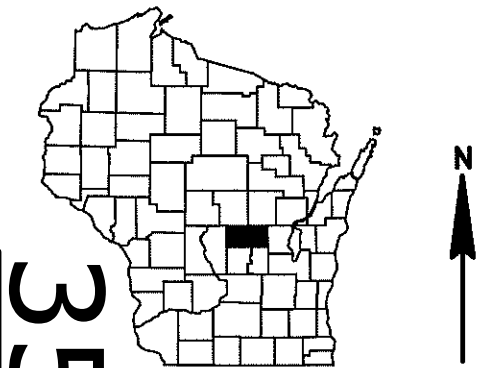


WIS MAY 2019
PROJECT ID: 6210-00-73, 6210-01-60
WITH: N/A
COUNTY: WAUSHARA

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details
Section No.	3	Estimate of Quantities
Section No.	3	Miscellaneous Quantities
Section No.	4	Right of Way Plat
Section No.	5	Plan and Profile
Section No.	6	Standard Detail Drawings
Section No.	7	Sign Plates
Section No.	8	Structure Plans
Section No.	9	Computer Earthwork Data
Section No.	9	Cross Sections

TOTAL SHEETS = 64



DESIGN DESIGNATION

A.A.D.T.	(2019)	=	3,900
A.A.D.T.	(2039)	=	5,200
D.H.V.		=	398
D.D.		=	60/40
T.		=	16.4%
DESIGN SPEED		=	60 MPH
ESALS		=	1,590,000

CONVENTIONAL SYMBOLS

PLAN	PROFILE
CORPORATE LIMITS	GRADE LINE
PROPERTY LINE	ORIGINAL GROUND
LOT LINE	MARSH OR ROCK PROFILE (To be noted as such)
LIMITED HIGHWAY EASEMENT	SPECIAL DITCH
EXISTING RIGHT OF WAY	GRADE ELEVATION
PROPOSED OR NEW R/W LINE	CULVERT (Profile View)
SLOPE INTERCEPT	UTILITIES
REFERENCE LINE	ELECTRIC
EXISTING CULVERT	FIBER OPTIC
PROPOSED CULVERT (Box or Pipe)	GAS
COMBUSTIBLE FLUIDS	SANITARY SEWER
MARSH AREA	STORM SEWER
WOODED OR SHRUB AREA	TELEPHONE
	WATER
	UTILITY PEDESTAL
	POWER POLE
	TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

RIPON - AURORAVILLE

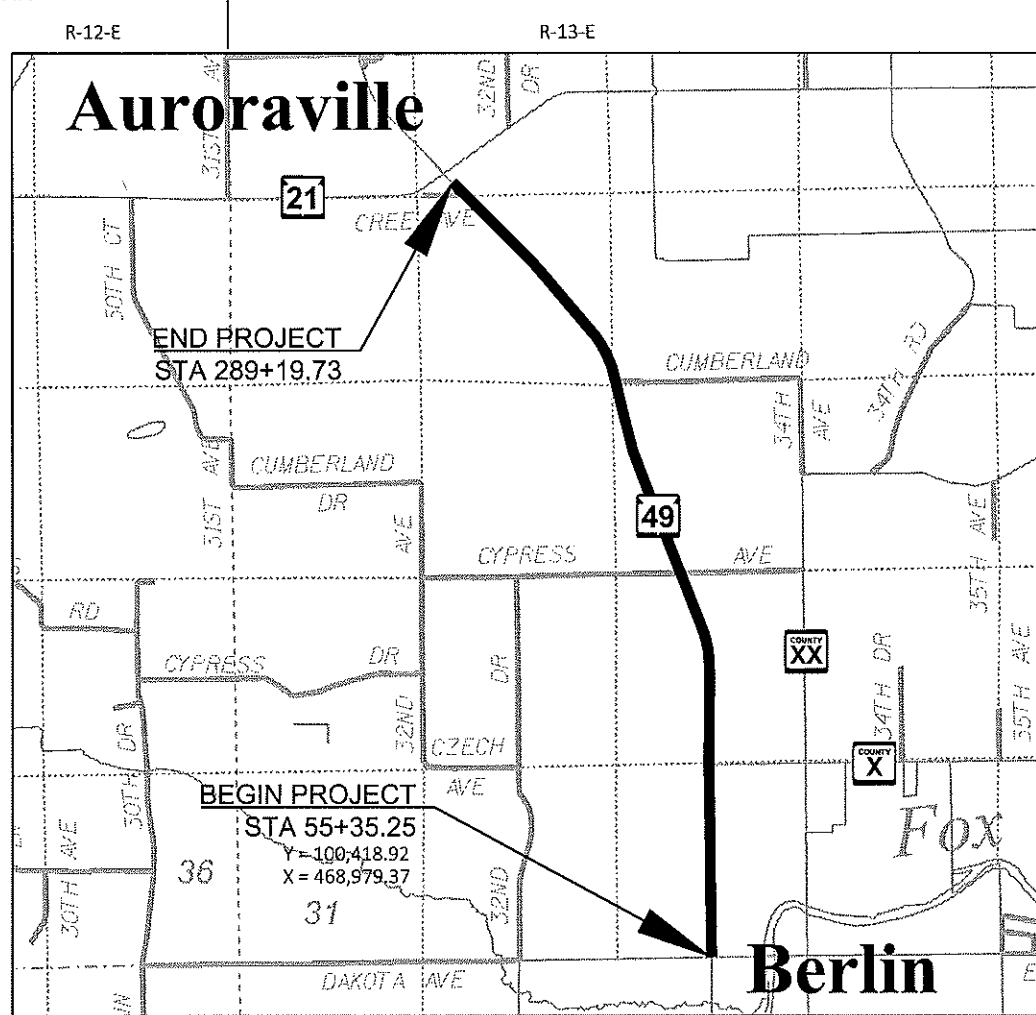
GREEN LAKE COUNTY LINE - STH 21

STH 49

WAUSHARA COUNTY

STATE PROJECT NUMBER
6210-01-60
CULVERT WORK

STATE PROJECT NUMBER
6210-00-73
RESURFACE WORK



LAYOUT
SCALE 0 1 MI
TOTAL NET LENGTH OF CENTERLINE = 4.429 MI

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COORDINATE REFERENCE SYSTEM (WISCRS), WAUSHARA COUNTY, NAD83 (2011), IN U.S. SURVEY FEET. POSITIONS SHOWN ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES ARE THE SAME AS GROUND DISTANCES. ELEVATIONS ARE REFERENCED TO NAVD 88 (2012). GPS DERIVED ELEVATIONS ARE BASED ON GEOID 12A.

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
6210-00-73	WISC 2019305	1
6210-01-60	WISC 2019306	1

ORIGINAL PLANS PREPARED BY

DAAR ENGINEERING, INC.
www.daarcorp.com
Portage, WI 53901
608-566-1370

WISCONSIN PROFESSIONAL ENGINEER
TENSER A. SCHOPP
E-36813
JOHNSON CREEK
WISCONSIN

3/6/2019 *Tenser A. Schopp*
(DATE) (SIGNATURE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
Surveyor: DAAR ENGINEERING, INC.
Designer: DAAR ENGINEERING, INC.
Project Manager: DAN HOLLOWAY
Regional Examiner: —
Regional Supervisor: NICHOLE LYSNE

APPROVED FOR THE DEPARTMENT
DATE 3/8/19 *Dan Holloway*
(Signature)

E

GENERAL NOTES

- 1
- THE LOCATIONS OF EXISTING AND PROPOSED UTILITY INSTALLATIONS AS SHOWN ON THE PLAN ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA WHICH ARE NOT SHOWN.
- 2
- THE CONTRACTOR SHALL NOTIFY DIGGERS HOTLINE AND AFFECTED UTILITIES PRIOR TO THE START OF WORK. ANY LOCAL MUNICIPALITY OR PUBLIC AGENCY WHICH IS NOT A MEMBER OF DIGGERS HOTLINE MUST BE CONTACTED SEPARATELY.

UTILITY CONTACTS

AMERICAN TRANSMISSION COMPANY
DOUG VOSBERG
5303 FEN OAK DRIVE
MADISON, WI 53718
(608)-877-7650
dvosberg@atcllc.com

CENTURYLINK - COMMUNICATION LINE
TIM KROEZE
19 W. FOND DU LAC ST.
RIPON, WI 54971
(920)-748-8491
Tim.Kroeze@CenturyLink.com

ALLIANT ENERGY - ELECTRICITY
MARK VILLARS
880 N. WISCONSIN ST
BERLIN, WI 54923
(920) 361-5652
markvillars@alliantenergy.com

ALLIANT ENERGY - GAS/PETROLEUM
MARK VILLARS
880 N. WISCONSIN ST
BERLIN, WI 54923
(920) 361-5652
markvillars@alliantenergy.com

ORDER OF DETAIL SHEETS

GENERAL NOTES
PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)			SLOPE RANGE (PERCENT)		
LAND USE:	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER	0-2	2-6	6 & OVER
ROW CROPS	.08 .22	.16 .30	.22 .38	.12 .26	.20 .34	.27 .44	.15 .30	.24 .37	.33 .50	.19 .34	.28 .41	.38 .56
MEDIAN STRIP-TURF	.19 .24	.20 .26	.24 .30	.19 .25	.22 .28	.26 .33	.20 .26	.23 .30	.30 .37	.20 .27	.25 .32	.30 .40
SIDE SLOPE-TURF			.25 .32			.27 .34			.28 .36			.30 .38
PAVEMENT:												
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

TOTAL PROJECT AREA = 1.97 ACRES
TOTAL AREA EXPECTED TO BE DISTURBED BY CONSTRUCTION ACTIVITIES = 0.24 ACRES

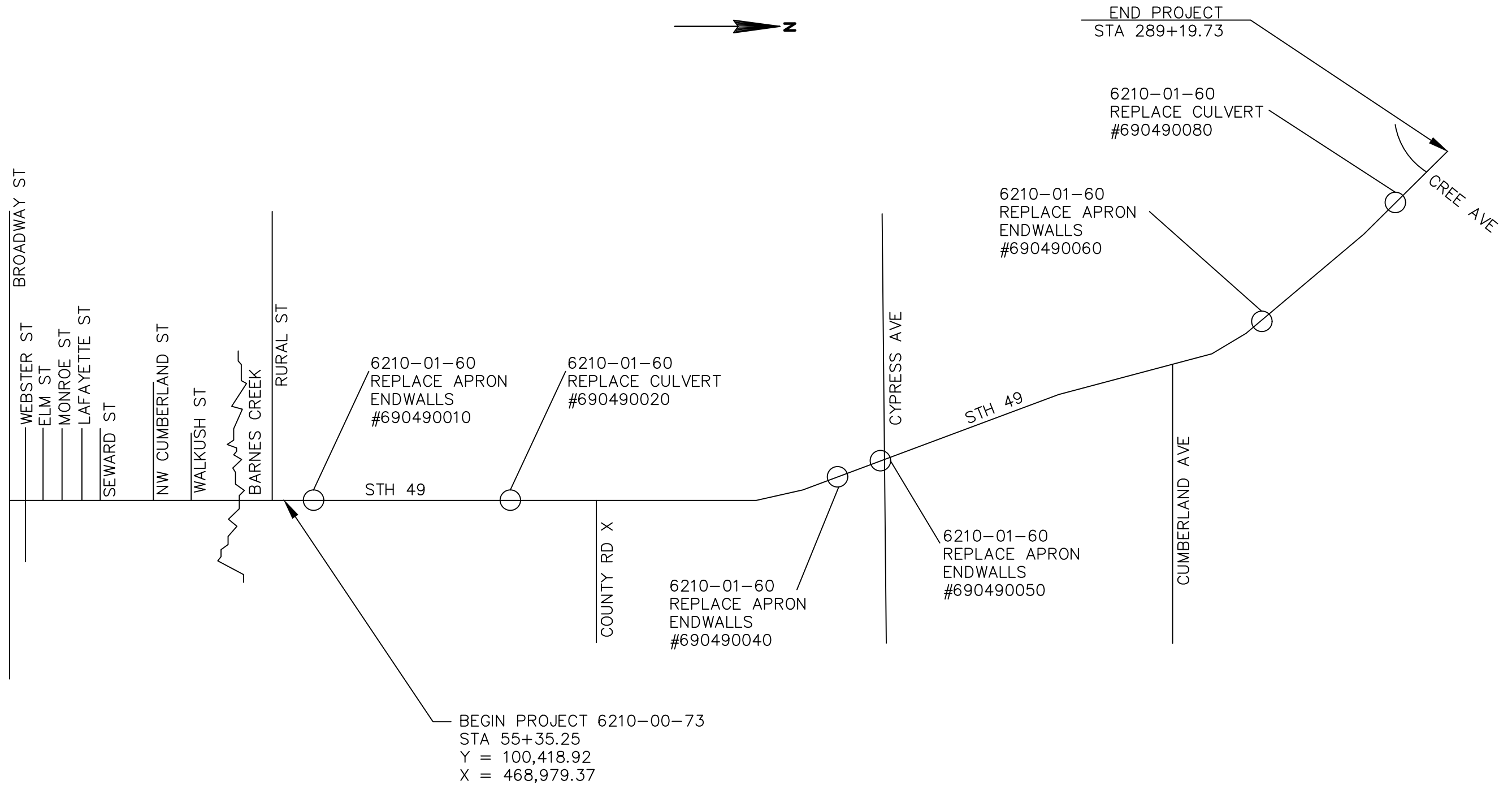
WDNR CONTACT

BRETT BETTHAUSER
WISCONSIN DEPARTMENT OF NATURAL RESOURCE
473 GRIFFITH AVE.
WISCONSIN RAPIDS, WI 54494-7859
(715) 213-9064
Bradley.Betthauser@wisconsin.gov

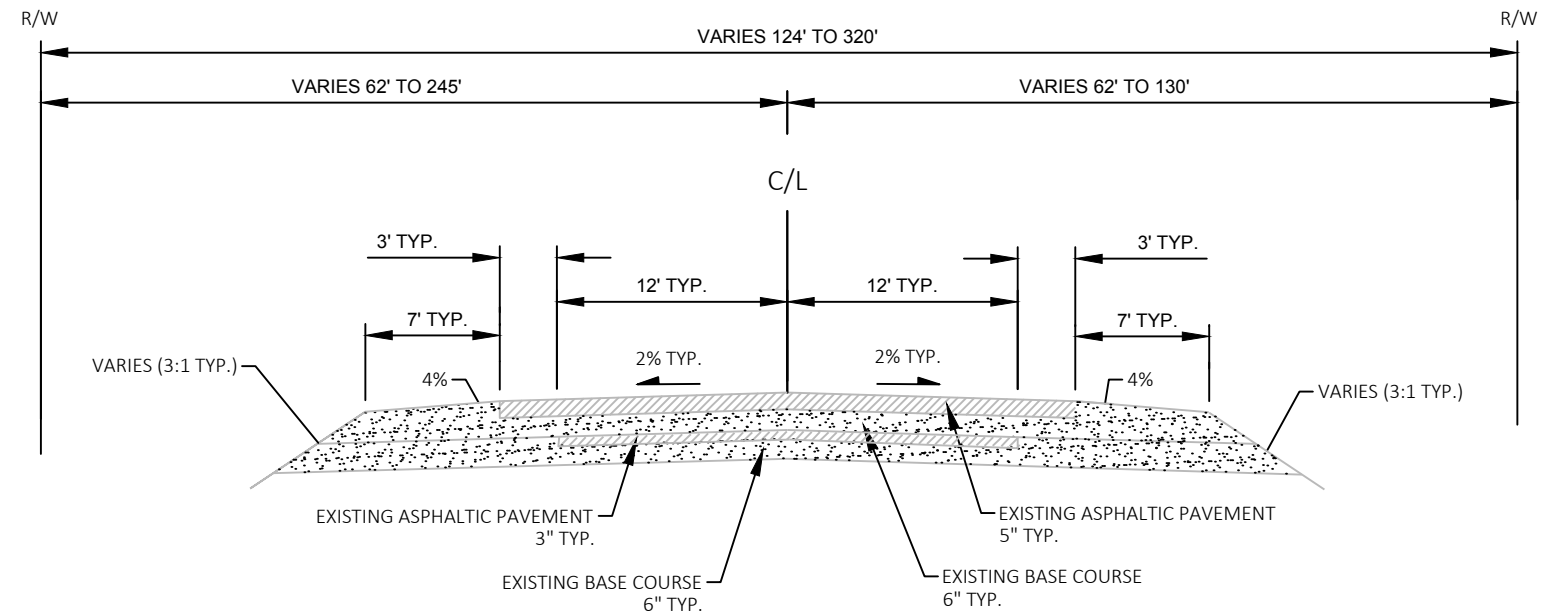
DIGGERSHOTLINE

Dial 811 or (800) 242-8511

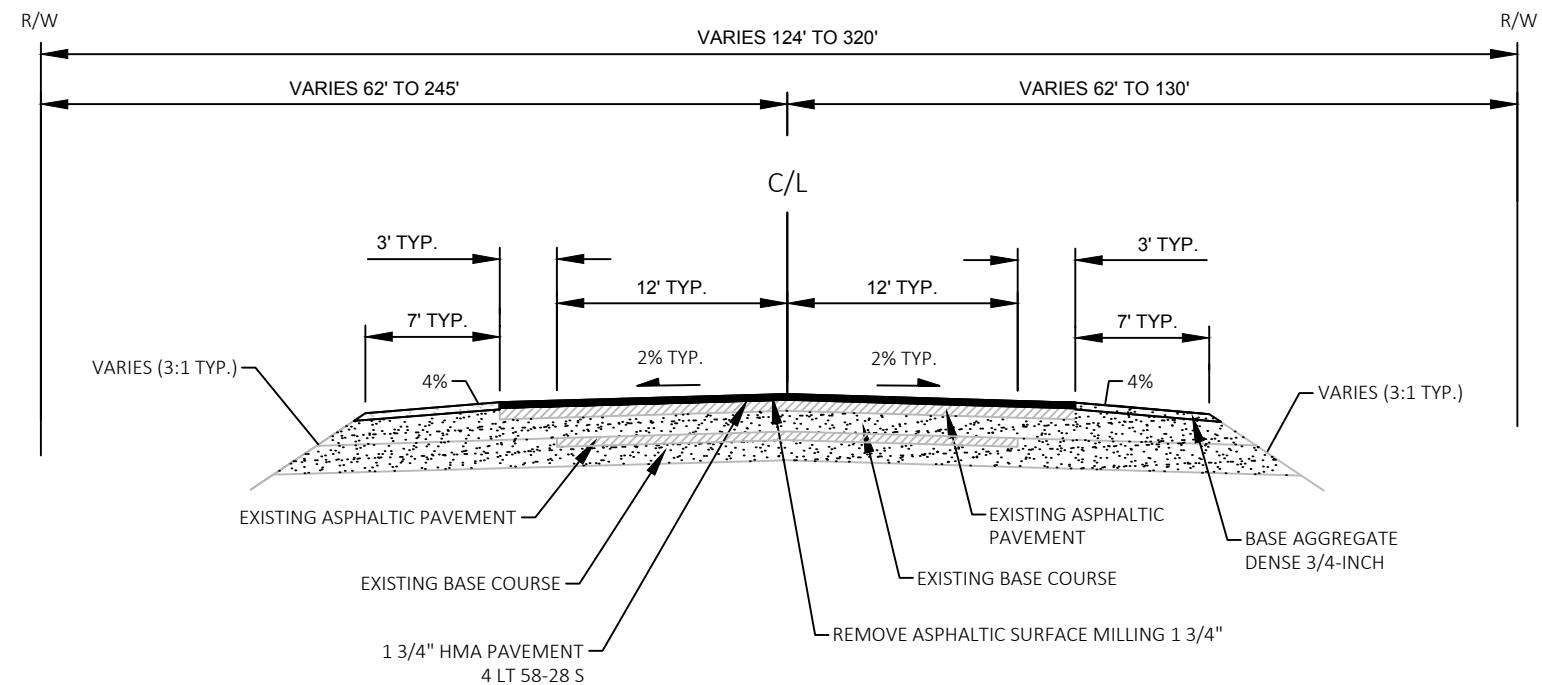
www.DiggersHotline.com



PROJECT NO: 6210-00-73/6210-01-60	HWY: STH 49	COUNTY: WAUSHARA	PROJECT OVERVIEW	SHEET	E
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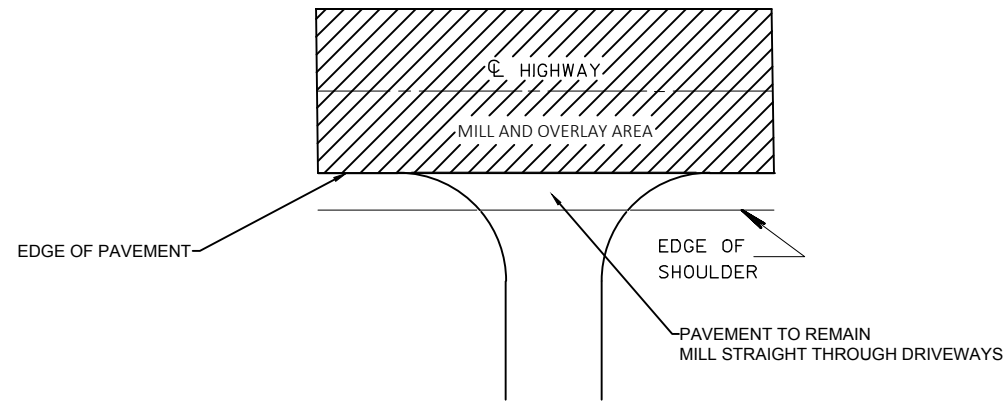


6210-00-73/6210-01-60 TYPICAL EXISTING SECTION - STH 49
STA 55+35.25 TO 289+19.73



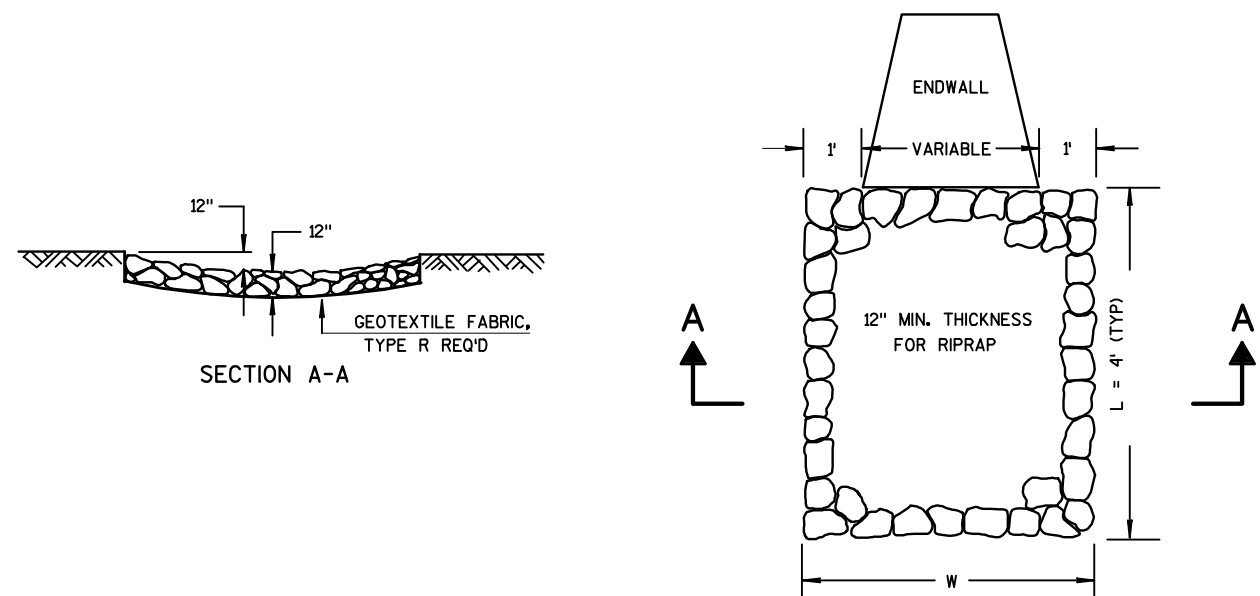
6210-00-73 TYPICAL FINISHED SECTION - STH 49
STA 55+35.25 TO 289+19.73

*EXCLUDES: STA 93+60 TO 94+60
STA 277+81 TO 279+40

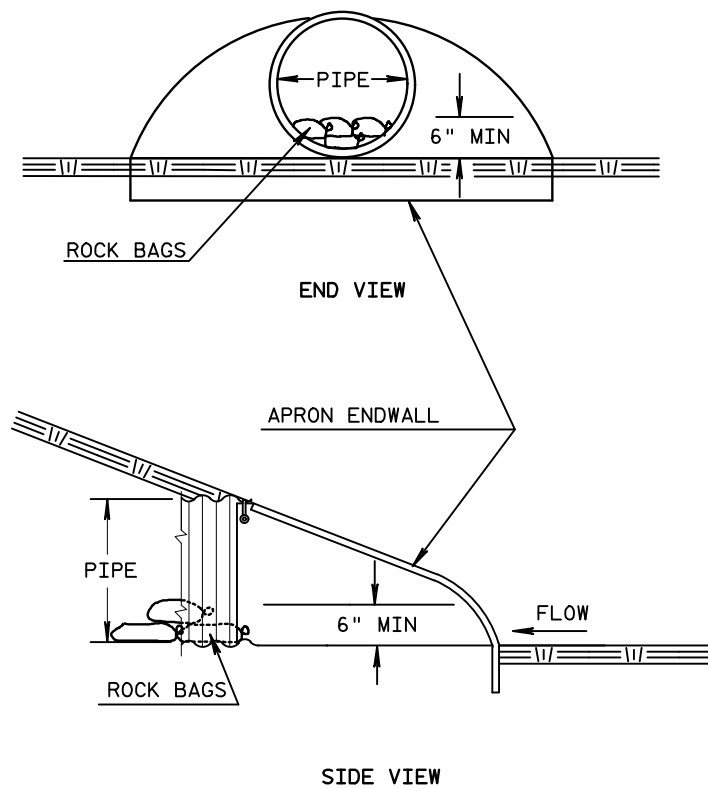


PLAN VIEW

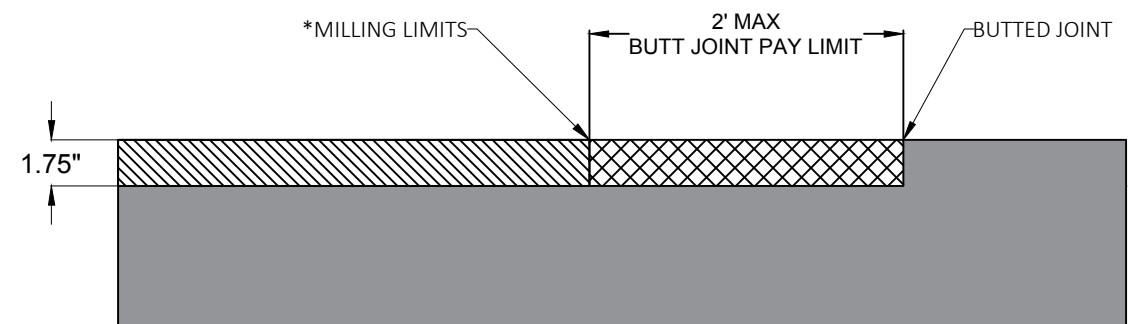
RURAL DRIVEWAY INTERSECTION DETAIL



RIPRAP TREATMENT AT CULVERTS



CULVERT PIPE CHECKS

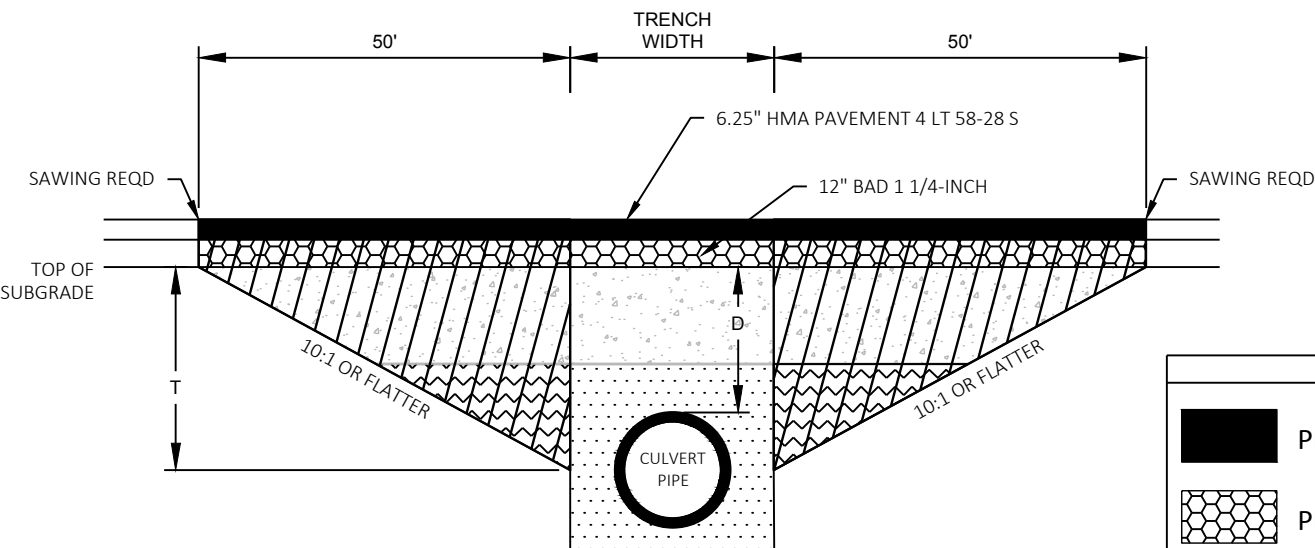


-  REMOVING ASPHALTIC SURFACE MILLING
-  REMOVING ASPHALTIC SURFACE BUTT JOINTS
-  EXISTING PAVEMENT TO REMAIN

BUTT JOINT DETAIL

NOT TO SCALE

USE WHERE MILLING ABUTS PAVEMENT TO BE LEFT IN PLACE
*MILLING LIMITS AS SHOWN ON PLANS



TRANSITION CUT DEPTH (T) = THE LESSER OF DEPTH TO CENTER OF PIPE OR 5 FT.
DO NOT EXTEND TRANSITION CUT BELOW HORIZONTAL CENTER OF PIPE.

DEPTH D < 6 FT

KEY

PROPOSED SURFACE

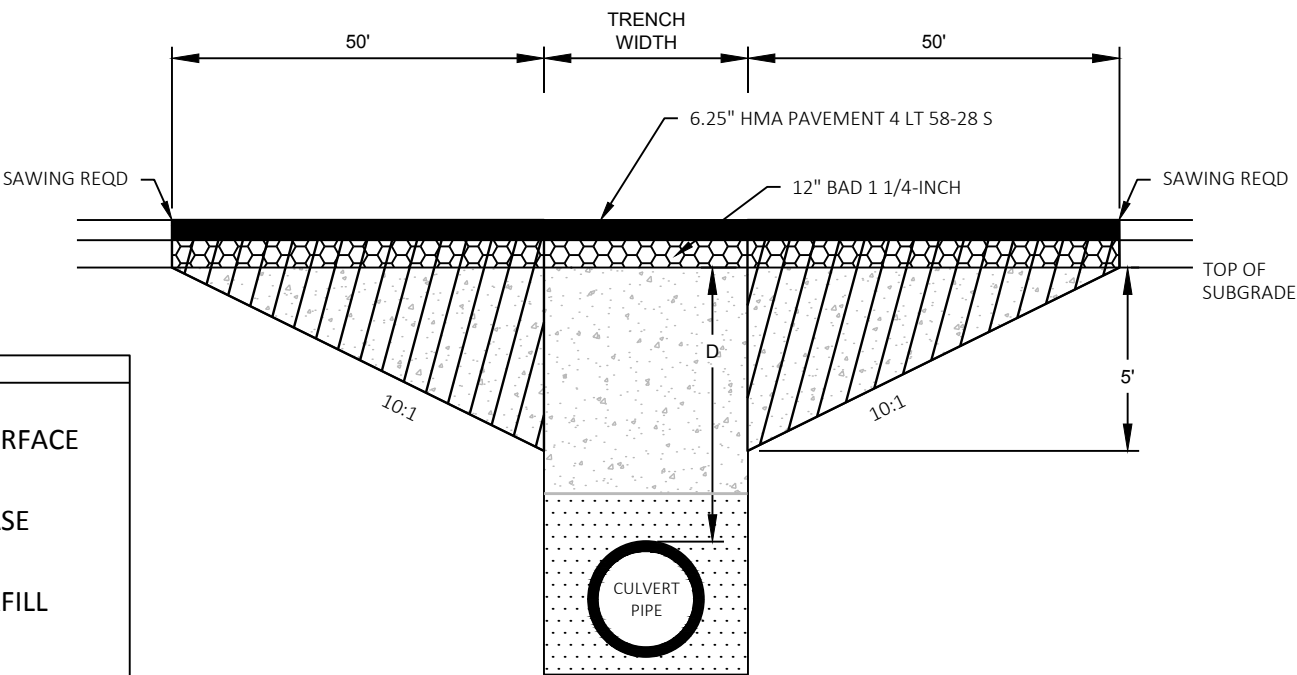
PROPOSED BASE

TRENCH BACKFILL

TRENCH OR
FOUNDATION BACKFILL

FOUNDATION BACKFILL

TRANSITION CUT



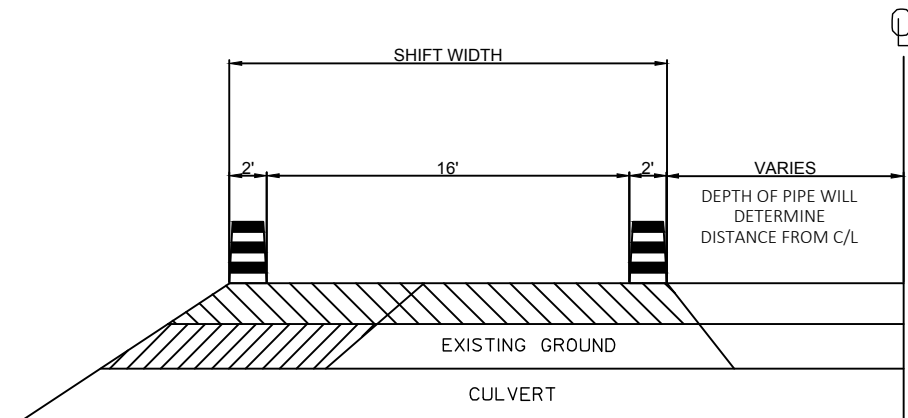
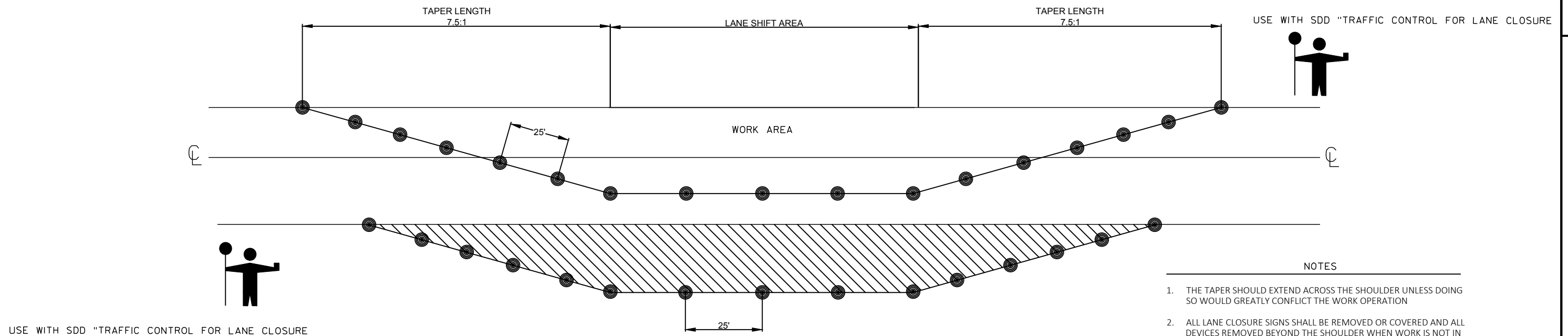
DEPTH D ≥ 6 FT

NOTES

- TRANSITION CUT IS PAID AS EXCAVATION COMMON.
- TRANSITION CUT WIDTH IS FROM SUBGRADE SHOULDER POINT TO SUBGRADE SHOULDER POINT.
- BACKFILL THE TRANSITION CUT AREAS WITH FOUNDATION AND TRENCH BACKFILL AS SPECIFIED IN STANDARD SPEC 520.
- PERFORM CULVERT PIPE INSTALLATION BEFORE MILLING AND PAVING.
- PLACE FULL DEPTH 4 LT 58-28 S AFTER CULVERT PIPE INSTALLATION AND BEFORE MILLING AND PAVING.

CULVERT PIPE TRANSITION

ROUTE	STA (CL)	DEPTH D (FT)	PIPE DIA (IN)	REMARKS
STH 49	94+09	4.3	48	
STH 49	278+54	7.5	48	SKEWED

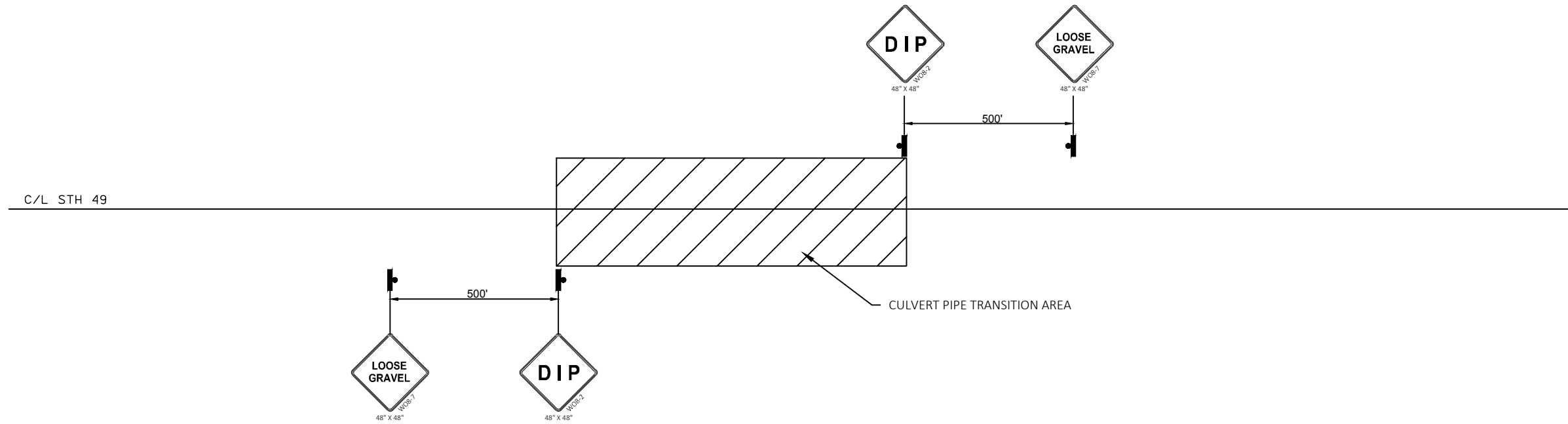


NOTES

1. THE TAPER SHOULD EXTEND ACROSS THE SHOULDER UNLESS DOING SO WOULD GREATLY CONFLICT THE WORK OPERATION
2. ALL LANE CLOSURE SIGNS SHALL BE REMOVED OR COVERED AND ALL DEVICES REMOVED BEYOND THE SHOULDER WHEN WORK IS NOT IN PROGRESS AND THE LANE IS RESTORED TO A SAFE OPERATING CONDITION
3. CHANNELIZING DEVICES PLACED ADJACENT TO WORK AREA SHALL BE PULLED BACK FROM TRAVEL LANE WHEN WORK IS NOT IN PROGRESS
4. USE WITH STANDARD DETAIL DRAWING, "TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION"
5. FLAGGERS ARE SPECIFIC TO THIS OPERATION
6. LANE SHIFT SHALL ONLY BE USED DURING DAYLIGHT HOURS

KEY

	TRAFFIC CONTROL DRUM
	6" BASE AGGREGATE DENSE 1 1/2-INCH (INCIDENTAL TO LANE SHIFT ITEM)
	FILL (INCIDENTAL TO LANE SHIFT ITEM)



TEMPORARY SIGNING AT CULVERT PIPE REPLACEMENTS

PROJECT NO: 6210-01-60

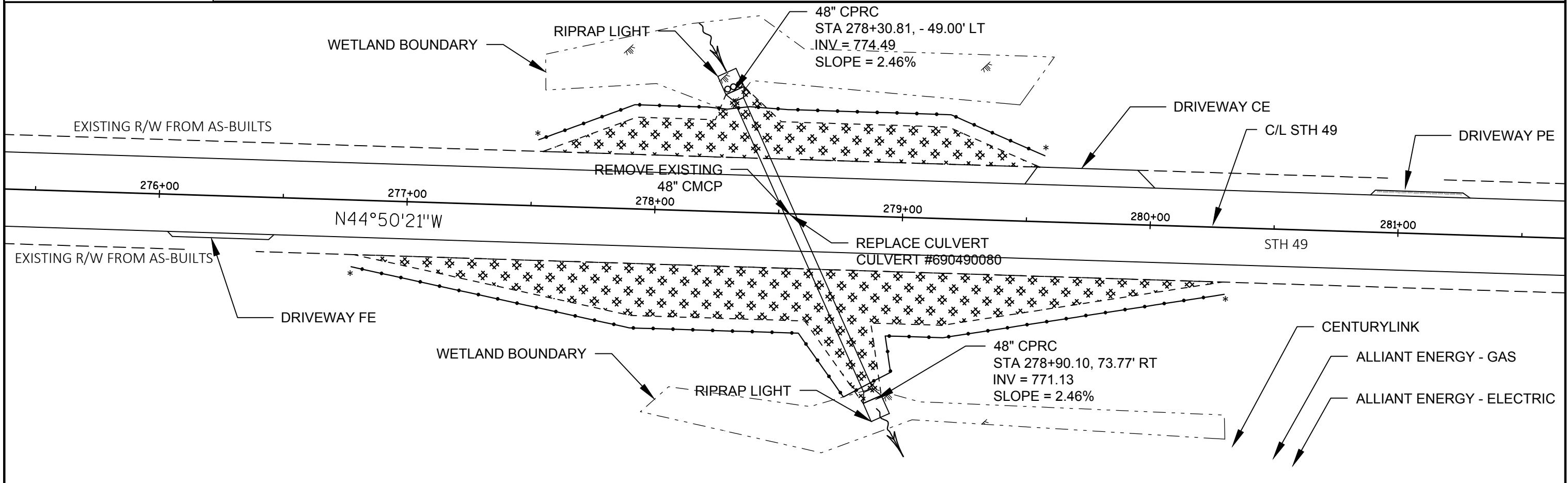
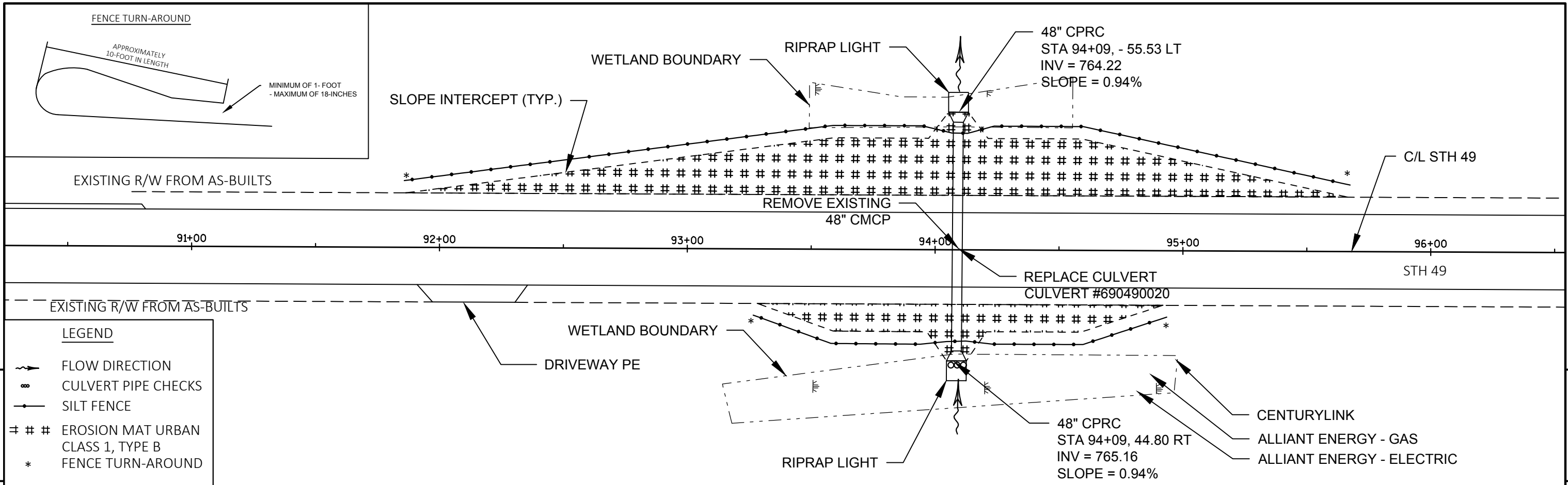
HWY: STH 49

COUNTY: WAUSHARA

PLAN: CONSTRUCTION DETAILS

SHEET

E



Estimate Of Quantities

		6210-00-73		6210-01-60	
Line	Item	Item Description	Unit	Total	Qty
0078	643.1000	Traffic Control Signs Fixed Message	SF	64.000	64.000
0080	643.5000	Traffic Control	EACH	1.000	0.600
0082	645.0130	Geotextile Type R	SY	74.000	74.000
0084	646.1020	Marking Line Epoxy 4-Inch	LF	14,850.000	14,850.000
0086	646.1040	Marking Line Grooved Wet Ref Epoxy 4-Inch	LF	46,800.000	46,800.000
0088	646.3040	Marking Line Grooved Wet Ref Epoxy 8-Inch	LF	300.000	300.000
0090	646.4520	Marking Line Same Day Epoxy 4-Inch	LF	14,850.000	14,850.000
0092	648.0100	Locating No-Passing Zones	MI	4.430	4.430
0094	649.0105	Temporary Marking Line Paint 4-Inch	LF	93,600.000	93,600.000
0096	650.6000	Construction Staking Pipe Culverts	EACH	2.000	2.000
0098	650.8000	Construction Staking Resurfacing Reference	LF	23,390.000	23,390.000
0100	650.9910	Construction Staking Supplemental Control (project) 01. 6210-00-73	LS	1.000	1.000
0102	690.0150	Sawing Asphalt	LF	120.000	120.000
0104	740.0440	Incentive IRI Ride	DOL	18,000.000	18,000.000
0106	ASP.1T0A	On-the-Job Training Apprentice at \$5.00/HR	HRS	1,200.000	1,200.000
0108	ASP.1T0G	On-the-Job Training Graduate at \$5.00/HR	HRS	600.000	600.000
0110	SPV.0060	Special 01. Lane Shift	EACH	4.000	4.000

3

REMOVALS						ASPHALTIC SURFACE MILLING						EXCAVATION COMMON					
PROJECT ID: 6210-01-60						PROJECT ID: 6210-00-73						PROJECT ID: 6210-01-60					
			203.0100						204.0115			204.0120			205.0100		
			REMOVING						REMOVING			REMOVING					
			SMALL PIPE						ASPHALTIC			ASPHALTIC					
			CULVERTS						SURFACE			SURFACE					
									BUTT JOINTS			MILLING					
ROADWAY	STATION	TO	STATION	EACH	EACH	ROADWAY	STA	TO	STA	SY	SY	ROADWAY	STA	TO	STA	CY	
STH 49	65+55		65+55	-	2	STH 49	55+35		55+37	7	-						
STH 49	94+09		94+09	1	-	CTH X	108+15		-	7	-						
STH 49	155+01		155+01	-	2	CYPRESS AVE	162+11		-	14	-						
STH 49	161+35		161+66	-	2	CUMBERLAND AVE	217+90		-	7	-						
STH 49	235+33		235+33	-	2	CREE AVE	285+75		-	7	-						
STH 49	278+31		278+90	1	-	STH 49	289+18		289+20	7	-						
TOTAL				2	8	STH 49	55+35		289+20	-	81,700						
						TOTAL						TOTAL					

RIPRAP

PROJECT ID: 6210-01-60

			606.0100	645.0130
			RIPRAP	GEOTEXTILE
			LIGHT	TYPE R
ROADWAY	STATION	TO	STATION	
			CY	SY
STH 49	65+55		65+55	3
STH 49	94+09		94+09	2
STH 49	155+01		155+01	2
STH 49	161+35		161+66	2
STH 49	235+33		235+33	2
STH 49	278+31		278+90	2
TOTAL			13	74

EROSION CONTROL

PROJECT ID: 6210-01-60

				625.0500	628.1504	628.1520	628.2008	628.7555	629.0210	630.0130	630.0200	633.5200
				SALVAGED	SILT	SILT FENCE	EROSION MAT	CULVERT	FERTILIZER	SEEDING	SEEDING	MARKERS
				TOPSOIL	FENCE	MAINTENANCE	URBAN CLASS	PIPE	TYPE B	MIXTURE	TEMPORARY	CULVERT END
				1			TYPE B	CHECKS		NO. 30		
ROADWAY	STATION	TO	STATION	SY	LF	LF	SY	EACH	CWT	LB	LB	EACH
STH 49	65+55		65+55	40	100	100	40	4	0.1	1	1	2
STH 49	94+09		94+09	815	550	550	815	6	0.6	15	22	2
STH 49	155+01		155+01	40	100	100	40	2	0.1	1	1	2
STH 49	161+35		161+66	40	100	100	40	2	0.1	1	1	2
STH 49	235+33		235+33	40	100	100	40	2	0.1	1	1	2
STH 49	278+31		278+90	915	600	600	915	6	0.6	17	25	2
TOTAL				1,890	1,550	1,550	1,890	22	1.6	36	51	12

EROSION CONTROL MOBILIZATIONS

	628.1905	628.1910
	MOBILIZATIONS	MOBILIZATIONS
	EROSION	EMERGENCY
	CONTROL	EROSION
		CONTROL
LOCATION	EACH	EACH
PROJECT	2	2
TOTAL	2	2

CONSTRUCTION STAKING

PROJECT ID: 6210-01-60

PROJECT ID: 6210-00-73

				650.6000	650.8000	650.9910
				CONSTRUCTION	CONSTRUCTION	CONSTRUCTION
				STAKING PIPE	STAKING	STAKING
				CULVERTS	RESURFACING	SUPPLEMENTAL
					REFERENCE	CONTROL
ROADWAY	STATION	TO	STATION	EACH	LF	LS
STH 49	55+35		289+20	-	23,390	1
STH 49	94+09		94+09	1	-	-
STH 49	278+31		278+90	1	-	-
TOTAL				2	23,390	1

PAVEMENT MARKING ITEMS

PROJECT ID: 6210-00-73

				646.1020	646.1040	646.4520	646.3040	648.0100	649.0105		
				MARKING LINE				LOCATING NO-PASSING ZONES	TEMPORARY MARKING LINE PAINT 4-INCH		
				EPOXY 4- INCH YELLOW	GROOVED WET REF EPOXY 4- INCH WHITE	SAME DAY EPOXY 4-INCH YELLOW	GROOVED WET REF EPOXY 8-INCH WHITE		YELLOW	WHITE	
ROADWAY	STATION	TO	STATION	DESCRIPTION	LF	LF	LF	MI	LF	LF	
STH 49	55+35		102+50	SKIPS	1,180	-	1,180	-	-	-	
STH 49	104+00		107+50	-	-	-	300	-	-	-	
STH 49	108+00		109+50	-	-	-	-	-	-	-	
STH 49	102+50		117+50	NB SKIPS/SB SOLID	1,875	-	1,875	-	-	-	
STH 49	117+50		128+76	SKIPS	282	-	282	-	-	-	
STH 49	128+76		138+50	SB SKIPS/NB SOLID	1,218	-	1,218	-	-	-	
STH 49	138+50		141+00	SOLID	500	-	500	-	-	-	
STH 49	141+00		151+60	NB SKIPS/SB SOLID	1,325	-	1,325	-	-	-	
STH 49	151+60		166+63	SKIPS	376	-	376	-	-	-	
STH 49	166+63		176+75	SB SKIPS/NB SOLID	1,265	-	1,265	-	-	-	
STH 49	176+75		178+79	SOLID	408	-	408	-	-	-	
STH 49	178+79		189+23	NB SKIPS/SB SOLID	1,305	-	1,305	-	-	-	
STH 49	189+23		246+80	SKIPS	1,439	-	1,439	-	-	-	
STH 49	246+80		257+20	SB SKIPS/NB SOLID	1,300	-	1,300	-	-	-	
STH 49	257+20		260+93	SKIPS	93	-	93	-	-	-	
STH 49	260+93		272+50	NB SKIPS/SB SOLID	1,446	-	1,446	-	-	-	
STH 49	272+50		285+00	SKIPS	313	-	313	-	-	-	
STH 49	285+00		289+20	SB SKIPS/NB SOLID	525	-	525	-	-	-	
STH 49	55+35		289+20	-	-	46,800	-	4.43	46,800	46,800	
TOTAL					14,850	46,800	14,850	300	4.43	46,800	46,800
											93,600

TRAFFIC CONTROL

PROJECT ID: 6210-01-60

643.0900 643.0310.S 643.0300

TEMPORARY
PORTABLE RUMBLE

STRIPS (project) 02.
6210-01-60

DURATION		TRAFFIC CONTROL		
LOCATION	DAYS	SIGNS	LS	DRUMS
DAY				DAY
PROJECT	12	120	1	408
TOTAL		120	1	408

PROJECT ID: 6210-00-73

643.0900 643.0310.S 643.1000

TEMPORARY
PORTABLE RUMBLE

STRIPS (project) 01.
6210-00-73

DURATION		TRAFFIC CONTROL		
LOCATION	DAYS	SIGNS	LS	SF
DAY				
PROJECT	30	540	1	64
TOTAL		540	1	64

SIGNS

PROJECT ID: 6210-01-60

638.2102 638.4000

MOVING SIGNS
TYPE II

MOVING SMALL
SIGN SUPPORTS

STATION	SIDE	EACH	EACH
94+19	LT	2	1
95+25	RT	2	1
279+24	LT	1	1
279+26	RT	1	1
TOTAL		6	4

SAWING ASPHALT

PROJECT ID: 6210-01-60

690.0150

SAWING
ASPHALT

ROADWAY	STATION	LF
STH 49	93+59	30
STH 49	94+59	30
STH 49	277+81	30
STH 49	279+40	30
TOTAL		120

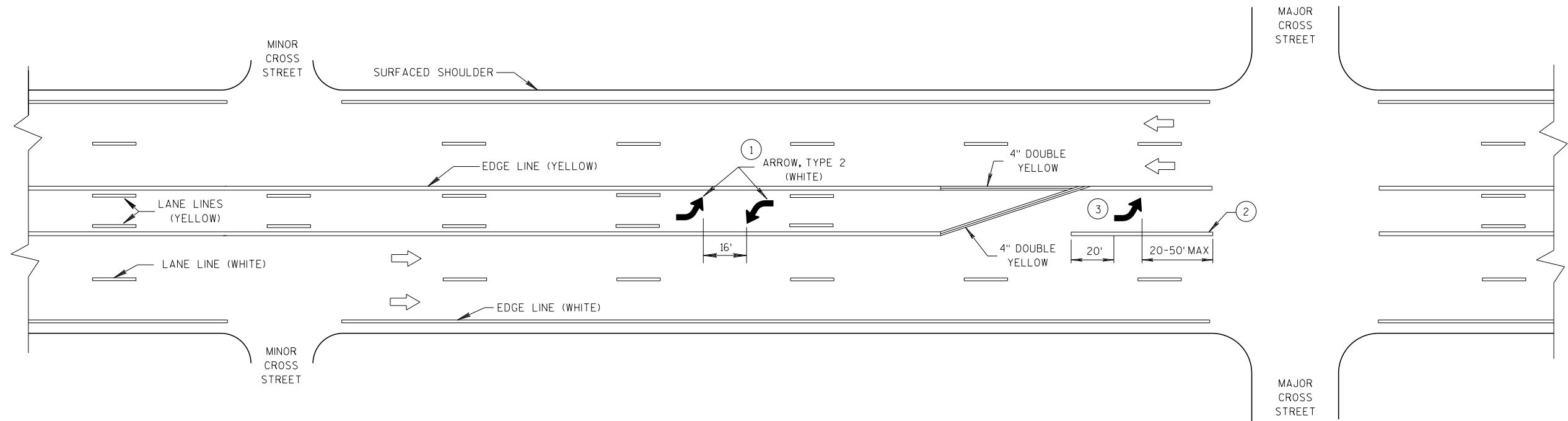
Standard Detail Drawing List

08E09-06	SILT FENCE
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
13A11-03A	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
13A11-03B	2-LANE RURAL CENTER LINE RUMBLE STRIP, MILLING
14B29-01	SAFETY EDGE
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15C04-05	TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC
15C08-19A	LONGITUDINAL MARKING (MAINLINE)
15C08-19B	PAVEMENT MARKING (TURN LANES)
15C08-19C	PAVEMENT MARKING (TURN LANES)
15C11-07B	CHANNELIZING DEVICES DRUMS, CONES, BARRICADES AND VERTICAL PANELS
15C12-06	TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION
15C19-05A	MOVING PAVEMENT MARKING OPERATION TWO-LANE TWO-WAY ROADWAY
15C35-03A	PAVEMENT MARKING (INTERSECTIONS)
15D28-03	TRAFFIC CONTROL, WORK ON SHOULDER OR PARKING LANE, UNDIVIDED ROADWAY
15D38-02A	TEMPORARY TRAFFIC CONTROL SIGN MOUNTING
15D38-02B	ATTACHMENT OF SIGNS TO POSTS
15D39-02	TRAFFIC CONTROL, DROP-OFF SIGNING

GENERAL NOTES

- 1 A SET OF ARROWS IS REQUIRED EVERY 400 FEET OR NEAR INTERSECTIONS OR DRIVEWAYS WITH TURNING TRAFFIC.
- 2 8" WHITE
- 3 TURN BAY LENGTH OF LESS THAN 48'DOES NOT REQUIRE PAVEMENT ARROWS OR TEXT

DIRECTION OF TRAFFIC



TWO WAY LEFT TURN LANE

PAVEMENT MARKING
(TURN LANES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

Notes

