PROJECT ID: 4580-11-60

WITH:

COUNTY: CALUMET

ORDER OF SHEETS

TOTAL SHEETS =

N

DESIGN DESIGNATION 4580-11-30

A.A.D.T.	2019	= 4,200
A.A.D.T.	2039	= 5,100
D.H.V.		= 570
D.D.		= 60/40
T.		= 10.6%
DESIGN SPEED		= 55 MPH
ESALS		= 1,100,000

CONVENTIONAL SYMBOLS

PLAN
- CORPORATE LIMITS
- PROPERTY LINE
- LOT LINE
- LIMITED HIGHWAY EASEMENT
- EXISTING RIGHT OF WAY
- PROPOSED OR NEW R/W LINE
- SLOPE INTERCEPT
- REFERENCE LINE (300'EB')
- EXISTING CULVERT
- PROPOSED CULVERT (Box or Pipe)
- COMBUSTIBLE FLUIDS (CAUTION)
- MARSH AREA
- WOODED OR SHRUB AREA

PROFILE
- GRADE LINE
- ORIGINAL GROUND
- MARSH OR ROCK PROFILE (To be noted as such) (ROCK)
- SPECIAL DITCH (LABEL)
- GRADE ELEVATION (95.36)
- CULVERT (Profile View)

UTILITIES
- ELECTRIC (E)
- FIBER OPTIC (FO)
- GAS (G)
- SANITARY SEWER (SAN)
- STORM SEWER (SS)
- TELEPHONE (T)
- WATER (W)
- UTILITY PEDESTAL
- POWER POLE
- TELEPHONE POLE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

SHERWOOD - HILBERT

STH 55 - STH 32

STH 114

CALUMET

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
4580-11-60		

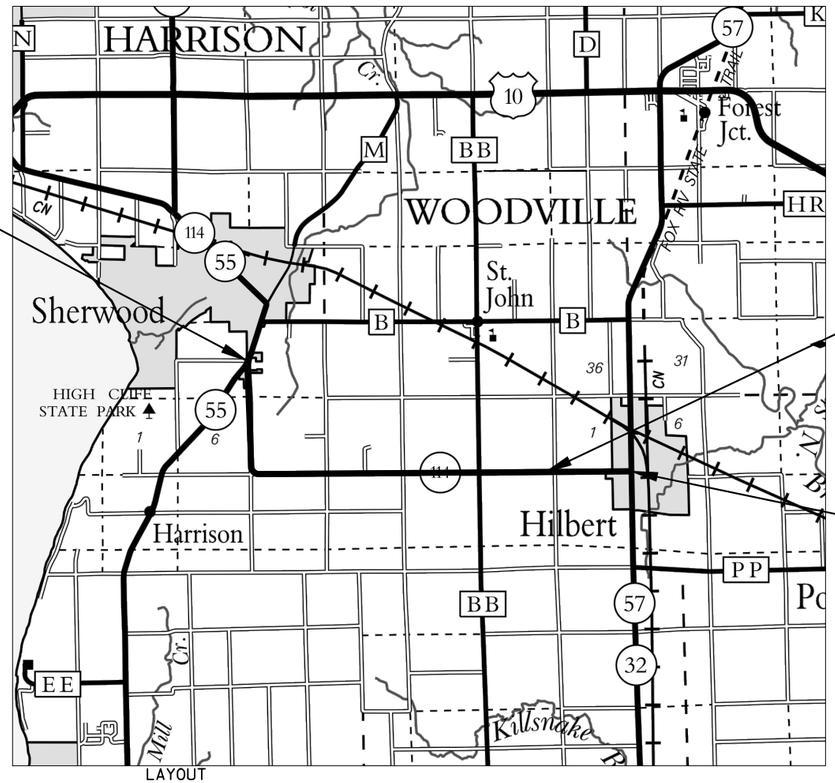
TRANS 220 PROJECT PLAN FOR DESIGN OF UTILITY FACILITY ALTERATIONS OR RELOCATIONS

Date: 03/20/2018

TRANS 220 PROJECT PLANS FOR DESIGN OF UTILITY ALTERATIONS OR RELOCATIONS

STATE PROJECT NUMBER
4580-11-60

R-18-E | R-19-E | R-19-E | R-20-E



BEGIN PROJECT
STA. 6+12.10

EXCEPTION TO NET ℄ LENGTH
STA. 287+15
STRUCTURE B-8-119

END PROJECT
STA. 342+17.55

TOTAL NET LENGTH OF CENTERLINE = 6.5 MILES

HORIZONTAL POSITIONS SHOWN ON THIS PLAN ARE WISCONSIN COUNTY COORDINATES, COUNTY COUNTY, NAD83 (YEAR), IN U.S. SURVEY FEET. VALUES ARE GRID COORDINATES, GRID BEARINGS, AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY

Surveyor	SURVEYOR
Designer	JOSH LANG
Project Manager	TIM VERHAGEN
Regional Examiner	REGIONAL EXAMINER
Regional Supervisor	CHAD DEGRAVE

APPROVED FOR THE DEPARTMENT

DATE: _____ _____ (Signature)

PRE_1

E

GENERAL NOTES

LOCATIONS OF EXISTING AND PROPOSED UTILITY FACILITIES AS SHOWN ON THE PLAN ARE APPROXIMATE. THERE MAY BE OTHER UTILITIES WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

THIS PROJECT WILL INCLUDE CENTER AND EDGELINE RUMBLE STRIPS AND TYPE II SIGN REPLACEMENT.

ORDER OF SECTION 2 DETAIL SHEETS

UTILITY CONTACTS

ANR PIPELINE COMPANY
LAWRENCE HUBER
ANR PIPELINE CO-GAS/PETROLEUM
W3925 PIPELINE LN
EDEN, WI 53019
920-477-2235
lawrence_huber@transcanada.com

AMERICAN TRANSMISSION COMPANY, LLC
MIKE OLSEN
ATC MANAGEMENT, INC.
801 O'Keefe Rd, P.O. BOX 6113
DE PERE, WI 54115
920-338-6582
molsen@atcllc.com

CHARTER SPECTRUM COMMUNICATIONS
VINCENT ALBIN
CHARTER SPECTRUM
3520 E DESTINATION DR
APPLETON, WI 54915
920-831-9249
vince.albin@twcable.com

FRONTIER NORTH INC.
RUSS RYAN
FRONTIER NORTH INC.
107 PLEASANTVIEW DR
PLYMOUTH, WI 53073
920-893-7212
Russell.w.ryan@ftr.com

GUARDIAN PIPELINE
VICTOR DUFOUR
GUARDIAN PIPLINE-GAS/PETROLEUM
23823 W AMOCO RD
CHANNAHON, IL 60410
815-467-4633
victor.dufour@oneok.com

TDS TELECOM
STEVE JAKUBIEC
STOCKBRIDGE & SHERWOOD TELEPHONE COMPANY
10 COLLEGE AVE
APPLETON, WI 54911
920-882-4166
steve.jakubiec@dstelecom.com

VILLAGE OF HILBERT-SEWER
DENNIS DUPREY
PUBLIC WORKS/WATER DEPARTMENT
26 N. 6TH ST, P.O. BOX 266
HILBERT, WI 54129
920-853-3241
hilbertdpw@bugnet.net

VILLAGE OF HILBERT-WATER
DENNIS DUPREY
PUBLIC WORKS/WATER DEPARTMENT
26 N. 6TH ST, P.O. BOX 266
HILBERT, WI 54129
920-853-3241
hilbertdpw@bugnet.net

VILLAGE OF SHERWOOD-SEWER
BRUCE GENSKOW
VILLAGE OF SHERWOOD-SEWER
W482 CLIFTON RD
SHERWOOD, WI 54169
920-989-4096
Sherwoodutility@tds.net

VILLAGE OF SHERWOOD-WATER
BRUCE GENSKOW
VILLAGE OF SHERWOOD-WATER
W482 CLIFTON RD
SHERWOOD, WI 54169
920-989-4096
Sherwoodutility@tds.net

WE ENERGIES-ELECTRIC
LATROY BRUMFIELD
WISCONSIN ELECTRIC POWER COMPANY
333 W EVERETT ST, RM A299
MILWAUKEE, WI 53203
414-221-5617
LaTroy.Brumfield@we-energies.com

WE ENERGIES-GAS
LATROY BRUMFIELD
WISCONSIN ELECTRIC POWER COMPANY
333 W EVERETT ST, RM A299
MILWAUKEE, WI 53203
414-221-5617
LaTroy.Brumfield@we-energies.com

DIGGERS HOTLINE
Dial 811 or (800)242-8511
www.DiggersHotline.com

DNR LIASION

MATT SCHAEVE
DEPARTMENT OF NATURAL RESOURCES
NORTHEAST REGION
2984 SHAWANO AVE
GREEN BAY, WI 54313
(920)366-1544
matthew.schaeve@wisconsin.gov

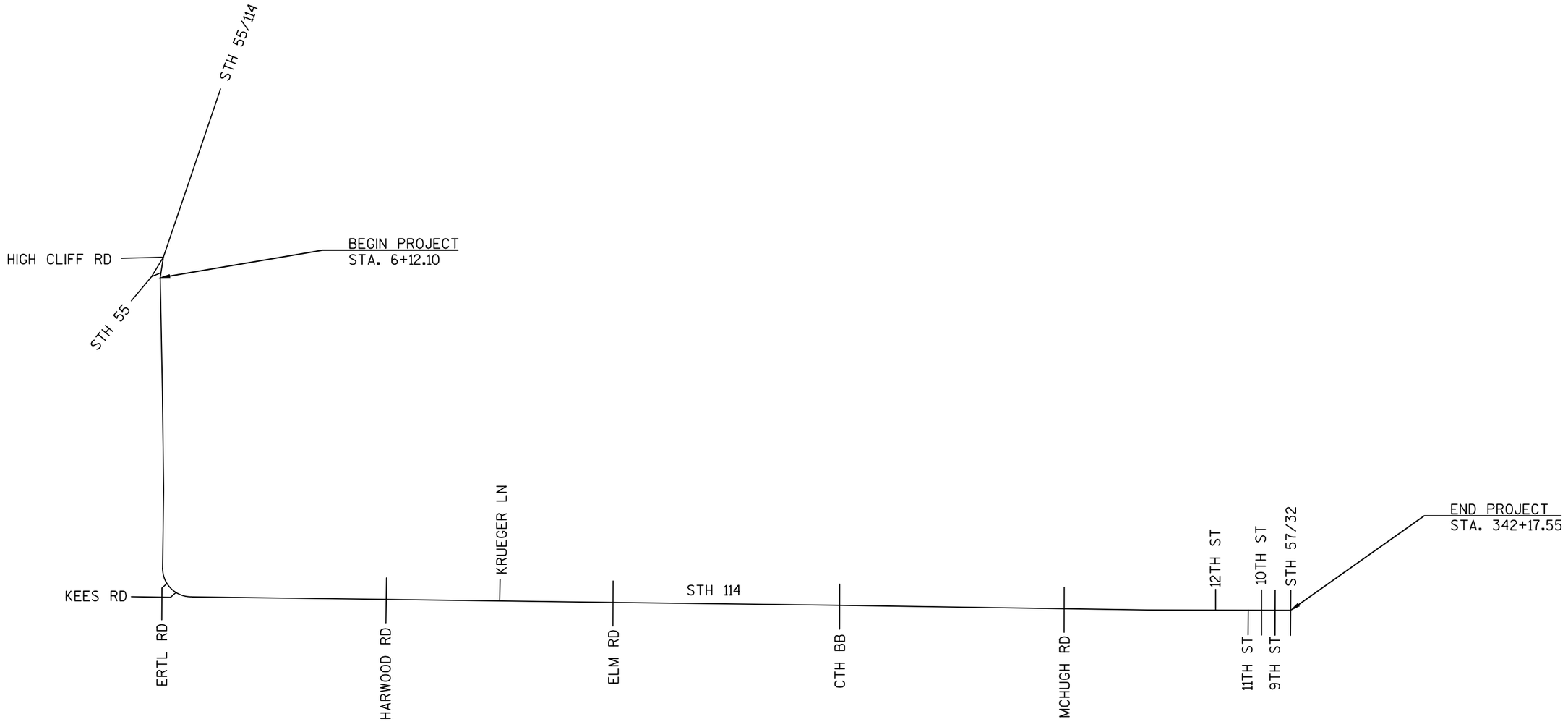
CALUMET COUNTY COMMISSIONER

BRIAN GLAESER
HIGHWAY COMMISSIONER
241 E. CHESTNUT ST.
CHILTON, WI 53014
(920)849-1434
glaeser.brian@co.calumet.wi.us

NE REGION SURVEY COORDINATOR

CORMAC MCINNIS, RLS
944 VANDERPERREN WAY
GREEN BAY, WI 54304
(920)492-5638
cormac.mcinnis@dot.wi.gov

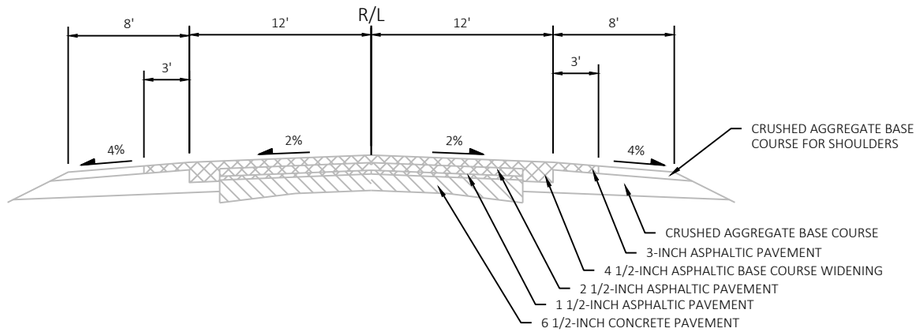
2



PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	PROJECT OVERVIEW	SHEET E

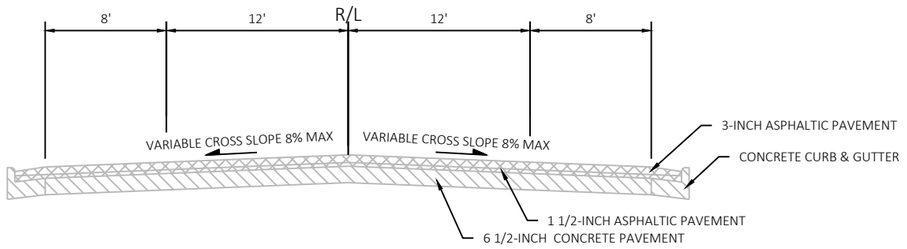
PRE_3

2



EXISTING TYPICAL SECTION FOR STH 114

STA 6+12 TO STA 73+14
STA 83+52 TO STA 102+38
STA 127+32 TO STA 236+61
STA 236+94 TO STA 328+33



EXISTING TYPICAL SECTION FOR STH 114

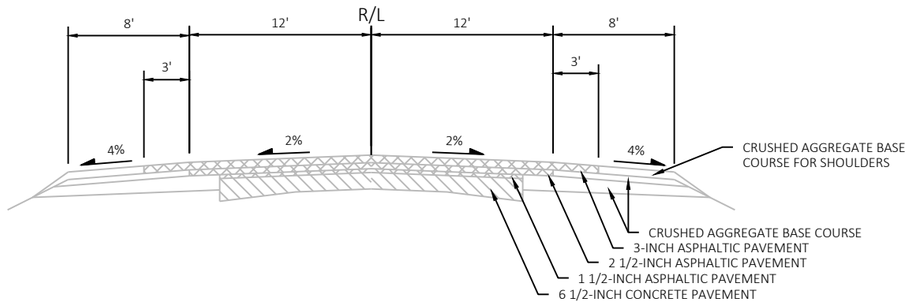
STA 73+14 TO STA 83+52

PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	PLAN: TYPICAL SECTIONS	SHEET E

FILE NAME : N:\PDS\C3D\45801130\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - 020301-ts
PLOT DATE : 3/1/2018 11:26 AM
PLOT BY : MAATTA, TRAVIS SHANE
PLOT NAME :
PLOT SCALE : 1 IN:10 FT

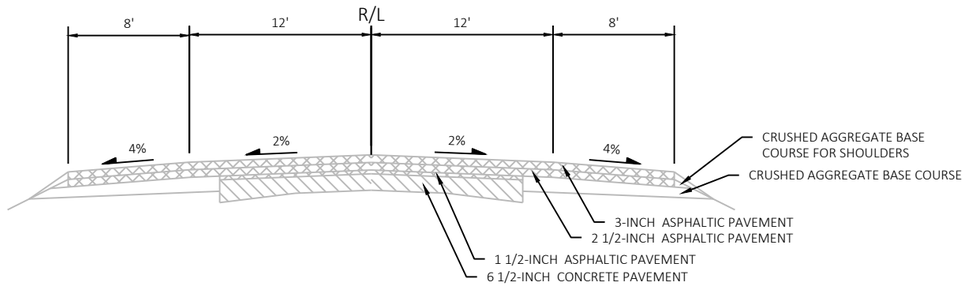
PRE_4

2



EXISTING TYPICAL SECTION FOR STH 114

STA 102+38 TO STA 127+32
STA 236+61 TO STA 236+94

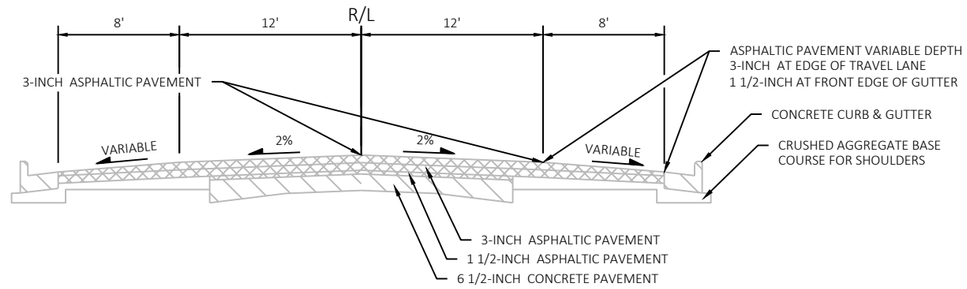


EXISTING TYPICAL SECTION FOR STH 114

STA 328+33 TO STA 338+83

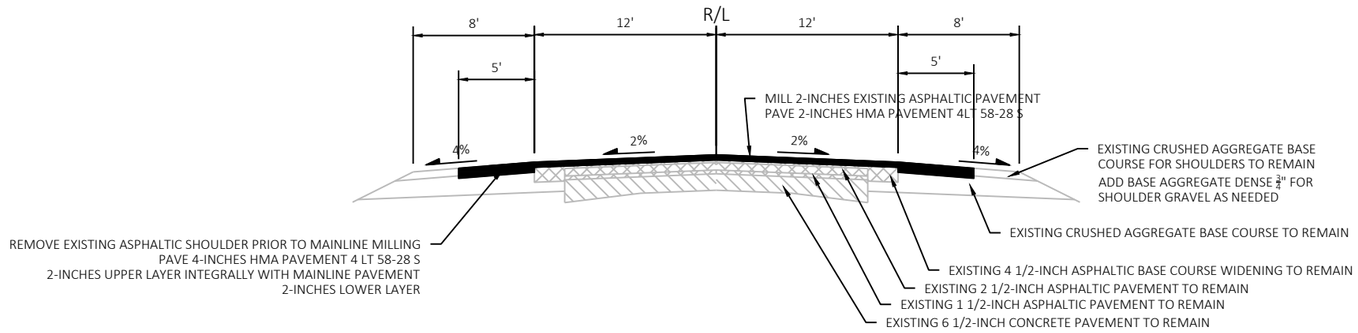
PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	PLAN: TYPICAL SECTIONS	SHEET E

2



EXISTING TYPICAL SECTION FOR STH 114

STA 338+83 TO STA 342+18



FINISHED TYPICAL SECTION FOR STH 114

STA 6+12 TO STA 73+14
STA 83+52 TO STA 102+38
STA 127+32 TO STA 236+61
STA 236+94 TO STA 328+33

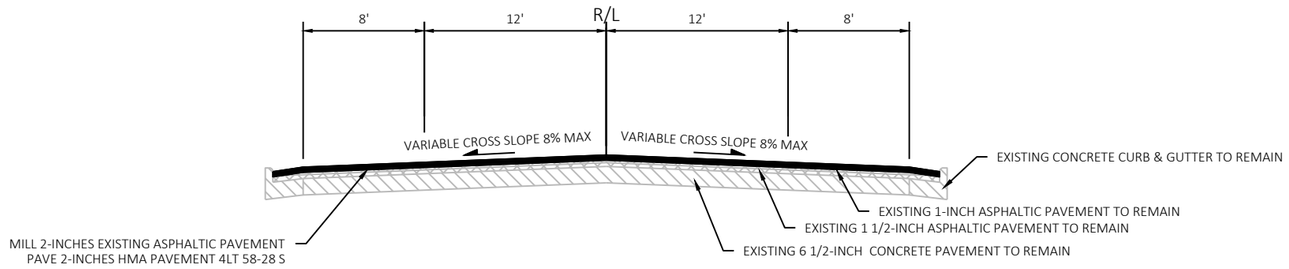
PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	PLAN: TYPICAL SECTIONS	SHEET E

PRE_6

FILE NAME : N:\PDS\C3D\45801130\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - 020303-ts

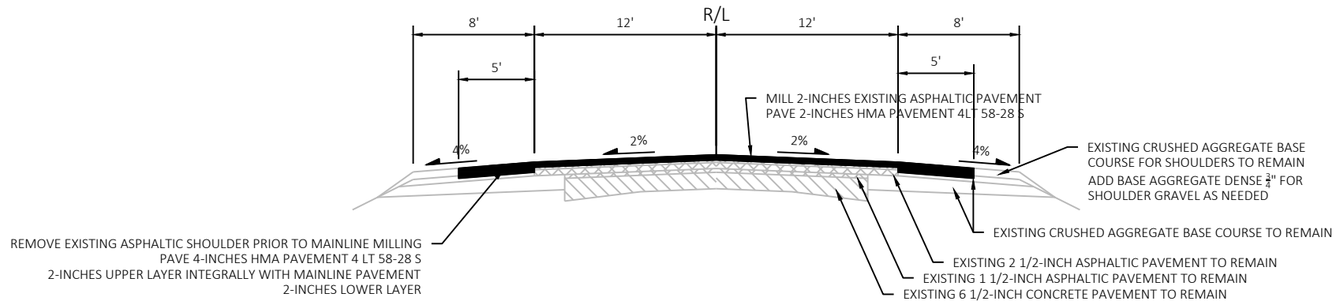
PLOT DATE : 3/1/2018 11:26 AM PLOT BY : MAATTA, TRAVIS SHANE PLOT NAME : PLOT SCALE : 1 IN:10 FT

2



FINISHED TYPICAL SECTION FOR STH 114

STA 73+14 TO STA 83+52

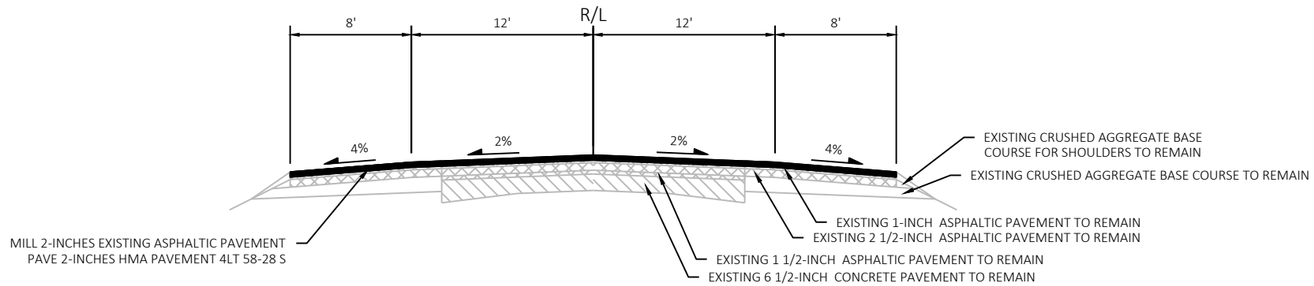


FINISHED TYPICAL SECTION FOR STH 114

STA 102+38 TO STA 127+32
STA 236+61 TO STA 236+94

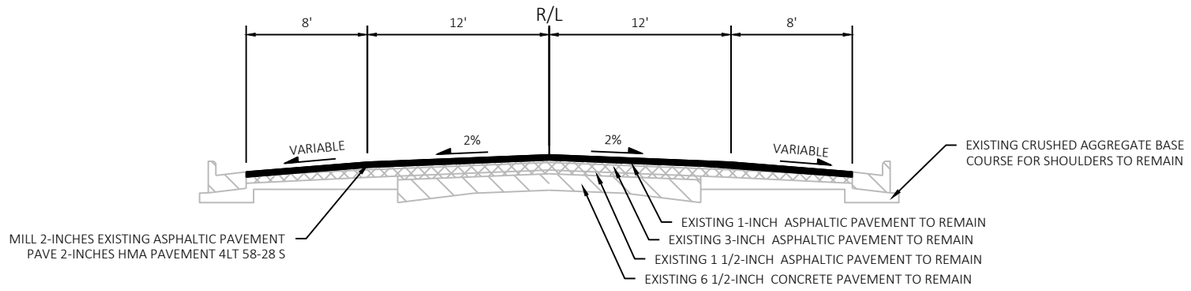
PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	PLAN: TYPICAL SECTIONS	SHEET E

2



FINISHED TYPICAL SECTION FOR STH 114

STA 328+33 TO STA 338+83

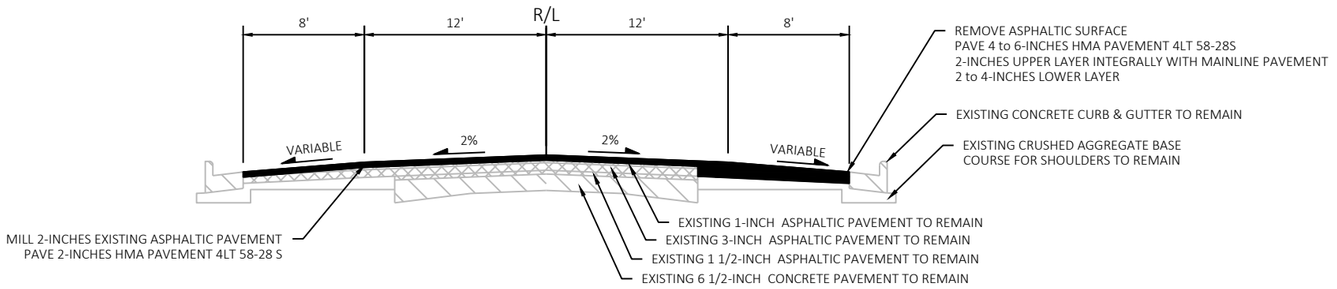


FINISHED TYPICAL SECTION FOR STH 114

STA 338+83 TO STA 339+38

PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	PLAN: TYPICAL SECTIONS	SHEET E

2



FINISHED TYPICAL SECTION FOR STH 114

STA 339+38 TO STA 342+18

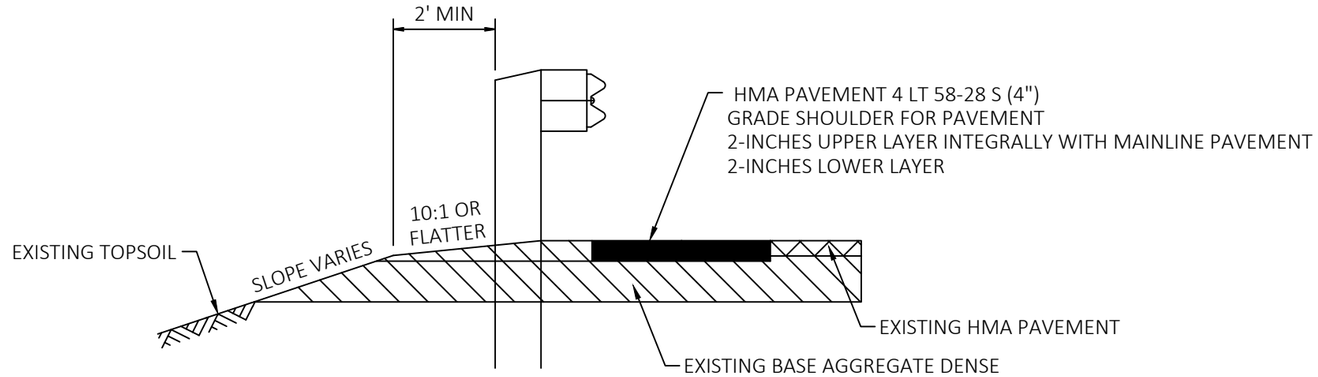
PROJECT NO: 4580-11-30	HWY: 114	COUNTY: CALUMET	PLAN: TYPICAL SECTION	SHEET E

FILE NAME : N:\PDS\C3D\45801130\SHEETSPLAN\020301-TS.DWG
LAYOUT NAME - 020306-ts

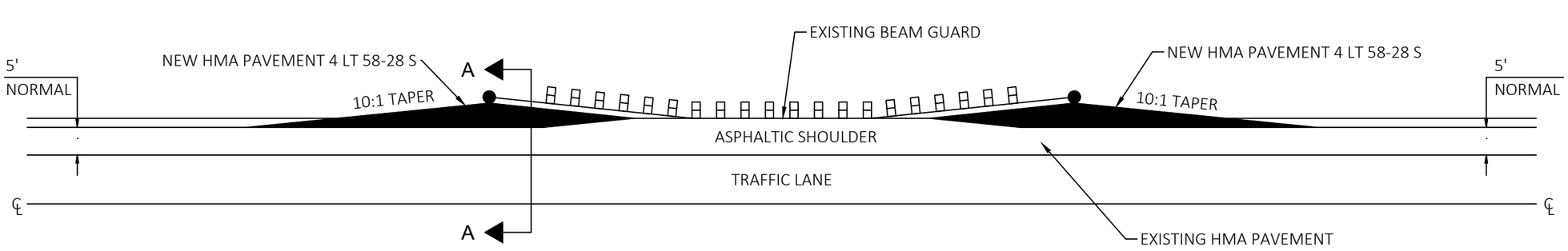
PLOT DATE : 3/1/2018 11:26 AM PLOT BY : MAATTA, TRAVIS SHANE PLOT NAME : PLOT SCALE : 1 IN:10 FT

PRE_9

2



SECTION A-A



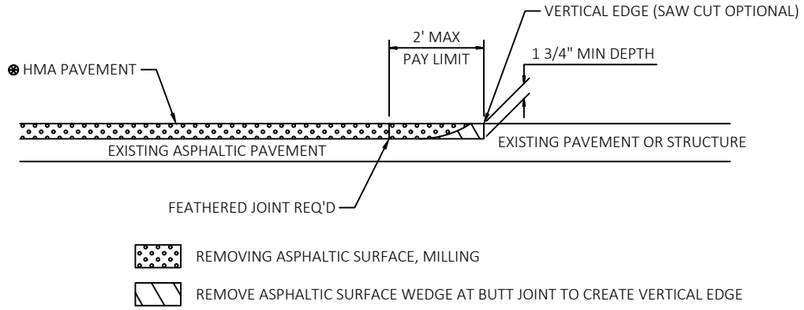
DETAIL FOR ASPHALTIC SHOULDER AT BEAM GUARD

PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	PLAN: CONSTRUCTION DETAIL	SHEET E

FILE NAME : N:\PDS\C3D\45801130\SHEETSPLAN\021001-CD.DWG
LAYOUT NAME - 01

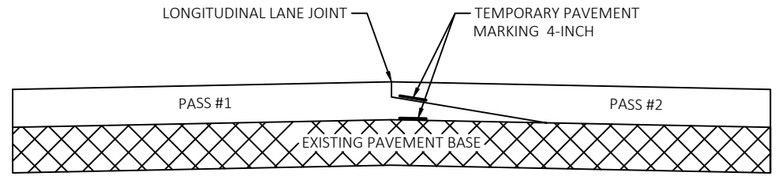
PLOT DATE : 3/1/2018 11:30 AM PLOT BY : MAATTA, TRAVIS SHANE PLOT NAME : PLOT SCALE : 1 IN:10 FT

PRE_10

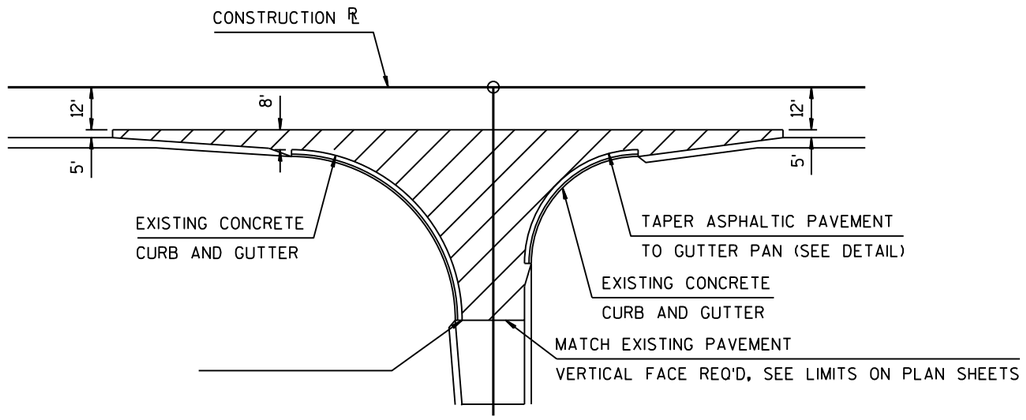


HMA PAVEMENT — SEE TYPICAL CROSS SECTION FOR PAVEMENT TYPE AND THICKNESS OF INDIVIDUAL LAYERS

BUTT JOINT DETAIL FOR ASPHALTIC PAVEMENTS (NO PROFILE CHANGE)

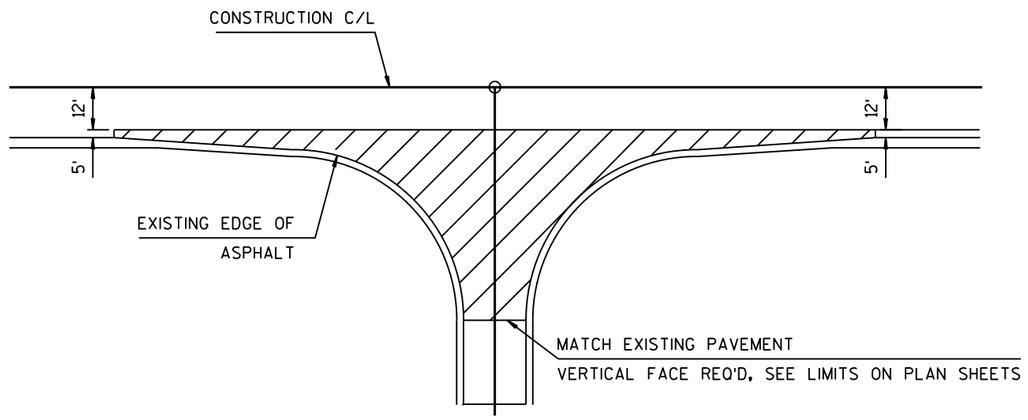


PAVEMENT MARKING DETAIL FOR TAPERED OVERLAPPING JOINTS IN HMA PAVEMENTS



SIDE ROAD CONSTRUCTION LIMITS

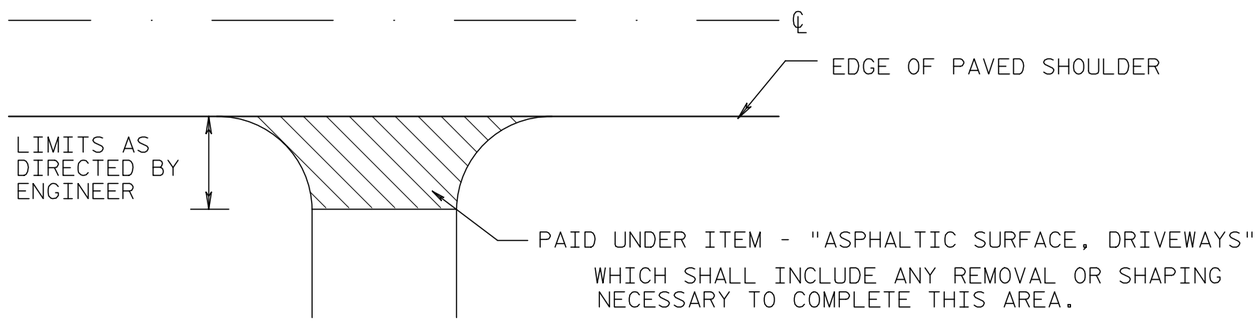
EXISTING CURB AND GUTTER RETURNS



SIDE ROAD CONSTRUCTION LIMITS

EXISTING AGGREGATE SHOULDER RETURNS

2



ANY ADDITIONAL BASE AGG. DENSE REQ'D. SHALL BE PAID
UNDER ITEM - "BASE AGGREGATE DENSE 1 14/-INCH"

RURAL DRIVEWAY DETAIL - ASPHALT

PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	PLAN: CONSTRUCTION DETAIL	SHEET E

FILE NAME : N:\PDS\C3D\45801130\SHEETSPLAN\021001-CD.DWG
LAYOUT NAME - 03
PLOT DATE : 3/1/2018 11:30 AM
PLOT BY : MAATTA, TRAVIS SHANE
PLOT NAME :
PLOT SCALE : 1 IN:10 FT

BEGIN PROJECT 4580-11-60
STA 6+12.10
N: 525689.351
E: 864665.185

VERTICAL FACE REQUIRED
BEGIN MILL 2", PAVE 2"

GRAVEL DRIVEWAY

SAW CUT

ASPHALT DRIVEWAY

STH 114

ASPHALT DRIVEWAY

REMOVE EXISTING ASPHALTIC SHOULDER GRADE SHOULDER AND PLACE 5-FOOT WIDE ASPHALTIC SHOULDER 4-INCH DEPTH IN TWO LAYERS, TOP LAYER INTEGRAL TO MAINLINE PAVEMENT (SEE TYPICAL SECTIONS)

ADD BASE AGGREGATE DENSE $\frac{3}{4}$" SHOULDER GRAVEL AS NEEDED

ASPHALT DRIVEWAY

ADJUST BEAM GUARD
RT STA 15+35 - 17+39, STA 18+13 - 18+51
LT STA 15+93 - 18+36
REPAIR AND REPLACE BEAM GUARD POSTS, RAIL, AND OTHER HARDWARE AS NEEDED

GRAVEL DRIVEWAY

EXISTING 8-FOOT WIDE ASPHALT SHOULDER TO REMAIN; MILL 2", PAVE 2"

WIDEN ASPHALTIC SHOULDER AT BEAM GUARD TERMINALS (SEE CONSTRUCTION DETAIL)

ASPHALT DRIVEWAY

20+87.10

35+62.10

GRAVEL DRIVEWAY

ASPHALT DRIVEWAY

PC: 25+51.41

ADJUST BEAMGUARD
RT STA 27+71 - 30+38
LT STA 27+91 - 29+18, STA 30+80 - 31+07
REPAIR AND REPLACE BEAM GUARD POSTS, RAIL, AND OTHER HARDWARE AS NEEDED

PT: 30+40.34

STH 114

SAW CUT

EXISTING 8-FOOT WIDE ASPHALT SHOULDER TO REMAIN; MILL 2", PAVE 2"

GRAVEL DRIVEWAY

REMOVE EXISTING ASPHALTIC SHOULDER GRADE SHOULDER AND PLACE 5-FOOT WIDE ASPHALTIC SHOULDER 4-INCH DEPTH IN TWO LAYERS, TOP LAYER INTEGRAL TO MAINLINE PAVEMENT (SEE TYPICAL SECTIONS)

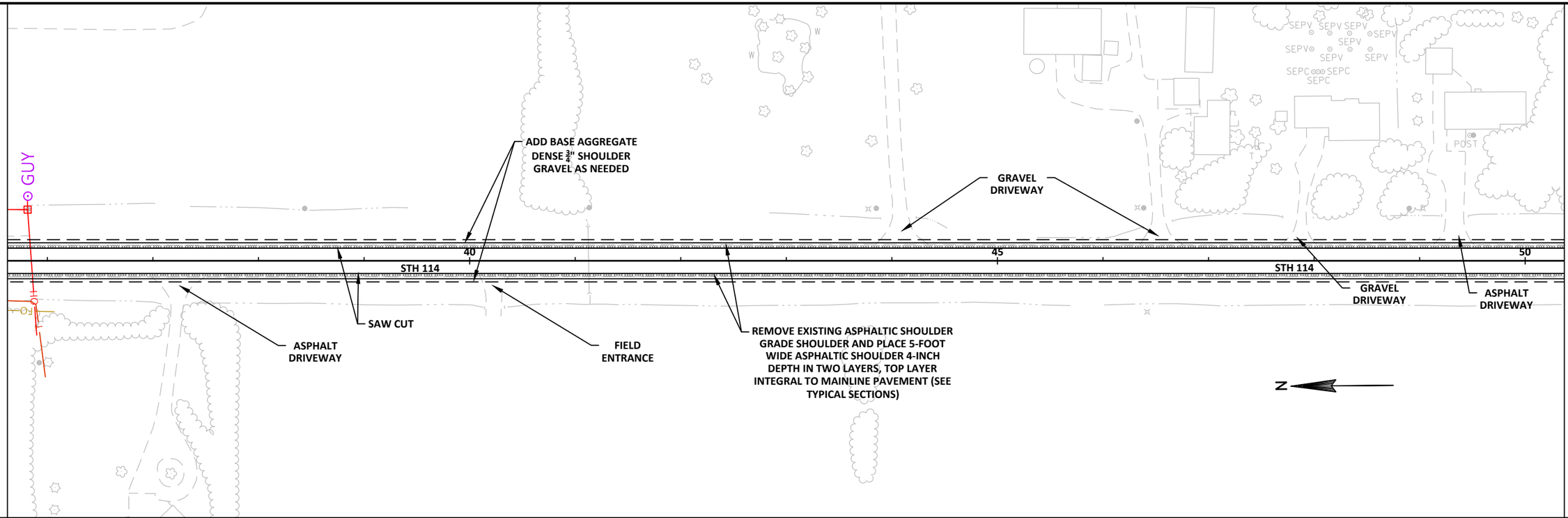
WIDEN ASPHALTIC SHOULDER AT BEAM GUARD TERMINALS (SEE CONSTRUCTION DETAIL)

PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	PLAN	SHEET E

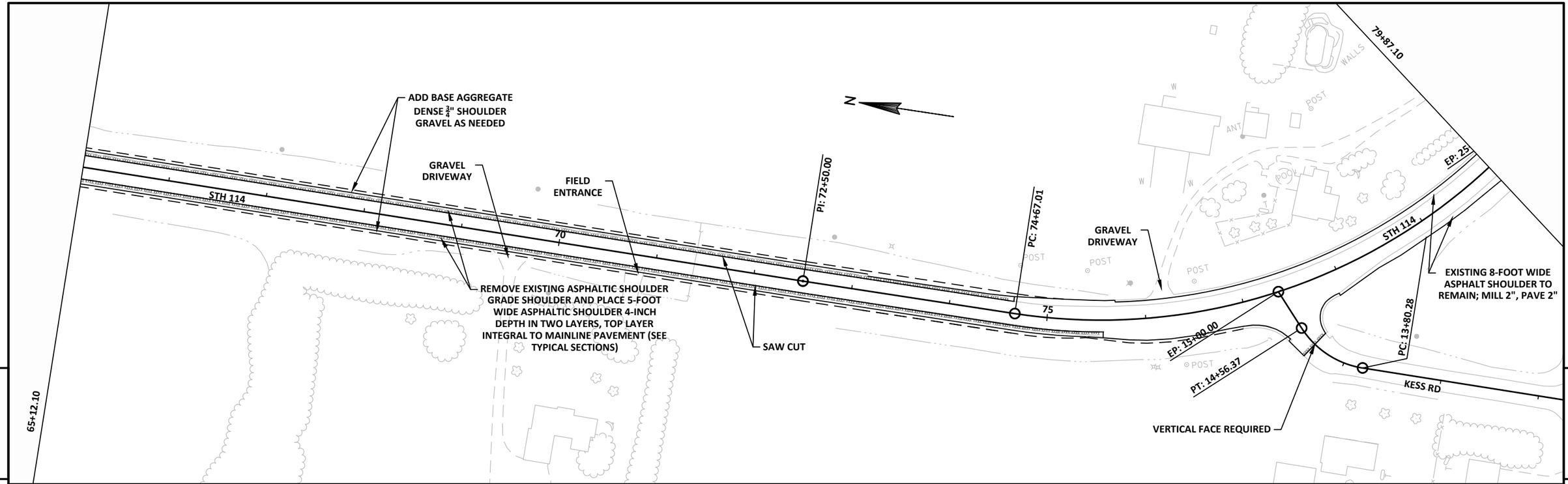
PRE_13

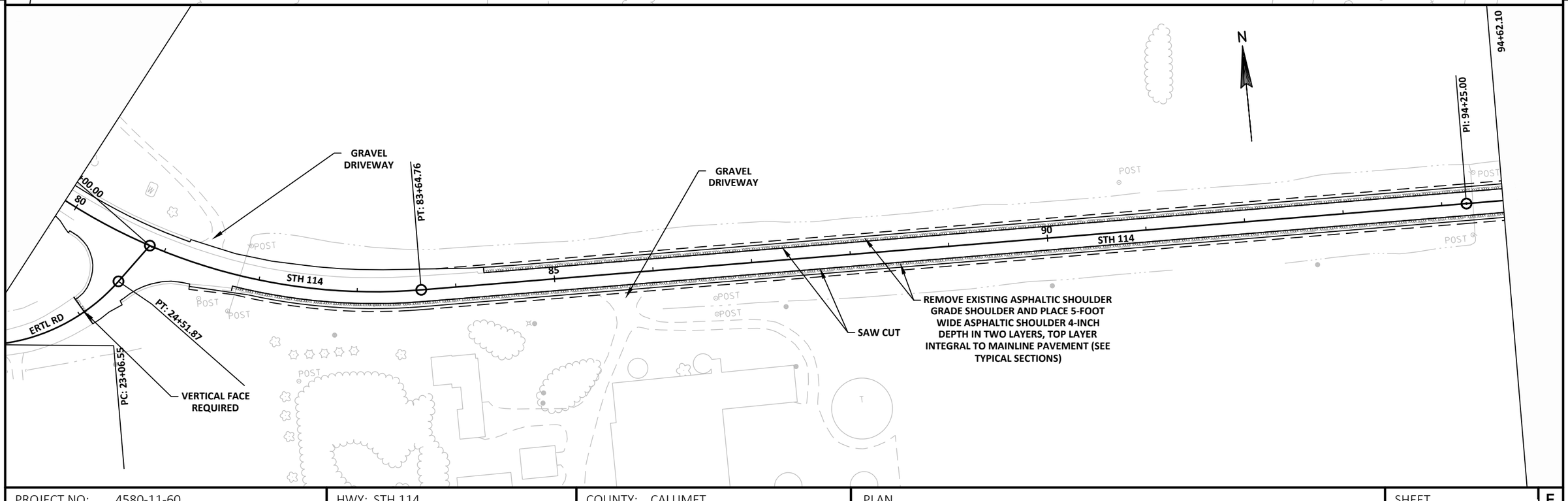
FILE NAME : N:\PDS\C3D\45801130\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 01

PLOT DATE : 3/15/2018 8:27 AM PLOT BY : LANG, JOSHUA J PLOT NAME : PLOT SCALE : ##########



PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	PLAN	SHEET E





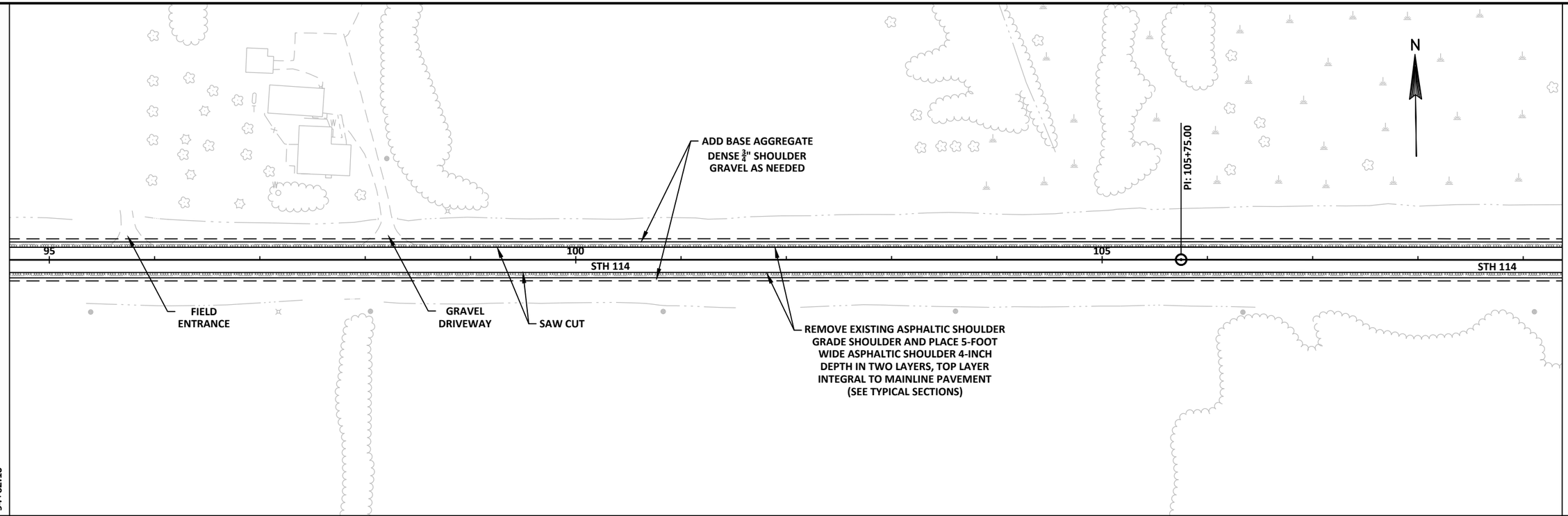
PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	PLAN	SHEET E

FILE NAME : N:\PDS\C3D\45801130\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 03

PLOT DATE : 3/15/2018 8:28 AM PLOT BY : LANG, JOSHUA J PLOT NAME : PLOT SCALE : ##########

94+62.10

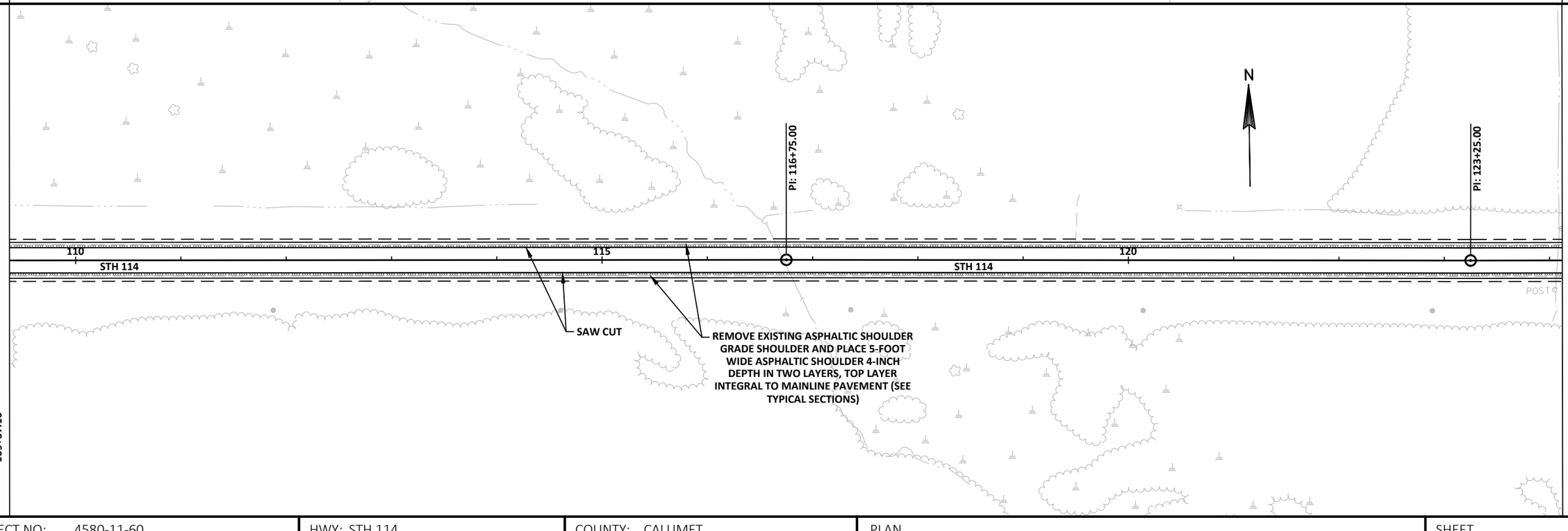
109+37.10



5

109+37.10

124+12.10

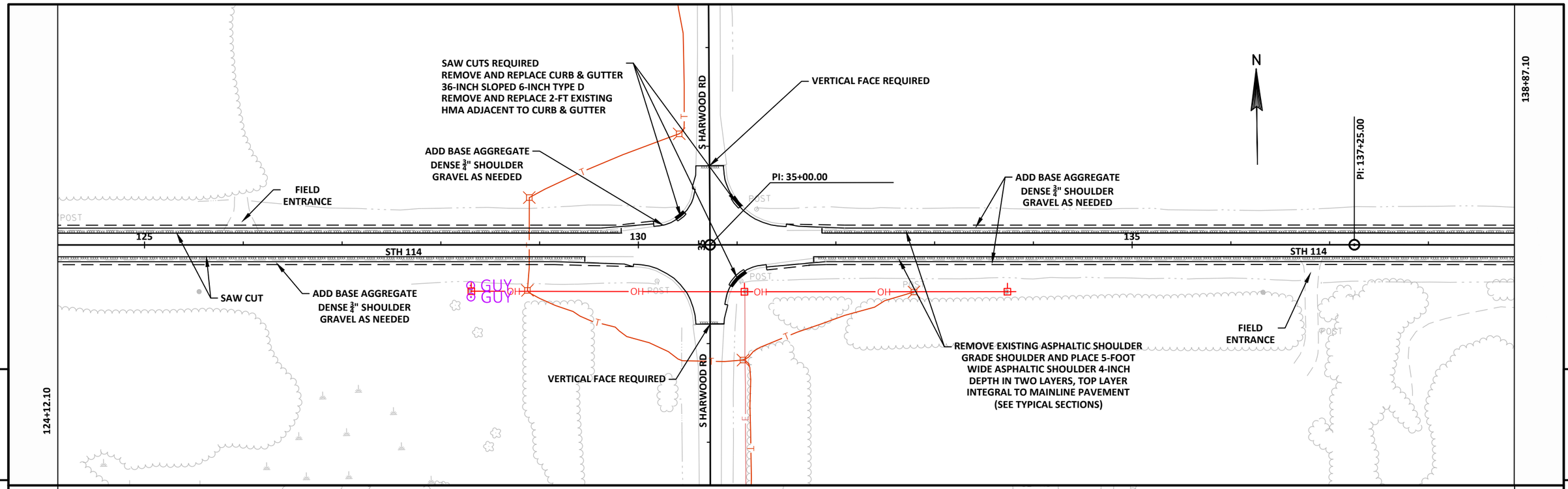


PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	PLAN	SHEET E

PRE_16

FILE NAME : N:\PDS\C3D\45801130\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 04

PLOT DATE : 3/15/2018 8:28 AM PLOT BY : LANG, JOSHUA J PLOT NAME : PLOT SCALE : ##########



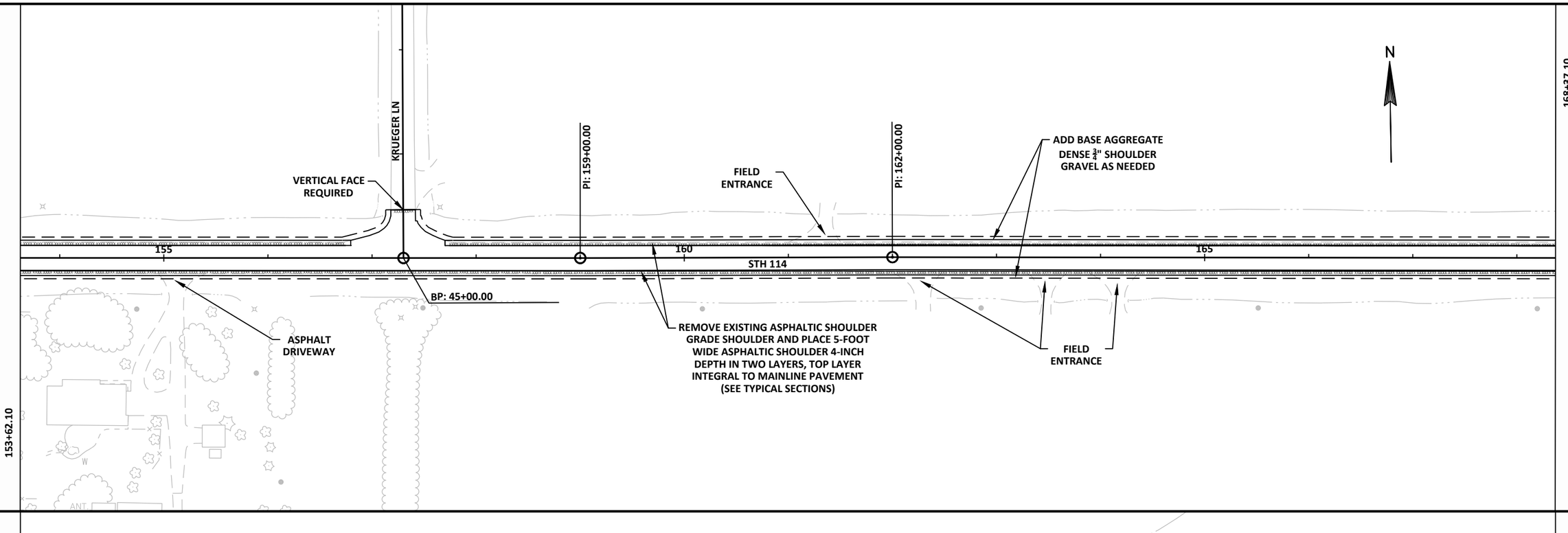
PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	PLAN	SHEET E

FILE NAME : N:\PDS\C3D\45801130\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 05

PLOT DATE : 3/15/2018 8:28 AM PLOT BY : LANG, JOSHUA J PLOT NAME : PLOT SCALE : ##########

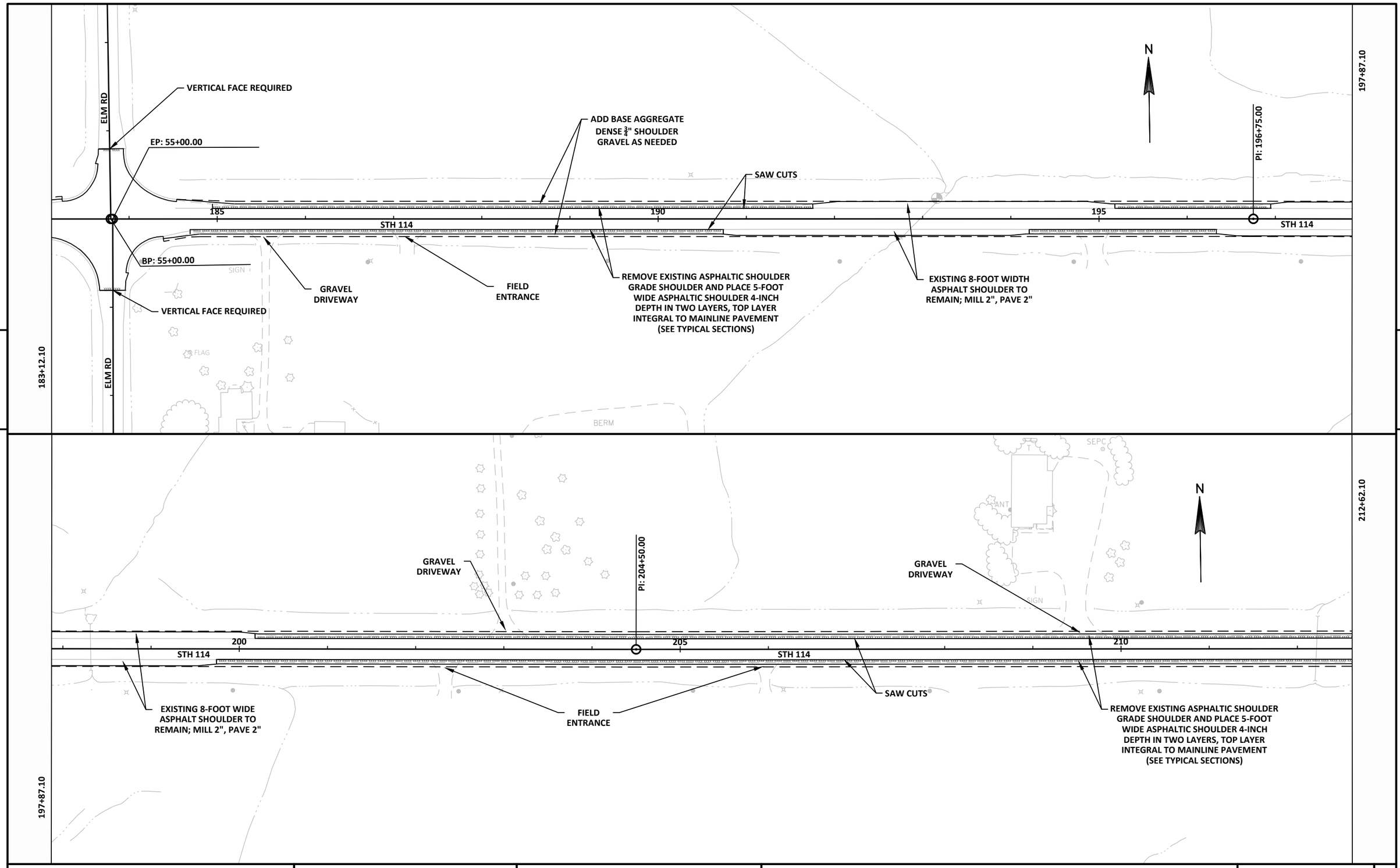
PRE_17

WISDOT/CADDS SHEET 44



5

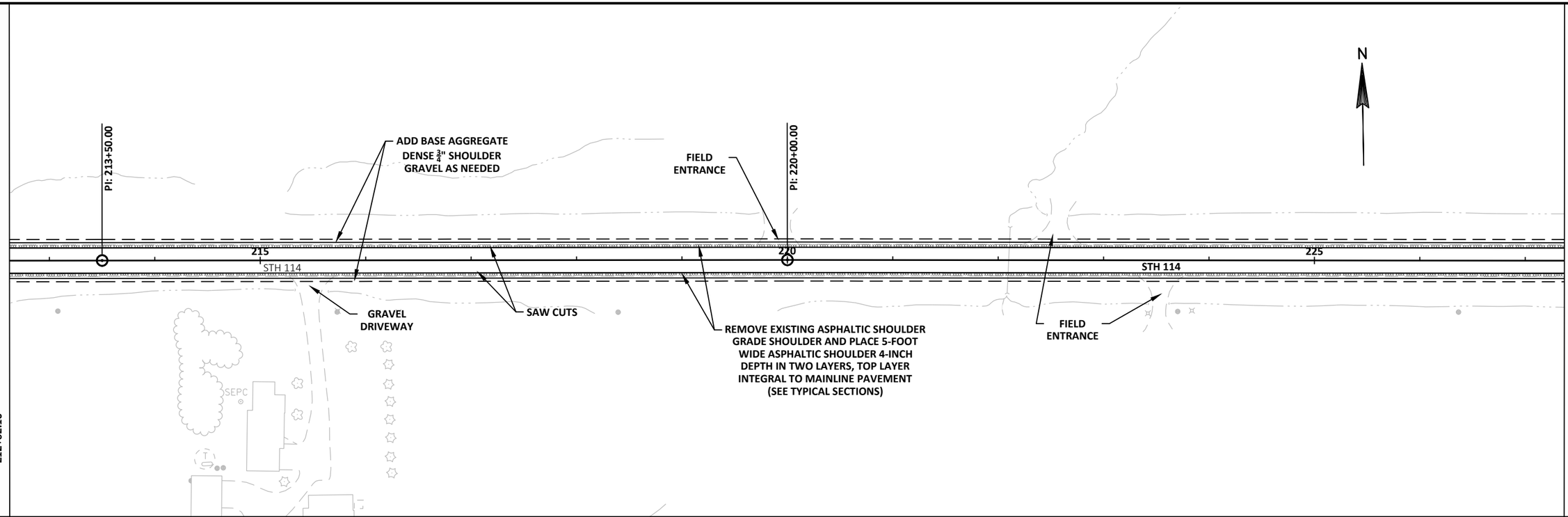
PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	PLAN	SHEET	E



5

5

PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	PLAN	SHEET E



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PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	PLAN	SHEET E

FILE NAME : N:\PDS\C3D\45801130\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 08
PLOT DATE : 3/15/2018 8:29 AM
PLOT BY : LANG, JOSHUA J
PLOT NAME :
PLOT SCALE : ##########
PRE_20
WISDOT/CADDS SHEET 44

242+12.10

256+87.10

PI: 247+50.00

ADD BASE AGGREGATE DENSE $\frac{3}{4}$" SHOULDER GRAVEL AS NEEDED

N

POST

I SIGN

245 250 255

STH 114 STH 114

SAW CUTS

REMOVE EXISTING ASPHALTIC SHOULDER GRADE SHOULDER AND PLACE 5-FOOT WIDE ASPHALTIC SHOULDER 4-INCH DEPTH IN TWO LAYERS, TOP LAYER INTEGRAL TO MAINLINE PAVEMENT (SEE TYPICAL SECTIONS)

FIELD ENTRANCE

5

256+87.10

271+62.10

N

FIELD ENTRANCE

FIELD ENTRANCE

260 265 270

STH 114 STH 114

SAW CUTS

REMOVE EXISTING ASPHALTIC SHOULDER GRADE SHOULDER AND PLACE 5-FOOT WIDE ASPHALTIC SHOULDER 4-INCH DEPTH IN TWO LAYERS, TOP LAYER INTEGRAL TO MAINLINE PAVEMENT (SEE TYPICAL SECTIONS)

GRAVEL DRIVEWAY

POST POST

BERM

TANKS

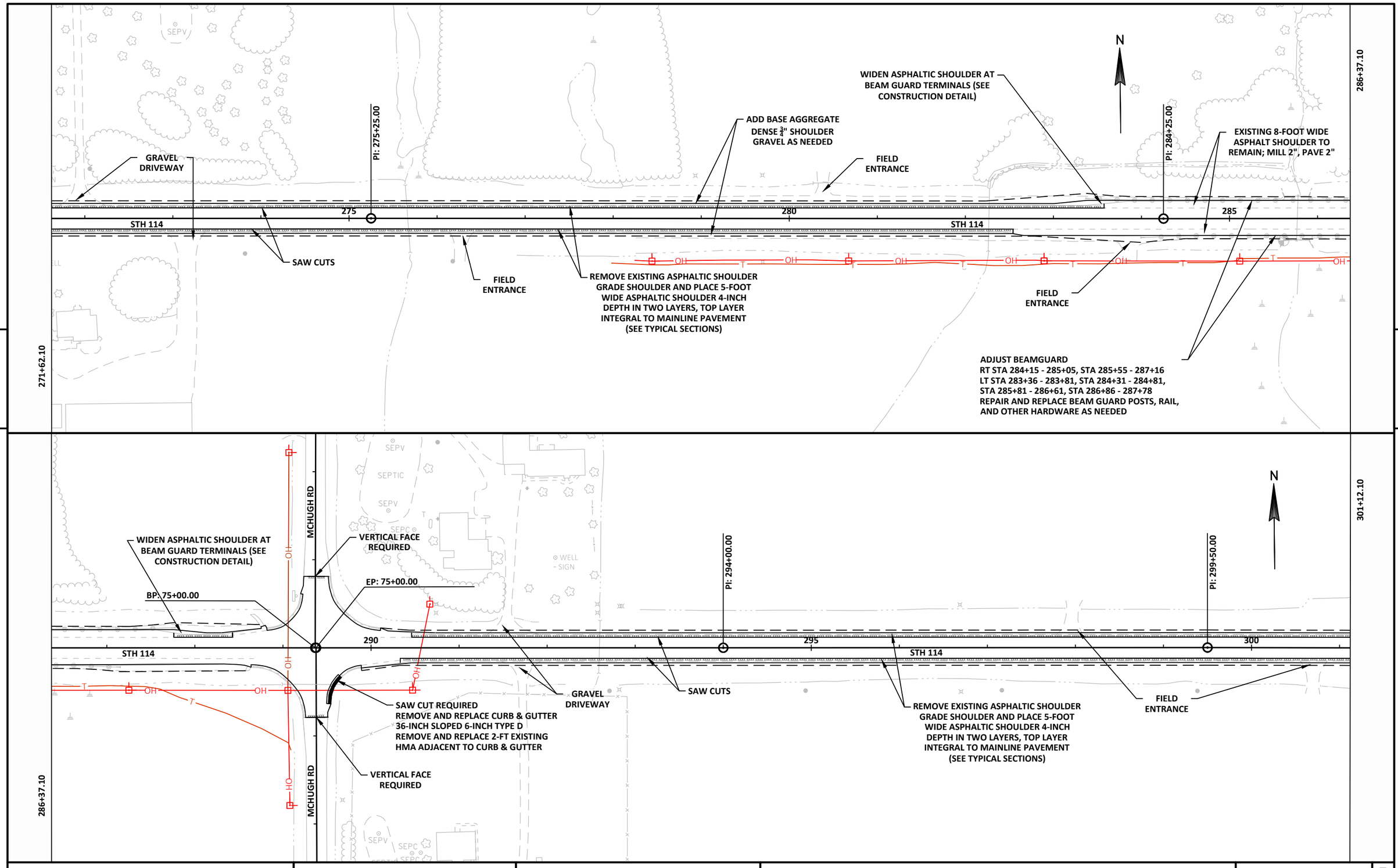
SLUDGE POND

PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	PLAN	SHEET E

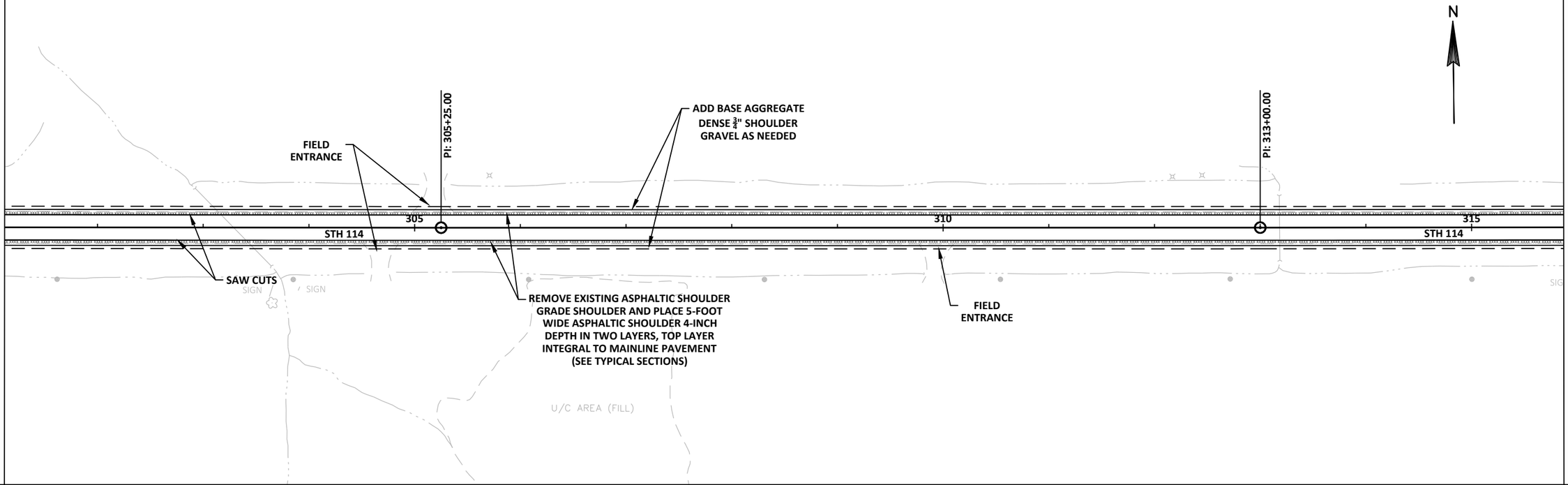
PRE_21

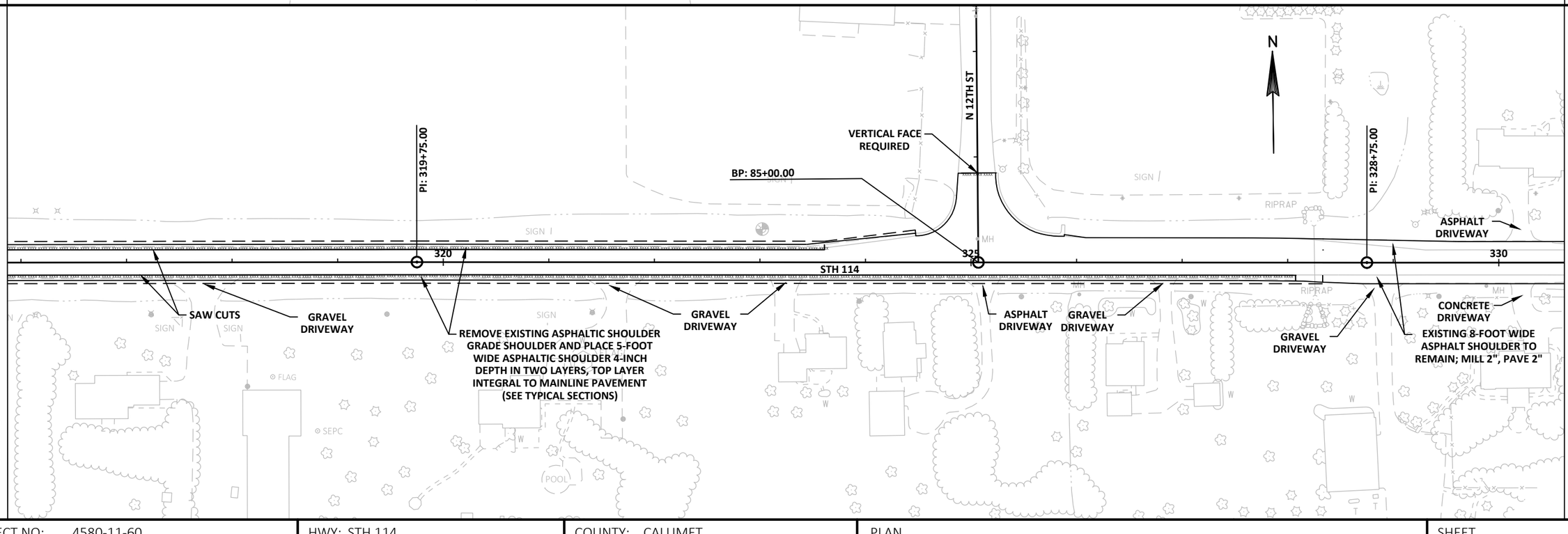
FILE NAME : N:\PDS\C3D\45801130\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 09

PLOT DATE : 3/15/2018 8:29 AM PLOT BY : LANG, JOSHUA J PLOT NAME : PLOT SCALE : ##########



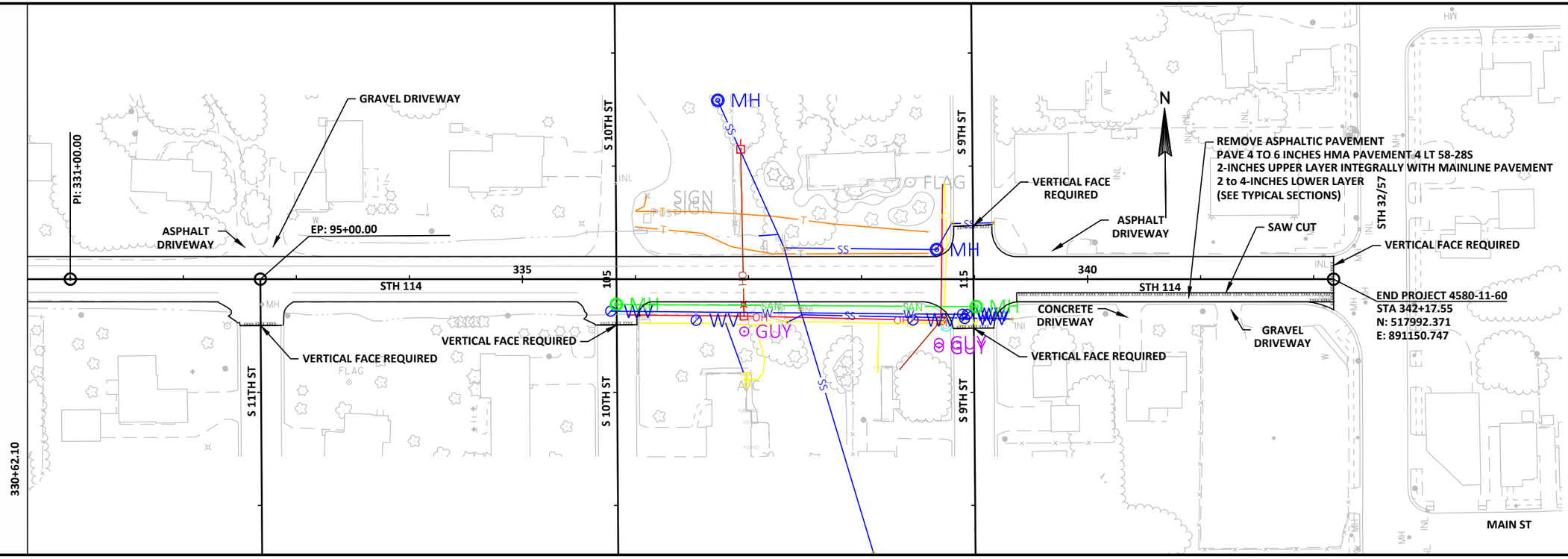
PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	PLAN	SHEET E





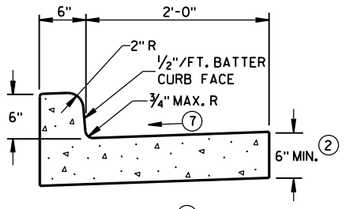
PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	PLAN	SHEET E

FILE NAME : N:\PDS\C3D\45801130\SHEETSPLAN\050201-PN.DWG
LAYOUT NAME - 11
PLOT DATE : 3/15/2018 8:29 AM
PLOT BY : LANG, JOSHUA J
PLOT NAME :
PLOT SCALE : ##########
PRE_23
WISDOT/CADDS SHEET 44

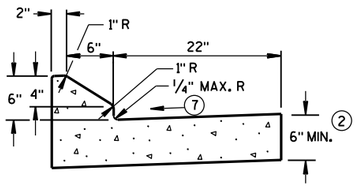


PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	PLAN	SHEET E

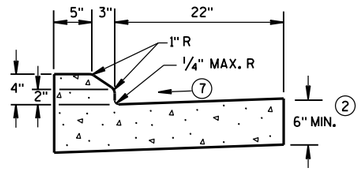
8D1 sheet a: Concrete Curb, Concrete Curb & Gutter and Ties



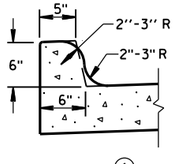
TYPES A (1) & D



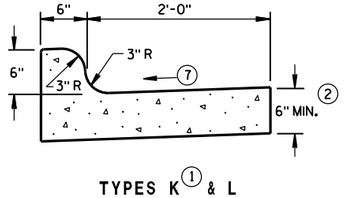
6" SLOPED CURB TYPES G (1) & J



4" SLOPED CURB TYPES G (1) & J

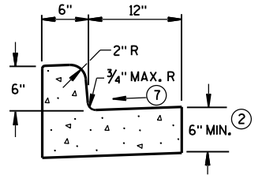


TYPES K (1) & L
(OPTIONAL CURB SHAPE)



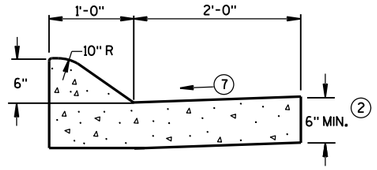
TYPES K (1) & L

CONCRETE CURB & GUTTER 30"

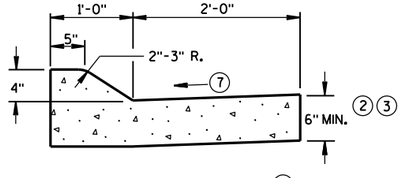


TYPES A (1) & D

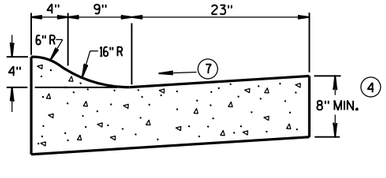
CONCRETE CURB & GUTTER 18"



6" SLOPED CURB TYPES A (1) & D

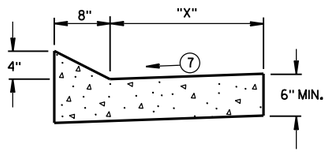


4" SLOPED CURB TYPES A (1) & D



4" SLOPED CURB TYPES R (1) & T (5)

CONCRETE CURB & GUTTER 36"



TYPES TBT & TBTT (1)

CONCRETE CURB & GUTTER

TBT & TBTT	"X"
30"	22"
36"	28"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

INTEGRAL CURB & GUTTER SHALL CONFORM TO THE DETAILS SHOWN FOR CONCRETE CURB & GUTTER INCLUDING THE TRANSVERSE GUTTER SLOPE.

WHERE THE TRANSVERSE JOINTS IN THE PAVEMENT ARE REQUIRED TO BE SEALED, THE JOINTS IN THE INTEGRAL CURB AND GUTTER SHALL BE SEALED TO THE FACE OF CURB WITH THE SAME TYPE OF SEALANT. THE COST OF FURNISHING AND INSTALLING THIS SEALANT SHALL BE INCIDENTAL TO THE ITEM CONCRETE CURB AND GUTTER.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(3) USE 8" MINIMUM GUTTER THICKNESS WHEN USED WITH AN ADJACENT CONCRETE TRUCK APRON PLACED BEHIND BACK OF CURB.

(4) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(5) THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

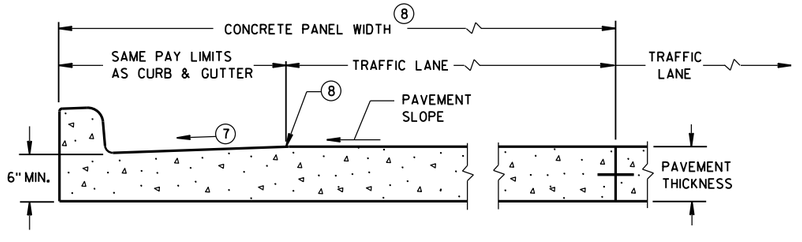
(6) WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.

(7) USE 4% GUTTER CROSS SLOPE UNLESS OTHERWISE NOTED IN THE PLANS.

(8) INCLUDE LONGITUDINAL JOINT AND TIE BARS ALONG LANE EDGE WHEN CONCRETE PANEL WIDTH EXCEEDS THE MAXIMUM WIDTH PER TABLE BELOW. LONGITUDINAL JOINT(S) ARE NOT ALLOWED WITHIN TRAFFIC LANES AND BIKE LANES. LONGITUDINAL JOINT MAY BE SAWED.

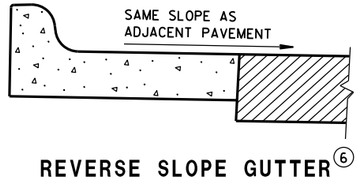
PAVEMENT THICKNESS AND MAXIMUM CONCRETE PANEL WIDTH TABLE

PAVEMENT THICKNESS	MAXIMUM PANEL WIDTH
LESS THAN 10"	12'
10" & ABOVE	15'



PARTIAL SECTION OF PAVEMENT * WITH INTEGRAL CURB & GUTTER

* BIKE LANE IS NOT SHOWN.



REVERSE SLOPE GUTTER (6)
(TYPICAL FOR ALL CURB & GUTTER TYPES)

CONCRETE CURB & GUTTER

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

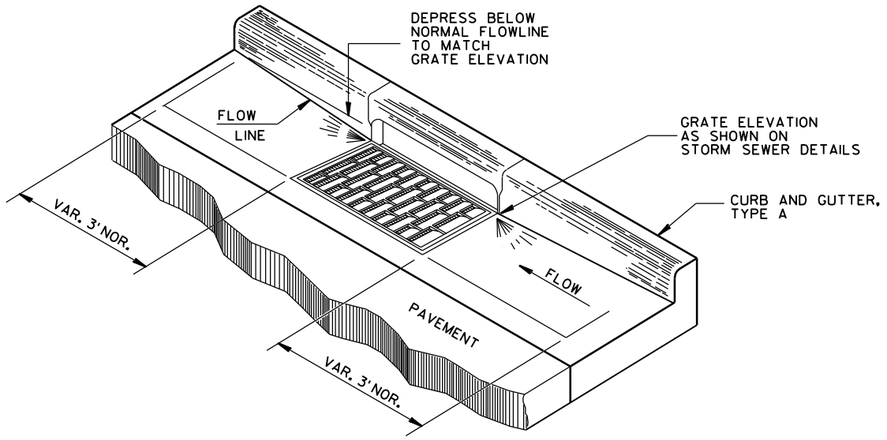
PRE_25

6

S.D.D. 8 D 1-20a

6

S.D.D. 8 D 1-20a



DETAIL OF CURB AND GUTTER AT INLETS

(TYPE H INLET COVER SHOWN)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

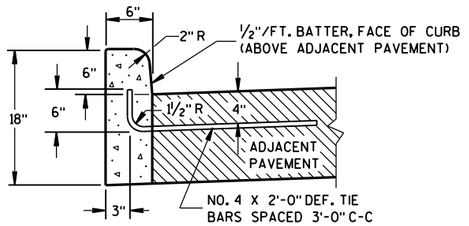
PAVEMENT TIES AND TIE BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.6.2 OF THE STANDARD SPECIFICATIONS.

UNLESS OTHERWISE SHOWN ON THE TYPICAL CROSS SECTIONS, THE BASE AGGREGATE AND COMMON EXCAVATION LIMITS ARE 2'-0" BEHIND THE BACK OF CURBS.

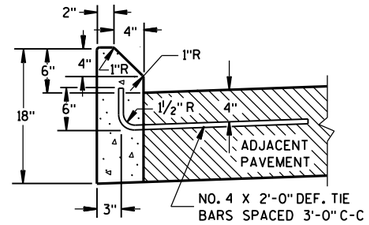
(1) TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

(2) THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 6" MINIMUM GUTTER THICKNESS IS MAINTAINED.

(9) REFER TO SDD 8D18 AND SDD 8D19 FOR ADDITIONAL DRIVEWAY ENTRANCE CURB DETAILS.

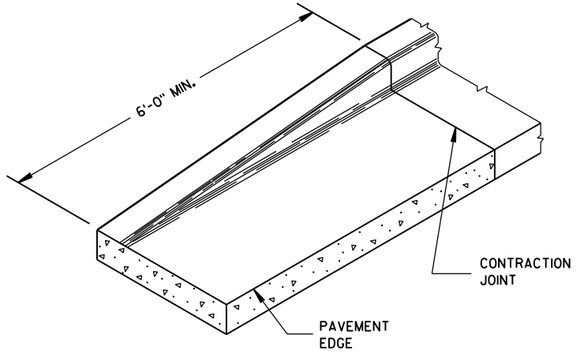


TYPES A (1) & D

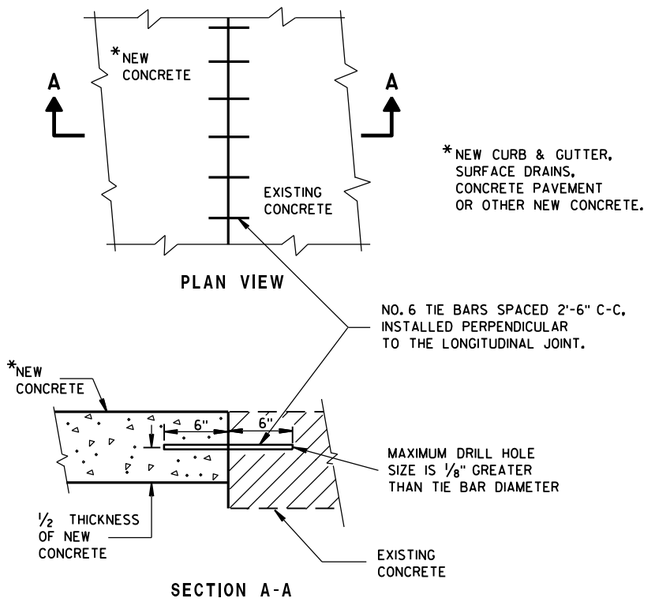


TYPES G (1) & J

CONCRETE CURB



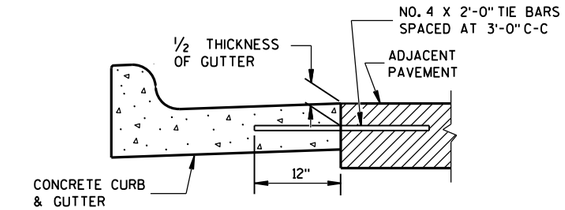
END SECTION CURB & GUTTER



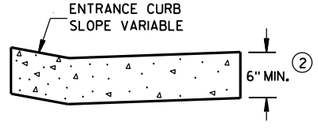
PLAN VIEW

SECTION A-A

TIE BARS DRILLED INTO EXISTING PAVEMENT



TYPICAL TIE BAR LOCATION (1)



DRIVEWAY ENTRANCE CURB (9)

(WHEN DIRECTED BY THE ENGINEER)

CONCRETE CURB, TIES AND CURB AND GUTTER APPLICATIONS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

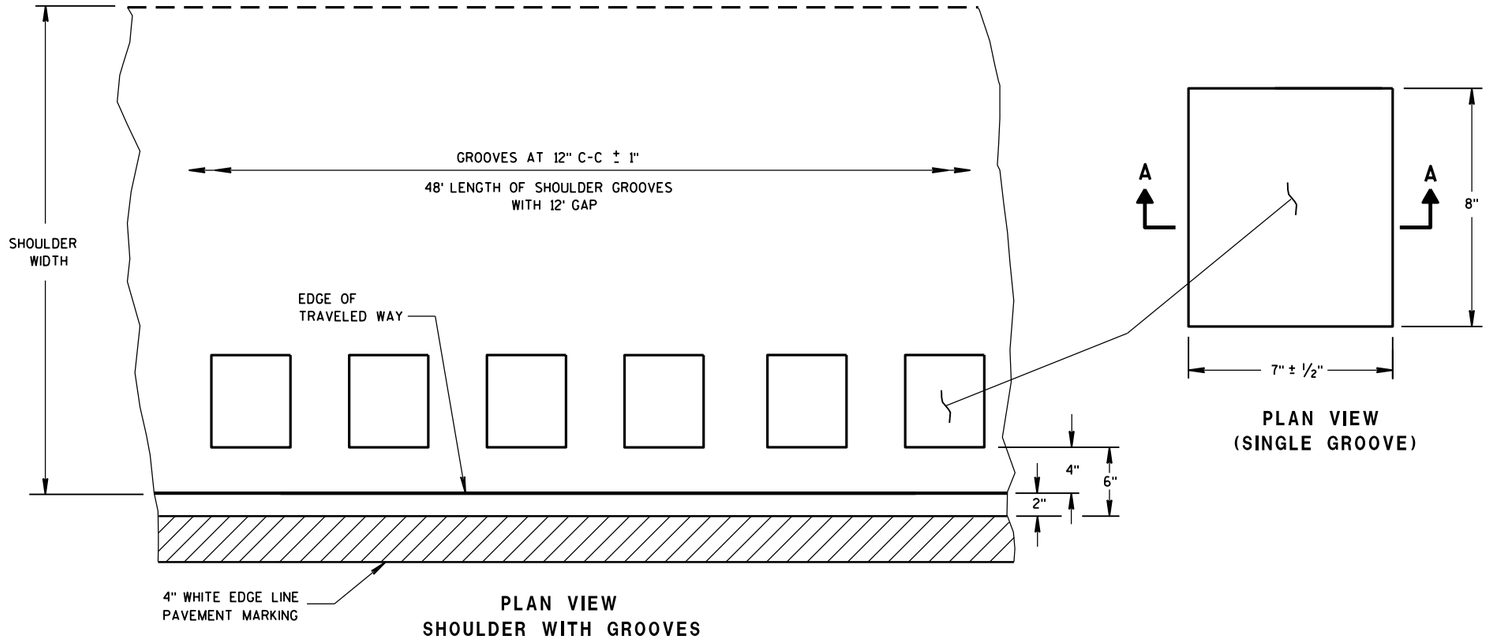
APPROVED
June, 2017 — DATE
/S/ Rodney Taylor — ROADWAY STANDARDS UNIT SUPERVISOR
NT
FHWA

PRE_26

6

S.D.D. 8 D 1-20b

13A10 sheet a: 2-Lane Rural Shoulder Rumble Strip, Milling - Type 1



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

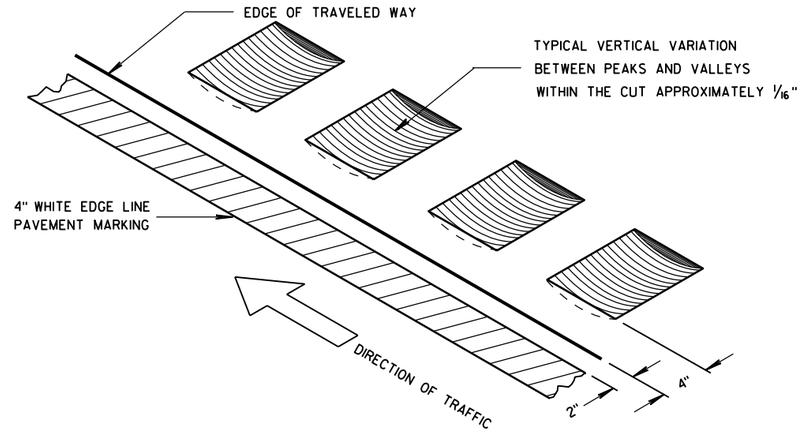
PLACEMENT DETAIL FOR TYPE 1 MILLED RUMBLE STRIP

GENERAL NOTES

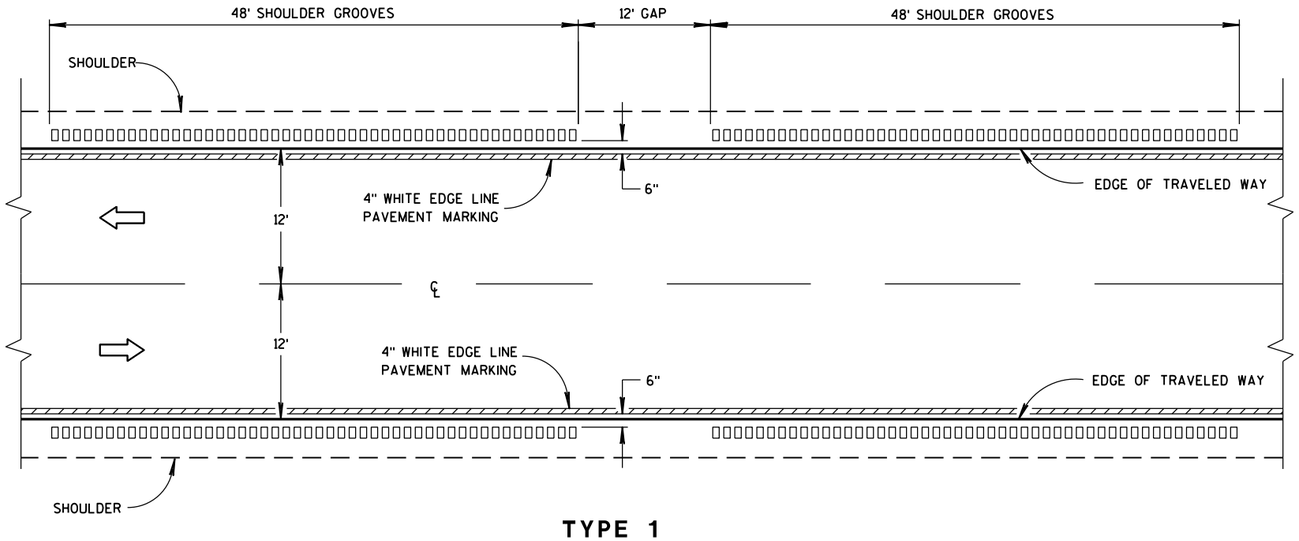
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL SHOULDER GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

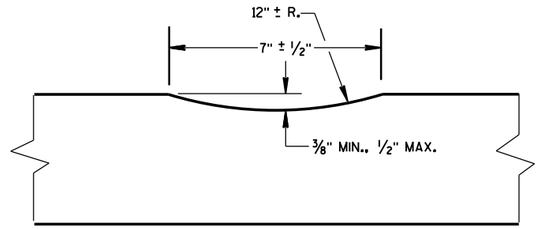
(1) SHOULDER GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



ISOMETRIC



TYPE 1
2-LANE SHOULDER RUMBLE STRIP



SECTION A-A

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRAN

PRE_27

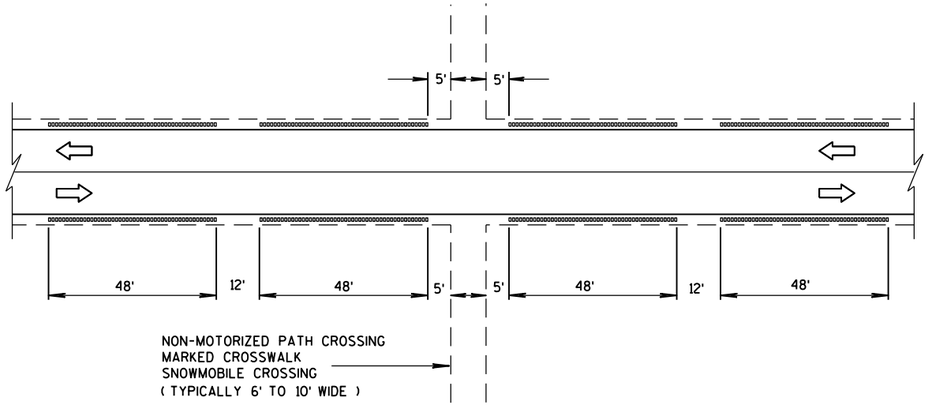
6

S.D.D. 13 A 10-1a

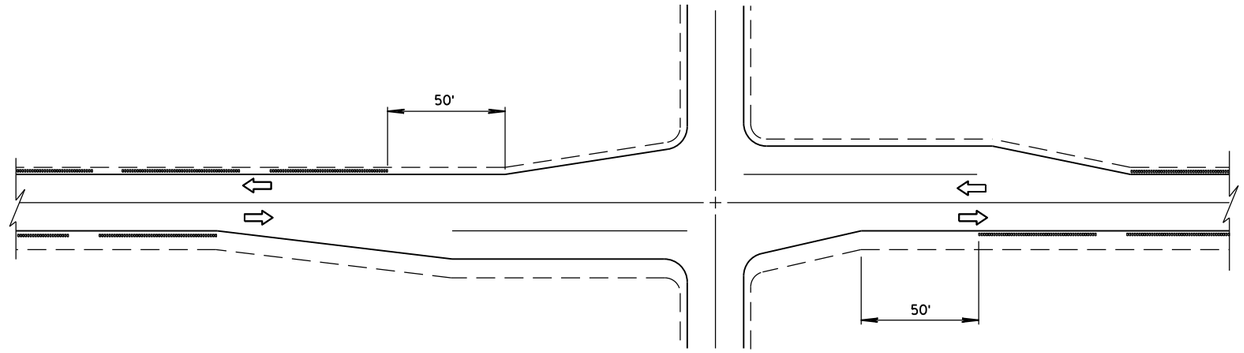
6

S.D.D. 13 A 10-1a

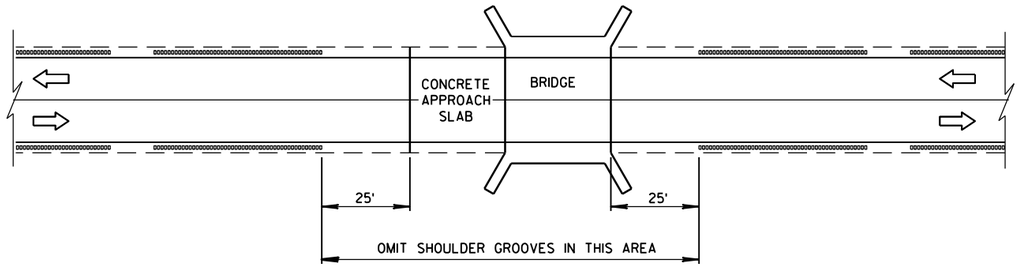
13A10 sheet c: 2-Lane Rural Shoulder Rumble Strip, Milling - Crossing, Intersections, Bridges, Railroads, Driveways



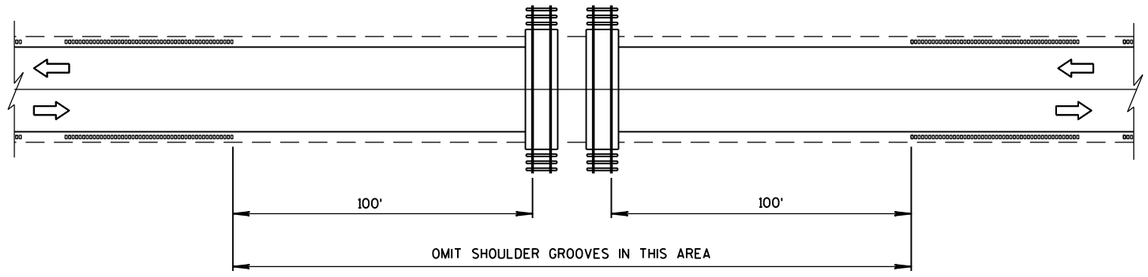
SHOULDER GROOVES AT MISCELLANEOUS CROSSINGS



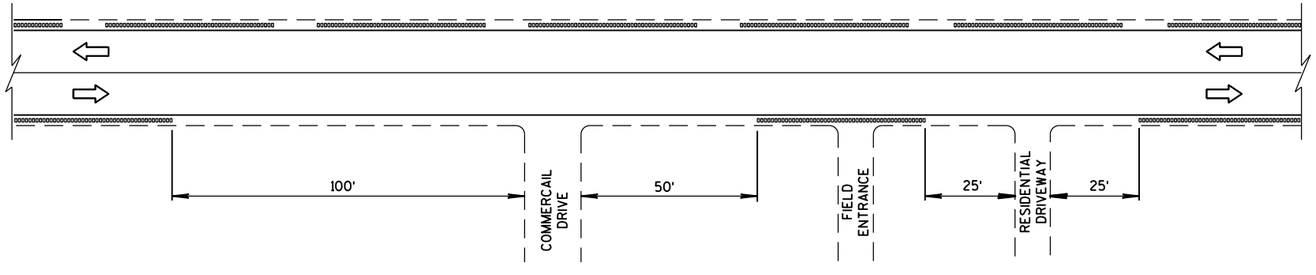
SHOULDER GROOVES AT INTERSECTIONS



SHOULDER GROOVES AT BRIDGES



SHOULDER GROOVES AT RAILROADS



SHOULDER GROOVES AT DRIVEWAYS (1)

2-LANE RURAL
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRAN PRE_28

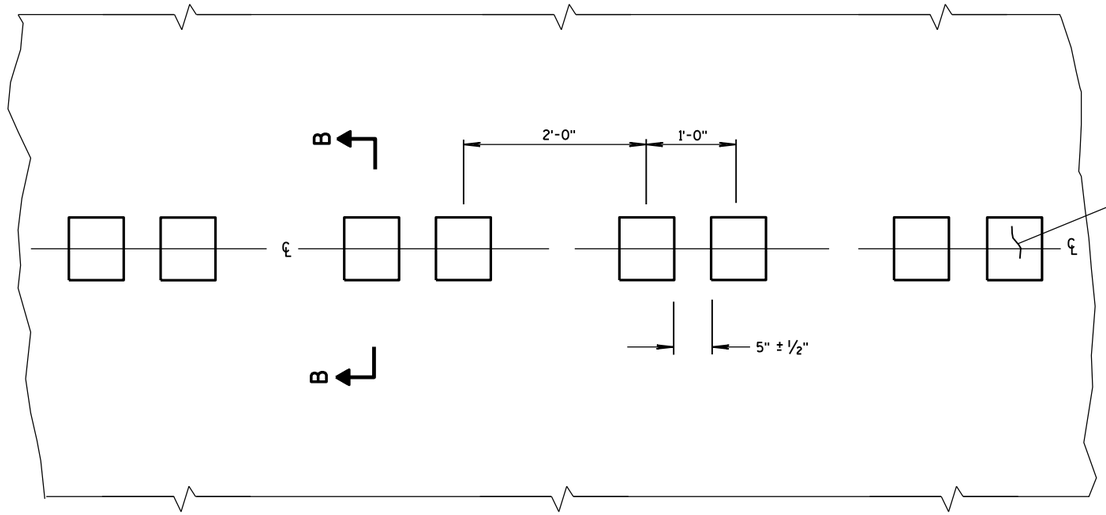
6

S.D.D. 13 A 10-1c

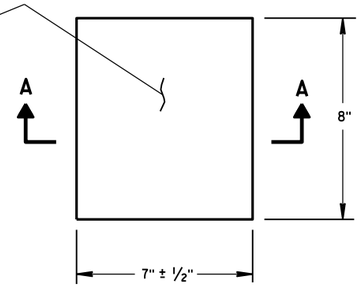
6

S.D.D. 13 A 10-1c

13A11 sheet a: 2-Lane Rural Center Line Rumble Strip, Milling



PLAN VIEW
CENTER LINE WITH GROOVES



PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

GENERAL NOTES

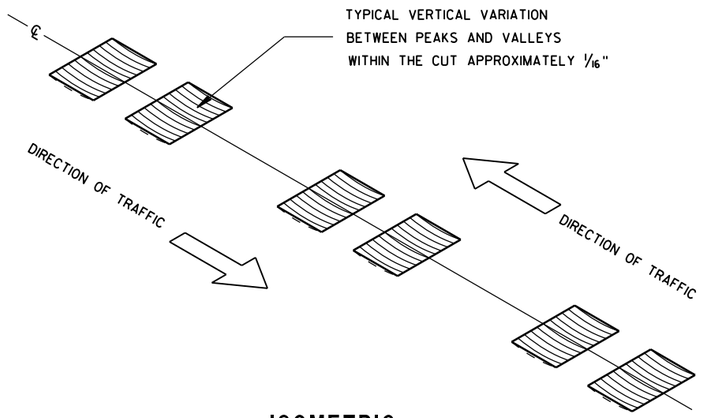
DETAILS OF CONSTRUCTION SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

DO NOT MILL CENTER LINE GROOVES THROUGH ANY INTERSECTION, MARKED CROSSWALK, NON-MOTORIZED PATH CROSSING, OR SNOWMOBILE CROSSING.

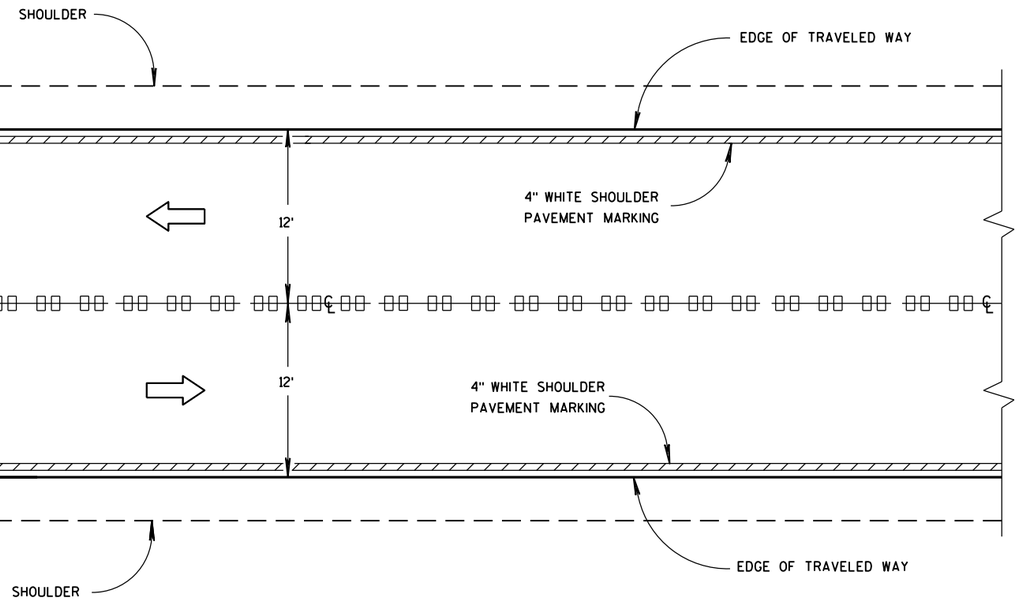
INSTALL PAVEMENT MARKING AFTER THE GROOVES ARE INSTALLED.

SEE SIGNING PLAN FOR SIGN REQUIREMENTS THAT MAY BE NEEDED.

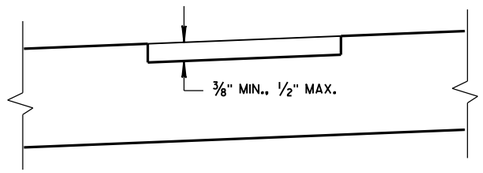
(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



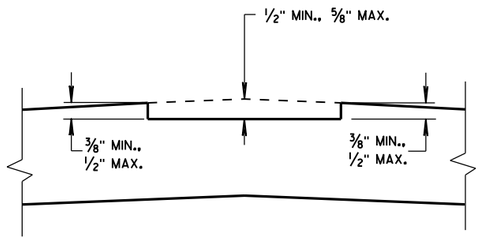
ISOMETRIC



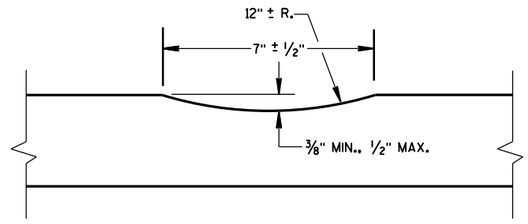
CENTER LINE GROOVES ON TWO-WAY ROADWAYS



SECTION B-B
SUPERELEVATED ROADWAY



SECTION B-B
CROWNED ROADWAY



SECTION A-A

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRAN

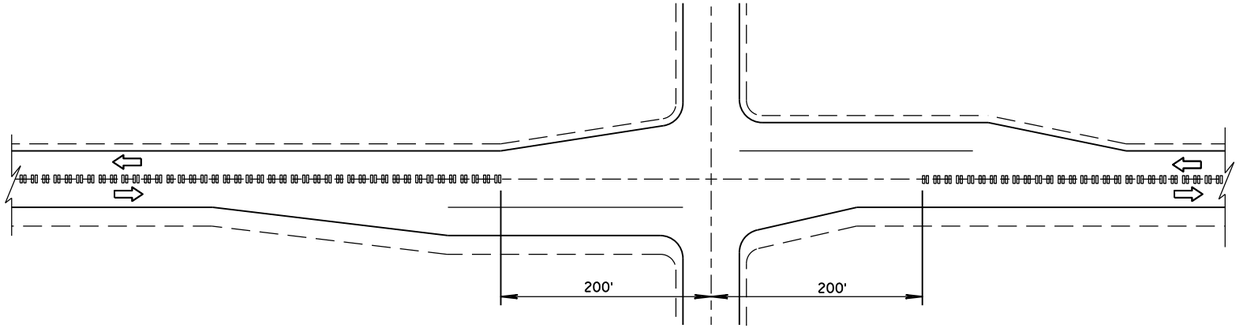
6

S.D.D. 13 A 11-2a

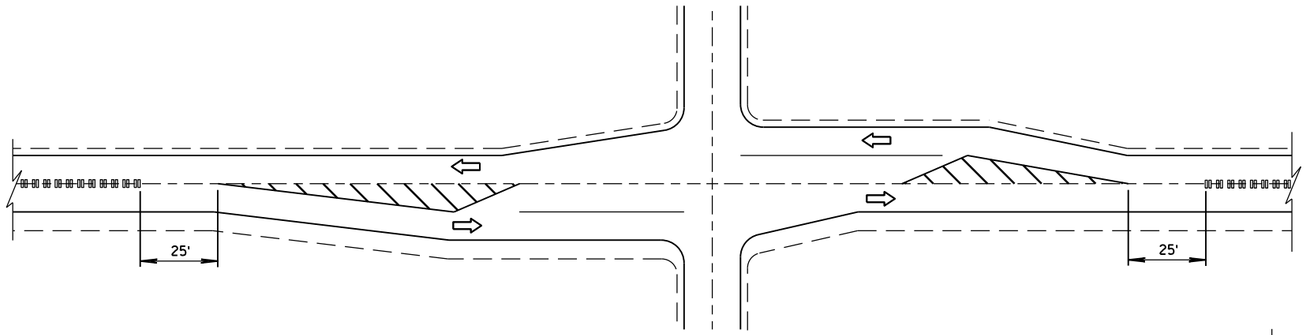
6

S.D.D. 13 A 11-2a

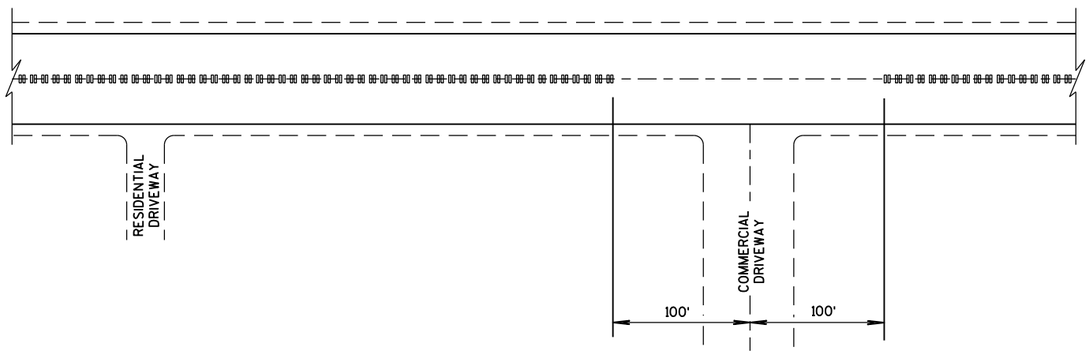
13A11 sheet b: 2-Lane Rural Center Line Rumble Strip, Milling



CENTER LINE GROOVES AT INTERSECTIONS

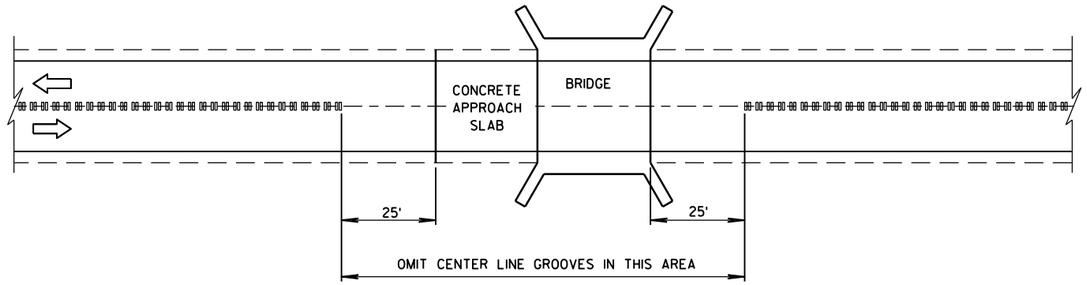


CENTER LINE GROOVES AT INTERSECTIONS
(WITH LEFT TURN LANES)

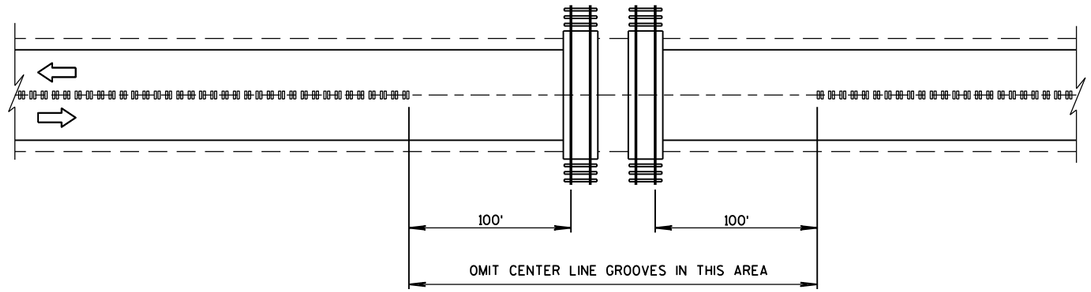


CENTER LINE GROOVES AT DRIVEWAYS (1)

(1) CENTERLINE GROOVES MAY BE OMITTED IN AREAS WITH HIGH CONCENTRATIONS OF DRIVEWAYS, WHEN DIRECTED BY THE ENGINEER.



CENTER LINE GROOVES AT BRIDGES



CENTER LINE GROOVES AT RAILROADS

2-LANE RURAL
CENTER LINE RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/15/2013
DATE

/S/ Jerry H. Zoaa
ROADWAY STANDARDS ENGINEER

FHWA

PRE_30

6

S.D.D. 13 A 11-2b

6

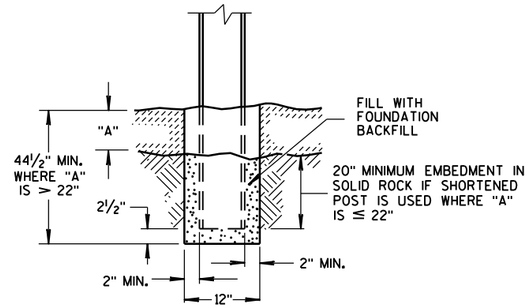
S.D.D. 13 A 11-2b

14B15 sheet a: Steel Plate Beam Guard, Class "A", Installation and Elements

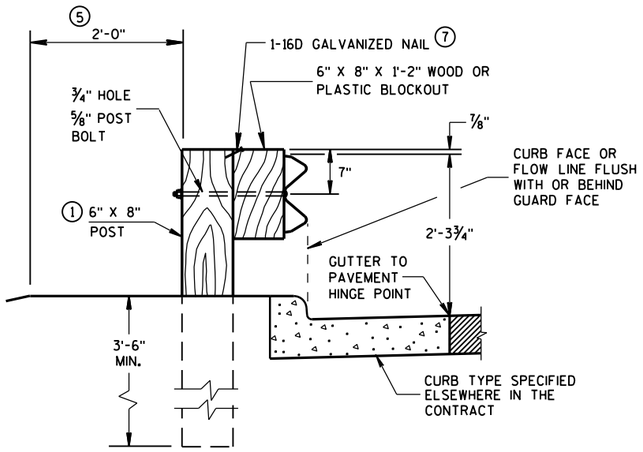
GENERAL NOTES

1. W6 X 9 OR W6 X 8.5 STEEL POSTS AND NOTCHED PLASTIC BLOCKOUTS ARE ACCEPTABLE ALTERNATIVES FOR 6" X 8" WOOD POSTS WITH WOOD OR PLASTIC BLOCKOUTS. USE APPROVED NOTCHED PLASTIC BLOCKOUTS WITH STEEL POSTS. APPROVED PLASTIC BLOCKOUT DESIGNS MAY VARY FROM THIS TYPICAL DETAIL WHEN USED IN CONJUNCTION WITH STEEL POSTS.
   DO NOT MIX STEEL POSTS AND WOOD POSTS IN A SINGLE INSTALLATION.
2. USE STRUCTURAL STEEL POSTS CONFORMING TO ASTM A 36. GALVANIZED POSTS ACCORDING TO AASHTO M 111. EITHER SET THE POSTS IN DRILLED HOLES OR DRIVE TO GRADE. REMOVE MUSHROOMING CAUSED BY DRIVING AND REPAIR DAMAGED SPELTER COATING ON GALVANIZED POSTS.
3. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.
4. USE EITHER WOOD OR APPROVED PLASTIC BLOCKOUTS ON WOOD POSTS.
5. IF THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING, W BEAM (LHW).
6. IF ROCK IS ENCOUNTERED DURING EXCAVATION, THE ENGINEER MAY APPROVE USING A 12 INCH DIAMETER POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE APPROXIMATELY 2½ INCHES DEEP. CUT THE POSTS TO LENGTH AND PLACE IN YHE HOLE. BACKFILL WITH MATERIAL EXCAVATED FROM THE HOLE AND COMPACT ADEQUATEY.
7. WHEN USING STEEL POSTS AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.

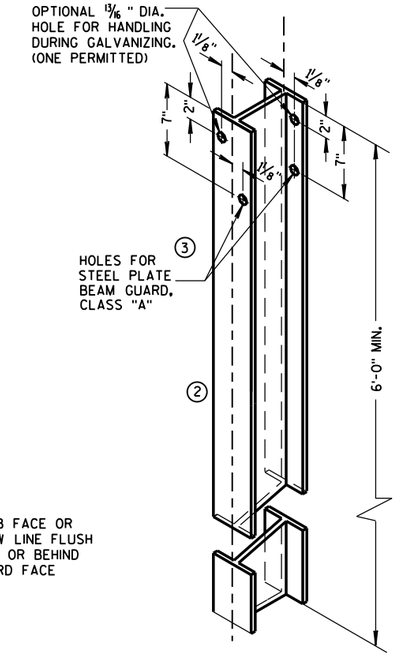
INSTALL BEAM GUARD SECTIONS AND ALL NECESSARY HARDWARE ACCORDING TO THE APPLICABLE PLAN AND CURRENT STANDARD AND SUPPLEMENTAL SPECIFICATIONS.
ALL DIMENSIONS ARE SUBJECT TO MANUFACTURER'S TOLERANCES EXCEPT WHERE ALLOWABLE TOLERANCES ARE SHOWN.



END VIEW
SETTING STEEL OR WOOD POST IN ROCK (6)

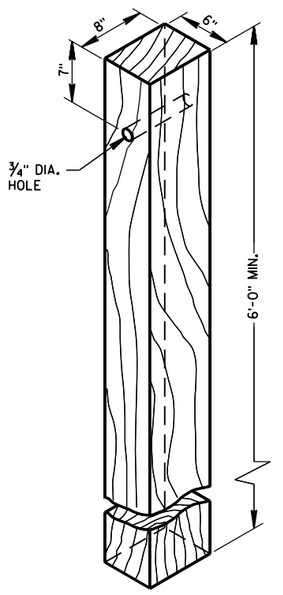


END VIEW
LOCATED ALONG A CURBED ROADWAY

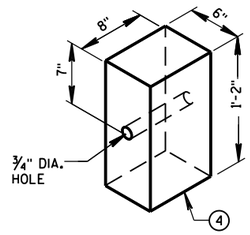


STEEL POST &
HOLE PUNCHING DETAIL
(W6 X 9) (1)

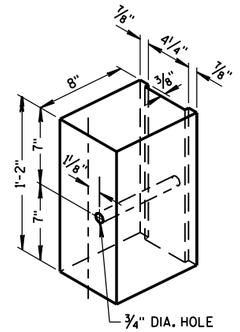
ALL HOLES 13/16" DIAMETER EXCEPT AS NOTED



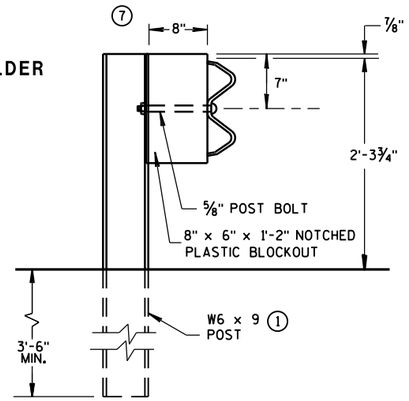
WOOD POST
(6"X8") NOMINAL



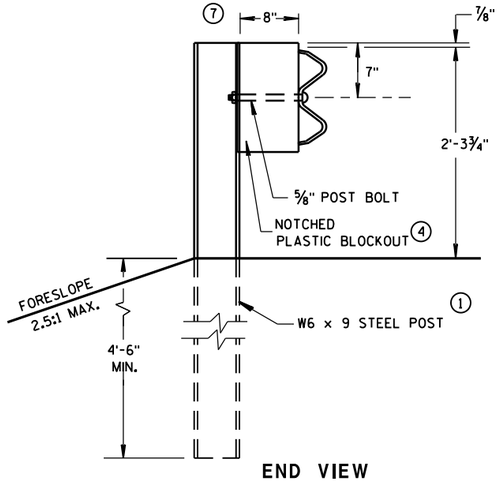
WOOD OR PLASTIC
BLOCKOUT FOR
WOOD POSTS



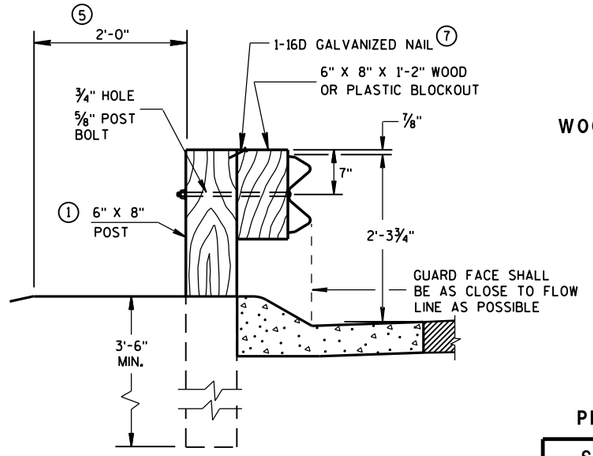
TYPICAL NOTCHED
PLASTIC BLOCKOUT
FOR STEEL POSTS (1)



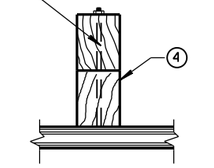
END VIEW
STEEL POST & NOTCHED
PLASTIC BLOCKOUT ALTERNATIVE
STANDARD INSTALLATION



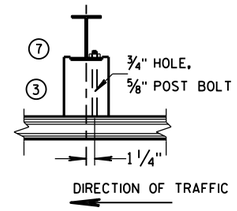
END VIEW
LONGER POST AT HALF
POST SPACING W BEAM
(LHW)



END VIEW
LOCATED ALONG A
MOUNTABLE CURBED ROADWAY



PLAN VIEW
WOOD POST, BLOCKOUT & BEAM



PLAN VIEW
STEEL POST, NOTCHED
PLASTIC BLOCKOUT & BEAM

TYPICAL INSTALLATION OF STEEL PLATE BEAM GUARD

STEEL PLATE BEAM GUARD,
CLASS "A"
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRAN PRE_31

6

S.D.D. 14 B 15-10a

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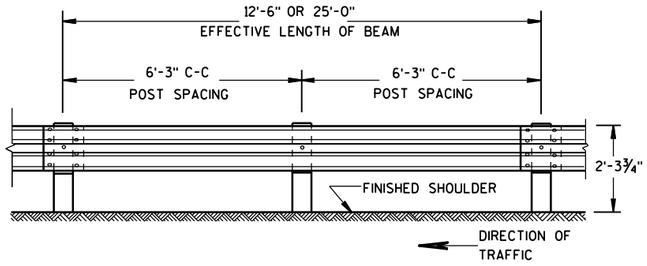
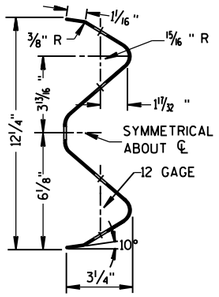
S.D.D. 14 B 15-10a

14B15 sheet b: Steel Plate Beam Guard, Class "A", Installation and Elements

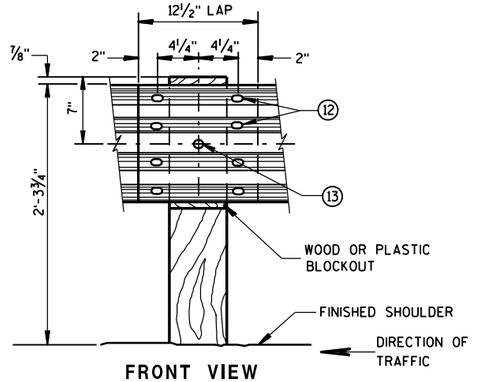


FRONT VIEW

POST SPACING STANDARD INSTALLATION



SECTION THRU W BEAM



FRONT VIEW

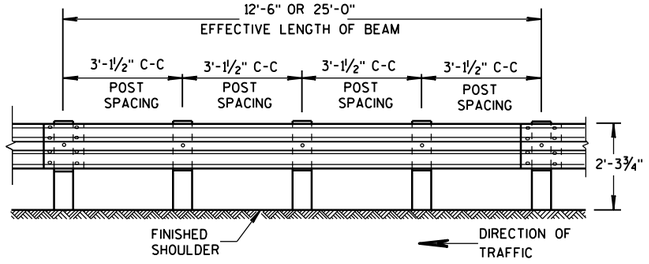
BEAM SPLICE AT WOOD POST AND POST MOUNTING DETAIL

GENERAL NOTES

(9) DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

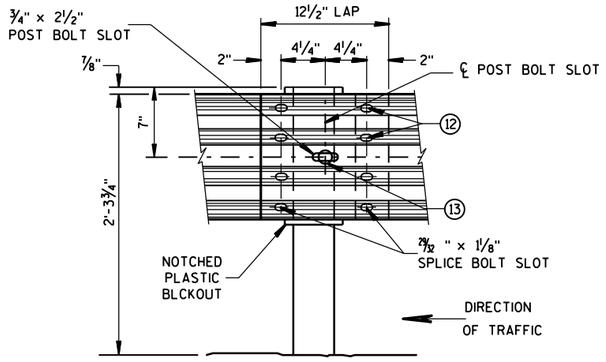
(12) 8 -5/8" ϕ X 2" BUTTON HEAD BOLTS WITH OVAL SHOULDERS & RECESS NUTS.

(13) 5/8" DIA. BUTTON HEAD BOLT AND RECESS NUT WITH 5/8" DIA. F844 FLAT WASHER UNDER NUT.



FRONT VIEW

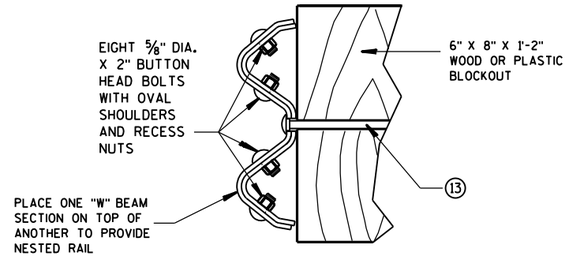
POST SPACING FOR LONGER POST AT HALF POST SPACING W BEAM (LHW)



FRONT VIEW

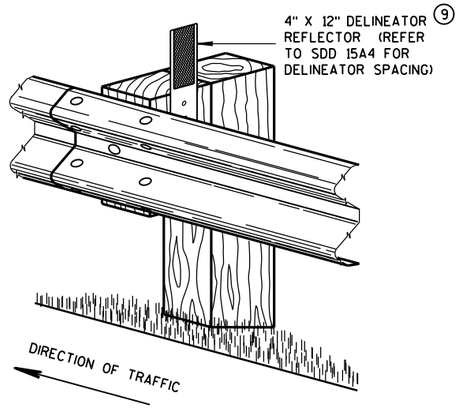
BEAM SPLICE AT STEEL POST

TYPICAL SPLICING DETAILS OF STEEL PLATE BEAM GUARD



NESTED W BEAM (NW)

USE ALL OTHER STANDARD BEAM GUARD DETAILS FOR CONSTRUCTING NESTED W BEAM (NW)



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION

STEEL PLATE BEAM GUARD,
CLASS "A",
INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRAN PRE_32

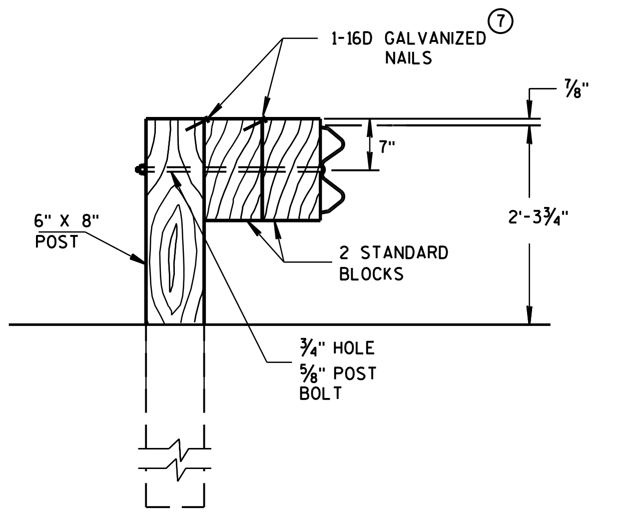
6

S.D.D. 14 B 15-10b

6

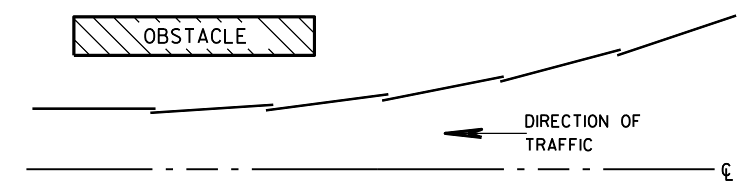
S.D.D. 14 B 15-10b

14B15 sheet c: Steel Plate Beam Guard, Class "A", Installation and Elements

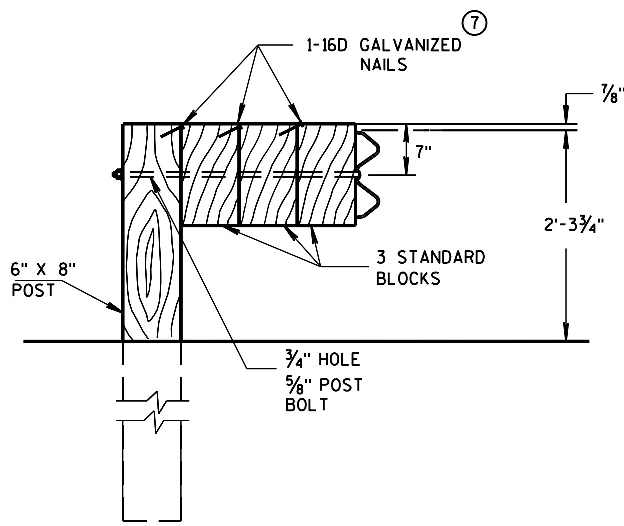


DETAIL FOR DOUBLE BLOCKS

THE NUMBER OF DOUBLE BLOCK POSTS WITHIN A BARRIER RUN IS UNLIMITED

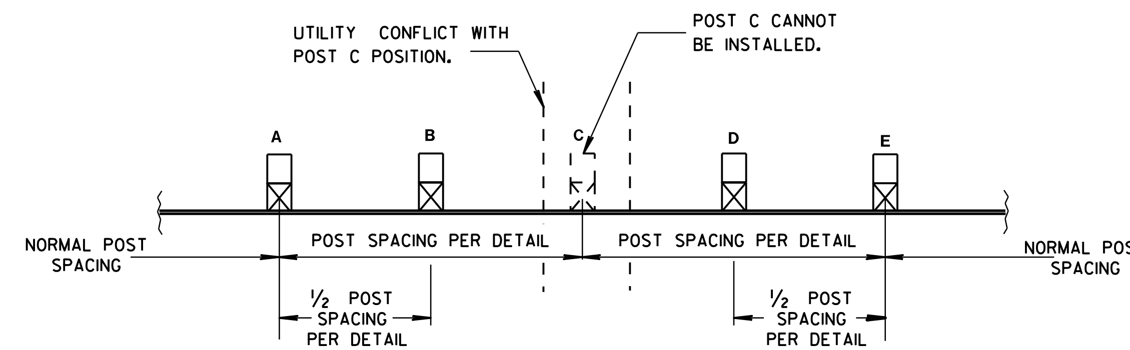


PLAN VIEW
BEAM LAPPING DETAIL



DETAIL FOR TRIPLE BLOCKS

TRIPLE BLOCK DETAIL IS LIMITED TO ONE LOCATION WITHIN A BEAM GUARD RUN.



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION

NOTES: USE DOUBLE OR TRIPLE BLOCKS WHEN UNDERGROUND OBSTACLES PREVENT THE POST FROM BEING INSTALLED.

DO NOT USE EXTRA BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

STEEL PLATE BEAM GUARD, CLASS "A", INSTALLATION & ELEMENTS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
/S/ Rodney Taylor
ROADWAY STANDAI PRE_33 NT
UNIT SUI
FHWA

14B24 sheet a: Steel Plate Beam Guard Energy Absorbing Terminal

BILL OF MATERIALS

NOTE NO.	DESCRIPTION
①	WOOD BREAKAWAY TERMINAL POST: 5½" X 7½" X 3'-9"
②	STEEL TUBE TS 8" X 6" X 0.188", 6'-0"
④	WOOD BREAKAWAY CRT POST: 6" X 8" X 6'-0"
⑤	WOOD OFFSET BLOCKS: 6' X 8" X 1'-2"
⑥	PIPE SLEEVE: 2" X 5 ½" STANDARD PIPE
⑦	BEARING PLATE
⑧	BCT CABLE ASSEMBLY
⑨	CABLE ANCHOR BOX
⑩	STRUT & YOKE
⑪	STEEL PLATE BEAM, END PANEL 12 GA.
⑫	STEEL PLATE BEAM: 12 GA. 13'-6½"
⑬	IMPACT HEAD
⑭	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS

GENERAL NOTES

FOLLOW MANUFACTURE'S BOLTING RECOMMENDATIONS.

(A) THE SLOPE IN THE AREA BOUNDED BY THE GRADELINE, THE HINGE POINT LINE (HPL), AND THE CLEAR ZONE LIMITS (CZL) SHALL BE 4:1 OR FLATTER.

(B) AFTER FINAL ASSEMBLY, RECHECK CABLE TO BE SURE IT IS TAUT AND HAS NOT RELAXED.

(D) THE TOP OF THE STEEL TUBE ON POSTS 1 AND 2 SHALL NOT BE MORE THAN 3" ABOVE THE FINISH GROUND ELEVATION.

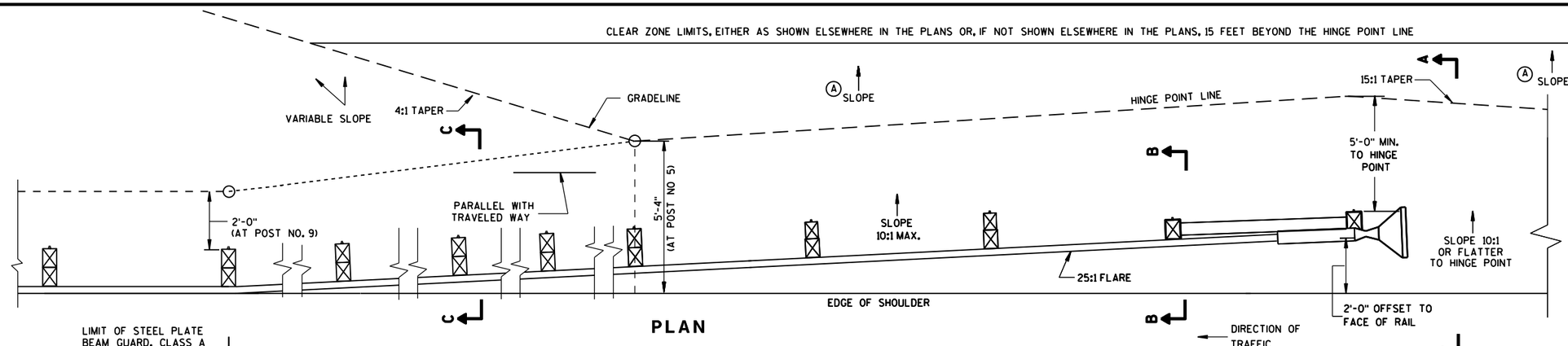
(E) THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST 3 THROUGH 8 SHALL BE ¾" ABOVE THE FINISHED GROUND LINE.

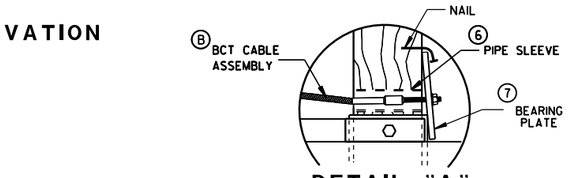
(F) ATTACH ALUMINUM SHEET TO E.A.T. HEAD USING 4 STAINLESS STEEL SELF-TAPPING SCREWS. ONE SCREW PER CORNER.

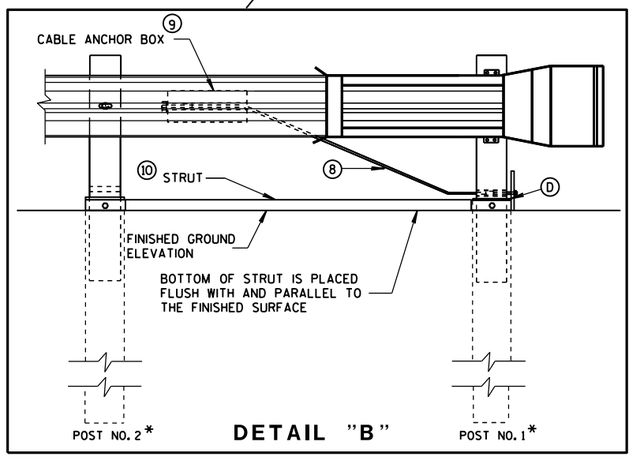
STEEL POSTS SHALL NOT BE ALLOWED FOR USE WITH ENERGY ABSORBING TERMINALS.

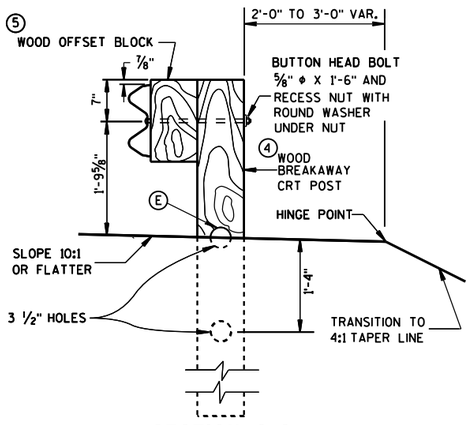
DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL.

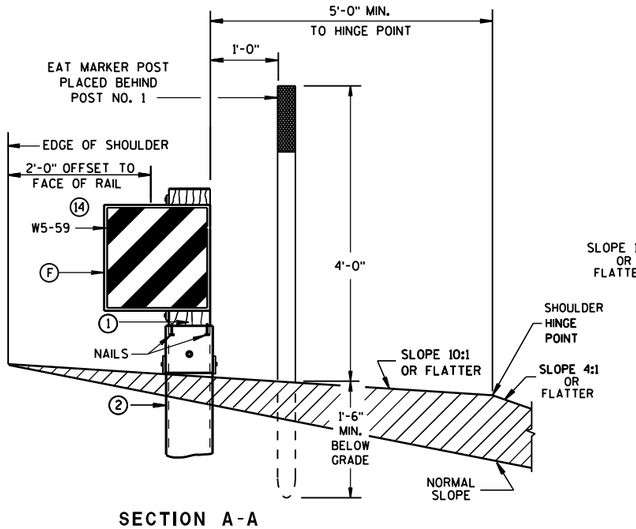
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

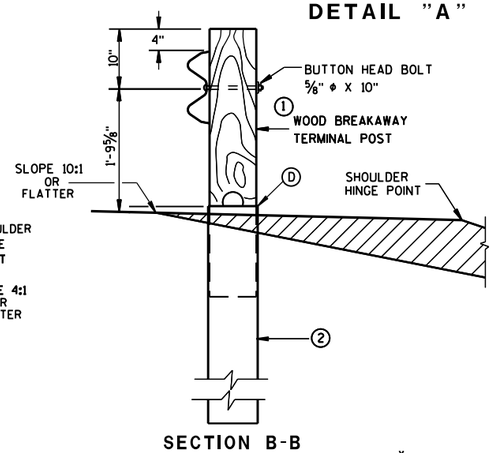












STEEL PLATE BEAM GUARD ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRAN PRE_34

S.D.D. 14 B 24-9a

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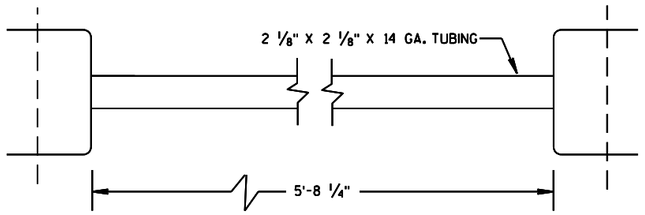
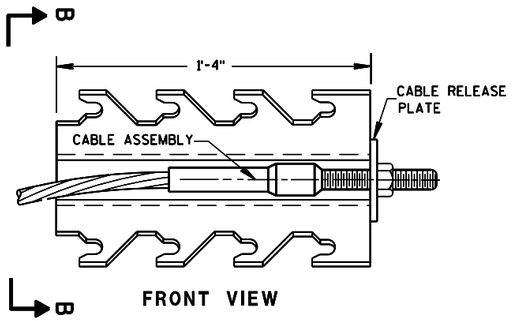
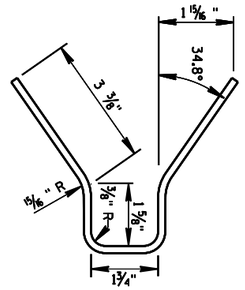


⑩ STRUT DETAIL

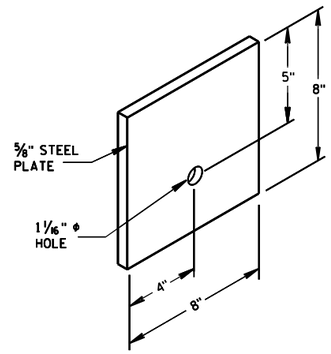


FRONT VIEW



SECTION B-B

⑨ CABLE ANCHOR BOX



⑦ STEEL BEARING PLATE

6

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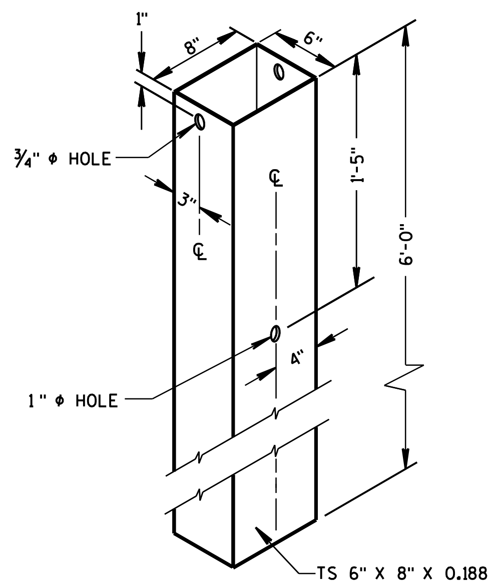
S.D.D. 14 B 24-9b

S.D.D. 14 B 24-9b

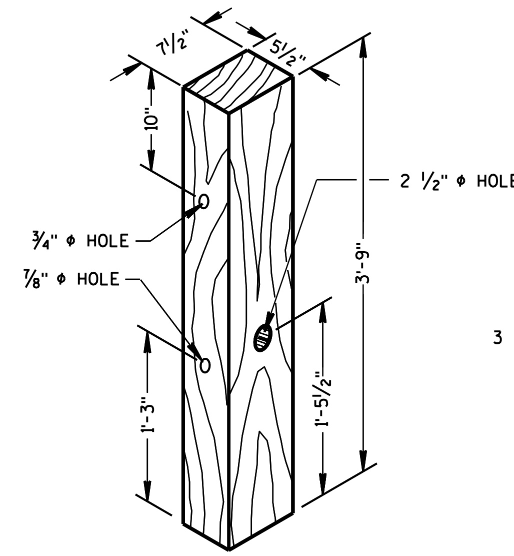
STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRAN

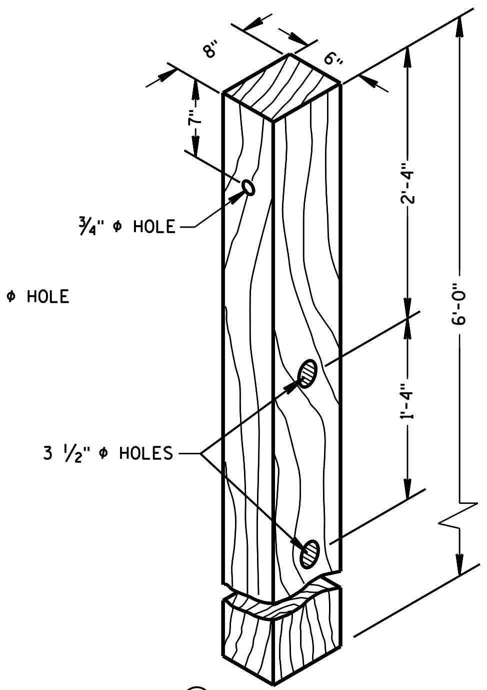
14B24 sheet c: Steel Plate Beam Guard Energy Absorbing Terminal



② 72" STEEL TUBE
(POSTS NO. 1-4



① TERMINAL POST

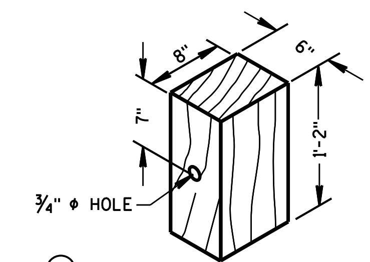


④ CRT POST
(POSTS NO'S 5-8

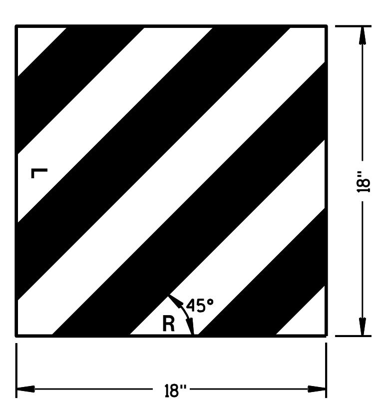
WOOD BREAKAWAY POSTS

GENERAL NOTES

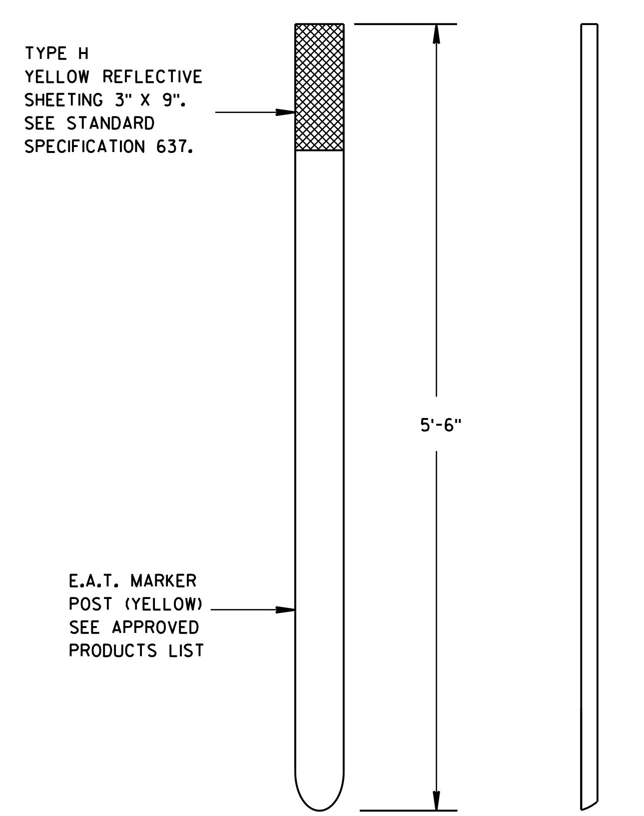
WHEN ROCK IS ENCOUNTERED DURING EXCAVATION, A 12 INCH DIA. POST HOLE EXTENDING 20 INCHES DEEP INTO THE ROCK MAY BE USED IF APPROVED BY THE ENGINEER. GRANULAR MATERIAL SHALL BE PLACED IN THE BOTTOM OF THE HOLE APPROXIMATELY 2 ½" INCHES DEEP TO PROVIDE DRAINAGE. THE SOIL TUBES SHALL BE FIELD CUT TO LENGTH, PLACED IN THE HOLE AND BACKFILLED WITH ADEQUATELY COMPACTED MATERIAL EXCAVATED FROM THE HOLE.



⑤ WOOD OFFSET BLOCK
REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2



⑭ REFLECTIVE SHEETING DETAILS



FRONT VIEW SIDE VIEW

E.A.T. MARKER POST

6

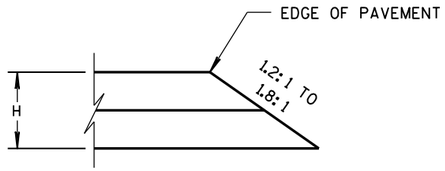
6

STEEL PLATE BEAM GUARD
ENERGY ABSORBING TERMINAL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

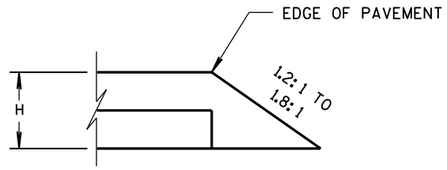
APPROVED
June 2017
DATE
/S/ Rodney Taylor
ROADWAY STANDARDS DEVELOPMENT
UNIT SUPERVISOR
FHWA

S.D.D. 14 B 24-9c



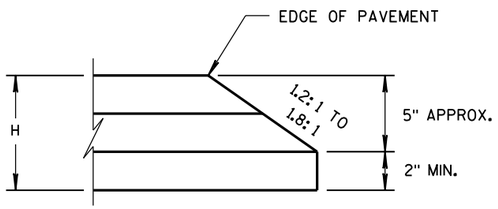
CONSTRUCTED WITH FINAL TWO LAYERS

FOR H 5" OR LESS



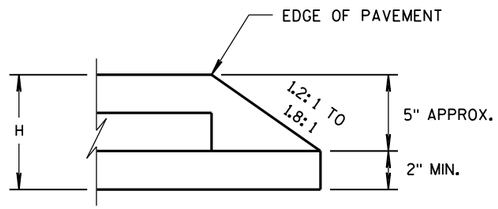
CONSTRUCTED WITH FINAL LAYER

FOR H 5" OR LESS



CONSTRUCTED WITH FINAL TWO LAYERS

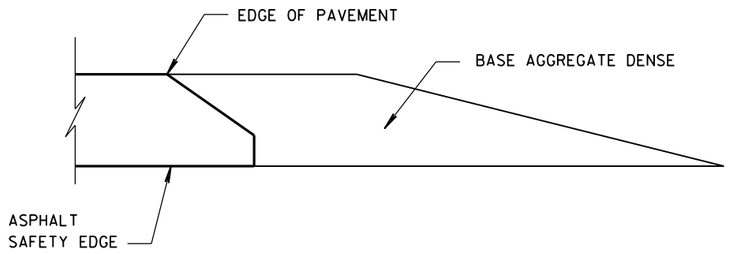
FOR H GREATER THAN 5"



CONSTRUCTED WITH FINAL LAYER

FOR H GREATER THAN 5"

HMA PAVEMENT AND HMA OVERLAYS



FINISHED SHOULDER AGGREGATE PLACEMENT

6

6

S.D.D. 14 B 29-1

S.D.D. 14 B 29-1

SAFETY EDGE SM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

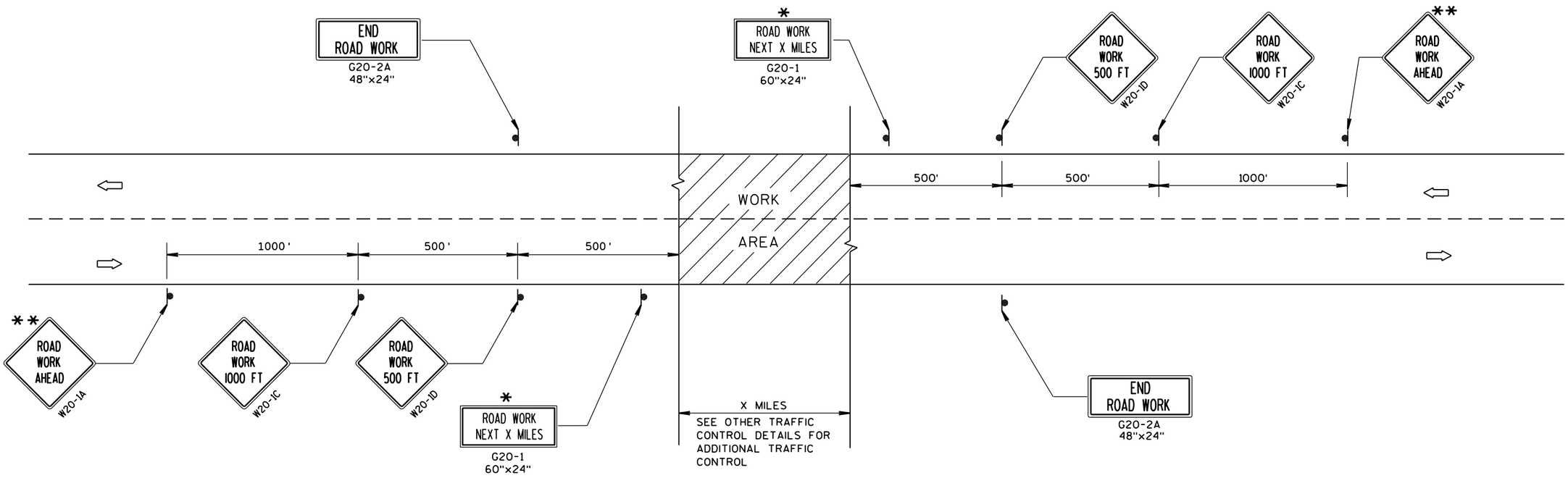
11/30/2012
DATE

/S/ Jerry H. Zoda
ROADWAY STANDARDS ENG

FHWA

PRE_37

15C4: Traffic Control, Advance Warning Signs 45 M.P.H. or Greater, Two Way Undivided Road Open to Traffic



GENERAL NOTES

THE EXACT NUMBER, LOCATION, AND SPACING OF ALL SIGNS AND DEVICES SHALL BE ADJUSTED TO FIT FIELD CONDITIONS.

THE SPACING BETWEEN TRAFFIC CONTROL SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND SHOULD PROVIDE A MINIMUM OF 200 FEET (500 FEET DESIRABLE) CLEARANCE TO EXISTING SIGNS THAT WILL REMAIN IN PLACE.

ALL SIGNS ARE 48"x48" UNLESS OTHERWISE NOTED.

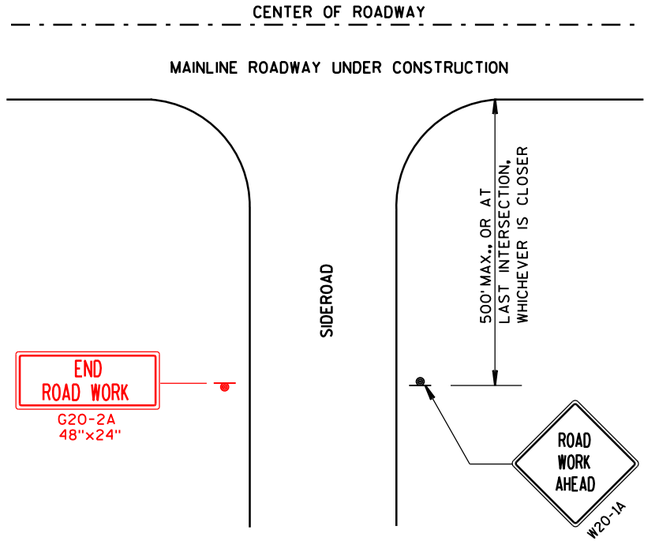
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

IF A "STOP" SIGN MUST BE REMOVED FOR A WORK OPERATION, A TEMPORARY "STOP" SIGN SHALL BE PLACED PRIOR TO THE SIGN REMOVAL, OR A FLAGGER SHALL BE PROVIDED UNTIL THE SIGN IS RE-ESTABLISHED.

* OMIT G20-1 SIGNS IF LENGTH OF WORK AREA IS 2 MILES OR LESS.

** PLACE ADDITIONAL W20-1A "ROAD WORK AHEAD" SIGN IF WORK AREA WITHIN THE PROJECT IS SEPARATED BY MORE THAN 2 MILES FROM PREVIOUS WORK AREA.

TYPICAL SIDEROAD APPROACH WARNING SIGN DETAIL



LEGEND

- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA

TRAFFIC CONTROL, ADVANCE WARNING SIGNS 45 M.P.H. OR GREATER TWO-WAY UNDIVIDED ROAD OPEN TO TRAFFIC

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2017
DATE
FHWA

/S/ Andrew Heldtke
WORK ZONE PRE_38

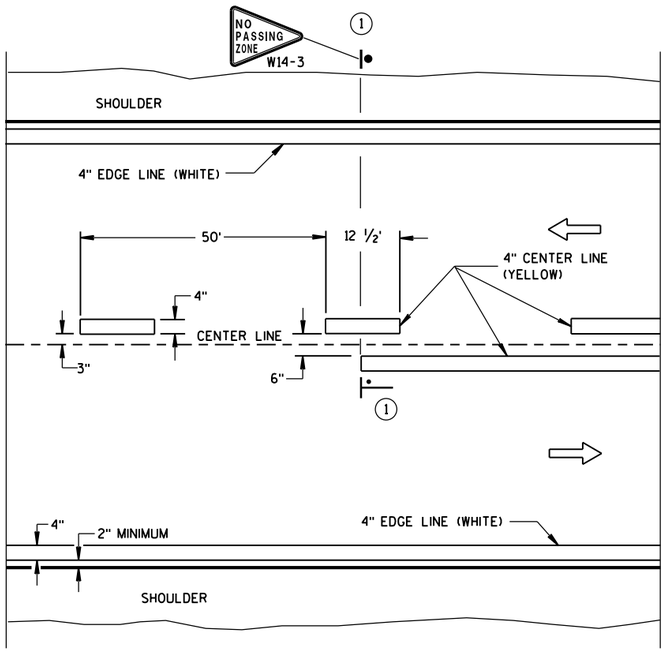
6

6

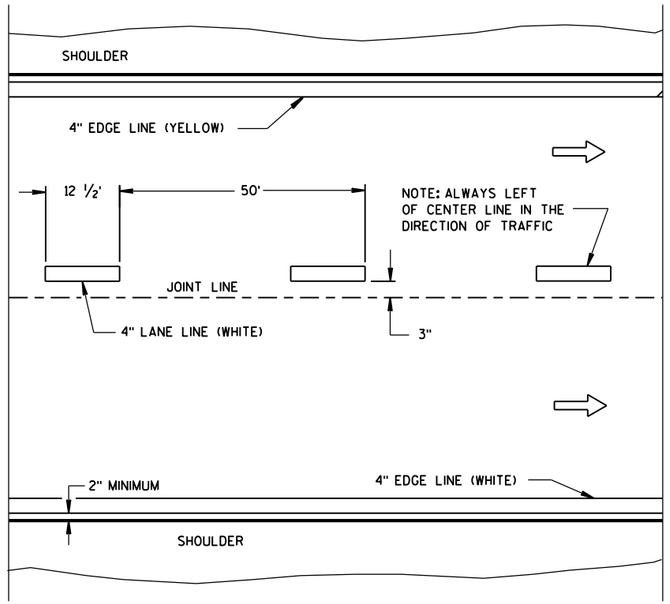
S.D.D. 15 C 4-4

S.D.D. 15 C 4-4

15C8 sheet a: Longitudinal Marking (Mainline)



TWO WAY TRAFFIC



ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING

GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO STANDARD SPECIFICATIONS AND SPECIAL PROVISIONS.

(1) LOCATE THE NO PASSING ZONE W14-3 SIGN WITHIN 50 FEET OF THE "T" MARKING.

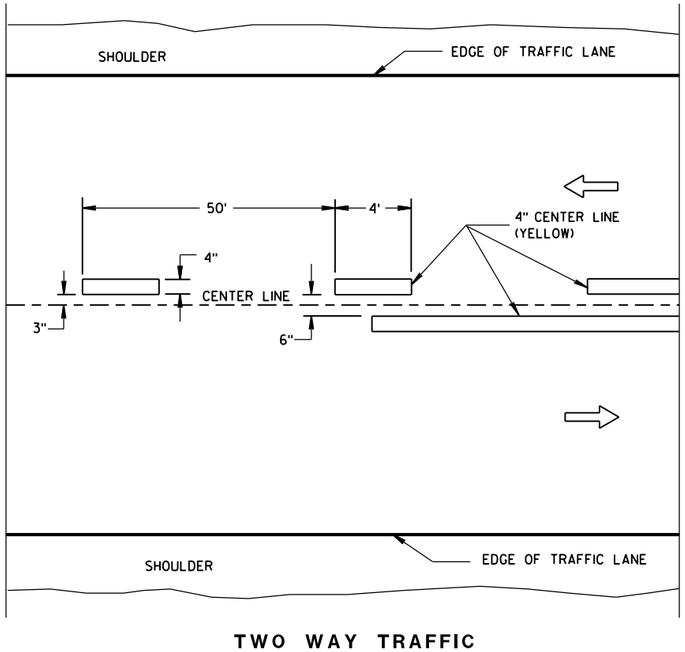
NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL

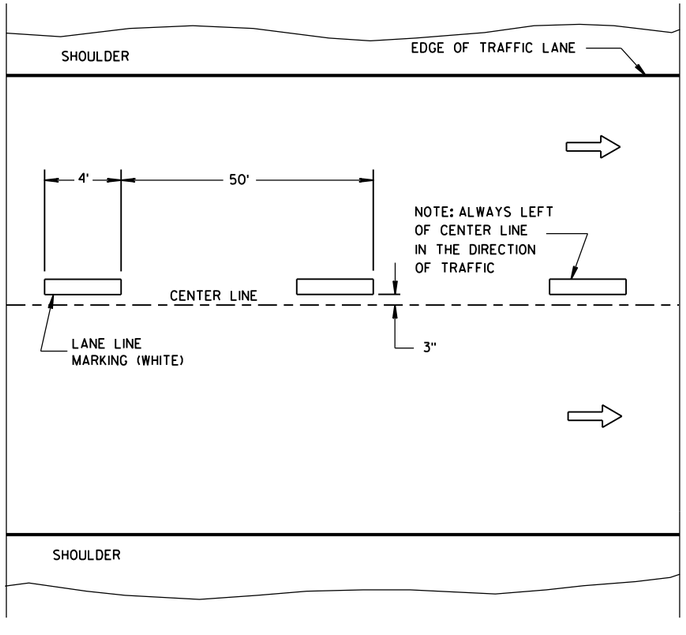
LEGEND

"T" MARKING

POST MOUNTED SIGN



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY PAVEMENT MARKING

LONGITUDINAL MARKING (MAINLINE)	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
June 2017 DATE	/S/ Matthew R. Rauch STATE SIGNING AND PRE_39 NEER
FHWA	

6

S.D.D. 15 C 8-18a

6

S.D.D. 15 C 8-18a

15C12: Traffic Control for Lane Closure with Flagging Operation

LEGEND

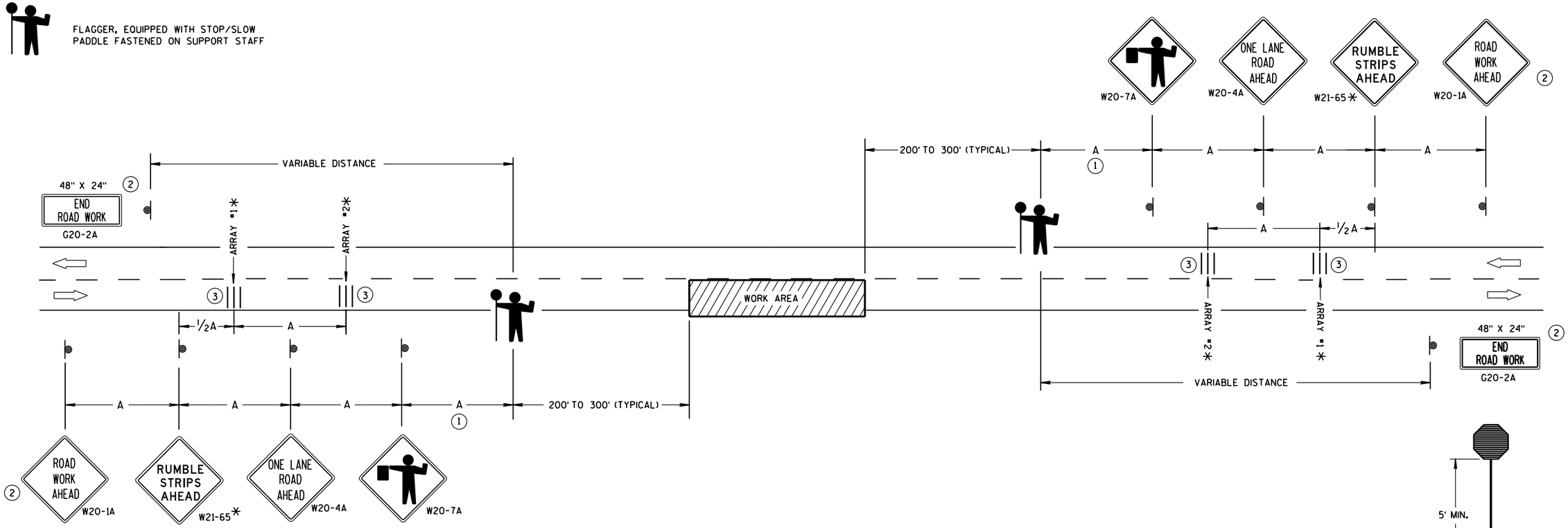
- SIGN ON PORTABLE OR PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- WORK AREA
- FLAGGER, EQUIPPED WITH STOP/SLOW PADDLE FASTENED ON SUPPORT STAFF

SIGN AND TEMPORARY RUMBLE STRIP ARRAY SPACING TABLE

SPEED LIMIT	SPACING A
25-35 MPH	200'
35-40 MPH	350'
45-55 MPH	500'

W03-4

USE OF THE "BE PREPARED TO STOP" SIGN IS OPTIONAL. WHEN USED, THIS SIGN SHALL BE LOCATED BETWEEN THE W20-7A AND W20-4A SIGNS, USING SPACING A.



TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STOP/SLOW PADDLE ON SUPPORT STAFF

GENERAL NOTES

DETAILS OF TRAFFIC CONTROL DEVICES AND INSTALLATION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS, AND THE MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES.

THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES (AND THE LOCATION OF ALL FLAGGERS) SHALL BE ADJUSTED TO FIT FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

THE FIRST ADVANCE WARNING SIGN SHOULD TYPICALLY BE LOCATED IN ADVANCE OF THE ANTICIPATED TRAFFIC BACKUP OR QUEUE.

"WO" SIGNS ARE THE SAME AS "W" SIGNS EXCEPT THE BACKGROUND IS ORANGE.

WHEN A SIDE ROAD OR RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, ADDITIONAL TRAFFIC CONTROLS SHALL BE PROVIDED AS SPECIFIED IN THE PLANS AND/OR THE SPECIAL PROVISIONS OR AS APPROVED BY THE ENGINEER.

INSTALL TEMPORARY RUMBLE STRIPS PER MANUFACTURER'S RECOMMENDATIONS.

PLACE ADVANCE SIGNING PRIOR TO INSTALLING TEMPORARY RUMBLE STRIPS.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE NOTED.

FLAGGERS SHALL BE IN SIGHT OF EACH OTHER OR IN DIRECT COMMUNICATION AT ALL TIMES. THEY SHALL BE EQUIPPED WITH STOP/SLOW PADDLES FASTENED ON SUPPORT STAFFS. WHEN THE FLAGGING OPERATION IS NOT IN EFFECT, REMOVE TEMPORARY RUMBLE STRIPS PRIOR TO COVERING OR REMOVING ALL ADVANCE SIGNING.

* UTILIZE TEMPORARY RUMBLE STRIPS WHEN FLAGGING OPERATION IS ANTICIPATED TO BE STATIONARY IN EXCESS OF TWO HOURS.

(1) FOR A MOVING WORK OPERATION, SIGNING AND TEMPORARY RUMBLE STRIPS (IF USED) SHALL BE REESTABLISHED (AS SIMULTANEOUSLY AS PRACTICAL) AT APPROXIMATELY 3,500 FOOT INTERVALS IN THE MOVING WORK OPERATION OR AS APPROVED BY THE ENGINEER.

(2) SIGN NOT REQUIRED IF FLAGGING OPERATION OCCURS WITHIN A SIGNED ROAD WORK ZONE AREA.

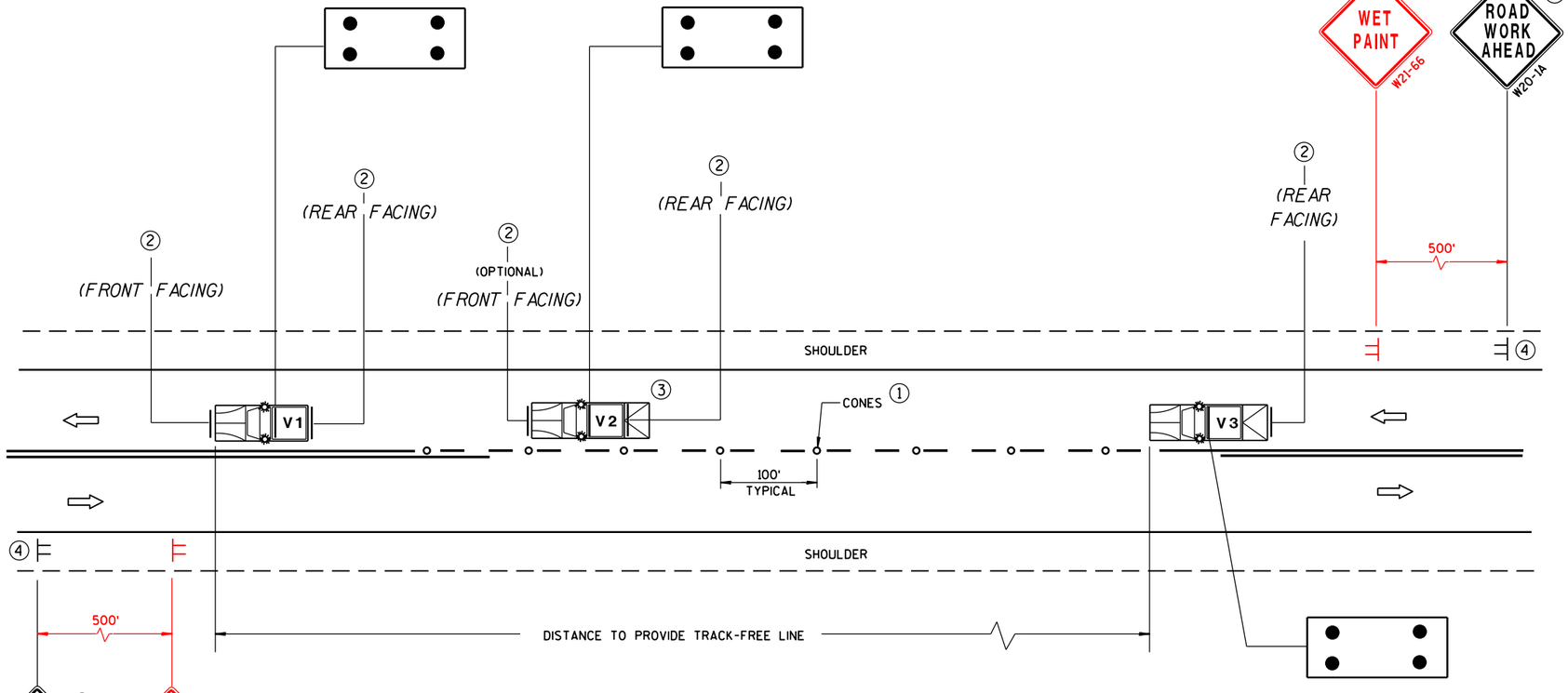
(3) EACH TEMPORARY RUMBLE STRIP ARRAY CONSISTS OF THREE RUMBLE STRIPS SPACED ACCORDING TO MANUFACTURER'S RECOMMENDATION, PLACED TRANSVERSE ACROSS THE LANE AT LOCATIONS SHOWN.

TRAFFIC CONTROL FOR LANE CLOSURE WITH FLAGGING OPERATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2017
DATE
/S/ Andrew Heldtke
WORK ZONE PRE_40
FHWA

15C19 sheet a: Moving Pavement Marking Operation - Two-Lane Two-Way Roadway



MOVING PAVEMENT MARKING OPERATIONS
TWO-LANE TWO-WAY ROADWAY

GENERAL NOTES

ALL VEHICLES SHALL BE EQUIPPED WITH TWO 360 DEGREE HIGH INTENSITY YELLOW FLASHING LIGHTS OR STROBE LIGHTS AND OPERATED WITH HEADLIGHTS TURNED ON.

VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL OPERATING IN CAUTION MODE. SIGNS PLACED ON VEHICLES MUST NOT OBSCURE THE ARROW PANEL.

ALL SIGNS ARE 48" X 48" UNLESS OTHERWISE SPECIFIED.

IF SPEED LIMIT IS 40 MPH OR LESS STATIONARY SIGNS MAY BE OMITTED IF CONES ARE USED.

ALTERNATE SIGN MESSAGES, SUCH AS "PAINT CREW AHEAD" OR "ROAD PAINTING AHEAD" MAY BE USED.

DISTANCE BETWEEN VEHICLES MAY VARY ACCORDING TO TERRAIN, SIGHT DISTANCE, PAINT DRYING TIME, AND OTHER FACTORS. WHENEVER ADEQUATE STOPPING SIGHT DISTANCE EXISTS TO THE REAR, SHADOW VEHICLES SHOULD MAINTAIN THE MINIMUM DISTANCE FROM THE WORK VEHICLE AND PROCEED AT THE SAME SPEED AS THE WORK VEHICLE. SHADOW VEHICLES SHOULD SLOW DOWN IN ADVANCE OF VERTICAL OR HORIZONTAL CURVES THAT RESTRICT SIGHT DISTANCE.

THE WORK AND SHADOW VEHICLES SHOULD PULL OVER PERIODICALLY TO ALLOW TRAFFIC TO PASS.

THIS DRAWING SHALL BE USED FOR CENTERLINE OR EDGELINE MARKING.

WHEN NO WORK ACTIVITY IS TAKING PLACE, REMOVE OR TURN THE STATIONARY WARNING SIGNS AWAY FROM TRAFFIC.

(1) CONES MAY BE OMITTED ON PAINTED LINE IF APPROVED BY THE ENGINEER. CONSIDER PAVEMENT MARKING DRY OR CURE TIMES AND TRAFFIC VOLUME.

(2) USE STANDARD SIGN W21-64 WITH APPROPRIATE ARROW.

WET PAINT W21-64 OR WET PAINT W21-64

(3) OPTIONAL TRUCK-MOUNTED ATTENUATOR.

(4) SIGNS SHALL BE REPEATED APPROXIMATELY EVERY THREE MILES.

(5) IF CONSTRUCTION WORK ZONE SIGNS ARE IN PLACE, W20-1 OR W21-63 ARE NOT REQUIRED.

LEGEND

V1	LEAD VEHICLE
V2	SHADOW VEHICLE
V3	TRAIL VEHICLE WITH TMA
TMA	TRUCK-MOUNTED ATTENUATOR
	SIGN ON TEMPORARY SUPPORT
	DIRECTION OF TRAFFIC
	CONES
	FLASHING ARROW PANEL (CAUTION)

MOVING PAVEMENT MARKING OPERATION
TWO-LANE TWO-WAY ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2017 — DATE
/S/ Andrew Heldtke — WORK ZONE PRE_41
FHWA

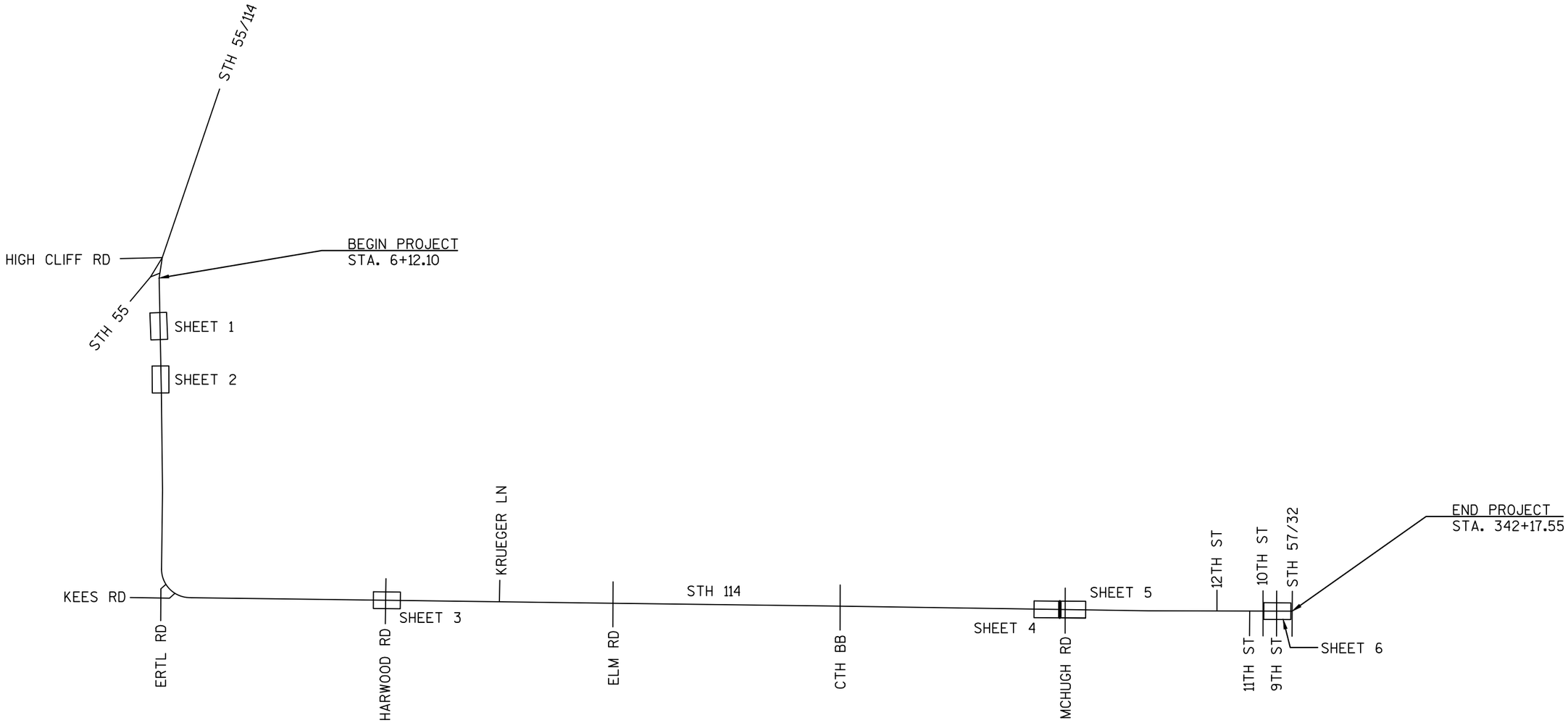
6

S.D.D. 15 C 19-5a

6

S.D.D. 15 C 19-5a

2



PROJECT NO: 4580-11-60	HWY: STH 114	COUNTY: CALUMET	IMPACTED UTILITIES OVERVIEW	SHEET E

FILE NAME : N:\PDS\C3D\45801130\SHEETSPLAN\021101-IDOVERVIEW.DWG
LAYOUT NAME - 021101-IDOVERVIEW - 020201-PO
PLOT DATE : 11/16/2017 7:36 AM PLOT BY : VICKMAN, GARRETT T PLOT NAME : PLOT SCALE : 1:0.06
WISDOT/CADDS SHEET 42

2

N

WELL

POST

GUY

GUY

WE ENERGIES
& SPECTRUM

WIDEN ASPHALTIC SHOULDER AT BEAM
GUARD TERMINALS (SEE CONSTRUCTION
DETAIL)

GRAVEL DRIVEWAY

TDS

TDS

SIGN

14

15

16

18

20

STH 114

STH 114

SAW CUT

SAW CUT

WIDEN ASPHALTIC SHOULDER AT BEAM
GUARD TERMINALS (SEE CONSTRUCTION
DETAIL)

ASPHALT DRIVEWAY

REMOVE EXISTING ASPHALTIC SHOULDER
GRADE SHOULDER AND PLACE 5-FOOT WIDE ASPHALTIC
SHOULDER 4-INCH DEPTH IN TWO LAYERS, TOP LAYER
INTEGRAL TO MAINLINE PAVEMENT
(SEE TYPICAL SECTIONS)

FIELD ENTRANCE

SHERWOOD
WATER

TDS

ADJUST BEAM GUARD
RT STA 15+35 - 17+39, STA 18+13 - 18+51
LT STA 15+93 - 18+36
REPAIR AND REPLACE BEAM GUARD POSTS,
RAIL, AND OTHER HARDWARE AS NEEDED

TDS

REMOVE EXISTING ASPHALTIC SHOULDER
GRADE SHOULDER AND PLACE 5-FOOT WIDE ASPHALTIC
SHOULDER 4-INCH DEPTH IN TWO LAYERS, TOP LAYER
INTEGRAL TO MAINLINE PAVEMENT
(SEE TYPICAL SECTIONS)

PROJECT NO: 4580-11-60	HWY: STH 441	COUNTY: CALUMET	IMPACTED UTILITIES	SHEET E

PRE_43

FILE NAME : N:\PDS\C3D\45801130\SHEETSPLAN\021101-ID.DWG
LAYOUT NAME - 021101-id
PLOT DATE : 3/15/2018 8:37 AM
PLOT BY : LANG, JOSHUA J
PLOT NAME :
PLOT SCALE : 1 IN:40 FT
WISDOT/CADDS SHEET 42

2

2

N

POST

POST

POST

SIGN

SIGN

SIGN POST

GUY

GRAVEL DRIVEWAY

ADJUST BEAM GUARD
RT STA 27+71 - 30+38
LT STA 27+91 - 29+18, STA 30+80 - 31+07
REPAIR AND REPLACE BEAM GUARD POSTS,
RAIL, AND OTHER HARDWARE AS NEEDED

TDS

WE ENERGIES
& SPECTRUM

PT: 30+40.34

WIDEN ASPHALTIC SHOULDER AT BEAM
GUARD TERMINALS (SEE CONSTRUCTION
DETAIL)

28

30

32

STH 114

SAW CUT

SAW CUT

STH 114

WIDEN ASPHALTIC SHOULDER AT BEAM
GUARD TERMINALS (SEE CONSTRUCTION
DETAIL)

TDS

GRAVEL DRIVEWAY

TDS

REMOVE EXISTING ASPHALTIC SHOULDER
GRADE SHOULDER AND PLACE 5-FOOT WIDE ASPHALTIC
SHOULDER 4-INCH DEPTH IN TWO LAYERS, TOP LAYER
INTEGRAL TO MAINLINE PAVEMENT
(SEE TYPICAL SECTIONS)

REMOVE EXISTING ASPHALTIC SHOULDER
GRADE SHOULDER AND PLACE 5-FOOT WIDE ASPHALTIC
SHOULDER 4-INCH DEPTH IN TWO LAYERS, TOP LAYER
INTEGRAL TO MAINLINE PAVEMENT
(SEE TYPICAL SECTIONS)

PROJECT NO: 4580-11-60	HWY: STH 441	COUNTY: CALUMET	IMPACTED UTILITIES	SHEET E

PRE_44

FILE NAME : N:\PDS\C3D\45801130\SHEETSPLAN\021101-ID.DWG
LAYOUT NAME - 021102-id

PLOT DATE : 3/15/2018 8:37 AM PLOT BY : LANG, JOSHUA J PLOT NAME : PLOT SCALE : 1 IN:40 FT

2

2

N

S HARWOOD RD

VERTICAL FACE REQUIRED

SAW CUTS REQUIRED
REMOVE AND REPLACE CURB & GUTTER
36-INCH SLOPED 6-INCH TYPE D
REMOVE AND REPLACE 2-FT EXISTING HMA ADJACENT TO CURB & GUTTER

PI: 35+00.00

PI: 35+00.00

36

34

128

130

132

134

STH 114

STH 114

SAW CUT

SAW CUT

GUY

GUY

OH

POST

WE ENERGIES
& SPECTRUM

VERTICAL FACE REQUIRED

WE ENERGIES

REMOVE EXISTING ASPHALTIC SHOULDER
GRADE SHOULDER AND PLACE 5-FOOT WIDE ASPHALTIC
SHOULDER 4-INCH DEPTH IN TWO LAYERS, TOP LAYER
INTEGRAL TO MAINLINE PAVEMENT
(SEE TYPICAL SECTIONS)

TDS

REMOVE EXISTING ASPHALTIC SHOULDER
GRADE SHOULDER AND PLACE 5-FOOT WIDE ASPHALTIC
SHOULDER 4-INCH DEPTH IN TWO LAYERS, TOP LAYER
INTEGRAL TO MAINLINE PAVEMENT
(SEE TYPICAL SECTIONS)

S HARWOOD RD

PROJECT NO: 4580-11-60	HWY: STH 441	COUNTY: CALUMET	IMPACTED UTILITIES	SHEET	E

PRE_45

2

N

288+10.00

REMOVE EXISTING ASPHALTIC SHOULDER
GRADE SHOULDER AND PLACE 5-FOOT WIDE ASPHALTIC SHOULDER 4-INCH DEPTH IN TWO LAYERS, TOP LAYER INTEGRAL TO MAINLINE PAVEMENT
(SEE TYPICAL SECTIONS)

WIDEN ASPHALTIC SHOULDER AT BEAM GUARD TERMINALS (SEE CONSTRUCTION DETAIL)

PI: 284+25.00

ADJUST BEAM GUARD
RT STA 284+15 - 285+05, STA 285+55 - 287+16
LT STA 283+36 - 283+81, STA 284+31 - 284+81, STA 285+81 - 286+61, STA 286+86 - 287+78
REPAIR AND REPLACE BEAM GUARD POSTS, RAIL, AND OTHER HARDWARE AS NEEDED

WIDEN ASPHALTIC SHOULDER AT BEAM GUARD TERMINALS (SEE CONSTRUCTION DETAIL)

284 **285** 286 288

SAW CUT

STH 114

SAW CUT

STH 114

WE ENERGIES
& SPECTRUM

OH OH OH OH OH OH OH OH OH OH OH OH OH OH

T T T T T T T T T T T T T T

TDS

FIELD ENTRANCE

2

PROJECT NO: 4580-11-60	HWY: STH 441	COUNTY: CALUMET	IMPACTED UTILITIES	SHEET E

2

2

N

MCHUGH RD

76

74

SEPV

SEPC

T

WELL

SIGN

VERTICAL FACE REQUIRED

WE ENERGIES

EP: 75+00.00

BP: 75+00.00

BP: 75+00.00

EP: 75+00.00

PI: 294+00.00

290

292

294

STH 114

STH 114

OH

OH

OH

OH

OH

OH

OH

OH

T

T

TDS

WE ENERGIES
& SPECTRUM

GRAVEL DRIVEWAY

SAW CUTS REQUIRED
REMOVE AND REPLACE CURB & GUTTER
36-INCH SLOPED 6-INCH TYPE D
REMOVE AND REPLACE 2-FT EXISTING HMA ADJACENT TO CURB & GUTTER

VERTICAL FACE REQUIRED

MCHUGH RD

288+10.00

PROJECT NO: 4580-11-60	HWY: STH 441	COUNTY: CALUMET	IMPACTED UTILITIES	SHEET	E

FILE NAME : N:\PDS\C3D\45801130\SHEETSPLAN\021101-ID.DWG
LAYOUT NAME - 021105-id

PLOT DATE : 3/15/2018 8:38 AM PLOT BY : LANG, JOSHUA J PLOT NAME : PLOT SCALE : 1 IN:40 FT

PRE_47

WISDOT/CADDS SHEET 42

2

2

N

MH

SS

HO

WE ENERGIES

SIGN

SIGN

POST

FRONTIER

FRONTIER

FLAG

INL

S 9TH ST

116

VERTICAL FACE REQUIRED

END PROJECT 4580-11-60
STA 342+17.55
N: 517992.371
E: 891150.747

ASPHALT DRIVEWAY

VERTICAL FACE REQUIRED

EP: 342+17.55

MH

6

338

115

340

342

STH 114

SAW CUT

STH 114

SAN

W

OH

WV

GUY

G

WE ENERGIES
& SPECTRUM

WPS

HILBERT WATER

HILBERT SAN

WE ENERGIES

MH

CONCRETE DRIVEWAY

GRAVEL DRIVEWAY

REMOVE ASPHALTIC PAVEMENT
PAVE 4 TO 6 INCHES HMA PAVEMENT 4 LT 58-28S
2-INCHES UPPER LAYER INTEGRALLY WITH MAINLINE PAVEMENT
2 to 4-INCHES LOWER LAYER
(SEE TYPICAL SECTIONS)

VERTICAL FACE REQUIRED

114

S 9TH ST

PROJECT NO: 4580-11-60	HWY: STH 441	COUNTY: CALUMET	IMPACTED UTILITIES	SHEET	E

PRE_48

WISCONSIN DEPARTMENT OF TRANSPORTATION

EPlans Preliminary Sheet Numbering Tool

This sheet: ftp://ftp.dot.state.wi.us/transp/roads/eplans/prelim_sheet_numbers.pdf

Notes

- Acrobat 5 or higher is required to use this tool.
- The Bureau of Highway Construction places sheet numbers in the final plan.
- This sheet is for placing preliminary sheet numbers with a “PRE_" prefix.
- If a plan contains multiple projects, number each plan individually.
- Leave this sheet in the plan.

TO ADD PRELIMINARY SHEET NUMBERS

1. Insert this sheet at the end of the plan

a. With the plan open in Acrobat, select Document > Insert Pages.
b. In the Select File to Insert dialog box, select this file (prelim_sheet_numbers.pdf)
c. In the Insert dialog box, choose After for Location and Last page for Page.
d. Click OK.

2. Click the Place Preliminary Sheet Numbers button

a. Go to the last sheet of the plan.
b. Click the Place Preliminary Sheet Numbers button once.
(The preliminary sheet number appears in the bottom right corner of the sheets.
The number should match te page number in the Acrobat Status bar).

3. Re-Save the PDF

a. Select File > Save As and save the PDF.

Place Preliminary Sheet Numbers

TO REMOVE PRELIMINARY SHEET NUMBERS

Remove