OF C205

POINT DATA TABLE			
POINT NO.	POINT DATA		DESCRIPTION
	NORTHING	EASTING	
3011	715010.2271	1731225.1256	PRC OF C504/C301
3012	714940.5960	1731296.3319	PRC OF C301/C309
3021	714882.3504	1731175.8207	PRC OF C503/C302
3022	714888.0239	1731343.2939	PT OF C302
3031	714963.2461	1731233.0360	PRC OF C303/C304
3041	714919.8781	1731220.0586	PRC OF C304/C305
3051	714915.4772	1731223.2691	PRC OF C305/C307
3061	714963.8318	1731234.7854	PRC OF C303/C306
3071	714917.5314	1731296.1452	PRC OF C307/C308
3081	714923.3713	1731297.4420	PRC OF C306/C308
3091	714915.9614	1731359.4057	PT OF C309

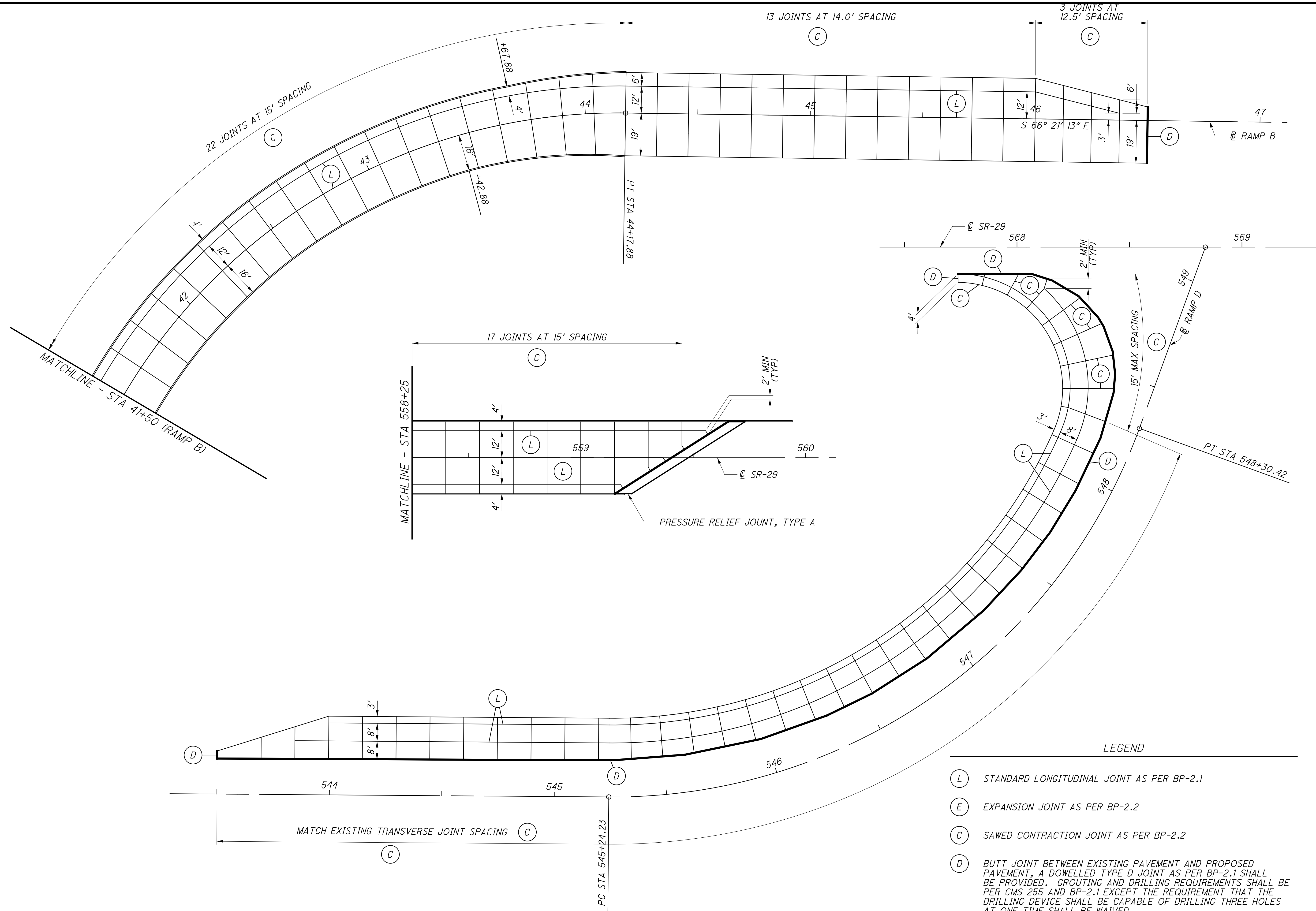
POINT DATA TABLE			
POINT NO.	POINT DATA		DESCRIPTION
	NORTHING	EASTING	
4011	714904.8591	1731054.5026	PRC OF C503/C401
4012	714900.0937	1731037.2971	PRC OF C401/C402
4021	714807.0076	1730953.9900	PT OF C402
5011	714973.4688	1731129.9792	CENTER OF ROUNDABOUT

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ROUNDABOUT DETAILS

MAD-70-10.27

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13 JOINTS AT 14.0' SPACING
3 JOINTS AT 12.5' SPACING

22 JOINTS AT 15' SPACING

17 JOINTS AT 15' SPACING

LEGEND

- (L) STANDARD LONGITUDINAL JOINT AS PER BP-2.1
- (E) EXPANSION JOINT AS PER BP-2.2
- (C) SAWED CONTRACTION JOINT AS PER BP-2.2
- (D) BUTT JOINT BETWEEN EXISTING PAVEMENT AND PROPOSED PAVEMENT, A DOWELLED TYPE D JOINT AS PER BP-2.1 SHALL BE PROVIDED. GROUTING AND DRILLING REQUIREMENTS SHALL BE PER CMS 255 AND BP-2.1 EXCEPT THE REQUIREMENT THAT THE DRILLING DEVICE SHALL BE CAPABLE OF DRILLING THREE HOLES AT ONE TIME SHALL BE WAIVED.
MINIMUM LENGTH FOR ANY JOINT SECTION SHALL BE 2'.

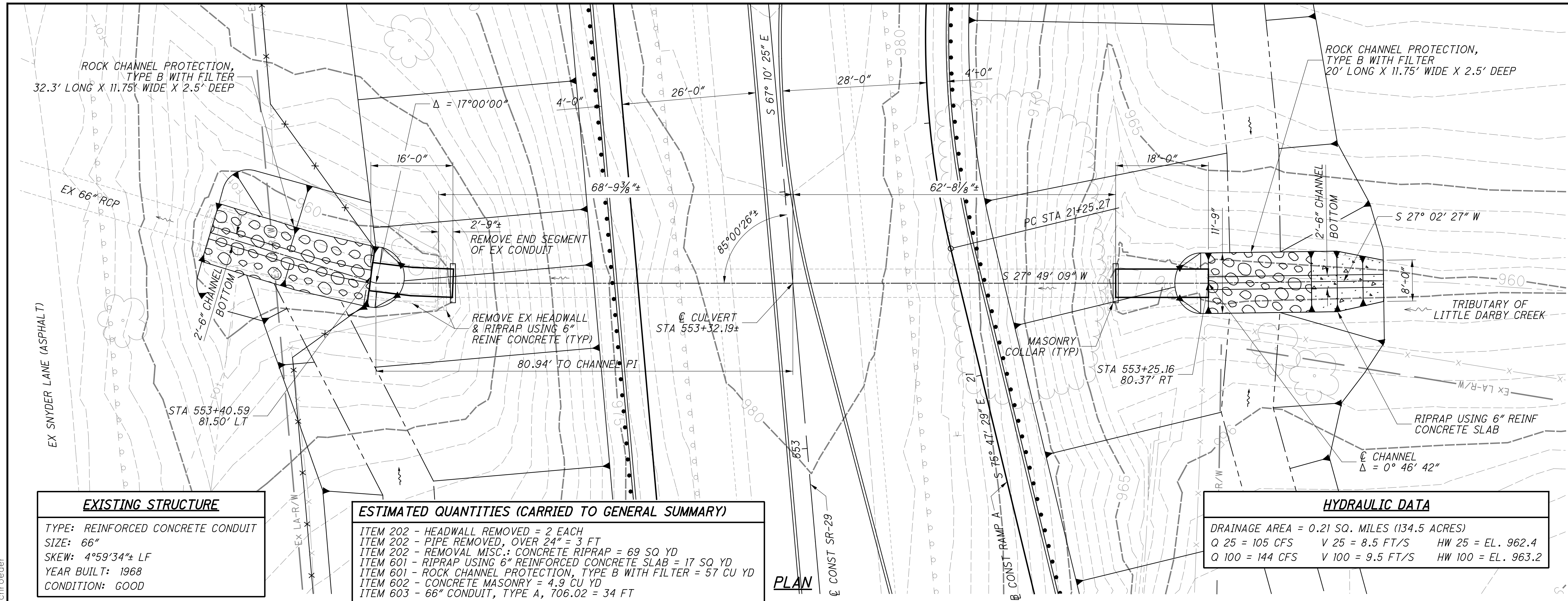
AS BUILT 2-10-2014

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HORIZONTAL
SCALE IN FEET

PAVEMENT JOINT DETAILS

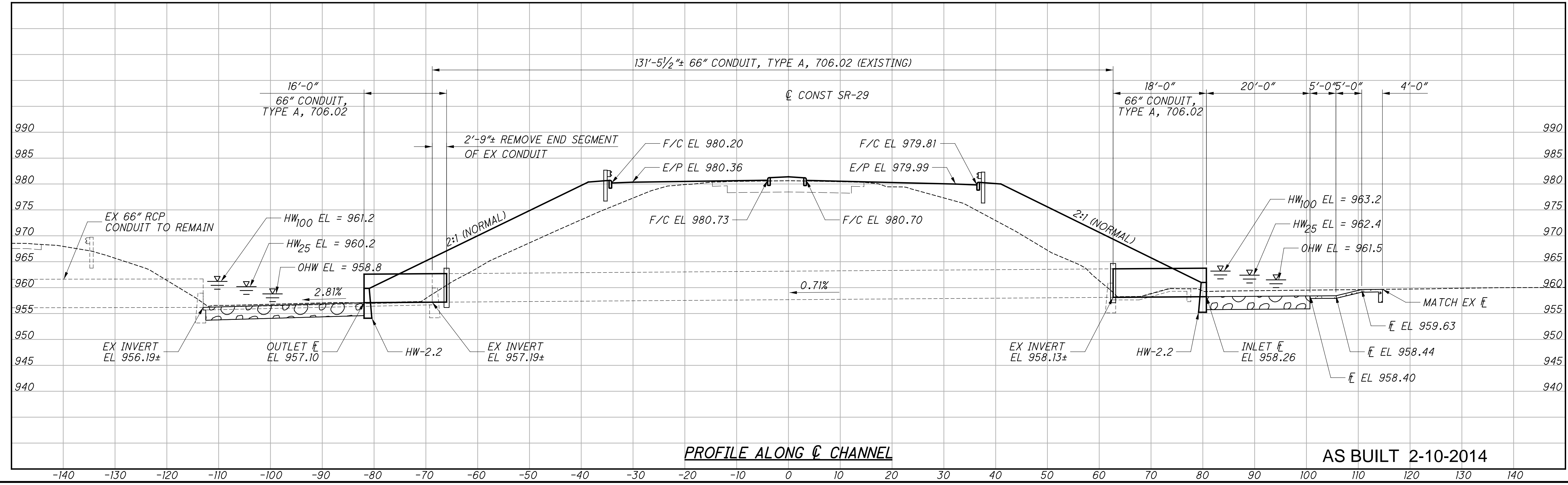
MAD-70-10.27



EXISTING STRUCTURE	
TYPE:	REINFORCED CONCRETE CONDUIT
SIZE:	66"
SKIEW:	4°59'34"± LF
YEAR BUILT:	1968
CONDITION:	GOOD

ESTIMATED QUANTITIES (CARRIED TO GENERAL SUMMARY)	
ITEM 202 - HEADWALL REMOVED = 2 EACH	
ITEM 202 - PIPE REMOVED, OVER 24" = 3 FT	
ITEM 202 - REMOVAL MISC.: CONCRETE RIPRAP = 69 SQ YD	
ITEM 601 - RIPRAP USING 6" REINFORCED CONCRETE SLAB = 17 SQ YD	
ITEM 601 - ROCK CHANNEL PROTECTION, TYPE B WITH FILTER = 57 CU YD	
ITEM 602 - CONCRETE MASONRY = 4.9 CU YD	
ITEM 603 - 66" CONDUIT, TYPE A, 706.02 = 34 FT	

HYDRAULIC DATA		
DRAINAGE AREA = 0.21 SQ. MILES (134.5 ACRES)		
Q 25 = 105 CFS	V 25 = 8.5 FT/S	HW 25 = EL. 962.4
Q 100 = 144 CFS	V 100 = 9.5 FT/S	HW 100 = EL. 963.2



PROFILE ALONG $\text{\textcircled{C}}$ CHANNEL

AS BUILT 2-10-2014

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REF NO.	SHEET NO.	STATION				SIDE	621		642	644	644	644	644	644	644	646	646	646	646	646	646	646	646	646	646			
		FROM	TO	RPM	RAISED PAVEMENT MARKER REMOVED		TRANSVERSE/DIAGONAL LINE	EDGE LINE, 4"	LANE LINE, 4"	CENTER LINE	STOP LINE	TRANSVERSE/DIAGONAL LINE	LANE ARROW	DOTTED LINE, 4"	EDGE LINE, 4"	LANE LINE, 4"	CENTER LINE	CHANNELIZING LINE, 8"	TRANSVERSE/DIAGONAL LINE	LANE ARROW	LANE ARROW, AS PER PLAN	DOTTED LINE	YIELD LINE	STOP LINE				
						EACH	EACH	FT	MILE	MILE	MILE	FT	FT	EACH	FT	MILE	MILE	MILE	FT	FT	EACH	EACH	FT	FT	FT			
CL1	91	29	532+20	29	537+75	LT/RT	8				0.11																	
CL2	91	29	534+50	29	537+75	LT/RT	5				0.06																	
CL3	92	SN	50+46	SN	51+20	LT/RT					0.01																	
CL4	94,96	29	558+00	29	568+30	LT/RT	14				0.06						0.14											
CL5	96	29	568+80	29	570+50	LT/RT	3				0.03																	
CLD1	91-92	29	537+75	29	548+60	LT	15				0.21																	
CLD2	91-92	29	537+75	29	548+60	RT	15				0.21																	
DL1	91-92	29	539+00	29	545+00	LT								600														
DL2	94	RBT	SEE SHEET																				48					
DL3	94	RBT	SEE SHEET																				60					
DL4	94	RBT	SEE SHEET																				40					
ELW1	91-92	29	532+20	SN	51+20	LT					0.27																	
ELW2	91-94	29	532+20	A	26+00	RT					0.39				0.1													
ELW3	92-95	SN	51+20	B	49+75	LT/RT					0.14				0.24													
ELW4	94	RBT	0+37	RBT	0+56	RT									0.01													
ELW5	94	RBT	4+18	RBT	4+84	LT									0.01													
ELW6	94,96	29	556+90	29	568+05	RT					0.05				0.16													
ELW7	94,96	29	556+70	29	568+50	LT					0.05				0.17													
ELW8	96	D	542+00	D	548+88	RT									0.13													
ELY1	92-94	29	548+60	29	554+82	LT					0.08				0.04													
ELY2	92-94	29	548+60	29	554+87	RT					0.08				0.04													
ELY3	94	RBT	0+00	RBT	6+35	LT									0.1													
ELY4	94	A	23+18	A	26+00	LT	5								0.06													
ELY5	94	29	556+84	29	558+00	LT									0.02													
ELY6	94	29	556+92	29	558+00	RT									0.02													
ELY7	95	B	43+35	B	49+75	RT	9								0.12													
ELY8	96	D	542+00	D	548+88	LT	10								0.13													
CHI	93-95	29	554+00	B	45+80	LT/RT	18											695										
CH2	94	B	40+65	B	42+00	RT	4											135										
CH3	96	D	544+20	D	548+88	LT	12											448										
TLW1	91-94	29	540+60	29	554+60	RT																						
TLW2	94	RBT	4+35	RBT	4+84	LT/RT																						
TLW3	94	B	40+80	B	42+00	RT																						
TLY1	91	29	535+00	29	537+75	LT/RT																						
TLY2	93-94	29	553+30	29	554+90	RT																						
TLY3	94	RBT	0+00	RBT	6+35	LT																						
TLY4	92	29	548+60	29	549+20	LT/RT								118														
SL1	92	SN	50+46			LT																						
SL2	92	SN	10+30			LT							25															
SL3	96	D	548+88			LT/RT							12															
LL1	92-93	29	545+00	29	554+00	LT	12				0.15						0.02											
YM1	94	A	22+71			LT																						
YM2	94	B	40+90			LT																			16			
YM3	94	B	41+03			RT																			12			
YM4	94	29	556+81			LT																			12			
LA	91-96		SEE SHEETS			LT/RT																						
		29	535+00	29	560+00	LT/RT								6											8			
							30																		5			
SUBTOTAL							130	30	1166	1.06	0.15	0.69	37	118	6	600	1.35	0.02	0.14	1278	132	8	5	148	56	87		
TOTALS CARRIED TO GENERAL SUMMARY							130	30	1166	1.06	0.15	0.69	37	118	6	600	1.35	0.02	0.14	1278	132	8	5	148	56	87		

AS BUILT 2-10-2014

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TRAFFIC CONTROL QUANTITIES

MAD-70-10.27

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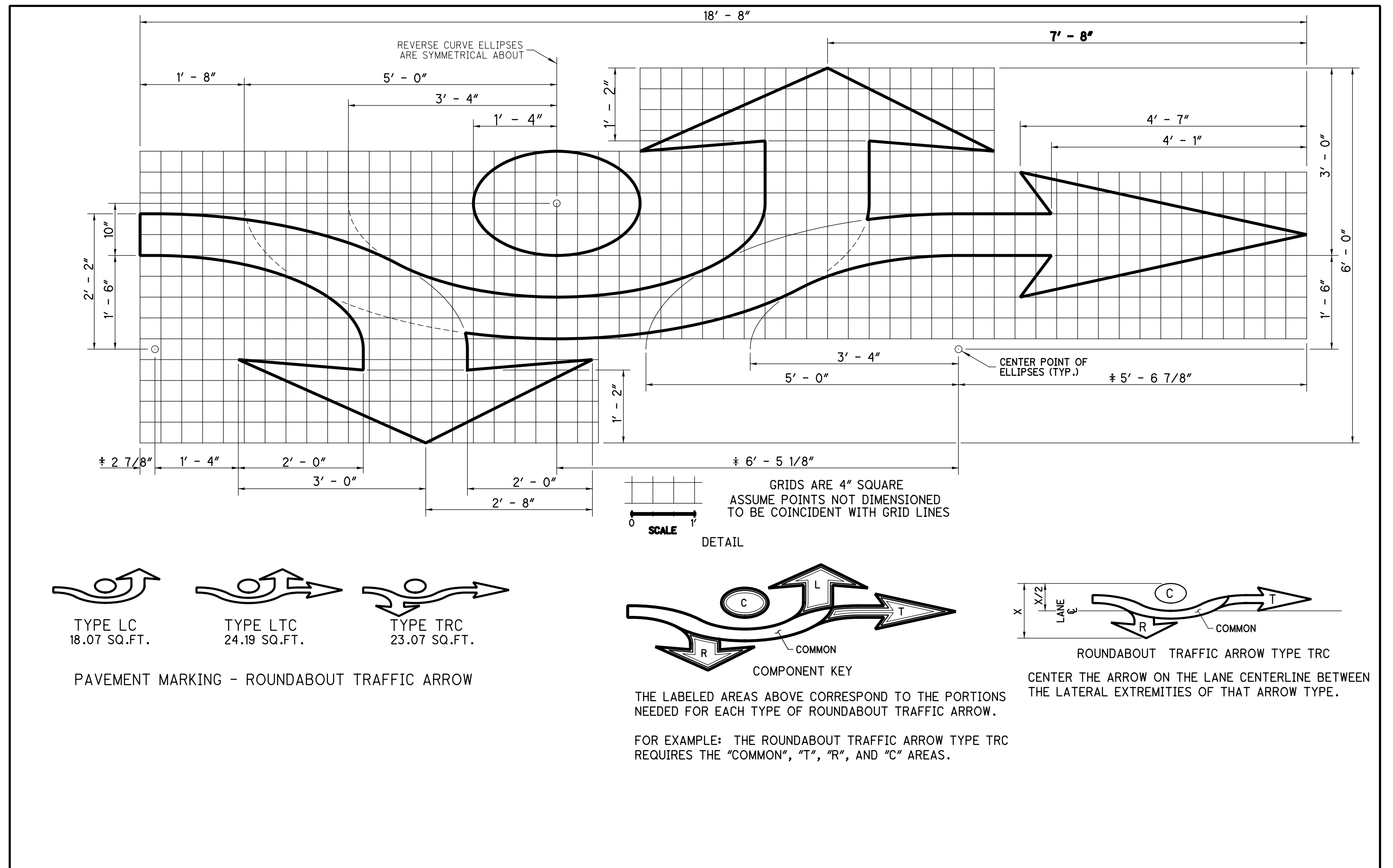
REF. NO.	SHEET NO.	STATION		SIDE	QUANTITIES																									
		FROM	TO		625	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630	630			
					EACH	FT	FT	FT	FT	FT	EACH	EACH	EACH	EACH	EACH	SQ FT	SQ FT	SQ FT	EACH	EACH	EACH	EACH	EACH	EACH	EACH	EACH				
S1	91	29	538+00				14									7														
S2	91	29	538+00				14									7														
S3	91	29	544+00			26										10.7														
S4	92	29	545+00				13									9														
S5	92	SN	50+46				13				1					4														
S6	92	SN	10+29				13				1					4														
S7	92	29	546+40							15										1										
S8	92	29	547+50				26									10.7														
S9	92	29	549+00													7														
S10	95	B	45+80			1								1	2				119			2								
S11	93	29	550+65													9														
S12	93	29	550+50				26									11														
S13	93	29	552+50						47.2			2						100			2									
S14	93	29	552+75													5														
S15	94	29	544+81													8.2														
S16	94	29	544+65	29	544+79						2					7.8														
S17	94	A	23+42													8.2														
S18	94	29	555+35				22									8														
S19	94	29	555+84				22									8														
S20	94	29	556+33				22									8														
S21	94	B	40+90	B	41+10						2					7.8														
S22	94	29	556+93								2					7.8														
S23	94	29	566+88													8.2														
S24	94	29	557+58													5														
S25	94	29	559+00						47			2						100			2									
S26	94	29	561+00												1	11														
S27	95	B	42+30								2					12														
S28	95	B	44+50				26									11														
S29	95	B	42+50				13									9														
S30	96	29	565+40													8.2						3		1						
S31	96	D	548+10													9														
S32	96	29	568+00													10.9														
S33	96	D	548+56								1					15					2		2							
S34	96	29	568+35									2				27				2			1		2					
S35	96	D	548+78								1					15						4		2						
S36	96	29	569+45													8.2														
S37	96	29	570+00													6														
S38	96	D	547+20								2					12						2			1					
S39	96	D	546+00								2					18									2					
S40	96	D	544+00													7.5														
S41	93	29	551+25													3														
S42	93	29	551+40													3														
S43	93	29	552+88													3														
S44	93	29	553+50													3														
S45	94	A	23+50													3														
S46	92	SN	51+55													4.5														
S47	92	SN	51+90				30									6.8														
S48	94	B	41+08								1					9														
S49	96	D	548+60								1					6.3														
S50	96	D	548+81								1					6.3														
S51	94	B	40+86								1					9														
SUBTOTAL					1	265	500	31.6	94.2	15	20	6	1	2	1	398.1	200	119	1	6	2	13	1	8	2					
TOTALS CARRIED TO GENERAL SUMMARY					1	265	500	31.6	94.2	15	20	6	1	2	1	398.1	200	119	1	6	2	13	1	8	2					

AS BUILT 2-10-2014

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REF NO.	SHEET NO.	STATION		SIDE	630			
		FROM	TO		REMOVAL OF GROUND MOUNTED SIGN AND DISPOSAL EACH	REMOVAL OF GROUND MOUNTED MAJOR SIGN AND DISPOSAL EACH	REMOVAL OF GROUND MOUNTED POST SUPPORT AND DISPOSAL EACH	REMOVAL OF GROUND MOUNTED STRUCTURAL BEAM SUPPORT AND DISPOSAL EACH
R1	92	546+00			2		1	
R2	92	547+35			1		1	
R3	92	548+35			1		1	
R4	92	549+10			1		1	
R5	92	549+50			1		1	
R6	92	550+00			1		1	
R7	92	549+85				1		2
R8	93	550+15			1		1	
R9	93	550+65			1		1	
R10	93	551+42			1		1	
R11	93	552+00			1		1	
R12	93	552+25			1		1	
R13	93	553+00			2		2	
R14	94	555+50			4			
R15	94	556+40				1		2
R16	94	555+90	556+36		2		4	
R17	94	559+57			3		1	
R18	95	B 43+35			1		1	
R19	95	B 43+45			1		1	
R20	96	569+33			4		2	
R21	96	D 544+45			2		2	
SUBTOTAL					31	2	24	4
TOTALS CARRIED TO GENERAL SUMMARY					31	2	24	4

ITEM 646 - LANE ARROW, AS PER PLAN
 ROUNDABOUT "FISH-HOOK" STYLE LANE ARROWS SHOWN IN THE PLANS SHALL BE AS DETAILED BELOW.



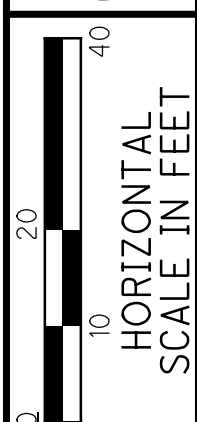
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 CHECKED
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TRAFFIC CONTROL QUANTITIES

MAD-70-10.27

90
 97

AS BUILT 2-10-2014

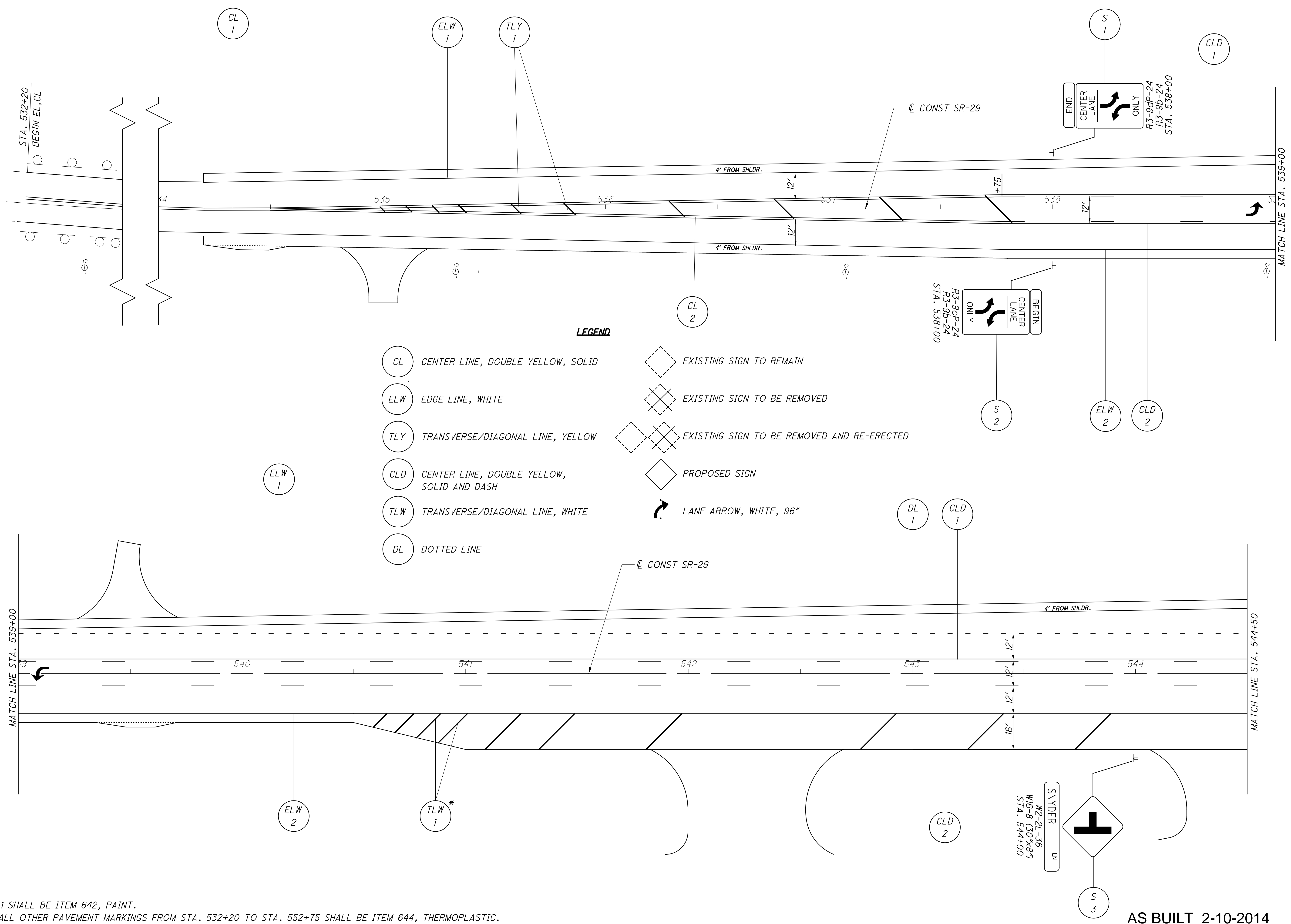


CALCULATED AT
CHECKED JFM

SIGNING AND PAVEMENT MARKINGS STA 532+00 TO STA 544+50

MAD-70-10.27

91
97



- LEGEND**
- CL CENTER LINE, DOUBLE YELLOW, SOLID
 - ELW EDGE LINE, WHITE
 - TLY TRANSVERSE/DIAGONAL LINE, YELLOW
 - CLD CENTER LINE, DOUBLE YELLOW, SOLID AND DASH
 - TLW TRANSVERSE/DIAGONAL LINE, WHITE
 - DL DOTTED LINE
 - EXISTING SIGN TO REMAIN
 - EXISTING SIGN TO BE REMOVED
 - EXISTING SIGN TO BE REMOVED AND RE-ERECTED
 - PROPOSED SIGN
 - LANE ARROW, WHITE, 96"

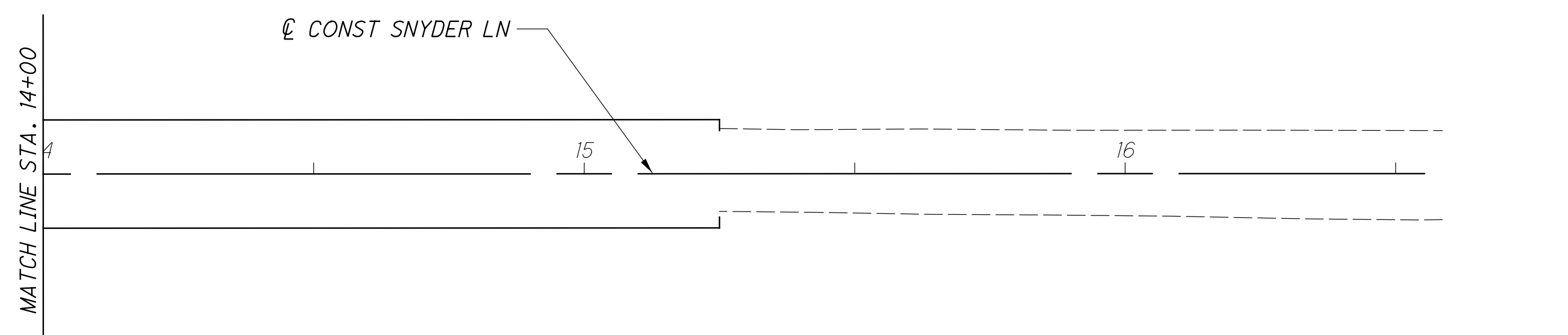
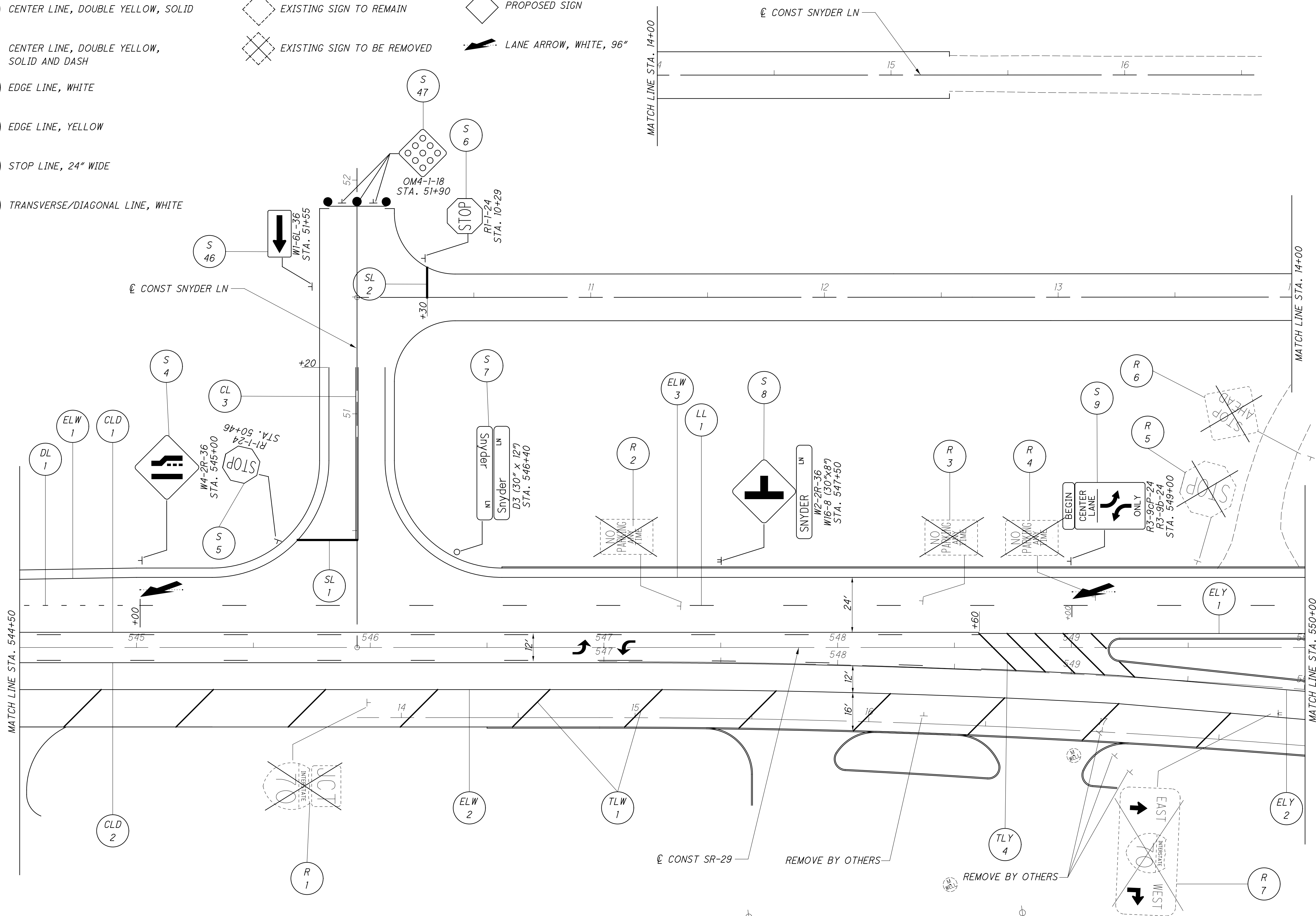
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* TLW-1 SHALL BE ITEM 642, PAINT.
NOTE: ALL OTHER PAVEMENT MARKINGS FROM STA. 532+20 TO STA. 552+75 SHALL BE ITEM 644, THERMOPLASTIC.

AS BUILT 2-10-2014

LEGEND

- CL CENTER LINE, DOUBLE YELLOW, SOLID
- CLD CENTER LINE, DOUBLE YELLOW, SOLID AND DASH
- ELW EDGE LINE, WHITE
- ELY EDGE LINE, YELLOW
- SL STOP LINE, 24" WIDE
- TL TRANSVERSE/DIAGONAL LINE, WHITE
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- PROPOSED SIGN
- LANE ARROW, WHITE, 96"



SIGNING AND PAVEMENT MARKINGS
STA 544+50 TO STA 550+00

MAD-70-10.27

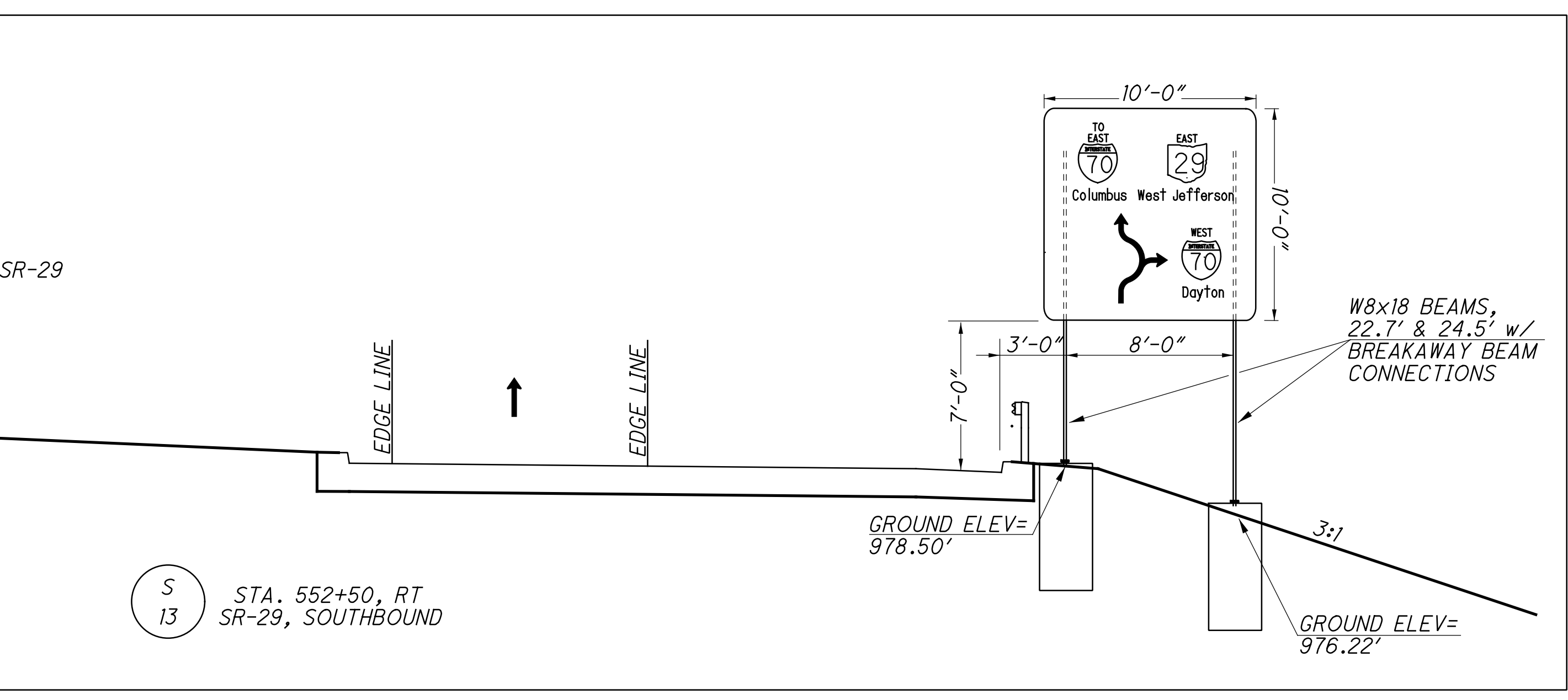
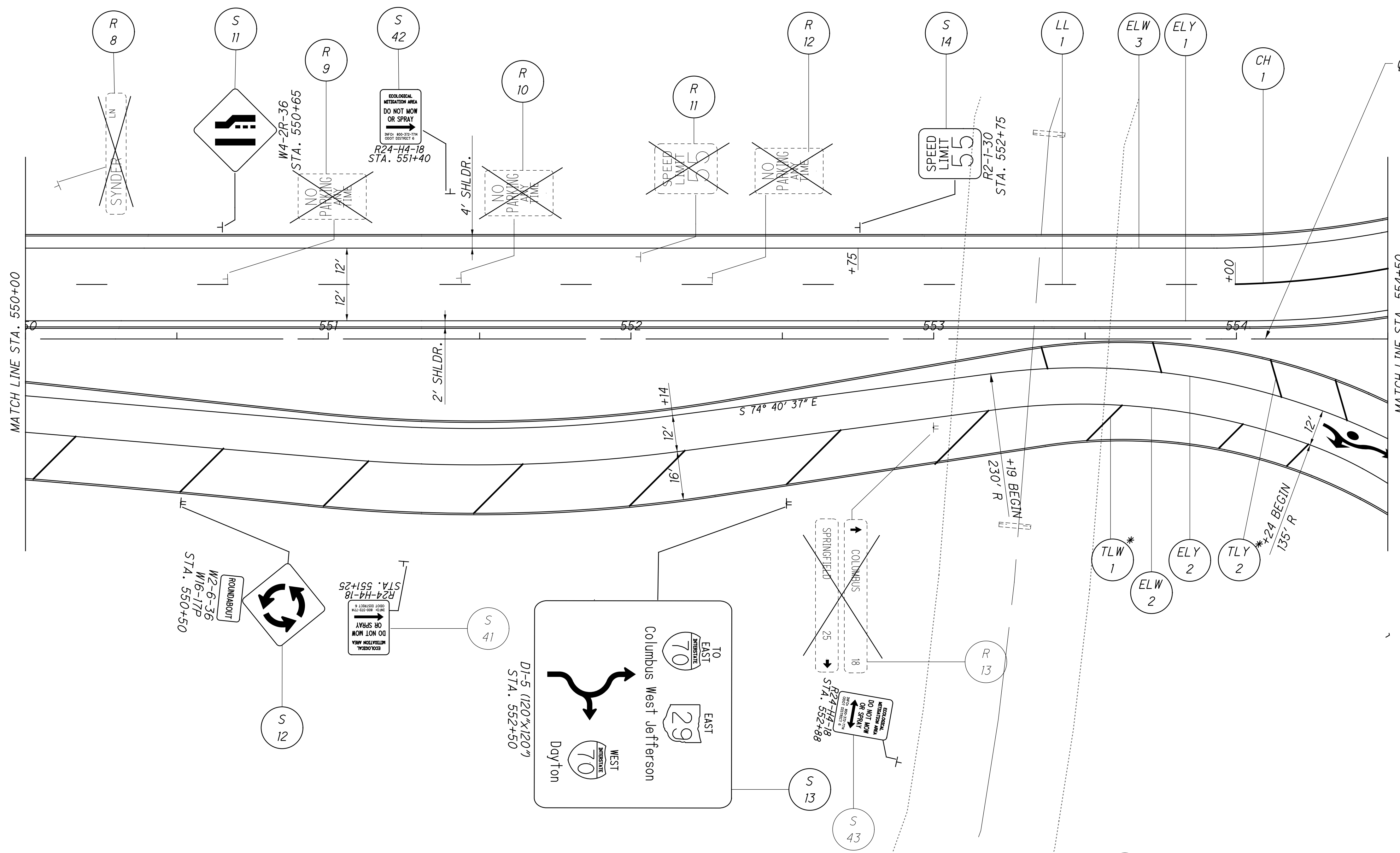
92
97

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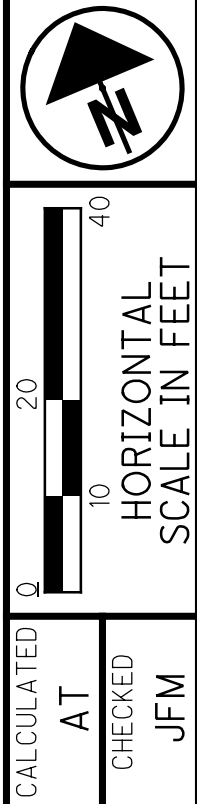
* TLW-1 SHALL BE ITEM 642, PAINT.
 NOTE: ALL OTHER PAVEMENT MARKINGS FROM STA. 532+20 TO STA. 552+75 SHALL BE ITEM 644, THERMOPLASTIC.

AS BUILT 2-10-2014

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- LEGEND**
- CL CENTER LINE, DOUBLE YELLOW, SOLID
 - ELW EDGE LINE, WHITE
 - ELY EDGE LINE, YELLOW
 - SL STOP LINE, 24" WIDE
 - CH CHANNELIZING LINE
 - TLW TRANSVERSE/DIAGONAL LINE, WHITE
 - TLY TRANSVERSE/DIAGONAL LINE, YELLOW
 - YM YIELD MARKING
 - EXISTING SIGN TO REMAIN
 - EXISTING SIGN TO BE REMOVED
 - EXISTING SIGN TO BE REMOVED AND RE-ERECTED
 - PROPOSED SIGN
 - LANE ARROW, WHITE, 96"
 - LANE ARROW, AS PER PLAN



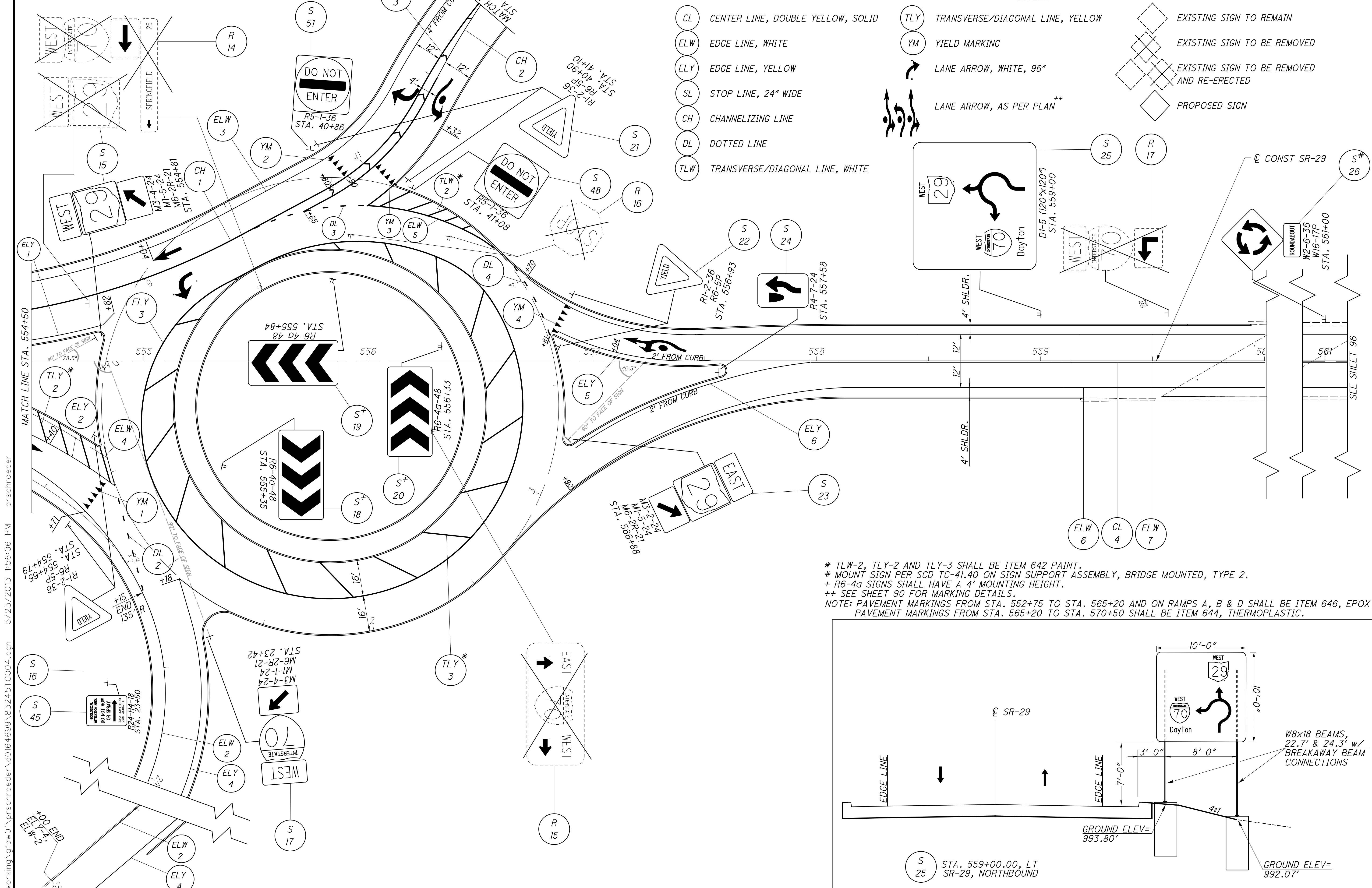
**SIGNING AND PAVEMENT MARKINGS
STA 550+00 TO 554+50**

MAD-70-10.27

93
97

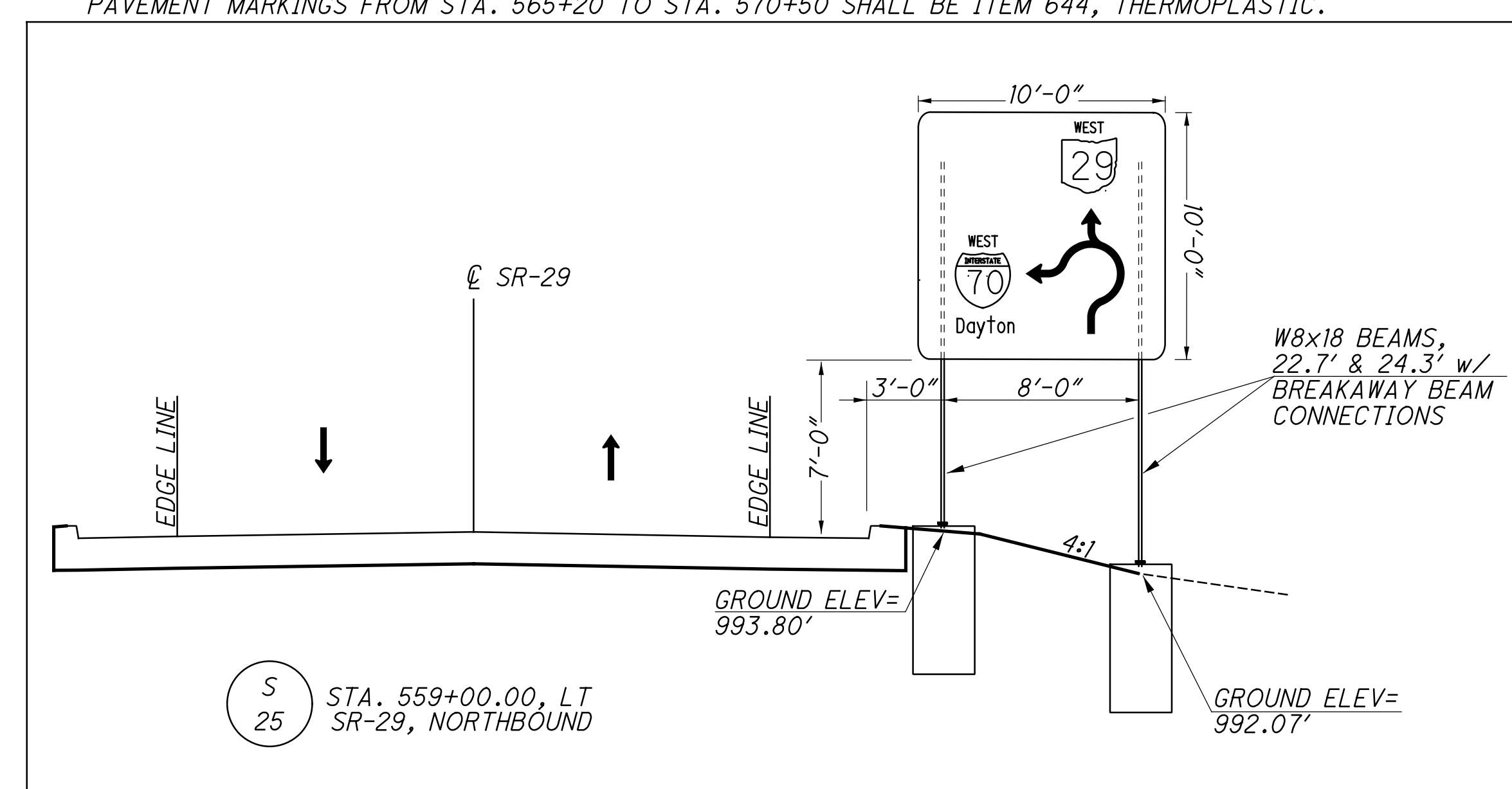
AS BUILT 2-10-2014

* TLW-1 AND TLY-2 SHALL BE ITEM 642, PAINT.
NOTE: PAVEMENT MARKINGS FROM STA. 532+20 TO STA. 552+75 AND FROM STA. 565+20 TO STA. 570+50 SHALL BE ITEM 644, THERMOPLASTIC.
PAVEMENT MARKINGS FROM STA. 552+75 TO STA. 565+20 AND ON RAMPS A, B & D SHALL BE ITEM 646, EPOXY.



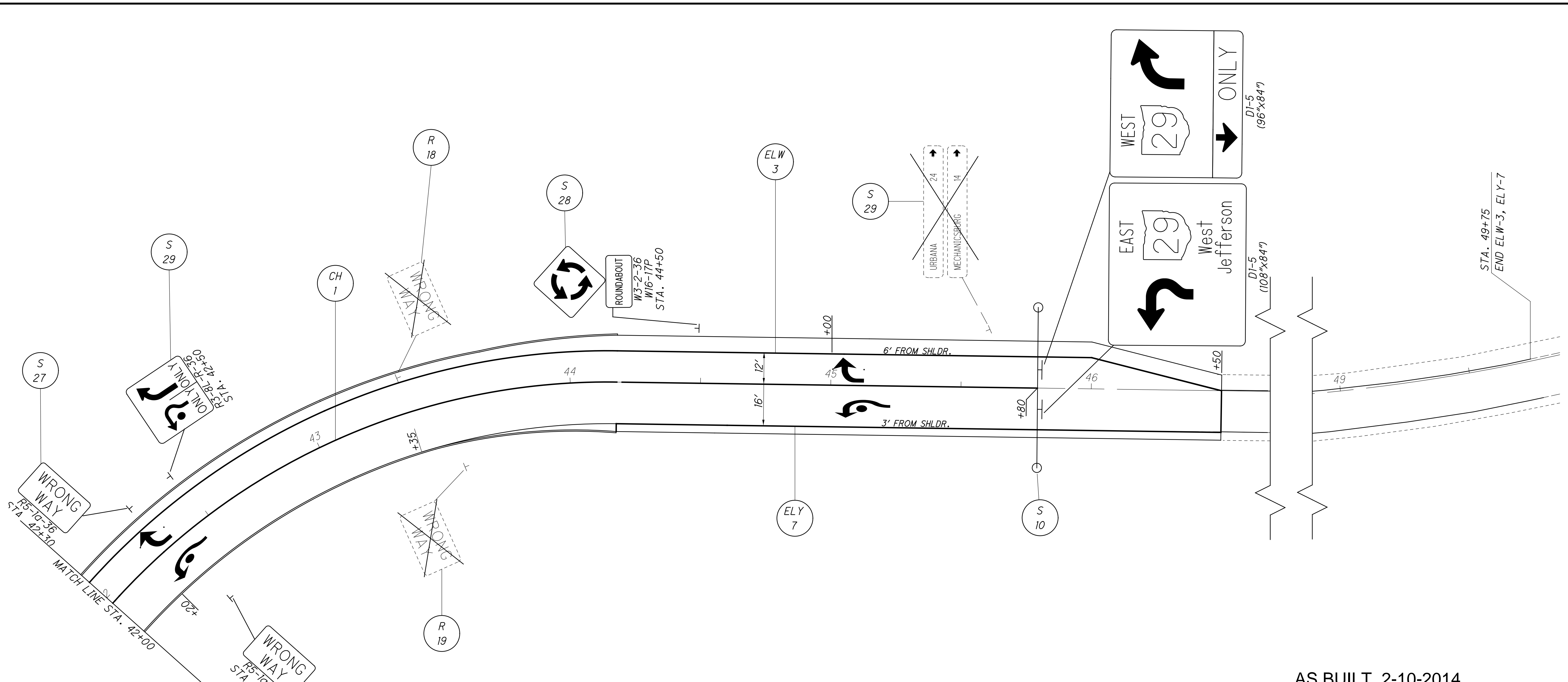
- LEGEND**
- CL CENTER LINE, DOUBLE YELLOW, SOLID
 - ELW EDGE LINE, WHITE
 - ELY EDGE LINE, YELLOW
 - SL STOP LINE, 24" WIDE
 - CH CHANNELIZING LINE
 - DL DOTTED LINE
 - TLW TRANSVERSE/DIAGONAL LINE, WHITE
 - TLY TRANSVERSE/DIAGONAL LINE, YELLOW
 - YM YIELD MARKING
 - LANE ARROW, WHITE, 96"
 - LANE ARROW, AS PER PLAN**
 - EXISTING SIGN TO REMAIN
 - EXISTING SIGN TO BE REMOVED
 - EXISTING SIGN TO BE REMOVED AND RE-ERECTED
 - PROPOSED SIGN

* TLW-2, TLY-2 AND TLY-3 SHALL BE ITEM 642 PAINT.
 # MOUNT SIGN PER SCD TC-41.40 ON SIGN SUPPORT ASSEMBLY, BRIDGE MOUNTED, TYPE 2.
 + R6-4a SIGNS SHALL HAVE A 4' MOUNTING HEIGHT.
 ++ SEE SHEET 90 FOR MARKING DETAILS.
 NOTE: PAVEMENT MARKINGS FROM STA. 552+75 TO STA. 565+20 AND ON RAMPS A, B & D SHALL BE ITEM 646, EPOXY.
 PAVEMENT MARKINGS FROM STA. 565+20 TO STA. 570+50 SHALL BE ITEM 644, THERMOPLASTIC.

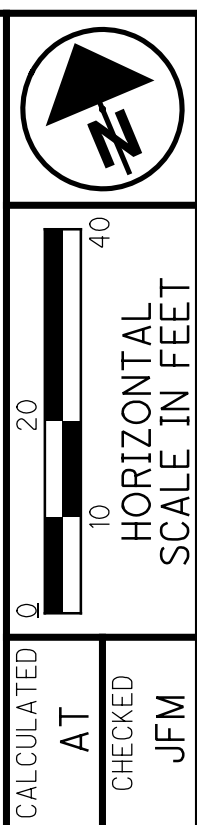
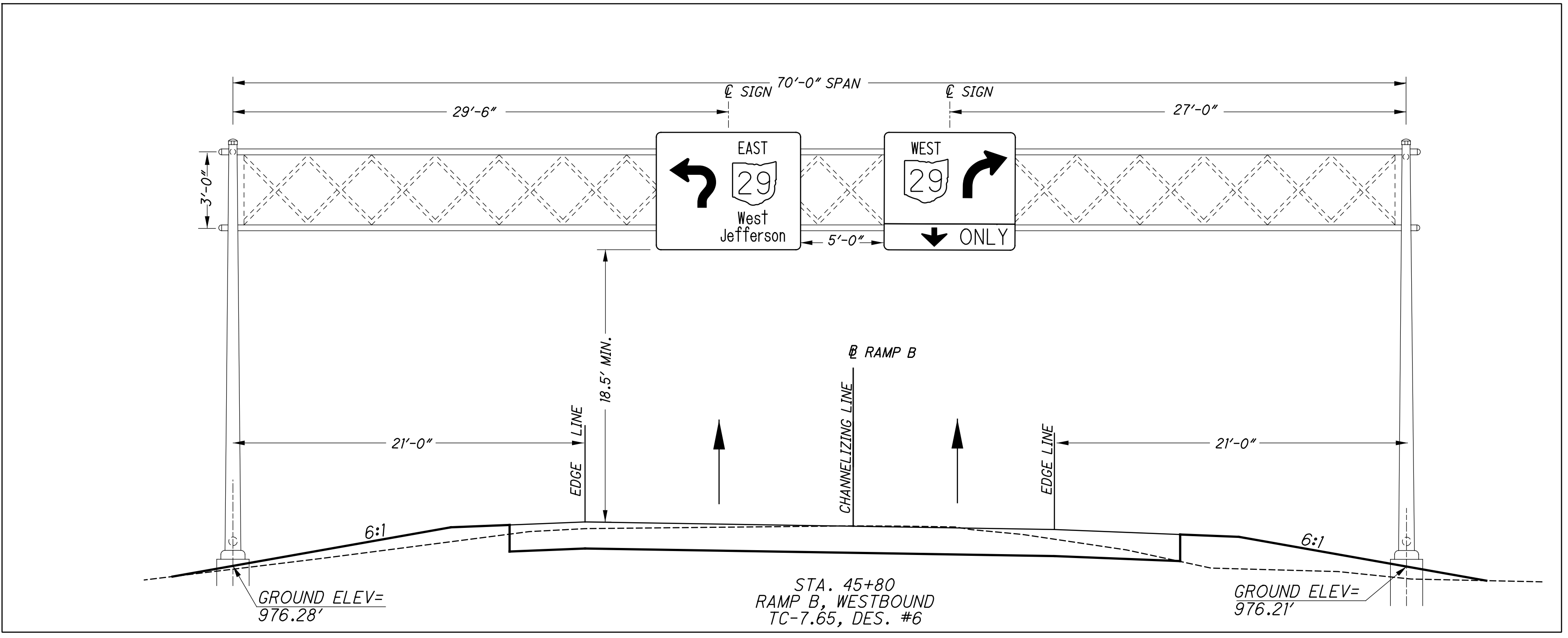


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AS BUILT 2-10-2014



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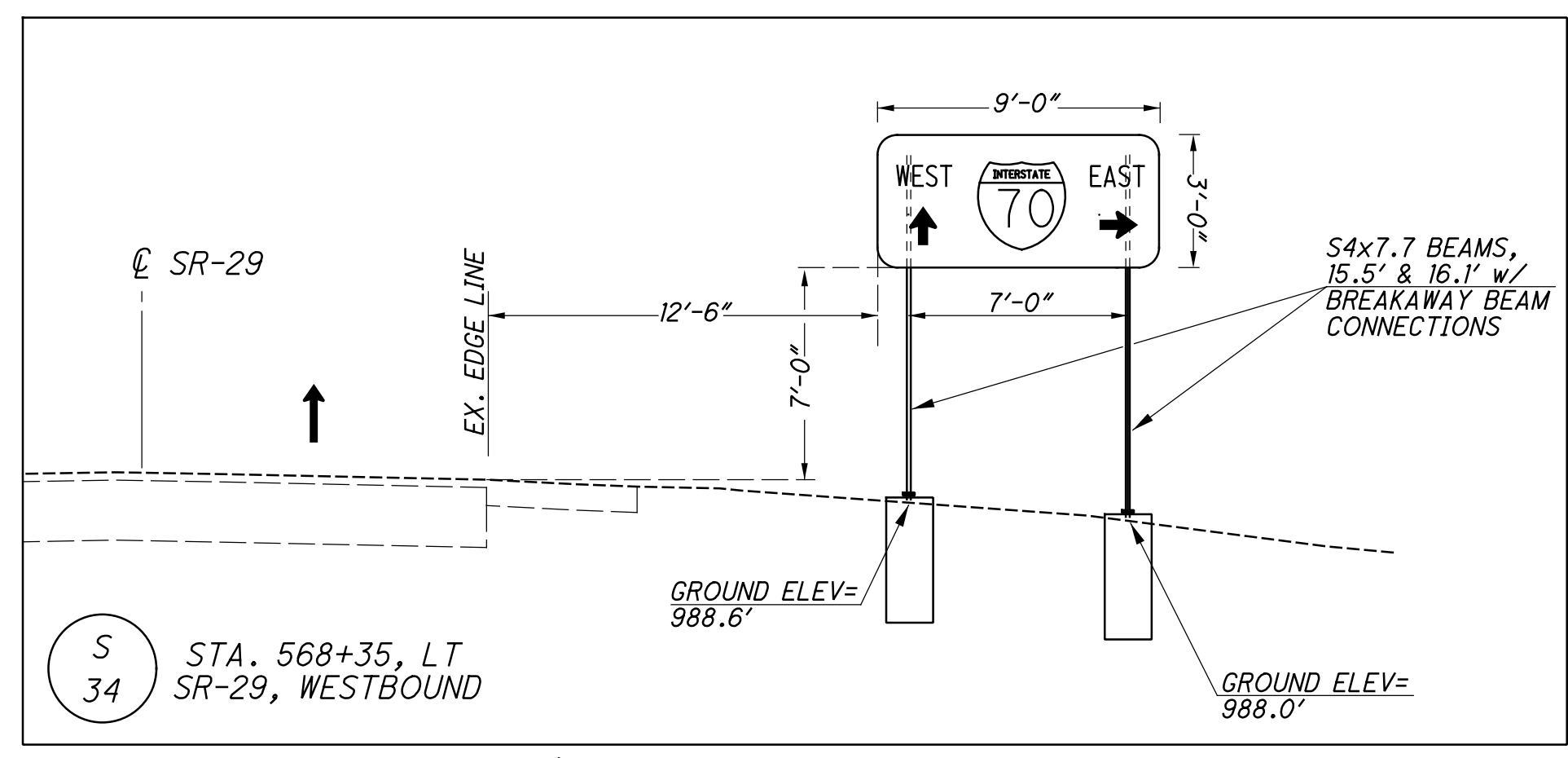
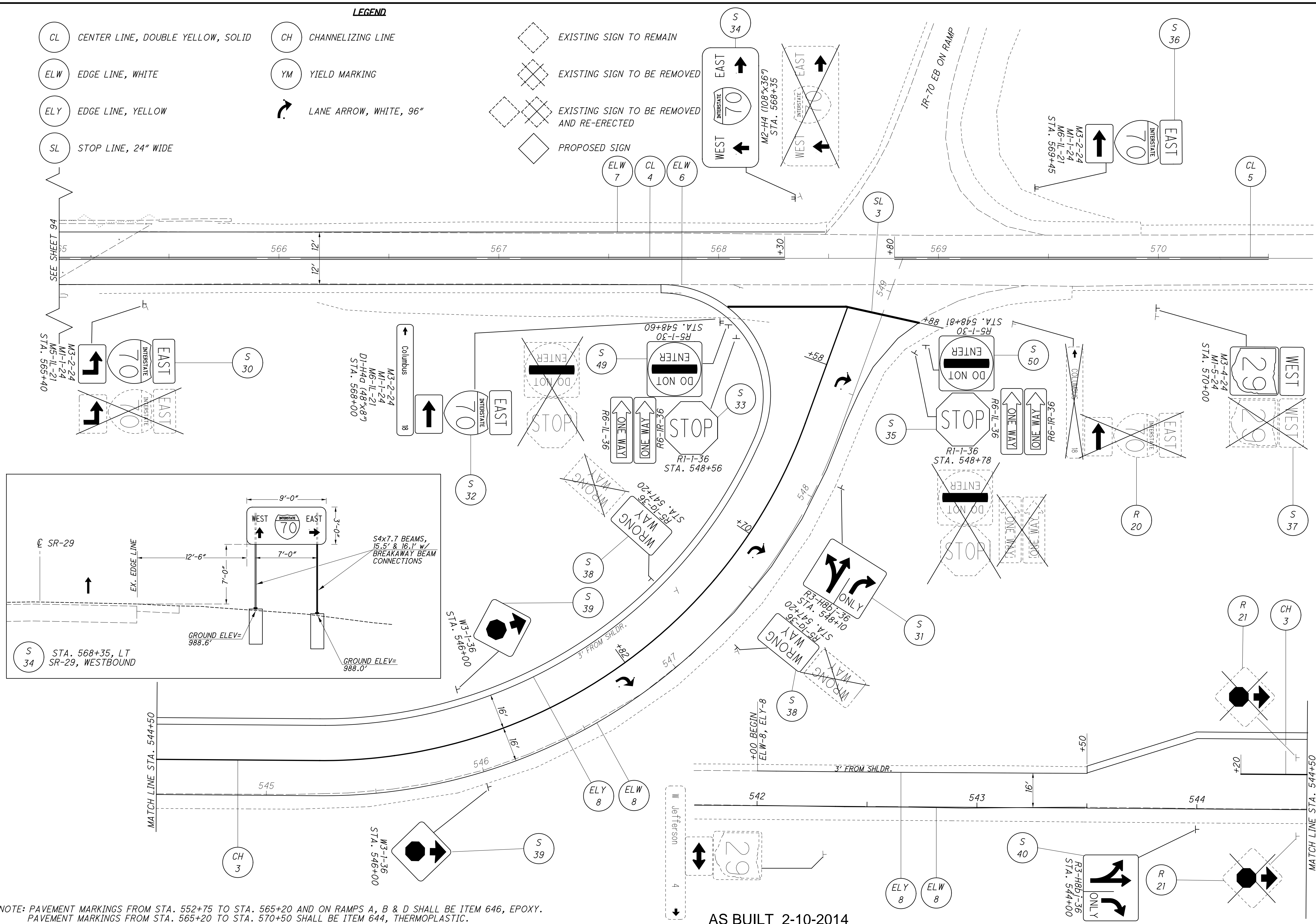
SIGNING AND PAVEMENT MARKINGS
STA 42+00 TO STA 46+00

MAD-70-10.27

95
97

LEGEND

- CL CENTER LINE, DOUBLE YELLOW, SOLID
- ELW EDGE LINE, WHITE
- ELY EDGE LINE, YELLOW
- SL STOP LINE, 24" WIDE
- CH CHANNELIZING LINE
- YM YIELD MARKING
- LANE ARROW, WHITE, 96"
- EXISTING SIGN TO REMAIN
- EXISTING SIGN TO BE REMOVED
- EXISTING SIGN TO BE REMOVED AND RE-ERECTED
- PROPOSED SIGN



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NOTE: PAVEMENT MARKINGS FROM STA. 552+75 TO STA. 565+20 AND ON RAMPS A, B & D SHALL BE ITEM 646, EPOXY.
PAVEMENT MARKINGS FROM STA. 565+20 TO STA. 570+50 SHALL BE ITEM 644, THERMOPLASTIC.

AS BUILT 2-10-2014

