MAD JULY 2016

PROJECT ID: 1070-00-72, 73

COUNTY: MONROE, LA CROSSE

ORDER OF SHEETS

Section No.	1	Title
Section No.	2	Typical Sections and Details (Includes Erosion Control Plans)
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 = 546

STATE PROJECT	FEDERAL PROJECT	
	PROJECT	CONTRACT
1070-00-72	WISC 2016246	1
1070-00-73	WISC 2016247	1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

LA CROSSE - TOMAH ROAD

(WEST SALEM SAFETY & WEIGHT FACILITY #53)

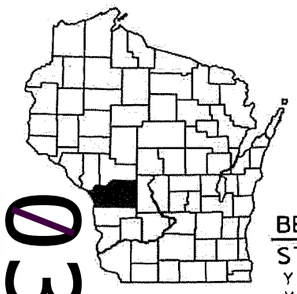
I.H. 90
LA CROSSE COUNTY

STATE PROJECT NUMBER
1070-00-73

(SPARTA SAFETY & WEIGHT FACILITY #54)

I.H. 90
MONROE COUNTY

STATE PROJECT NUMBER
1070-00-72

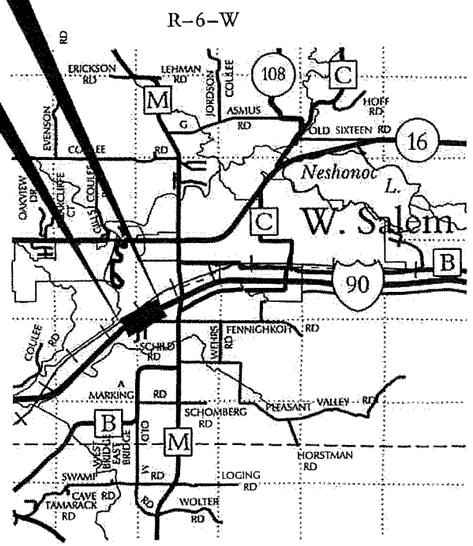


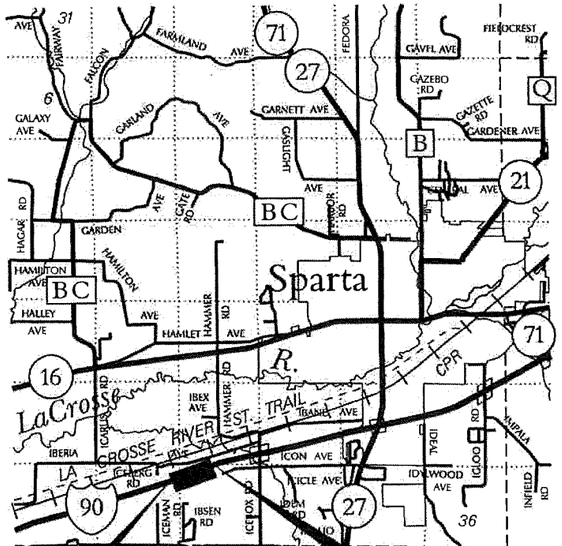
03

N

END PROJECT 1070-00-73
STA 544+39.17, 24' RT

BEGIN PROJECT 1070-00-73
STA 513+34.20, 24' RT
Y = 157835.2057
X = 481793.2232





BEGIN PROJECT 1070-00-72
STA 1203+46.35, 24' RT=
STA 1203+46.08R (RAMP R/L)
Y = 366778.9806
X = 608910.7055
LAYOUT
SCALE 0 1.0 MI.

END PROJECT 1070-00-72
STA 1266+24.14, 24' RT=
STA 1266+18.85R (RAMP R/L)

1070-00-72
Coordinates are referenced to the Wisconsin County Coordinate System (WCCS), Monroe County, NAD 83 (2007). Elevations on this plan are based on NAVD 88 (2007) Vertical Datum

1070-00-73
Coordinates are referenced to the Wisconsin County Coordinate System (WCCS), LaCrosse County, NAD 83 (2007). Elevations on this plan are based on NAVD 88 (2007) Vertical Datum

I.D. 1070-00-72 TOTAL NET LENGTH OF CENTERLINE = 0.000 MI.
I.D. 1070-00-73 TOTAL NET LENGTH OF CENTERLINE = 0.000 MI.

DESIGN DESIGNATION

		I.H. 90 (EB)	SPARTA SWEF #54
A.A.D.T. 2014	=	21,700	3,000
A.A.D.T. 2034	=	29,800	4,120
D.H.V.	=	4,530	630
D.D.	=	58/42	-
T.	=	23.8%	100%
DESIGN SPEED	=	70 MPH	30-70 MPH
ESALS	=	27,000,000	35,000,000

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
- 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

ORIGINAL PLANS PREPARED BY
KL Engineering
[A] Better Experience

WISCONSIN
AARON S. STEGER
36097-006
VERONA, WI
PROFESSIONAL ENGINEER

1/25/16 (Date)
(Signature)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PREPARED BY
- Surveyor: WISDOT / KL ENGINEERING, INC.
- Designer: KL ENGINEERING, INC.
- Project Manager: ROBERT SPOERL
- Regional Examiner:
- Regional Supervisor:
- C.O. Examiner:

APPROVED FOR THE DEPARTMENT
DATE: 1/25/16 (Signature)

E

FILE NAME : G:\WDOTCO\WDCO12014\DGN\010101_ti.dgn
PLOT DATE : 8/28/2014
PLOT BY : KL Engineering
PLOT NAME :
PLOT SCALE :
WISDOT/CADDS SHEET 10

ABBREVIATIONS

AC	ACRES
ASPH.	ASPHALT
BLDG.	BUILDING
BOC	BACK OF CURB
CABC	CRUSHED AGGREGATE BASE COURSE
C.E.	COMERCIAL ENTRANCE
CONC.	CONCRETE
CP	CULVERT PIPE
CPRC	CULVERT PIPE REINFORCED CONCRETE
CRCP	CONTINUOUS REINFORCED CONCRETE PAVEMENT
CSW	CONCRETE SIDEWALK
CTR	CENTER
E.C.I.P.	EROSION CONTROL IMPLEMENTATION PLAN
E.O.P.	EDGE OF PAVEMENT
ERW	EXISTING RIGHT-OF-WAY
F.E.	FIELD ENTRANCE
HE	HIGHWAY EASEMENT
HSE.	HOUSE
NOR.	NORMAL
P.E.	PRIVATE ENTRANCE
P.L.	PROPERTY LINE
PRW	PROPOSED RIGHT-OF-WAY
R	RADIUS
RCCP	REINFORCED CONCRETE CULVERT PIPE
RCPSS	REINFORCED CONCRETE PIPE STORM SEWER
RCHECP	REINFORCED CONCRETE HORIZONTAL ELLIPTICAL CULVERT PIPE
R/W	RIGHT-OF-WAY
S.D.	SPECIAL DITCH
S.D.D.	STANDARD DETAIL DRAWING
SHLDR.	SHOULDER
WIM	WEIGH-IN-MOTION
VWS	VIRTUAL WEIGH STATION

UTILITIES

ELECTRIC

KAYE CROOK
XCEL ENERGY
1003 S. BLACK RIVER STREET
SPARTA, WI 54656
(608) 789-3677 Ext. 14
kaye.m.crook@xcelenergy.com

GAS

KIM MOON
WE ENERGIES - GAS
(608) 366-2204
kim.moon@we-energies.com

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CENTURY LINK
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P.O. BOX 4800
LACROSSE, WI 54602
(608) 269-0819
brett.clark@centurylink.com

NETWORK

DICK HAMMETTER
WISCONSIN INDEPENDENT NETWORK
(715) 838-4406
hammetter@wins.net

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

ORDER OF DETAIL SHEETS

PROJECT OVERVIEW
TYPICAL SECTIONS
CONSTRUCTION DETAILS
REMOVAL PLAN
PLAN DETAILS
SITE OVERVIEW
BUILDING SITE PLAN/PLANTING PLAN
CROSS SECTION MATCHLINES
EROSION CONTROL PLAN
STORM SEWER PLAN
UTILITY SERVICE CONNECTION PLAN
PERMANENT SIGNING AND MARKING
LIGHTING PLAN
VIRTUAL WEIGH STATION PLANS
WEIGH-IN-MOTION SYSTEM PLANS
STATIC SCALE SYSTEM PLANS
COMMUNICATIONS TOWER DETAILS
BUILDING ARCHITECTURAL PLANS
TRAFFIC CONTROL AND STAGING PLAN
ALIGNMENT DETAIL
CONTROL POINT DETAIL
FENCING PLAN
SOIL BORING DETAIL

GENERAL NOTES

ALL RADII DIMENSIONS WITH OR WITHOUT CURB AND GUTTER ARE MEASURED TO THE EDGE OF PAVEMENT UNLESS OTHERWISE NOTED.

ALL GRADES PROVIDED ALONG RADII ARE ALONG EDGE OF PAVEMENT.

EXPANSION JOINTS TO BE CONSTRUCTED AT ALL RADII POINTS IN THE CURB AND GUTTER.

THE LOCATION OF EXISTING AND PROPOSED UTILITIES INSTALLATION AS SHOWN THE PLANS, ARE APPROXIMATE. THERE MAY BE OTHER UTILITY INSTALLATIONS WITHIN THE PROJECT AREA THAT ARE NOT SHOWN.

MISCELLANEOUS REMOVAL ITEMS REQUIRING RESTORATION OF CONCRETE OR ASPHALT SHALL BE REMOVED TO AN EXISTING JOINT OR SAWED AS DETERMINED BY THE ENGINEER.

CONTRACTOR SHALL EXERCISE EXTREME CARE SO AS NOT TO DAMAGE MAINLINE PAVEMENT STRUCTURE WHEN REMOVING EXISTING SHOULDER MATERIAL. IF DAMAGE OCCURS DURING REMOVAL OF THE EXISTING SHOULDER MATERIAL, ALL REPAIRS WILL BE DONE AT THE CONTRACTORS EXPENSE.

EROSION CONTROL FEATURES AS SHOWN IN THE PLANS ARE AT SUGGESTED LOCATIONS. THE ENGINEER MAY MODIFY LOCATIONS AS NEEDED. ALL EROSION CONTROL MEASURES SHALL BE MAINTAINED UNTIL SUCH TIME AS THE ENGINEER DETERMINES THE MEASURE IS NO LONGER NECESSARY.

NO TREES AND/OR SHRUBS ARE TO BE REMOVED WITHOUT THE APPROVAL OF THE ENGINEER.

PIPE ELEVATIONS, LENGTHS, AND LOCATIONS AS SHOWN ON THE PLANS, MAY BE ADJUSTED TO FIT EXISTING FIELD CONDITIONS AS APPROVED BY THE ENGINEER.

ALL CONCRETE PIPE SHALL HAVE THE APRON ENDWALL AND THE FIRST TWO PIPE JOINTS TIED AT THE JOINTS (3 JOINTS TOTAL). JOINT TIES SHALL BE INCIDENTAL TO THE PIPE ITEM.

DISTURBED AREA WITHIN THE RIGHT-OF-WAY, EXCEPT THE AREAS WITHIN THE FINISHED SHOULDER POINTS, SHALL BE FERTILIZED, SEEDED, AND MULCHED, WITHIN TEN DAYS AFTER TOPSOIL PLACEMENT. SUBGRADE SLOPES SHALL BE TOPSOILED AS WORK PROGRESSES.

WHEN THE QUANTITY OF THE ITEMS OF BASE OR SURFACE COURSE IS MEASURED BY THE TON, THE DEPTH OR THICKNESS OF THE COURSE SHOWN ON THE PLANS IS APPROXIMATE, AND THE ACTUAL THICKNESS WILL DEPEND ON THE DISTRIBUTION OF THE MATERIAL AS DIRECTED BY THE ENGINEER.

HMA PAVEMENT, WHEN INDICATED ON THE PLANS, SHALL CONSIST OF COURSES AS FOLLOWS UNLESS OTHERWISE NOTED ON THE PLANS.

5" TOTAL DEPTH (SHOULDERS)	TYPE	NOMINAL MAX SIZE GRADATION
2 1/2" LOWER	3 LT 58-28S	19.0 mm
2 1/2" UPPER	4 LT 58-28S	12.5 mm
6" TOTAL DEPTH (WEST SALEM SWEF SHOULDERS)		
2 1/2" LOWER	3 LT 58-28S	19.0 mm
2 1/2" UPPER	4 LT 58-28S	12.5 mm

DNR LIAISON

WIS. DNR
KAREN KALVELAGE
3550 MORMON COULEE ROAD
La CROSSE, WI. 54601
(608) 785-9115

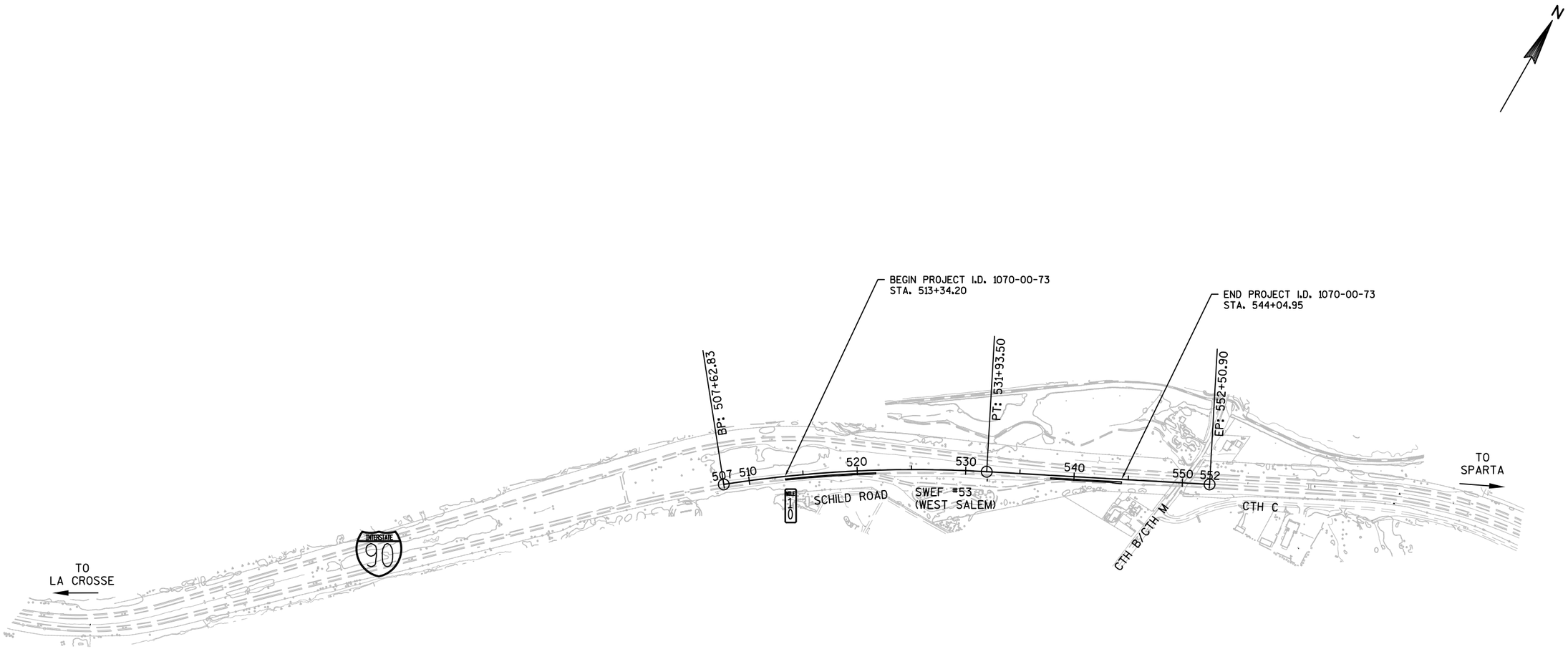
DESIGN CONTACT

AARON STEGER, P.E.
KL ENGINEERING, INC.
5950 SEMINOLE CENTRE CT
SUITE 200
MADISON, WI 53711
(608) 663-1218

WISDOT CONTACT

ROBERT SPOERL, P.E.
BUREAU OF HIGHWAY MAINTENANCE
4802 SHEBOYGAN AVENUE, ROOM 501
P.O. BOX 7986
MADISON, WI 53707
(608) 266-8665

2

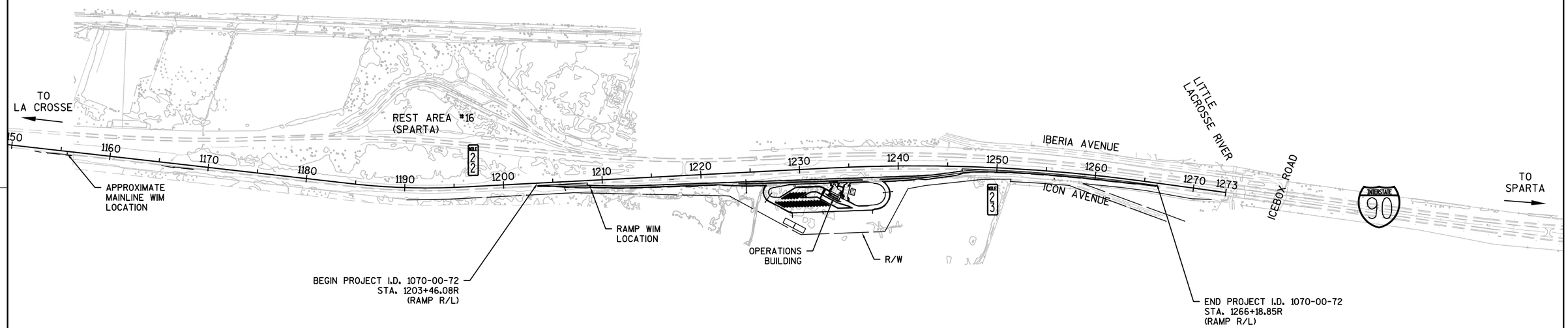


PROJECT NO:1070-00-73	HWY:IH 90	COUNTY:LA CROSSE	PROJECT OVERVIEW (WEST SALEM SWEF #53)	SHEET 3	E

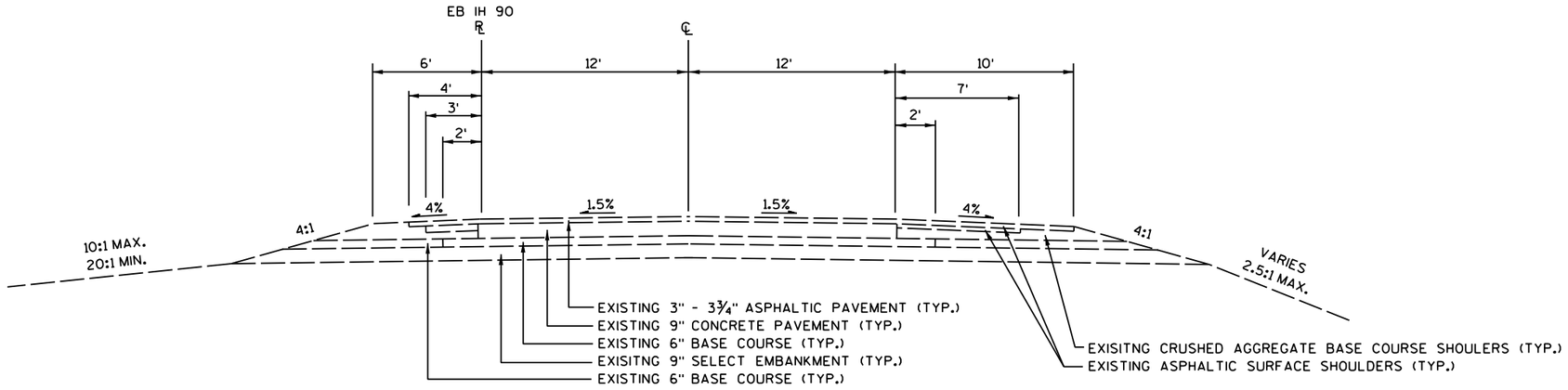
2

VIRTUAL WEIGH STATION
(LOCATED ALONG STH 16 BETWEEN
STH 162 AND CTH E NORTH OF BANGOR)

N

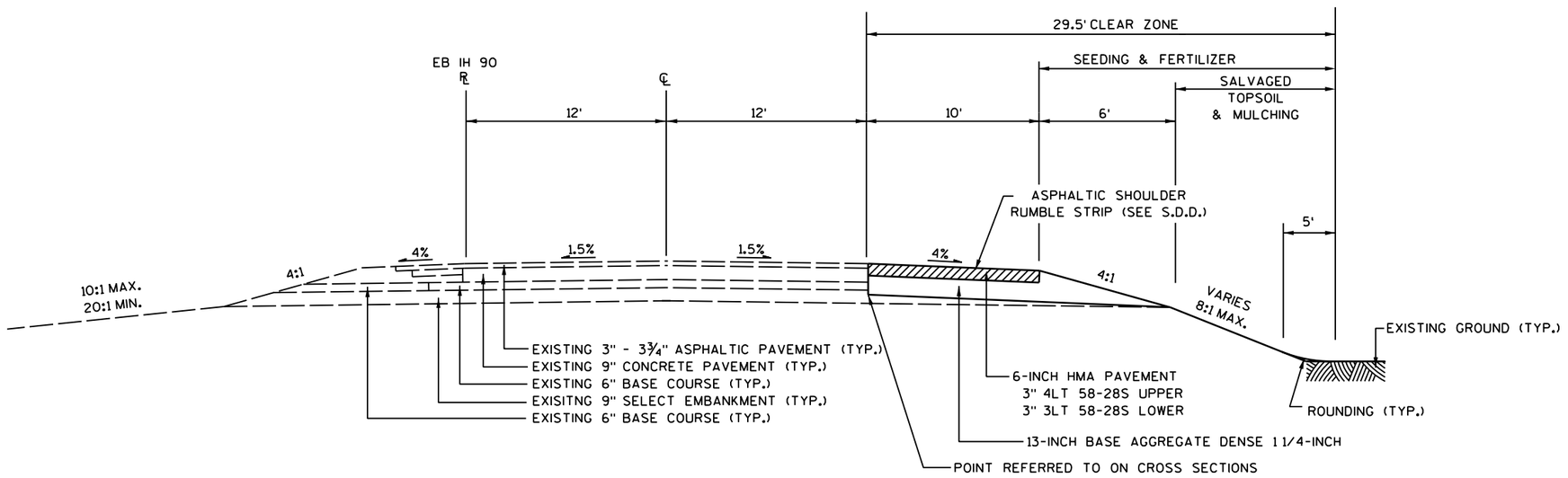


PROJECT NO:1070-00-72	HWY:IH 90	COUNTY:MONROE	PROJECT OVERVIEW (SPARTA SWEF #54)	SHEET 4	E



EXISTING TYPICAL SECTION, IH 90

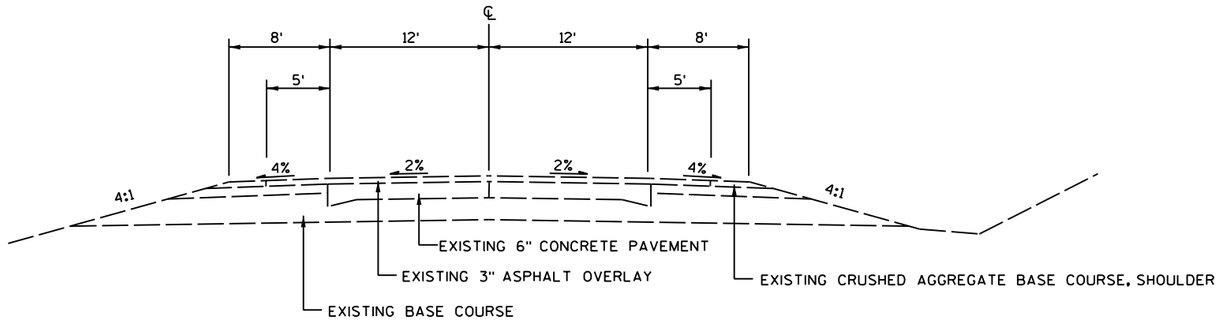
STA. 513+34.19 - STA. 542+59.26



PROPOSED TYPICAL SECTION, IH 90

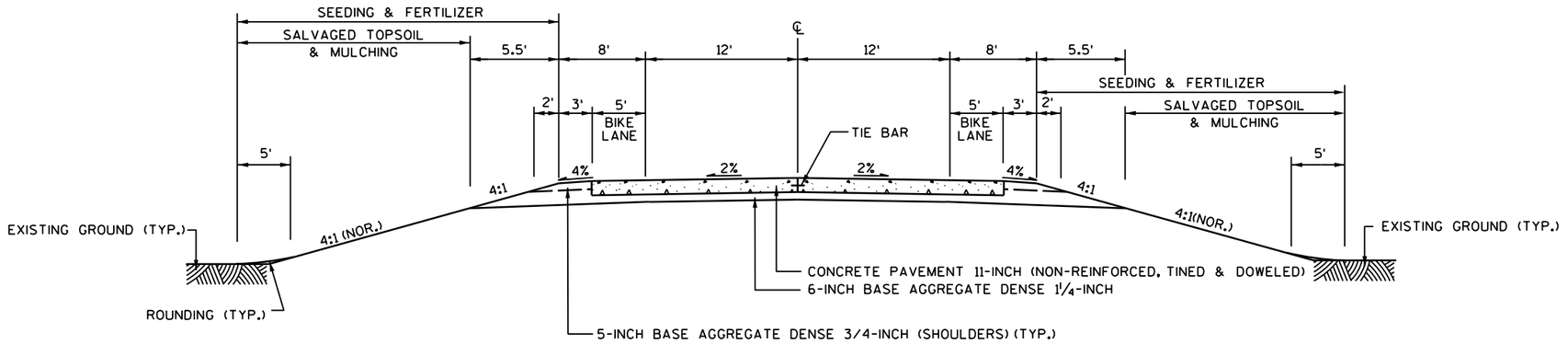
STA. 513+34.19 - STA. 521+70.05
STA. 527+86.13 - STA. 542+59.26

PROJECT NO: 1070-00-73	HWY: IH 90	COUNTY: LA CROSSE	TYPICAL SECTIONS (WEST SALEM SWEF #54)	SHEET 5	E



EXISTING TYPICAL SECTION, STH 16

STA. 827+30.50 - STA. 830+50.50

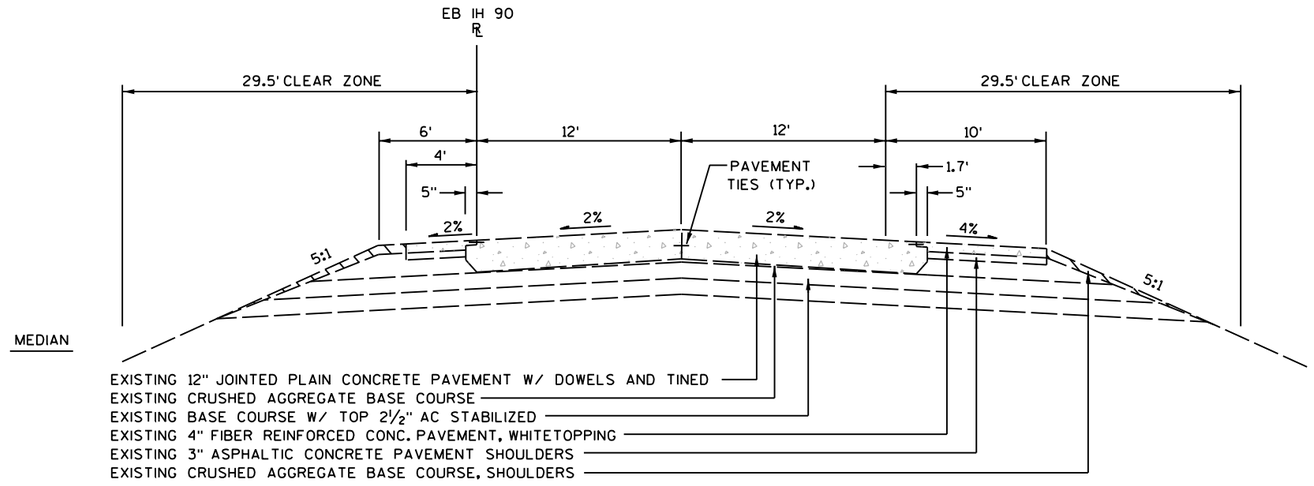


PROPOSED TYPICAL SECTION, STH 16

STA. 827+30.50 - STA. 830+50.50

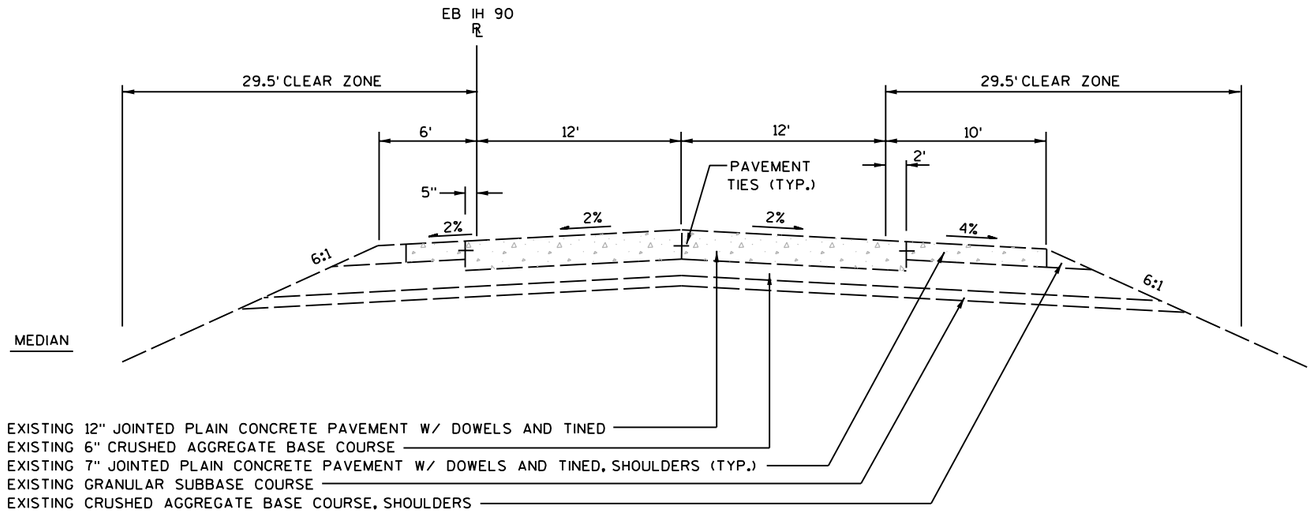
NOTE: PROPOSED GRADES TO MATCH EXISTING GRADES.
CROSS SECTIONS NOT PROVIDED.

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS (SPARTA SWEF #54)	SHEET 6	E



EXISTING TYPICAL SECTION, IH 90

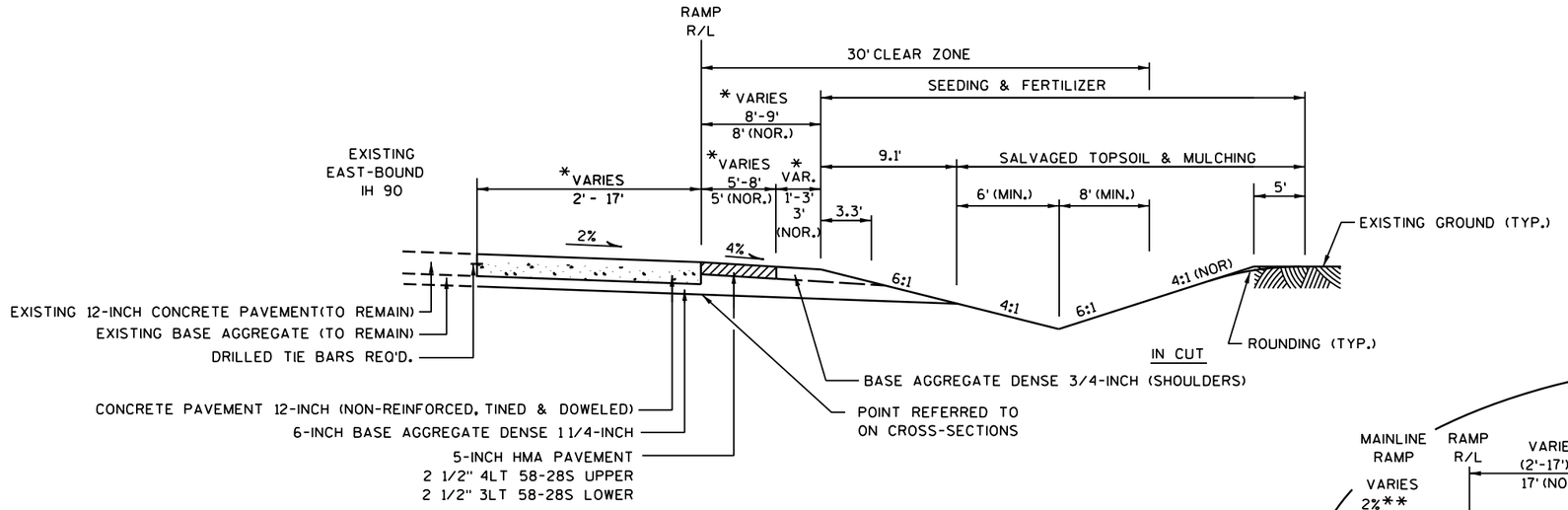
STA. 1145+00 - STA. 1262+00



EXISTING TYPICAL SECTION, IH 90

STA. 1262+00 - STA. 1273+18.85

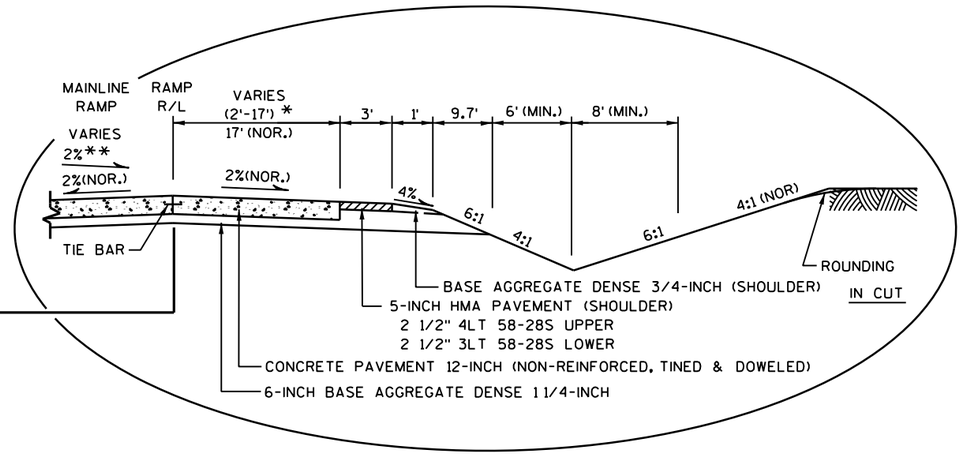
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS (SPARTA SWEF #53)	SHEET 7	E



TYPICAL FINISHED SECTION, MAINLINE RAMP TAPER

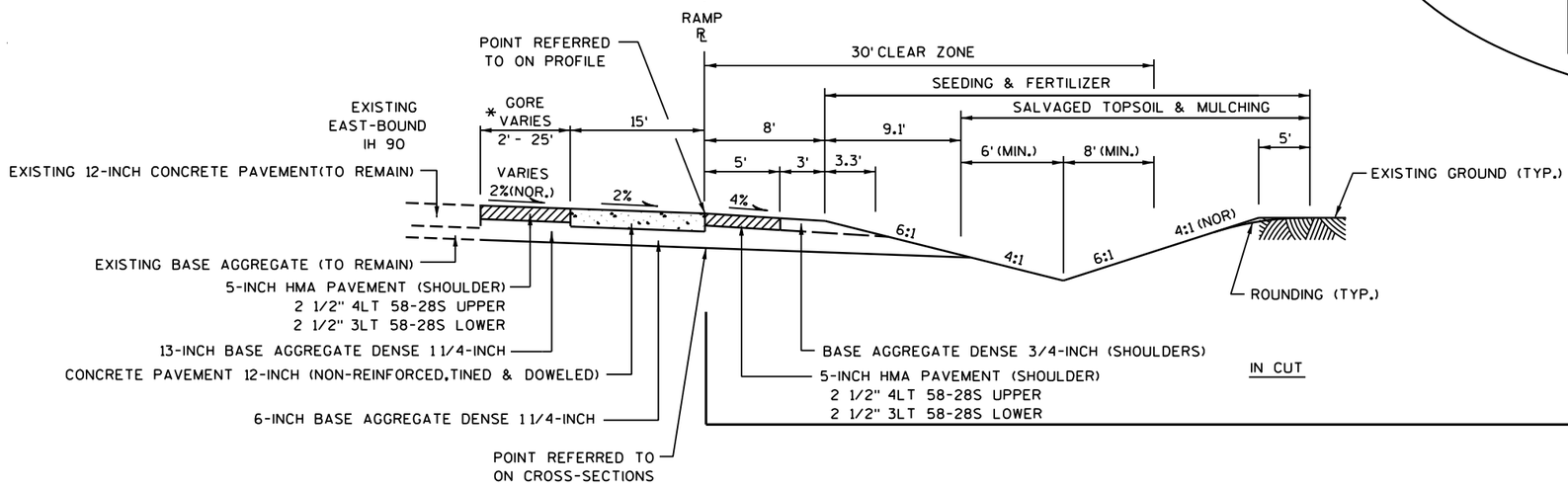
STA 1203+46.08R - STA 1205+58.09R
STA 1249+09.01R - STA 1266+18.85R

* SEE PLAN DETAILS FOR LOCATIONS



OSOW STAGING/HAZARDOUS MATERIAL PARKING AREA

STA 1246+46.70R - STA 1246+58.23R



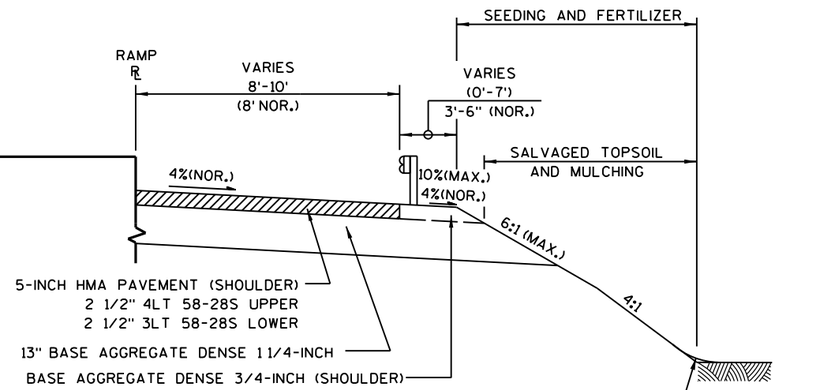
TYPICAL FINISHED SECTION, MAINLINE RAMPS

STA 1205+58.09R - STA 1208+48.31R
STA 1246+46.70R - STA 1249+09.01R

* SEE PLAN DETAILS FOR LOCATIONS

OSOW STAGING/HAZARDOUS MATERIAL PARKING AREA

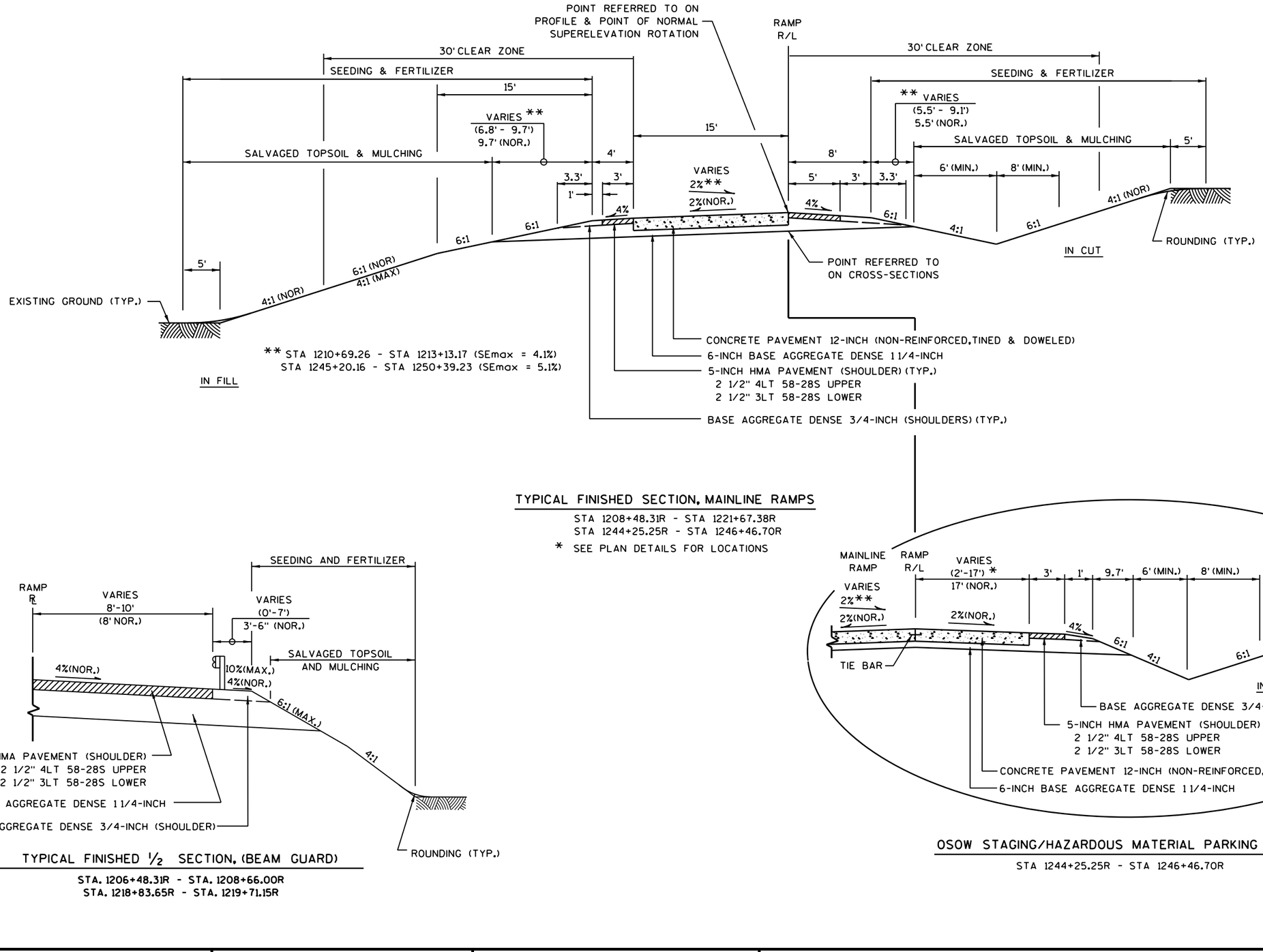
STA 1246+46.70R - STA 1246+58.23R



BEAM GUARD

STA. 1206+82R - STA. 1208+48.31R

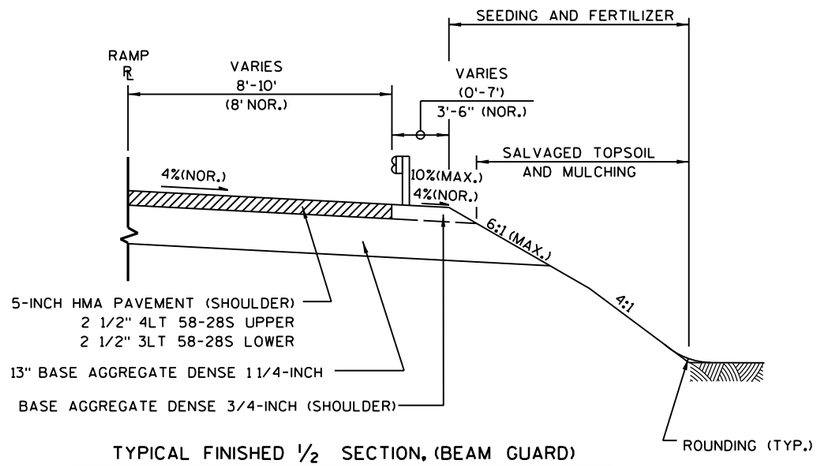
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS (SPARTA, SWEF #54)	SHEET 8	E



TYPICAL FINISHED SECTION, MAINLINE RAMPS

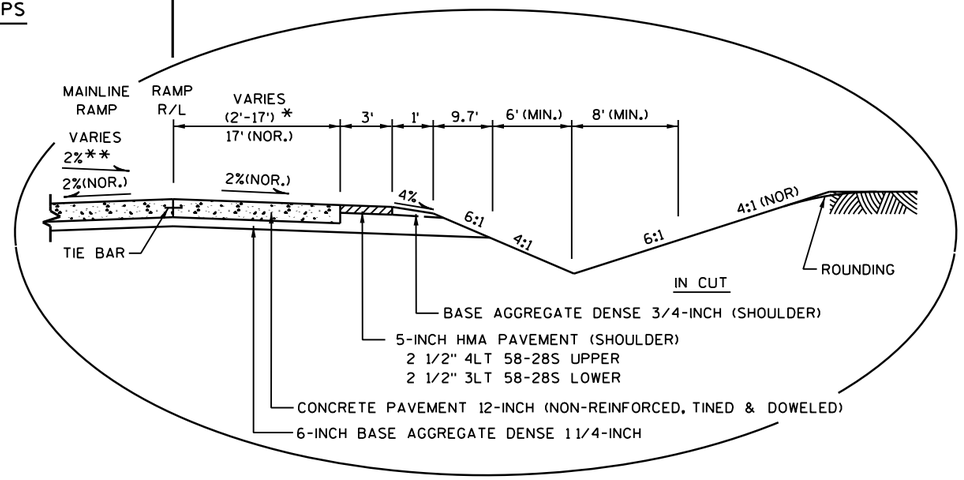
STA 1208+48.31R - STA 1221+67.38R
STA 1244+25.25R - STA 1246+46.70R

* SEE PLAN DETAILS FOR LOCATIONS



TYPICAL FINISHED 1/2 SECTION, (BEAM GUARD)

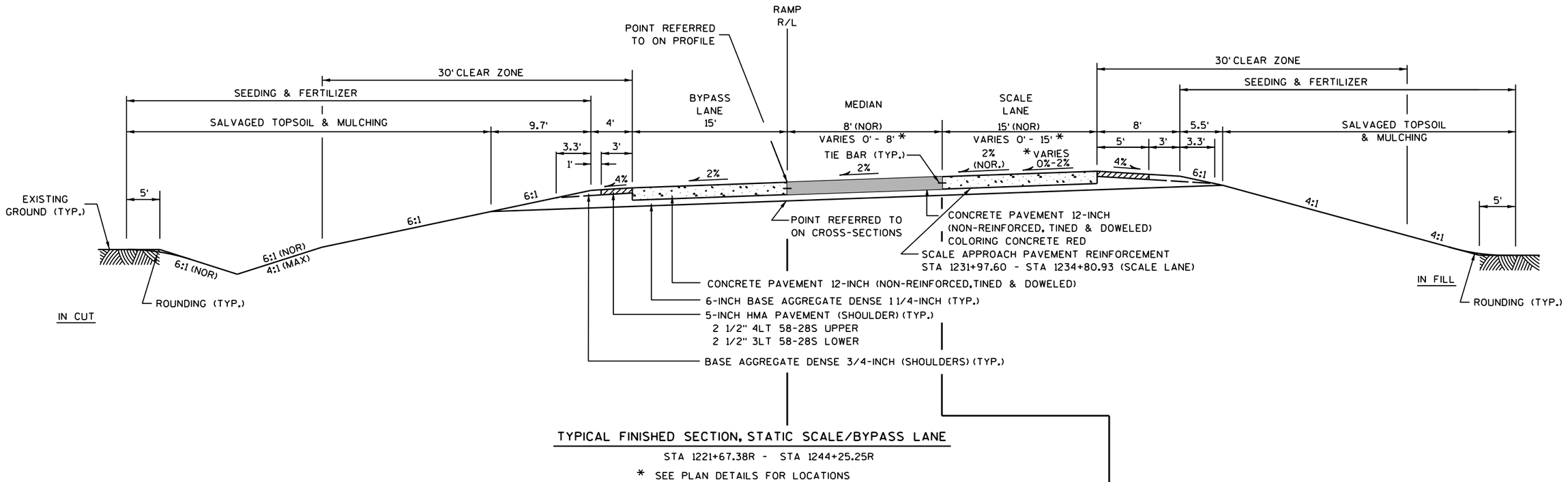
STA. 1206+48.31R - STA. 1208+66.00R
STA. 1218+83.65R - STA. 1219+71.15R



OSOW STAGING/HAZARDOUS MATERIAL PARKING AREA

STA 1244+25.25R - STA 1246+46.70R

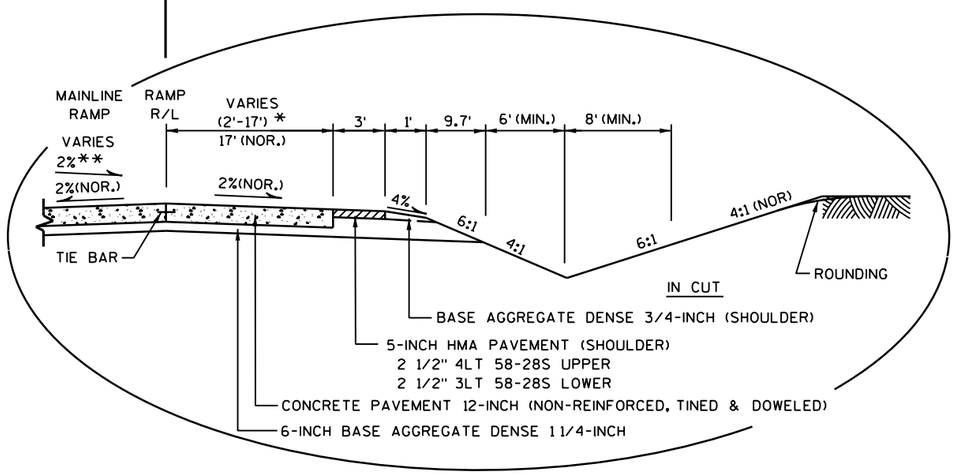
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS (SPARTA, SWEF #54)	SHEET 9	E



TYPICAL FINISHED SECTION, STATIC SCALE/BYPASS LANE

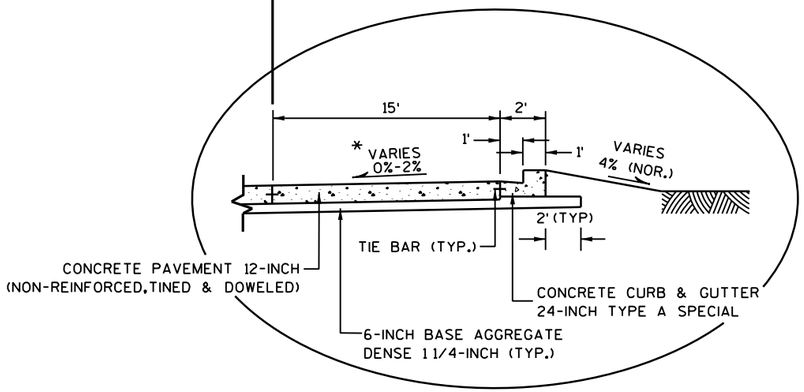
STA 1221+67.38R - STA 1244+25.25R

* SEE PLAN DETAILS FOR LOCATIONS



OSOW STAGING/HAZARDOUS MATERIAL PARKING AREA

STA 1241+99.02R - STA 1244+25.25R

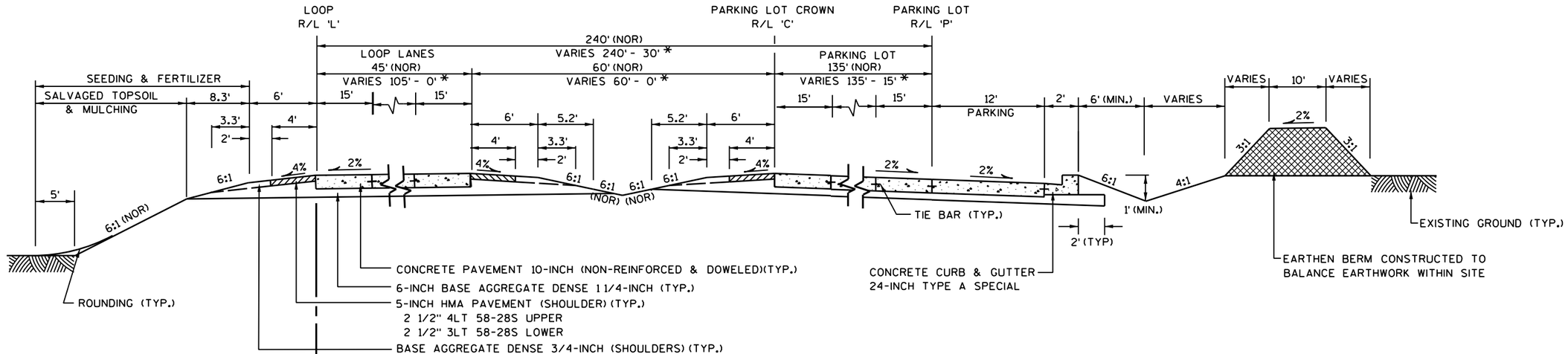


STATIC SCALE LANE WITH CURB & GUTTER

STA 1229+66R - STA 1234+99R

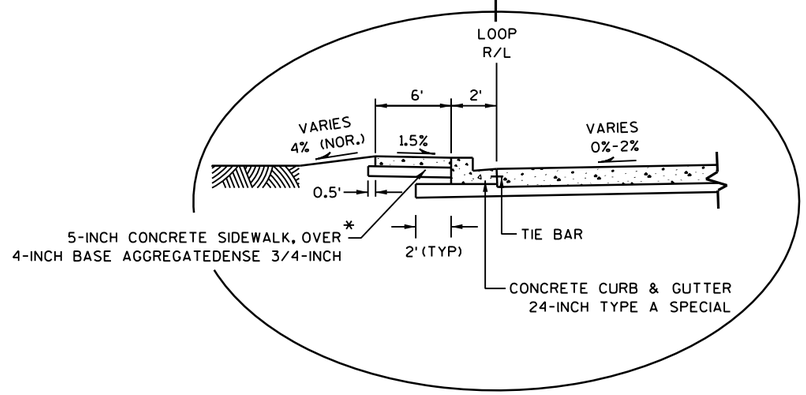
* SEE PLAN DETAILS FOR LOCATIONS

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS (SPARTA, SWEF #54)	SHEET 10	E



TYPICAL FINISHED SECTION, PARKING LOT

STA. 4228+43.29P - STA. 4238+00P
* SEE PLAN DETAILS FOR LOCATIONS

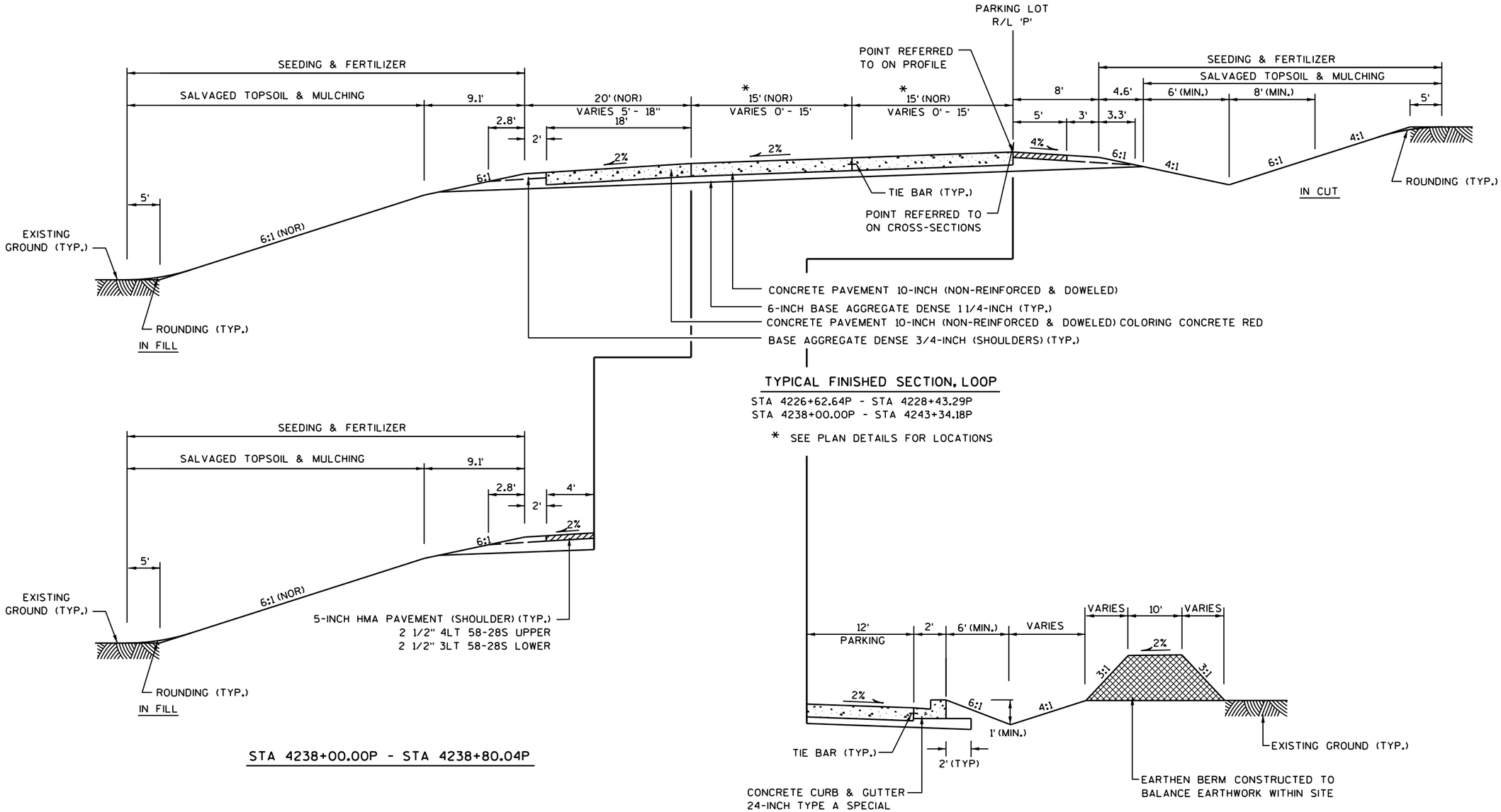


PARKING LOT WITH CURB & GUTTER

STA 3229+96.53L - STA 3233+46.57L
STA 3234+60.57L - STA 3234+94.38L

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS (SPARTA, SWEF #54)	SHEET 11	E

2



TYPICAL FINISHED SECTION, LOOP

STA 4226+62.64P - STA 4228+43.29P
STA 4238+00.00P - STA 4243+34.18P

* SEE PLAN DETAILS FOR LOCATIONS

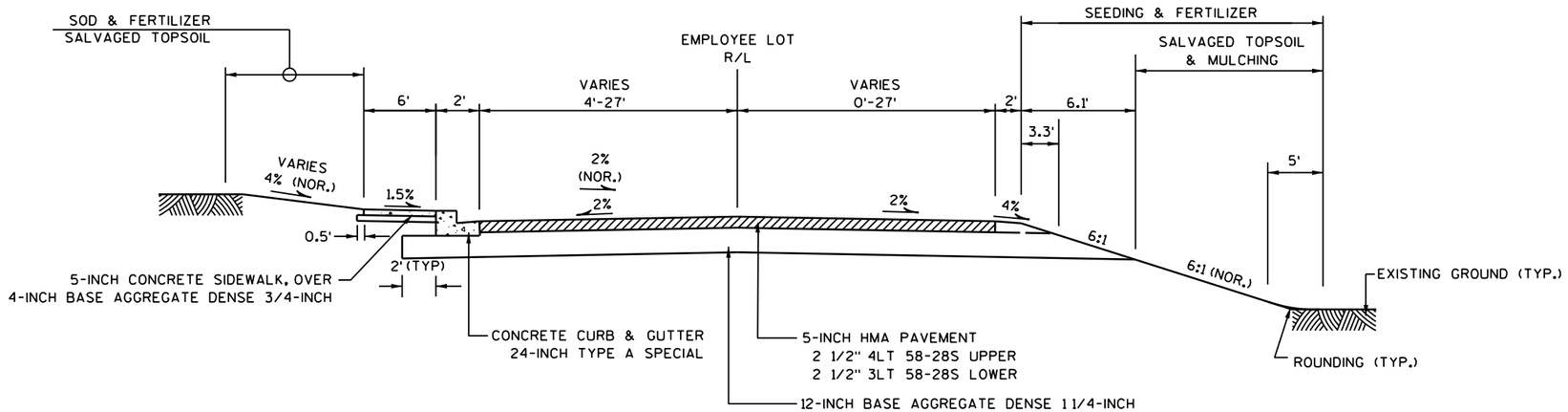
STA 4238+00.00P - STA 4238+80.04P

CURB & GUTTER

STA 4238+00.00P - STA 4239+14.27P

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS (SPARTA, SWEF #54)	SHEET 12	E

2



TYPICAL FINISHED SECTION, EMPLOYEE LOT

STA 7235+50.38E - STA 7237+69.45E

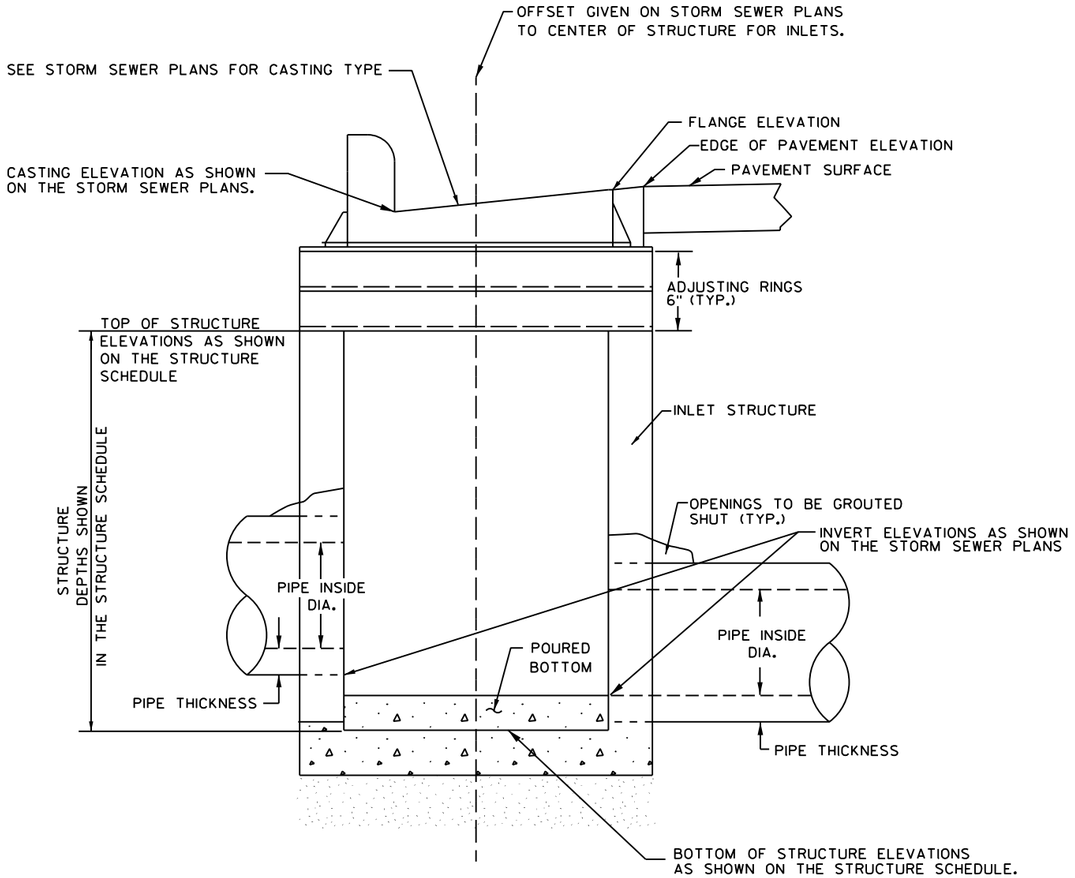
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	TYPICAL SECTIONS (SPARTA, SWEF #54)	SHEET 13	E

2

GENERAL NOTES:

GRANULAR BACKFILL REQUIRED AROUND INLET
(INCIDENTAL TO CONSTRUCTION OF INLET)

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, APPLICABLE SPECIAL PROVISIONS, AND S.D.D. FOR INLETS.

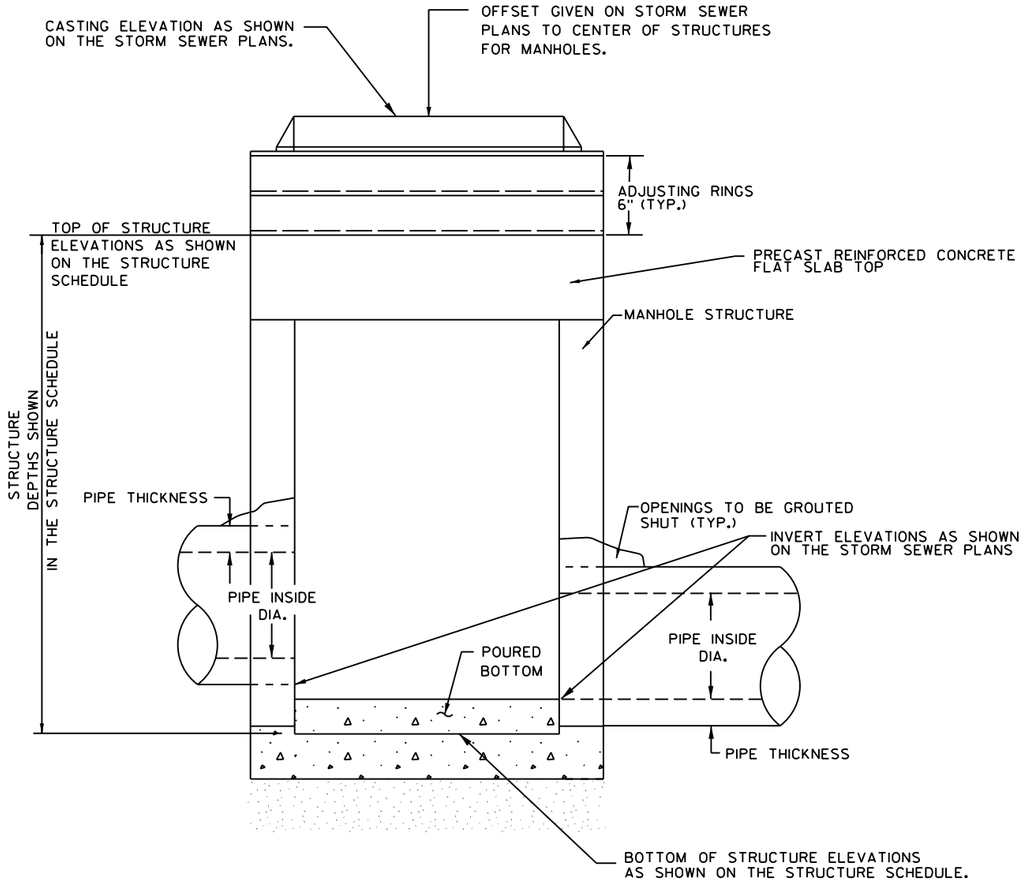


INLET W/CASTING DETAIL

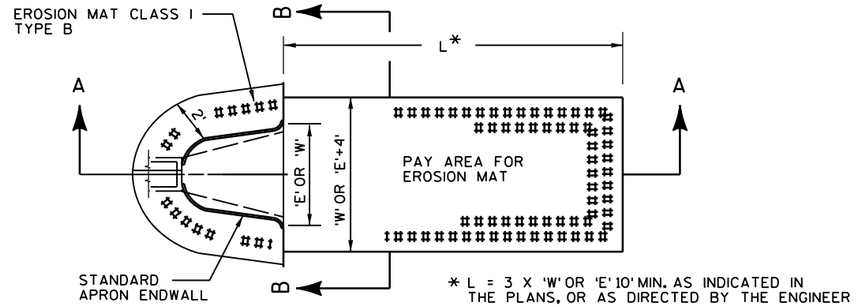
GENERAL NOTES:

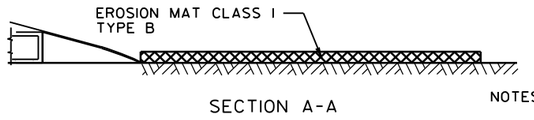
GRANULAR BACKFILL REQUIRED AROUND MANHOLE
(INCIDENTAL TO CONSTRUCTION OF MANHOLE)

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, APPLICABLE SPECIAL PROVISIONS, AND S.D.D. FOR MANHOLES.



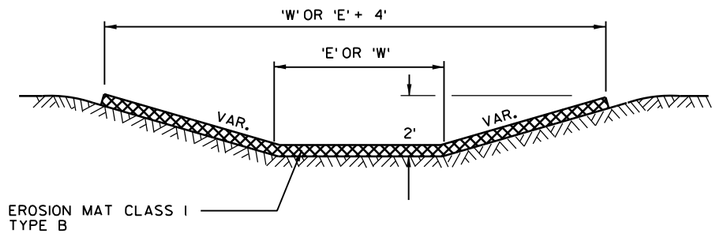
MANHOLE W/CASTING DETAIL





SECTION A-A

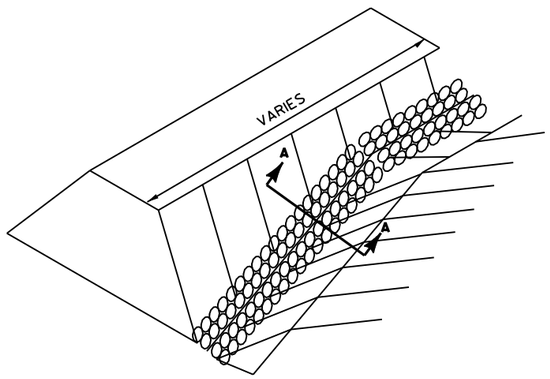
NOTES: REFER TO S.D.D. FOR 'E' OR 'W' DIMENSIONS

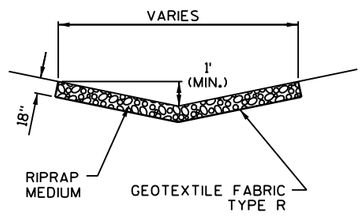


SECTION B-B

EROSION MAT TREATMENT AT PIPE ENDWALL

SEE EROSION CONTROL PLAN FOR LOCATIONS

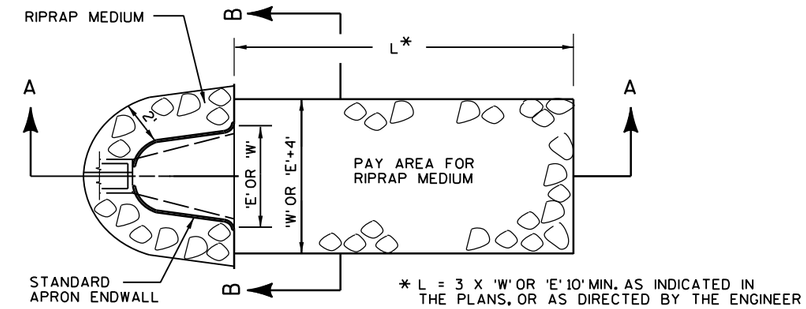


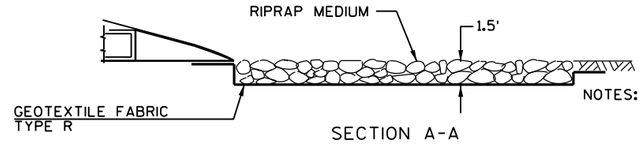


SECTION A-A

RIPRAP MEDIUM AND GEOTEXTILE FABRIC TYPE R AT CUT TO FILL TRANSITION

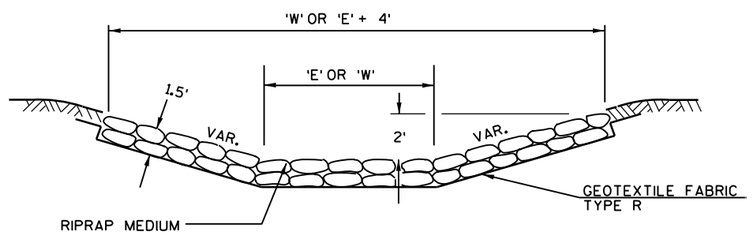
SEE EROSION CONTROL PLAN FOR LOCATIONS





SECTION A-A

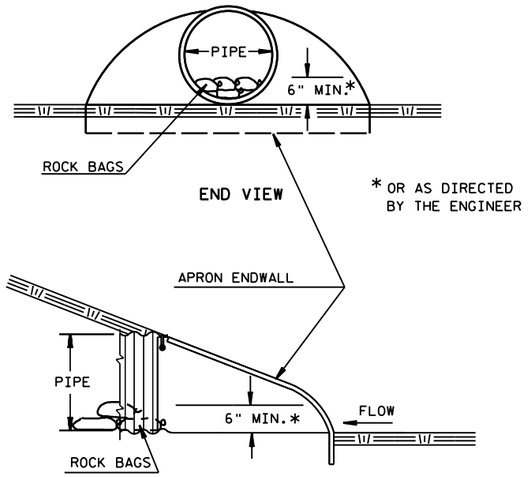
NOTES: REFER TO S.D.D. FOR 'E' OR 'W' DIMENSIONS



SECTION B-B

RIPRAP TREATMENT AT PIPE ENDWALL

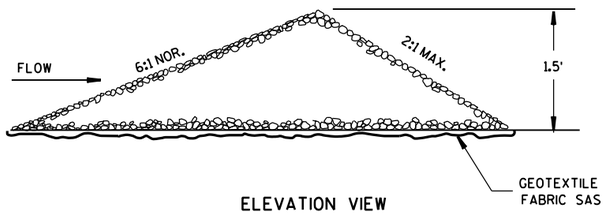
SEE EROSION CONTROL PLAN FOR LOCATIONS

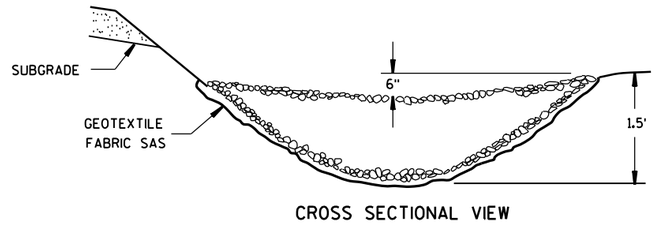


NOTE:
TO BE PLACED AT INLET END OF CULVERT PIPE.

CULVERT PIPE CHECK

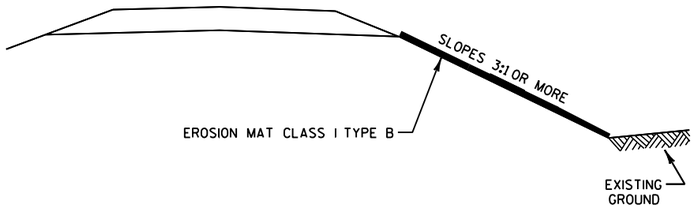
SEE EROSION CONTROL PLAN FOR LOCATIONS





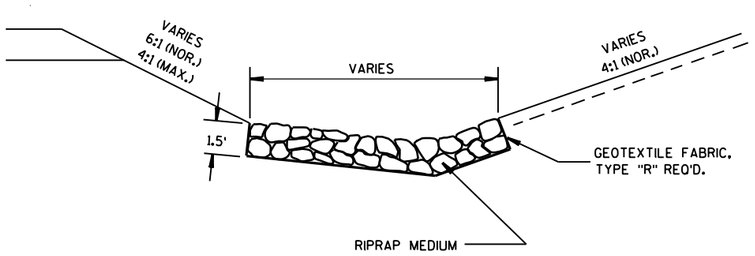
STONE OR ROCK DITCH CHECK DETAIL

SEE EROSION CONTROL PLAN FOR LOCATIONS



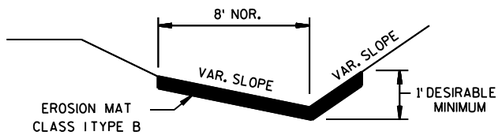
EROSION MAT DETAIL FOR SLOPES

(SEE EROSION CONTROL PLAN FOR LOCATIONS)
NOT TO SCALE



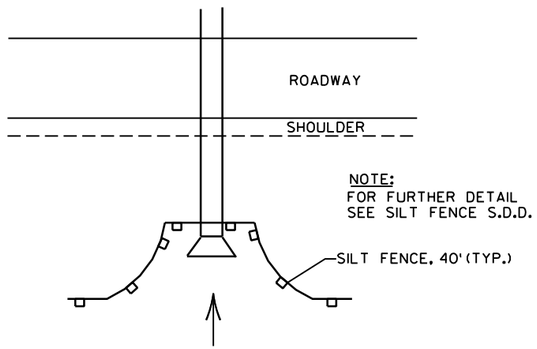
RIPRAP IN DITCH DETAIL

SEE EROSION CONTROL PLAN FOR LOCATIONS



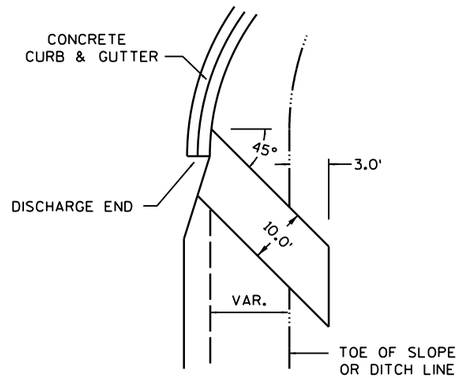
EROSION MAT DETAIL FOR DITCHES

SEE EROSION CONTROL PLAN FOR LOCATIONS
(REQ'D. IN ALL DITCHES)



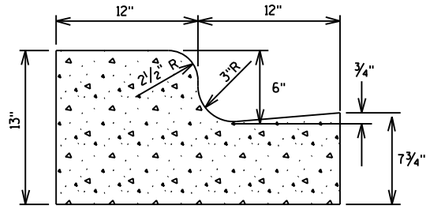
SILT FENCE AT PIPE INLET

SEE EROSION CONTROL PLAN FOR LOCATIONS

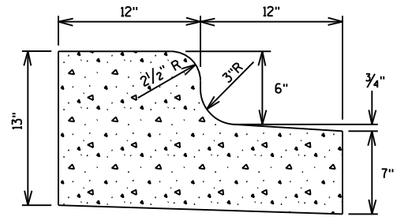


ASPHALTIC FLUME DETAIL

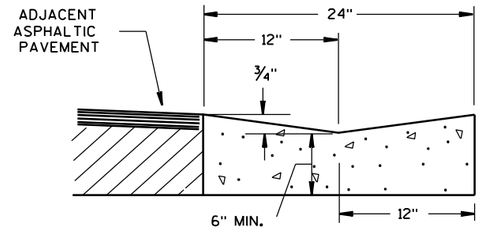
SEE S.D.D. CONCRETE SURFACE DRAIN AND ASPHALTIC FLUME FOR ADDITIONAL CONSTRUCTION DETAILS



ACCEPTING
CURB & GUTTER



REVERSE SLOPE
CURB & GUTTER



DRIVEWAY
CURB & GUTTER

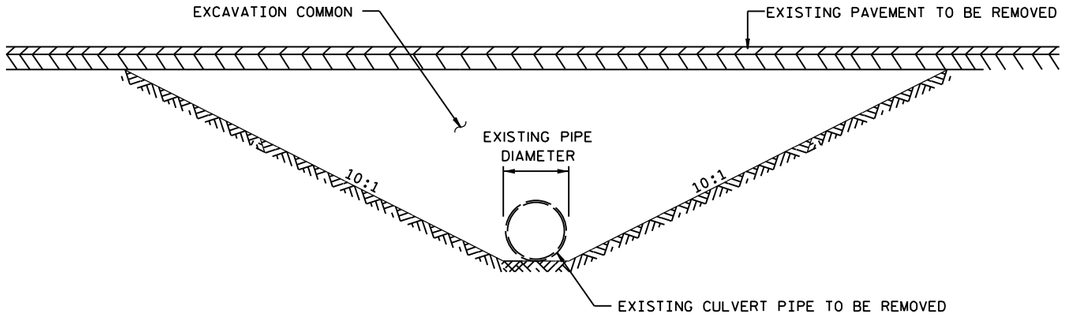
GENERAL NOTES:

LATERAL CONTRACTION JOINTS SHALL BE PLACED AT INTERVALS OF NOT MORE THAN 15' NOR LESS THAN 6' IN LENGTH. THE JOINTS SHALL BE A MINIMUM OF 3" IN DEPTH.

EXPANSION JOINTS SHALL BE PLACED TRANSVERSLY AT RADIUS POINTS ON CURVES OF RADIUS 200' OR LESS, AND AT ANGLE POINTS, OR AS DIRECTED BY THE ENGINEER. THE EXPANSION JOINT SHALL BE A ONE PIECE ASPHALTIC MATERIAL HAVING THE SAME DIMENSIONS AS CURB & GUTTER AT THAT STATION AND BE ½" THICK.

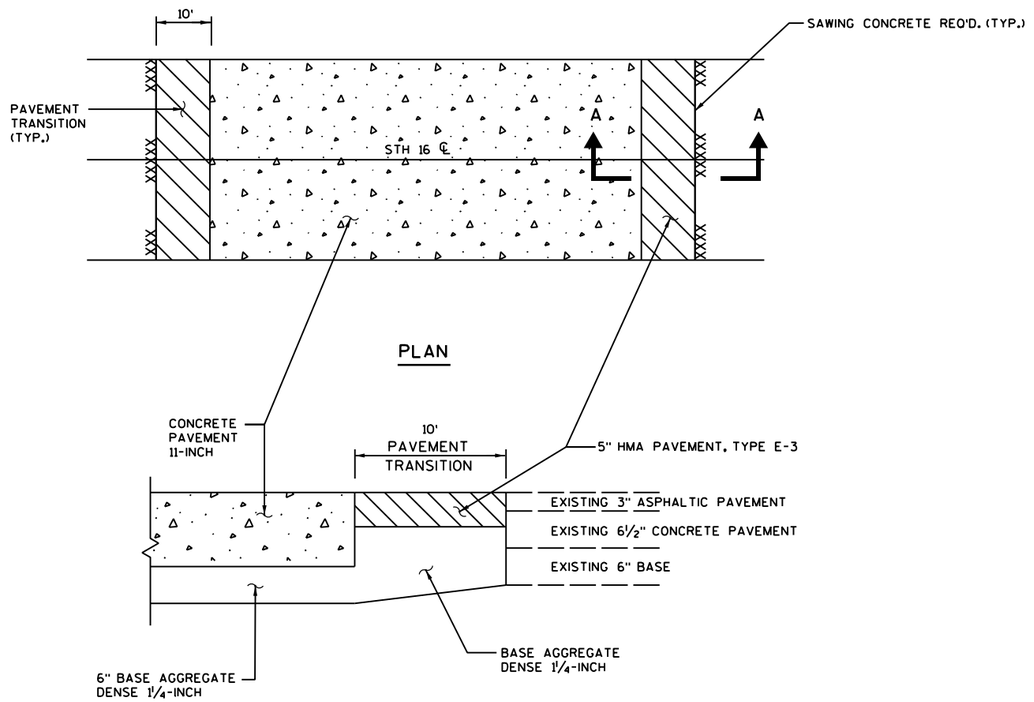
CONCRETE CURB & GUTTER 24-INCH TYPE A/D SPECIAL DETAIL

DETAILS NOT SHOWN SHALL CONFORM TO STANDARD DETAIL DRAWINGS FOR CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES.



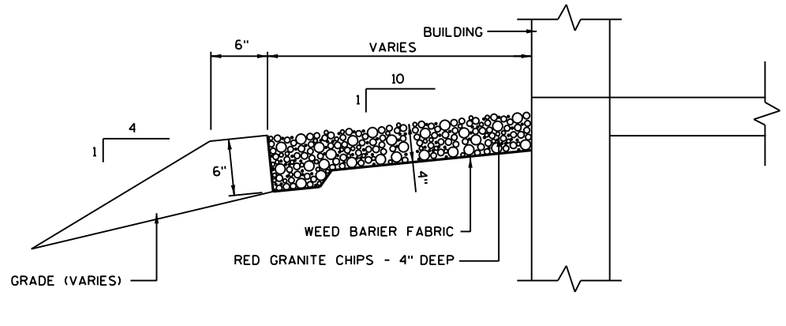
PIPE REMOVAL AND GRADING DETAIL

WEST SALEM SWEF

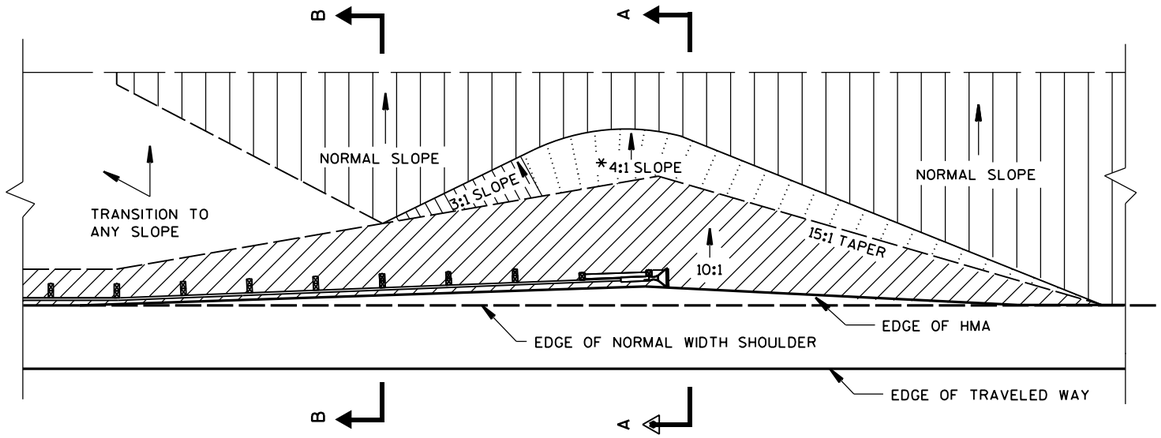


PAVEMENT TRANSITION DETAIL

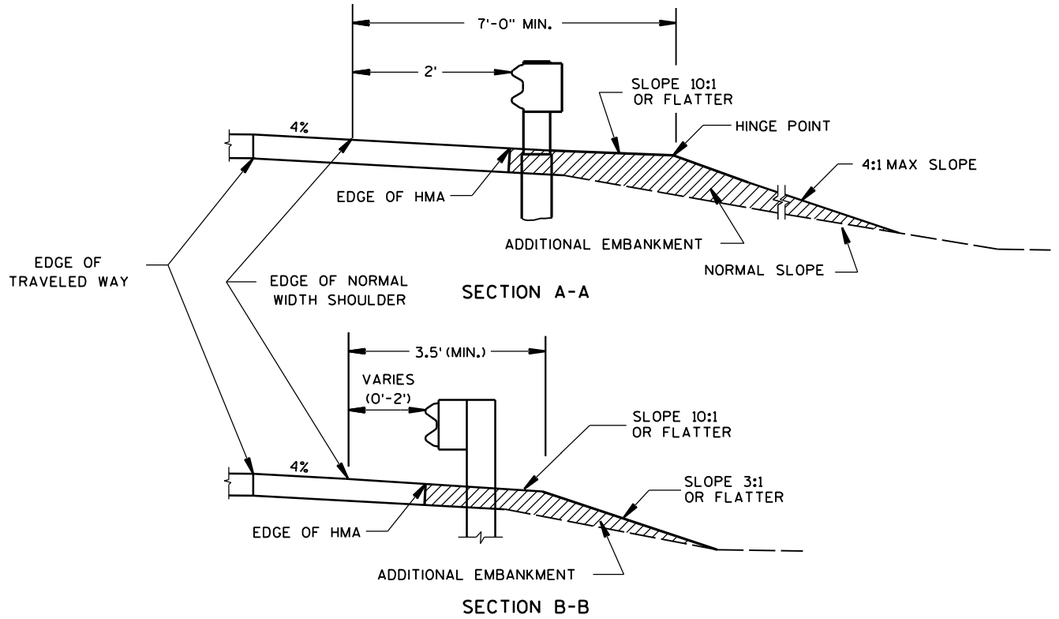
STH 16 VIRTUAL WEIGH STATION LOCATION



PLANTING BED DETAIL



PLAN VIEW

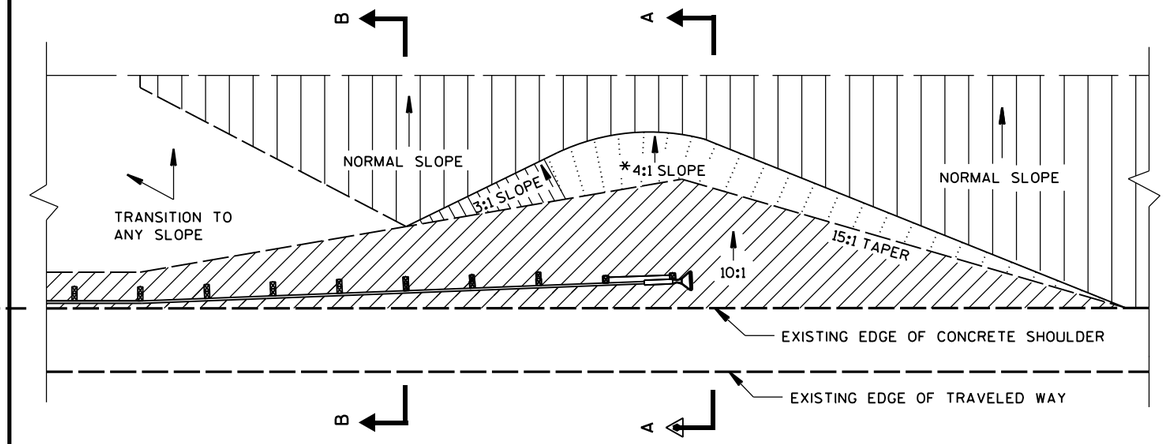


SECTION A-A

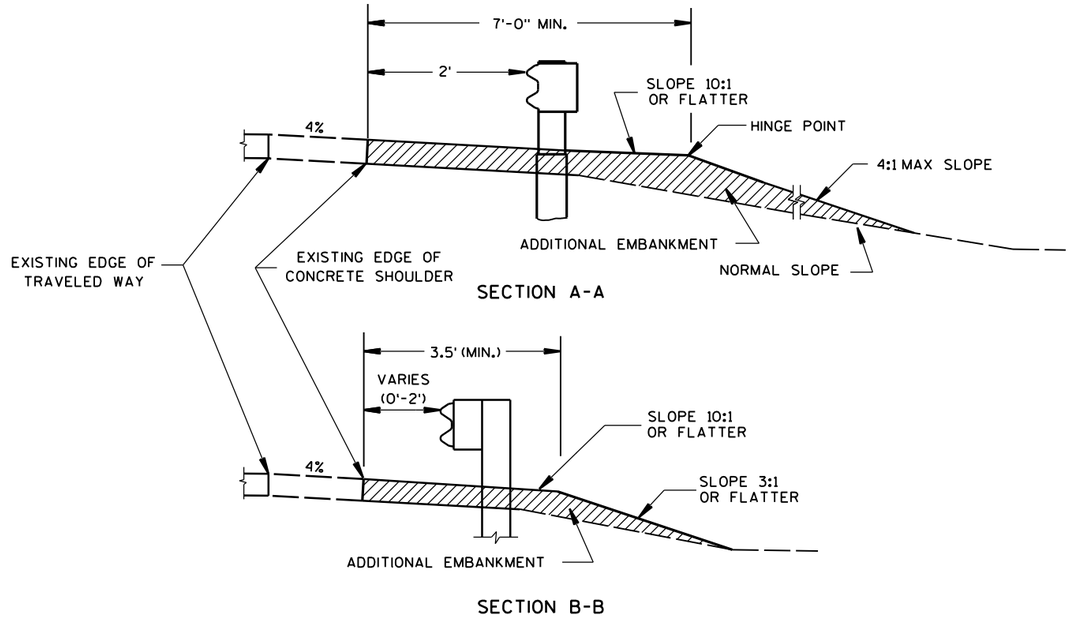
SECTION B-B

FILL AREA AT BEAM GUARD DETAIL

STA. 1206+68.50R - STA. 1208+81.0R
STA. 1218+83.65R - STA. 1219+71.15R



PLAN VIEW



SECTION A-A

SECTION B-B

FILL AREA AT BEAM GUARD DETAIL

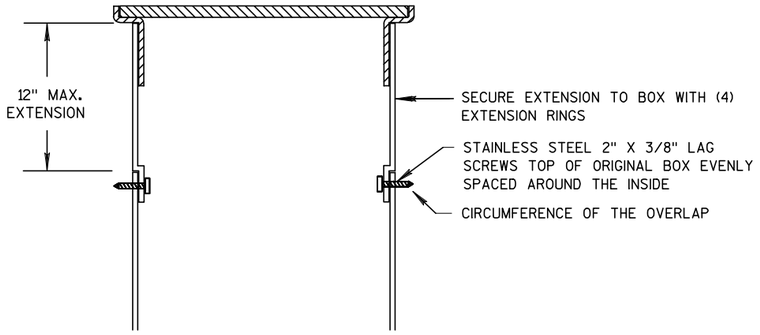
STA. 1153+53.25EB - STA. 1156+06.37EB RT
STA. 1166+44.88EB - STA. 1168+48EB RT

TABLE OF NOMINAL DIMENSIONS AND WEIGHTS

NON-CONDUCTIVE PULL BOX DIMENSION (INCHES)			
BOX DIAMETER ** (INSIDE)	A	24	24
BOX DIAMETER ** (OUTSIDE)	B	25	25
BOX LENGTH	C	36	42
COVER	D	25 1/2	25 1/2
FRAME	E	27	27
FRAME	F	25 3/4	25 3/4
FRAME	G	22 1/2	22 1/2
WEIGHT (POUNDS) *			
COVER		50	50

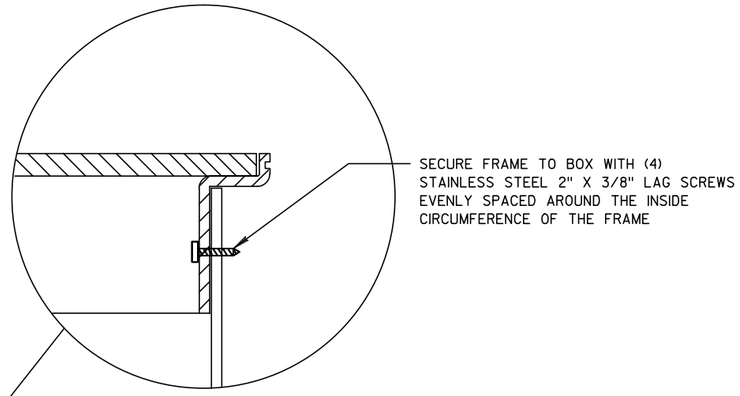
* THE ACTUAL WEIGHT OF THE COVER MAY VARY NOT TO EXCEED 100 LBS.

** DIAMETER VARIES FROM TOP TO BOTTOM WITH THE DIAMETER LARGER AT THE BOTTOM TO PREVENT FROST HEAVE

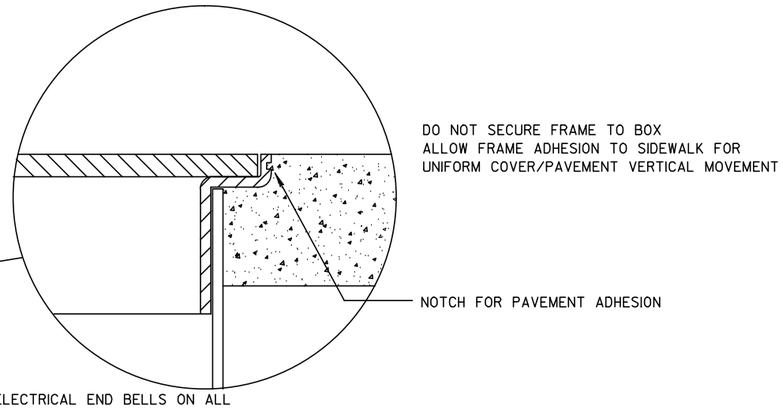


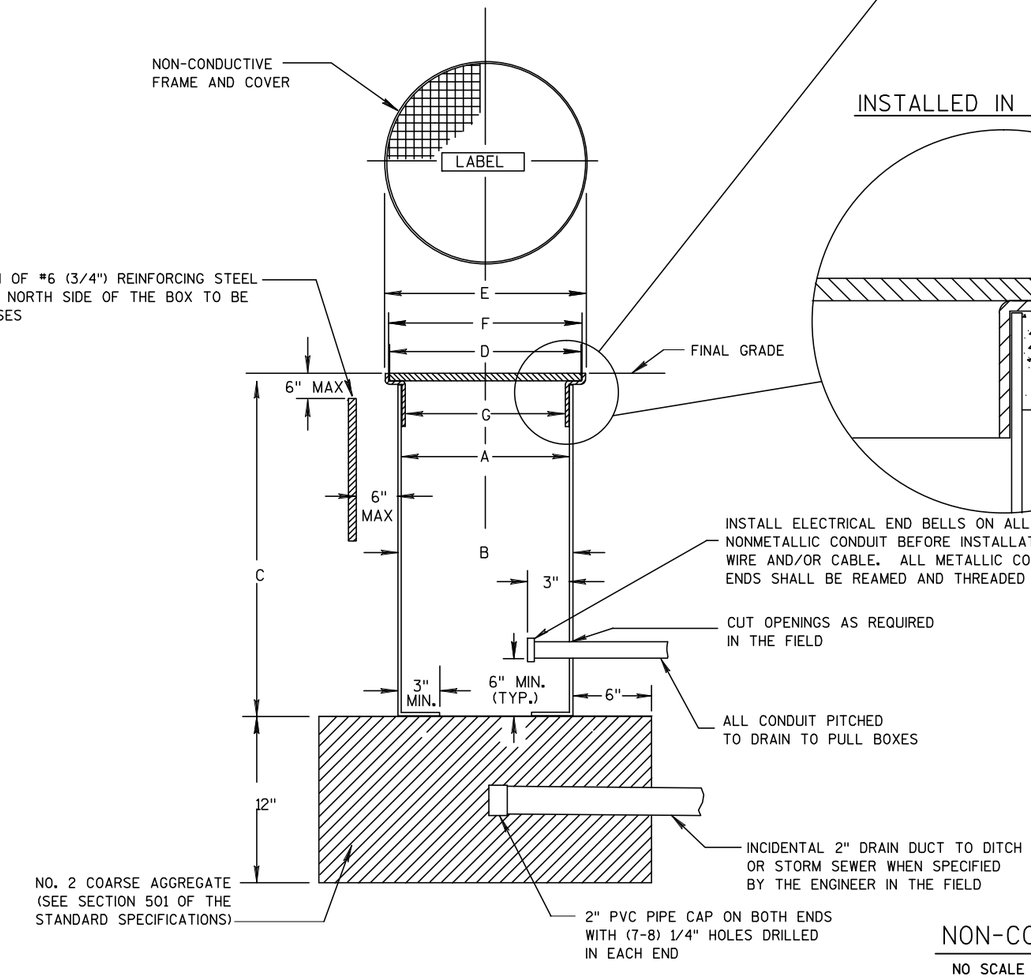
BOX EXTENSION

INSTALLED IN SOD OR CRUSHED AGGREGATE



INSTALLED IN SIDEWALK





NON-CONDUCTIVE PULL BOX

NO SCALE

GENERAL NOTES

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

ALL BOXES, FRAMES AND COVERS SHALL BE SUITABLE FOR TIER 15 LOADING AS SPECIFIED IN ANSI/SCTE 77.

PROVIDE AN OPENING FOR TOOL ASSISTED COVER REMOVAL NOT LARGE ENOUGH TO PERMIT PASSAGE OF A SPHERE MORE THAN 1/2" DIAMETER

ENSURE COVER SURFACE IS SKID RESISTANT WITH A COEFFICIENT OF FRICTION OF AT LEAST 0.5 AND VERTICAL SURFACE DISCONTINUITIES LESS THAN 1/4".

BOXES AND EXTENSIONS ARE TRIMMABLE FOR CUSTOM LENGTHS. TRIMMED PIECES SHALL MAINTAIN A UNIFORM LENGTH.

ENTRANCE HOLES INTO PULL BOXES SHALL BE CUT WITH A CIRCULAR HOLE SAW OR HYDRAULIC CONDUIT PUNCH. HOLE SIZE SHALL BE THE OUTSIDE DIAMETER OF THE CONDUIT THAT IS TO FIT IN THE OPENING PLUS NO MORE THAN 1/4".

THE CONTRACTOR SHALL NOT INSTALL WIRE IN ANY PULL BOX UNTIL ITS INSTALLATION HAS BEEN INSPECTED AND ACCEPTED BY THE ENGINEER.

ALL METALLIC CONDUIT IN WHICH WIRE AND/OR CABLE IS TO BE INSTALLED, SHALL BE BUSHED BEFORE INSTALLATION OF THE WIRE AND/OR CABLE.

ENTIRE BOX MUST BE CONSTRUCTED OF NON-CONDUCTIVE MATERIALS WITH THE EXCEPTION OF STAINLESS STEEL FASTENERS.

WHEN A PULL BOX IS INSTALLED IN CRUSHED AGGREGATE SHOULDERS, PLACE IT 2-3 INCHES BELOW GRADE AND COVER IT WITH 2-3 INCHES OF CRUSHED AGGREGATE.

LABEL ON COVER SHALL READ "ELECTRIC" FOR SIGNAL OR LIGHTING SYSTEMS. "WISDOT COMMUNICATIONS" FOR COMMUNICATIONS SYSTEMS.

2

N

SLOPE INTERCEPTS (TYP.)

A

7.0

INV. EL. 784.33

INV. EL. 785.13

MANHOLE INV. EL. 789.00

786
787
788
789
790

BP: 0+00.00PD

B

0+00PD

7.1

INV. EL. 785.55

7.2

RIP RAP TREATMENT
AT PIPE ENDWALL
(SEE DETAIL)

1+00PD

POND R/L

2+00PD

B

EP: 2+50.00PD

2+50PD

786
787
788
789
790

790
789
788
787

A

R/W

4228+00P

PT: 4228+43.0

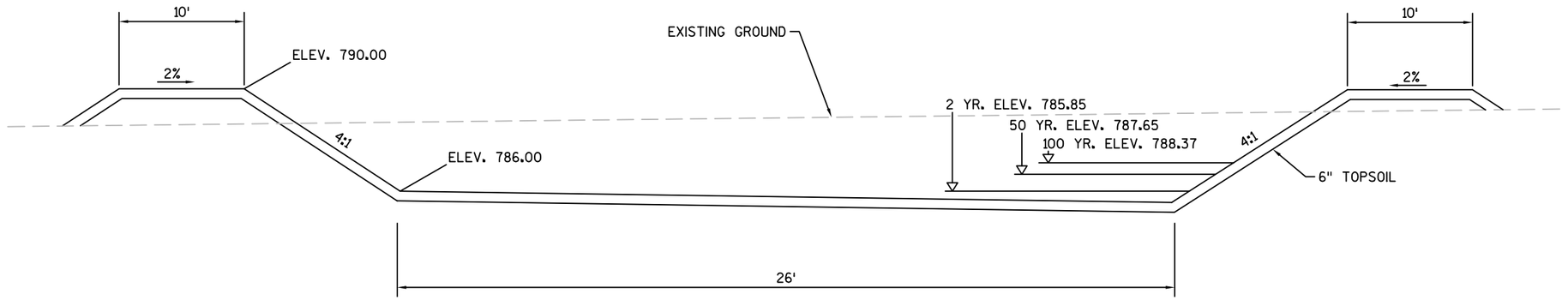
PARKING LOT

42

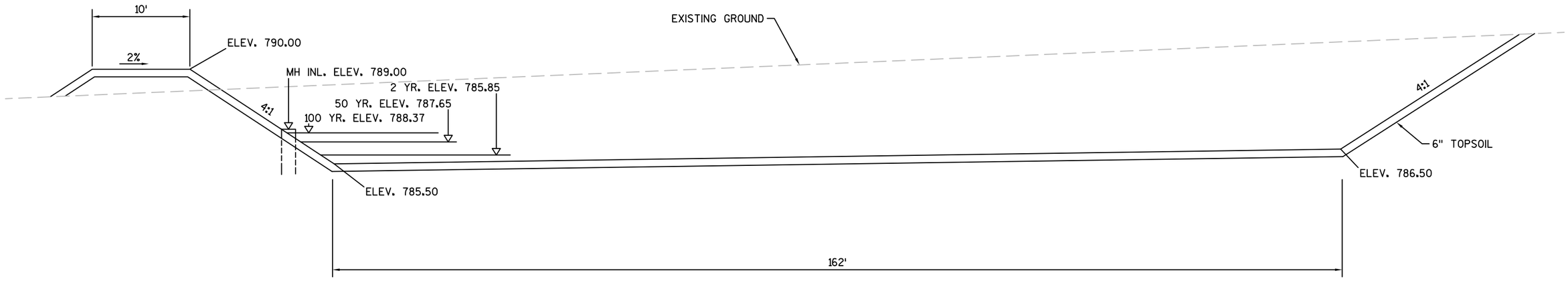
792
791

POND DETAILS

PROJECT NO:1070-00-72	HWY: IH 90	COUNTY: MONROE	CONSTRUCTION DETAIL (SPARTA, SWEF #54)	SHEET 21	E



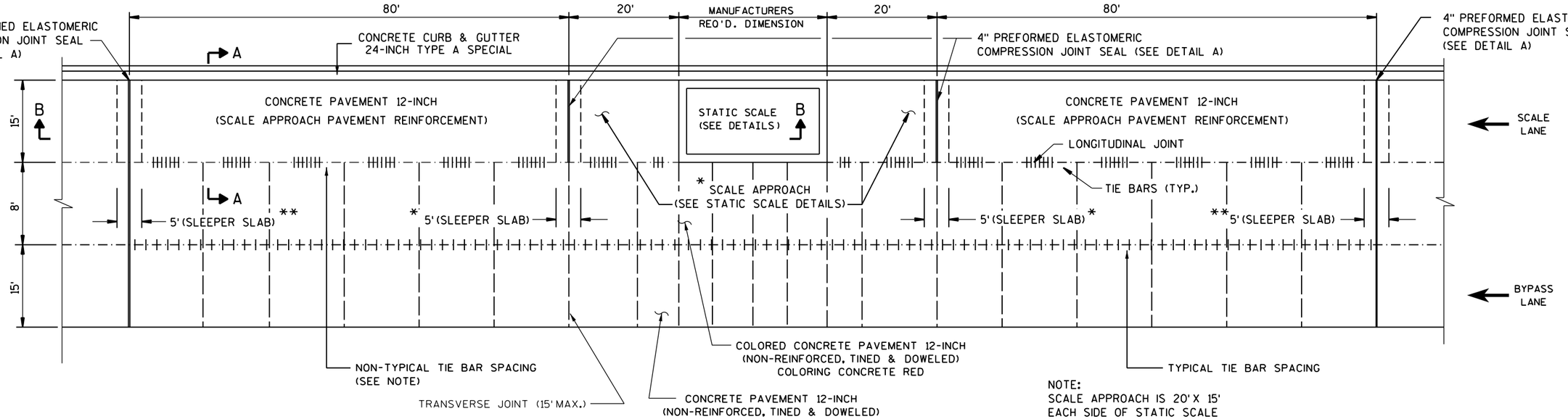
TYPICAL FINISHED SECTION 'A-A' - POND



TYPICAL FINISHED SECTION 'B-B' - POND

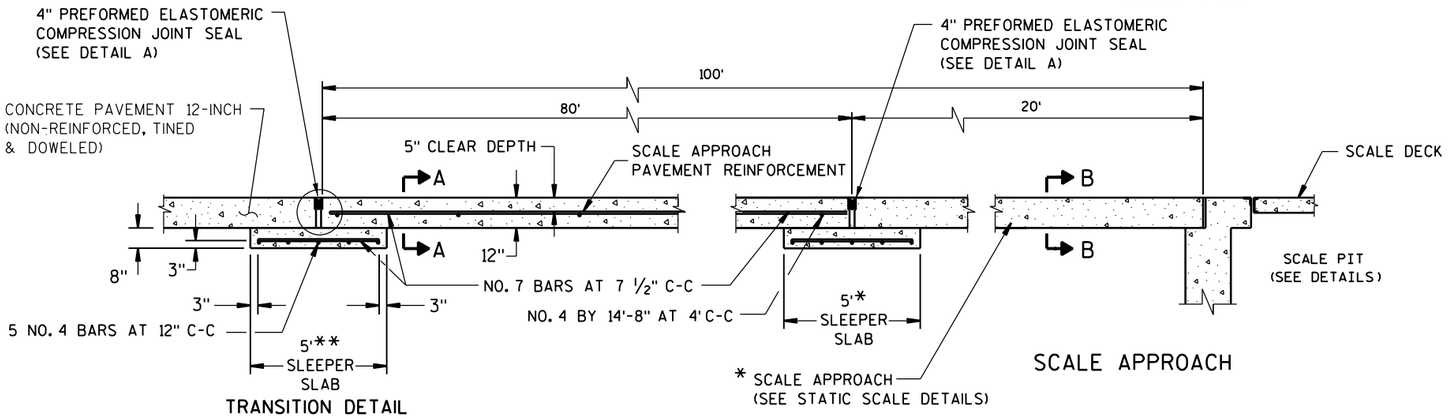
POND DETAILS

PROJECT NO:1070-00-72	HWY: IH 90	COUNTY: MONROE	CONSTRUCTION DETAIL (SPARTA, SWEF #54)	SHEET 22 E

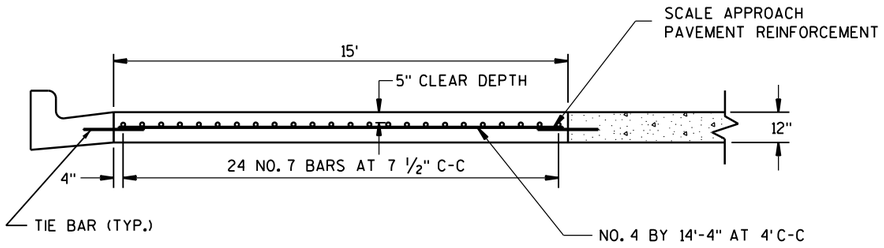


PLAN VIEW

NOTE:
SCALE APPROACH IS 20' X 15'
EACH SIDE OF STATIC SCALE



SECTION B-B



SECTION A-A

(CONTINUOUS REINFORCED CONCRETE APPROACH)

* COSTS INCIDENTAL TO STATIC SCALE CONSTRUCTION

** COSTS INCIDENTAL TO CONCRETE PAVEMENT 12-INCH

PAVEMENT SECTION AT STATIC SCALE LOCATION

GENERAL NOTES

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

JOINT FILLER

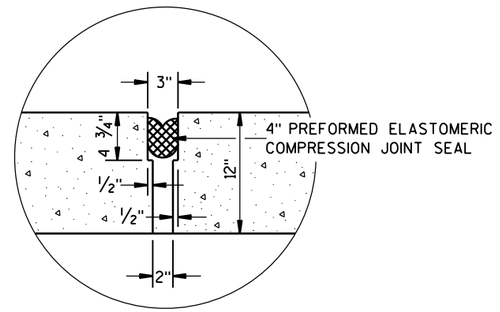
EXPANSION JOINT FILLER BETWEEN APPROACH SLAB AND ROADWAY PAVEMENT AT THE SLEEPER SLAB IS A 4 INCH PREFORMED ELASTOMERIC COMPRESSION SEAL.

STEEL REINFORCEMENT

SPLICING OF NO. 7 BARS IN THE APPROACH SLAB IS PERMITTED. SPLICES SHALL BE STAGGERED, WITH A MAXIMUM OF ONE SPLICE PER BAR. LAPS SHALL CONFORM TO THE STANDARD SPECIFICATIONS. REINFORCEMENT BARS SHALL BE EPOXY COATED IN CONFORMANCE WITH SUBSECTION 505.2.4 OF THE STANDARD SPECIFICATIONS.

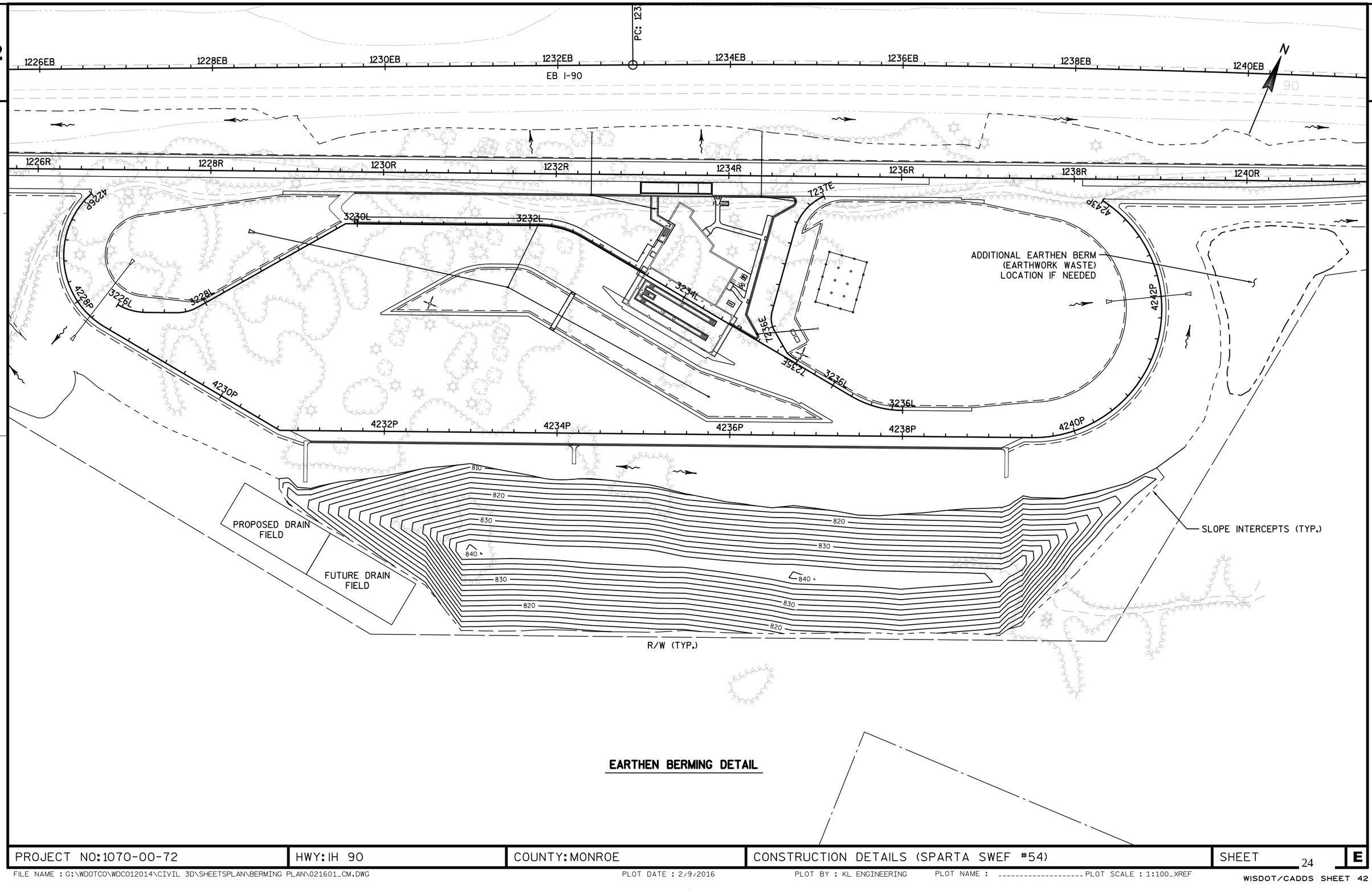
TIE BARS

TIE BARS BETWEEN THE CRCP AND THE NON-REINFORCED DOWELED CONCRETE PAVEMENT LONGITUDINAL JOINT SHOULD ONLY BE PLACED WITHIN THE MIDDLE THIRD OF THE SLAB (15 FOOT MAX. LENGTH) BETWEEN THE TRANSVERSE JOINTS. THE SAME NUMBER OF TIE BARS THAT WOULD TYPICALLY BE USED ALONG THE LONGITUDINAL JOINTS PER S.D.D. SHOULD BE USED.



DETAIL A

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CONSTRUCTION DETAIL (SPARTA, SWEF #54)	SHEET 23	E



EARTHEN BERMING DETAIL

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CONSTRUCTION DETAILS (SPARTA SWEF #54)	SHEET 24	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\BERMING PLAN\021601_CM.DWG PLOT DATE : 2/9/2016 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

2

2

LEGEND

- ××××××× REMOVING SMALL PIPE CULVERTS
- ○○○○○○○ REMOVING STORM SEWER (SIZE)
- (A) REMOVING CONCRETE BASES
- (B) REMOVING MANHOLES
- (C) REMOVING INLETS
- (D) REMOVING STREET LIGHTS
- REMOVING PAVEMENT
- (XR-XX) REMOVING SIGNS TYPE II
- SAWING ASPHALT
- xxxx SAWING CONCRETE

N

I 90

WB I-90

INL

2205'

2270'

640'

515EB

520EB

EB I-90

5'

15'

5'

SIGN

SLOPE INTERCEPTS (TYP.)

EXISTING INLET TO REMAIN

OBLITERATING OLD ROAD

MATCH LINE STA. 523+00

WEIGH STATION CMS

1R-04

1R-03

WEIGH STATION RIGHT LANE CMS

1R-01

WEIGH STATION 1 MILE

1R-02

TRUCKS OVER 4 TONS STOP AT WEIGH STA.

ANT.

SEPTIC

SAN

PROJECT NO:1070-00-73	HWY:IH 90	COUNTY:LA CROSSE	REMOVAL PLAN (WEST SALEM SWEF #53)	SHEET 25	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\WEST SALEM\021201_RM.DWG PLOT DATE : 7/11/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 42

2

LEGEND

- REMOVING SMALL PIPE CULVERTS
- REMOVING STORM SEWER (SIZE)
- (A) REMOVING CONCRETE BASES
- (B) REMOVING MANHOLES
- (C) REMOVING INLETS
- (D) REMOVING STREET LIGHTS
- REMOVING PAVEMENT
- (XR-XX) REMOVING SIGNS TYPE II
- SAWING ASPHALT
- SAWING CONCRETE

N

WB I-90

I 90

PT; 531+93.50

MATCH LINE STA. 523+00

525EB

530EB

EB I-90

I 90

535EB

MATCH LINE STA. 537+00

STATE PATROL WEIGH STATION NO 53

2R-05

2R-02

2R-03

DO NOT ENTER

WRONG WAY

EXISTING INLET TO REMAIN

INL

REMOVING WEIGHT SCALE AND PIT

REMOVING UNDERGROUND PRESSURE TANK

SPEAKER HERE

2R-07

AD

5'

28'

2.5'

ABANDONING WELL

15'

5'

TURN OFF HEADLIGHTS

2R-01

REMOVING CONCRETE SIDEWALK

REMOVING EXISTING BUILDINGS (SEE EXISTING AS-BUILT PLANS DETAILS)

22'

(18")

C

2.5'

103.5'

5.5'

2R-09

2R-10

EXIT

PARKING

2R-08

REMOVING UNDERGROUND FUEL TANK

REMOVING SEPTIC TANK

2R-06

(30")

EXIT

2R-04

PROJECT NO: 1070-00-73	HWY: IH 90	COUNTY: LA CROSSE	REMOVAL PLAN (WEST SALEM SWEF #53)	SHEET 26 E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\WEST SALEM\021201_RM.DWG PLOT DATE : 7/11/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1:100_XREF

2

2

LEGEND

- REMOVING SMALL PIPE CULVERTS
- REMOVING STORM SEWER (SIZE)
- (A) REMOVING CONCRETE BASES
- (B) REMOVING MANHOLES
- (C) REMOVING INLETS
- (D) REMOVING STREET LIGHTS
- REMOVING PAVEMENT
- (XR-XX) REMOVING SIGNS TYPE II
- SAWING ASPHALT
- xxxx SAWING CONCRETE

N

SIGN

WB I-90

I 90

INL

3R-01

STA. 537+00

540EB

545EB

550EB

EB I-90

xxxx

MATCH LINE STA. 537+00

5'

SIGN

15'

5'

SLOPE INTERCEPTS (TYP.)

OBLITERATING OLD ROAD

W

W

CTH B/CTH M

CTH C

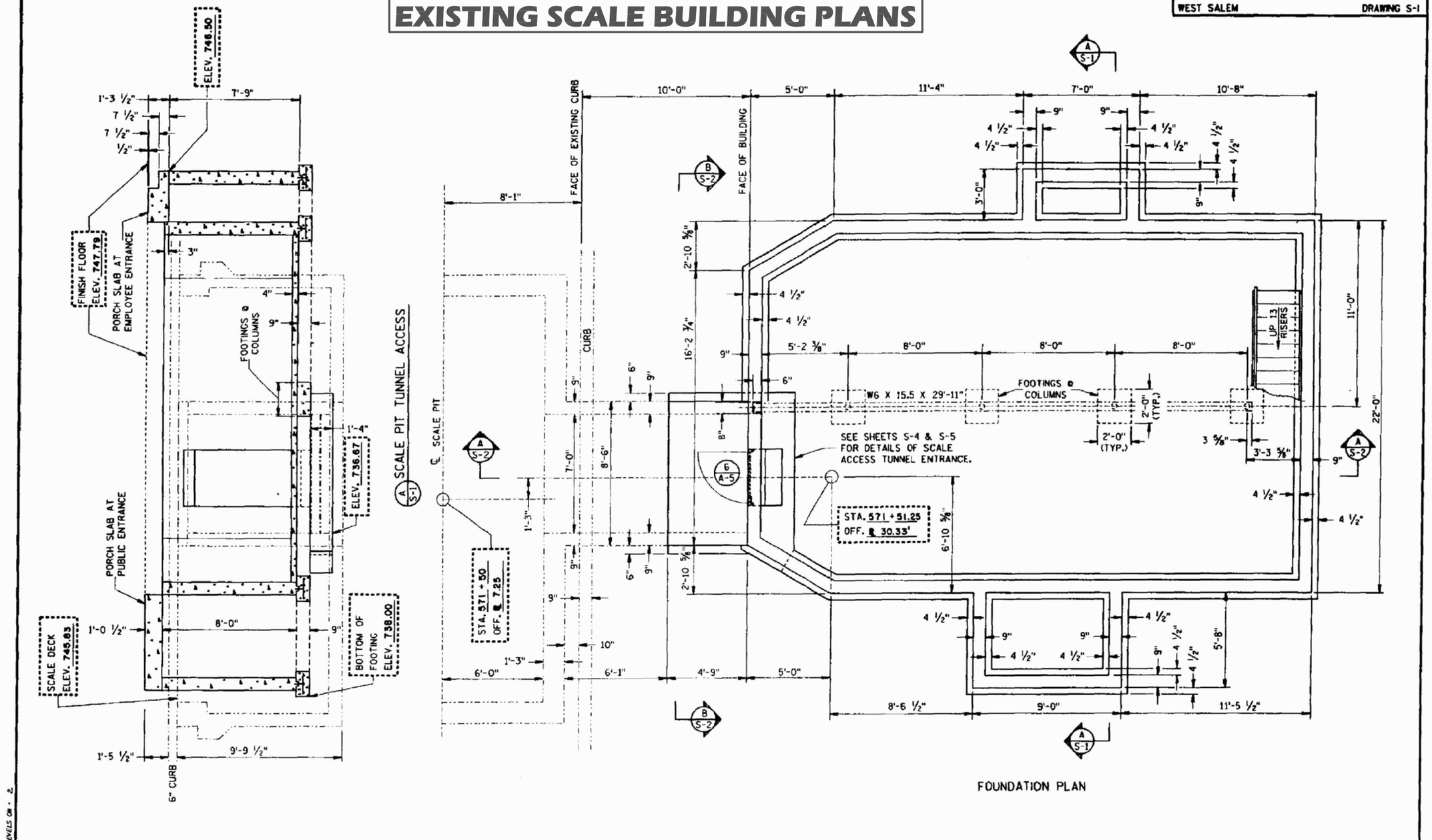
PROJECT NO: 1070-00-73	HWY: IH 90	COUNTY: LA CROSSE	REMOVAL PLAN (WEST SALEM SWEF #53)	SHEET 27	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\WEST SALEM\021201_RM.DWG PLOT DATE : 7/11/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

FOR INFORMATION ONLY
EXISTING SCALE BUILDING PLANS

STATE PROJECT NUMBER	SHEET NO.
1071-01-87	2.3

WEIGH STATION (WOOD FRAME)
FOUNDATION DETAILS
WEST SALEM — DRAWING S-1



FOUNDATION PLAN

LEVELS ON - 2

FILE NAME: HOGN(32.33)WSALEM51.DGN

WISDOT/CADDS SHEET 42

PROJECT NO: 1070-00-73	HWY: IH 90	COUNTY: LA CROSSE	REMOVAL PLAN (WEST SALEM SWEF #53)	SHEET	E

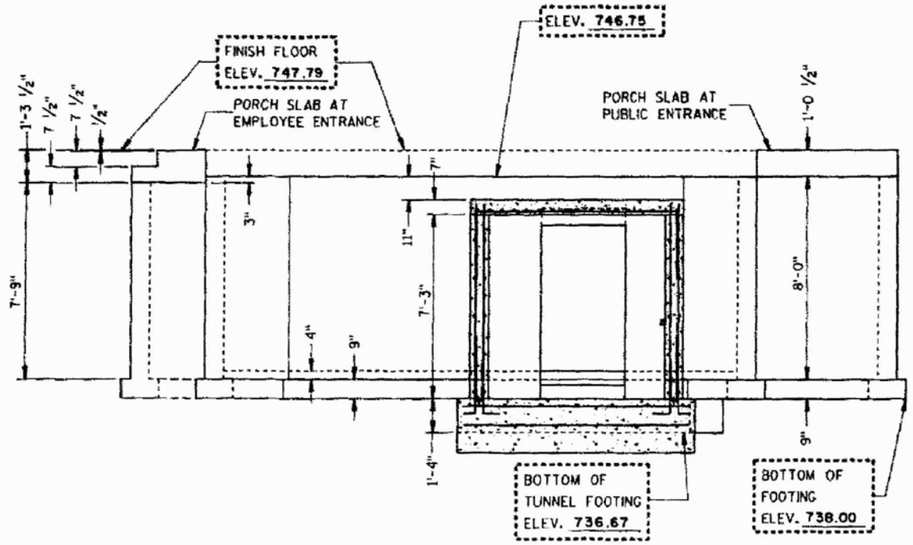
FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\WEST SALEM\021201_RM_BLDG.DWG PLOT DATE : 3/19/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

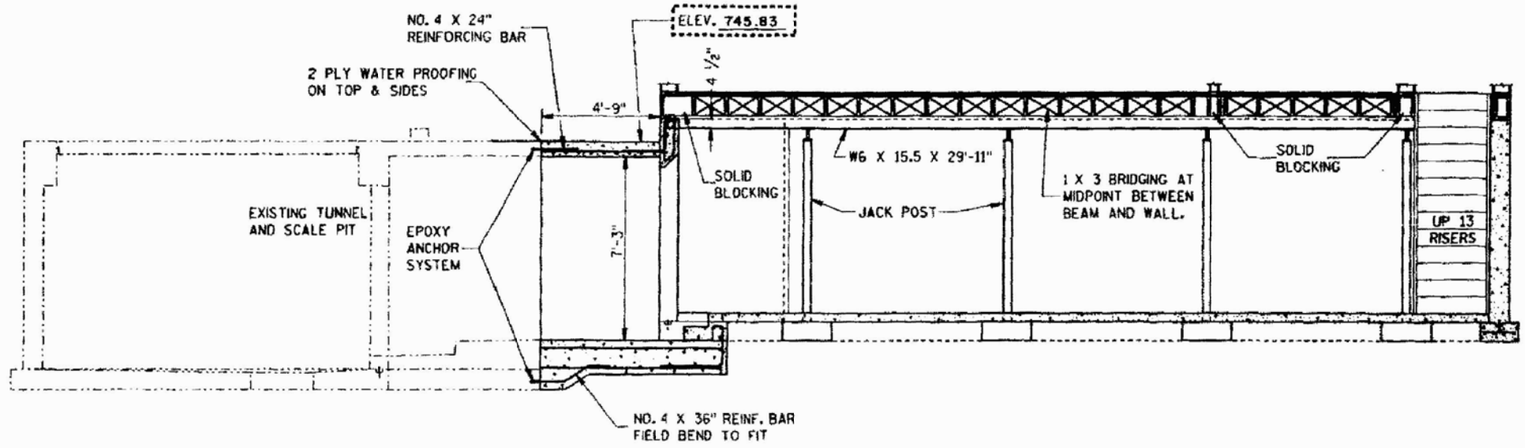
FOR INFORMATION ONLY
EXISTING SCALE BUILDING PLANS

STATE PROJECT NUMBER	SHEET NO.
1071-01-87	2.4

WEIGH STATION (WOOD FRAME)
FOUNDATION DETAILS
WEST SALEM — DRAWING S-2



B S-2 SECTION AT TUNNEL CONNECTION



A S-2 LONGITUDINAL SECTION

LEVELS ON = 2

FILE NAME: HDGN(32,3)WSALEMS2.DGN

WISDOT/CADDS SHEET 42

PROJECT NO:1070-00-73	HWY:IH 90	COUNTY:LA CROSSE	REMOVAL PLAN (WEST SALEM SWEF #53)	SHEET 29	E

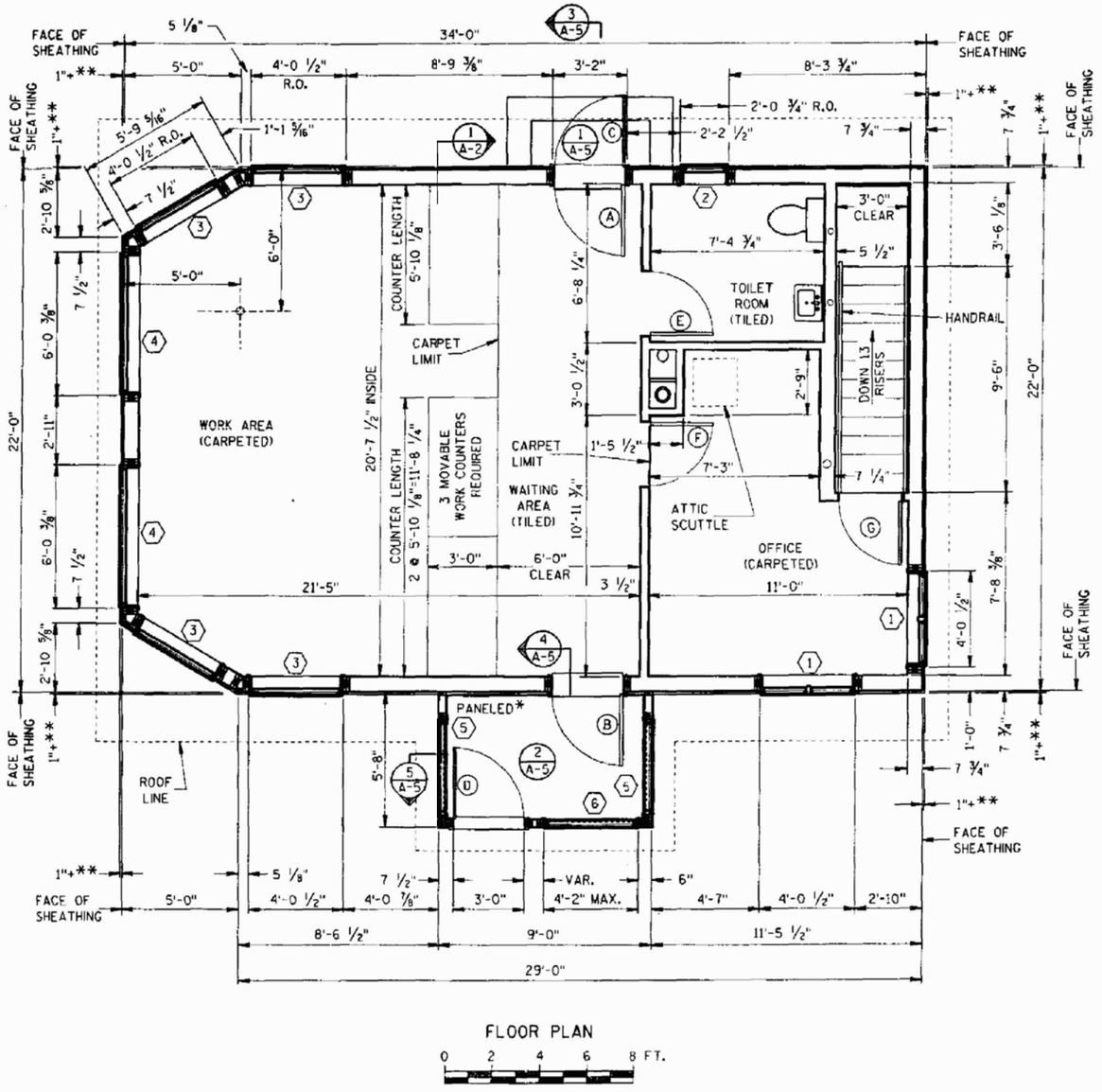
FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\WEST SALEM\021201_RM_BLDG.DWG PLOT DATE : 3/19/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

STATE PROJECT NUMBER	SHEET NO.
1071-01-87	2.9

WEIGH STATION (WOOD FRAME)
FLOOR PLAN

WEST SALEM — DRAWING A-1



FLOOR PLAN
0 2 4 6 8 FT.

WINDOW SCHEDULE

MARK	NO. REQ'D.	ROUGH OPENING WIDTH MIN.	ROUGH OPENING WIDTH MAX.	ROUGH OPENING HEIGHT MIN.	ROUGH OPENING HEIGHT MAX.	MATERIAL	REMARKS
1	2	4'-0"	4'-2"	3'-0"	3'-2"	VINYL CLAD OR ALUM. CLAD WOOD	CASEMENT
2	1	1'-10"	2'-1"	3'-0"	3'-2"	"	CASEMENT-OBSCURED GLASS IN TOILET RM
3	4	3'-10"	4'-2"	3'-6"	4'-0"	"	CASEMENT-PICTURE
4	2	6'-0"	6'-6"	3'-6"	4'-0"	"	CASEMENT-PICTURE
5	2	4'-0"	4'-6"	6'-0"	6'-3"	"	AWNING-PICTURE
6	1	4'-0"	4'-2"	6'-0"	6'-3"	"	AWNING-PICTURE

DOOR SCHEDULE

MARK	NO. REQ'D.	WIDTH	HEIGHT	THICKNESS	MATERIAL	HAND[1] OF DOOR	REMARKS
A	1	3'-0"	6'-8"	1 3/4"	METAL	LH	ENTRANCE DOOR W/WINDOW
B	1	3'-0"	6'-8"	1 3/4"	METAL	RHR	ENTRANCE DOOR W/WINDOW
C	1	3'-0"	6'-8"	1 1/8"	METAL	LHR	COMB. STORM & SCREEN
D	1	3'-0"	6'-8"	1 1/8"	METAL	LH	COMB. STORM & SCREEN
E	1	2'-8"	6'-8"	1 3/8"	WOOD	RH	TOILET ROOM
F	1	2'-8"	6'-8"	1 3/8"	WOOD	LH	OFFICE
G③	1	2'-8"	6'-8"	1 3/8"	WOOD	LH	BASEMENT

[1] DOOR HANDS:
FACE THE OUTSIDE OF THE DOOR TO DETERMINE ITS HAND. THE OUTSIDE IS THE STREET SIDE OF AN ENTRANCE DOOR AND THE CORRIDOR SIDE OF A ROOM DOOR. THE OUTSIDE OF A COMMUNICATING DOOR IS THE SIDE OPPOSITE THE HINGES.

ROOM FINISH SCHEDULE

ROOM	FLOOR FIELD	FLOOR BASE	WALL	CEILING	DECORATION WALL	DECORATION CEILING	DECORATION WOOD	REMARKS
WORK AREA	CARPET	WOOD	1/2" DRYWALL	5/8" DRYWALL	LATEX	SEAL② DRYWALL	STAIN & VARNISH	MOVABLE COUNTERS
OFFICE	CARPET	WOOD	1/2" DRYWALL	5/8" DRYWALL	LATEX	LATEX	STAIN & VARNISH	
TOILET	QUARRY TILE	QUARRY TILE	1/2" ① DRYWALL	5/8" DRYWALL	LATEX & TILE	LATEX	STAIN & VARNISH	
WAITING AREA	QUARRY TILE	QUARRY TILE	1/2" DRYWALL	5/8" DRYWALL	LATEX	SEAL② DRYWALL	STAIN & VARNISH	

① GLAZED CERAMIC TILE WAINSCOT 48" UP WALL.
② ACOUSTICAL TILE OVER SEALED DRYWALL, AS PER SPECIFICATIONS.
③ DOOR CLOSER REQUIRED ON BASEMENT DOOR.
* 5/8" EXTERIOR PLYWOOD SIDING.
** 1"+ = 1" EXTRUDED POLYSTYRENE INSULATION PLUS THICKNESS OF SIDING USED.

FOR INFORMATION ONLY
EXISTING SCALE BUILDING PLANS

LEVELS ON 12

FILE NAME: HDON:[32.33]WSALEMA1.DGN

WISDOT/CADDS SHEET 42

PROJECT NO:1070-00-73	HWY: IH 90	COUNTY: LA CROSSE	REMOVAL PLAN (WEST SALEM SWEF #53)	SHEET 30	E

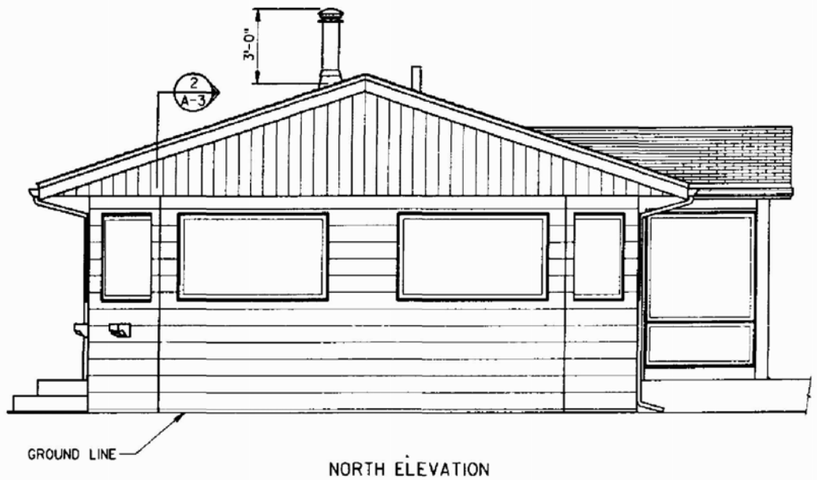
FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\WEST SALEM\021201_RM_BLDG.DWG PLOT DATE : 3/19/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

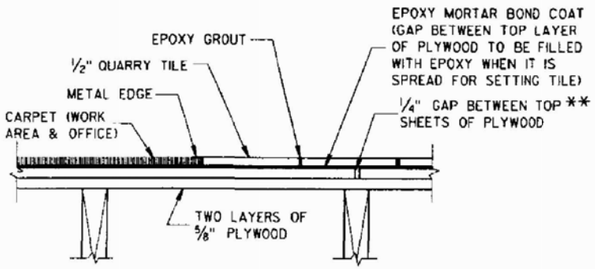
FOR INFORMATION ONLY
EXISTING SCALE BUILDING PLANS

STATE PROJECT NUMBER	SHEET NO.
1071-01-87	2.10

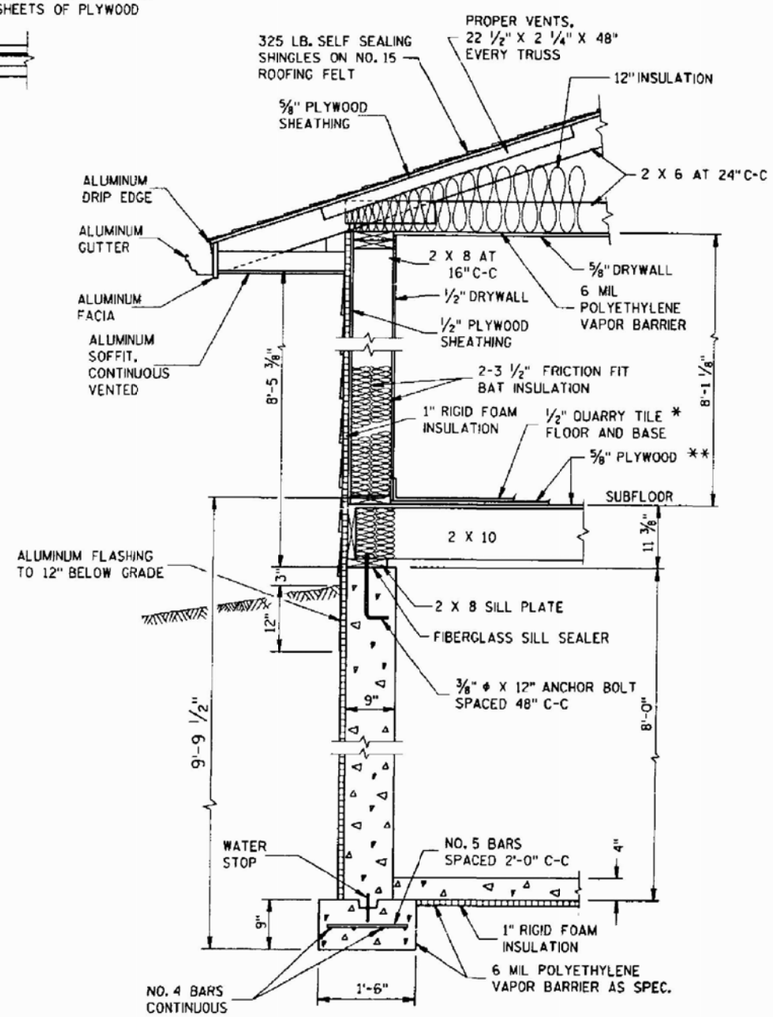
WEIGH STATION (WOOD FRAME)
BUILDING ELEVATIONS, WALL SECTION
WEST SALEM — DRAWING A-2



NORTH ELEVATION

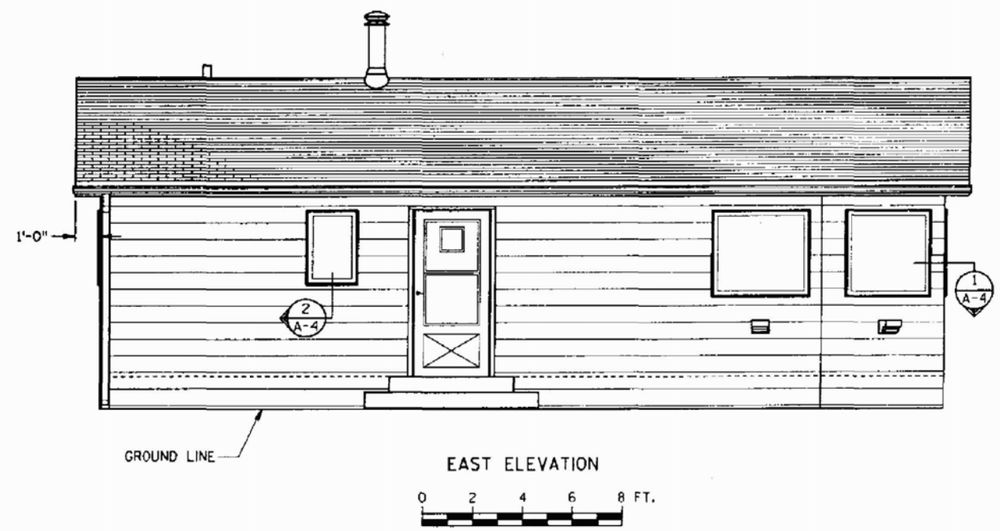


FLOORING DETAIL



1 A-2 SECTION THRU WALL

0 1 2 3 FT.



EAST ELEVATION

0 2 4 6 8 FT.

* CARPET SQUARES IN WORK AREA AND OFFICE.

** PLYWOOD JOINTS TO BE LAPPED TO CENTER OF SHEET BELOW. (ALSO SEE FLOORING DETAIL)

LEVELS ON •

FILE NAME: HDGN(32,33)WSALEMA2.DGN

WISDOT/CADDS SHEET 42

PROJECT NO:1070-00-73	HWY:IH 90	COUNTY:LA CROSSE	REMOVAL PLAN (WEST SALEM SWEF #53)	SHEET 31	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\WEST SALEM\021201_RM_BLDG.DWG PLOT DATE : 3/19/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1 IN:200 FT

WISDOT/CADDS SHEET 42

2

2

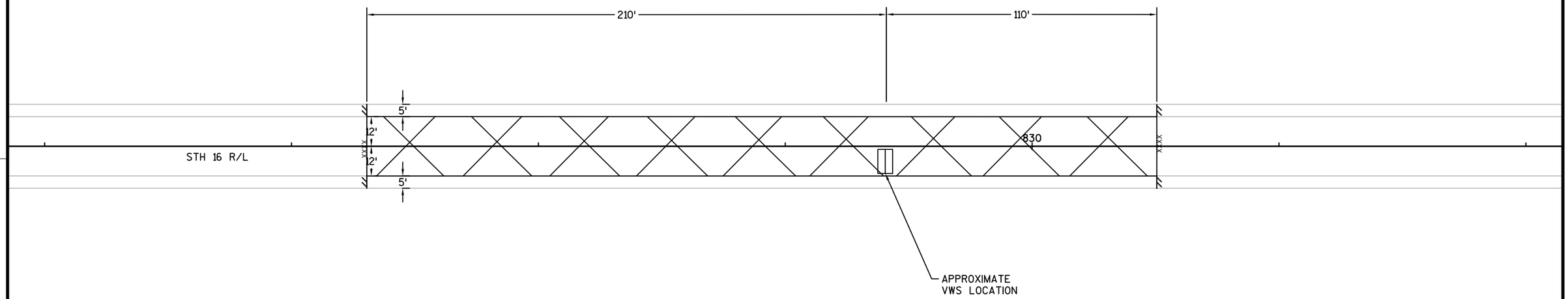
LEGEND

REMOVING PAVEMENT

SAWING ASPHALT

xxxx SAWING CONCRETE

N



PROJECT NO:1070-00-72	HWY:IH 90	COUNTY:MONROE	REMOVAL PLAN (VIRTUAL WEIGH STATION)	SHEET 32	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\WEST SALEM\021201_RM.DWG PLOT DATE : 5/9/2016 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

LEGEND

REMOVING PAVEMENT

SAWING ASPHALT

xxxx SAWING CONCRETE

N

NURSERY

SIGN

I 90

1165EB

1160EB

IH 90 R/L

1155EB

300'

15'

15'

15'
12'

APPROXIMATE
WIM LOCATION

PROJECT NO:1070-00-72	HWY:IH 90	COUNTY:MONROE	REMOVAL PLAN (SPARTA SWEF #54)	SHEET 33	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\WEST SALEM\021201_RM.DWG PLOT DATE : 5/9/2016 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1:100_XREF

2

2

LEGEND

REMOVING PAVEMENT

SAWING ASPHALT

xxxx SAWING CONCRETE

CLEARING AND GRUBBING

N

SIGN

I 90

WB IH-90

1205EB

1210EB

1215EB

EB IH-90

MATCH LINE STA. 1217+00EB

15' 15' 15' 15'

12' 12'

SLOPE INTERCEPTS (TYP.)

R/W

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	REMOVAL PLAN (SPARTA SWEF #54)	SHEET 34	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\WEST SALEM\021201_RM.DWG PLOT DATE : 5/9/2016 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1:100_XREF

2

N

WB IH-90

I 90

MATCH LINE STA. 1217+00EB

1220EB

1225EB

1230EB

MATCH LINE STA. 1232+00EB

EB IH-90

I 90

R/W

SLOPE INTERCEPTS (TYP.)

LEGEND

REMOVING PAVEMENT

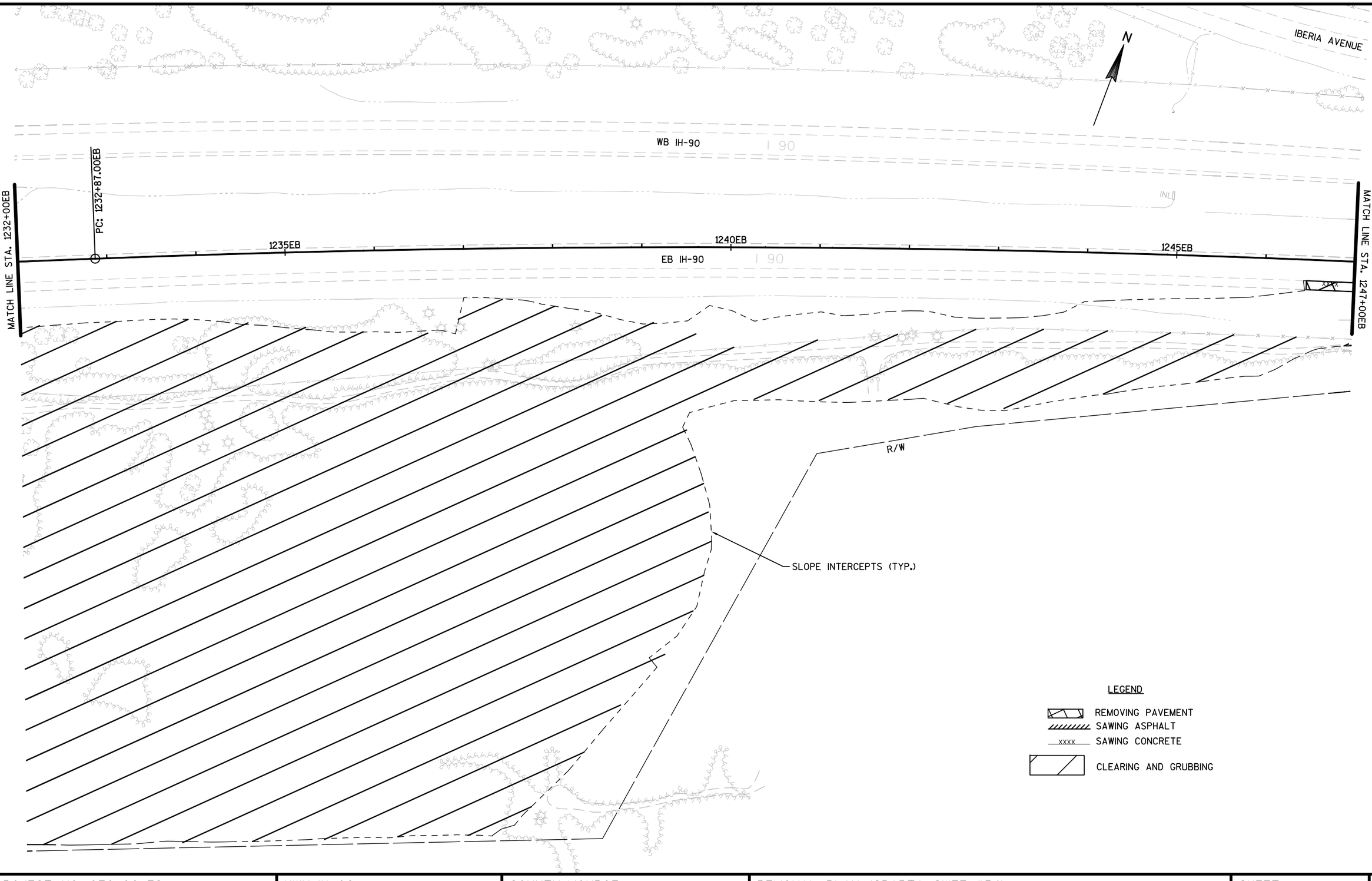
SAWING ASPHALT

xxxx SAWING CONCRETE

CLEARING AND GRUBBING

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	REMOVAL PLAN (SPARTA SWEF #54)	SHEET 35	E

2



LEGEND

- REMOVING PAVEMENT
- SAWING ASPHALT
- xxxx SAWING CONCRETE
- CLEARING AND GRUBBING

PROJECT NO:1070-00-72	HWY:IH 90	COUNTY:MONROE	REMOVAL PLAN (SPARTA SWEF #54)	SHEET 36	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\WEST SALEM\021201_RM.DWG PLOT DATE : 5/9/2016 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

2

N

IBERIA AVENUE

WB IH-90

I 90

INL

MATCH LINE STA. 1247+00EB

1250EB

1255EB

1260EB

EB IH-90

I 90

MATCH LINE STA. 1262+00EB

ICON AVENUE

R/W

SLOPE INTERCEPTS (TYP.)

SIGN

LEGEND

REMOVING PAVEMENT

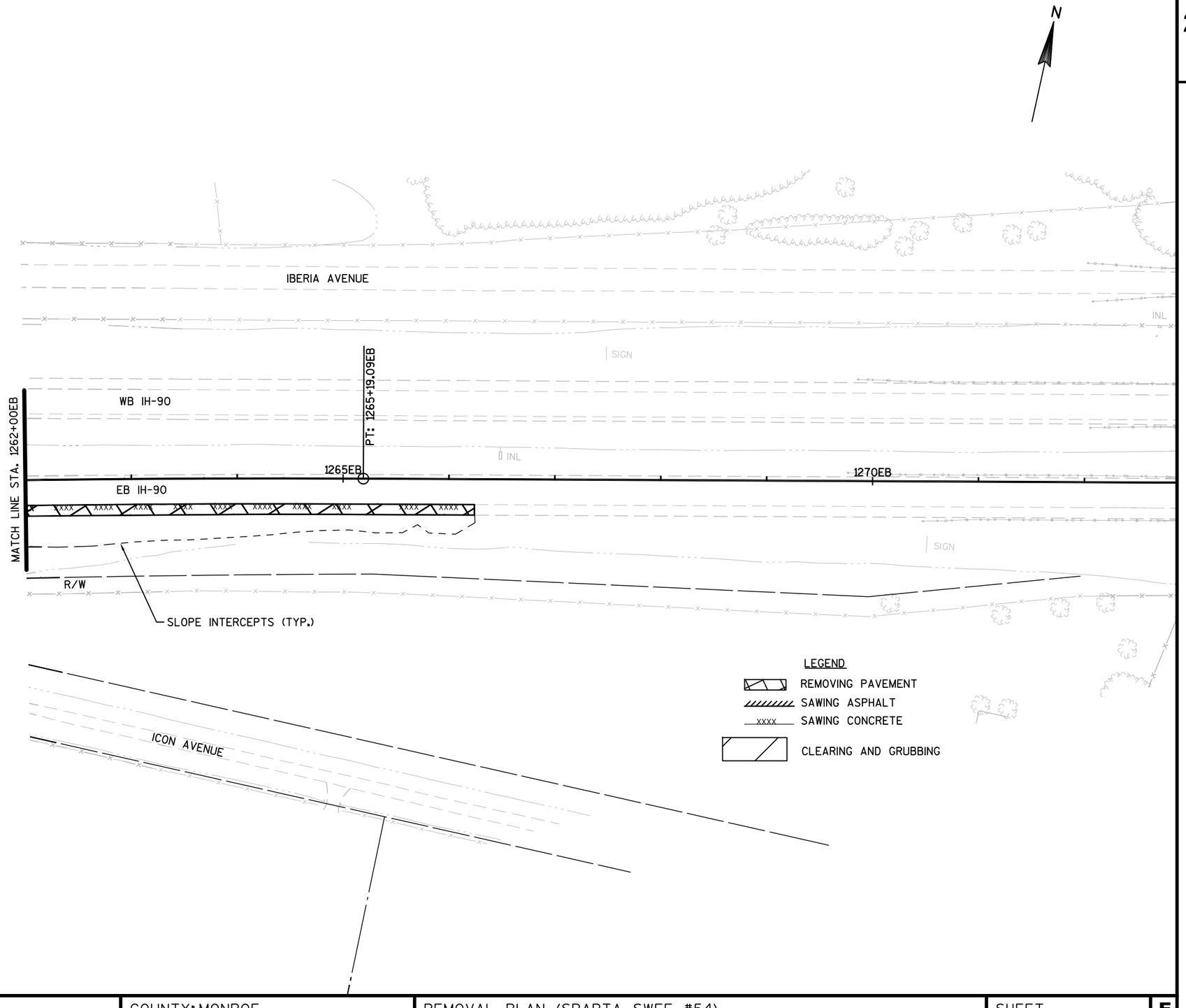
SAWING ASPHALT

xxxx SAWING CONCRETE

CLEARING AND GRUBBING

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	REMOVAL PLAN (SPARTA SWEF #54)	SHEET 37	E

2



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	REMOVAL PLAN (SPARTA SWEF #54)	SHEET 38	E

PLAN DETAILS LEGEND

➡	TRAFFIC FLOW
▭	CURB RAMP DETECTABLE WARNING FIELD YELLOW
X	CURB RAMP, TYPE X
CS-5	CONCRETE SIDEWALK 5-INCH
xxxx	SAWING CONCRETE
□	LAYOUT POINT NUMBER
XXX.XX	PROPOSED ELEVATION
	ANTICIPATED CONCRETE JOINTING
CG-24AS CG-24DS	CONCRETE CURB & GUTTER 24-INCH A OR D SPECIAL
	COLORED CONCRETE PAVEMENT
	MGS GUARDRAIL
▬	STORM SEWER INLET
●	STORM SEWER MANHOLE
	SAWING ASPHALT

2

2

N

514+00EB

515+00EB

516+00EB

517+00EB

518+00EB

519+00EB

MATCH LINE STA. 519+00EB

IH 90 EASTBOUND R/L

24'

HMA SHOULDER (MATCH EXISTING MAINLINE)

10'

BEGIN PROJECT
STA. 513+34.19EB
MATCH EXISTING
SAWCUT REQ'D

INL

PROJECT NO:1070-00-73	HWY:IH 90	COUNTY:LA CROSSE	PLAN DETAILS (WEST SALEM SWEF #53)	SHEET 40	E

2

N

519+00EB

520+00EB

521+00EB

522+00EB

523+00EB

524+00EB

525+00EB

IH 90 EASTBOUND R/L

MATCH LINE STA. 519+00EB

24'

10'

HMA SHOULDER (MATCH EXISTING MAINLINE)

END CONSTRUCTION STA. 521+70.04EB
MATCH EXISTING
SAWCUT REQ'D

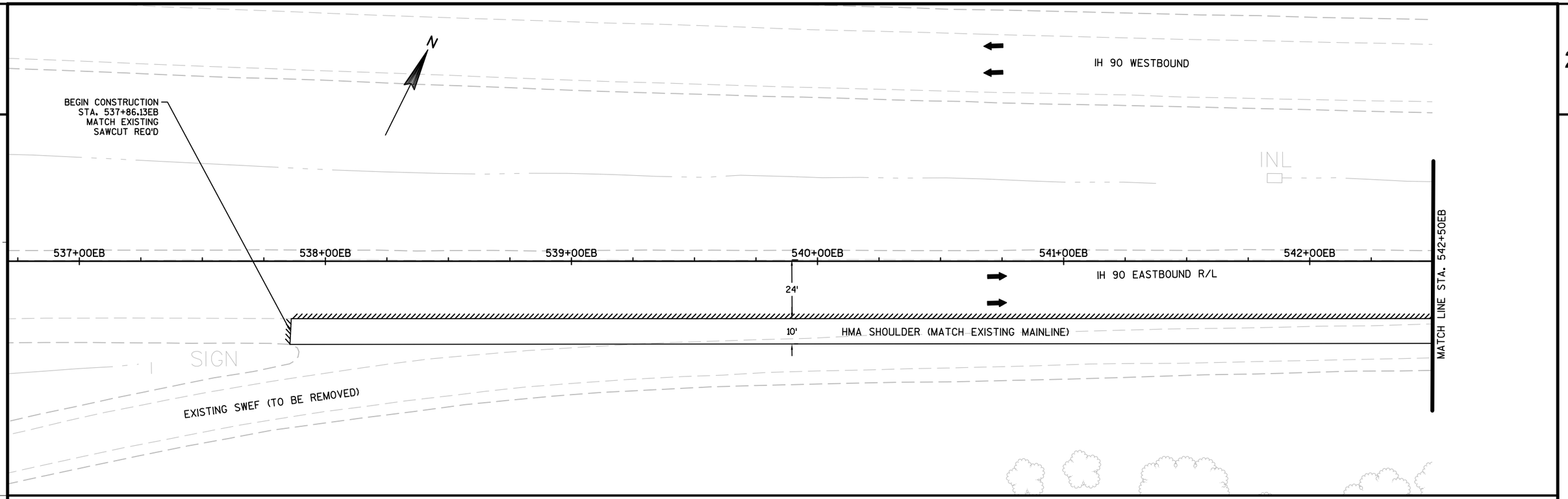
SIGN

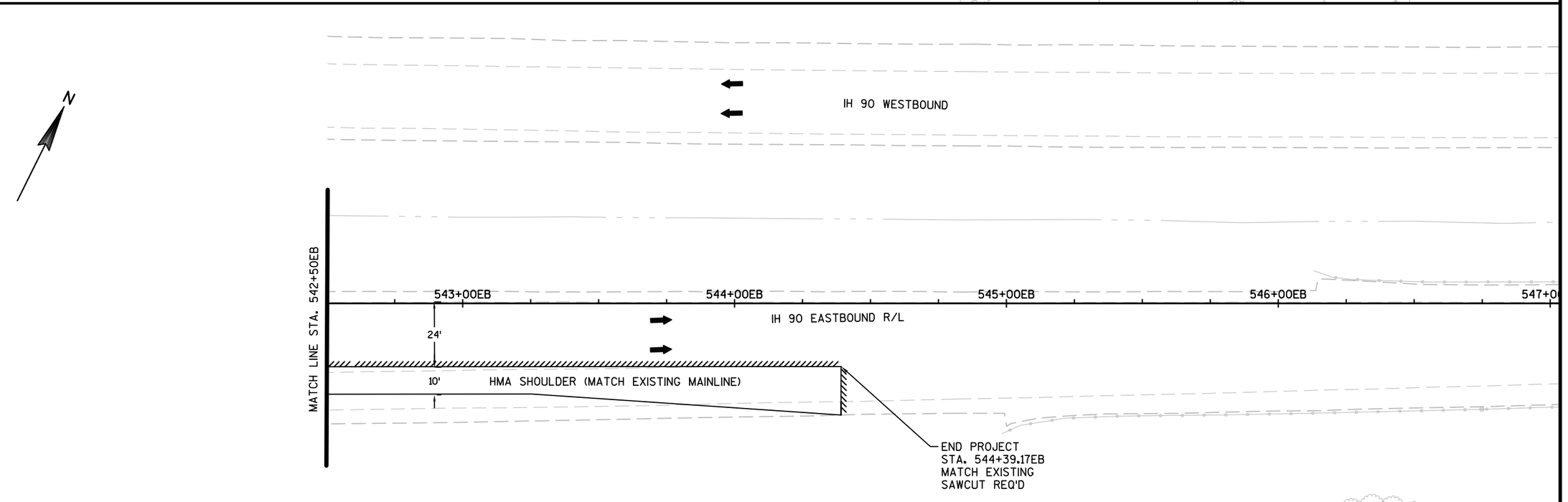
EXISTING SWEF (TO BE REMOVED)

PROJECT NO:1070-00-73	HWY:IH 90	COUNTY:LA CROSSE	PLAN DETAILS (WEST SALEM SWEF #53)	SHEET 41 E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\PLAN DETAILS\021201_PD.DWG PLOT DATE : 5/9/2016 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1:40_XREF

2

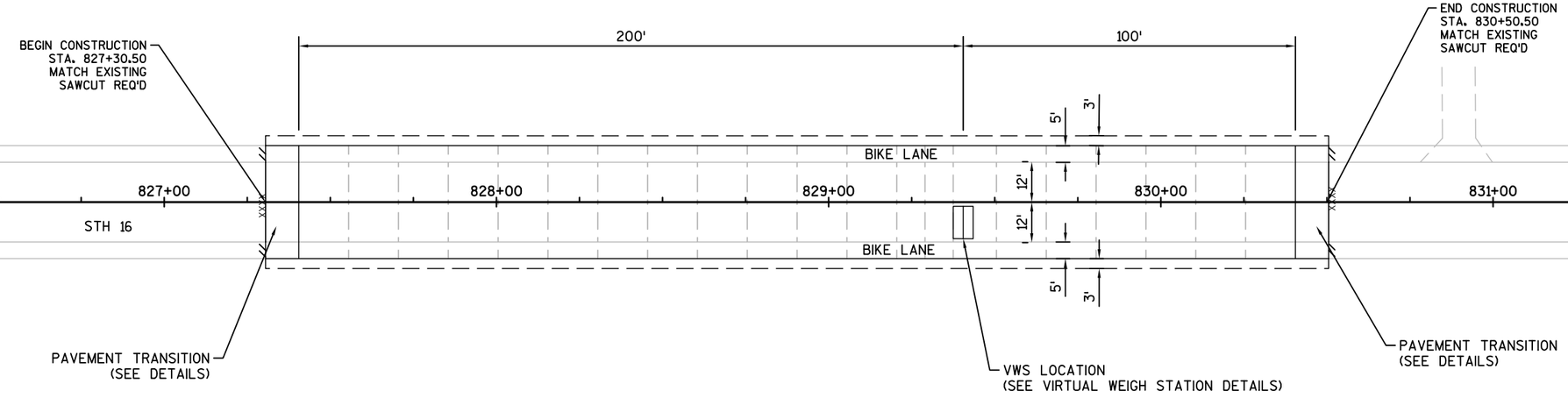




PROJECT NO:1070-00-73	HWY:IH 90	COUNTY:LA CROSSE	PLAN DETAILS (WEST SALEM SWEF #53)	SHEET 42	E

2

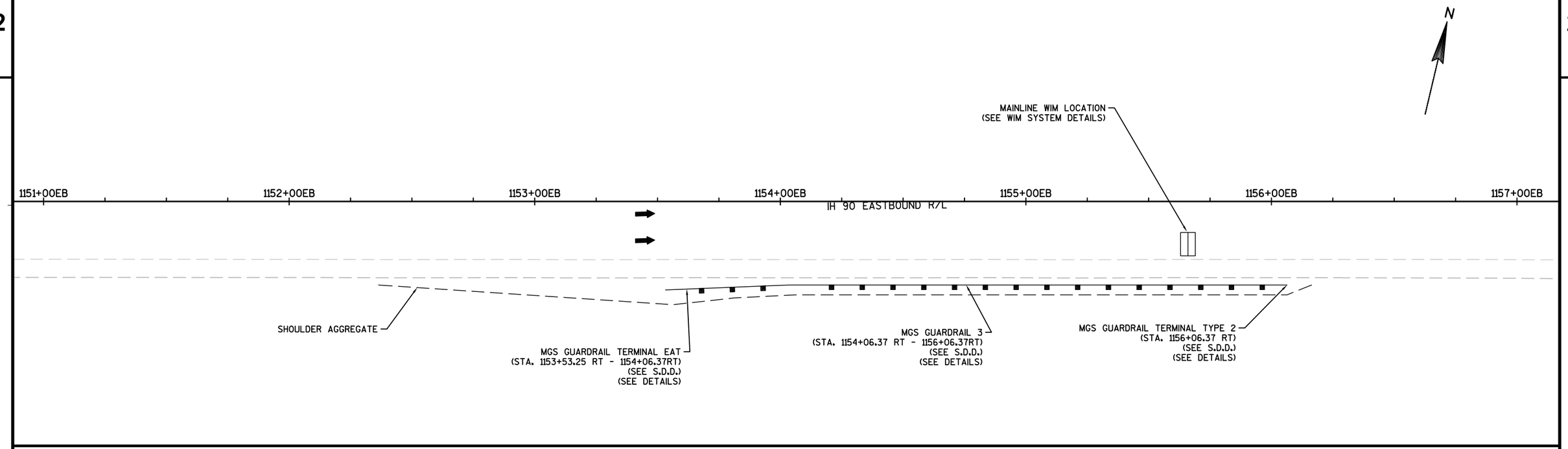
N

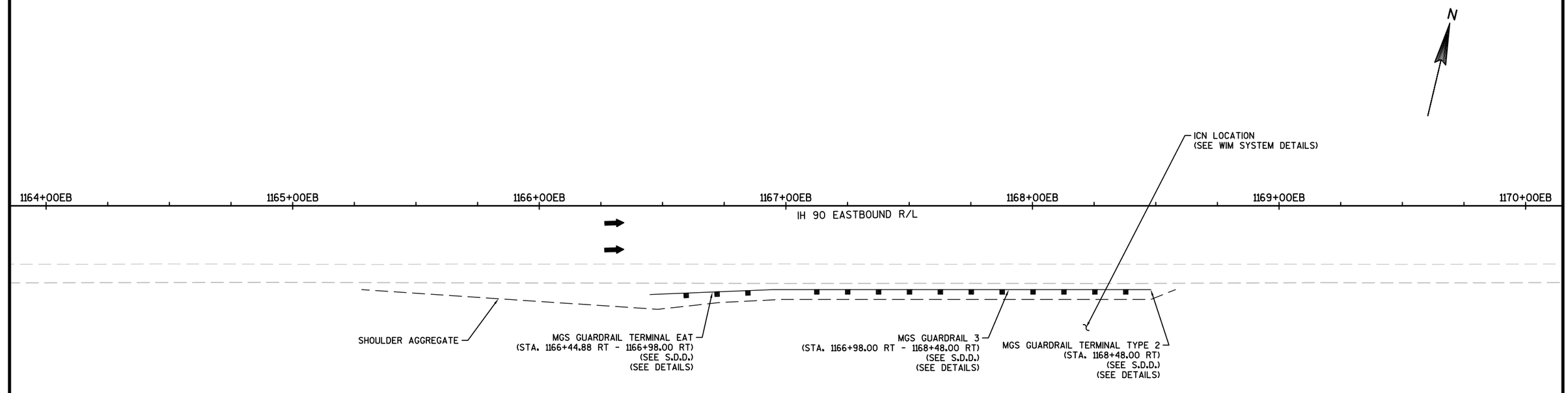


NOTE: PROPOSED GRADES TO MATCH EXISTING GRADES. CROSS SECTIONS NOT PROVIDED.

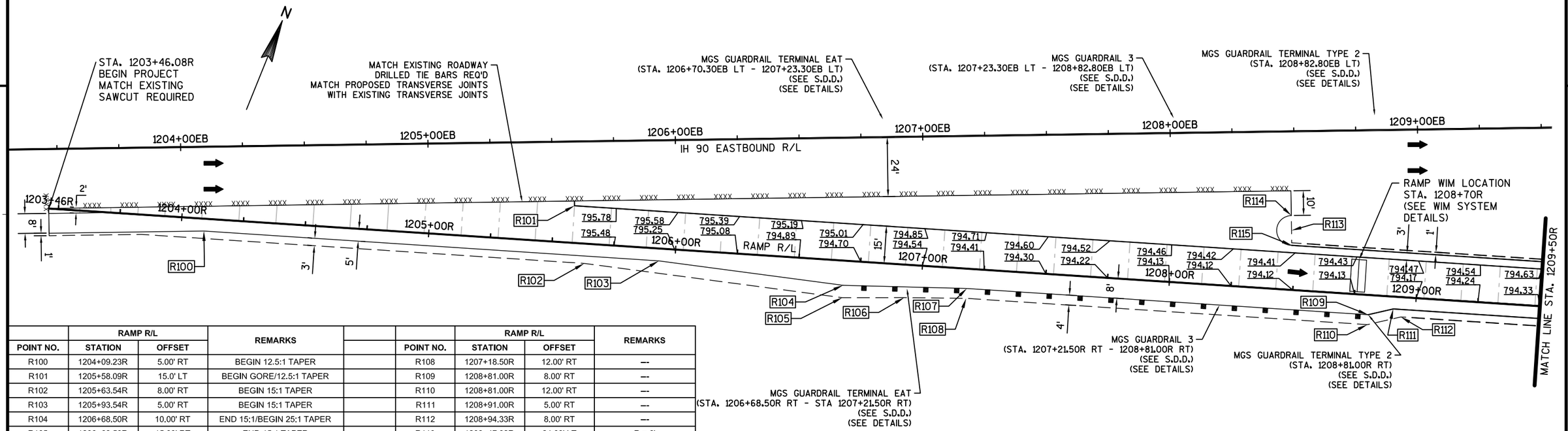
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN DETAILS (STH 16)	SHEET 43	E

2

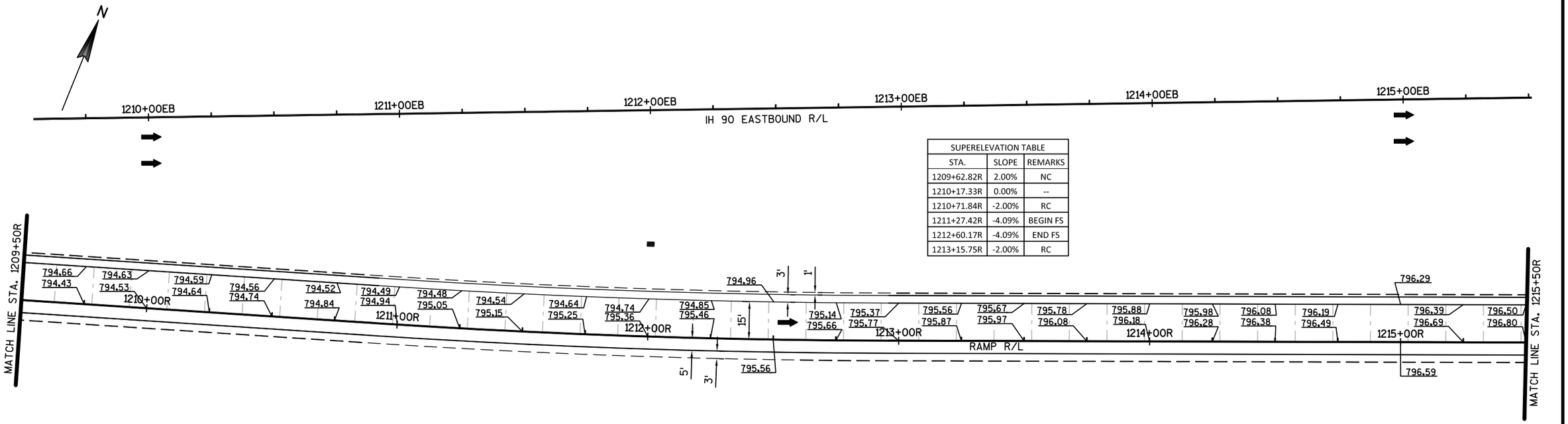




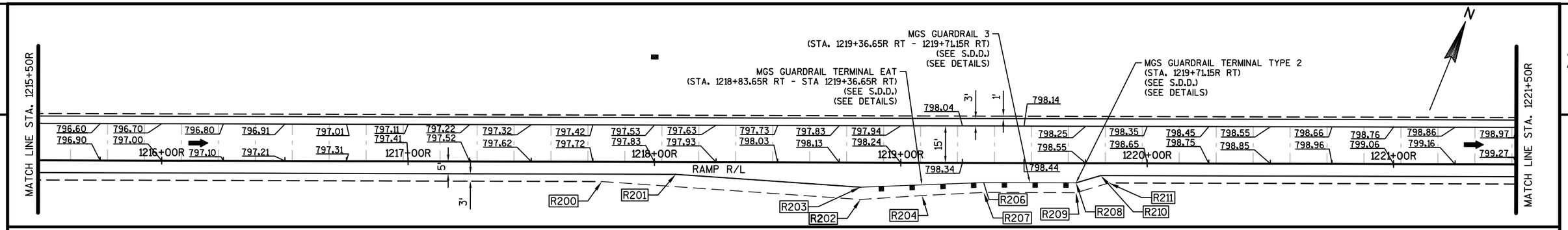
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN DETAILS (SPARTA SWEF #54)	SHEET 44	E

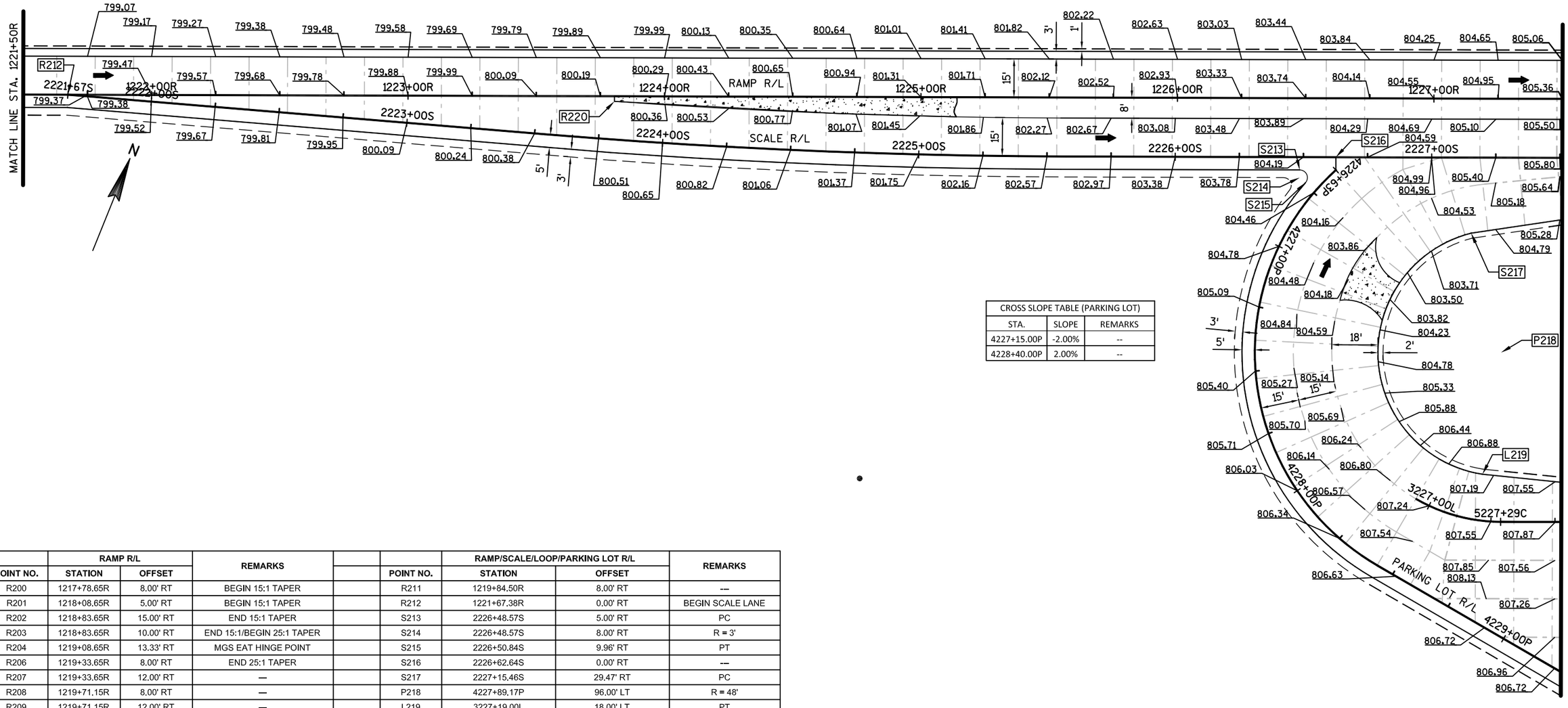


	RAMP R/L		REMARKS		RAMP R/L			REMARKS
POINT NO.	STATION	OFFSET			POINT NO.	STATION	OFFSET	
R100	1204+09.23R	5.00' RT	BEGIN 12.5:1 TAPER		R108	1207+18.50R	12.00' RT	---
R101	1205+58.09R	15.0' LT	BEGIN GORE/12.5:1 TAPER		R109	1208+81.00R	8.00' RT	---
R102	1205+63.54R	8.00' RT	BEGIN 15:1 TAPER		R110	1208+81.00R	12.00' RT	---
R103	1205+93.54R	5.00' RT	BEGIN 15:1 TAPER		R111	1208+91.00R	5.00' RT	---
R104	1206+68.50R	10.00' RT	END 15:1/BEGIN 25:1 TAPER		R112	1208+94.33R	8.00' RT	---
R105	1206+68.50R	15.00' RT	END 15:1 TAPER		R113	1208+47.92R	24.00' LT	R = 6'
R106	1206+93.50R	13.33' RT	MGS EAT HINGE POINT		R114	1208+47.44R	30.00' LT	PC
R107	1207+18.50R	8.00' RT	END 25:1 TAPER		R115	1208+48.40R	18.00' LT	PT



SUPERELEVATION TABLE		
STA.	SLOPE	REMARKS
1209+62.82R	2.00%	NC
1210+17.33R	0.00%	--
1210+71.84R	-2.00%	RC
1211+27.42R	-4.09%	BEGIN FS
1212+60.17R	-4.09%	END FS
1213+15.75R	-2.00%	RC





CROSS SLOPE TABLE (PARKING LOT)		
STA.	SLOPE	REMARKS
4227+15.00P	-2.00%	--
4228+40.00P	2.00%	--

	RAMP R/L		REMARKS		RAMP/SCALE/LOOP/PARKING LOT R/L			REMARKS
POINT NO.	STATION	OFFSET			POINT NO.	STATION	OFFSET	
R200	1217+78.65R	8.00' RT	BEGIN 15:1 TAPER		R211	1219+84.50R	8.00' RT	--
R201	1218+08.65R	5.00' RT	BEGIN 15:1 TAPER		R212	1221+67.38R	0.00' RT	BEGIN SCALE LANE
R202	1218+83.65R	15.00' RT	END 15:1 TAPER		S213	2226+48.57S	5.00' RT	PC
R203	1218+83.65R	10.00' RT	END 15:1/BEGIN 25:1 TAPER		S214	2226+48.57S	8.00' RT	R = 3'
R204	1219+08.65R	13.33' RT	MGS EAT HINGE POINT		S215	2226+50.84S	9.96' RT	PT
R206	1219+33.65R	8.00' RT	END 25:1 TAPER		S216	2226+62.64S	0.00' RT	--
R207	1219+33.65R	12.00' RT	—		S217	2227+15.46S	29.47' RT	PC
R208	1219+71.15R	8.00' RT	—		P218	4227+89.17P	96.00' LT	R = 48'
R209	1219+71.15R	12.00' RT	—		L219	3227+19.00L	18.00' LT	PT
R210	1219+81.15R	5.00' RT	—		R220	1223+80.47R	2.00' RT	BEGIN CENTER LANE

CROSS SLOPE TABLE (SCALE LANE)		
STA.	Slope	Remarks
1231+79.25R	2.00%	RC
1232+39.25R	0.00%	--

CROSS SLOPE TABLE (LOOP)		
STA.	SLOPE	REMARKS
3232+80.57L	2.00%	--
3233+40.57L	0.00%	--

PAVEMENT SECTION AT STATIC SCALE LOCATION (SEE CONSTRUCTION DETAIL)

STATIC SCALE (SEE DETAILS)

MATCH LINE STA. 1227+50R

MATCH LINE STA. 1233+50R

1228+00R 1229+00R 1230+00R RAMP R/L 1231+00R 1232+00R 1233+00R

2228+00S 2229+00S 2230+00S SCALE R/L 2231+00S CG-24AS 2232+00S 2233+00S

3230+00L 3231+00L CG-24AS 3232+00L 3233+00L

3229+00L LOOP R/L 3228+00L

4230+00P 4231+00P 4232+00P PARKING LOT R/L 4233+00P 4234+00P 4235+00P

5228+00C 5229+00C PARKING LOT CROWN 5230+00C 5231+00C 5232+00C 5233+00C

CG-24AS

S305 S306 S307 S308 S309 S310 S311 S329

L300 L301 L302 L312 L313 L314 L315 L316 L317 L318 L319 L320 L321 L322 L323 L324 L325 L326 L327 L328

P303 P304

ASPHALTIC FLUME (SEE DETAILS)

25' TAPER

ASPHALTIC FLUME (SEE SDD)

ASPHALTIC FLUME (SEE SDD)

CS-4

100'R 40'R

N

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN DETAILS (SPARTA SWEF #54)	SHEET 47	E

	SCALE/LOOP/PARKING LOT/CROWN R/L		REMARKS
POINT NO.	STATION	OFFSET	
L300	3227+82.99L	9.88' LT	PC
L301	3228+00.72L	33.00' LT	R = 28'
L302	3228+00.72L	5.00' LT	PT
P303	4230+89.97P	0.00' RT	BEGIN 2.083:1 TAPER
P304	4231+14.97P	12.00' RT	END 2.083:1 TAPER/BEGIN CURB
S305	2228+84.43S	4.00' RT	BEGIN 20:1 TAPER
S306	2228+91.29S	6.00' RT	BEGIN 20:1 TAPER
S307	2229+45.74S	6.00' RT	—
S308	2229+50.57S	4.00' RT	—
S309	2229+39.61S	14.96' RT	PC
S310	2229+43.15S	18.50' RT	R = 5'
S311	2229+39.61S	22.03' RT	PT
L312	3229+80.73L	6.00' LT	—
L313	3229+83.34L	4.00' LT	—
L314	3229+96.52L	0.00' RT	BEGIN CURB
L315	3230+28.12L	103.00' RT	—
L316	3230+39.59L	101.00' RT	—
L317	3231+05.38L	58.40' RT	PC
L318	3231+55.38L	145.00' RT	R = 100'
L319	3231+55.38L	45.00' RT	PT
L320	3231+82.55L	45.00' RT	PC
L321	3231+82.55L	95.00' RT	R = 50'
L322	3232+07.55L	51.70' RT	PT
L323	3231+98.63L	105.00' RT	—
L324	3233+12.90L	36.00' RT	—
L325	3233+12.90L	38.00' RT	—
L326	3233+38.10L	46.00' RT	—
L327	3233+44.40L	46.00' RT	—
L328	3233+44.40L	48.00' RT	—
S329	2229+67.46S	6.00' RT	BEGIN CURB

PAVEMENT SECTION AT STATIC SCALE LOCATION (SEE CONSTRUCTION DETAIL)

MATCH LINE STA. 1233+50R

MATCH LINE STA. 1239+50R

1234+00R | 1235+00R | 1236+00R | RAMP R/L | 1237+00R | 1238+00R | 1239+00R

2234+00S | 2235+00S | 2236+00S | SCALE R/L | 2237+00S | 2238+00S | 2239+00S

CG-24AS

FLAGO

R=5'

CS-4

STATIC SCALE (SEE DETAILS)

FENCE CHAIN LINK 6-FT SPECIAL

GATES CHAIN LINK 4-FT

CG-24DS REVERSE SLOPE

EMPLOYEE PARKING LOT R/L

7237+00E

3233+00L

L409

L408

L410

L412

L411

L413

L414

L415

L416

L417

L418

L405

L406

L407

E403

E404

E440

E441

E423

E421

E422

E420

E424

E425

S400

S401

S402

S419

S427

S428

S429

R426

R432

S433

S434

S435

S436

4243+34P

4243+00P

4242+00P

4241+00P

4240+00P

4239+00P

4238+00P

4237+00P

4236+00P

3236+00L

3236+87L

PARKING LOT R/L

CG-24AS

P430

P431

25' TAPER

ASPHALT FLUME (SEE S.D.D.)

CROSS SLOPE TABLE (SCALE LANE)		
STA.	SLOPE	REMARKS
1234+29.25R	0.00%	--
1234+89.25R	2.00%	RC

CROSS SLOPE TABLE (LOOP)		
STA.	SLOPE	REMARKS
3234+65.57L	0.00%	--
3235+25.57L	2.00%	--

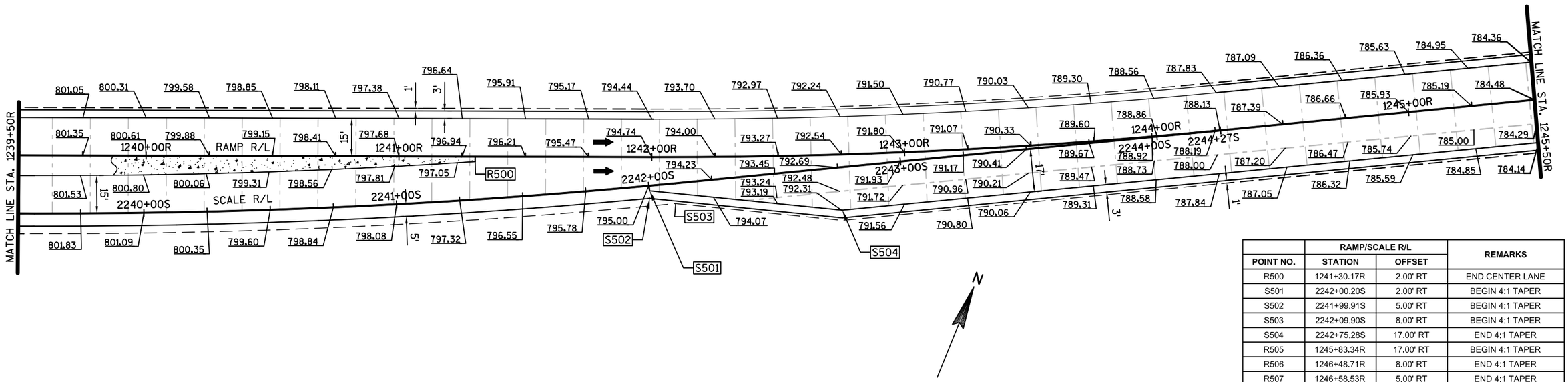
CROSS SLOPE TABLE (PARKING LOT)		
STA.	SLOPE	REMARKS
4236+75.00P	2.00%	--
4238+00.00P	-2.00%	--

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN DETAILS (SPARTA SWEF #54)	SHEET 49	E

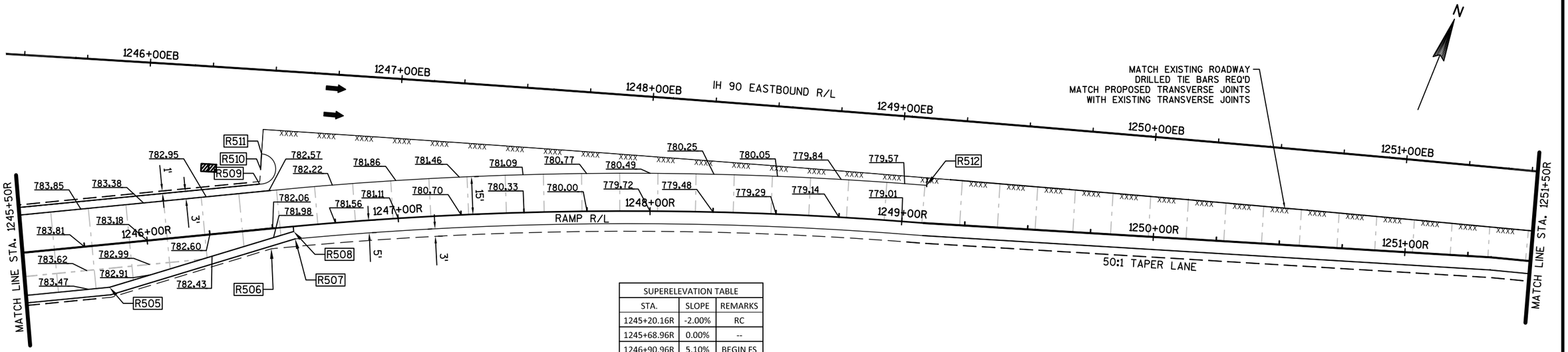
FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\PLAN DETAILS\021201_PD.DWG PLOT DATE : 5/9/2016 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1:40_XREF

WISDOT/CADDS SHEET 42

	SCALE/LOOP/PARKING LOT/CROWN R/L		REMARKS
POINT NO.	STATION	OFFSET	
S400	2234+72.90S	0.00' RT	PC
S401	2234+72.90S	6.50' RT	R = 6.5'
S402	2234+76.15S	12.13' RT	PT
E403	7237+21.32E	27.27' LT	---
E404	7236+12.44E	28.12' LT	---
L405	3234+96.13L	6.53' LT	PC
L406	3234+94.38L	3.50' LT	R = 3.5'
L407	3234+94.38L	0.00' RT	PT
L408	3234+58.08L	48.00' RT	---
L409	3234+58.07L	46.00' RT	---
L410	3234+64.37L	46.00' RT	---
L411	3234+89.57L	38.00' RT	---
L412	3234+89.58L	36.00' RT	---
L413	3234+58.08L	60.00' RT	---
L414	3234+95.18L	110.62' RT	---
L415	3235+68.08L	38.00' RT	---
L416	3235+78.08L	38.00' RT	---
L417	3235+78.08L	36.00' RT	---
L418	3236+20.42L	36.00' RT	---
S419	2235+34.82S	4.00' RT	PC
E420	7237+16.68E	59.00' RT	R = 50'
E421	7237+16.68E	9.00' RT	PT
E422	7237+14.10E	9.00' RT	---
E423	7237+43.17E	23.48' RT	---
E424	7236+06.55E	26.75' RT	---
E425	7235+51.68E	24.30' RT	---
R426	1236+31.90E	8.00' RT	END COLORED CONCRETE
S427	2236+70.30S	4.00' RT	---
S428	2236+70.50S	2.00' RT	---
S429	2236+90.50S	2.00' RT	---
P430	4239+14.97P	12.00' RT	END CURB/BEGIN 2.083:1 TAPER
P431	4239+39.97P	0.00' RT	END 2.083:1 TAPER
R432	1238+09.70S	8.00' RT	BEGIN COLORED CONCRETE
S433	2238+34.09S	0.00' RT	---
S434	2238+53.87S	10.29' RT	PC
S435	2238+55.80S	8.00' RT	R = 3'
S436	2238+55.80S	5.00' RT	PT
E440	7236+00.58S	20.27' LT	BEGIN REVERSE SLOPE
E441	7237+38.15S	13.99' LT	END REVERSE SLOPE

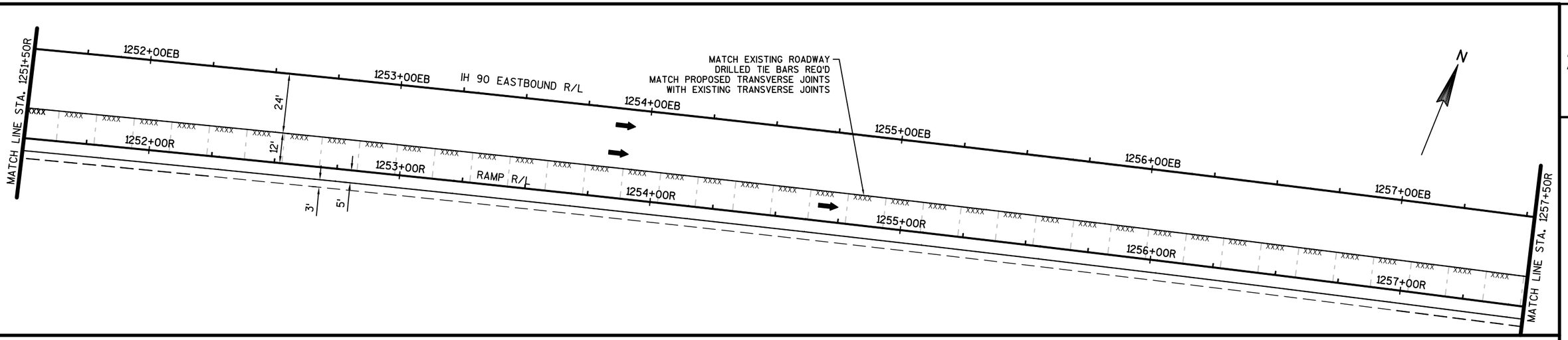


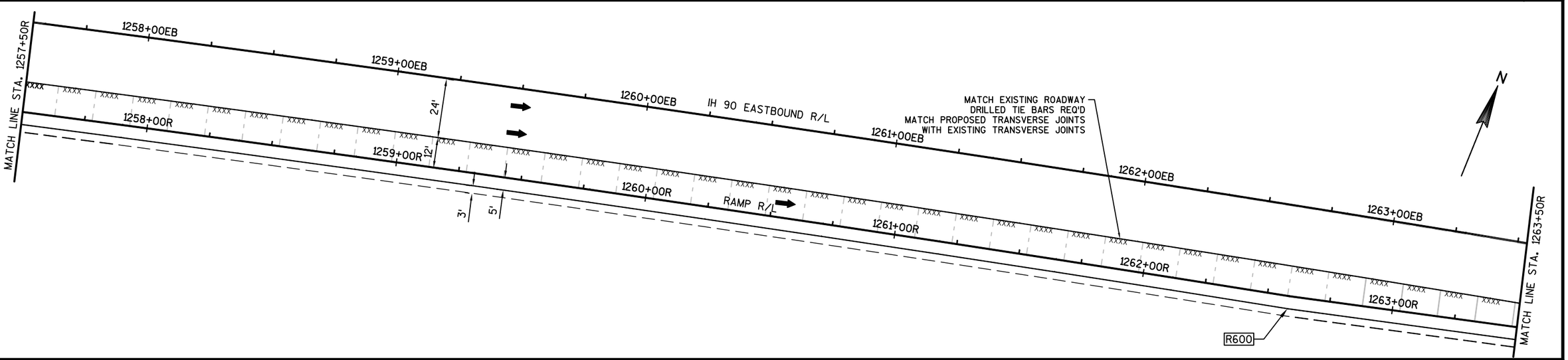
	RAMP/SCALE R/L		REMARKS
POINT NO.	STATION	OFFSET	
R500	1241+30.17R	2.00' RT	END CENTER LANE
S501	2242+00.20S	2.00' RT	BEGIN 4:1 TAPER
S502	2241+99.91S	5.00' RT	BEGIN 4:1 TAPER
S503	2242+09.90S	8.00' RT	BEGIN 4:1 TAPER
S504	2242+75.28S	17.00' RT	END 4:1 TAPER
R505	1245+83.34R	17.00' RT	BEGIN 4:1 TAPER
R506	1246+48.71R	8.00' RT	END 4:1 TAPER
R507	1246+58.53R	5.00' RT	END 4:1 TAPER
R508	1246+58.23R	2.00' RT	END 4:1 TAPER
R509	1246+46.58R	18.00' LT	PC
R510	1246+47.54R	24.00' LT	R = 6'
R511	1246+48.51R	30.00' LT	PT
R512	1249+09.00R	15.00' LT	END GORE

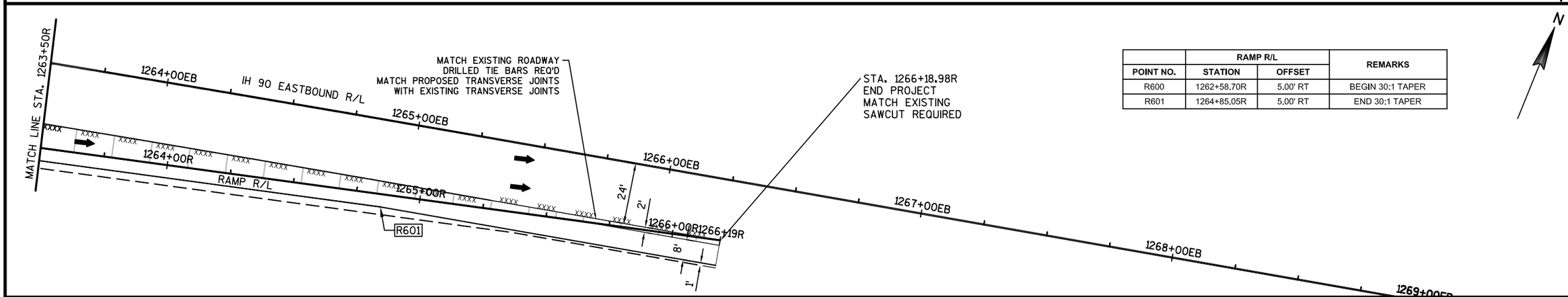


SUPERELEVATION TABLE		
STA.	SLOPE	REMARKS
1245+20.16R	-2.00%	RC
1245+68.96R	0.00%	--
1246+90.96R	5.10%	BEGIN FS
1248+68.44R	5.10%	END FS
1249+42.48R	2.00%	NC

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN DETAILS (SPARTA SWEF #54)	SHEET 51 E



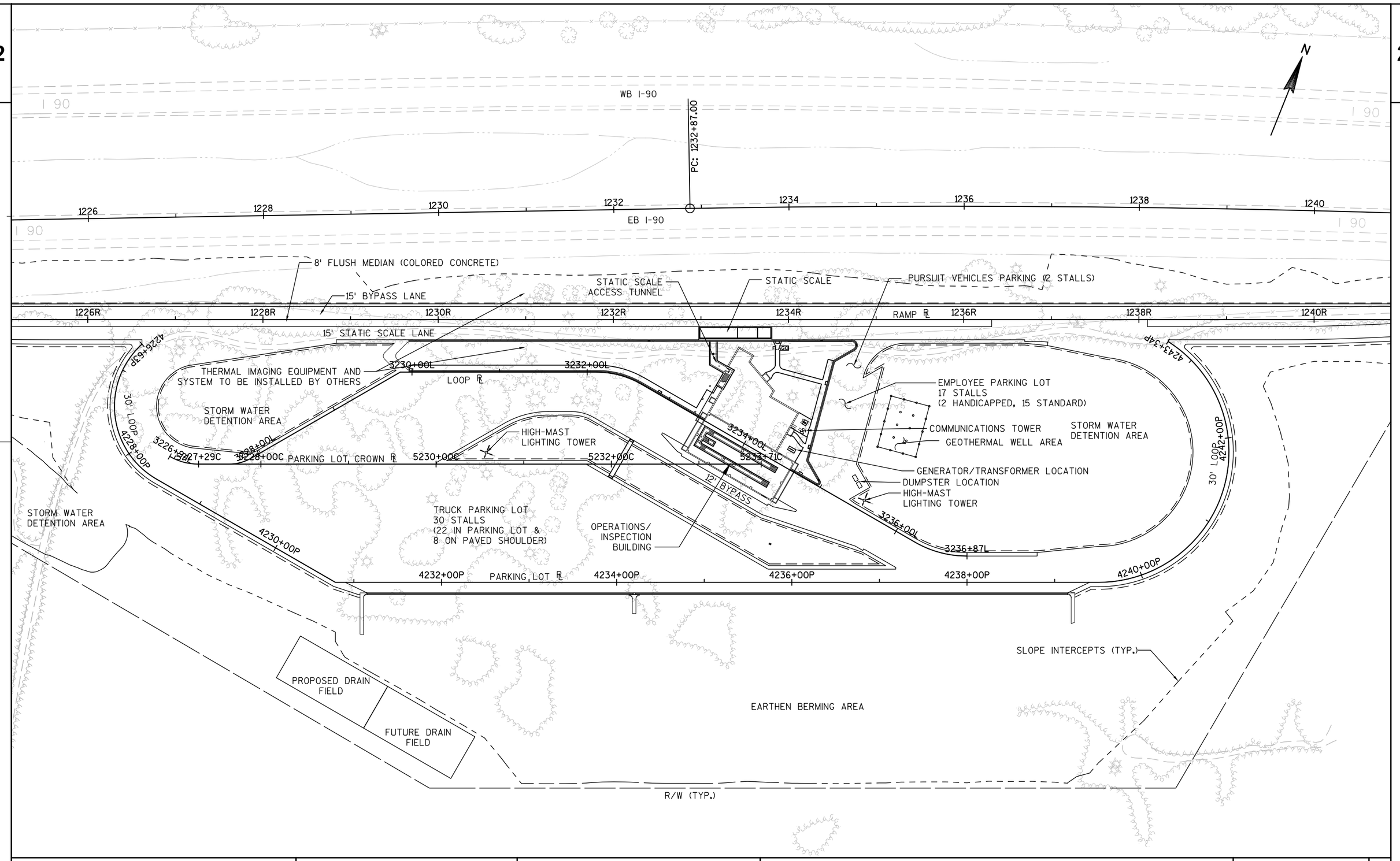




	RAMP R/L		REMARKS
POINT NO.	STATION	OFFSET	
R600	1262+58.70R	5.00' RT	BEGIN 30:1 TAPER
R601	1264+85.05R	5.00' RT	END 30:1 TAPER

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN DETAILS (SPARTA SWEF #54)	SHEET 52	E

2



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SITE OVERVIEW (SPARTA SWEF #54)	SHEET 53	E

1232+00R 1233+00R 1234+00R

RAMP R/L

STATIC SCALE
(SEE DETAIL)

2232+00S 2233+00S 2234+00S

812.16 812.16 812.16

812.83 812.95 812.36 812.94 812.34 812.97

812.58 813.75 813.46 813.37 813.32 813.26 813.24 813.20 812.80 813.36 813.22

813.16 813.10 813.15 813.24 813.43 813.33 813.25 813.33 813.43 813.32 812.72 813.36

5' 6' CS-4

FLAGPOLE

EDGE OF PLANTING BED

GS 6
CPB 17
WAC 3
TAY 7
GS 7
CPB 12
BJ 8
GS 2
GP 4
CPB 6

TRASH RECEPTACLE

SCALE BUILDING

INSPECTION BUILDING

GENERATOR

ELECT. TRANS.

BUILDING PLAN ELEVATION 100.00 = 813.43

ELEC. TRANSFORMER LOCATION

TRANSMISSION LINE BRIDGE
(SEE DETAIL)

COMMUNICATIONS TOWER
(SEE DETAIL)

GENERATOR LOCATION

3233+00L

LOOP R/L

3234+00L

N

GENERAL NOTES

EDGE OF PLANTING BED IS EDGE OF PAVEMENT AND/OR BUILDING UNLESS OTHERWISE NOTED.

ALL PLANTING BEDS TO RECEIVE PLASTIC EDGING EXCEPT WHERE BOUNDED BY PAVEMENT, BUILDING OR WHERE SPECIFICALLY NOTED.

EDGE OF PLANTING BED IN OPEN AREAS (NOT ADJACENT TO PAVEMENT OR BUILDING) IS TO BE LOCATED 18" BEYOND THE MATURE WIDTH (HEIGHT) OF PLANT, MEASURED FORM THE CENTER.

ALL PLANTING BEDS TO RECEIVE MINERAL MULCH - EXCEPT WHERE NOTED.

CONTRACTOR SHALL FIELD VERIFY LOCATIONS FOR WELL, SEPTIC, AND FLAGPOLE.

BUILD UP GRADE AROUND WELL AND PROVIDE POSITIVE DRAINAGE AWAY.

LEGEND

- WENTWORTH AMERICAN CRANBERRY (WAC)
- GOLDMOUND SPIREA (GS)
- GOLDFINGER POTENTILLA (GP)
- CRIMSON PYGMY BARBERRY (CPB)
- TAUNTON ANGLOJAP YEW (TAY)
- BROADMOOR JUNIPER (BJ)
- SOD LAWN

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN: BUILDING SITE PLAN/PLANTING PLAN	SHEET 54 E

2

N

WB IH 90

EB IH 90

I 90

RAMP SECTIONS

1218R 1220R 1222R 1224R 1226R 1228R 1230R 1232R 1234R 1236R 1238R 1240R 1242R 1244R 1246R 1248R

LOOP SECTIONS

3230L 3232L

EMPLOYEE LOT SECTIONS

3234L 3235E 3236E 3236L

4226P 4228P 4230P 4232P 4234P 4236P 4238P 4240P 4242P

POND SECTIONS

2PD 2PD 2PD

PARKING LOT SECTIONS

R/W

PROJECT NO:1070-00-72	HWY:IH 90	COUNTY:MONROE	CROSS SECTIONS MATCHLINES	SHEET 55	E

2

2

SIGN

INL

IH 90 WB

513+00EB 514+00EB 515+00EB 516+00EB 517+00EB 518+00EB 519+00EB 520+00EB 521+00EB 522+00EB 523+00EB 524+00EB 525+00EB 526+00EB 527+00EB 528+

IH 90 EB R/L

SIGN

INL

SLOPE INTERCEPTS (TYP.)

SILT FENCE (SEE SDD) (TYP.)

INL

INL

INL

SEPTIC SAN

MATCHLINE STA. 528+00

LEGEND

######	EROSION MAT CLASS I, TYPE B
	RIPRAP MEDIUM
	SOD
	SILT FENCE
△△△	TEMPORARY DITCH CHECK
FI	STONE OR ROCK DITCH CHECK
OOO	CULVERT PIPE CHECK
	SURFACE WATER FLOW
AB	INSTALL INLET PROTECTION TYPE A AND TYPE B AFTER STRUCTURE IS PLACED.
AC	INSTALL INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS POURED. THEN INSTALL INLET PROTECTION TYPE C.

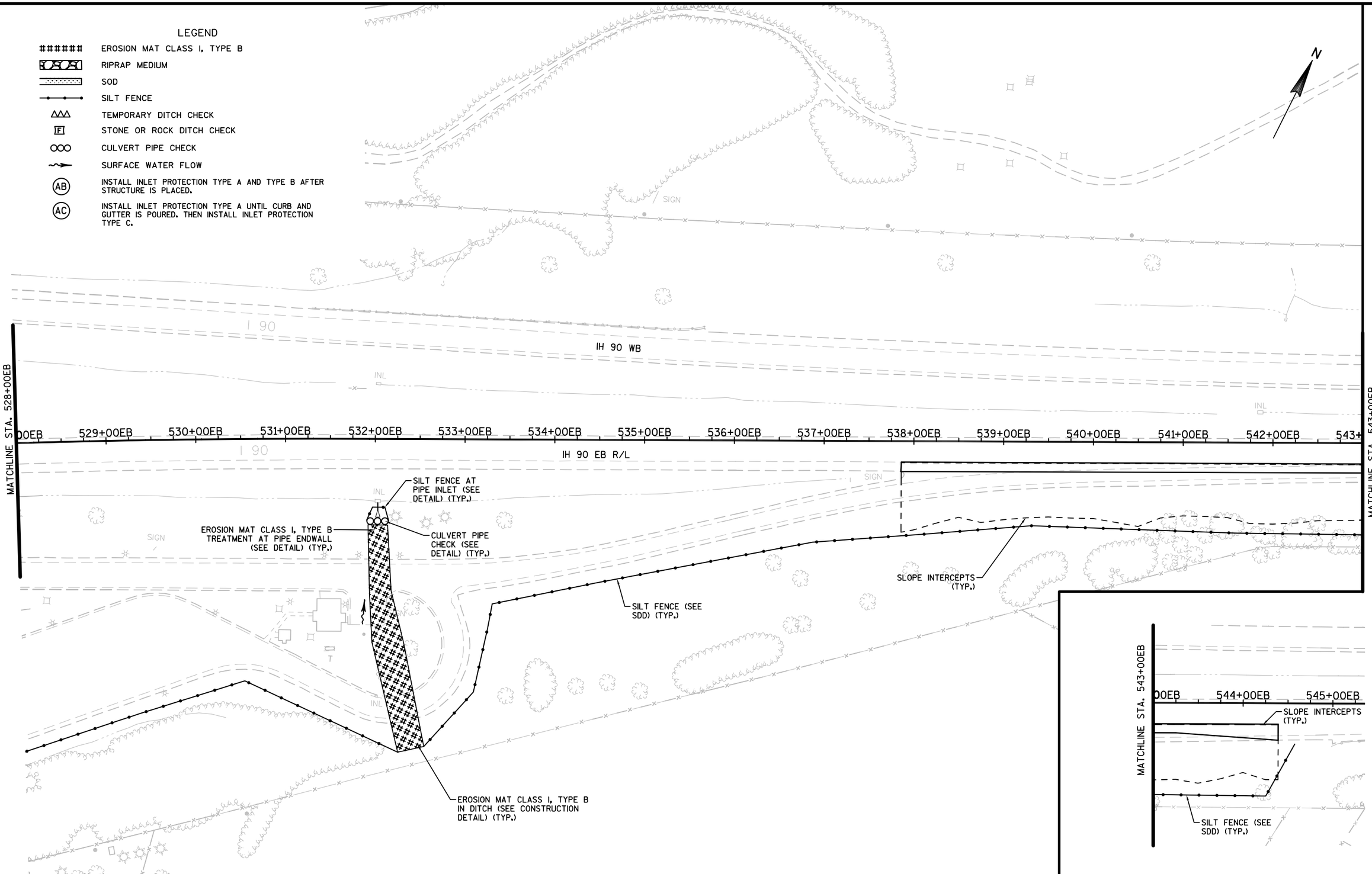
PROJECT NO:1070-00-73	HWY: IH 90	COUNTY:LA CROSSE	EROSION CONTROL PLAN (WEST SALEM SWEF #53)	SHEET 56	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\EROSION CONTROL\022001_EC.DWG PLOT DATE : 5/9/2016 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

2

LEGEND

- ###### EROSION MAT CLASS I, TYPE B
- RIPRAP MEDIUM
- SOD
- SILT FENCE
- TEMPORARY DITCH CHECK
- STONE OR ROCK DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- (AB) INSTALL INLET PROTECTION TYPE A AND TYPE B AFTER STRUCTURE IS PLACED.
- (AC) INSTALL INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS POURED. THEN INSTALL INLET PROTECTION TYPE C.

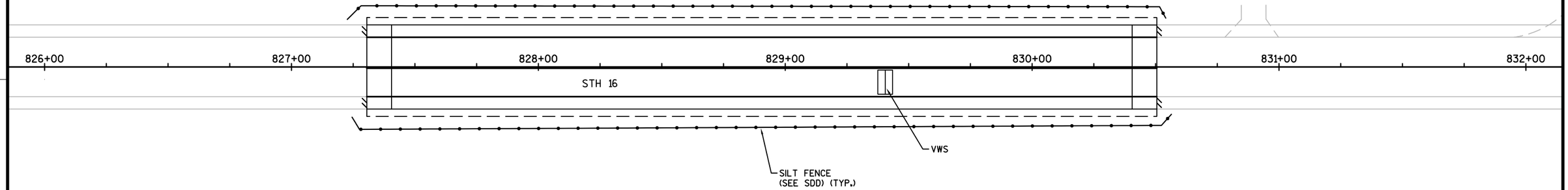


PROJECT NO:1070-00-73	HWY: IH 90	COUNTY:LA CROSSE	EROSION CONTROL PLAN (WEST SALEM SWEF #53)	SHEET 57 E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\EROSION CONTROL\022001_EC.DWG PLOT DATE : 5/9/2016 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1:100_XREF

2

N



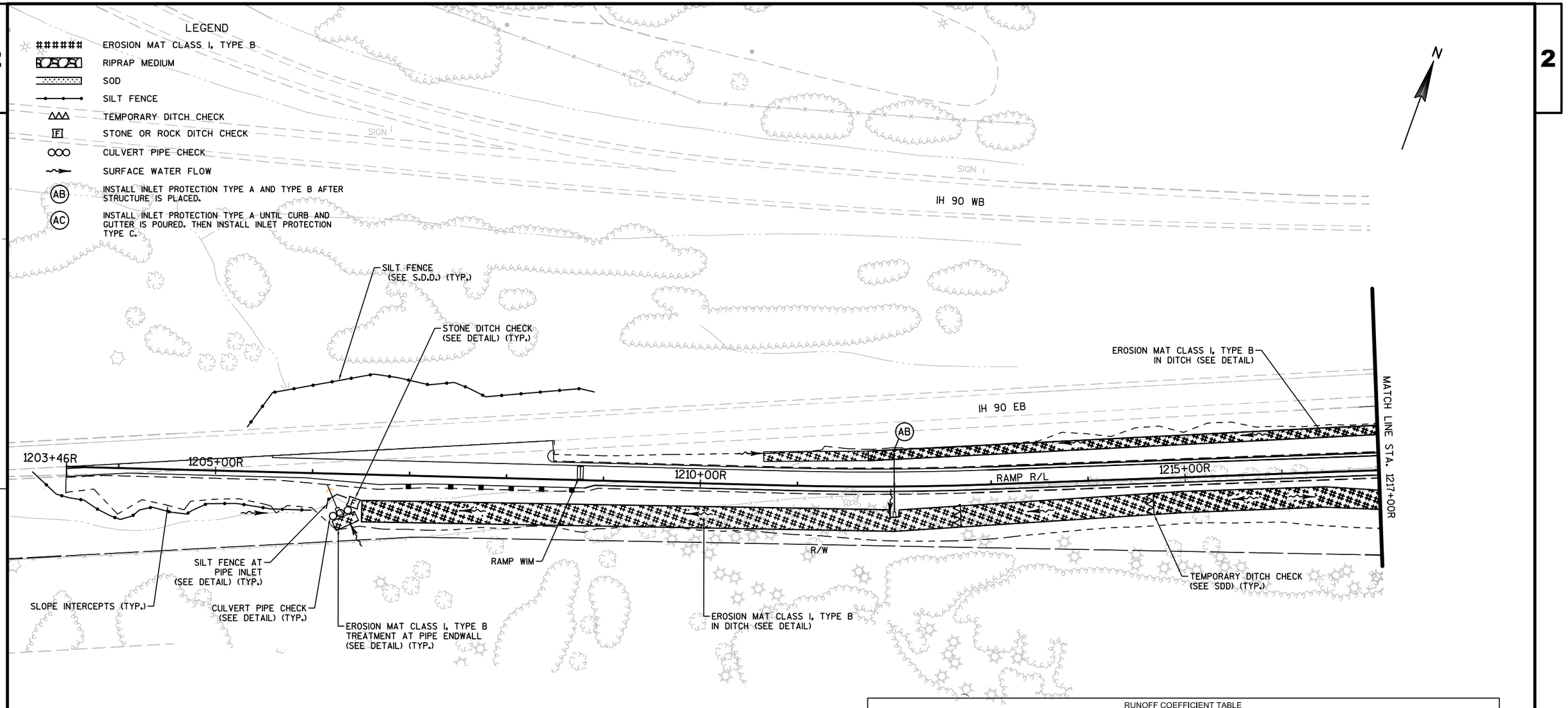
LEGEND

######	EROSION MAT CLASS I, TYPE B
	RIPRAP MEDIUM
	SOD
	SILT FENCE
△△△	TEMPORARY DITCH CHECK
F	STONE OR ROCK DITCH CHECK
○○○	CULVERT PIPE CHECK
	SURFACE WATER FLOW
(AB)	INSTALL INLET PROTECTION TYPE A AND TYPE B AFTER STRUCTURE IS PLACED.
(AC)	INSTALL INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS POURED. THEN INSTALL INLET PROTECTION TYPE C.

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	EROSION CONTROL PLAN (STH 16)	SHEET 58	E

LEGEND

- ###### EROSION MAT CLASS I, TYPE B
- RIPRAP MEDIUM
- SOD
- SILT FENCE
- TEMPORARY DITCH CHECK
- [F] STONE OR ROCK DITCH CHECK
- CULVERT PIPE CHECK
- SURFACE WATER FLOW
- (AB) INSTALL INLET PROTECTION TYPE A AND TYPE B AFTER STRUCTURE IS PLACED.
- (AC) INSTALL INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS POURED. THEN INSTALL INLET PROTECTION TYPE C.



GENERAL NOTES:

DO NOT PLACE SILT FENCE ON OR OUTSIDE OF THE RIGHT-OF-WAY.

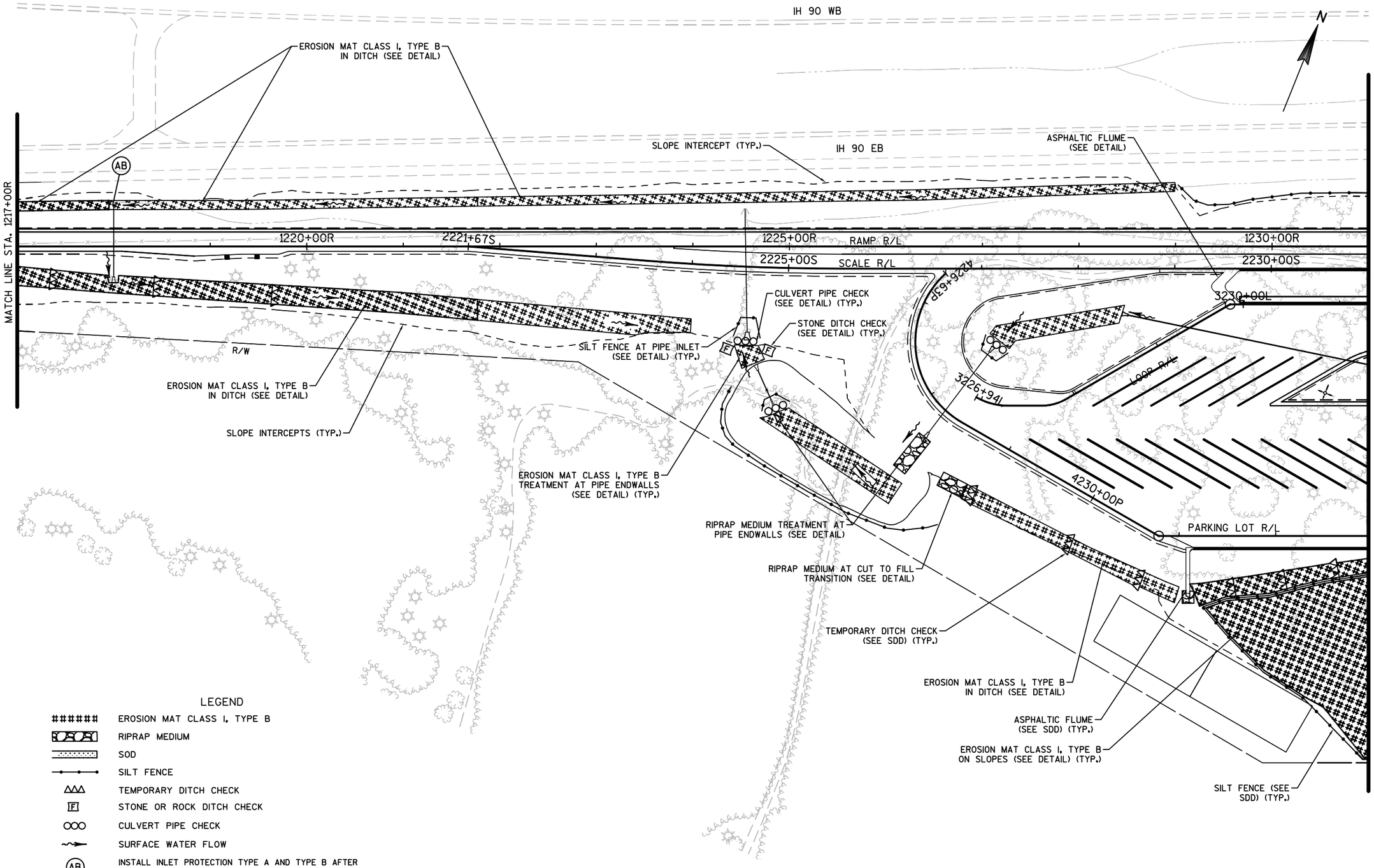
INLET PROTECTION TYPE A SHALL BE PLACED AT ALL INLET LOCATIONS DURING GRADING STAGES. TYPE B INLET PROTECTION SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE FOR ALL TYPE B INLET COVERS. TYPE C INLET PROTECTION SHALL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE FOR ALL TYPE H INLET COVERS.

REMOVE TEMPORARY EROSION CONTROL FEATURES AS AREA IS STABILIZED OR AS DIRECTED BY ENGINEER.

RUNOFF COEFFICIENT TABLE

	HYDROLOGIC SOIL GROUP											
	A			B			C			D		
	SLOPE RANGE (%)			SLOPE RANGE (%)			SLOPE RANGE (%)			SLOPE RANGE (%)		
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
ASPHALT	.70 - .95											
CONCRETE	.80 - .95											
BRICK	.70 - .80											
DRIVES, WALKS	.75 - .85											
ROOFS	.75 - .95											
GRAVEL ROADS, SHOULDERS	.40 - .60											

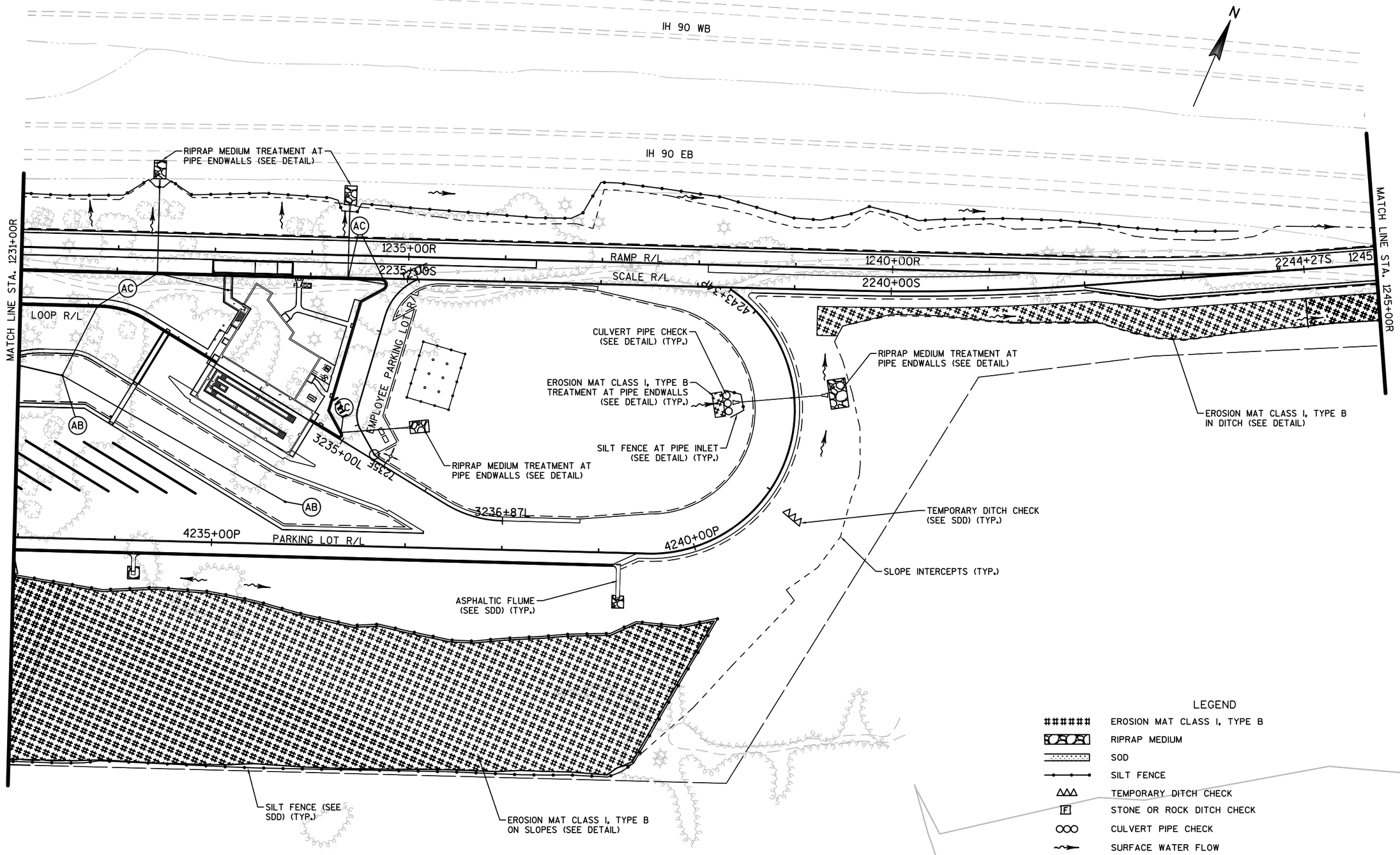
TOTAL PROJECT AREA = 34.0 ACRES
TOTAL DISTURBED AREA = 25.8 ACRES



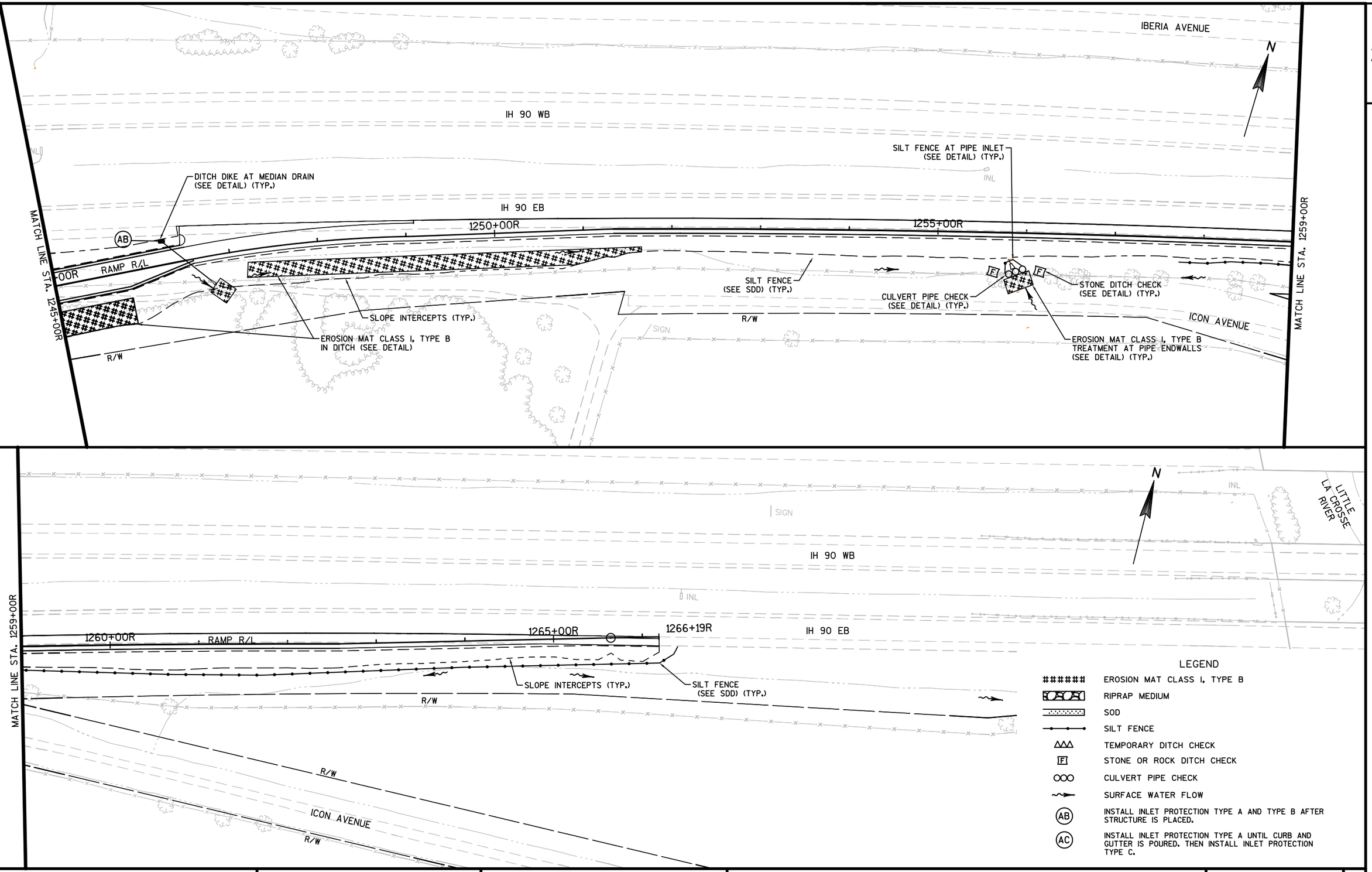
LEGEND

######	EROSION MAT CLASS I, TYPE B
	RIPRAP MEDIUM
	SOD
	SILT FENCE
	TEMPORARY DITCH CHECK
F	STONE OR ROCK DITCH CHECK
	CULVERT PIPE CHECK
	SURFACE WATER FLOW
AB	INSTALL INLET PROTECTION TYPE A AND TYPE B AFTER STRUCTURE IS PLACED.
AC	INSTALL INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS POURED. THEN INSTALL INLET PROTECTION TYPE C.

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	EROSION CONTROL PLAN (SPARTA SWEF #54)	SHEET 60 E



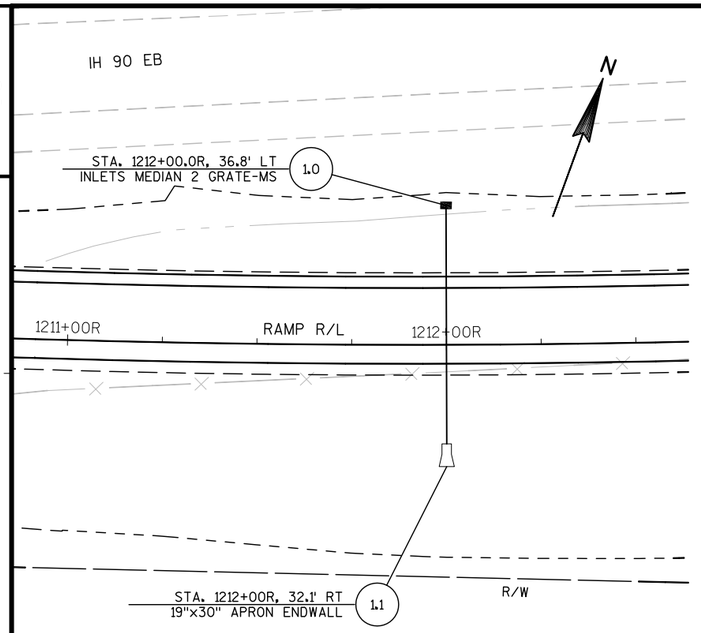
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	EROSION CONTROL PLAN (SPARTA SWEF #54)	SHEET 61	E

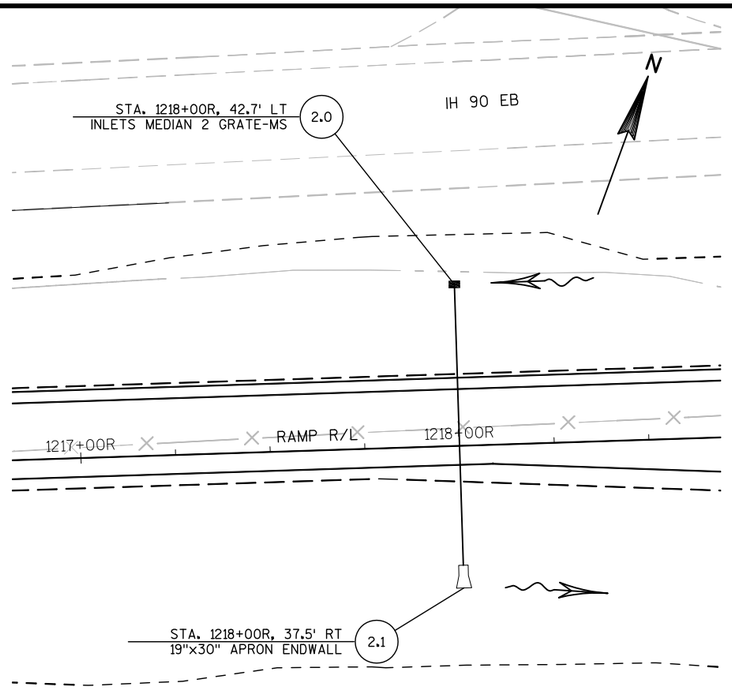


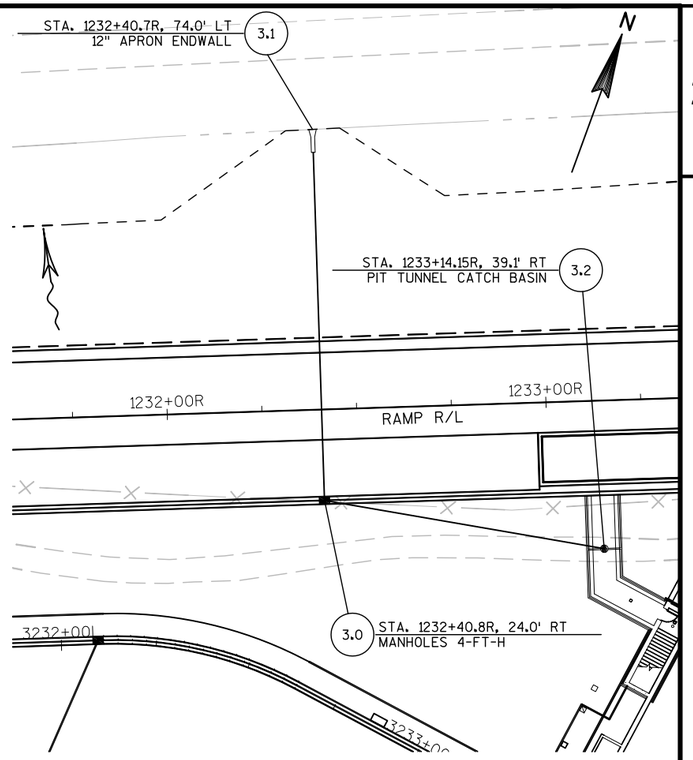
LEGEND

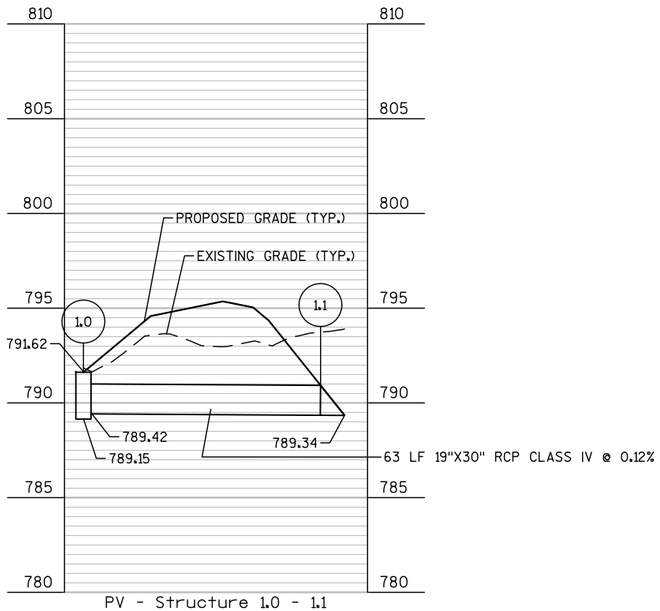
######	EROSION MAT CLASS I, TYPE B
	RIPRAP MEDIUM
	SOD
	SILT FENCE
ΔΔΔ	TEMPORARY DITCH CHECK
F F	STONE OR ROCK DITCH CHECK
OOO	CULVERT PIPE CHECK
	SURFACE WATER FLOW
(AB)	INSTALL INLET PROTECTION TYPE A AND TYPE B AFTER STRUCTURE IS PLACED.
(AC)	INSTALL INLET PROTECTION TYPE A UNTIL CURB AND GUTTER IS POURED. THEN INSTALL INLET PROTECTION TYPE C.

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	EROSION CONTROL PLAN (SPARTA SWEF #54)	SHEET 62 E

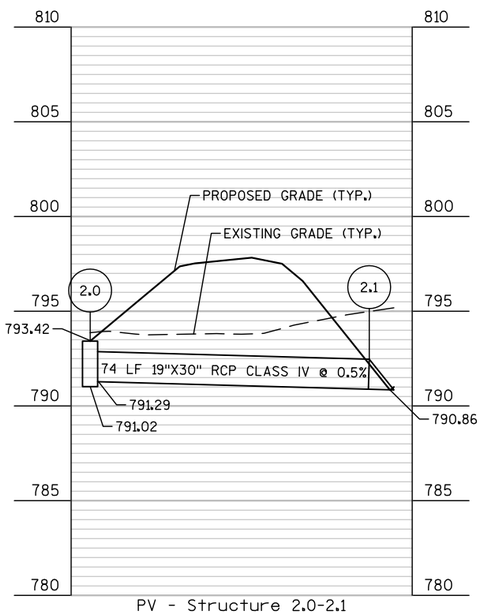




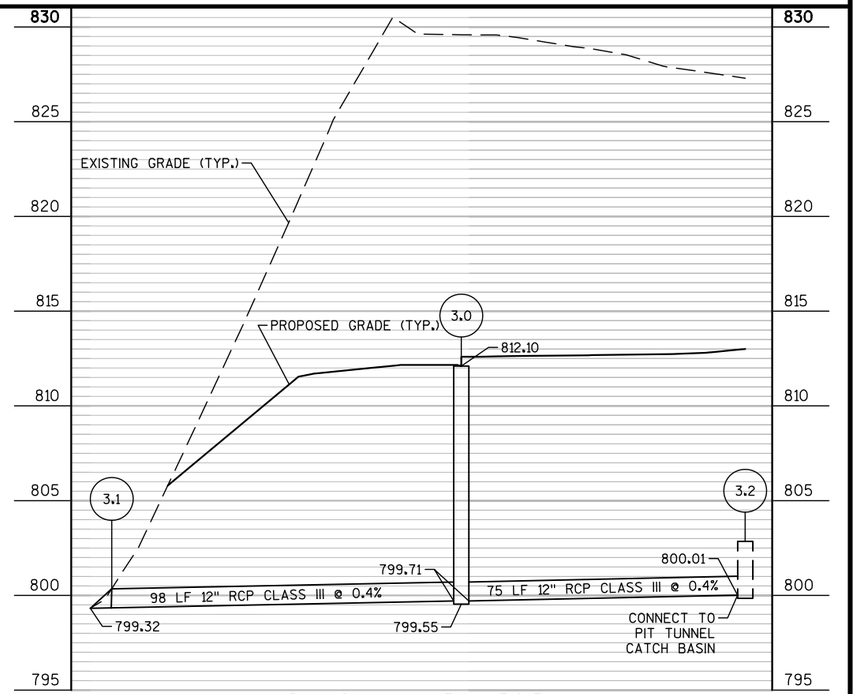




PV - Structure 1.0 - 1.1

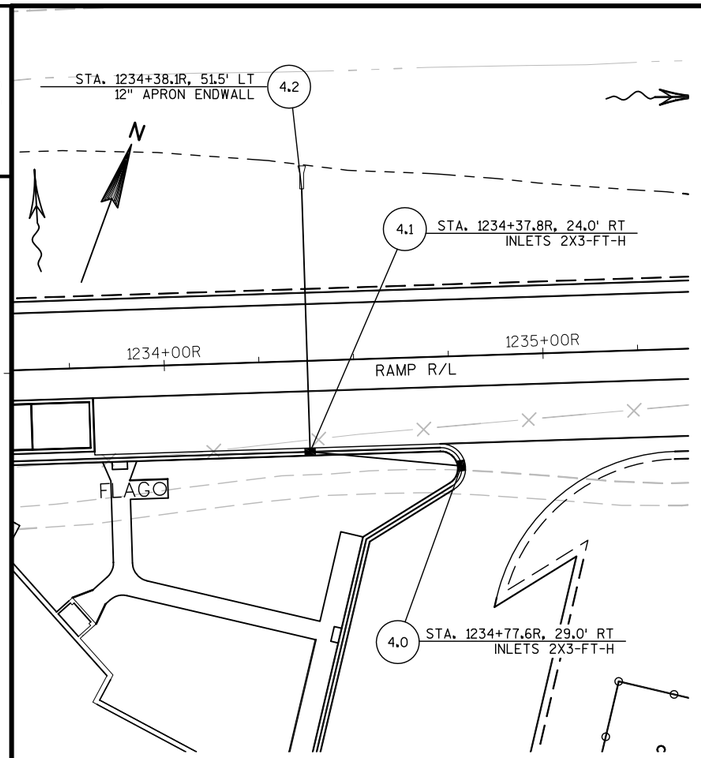


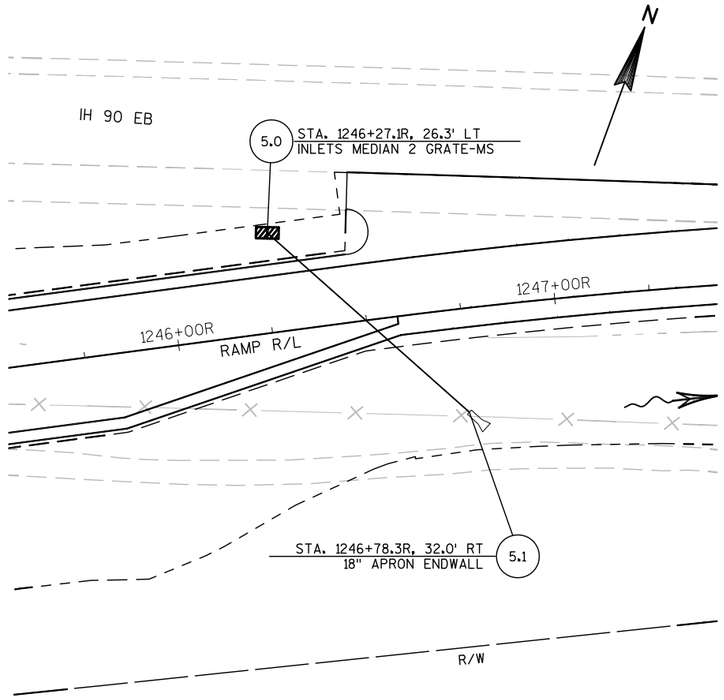
PV - Structure 2.0-2.1

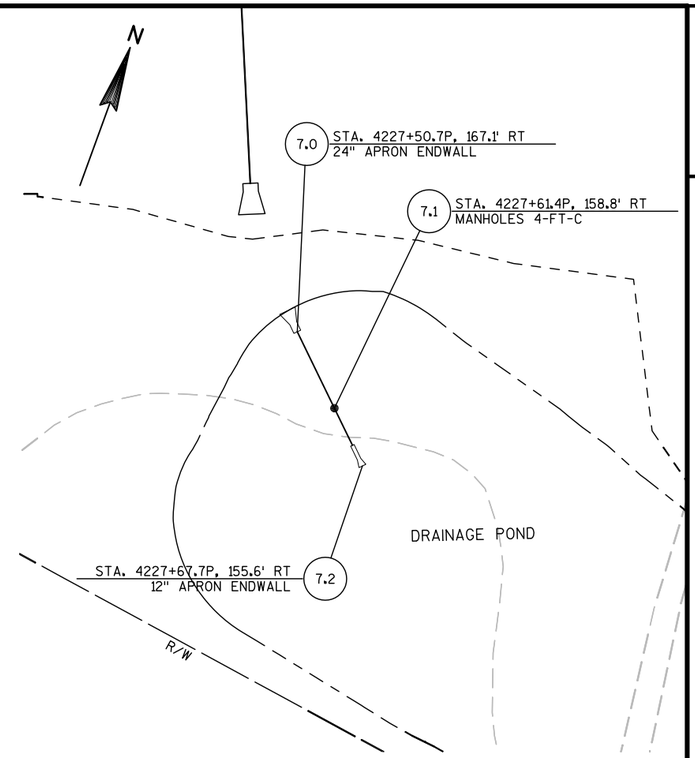


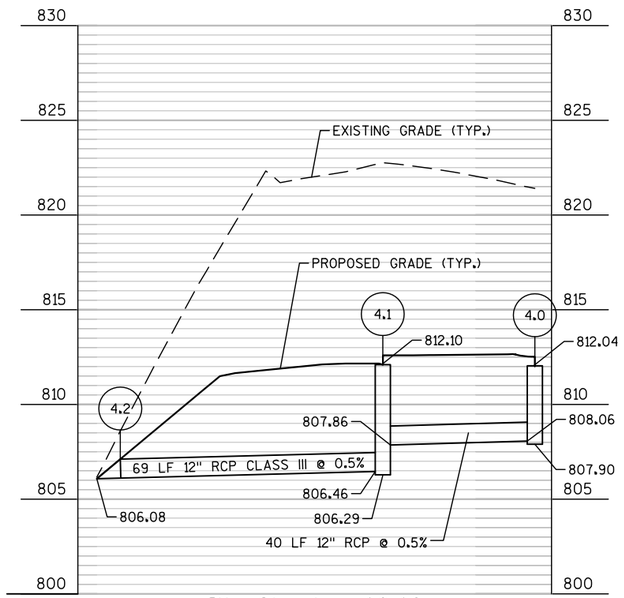
PV - Structure Exist-3.0-3.1

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	STORM SEWER PLAN	SHEET 63	E

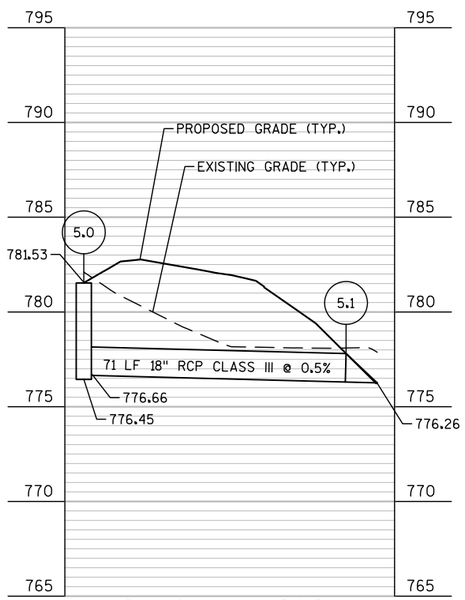




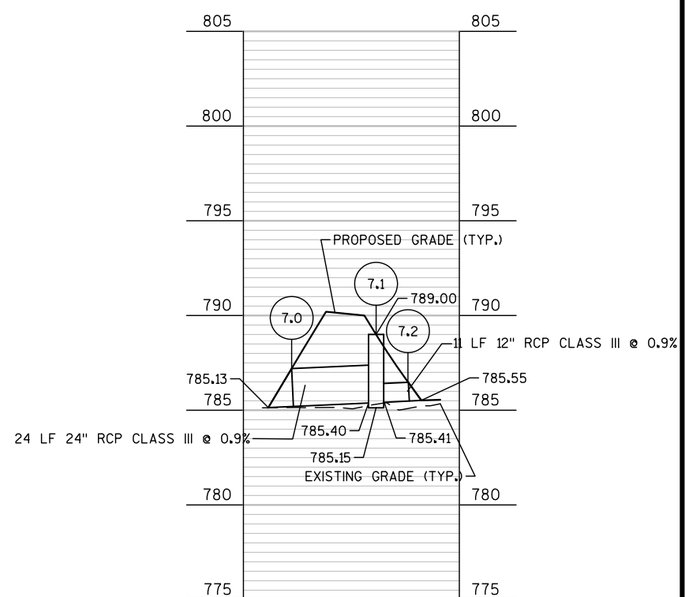




PV - Structure 4.0-4.2

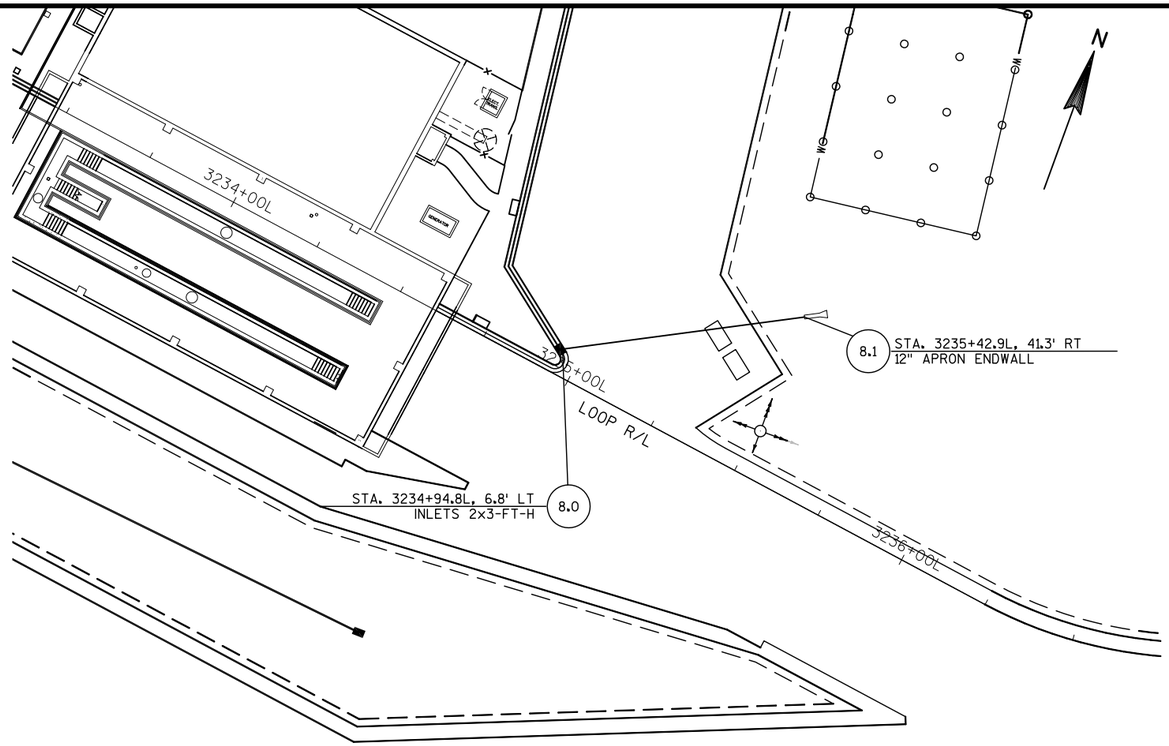


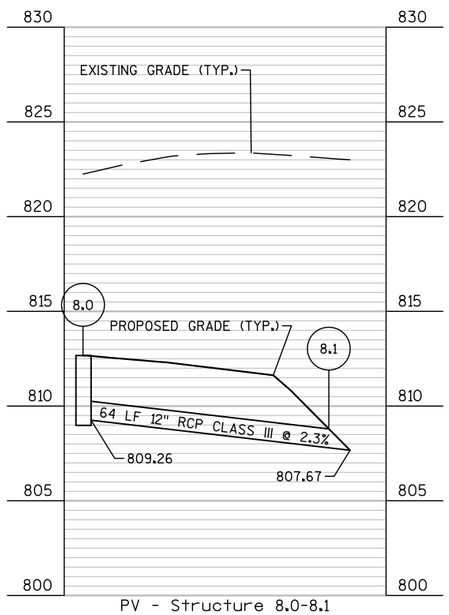
PV - Structure 5.0-5.1



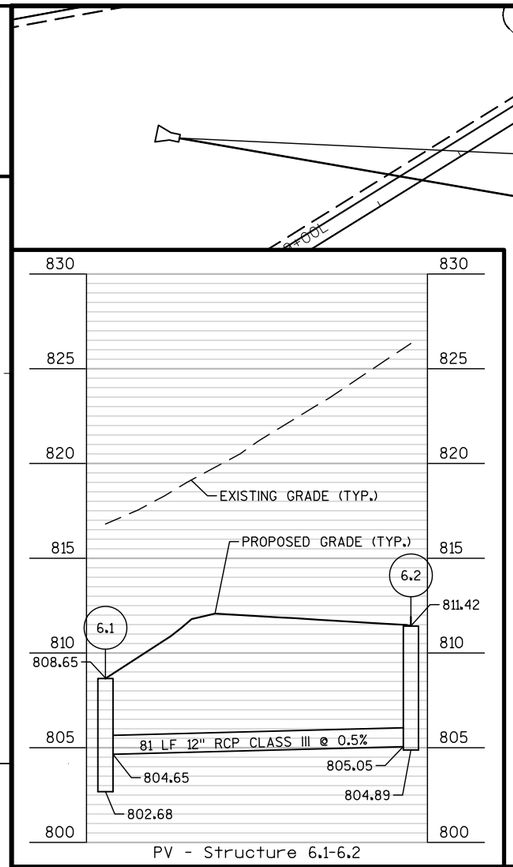
PV - Structure 7.0-7.2

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	STORM SEWER PLAN	SHEET 64	E

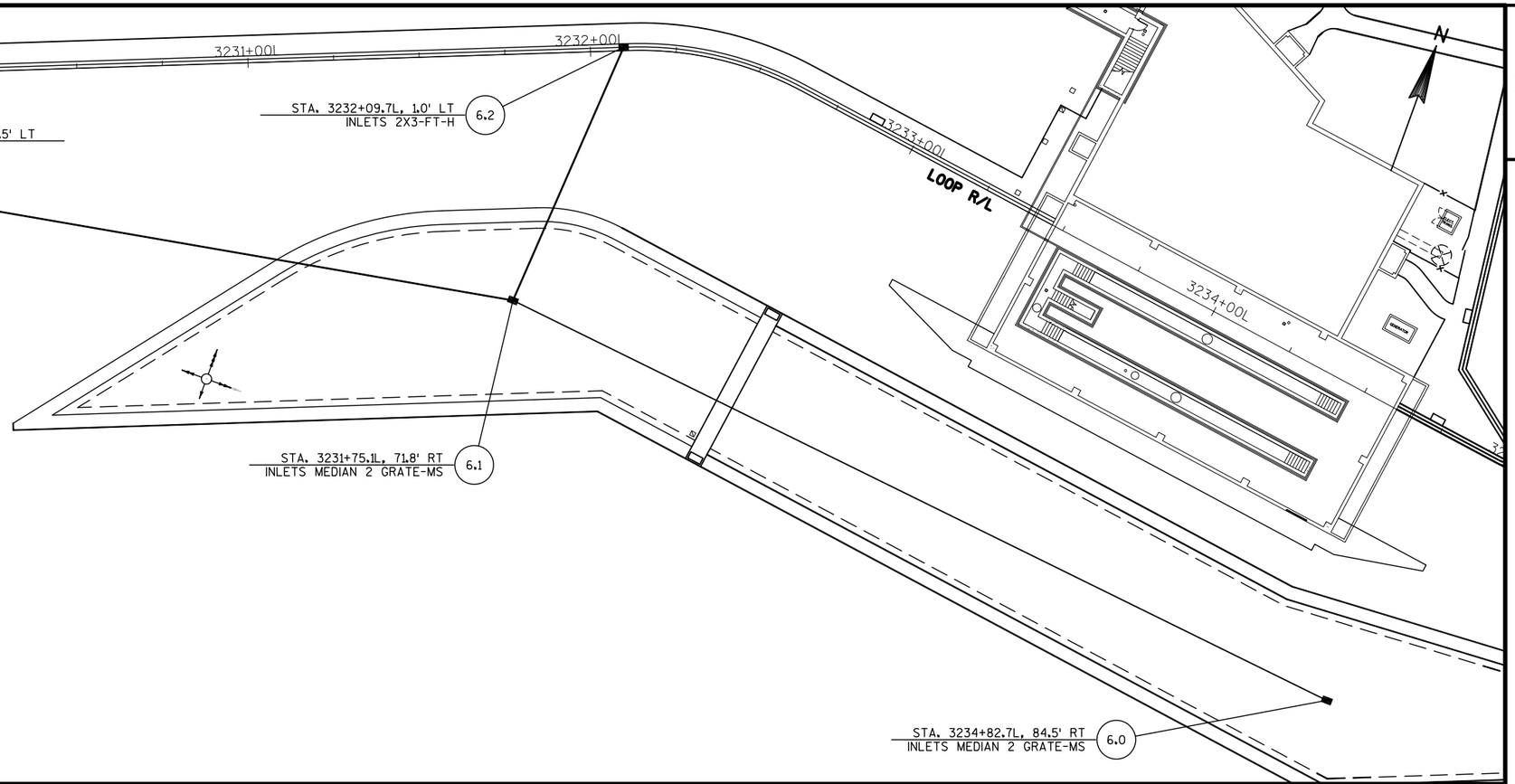


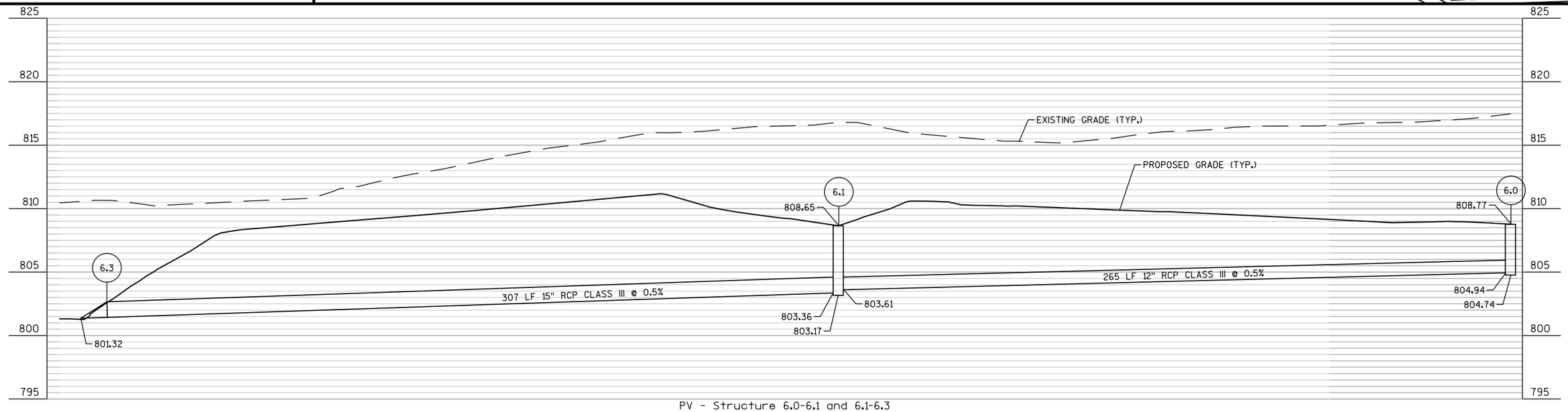


PV - Structure 8.0-8.1



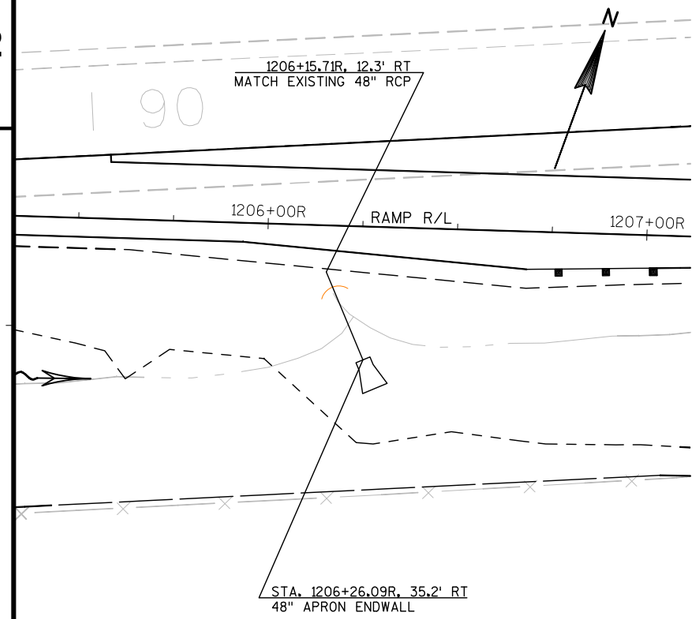
PV - Structure 6.1-6.2

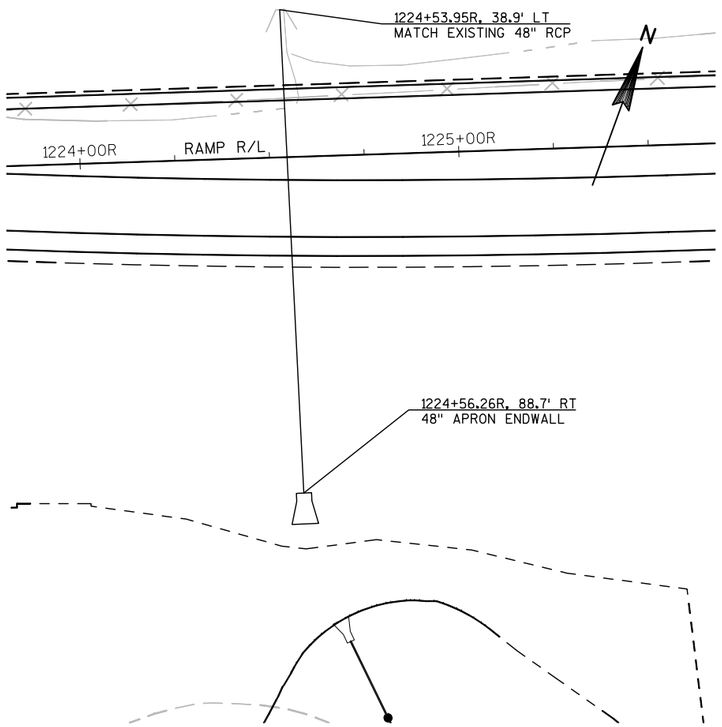


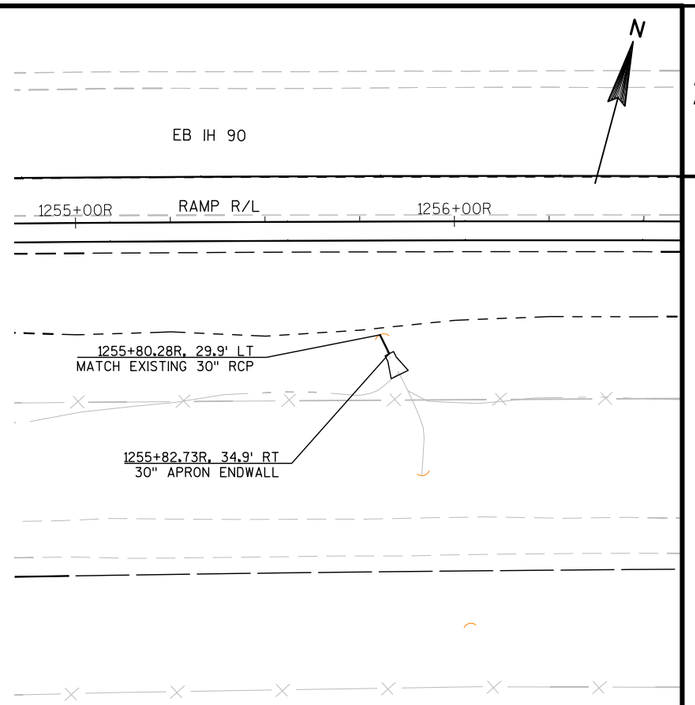


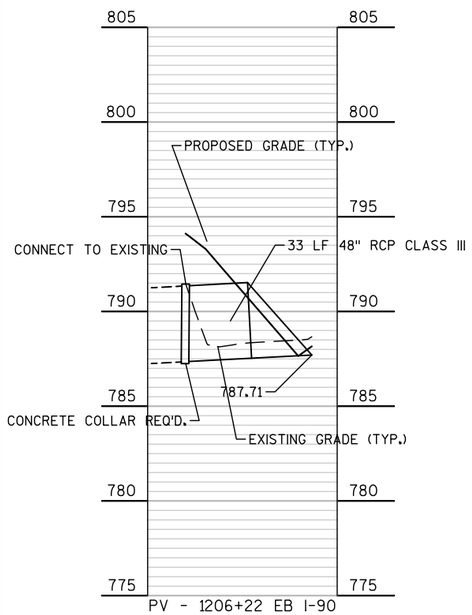
PV - Structure 6.0-6.1 and 6.1-6.3

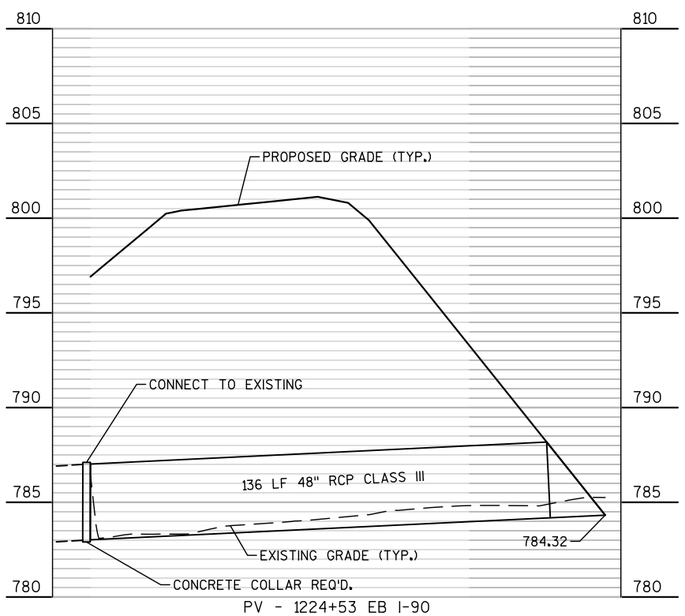
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	STORM SEWER PLAN	SHEET 66	E

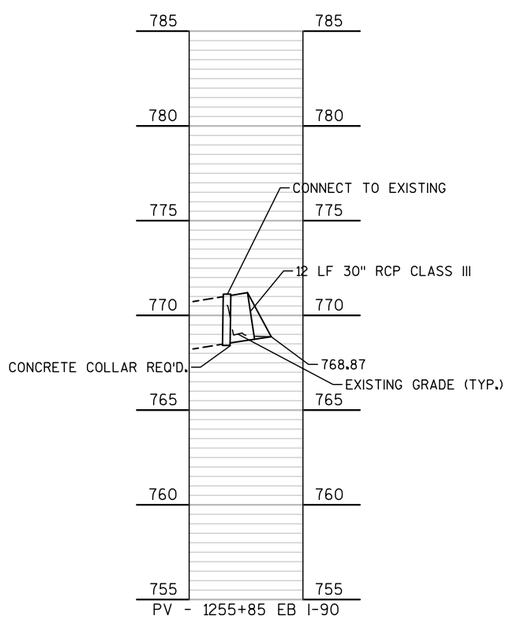

I 90
N
1206+15.71R, 12.3' RT
MATCH EXISTING 48" RCP
1206+00R
RAMP R/L
1207+00R
STA. 1206+26.09R, 35.2' RT
48" APRON ENDWALL

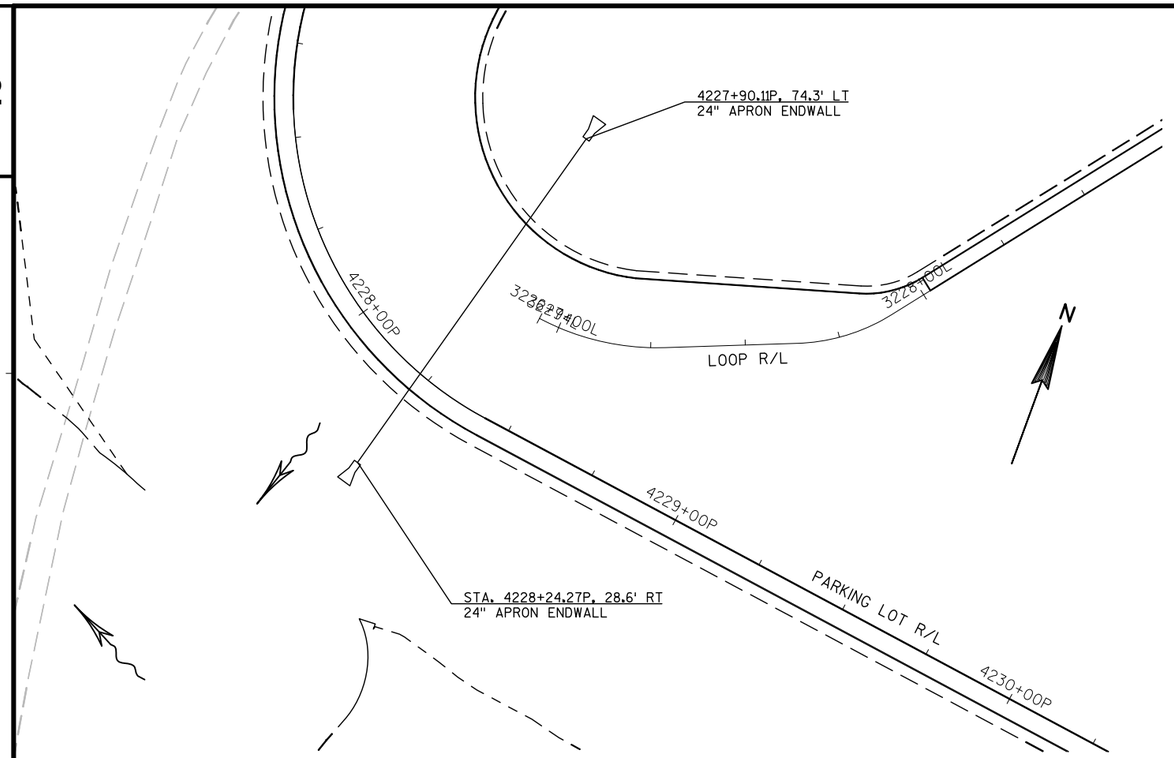

N
1224+53.95R, 38.9' LT
MATCH EXISTING 48" RCP
1224+00R
RAMP R/L
1225+00R
1224+56.26R, 88.7' RT
48" APRON ENDWALL

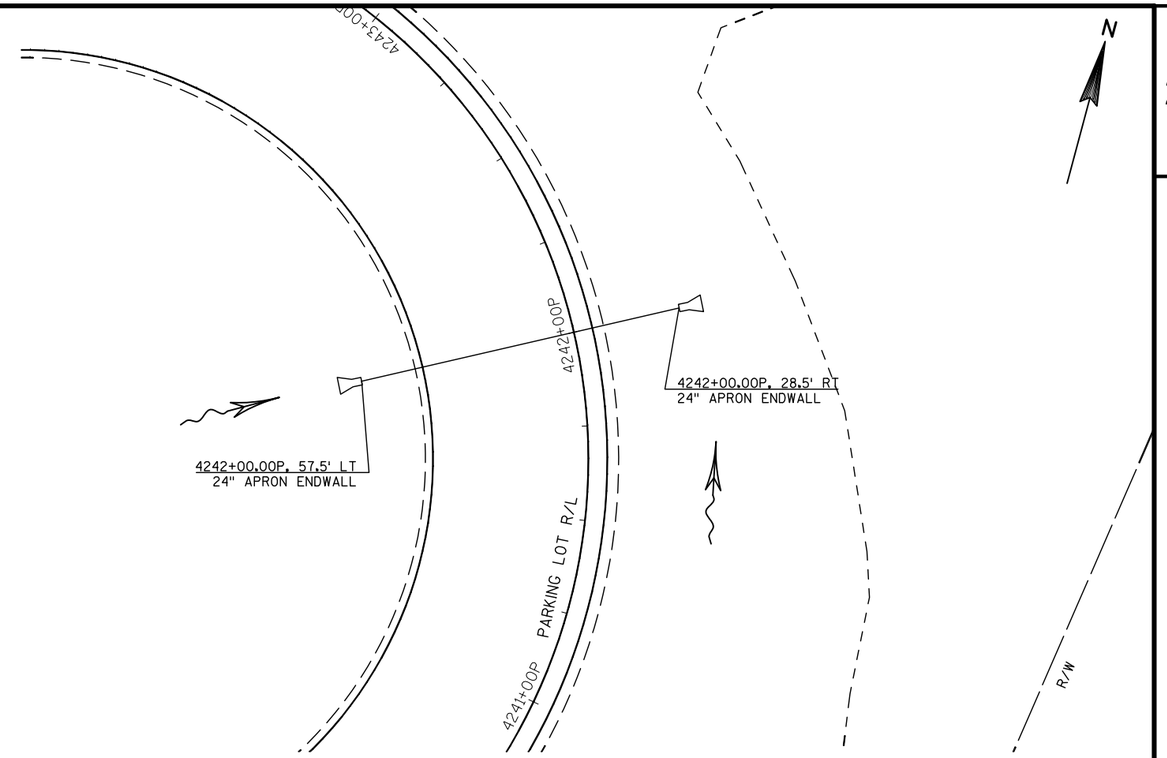

N
EB IH 90
1255+00R
RAMP R/L
1256+00R
1255+80.28R, 29.9' LT
MATCH EXISTING 30" RCP
1255+82.73R, 34.9' RT
30" APRON ENDWALL

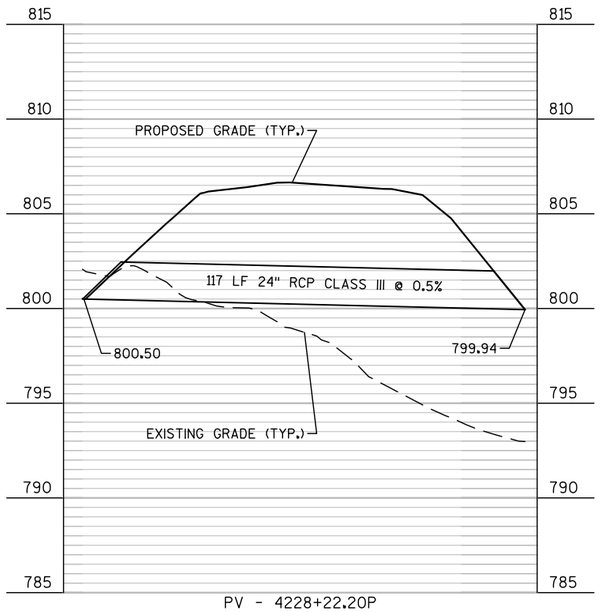

805
800
795
790
785
780
775
PROPOSED GRADE (TYP.)
CONNECT TO EXISTING
33 LF 48" RCP CLASS III
787.71
CONCRETE COLLAR REQ'D.
EXISTING GRADE (TYP.)
PV - 1206+22 EB I-90


810
805
800
795
790
785
780
PROPOSED GRADE (TYP.)
CONNECT TO EXISTING
136 LF 48" RCP CLASS III
784.32
EXISTING GRADE (TYP.)
CONCRETE COLLAR REQ'D.
PV - 1224+53 EB I-90

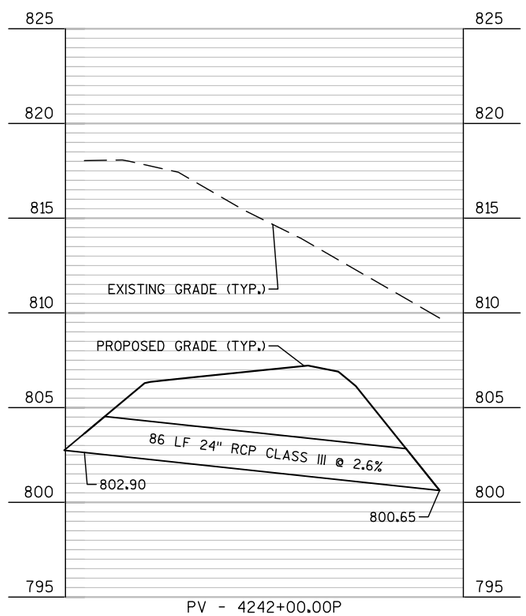

785
780
775
770
765
760
755
CONNECT TO EXISTING
12 LF 30" RCP CLASS III
768.87
CONCRETE COLLAR REQ'D.
EXISTING GRADE (TYP.)
PV - 1255+85 EB I-90







PV - 4228+22.20P



PV - 4242+00.00P

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	STORM SEWER PLAN	SHEET 68	E

2

N

NURSERY

I 90

WB I-90

EB I-90

1148 1150 1152 1154 1156 1158 1160 1162 1164 1166 1168 1170 1172 1174 1176 1178

XCEL ENERGY PROPOSED
ELECTRIC SERVICE ROUTE FROM
ELECTRIC METER (STA. 1141+00) ON
SOUTH SIDE OF RIGHT-OF-WAY
FENCE TO MAINLINE WIM LOCATION

MAINLINE WIM LOCATION

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	UTILITY SERVICE CONNECTION PLAN	SHEET 69	E

2

NETWORK SERVICE CONNECTION NOTES

1) CONTACT WISCONSIN INDEPENDENT NETWORK (WIN) REPRESENTATIVE (715-838-4012) 45 DAYS PRIOR TO PLACING FIBER OPTIC CABLES TO SCHEDULE WORK ACTIVITIES. WIN WILL COMPLETE SPLICING CONNECTIONS AND MONITOR ALL WORK AT THE EXISTING VAULT.

2) COORDINATE WITH BUILDING CONSTRUCTION TO HAVE A CONDUIT CONNECTION TO THE COMMUNICATIONS ROOM FROM THE PROPOSED COMMUNICATIONS VAULT.

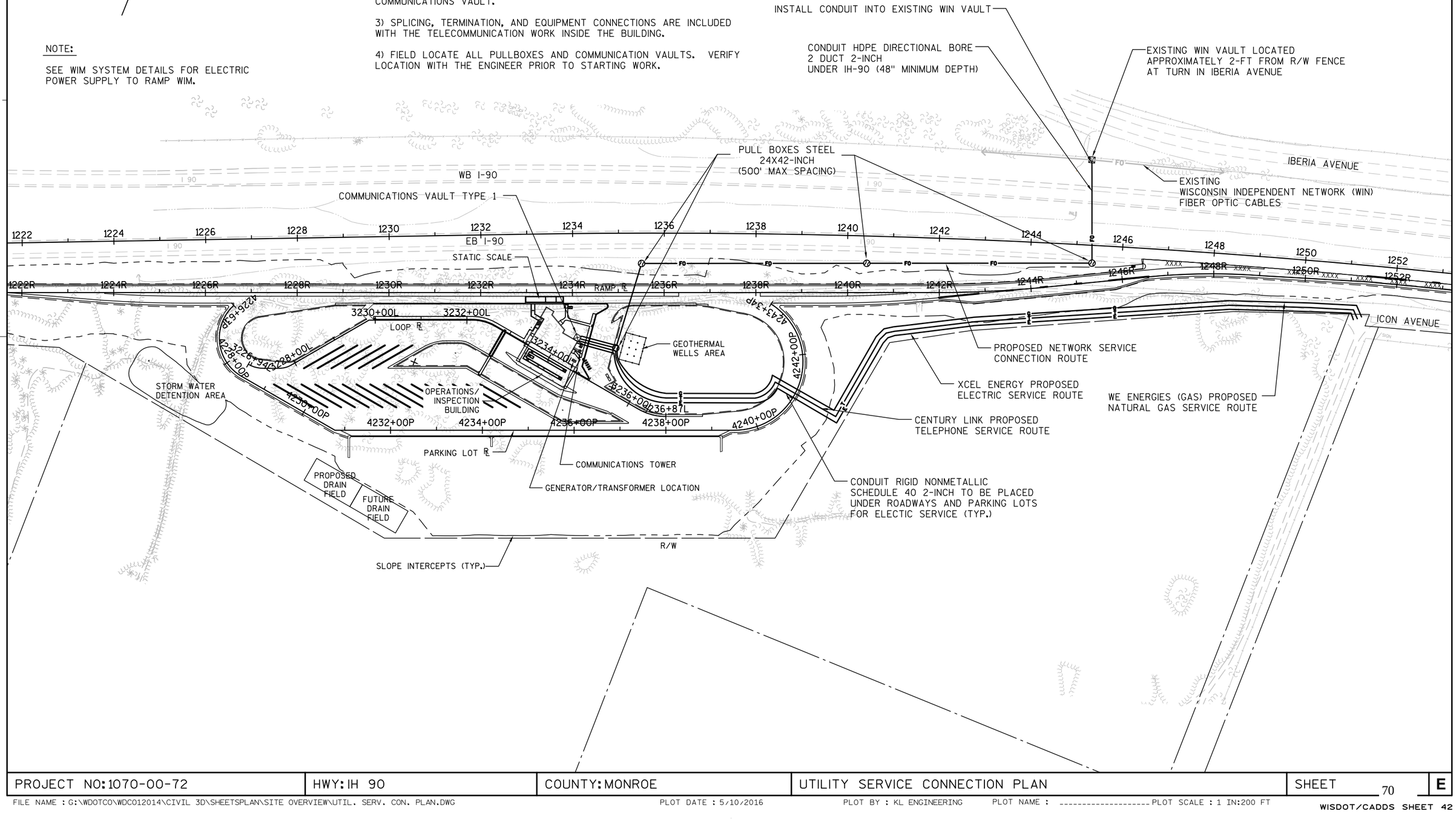
3) SPLICING, TERMINATION, AND EQUIPMENT CONNECTIONS ARE INCLUDED WITH THE TELECOMMUNICATION WORK INSIDE THE BUILDING.

4) FIELD LOCATE ALL PULLBOXES AND COMMUNICATION VAULTS. VERIFY LOCATION WITH THE ENGINEER PRIOR TO STARTING WORK.

N

NOTE:

SEE WIM SYSTEM DETAILS FOR ELECTRIC POWER SUPPLY TO RAMP WIM.



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	UTILITY SERVICE CONNECTION PLAN	SHEET 70	E

STA. 1098+00

WEIGH STATION 2 MILES

E5-56A(5)
144" X 72"

1-01

LEGEND

- PROPOSED SIGN
- PROPOSED SIGN (TWO POSTS)
- (X) SIGN SIZE
- DELINEATOR
- EXISTING SIGN
- EXISTING SIGN (TWO POSTS)
- X-XX SIGN NUMBER
- XM-XX SIGN NUMBER TO BE MOVED
- XR-XX SIGN NUMBER TO BE REMOVED

N

IH 90 WB

I 90

1095 1100 1105 IH 90 EB R/L 11

MATCH LINE STA 1110+00

I 90

EB OFF - RAMP

BANGOR REST AREA #15

N

IH 90 WB

(TO REMAIN)
Monroe Co.

(TO REMAIN)

MATCH LINE STA 1110+00

0 IH 90 EB R/L 1115

EB ON - RAMP

BANGOR REST AREA #15

STA. 1130+00

TRUCKS USE RIGHT LANE

1-02
1-03
R4-5R(5)
48" X 60"

N

1130

1-04

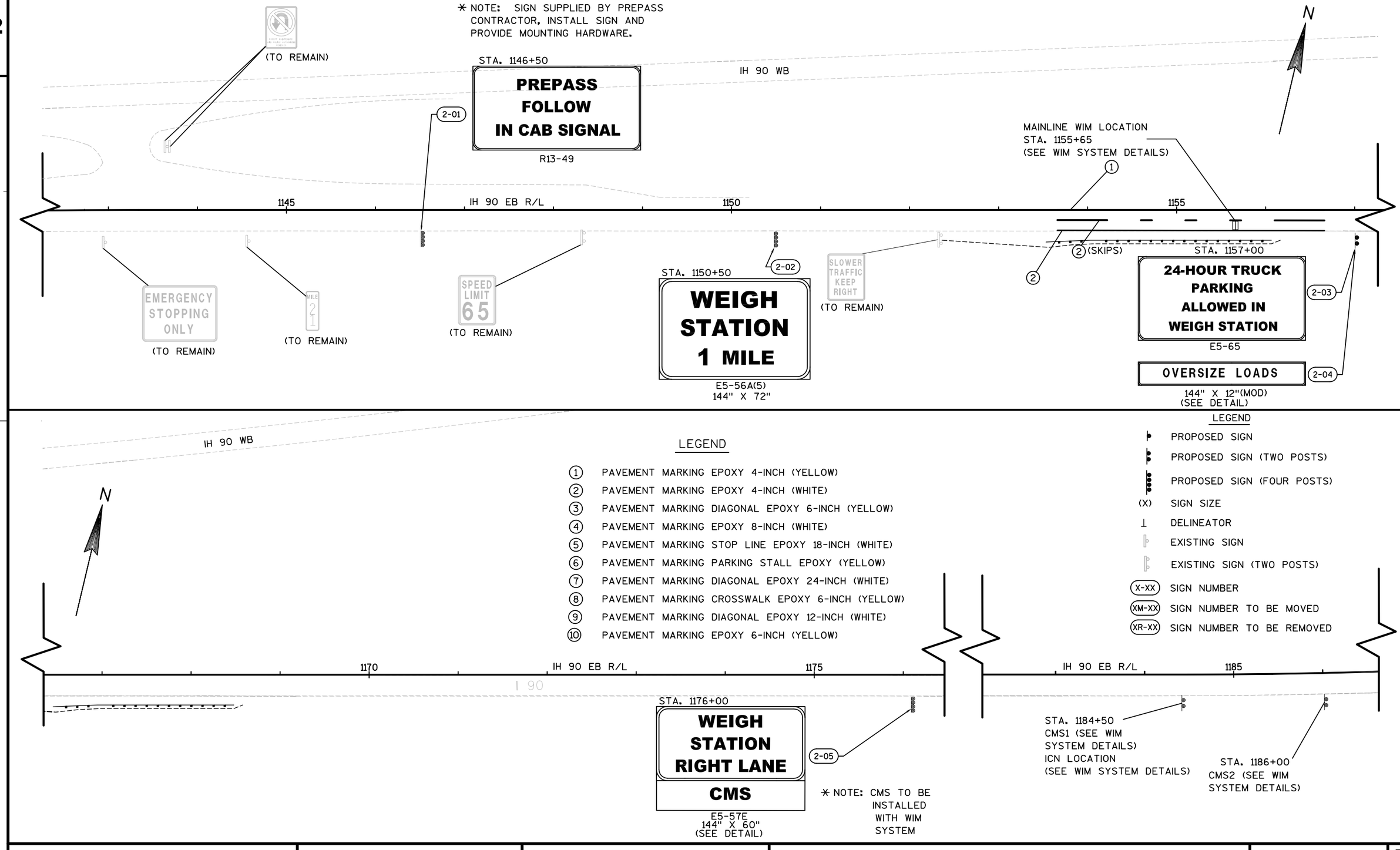
STA. 1134+00

TRUCKS OVER 5 TONS STOP AT WEIGH STA.

R13-1(5)
144" X 66"

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN: PERMANENT SIGNING & MARKING	SHEET 71	E

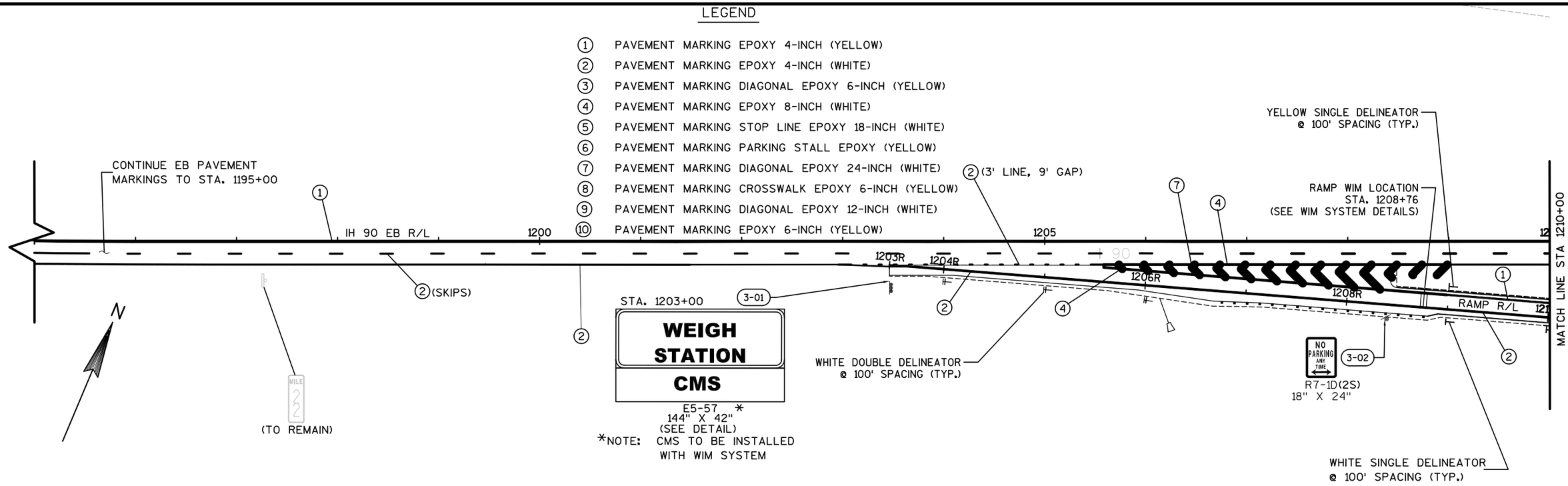
FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\SIGNING & MARKING\023201_PS.DWG PLOT DATE : 5/9/2016 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1:100_XREF

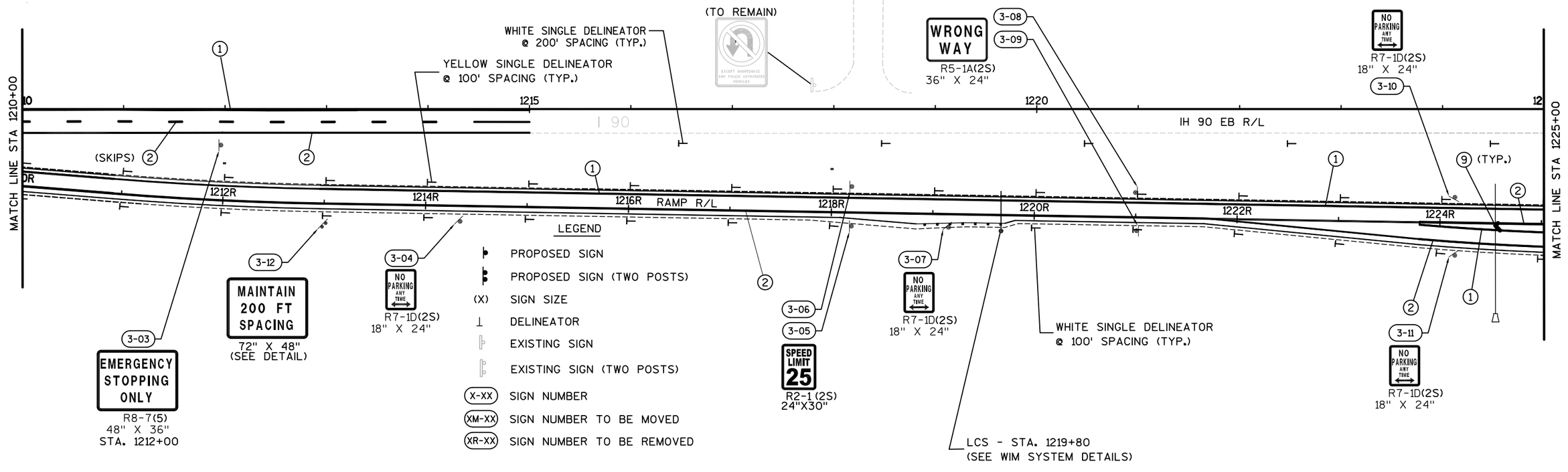


PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN: PERMANENT SIGNING & MARKING	SHEET 72	E

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (YELLOW)
4. PAVEMENT MARKING EPOXY 8-INCH (WHITE)
5. PAVEMENT MARKING STOP LINE EPOXY 18-INCH (WHITE)
6. PAVEMENT MARKING PARKING STALL EPOXY (YELLOW)
7. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH (WHITE)
8. PAVEMENT MARKING CROSSWALK EPOXY 6-INCH (YELLOW)
9. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
10. PAVEMENT MARKING EPOXY 6-INCH (YELLOW)

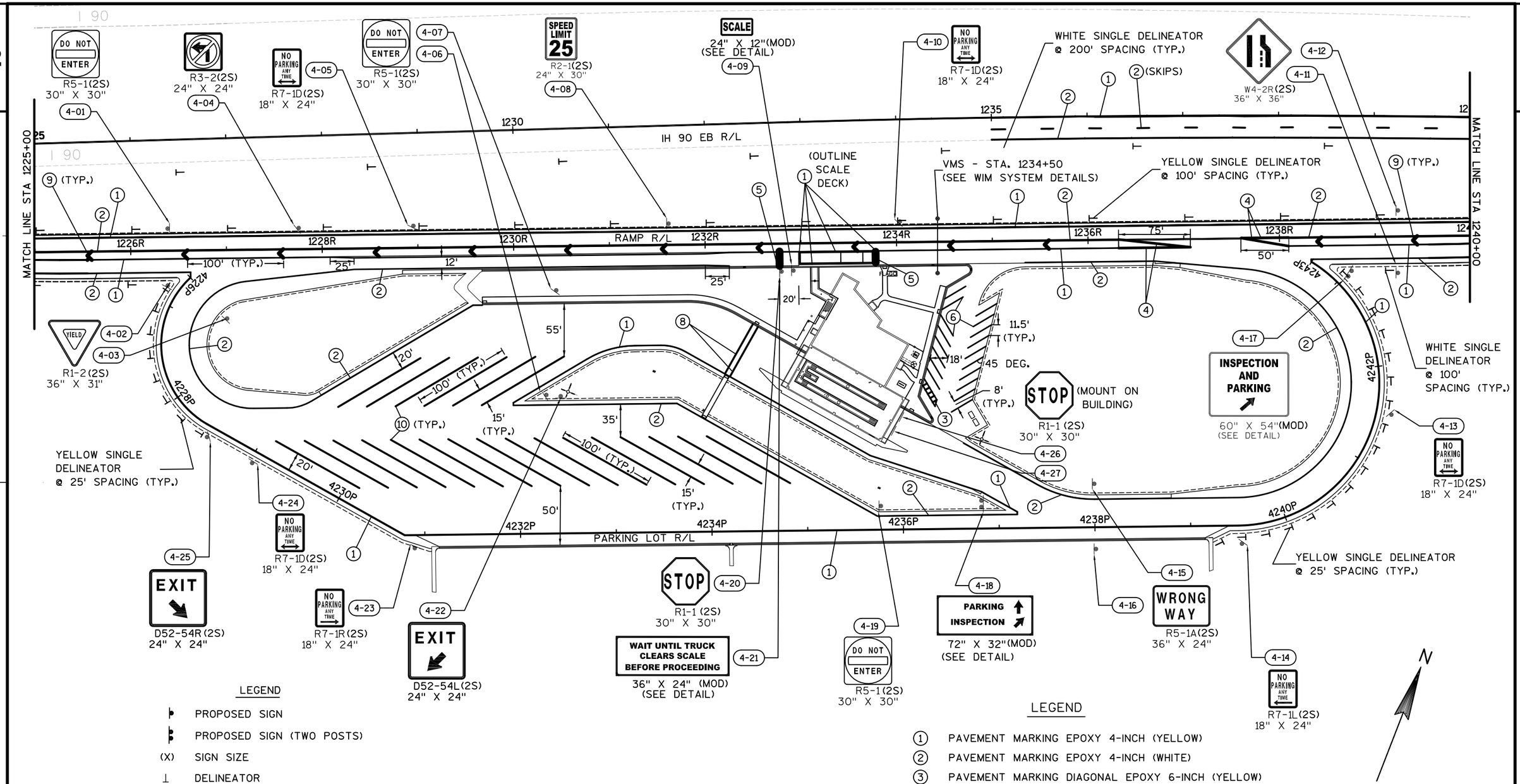




LEGEND

- PROPOSED SIGN
- PROPOSED SIGN (TWO POSTS)
- (X) SIGN SIZE
- DELINEATOR
- EXISTING SIGN
- EXISTING SIGN (TWO POSTS)
- (X-XX) SIGN NUMBER
- (XM-XX) SIGN NUMBER TO BE MOVED
- (XR-XX) SIGN NUMBER TO BE REMOVED

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN: PERMANENT SIGNING & MARKING	SHEET 73	E



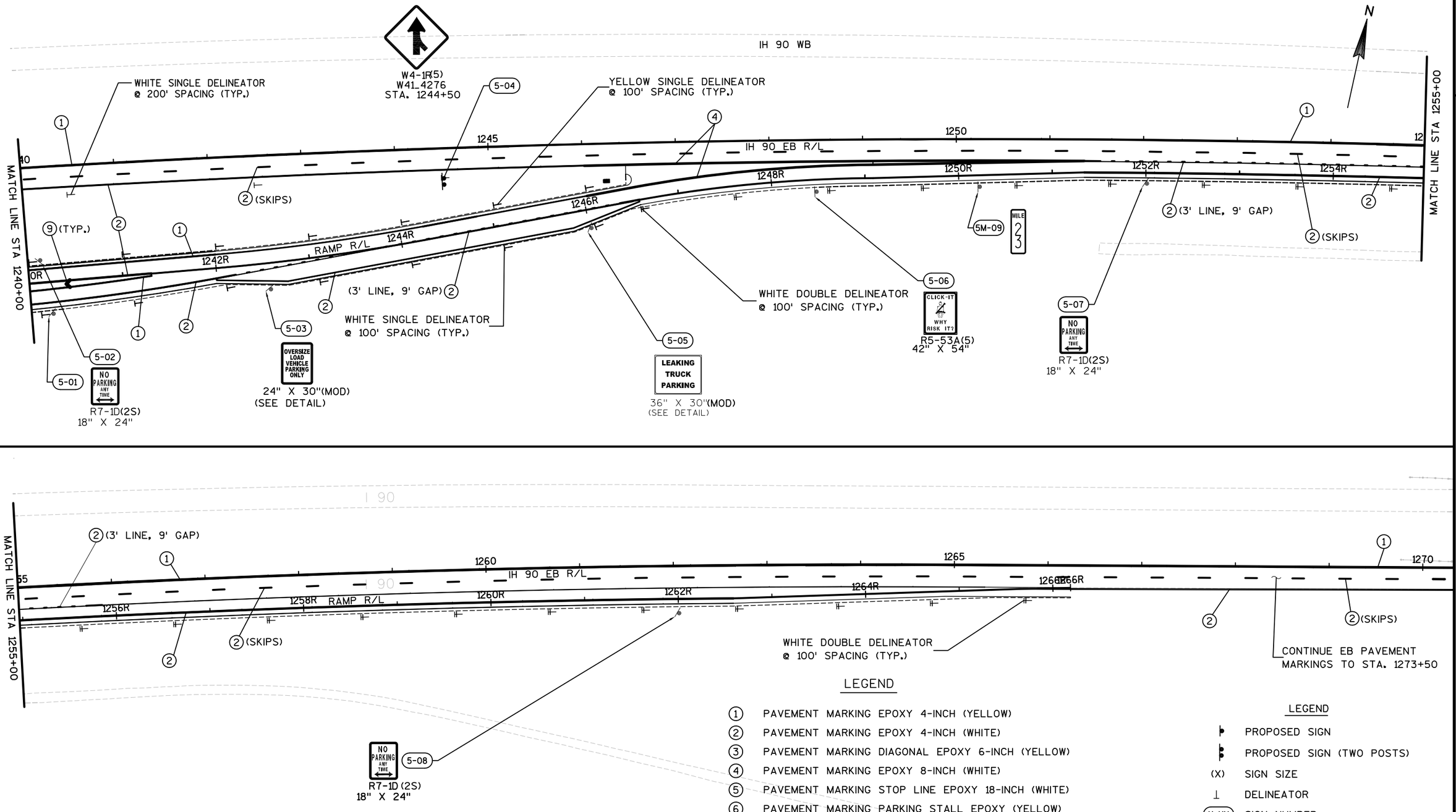
LEGEND

- PROPOSED SIGN
- PROPOSED SIGN (TWO POSTS)
- (X) SIGN SIZE
- ⊥ DELINEATOR
- EXISTING SIGN
- EXISTING SIGN (TWO POSTS)
- (X-XX) SIGN NUMBER
- (XM-XX) SIGN NUMBER TO BE MOVED
- (XR-XX) SIGN NUMBER TO BE REMOVED

LEGEND

1. PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
2. PAVEMENT MARKING EPOXY 4-INCH (WHITE)
3. PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (YELLOW)
4. PAVEMENT MARKING EPOXY 8-INCH (WHITE)
5. PAVEMENT MARKING STOP LINE EPOXY 18-INCH (WHITE)
6. PAVEMENT MARKING PARKING STALL EPOXY (YELLOW)
7. PAVEMENT MARKING DIAGONAL EPOXY 24-INCH (WHITE)
8. PAVEMENT MARKING CROSSWALK EPOXY 6-INCH (YELLOW)
9. PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
10. PAVEMENT MARKING EPOXY 6-INCH (YELLOW)

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN: PERMANENT SIGNING & MARKING	SHEET 74	E



LEGEND

(1)	PAVEMENT MARKING EPOXY 4-INCH (YELLOW)
(2)	PAVEMENT MARKING EPOXY 4-INCH (WHITE)
(3)	PAVEMENT MARKING DIAGONAL EPOXY 6-INCH (YELLOW)
(4)	PAVEMENT MARKING EPOXY 8-INCH (WHITE)
(5)	PAVEMENT MARKING STOP LINE EPOXY 18-INCH (WHITE)
(6)	PAVEMENT MARKING PARKING STALL EPOXY (YELLOW)
(7)	PAVEMENT MARKING DIAGONAL EPOXY 24-INCH (WHITE)
(8)	PAVEMENT MARKING CROSSWALK EPOXY 6-INCH (YELLOW)
(9)	PAVEMENT MARKING DIAGONAL EPOXY 12-INCH (WHITE)
(10)	PAVEMENT MARKING EPOXY 6-INCH (YELLOW)

LEGEND

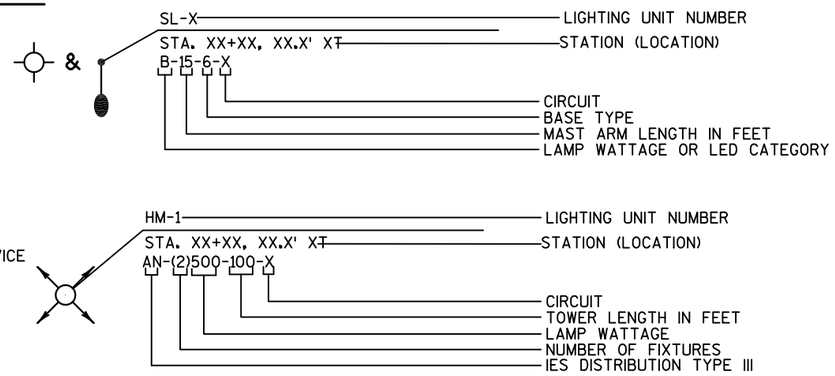
	PROPOSED SIGN
	PROPOSED SIGN (TWO POSTS)
(X)	SIGN SIZE
⊥	DELINEATOR
X-XX	SIGN NUMBER
XM-XX	SIGN NUMBER TO BE MOVED
XR-XX	SIGN NUMBER TO BE REMOVED

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN: PERMANENT SIGNING & MARKING	SHEET 75	E

2

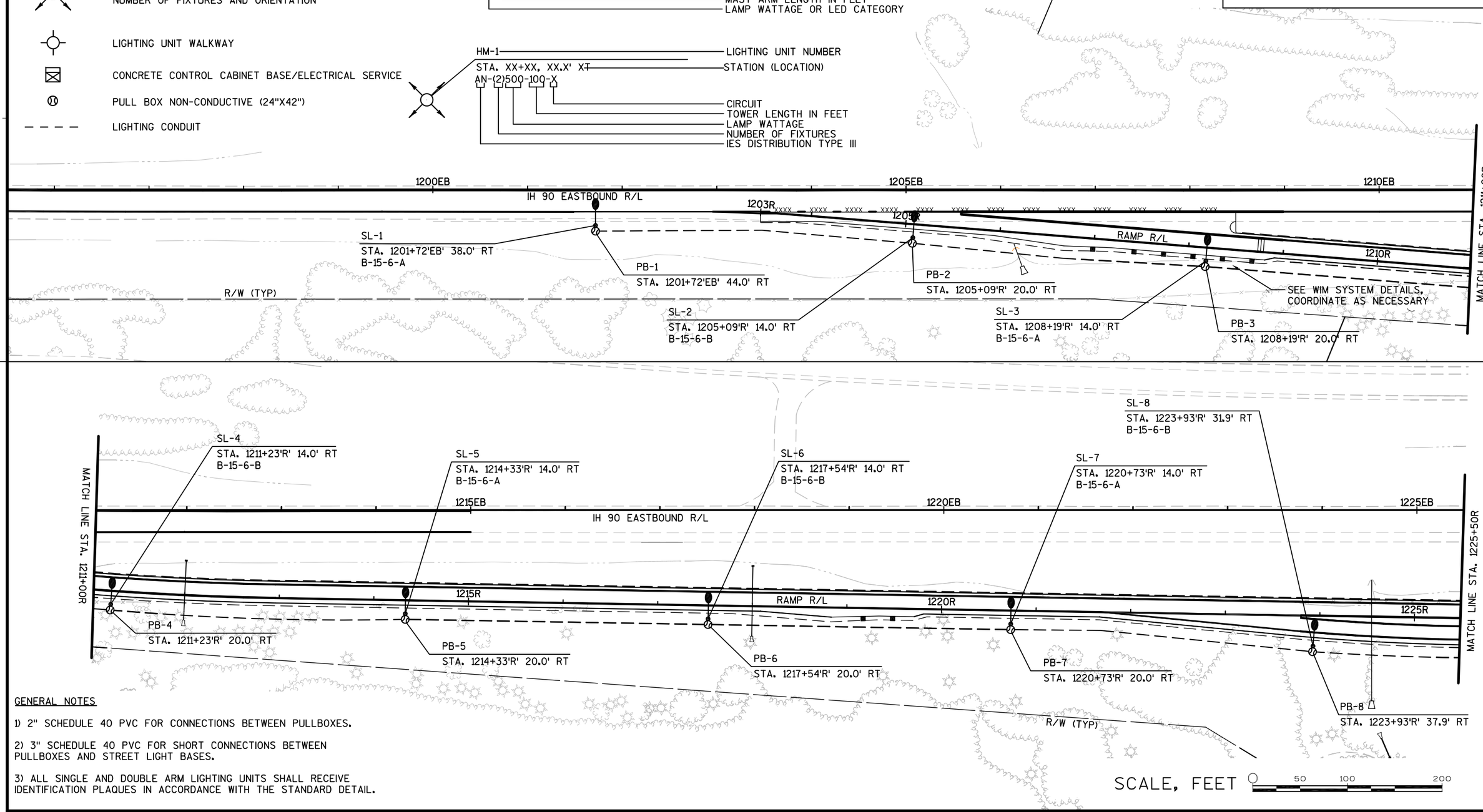
LEGEND:

- SINGLE ARM LIGHTING UNIT
- TWIN ARM LIGHTING UNIT
- HIGH-MAST LIGHT TOWER, ARROWS INDICATE NUMBER OF FIXTURES AND ORIENTATION
- LIGHTING UNIT WALKWAY
- CONCRETE CONTROL CABINET BASE/ELECTRICAL SERVICE
- PULL BOX NON-CONDUCTIVE (24"X42")
- LIGHTING CONDUIT



HIGHWAY LIGHTING
SPARTA SWEF #54
IH 90 MONROE COUNTY
LIGHTING NO. SPARTA SWEF #54
REGION CONTACT: ANDY WINGA PAGE 1 OF 4

2



GENERAL NOTES

1) 2" SCHEDULE 40 PVC FOR CONNECTIONS BETWEEN PULLBOXES.

2) 3" SCHEDULE 40 PVC FOR SHORT CONNECTIONS BETWEEN PULLBOXES AND STREET LIGHT BASES.

3) ALL SINGLE AND DOUBLE ARM LIGHTING UNITS SHALL RECEIVE IDENTIFICATION PLAQUES IN ACCORDANCE WITH THE STANDARD DETAIL.

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN: LIGHTING PLAN	SHEET 76	E

A/B	= CIRCUIT A:	2 - 4AWG
	CIRCUIT B:	2 - 4AWG
ROADWAY LIGHTING - 240V		1 - 4AWG GND
C/D	= CIRCUIT C:	2 - 4AWG
	CIRCUIT D:	2 - 4AWG
ROADWAY LIGHTING - 240V		1 - 4AWG GND
E/F	= CIRCUIT E:	1 - 4AWG
	CIRCUIT F:	1 - 4AWG
		1 - 4AWG NEUTRAL
HIGH MAST LIGHTING - 120V		1 - 4AWG GND
G/H	= CIRCUIT H:	1 - 4AWG
	CIRCUIT G:	1 - 4AWG
		1 - 4AWG NEUTRAL
HIGH MAST LIGHTING - 120V		1 - 4AWG GND
I	= CIRCUIT I	1 - 8AWG
		1 - 8AWG NEUTRAL
WALKWAY LIGHTING - 120V		1 - 8AWG GND

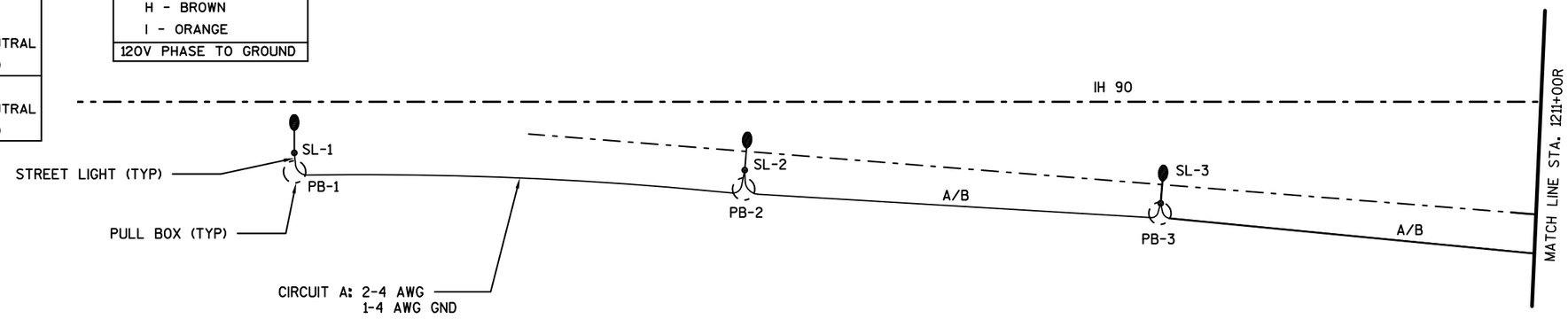
CONDUCTOR LEGEND

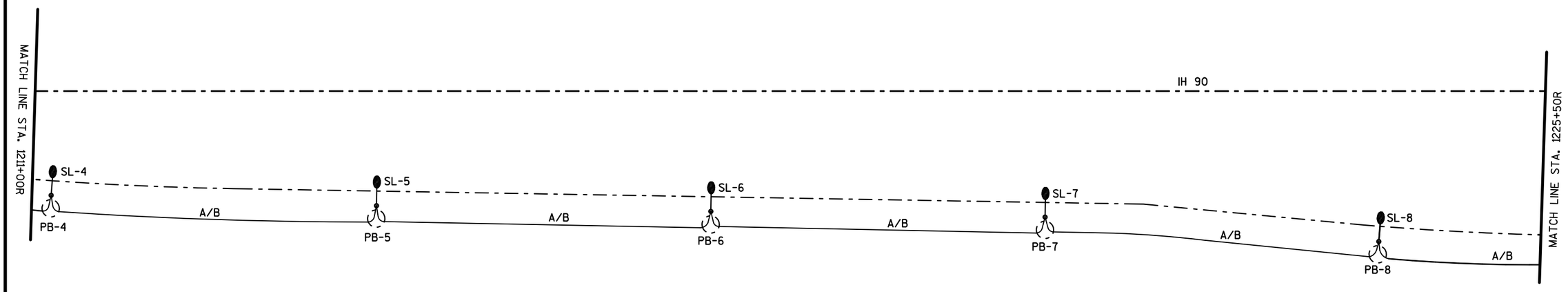
A - BLACK
B - RED
C - BLUE
D - BROWN
240V PHASE TO PHASE
E - BLACK
F - RED
G - BLUE
H - BROWN
I - ORANGE
120V PHASE TO GROUND

NOTES:

1. NO SPLICES ALLOWED IN PULLBOXES.
2. PHOTOCONTROL ON LIGHTING CABINET.

N





SCALE, FEET 0 50 100 200

HIGHWAY LIGHTING
SPARTA SWEF #54

IH 90 MONROE COUNTY

LIGHTING NO. SPARTA SWEF #54

REGION CONTACT: ANDY WINGA PAGE 1A OF 4

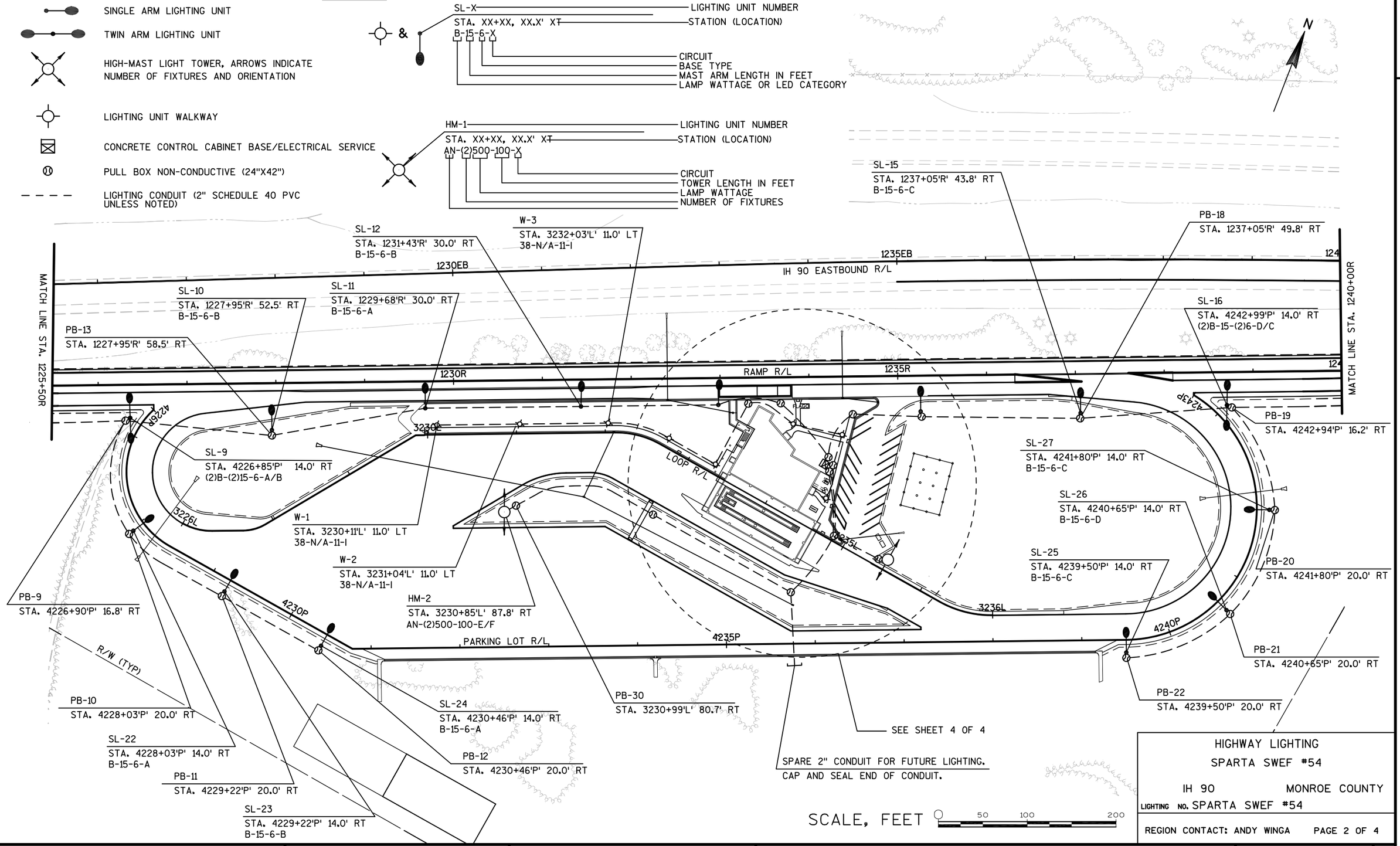
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN: LIGHTING PLAN	SHEET 77 E

LEGEND:

- SINGLE ARM LIGHTING UNIT
- TWIN ARM LIGHTING UNIT
- HIGH-MAST LIGHT TOWER, ARROWS INDICATE NUMBER OF FIXTURES AND ORIENTATION
- LIGHTING UNIT WALKWAY
- CONCRETE CONTROL CABINET BASE/ELECTRICAL SERVICE
- PULL BOX NON-CONDUCTIVE (24"X42")
- LIGHTING CONDUIT (2" SCHEDULE 40 PVC UNLESS NOTED)

SL-X — LIGHTING UNIT NUMBER
STA. XX+XX, XX.X' XT — STATION (LOCATION)
B-15-6-X
- CIRCUIT
- BASE TYPE
- MAST ARM LENGTH IN FEET
- LAMP WATTAGE OR LED CATEGORY

HM-1 — LIGHTING UNIT NUMBER
STA. XX+XX, XX.X' XT — STATION (LOCATION)
AN-(2)500-100-X
- CIRCUIT
- TOWER LENGTH IN FEET
- LAMP WATTAGE
- NUMBER OF FIXTURES



HIGHWAY LIGHTING
SPARTA SWEF #54
IH 90 MONROE COUNTY
LIGHTING NO. SPARTA SWEF #54
REGION CONTACT: ANDY WINGA PAGE 2 OF 4

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN: LIGHTING PLAN	SHEET 78 E

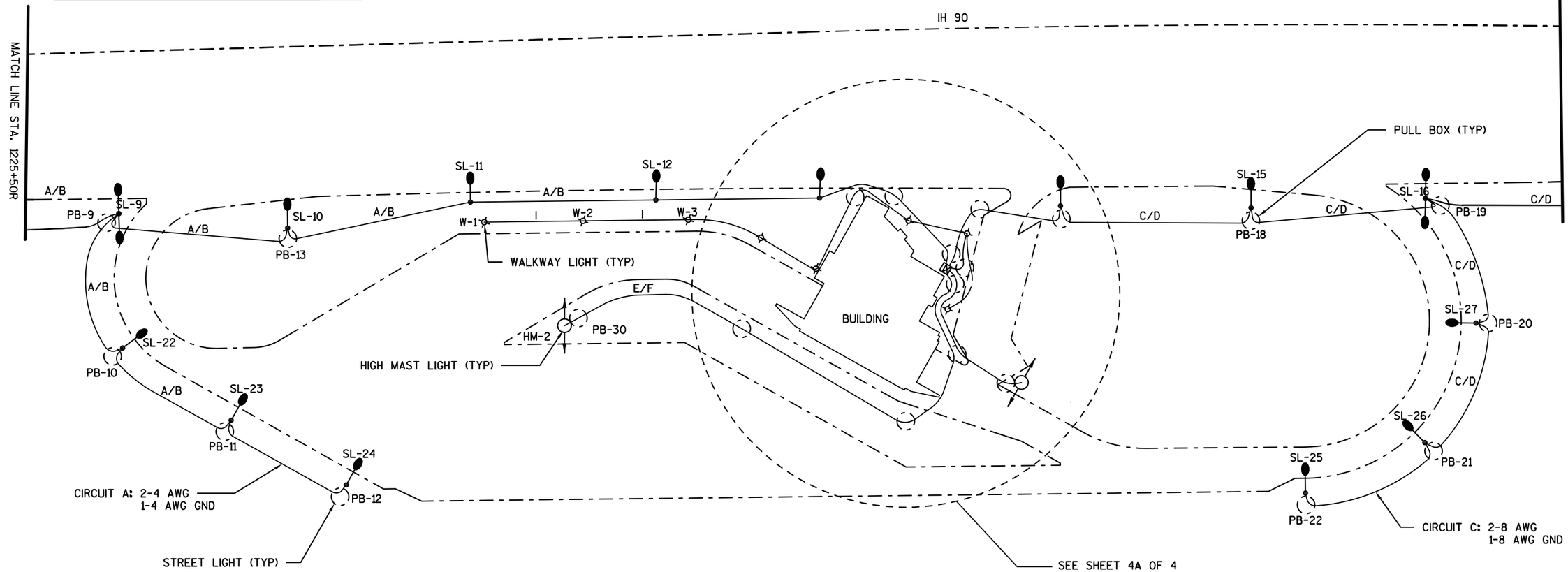
A/B	= CIRCUIT A:	2 - 4AWG
	CIRCUIT B:	2 - 4AWG
ROADWAY LIGHTING - 240V		1 - 4AWG GND
C/D	= CIRCUIT C:	2 - 4AWG
	CIRCUIT D:	2 - 4AWG
ROADWAY LIGHTING - 240V		1 - 4AWG GND
E/F	= CIRCUIT E:	1 - 4AWG
	CIRCUIT F:	1 - 4AWG
		1 - 4AWG NEUTRAL
HIGH MAST LIGHTING - 120V		1 - 4AWG GND
G/H	= CIRCUIT H:	1 - 4AWG
	CIRCUIT G:	1 - 4AWG
		1 - 4AWG NEUTRAL
HIGH MAST LIGHTING - 120V		1 - 4AWG GND
I	= CIRCUIT I	1 - 8AWG
		1 - 8AWG NEUTRAL
WALKWAY LIGHTING - 120V		1 - 8AWG GND

CONDUCTOR LEGEND

A - BLACK
B - RED
C - BLUE
D - BROWN
240V PHASE TO PHASE
E - BLACK
F - RED
G - BLUE
H - BROWN
I - ORANGE
120V PHASE TO GROUND

NOTES:

1. NO SPLICES ALLOWED IN PULLBOXES.
2. PHOTOCONTROL ON LIGHTING CABINET.



SCALE, FEET 0 50 100 200

HIGHWAY LIGHTING
SPARTA SWEF #54

IH 90 MONROE COUNTY

LIGHTING NO. SPARTA SWEF #54

REGION CONTACT: ANDY WINGA PAGE 2A OF 4

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN: LIGHTING PLAN	SHEET 79 E

LEGEND:

- SINGLE ARM LIGHTING UNIT
- TWIN ARM LIGHTING UNIT
- HIGH-MAST LIGHT TOWER, ARROWS INDICATE NUMBER OF FIXTURES AND ORIENTATION
- LIGHTING UNIT WALKWAY
- CONCRETE CONTROL CABINET BASE/ELECTRICAL SERVICE
- PULL BOX NON-CONDUCTIVE (24"X42")
- LIGHTING CONDUIT (2" SCHEDULE 40 PVC UNLESS NOTED)

& SL-X — LIGHTING UNIT NUMBER
STA. XX+XX, XX.X' XT — STATION (LOCATION)
B-15-6-X
- CIRCUIT
- BASE TYPE
- MAST ARM LENGTH IN FEET
- LAMP WATTAGE OR LED CATEGORY

HM-1 — LIGHTING UNIT NUMBER
STA. XX+XX, XX.X' XT — STATION (LOCATION)
AN-(2)500-100-X
- CIRCUIT
- TOWER LENGTH IN FEET
- LAMP WATTAGE
- NUMBER OF FIXTURES

N

SL-17
STA. 1241+32'R' 31.0' RT
B-15-6-C

SL-18
STA. 1244+32'R' 27.0' RT
B-15-6-D

SL-19
STA. 1247+54'R' 14.0' RT
B-15-6-C

SL-20
STA. 1250+31'R' 14.0' RT
B-15-6-D

SL-21
STA. 1253+77'R' 14.0' RT
B-15-6-C

1245EB
1250EB
1255E
IH 90 EASTBOUND R/L
1245R
1250R
1255
RAMP R/L
MATCH LINE STA. 1240+00R
R/W (TYP)
SIGN

PB-23
STA. 1241+32'R' 37.0' RT

PB-24
STA. 1244+32'R' 33.0' RT

PB-25
STA. 1247+54'R' 20.0' RT

PB-26
STA. 1250+31'R' 20.0' RT

PB-27
STA. 1253+77'R' 20.0' RT

SCALE, FEET 0 50 100 200

HIGHWAY LIGHTING
SPARTA SWEF #54
IH 90 MONROE COUNTY
LIGHTING NO. SPARTA SWEF #54
REGION CONTACT: ANDY WINGA PAGE 3 OF 4

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN: LIGHTING PLAN	SHEET 80 E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\PLAN DETAILS\021201_LP.DWG PLOT DATE : 5/9/2016 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1:100_XREF

A/B	= CIRCUIT A:	2 - 4AWG
	CIRCUIT B:	2 - 4AWG
ROADWAY LIGHTING - 240V		1 - 4AWG GND
C/D	= CIRCUIT C:	2 - 4AWG
	CIRCUIT D:	2 - 4AWG
ROADWAY LIGHTING - 240V		1 - 4AWG GND
E/F	= CIRCUIT E:	1 - 4AWG
	CIRCUIT F:	1 - 4AWG
		1 - 4AWG NEUTRAL
HIGH MAST LIGHTING - 120V		1 - 4AWG GND
G/H	= CIRCUIT H:	1 - 4AWG
	CIRCUIT G:	1 - 4AWG
		1 - 4AWG NEUTRAL
HIGH MAST LIGHTING - 120V		1 - 4AWG GND
I	= CIRCUIT I	1 - 8AWG
		1 - 8AWG NEUTRAL
WALKWAY LIGHTING - 120V		1 - 8AWG GND

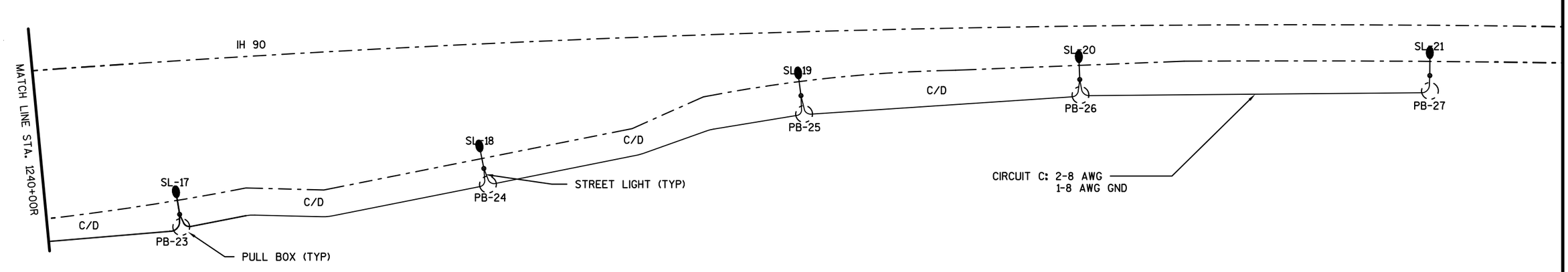
CONDUCTOR LEGEND

A - BLACK
B - RED
C - BLUE
D - BROWN
240V PHASE TO PHASE
E - BLACK
F - RED
G - BLUE
H - BROWN
I - ORANGE
120V PHASE TO GROUND

NOTES:

1. NO SPLICES ALLOWED IN PULLBOXES.
2. PHOTOCONTROL ON LIGHTING CABINET.

N



SCALE, FEET 0 50 100 200

HIGHWAY LIGHTING
SPARTA SWEF #54

IH 90 MONROE COUNTY

LIGHTING NO. SPARTA SWEF #54

REGION CONTACT: ANDY WINGA PAGE 3A OF 4

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN: LIGHTING PLAN	SHEET 81 E

LEGEND:

SINGLE ARM LIGHTING UNIT

TWIN ARM LIGHTING UNIT

HIGH-MAST LIGHT TOWER, ARROWS INDICATE NUMBER OF FIXTURES AND ORIENTATION

LIGHTING UNIT WALKWAY

CONCRETE CONTROL CABINET BASE/ELECTRICAL SERVICE

PULL BOX NON-CONDUCTIVE (24"X42")

LIGHTING CONDUIT (2" SCHEDULE 40 PVC UNLESS NOTED)

&

SL-X — LIGHTING UNIT NUMBER
STA. XX+XX, XX.X' XT — STATION (LOCATION)
B-15-6-X
- CIRCUIT
- BASE TYPE
- MAST ARM LENGTH IN FEET
- LAMP WATTAGE OR LED CATEGORY

HM-1 — LIGHTING UNIT NUMBER
STA. XX+XX, XX.X' XT — STATION (LOCATION)
AN-(2)500-100-X
- CIRCUIT
- TOWER LENGTH IN FEET
- LAMP WATTAGE
- NUMBER OF FIXTURES

NOTE:
FIELD LOCATE/VERIFY CABINET AND PULLBOXES PRIOR TO CONSTRUCTION. ADJUST LOCATIONS IF DIRECTED BY THE ENGINEER.

N

W-6
STA. 1233+82'R' 52.4' RT
38-N/A-11-I

PB-16
STA. 1234+49'R' 42.2' RT

W-7
STA. 1234+37'R' 65.1' RT
38-N/A-11-I

SL-14
STA. 1235+25'R' 40.0' RT
B-15-6-D

SL-13
STA. 1232+98'R' 30.0' RT
B-15-6-A

PB-14
STA. 1233+68'R' 29.0' RT

1235R
RAMP R/L

PB-28
STA. 1233+32'R' 29.0' RT
2-2" SCHEDULE 40 PVC CONDUIT

FLAGO

CB-1
STA. 1234+17'R' 98.8' RT

W-4
STA. 3232+70'L' 11.0' LT
38-N/A-11-I

PB-17
STA. 1235+25'R' 46.0' RT

PB-15
STA. 1234+21'R' 90.2' RT

PB-31
STA. 3232+96'L' 72.9' RT

LOOP R/L

PB-29
STA. 1234+26'R' 99.4' RT

W-5
STA. 3233+29'L' 11.0' LT
38-N/A-11-I

2-2" SCHEDULE 40 PVC CONDUIT

PB-35
STA. 1234+22'R' 106.5' RT

W-8
STA. 3234+56'L' 38.6' LT
38-N/A-11-I

2-2" SCHEDULE 40 PVC CONDUIT

PB-33
STA. 3234+85'L' 6.0' LT

1235L

SEE SHEET 2 OF 4

PB-34
STA. 3235+42'L' 7.9' LT

HM-1
STA. 3235+51'L' 12.4' LT
AN-(2)500-100-G/H

PB-32
STA. 3234+74'L' 73.1' RT

PWO

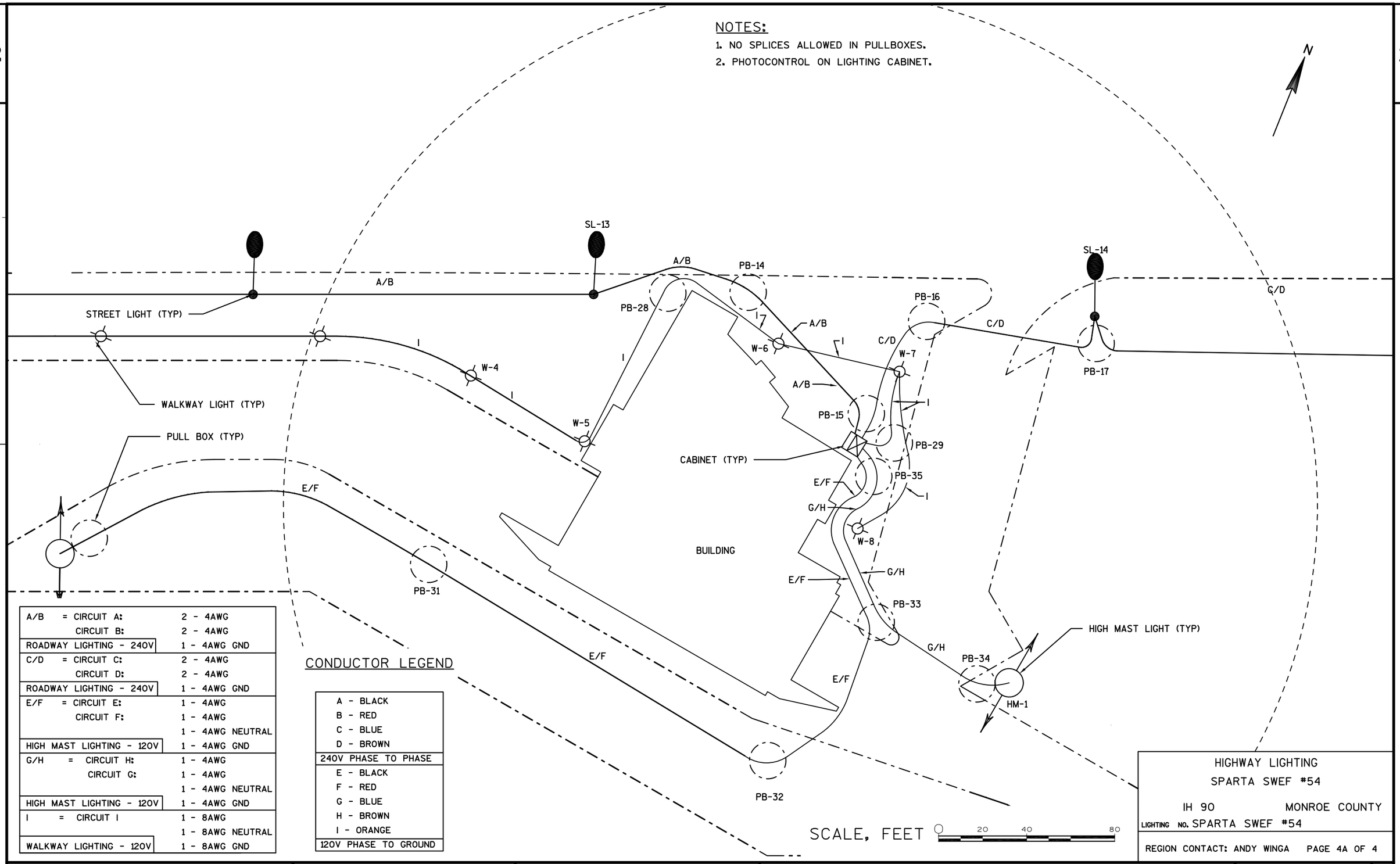
SCALE, FEET 0 20 40 80

HIGHWAY LIGHTING
SPARTA SWEF #54
IH 90 MONROE COUNTY
LIGHTING NO. SPARTA SWEF #54
REGION CONTACT: ANDY WINGA PAGE 4 OF 4

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN: LIGHTING PLAN	SHEET 82 E

NOTES:

1. NO SPLICES ALLOWED IN PULLBOXES.
2. PHOTOCONTROL ON LIGHTING CABINET.



A/B	= CIRCUIT A:	2 - 4AWG
	CIRCUIT B:	2 - 4AWG
ROADWAY LIGHTING - 240V		1 - 4AWG GND
C/D	= CIRCUIT C:	2 - 4AWG
	CIRCUIT D:	2 - 4AWG
ROADWAY LIGHTING - 240V		1 - 4AWG GND
E/F	= CIRCUIT E:	1 - 4AWG
	CIRCUIT F:	1 - 4AWG
		1 - 4AWG NEUTRAL
HIGH MAST LIGHTING - 120V		1 - 4AWG GND
G/H	= CIRCUIT H:	1 - 4AWG
	CIRCUIT G:	1 - 4AWG
		1 - 4AWG NEUTRAL
HIGH MAST LIGHTING - 120V		1 - 4AWG GND
I	= CIRCUIT I	1 - 8AWG
		1 - 8AWG NEUTRAL
WALKWAY LIGHTING - 120V		1 - 8AWG GND

CONDUCTOR LEGEND

A - BLACK
B - RED
C - BLUE
D - BROWN
240V PHASE TO PHASE
E - BLACK
F - RED
G - BLUE
H - BROWN
I - ORANGE
120V PHASE TO GROUND

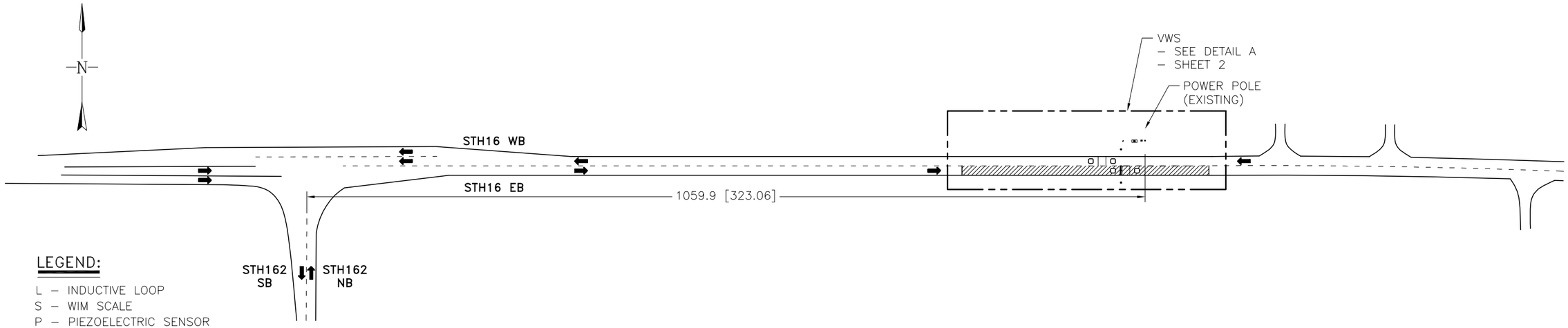
HIGHWAY LIGHTING
SPARTA SWEF #54

IH 90 MONROE COUNTY

LIGHTING NO. SPARTA SWEF #54

REGION CONTACT: ANDY WINGA PAGE 4A OF 4

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN: LIGHTING PLAN	SHEET 83 E



LEGEND:

- L – INDUCTIVE LOOP
- S – WIM SCALE
- P – PIEZOELECTRIC SENSOR
- T – TEMPERATURE SENSOR
- E – ROADSIDE ENCLOSURE
- SVC – SIDE VIEW CAMERA
- [1] – SIGNAL CONDUIT
- ⟨1⟩ – POWER CONDUIT
- (A) – NOTE

LOOP DETAILS:

LOOP #	SIZE	NUMBER OF TURNS	NOTE:
L1–L4	6' X 6'	4	PREFORMED LOOPS

GENERAL NOTES:

THE WIM SYSTEM SHOWN IN THESE PLANS AND SPECIFICATIONS DETAILS ONE POSSIBLE SYSTEM CONFIGURATION AND COMPONENTS. OTHER VENDOR WIM SYSTEM CONFIGURATIONS AND COMPONENTS ACCOMPLISHING THE SAME PERFORMANCE REQUIREMENTS WILL BE CONSIDERED.

POWER CABLES MUST BE RUN IN SEPARATE CONDUITS/PULL BOXES FROM SIGNAL CABLES.

SENSOR SPACING SHOWN IS TYPICAL SPACING REQUIREMENT, ACTUAL SENSOR SPACING MAY BE ALTERED TO SUIT SITE CONDITIONS.

ALL CONNECTIONS BETWEEN SENSORS AND LEAD CABLES ARE DONE IN PULL BOX AND ARE SOLDERED THEN SEALED FOR WATERPROOFING. NUMBER AND PLACEMENT OF PULL BOXES NOT SHOWN.

ROAD SURFACE PAVEMENT CONDITIONS MUST MEET CURRENT ASTM E1318 REQUIREMENTS TO ACHIEVE OPTIMAL SYSTEM PERFORMANCE.

PIEZOELECTRIC SENSORS MUST BE A MINIMUM OF 2' [0.61m] AWAY FROM CRACKS, JOINTS OR SAWCUTS WHEN POSSIBLE.

CABLES MUST BE PROTECTED BY PVC SLEEVES WHERE THEY CROSS PAVEMENT JOINTS/CRACKS.

IT IS RECOMMENDED THAT PULL BOXES BE NO FURTHER THAN 200' [61m] APART.
IT IS RECOMMENDED THE MINIMUM SIZE FOR PULL BOXES IS 18" [45.7cm] X 18" [45.7cm] X 12" [30.5cm].

EXACT ROUTING OF CONDUIT TO BE DETERMINED ON SITE.

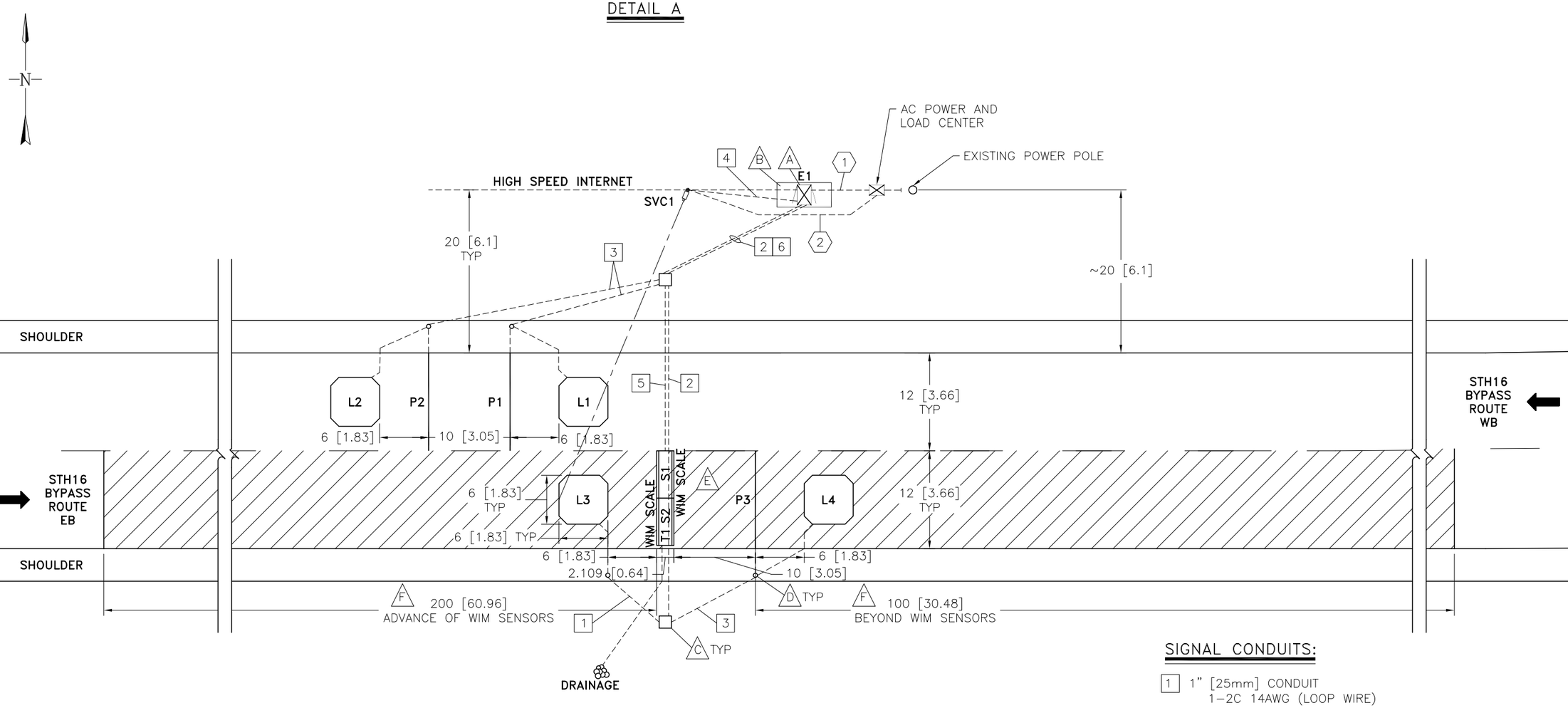
DRAWING NOT TO SCALE.

VWIM1

PROJECT NO: 1070-00-72	HWY: SPARTA, SWEF #54	COUNTY: MONROE	VMS	SHEET	E

FILE NAME : MWIVWS03 PLOT DATE : PLOT BY : PLOT NAME : PLOT SCALE : WISDOT/CADDS

DETAIL A



NOTES:

A. CABINET WITH WIM ELECTRONICS.

B. CABINET BASE.

C. PULL BOX.

D. DRILL THROUGH SHOULDER FOR CONDUIT.

E. PAVEMENT ON EITHER SIDE OF EACH SENSOR MUST BE FREE OF JOINTS AND CRACKS FOR 2' [0.61m].

F. ROAD SURFACE PAVEMENT CONDITIONS MUST MEET CURRENT ASTM E1318 REQUIREMENTS TO ACHIEVE OPTIMAL SYSTEM PERFORMANCE.

POWER CONDUITS:

1. CABINET ENCLOSURE POWER
2. CAMERA POWER

SIGNAL CONDUITS:

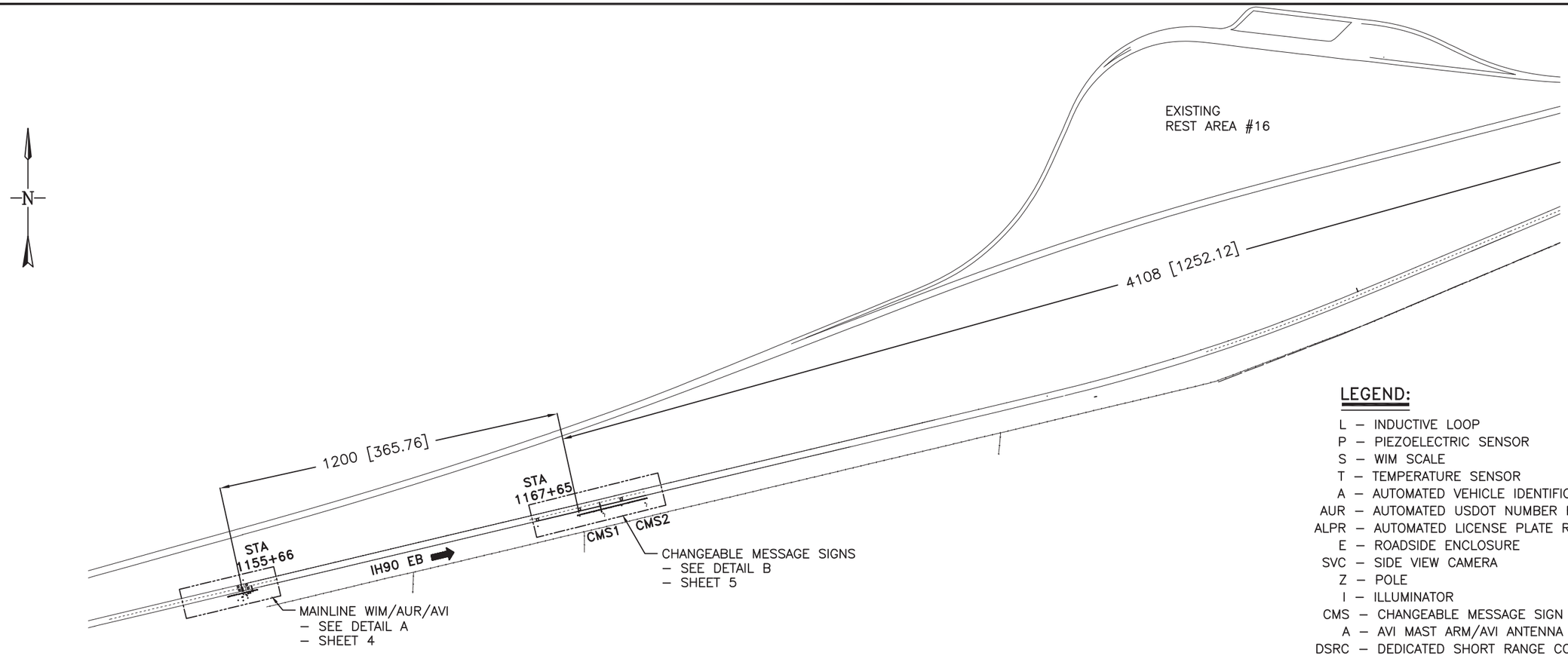
1. 1" [25mm] CONDUIT
   1–2C 14AWG (LOOP WIRE)
2. 2" [51mm] CONDUIT
   2–WIM LEADS
   1–TEMPERATURE SENSOR LEAD
3. 1" [25mm] CONDUIT
   1–2C 14AWG (LOOP WIRE)
   1–RG58 COAXIAL CABLE (PIEZO LEAD)
4. 2" [51mm] CONDUIT
   1–CAMERA CABLE
5. 2" [51mm] CONDUIT
   2–2C 18AWG (LOOP LEADS)
   1–RG58 COAXIAL CABLE (PIEZO LEAD)
6. 2" [51mm] CONDUIT
   4–2C 18AWG (LOOP LEADS)
   3–RG58 COAXIAL CABLE (PIEZO LEAD)

VWIM2

PROJECT NO: 1070-00-72	HWY: SPARTA, SWEF #54	COUNTY: MONROE	VMS	SHEET E

FILE NAME : MWIVWS03 PLOT DATE : PLOT BY : PLOT NAME : PLOT SCALE : WISDOT/CADDS

2



LEGEND:

L – INDUCTIVE LOOP
P – PIEZOELECTRIC SENSOR
S – WIM SCALE
T – TEMPERATURE SENSOR
A – AUTOMATED VEHICLE IDENTIFICATION
AUR – AUTOMATED USDOT NUMBER RECOGNITION
ALPR – AUTOMATED LICENSE PLATE READER CAMERA
E – ROADSIDE ENCLOSURE
SVC – SIDE VIEW CAMERA
Z – POLE
I – ILLUMINATOR
CMS – CHANGEABLE MESSAGE SIGN
A – AVI MAST ARM/AVI ANTENNA
DSRC – DEDICATED SHORT RANGE COMMUNICATION DEVICE
LCS – LANE CONTROL SIGNAL
[1] – SIGNAL CONDUIT
(1) – POWER CONDUIT
(A) – NOTE

GENERAL NOTES:

THE WIM SYSTEM SHOWN IN THESE PLANS AND SPECIFICATIONS DETAILS ONE POSSIBLE SYSTEM CONFIGURATION AND COMPONENTS. OTHER VENDOR WIM SYSTEM CONFIGURATIONS AND COMPONENTS ACCOMPLISHING THE SAME PERFORMANCE REQUIREMENTS WILL BE CONSIDERED.

POWER CABLES MUST BE RUN IN SEPARATE CONDUITS/PULL BOXES FROM SIGNAL CABLES.

SENSOR SPACING SHOWN IS TYPICAL SPACING REQUIREMENT, ACTUAL SENSOR SPACING MAY BE ALTERED TO SUIT SITE CONDITIONS.

ALL CONNECTIONS BETWEEN SENSORS AND LEAD CABLES ARE DONE IN PULL BOX AND ARE SOLDERED THEN SEALED FOR WATERPROOFING. NUMBER AND PLACEMENT OF PULL BOXES NOT SHOWN.

ROAD SURFACE PAVEMENT CONDITIONS MUST MEET CURRENT ASTM E1318 REQUIREMENTS TO ACHIEVE OPTIMAL SYSTEM PERFORMANCE.

PIEZOELECTRIC SENSORS MUST BE A MINIMUM OF 2' [0.61m] AWAY FROM CRACKS, JOINTS OR SAWCUTS WHEN POSSIBLE.

CABLES MUST BE PROTECTED BY PVC SLEEVES WHERE THEY CROSS PAVEMENT JOINTS/CRACKS.

PULL BOXES BE NO FURTHER THAN 300' [92m] APART.
THE MINIMUM SIZE FOR PULL BOXES IS 18" [45.7cm] X 18" [45.7cm] X 12" [30.5cm].

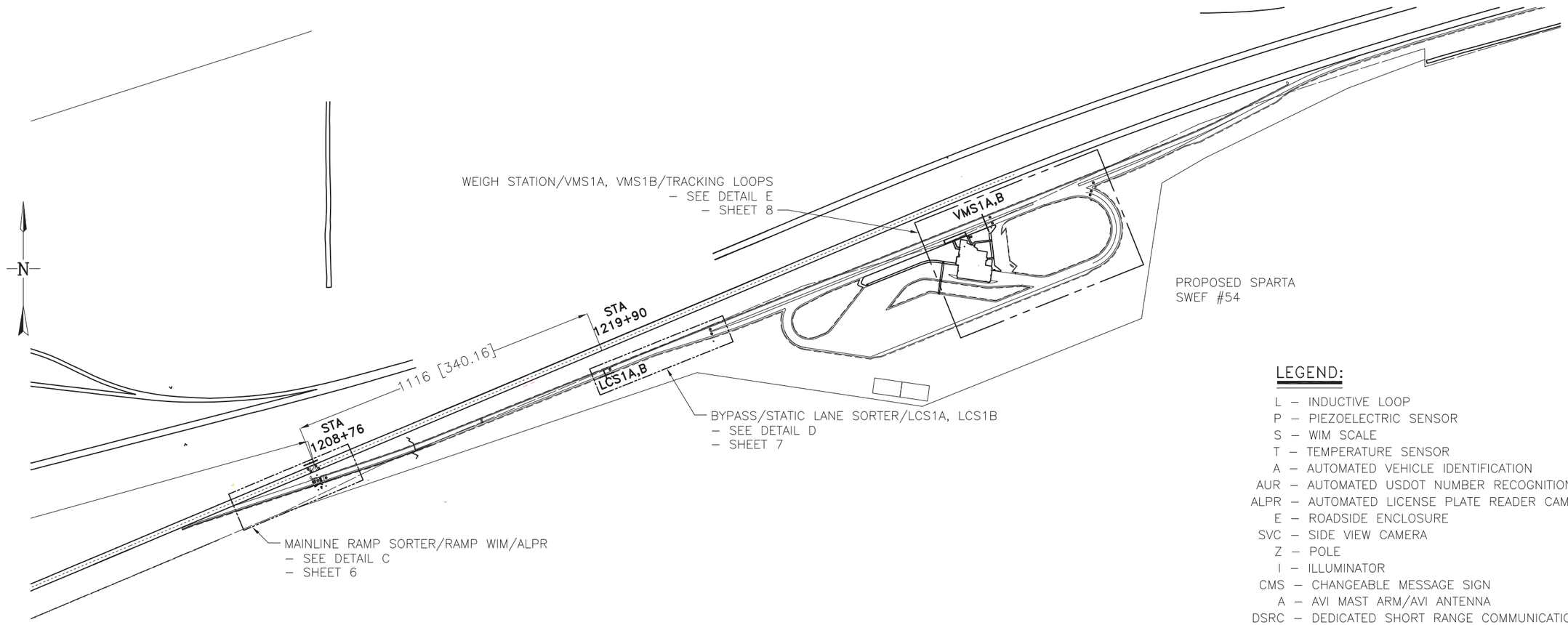
EXACT ROUTING OF CONDUIT TO BE DETERMINED ON SITE.

DRAWING NOT TO SCALE.

ALL MEASUREMENTS IN FEET [METERS] UNLESS OTHERWISE NOTED.

LOOP DETAILS:

LOOP #	SIZE	NUMBER OF TURNS	NOTE:
L1–L4	6' X 6'	4	PREFORMED LOOPS
L5–L7	8' X 8'	7	PREFORMED LOOPS
L8–L23	6' X 6'	4	PREFORMED LOOPS



LEGEND:

L – INDUCTIVE LOOP
P – PIEZOELECTRIC SENSOR
S – WIM SCALE
T – TEMPERATURE SENSOR
A – AUTOMATED VEHICLE IDENTIFICATION
AUR – AUTOMATED USDOT NUMBER RECOGNITION
ALPR – AUTOMATED LICENSE PLATE READER CAMERA
E – ROADSIDE ENCLOSURE
SVC – SIDE VIEW CAMERA
Z – POLE
I – ILLUMINATOR
CMS – CHANGEABLE MESSAGE SIGN
A – AVI MAST ARM/AVI ANTENNA
DSRC – DEDICATED SHORT RANGE COMMUNICATION DEVICE
LCS – LANE CONTROL SIGNAL
[1] – SIGNAL CONDUIT
⟨1⟩ – POWER CONDUIT
△A – NOTE

LOOP DETAILS:

LOOP #	SIZE	NUMBER OF TURNS	NOTE:
L1–L4	6' X 6'	4	PREFORMED LOOPS
L5–L7	8' X 8'	7	PREFORMED LOOPS
L8–L23	6' X 6'	4	PREFORMED LOOPS

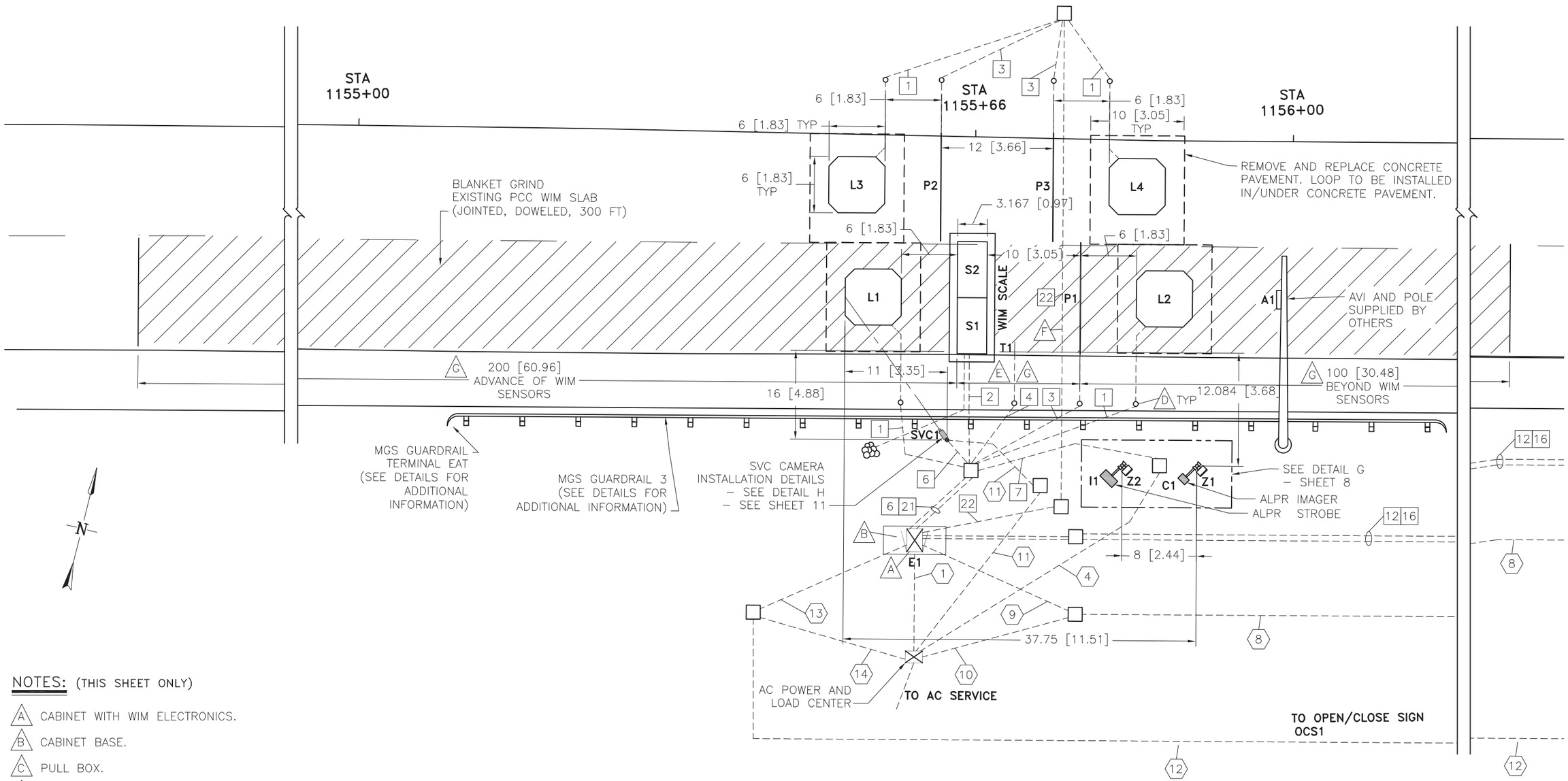
POWER CONDUITS:

1. CABINET POWER CABLE
2. UNUSED
3. UNUSED
4. 1–3C–120VAC POWER (ALPR + ILLUMINATOR)
5. 1–3C–120VAC POWER (AUR)
6. 1–3C–120VAC POWER (ILLUMINATOR)
7. 2–3C–120VAC POWER (ALPR + ILLUMINATOR)
8. CMS SWITCHED POWER (REPORT/BYPASS SIGNALS)
   CMS CONSTANT POWER
9. CMS SWITCHED POWER (REPORT/BYPASS SIGNALS)
10. CMS CONSTANT POWER
11. 2–3C–120VAC POWER (CAMERA + ILLUMINATOR)
12. OCS SWITCHED POWER
    OCS CONSTANT POWER
13. OCS SWITCHED POWER
14. OCS CONSTANT POWER
15. LCS SWITCHED POWER
    LCS CONSTANT POWER
16. LCS SWITCHED POWER
17. LCS CONSTANT POWER
18. VMS POWER

SIGNAL CONDUITS:

1. 1" [25mm] CONDUIT
   1–2C 14AWG (LOOP WIRE)
2. 2" [51mm] CONDUIT
   2–3PR 20AWG (WIM LEAD)
   4–2C 18AWG (OFF–SCALE LEAD)
3. 1" [25mm] CONDUIT
   1–RG58 COAXIAL CABLE (PIEZO LEAD)
4. 1" [25mm] CONDUIT
   1–TEMPERATURE SENSOR LEAD
5. 2" [51mm] CONDUIT
   2–2C 14AWG (LOOP WIRE)
6. 2" [51mm] CONDUIT
   1–CAT5 CABLE (SVC)
7. 1" [25mm] CONDUIT
   1–CAT5 CABLE (ALPR)
   1–2PR 22AWG CABLE
8. 1" [25mm] CONDUIT
   1–CAT5 CABLE (AUR)
9. 1" [25mm] CONDUIT
   1–CAT5 CABLE (AUR)
   2–2C 14AWG (LOOP WIRE)
10. 1" [25mm] CONDUIT
    1–CAT5 CABLE (ALPR)
    1–2PR 22AWG CABLE (ILLUMINATOR)
    1–2PR 22AWG CABLE (ALPR)
11. 1" [25mm] CONDUIT
    1–2PR 22AWG CABLE (ILLUMINATOR)
12. 2" [51mm] CONDUIT
    3–2C 18AWG (LOOP LEADS)
13. 2" [51mm] CONDUIT
    1–2C 18AWG (LOOP LEADS)
14. NOT USED
15. 1" [25mm] CONDUIT
    1–2C 18AWG (OVERHEIGHT SIGNAL)
16. 2" [51mm] CONDUIT
    1–12 STRAND MULTIMODE FIBER OPTIC CABLE (COM)
17. UNUSED
18. 2" CONDUIT
    1–12 STRAND MULTIMODE FIBER OPTIC CABLE (VMS COM)
19. 2" CONDUIT
    3–2C 18AWG (LOOP LEADS)
    1–12 STRAND MULTIMODE FIBER OPTIC CABLE (VMS COM)
20. NOT USED
21. 2" [51mm] CONDUIT
    2–2C 18AWG (LOOP WIRE)
    1–RG58 COAXIAL CABLE (PIEZO LEAD)
    2–3PR 20AWG (WIM LEAD)
    4–2C 18AWG (OFF–SCALE LEAD)
    1–TEMPERATURE SENSOR LEAD
22. 2" [51mm] CONDUIT
    2–2C 18AWG (LOOP WIRE)
    2–RG58 COAXIAL CABLE (PIEZO LEAD)
23. 2" [51mm] CONDUIT
    4–2C 18AWG (LOOP WIRE)
    4–RG58 COAXIAL CABLE (PIEZO LEAD)

DETAIL A



NOTES: (THIS SHEET ONLY)

A. CABINET WITH WIM ELECTRONICS.

B. CABINET BASE.

C. PULL BOX.

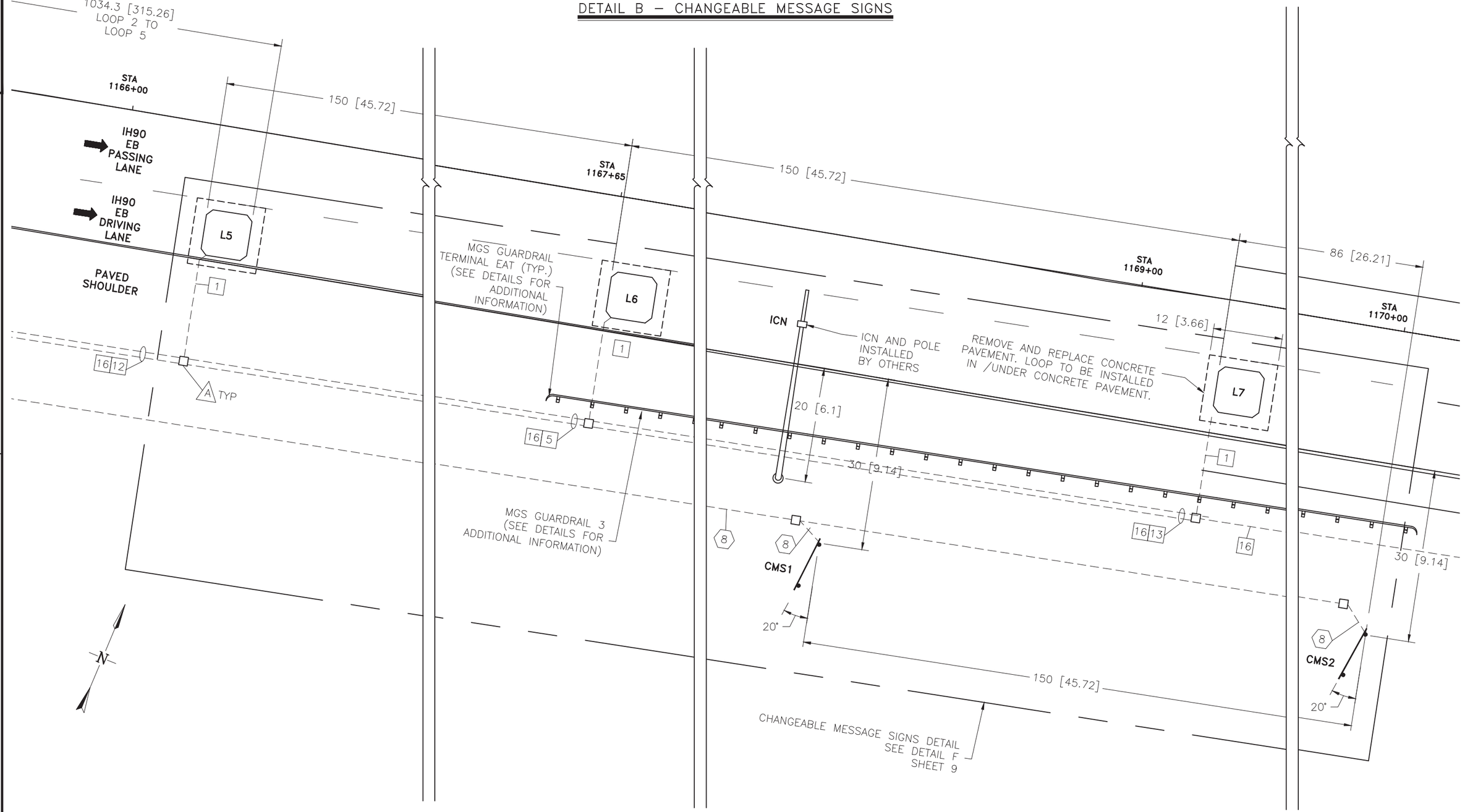
D. DRILL THROUGH SHOULDER FOR CONDUIT.

E. PAVEMENT ON EITHER SIDE OF EACH SENSOR MUST BE FREE OF JOINTS AND CRACKS FOR 2' [0.61m].

F. CONDUIT SHALL BE PLACED USING BORING, JACKING OR ALTERNATIVE METHOD THAT DOES NOT REQUIRE THE SURFACE OF THE ROAD TO BE CUT.

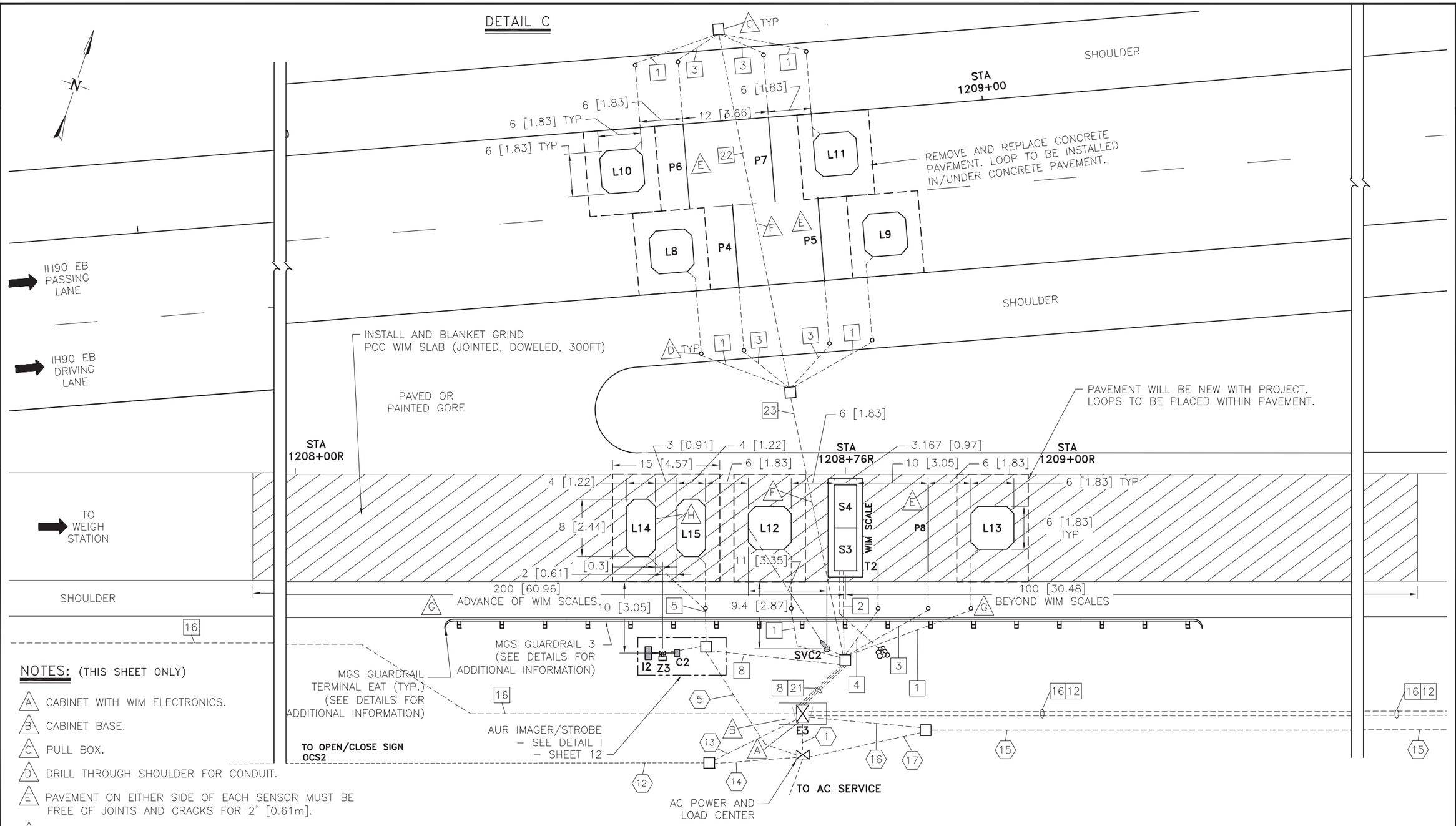
G. GRIND ROAD SURFACE TO MEET CURRENT ASTM E1318 REQUIREMENTS.

DETAIL B – CHANGEABLE MESSAGE SIGNS



NOTES: (THIS SHEET ONLY)

A PULL BOX.



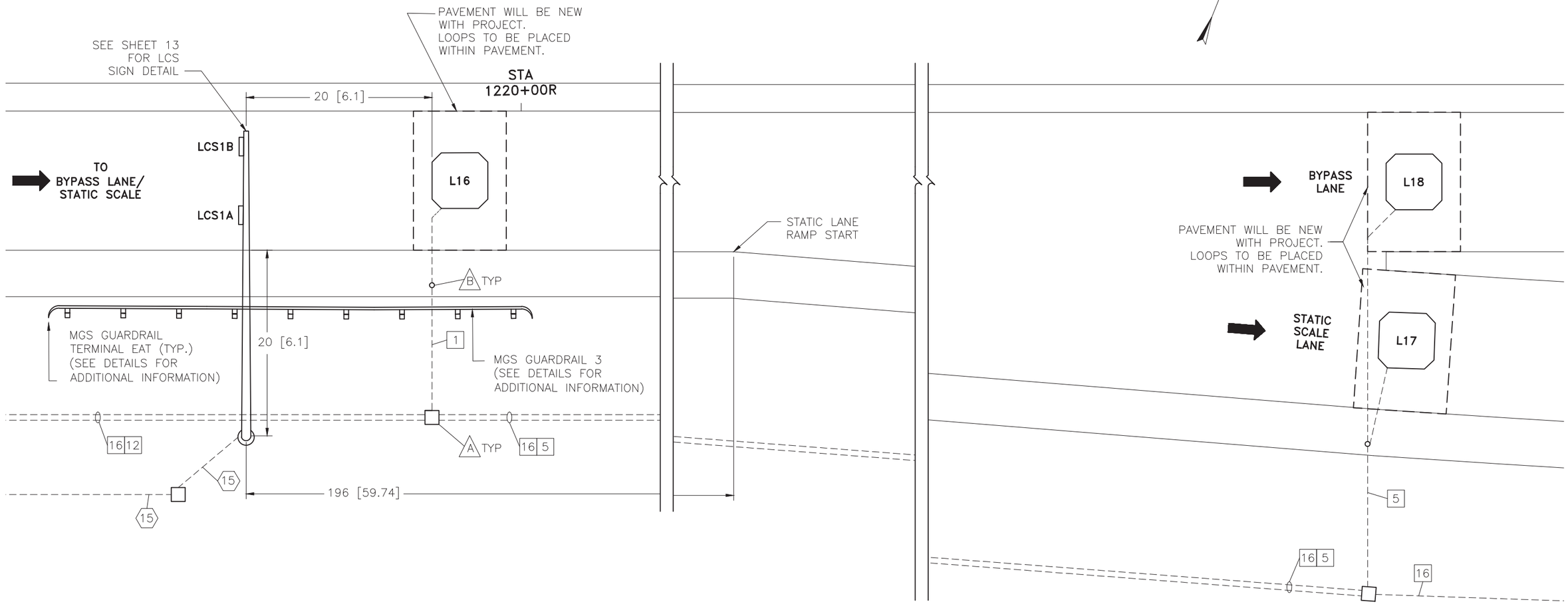
NOTES: (THIS SHEET ONLY)

- A CABINET WITH WIM ELECTRONICS.
- B CABINET BASE.
- C PULL BOX.
- D DRILL THROUGH SHOULDER FOR CONDUIT.
- E PAVEMENT ON EITHER SIDE OF EACH SENSOR MUST BE FREE OF JOINTS AND CRACKS FOR 2' [0.61m].
- F CONDUIT SHALL BE PLACED USING BORING, JACKING OR ALTERNATIVE METHOD THAT DOES NOT REQUIRE THE SURFACE OF THE ROAD TO BE CUT.
- G GRIND ROAD SURFACE TO MEET CURRENT ASTM E1318 REQUIREMENTS.
- H 4 TURN LOOPS.

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA, SWEF #54 (WIM SYSTEM DETAILS)	SHEET E

2

DETAIL D

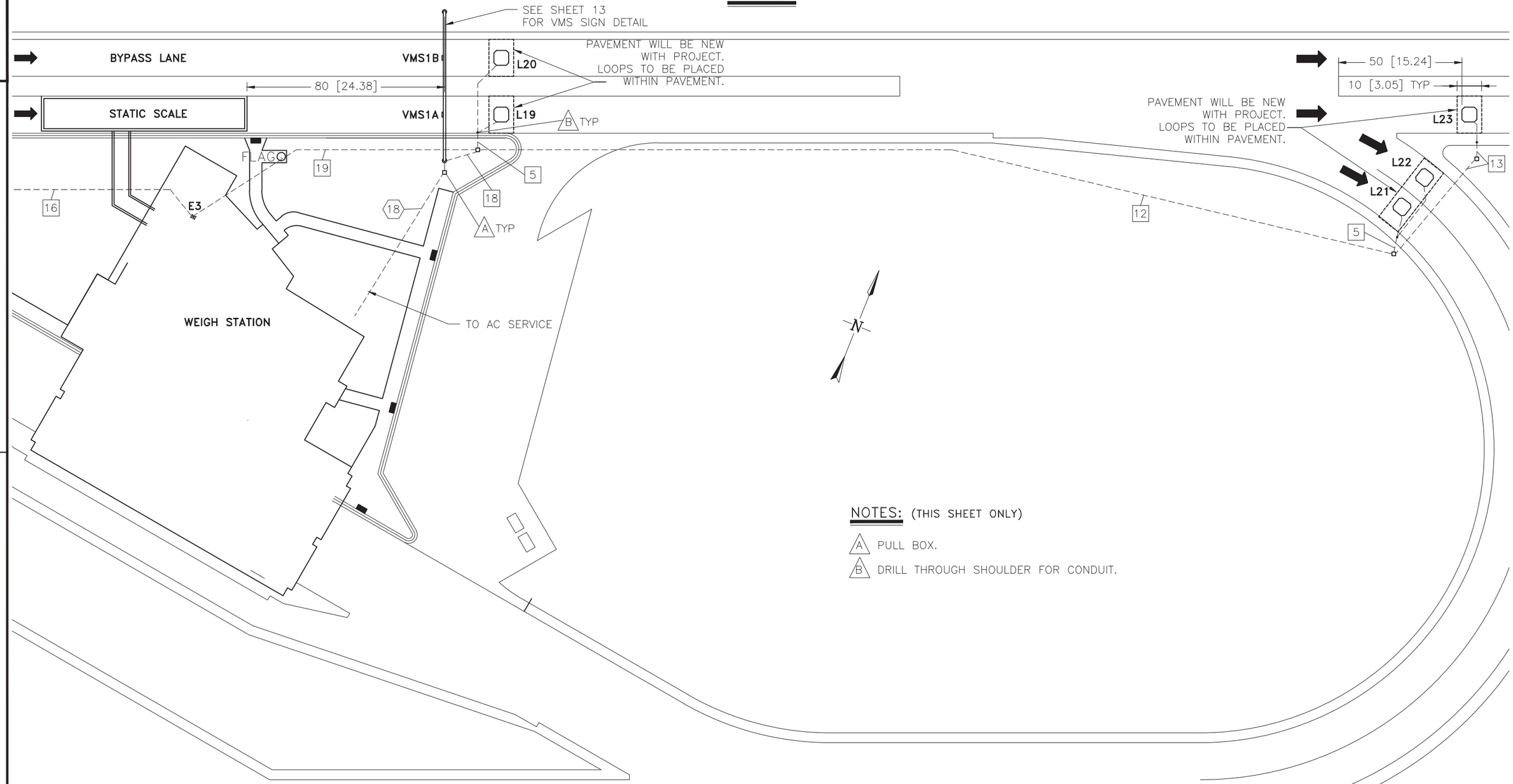


NOTES: (THIS SHEET ONLY)

A PULL BOX.

B DRILL THROUGH SHOULDER FOR CONDUIT.

DETAIL E



NOTES: (THIS SHEET ONLY)

A PULL BOX.

B DRILL THROUGH SHOULDER FOR CONDUIT.

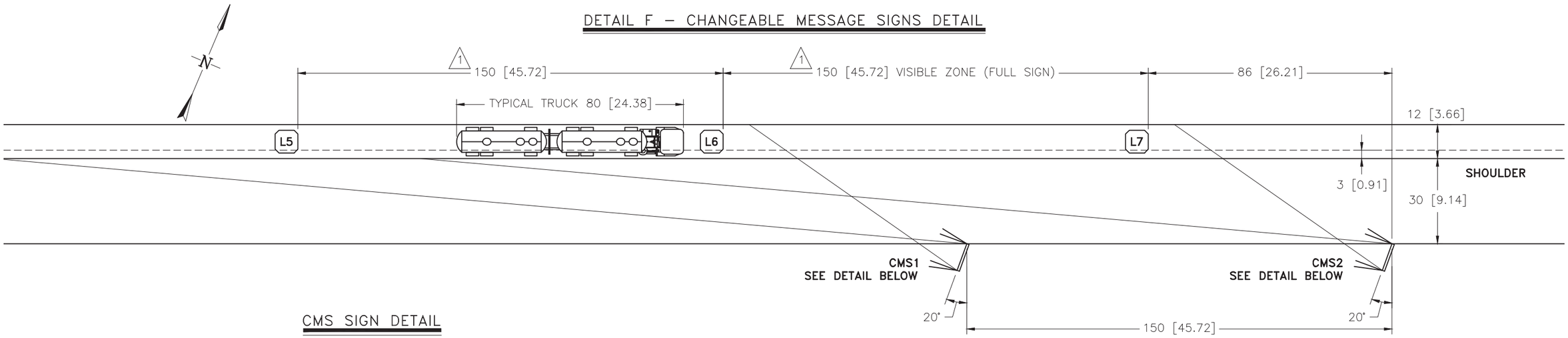
SHEET 8 OF 13

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA, SWEF #54 (WIM SYSTEM DETAILS)	SHEET E

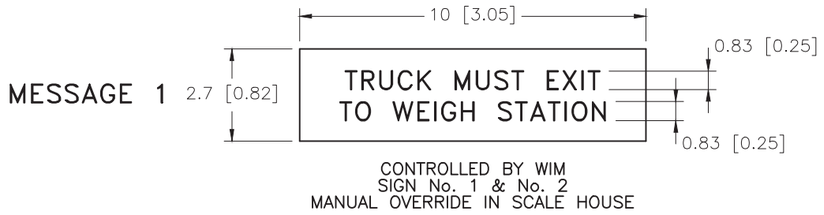
FILE NAME : MWIWIM02 PLOT DATE : PLOT BY : PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

DETAIL F – CHANGEABLE MESSAGE SIGNS DETAIL

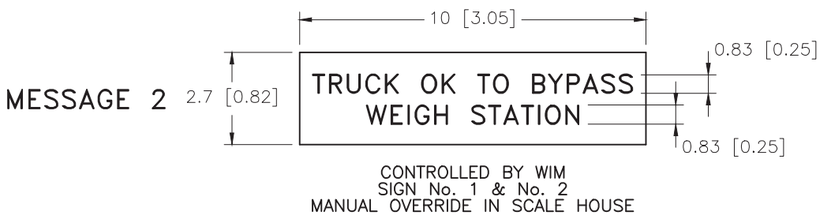


CMS SIGN DETAIL

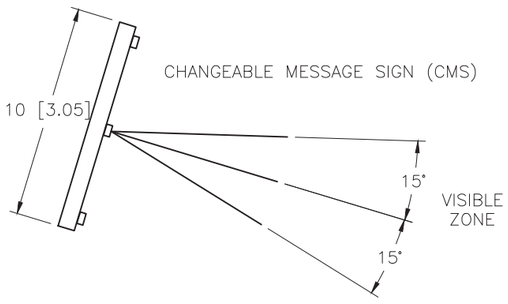


CONTROLLED BY WIM
SIGN No. 1 & No. 2
MANUAL OVERRIDE IN SCALE HOUSE

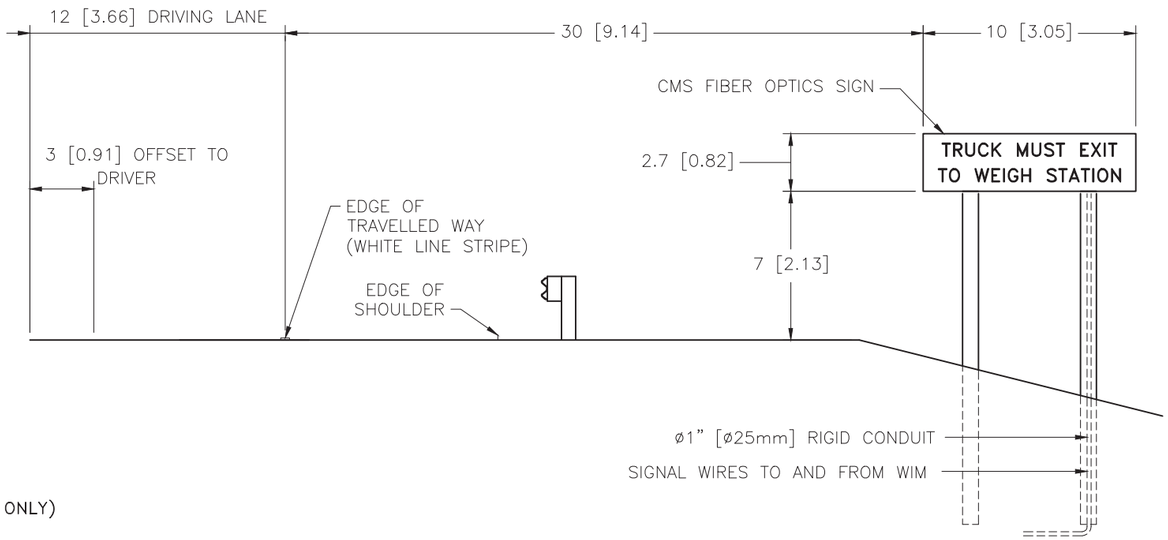
OR



CONTROLLED BY WIM
SIGN No. 1 & No. 2
MANUAL OVERRIDE IN SCALE HOUSE



SIGN GEOMETRY



NOTES: (THIS SHEET ONLY)

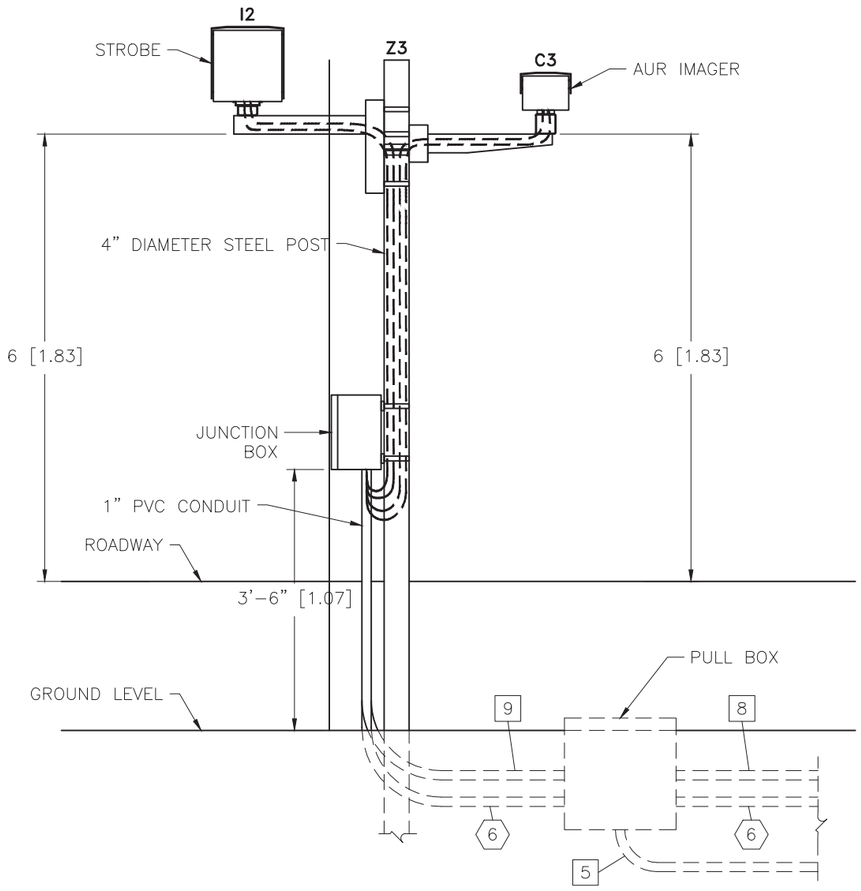
1. SIGNS SET TO ENSURE MINIMUM 100' FULL VISIBILITY.

2

2

DETAIL G

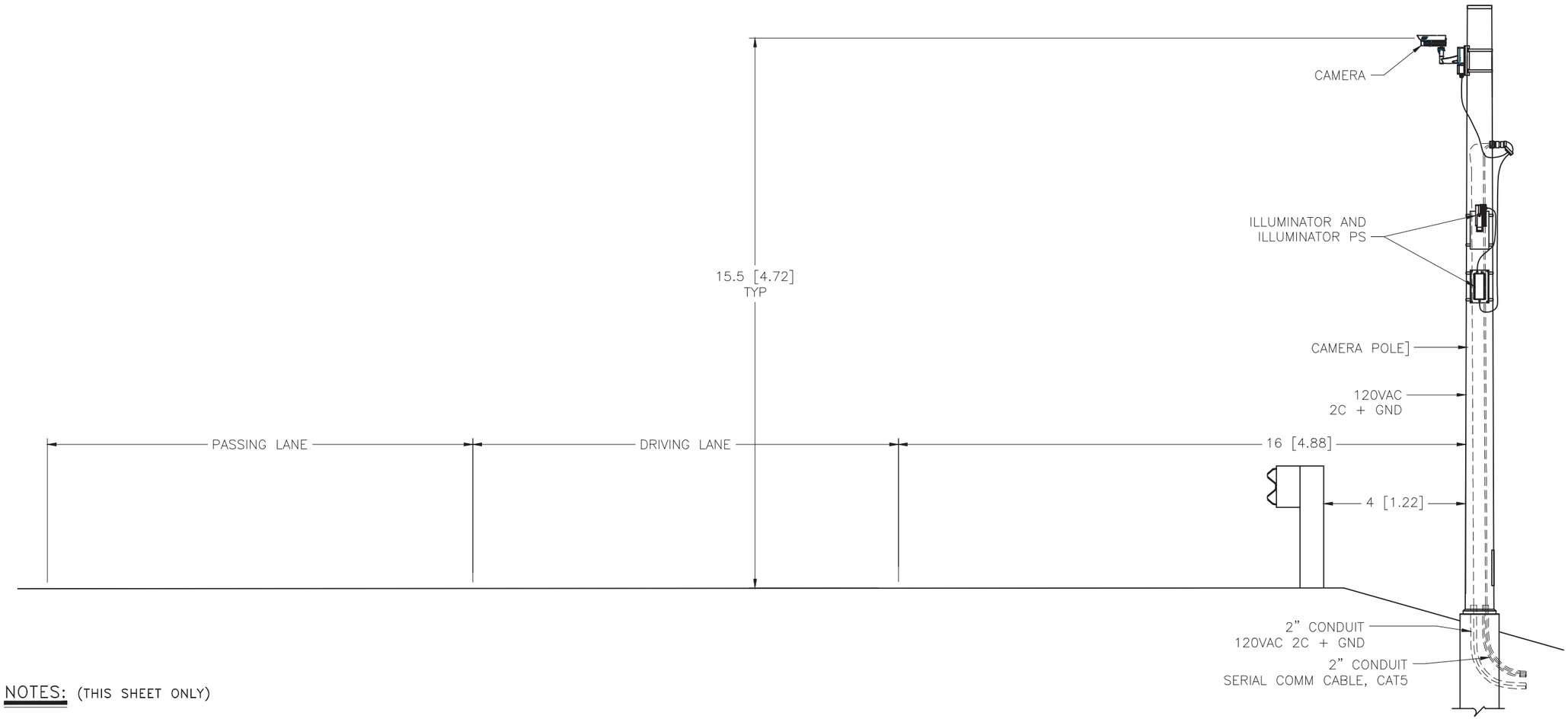
(VIEW FACING ROADWAY)



NOTES: (THIS SHEET ONLY)

ALL CABLING TO BE INSTALLED IN POLE OR IN CONDUIT.
NO EXPOSED WIRING.

DETAIL H

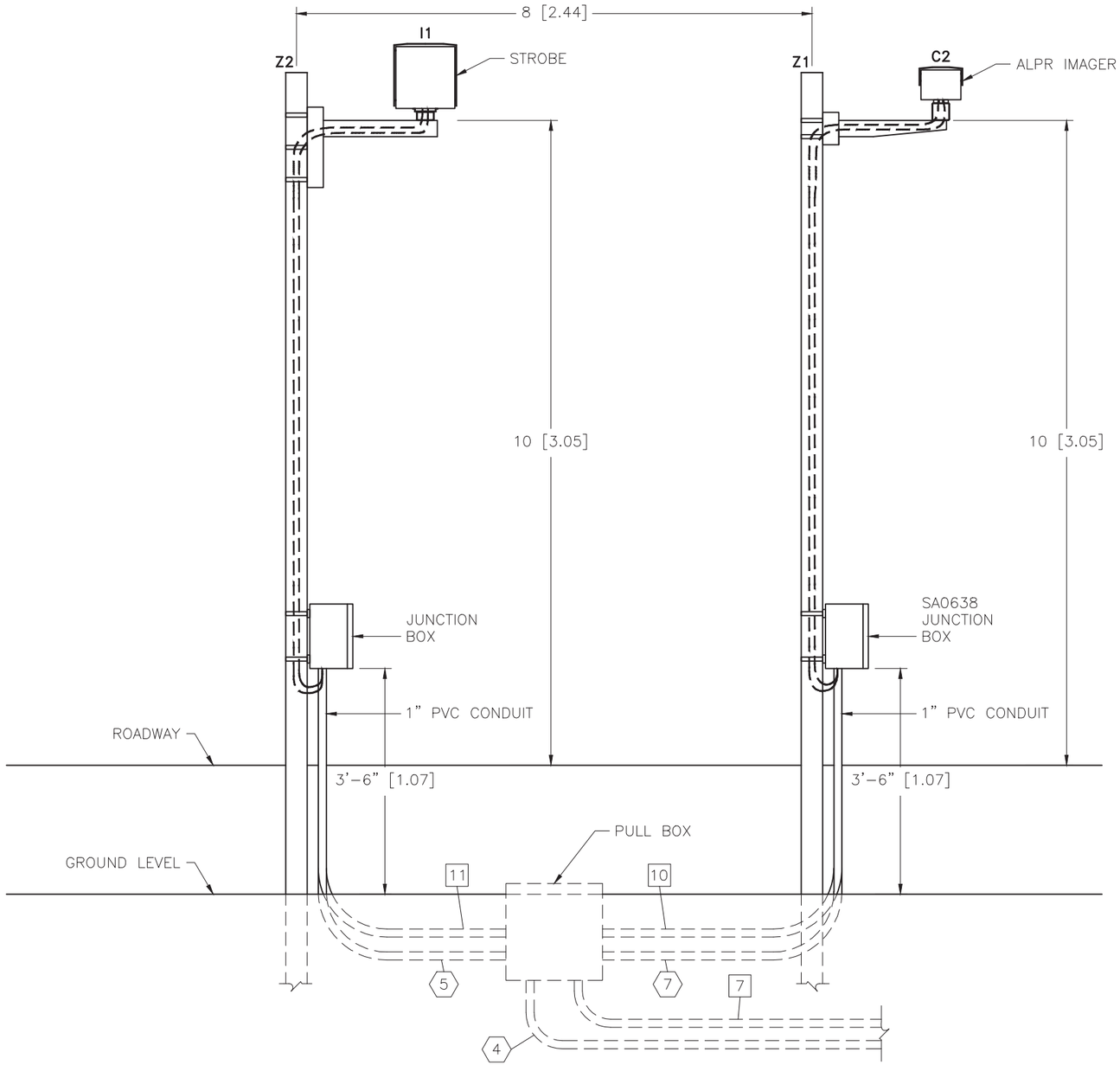


NOTES: (THIS SHEET ONLY)

ALL CABLING TO BE INSTALLED IN POLE OR IN CONDUIT.
NO EXPOSED WIRING.

DETAIL I

(VIEW FACING ROADWAY)



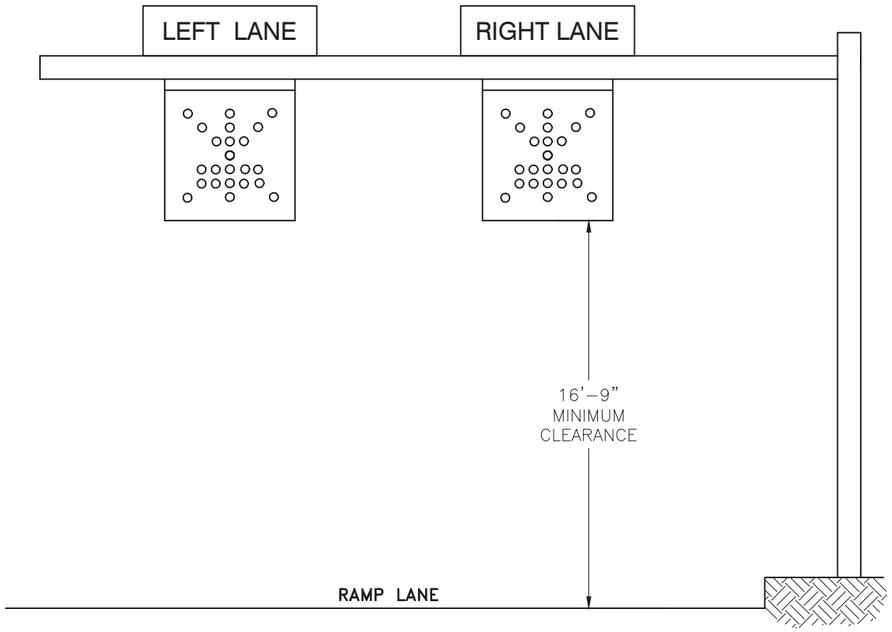
NOTES: (THIS SHEET ONLY)

ALL CABLING TO BE INSTALLED IN POLE OR IN CONDUIT.
NO EXPOSED WIRING.

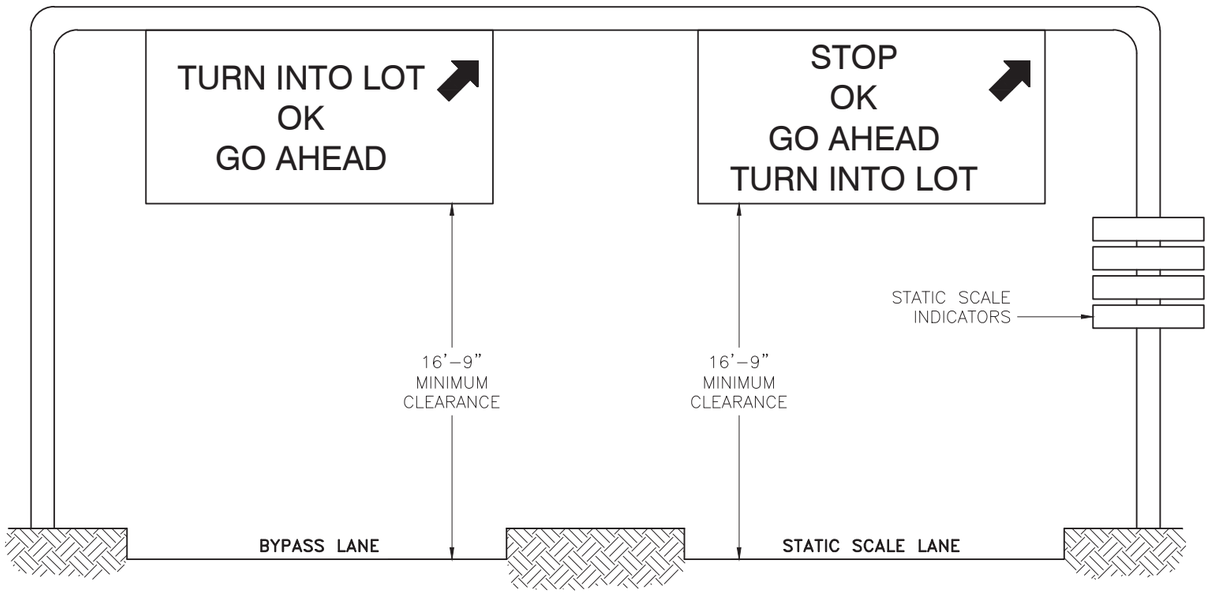
2

2

LANE CONTROL SIGNALS – ELEVATION VIEW



VARIABLE MESSAGE SIGN DETAIL – ELEVATION VIEW

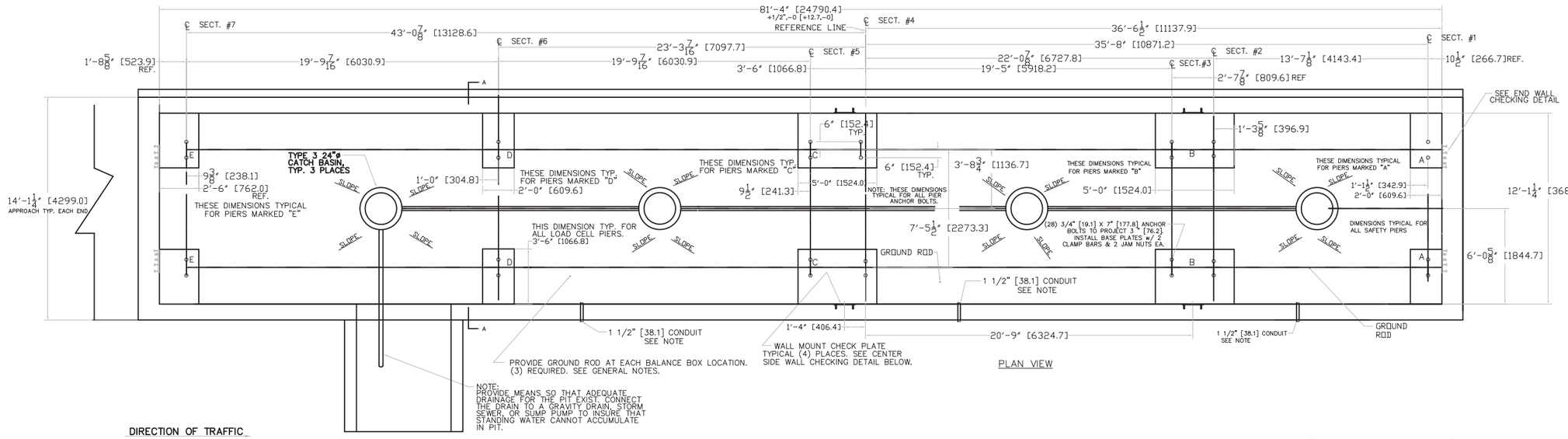


SHEET 13 OF 13

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA, SWEF #54 (WIM SYSTEM DETAILS)	SHEET E

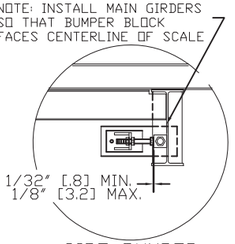
FILE NAME : MWIWIM02 PLOT DATE : PLOT BY : PLOT NAME : PLOT SCALE :

WISDOT/CADDS SHEET 42

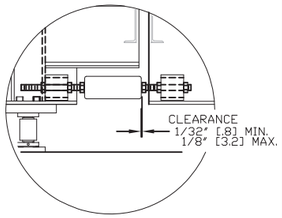


PLAN VIEW

NOTE: INSTALL MAIN GIRDERS SO THAT BUMPER BLOCK FACES CENTERLINE OF SCALE

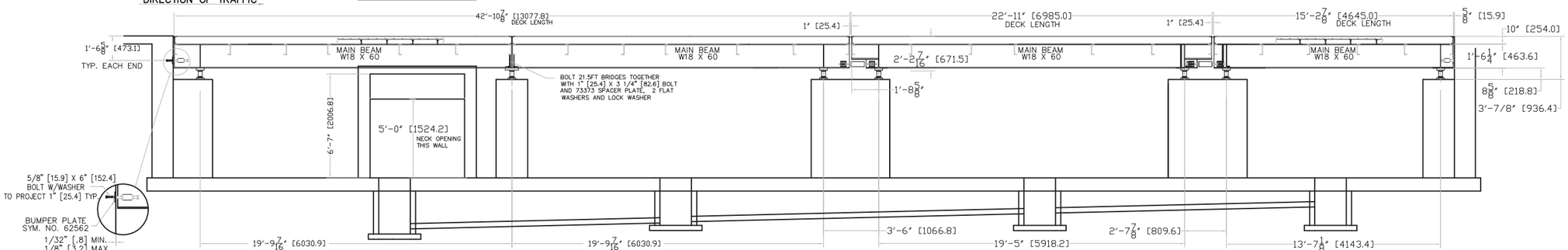


SIDE BUMPER CHECK ADJUSTMENT



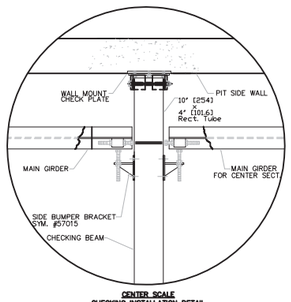
CENTER SCALE CHECKING DETAIL

DIRECTION OF TRAFFIC

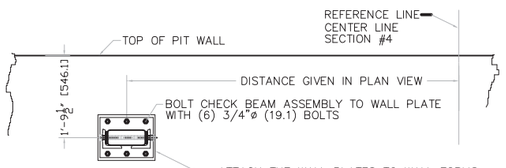


ELEVATION VIEW

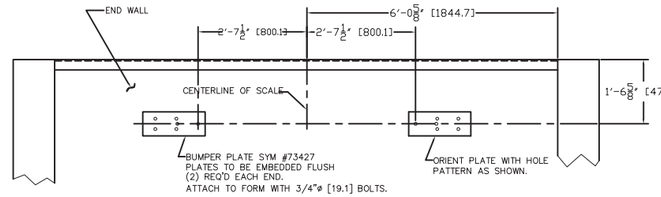
NOTE: ALL BUMPER BOLTS MUST BE INSTALLED BEFORE MAIN GIRDERS ARE PLACED IN FINAL POSITION.



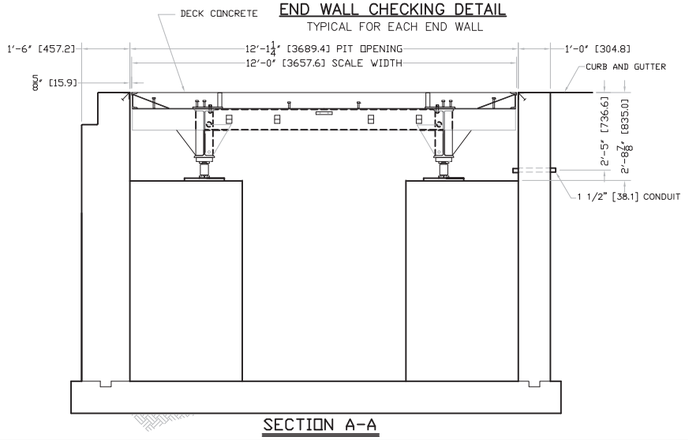
CENTER SCALE CHECKING INSTALLATION DETAIL (TOP VIEW)



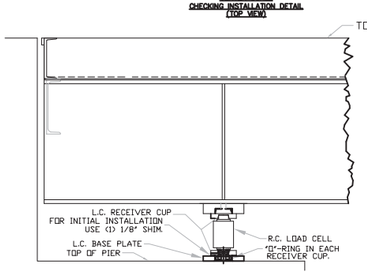
CENTER SIDE WALL CHECKING DETAIL



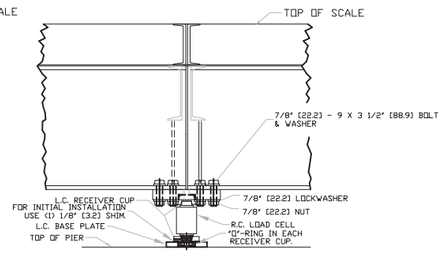
END WALL CHECKING DETAIL
TYPICAL FOR EACH END WALL



SECTION A-A



LOAD CELL END ASSEMBLY DETAIL



LOAD CELL CENTER ASSEMBLY DETAIL

GENERAL NOTES:

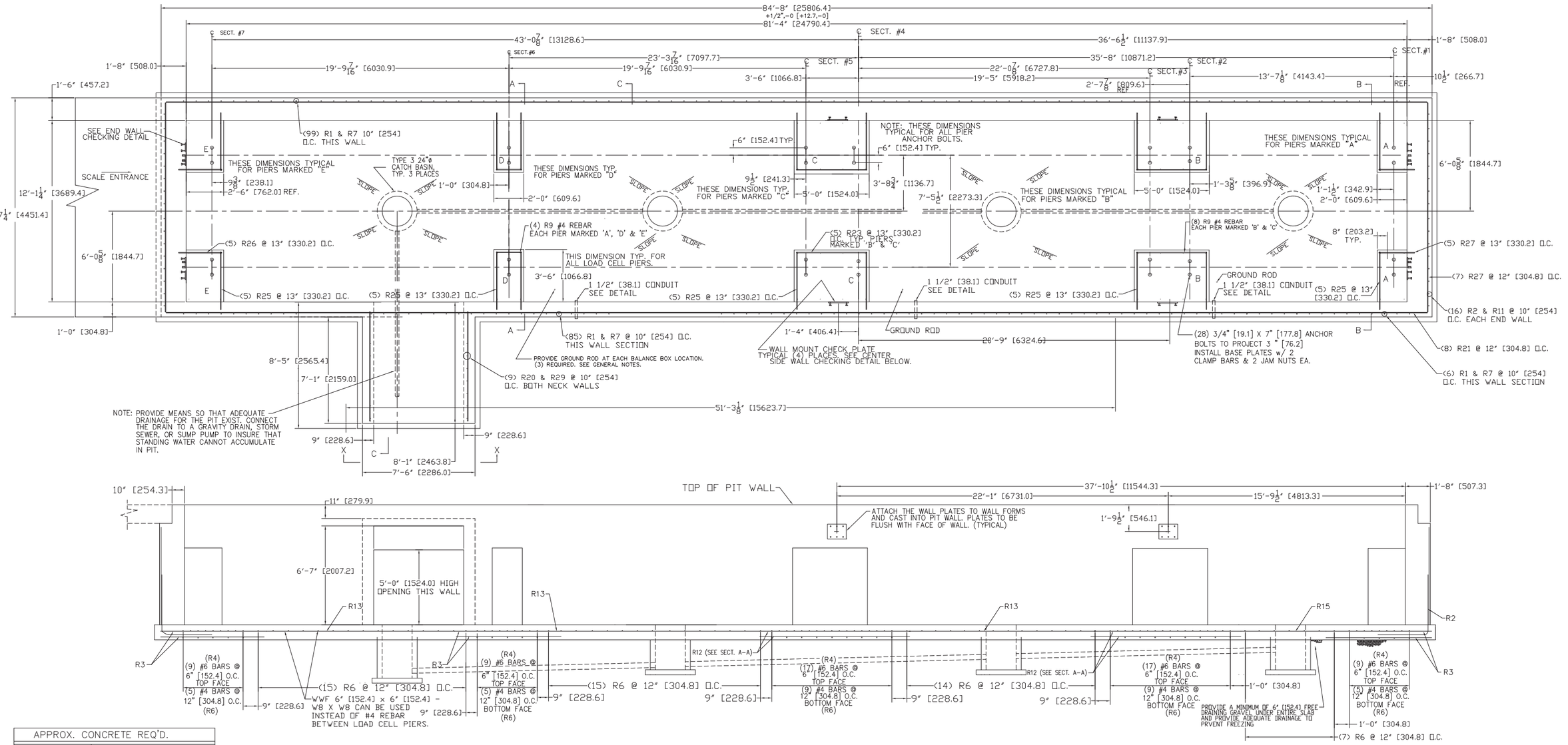
1. EXCAVATION, FOUNDATION FORMS, REBARS, AND CONCRETE IS TO BE FURNISHED BY CONTRACTOR.
2. THE PIT AS SHOWN IS THE MINIMUM REQUIRED TO ACCOMMODATE THE SCALE. N.I.S.T. REQUIREMENTS AND LOCAL WEIGHTS AND MEASURE REGULATIONS MAY SPECIFY ADDITIONAL INSTALLATION REQUIREMENTS. IN ORDER TO INSURE COMPLIANCE, CONSULT THE GOVERNING WEIGHTS AND MEASURE DEPARTMENT PRIOR TO INSTALLATION.
3. TO COMPLY WITH SPECIFICATIONS OF N.I.S.T., ANY ENDS OF A VEHICLE SCALE INSTALLED IN ONE LOCATION FOR A PERIOD OF SIX MONTHS OR MORE SHALL HAVE A STRAIGHT APPROACH AT LEAST AS WIDE AS THE PLATFORM AND AT LEAST ONE-HALF THE LENGTH OF THE PLATFORM, NOT LESS THAN 15 FEET [4572] ON ANY APPROACH ADJACENT TO THE PLATFORM SHALL BE CONSTRUCTED OF CONCRETE OR OTHER DURABLE MATERIAL TO INSURE THAT THIS PORTION REMAINS SMOOTH AND IS IN THE SAME PLANE AS THE PLATFORM. WHERE NECCESSARY FOR DRAINAGE, THE REMAINING PORTION OF THE APPROACH MAY SLOPE SLIGHTLY.
4. WORK FROM CENTERLINES WHEN ERECTING FORMS AND PLACING FOUNDATION BOLTS. PLACE BOLTS TO WITHIN ±1/8" [3.175] OF POSITIONS INDICATED ON DRAWING. (BOLTS MUST BE PLACED WITHIN ±1/8" [3.175] OF TOTAL DIMENSIONS FROM CENTERLINE OF SCALE.)
5. ADEQUATE PROVISION MUST BE MADE FOR READY ACCESS TO THE PIT FOR INSPECTION OR MAINTENANCE.
6. VEHICLES SHOULD ENTER AND EXIT SCALE FROM APPROACHES ONLY. ALL CROSS TRAFFIC SHOULD BE RESTRICTED.
7. THE WEIGHBRIDGE BE SET AND BLOCKED IN THE PIT BEFORE THE LOAD CELL ASSEMBLIES ARE INSTALLED.
8. WHEN WELDING IN PIT OR ON WEIGHBRIDGE, LOAD CELLS MUST BE DISCONNECTED AND LEADS TAPED TO PREVENT THEM FROM TOUCHING EACH OTHER AND FROM GROUNDING.

PROJECT NO:1070-00-72	HWY:IH 90	COUNTY: MONROE	SPARTA SWEF #54 (STATIC SCALE)	SHEET	E

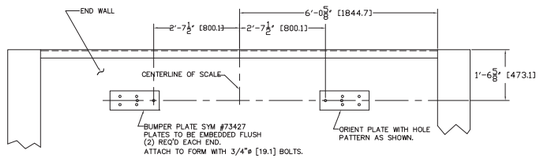
FILE NAME : DMM84727-SPM
PLOT DATE : 10/30/06
PLOT BY : BADGER SCALE
PLOT NAME : STATIC SCALE
PLOT SCALE : NO SCALE
WISDOT/CADDS SHEET 42

APPROX. EXCAVATION QTY = 617 CU. YDS [471.85 CM].
(BASED ON 2'-0" [609.6] CLEARANCE AROUND SIDE OF PIT.)

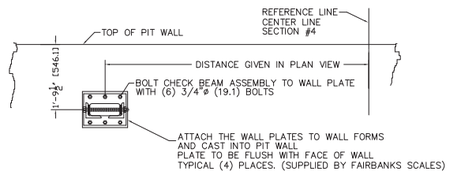
PLAN VIEW



APPROX. CONCRETE REQ'D.		
SLAB/PIERS	57.69 CU. YDS.	[44.1 CM]
WALLS	75.78 CU. YDS.	[57.9 CM]
APPROACHES	27.00 CU. YDS.	[20.7 CM]
SLEEPER SLAB	3.61 CU. YDS.	[2.76 CM]
TOTAL	164.08 CU. YDS.	[125.46 CM]



END WALL CHECKING DETAIL
TYPICAL FOR EACH END WALL



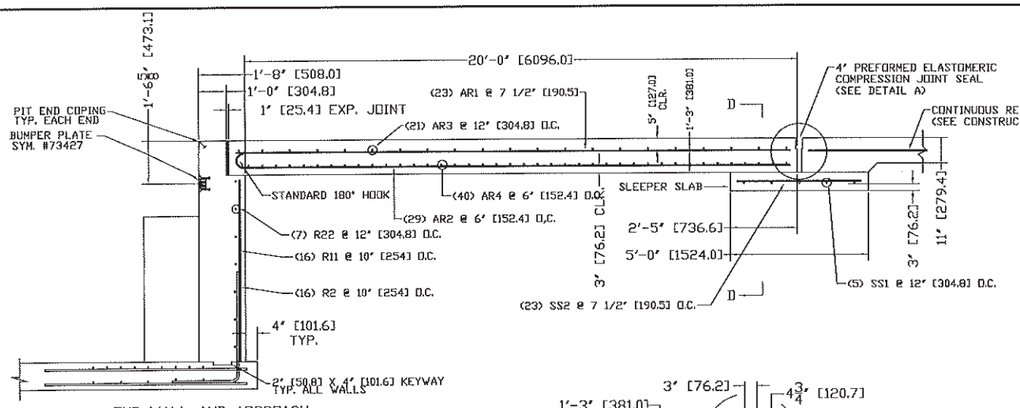
CENTER SIDE WALL CHECKING DETAIL

GENERAL NOTES:

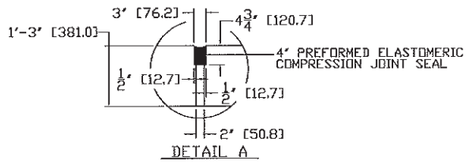
1. USE 4000 PSI [281.2 K.SQ.CM.] CONCRETE @ 28 DAYS. CONCRETE SHALL BE A MIX DESIGN UTILIZING TYPE II PORTLAND CEMENT AND NORMAL WEIGHT AGGREGATES. NO FLY ASH WILL BE ALLOWED. MAXIMUM ALLOWABLE SLUMP SHALL BE 4 1/2" [114.3] CONCRETE TO BE MECHANICALLY VIBRATED TO INSURE PROPER CONSOLIDATION. USE 5-7% AIR ENTRAINMENT.
2. USE A MIX DESIGN WHICH WILL DEVELOP 4000 PSI [281.2 K. SQ. CM] STRENGTH IN 7 DAYS ON THE APROACHES.
3. REINFORCING BARS ARE TO EQUAL ASTM A615, GRADE 60. BEND BARS COLD TO CONFORM WITH REQUIRED DETAILS. REMOVE SCALE, LOOSE FLAKEY RUST, DIRT, AND OTHER COATING THAT WOULD IMPAIR BONDING. SPACE BARS PROPERLY AND TIE SECURELY IN POSITION BEFORE PLACING CONCRETE. TACK WELDING TO KEEP REINFORCING IN PLACE IS NOT PERMITTED.
4. ALL CONCRETE SURFACES SHALL BE FORMED WITH WOOD OR METAL FORMS USING APPROVED METHODS. NO CONCRETE VERTICAL SURFACES SHALL BE POURED AGAINST DIRT.
5. MAKE 3 CONCRETE TEST CYLINDERS, LABLE WITH POUR DATE AND DESCRIPTION OF POUR. WRAP CYLINDERS IN 6 MIL POLY.
6. WORK FROM CENTERLINES WHEN ERECTING FORMS AND PLACING FOUNDATION EMBEDMENTS. PLACE EMBEDMENTS TO WITHIN ±1/8" [3.175] OF POSITIONS INDICTED ON DRAWING. (EMBEDMENTS MUST BE PLACED WITHIN ±1/8" [3.175] OF TOTAL DIMENSIONS FROM CENTERLINE OF SCALE.)
7. BOTTOM OF PIT SHOULD BE SUPPORTED ON NON-EXPANSIVE WELL DRAINED MATERIAL CAPABLE OF SAFELY SUPPORTING 1000 PSF [4882.4 K.SQ.M.].
8. SUITABLE CONDUIT FOR LOW VOLTAGE CONDUCTOR SHIELDED CABLE MUST PASS THRU THE PIT WALL AS INDICATED ON THIS DRAWING. CONDUIT MUST EXTEND BEYOND PIT WALL A MINIMUM OF 2" [50.8].
9. ALL BACK FILL SHOULD BE PLACED IN 8" [203.2] LIFTS & COMPACTED TO 95% OF MAXIMUM DENSITY PER ASTM 1557. ALL WORK TO BE IN ACCORDANCE WITH ACI 301.
10. PROVIDE MEANS SO THAT ADEQUATE DRAINAGE FOR THE PIT EXIST. CONNECT THE DRAIN TO A GRAVITY DRAIN, STORM SEWER, OR SUMP PUMP TO INSURE THAT STANDING WATER CANNOT ACCUMULATE IN PIT.

PROJECT NO:1070-00-72	HWY:IH 90	COUNTY:MONROE	SPARTA SWEF #54 (STATIC SCALE)	SHEET	E

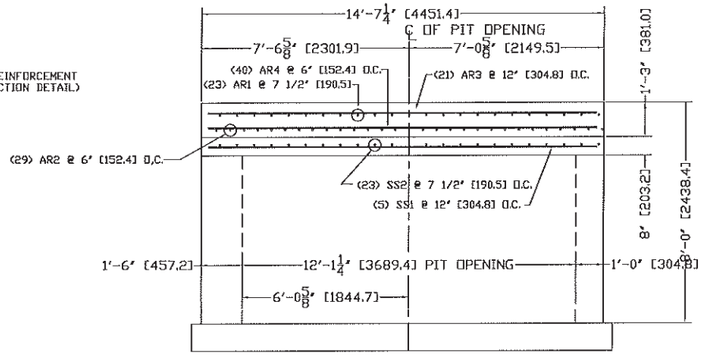
FILE NAME : MM84727-RPM-1 PLOT DATE : 10/30/06 PLOT BY : BADGER SCALE PLOT NAME : STATIC SCALE PLOT SCALE : NO SCALE
WISDOT/CADDS SHEET 42



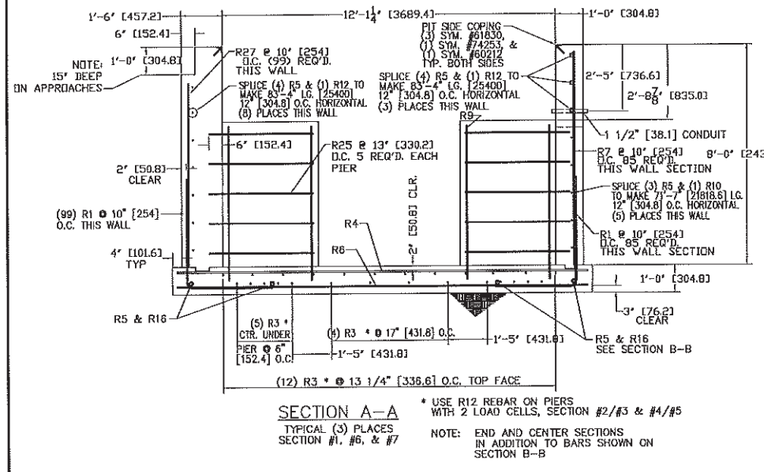
END WALL AND APPROACH
TYPICAL EACH END



DETAIL A



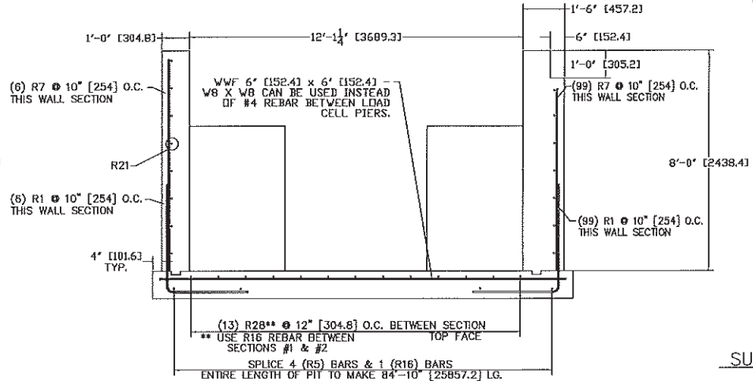
APPROACH/SLEEPER SLAB SECT 'D' - 'D'



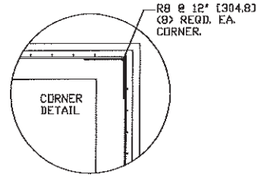
SECTION A-A
TYPICAL (3) PLACES
SECTION #1, #6, & #7

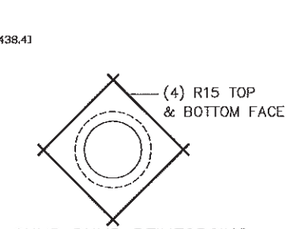
* USE R12 REBAR ON PIERS WITH 2 LOAD CELLS, SECTION #2/#3 & #4/#5

NOTE: END AND CENTER SECTIONS IN ADDITION TO BARS SHOWN ON SECTION B-B

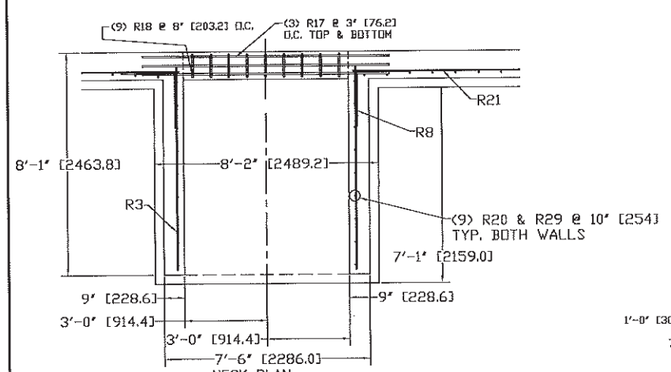


SECTION B-B

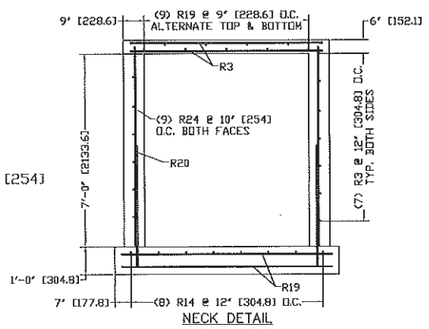




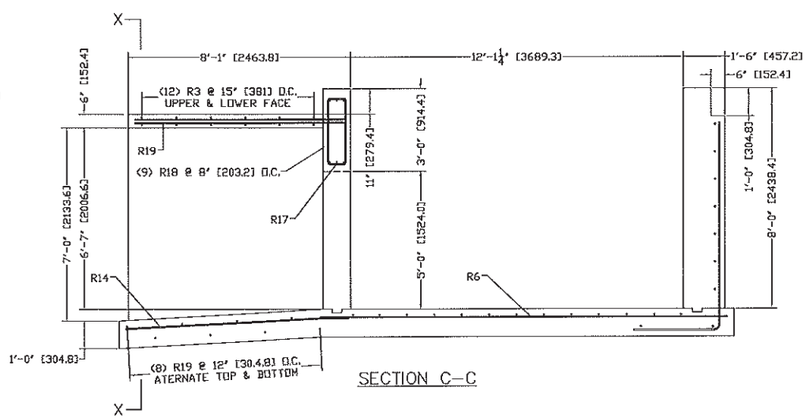
SUMP PUMP REINFORCING



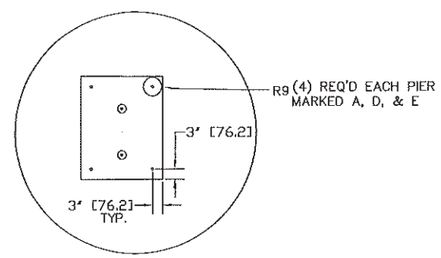
NECK PLAN



NECK DETAIL
SECTION X-X



SECTION C-C



PIER REINFORCING
SEE SCHEDULE FOR LENGTH

REINFORCING BAR SCHEDULE

SYM.	QTY.	SIZE	LENGTH	BENDING	WEIGHT
R1	190	#6	6'-0" [914.4]	3'-0" [914.4] 3'-0" [914.4]	1712 [776.7 KG]
R2	32	#6	5'-0" [1524]	3'-0" [914.4] 2'-0" [609.6]	240 [109 KG]
R3	104	#4	7'-0" [2133.6]	7'-0" [2133.6]	486 [220.6 KG]
R4	61	#6	14'-8" [4470.4]	14'-8" [4470.4]	1343.8 [609.5 KG]
R5	75	#4	20'-0" [6096]	20'-0" [6096]	1002 [454 KG]
R6	84	#4	14'-8" [4470.4]	14'-8" [4470.4]	823 [373.3 KG]
R7	190	#4	7'-9" [2362.2]	7'-9" [2362.2]	1535.8 [696.6]
R8	48	#4	4'-0" [1219]	2'-0" [609.6] 2'-0" [609.6]	122.9 [55.8 KG]
R9	40	#4	5'-6" [1676.4]	5'-6" [1676.4]	147 [66.7 KG]
R10	5	#4	16'-7" [5054.6]	16'-7" [5054.6]	55.4 [25.1 KG]
R11	32	#4	6'-6" [1981.2]	6'-6" [1981.2]	141.1 [64 KG]
R12	63	#4	10'-0" [3048]	10'-0" [3048]	420.8 [190.9 KG]
R13	64	#4	6'-0" [1828.8]	6'-0" [1828.8]	256.5 [116.4 KG]
R14	8	#5	8'-9" [2667]	8'-9" [2667]	73 [33.1 KG]
R15	24	#4	4'-0" [1219.2]	4'-0" [1219.2]	64.1 [29.1 KG]
R16	17	#4	11'-0" [3352.8]	11'-0" [3352.8]	124.9 [56.7 KG]
R17	6	#4	9'-0" [2743.2]	9'-0" [2743.2]	36.1 [16.4 KG]
R18	9	#4	6'-4" [1930.4]	6" [152.4] 32" [812.8] 32" [812.8] 6" [152.4]	38.1 [17.2 KG]
R19	9	#4	7'-7" [2311.4]	7'-7" [2311.4]	45.6 [20.6 KG]
R20	18	#5	3'-0" [914.4]	3'-0" [914.4]	56.3 [25.5 KG]
R21	8	#4	5'-5" [1651]	5'-5" [1651]	29 [13.2 KG]
R22	20	#4	14'-1" [4292.6]	14'-1" [4292.6]	131.7 [59.7 KG]
R23	20	#4	4'-6" [1371.6]	4'-6" [1371.6]	60.1 [27.3 KG]
R24	18	#4	6'-3" [1905]	6'-3" [1905]	75.2 [34.1 KG]
R25	10	#4	2'-9" [838.2]	2'-9" [838.2]	18.4 [8.3 KG]
R26	10	#4	2'-10" [863.6]	2'-10" [863.6]	19 [8.6 KG]
R28	39	#4	16'-0" [4876.8]	16'-0" [4876.8]	416.8 [189.1 KG]
				TOTAL	9,572.6 [4297.5 KG]

APPROACHES & SLEEPER SLABS					
AR1	46	#5	20'-3" 6172.2]	20'-3" 6172.2]	
AR2	58	#5	20'-10" [6350]	20'-10" [6350]	
AR3	42	#5	14'-1" [4292.6]	14'-1" [4292.6]	
AR4	80	#5	14'-1" [4292.6]	14'-1" [4292.6]	
SS1	10	#5	14'-1" [4292.6]	14'-1" [4292.6]	
SS2	46	#5	4'-6" [1371.6]	4'-6" [1371.6]	
				TOTAL	

SHEET 3 OF 3

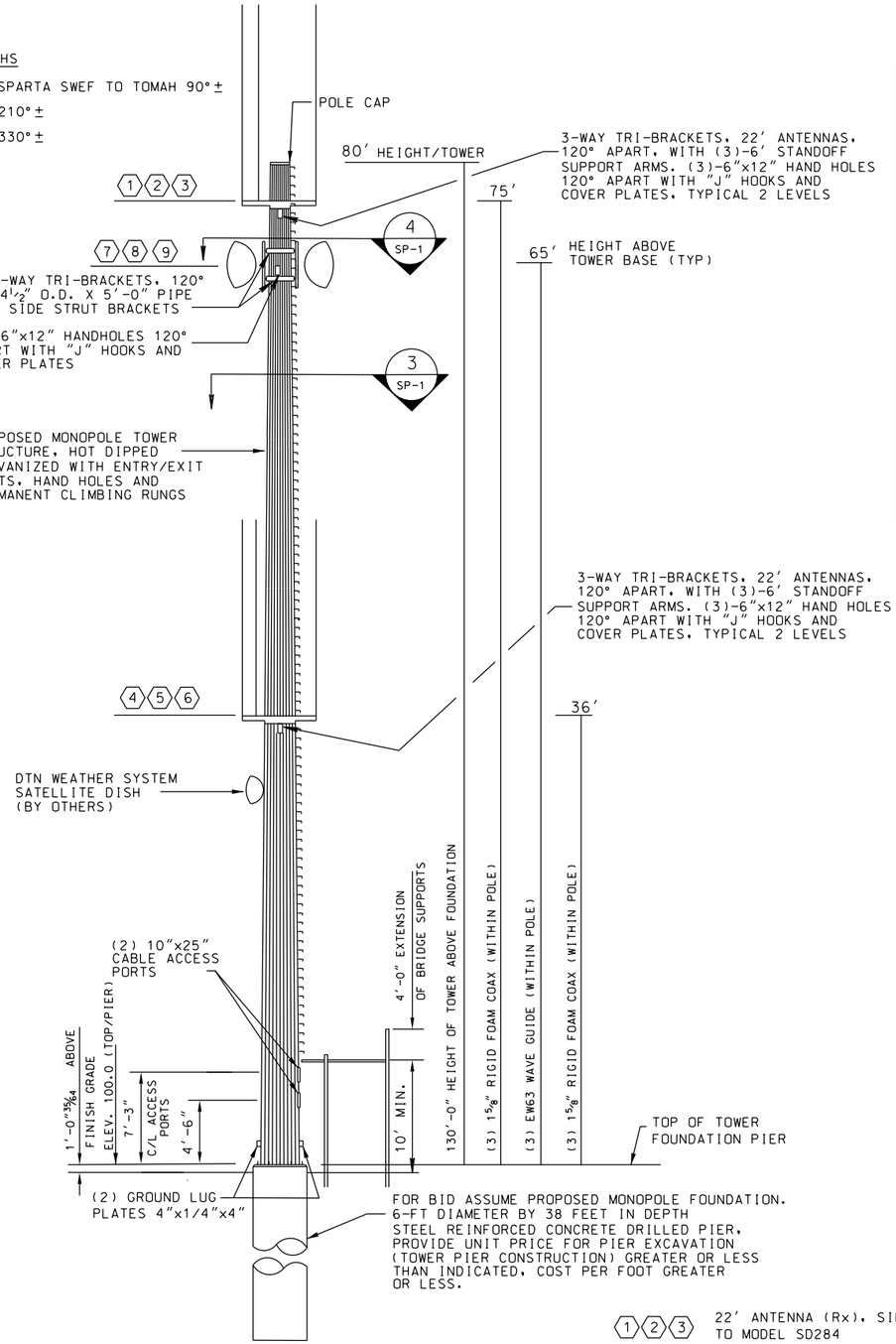
PROJECT NO:1070-00-72	HWY:IH 90	COUNTY:MONROE	SPARTA SWEF #54 (STATIC SCALE)	SHEET 101

DISH AZIMUTHS

⑦ FUTURE SPARTA SWEF TO TOMAH 90°±

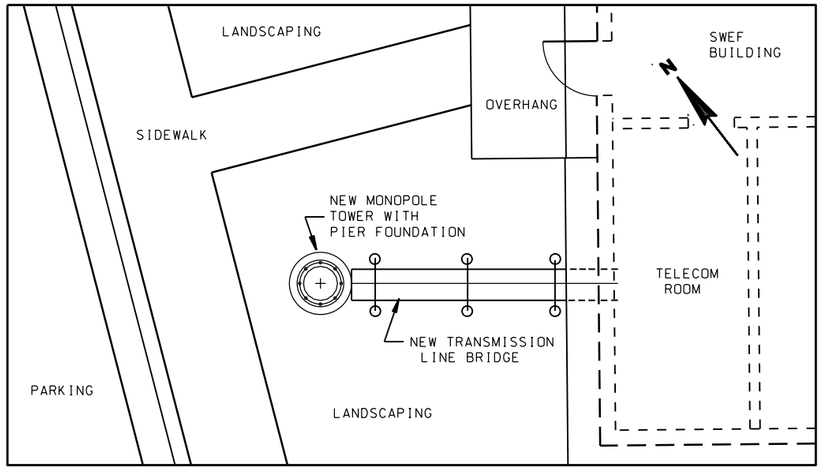
⑧ FUTURE 210°±

⑨ FUTURE 330°±



2 SP-1 MONOPOLE/TOWER DESIGN LOAD INFORMATION

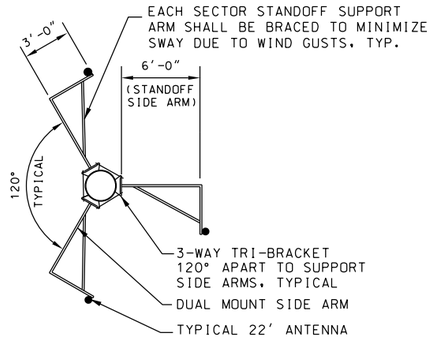
⓪ INDICATES ANTENNA AND TRANSMISSION LINE TO BE INSTALLED AS PART OF THIS CONTRACT



1 SP-1 MONOPOLE/TOWER SITE PLAN

SCALE 1/4" = 1'-0"

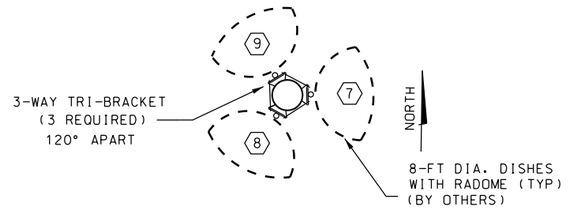
0 4' 8'



3 SP-1 LAYOUT-SIDE ARM ANTENNA SUPPORT (THREE LOCATIONS)

SCALE 1/4" = 1'-0"

0 6' 12'



4 SP-1 PLAN - DISH ANTENNA

SCALE 1/4" = 1'-0"

0 6' 12'

① ② ③ 22' ANTENNA (Rx), SIMILAR TO MODEL SD284

④ ⑤ ⑥ 22' ANTENNA (Tx), SIMILAR TO MODEL SD284

⑦ ⑧ ⑨ 3-WAY TRI-BRACKET FOR 8-FT DIA. DISHES WITH RADOME AND NO ICE DEFLECTOR (DISHES BY OTHERS)

NOTES FOR TOWER

1. PROVIDE AND INSTALL A 6-FT SIDE ARM (STANDOFF), SIX (6) REQUIRED. EACH SIDE ARM FOR SUPPORT OF ONE (1) PD-340 DIPOLE ANTENNA, 3-WAY TRI-BRACKET 120° APART TO SUPPORT SIDE ARMS, SEE DETAIL 3 ON THIS SHEET.
2. PROVIDE AND INSTALL A 4.5" O.D. x 5'-0" PIPE MOUNT FOR EACH DISH ANTENNA INDICATED (PROPOSED AND FUTURE), THREE (3) REQUIRED. PROVIDE THREE (3) 3-WAY TRI-BRACKETS 120° APART TO SUPPORT PIPE MOUNTS. INSTALL PIPE MOUNTS BOTH FOR DISH ANTENNA INSTALLED AS PART OF THIS CONTRACT AND FUTURE ANTENNAS INSTALLED OUTSIDE OF THIS CONTRACT.

SPARTA SWEF #54
Communications Tower
Monroe County

State of Wisconsin
Dept. of Transportation

Issued / Revised

ISSUED FOR BID

Drawing Title

TOWER LOAD INFORMATION AND SITE PLAN DETAILS

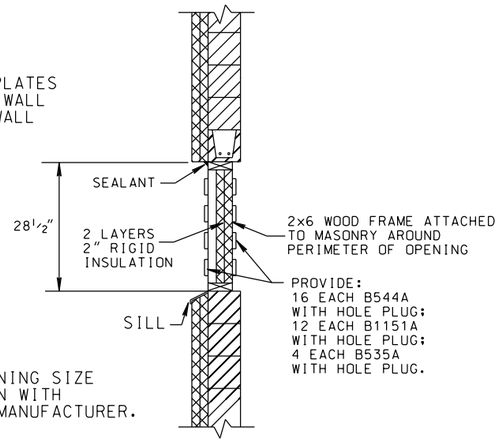
Plans prepared by WisDOT

Sheet No.

SP-1

LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

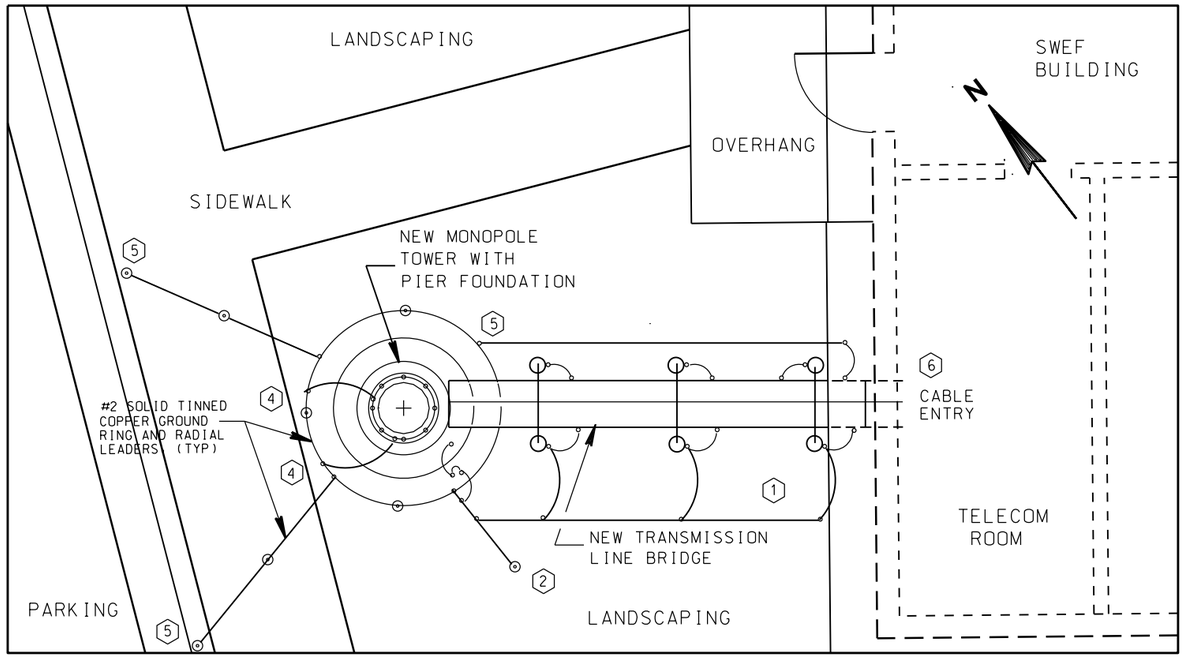
NOTE:
TWO MODEL B-1447 PORT PLATES REQUIRED, ONE EXTERIOR WALL FACE AND ONE INTERIOR WALL FACE, WITH 4" OF RIGID INSULATION BETWEEN.



CONFIRM OPENING SIZE AND LOCATION WITH MECHANICAL MANUFACTURER.

3 / E-1 WAVEGUIDE ENTRY DETAIL

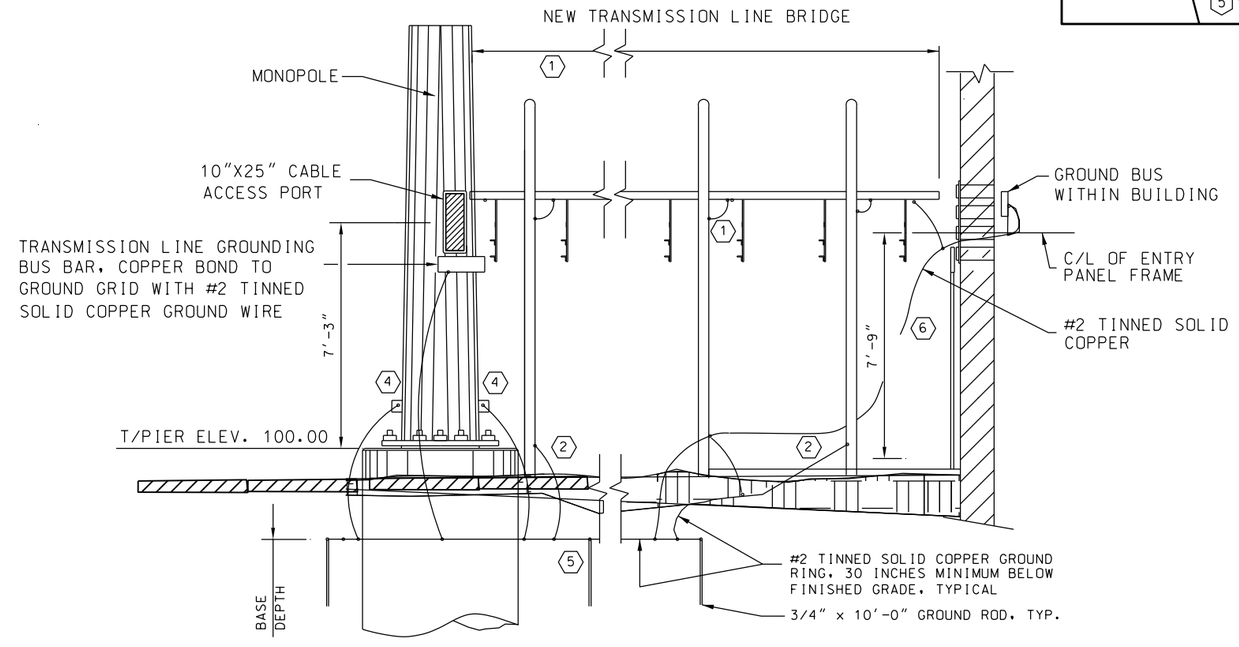
NOT TO SCALE



1 / E-1 SITE GROUNDING PLAN

SCALE 1/4" = 1'-0"

0 4' 8'



2 / E-1 TOWER AND CABLE BRIDGE SUPPORT GROUND DETAIL

SCALE 1/2" = 1'-0"

0 2' 4'

LEGEND

- GROUND ROD LOCATION
- GROUNDING BOND CONNECTION
- SWEF BUILDING WALL

ELECTRICAL NOTES:

1. OUTSIDE CABLE TRAY BY TOWER CONTRACTOR. ELECTRICAL CONTRACTOR TO BOND ALL JOINTS IN CABLE TRAY WITH #6 STRANDED COPPER GREEN INSULATED, EXOTHERMICALLY WELD CONNECTIONS TO CABLE TRAY ON BOTH SIDES OF JOINT AND TO SUPPORT POSTS. BOND TO EXTERIOR GROUND RING, REFER TO DETAIL 1/E-1. INCLUDE EXISTING CABLE TRAY JOINTS.
2. EXOTHERMICALLY BOND GROUND WIRE TO TRANSMISSION LINE BRIDGE POSTS AND EXISTING CABLE TRAY SUPPORTS POSTS APPROXIMATELY 12 INCHES ABOVE FINISHED GRADE.
3. MANUFACTURER'S NAMES AND CATALOG NUMBERS ARE USED FOR QUALITY AND PERFORMANCE ONLY.
   EQUIPMENT MANUFACTURED BY OTHERS WILL BE EQUALLY ACCEPTABLE PROVIDED THEY MEET OR EXCEED THE SPECIFICATIONS.
4. EXOTHERMICALLY BOND #2 SOLID TINNED COPPER GROUND WIRE TO TOWER GROUND PLATES AS SHOWN IN DETAIL 2/E-1.
5. ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL GROUND RODS, GROUND RING CONDUCTORS MAKE ALL BELOW AND ABOVE GROUND CONNECTIONS.
6. EXOTHERMICALLY BOND EXISTING GROUND BUS WITHIN BUILDING TO NEW GROUND GRID.

SPARTA SWEF #54
Communications Tower
Monroe County
State of Wisconsin
Dept. of Transportation

Issued / Revised
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Drawing Title
ELECTRICAL PLAN & DETAILS

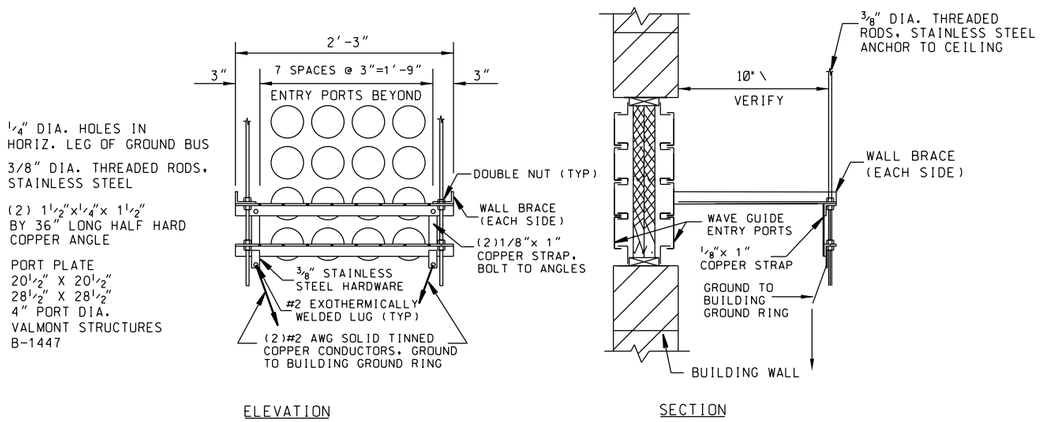
Plans prepared by WisDOT

Sheet No.
E-1

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	COMMUNICATIONS TOWER DETAILS	SCALE:	SHEET	E

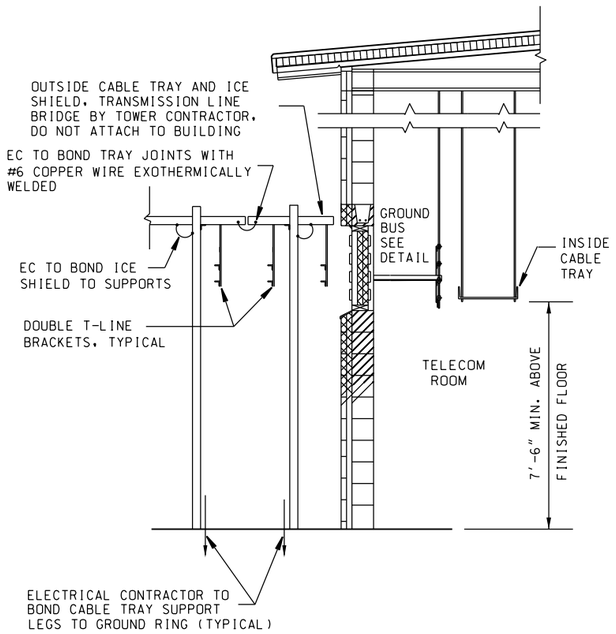
FILE NAME :W:\03 PavtRoad\Projects-SWEF\Sparta-54\Comm Tower\CommTower54.dgn PLOT DATE : 29-JAN-2016 10:48 PLOT BY : dotres PLOT NAME : CommTower54b.dgn PLOT SCALE : 116.823529:1.000000
WISDOT/CADDS SHEET 42

LEVELS ON • 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63



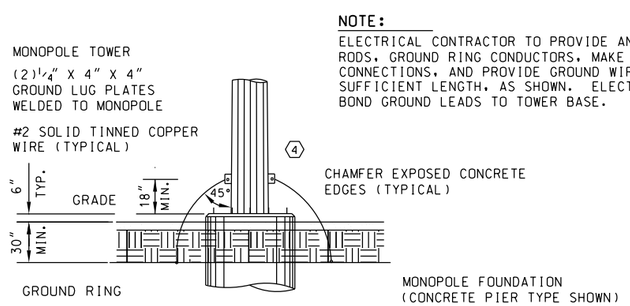
1 E-2 MICROWAVE CABLE ENTRANCE GROUND BUS DETAIL

NOT TO SCALE



2 E-2 CABLE ENTRANCE GROUND DETAIL

0' 2' 5'



NOTE:

ELECTRICAL CONTRACTOR TO PROVIDE AND INSTALL GROUND RODS, GROUND RING CONDUCTORS, MAKE ALL UNDERGROUND CONNECTIONS, AND PROVIDE GROUND WIRE TO ABOVE GRADE, OF SUFFICIENT LENGTH, AS SHOWN. ELECTRICAL CONTRACTOR TO BOND GROUND LEADS TO TOWER BASE.

3 E-2 MONOPOLE TOWER GROUND DETAIL

NOT TO SCALE

SPARTA SWEF #54
Communications Tower
Monroe County

State of Wisconsin
Dept. of Transportation

Issued / Revised

ISSUED FOR BID

Drawing Title

ELECTRICAL DETAILS

Plans prepared by WisDOT

Sheet No. E-2

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	COMMUNICATIONS TOWER DETAILS	SCALE:	SHEET	E

FILE NAME :W:\03 PavtRoad\Projects-SWEF\Sparta-54\Comm Tower\CommTower54.dgn PLOT DATE : 29-JAN-2016 10:52 PLOT BY : dotres PLOT NAME : CommTower54c.dgnPLOT SCALE : 116.823529:1.000000

WISDOT/CADDS SHEET 42

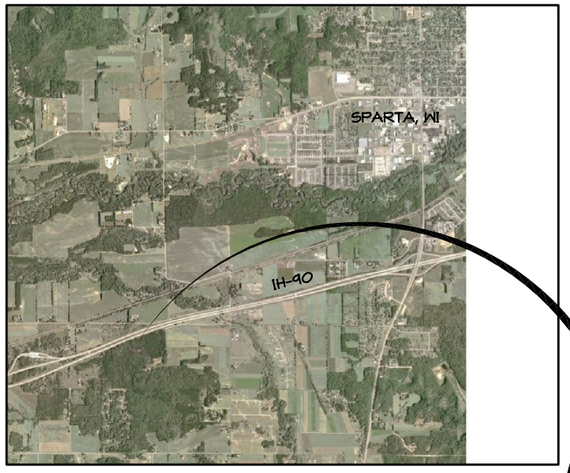
LEVELS ON - 1,2,3,4,5,6,7,8,9,10,11,12,13,14,15,16,17,18,19,20,21,22,23,24,25,26,27,28,29,30,31,32,33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,50,51,52,53,54,55,56,57,58,59,60,61,62,63

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

PLAN OF PROPOSED IMPROVEMENT

SPARTA SAFETY & WEIGHT FACILITY
NO. 54
IH-90
MONROE COUNTY

STATE PROJECT NUMBER
1070–00–72

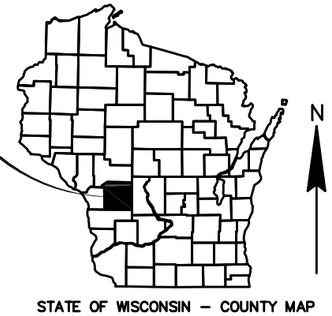


1 LOCATION MAP
N.T.S.

North

PROJECT LOCATION

SAFETY & WEIGHT FACILITY NO. 54
EAST BOUND OF IH-90
NEAR SPARTA, WI



STATE OF WISCONSIN – COUNTY MAP

Typical Abbreviations List

A.D.	AREA DRAIN	MBD	MARKER BOARD
A.F.F.	ABOVE FINISHED FLOOR	MAS.	MASONRY
A.T.	ACOUSTICAL TILE	M.O.	MASONRY OPENING
ADJ.	ADJUSTABLE	MAX.	MAXIMUM
ALT.	ALTERNATE	MECH.	MECHANICAL
ALUM.	ALUMINUM	MTL.	METAL
@	AT	MIN.	MINIMUM
BRG.	BEARING	N.I.C.	NOT IN CONTRACT
BIT.	BITUMINOUS	N.T.S.	NOT TO SCALE
BLK'G.	BLOCKING		
BR.	BRICK	O.C.	ON CENTER
BLDG.	BUILDING	O.D.	OUTSIDE DIAMETER
		OH.	OVERHEAD
CAB.	CABINET		
CPT.	CARPET	P.	PAINT
CLG.	CEILING	PLAS.	PLASTER
CT.	CERAMIC TILE	P. LAM.	PLASTIC LAMINATE
COL.	COLUMN	PL.	PLATE
CONC.	CONCRETE	PLBG.	PLUMBING
C.B.	CONCRETE BLOCK	PLYWD.	PLYWOOD
CMU	CONCRETE MASONRY UNIT	PCT.	PORCELAIN CERAMIC TILE
CONT.	CONTINUOUS	P/C	PRECAST
CONTR.	CONTRACTOR	P/C TERR.	PRECAST TERRAZZO
C.J.	CONTROL JOINT	PREFAB.	PREFABRICATED
COORD.	COORDINATE	PREFIN.	PREFINISHED
		P.T.	PRESSURE TREATED
DIA.	DIAMETER	Q.T.	QUARRY TILE
DRS.	DOORS	REINF.	REINFORCING OR REINFORCEMENT
D.S.	DOWN SPOUT		
E.W.C.	ELECTRIC WATER CHILLIER	REQ'D.	REQUIRED
ELECT.	ELECTRICAL	R.	RISERS
EL.	ELEVATION	R.D.	ROOF DRAIN
ELEV.	ELEVATOR	RFG.	ROOFING
E.P.	EPOXY PAINT	R.F.S	ROOM FINISH SCHEDULE
EQUIP.	EQUIPMENT	RM.	ROOM
EXIST.	EXISTING		
E.P.S.	EXPANDED POLYSTYRENE	SCHED.	SCHEDULE
EXP.	EXPOSED	S.	SEALED
EXT.	EXTERIOR	S.D.	SHOWER DRAIN
E.I.F.S.	EXTERIOR INSULATION FINISH SYSTEM	SIM.	SIMILAR
		S.C.	SOLID CORE
F.V.	FIELD VERIFY	S.SURF.	SOLID SURFACE
FIN.	FINISH	SPEC.	SPECIFICATION
F.E.	FIRE EXTINGUISHER	SPORT SURF.	SPORT SURFACES
FL.	FLOOR	ST.	STAIN
F.D.	FLOOR DRAIN	S.S.	STAINLESS STEEL
FTG.	FOOTING	STRUCT.	STRUCTURE OR STRUCTURAL
FDN.	FOUNDATION		
GEN.	GENERAL	T.BD.	TACKBOARD
G.C.	GENERAL CONTRACTOR	T.S.	TACK SURFACE
GL.	GLASS OR GLAZING	TEMP.	TEMPERED
GL.CMU.	GLAZED CMU	TERR.T.	TERRAZZO TILE
G.F.CMU.	GROUND FACE CMU	T&G	TONGUE & GROOVE
GYP. BD.	GYPSUM BOARD	T/	TOP OF
		T.P.	TOILET PARTITION
H&V	HEATING & VENTILATION	TR.	TREADS
H.C.	HOLLOW CORE	TYP.	TYPICAL
H.M.	HOLLOW METAL		
H.D.	HUB DRAIN	UNFIN.	UNFINISHED
H.O.	HOLD OPEN ARM		
HORIZ.	HORIZONTAL	V.B.	VAPOR BARRIER
HR.	HOURS	VERT.	VERTICALLY
HYD.	HYDRANT	V.C.T.	VINYL COMPOSITION TILE
		V.W.C.	VINYL WALL COVERING
INSUL.	INSULATION	VB	VINYL BASE
INT.	INTERIOR		
		W.W.F.	WELDED WIRE FABRIC
JT.	JOINT	WDW.	WINDOW
JST.	JOIST	W/	WITH
		WD.	WOOD

Material Symbols

- Earth
- Concrete
- Concrete Block
- Face Brick
- Stone
- Structural Steel
- Batt Insulation
- Dimensioned Lumber
- Rigid Insulation
- Finish Wood
- Plywood
- Ceramic Tile
- Gyp. Board
- Plaster or Stucco

Graphic Symbols

- TOILET RM / 101 — Room Name, Room Number
- 2 / A6 — Section Number, Sheet Number
- 2 / A6 — Elevation Number, Sheet Number
- 2 / A6 — Detail Number, Sheet Number
- 101 — Door Number
- 1 — Key Note
- TOP OF WALL ELEV= 100'-0" — Vertical Working Point Elevation
- PLAN NORTH — Plan North
- A — Wall Type
- SF-1 — Storefront Aluminum Type
- BL-1 — Borrowed Lite Indicator
- X — Revision Indicator
- X — Column Reference Grid

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La Crosse, WI 54601
Phone: (608) 787-9106

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			TITLE SHEET	DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: G000

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G202 - DUMPSTER ENCLOSURE SECTIONS & DETAILS
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(ARCHITECTURAL)

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S002 - GENERAL NOTES
S003 - GENERAL NOTES
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S501 - FOUNDATION SECTIONS & DETAILS
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S505 - FOUNDATION SECTIONS & DETAILS
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S508 - FOUNDATION SECTIONS & DETAILS
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S510 - FOUNDATION SECTIONS & DETAILS
S511 - FOUNDATION SECTIONS & DETAILS
S512 - FOUNDATION SECTIONS & DETAILS
S513 - FOUNDATION SECTIONS & DETAILS
S514 - FOUNDATION SECTIONS & DETAILS
S515 - FOUNDATION SECTIONS & DETAILS
S516 - EXTERIOR & INTERIOR WALL SECTIONS & DETAILS

(STRUCTURAL)

S517 - EXTERIOR & INTERIOR WALL SECTIONS & DETAILS
S518 - EXTERIOR & INTERIOR WALL SECTIONS & DETAILS
S519 - EXTERIOR & INTERIOR WALL SECTIONS & DETAILS
S520 - EXTERIOR & INTERIOR WALL SECTIONS & DETAILS
S521 - ROOF SECTIONS & DETAILS
S522 - ROOF SECTIONS & DETAILS
S523 - ROOF SECTIONS & DETAILS
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S528 - ROOF SECTIONS & DETAILS
S529 - ROOF SECTIONS & DETAILS
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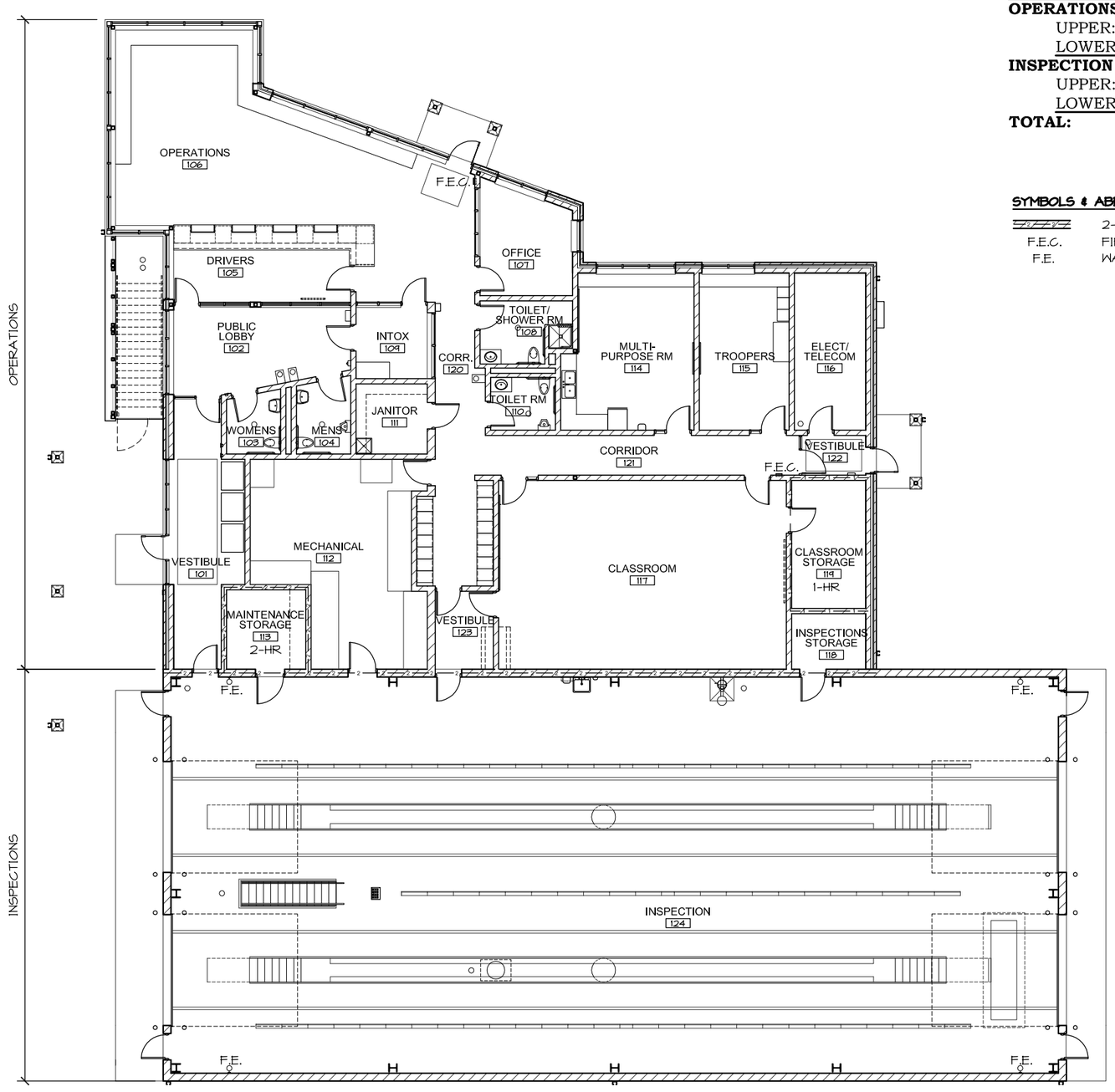
E503 - ELECTRICAL SCHEDULES
E504 - ELECTRICAL SCHEDULES

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			SHEET INDEX		DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: G001	



BUILDING AREA TABULATION:

OPERATIONS	
UPPER:	5,664 SQ.FT.
LOWER:	160 SQ.FT.
INSPECTION	
UPPER:	5,928 SQ.FT.
LOWER:	94 SQ.FT.
TOTAL:	11,846 SQ.FT.

SYMBOLS & ABBREVIATIONS

	2-HR RATED WALL
F.E.C.	FIRE EXTINGUISHER CABINET
F.E.	WALL MOUNTED FIRE EXTINGUISHER

BUILDING CODE INFORMATION

Building Occupancy:
Classification: Operations-Business, Group B
Inspections-Storage, Group S-1
Building Areas: Operations= 5,664 sq. ft. (23,000 allowable)
Operations Lower Level = 160 sq. ft.
Inspections= 5,928 sq. ft. (17,500 allowable)
Inspections Lower Level = 94 sq. ft.
Total building area = 11,846 sq. ft.

Number of Stories: One
Type of Construction:
Operations: Type 2B, Non Combustible: Non-Sprinklered
Inspection: Type 2B, Non Combustible: Non-Sprinklered
Sprinkler Requirements: Per 903.2 Not required.
Per 903.2.8 Group S1- An automatic sprinkler system shall be provided for fire areas greater that 12,000 sq. ft. The Inspections Building will have a automatic sprinkler system due to potentially long fire department response time.
Fire Alarm: Per 907.2.2 Group B- Manual fire alarm boxes are not required in a Group B occupancy having an occupant load less than 500 persons
Area Modifications: N. A.
Building Separations: No separation is required per IBC 706.3.8
Fire Partitions:
One-hour separation at storage rooms greater than 100 s. f.
Rated Area
Occupant Load:

Per Table 1004.1.1	Space	
Business @ 100 sq. ft.	5,664 sq. ft./100 sq. ft. =	57 persons
Inspection @ 300 sq. ft.	5,928 sq. ft./300 sq. ft. =	20 persons
	Total occupant load=	**77 persons**

Exit Requirements:
Table 1019.1 Two exits required where more than 50 person occupant load and less than 500 persons (locate a min. of 1/3 diagonal distance)
Table 1016.1 Travel distance: 200 ft. Non-sprinklered
1014.3 Common path: Common path of travel shall not exceed 75 ft.
1017.3 Dead ends: Dead end corridors shall not exceed 20 ft.
1014.2.4 Isle Width: Min. width of isles shall not be less than 36"
77 Occupant x 0.20 = 15.4 inches required
ADA Accessibility:
The project will provide access to all areas of the facility. All spaces in the project will comply with ADA requirements.
Sanitary Fixtures:
Per Table 2902.1

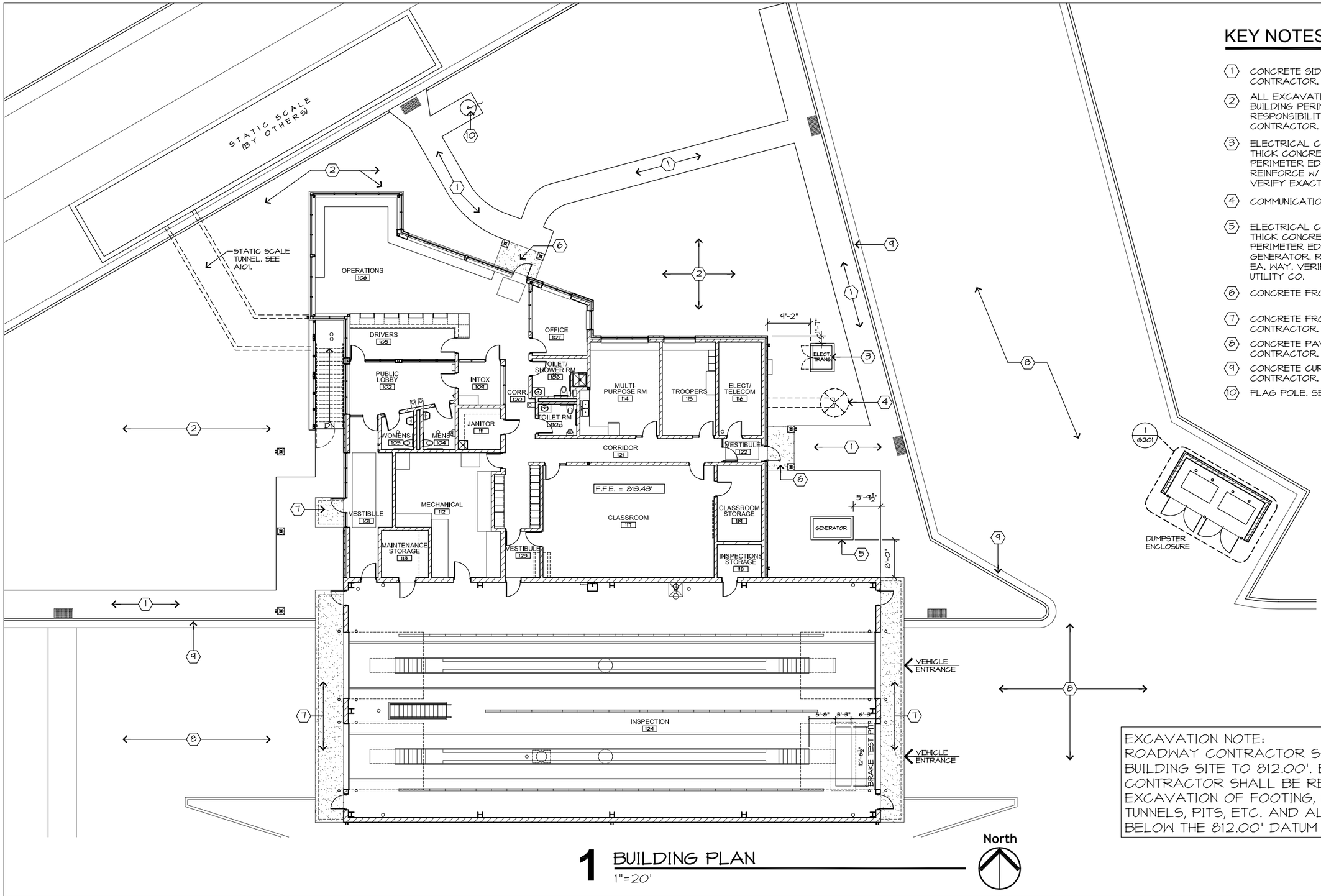
Area	U or WC (M)	WC(F)	Lav	Showers	D.F.	Other
Operations	1.14	1.14	1.43	---	.57	1 service sink
Inspection	.10	.10	.20	---	.04	
Required	1.24	1.24	1.63	---	.61	1 service sink
Provided	3	3	3	1	2	1 service sink

Fire Extinguishers: 906.1 per NFPA 10 - see floor plans for designated locations.

North

1 LIFE SAFETY PLAN
1/16"=1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			LIFE SAFETY PLAN	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 4 8 16 24	SHEET NO: G101



KEY NOTES

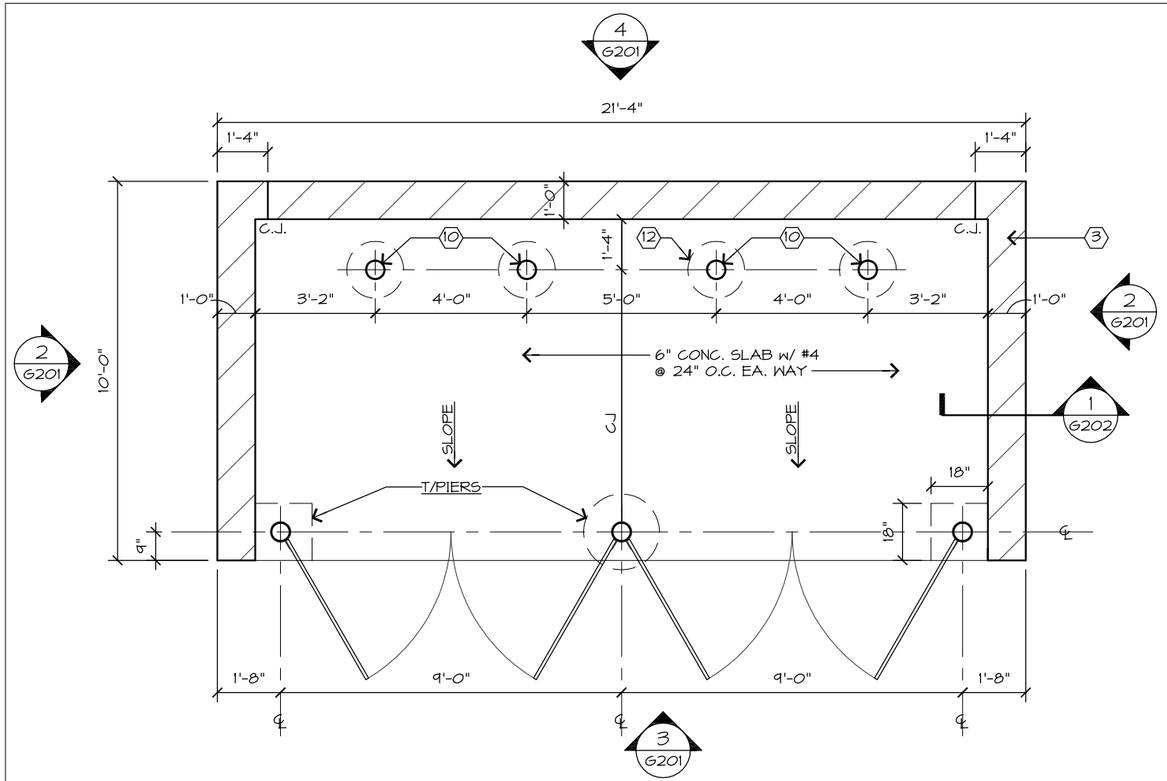
1. CONCRETE SIDEWALKS BY ROADWAY CONTRACTOR.
2. ALL EXCAVATION, AND GRADING, AROUND BUILDING PERIMETER SHALL BE THE RESPONSIBILITY OF THE ROADWAY CONTRACTOR.
3. ELECTRICAL CONTRACTOR TO PROVIDE 5" THICK CONCRETE PAD WITH 12" THICK PERIMETER EDGE FOR TRANSFORMER. REINFORCE W/ #4s @ 12" O.C. EA. WAY. VERIFY EXACT DIMENSIONS W/ UTILITY CO.
4. COMMUNICATIONS TOWER (BY OTHERS).
5. ELECTRICAL CONTRACTOR TO PROVIDE 5" THICK CONCRETE PAD WITH 12" THICK PERIMETER EDGE FOR EMERGENCY GENERATOR. REINFORCE W/ #4s @ 12" O.C. EA. WAY. VERIFY EXACT DIMENSIONS W/ UTILITY CO.
6. CONCRETE FROST STOOP. SEE DETAIL 2/S506.
7. CONCRETE FROST STOOP BY GENERAL BUILDING CONTRACTOR. SEE DETAIL 2/S507.
8. CONCRETE PAVING BY GENERAL BUILDING CONTRACTOR.
9. CONCRETE CURB & GUTTER BY ROADWAY CONTRACTOR.
10. FLAG POLE. SEE DETAIL 6/G202.

EXCAVATION NOTE:
ROADWAY CONTRACTOR SHALL EXCAVATE BUILDING SITE TO 812.00'. BUILDING CONTRACTOR SHALL BE RESPONSIBLE FOR EXCAVATION OF FOOTING, FOUNDATION, TUNNELS, PITS, ETC. AND ALL EXCAVATION BELOW THE 812.00' DATUM ELEVATION.

1 BUILDING PLAN

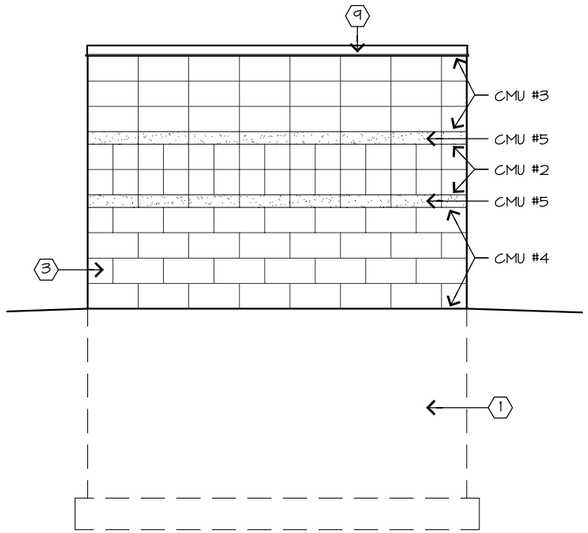
1"=20'

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			BUILDING PLAN	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 5 10 20 30	SHEET NO: G102



1 DUMPSTER ENCLOSURE PLAN

1/4"=1'-0"



2 DUMPSTER ENCLOSURE SIDE ELEV.

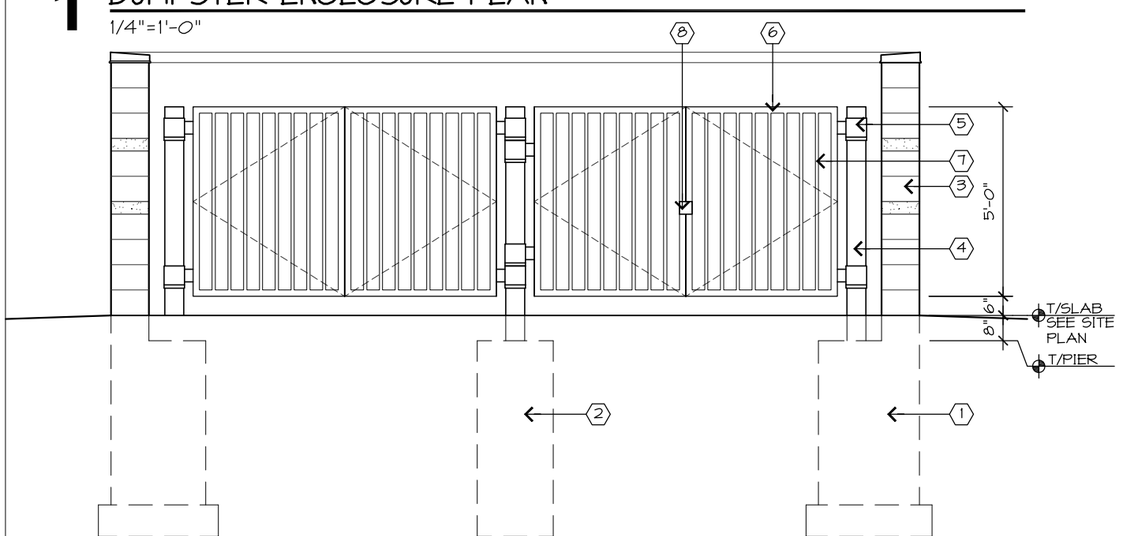
1/4"=1'-0"

DUMPSTER ENCLOSURE KEY NOTES

1. CAST-IN-PLACE CONCRETE FOOTING & FOUNDATION. SEE STRUCT. DETAIL S505.
2. 24" DIA. x 5'-0" DEEP CAST-IN-PLACE CONCRETE PIER.
3. CMU. SEE ELEVATIONS & SPEC. FOR TYPE.
4. GALV. STEEL GATE POST. PER SPEC SECTION 32 31 19.
5. GALV. GATE HINGES.
6. GALVANIZED 2"x2" TUBE STEEL GATE FRAME.
7. GALVANIZED 1"x1" TUBE STEEL BARS.
8. GATE LATCH.
9. PRE-FINISHED METAL WALL CAP.
10. GALVANIZED PIPE BOLLARD. SEE DETAIL 2/G202.
11. CMU CONTROL JOIN-CAULK
12. 18" DIA. CONCRETE PIER (TYP.) - SEE DETAIL 2/G202.

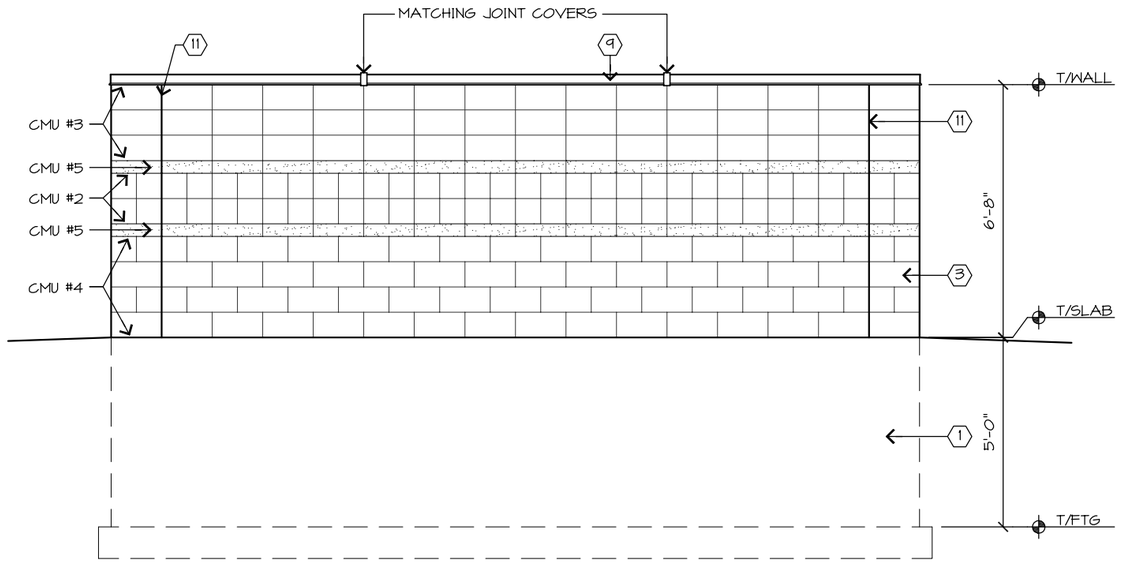
GENERAL NOTES

A. REFER TO SPEC SECTION 32 31 19 - DECORATIVE METAL GATES.



3 DUMPSTER ENCLOSURE FRONT ELEVATION

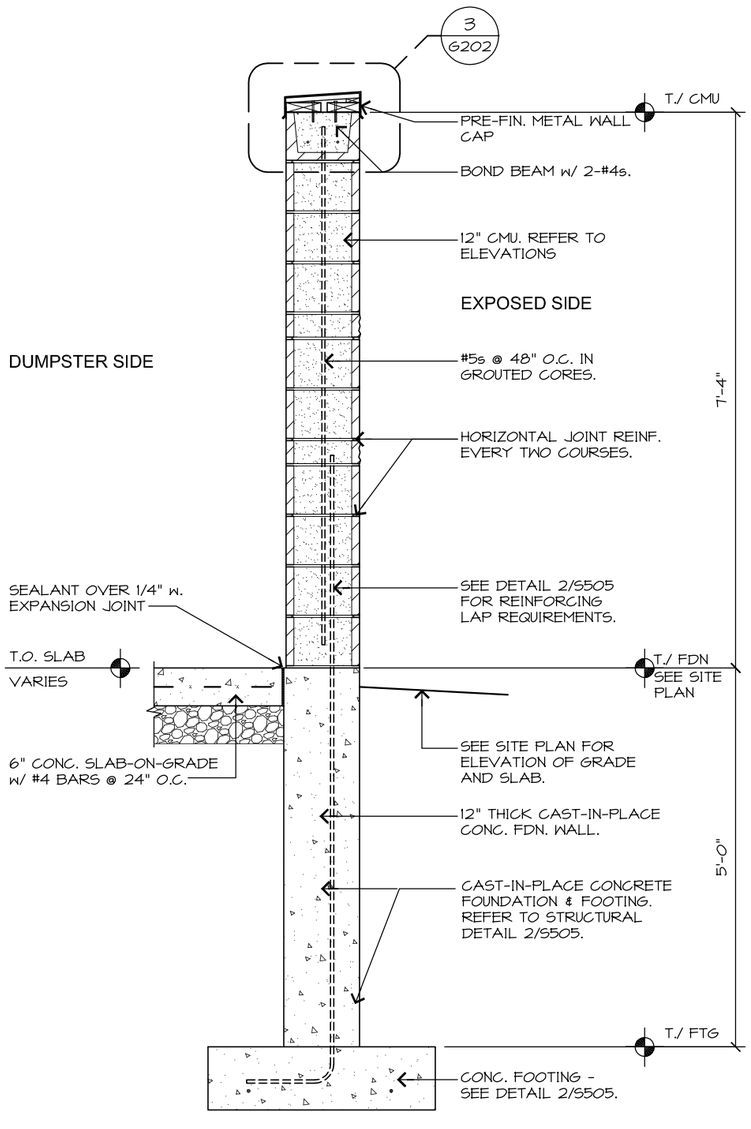
1/4"=1'-0"



4 DUMPSTER ENCLOSURE BACK ELEVATION

1/4"=1'-0"

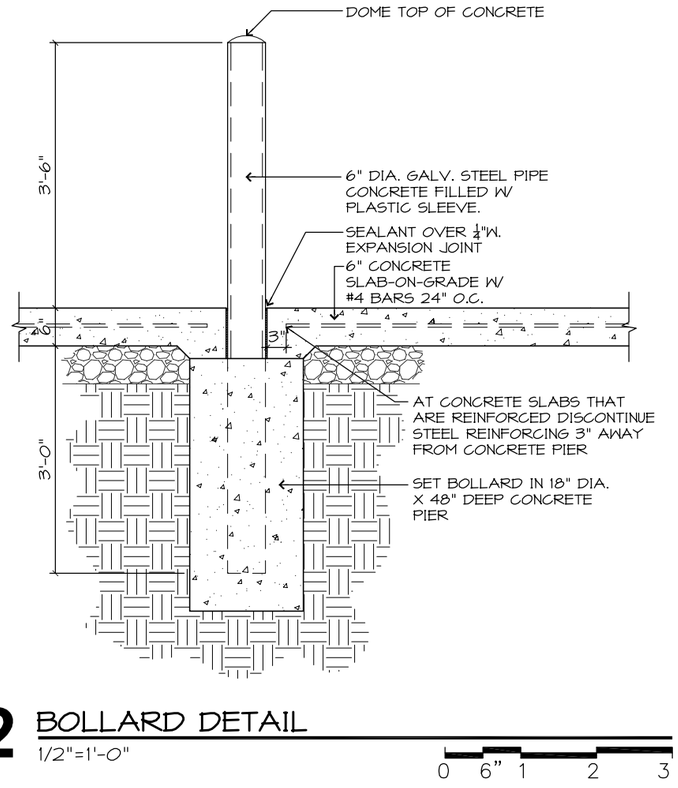
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DUMPSTER ENCLOSURE PLAN & ELEVATIONS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 1 2 4 6	SHEET NO: G201



1 DUMPSTER ENCLOSURE SECTION

1/2"=1'-0"

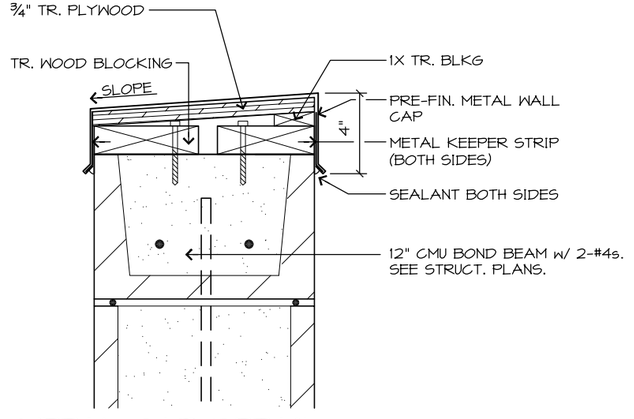
0 6" 1 2 3



2 BOLLARD DETAIL

1/2"=1'-0"

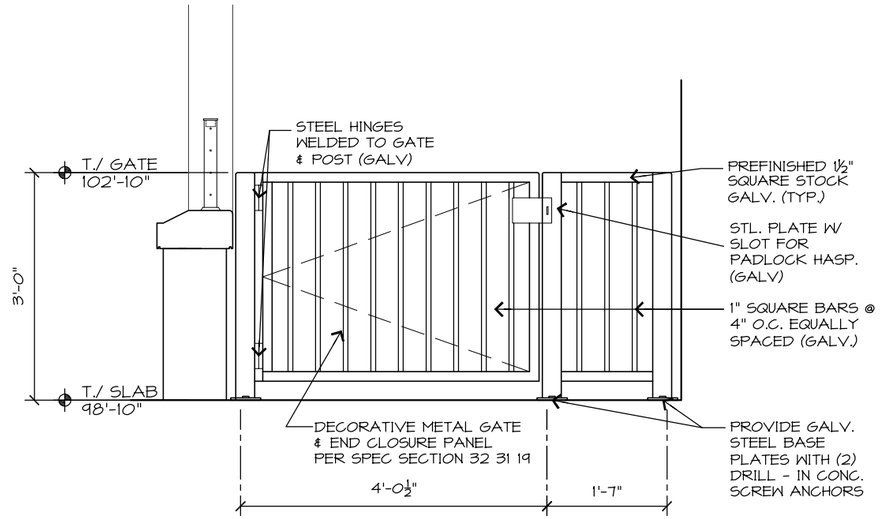
0 6" 1 2 3



3 METAL CAP DETAIL

1-1/2"=1'-0"

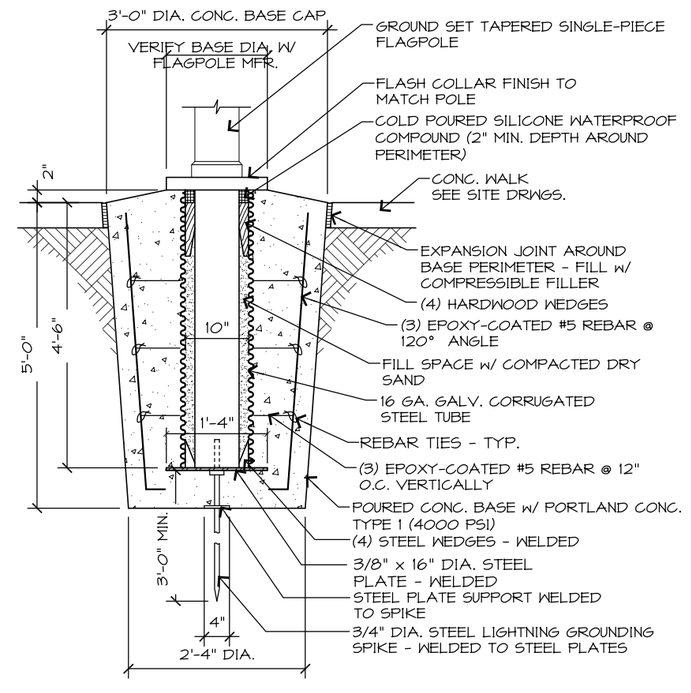
0 2" 4" 8" 12"



4 STATIC SCALE GATE DETAIL

1/2"=1'-0"

0 6" 1 2 3

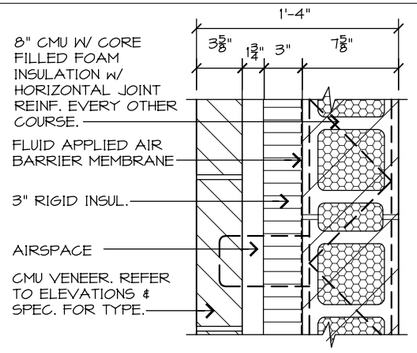


6 EXTERIOR FLAG POLE BASE DETAIL

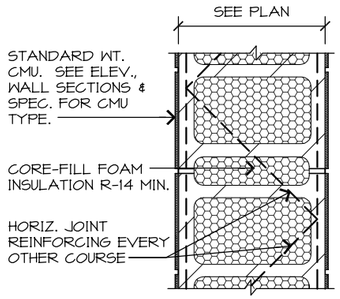
1/2"=1'-0"

0 6" 1 2 3

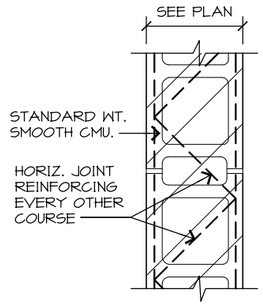
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DUMPSTER ENCLOSURE SECTION & DETAILS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: SEE PLAN	SHEET NO: G202



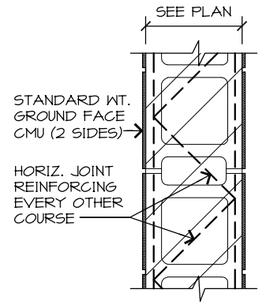
A WALL TYPE
EXTERIOR WALL @ OPERATIONS BLDG



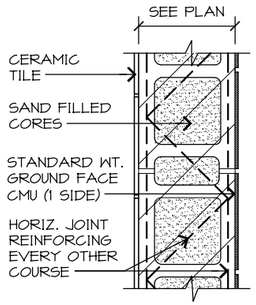
C WALL TYPE
EXTERIOR WALL @ INSPECTION BAY



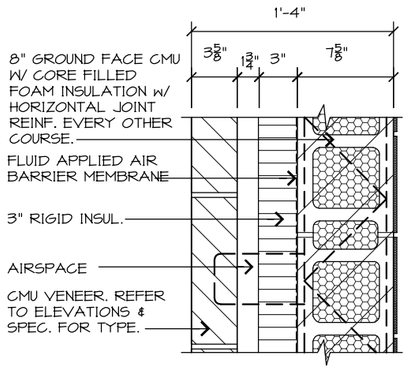
E WALL TYPE



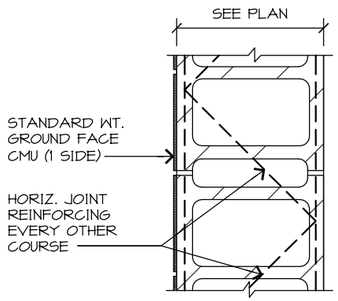
F1 WALL TYPE



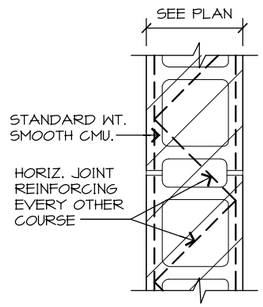
G2 WALL TYPE
INTERIOR WALL - 2HR. RATED
FIRE TEST REFERENCE UL U905



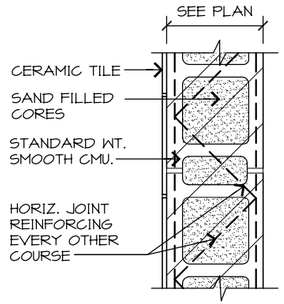
A1 WALL TYPE
EXTERIOR WALL @ OPERATIONS BLDG



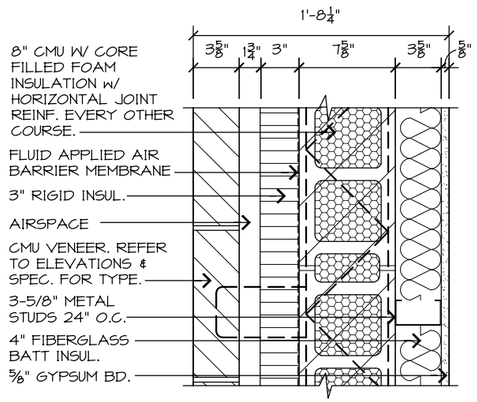
D WALL TYPE
INTERIOR WALL - 2HR. RATED
FIRE TEST REFERENCE UL U905



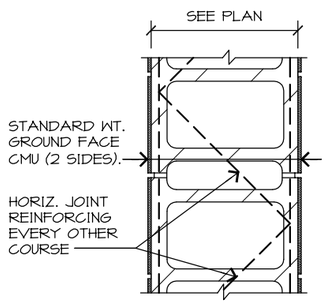
E1 WALL TYPE
INTERIOR WALL - 2HR. RATED
FIRE TEST REFERENCE UL U905



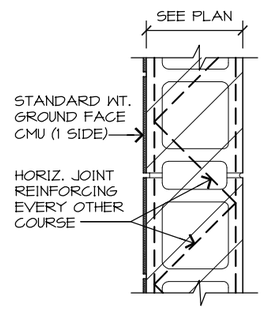
G WALL TYPE



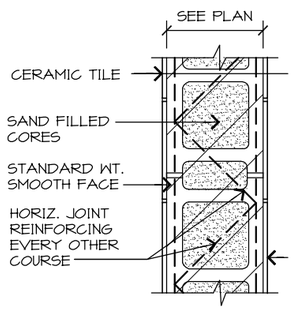
B WALL TYPE
EXTERIOR WALL @ OPERATIONS AREA BELOW COUNTER



D1 WALL TYPE
INTERIOR WALL - 2HR. RATED
FIRE TEST REFERENCE UL U905



F WALL TYPE

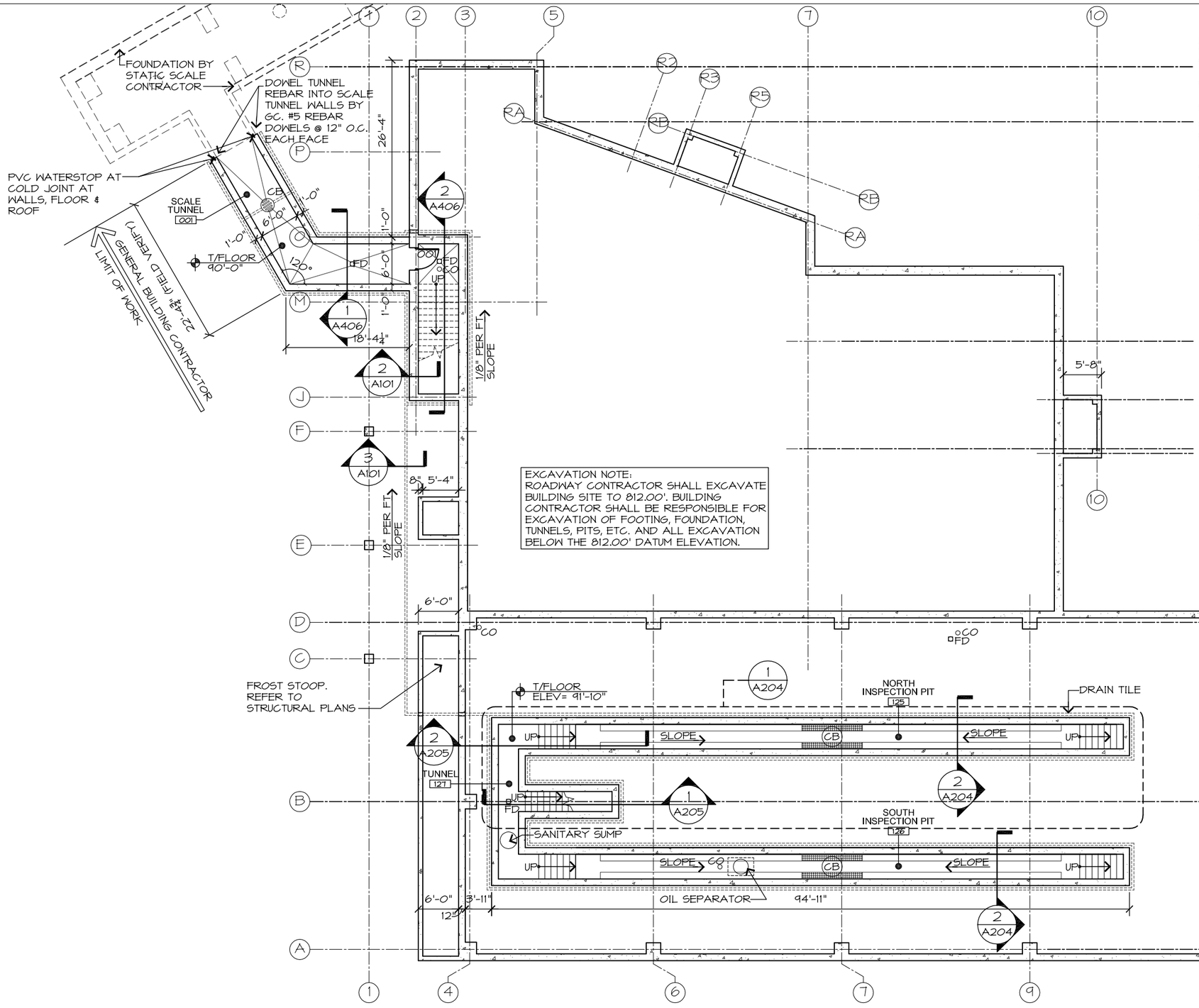


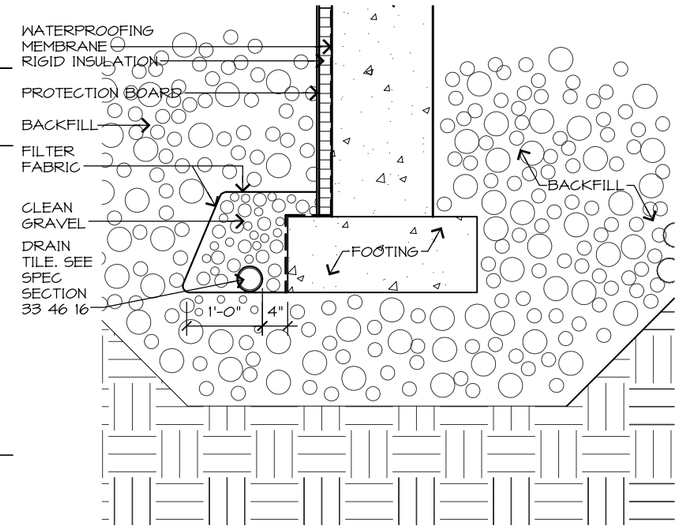
G1 WALL TYPE

* NOTE: SEE REFLECTED CEILING PLAN FOR WALLS THAT EXTEND TO ROOF DECK

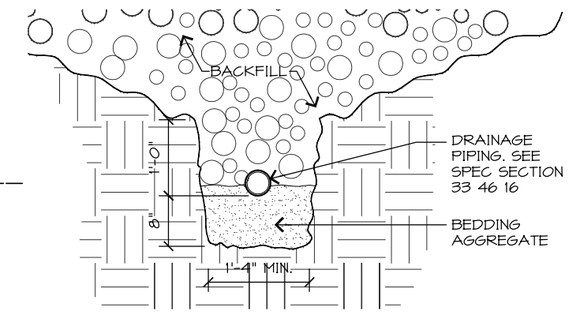
1 WALL TYPES
1"=1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			WALL TYPES	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 3" 6" 1 1.5	SHEET NO: A001





2 PERIMETER DRAIN TILE DETAIL
1/2"=1'-0"



3 PIPE TRENCH DETAIL
1/2"=1'-0"

1 INSPECTION PIT LEVEL FLOOR PLAN
1/16"=1'-0"

North

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			INSPECTION PIT LEVEL FLOOR PLAN		DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: A101	

KEY NOTES

1. PAINTED 4" WIDE TRAFFIC STRIPE. REFER TO SPECIFICATION.
2. PIPE BOLLARD. REFER TO 1/A801.
3. CONCRETE FROST STOOP APRON BY GENERAL BUILDING CONTRACTOR.
4. NOTE: NOT USED
5. INSPECTIONS PIT. REFER TO A101.
6. TRENCH DRAIN. REFER TO PLUMBING PLANS.
7. EMERGENCY EYEWASH / SHOWER.
8. METAL LOCKERS
9. MOTORIZED PROJECTION SCREEN.

OPERATIONS 106
DRIVERS 105
PUBLIC LOBBY 102
INTOX 104
WOMENS TOILET RM 103
MENS TOILET RM 104
JANITOR 111
CORR. 120
OFFICE 107
TOILET/ SHOWER RM 108
TOILET RM 110
MULTI-PURPOSE RM 114
TROOPERS 115
ELECT/ TELECOM 116
CORRIDOR 121
VESTIBULE 122
VESTIBULE 101
MECHANICAL 112
MAINTENANCE STORAGE 113 2 HR
VESTIBULE 123
CLASSROOM 117
CLASSROOM STORAGE 119 1 HR
INSPECTIONS STORAGE 118
INSPECTION 124

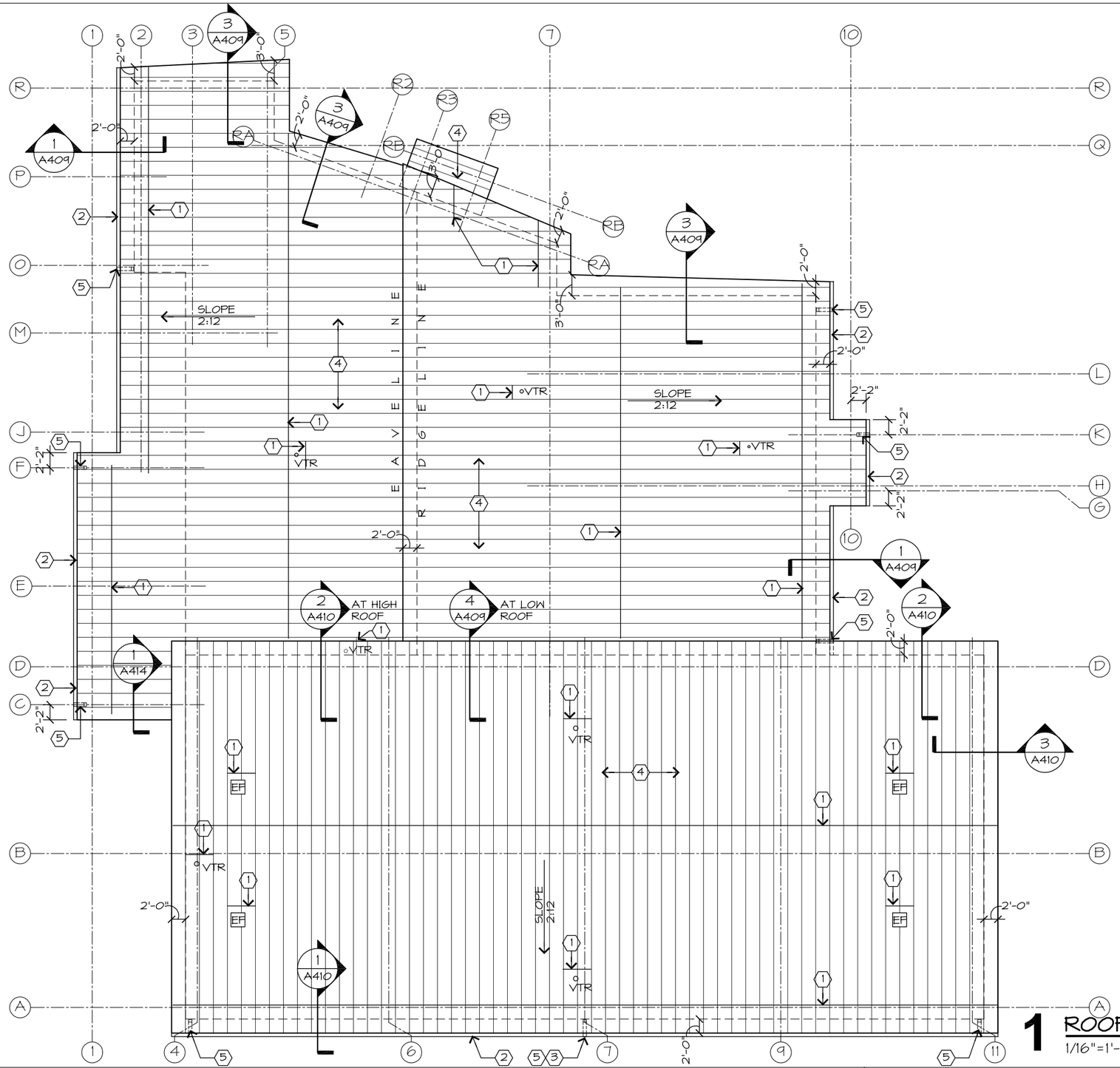
121'-4" | 24'-0" | 5'-0" | 7'-6" | 23'-4" | 24'-8" | 51'-4"
27'-4" | 12'-8" | 12'-8" | 9'-8" | 14'-2" | 5'-1" | 16'-11" | 11'-6" | 106'-8" | 5'-5" | 21'-3" | 22'-0" | 1'-8" | 134'-0"
11'-2" | 8'-8¼" | 7'-3¾" | 8¼" | 25'-1¾" | 26'-8" | 22'-0" | 1'-8" | 52'-0"

DS | F.E. | DN

1 MAIN LEVEL FLOOR PLAN
1/16"=1'-0"

North

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			MAIN LEVEL FLOOR PLAN	DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 4 8 16 24	SHEET NO: A102



1 ROOF PLAN
1/16"=1'-0"
0 4 8 16 24

North

KEY NOTES

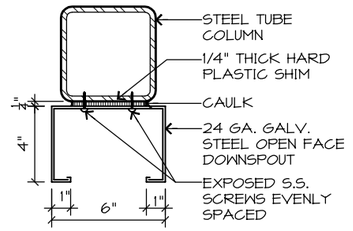
1. SNOW RETENTION BAR. SEE 4/A410.
2. PREFINISHED METAL GUTTER. SEE 2/A103.
3. GUTTER EXPANSION JOINT. REFER TO DETAIL 3/A411.
4. PREFINISHED STANDING SEAM METAL ROOFING.
5. PREFINISHED METAL DOWNSPOUT.

GENERAL NOTES

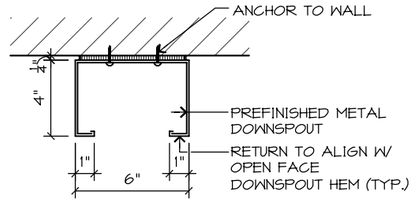
A. SEE PLUMBING & HVAC PLANS FOR SIZES, QUANTITIES & LOCATIONS OF ROOF PENETRATIONS, ROOFING CONTRACTOR TO VERIFY PENETRATIONS W/ ALL BUILDING TRADES.

B. SEE A411 FOR ROOF PENETRATION & CURB DETAILS.

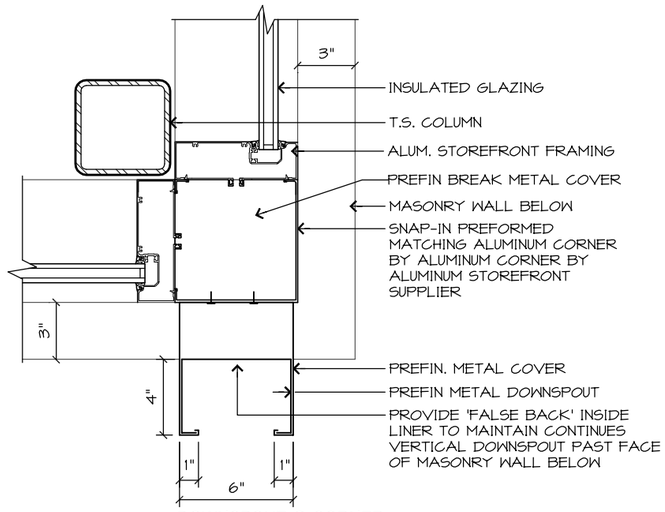
C. SEE THIS SHEET FOR DOWNSPOUT DETAILS.



DOWNSPOUT @ COLUMN



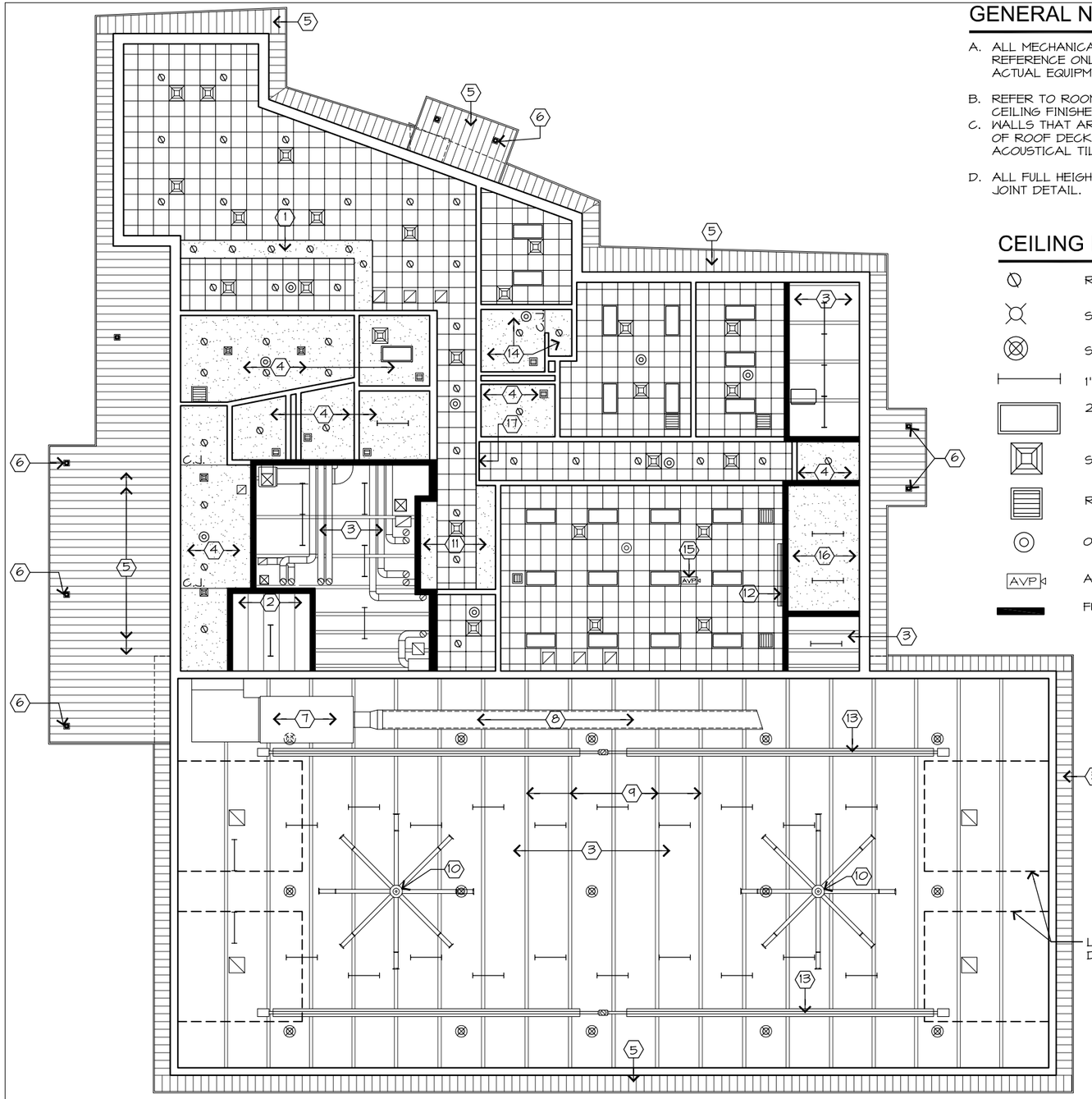
CLOSED-FACE DOWNSPOUT



DOWNSPOUT @ CORNER

2 DOWNSPOUT DETAILS
1 1/2"=1'-0"
0 2" 4" 8" 12"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			ROOF PLAN	DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: A103



1 REFLECTED CEILING PLAN
1/16"=1'-0"
0 4 8 16 24

North

GENERAL NOTES

A. ALL MECHANICAL & ELECTRICAL EQUIPMENT IS SHOWN FOR REFERENCE ONLY. SEE INDIVIDUAL DISCIPLINE DRAWINGS FOR ACTUAL EQUIPMENT AND PLACEMENT.

B. REFER TO ROOM FINISH SCHEDULE ON SHEET A901 FOR CEILING FINISHES & HEIGHTS.

C. WALLS THAT ARE NOT INDICATED TO BE RUN UP TO UNDERSIDE OF ROOF DECK SHALL STOP MINIMUM 16" ABOVE SUSPENDED ACOUSTICAL TILE CEILING.

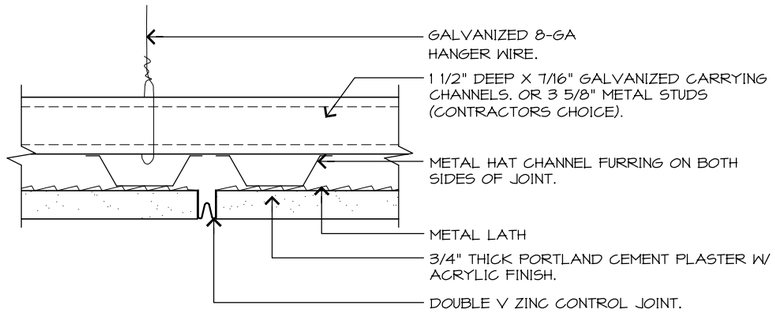
D. ALL FULL HEIGHT MASONRY WALLS; REFER TO 4/A804 - SLIP JOINT DETAIL.

CEILING PLAN SYMBOL LEGEND

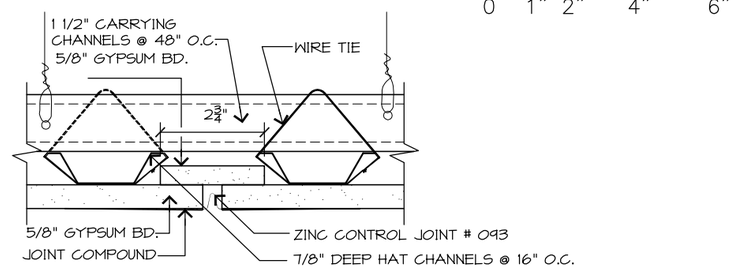
- RECESSED DOWN LIGHT
- SURFACE MOUNTED LIGHTING
- SUSPENDED LIGHT FIXTURE
- 1' x 4' SURFACE MOUNTED FLUORESCENT FIXTURE
- 2' x 4' RECESSED FLUORESCENT FIXTURE
- SUPPLY AIR DIFFUSER
- RETURN AIR GRILL
- OCCUPANCY SENSOR
- AVP — AUDIO/ VISUAL PROJECTOR
- FULL HEIGHT WALL TO DECK ABOVE

REFLECTED CEILING PLAN KEY NOTES

1. GYPSUM BOARD SOFFIT. SEE DETAIL 4/A804.
2. EXPOSED UNDERSIDE OF PRECAST CONCRETE PLANK - PAINT.
3. OPEN TO METAL ROOF DECK - PAINT.
4. SUSPENDED GYPSUM BOARD CEILING. JANITOR'S ROOM, VESTIBULE, & TOILET ROOMS SHALL BE MOISTURE RESISTANT GYPSUM BOARD. SEE DETAIL 1/A804.
5. PREFINISHED METAL SOFFIT PER SPEC SECTION 07 46 00.
6. PROVIDE MATCHING COLOR 24-GA. GALV. STEEL CHANNEL TRIM @ COLUMN PENETRATIONS.
7. MAKE-UP AIR UNIT SUSPENDED FROM ROOF STRUCTURE. SEE MECH. PLANS.
8. EXPOSED SHEET METAL DUCT - PAINT.
9. STEEL ROOF JOISTS TO BE PREPPED AND PAINTED.
10. DESTRATIFICATION FAN. SEE HVAC PLANS.
11. GYP. BD. BULKHEAD SOFFIT ABOVE LOCKERS - SEE DETAIL 1/A803.
12. MOTORIZED PROJECTION SCREEN, RECESSED INTO CEILING TILE.
13. INFRARED HEATER. REFER TO MECHANICAL PLANS.
14. SUSPENDED PORTLAND CEMENT CEILING IN TOILET/ SHOWER RM. 108.
15. SUSPENDED PROJECTED MOUNTED. SEE DETAIL 6/A801.
16. 1 HR RATED SUSPENDED GYP. BD. CEILING (UL NO.P510). SEE 3/A414.
17. METAL STUD & GYP. BD. BULKHEAD SOFFIT. SEE DETAIL 3/A804.

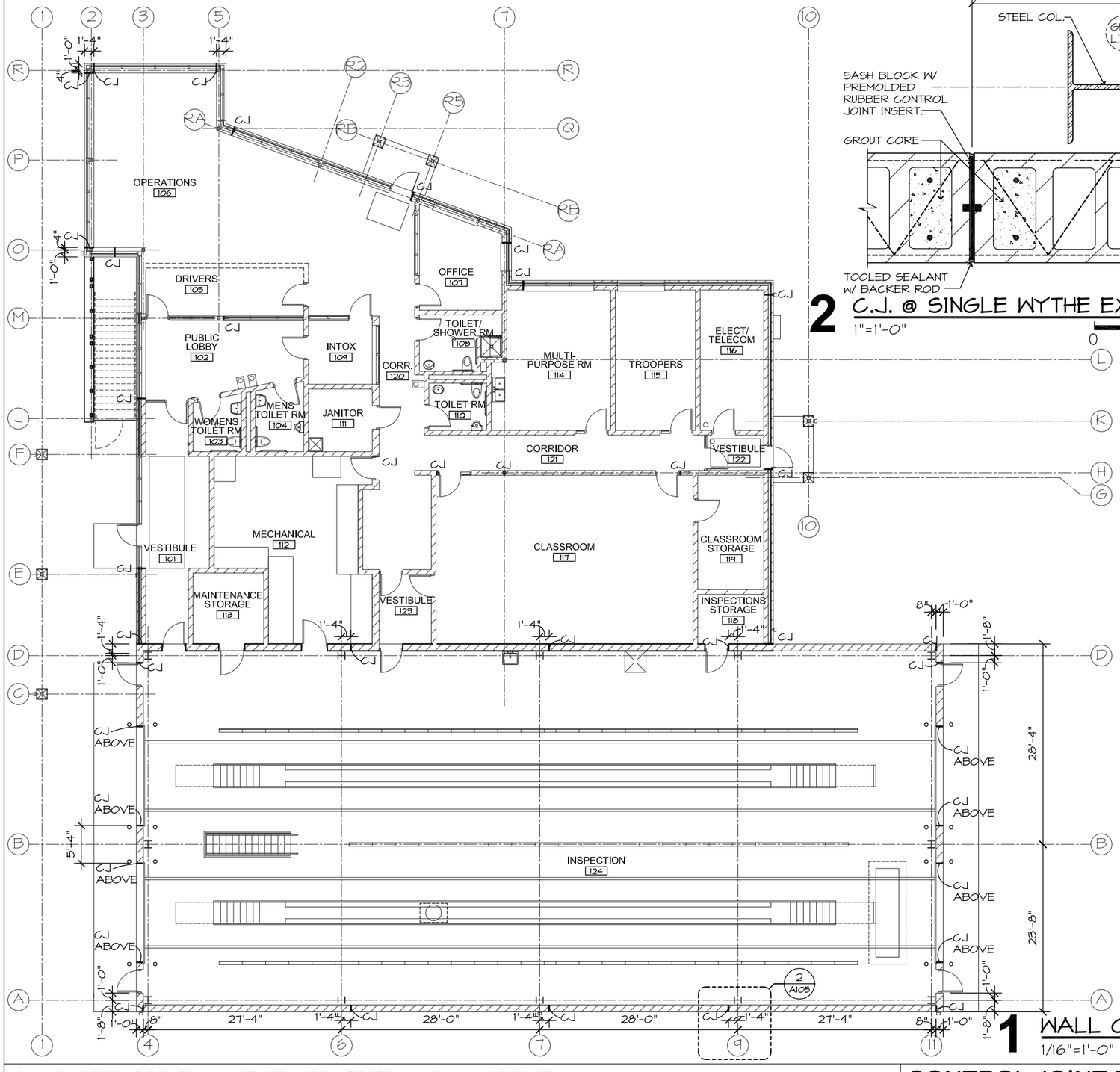


2 CONTROL JOINT DETAIL AT PLASTER CEILING
3"=1'-0"
0 1" 2" 4" 6"

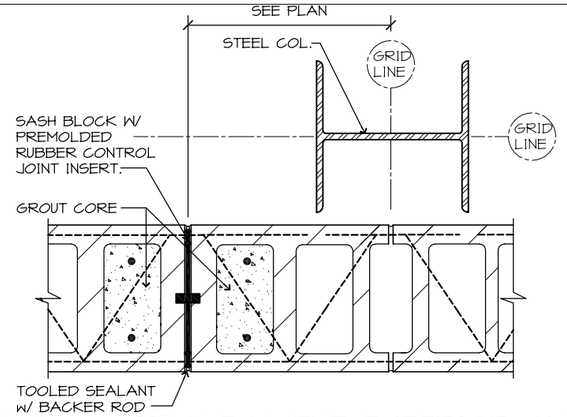


3 CONTROL JT. @ SUSPENDED GYP. BD. CEILING
3"=1'-0"
0 1" 2" 4" 6"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			REFLECTED CEILING PLAN	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: A104



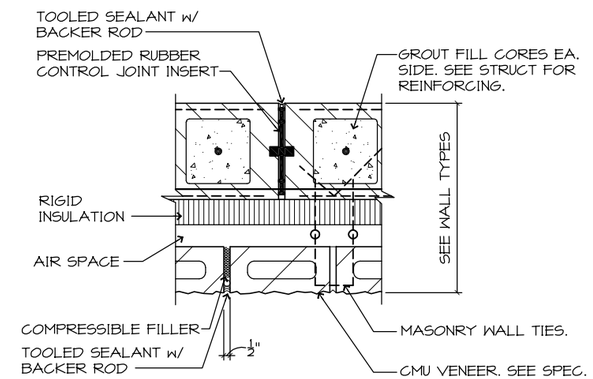
1 WALL CONTROL JOINT PLAN
1/16"=1'-0"



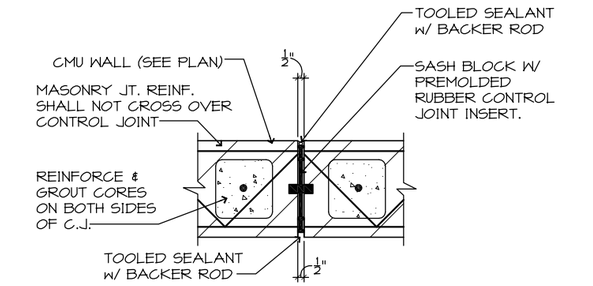
2 C.J. @ SINGLE WYTHE EXTERIOR CMU
1"=1'-0"

GENERAL NOTES

- SEE STRUCTURAL PLANS FOR REINFORCING AT CONTROL JOINTS.

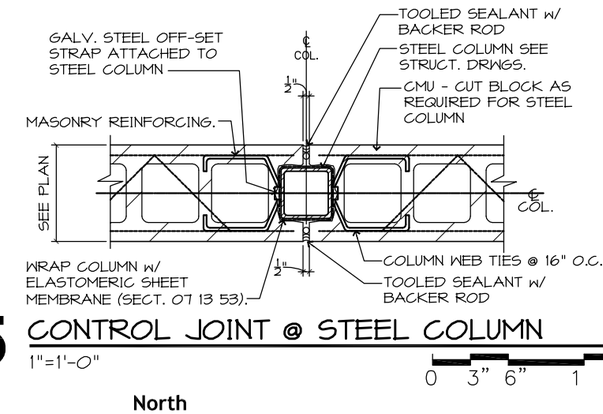


3 CONTROL JOINT @ CMU CAVITY WALL
1"=1'-0"



*PROVIDE AT ALL CONC. FLOOR COLD JOINTS & SAWCUTS

4 CONTROL JOINT @ INTERIOR CMU WALL
1"=1'-0"



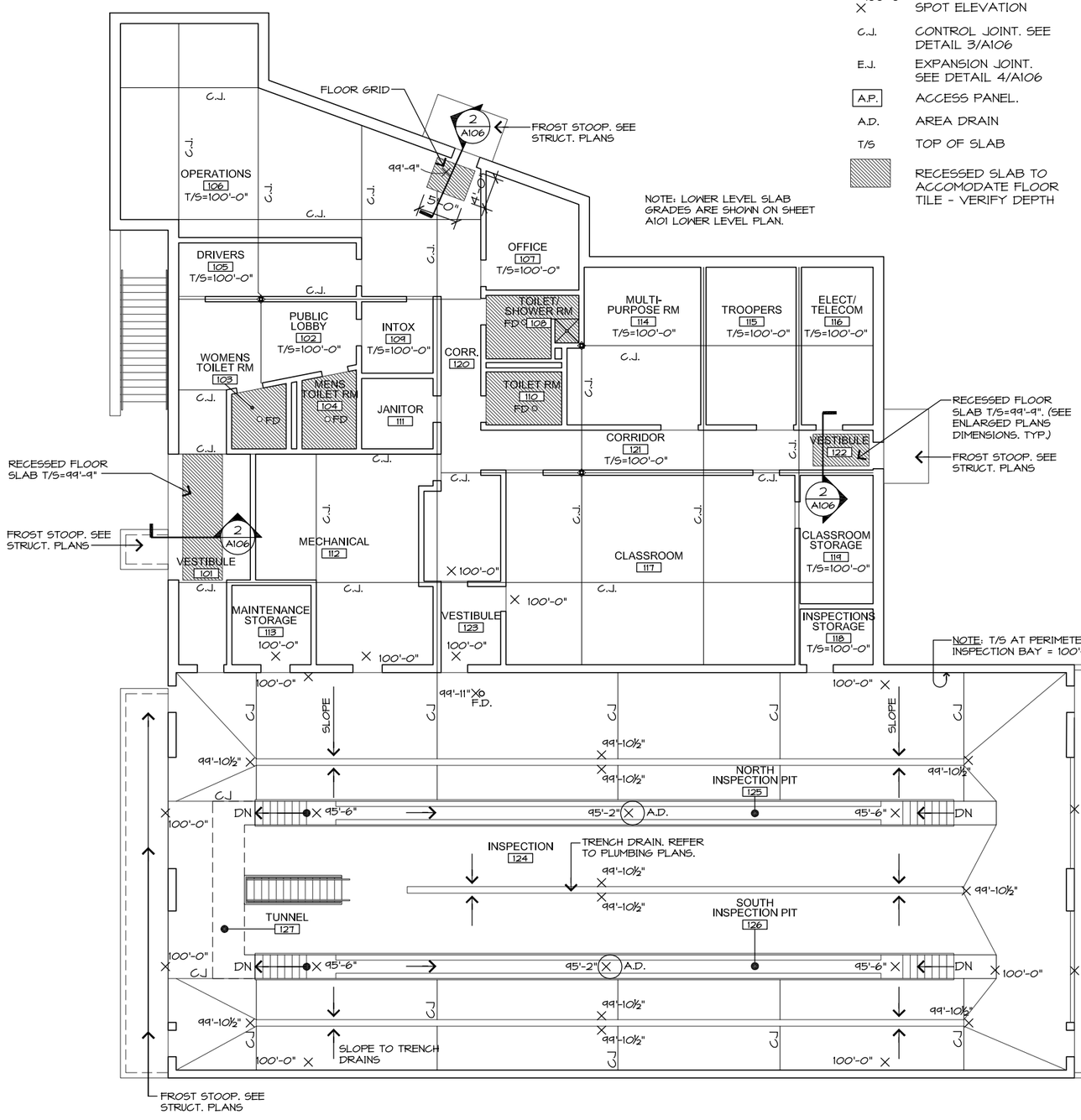
5 CONTROL JOINT @ STEEL COLUMN
1"=1'-0"

North

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			CONTROL JOINT PLAN - MASONRY WALLS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: SEE PLAN	SHEET NO: A105

SYMBOLS LEGEND

100'-0" ×	SPOT ELEVATION
C.J.	CONTROL JOINT. SEE DETAIL 3/A106
E.J.	EXPANSION JOINT. SEE DETAIL 4/A106
A.P.	ACCESS PANEL.
A.D.	AREA DRAIN
T/S	TOP OF SLAB
	RECESSED SLAB TO ACCOMODATE FLOOR TILE - VERIFY DEPTH

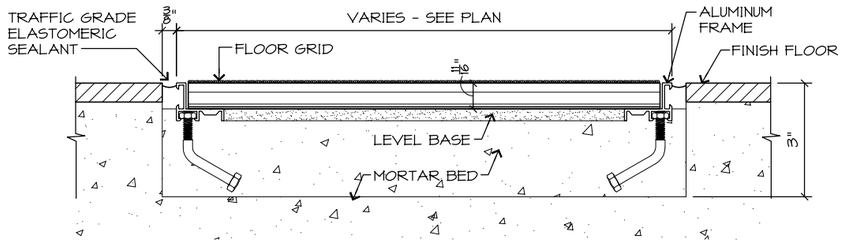


1 FLOOR SLAB PLAN

1/16"=1'-0"

0 4 8 16 24

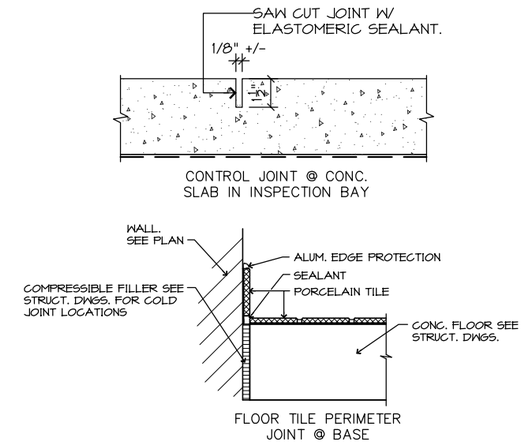
North



2 FLOOR GRID SECTION

3"=1'-0"

0 1" 2" 4" 6"



3 CONTROL JOINT DETAIL

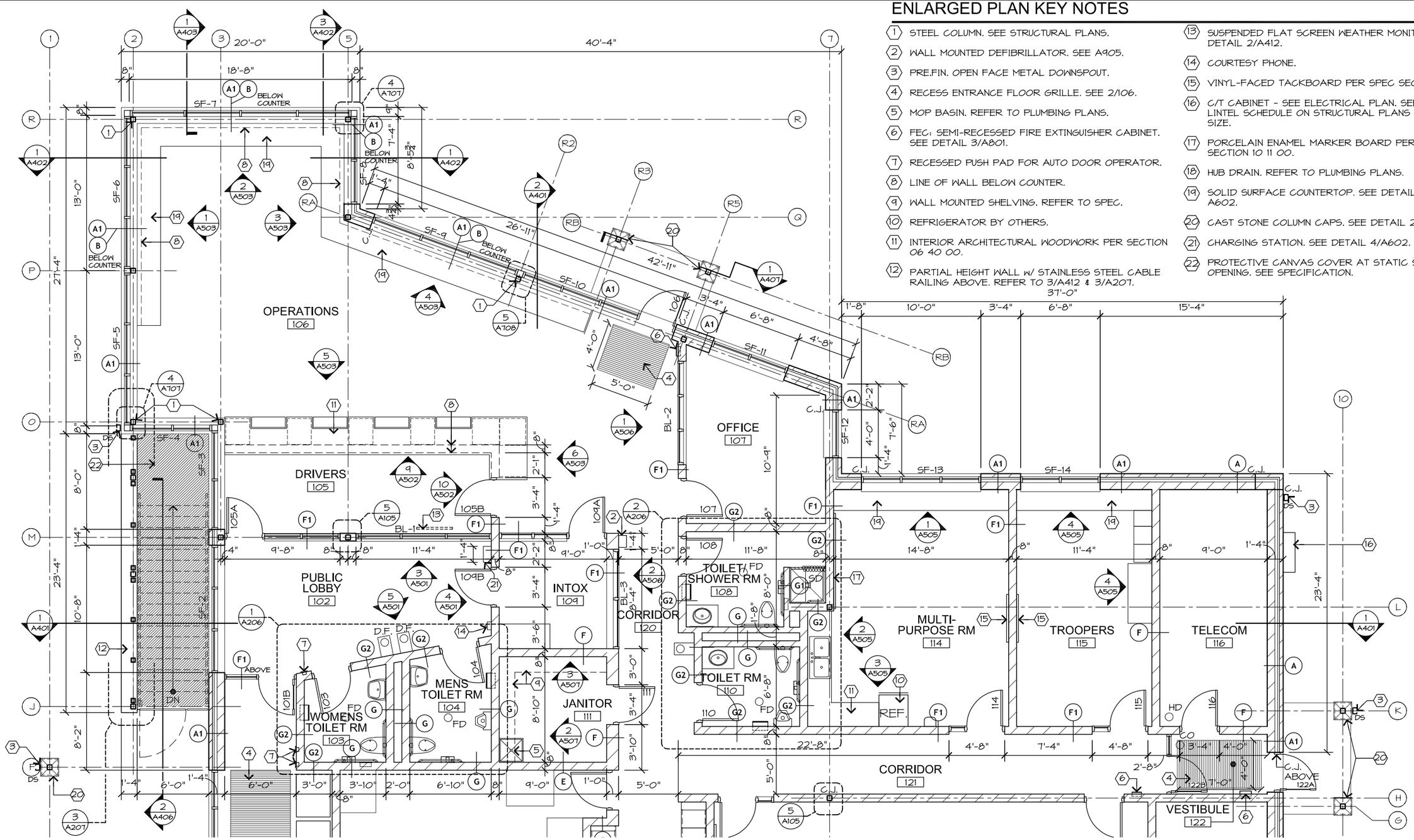
1 1/2"=1'-0"

0 2" 4" 8" 12"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			FLOOR SLAB PLAN	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: SEE PLAN	SHEET NO: A106

ENLARGED PLAN KEY NOTES

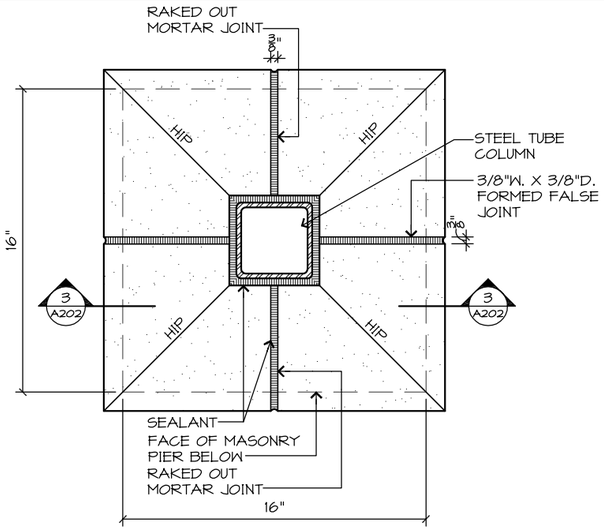
1. STEEL COLUMN. SEE STRUCTURAL PLANS.
2. WALL MOUNTED DEFIBRILLATOR. SEE A905.
3. PRE.FIN. OPEN FACE METAL DOWNSPOUT.
4. RECESS ENTRANCE FLOOR GRILLE. SEE 2/106.
5. MOP BASIN. REFER TO PLUMBING PLANS.
6. FEC: SEMI-RECESSED FIRE EXTINGUISHER CABINET. SEE DETAIL 3/A801.
7. RECESSED PUSH PAD FOR AUTO DOOR OPERATOR.
8. LINE OF WALL BELOW COUNTER.
9. WALL MOUNTED SHELVING. REFER TO SPEC.
10. REFRIGERATOR BY OTHERS.
11. INTERIOR ARCHITECTURAL WOODWORK PER SECTION 06 40 00.
12. PARTIAL HEIGHT WALL W/ STAINLESS STEEL CABLE RAILING ABOVE. REFER TO 3/A412 & 3/A207.
13. SUSPENDED FLAT SCREEN WEATHER MONITOR. SEE DETAIL 2/A412.
14. COURTESY PHONE.
15. VINYL-FACED TACKBOARD PER SPEC SECTION 10 11 00
16. C/T CABINET - SEE ELECTRICAL PLAN. SEE VENEER LINTEL SCHEDULE ON STRUCTURAL PLANS FOR LINTEL SIZE.
17. PORCELAIN ENAMEL MARKER BOARD PER SPEC SECTION 10 11 00.
18. HUB DRAIN. REFER TO PLUMBING PLANS.
19. SOLID SURFACE COUNTERTOP. SEE DETAILS ON SHEET A602.
20. CAST STONE COLUMN CAPS. SEE DETAIL 2&3/A202.
21. CHARGING STATION. SEE DETAIL 4/A602.
22. PROTECTIVE CANVAS COVER AT STATIC SCALE STAIR OPENING. SEE SPECIFICATION.



1 ENLARGED PLAN - OPERATIONS

1/8"=1'-0"

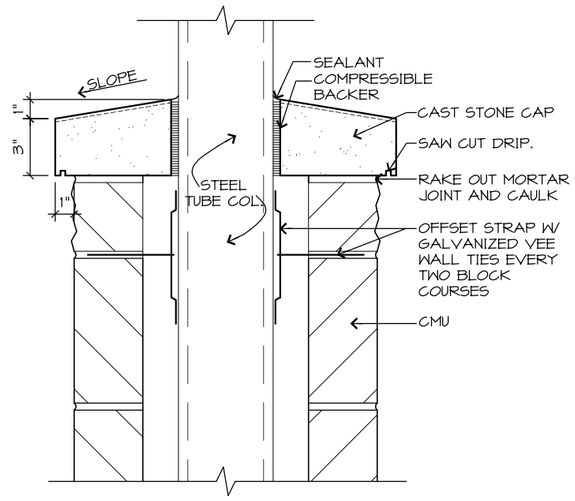
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			ENLARGED FLOOR PLAN	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 2 4 8 12	SHEET NO: A201



2 ENLARGED PLAN OF CAST STONE CAP

1 1/2"=1'-0"

0 2" 4" 8" 12"



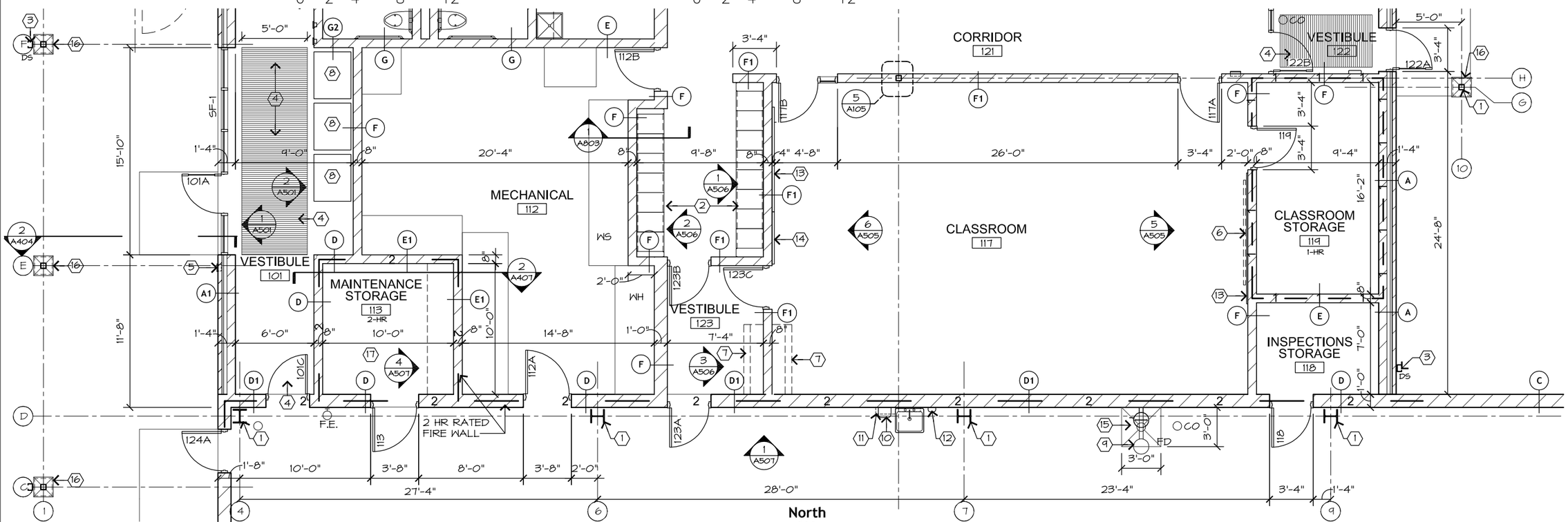
3 SECTION THRU CAST STONE CAP

1 1/2"=1'-0"

0 2" 4" 8" 12"

ENLARGED PLAN KEY NOTES

1. STEEL COLUMN. SEE STRUCTURAL PLANS.
2. SINGLE TIER METAL LOCKERS OVER FILE CABINETS. REFER TO SPEC. SECTION 10 51 13.
3. PRE.FIN. OPEN FACE METAL DOWNSPOUT.
4. RECESS ENTRANCE FLOOR GRID. SEE DETAIL 2/A106.
5. SEMI-RECESSED KNOX BOX. VERIFY LOCATION WITH LOCAL FIRE DEPARTMENT.
6. MOTORIZED PROJECTION SCREEN
7. WALL MOUNTED SHELF AND COAT HOOK. SEE SPEC. SECTION 06 40 00.
8. VENDING MACHINES (BY OTHERS).
9. EMERGENCY EYE WASH & SHOWER. REFER TO PLUMBING PLANS.
10. WALL MOUNTED SHELVING. REFER TO SPEC.
11. PAPER TOWEL DISPENSER.
12. SOAP DISPENSER.
13. MARKER BOARD. SEE SPEC. SECTION 10 11 00.
14. VINYL FACED TACKBOARD PER SPEC SECTION 10 11 00.
15. SLOPE FLOOR SLAB TO FLOOR DRAIN 1/4" PER FT.
16. CAST STONE COLUMN CAP. SEE DETAILS 2&3/A202.
17. ALL PENETRATIONS THROUGH RATED CONSTRUCTION SHALL BE SEALED PER CODE.



1 ENLARGED PLAN @ MIDSECTION

1/8"=1'-0"

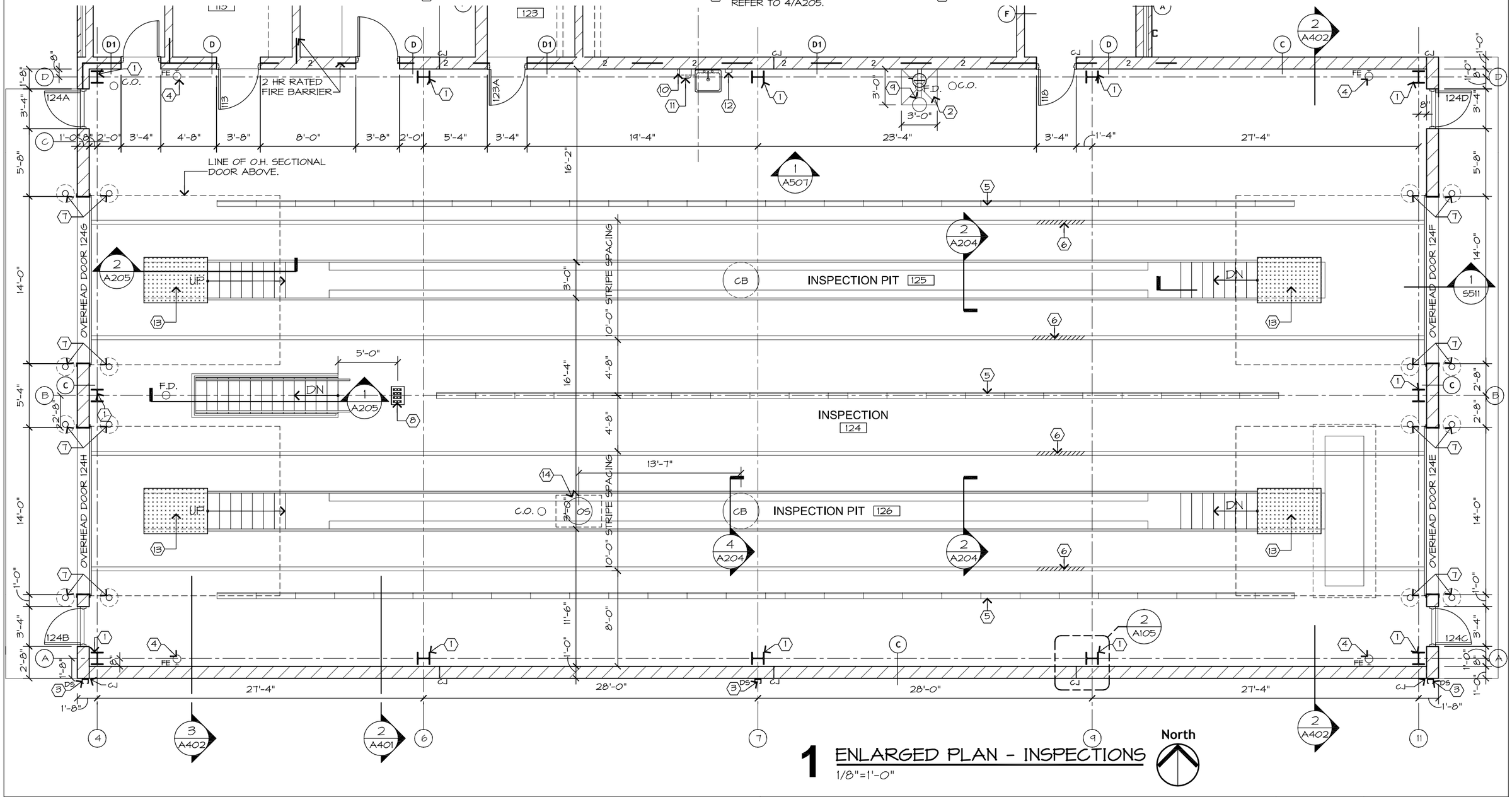
0 2 4 8 12

North

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			ENLARGED FLOOR PLAN	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: A202

PLAN KEY NOTES

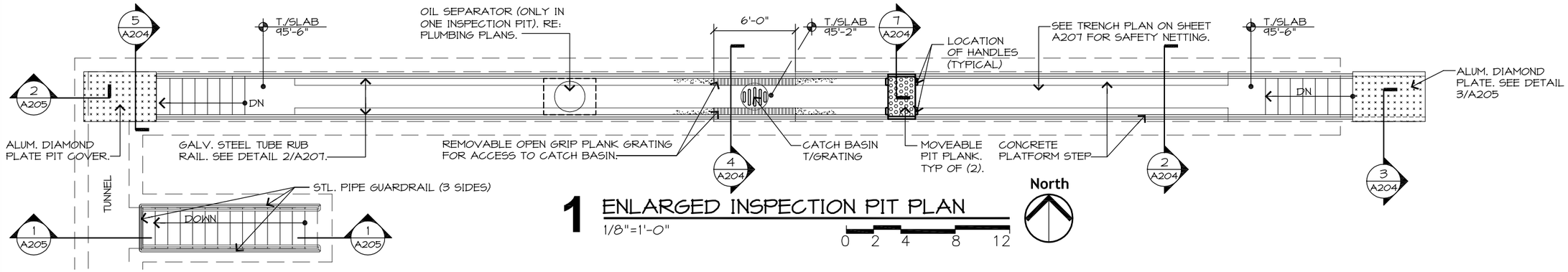
1. STEEL COLUMN. SEE STRUCTURAL PLANS.
2. SLOPE FLOOR SLAB TO FLOOR DRAIN.
3. PRE.FIN. OPEN FACE METAL DOWNSPOUT.
4. FE: SURFACE MOUNDED FIRE EXTINGUISHER.
5. TRENCH DRAIN - SEE DETAIL 5/A205.
6. PAINTED 4" WIDE TRAFFIC STRIPE. REFER TO SPEC. SECTION 09 90 00.
7. PIPE BOLLARD. REFER TO 1/A801.
8. OVERHEAD DOOR CONTROL CONSOLE. REFER TO 4/A205.
9. EMERGENCY EYE WASH & SHOWER. REFER TO PLUMBING PLANS.
10. WALL MOUNTED S.S. SHELF ABOVE SERVICE SINK.
11. PAPER TOWEL DISPENSER.
12. SOAP DISPENSER.
13. ALUM. PIT COVER. SEE DETAIL 3/A205.
14. OIL SEPARATOR. RE: PLUMBING PLANS.



1 ENLARGED PLAN - INSPECTIONS

1/8"=1'-0"

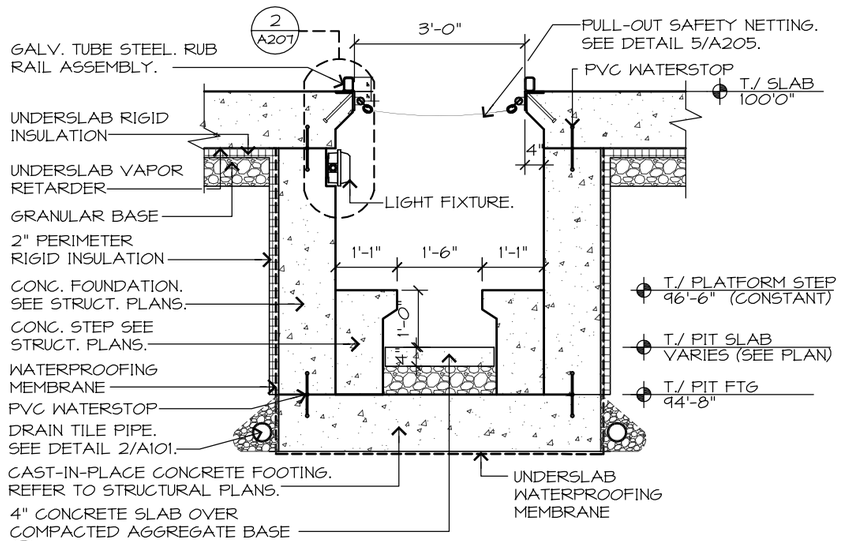
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			ENLARGED FLOOR PLAN	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 2 4 8 12	SHEET NO: A203



1 ENLARGED INSPECTION PIT PLAN

1/8"=1'-0"

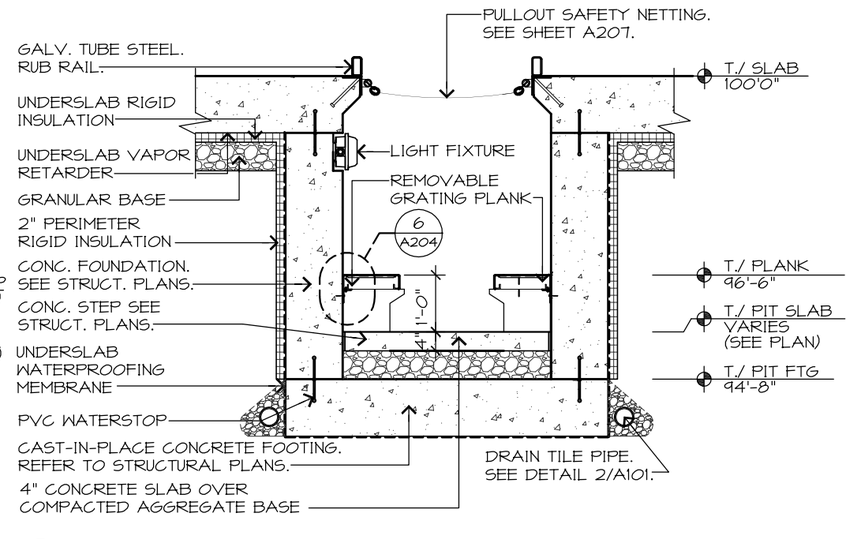
0 2 4 8 12



2 INSPECTION PIT SECTION

3/8"=1'-0"

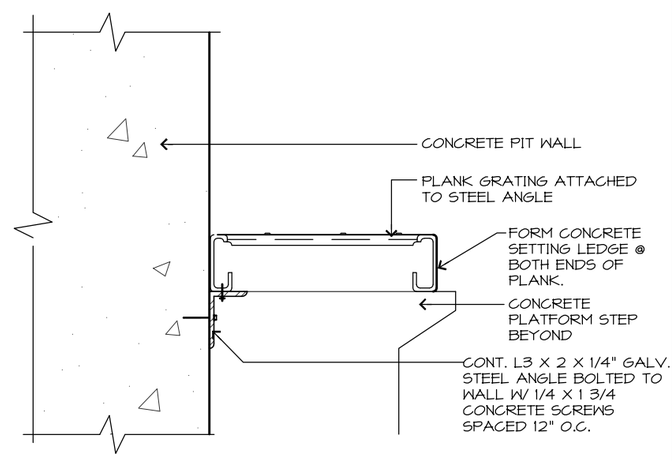
0 8" 16" 32" 48"



4 INSPECTION PIT SECTION @ CATCH BASIN

3/8"=1'-0"

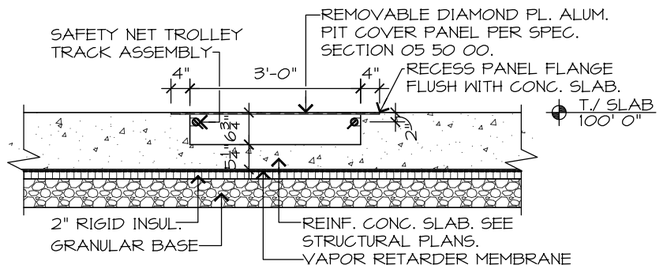
0 8" 16" 32" 48"



6 REMOVABLE PLANKS AT CATCH BASIN

1 1/2"=1'-0"

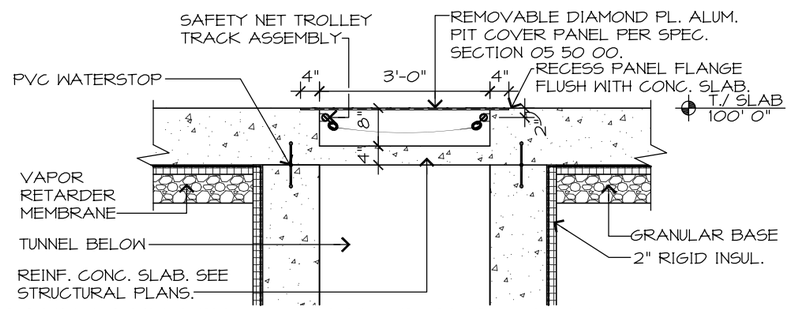
0 2" 4" 8" 12"



3 SECTION THUR PIT COVER/ NET STACKING

3/8"=1'-0"

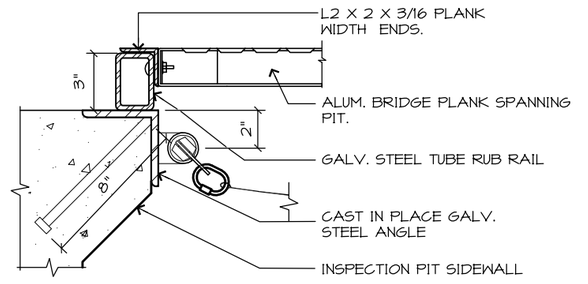
0 8" 16" 32" 48"



5 SAFETY NETTING COLLECTION POCKET

3/8"=1'-0"

0 8" 16" 32" 48"

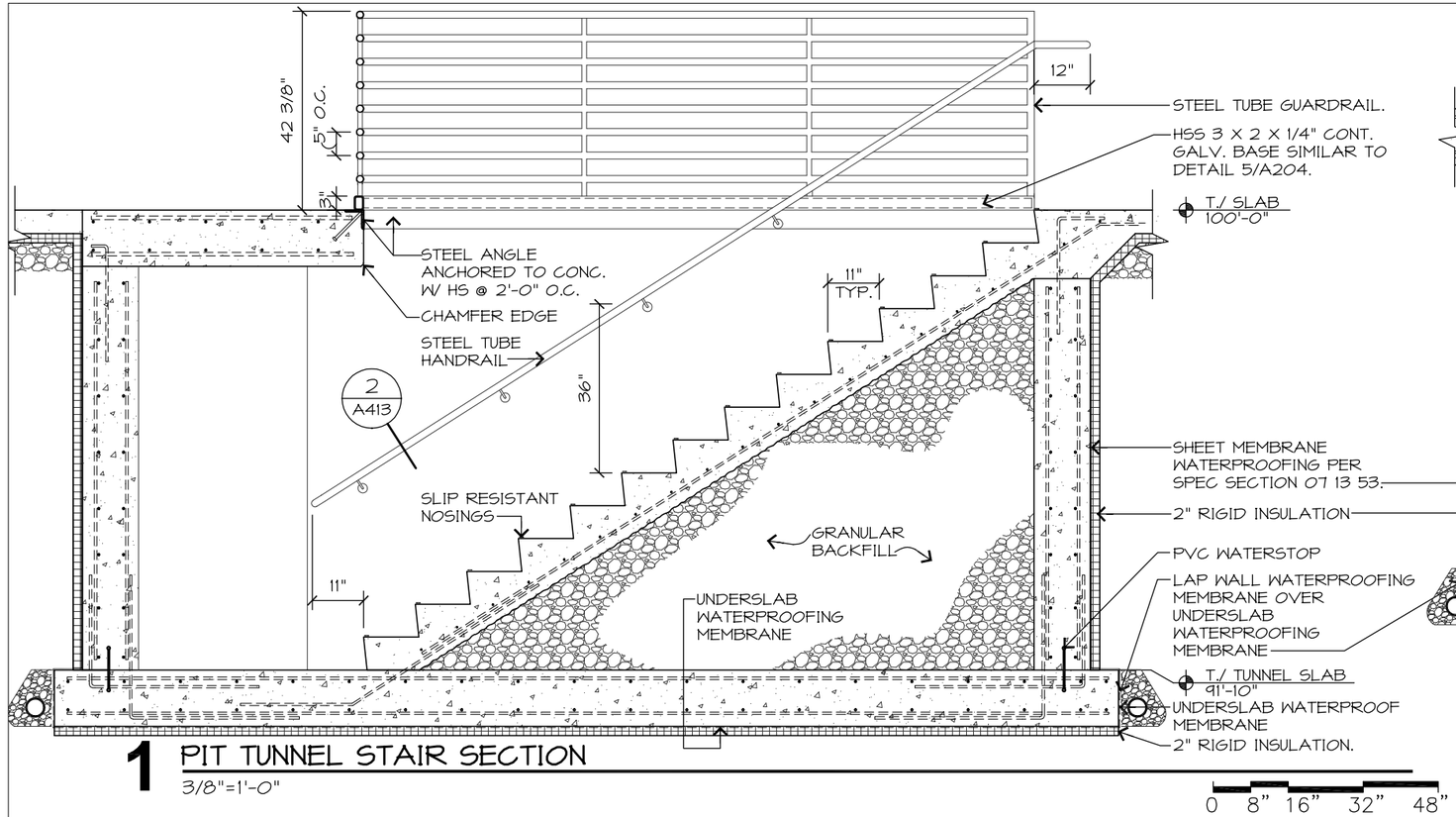


7 MOVABLE PLANK DETAIL

1 1/2"=1'-0"

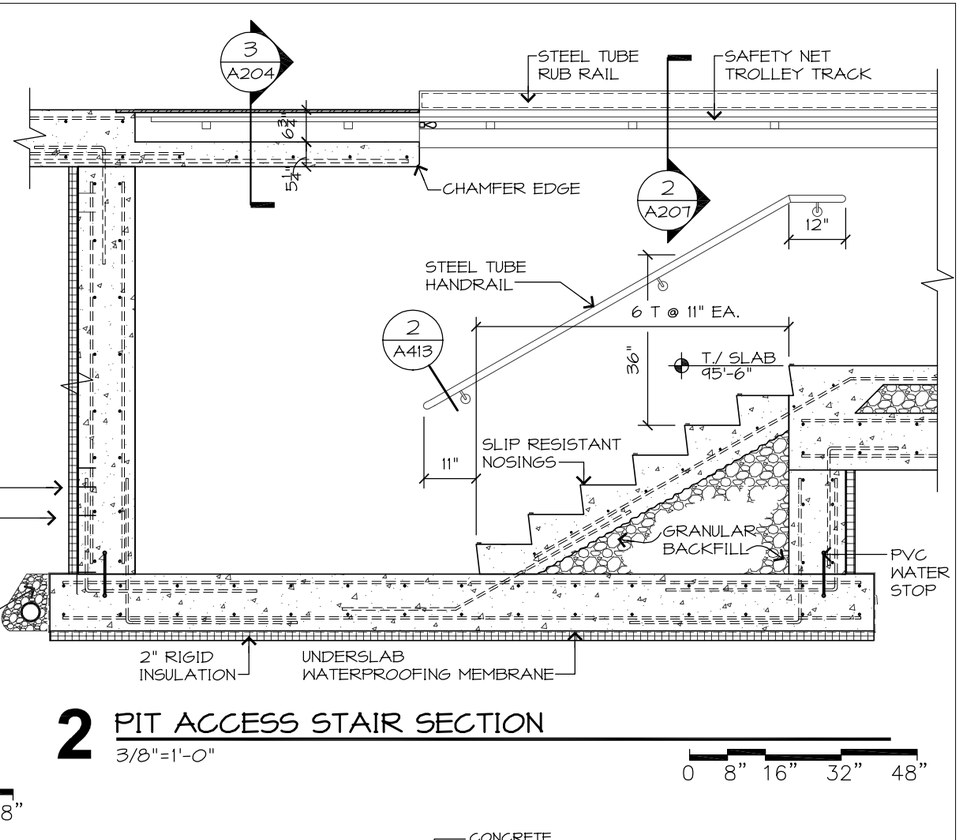
0 2" 4" 8" 12"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			INSPECTION PIT PLAN & DETAILS	DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: A204



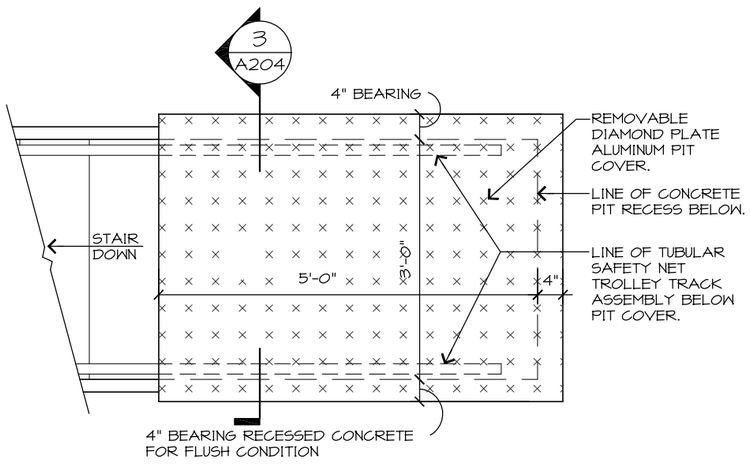
1 PIT TUNNEL STAIR SECTION

3/8"=1'-0"



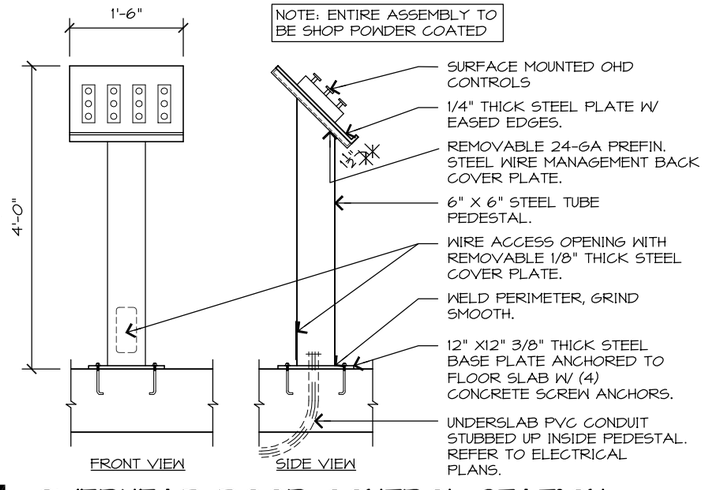
2 PIT ACCESS STAIR SECTION

3/8"=1'-0"



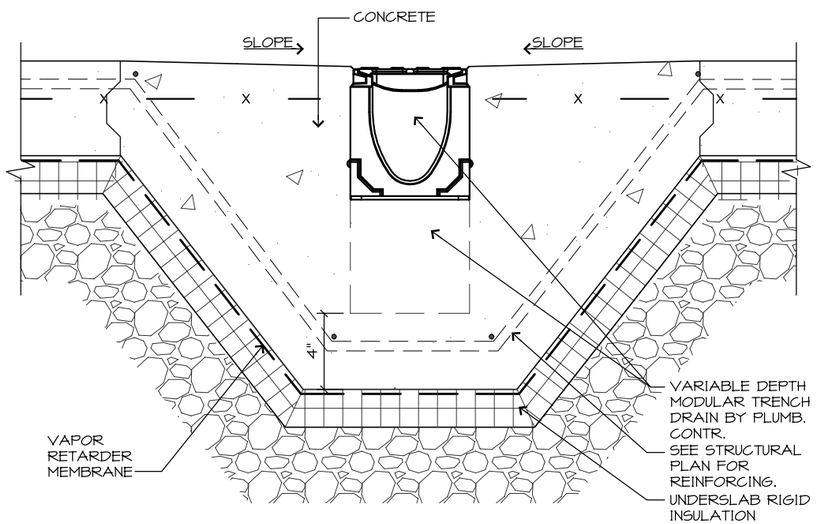
3 PIT COVER PLATE DETAIL

1/2"=1'-0"



4 OVERHEAD DOOR CONTROL STATION

1/2"=1'-0"



5 TRENCH DRAIN DETAIL

1 1/2"=1'-0"

0 6" 1 2 3 — 0 6" 1 2 3 — 0 2" 4" 8" 12"

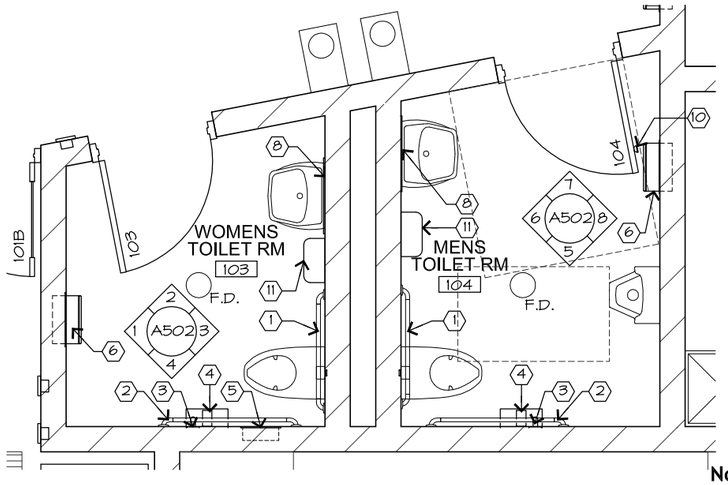
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI

INSPECTION PIT SECTIONS

DATE:

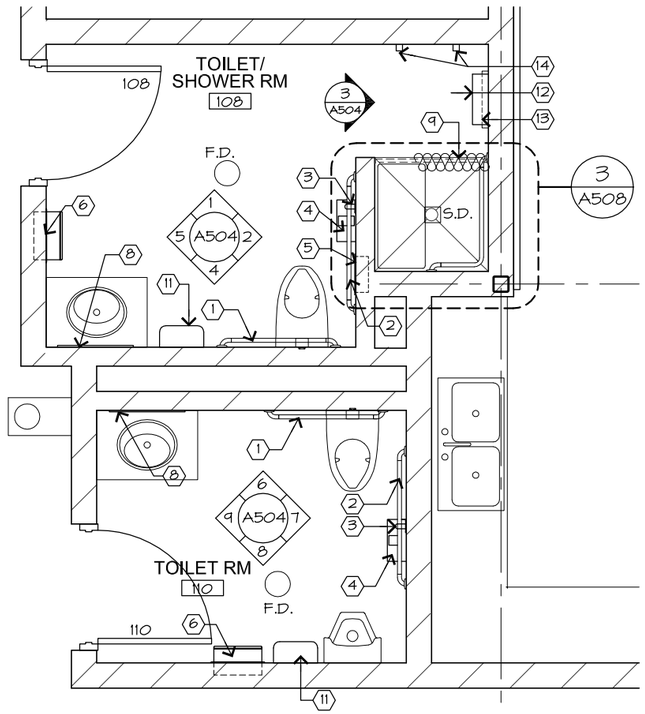
STATE PROJECT NUMBER: 1070–00–72 | HWY: IH 90 | COUNTY: MONROE | SPARTA SWEF NO. 54 | SCALE:

SHEET NO: A205



1 ENLARGED PLAN - TOILET RMS 103 & 104

1/4"=1'-0"



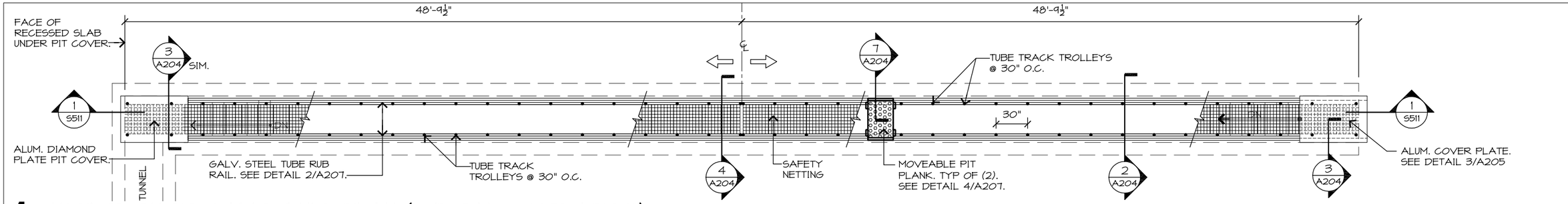
2 ENLARGED PLAN - TOILET RMS 108 & 110

1/4"=1'-0"

ENLARGED TOILET PLAN KEY NOTES

1. 36" LONG GRAB BAR 36" A.F.F. TO TOP.
2. 42" LONG GRAB BAR 36" A.F.F. TO TOP.
3. 18" LONG VERTICAL GRAB BAR 40" A.F.F. TO BOTTOM.
4. TOILET TISSUE PAPER DISPENSER 30" A.F.F. TO TOP EDGE. 12" TO ℄ IN FRONT OF TOILET FIXTURE.
5. RECESSED SANITARY NAPKIN DISPOSAL. TOP EDGE TO BE 3" BELOW GRAB BAR.
6. RECESSED PAPER TOWEL & WASTE DISPENSER 48" A.F.F. TO TOP OF CONTROL.
7. NOT USED
8. 24"W. X 36"H. STAINLESS STEEL FRAMED MIRROR 40" A.F.F. TO REFLECTIVE SURFACE.
9. SHOWER CURTAIN ROD.
10. FLOOR MOUNTED DOOR STOP.
11. ELECTRIC HAND DRYER
12. STAINLESS STEEL SHELF, 16"W. X 5"D.
13. STAINLESS STEEL TOWEL BAR
14. STAINLESS STEEL ROBE HOOKS

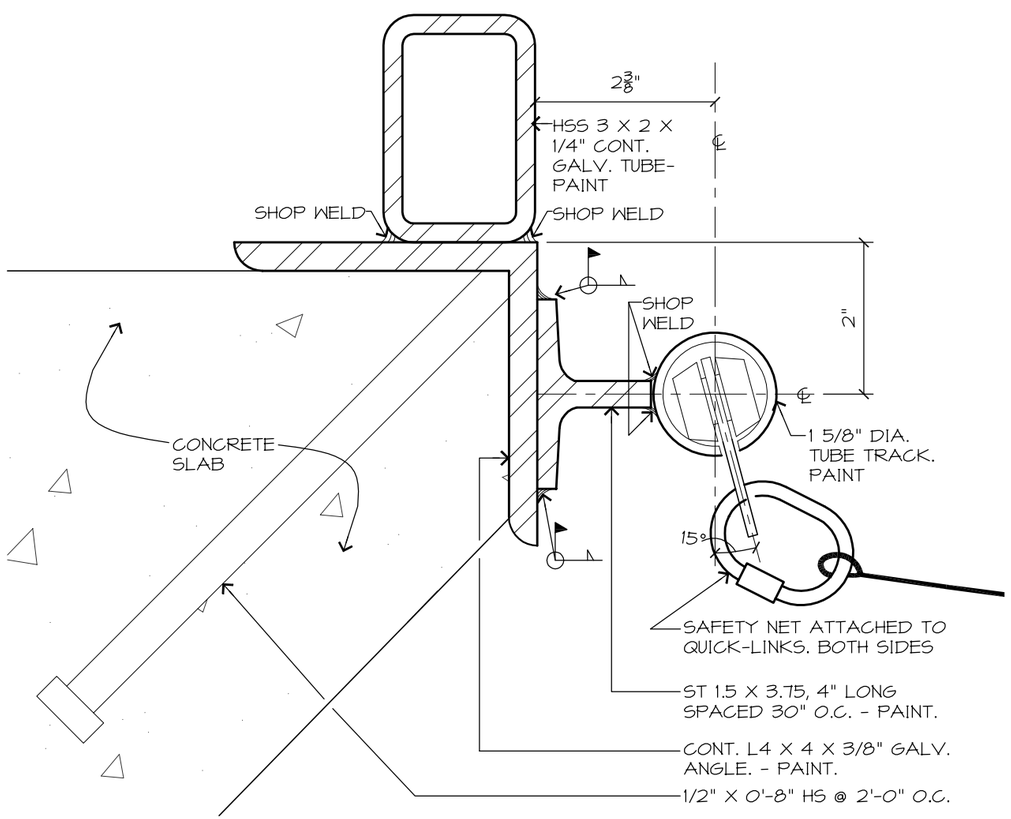
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			ENLARGED TOILET PLANS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 1 2 4 6	SHEET NO: A206



1 INSPECTION PIT SAFETY NET PLAN (TYPICAL @ BOTH PITS)

1/8"=1'-0"

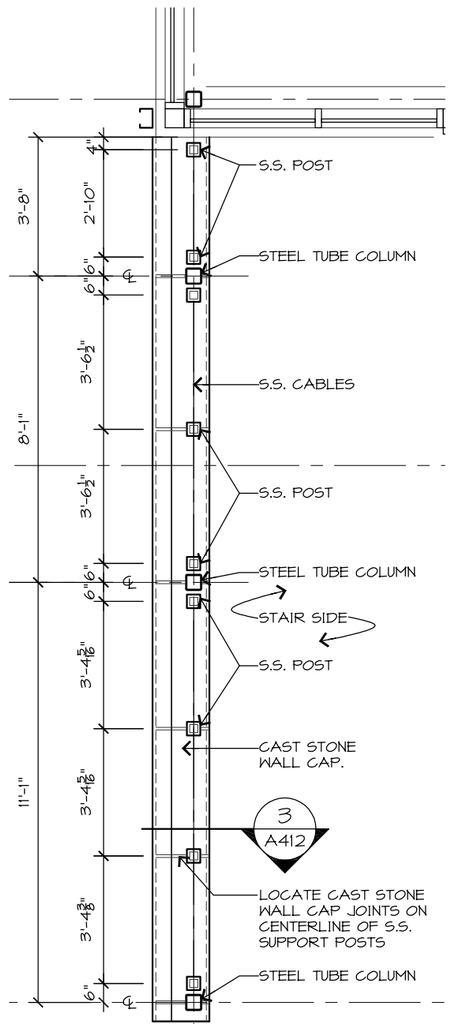
0 2 4 8 12



2 PIT SAFETY NETTING TROLLEY TRACK ASSEMBLY

6"=1'-0"

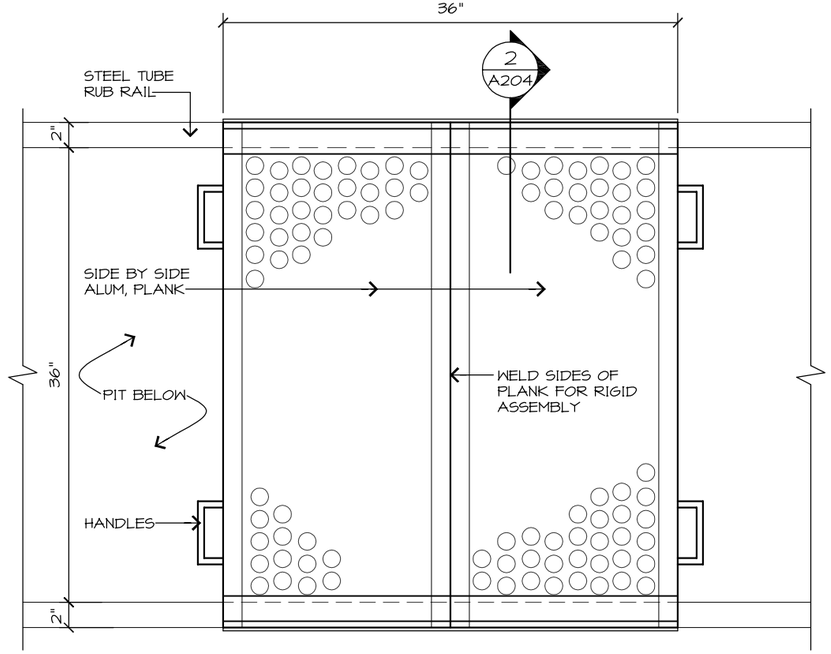
0 .5" 1" 2" 3"



3 GUARD RAIL WALL

1/4"=1'-0"

0 1 2 4 6

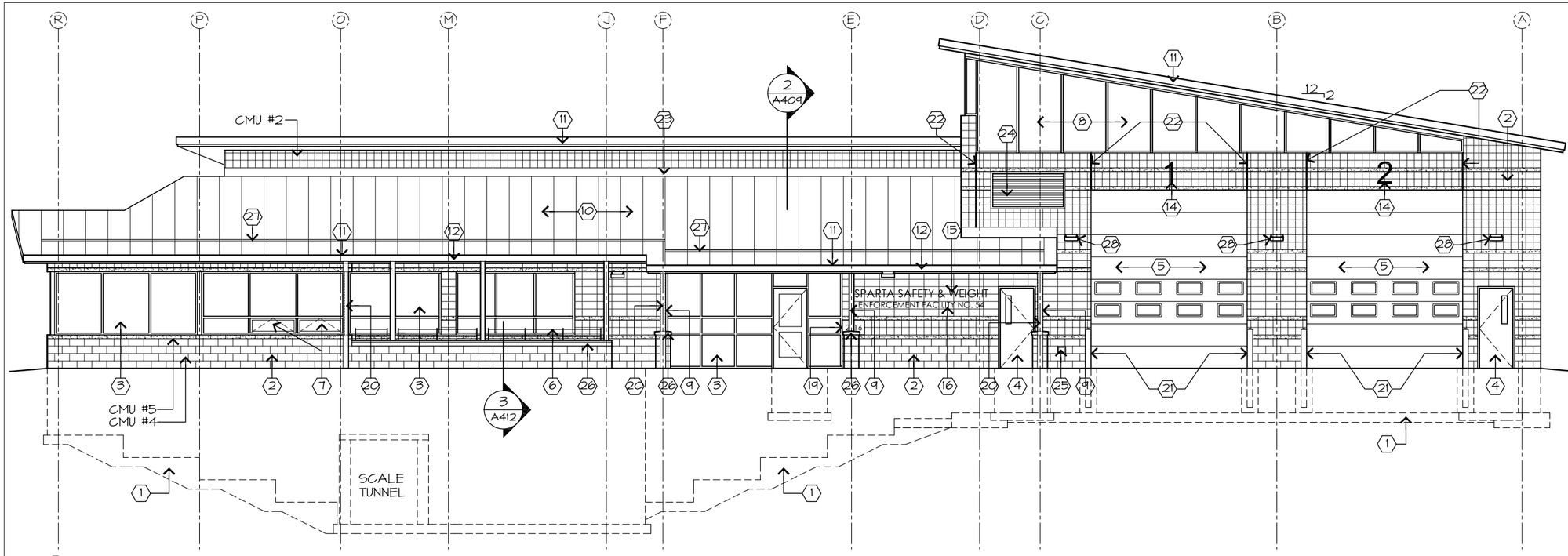


4 MOVABLE PIT BRIDGE PLANK (TYP. OF 2)

1"=1'-0"

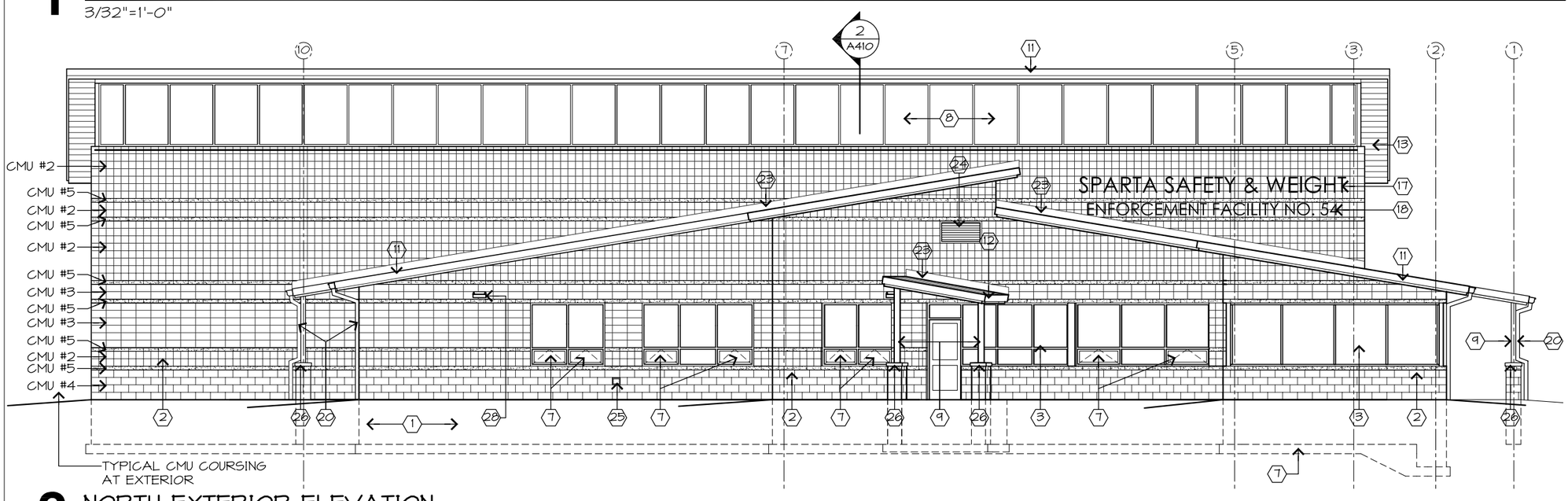
0 3" 6" 1 1.5

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			INSPECTION PIT SAFETY NETTING	DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 1 2 4 6	SHEET NO: A207



1 WEST EXTERIOR ELEVATION

3/32"=1'-0"



2 NORTH EXTERIOR ELEVATION

3/32"=1'-0"

ELEVATION KEY NOTES

1. CAST-IN-PLACE CONC. FOUNDATION. SEE STRUCTURAL PLANS.
2. CMU VENEER. SEE ELEVATIONS & SPECIFICATION FOR TYPES.
3. ALUMINUM STOREFRONT FRAMING
4. GALV. HOLLOW METAL DOOR. PAINT.
5. SECTIONAL OVERHEAD DOOR
6. STAINLESS STEEL CABLE RAILING. SEE 3/A412
7. OPERABLE WINDOW SET IN STOREFRONT FRAME
8. TRANSLUCENT WALL PANELS
9. GALV. TUBE STEEL COLUMN. PAINT.
10. STANDING SEAM METAL ROOFING
11. PRE.FIN. METAL FASCIA
12. PRE.FIN. METAL GUTTER
13. PREFIN. METAL SOFFIT
14. 24" CAST ALUMINUM NUMERALS
15. 8 1/2" CAST ALUMINUM LETTERS
16. 6 1/2" CAST ALUMINUM LETTERS
17. 17" CAST ALUMINUM LETTERS
18. 13" CAST ALUMINUM LETTERS
19. DATE STONE. SEE 2/A801.
20. PREFIN. OPEN FACED DOWNSPOUT.
21. CONC. FILLED STEEL PIPE BOLLARDS W/ PLASTIC SLEEVES
22. CMU CONTROL JOINT.
23. 24 GA. GALV. STEEL WALL FLASHING.
24. PREFINISHED LOUVER. SEE HVAC PLANS.
25. HOSE BIB. SEE PLUMBING PLANS.
26. CAST STONE CAP. SEE 2&3/A202.
27. CONTINUOUS STRIPS OF SNOW GUARDS
28. EXTERIOR LIGHTING (TYPICAL). REFER TO ELECTRICAL PLANS.

GENERAL NOTES

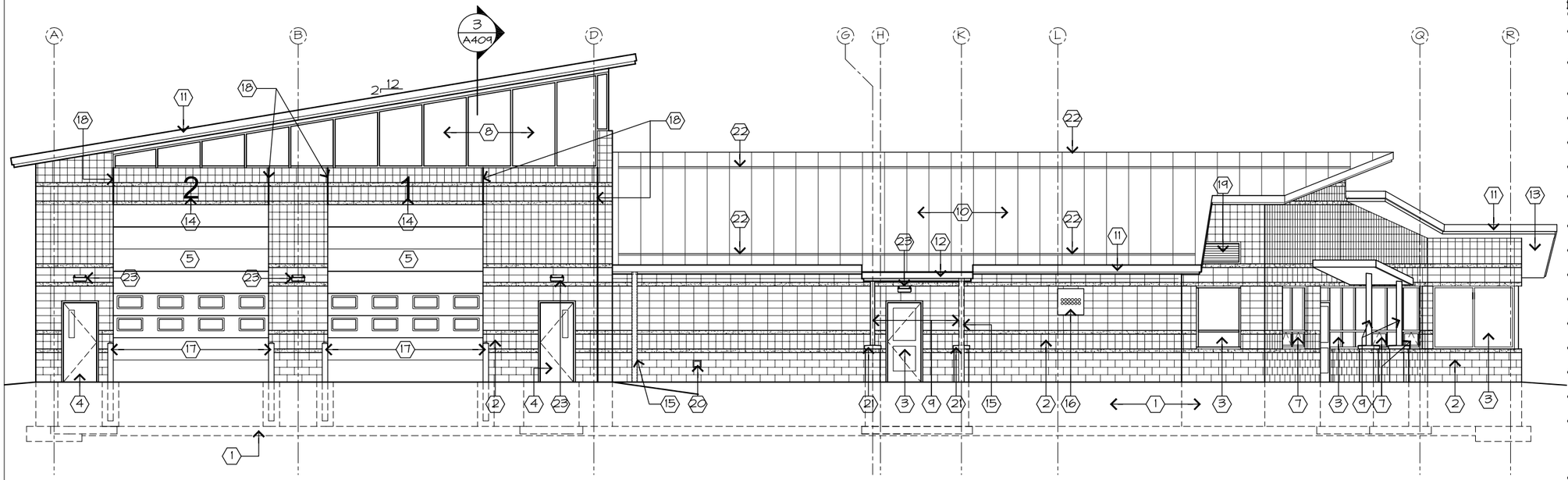
A. ALL EXPOSED CMU TO RECEIVE TWO COATS OF SEALER PER SPEC. SECTION 04 20 00.

B. ALL EXPOSED LINTELS, COLUMNS, AND O.H. DOOR JAMB CHANNEL PROTECTORS TO BE PAINTED.

C. ALL MASONRY CONTROL JOINTS SHOWN ON SHEET A105 TO BE FULL HT. CONTINUOUS. SEE

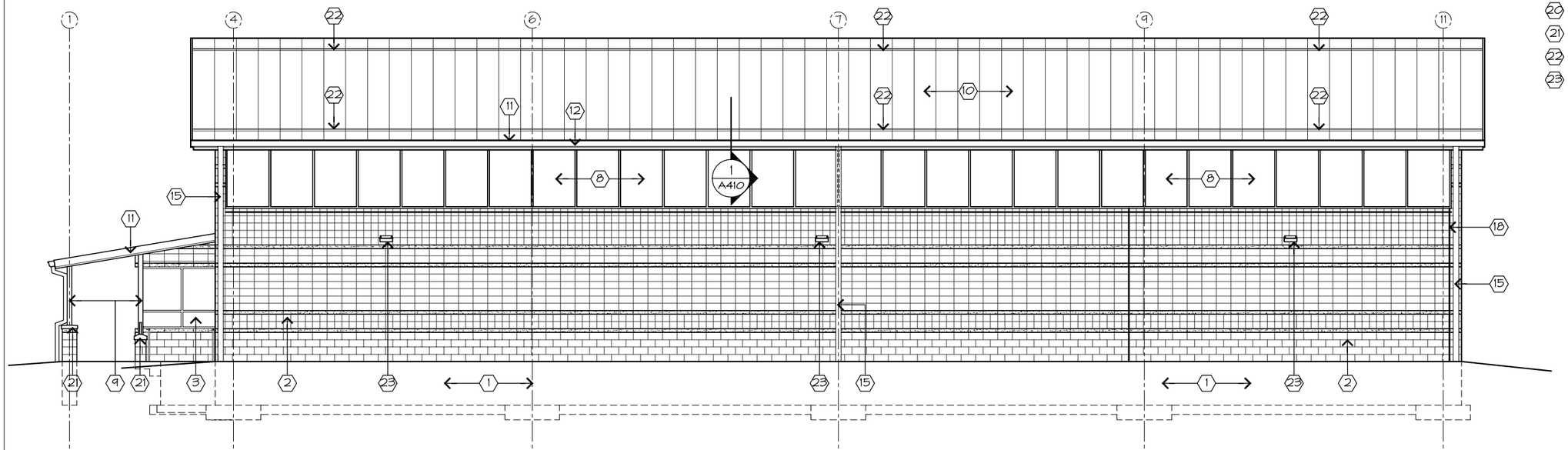
D. ALL GROUND FACE SIDES SHALL BE TO EXTERIOR SIDE OF WALLS.

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			EXTERIOR ELEVATIONS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 2 4 8 12	SHEET NO: A301



1 EAST EXTERIOR ELEVATION

3/32"=1'-0"



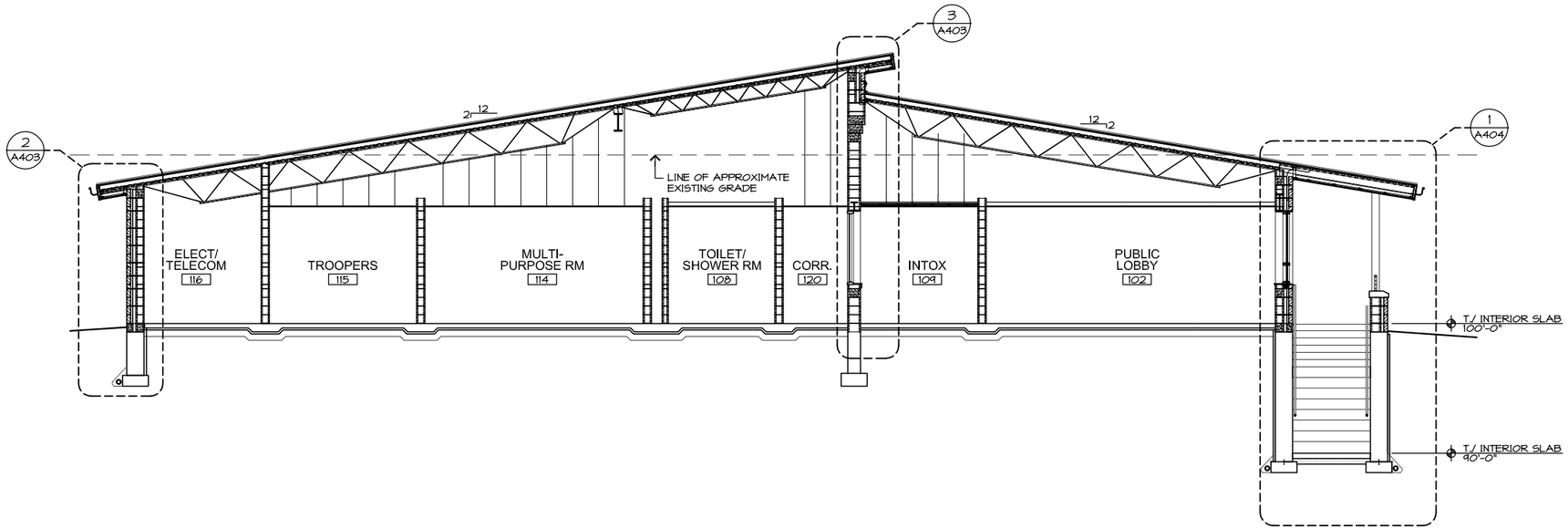
2 SOUTH EXTERIOR ELEVATION

3/32"=1'-0"

ELEVATION KEY NOTES

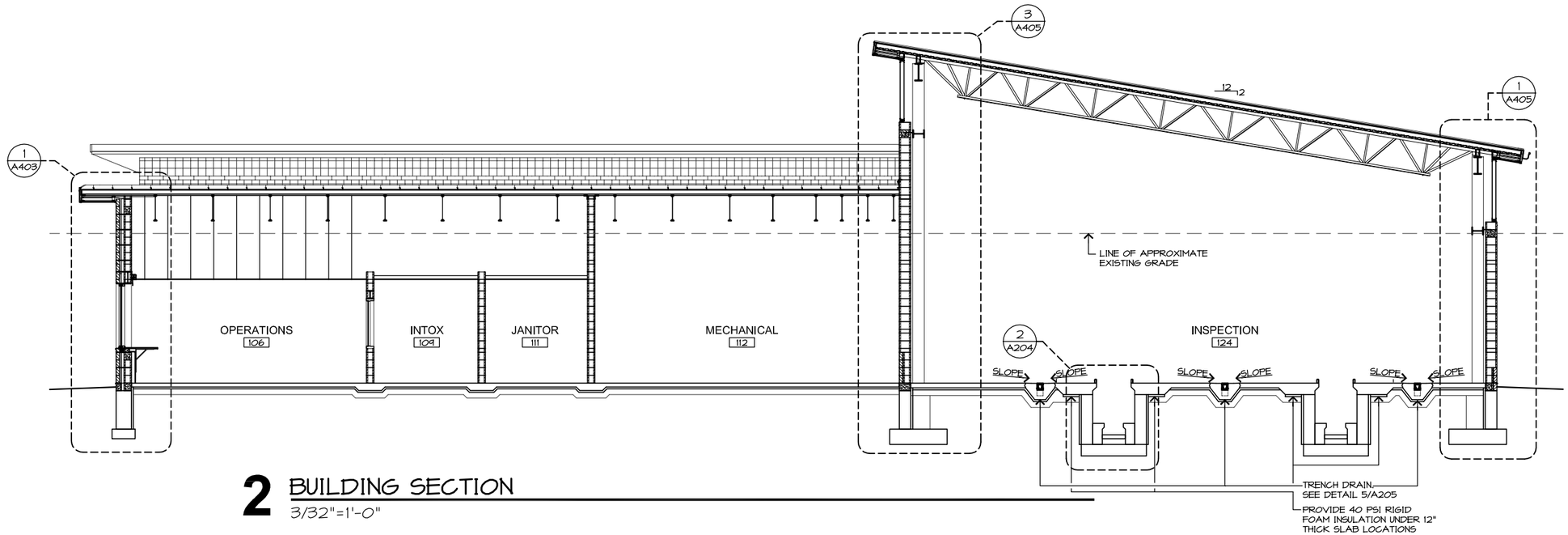
1. CAST-IN-PLACE CONC. FOUNDATION. SEE STRUCTURAL PLANS.
2. CMU VENEER. SEE ELEVATIONS & SPECIFICATION FOR TYPES.
3. ALUMINUM STOREFRONT FRAMING
4. GALV. HOLLOW METAL DOOR. PAINT.
5. SECTIONAL OVERHEAD DOOR
6. STAINLESS STEEL CABLE RAILING. SEE 3/A411
7. OPERABLE WINDOW SET IN STOREFRONT FRAME
8. TRANSLUCENT WALL PANELS
9. GALV. TUBE STEEL COLUMN. PAINT.
10. STANDING SEAM METAL ROOFING
11. PRE.FIN. METAL FASCIA
12. PRE.FIN. METAL GUTTER
13. PREFIN. METAL SOFFIT
14. 24" CAST ALUMINUM NUMERALS
15. PREFIN. OPEN FACED DOWNSPOUT
16. ENTRY PORT FURNISHED BY COMMUNICATIONS TOWER CONTRACTOR AND INSTALLED BY GENERAL BUILDING CONTRACTOR
17. CONC. FILLED STEEL PIPE BOLLARDS W/ PLASTIC SLEEVES.
18. CMU CONTROL JOINT.
19. PREFINISHED LOUVER. SEE HVAC PLANS.
20. HOSE BIB. SEE PLUMBING PLANS.
21. CAST STONE CAP. SEE 2&3/A202.
22. CONTINUOUS STRIP OF SNOW GUARDS
23. EXTERIOR LIGHTING (TYPICAL). REFER TO ELECTRICAL PLANS.

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			EXTERIOR ELEVATIONS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 2 4 8 12	SHEET NO: A302



1 BUILDING SECTION

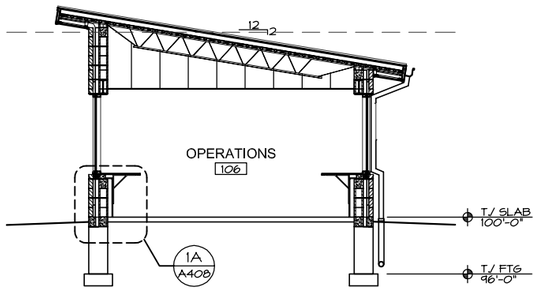
3/32"=1'-0"



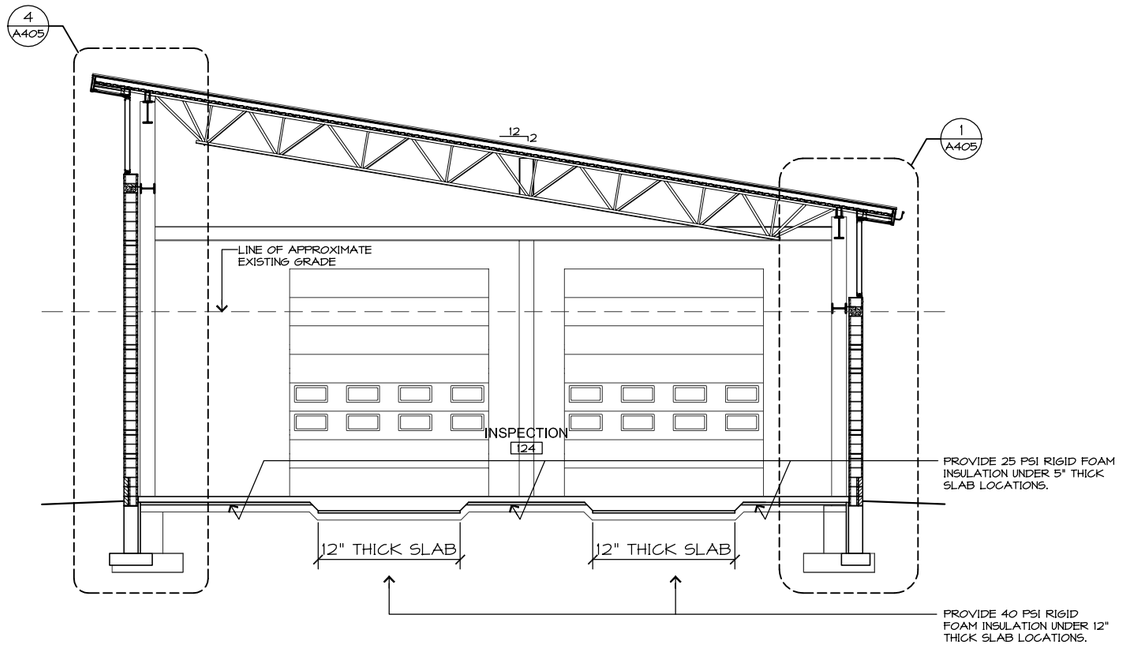
2 BUILDING SECTION

3/32"=1'-0"

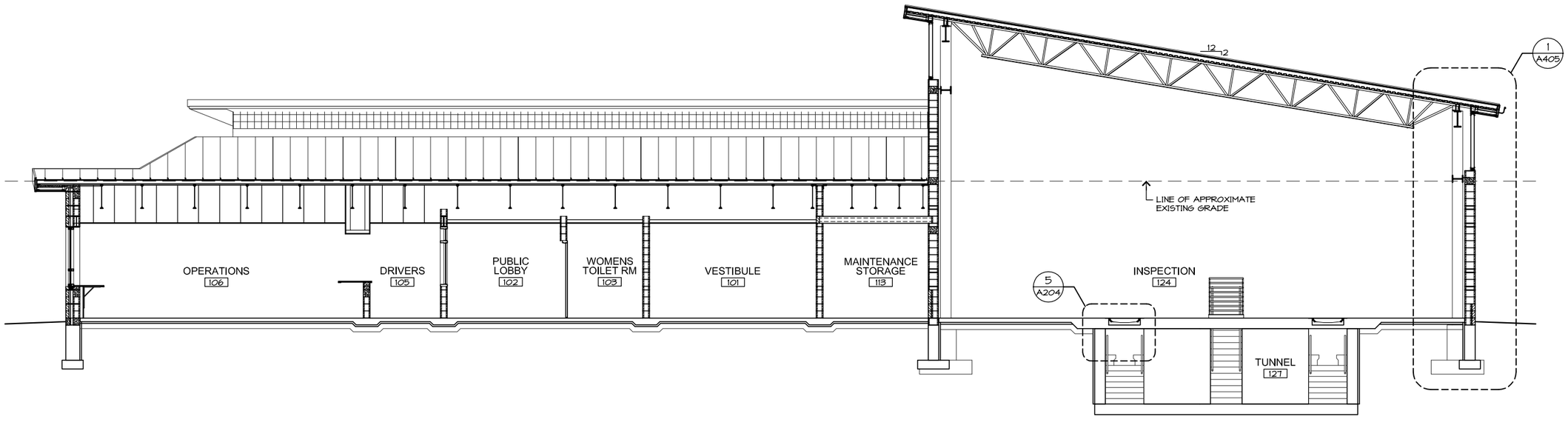
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			BUILDING SECTION	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 2 4 8 12	SHEET NO: A401



1 BUILDING SECTION
3/32"=1'-0"

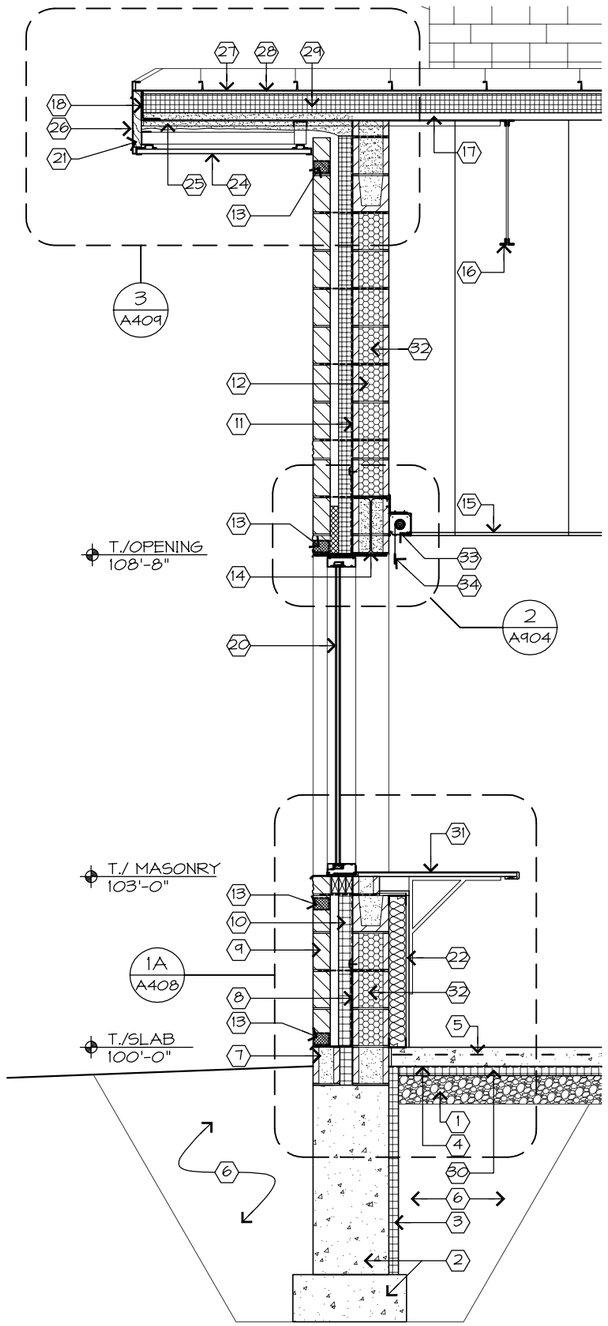


2 BUILDING SECTION
3/32"=1'-0"



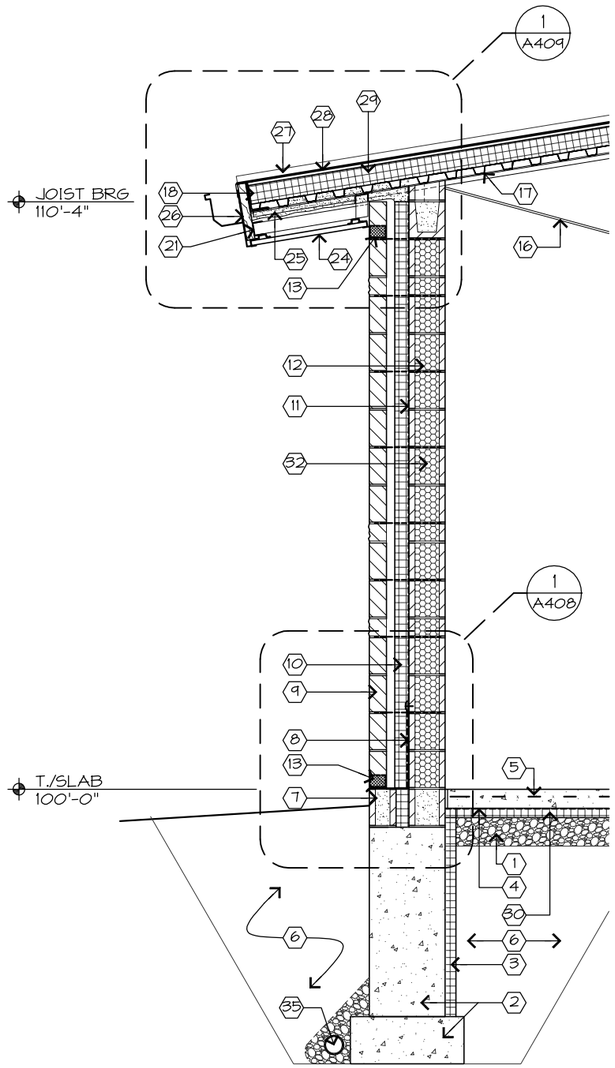
3 BUILDING SECTION
3/32"=1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			BUILDING SECTION	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 2 4 8 12	SHEET NO: A402



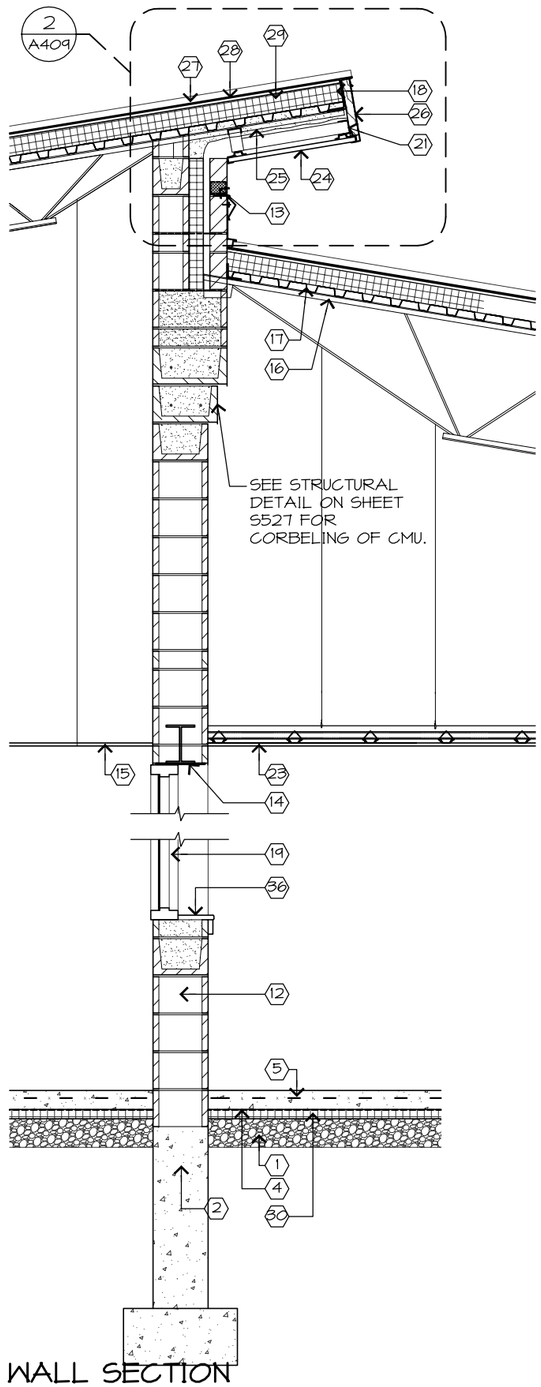
1 WALL SECTION

3/8"=1'-0"



2 WALL SECTION

3/8"=1'-0"



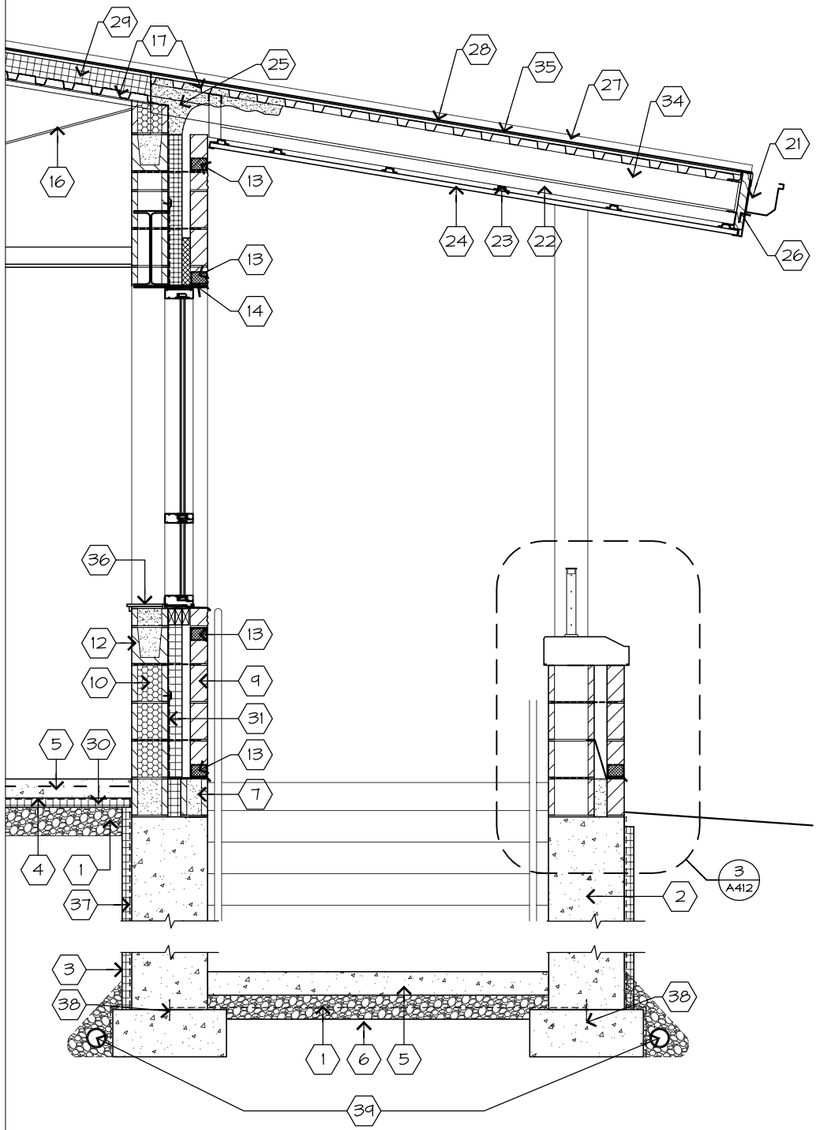
3 WALL SECTION

3/8"=1'-0"

SECTION KEY NOTES

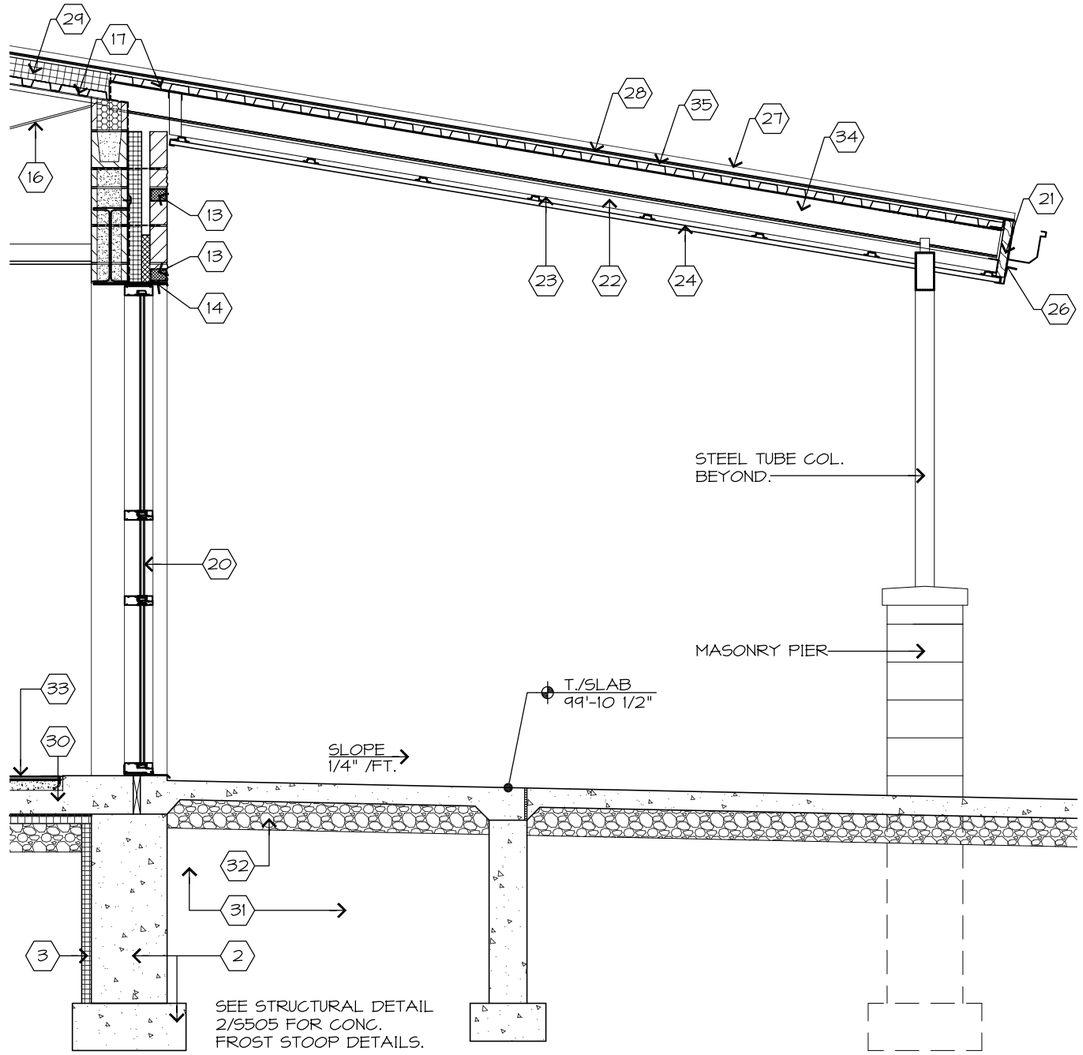
1. 6" COMPACT AGGREGATE BASE
2. REFER TO STRUCTURAL PLANS FOR CAST-IN-PLACE CONCRETE FOUNDATION & FOOTING
3. 2" THICK RIGID PERIMETER INSULATION
4. 15 ML VAPOR RETARDER MEMBRANE.
5. CONCRETE SLAB-ON-GRADE. SEE STRUCTURAL PLANS FOR THICKNESS & REINFORCING.
6. COMPACTED BACKFILL
7. 6" CMU STARTER COURSE. GROUT FILL. (COLOR: CMU-4)
8. THRU-WALL FLASHING OVER STAINLESS STEEL DRIP EDGE. (HOLD THRU-WALL FLASHING BACK 1" MIN. FROM FACE OF CMU)
9. CMU VENEER. REFER TO EXTERIOR ELEVATIONS & SPECIFICATION.
10. 3" RIGID CAVITY INSULATION.
11. SPRAY-APPLIED AIR BARRIER MEMBRANE.
12. CMU - REFER TO STRUCTURAL PLANS FOR REINFORCING. SEE PLANS & WALL TYPES.
13. WEEP VENTS IN HEAD JOINTS 32" O.C.
14. GALV. STEEL LINTEL. PAINT EXPOSED.
15. SUSPENDED ACOUSTICAL TILE CEILING
16. STEEL BAR JOISTS. REFER TO STRUCTURAL PLANS.
17. STEEL ROOF DECKING. REFER TO STRUCT. PLANS.
18. PERIMETER STEEL ANGLE. REFER TO STRUCT. PLANS.
19. HOLLOW METAL BORROW LITE.
20. ALUMINUM STOREFRONT WINDOW W/ INSUL. GLAZING.
21. 1¾" X 11-7/8" LSL SUB-FASCIA ATTACHED TO PERIMETER ANGLE.
22. GYP. BD. OVER LIGHT GUAGE METAL STUDS 24" O.C. SEE WALL TYPES
23. SUSPENDED GYP. BD. CEILING SYSTEM
24. PRE.FIN. METAL SOFFIT PANEL
25. CLOSED-CELL SPRAY-FOAM INSULATION.
26. PRE.FIN. METAL FASCIA TRIM
27. STANDING SEAM METAL ROOFING
28. ICE & WATERSHIELD ROOF UNDERLAYMENT
29. NAIL-BASE INSULATION SYSTEM
30. 2" RIGID INSULATION BELOW SLAB
31. SOLID SURFACE COUNTERTOP. SEE INTERIOR ELEVATIONS.
32. CORE FILL FOAM INSULATION
33. ROLLER SHADE POCKET RECESS. SEE DETAIL ON SHEET A904.
34. WINDOW TREATMENT. REFER TO SHEET A904.
35. PERIMETER DRAIN TILE - SEE DETAIL 2/A101.
36. SOLID SURFACE WINDOW STOOL.

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			WALL SECTIONS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 8" 16" 32" 48"	SHEET NO: A403



1 WALL SECTION

3/8"=1'-0"



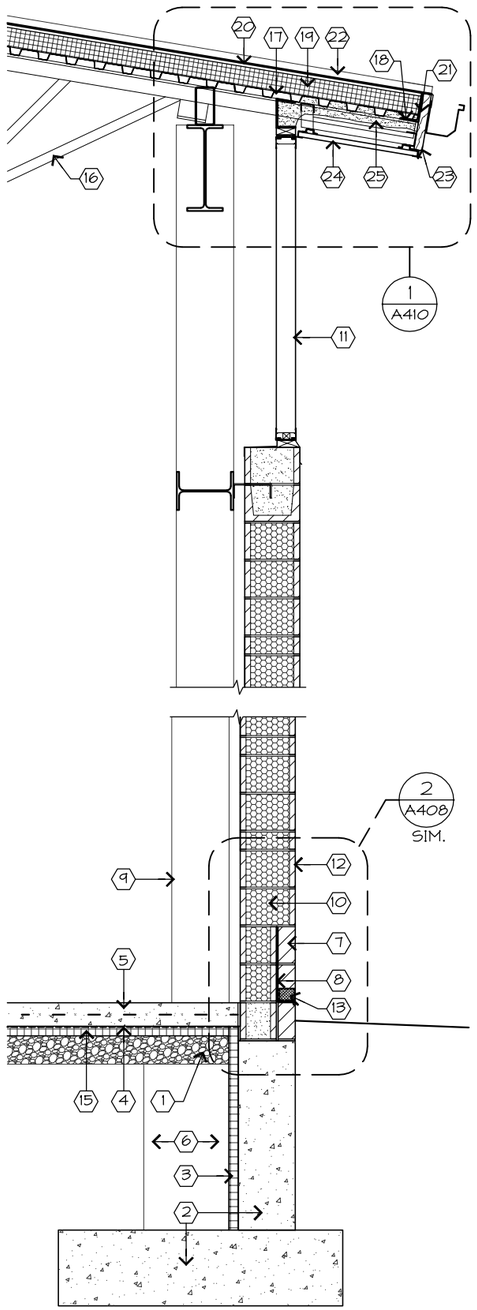
2 CANOPY SECTION

3/8"=1'-0"

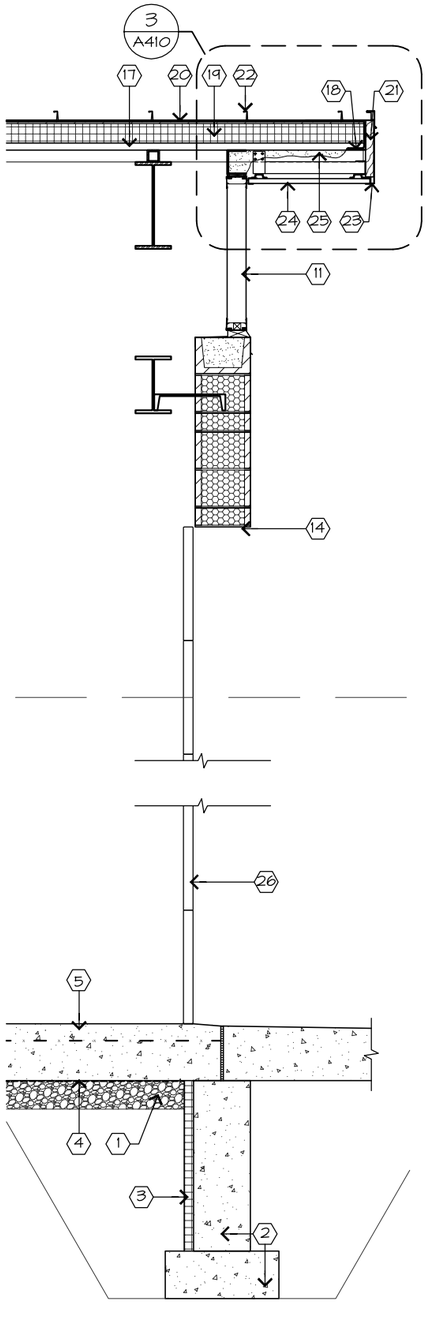
SECTION KEY NOTES

1. 6" COMPACT AGGREGATE BASE
2. REFER TO STRUCTURAL PLANS FOR CAST-IN-PLACE CONCRETE FOUNDATION & FOOTING
3. 2" THICK RIGID PERIMETER INSULATION
4. 15 MIL VAPOR BARRIER
5. CONCRETE SLAB-ON-GRADE. SEE STRUCTURAL PLANS FOR THICKNESS & REINFORCING.
6. COMPACTED BACKFILL
7. 6" CMU STARTER COURSE. FILL W/ GROUT.
8. THRU-WALL FLASHING OVER STAINLESS STEEL DRIP EDGE.
9. CMU VENEER. REFER TO EXTERIOR ELEVATIONS & SPECIFICATION.
10. CORE-FILLED FOAM INSULATION. SEE SPEC.
11. SPRAY-APPLIED AIR BARRIER MEMBRANE.
12. CMU - REFER TO STRUCTURAL PLANS FOR REINFORCING. SEE PLANS, WALL TYPES, & EXTERIOR ELEVATIONS.
13. WEEP VENTS IN HEAD JOINTS 32" O.C.
14. GALV. STEEL LINTEL. PAINT EXPOSED.
15. WATER PROOFING MEMBRANE
16. STEEL BAR JOISTS. REFER TO STRUCTURAL PLANS.
17. STEEL ROOF DECKING. REFER TO STRUCT. PLANS.
18. PERIMETER STEEL ANGLE. REFER TO STRUCT. PLANS.
19. DRAINAGE BOARD OVER 2"T. RIGID PERIMETER INSULATION.
20. ALUMINUM STOREFRONT WINDOW W/ INSUL. GLAZING.
21. 1¾" X 11-7/8" LSL SUB-FASCIA ATTACHED TO PERIMETER ANGLE.
22. 2 1/2" LIGHT GAGE METAL FRAMING 48" O.C.
23. 7/8" HAT CHANNEL 2' O.C.
24. PRE.FIN. METAL SOFFIT PANEL
25. CLOSED-CELL SPRAY-FOAM INSULATION.
26. PRE.FIN. METAL FASCIA PANEL
27. STANDING SEAM METAL ROOFING
28. ICE & WATERSHIELD ROOF UNDERLAYMENT
29. NAIL-BASE INSULATION SYSTEM
30. 2" RIGID INSULATION BELOW SLAB
31. LOOSE & NON COMPACTED BACKFILL
32. 6" NON COMPACTED AGGREGATE BASE.
33. FLOOR GRID - SEE DETAIL 2/A106.
34. STEEL PURLINS. SEE STRUCTURAL PLANS.
35. 5/8" OSB UNDERLAYMENT
36. SOLID SURFACE WINDOW STOOL.
37. WATERPROOFING MEMBRANE
38. PVC WATERSTOP
39. DRAIN TILE PIPING. SEE DETAIL 2/A101

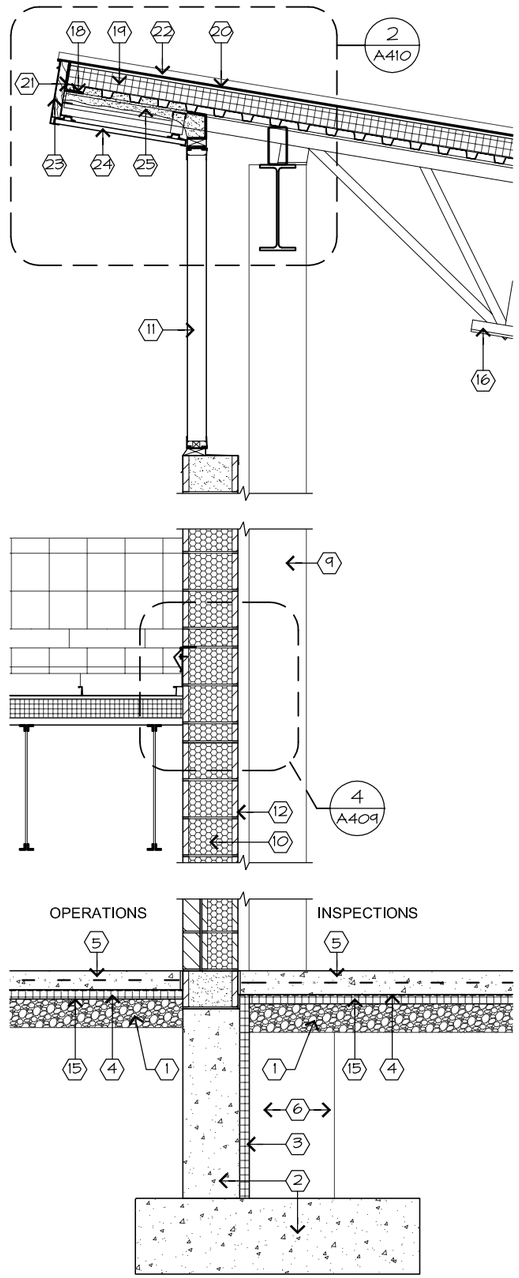
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			WALL SECTIONS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 8" 16" 32" 48"	SHEET NO: A404



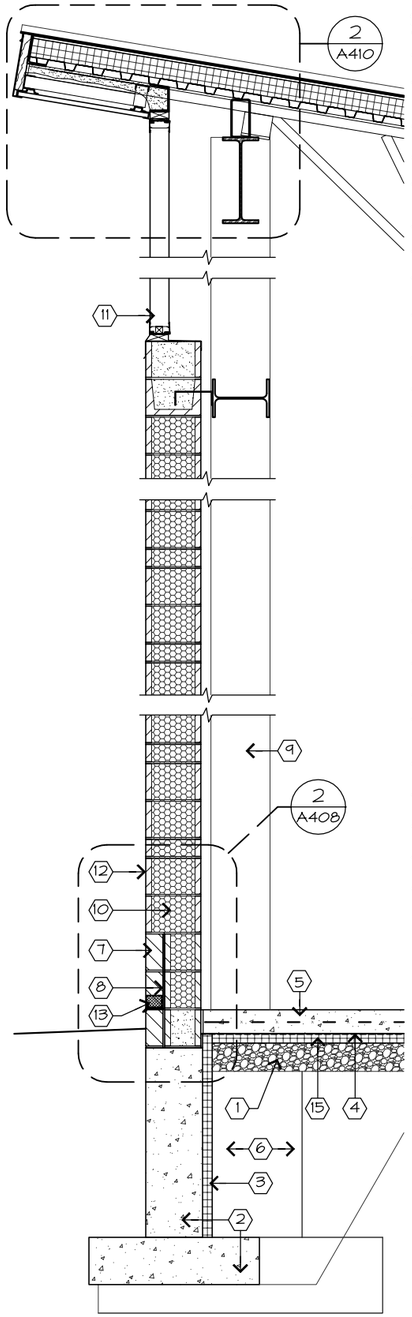
1 WALL SECTION
3/8"=1'-0"



2 WALL SECTION
3/8"=1'-0"



3 WALL SECTION
3/8"=1'-0"



4 WALL SECTION
3/8"=1'-0"

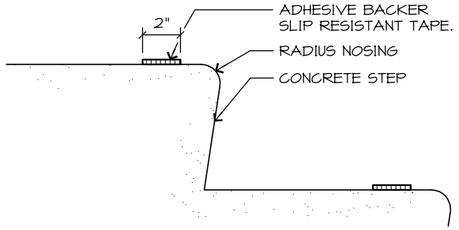
SECTION KEY NOTES

1. 6" COMPACT AGGREGATE BASE
2. REFER TO STRUCTURAL PLANS FOR CAST-IN-PLACE CONCRETE FOUNDATION & FOOTING
3. 2" THICK RIGID PERIMETER INSULATION
4. 15 MIL VAPOR BARRIER
5. CONCRETE SLAB-ON-GRADE. SEE STRUCTURAL PLANS FOR THICKNESS & REINFORCING.
6. COMPACTED BACKFILL
7. 4"W. CMU STARTER COURSES.
8. THRU-WALL FLASHING OVER STAINLESS STEEL DRIP EDGE.
9. WIDE FLANGE STEEL COLUMN. REFER TO STRUCTURAL PLANS.
10. CORE FILLED FOAM INSULATION. SEE SPEC.
11. TRANSLUCENT WALL PANEL. SEE SPECIFICATION.
12. CMU - REFER TO STRUCTURAL PLANS FOR REINFORCING. SEE PLANS, WALL TYPES, & EXTERIOR ELEVATIONS.
13. WEEP VENTS IN HEAD JOINTS 32" O.C.
14. GALV. STEEL LINTEL. PAINT EXPOSED.
15. 2" RIGID INSULATION BELOW SLAB
16. STEEL BAR JOISTS. REFER TO STRUCTURAL PLANS.
17. STEEL ROOF DECKING. REFER TO STRUCT. PLANS.
18. PERIMETER STEEL ANGLE. REFER TO STRUCT. PLANS.
19. NAIL-BASE INSULATION SYSTEM
20. ICE & WATERSHIELD ROOF UNDERLAYMENT
21. 1¾" X 11-7/8" LSL SUB-FASCIA ATTACHED TO PERIMETER ANGLE.
22. STANDING SEAM METAL ROOFING
23. PRE.FIN. METAL FASCIA PANEL
24. PRE.FIN. METAL SOFFIT PANEL
25. CLOSED-CELL SPRAY-FOAM INSULATION.
26. INSULATED OVERHEAD SECTIONAL DOOR.

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			WALL SECTIONS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 8" 16" 32" 48"	SHEET NO: A405

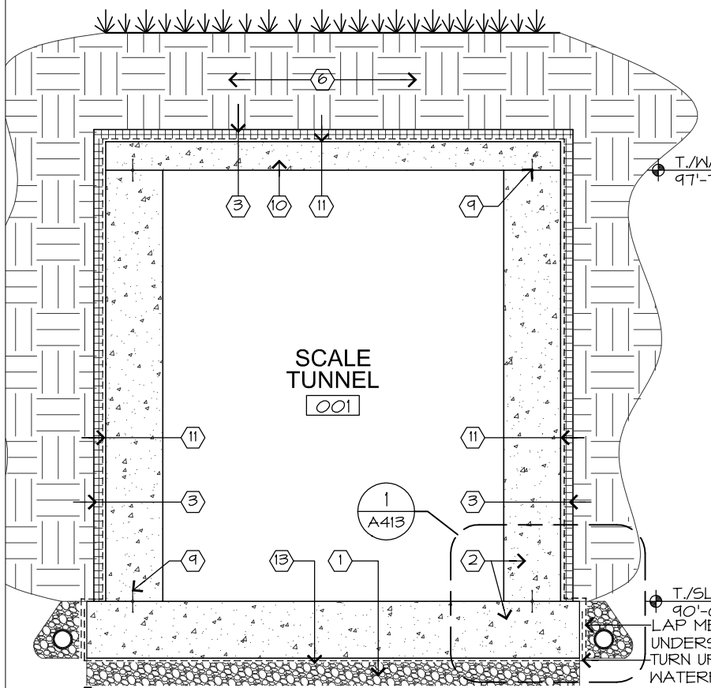
KEY NOTES

1. 6" COMPACT AGGREGATE BASE
2. REFER TO STRUCTURAL PLANS FOR CAST-IN-PLACE CONCRETE FOUNDATION & FOOTING
3. DRAINAGE BOARD OVER 2" THICK RIGID PERIMETER INSULATION
4. HANDRAIL. SEE 2/A413.
5. CONCRETE SLAB-ON-GRADE. SEE STRUCTURAL PLANS FOR THICKNESS & REINFORCING.
6. COMPACTED BACKFILL
7. CAST-IN-PLACE CONC. STAIRS. SEE STRUCT PLANS.
8. SLIP RESISTANT NOSING - SEE DETAIL 3/A406.
9. PVC WATERSTOP
10. CAST-IN-PLACE CONC. DECK. SEE STRUCT. PLANS.
11. FOUNDATION WALL WATERPROOF MEMBRANE. PER SPEC. SECTION 07 13 53.
12. DRAIN TILE PIPING - SEE DETAIL 1/A413.
13. UNDERSLAB WATERPROOFING MEMBRANE PER SPEC. SECTION 07 13 53.
14. CONTINUE WATERPROOFING MEMBRANE INTO JOINT BETWEEN FOUNDATION WALL AND TOP/ FOOTING.



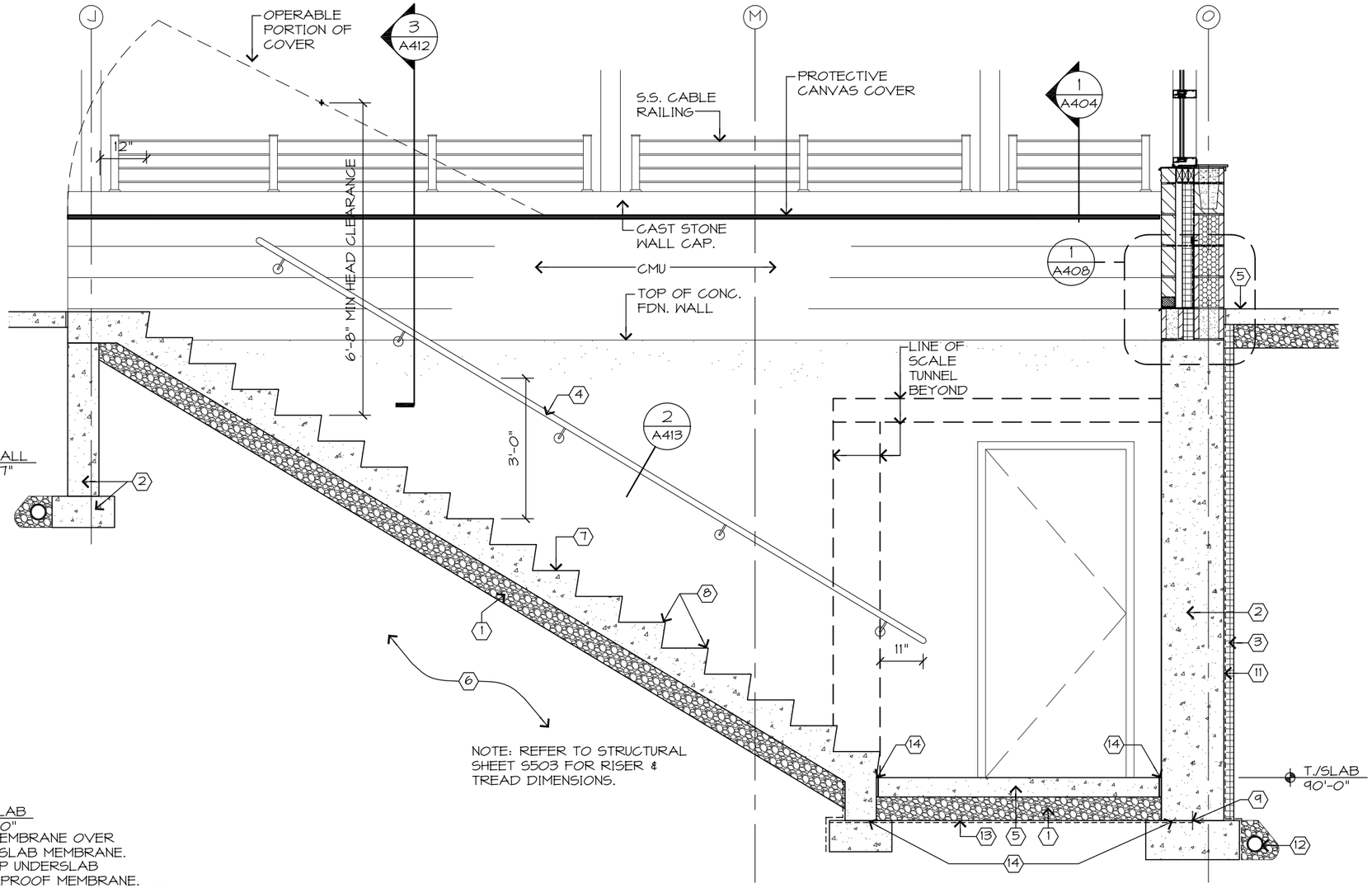
3 SLIP RESISTANT NOSINGS
1 1/2"=1'-0"

0 2" 4" 8" 12"



1 SCALE TUNNEL SECTION
3/8"=1'-0"

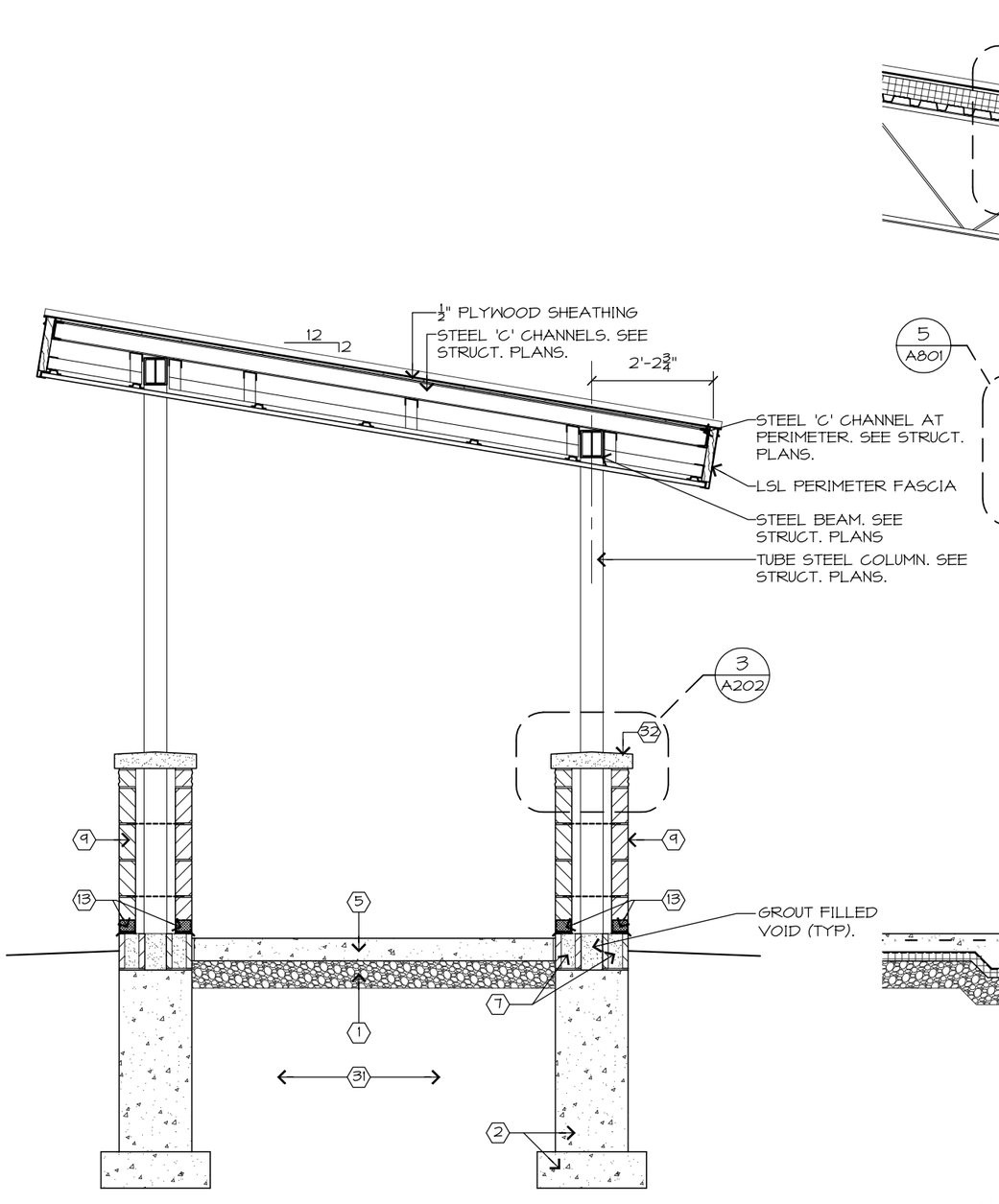
0 8" 16" 32" 48"



2 SCALE TUNNEL STAIR SECTION
3/8"=1'-0"

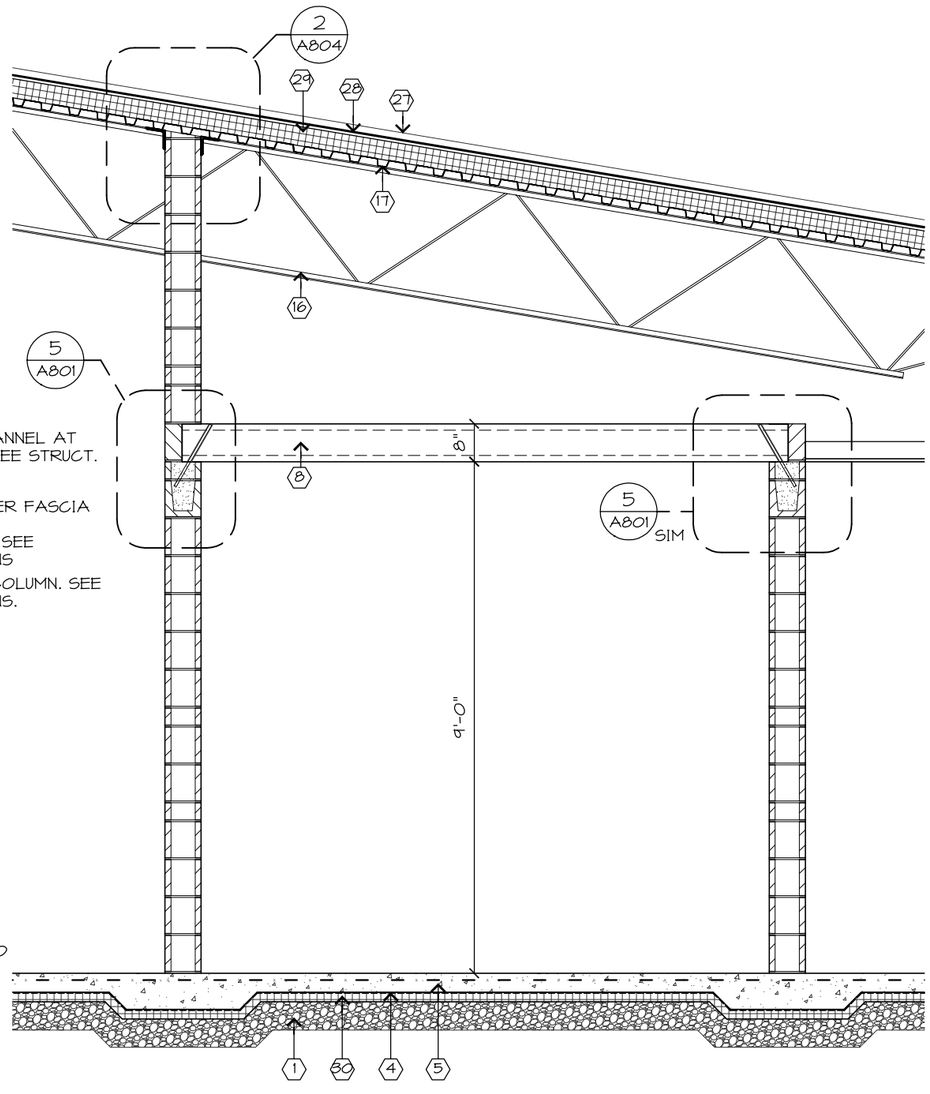
0 8" 16" 32" 48"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			SECTIONS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: A406



1 NORTH ENTRANCE CANOPY SECTION

3/8"=1'-0"



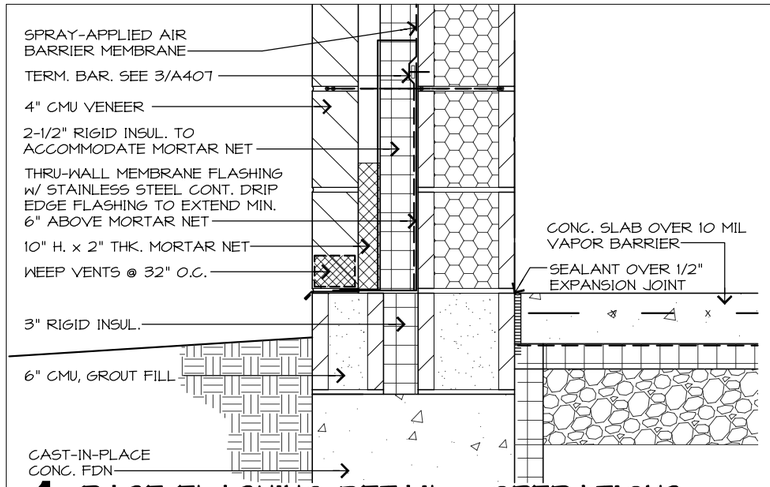
2 SECTION THRU 113 - MAINTENANCE STORAGE

3/8"=1'-0"

SECTION KEY NOTES

1. 6" COMPACT AGGREGATE BASE
2. REFER TO STRUCTURAL PLANS FOR CAST-IN-PLACE CONCRETE FOUNDATION & FOOTING
3. 2" THICK RIGID PERIMETER INSULATION
4. 15 MIL VAPOR BARRIER
5. CONCRETE SLAB-ON-GRADE. SEE STRUCTURAL PLANS FOR THICKNESS & REINFORCING.
6. COMPACTED BACKFILL
7. 6" CMU STARTER COURSE.
8. PRECAST HOLLOW CORE CONC. PLANK. SEE STRUCT.PLANS.
9. CMU VENEER. REFER TO EXTERIOR ELEVATIONS & SPECIFICATION.
10. CORE-FILLED FOAM INSULATION. SEE SPEC.
11. SPRAY-APPLIED AIR BARRIER MEMBRANE.
12. CMU - REFER TO STRUCTURAL PLANS FOR REINFORCING. SEE PLANS, WALL TYPES, & EXTERIOR ELEVATIONS.
13. WEEP VENTS IN HEAD JOINTS 32" O.C.
14. GALV. STEEL LINTEL. PAINT EXPOSED.
15. SUSPENDED ACOUSTICAL TILE CEILING
16. STEEL BAR JOISTS. REFER TO STRUCTURAL PLANS.
17. STEEL ROOF DECKING. REFER TO STRUCT. PLANS.
18. PERIMETER STEEL ANGLE. REFER TO STRUCT. PLANS.
19. HOLLOW METAL BORROW LITE.
20. ALUMINUM STOREFRONT WINDOW W/ INSUL. GLAZING.
21. 1¾" X 11-7/8" LSL SUB-FASCIA ATTACHED TO PERIMETER ANGLE.
22. GYP. BD. OVER LIGHT GUAGE METAL STUDS 24" O.C.
23. GYP. BD. CEILING SYSTEM
24. PRE.FIN. METAL SOFFIT PANEL
25. CLOSED-CELL SPRAY-FOAM INSULATION.
26. PRE.FIN. METAL FASCIA PANEL
27. STANDING SEAM METAL ROOFING
28. ICE & WATERSHIELD ROOF UNDERLAYMENT
29. NAIL-BASE INSULATION SYSTEM
30. 2" RIGID INSULATION BELOW SLAB
31. LOOSE AND UNCOMPACTED BACKFILL
32. CAST STONE PIER CAP. SEE DETAIL 2/A202.

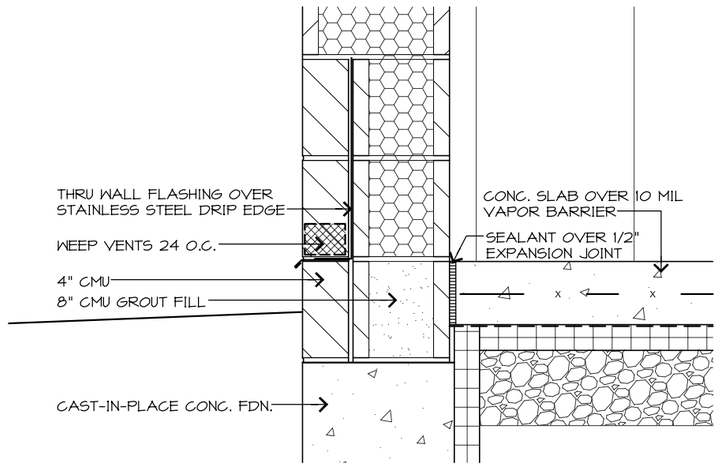
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			SECTIONS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 8" 16" 32" 48"	SHEET NO: A407



1 BASE FLASHING DETAIL - OPERATIONS

1"=1'-0"

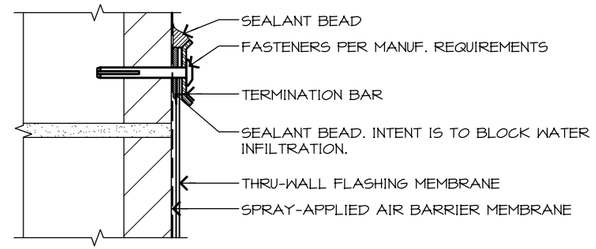
0 3" 6" 1 1.5



2 BASE FLASHING DETAIL - INSPECTIONS

1"=1'-0"

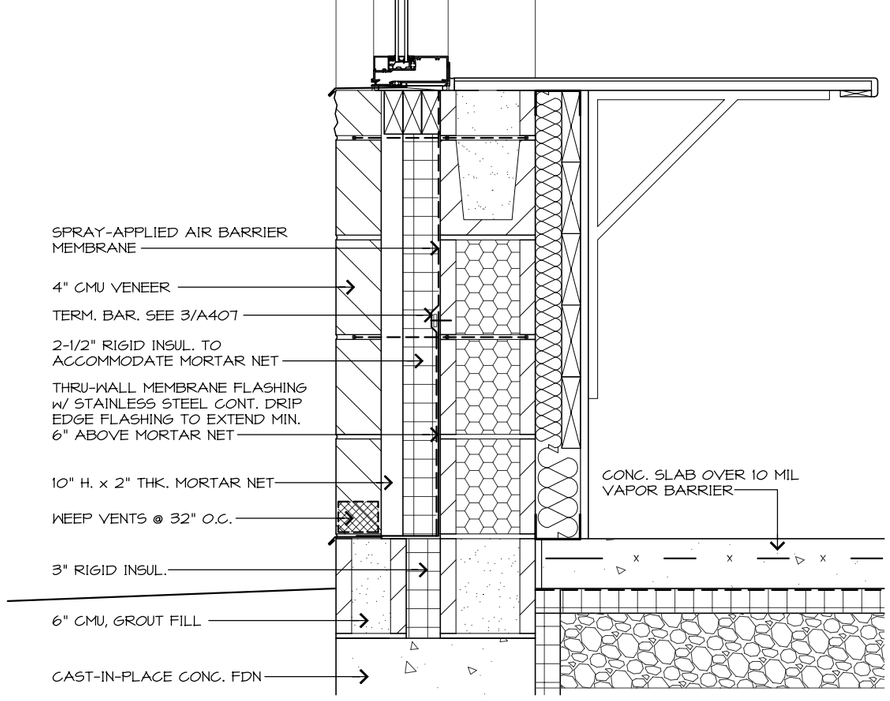
0 3" 6" 1 1.5



3 TERMINATION BAR DETAIL

3"=1'-0"

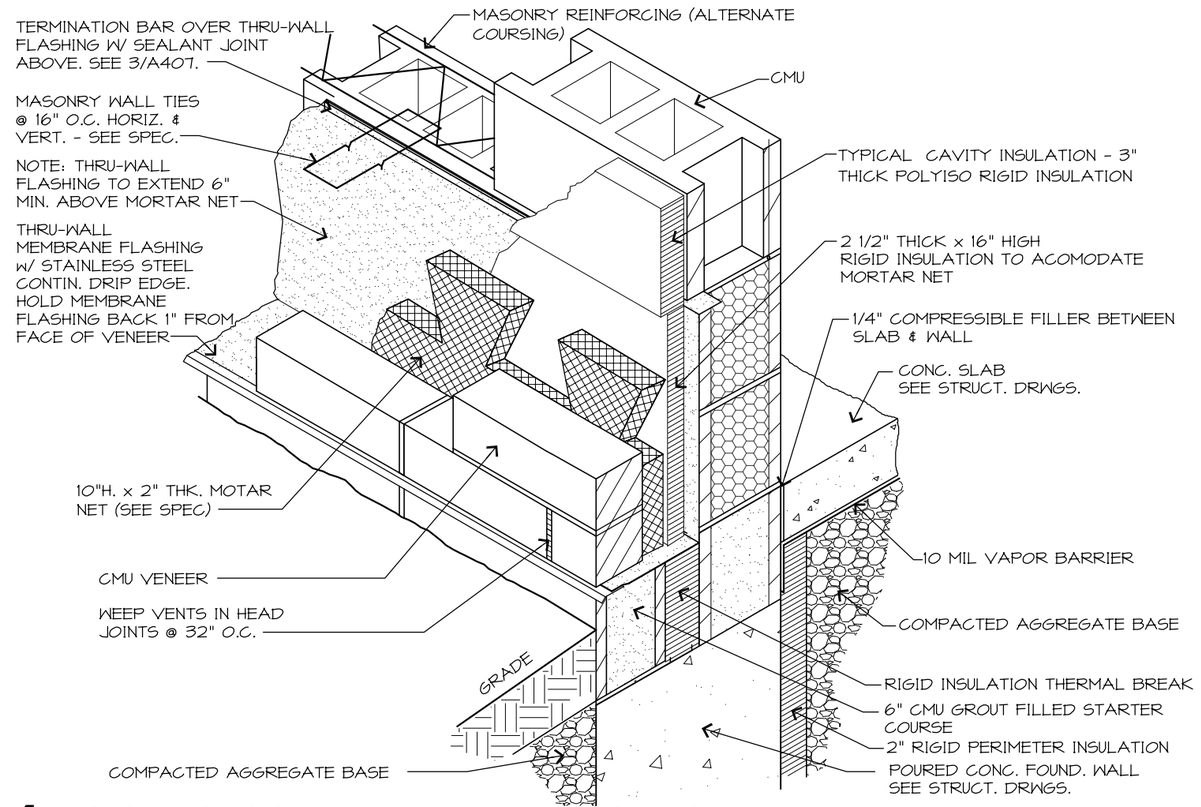
0 1" 2" 4" 6"



1A BASE FLASHING DETAIL - OPERATIONS

1"=1'-0"

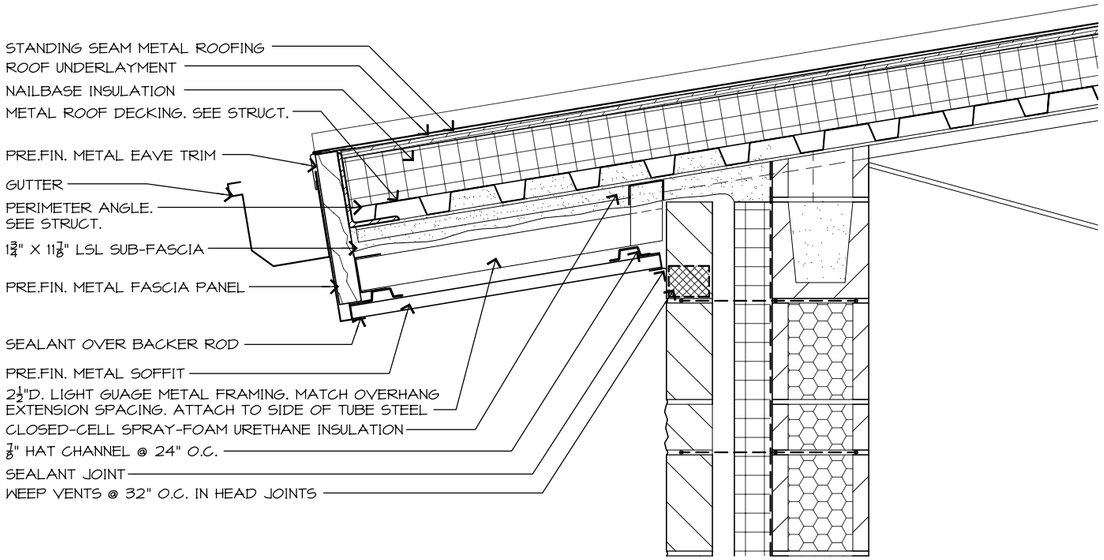
0 3" 6" 1 1.5



4 BASE FLASHING ISOMETRIC - OPERATIONS

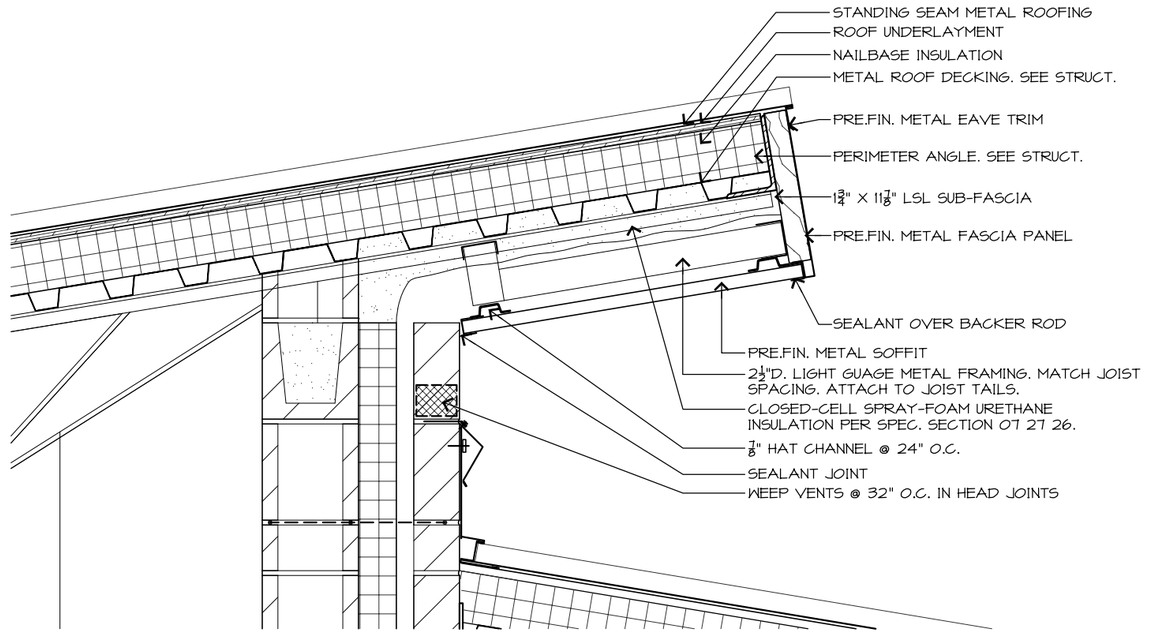
N.T.S.

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			FLASHING DETAILS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: A408



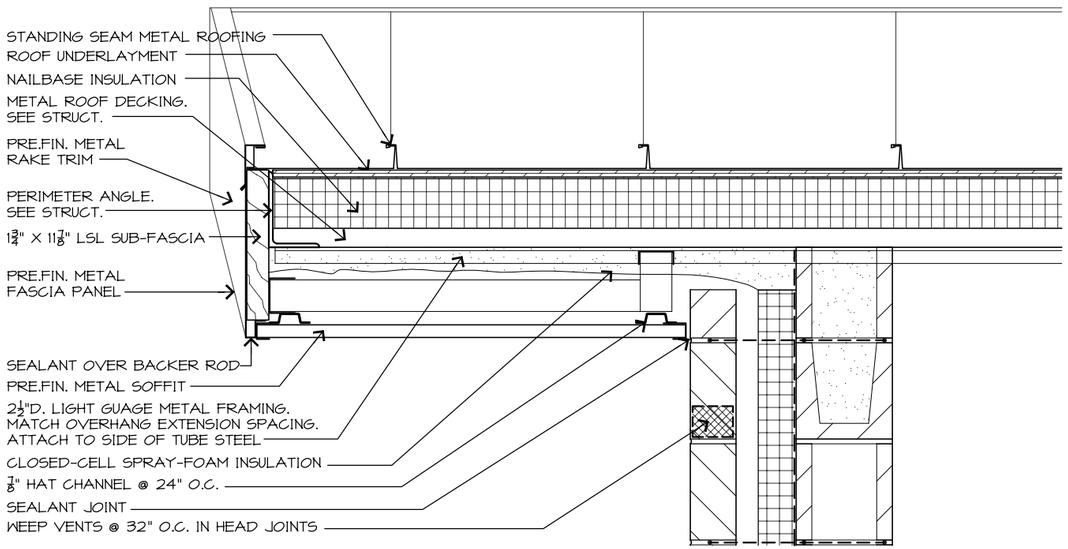
1 OVERHANG DETAIL - EAVE LOW SIDE

1"=1'-0"



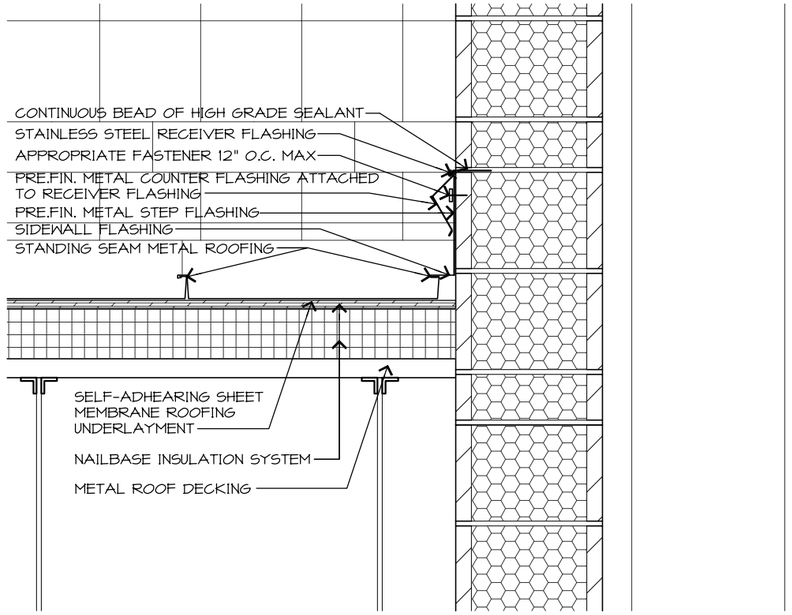
2 OVERHANG DETAIL - EAVE HIGH SIDE

1"=1'-0"



3 OVERHANG DETAIL - RAKE

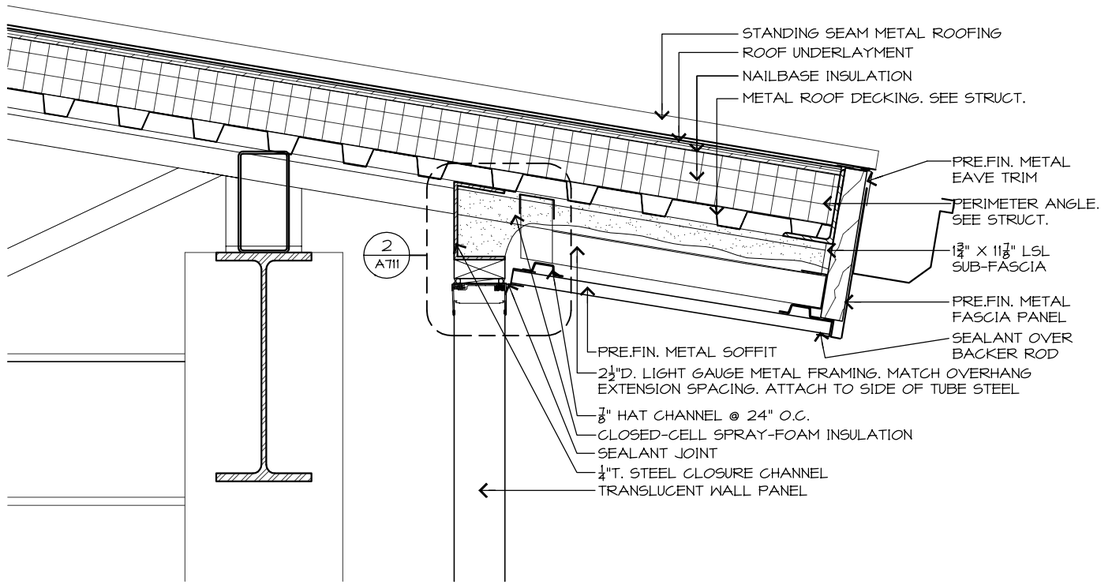
1"=1'-0"



4 ROOF TO WALL TRANSITION DETAIL

1"=1'-0"

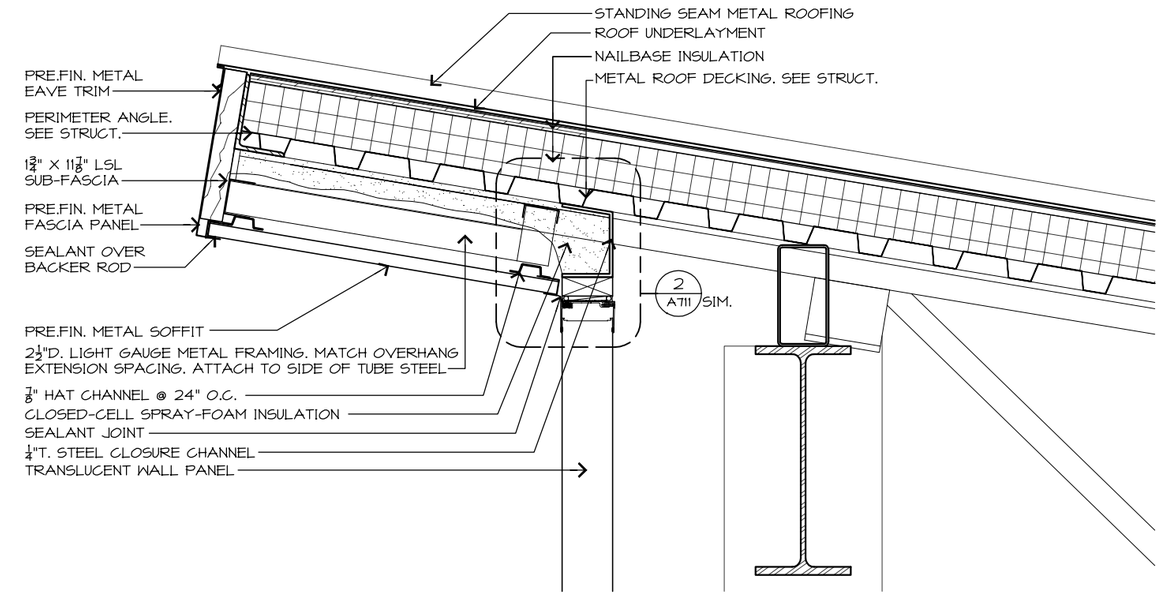
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			ROOF DETAILS - OPERATIONS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 3" 6" 1 1.5	SHEET NO: A409



1 OVERHANG DETAIL - EAVE LOW SIDE

1"=1'-0"

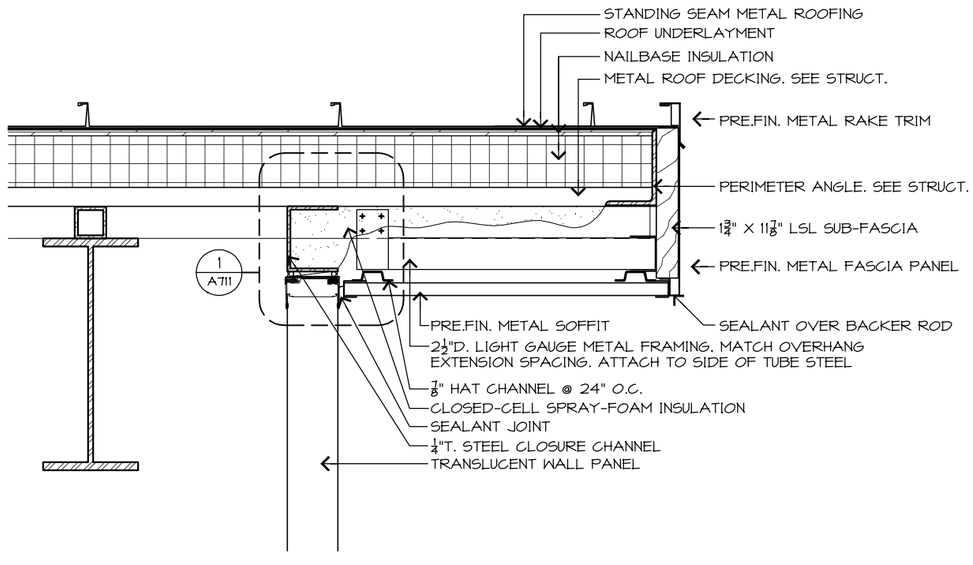
0 3" 6" 1 1.5



2 OVERHANG DETAIL - EAVE HIGH SIDE

1"=1'-0"

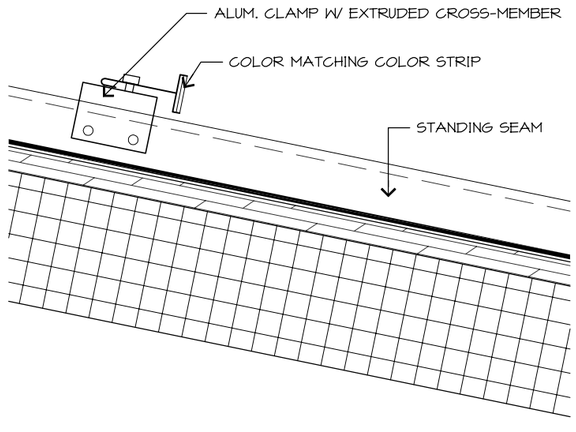
0 3" 6" 1 1.5



3 OVERHANG DETAIL - RAKE

1"=1'-0"

0 3" 6" 1 1.5

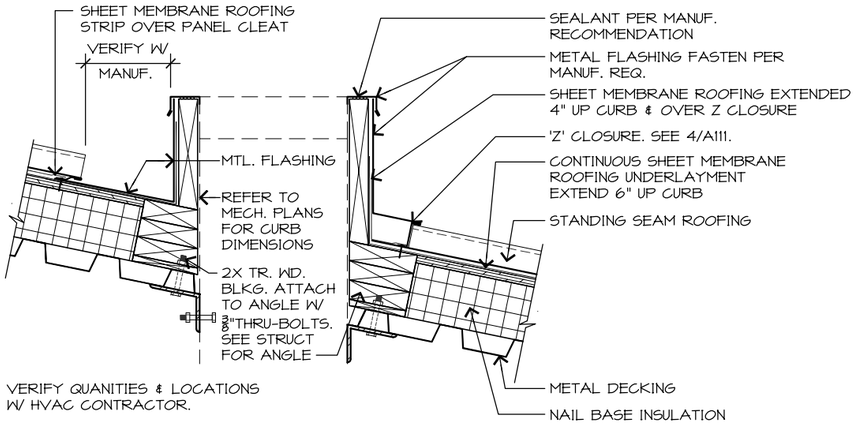


4 SNOW GUARD DETAIL

3"=1'-0"

0 1" 2" 4" 6"

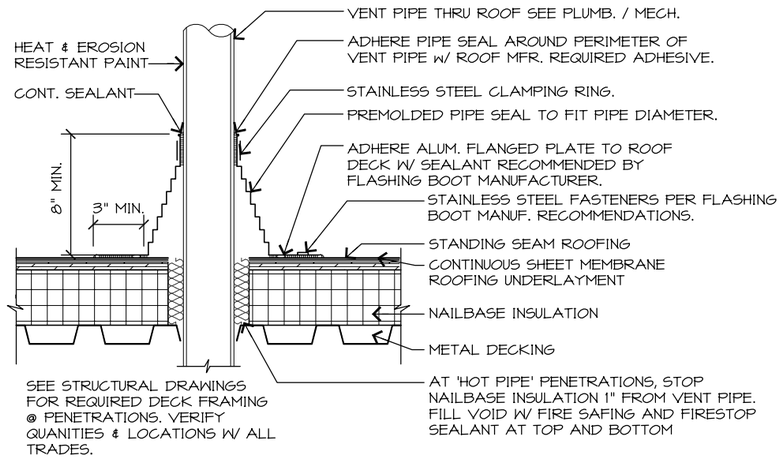
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			ROOF DETAILS - INSPECTIONS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: A410



1 ROOF CURB DETAIL

1"=1'-0"

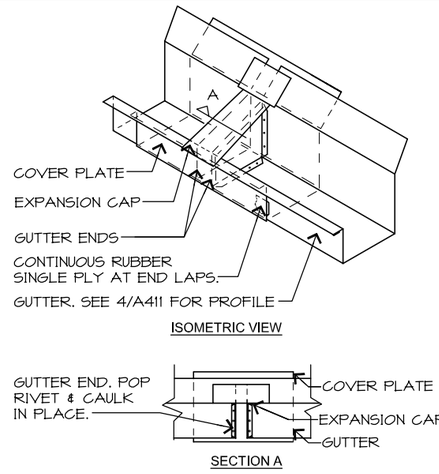
0 3" 6" 1 1.5



2 ROOF PENETRATION DETAIL

1"=1'-0"

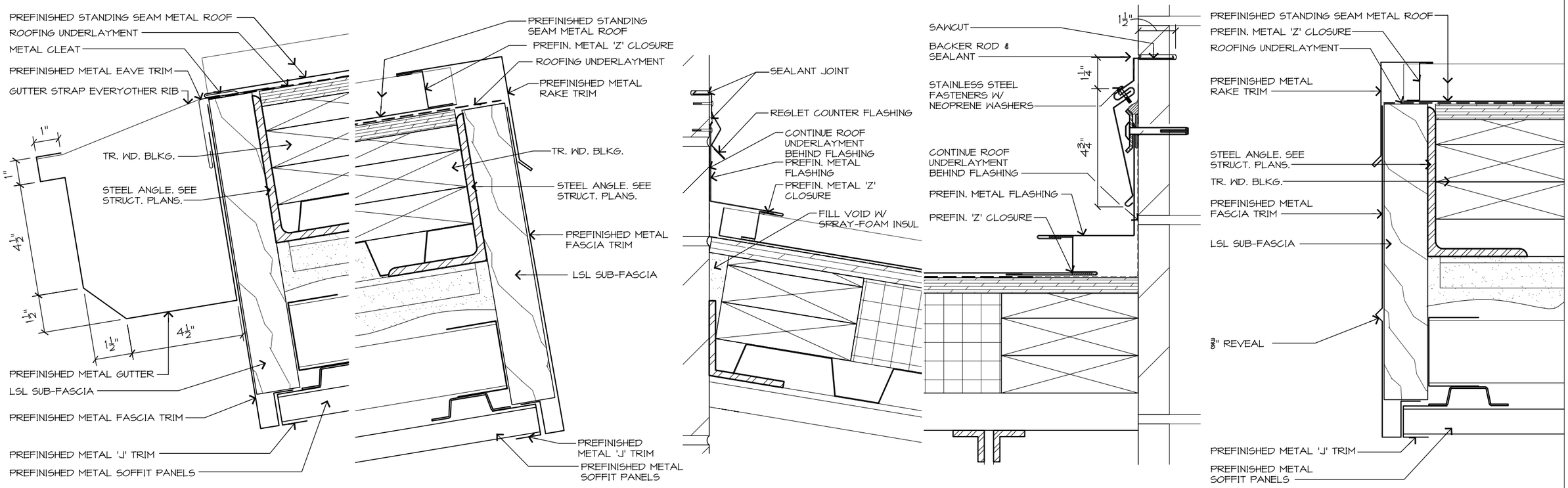
0 3" 6" 1 1.5



3 GUTTER EXPANSION JOINT DET.

1/2"=1'-0"

0 6" 1 2 3



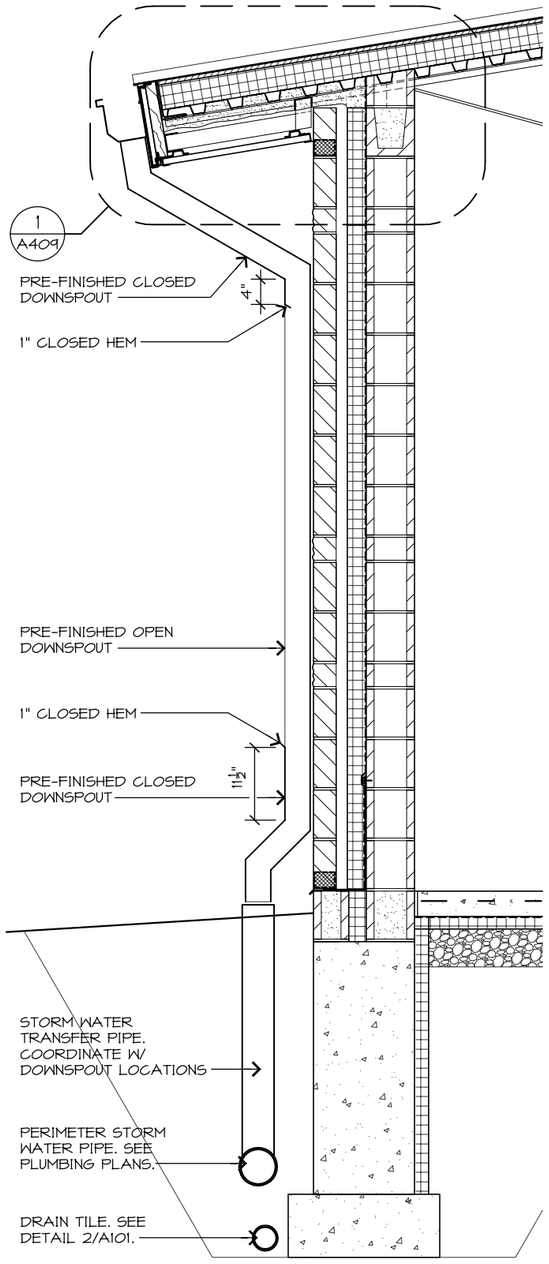
LOW-SIDE ROOF EDGE DETAIL | HIGH-SIDE ROOF EDGE DETAIL | HIGH-SIDE ROOF TRANSITION DETAIL | SIDEWALL ROOF TRANSITION DETAIL | RAKE DETAIL

4 ENLARGED ROOF EDGE DETAILS

3"=1'-0"

0 1" 2" 4" 6"

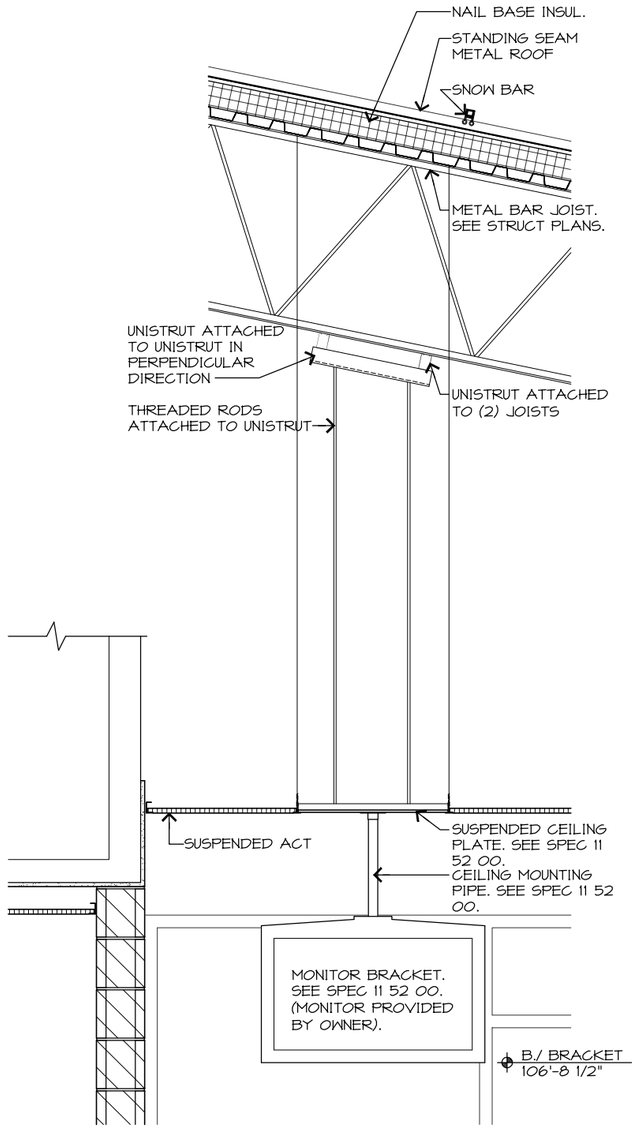
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			ROOF DETAILS		DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: A411	



1 WALL SECTION AT DOWNSPOUT

1/2"=1'-0"

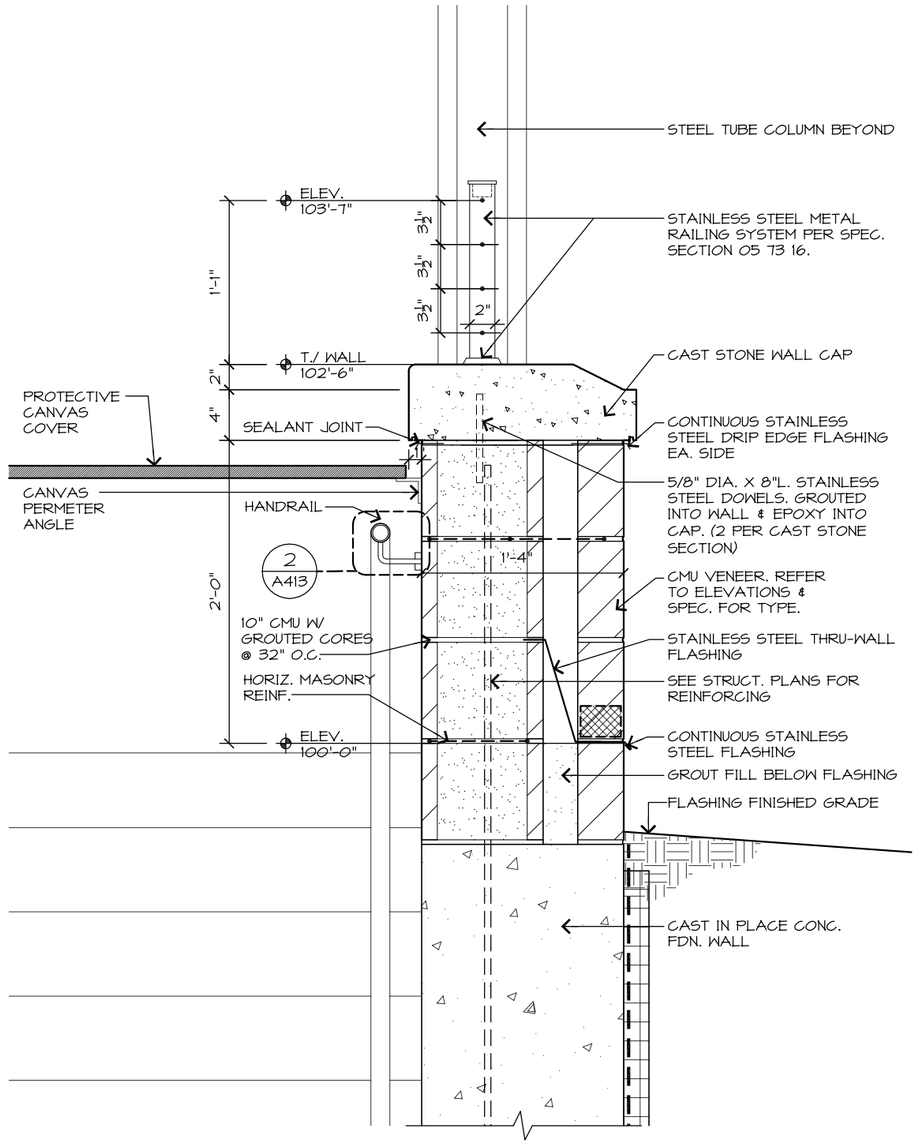
0 6" 1 2 3



2 WEATHER MONITOR MOUNTING DETAIL

1/2"=1'-0"

0 6" 1 2 3

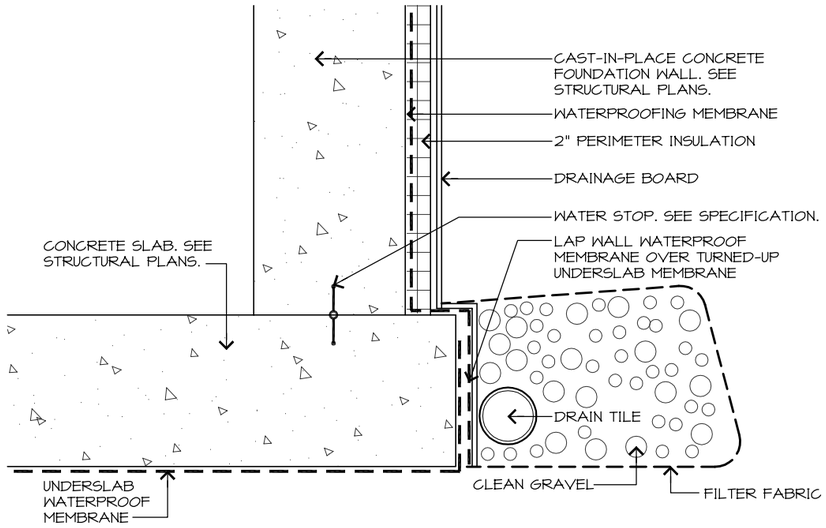


3 PARTIAL HEIGHT WALL SECTION W/CABLE

1"=1'-0"

0 3" 6" 1 1.5

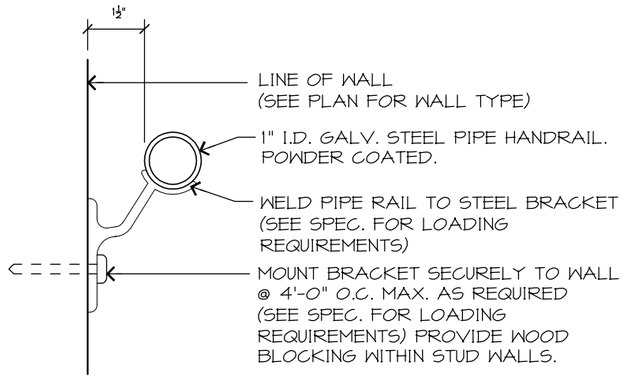
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DETAILS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: A412	



1 FOUNDATION WATERPROOFING DRAIN TILE DETAIL

1"=1'-0"

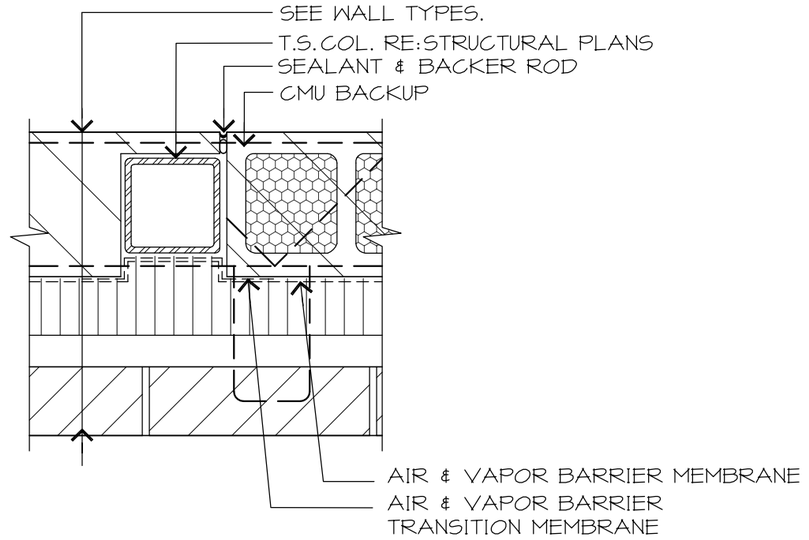
0 3" 6" 1 1.5



2 SURFACE MOUNTED PIPE RAILING ANCHOR

3"=1'-0"

0 1" 2" 4" 6"

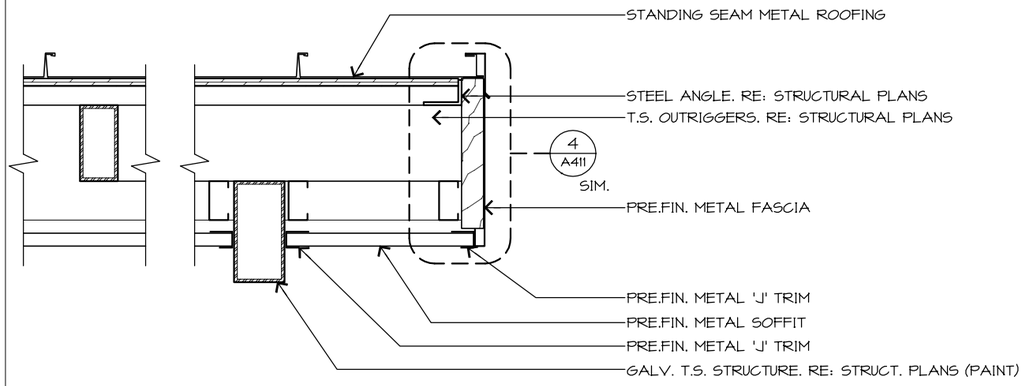


3 STEEL COLUMN AT CAVITY WALL

1 1/2"=1'-0"

0 2" 4" 8" 12"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			SECTIONS	DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 4 8 16 24	SHEET NO: A413



1 PUBLIC ENTRY RAKE DETAIL

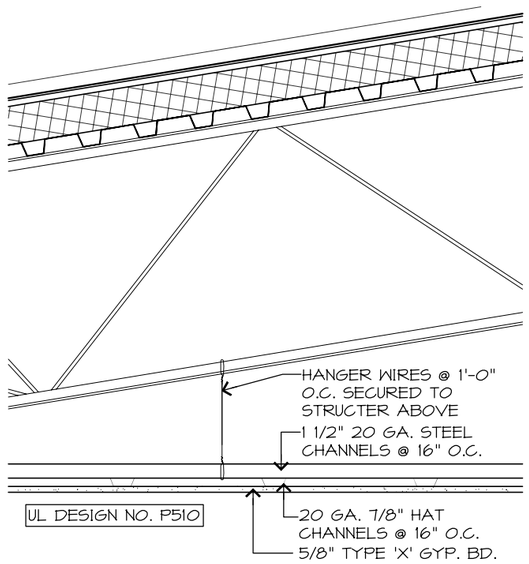
1"=1'-0"

0 3" 6" 1 1.5

2 NOT USED

1 1/2"=1'-0"

0 2" 4" 8" 12"

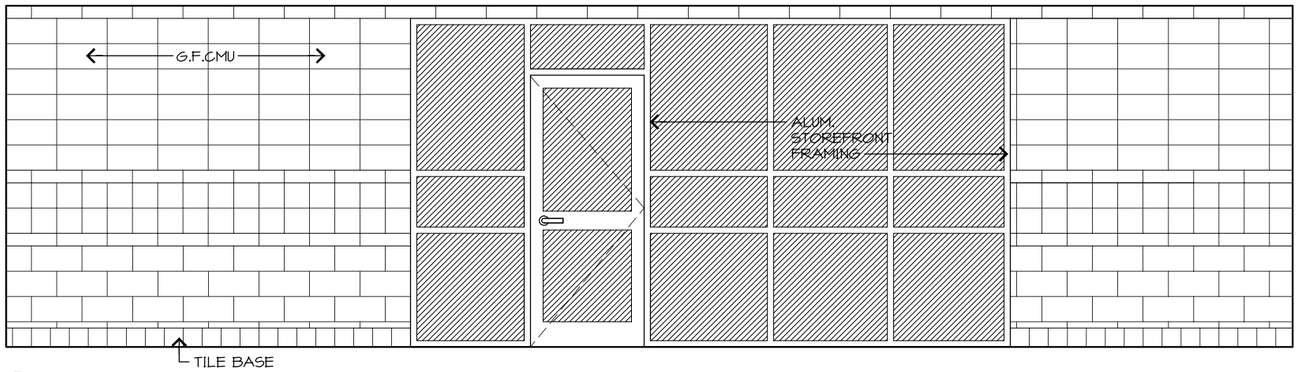


3 RATED CEILING DETAIL

3/4"=1'-0"

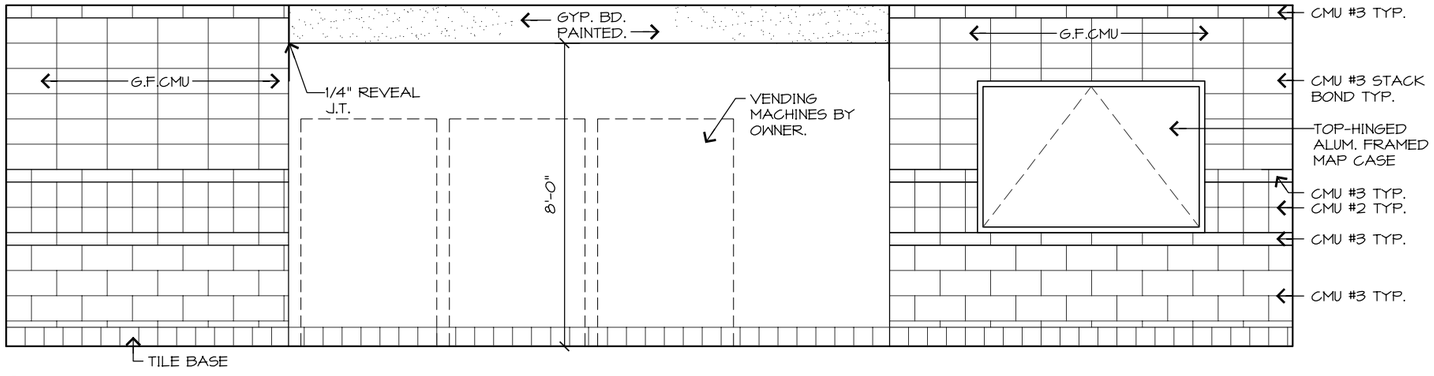
0 4" 8" 16" 24"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DETAILS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: A414	



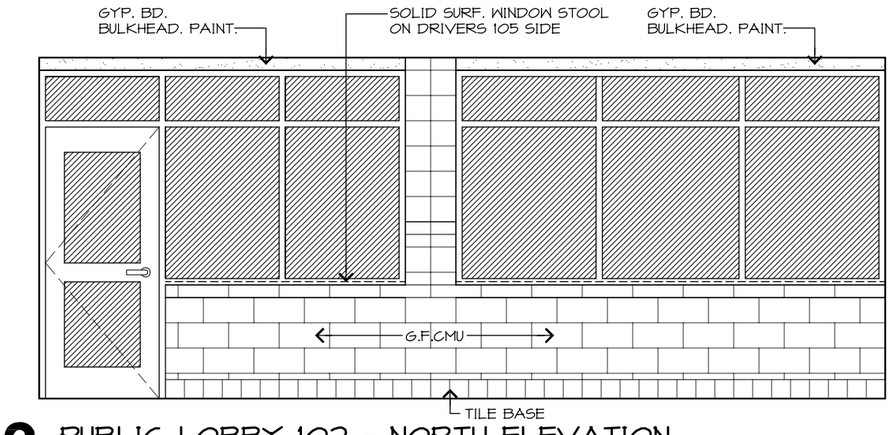
1 VESTIBULE 101 - WEST ELEVATION

1/4" = 1'-0"



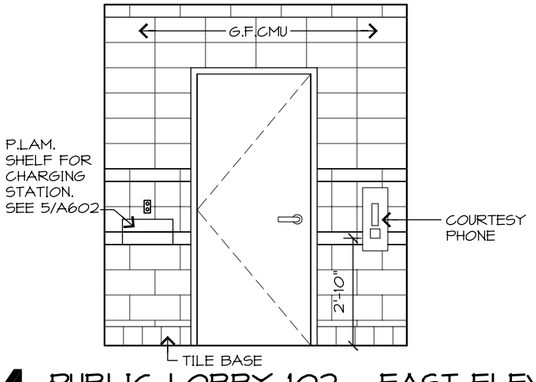
2 VESTIBULE 101 - EAST ELEVATION

1/4" = 1'-0"



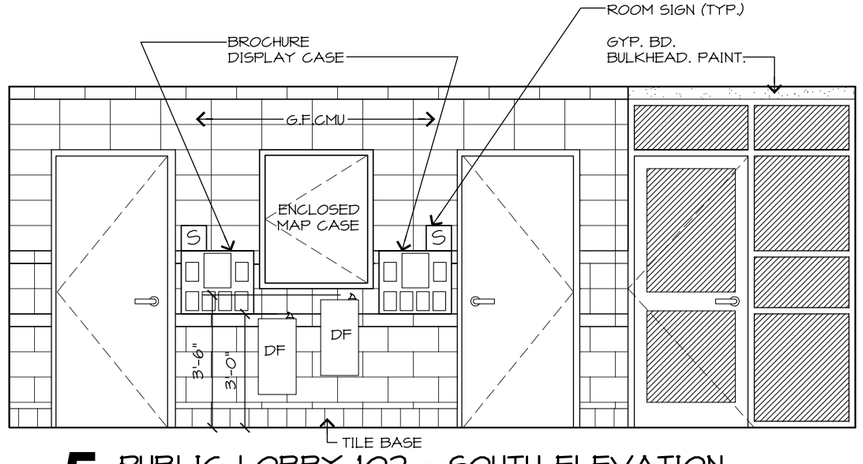
3 PUBLIC LOBBY 102 - NORTH ELEVATION

1/4" = 1'-0"



4 PUBLIC LOBBY 102 - EAST ELEV.

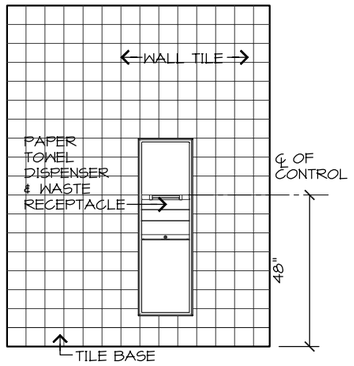
1/4" = 1'-0"



5 PUBLIC LOBBY 102 - SOUTH ELEVATION

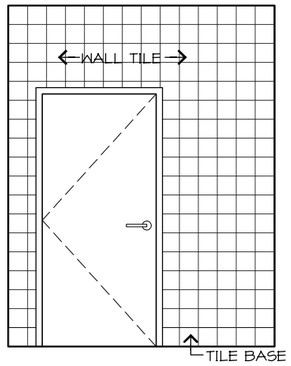
1/4" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			INTERIOR ELEVATIONS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 1 2 4 6	SHEET NO: A501



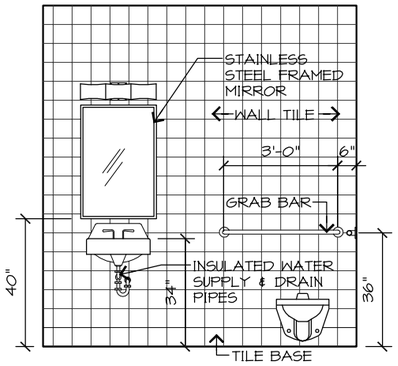
1 WOMENS. 103 - WEST ELEV.

1/4" = 1'-0"



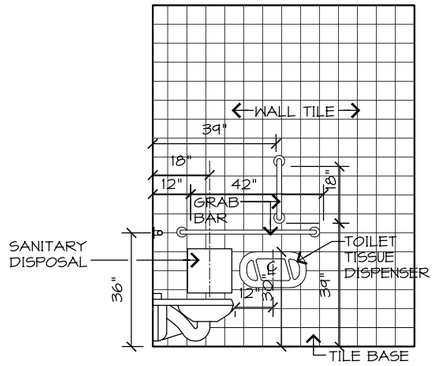
2 WOMENS. 103 - NORTH ELEV.

1/4" = 1'-0"



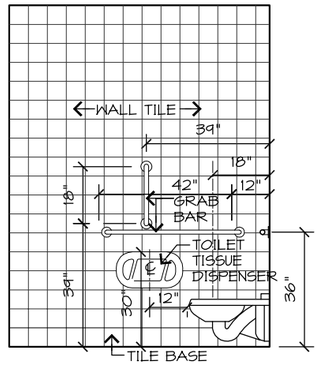
3 WOMENS 103 - EAST ELEV.

1/4" = 1'-0"



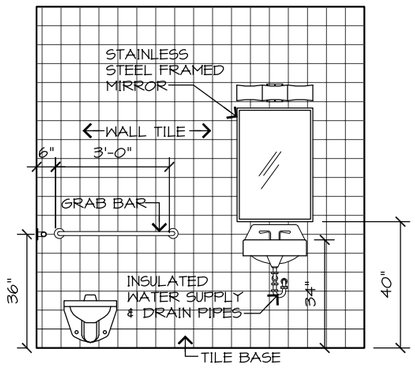
4 WOMENS 103 - SOUTH ELEV.

1/4" = 1'-0"



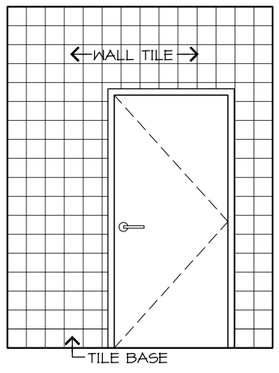
5 MENS 104 - SOUTH ELEV.

1/4" = 1'-0"



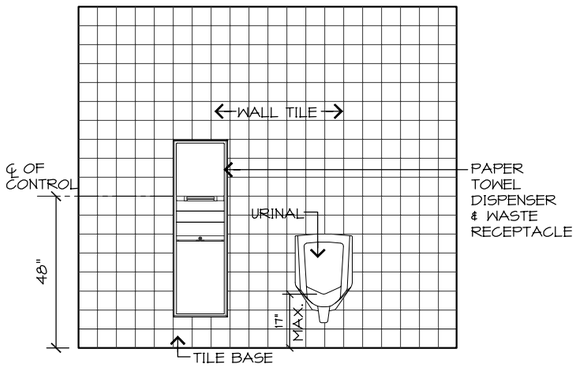
6 MENS 104 - WEST ELEV.

1/4" = 1'-0"



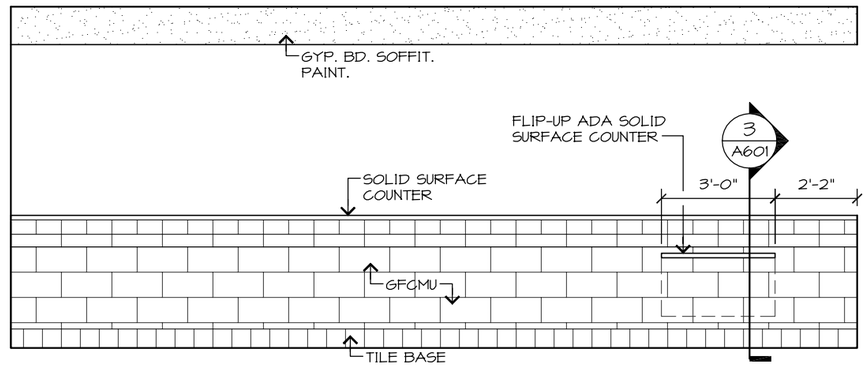
7 MENS 104 - NORTH ELEV.

1/4" = 1'-0"



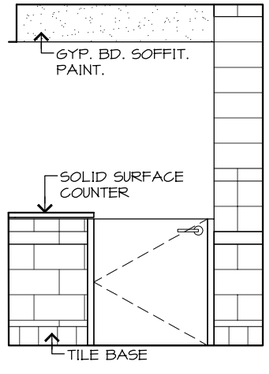
8 MENS 104 - EAST ELEV.

1/4" = 1'-0"



9 DRIVERS 105 - NORTH ELEVATION

1/4" = 1'-0"



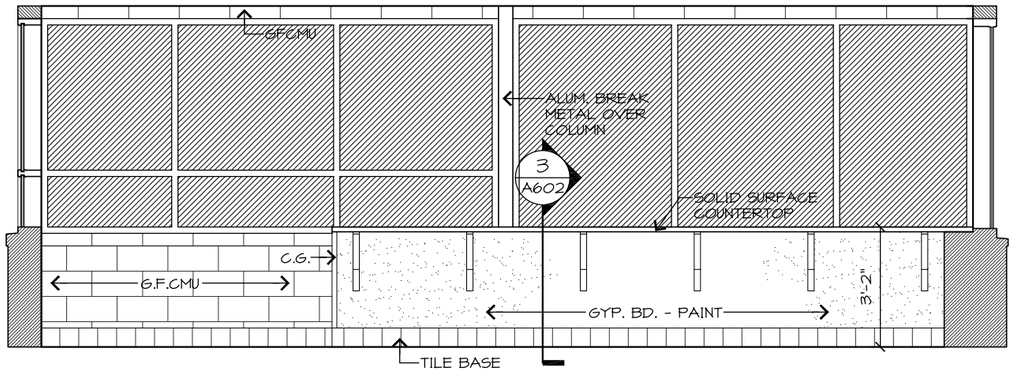
10 DRIVERS 105 - EAST ELEV.

1/4" = 1'-0"

GENERAL NOTES

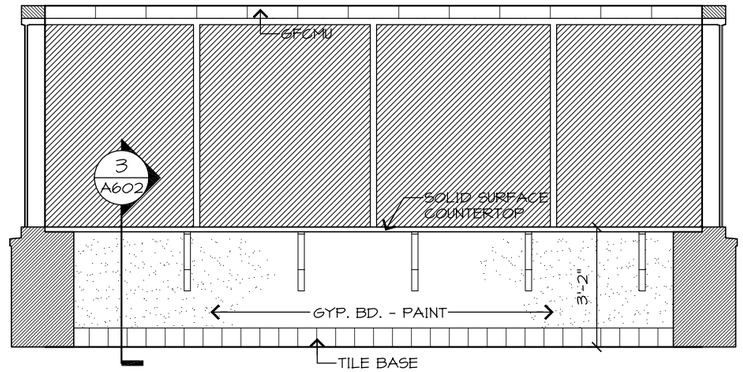
A. SEE 1/A508 FOR GRAB BAR DETAIL

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			INTERIOR ELEVATIONS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 1 2 4 6	SHEET NO: A502



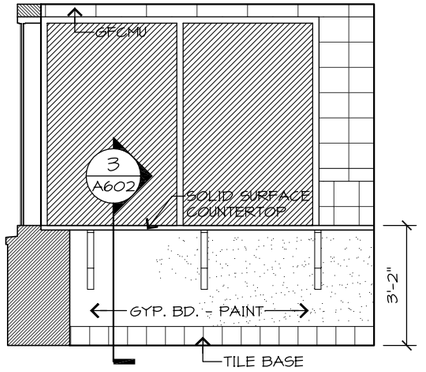
1 OPERATIONS 106 - WEST ELEVATION

1/4" = 1'-0"



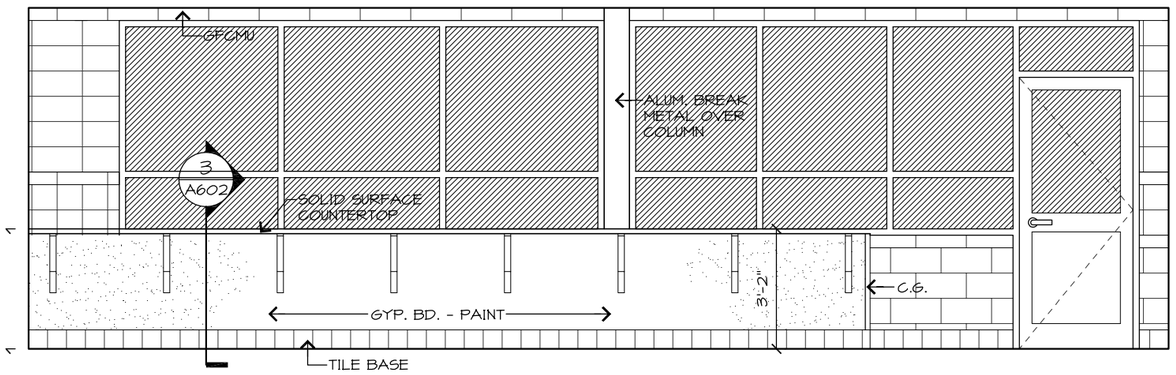
2 OPERATIONS 106 - NORTH ELEVATION

1/4" = 1'-0"



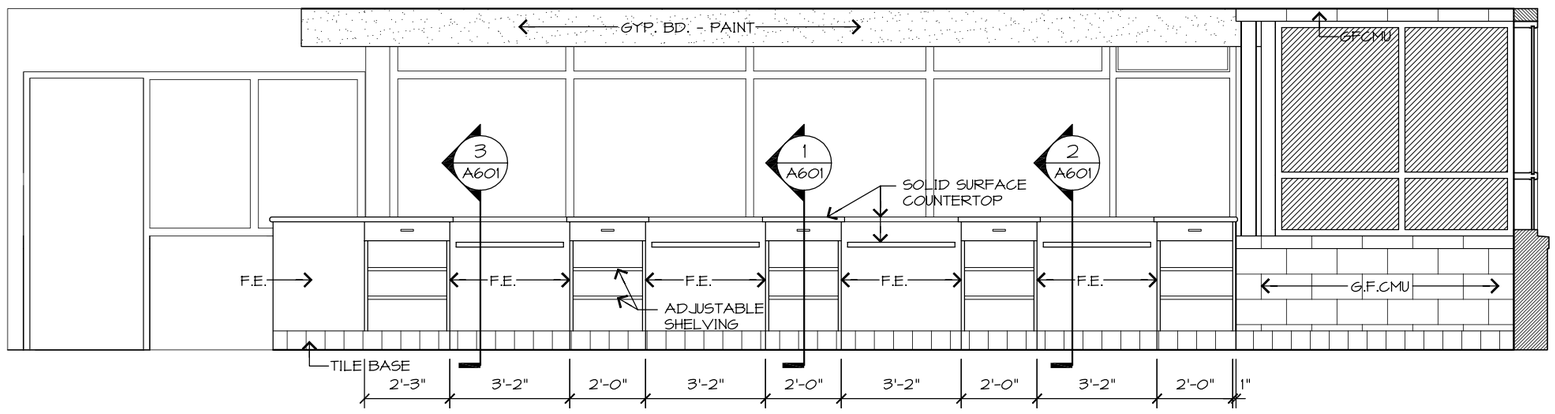
3 OPERATIONS 106 - EAST ELEV.

1/4" = 1'-0"



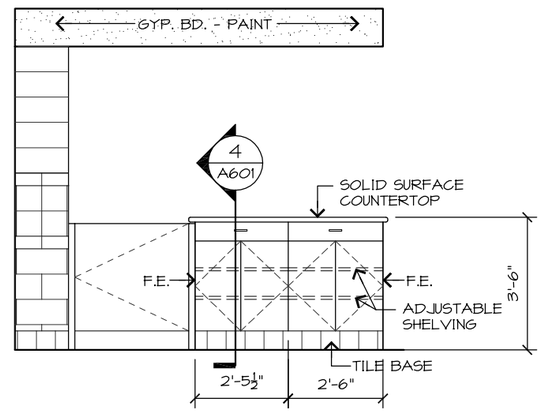
4 OPERATIONS 106 - NORTH ELEVATION (ANGLED WALL)

1/4" = 1'-0"



5 OPERATIONS 106 - SOUTH ELEVATION

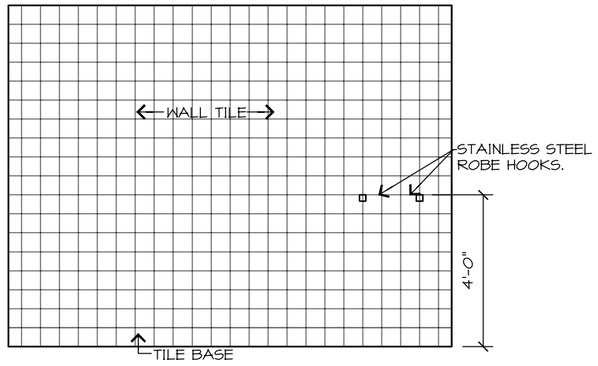
1/4" = 1'-0"



6 OPERATIONS 106 - WEST COUNTER ELEV.

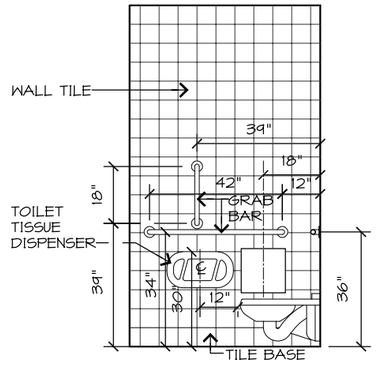
1/4" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			INTERIOR ELEVATIONS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 1 2 4 6	SHEET NO: A503



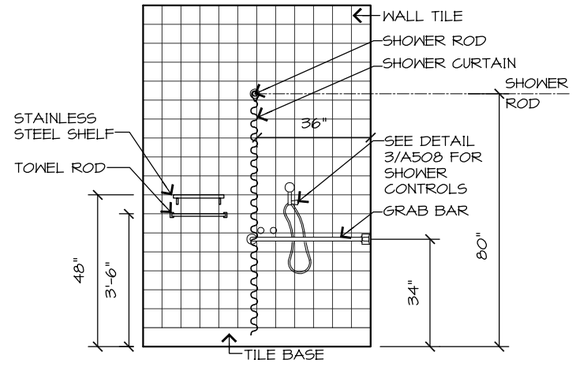
1 TOILET/SHOWER RM 108 - NORTH ELEV.

1/4" = 1'-0"



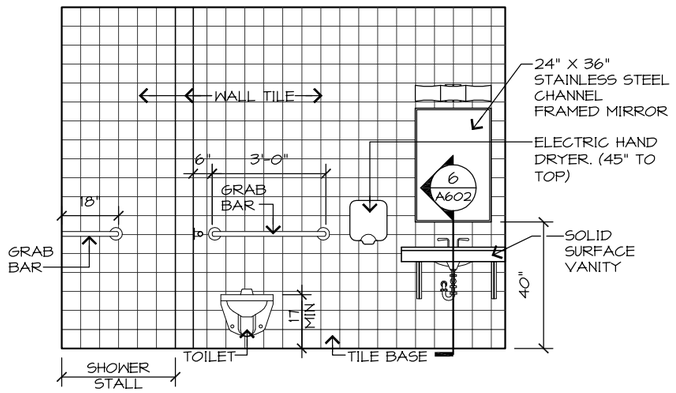
2 TOILET/SHOWER RM 108 - EAST ELEV. (INT. WALL)

1/4" = 1'-0"



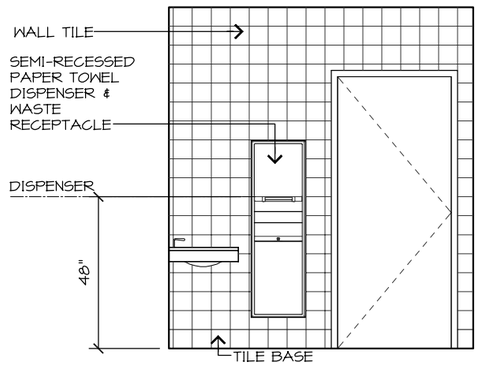
3 TOILET/SHOWER RM 108 - EAST ELEV.

1/4" = 1'-0"



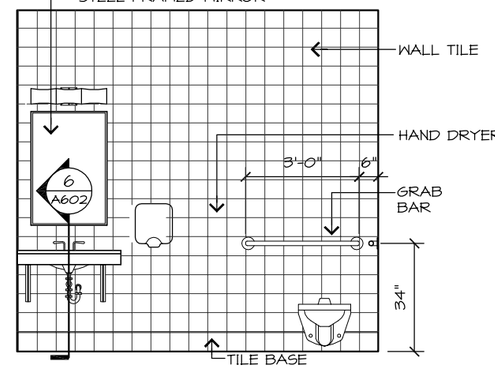
4 TOILET/SHOWER RM 108 - SOUTH ELEV.

1/4" = 1'-0"



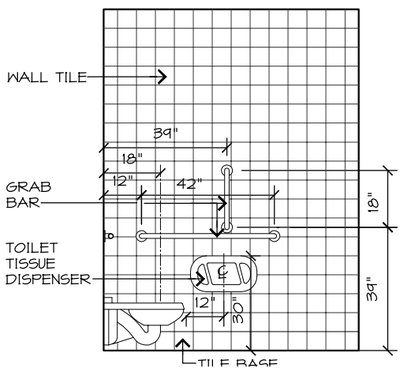
5 TOILET/SHOWER RM 108 - WEST ELEV.

1/4" = 1'-0"



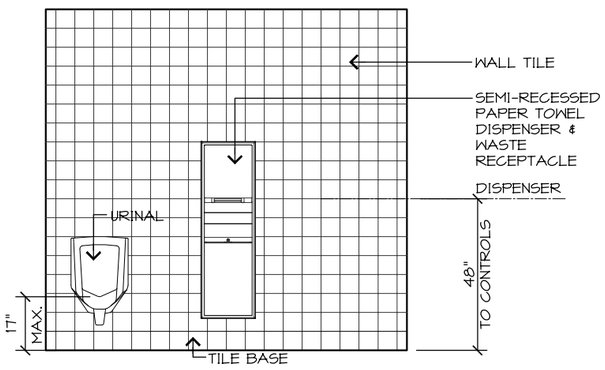
6 TOILET RM 110 - NORTH ELEV.

1/4" = 1'-0"



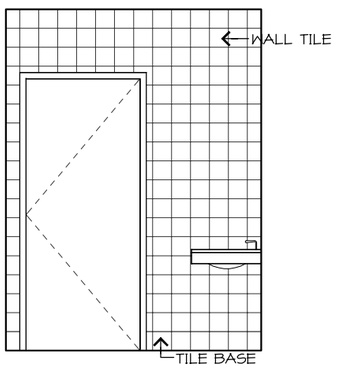
7 TOILET RM 110 - EAST ELEV.

1/4" = 1'-0"



8 TOILET RM 110 - SOUTH ELEV.

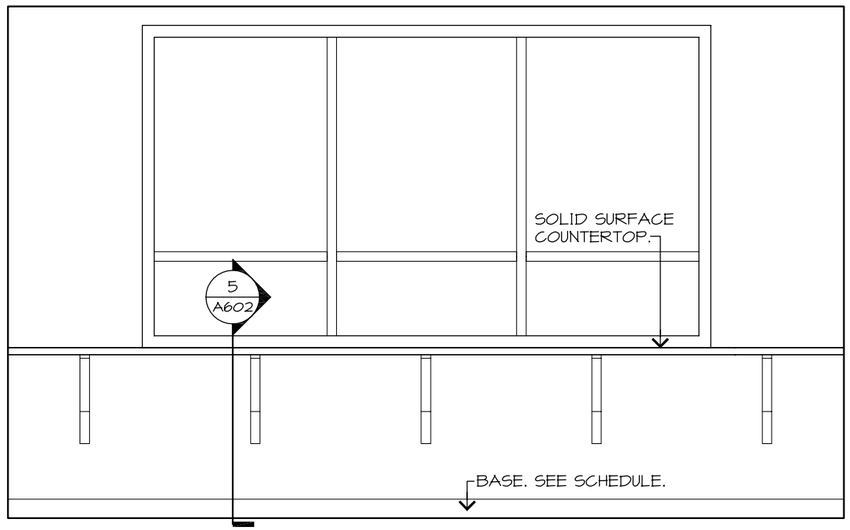
1/4" = 1'-0"



9 TOILET RM 110 - WEST ELEV.

1/4" = 1'-0"

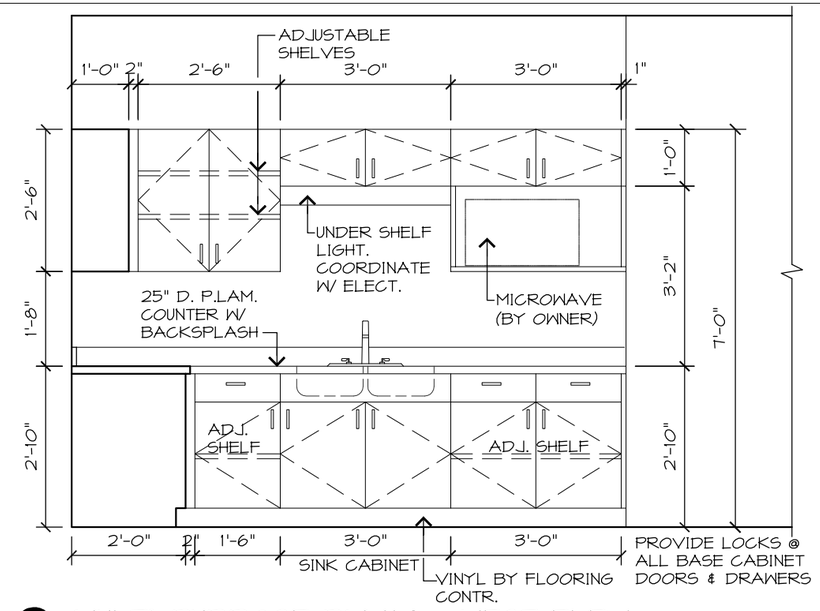
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			INTERIOR ELEVATIONS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 1 2 4 6	SHEET NO: A504



1 MULTI-PURPOSE RM 114 - NORTH ELEV.

3/8" = 1'-0"

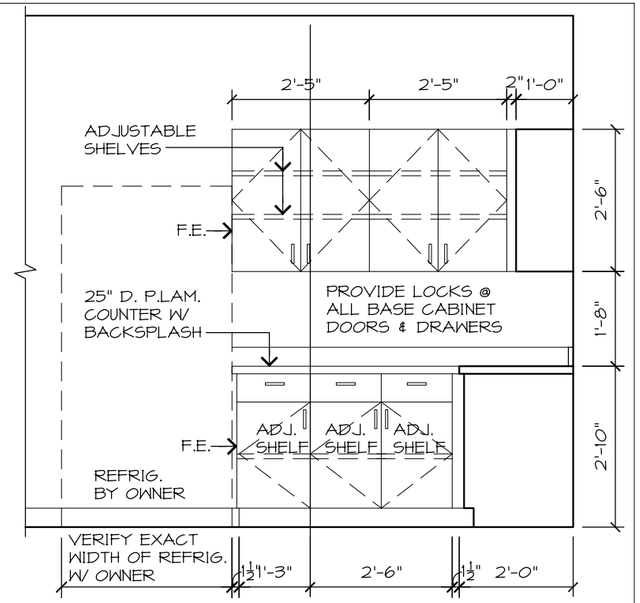
0 8" 16" 32" 48"



2 MULTI-PURPOSE RM 114 - WEST ELEV.

3/8" = 1'-0"

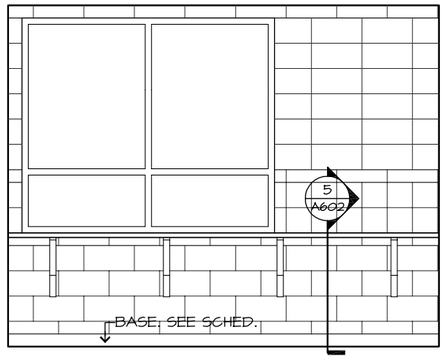
0 8" 16" 32" 48"



3 MULTI-PURPOSE RM 114 - SOUTH ELEV.

3/8" = 1'-0"

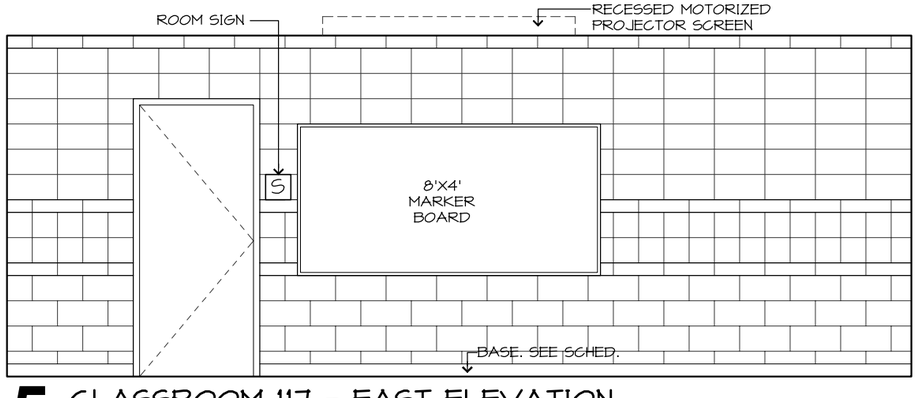
0 8" 16" 32" 48"



4 TROOPER 115 - NORTH ELEV.

1/4" = 1'-0"

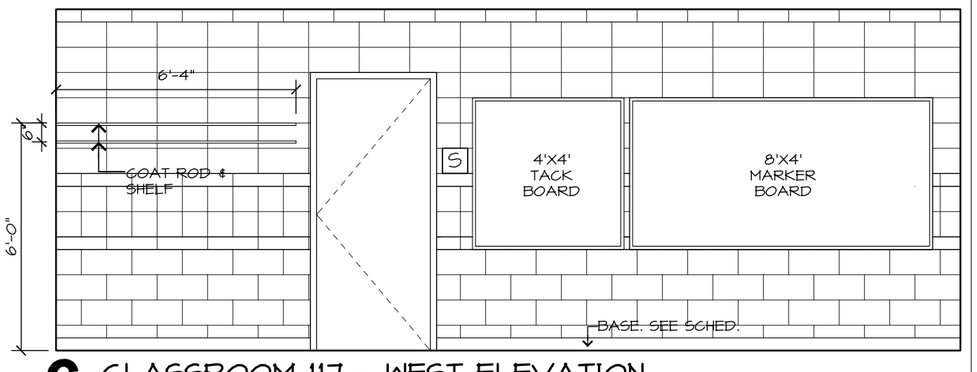
0 1 2 4 6



5 CLASSROOM 117 - EAST ELEVATION

1/4" = 1'-0"

0 1 2 4 6

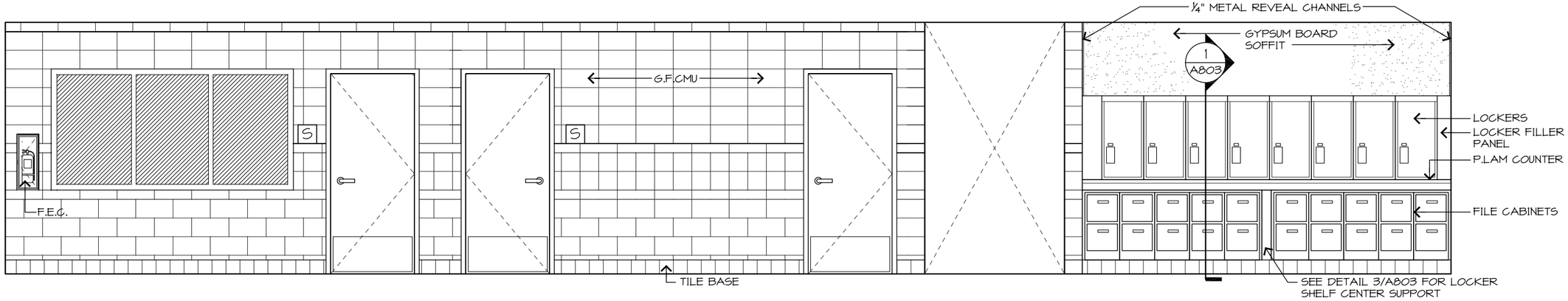


6 CLASSROOM 117 - WEST ELEVATION

1/4" = 1'-0"

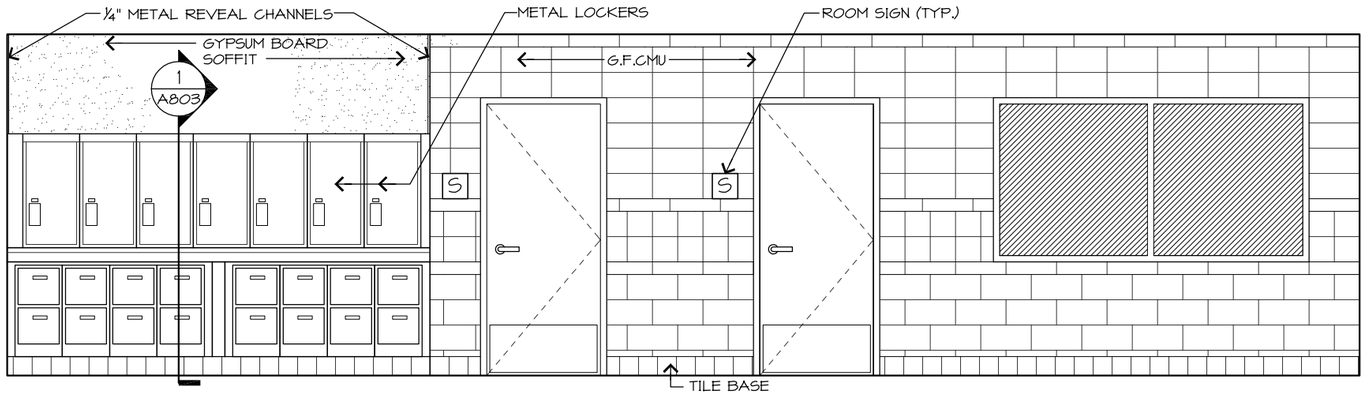
0 1 2 4 6

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			INTERIOR ELEVATIONS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: A505



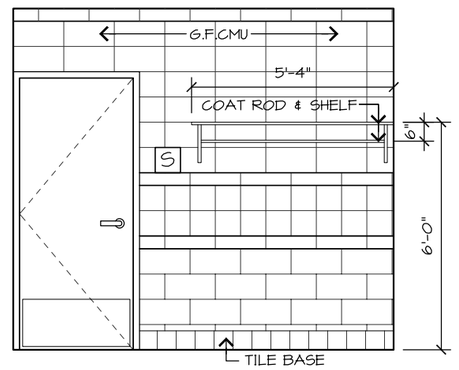
1 CORRIDOR 120 - EAST ELEVATION

1/4" = 1'-0"



2 CORRIDOR 120 - WEST ELEVATION

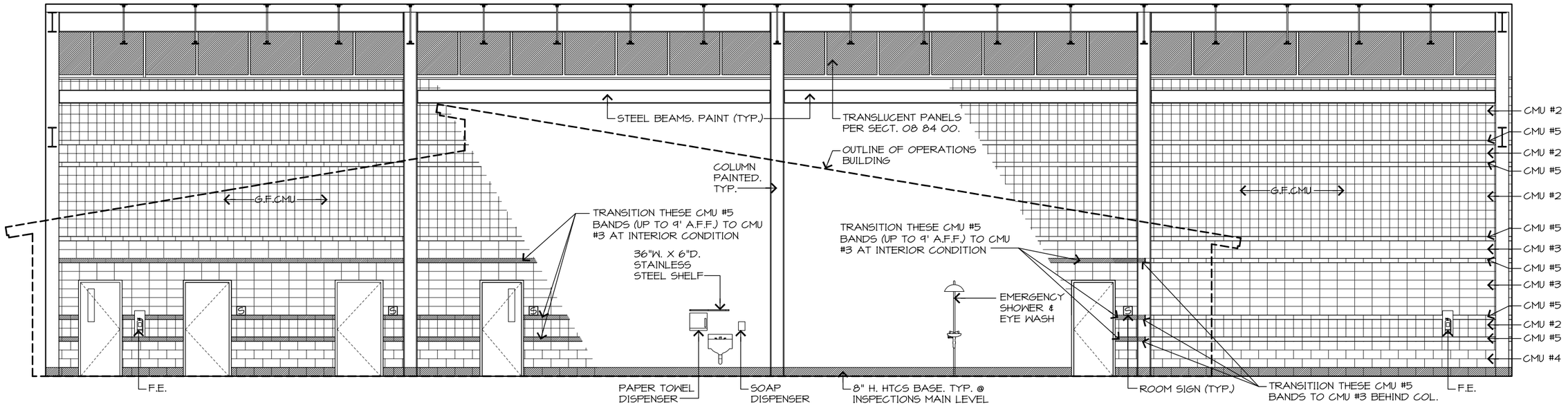
1/4" = 1'-0"



3 VESTIBULE 123 - EAST ELEV.

1/4" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			INTERIOR ELEVATIONS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 1 2 4 6	SHEET NO: A506

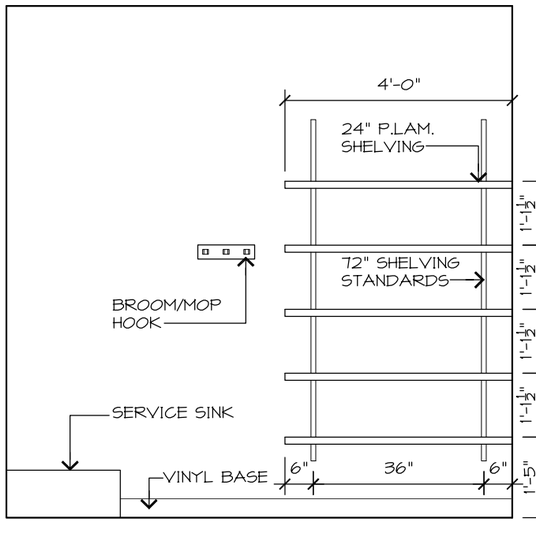


1 INSPECTION 124 - NORTH ELEVATION

1/8" = 1'-0"

0 2 4 8 12

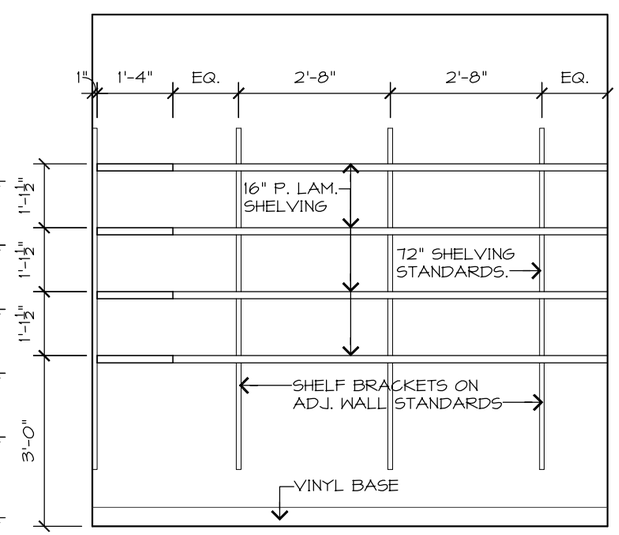
NOTE:
ALL GROUND FACE SIDES SHALL BE TO EXTERIOR SIDE OF WALLS



2 JANITOR 111 - WEST ELEVATION

3/8" = 1'-0"

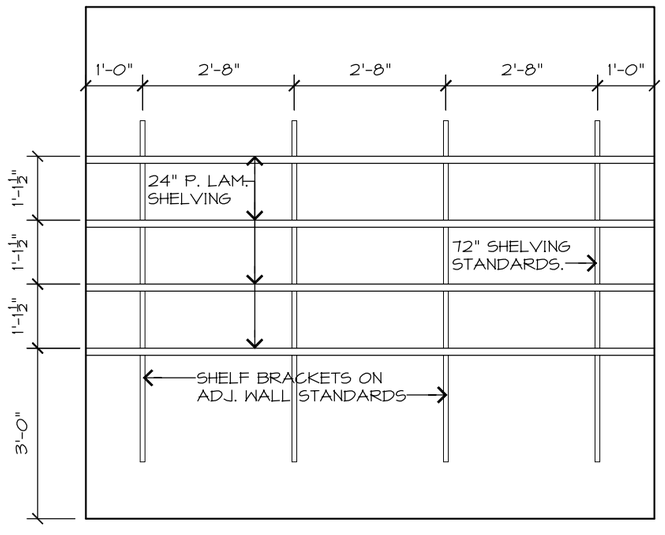
0 8" 16" 32" 48"



3 JANITOR 111 - NORTH ELEVATION

3/8" = 1'-0"

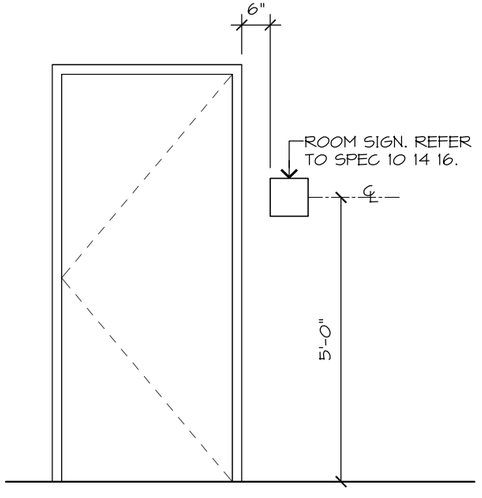
0 8" 16" 32" 48"



4 MECHANICAL STORAGE 113 - EAST ELEV.

3/8" = 1'-0"

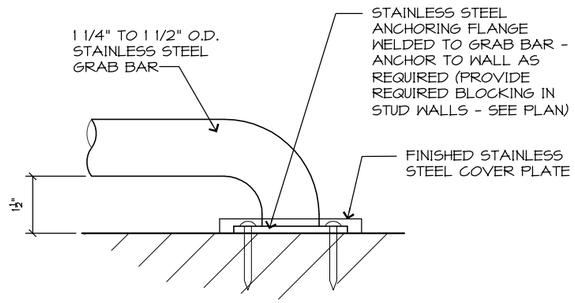
0 8" 16" 32" 48"



5 TYPICAL SIGNAGE MOUNTING

NTS

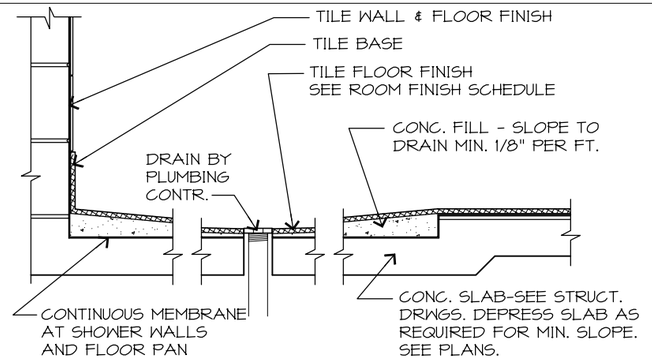
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			INTERIOR ELEVATIONS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: A507



1 GRAB BAR DETAIL

3" = 1'-0"

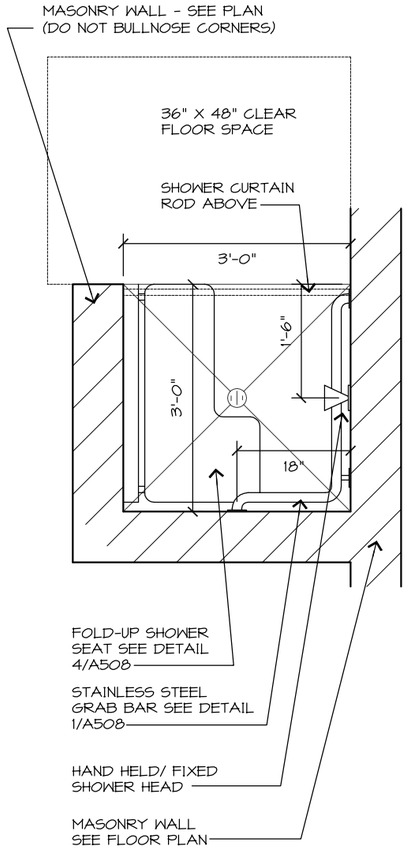
0 1" 2" 4" 6"



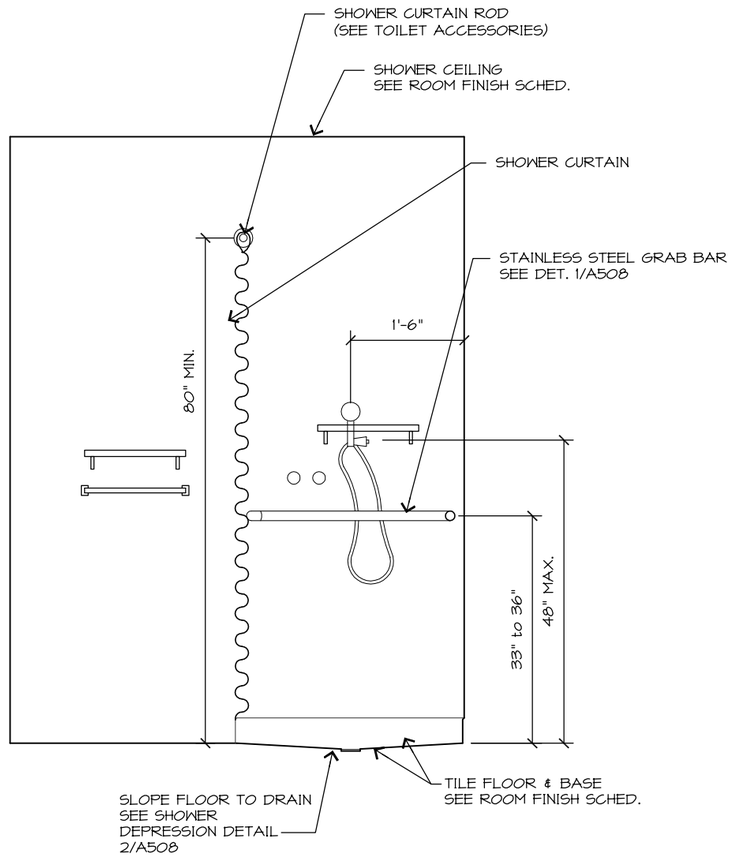
2 SHOWER DEPRESSION DETAIL

3/4" = 1'-0"

0 4" 8" 16" 24"



PLAN

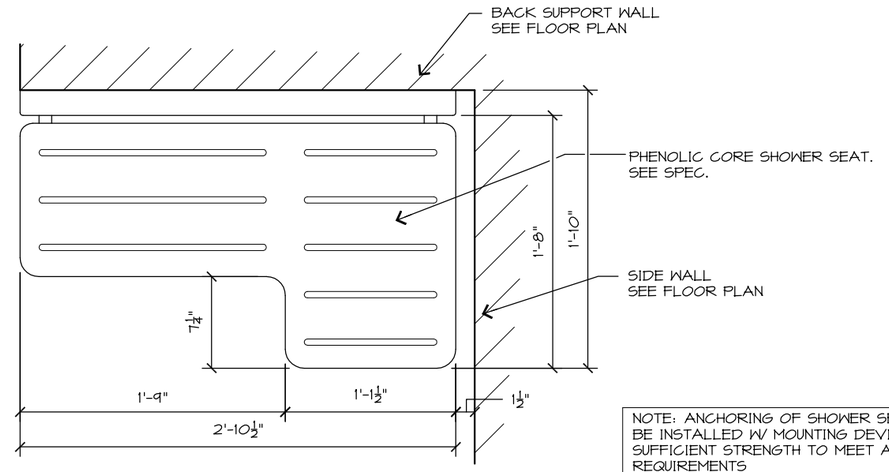


ELEVATION

3 ACCESSIBLE SHOWER DETAILS

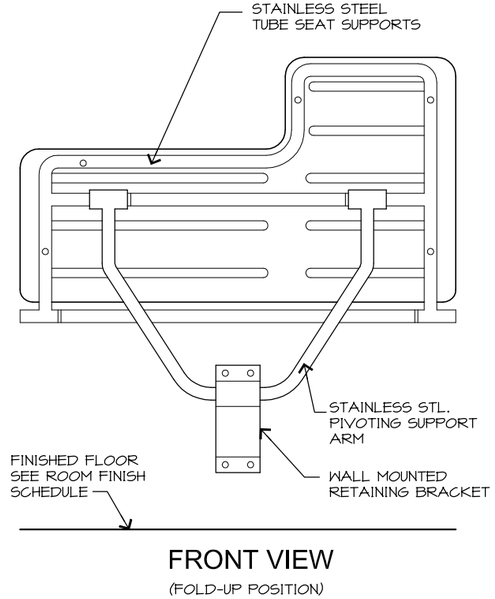
1/2" = 1'-0"

0 6" 1 2 3

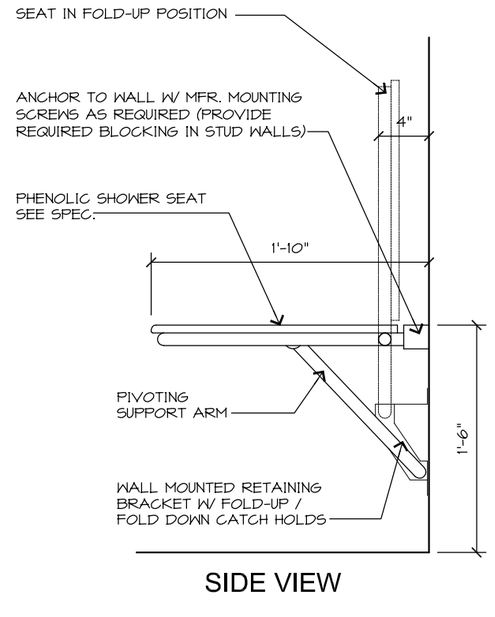


NOTE: ANCHORING OF SHOWER SEAT SHALL BE INSTALLED W/ MOUNTING DEVICES OF SUFFICIENT STRENGTH TO MEET ALL ADAAG REQUIREMENTS

PLAN VIEW
(FOLD-DOWN POSITION)



FRONT VIEW
(FOLD-UP POSITION)



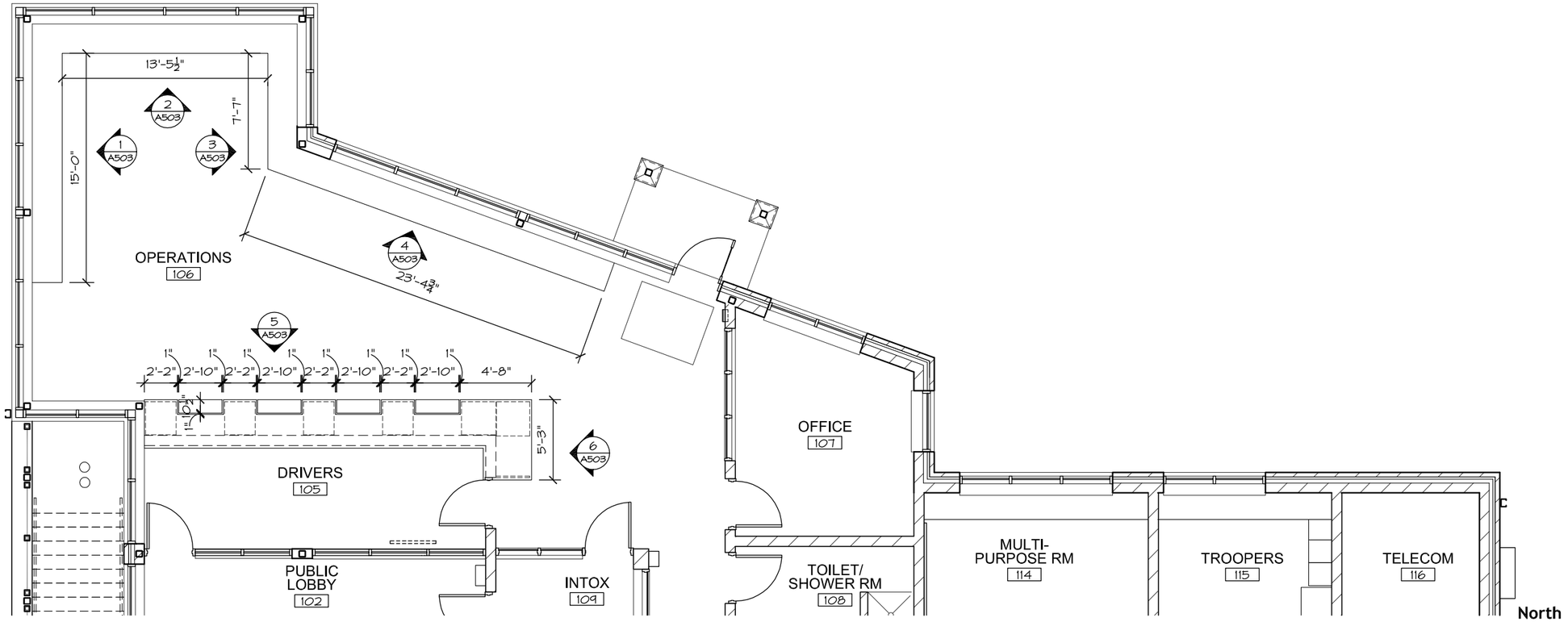
SIDE VIEW

4 FOLDABLE SHOWER SEAT DETAIL

1" = 1'-0"

0 3" 6" 1 1.5

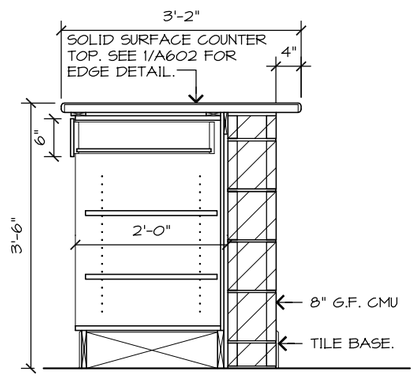
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			SHOWER DETAILS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: A508



5 CASEWORK DIMENSION PLAN

1/8" = 1'-0"

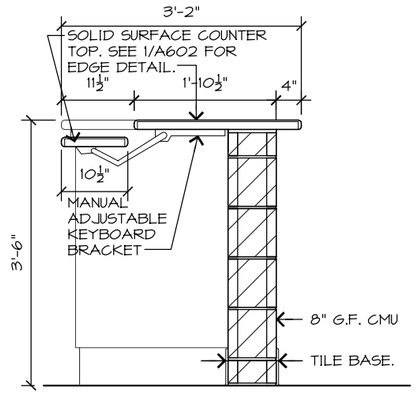
0 6" 1 2 3



1 SECTION @ TYPICAL COUNTER

1/2" = 1'-0"

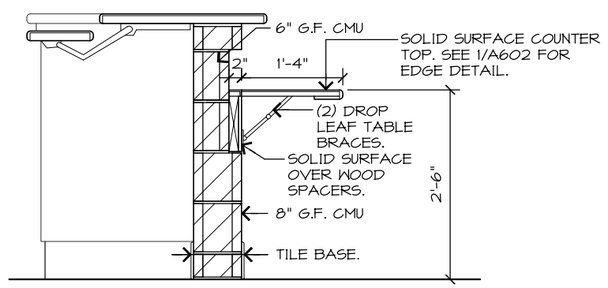
0 6" 1 2 3



2 SECTION @ PENINSULA

1/2" = 1'-0"

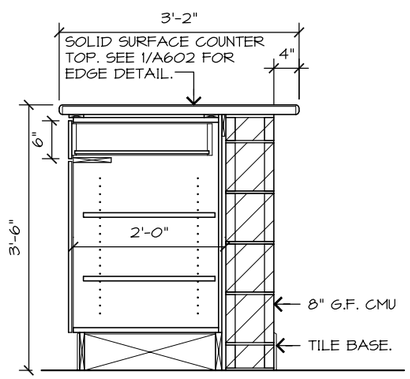
0 6" 1 2 3



3 SECTION @ ACCESSIBLE COUNTER

1/2" = 1'-0"

0 6" 1 2 3

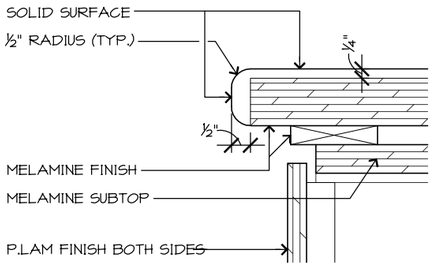


4 SECTION @ END CABINETS

1/2" = 1'-0"

0 6" 1 2 3

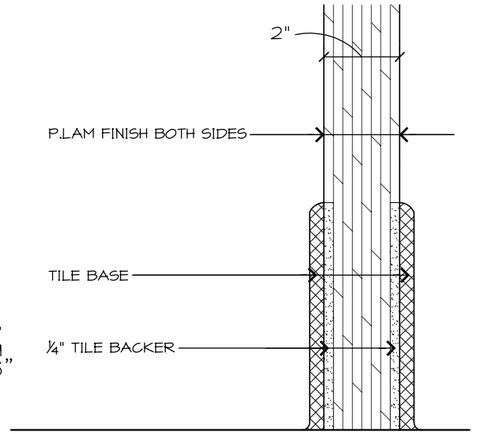
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			ARCHITECTURAL MILLWORK		DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: A601	



1 SOLID SURFACE EDGE DET.

3" = 1'-0"

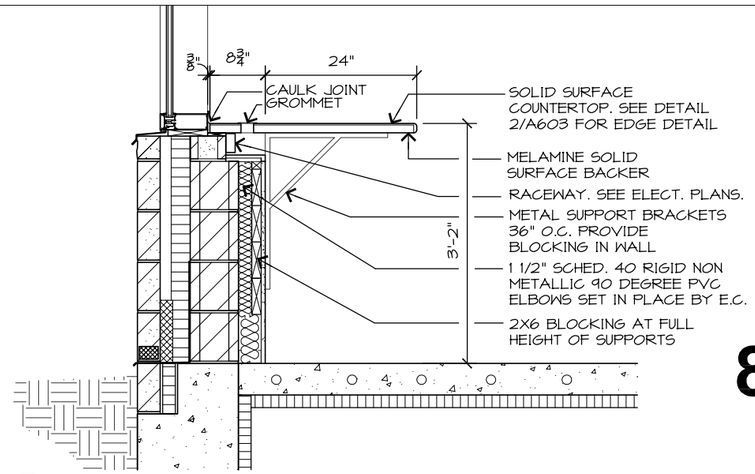
0 1" 2" 4" 6"



2 BASE DETAIL

3" = 1'-0"

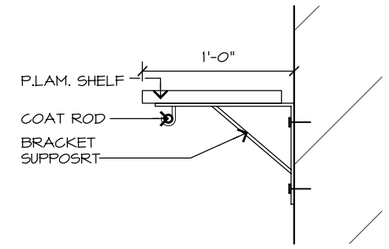
0 1" 2" 4" 6"



3 COUNTER SECTION @ 106 OPERATIONS

1/2" = 1'-0"

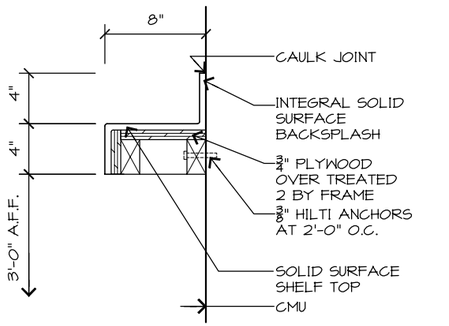
0 6" 1 2 3



8 COAT RACK

1/2" = 1'-0"

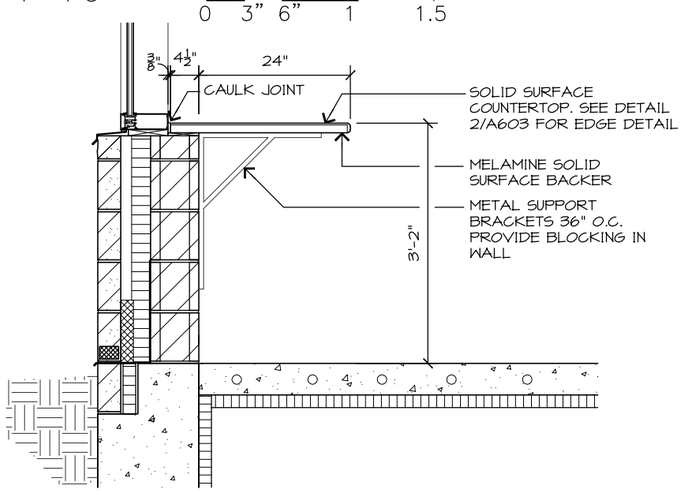
0 3" 6" 1 1.5



4 SHELF DETAIL

1" = 1'-0"

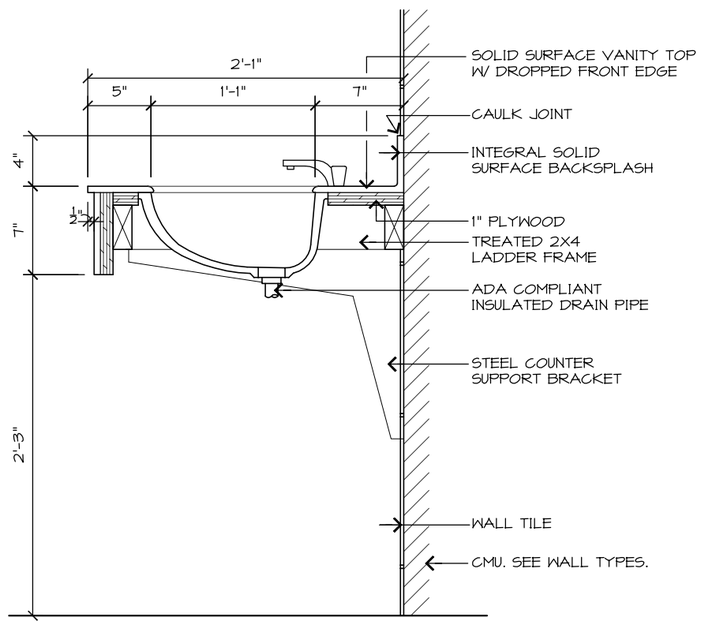
0 3" 6" 1 1.5



5 COUNTER SECTION AT 114 & 115

1/2" = 1'-0"

0 6" 1 2 3



6 VANTIY DETAIL

1" = 1'-0"

0 3" 6" 1 1.5

DOOR & DRAWER FRONTS (EXPOSED)
CORE: ¾" (45#) IND. GRADE PART. BD.
FACE: V32 P.LAM. HPDL.
BACKS: V30 P.LAM. HPDL. (WHITE)
EDGES: 3MM PVC

-FINISHED ENDS AND EXPOSED INTERIORS ARE V32 HPDL.

-EXPOSED CABINET EDGES ARE COLOR TO MATCH PVC (.02")

CABINET INTERIORS (SEMI-EXPOSED)

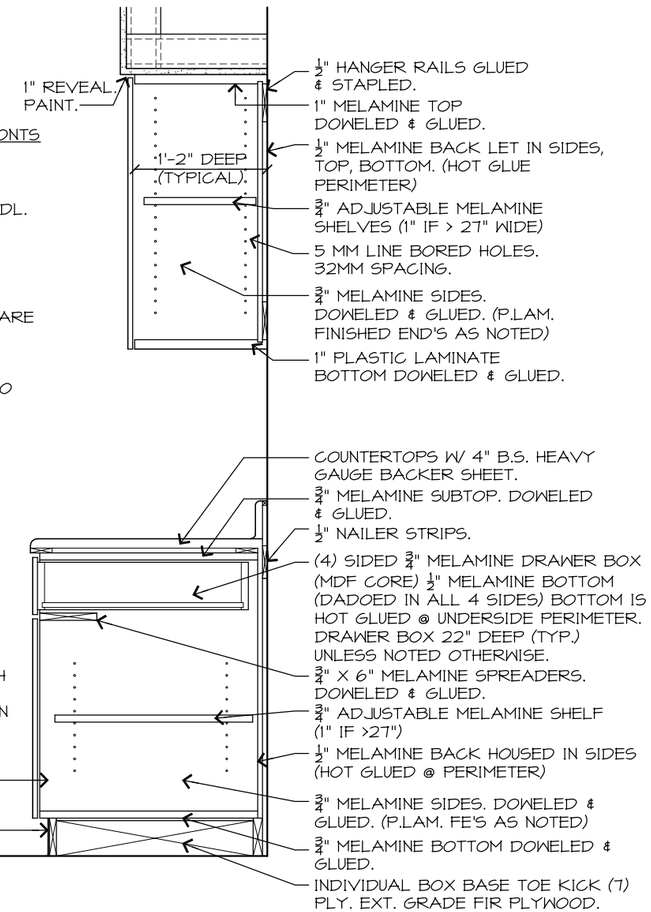
-CABINET INTERIORS ARE WHITE MELAMINE.
- INTERIOR CABINET EDGES ARE COLOR MATCHING PVC (.02)

CABINET STYLE:
REVEAL OVERLAY
⅛" REVEALS.

CASE DEPTH IS DEPTH OF CABINET BOX. DOOR THICKNESS IS IN ADDITION TO THIS.

24" DEEP (TYPICAL)

SEE FINISH SCHEDULE FOR BASE FINISH



7 TYPICAL SECTION THRU BASE & WALL CABINETS

3/4" = 1'-0"

0 4" 8" 16" 24"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI

ARCHITECTURAL MILLWORK DETAILS

DATE:

STATE PROJECT NUMBER: 1070-00-72 | HWY: IH 90 | COUNTY: MONROE | SPARTA SWEF NO. 54 | SCALE:

SHEET NO: A602

DOOR SCHEDULE

DOOR NO.	DOOR SIZE	DOOR TYPE	DOOR ELEVATION	FRAME TYPE	FRAME ELEVATION	HEAD DETAIL	JAMB DETAIL	SILL DETAIL	LABEL	HARDWARE	DOOR GRILLE/ UNDERCUT	NOTES
001A	3'-0" x 7'-2"	HM	D-6	HM	F-3	—	—-	—-		20		
101A	3'-0" x 7'-2"	ALUM	D-1	ALUM	SF-1	1/A706	4/A706	5&6/A-706		1		
101B	3'-0" x 7'-2"	ALUM	D-1	ALUM	F-2	3/A709 SIM	2&6/A707			3		
101C	3'-0" x 7'-2"	HM	D-9	HM	F-3	2/A708	7/A708	-/A—-		4		
103	3'-0" x 7'-2"	WOOD	D-3	HM	F-3	2/A708	7/A708			5		
104	3'-0" x 7'-2"	WOOD	D-3	HM	F-3	2/A708	7/A708			5		
105A	3'-0" x 7'-2"	WOOD	D-4	HM	F-5	3/A709	7&9/A708	2/A709		11		
105B	3'-0" x 3'-4"	WOOD	D-5	HM	F-6		7/A708			12		
106	3'-0" x 7'-2"	ALUM	D-2	ALUM	SF-10	3/A706	1/A706	5/A706		13		
107	3'-0" x 7'-2"	WOOD	D-3	HM	F-3	2/A708	7/A708			8		
108	3'-0" x 7'-2"	WOOD	D-3	HM	F-3	2/A708	7/A708			5		
109A	3'-0" x 7'-2"	WOOD	D-3	HM	F-7	1/A709 SIM	6&7/A708	2/A709		17		
109B	3'-0" x 7'-2"	WOOD	D-3	HM	F-3	2/A708	7/A708			17		
110	3'-0" x 7'-2"	WOOD	D-3	HM	F-3	2/A708	7/A708			5		
111	3'-0" x 7'-2"	WOOD	D-3	HM	F-3	2/A708	7/A708			6		
112A	4'-0" x 7'-2"	HM	D-6	HM	F-3	2/A708	7/A708			16		
112B	4'-0" x 7'-2"	WOOD	D-6	HM	F-3	2/A708	7/A708			21		
113	4'-0" x 7'-2"	HM	D-6	HM	F-3	2/A708	7/A708			15		
114	3'-0" x 7'-2"	WOOD	D-3	HM	F-4	2/A708	7&9/A708	5/A709		7		
115	3'-0" x 7'-2"	WOOD	D-3	HM	F-4	2/A708	7&9/A708	5/A709		7		
116	3'-0" x 7'-2"	WOOD	D-3	HM	F-3	2/A708	7/A708			6		
117A	3'-0" x 7'-2"	WOOD	D-3	HM	F-3	2/A708	7/A708			7		
117B	3'-0" x 7'-2"	WOOD	D-3	HM	F-4	2/A708	7&9/A708	5/A709		7		
118	3'-0" x 7'-2"	HM	D-6	HM	F-3	2/A708	7/A708			15		
119	3'-0" x 7'-2"	WOOD	D-3	HM	F-3	2/A708	7/A708			18		
122A	3'-0" x 7'-2"	ALUM	D-2	ALUM	F-1	2/A706	3/A706	5/A706		2		
122B	3'-0" x 7'-2"	ALUM	D-1	ALUM	F-2A	3/A707	2&6/A707			3		
123A	3'-0" x 7'-2"	HM	D-9	HM	F-3	2/A708	6&7/A708			14		
123B	3'-0" x 7'-2"	WOOD	D-4A	HM	F-3	2/A708	3&7/A708			19		
123C	3'-0" x 7'-2"	WOOD	D-3	HM	F-3	2/A708	3&7/A708			7		
124A	3'-0" x 7'-2"	HM	D8	HM	F-3	1/A708	4/A708	8/A708		9		
124B	3'-0" x 7'-2"	HM	D8	HM	F-3	1/A708	4/A708	8/A708		10		
124C	3'-0" x 7'-2"	HM	D8	HM	F-3	1/A708	4/A708	8/A708		10		
124D	3'-0" x 7'-2"	HM	D8	HM	F-3	1/A708	4/A708	8/A708		9		
124E	14'-0" x 16'-0"	METAL	D10	-		1/A710	1/A710	1/A710				
124F	14'-0" x 16'-0"	METAL	D10	-		1/A710	1/A710	1/A710				
124G	14'-0" x 16'-0"	METAL	D10	-		1/A710	1/A710	1/A710				
124H	14'-0" x 16'-0"	METAL	D10	-		1/A710	1/A710	1/A710				

ABBREVIATIONS

ALUM	ALUMINUM
HM	HOLLOW METAL

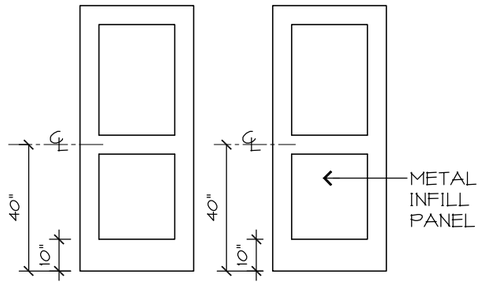
GLAZING SCHEDULE

GL-1 TEMPERED GLASS
-INTERIOR GLAZING AT NON-RATED DOORS, SIDELITES AND BORROWED LITES
-1/4" THICK, TEMPERED, CLEAR, UNLESS NOTED OTHERWISE

GL-2 FIRE-RATED GLASS
-GLAZING LOCATED IN DOORS AND SIDELITES
-SEE SPEC FOR GLASS TYPE

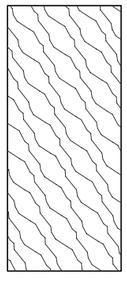
GL-3 INSULATED GLASS UNITS
-GLAZING LOCATED IN EXTERIOR DOORS AND SIDELITES
-SEALED INSULATED GLASS UNITS CONSISTING OF:
- $\frac{1}{4}$" TINTED TEMPERED GLASS, EXTERIOR PANE
- $\frac{1}{2}$" AIR SPACE
- $\frac{1}{4}$"CLEAR TEMPERED GLASS, INTERIOR PANE W/ LOW-E COATING

REMARKS:
-REFER TO SPECIFICATION.

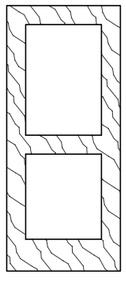


D-1
ALUMINUM

D-2
ALUMINUM



D-3
SOLID CORE WOOD



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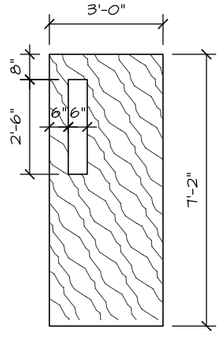
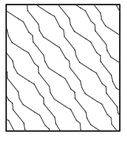
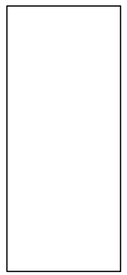


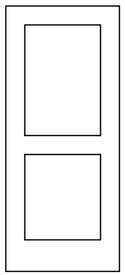
D-4A
SOLID CORE WOOD



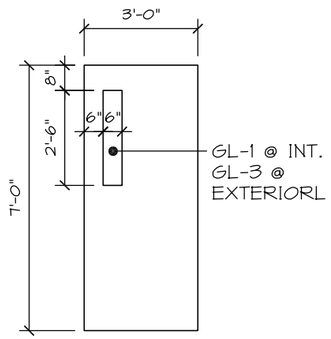
D-5
SOLID CORE WOOD



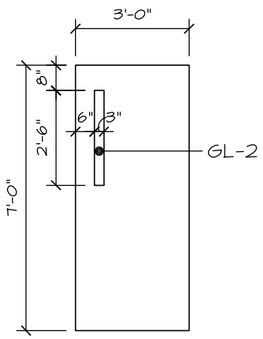
D-6
HOLLOW METAL



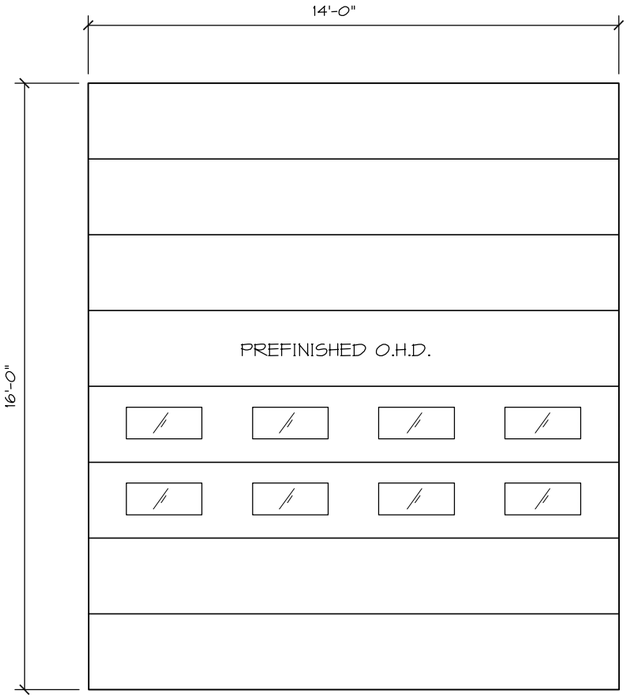
D-7
HOLLOW METAL



D-8
HOLLOW METAL

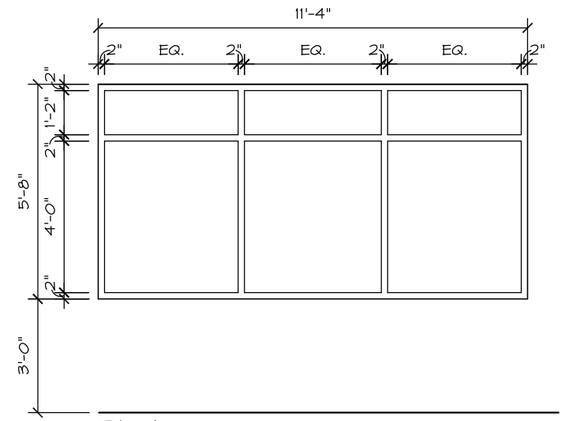


D-9
HOLLOW METAL

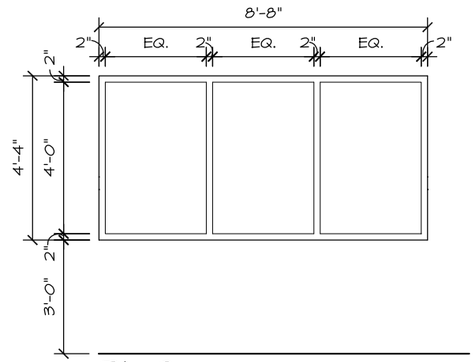


D-10
METAL O.H.

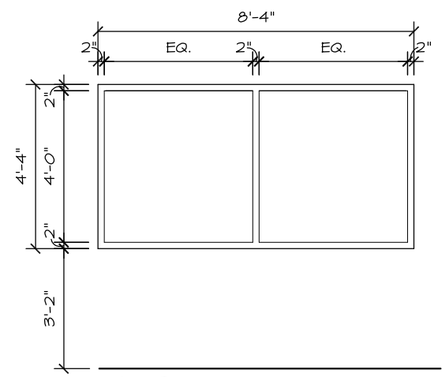
1 DOOR TYPES
1/4"=1'-0"



BL-1
HOLLOW METAL



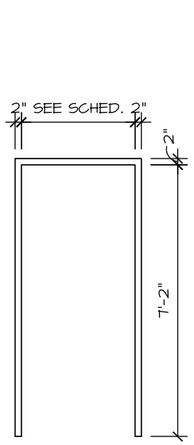
BL-2
HOLLOW METAL



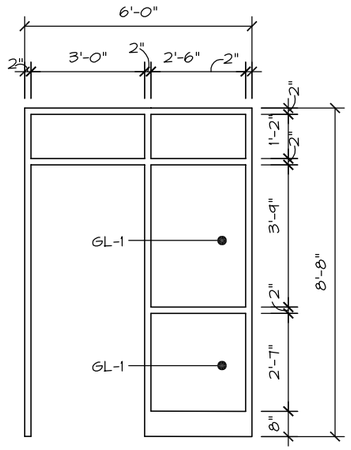
BL-3
HOLLOW METAL

2 BORROWED LITE TYPES
1/4"=1'-0"

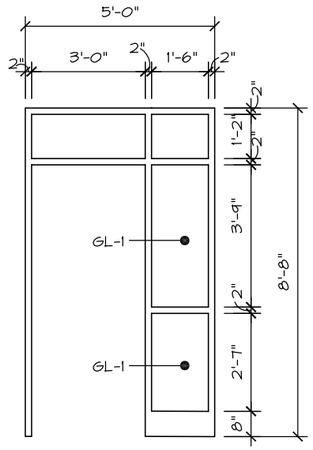
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DOOR ELEVATIONS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 1 2 4 6	SHEET NO: A702



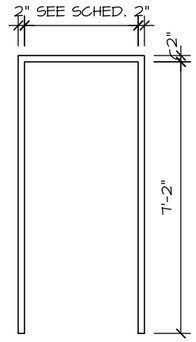
F-1
ALUMINUM



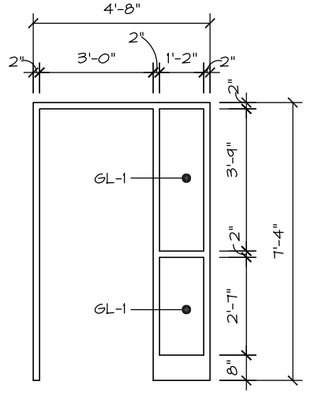
F-2
ALUMINUM



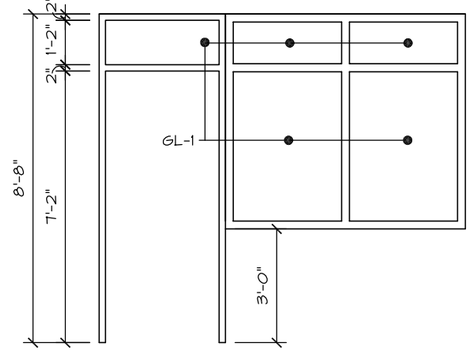
F-2A
ALUMINUM



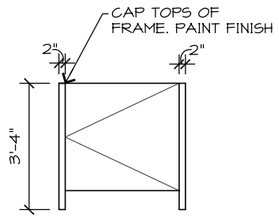
F-3
HOLLOW METAL



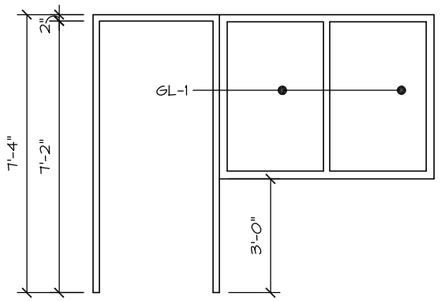
F-4
HOLLOW METAL



F-5
HOLLOW METAL



F-6
HOLLOW METAL

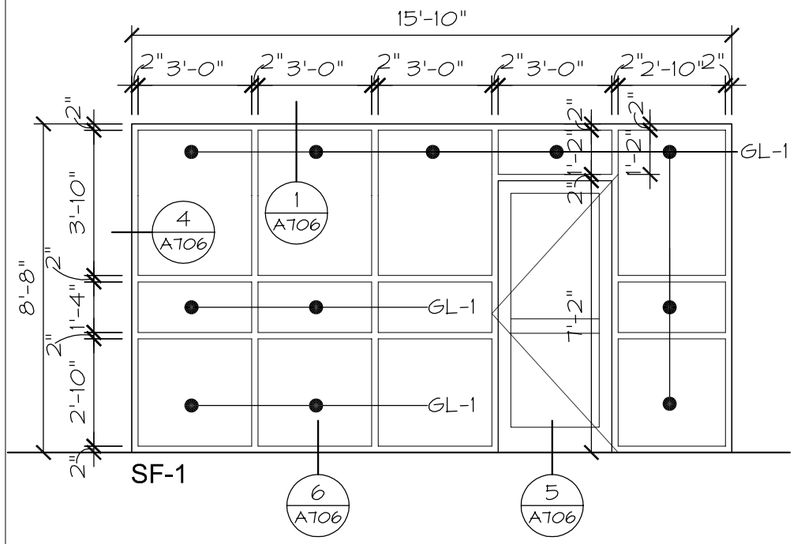


F-7
HOLLOW METAL

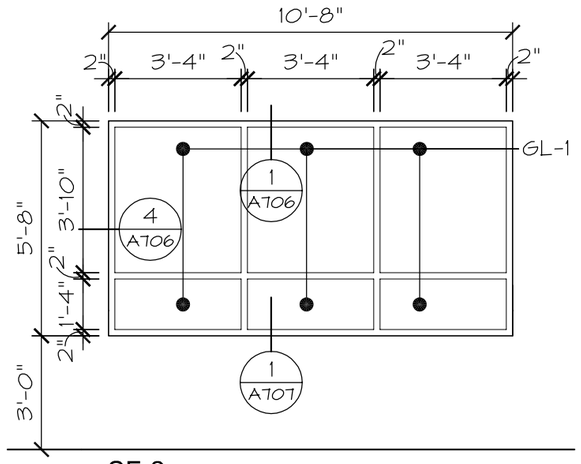
1 FRAME TYPES

1/4" = 1'-0"

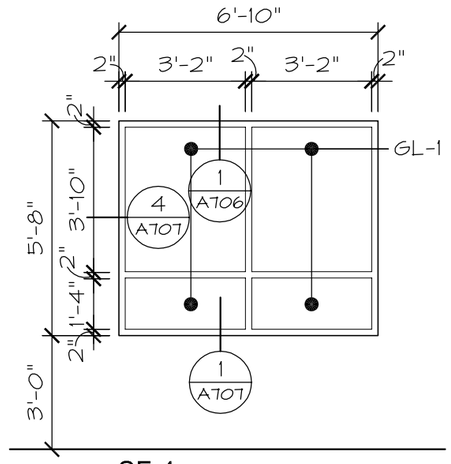
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			FRAME TYPES	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 1 2 4 6	SHEET NO: A703



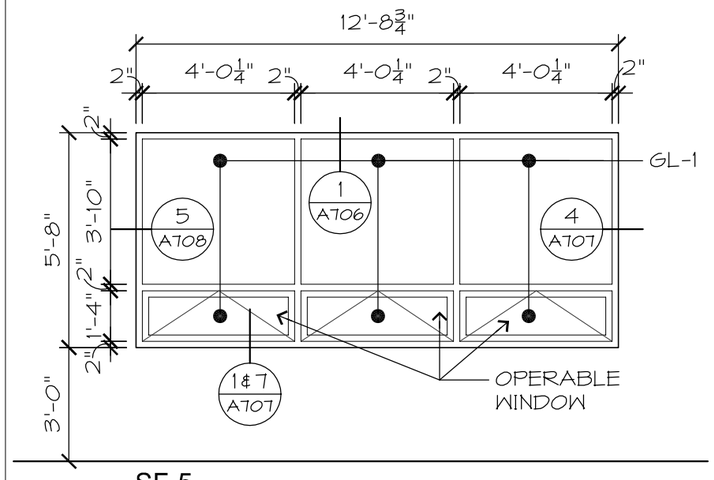
SF-1



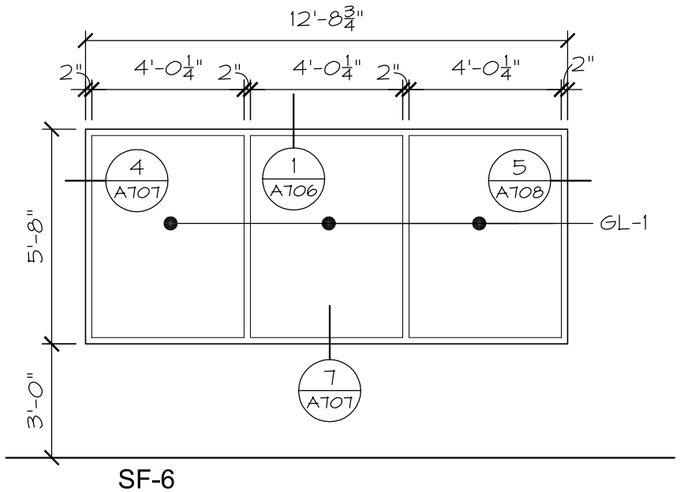
SF-2



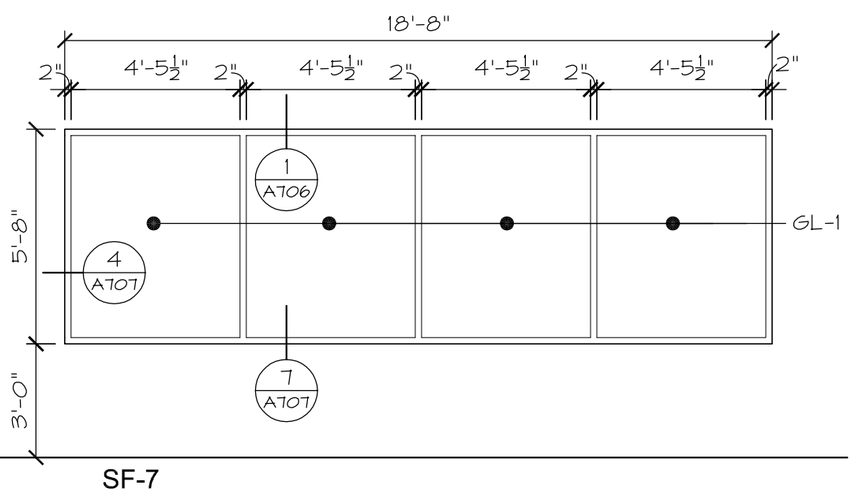
SF-4



SF-5



SF-6

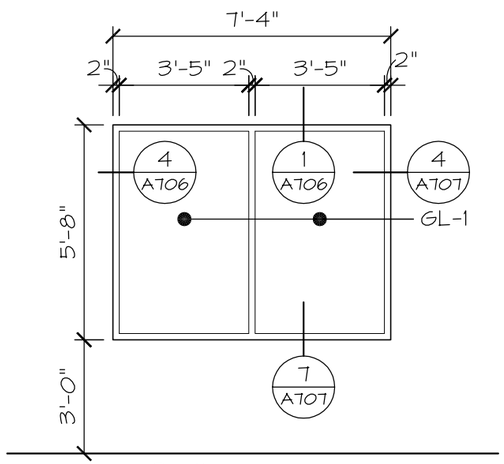


SF-7

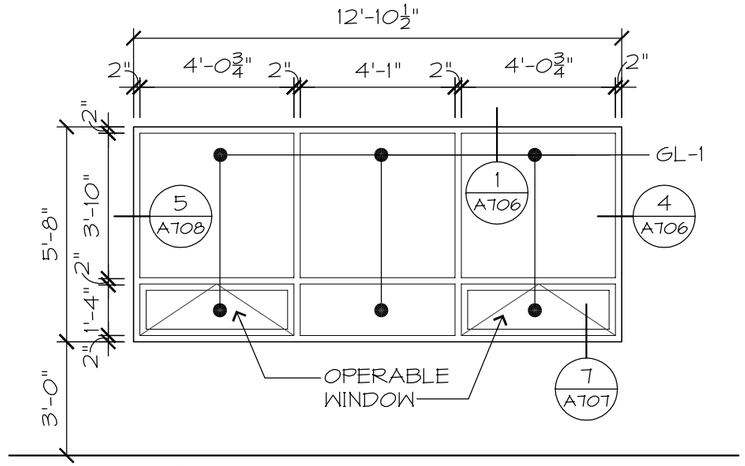
1 STOREFRONT ELEVATIONS

1/4" = 1'-0"

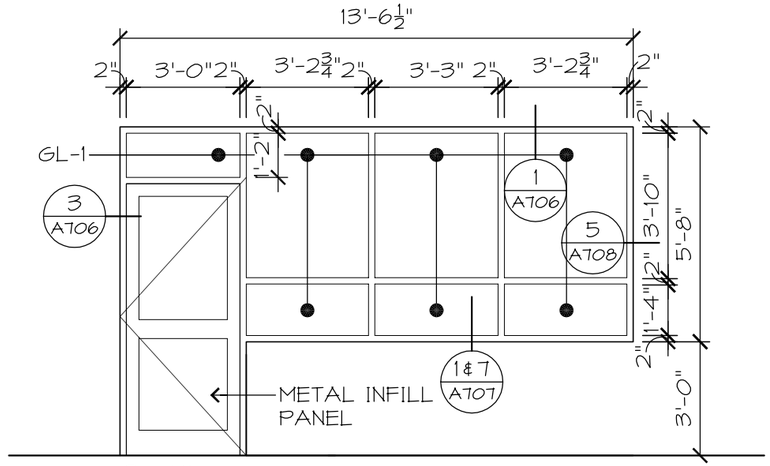
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			STOREFRONT ELEVATIONS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 1 2 4 6	SHEET NO: A704



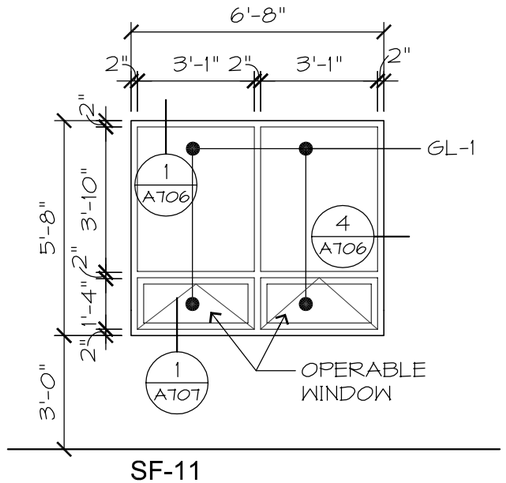
SF-8



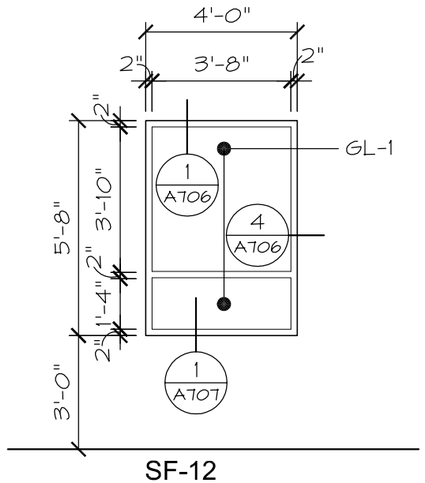
SF-9



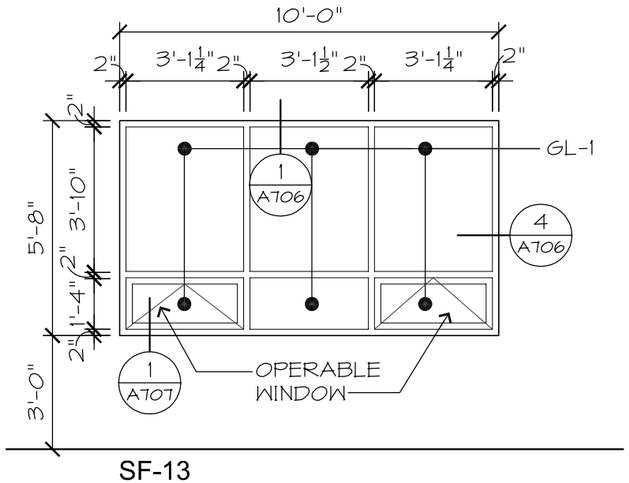
SF-10



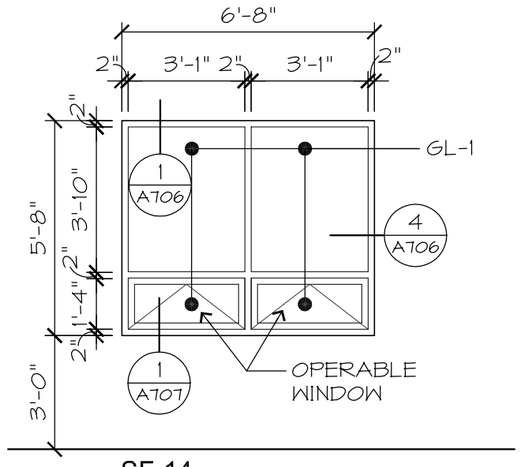
SF-11



SF-12



SF-13

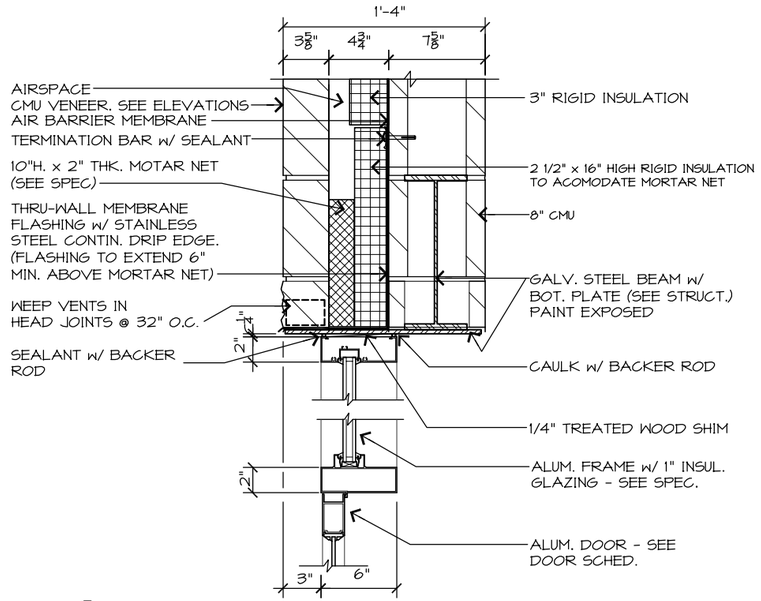


SF-14

1 STOREFRONT ELEVATIONS

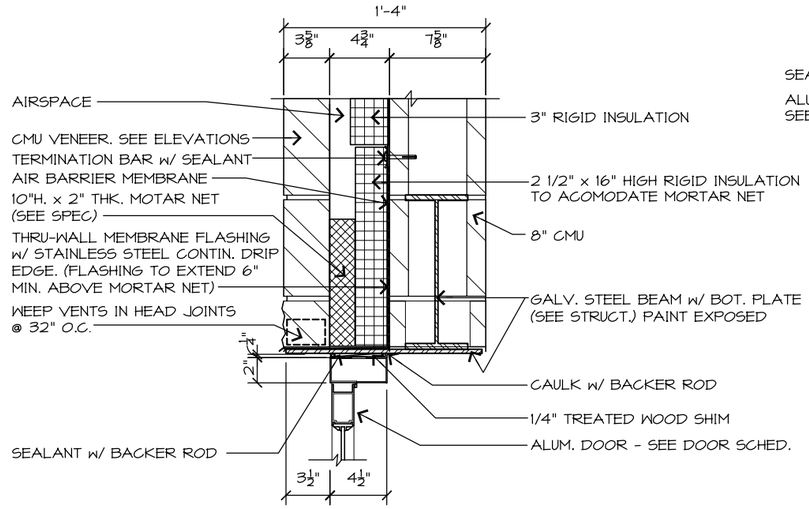
1/4" = 1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			STOREFRONT ELEVATIONS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 1 2 4 6	SHEET NO: A705



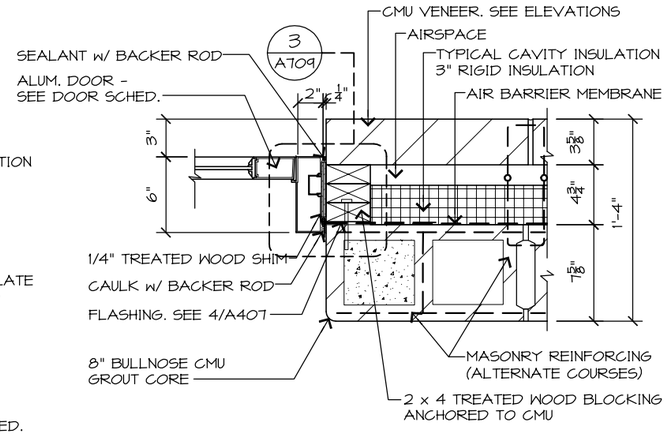
1 ALUMINUM STOREFRONT HEAD DETAIL

1"=1'-0"



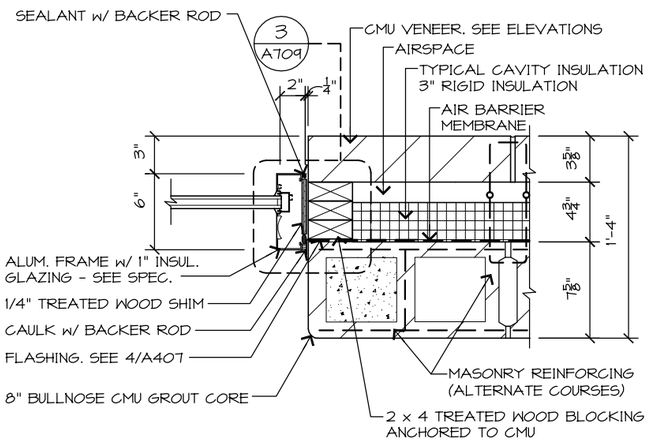
2 ALUMINUM DOOR HEAD DETAIL

1"=1'-0"



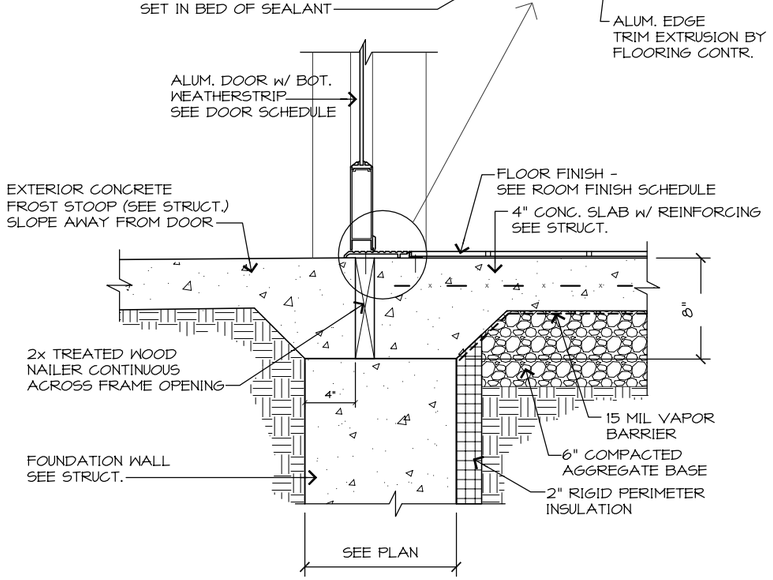
3 ALUMINUM DOOR JAMB DETAIL

1"=1'-0"



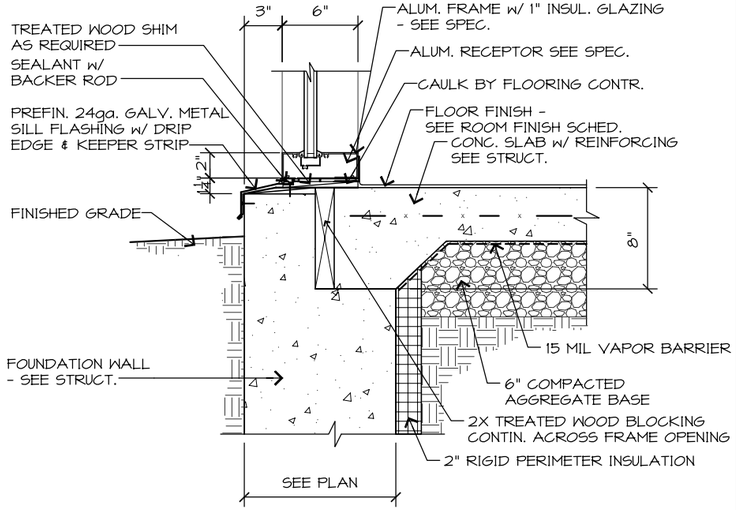
4 ALUMINUM STOREFRONT JAMB DETAIL

1"=1'-0"



5 ALUMINUM DOOR THRESHOLD DETAIL

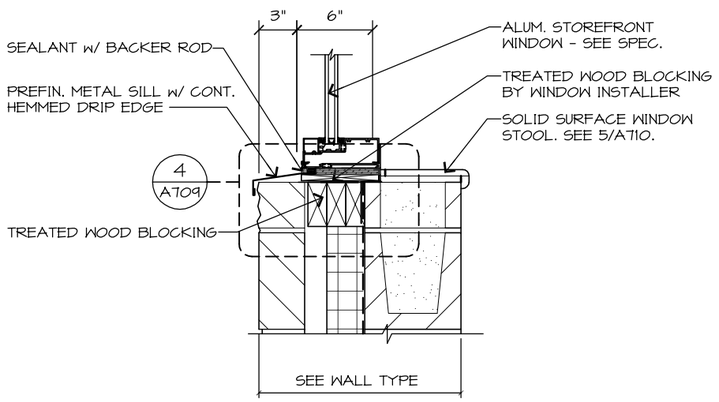
1"=1'-0"



6 STOREFRONT SILL DETAIL

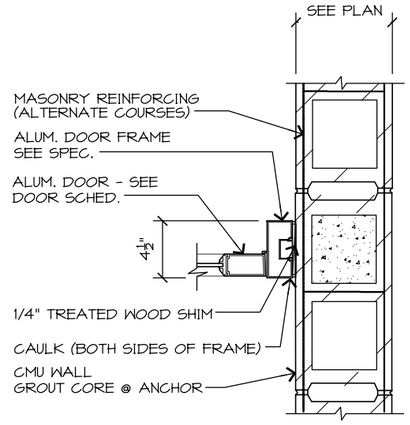
1"=1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DOOR DETAILS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 3" 6" 1 1.5	SHEET NO: A706



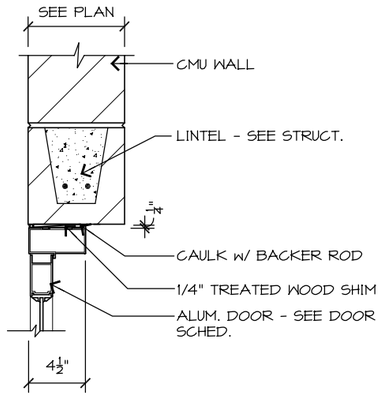
1 ALUMINUM STOREFRONT SILL DETAIL

1"=1'-0"



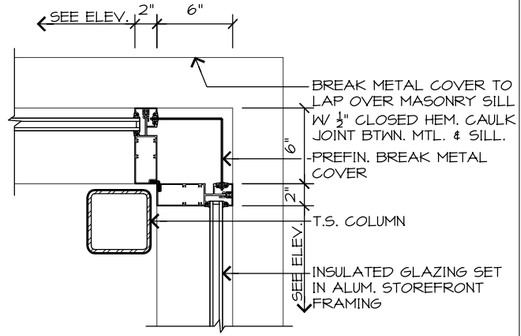
2 ALUM. DOOR JAMB DET.

1"=1'-0"



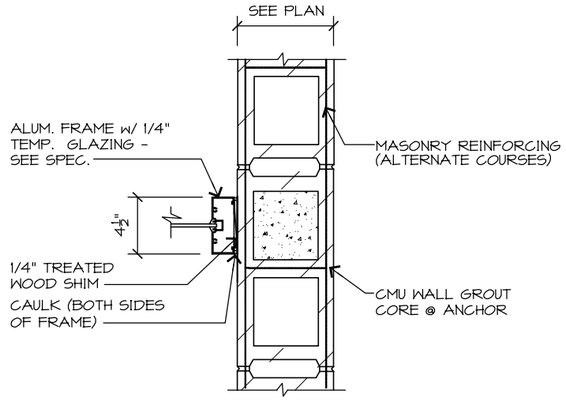
3 ALUM. DOOR HEAD DET.

1"=1'-0"



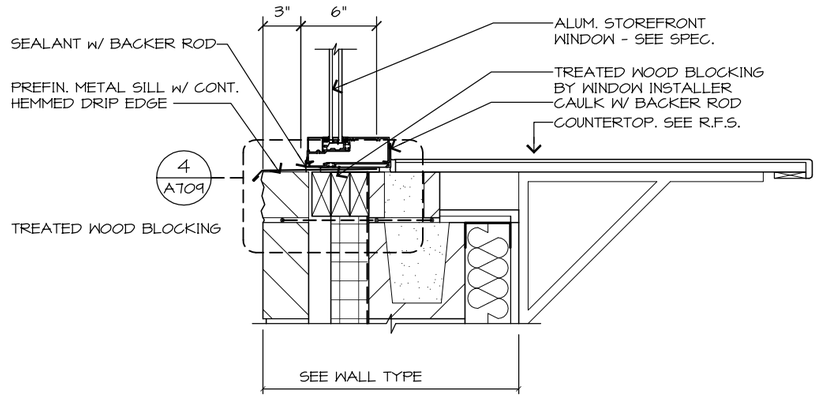
4 ALUM. STOREFRONT CORNER DETAIL

1"=1'-0"



6 ALUMINUM DOOR JAMB DETAIL

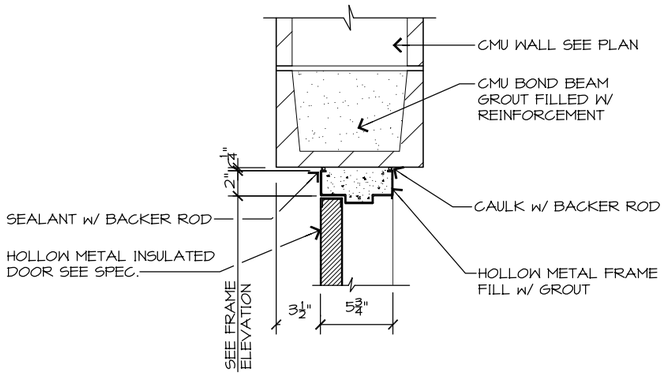
1"=1'-0"



7 ALUMINUM STOREFRONT SILL DETAIL

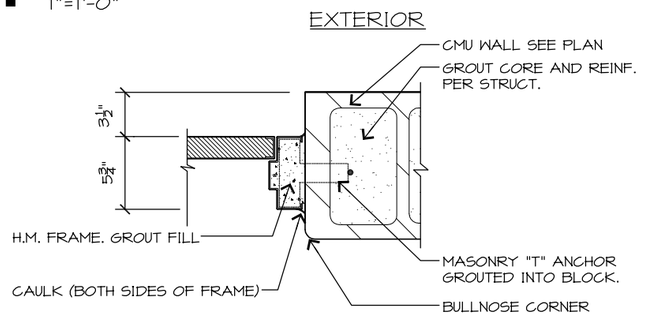
1"=1'-0"

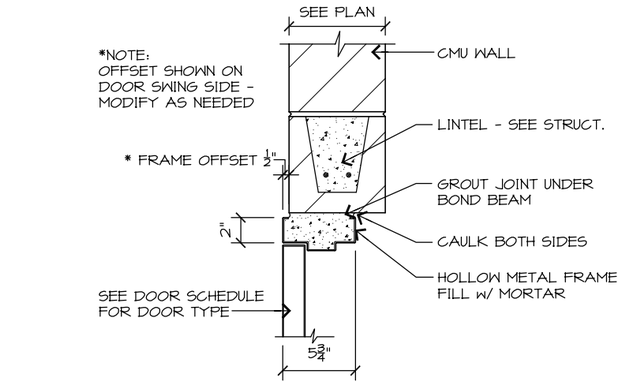
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DOOR DETAILS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 3" 6" 1 1.5	SHEET NO: A707	157



1 HOLLOW METAL DOOR HEAD @ EXT. MASONRY

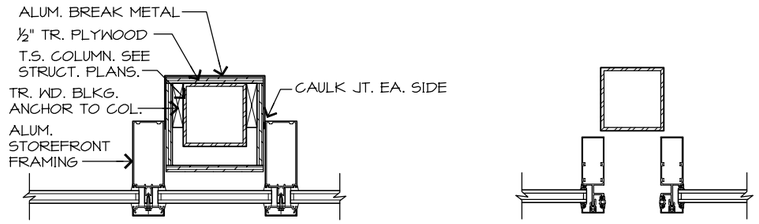
1"=1'-0"





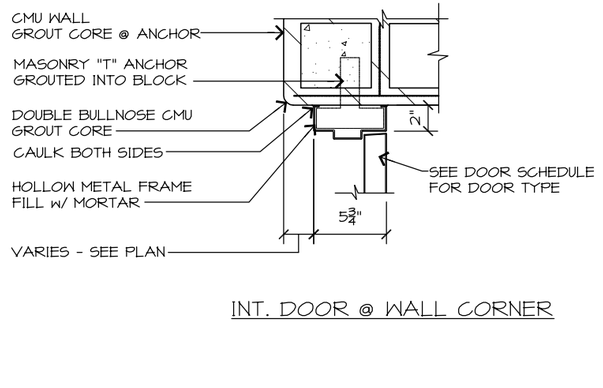
2 HOLLOW METAL DOOR HEAD DETAIL

1"=1'-0"

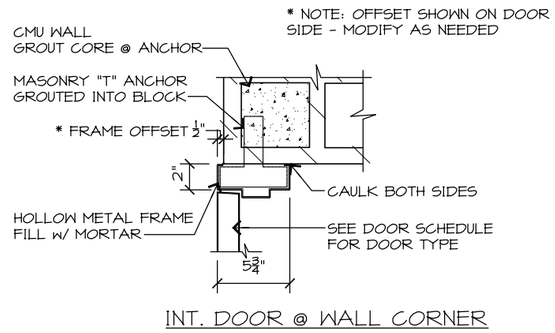


3 HOLLOW METAL DOOR JAMB DETAIL @ WALL CORNER

1"=1'-0"



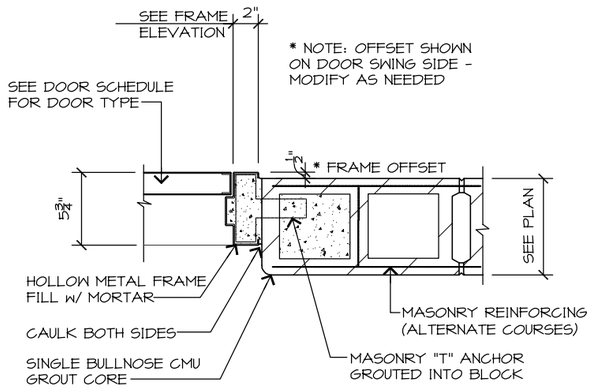
INT. DOOR @ WALL CORNER



INT. DOOR @ WALL CORNER

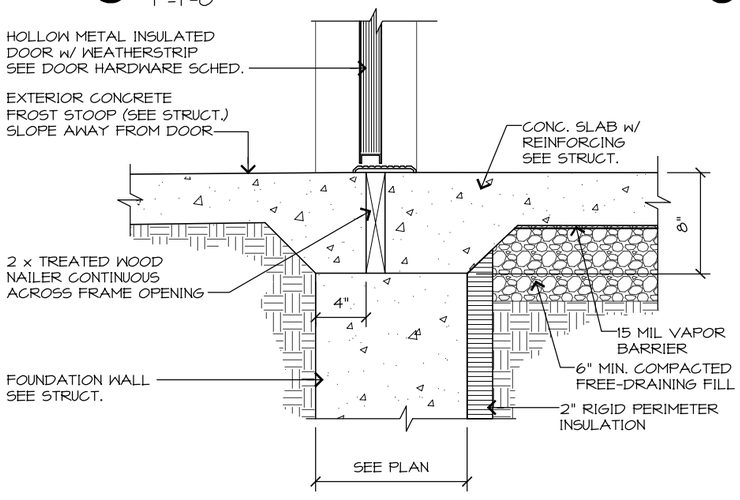
4 HOLLOW METAL DOOR JAMB @ EXT. MASONRY

1"=1'-0"



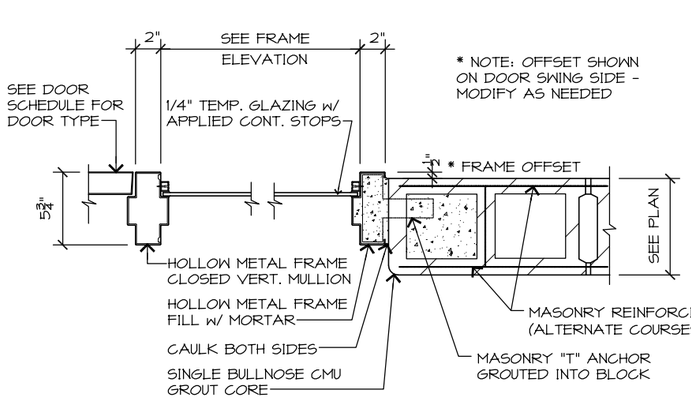
5 STOREFRONT JAMB @ COLUMN

1"=1'-0"



6 HOLLOW METAL DOOR JAMB DETAIL @ WALL CORNER

1"=1'-0"



7 HOLLOW METAL JAMB DETAIL

1"=1'-0"

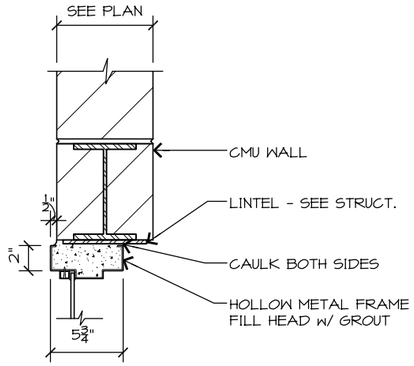
8 HOLLOW METAL DOOR THRESHOLD DETAIL

1"=1'-0"

9 HOLLOW METAL DOOR JAMB DETAIL

1"=1'-0"

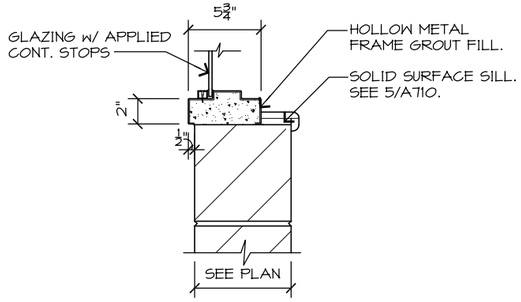
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DOOR DETAILS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 3" 6" 1 1.5	SHEET NO: A708



1 HOLLOW METAL HEAD DETAIL

1"=1'-0"

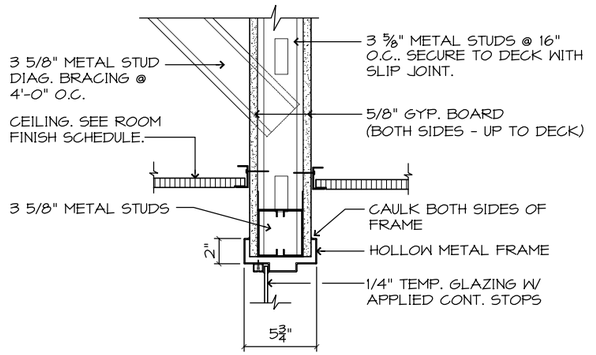
0 3" 6" 1 1.5



2 HOLLOW METAL SIDE LITE SILL DETAIL

1"=1'-0"

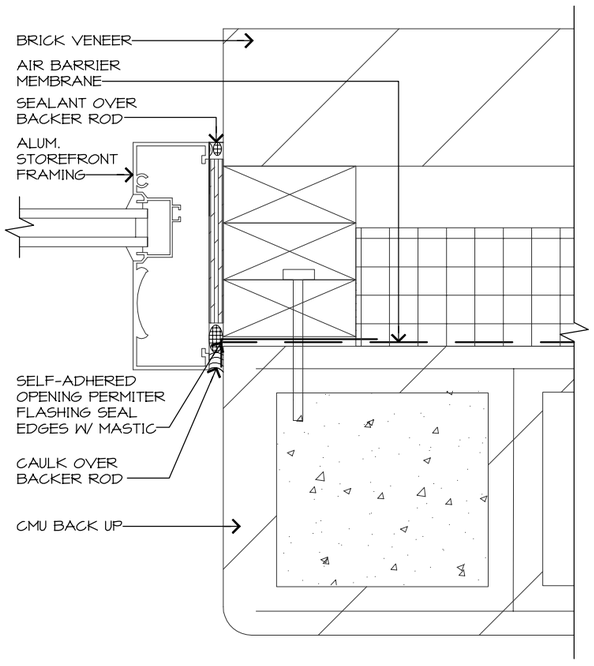
0 3" 6" 1 1.5



3 HOLLOW METAL HEAD DETAIL

1"=1'-0"

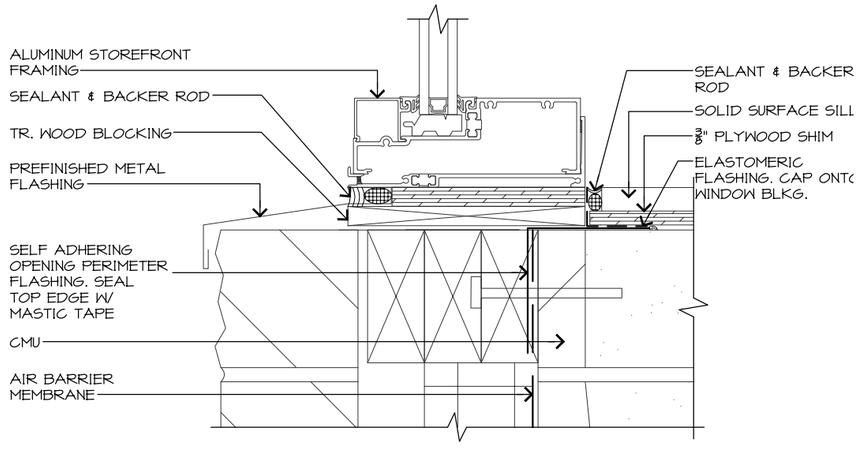
0 3" 6" 1 1.5



3 JAMB FLASHING DETAIL

3"=1'-0"

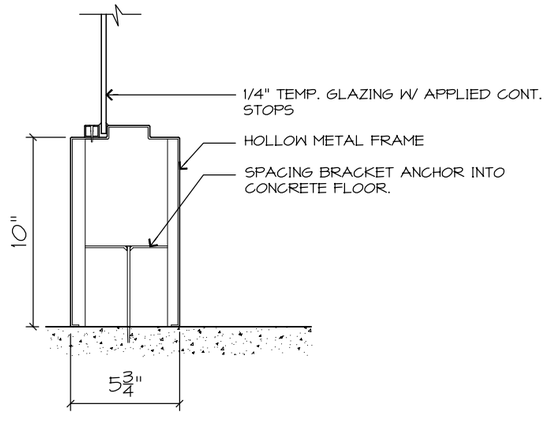
0 1" 2" 4" 6"



4 SILL FLASHING DETAIL

3"=1'-0"

0 1" 2" 4" 6"

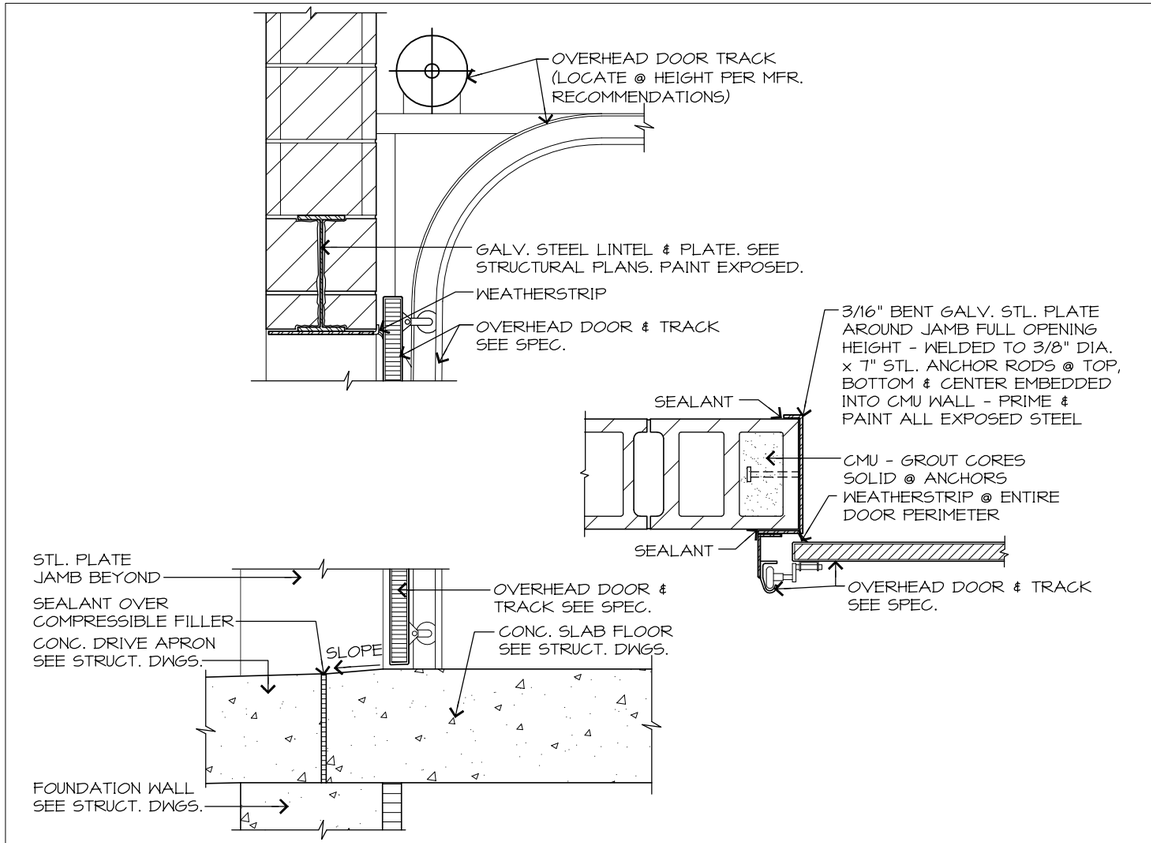


5 SIDELITE THRESHOLD DETAIL

1 1/2"=1'-0"

0 2" 4" 8" 12"

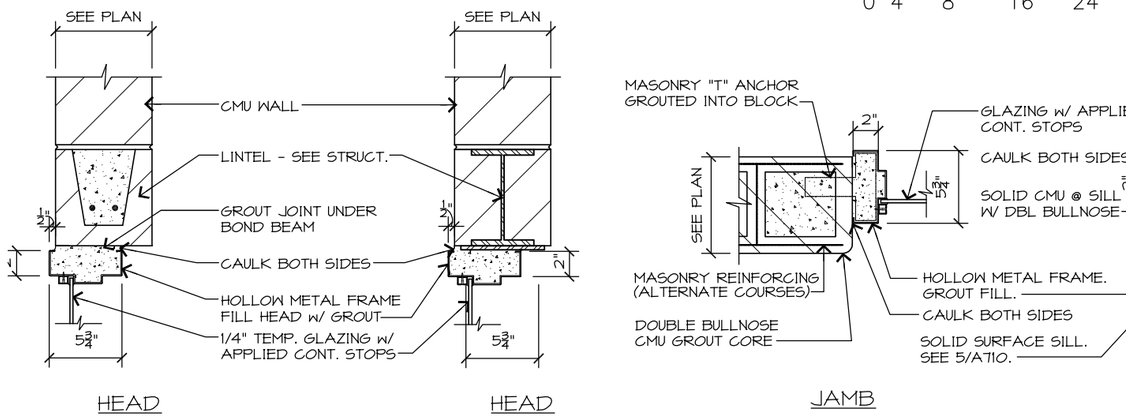
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			OVERHEAD DOOR DETAILS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: SEE PLAN	SHEET NO: A709	

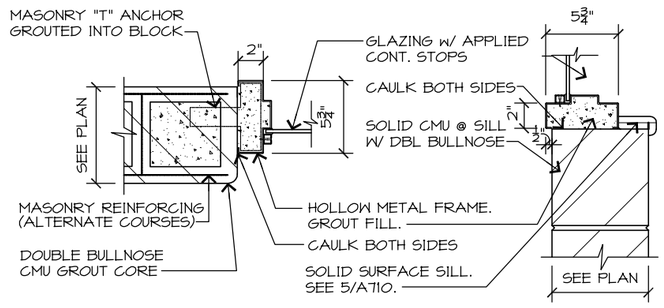


1 OVERHEAD DOOR HEAD/JAMB/SILL

3/4"=1'-0"

0 4" 8" 16" 24"

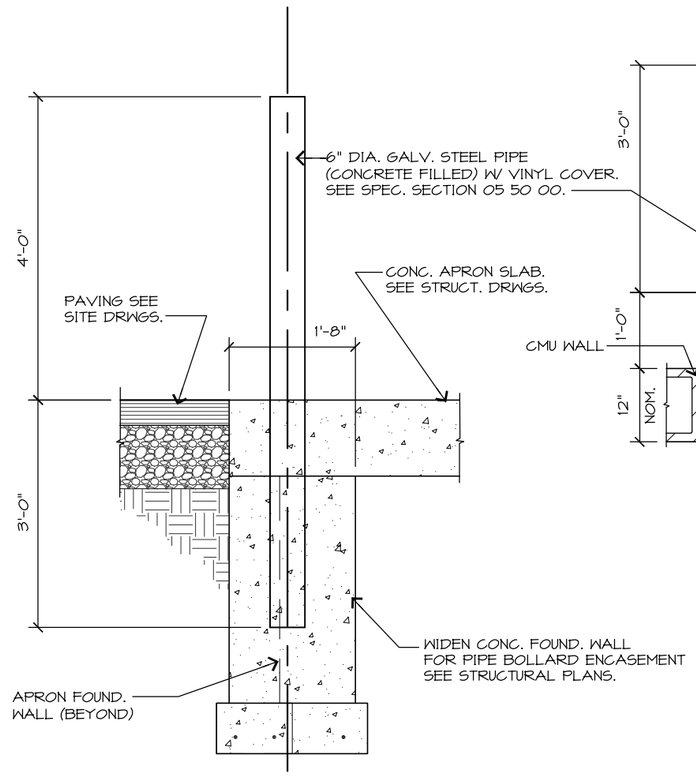




2 HOLLOW METAL BORROWED LITE DETAILS

1"=1'-0"

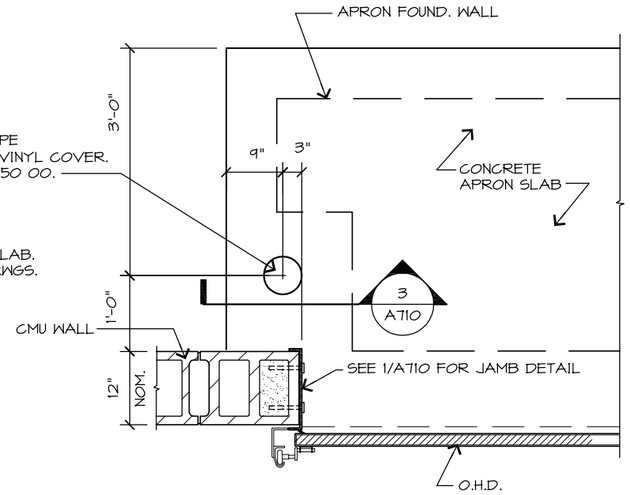
0 3" 6" 1 1.5



3 GUARD POST SECTION

1/2"=1'-0"

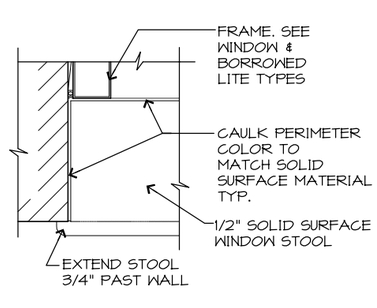
0 6" 1 2 3

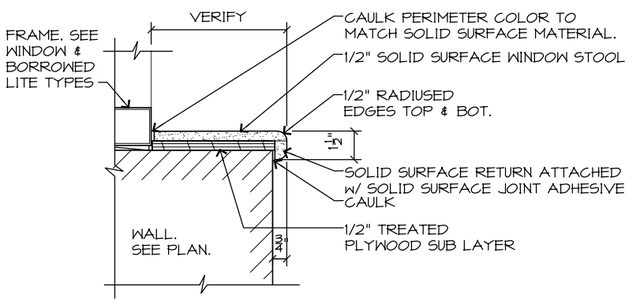


4 GUARD POST DETAIL

1/2"=1'-0"

0 6" 1 2 3



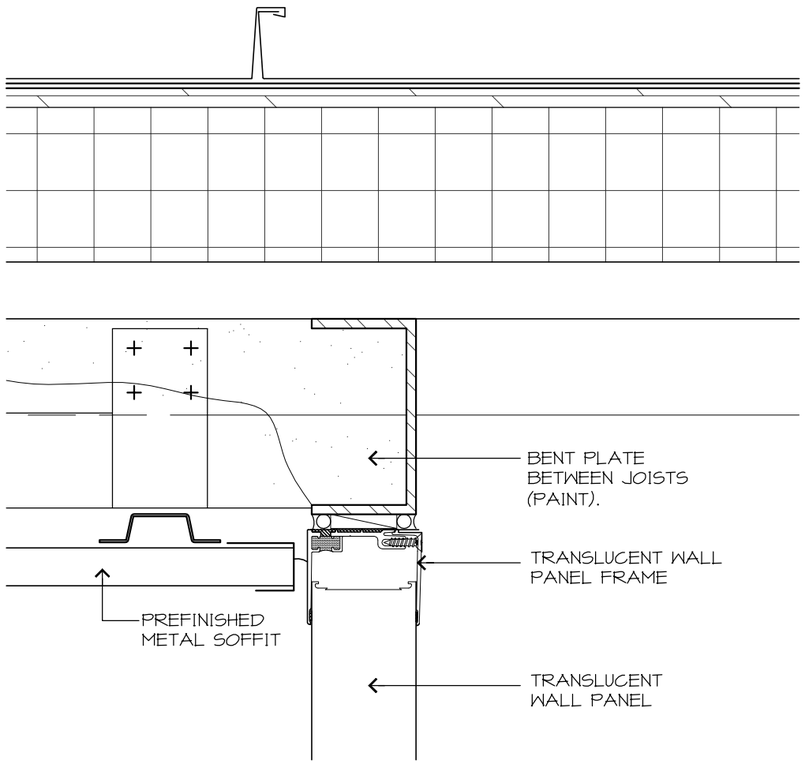


5 SOLID SURFACE STOOL DETAIL

1 1/2"=1'-0"

0 2" 4" 8" 12"

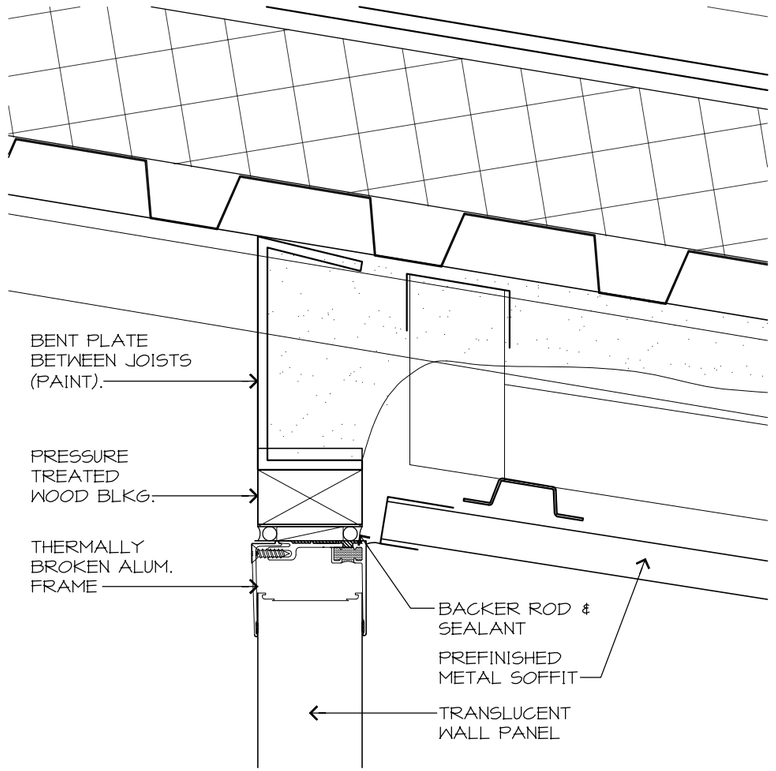
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			OVERHEAD DOOR DETAILS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: SEE PLAN	SHEET NO: A710	160



1 TRANSLUCENT PANEL HEAD DETAIL

1-1/2"=1'-0"

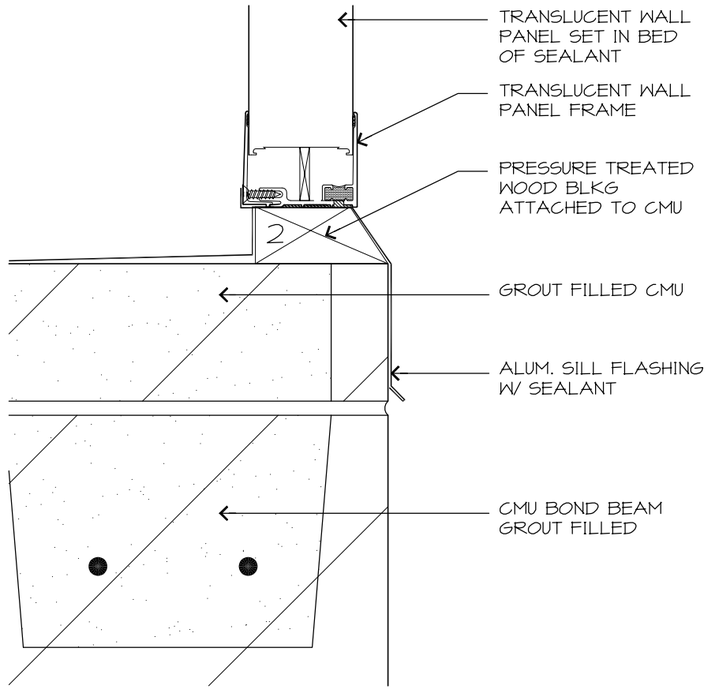
0 2" 4" 8" 12"



2 TRANSLUCENT PANEL HEAD DETAIL

1-1/2"=1'-0"

0 2" 4" 8" 12"

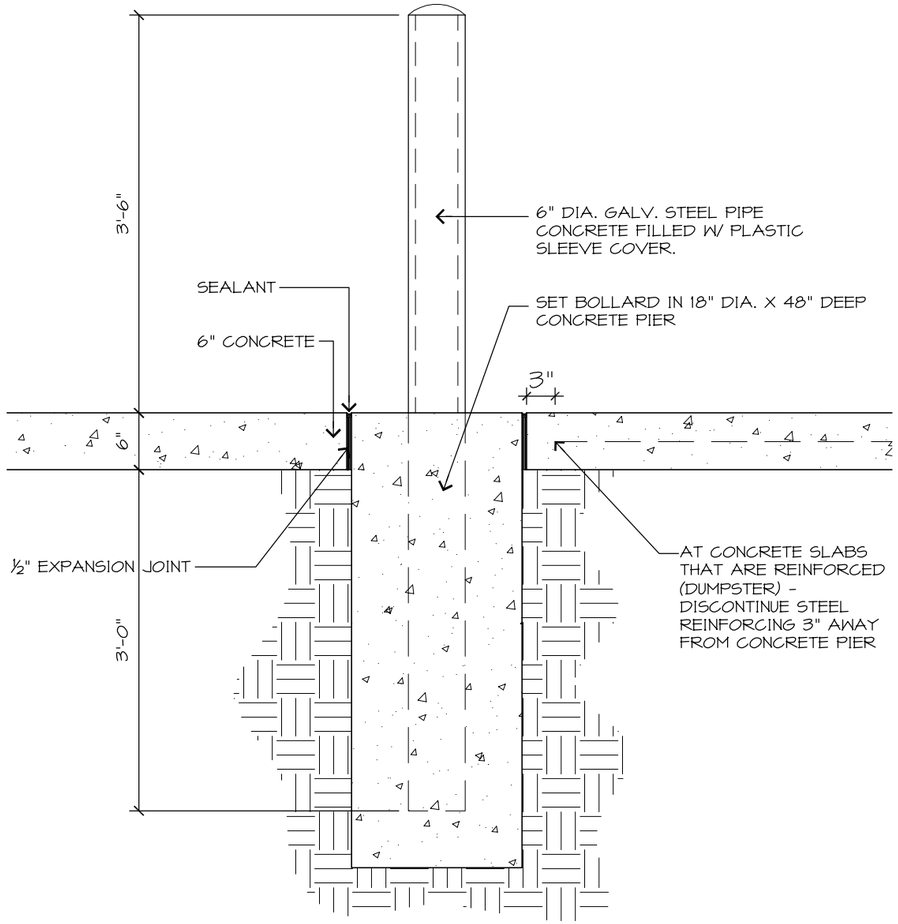


3 TRANSLUCENT PANEL SILL

1-1/2"=1'-0"

0 2" 4" 8" 12"

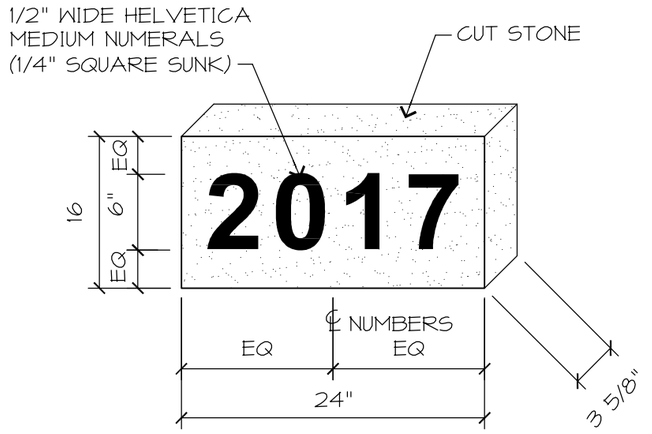
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			OVERHEAD DOOR DETAILS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: SEE PLAN	SHEET NO: A711	



1 PIPE BOLLARD DETAIL

3/4"=1'-0"

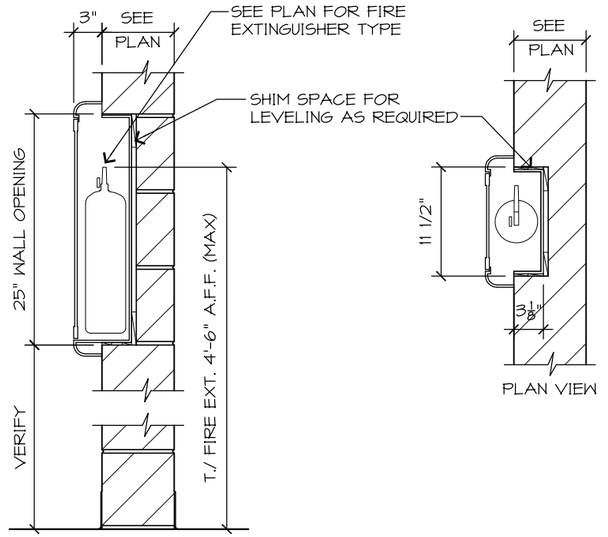
0 4" 8" 16" 24"



2 TYPICAL DATE STONE DETAIL

1"=1'-0"

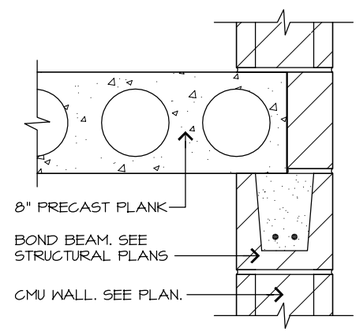
0 3" 6" 1 1.5



3 SEMI-RECESSED CABINET SECTIONS

3/4"=1'-0"

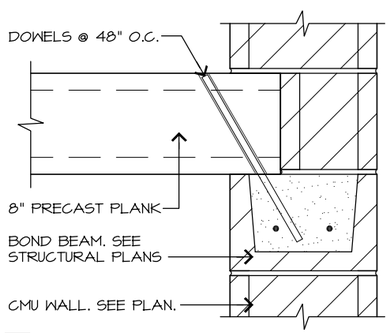
0 4" 8" 16" 24"



4 P/C PLANK BRG DETAIL

1"=1'-0"

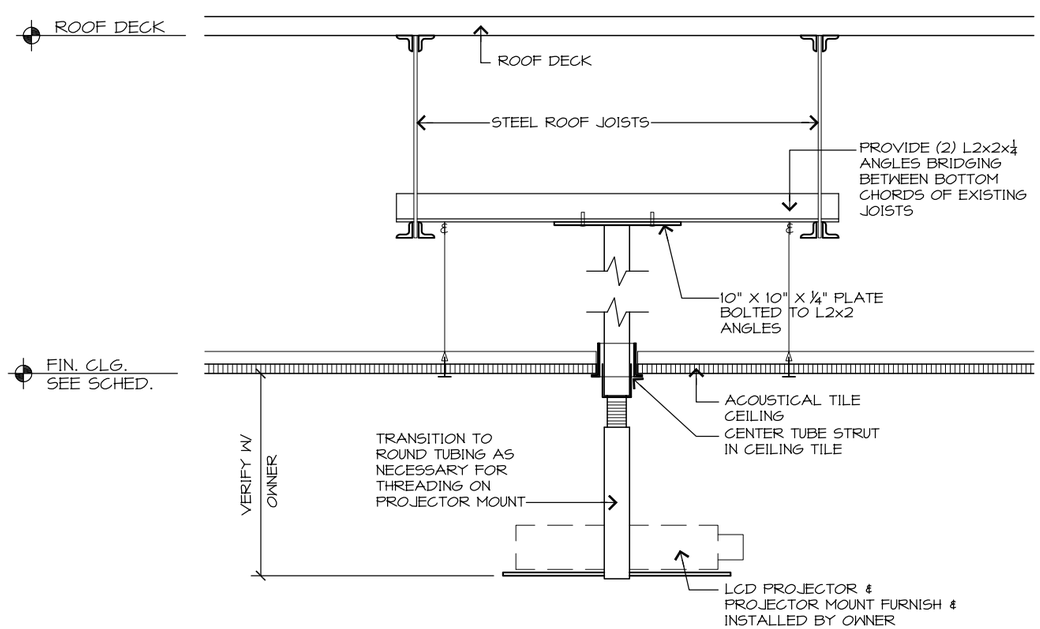
0 3" 6" 1 1.5



5 P/C PLANK BRG DETAIL

1"=1'-0"

0 3" 6" 1 1.5

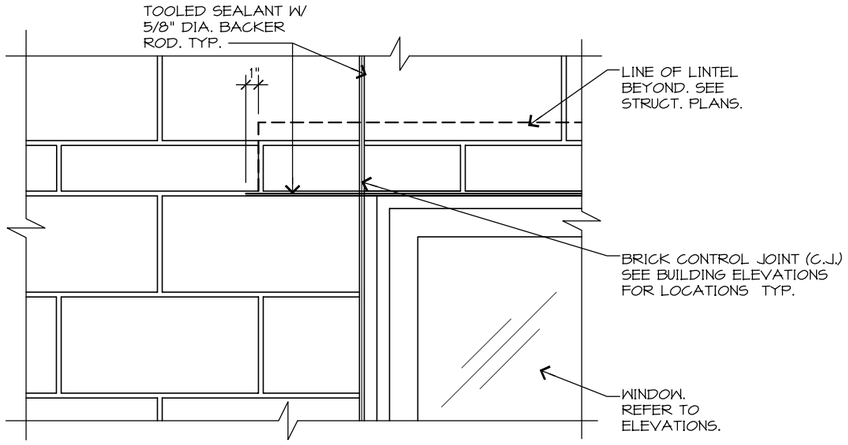


6 PROJECTOR MOUNTED DETAIL

1"=1'-0"

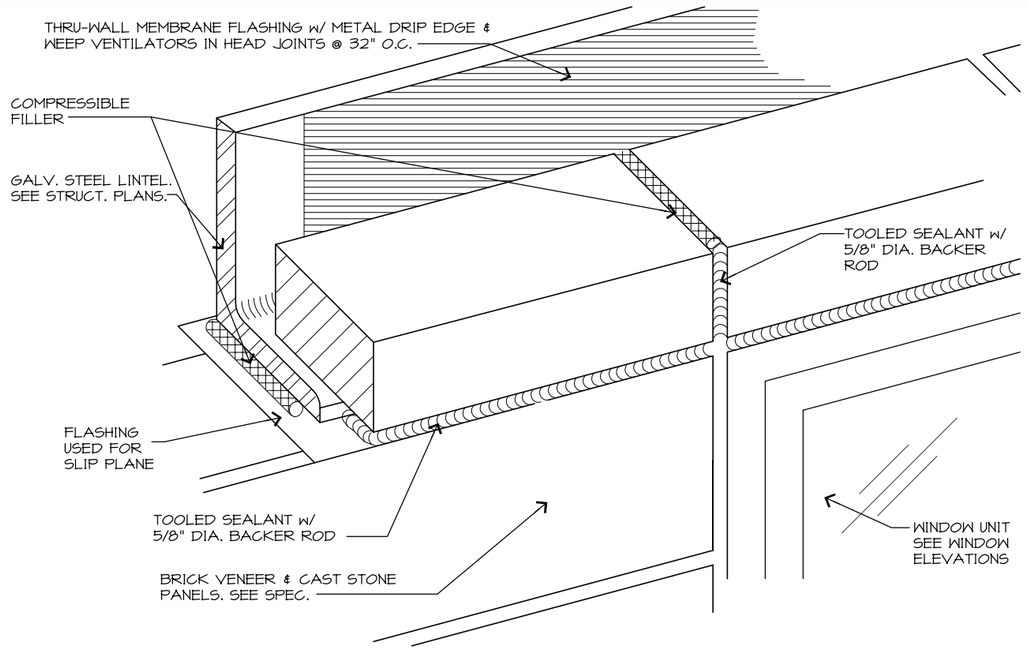
0 3" 6" 1 1.5

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DETAILS		DATE:
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: A801



BLOCK CONTROL JOINT (C.J.)

SCALE: 1" = 1'-0"

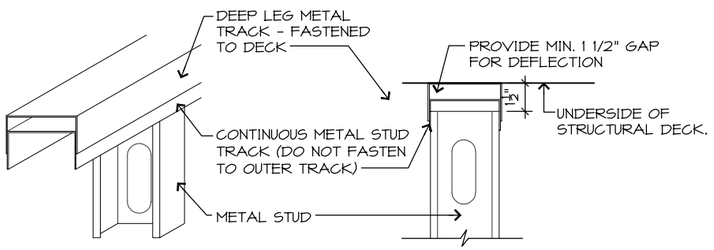


ISOMETRIC VIEW

SCALE: N.T.S.

1 EXTERIOR CONTROL JOINT DETAIL

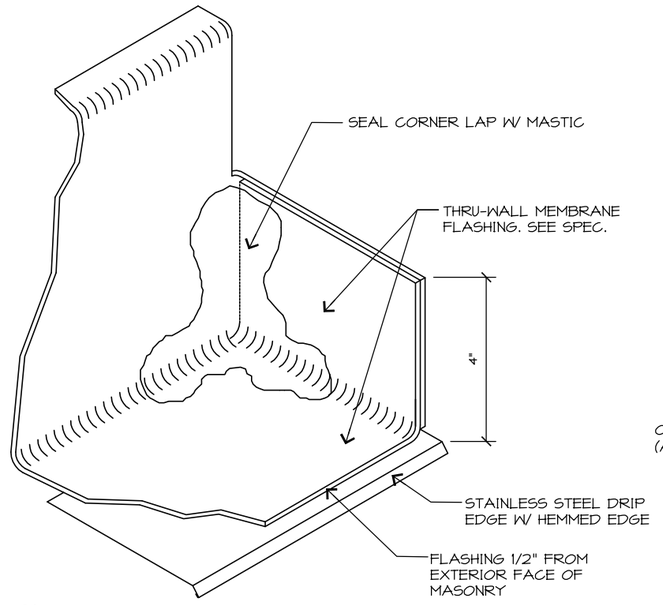
SCALE: VARIES



2 TYPICAL SLIP JOINT DETAIL

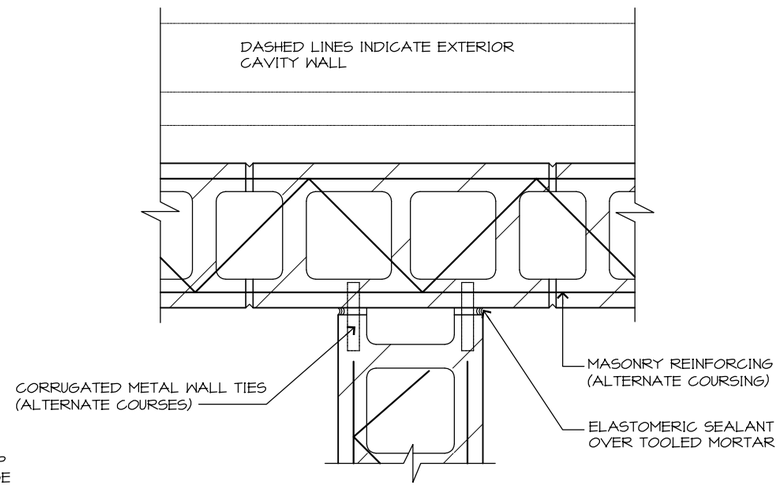
1-1/2"=1'-0"

0 2" 4" 8" 12"



3 THRU-WALL MEMBRANE END DAM

N.T.S.



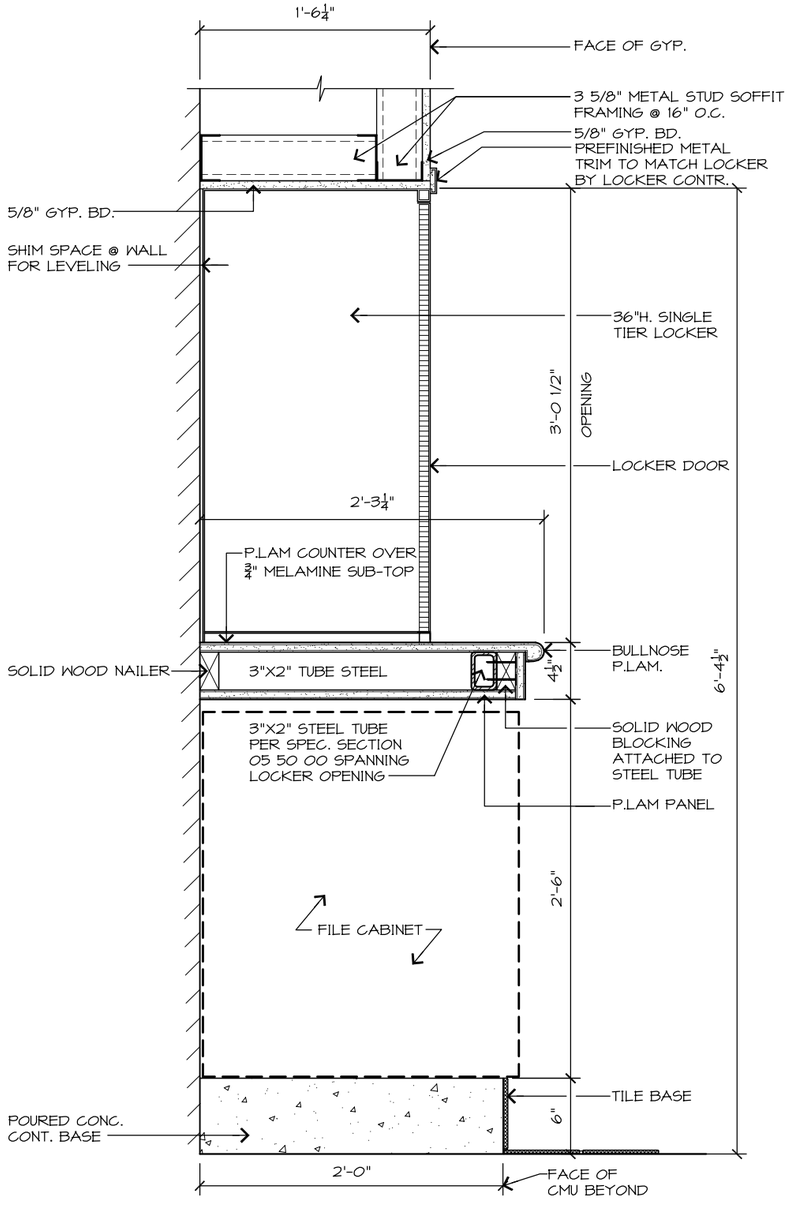
TYPICAL AT ALL PILASTERS, COLUMNS AND
INTERIOR & EXTERIOR WALL INTERSECTIONS

4 CONTROL JOINT @ WALL INTERSECTION

1 1/2"=1'-0"

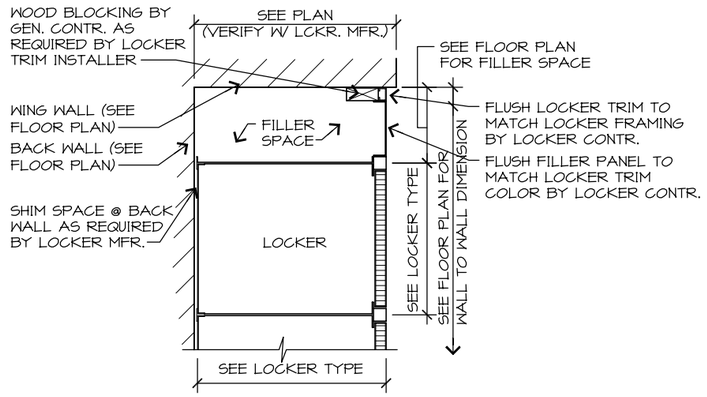
0 2" 4" 8" 12"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DETAILS		DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: A802	



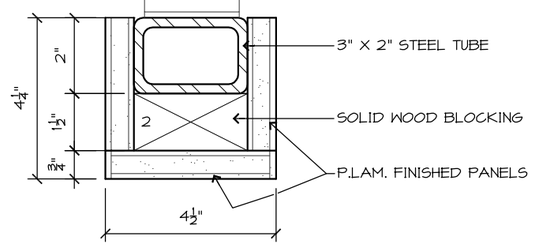
1 LOCKER OVER FILE CABINET DETAIL

1"=1'-0"



2 LOCKER FILLER PANEL DETAIL

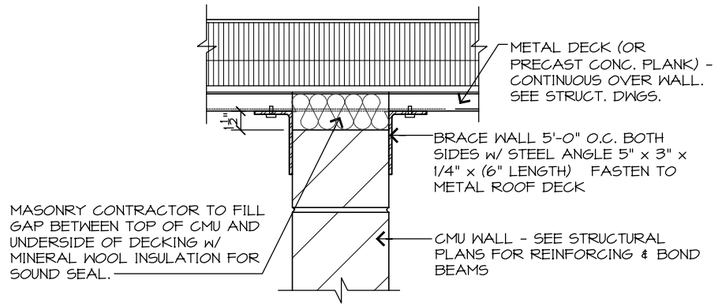
1"=1'-0"



3 LOCKER SHELF CENTER SUPPORT

3"=1'-0"

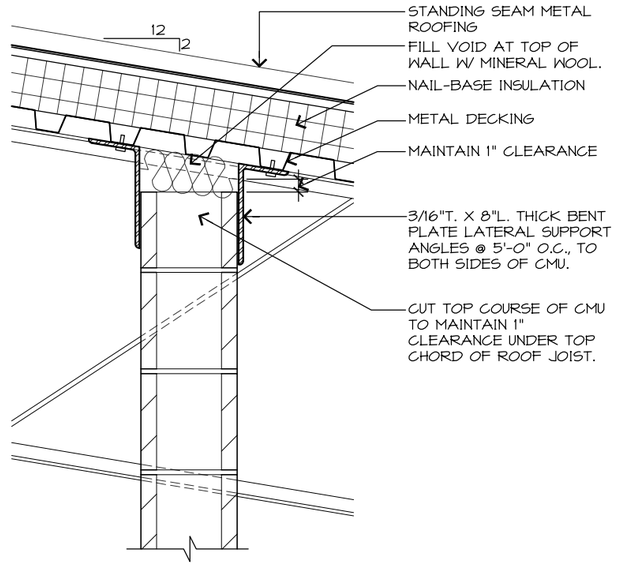
PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DETAILS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 3" 6" 1 1.5	SHEET NO: A803	164



1 CMU TOP OF WALL BRACING DETAILS

1"=1'-0"

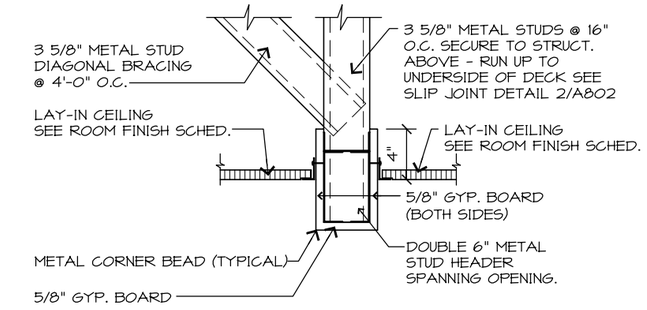
0 3" 6" 1 1.5



2 CMU TOP OF WALL BRACING DETAILS

1"=1'-0"

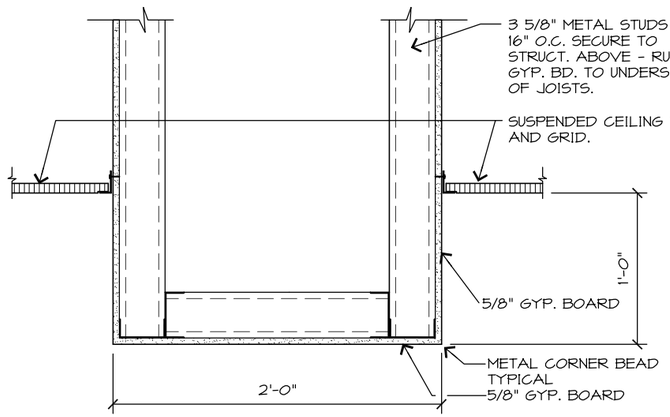
0 3" 6" 1 1.5



3 BULKHEAD SOFFIT DETAIL

1"=1'-0"

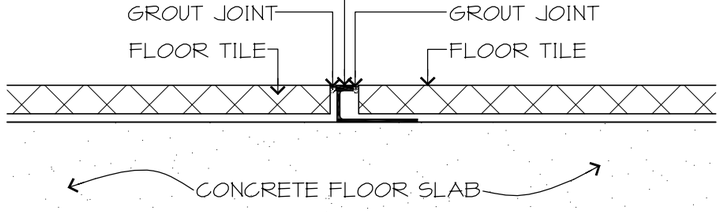
0 3" 6" 1 1.5



4 METAL STUD & GYP. BD. SOFFIT

1"=1'-0"

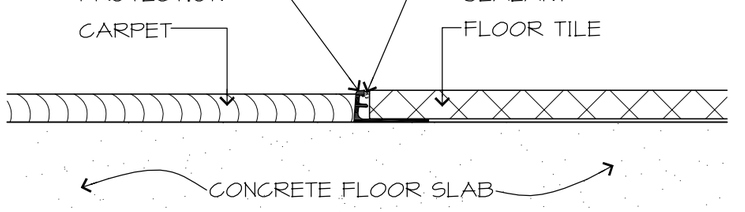
0 3" 6" 1 1.5



5 FLOOR TILE MOVEMENT JOINT

6"=1'-0"

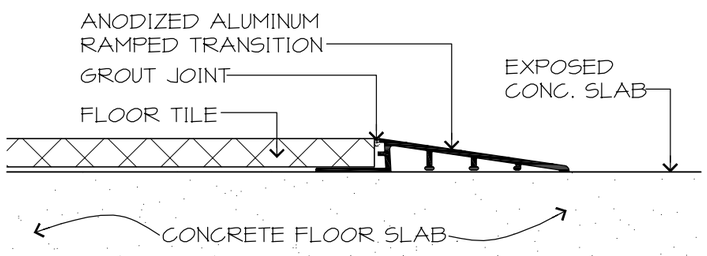
0 .5" 1" 2" 3"



6 TRANSITION -FLOOR TILE TO CARPET

6"=1'-0"

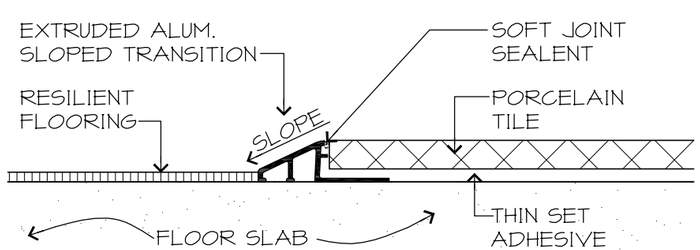
0 .5" 1" 2" 3"



7 TRANSITION -FLOOR TILE TO EXPOSED SLAB

6"=1'-0"

0 .5" 1" 2" 3"



8 TRANSITION - FLOOR TILE TO RESILIENT FLOORING

6"=1'-0"

0 .5" 1" 2" 3"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			DETAILS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: A804	

ROOM FINISH SCHEDULE

ROOM NAME	SCALE TUNNEL	VESTIBULE	PUBLIC LOBBY	WOMENS TOILET	MENS TOILET	DRIVERS	OPERATIONS	OFFICE	TOILET/ SHOWER	INTOX	TOILET RM	JANITOR	MECH. RM.	MAINT. STORAGE	MULTI-PURPOSE RM	TROOPERS	ELECT/ TELECOM	CLASSROOM	INSPECT STORAGE	CLASSROOM STORAGE	CORRIDOR	CORRIDOR	VESTIBULE	VESTIBULE	INSPECTION	N. INSPEC. PIT	S. INSPEC. PIT	TUNNEL
ROOM NO.	001	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127
FLOORING																												
SUBSTRATE	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC	CONC
FINISH-COLOR	S	PT-1	PT-1	PT-1	PT-1	PT-1	PT-1	CPT	PT-1	PT-1	PT-1	S	S	S	SV	CPT	S	CPT	S	SV	PT-1	PT-1	PT-1	PT-1	HTCS	HTCS	HTCS	HTCS
BASE	S	PT-1	PT-1	PT-1	PT-1	PT-1	PT-1	CPT	PT-1	PT-1	PT-1	VB	CMU	CMU	VB	CPT		CPT	VB	VB	PT	PT	PT	PT		CONC	CONC	CONC
TYPE- COLOR		PT-1	PT-1	PT-1	PT-1	PT-1	PT-1		PT-1	PT-1	PT-1		P	P			VB				PT-1	PT-1	PT-1	PT-1	HTCS	HTCS	HTCS	HTCS
WALLS																												
NORTH WALL																												
SUBSTRATE	CONC	GFCMU	GFCMU	CMU	CMU	GFCMU	GFCMU / GYP BD	GFCMU	CMU	GFCMU	CMU	CMU	CMU	CMU	GFCMU	GFCMU	CMU	GFCMU	CMU	CMU	GFCMU	GFCMU	GFCMU	GFCMU	GFCMU	CONC	CONC	CONC
FINISH-COLOR	S	S	S	WCT-1	WCT-1	S	S/P 4	S	WCT-1	S	WCT-1	P	P	P	S	S	P	S	P	P 4	S	S	S	S	S	HTCS	HTCS	HTCS
EAST WALL																												
SUBSTRATE	CONC	GFCMU	GFCMU	CMU	CMU	GFCMU	GFCMU /	GFCMU	CMU	GFCMU	CMU	CMU	CMU	CMU	GFCMU	GFCMU	CMU	GFCMU	CMU	CMU	GFCMU	GFCMU	GFCMU	GFCMU	GFCMU	CONC	CONC	CONC
FINISH-COLOR	S	S	S	WCT-1	WCT-1	S	S	S	WCT-1	S	WCT-1	P	P	P	S	S	P	S	P	P 4	S	S	S	S	S	HTCS	HTCS	HTCS
SOUTH WALL																												
SUBSTRATE	CONC	GFCMU	GFCMU	CMU	CMU	GFCMU	GFCMU	GFCMU	CMU	GFCMU	CMU	CMU	CMU	CMU	GFCMU	GFCMU	CMU	GFCMU	CMU	CMU	GFCMU	GFCMU	GFCMU	GFCMU	GFCMU	CONC	CONC	CONC
FINISH-COLOR	S	S	S	WCT-1	WCT-1	S	S	S	WCT-1	S	WCT-1	P	P	P	S	S	P	S	P	P 4	S	S	S	S	S	HTCS	HTCS	HTCS
WEST WALL																												
SUBSTRATE	CONC	GFCMU	GFCMU	CMU	CMU	GFCMU	GFCMU / GYP BD	GFCMU	CMU	GFCMU	CMU	CMU	CMU	CMU	GFCMU	GFCMU	CMU	GFCMU	CMU	CMU	GFCMU		GFCMU	GFCMU	GFCMU	CONC	CONC	CONC
FINISH-COLOR	S	S	S	WCT-1	WCT-1	S	S/P 4	S	WCT-1	S	WCT-1	P	P	P	S	S	P	S	P	P 4	S		S	S	S	HTCS	HTCS	HTCS
CEILING																												
MATERIAL	CONC	GYP BD	GYP BD	GYP BD	GYP BD	AT/ GYP BD	AT/ GYP BD	AT	GYP BD	GYP BD	GYP BD	GYP BD	STRUCT	STRUCT	AT	AT	STRUCT	AT	STRUCT	AT	AT	AT	GYP BD	AT	STRUCT			CONC
FINISH-COLOR	S	P-1	P-1	P-1	P-1	P-1	P-1		P-1	P	P	P	P	P			P		P				P		P			HTCS
HEIGHT	7'-7"	9'-0"	9'-0"	9'-0"	9'-0"	9'-0"	9'-0"	9'-0"	9'-0"	9'-0"	9'-0"	9'-0"	VARIES	9'-0"	9'-0"	9'-0"	VARIES	9'-0"	VARIES	9'-0"	9'-0"	9'-0"	9'-0"	9'-0"	VARIES			
FRAMES																												
MATERIAL	HM	AL/HM	AL/HM	HM	HM	AL/HM	AL/HM	AL/HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	HM	AL	HM	HM			
FINISH-COLOR	P-2	PF/P	PF/P	P	P	P	PF/P	PF/P	P	P	P	P	P	P	P	P	P	P	P	P	P	P	PF	P	P			
DOORS																												
MATERIAL	HM	AL/HM	AL/WD	WD	WD	WD	AL/WD	WD	WD	WD	WD	WD	WD/HM	HM	WD	WD	WD	WD	HM	WD	WD	WD	AL	WD/HM	HM			
FINISH-COLOR	P	PF/P	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF	PF/P	P	PF	PF	PF	PF	P	PF	PF	PF	PF	PF/P	P			
CASEWORK																												
COUNTERTOPS			PLAM-1				S.SURF-1		S.SURF-1		S.SURF-1				P. LAM-1	P. LAM-1		P. LAM-1			P. LAM-1							
CASEWORK FACE							P. LAM-2								P. LAM-2	P. LAM-2		P. LAM-2			P. LAM-2							
MISC. - ITEMS							S.SURF-2	S.SURF-2		S.SURF-2																		
WINDOW STOOLS			S.SURF-2												S.SURF-2	S. SURF-2												
WINDOW TREATMENT			WT-3				WT-3	WT-1 & 2		WT-1					WT-2	WT-2												
REMARKS			1	4	4	1		2	4	3	4										4							

ABBREVIATIONS

AT	ACOUSTICAL TILE
AL	ALUMINUM
BLIND	ALUMINUM BLIND
CMU	CONCRETE MASONRY UNIT
CONC	CONCRETE
CPT	CARPET
CT	CERAMIC TILE
F.GRID	FLOOR WALK OFF GRID
GFCMU	GROUND FACE CONCRETE MASONRY UNIT
GYP BD	GYPSUM BOARD
HM	HOLLOW METAL
HTCS	HIGH TRAFFIC COATING SYSTEM
P	PAINT
PF	PREFINISHED
PLAM	PLASTIC LAMINATE
PT	PORCELAIN TILE
S	SEALED
S.SURF	SOLID SURFACE
STRUCT	STRUCTURE
SV	SHEET VINYL
VB	VINYL BASE
WCT	WALL CERAMIC TILE
WD	WOOD
WT	WINDOW TREATMENT

GENERAL NOTES

A. ALL INTERIOR HOLLOW METAL DOOR FRAMES TO BE PAINTED P2.
B. ALL INTERIOR WOOD DOORS TO BE STAINED TO MATCH WD-1
C. ALL WINDOW STOOLS TO BE S.SURF=2.
D. PAINT ALL WALLS AND CEILINGS P-1, UNLESS OTHERWISE SPECIFIED IN THE ABOVE SCHEDULE.

REMARKS

1. PROVIDE SOLID SURFACE WINDOW STOOL ON DRIVERS 105 SIDE OF H.M. BORROWED LITE FRAME.
2. PROVIDE SOLID SURFACE ON OFFICE 107 SIDE OF BORROWED LITE FRAME.
3. PROVIDE SOLID SURFACE WINDOW STOOLS ON INTOX 109 SIDE OF BORROWED LITE FRAMES.
4. SEE DETAILS OF PLASTIC LAMINATE LOCKER SHELF ON SHEET A803.

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI

ROOM FINISH SCHEDULE

DATE:

STATE PROJECT NUMBER: 1070–00–72 | HWY: IH 90 | COUNTY: MONROE | SPARTA SWEF NO. 54 | SCALE:

SHEET NO: A901

ABBREVIATIONS

AT.	Acoustical Tile
AL	Aluminum
BLIND	Aluminum Blinds
CMU	Concrete Masonry Unit
CONC	Concrete
CPT	Carpet
CT	Ceramic Tile
F.GRID	Floor Walk Off Grid
GFCMU	Ground Face Concrete Masonry Unit
GYP BD	Gypsum Board
HM	Hollow Metal
H.T.C.S.	Coating System
P	Paint
PF	Prefinished
P.LAM.	Plastic Laminate
PT	Pocerlain Tile
S	Sealed
S. SURF.	Solid Surface
STRUCT	Structure
SV.	Sheet Vinyl
VB	Vinyl Base
WCT.	Wall Tile
WD	Wood
WT	Window Treatment

REMARKS

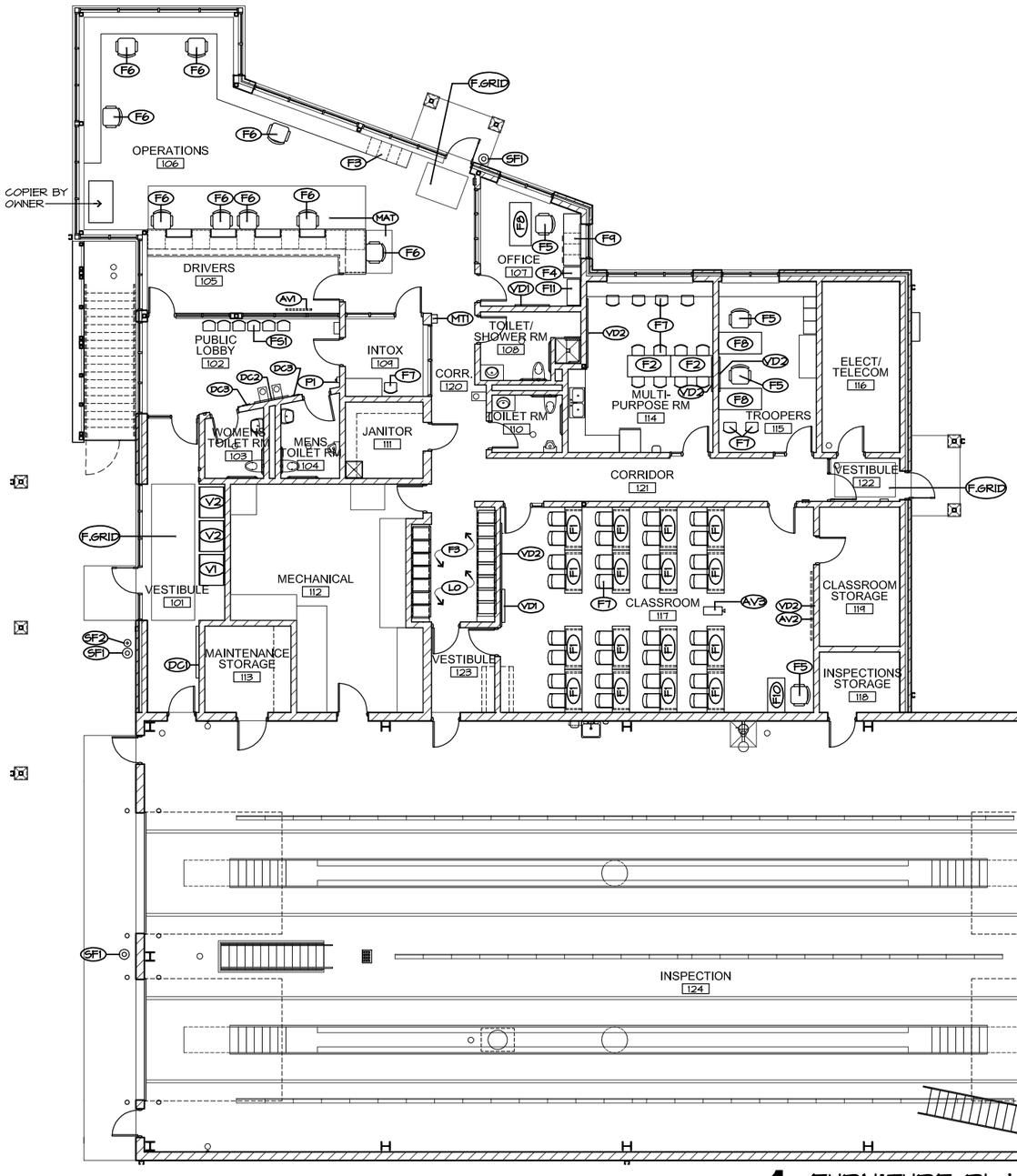
1. FIELD-APPLIED SEAL COAT PER SPEC. SECTION 12 50 00.
2. PLAM-3 TO MATCH FURNITURE MANUFACTURER DESK (F-8) FINISH.
3. P-3 TO MATCH CUSTOM METAL FASCIA AND ROOF COLORS. PAINT ALL EXTERIOR GUARD RAILINGS P-3.
4. FLOOR TILE OVERFULL MORTAR BED. SEE A106 FOR RECESSED SLABS.

COLOR SCHEDULE

DIVISION	LABEL	MFG.	SIZE	PATTERN	COLOR	NOTES
04 20 00 - Unit Masonry	CMU-1	County Materials	See Spec.		Standard Gray	
	CMU-2	Premier Block	See Spec.		Antique White	
	CMU-3	Premier Block	See Spec.		Antique White	
	CMU-3A	Premier Block	See Spec.		Antique White	
	CMU-4	Premier Block	See Spec.		Sandstone	
	CMU-5	Premier Block	See Spec.		Sienna Cream	
06 40 00 - Architectural	P.LAM.-1	Formica or Equal		Rosso Granite	3917-58	
Woodwork	P.LAM.-2	Formica or Equal		Cocoa Leather	3515-58	
	S.SURF.-1	Meganite or Equal		Granite	Saddlebrown 668	
	S.SURF.-2	Meganite or Equal		Granite	Sanibel 691	
08 14 16 - Flush Wood Doors	WD-1	Graham or Equal		Red Oak	#901 Burgundy	
09 31 00 - Tiling	P.T-1	Daltile or Equal	6"x 6"	Terra Antica	Oro TA01	
	P.T-1	Daltile or Equal	12"x 12"	City View	Downtown Nite CY04	
	WCT-1	Daltile or Equal	6"x 6"	Brixton	Bone BX01	
09 51 00 - Acoustical Ceiling	AT-1	Armstrong or Equal	2' x 2'	#1732 White	Fine Fissured	
09 65 00 - Resilient Flooring	SV-1	Polyflor or Equal		2000-pur	Stonewall	
	VB-1	Armstrong or Equal	4" H.		61 Graphite Gray	
09 68 00 - Carpet	CPT-1	Interface or Equal	19" sq.	Kamala II	101857 Sake	
09 96 00 - High Performance Coating	H.T.C.S.	Tennant			Medium Grey	
09 90 00 - Painting	P-1	Sherwin Williams or EQ.		SW 7006	SW 7066 Extra White	
	P-2	Sherwin Williams or EQ.		SW 6328	SW6328 Firewood	
	P-3	Sherwin Williams or EQ.		SW6328	SW6328 Custom Color Match	
	P-4	Sherwin Williams or EQ.		SW 7012	SW7012 Creamy	
12 20 00 - Window Treatment	WT-1	Hunter Douglas or EQ.			D1-127 'Linen Flirt'	
	WT-2	Mechoshade			#2104 Black/Brown	
	WT-3	Mechoshade			0606 Smoke/Silver-Smoke	
	Blind	Hunter Douglas or EQ.		Aluminum 1"		
12 48 16 - Floor Grids	F.GRID	Balco or Equal		Epoxy w/ grit	ABRV Brown Bark	

FURNITURE SCHEDULE

Location	Spec #	Label	Qty	Description	Provided By
Outdoor	12 93 00	SF-1	4	Trash receptacle (concrete aggregate)	Contractor
	12 93 00	SF-2	1	Cigarette receptacle snuffer	Contractor
		R-1	1 each	Exterior recycling receptacles	Owner
Vestibule 101		V-1	1	Vending machine - drinks	By Owner
		V-2	2	Vending machine - snacks	By Owner
	10 12 00	DC-1	1	Enclosed map case 6' x 4'	Contractor
		F.GRID	1	Floor grid	
Public Lobby 102	12 65 00	FS-1	6	Fixed seating	Contractor
	10 12 00	DC-2	1	Interior enclosed map case 36" x 44"	Contractor
	10 12 00	DC-3	2	Wall mounted brochure display	Contractor
		P-1	1	Courtesy Phone	Contractor
Drivers Room 105	11 52 00	AV-1	1	Bracket for weather monitor	Contractor
Operations 106	12 50 00	F-6	9	Task chair - high counter height	Contractor
	12 50 00	F-3	4	File pedestals F/F	Contractor
	12 48 16	Mat	2	Anti-fatigue floor mat	Contractor
		R-2	1 each	Interior recycling receptacles	Owner
		F.GRID	1	Floor grid	
Office 107	12 50 00	F-5	1	Task chair - standard height	Contractor
	12 50 00	F-8	1	60" x 30" desk	Contractor
	12 50 00	F-9	1	Work surface credenza - with B/B/F, F/F, F/F	Contractor
	12 50 00	F-4	1	Vertical file - 4 drawer	Contractor
	12 50 00	F-11	1	Book shelf	Contractor
	10 11 00	VD-1	1	Tack board 4' x 4'	Contractor
Intox Room 109	12 50 00	F-7	1	Task chair - attached to floor	Contractor
Multi- Purpose Room 114	12 50 00	F-7	12	Guest chair - standard height	Contractor
	12 50 00	F-2	2	Training tables 5' x 2'	Contractor
	10 11 00	VD-2	1	Marker board 8' x 4'	Contractor
	10 28 00	D-1	1	Paper towel dispenser	Contractor
			1	Bottled water cooler	By Owner
Troopers 115	12 50 00	F-7	2	Guest chair - standard height	Contractor
	12 50 00	F-5	2	Task chair - standard height	Contractor
	12 50 00	F-8	2	60" x 30" desk	Contractor
	10 11 00	VD-2	1	Marker board 8' x 4'	Contractor
	10 51 00	LO-2	1	Single tier locker	Contractor
	10 51 00	LO-3	1	5 tier locker	Contractor
Classroom 117	12 50 00	F-1	16	Training tables 5' x 2'	Contractor
	12 50 00	F-5	1	Task chair - standard height	Contractor
	12 50 00	F-7	32	Guest chair - standard height	Contractor
	12 50 00	F-10	1	Work surface 4' x 2'	Contractor
	10 11 00	VD-2	2	Marker board 8' x 4'	Contractor
	10 11 00	VD-1	1	Tack board 4' x 4'	Contractor
	11 52 00	AV-2	1	Projector screen-motorized	Contractor
	11 52 00	AV-3	1	Projector mount at ceiling	Contractor
Inspections Storage 118					
Classroom Storage 119					
Corridor 120	10 51 00	LO-1	15	Metal Lockers	Contractor
	11 72 53	MT-1	1	Medical Treatment Equipment	Contractor
	12 50 00	F-3	18	File Cabinets	Contractor
Vestibule 122	12 48 00	F.GRID	1	Floor Grid	
Inspection 124	12 50 00	F-12	1	Movable Stair	Contractor

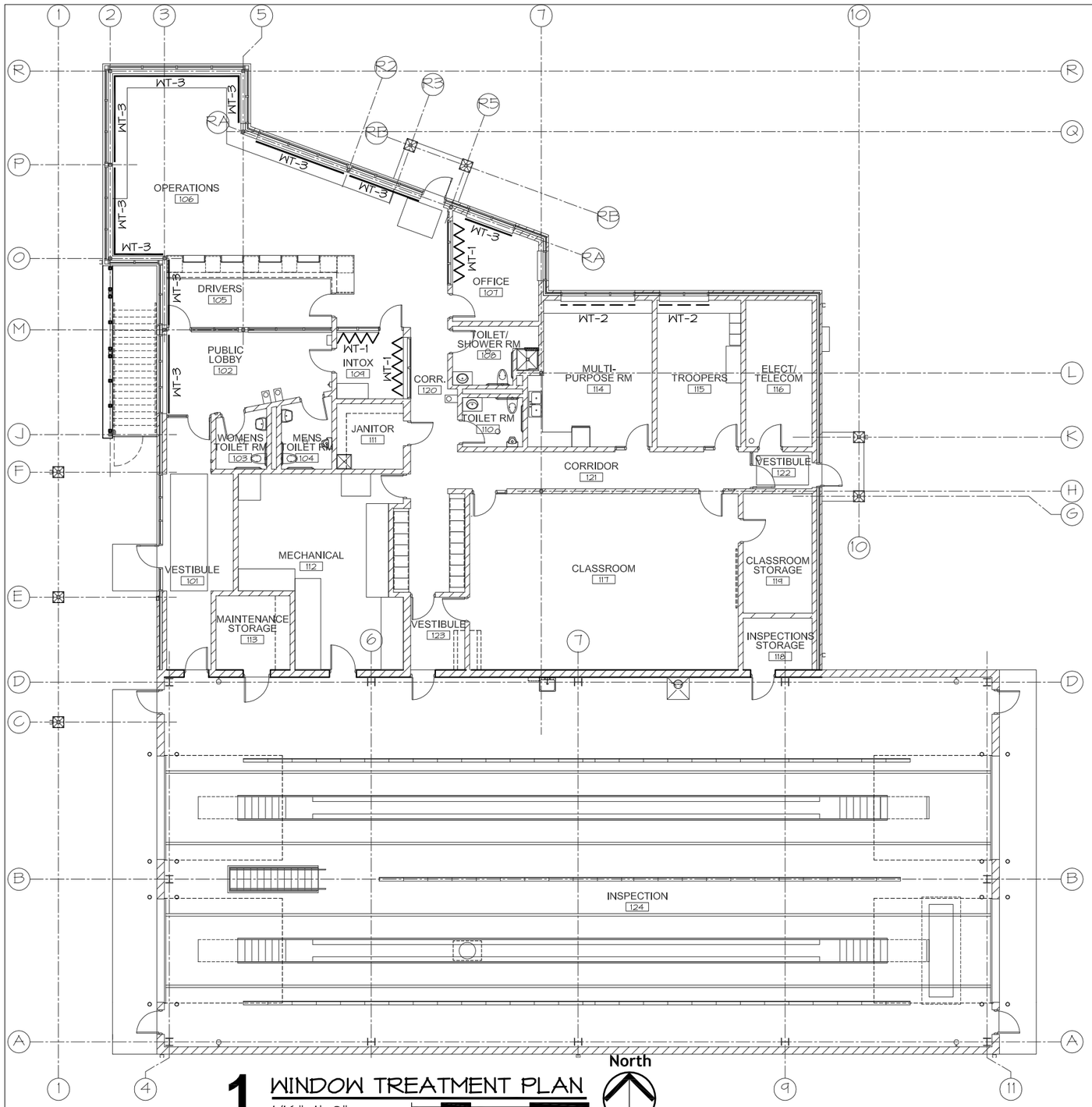


1 FURNITURE PLAN
1/16"=1'-0"

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI	FURNITURE PLAN & SPECIALTIES	DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 4 8 16 24	SHEET NO: A903

WINDOW TREATMENT SYMBOLS LEGEND

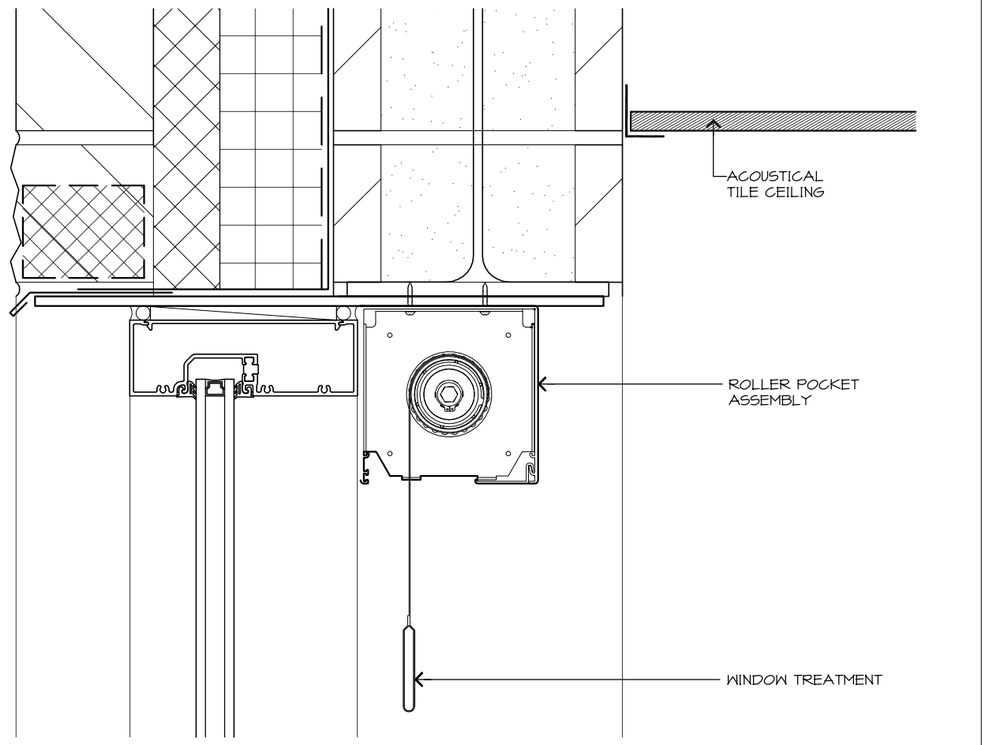
- WT-1 — HORIZONTAL WINDOW BLINDS
- WT-2 — ROLLING FABRIC SOLAR SHADES
- WT-3 — ROLLING TINTED FILM SOLAR SHADE



1 WINDOW TREATMENT PLAN

1/16"=1'-0"

0 4 8 16 24

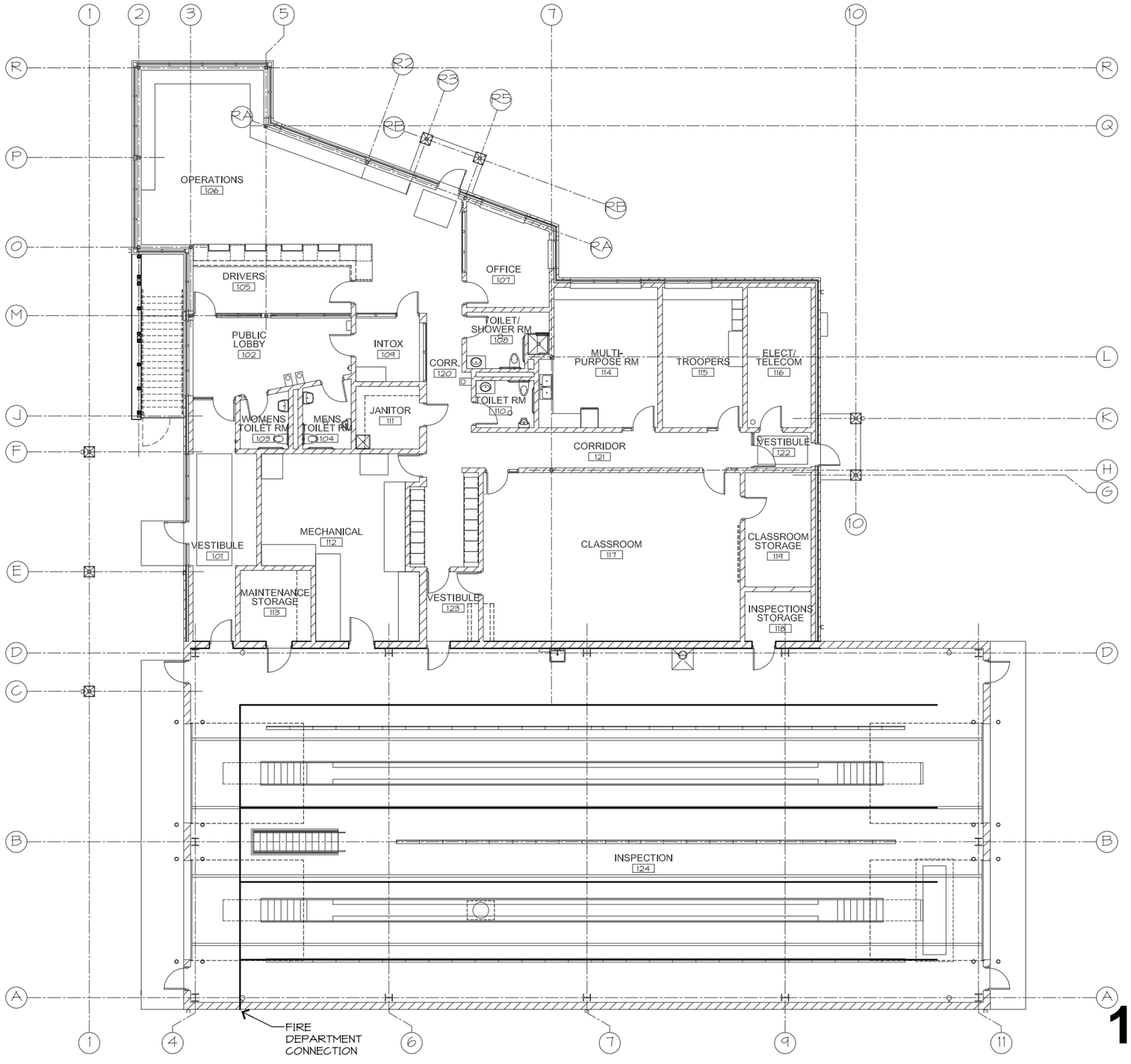


2 SOLAR SHADE POCKET MOUNT

3"=1'-0"

0 3" 6" 1 1.5

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			WINDOW TREATMENT PLAN	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: A904



1 FIRE PROTECTION PLAN

1/16"=1'-0"

North

PLANS PREPARED BY: VANTAGE ARCHITECTS, INC. LA CROSSE, WI			FIRE PROTECTION PLAN	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: 0 4 8 16 24	SHEET NO: F101

G E N E R A L N O T E S

1.1 GENERAL:

1.1.1 GENERAL: THE FOLLOWING GENERAL AND SPECIFIC NOTES SHALL APPLY EQUALLY TO ALL CONTRACTORS AND SUPPLIERS ENGAGED IN EXECUTION OF THE WORK SHOWN ON THESE PLANS. THESE NOTES SUPPLEMENT AND ARE MADE A PART OF THE ENTIRE CONTRACT DOCUMENTS AND SPECIFICATIONS.

1.1.2 REFERENCES: ALL CONSTRUCTION SHALL BE EXECUTED IN CONFORMANCE WITH THE FOLLOWING:
- PLANS AND SPECIFICATIONS
- GOVERNING STATE, LOCAL AND MUNICIPAL CODES
- AMERICAN SOCIETY FOR TESTING AND MATERIALS (ASTM)
- OCCUPATIONAL SAFETY AND HEALTH ACT (OSHA)

CONCRETE CONSTRUCTION:
- AMERICAN CONCRETE INSTITUTE (ACI),

MASONRY CONSTRUCTION:
- AMERICAN CONCRETE INSTITUTE (ACI)
- THE MASONRY SOCIETY (TMS)
- STRUCTURAL ENGINEERING INSTITUTE (SEI)

STRUCTURAL AND MISCELLANEOUS STEEL WORK:
- AMERICAN INSTITUTE OF STEEL CONSTRUCTION (AISC)

STEEL JOIST, STEEL DECK AND ACCESSORIES:
- STEEL JOIST INSTITUTE (SJI)
- STEEL DECK INSTITUTE (SDI)

COLD FORMED METAL FRAMING:
- AMERICAN IRON AND STEEL INSTITUTE (AISI)

WOOD CONSTRUCTION & TRUSSES:
- NATIONAL DESIGN SPECIFICATION (NDS) FOR WOOD CONSTRUCTION
- AMERICAN INSTITUTE OF TIMBER CONSTRUCTION (AITC)
- AMERICAN PLYWOOD ASSOCIATION (APA)
- TRUSS PLATE INSTITUTE (TPI)

CONTRACTOR SHALL ENSURE FAMILIARITY OF THE ABOVE ITEMS. ARCHITECT AND/OR ENGINEER INSPECTIONS WILL BE IN CONFORMANCE WITH THE ABOVE.

1.1.3 DESIGN DATA:

FLOOR AND ROOF LIVE LOADS:

SCALE	.100 PSF
SCALE MECHANICAL	.ACTUAL WEIGHTS
INSPECTION - 12" SLAB	HS25 TRUCK
INSPECTION - 5" SLAB ON GRADE	.100 PSF
STAIRS AND EXITS	100 PSF

ROOF SNOW LOADS:

GROUND SNOW LOAD, Pg	40 PSF
EXPOSURE FACTOR, Ce	1.0
THERMAL FACTOR, Ct	1.0
IMPORTANCE FACTOR, Is	1.0
FLAT ROOF SNOW LOAD Pf = 0.7xCexCtxIsxPg	28.0 PSF
ROOF SLOPE FACTOR Cs	1.0
SLOPED ROOF SNOW LOAD Ps = CsxPf.	28.0 PSF

ROOF DEAD LOADS:

SLOPED ROOF	20 PSF

WIND LOADS:

BASIC WIND SPEED, V	90 MPH
BUILDING CLASSIFICATION	.CATEGORY II
IMPORTANCE FACTOR, Iw	1.0
EXPOSURE CATEGORY	C
INTERNAL PRESSURE COEFFICIENT Gcpi	+/- 0.18

SEISMIC DATA:

SEISMIC USE GROUP	.CATEGORY II
IMPORTANCE FACTOR, Ie	1.0
SPECTRAL RESPONSE COEFFICIENT, SDS = 2/3 SMS	.0.065g
SPECTRAL RESPONSE COEFFICIENT, SD1 = 2/3 SM1	.0.034g
SITE CLASS	D
SEISMIC DESIGN CATEGORY	A
DESIGN BASE SHEAR	.12.1 KIPS
ANALYSIS PROCEDURE	INDEX FORCE ANALYSIS
FORCE RESISTING SYSTEM	ORDINARY STEEL MOMENT FRAME

COMPONENTS AND CLADDING DESIGN CRITERIA:
REFER TO ASCE 7-05 FIGURES 6-11A THROUGH 6-11D FOR ZONE DIAGRMAS

SEE COMPONENTS AND CLADDING SPREADSHEET FOLLOWING THESE GENERAL NOTES

1.1.4 DESIGN CRITERIA:

REPORTED SOIL BEARING CAPACITY . . . . . 5000 PSF

GEOTECHNICAL REPORT:
REFER TO GEOTECHNICAL ENGINEERING EXPLORATION AND ANALYSIS PREPARED BY:
CGC, INC. PROJECT ID 1070-00-32 DATED DECEMBER 10,2012

CONCRETE:

FOOTINGS	.f'c = 3000 PSI
COLUMNS & PIERS	.f'c = 4000 PSI
WALLS, BEAMS AND SLABS	.f'c = 4000 PSI
GROUND SLABS	.f'c = 4000 PSI
BOND BEAMS	.f'c = 3000 PSI
EXTERIOR SLABS	.f'c = 3500 PSI

MASONRY:

UNIT STRENGTH METHOD	f'm = 2000 PSI
GROUT	.f'c = 2000 PSI

REINFORCING STEEL:

#2 & #3 BARS A615-40	Fy = 40000 PSI
#4 BARS & LARGER A615-60	Fy = 60000 PSI

STRUCTURAL STEEL:

ANGLE SHAPES & PLATES- ASTM A36	Fy = 36000 PSI
WIDE FLANGE SHAPES ASTM A992	Fy = 50000 PSI
HSS TUBE SHAPES - ASTM A500 GRADE B	Fy = 46000 PSI
CHANNEL SHAPES - ASTM A572 GRADE 50	Fy = 50000 PSI

FASTENERS:
BOLTS - ASTM A325N
ANCHOR BOLTS - ASTM F1554
HEADED SHEAR CONNECTOR STUDS - ASTM A108

1.1.5 EXECUTION: CONTRACTOR TO CROSS CHECK DIMENSIONS, ELEVATIONS, SECTIONS AND DETAILS BETWEEN ARCHITECTURAL, MECHANICAL AND STRUCTURAL PLANS. AMBROSE ENGINEERING IS TO BE NOTIFIED OF ANY VARIANCE THAT WILL AFFECT THE STRUCTURAL FRAMING BEFORE CONTRACTOR BEGINS WORK. ALL EQUIPMENT SUPPORTS AND ANCHORAGES TO BE CROSS CHECKED WITH MANUFACTURER'S DRAWINGS. CONTRACTORS SHALL VERIFY ALL PROFILES, HEIGHTS AND DIMENSIONS AT PROJECT SITE PRIOR TO FABRICATION OF ANY MATERIAL AND INFORM THE ENGINEER OF ANY DISCREPANCIES OR FRAMING INTERFERENCES.

1.1.6 SHOP DRAWINGS: SHALL BE SUBMITTED BY THE GENERAL CONTRACTOR TO THE ARCHITECT/ENGINEER FOR APPROVAL BEFORE FABRICATION MAY PROCEED. GENERAL CONTRACTOR SHALL REVIEW AND STAMP SHOP DRAWINGS BEFORE SUBMITTAL TO ARCHITECT/ENGINEER. ALL SHOP DRAWINGS SHALL CONTAIN THE ISSUE DATE INDICATED ON THE CONSTRUCTION DOCUMENTS, ALONG WITH ANY ADDENDUMS OR REVISION DATES. SHOP DRAWINGS SHALL BE PROVIDED FOR THE FOLLOWING COMPONENTS: CONCRETE DESIGN MIXES, REINFORCING STEEL, STRUCTURAL STEEL, STEEL JOISTS AND GIRDERS, STEEL DECKING, AND METAL FABRICATIONS.

1.1.7 PROJECT CONDITIONS: ALL EXISTING BUILDING DIMENSIONS AND CONDITIONS MUST BE FIELD VERIFIED PRIOR TO FABRICATION. AMBROSE ENGINEERING SHALL NOT BE RESPONSIBLE FOR ANY EXISTING INFORMATION SUPPLIED BY THE OWNER/ARCHITECT NOR BE LIABLE FOR THOSE EXISTING CONDITIONS THAT VARY FROM THE PREVIOUSLY GIVEN INFORMATION.

2.1 EARTHWORK:

2.1.1 SOILS REPORT: REFER TO SOILS REPORT FOR SITE CONDITIONS, SUITABLE BEARING MATERIALS, ENGINEERED FILL, BACK FILL MATERIALS, COMPACTION REQUIREMENTS AND PROJECT SPECIFICATIONS FOR EARTHWORK NOT SPECIFIED HEREIN.

2.1.2 EXCAVATIONS: IF EXCAVATION SHOULD INDICATE A SAFE SOIL BEARING CAPACITY, LESS THAN THE GENERAL DESIGN DATA SOIL BEARING CAPACITY, AT THE FOOTING DEPTH INDICATED ON PLANS, THE ARCHITECT / ENGINEER SHALL BE NOTIFIED IMMEDIATELY AND FOUNDATION REVISED TO MEET THIS CONDITION.

2.1.3 INSPECTIONS: ALL FOOTING EXCAVATIONS SHALL BE INSPECTED BY A SOILS TESTING AGENCY PRIOR TO PLACING FOUNDATION CONCRETE OR ENGINEERED FILL. NOTIFY OWNERS REPRESENTATIVE WHEN ADDITIONAL EXCAVATION IS REQUIRED TO REACH SUITABLE BEARING MATERIAL.

2.1.4 SITE PREPARATION: ALL TOP SOIL AREAS MUST BE REMOVED FOR SLABS BEARING ON SOIL AND REPLACED WITH WELL COMPACTED GRANULAR FILL MATERIAL.

2.1.5 BACKFILLING: WHERE BASEMENT WALLS ARE INDICATED, NO BACKFILL SHALL BE PLACED AGAINST BUILDING WALLS UNTIL FIRST FLOOR CONSTRUCTION IS COMPLETE. PROPERLY BRACE WALLS PRIOR TO BACKFILLING. WHERE FROST WALLS ARE INDICATED, BACKFILL BOTH SIDES OF WALLS SIMULTANEOUSLY TO PREVENT OVERTURNING OR LATERAL MOVEMENT OF WALLS.

3.1 REINFORCED CONCRETE:

3.1.1 REFERENCES: PERFORM CONSTRUCTION WORK IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND AS MODIFIED HEREIN:

ACI 301 "SPECIFICATIONS OF STRUCTURAL CONCRETE FOR BUILDINGS"
ACI 318 "BUILDING CODE REQUIREMENTS FOR REINFORCED CONCRETE"
ACI 117 "SPECIFICATIONS FOR TOLERANCES FOR CONCRETE CONSTRUCTION AND MATERIALS".
ACI 315 "MANUAL OF STANDARD PRACTICE FOR DETAILING REINFORCED CONCRETE STRUCTURES".

3.1.2 PLACING REINFORCEMENT: INSTALL REINFORCEMENT IN ACCORDANCE WITH CRSI "RECOMMENDED PRACTICE FOR PLACING REINFORCING BARS" AND THE FOLLOWING MINIMUM CLEARANCES:

CONCRETE CAST AGAINST AND PERMANENTLY EXPOSED TO EARTH	.3"
CONCRETE EXPOSED TO EARTH AND WEATHER	
NO. 6 BAR AND LARGER	.2"
NO. 5 AND SMALLER	1 1/2"
CONCRETE NOT EXPOSED TO EARTH AND WEATHER OR IN CONTACT WITH GROUND	
NO. 8 BAR AND SMALLER	.1 1/2"

3.1.3 HOT WEATHER CONCRETING: FOLLOW ACI 305 "HOT WEATHER CONCRETING" WHEN MAXIMUM DAILY TEMPERATURE EXCEEDS 85°F, OR RAPID DRYING CONDITIONS EXIST; EVAPORATION RATE >.15LB/SF/HR PER FIGURE 2.1.5.

3.1.4 COLD WEATHER CONCRETING: FOLLOW ACI 306 "COLD WEATHER CONCRETING" WHEN FREEZING CONDITIONS OR MEAN DAILY TEMPERATURE FALLS BELOW 40°F.

3.1.5 MATERIALS: PROVIDE CONCRETE AND REINFORCING MATERIALS IN ACCORDANCE WITH THE GENERAL DESIGN CRITERIA STRENGTH OF MATERIALS LISTED.

3.1.6 ACCESSORIES: ALL CONCRETE ACCESSORIES SUCH AS CHAIRS, TIES, ETC., THAT COME IN CONTACT WITH FORM WORK ON EXPOSED CONCRETE SHALL BE GALVANIZED OR PLASTIC COATED.

3.1.7 TESTING: ALL CONCRETE SHALL BE TESTED BY APPROVED TESTING AGENCY, FOR EACH CLASS OF CONCRETE, IN STANDARD CYLINDERS, AT THE FREQUENCY INDICATED IN THE SPECIFICATIONS.

3.1.8 SPLICES: LAP CONTINUOUS REINFORCING, WALL BARS, AND DOWELS 30 DIAMETERS. ALL OTHER LAPPED SPLICES SHALL BE LAPPED 36 BAR DIAMETERS. IN GROUPS OF PARALLEL BARS, SPLICES SHALL BE STAGGERED.

3.1.9 TERMINATE NON-CONTINUOUS BARS WITH A STANDARD HOOK IN ACCORDANCE WITH ACI IF EMBEDMENT CANNOT BE OBTAINED.

3.1.10 WHERE REINFORCING IS CALLED FOR IN A CERTAIN PORTION OF THE BUILDING, IT SHALL BE DUPLICATED IN SIMILAR PORTIONS OF THE BUILDING, UNLESS OTHERWISE SHOWN.

3.1.11 SLABS: MAY BE POURED AS A CONTINUOUS SCREEDED POUR WITH SAW CUT CONTROL JOINTS AT 15' MAXIMUM ON CENTER IN BOTH DIRECTIONS AND UNDER PARTITIONS. SAW CUTS TO BE MADE WITHIN 8 HOURS OF POUR.

3.1.12 WALLS: MAXIMUM POUR LENGTH 100 FT BETWEEN FORMED CONSTRUCTION JOINT AND IS TO ALIGN WITH BUILDING CONTROL JOINTS. INTERMEDIATE CONTROL JOINTS TO ALIGN WITH BUILDING CONTROL JOINTS AND SHALL BE NO GREATER THAN 30 FEET ON CENTER.

3.1.13 CONCRETE CONTRACTOR TO PROVIDE AND COORDINATE WITH ALL OTHER TRADES FOR SIZE AND LOCATIONS OF ANY AND ALL OPENINGS, SLEEVES, ETC. OCCURRING IN WALLS, FOOTINGS, AND FLOORS.

3.1.14 PROVIDE BOND BREAKER MATERIAL WHERE SLABS ABUT WALLS, COLUMNS AND OTHER VERTICAL SURFACES.

3.1.15 PROTECTION: ALL REINFORCEMENT BARS SHALL BE EPOXY COATED UNLESS NOTED OTHERWISE.

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4.1 MASONRY:

4.1.1 REFERENCES: ALL MASONRY CONSTRUCTION SHALL CONFORM TO THE FOLLOWING STANDARDS AND AS MODIFIED HEREIN:

ACI 530-05/ASCE 5-05/TMS 402/05 "BUILDING CODE REQUIREMENTS FOR MASONRY STRUCTURES"
ACI 530.1-05/ASCE 6-05/TMS 602/05 "SPECIFICATIONS FOR MASONRY STRUCTURES"

4.1.2 MASONRY MATERIALS: CONFORM TO THE LATEST EDITION OF THE FOLLOWING ASTM SPECIFICATIONS:

CLAY BRICK:	ASTM C216 (FACE BRICK) GRADE SW, TYPE FBS,
LOAD BEARING CONCRETE BLOCK:	ASTM C90 MINIMUM COMPRESSIVE STRENGTH = 2800 PSI (THREE UNITS)
MORTAR:	ASTM C270
TYPE M:	MINIMUM COMPRESSIVE STRENGTH = 2500 PSI AT 28 DAYS
TYPE S:	MINIMUM COMPRESSIVE STRENGTH = 1800 PSI AT 28 DAYS
TYPE N:	MINIMUM COMPRESSIVE STRENGTH = 750 PSI AT 28 DAYS
GROUT:	ASTM C476
	MINIMUM COMPRESSIVE STRENGTH = 2000 PSI AT 28 DAYS
MASONRY JOINT REINFORCEMENT:	ASTM A82, GALVANIZED

REBAR POSITIONERS: ASTM A82, GALVANIZED

4.1.3 INSPECTION: MASONRY WORK SHALL BE INSPECTED BY AN APPROVED TESTING AGENCY IN ACCORDANCE WITH ACI 530.1, TABLE 4 LEVEL B, QUALITY ASSURANCE.

4.1.4 JOINT REINFORCEMENT: PROVIDE STANDARD LADDER TYPE REINFORCEMENT FABRICATED OF 9 GA. MINIMUM WIRE DIAMETER, AT EVERY SECOND BLOCK COURSE, 16" ON CENTER VERTICALLY. IN ALL RUNNING BOND WALLS. PROVIDE LADDER REINFORCEMENT AT EVERY BLOCK COURSE, 8" ON CENTER VERTICALLY IN ALL STACK BOND WALLS. INSTALL REINFORCEMENT IN THE FIRST AND SECOND BED JOINTS, EIGHT (8) INCHES o/c, IMMEDIATELY ABOVE AND BELOW OPENINGS. EXTEND THE REINFORCEMENT IN THE SECOND BED JOINTS, ABOVE AND BELOW. EXTEND REINFORCEMENT TWO (2) FEET BEYOND JAMBS, MINIMUM.

4.1.5 REBAR POSITIONERS: FABRICATED FROM 9 GAUGE WIRE. LOCATE AT TOP OF FIRST COURSE AND ONE COURSE BELOW TOP OF WALL WITH A MAXIMUM SPACING OF 4'-0" O/C.

4.1.6 BOND BEAMS SHALL BE REINFORCED WITH 2 #4 BARS CONTINUOUS, EXCEPT AT CONTROL JOINTS. LAP BOND BEAMS A MINIMUM OF 4'-0" AT VERTICAL STEPS IN BOND BEAM COURSES. LAP CONTINUOUS BARS 30 DIAMETERS AT ALL SPLICES.

4.1.7 VERTICAL WALL REINFORCEMENT SHALL BE LAPPED 48 DIAMETERS. GROUT ALL VERTICALLY REINFORCED MASONRY CORES SOLID.

4.1.8 MASONRY CONTROL JOINTS: CONSTRUCT EXTERIOR JOINTS AT A MAXIMUM HORIZONTAL SPACING BETWEEN JOINTS OF 24'-0" AND NOT MORE THE 12'-0" FROM CORNERS. SEE ARCHITECTURAL DRAWINGS FOR EXACT LOCATIONS. CONSTRUCT INTERIOR CONTROL JOINTS IN WALLS PLACED PERPENDICULAR TO BEAMS OR BEARING WALLS AND NOT MORE THAN 32'-0" ON CENTER OR 16'-0" FROM CORNERS. NO JOINTS SHALL BE LOCATED WITHIN 2'-0" OF STEEL BEAM BEARINGS.

4.1.9 PROVIDE FLEXIBLE MASONRY JOINTS AT ALL SIDES OF STEEL BEAMS AND/OR STEEL JOISTS THAT PENETRATE NON-BEARING MASONRY WALLS. MAINTAIN A MINIMUM 1-1/2" CLEAR DISTANCE BETWEEN THE STEEL AND MASONRY.

4.1.10 ALL MASONRY WALLS HAVING TWO OR MORE WYTHES OF BRICK AND/OR CONCRETE BLOCK SHALL HAVE ALL VERTICAL COLLAR JOINTS FILLED WITH MORTAR FOR THEIR FULL HEIGHT. PARGING IS NOT ACCEPTABLE. THIS REQUIREMENT DOES NOT APPLY BETWEEN WYTHES OF CAVITY WALLS.

4.1.11 MASONRY WALLS SHALL BE BRACED TO WITHSTAND A MINIMUM HORIZONTAL LOAD OF 20 PSF DURING THEIR ERECTION, AND UNTIL THEIR DESIGN SUPPORTS ARE IN PLACE. BRACING SYSTEMS SHALL BE DESIGNED BY A QUALIFIED STRUCTURAL ENGINEER.

4.1.12 IN NO CASE SHALL SHORES OR FORMS BE REMOVED, OR CONCENTRATED LOADS FROM FRAMING MEMBERS BE APPLIED, UNTIL THE MORTAR HAS CURED SUFFICIENTLY TO CARRY ITS OWN WEIGHT AND ALL OTHER ANTICIPATED LOADS.

4.1.13 ALL EMBEDDED STEEL BEAMS SHALL HAVE ADJUSTABLE MASONRY ANCHORS SPACED NOT GREATER THAN 16" VERTICALLY, AND 24" HORIZONTALLY, UNLESS OTHERWISE NOTED. ALL EMBEDDED STEEL COLUMNS SHOULD HAVE ADJUSTABLE MASONRY ANCHOR STRAPS AT 16" O/C VERTICALLY.

4.1.14 PROVIDE POCKETS IN MASONRY WALLS FOR STEEL BEAMS AND COLUMN BASE PLATES WHERE REQUIRED. BACK PATCH WITH CONCRETE.

4.1.15 WHERE NO MASONRY PIERS ARE INDICATED BELOW, STRUCTURAL MEMBERS RESTING ON MASONRY, PROVIDE A MINIMUM OF THREE COURSES OF CONCRETE BRICK OR APPROVED EQUIVALENT BEARING.

4.1.16 IN MASONRY BEARING WALLS, NO CHASES, RISERS, CONDUIT OR TOOTHING OF MASONRY SHALL OCCUR WITHIN 1'-6" OF CENTERLINE OF BEAM BEARING OR LOAD CONCENTRATION.

4.1.17 COLD WEATHER MASONRY CONSTRUCTION AND ITS QUALITY CONTROL REQUIRE ADDITIONAL ATTENTION TO CONSTRUCTION PRACTICES AND PROTECTION. ATTENTION SHOULD BE DIRECTED TO THE FOLLOWING DETAILS AS WELL AS THOSE NORMALLY ATTENDED.

1. CONSTRUCTION MATERIALS SHOULD BE RECEIVED, STORED, AND PROTECTED IN WAYS THAT PREVENT WATER FROM ENTERING THE MATERIALS.

2. IF CLIMATIC CONDITIONS WARRANT, TEMPERATURES OF CONSTRUCTION MATERIALS SHOULD BE MEASURED. FROZEN SAND AND WET MASONRY UNITS MUST BE THAWED. MASONRY UNITS BELOW 20°F MUST BE HEATED ABOVE 20°F WITHOUT OVERHEATING.

3. SUFFICIENT MORTAR INGREDIENTS SHOULD BE HEATED TO PRODUCE MORTAR TEMPERATURES BETWEEN 40°F AND 120°F. EVERY EFFORT SHOULD BE MADE TO PRODUCE CONSECUTIVE BATCHES OF MORTAR WITH THE SAME TEMPERATURES FALLING WITHIN THIS RANGE. THE MORTAR TEMPERATURE AFTER MIXING AND BEFORE USE SHOULD BE ABOVE 40°F, MAINTAINABLE EITHER BY AUXILIARY HEATERS UNDER THE MORTAR BOARD OR BY MORE FREQUENT MIXING OF MORTAR BATCHES. HEATED MORTAR ON MORTAR BOARDS SHOULD NOT BECOME EXCESSIVELY HOT (GREATER THAN 120°F).

4. DURING BELOW-NORMAL TEMPERATURES, MASONRY SHOULD BE PLACED ONLY ON A SOUND UNFROZEN FOUNDATIONS. MASONRY SHOULD NEVER BE PLACED ON A SNOW OR ICE-COVERED SURFACE, BECAUSE OF THE DANGER OF MOVEMENT WHEN THE BASE THAWS AND THE POSSIBILITY OF VERY LITTLE BOND BEING DEVELOPED BETWEEN THE MORTAR AND THE SUPPORTING SURFACE.

5. AT THE END OF THE DAY, THE TOP SURFACE OF ALL MASONRY SHOULD BE PROTECTED TO PREVENT MOISTURE, AS RAIN, SNOW OR SLEET, FROM ENTERING THE MASONRY. THIS PROTECTION MUST COVER THE TOP SURFACE AND SHOULD EXTEND A MINIMUM OF 2 FEET DOWN ALL SIDES OF THE MASONRY.

WORK DAY TEMPERATURE	CONSTRUCTION REQUIREMENT	PROTECTION REQUIREMENT
ABOVE 40°F	NORMAL MASONRY PROCEDURES.	COVER WALLS WITH PLASTIC OR CANVAS AT END OF WORK DAY TO PREVENT WATER ENTERING MASONRY.
40°F - 32°F	HEAT MIXING WATER TO PRODUCE MORTAR TEMPERATURES BETWEEN 40°F - 120°F.	COVER WALLS AND MATERIALS TO PREVENT WETTING AND FREEZING. COVERS SHOULD BE PLASTIC OR CANVAS.
32°F - 25°F	HEAT MIXING WATER AND SAND TO PRODUCE MORTAR TEMPERATURES BETWEEN 40°F - 120°F.	WITH WIND VELOCITIES OVER 15 MPH PROVIDE WIND-BREAKS DURING THE WORK DAY AND COVER WALLS AND MATERIALS AT THE END OF THE WORK DAY.
25°F - 20°F	MORTAR ON BOARDS SHOULD BE MAINTAINED ABOVE 40°F.	TO PREVENT WETTING AND FREEZING. MAINTAIN MASONRY ABOVE FREEZING FOR 16 HOURS USING AUXILIARY HEAT OR INSULATED BLANKETS.
20°F - 0°F AND BELOW	HEAT MIXING WATER AND SAND TO GET MORTAR TEMPERATURES BETWEEN 40°F - 120°F.	PROVIDE ENCLOSURES AND SUPPLY SUFFICIENT HEAT TO MAINTAIN MASONRY ENCLOSURE ABOVE 32°F FOR 24 HOURS.

5.1 STRUCTURAL STEEL:

5.1.1 REFERENCES: STRUCTURAL STEEL CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING STANDARDS AND AS MODIFIED HEREIN:

AISC - "SPECIFICATIONS FOR THE DESIGN, FABRICATION AND ERECTION OF STRUCTURAL STEEL FOR BUILDINGS".
AWS - "STRUCTURAL WELDING CODE - STEEL".
SSPC - "STEEL STRUCTURES PAINTING MANUAL", VOLUME 1 AND 2.

5.1.2 PRODUCTS: COMPLY WITH ASTM REQUIREMENTS FOR STRENGTH OF MATERIALS INDICATED FOR THE GENERAL DESIGN CRITERIA.

5.1.3 CONNECTIONS: CONNECTIONS NOT DETAILED ON DRAWINGS SHALL BE DESIGNED BY THE FABRICATOR FOR THE FOLLOWING REQUIREMENTS:

1. BEAM CONNECTIONS SHALL BE AISC STANDARD FRAMED BEAM CONNECTIONS.

2. FIELD CONNECTIONS SHALL BE BOLTED WITH 3/4" DIAMETER HIGH STRENGTH ASTM A325 BOLTS, BEARING TYPE N WITH STANDARD ROUND HOLES.

3. WHERE SLOTTED CONNECTIONS ARE REQUIRED, ADJUST BOLT VALUES ACCORDINGLY.

4. WHERE REACTIONS ARE NOT INDICATED ON DRAWINGS DESIGN CONNECTION FOR 60% OF THE TOTAL UNIFORM LOAD CAPACITY SHOWN IN THE AISC TABLES OF UNIFORM LOAD CONSTANTS.

5. THE FOLLOWING CONDITIONS SHALL BE CHECKED WHEN DESIGNING BEAM CONNECTIONS: BOLT SHEAR, BOLT BEARING ON CONNECTING MATERIAL, BLOCK WEB SHEAR, SHEAR ON THE NET AREA OF THE CONNECTING ANGLES, PLATES OR TEES AND LOCAL BENDING STRESS.

6. STEEL CONTRACTOR TO PUNCH HOLES IN STEEL MEMBERS FOR ARCHITECTURAL CONNECTIONS. REFER TO ARCHITECTURAL PLANS.

5.1.4 PAINT: FOR ALL STRUCTURAL STEEL - FABRICATOR'S STANDARD RUST INHIBITING PRIMER PER SSPC-SP2. DO NOT PAINT STRUCTURAL SURFACES TO BE IN CONTACT WITH POURED CONCRETE, SURFACES TO BE WELDED, SURFACES TO RECEIVE WELDED STUDS OR SURFACES TO RECEIVE SPRAY ON FIREPROOFING.

5.1.5 TEMPORARY BRACING: THE BUILDING FRAME, DURING CONSTRUCTION, IS NOT A SELF-SUPPORTING STEEL FRAME AS DEFINED IN THE AISC CODE OF STANDARD PRACTICE, SECTION 7.9.3 (NINTH EDITION). CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORTS FOR THE FRAME UNTIL ALL THE DESIGN SUPPORTS AND ITS COMPONENTS (FLOORS AND/OR ROOF) ARE SECURELY IN PLACE.

5.1.6 WELD IDENTIFICATION: EACH STRUCTURALLY SIGNIFICANT MEMBER SHALL HAVE ITS WELDING IDENTIFIED BY A DISTINGUISHING MARK STAMPED ON THE MEMBER BY THE CERTIFIED WELDERS INVOLVED.

5.2 STEEL JOIST:

5.2.1 REFERENCES: PERFORM CONSTRUCTION WORK IN ACCORDANCE WITH THE FOLLOWING STANDARDS AND AS MODIFIED HEREIN:

SJI "STANDARD SPECIFICATIONS FOR OPEN WEB STEEL JOIST K-SERIES"
SJI "STANDARD SPECIFICATIONS FOR LONGSPAN STEEL JOIST LH AND DEEP LONGSPAN STEEL JOIST DLH-SERIES".
SJI "STANDARD SPECIFICATION FOR JOIST GIRDERS".
SJI "RECOMMENDED CODE OF STANDARD PRACTICE FOR STEEL JOIST AND JOIST GIRDERS".

5.2.2 MATERIALS: FABRICATE STEEL JOIST IN ACCORDANCE WITH SJI SPECIFICATION FOR TYPE OF JOISTS INDICATED ON DRAWINGS. PROVIDE JOIST TOP AND BOTTOM CHORD EXTENSIONS, SPLICES AND ACCESSORIES. REFER TO DRAWINGS FOR ADDITIONAL ITEMS SUPPLIED BY JOIST MANUFACTURER.

5.2.3 ROOF JOISTS AS DESIGNATED ARE DESIGNED FOR DEAD LOAD, LIVE LOAD, DRIFTING SNOW AND MECHANICAL EQUIPMENT WEIGHTS INDICATED ON DRAWINGS. STEEL JOIST CONTRACTOR SHALL PROVIDE ADDITIONAL WEB MEMBERS AND/OR SPECIAL JOISTS AS REQUIRED TO SUPPORT CONCENTRATED EQUIPMENT LOADS.

5.2.4 BRIDGING SIZE & SPACING TO COMPLY WITH SJI SPECIFICATIONS. WHERE UPLIFT FORCES EXCEED THE ROOF TYPE DEAD LOAD, ADDITIONAL BRIDGING SHALL BE PROVIDED TO SUIT UPLIFT REQUIREMENTS.

5.2.5 PAINT: ONE COAT MANUFACTURE'S STANDARD GRAY PRIMER.

5.2.6 INSTALLATION: FIELD WELD JOISTS TO WALL ANGLES, BEARING PLATES AND SUPPORTING STEEL BEAMS WITH AT LEAST TWO 3/16" X 1" LONG WELDS. BOLT TO STEEL FRAMING WHERE INDICATED ON DRAWINGS. COMPLY WITH OSHA REQUIREMENTS FOR INSTALLATION OF JOIST AND BRIDGING.

5.2.7 NO HOLES TO BE DRILLED THROUGH CHORD MEMBERS OR OTHERWISE THAT WOULD REDUCE MEMBER SECTIONS.

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5.3 METAL DECK:

5.3.1 REFERENCES: STEEL DECK CONSTRUCTION SHALL COMPLY WITH THE FOLLOWING STANDARDS AND AS MODIFIED HEREIN:

SDI "DESIGN MANUAL FOR COMPOSITE DECKS, FORM DECKS, ROOF DECKS, CELLULAR METAL FLOOR DECK AND ELECTRICAL DISTRIBUTION".
SDI "SPECIFICATION AND COMMENTARY FOR STEEL ROOF DECK".

5.3.2 DECK TYPES: PROVIDE DEPTH, GAGE AND TYPE INDICATED ON DRAWINGS.

5.3.3 COATING: ALL ROOF DECK SHALL BE PAINTED, EXCEPT DECK EXPOSED TO WEATHER WHICH SHALL BE GALVANIZED. ALL FLOOR DECK SHALL BE GALVANIZED.

5.3.4 ROOF DECK INSTALLATION: PLACE DECK UNITS AND SECURE TO ADJACENT FRAMING BY MECHANICAL FASTENERS. MECHANICAL FASTENERS TO BE ONE OF THE FOLLOWING: HILTI X-EDN19 NAIL OR X-EDNK22 NAIL, OR PNEUTEK, INC. FASTENER SYSTEM. REFER TO DRAWINGS FOR FASTENER SPACING REQUIREMENTS.

5.3.5 FLOOR DECK INSTALLATION: PLACE DECK UNITS AND SECURE TO ADJACENT FRAMING BY WELDING IN ACCORDANCE WITH SDI SPECIFICATIONS FOR EACH DECK THICKNESS, GAGE AND SPAN. PROVIDE ALL CELL CLOSURE AND GIRDER FILLER MATERIAL AS REQUIRED. DECK SUPPLIER SHALL PROVIDE SUPPORT FOR ALL GIRDER FILLER PIECES AS REQUIRED. WHERE NOT INDICATION ON PLANS, PROVIDE POUR STOPS PER SDI POUR STOP SELECTION TABLES.

5.3.6 NO METAL ROOF DECK OPENINGS SHALL BE CUT UNLESS AUTHORIZED AND/OR DIRECTED BY THE ARCHITECT. WHEN OPENINGS ARE REQUIRED, THE FOLLOWING RECOMMENDATIONS APPLY:

6" OPENING OR LESS	(ONE RIB REMOVED) -	NO REINFORCING REQUIRED
6" TO 8" OPENING	(ONE RIB REMOVED) -	18 GA. REINFORCING PLATE, SCREWED TO ADJACENT RIBS.
8" TO 12" OPENING	(TWO RIBS REMOVED) -	16 GA. REINFORCING PLATE, SCREWED TO ADJACENT RIBS.
OPENINGS OVER 12"	STEEL ANGLE FRAME, AS SHOWN ON THE STEEL DETAIL DRAWINGS ARE REQUIRED.	

PROVIDE 1-1/2" DEEP REINFORCING CHANNELS IN EACH RIB AT EACH SIDE OF OPENING (FLUSH WITH TOP OF DECK), SPANNING BETWEEN ROOF DECK SUPPORTS, SHOULD THE ROOF OPENINGS BE LOCATED NEAR THE END OF THE DECK.

6.4 ANCHORAGE:

6.4.1 ALL FIELD INSTALLED EXPANSION AND EPOXY ANCHORS SHALL BE APPROVED FOR THE TYPE AND INSTALLATION, FOR ITS APPLICATION, AND MATERIALS.

6.4.2 MINIMUM ANCHOR EMBEDMENT, EDGE DISTANCE AND MINIMUM SPACING ARE AS FOLLOWS U.N.O.:

EXPANSION ANCHORS:

BOLT DIAMETER (d)	1/4"	3/8"	1/2"	5/8"	3/4"	1"
EMBEDMENT	2"	2.5"	3.5"	4"	4.75"	6"
MIN. EDGE DISTANCE	3.25"	3.75"	5.5"	6"	7"	9"
MIN. SPACING	4.5"	5"	7"	8"	10"	12"

EPOXY ANCHORS:

BOLT DIAMETER (d)	3/8"	1/2"	5/8"	3/4"	1"
EMBEDMENT	3.5"	4.25"	5"	6.62"	8.25"
MIN. EDGE DISTANCE	6"	6.5"	7.5"	10"	12.5"
MIN. SPACING	5.25"	6.5"	7.5"	10"	12.5"

7.1 SPECIAL INSPECTIONS:

7.1.1 GENERAL CONTRACTOR SHALL RETAIN A TESTING COMPANY FOR THE FOLLOWING:

1. CONCRETE REINFORCEMENT: FOOTINGS, WALLS, PIERS AND SLABS PER SPECIFICATIONS.
2. CONCRETE: PROVIDE TEST CYLINDERS AND STRENGTH TESTING PER SPECIFICATIONS.
3. MASONRY: COMPLY WITH THE SPECIFICATION FOR MASONRY STRUCTURES - TABLE 4 - LEVEL B QUALITY ASSURANCE.
4. STRUCTURAL STEEL: LIMITED WELDED AND BOLTED CONNECTIONS PER SPECIFICATIONS.
5. JOIST AND JOIST GIRDER CONNECTIONS: WELDED AND BOLTED CONNECTIONS PER SPECIFICATIONS.
6. METAL DECK FASTENING: LIMITED INSPECTION PER SPECIFICATIONS.
7. FOOTING EXCAVATIONS: AS RECOMMENDED IN GEOTECHNICAL REPORT.

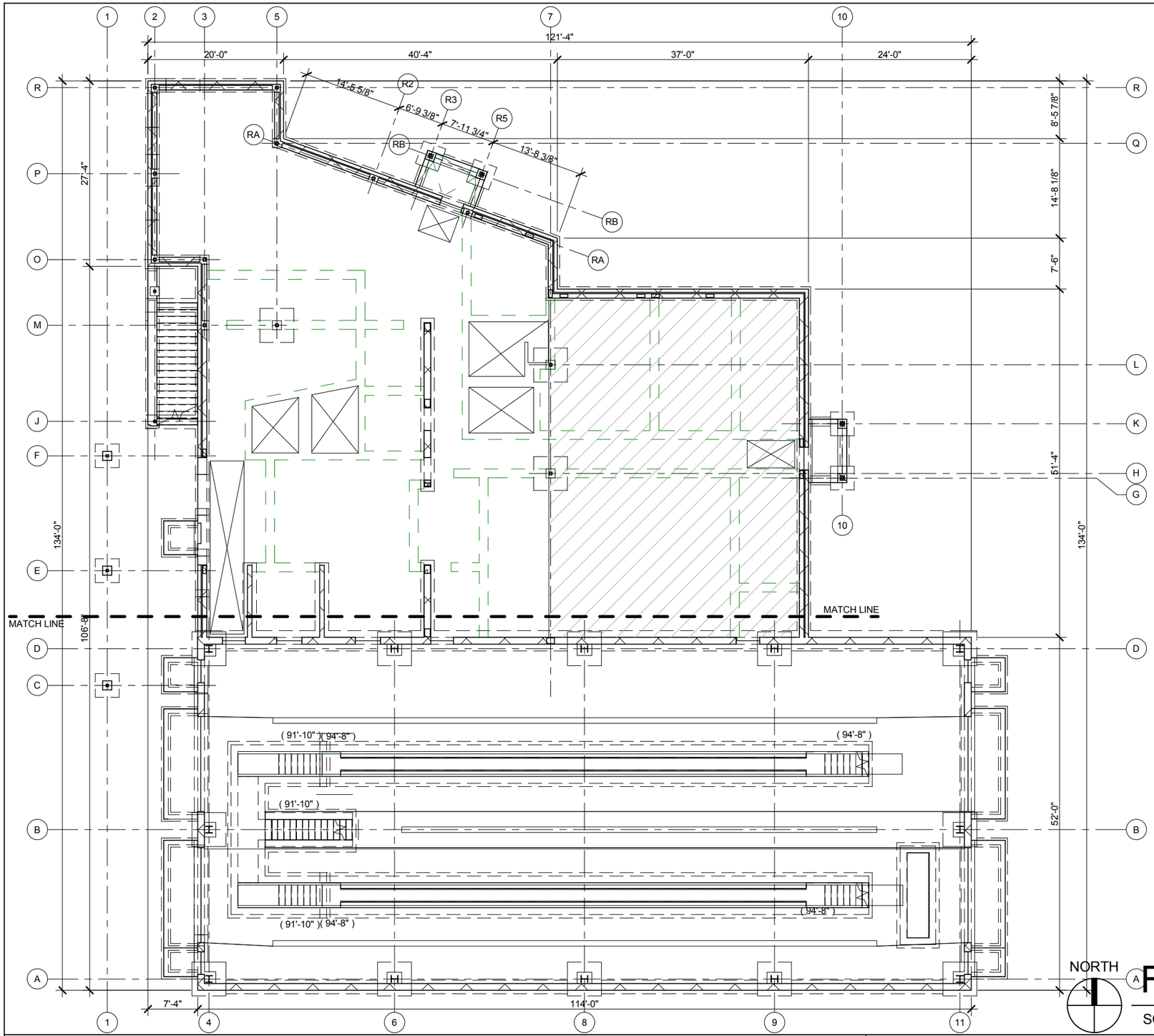
A B B R E V I A T I O N S

AB	Anchor Bolt
ADDM	Addendum
ADDL	Additional
ADJ	Adjacent
ADJ	Adjustable
AFF	Above Finished Floor
AGGR	Aggregate
ALUM	Aluminum
ALT	Alternate, Alternating
APPROX	Approximate
ANCH	Anchor
ARCH	Architectural
BB	Bond Beam
BC	Bottom Chord
BCX	Bott Chord Extension
BD	Board
BL	Brick Ledge
BLDG	Building
BLK	Block
BLKG	Blocking
BM	Beam
BO	Bottom of
BOF	Bottom of Footing
BOL	Bottom of Lintel
BOS	Bottom of Steel
BOT	Bottom
BOW	Bottom of Wall
BP	Bearing Plate
BRDG	Bridging, Bridge
BRG	Bearing
BRK	Brick
BSMT	Basement
BT	Bent
BTWN	Between
C	Camber
C	Standard Channel
CANT	Cantilever (ed)
CB	Castellated Beam
CB	Catch Basin
CFMU	Conc Form Masonry Unit
CHD	Chord
CIP	Cast-in-Place
CJ	Composite Joist
CJ	Control Joint
CL	Centerline
CLG	Ceiling
CLR	Clear (ance)
CMU	Conc Masonry Unit
COL	Column
CONC	Concrete
CONN	Connection
CONSTR	Construction
CONT	Continuous
CONTR	Contractor
COORD	Coordinate
COV	Cover
CP	Center Point
CRS	Course
CTR	Center
CU FT	Cubic Feet
CU YD	Cubic Yards
D	Depth
DBL	Double
DEPR	Depression
DF	Douglas Fir
DIA	Diameter
DIAG	Diagonal
DIM	Dimension
DK	Deck
DL	Dead Load
DLH	Deep Longspan Joist
DN	Down
DO	Ditto
DR	Door
DTL	Detail
DWG	Drawing
DWL	Dowel
E	Elasticity Modulus
EA	Each
EB	Expansion Bolt
EE	Extended End
EF	Each Face
EIFS	Ext Insul Fin System
EJ	Expansion Joint
EL	Elevation
ELEC	Electrical
ELEV	Elevator
EMBED	Embedment
EPS	Expanded Polystyrene
EQ	Equal
EQUIP	Equipment
ES	Each Side
EW	Each Way
EX	Existing
EXIST	Existing
EXP	Expansion
EXT	Exterior
Fb	Flexural Bending Stress
Fc	Compressive Stress
F'c	Comp Stress @ 28 days
Ft	Tensile Stress
Fv	Shear Stress
Fy	Yield Stress
FD	Floor Drain
FDN	Foundation
FFE	Fin Floor Elevation
FH	Full Height
FIN	Finish (ed)
FLR	Floor
FLG	Flange
FOC	Face of Concrete
FOM	Face of Masonry
FOS	Face of Studs
FOW	Face of Wall
FP	Fire Protection, Fireproof
FR	Frame (ed)
FRMG	Framing
FT	Feet, Foot
FTG	Footing
FUT	Future
FV	Field Verify
FW	Fire Wall
G	Girder
GA	Gage
GALV	Galvanized
GC	General Contractor
GEN	General
GIR	Girder
GL	Glu lam
GLULAM	Glued Laminated Wood
GR BM	Grade Beam
GYP	Gypsum
H	Horizontal, Height
HDR	Header
HGR	Hanger
HI	High
HM	Hollow Metal
HORIZ	Horizontal
HR	Hour
HS	Headed Stud
HSS	Hollow Struct Section
HT	Height
HVAC	Heat/Vent/Air Cond
ICF	Insulating Conc Form
ID	Inside Diameter
IE	Invert Elevation
IF	Inside Face
IN	Inches
INCL	Include (ed) (ing)
INSUL	Insulate (ed) (ion)
INT	Interior
JB	Joist Bearing
JG	Joist Girder
JS	Joist Substitute
JST	Joist
JT	Joint
K	Kips
K	K-Series Steel Joist
KCS	K-Joist Constant Shear
KLF	Kips per Lineal Foot
KO	Knock Out
KSI	Kips per Square Inch
L	Angle
LAM	Laminated
LG	Long, Length
LH	Longspan Steel Joist
LL	Live Load
LLH	Long Leg Horizontal
LLV	Long Leg Vertical
LO	Low
LONG	Longitudinal
LSL	Lam Strand Lumber
LT	Light
LVL	Lam Veneer Lumber
M	Misc Beam
MAS	Masonry
MAX	Maximum
MBR	Member
MC	Misc Channel
MECH	Mechanical
MED	Medium
MEZZ	Mezzanine
MFR	Manufacturer
MH	Manhole
MIN	Minimum
MISC	Miscellaneous
ML	Masonry Lintel
MO	Masonry Opening
MTL	Metal
N	Girder Joist Spaces
NIC	Not in Contract
NOM	Nominal
NTS	Not to Scale
OA	Overall
OAD	Overall Dimension
OC	On Center
OD	Outside Diameter
OF	Outside Face
OH	Opposite Hand
OH	Overhead
OPNG	Opening
OPP	Opposite
OSB	Oriented Strand Board
PAF	Powder Actuated Fastener
PC	Piece
PC	Precast
PCI	Pounds per Cubic Inch
PERIM	Perimeter
PL	Plate
PLBG	Plumbing
PLF	Pounds per Lineal Foot
PLK	Plank
PLYWD	Plywood
PNL	Panel
PR	Pair
PSF	Pounds per Sq Foot
PSI	Pounds per Sq Inch
PSL	Parallel Strand Lumber
PT	Pressure Treated
R	Riser, Radius
RAD	Radius
RD	Roof Drain
REINF	Reinforcing
REQ	Required, Requirement(s)
REV	Revision
RO	Rough Opening
RTU	Roof Top Unit
RW	Retaining Wall
S	Standard Beam
SCHED	Schedule
SD	Side
SDS	Self Drilling Screw
SECT	Section
SF	Square Feet
SHT	Sheet
SHTG	Sheathing
SIM	Similar
SL	Slab
SL	Superimposed Load
SLH	Super Longspan Joist
SOG	Slab on Grade
SP	Spaces
SP	Special (for joists)
SPCL	Special
SPEC	Specification
SPF	Spruce, Pine, Fir
SQ	Square
SS	Stainless Steel
STD	Standard
STIF	Stiffener
STL	Steel
STRUCT	Structural
SUB	Substitute
SUSP	Suspended
T	Tread
T&B	Top and Bottom
T&G	Tongue and Groove
TB	Truss Bearing
TC	Top Chord
TCX	Top Chord Extension
TEMP	Temperature
THK	Thickened, Thick
TL	Total Load
TO	Top of
TOC	Top of Concrete
TOF	Top of Footing
TOM	Top of Masonry
TOP	Top of Panel
TOP	Top of Pier
TOPP	Topping
TOS	Top of Steel
TOSL	Top of Slab
TOW	Top of Wall
TRANS	Transverse
TYP	Typical
UL	Underwriters Lab
UNEXC	Unexcavated
UNO	Unless Noted Otherwise
UR	Urinal
V	Vertical
VERT	Vertical
VLD	Vertical Leg Down
VLU	Vertical Leg Up
W	Width, Wide
W	Wide Flange Beam
w/	with
w/o	without
WD	Wood
WHS	Welded Headed Stud
WP	Working Point
WT	Wide Flange Tee
WWM	Welded Wire Mesh

Symbols

ø	Diameter
d	Penny
#	Rebar Number
#	Pounds
±	Plus or Minus

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)		ABBREVIATIONS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S004



COLUMN SCHEDULE

MARK	SIZE	BASE PLATE	ANCH BOLTS
C-01	HSS4x4x1/4	PL3/4x10x0'-10"	(4) 3/4"
C-01A	HSS4x4x1/4	PL3/4x7x0'-10"	(4) 3/4"
C-02	HSS5x5x5/16	PL3/4x9 x0'-11"	(4) 3/4"
C-03	W12x65	PL1 1/2x14x1'-9"	(4) 1"

- PROVIDE 1/4" SETTING PLATE SAME SIZE AS BASE PLATE.
- ANCHOR BOLT EMBEDMENT: 12 x (BOLT DIAMETER).
- PROVIDE PLATE WASHER PL3/8x3x0'-3" w/ NUT TOP & BOT, TACK WELD NUTS TO BOLT.

PIER SCHEDULE

MARK	SIZE	VERT REINF	TIES
P-01	8"x16" MAS	(4) #5	#3 @ 16" OC
P-02	16"x16" CONC	(4) #6	#3 @ 12" OC
P-03	24"x26" CONC	(8) #6	(2) #3 @ 12" OC
P-04	12"x16" MAS	(4) #5	#3 @ 16" OC
P-05	12"x8" MAS	(2) #5	-----

- PROVIDE DOWELS INTO FOOTING SAME SIZE AND QUANTITY AS PIER VERTICALS.

FOOTING SCHEDULE

MARK	SIZE	REINFORCING EACH WAY
F-01	3'-6"x3'-6"x12"	(4) #5
F-02	5'-0"x5'-0"X13"	(5) #5
F-03	5'-0"x5'-0"x16"	(6) #5

- SOIL CAPACITY = 5000 PSF (REPORT).

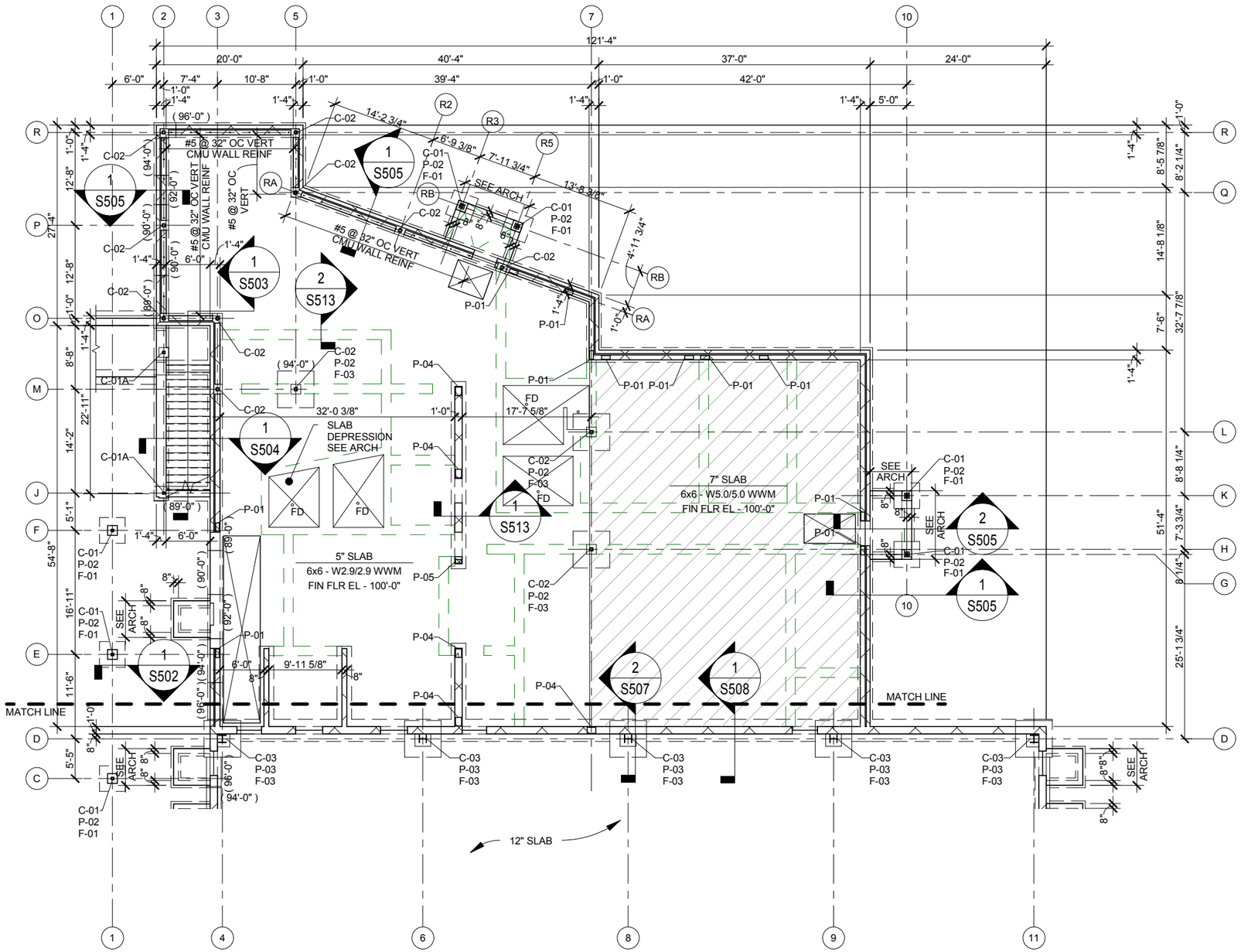
CONCRETE FOUNDATION NOTES:

1. FINISHED FLOOR - EL 100'-0"
   (unless noted otherwise)
2. TOP OF FOOTINGS
   INTERIOR - EL 96'-0"
   (unless noted otherwise)
   EXTERIOR - EL 96'-0"
   (unless noted otherwise)
3. (xx'-x") INDICATES TOP OF FOOTING ELEVATIONS.
4. [xx'-x"] INDICATES TOP OF PIER ELEVATIONS.
5. WALL FOOTINGS
   INTERIOR - 2'-0"x10" NO REINF
   (unless otherwise noted)
   EXTERIOR - 2'-0"x10" NO REINF
   (unless otherwise noted)
   STOOPS - 1'-4"x8" NO REINF
   (unless otherwise noted)
6. CONCRETE FOUNDATION WALL REINFORCING
   (2) #5 CONT TOP AND BOTTOM
   (unless noted otherwise)
7. STOOP SLABS
   5" SLAB w/ #3 @ 12"OC EACH WAY
   (UP TO 5'-0" SPAN)
8. SEE ARCH PLANS FOR LOCATION OF NON-BEARING WALLS.

FOUNDATION PLAN - OVERALL

SCALE: 1/16" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			FOUNDATION PLAN – OVERALL	DATE :	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S101



COLUMN SCHEDULE

MARK	SIZE	BASE PLATE	ANCH BOLTS
C-01	HSS4x4x1/4	PL3/4x10x0'-10"	(4) 3/4"
C-01A	HSS4x4x1/4	PL3/4x7x0'-10"	(4) 3/4"
C-02	HSS5x5x5/16	PL3/4x9 x0'-11"	(4) 3/4"
C-03	W12x65	PL1 1/2x14x1'-9"	(4) 1"

- PROVIDE 1/4" SETTING PLATE SAME SIZE AS BASE PLATE.
- ANCHOR BOLT EMBEDMENT: 12 x (BOLT DIAMETER).
- PROVIDE PLATE WASHER PL3/8x3x0'-3" w/ NUT TOP & BOT, TACK WELD NUTS TO BOLT.

PIER SCHEDULE

MARK	SIZE	VERT REINF	TIES
P-01	8"x16" MAS	(4) #5	#3 @ 16" OC
P-02	16"x16" CONC	(4) #6	#3 @ 12" OC
P-03	24"x26" CONC	(8) #6	(2) #3 @ 12" OC
P-04	12"x16" MAS	(4) #5	#3 @ 16" OC
P-05	12"x8" MAS	(2) #5	-----

- PROVIDE DOWELS INTO FOOTING SAME SIZE AND QUANTITY AS PIER VERTICALS.

FOOTING SCHEDULE

MARK	SIZE	REINFORCING EACH WAY
F-01	3'-6"x3'-6"x12"	(4) #5
F-02	5'-0"x5'-0"X13"	(5) #5
F-03	5'-0"x5'-0"x16"	(6) #5

- SOIL CAPACITY = 5000 PSF (REPORT).

CONCRETE FOUNDATION NOTES:

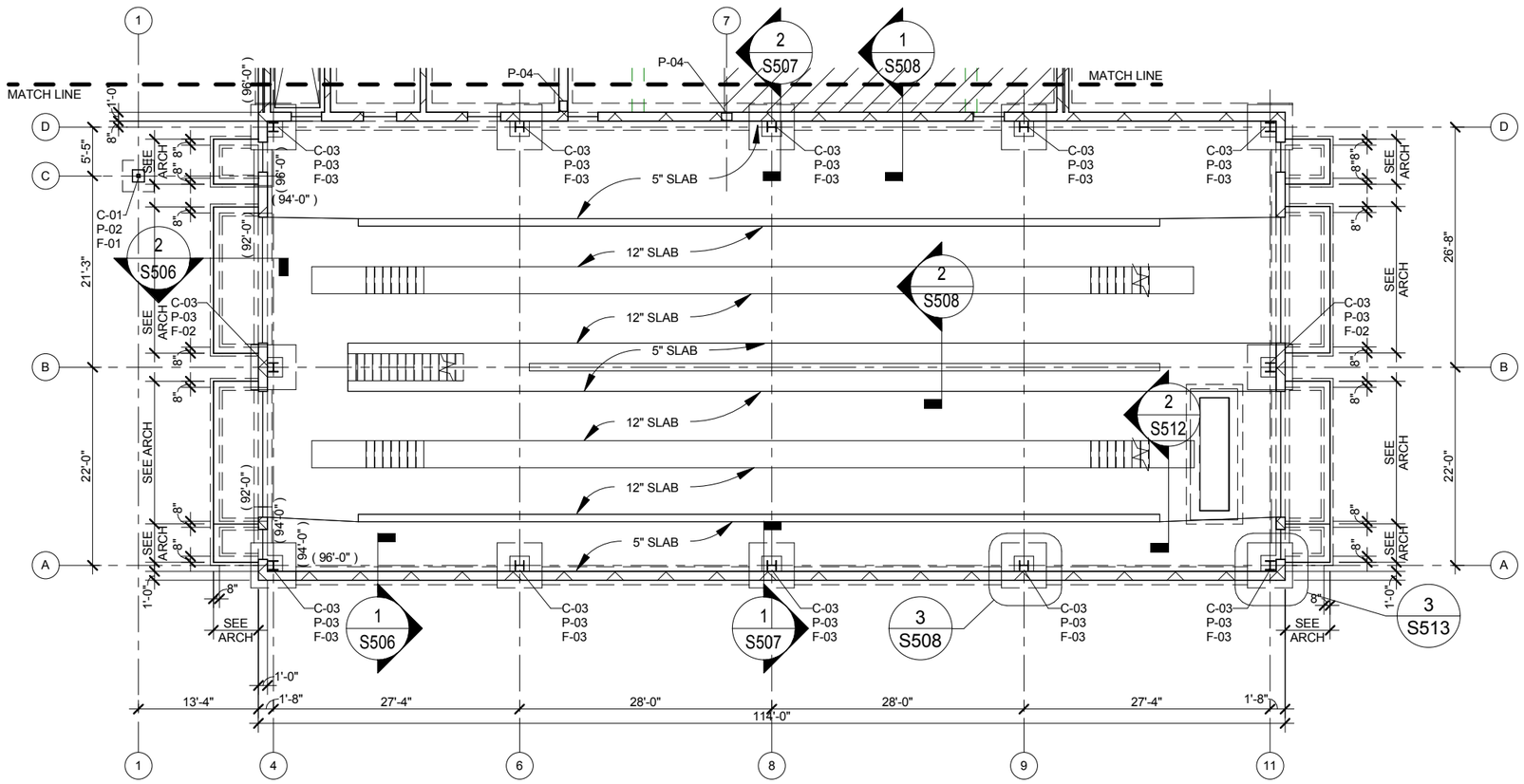
1. FINISHED FLOOR - EL 100'-0"
   (unless noted otherwise)
2. TOP OF FOOTINGS
   INTERIOR - EL 96'-0"
   (unless noted otherwise)
   EXTERIOR - EL 96'-0"
   (unless noted otherwise)
3. (xx'-x") INDICATES TOP OF FOOTING ELEVATIONS.
4. [xx'-x"] INDICATES TOP OF PIER ELEVATIONS.
5. WALL FOOTINGS
   INTERIOR - 2'-0"x10" NO REINF
   (unless otherwise noted)
   EXTERIOR - 2'-0"x10" NO REINF
   (unless otherwise noted)
   STOOPS - 1'-4"x8" NO REINF
   (unless otherwise noted)
6. CONCRETE FOUNDATION WALL REINFORCING
   (2) #5 CONT TOP AND BOTTOM
   (unless noted otherwise)
7. STOOP SLABS
   5" SLAB w/ #3 @ 12"OC EACH WAY
   (UP TO 5'-0" SPAN)
8. SEE ARCH PLANS FOR LOCATION OF NON-BEARING WALLS.

NORTH

FOUNDATION PLAN - NORTH

SCALE: 1/16" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			FOUNDATION PLAN – NORTH	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S102



COLUMN SCHEDULE

MARK	SIZE	BASE PLATE	ANCH BOLTS
C-01	HSS4x4x1/4	PL3/4x10x0'-10"	(4) 3/4"
C-01A	HSS4x4x1/4	PL3/4x7x0'-10"	(4) 3/4"
C-02	HSS5x5x5/16	PL3/4x9 x0'-11"	(4) 3/4"
C-03	W12x65	PL1 1/2x14x1'-9"	(4) 1"

- PROVIDE 1/4" SETTING PLATE SAME SIZE AS BASE PLATE.
- ANCHOR BOLT EMBEDMENT: 12 x (BOLT DIAMETER).
- PROVIDE PLATE WASHER PL3/8x3x0'-3" w/ NUT TOP & BOT, TACK WELD NUTS TO BOLT.

PIER SCHEDULE

MARK	SIZE	VERT REINF	TIES
P-01	8"x16" MAS	(4) #5	#3 @ 16" OC
P-02	16"x16" CONC	(4) #6	#3 @ 12" OC
P-03	24"x26" CONC	(8) #6	(2) #3 @ 12" OC
P-04	12"x16" MAS	(4) #5	#3 @ 16" OC
P-05	12"x8" MAS	(2) #5	-----

- PROVIDE DOWELS INTO FOOTING SAME SIZE AND QUANTITY AS PIER VERTICALS.

FOOTING SCHEDULE

MARK	SIZE	REINFORCING EACH WAY
F-01	3'-6"x3'-6"x12"	(4) #5
F-02	5'-0"x5'-0"X13"	(5) #5
F-03	5'-0"x5'-0"x16"	(6) #5

- SOIL CAPACITY = 5000 PSF (REPORT).

CONCRETE FOUNDATION NOTES:

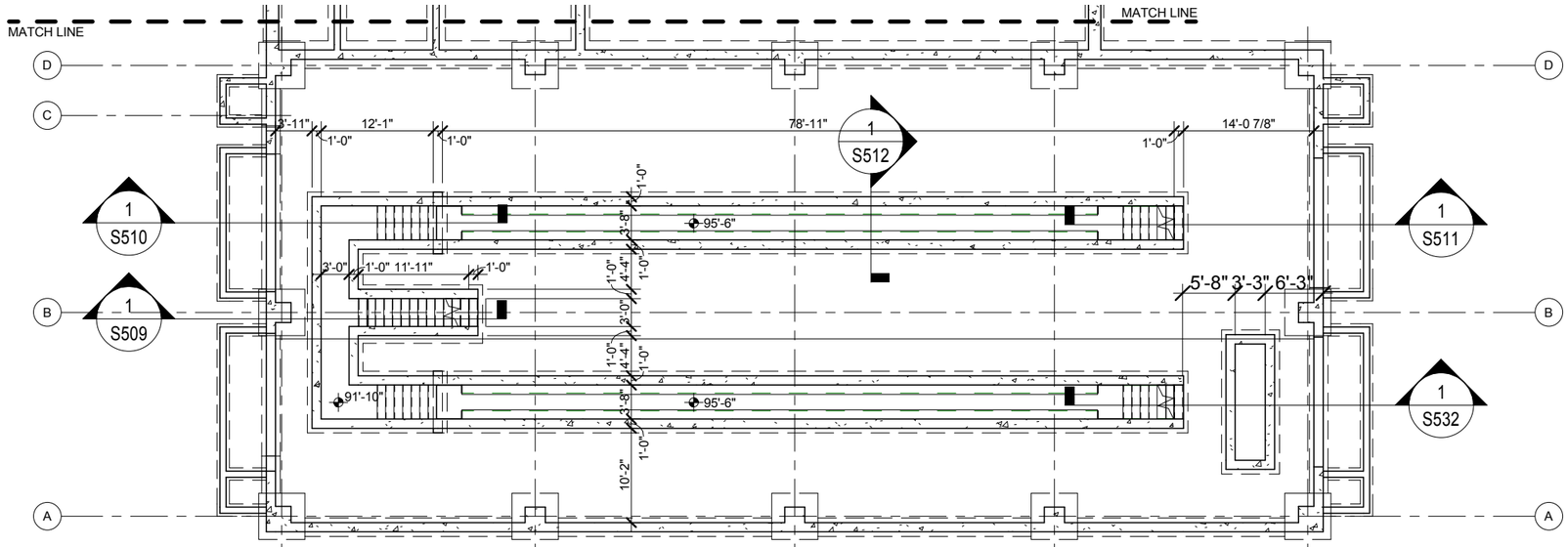
1. FINISHED FLOOR - EL 100'-0"
   (unless noted otherwise)
2. TOP OF FOOTINGS
   INTERIOR - EL 96'-0"
   (unless noted otherwise)
   EXTERIOR - EL 96'-0"
   (unless noted otherwise)
3. (xx'-x") INDICATES TOP OF FOOTING ELEVATIONS.
4. [xx'-x"] INDICATES TOP OF PIER ELEVATIONS.
5. WALL FOOTINGS
   INTERIOR - 2'-0"x10" NO REINF
   (unless otherwise noted)
   EXTERIOR - 2'-0"x10" NO REINF
   (unless otherwise noted)
   STOOPS - 1'-4"x8" NO REINF
   (unless otherwise noted)
6. CONCRETE FOUNDATION WALL REINFORCING
   (2) #5 CONT TOP AND BOTTOM
   (unless noted otherwise)
7. STOOP SLABS
   5" SLAB w/ #3 @ 12"OC EACH WAY
   (UP TO 5'-0" SPAN)
8. SEE ARCH PLANS FOR LOCATION OF NON-BEARING WALLS.

NORTH

FOUNDATION PLAN - SOUTH

SCALE: 1/16" = 1'-0"

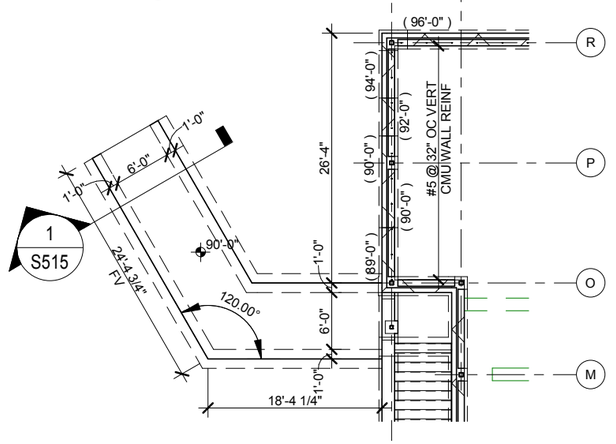
PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			FOUNDATION PLAN – SOUTH	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S103



NORTH

PIT PLAN

SCALE: 1/16" = 1'-0"



NORTH

TUNNEL FOUNDATION PLAN

SCALE: 1/16" = 1'-0"

CONCRETE FOUNDATION NOTES:

1. FINISHED FLOOR - EL 100'-0"
   (unless noted otherwise)
2. TOP OF FOOTINGS
   INTERIOR - EL 96'-0"
   (unless noted otherwise)
   EXTERIOR - EL 96'-0"
   (unless noted otherwise)
3. (xx'-x") INDICATES TOP OF FOOTING ELEVATIONS.
4. [xx'-x"] INDICATES TOP OF PIER ELEVATIONS.
5. WALL FOOTINGS
   INTERIOR - 2'-0"x10" NO REINF
   (unless otherwise noted)
   EXTERIOR - 2'-0"x10" NO REINF
   (unless otherwise noted)
   STOOPS - 1'-4"x8" NO REINF
   (unless otherwise noted)
6. CONCRETE FOUNDATION WALL REINFORCING
   (2) #5 CONT TOP AND BOTTOM
   (unless noted otherwise)
7. STOOP SLABS
   5" SLAB w/ #3 @ 12"OC EACH WAY
   (UP TO 5'-0" SPAN)
8. SEE ARCH PLANS FOR LOCATION OF NON-BEARING WALLS.

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			PIT PLAN & TUNNEL FOUNDATION PLAN		DATE :	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S104	

VENEER LINTEL SCHEDULE

MARK	TYPE	SPAN	SIZE	ANCHORS
VL-01	-----	UP TO 4'-0"	L4x3-1/2x1/4	------
VL-02	-----	4'-1" TO 7'-0"	L5x3-1/2x5/16	------

- PROVIDE LOOSE ANGLE LINTELS AT ALL BRICK VENEER OR CAST STONE CORNICE OPENINGS.

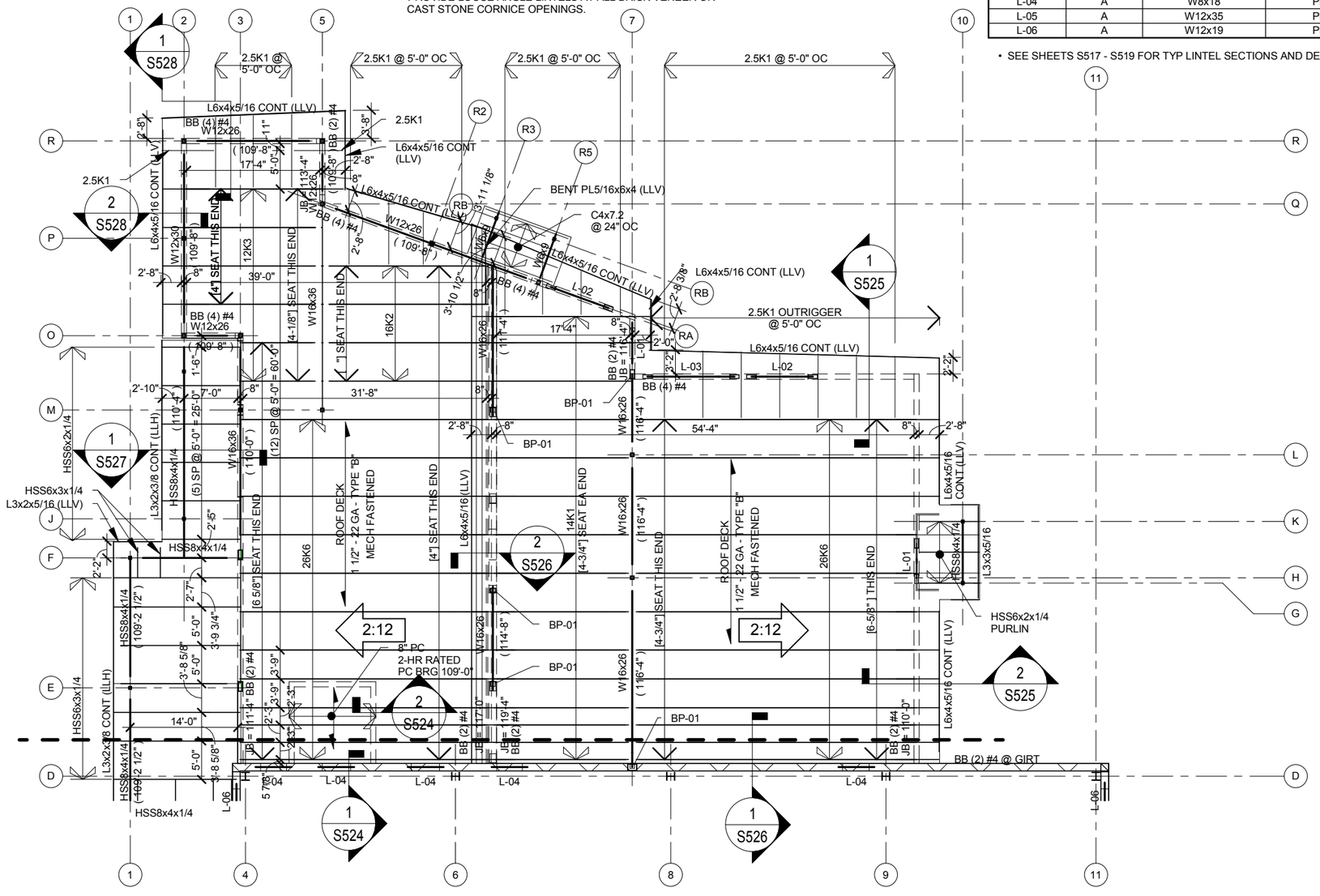
LINTEL SCHEDULE

MARK	TYPE	SIZE	PL / REINF	GUSSET / L
L-01	B	W12x14	PL5/16x15	1/4" @ 32" OC
L-02	B	W12x19	PL5/16x15	1/4" @ 32" OC
L-03	B	W12x26	PL5/16x15	1/4" @ 32" OC
L-04	A	W8x18	PL1/4x11	--------
L-05	A	W12x35	PL1/4x11	--------
L-06	A	W12x19	PL1/4x11	--------

- SEE SHEETS S517 - S519 FOR TYP LINTEL SECTIONS AND DETAILS

LOW ROOF FRAMING NOTES:

1. 1 1/2" ROOF DECK: 22 GA - TYPE B, MECH FASTENED (unless noted otherwise) SEE 2/S522 FOR FASTENING PATTERN
2. DECK LAYOUT MUST BE 3-SPAN MINIMUM
3. (xxx'-x") INDICATES TOP OF STEEL ELEVATIONS
4. JB xxx'-x" INDICATES JOIST BEARING ELEVATIONS
5. [x"] INDICATES JOIST SEAT HEIGHT 4" SEATS FOR K-SERIES JOISTS (unless noted otherwise)
6. JOISTS AS DESIGNATED ARE DESIGNED FOR DRIFT SNOW
7. PROVIDE BRIDGING PER SJI AND OSHA REQUIREMENTS AT ALL JOISTS
8. PROVIDE DIAGONAL BRIDGING AT FIRST TWO JOIST SPACES EA END
9. PROVIDE 5x1/4x0'-7" PL w/ (2) 3/8"x0'-4" ANCH AT EACH K-SERIES JOIST END BEARING ON BOND BEAM
10. ROOF OPENINGS - VERIFY ALL SIZES AND LOCATIONS WITH MECHANICAL DRAWINGS
11. PROVIDE L4x4x1/4 FRAME AT ALL ROOF OPENINGS BETWEEN JOISTS SPACED GREATER THAN 5'-6" OC SEE 1/S523
12. BEARING PLATES: BP-1 PL1/2x7x0'-7" w/ (2) 1/2"x0'-6" ANCH



NON-BEARING WALL LINTEL SCHEDULE

MARK	SPAN	WALL WIDTH	NON-RATED WALL TYPE	NON-RATED WALL SIZE	NON-RATED WALL PLATE/REINF
NL-1	UP TO 2'-0"	6"	C	6" x 8"	----------
		8"		8" x 8"	----------
		12"		12" x 8"	----------
NL-2	2'-1" TO 4'-0"	6"	C	6" x 8"	(2) #4
		8"		8" x 8"	(2) #4
		12"		12" x 8"	(2) #4
NL-3	4'-1" TO 8'-0"	6"	D	6" x 16"	(2) #4 T&B
		8"		8" x 16"	(2) #4 T&B
		12"		12" x 16"	(2) #4 T&B
NL-4	8'-1" TO 10'-0"	6"	A	W 8x10	PL1/4x5-1/2
		8"		W 8x10	PL1/4x7
		12"		W 8x13	PL1/4x11
NL-5	10'-1" TO 12'-0"	6"	A	W 8x15	PL1/4x5-1/2
		8"		W 8x15	PL1/4x7
		12"		W 8x18	PL1/4x11

- PROVIDE LINTELS AS NOTED ABOVE AT ALL NON-BEARING MASONRY WALL OPENINGS, INCLUDES DUCT OPENINGS.

NORTH

LOW ROOF FRAMING - NORTH

SCALE: 1/16" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			LOW ROOF FRAMING PLAN – NORTH	DATE :	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S105

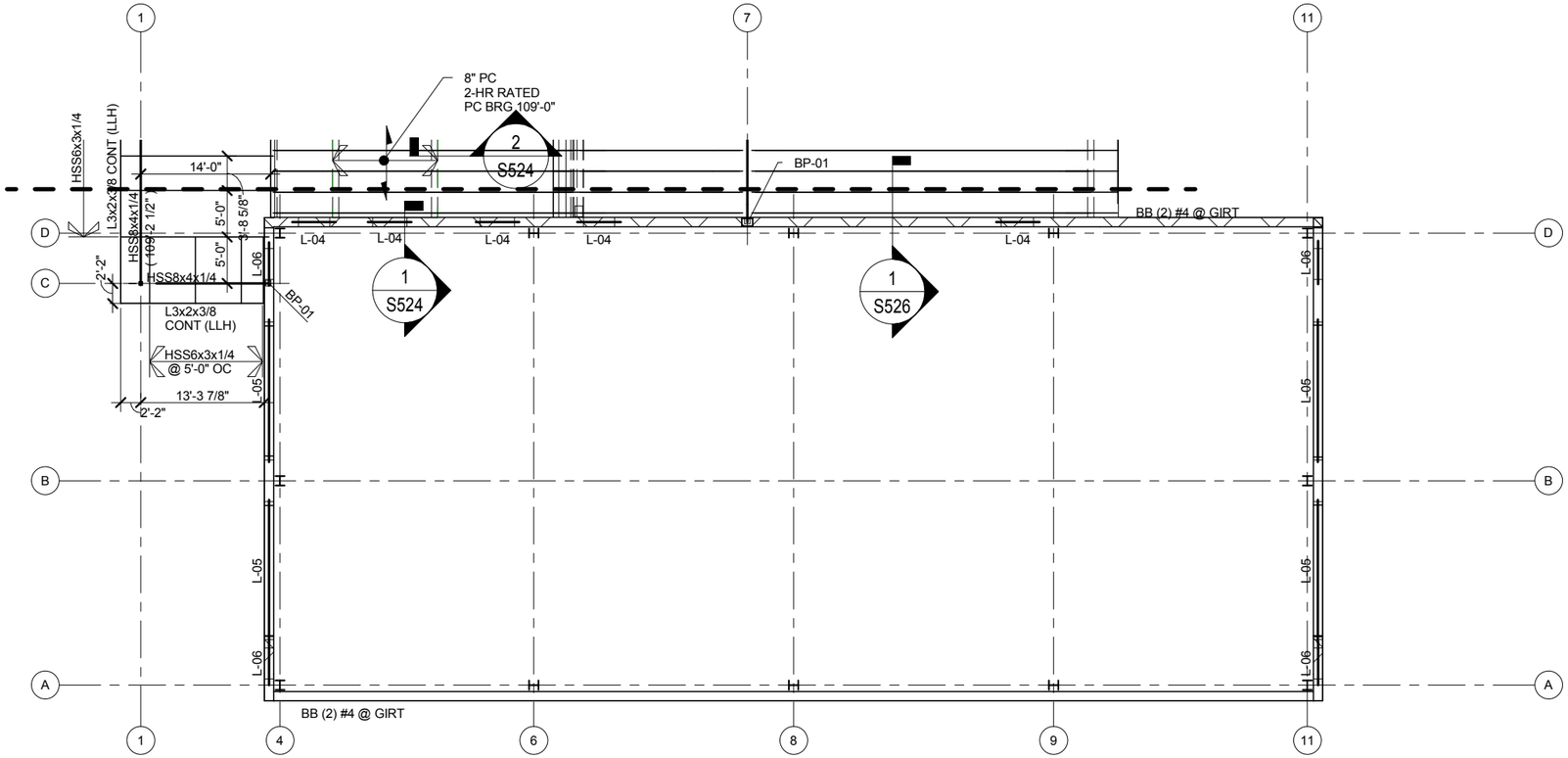
LINTEL SCHEDULE

MARK	TYPE	SIZE	PL / REINF	GUSSET / L
L-01	B	W12x14	PL5/16x15	1/4" @ 32" OC
L-02	B	W12x19	PL5/16x15	1/4" @ 32" OC
L-03	B	W12x26	PL5/16x15	1/4" @ 32" OC
L-04	A	W8x18	PL1/4x11	--------
L-05	A	W12x35	PL1/4x11	--------
L-06	A	W12x19	PL1/4x11	--------

- SEE SHEETS S517 - S519 FOR TYP LINTEL SECTIONS AND DETAILS

LOW ROOF FRAMING NOTES:

1. 1 1/2" ROOF DECK: 22 GA - TYPE B, MECH FASTENED (unless noted otherwise)
   SEE 2/S522 FOR FASTENING PATTERN
2. DECK LAYOUT MUST BE 3-SPAN MINIMUM
3. (xxx'-x") INDICATES TOP OF STEEL ELEVATIONS
4. JB xxx'-x" INDICATES JOIST BEARING ELEVATIONS
5. [x"] INDICATES JOIST SEAT HEIGHT
   4" SEATS FOR K-SERIES JOISTS
   (unless noted otherwise)
6. JOISTS AS DESIGNATED ARE DESIGNED FOR DRIFT SNOW
7. PROVIDE BRIDGING PER SJI AND OSHA REQUIREMENTS AT ALL JOISTS
8. PROVIDE DIAGONAL BRIDGING AT FIRST TWO JOIST SPACES EA END
9. PROVIDE 5x1/4x0'-7" PL w/ (2) 3/8"x0'-4" ANCH AT EACH K-SERIES JOIST END BEARING ON BOND BEAM
10. ROOF OPENINGS - VERIFY ALL SIZES AND LOCATIONS WITH MECHANICAL DRAWINGS
11. PROVIDE L4x4x1/4 FRAME AT ALL ROOF OPENINGS BETWEEN JOISTS SPACED GREATER THAN 5'-6" OC SEE 1/S523
12. BEARING PLATES:
    BP-1 PL1/2x7x0'-7" w/ (2) 1/2"x0'-6" ANCH

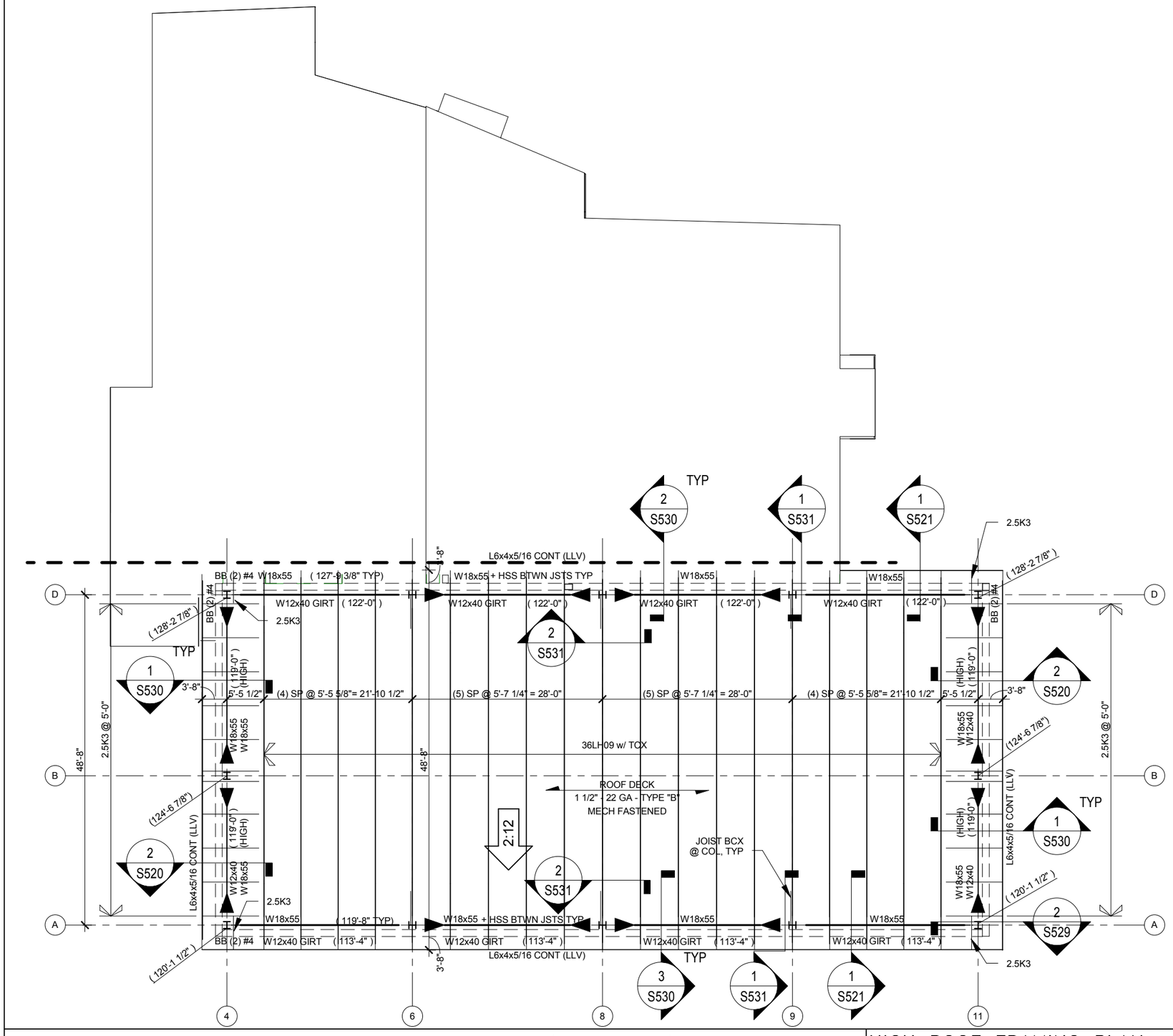


NORTH

LOW ROOF FRAMING - SOUTH

SCALE: 1/16" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			LOW ROOF FRAMING PLAN – SOUTH		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S106	



HIGH ROOF FRAMING NOTES:

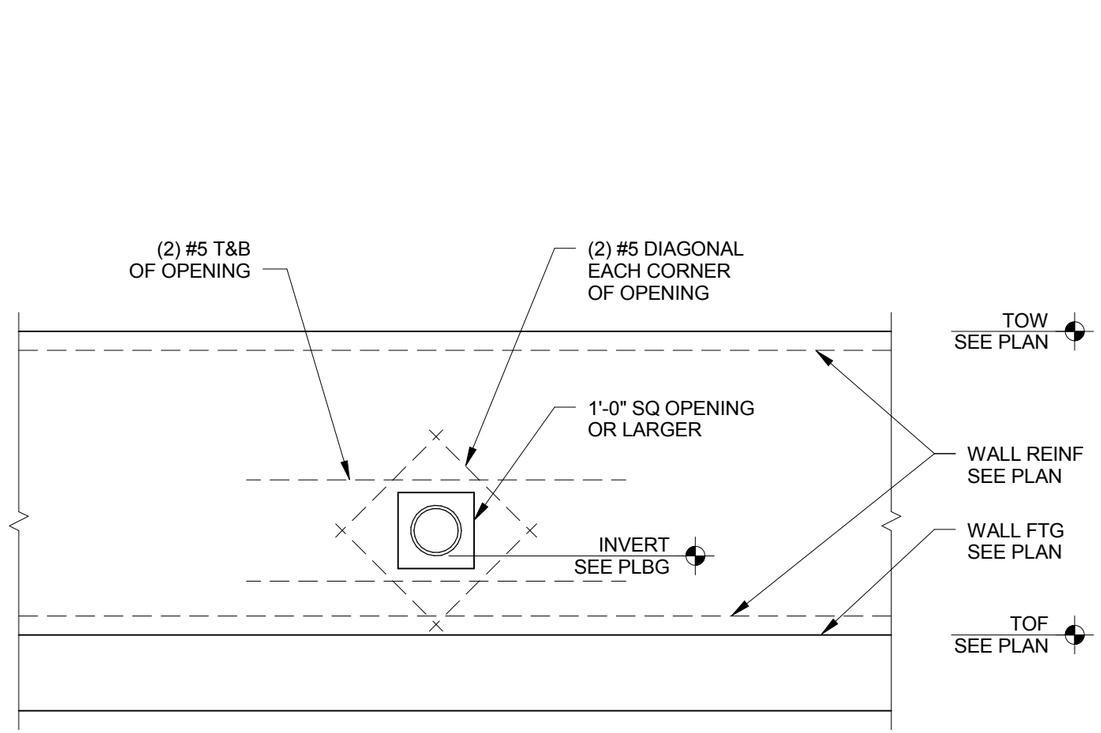
1. 1 1/2" ROOF DECK: 22 GA - TYPE B, MECH FASTENED (unless noted otherwise)
   SEE 2/S522 FOR FASTENING PATTERN
2. DECK LAYOUT MUST BE 3-SPAN MINIMUM
3. (xxx'-x") INDICATES TOP OF STEEL ELEVATIONS
4. JB xxx'-x" INDICATES JOIST BEARING ELEVATIONS
5. [x"] INDICATES JOIST SEAT HEIGHT
   8" SEATS FOR LH-SERIES JOISTS, TYP
   7 1/4" SEATS @ COLUMNS
   (unless noted otherwise)
6. JOISTS AS DESIGNATED ARE DESIGNED FOR DRIFT SNOW
7. PROVIDE BRIDGING PER SJI AND OSHA REQUIREMENTS AT ALL JOISTS
8. PROVIDE DIAGONAL BRIDGING AT FIRST TWO JOIST SPACES EA END
9. ROOF OPENINGS - VERIFY ALL SIZES AND LOCATIONS WITH MECHANICAL DRAWINGS
10. PROVIDE L4x4x1/4 FRAME AT ALL ROOF OPENINGS BETWEEN JOISTS SPACED GREATER THAN 5'-6" OC
    SEE 1/S523
11. ▶— INDICATES MOMENT CONNECTION
    SEE 2/S531

NORTH

HIGH ROOF FRAMING

SCALE: 1/16" = 1'-0"

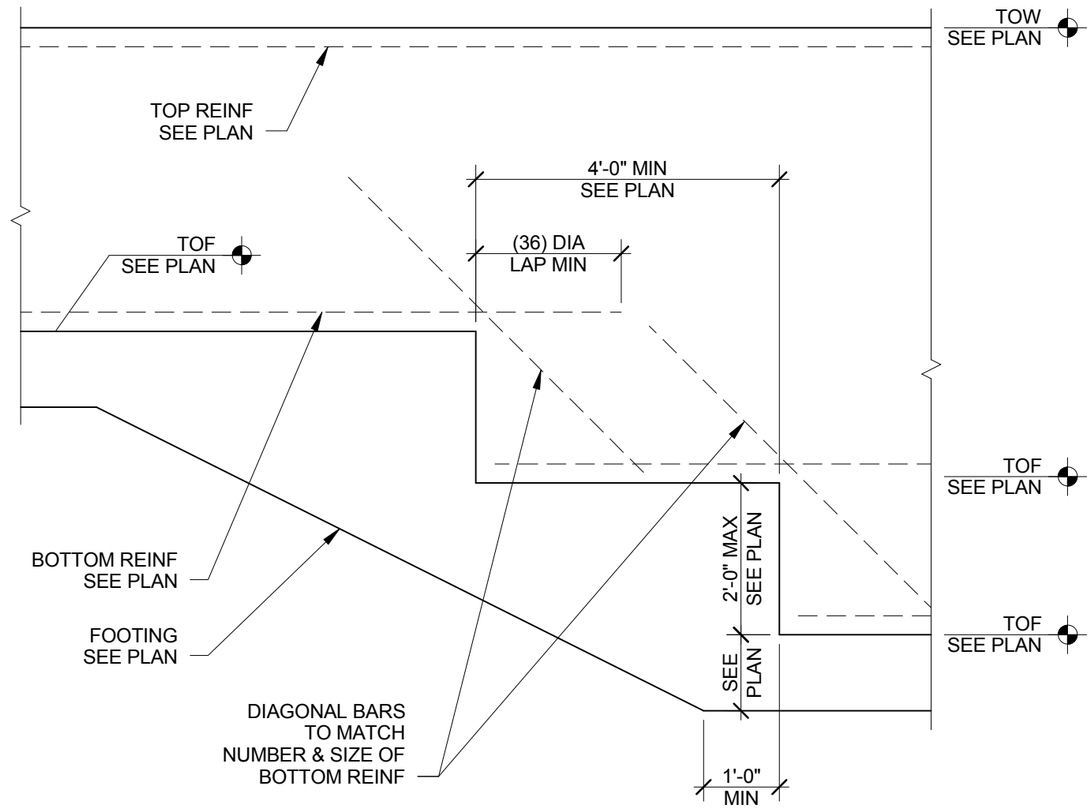
PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			HIGH ROOF FRAMING PLAN	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S107



2 CONC WALL FDN WALL REINF @ PIPE PENETRATION

S501

SCALE: 1/2" = 1'-0"

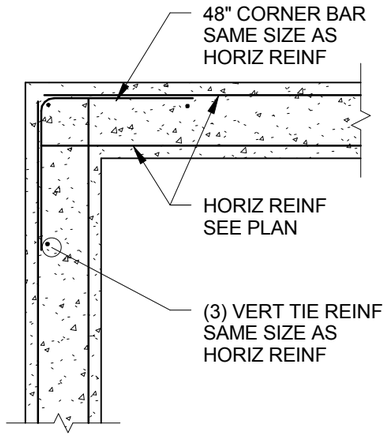


1 TYP CONC FDN WALL FTG STEP ELEVATION

S501

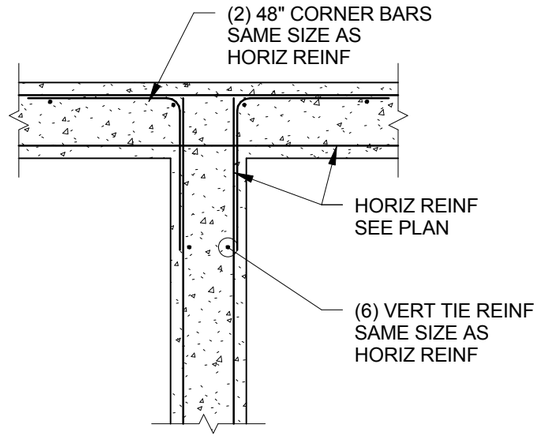
SCALE: 1/2" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			FOUNDATION SECTIONS & DETAILS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S501



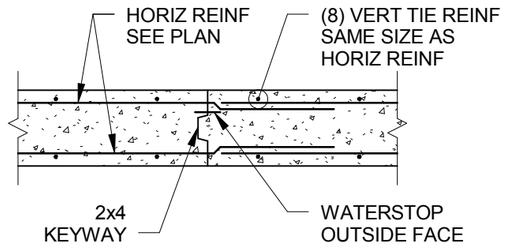
PLAN - TYP WALL
CORNER REINF
NO SCALE

C



PLAN - TYP WALL
INTERSECTION REINF
NO SCALE

B



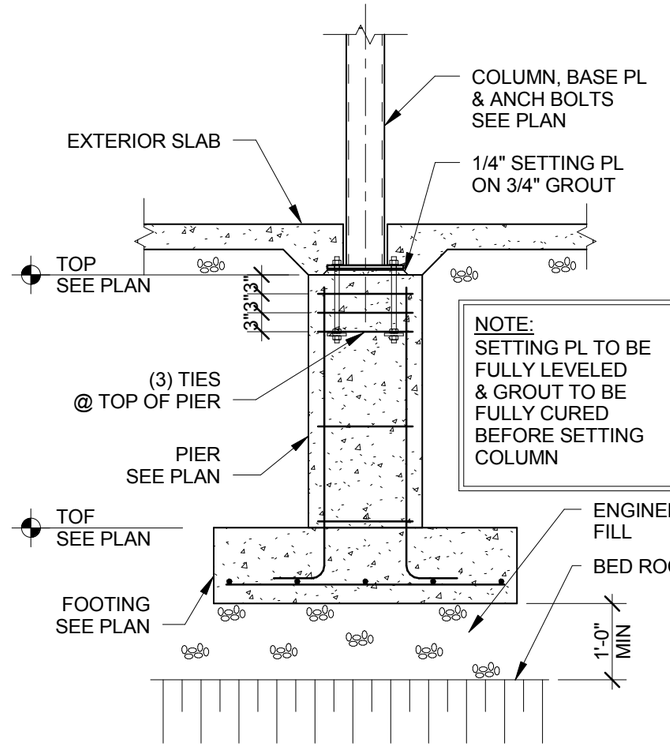
PLAN - TYP VERTICAL
WALL CONST JOINT
NO SCALE

A

2 TYPICAL CONCRETE FDN WALL REINFORCING

SCALE: 1/2" = 1'-0"

S502

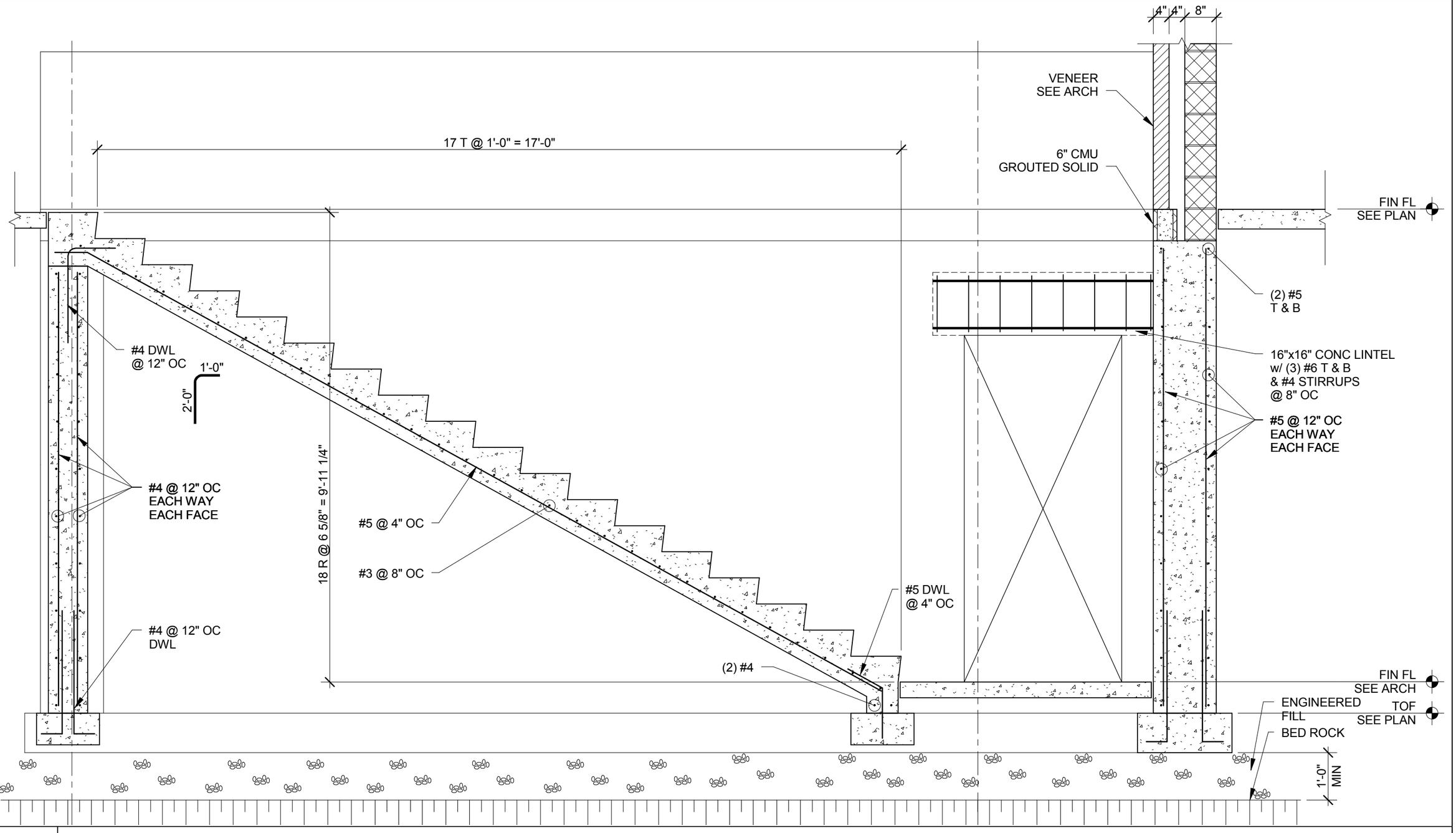


1 CANOPY COLUMN/PIER/FOOTING

SCALE: 1/2" = 1'-0"

S502

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			FOUNDATION SECTIONS & DETAILS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S502	

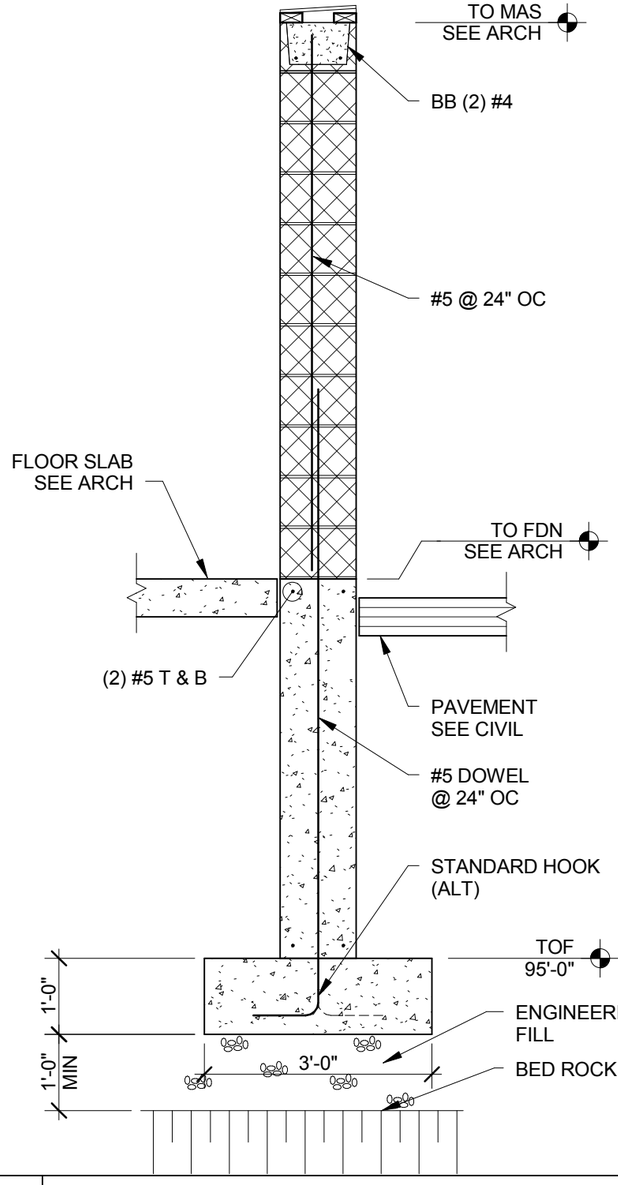


1 STATIC SCALE STAIR SECTION

S503

SCALE: 1/2" = 1'-0"

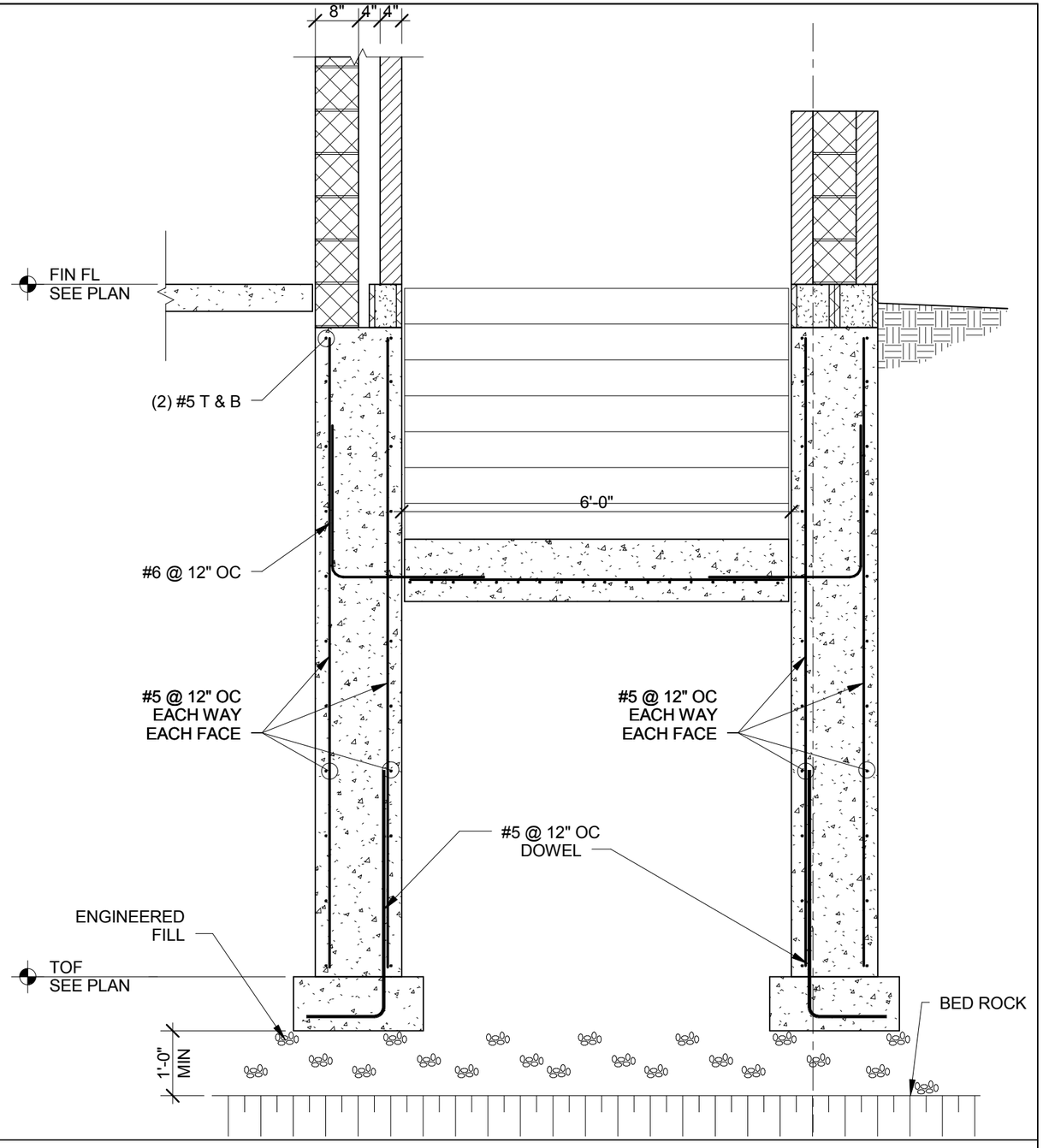
PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			FOUNDATION SECTIONS & DETAILS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S503



2 DUMPSTER ENCLOSURE

S504

SCALE: 1/2" = 1'-0"

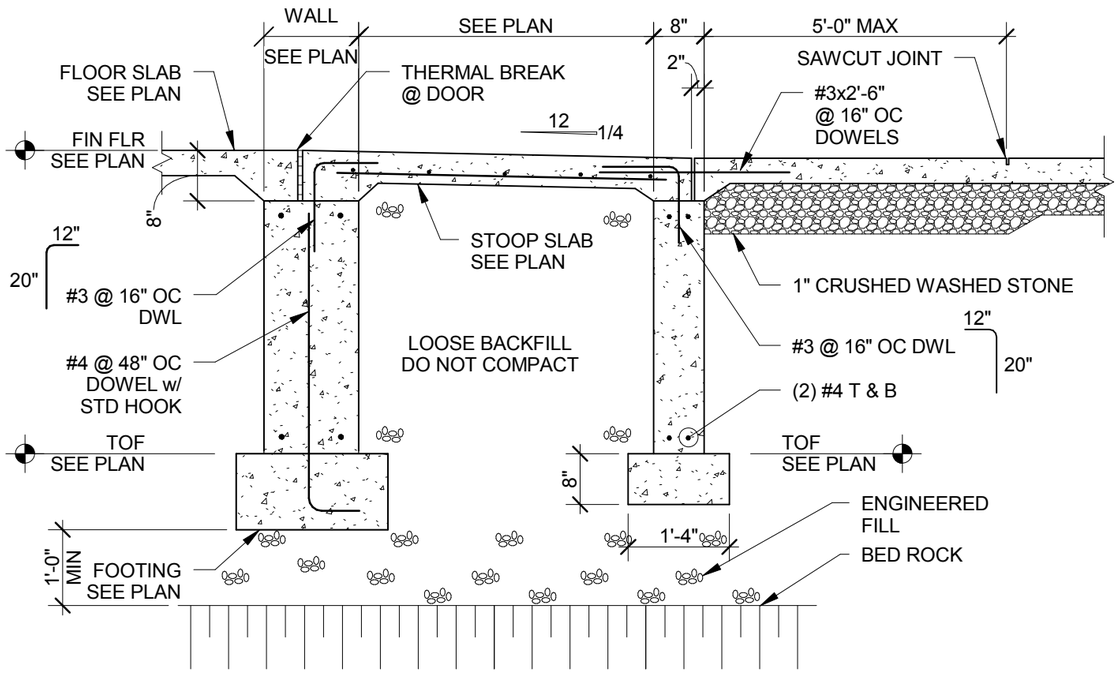


1 EXT WALL @ SCALE BUILDING

S504

SCALE: 1/2" = 1'-0"

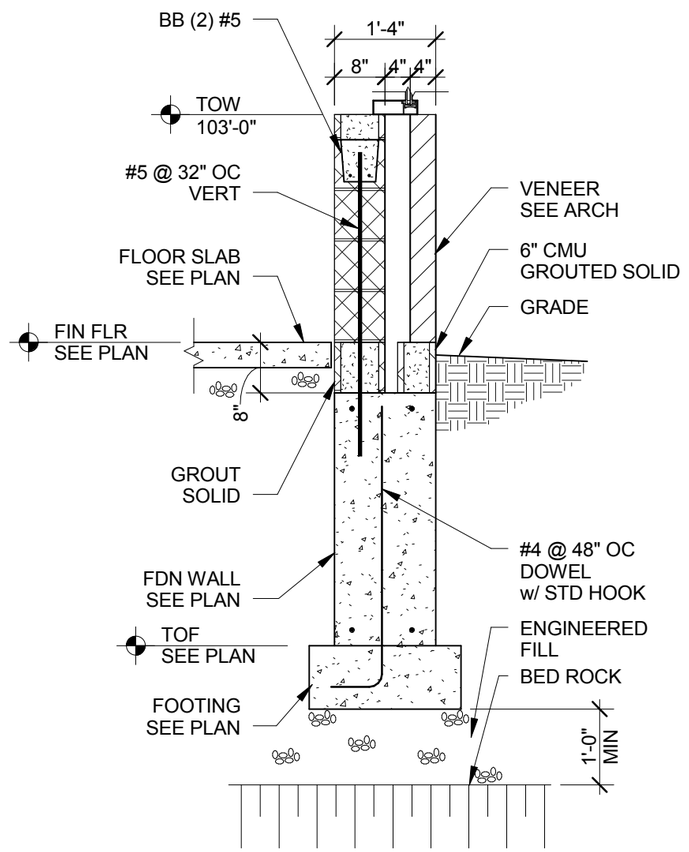
PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			FOUNDATION SECTIONS & DETAILS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S504



2 CONCRETE STOOP @ SCALE BUILDING

S505

SCALE: 1/2" = 1'-0"

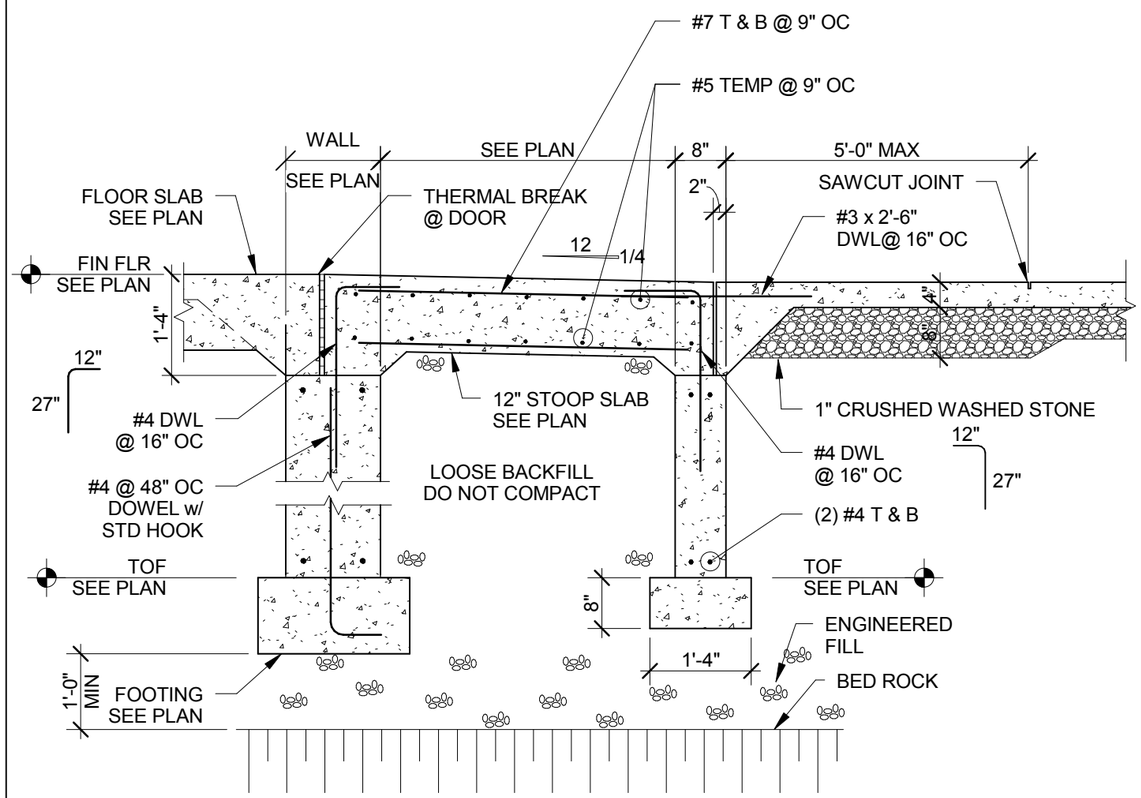


1 EXTERIOR WALL

S505

SCALE: 1/2" = 1'-0"

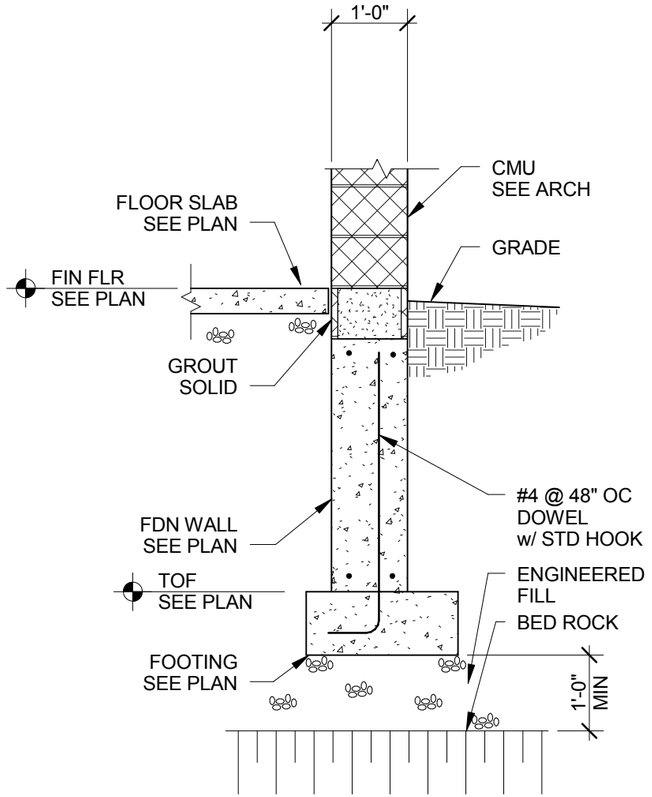
PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			FOUNDATION SECTIONS & DETAILS	DATE :	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S505



2 CONCRETE STOOP @ INSPECTION BUILDING

S506

SCALE: 1/2" = 1'-0"



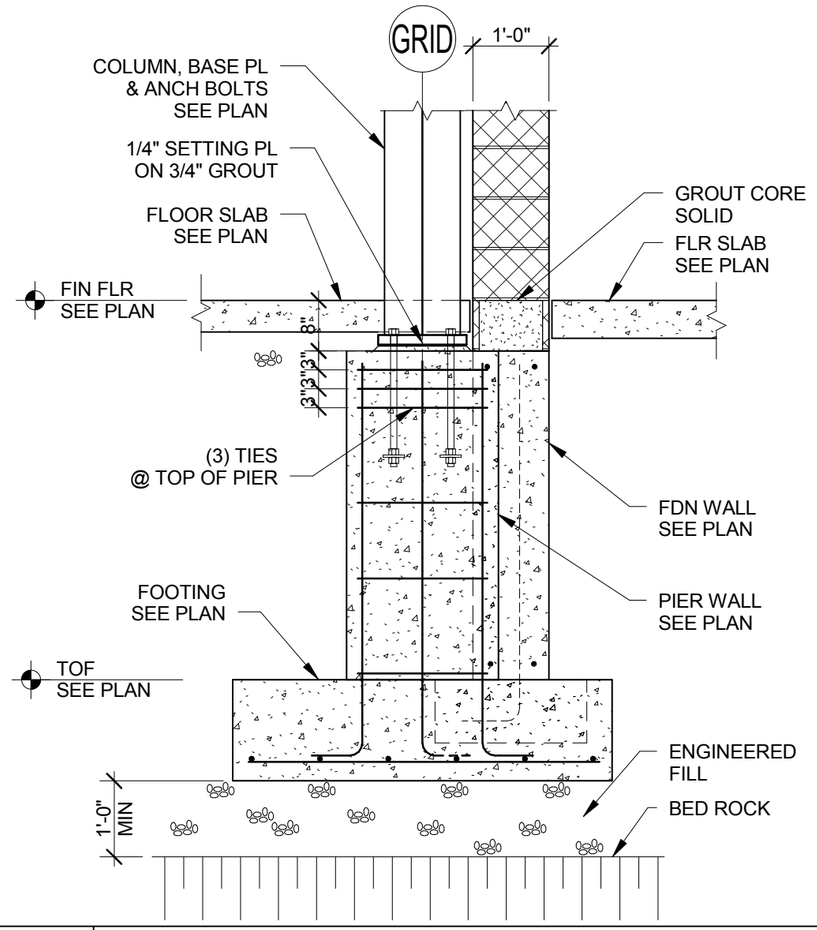
1 EXT WALL @ INSPECTION BLDG

S506

SCALE: 1/2" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			FOUNDATION SECTIONS & DETAILS		DATE:
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S506

NOTE:
SETTING PL TO BE FULLY LEVELED
& GROUT TO BE FULLY CURED
BEFORE SETTING COLUMN

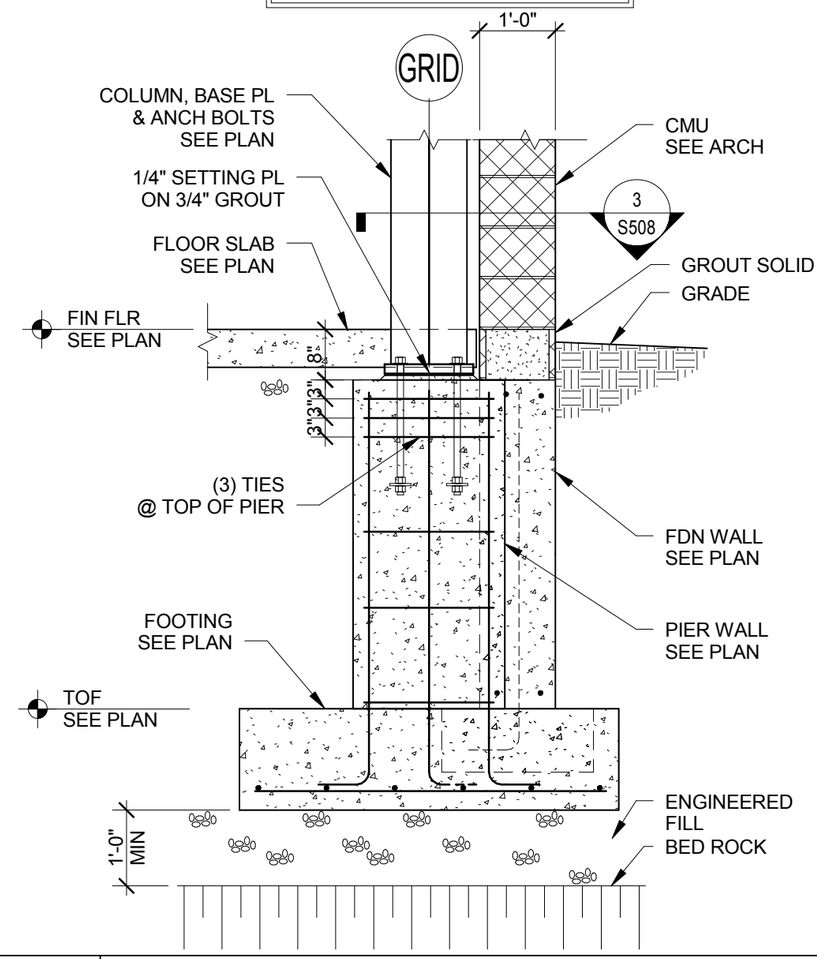


2 INT COL/PIER @ INSPECTION BLDG

S507

SCALE: 1/2" = 1'-0"

NOTE:
SETTING PL TO BE FULLY LEVELED
& GROUT TO BE FULLY CURED
BEFORE SETTING COLUMN

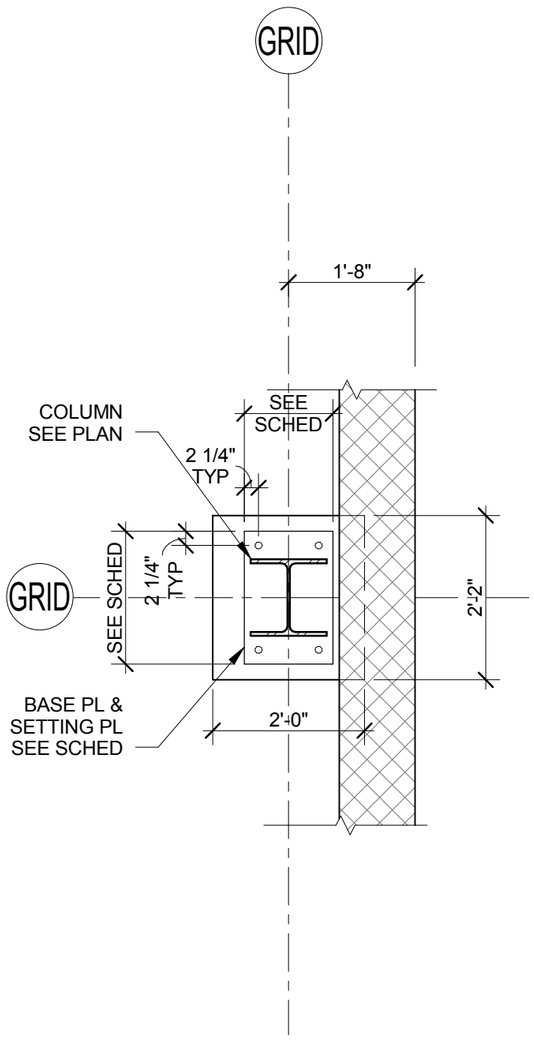


1 EXT COL/PIER @ INSPECTION BLDG

S507

SCALE: 1/2" = 1'-0"

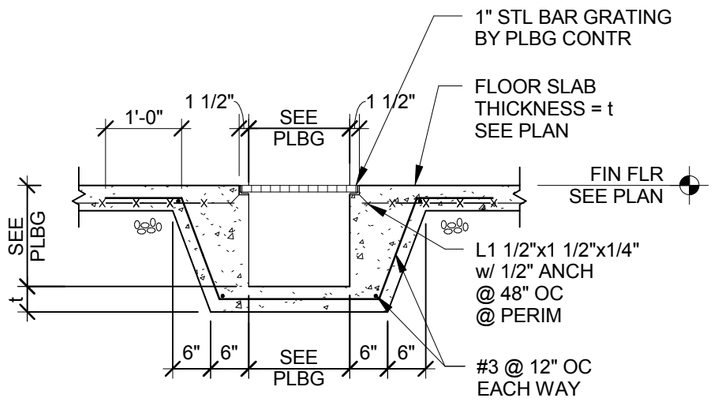
PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			FOUNDATION SECTIONS & DETAILS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S507	



3 TYP COL/BASE PLATE/PIER DETAIL

S508

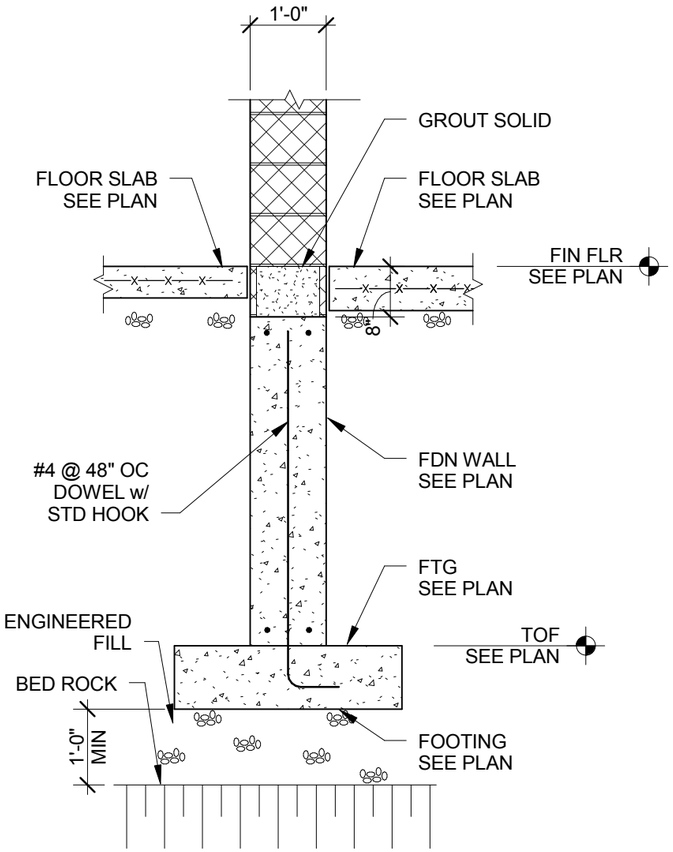
SCALE: 1/2" = 1'-0"



2 TYP PLUMBING TRENCH

S508

SCALE: 1/2" = 1'-0"



1 INT WALL @ INSPECTION BLDG

S508

SCALE: 1/2" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			FOUNDATION SECTIONS & DETAILS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S508

4

#4 TEMP @ 12" OC
TYP @ 12" SLAB

#6 T & B @ 6" OC
OVER TUNNEL

4'-0"

SEE PLAN

13 T @ 11" = 11'-11"

2'-0"

L4x4x3/8 CONT GALV
(3-SIDES OF STAIR OPENING)
w/ 1/2"x0'-8" HS @ 2-0" OC

FIN FLR
SEE PLAN

5"

1'-0"

1 1/2"
CLR

3"
CLR

(3) #6 @ SLAB EDGE

#4 DWL
@ 12" OC

1'-0"

2'-0"

1'-0"

3'-0"
TUNNEL

2" CLR
TYP

14 R @ 7" = 8'-2"

DOWEL STEPS INTO WALL
SEE SECTION 1/S504 FOR
DOWLE SIZE AND SPACING

#4 DWL
@ 12" OC

1'-0"

3'-0"

1'-0"

#5 VERT
@ 12" OC

#5 BOT @ 5" OC

#5 VERT
@ 12" OC

#5 HORIZ
@ 12" OC

#3 TEMP @ 9" OC

#5 HORIZ
@ 12" OC

#4 DWL
@ 12" OC

3'-3"

3'-3"

WATERSTOP
TYP

1 1/2"
CLR

FIN FLR
SEE PLAN

1'-0"

2'-0"

3'-3"

#4 DWL
@ 12" OC

3'-3"

#5 DWL
@ 5" OC

3"
CLR

#5 T&B
@ 12" OC

#4 TEMP
@ 12" OC

1 INSPECTION PIT STAIR/TUNNEL

S509

SCALE: 1/2" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			FOUNDATION SECTIONS & DETAILS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S509	

4

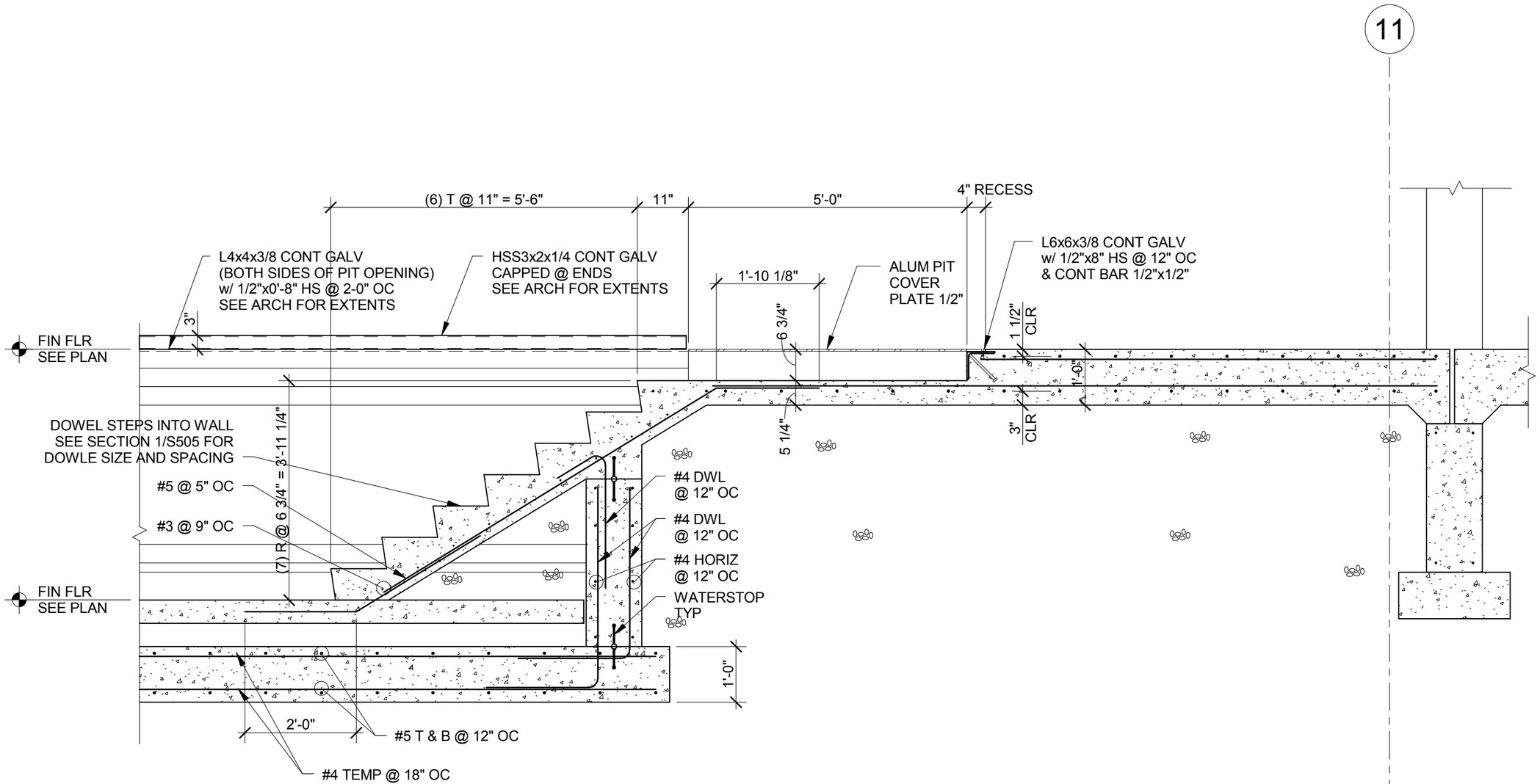
#6 TOP @ 6" OC
#4 TEMP @ 12" OC
BAR 1/2"x1/2"
3/16
1 @ 6
1 1/2" CLR
1'-0"
4" RECESS
5'-0"
SEE PLAN
#4 TEMP @ 12" OC
ALUM PIT COVER PLATE 1/2"
L6x6x3/8 CONT GALV w/ 1/2"x8" HS @ 12" OC
L4x4x3/8 CONT GALV (BOTH SIDES OF PIT OPENING) w/ 1/2"x0'-8" HS @ 2-0" OC SEE ARCH FOR EXTENTS
HSS3x2x1/4 CONT GALV CAPPED @ ENDS SEE ARCH FOR EXTENTS
3"
8"
4"
FIN FLR SEE PLAN
3" CLR
#6 BOT @ 6" OC OVER TUNNEL
#4 DWL @ 12" OC
1'-0"
2'-0"
(6) T @ 11" = 5'-6"
DOWEL STEPS INTO WALL SEE SECTION 1/S505 FOR DOWLE SIZE AND SPACING
1'-0"
2" CLR TYP
#5 VERT @ 12" OC
#5 HORIZ @ 12" OC
WATERSTOP TYP
#5 @ 5" OC
#3 @ 9" OC
12'-1"
(7) R @ 6 1/4" = 3'-8"
1 1/2" CLR
FIN FLR SEE PLAN
1'-0"
#4 DWL @ 12" OC
3'-3"
3" CLR
2'-0"
#5 T & B @ 12" OC
#4 TEMP @ 12" OC
3'-3"
2'-0"
#4 TEMP @ 18" OC
#5 T & B @ 12" OC
FIN FLR SEE PLAN
2 1/8" CLR
1'-0"
3 5/8" CLR
1'-0"
2'-0"
#4 DWL @ 12" OC
1'-0"
#5 HORIZ @ 12" OC
#4 DWL @ 12" OC

1 INSPECTION PIT BAY STAIR/TUNNEL

S510

SCALE: 1/2" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			FOUNDATION SECTIONS & DETAILS		DATE :	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S510	

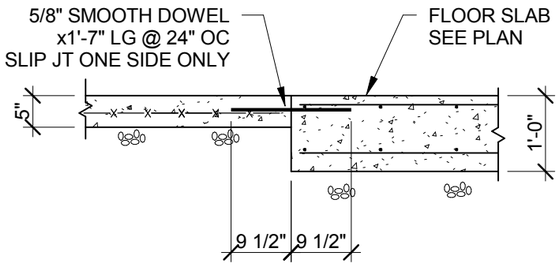


1 INSPECTION PIT BAY STAIR

S511

SCALE: 1/2" = 1'-0"

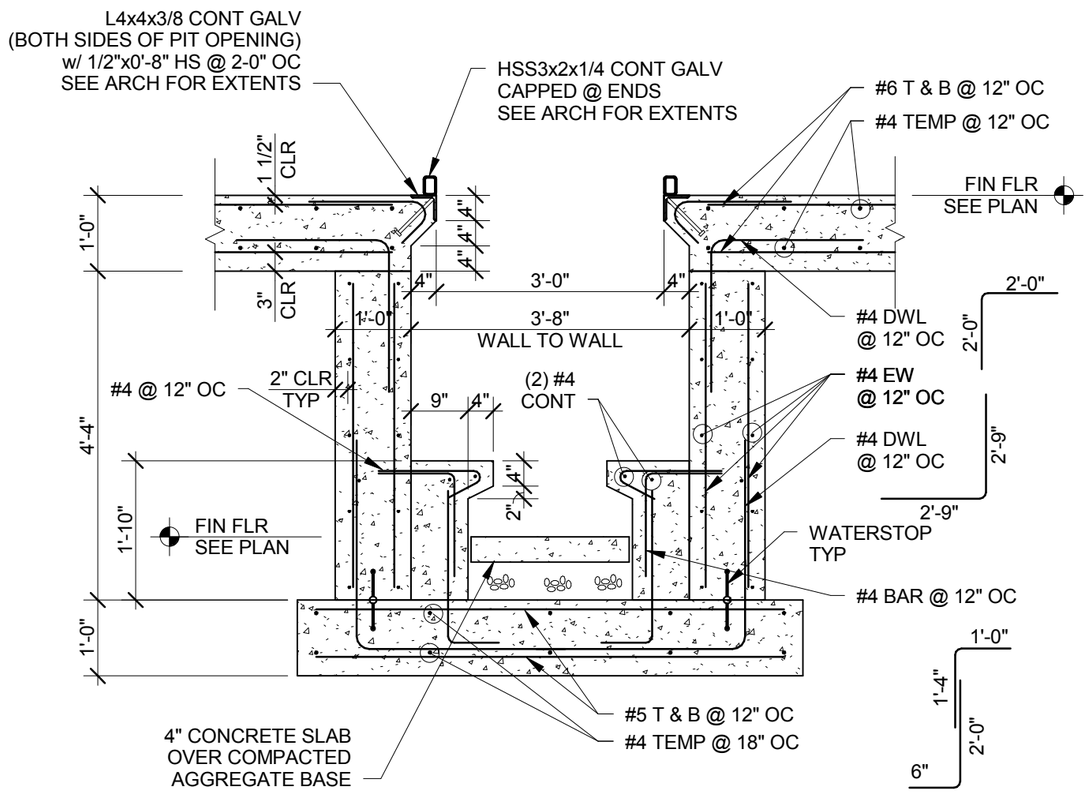
PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			FOUNDATION SECTIONS & DETAILS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S511	



2 SLAB TRANSITION - INSPEC BLDG

S512

SCALE: 1/2" = 1'-0"

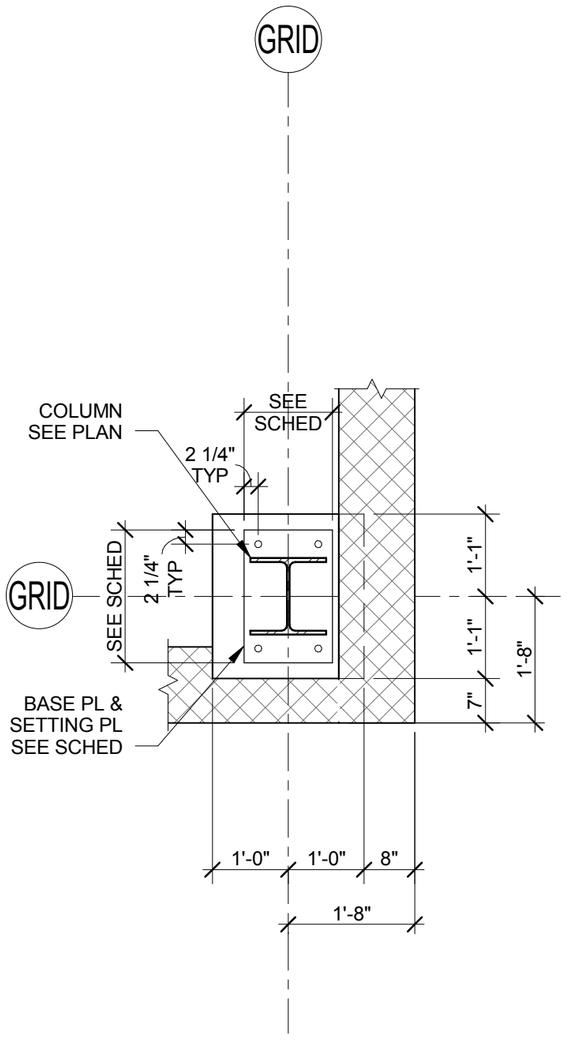


1 INSPECTION PIT

S512

SCALE: 1/2" = 1'-0"

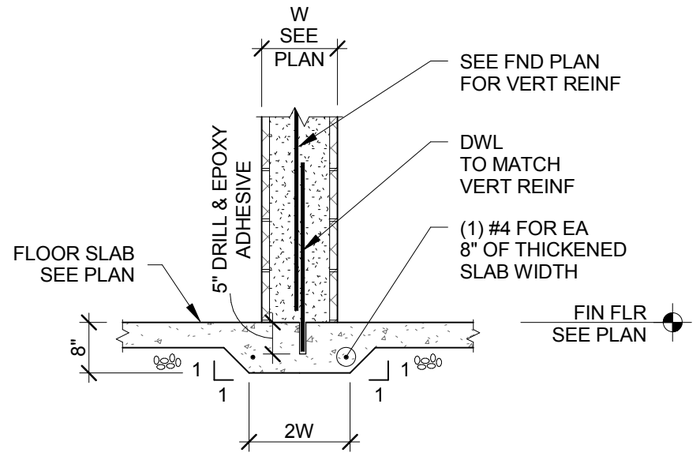
PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			FOUNDATION SECTIONS & DETAILS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S512



3 S513

TYP COL/BASE PLATE/PIER DETAIL

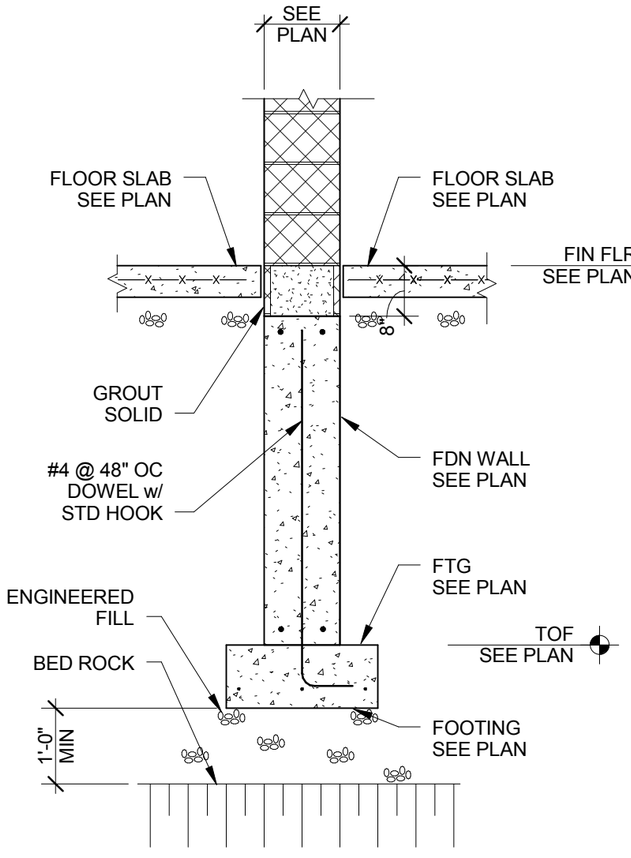
SCALE: 1/2" = 1'-0"



2 S513

THICK SLAB @ NON-BRG WALL

SCALE: 1/2" = 1'-0"

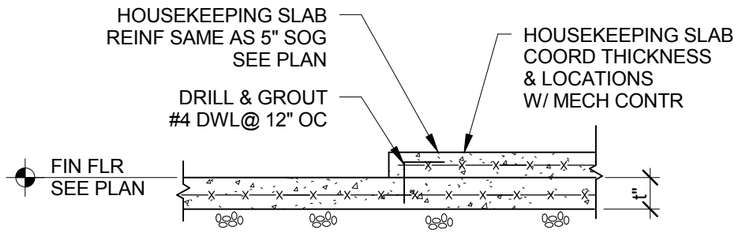


1 S513

INT BEARING WALL

SCALE: 1/2" = 1'-0"

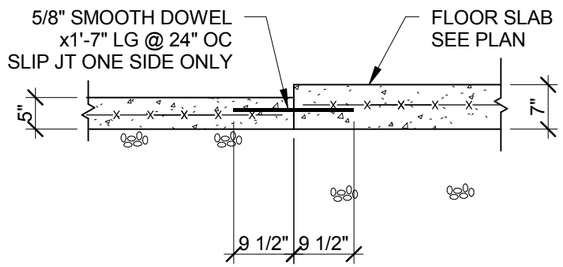
PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			FOUNDATION SECTIONS & DETAILS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S513



3 TYP HOUSEKEEPING SLABS

S514

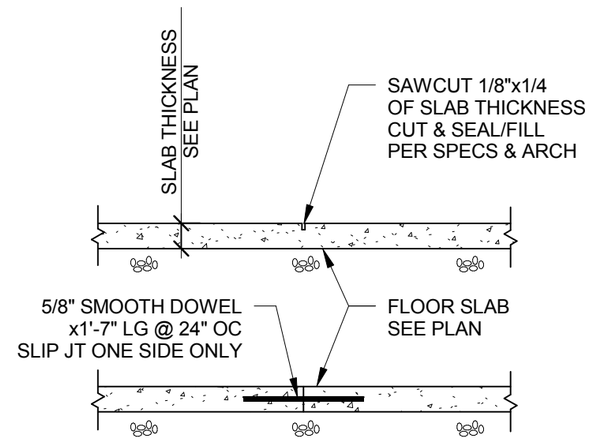
SCALE: 1/2" = 1'-0"



2 SLAB THICK CHANGE - SCALE BLDG

S514

SCALE: 1/2" = 1'-0"



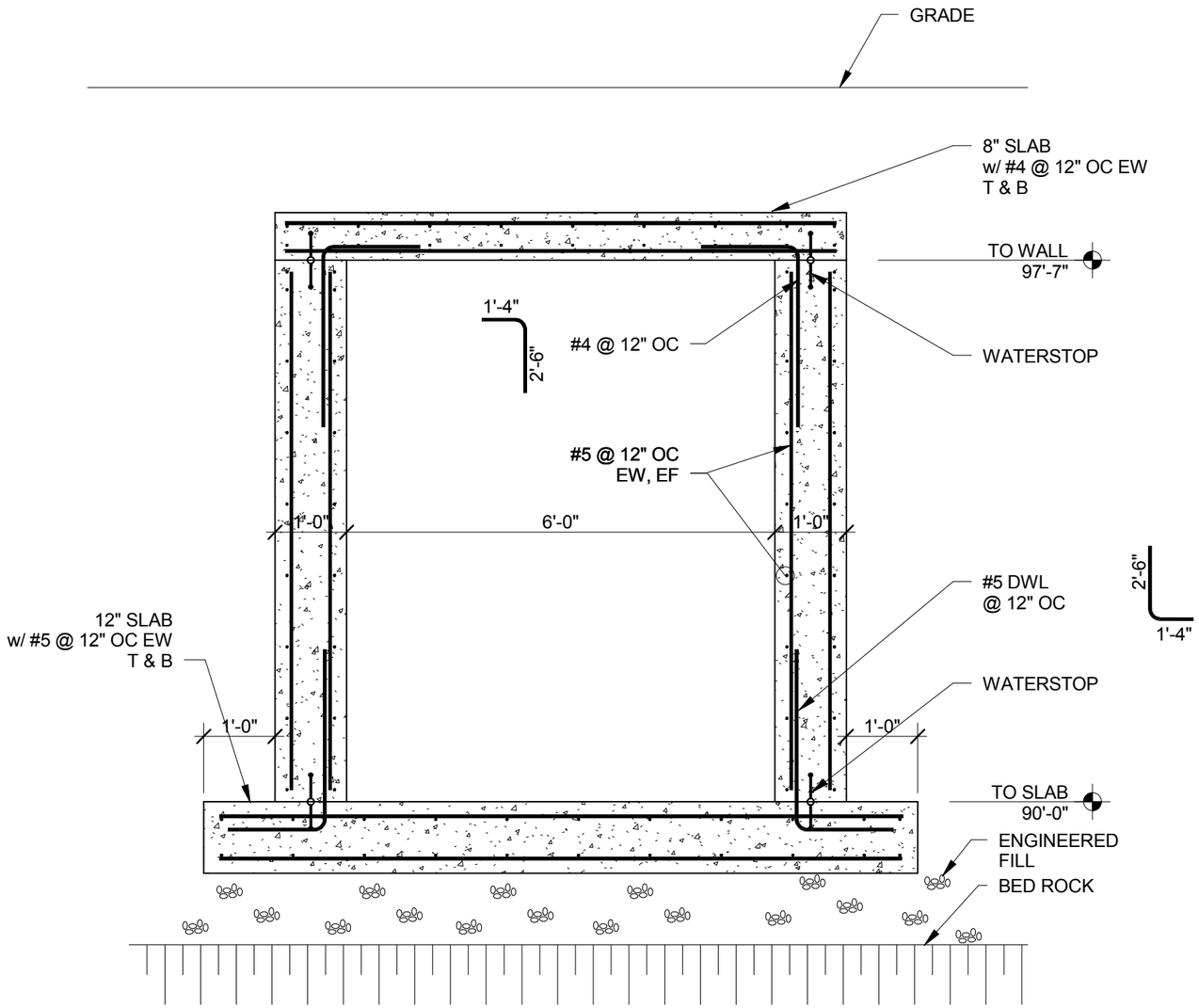
PROVIDE CONSTRUCTION OR
CRACK CONTROL JOINTS:
5" SLAB - 13'-0" OC EW
7" SLAB - 18'-0" OC EW
12" SLAB - 25'-0" OC EW

1 TYP SLAB JOINTS

S514

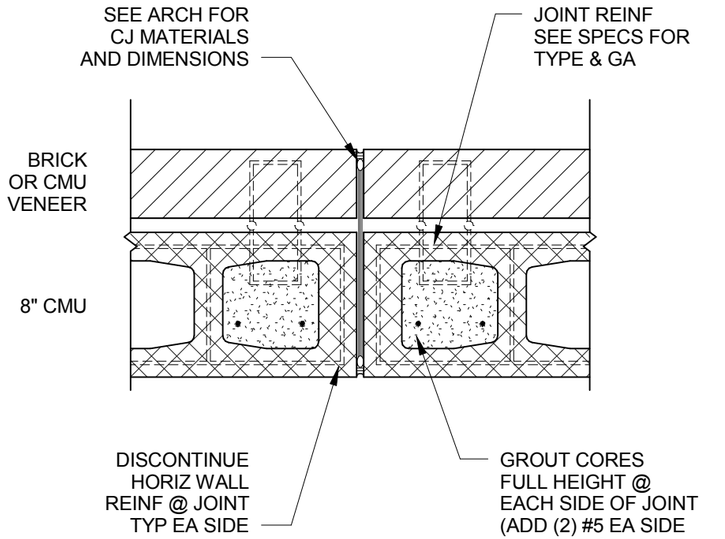
SCALE: 1/2" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			FOUNDATION SECTIONS & DETAILS		DATE:
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S514



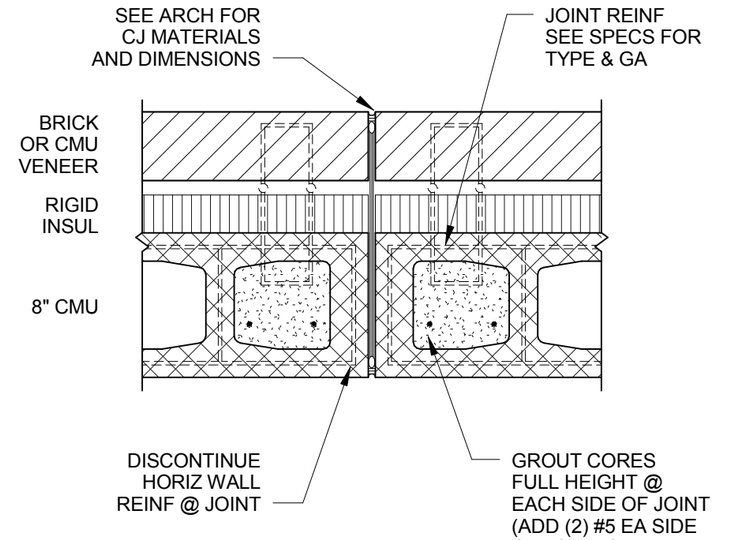
3 S515	NOT USED	1 S515	TUNNEL SECTION SCALE: 1/2" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			FOUNDATION SECTIONS & DETAILS		DATE :	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S515	196



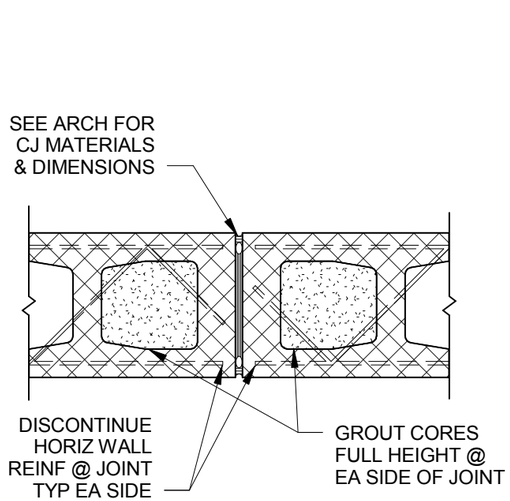
3 S516 **EXTERIOR CONTROL JOINT**

SCALE: NOT TO SCALE



2 S516 **EXTERIOR CONTROL JOINT**

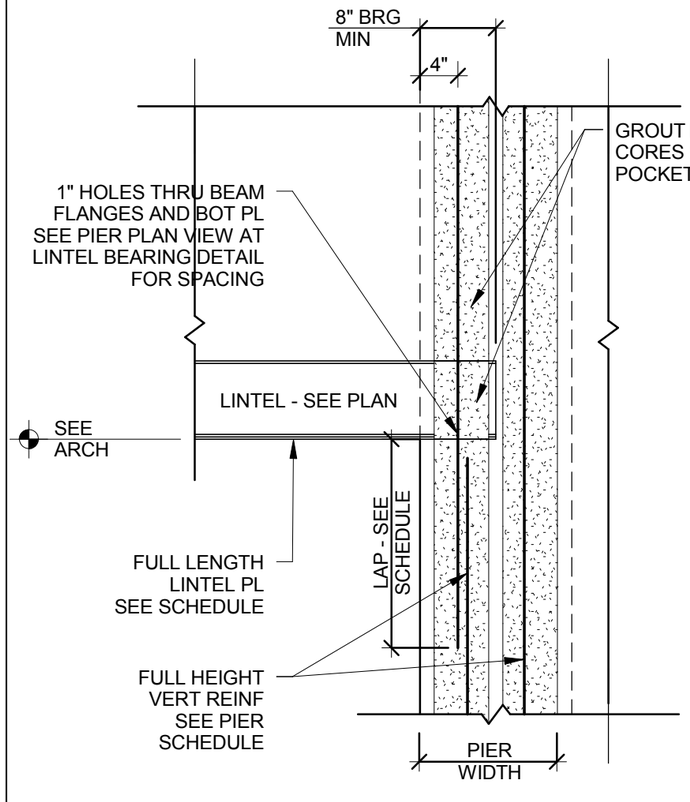
SCALE: NOT TO SCALE



1 S516 **INTERIOR CONTROL JOINT**

SCALE: NOT TO SCALE

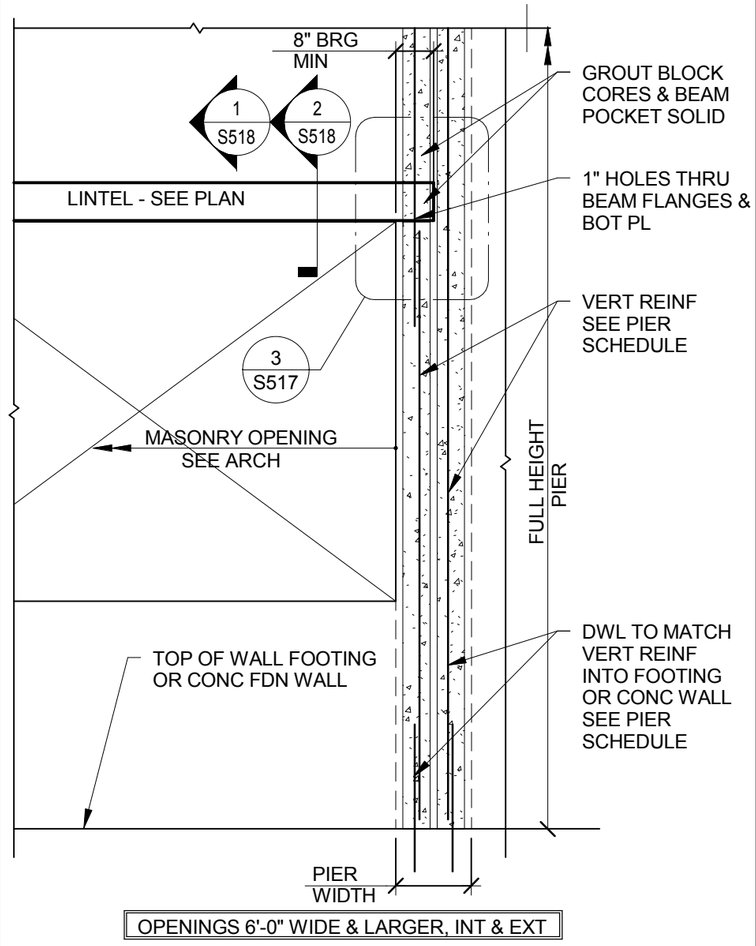
PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			EXTERIOR & INTERIOR WALL SECTIONS & DETAILS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S516



3 S517

TYP LINTEL BRG @ FULL HT PIER

SCALE: 3/4" = 1'-0"

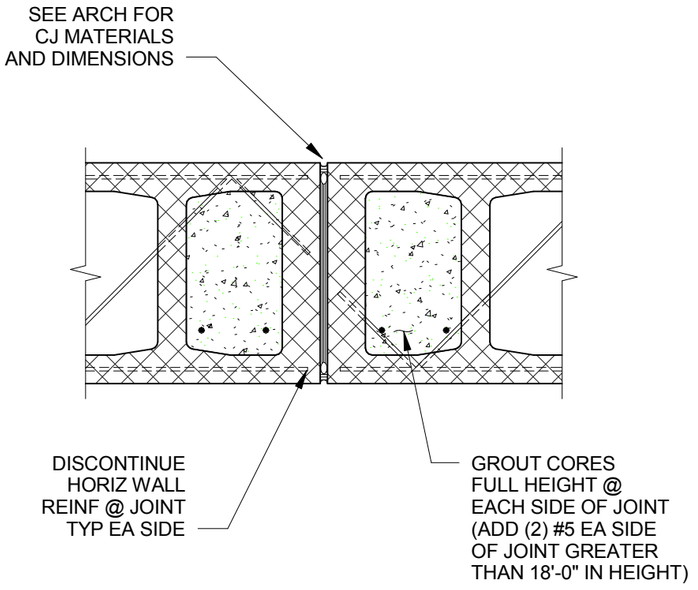


OPENINGS 6'-0" WIDE & LARGER, INT & EXT

2 S517

FULL HT PIER REINF @ LINTEL

SCALE: 3/8" = 1'-0"

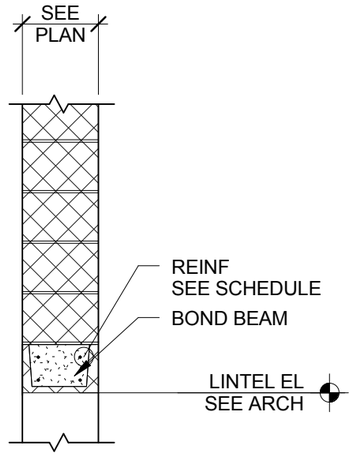


1 S517

EXTERIOR CONTROL JOINT

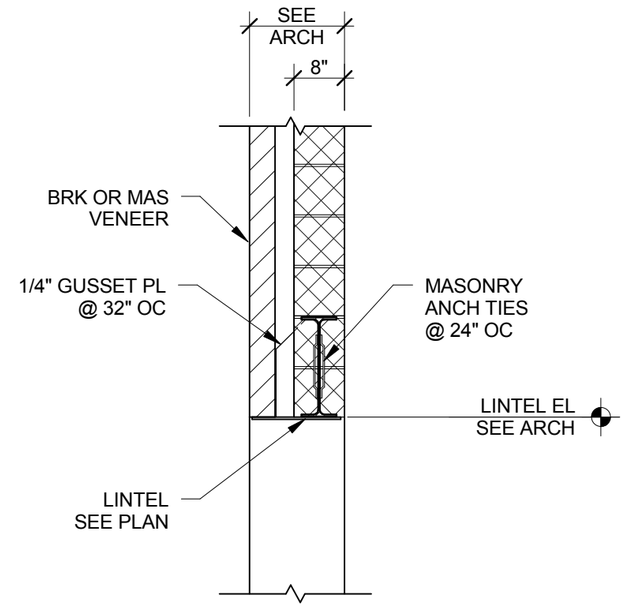
SCALE: NOT TO SCALE

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			EXTERIOR & INTERIOR WALL SECTIONS & DETAILS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S517



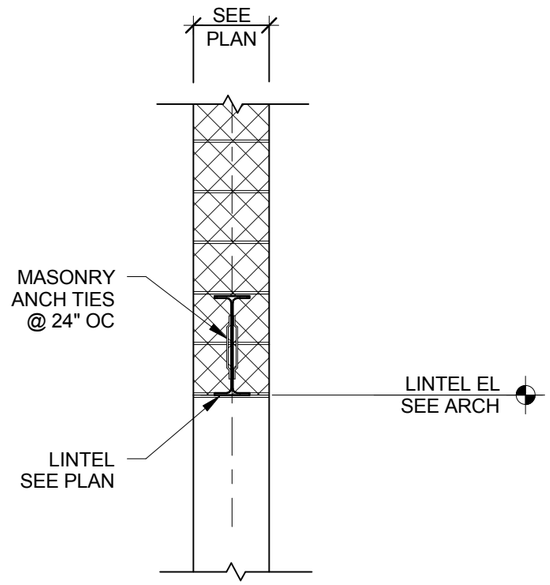
3 S518 **LINTEL TYPE C**

SCALE: 1/2" = 1'-0"



2 S518 **LINTEL TYPE B**

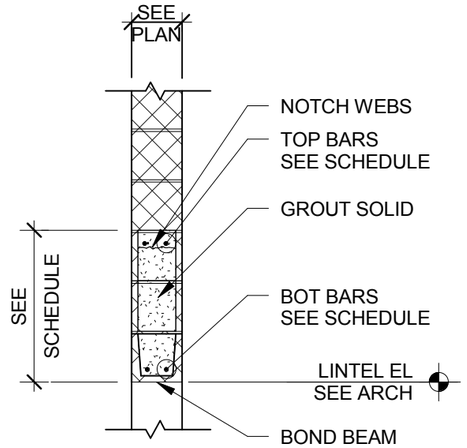
SCALE: 1/2" = 1'-0"



1 S518 **LINTEL TYPE A**

SCALE: 1/2" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			EXTERIOR & INTERIOR WALL SECTIONS & DETAILS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S518



3 S519

LINTEL TYPE D

SCALE: 1/2" = 1'-0"

PIER REINFORCING LAP SCHEDULE

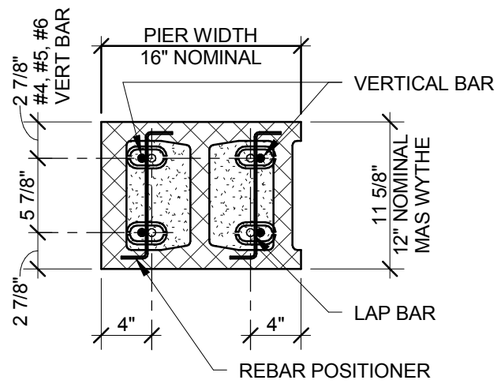
REINF SIZE	MASONRY WYTHE	MINIMUM COVER	LAP LENGTH, Ld
#4	8"	2-3/8"	25"
#5	8"	2-3/8"	41"
#4	12"	2-7/8"	22"
#5	12"	2-7/8"	33"
#6	12"	2-7/8"	46"

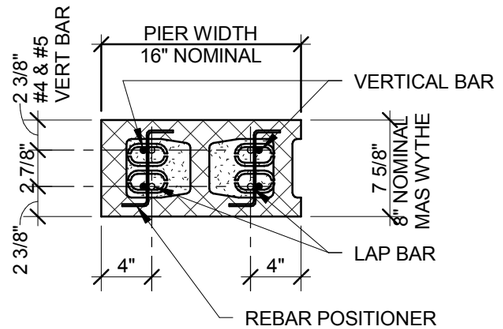
* LAP LENGTH (Ld) CALCULATED PER IBC2000 SECTION 2107.2.3

2 S519

PIER REINFORCING LAP SCHEDULE

SCALE: 1/2" = 1'-0"



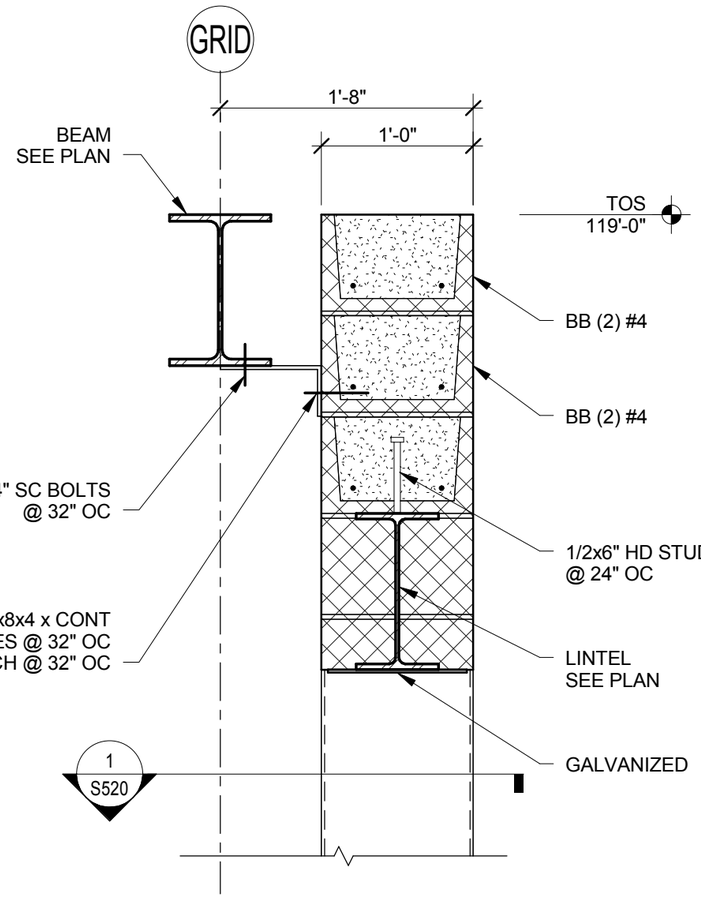


1 S519

TYP PIER PLAN @ LINTEL BRG

SCALE: 1" = 1'-0"

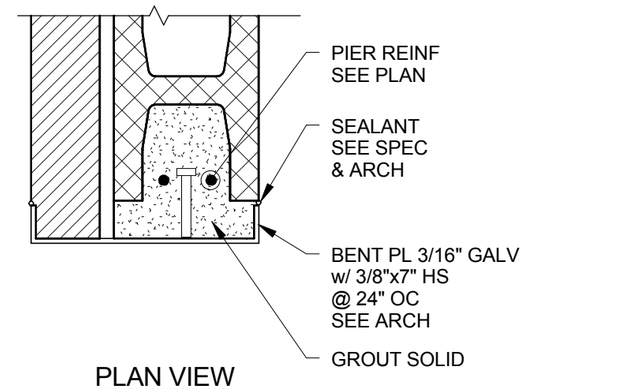
PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			EXTERIOR & INTERIOR WALL SECTIONS & DETAILS	DATE :	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S519



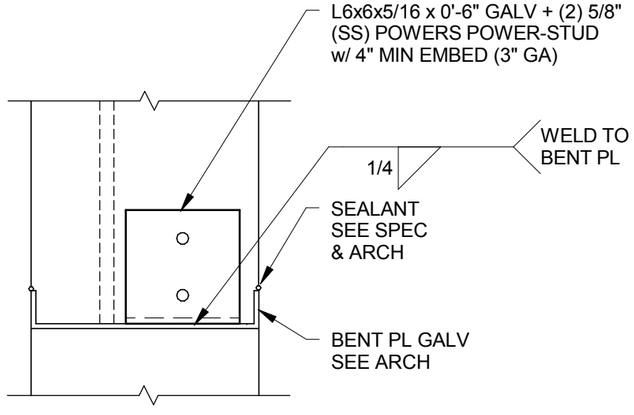
2 GARAGE DOOR HEAD

S520

SCALE: 1" = 1'-0"



PLAN VIEW



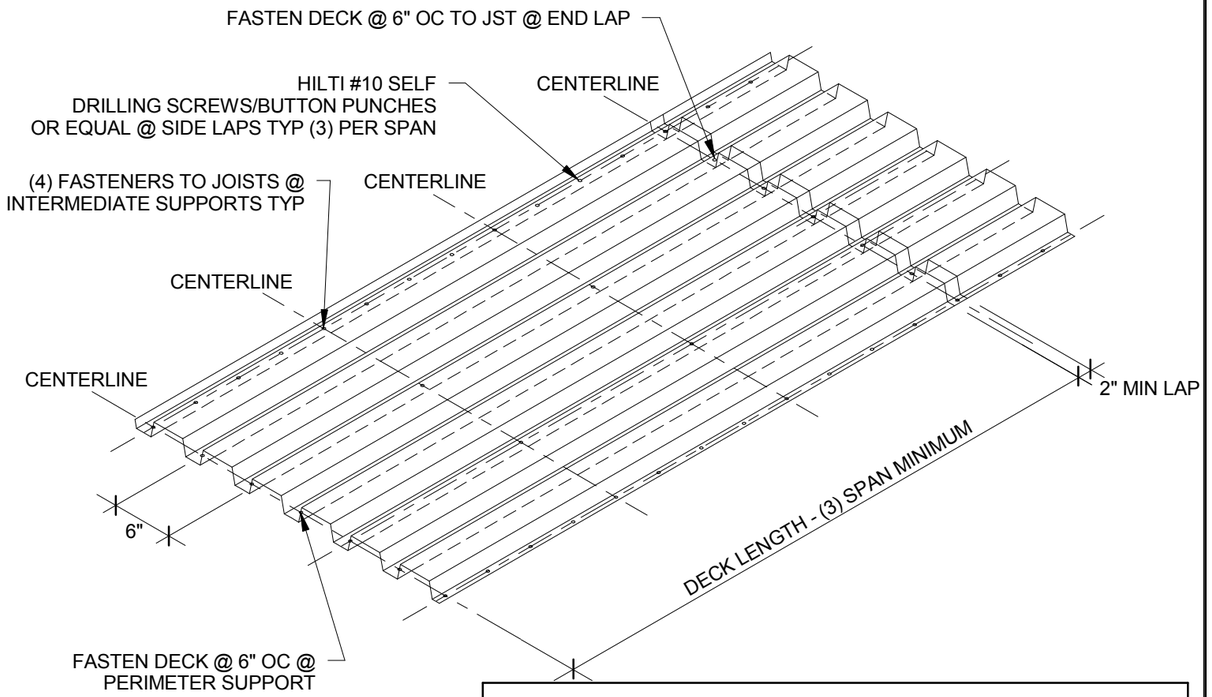
PLAN VIEW @ FDN WALL

1 GARAGE DOOR JAMB

S520

SCALE: 1 1/2" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			EXTERIOR & INTERIOR WALL SECTIONS & DETAILS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S520	201



TYPE 'B' FASTENERS

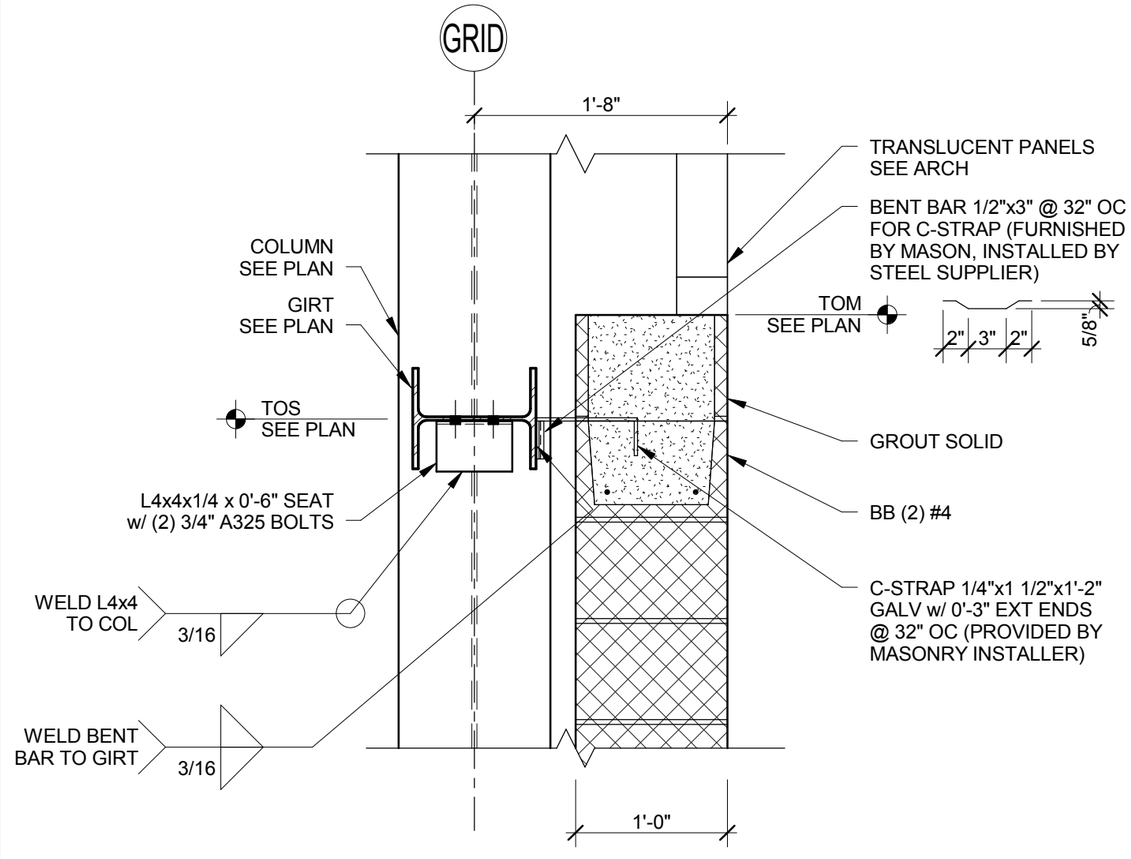
BAR JOIST:
HILTI X-EDNK22 HSN FASTENERS FOR BASE MATERIAL 1/8" TO 1/4"
HILTI X-EDN19 HSN FASTENERS FOR BASE MATERIAL 1/4" TO 3/8"

STRUCTURAL STEEL:
HILTI ENP2/ENPH2 FASTENERS FOR BASE MATERIAL 1/4" OR GREATER

2 TYPE 'B' DECK FASTENER PATTERN

S521

SCALE: 1/2" = 1'-0"

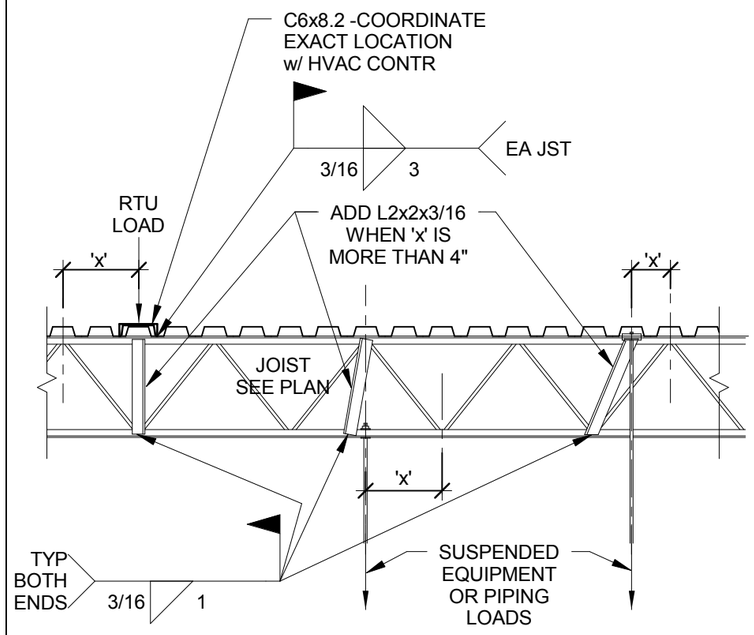


1 TYPICAL TOP OF WALL w/ GIRT

S521

SCALE: 1" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			ROOF SECTIONS & DETAILS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S521

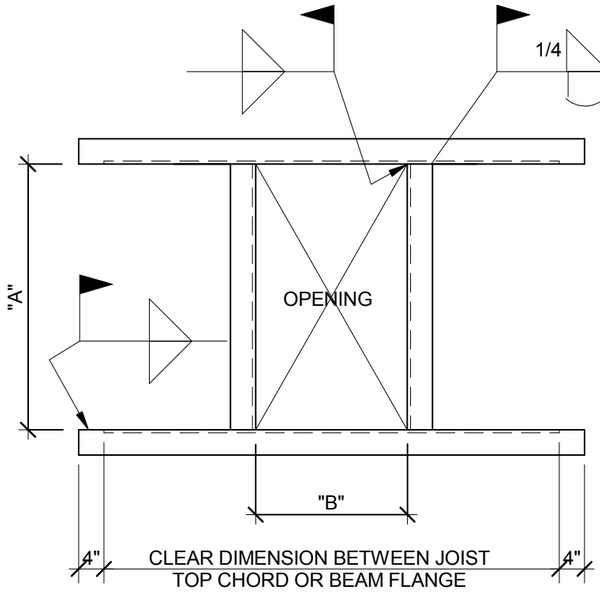


WELD L2x2x3/16 TO JOIST CHORDS FROM LOAD POINT TO PANEL POINT WHERE CONCENTRATED LOADS ARE NOT AT PANEL POINT LOCATIONS

2 JOIST REINF @ ADDED LOADS

S522

SCALE: 1/2" = 1'-0"



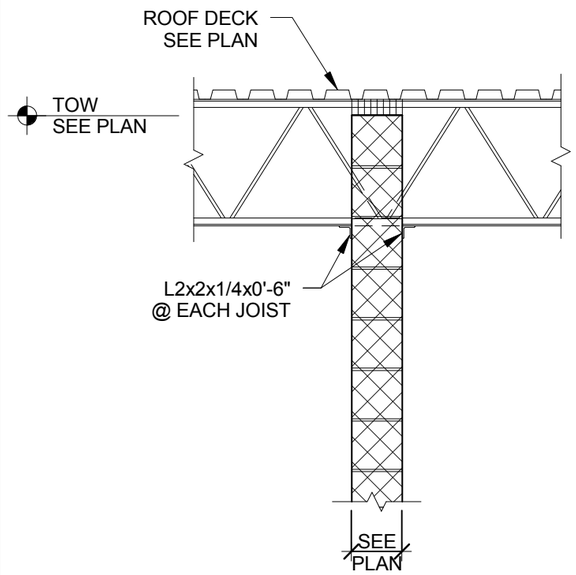
- SEE HVAC FOR LOCATION & SIZE REQUIRED
- DETAIL IS TYPICAL @ OPENINGS GREATER THAN 10", INCLUDING ROOF DRAINS & SUMPS
- DIMENSIONS "A" & "B" BY MECHANICAL CONTRACTOR & ROOF SUMP SUPPLIER

1 ROOF DECK OPENING FRAMING

S522

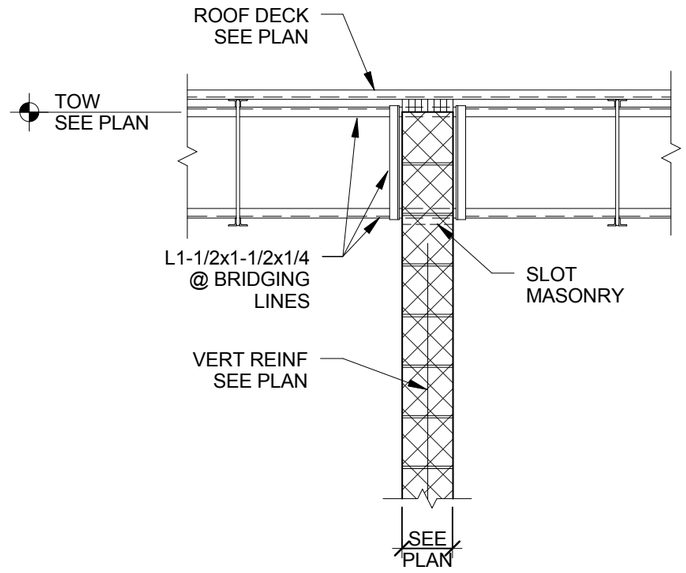
SCALE: 1/2" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			ROOF SECTIONS & DETAILS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S522	



2 NON-BRG WALL BRACING DETAIL

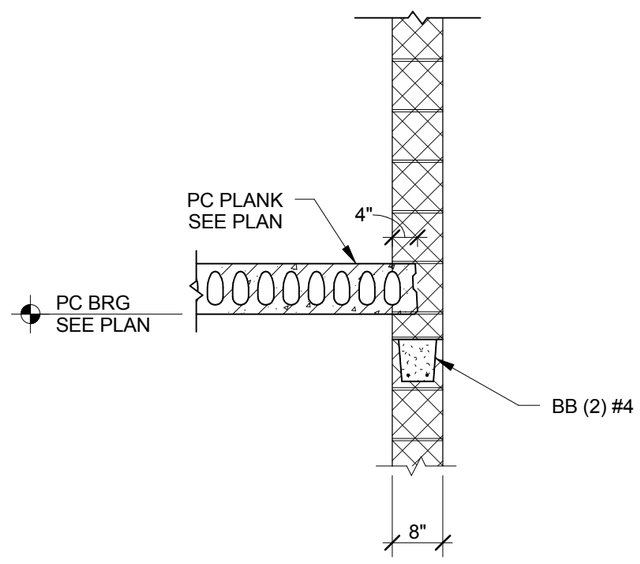
S523 SCALE: 1/2" = 1'-0"



1 NON-BRG WALL BRACING DETAIL

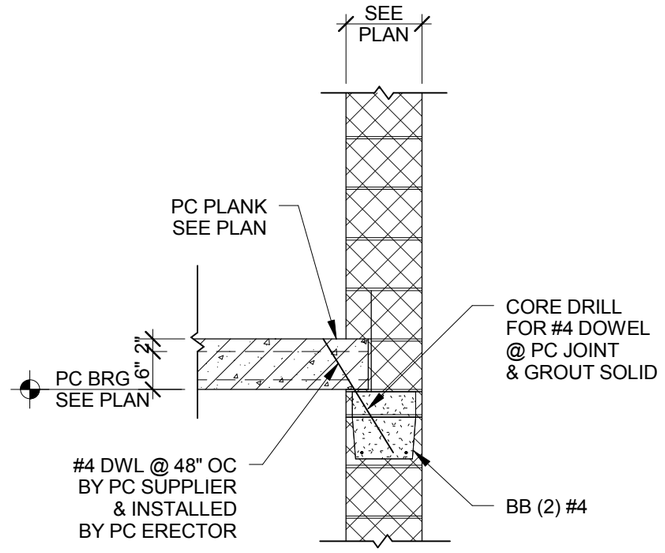
S523 SCALE: 1/2" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			ROOF SECTIONS & DETAILS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S523	



2 PC BRG WALL SECTION

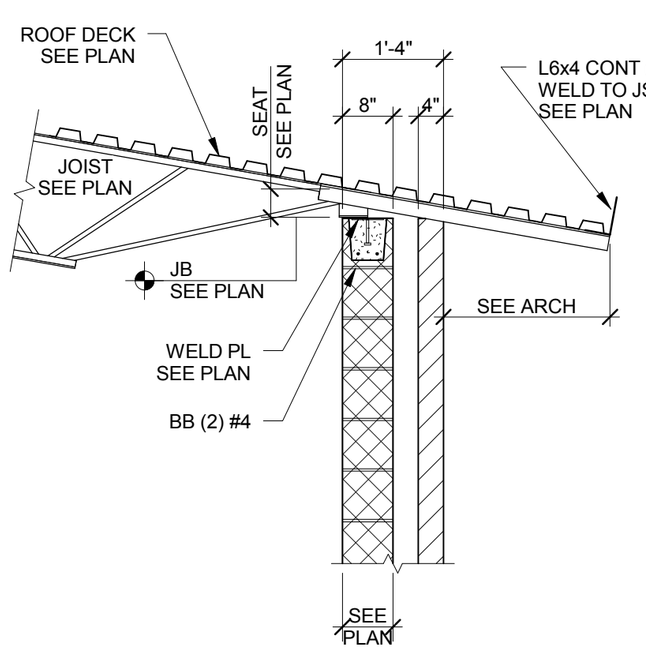
S524 SCALE: 1/2" = 1'-0"



1 PC BRG WALL SECTION

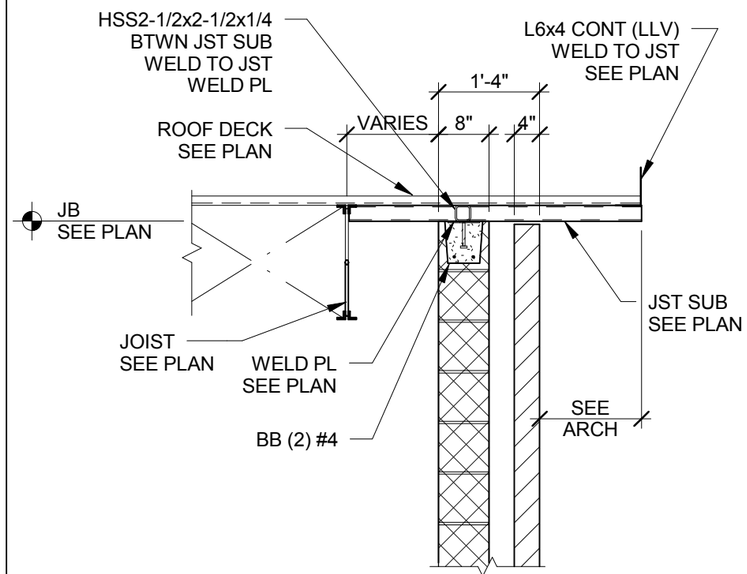
S524 SCALE: 1/2" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			ROOF SECTIONS & DETAILS		DATE :	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S524	



2 S525 — JOIST BRG @ EXT WALL

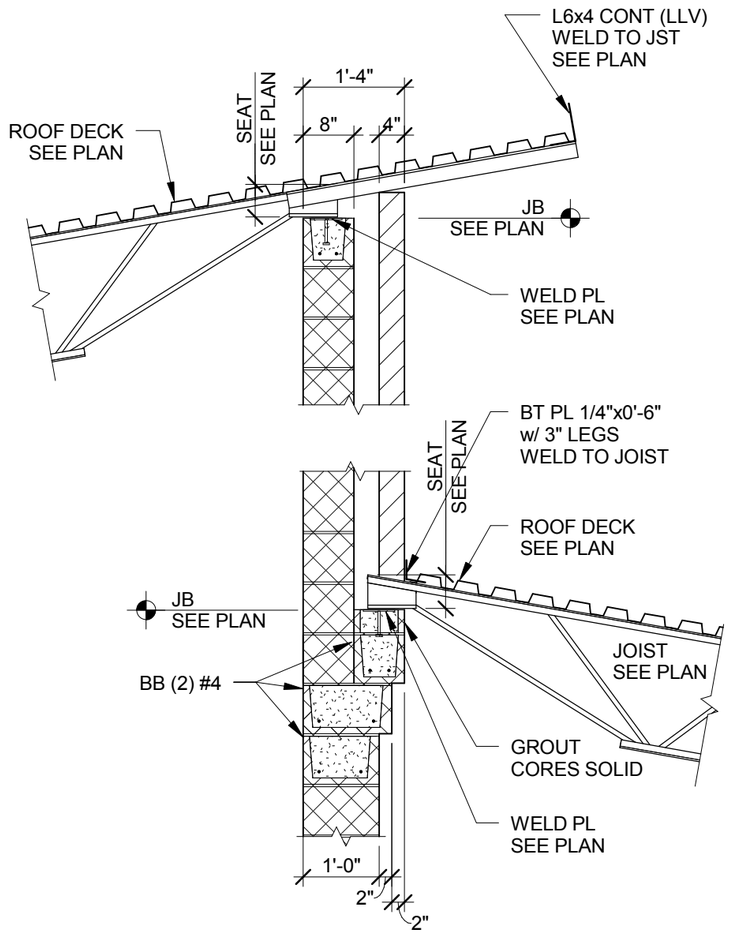
SCALE: 1/2" = 1'-0"



1 S525 — JOIST BRG @ EXT WALL

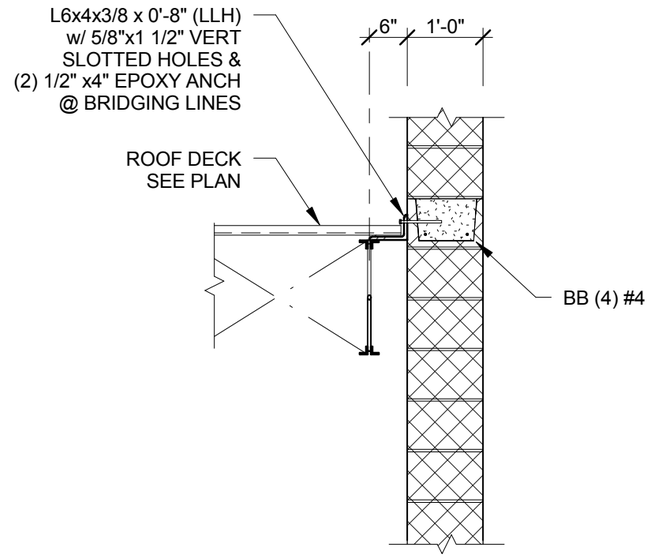
SCALE: 1/2" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			ROOF SECTIONS & DETAILS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S525



2 S526 **HIGH-LOW ROOF SECTION**

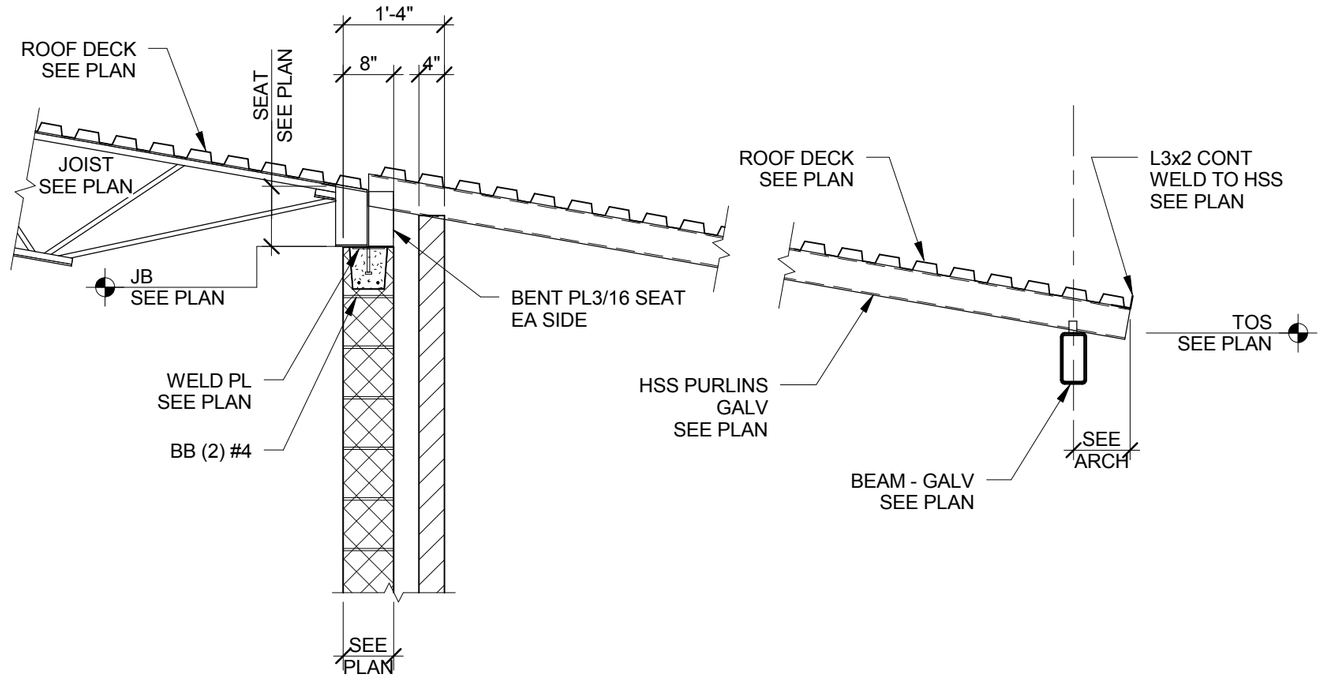
SCALE: 1/2" = 1'-0"



1 S526 **JOIST PARALLEL TO MAS WALL**

SCALE: 1/2" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			ROOF SECTIONS & DETAILS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S526



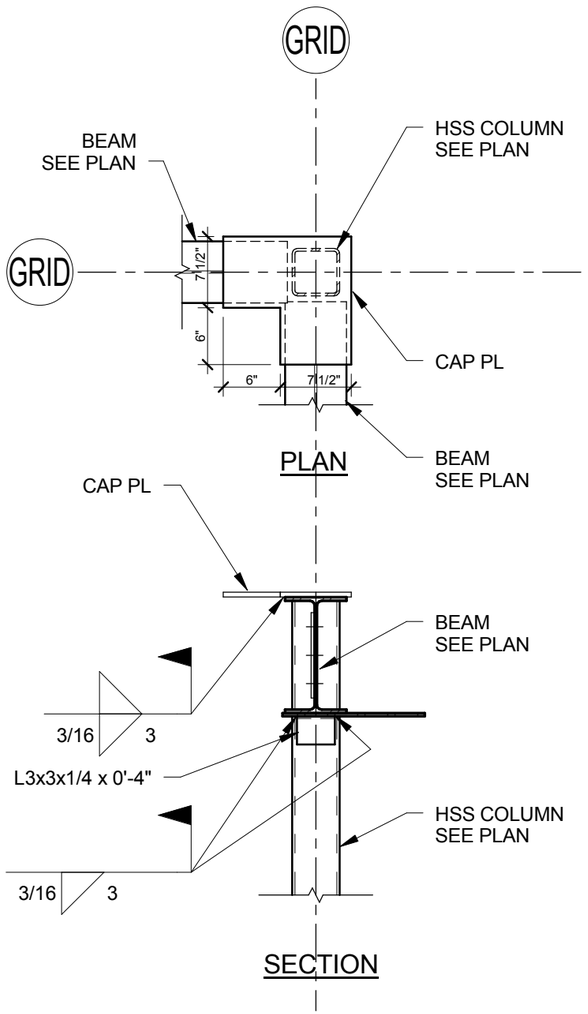
1

S527

CANOPY ROOF SECTION

SCALE: 1/2" = 1'-0"

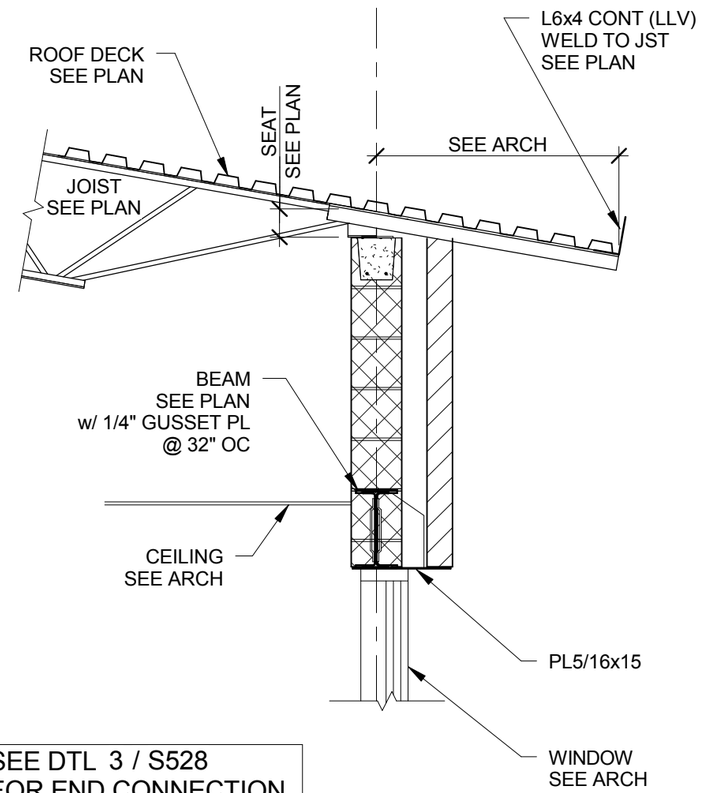
PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			ROOF SECTIONS & DETAILS		DATE :	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S527	



3 S528

CONNECTION DETAIL

SCALE: 3/4" = 1'-0"

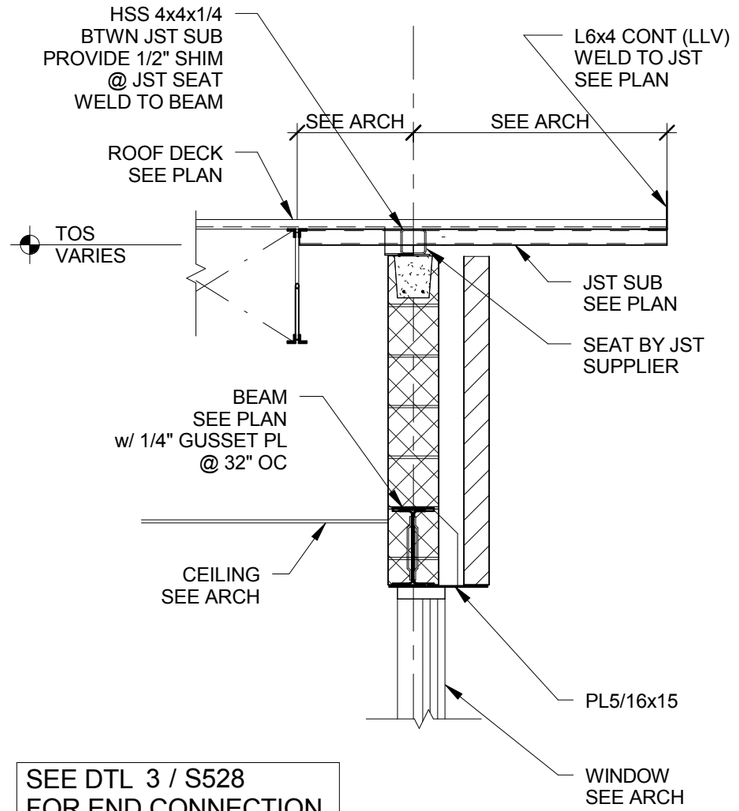


SEE DTL 3 / S528
FOR END CONNECTION
OF BEAM

2 S528

ROOF SECTION

SCALE: 1/2" = 1'-0"



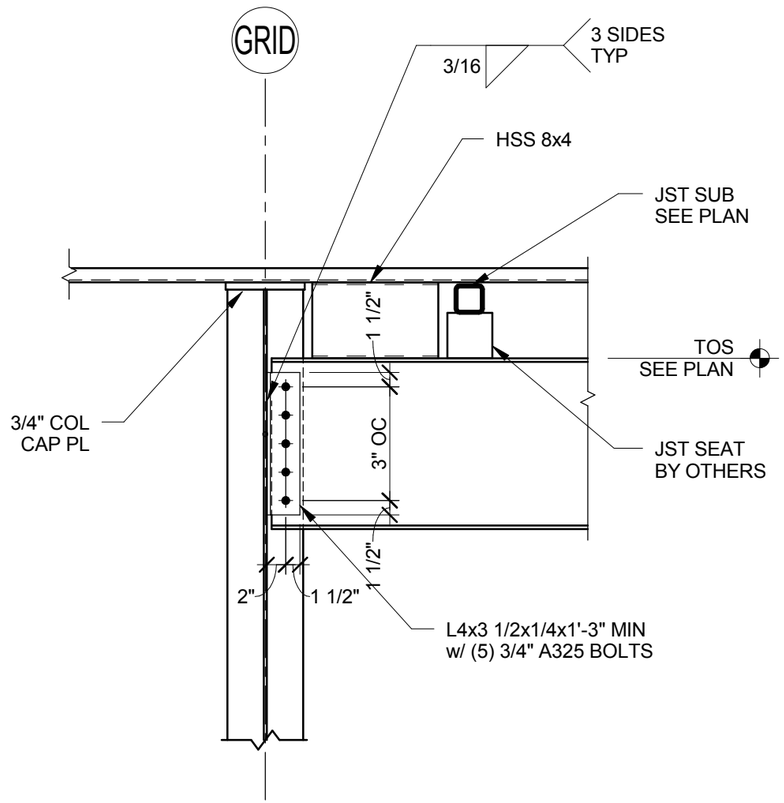
SEE DTL 3 / S528
FOR END CONNECTION
OF BEAM

1 S528

ROOF SECTION

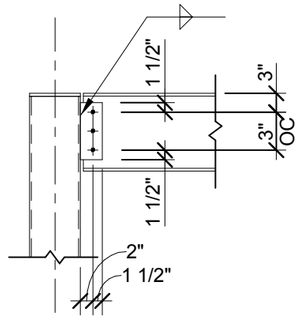
SCALE: 1/2" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			ROOF SECTIONS & DETAILS	DATE :	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S528



BEAM TO COLUMN SHEAR CONNECTION SCHEDULE

	BEAM SIZE	BOLT DIA	NO OF BOLTS	CONN LENGTH (MIN)	CONN WELD (MIN)
SHEAR TAB	W8, W10	3/4"	(2)	6"	1/4
	W12	3/4"	(3)	9"	1/4
	W14, W16	3/4"	(4)	12"	1/4
	W18	3/4"	(5)	15"	1/4
	W21	3/4"	(6)	18"	1/4
	W24, W27	3/4"	(7)	21"	1/4



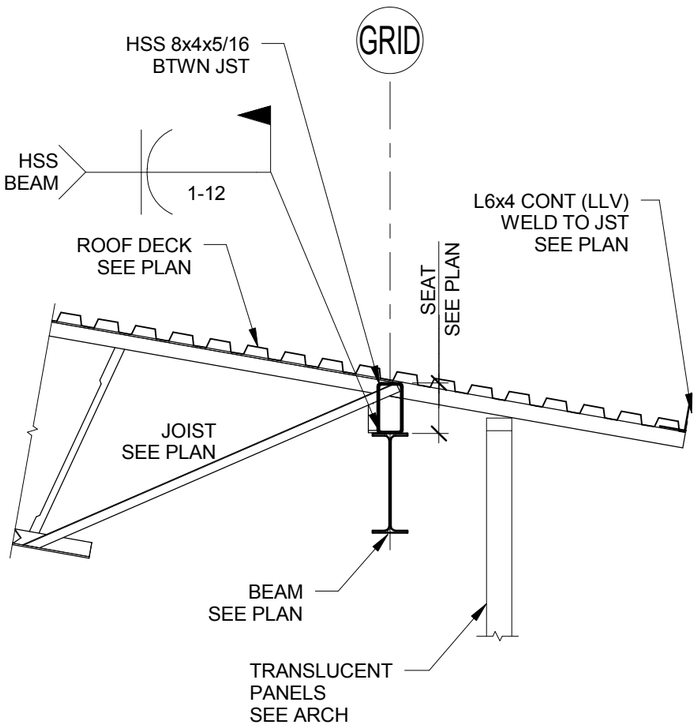
SHEAR TAB

BEAM TO COLUMN CONNECTION SCHEDULE NOTES:
1. BEAMS TO BEAR ON TOP OF COLUMNS SHOWN AS (⊟——) ON PLAN, TYP UNLESS DETAILED OTHERWISE
2. BEAM-TO-COLUMN CONNECTIONS SHOWN AS (□——) ON PLAN, TO BE SHEAR TAB CONNECTIONS AS NOTED ABOVE, UNLESS DETAILED OTHERWISE.
3. ALL CONNECTIONS TO BE DESIGNED PER AISC STEEL CONSTRUCTION MANUAL - THIRTEENTH EDITION

2 BEAM TO COLUMN WEB DETAIL
S529
SCALE: 3/4" = 1'-0"

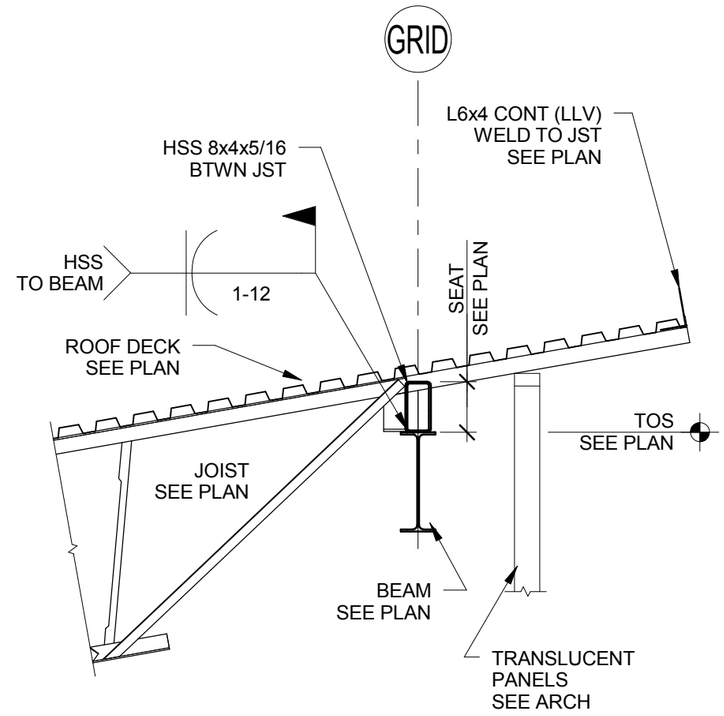
1 BEAM TO HSS COLUMN CONN SCHEDULE
S529
SCALE: 1/2" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)
ROOF SECTIONS & DETAILS
DATE :
STATE PROJECT NUMBER: 1070-00-72 | HWY: IH 90 | COUNTY: MONROE | SPARTA SWEF NO. 54 | SCALE:
SHEET NO: S529



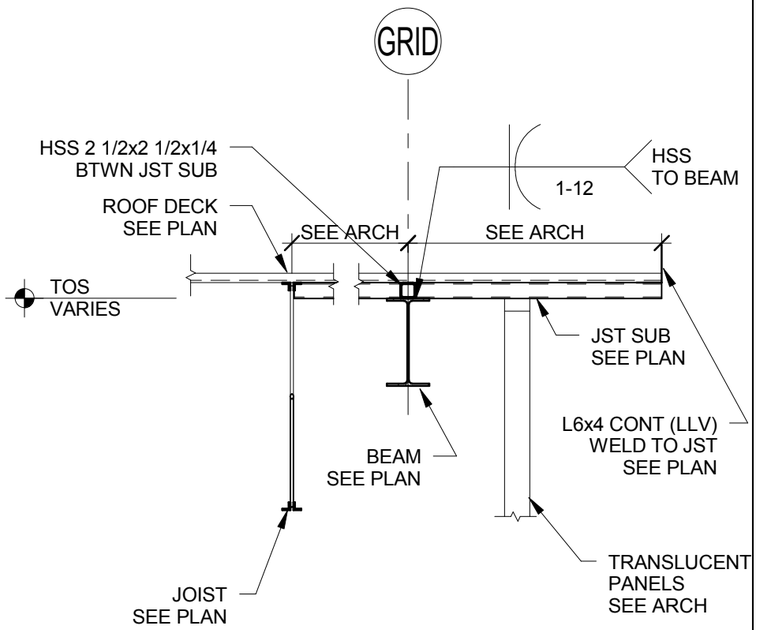
3 S530 **ROOF SECTION**

SCALE: 1/2" = 1'-0"



2 S530 **ROOF SECTION**

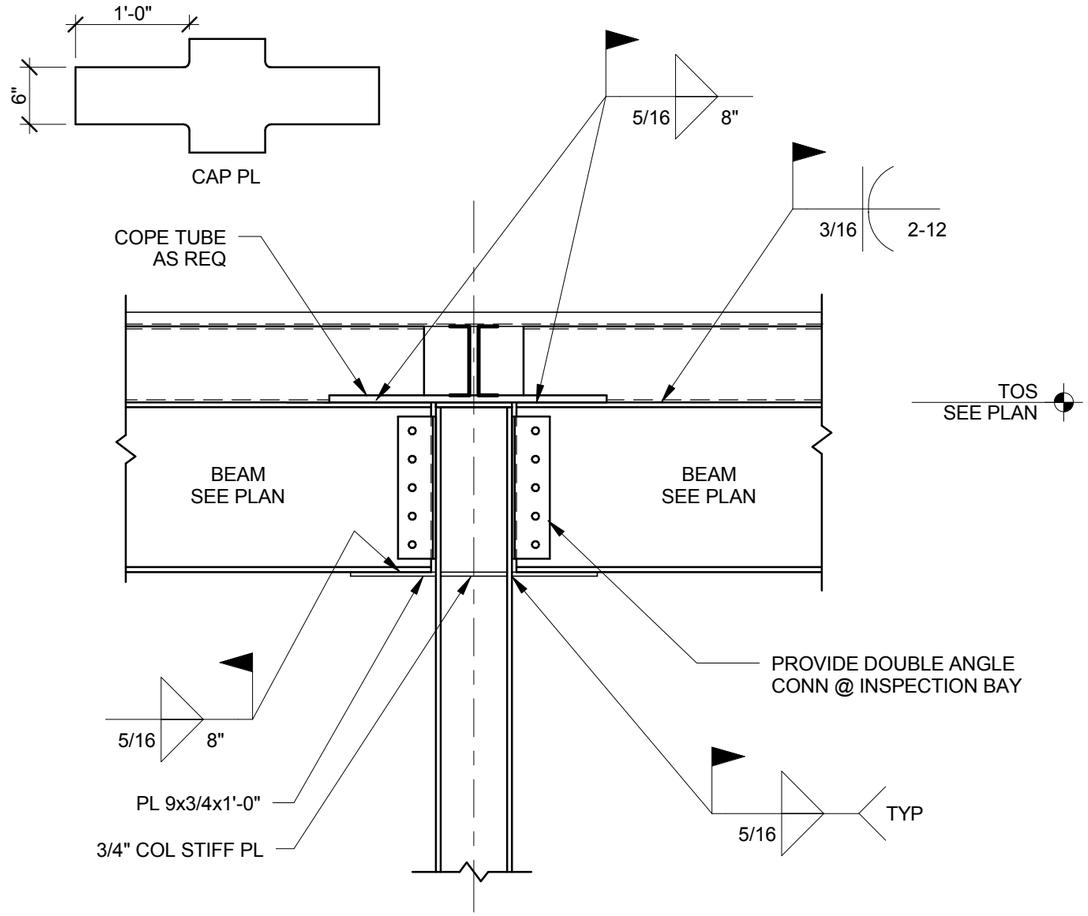
SCALE: 1/2" = 1'-0"



1 S530 **ROOF SECTION**

SCALE: 1/2" = 1'-0"

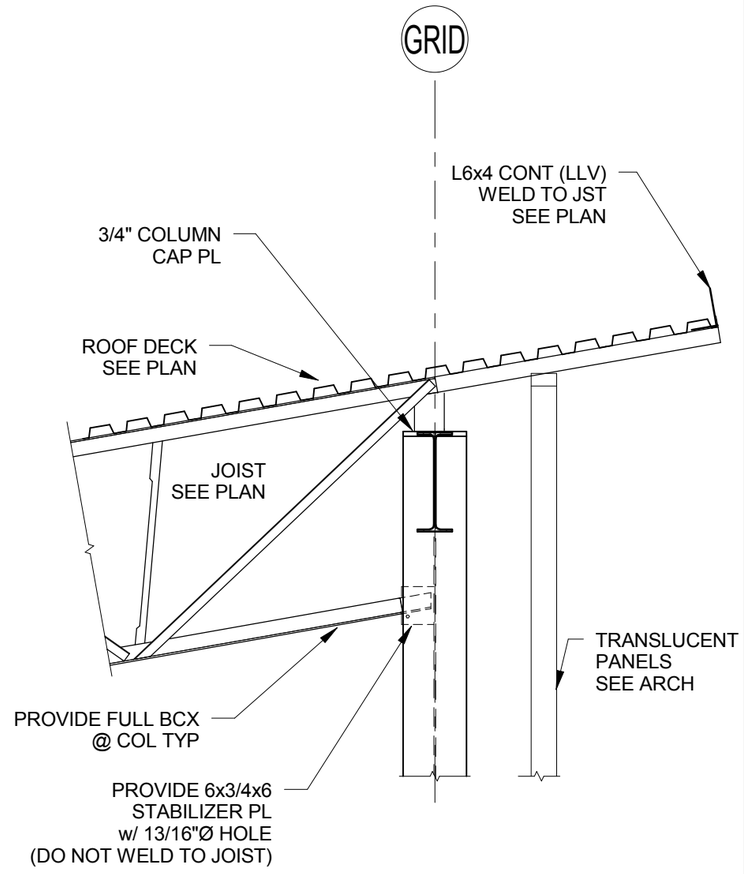
PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			ROOF SECTIONS & DETAILS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S530



2 WELDED MOMENT CONNL - ROOF BM TO COL

S531

SCALE: 3/4" = 1'-0"

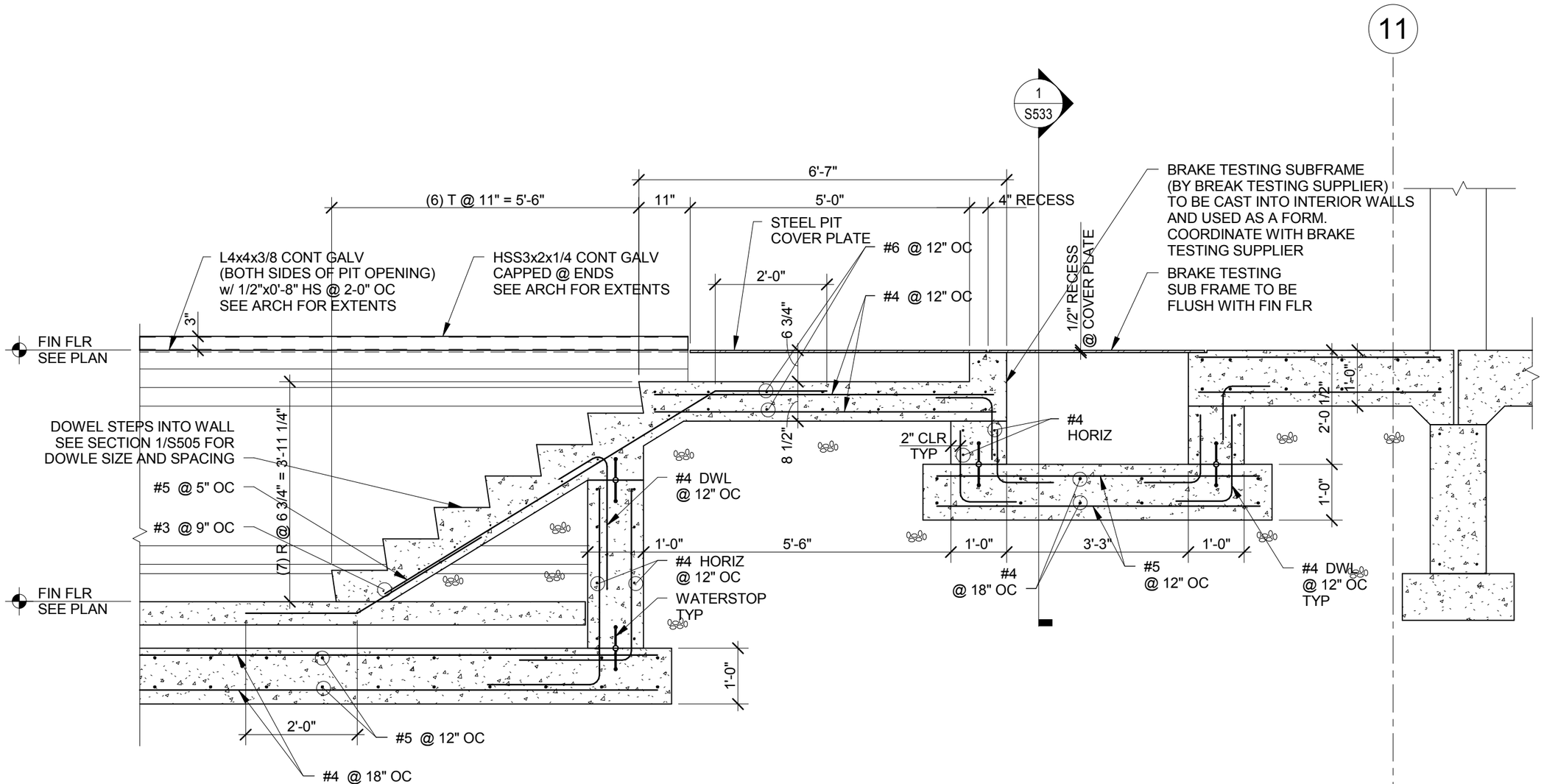


1 ROOF SECTION

S531

SCALE: 1/2" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			ROOF SECTIONS & DETAILS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S531	212

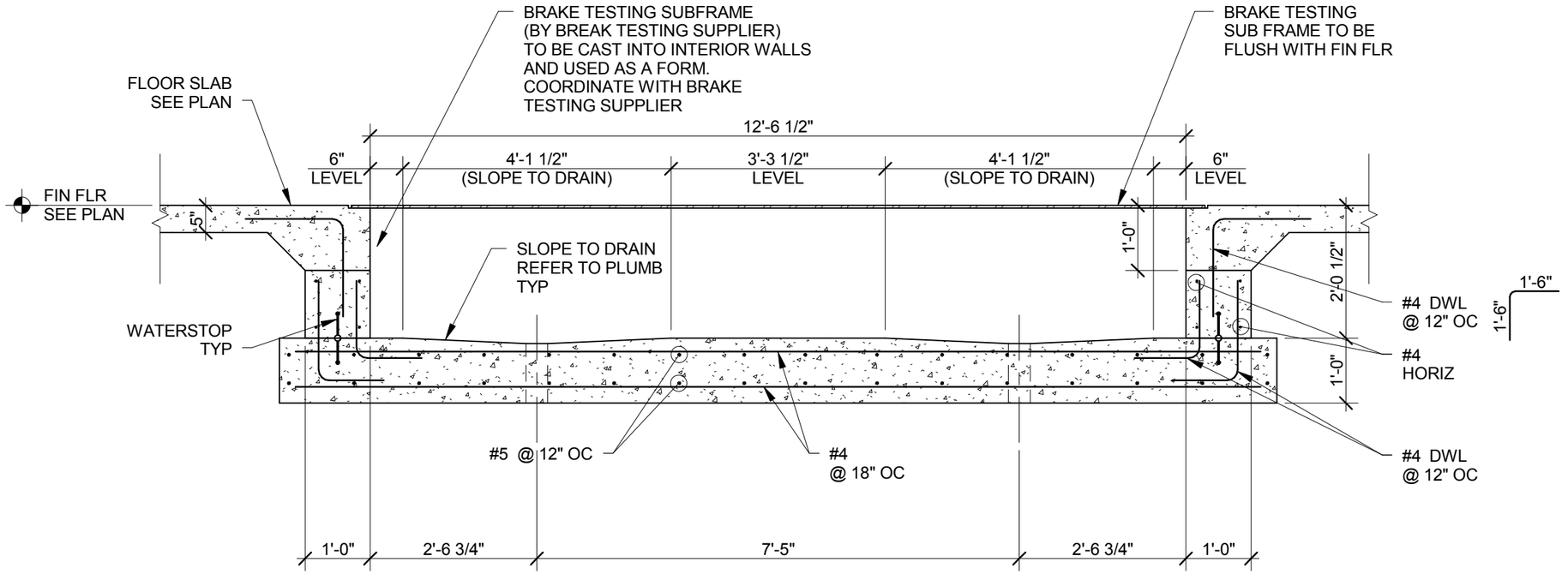


1 INSPECTION PIT BAY STAIR & BRAKE TESTING PIT

1
S532

SCALE: 1/2" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			FOUNDATION SECTIONS & DETAILS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S532



NOTE:
LEVEL AREAS SHOWN ARE NEEDED TO SUPPORT BREAK TESTING SUBFRAME,
COORIDNATE WITH SUBFRAME SUPPLIER

1	BRAKE TESTING PIT
S533	SCALE: 1/2" = 1'-0"

PLANS PREPARED BY: AMBROSE ENGINEERING, INC. CEDARBURG, WI (AEI# 012-307)			FOUNDATION SECTIONS & DETAILS	DATE :	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE:	SHEET NO: S533

PROJECT: Sparta Safety & Weight Facility No. 54
IH-90
Monroe County

Wisconsin Domestic Water Service Calculations

NO. OF FIXTURES	FIXTURE DESCRIPTION	WATER SUPPLY FIXTURES UNITS (WFSU) HOT PER FIXTURE	TOTAL HOT	COLD PER FIXTURE	TOTAL COLD	COMMON PER FIXTURE	COMMON TOTAL	REMARKS
PUBLIC FIXTURES								
	Automatic Clothes Washer, Individual	2.0		2.0		3.0		
	Automatic Clothes Washer, Large Capacity							
	Bathtub, With or Without Shower Head	2.0		2.0		3.0		
	Coffeemaker			0.5		0.5		
	Dishwasher, Commercial							
	Drink Dispenser			0.5		0.5		
2	Drinking Fountain			0.25	0.5	0.25	0.5	
	Glass Filler			0.5		0.5		
	Hose Bibb:							
	1/2" diameter			3.0		3.0		
5	3/4" diameter			4.0	20.0	4.0	20.0	
	Icemaker			0.5		0.5		
4	Lavoratory	0.5	2.0	0.5	2.0	1.0	4.0	
1	Shower, Per Head	2.0	2.0	2.0	2.0	3.0	3.0	
	Sinks:							
	Bar and Fountain	1.5		1.5		2.0		
	Barber and Shampoo	1.5		1.5		2.0		
	Cup			0.5		0.5		
	Flushing Rim			7.0		7.0		
1	Kitchen and Food Preparation per Faucet	2.0	2.0	2.0	2.0	3.0	3.0	
	Laboratory	1.0		1.0		1.5		
	Medical Exam and Treatment	1.0		1.0		1.5		
1	Service	2.0	2.0	2.0	2.0	3.0	3.0	
	Surgeon Washup							
1	Laundry Tray	1.0	1.0	1.0	1.0	1.5	1.5	
	Urinal:							
	Syphon Jet			4.0		4.0		
1	Washdown			2.0	2.0	2.0	2.0	
	Wall Hydrant, Hot and Cold Mix:							
	1/2" diameter	2.0		2.0		3.0		
	3/4" diameter	3.0		3.0		4.0		
	Wash Fountain:							
	Semicircular	1.5		1.5		2.0		
	Circular							
	Water Closet:							
4	Flushometer			6.5	26.0	6.5	26.0	
	Gravity Type Flush Tank			3.0		3.0		
1	Emergency Eyewash Station							A, B
PUBLIC TOTALS			9.0		57.5		63.0	

REMARKS:
A. The project includes one emergency shower. Design is 20 GPM at 90 degree supply water temperature. Hot water stored at 120 degrees. Cold water assumed to be 55 degrees.
B. Water demands for emergency eyewash station are: 54% hot water = 10.8 GPM; 46% cold water = 9.2 GPM

CONVERSION TO GPM (Per Comm 82.40-3)	Add Per Remarks Directly Above	Subtotal	Add for Future Expansion	TOTAL
9.0 Hot WSFU = 7.0 GPM (Predominately Flush Tank Water Closets)	10.8 GPM	17.8 GPM	(None)	17.8 GPM
57.5 Cold WSFU = 53.1 GPM (Predominately Flush Valve Water Closets)	9.2 GPM	62.3 GPM	(None)	62.3 GPM
63.0 Total WSFU = 55.2 GPM (Predominately Flush Valve Water Closets)	20.0 GPM	75.2 GPM	(None)	75.2 GPM

PROJECT: Sparta Safety & Weight Facility No. 54
IH-90
Monroe County

NON-GREASY WASTES

Wisconsin Drainage Fixture Unit Calculations

NO. OF FIXTURES	FIXTURE DESCRIPTION	Drainage Fixture Unit Value	TOTAL DFU's	NO. OF FIXTURES	FIXTURE DESCRIPTION	Drainage Fixture Unit Value	TOTAL DFU's	NO. OF FIXTURES	FIXTURE DESCRIPTION	Drainage Fixture Unit Value	TOTAL DFU's
PUBLIC FIXTURES				PUBLIC FIXTURES				PUBLIC FIXTURES			
First Floor Level				First Floor Level				First Floor Level			
	Automatic Clothes Washer, Individual	4			Refrigerated Food Display Case	1			Sterilizers		
	Automatic Clothes Washer, Large Capacity				Shower Stall				Bedpan	4	
	Automatic Self Service Laundry	3		1	Residential	2	2		Garbage can washer	3	
	Residential Washer	3			Public, Individual	2			Instrument or water	1	
	Autopsy Table				Public, Group	2 per head		1	Urinal	2	2
	Bathroom Group				Sinks				Water Closet, nonpublic	4	
	Water Closet	6			Bar, residential	1		4	Water Closet, public	6	24
	Lavoratory	6			Breakroom, single compartment	1					
	Bathtub/Shower	6			Cup	0.5					
	Bathtub (All Types)	2			Facotry, Wash, per set of faucets	1					
	Bedpan Washer	6			Fountain, wash up	1					
	Beer Tap	0.5			Food Waster, Grinder, 2hp or less	2					
	Bidet	2			Food Waster, Grinder, 3hp or less	3					
	Bottle Cooler	0.5			Laboratory	2					
	Campsite Receptor	6			Laboratory, school	2					
	Coffee Maker	0.5			Classroom	1					
	Cuspidor, Fountain or Dental	1			Pack of Plaster	3					
	Dipper Well	1		1	Residential w/ or w/o grinder	2	2				
	Dishwasher - Commercial Type				Restaurant, Scullery 4 compartments of les	3					
	Dishwasher - Residential Type	2.0			Food, Rinsing, cleaning or thawing	3					
2	Drinking Fountain	0.5	1		Service Sink, 2 inch diameter, wall outlet	2					
	Exhaust Hood Washer	4			Service Sink, 3 inch diameter, wall outlet	3					
	Floor Drain				Service Sink, 2 inch diameter, floor outlet	2					
4	2 inch	2	8	1	Service Sink, 3 inch diameter, floor outlet	3	3				
7	3 inch	3	21		Shampoo Sink, barber or beauty parlor	2					
	4 inch	4			Surgeons, wash up	3					
	Larger than 4 inch	4			Wash Fountain, circular and semi-circular	2					
	Glass Filler	0.5			Receptors of Indirect Waste, Gravity Flow						
	Health Care Fixture				1-1/4 inch receptor outlet diameter	1					
	Clinic Sink	6			1-1/2 inch receptor outlet diameter	2					
	Exam/Treatment Sink	1		1	2 inch receptor outlet diameter	3	3				
	Sitz bath	2		1	3 inch receptor outlet diamter	4	4				
	Ice Chest	0.5			4 inch receptor outlet diamter	6					
1	Laundry Tray 1 or 2 compartment	2	2		Larger than 4 inch receptor	8					
4	Lavatory	1	4		Soda Dispenser	0.5					
	Lavatory combination per trap	1				1					
	Mobile Home	11									
Column Total			36	Column Total			14	Column Totals			26

GRAND TOTAL 76

PROJECT: Sparta Safety & Weight Facility No. 54
IH-90
Monroe County

GREASY WASTES TO HOLDING TANK

Wisconsin Drainage Fixture Unit Calculations

NO. OF FIXTURES	FIXTURE DESCRIPTION	Drainage Fixture Unit Value	TOTAL DFU's	NO. OF FIXTURES	FIXTURE DESCRIPTION	Drainage Fixture Unit Value	TOTAL DFU's	NO. OF FIXTURES	FIXTURE DESCRIPTION	Drainage Fixture Unit Value	TOTAL DFU's
PUBLIC FIXTURES				PUBLIC FIXTURES				PUBLIC FIXTURES			
First Floor Level				First Floor Level				First Floor Level			
	Automatic Clothes Washer, Individual	4			Refrigerated Food Display Case	1			Sterilizers		
	Automatic Clothes Washer, Large Capacity				Shower Stall				Bedpan	4	
	Automatic Self Service Laundry	3			Residential	2			Garbage can washer	3	
	Residential Washer	3			Public, Individual	2			Instrument or water	1	
	Autopsy Table				Public, Group	2 per head			Urinal	2	
	Bathroom Group				Sinks				Water Closet, nonpublic	4	
	Water Closet	6			Bar, residential	1			Water Closet, public	6	
	Lavoratory	6			Breakroom, single compartment	1					
	Bathtub/Shower	6			Cup	0.5					
	Bathtub (All Types)	2			Facotry, Wash, per set of faucets	1					
	Bedpan Washer	6			Fountain, wash up	1					
	Beer Tap	0.5			Food Waster, Grinder, 2hp or less	2					
	Bidet	2			Food Waster, Grinder, 3hp or less	3					
	Bottle Cooler	0.5			Laboratory	2					
	Campsite Receptor	6			Laboratory, school	2					
	Coffee Maker	0.5			Classroom	1					
	Cuspidor, Fountain or Dental	1			Pack of Plaster	3					
	Dipper Well	1			Residential w/ or w/o grinder	2					
	Dishwasher - Commercial Type				Restaurant, Scullery 4 compartments of les	3					
	Dishwasher - Residential Type	2.0			Food, Rinsing, cleaning or thawing	3					
	Drinking Fountain	0.5			Service Sink, 2 inch diameter, wall outlet	2					
	Exhaust Hood Washer	4			Service Sink, 3 inch diameter, wall outlet	3					
	Floor Drain				Service Sink, 2 inch diameter, floor outlet	2					
	2 inch	2			Service Sink, 3 inch diameter, floor outlet	3					
	3 inch	3			Shampoo Sink, barber or beauty parlor	2					
1	4 inch	4	4		Surgeons, wash up	3					
	Larger than 4 inch	4			Wash Fountain, circular and semi-circular	2					
	Glass Filler	0.5			Receptors of Indirect Waste, Gravity Flow						
	Health Care Fixture				1-1/4 inch receptor outlet diameter	1					
	Clinic Sink	6			1-1/2 inch receptor outlet diameter	2					
	Exam/Treatment Sink	1			2 inch receptor outlet diamter	3					
	Sitz bath	2			3 inch receptor outlet diamter	4					
	Ice Chest	0.5		2	4 inch receptor outlet diamter	6	24				
	Laundry Tray 1 or 2 compartment	2			Larger than 4 inch receptor	8					
	Lavatory	1			Soda Dispenser	0.5					
	Lavatory combination per trap	1				1					
	Mobile Home	11									
Column Total			4	Column Total			24	Column Totals			0

GRAND TOTAL 28

FIRE PROTECTION

- F — FIRE PROTECTION PIPING
- UPRIGHT HEAD
- PENDANT HEAD
- FLUSH MOUNTED HEAD
- SIDEWALL HEAD

EXIST. NEW

- FIRE HYDRANT
- REMOTE SIAMESE PUMPER CONNECTION
- SIAMESE CONNECTION
- SPRINKLER HEAD

GENERAL PIPING

- DIRECTION OF FLOW
- PIPE DESIGNATION
- R — PIPE PITCH,RISE(R) DROP(D)
- PIPE CONNECTION
- PIPE TURNED UP
- PIPE TURNED DOWN
- OFF TOP OF PIPE
- OFF BOTTOM OF PIPE
- REDUCER (ECCENTRIC)
- PRESSURE GAUGE
- CONNECT TO EXISTING
- REDUCER (CONC.)
- CAP
- BLIND FLANGE
- FLANGE
- COUPLING
- BUSHING
- UNION
- STRAINER
- INLINE PUMP
- THERMOMETER

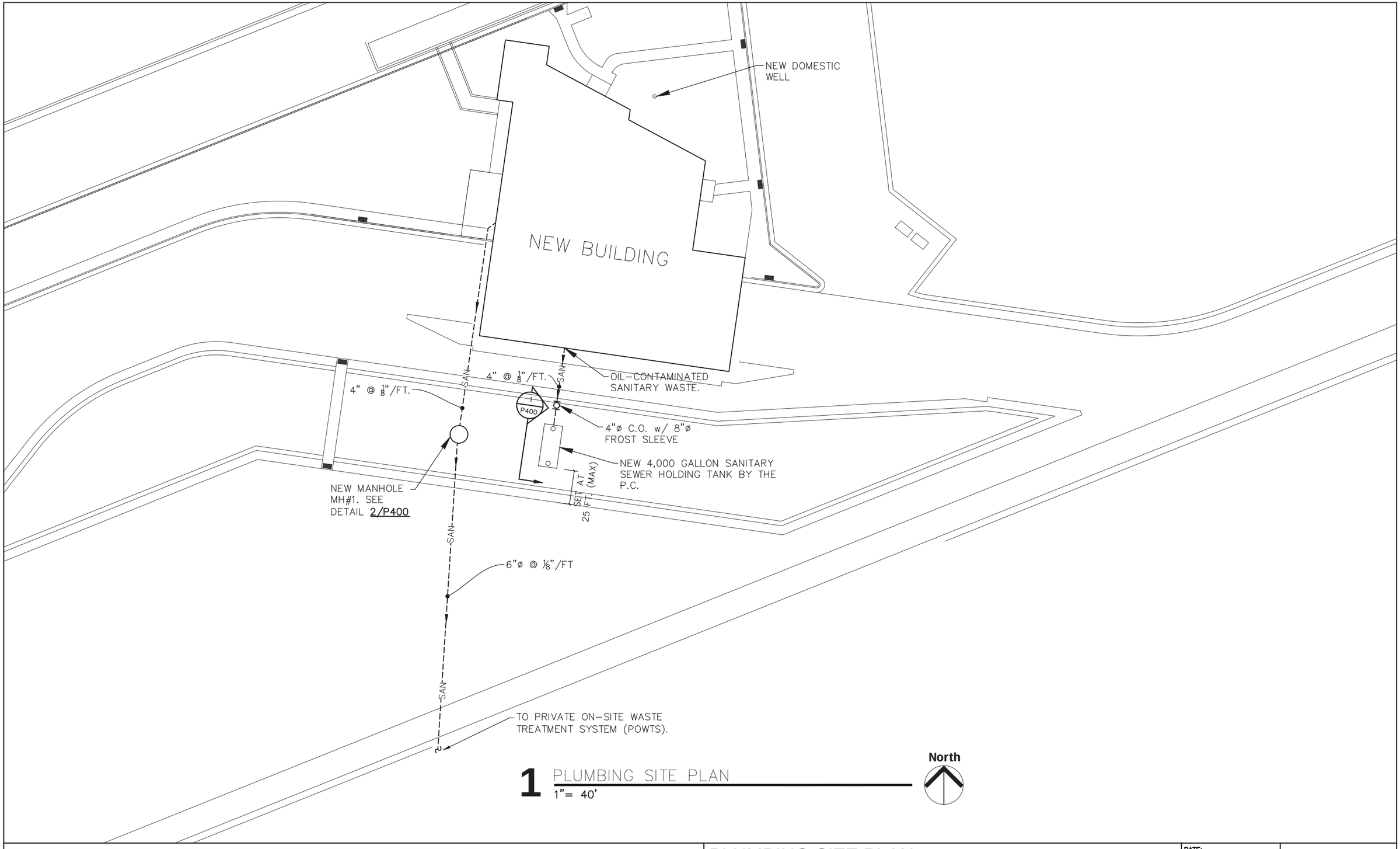
PLUMBING

- W — CITY WATER ON SITE PLAN
- CW — COLD WATER
- HCW — HARD COLD WATER
- HWR — HOT WATER RETURN
- SCW — SOFT COLD WATER
- SHW — SOFT HOT WATER
- TW — TEMPERED WATER
- TWR — TEMPERED WATER RETURN
- 180 — 180 DEG. WATER
- AW — ACID WASTE
- AV — ACID VENT
- CLEANOUT,FLOOR(FCO) WALL(WCO)
- FD — FLOOR DRAIN
- HD — HUB DRAIN
- WATER HAMMER SUPPRESS.
- WH — WALL HYDRANT FREEZE–PROOF (FWH)
- SAN — SANITARY BELOW GRADE
- SAN — SANITARY ABOVE GRADE
- S — STORM
- RC — RAIN CONDUCTOR
- V — VENT
- D — DRAIN
- VTR — VENT THRU ROOF
- A — COMPRESSED AIR
- NG — NATURAL GAS
- 1/4"/FT — PIPE PITCH
- RD — ROOF DRAIN

VALVES

- BALL VALVE
- GATE VALVE
- GLOBE VALVE
- BUTTERFLY VALVE
- PLUG VALVE
- CHECK VALVE,SWING(S) LIFT(L),BALL(B),DISC(D)
- SQUARE HEAD VALVE
- GENERAL,NON–DESIGNATED
- PRESSURE REDUCING VALVE
- S — SAFETY(S),RELIEF(R)
- HOSE BIBB DRAIN
- REDUCED PRESSURE ZONE BACKFLOW PREVENTER

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			PLUMBING SYMBOLS AND DESIGN CRITERIA	DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: P001



1 PLUMBING SITE PLAN
1"= 40'

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			PLUMBING SITE PLAN		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: P002	216

8"ø PVC INLET
I.E. = 800.59'

8"ø SDR35 PVC SOLID-WALL STORM DRAINAGE PIPE @ 1/16"/FT. PITCH ABOVE FOOTING. (441 GPM)

8"ø SCH. 40 PVC SOLID-WALL STORM DRAINAGE PIPE SET DIRECTLY ON FOOTING

DROP 8"ø SDR35 PVC VERTICALLY AND CONNECT TO SCH. 40 PIPE

8"ø SDR35 PVC STORM AT 1/8"/FT. PITCH. (523 GPM)

6"ø DRAIN (SDR35 PVC) FROM RAINWATER DOWNSPOUT ABOVE (82.0 GPM)

4"ø STORM

FD-4

4" FCO

IN THE SCALE
803.59'

8"ø SDR35 PVC SOLID-WALL STORM DRAINAGE PIPE @ 1/16"/FT. PITCH ABOVE FOOTING.

NEW DOMESTIC WELL-REFER TO SPECIFICATIONS.

2ø HDPE WATER SUPPLY

WATER SUPPLY ENTERS BLDG. 7' BELOW FLOOR. RISE ONCE INSIDE BLDG.

6"ø DRAIN (SDR35 PVC) FROM RAINWATER DOWNSPOUT ABOVE (55.0 GPM)

3/4" CW PEX UPTO HB-1

FD-2

1-1/2" CIRCUIT VENT UP

SD-1

2" DRN. FROM LAV'S

4" DRN. FROM WATER CLOSETS

2" DRN. FROM S-1

3/4" CW PEX BELOW FLOOR

2" DRN. FROM EWC-2

2" DRN. FROM UR-1

HUB DRAIN (HD-1) IN CORNER OF ROOM

1-1/2" VENT UP

2" DRN. TO HD-1

FCO-3

8"ø SDR35 PVC SOLID-WALL STORM DRAINAGE PIPE @ 1/16"/FT. PITCH ABOVE FOOTING.

6"ø DRAIN (SDR35 PVC) FROM RAINWATER DOWNSPOUT ABOVE (31.0 GPM)

6"ø DRAIN (SDR35 PVC) FROM RAINWATER DOWNSPOUT ABOVE (28.0 GPM)

4"C.O. FLUSH w/ FLOOR

2" DRN. FROM EWC-1

2" DRN. FROM LAV'S

2" VT. UP

4" DRN. FROM WATER CLOSETS

MB-1

1-1/2" VT. UP

3" C.O. FLUSH w/ FLOOR.

FCO-4

2" CIRCUIT VENT UP

6"ø SDR35 PVC SOLID-WALL STORM DRAINAGE PIPE @ 1/16"/FT. PITCH ABOVE FOOTING.

3/4" CW FROM MANIFOLD ABOVE (TYP. OF 3)

EXTEND TO FLOOR DRAINS IN MECH. RM.

HD-3

FD-3

3/4" PEX CW BELOW FLOOR

2" HDPE WATER INSTALLED 12" BELOW SANITARY LINES

3/4" CW PEX BELOW FLOOR

1-1/2" VT. UP

3/4" CW PEX UPTO HB-1

8"ø SDR35 PVC SOLID-WALL STORM DRAINAGE PIPE @ 1/32"/FT. PITCH ABOVE FOOTING.

PENETRATE FOUNDATION AT I.E. 94'-0"

2" HDPE WATER SUPPLY UPTO PRESSURE TANKS

3/4"CW PEX UPTO HB-1

2" RELIEF VENT UP

2" DRN. FROM LT-1

6"ø DRAIN (SDR35 PVC) FROM RAINWATER DOWNSPOUT ABOVE (44.0 GPM)

8"ø SDR35 PVC SOLID-WALL STORM DRAINAGE PIPE @ 1/32"/FT. PITCH ABOVE FOOTING.

MATCH LINE

MATCH LINE

MATCH LINE

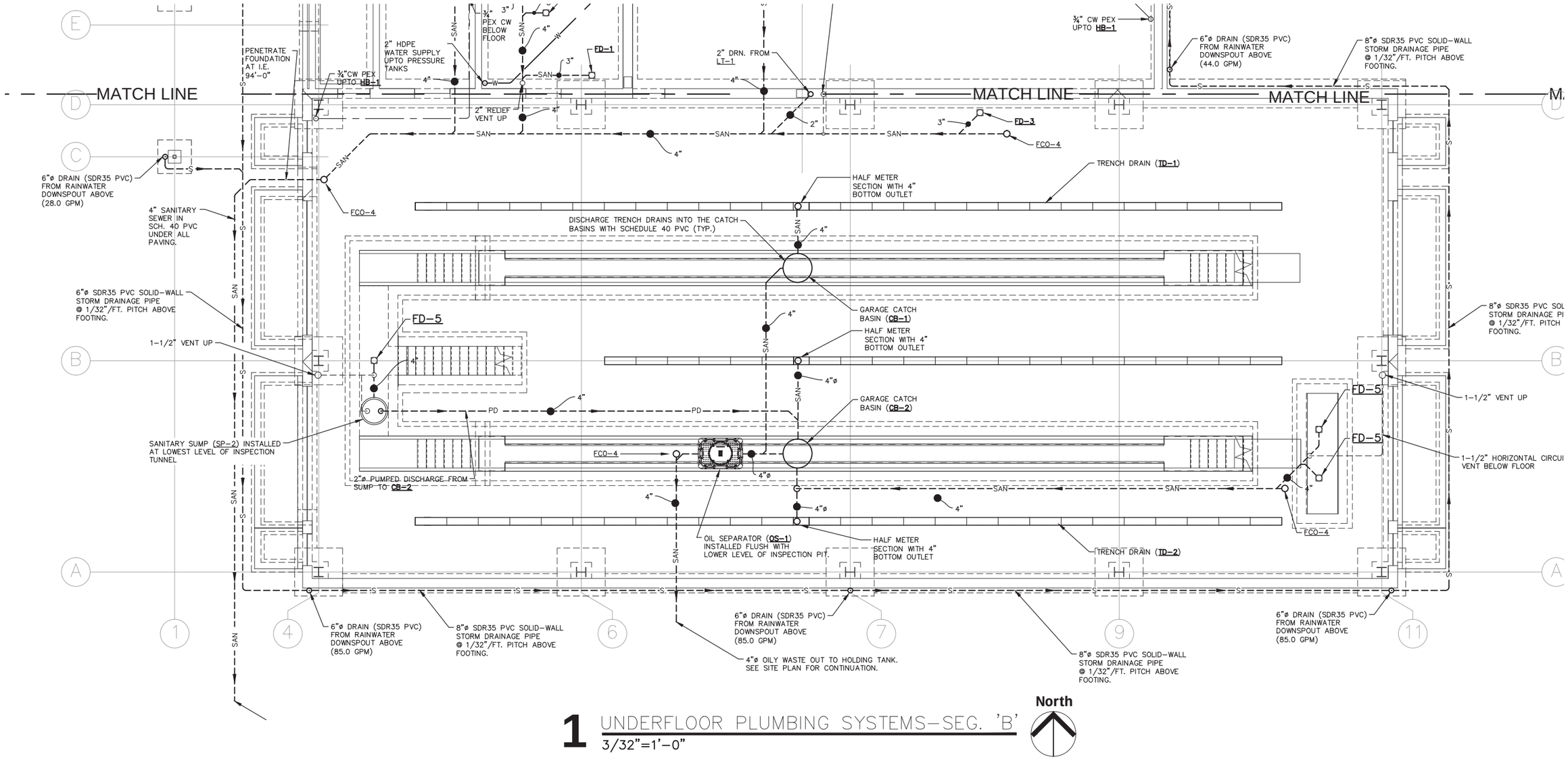
MAT

North

1 UNDERFLOOR PLUMBING SYSTEMS – SEG. 'A'

3/32"=1'-0"

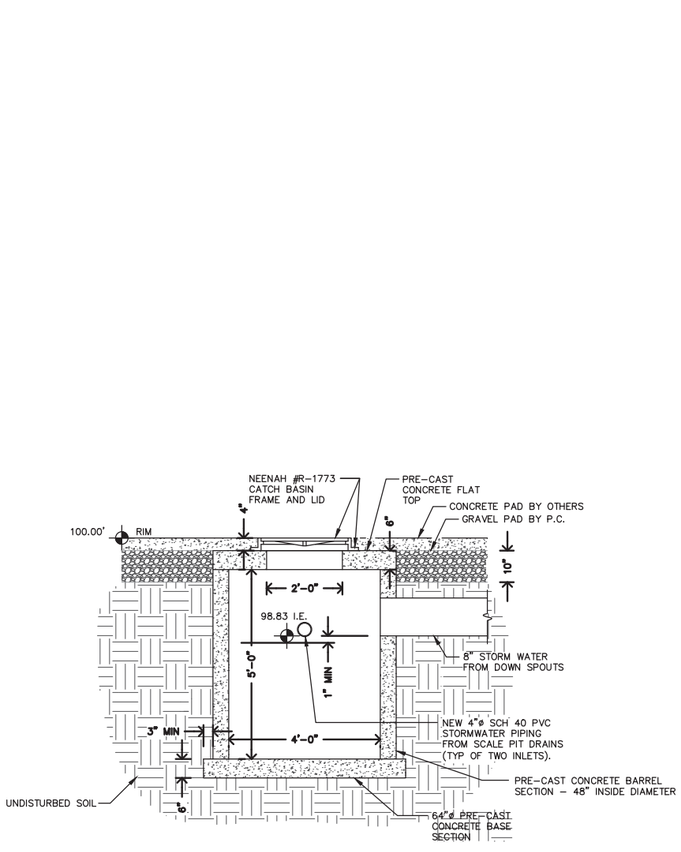
PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			UNDERFLOOR PLUMBING SYSTEMS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: P100A



1 UNDERFLOOR PLUMBING SYSTEMS–SEG. 'B'

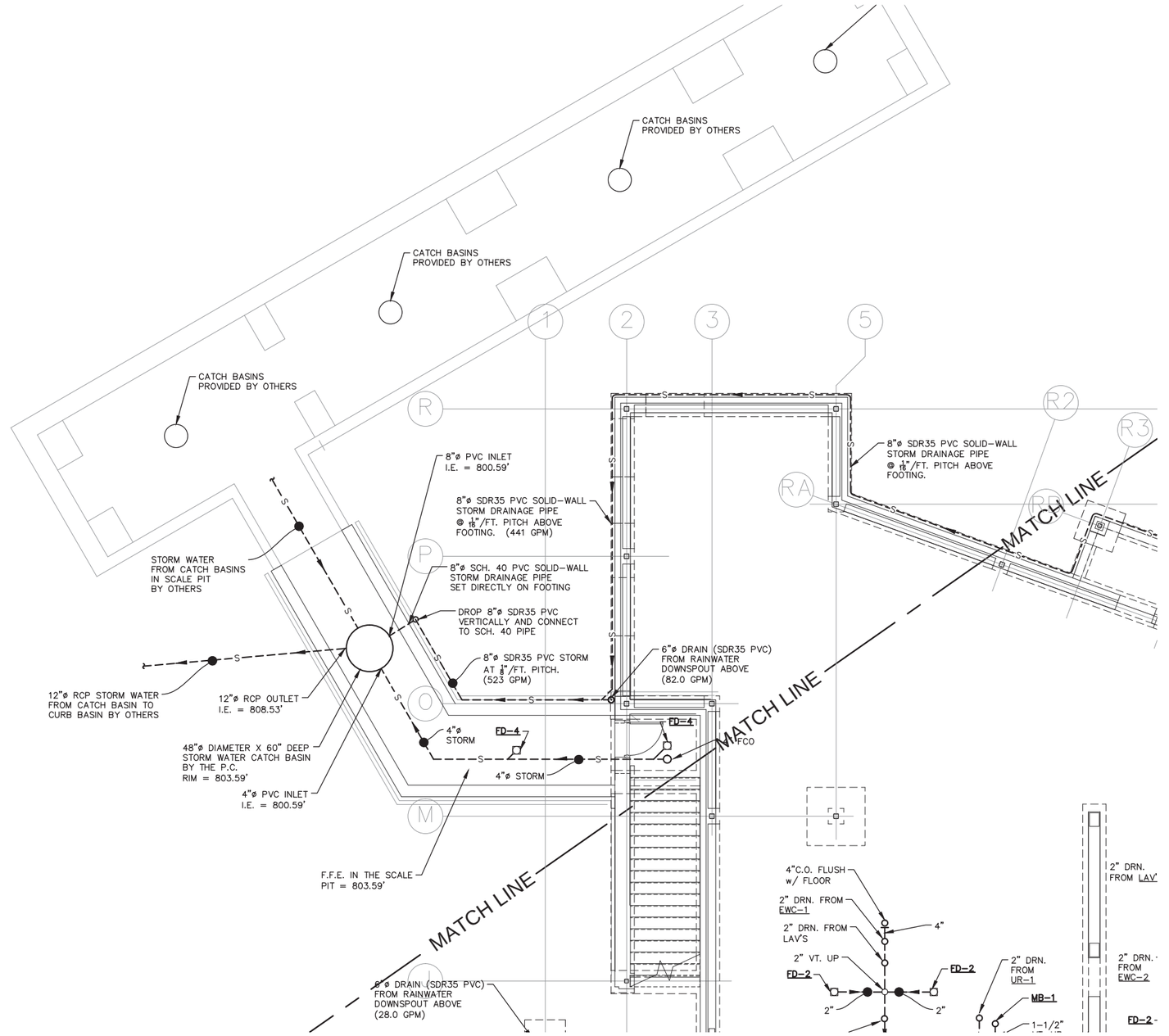
3/32"=1'-0"

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			UNDERFLOOR PLUMBING SYSTEMS		DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: P100B	



2 CATCH BASIN IN SCALE PIT DETAIL

NTS



1 UNDERFLOOR PLUMBING SYSTEMS - SEG. 'D'

3/32"=1'-0"

North

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			UNDERFLOOR PLUMBING SYSTEMS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: P100D	

NEW DOMESTIC WELL

HB-1

1" PEX WATER SUPPLY FROM UNDERFLOOR

FD-2

SD-1

WC-1

SH-1

L-2

EWC-2

3" VTR

S-1

1-1/2" VT.

L-2

WC-1

FD-2

UR-1

1-1/2" VT.

ELECT. TRANS.

HUB DRAIN (HD-1) IN CORNER OF ROOM

1-1/2" VENT UP - 2" VTR

FCO-3

EWC-1

4" FCO

FD-2

L-1

UR-1

FD-2

MB-1

WC-1

3" VTR

WC-1

1-1/2" VT.

FD-1

4" FCO

3" C.O. FLUSH w/ FLOOR.

2" VT.

2" CIRCUIT VENT UP

FD-1

FD-1

FD-1

SAS

FD-1

HD-3

WATER HEATER (WH-1)

FD-3

DCP-1

WS-1

BRINE TANK

PRESSURE TANK (PR-1) (36"ø X 86")

FD-1

HCW

HCW

1"

GENERATOR

HB-1

1" PEX WATER SUPPLY FROM UNDERFLOOR

HB-1

MATCH LINE

MATCH LINE

MATCH LINE

MATCH LINE

2" VENT UP - 3" VTR

1-1/4"

1-1/2" VT.

1-1/2" VT.

1-1/4"

FD-3

HB-2

FCO-4

LT-1

EEW-1

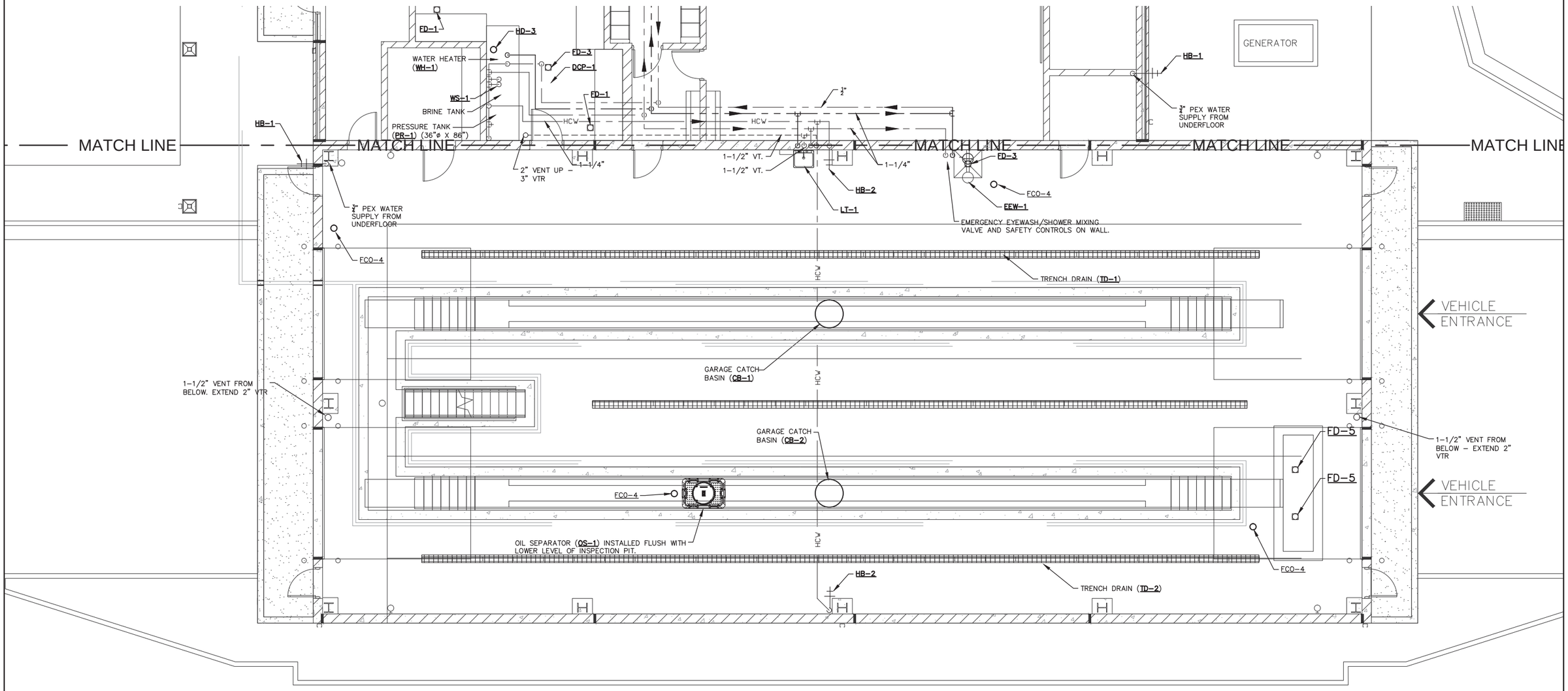
1" PEX WATER

North

1 FLOOR PLAN-PLUMBING SYSTEMS-SEG. 'A'

3/32"=1'-0"

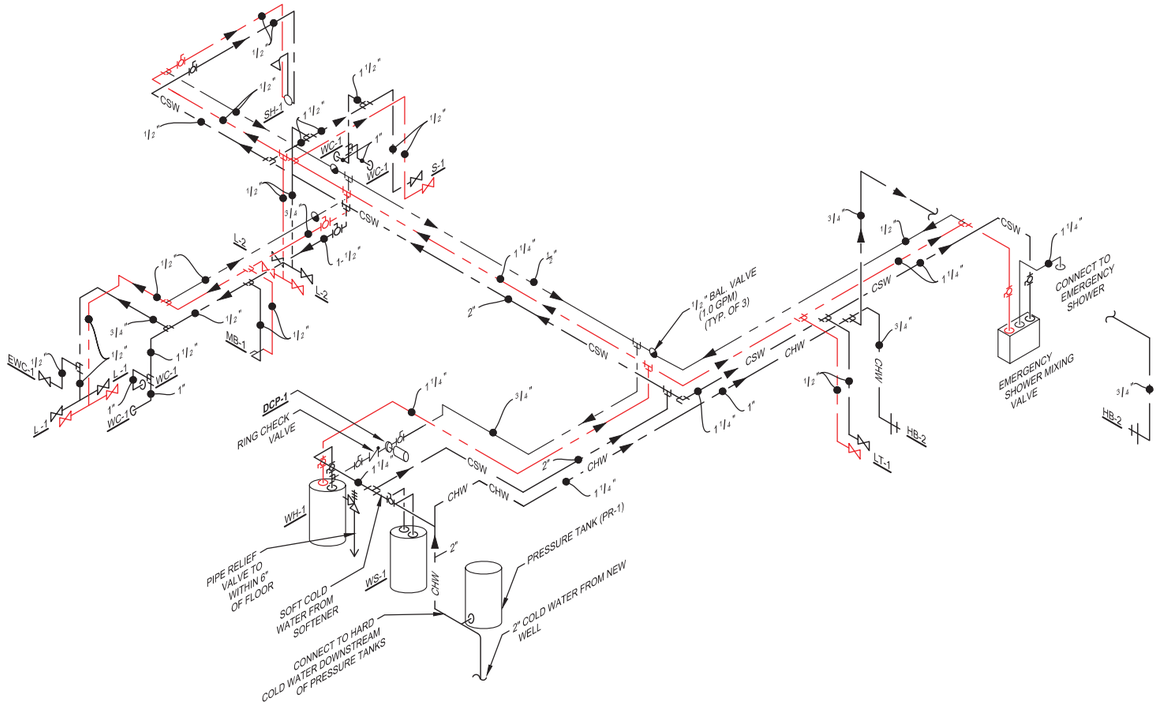
PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			PLUMBING SYSTEMS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: P101A	220

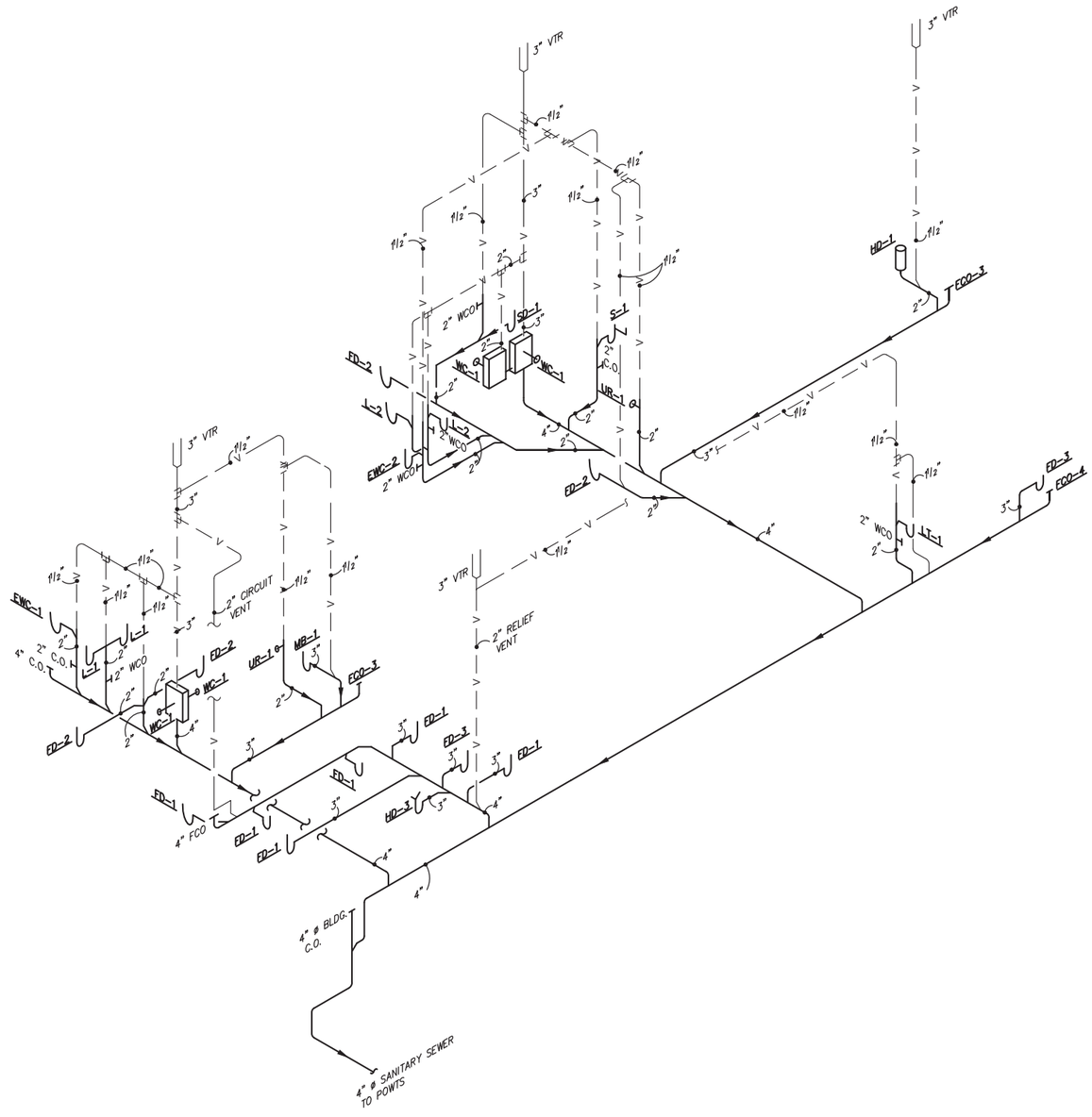


1 FLOOR PLAN–PLUMBING SYSTEMS–SEG. 'B'
3/32"=1'-0"

North

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			PLUMBING SYSTEMS		DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: P101B	





2 DOMESTIC WATER PIPING ISOMETRIC VIEWS

NTS

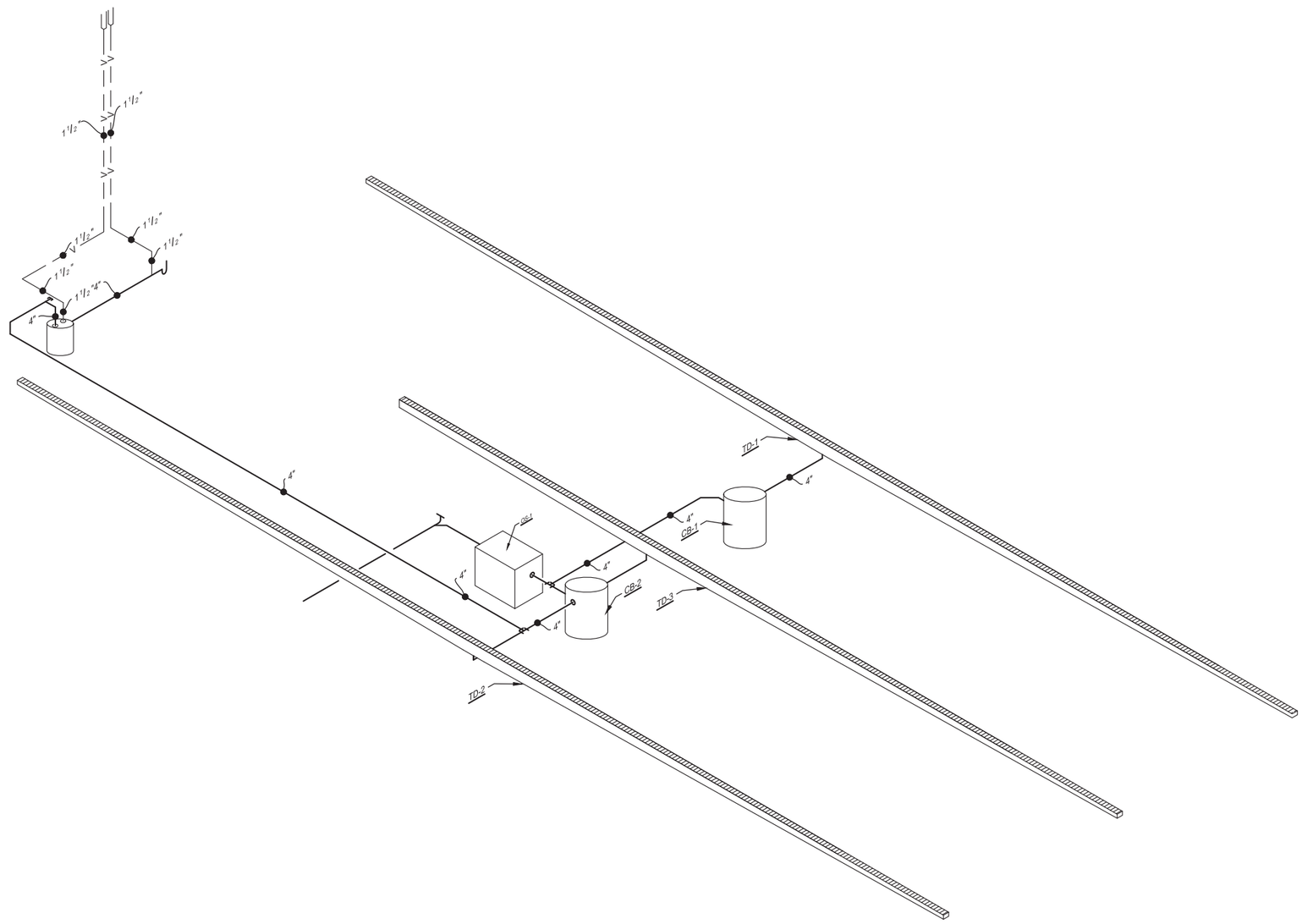
North

1 DRAINAGE AND VENT PIPING ISOMETRIC VIEWS

NTS

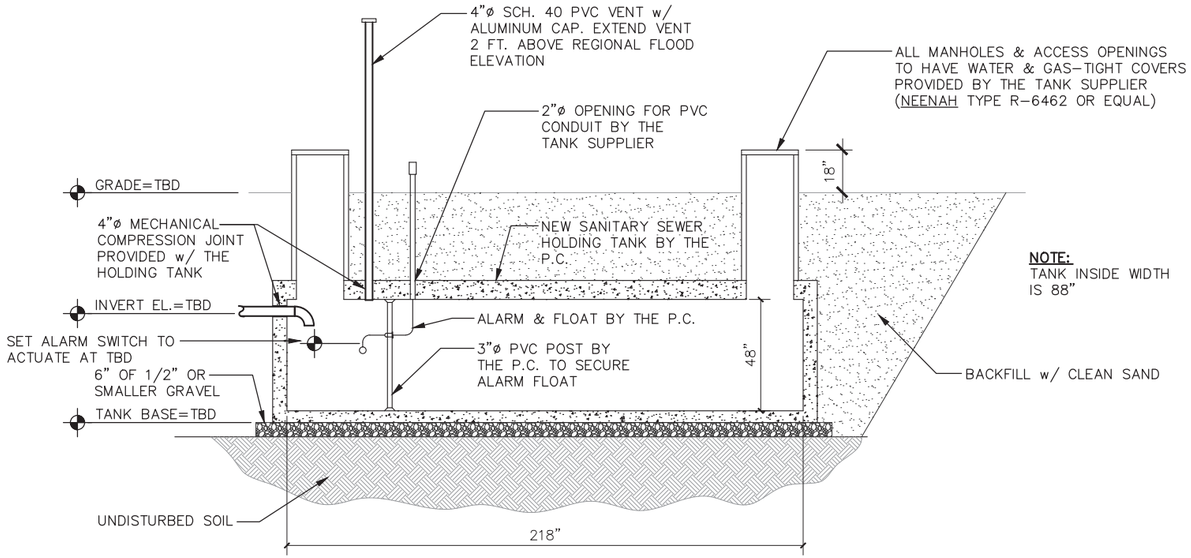
North

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			DRAINAGE AND VENT PIPING ISOMETRIC VIEWS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: P300

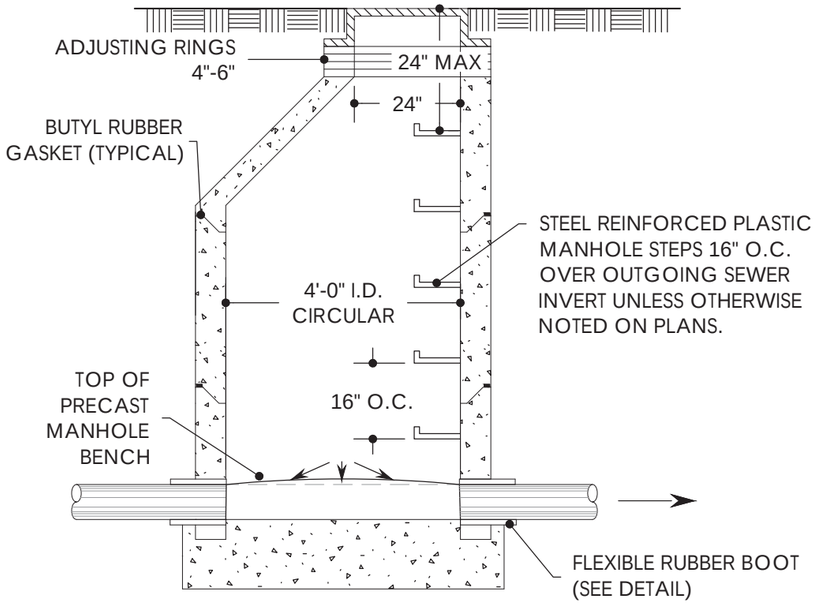


1 DRAINAGE AND VENT PIPING – INSPECTION AREA
NTS

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			DRAINAGE AND VENT PIPING ISOMETRIC VIEW		DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: P301	



1 HOLDING TANK DETAIL
NTS



2 MANHOLE DETAIL
NTS

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			PLUMBING DETAILS		DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: P400	224

DRAINS SCHEDULE

MARK	GENERAL DESCRIPTION	FIXTURE	STRAINER FINISH	TRAP	SEDIMENT BUCKET	ACCESSORIES	REMARKS
FD-1	FLOOR DRAIN (Concrete Floors)	**Sioux Chief** #860-3PiW Large body PVC drain body, fixed strainer height, with removable strainer and for glue-weld connection to PVC pipe.	8.5" diameter cast iron ring and strainer suitable for heavy traffic loading.	3" PVC "P" trap (Field-fabricated)		**Sioux Chief** #860-UM Stainless steel debris bucket	
FD-2	FLOOR DRAIN (Concrete Floors)	**Sioux Chief** #842-2PBQ PVC floor drain body with adjustable round strainer in a square cast metal ring.	Cast brass 4.5" diameter strainer in a 4.625" square cast brass ring.	2" PVC "P" trap (Field-fabricated)			
FD-3	FLOOR DRAIN (Concrete Floors)	**Sioux Chief** #842-3PP PVC floor drain body with adjustable round strainer in a grey-color PVC ring.	Grey PVC 5.75" diameter strainer in a matching grey PVC round ring.	3" PVC "P" trap (Field-fabricated)			
FD-4	FLOOR DRAIN (Concrete Floors)	**Sioux Chief** #860-4Pi Large body PVC drain body, fixed strainer height, with removable strainer and for glue-weld connection to PVC pipe.	8.5" diameter cast iron ring and strainer suitable for heavy traffic loading.	No Trap Required		**Sioux Chief** #860-UM Stainless steel debris bucket	
FD-5	FLOOR DRAIN (Concrete Floors)	**Sioux Chief** #860-4P2 Large body PVC drain body, fixed strainer height, with removable strainer and for glue-weld connection to PVC pipe.	8.5" diameter cast iron ring and strainer suitable for heavy traffic loading.	4" PVC "P" trap (Field-fabricated)		**Sioux Chief** #860-UM Stainless steel debris bucket	
HD-1	HUB DRAIN (Any Floor Finish)	**(Non-purchased Product)** Fabricate hub drain with 2" drain pipe protruding through finished floor, then 3"x2" inverted reducer solvent welded to drain pipe.	N/A	2" PVC "P" trap (Field-fabricated)			
SD-1	SHOWER DRAIN (Ceramic Tile Floors)	**Sioux Chief** #821-2080PNQ PVC floor drain body with flashing clamp, adjustable height, with brass thread inserts for flashing clamp and strainer.	Cast brass 4.25" diameter strainer in a 4.5" square cast brass ring.	2" PVC "P" trap (Field-fabricated)			B
TD-1	MODULAR TRENCH DRAIN	**ACO** Power Drain Model S200K Polymer trench drain system constructed in one meter integrals, designed to interlock with adjacent sections and maintain internal drainage pitch. 8 inches wide.	**ACO** Part No. 02449 Load class F cast iron grate suitable for upto 200,000 lbs of top weight, cast iron construction with slots installed perpendicular to running trench. Standard painted	Provide half section of trench drain with bottom knock-out. No trap is required.			C
TD-2	MODULAR TRENCH DRAIN	**ACO** Power Drain Model S200K Polymer trench drain system constructed in one meter integrals, designed to interlock with adjacent sections and maintain internal drainage pitch. 8 inches wide.	**ACO** Part No. 02449 Load class F cast iron grate suitable for upto 200,000 lbs of top weight, cast iron construction with slots installed perpendicular to running trench. Standard painted	Provide half section of trench drain with bottom knock-out. No trap is required.			C
TD-3	MODULAR TRENCH DRAIN	**ACO** Power Drain Model S200K Polymer trench drain system constructed in one meter integrals, designed to interlock with adjacent sections and maintain internal drainage pitch. 8 inches wide.	**ACO** Part No. 02449 Load class F cast iron grate suitable for upto 200,000 lbs of top weight, cast iron construction with slots installed perpendicular to running trench. Standard painted	Provide half section of trench drain with bottom knock-out. No trap is required.			C

ACCESSORIES:

REMARKS:
A. Provide a solid strainer for this floor drain, in addition to the Scheduled strainer, in case the Owner chooses not to use this floor drain at this time.
B. Provide and install a minimum size of 48"x48" flashing membrane for this floor drain.
C. Verify length of each trench drain on the floor plan views and provide length to nearest one meter module.

PLUMBING FIXTURES AND TRIM

MARK	GENERAL DESCRIPTION	FIXTURE	VALVE / FAUCET	SUPPORT	SUPPLIES	HOT WATER SUPPLY SIZE	COLD WATER SUPPLY SIZE	DRAIN	DRAINAGE CONNECTION	ACCESSORIES	REMARKS
EWC-1	ADA-compliant DUAL-LEVEL ELECTRIC WATER COOLER	**Elkay** Model VRCGRNTL8C Wall-mounted ADA-complaint electric water cooler with dual levels, integral refrigeration for surface-mounting, manual push button control. "GreenSpec Listed".	(Integral to Fixture)	Provided with unit	**Brass Craft** #SCR14 C Heavy chrome-plated supplies with loose key operator and flexible 3/8" supplies. 1/2" compression inlet for copper pipe connection.		1/2"	**Dearborn Brass** (Verify Models) 1-1/4" PVC P-Trap and required offset fittings.	1-1/2"		A
EWC-2	ADA-compliant SINGLE-LEVEL ELECTRIC WATER COOLER	**Elkay** Model LVRCGRN8F Wall-mounted ADA-complaint electric water cooler with integral refrigeration for surface-mounting, manual push button control. Provide with glass filler. "GreenSpec Listed".	(Integral to Fixture)	Provided with unit	**Brass Craft** #SCR14 C Heavy chrome-plated supplies with loose key operator and flexible 3/8" supplies. 1/2" compression inlet for copper pipe connection.		1/2"	**Dearborn Brass** (Verify Models) 1-1/4" PVC P-Trap and required offset fittings.	1-1/2"		A
L-1	ADA-compliant WALL-HUNG LAVATORY	**Kohler** #K-2005 20" x 17.5" vitreous china oval lavatory with back-set drain connection for ADA-compliance, standard white color, single hole for faucet, front overflow.	**Sloan** Solis Model EAF-275 Automatic faucet with solar-powered sensing and operation. Single hole mounting. Hot and cold water supplies with mixing lever (removable)	Not Required	**Brass Craft** #SCR14 C Heavy chrome-plated supplies with loose key operator and flexible 3/8" supplies. 1/2" compression inlet for copper pipe connection.	1/2"	1/2"	**McGuire #155WC** & #B8902 1-1/4" chrome plated brass offset grid strainer and P-trap.	1-1/2"		C
L-2	ADA-compliant DROP IN LAVATORY	**Kohler** #K-2196 20" x 17.5" vitreous china oval lavatory with back-set drain connection for ADA-compliance, standard white color, single hole for faucet, front overflow.	**Sloan** Solis Model EAF-275 Automatic faucet with solar-powered sensing and operation. Single hole mounting. Hot and cold water supplies with mixing lever (removable)	Not Required	**Brass Craft** #SCR14 C Heavy chrome-plated supplies with loose key operator and flexible 3/8" supplies. 1/2" compression inlet for copper pipe connection.	1/2"	1/2"	**McGuire #155WC** & #B8902 1-1/4" chrome plated brass offset grid strainer and P-trap.	1-1/2"		C
LT-1	WALL-HUNG LAUNDRY TUBB WITH WALL-MOUNTING BRACKETS	**MUSTEE** 17F 24"x24"x16" molded one-piece tub, single-compartment.	**DELTA** 2123 Deck-mount faucet, chrome plated with 6" swing gooseneck, stardard aerator, and lever handles.	N/A	**Brass Craft** #SCR14 C Heavy chrome-plated supplies with loose key operator and flexible 3/8" supplies. 1/2" compression inlet for copper pipe connection.	1/2"	1/2"	**Any** 1-1/2" P-trap in PVC plastic construction. Strainer part of laundry tub.	1-1/2"		
MB-1	FLOOR-MOUNTED MOP BASIN	**Mustee** #63M 24"x24"x10" molded stone one-piece, 10" sides with a chrome plated cast brass drain body	**Chicago** #540-LD897-SWXFCP Wall-mount faucet, chrome-plated, with rigid spout, pail hook, wall support bracket, and integral vacuum breaker. 3/4" male hose threaded outlet.	None Required	N/A	1/2"	1/2"	**Mustee** #65.311 PVC drain body with S.S. flat strainer	3"	1, 2, 3, 4	D
S-1	DOUBLE COMPARTMENT SINK	**Just** DL-3322-A-GR 33"x22"x8" stainless steel sink, 18 gauge stainless with full undercoating, standard 3.5 inch drain connections, standard finish. Drilling for 3-hole, 8 inch centers.	**Symmons** Symmetrix #S-23-W-10-1.5 Single-handle kitchen faucet, with 10" swing spout, 1.5 GPM aerator, 3-hole - 8" mounting.	Not Required	**Brass Craft** #SCR14 C Heavy chrome-plated supplies with loose key operator and flexible 3/8" supplies. 1/2" compression inlet for copper pipe connection.	1/2"	1/2"	**McGuire** #151M Chrome-plated basket strainer with brass tailpiece, PVC traps and crossover piping.	2"		
SH-1	SHOWER VALVE, TRIM AND ACCESSORIES	(None Required)	**MOEN COMMERCIAL** 8342 Moen shower "system" consisting of pressure balance valve, diverting valve, shower head and arm, hand-held shower with 6' metal hose, 24 arm with adjustable bracket for hand-held shower, and related trim.	Not Required	Ingtegral to faucet	1/2"	1/2"	(Not Applicable - see Floor Drain Schedule)	2"		
UR-1	ADA-Compliant WALL-HUNG FLUSH VALVE WASHDOWN URINAL	**Kohler** K-4960-ET Top supply, vitreous china with integral flush spreader, sloped front, and 3/4" inlet spud. Suitable for 0.5 GPF. White Color.	**Sloan** Solis Model 8186 0.5 GPF flush valve, top spud connection, automatic operation with solar-powered control head and flushing capacitor. Chrome-plated.	**Wade** #400 "Universal" floor-mounted carrier with mounting plate to match urinal.	(Part of Flush Valve)		3/4"	Integral to Fixture	2"		A
WC-1	ADA-Compliant WALL-HUNG FLUSH VALVE WATER CLOSET (HET Fixture)	**Kohler** "Kingston" #K-4325-L-0-WHT Vitreous china, 1.28 gal flush, elongated bowl, siphon jet flushing with top spud flush valve connection. OLSONITE #95 open front seat, less cover	**Sloan** Solis Model 8111-1.28 1.28 GPF flush valve, top spud connection, automatic operation with solar-powered control head and flushing capacitor. Chrome-plated.	**Wade** 340 Series Heavy-duty closet carrier for vertical drainage connection.	(Part of Flush Valve)		1"	Integral to Fixture	3" or 4"		A, B

ACCESSORIES:
1. Mop Basin Hose and Hose Holder
2. Mop Basin Mop Hanger
3. Mop Basin Corner Bumper Guards
4. Mop Basin Corner Wall Guards

REMARKS:
A. Verify mounting height requirements with the Architectural Drawings.
B. Verify closet carrier for each application.
C. Provide McGuire "Pro-Wrap" insulated pipe coverings for water supplies and drainage fittings.
D. Provide a Watts Model 8A non-removable vacuum breaker.

1 PLUMBING SCHEDULES
NTS

North

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			PLUMBING SCHEDULES	DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: P500

FITTINGS AND SPECIALTIES

MARK	GENERAL DESCRIPTION	FIXTURE	VALVE / FAUCET	FINISH	CONNECTIONS	ACCESSORIES	REMARKS
EEW-1	DRENCH SHOWER AND EYEWASH UNIT WITH DUST COVER	**BRADLEY** S-19-310SC Combination emergency shower and eyewash, stainless steel eyewash bowl with hinged stainless steel cover, floor-mounted with floor-mounting flange, single top water supply.		Galvanized steel construction with painted yellow safety coating.	1-1/4" NPT Tempered Water from Mixing Valve	**Lawler** Model 911 Thermostatic mixing valve for emergency showers Unit No. 8334	
HB-1	AUTOMATIC DRAINING, FREEZE PROOF WALL FAUCET WITH BACKFLOW PROTECTION	N/A	**Woodford** Model 30 Rough brass, freezeless automatic draining wall hydrant with anti-siphon vacuum breaker and optional loose key operator.	Chrome-plated rough brass	3/4" CW	Non-removable, backflow preventer with standard hose thread outlet.	
HB-2	INTERIOR WALL FAUCET WITH BACKFLOW PROTECTION	N/A	**Woodford** Model 26 Bronze wall faucet with angled valve stem and standard polycarbonate operating handle, NIDEL Model 37HF backflow preventer, and standard 3/4" threaded outlet for hose connection.	Standard rough brass	3/4" CW	**Nidel** 37HF Non-removable, hose thread backflow preventer in standard brass finish.	

ACCESSORIES:

REMARKS:

PACKAGED SIMPLEX SUMP PUMPS - EFFLUENT PUMPS - FOR SANITARY DUTY

PUMPS									SUMPS							
				FLUID		MOTOR						SIZE (INCHES)		GALLONS		
MARK	PUMP TYPE	MODEL No.	TYPE	GPM	FT HD	HP	VOLT/PH	ACCESSORIES REMARKS	SUMP APPLICATION	MATERIAL	MODEL NUMBER	Diameter	Height	TOTAL	Per Cycle	REMARKS
SP-1	Simplex Effluent Pumps for sanitary use.	SPAC-237	Effluent Pump for Sanitary Duty	20	15'	1/3	120/1/60	A	Interior Simplex	Polythylene		22 Inches	25 Inches	38 Gallon Vessel	10 Gallons Per Cycle	A, C, D, F

Based on products by Liberty Pumps. Equal products will be acceptable.

PUMP ACCESSORIES:
1. Guide and Rail System
2. Discharge-side Isolation Valves
3. Discharge-side Check Valves

PUMP REMARKS:
A. Equip pump with plug and cord with integral floats.

SUMP REMARKS:
A. Provide 4 inch inlet hub with gasket for field installation.
B. Provide rail system for pumps for removing pumps individually without entering sump.
C. Provide 2 inch diameter discharge piping through sidewall of sump.
D. Include factory-installed isolation and check valves within sump.
E. Provide 2" hub connection for PVC electrical conduit.
F. Provide with standard fiberglass cover

DOMESTIC WATER HEATING EQUIPMENT - TANK TYPE - HYBRID HEAT PUMP/ELECTRIC

DOMESTIC WATER HEATER									HOT WATER CIRCULATING PUMP								
				SIZE							FLUID		MOTOR				
MARK	MODEL No.	Input	GPH* Recovery	Diameter	Height	GALLON Cap.	HEATER ACCESSORIES	HEATER REMARKS	MARK	MODEL No.	GPM	FT HD	WATTS	VOLT/PH	TYPE	PUMP ACCESS.	PUMP REMARKS
WH-1	PHPT-80	4,500 Watts	84	24.5 Inches	81.5 Inches	80	A, B	1, 2	DCP-1	e3-4V/BSPYC 1/2" Sweat Connections	1	4.5	28	120/1	Bronze	A, C, D	1

Based on products by A.O. Smith. Equal products are acceptable. * 70 Deg F Temperature Rise

Pumps based on products by Bell & Gossett

HEATER ACCESSORIES:
A. P&T Relief Valve
B. Drain Valve

HEATER REMARKS:
1. This heater shall have a 10 year limited warranty. Substitute products shall carry a similar warranty - subject to Engineer review.
2. This heater is a hybrid heater with primary heating as a heat pump using room heat. A 4,500 watt heating element shall provide back-up heat.

PUMP ACCESSORIES:
A. Variable Speed Selector Switch
B. Adjustable Temperature Sensor
C. Plug and Cord Electrical Connection
D. Unit-mounted Timer

PUMP REMARKS:
1. Pump must run continually during occupied periods to maintain water temperature.

WATER SOFTENER

MARK	MODEL No.	WATER SUPPLY AND USE				SOFTENER								
		WATER SUPPLY/SOURCE	REPORTED MUNICIPAL WATER SUPPLY HARDNESS	MAXIMUM USE GPM	MAXIMUM USE GPD	TYPE	CAPACITY MED GRAINS	DESIGN FLOW GPM ** Continuous	DESIGN FLOW GPM ** PEAK	TANK (Diameter x Height) Resin	TANK (Diameter x Height) Brine	SALT LBS	ACCESSORIES	REMARKS
WS-1	H125-32-10	Well Water	(Unknown)	18 Peak	<1,000	Simplex Softener	28,000	22.0	31.0	10" x 44"	18" X 40"	330	1	A, B, C

Based on products by Hellenbrand. Equal products will be acceptable.

** @ 15 PSI Continuous and 25 PSI Peak

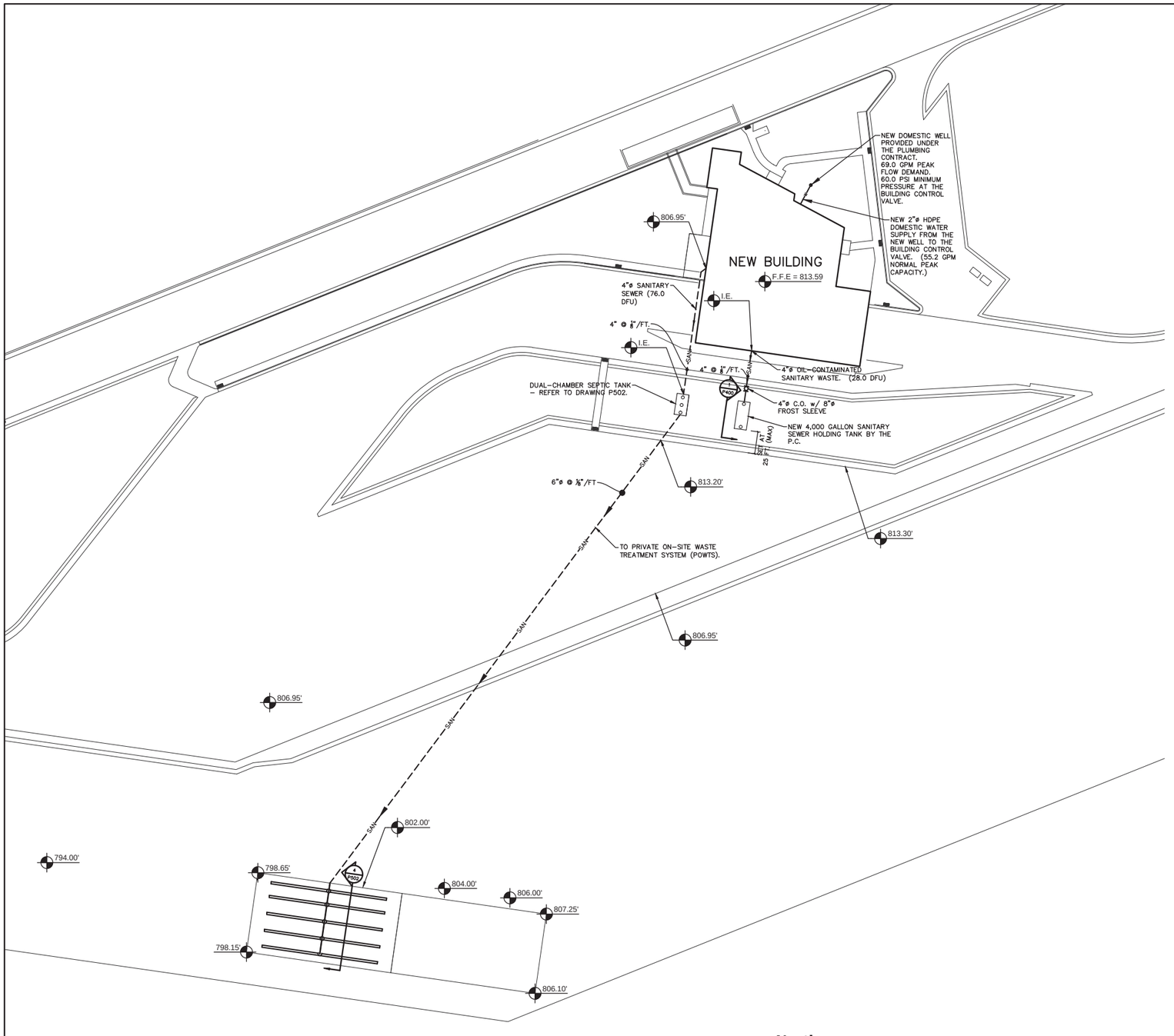
ACCESSORIES:
1. Full Flow Bypass Valve

REMARKS:
A. Provide with standard 1-1/4" metering valve.
B. Include full fill of salt at Substantial Completion.
C. This softener includes demand-based regeneration. Equal products shall be similar in operation.

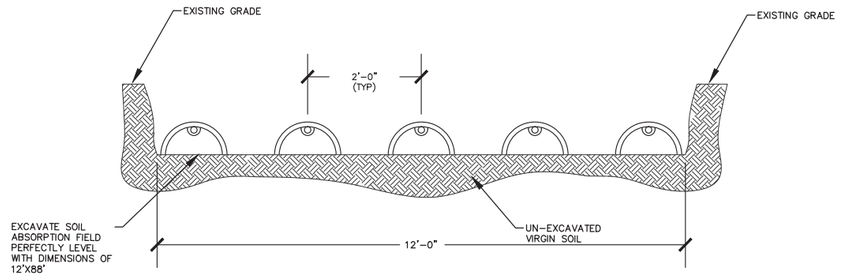
1 PLUMBING SCHEDULES
NTS

North

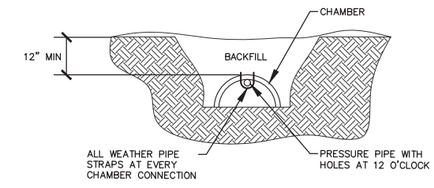
PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			PLUMBING SCHEDULES	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: P501



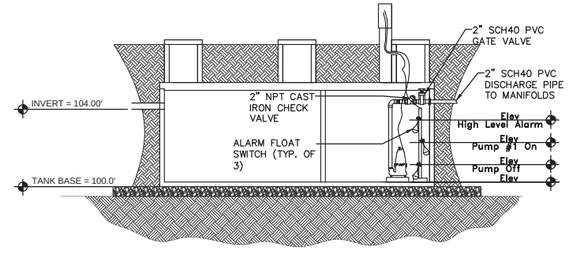
1 SEPTIC SYSTEM
1"=80'-0"



4 SECTION
1/4"=1'0"



3 TYPICAL SEPTIC CHAMBER
1/4"=1'0"



2 SEPTIC DETAIL
1/8"=1'0"

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			SEPTIC SYSTEM		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: P502	227

PACKAGED DUPLEX SUMP PUMPS - EFFLUENT PUMPS - FOR INSTALLATION IN THE DOSING CHAMBER OF THE SEPTIC TANK

PUMPS									SUMPS							
MARK	PUMP TYPE	MODEL No.	TYPE	FLUID		MOTOR		ACCESSORIES REMARKS	SUMP APPLICATION	MATERIAL	MODEL NUMBER	SIZE (INCHES)		GALLONS		REMARKS
				GPM	FT HD	HP	VOLT/PH					Diameter	Height	TOTAL	Per Cycle	
EP-1/2	Duplex Effluent Pumps for Septic Field Dosing.	WE0311L	Effluent Duty for Installation in an Exterior Dosing Chamber	31	17.1	1/3	120/1	A 2, 3								A

Based on products by Gould Pumps. Equal products Liberty and Zoeller will be acceptable.

PUMP ACCESSORIES:
1. Guide and Rail System
2. Discharge-side Isolation Valves
3. Discharge-side Check Valves

PUMP REMARKS:
A. Provide a duplex pump panel suitable for alternating two pumps as scheduled, with pump level floats, and high water level alarm float. Include local red alarm beacon and horn. Provide all controls in a NEMA 4X enclosure for exterior location.

SUMP REMARKS:
A. Combination septic tank/dosing chamber provided separately.

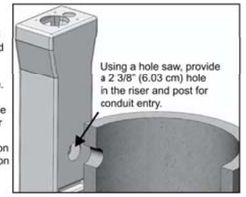
SJE Rhombus

Control Panel Accessories Installation Instructions

Call SJE-Rhombus with questions: 1-888-DIAL SJE (1-888-342-5753)

Riser Mounting Kit Installation Instructions (PN 1038262)

Figure 1
Locate the post next to the riser and determine location of access hole. Recommended hole locations for top of post are shown on a template on the back of this page.



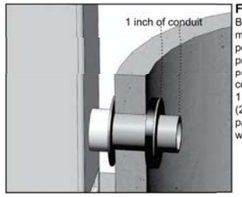
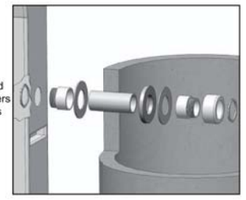


Figure 2
Before mounting post to riser, pre-assemble parts and cut conduit to 1 inch (2.54 cm) past PVC washer.

Figure 3
Install post to riser by assembling parts as shown. Solvent weld male adapters to both ends of conduit.



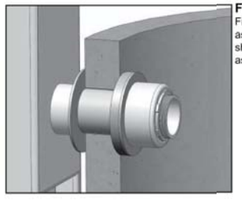
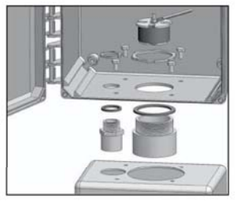


Figure 4
Final assembly should be as shown.

Simplex/Duplex Kit Installation Instructions (PNs 1038029 and 1038030)

Figure 1
Mount enclosure to post by assembling parts as shown. Recommended hole locations are shown on a template on the back of this page.



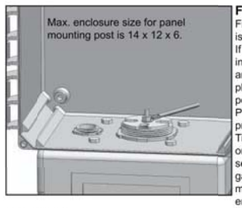


Figure 2
Final assembly is as shown. If all positions in cord seal are not used, plug open positions with PVC plugs provided. Tighten the nut on the cord seal to prevent gas and moisture from entering panel.

www.sjerhombus.com

1 SEPTIC DETAIL
NTS

DESIGN WASTE WATER FLOW RATE

Basis of Design: "Onsite Wastewater Treatment Systems Manual" by the Office of Water, Office of Research and Development, U.S. Environmental Protection Agency

Facility Use	Unit of Measure	No. of Employees	Basis for Employee Estimate	Design Flow Rate	Shifts/Day	Peak Number of Vistors/Day	Peak Daily Use
Office	Employee	5	Peak of (5) full time staff serving at facility in an 8 hour shift	13 Gallons/Day/Employee	1		65 Gallons/Day
Office	Employee	2	State Patrol Infrequent Use. On average, no more than 2 staff in this facility during an 8 hour period.	13 Gallons/Day/Employee	3		78 Gallons/Day
Visitor Center	Visitors		Assume upto 4 Truckers will enter the Building to access the Service Counter in a 1 hour period.	3.5 Gallons/Day/Visitor	1	32	112 Gallons/Day
						Peak Estimated Daily Flow Rate	255 Gallons/Day
						Design Waste Water Flow Rate Safety Factor (Per Wisconsin Comm. 83.43 (2)	50%
						POWTS Waste Flow Flow Design Rate/Day	382.50 Gallons/Day

DESIGN WASTE WATER QUALITY

Source of Waste Water in this Facility	(4) Water Closets (1) Urinal (1) Shower (4) Lavatories	(1) Mop Basin (1) Break Room Sink (2) Drinking Fountains (13) Floor Drains (No continuous flow expected)			
Estimated Constituent Mass Loadings and Concentrations in Waste Water:		BOD(5) Estimated at 285 mg/L TSS Estimated at 225 mg/L			

SOIL CHARACTERISTICS OF PROPOSED POWTS LOCATIONS

Refer to "SOIL EVALUATION REPORT"
Estimated Effluent Quality prior to Soil Absorption Field — BOD(5) Assumed to Range between 30 mg/L and 220 mg/L; TSS Assumed to Range between 30 mg/L and 150 mg/L

Based on Soils Report, Maximum Soil Application Rate = 0.5 GPD/ft2 (Gallons per Day per Square Foot)

SOIL ABSORPTION FIELD DESIGN

System Type: Low Pressure, In-ground pressurized distribution system
Absorption Field Design: 18 inch wide, standard profile polyethylene leeching chambers installed over existing virgin soil and suitable for pressurized distribution. 18 inch leeching chamber provides 1.9 SF/LF of equivalent soil absorption area.
Absorption Field Minimum Size: 382.50 GPD / 0.5 GPD/S.F. = 765 S.F.
Minimum Quantity of 18 inch Leeching Chambers: 765 SF / 1.9 S.F./LF = 402.65 LF of total Leeching Chambers
Maximum Individual Run of Leeching Chambers per the Manufacturer's Recommen 50 Lineal Feet

Assume (5) Rows of Leeching Chambers with center effluent supply = minimum length of 40.25 feet per run.

DOSING AND PUMPING

Dosing Rate: Design four (4) doses per day.
382.50 Gallons/Day at 4 Doses/Day = 95.65 Gallons per Dose
Add 25% Safety Factor for Pump sizing = 120 Gallons per Dose

Pipe Size to Soil Absorption Field: Use 2 inch Schedule 40 PVC from pumps to soil absorption field.
2 inch Schedule 40 PVC at 3 FPS maximum velocity = 31 GPM
Friction loss of Schedule 40 PVC at 31 GPM flow rate = 2.10 ft./100'

Pipe Size Within Leeching Chamber: Number of Chambers = 10
Volume per Chamber/Dose = 3.1 GPM
Assume a Velocity between 1 - 2 FPS within each Pipe using Schedule 40 GPM = Use 1 inch diameter Schedule 40 Pipe

Distribution Holes in Leeching Chamber: Design is based on using 1/8" diameter holes in laterals.
Length of each Lateral Run = 40 Feet
Discharge Rate from 1/8" Orifice at 5.0 Ft. Static Pressure = 0.41 GPM (Gallons per Minute)
3.1 GPM / 0.41 GPM / Orifice = 7.56 Orifice per lateral (Round to 8 Orifice per lateral)
Minimum Orifice Spacing per Wisconsin Component Manual = 2.25 Feet on Center
Design Orifice Spacing = 40 feet / 8 Orifices = 5 Feet on Center

Pump Sizing: Design Water Flow = 31 GPM
Head Loss Calculations:

Lift at Pump Chamber	6.0 Ft. Allowance
Check Valve and Isolation Valve Allowance	3.0 Ft.
Elevation Difference between Pump Chamber and Soil Absorption Field	-9.5 Ft.
Design Pressure at Furthest Pipe in Leeching Chamber (Based on 1/8" hol	5.0 Ft.
Friction Loss in main 2 inch Piping (400 Ft. x 1.5 x 2.10 Ft./100 Ft.)	12.6 Ft.
Total	**17.10 Ft.**

Select Effluent Pump for 31.0 GPM at 17.10 Ft. Hd.

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			SEPTIC SYSTEM CALCULATIONS AND DETAILS	DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: P503

Wisconsin Department of Commerce
Division of Safety and Buildings

SOIL EVALUATION REPORT

in accordance with Comm 85, Wis. Adm. Code

Attach complete site plan on paper not less than 8 1/2 x 11 inches in size. Plan must include, but not limited to: vertical and horizontal reference point (BM), direction and percent slope, scale or dimensions, north arrow, and location and distance to nearest road.

Please print all information.

Personal information you provide may be used for secondary purposes (Privacy Law, s. 15.04 (1) (m)).

County	Monroe
Parcel I.D.	
Reviewed by	Date

Property Owner	Property Location
WIDOT Sparta SWEF #54 (not purchased at present)	Govt. Lot NE 1/4 NW 1/4 S 33 T 17 N R 4 E (or) W
Property Owner's Mailing Address	Lot # / Block # / Subd. Name or CSM#
City / State / Zip Code / Phone Number	☐ City ☐ Village ☒ Town — Sparta — Nearest Road: Icon Road

☒ New Construction ☐ Replacement — Use: ☒ Residential / Number of bedrooms _____ Code derived design flow rate _____ GPD ☐ Pubic or commercial - Describe: weigh station

Parent material sandstone — Flood Plain elevation if applicable NA ft.

General comments and recommendations: The area will need to have trees removed to adequately read the elevations to flag out the septic system area. Therefore pgge 3, the plot plan, is not provided at this time. If the space is sufficient along a contour in the tested area an at-grade system may be installed. To save on space, a mound, which is a smaller configuration, could be another option.

1 Boring # ☐ Boring ☒ Pit — Ground surface elev. _____ ft. — Depth to limiting factor 72 in.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft² *Eff#1	*Eff#2
1	0-3	10YR3/2	no	LFS	0sg	mfr	cs	3f/2f	.5	1.0
2	3-10	10YR3/4	no	FS	0sg	mfr	cs	2m/2f	.5	1.0
3	10-26	10YR4/4	no	FS	0sg	mfr	gw	2m/2f	.5	1.0
4	26-52	10YR5/6	no	FS	0sg	mfr	gw	1m/1f	.5	1.0
5	52-72	10YR6/6	no	FS	0sg	mfr	--	1vf	.5	1.0

2 Boring # ☐ Boring ☒ Pit — Ground surface elev. _____ ft. — Depth to limiting factor 37 in.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft² *Eff#1	*Eff#2
1	0-3	10YR3/2	no	LFS	0sg	mfr	cs	3f/2m	.5	1.0
2	3-16	10YR3/3	no	FS	0sg	mfr	cs	2m/2f	.5	1.0
3	16-28	7.5YR4/4	no	FS	0sg	mfr	gw	2m/2f	.5	1.0
4	28-37	10YR4/6	no	FS	0sg	mfr	gw	1m/1f	.5	1.0
5	37-47	10YR6/6	c2d 10YR7.2&7.5YR5/8	S	w. cemented	mvfi	gw	1m/1f	---	-----
6	47-66	10YR6/6	c2d 10YR7/2&7.5YR5/8	S	bedrock	mvfi	--	---	-----	------

* Effluent #1 = BOD_5 > 30 ≤ 220 mg/L and TSS >30 ≤ 150 mg/L * Effluent #2 = BOD_5 ≤ 30 mg/L and TSS ≤ 30 mg/L

CST Name (Please Print)	Signature	CST Number
Peg Pieper		225461
Address	**Date Evaluation Conducted**	**Telephone Number**
E 2119 Zietlow Lane Chaseburg,WI 54621	11-8-2013	688-452-3302

Property Owner WIDOT (to be purchased) Parcel ID # _____

3 Boring # ☐ Boring ☒ Pit — Ground surface elev. _____ ft. — Depth to limiting factor 38 in.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft² *Eff#1	*Eff#2
1	0-2	10YR3/2	no	LFS	0sg	mfr	cs	3f/1m	.5	1.0
2	2-11	10YR3/4	no	FS	0sg	mfr	cs	2m/2f	.5	1.0
3	11-26	10YR4/6	no	FS	0sg	mfr	cw	2m/2f	.5	1.0
4	26-38	10YR5/6	no	FS	0sg	mfr	gw	1m/1f	.5	1.0
5	38-44	5YR5/8	no	S	w. cemented	mfi	gw	1vf	----	----
6	44-65	7.5YR5/8	no	S	w. cemented	mvfi	--	----	----	----

☐ Boring # ☐ Boring ☐ Pit — Ground surface elev. _____ ft. — Depth to limiting factor _____ in.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft² *Eff#1	*Eff#2

☐ Boring # ☐ Boring ☐ Pit — Ground surface elev. _____ ft. — Depth to limiting factor _____ in.

Horizon	Depth in.	Dominant Color Munsell	Redox Description Qu. Sz. Cont. Color	Texture	Structure Gr. Sz. Sh.	Consistence	Boundary	Roots	Soil Application Rate GPD/ft² *Eff#1	*Eff#2

* Effluent #1 = BOD_5 > 30 ≤ 220 mg/L and TSS >30 ≤ 150 mg/L * Effluent #2 = BOD_5 ≤ 30 mg/L and TSS ≤ 30 mg/L

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SBD-8330Text (R.07/00)

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			SEPTIC SYSTEM CALCULATIONS AND DETAILS		DATE:
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: P504

FUEL PIPING

- NG — NATURAL GAS
- PG — PROPANE GAS
- LP — LIQUID PROPANE
- PA — PROPANE/AIR MIX
- FOS — FUEL OIL SUPPLY
- FOR — FUEL OIL RETURN
- GAS COCK

DUCTWORK

- 24X12 — RECTANGULAR DUCT 24"WIDE X 12"DEEP CLEAR INSIDE DIMENSION
- 12"ø — ROUND RIGID DUCT 12"DIA.
- ROUND FLEXIBLE DUCT
- DUCT TURNED UP
- DUCT TURNED DOWN
- SUPPLY / FRESH AIR
- RETURN AIR
- EXHAUST AIR
- TRANSITION, 30° MAX.
- RECTANGULAR TO ROUND TRANSITION
- 45 DEG. ENTRY TAP
- AIR EXTRACTOR
- 90 DEG. ELBOW W/ TURNING VANES
- OPPOSED BLADE DAMPER
- PARALLEL BLADE DAMPER
- BUTTERFLY DAMPER
- DUCT COVERING THERMAL INSULATION
- DUCT LINER ACOUSTICAL INSULATION
- AP — ACCESS PANEL (AP) ACCESS DOOR (AD)
- HORIZONTAL FIRE DAMPER (IN VERTICAL DUCT)
- VERTICAL FIRE DAMPER (IN HORIZONTAL DUCT)
- CD-1 / 200 — DIFFUSER TYPE ,CFM
- UNDERCUT DOOR
- DG 18X12 — DOOR GRILLE 18"WX12"H
- T — THERMOSTAT
- H — HUMIDISTAT
- TS — TEMPERATURE SENSOR
- AIRFLOW INDICATOR
- M — MOTOR OPERATOR
- A — PNEUMATIC OPERATOR
- STEAM DISTRIBUTION TUBE HUMIDIFIER
- CENTRIFUGAL ROOF EXHAUSTER
- ROOF FRESH AIR INTAKE

EQUIPMENT

EQUIPMENT MARK SYMBOL: RTU #

- ACH – Air Cooled Chiller
- ACU – Air Cooled Condensing Unit
- AFM – Air Flow Measuring Station
- AHU – Air Handling Unit
- AP – Access Panel
- ATU – Air Terminal Unit
- BC – Blower Coil
- BLR – Boiler
- BV – Brick Vent
- CC – Cooling Coil
- CD – Ceiling Diffuser
- CF – Combustion Air Fan
- CH – Cabinet Heater
- CP – Condensate Pump
- CT – Cooling Tower
- CU – Condensing Unit
- CV – Convectors
- DC – Duct Coil
- DG – Door Grille
- DLC – Dry Liquid Coolers
- EBB – Electric Base Board
- EDH – Electric Duct Heater
- EF – Exhaust Fan
- EG – Exhaust Grille
- EH – Exhaust Hood
- ELC – Evaporative Liquid Coolers
- ER – Exhaust Register
- ETS – Expansion Tank System
- EUH – Electric Unit Heater
- EWH – Electric Wall Heat
- EWH – Electric Wall Heater
- F – Fan
- FC – Fan Coil Unit
- FG – Floor Grille
- FH – Filter Housing
- FTR – Fin Tube Radiation
- HC – Heating Coil
- HCC – Heat Cool Coils
- HP – Heat Pump
- HUM – Humidifier
- HX – Heat Exchanger
- IH – Intake Hood
- IL – Intake Louver
- IPH – Infrared Panel Heater
- ITH – Infrared Tube Heater
- L – Louver
- LG – Linear Grille
- LS – Linear Slot
- MUA – Make–Up Air Unit
- P – Pump
- PAC – Packaged Air Conditioners
- RG – Return Grille
- RH – Relief Hood
- RP – Return Panel
- RR – Return Register
- RTU – Rooftop Unit
- SD – Slot Diffuser
- SF – Supply Fan
- SG – Supply Grille
- TG – Transfer Grille
- UH – Unit Heater
- VAC – Unit Air Conditioner
- VAV – Variable Air Volume Box
- WCH – Water Cooled Chiller

ABBREVIATIONS

- AFF – Above Finish Floor
- BD – Back Draft Damper
- BOF – Bottom Of Footing
- CLG – Ceiling
- C/C – Center To Center
- CW – Cold Water
- COMP – Compressor
- CR – Condenser Return
- CS – Condenser Supply
- CONN – Connection
- DIFF – Diffuser
- DF – Drinking Fountain
- DTR – Dual – Temp Return
- DTS – Dual – Temp Supply
- DF – Duct Furnace
- DH – Duct Heater
- EWC – Electrical Water Cooler
- EWH – Electrical Water Heater
- E.C. – Electrical Contractor
- EXH – Exhaust
- EF – Exhaust Fan
- EG – Exhaust Grille
- FD – Fire Damper
- FLD – Floor Drain
- FS – Flow Switch
- G.C. – General Contractor
- HP – Horse Power
- HT – Hot Water
- I.E. – Invert Elevation
- MAV – Manual Air Vent
- M.C. – Mechanical Contractor
- MOD – Motor Operated Damper
- P.C. – Plumbing Contractor
- RD – Roof Drain
- SAN – Sanitary
- SM – Sheet Metal
- SMD – Smoke Damper
- T'STAT – Thermostat
- UR – Urinal
- V – Vent
- VTR – Vent Thru Roof
- WH – Wall Hydrant
- WTR – Water
- WC – Water Closet
- WP – Water Proof

REFRIGERATION

- RL — REFRIGERANT LIQUID
- RS — REFRIGERANT SUCTION
- RHG — REFRIGERANT HOT GAS
- CHWS — CHILLED WATER SUPPLY
- CHWR — CHILLED WATER RETURN
- COMBINATION TEMPERATURE/ PRESSURE GAGE

STEAM / HYDRONIC

- HS — HEATING WATER SUPPLY
- HR — HEATING WATER RETURN
- AUTOMATIC AIR VENT
- MANUAL AIR VENT
- BALANCING VALVE
- FLOW INDICATOR
- BASEBOARD RADIATION (SHOWING ACTIVE LENGTH)
- STM — STEAM
- CR — CONDENSATE RETURN
- S–60 — STEAM 60 PSIG
- HPCR — HIGH PRESSURE CONDENSATE RETURN
- LPCR — LOW PRESSURE CONDENSATE RETURN
- BFW — BOILER FEED WATER
- BBD — BOILER BLOW DOWN
- INVERTED BUCKET TRAP
- FLOAT & THERMOSTATIC TRAP
- BLOWDOWN SEPARATOR
- EXPANSION LOOP
- EJ — EXPANSION JOINT
- PIPE ANCHOR
- ALIGNMENT GUIDE

VALVES

- BALL VALVE
- GATE VALVE
- GLOBE VALVE
- BUTTERFLY VALVE
- PLUG VALVE
- CHECK VALVE,SWING(S) LIFT(L),BALL(B),DISC(D)
- SQUARE HEAD VALVE
- GENERAL,NON–DESIGNATED
- PRESSURE REDUCING VALVE
- S — SAFETY(S),RELIEF(R)
- HOSE BIBB DRAIN
- REDUCED PRESSURE ZONE BACKFLOW PREVENTER

GENERAL PIPING

- DIRECTION OF FLOW PIPE DESIGNATION
- R — PIPE PITCH,RISE(R) DROP(D)
- PIPE CONNECTION
- PIPE TURNED UP
- PIPE TURNED DOWN
- OFF TOP OF PIPE
- OFF BOTTOM OF PIPE
- REDUCER (ECCENTRIC)
- REDUCER (CONCENTRIC)
- CAP
- BLIND FLANGE
- FLANGE
- COUPLING
- BUSHING
- UNION
- STRAINER
- INLINE PUMP
- THERMOMETER
- PRESSURE GAUGE
- CONNECT TO EXISTING

SPECIALTY PIPING

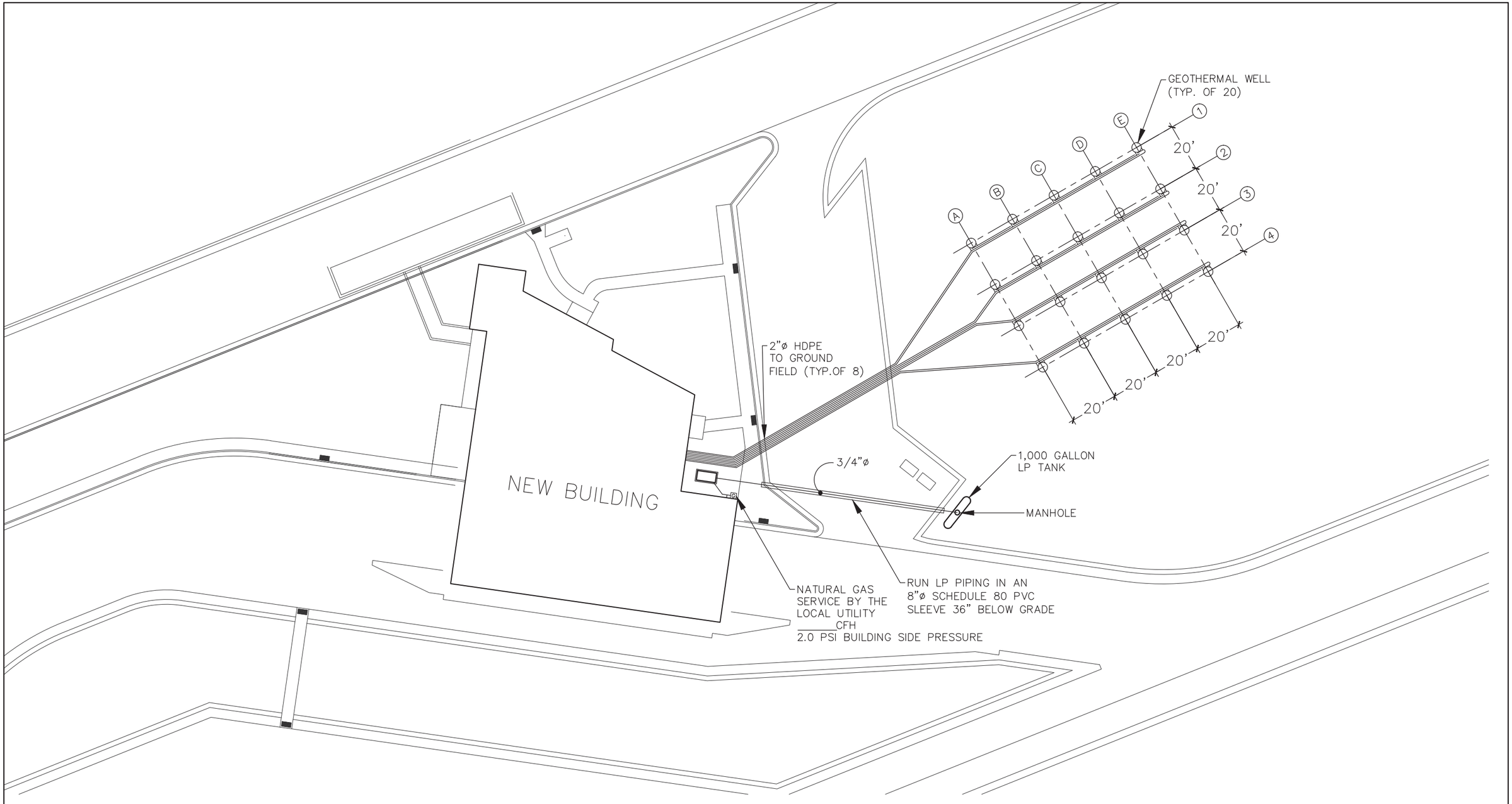
- VAC — VACUUM
- O — OXYGEN
- N — NITROGEN
- NO — NITROUS OXIDE
- MA — MEDICAL AIR
- SPECIAL (ABBREVIATION)

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI

HVAC GENERAL NOTES

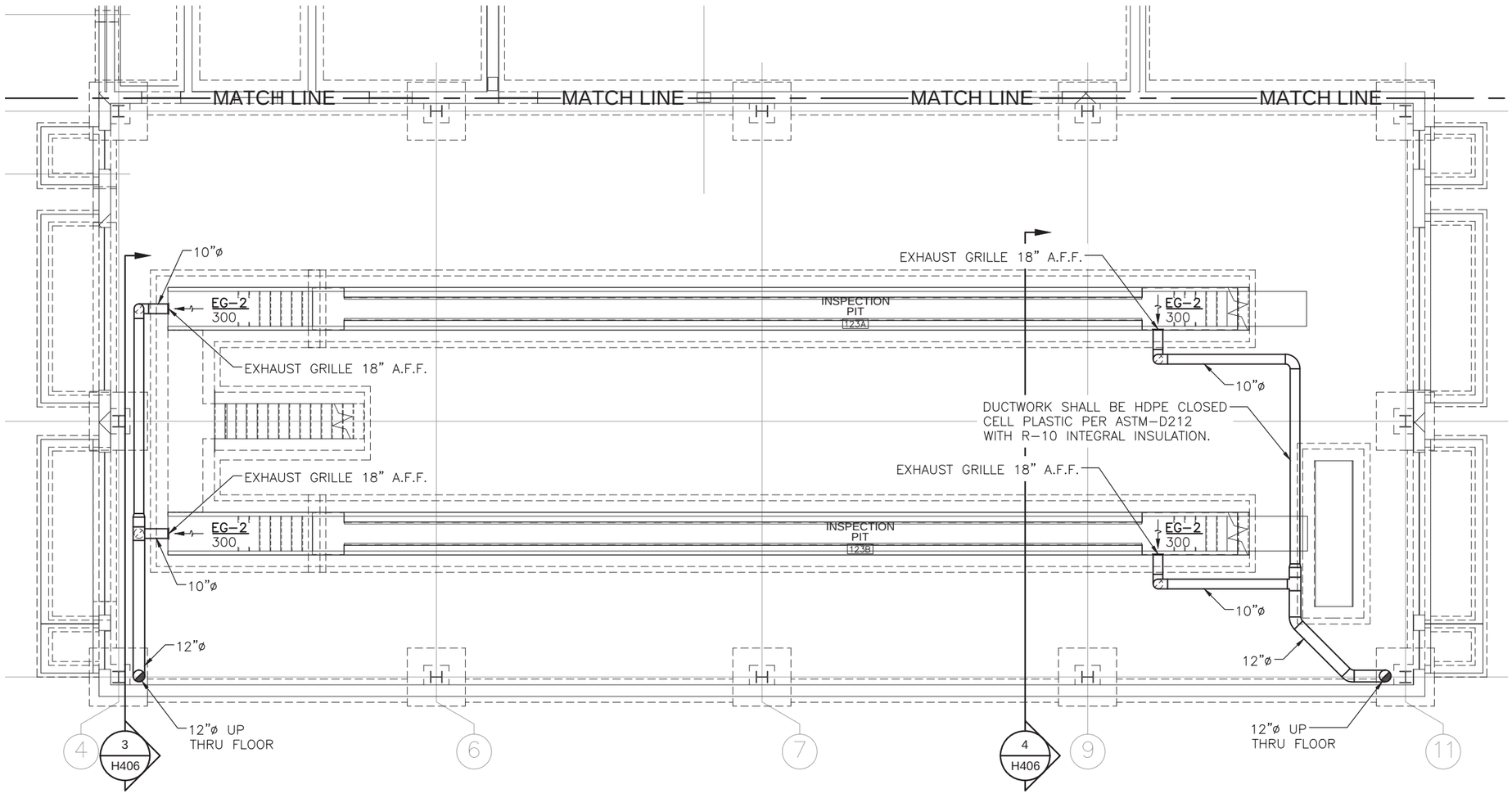
DATE:

STATE PROJECT NUMBER: 1070–00–72 | HWY: IH 90 | COUNTY: MONROE | SPARTA SWEF NO. 54 | SCALE: AS NOTED | SHEET NO: H001



1 GEOTHERMAL WELL PLAN
1" = 40'

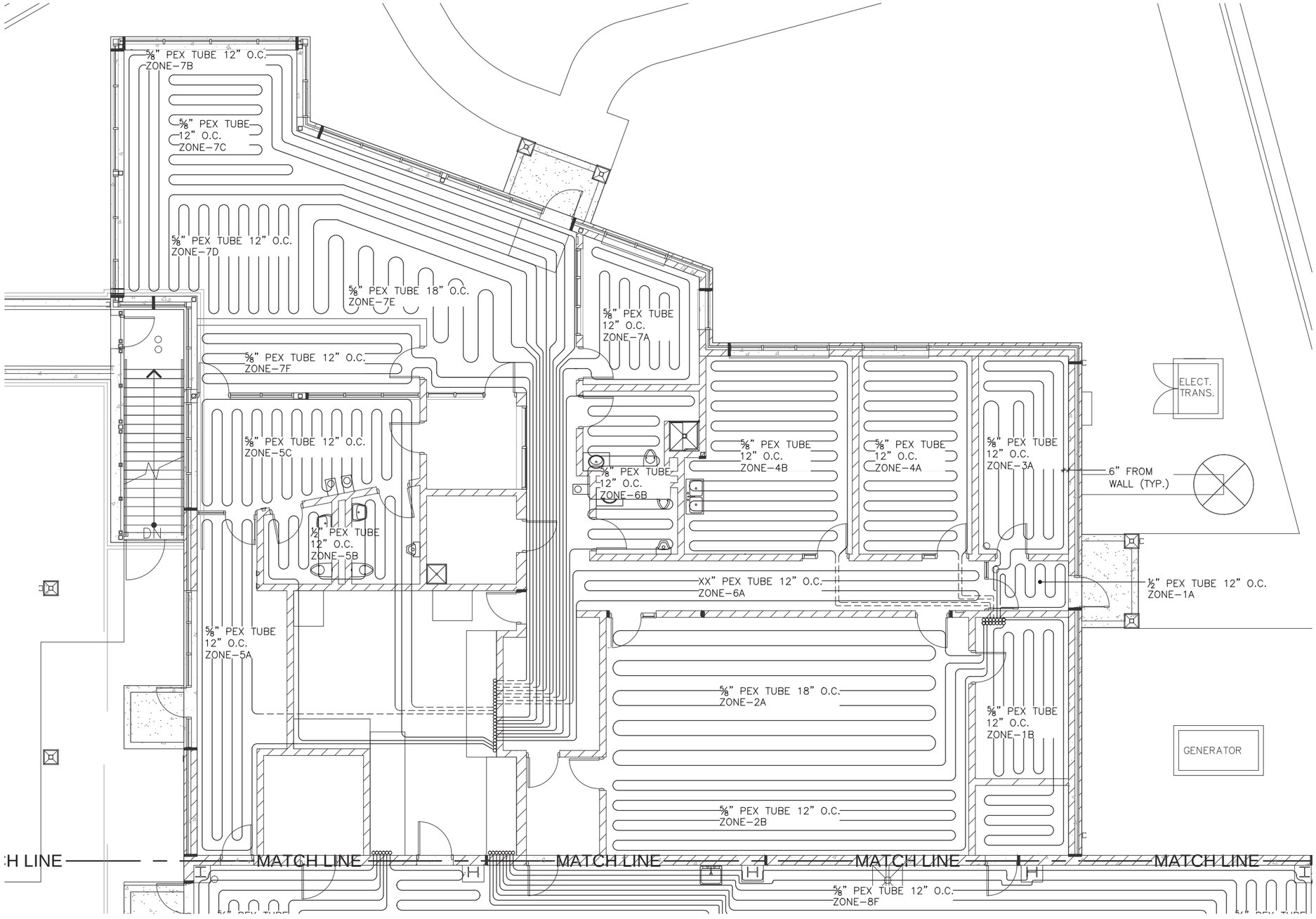
PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			GEOTHERMAL WELL PLAN		DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: H100	



1 UNDERFLOOR HVAC DUCT PLAN-SEG. 'B'
3/32"=1'-0"

North

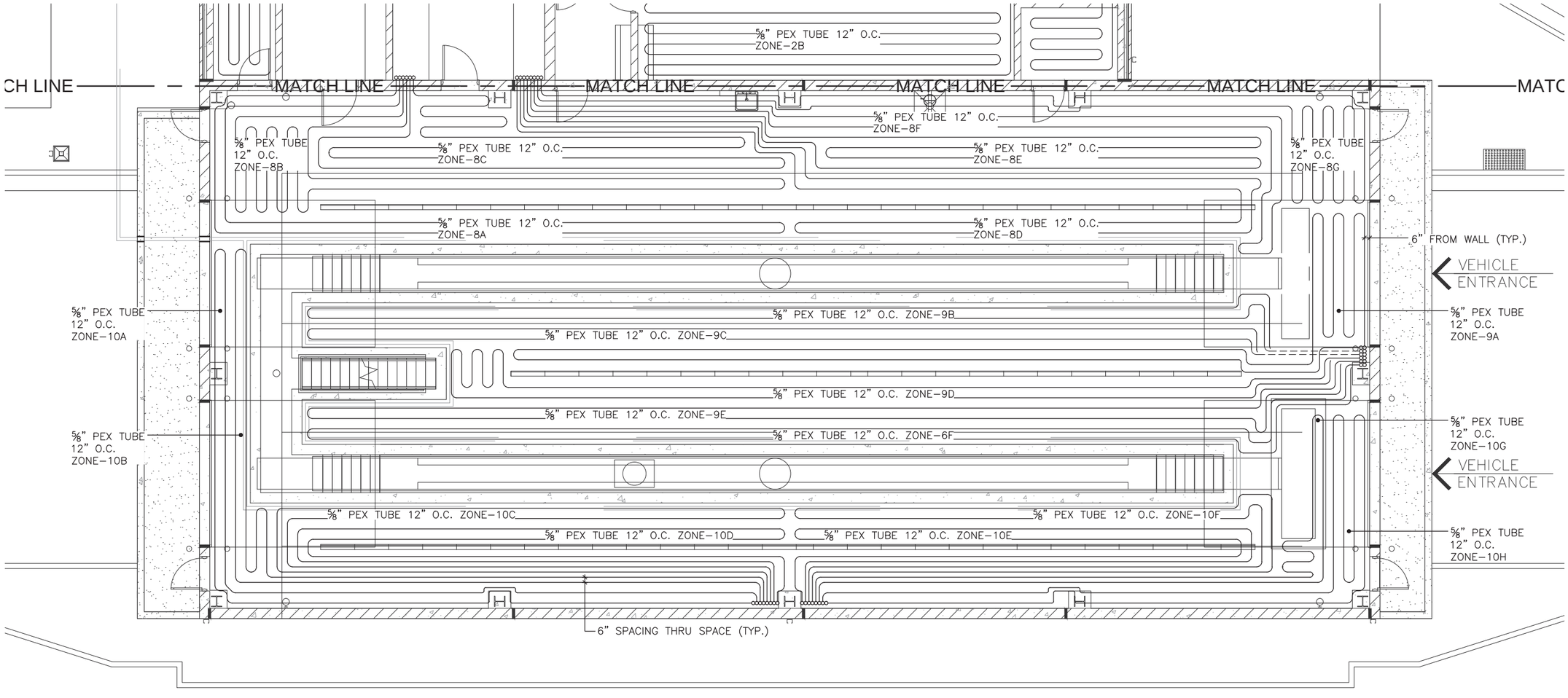
PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			UNDERFLOOR PIPING PLAN		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: H100B	232



North

1 FLOOR PLAN–HVAC PIPING–SEG. 'A'
3/32"=1'–0"

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			HVAC PIPING PLAN		DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: H101A	

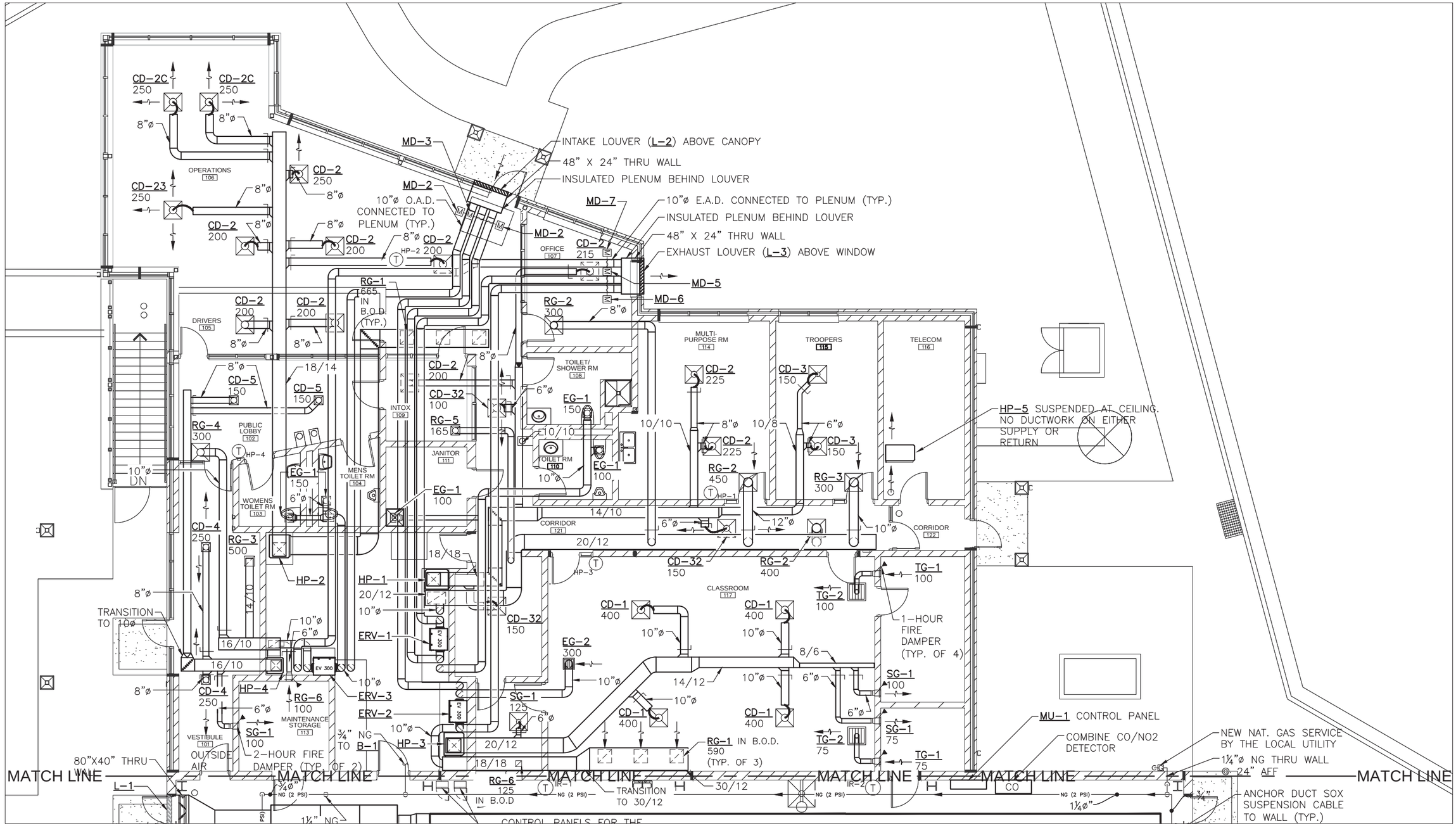


1 FLOOR PLAN–HVAC PIPING–SEG. 'B'

3/32"=1'–0"

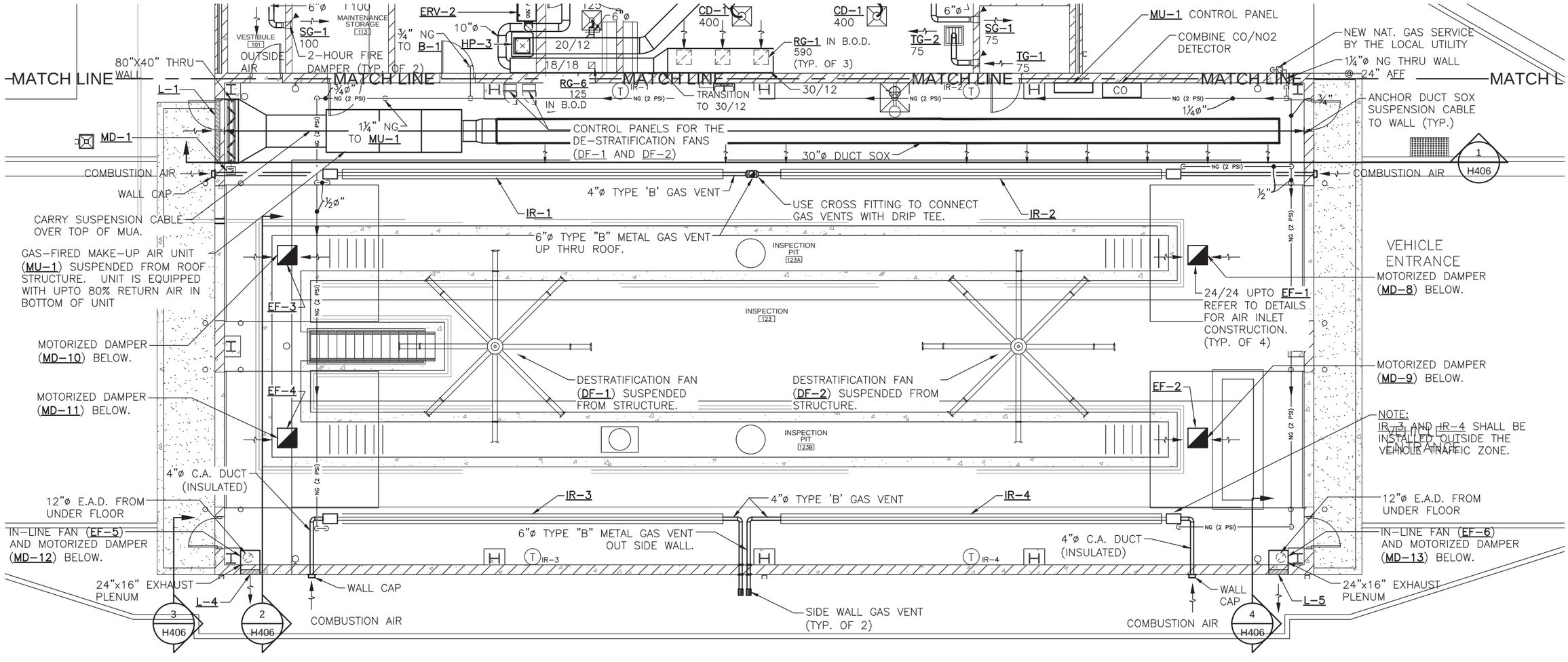
North

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			HVAC PIPING	DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: H101B



1 FLOOR PLAN–HVAC DUCTWORK–SEG. 'A'
3/32"=1'-0"

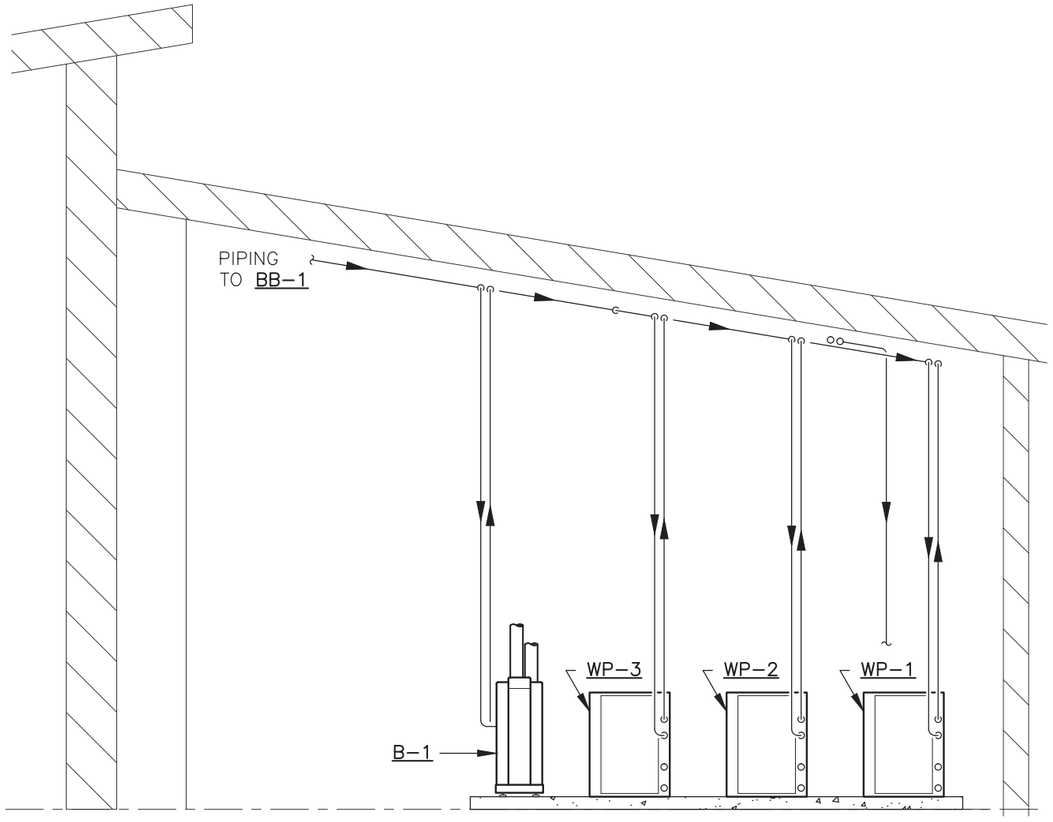
PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			HVAC DUCTWORK		DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: H102A	235



1 FLOOR PLAN–HVAC DUCTWORK–SEG. 'B'
3/32"=1'-0"

North

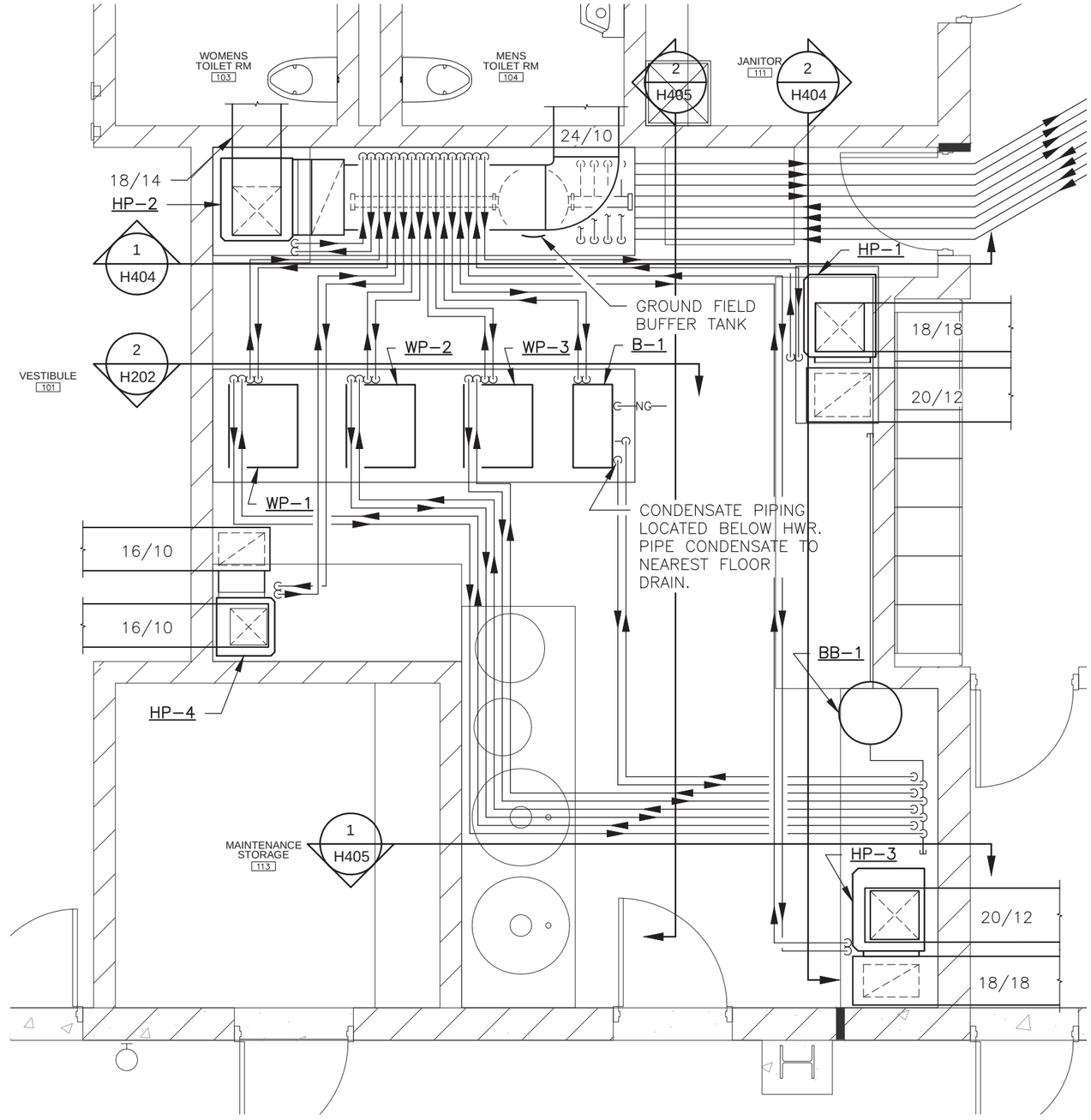
PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			HVAC DUCTWORK		DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: H102B	



2 MECH. ROOM CENTER ELEVATION VIEW

1/4"=1'–0"

North

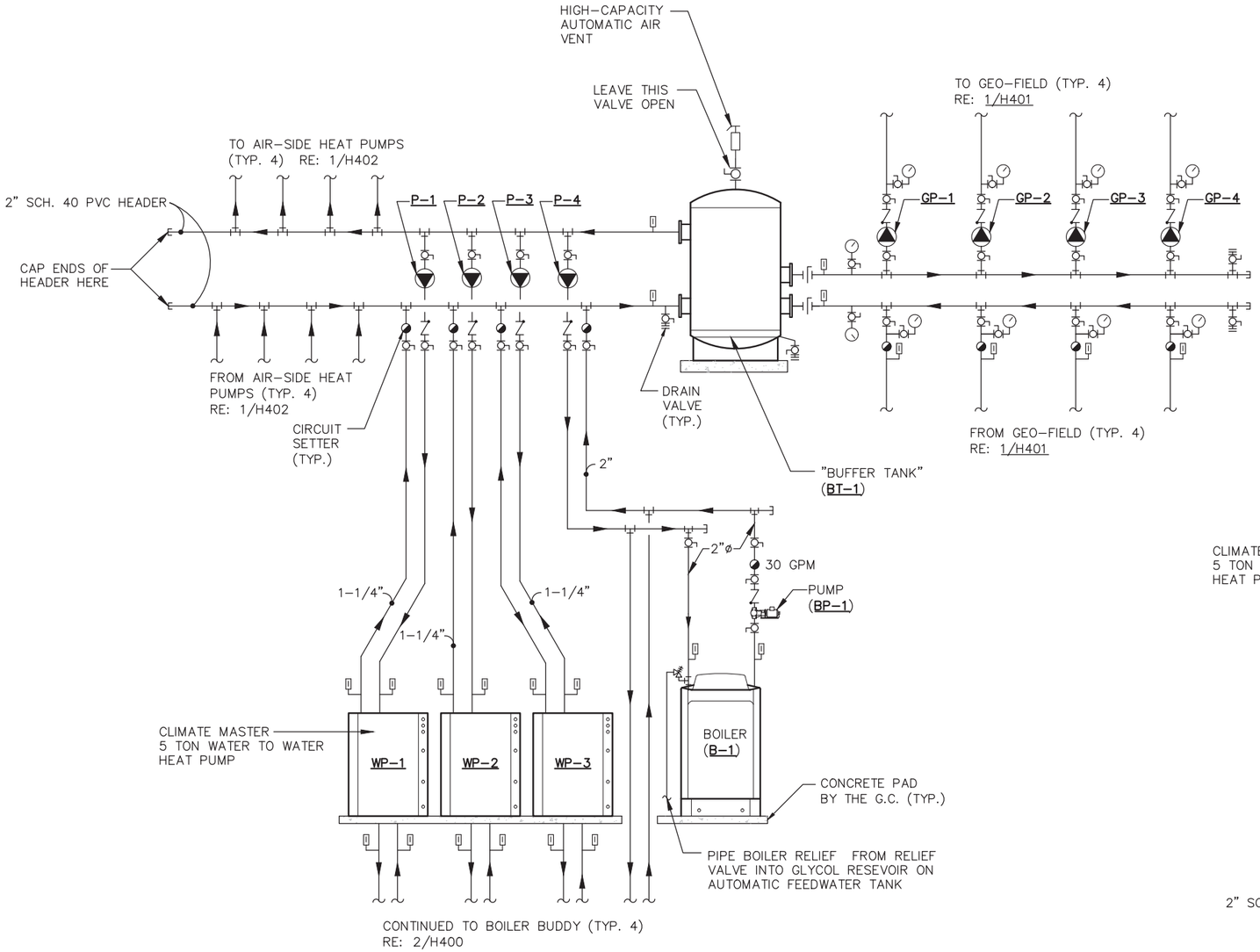


1 ENLARGED MECHANICAL ROOM

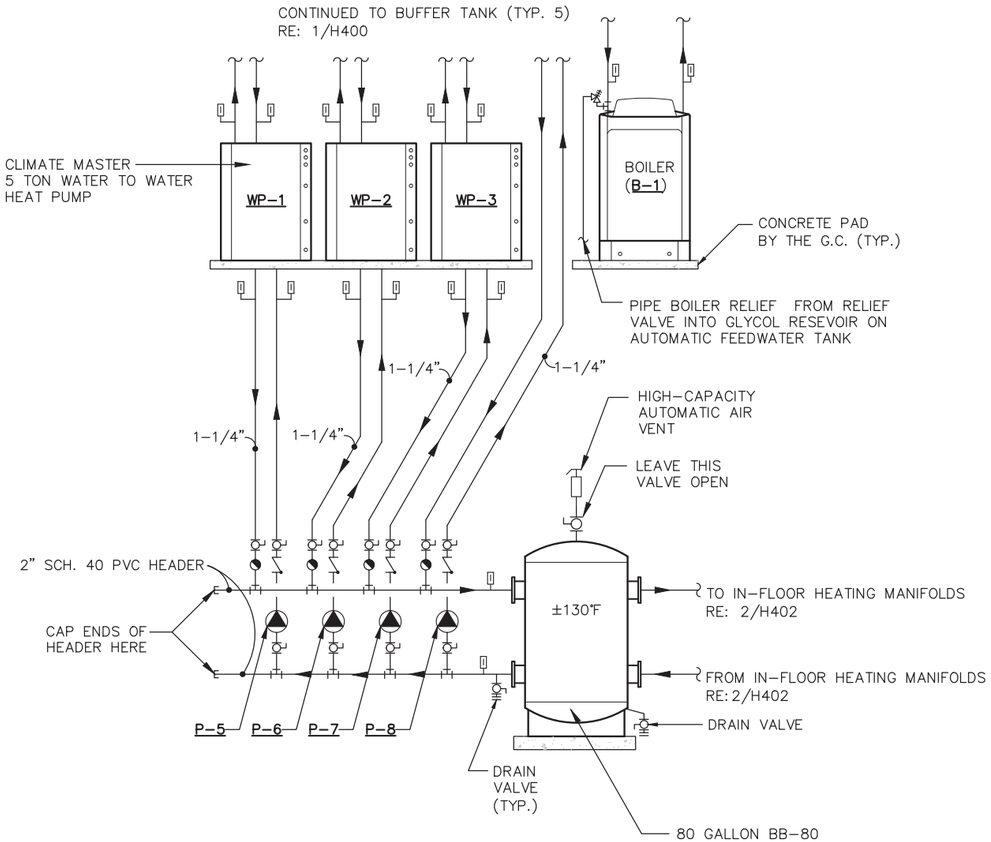
1/4"=1'–0"

North

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ENLARGED MECHANICAL ROOM		DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: H202	237

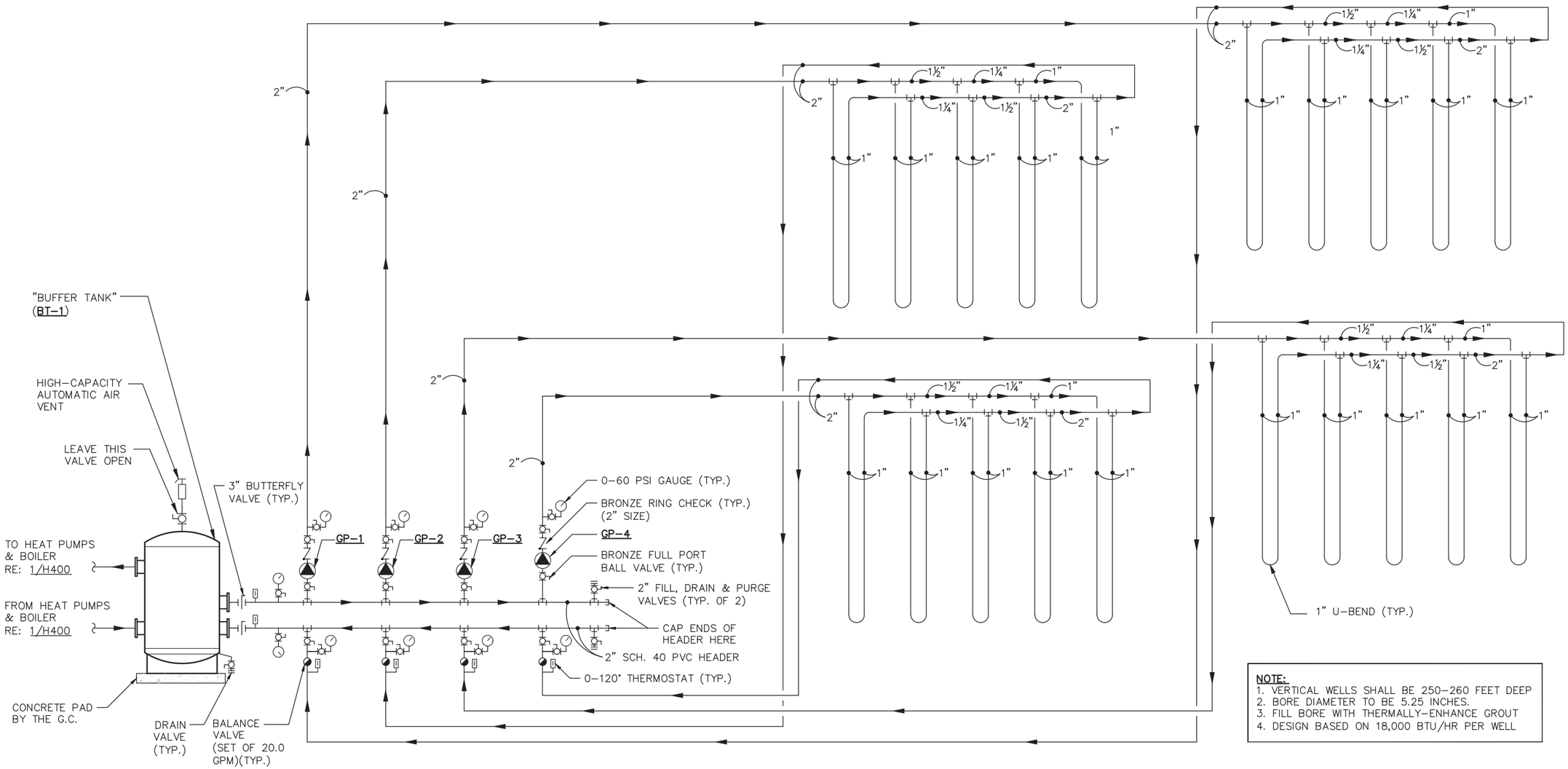


1 HVAC PIPING SCHEMATIC VIEWS
NTS



2 HVAC PIPING SCHEMATIC VIEWS
NTS

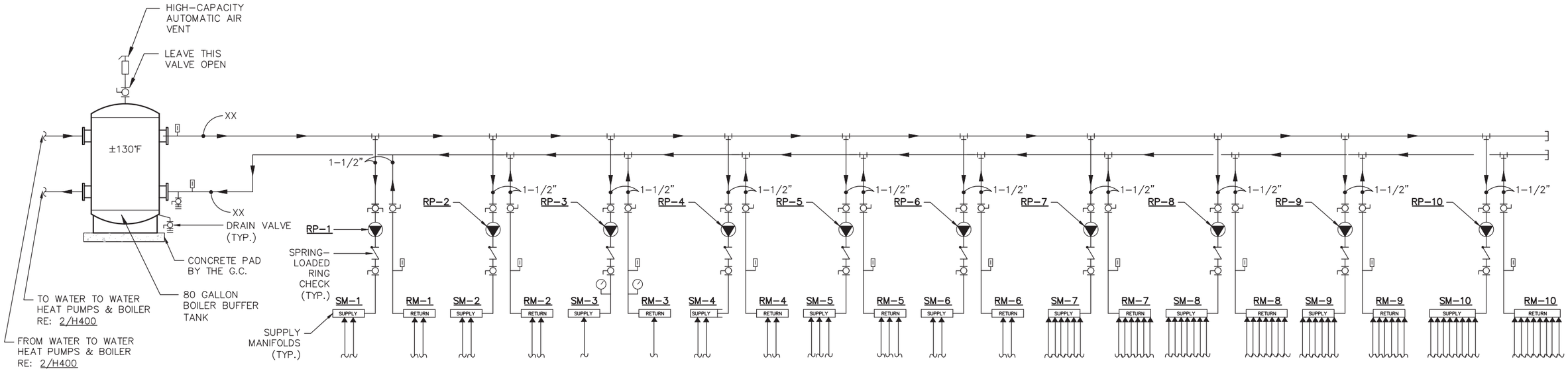
PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			HVAC PIPING SCHEMATIC VIEWS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: H400	238



NOTE:
1. VERTICAL WELLS SHALL BE 250-260 FEET DEEP
2. BORE DIAMETER TO BE 5.25 INCHES.
3. FILL BORE WITH THERMALLY-ENHANCE GROUT
4. DESIGN BASED ON 18,000 BTU/HR PER WELL

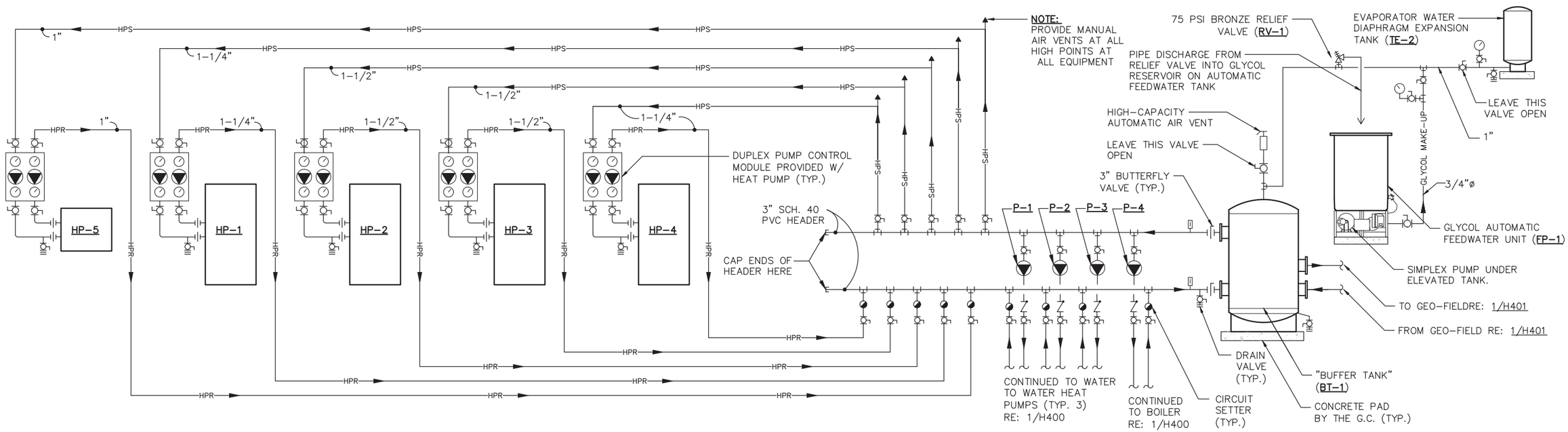
1 GEOTHERMAL FIELD SCHEMATIC VIEWS
NTS

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			HVAC PIPING SCHEMATIC VIEWS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: H401



2 IN-FLOOR HEATING SCHEMATIC VIEWS

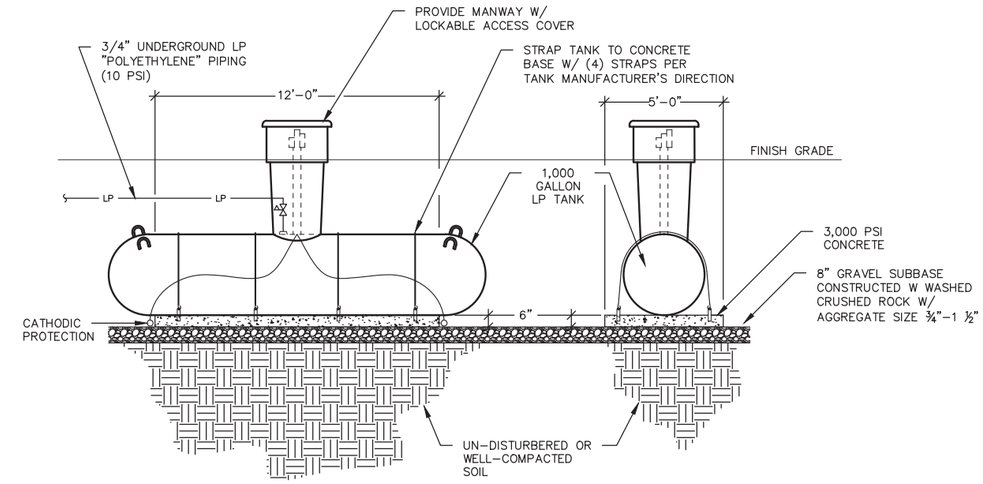
NTS



1 AIR-SIDE HEAT PUMP SCHEMATIC VIEWS

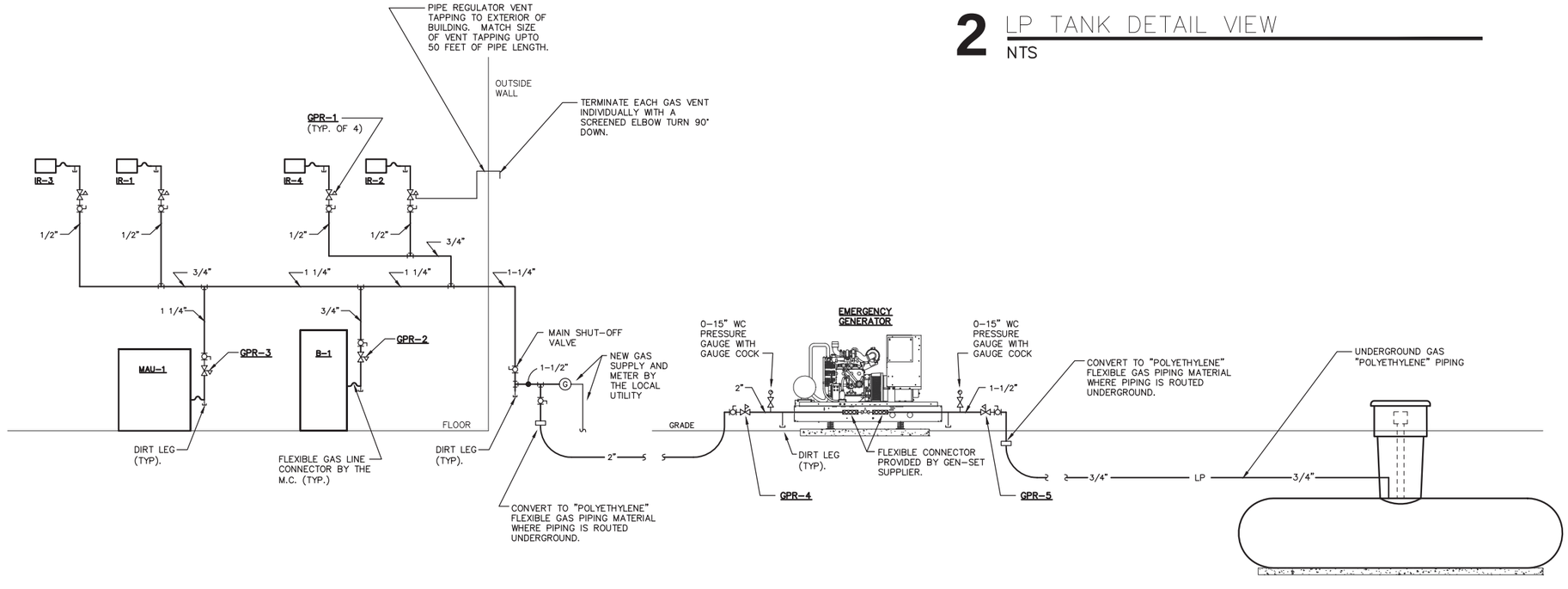
NTS

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			HVAC PIPING SCHEMATIC VIEWS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: H402



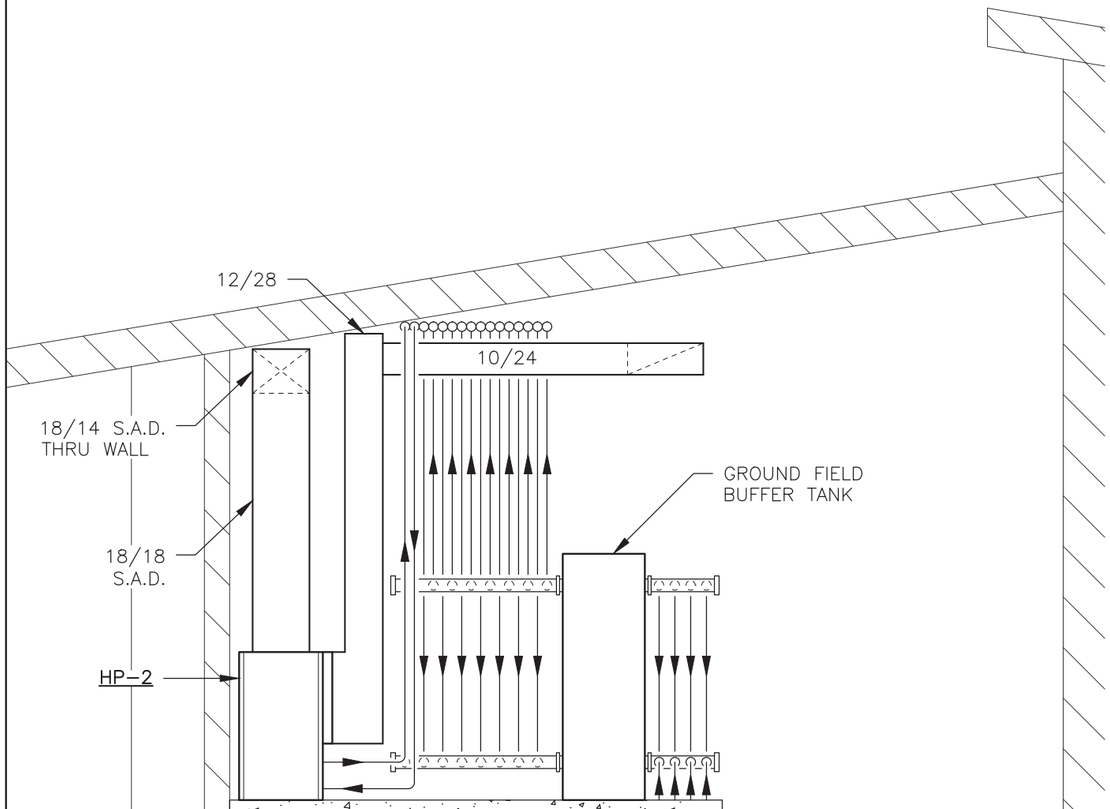
2 LP TANK DETAIL VIEW
NTS

GAS SUPPLY:
1,000 CFH
2 PSIg SUPPLY PRESSURE

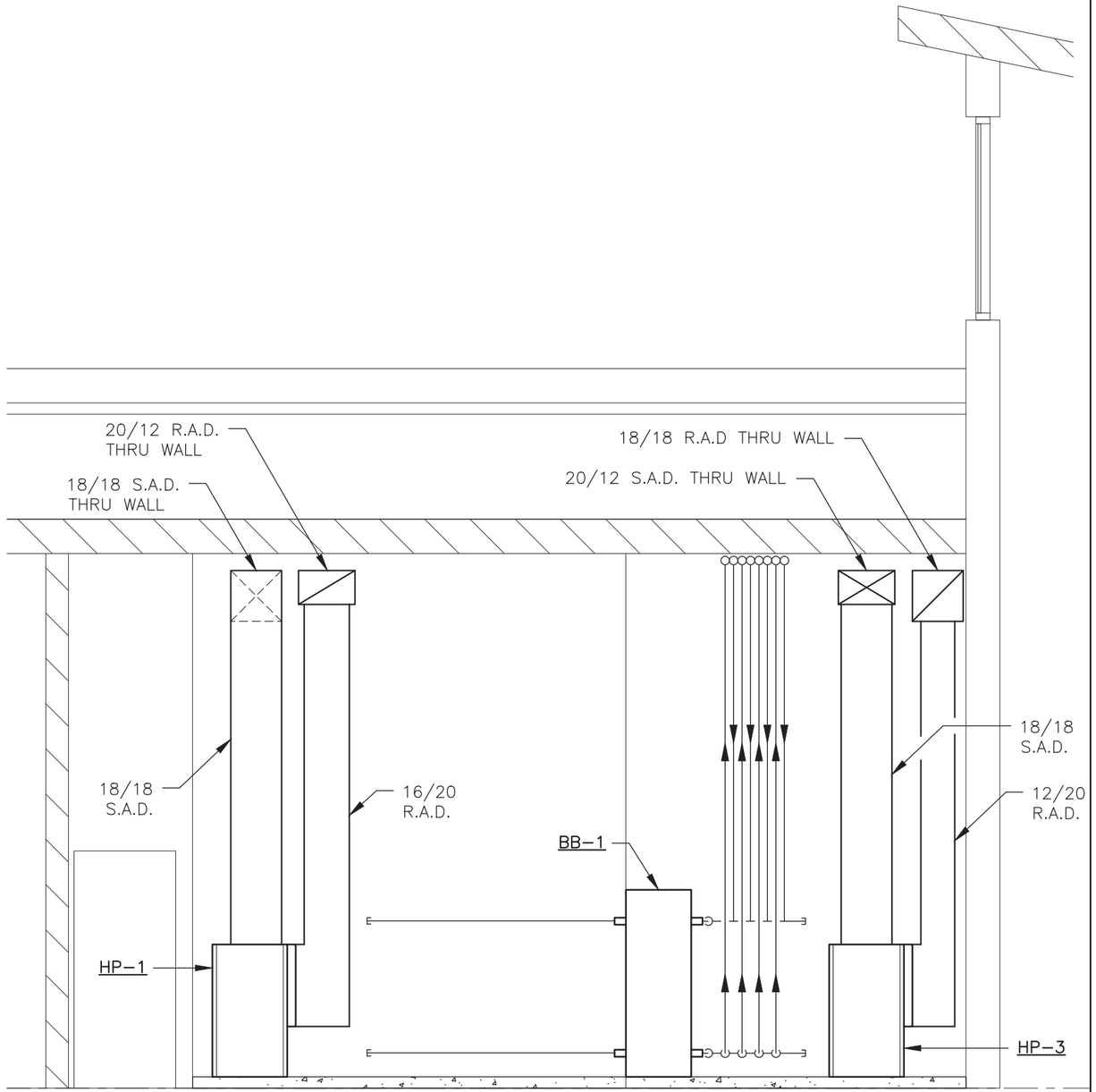


1 GAS PIPING SCHEMATIC VIEW
NTS

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			HVAC PIPING SCHEMATIC AND DETAIL VIEWS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: H403

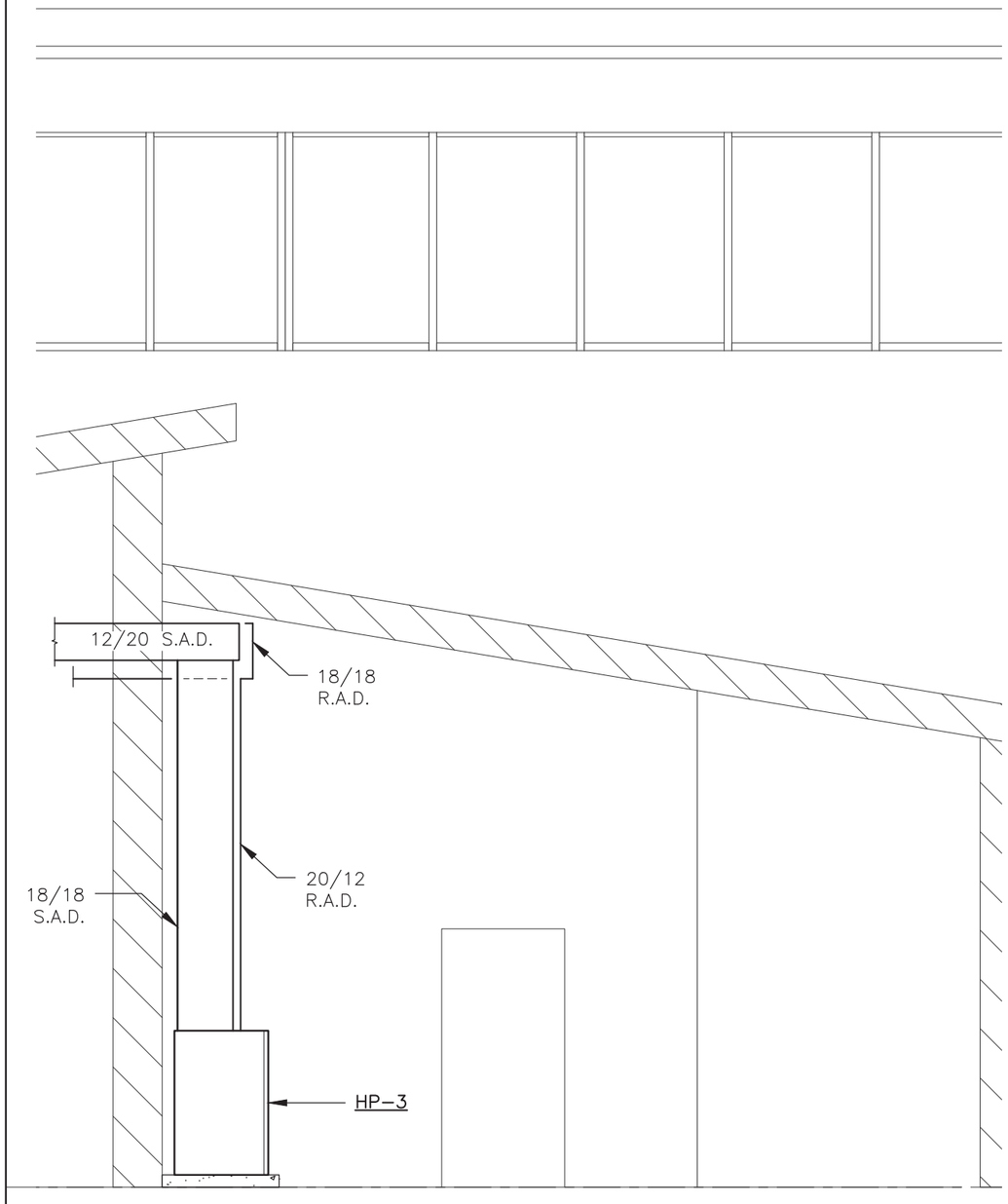


1 MECH. ROOM NORTH ELEVATION VIEW
3/32"=1'-0"

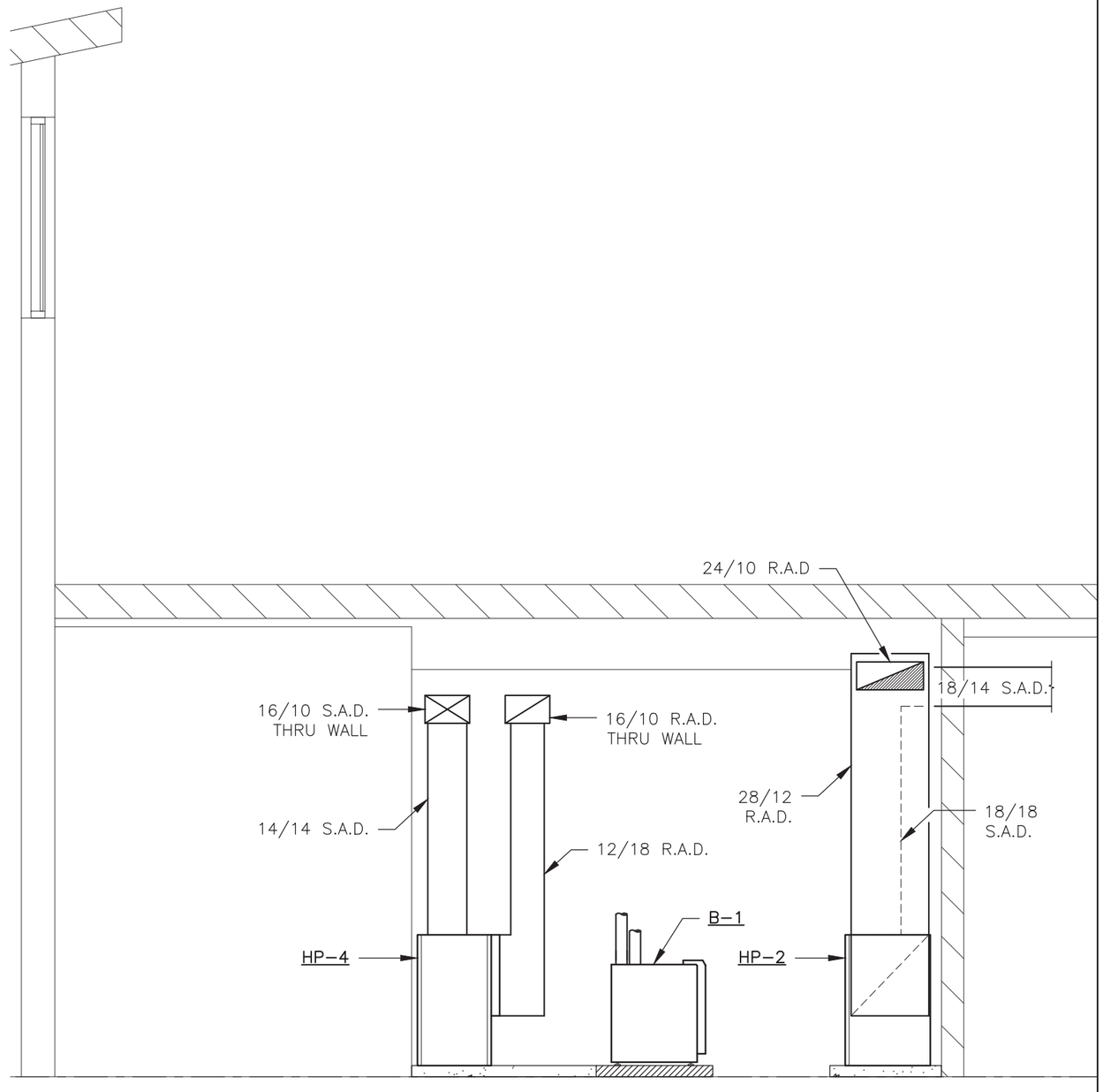


2 MECH. ROOM EAST ELEVATION VIEW
3/32"=1'-0"

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			HVAC SECTIONS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: H404	242

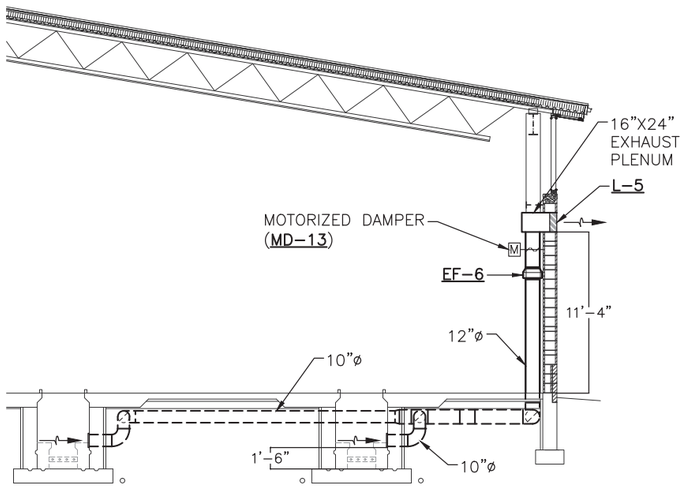


1 MECH. ROOM SOUTH ELEVATION VIEW
3/32"=1'-0"

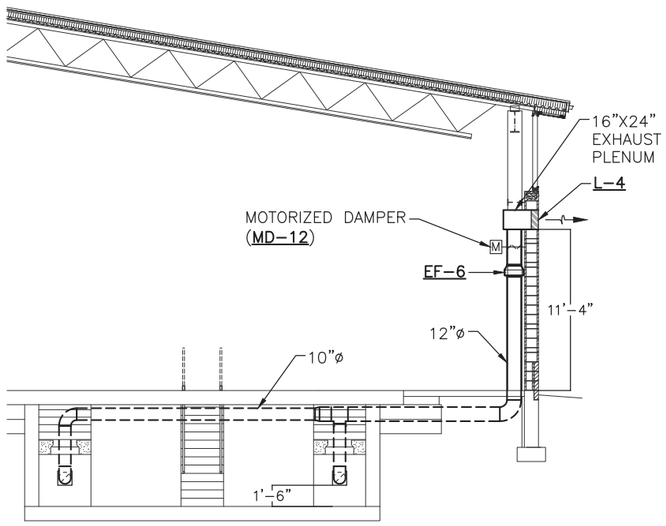


2 MECH. ROOM WEST ELEVATION VIEW
3/32"=1'-0"

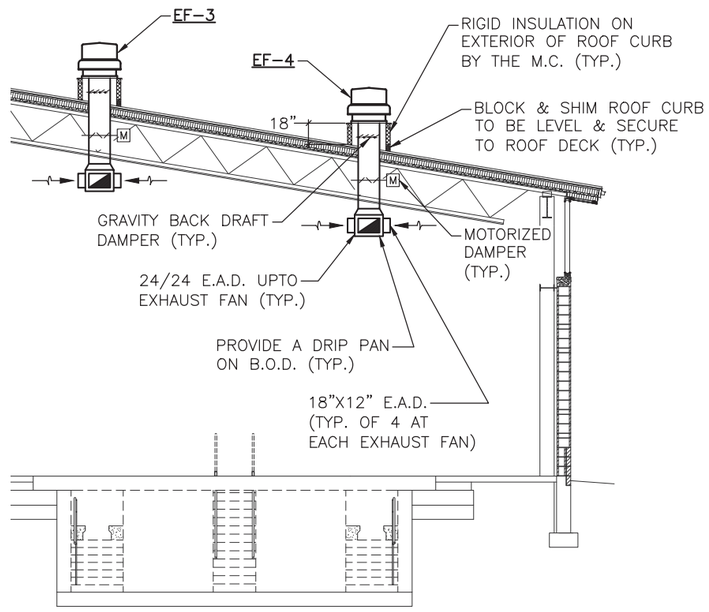
PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			HVAC SECTIONS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: H405	243



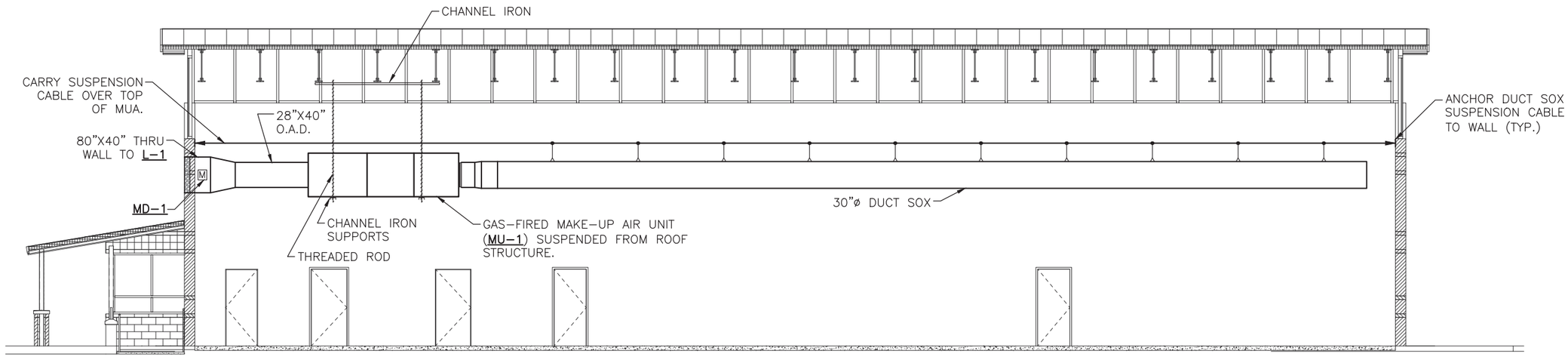
4 SECTION AT L-5
3/32"=1'-0"



3 SECTION AT L-4
3/32"=1'-0"



2 SECTION AT EF-3 AND EF-4
3/32"=1'-0"



1 SECTION AT MU-1
3/32"=1'-0"

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			HVAC SECTIONS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: H406	

WATER SPECIALTIES

SYSTEM BUFFER TANK						GLYCOL FEEDWATER TANK ASSEMBLY							PRESSURE REDUCING VALVE						
MARK	MANUFACTURER	MODEL	VOLUME	TAPPINGS	AMSE?	MARK	MANUFACTURER	MODEL	PUMPS	TANK SIZE	Electrical	Mounting	MARK	MANUFACTURER	MODEL	SIZE	CONSTRUCTION	PSI SETPOINT	CONNECTIONS
BT-1	Wesssels	HBT-120-34	120 Gallon	(4) @ 3.0"	Yes	FP-1	Wessels	GMP-13050	Simplex	50 Gallon	120/1/60	Floor	PRV-1	Bell & Gossett	B-38	1/2"	Bronze Body	12.0	1/2" NPT

BOILER BUFFER TANK						EXPANSION TANKS							PRESSURE RELIEF VALVE						
MARK	MANUFACTURER	MODEL	VOLUME	TAPPINGS	AMSE?	MARK	MANUFACTURER	MODEL	TANK TYPE	TANK SIZE	Acceptance	AMSE?	MARK	MANUFACTURER	MODEL	SIZE	CONSTRUCTION	PSI SETPOINT	CONNECTIONS
BBT-1	Boiler Buddy	BB-50-G	50 Gallon	(4) @ 1.5"	No	TE-2	Bell & Gossett	D-40V	Diephragm	21.7 Gallon	11.3 Gallons	Yes	RP-1	Bell & Gossett	790	3/4"	Bronze Body	30.0	3/4" NPT

Remarks:
A. Provide high capacity automatic air vent.
B. Provide drain valve.
C. Provide tapping for aquastat.

DUCTWORK INSULATION

Air System	DUCT SYSTEM	DUCT WRAP			DUCT BOARD				DUCT LINER				REMARKS
		1 1/2"	3"	DENSITY	1"	1 1/2"	2"	DENSITY	1/2"	1"	1 1/2"	DENSITY	
Heat Pump Systems	Rectangular Supply Air Ductw ork - Inside Building									X		3.0 PCF	
	Round Supply Air Ductw ork - Inside Building	X		.75 PCF									
	Rectangular Return Air Ductw ork - Inside Building									X		3.0 PCF	
	Round Return Air Ductw ork - Inside Building												None
	O.A. Ductw ork - Inside Building	X		.75 PCF									
Make-Up Air Unit MU-1	Supply Air Ductw ork												None
	Outside Air Ductw ork						X	3.0 PCF					
ERV Systems	Outside Air Ductw ork	X		.75 PCF									
	Tempered Outside Air Ductw ork	X		.75 PCF									
	Exhaust Air Ductw ork Upstream of Unit												None
	Exhaust Air Ductw ork Dow nstream of Unit	X		.75 PCF									
Misc. Systems	IR Combustion Air Ductw ork	X		.75 PCF									
	Renums behind louvers						X	3.0 PCF					
	Roof Exhaust Fans						X	3.0 PCF					

Remarks:

SMACNA PRESSURE CLASS

FAN No.	DUCTWORK INVOLVED CLASS, W.G.	MINIMUM DUCT PRESSURE CLASS									SEAL CLASS	REMARKS
		+4"	+3"	+2"	+1"	+1/2"	-1/2"	-1"	-2"	-3"		
MUA-1	Supply Air Ductw ork				X						A	
	Outside Air Ductw ork							X			A	
Heat Pump Systems	Outside Air Ductw ork						X				A	
	Supply Air Ductw ork				X						A	
	Return Air Ductw ork						X				C	
ERV Units	Outside Air Ductw ork						X				A	
	Tempered Outside Air Ductw ork					X					A	
	Exhaust Air Ductw ork - Suction side						X				A	
	Exhaust Air Ductw ork - Discharge side					X					A	
Exhaust Fans	Suction Side of Fans						X				C	
	Discharge Side of Fans				X						A	

REMARKS:

SEALED COMBUSTION WATER BOILERS

MARK	MANUFACTURER MODEL NO.	BOILER CAPACITY			WATER FLOWS			BOILER VESSEL VOLUME (Gallons)	PIPE CONNECTION SIZE		GAS VENT SIZE	COMB. AIR SIZE	FUEL		ELECTRICAL			ACCESS./ OPTIONS	REMARKS
		INPUT	OUTPUT	EFFICIENCY	GPM	P.D.	MIN. TEMP		SUPPLY	RETURN			FUEL	Pressure	VOLT	PHASE	FLA		
B-1	EL-399	399	381	95%	28.0	14'	50	3.7	1-1/2"	1-1/2"	4"	4"	Nat. Gas.	2.0 PSI	120.0	1.0	15.0	4	A, B, C, D

Based on products by HTP Products. Equal products w ill be acceptable.

ACCESSORIES/OPTIONS:
1. Low Water Cut-off
2. High and Low Gas Pressure Sw itch
3. IRI Gas Train
4. Flow Sw itch
5. Condensate Neutralizer

REMARKS:
A. Provide w ith 30 PSI Relief Valve.
B. This boiler shall be equipped w ith fully modulating burner controls.
C. The Contractor shall provide and install all gas venting and combustion air piping materials per the manufacturer's recommendations. Vent out the side w all using a matching sidew all termination kit.
D. Provide and install a gas pressure regulator for this appliance.

GAS PRESSURE REGULATORS

REGULATOR I.D.	REGUATOR USE	REGULATOR LOCATION	MAX. LOAD (CFH)	GAS PRESSURE REGULATOR						PIPE CONNECTION SIZE	ACCESSORIES	REMARKS
				MANUFACTURER	MODEL	SUPPLY SIDE PRESSURE	DISCHARGE SIDE PRESSURE SETTING	VENT LIMITER ALLOWED?	RELIEF VENT SIZE			
GPR-1	Infrared Heaters	Interior	150.0	Maxitrol	325-5L	2.0 PSI	7.0 Inches	Yes	3/8 Inch	1/2 Inch	A	
GPR-2	Boiler	Interior	400.0	Maxitrol	325-5L	2.0 PSI	7.0 Inches	Yes	3/8 Inch	1 Inch	A	
GPR-3	Make-Up Air Unit	Interior	1,050.0	Maxitrol	325-7AL	2.0 PSI	7.0 Inches	No	1/2 Inch	1-1/4 Inch		
GPR-4	Natural Gas to Generator	Exterior	1,400.0	Fisher	S-201	2.0 PSI	7.0 Inches	No	3/8 Inch	1-1/2 Inch	B	1, 2
GPR-5	LP Gas to Generator	Exterior	550.0	Fisher	HSRL-SFC	10.0 PSI	11.0 Inches	No	3/8 Inch	1 Inch	B	1

Accessories:
A. Vent Limiting Device
B. Weather-proof Exterior Vent Cap

Remarks:
1. Provide gas pressure regulator with weather-resistant coating.
2. 1/2 Inch Seat Ring Diameter.

GRILLES, REGISTERS, AND DIFFUSERS

MARK	MANUFACTURER'S MODEL NO.	Service	Size		Performance		Throw		Type	Construction	Color	Volume Damper	Access. Options	REMARKS
			DUCT	FACE	PD"	NC	FT **	Direction						
CD-1	PLQ-10	Supply	10" Round	24"x24"	<.05"	<20	8	4-Way	Flat Plate Diffuser	Steel	White	No		
CD-2	PLQ-08	Supply	8" Round	24"x24"	<.05"	<20	8	4-Way	Flat Plate Diffuser	Steel	White	No		
CD-2C	PLQ-08	Supply	8" Round	24"x24"	<.05"	<20	8	Corner	Flat Plate Diffuser	Steel	White	No		
CD-23	PLQ-08	Supply	8" Round	24"x24"	<.05"	<20	8	3-Way	Flat Plate Diffuser	Steel	White	No		
CD-3	PLQ-06	Supply	6" Round	24"x24"	<.05"	<20	8	4-Way	Flat Plate Diffuser	Steel	White	No		
CD-32	PLQ-06	Supply	6" Round	24"x24"	<.05"	<20	8	2-Way	Flat Plate Diffuser	Steel	White	No		
CD-4	PLQ-08	Supply	8" Round	12"x12"	<.05"	<20	8	2-Way	Flat Plate Diffuser	Steel	White	No		C
CD-5	PLQ-08	Supply	8" Round	12'x12'	<.05"	<20	8	4-Way	Flat Plate Diffuser	Steel	White	No		C
EG-1	EGC-15	Exhaust	6"x6"	8"x8"	<.05"	<20	---	---	3/4" Single Deflection Blades at 38 Degrees	Aluminum	White	Yes	2	
EG-2	EGC-15	Exhaust	12"x12"	14"x14"	<.05"	<20	---	---	3/4" Single Deflection Blades at 38 Degrees	Aluminum	White	No	2	
EG-3		Exhaust	10" Round									Yes		A
RG-1	EGC-15	Return	16"x16"	18"x18"	<.05"	<20	---	---	1/2"x1/2"x1" Eggcrate	Aluminum	White	Yes		
RG-2	RA-0-OB	Return	14"x14"	16"x16"	<.05"	<20	---	---	3/4" Single Deflection Blades at 0 Degrees	Aluminum	White	Yes	2	
RG-3	RA-0-OB	Return	10"x10"	12"x12"	<.05"	<20	---	---	3/4" Single Deflection Blades at 0 Degrees	Aluminum	White	Yes	2	
RG-4	EGC-15	Relief	14"x14"	24"x24"	<.05"	<20	---	---	1/2"x1/2"x1" Eggcrate	Aluminum	White	No	2	
SG-1	S-585-FF	Supply	8"x8"	10"x10"	<.05"	<20	---	---	3/4" Single Deflection Blades at 38 Degrees	Aluminum	White	No		B
TG-1	S-585-FF	Transfer	8"x8"	10"x10"	<.05"	<20	---	---	3/4" Single Deflection Blades at 38 Degrees	Aluminum	White	No		B
TG-2	EGC-15	Transfer	12"x12'	14"x14"	<.05"	<20	---	---	1/2"x1/2"x1" Eggcrate	Aluminum	White	No	2, 3	

Based on products by Kreuger.

** Distance in FT at 100 FPM w ith direction pattern indicated.

ACCESSORIES/OPTIONS:
1. Square Plenum Box for Lateral Duct Connection.
2. Square-to-round Adapter.
3. Infill Panel for 24"x24" Grid System.
4. Infill Panel for 24"x48" Grid System.
5. 1-hour Radiation Damper.
6. Beveled Drop Face.
7. Channel Frame for 2'x2' Grid System

REMARKS:
A. This grille shall be a Seiho Model EC round grille in aluminum construction and clear anodized finish.
B. Provide this grille w ith a filter frame for access to the fire damper.
C. Provide this diffuser w ith optional plaster frame

POWER ROOF VENTILATORS

MARK	MANUFACTURER'S MODEL NO.	SERVICE	SERVES ROOM NO./AREA	CFM	Total S.P.	Discharge Direction	Roof Opening	FAN			ELECT.		ACCESSORIES/ OPTIONS	REMARKS
								RPM	DIA.	DRIVE	H.P.	VOLT/PH		
EF-1	GB-163-VG-1	Garage Ventilation	Inspection Bay	2,500	0.125"	Dow ndraft	18.5"x18.5"	935	16"	Belt	1/3	120/1	2, 3, 5, 7, 8	
EF-2	GB-163-VG-1	Garage Ventilation	Inspection Bay	2,500	0.125"	Dow ndraft	18.5"x18.5"	935	16'	Belt	1/3	120/1	2, 3, 5, 7, 8	
EF-3	GB-163-VG-1	Garage Ventilation	Inspection Bay	2,500	0.125"	Dow ndraft	18.5"x18.5"	935	16"	Belt	1/3	120/1	2, 3, 5, 7, 8	
EF-4	GB-163-VG-1	Garage Ventilation	Inspection Bay	2,500	0.125'	Dow ndraft	18.5"x18.5"	935	16"	Belt	1/3	120/1	2, 3, 5, 7, 8	

Based on products by Greenheck. Equal products by Acme, Cook, Jenn-Fan or ILG w ill be acceptable.

ACCESSORIES/OPTIONS:
1. Roof Curb for Flat Roof
2. Roof Curb for Pitched Roof
3. Gravity Backdraft Damper
4. Motorized Backdraft Damper
5. Hinged Subbase
6. Insect Screen
7. Combination Disc. Sw itch/Variable Speed Control
8. Disconnect Sw itch

REMARKS:

IN-LINE FANS

MARK	MANUFACTURER'S MODEL NO.	SERVES	CFM	TOTAL S.P.	TYPE	SONES	CONTROL/ INTERLOCK	FAN		ELECT.		ACCESSORIES/ OPTIONS	REMARKS
								RPM	DRIVE	AMPS	VOLT/PH		
EF-5	FG-12	Inspection Pits	600	0.40"	In-line	N/A	"Occupied - unoccupied"	2,600	Direct	2.0	120/1	1, 5	A
EF-6	FG-12	Inspection Pits	600	0.40"	In-line	N/A	"Occupied - unoccupied"	2,600	Direct	2.0	120/1	1, 5	A

Based on products by Fantech. Equal products w ill be acceptable.

ACCESSORIES/OPTIONS:
1. Spring-loaded Backdraft Damper
2. Wall Cap (w ith BDD)
3. Roof Cap (w ith BDD)
4. Variable Speed Control (for field mounting)
5. Mounting Clamps
6. "IG" Inlet Guards

REMARKS:
A. Fan shall be suitable for mounting in the vertical position.

FAN POWERED AIR TO AIR HEAT EXCHANGERS - TOTAL ENERGY TRANSFER TYPE

MARK	MANUFACTURER MODEL NO.	SERVING/ LOCATION	SUPPLY FAN			OUTSIDE AIR CONDITIONS		EXHAUST FAN			RETURN AIR CONDITIONS		UNIT EFFICIENCY		LEAVING AIR CONDITIONS		ELECTRICAL			ACCESSORIES/ OPTIONS	REMARKS
			CFM	E.S.P.	MOTOR HP	SUMMER	WINTER	CFM	E.S.P.	MOTOR HP	SUMMER	WINTER	TOTAL EFF (%)	SENSIBLE EFF (%)	SUMMER	WINTER	VOLT/PH	FLA	MOP		
ERV-1	EV-300	HP-1	350	0.25"	0.2	91/75	-20	350	0.25"	0.2	75/64	72/54.5	62% (W)/46%(S)	69%	80/67.5	43	120/1	3.3	15.0	2	A, B, C
ERV-2	EV-300	HP-3	300	0.25"	0.2	91/75	-20	300	0.25"	0.2	75/64	72/54.5	62% (W)/46%(S)	69%	80/67.5	43	120/1	3.3	15.0	2	A, B, C
ERV-3	EV-300	HP-4	300	0.25"	0.2	91/75	-20	300	0.25"	0.2	75/64	72/54.5	62% (W)/46%(S)	69%	80/67.5	43	120/1	3.3	15.0	2	A, B, C

Based on products by Renew Aire. Equal products w ill be acceptable.

ACCESSORIES/OPTIONS:
1. Factory-installed Disconnect Sw itch
2. Control Circuit Transformer
3. Digital Time Clock
4. Carbon Dioxide (CO2) Sensor/Control

REMARKS:
A. Verify the preferred unit configuration prior to ordering unit. Unit can be ordered in "Right Hand" or "Left Hand" versions.
B. Control pow er shall be 24 VAC.
C. Provide (2) sets of 1" thick pleated media air filters (MERV 8).

CONTROL DAMPERS

MARK	SERVICE	RECOMMENDED MODEL NO.	DESIGN AIR VOLUME	MAX. PSI DROP	DAMPER ORIENTATION	DAMPER DIMENSIONS WIDTH	HEIGHT	ROUND	BLADE SEALS	EDGE SEALS	INSULATED BLADES?	DAMPER ACTUATOR OPERATION	VOLTAGE/PHASE	CONTROL BY	CONSTRUCTION	ACCESSORIES/ OPTIONS	REMARKS
MD-1	Make Up air to MU-1	TED-50	10,000	0.05"	Vertical	80"	40"		Yes	Yes	Yes	Tw o-Position	24 VAC	M.C.	Aluminum	2	
MD-2	O.A. to ERV-1	CDR-50	300	0.05"	Vertical			10"	Yes	Yes	No	Tw o-Position	24 VAC	M.C.	Galvanized Steel	2	
MD-3	O.A. to ERV-2	CDR-50	300	0.05"	Vertical			10"	Yes	Yes	No	Tw o-Position	24 VAC	M.C.	Galvanized Steel	2	
MD-4	O.A. to ERV-3	CDR-50	300	0.05"	Vertical			10"	Yes	Yes	No	Tw o-Position	24 VAC	M.C.	Galvanized Steel	2	
MD-5	E.A. from ERV-1	CDR-50	300	0.05"	Vertical			10"	Yes	Yes	No	Tw o-Position	24 VAC	M.C.	Galvanized Steel	2	
MD-6	E.A. from ERV-2	CDR-50	300	0.05"	Vertical			10"	Yes	Yes	No	Tw o-Position	24 VAC	M.C.	Galvanized Steel	2	
MD-7	E.A. from ERV-3	CDR-50	300	0.05"	Vertical			10"	Yes	Yes	No	Tw o-Position	24 VAC	M.C.	Galvanized Steel	2	
MD-8	Exhaust Fan EF-1	TED-50	2,500	0.05"	Horizontal	18"	18"		Yes	Yes	Yes	Tw o-Position	120 VAC	M.C.	Aluminum	2	
MD-9	Exhaust Fan EF-2	TED-50	2,500	0.05"	Horizontal	18"	18"		Yes	Yes	Yes	Tw o-Position	120 VAC	M.C.	Aluminum	2	
MD-10	Exhaust Fan EF-3	TED-50	2,500	0.05"	Horizontal	18"	18"		Yes	Yes	Yes	Tw o-Position	120 VAC	M.C.	Aluminum	2	
MD-11	Exhaust Fan EF-4	TED-50	2,500	0.05"	Horizontal	18"	18"		Yes	Yes	Yes	Tw o-Position	120 VAC	M.C.	Aluminum	2	
MD-12	Exhaust Fan EF-5	CDR-50	600	0.05"	Horizontal			12"	Yes	Yes	No	Tw o-Position	120 VAC	M.C.	Galvanized Steel	2	
MD-13	Exhaust Fan EF-6	CDR-50	600	0.05'	Horizontal			12"	Yes	Yes	No	Tw o-Position	120 VAC	M.C.	Galvanized Steel	2	

Based on products by Ruskin. Equal products w ill be acceptable.

ACCESSORIES/OPTIONS:
1. Single End Sw itch in Damper Actuator
2. Tw o End Sw itches in Damper Actuator

REMARKS:
A.

PUMPS

MARK	MANUFACTURER MODEL NO.	SYSTEM / SERVICE	CIRCULATING FLUID FLUID	GPM	FT HD	TEMP	SP. GR.	FLANGES SUCTION	DISCHARGE	MOTOR VOLT	PHASE	Amps	HP	RPM	TYPE	SUCTION DIFFUSER	TRIPLE DUTY VALVE	ACCESSORIES	REMARKS
BP-1	VR-15	Boiler Loop	25% PG	28.0	20.0	130	1.02	2"	2"	120	1	4.9	1/2	3,450	In-Line	(None)	(None)		A, B
GP-1	VR-15	Groundfield Loop	25% PG	18.0	24.0	90	1.02	2"	2"	120	1	1.0		Std.	In-Line	(None)	(None)		A, B
GP-2	VR-15	Groundfield Loop	25% PG	18.0	24.0	90	1.02	2"	2"	120	1	1.0		Std.	In-Line	(None)	(None)		A, B
GP-3	VR-15	Groundfield Loop	25% PG	18.0	24.0	90	1.02	2"	2"	120	1	1.0		Std.	In-Line	(None)	(None)		A, B
GP-4	VR-15	Groundfield Loop	25% PG	18.0	24.0	90	1.02	2"	2"	120	1	1.0		Std.	In-Line	(None)	(None)		A, B
P-1	VR-15	Water-to-Water Heat Pumps	25% PG	12.0	28.0	130	1.02	2"	2"	120	1	1.0		Std.	In-Line	(None)	(None)		A, B
P-2	VR-15	Water-to-Water Heat Pumps	25% PG	12.0	28.0	130	1.02	2"	2"	120	1	1.0		Std.	In-Line	(None)	(None)		A, B
P-3	VR-15	Water-to-Water Heat Pumps	25% PG	12.0	28.0	130	1.02	2"	2"	120	1	1.0		Std.	In-Line	(None)	(None)		A, B
P-4	VR-15	Boiler to BT-1	25% PG	28.0	16.0	130	1.02	2"	2"	120	1	1.0		Std.	In-Line	(None)	(None)		A, B
P-5	VR-15	Boiler to BBT-1	25% PG	28.0	16.0	130	1.02	2"	2"	120	1	1.0		Std.	In-Line	(None)	(None)		A, B
RP-1	BumbleBee	Radiant Loop	25% PG	3.0	11.0	130	1.02	3/4"	3/4"	120	1	1.0		Std.	System-Lubricated	(None)	(None)		A, B
RP-2	BumbleBee	Radiant Loop	25% PG	3.0	12.0	130	1.02	3/4"	3/4"	120	1	1.0		Std.	System-Lubricated	(None)	(None)		A, B
RP-3	BumbleBee	Radiant Loop	25% PG	3.0	12.0	130	1.02	3/4"	3/4"	120	1	1.0		Std.	System-Lubricated	(None)	(None)		A, B
RP-4	BumbleBee	Radiant Loop	25% PG	3.0	12.0	130	1.02	3/4"	3/4"	120	1	1.0		Std.	System-Lubricated	(None)	(None)		A, B
RP-5	BumbleBee	Radiant Loop	25% PG	3.0	12.0	130	1.02	3/4"	3/4"	120	1	1.0		Std.	System-Lubricated	(None)	(None)		A, B
RP-6	BumbleBee	Radiant Loop	25% PG	3.0	12.0	130	1.02	3/4"	3/4"	120	1	1.0		Std.	System-Lubricated	(None)	(None)		A, B
RP-7	BumbleBee	Radiant Loop	25% PG	3.0	12.0	130	1.02	3/4"	3/4"	120	1	1.0		Std.	System-Lubricated	(None)	(None)		A, B
RP-8	BumbleBee	Radiant Loop	25% PG	3.0	12.0	130	1.02	3/4"	3/4"	120	1	1.0		Std.	System-Lubricated	(None)	(None)		A, B
RP-9	BumbleBee	Radiant Loop	25% PG	3.0	12.0	130	1.02	3/4"	3/4"	120	1	1.0		Std.	System-Lubricated	(None)	(None)		A, B
RP-10	BumbleBee	Radiant Loop	25% PG	3.0	12.0	130	1.02	3/4"	3/4"	120	1	1.0		Std.	System-Lubricated	(None)	(None)		A, B

Based on products by Taco. Equal products by Grundfos or Bell & Gossett w ill be acceptable.

ACCESSORIES:
1. Tappings for pressure gauge set
2. Threaded volute for pump support
3. Suction Diffuser to Match Pipe Sizes
4. Triple Duty Valve to Match Pipe Sizes

REMARKS:
A. Provide w ith integral flow check valve.
B. This pump shall have an ECM motor w ith unit-mounted variable speed controls.

WATER-SOURCE to WATER SOURCE HEAT PUMPS (HEATING ONLY)

MARK	MAXIMUM TEMPERATURE WATER	Manufacturer MODEL NO.	GROUND RELD WATER WATER GPM	FLUID	P.D.	RUN-OUT	BUILDING WATER WATER GPM	FLUID	P.D.	RUN-OUT	HEATING CAP. @ 100 Degrees - 50 Degress MBH	EWT	COP	HEATING CAP. @ 130 Degree - 40 Degrees MBH	EWT	COP	ELECTRICAL MCA	MOP	VOLT/PH	ACCESSORIES/ OPTIONS	REMARKS
WP-1	130 Degrees	TMW-060	15.0	25% PG	6.5	1-1/2"	15.0	25% PG	6.5	1-1/2"	64.0	90	4.9	54.0	120	2.9	32.9	50.0	240/1	5	
WP-2	130 Degrees	TMW-060	15.0	25% PG	6.5	1-1/2"	15.0	25% PG	6.5	1-1/2"	64.0	90	4.9	54.0	120	2.9	32.9	50.0	240/1	5	
WP-3	130 Degrees	TMW-060	15.0	25% PG	6.5	1-1/2"	15.0	25% PG	6.5	1-1/2"	64.0	90	4.9	54.0	120	2.9	32.9	50.0	240/1	5	

Based on products by Climatemaster. Equal products by Carrier, Florida Heat Pump, McQuay or York w ill be acceptable.

ACCESSORIES/OPTION:
1. Water Regulating Valve(s)
2. Motorized Water Control Valve
3. Pump Module
4. Hose Kit
5. Automatic Balancing Kit
6. Boilerless Electric Emergency Heat
7. Room Thermostat
8. Ducted Filter Rack

REMARKS:

WATER-SOURCE HEAT PUMPS (HEATING-COOLING)

MARK	ORIENTATION	Manufacturer MODEL NO.	FAN CFM	ESP	COOLING CAP. @ 86 Degrees EWT BTU/Hr TOTAL	SENS.	Temps. EDB	EWB	EER	CIRC. WATER WATER GPM	P.D.	RUN-OUT	HEATING CAP. @ 45 Degrees EWT MBH	EAT	COP	AUXILLIARY ELECTRIC HEAT STAGES	KW	ELECTRICAL MCA	MOP	VOLT/PH	ACCESSORIES/ OPTIONS	REMARKS
HP-1	Vertical	EXVE-048	1,515	0.40"	45.4	36.2	77	66	14.1	11.2	9.3	1-1/4"	44.4	63	4.3	2	6.5	29.0	30.0	208/3	2, 3, 4, 5, 6, 8	A, B, C, D
HP-2	Vertical	EXVE-060	2,000	0.45"	58.0	43.8	76	66	13.5	14.0	9.1	1-1/4"	59.2	59	4.1	2	6.5	32.5	40.0	208/3	2, 3, 4, 5, 6, 8	A, B, C, D
HP-3	Vertical	EXVE-060	1,900	0.45"	58.0	43.8	76	66	13.5	14.0	9.1	1-1/4"	59.2	63	4.1	2	6.5	32.5	40.0	208/3	2, 3, 4, 5, 6, 8	A, B, C, D
HP-4	Vertical	EXVE-036	1,000	0.35"	33.8	27.0	77	66	14.2	8.4	10.9	1-1/4"	40.2	33.3	4.2	1	4.9	22.0	25.0	208/3	2, 3, 4, 5, 6, 8	A, B, C, D
HP-5	Horizontal	EXHE-024	750	0.00"	23.4	18.5	74	62	14.3	5.6	11.4	1"	22.0	68	4.2	1	3.3	22.3	30.0	208/1	2, 3, 4, 5, 6, 8	A, B, C, D

Based on products by Trane. Equal products by Carrier, Climate Master, Florida Heat Pump, McQuay or York w ill be acceptable.

ACCESSORIES/OPTION:
1. Water Regulating Valve(s)
2. Motorized Water Control Valve
3. Pump Module
4. Hose Kit
5. Automatic Balancing Kit
6. Boilerless Electric Emergency Heat
7. Room Thermostat
8. Ducted Filter Rack

REMARKS:
A. Verify ductw ork configuration per unit based on the Drawings.
B. Provide (2) sets of 1" Pleated Media air filters for each unit. (MERV 7.0 or better)
C. Provide hose kit consisting of 24-30" length of stainless steel, braided flexible hose connections w ith isolation valves and manual balancing valve.
D. Provide unit-mounted emergency electrical heat in the largest capacity available that does not alter the "normal" electrical requirements for the heat pump.

GAS-FIRED, LOW-INTENSITY INFRARED TUBE HEATERS

MARK	MANUFACTURER MODEL NO.	Room No.	SERVING	HEATING INPUT (MBH)	STAGES	TUBE LENGTH	SHAPE	REFLECTOR TYPE	ANGLE	FUEL FUEL	Pressure	SEALED COMBUSTION?	MOUNTING HEIGHT (')	ELECTRICAL VOLT	PHASE	FLA	ACCESS./ OPTIONS	REMARKS
IR-1	TXR-150	123	Inspection Bay	150.0	2	40 Feet	Straight	Std.	0 degrees	Nat. Gas	2.0 PSI	Yes	15'-0"	120	1	1.0	2, 3, 5, 6, 7	A
IR-2	TXR-150	123	Inspection Bay	150.0	2	40 Feet	Straight	Std.	0 degrees	Nat. Gas	2.0 PSI	Yes	15'-0"	120	1	1.0	2, 3, 5, 6, 7	A
IR-3	TXR-150	123	Inspection Bay	150.0	2	40 Feet	Straight	Std.	0 degrees	Nat. Gas	2.0 PSI	Yes	15'-0"	120	1	1.0	2, 4, 5, 6, 7	
IR-4	TXR-150	123	Inspection Bay	150.0	2	40 Feet	Straight	Std.	0 degrees	Nat. Gas	2.0 PSI	Yes	15'-0"	120	1	1.0	2, 4, 5, 6, 7	

Based on products by Superior. Equal products by Detroit Radiant w ill be acceptable.

(*) To centerline of heating tube.

ACCESSORIES/OPTIONS:
1. Side Reflector Shield
2. 24 VAC Thermostatic Controls
3. Vent Termination Cap for Roof Mounting
4. Vent Termination Cap for Sidew all Mounting
5. Flexible Gas Line Connection
6. Chain Hanging Kit
7. Outside Combustion Air Kit

REMARKS:
A. Heaters IR-1 and IR-2 share a common exhaust vent and shall operate simultaneously. Provide suitable controls to ensure these heaters cycle on and off and betw een firing stages in parallel.

LOUVERS

MARK	MANUFACTURER'S MODEL NO.	SERVING	DIMENSIONS IN INCHES WIDTH	HGT.	DEPTH	F. A. SQ FT	APPLICATION	CFM	MAX P.D. "	CONSTRUCTION	ACCESSORIES/ OPTIONS	REMARKS
L-1	ELF-6375-DX	MU-1	80"	40"	6"	12.75	Intake	10,000	<0.10"	Aluminum	1, 3, 5	A
L-2	ELF-6375-DX	ERV's	48"	24"	6"	3.96	Intake	950	<0.05"	Aluminum	1, 3, 5	A
L-3	ELF-6375-DX	ERV's	48"	24"	6"	3.96	Exhaust	950	<0.05"	Aluminum	1, 3, 5	A
L-4	ELF-6375-DX	EF-5	24"	16"	6"	1.1	Exhaust	600	<0.05"	Aluminum	1, 3, 5	A
L-5	ELF-6375-DX	EF-6	24"	16'	6"	1.1	Exhaust	600	<0.05"	Aluminum	1, 3, 5	A

Based on products by Ruskin. Equal products w ill be acceptable.

ACCESSORIES/OPTIONS:
1. Bird Screen
2. Insect Screen
3. Channel Frame
4. Flange Frame
5. Extended Sill
6. Filter Rack
7. Subframe and Removeable Core
8. Security Bars

REMARKS:
A. Provide louver w ith baked enamel painted finish - color choice by Architect from manufacturer's standard colors.

DIRECT FIRED MAKE-UP AIR UNIT (GAS-FIRED)

MARK	MANUFACTURER MODEL NO.	ROOM NO.	UNIT SERVES	FAN CFM	E.S.P.	RPM	HP	HEATING E.A.T.	L.A.T.	MBH	MOD.	FUEL FUEL	PRESS.	RETURN AIR CAPABILITIES REQUIRED?	Max. R.A. Percentage	ELECTRICAL VOLT	PHASE	MCA	MOP	ACCESSORIES/ OPTIONS	REMARKS
MU-1	DGX-120-H32	123	Inspection Bay	10,000	0.50"	<750	7.5	-20	70	1050.0	Yes	Nat. Gas	2.0 PSI	Yes	80.0%	240	1	52.0	60.0	3, 5, 7, 9, 11	A, B, C, D, E, F, G

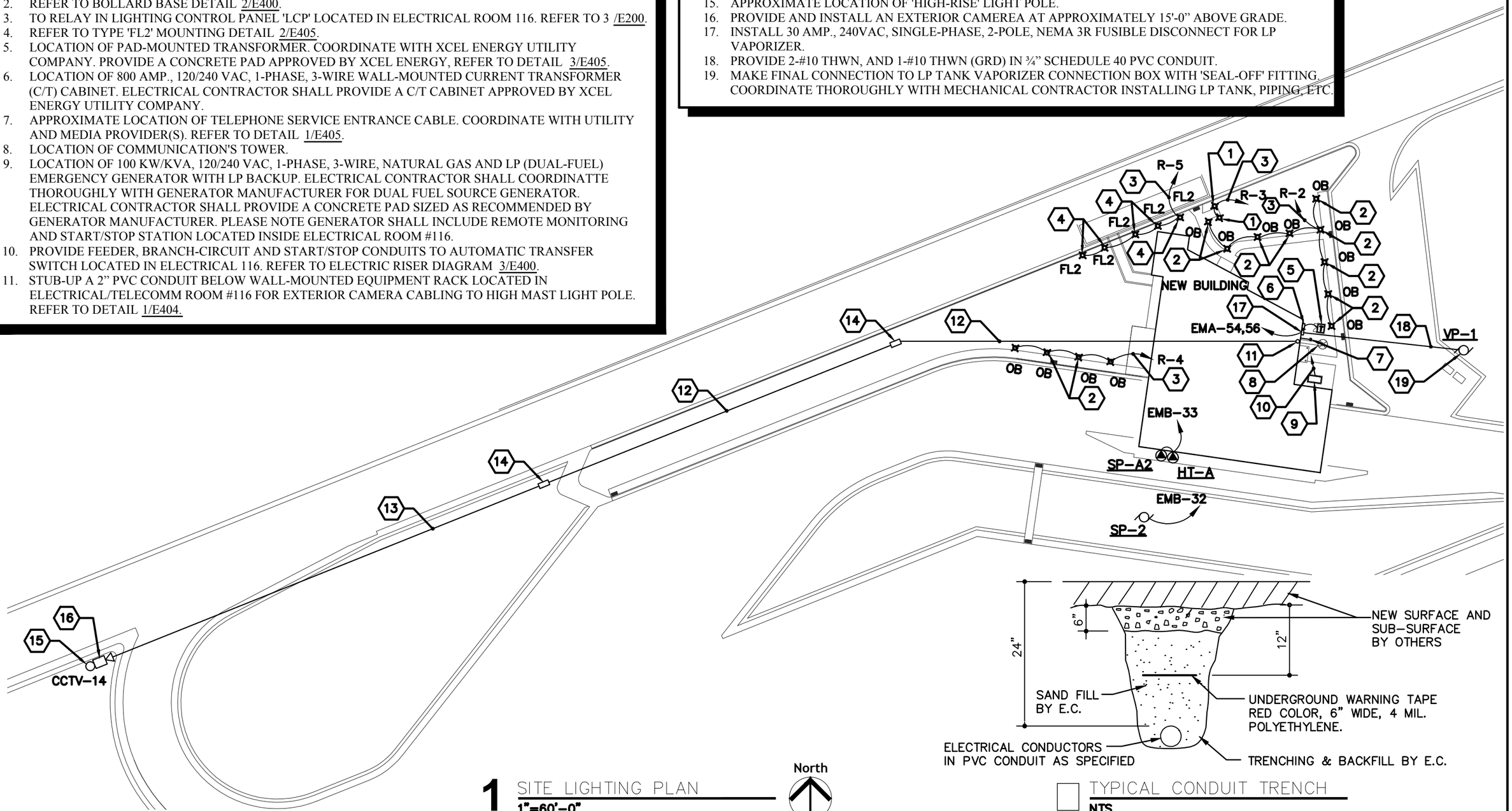
Based on products by Greenheck. Equal products by Captive-Aire, Rapid, Titan or Thermotek w ill be acceptable.

ACCESSORIES/OPTIONS:
1. Motorized Inlet Damper
2. Motorized Discharge Damper
3. Housing Insulation
4. Inlet Hood
5. Filter Box
6. Discharge Head
7. Suspension Frame
8. Vertical Configuration and Support Frame
9. Low Temperature Limit Control
10. Roof Curb
11. Vibration Isolators

REMARKS:
A. Provide w ith FM-Approved gas manifold suitable for Natural Gas.
B. Provide a field-installed motorized outside air damper (CD-7) w ith tw o-position damper actuator. Interlock this damper w ith operation of unit.
C. Provide a remote control panel w ith "FAN ON-OFF" and "HEAT ON-OFF" selector sw itches. Include indicator lights for "Pow er On", "Burner On", Filter Status.
D. Discharge air temperature shall be controlled w ith electronic modulation using a discharge air temperature sensor. A remote reset control shall be installed in the control panel.
E. Include a modulating damper on the mixing box w ith building pressure control. Mixing box shall modulate to maintain 0.05 inches negative pressure as referenced to the office space.
F. Unit shall be fully insulated w ith internal duct liner.
G. Provide a frame for suspension of unit from structure. Include a set of neoprene isolators matched to w eight distribution of unit.

KEYED SITE PLAN NOTES 1/E100:

1. MAKE FINAL CONNECTION TO FLAG-POLE LIGHT FIXTURE MOUNTED AT APPROXIMATELY 12'-0" ABOVE GRADE. PLEASE NOTE LIGHTING FIXTURE INCLUDED WITH FLAG POLE BY OTHERS. COORDINATE WITH FLAG POLE INSTALLER. CONNECT LIGHT FIXTURES TO LIGHTING CONTROL PANEL LOCATED IN ELECTRICAL ROOM #116. REFER TO DETAIL 3 /E200.
2. REFER TO BOLLARD BASE DETAIL 2/E400.
3. TO RELAY IN LIGHTING CONTROL PANEL 'LCP' LOCATED IN ELECTRICAL ROOM 116. REFER TO 3 /E200.
4. REFER TO TYPE 'FL2' MOUNTING DETAIL 2/E405.
5. LOCATION OF PAD-MOUNTED TRANSFORMER. COORDINATE WITH XCEL ENERGY UTILITY COMPANY. PROVIDE A CONCRETE PAD APPROVED BY XCEL ENERGY, REFER TO DETAIL 3/E405.
6. LOCATION OF 800 AMP., 120/240 VAC, 1-PHASE, 3-WIRE WALL-MOUNTED CURRENT TRANSFORMER (C/T) CABINET. ELECTRICAL CONTRACTOR SHALL PROVIDE A C/T CABINET APPROVED BY XCEL ENERGY UTILITY COMPANY.
7. APPROXIMATE LOCATION OF TELEPHONE SERVICE ENTRANCE CABLE. COORDINATE WITH UTILITY AND MEDIA PROVIDER(S). REFER TO DETAIL 1/E405.
8. LOCATION OF COMMUNICATION'S TOWER.
9. LOCATION OF 100 KW/KVA, 120/240 VAC, 1-PHASE, 3-WIRE, NATURAL GAS AND LP (DUAL-FUEL) EMERGENCY GENERATOR WITH LP BACKUP. ELECTRICAL CONTRACTOR SHALL COORDINATTE THOROUGHLY WITH GENERATOR MANUFACTURER FOR DUAL FUEL SOURCE GENERATOR. ELECTRICAL CONTRACTOR SHALL PROVIDE A CONCRETE PAD SIZED AS RECOMMENDED BY GENERATOR MANUFACTURER. PLEASE NOTE GENERATOR SHALL INCLUDE REMOTE MONITORING AND START/STOP STATION LOCATED INSIDE ELECTRICAL ROOM #116.
10. PROVIDE FEEDER, BRANCH-CIRCUIT AND START/STOP CONDUITS TO AUTOMATIC TRANSFER SWITCH LOCATED IN ELECTRICAL 116. REFER TO ELECTRIC RISER DIAGRAM 3/E400.
11. STUB-UP A 2" PVC CONDUIT BELOW WALL-MOUNTED EQUIPMENT RACK LOCATED IN ELECTRICAL/TELECOMM ROOM #116 FOR EXTERIOR CAMERA CABLING TO HIGH MAST LIGHT POLE. REFER TO DETAIL 1/E404.
12. PROVIDE A 2" SCHEDULE 40 PVC CONDUIT FOR EXTERIOR CAMERA CABLING LOCATED AT HIGH-RISE LIGHT POLE.
13. PROVIDE A 1" SCHEDULE 40 PVC CONDUIT FOR EXTERIOR CAMERA CABLING LOCATED AT HIGH-RISE LIGHT POLE.
14. PROVIDE A 13"(WIDE) X 24" (LONG) X 18" (DEEP) 'QUAZITE' WEATHERPROOF ENCLOSURE WITH 4" MOUSEHOLES. LABEL TOP COVER 'LOW-VOLTAGE'. MODEL #PG1118BB18 OR EQUAL.
15. APPROXIMATE LOCATION OF 'HIGH-RISE' LIGHT POLE.
16. PROVIDE AND INSTALL AN EXTERIOR CAMEREA AT APPROXIMATELY 15'-0" ABOVE GRADE.
17. INSTALL 30 AMP., 240VAC, SINGLE-PHASE, 2-POLE, NEMA 3R FUSIBLE DISCONNECT FOR LP VAPORIZER.
18. PROVIDE 2-#10 THWN, AND 1-#10 THWN (GRD) IN ¾" SCHEDULE 40 PVC CONDUIT.
19. MAKE FINAL CONNECTION TO LP TANK VAPORIZER CONNECTION BOX WITH 'SEAL-OFF' FITTING. COORDINATE THOROUGHLY WITH MECHANICAL CONTRACTOR INSTALLING LP TANK, PIPING, ETC.

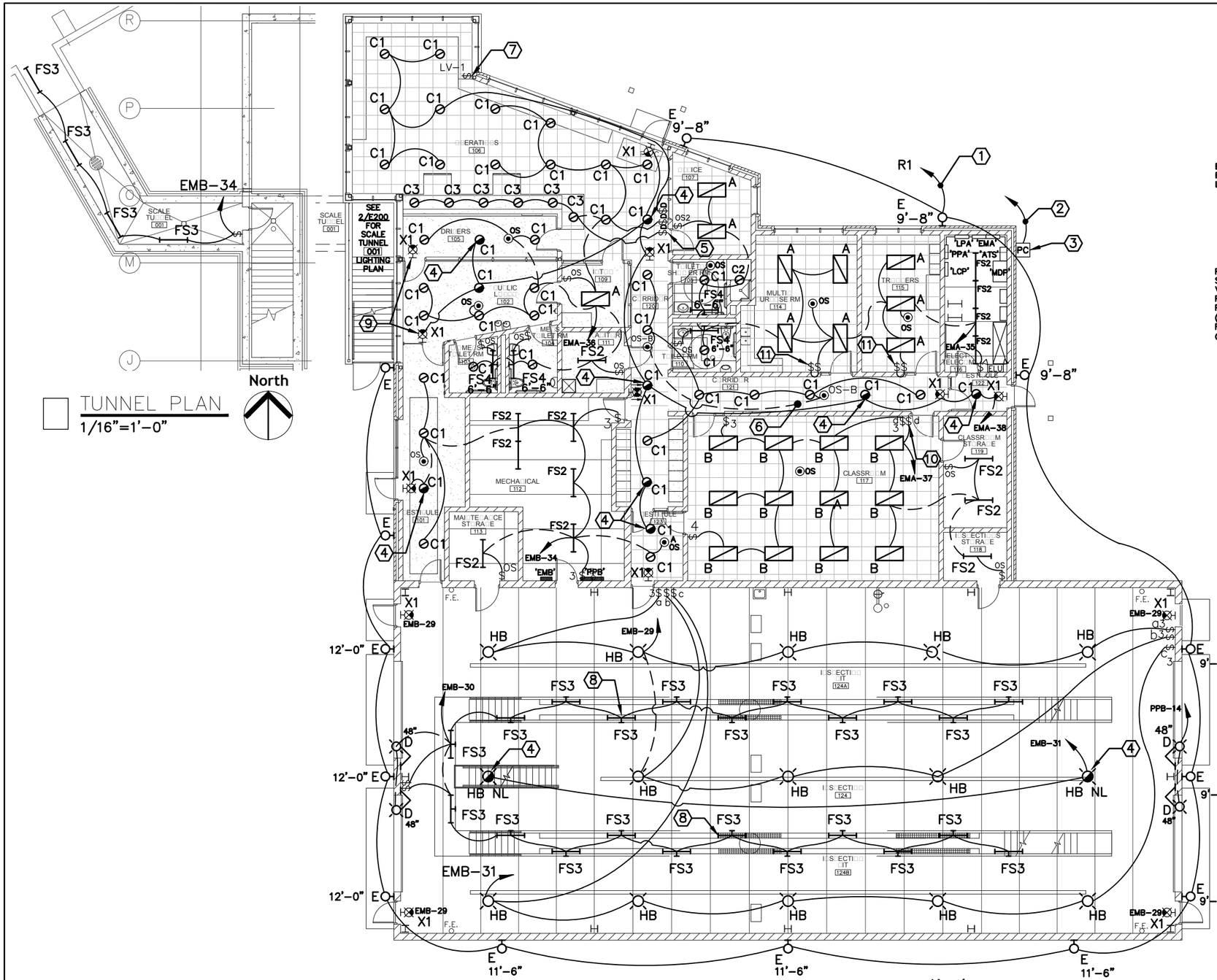


1 SITE LIGHTING PLAN
1"=60'-0"

North

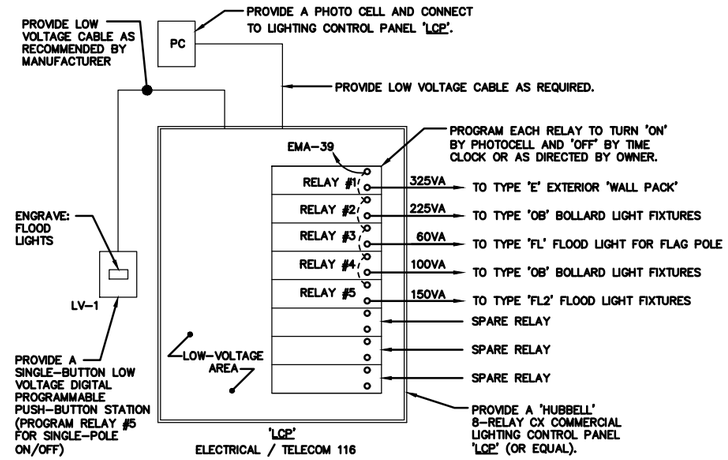
TYPICAL CONDUIT TRENCH
NTS

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL SITE □LA□ A□D S□M□□LS	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: E□00



TUNNEL PLAN
1/16"=1'–0"

1 LIGHTING PLAN
1/16"=1'–0"



LIGHTING CONTROL PANEL (LCP) DETAIL
N.T.S.

KEYED LIGHTING PLAN NOTES:

1. TO LIGHTING CONTROL PANEL LOCATED IN TELECOM ROOM #116. REFER TO DETAIL 3/E200.
2. TO LIGHTING CONTROL PANEL LOCATED IN TELECOM ROOM #116, EXTERIOR TYPE 'E', 'OB', AND 'FL2' LIGHTING FIXTURES SHALL BE CONTROLLED BY PHOTOCELL. REFER TO DETAIL 3/E200.
3. APPROXIMATE LOCATION OF EXTERIOR PHOTOCELL, CONNECT TO LIGHTING CONTROL PANEL. REFER TO DETAIL 1/E407.
4. LIGHTING FIXTURE SHALL BE CONTIUOUSLY ILLUMINATED AND SHALL SERVE AS A NIGHT LIGHT. (TYP.)
5. PROVIDE SINGLE POLE DIMMER SWITCH TO CONTROL TYPE 'C1' AND 'C3' LED RECESSED DOWN LIGHTS, PROVIDE LOW-VOLTAGE 0-10VOLT CONTROL WIRING (IF REQUIRED) TO EACH LIGHT FIXTURE.
6. INTERCONNECT OCCUPANCY SENSORS WITH LOW-VOLTAGE WIRING AS RECOMMENDED BY OCCUPANCY SENSOR MANUFACTURER. REFER TO DETAIL 2/E403.
7. PROVIDE A LOW-VOLTAGE SINGLE-BUTTON SWITCH TO CONTROL TYPE 'FL2' EXTERIOR FLOOD LIGHT FIXTURES. LOCATE SWITCH AS DIRECTED BY OWNER. REFER TO DETAIL 3/E200.
8. INSTALL LIGHTING FIXTURE(S) IN INSPECTION PIT. (TYPICAL)
9. INSTALL LIGHTING FIXTURE ON HOLLOW FRAME WORK. COORDINATE WITH GENERAL CONTRACTOR.
10. PROVIDE SINGLE POLE AND 3-WAY DIMMER SWITCHES TO CONTROL TYPE 'B' 2'X4' LED RECESSED LIGHT FIXTURES, PROVIDE LOW-VOLTAGE 0-10VOLT CONTROL WIRING (IF REQUIRED) TO EACH LIGHT FIXTURE. PLEASE NOTE TYPE 'B' FIXTURES INCLUDE 0-10VOLT DIMMING DRIVERS.
11. PROVIDE DUAL LEVEL SWITCHING FOR LED TYPE 'A' LIGHTING FIXTURES. PLEASE NOTE TYPE 'A' FIXTURES SHALL HAVE STEPPED DIMMING (50□) DRIVERS.

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL LI□HTI□□ □LA□		DATE:	
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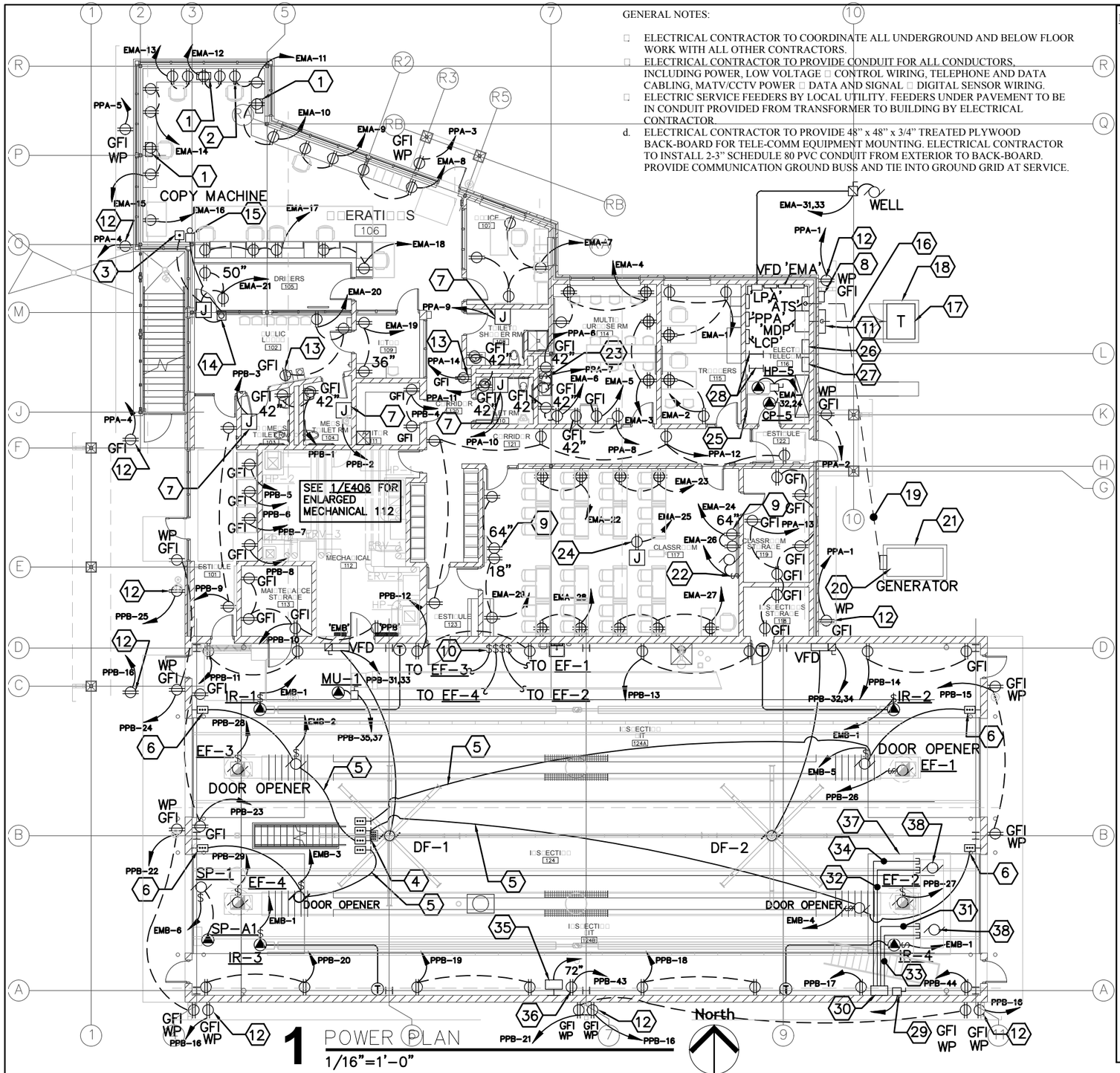

1 POWER PLAN
1/16"=1'-0"

GENERAL NOTES:

- ELECTRICAL CONTRACTOR TO COORDINATE ALL UNDERGROUND AND BELOW FLOOR WORK WITH ALL OTHER CONTRACTORS.
- ELECTRICAL CONTRACTOR TO PROVIDE CONDUIT FOR ALL CONDUCTORS, INCLUDING POWER, LOW VOLTAGE □ CONTROL WIRING, TELEPHONE AND DATA CABLING, MATV/CCTV POWER □ DATA AND SIGNAL □ DIGITAL SENSOR WIRING.
- ELECTRIC SERVICE FEEDERS BY LOCAL UTILITY. FEEDERS UNDER PAVEMENT TO BE IN CONDUIT PROVIDED FROM TRANSFORMER TO BUILDING BY ELECTRICAL CONTRACTOR.

d. ELECTRICAL CONTRACTOR TO PROVIDE 48" x 48" x 3/4" TREATED PLYWOOD BACK-BOARD FOR TELE-COMM EQUIPMENT MOUNTING. ELECTRICAL CONTRACTOR TO INSTALL 2-3" SCHEDULE 80 PVC CONDUIT FROM EXTERIOR TO BACK-BOARD. PROVIDE COMMUNICATION GROUND BUSS AND TIE INTO GROUND GRID AT SERVICE.

KEYED POWER PLAN NOTES 1E/300:

1. LOCATION OF 'WEIGH-IN-MOTION' INSPECTION CCTV MONITOR.
2. MOUNT RECEPTACLES IN OPERATIONS ROOM 106 ON WINDOW WALL AT 12" A.F.F. (TYPICAL)
3. PROVIDE AND INSTALL A PUSH BUTTON FOR ELECTRIC DOOR STRIKE LOCATED IN DOOR TO DRIVERS ROOM 105. PUSHBUTTON SHALL UNLOCK DOOR WHEN ENERGIZED. FIELD VERIFY EXACT LOCATION WITH OWNER.
4. MAKE FINAL CONNECTION TO PUSH-BUTTON DOOR OPERATORS FOR OVERHEAD DOORS LOCATED ON THIS COLUMN, FOUR (4) DOORS TOTAL.
5. PROVIDE LOW-VOLTAGE WIRING BETWEEN OVERHEAD DOOR PUSH-BUTTON OPERATOR AND OVERHEAD DOOR MOTOR CONTROLLER AS RECOMMENDED BY OVERHEAD DOOR MANUFACTURER. ROUTE WIRING BELOW CONCRETE SLAB IN SCHEDULE 40 PVC CONDUIT TO AN EXTERIOR WALL AND RISE ABOVE CONCRETE FLOOR TO THE CEILING AND CONVERT TO EMT CONDUIT FOR FINAL CONNECTION TO MOTOR.
6. MAKE FINAL CONNECTION TO PUSH-BUTTON DOOR OPERATOR FOR OVERHEAD DOOR LOCATED ON THIS COLUMN.
7. PROVIDE A JUNCITON BOX A 5'-0" A.F.F. FOR ELECTRIC HAND DRYER. MAKE FINAL CONNECTION TO ELECTRIC HAND DRYER.
8. PROVIDE AND INSTALL A HEAT TAPE CONTROL PANEL AS SPECIFIED. ELECTRICAL CONTRACTOR IS RESPONSIBLE FOR PROVIDING HEAT TAPE CABLE FOR ALL GUTTERS AND DOWNSPOUTS ON THE BUILDING. REFER TOARCHITECTURAL DRAWINGS AND DETAILS FOR ESTIMATING LENGTHS. REFER TO DETAIL 2/E401.
9. PROVIDE A DUPLEX RECEPTACLE FOR WALL-MOUNTED MONITOR FOR A/V SYSTEM.
10. PROVIDE A SINGLE POLE MOTOR RATED MANUAL SWITCH T O CONTROL EXHAUST FAN. PROVIDE A STAINLESS STEEL COVER PLATE WITH ENGRAVED LABEL AS NOTED IN MOTOR/EQUIPMENT SCHEDULE.
11. LOCATION OF 800 AMP., 120/240VAC, SINGLE-PHASE, 3-WIRE, C/T CABINET. REFER TO ELECTRIC RISER DIAGRAM 3/E400.
12. RECEPTACLE MOUNTED IN SOFFIT FOR HEAT TAPE CONNECTION. CONNECT TO HEAT-TAPE CONTROLLER. REFER TO DETAIL 2/E401.
13. PROVIDE A DUPLEX GFI RECEPTACLE FOR ELECTRIC WATER COOLER, COORDINATE WITH PLUMBING CONTRACTOR.
14. PROVIDE AND INSTALL PUSH BUTTON FOR DOOR BELL LOCATED IN OPERATIONS ROOM 106.
15. PROVIDE AND INSTALL A DOOR CHIME IN THIS APPROXIMATE LOCATION. FIELD VERIFY EXACT LOCATION WITH OWNER. PROVIDE THE FOLLOWING: PUSHBUTTON: NUTONE #PB69BL (BLACK COLOR), DOOR CHIME: NUTONE LA11WH (WHITE COLOR), TRANSFORMER: NUTONE C905 (FOR SINGLE CHIME). OR APPROVED EQUAL.
16. NEW UNDERGROUND SECONDARY ELECTIC SERVICE. REFER TO ELECTRIC RISER DIAGRAM 3/E400.
17. NEW PAD-MOUNTED TRANSFORMER PROVIDED AND INSTALLED BY XCEL ENERGY UTILITY COMPANY. REFER TO ELECTRIC RISER DIAGRAM 3/E400.
18. ELECTRICAL CONTRACTOR SHALL PROVIDE A CONCRETE PAD APPROVED BY XCEL ENERGY UTILITY COMPANY FOR TRANSFORMER. REFER TO DETAIL 3/E405.
19. APPROXIMATE LOCATION OF UNDERGROUND EMERGENCY FEEDER, BRANCH-CIRCUIT, AND START/STOP CONDUITS FROM EMERGENCY GENERATOR TO AUTOMATIC TRANSFER SWITCH AND PANELBOARD 'EMA'. REFER TO ELECTRIC RISER DIAGRAM 3/E400.
20. APPROXIMATE LOCATION OF NEW EMERGENCY GENERATOR PROVIDED AND INSTALLED BY ELECTRICAL CONTRACTOR. REFER TO ELECTRIC RISER DIAGRAM 3/E400.
21. ELECTRICAL CONTRACTOR SHALL PROVIDE A CONCRETE PAD FOR EMERGENCY GENERATOR SIZED AS RECOMMENDED BY GENERATOR MANUFACTURER.
22. ELECTRICAL CONTRACTOR SHALL INSTALL SWITCH PROVIDED BY A/V EQUIPMENT CONTRACTOR TO CONTROL MOTORIZED PROJECTION SCREEN. COORDINAE WITH A/V CONTRACTOR.
23. PROVIDE A 20 AMP., 120 VAC, SINGLE-POLE SWITCH TO CONTROL GARBAGE DISPOSAL LOCATED BELOW COUNTER IN SINK COMPARTMENT.
24. MOUNT DUPLEX RECEPTACLE FLUSH IN CEILING FOR OVERHEAD A/V PROJECTOR.
25. ELECTRICAL CONTRACTOR TO PROVIDE 48" HIGH PLYWOOD BACKBOARD WITH FIRE-PROOF PAINT FOR LOW VOLTAGE EQUIPMENT FOR TELEPHONE, DATA, RF AND SECURITY PROVIDED AND INSTALLED BY OTHERS.
26. CLOSED CIRCUIT TELEVISION (CCTV) AND PUBLIC ADDRESS SYSTEM INSTALLED INSIDE WALL-MOUNTED EQUIPMENT RACK LOCATED HERE.
27. WEATHER MONITOR SYSTEM. ROUTE RG6 CABLE FROM SATELLITE DISH TO CONVERTOR BOX LOCATED IN TELECOM ROOM, THEN EXTEND RG6 CABLE TO MONITOR IN DRIVERS ROOM.
28. PROVIDE AND INSTALL TWO (2) EQUIPMENT RACK(S) FOR BUILDING DATA/VOICE, WEIGH-IN-MOTION AND PREPASS ELECTRONIC EQUIPMENT. REFER TO DETAIL 1/E401.
29. ELECTRICAL CONTRACTOR SHALL PROVIDE A 125 AMP., 2-P0LE HEAVY DUTY FUSIBLE DISCONNECT SWITCH WITH SOLID NEUTRAL FOR BRAKE TESTER EQUIPMENT. PROVIDE FUSES SIZED AS REQUIRED BY BRAKE TEST EQUIPMENT MANUFACTURER.
30. ELECTRICAL CONTRACTOR SHALL MOUNT BRAKE TESTER CONTROL PANEL TO THE WALL IN THIS APPROXIMATE LOCATION. CONTROL PANEL AND BRACKETS PROVIDED BY BRAKE TESTER MANUFACTURER. ALL LOW VOLTAGE WIRING INSTALLED (PULLED) BY ELECTRICAL CONTRACTOR. LOW VOLTAGE WIRING SUPPLIED AND TERMINATED BY BRAKE TESTER EQUIPMENT SUPLIER.
31. ELECTRICAL CONTRACTOR SHALL PROVIDE (2) 2" CONDUITS FROM BRAKE TESTER CONTROL PANEL TO SOUTH ROLLER LOCATED IN EQUIPMENT PIT, INSTALL BELOW CONCRETE FLOOR. REFER TO MANUFACTURER INSTALLATION INSTRUCTIONS.
32. ELECTRICAL CONTRACTOR SHALL PROVIDE (2) 2" CONDUITS FROM BRAKE TESTER CONTROL PANEL TO NORTH ROLLER LOCATED IN EQUIPMENT PIT, INSTALL BELOW CONCRETE FLOOR. REFER TO MANUFACTURER INSTALLATION INSTRUCTIONS.
33. ELECTRICAL CONTRACTOR SHALL PROVIDE (2) 3/4" CONDUITS FROM BRAKE TESTER CONTROL PANEL TO SOUTH ROLLER SAFETY SENSOR BRACKET LOCATED IN EQUIPMENT PIT, INSTALL BELOW CONCRETE FLOOR. REFER TO MANUFACTURER INSTALLATION INSTRUCTIONS. MOUNTING (INSTALLATION) OF INFRARED TRANSMITTERS AND RECEIVERS SAFETY SENSOR EQUIPMENT BY ELECTRICAL CONTRACTOR. ALL LOW-VOLTAGE WIRING PROVIDED BY AND TERMINATED BY BRAKE TESTER EQUIPMENT SUPPLIER, INSTALLED (PULLED) BY ELECTRICAL CONTRACTOR.
34. ELECTRICAL CONTRACTOR SHALL PROVIDE (2) ¾" CONDUITS FROM BRAKE TESTER CONTROL PANEL TO NORTH ROLLER SAFETY SENSOR BRACKET LOCATED IN EQUIPMENT PIT, INSTALL BELOW CONCRETE FLOOR. REFER TO MANUFACTURER INSTALLATION INSTRUCTIONS. MOUNTING (INSTALLATION) OF SAFETY SENSOR EQUIPMENT BY ELECTRICAL CONTRACTOR. ALL LOW-VOLTAGE WIRING PROVIDED AND TERMINATED BY BRAKE TESTER EQUIPMENT SUPPLIER, INSTALLED (PULLED) BY ELECTRICAL CONTRACTOR.
35. ELECTRICAL CONTRACTOR SHALL INSTALL BRAKE TESTER DISPLAY MONITOR LOCATED APPROXIMATELY 72" A.F.F. PROVIDE (2) 1" CONDUITS BETWEEN BRAKE TESTER CONTROL PANEL AND DISPLAY MONITOR FOR LOW-VOLTAGE WIRING. LOW-VOLTAGE WIRING PROVIDED AND TERMINATED BY BRAKE TESTER EQUIPMENT SUPPLIER, INSTALLED (PULLED) BY ELECTRICAL CONTRACTOR.
36. PROVIDE A DUPLEX RECEPTACLE FOR BRAKE TESTER DISPLAY MONITOR. COORDINATE MOUNTING HEIGHT WITH MANUFACTURER REPRESENTATIVE. ALL LOW-VOLTAGE WIRING AND TERMINATION BY BRAKE TESTER EQUIPMENT SUPPLIER.
37. LOCATION OF BRAKE TESTER EQUIPMENT PIT.
38. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL LOAD SIDE WIRING BETWEEN CONTROL PANEL AND MOTORS LOCATED INSIDE PIT. MAKE FINAL CONNECTION TO BRAKE TESTER MOTORS LOCATED INSIDE EQUIPMENT PIT. COORDINATE THOROUGHLY WITH BRAKE TESTER MANUFACTURER PRIOR TO SUBMITTING BID TO DETERMINE SCOPE OF WORK.

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL □□□ ER □LA□		DATE:
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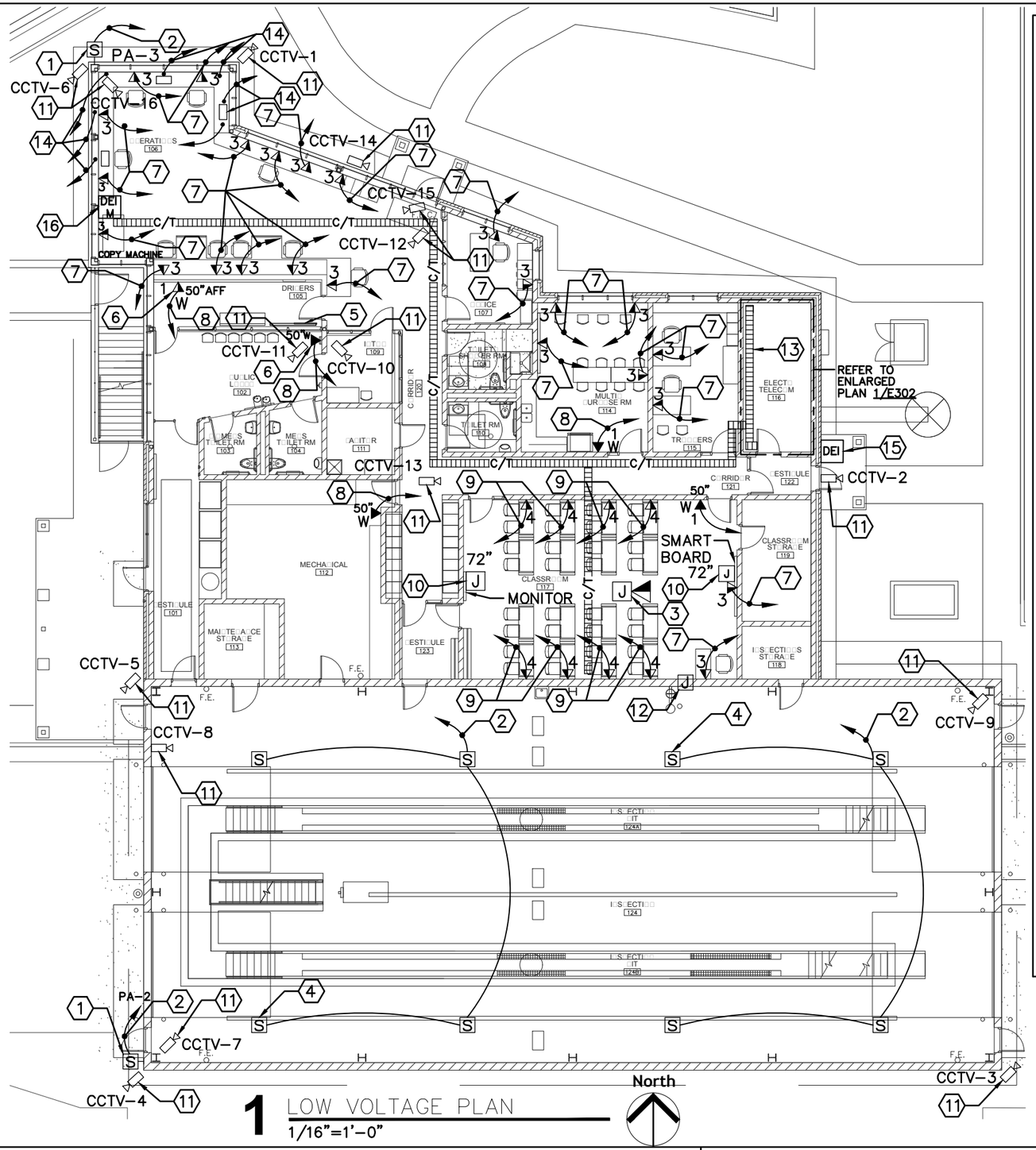

1 LOW VOLTAGE PLAN
1/16"=1'-0"

North

KEYED LOW VOLTAGE PLAN NOTES 1/E301:

1. PROVIDE AND INSTALL A WEATHER PROOF PUBLIC ADDRESS LOUD-SPEAKER AS SPECIFIED. REFER TO DETAIL 1/E403.
2. PROVIDE A #14/2 OVER-ALL-SHIELDED (O.A.S.) CABLE TO SOUND SYSTEM AMPLIFIER LOCATED IN EQUIPMENT RACK IN ELECTRICAL/TELECOM ROOM 116. REFER TO DETAIL 1/E403.
3. PROVIDE A CEILING MOUNTED JUNCTION BOX FOR CAT6 AND A/V LOW-VOLTAGE WIRING TO PROJECTOR.
4. PROVIDE AND INSTALL A SURFACE CEILING MOUNTED PUBLIC ADDRESS SPEAKER. ROUTE #14/2 AWG SPEAKER CABLE TO SOUND AMPLIFIER LOCATED IN ELECTRICAL/TELECOM ROOM 116. (TYP. OF 8) REFER TO DETAIL 1/E403.
5. TELEVISION MONITOR DEDICATED TO WEATHER MONITORING SYSTEM. PROVIDE A 3/4" CONDUIT WITH ONE (1) RG6 COAX CABLE TO ELECTRICAL/TELECOM ROOM 116. COORDINATE WITH WEATHER MONITORING SYSTEM INSTALLER.
6. WALL MOUNTED COURTESY TELEPHONE PROVIDED AND INSTALLED BY OTHERS, PROVIDE A WALL-MOUNTED JACK.
7. PROVIDE THREE (3) CAT 6 DATA CABLES TO EQUIPMENT RACK PATCH PANEL LOCATED IN ELECTRIC/TELECOM ROOM 116 AND TERMINATE BOTH ENDS.
8. PROVIDE ONE (1) CAT 6 DATA CABLE TO EQUIPMENT RACK PATCH PANEL LOCATED IN ELECTRIC/TELECOM ROOM 116 AND TERMINATE BOTH ENDS.
9. PROVIDE FOUR (4) CAT 6 DATA CABLES TO EQUIPMENT RACK PATCH PANEL LOCATED IN ELECTRIC/TELECOM ROOM 116 AND TERMINATE BOTH ENDS.
10. PROVIDE A DOUBLE GANG JUNCTION BOX FOR WALL-MOUNTED LARGE SCREEN MONITOR. STUB TWO (2) 1" EMT CONDUITS ABOVE SUSPENDED CEILING FOR A/V CABLES.
11. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL IP CAMERA AS SPECIFIED. PROVIDE, INSTALL □ TERMINATE ON BOTH ENDS ONE (1) CAT6E CABLE BETWEEN EACH IP CAMERA AND POINT-OVER-ETHERNET SWITCH LOCATED IN ELECTRICAL ROOM 116. REFER TO DETAIL 1/E404.
12. PROVIDE A 6"X6"X4" JUNCTION BOX MOUNTED AT 18" A.F.F FOR TEACHERS AREA FOR A/V EQUIPMENT WIRING. STUB A 2" EMT CONDUIT FROM J-BOX TO ABOVE SUSPENDED CEILING.
13. PROVIDE LADDER RACK INSIDE TELECOM ROOM #116, ELECTRICAL CONTRACTOR SHALL COORDINATE EXACT LOCATION WITH OTHER TRADES PRIOR TO INSTALLING.
14. PROVIDE AN EMPTY 1" SCHEDULE 40 PVC CONDUIT FOR CONSOLE/NETWORK WIRING BETWEEN COUNTER AND IT EQUIPMENT RACKS LOCATED IN TELECOMM ROOM #116. COORDINATE WITH THE INSPECTION MONITORING EQUIPMENT SUPPLIERS.
15. PROVIDE A DOOR ENTRY INTERCOM (DEI) AS SPECIFIED. REFER TO DETAIL 1/E504.
16. PROVIDE A DOOR ENTRY INTERCOM MASTER (DEI M) AS SPECIFIED. REFER TO DETAIL 1/E504.

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL L□□ □□LTA□E □LA□S	DATE:	
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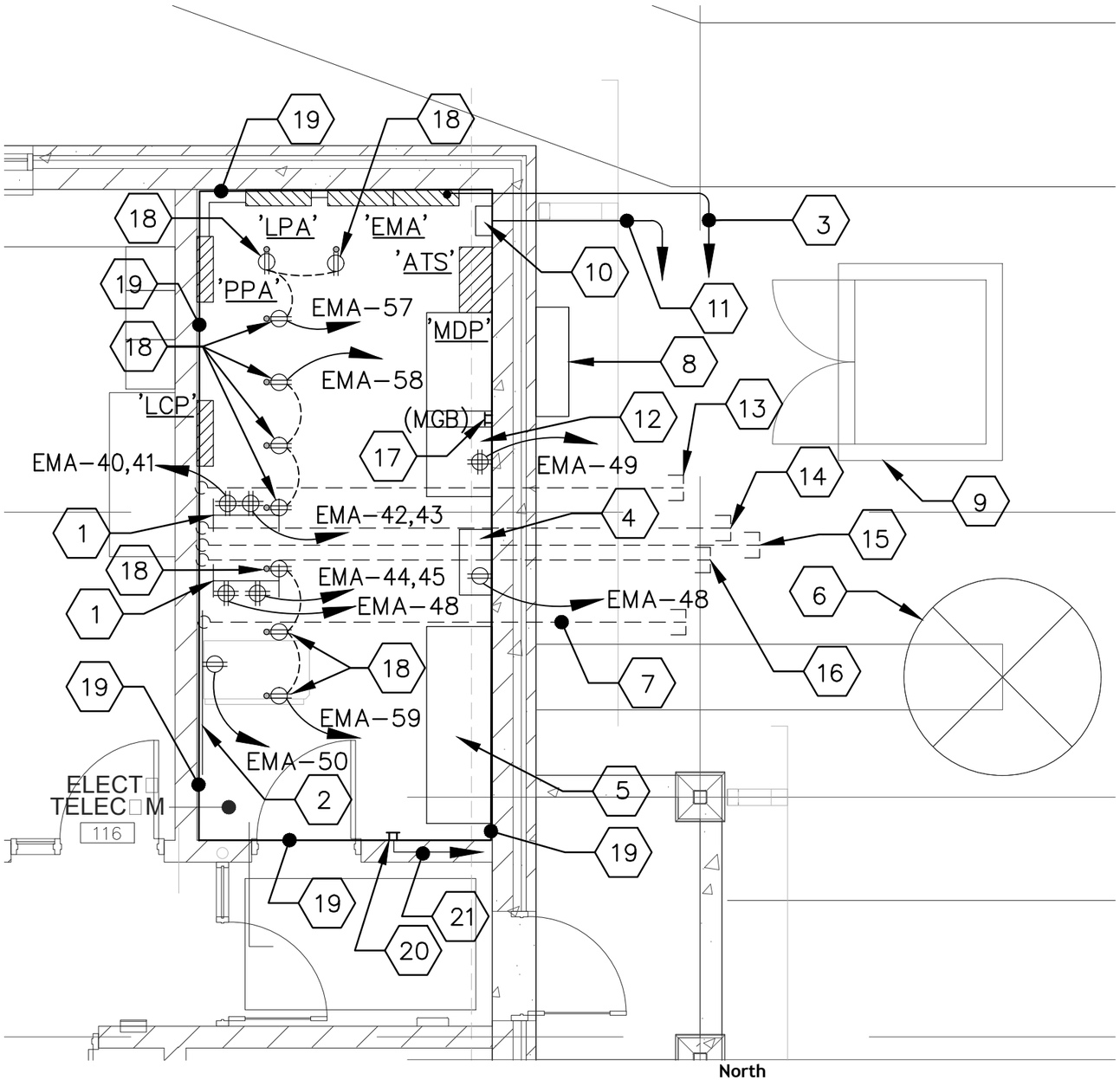


1 ENLARGED TELECOM RM.116
1/4"=1'-0"

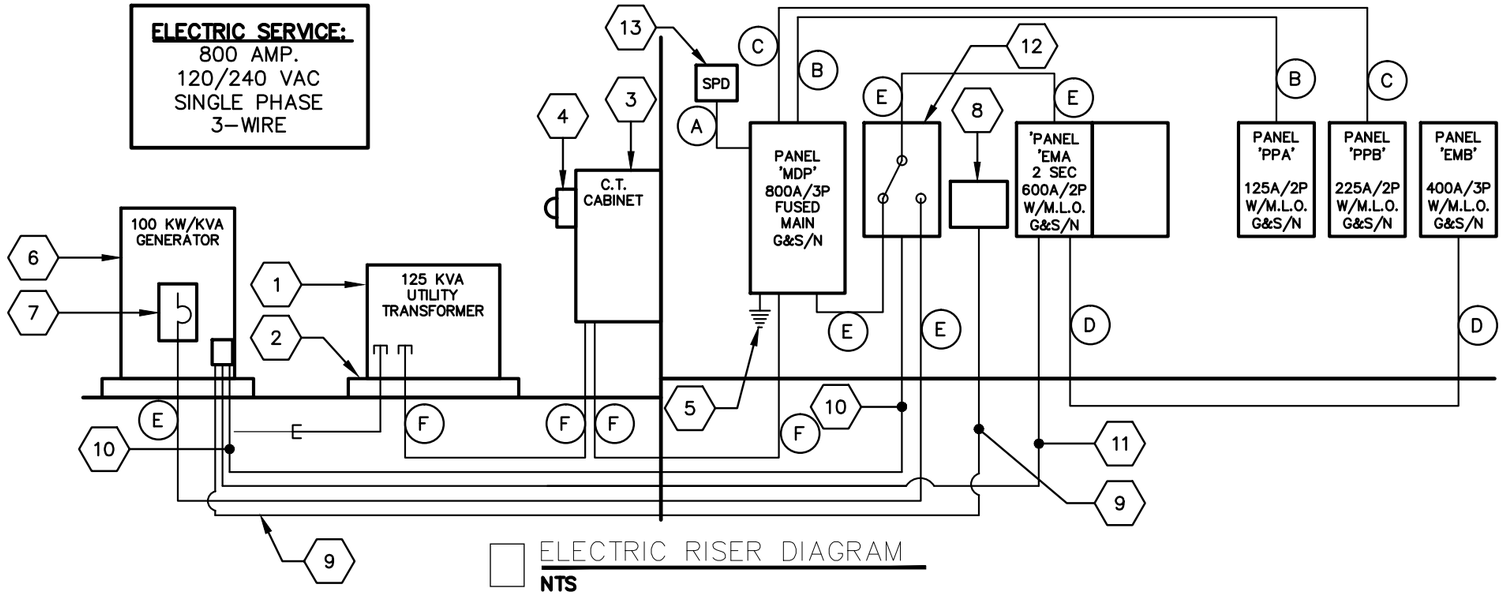
KEYED TELECOM ROOM 116 NOTES 1/E302:

1. PROVIDE TWO (2) EQUIPMENT RACKS FOR DATA, WEIGH-IN-MOTION AND PREPASS ELECTRONIC EQUIPMENT. REFER TO DETAIL 1/E401.
2. ELECTRICAL CONTRACTOR TO PROVIDE 48" HIGH, FIRE PROOF PLYWOOD BACKBOARD FOR LOW VOLTAGE EQUIPMENT REQUIRED FOR TELEPHONE, DATA, RF AND SECURITY PROVIDED AND INSTALLED BY OTHERS. REFER TO DETAIL 1/E405.
3. PROVIDE A ¾" SCHEDULE 40 PVC CONDUIT BETWEEN PANELBOARD 'EMA' AND EMERGENCY GENERATOR FOR BATTERY CHARGER, RECEPTACLE, HEATER, ETC. WITH BRANCH-CIRCUITS EMA-51,53,55.
4. WEATHER MONITOR SYSTEM. ROUTE RG-6 CABLE FROM SATELLITE DISH TO CONVERTER BOX LOCATED IN TELECOM ROOM 116. THEN EXTEND RG-6 CABLE TO MONITOR IN DRIVERS ROOM 105.
5. OPEN SPACE FOR SPECIALIZED RADIO TOWER EQUIPMENT INSTALLATION BY OTHERS.
6. RADIO / SATELLITE TOWER BY OTHERS.
7. PROVIDE TWO (3") PVC CONDUITS FOR TELEPHONE/MEDIA/FIBRE-OPTIC SERVICE CABLES. REFER TO DETAIL 1/E405.
8. LOCATION OF WALL-MOUNTED CURRENT TRANSFORMER (C/T) CABINET.
9. LOCATION OF XCEL ENERGY PAD-MOUNTED TRANSFORMER. REFER TO ELECTRIC RISER DIAGRAM 3/E400.
10. PROVIDE AND INSTALL A REMOTE MONITOR WITH START/STOP STATION FOR EMERGENCY GENERATOR SYSTEM.
11. PROVIDE A LOW-VOLTAGE CABLE AS RECOMMENDED BY EMERGENCY GENERATOR MANUFACTURER BETWEEN REMOTE ANNUNCIATOR STATION AND EMERGENCY GENERATOR.
12. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A WALL-MOUNTED EQUIPMENT RACK FOR CCTV AND PUBLIC ADDRESS SYSTEM RACK-MOUNTED EQUIPMENT.
13. STUB OUT AN EMPTY 2" SCHEDULE 40 PVC CONDUIT FOR POWER WIRING TO 'WEIGH-IN-MOTION' SYSTEM.
14. STUB OUT AN EMPTY 2" SCHEDULE 40 PVC CONDUIT FOR FIBER-OPTIC WIRING TO 'WEIGH-IN-MOTION' SYSTEM.
15. STUB OUT AN EMPTY 2" SCHEDULE 40 PVC CONDUIT FOR 'PREPASS WIRING SYSTEM.
16. STUB OUT AN EMPTY 2" SCHEDULE 40 PVC CONDUIT FOR FIBER-OPTIC WIRING TO RAMP 'WEIGH-IN-MOTION' SYSTEM.
17. LOCATION OF 'MAIN GROUNDING BAR' (MGB). REFER TO DETAILS 1/E402 AND 2/E402.
18. ELECTRICAL CONTRACTOR SHALL PROVIDE A 20 AMP., 120 VOLT, DUPLEX RECEPTACLE PENDANT CORD DROP. FIELD VERIFY EXACT LOCATION ON-SITE WITH OWNER. PROVIDE THE FOLLOWING: 4"X4"X2-1/8" SURFACE JUNCTION BOX MOUNTED AT STRUCTURAL CEILING, SO CORD RELIEF STRAIN CONNECTOR INSTALLED AT JUNCTION BOX, #12/3 SO CORD (LENGTH AS REQUIRED), KELLEMS WIRE GRIP ON END OF SO CORD BY DUPLEX RECEPTACLE, 'YELLOW' HEAVY DUTY JUNCTION BOX WITH 20AMP., 120VAC DUPLEX RECEPTACLE WITH STRAIN RELIEF CONNECTOR. PENDANT CORD DROP SHALL BE INSTALLED APPROXIMATELY 10'-0" A.F.F.
19. ELECTRICAL CONTRACTOR SHALL PROVIDE AND INSTALL A 'HALO' GROUNDING SYSTEM IN ELECT/TELECOM ROOM 116. INSTALL A #2 BARE COPPER GROUND CONDUCTOR SECURELY FASTENED TO PERIMITER OF ROOM AT APPROXIMATELY 10'-0" A.F.F.
20. PROVIDE A COPPER GROUND BAR APPROXIMATELY 4" HIGH X 18" LONG FOR 'HALO' GROUND SYSTEM.
21. PROVIDE A #4/0 COPPER CONDUCTOR AND CONNECT TO GROUND RING LOCATED ON EXTERIOR OF BUILDING. COORDINATE WITH LIGHTNING PROTECTION CONTRACTOR.

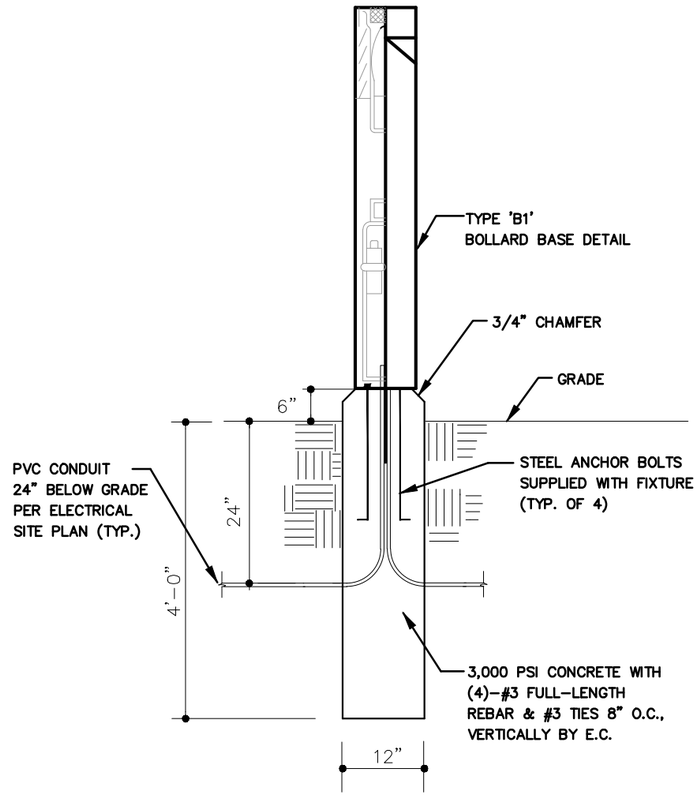
FEEDER SCHEDULE

SYMBOL	AMPS	CONDUCTOR SIZE	NUMBER OF CONDUCTORS	GROUND SIZE	CONDUIT SIZE	REMARKS
(A)	30	10	3	10	3/4"	'SPD'
(B)	100	3	3	8	1-1/4"	PANELBOARD 'PPA'
(C)	225	4/0	3	4	2"	PANELBOARD 'PPB'
(D)	400	500	3	3	3"	PANELBOARD 'EMB'
(E)	600	350	3	3	2-1/2"	2 - PARALLEL RUNS
(F)	800	500	3	-	3"	2 - PARALLEL RUNS

1 FEEDER SCHEDULE
NTS



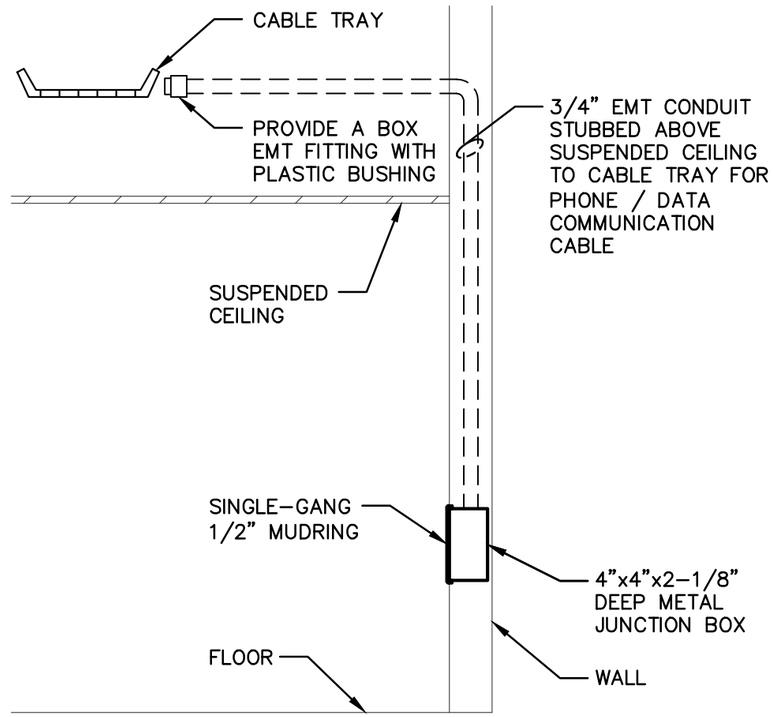
ELECTRIC RISER DIAGRAM
NTS



TYPE 'OB' BOLLARD BASE
NTS

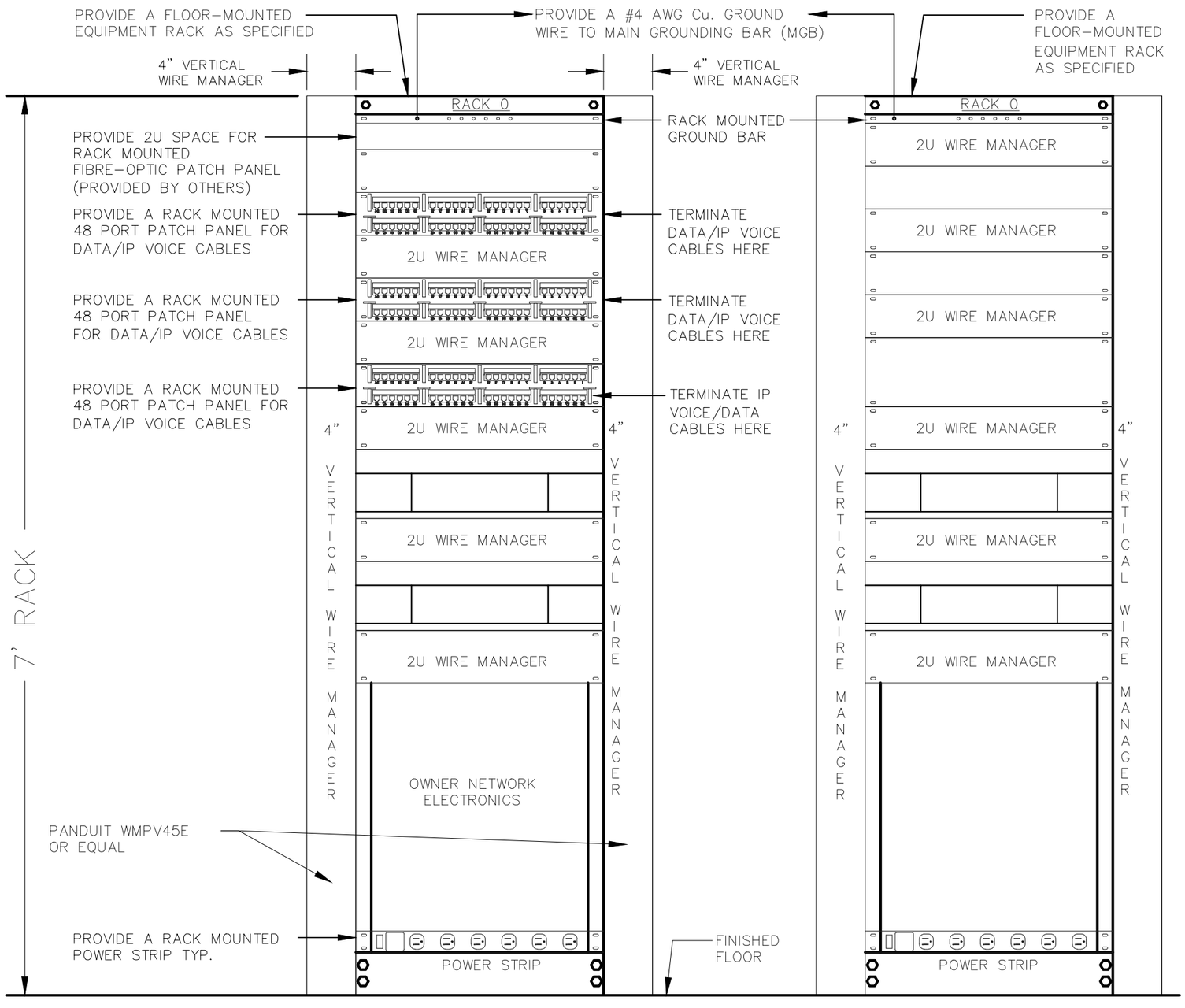
KEYED ELECTRIC RISER DIAGRAM NOTES 3/E400 :

1. UTILITY PAD-MOUNTED TRANSFORMER INSTALLED BY XCEL UTILITY COMPANY.
2. PROVIDE A CONCRETE PAD FOR PAD-MOUNTED TRANSFORMER. REFER TO DETAIL 3/E405.
3. PROVIDE A WALL-MOUNTED 800 AMP., 120/240VAC, SINGLE-PHASE, CURRENT TRANSFORMER (C/T) CABINET APPROVED BY XCEL UTILTY COMPANY.
4. INSTALL METER SOCKET PROVIDED BY XCEL UTILITY COMPANY. COORDINATE WITH METER DEPARTMENT.
5. PROVIDE GROUNDING AND BONDING PER NEC CODE RULES, REFER TO DETAIL 1/E402.
6. PROVIDE A 100 KW/KVA 120/240 VAC, SINGLE-PHASE, 3-WIRE EMERGENCY GENERATOR. PLEASE NOTE GENERATOR SHALL EQUIPPED NATURAL GAS AND LP DUAL FUEL SOURCE. PLEASE COORDINATE THOROUGHLY WITH GENERATOR MANUFACTURER TO PROVIDE ALL ACCESSORIES REQUIRED FOR THIS DUAL FUEL SOURCE.
7. PROVIDE DOUBLE LUGS RATED FOR 350KCMIL (MINIMUM) ON MAIN CIRCUIT BREAKER. PLEASE COORDINATE WITH GENERATOR MANUFACTURER PRIOR TO ORDERING GENERATOR.
8. PROVIDE A REMOTE EMERGENCY GENERATOR ANNUNCIATOR AND START/STOP STATION. LOCATED AS DIRECTED BY OWNER.
9. PROVIDE A LOW-VOLTAGE CABLE AS RECOMMENDED BY GENERATOR MANUFACTURER BETWEEN REMOTE ANNUNCIATOR PANEL AND GENERATOR CONTROL PANEL.
10. PROVIDE 2-#14 THWN AND 1-#14 THWN (GRD) IN ¾" SCHEDULE 40 PVC CONDUIT FOR START/STOP CONTROL WIRES.
11. PROVIDE A ¾" SCHEDULE 40 PVC CONDUIT WITH 6-#12 THWN AND 1-#12 THWN (GRD) FOR THE FOLLOWING BRANCH-CIRCUITS:
    EMA-51 (BATTERY CHARGER), EMA-53 (BLOCK HEATER), EMA-55 (RECEPTACLE), ETC.
12. PROVIDE A 600 AMP., 120/240 VAC, SINGLE-PHASE, 3-WIRE AUTOMATIC TRANSFER SWITCH (ATS).
13. PROVIDE A SURGE PROTECTIVE DEVICE (SPD).

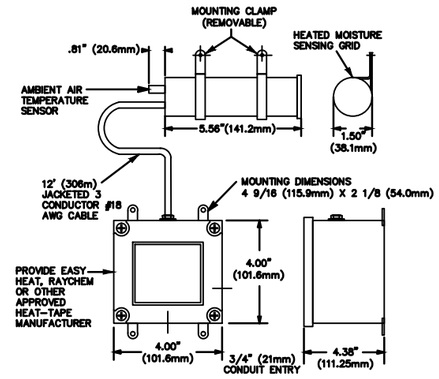


TELECOM JUNCTION BOX DETAIL
NTS

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRIC RISER DIAGRAM AND DETAILS	DATE:
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: E400

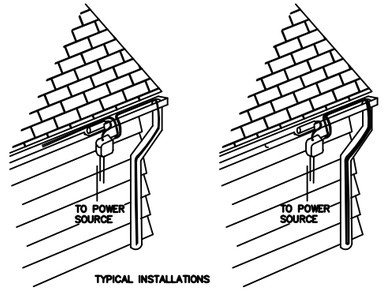


1 IT / AV RACK DETAIL (2–EQUIPMENT RACKS)
NTS

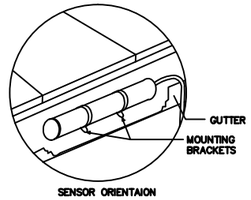


SIMPLIFIED DRAWING OF INSTALLATIONS USING BOTH CONSTANT WATTAGE AND SELF–LIMITING HEATING CABLES FOLLOW. THESE SHOW TYPICAL HEATING CABLE PLACEMENT ALONG WITH A SENSOR AND CONTROL ENCLOSURE LOCATIONS. REFER TO INSTALLATION DATA PROVIDED BY HEATING CABLE MANUFACTURE AND THE INSTRUCTION MANUAL FOR MORE DETAILED INFORMATION.

INSTALLATIONS MUST MEET THE REQUIREMENT OF BOTH THE LOCAL AND NATIONAL ELECTRICAL CODES.



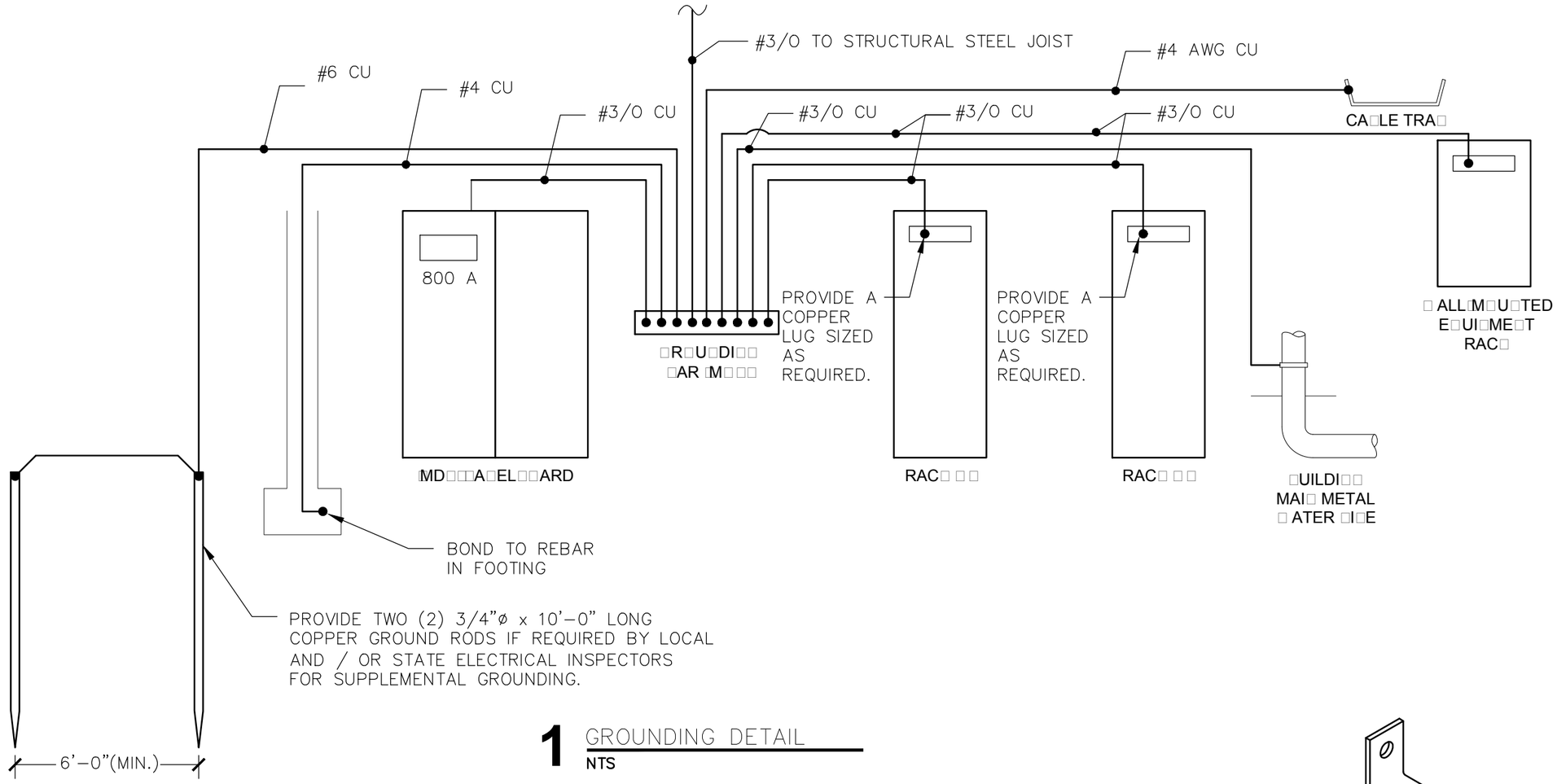
TYPICAL INSTALLATIONS



SENSOR ORIENTAION

☐ HEAT TAPE DETAIL
NTS

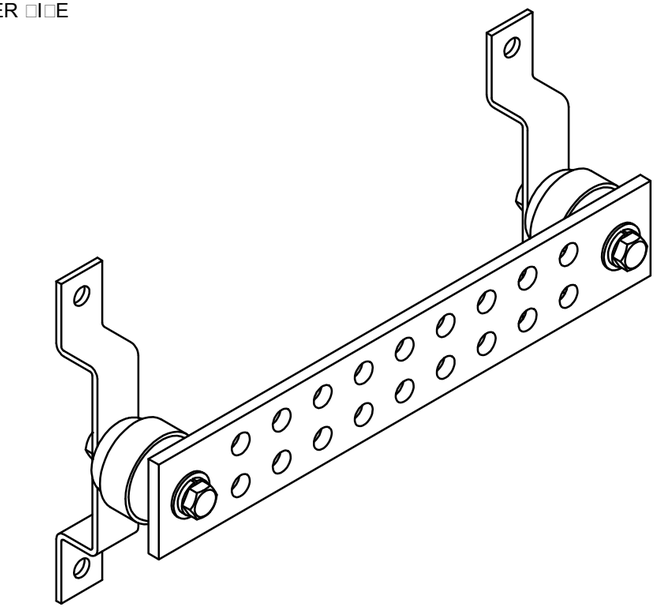
PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL DETAILS		DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: E40☐	253



1 GROUNDING DETAIL
NTS

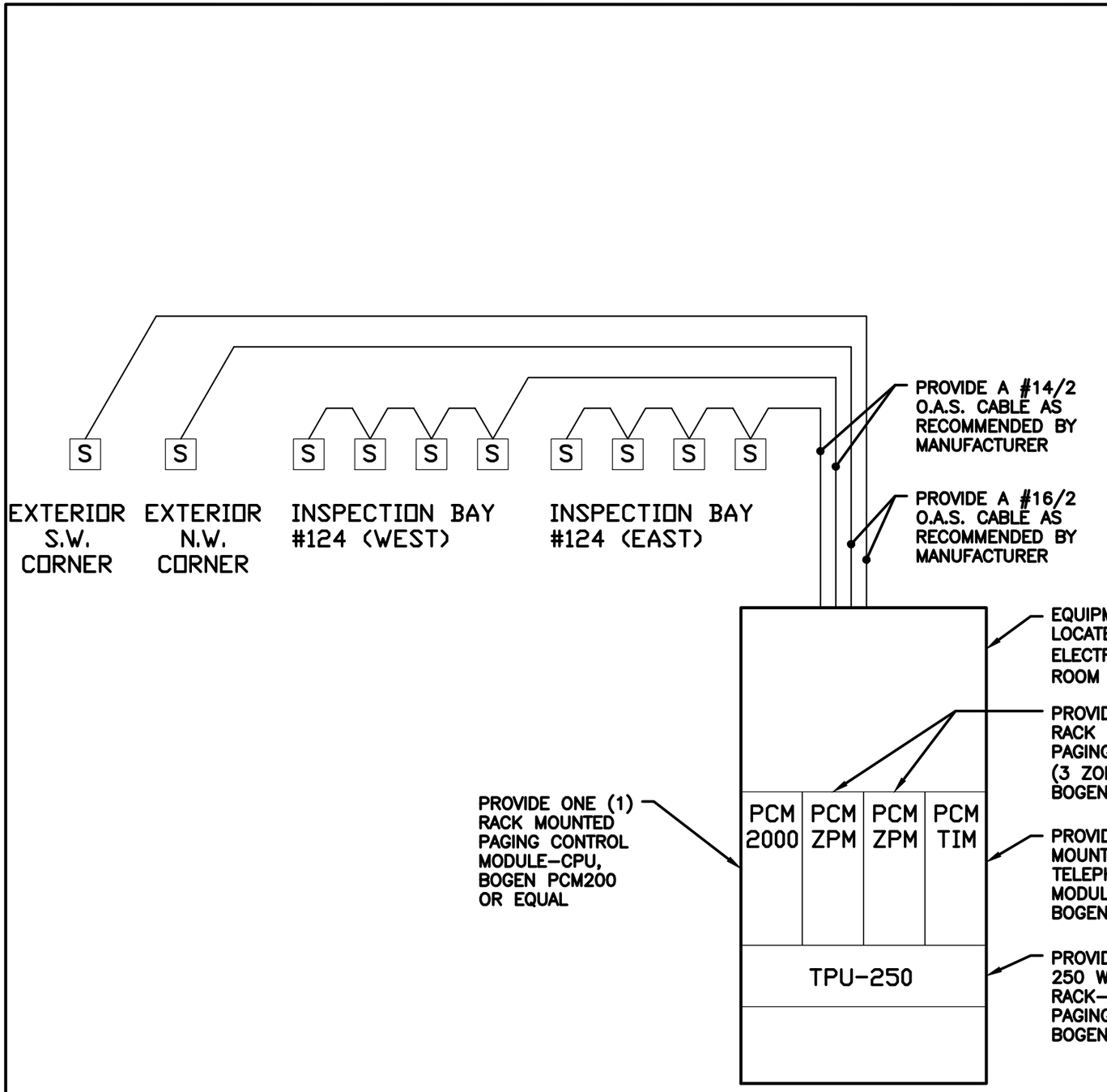
GENERAL NOTES:

1. Grounding Lug Attachment to Grounding Bar Requires two (2) Bolts per Lug.
2. Electrical Contractor shall ground to exterior building ring and exterior Communication Tower. Refer to 'Communications Tower" drawing E-2.

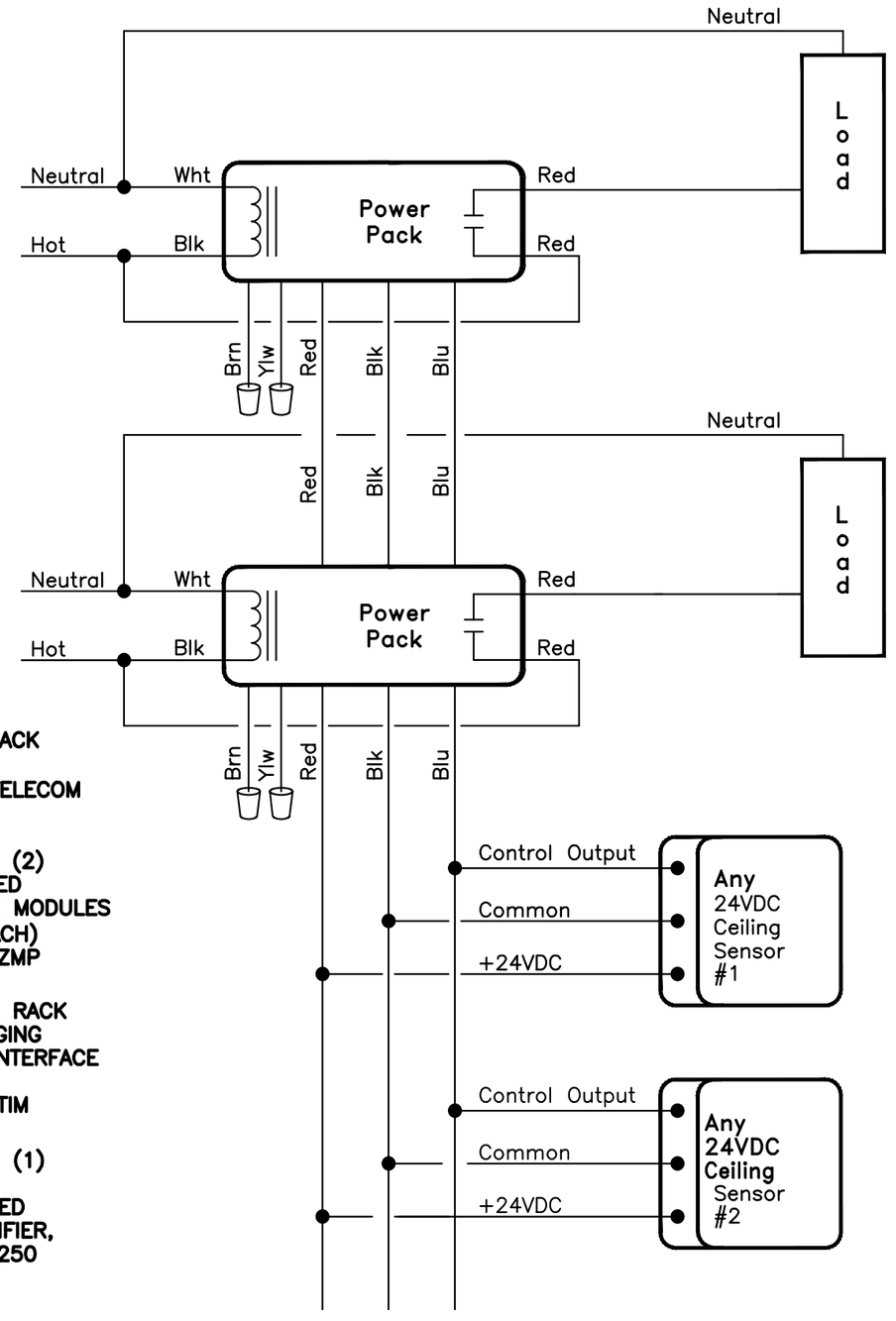


□ STANDARD GROUND BAR DETAIL (MGB)
NTS

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL DETAILS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: E40□	254

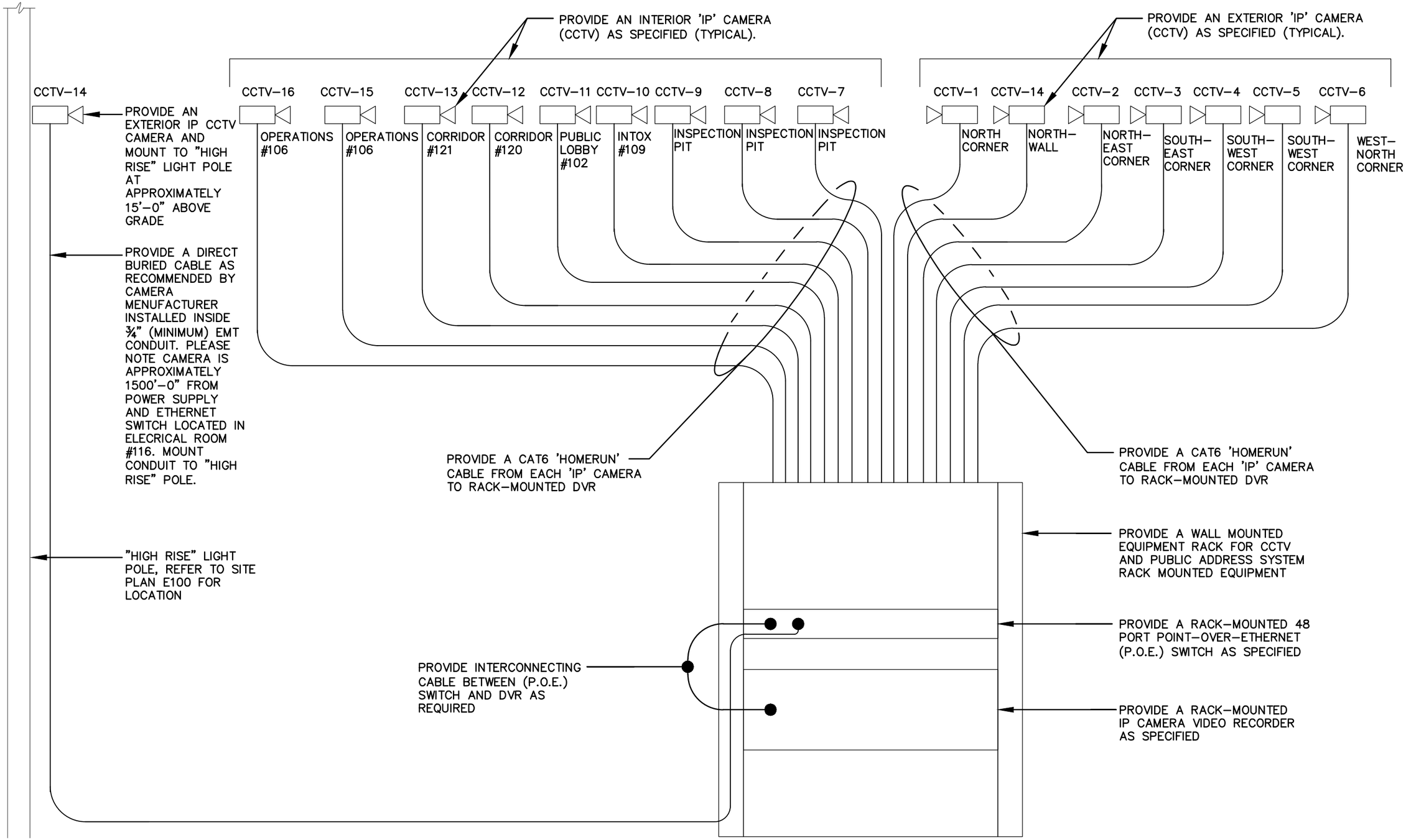


1 PUBLIC ADDRESS SYSTEM
NTS



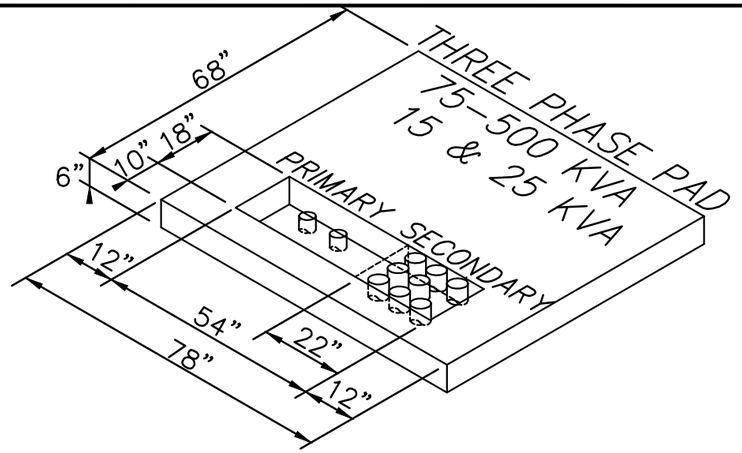
□ OCCUPANCY SENSOR WIRING DETAIL
NTS

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL DETAILS		DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: E40□	255



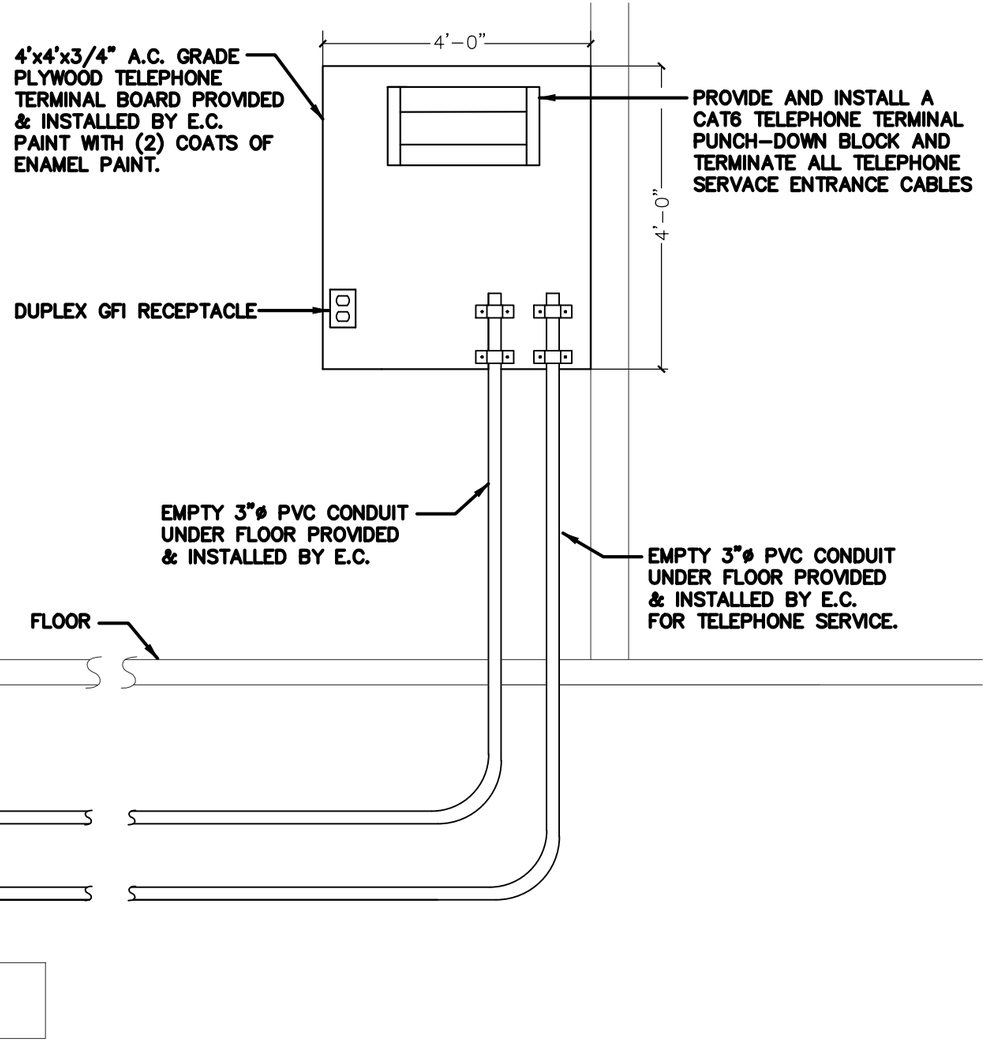
1 CLOSED CIRCUIT TELEVISION (CCTV) WIRING DETAIL
NTS

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL DETAILS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: E404	256



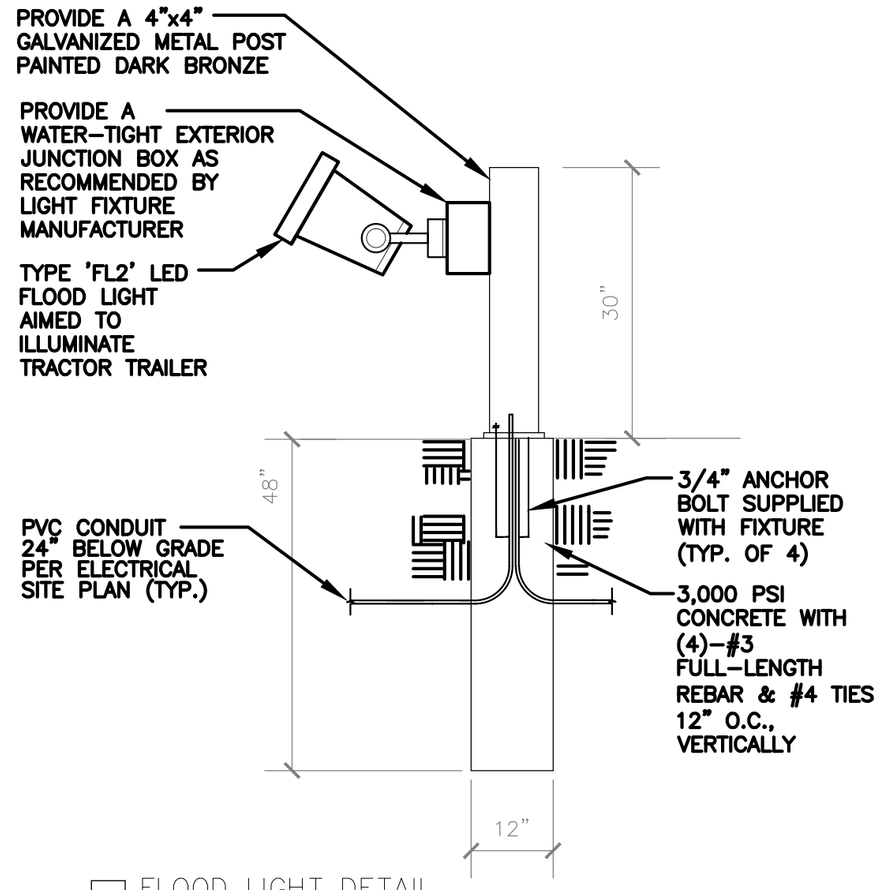
TRANSFORMER CONCRETE PAD DETAIL

NTS



1 ELEVATION AT TELEPHONE TERMINAL BOARD

NTS



FLOOD LIGHT DETAIL

NTS

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL DETAILS		DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: E405	257

LIGHTING

- RECESSED FLUORESCENT FIXTURE. SEE LIGHTING FIXTURE SCHEDULE. 'A' INDICATES FIXTURE TYPE. 'b' INDICATES SWITCH CONTROL
- SURFACE FLUORESCENT FIXTURE SEE LIGHTING FIXTURE SCHEDULE. 'A' INDICATES FIXTURE TYPE. 'b' INDICATES SWITCH CONTROL
- WALL BRACKET LIGHTING FIXTURE SEE LIGHTING FIXTURE SCHEDULE 'A' INDICATES FIXTURE TYPE
- SURFACE-MOUNTED FIXTURE-SEE LIGHTING FIXTURE SCHEDULE FOR DECRIPTION AND MANUFACTURER 'A' INDICATES FIXTURE TYPE
- PENDANT-MOUNTED LIGHTING FIXTURE 'A' INDICATES FIXTURE TYPE
- RECESS-MOUNTED DOWNLIGHT-SEE LIGHTING FIXTURE SCHEDULE FOR DECRIPTION AND MANUFACTURER 'A' INDICATES FIXTURE TYPE
- RECESSED WALL-WASH OR SPOTLIGHTING FIXTURE, DIRECTION AS INDICATED BY ARROW 'A' INDICATES FIXTURE TYPE
- WALL MOUNTED FIXTURE-SEE FIXTURE SCHEDULE 'A' INDICATES FIXTURE TYPE
- POLE MOUNTED LIGHT FIXTURE
- FLUORESCENT STRIP FIXTURE 'A' INDICATES FIXTURE TYPE
- TRACK LIGHTING FIXTURE WITH NUMBER OF FIXTURES INDICATED.
- LIGHTING FIXTURES ON EMERGENCY POWER SOURCE 'A' INDICATES FIXTURE TYPE. 'NL' INDICATES IF FIXTURE IS TO BE ON AT ALL TIMES
- EMERGENCY LIGHTING UNIT WITH SELF-CONTAINED BATTERY AND HEADS AS INDICATED WG = WIRE GUARD PROTECTED
- EXIT LIGHT FIXTURE, NUMBER OF FACES AND DIRECTIONAL ARROWS AS INDICATED WG = WIRE GUARD PROTECTED

RACEWAY

- NEUTRAL CONDUCTOR (TYP.)
- POWER CONDUCTOR (TYP.)
- BRANCH CIRCUIT CARRYING SWITCHED CONDUCTORS
- BRANCH CIRCUIT WITHOUT SWITCHED CONDUCTORS
- LOW VOLTAGE CIRCUIT
- GROUND OR NEUTRAL CONNECTION AS INDICATED
- J JUNCTION BOX
- L2, LCP-1, R1 HOME RUN TO PANEL 'L' CIRCUIT #2 VIA RELAY #1 IN LIGHTING CONTROL PANEL LCP-1. SEE PANELBOARD & LIGHTING CONTROL RELAY SCHEDULES
- L2 HOME RUN DIRECTLY TO PANEL 'L' CIRCUIT #2
- CONDUIT ROUTED ABOVE GROUND SIZE AND TYPE AS INDICATED
- CONDUIT ROUTED BELOW GROUND OR FLOOR SLAB SIZE AND TYPE AS INDICATED

NOTE: ALL BRANCH CIRCUITS TO CARRY SEPARATE GROUNDING CONDUCTOR REGARDLESS OF CONDUIT MATERIAL

MISCELLANEOUS

- EQUIPMENT CONNECTION POINT: SEE MOTOR & EQUIPMENT SCHEDULE

MOTORS AND EQUIPMENT

- MAGNETIC MOTOR STARTER
- COMBINATION DISCONNECT SWITCH AND STARTER
- MANUAL MOTOR SWITCH, 3-PHASE WITH OVERLOADS AND PILOT LIGHT
- MOTOR SEE POWER AND EQUIPMENT SCHEDULE.
- EQUIPMENT CONNECTION POINT. SEE POWER AND EQUIPMENT SCHEDULE.

CONTROL DEVICES

- CP CONTROL PANEL
- TCP TEMPERATURE CONTROL PANEL
- TC TIME CLOCK
- P PHOTOCELL
- T THERMOSTAT
- R RELAY
- DOOR BELL
- BUZZER
- PUSH BUTTON REMOTE CONTROL STATION

RECEPTACLES

- DUPLEX RECEPTACLE WITH 3 WIRE GROUNDING
- XX SPECIAL PURPOSE DUPLEX RECEPTACLE LETTERS INDICATE FUNCTION - CIRCUIT RECEPT. AS INDICATED
  - AC = ABOVE COUNTER MOUNTING HEIGHT
  - GFCI = RECEPTACLE WITH GROUND FAULT INTERRUPTION (GFI) PROTECTION
  - WP = WEATHERPROOF
- FOUR-PLEX (DOUBLE DUPLEX) RECEPTACLE
- SINGLE RECEPTACLE
- SPECIAL PURPOSE OUTLET, TYPE AS INDICATED
- SURFACE-MOUNTED "PLUG MOLD"; TYPE, MOUNTING HEIGHT & RECEPT. LOCATIONS AS INDICATED

SWITCHES

- $x WALL SWITCH, SINGLE POLE SINGLE THROW (SPST) LETTER INDICATES SPECIAL FEATURE
  - 3 = 3-WAY SWITCH
  - 4 = 4-WAY SWITCH
  - D = DIMMER
  - OS = OCCUPANCY SENSING
  - P = PILOT LIGHT
  - WP = WEATHER PROOF

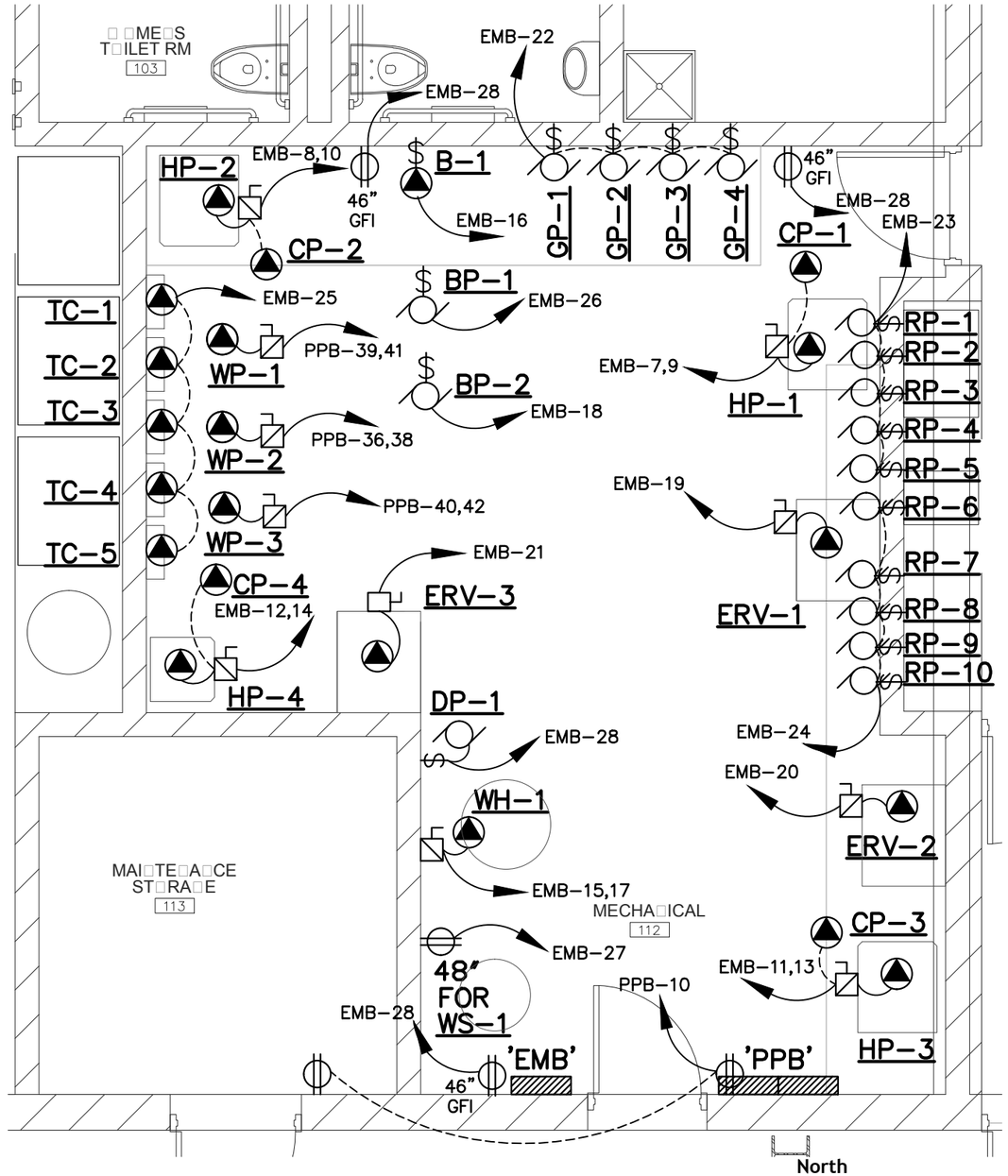
  NOTE: LOWER CASE LETTERS INDICATE MULTIPLE LEVELS OF LIGHT CONTROL OF FIXTURES WITH CORRESPONDING LETTERS INDICATED ON FIXTURES
- OS CEILING MOUNTED OCCUPANCY SENSOR
- PP OCCUPANCY SENSOR POWER PACK

DISTRIBUTION EQUIPMENT

- POWER DISTRIBUTION PANEL.
- BRANCH CIRCUIT PANELBOARD
- ELECTRICAL METER SOCKET
- T TRANSFORMER. SIZE AS INDICATED
- DISCONNECT SWITCH, NON-FUSED
- DISCONNECT SWITCH, FUSED

DATA AND COMMUNICATION EQUIPMENT

- TTB 4'x8' DATA/COMMUNICATION BOARD (TTB) 3/4" THICK, GRADE AC PLYWOOD. HEIGHT AND WIDTH AS INDICATED.
- 2 TELECOMMUNICATIONS OUTLET NUMBER INDICATES 1-DATA JACK, 1-PHONE JACK
- TTC TELEPHONE TERMINAL CABINET
- TELEVISION OUTLET



1 ENLARGED MECHANICAL ROOM 112
1/4"=1'-0"

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ENLARGED MECHANICAL ROOM PLAN	DATE:	
STATE PROJECT NUMBER: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: E40

LIGHTING FIXTURE SCHEDULE

TYPE	QTY	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	VOLT	MOUNT			LAMPS			WATTS/ FIXTURE	REMARKS
						F	S	*	NO.	WATT	TYPE		
A		COLUMBIA	LSER24-40LWG-C-EU	2x4 lay-in volumetric troffer, 4000K, 44w, 4345 lumens STEP DIMMING (50% DUAL SWITCH)	120	X			-	-	LED	55	1
B		COLUMBIA	LSER24-40LWG-C-EDU	2x4 lay-in volumetric troffer, 4000K, 44w, 4345 lumens WITH (0-10V) DIMMING	120	X			-	-	LED	55	1
C1		PRESCOLITE	LC6LED120DM-6LCLED740K8	6" LED downlight, 33W, 4000K, 2000 nominal lumens (DIMMABLE)	120	X			-	-	LED	35	1
C2		PRESCOLITE (WET LOCATION)	LC6LED120-6LCLED740K8	6" LED downlight, 16w, 4000K, 2000 nominal lumens	120	X			-	-	LED	35	1, 3
C3		PRESCOLITE	LF4LEDG4-4LFLED5G440K	4" LED downlight, 16w, 4000K, 1100 nominal lumens	120	**X**			-	-	LED	15	1
D		HUBBELL	DOK-18LU-6K-SP-C3C13P-IRS-DSDL40	18LED, 24w spot dock light, 1323 lumens, 350mA with 40" double strut swing arm, in-line rocker switch, and 3ft cord with IEC plug	120		X		-	-	LED	30	1
E		HUBBELL	LNC-9LU-5K-3-1	20w, 9LEDs, 1460 lumens, type 3 distribution Wallpack	120		X		-	-	LED	25	1
HB		HUBBELL	HBL-60LU-5K-A2-N-070-WD-WH	LED highbay (Dimmable)	120		X		-	-	LED	169	1
FS2		COLUMBIA	LCS-4-40-ML-E-U-	LED Straight Strip Channel	120		X		-	-	LED	61	1, 3
FS3		COLUMBIA	LXEM-4-40-ML-RFA-E-U	Fiberglass body, rated Extreme Environment, 4ft LED Medium Lumen Output, 4000K, Ribbed Frosted Acrylic	120		X		-	-	LED	53	1
FS4		OCL	BA2-S1SA-24-MW-PTD-2LD12/40K-120	Bamboo 2@12w, 4000K LED	120	X					LED	30	1
OB		KIM	VRB1/20L/5K/UV/DB	20LED (type 5 distribution) universal 120-277 voltage dark bronze finish bollard	120		X		-	-	LED	24	1, 3, 4
FL2		BEACON	12NB-25/5K/6X6/UNV/YK-12NA/GS	12LED, 24w, 520mA, Wide Flood, yoke mount, 1/2" NPT adaptor, bronze finish	120		X		-	-	LED	30	1, 3
X1		DUAL	HCX-U-R-W-03L-RC12	LED EXIT LIGHT FIXTURE	120		**X**		_	_	LED		1

REMARKS:

1 SUBSTITUTIONS BY OTHER MANUFACTURERS WILL BE CONSIDERED. SUBMIT SUBSTITUTION REQUEST IN REGARDS TO EQUAL PRODUCTS AS FOLLOWS:
- A. PRODUCT SUBSTITUTIONS WILL ONLY BE CONSIDERED DURING BIDDING.
- B. SUBSTITUTIONS WILL ONLY BE ALLOWED WITH THE PRIOR APPROVAL OF ENGINEER MADE DURING BIDDING.

2 FIXTURE MUST OPERATE FOR 90 MINUTES MINIMUM WITH BATTERY POWER UPON LOSS OF UTILITY POWER.

3 THIS FIXTURE MUST BE WET LOCATION RATED.

4 PROVIDE A CONCRETE BASE FOR POLE MOUNTED FIXTURE AS DETAILED ON DRAWINGS, PROVIDE A 4"X4"X 25 FOOT SQUARE STEEL STRAIGHT (SSS) WITH PROVISION FOR G.F.I. RECEPTACLE, DARK BRONZE FINISH.

MOTOR & EQUIPMENT SCHEDULE

EQUIP NO.	EQUIPMENT DESCRIPTION	EQUIPMENT LOCATION		ELECTRICAL LOADS							STARTER			DISCONNECT				CONTROL WIRING BY		BRANCH CIRCUIT WIRING				REMARKS
		ROOM NO.	ELEV.	H.P.	WATTS	VOLT	PH.	FLA	MCA	MOP	F.B.	I.B.	Size	F.B.	I.B.	U.M.	Fused	MC	EC	N.C.	SIZE	CONDUIT	GRND	
B-1	Gas Boiler	113	Floor		1200	120	1	10.0	15.0	15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1
BP-1	Gas Boiler Pump #1	113	36"	1/2	1176	120	1	9.8		20.0	None			EC	EC	No	No	X		2	12	1/2"	12	1, 2
BP-2	Gas Boiler Pump #2	113	36"	1/2	1176	120	1	9.8		20.0	None			EC	EC	No	No	X		2	12	1/2"	12	1, 2
CP-1	Heat Pump Pump Package	113	36"	1/6	408	240	1	1.7		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	3
CP-2	Heat Pump Pump Package	113	36"	1/6	408	240	1	1.7		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	3
CP-3	Heat Pump Pump Package	113	36"	1/6	408	240	1	1.7		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	3
CP-4	Heat Pump Pump Package	113	36"	1/6	408	240	1	1.7		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	3
CP-5	Heat Pump Pump Package	116	36"	1/6	408	240	1	1.7		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	3
DF-1	De-stratification Fan	123	Ceiling	1.5	2400	240	1		30.0	30.0	MC	EC	VFD	MC	EC	No	No		X	2	10	3/4"	10	4, 5
DF-2	De-stratification Fan	123	Ceiling	1.5	2400	240	1		30.0	30.0	MC	EC	VFD	MC	EC	No	No		X	2	10	3/4"	10	4, 5
DP-1	Domestic Water Circulation Pump	113	60"		52	120	1	0.43		15.0	None			EC	EC	No	No		X	2	12	1/2"	12	1, 6
EF-1	Roof-mounted Exhaust Fan	123	Roof	1/3	864	120	1	7.2		20.0	None			MC	EC	Yes	No		X	2	12	1/2'	12	7, 8, 9
EF-2	Roof-mounted Exhaust Fan	123	Roof	1/3	864	120	1	7.2		20.0	None			MC	EC	Yes	No		X	2	12	1/2'	12	7, 8, 9
EF-3	Roof-mounted Exhaust Fan	123	Roof	1/3	864	120	1	7.2		20.0	None			MC	EC	Yes	No		X	2	12	1/2'	12	7, 8, 9
EF-4	Roof-mounted Exhaust Fan	123	Roof	1/3	864	120	1	7.2		20.0	None			MC	EC	Yes	No		X	2	12	1/2'	12	7, 8, 9
ERV-1	Packaged Energy Recovery Unit	113	96"		396	120	1	3.3		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1
ERV-2	Packaged Energy Recovery Unit	113	96"		396	120	1	3.3		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1
ERV-3	Packaged Energy Recovery Unit	113	96"		396	120	1	3.3		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1
GP-1	Ground Field Water Circulating Pump	113	36"	1/6	240	120	1	2.0		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1, 2
GP-2	Ground Field Water Circulating Pump	113	36"	1/6	240	120	1	2.0		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1, 2
GP-3	Ground Field Water Circulating Pump	113	36"	1/6	240	120	1	2.0		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1, 2
GP-4	Ground Field Water Circulating Pump	113	36"	1/6	240	120	1	2.0		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1, 2
HP-1	Water-to-air Heat Pump	113	Floor		854	240	1		35.6	50.0	None			EC	EC	No	No	X		2	8	3/4"	10	10
HP-2	Water-to-air Heat Pump	113	Floor		10296	240	1		42.9	70.0	None			EC	EC	No	No	X		2	6	3/4"	10	10
HP-3	Water-to-air Heat Pump	113	Floor		10296	240	1		42.9	70.0	None			EC	EC	No	No	X		2	6	3/4'	10	10
HP-4	Water-to-air Heat Pump	113	Floor		6048	240	1		25.2	40.0	None			EC	EC	No	No	X		2	8	3/4"	10	10
HP-5	Water-to-air Heat Pump	116	Ceiling		4968	240	1		20.7	30.0	None			EC	EC	No	No	X		2	10	3/4"	10	10
IR-1	Infrared Low Intensity Gas Infrared Unit	123	Ceiling		120	120	1	1.0		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1, 11
IR-2	Infrared Low Intensity Gas Infrared Unit	123	Ceiling		120	120	1	1.0		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1, 11
IR-3	Infrared Low Intensity Gas Infrared Unit	123	Ceiling		120	120	1	1.0		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1, 11
IR-4	Infrared Low Intensity Gas Infrared Unit	123	Ceiling		120	120	1	1.0		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1, 11
MAU-1	Gas-fired Make-up Air Unit	120	Ceiling	7.5	9600	240	1	40.0		60.0	None			EC	EC	No	No		X	2	6	3/4"	10	10, 13, 14
RP-1	Hot Water Radiant Circulation Pump	113	24"		81	120	1	0.67		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1, 2
RP-2	Hot Water Radiant Circulation Pump	113	24"		81	120	1	0.67		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1, 2
RP-3	Hot Water Radiant Circulation Pump	113	24"		81	120	1	0.67		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1, 2
RP-4	Hot Water Radiant Circulation Pump	113	24"		81	120	1	0.67		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1, 2
RP-5	Hot Water Radiant Circulation Pump	113	24"		81	120	1	0.67		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1, 2
RP-6	Hot Water Radiant Circulation Pump	113	24"		81	120	1	0.67		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1, 2
RP-7	Hot Water Radiant Circulation Pump	123	24"		81	120	1	0.67		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1, 2
RP-8	Hot Water Radiant Circulation Pump	123	24"		81	120	1	0.67		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1, 2
RP-9	Hot Water Radiant Circulation Pump	119	24"		81	120	1	0.67		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1, 2
RP-10	Hot Water Radiant Circulation Pump	119	24"		81	120	1	0.67		15.0	None			EC	EC	No	No	X		2	12	1/2"	12	1, 2
SP-1	Sanitary Sump Pump Assembly	123B	Floor	1/3	864	120	1	7.2		20.0	None			EC	EC	No	No	X		2	12	1/2"	12	16
SP-2	Septic Tank Pump	Outside	Below Grade	1.0	1920	240	1	8.0		20.0	PC	EC	DP	EC	EC	No	No		X	2	12	1/2"	12	17, 18
SP-A1	Sanitary Sump Pump Alarm	123B	Floor		120	120	1	1.0		15.0	None			EC	EC	No	No		X	2	12	1/2"	12	19, 20
SP-A2	Septic Tank Pump Alarm	123B	Floor		120	120	1	1.0		15.0	None			EC	EC	No	No		X	2	12	1/2"	12	19
HT-A	Holding Tank Alarm	123B	Floor		120	120	1	1.0		15.0	None			EC	EC	No	No		X	2	12	1/2"	12	19
TC-1	Temperature Control Panel	113	60"		120	120	1	1.0		15.0	None			None						2	12	1/2"	12	12
TC-2	Temperature Control Panel	113	60"		120	120	1	1.0		15.0	None			None						2	12	1/2"	12	12
TC-3	Temperature Control Panel	113	60"		120	120	1	1.0		15.0	None			None						2	12	1/2"	12	12
TC-4	Temperature Control Panel	113	60"		120	120	1	1.0		15.0	None			None						2	12	1/2"	12	12
TC-5	Temperature Control Panel	113	60"		120	120	1	1.0		15.0	None			None						2	12	1/2"	12	12
VP-1	LP GAS VAPORIZER	EXT.	EXT.		4,680	240	1	19.5	25.0	30.0	None			EC	EC	No	No			2	10	3/4"	10	25
WH-1	Heat Pump Water Heater with Electric Back-up	113	Floor		4,500	240	1	18.75	30.0	30.0	None			EC	EC	No	No			2	10	3/4"	10	5
WP-1	Water-to-water Heat Pump	113	Floor		6312	240	1	26.3	32.9	50.0	None			EC	EC	No	No	X		2	8	3/4"	10	10
WP-2	Water-to-water Heat Pump	113	Floor		6312	240	1	26.3	32.9	50.0	None			EC	EC	No	No	X		2	8	3/4"	10	10
WP-3	Water-to-water Heat Pump	113	Floor		6312	240	1	26.3	32.9	50.0	None			EC	EC	No	No	X		2	8	3/4"	10	10
WS-1	Water Softener	113	Floor		120	120	1	1.0		20.0	None			None						2	12	1/2"	12	15
Well	Submersible Well	Outside	Below Grade	1.5	2400	240	1	10.0	30.0	30.0	PC	EC	VFD	EC	EC	No	No		X	2	8	3/4"	10	21, 22, 23, 24

REMARKS:

1. Provide and install a "Motor-Rated", 20 amp, SPST Toggle Switch with heavy duty cover plate to serve as a disconnecting means. Install switch directly on equipment, or on building structure in close proximity to device. Make final connections to motor or equipment with rigid or flexible conduit as necessary.
2. Install an empty 2-gang box immediately downstream of the disconnect switch with knock-outs suitable for the Mechanical Contractor to provide and install a "RIB-Style" relay. This Contractor to make line voltage connections to the RIB relay as directed by the M.C. Provide and install a blank cover plate for the outlet box.
3. Wire these pumps to the electrical control box on their respective heat pumps. Make all line voltage wiring connections per the manufacturer's directions. The disconnect switch for the heat pump will also serve this pump assembly.
4. These fans will be provided with a variable speed motor control with internal operating station. This Contractor shall install these VFD's in the Inspection Bay, where shown on the Drawings, at ADA-accessible height. Extend line voltage wiring from the drives to the fan motors and make all line voltage connections.
5. Provide and install a 30 amp, Heavy Duty, 250 VAC, 2-pole disconnect switch with solid neutral and grounding bar, all enclosed in a NEMA 1 enclosure for interior applications for a NEMA 3R enclosure for exterior applications. Install disconnect within sight of the motor or directly adjacent to the motor starter or VFD. Make all line voltage wiring connections.
6. The E.C. shall install and wire any and all line voltage control devices provided by the Plumbing Contractor. Verify exact scope of work with the Plumbing Contractor.
7. Install and wire a SPST disconnect switch in the motor dome of this fan on the roof. An outlet box will be supplied factory-mounted within the fan housing. Make all line voltage wiring connections.
8. This fan will be supplied with a duct-mounted motorized damper with 120 VAC damper motor. Wire the power supply to the motorized damper in parallel with the power supply to the fan motor.
9. Provide and install a control switch per Remark #1 above. This switch shall be fitted with a custom-engraved stainless steel cover plate with wording "EXHAUST FAN - XX CORNER" where "XX' shall indicate the compass location of each fan.
10. Provide and install a 60 amp, Heavy Duty, 250 VAC, 2-pole disconnect switch with solid neutral and grounding bar, all enclosed in a NEMA 1 enclosure. Install disconnect switch on structure adjacent to heat pumps or make-up air unit.
11. The E.C. shall extend 1/2 inch EMT from the infrared heater control box to a wall-mounted low voltage thermostat location as directed by the Mechanical Contractor. Provide an outlet box at the thermostat location on configuration as requested by the Mechanical Contractor. Provide and install 18/3 control cable and leave suitable pigtails at each location for the Mechanical Contractor to make final connections.
12. At each Temperature Control panel, the E.C. shall provide a 120 VAC power supply with a local disconnect switch per Remark #1 above. Immediately downstream of the disconnect switch, the E.C. shall provide and install a plate-mounted 75 VA, 120/24 VAC transformer for use by the Mechanical Contractor. Install transformer and make all line voltage wiring connections.
13. The Make-up Air Unit will be provided with a wall-mounted control panel by the M.C. This Contractor shall install this control panel where shown on the Drawings. Extend a 1 inch EMT conduit from this control panel back to the make-up air unit. Make all conduit connections and use a short length of flexible conduit at the suspended make-up air unit. Provide and install a pull string for installation of low voltage conductors by the M.C.
14. The E.C. shall install (2) #14 copper THHN stranded from the make-up air unit control panel to the motorized end switches in the motorized dampers directly beneath the (4) Exhaust Fans. Route all conductors directly from the MAU control panel to each motorized damper. Make connections to the "N.O." end switch contacts and verify for continuity when the dampers are driven open. The M.C. will make all final connections in the make-up air unit.
15. Provide and install a receptacle for the water softener.
16. This pump is located in a Class 1, Division 2 environment. Extend 120 VAC power to the cord supplied with the pump and make all final connections in a manner suitable for this environment. The pump will be equipped with an integral float for automatic operation.
17. Extend power to pump control panel to be located at the septic tank. This Contractor to provide and install a wood post for mounting of control panel. Make line voltage power connection to the control panel.
18. Extend conduit from the control panel to the pump chamber of the septic tank using the conduit stub cast into the septic tank. Route the cord supplied with the pump through this conduit and make connections in the pump control panel per the manufactuer's directions. Install and wire the float controls through this same conduit path to the pump control panel and make all line voltage connections.
19. These alarms shall be installed in the Mechanical Room at a common location. Make a direct line voltage connection to each alarm control panel. Install control panels as shown on Drawings or as directed by the Owner. Extend suitable conductors and conduit to each vessel and make connections to the float switch supplied and installed by the P.C. Assume a junction box will be required at each vessel.
20. This alarm must be installed suitable for Class 1, Division 2 location.
21. The P.C. will provide a variable speed drive for the well pump. This Contractor shall install this device in Mechanical Room 113 per the manufactuer's direction.
22. Provide and install a disconnect switch per Remark #5 above immediately upstream of the variable speed motor control. Make all line voltage wiring connections.
23. Provide and install a disconnect switch per Remark #5 above directly at the well head on the site. Install this disconnect on a wood post within (3) feet of the well head. Connect the well pump conductors provided and installed by the P.C. to the downstream side of this disconnect switch.
24. The variable frequency drive for the well pump will be provided with a low voltage pressure transducer. The P.C. will provide and install this device in Mechanical Room 113. The E.C. shall provide and install (2) - #14 THHN stranded copper conductors in 1/2 inch EMT between this transducer and the VFD and make all wiring connections per the manufacturer's direction.
25. Provide a 30 amp., 250VAC, Heavy Duty, 2-Pole, Nema 3R fusible disconnect switch.

ABBREVIATIONS:

F.B.	=	Furnished By	N.C.	=	Number of Power Conductors
I.B.	=	Installed By	GRND	=	Ground wire size
U.M.	=	Unit-Mounted	NR	=	Not Required
EC	=	Electrical Contractor	DP	=	Definite Purpose
MC	=	Mechanical Contractor			
PC	=	Plumbing Contractor			
FEC	=	Food Equipment Contractor			

Panel- 'EMA', 600 A., 120/240V AC, 1-Phase, 3- Wire, M.BRK. (45KAIC)

Space No.	Serves	C/B Size/Type	Load (KVA)		Load (KVA)	C/B Size/Type	Serves	Space No.
1	TROOPERS RECEPTACLES	20/1	0.72		0.54	20/1	TROOPERS RECEPTACLES	2
3	MULTI PURPORSE RECPT'S	20/1	0.72		0.90	20/1	MULTIPURPOSE RECEPT'S	4
5	REFRIGERATOR	20/1	0.80		1.50	20/1	KITCHEN RECEPTACLES	6
7	OFFICE RECEPTACLES	20/1	0.72		0.36	20/1	OPERATIONS RECEPTACLES	8
9	OPERATION RECEPTACLES	20/1	0.36		0.36	20/1	OPERATIONS RECEPTACLES	10
11	OPERATION RECEPTACLES	20/1	0.36		0.36	20/1	OPERATIONS RECEPTACLES	12
13	OPERATION RECEPTACLES	20/1	0.36		0.36	20/1	OPERATIONS RECEPTACLES	14
15	OPERATION RECEPTACLES	20/1	0.36		0.75	20/1	OPERATIONS COPY MACH.	16
17	OPERATION RECEPTACLES	20/1	0.54		0.36	20/1	OPERATIONS RECEPTACLES	18
19	INTOX RECEPTACLES	20/1	0.36		0.72	20/1	PUBLIC LOBBY	20
21	DRIVERS RECEPTACLES	20/1	0.36		0.72	20/1	CLASSROOM RECEPTACLES	22
23	CLASSROOM RECEPTACLES	20/1	0.72		0.36	20/1	CLASSROOM RECEPTACLES	24
25	OVERHEAD PROJECTOR	20/1	0.50		0.50	20/1	ELECTRIC SCREEN	26
27	CLASSROOM RECEPTACLES	20/1	1.08		0.72	20/1	CLASSROOM RECEPTACLES	28
29	CLASSROOM RECEPTACLES	20/1	0.72				SPACE	30
31	MOTOR (WELL)	30/2	1.20		2.50	30/2	MOTOR (HP-5)	32
33	"	30/2	1.20		2.50	30/2	"	34
35	LIGHTING	20/1	1.23		1.20	20/1	LIGHTING	36
37	LIGHTING	20/1	1.00		0.50	20/1	LIGHTING - CORRIDOR	38
39	LIGHTING	20/1	0.90		0.50	20/1	IT RACK EQUIPMENT	40
41	IT RACK EQUIPMENT	20/1	0.50		0.50	20/1	IT RACK EQUIPMENT	42
43	IT RACK EQUIPMENT	20/1	0.50		0.50	20/1	IT RACK EQUIPMENT	44
45	IT RACK EQUIPMENT	20/1	0.50		0.50	20/1	IT RACK EQUIPMENT	46
47	IT RACK EQUIPMENT	20/1	0.50		0.50	20/1	WEATHER MONITOR EQPMT	48
49	CCTV & PAGING EQPMNT	20/1	0.50		31.10	400/2	SUBPANEL 'EMB'	50
51	EMERG. GEN BATT. CHARGER	20/1	0.18		31.10	400/2	SUBPANEL 'EMB'	52
53	EMERG. GENERATOR HTR.	20/1	1.50		2.34	30/2	MOTOR (VP-1)	54
55	EMERG. GEN. RECEPTACLE	20/1	0.18		2.34	30/2	"	56
57	RECEPTACLE	20/1	0.54		0.54	20/1	RECEPTACLE	58
59	RECEPTACLE	20/1	0.54					60
61								62

LIGHTING (KVA):	4.33	NOTE:	1	PROVIDE A MAIN BREAKER	
RECEPTACLES (KVA):	13		2	84 CKT. SURFACE MOUNT	
MOTOR/EQUIPMENT (KVA):	8.2				
SUBPANNEL 'EMB'	62.2		**TOTAL AMP. :**		**366**
TOTAL (KVA):	**87.73**		**(DIVERSITY FACTOR) X 1.25 =**		**457**

Panel- 'EMB', 400 A., 120/240VAC, 1-Phase, 3- Wire, M.L.0 (14KAIC)

Space No.	Serves	C/B Size/Type	Load (KVA)		Load (KVA)	C/B Size/Type	Serves	Space No.
1	MOTOR (IR-1, IR-2, IR-3, IR-4)	20/1	0.48		1.50	20/1	OVERHEAD DOOR	2
3	OVERHEAD DOOR	20/1	1.50		1.50	20/1	OVERHEAD DOOR	4
5	OVERHEAD DOOR	20/1	1.50		0.90	20/1	MOTOR (SP-1, SPA-1)	6
7	MOTOR (HP-1 &CP-1)	50/2	4.30		5.20	70/2	MOTOR (HP-2 & CP-2)	8
9	"	50/2	4.30		5.20	70/2	"	10
11	MOTOR (HP-3 & CP-3)	70/2	5.20		3.10	40/2	MOTOR (HP-4 & CP-4)	12
13	"	70/2	5.20		3.10	40/2	"	14
15	MOTOR (WH-1)	30/2	2.25		1.20	20/1	MOTOR (B-1)	16
17	"	30/2	2.25		1.20	20/1	MOTOR (BP-2)	18
19	MOTOR (ERV-1)	20/1	0.40		0.40	20/1	MOTOR (ERV-2)	20
21	MOTOR (ERV-3)	20/1	0.40		0.40	20/1	MOTOR (GP-1,GP-2,GP-3,GP-4)	22
23	MOTOR (RP-1 THRU RP-5)	20/1	0.50		0.50	20/1	MOTOR (RP-6 THRU RP-10)	24
25	MOTOR (TC-1 THRU TC-5)	20/1	0.60		1.20	20/1	MOTOR (BP-1)	26
27	RECEPTACLE (WS-1)	20/1	0.30		0.54	20/1	RECEPTACLES	28
29	LIGHTING	20/1	1.35		1.40	20/1	LIGHTING	30
31	LIGHTING	20/1	0.90		2.00	20/1	MOTOR (SP-2)	32
33	MOTOR (HT-A, SP-A2)	20/1	0.30		0.75	20/1	LIGHTING	34
35								36
37								38
39								40
41								42

LIGHTING (KVA):	4.4
RECEPTACLES (KVA):	0.9
MOTOR/EQUIPMENT (KVA):	56.9
TOTAL (KVA):	**62.2**

NOTE: 1 SURFACE MOUNT

TOTAL AMP. :	**259.2**
(DIVERSITY FACTOR) X 1.25 =	**323.96**

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI

ELECTRICAL SCHEDULES

DATE:

STATE PROJECT NUMBER: 1070-00-72 | HWY: IH 90 | COUNTY: MONROE | SPARTA SWEF NO. 54 | SCALE: AS NOTED | SHEET NO: E50□

Panel- 'PPA', 125 A., 120/240VAC, 1-Phase, 3- Wire, M.L.O. (10KAIC)

Space No.	Serves	C/B Size/Type	Load (KVA)		Load (KVA)	C/B Size/Type	Serves	Space No.
1	HEAT TAPE	20/1	1.80		0.18	20/1	EXTERIOR RECEPTACLE	2
3	EXTERIOR RECEPTACLE	20/1	0.18		1.80	20/1	HEAT TAPE	4
5	EXTERIOR RECEPTACLE	20/1	0.18		1.00	20/1	KITCHEN RECEPTACLE	6
7	GARBAGE DISPOSAL	20/1	1.00		1.00	20/1	KITCHEN RECEPTACLE	8
9	HAND DRYER	20/1	1.50		1.50	20/1	HAND DRYER	10
11	TOILET RECEPTACLES	20/1	0.36		0.72	20/1	CORRIDOR RECEPTACLE	12
13	RECEPTACLES	20/1	0.36		0.18	20/1	RECEPTACLE - WTR. COOLER	14
15								16
17								18
19								20
21								22
23								24
25								26
27								28
29								30
31								32
33								34
35								36
37								38
39								40
41								42

LIGHTING (KVA):	
RECEPTACLES (KVA):	7.22
MOTOR/EQUIPMENT (KVA):	4
TOTAL (KVA):	**11.22**

NOTE: 1 SURFACE MOUNT
2

TOTAL AMP. :	**46.7**
(DIVERSITY FACTOR) X 1.25 =	**58.4**

Panel- 'PPB', 225 A., 120/240VAC, 1-Phase, 3- Wire, M.L.O (10KAIC)

Space No.	Serves	C/B Size/Type	Load (KVA)		Load (KVA)	C/B Size/Type	Serves	Space No.
1	TOILET RECEPTACLES	20/1	0.36		1.50	20/1	HAND DRYER	2
3	HAND DRYER	20/1	1.50		0.36	20/1	JANITOR RECEPTACLE	4
5	VENDING RECEPTACLE	20/1	1.00		1.00	20/1	VENDING RECEPTACLE	6
7	VENDING RECEPTACLE	20/1	1.00		1.00	20/1	VENDING RECEPTACLE	8
9	COORIDOR RECEPTACLE	20/1	0.36		0.36	20/1	MECHANICAL RM RECEPTACLES	10
11	INSPECTION RECEPTACLE	20/1	0.36		0.36	20/1	INSPECTION RECEPTACLES	12
13	INSPECTION RECEPTACLE	20/1	0.36		0.36	20/1	INSPECTION RECEPTACLES	14
15	EXTERIOR RECEPTACLES	20/1	0.36		1.00	20/1	HEAT TAPE	16
17	INSPECTION RECEPTACLE	20/1	0.36		0.36	20/1	INSPECTION RECEPTACLES	18
19	INSPECTION RECEPTACLE	20/1	0.36		0.36	20/1	INSPECTION RECEPTACLES	20
21	EXTERIOR RECEPTACLES	20/1	0.36		0.36	20/1	EXTERIOR RECEPTACLES	22
23	INSPECTION RECEPTACLE	20/1	0.36		0.36	20/1	EXTERIOR RECEPTACLES	24
25	HEAT TAPE	20/1	1.00		0.90	20/1	EXHAUST FAN (EF-1)	26
27	EXHASUT FAN (EF-2)	20/1	0.90		0.90	20/1	EXHAUST FAN (EF -3)	28
29	EXHAUST FAN (EF-4)	20/1	0.90				SPACE	30
31	MOTOR (DF-1)	30/2	1.20		1.20	30/2	MOTOR (DF-2)	32
33	MOTOR (DF-1)	30/2	1.20		1.20	30/2	MOTOR (DF-2)	34
35	MOTOR (MUA-1)	60/2	4.80		3.12	50/2	MOTOR (WP-1)	36
37	MOTOR (MUA-1)	60/2	4.80		3.12	50/2	"	38
39	MOTOR (WP-2)	50/2	3.12		3.12	50/2	MOTOR (WP-3)	40
41	"	50/2	3.12		3.12	50/2	"	
43	RECEPTACLE	20/1	0.18		0.18	20/1	RECEPTACLE	44

LIGHTING (KVA):	
RECEPTACLES (KVA):	11.4
MOTOR/EQUIPMENT (KVA):	35.2
TOTAL (KVA):	**46.6**

NOTE: 1 SURFACE MOUNT
2 54 CIRCUIT (MINIMUM)

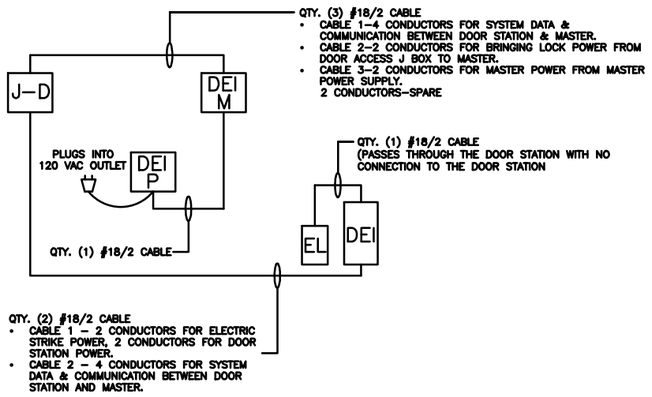
TOTAL AMP. :	**194.2**
(DIVERSITY FACTOR) X 1.25 =	**242.7**

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI

ELECTRICAL SCHEDULES

DATE:

STATE PROJECT NUMBER: 1070-00-72 | HWY: IH 90 | COUNTY: MONROE | SPARTA SWEF NO. 54 | SCALE: AS NOTED | SHEET NO: E50□



SYMBOL	DESCRIPTION	PART NUMBER
J–D	DOOR ACCESS SYSTEM JUNCTION BOX 6" X 6"	BY ELECTRICAL CONTRACTOR
DEI–P	AIPHONE POWER SUPPLY	PS1820UL
DEI–M	AIPHONE MASTER STATION	JK–1MED
S	AIPHONE SUB MASTER STATION	JK1–HD
DEI	AIPHONE DOOR STATION	JK–DV
EL	ELECTRIC LOCK	INSTALLED BY OTHERS
J–DEI	JUNCTION BOX	BY ELECTRICAL CONTRACTORS

1 DOOR ENTRY INTERCOM RISER DIAGRAM

N.T.S. 1209E–DOOR ENTRY INT DTL

Panel- 'MDP', 800 A., 120/40 VAC, 1-Phase, 3- Wire, M.BRK. (45KAIC)

Space No.	Serves	C/B Size/Type	Load (KVA)		Load (KVA)	C/B Size/Type	Serves	Space No.
1	PANELBOARD 'EMA'	600/2	44.00		6.00	100/2	PANELBOARD 'PPA'	2
3	PANELBOARD 'EMA'	600/2	44.00		6.00	100/2	PANELBOARD 'PPA'	4
5	PANELBOARD 'PPB'	225/2	23.50		0.00	30/2	SURGE PROTECTIVE DEVICE	6
7	PANELBOARD 'PPB'	225/2	23.50		0.00	30/2	SURGE PROTECTIVE DEVICE	8
9	BRAKE TEST EQPT.	125/2	9.00					10
11	"	125/2	9.00					12

PANELBOARD 'EMA'	88			NOTE:	1	SURFACE MOUNT
PANELBOARD 'PPA'	12					
PANELBOARD 'PPB'	47					
				TOTAL AMP. :		**612.5**
TOTAL (KVA):	**147**			**(DIVERSITY FACTOR) X 1.25 =**		**766**

PLANS PREPARED BY: GALILEO CONSULTING GROUP, LA CROSSE, WI			ELECTRICAL SCHEDULES	DATE:	
STATE PROJECT NUMBER: 1070–00–72	HWY: IH 90	COUNTY: MONROE	SPARTA SWEF NO. 54	SCALE: AS NOTED	SHEET NO: E504

TRAFFIC CONTROL GENERAL NOTES

ADJUST THE EXACT NUMBER, LOCATION AND SPACING OF ALL SIGNS AND DEVICES TO FIT FIELD CONDITIONS AND FOLLOW THE CURRENT EDITION OF THE MUTCD AS APPROVED BY THE ENGINEER.

ADJUST THE SPACING BETWEEN SIGNS TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 500' (1000' DESIRABLE) DISTANCE TO EXISTING SIGNS.

ALL SIGNS ARE 48" X 48" UNLESS NOTED.

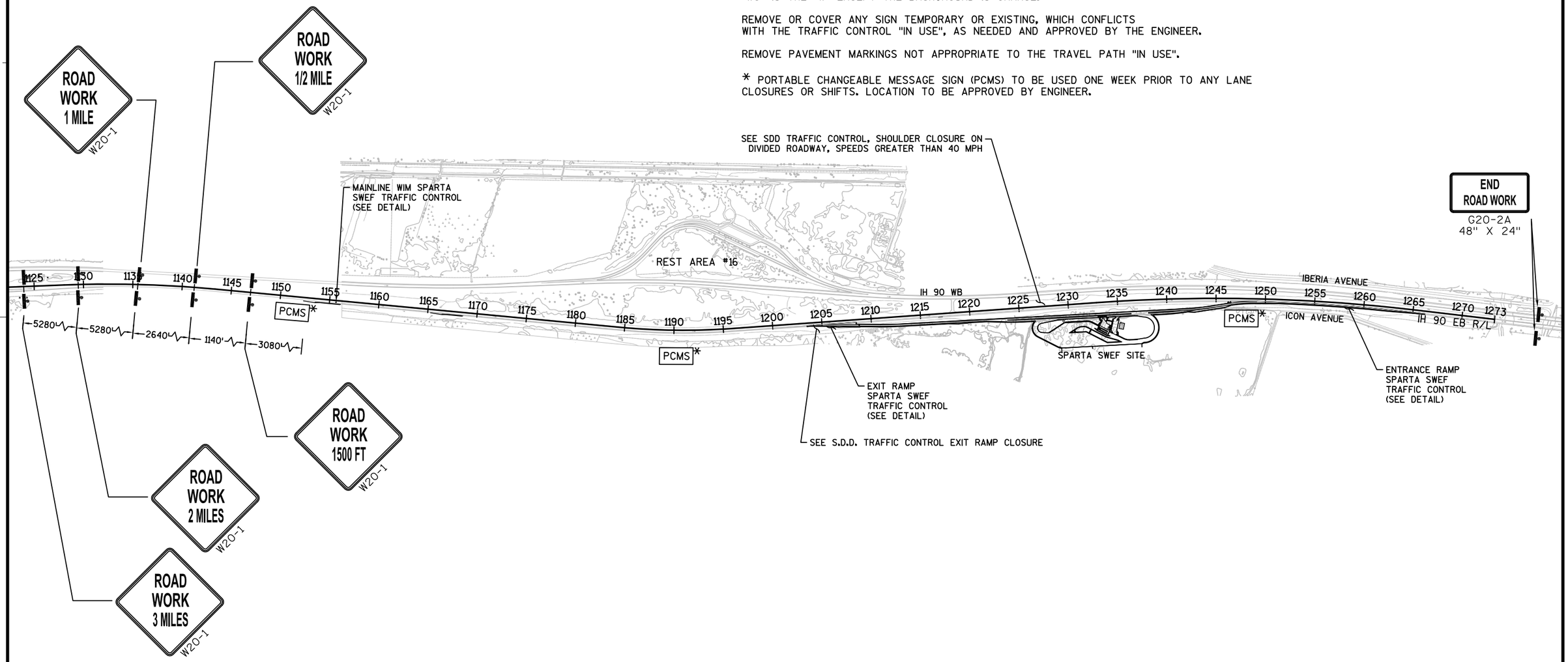
"WO" IS THE "W" EXCEPT THE BACKGROUND IS ORANGE.

REMOVE OR COVER ANY SIGN TEMPORARY OR EXISTING, WHICH CONFLICTS WITH THE TRAFFIC CONTROL "IN USE", AS NEEDED AND APPROVED BY THE ENGINEER.

REMOVE PAVEMENT MARKINGS NOT APPROPRIATE TO THE TRAVEL PATH "IN USE".

* PORTABLE CHANGEABLE MESSAGE SIGN (PCMS) TO BE USED ONE WEEK PRIOR TO ANY LANE CLOSURES OR SHIFTS. LOCATION TO BE APPROVED BY ENGINEER.

N



2

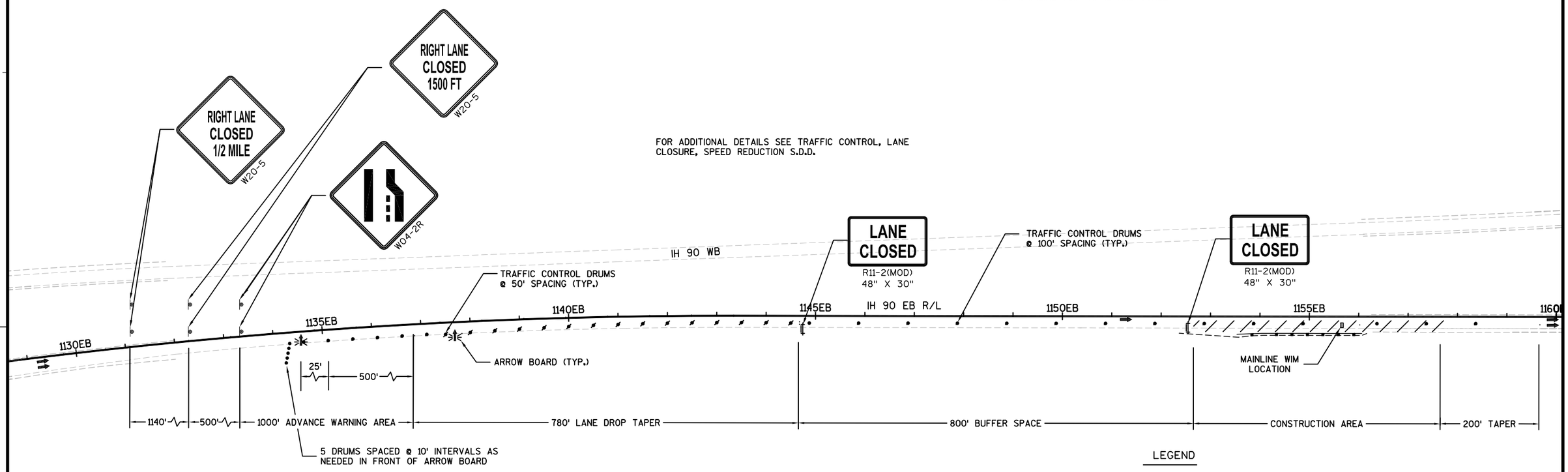
2

TO BE USED DURING OFF-PEAK TRAFFIC PERIODS ONLY

NOTE: CONTINUOUS LANE CLOSURE WILL BE ALLOWED TO SET MAINLINE WIM FRAME AND SCALE

N

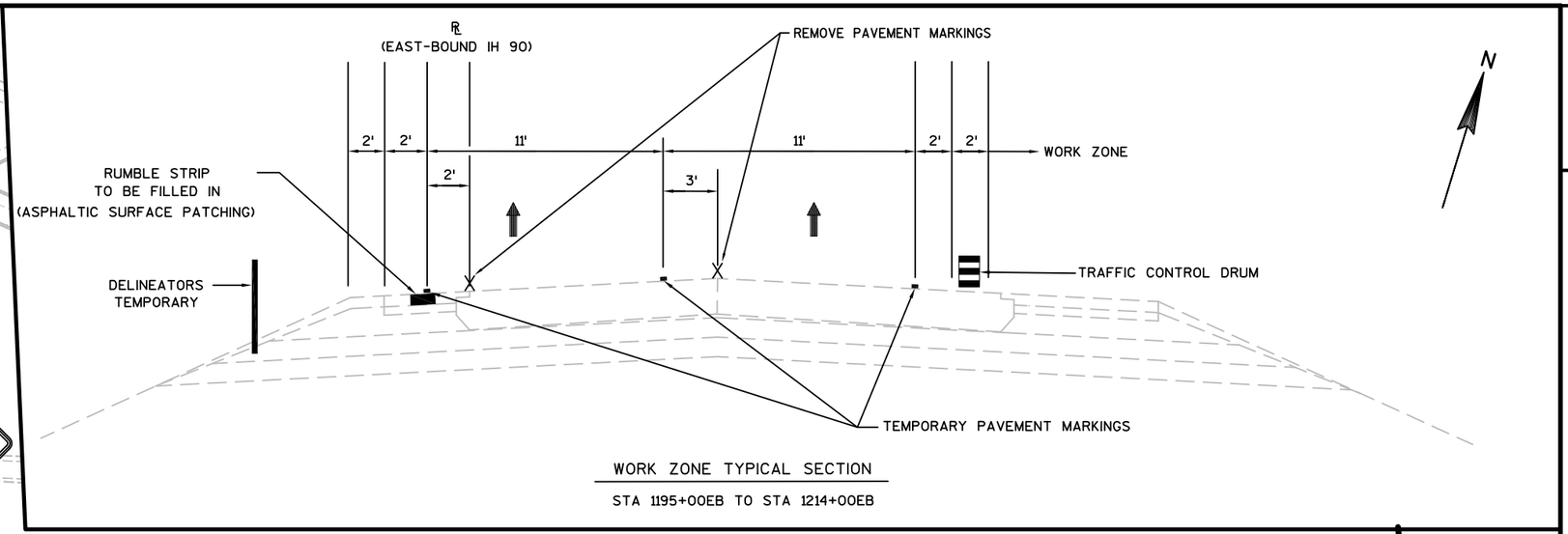
FOR ADDITIONAL DETAILS SEE TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION S.D.D.



LEGEND

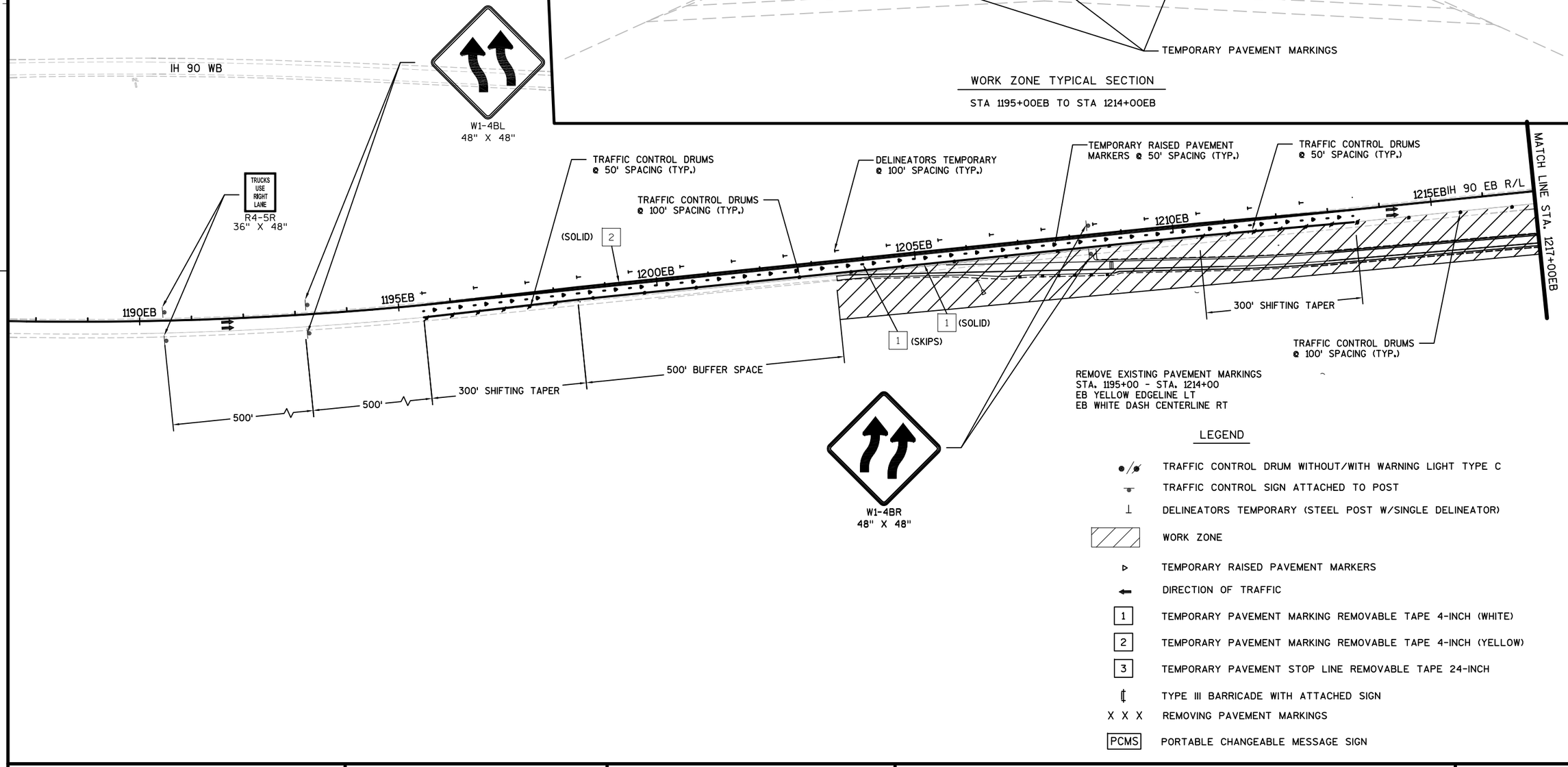
- ●/● TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT TYPE C
- TRAFFIC CONTROL SIGN ATTACHED TO POST
- ⊥ DELINEATORS TEMPORARY (STEEL POST W/SINGLE DELINEATOR)
- WORK ZONE
- ▷ TEMPORARY RAISED PAVEMENT MARKERS
- ← DIRECTION OF TRAFFIC
- [1] TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- [2] TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- [3] TEMPORARY PAVEMENT STOP LINE REMOVABLE TAPE 24-INCH
- TYPE III BARRICADE WITH ATTACHED SIGN
- X X X REMOVING PAVEMENT MARKINGS
- [PCMS] PORTABLE CHANGEABLE MESSAGE SIGN
- FLASHING ARROW BOARD

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	TRAFFIC CONTROL DETAIL (MAINLINE WIM - SPARTA SWEF #54)	SHEET 265	E



WORK ZONE TYPICAL SECTION

STA 1195+00EB TO STA 1214+00EB



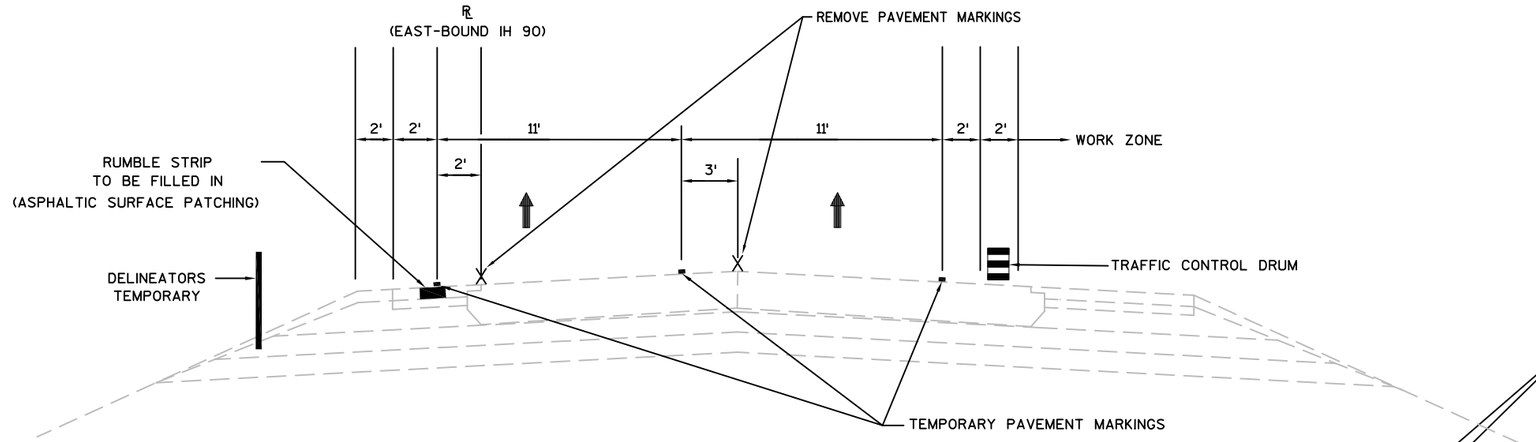
REMOVE EXISTING PAVEMENT MARKINGS
STA. 1195+00 - STA. 1214+00
EB YELLOW EDGELINE LT
EB WHITE DASH CENTERLINE RT

LEGEND

●/	TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT TYPE C
	TRAFFIC CONTROL SIGN ATTACHED TO POST
⊥	DELINEATORS TEMPORARY (STEEL POST W/SINGLE DELINEATOR)
	WORK ZONE
▷	TEMPORARY RAISED PAVEMENT MARKERS
←	DIRECTION OF TRAFFIC
1	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
2	TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
3	TEMPORARY PAVEMENT STOP LINE REMOVABLE TAPE 24-INCH
℄	TYPE III BARRICADE WITH ATTACHED SIGN
X X X	REMOVING PAVEMENT MARKINGS
PCMS	PORTABLE CHANGEABLE MESSAGE SIGN

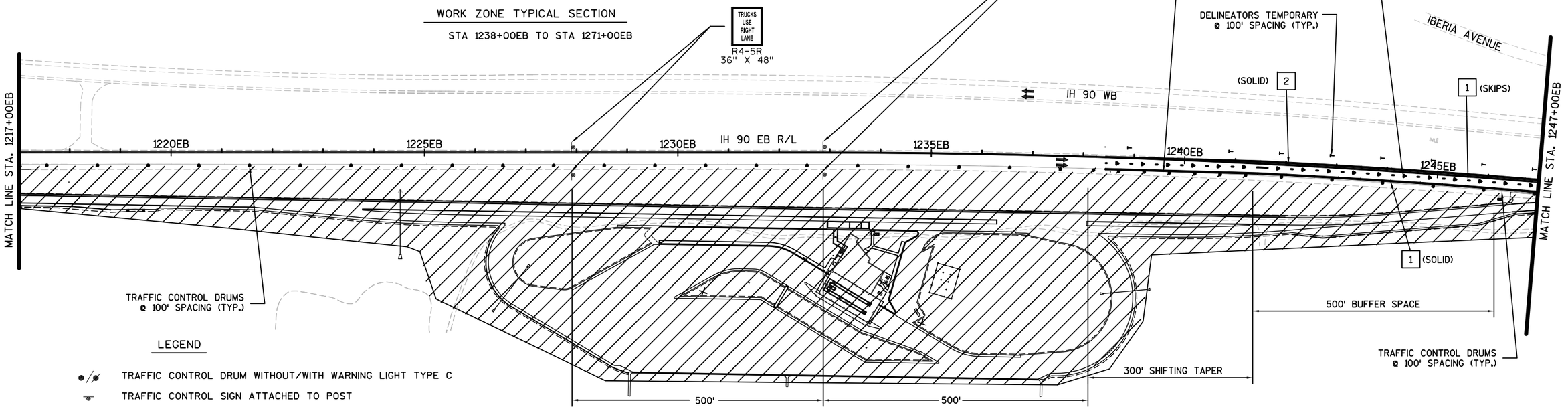
PROJECT NO:1070-00-72	HWY: IH 90	COUNTY: MONROE	TRAFFIC CONTROL DETAIL (EXIT RAMP - SPARTA SWEF #54)	SHEET 266	E

2



WORK ZONE TYPICAL SECTION

STA 1238+00EB TO STA 1271+00EB



LEGEND

- ●/⌀ TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT TYPE C
- TRAFFIC CONTROL SIGN ATTACHED TO POST
- ⊥ DELINEATORS TEMPORARY (STEEL POST W/SINGLE DELINEATOR)
- WORK ZONE
- ▷ TEMPORARY RAISED PAVEMENT MARKERS
- ⬅ DIRECTION OF TRAFFIC
- [1] TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- [2] TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- [3] TEMPORARY PAVEMENT STOP LINE REMOVABLE TAPE 24-INCH
- TYPE III BARRICADE WITH ATTACHED SIGN
- X X X REMOVING PAVEMENT MARKINGS
- [PCMS] PORTABLE CHANGEABLE MESSAGE SIGN

REMOVE EXISTING PAVEMENT MARKINGS
STA. 1238+00 - STA. 1271+00
EB YELLOW EDGELINE LT
EB WHITE DASH CENTERLINE RT

PROJECT NO:1070-00-72	HWY: IH 90	COUNTY: MONROE	TRAFFIC CONTROL DETAIL (ENTRANCE RAMP - SPARTA SWEF #54)	SHEET 267	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\TRAFFIC CONTROL\025001_TC.DWG PLOT DATE : 5/9/2016 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1 IN:200 FT

2

N

LITTLE LACROSSE RIVER

DELINEATORS TEMPORARY
@ 100' SPACING (TYP.)

IBERIA AVENUE

(SOLID) 2

1 (SOLID)

1 (SKIPS)

IH 90 WB

IH 90 EB

1250EB

1255EB

1260EB

1265EB

1270EB

1273EB

MATCH LINE STA. 1247+00EB

ICON AVENUE

300' SHIFTING TAPER

TRAFFIC CONTROL DRUMS
@ 100' SPACING (TYP.)

TEMPORARY RAISED PAVEMENT
MARKERS @ 50' SPACING (TYP.)

REMOVE EXISTING PAVEMENT MARKINGS
STA. 1238+00 - STA. 1271+00
EB WHITE EDGELINE LT
EB WHITE DASH CENTERLINE

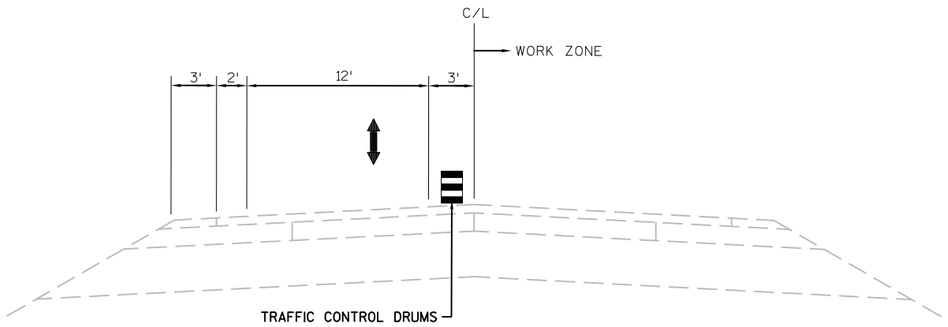
W1-4BR
48" X 48"

LEGEND

- TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT TYPE C
- TRAFFIC CONTROL SIGN ATTACHED TO POST
- DELINEATORS TEMPORARY (STEEL POST W/SINGLE DELINEATOR)
- WORK ZONE
- TEMPORARY RAISED PAVEMENT MARKERS
- DIRECTION OF TRAFFIC
- 1 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- 2 TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- 3 TEMPORARY PAVEMENT STOP LINE REMOVABLE TAPE 24-INCH
- TYPE III BARRICADE WITH ATTACHED SIGN
- X X X REMOVING PAVEMENT MARKINGS
- PCMS PORTABLE CHANGEABLE MESSAGE SIGN

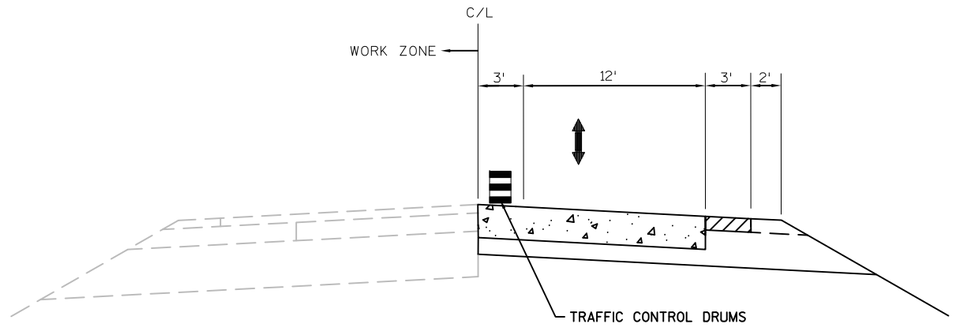
PROJECT NO:1070-00-72	HWY: IH 90	COUNTY: MONROE	TRAFFIC CONTROL DETAIL (ENTRANCE RAMP - SPARTA SWEF #54)	SHEET 268	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\TRAFFIC CONTROL\025001_TC.DWG PLOT DATE : 5/9/2016 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1 IN:200 FT



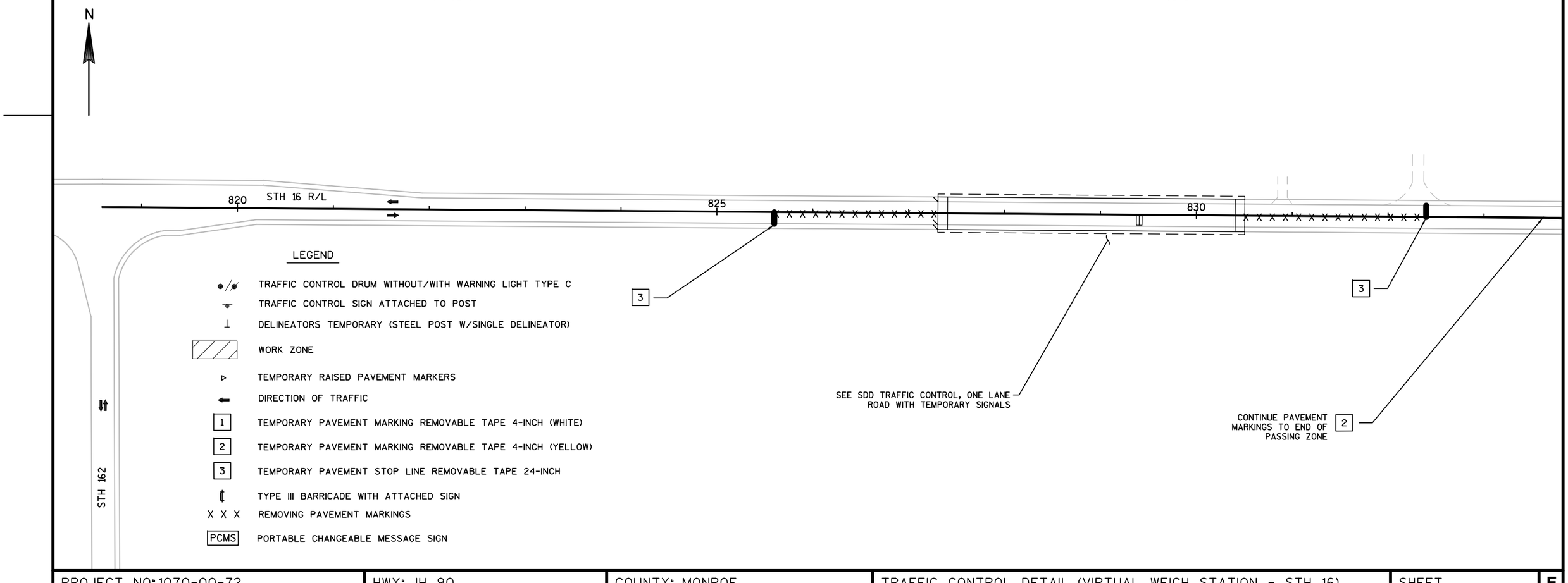
WORK ZONE TYPICAL SECTION

STAGE 1



WORK ZONE TYPICAL SECTION

STAGE 2

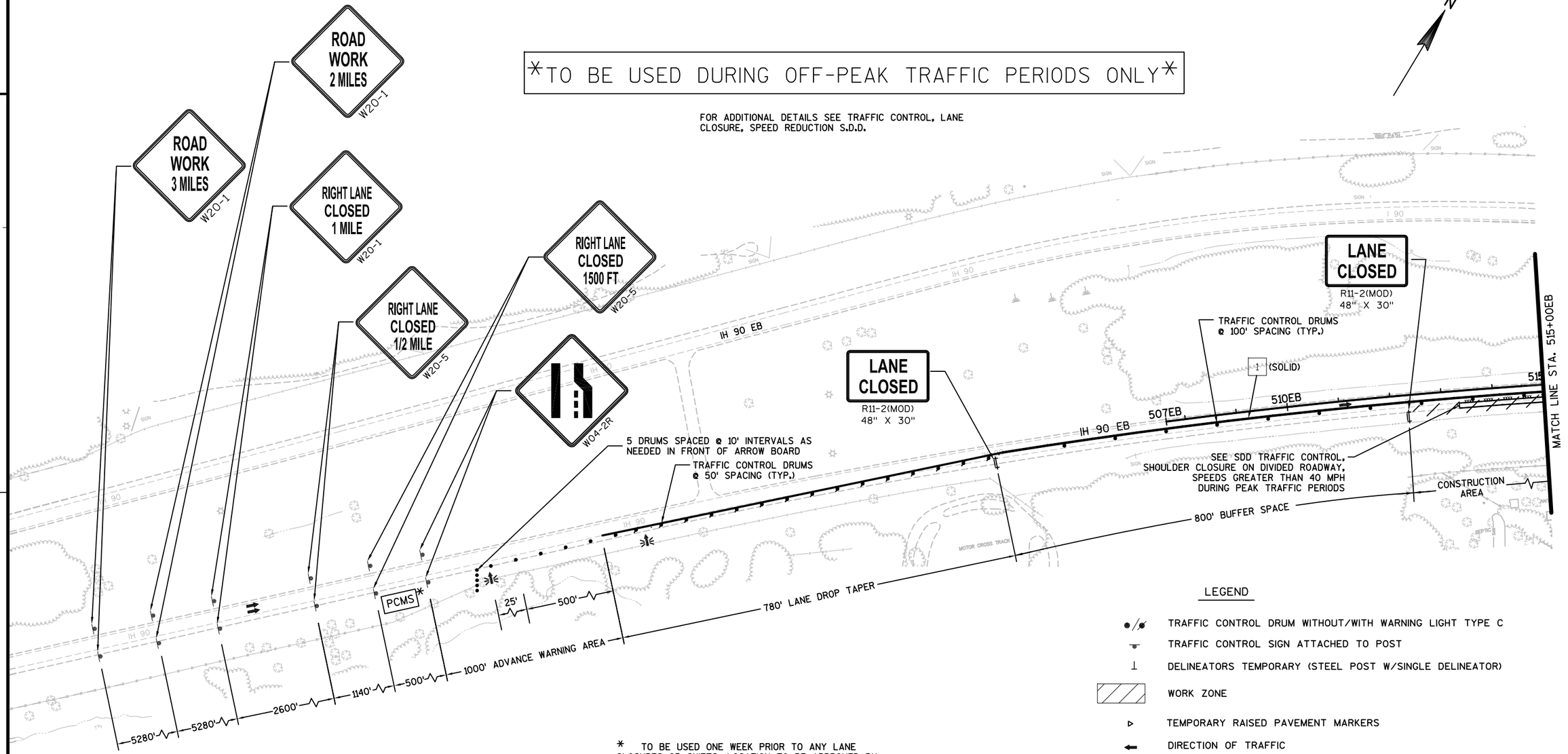


PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	TRAFFIC CONTROL DETAIL (VIRTUAL WEIGH STATION - STH 16)	SHEET 269	E

2

TO BE USED DURING OFF-PEAK TRAFFIC PERIODS ONLY

FOR ADDITIONAL DETAILS SEE TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION S.D.D.



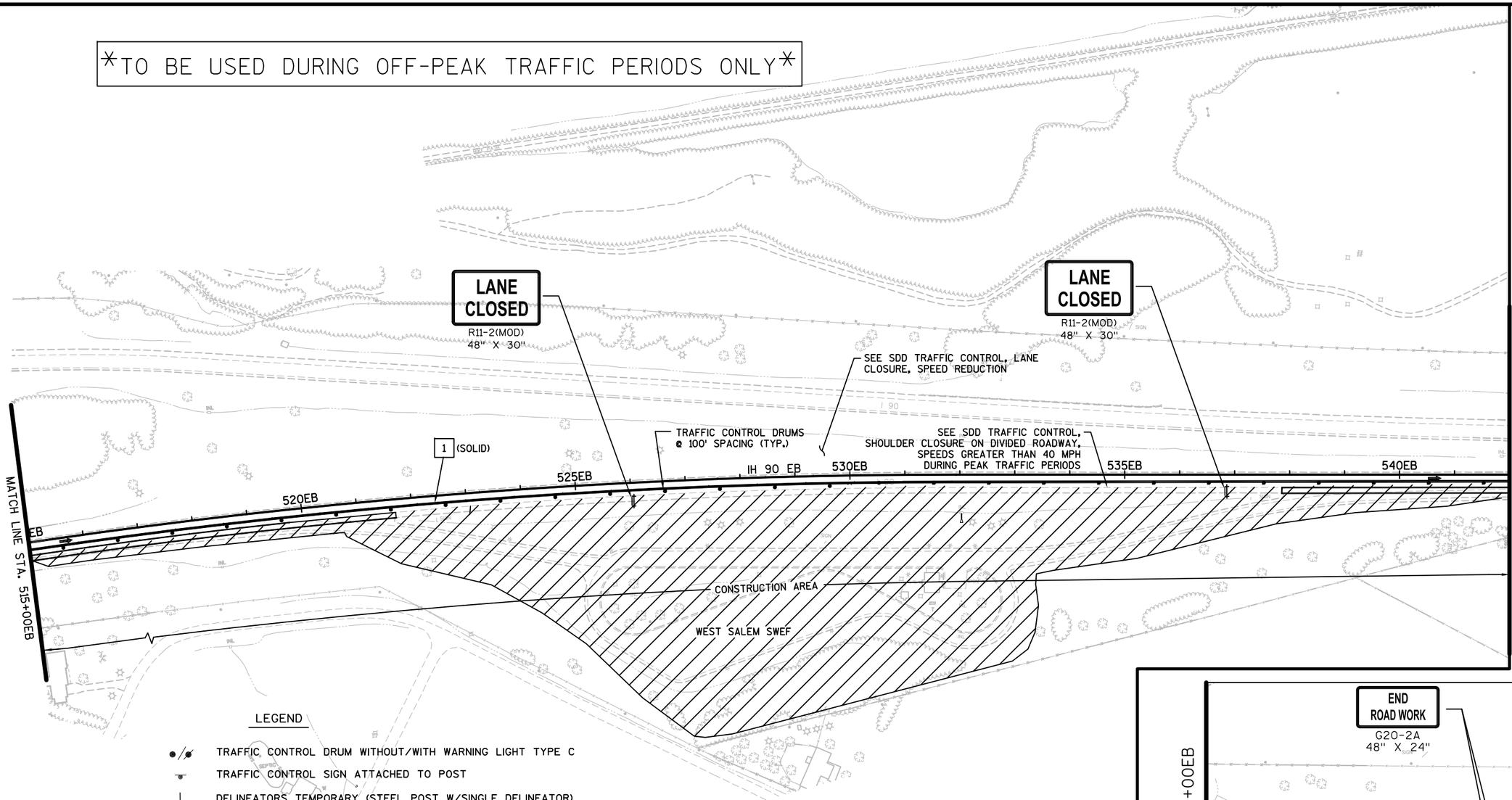
* TO BE USED ONE WEEK PRIOR TO ANY LANE CLOSURES OR SHIFTS. LOCATION TO BE APPROVED BY ENGINEER.

LEGEND

- TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT TYPE C
- TRAFFIC CONTROL SIGN ATTACHED TO POST
- DELINEATORS TEMPORARY (STEEL POST W/SINGLE DELINEATOR)
- WORK ZONE
- TEMPORARY RAISED PAVEMENT MARKERS
- DIRECTION OF TRAFFIC
- [1] TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- [2] TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- [3] TEMPORARY PAVEMENT STOP LINE REMOVABLE TAPE 24-INCH
- TYPE III BARRICADE WITH ATTACHED SIGN
- X X X REMOVING PAVEMENT MARKINGS
- [PCMS] PORTABLE CHANGEABLE MESSAGE SIGN
- FLASHING ARROW BOARD

PROJECT NO:1070-00-73	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL DETAIL (WEST SALEM SWEF #53)	SHEET 270	E

TO BE USED DURING OFF-PEAK TRAFFIC PERIODS ONLY

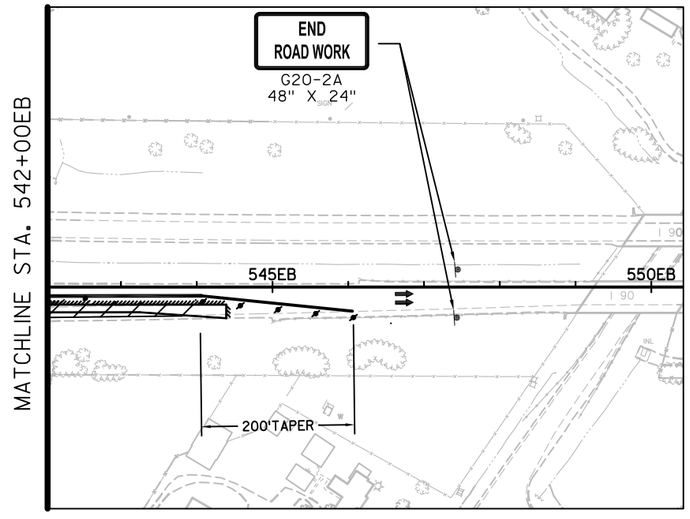


2

N

LEGEND

- TRAFFIC CONTROL DRUM WITHOUT/WITH WARNING LIGHT TYPE C
- TRAFFIC CONTROL SIGN ATTACHED TO POST
- DELINEATORS TEMPORARY (STEEL POST W/SINGLE DELINEATOR)
- WORK ZONE
- TEMPORARY RAISED PAVEMENT MARKERS
- DIRECTION OF TRAFFIC
- [1] TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (WHITE)
- [2] TEMPORARY PAVEMENT MARKING REMOVABLE TAPE 4-INCH (YELLOW)
- [3] TEMPORARY PAVEMENT STOP LINE REMOVABLE TAPE 24-INCH
- TYPE III BARRICADE WITH ATTACHED SIGN
- X X X REMOVING PAVEMENT MARKINGS
- [PCMS] PORTABLE CHANGEABLE MESSAGE SIGN

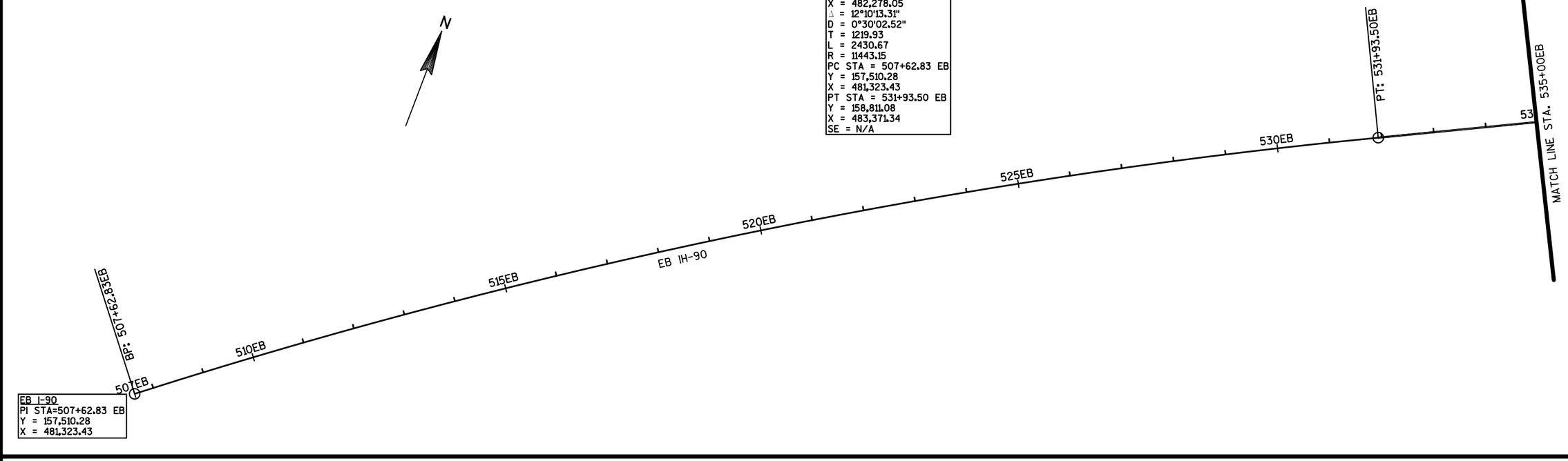


PROJECT NO: 1070-00-73	HWY: IH 90	COUNTY: LA CROSSE	TRAFFIC CONTROL DETAIL (WEST SALEM SWEF #53)	SHEET 271	E

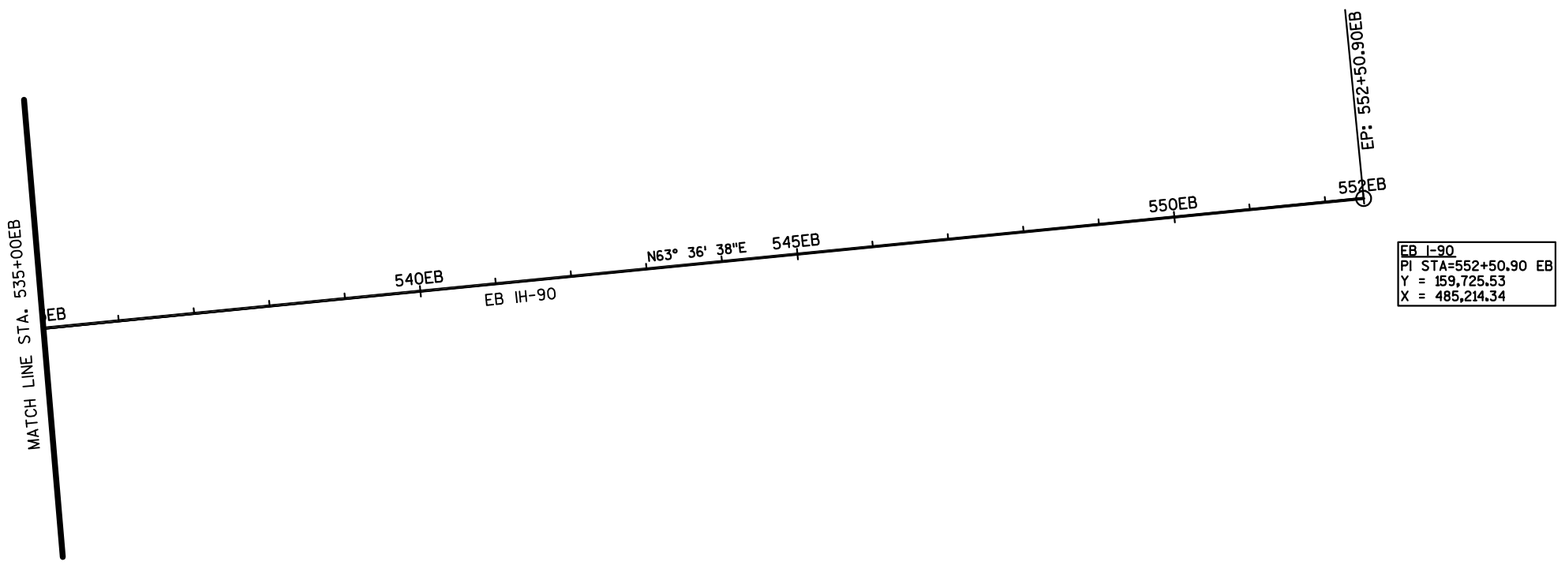
2

EB I-90
PI STA = 519+82.76 EB
Y = 158,269.84
X = 482,278.05
Δ = 12°10'13.31"
D = 0°30'02.52"
T = 1219.93
L = 2430.67
R = 11443.15
PC STA = 507+62.83 EB
Y = 157,510.28
X = 481,323.43
PT STA = 531+93.50 EB
Y = 158,811.08
X = 483,371.34
SE = N/A

N



EB I-90
PI STA=507+62.83 EB
Y = 157,510.28
X = 481,323.43

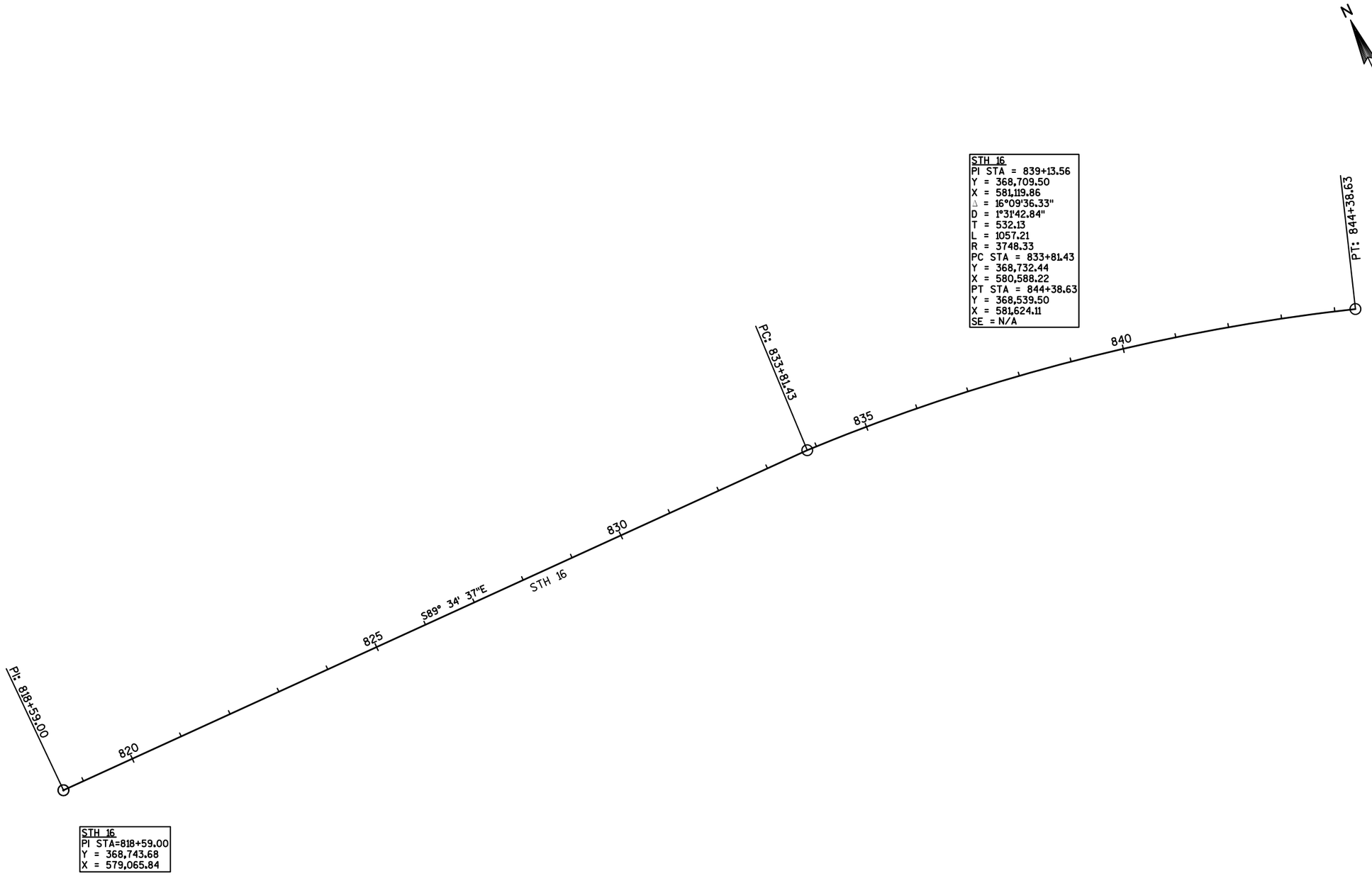


EB I-90
PI STA=552+50.90 EB
Y = 159,725.53
X = 485,214.34

PROJECT NO: 1070-00-73	HWY: IH 90	COUNTY: LA CROSSE	ALIGNMENT DETAIL	SHEET 272	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\027201_AD.DWG PLOT DATE : 7/11/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1 IN:200 FT

2



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	ALIGNMENT DETAIL	SHEET 273	E

2

2

N

1150EB

EB I-90
PI STA=1150+00.00 EB
Y = 365,356.05
X = 603,765.48

1155EB

1160EB

EB IH-90

1165EB

N76° 38' 03"E

1170EB

1175+00EB

MATCH LINE STA. 1175+00EB

1180EB

N76° 38' 03"E

PC: 1184+48.66EB

1185EB

EB IH-90

1190EB

1195EB

PT: 1195+82.51EB

1200EB

N67° 11' 08"E

MATCH LINE STA. 1203+00R

EB I-90
PI STA = 1190+16.87 EB
Y = 366,284.61
X = 607,673.56
Δ = 9°26'55.55"
D = 0°50'00.00"
T = 568.21
L = 1133.85
R = 6875.50
PC STA = 1184+48.66 EB
Y = 366,153.26
X = 607,120.73
PT STA = 1195+82.51 EB
Y = 366,504.93
X = 608,197.32
SE =

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	ALIGNMENT DETAIL	SHEET 274	E

2

RAMP
PI STA=1203+46.08 R
Y = 366,778.98
X = 608,910.71

RAMP
PI STA = 1211+93.83 R
Y = 367,044.49
X = 609,715.80
Δ = 3°35'22.53"
D = 1°45'17.45"
T = 102.31
L = 204.55
R = 3,265.00
PC STA = 1210+91.52 R
Y = 367,012.45
X = 609,618.64
PT STA = 1212+96.07 R
Y = 367,082.55
X = 609,810.77
SE = 4.09%

SCALE
PI STA=2221+67.37 S
Y = 367,406.72
X = 610,619.54

N.C.

PARKING LOT
PI STA = 4227+94.04 P
Y = 367,446.44
X = 611,031.62
Δ = 107°41'43.94"
D = 59°40'58.70"
T = 131.40
L = 180.45
R = 96.00
PC STA = 4226+62.64 P
Y = 367,564.68
X = 611,088.91
PT STA = 4228+43.09 P
Y = 367,427.79
X = 611,161.68
SE = N.C.

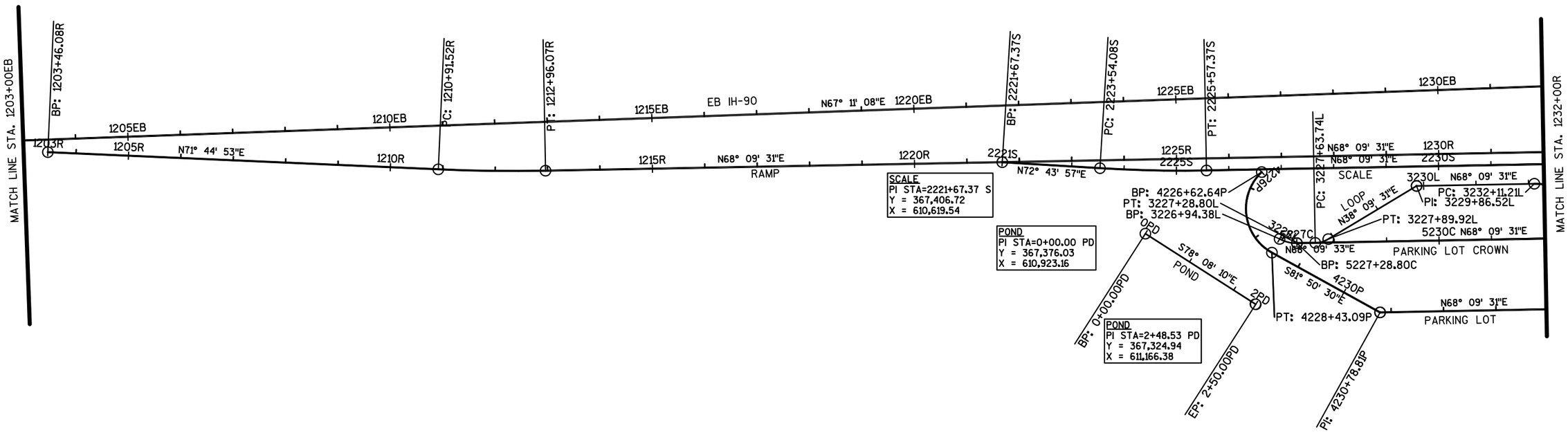
PARKING LOT
PI STA=4230+78.81 P
Y = 367,394.34
X = 611,395.02

LOOP
PI STA = 3227+11.99 L
Y = 367,455.01
X = 611,183.51
Δ = 29°52'41.74"
D = 86°48'42.43"
T = 17.61
L = 34.42
R = 66.00
PC STA = 3226+94.38 L
Y = 367,457.47
X = 611,166.08
PT STA = 3227+28.80 L
Y = 367,461.56
X = 611,199.86
SE = N.C.

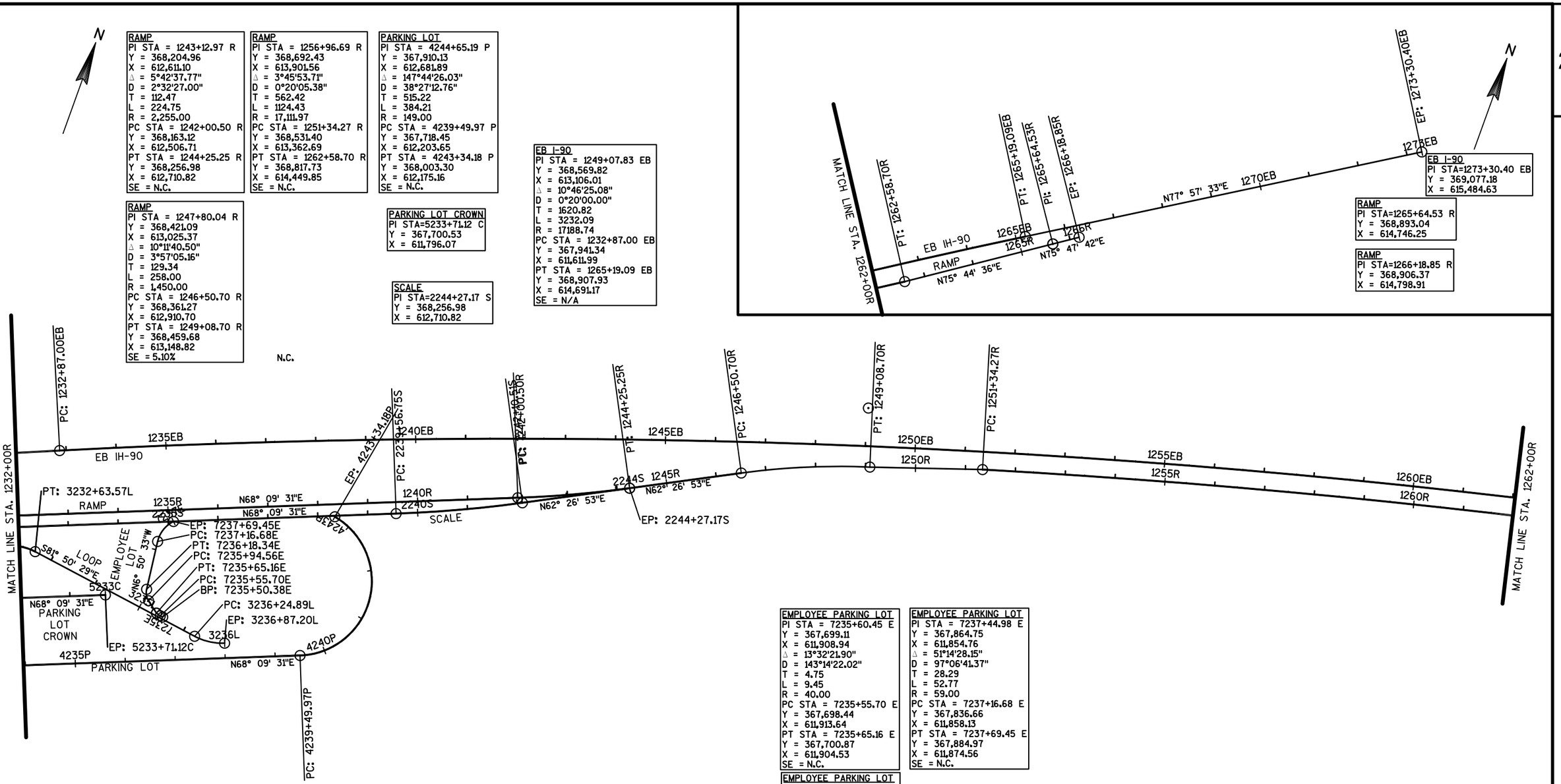
PARKING LOT CROWN
PI STA=5227+28.80 C
Y = 367,461.56
X = 611,199.86

LOOP
PI STA=3229+86.52 L
Y = 367,644.67
X = 611,374.48

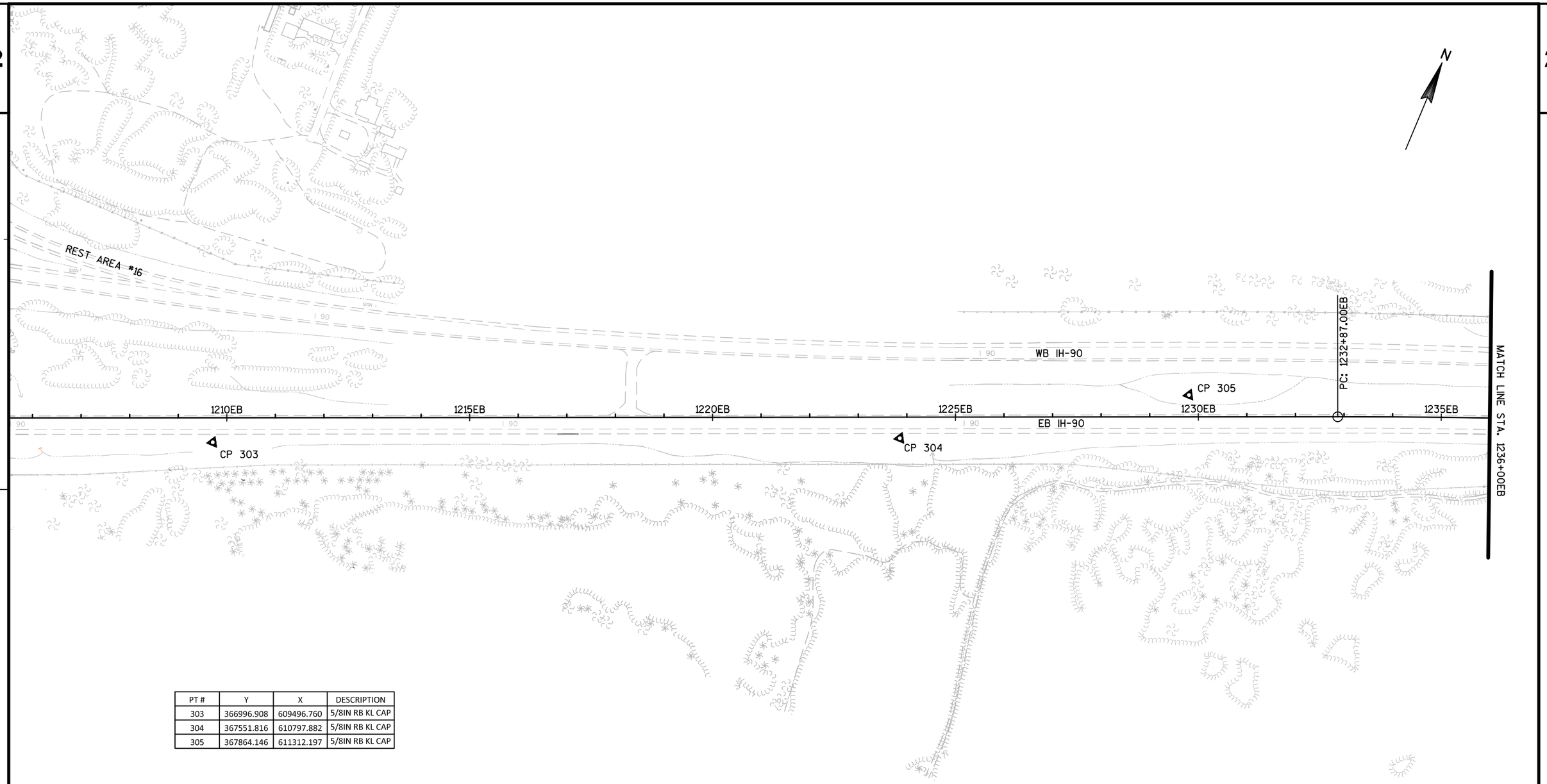
N



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	ALIGNMENT DETAIL	SHEET 275 E



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	ALIGNMENT DETAIL	SHEET 276	E

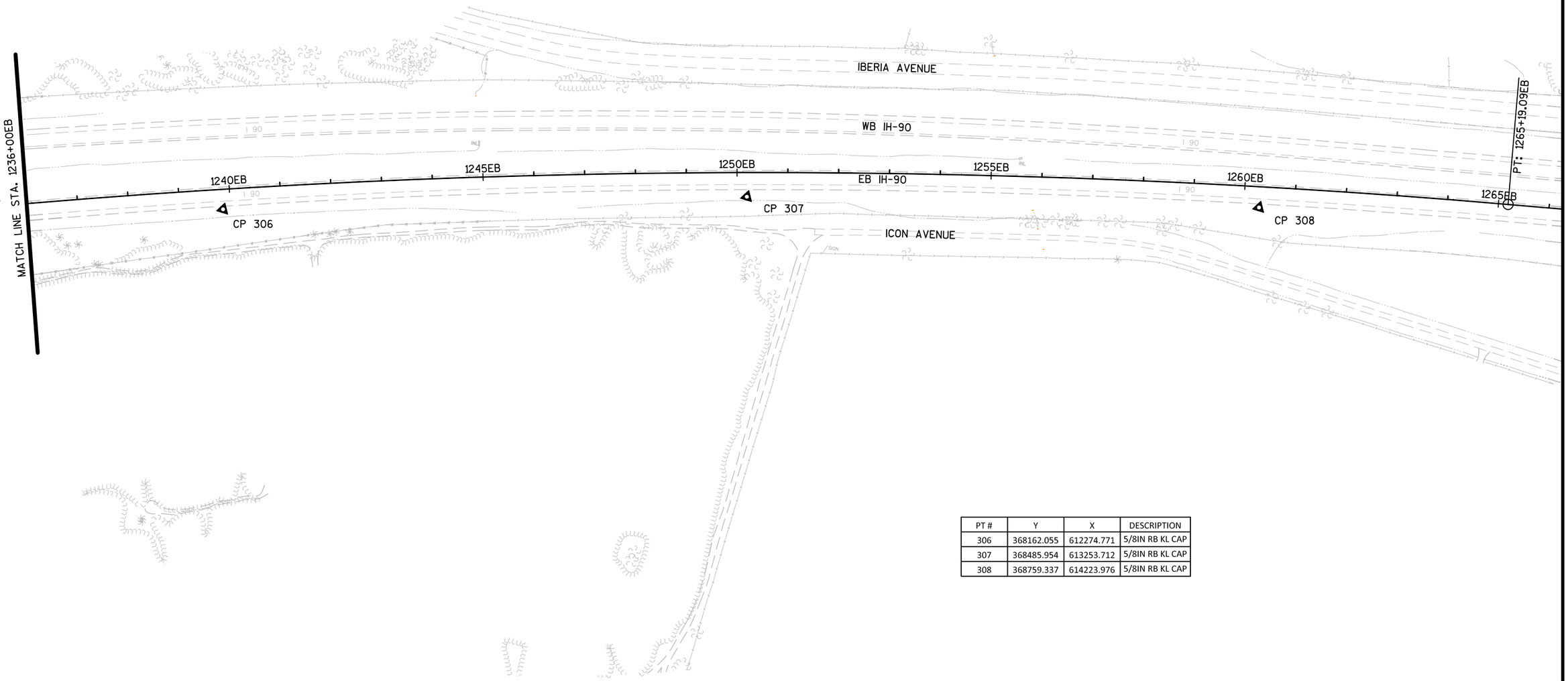


PT #	Y	X	DESCRIPTION
303	366996.908	609496.760	5/8IN RB KL CAP
304	367551.816	610797.882	5/8IN RB KL CAP
305	367864.146	611312.197	5/8IN RB KL CAP

PROJECT NO:1070-00-72	HWY: IH 90	COUNTY: MONROE	CONTROL POINT DETAIL (SPARTA, SWEF #54)	SHEET 277	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\027301_CP.DWG PLOT DATE : 7/11/2014 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1" = 200'_XREF

2



PT #	Y	X	DESCRIPTION
306	368162.055	612274.771	5/8IN RB KL CAP
307	368485.954	613253.712	5/8IN RB KL CAP
308	368759.337	614223.976	5/8IN RB KL CAP

PROJECT NO:1070-00-72	HWY:IH 90	COUNTY:MONROE	CONTROL POINT DETAIL (SPARTA, SWEF #54)	SHEET 278	E

2

N

SIGN

I 90

WB IH 90

EB IH 90

1203+46R

1205+00R

1210+00R

RAMP

1215+00R

MATCH LINE STA. 1217+00R

REMOVING FENCE REQ'D
1207+38R - 1251+52R

R/W

1207+38R
60' RT

SLOPE INTERCEPTS (TYP.)

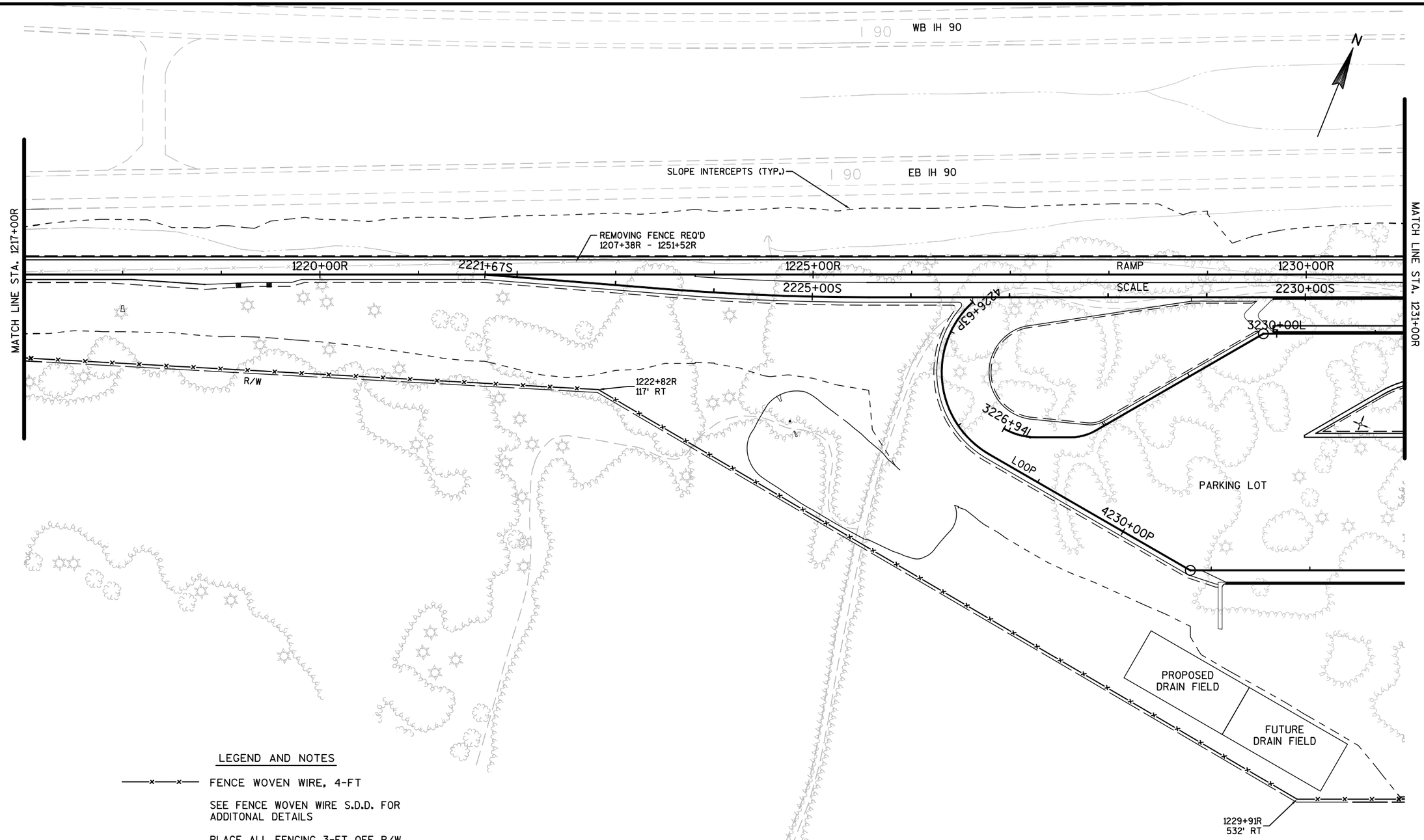
LEGEND AND NOTES

FENCE WOVEN WIRE, 4-FT

SEE FENCE WOVEN WIRE S.D.D. FOR ADDITONAL DETAILS

PLACE ALL FENCING 3-FT OFF R/W UNLESS OTHERWISE NOTED

PROJECT NO:1070-00-72	HWY:IH 90	COUNTY:MONROE	FENCING PLAN (SPARTA, SWEF #54)	SHEET 279	E



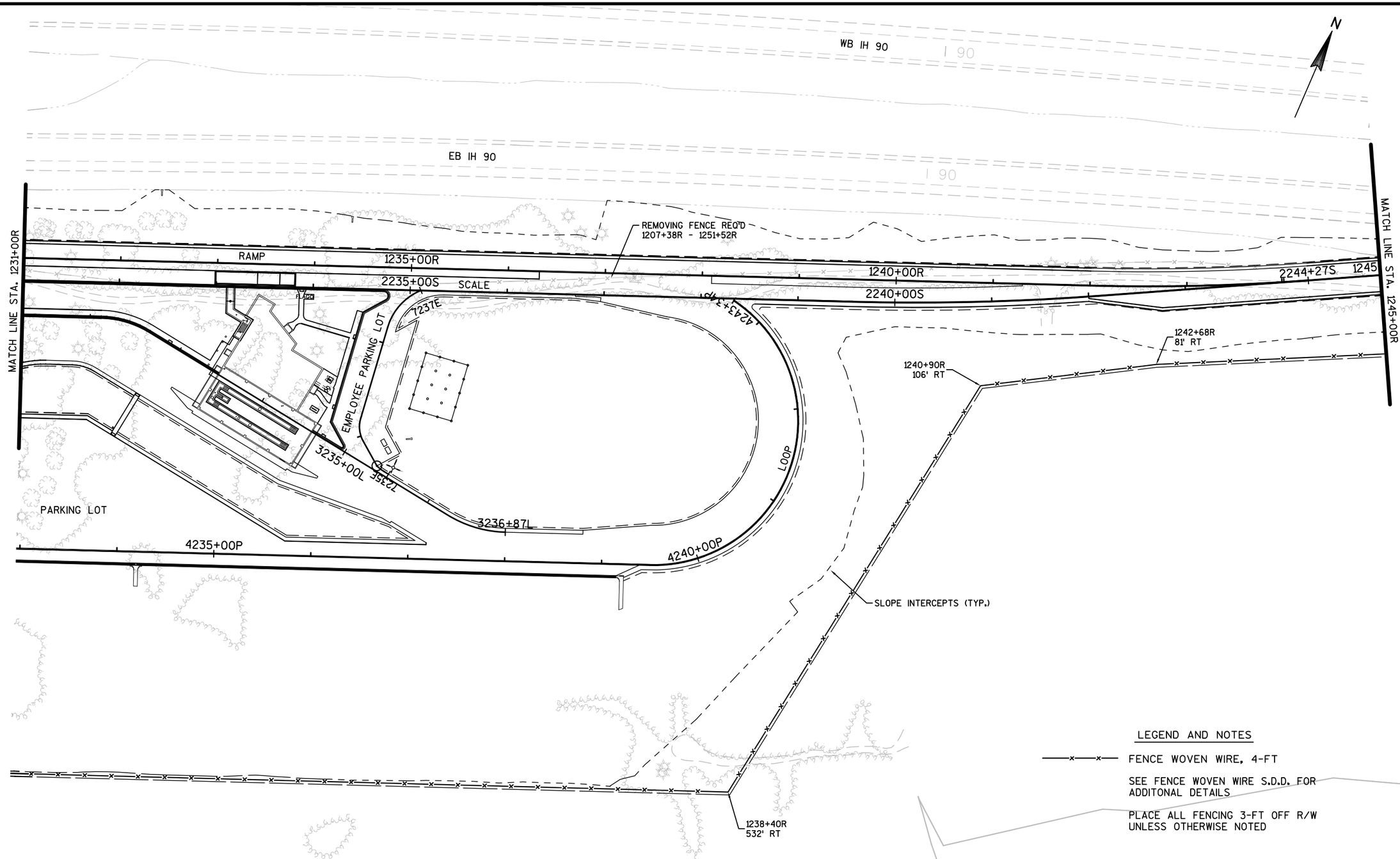
LEGEND AND NOTES

——×——×—— FENCE WOVEN WIRE, 4-FT

SEE FENCE WOVEN WIRE S.D.D. FOR ADDITONAL DETAILS

PLACE ALL FENCING 3-FT OFF R/W UNLESS OTHERWISE NOTED

PROJECT NO:1070-00-72	HWY: IH 90	COUNTY: MONROE	FENCING PLAN (SPARTA, SWEF #54)	SHEET 280	E



LEGEND AND NOTES

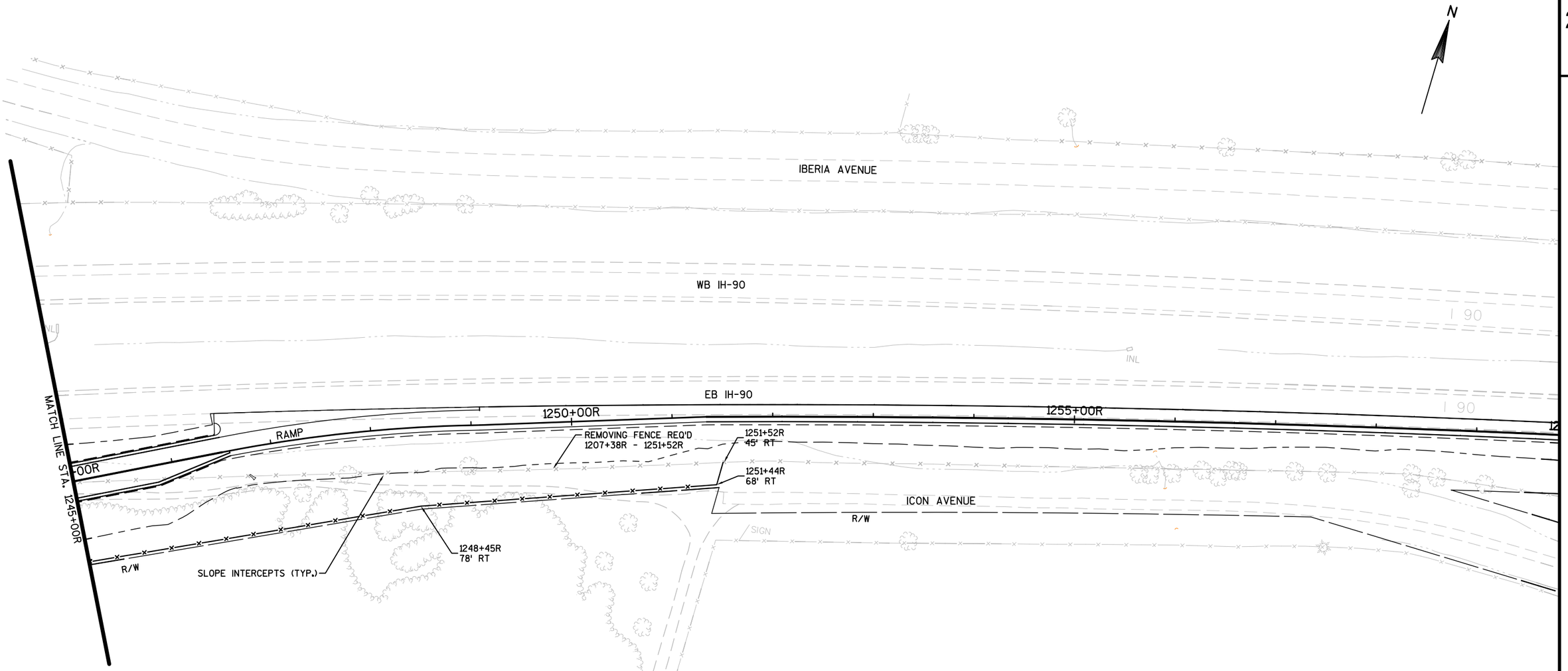
FENCE WOVEN WIRE, 4-FT

SEE FENCE WOVEN WIRE S.D.D. FOR ADDITONAL DETAILS

PLACE ALL FENCING 3-FT OFF R/W UNLESS OTHERWISE NOTED

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	FENCING PLAN (SPARTA, SWEF #54)	SHEET 281 E

2



LEGEND AND NOTES

FENCE WOVEN WIRE, 4-FT

SEE FENCE WOVEN WIRE S.D.D. FOR ADDITONAL DETAILS

PLACE ALL FENCING 3-FT OFF R/W UNLESS OTHERWISE NOTED

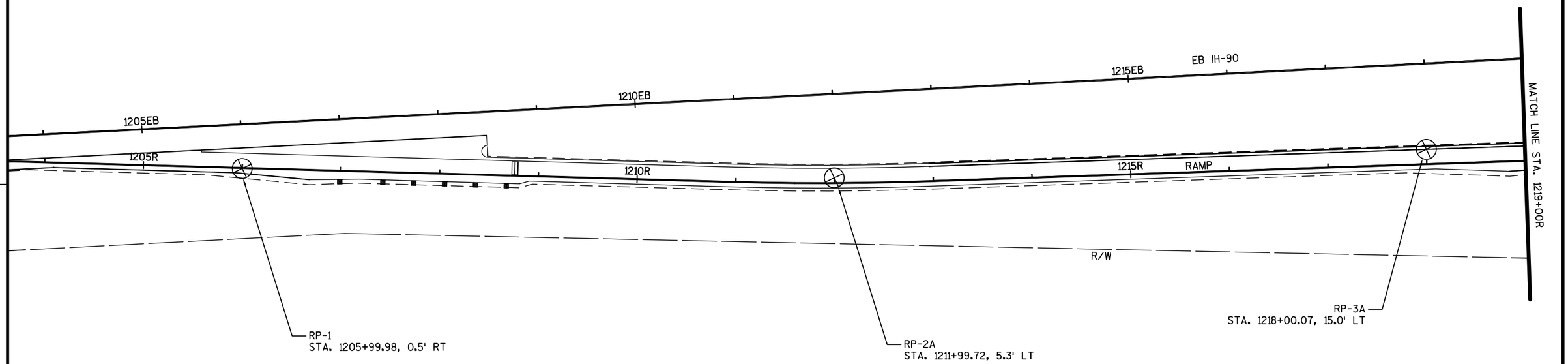
PROJECT NO:1070-00-72	HWY:IH 90	COUNTY:MONROE	FENCING PLAN (SPARTA, SWEF #54)	SHEET 282	E

2

2

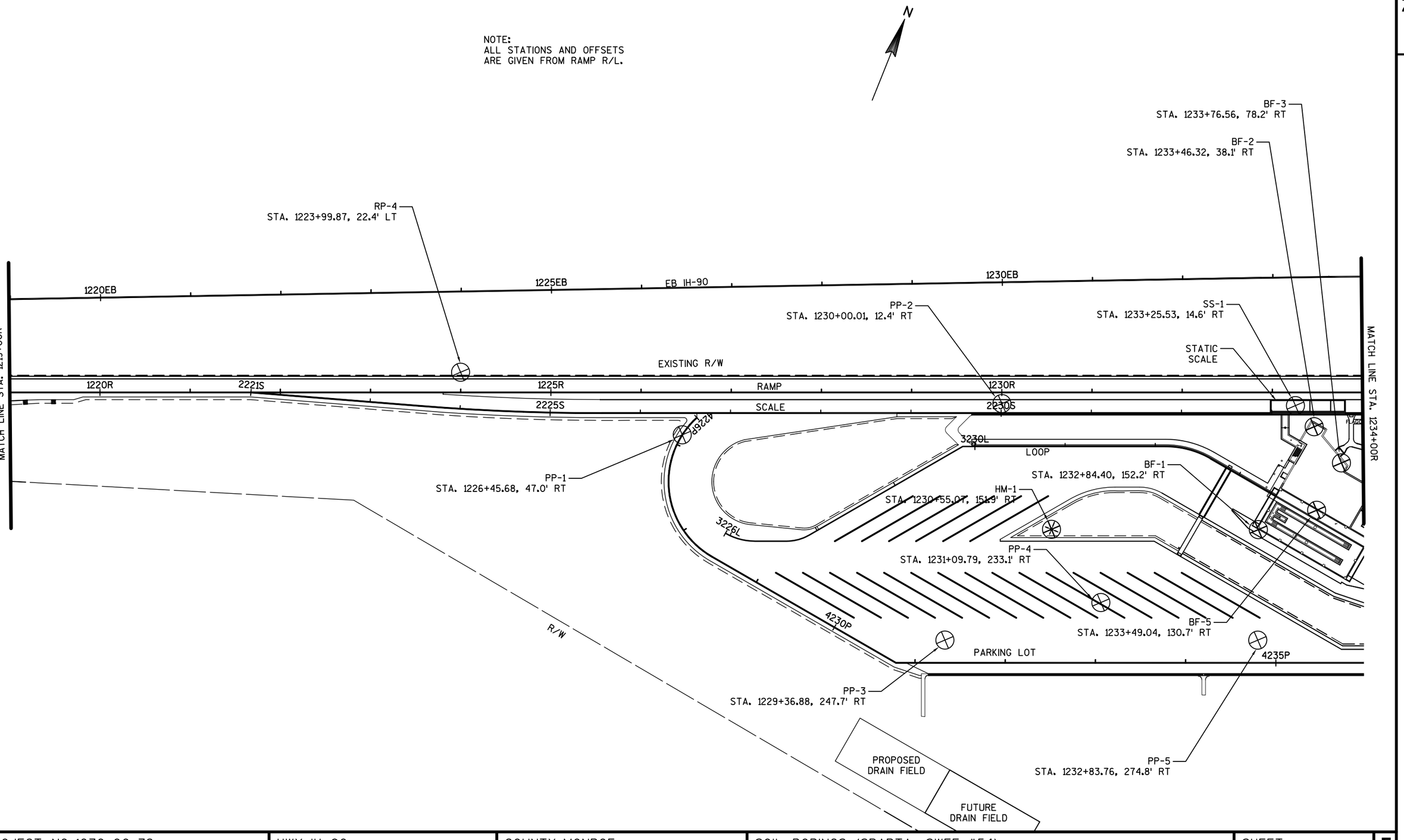
N

NOTE:
ALL STATIONS AND OFFSETS
ARE GIVEN FROM RAMP R/L.



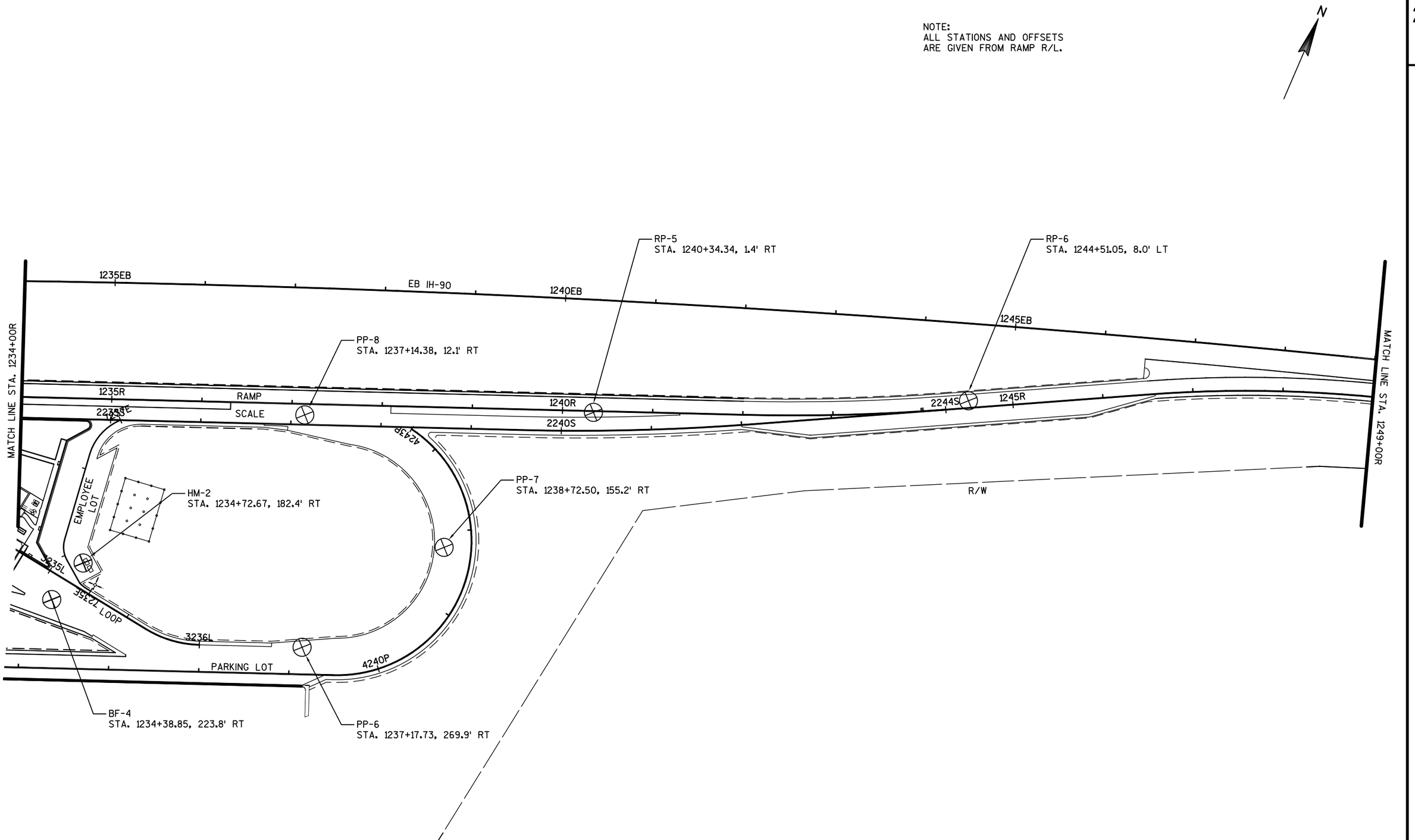
PROJECT NO:1070-00-72	HWY:IH 90	COUNTY:MONROE	SOIL BORINGS (SPARTA, SWEF #54)	SHEET 283	E

NOTE:
ALL STATIONS AND OFFSETS
ARE GIVEN FROM RAMP R/L.



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SOIL BORINGS (SPARTA, SWEF #54)	SHEET 284 E

NOTE:
ALL STATIONS AND OFFSETS
ARE GIVEN FROM RAMP R/L.

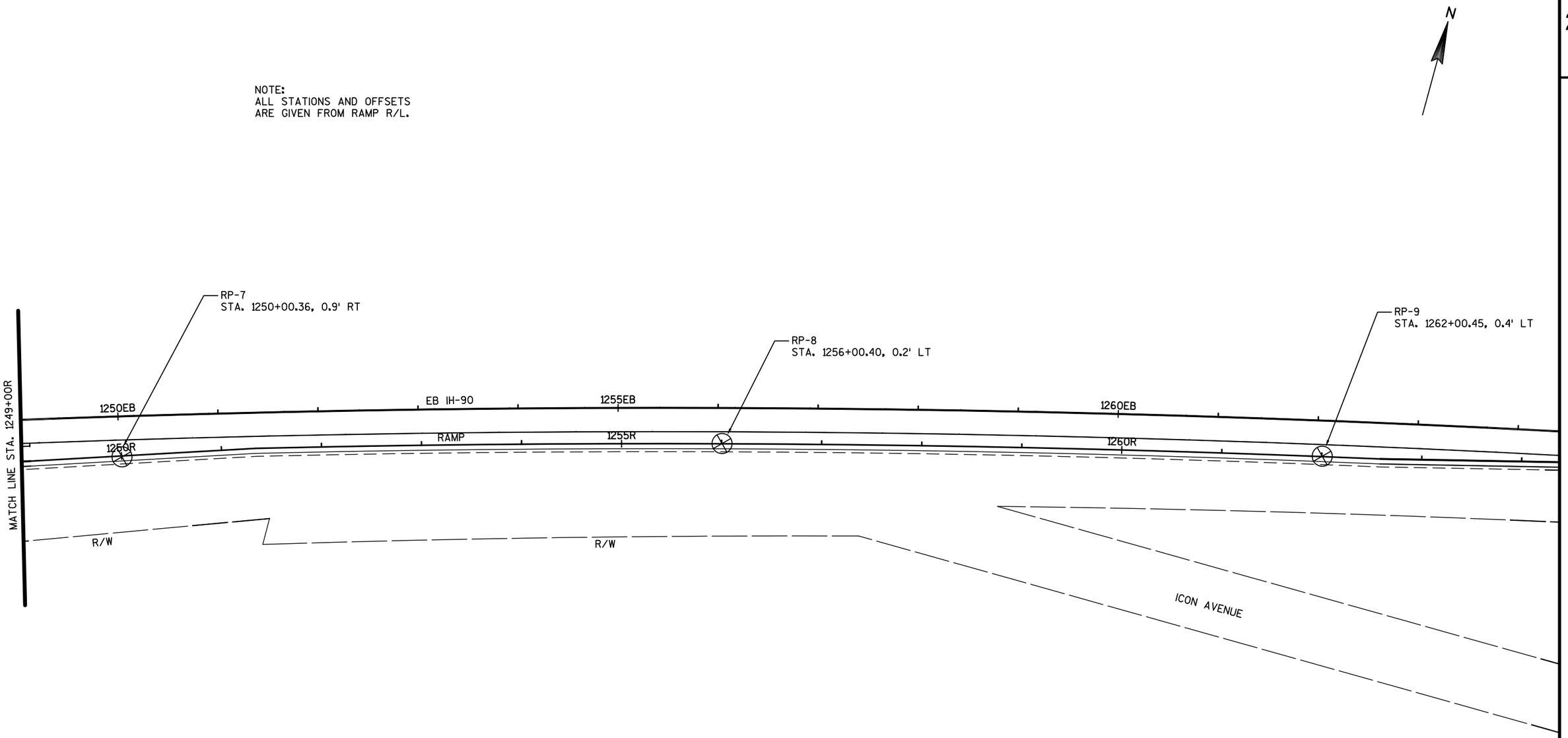


PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SOIL BORINGS (SPARTA, SWEF #54)	SHEET 285	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\SOIL BORINGS\SOIL BORINGS.DWG PLOT DATE : 5/9/2016 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 42

NOTE:
ALL STATIONS AND OFFSETS
ARE GIVEN FROM RAMP R/L.



PROJECT NO:1070-00-72	HWY:IH 90	COUNTY:MONROE	SOIL BORINGS (SPARTA, SWEF #54)	SHEET 286 E

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. BF-1
Surface Elevation (ft) 818.1
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	Type	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						12 in. +/- Sandy TOPSOIL (OL)					
1		18	M	1		Very Loose, Dark Brown Fine SAND; Some Silt, Trace Clay (SM)					
2		18	M	9	5	Loose to Medium Dense, Orange Brown to Light Brown Fine to Medium SAND; Trace to Little Silt and Gravel (SP/SP-SM) P200 near 7.5 ft = 2.7%					
3		18	M	16				2.2			
4		18	M	24	10	Possible highly weathered sandstone bedrock in lower portion of layer.					
5		4	M	50/4"	15	Very Dense, Light Brown/Orange Brown/Brown Fine to Medium SAND; Little to Some Gravel, Trace Silt (SP-Probable Weathered Sandstone Bedrock)					
6		6	M	50/6"	20						
7		3	M	50/3"	25						
8		2	M	50/2"	30	Yellow Brown near 28.5 ft End of Boring & Split-Spoon Refusal at 28.7 ft Backfilled with Bentonite Chips					
					35						
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW Upon Completion of Drilling _____
Time After Drilling _____
Depth to Water _____ ▼
Depth to Cave in _____

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 11/12/12 End 11/12/12
Driller BSD Chief AP Rig CME-750
Logger GM Editor DAS
Drill Method 2.25" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. BF-2A
Surface Elevation (ft) 825.8±
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	Type	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						Boring BF-2A offset 5 ft from BF-2 and blind-drilled (without sampling) to 5.5 ft					
1		2	M	50/4"	5	Very Dense, Light Brown/Orange Brown/Brown Fine to Medium SAND; Little to Some Gravel, Trace Silt (SP-Probable Weathered Sandstone Bedrock)					
2		2	M	50/4"	10	Very hard drilling in the upper ~5 ft of this layer.					
3		4	M	50/5"	15						
4		1	M	50/4"	20						
5		1	M	50/2"	25						
6		2	M	50/4"	30	End of Boring & Split-Spoon Refusal at 29 ft Backfilled with Bentonite Chips					
					35						
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW Upon Completion of Drilling NW
Time After Drilling 15 min.
Depth to Water NW ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 11/14/12 End 11/14/12
Driller BSD Chief AP Rig CME-750
Logger GM Editor DAS
Drill Method 2.25" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. BF-3A
Surface Elevation (ft) 823.0
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	Type	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						Boring BF-3A offset 3 ft south of BF-3 and blind-drilled (without sampling) to 5.5 ft					
1		4	M	50/5"	5	Very Dense, Light Brown/Orange Brown/Brown Fine to Medium SAND; Little to Some Gravel, Trace Silt (SP-Probable Weathered Sandstone Bedrock)					
2		4	M	50/5"	10	Very hard drilling in the upper 5 ft of this layer.					
3		2	M	50/4"	15						
4		4	M	50/4"	20						
5		2	M	50/3"	25						
6		2	M	50/3"	30	End of Boring & Split-Spoon Refusal at 28.7 ft Backfilled with Bentonite Chips					
					35						
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW Upon Completion of Drilling _____
Time After Drilling _____
Depth to Water _____ ▼
Depth to Cave in _____

The stratification lines represent the approximate boundary between soil types and the transition may be gradua..

GENERAL NOTES

Start 11/14/12 End 11/14/12
Driller BSD Chief AP Rig CME-750
Logger GM Editor DAS
Drill Method 2.25" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. BF-4
Surface Elevation (ft) 820.4
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	Type	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						12 in. +/- Sandy TOPSOIL (OL)					
1		18	M	2		Very Loose to Medium Dense, Orange Brown Fine SAND; Little Silt, Trace Gravel (SP-SM)					
2		12	M	71/9"	5						
3		6	M	50/4"		Very Dense, Light Orange Brown/White Fine to Medium SAND; Little to Some Gravel, Trace Silt (SP-Probable Weathered Sandstone Bedrock)					
4		9	M	50/5"	10	P200 near 10 ft = 3.4%		5.2			
5		2	M	50/2"	15						
6		0	M	50/3"	20						
7		0	M	50/3"	25						
8		0	M	50/2"	30	End of Boring & Split-Spoon Refusal at 28.7 ft Backfilled with Bentonite Chips					
					35						
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW Upon Completion of Drilling _____
Time After Drilling _____
Depth to Water _____ ▼
Depth to Cave in _____

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 11/12/12 End 11/12/12
Driller BSD Chief AP Rig CME-750
Logger GM Editor DAS
Drill Method 2.25" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. BF-5
Surface Elevation (ft) 821.3
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	Type	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						12 in. +/- Sandy TOPSOIL (OL)					
1		12	M	7		Loose, Brown/Dark Brown Fine to Medium SAND; Little to Some Silt, Trace Clay (SM)					
2		6	M	50/6"	5	Very Dense, White/Light Brown/Orange Brown Fine to Medium SAND; Little to Some Gravel, Trace Silt (SP-Probable Weathered Sandstone Bedrock)					
3		5	M	50/5"							
4		5	M	50/5"	10						
5		4	M	50/6"	15						
6		1	M	50/3"	20						
7		0	M	50/3"	25						
8		0	M	50/2"	30	End of Boring & Split-Spoon Refusal at 28.7 ft Backfilled with Bentonite Chips					
					35						
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW Upon Completion of Drilling
Time After Drilling
Depth to Water
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 11/12/12 End 11/12/12
Driller BSD Chief AP Rig CME-750
Logger GM Editor DAS
Drill Method 2.25" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. SS-1
Surface Elevation (ft) 827.1
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	Type	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						12 in. +/- Sandy TOPSOIL (OL)					
1		18	M	6		Loose, Dark Brown/Brown Fine to Medium SAND; Little to Some Silt, Trace Clay (SM)					
2		14	M	72/8"	5	Very Dense, White/Brown/Orange Brown Fine to Medium SAND; Little to Some Gravel, Trace Silt (SP-Probable Weathered Sandstone Bedrock)					
3		2	M	50/4"							
4		3	M	50/4"	10						
5		1	M	50/3"	15						
6		1	M	50/3"	20						
7		0	M	50/3"	25						
8		0	M	50/2"	30	End of Boring & Split-Spoon Refusal at 28.7 ft Backfilled with Bentonite Chips					
					35						
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW Upon Completion of Drilling
Time After Drilling
Depth to Water
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 11/12/12 End 11/12/12
Driller BSD Chief AP Rig CME-750
Logger GM Editor DAS
Drill Method 2.25" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. HM-1
Surface Elevation (ft) 811.6
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	Type	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						10 in. +/- Sandy TOPSOIL (OL)					
1		14	M	0		Very Loose, Dark Brown/Brown Fine to Medium SAND; Little to Some Silt, Trace Clay (SM)					
2		16	M	6	5	Loose to Medium Dense, Orange Brown Fine to Medium SAND; Trace to Little Silt and Gravel (SP/SP-SM)					
3		16	M	11							
4		14	M	24	10	Possible highly weathered sandstone bedrock in lower portion of layer					
						Very Dense, Light Brown/Brown Fine to Medium SAND; Little to Some Gravel, Trace Silt (SP-Probable Weathered Sandstone Bedrock)					
5		2	M	50/4"	15						
6		0	M	50/4"	20						
7		0	M	50/2"	25						
8		0	M	50/1"	30	End of Boring & Split-Spoon Refusal at 28.6 ft Backfilled with Bentonite Chips					
					35						
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW — Upon Completion of Drilling NW
Time After Drilling — 15 min.
Depth to Water — NW ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 11/14/12 End 11/14/12
Driller BSD Chief AP Rig CME-750
Logger GM Editor DAS
Drill Method 2.25" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. HM-2
Surface Elevation (ft) 823.0
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	Type	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						6 in. +/- Sandy TOPSOIL (OL)					
1		10	M	5		Loose, Light Brown Fine SAND; Trace to Little Silt, Trace Gravel (SP/SP-SM)					
2		10	M	50/6"	5	Very Dense, Light Brown/White/Orange Brown Fine to Medium SAND; Little to Some Gravel, Trace Silt (SP-Probable Weathered Sandstone Bedrock)					
3		8	M	50/6"							
4		6	M	50/2"	10						
5		2	M	50/3"	15						
6		1	M	50/2"	20						
7		1	M	50/2"	25						
8		2	M	50/2"	30						
9		2	M	50/2"	35	End of Boring & Split-Spoon Refusal at 33.5 ft Backfilled with Bentonite Chips					
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW — Upon Completion of Drilling NW
Time After Drilling — 15 min.
Depth to Water — NW ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 11/14/12 End 11/14/12
Driller BSD Chief AP Rig CME-750
Logger GM Editor DAS
Drill Method 2.25" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. PP-1
Surface Elevation (ft) 795.4
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						12 in. ± Sandy TOPSOIL (OL)					
1		18	M	6		Loose, Light Brown to Orange Fine to Medium SAND, Trace to Little Silt, Trace Gravel, Scattered Silt Seams (SP/SP-SM)					
2		18	M	7	5						
3		18	M	12		Medium Dense, Orange Brown Fine to Medium SAND, Trace to Little Silt, Trace Gravel, Scattered Silt Seams (SP/SP-SM)					
4		18	M	11	10	End Boring at 10 ft Borehole backfilled with soil cuttings					
					15						
					20						
					25						
					30						
					35						
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW Upon Completion of Drilling NW
Time After Drilling
Depth to Water ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 8/6/12 End 8/6/12
Driller Badger Chief RM Rig CME-750
Logger CM Editor DAS
Drill Method 2 1/4" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. PP-2
Surface Elevation (ft) 815.3
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						8 in. ± Sandy TOPSOIL (OL)					
1		12	M	6		Loose, Light Brown Fine SAND, Little Silt, Trace Gravel (SP-SM)					
2		18	M	21	5	Medium Dense, Orange Brown to Light Brown Fine to Medium SAND, Trace to Little Silt, Trace Gravel, Scattered Silt Seams (SP/SP-SM)					
3		14	M	87/10"		Very Dense, Red-Brown Fine to Medium SAND, Little to Some Gravel, Trace to Little Silt (SP/SP-SM - Probable Weathered Sandstone Bedrock)					
4		7	M	50/3"	10	End Boring/Auger Refusal at 12.0 ft Borehole backfilled with bentonite chips					
					15						
					20						
					25						
					30						
					35						
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW Upon Completion of Drilling NW
Time After Drilling
Depth to Water ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 8/6/12 End 8/6/12
Driller Badger Chief RM Rig CME-750
Logger CM Editor DAS
Drill Method 2 1/4" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. PP-3
Surface Elevation (ft) 802.3
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	Type	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						6 in. +/- Sandy TOPSOIL (OL)					
1		10	M	4		Very Loose to Loose, Dark Brown/Brown Fine to Medium SAND; Little to Some Silt, Trace Clay (SM)					
2		16	M	8	5	Loose to Medium Dense, Brown to Orange Brown Fine to Medium SAND; Trace to Little Silt, Trace Gravel (SP/SP-SM)					
3		16	M	13							
4		16	M	23		Possible highly weathered sandstone bedrock near bottom of boring.					
					10	End of Boring at 10 ft Backfilled with Bentonite Chips					
					15						
					20						
					25						
					30						
					35						
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW — Upon Completion of Drilling NW
Time After Drilling 15 min.
Depth to Water NW ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 11/14/12 End 11/14/12
Driller BSD Chief AP Rig CME-750
Logger GM Editor DAS
Drill Method 2.25" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. PP-4
Surface Elevation (ft) 809.7
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	Type	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						8 in. +/- Sandy TOPSOIL (OL)					
1		14	M	2		Very Loose, Dark Brown Fine SAND; Some Silt, Trace Clay (SM)					
2		14	M	11	5	Medium Dense, Light Brown Fine to Medium SAND; Trace to Little Silt, Trace Gravel, Scattered Silt Seams (SP/SP-SM) P200 near 5 ft = 10.4%		2.7			
3		16	M	17							
4		16	M	15							
					10	End of Boring at 10 ft Backfilled with Bentonite Chips					
					15						
					20						
					25						
					30						
					35						
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW — Upon Completion of Drilling
Time After Drilling
Depth to Water ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 11/14/12 End 11/14/12
Driller BSD Chief AP Rig CME-750
Logger GM Editor DAS
Drill Method 2.25" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. PP-5
Surface Elevation (ft) 814.0
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						12 in. +/- Sandy TOPSOIL (OL)					
1		14	M	1		Very Loose to Medium Dense, Orange Brown Fine to Medium SAND; Trace to Little Silt, Trace Gravel (SP/SP-SM)					
2		16	M	15	5						
3		14	M	41		Dense to Very Dense, Light Brown/Orange Brown Fine to Medium SAND; Little to Some Gravel, Trace to Little Silt (SP/SP-SM - Possible Weathered Sandstone Bedrock)					
4		10	M	50/5"	10	End of Boring & Split-Spoon Refusal at 9.5 ft Backfilled with Soil Cuttings					
					15						
					20						
					25						
					30						
					35						
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW — Upon Completion of Drilling NW
Time After Drilling 15 min.
Depth to Water NW ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 11/14/12 End 11/14/12
Driller BSD Chief AP Rig CME-750
Logger GM Editor DAS
Drill Method 2.25" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. PP-6
Surface Elevation (ft) 819.3
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						3 in. +/- Sandy TOPSOIL (OL)					
1		16	M	3		Very Loose, Orange Brown Fine SAND; Little Silt, Trace Gravel (SP-SM)					
2		18	M	9	5	Loose to Medium Dense, Orange Brown Fine to Medium SAND; Trace to Little Silt, Trace Gravel (SP/SP-SM)					
3		18	M	27							
4		14	M	41	10	Dense to Very Dense, Light Brown to Orange Brown Fine to Medium SAND; Little to Some Gravel, Trace Silt (SP-Probable Weathered Sandstone Bedrock)					
5		5	M	50/5"	15						
6		3	M	50/4"		End of Boring & Split-Spoon Refusal at 19 ft Backfilled with Bentonite Chips					
					20						
					25						
					30						
					35						
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW — Upon Completion of Drilling
Time After Drilling
Depth to Water ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 11/13/12 End 11/13/12
Driller BSD Chief AP Rig CME-750
Logger GM Editor DAS
Drill Method 2.25" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. PP-7
Surface Elevation (ft) 818.5
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	Type	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						6 in. +/- Sandy TOPSOIL (OL)					
1		16	M	4		Very Loose to Loose, Brown Fine to Medium SAND; Trace Silt and Gravel (SP)					
2		8	M	60/6"	5	Very Dense, Brown/Light Brown/White Fine to Medium SAND; Little to Some Gravel, Trace Silt (SP-Probable Weathered Sandstone Bedrock)					
3		6	M	50/3"							
4		3	M	50/4"	10						
5		0	M	50/3"	15						
6		0	M	50/2"	20	End of Boring & Split-Spoon Refusal at 18.7 ft Backfilled with Bentonite Chips					
					25						
					30						
					35						
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW Upon Completion of Drilling ____
Time After Drilling ____
Depth to Water ____ ▼
Depth to Cave in ____

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 11/13/12 End 11/13/12
Driller BSD Chief AP Rig CME-750
Logger GM Editor DAS
Drill Method 2.25" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. PP-8
Surface Elevation (ft) 809.6
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	Type	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						18 in. ± Sandy TOPSOIL (OL)					
1		18	M	4		Very Loose to Loose, Brown Fine to Medium SAND, Little to Some Silt, Trace Clay (SM)		4.2			
2		18	M	9	5	6 in. Silt Seam near 3.5 ft					
3		16	M	13		Medium Dense, Light Brown to Brown Fine to Medium SAND, Trace to Little Silt, Trace Gravel, Scattered Silt Seams (SP/SP-SM)					
4		16	M	11	10						
						End Boring at 10 ft					
					15	Borehole backfilled with soil cuttings					
					20						
					25						
					30						
					35						
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW Upon Completion of Drilling NW
Time After Drilling ____
Depth to Water ____ ▼
Depth to Cave in ____

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 8/6/12 End 8/6/12
Driller Badger Chief RM Rig CME-750
Logger CM Editor DAS
Drill Method 2 1/4" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. RP-1
Surface Elevation (ft) 793.9
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
					18 in. ± Sandy TOPSOIL (OL - Possible Fill)					
1	18	M	8		Loose, Light Brown to Brown Fine to Medium SAND, Trace to Little Silt, Trace Gravel, Scattered Silt Seams (SP/SP-SM - Possible Fill)					
2	18	M	4	5						
3	18	M/W	15		Loose to Medium Dense, Dark Gray/Black Silty Fine SAND, Trace Organics (SM - Possible Buried Topsoil)		14.8			3.2
4	18	M	11		Medium Dense, Gray Fine SAND, Some Silt, Trace Clay (SM)					
				10	Medium Dense, Yellow-Brown Fine SAND, Little Silt, Trace Gravel (SP-SM)					
					End Boring at 10 ft					
					Borehole backfilled with soil cuttings					
				15						
				20						
				25						
				30						
				35						
				40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW Upon Completion of Drilling NW
Time After Drilling
Depth to Water ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 8/1/12 End 8/1/12
Driller Badger Chief RM Rig CME-750
Logger CM Editor DAS
Drill Method 2 1/4" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. RP-2
Surface Elevation (ft) 792.9
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
					12 in. ± Sandy TOPSOIL (OL)					
1	18	M	5		Loose, Brown Fine SAND, Little Silt, Trace Gravel, Scattered Silt Pockets/Seams (SP-SM - Possible Fill)					
2	18	M	10	5	Loose to Medium Dense, Brown Clayey Fine SAND to Very Stiff, Sandy Lean CLAY, Scattered Sand Seams (SC/CL)	(2.25)	11.6			
3	18	M	7		Medium Stiff to Very Stiff, Brown to Brown/Gray (Mottled) Lean CLAY, Little to Some Sand (CL) Clay Softens with Depth	(2.0-2.5)	15.0			
4	18	M	7			(0.75-1.25)	21.5			
				10	End Boring at 10 ft					
					Borehole backfilled with soil cuttings					
				15						
				20						
				25						
				30						
				35						
				40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW Upon Completion of Drilling NW
Time After Drilling
Depth to Water ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 8/1/12 End 8/1/12
Driller Badger Chief RM Rig CME-750
Logger CM Editor DAS
Drill Method 2 1/4" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. RP-3
Surface Elevation (ft) 794.0
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	Type	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						14 in. ± Sandy TOPSOIL (OL)					
1		18	M	10		Medium Dense, Light Brown to Brown Fine to Medium SAND, Trace to Little Silt, Trace Gravel, Scattered Silt Seams (SP/SP-SM - Possible Fill)					
2		16	M	23	5						
3		18	M	13		Stiff, Brown to Brown/Gray (Mottled) Sandy Lean CLAY, Scattered Sand Seams (CL)	(2.5-2.0)	13.3			
4		4	M	9		Loose, Brown Fine SAND, Some Silt, Trace Clay, Scattered Silt Seams (SM)					
					10	End Boring at 10 ft Borehole backfilled with bentonite chips					
					15						
					20						
					25						
					30						
					35						
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW Upon Completion of Drilling NW
Time After Drilling
Depth to Water
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 8/7/12 End 8/7/12
Driller Badger Chief RM Rig CME-750
Logger CM Editor DAS
Drill Method 2 1/4" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. RP-4
Surface Elevation (ft) 785.2
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	Type	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						24 in. ± Sandy TOPSOIL (OL)					
1		18	M	6		Loose, Brown Fine SAND, Little Silt, Trace Gravel, Scattered Silt Seams (SP-SM)					
2		15	M	6	5	Loose to Medium Dense, Brown/Orange Brown/Yellow Brown Fine to Medium SAND, Trace to Little Silt, Trace Gravel (SP/SP-SM)					
3		18	M	14							
4		18	M	18							
					10	End Boring at 10 ft Borehole backfilled with soil cuttings					
					15						
					20						
					25						
					30						
					35						
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW Upon Completion of Drilling NW
Time After Drilling
Depth to Water
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 8/7/12 End 8/7/12
Driller Badger Chief RM Rig CME-750
Logger CM Editor DAS
Drill Method 2 1/4" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. RP-5
Surface Elevation (ft) 796.3
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
					14 in. ± Sandy TOPSOIL (OL)					
1	16	M	14		Loose to Medium Dense, Brown/Orange Brown/Yellow Brown Fine to Medium SAND, Trace to Little Silt and Gravel, Scattered Silt Seams (SP/SP-SM)					
2	18	M	9	5						
3	18	M	26							
4	9	M	90/9"		Medium Dense to Very Dense, Light Brown/Orange Brown Fine to Medium SAND, Little to Some Gravel, Trace to Little Silt (SP/SP-SM - Possible Weathered Sandstone Bedrock)					
				10	Firmer Drilling near 7 ft					
					End Boring/Split-Spoon Refusal at 9.5 ft					
					Borehole backfilled with soil cuttings					
				15						
				20						
				25						
				30						
				35						
				40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW — Upon Completion of Drilling NW
Time After Drilling 5 hrs
Depth to Water NW ▼
Depth to Cave in 8.5'

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 8/6/12 End 8/6/12
Driller Badger Chief RM Rig CME-750
Logger CM Editor DAS
Drill Method 2 1/4" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. RP-6
Surface Elevation (ft) 782.2
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
					16 in. ± Sandy TOPSOIL (OL)					
1	18	M	4		Very Loose to Loose, Brown Fine SAND, Little Silt, Trace Gravel (SP-SM)					
2	18	M	10	5	Medium Dense, Brown/Orange Brown/Yellow Brown Fine to Medium SAND, Trace to Little Silt and Gravel (SP/SP-SM)					
3	18	M	14							
4	18	M	12		Possible Highly Weathered Sandstone in Bottom Few Feet of Boring					
				10	End Boring at 10 ft					
					Borehole backfilled with soil cuttings					
				15						
				20						
				25						
				30						
				35						
				40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW — Upon Completion of Drilling NW
Time After Drilling
Depth to Water ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 8/7/12 End 8/7/12
Driller Badger Chief RM Rig CME-750
Logger CM Editor DAS
Drill Method 2 1/4" HSA; Autohammer

2

CGC Inc.

LOG OF TEST BORING

Project Sparta SWEF #54
Project I.D. 1070-00-32/72
Location Monroe County, Wisconsin

Boring No. PP-7
Surface Elevation (ft) 818.5
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						6 in. +/- Sandy TOPSOIL (OL)					
1		16	M	4		Very Loose to Loose, Brown Fine to Medium SAND; Trace Silt and Gravel (SP)					
2		8	M	60/6"	5	Very Dense, Brown/Light Brown/White Fine to Medium SAND; Little to Some Gravel, Trace Silt (SP-Probable Weathered Sandstone Bedrock)					
3		6	M	50/3"							
4		3	M	50/4"	10						
5		0	M	50/3"	15						
6		0	M	50/2"	20	End of Boring & Split-Spoon Refusal at 18.7 ft Backfilled with Bentonite Chips					
					25						
					30						
					35						
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW Upon Completion of Drilling _____
Time After Drilling _____
Depth to Water _____ ▼
Depth to Cave in _____

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 11/13/12 End 11/13/12
Driller BSD Chief AP Rig CME-750
Logger GM Editor DAS
Drill Method 2.25" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project Sparta SWEF #54
Project I.D. 1070-00-32/72
Location Monroe County, Wisconsin

Boring No. RP-8
Surface Elevation (ft) 775.4
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	TYPE	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						12 in.± Sandy Gravel FILL					
1		18	M	16		FILL: Medium Dense, Brown to Orange Brown Fine to Medium Sand, Trace to Little Silt, Trace Gravel, Scattered Silty Sand Seams					
2		16	M/W	20	5	FILL: Medium Dense, Light Olive Gray Fine to Medium Sand, Trace to Little Silt, Trace Gravel, Scattered Sandy Clay Seams					
3		18	M	18		Qp = 0.75-1.0 tsf in clay seam near 7 ft					
4		18	M	12		Very Stiff, Brown Sandy Lean CLAY (CL)	(2.5)	12.6			
					10	Medium Dense, Brown/Light Gray Fine SAND, Little to Some Silt, Scattered Silt Seams (SP-SM/SM)					
						End Boring at 10 ft					
					15	Borehole backfilled with soil cuttings					
					20						
					25						
					30						
					35						
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW Upon Completion of Drilling NW
Time After Drilling _____
Depth to Water _____ ▼
Depth to Cave in _____

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 8/7/12 End 8/7/12
Driller Badger Chief RM Rig CME-750
Logger CM Editor DAS
Drill Method 2 1/4" HSA; Autohammer

CGC Inc.

LOG OF TEST BORING

Project: Sparta SWEF #54
Project I.D. 1070-00-32/72
Location: Monroe County, Wisconsin

Boring No. RP-9
Surface Elevation (ft) 773.7
Job No. C12064
Sheet 1 of 1

2921 Perry Street, Madison, WI 53713 (608) 288-4100, FAX (608) 288-7887

SAMPLE No.	Type	Rec (in.)	Moist	N	Depth (ft)	VISUAL CLASSIFICATION and Remarks	qu (qa) (tsf)	W	LL	PL	LI
						8 in.± Sandy Gravel FILL					
1		15	M	28		FILL: Medium Dense, Light Olive Gray Fine to Medium Sand, Trace to Little Silt, Trace Gravel, Scattered Silty Sand Seams					
2		18	M/W	16	5			9.8			
						FILL: Loose to Medium Dense, Gray Sandy Silt					
3		18	M	9		Very Stiff, Brown Sandy Lean CLAY (CL)	(2.5)	13.4			
4		16	M	15		Medium Dense, Brown/Light Gray Fine SAND, Little to Some Silt, Scattered Silt Seams (SP-SM/SM)					
					10	End Boring at 10 ft					
						Borehole backfilled with bentonite chips					
					15						
					20						
					25						
					30						
					35						
					40						

WATER LEVEL OBSERVATIONS

While Drilling ▽ NW Upon Completion of Drilling NW
Time After Drilling
Depth to Water ▼
Depth to Cave in

The stratification lines represent the approximate boundary between soil types and the transition may be gradual.

GENERAL NOTES

Start 8/7/12 End 8/7/12
Driller Badger Chief RM Rig CME-750
Logger CM Editor DAS
Drill Method 2 1/4" HSA; Autohammer

DATE 31MAY16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1070-00-72 QUANTITY	1070-00-73 QUANTITY
0010	201.0115	Clearing	ACRE	25.000	25.000	
0020	201.0215	Grubbing	ACRE	25.000	25.000	
0030	203.0100	Removing Small Pipe Culverts	EACH	1.000		1.000
0040	204.0100	Removing Pavement	SY	16,160.000	4,160.000	12,000.000
0050	204.0155	Removing Concrete Sidewalk	SY	100.000		100.000
0060	204.0170	Removing Fence	LF	4,450.000	4,450.000	
0070	204.0180	Removing Delineators and Markers	EACH	17.000	9.000	8.000
0080	204.0195	Removing Concrete Bases	EACH	15.000		15.000
0090	204.0220	Removing Inlets	EACH	4.000		4.000
0100	204.0225	Removing Septic Tanks	EACH	1.000		1.000
0110	204.0235	Removing Buildings (parcel) 001. West Salem SWEF	LS	1.000		1.000
0120	204.0240	Site Clearance (parcel) 001. West Salem SWEF	LS	1.000		1.000
0130	204.0245	Removing Storm Sewer (size) 018. 18-Inch	LF	127.000		127.000
0140	204.0245	Removing Storm Sewer (size) 030. 30-Inch	LF	266.000		266.000
0150	204.0265	Abandoning Wells	EACH	1.000		1.000
0160	205.0100	Excavation Common	CY	158,408.000	154,554.000	3,854.000
0170	205.0200	Excavation Rock	CY	470.000	470.000	
0180	213.0100	Finishing Roadway (project) 001. 1070-00-72	EACH	1.000	1.000	
0190	213.0100	Finishing Roadway (project) 002. 1070-00-73	EACH	1.000		1.000
0200	214.0100	Obliterating Old Road	STA	17.000		17.000
0210	305.0110	Base Aggregate Dense 3/4-Inch	TON	2,500.000	2,500.000	
0220	305.0120	Base Aggregate Dense 1 1/4-Inch	TON	27,800.000	26,750.000	1,050.000
0230	405.0100	Coloring Concrete WisDOT Red	CY	765.000	765.000	
0240	415.0100	Concrete Pavement 10-Inch	SY	17,600.000	17,600.000	
0250	415.0110	Concrete Pavement 11-Inch	SY	1,250.000	1,250.000	
0260	415.0120	Concrete Pavement 12-Inch	SY	15,800.000	15,800.000	
0270	416.0610	Drilled Tie Bars	EACH	1,105.000	1,105.000	
0280	416.0620	Drilled Dowel Bars	EACH	160.000	160.000	
0290	416.1710	Concrete Pavement Repair	SY	180.000	180.000	
0300	416.1720	Concrete Pavement Replacement	SY	400.000	400.000	
0310	440.4410	Incentive IRI Ride	DOL	3,087.000	3,087.000	
0320	455.0605	Tack Coat	GAL	310.000	235.000	75.000
0330	460.2000	Incentive Density HMA Pavement	DOL	1,610.000	1,290.000	320.000
0340	460.5223	HMA Pavement 3 LT 58-28 S	TON	1,250.000	1,005.000	245.000
0350	460.5224	HMA Pavement 4 LT 58-28 S	TON	1,250.000	1,005.000	245.000
0360	465.0110	Asphaltic Surface Patching	TON	10.000	10.000	
0370	465.0315	Asphaltic Flumes	SY	100.000	100.000	
0380	465.0400	Asphaltic Shoulder Rumble Strips	LF	6,610.000	5,300.000	1,310.000
0390	520.8000	Concrete Collars for Pipe	EACH	4.000	3.000	1.000
0400	522.0124	Culvert Pipe Reinforced Concrete Class III 24-Inch	LF	203.000	203.000	
0410	522.0130	Culvert Pipe Reinforced Concrete Class III 30-Inch	LF	20.000	12.000	8.000
0420	522.0148	Culvert Pipe Reinforced Concrete Class III 48-Inch	LF	169.000	169.000	
0430	522.1012	Apron Endwalls for Culvert Pipe Reinforced Concrete 12-Inch	EACH	4.000	4.000	
0440	522.1015	Apron Endwalls for Culvert Pipe Reinforced Concrete 15-Inch	EACH	1.000	1.000	
0450	522.1018	Apron Endwalls for Culvert Pipe Reinforced Concrete 18-Inch	EACH	1.000	1.000	

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DATE 31MAY16 E S T I M A T E O F Q U A N T I T I E S

LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1070-00-72 QUANTITY	1070-00-73 QUANTITY
0460	522.1024	Apron Endwalls for Culvert Pipe Reinforced Concrete 24-Inch	EACH	5.000	5.000	
0470	522.1030	Apron Endwalls for Culvert Pipe Reinforced Concrete 30-Inch	EACH	2.000	1.000	1.000
0480	522.1048	Apron Endwalls for Culvert Pipe Reinforced Concrete 48-Inch	EACH	2.000	2.000	
0490	523.0519	Apron Endwalls for Culvert Pipe Reinforced Concrete Horizontal Elliptical 19x30-Inch	EACH	2.000	2.000	
0500	602.0410	Concrete Sidewalk 5-Inch	SF	5,075.000	5,075.000	
0510	602.0505	Curb Ramp Detectable Warning Field Yellow	SF	64.000	64.000	
0520	606.0200	Riprap Medium	CY	200.000	200.000	
0530	608.0312	Storm Sewer Pipe Reinforced Concrete Class III 12-Inch	LF	703.000	703.000	
0540	608.0315	Storm Sewer Pipe Reinforced Concrete Class III 15-Inch	LF	307.000	307.000	
0550	608.0318	Storm Sewer Pipe Reinforced Concrete Class III 18-Inch	LF	71.000	71.000	
0560	608.0324	Storm Sewer Pipe Reinforced Concrete Class III 24-Inch	LF	24.000	24.000	
0570	610.0419	Storm Sewer Pipe Reinforced Concrete Horizontal Elliptical Class HE-IV 19x30-Inch	LF	137.000	137.000	
0580	611.0612	Inlet Covers Type C	EACH	1.000	1.000	
0590	611.0624	Inlet Covers Type H	EACH	5.000	5.000	
0600	611.0642	Inlet Covers Type MS	EACH	10.000	10.000	
0610	611.2004	Manholes 4-FT Diameter	EACH	2.000	2.000	
0620	611.3230	Inlets 2x3-FT	EACH	4.000	4.000	
0630	611.3902	Inlets Median 2 Grate	EACH	5.000	5.000	
0640	614.0010	Barrier System Grading Shaping Finishing	EACH	2.000	2.000	
0650	614.2300	MGS Guardrail 3	LF	600.000	600.000	
0660	614.2610	MGS Guardrail Terminal EAT	EACH	4.000	4.000	
0670	614.2620	MGS Guardrail Terminal Type 2	EACH	4.000	4.000	
0680	616.0100	Fence Woven Wire (height) 001. 4-Ft	LF	4,800.000	4,800.000	
0690	616.0329	Gates Chain Link (width) 001. 4-Ft	EACH	1.000	1.000	
0700	618.0100	Maintenance And Repair of Haul Roads (project) 001. 1070-00-72	EACH	1.000	1.000	
0710	619.1000	Mobilization	EACH	1.000	0.950	0.050
0720	623.0200	Dust Control Surface Treatment	SY	56,400.000	56,400.000	
0730	624.0100	Water	MGAL	1,200.000	1,200.000	
0740	625.0100	Topsoil	SY	25,950.000	650.000	25,300.000
0750	625.0500	Salvaged Topsoil	SY	58,000.000	58,000.000	
0760	627.0200	Mulching	SY	57,900.000	32,600.000	25,300.000
0770	628.1504	Silt Fence	LF	12,250.000	7,925.000	4,325.000
0780	628.1520	Silt Fence Maintenance	LF	6,150.000	3,990.000	2,160.000
0790	628.1905	Mobilizations Erosion Control	EACH	16.000	14.000	2.000
0800	628.1910	Mobilizations Emergency Erosion Control	EACH	8.000	7.000	1.000
0810	628.2004	Erosion Mat Class I Type B	SY	30,300.000	29,250.000	1,050.000
0820	628.6510	Soil Stabilizer Type B	ACRE	8.000	8.000	
0830	628.7005	Inlet Protection Type A	EACH	10.000	10.000	
0840	628.7010	Inlet Protection Type B	EACH	5.000	5.000	
0850	628.7015	Inlet Protection Type C	EACH	5.000	5.000	
0860	628.7504	Temporary Ditch Checks	LF	300.000	300.000	
0870	628.7515.S	Stone or Rock Ditch Checks	CY	35.000	35.000	
0880	628.7555	Culvert Pipe Checks	EACH	50.000	40.000	10.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1070-00-72 QUANTITY	1070-00-73 QUANTITY
0890	628.7560	Tracking Pads	EACH	3.000	3.000	
0900	629.0210	Fertilizer Type B	CWT	55.000	39.000	16.000
0910	630.0120	Seeding Mixture No. 20	LB	2,280.000	1,700.000	580.000
0920	630.0130	Seeding Mixture No. 30	LB	440.000	370.000	70.000
0930	630.0140	Seeding Mixture No. 40	LB	15.000	15.000	
0940	630.0200	Seeding Temporary	LB	2,940.000	2,250.000	690.000
0950	631.0300	Sod Water	MGAL	32.000	32.000	
0960	631.1000	Sod Lawn	SY	1,450.000	1,450.000	
0970	632.0201	Shrubs (species) (size) (root) 001. Wentworth American Cranberry CG 24-Inch Ht	EACH	3.000	3.000	
0980	632.0201	Shrubs (species) (size) (root) 002. Goldmound Spirea CG 18-Inch Ht	EACH	14.000	14.000	
0990	632.0201	Shrubs (species) (size) (root) 003. Crimson Pygmy Barberry CG 18-Inch Ht	EACH	35.000	35.000	
1000	632.0201	Shrubs (species) (size) (root) 004. Goldfinger Potentilla CG 18-Inch Ht	EACH	4.000	4.000	
1010	632.0201	Shrubs (species) (size) (root) 005. Tauton Anglojap Yew CG 18-Inch Ht	EACH	7.000	7.000	
1020	632.0201	Shrubs (species) (size) (root) 006. Broadmoor Juniper CG 18-Inch Ht	EACH	3.000	3.000	
1030	632.9101	Landscape Planting Surveillance and Care Cycles	EACH	16.000	16.000	
1040	633.0100	Delineator Posts Steel	EACH	149.000	141.000	8.000
1050	633.0500	Delineator Reflectors	EACH	175.000	167.000	8.000
1060	633.1100	Delineators Temporary	EACH	60.000	60.000	
1070	633.5100	Markers Row	EACH	9.000	9.000	
1080	633.5200	Markers Culvert End	EACH	8.000	7.000	1.000
1090	634.0614	Posts Wood 4x6-Inch X 14-FT	EACH	27.000	27.000	
1100	634.0616	Posts Wood 4x6-Inch X 16-FT	EACH	19.000	19.000	
1110	634.0618	Posts Wood 4x6-Inch X 18-FT	EACH	7.000	7.000	
1120	634.0620	Posts Wood 4x6-Inch X 20-FT	EACH	4.000	4.000	
1130	634.0622	Posts Wood 4x6-Inch X 22-FT	EACH	8.000	8.000	
1140	635.0200	Sign Supports Structural Steel HS	LB	1,650.000	1,650.000	
1150	636.0100	Sign Supports Concrete Masonry	CY	4.000	4.000	
1160	636.0500	Sign Supports Steel Reinforcement	LB	204.000	204.000	
1170	637.1220	Signs Type I Reflective SH	SF	396.000	396.000	
1180	637.2210	Signs Type II Reflective H	SF	295.050	295.050	
1190	637.2230	Signs Type II Reflective F	SF	34.000	34.000	
1200	638.2102	Moving Signs Type II	EACH	1.000	1.000	
1210	638.2601	Removing Signs Type I	EACH	4.000		4.000
1220	638.2602	Removing Signs Type II	EACH	11.000		11.000
1230	638.3000	Removing Small Sign Supports	EACH	12.000	1.000	11.000
1240	638.3100	Removing Structural Steel Sign Supports	EACH	8.000		8.000
1250	638.3610	Erecting State Owned Signs Type I	EACH	1.000	1.000	
1260	642.5001	Field Office Type B	EACH	1.000	1.000	
1270	642.6001	Field Laboratory	EACH	1.000	1.000	
1280	643.0200	Traffic Control Surveillance and Maintenance (project) 001. 1070-00-72	DAY	440.000	440.000	
1290	643.0200	Traffic Control Surveillance and Maintenance (project) 002. 1070-00-73	DAY	15.000		15.000
1300	643.0300	Traffic Control Drums	DAY	5,350.000	4,250.000	1,100.000
1310	643.0420	Traffic Control Barricades Type III	DAY	130.000	55.000	75.000
1320	643.0705	Traffic Control Warning Lights Type A	DAY	260.000	110.000	150.000
1330	643.0715	Traffic Control Warning Lights Type C	DAY	1,970.000	1,650.000	320.000

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1070-00-72 QUANTITY	1070-00-73 QUANTITY
1340	643.0800	Traffic Control Arrow Boards	DAY	55.000	25.000	30.000
1350	643.0900	Traffic Control Signs	DAY	7,530.000	7,300.000	230.000
1360	643.0920	Traffic Control Covering Signs Type II	EACH	3.000	3.000	
1370	643.1050	Traffic Control Signs PCMS	DAY	80.000	65.000	15.000
1380	645.0130	Geotextile Type R	SY	390.000	390.000	
1390	645.0140	Geotextile Type SAS	SY	630.000	630.000	
1400	646.0106	Pavement Marking Epoxy 4-Inch	LF	31,750.000	30,250.000	1,500.000
1410	646.0116	Pavement Marking Epoxy 6-Inch	LF	2,200.000	2,200.000	
1420	646.0126	Pavement Marking Epoxy 8-Inch	LF	2,050.000	2,050.000	
1430	646.0600	Removing Pavement Markings	LF	7,000.000	7,000.000	
1440	647.0566	Pavement Marking Stop Line Epoxy 18-Inch	LF	30.000	30.000	
1450	647.0656	Pavement Marking Parking Stall Epoxy	LF	510.000	510.000	
1460	647.0706	Pavement Marking Diagonal Epoxy 6-Inch	LF	25.000	25.000	
1470	647.0726	Pavement Marking Diagonal Epoxy 12-Inch	LF	200.000	200.000	
1480	647.0746	Pavement Marking Diagonal Epoxy 24-Inch	LF	300.000	300.000	
1490	647.0766	Pavement Marking Crosswalk Epoxy 6-Inch	LF	150.000	150.000	
1500	649.0400	Temporary Pavement Marking Removable Tape 4-Inch	LF	18,500.000	13,500.000	5,000.000
1510	649.1400	Temporary Pavement Marking Stop Line Removable Tape 24-Inch	LF	30.000	30.000	
1520	649.2100	Temporary Raised Pavement Markers Type I	EACH	110.000	110.000	
1530	650.4000	Construction Staking Storm Sewer	EACH	20.000	20.000	
1540	650.4500	Construction Staking Subgrade	LF	11,450.000	11,450.000	
1550	650.5000	Construction Staking Base	LF	220.000	220.000	
1560	650.5500	Construction Staking Curb Gutter and Curb & Gutter	LF	190.000	190.000	
1570	650.6000	Construction Staking Pipe Culverts	EACH	6.000	5.000	1.000
1580	650.7000	Construction Staking Concrete Pavement	LF	11,200.000	11,200.000	
1590	650.8500	Construction Staking Electrical Installations (project) 001. 1070-00-72	LS	1.000	1.000	
1600	650.9910	Construction Staking Supplemental Control (project) 001. 1070-00-72	LS	1.000	1.000	
1610	650.9920	Construction Staking Slope Stakes	LF	11,450.000	11,450.000	
1620	652.0225	Conduit Rigid Nonmetallic Schedule 40 2-Inch	LF	7,810.000	7,810.000	
1630	652.0235	Conduit Rigid Nonmetallic Schedule 40 3-Inch	LF	240.000	240.000	
1640	652.0700.S	Install Conduit into Existing Item	EACH	1.000	1.000	
1650	653.0905	Removing Pull Boxes	EACH	20.000		20.000
1660	654.0106	Concrete Bases Type 6	EACH	27.000	27.000	
1670	654.0111	Concrete Bases Type 11	EACH	8.000	8.000	
1680	654.0230	Concrete Control Cabinet Bases Type L30	EACH	1.000	1.000	
1690	655.0610	Electrical Wire Lighting 12 AWG	LF	4,829.000	4,829.000	
1700	655.0620	Electrical Wire Lighting 8 AWG	LF	2,409.000	2,409.000	
1710	655.0630	Electrical Wire Lighting 4 AWG	LF	39,906.000	39,906.000	
1720	656.0200	Electrical Service Meter Breaker Pedestal (location) 001. CB100	LS	1.000	1.000	
1730	657.0255	Transformer Bases Breakaway 11 1/2-Inch Bolt Circle	EACH	27.000	27.000	
1740	657.0327	Poles Type 6-Aluminum	EACH	27.000	27.000	
1750	657.0715	Luminaire Arms Truss Type 4 1/2-Inch Clamp 15-FT	EACH	29.000	29.000	
1760	659.0400	Luminaires High Mast Lighting	EACH	4.000	4.000	
1770	659.0700	Lighting Units Walkway	EACH	8.000	8.000	
1780	659.1120	Luminaires Utility LED B	EACH	29.000	29.000	

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1070-00-72 QUANTITY	1070-00-73 QUANTITY
1790	659.2130	Lighting Control Cabinets 120/240 30-Inch	EACH	1.000	1.000	
1800	660.0100	High Mast Foundation (location) 001. HM1	LS	1.000	1.000	
1810	660.0100	High Mast Foundation (location) 002. HM2	LS	1.000	1.000	
1820	660.0200	High Mast Lighting Tower (location) 001. HM1	LS	1.000	1.000	
1830	660.0200	High Mast Lighting Tower (location) 002. HM2	LS	1.000	1.000	
1840	661.0100	Temporary Traffic Signals for Bridges (structure) 001. STH 16-VWS	LS	1.000	1.000	
1850	671.0112	Conduit HDPE 1-Duct 2-Inch	LF	1,300.000	1,300.000	
1860	671.0222	Conduit HDPE Directional Bore 2-Duct 2-Inch	LF	300.000	300.000	
1870	671.0300	Fiber Optic Cable Marker	EACH	5.000	5.000	
1880	673.0105	Communication Vault Type 1	EACH	1.000	1.000	
1890	678.0024	Install Fiber Optic Cable Outdoor Plant 24-CT	LF	1,950.000	1,950.000	
1900	678.0400	Fiber Optic Termination	EACH	6.000	6.000	
1910	678.0500	Communication System Testing	LS	1.000	1.000	
1920	690.0150	Sawing Asphalt	LF	960.000	60.000	900.000
1930	690.0250	Sawing Concrete	LF	4,250.000	3,600.000	650.000
1940	715.0415	Incentive Strength Concrete Pavement	DOL	3,210.000	3,210.000	
1950	SPV.0060	Special 001. Remove Street Light	EACH	15.000		15.000
1960	SPV.0060	Special 002. Pull Box Non-Conductive 24X42-Inch	EACH	39.000	39.000	
1970	SPV.0060	Special 101. Underground LP Tanks and Piping	EACH	1.000	1.000	
1980	SPV.0060	Special 102. Trash Receptacles	EACH	2.000	2.000	
1990	SPV.0090	Special 001. Construction Staking Fence	LF	4,800.000	4,800.000	
2000	SPV.0090	Special 002. Concrete Curb & Gutter 24-Inch Type A Special	LF	1,700.000	1,700.000	
2010	SPV.0090	Special 003. Concrete Curb & Gutter 24-Inch Type D Special	LF	190.000	190.000	
2020	SPV.0090	Special 004. Fiber Optic Tracer Cable	LF	1,600.000	1,600.000	
2030	SPV.0090	Special 005. Fence Chain Link 6-Ft Special	LF	60.000	60.000	
2040	SPV.0105	Special 001. Telephone Service, Sparta SWEF	LS	1.000	1.000	
2050	SPV.0105	Special 002. Electrical Service, Sparta SWEF	LS	1.000	1.000	
2060	SPV.0105	Special 003. Natural Gas Service, Sparta SWEF	LS	1.000	1.000	
2070	SPV.0105	Special 004. Construction Staking Initial Layout Parking Lot	LS	1.000	1.000	
2080	SPV.0105	Special 005. Construction Staking Subgrade Parking Lot	LS	1.000	1.000	
2090	SPV.0105	Special 006. Construction Staking Concrete Pavement Parking Lot	LS	1.000	1.000	
2100	SPV.0105	Special 007. Concrete Pavement Joint Layout	LS	1.000	1.000	
2110	SPV.0105	Special 101. SWEF Building, General Construction	LS	1.000	1.000	
2120	SPV.0105	Special 102. SWEF Building, Plumbing	LS	1.000	1.000	
2130	SPV.0105	Special 103. SWEF Building, Heating and Ventilating	LS	1.000	1.000	
2140	SPV.0105	Special 104. SWEF Building, Electrical	LS	1.000	1.000	
2150	SPV.0105	Special 105. Well Pump and Controls	LS	1.000	1.000	

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LINE NUMBER	ITEM	ITEM DESCRIPTION	UNIT	TOTAL	1070-00-72 QUANTITY	1070-00-73 QUANTITY
2160	SPV.0105	Special 106. Emergency Generator	LS	1.000	1.000	
2170	SPV.0105	Special 107. Holding Tanks	LS	1.000	1.000	
2180	SPV.0105	Special 108. Lightning Protection and Grounding System	LS	1.000	1.000	
2190	SPV.0105	Special 200. Weigh-In-Motion System	LS	1.000	1.000	
2200	SPV.0105	Special 201. Static Scale System	LS	1.000	1.000	
2210	SPV.0105	Special 202. Weigh-In-Motion System Warranty Maintenance	LS	1.000	1.000	
2220	SPV.0105	Special 203. Static Scale System Warranty Maintenance	LS	1.000	1.000	
2230	SPV.0105	Special 301. Communications Tower	LS	1.000	1.000	
2240	SPV.0105	Special 401. Removing Weight Scale And Pit	LS	1.000		1.000
2250	SPV.0105	Special 402. Removing Underground LP Tank	LS	1.000		1.000
2260	SPV.0180	Special 001. Scale Approach Pavement Reinforcement	SY	270.000	270.000	

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CLEARING AND GRUBBING

CATEGORY	PROJECT	LOCATION	STATION - STATION	201.0115 CLEARING (ACRE)	201.0215 GRUBBING (ACRE)
0010					
	1070-00-72				
		RAMP	1203+46 R - 1221+67 R	2	2
		RAMP	1221+67 R - 1244+25 R	21	21
		RAMP	1244+25 R - 1266+19 R	2	2
	PROJECT 1070-00-72 TOTAL			25	25
COMBINED PROJECT TOTAL				**25**	**25**

REMOVING CONCRETE SIDEWALK

CATEGORY	PROJECT	LOCATION	STATION - STATION	OFFSET	204.0155 (SY)
0010					
	1070-00-73				
		WEST SALEM SWEF	530+78 EB - 531+31 EB	RT	35
		WEST SALEM SWEF	531+40 EB - 531+73 EB	RT	65
	PROJECT 1070-00-73 TOTAL				100
COMBINED PROJECT TOTAL					**100**

REMOVING PAVEMENT

CATEGORY	PROJECT	LOCATION	STATION - STATION	204.0100 REMOVING PAVEMENT (SY)	204.0180 REMOVING DELINEATORS AND MARKERS (EACH)
0010					
	1070-00-72				
		RAMP	1203+46 R - 1221+67 R	535	3
			1221+67 R - 1244+25 R	--	—
			1244+25 R - 1266+19 R	2190	6
		IH 90	1154+64 EB - 1208+88 EB	580	—
		STH 16	827+00 - 831+00	855	—
	PROJECT 1070-00-72 TOTAL			4160	9
	1070-00-73				
		WEST SALEM SWEF	512+00 EB - 523+00 EB	1086	3
			523+00 EB - 537+00 EB	9779	3
			537+00 EB - 552+00 EB	1134	2
	PROJECT 1070-00-73 TOTAL			12000	8
COMBINED PROJECT TOTAL				**16160**	**17**

REMOVING UNDERGROUND LP TANK

CATEGORY	PROJECT	LOCATION	STATION	OFFSET	SPV.0105.402 REMOVING UNDERGROUND LP TANK (LS)
0010					
	1070-00-73				
		WEST SALEM SWEF	531+54 EB	234' RT	1
	PROJECT 1070-00-73 TOTAL				1
COMBINED PROJECT TOTAL					**1**

REMOVING SMALL PIPE CULVERTS

CATEGORY	PROJECT	LOCATION	STATION	OFFSET	203.0100 (EACH)	NOTES
0010						
	1070-00-73					
		WEST SALEM SWEF	523+37 EB	RT	1	24" R.C.C.P.
	PROJECT 1070-00-73 TOTAL				1	
COMBINED PROJECT TOTAL					**1**	

REMOVING SEPTIC TANKS AND ABANDONING WELLS

CATEGORY	PROJECT	LOCATION	STATION	OFFSET	204.0225 REMOVING SEPTIC TANKS (EACH)	204.0265 ABANDONING WELLS (EACH)
0010						
	1070-00-73					
		WEST SALEM SWEF	530+78 EB	186' RT	—	1
		WEST SALEM SWEF	531+82 EB	224' RT	1	—
	PROJECT 1070-00-73 TOTAL				1	1
COMBINED PROJECT TOTAL					**1**	**1**

REMOVING FENCE

CATEGORY	PROJECT	LOCATION	STATION - STATION	204.0170 (LF)
0010				
	1070-00-72			
		RAMP	1203+46 R - 1221+67 R	1,432
		RAMP	1221+67 R - 1244+25 R	2,295
		RAMP	1244+25 R - 1266+19 R	723
	PROJECT 1070-00-72 TOTAL			4,450
COMBINED PROJECT TOTAL				**4,450**

REMOVING BUILDINGS AND SITE CLEARANCE

PROJECT	CATEGORY	LOCATION	204.0235 REMOVING BUILDINGS (PARCEL) (LS)	204.0240 SITE CLEARANCE (LS)	214.0100 OBLITERATING OLD ROAD (STA)	SPV.0105.401 REMOVING WEIGHT SCALE AND PIT (LS)
0010						
1070-00-73						
	WEST SALEM SWEF		1	1	17	1
PROJECT 1070-00-73 TOTAL			1	1	17	1
COMBINED PROJECT TOTAL			**1**	**1**	**17**	**1**

REMOVING INLETS

CATEGORY	PROJECT	LOCATION	STATION	OFFSET	204.0220 REMOVING INLETS (EACH)
0010					
	1070-00-73				
		WEST SALEM SWEF	525+35 EB	196' RT	1
			525+99 EB	211' RT	1
			531+99 EB	231' RT	1
			532+02 EB	287' RT	1
	PROJECT 1070-00-73 TOTAL				4
COMBINED PROJECT TOTAL					**4**

REMOVING STORM SEWER

CATEGORY	PROJECT	LOCATION	STATION - STATION	OFFSET	204.0245.018 18-INCH (LF)	204.0245.030 30-INCH (LF)
0010						
	1070-00-73					
		WEST SALEM SWEF	524+67 EB - 525+96 EB	RT	127	—
		WEST SALEM SWEF	532+02 EB	RT	—	266
	PROJECT 1070-00-73				127	266
COMBINED PROJECT TOTAL					**127**	**266**

REMOVING STREET LIGHTING ITEMS

CATEGORY	PROJECT	LOCATION	STATION	OFFSET	204.0195 REMOVING CONCRETE BASES (EACH)	653.0905 REMOVING PULL BOXES (EACH)	SPV.0060.001 REMOVE STREET LIGHT (EACH)
0010							
	1070-00-73						
		WEST SALEM SWEF	523+74 EB	90' RT	1	—	1
		WEST SALEM SWEF	525+58 EB	121' RT	1	—	1
		WEST SALEM SWEF	526+71 EB	253' RT	1	—	1
		WEST SALEM SWEF	527+35 EB	121' RT	1	—	1
		WEST SALEM SWEF	527+64 EB	345' RT	1	—	1
		WEST SALEM SWEF	528+35 EB	202' RT	1	—	1
		WEST SALEM SWEF	529+19 EB	126' RT	1	—	1
		WEST SALEM SWEF	529+61 EB	282' RT	1	—	1
		WEST SALEM SWEF	530+20 EB	193' RT	1	—	1
		WEST SALEM SWEF	531+05 EB	182' RT	1	—	1
		WEST SALEM SWEF	531+44 EB	129' RT	1	—	1
		WEST SALEM SWEF	531+66 EB	185' RT	1	—	1
		WEST SALEM SWEF	531+84 EB	130' RT	1	—	1
		WEST SALEM SWEF	532+28 EB	130' RT	1	—	1
		WEST SALEM SWEF	532+42 EB	187' RT	1	—	1
		UNDISTRIBUTED			--	20	—
	PROJECT 1070-00-73 TOTAL				15	20	15
COMBINED PROJECT TOTAL					**15**	**20**	**15**

BASE AGGREGATE DENSE

CATEGORY	PROJECT	LOCATION	STATION - STATION	305.0110 BASE AGGREGATE DENSE 3/4-INCH (TON)	305.0120 BASE AGGREGATE DENSE 1 1/4-INCH (TON)	623.0200 DUST CONTROL SURFACE TREATMENT (SY)
0010						
	1070-00-72					
		RAMP	1203+46 R - 1221+67 R	585	5,177	8,696
		RAMP	1221+67 R - 1244+25 R	319	4,066	8,366
		RAMP	1244+25 R - 1266+19 R	494	4,494	8,016
		SCALE	2221+67 S - 2244+27 S	203	2,862	6,035
		PARKING LOT	4226+63 P - 4243+34 P	560	6,271	16,614
		LOOP	3226+94 L - 3236+87 L	215	2,490	6,148
		EMPLOYEE PARKING LOT	7235+50 E - 7237+69 E	61	726	1,103
		STH 16	827+62 - 830+82	62	663	1,421
	PROJECT 1070-00-72 TOTAL			2,500	26,750	56,400
	1070-00-73					
		WEST SALEM SWEF	512+00 EB - 552+00 EB	--	1,050	—
	PROJECT 1070-00-73 TOTAL			--	1,050	—
COMBINED PROJECT TOTAL				**2,500**	**27,800**	**56,400**

EARTHWORK

CATEGORY	DIVISION	LOCATION	STATION - STATION	205.0100 Excavation Common (1) Cut (2) (CY)	205.0100 Excavation Common (1) EBS Excavation (3) (CY)	Salvaged/ Unusable Pavement Material (4)	Available Material (5)	205.0200 Excavation Rock (12) (CY)	Reduced EBS in Fill (6) Factor 0.80	Unexpanded Fill	Expanded Fill (7) Factor 1.20	Mass Ordinate +/- (8)	Waste
0010	1	RAMP	1203+46R - 1266+19R	47,866	2,393	0	47,866	346	1,915	5,668	4,088	43,778	43,778
		PARKING LOT	4226+63P - 4243+34P	62,005	3,100	0	62,005	0	2,480	75,213	87,279	-25,274	0
		LOOP	3227+64L - 3236+25L	21,553	1,078	0	21,553	34	862	722	-208	21,761	21,761
		EMPLOYEE PARKING LOT	7253+50E - 7237+69E	14,624	731	0	14,624	90	585	0	-809	15,433	15,433
		POND	0+09PD - 2+31PD	307	15	0	307	0	12	814	961	-655	0
	Sub-total 1	1070-00-72		146,355	7,318	0	146,355	470	5,854	82,417	91,311	55,044	80,973
	2	STH 16	827+63 - 830+83	839	42	0	839	0	34	0	-40	879	879
	Sub-total 2	1070-00-72		839	42	0	839	0	34	0	-40	879	879
	1070-00-72 Totals			147,194	7,360	0	147,194	470	5,888	82,417	91,271	55,923	81,852
	3	WEST SALEM SWEF REMOVAL	513+34 - 521+70	1,489	74	0	1,489	0	60	0	-71	1,560	1,560
	Sub-total 3	1070-00-73		1,489	74	0	1,489	0	60	0	-71	1,560	1,560
	4	WEST SALEM SWEF REMOVAL	537+86 - 544+05	2,181	109	0	2,181	0	87	0	-105	2,286	2,286
	Sub-total 4	1070-00-73		2,181	109	0	2,181	0	87	0	-105	2,286	2,286
	1070-00-73 Totals			3,670	184	0	3,670	0	147	0	-176	3,846	3,846
Grand Totals				150,864	7,543	0	150,864	470	6,034	82,417	91,095	59,769	85,698
Total Excavation Common				158,407									

1) Common Excavation is the sum of the Cut and EBS Excavation columns
2) Salvaged/Unsuable Pavement Material is included in Cut
3) EBS Excavation to be backfilled with Breaker Run
4) Salvaged/Unusable Pavement Material
5) Available Material = Cut - Salvaged/Unusuable Pavement Material
6) Reduced EBS in Fill - Excavated EBS material is usuable in Fills outside the 1:1 slope. EBS in Fill Reduction factor = 0.8
7) Expanded Fill. Factor = 1.25
8) The Mass Ordinate + or - Qty calculated for the Division. Plus quantity indicates an excess of material within the Division. Minus indicates a shortage of material within the Division.

3

ASPHALTIC ITEMS

CATEGORY	PROJECT	LOCATION	STATION - STATION	455.0605 TACK COAT GAL	465.0110 ASPHALTIC SURFACE PATCHING TON	465.0315 ASPHALTIC FLUME SY	465.0400 ASPHALTIC SHOULDER RUMBLE STRIP LF	460.5223 HMA PAVEMENT TYPE 3 LT 58-28 S TON	460.5224 HMA PAVEMENT TYPE 4 LT 58-28 S TON
0010									
	1070-00-72								
		RAMP	1203+46 R - 1221+67 R	50	---	---	—	264	264
			1221+67 R - 1244+25 R	40	---	---	—	193	193
			1244+25 R - 1266+19 R	40	---	---	—	222	222
		PARKING LOT	4226+63 P - 4243+34 P	20	---	51	—	102	102
		LOOP	3226+94 L - 3236+87 L	30	---	49	—	80	80
		EMPLOYEE PARKING LOT	7235+50 E - 7237+69 E	55	---	---	—	145	145
		IH 90 EB	1195+00 EB - 1273+50 EB	—	10	---	5300	---	—
	PROJECT 1070-00-72 TOTAL			235	10	100	5300	1005	1005
	1070-00-73								
		WEST SALEM SWEF	512+00 EB - 552+00 EB	75	---	---	1310	245	245
	PROJECT 1070-00-73 TOTAL			75	---	---	1310	245	245
COMBINED PROJECT TOTAL				**310**	**10**	**100**	**6610**	**1250**	**1250**

CONCRETE ITEMS

CATEGORY	PROJECT	LOCATION	STATION - STATION	405.0100 COLORING CONCRETE RED (CY)	415.0100 CONCRETE PAVEMENT 10-INCH (SY)	415.0110 CONCRETE PAVEMENT 11-INCH (SY)	415.0120 CONCRETE PAVEMENT 12-INCH (SY)	416.0610 DRILLED TIE BARS (EACH)	416.0620 DRILLED DOWEL BARS (EACH)	416.1710 CONCRETE PAVEMENT REPAIR (SY)	416.1720 CONCRETE PAVEMENT REPLACEMENT (SY)	SPV.0090.002 CONCRETE CURB & GUTTER 24 - INCH TYPE A SPECIAL (LF)	SPV.0090.003 CONCRETE CURB & GUTTER 24 - INCH TYPE D SPECIAL (LF)	SPV.0180.001 SCALE APPROACH PAVEMENT REINFORCEMENT (SY)
0010														
	1070-00-72													
		RAMP	1203+46 R - 1221+67 R	—	—	—	2895	85	---	—	—	---	—	---
		RAMP	1221+67 R - 1244+25 R	427	340	—	9620	---	---	—	—	508	—	270
		RAMP	1244+25 R - 1266+19 R	—	—	—	3285	685	---	—	—	---	—	---
		PARKING LOT	4226+63 P - 4243+34 P	—	11590	—	---	---	---	—	—	804	—	---
		LOOP	3226+94 L - 3236+87 L	338	5670	—	---	---	---	—	—	388	—	---
		EMPLOYEE PARKING LOT	7235+50 E - 7237+69 E	—	—	—	---	---	---	—	—	---	190	---
		IH 90	1169+66 EB - 1208+88 EB	—	—	—	---	205	160	180	400	---	—	---
		STH 16	827+00 - 831+00	—	—	1250	---	130	---	—	—	---	—	---
	PROJECT 1070-00-72 TOTAL			765	17600	1250	15800	1105	160	180	400	1700	190	270
COMBINED PROJECT TOTAL				**765**	**17600**	**1250**	**15800**	**1105**	**160**	**180**	**400**	**1700**	**190**	**270**

CULVERT PIPES

CATEGORY	PROJECT	LOCATION	INLET STATION	INLET OFFSET	INLET ELEV.	OUTLET STATION	OUTLET OFFSET	OUTLET ELEV.	NOTES	SLOPE (%)	522.0124 REINFORCED CONCRETE CLASS III 24-INCH (LF)	522.0130 REINFORCED CONCRETE CLASS III 30-INCH (LF)	522.0148 REINFORCED CONCRETE CLASS III 48-INCH (LF)	633.5200 MARKERS CULVERT END (EACH)	650.6000 CONSTRUCTION STAKING PIPE CULVERTS (EACH)
0010															
	1070-00-72														
		RAMP	1206+26.09 R	35.2' RT	787.71	1206+15.71 R	12.3' RT		CROSS DRAIN TO EXISTING CULVERT		---	—	33	1	1
		RAMP	1224+56.24 R	88.7' RT	784.32	1224+53.95 R	38.9' LT		CROSS DRAIN TO EXISTING CULVERT		---	—	136	1	1
		RAMP	1255+82.73 R	34.9' RT	768.87	1255+80.28 R	29.9' RT		CROSS DRAIN TO EXISTING CULVERT		---	12	---	1	1
		PARKING LOT	4227+90.11 P	74.3' LT	800.50	4228+24.27 P	28.6' RT	799.94	CROSS DRAIN	0.5%	117	—	---	2	1
		PARKING LOT	4242+00.00 P	57.5' LT	802.90	4242+00.00 P	28.5' RT	800.65	CROSS DRAIN	2.6%	86	—	---	2	1
	PROJECT 1070-00-72 TOTAL										203	12	169	7	5
	1070-00-73														
		WEST SALEM SWEF							TIE INTO EXISTING AT REMOVAL		---	8	---	1	1
	PROJECT 1070-00-73 TOTAL										---	8	---	1	1
COMBINED PROJECT TOTAL											**203**	**20**	**169**	**8**	**6**

CONCRETE COLLARS AND APRON ENDWALLS

CATEGORY	PROJECT	LOCATION	STATION	OFFSET	520.8000 CONCRETE COLLARS FOR PIPE (EACH)	522.1012 APRON ENDWALLS FOR CULVERT PIPE REINFORCED CONCRETE 12-INCH (EACH)	522.1015 15-INCH (EACH)	522.1018 18-INCH (EACH)	522.1024 24-INCH (EACH)	523.0519 HE 19X30-INCH (EACH)	522.1030 30-INCH (EACH)	522.1048 48-INCH (EACH)
0010												
	1070-00-72											
		RAMP	1206+15.71 R	12.3' RT	1	---	—	---	---	---	—	—
		RAMP	1206+26.09 R	35.2' RT	---	---	—	---	---	---	—	1
		RAMP	1212+00.00 R	32.1' RT	---	---	—	---	---	1	—	—
		RAMP	1218+00.00 R	37.5' RT	---	---	—	---	---	1	—	—
		RAMP	1224+53.95 R	38.9' LT	1	---	—	---	---	---	—	—
		RAMP	1224+56.24 R	88.7' RT	---	---	—	---	---	---	—	1
		RAMP	1232+40.74 R	74.0' LT	---	1	—	---	---	---	—	—
		RAMP	1234+37.74 R	46.5' LT	---	1	—	---	---	---	—	—
		RAMP	1246+74.12 R	27.4' RT	---	---	—	1	---	---	—	—
		RAMP	1255+80.28 R	29.9' RT	1	---	—	---	---	---	—	—
		RAMP	1255+82.73 R	34.9' RT	---	---	—	---	---	---	1	—
		PARKING LOT	4227+52.86 P	165.2' RT	---	---	—	---	1	---	—	—
		PARKING LOT	4227+65.46 P	156.7' RT	---	1	—	---	---	---	—	—
		PARKING LOT	4227+90.10 P	74.3' LT	---	---	—	---	1	---	—	—
		PARKING LOT	4228+24.30 P	28.6' RT	---	---	—	---	1	---	—	—
		PARKING LOT	4242+00.00 P	28.5' RT	---	---	—	---	1	---	—	—
		PARKING LOT	4242+00.00 P	57.5' LT	---	---	—	---	1	---	—	—
		LOOP	3228+89.37 L	43.2' LT	---	---	1	---	---	---	—	—
		LOOP	3235+47.13 L	44.4' LT	---	1	—	---	---	---	—	—
	PROJECT 1070-00-72 TOTAL				3	4	1	1	5	2	1	2
	1070-00-73											
		WEST SALEM SWEF			1	---	—	---	---	---	1	—
	PROJECT 1070-00-73 TOTAL				1	---	—	---	---	---	1	—
COMBINED PROJECT TOTAL					**4**	**4**	**1**	**1**	**5**	**2**	**2**	**2**

CONCRETE SIDEWALK

CATEGORY	PROJECT	PROJECT LOCATION	STATION - STATION	602.0410 CONCRETE SIDEWALK 5-INCH (SF)	602.0505 CURB RAMP DETECTABLE WARNING FIELD YELLOW (SF)
0010					
	1070-00-72				
		RAMP	1221+67 R - 1244+25 R	616	8
		LOOP	3226+94 L - 3236+87 L	2777	32
		EMPLOYEE PARKING LOT	7235+50 E - 7237+69 E	1683	24
	PROJECT 1070-00-72 TOTAL			5,075	64
COMBINED PROJECT TOTAL				**5,075**	**64**

PIPE SCHEDULE

CATEGORY	PROJECT	FROM	TO	INLET ELEVATION	DISCHARGE ELEVATION	SLOPE FT/FT	608.0312 12-INCH RCP CLASS III SS (LF)	608.0315 15-INCH RCP CLASS III SS (LF)	608.0318 18-INCH RCP CLASS III SS (LF)	608.0324 24-INCH RCP CLASS III SS (LF)	610.0419 19 X 30-INCH RCP CLASS IV SS (LF)
0010											
	1070-00-72										
		1.0	1.1	789.42	789.34	0.001	---	---	---	---	63
		2.0	2.1	791.29	790.86	0.005	---	---	---	---	74
		3.2	3.0	800.01	799.71	0.004	75	---	---	---	---
		3.0	3.1	799.71	799.32	0.004	98	---	---	---	---
		4.0	4.1	808.06	807.86	0.005	40	---	---	---	---
		4.1	4.2	806.46	806.08	0.005	69	---	---	---	---
		5.0	5.1	776.66	776.26	0.005	---	---	71	---	---
		6.0	6.1	804.94	803.61	0.005	265	---	---	---	---
		6.2	6.1	805.05	804.65	0.005	81	---	---	---	---
		6.1	6.3	803.36	801.32	0.007	---	307	---	---	---
		7.2	7.1	785.56	785.41	0.009	11	---	---	---	---
		7.1	7.0	785.40	785.13	0.009	---	---	---	24	---
		8.0	8.1	809.26	807.67	0.023	64	---	---	---	---
	PROJECT 1070-00-72 TOTAL						703	307	71	24	137
COMBINED PROJECT TOTAL							**703**	**307**	**71**	**24**	**137**

STRUCTURE SCHEDULE

CATEGORY	PROJECT	STRUC. NO.	STATION	OFFSET TO CENTER OF STRUCTURE	CASTING ELEV.	TOP OF STR. ELEV.	BOTTOM OF STR. ELEV.	DEPTH	611.0612 INLET COVERS TYPE C (EACH)	611.0624 INLET COVERS TYPE H (EACH)	611.0642 INLET COVERS TYPE MS (EACH)	611.2004 MANHOLES 4-FT DIAMETER (EACH)	611.3230 INLETS 2X3-FT (EACH)	611.3902 INLETS MEDIAN 2 GRATE (EACH)	650.4000 CONSTRUCTION STAKING STORM SEWER (EACH)	COMMENT
0010																
	1070-00-72															
		1.0	1212+00.0 R	36.8' LT	791.62	791.62	789.15	2.47	---	---	2	---	---	1	1	---
		1.1	1212+00.0 R	32.1' RT	ENDWALL	-	-	-	---	---	---	---	---	---	1	---
		2.0	1218+00.0 R	42.7' LT	793.42	793.42	791.02	2.40	---	---	2	---	---	1	1	---
		2.1	1218+00.0 R	37.5' RT	ENDWALL	-	-	-	---	---	---	---	---	---	1	---
		3.0	1232+40.8 R	24.0' RT	812.10	811.27	799.55	11.72	---	1	---	1	---	---	1	---
		3.1	1232+40.7 R	74.0' LT	ENDWALL	-	-	-	---	---	---	---	---	---	1	---
		4.0	1234+77.6 R	29.0' RT	812.04	811.21	807.90	3.31	---	1	---	---	1	---	1	---
		4.1	1234+37.8 R	24.0' RT	812.10	811.27	806.29	4.98	---	1	---	---	1	---	1	---
		4.2	1234+38.1 R	51.5' LT	ENDWALL	-	-	-	---	---	---	---	---	---	1	---
		5.0	1246+27.1 R	26.3' LT	781.53	780.70	776.45	4.25	---	---	2	---	---	1	1	---
		5.1	1246+78.3 R	32.0' RT	ENDWALL	-	-	-	---	---	---	---	---	---	1	---
		6.0	3234+82.7 L	84.5' RT	808.77	808.77	804.74	4.03	---	---	2	---	---	1	1	---
		6.1	3231+75.1 L	71.8' RT	808.65	808.65	803.17	5.48	---	---	2	---	---	1	1	---
		6.2	3232+09.7 L	1.0' LT	811.91	811.08	804.89	6.19	---	1	---	---	1	---	1	---
		6.3	3228+84.9 L	47.5' LT	ENDWALL	-	-	-	---	---	---	---	---	---	1	---
		7.0	4227+50.7 P	167.1' RT	ENDWALL	-	-	-	---	---	---	---	---	---	1	---
		7.1	4227+61.4 P	158.8' RT	789.00	789.00	785.15	3.85	1	---	---	1	---	---	1	---
		7.2	4227+67.7 P	155.6' RT	ENDWALL	-	-	-	---	---	---	---	---	---	1	---
		8.0	3234+94.8 L	6.8' LT	812.67	811.84	809.01	2.83	---	1	---	---	1	---	1	---
		8.1	3235+52.1 L	47.9' LT	ENDWALL	-	-	-	---	---	---	---	---	---	1	---
	PROJECT 1070-00-72 TOTAL								1	5	10	2	4	5	20	
COMBINED PROJECT TOTAL									**1**	**5**	**10**	**2**	**4**	**5**	**20**	

MIDWEST GUARDRAIL SYSTEM

CATEGORY	PROJECT	LOCATION	STATION - STATION	614.2300 GUARDRAIL 3 (LF)	614.2610 GUARDRAIL TERMINAL EAT (EACH)	614.2620 GUARDRAIL TERMINAL TYPE 2 (EACH)
0010						
	1070-00-72					
		IH 90 EB	1169+63 EB - 1172+21 EB	250	1	1
		IH 90 EB	1181+00 EB - 1183+58 EB	150	1	1
		RAMP	1206+25 R - 1208+83 R	162.5	1	1
		RAMP	1218+95 R - 1219+78 R	37.5	1	1
	PROJECT 1070-00-72			600.0	4	4
COMBINED PROJECT TOTAL				**600.0**	**4**	**4**

Barrier System Grading Shaping Finishing							
Location	Excavation Common* (CY)	Borrow* (CY)	Salvaged Topsoil* (SY)	Fertilizer Type B* (CWT)	Seeding* (LB)	Mulching* (SY)	614.0010 EACH
Sta. 1166+45 EB to 1168+48 EB	102	-	571	0.36	15	571	1
Sta. 1153+53 EB to 1156+06 EB	81	-	453	0.29	12	453	1
Totals	183	0	1024	0.65	28	1024	**2**

INLET PROTECTION

CATEGORY	PROJECT	LOCATION	STATION	OFFSET	628.7005 INLET PROTECTION TYPE A (EACH)	628.7010 INLET PROTECTION TYPE B (EACH)	628.7015 INLET PROTECTION TYPE C (EACH)
0010							
	1070-00-72						
		RAMP	1212+00 R	37' LT	1	1	—
		RAMP	1218+00 R	43' LT	1	1	—
		RAMP	1232+41 R	24' RT	1	—	1
		RAMP	1234+38 R	24' RT	1	—	1
		RAMP	1234+78 R	29' RT	1	—	1
		RAMP	1246+27 R	26' LT	1	1	—
		LOOP	3231+75 L	72' RT	1	1	—
		LOOP	3232+10 L	1' LT	1	—	1
		LOOP	3234+83 L	85' RT	1	1	—
		LOOP	3234+95 L	7' LT	1	—	1
	PROJECT 1070-00-72 TOTAL				10	5	5
COMBINED PROJECT TOTAL					**10**	**5**	**5**

WATER

CATEGORY	PROJECT	LOCATION	TASK	624.0100 (MGAL)
0010				
	1070-00-72			
		PROJECT	DUST CONTROL	600
			COMPACTION	600
	PROJECT 1070-00-72 TOTAL			1200
COMBINED PROJECT TOTAL				**1200**

FENCE

CATEGORY	PROJECT	LOCATION	STATION - STATION	SPV.0090.001 CONSTRUCTION STAKING FENCE (LF)	616.0100.001 WOVEN WIRE 4-FT (LF)	SPV.0090.005 CHAIN LINK 6-FT SPECIAL (LF)	616.0329.001 GATES CHAIN LINK 4-FT (EACH)
0010							
	1070-00-72						
		RAMP	1203+46 R - 1221+67 R	1,435	1,435	---	---
		RAMP	1221+67 R - 1244+25 R	2,637	2,637	---	---
		RAMP	1244+25 R - 1266+19 R	728	728	---	---
		EMPLOYEE PARKING LOT	7235+50 E - 7237+69 E	—	---	60	1
	PROJECT 1070-00-72 TOTAL			4,800	4,800	60	1
COMBINED PROJECT TOTAL				**4,800**	**4,800**	**60**	**1**

MOBILIZATIONS EROSION CONTROL

CATEGORY	PROJECT	LOCATION	628.1905 (EACH)	628.1910 EMERGENCY (EACH)
0010				
	1070-00-72			
		PROJECT	14	7
	PROJECT 1070-00-72 TOTAL		14	7
	1070-00-73			
		PROJECT	2	1
	PROJECT 1070-00-73 TOTAL		2	1
COMBINED PROJECT TOTAL			**16**	**8**

EROSION CONTROL

CATEGORY	PROJECT	LOCATION	STATION - STATION	606.0200 RIPRAP MEDIUM (CY)	628.1504 SILT FENCE (LF)	628.1520 SILT FENCE MAINTENANCE (LF)	628.2004 EROSION MAT CLASS 1 TYPE B (SY)	628.7504 TEMPORARY DITCH CHECKS (LF)	628.7555 CULVERT PIPE CHECKS (EACH)	645.0130 GEOTEXTILE FABRIC TYPE R (SY)	645.0140 GEOTEXTILE FABRIC TYPE SAS (SY)	628.6510 SOIL STABILIZER TYPE B (ACRE)	628.7515.S STONE OR ROCK DITCH CHECKS (CY)	628.7560 TRACKING PADS (EACH)
0010														
	1070-00-72													
		RAMP	1203+46 R - 1221+67 R	—	721	361	4511	100	10	—	100	---	5	1
		RAMP	1221+67 R - 1244+25 R	40	1621	811	2411	—	10	81	200	---	10	---
		RAMP	1244+25 R - 1266+19 R	—	908	454	1339	—	5	—	200	---	10	2
		PARKING LOT	4226+63 P - 4243+34 P	115	2377	1188	15078	140	7	230	---	---	---	---
		STH 16	827+00 - 831+00	—	713	357	---	—	---	—	---	---	---	---
			UNDISTRIBUTED	45	1585	820	5911	60	8	80	130	8	10	---
	PROJECT 1070-00-72 TOTAL			200	7925	3990	29250	300	40	390	630	8	35	3
	1070-00-73													
		WEST SALEM	513+00 EB - 543+00 EB	—	3460	1721	827	—	8	—	---	---	---	---
			UNDISTRIBUTED	—	865	439	223	—	2	—	---	---	---	---
	PROJECT 1070-00-73 TOTAL			—	4325	2160	1050	—	10	—	---	---	---	---
COMBINED PROJECT TOTAL				**200**	**12250**	**6150**	**30300**	**300**	**50**	**390**	**630**	**8**	**35**	**3**

PLANT DATA CHART

KEY:
CG - CONTAINER GROWN
HT - HEIGHT

CATEGORY	PROJECT		SYMBOL	COMMON NAME	SCIENTIFIC NAME	TYPE	AVERAGE MATURE HEIGHT	SIZE WHEN PLANTED	ROOT ZONE MODE	MINIMUM POT SIZE DIA.	MINIMUM POT SIZE DEPTH	MINIMUM HOLE SIZE DIA.	MINIMUM HOLE SIZE DEPTH	FERTILIZER UNITS REQUIRED	RODENT PROTECTION REQUIRED	MULCH RING DIA.	TOTAL (EACH)
0010																	
	1070-00-72																
		Large Deciduous Shrubs															
		632.0201.001	WAC	CRANBERRY, WENTWORTH AMERICAN	Viburnum trilobum 'Wentworth'	3	6'	24" HT	CG	10"	6.5"	34"	6.5"	2	NO	46"	3
		Small Deciduous Shrubs															
		632.0201.002	GS	SPIREA, GOLDMOUND	Spirea x bumalda 'Goldmound'	1	4'	18" HT	CG	9"	6"	33"	6"	2	NO	45"	14
		632.0201.003	CPB	BARBERRY, CRIMSON PYGMY	Berberis Thunbergii var. atropurpurea 'Crimson Pygmy'	1	2'	18" HT	CG	9"	6"	33"	6"	2	NO	45"	35
		632.0201.004	GP	POTENTILLA, GOLDFINGER	Potentilla fruticosa 'Goldfinger'	1	3'	18" HT	CG	9"	6"	33"	6"	2	NO	45"	4
		Coniferous Shrubs															
		632.0201.005	TAY	YEW, TAUTON ANGLOJAP	Taxus x media 'Tauntonii'	1	2'	18" HT	CG	9"	6"	33"	6"	2	NO	45"	7
		632.0201.006	BJ	JUNIPER, BROADMOOR	Juniperus sabina 'Broadmoor'	1	2'	18" HT	CG	9"	6"	33"	6"	2	NO	45"	3

FINISHING ITEMS

CATEGORY	PROJECT	LOCATION	STATION - STATION	625.0500 SALVAGED TOPSOIL (SY)	625.0100 TOPSOIL (SY)	627.0200 MULCHING (SY)	629.0210 FERTILIZER TYPE B (CWT)	630.0120 SEEDING MIXTURE NO. 20 (LB)	630.0130 SEEDING MIXTURE NO. 30 (LB)	630.0140 SEEDING MIXTURE NO. 40 (LB)	630.0200 SEEDING MIXTURE TEMPORARY (LB)	631.1000 SOD LAWN (SY)	631.0300 SOD WATER (MGAL)
0010													
	1070-00-72												
		RAMP	1203+46 R - 1221+67 R	10,211	---	5,702	6	211	92	---	348	—	---
			1221+67 R - 1244+25 R	7,439	---	5,030	5	247	98	---	245	—	---
			1244+25 R - 1266+19 R	4,150	---	2,812	3	45	78	---	163	—	---
		PARKING LOT	4226+63 P - 4243+34 P	30,539	---	15,467	19	1,025	50	12	1,232	1,277	29
		STH 16	827+00 - 831+00	—	583	583	1	---	11	---	16	—	---
			UNDISTRIBUTED	5,662	67	3,006	5	172	40	3	247	174	3
	PROJECT 1070-00-72 TOTAL			58,000	650	32,600	39	1,700	370	15	2,250	1,450	32
	1070-00-73												
		WEST SALEM SWEF	512+00 EB - 523+00 EB	—	2,626	2,626	2	---	47	---	71	—	---
			523+00 EB - 537+00 EB	—	17,169	17,169	11	464	---	---	464	—	---
			537+00 EB - 552+00 EB	—	3,142	3,142	2	61	16	---	85	—	---
			UNDISTRIBUTED	—	2,363	2,363	1	55	7	---	71	—	---
	PROJECT 1070-00-73 TOTAL			—	25,300	25,300	16	580	70	---	690	—	---
COMBINED PROJECT TOTAL				**58,000**	**25,950**	**57,900**	**55**	**2,280**	**440**	**15**	**2,940**	**1,450**	**32**

LANDSCAPE PLANTING SURVEILLANCE & CARE CYCLES

CATEGORY	PROJECT	LOCATION	NOTE	632.9101 (EACH)*
0010				
	1070-00-72			
		PROJECT SITE	1ST GROWING SEASON	8
		PROJECT SITE	2ND GROWING SEASON	8
	PROJECT 1070-00-72 TOTAL			16
COMBINED PROJECT TOTAL				**16**

* BASED ON A SITE VISIT ONCE EVERY TWO WEEKS BETWEEN MAY 15 AND SEPTEMBER 15 FOR TWO GROWING SEASONS (8 MONTHES AT 2 TIMES PER MONTH)

3

DELINEATORS

CATEGORY	PROJECT	LOCATION	STATION - STATION	633.0100 POSTS STEEL (EACH)	633.0500 REFLECTORS WHITE (EACH)	633.0500 REFLECTORS YELLOW (EACH)
0010						
	1070-00-72					
		IH 90 EB	1169+66 EB - 1172+66 EB	---	—	—
		IH 90 EB	1195+00 EB - 1215+00 EB	4	4	—
		IH 90 EB	1215+00 EB - 1235+00 EB	10	10	—
		IH 90 EB	1235+00 EB - 1273+50 EB	6	6	—
		RAMP	1203+46 R - 1221+67 R	34	26	14
		RAMP	1221+67 R - 1244+25 R	35	12	23
		RAMP	1244+25 R - 1266+19 R	26	43	3
		PARKING LOT	4226+63 P - 4243+34 P	26	—	26
					101	66
	PROJECT 1070-00-72 TOTAL			141	167	
	1070-00-73					
		WEST SALEM SWEF	512+00 EB - 523+00 EB	3	3	—
			523+00 EB - 537+00 EB	3	3	—
			537+00 EB - 552+00 EB	2	2	—
					8	—
	PROJECT 1070-00-73 TOTAL			8	8	
COMBINED PROJECT TOTAL				**149**	**175**	

ROW MARKERS

CATEGORY	PROJECT	LOCATION	STATION	OFFSET	POINT NUMBER	633.5100 MARKERS ROW (EACH)
0010						
	1070-00-72					
		IH 90 EB	1206+99.56 EB	115.64' RT	100	1
		IH 90 EB	1215+60.72 EB	175.10' RT	101	1
		IH 90 EB	1222+76.82 EB	229.46' RT	102	1
		IH 90 EB	1229+78.35 EB	656.87' RT	200	1
		IH 90 EB	1238+52.12 EB	662.41' RT	201	1
		IH 90 EB	1240+98.23 EB	230.73' RT	202	1
		IH 90 EB	1242+78.52 EB	197.96' RT	203	1
		IH 90 EB	1248+50.95 EB	124.15' RT	204	1
		IH 90 EB	1251+49.17 EB	106.14' RT	205	1
	PROJECT 1070-00-72 TOTAL					9
COMBINED PROJECT TOTAL						**9**

SAWING ASPHALT AND CONCRETE

CATEGORY	PROJECT	LOCATION	STATION - STATION	690.0150 SAWING ASPHALT (LF)	690.0250 SAWING CONCRETE (LF)
0010					
	1070-00-72				
		IH 90 EB	1203+46 EB - 1208+47 EB	---	503
		IH 90 EB	1246+48 EB - 1266+19 EB	---	1981
		IH 90	1169+66 EB - 1208+88 EB	---	1050
		STH 16	827+00 - 831+00	20	48
			UNDISTRIBUTED	40	18
	PROJECT 1070-00-72 TOTAL			60	3600
	1070-00-73				
		WEST SALEM SWEF	512+00 EB - 523+00 EB	215	640
			523+00 EB - 537+00 EB	---	—
			537+00 EB - 552+00 EB	680	—
			UNDISTRIBUTED	5	10
	PROJECT 1070-00-73 TOTAL			900	650
COMBINED PROJECT TOTAL				**960**	**4,250**

PERMANENT SIGNING

CATEGORY	PROJECT	SIGN #	SIGN CODE	SIGN SIZE	SIGN SIZE (IN)	637.2230 SIGNS TYPE II REFLECTIVE F (SF)	637.2210 SIGNS TYPE II REFLECTIVE H (SF)	634.0614 WOOD POSTS 4X6-IN 14 FT (EACH)	634.0616 WOOD POSTS 4X6-IN 16 FT (EACH)	634.0618* WOOD POSTS 4X6-IN 18 FT (EACH)	638.2102 MOVING SIGNS TYPE II (EACH)	638.3000 REMOVING SMALL SIGN SUPPORTS (EACH)	SIGN MOUNTED ON SAME POST AS	REMARKS
0010														
	1070-00-72													
		1-02	R4-5R	(5)	48X60	–	20.00	–	1	–	--	–	–	TRUCKS USE RIGHT LANE
		1-03	R4-5R	(5)	48X60	–	20.00	–	1	–	--	–	–	TRUCKS USE RIGHT LANE
		3-02	R7-1D	2S	18X24	–	3.00	1	--	–	--	–	–	NO PARKING ANY TIME (DOUBLE ARROW)
		3-03	R8-7	(5)	48X36	–	12.00	1	--	–	--	–	–	EMERGENCY STOPPING ONLY
		3-04	R7-1D	2S	18X24	–	3.00	1	--	–	--	–	–	NO PARKING ANY TIME (DOUBLE ARROW)
		3-05	R2-1	2S	24X30	–	5.00	1	--	–	--	–	–	SPEED LIMIT 25 MPH
		3-06	R2-1	2S	24X30	–	5.00	1	--	–	--	–	–	SPEED LIMIT 25 MPH
		3-07	R7-1D	2S	18X24	–	3.00	1	--	–	--	–	–	NO PARKING ANY TIME (DOUBLE ARROW)
		3-08	R5-1A	2S	36X24	–	6.00	1	--	–	--	–	–	WRONG WAY
		3-09	R5-1A	2S	36X24	–	6.00	1	--	–	--	–	–	WRONG WAY
		3-10	R7-1D	2S	18X24	–	3.00	1	--	–	--	–	–	NO PARKING ANY TIME (DOUBLE ARROW)
		3-11	R7-1D	2S	18X24	–	3.00	1	--	–	--	–	–	NO PARKING ANY TIME (DOUBLE ARROW)
		3-12		Custom	72x48	–	24.00	–	2	–	--	–	–	MAINTAIN 200 FT SPACING
		4-01	R5-1	2S	30X30	–	6.25	–	1	–	--	–	–	DO NOT ENTER
		4-02	R1-2	2S	36X31	–	3.88	–	1	–	--	–	–	YIELD
		4-03	R1-2	2S	36X31	–	3.88	–	1	–	--	–	–	YIELD
		4-04	R3-2	2S	24X24	–	4.00	1	--	–	--	–	–	NO LEFT TURN SYMBOL
		4-05	R7-1D	2S	18X24	–	3.00	1	--	–	--	–	–	NO PARKING ANY TIME (DOUBLE ARROW)
		4-06	R5-1	2S	30X30	–	6.25	–	1	–	--	–	–	DO NOT ENTER
		4-07	R5-1	2S	30X30	–	6.25	–	1	–	--	–	–	DO NOT ENTER
		4-08	R2-1	2S	24X30	–	5.00	–	1	–	--	–	–	SPEED LIMIT 25 MPH
		4-09		Custom	24X12	–	2.00	1	--	–	--	–	–	SCALE
		4-10	R7-1D	2S	18X24	–	3.00	1	--	–	--	–	–	NO PARKING ANY TIME (DOUBLE ARROW)
		4-11	W4-2R	2S	36X36	9.00	--	–	1	–	--	–	–	LANE REDUCTION TRANSITION SYMBOL (RIGHT)
		4-12	W4-2R	2S	36X36	9.00	--	–	1	–	--	–	–	LANE REDUCTION TRANSITION SYMBOL (RIGHT)
		4-13	R7-1D	2S	18X24	–	3.00	1	--	–	--	–	–	NO PARKING ANY TIME (DOUBLE ARROW)
		4-14	R7-1L	2S	18X24	–	3.00	1	--	–	--	–	–	NO PARKING ANY TIME (LEFT ARROW)
		4-15	R5-1A	2S	36X24	–	6.00	1	--	–	--	–	–	WRONG WAY
		4-16	R5-1A	2S	36X24	–	6.00	1	--	–	--	–	–	WRONG WAY
		4-17		Custom	60X54	–	22.50	–	--	2	--	–	–	PARKING AND INSPECTION (ARROW)
		4-18		Custom	72X32	–	16.00	–	2	–	--	–	–	PARKING (ARROW) INSPECTION (ARROW)
		4-19	R5-1	2S	30X30	–	6.25	–	1	–	--	–	–	DO NOT ENTER
		4-20	R1-1	2S	30X30	–	5.18	–	1	–	--	–	4-20	STOP SIGN
		4-21		Custom	36X24	–	6.00	–	--	–	--	–	4-21	WAIT UNTIL TRUCK CLEARS SCALE BEFORE PROCEEDING
		4-22	D52-54L	2S	24X24	–	4.00	1	--	–	--	–	–	EXIT (DOWN LEFT ARROW)
		4-23	R7-1R	2S	18X24	–	3.00	1	--	–	--	–	–	NO PARKING ANY TIME (RIGHT ARROW)
		4-24	R7-1D	2S	18X24	–	3.00	1	--	–	--	–	–	NO PARKING ANY TIME (DOUBLE ARROW)
		4-25	D52-54R	2S	24X24	–	4.00	1	--	–	--	–	–	EXIT (DOWN RIGHT ARROW)
		4-26	R1-1	2S	30X30	–	5.18	–	--	–	--	–	–	STOP SIGN
		4-27	R1-1	2S	30X30	–	5.18	–	--	–	--	–	–	STOP SIGN
		5-01	R7-1D	2S	18X24	–	3.00	1	--	–	--	–	–	NO PARKING ANY TIME (DOUBLE ARROW)
		5-02	R7-1D	2S	18X24	–	3.00	1	--	–	--	–	–	NO PARKING ANY TIME (DOUBLE ARROW)
		5-03		Custom	24X30	–	5.00	–	1	–	--	–	–	OVERSIZE LOAD VEHICLE PARKING ONLY
		5-04	W4-1R	(5)	48X48	16.00	--	–	--	2	--	–	–	MERGING TRAFFIC SYMBOL (RIGHT)
		5-05		Custom	36X30	–	7.50	–	1	–	--	–	–	LEAKING TRUCK PARKING
		5-06	R5-53A	(5)	42X54	–	15.75	–	1	–	--	–	–	SEAT BELT SIGN - CLICK IT...WHY RISK IT?
		5-07	R7-1D	2S	18X24	–	3.00	1	--	–	--	–	–	NO PARKING ANY TIME (DOUBLE ARROW)
		5-08	R7-1D	2S	18X24	–	3.00	1	--	–	--	–	–	NO PARKING ANY TIME (DOUBLE ARROW)
					--	–	--	1	--	–	1	1	–	MILEPOST MARKER 23
	PROJECT 1070-00-72 TOTAL					34.00	295.05	27	19	4	1	1		
	COMBINED PROJECT TOTAL					**34.00**	**295.05**	**27**	**19**	**4**	**1**	**1**		

PERMANENT SIGNS, TYPE I

CATEGORY	PROJECT	SIGN #	SIGN CODE	SIGN SIZE W IN	X	SIGN SIZE H IN	STATION	634.0618* POSTS WOOD 4X6 - IN 18 FT (EACH)	634.0620 POSTS WOOD 4X6 - IN 20 FT (EACH)	634.0622 POSTS WOOD 4X6 - IN 22 FT (EACH)	STEEL POST TYPE	635.0200 SIGN SUPPORTS STRUCTURAL STEEL HS (LB)	636.0100 SIGN SUPPORTS CONCRETE MASONRY (CY)	636.0500 SIGN SUPPORTS STEEL REINFORCEMENT (LB)	637.1220 SIGNS TYPE 1 REFLECTIVE SH (SF)	638.3610 ERECTING STATE OWNED SIGNS TYPE I (EACH)	REMARKS	NOTES
0010																		
	1070-00-72																	
		1-01	E5-56A	144	X	72	STA 1098+00	—	---	---	A	550	1.2	68	72	---	WEIGH STATION 2 MILES	---
		1-04	R13-1	144	X	66	STA 1134+00	—	---	4	—	---	---	—	66	---	TRUCKS OVER 5 TONS STOP AT WEIGH STATION	---
		2-01	R13-49	120	X	60	STA 1146+50	—	4	---	—	---	---	—	—	1	PREPASS FOLLOW IN CAB SIGNAL	PROVIDED BY PREPASS
		2-02	E5-56A	144	X	72	STA 1150+50	—	---	---	A	550	1.2	68	72	---	WEIGH STATION 1 MILE	---
		2-03	E5-65	144	X	72	STA 1157+00	—	---	---	A	550	1.2	68	72	---	24-HOUR TRUCK PARKING ALLOWED IN WEIGH STA	---
		2-04		144	X	12	STA 1157+00	—	---	---	—	---	---	—	12	---	OVERSIZE LOADS	ON SAME POST AS 2-03
		2-05	E5-57E	144	X	60	STA 1176+00	—	---	4	—	---	---	—	60	---	WEIGH STATION RIGHT LANE	---
		3-01	E-5-57	144	X	42	STA 1203+00	3	---	---	—	---	---	—	42	---	WEIGH STATION	---
	PROJECT 1070-00-72 TOTAL							3	4	8		1650	4	204	396	1		
COMBINED PROJECT TOTAL								**3**	**4**	**8**		**1650**	**4**	**204**	**396**	**1**		

* ADDITIONAL QUANTITIES FOUND IN "PERMANENT SIGNING" TABLE

REMOVING SIGNS & REMOVING SIGN SUPPORTS

CATEGORY	PROJECT	SIGN NUMBER	SIGN CODE	638.2601 REMOVING SIGNS TYPE I EACH	638.2602 REMOVING SIGNS TYPE II EACH	638.3000 REMOVING SMALL SIGN SUPPORTS EACH	638.3100 REMOVING STRUCTURAL STEEL SIGN SUPPORTS EACH	SIGN MOUNTED ON SAME SUPPORT AS	DESCRIPTION
0010									
	1070-00-73								
		1R-01	E5-56A	1	---	---	2	---	WEIGH STATION 1 MILE
		1R-02	R13-1	1	---	---	2	---	TRUCKS OVER 4 TONS STOP AT WEIGH STA.
		1R-03	E5-57E	1	---	---	2	---	WEIGH STATION RIGHT LANE CMS
		1R-04	E5-58	1	---	---	2	---	WEIGH STATION CMS
		2R-01	---	---	1	1	---	---	TURN OFF HEADLIGHTS
		2R-02	R5-1	---	1	1	---	2R-03	DO NOT ENTER
		2R-03	R5-1A	---	1	---	---	2R-02	WRONG WAY
		2R-04	D52-54R	---	1	1	---	---	EXIT (DOWN RIGHT ARROW)
		2R-05	---	---	1	2	---	---	STATE PATROL WEIGH STATION NO. 53
		2R-06	---	---	1	1	---	---	DO NOT ENTER
		2R-07	---	---	1	---	---	LIGHTPOLE	(AHEAD ARROW) SPEAKER HERE
		2R-08	---	---	1	2	---	---	SCALE DIRECTIONS
		2R-09	D52-54L	---	1	1	---	2R-10	EXIT (DOWN LEFT ARROW)
		2R-10		---	1	---	---	2R-09	PARKING (DOWN RIGHT ARROW)
		3R-01	W4-1R	---	1	2	---	---	MERGING TRAFFIC SYMBOL (RIGHT)
	PROJECT 1070-00-73 TOTAL			4	11	11	8		
COMBINED PROJECT TOTAL				**4**	**11**	**11**	**8**		

TRAFFIC CONTROL

CATEGORY	PROJECT	LOCATION	633.1100 TEMPORARY DELINEATORS (EACH)	NO. OF DAYS (DAY)	643.0200 SURVEILLANCE AND MAINTENANCE (DAY)	643.0300 DRUMS (DAY)	643.0420 BARRICADES TYPE III (DAY)	643.0705 WARNING LIGHTS TYPE A (DAY)	643.0715 WARNING LIGHTS TYPE C (DAY)	643.0800 ARROW BOARDS (DAY)	643.0900 SIGNS (DAY)	643.0920 COVERING SIGNS TYPE II (EACH)	643.1050 SIGNS PCMS (DAY)	649.2100 TEMPORARY RAISED PAVEMENT MARKERS (EACH)	661.0100 TEMPORARY TRAFFIC SIGNALS FOR BRIDGES (LS)
0010															
	1070-00-72														
		PROJECT	---	440	440	—	---	—	—	---	—	---	—	—	---
		MAINLINE WIM	---	10	---	450	20	40	200	20	5,380	---	14	—	---
		EXIT RAMP	18	20	---	600	---	—	240	---	200	---	14	40	---
		ENTRANCE RAMP	30	35	---	2,170	---	—	420	---	420	---	14	60	---
		STH 16	---	30	---	600	30	60	600	---	600	---	14	—	1
		UNDISTRIBUTED	12	15	---	430	5	10	190	5	700	3	9	10	---
	PROJECT 1070-00-72 TOTAL		60		440	4,250	55	110	1,650	25	7,300	3	65	110	1
	1070-00-73														
		PROJECT	---	15	15	—	---	—	—	---	—	---	—	—	---
		WEST SALEM SWEF	---	15	---	1,100	75	150	320	30	230	---	15	—	---
	PROJECT 1070-00-73 TOTAL		---		15	1,100	75	150	320	30	230	---	15	—	---
COMBINED PROJECT TOTAL			**60**		**455**	**5,350**	**130**	**260**	**1,970**	**55**	**7,530**	**3**	**80**	**110**	**1**

TEMPORARY PAVEMENT MARKING

CATEGORY	PROJECT	LOCATION	649.0400 REMOVABLE TAPE 4-INCH (WHITE) SOLID (LF)	649.0400 REMOVABLE TAPE 4-INCH (WHITE) 12.5' SEG, 37.5' GAP (LF)	649.0400 REMOVABLE TAPE 4-INCH (YELLOW) SOLID (LF)	649.1400 STOP LINE REMOVABLE TAPE 24-INCH (LF)	646.0600 REMOVING PAVEMENT MARKINGS (LF)
0010							
	1070-00-72						
		EXIT RAMP	1,800	450	1,800	---	2,500
		ENTRANCE RAMP	3,290	745	3,415	---	4,140
		STH 16	1,400	—	600	30	360
			6,490	1,195	5,815		
			7,685				
	PROJECT 1070-00-72 TOTAL		13,500			30	7,000
	1070-00-73						
		WEST SALEM SWEF	5,000	—	—	---	—
	PROJECT 1070-00-73 TOTAL		5,000	—	—	---	—
COMBINED PROJECT TOTAL			**18,500**			**30**	**7,000**

PAVEMENT MARKING

CATEGORY	PROJECT	LOCATION	STATION - STATION	646.0106 EPOXY 4-INCH YELLOW (LF)	646.0106 EPOXY 4-INCH WHITE SOLID (LF)	646.0106 EPOXY 4-INCH WHITE 3' SEG, 9' GAP (LF)	646.0106 EPOXY 4-INCH WHITE 12.5' SEG., 37.5' GAP (LF)	646.0116 EPOXY 6-INCH YELLOW (LF)	646.0126 EPOXY 8-INCH WHITE (LF)	647.0566 STOP LINE EPOXY 18-INCH (LF)	647.0656 PARKING STALL EPOXY (LF)	647.0706 DIAGONAL EPOXY 6-INCH (LF)	647.0726 DIAGONAL EPOXY 12-INCH (LF)	647.0746 DIAGONAL EPOXY 24-INCH (LF)	647.0766 CROSSWALK EPOXY 6-INCH (LF)
0010															
	1070-00-72														
		IH 90 EB	1169+66 - 1172+66	300	300	---	75	—	—	—	---	—	---	—	---
		IH 90 EB	1195+00 EB - 1215+00 EB	2000	1400	65	500	—	350	—	---	—	---	—	---
		IH 90 EB	1235+00 EB - 1273+50 EB	3870	1885	115	975	—	545	—	---	—	---	—	---
		RAMP	1203+46 R - 1221+67 R	1270	1830	---	---	—	360	—	---	—	---	300	---
		RAMP	1221+67 R - 1244+25 R	4030	2945	60	---	—	250	30	---	—	200	—	---
		RAMP	1244+25 R - 1266+19 R	180	2730	60	---	—	545	—	---	—	---	—	---
		PARKING LOT	4226+63 P - 4243+34 P	2270	1900	---	---	2200	—	—	510	25	---	—	150
		STH 16	-	850	640	---	---	—	—	—	---	—	---	—	---
	PROJECT 1070-00-72 TOTAL			14,770	13,630	300	1,550	2,200	2,050	30	510	25	200	300	150
						30,250									
	1070-00-73														
		WEST SALEM SWEF	512+00 EB - 523+00 EB	—	860	---	---	—	—	—	---	—	---	—	---
			523+00 EB - 537+00 EB	—	---	---	---	—	—	—	---	—	---	—	---
			537+00 EB - 552+00 EB	—	630	---	---	—	—	—	---	—	---	—	---
	PROJECT 1070-00-73 TOTAL			—	1500	---	---	—	—	—	---	—	---	—	---
						1500									
	COMBINED PROJECT TOTAL				**31750**			**2200**	**2050**	**30**	**510**	**25**	**200**	**300**	**150**

ELECTRIC SERVICE CONNECTION

CATEGORY	PROJECT	LOCATION	STATION	***652.0225 CONDUIT RIGID NONMETALIC SCHEDULE 40 2-INCH (LF)
0010				
	1070-00-72			
		LOOP	4241+00 P	50
		EMPLOYEE LOT	7236+50 E	90
	PROJECT 1070-00-72			140
	COMBINED PROJECT TOTAL			**140**

***ADDITIONAL QUANTITIES FOUND IN "LIGHTING CONDUIT AND ELECTRICAL WIRE ITEMS" TABLE

NETWORK SERVICE CONNECTION

CATERGORY	PROJECT	SPV.0090.04 FIBER OPTIC TRACER CABLE (LF)	671.0112 CONDUIT HDPE 1-DUCT 2-INCH (LF)	671.0222 CONDUIT HDPE DIRECTIONAL BORE 2-DUCT 2-INCH (LF)	671.0300 FIBER OPTIC CABLE MARKER (EACH)	*SPV.0060.002 PULL BOX NON-CONDUCTIVE 24X42-INCH (EACH)	673.0105 COMMUNICATION VALULT TYPE 1 (EACH)	678.0024 INSTALL FIBER OPTIC CABLE OUTDOOR PLANT 24-CT (LF)	678.0400 FIBER OPTIC TERMINATION (EACH)	678.0500 COMMUNICATION SYSTEM TESTING (LS)	652.0700.S INSTALL CONDUIT INTO EXISTING ITEM (EACH)
0010											
	1070-00-72										
	SPARTA SWEF	1600	1300	300	5	4	1	1950	6	1	1
	PROJECT 1070-00-72 TOTAL	1600	1300	300	5	4	1	1950	6	1	1
COMBINED PROJECT TOTAL		**1600**	**1300**	**300**	**5**	**4**	**1**	**1950**	**6**	**1**	**1**

*ADDITIONAL QUANTITIES FOUND IN "LIGHTING PULLBOX ITEMS" TABLE

CONSTRUCTION STAKING

CATEGORY	PROJECT	LOCATION	STATION - STATION	650.4500 CONSTRUCTION STAKING SUBGRADE (LF)	650.5000 CONSTRUCTION STAKING BASE (LF)	650.5500 CONSTRUCTION STAKING CURB & GUTTER (LF)	650.7000 CONSTRUCTION STAKING CONCRETE PAVEMENT (LF)	650.9920 CONSTRUCTION STAKING SLOPE STAKES (LF)	650.9910 CONSTRUCTION STAKING SUPPLEMENTAL CONTROL (LS)	SPV.0105.004 CONSTRUCTION STAKING INITIAL LAYOUT PARKING LOT (LS)	SPV.0105.005 CONSTRUCTION STAKING SUBGRADE PARKING LOT (LS)	SPV.105.006 CONSTRUCTION STAKING CONCRETE PAVEMENT PARKING LOT (LS)
0010												
	1070-00-72											
		RAMP	1203+46 R - 1221+67 R	1,821	—	--	1,821	1,821	—	--	--	—
		RAMP	1221+67 R - 1244+25 R	2,258	—	--	2,258	2,258	—	--	--	—
		RAMP	1244+25 R - 1266+19 R	2,194	—	--	2,194	2,194	—	--	--	—
		SCALE	2221+67 S - 2244+27 S	2,260	—	--	2,260	2,260	—	--	--	—
		PARKING LOT	4226+63 P - 4243+34 P	1,671	—	--	1,671	1,671	—	1	1	1
		LOOP	3226+94 L - 3236+87 L	993	—	--	993	993	—	--	--	—
		EMPLOYEE PARKING LOT	7235+50 E - 7237+69 E	253	220	190	3	253	—	--	--	—
		PROJECT		--	—	--	--	—	1	--	--	—
	PROJECT 1070-00-72 TOTAL			11,450	220	190	11,200	11,450	1	1	1	1
COMBINED PROJECT TOTAL				**11,450**	**220**	**190**	**11,200**	**11,450**	**1**	**1**	**1**	**1**

LIGHTING CONTROL AND CABINET ITEMS

CATEGORY	PROJECT	CABINET #	STATION	R/L	654.0230 CONCRETE CONTROL CABINET BASES TYPE L30 EACH	659.2130 LIGHTING CONTROL CABINETS 120/240 30-INCH EACH	656.0200.001 ELECTRICAL SERVICE METER BREAKER PEDESTAL LS	650.8500.001 CONSTRUCTION STAKING ELECTRICAL INSTALLATIONS (1070-00-72) LS
0020								
	1070-00-72							
		LCB1	1234+17'R'	98.8' RT	1	1	1	1
PROJECT 1070-00-72 TOTAL					**1**	**1**	**1**	**1**

WALKWAY LIGHTING ITEMS

CATEGORY	PROJECT	LIGHT UNIT	STATION	OFFSET	R/L	654.0111 CONCRETE BASES TYPE 11 EACH	659.0700 LIGHTING UNITS WALKWAY EACH	*655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF
0020								
	1070-00-72							
		W1	3230+00L	11.0'	LT	1	1	46.5
		W2	3230+83L	11.0'	LT	1	1	46.5
		W3	3231+67L	11.0'	LT	1	1	46.5
		W4	3232+47L	11.0'	LT	1	1	46.5
		W5	3233+29L	11.0'	LT	1	1	46.5
		W6	1233+93R	53.0'	RT	1	1	46.5
		W7	1234+34R	75.7'	RT	1	1	46.5
		W8	3234+56L	38.6'	LT	1	1	46.5
PROJECT 1070-00-72 TOTAL						**8**	**8**	**372**

*ADDITIONAL QUANTITIES FOUND IN "LIGHTING UNIT ITEMS" TABLE

LIGHTING CONDUIT AND ELECTRICAL WIRE ITEMS

CATEGORY	PROJECT	FROM	-	TO	***652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG LF	655.0630 ELECTRICAL WIRE LIGHTING 4 AWG LF
0020								
	1070-00-72							
		LCB1	-	PB15	10	–	–	140
		LCB1	-	PB15	10	–	–	140
		PB15	-	PB14	85	–	–	505
		PB14	-	SL13	75	–	–	440
		SL13	-	SL12	160	–	–	850
		SL12	-	SL11	180	–	–	950
		SL11	-	PB13	180	–	–	965
		PB13	-	SL10	–	10	–	230
		PB13	-	PB9	170	–	–	930
		PB9	-	SL9	–	10	–	345
		PB9	-	PB8	240	–	–	1,280
		PB8	-	SL8	–	10	–	230
		PB8	-	PB7	325	–	–	1,705
		PB7	-	SL7	–	10	–	230
		PB7	-	PB6	325	–	–	1,705
		PB6	-	SL6	–	10	–	230
		PB6	-	PB5	325	–	–	1,705
		PB5	-	SL5	–	10	–	230
		PB5	-	PB4	325	–	–	1,705
		PB4	-	SL4	–	10	–	230
		PB4	-	PB3	325	–	–	1,705
		PB3	-	SL3	–	10	–	230
		PB3	-	PB2	320	–	–	1,680
		PB2	-	SL2	–	10	–	184
		PB2	-	PB1	350	–	–	1,098
		PB1	-	SL1	–	10	–	69
		PB9	-	PB10	140	–	–	780
		PB10	-	SL22	–	10	–	230
		PB10	-	PB11	130	–	–	730
		PB11	-	SL23	–	10	–	184
		PB11	-	PB12	125	–	–	423
		PB12	-	SL24	–	10	–	69
		PB15	-	PB16	65	–	–	405
		PB16	-	PB17	80	–	–	465
		PB17	-	SL14	–	10	–	230
		PB17	-	PB18	175	–	–	955
		PB18	-	SL15	–	10	–	230
		PB18	-	PB19	180	–	–	980
		PB19	-	SL16	–	10	–	345
		PB19	-	PB23	255	–	–	1,355
		PB23	-	SL17	–	10	–	230
		PB23	-	PB24	310	–	–	1,630
		PB24	-	SL18	–	10	–	230
		PB24	-	PB25	325	–	–	1,705
		PB25	-	SL29	–	10	–	230
		PB25	-	PB26	280	–	–	1,480
		PB26	-	SL20	–	10	–	184
		PB26	-	PB27	350	–	–	1,098
		PB27	-	SL21	–	10	–	69
SUBTOTAL					**5,820**	**210**	**–**	**33,948**

LIGHTING CONDUIT AND ELECTRICAL WIRE ITEMS

CATEGORY	PROJECT	FROM	-	TO	***652.0225 CONDUIT RIGID NONMETALLIC SCHEDULE 40 2-INCH LF	652.0235 CONDUIT RIGID NONMETALLIC SCHEDULE 40 3-INCH LF	655.0620 ELECTRICAL WIRE LIGHTING 8 AWG LF	655.0630 ELECTRICAL WIRE LIGHTING 4 AWG LF
0020								
	1070-00-72							
SUBTOTAL FROM PREVIOUS SHEET					5,820	210	--	33,948
		PB19	-	PB20	135	--	--	755
		PB20	-	SL28	--	10	--	230
		PB20	-	PB21	150	--	--	830
		PB21	-	SL27	--	10	--	184
		PB21	-	PB22	150	--	--	498
		PB22	-	SL26	--	10	--	69
		LCB1	-	PB29	10	--	69	–
		PB29	-	W7	40	--	318	–
		W7	-	W6	60	--	210	–
		W6	-	PB28	65	--	234	–
		PB28	-	W5	80	--	279	–
		W5	-	W4	65	--	225	–
		W4	-	W3	75	--	255	–
		W3	-	W2	100	--	330	–
		W2	-	W1	95	--	315	–
		PB29	-	W8	45	--	174	–
		LCB1	-	PB35	10	--	--	92
		LCB1	-	PB35	10	--	--	92
		PB35	-	PB33	75	--	--	364
		PB35		PB33	75	--	--	364
		PB33	-	PB32	85	--	--	404
		PB32	-	PB31	180	--	--	784
		PB31	-	PB30	175	--	--	764
		PB30	-	HM2	20	--	--	132
		PB33	-	PB34	60	--	--	304
		PB34	-	HM1	10	--	--	92
		PB32	-	STUB	80	--	--	–
PROJECT 1070-00-72 TOTAL					**7,670**	**240**	**2,409**	**39,906**

***ADDITIONAL QUANTITIES FOUND IN "ELECTRIC SERVICE CONNECTION" TABLE

LIGHTING UNIT ITEMS

CATEGORY	PROJECT	LIGHT UNIT	STATION	OFFSET	R/L	654.0106 CONCRETE BASES TYPE 6 EACH	657.0255 TRANSFORMER BASES BREAKAWAY 11 1/2-INCH BOLT CIRCLE EACH	657.0327 POLES TYPE 6 ALUMINUM EACH	657.0715 LUMINAIRE ARMS SINGLE MEMBER 4 1/2-INCH CLAMP 15-FT EACH	659.1120 LUMINAIRES UTILITY LED B EACH	*655.0610 ELECTRICAL WIRE LIGHTING 12 AWG LF
0020											
	1070-00-72										
		SL1	1201+72'EB'	42.0'	RT	1	1	1	1	1	166.5
		SL2	1205+09'R'	18.0'	RT	1	1	1	1	1	166.5
		SL3	1208+19'R'	11.0'	RT	1	1	1	1	1	166.5
		SL4	1211+23'R'	16.0'	RT	1	1	1	1	1	166.5
		SL5	1214+33'R'	16.0'	RT	1	1	1	1	1	166.5
		SL6	1217+54'R'	16.0'	RT	1	1	1	1	1	166.5
		SL7	1220+73'R'	22.0'	RT	1	1	1	1	1	166.5
		SL8	1223+93'R'	33.9'	RT	1	1	1	1	1	166.5
		SL9	4226+88'P'	16.0'	RT	1	1	1	2	2	333.0
		SL10	1227+95'R'	52.5'	RT	1	1	1	1	1	166.5
		SL11	1229+68'R'	30.0'	RT	1	1	1	1	1	166.5
		SL12	1231+43'R'	30.0'	RT	1	1	1	1	1	166.5
		SL13	1232+98'R'	30.0'	RT	1	1	1	1	1	166.5
		SL14	1235+25'R'	42.0'	RT	1	1	1	1	1	166.5
		SL15	1237+05'R'	45.9'	RT	1	1	1	1	1	166.5
		SL16	4242+95'P'	16.0'	RT	1	1	1	1	1	166.5
		SL17	1241+32'R'	33.0'	RT	1	1	1	2	2	333.0
		SL18	1244+32'R'	33.0'	RT	1	1	1	1	1	166.5
		SL19	1247+54'R'	22.0'	RT	1	1	1	1	1	166.5
		SL20	1250+31'R'	19.0'	RT	1	1	1	1	1	166.5
		SL21	1253+77'R'	19.0'	RT	1	1	1	1	1	166.5
		SL22	4228+03'P'	16.0'	RT	1	1	1	1	1	166.5
		SL23	4229+22'P'	16.0'	RT	1	1	1	1	1	166.5
		SL24	4230+46'P'	16.0'	RT	1	1	1	1	1	166.5
		SL25	4239+50'P'	16.0'	RT	1	1	1	1	1	166.5
		SL26	4240+65'P'	16.0'	RT	1	1	1	1	1	166.5
		SL27	4241+80'P'	16.0'	RT	1	1	1	1	1	166.5
PROJECT 1070-00-72 TOTAL						**27**	**27**	**27**	**29**	**29**	**4,829**

*ADDITIONAL QUANTITIES FOUND IN "WALKWAY LIGHTING ITEMS" TABLE

**ADDITIONAL QUANTITIES FOUND IN "HIGH MAST LIGHTING ITEMS" TABLE

HIGH MAST LIGHTING ITEMS

CATEGORY	PROJECT	LIGHT UNIT	STATION	OFFSET	R/L	659.0400 LUMINAIRES HIGH MAST LIGHITNG EACH	660.0100.01 HIGH MAST FOUNDATION LS	660.0100.02 HIGH MAST FOUNDATION LS	660.0200.01 HIGH MAST LIGHTING TOWER LS	660.0200.02 HIGH MAST LIGHTING TOWER LS
0020										
	1070-00-72									
		HM1	3235+51'L'	12.4'	LT	2	1	–	1	–
		HM2	3230+85'L'	87.8'	RT	2	--	1	–	1
PROJECT 1070-00-72 TOTAL						**4**	**1**	**1**	**1**	**1**

LIGHTING PULLBOX ITEMS

CATEGORY	PROJECT	PULLBOX NUMBER	STATION	OFFSET	R/L	SPV.0060.002 PULL BOX NON-CONDUCTIVE 24X42-INCH EACH
0020						
	1070-00-72					
		PB1	1201+72'EB'	42.0'	RT	1
		PB2	1205+09'R'	24.0'	RT	1
		PB3	1208+19'R'	17.0'	RT	1
		PB4	1211+23'R'	22.0'	RT	1
		PB5	1214+33'R'	22.0'	RT	1
		PB6	1217+54'R'	22.0'	RT	1
		PB7	1220+73'R'	22.0'	RT	1
		PB8	1223+93'R'	39.9	RT	1
		PB9	4226+93'P'	19.0'	RT	1
		PB10	4228+03'P'	22.0'	RT	1
		PB11	4229+22'P'	22.0'	RT	1
		PB12	4230+46'P'	22.0'	RT	1
		PB13	1227+95'R'	58.5'	RT	1
		PB14	1233+68'R'	29.0'	RT	1
		PB15	1234+21'R'	90.2'	RT	1
		PB16	1234+49'R'	42.2'	RT	1
		PB17	1235+25'R'	48.0'	RT	1
		PB18	1237+05'R'	51.9'	RT	1
		PB19	4243+80'P'	18.4'	RT	1
		PB20	4241+80'P'	22.0'	RT	1
		PB21	4240+65'P'	22.0'	RT	1
		PB22	4239+50'P'	22.0'	RT	1
		PB23	1241+32'R'	39.0'	RT	1
		PB24	1244+32'R'	39.0'	RT	1
		PB25	1247+54'R'	28.0'	RT	1
		PB26	1250+31'R'	25.0'	RT	1
		PB27	1253+77'R'	25.0'	RT	1
		PB28	1233+32'R'	29.0'	RT	1
		PB29	1234+26'R'	99.4'	RT	1
		PB30	3230+99'L'	80.7'	RT	1
		PB31	3232+96'L'	72.9'	RT	1
		PB32	3234+74'L'	73.1'	RT	1
		PB33	3234+85'L'	6.0'	LT	1
		PB34	3235+42'L'	7.9'	LT	1
		PB35	1234+22'R'	106.5'	RT	1
PROJECT 1070-00-72 TOTAL						**35**

TRANSPORTATION PROJECT PLAT NO: 1070-00-22 - 4.01

PART OF THE NE¼ - NE¼, THE SW¼ - NE¼ AND THE SE¼ - NE¼ OF SECTION 32, T 17 N, R 4 W, TOWN OF SRARTA, MONROE COUNTY, WISCONSIN.

RELOCATION ORDER INTERSTATE 90 LACROSSE - TOMAH ROAD
(SPARTA SAFETY & WEIGHT FACILITY)

DOCUMENT #_____

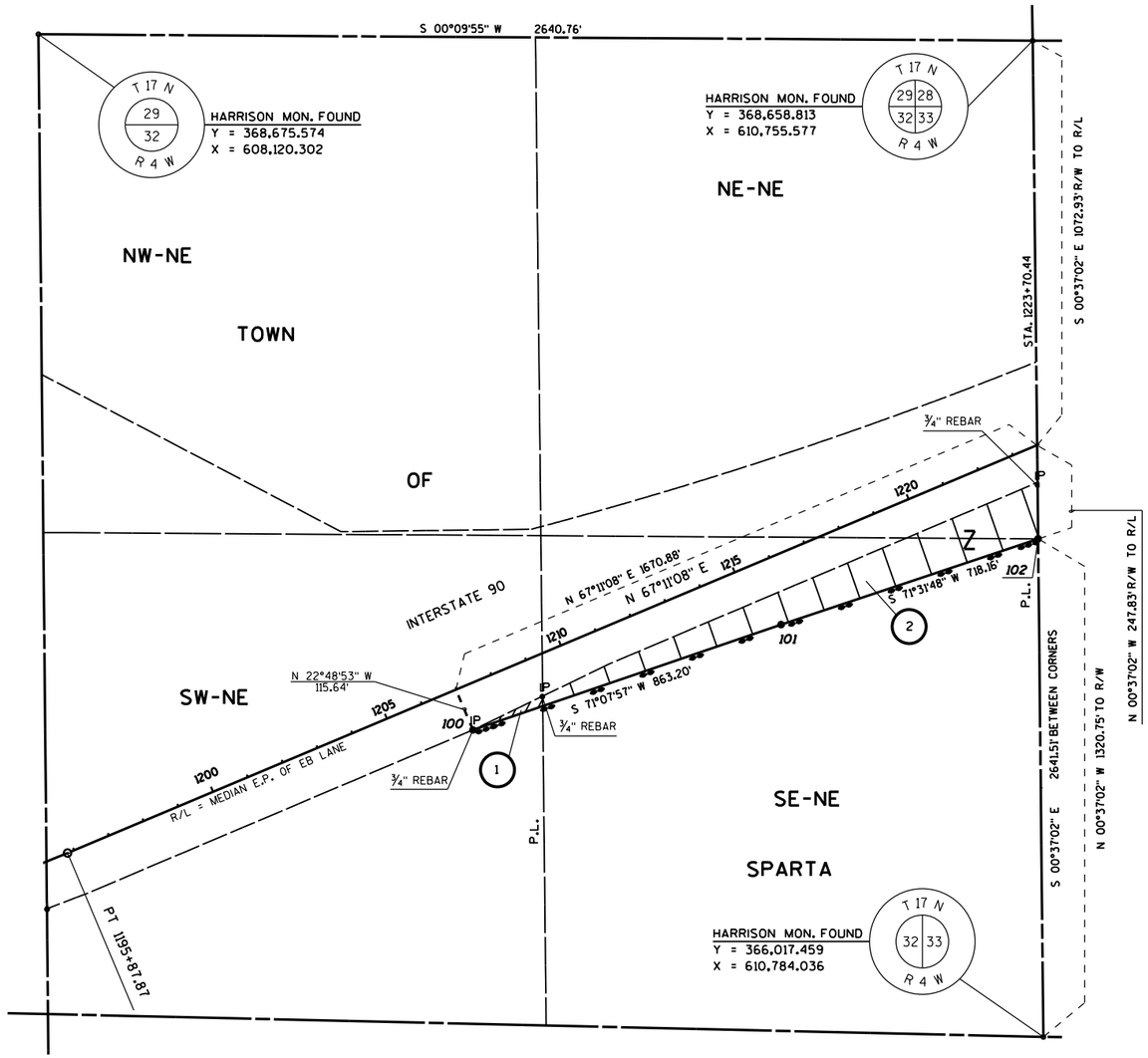
ACCEPTED FOR RECORDING
IN THE OFFICE OF
THE REGISTER OF DEEDS IN
MONROE COUNTY, WISCONSIN AT
__:__ _M ON _____, 2012
AND FILED IN MAP FILE_____

_____
SIGNATURE OF REGISTER OF DEEDS

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 1070-00-22-4.01

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3) AND 84.09, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.



STATION & OFFSET TABLE

Point Number	Station	Offset
100	1206+99.56	115.64'
101	1215+60.72	175.10'
102	1222+76.82	229.46'

CONVENTIONAL ABBREVIATIONS

ACCESS POINT, DRIVEWAY CONNECTION	AP	REFERENCE LINE	R/L
ACCESS RIGHTS	AR	RELEASE OF RIGHTS	ROR
ACRES	AC.	REMAINING	REM.
AND OTHERS	ET.AL.	RIGHT-OF-WAY	R/W
CENTERLINE	C/L	SECTION	SEC.
CERTIFIED SURVEY MAP	CSM	STATION	STA.
CORNER	COR.	TEMPORARY LIMITED EASEMENT	TLE
DOCUMENT	DOC.	VOLUME	V.
EASEMENT	EASE.		
HIGHWAY EASEMENT	H.E.		
LAND CONTRACT	LC		
MONUMENT	MON.		
PAGE	P.		
PERMANENT LIMITED EASEMENT	PLE		
PROPERTY LINE	P.L.		
RECORDED AS	(100')		

CURVE DATA

LONG CHORD	LCH
LONG CHORD BEARING	LCB
RADIUS	R
DEGREE OF CURVE	D
CENTRAL ANGLE OR DELTA	DELTA
LENGTH OF CURVE	L
TANGENT	TAN

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	LP (1" UNLESS NOTED)	PROPOSED R/W LINE
		EXISTING H.E. LINE
R/W MONUMENT	●(SET)	PROPERTY LINE
R/W STANDARD	▲(SET)	LOT & TIE LINES
SIGN	SIGN	SLOPE INTERCEPTS
SECTION CORNER MONUMENT		CORPORATE LIMITS
SECTION CORNER SYMBOL		ACCESS RESTRICTED (BY PREVIOUS ACQUISITION/CONTROL)
FEE (HATCH VARIES)		ACCESS CONTROLLED BY PARCEL ACQUISTION
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)
PERMANENT LIMITED EASEMENT		SECTION LINE
R/W BOUNDARY POINT		QUARTER LINE
PARCEL NUMBER	PRW20	SIXTEENTH LINE
UTILITY PARCEL NUMBER	102	EXISTING CENTERLINE
SIGN NUMBER (OFF PREMISE)	92	PROPOSED REFERENCE LINE
BUILDING	21	PARALLEL OFFSET

N

CONVENTIONAL UTILITY SYMBOLS

	NON COMPENSABLE	COMPENSABLE
WATER	W	
GAS	G	
TELEPHONE	T	
OVERHEAD TRANSMISSION LINES	OH	
ELECTRIC	E	
CABLE TELEVISION	TV	
FIBER OPTIC	FO	
SANITARY SEWER	SAN	
STORM SEWER	SS	
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		
ELECTRIC TOWER		

SCALE, FEET
0 200 400

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, MONROE COUNTY, NAD 83(2007) IN U.S.SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

RIGHT-OF-WAY MONUMENTS ARE ¾" X 24" REBAR AND WILL BE PLACED PRIOR TO THE COMPLETION OF THE PROJECT.

RIGHT-OF-WAY BOUNDARIES ARE DEFINED WITH COURSES OF THE PERIMETER OF THE HIGHWAY LANDS REFERENCED TO THE U.S. PUBLIC LAND SURVEY OR OTHER SURVEYS OF RECORD. PROPERTY LINES SHOWN ON THIS PLAT ARE DRAWN FROM DATA DERIVED FROM MAPS AND DOCUMENTS OF PUBLIC RECORD AND/OR EXISTING OCCUPATIONAL LINES. THIS PLAT MAY NOT BE A TRUE REPRESENTATION OF EXISTING PROPERTY LINES, EXCLUDING RIGHT-OF-WAY LINES, AND SHOULD NOT BE USED AS A SUBSTITUTE FOR AN ACCURATE FIELD SURVEY.

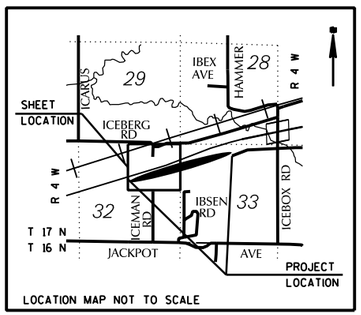
DIMENSIONING FOR THE NEW R/W IS MEASURED ALONG AND PERPENDICULAR TO THE NEW REFERENCE LINES. FOR THE LATEST ACCESS/DRIVEWAY INFORMATION, CONTACT THE PLANNING UNIT OF THE WISCONSIN DEPARTMENT OF TRANSPORTATION OFFICE IN LACROSSE.

ALL RIGHT-OF-WAY LINES DEPICTED IN NON ACQUISITION AREAS ARE INTENDED TO RE-ESTABLISH EXISTING RIGHT-OF-WAY LINES AS DETERMINED FROM PREVIOUS PROJECTS, OTHER DOCUMENTS, OR FROM CENTERLINE OF EXISTING PAVEMENTS.

EXISTING HIGHWAY RIGHT-OF-WAY HEREIN IS BASED ON THE FOLLOWING POINT OF REFERENCE:

EXISTING HIGHWAY RIGHT-OF-WAY FOR INTERSTATE 90 IS ESTABLISHED FROM PREVIOUS PROJECT 190-1(4) 20.

EXISTING ACCESS CONTROL FOR INTERSTATE 90 IS ESTABLISHED FROM PREVIOUS PROJECT 190-1(4) 20.



SCHEDULE OF LANDS & INTERESTS REQUIRED

OWNERS NAMES ARE SHOWN FOR REFERENCE PURPOSES ONLY, AND ARE SUBJECT TO CHANGE PRIOR TO TRANSFER OF LAND INTEREST TO D.O.T. ALL AREAS SHOWN IN ACRES UNLESS OTHERWISE NOTED.

PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES REQUIRED NEW	EXISTING	TOTAL	TLE ACRES
1	MATTHEW S. OLSON	FEE	0.06	----	0.06	----
2	JEAN M. WILLINGER	FEE	2.75	----	2.75	----

KL Engineering
[A] Better Experience

I, THOMAS J. HANSEN, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 1070-00-22-4.01 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

WISCONSIN THOMAS J. HANSEN S-2033 MADISON, WISCONSIN LAND SURVEYOR

Thomas J. Hansen AUGUST 12, 2013
THOMAS J. HANSEN DATE
AGENT FOR KL ENGINEERING, INC.
R.L.S. NUMBER 2033

THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

JAMES R. KUEHN DATE

4. 01

FILE NAME : G:\WDOTCO\WDCO12014\tpp\1070_00_22_401.dgn PLOT DATE : 7/11/2014 PLOT BY : KL Engineering PLOT NAME : PLOT SCALE :

TRANSPORTATION PROJECT PLAT NO: 1070-00-22 - 4.02

PART OF THE NW¼ - NW¼, THE SW¼ - NW¼ AND THE NE¼ - NW¼ OF SECTION 33, T 17 N, R 4 W, TOWN OF SRARTA, MONROE COUNTY, WISCONSIN.

RELOCATION ORDER INTERSTATE 90 LACROSSE - TOMAH ROAD
(SPARTA SAFETY & WEIGHT FACILITY)

DOCUMENT #----------

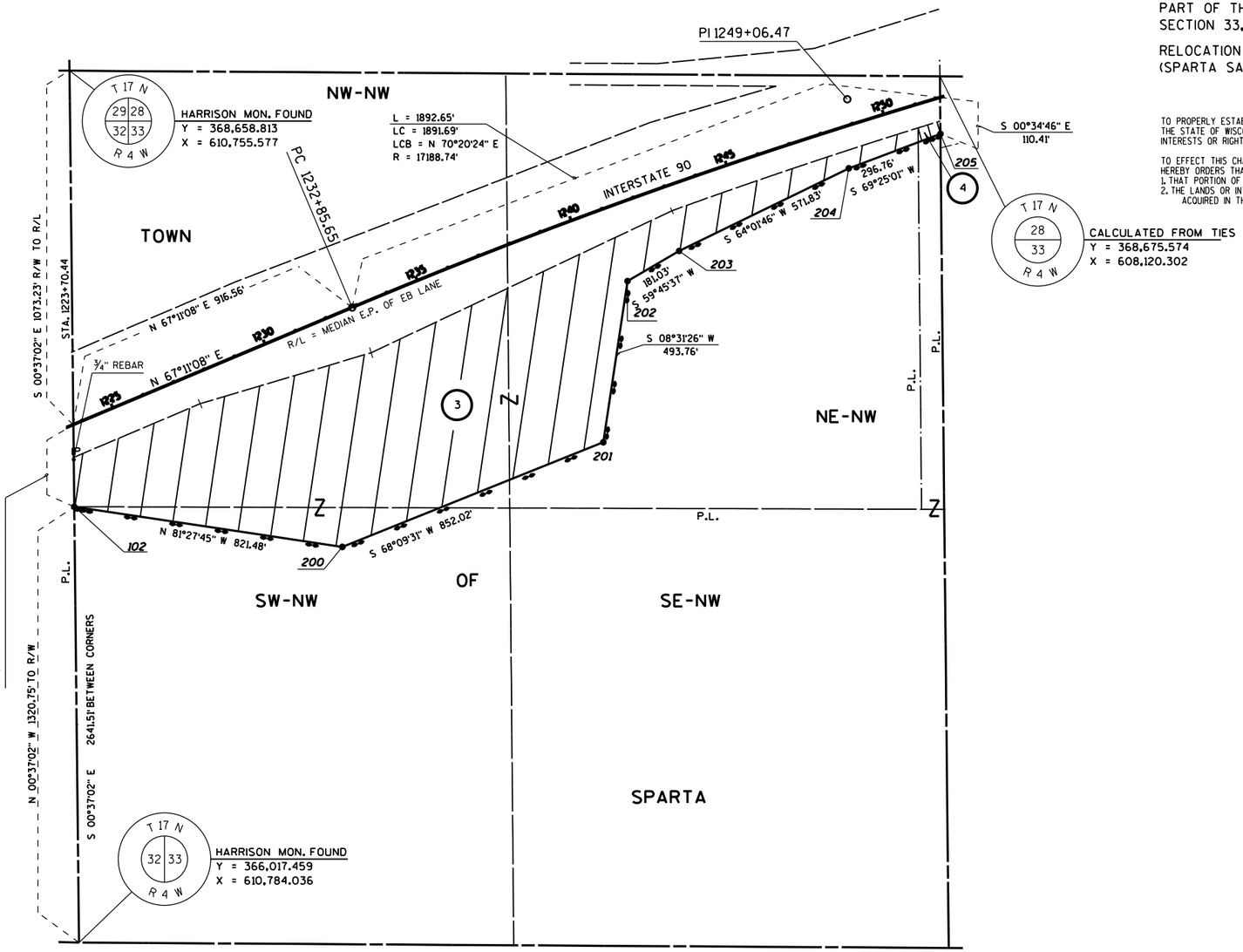
ACCEPTED FOR RECORDING
IN THE OFFICE OF
THE REGISTER OF DEEDS IN
MONROE COUNTY, WISCONSIN AT
__:__ _M ON _____, 2012
AND FILED IN MAP FILE----------

SIGNATURE OF REGISTER OF DEEDS

RESERVED FOR REGISTER OF DEEDS
PROJECT NUMBER 1070-00-22-4.02

TO PROPERLY ESTABLISH, LAY OUT, WIDEN, ENLARGE, EXTEND, CONSTRUCT, RECONSTRUCT, IMPROVE, OR MAINTAIN A PORTION OF THE HIGHWAY DESIGNATED ABOVE, THE STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION DEEMS IT NECESSARY TO RELOCATE OR CHANGE SAID HIGHWAY AND ACQUIRE CERTAIN LANDS AND INTERESTS OR RIGHTS IN LANDS FOR THE ABOVE PROJECT.

TO EFFECT THIS CHANGE, PURSUANT TO AUTHORITY GRANTED UNDER SECTION 84.02 (3) AND 84.09, WISCONSIN STATUTES, THE DEPARTMENT OF TRANSPORTATION HEREBY ORDERS THAT:
1. THAT PORTION OF SAID HIGHWAY AS SHOWN ON THIS PLAT IS LAID OUT AND ESTABLISHED TO THE LINES AND WIDTHS AS SO SHOWN FOR THE ABOVE PROJECT.
2. THE LANDS OR INTERESTS OR RIGHTS IN LANDS AS SHOWN ON THIS PLAT ARE REQUIRED BY THE DEPARTMENT FOR THE ABOVE PROJECT AND SHALL BE ACQUIRED IN THE NAME OF THE STATE OF WISCONSIN, PURSUANT TO THE PROVISIONS OF SECTION 84.09 (1) OR (2), WISCONSIN STATUTES.



STATION & OFFSET TABLE

Point Number	Station	Offset
102	1222+76.82	229.46'
200	1229+78.35	656.87'
201	1238+52.12	662.41'
202	1240+98.23	230.73'
203	1242+78.52	197.96'
204	1248+50.95	124.15'
205	1251+49.17	106.14'

CONVENTIONAL ABBREVIATIONS

ACCESS POINT/ DRIVEWAY CONNECTION	AP	REFERENCE LINE	R/L
ACCESS RIGHTS	AR	RELEASE OF RIGHTS	ROR
ACRES	AC.	REMAINING	REM.
AND OTHERS	ET.AL.	RIGHT-OF-WAY	R/W
CENTERLINE	C/L	SECTION	SEC.
CERTIFIED SURVEY MAP	CSM	STATION	STA.
CORNER	COR.	TEMPORARY LIMITED EASEMENT	TLE
DOCUMENT	DOC.	VOLUME	V.
EASEMENT	EASE.	**CURVE DATA**	
HIGHWAY EASEMENT	H.E.	LONG CHORD	LCH
LAND CONTRACT	LC	LONG CHORD BEARING	LCB
MONUMENT	MON.	RADIUS	R
PAGE	P.	DEGREE OF CURVE	D
PERMANENT LIMITED EASEMENT	PLE	CENTRAL ANGLE OR DELTA	DELTA
PROPERTY LINE	P.L.	LENGTH OF CURVE	L
RECORDED AS	(100')	TANGENT	TAN

CONVENTIONAL SYMBOLS

FOUND IRON PIPE/PIN	⌀ (1" UNLESS NOTED)	PROPOSED R/W LINE	
		EXISTING H.E. LINE	
R/W MONUMENT	● =(SET)	PROPERTY LINE	
R/W STANDARD	▲ =(SET)	LOT & TIE LINES	
SIGN	SIGN	SLOPE INTERCEPTS	
SECTION CORNER MONUMENT	◉	CORPORATE LIMITS	
SECTION CORNER SYMBOL		ACCESS RESTRICTED (BY PREVIOUS ACQUISITION/CONTROL)	
FEE (HATCH VARIES)		ACCESS CONTROLLED BY PARCEL ACQUISTION	
TEMPORARY LIMITED EASEMENT		NO ACCESS (BY STATUTORY AUTHORITY)	
PERMANENT LIMITED EASEMENT		SECTION LINE	
R/W BOUNDARY POINT		QUARTER LINE	
PARCEL NUMBER	PRW20	SIXTEENTH LINE	
UTILITY PARCEL NUMBER	102	EXISTING CENTERLINE	
SIGN NUMBER (OFF PREMISE)	92	PROPOSED REFERENCE LINE	
BUILDING	21-1	PARALLEL OFFSET	

CONVENTIONAL UTILITY SYMBOLS

	NON COMPENSABLE	COMPENSABLE
WATER	W	
GAS	G	
TELEPHONE	T	
OVERHEAD TRANSMISSION LINES	OH	
ELECTRIC	E	
CABLE TELEVISION	TV	
FIBER OPTIC	FO	
SANITARY SEWER	SAN	
STORM SEWER	SS	
POWER POLE		
TELEPHONE POLE		
TELEPHONE PEDESTAL		
ELECTRIC TOWER		

N

SCALE, FEET
0 200 400

NOTES:

POSITIONS SHOWN ON THIS PLAT ARE WISCONSIN COUNTY COORDINATES, MONROE COUNTY, NAD 83(2007) IN U.S.SURVEY FEET. VALUES SHOWN ARE GRID COORDINATES, GRID BEARINGS AND GRID DISTANCES. GRID DISTANCES MAY BE USED AS GROUND DISTANCES.

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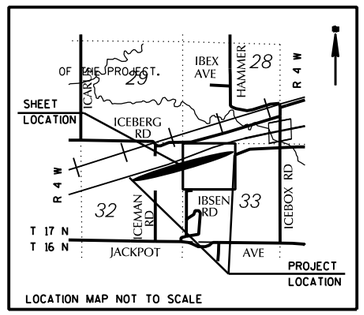
EXISTING ACCESS CONTROL FOR INTERSTATE 90 IS ESTABLISHED FROM PREVIOUS PROJECT 190-1(4) 20.



LOCATION MAP NOT TO SCALE

P.I. = 1249+06.47
Y = 368,569.817
X = 613,106.007
DELTA = 10° 46' 25" (RT)
D = 00° 20' 00"
T = 1620.82
L = 3232.09'
R = 17188.74'
P.C. = 1232+85.65
P.T. = 1265+17.74
AH. TAN = N 77° 57' 33" E

SCHEDULE OF LANDS & INTERESTS REQUIRED

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PARCEL NUMBER	OWNER(S)	INTEREST REQUIRED	R/W ACRES REQUIRED NEW	EXISTING	TOTAL	TLE ACRES
3	BRADLEY VAN KIRK	FEE	19.43	----	19.43	----
4	RONALD L. & MARY K. HANSON	FEE	0.04	----	0.04	----

KL Engineering
[A] Better Experience

I, THOMAS J. HANSEN, REGISTERED LAND SURVEYOR, HEREBY CERTIFY THAT IN FULL COMPLIANCE WITH THE PROVISIONS OF SECTION 84.095 OF THE WISCONSIN STATUTES AND UNDER THE DIRECTION OF THE DEPARTMENT, I HAVE SURVEYED AND MAPPED TRANSPORTATION PROJECT PLAT 1070-00-22-4.02 AND THAT SUCH PLAT CORRECTLY REPRESENTS ALL EXTERIOR BOUNDARIES OF THE SURVEYED LAND.

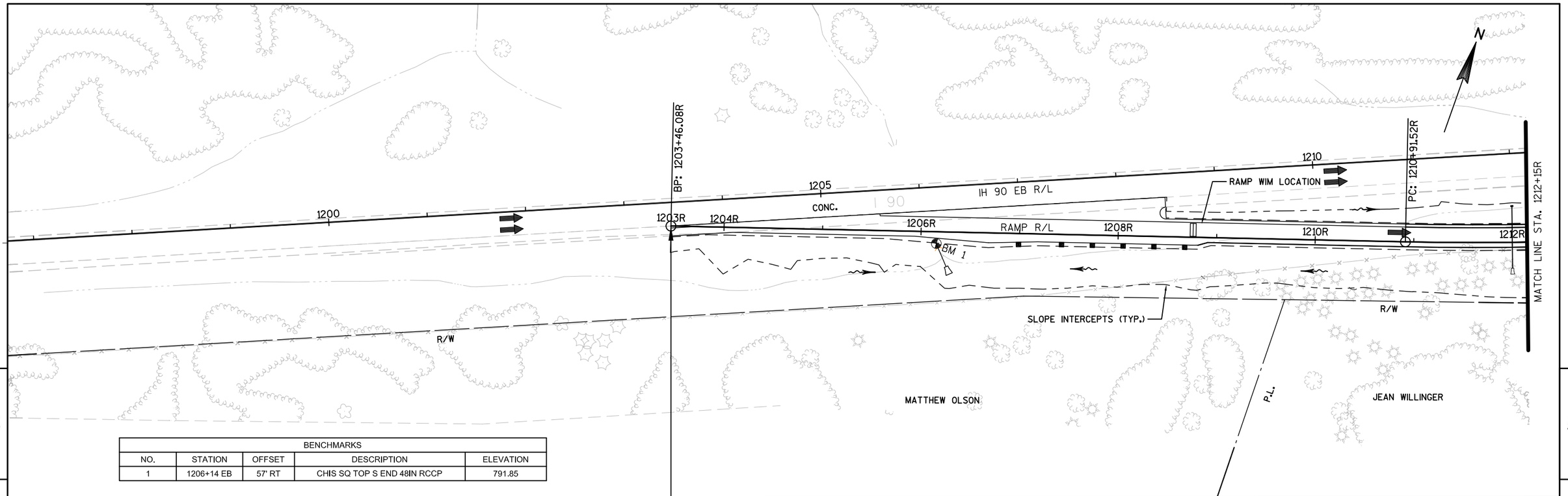
WISCONSIN THOMAS J. HANSEN S-2033 MADISON, WISCONSIN LAND SURVEYOR

AUGUST 12, 2013
THOMAS J. HANSEN — DATE
AGENT FOR KL ENGINEERING, INC.
R.L.S. NUMBER 2033

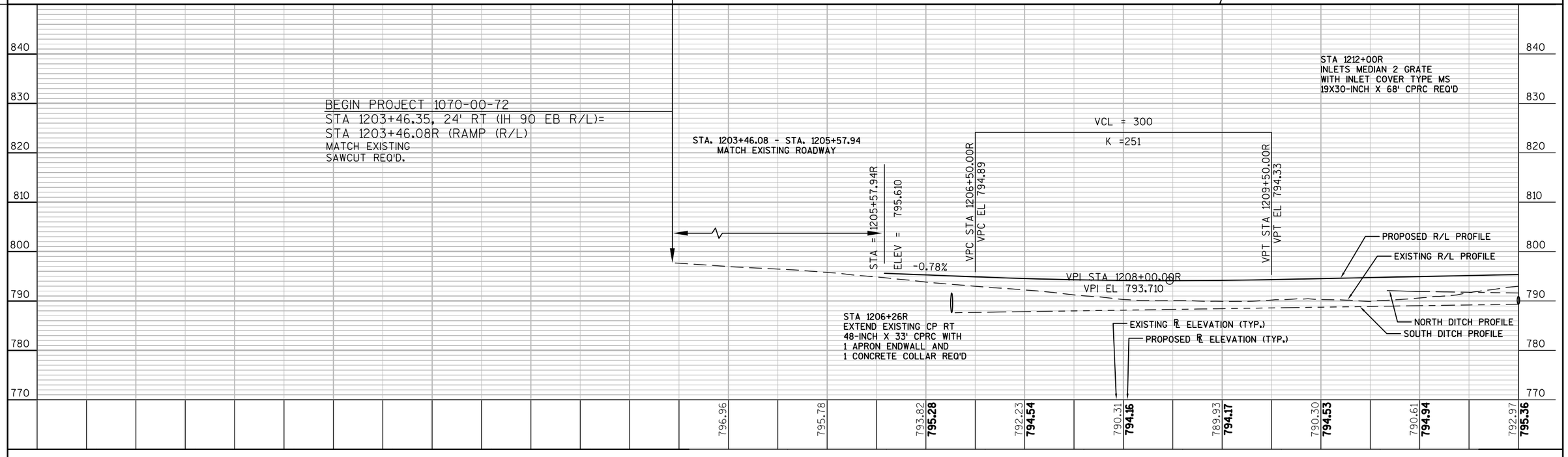
THIS PLAT AND RELOCATION ORDER ARE APPROVED FOR THE WISCONSIN DEPARTMENT OF TRANSPORTATION.

JAMES R. KUEHN

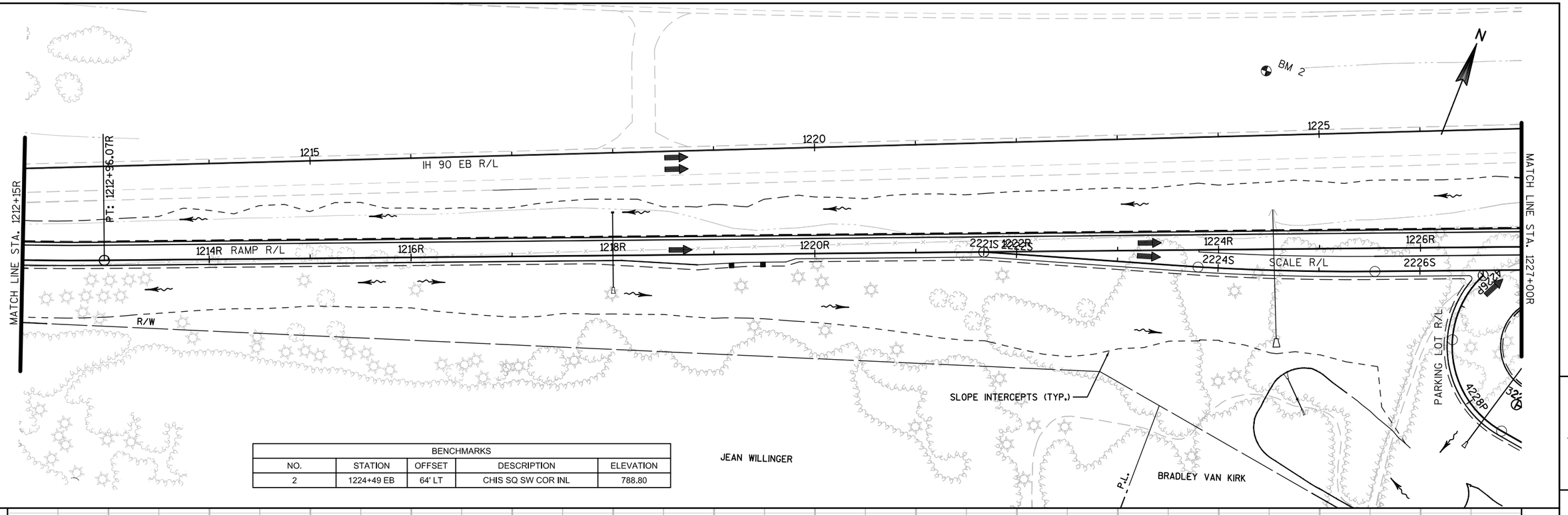
FILE NAME : G:\WDOTCO\WDCO12014\tpp\1070_00_22_402.dgn PLOT DATE : 7/11/2014 PLOT BY : KL Engineering PLOT NAME : PLOT SCALE :



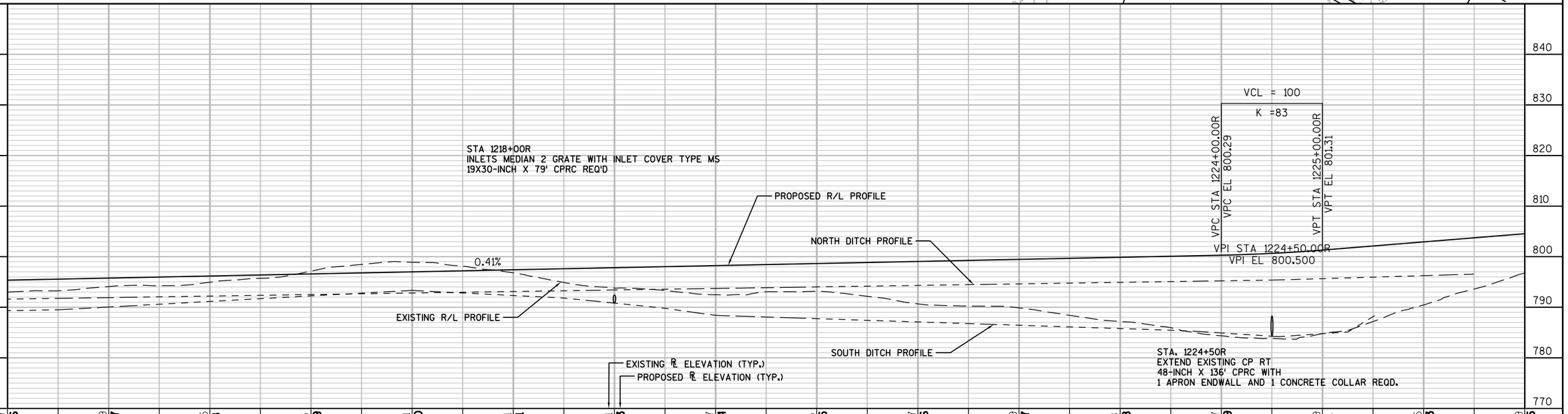
BENCHMARKS				
NO.	STATION	OFFSET	DESCRIPTION	ELEVATION
1	1206+14 EB	57' RT	CHIS SQ TOP S END 48IN RCCP	791.85



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN AND PROFILE: RAMP R/L (SPARTA SWEF #54)	SHEET 326 - E



BENCHMARKS				
NO.	STATION	OFFSET	DESCRIPTION	ELEVATION
2	1224+49 EB	64' LT	CHIS SQ SW COR INL	788.80

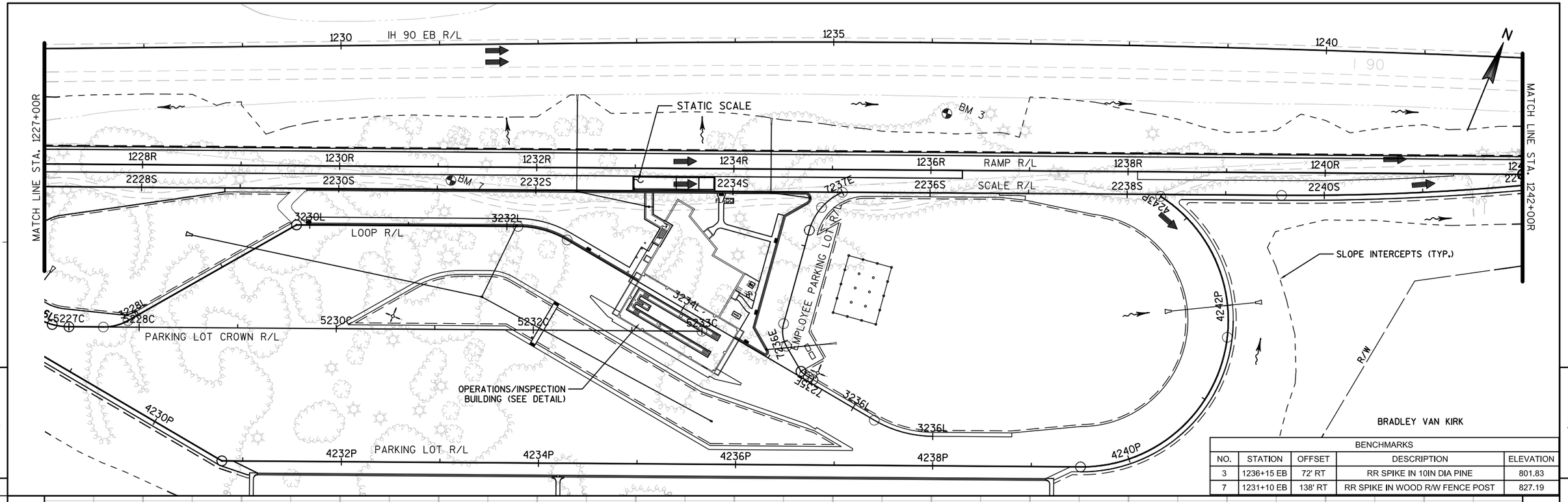


792.97	794.09	794.95	797.15	798.91	796.81	793.81	792.47	793.16	790.67	789.89	787.18	784.37	784.79	790.45	796.79
795.36	**795.77**	**796.18**	**796.59**	**797.00**	**797.41**	**797.83**	**798.24**	**798.65**	**799.06**	**799.47**	**799.88**	**800.29**	**801.31**	**802.93**	**804.55**
1212+00R	1213+00R	1214+00R	1215+00R	1216+00R	1217+00R	1218+00R	1219+00R	1220+00R	1221+00R	1222+00R	1223+00R	1224+00R	1225+00R	1226+00R	1227+00R

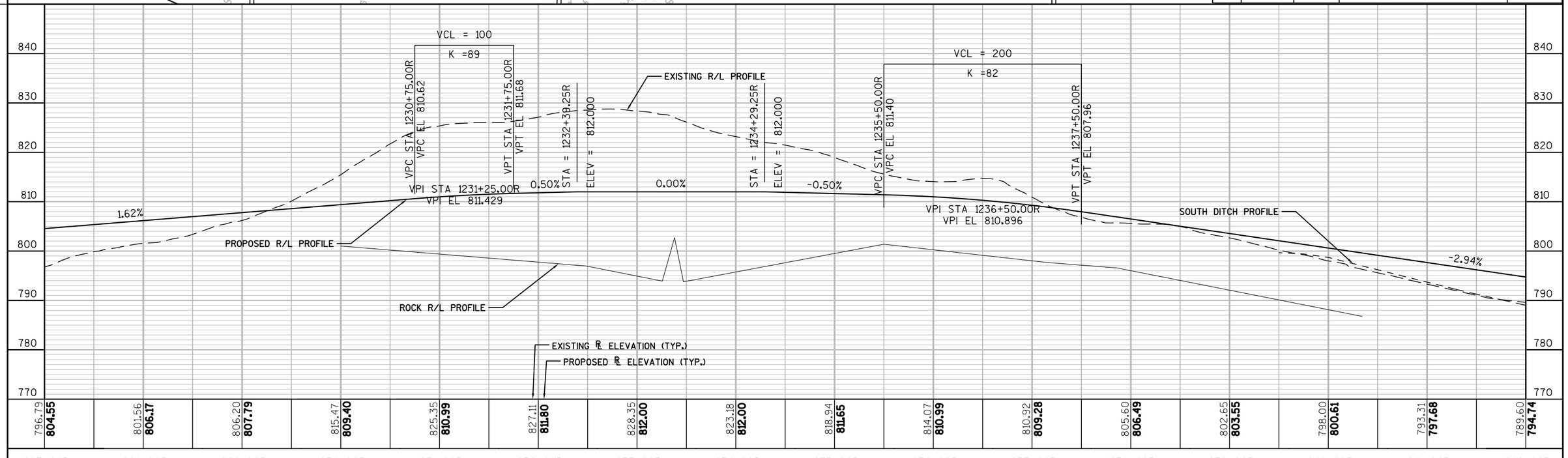
PROJECT NO:1070-00-72	HWY: IH 90	COUNTY:MONROE	PLAN AND PROFILE: RAMP R/L (SPARTA SWEF #54)	SHEET 327 - E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\PLAN AND PROFILE\050101_PP (RAMP).DWG PLOT DATE : 5/9/2016 PLOT BY : KL ENGINEERING PLOT NAME : _____ PLOT SCALE : 1:100_XREF

WISDOT/CADDS SHEET 44

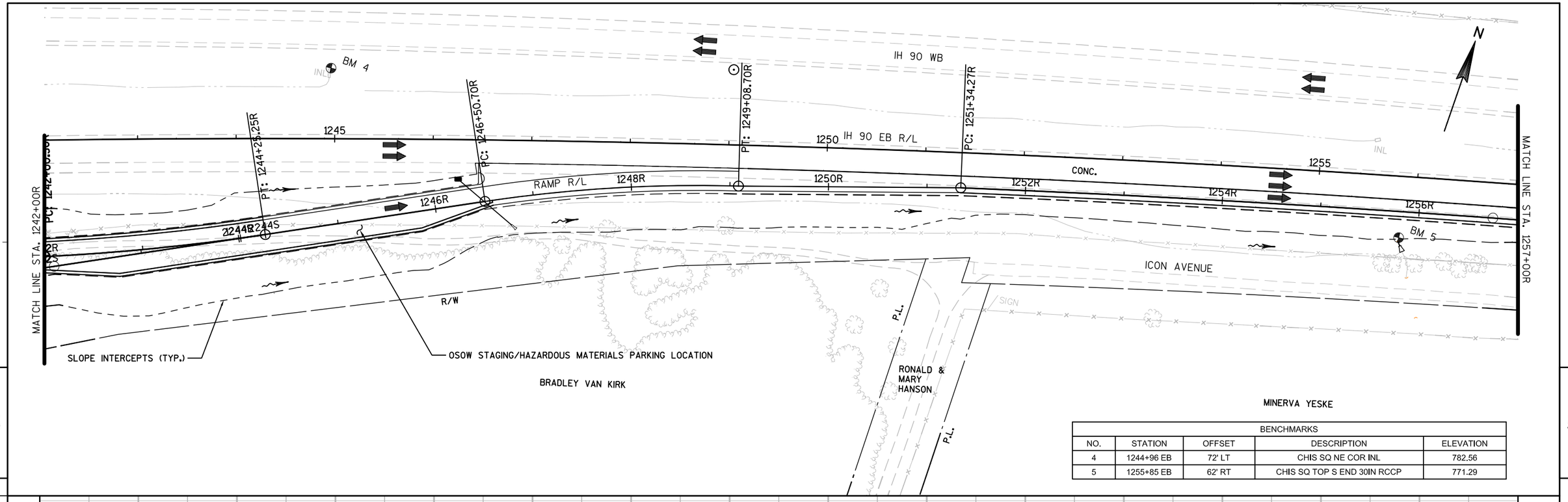


BENCHMARKS				
NO.	STATION	OFFSET	DESCRIPTION	ELEVATION
3	1236+15 EB	72' RT	RR SPIKE IN 10IN DIA PINE	801.83
7	1231+10 EB	138' RT	RR SPIKE IN WOOD R/W FENCE POST	827.19

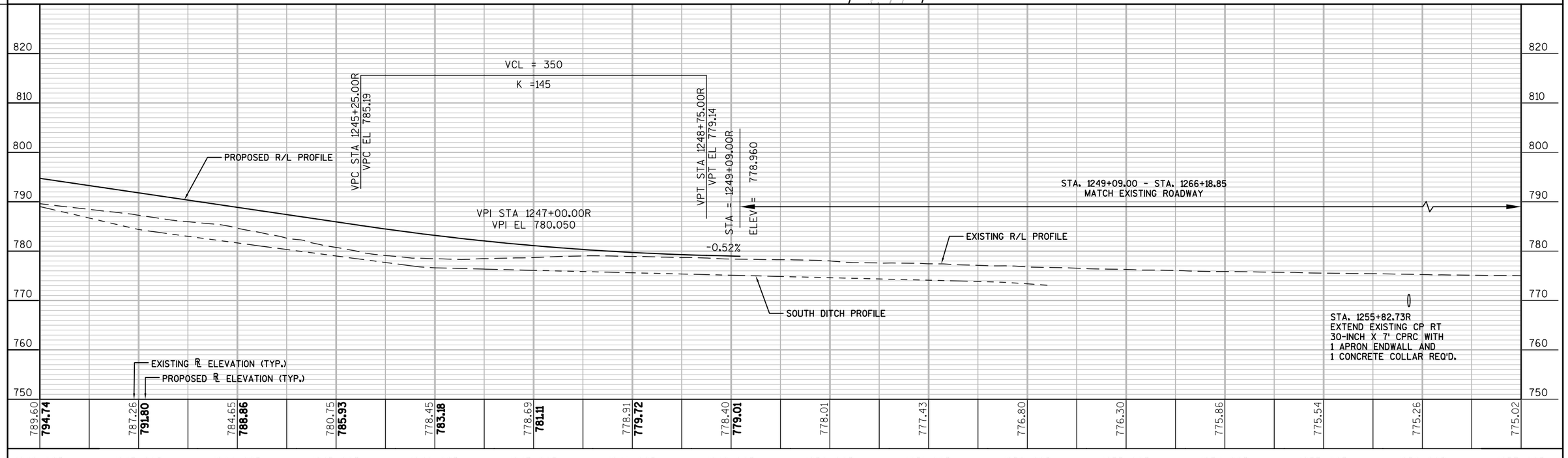


796.79	**804.55**	801.56	**806.17**	806.20	**807.79**	815.47	**809.40**	825.35	**810.99**	827.11	**811.80**	828.35	**812.00**	823.18	**812.00**	818.94	**811.65**
814.07	**810.99**	810.92	**809.28**	805.60	**806.49**	802.65	**803.55**	798.00	**800.61**	793.31	**797.68**	789.60	**794.74**			
1227+00R	1228+00R	1229+00R	1230+00R	1231+00R	1232+00R	1233+00R	1234+00R	1235+00R	1236+00R	1237+00R	1238+00R	1239+00R	1240+00R	1241+00R	1242+00R	

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN AND PROFILE: RAMP R/L (SPARTA SWEF #54)	SHEET 328 - E

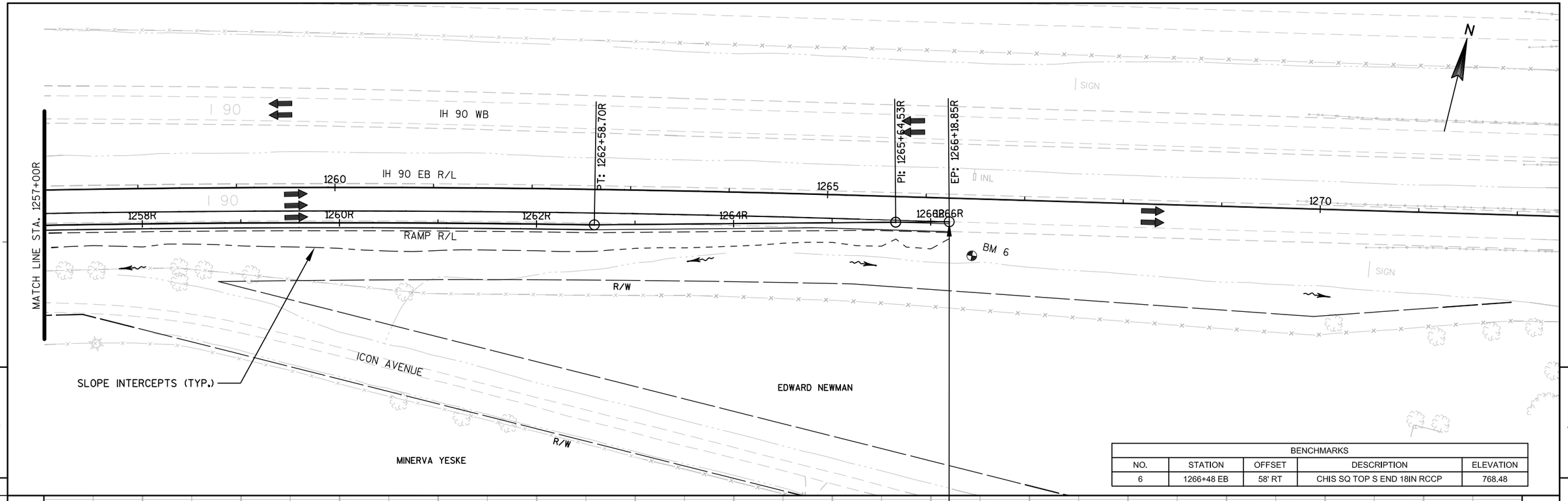


BENCHMARKS				
NO.	STATION	OFFSET	DESCRIPTION	ELEVATION
4	1244+96 EB	72' LT	CHIS SQ NE COR INL	782.56
5	1255+85 EB	62' RT	CHIS SQ TOP S END 30IN RCCP	771.29

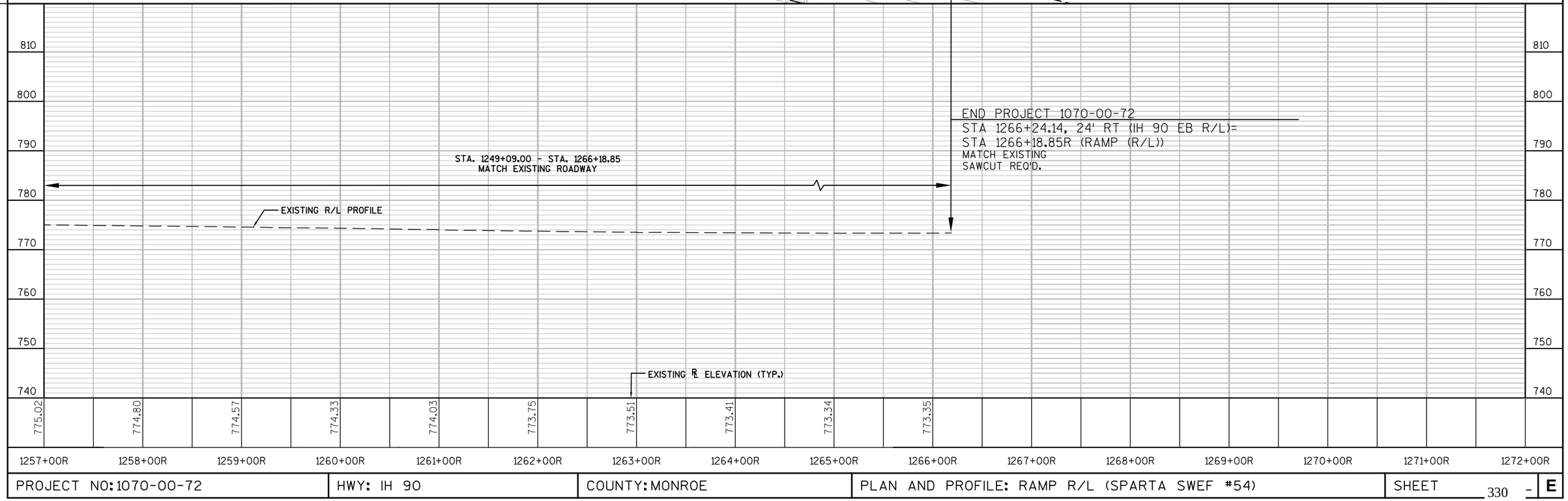


PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN AND PROFILE: RAMP R/L (SPARTA SWEF #54)	SHEET 329 - E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\PLAN AND PROFILE\050101_PP (RAMP).DWG PLOT DATE : 5/9/2016 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:100_XREF



BENCHMARKS				
NO.	STATION	OFFSET	DESCRIPTION	ELEVATION
6	1266+48 EB	58' RT	CHIS SQ TOP S END 18IN RCCP	768.48



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	PLAN AND PROFILE: RAMP R/L (SPARTA SWEF #54)	SHEET 330 - E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\PLAN AND PROFILE\050101_PP (RAMP).DWG PLOT DATE : 5/9/2016 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : 1:100_XREF

Standard Detail Drawing List

08A05-19A	INLET COVERS TYPE A, H, A-S, H-S & Z
08A05-19B	INLET COVERS TYPE B, B-A, C, MS, MS-A, & WM
08B09-01	MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER
08C07-01	INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT
08C08-01	INLETS MEDIAN 1 AND 2 GRATE
08D01-18	CONCRETE CURB, CONCRETE CURB AND GUTTER AND TIES
08D04-05	CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES
08D05-16A	CURB RAMPS TYPES 1 AND 1-A
08D05-16B	CURB RAMPS TYPES 2 AND 3
08D05-16C	CURB RAMPS TYPES 4A AND 4A1
08D05-16D	CURB RAMPS TYPE 4B AND 4B1
08D05-16E	CURB RAMPS TYPES 5, 6, 7A, 7B & 8
08E08-03	TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS
08E09-06	SILT FENCE
08E10-02	INLET PROTECTION TYPE A, B, C AND D
08E14-01	TRACKING PAD
08F01-11	APRON ENDWALLS FOR CULVERT PIPE
08F02-01	APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE
08F04-07	JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL
09B02-09	CONDUIT
09C02-07	CONCRETE BASES, TYPES 1, 2, 5, & 6
09C03-04	TRANSFORMER/PEDESTAL BASES
09C14-02	CONCRETE CONTROL CABINET BASE, TYPE L
09D01-05	CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)
09D02-03	SIGNAL CONTROL CABINET
09D05-01	L30 LIGHTING CONTROL CABINET 240/480 VOLT
09E01-14E	POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 6 (35 FEET)
09E01-14G	HARDWARE DETAILS FOR POLE MOUNTINGS
09E02-04	FREEWAY LIGHTING UNIT POLE WIRING
09E04-06	WALKWAY LIGHTING UNIT AND CONCRETE BASE, TYPE 11
09F04-04	LOOP DETECTOR INSTALLED IN NEW CONCRETE PAVEMENT ROUND CSCP PULLBOX
09F05-04	LOOP DETECTOR INSTALLED IN NEW CONCRETE PAVEMENT ROUND CSCP PULLBOX (MULTIPLE LEAD-OUT)
09F09-04	LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW CONCRETE PAVEMENT)
09F14-03	LOOP DETECTOR INSTALLED IN NEW CONCRETE PAVEMENT ROUND CSCP PULL BOX 45 DEGREE ELBOWS TO PULL BOX
09F15-04A	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)
09F15-04B	LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
09F16-02	LOOP DETECTOR INSTALLED IN NEW CONCRETE PAVEMENT ROUND CSCP PULL BOX 45 DEGREE ELBOWS TO PULL BOX
09G02-03A	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-03B	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09G02-03C	BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION
09H09-01	COMMUNICATION VAULT
10A01-03	ELECTRICAL HANDHOLE WIRING
10A02-02	IDENTIFICATION PLAQUES LIGHT POLES
10A04-03	IDENTIFICATION PLAQUES UNDERDECK AND HIGH MAST LIGHTING
10A14-02A	ELECTRICAL DETAILS HIGH MAST LIGHTING
10A14-02B	ELECTRICAL DETAILS HIGH MAST LIGHTING
12A04-03	STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES & OVERHEAD SIGN SUPPORTS & TRAFFIC SIGNALS
13A05-05A	SHOULDER RUMBLE STRIP, MILLING
13A05-05B	SHOULDER RUMBLE STRIP, MILLING
13C01-18	CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES
13C09-13A	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-13B	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C09-13C	CONCRETE PAVEMENT REPAIR AND REPLACEMENT
13C11-11A	RURAL DOWELED CONCRETE PAVEMENT
13C11-11B	RURAL DOWELED CONCRETE PAVEMENT
13C17-01A	CONCRETE JOINT DETAIL FOR EXIT RAMP TERMINI
13C17-01B	CONCRETE JOINT DETAIL FOR ENTRANCE RAMP TERMINI
13C18-03A	CONCRETE PAVEMENT JOINTING
13C18-03B	CONCRETE PAVEMENT STEEL REINFORCEMENT
13C18-03C	CONCRETE PAVEMENT JOINT TIES
13C18-03D	CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES
14A02-01	TREE PLANTING DETAIL
14B42-03A	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03B	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B42-03C	MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL
14B44-02A	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B44-02B	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

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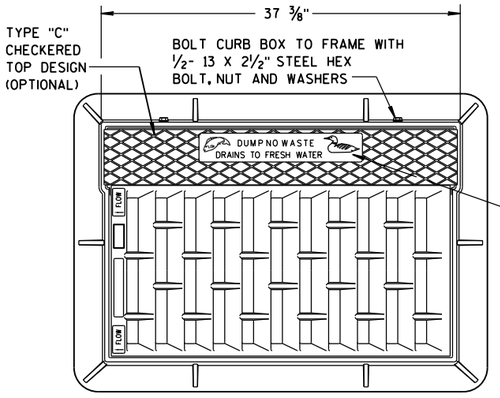
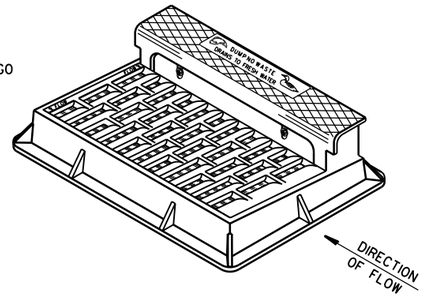
Standard Detail Drawing List

14B44-02C	MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)
14B47-02A	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02B	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
14B47-02C	MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL
15A01-12A	MARKER POST FOR RIGHT-OF-WAY
15A01-12B	FLEXIBLE MARKER POST FOR RIGHT-OF-WAY
15A02-08	DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING
15A03-02A	FLEXIBLE MARKER POST FOR CULVERT END
15A03-02B	FLEXIBLE MARKER POST FOR CULVERT END
15A04-02	FLEXIBLE DELINEATOR POST
15A06-02	DELINEATOR LAYOUT
15B01-08A	FENCE WOVEN WIRE
15B01-08B	FENCE WOVEN WIRE
15B03-15A	FENCE CHAIN LINK
15B03-15B	FENCE CHAIN LINK
15C08-16A	PAVEMENT MARKING (MAINLINE)
15C19-03C	MOVING PAVEMENT MARKING OPERATION MULTI-LANE DIVIDED ROADWAY
15C31-01A	PAVEMENT MARKING (RAMPS AND GORES)
15C31-01D	PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP
15C33-01	STOP LINE AND CROSSWALK PAVEMENT MARKING
15D12-05B	TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION
15D16-03	TRAFFIC CONTROL, EXIT RAMP CLOSURE
15D27-02	TRAFFIC CONTROL, SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH
15D33-04	TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

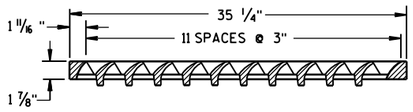
6

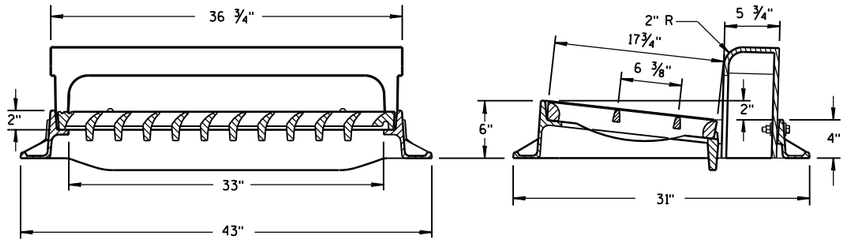


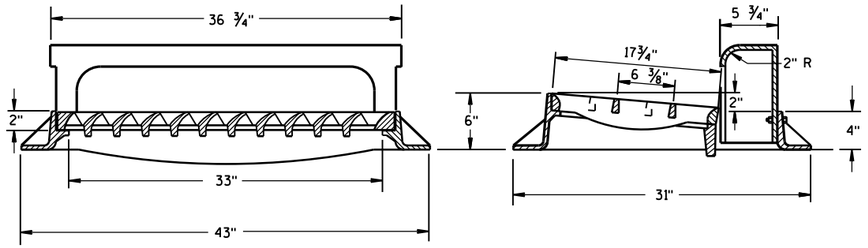
NOTE:
GRATE IS REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

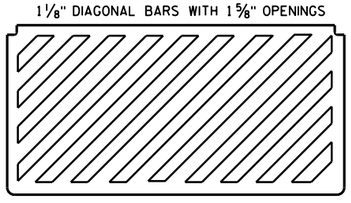






TYPE "H"

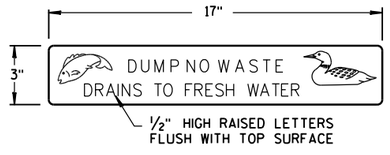
NOTE: EITHER CASTING IS ACCEPTABLE



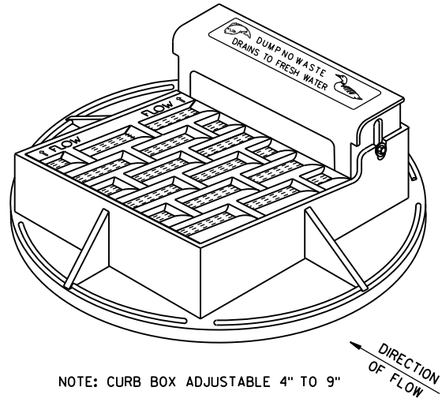
SPECIAL GRATE FOR TYPE "H" COVER

(MEASURES 35 1/4" X 17 3/4" X 2")

(NOTED AS TYPE H-S ON DRAINAGE TABLE)

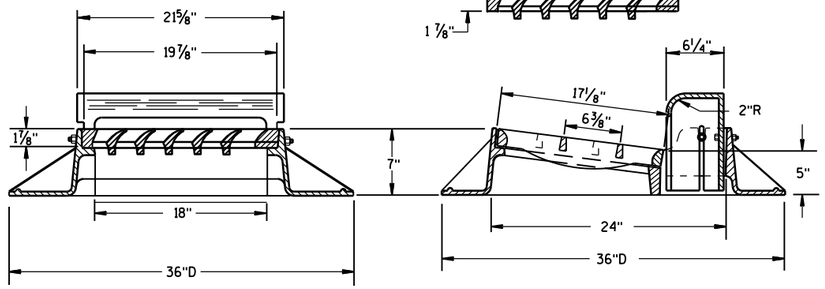


LOGO DETAIL



NOTE: CURB BOX ADJUSTABLE 4" TO 9"

NOTE:
GRATE IS REVERSIBLE.



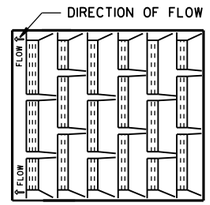
TYPE "A"

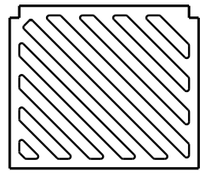
GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.

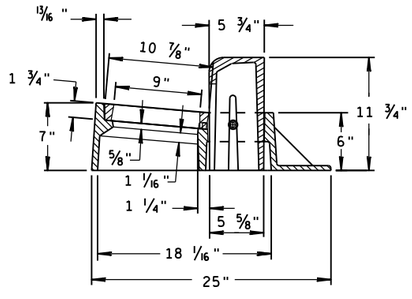


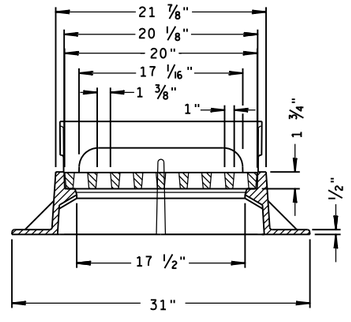


SPECIAL GRATE FOR TYPE "A" COVER

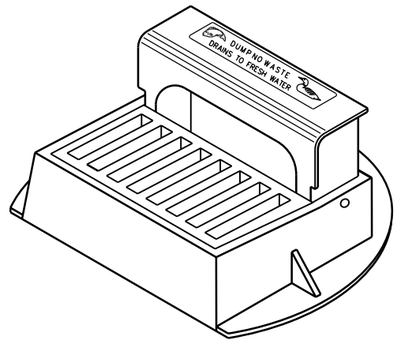
(MEASURES 19 3/4" X 17" X 1 7/8")

(NOTED AS TYPE A-S ON DRAINAGE TABLE)





TYPE "Z"



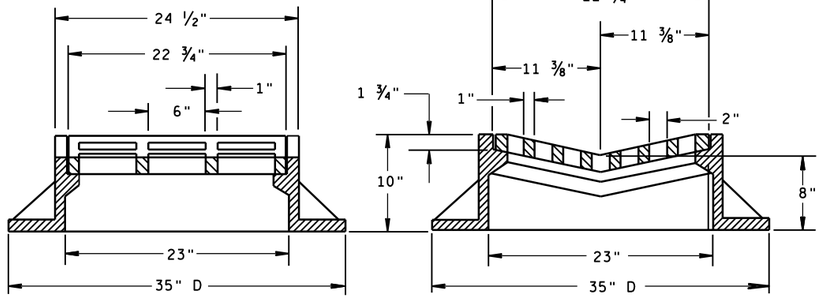
INLET COVERS TYPE A, H, A-S, H-S & Z

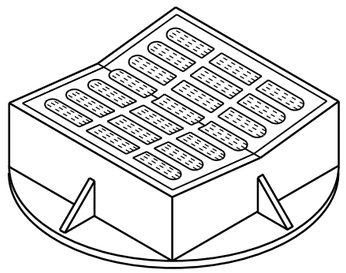
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11-27-13 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

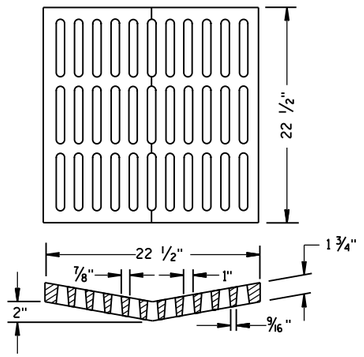
6

S.D.D. 8 A 5-19a



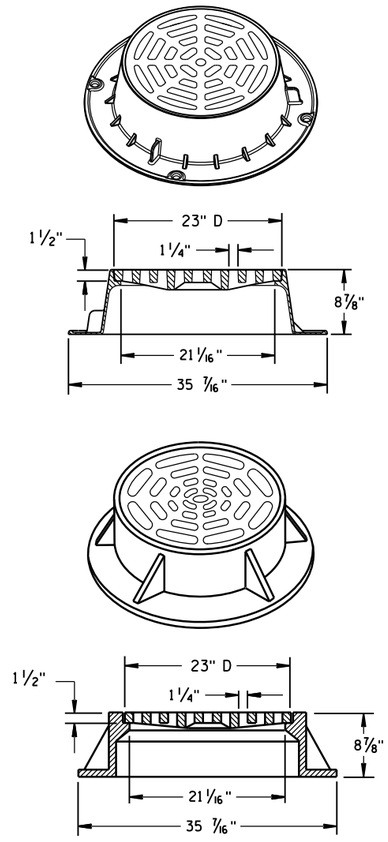


TYPE "B"



ALTERNATIVE GRATE FOR TYPE "B" COVER

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS POSSIBLE.
NOTED AS TYPE B-A ON THE DRAINAGE TABLE



TYPE "C"

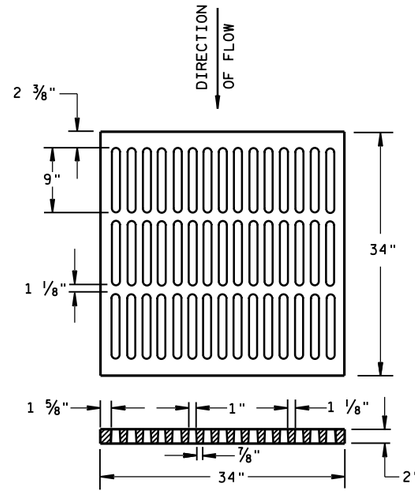
NOTE: EITHER CASTING IS ACCEPTABLE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

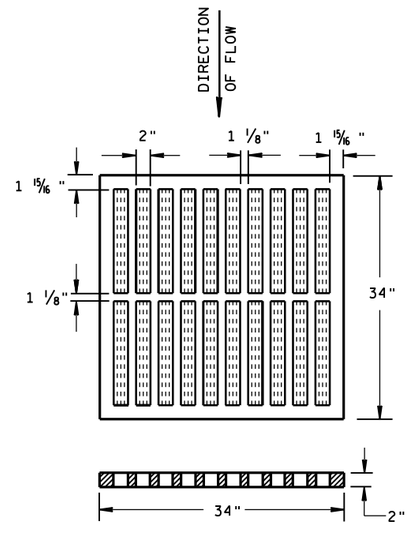
DETAIL DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR CATCH BASIN, MANHOLE AND INLET COVERS SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ROUND FRAMES AND COVERS SHALL HAVE CONTINUOUSLY MACHINED BEARING SURFACES TO PREVENT ROCKING AND RATTLING.



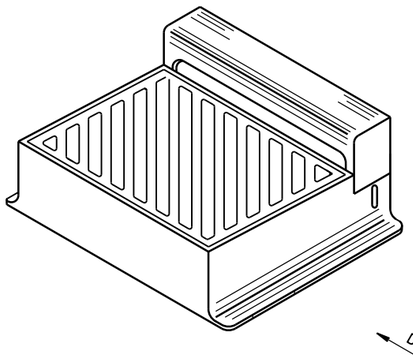
ALTERNATIVE TYPE "MS"

USE WHERE PEDESTRIAN OR BICYCLE TRAFFIC IS PERMITTED
NOTED AS TYPE MS-A ON THE DRAINAGE TABLE

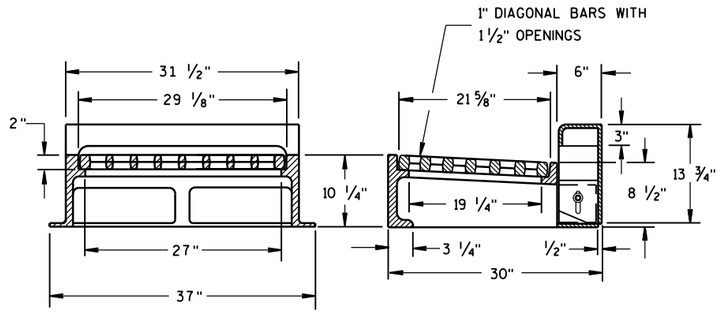


TYPE "MS"

USE ON FREEWAYS AND EXPRESSWAYS
NOTED AS TYPE MS ON DRAINAGE TABLE



DIAGONAL SLOTS, SHALL BE ORIENTED TO THE DIRECTION OF FLOW AS ILLUSTRATED. GRATES ARE MANUFACTURED TO BE REVERSIBLE.



NOTE: CURB BOX HEIGHT ADJUSTABLE 6" TO 9"

TYPE "WM"

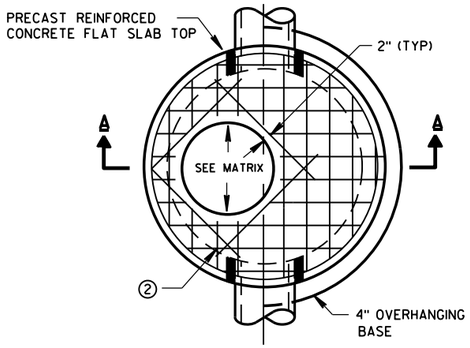
INLET COVERS
TYPE B, B-A, C, MS, MS-A, & WM

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

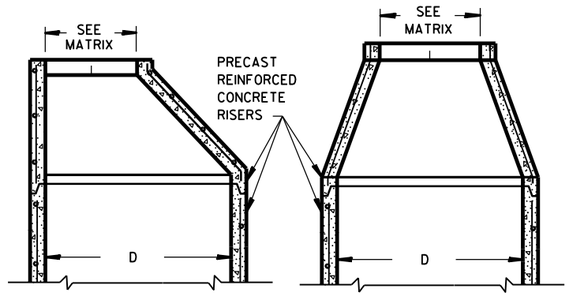
APPROVED
11/27/2013 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 A 5-19b

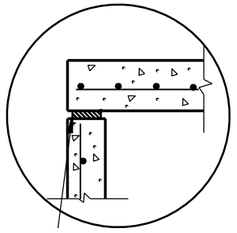


PLAN VIEW CIRCULAR OPENING

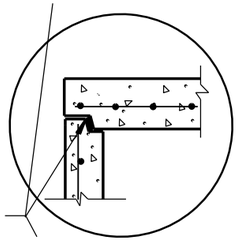


OPTIONAL PRECAST REINFORCED CONCRETE ECCENTRIC TOP

OPTIONAL PRECAST REINFORCED CONCRETE CONCENTRIC TOP

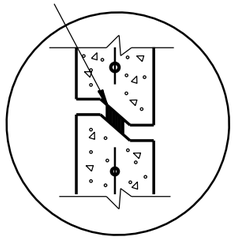


TOP WITH PLAIN END JOINT



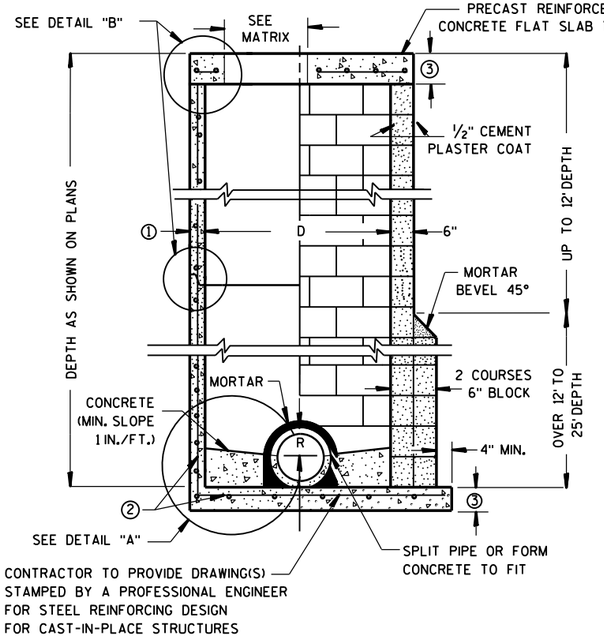
JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C990 (TYP)

TOP WITH TONGUE AND GROOVE JOINT



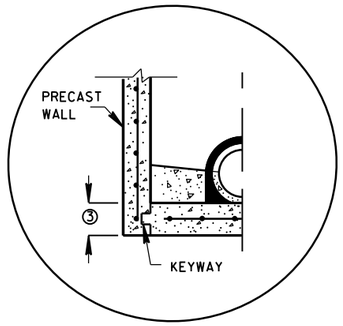
RISER WITH TONGUE AND GROOVE JOINT

DETAIL "B"

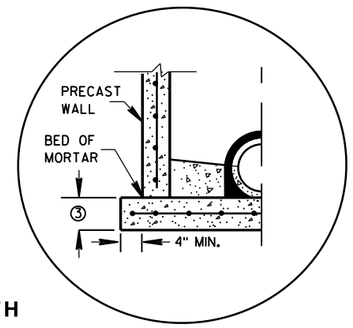


PRECAST REINFORCED CONCRETE WITH MONOLITHIC BASE

CONCRETE BLOCK WITH CAST-IN-PLACE OR PRECAST REINFORCED CONCRETE BASE ②

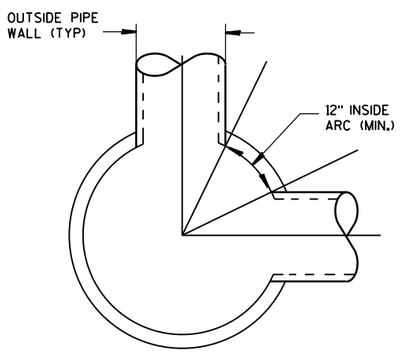


PRECAST REINFORCED CONCRETE WITH INTEGRAL BASE OPTION



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

DETAIL "A"



DETAIL "C"

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST MANHOLE UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATE THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

PRECAST REINFORCED CONE TOPS (ECCENTRIC OR CONCENTRIC) OR PRECAST REINFORCED FLAT SLAB TOPS MAY BE USED ON CONCRETE BLOCK STRUCTURES. THE CONE TOPS SHALL BE INSTALLED ON A BED OF MORTAR.

ECCENTRIC CONE TOPS MAY BE USED ON ALL STRUCTURES, AND CONCENTRIC CONE TOPS SHALL BE USED ONLY ON STRUCTURES 5 FEET OR LESS IN DEPTH, UNLESS OTHERWISE DIRECTED BY THE ENGINEER.

STEPS MEETING AASHTO M199 AND THE FOLLOWING REQUIREMENTS SHALL BE INSTALLED IN ALL STRUCTURES OVER 5 FEET IN DEPTH: 16 INCH C-C MAXIMUM SPACING; PROJECT A MINIMUM CLEAR DISTANCE OF 4 INCHES FROM THE WALL AT THE POINT OF EMBEDMENT; MINIMUM LENGTH OF 10 INCHES; MINIMUM WALL EMBEDMENT OF 3 INCHES. FERROUS METAL STEPS NOT PAINTED OR TREATED TO RESIST CORROSION SHALL HAVE A MINIMUM CROSS SECTIONAL DIMENSION OF 1 INCH.

STEPS OF APPROVED POLYPROPYLENE PLASTIC COATED REINFORCEMENT BAR ARE ACCEPTABLE. REINFORCING BAR MUST BE A MINIMUM OF ½" AND MEET THE REQUIREMENTS OF ASTM A615.

CERTIFICATION SHALL BE PROVIDED THAT INSTALLED STEPS WHEN TESTED IN ACCORDANCE WITH SECTION 10 OF AASHTO T280 CAN WITHSTAND A VERTICAL LOAD OF 800 LBS. AND A HORIZONTAL LOAD OF 400 LBS.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

CONCRETE BLOCK WILL NOT BE PERMITED FOR STRUCTURES GREATER THAN 4 FEET IN DIAMETER.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST MANHOLE UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF AASHTO DESIGNATION M 199.

4" OVERHANGING BASES ARE REQUIRED FOR ALL CONCRETE BLOCK INSTALLATIONS. 4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED. OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

FOR ADDITIONAL CONFIGURATIONS, MAINTAIN A MINIMUM OF 12 INCHES AS MEASURED FROM THE INSIDE OF THE STRUCTURE WALL BETWEEN THE OUTSIDE PIPE WALLS OF ADJACENT PIPES. SEE DETAIL "C".

① MINIMUM WALL THICKNESS SHALL BE 4 INCHES FOR 3-FT, 5 INCHES FOR 4-FT, 6 INCHES FOR 5-FT, 7 INCHES FOR 6-FT, 8 INCHES FOR 7-FT AND 9 INCHES FOR 8-FT DIAMETER PRECAST MANHOLES.

② FOR PRECAST MANHOLES PROVIDE REINFORCING STEEL IN ACCORDANCE TO AASHTO M199.

③ PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER OF 48" AND LESS SHALL HAVE A MINIMUM THICKNESS OF 6". PRECAST FLAT SLAB TOPS AND BASES WITH A DIAMETER LARGER THAN 48" SHALL HAVE A MINIMUM THICKNESS OF 8".

MANHOLE COVER OPENING MATRIX

MANHOLE COVER TYPE	C	ALL J'S	K	L	M
OPENING SIZE (FT)					
2 DIA.	X	X		X	
3 DIA.			X		X

PIPE MATRIX

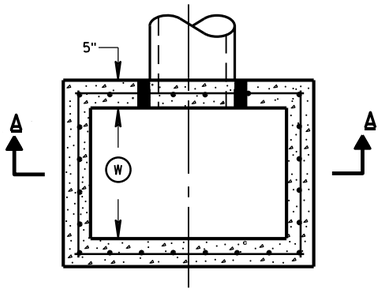
MANHOLE SIZE	MAXIMUM INSIDE PIPE DIAMETER FOR TWO PIPES	
	180° SEPARATION (IN)	90° SEPARATION (IN)
3-FT	15	12
4-FT	24	18
5-FT	36	24
6-FT	42	36
7-FT	48	36
8-FT	60	42

MANHOLES 3-FT, 4-FT, 5-FT, 6-FT, 7-FT AND 8-FT DIAMETER

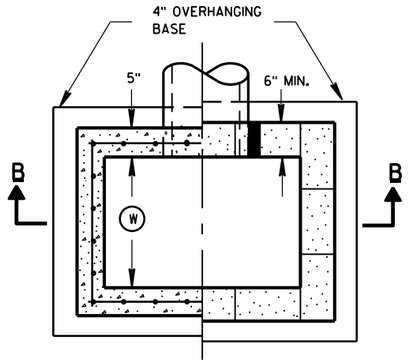
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

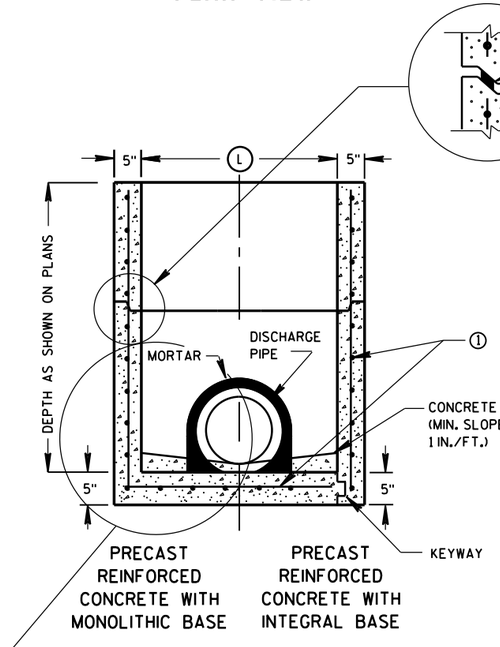
6
S.D.D. 8 B 9-1



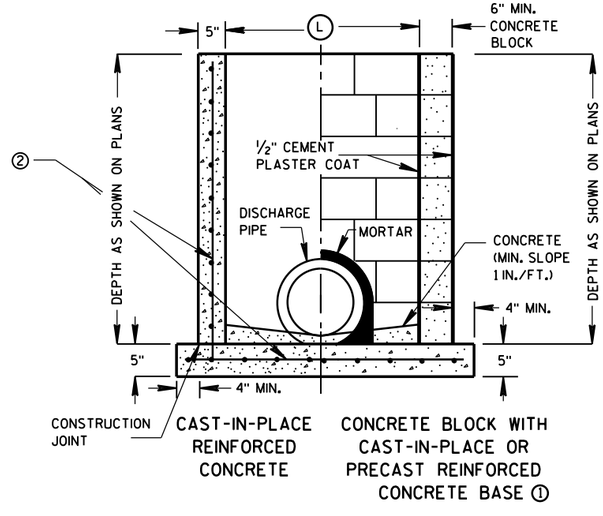
PLAN VIEW



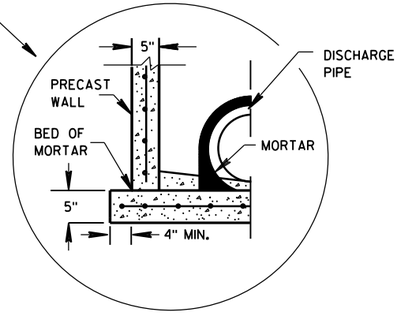
PLAN VIEW



SECTION A-A



SECTION B-B



SEPARATE PRECAST REINFORCED CONCRETE BASE OPTION

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR UNDERGROUND DRAINAGE STRUCTURES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

ALL DRAINAGE STRUCTURES ARE DESIGNATED ON THE PLANS AS "MANHOLES 3X3-L", "CATCH BASINS 4-B", "INLETS 2X3-H", ETC. THE FIRST NUMBERS DESIGNATES THE SIZE OF THE STRUCTURE, AND THE FOLLOWING LETTER DESIGNATES THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

BASES SHALL BE PLACED ON A BED OF MATERIAL AT LEAST 6 INCHES IN DEPTH, WHICH MEETS THE REQUIREMENTS OF GRANULAR BACKFILL. THIS BEDDING SHALL BE COMPACTED AND PROVIDE UNIFORM SUPPORT FOR THE ENTIRE AREA OF THE BASE.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

4" OVERHANGING BASES ARE REQUIRED FOR CAST-IN-PLACE REINFORCED CONCRETE AND CONCRETE BLOCK INSTALLATIONS.
4" OVERHANG IS REQUIRED WHEN SEPARATE PRECAST BASE IS PROVIDED.
OVERHANG IS NOT REQUIRED ON PRECAST STRUCTURES WITH AN INTEGRAL OR MONOLITHIC BASE.

MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3 INCH CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

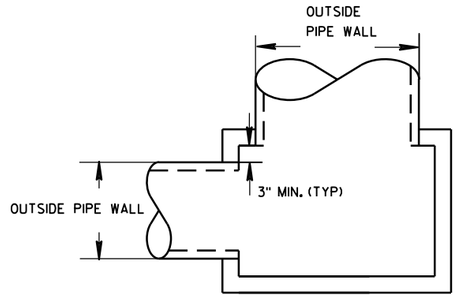
② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

INLET COVER MATRIX

INLET SIZE		INLET COVER TYPE	ALL A'S	ALL B'S	BW	F	ALL H'S	S	T	V	WM
	WIDTH (W) (FT)	LENGTH (L) (FT)									
2X2-FT	2	2	X	X				X		X	
2X2.5-FT	2	2.5			X			X	X	X	X
2X3-FT	2	3					X				
2.5X3-FT	2.5	3				X					

PIPE MATRIX

INLET SIZE	MAXIMUM INSIDE PIPE DIAMETER	
	WIDTH (IN)	LENGTH (IN)
2X2-FT	12	12
2X2.5-FT	12	18
2X3-FT	12	24
2.5X3-FT	18	24



DETAIL "A"

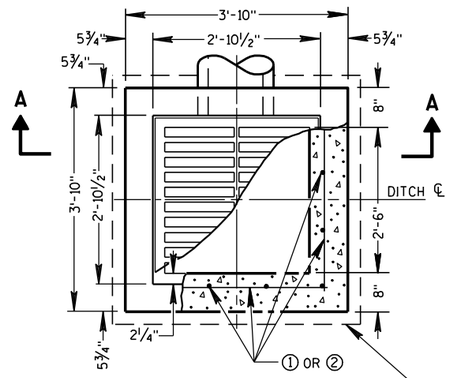
INLETS 2X2-FT, 2X2.5-FT, 2X3-FT AND 2.5X3-FT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

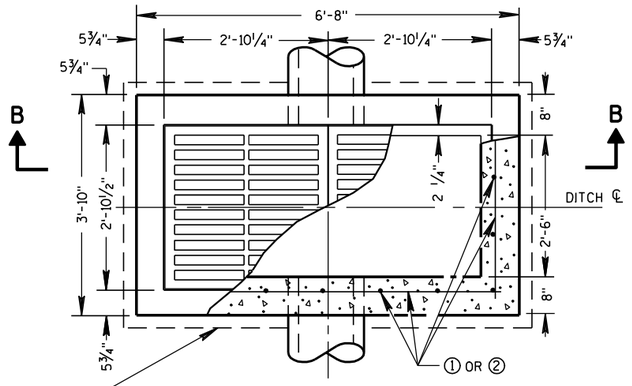
APPROVED
6/5/2012
DATE
FHWA

/S/ Jerry H. Zogg
ROADWAY STANDARDS DE
ENGINEER

6
S.D.D. 8 C 7-1

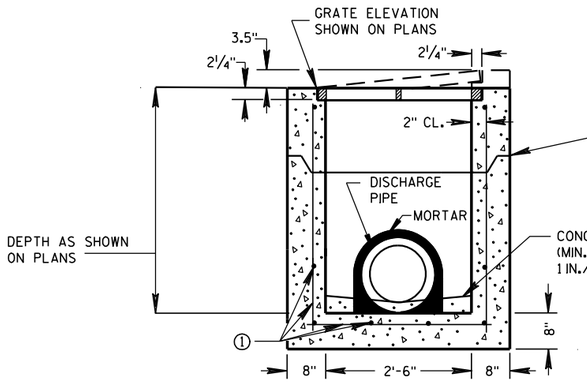


PLAN VIEW

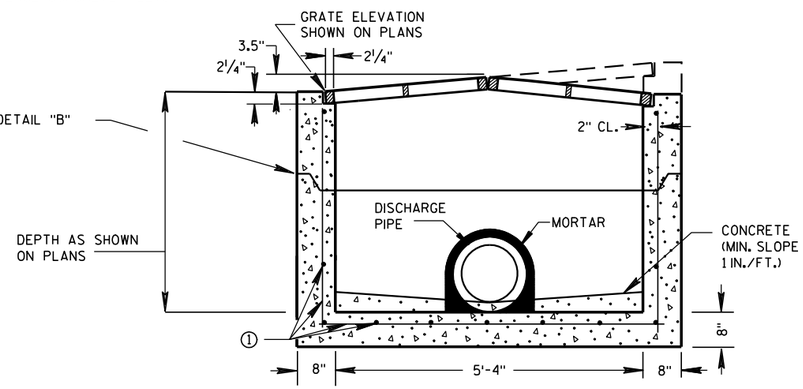


PLAN VIEW

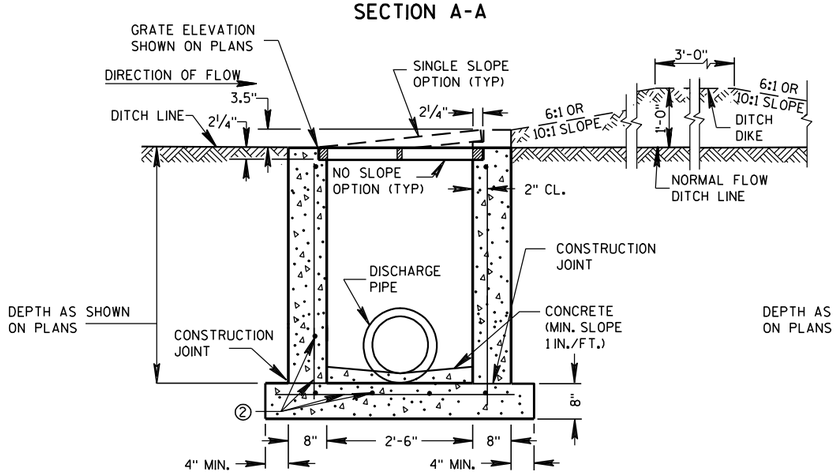
4" OVERHANGING BASE ON REINFORCED CAST-IN-PLACE CONCRETE INLETS



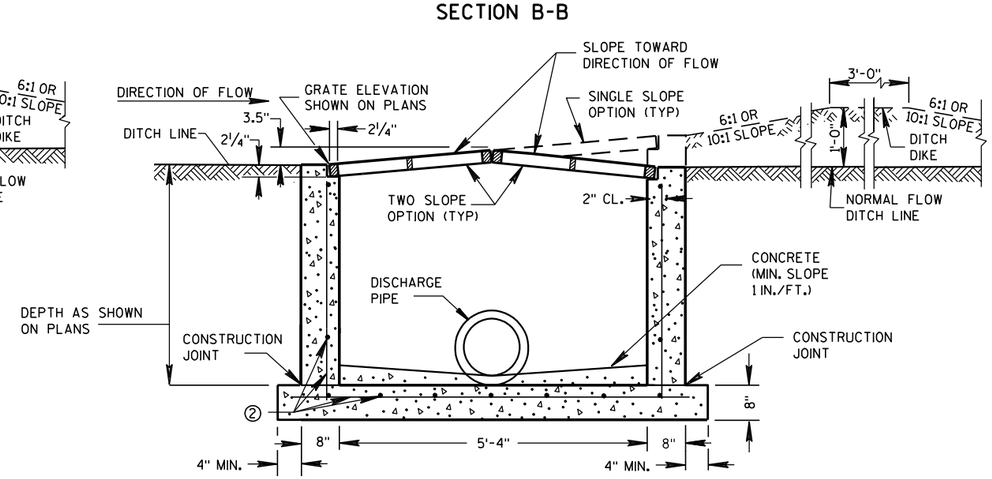
PRECAST REINFORCED CONCRETE SECTION A-A



PRECAST REINFORCED CONCRETE SECTION B-B



REINFORCED CAST-IN-PLACE CONCRETE SECTION A-A



REINFORCED CAST-IN-PLACE CONCRETE SECTION B-B

INLETS MEDIAN 1 GRATE

INLETS MEDIAN 2 GRATE

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

UNLESS OTHERWISE AUTHORIZED IN WRITING BY THE ENGINEER, THE CONTRACTOR SHALL NOT ORDER AND DELIVER PRECAST INLET UNITS REQUIRED FOR THE PROJECT UNTIL A LIST OF SIZES IS FURNISHED BY THE ENGINEER.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR INLETS WHICH MAY INCLUDE PRECAST REINFORCED CONCRETE INLETS, SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL PROVIDING THAT SUCH ALTERNATE DESIGNS MAKE PROVISION FOR EQUIVALENT CAPACITY AND STRENGTH.

ALL MEDIAN INLETS ARE DESIGNATED ON THE PLANS AS "INLETS, 1G-MS", ETC. THE FIRST NUMBER AND LETTER DESIGNATE THE TYPE OF STRUCTURE, AND THE FOLLOWING LETTERS DESIGNATE THE TYPE OF COVER TO BE USED TO COMPRISE THE COMPLETE UNIT.

ALL BAR STEEL REINFORCEMENT SHALL BE EMBEDDED 2 INCHES CLEAR UNLESS OTHERWISE SHOWN OR NOTED.

PRECAST REINFORCED RISERS SHALL HAVE A TONGUE AND GROOVE JOINT WITH TONGUE UP OR DOWN.

ALL PRECAST INLET UNITS SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF ASTM C 913.

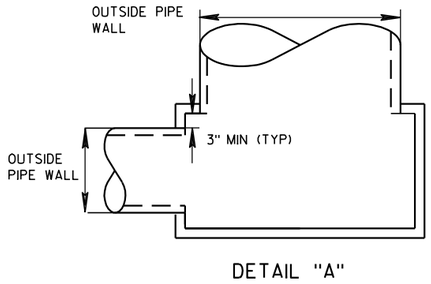
MAXIMUM INSIDE PIPE DIAMETER DETERMINED BY 3" CLEARANCE ON EACH SIDE OF THE OUTSIDE WALL OF THE PIPE. SEE DETAIL "A". ASSUMES PIPE ENTERS PERPENDICULAR TO THE STRUCTURE.

① FOR PRECAST INLETS PROVIDE REINFORCING STEEL IN ACCORDANCE TO ASTM C 913.

② CONTRACTOR TO PROVIDE DRAWING(S) STAMPED BY A PROFESSIONAL ENGINEER FOR STEEL REINFORCING DESIGN FOR CAST-IN-PLACE STRUCTURES.

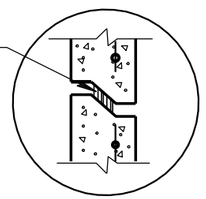
PIPE MATRIX

	MAXIMUM INSIDE PIPE DIAMETER	
INLET SIZE	WIDTH (IN)	LENGTH (IN)
1 GRATE	18	18
2 GRATE	18	42



DETAIL "A"

JOINTS TO BE SEALED WITH A BUTYL RUBBER SEAL PER SEALANT MANUFACTURERS RECOMMENDATIONS CONFORMING TO ASTM C 990 (TYP)



DETAIL "B"

INLETS MEDIAN 1 AND 2 GRATE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

6/5/2012
DATE

/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 8 C 8-1

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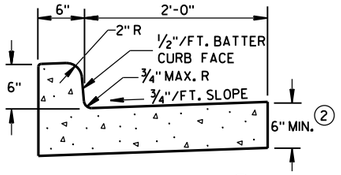
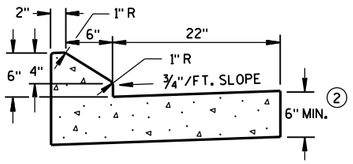
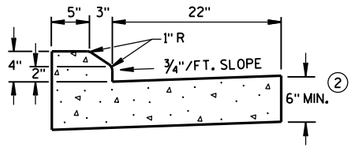
S.D.D. 8 C 8-1



TYPES A & D ①

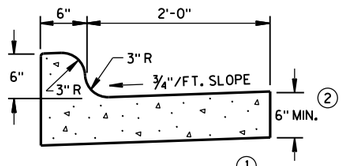


6" SLOPED CURB TYPES G & J ①

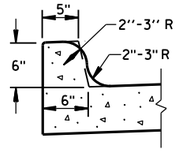


4" SLOPED CURB TYPES G & J ①

CONCRETE CURB & GUTTER 30"

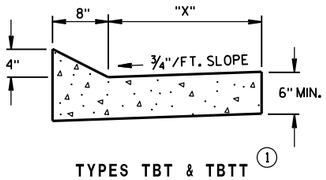


TYPES K & L ①



OPTIONAL CURB SHAPE FOR TYPES K & L ①

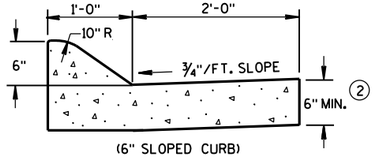
CONCRETE CURB & GUTTER 30"



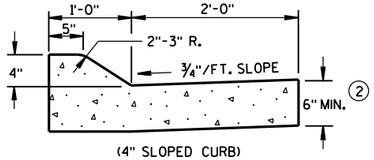
TYPES TBT & TBTT ①

CONCRETE CURB & GUTTER

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

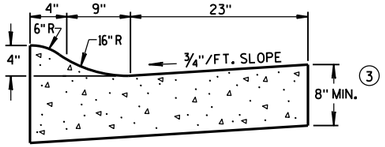


(6" SLOPED CURB)



(4" SLOPED CURB)

TYPES A & D ①



4" SLOPED CURB TYPES R & T ① ④

CONCRETE CURB & GUTTER 36"

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. A LONGITUDINAL CONSTRUCTION JOINT IS NOT REQUIRED WITH INTEGRAL CURB AND GUTTER.

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.

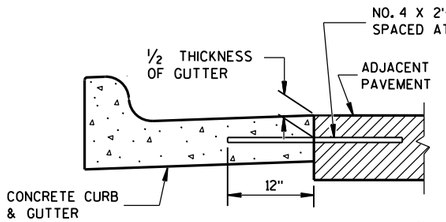
① TIE BARS ARE REQUIRED FOR CURB AND GUTTER TYPES A, G, K, R AND TBTT.

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.

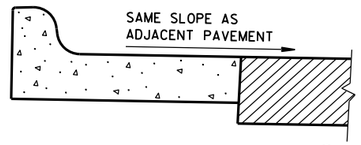
③ THE BOTTOM OF CURB AND GUTTER MAY BE CONSTRUCTED EITHER LEVEL OR PARALLEL TO THE SLOPE OF THE SUBGRADE OR BASE AGGREGATE PROVIDED A 8" MINIMUM GUTTER THICKNESS IS MAINTAINED.

④ THE FACE OF CURB IS 6" FROM THE BACK OF CURB.

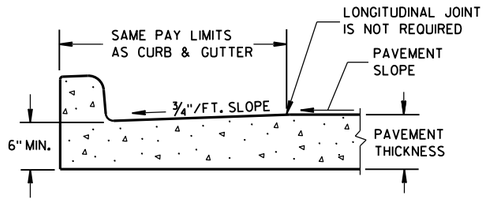
⑤ WHEN REVERSE SLOPE GUTTER IS REQUIRED, THE LOCATION(S) WILL BE SHOWN ELSEWHERE IN THE PLAN.



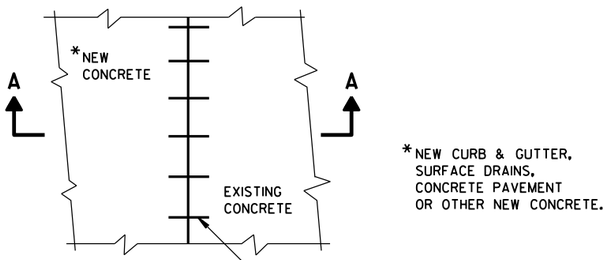
TYPICAL TIE BAR LOCATION ①



REVERSE SLOPE GUTTER ⑤
(TYPICAL FOR ALL CURB & GUTTER TYPES)

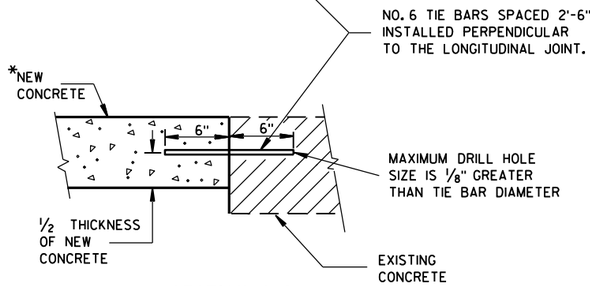


PARTIAL SECTION OF PAVEMENT
WITH INTEGRAL CURB & GUTTER



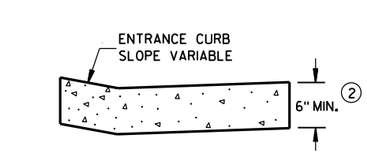
PLAN VIEW

*NEW CURB & GUTTER, SURFACE DRAINS, CONCRETE PAVEMENT OR OTHER NEW CONCRETE.

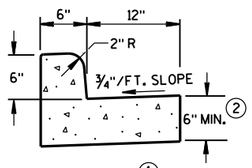


SECTION A-A

TIE BARS DRILLED
INTO EXISTING PAVEMENT

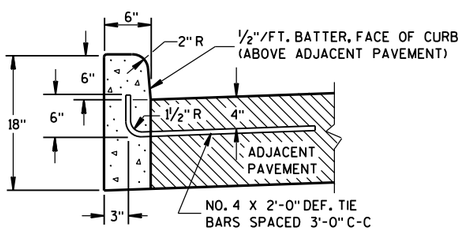


DRIVEWAY ENTRANCE CURB
(WHEN DIRECTED BY THE ENGINEER)

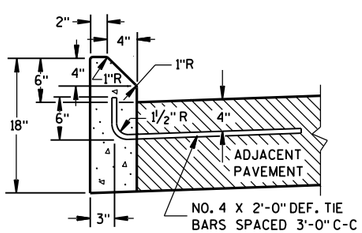


① TYPES A & D

CONCRETE CURB & GUTTER 18"

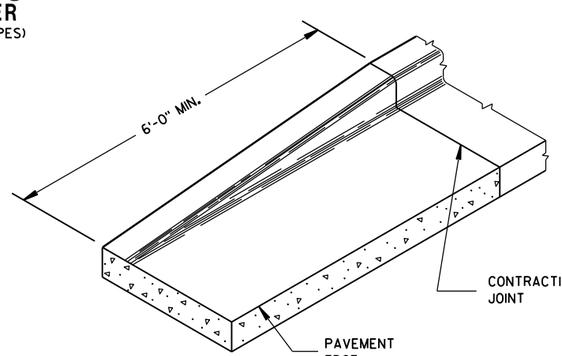


① TYPES A & D



① TYPES G & J

CONCRETE CURB



END SECTION CURB & GUTTER

CONCRETE CURB, CONCRETE CURB & GUTTER AND TIES

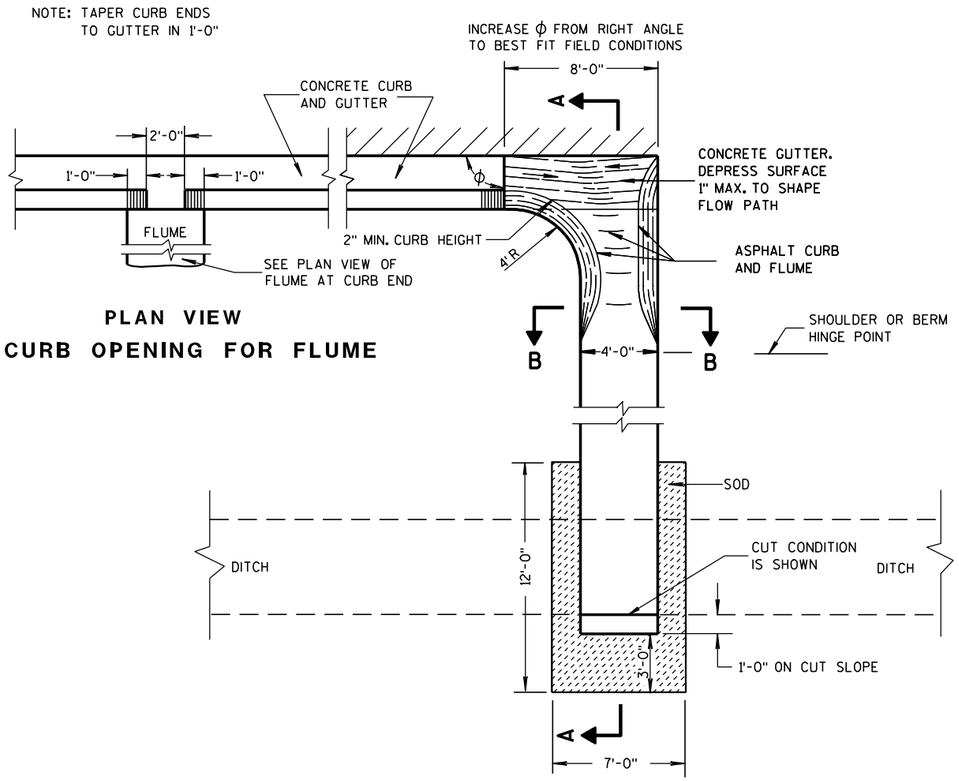
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
FHWA

6

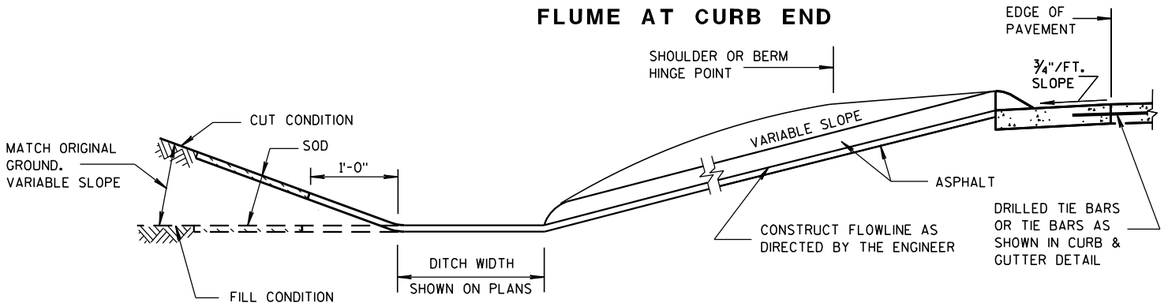
S.D.D. 8 D 1-18

ASPHALTIC FLUME

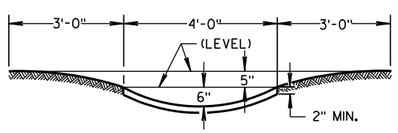


PLAN VIEW
CURB OPENING FOR FLUME

PLAN VIEW
FLUME AT CURB END



SECTION A-A



SECTION B-B

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

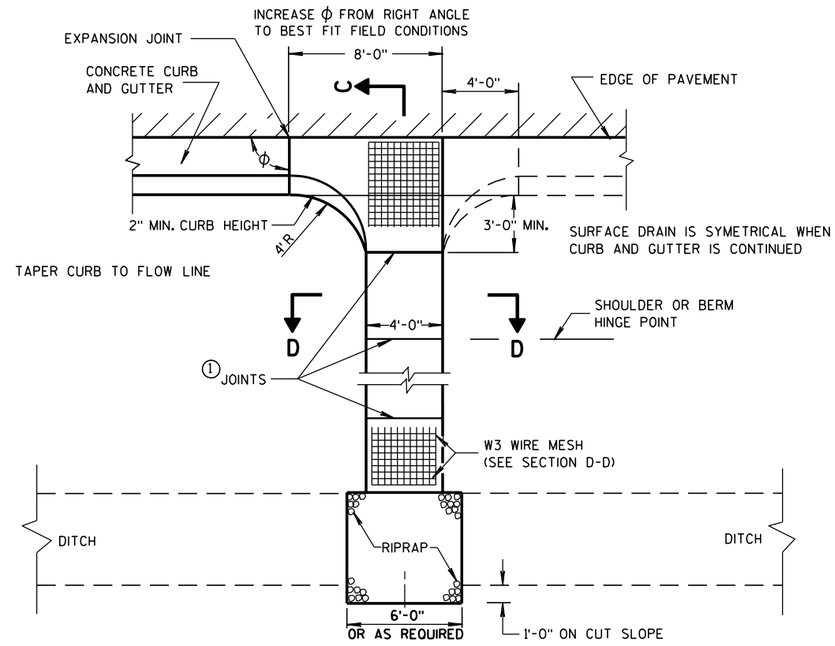
WELDED STEEL WIRE FABRIC SHALL BE IN ACCORDANCE WITH AASHTO SPECIFICATION M55.

① JOINTS SHALL BE $\frac{1}{8}$ TO $\frac{1}{4}$ INCH WIDE BY $1\frac{1}{2}$ INCHES DEEP AND SPACED AT UNIFORM INTERVALS OF APPROXIMATELY 4 FEET.

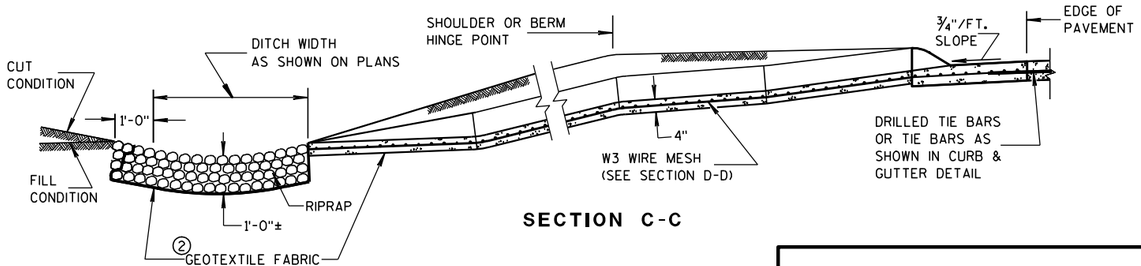
② GEOTEXTILE FABRIC TYPE "R" SHALL UNDERLAY THE FULL LENGTH AND WIDTH OF THE CONCRETE SURFACE DRAIN AND RIPRAP.

③ CONCRETE SURFACE DRAIN WITHOUT CURB AND GUTTER MAY BE USED ON BACKSLOPES WHEN SPECIFIED

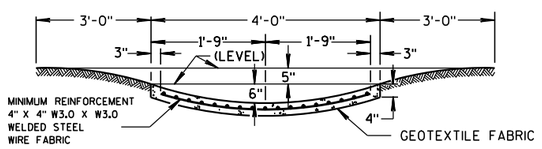
③ CONCRETE SURFACE DRAIN



PLAN VIEW



SECTION C-C



SECTION D-D

CONCRETE SURFACE DRAINS & ASPHALTIC FLUMES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-4-08 DATE
/S/ Jerry H. ... ROADWAY STANDARDS ENGINEER
MENT
FHWA

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S.D.D. 8 D 4-5

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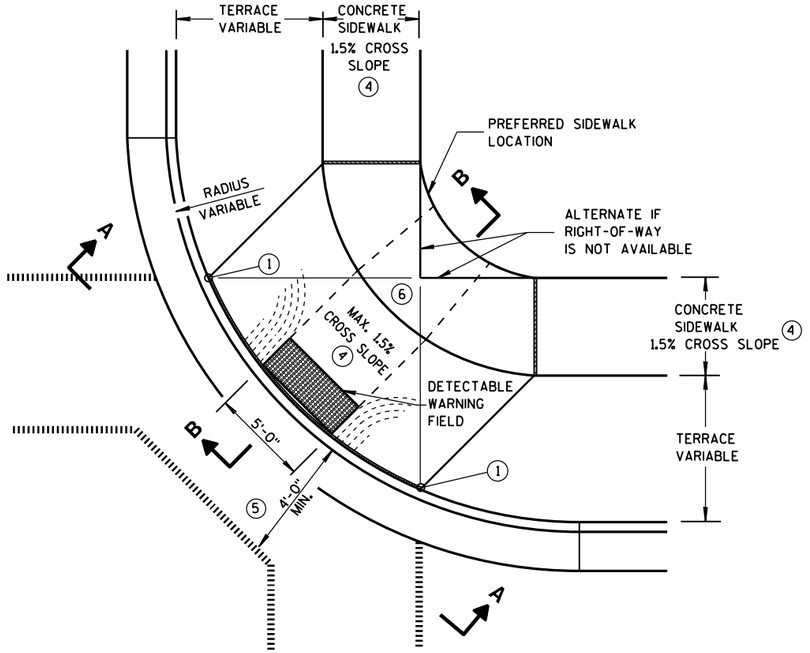
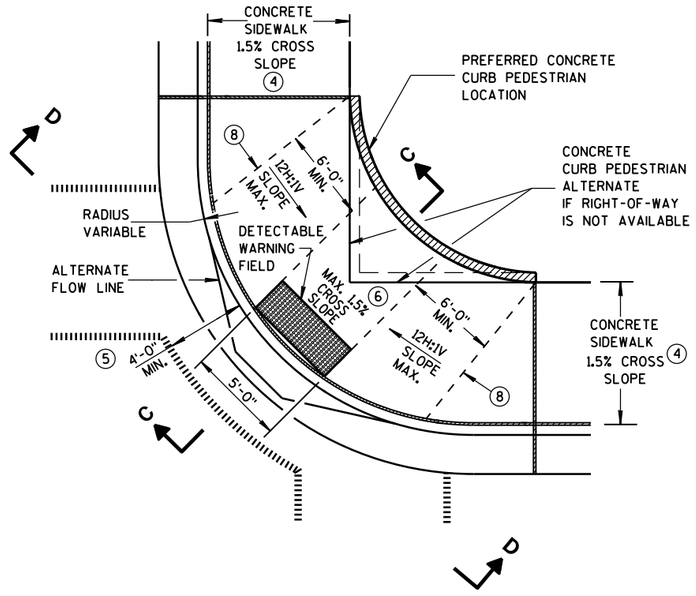


PLAN VIEW

TYPE 1 RAMP

(CENTER OF CORNER RADIUS)



PLAN VIEW

TYPE 1-A RAMP

(NO TERRACE)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

WHEN NECESSARY, THE SIDEWALK ELEVATION MAY BE LOWERED TO MEET THE HIGH POINT ON THE RAMP.

TYPE 1 RAMPS SHALL HAVE A NORMAL SIDEWALK APRON AND CURB ON BOTH SIDES OF RAMP.

DETECTABLE WARNING FIELD SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS "CURB RAMP DETECTABLE WARNING FIELD". THE CONCRETE PEDESTRIAN CURB, IF NEEDED, SHALL BE MEASURED AND PAID BY THE LINEAL FOOT AS "CONCRETE CURB PEDESTRIAN". CONCRETE SIDEWALK IN THE CURB RAMP AREA SHALL BE MEASURED AND PAID BY THE SQUARE FOOT AS CONCRETE SIDEWALK, INCLUDING THE AREA UNDER THE DETECTABLE WARNING FIELD.

SELECT CURB RAMP DETECTABLE WARNING FIELD MATERIALS AND DEVICES FROM THE DEPARTMENT'S APPROVED MATERIALS LIST. THE COLOR OF THE DETECTABLE WARNING FIELD IS SPECIFIED ELSEWHERE AND IS INCIDENTAL TO THE BID ITEM OF "CURB RAMP DETECTABLE WARNING FIELD".

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

SURFACE TEXTURE OF THE RAMP SHALL BE OBTAINED BY COARSE BROOMING TRANSVERSE TO THE SLOPE OF THE RAMP.

(1) THIS POINT IS AN EXTENSION OF OUTSIDE EDGE OF APPROACHING SIDEWALK WHERE IT MEETS THE BACK OF CONCRETE CURB.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

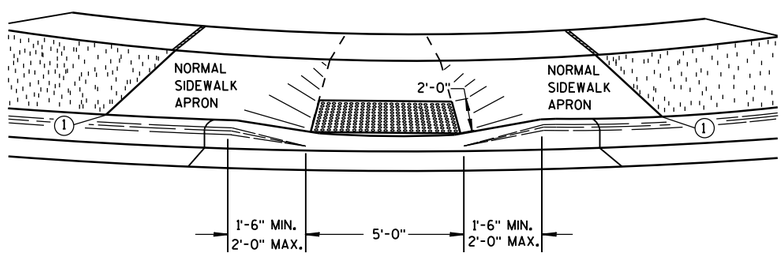
(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(5) PROVIDE A LEVEL LANDING IN THE STREET AND GUTTER AREA. (2% MAXIMUM SLOPE IN ANY DIRECTION). WHEN THE GUTTER SLOPE EXCEEDS 2%, CONSTRUCT THE LEVEL LANDING IN THE STREET AREA.

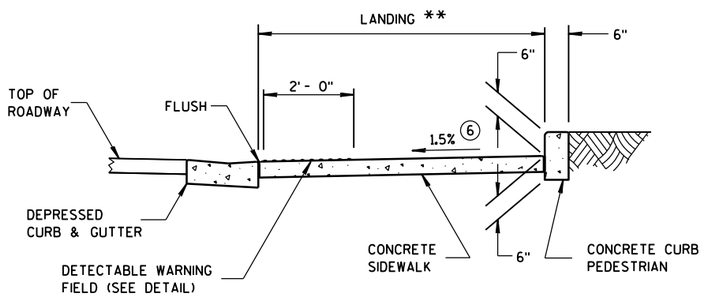
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.



VIEW A-A

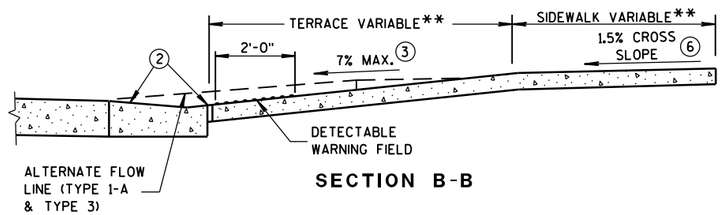
** WIDTH SHOWN ELSEWHERE IN THE PLANS



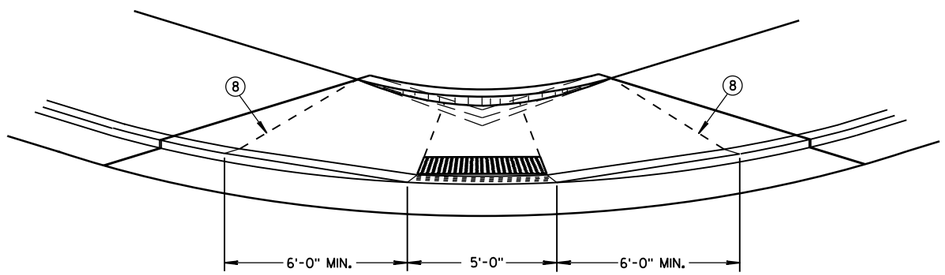
SECTION C-C

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



SECTION B-B



VIEW D-D

CURB RAMPS TYPES 1 AND 1-A

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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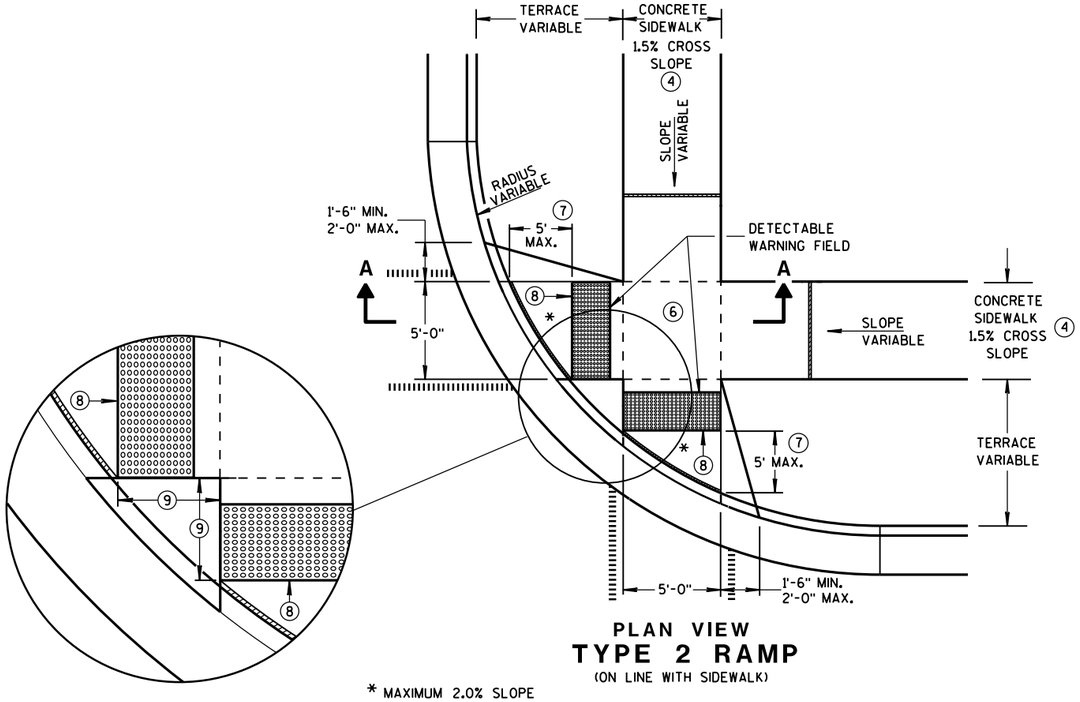
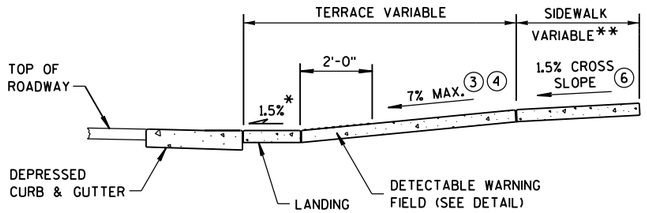
S.D.D. 8 D 5-16a



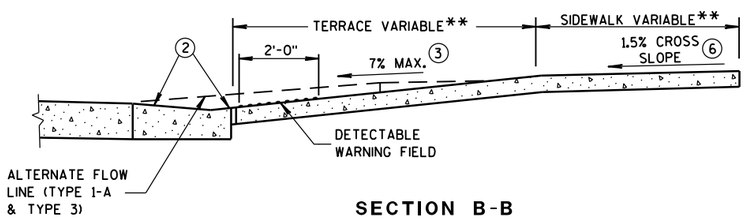
PLAN VIEW
TYPE 2 RAMP
(ON LINE WITH SIDEWALK)

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK



SECTION A-A

** WIDTH SHOWN ELSEWHERE IN THE PLANS



SECTION B-B

GENERAL NOTES

USE THE TYPE 3 RAMP ONLY WHEN A TYPE 1 OR TYPE 2 CANNOT BE ACHIEVED BECAUSE OF FIELD CONDITIONS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

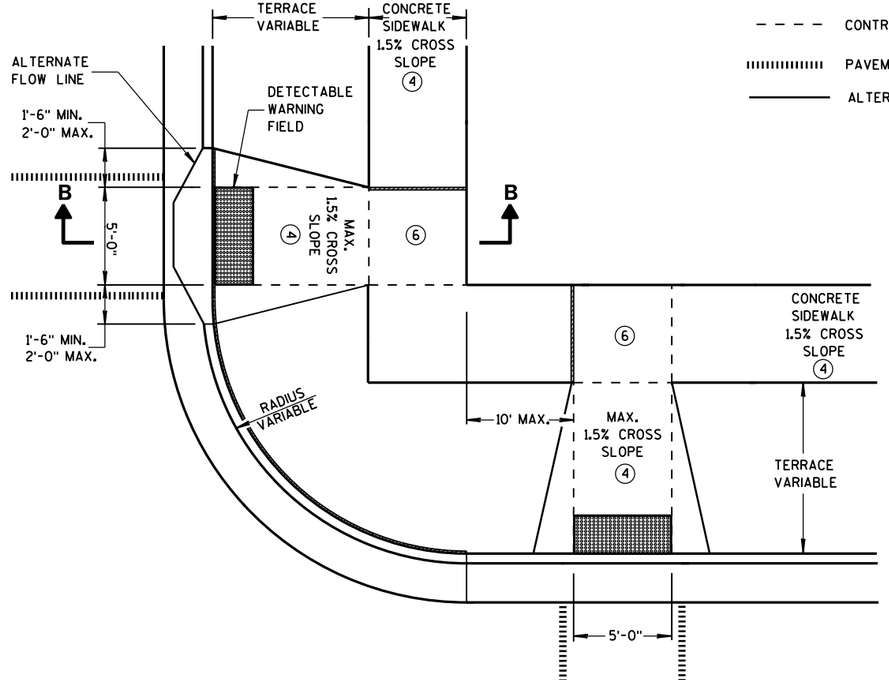
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(9) WHEN THIS DISTANCE IS LESS THAN 6'-0", IT MAY BE DIFFICULT TO ACHIEVE A 7% SLOPE OR FLATTER ALONG THE RAMP. REDUCE CURB HEIGHT IN TRIANGLE AREA TO ACHIEVE 7% SLOPE OR FLATTER ON RAMP. 2" MINIMUM CURB HEIGHT.

LEGEND

- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)
- ALTERNATIVE LAYOUT



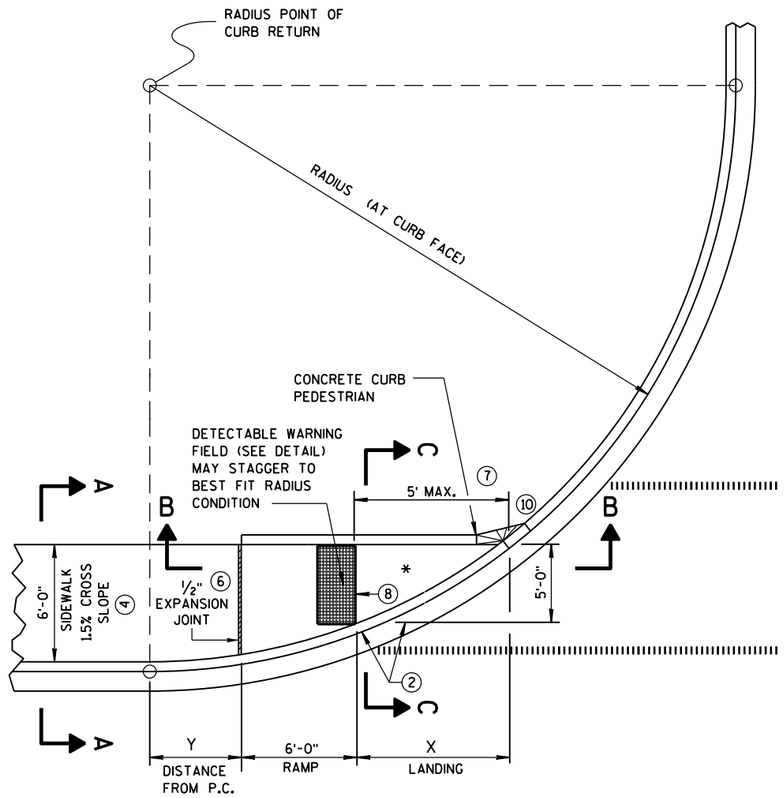
PLAN VIEW
TYPE 3 RAMP
(OUTSIDE OF CROSSWALK AREA)

CURB RAMPS TYPES 2 AND 3

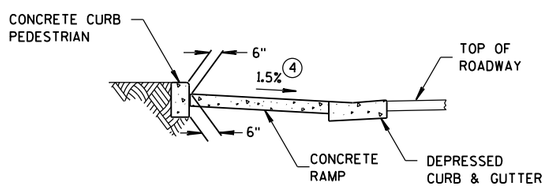
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

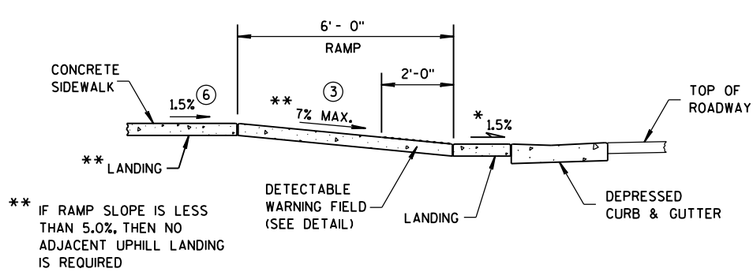
S.D.D. 8 D 5-16b



CURB RAMP TYPE 4A
PLAN VIEW



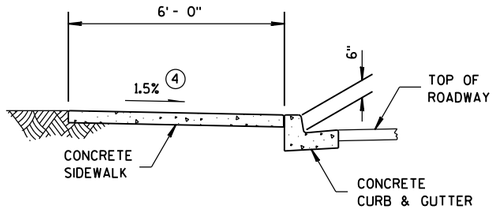
SECTION C-C FOR TYPE 4A



SECTION B-B FOR TYPE 4A

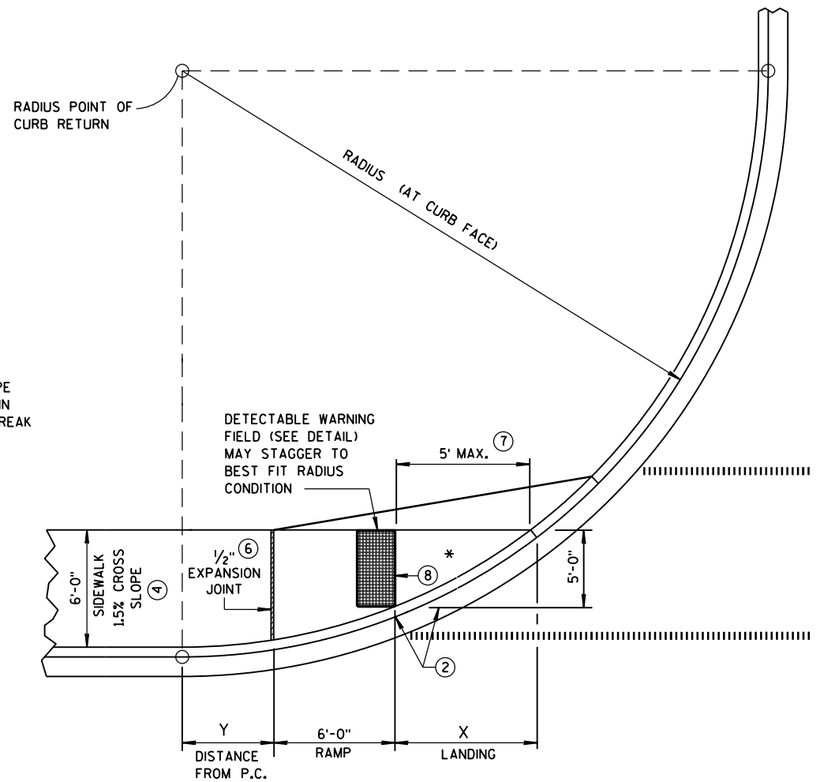
RADIUS (AT CURB FACE)	X	Y
20 FEET	6'-1¾"	2'-7¼"
30 FEET	7'-11¾"	4'-8¼"
40 FEET	9'-5¼"	6'-5"
50 FEET	10'-8¾"	7'-11¼"
60 FEET	11'-10¼"	9'-3½"

INTERMEDIATE RADII CAN BE INTERPOLATED



SECTION A-A FOR TYPE 4A

* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK



CURB RAMP TYPE 4A1
PLAN VIEW

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

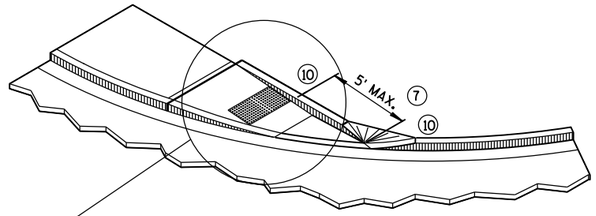
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

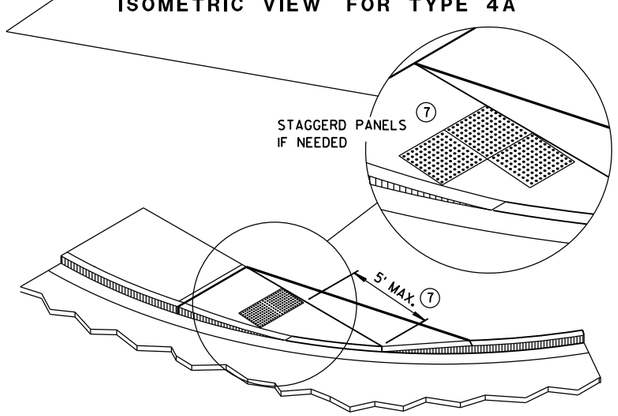
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4A



ISOMETRIC VIEW FOR TYPE 4A1

LEGEND

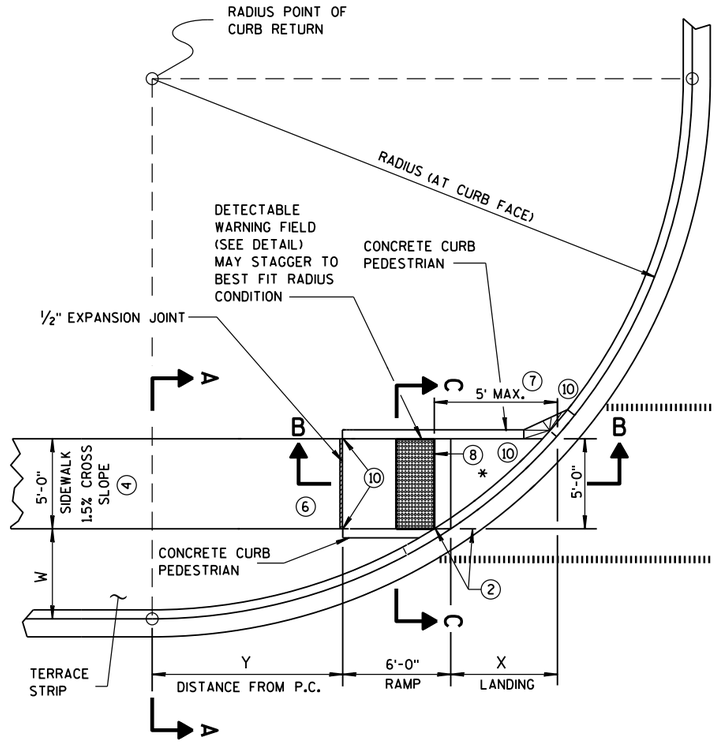
- ½" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

CURB RAMPS TYPES 4A AND 4A1

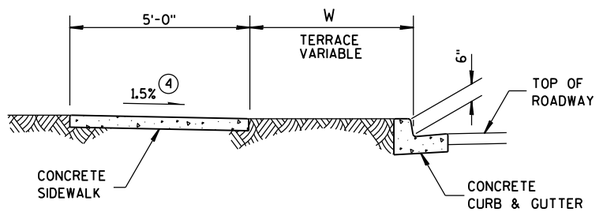
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

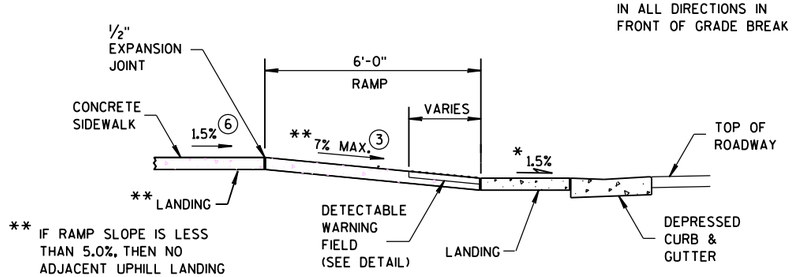
S.D.D. 8 D 5-16c



CURB RAMP TYPE 4B
PLAN VIEW



SECTION A-A FOR TYPE 4B



* MAXIMUM 2.0% SLOPE IN ALL DIRECTIONS IN FRONT OF GRADE BREAK

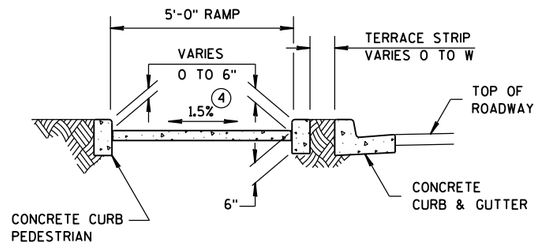
SECTION B-B FOR TYPE 4B

LEGEND

½" EXPANSION JOINT-SIDEWALK

CONTRACTION JOINT FIELD LOCATED

PAVEMENT MARKING CROSSWALK (WHITE)



SECTION C-C FOR TYPE 4B

RADIUS (AT CURB FACE)	W = 3'-0"		W = 4'-0"		W = 5'-0"		W = 6'-0"		W = 7'-0"	
	X	Y	X	Y	X	Y	X	Y	X	Y
20 FEET	5'-5½"	4'-6½"	4'-8½"	6'-0"	4'-1"	7'-2¾"	3'-7"	8'-3½"	3'-1½"	9'-2½"
30 FEET	7'-3¾"	7'-1"	6'-5½"	8'-11½"	5'-9¼"	10'-7"	5'-2½"	12'-0"	4'-8¾"	13'-3¼"
40 FEET	8'-9½"	9'-2½"	7'-10"	11'-5¼"	7'-1"	13'-4½"	6'-5¾"	15'-¾"	5'-11½"	16'-7¼"
50 FEET	10'-¾"	11'-¾"	9'-¼"	13'-7¼"	8'-2½"	15'-9½"	7'-6½"	17'-9"	6'-11¾"	19'-6¼"
60 FEET	11'-2½"	12'-8¾"	10'-¾"	15'-6½"	9'-2¼"	17'-11¾"	8'-5¾"	20'-1¾"	7'-10½"	22'-1½"

INTERMEDIATE RADII CAN BE INTERPOLATED

GENERAL NOTES

AVOID PLACING DRAINAGE STRUCTURES, JUNCTION BOXES OR OTHER OBSTRUCTIONS IN FRONT OF RAMP ACCESS AREAS.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN ¼-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

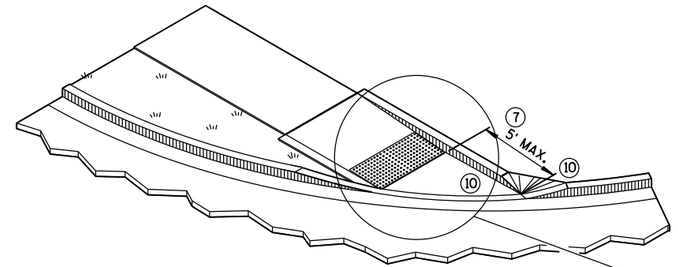
(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

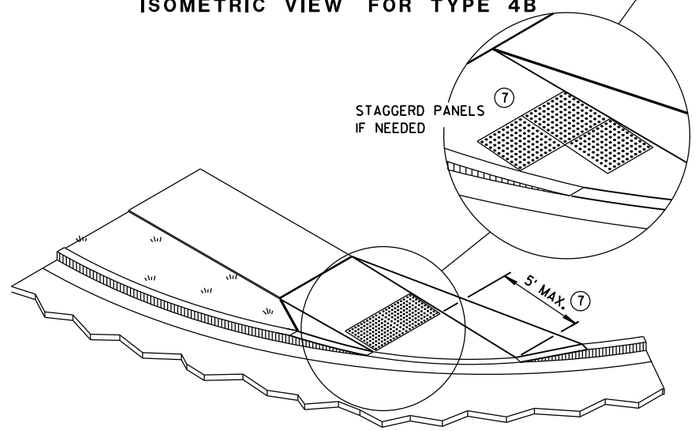
(7) WHEN THIS DISTANCE EXCEEDS 5 FEET, USE MULTIPLE DETECTABLE WARNING PANELS ACROSS THE RAMP AND STAGGER ADDITIONAL DETECTABLE WARNING PANEL(S) FORWARD TO REDUCE THIS DISTANCE.

(8) PROVIDE GRADE BREAK PERPENDICULAR TO DIRECTION OF WHEELCHAIR TRAVEL.

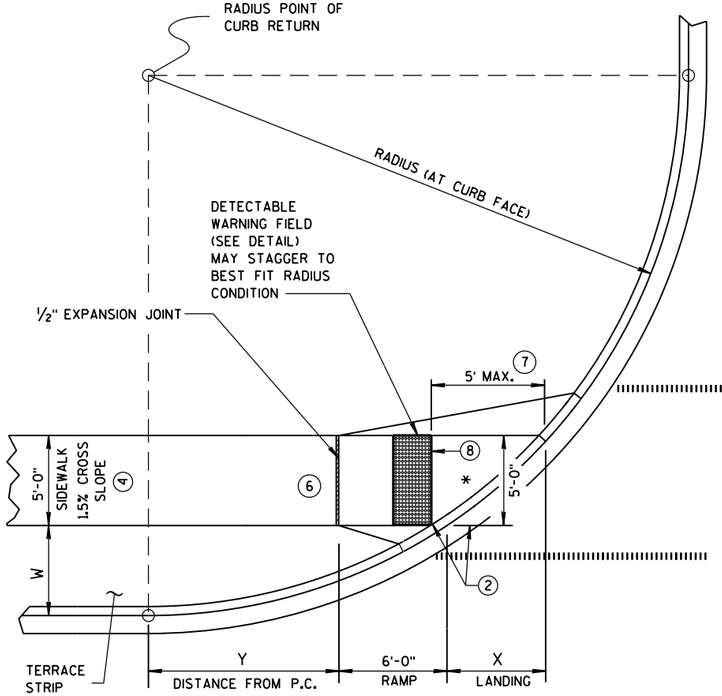
(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.



ISOMETRIC VIEW FOR TYPE 4B



ISOMETRIC VIEW FOR TYPE 4B1



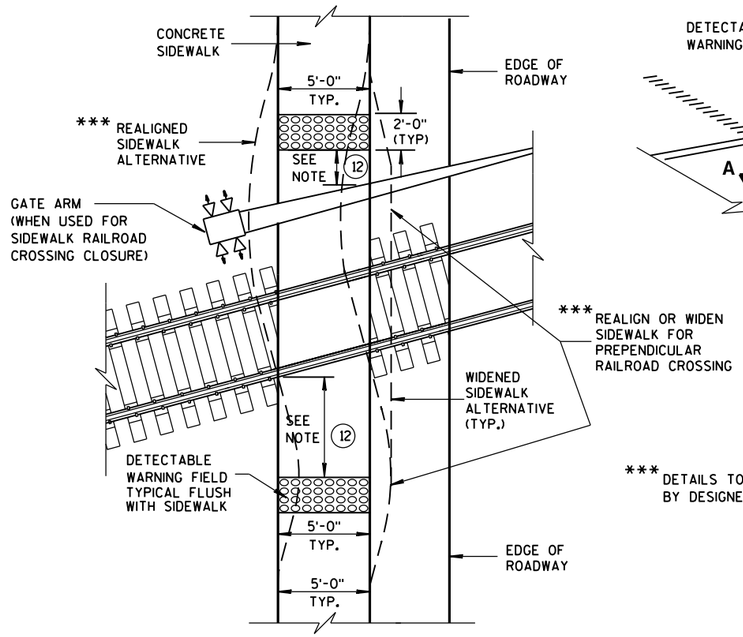
CURB RAMP TYPE 4B1
PLAN VIEW

CURB RAMPS TYPE 4B AND 4B1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

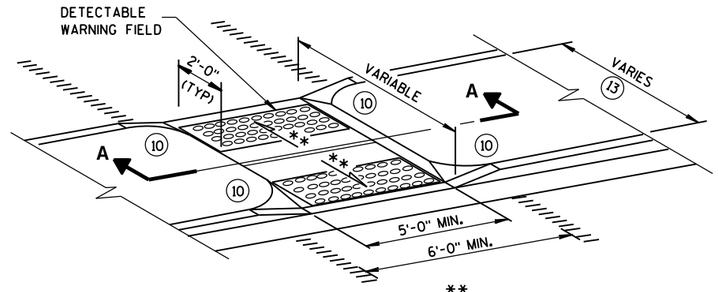
6

S.D.D. 8 D 5-16d



TYPE 8
DETECTABLE WARNINGS AT RAILROAD CROSSING

*** DETAILS TO BE DETERMINED BY DESIGNER



** 1% MIN. (PROVIDE DRAINAGE)

MEDIAN ISLAND
NON-ELEVATED CROSSING
TYPE 5

GENERAL NOTES

SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2%.

DETECTABLE WARNING FIELDS THAT ARE INSTALLED AS A GROUP OR SIDE BY SIDE, SHALL BE FROM THE SAME MANUFACTURER.

(2) GRADE CHANGE BETWEEN GUTTER FLAG SLOPE AND THE CURB RAMP SLOPE SHALL NOT EXCEED 11%. MAXIMUM GUTTER FLAG SLOPE IS 4%. PROVIDE DRAINAGE AWAY FROM CURB RAMP AT GUTTER FLAG INTERFACE. NO VERTICAL LIPS OR DISCONTINUITIES GREATER THAN 1/4-INCH ARE ALLOWED.

(3) ABSOLUTE MAXIMUM 12H:1V (8.33%) CURB RAMP SLOPE IS ALLOWABLE WITH FLATTENED GUTTER FLAG SLOPE AND NOT TO EXCEED 11% GRADE CHANGE.

(4) ±0.5% CONSTRUCTION TOLERANCE IN SIDEWALK CROSS SLOPE. THE SIDEWALK CROSS SLOPE SHALL NOT EXCEED 2% WITHOUT PRIOR APPROVAL FROM THE ENGINEER.

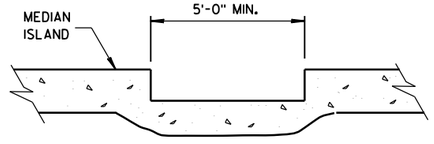
(6) PROVIDE A LEVEL LANDING (MAXIMUM 2% SLOPE) IN ANY DIRECTION OF PEDESTRIAN TRAVEL. STANDARD LANDING SIZE IS 5 FEET X 5 FEET (MINIMUM 4 FEET X 4 FEET).

(10) INSTALL TRANSITION NOSE. (INCIDENTAL TO OTHER PAY ITEMS). DO NOT MARK TRANSITION NOSE.

(11) SLOPE SIDEWALK TOWARD LANDING AS SHOWN WHERE THERE IS NO TERRACE OR WHERE THE TERRACE WIDTH IS LESS THAN 6 FEET WIDE.

(12) THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO A RAILROAD CROSSING SHALL BE 1.5 FEET ± 0.1' FROM THE FACE OF THE GATE ARM IF THE GATE ARM EXTENDS ACROSS THE SIDEWALK. WHERE THERE IS NO PEDESTRIAN GATE, THE EDGE OF THE DETECTABLE WARNING FIELD NEAREST TO THE RAILROAD CROSSING SHALL BE 15 FEET FROM THE NEAREST RAIL.

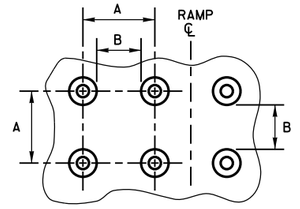
(13) DO NOT INSTALL DETECTABLE WARNING FIELDS IF MEDIAN WIDTH BETWEEN BACK OF CURBS IS LESS THAN 6 FEET.



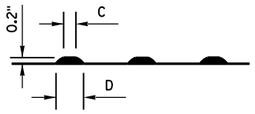
SECTION A-A

	MIN.	MAX.
A	1.6"	2.4"
B	0.65"	1.5"
C	*	*
D	0.9"	1.4"

* THE C DIMENSION IS 50% TO 65% OF THE D DIMENSION.

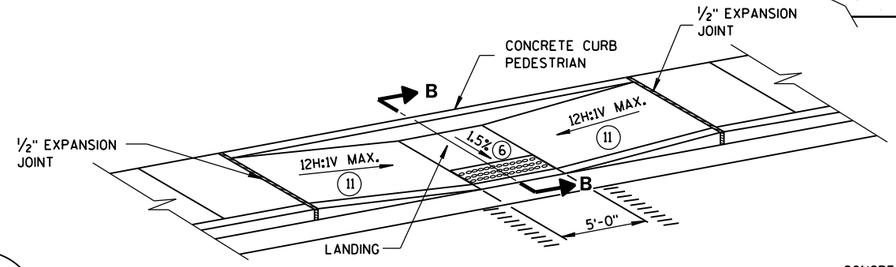


PLAN VIEW

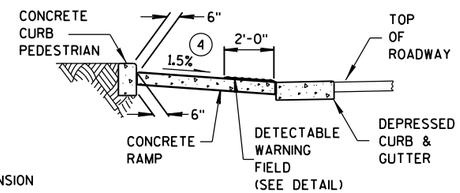


ELEVATION VIEW

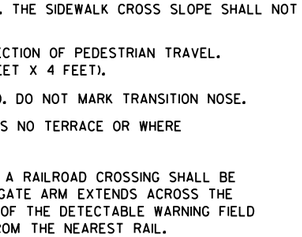
TRUNCATED DOMES
DETECTABLE WARNING PATTERN DETAIL



MID-BLOCK CROSSING
TYPE 7A



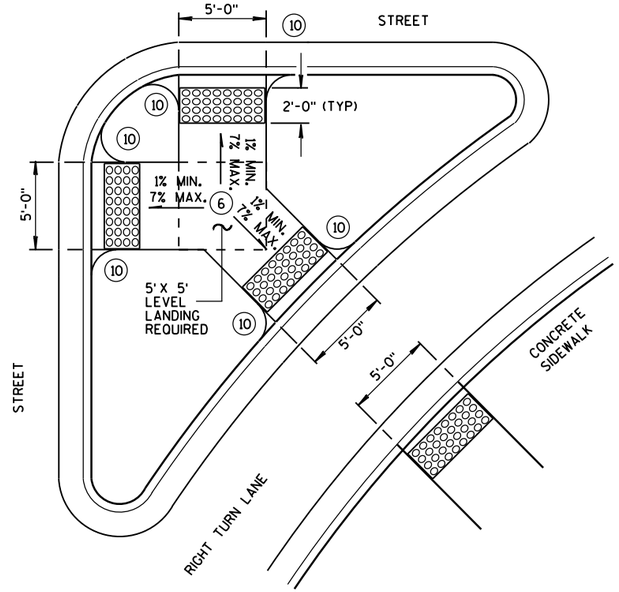
SECTION B-B



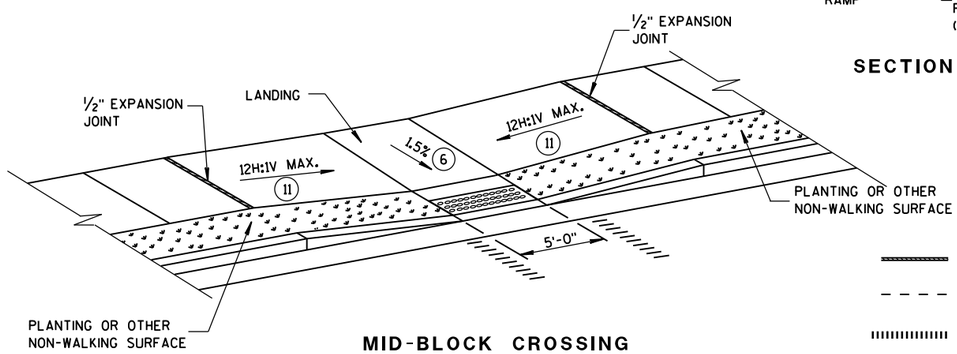
PLAN VIEW

DETECTABLE WARNING FIELD (TYPICAL)

REFER TO GENERAL NOTES (2) AND (3) FOR ALL ISLAND CURB RAMPS



TYPE 6
DETECTABLE WARNING AT ISLANDS



MID-BLOCK CROSSING
TYPE 7B

NOTE: THESE PARALLEL AND PARALLEL/PERPENDICULAR CURB RAMPS MAY BE USED AT INTERSECTIONS AND MID BLOCK LOCATIONS.

LEGEND

- 1/2" EXPANSION JOINT-SIDEWALK
- CONTRACTION JOINT FIELD LOCATED
- PAVEMENT MARKING CROSSWALK (WHITE)

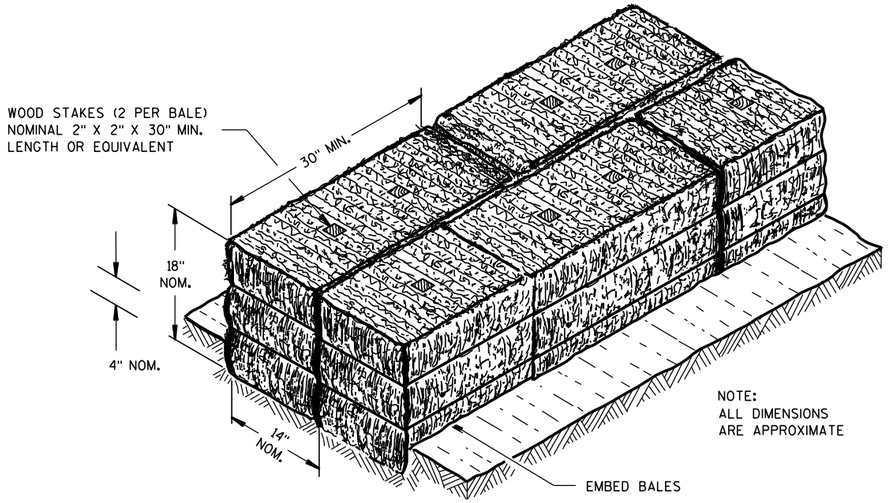
CURB RAMPS
TYPES 5, 6, 7A, 7B & 8

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

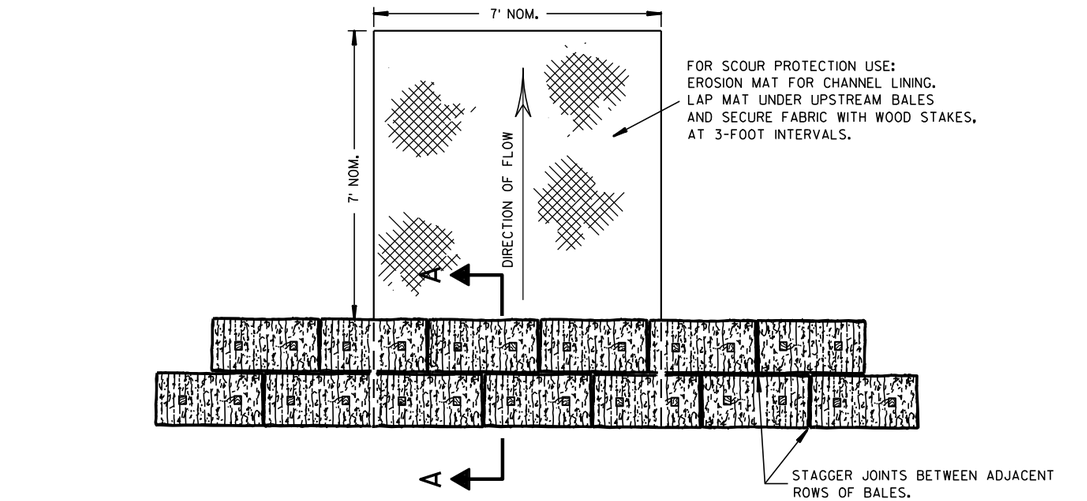
APPROVED
June, 2015 — DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS [illegible] ENGINEER
FHWA

6

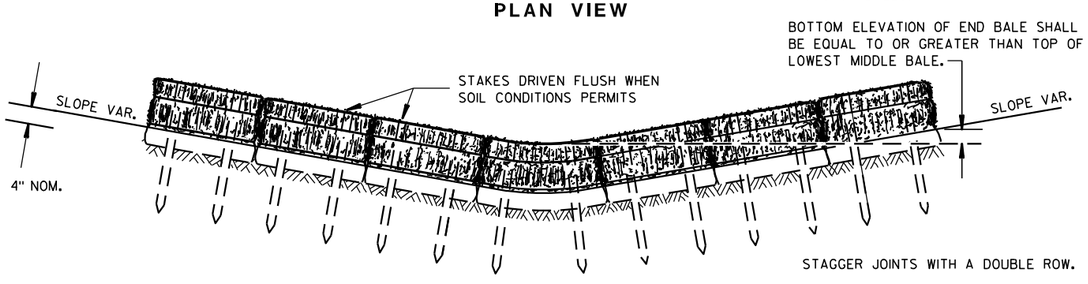
S.D.D. 8 D 5-16e



SECTION A-A



PLAN VIEW



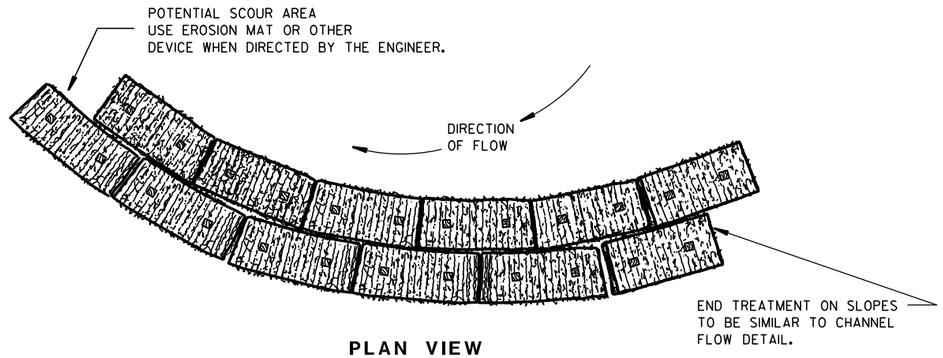
FRONT ELEVATION

TEMPORARY DITCH CHECK USING EROSION BALES ①

GENERAL NOTES

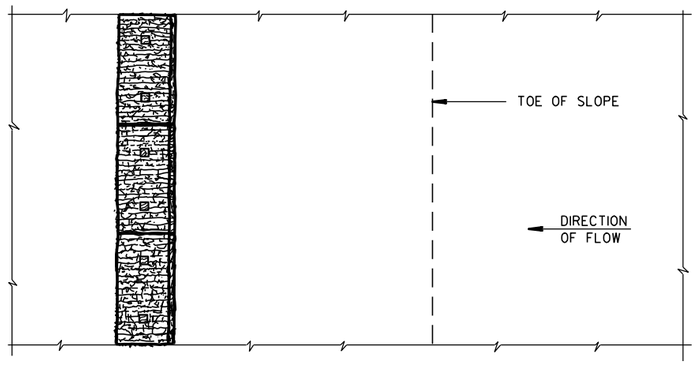
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

① TEMPORARY DITCH CHECKS EITHER EROSION BALES OR MANUFACTURED SHALL BE PAID FOR UNDER THE BID ITEM OF TEMPORARY DITCH CHECK. THE DEPARTMENT WILL NOT PAY FOR TEMPORARY DITCH CHECKS CONSTRUCTED OF A SINGLE ROW OF EROSION BALES.

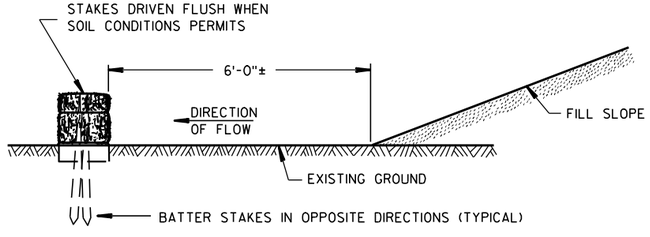


PLAN VIEW

WHEN ALTERING THE DIRECTION OF FLOW



PLAN VIEW



FRONT ELEVATION

WHEN EXISTING GROUND SLOPES AWAY FROM FILL SLOPE

EROSION BALES FOR SHEET FLOW

TYPICAL INSTALLATIONS OF EROSION BALES / TEMPORARY DITCH CHECKS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

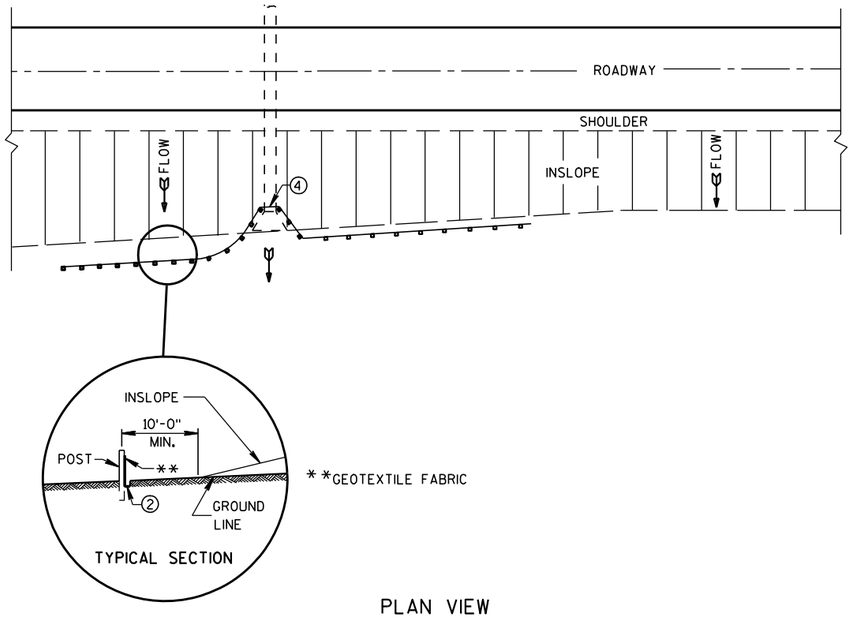
APPROVED
6/04/02 DATE
/S/ Beth Cannestra CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 8 E 8-3

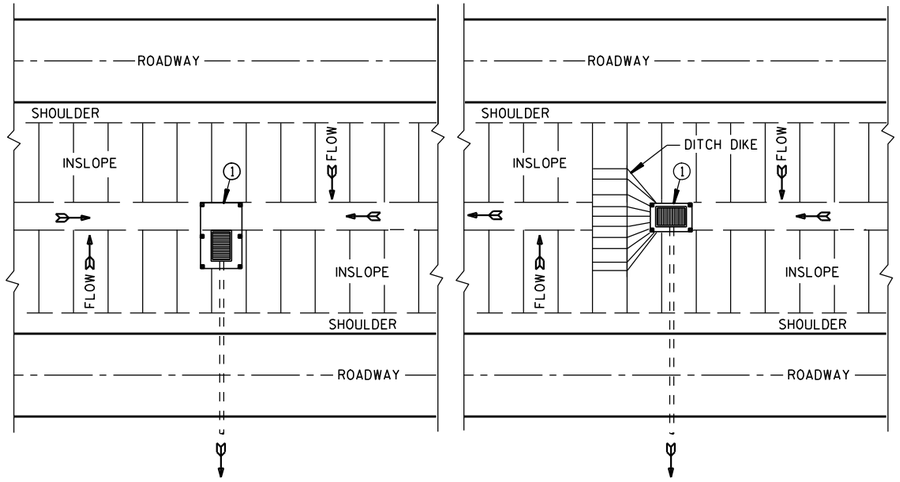
6

S.D.D. 8 E 8-3



PLAN VIEW

TYPICAL APPLICATION OF SILT FENCE



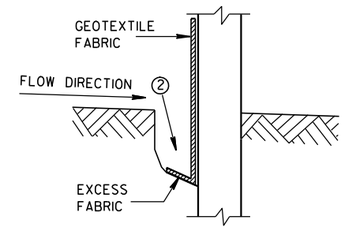
PLAN VIEW

SILT FENCE AT MEDIAN SURFACE DRAINS

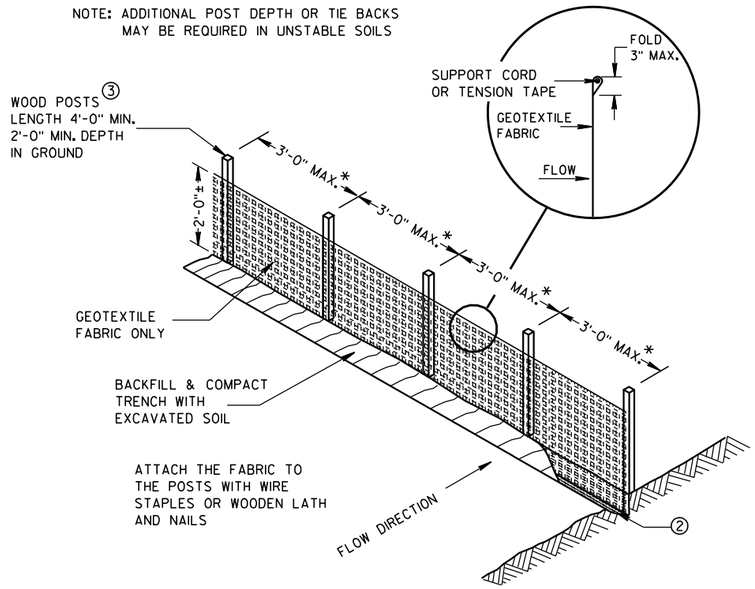
GENERAL NOTES

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

1. HORIZONTAL BRACE REQUIRED WITH 2" X 4" WOODEN FRAME OR EQUIVALENT AT TOP OF POSTS.
2. FOR MANUAL INSTALLATIONS THE TRENCH SHALL BE A MINIMUM OF 4" WIDE & 6" DEEP TO BURY AND ANCHOR THE GEOTEXTILE FABRIC. FOLD MATERIAL TO FIT TRENCH AND BACKFILL & COMPACT TRENCH WITH EXCAVATED SOIL.
3. WOOD POSTS SHALL BE A MINIMUM SIZE OF 1⅛" X 1⅛" OF OAK OR HICKORY.
4. SILT FENCE TO EXTEND ACROSS THE TOP OF THE PIPE.
5. CONSTRUCT SILT FENCE FROM A CONTINUOUS ROLL IF POSSIBLE BY CUTTING LENGTHS TO AVOID JOINTS. IF A JOINT IS NECESSARY USE ONE OF THE FOLLOWING TWO METHODS; A) OVERLAP THE END POSTS AND TWIST, OR ROTATE, AT LEAST 180 DEGREES, B) HOOK THE END OF EACH SILT FENCE LENGTH.

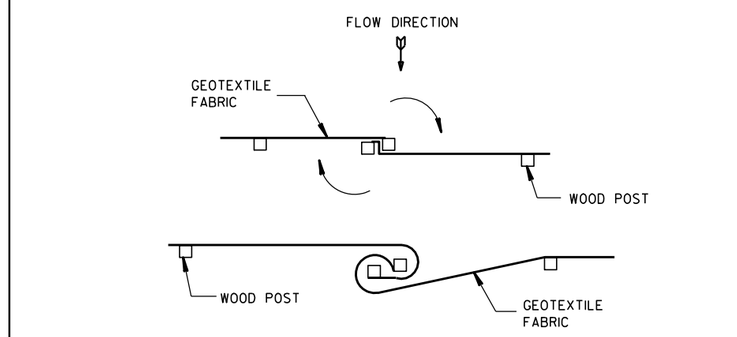


TRENCH DETAIL

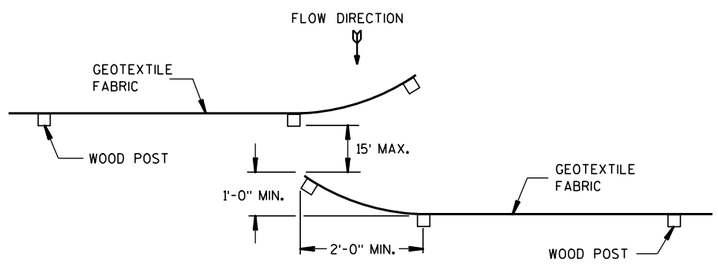


*NOTE: 8'-0" POST SPACING ALLOWED IF A WOVEN GEOTEXTILE FABRIC IS USED.

SILT FENCE

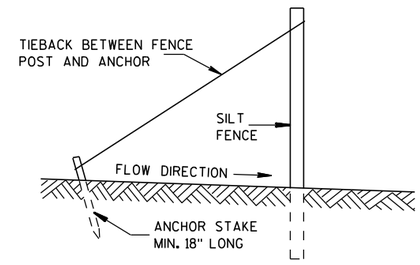


TWIST METHOD



HOOK METHOD

JOINING TWO LENGTHS OF SILT FENCE 5



SILT FENCE TIE BACK

(WHEN REQUIRED BY THE ENGINEER)

SILT FENCE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

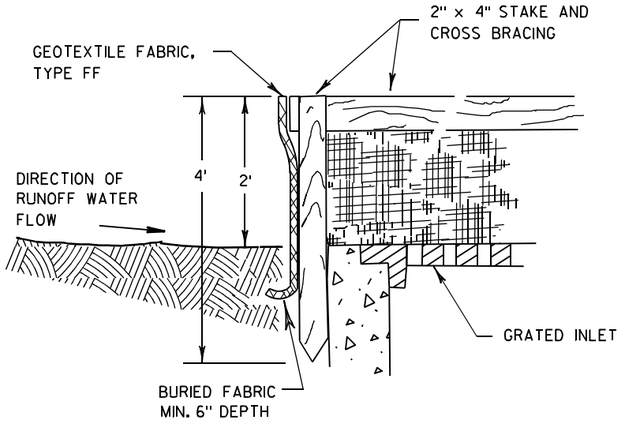
APPROVED
4-29-05 DATE
/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

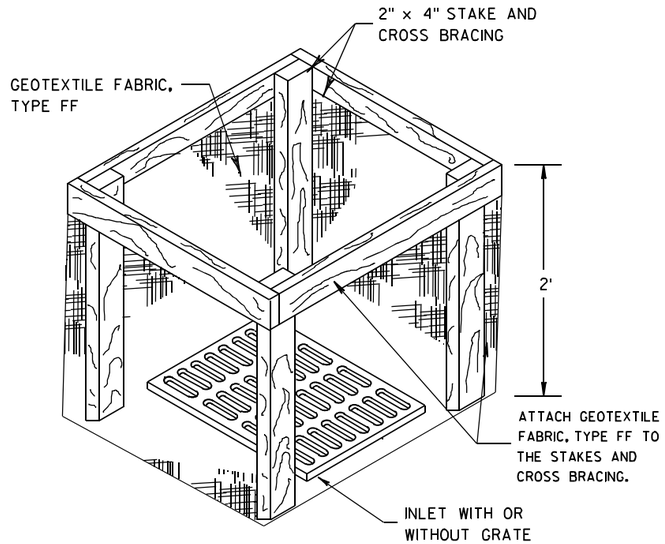
6

S.D.D. 8 E 9-6

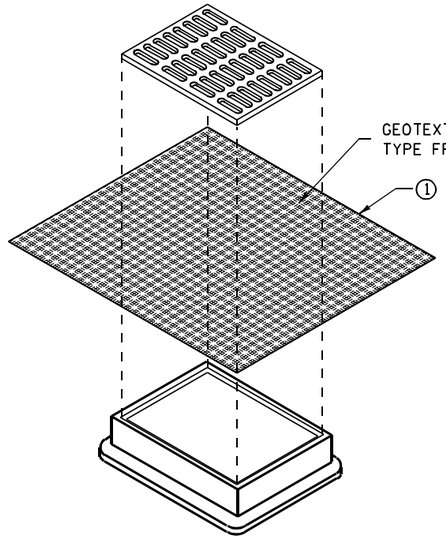
6

S.D.D. 8 E 9-6



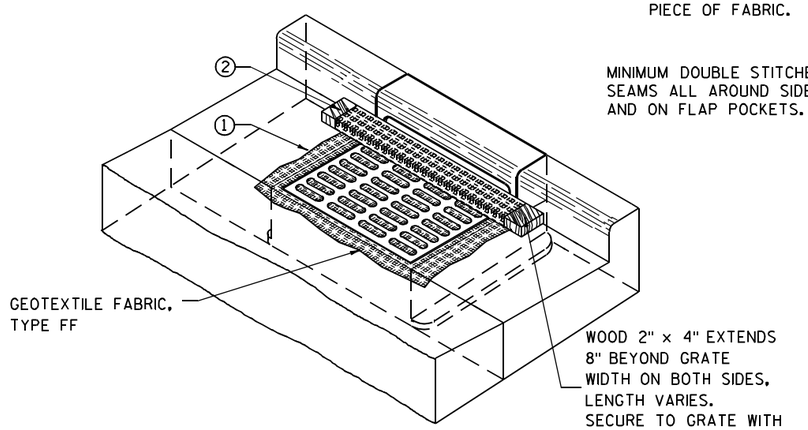


INLET PROTECTION, TYPE A

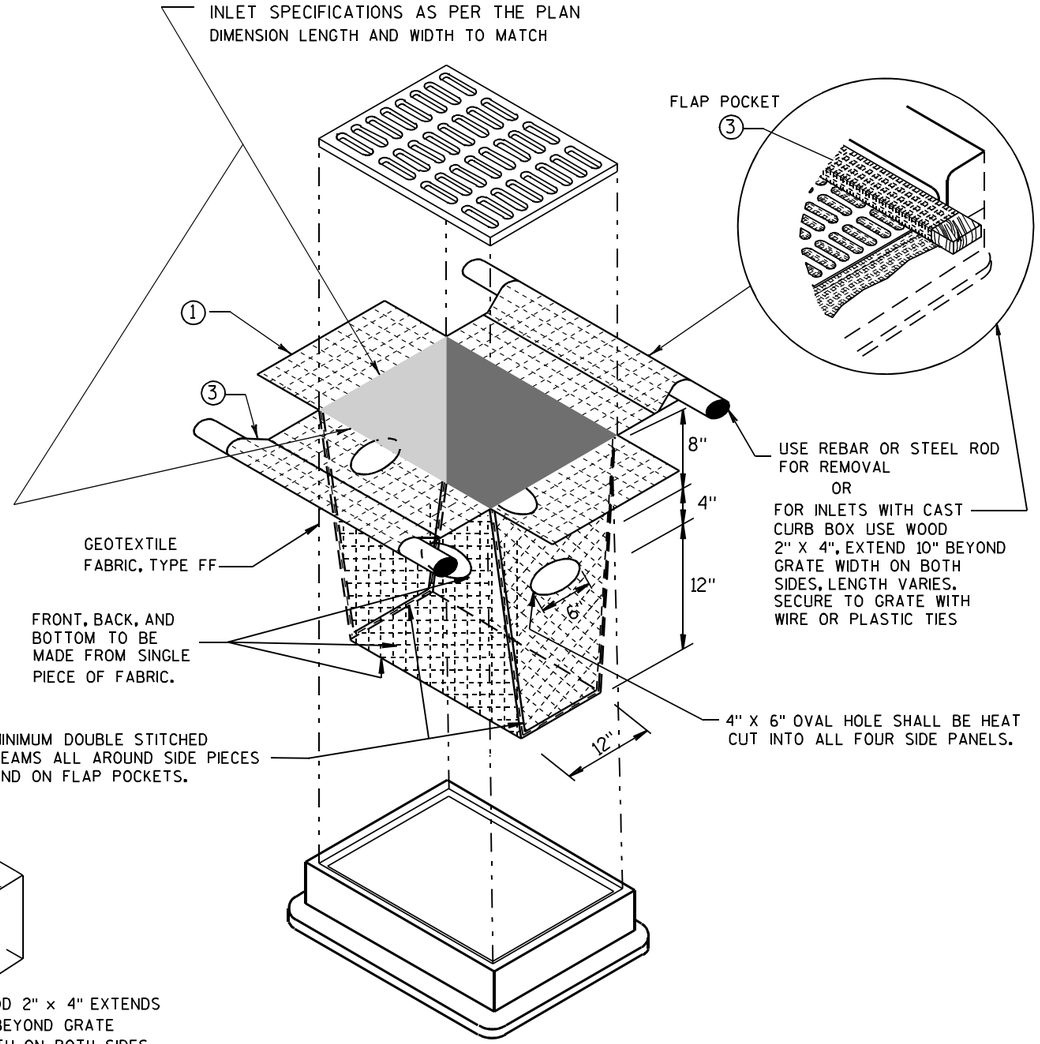


INLET PROTECTION, TYPE B
(WITHOUT CURB BOX)

(CAN BE INSTALLED IN ANY INLET WITHOUT A CURB BOX)



INLET PROTECTION, TYPE C (WITH CURB BOX)



INLET PROTECTION, TYPE D

(CAN BE INSTALLED IN ANY INLET TYPE WITH
OR WITHOUT A CURB BOX AS PER NOTE ②)

GENERAL NOTES

INLET PROTECTION DEVICES SHALL BE MAINTAINED OR REPLACED AT THE DIRECTION OF THE ENGINEER.

MANUFACTURED ALTERNATIVES APPROVED AND LISTED ON THE DEPARTMENT'S EROSION CONTROL PRODUCT ACCEPTABILITY LIST MAY BE SUBSTITUTED.

WHEN REMOVING OR MAINTAINING INLET PROTECTION, CARE SHALL BE TAKEN SO THAT THE SEDIMENT TRAPPED ON THE GEOTEXTILE FABRIC DOES NOT FALL INTO THE INLET. ANY MATERIAL FALLING INTO THE INLET SHALL BE REMOVED IMMEDIATELY.

① FINISHED SIZE, INCLUDING FLAP POCKETS WHERE REQUIRED, SHALL EXTEND A MINIMUM OF 10" AROUND THE PERIMETER TO FACILITATE MAINTENANCE OR REMOVAL.

② FOR INLET PROTECTION, TYPE C (WITH CURB BOX), AN ADDITIONAL 18" OF FABRIC IS WRAPPED AROUND THE WOOD AND SECURED WITH STAPLES. THE WOOD SHALL NOT BLOCK THE ENTIRE HEIGHT OF THE CURB BOX OPENING.

③ FLAP POCKETS SHALL BE LARGE ENOUGH TO ACCEPT WOOD 2X4.

INSTALLATION NOTES

TYPE B & C

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE CONTRACTOR SHALL DEMONSTRATE A METHOD OF MAINTENANCE, USING A SEWN FLAP, HAND HOLDS OR OTHER METHOD TO PREVENT ACCUMULATED SEDIMENT FROM ENTERING THE INLET.

TYPE D

DO NOT INSTALL INLET PROTECTION TYPE D IN INLETS SHALLOWER THAN 30", MEASURED FROM THE BOTTOM OF THE INLET TO THE TOP OF THE GRATE.

TRIM EXCESS FABRIC IN THE FLOW LINE TO WITHIN 3" OF THE GRATE.

THE INSTALLED BAG SHALL HAVE A MINIMUM SIDE CLEARANCE, BETWEEN THE INLET WALLS AND THE BAG, MEASURED AT THE BOTTOM OF THE OVERFLOW HOLES, OF 3". WHERE NECESSARY THE CONTRACTOR SHALL CINCH THE BAG, USING PLASTIC ZIP TIES, TO ACHIEVE THE 3" CLEARANCE. THE TIES SHALL BE PLACED AT A MAXIMUM OF 4" FROM THE BOTTOM OF THE BAG.

INLET PROTECTION
TYPE A, B, C, AND D

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

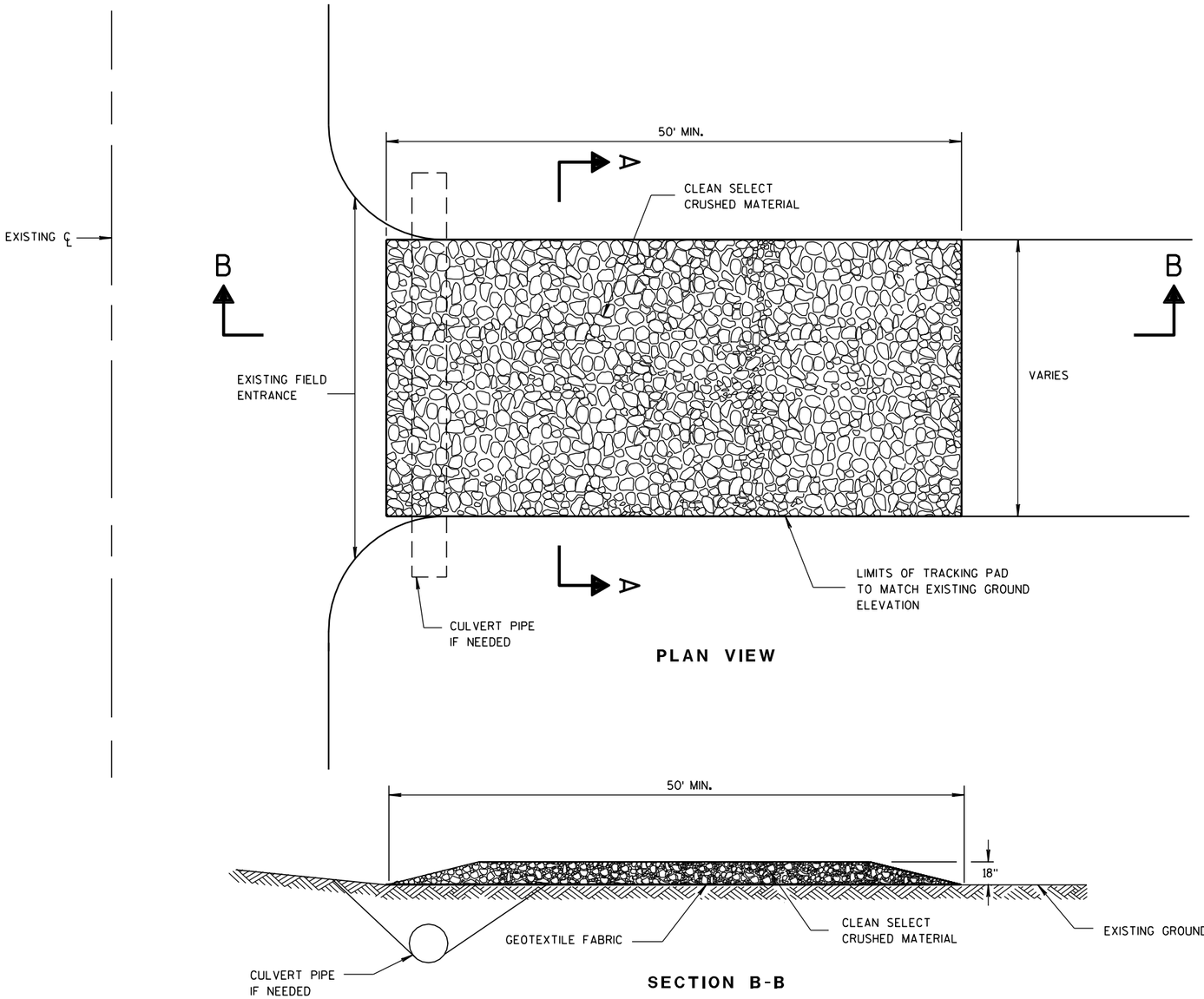
APPROVED

10/16/02
DATE

/S/ Beth Cannestra
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6
S.D.D. 8 E 10-2



PLAN VIEW

SECTION B-B

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

TRACKING PAD SHALL BE INSPECTED DAILY. DEFICIENT AREAS SHALL BE REPAIRED OR REPLACED IMMEDIATELY.

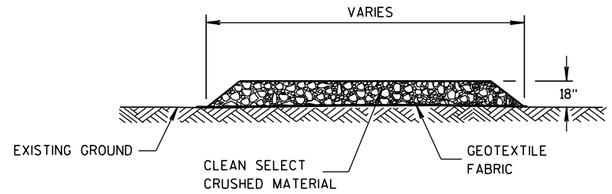
TRACKING PAD TO BE REMOVED AFTER CONSTRUCTION IS COMPLETED.

TRACKING PAD SHALL BE THE FULL WIDTH OF THE EGRESS POINT.

SURFACE WATER MUST BE PREVENTED FROM PASSING THROUGH THE TRACKING PAD. FLOWS SHALL BE DIVERTED AWAY, AROUND OR CONVEYED UNDER THE TRACKING PAD.

CULVERT PIPE OR OTHER BMP USED TO DIVERT WATER AWAY, AROUND OR UNDER THE TRACKING PAD SHALL BE DESIGNED TO CONVEY THE 2 YEAR - 24 HOUR EVENT.

THE COST OF ADDITIONAL BMP TO DIVERT WATER ARE INCIDENTAL TO THE TRACKING PAD BID ITEM.



SECTION A-A

TRACKING PAD

TRACKING PAD	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 3/24/2011 DATE FHWA	/S/ Jerry H. Zoda ROADWAY STANDARDS ENGINEER

6

S.D.D. 8 E 14-1

6

S.D.D. 8 E 14-1

METAL APRON ENDWALLS

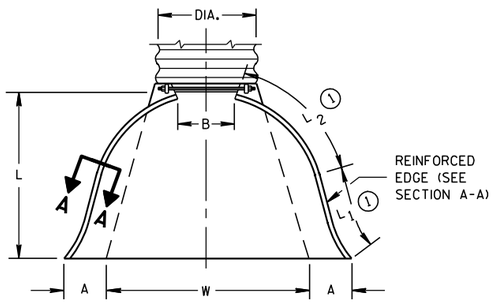
PIPE DIA. (IN.)	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
12	.064	.060	6	6	6	21	12	17 1/2	24	2 1/2 to 1	1 Pc.
15	.064	.060	7	8	6	26	14	21 3/4	30	2 1/2 to 1	1 Pc.
18	.064	.060	8	10	6	31	15	28 1/4	36	2 1/2 to 1	1 Pc.
21	.064	.060	9	12	6	36	18	29 5/8	42	2 1/2 to 1	1 Pc.
24	.064	.075	10	13	6	41	18	37 1/4	48	2 1/2 to 1	1 Pc.
30	.079	.075	12	16	8	51	18	52 1/4	60	2 1/2 to 1	1 Pc.
36	.079	.105	14	19	9	60	24	59 3/4	72	2 1/2 to 1	2 Pc.
42	.109	.105	16	22	11	69	24	75 5/8	84	2 1/2 to 1	2 Pc.
48	.109	.105	18	27	12	78	24	81	90	2 1/4 to 1	3 Pc.
54	.109	.105	18	30	12	84	30	85 1/2	102	2 1/4 to 1	3 Pc.
60	.109×	.105×	18	33	12	87	—	—	114	2 to 1	3 Pc.
66	.109×	.105×	18	36	12	87	—	—	120	2 to 1	3 Pc.
72	.109×	.105×	18	39	12	87	—	—	126	2 to 1	3 Pc.
78	.109×	.105×	18	42	12	87	—	—	132	1 1/2 to 1	3 Pc.
84	.109×	.105×	18	45	12	87	—	—	138	1 1/2 to 1	3 Pc.
90	.109×	.105×	18	37	12	87	—	—	144	1 1/2 to 1	3 Pc.
96	.109×	.105×	18	35	12	87	—	—	150	1 1/2 to 1	3 Pc.

× EXCEPT CENTER PANEL SEE GENERAL NOTES

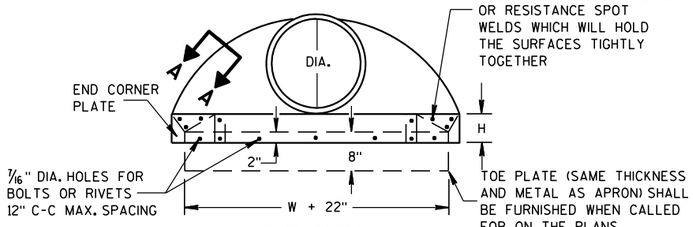
REINFORCED CONCRETE APRON ENDWALLS

PIPE DIA. (IN.)	DIMENSIONS (Inches) T	A	B	C	D	E	G	APPROX. SLOPE
12	2	4	24	48 7/8	72 1/8	24	2	3 to 1
15	2 1/4	6	27	46	73	30	2 1/4	3 to 1
18	2 1/2	9	27	46	73	36	2 1/2	3 to 1
21	2 3/4	9	36	37 1/2	73 1/2	42	2 3/4	3 to 1
24	3	9 1/2	43 1/2	30	73 1/2	48	3	3 to 1
27	3 1/4	10 1/2	49 1/2	24	73 1/2	54	3 1/4	3 to 1
30	3 1/2	12	54	19 3/4	73 1/2	60	3 1/2	3 to 1
36	4	15	63	34 3/4	97 3/4	72	4	3 to 1
42	4 1/2	21	63	35	98	78	4 1/2	3 to 1
48	5	24	72	26	98	84	5	3 to 1
54	5 1/2	27	65	* 33 1/4 - ** 35	* 98 1/4 - ** 100	90	5 1/2	2 2/5 to 1
60	6	* 30 - ** 35	60	39	99	96	5	2 to 1
66	6 1/2	* 24 - ** 30	* 72 - ** 78	* 21 - ** 27	99	102	5 1/2	2 to 1
72	7	* 24 - ** 36	78	21	99	108	6	2 to 1
78	7 1/2	* 24 - ** 36	78	21	99	114	6 1/2	2 to 1
84	8	36	90 1/2	21	111 1/2	120	6 1/2	1 1/2 to 1
90	8 1/2	41	87 1/2	24	111 1/2	132	6 1/2	1 1/2 to 1

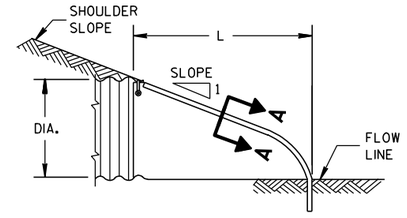
*MINIMUM
**MAXIMUM



PLAN VIEW

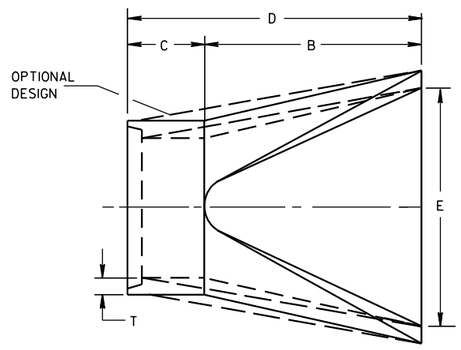


END VIEW

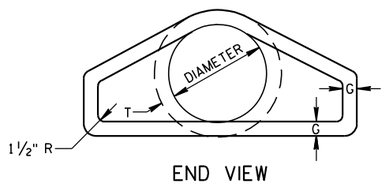


SIDE ELEVATION

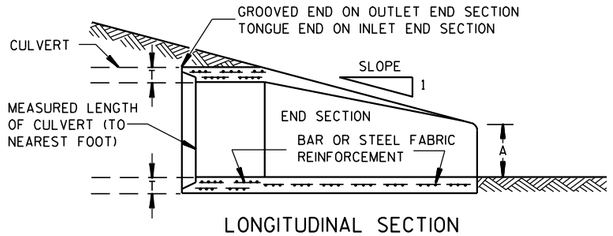
METAL ENDWALLS



PLAN

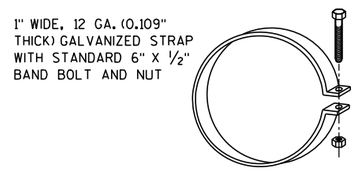


END VIEW



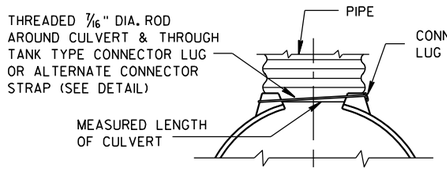
LONGITUDINAL SECTION

CONCRETE ENDWALLS

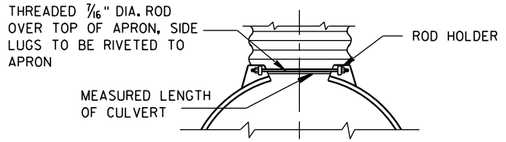


ALTERNATE FOR TYPE 1 CONNECTION

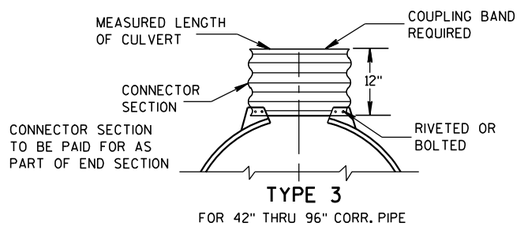
END SECTION CONNECTOR STRAP



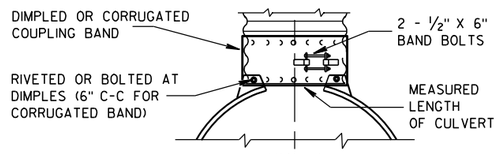
TYPE 1
FOR 12" THRU 24" CORR. PIPE



TYPE 2
FOR 30" THRU 96" CORR. PIPE



TYPE 3
FOR 42" THRU 96" CORR. PIPE



TYPE 5
ALTERNATE FOR:
ALL SIZES CORRUGATED CIRCULAR PIPE

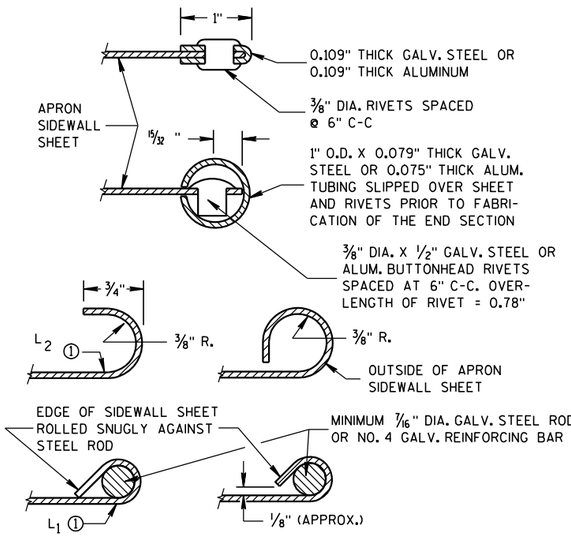
NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL. AND CORRUGATED BAND FITS INSIDE ENDWALL. DIMPLED BAND MAY BE USED WITH HELICALLY CORRUGATED PIPE.

FOR CIRCUMFERENTIALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2, 3 OR 5 AS APPLICABLE.

FOR HELICALLY CORRUGATED PIPE USE ENDWALL CONNECTION DETAILS 1, 2 OR 5.

FOR HELICALLY CORRUGATED PIPES WITH TWO CIRCUMFERENTIAL CORRUGATIONS AT EACH END USE ENDWALL CONNECTION DETAILS 1, 2 OR 3.

CONNECTION DETAILS



SECTION A-A

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 60" DIAMETER PIPE AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 60" THROUGH 96" DIAMETER APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

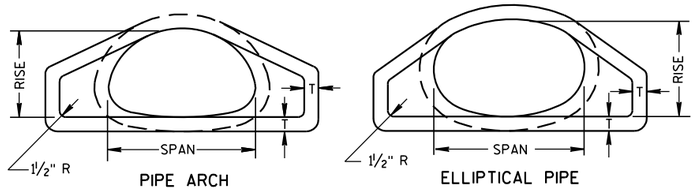
① FOR PIPE SIZES UP TO 60" DIAMETER, A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR CULVERT PIPE

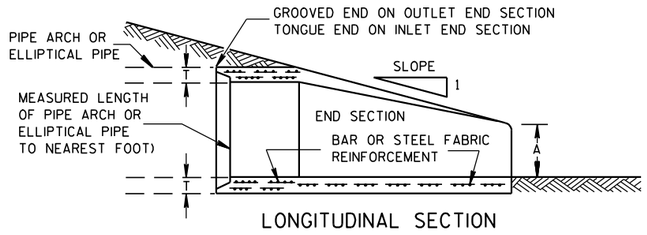
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
11/30/94 DATE
/S/ Rory L. Rhinesmith CHIEF ROADWAY DEVELOPMENT ENGINEER
FHWA

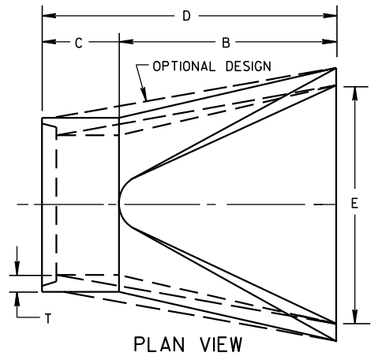
6
S.D.D. 8 F 1-11



END VIEW

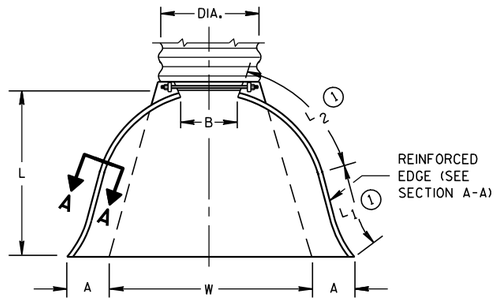


LONGITUDINAL SECTION

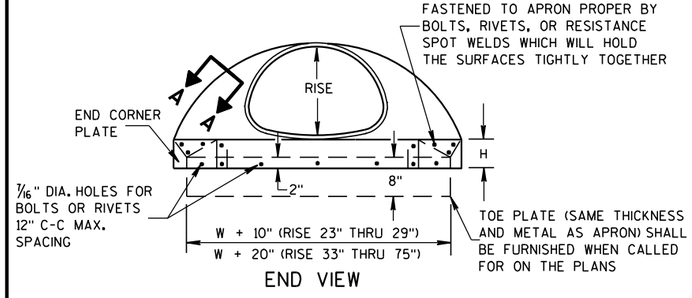


PLAN VIEW

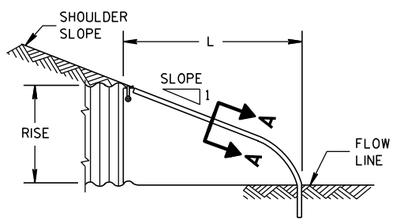
CONCRETE ENDWALLS



PLAN VIEW

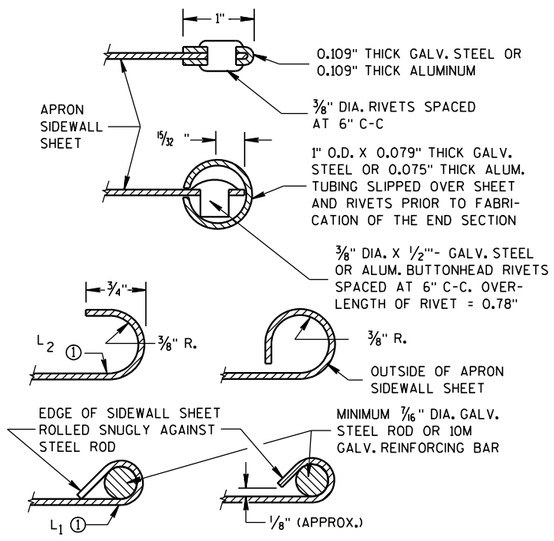


END VIEW



SIDE ELEVATION

METAL ENDWALLS



SECTION A-A

2- 2/3" X 1/2" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
15	17	13	.064	.060	7	9	6	19	14	16	30	2½ to 1	1 Pc.
18	21	15	.064	.060	7	10	6	23	14	19⅜	36	2½ to 1	1 Pc.
21	24	18	.064	.060	8	12	6	28	18	21¾	42	2½ to 1	1 Pc.
24	28	20	.064	.060	9	14	6	32	18	27½	48	2½ to 1	1 Pc.
30	35	24	.079	.075	10	16	6	39	18	37⅝	60	2½ to 1	1 Pc.
36	42	29	.079	.075	12	18	8	46	24	45⅜	75	2½ to 1	1 Pc.
42	49	33	.109	.105	13	21	9	53	24	54¾	85	2½ to 1	2 Pc.
48	57	38	.109	.105	18	26	12	63	24	68	90	2½ to 1	3 Pc.
54	64	43	.109	.105	18	30	12	70	24	72¾	102	2¼ to 1	3 Pc.
60	71	47	.109*	.105*	18	33	12	77	30	82¼	114	2¼ to 1	3 Pc.
66	77	52	.109*	.105*	18	36	12	77	—	—	126	2 to 1	3 Pc.
72	83	57	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.

3" X 1" CORRUGATIONS

EQUIV. DIA. (Inches)	(Inches) SPAN	(Inches) RISE	MIN. THICK. (Inches) STEEL	MIN. THICK. (Inches) ALUM.	DIMENSIONS (Inches) A (±1")	B (MAX.)	H (±1")	L (±1 1/2")	L1 ①	L2 ①	W (±2")	APPROX. SLOPE	BODY
48	53	41	.109	.105	18	26	12	63	24	72¾	90	2½ to 1	2 Pc.
54	60	46	.109	.105	18	30	12	70	30	82¼	102	2 to 1	2 Pc.
60	66	51	.109*	.105*	18	33	12	77	—	—	114	1½ to 1	3 Pc.
66	73	55	.109*	.105*	18	36	12	77	—	—	126	1½ to 1	3 Pc.
72	81	59	.109*	.105*	18	39	12	77	—	—	138	2 to 1	3 Pc.
78	87	63	.109*	.105*	22	38	12	77	—	—	148	1½ to 1	3 Pc.
84	95	67	.109*	.105*	22	34	12	77	—	—	162	1½ to 1	3 Pc.
90	103	71	.109*	.105*	22	38	12	77	—	—	174	1½ to 1	3 Pc.
96	112	75	.109*	.105*	24	40	12	77	—	—	174	1½ to 1	3 Pc.

NOTE: ALL SPLICES TO BE LAP RIVETED OR BOLTED.

* EXCEPT CENTER PANEL SEE GENERAL NOTES

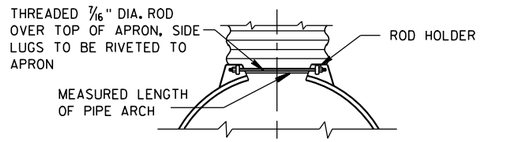
REINFORCED CONCRETE PIPE ARCH

EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	29	18	3	8½	39	33	72	48	3 to 1
30	36	22	3½	9½	50	46	96	60	3 to 1
36	44	27	4	11⅛	60	36	96	72	3 to 1
42	51	31	4½	15 13/16	60	36	96	78	3 to 1
48	58	36	5	21	60	36	96	84	3 to 1
54	65	40	5½	25½	60	36	96	90	3 to 1
60	73	45	6	31	60	36	96	96	3 to 1
72	88	54	7	31	60	39	99	120	2 to 1
84	102	62	8	28½	83	19	102	144	2 to 1

REINFORCED CONCRETE ELLIPTICAL PIPE

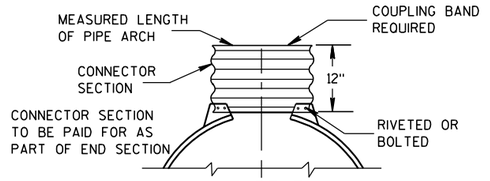
EQUIV. DIA. (Inches)	DIMENSIONS (Inches) ** SPAN	** RISE	T	A	B	C	D	E	APPROX. SLOPE
24	30	19	3¼	8½	39	33	72	48	3 to 1
30	38	24	3¾	9½	54	18	72	60	3 to 1
36	45	29	4½	11⅛	60	24	84	72	2½ to 1
42	53	34	5	15¾	60	36	96	78	2½ to 1
48	60	38	5½	21	60	36	96	84	2½ to 1
54	68	43	6	25½	60	36	96	90	2½ to 1
60	76	48	6½	30	60	36	96	96	2½ to 1

**NOMINAL SIZE



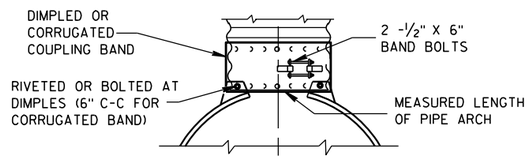
TYPE 2

FOR 17" X 13" THRU 112" X 75" PIPE ARCH



TYPE 3

FOR 64" X 43" THRU 112" X 75" PIPE ARCH



TYPE 5

ALTERNATE FOR:

ALL SIZES CORRUGATED PIPE ARCHES

NOTE: DIMPLED BAND FITS OVER OUTSIDE OF ENDWALL, AND CORRUGATED BAND FITS INSIDE ENDWALL.

CONNECTION DETAILS

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

CONCRETE APRON ENDWALLS MAY NOT BE USED WITH GALVANIZED STEEL OR ALUMINUM CULVERT PIPE OR VISE VERSA. GALVANIZED STEEL OR ALUMINUM APRON ENDWALLS SHALL NORMALLY BE INSTALLED ON CULVERT PIPE OF THE SAME METAL.

ALL THREE PIECE STEEL APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.109" SIDES AND 0.138" CENTER PANELS. ALL THREE PIECE ALUMINUM APRON ENDWALLS FOR 66" X 51" PIPE ARCH AND LARGER SHALL HAVE 0.105" SIDES AND 0.134" CENTER PANELS. THE WIDTH OF CENTER PANELS SHALL BE GREATER THAN 20 PERCENT OF THE PIPE ARCH PERIMETER.

LAP SEAMS SHALL BE TIGHTLY JOINED BY GALVANIZED RIVETS OR BOLTS FOR STEEL UNITS AND ALUMINUM RIVETS AND BOLTS FOR ALUMINUM UNITS. FOR THE 77" X 52" THROUGH 112" X 75" APRON ENDWALL SIZES, THE REINFORCED EDGES AND CENTER PANEL SEAMS SHALL BE FURTHER REINFORCED WITH GALVANIZED STEEL OR ALUMINUM STIFFENER ANGLES. THE ANGLES SHALL BE ATTACHED BY GALVANIZED NUTS AND BOLTS FOR STEEL UNITS AND ALUMINUM NUTS AND BOLTS FOR ALUMINUM UNITS.

WHERE TWO OR MORE PIPES WITH APRON ENDWALLS ARE LAID ADJACENT TO EACH OTHER, THEY SHALL BE SEPARATED BY A DISTANCE SUFFICIENT TO PROVIDE A MINIMUM CLEARANCE OF 6 INCHES BETWEEN APRON ENDWALLS.

① FOR PIPE ARCH SIZES UP TO 73" X 55" A 180° ROLLED EDGE MAY BE USED INSTEAD OF STEEL ROD REINFORCEMENT. SEE SECTION A-A.

APRON ENDWALLS FOR PIPE ARCH AND ELLIPTICAL PIPE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

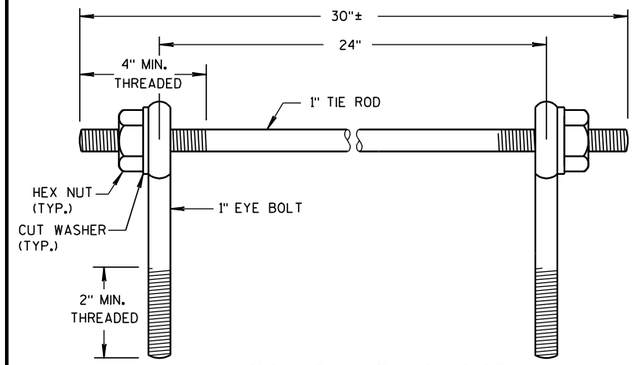
APPROVED

11/30/94 — DATE

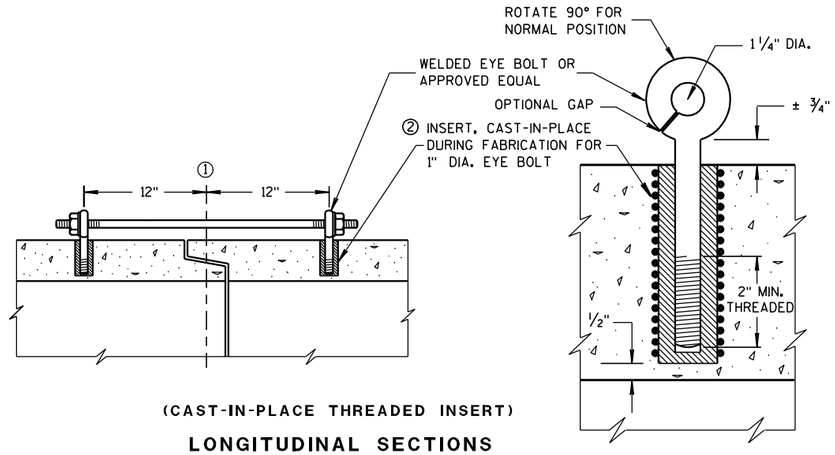
/S/ Rory L. Rhinesmith — CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

6
S.D.D. 8 F 2-1



EYE BOLTS AND TIE ROD



(CAST-IN-PLACE THREADED INSERT)

LONGITUDINAL SECTIONS

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 1)

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS, AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

CONCRETE CULVERT AND STORM SEWER PIPE SHALL BE TIED TOGETHER IN THE MANNER ILLUSTRATED BY THIS DETAIL AT LOCATIONS DESIGNATED IN THE STANDARD SPECIFICATIONS AND THE PLAN. THE CONTRACTOR MAY USE EITHER ALTERNATE 1, 2 OR 3 FOR DRAINAGE STRUCTURES. ONLY ALTERNATE 1 AND 3 MAY BE USED FOR CATTLE PASSES, UNLESS OTHERWISE STATED IN THE CONTRACT. THE MATERIALS, FABRICATION AND WORK NECESSARY TO TIE THE PIPE BY THIS DETAIL WILL BE CONSIDERED INCIDENTAL TO THE PIPE AND APRON ENDWALLS IF REQUIRED.

DETAILED DRAWINGS FOR PROPOSED ALTERNATE DESIGNS FOR JOINT TIES SHALL BE SUBMITTED TO THE ENGINEER FOR APPROVAL.

JOINT TIES TO BE HOT-DIP GALVANIZED PER ASTM A 153.

① ℄ OF TONGUE AND GROOVE OR BELL AND SPIGOT JOINTS.

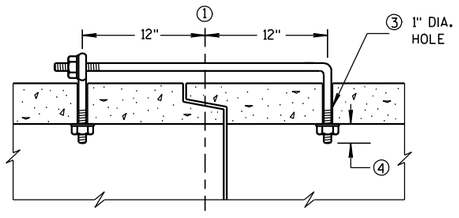
② THE INSIDE OF THE THREADED INSERTS SHALL BE CLEAN TO ALLOW THE INSERTION OF THREADED EYE BOLTS.

③ HOLES SHALL BE CAST-IN-PLACE OR DRILLED 12 INCHES FROM ℄ OF TONGUE AND GROOVE.

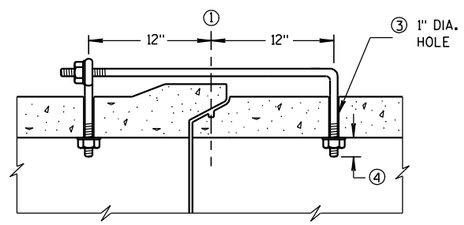
④ BOLT PROJECTION INSIDE OF PIPE SHALL NOT EXCEED 2 INCHES.

⑤ OPENING TO BE ROD DIAMETER PLUS 1 INCH.

⑥ LENGTH ADEQUATE TO EXTEND TO WITHIN 1/2 INCH OF THE INNER SURFACE OF THE PIPE.



(TONGUE & GROOVE PIPE)

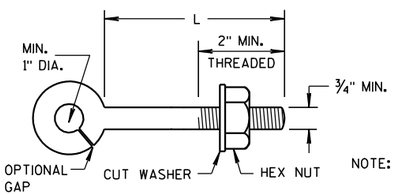


(MODIFIED BELL PIPE)

LONGITUDINAL SECTION

EYE BOLT DIMENSION TABLE

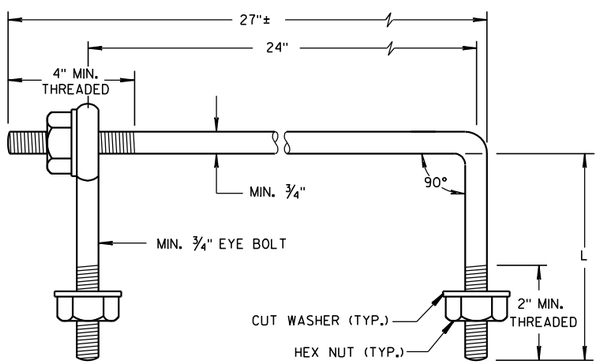
PIPE SIZE	L = LENGTH	
	TONGUE & GROOVE PIPE	MODIFIED BELL PIPE
18" TO 24"	4 1/2"	6 1/4"
30"	5"	7"
36"	5 1/2"	7"
42"	6"	
48"	6 1/2"	
60"	7 1/2"	
66"	8"	



NOTE:

EYE BOLT

NOTE: TWO EYE BOLTS MAY BE USED WITH A 30" LONG THREADED ROD IN LIEU OF THE 90° BENT TIE ROD.



EYE BOLT AND TIE ROD

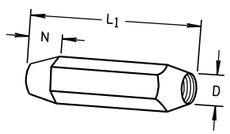
(JOINT TIES FOR 18" TO 66" DIA. CONCRETE PIPE)

EYE BOLT AND TIE ROD ASSEMBLY (ALTERNATE NO. 2)

ADJUSTABLE TIE ROD TABLE

PIPE DIAMETER	TIE ROD DIAMETER	D	L_1	N
12-60	5/8	5/8	5	1/2
66-84	3/4	3/4	5	1/2
90-108	1	1	7	1 1/16

DIMENSIONS SHOWN ARE IN INCHES



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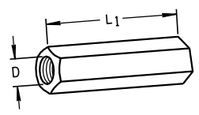
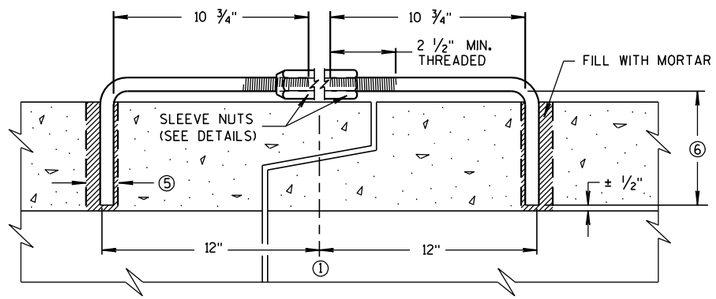


PLAIN

RIGHT AND LEFT THREADS

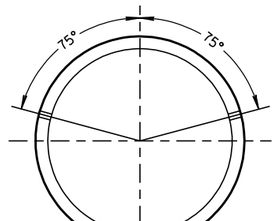
SLEEVE NUTS



LONGITUDINAL SECTION

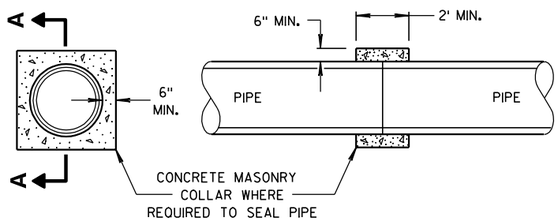
(JOINT TIES FOR 12" TO 108" DIA. CONCRETE PIPE)

ADJUSTABLE TIE ROD (ALTERNATE NO. 3)



PLACEMENT OF (2) CAST-IN-PLACE INSERTS OR HOLES DURING FABRICATION FOR PIPE SECTIONS REQUIRING TIE RODS

TRANSVERSE SECTION



SECTION A-A

CONCRETE COLLAR DETAIL

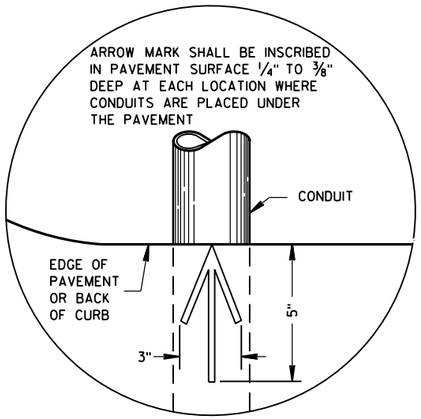
JOINT TIES FOR CONCRETE PIPE AND CONCRETE COLLAR DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/5/2012 — DATE
/S/ Jerry H. Zogg — ROADWAY STANDARDS ENGINEER
351
FHWA

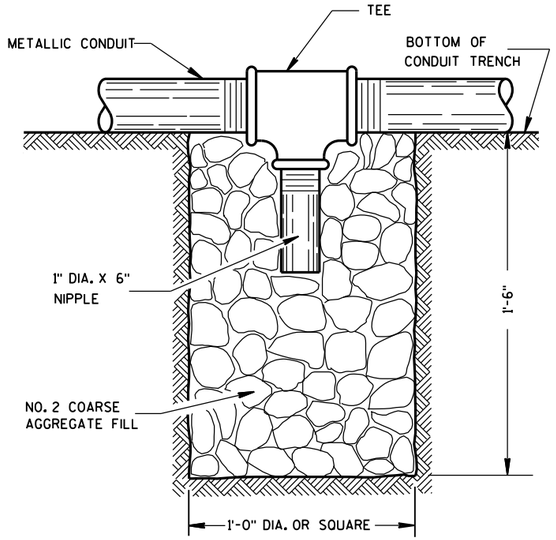
6

S.D.D. 8 F 4-7



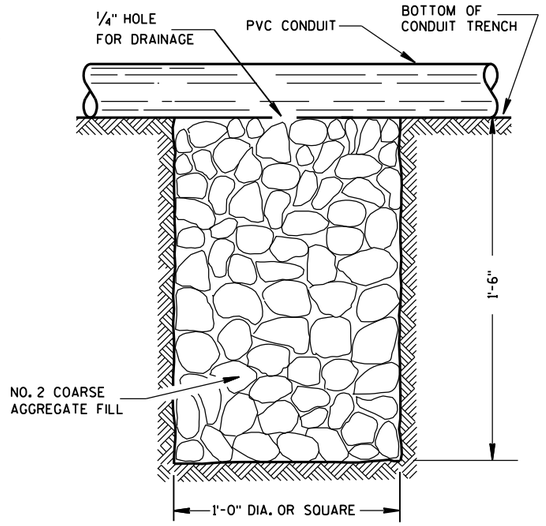
PLAN VIEW

ARROW MARK



NOTE: INSTALL AT LOCATIONS WHERE METALLIC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR METALLIC CONDUIT



NOTE: INSTALL AT LOCATIONS WHERE PVC CONDUITS CANNOT BE PITCHED TO DRAIN INTO A PULL BOX.

DRAIN SUMP FOR PVC CONDUIT

GENERAL NOTES

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

METALLIC (STANDARD SPECIFICATION 652.2.2) OR NONMETALLIC (STANDARD SPECIFICATION 652.2.3) CONDUIT SHALL BE FURNISHED AND PLACED AS SHOWN.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

THE TRENCH SHALL NOT BE BACKFILLED PRIOR TO INSPECTION OF THE CONDUIT.

ALL METALLIC CONDUIT RACEWAY ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUIT IN WHICH WIRE OR CABLE IS TO BE INSTALLED SHALL BE BUSHED WITH APPROVED THREADED BUSHINGS BEFORE INSTALLATION OF THE WIRE OR CABLE.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

ALL NONMETALLIC CONDUIT SHALL BE CAPPED OR PLUGGED IMMEDIATELY AFTER INSTALLATION AND SHALL REMAIN CAPPED OR PLUGGED UNTIL WIRE/CABLES ARE INSTALLED.

NONMETALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

BENDING OF PVC ELECTRICAL CONDUIT SHALL BE ACCOMPLISHED BY USING A BLANKET OR EMERSION TYPE TANK DESIGNED FOR THE PURPOSE OF BENDING PVC ELECTRICAL CONDUIT.

ALL CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES ON NONMETALLIC CONDUIT. (SEE NEC 347.5)

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY U.L. LISTED ADAPTER FITTINGS SHALL BE USED.

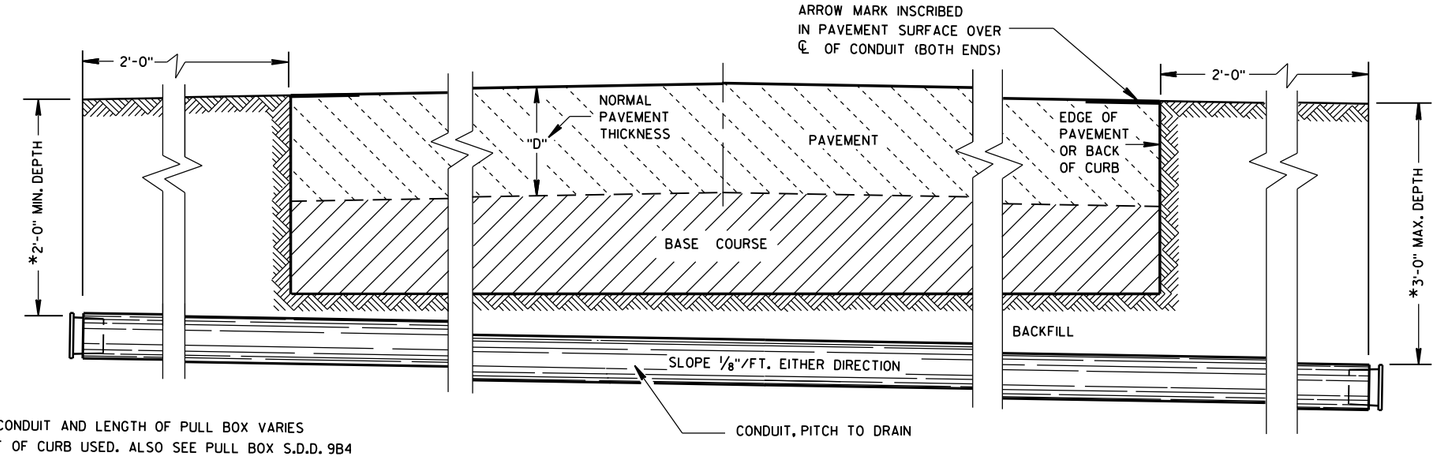
PRIOR TO CONDUIT ACCEPTANCE, CONDUIT CAPS OR PLUGS SHALL BE REMOVED, AND THE CAPS, PLUGS AND CONDUIT ENDS SHALL BE THOROUGHLY CLEANED AND THEN THE CAPS OR PLUGS REINSTALLED TO ENSURE THAT THE CAPS OR PLUGS CAN BE EASILY REMOVED IN THE FUTURE.

ALL CONDUIT BEING FURNISHED AND INSTALLED SHALL HAVE THE U.L. LABEL FIRMLY ATTACHED.

CONDUIT RUNS SHALL BE THE SAME SIZE OF CONDUIT FROM ONE END TO THE OTHER (FROM PULL BOX TO PULL BOX-OR-JUNCTION BOX TO JUNCTION BOX-OR-BASE TO BASE, ETC.).

TRACER WIRE SHALL BE INSTALLED AS STATED IN THE STANDARD SPECIFICATION, ITEM 652.3.1.1.

ALL CONDUIT RUNS SHALL BE STRAIGHT (WITHOUT BENDS) FROM PULL BOX TO PULL BOX, PULL BOX TO BASE AND BASE TO BASE AS SHOWN ON THE PLANS.



*DEPTH OF CONDUIT AND LENGTH OF PULL BOX VARIES WITH HEIGHT OF CURB USED. ALSO SEE PULL BOX S.D.D. 9B4

SIDE ELEVATION

DETAIL FOR CONDUIT UNDER PAVED HIGHWAYS

CONDUIT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL 352
FHWA

6

S.D.D. 9 B 2-9

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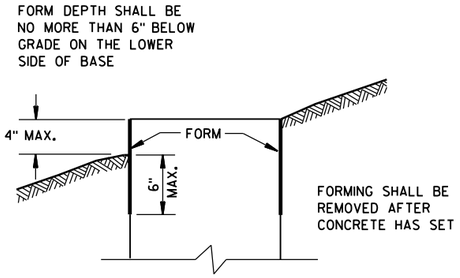
S.D.D. 9 B 2-9



FORMING DETAIL

QUANTITY REQUIREMENTS	CONCRETE BASE TYPE		
	1	2	5 & 6
APPROX. CUBIC YARDS OF CONCRETE	0.40	0.57	0.40
LBS. OF HOOP BAR STEEL	NONE	23	16
LBS. OF VERTICAL BAR STEEL	NONE	60	18

GENERAL NOTES

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

BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT SIZES AND LOCATIONS SHALL BE AS SHOWN ON THE PLANS.

THE FINAL OR TERMINATING CONCRETE BASE IN A CONDUIT RUN SHALL HAVE A 6" EXIT STUB INSTALLED FOR FUTURE CABLING USE. THE EXIT STUB SHALL BE SIZED AS USED THROUGHOUT THE CONDUIT RUN AS SHOWN AT THE ENTRANCE OF THE BASE.

MINIMUM BENDING RADIUS OF CONDUIT IS EQUAL TO 6 X THE DIAMETER.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1 INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

GENERAL NOTES (CONTINUED)

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF CONCRETE BASES BEFORE INSTALLATION OF CABLE OR WIRE.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1 FOOT OR LESS.

A NO. 4 AWG, STRANDED COPPER EQUIPMENT GROUNDING CONDUCTOR SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE (GROUND ROD) FOR TYPE 1, TYPE 2, TYPE 5, AND TYPE 6 BASES.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE FURNISHED AND INSTALLED TO ENTER THE BASE OF THE TYPE 2 AND TYPE 5 BASES THROUGH A 1 INCH CONDUIT INSTALLED FOR GROUNDING PURPOSES, LEAVING A 4 FOOT COIL OF WIRE ABOVE THE CONCRETE BASE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE THREADED 12" IN LENGTH ON EACH END OF THE ROD. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 OF THE STANDARD SPECIFICATIONS.

WASHERS AND LOCK WASHERS ARE REQUIRED ON ALL ANCHOR RODS.

WHEN ANCHOR RODS USING THE ALTERNATE "L" BEND ARE FURNISHED, THE 4" "L" BEND SHALL BE IN ADDITION TO THE SPECIFIED ANCHOR ROD BAR LENGTH. THE "L" BEND END SHALL NOT BE THREADED.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL.

WELDING OF THE ANCHOR RODS TO THE CAGE IS UNACCEPTABLE. TIE WIRES SHALL BE USED.

BAR STEEL REINFORCEMENT SHALL BE COATED WITH POWDERED EPOXY RESIN IN ACCORDANCE WITH SECTION 505 OF THE STANDARD SPECIFICATIONS (LATEST EDITION).

(1) THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES. THE MINIMUM DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18 INCHES. THE MAXIMUM DEPTH OF ALL CONDUIT SHALL BE 36 INCHES EXCEPT WITH WRITTEN APPROVAL BY THE ENGINEER.

(2) (4) 1" DIA. X 3'-6" ANCHOR RODS.

(3) (4) 1" DIA. X 5'-0" ANCHOR RODS.

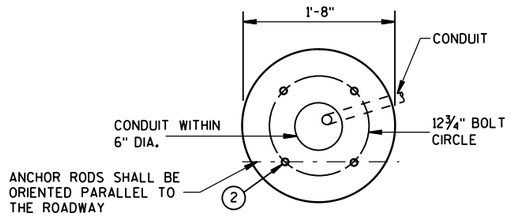
(4) (6) NO. 6 X 6'-8" BAR STEEL REINFORCEMENT.

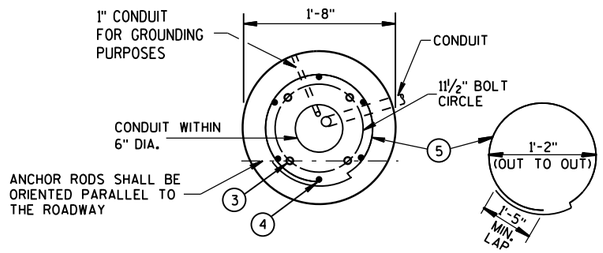
(5) (7) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.

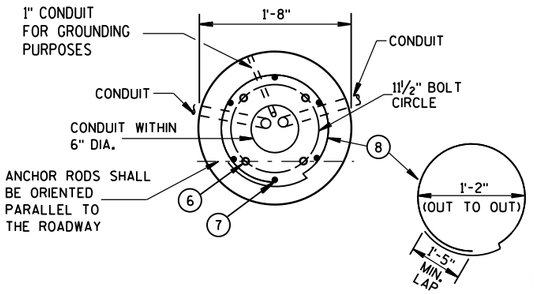
(6) (4) 1" DIA. X 3'-6" ANCHOR RODS.

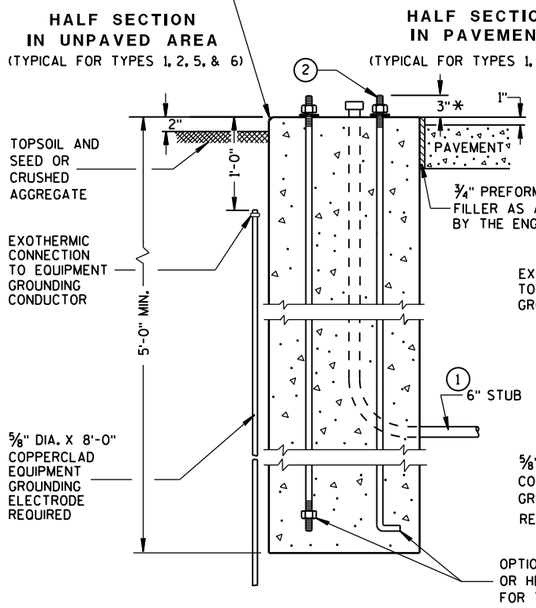
(7) (6) NO.4 X 4'-8" BAR STEEL REINFORCEMENT.

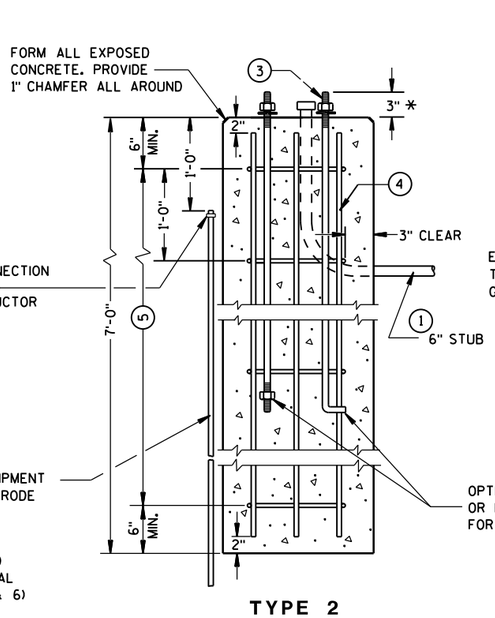
(8) (5) NO. 4 X 5'-1" BAR STEEL REINFORCEMENT @ 1'-0" C-C.



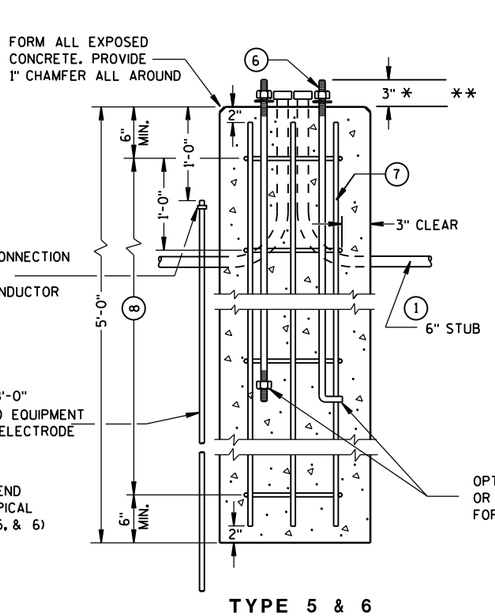








TYPE 2



TYPE 5 & 6

CONCRETE BASES

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

** FOR NONBREAKAWAY INSTALLATIONS, 4½" ± ANCHOR ROD PROJECTION WITH THE USE OF LEVELING NUTS. RODENT SCREEN REQUIRED.

CONCRETE BASES, TYPES 1, 2, 5, & 6

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

6

S.D.D. 9 C 2-7

GENERAL NOTES

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

FOUR (4) BOLTS SHALL BE FURNISHED WITH EACH TRANSFORMER BASE. BOLTS SHALL BE 1" DIAMETER, 4" IN LENGTH, WITH WASHERS, LOCK WASHERS AND NUTS. BOLTS, NUTS AND WASHERS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 641.2.2 OF THE STANDARD SPECIFICATIONS.

LEVELING SHIMS, IF NEEDED, SHALL BE DESIGNED FOR THE PURPOSE AND USED UNDER CAST BASES WHEN PLUMBING POLES OR STANDARDS DURING INSTALLATION. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE.

SHIM LENGTH SHALL BE LONG ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.

DOUBLE NUTTING IS NOT ACCEPTABLE FOR LEVELING OR MOUNTING PURPOSES.

A NEMA APPROVED, U.L. LISTED, COPPER WITH BRASS OR STAINLESS STEEL SET SCREW, DIRECT BURY RATED, MECHANICAL CONNECTOR (LUG), SIZED TO ACCEPT AWG. #10 TO #4 COPPER STRANDED WIRE SHALL BE FURNISHED AND INSTALLED IN THE PEDESTAL AND TRANSFORMER BASES.

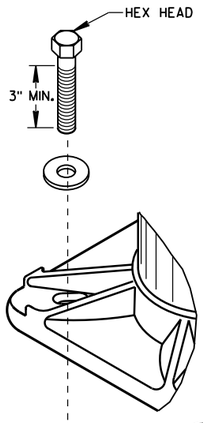
THE MECHANICAL CONNECTOR SHALL BE INSTALLED USING A 1/4" - 20 (TPI) STAINLESS STEEL HEX HEAD BOLT OF SUFFICIENT LENGTH TO FIRMLY ATTACH THE LUG TO THE BASE.

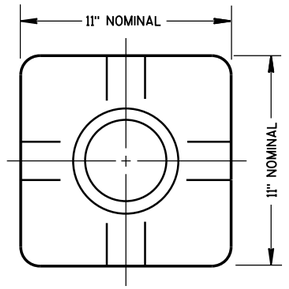
SHOULD THE MANNER OF ATTACHMENT OF THE LUG REQUIRE WASHERS, HEX NUTS, LOCK WASHER - THEY SHALL BE STAINLESS STEEL AS IS THE BOLT. THE MANNER OF ATTACHMENT SHALL NOT BLOCK ACCESSIBILITY TO WIRE PLACEMENT IN THE CONNECTOR.

PEDESTAL BASE COLLAR THREADING SHALL BE TAPERED AND IN ACCORDANCE WITH NATIONAL PIPE THREADING DIMENSIONS.

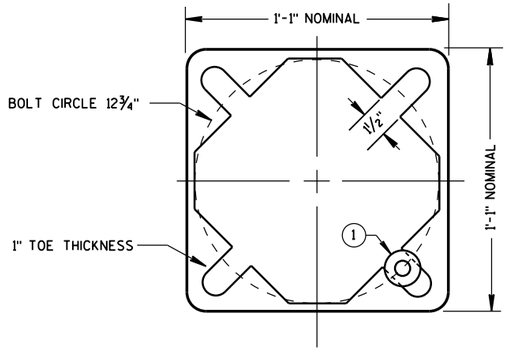
BASE COLLAR THREADING SHALL EXTEND INTO THE BASE COLLAR WITH SUFFICIENT DEPTH TO ACCEPT THE INSTALLATION OF TRAFFIC SIGNAL STANDARDS TO A DEPTH OF 1 1/2", THEN TIGHTENING TO A POINT OF BEING IMMOVABLE.

THE ACCESS DOOR SHALL BE OF THE SAME MATERIAL AS THE BASE.

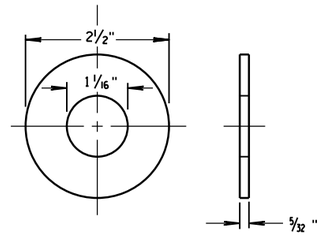




TOP VIEW
(PEDESTAL BASE)

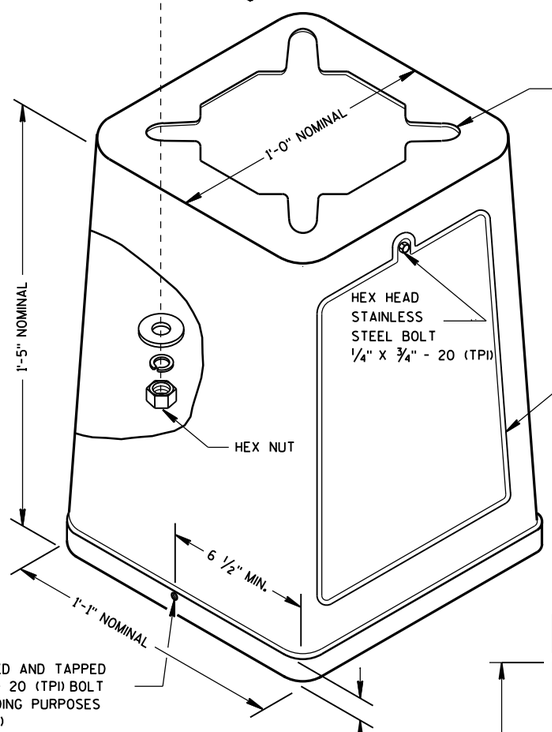


BOTTOM VIEW
(PEDESTAL BASE)

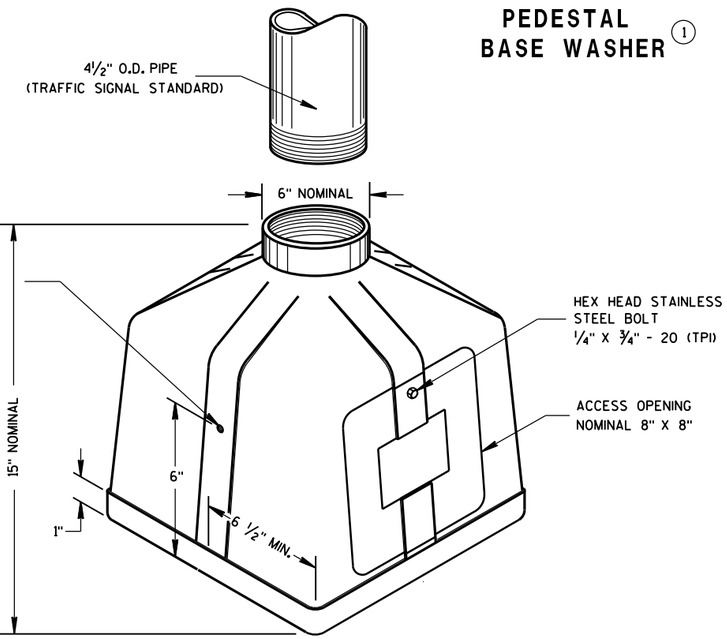


ZINC COATED STEEL WASHER
TO BE PROVIDED BY THE CONTRACTOR

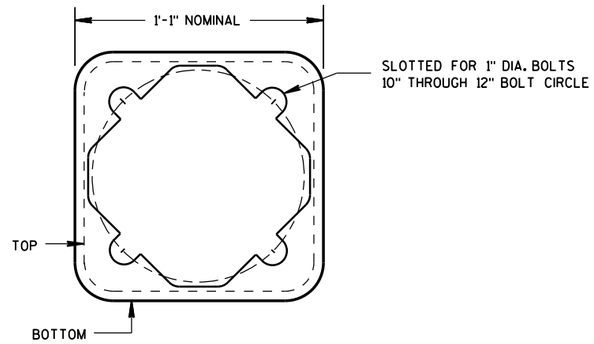
PEDESTAL BASE WASHER (1)



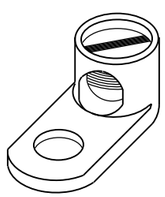
ISOMETRIC VIEW



ISOMETRIC VIEW
PEDESTAL BASE

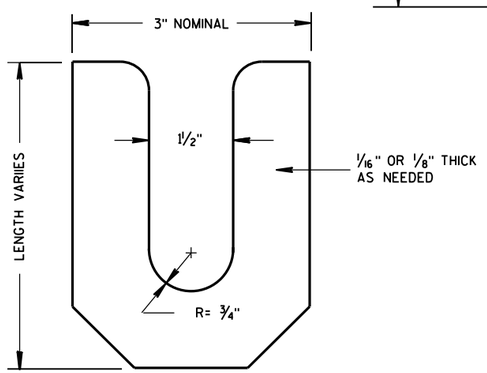


BOTTOM VIEW
(TRANSFORMER BASE)



TYPICAL MECHANICAL CONNECTOR LUG
TO BE FURNISHED WITH EACH BASE

TRANSFORMER BASE
INTENDED FOR USE WITH TYPE 2, 3, 4, 5 & 6 POLES



LEVELING SHIM

TRANSFORMER/PEDESTAL BASES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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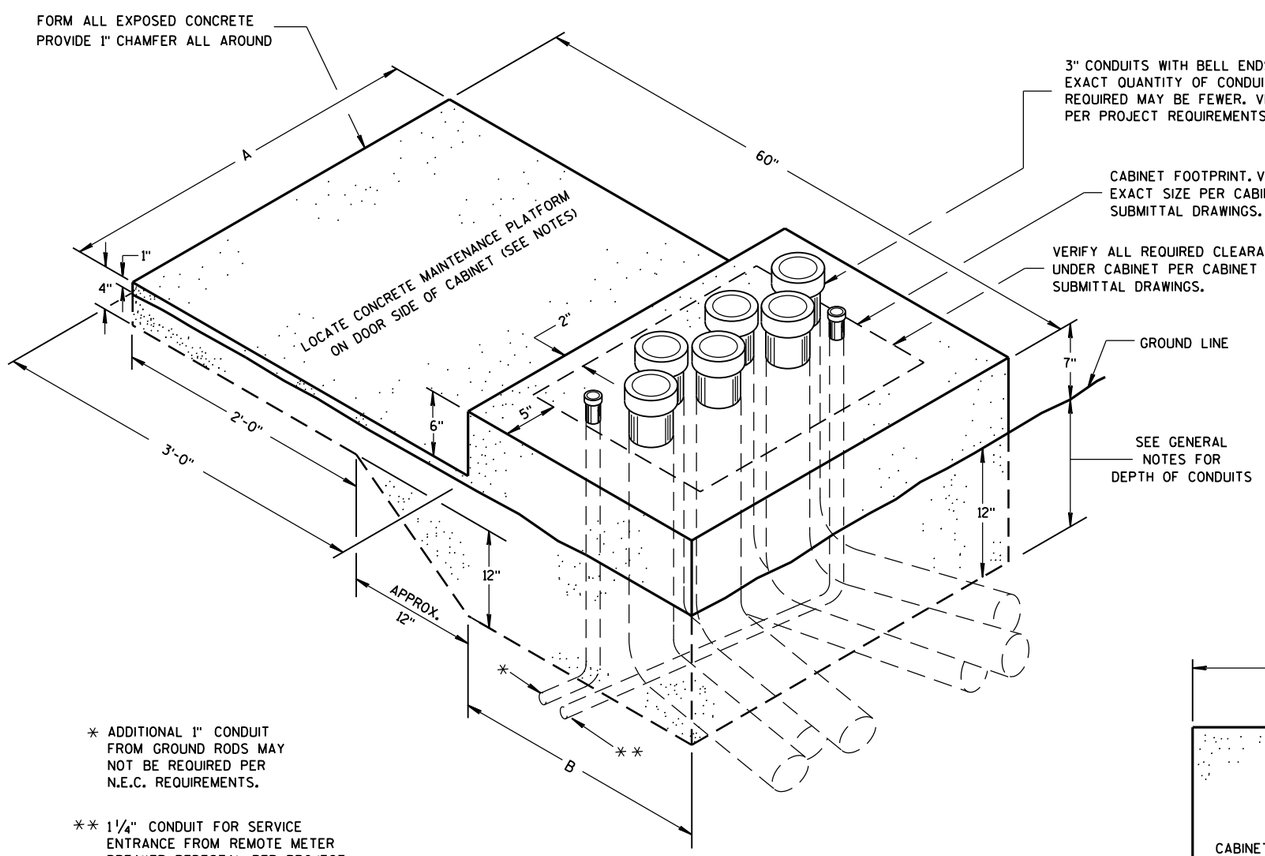


* ADDITIONAL 1" CONDUIT FROM GROUND RODS MAY NOT BE REQUIRED PER N.E.C. REQUIREMENTS.

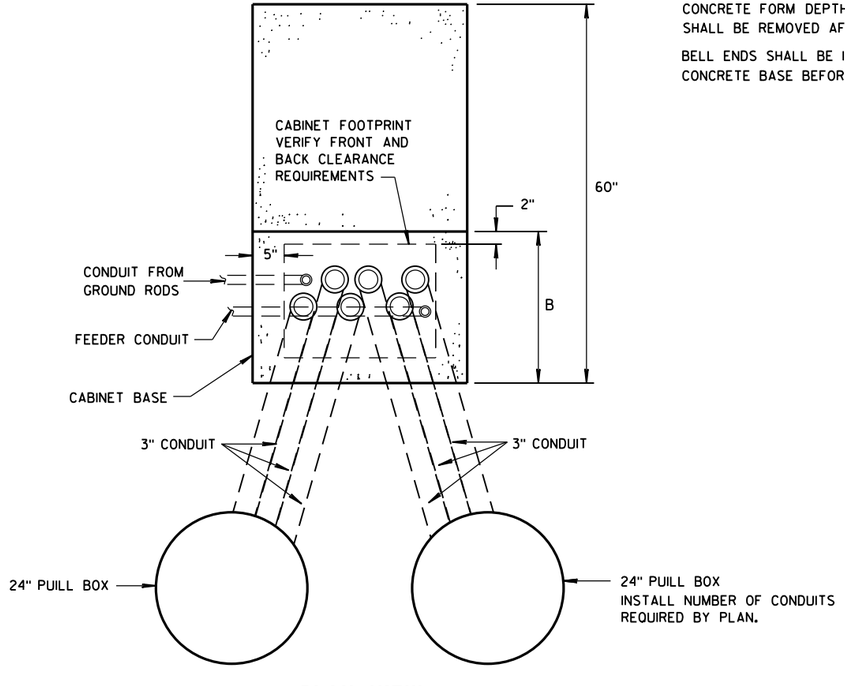
** 1¼" CONDUIT FOR SERVICE ENTRANCE FROM REMOTE METER BREAKER PEDESTAL PER PROJECT REQUIREMENTS. VERIFY LOCATION OF CONDUIT DEPENDENT UPON LOCATION OF INCOMING FEEDER AND FOR EASE OF CONNECTION TO LOAD CENTER.

ISOMETRIC VIEW

CONCRETE CONTROL CABINET BASE, TYPE L

(C.Y. CONCRETE = APPROX. 0.4)

CONCRETE BASE TYPE	CABINET WIDTH	DIMENSIONS		MAXIMUM 3" CONDUITS
		A	B	
L24	24"	34"	24"	4
L30	30"	40"	24"	6



PLAN VIEW

CONCRETE CONTROL CABINET BASE, TYPE L

GENERAL NOTES

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

INSTALL FOUR STAINLESS STEEL APPROVED CONCRETE MASONRY ANCHORS TO ANCHOR THE CABINET BASES. THE ANCHORS SHALL BE LOCATED AS DIRECTED BY THE ENGINEER TO PROPERLY ANCHOR THE CONTROL CABINET TO THE BASE.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

CONDUIT HEIGHT ABOVE THE CONCRETE BASE SHALL BE 1 INCH.

DEPTH OF CONDUIT INSTALLED BELOW THE TRAVELED WAY SHALL BE 24 INCHES MINIMUM AND 36 INCHES MAXIMUM.

DEPTH OF CONDUIT INSTALLED THAT IS NOT BELOW THE TRAVELED WAY SHALL BE 18 INCHES MINIMUM AND 36 INCHES MAXIMUM.

ANY EXCEPTION TO THE MAXIMUM DEPTH SHALL BE ONLY WITH THE WRITTEN APPROVAL OF THE ENGINEER.

CONTROL CABINET BASE TOP SURFACE SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

MAINTENANCE PLATFORM SHALL BE FLOAT OR BROOM FINISHED AND BE LEVEL.

MAINTENANCE PLATFORMS ARE NOT REQUIRED WHEN THE SURROUNDING AREA IS PAVED.

MINIMUM BENDING RADIUS OF CONDUIT = 6 X THE DIAMETER.

ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

CAP ALL BELOW GRADE METALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

PLUG ALL BELOW GRADE NONMETALLIC CONDUIT ENDS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT BEING INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

CONDUIT EXITING THE CONCRETE BASE SHALL TERMINATE IN PULL BOXES AS SHOWN ON THE PLANS.

CONCRETE FORM DEPTH BELOW FINISHED GRADE SHALL BE 6" MAXIMUM. CONCRETE FORMS SHALL BE REMOVED AFTER CONCRETE HAS SET.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE BEFORE INSTALLATION OF CABLE OR WIRE.

CONCRETE CONTROL CABINET BASE, TYPE L

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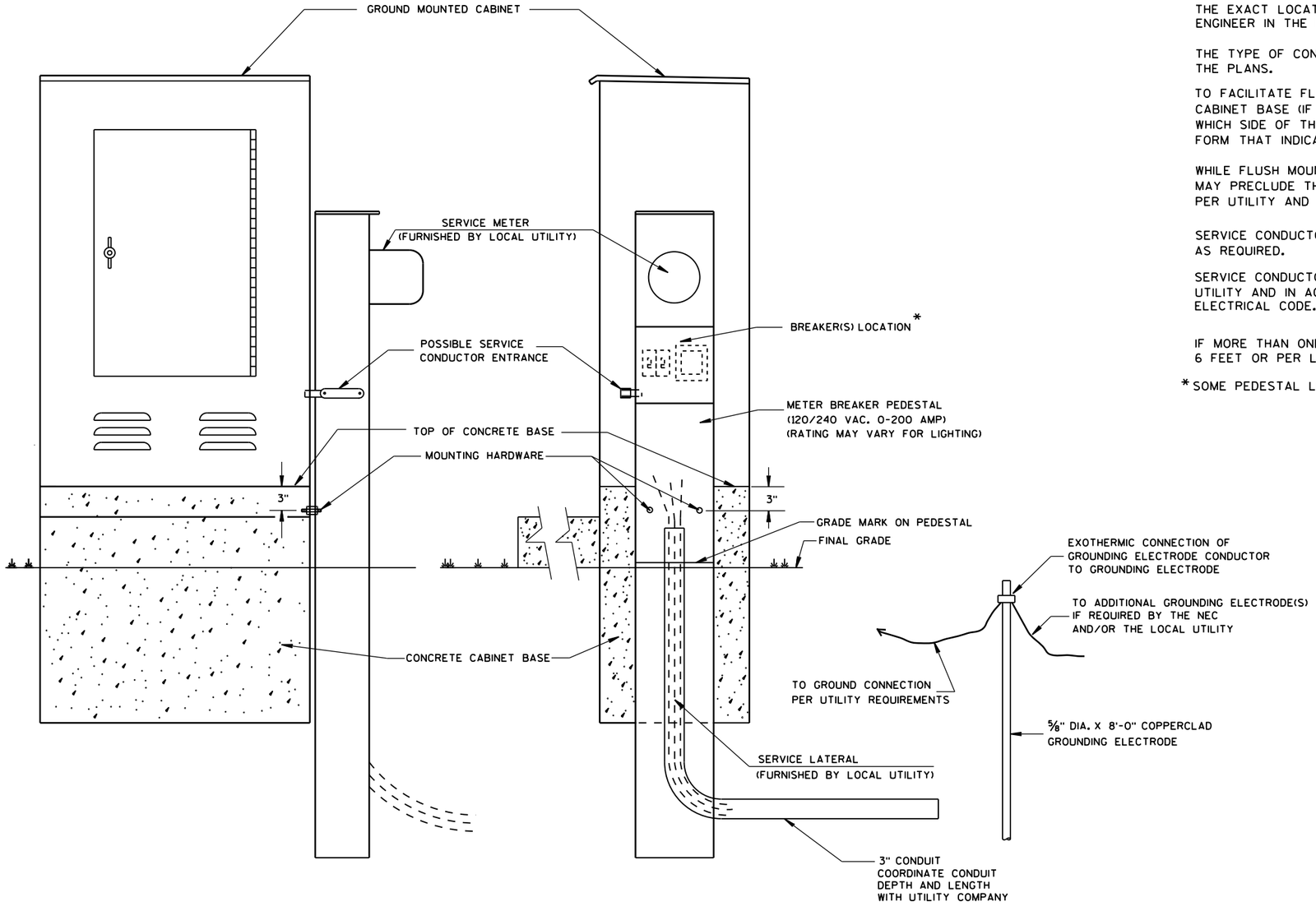

TYPICAL CABINET SERVICE INSTALLATION

GENERAL NOTES

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

THE EXACT LOCATION OF THE METER BREAKER PEDESTAL SHALL BE DETERMINED BY THE ENGINEER IN THE FIELD.

THE TYPE OF CONCRETE CABINET BASE TO BE INSTALLED SHALL BE AS CALLED FOR IN THE PLANS.

TO FACILITATE FLUSH MOUNTING OF THE METER BREAKER PEDESTAL AGAINST THE SIDE OF THE CABINET BASE (IF FLUSH MOUNTING POSSIBLE. CONFER WITH THE LOCAL UTILITY TO DETERMINE WHICH SIDE OF THE CONCRETE BASE THE ELECTRICAL SERVICE LATERAL WILL APPROACH. THEN FORM THAT INDICATED SIDE FOR FULL SIDE DEPTH.

WHILE FLUSH MOUNTING IS THE MOST DESIRABLE MOUNTING CONFIGURATION UTILITY REQUIREMENTS MAY PRECLUDE THIS OPTION. CONTRACTOR MUST PROVIDE UTILITY APPROVED PEDESTAL AND INSTALL PER UTILITY AND MANUFACTURERS REQUIREMENTS.

SERVICE CONDUCTOR ENTRANCES SHALL BE RIGID METALLIC CONDUIT, NIPPLES AND/OR CONDULETS AS REQUIRED.

SERVICE CONDUCTOR ENTRANCES SHALL BE SIZED AND LOCATED AS REQUIRED BY THE LOCAL UTILITY AND IN ACCORDANCE WITH APPROPRIATE ARTICLES OF THE LATEST ACCEPTED NATIONAL ELECTRICAL CODE.

IF MORE THAN ONE GROUNDING ELECTRODE IS REQUIRED, THE DISTANCE APART SHALL BE 6 FEET OR PER LOCAL UTILITY REGULATIONS.

* SOME PEDESTAL LIGHTING PLANS SHOW MAIN LUGS ONLY.

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S.D.D. 9 D 1-5

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S.D.D. 9 D 1-5

CABINET SERVICE INSTALLATION (METER BREAKER PEDESTAL)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE

/S/ Ahmet Demirbilek
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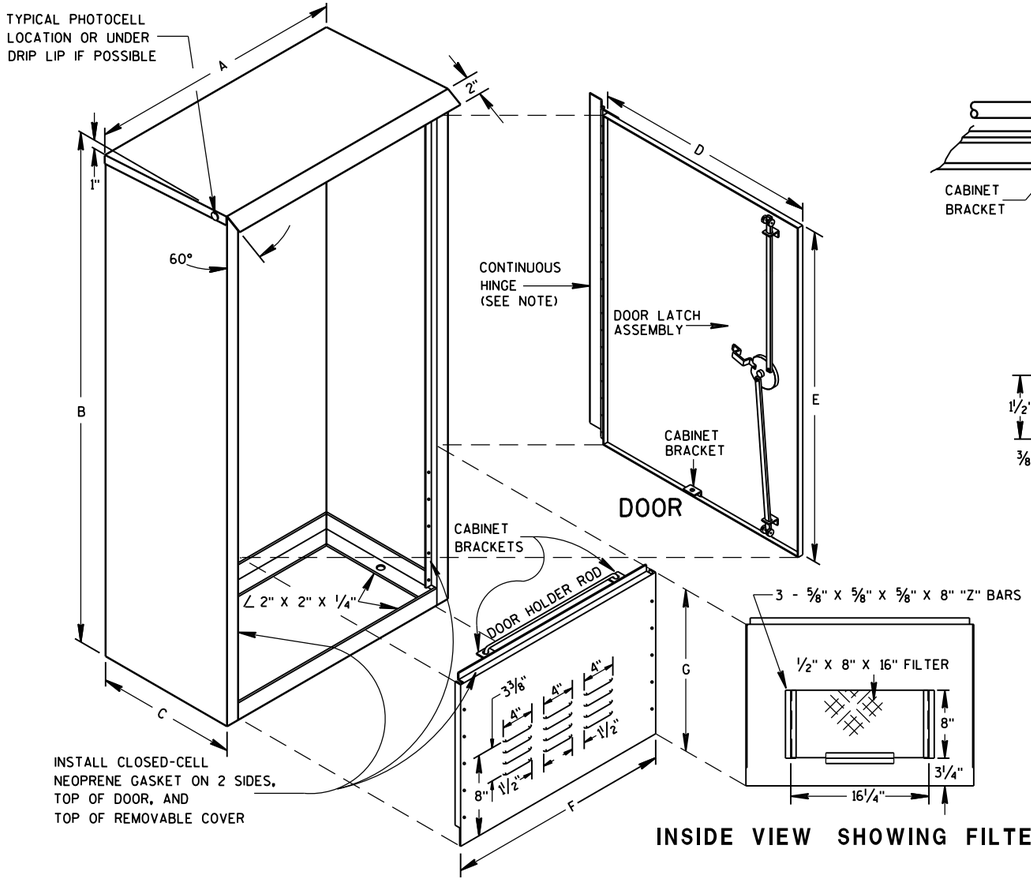
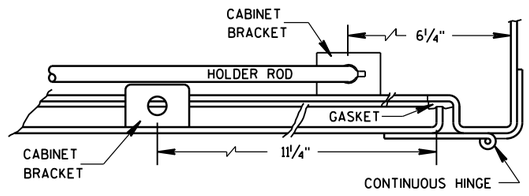
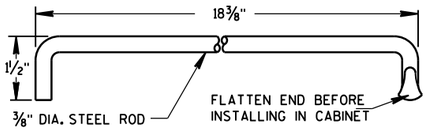


REMOVABLE COVER

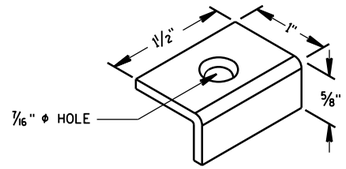
INSIDE VIEW SHOWING FILTER



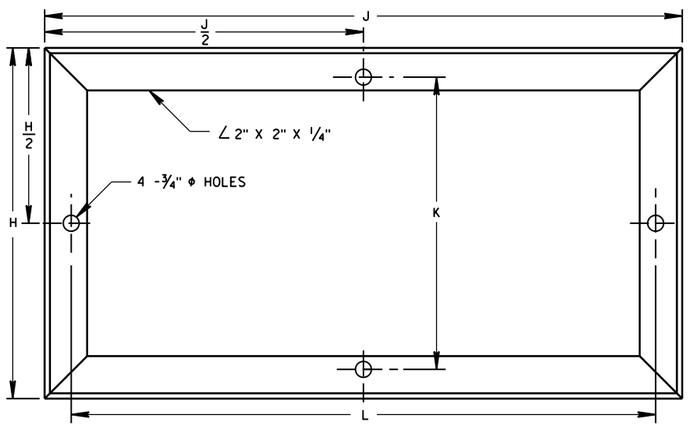
HINGE & DOOR HOLDER



HOLDER ROD



CABINET BRACKET



MOUNTING BASE

TABLE OF DIMENSIONS (INCHES)

MARK	CABINET TYPE		
	3060	3860	3866
A	30	38	38
B	60	60	66
C	16 1/2	16 1/2	24
D	26 1/2	34 3/4	33 3/4
E	38 3/4	38 3/4	38 3/4
F	26 1/2	34 3/4	33 3/4
G	19	19	25
H	16 1/2	16 1/2	24
H/2	8 1/4	8 1/4	12
J	30	38	38
J/2	15	19	19
K	13 3/4	13 3/4	21 1/4
L	27 1/2	35 1/2	35 1/2

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

PRIME WITH PHOSPHATE TREATMENT AND PRIMER.

FINISH EXTERIOR SURFACES WITH RUSTOLEUM #906 SILVER GRAY OR APPROVED EQUAL.

FINISH INTERIOR WITH RUSTOLEUM #2766 HIGH GLOSS WHITE ENAMEL OR APPROVED EQUAL.

ALL SHEET METAL PARTS SHALL BE .125 INCH THICK ALUMINUM.

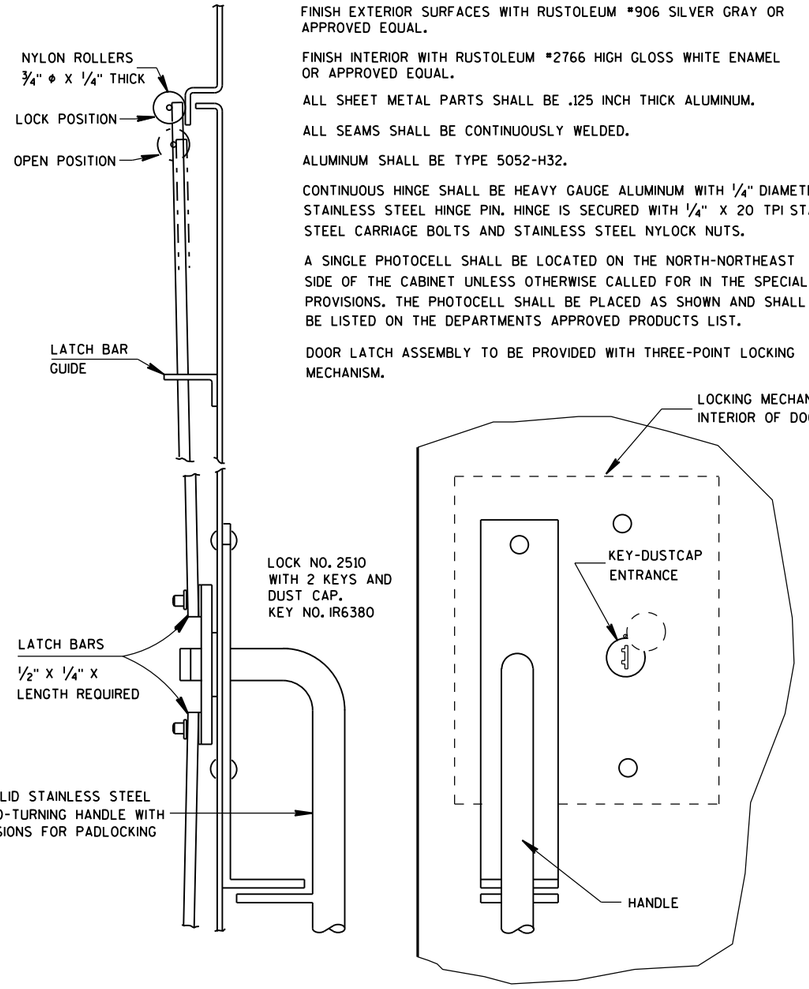
ALL SEAMS SHALL BE CONTINUOUSLY WELDED.

ALUMINUM SHALL BE TYPE 5052-H32.

CONTINUOUS HINGE SHALL BE HEAVY GAUGE ALUMINUM WITH 1/4" DIAMETER STAINLESS STEEL HINGE PIN. HINGE IS SECURED WITH 1/4" X 20 TPI STAINLESS STEEL CARRIAGE BOLTS AND STAINLESS STEEL NYLOCK NUTS.

A SINGLE PHOTOCELL SHALL BE LOCATED ON THE NORTH-NORTHEAST SIDE OF THE CABINET UNLESS OTHERWISE CALLED FOR IN THE SPECIAL PROVISIONS. THE PHOTOCELL SHALL BE PLACED AS SHOWN AND SHALL BE LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST.

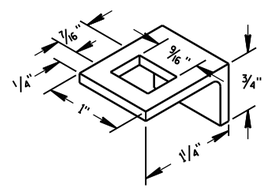
DOOR LATCH ASSEMBLY TO BE PROVIDED WITH THREE-POINT LOCKING MECHANISM.



SIDE VIEW

FRONT VIEW

LATCH ASSEMBLY



LATCH BAR GUIDE

SIGNAL CONTROL CABINET

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE

/S/ Ahmet Demirbilek
STATE ELECTRICAL 357

FHWA

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S.D.D. 9 D 2-3

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S.D.D. 9 D 2-3

GENERAL NOTES

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND APPLICABLE SPECIAL PROVISIONS.

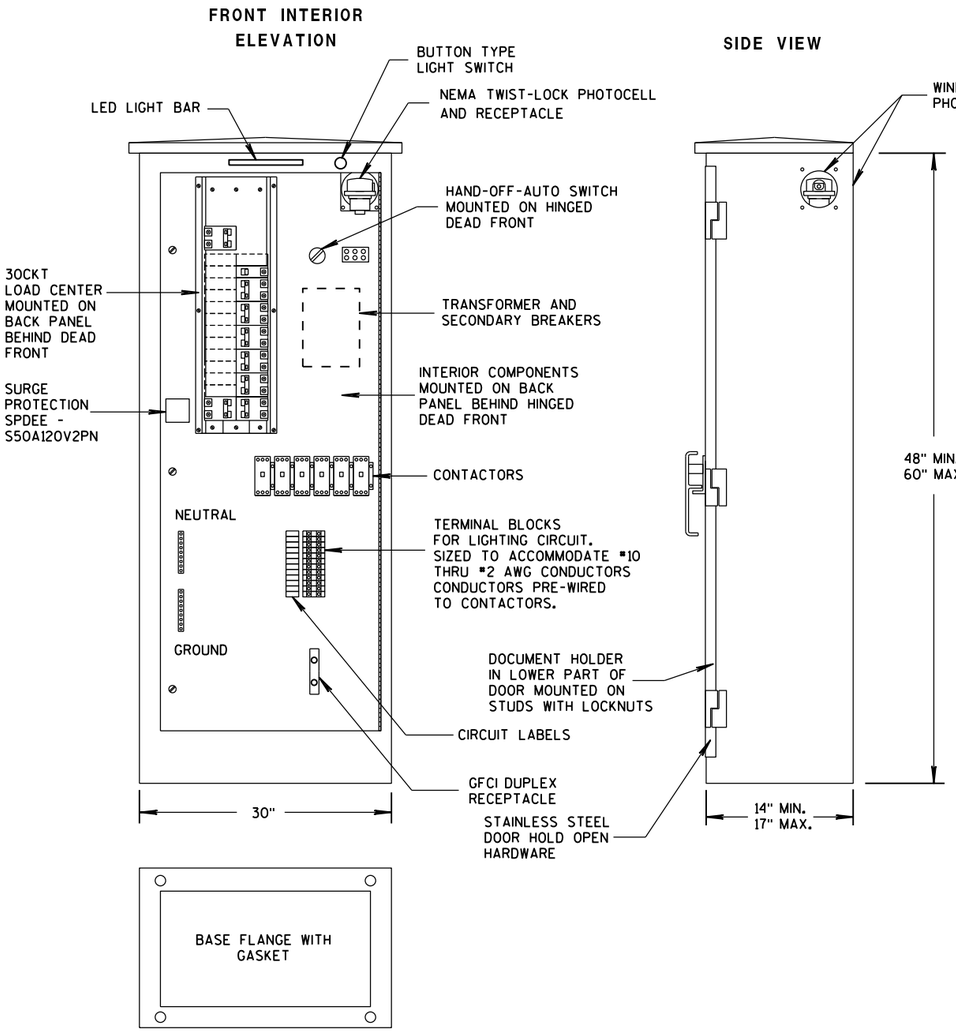
ALL INTERNAL ELECTRICAL COMPONENTS WILL BE PRE-WIRED BY THE CABINET FABRICATOR.

ALL CONDUIT ENTRIES SHALL BE SEALED WITH AN APPROPRIATE DUCT SEALING COMPOUND.

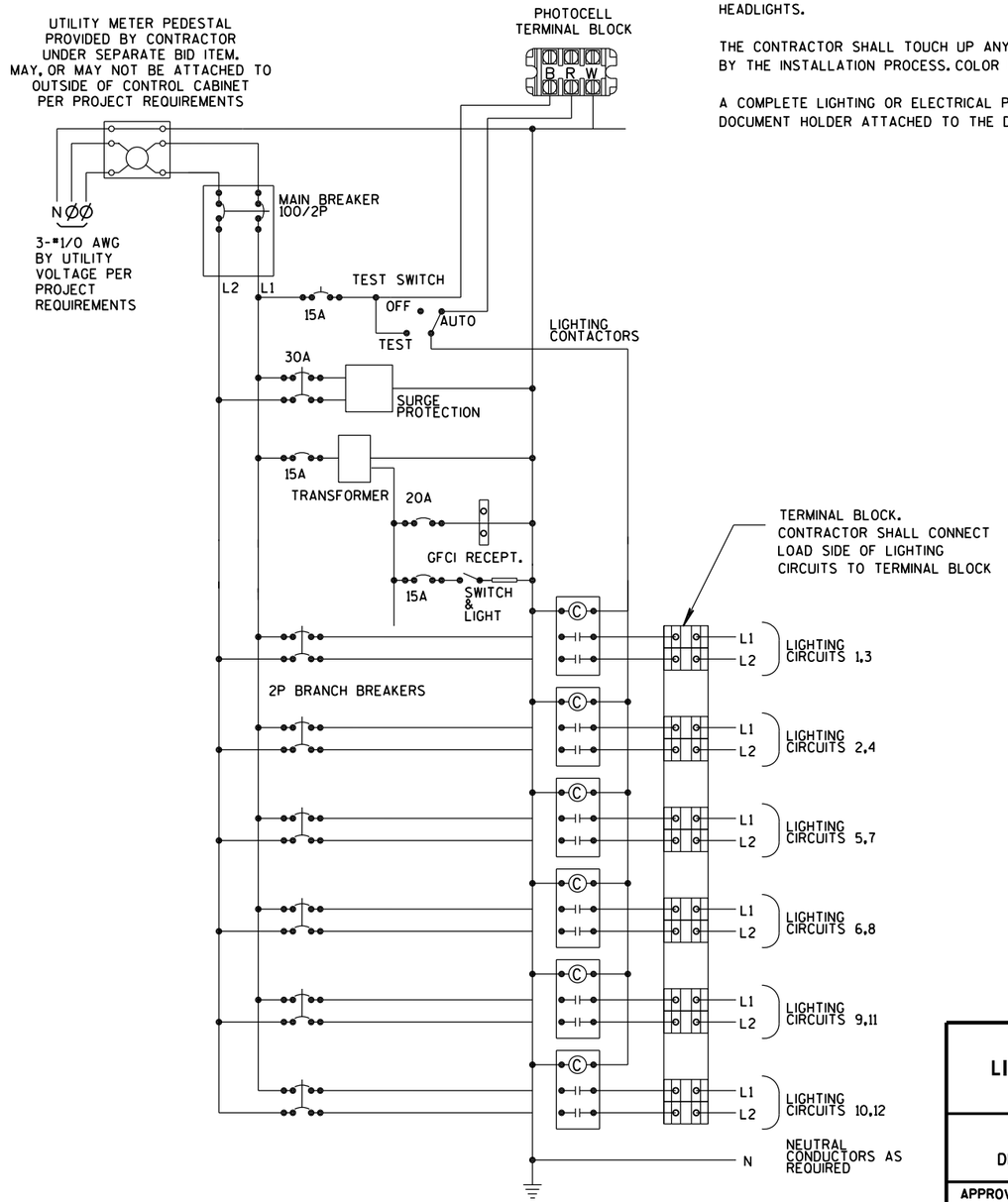
ORIENT PHOTOCELL AWAY FROM AMBIENT LIGHT SOURCES AND ONCOMING TRAFFIC HEADLIGHTS.

THE CONTRACTOR SHALL TOUCH UP ANY DAMAGE TO THE ANODIZED FINISH CAUSED BY THE INSTALLATION PROCESS. COLOR MATCH PAINT SHALL BE USED.

A COMPLETE LIGHTING OR ELECTRICAL PLAN SHALL BE SECURELY PLACED IN THE DOCUMENT HOLDER ATTACHED TO THE DOOR.



LIGHTING CONTROL CABINET



CONTROL CABINET SCHEMATIC

L30
LIGHTING CONTROL CABINET 240/480 VOLT

STATE OF WISCONSIN
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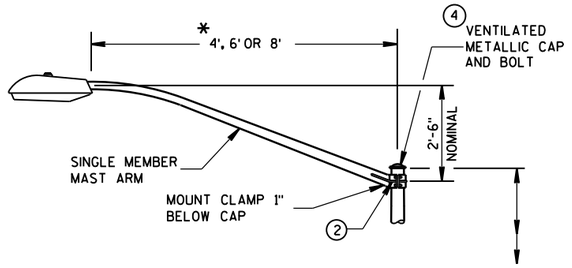
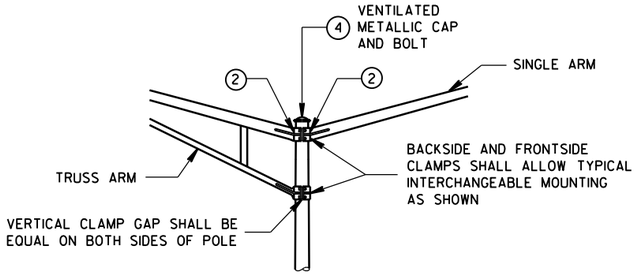
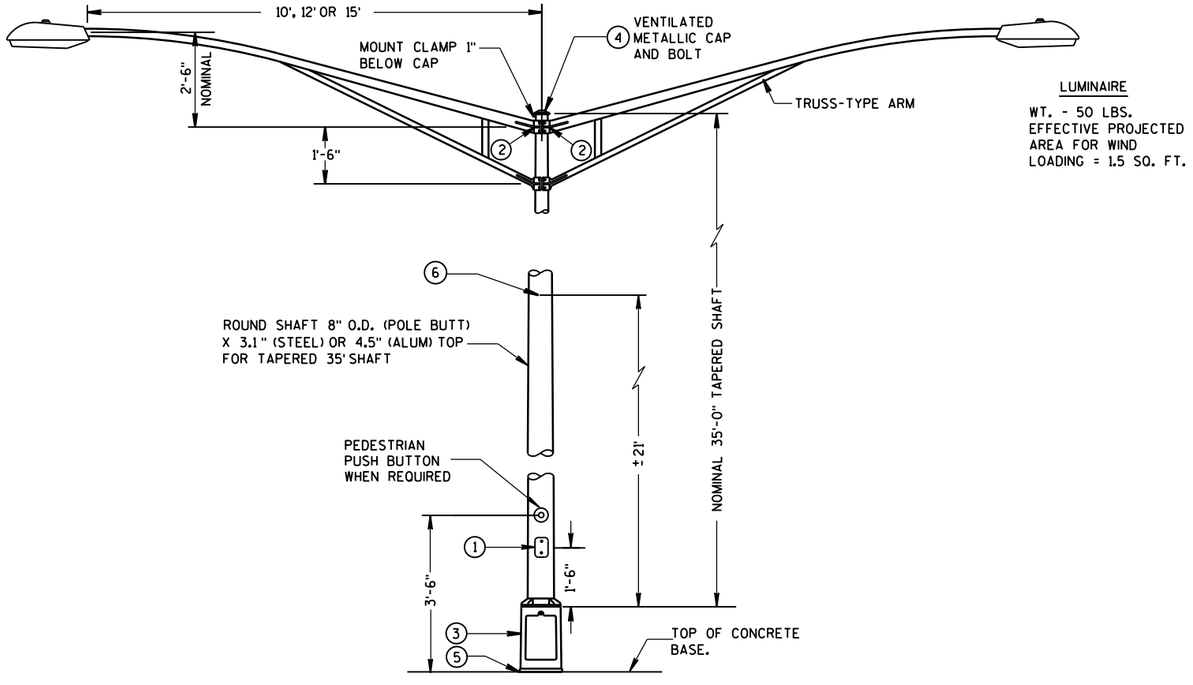
* RISE FOR 4' ARM SHALL BE 2'-0".





INTERCHANGEABLE MOUNTING DETAIL



TYPE 6 POLE MOUNTING CONFIGURATION

(MAXIMUM LOAD)

LIGHTING ONLY

GENERAL NOTES

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

ALL TYPE 6 POLE MOUNTINGS SHALL BE DESIGNED TO INCLUDE TWIN 15' ARMS WITH LUMINAIRES.

POLES SHALL BE EITHER GALVANIZED STEEL OR ALUMINUM, AS CALLED FOR IN THE CONTRACT.

TYPE 6 ALUMINUM POLES, SHALL BE CONSTRUCTED OF 6063-T6 ALUMINUM ALLOY. SLEEVING INSIDE THE POLE IS NOT ACCEPTABLE.

THE TYPE 6 ALUMINUM POLES SHALL HAVE MINIMUM WALL THICKNESS OF 0.219".

TYPE 6 STEEL POLES SHALL HAVE A MINIMUM WALL THICKNESS OF U.S. STANDARD 11 GAGE (.1196").

THE SLIPFITTER END OF THE LUMINAIRE MAST ARM SHALL BE A NOMINAL 2⅜ INCHES IN OUTSIDE DIAMETER. THE STRAIGHT PORTION OF THE SLIPFITTER END OF THE LUMINAIRE ARM SHALL BE A NOMINAL 12 INCHES IN LENGTH.

WHEN TRANSFORMER BASES ARE USED, WIRE CONNECTIONS SHALL BE MADE IN THE TRANSFORMER BASE.

(1) 4" x 6" REINFORCED HANDHOLE & COVER ASSEMBLY WITH 2 (TWO) ¼" X ¾" - 20 TPI HEX HEAD STAINLESS STEEL BOLTS.

(2) GROMMETS, 1" CHASE NIPPLES OR 1" CLOSE CONDUIT NIPPLES WITH BUSHINGS SHALL BE PROVIDED FOR 1⅜" HOLE IN POLE SHAFT FOR WIRING.

(3) CAST ALUMINUM TRANSFORMER BASE, WHEN REQUIRED.

(4) FURNISH AND INSTALL VENTILATED, CAST, METALLIC (ALUMINUM ALLOY) CAPS. FASTEN CAPS WITH ONE (1) ¼" X ¾" - 20 TPI STAINLESS STEEL, HEX HEAD BOLT.

(5) SHIMMING, IF NEEDED, SHALL BE LOCATED BETWEEN THE CONCRETE FOUNDATION AND THE TRANSFORMER BASE.

(6) INTERNAL DUMBBELL-TYPE VIBRATION DAMPER.

POLE MOUNTINGS FOR LIGHTING UNITS, TYPE 6 (35 FEET)

STATE OF WISCONSIN
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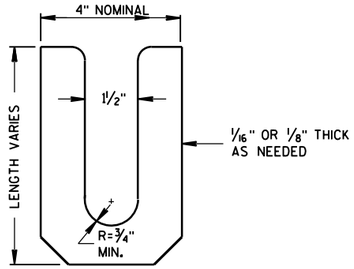
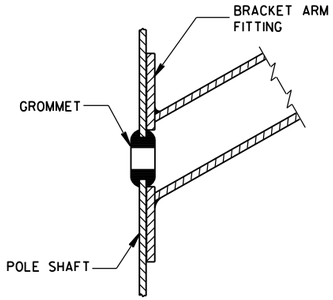
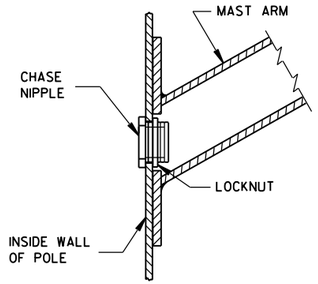


LEVELING SHIM (13)

SHALL BE ALUMINUM



TYPICAL APPLICATION OF GROMMET IN POLE SHAFT



TYPICAL APPLICATION OF CHASE NIPPLE IN POLE SHAFT

GENERAL NOTES

CLAMP BOLT-NUT TIGHTENING TORQUE SHALL BE INDICATED BY INDENT STAMPING (1/2 INCH NUMERALS AND LETTERS) OR WEATHERPROOF PRINTING ON THE INSIDE OF THE CLAMP THAT IS WELDED TO THE ARM MEMBER.

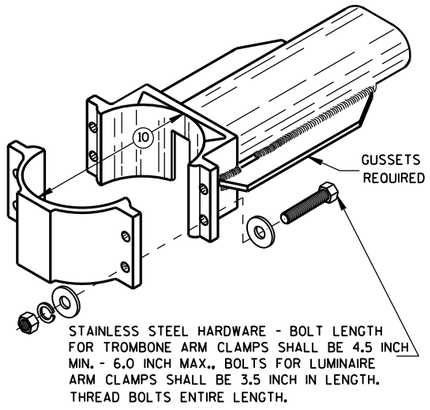
(10) 4.5" I.D. FOR LUMINAIRE MAST ARM CLAMP.
6.625" I.D. FOR TROMBONE MAST ARM CLAMP.

(11) INDIVIDUAL BASE PLATE ANCHOR ROD COVERS. (4 REQUIRED)

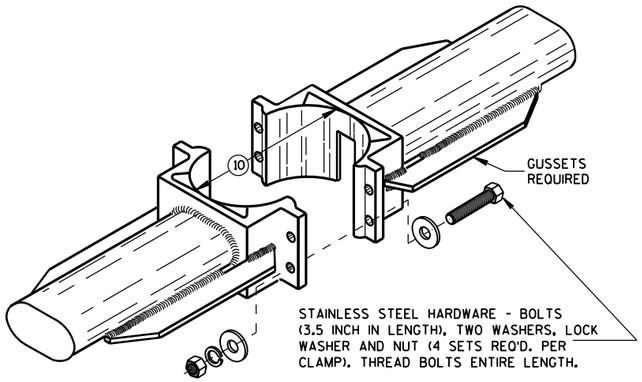
(12) BASE PLATE SLOTTED TO ACCEPT 11" THROUGH 12" BOLT CIRCLE USING 1" DIAMETER ANCHOR RODS.

(13) LEVELING SHIMS, DESIGNED FOR THE PURPOSE, SHALL BE USED WHEN PLUMBING POLES. THE USE OF WASHERS IN LIEU OF PROPER LEVELING SHIMS IS NOT ACCEPTABLE. LEVELING SHIMS SHALL BE USED ONLY BETWEEN THE TOP OF THE CONCRETE BASE AND A METALLIC BASE PLATE.

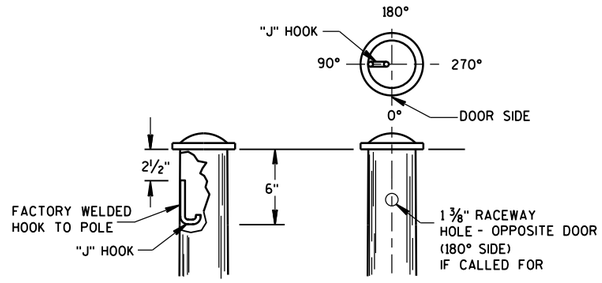
SHIMS SHALL BE LONG ENOUGH AND WIDE ENOUGH TO COMPLETELY COVER THE AREA UNDER THE LENGTH AND WIDTH OF THE BASE MOUNTING FLANGE.



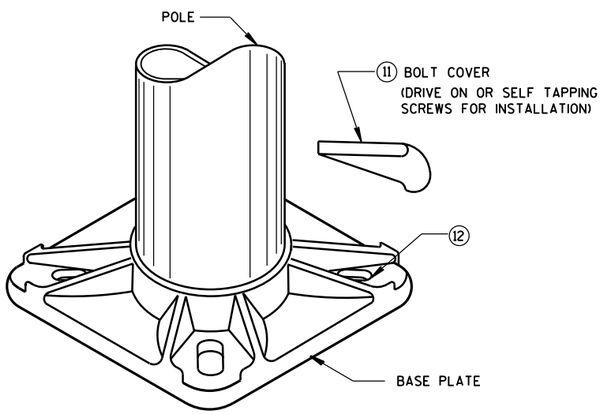
TYPICAL TROMBONE MAST ARM AND SINGLE LUMINAIRE MAST ARM MOUNTING CLAMP



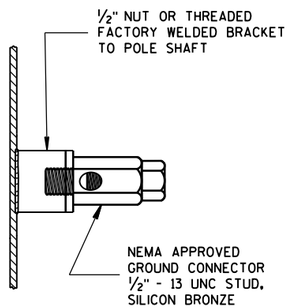
TYPICAL LUMINAIRE MAST ARM (DOUBLE) MOUNTING BRACKETS

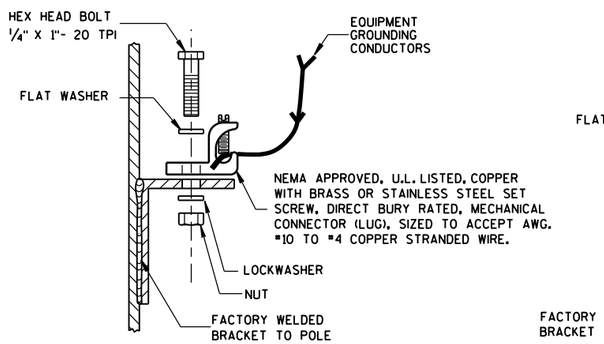


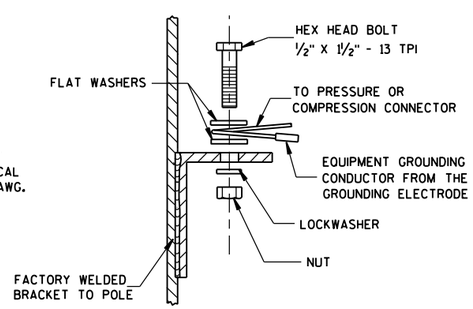
TYPICAL "J" HOOK LOCATION



BASE PLATE







TYPICAL GROUNDING CONNECTIONS

NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL

HARDWARE DETAILS FOR POLE MOUNTINGS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Feb. 2015 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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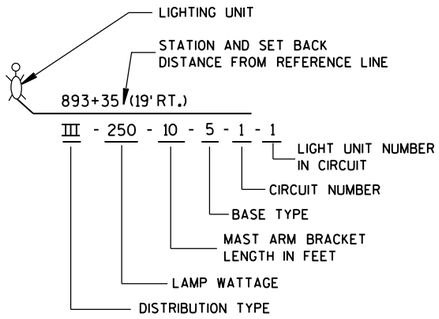
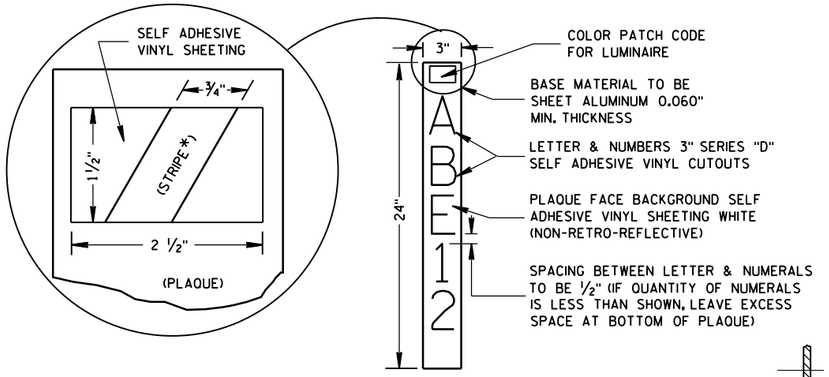


LIGHTING UNIT CODE
(TYPICAL)



COLOR PATCH CODE FOR LUMINAIRES

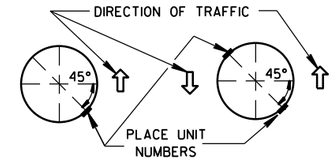
(HIGH PRESSURE SODIUM)

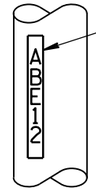
1000 WATT - NO PATCH
400 WATT - ORANGE
310 WATT - BLUE
250 WATT - ORANGE W/WHITE STRIPE*
200 WATT - RED
150 WATT - GREEN
100 WATT - BROWN

(MERCURY VAPOR)

400 WATT - (NO PATCH)
250 WATT - YELLOW

IDENTIFICATION PLAQUE





FASTEN TOP, CENTER AND BOTTOM OF PLAQUE WITH 3 ALUMINUM POP RIVETS (ALUM. POLES) OR STAINLESS STEEL POP RIVETS (STEEL POLES)

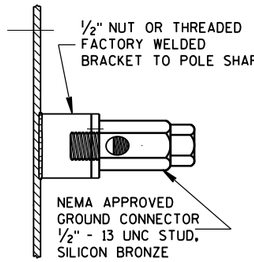
NOTES:

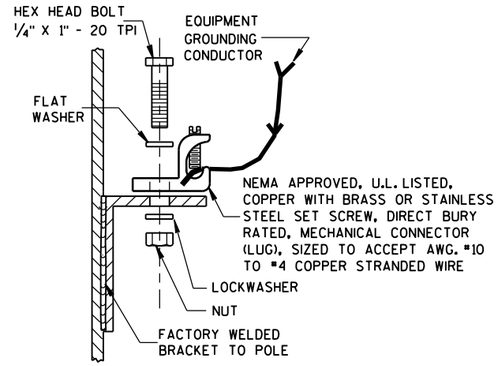
1) PLACE BOTTOM OF UNIT NUMBER PLAQUE 5'-0" ABOVE ELEVATION OF ADJACENT CURB OR SHOULDER.

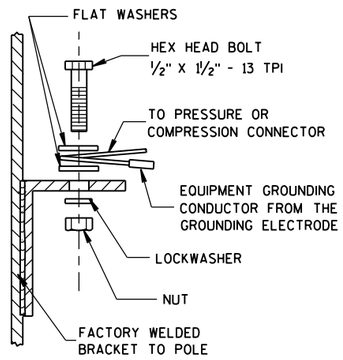
2) UNIT NUMBERS: ONE REQUIRED FOR SINGLE ARM POLES TWO REQUIRED FOR MEDIAN MOUNT POLES.

LIGHTING UNIT IDENTIFICATION PLAQUE REQUIREMENTS AND PLACEMENT
(TYPICAL ALL LIGHTING UNITS)

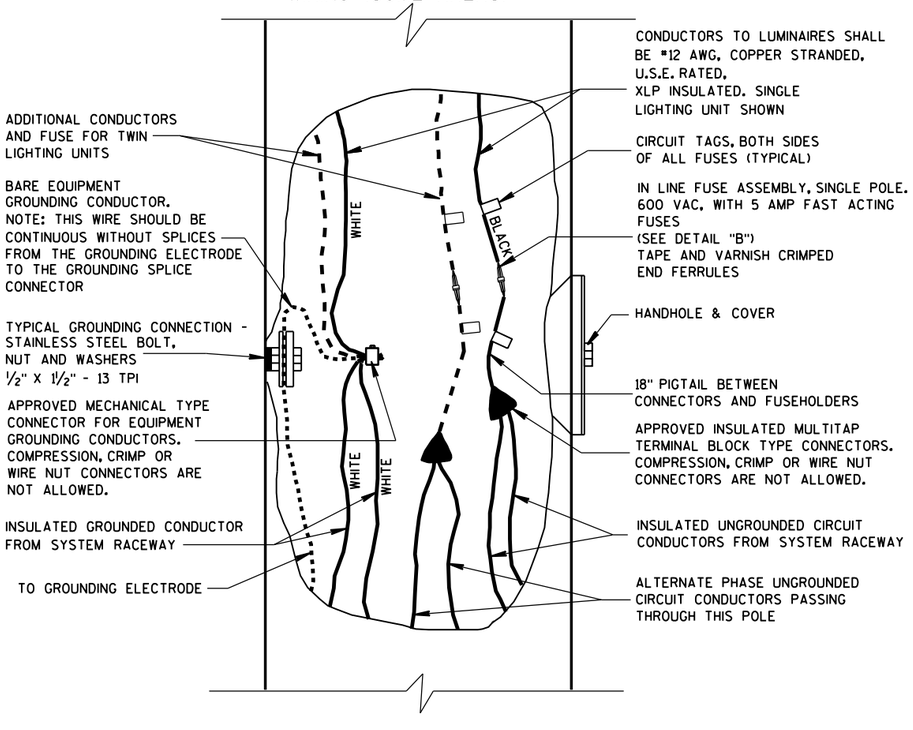
FURNISH PLAQUE WHEN CALLED FOR BY SPECIAL PROVISIONS



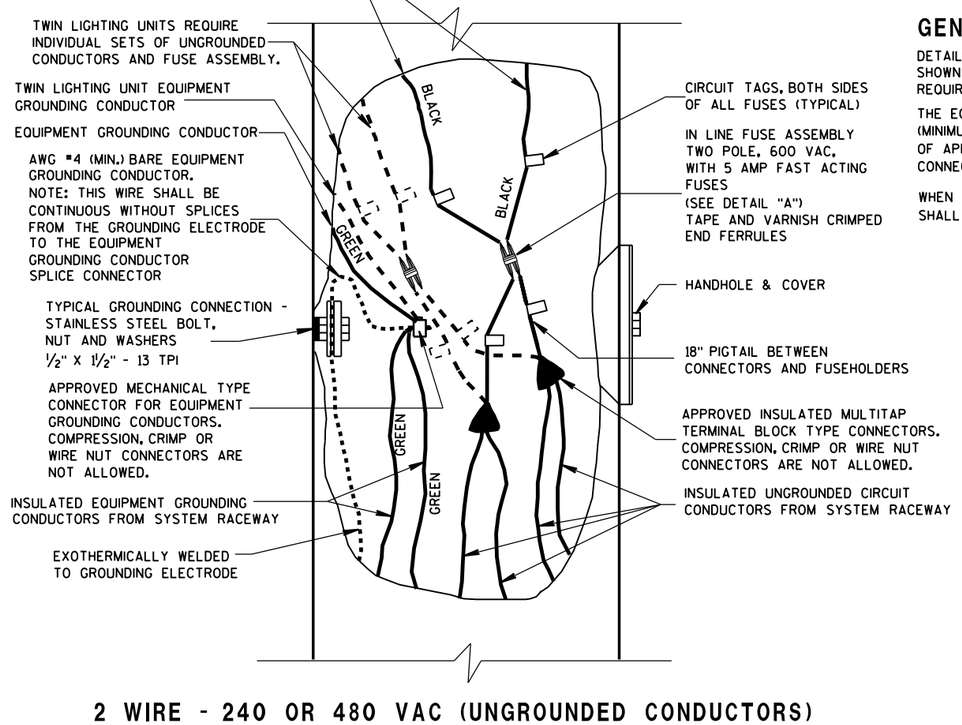




TYPICAL GROUNDING CONNECTIONS
NUT, BOLT AND WASHERS SHALL BE STAINLESS STEEL



2 WIRE - 120, 240 OR 480 VAC TO GROUND



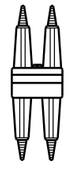
2 WIRE - 240 OR 480 VAC (UNGROUNDED CONDUCTORS) WITH EQUIPMENT GROUNDING CONDUCTOR

GENERAL NOTES

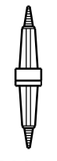
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE CONTRACT.

THE EQUIPMENT GROUND CONNECTOR SHALL BE TAPED WITH 3 WRAPS (MINIMUM) OF APPROVED RUBBER TAPE AND THEN 3 WRAPS (MINIMUM) OF APPROVED VINYL TAPE TO COVER SHARP WIRE ENDS AFTER THE CONNECTION IS COMPLETED.

WHEN TRANSFORMER BASES ARE USED, ALL WIRING CONNECTIONS SHALL OCCUR WITHIN THE TRANSFORMER BASES.



DETAIL "A"
BREAKAWAY DOUBLE POLE WITH WATERPROOF INSULATING BOOT



DETAIL "B"
BREAKAWAY SINGLE POLE WITH WATERPROOF INSULATING BOOT

FREEWAY LIGHTING UNIT POLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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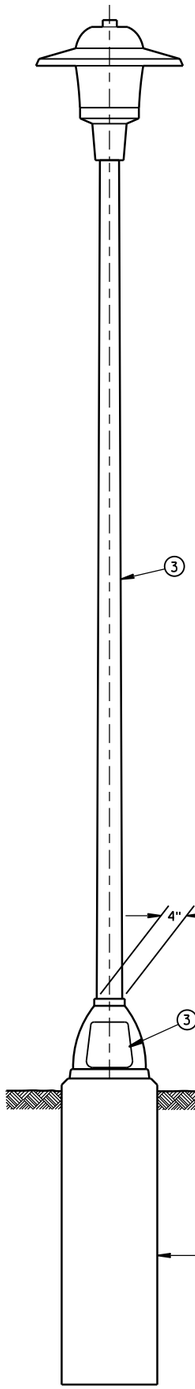
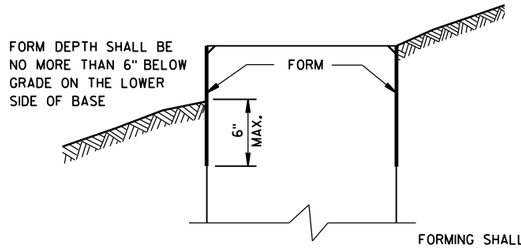


LUMINAIRE

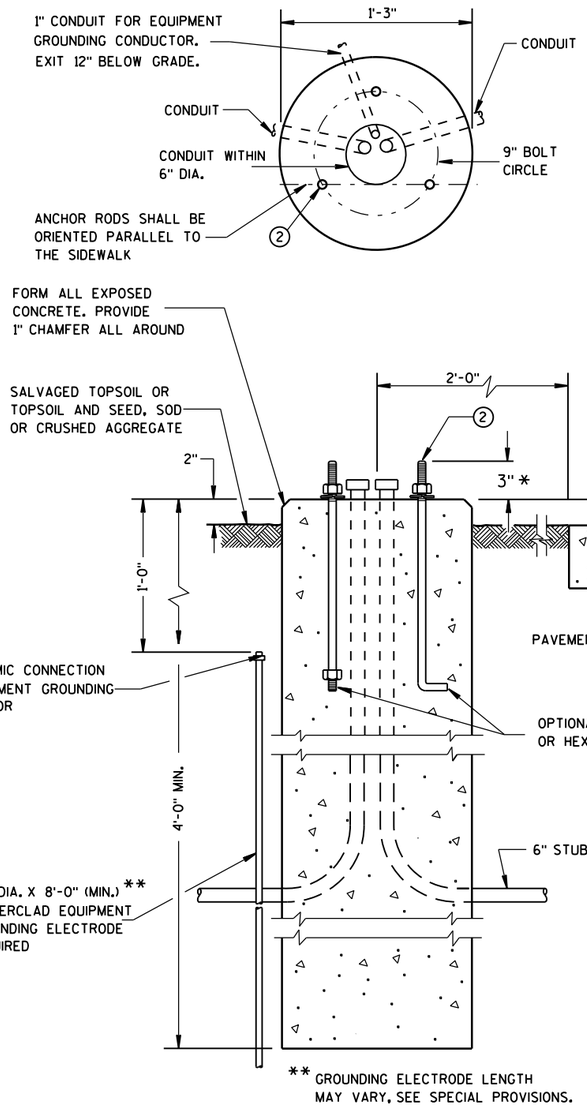
WT. = 50 LBS.
EFFECTIVE PROJECTED AREA
FOR WIND LOADING = 1.5 SQ. FT.

USE LUMINAIRE FROM DEPARTMENT APPROVED PRODUCTS LIST OR ENGINEER APPROVED EQUAL.

WALKWAY LIGHTING UNIT DETAIL



FORMING DETAIL



** GROUNDING ELECTRODE LENGTH MAY VARY, SEE SPECIAL PROVISIONS.

CONCRETE BASE, TYPE 11

GENERAL NOTES

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

CONCRETE BASES SHALL BE EXCAVATED BY USE OF A CIRCULAR AUGER.

TOP SURFACES OF CONCRETE BASES SHALL BE TROWEL FINISHED SMOOTH AND LEVEL.

CONDUIT RUNS, NUMBER OF CONDUITS IN EACH CONCRETE BASE AND CONDUIT SIZE IS AS SHOWN ON THE PLANS. THE 1-INCH CONDUIT IS USED IN ALL BASES.

MINIMUM BENDING RADIUS OF CONDUIT SHALL BE SIX TIMES THE DIAMETER OF THE CONDUIT.

CONDUIT HEIGHT ABOVE CONCRETE BASES SHALL BE 1-INCH. ALL METALLIC CONDUIT ENDS SHALL BE REAMED AND THREADED.

ALL METALLIC CONDUITS IN WHICH WIRE OR CABLE IS NOT TO BE INSTALLED SHALL BE CAPPED WITH THREADED PROTECTIVE CAPS, AS APPROVED BY THE ENGINEER.

BELL ENDS SHALL BE INSTALLED ON ALL PVC CONDUIT EXPOSED AT THE TOP OF THE CONCRETE BASE AND BEFORE INSTALLATION OF CABLE OR WIRE.

ALL CONDUIT ENDS AT THE TOP OF CONCRETE BASES SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC IMMEDIATELY AFTER PLACEMENT AND BEFORE CONCRETE IS POURED. CONDUITS IN WHICH WIRE OR CABLE IS NOT INSTALLED SHALL REMAIN CAPPED OR PLUGGED.

ENDS OF CONDUIT INSTALLED BELOW GRADE FOR FUTURE USE SHALL BE CAPPED IF METALLIC OR PLUGGED IF NONMETALLIC.

WHEN REQUIRED TO CONNECT NONMETALLIC CONDUIT TO METALLIC CONDUIT, ONLY ADAPTER FITTINGS, U.L. LISTED FOR ELECTRICAL USE, SHALL BE USED.

IF A CONCRETE BASE REQUIRES A DEEP FORM BECAUSE OF LOOSE DIRT OR FILL, THE FORM SHALL BE REMOVED BEFORE BACKFILLING AROUND THE CONCRETE BASE. BACKFILL SHALL BE TAMPED TIGHT AGAINST THE BARE CONCRETE BASE IN LAYERS OF 1-FOOT OR LESS.

THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE NO. 4 AWG, BARE, STRANDED COPPER. IT SHALL BE EXOTHERMICALLY WELDED TO THE EQUIPMENT GROUNDING ELECTRODE. THE EQUIPMENT GROUNDING CONDUCTOR SHALL BE INSTALLED LEAVING A 2-FOOT LENGTH OF WIRE ABOVE THE CONCRETE BASE. THE 2-FOOT LENGTH OF EQUIPMENT GROUNDING CONDUCTOR ABOVE THE BASE SHALL BE NEATLY COILED AND THE COILS TIED TOGETHER.

ANCHOR RODS SHALL BE INSTALLED WITH MISALIGNMENTS OF LESS THAN 1:40 FROM VERTICAL PER SECTION 5.17.6.3, AASHTO 2001 4TH EDITION STANDARD SPECIFICATIONS FOR STRUCTURAL SUPPORTS FOR HIGHWAY SIGNS, LUMINARIES AND TRAFFIC SIGNALS.

* ANY ANCHOR ROD PROJECTION SHORTER THAN 2¾" OR LONGER THAN 3¼" SHALL REQUIRE THE BASE TO BE REMOVED AND REPLACED AT THE CONTRACTORS EXPENSE.

GENERAL NOTES (CONTINUED)

(1) DEPTH OF CONDUIT EXITING THE CONCRETE BASE AND INSTALLED BELOW THE TRAVELED WAY SHALL BE 24-INCHES MIN. DEPTH OF CONDUIT EXITING THE CONCRETE BASE THAT IS NOT INSTALLED BELOW THE TRAVELED WAY SHALL BE 18-INCHES MIN. DEPTH OF ALL CONDUITS SHALL NOT EXCEED 36-INCHES.

(2) THREE - ¾-INCH DIA. X 15-INCH ANCHOR RODS OR ¾-INCH DIA. X 19-INCH ANCHOR RODS INCLUDING THE 4-INCH "L" BEND. THE "L" BEND SHALL NOT BE THREADED. ANCHOR RODS SHALL BE MANUFACTURED IN ACCORDANCE WITH SECTION 654.2.1 AND 641.2.2 OF THE STANDARD SPECIFICATIONS.

(3) PEDESTAL BASE-STANDARD:

THE PEDESTAL BASE-STANDARD SHALL BE A ONE PIECE WELDED UNIT, WITH AN OVERALL HEIGHT OF TEN FEET.

THE POLE SHALL BE ROUND, TAPERED, ALUMINUM WITH A 3-INCH OUTSIDE DIAMETER TOP AND 0.125 INCH WALL THICKNESS.

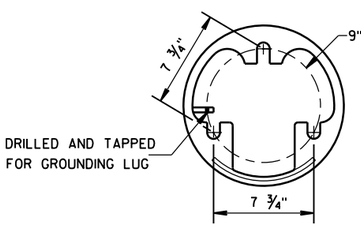
THE BELL SHAPED BASE SHALL BE 12 ½ INCHES IN DIAMETER AND HAVE A 9-INCH BOLT CIRCLE. ANCHOR RODS SHALL BE INCLUDED WITH THE BASE.

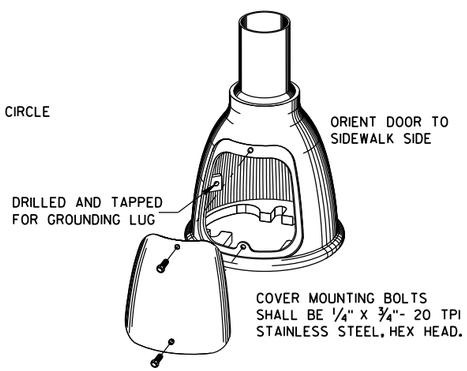
THE ACCESS DOOR OPENING SHALL BE APPROXIMATELY 7½ X 5¼ X 7½-INCHES.

THE FIXTURE AND PEDESTAL BASE-STANDARD SHALL BE PAINTED WITH AN EARTH COLORED THERMOSET POWDER COAT, ACRYLIC ENAMEL. THE ENAMEL SHALL BE FORMULATED TO SHOW NO APPRECIABLE FADING WITHIN FIVE YEARS.

GROUNDING LUGS (MECHANICAL CONNECTORS) SHALL BE U.L. LISTED BRASS OR COPPER TYPE. CONNECTION HARDWARE SHALL BE STAINLESS STEEL (BOLT, NUT, LOCKWASHER - ¼" X ¾" - 20 TPI).

ALL NONMETALLIC CONDUIT CUT ENDS SHALL BE TRIMMED INSIDE AND OUTSIDE TO REMOVE ALL ROUGH EDGES. (SEE NEC 347.5)





WALKWAY PEDESTAL BASE STANDARD DETAIL

WALKWAY LIGHTING UNIT AND CONCRETE BASE, TYPE 11

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
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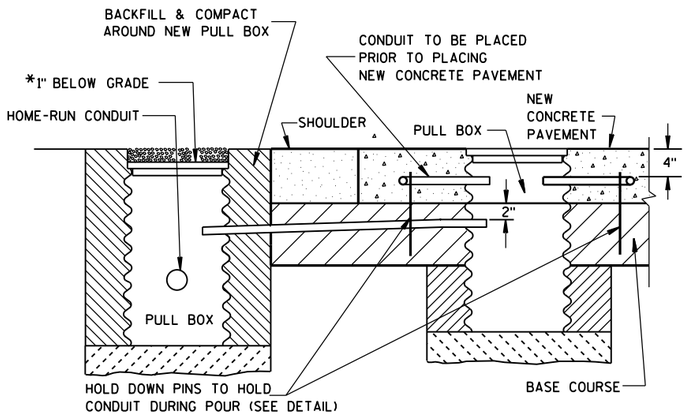


SECTION A-A
NO CURB & GUTTER
LOOP DETECTOR INSTALLATION DETAIL

*RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

GENERAL NOTES

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

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

ANY PVC LEADOUT CONDUIT CONTAINING MORE THAN ONE TWISTED PAIR OF LOOP LEAD WIRE SHALL BE 2".

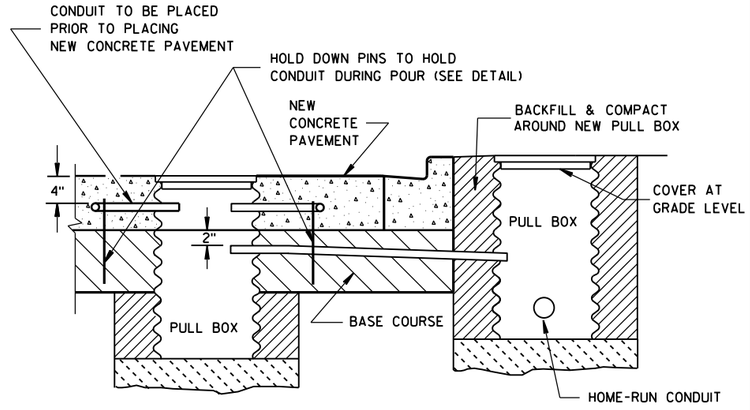
THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

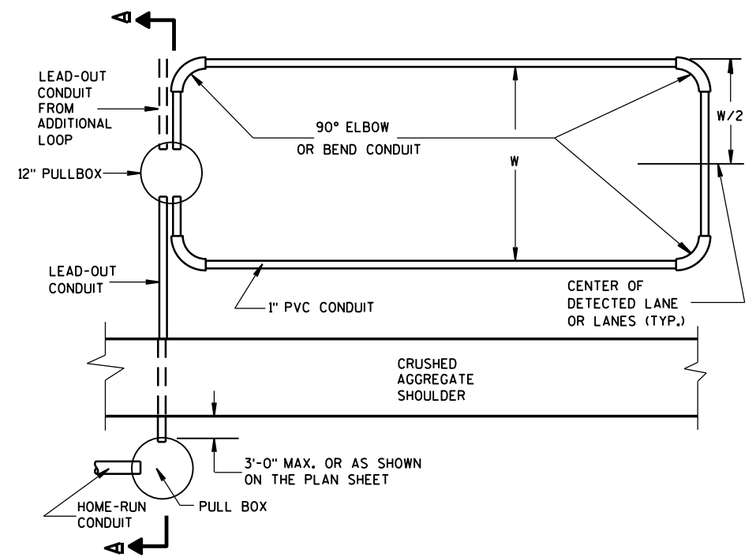
THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, INTO THE PULL BOX IN THE PAVEMENT, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED CONTINUOUS LENGTH.

PROTECTION OF THE PULL BOX IN THE BASE COURSE, AND THE RELATED CONDUITS SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW CONCRETE PAVEMENT IS POURED.

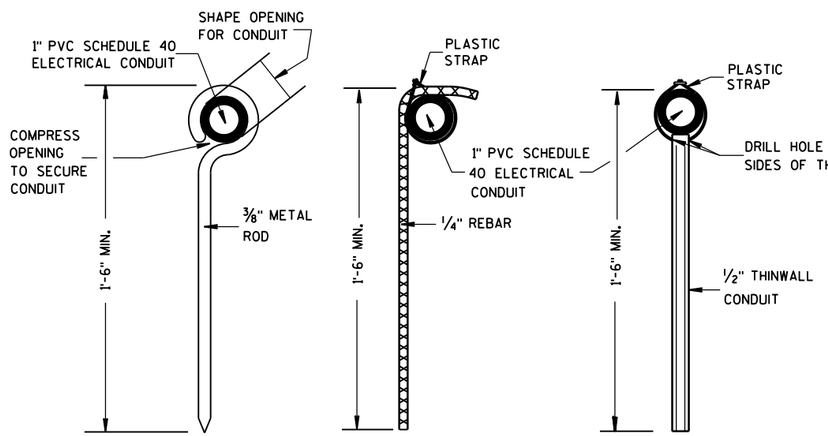
12" PULL BOXES IN PAVEMENT SHALL BE CORRUGATED STEEL ONLY.



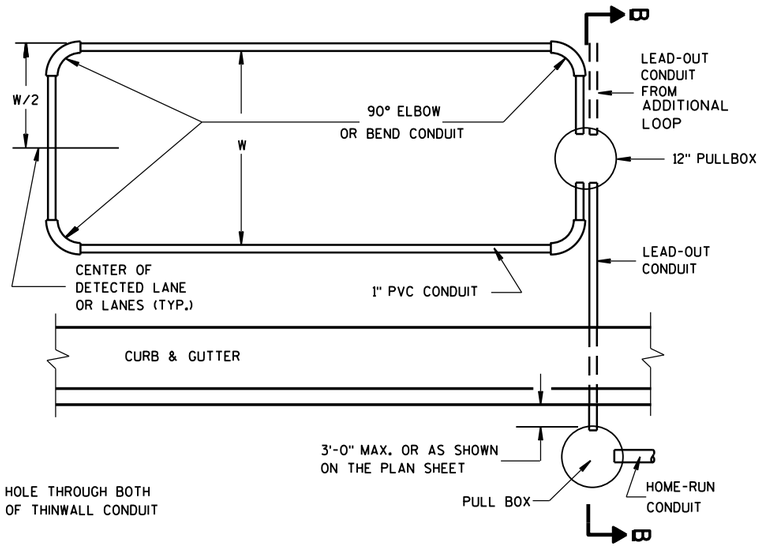
SECTION B-B
CURB & GUTTER
LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULLBOX

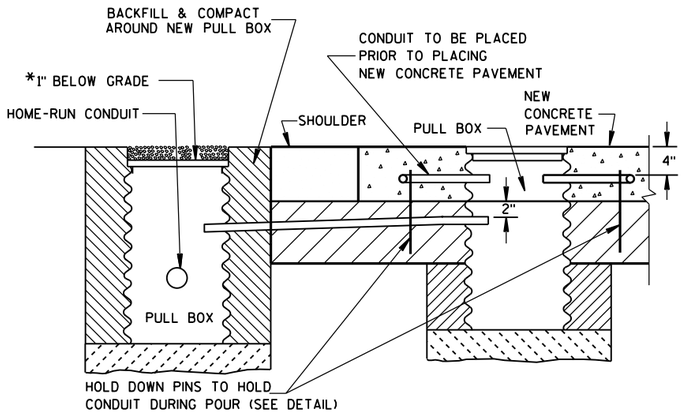


TYPICAL DETAILS FOR HOLD DOWN PINS



TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULLBOX

LOOP DETECTOR INSTALLED IN NEW CONCRETE PAVEMENT ROUND CSCP PULLBOX
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED Sept. 2014 DATE /S/ Ahmet Demirbilek STATE ELECTRICAL 363 FHWA



SECTION A-A
NO CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL

*RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

GENERAL NOTES

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

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

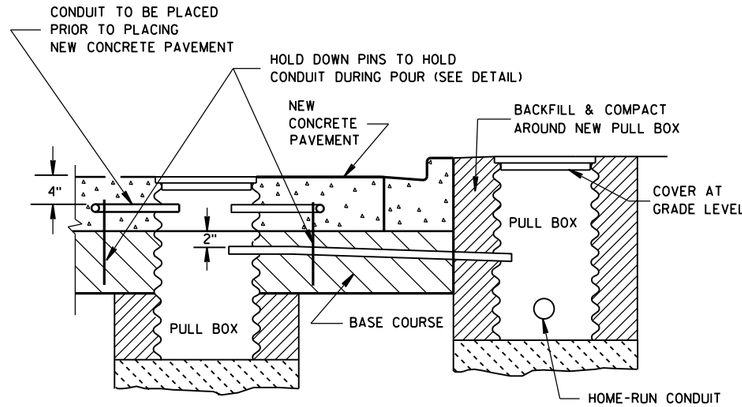
THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

SPLICES OF LOOP WIRE TO LEAD-IN CABLE SHALL BE MADE ONLY IN PULL BOXES AT THE SIDE OF THE ROAD.

THE #12 AWG LOOP WIRE SHALL BE INSTALLED FROM THE ROADSIDE PULL BOX, INTO THE PULL BOX IN THE PAVEMENT, THROUGH THE LOOP CONDUIT, BACK TO THE ROADSIDE PULL BOX, AND BE INSTALLED IN ONE, NON-SPLICED CONTINUOUS LENGTH.

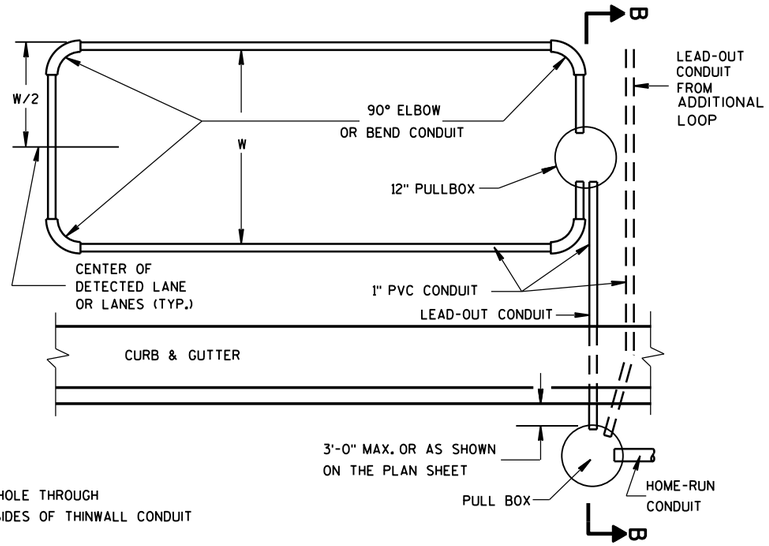
PROTECTION OF THE PULL BOX AND RELATED CONDUITS SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW CONCRETE PAVEMENT IS POURED.

12" PULL BOXES IN PAVEMENT SHALL BE CORRUGATED STEEL ONLY.

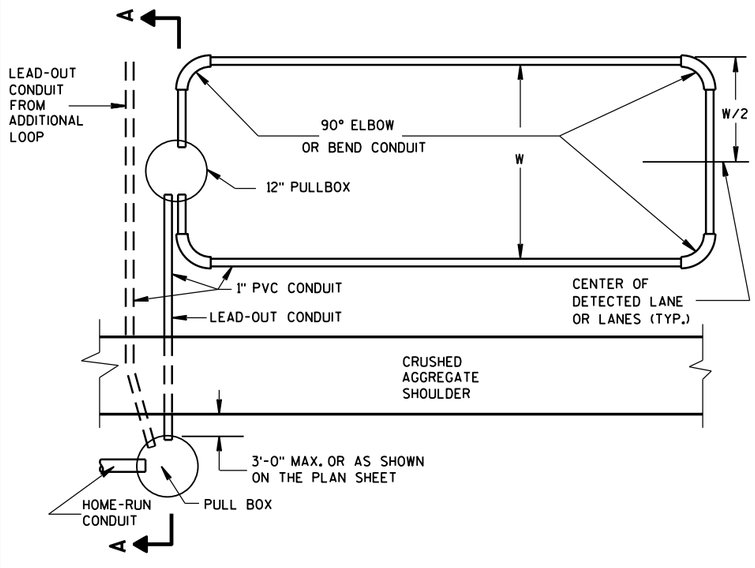


SECTION B-B
CURB & GUTTER

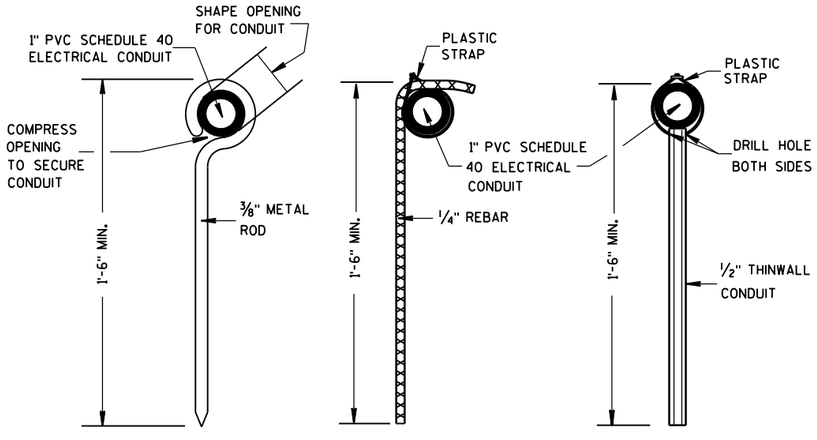
LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR
WITH 12" PULLBOX



TYPICAL PLAN OF LOOP DETECTOR
WITH 12" PULLBOX



TYPICAL DETAILS FOR HOLD DOWN PINS

LOOP DETECTOR INSTALLED
IN NEW CONCRETE PAVEMENT
ROUND CSCP PULLBOX
(MULTIPLE LEAD-OUT)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
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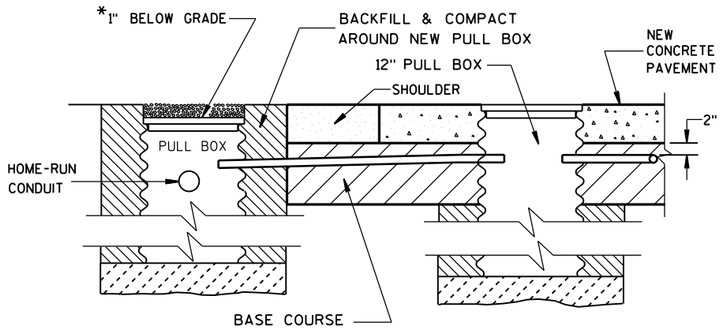

SECTION A-A

NO CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAILS

*RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

GENERAL NOTES

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

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

LOOP DETECTOR LEADS SHALL BE IDENTIFIED WITH THEIR ASSOCIATED LOOP BY USE OF WATERPROOF TAGS AT BOTH ENDS OF THE CABLE. A LISTING OF THE CABLE IDENTIFICATION PER INDIVIDUAL LOOP LEAD-IN SHALL BE PLACED IN THE CABINET.

THE #12 AWG LOOP WIRE FROM THE LOOP TO THE ROADSIDE PULL BOX, SHALL BE HAND TWISTED AT LEAST 3 TWISTS PER FOOT BEFORE INSTALLATION.

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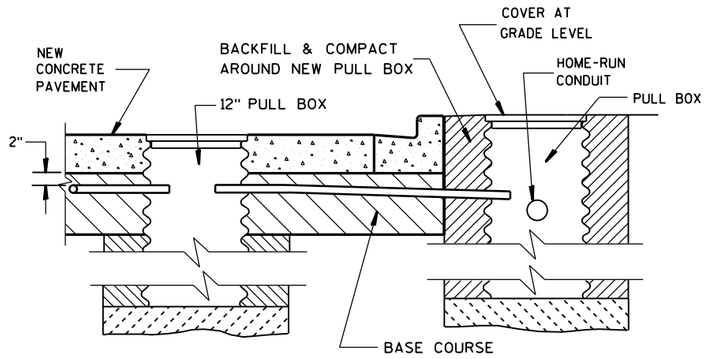
PROTECTION OF THE CONDUIT, CONDULET AND PULL BOX SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE THE NEW CONCRETE PAVEMENT IS PLACED.

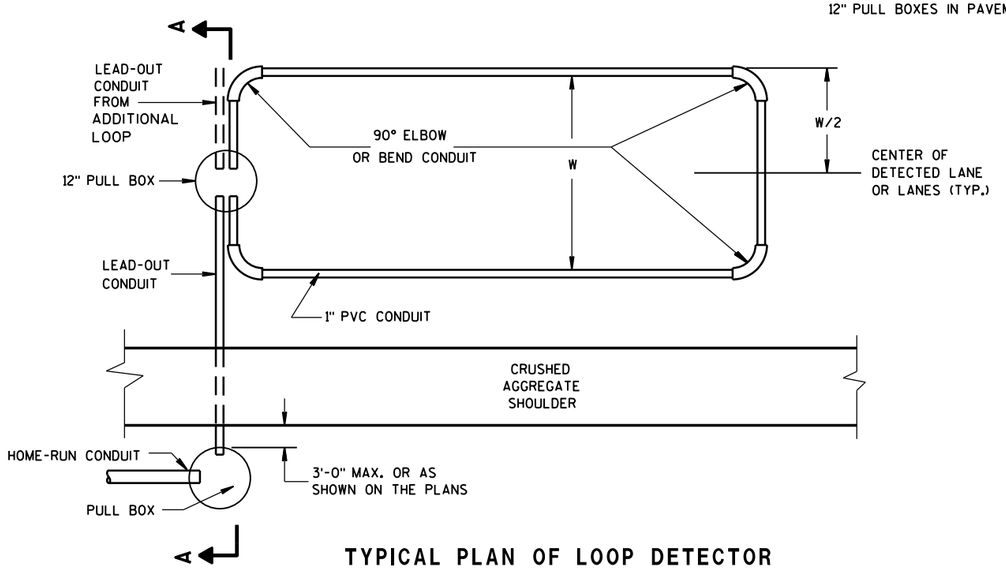
12" PULL BOXES IN PAVEMENT SHALL BE CORRUGATED STEEL ONLY.



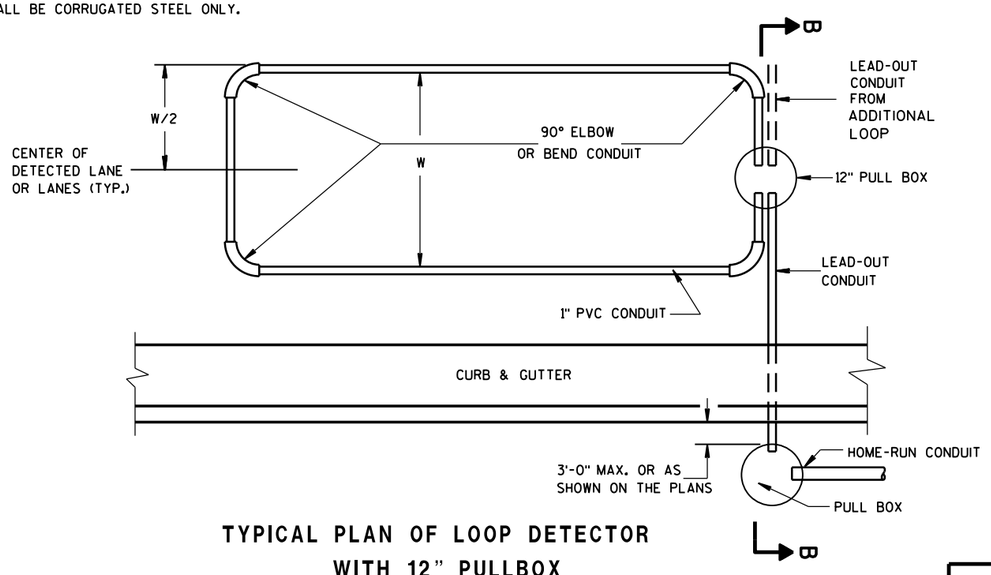
SECTION B-B

CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAILS



TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULLBOX



TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULLBOX

LOOP DETECTOR PLACED IN CRUSHED AGGREGATE BASE (NEW CONCRETE PAVEMENT)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2014 — DATE

/S/ Ahmet Demirbilek — STATE ELECTRICAL

FHWA

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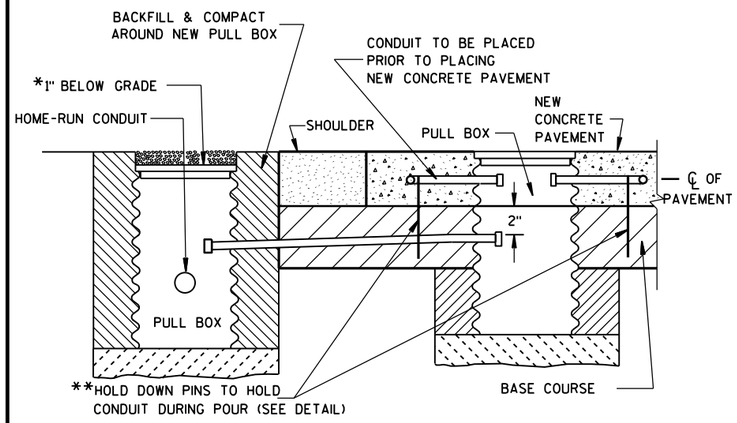

SECTION A-A
NO CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL

*RECESS PULL BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

GENERAL NOTES

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

LOOP SIZE, LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD-OUT CONDUIT TO DRAIN TO ROADSIDE PULL BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

MEASURE GROUND RESISTANCE USING A MEGGER. REPLACE LOOP WIRE NOT ATTAINING A READING OF INFINITY TO GROUND.

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ANY PVC LEAD-OUT CONDUIT CONTAINING MORE THAN TWO TWISTED PAIR OF LOOP LEAD-IN WIRE SHALL BE 2".

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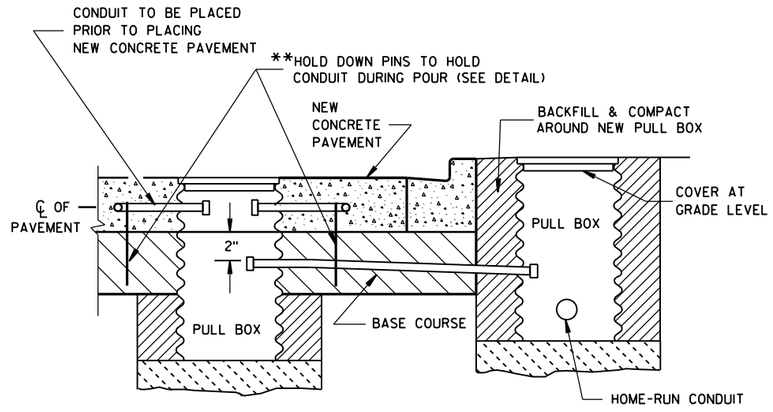
PROTECTION OF THE PULL BOX IN THE BASE COURSE, AND THE RELATED CONDUITS SHALL BE REQUIRED AFTER INSTALLATION AND BEFORE NEW CONCRETE PAVEMENT IS POURED. ANY DAMAGE THAT OCCURS DUE TO FAILURE TO PROTECT THE INSTALLATION SHALL BE REPAIRED AT THE CONTRACTORS EXPENSE.

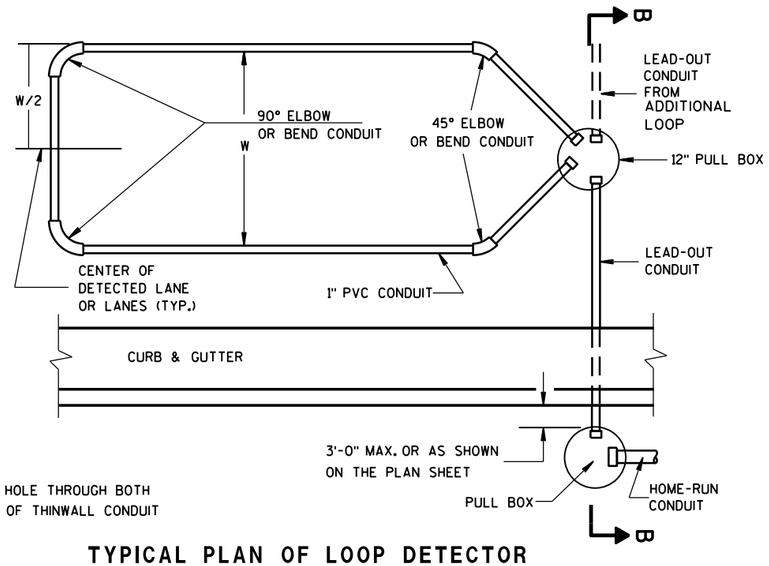
SHOULD INSTALLATION REPAIR BE REQUIRED, IT SHALL BE ACCOMPLISHED UNDER THE DIRECTION OF THE PROJECT ENGINEER.

12" PULL BOXES IN PAVEMENT SHALL BE CORRUGATED STEEL ONLY.

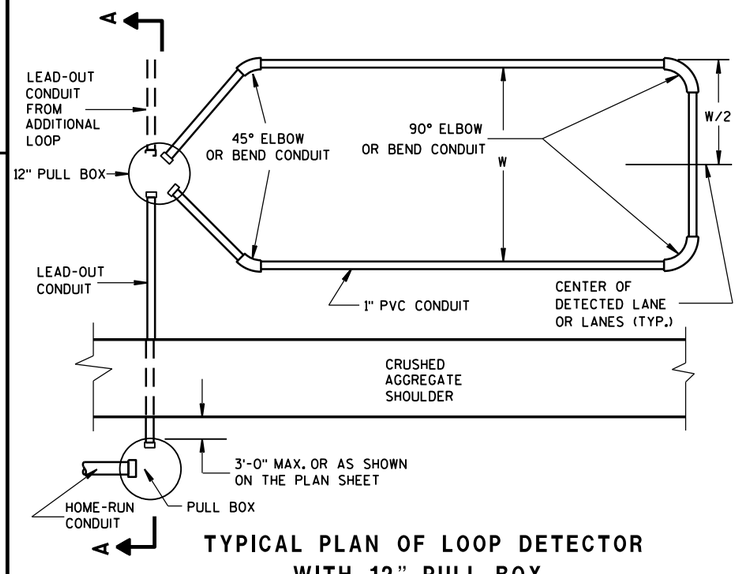


SECTION B-B
CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL



TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULL BOX



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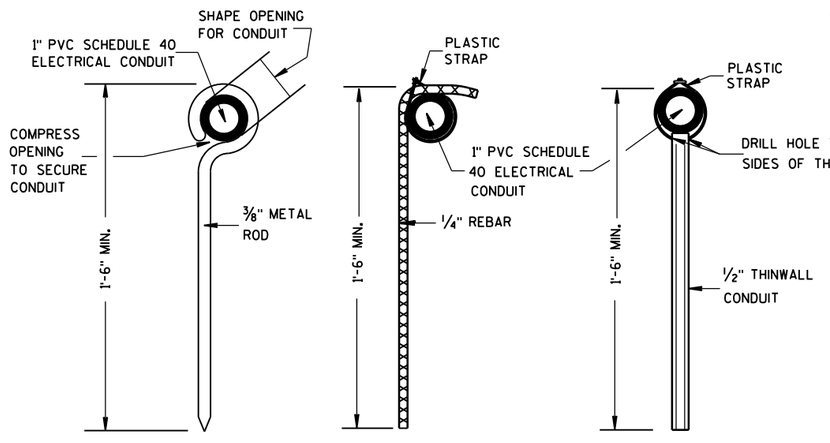

TYPICAL DETAILS FOR HOLD DOWN PINS

**HOLD DOWN PINS ARE REQUIRED TO STABILIZE THE LOOP TO MEET THE DIMENSIONAL AND PHYSICAL CONSTRUCTION REQUIREMENTS OF THE PLANS. THE NUMBER OF HOLD DOWN PINS SHALL BE DETERMINED IN THE FIELD, BY THE PROJECT ENGINEER.

LOOP DETECTOR INSTALLED IN NEW CONCRETE PAVEMENT ROUND CSCP PULL BOX 45 DEGREE ELBOWS TO PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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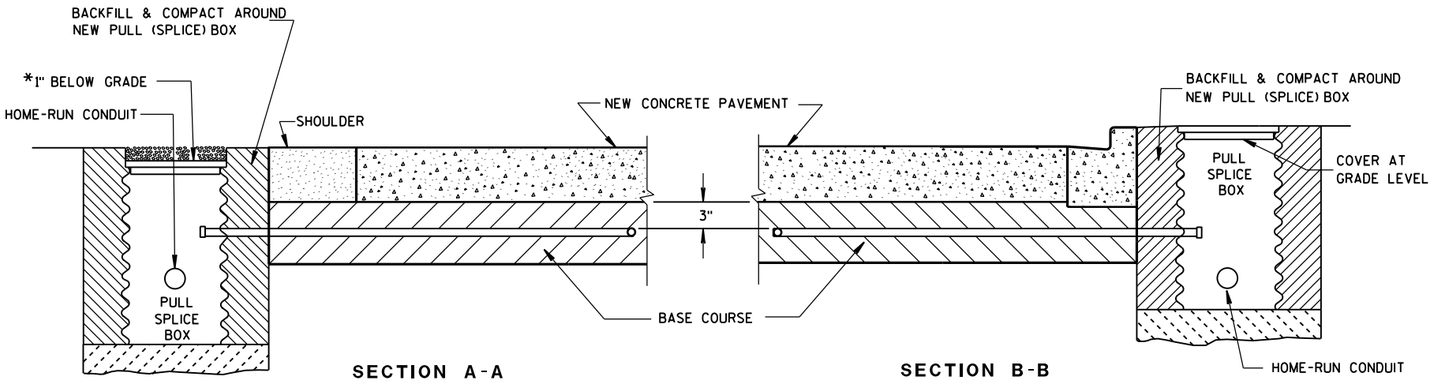

SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

GENERAL NOTES

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

LOOP SIZE, CONFIGURATION LOCATION, NUMBER OF TURNS OF WIRE AND ASSOCIATED SIGNAL PHASE SHALL BE AS SHOWN ON THE PLANS.

PITCH LEAD OUT CONDUIT TO DRAIN TO ROADSIDE PULL (SPLICE) BOX.

SPLICES SHALL BE INSTALLED BY USING CAST IN PLACE SPLICE KITS LISTED ON THE DEPARTMENTS APPROVED PRODUCTS LIST OR AN ENGINEER APPROVED EQUAL. NON-INSULATED BUTT SPLICES TO FIT #12 AWG STRANDED WIRE SHALL BE USED. SPLICES SHALL BE SOLDERED AND INSULATED FROM EACH OTHER AS PER INSTRUCTIONS INCLUDED IN THE SPLICE KIT.

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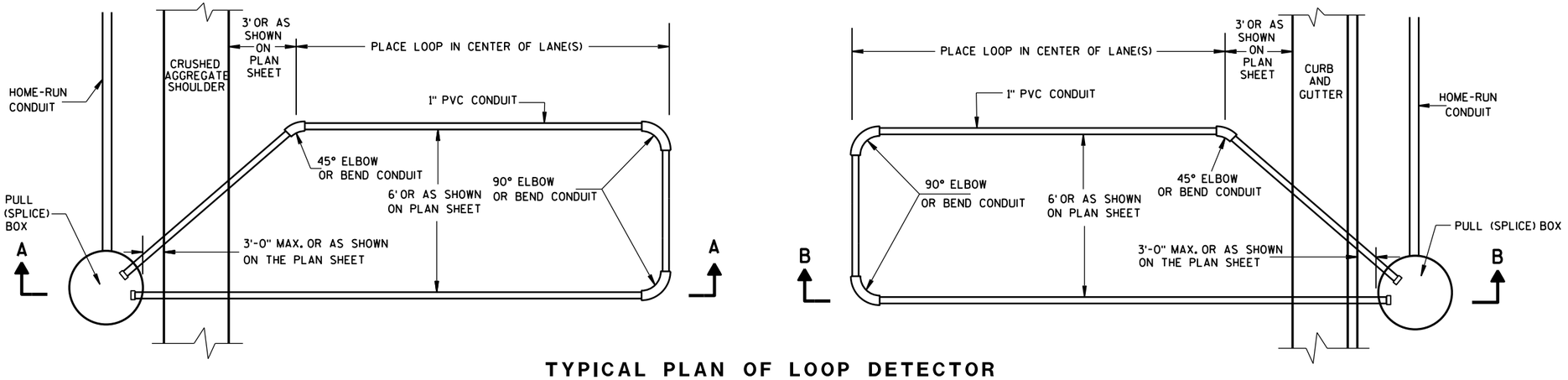

TYPICAL PLAN OF LOOP DETECTOR WITH 18" OR 24" PULL (SPLICE) BOX

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 1)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL
FHWA

S.D.D. 9 F 15-4a

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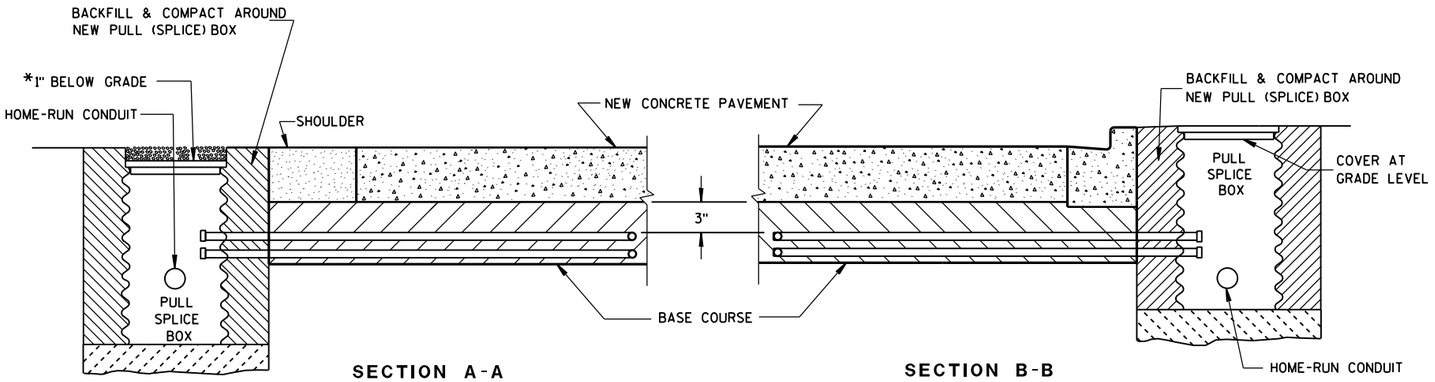

SECTION A-A
NO CURB & GUTTER

SECTION B-B
CURB & GUTTER

*RECESS PULL (SPLICE) BOX SO THAT THE COVER IS 3" BELOW GRADE IN SHOULDER AREAS OF CRUSHED AGGREGATE. BACKFILL OVER COVER WITH THE CRUSHED AGGREGATE TO BRING THE AREA TO GRADE LEVEL.

LOOP DETECTOR INSTALLATION DETAIL

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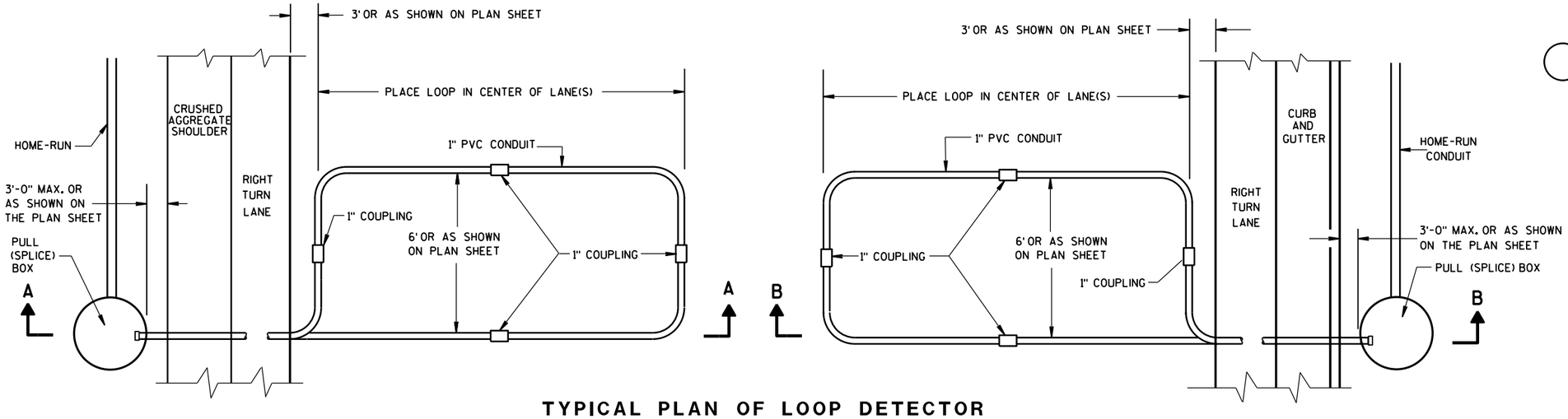
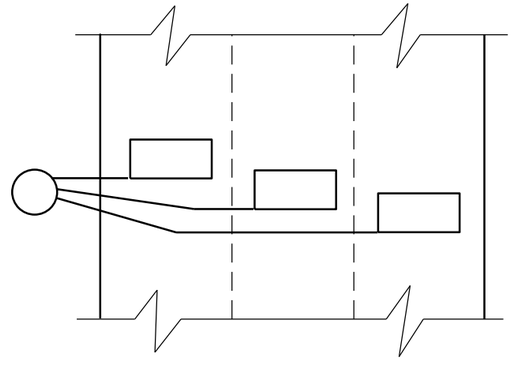


TYPICAL PLAN OF LOOP DETECTOR WITH 24" PULL (SPLICE) BOX



MULTI-LANE INSTALLATION

LOOP DETECTOR INSTALLED IN BASE COURSE WITH PULL (SPLICE) BOX OFF ROADWAY (OPTION 2)
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION
APPROVED Sept. 2014 — DATE /S/ Ahmet Demirbilek — STATE ELECTRICAL FHWA

GENERAL NOTES

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THE GROUND RESISTANCE READING OF THE LOOP SHALL READ "INFINITY" TO GROUND ON AN OHMMETER USING A MULTIPLIER SCALE OF 1 MEGOHM AND AN INPUT RESISTANCE OF 11 MEGOHMS MINIMUM BEFORE SPLICING THE LOOP TO THE LEAD-IN CABLE.

AFTER SPLICING THE LOOP WIRE TO THE LOOP LEAD-IN CABLE, THE CONTRACTOR SHALL MEASURE INDUCTANCE, GROUND RESISTANCE AND WIRE RESISTANCE AT THE CABINET END OF THE LEAD-IN CABLE AND FURNISH A COPY OF THE READINGS TO THE PROJECT ENGINEER FOR EVALUATION.

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ALL PVC LEAD-OUT CONDUIT CONTAINING LOOP LEAD-IN CABLES SHALL BE 2".

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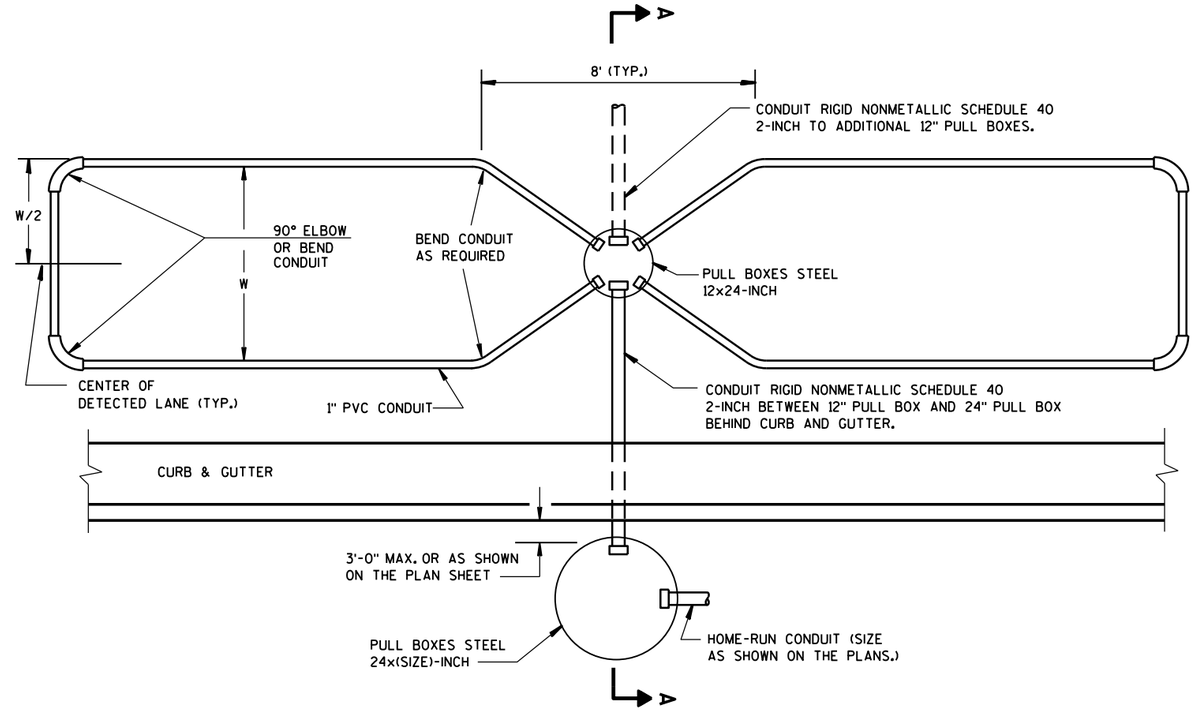
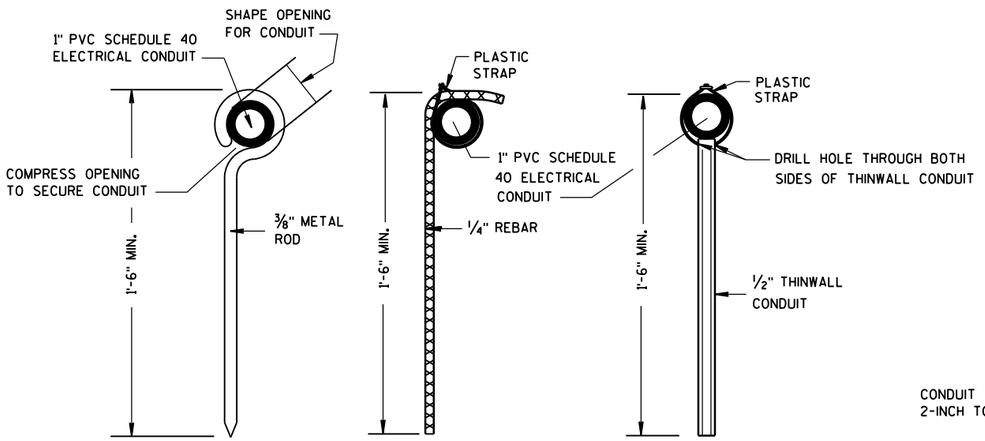


TYPICAL PLAN OF LOOP DETECTOR WITH 12" PULL BOX



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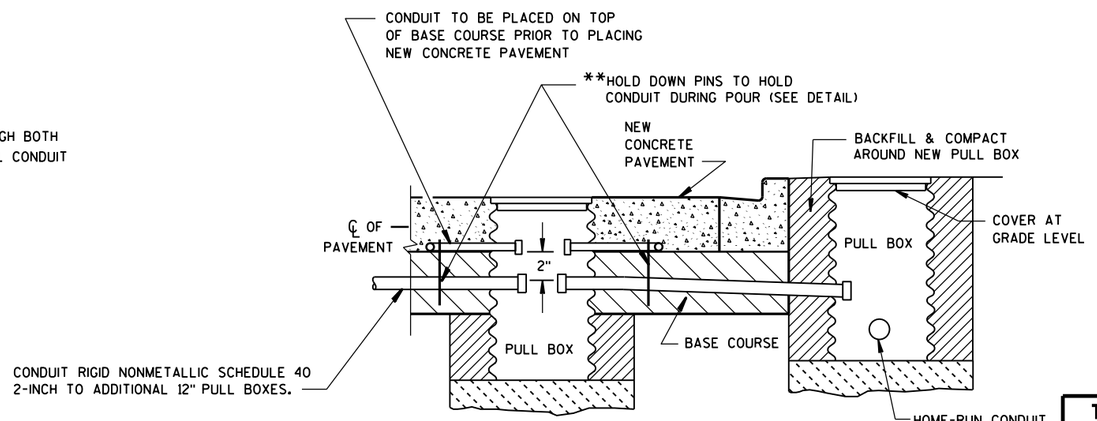

SECTION A-A
CURB & GUTTER

LOOP DETECTOR INSTALLATION DETAIL

TWO LOOP DETECTORS INSTALLED IN NEW CONCRETE PAVEMENT ROUND CSCP PULL BOX 45 DEGREE ELBOWS TO PULL BOX

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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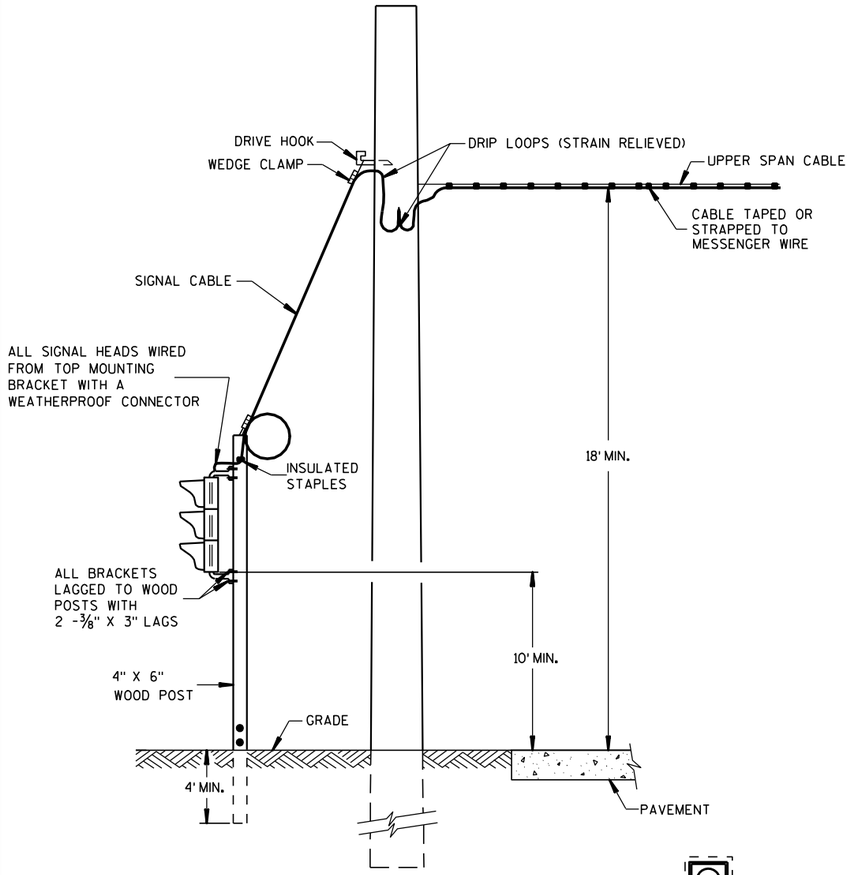
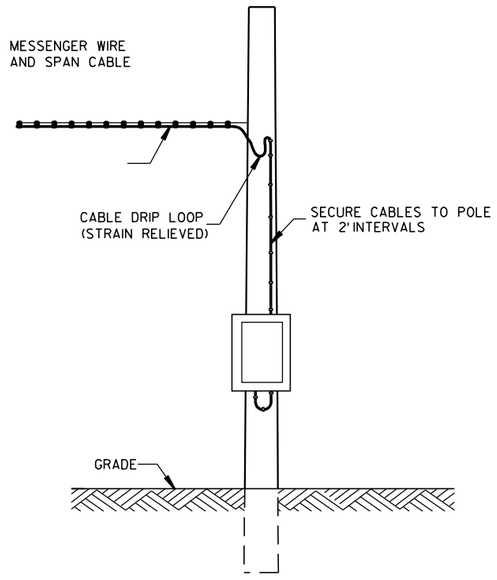


TYPICAL DROP TO TRAFFIC SIGNAL FACE



POLE MOUNT CABINET INSTALLATION

GENERAL NOTES

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

POLE MOUNTED TRAFFIC SIGNAL CONTROL CABINET MAYBE MOUNTED ON THE SERVICE POLE IF THE ELECTRICAL UTILITY ALLOWS THE INSTALLATION.

WHEN UTILITY PLOLES ARE USED TO SPAN THE TEMPORARY OVERHEAD CABLE, WRITTEN PERMISSION MUST BE OBTAINED FROM THE OWNER OF THE POLES AND GIVEN TO THE PROJECT MANAGER. ALL PERTINENT UTILITY AND CODE CLEARANCES SHALL BE MAINTAINED.

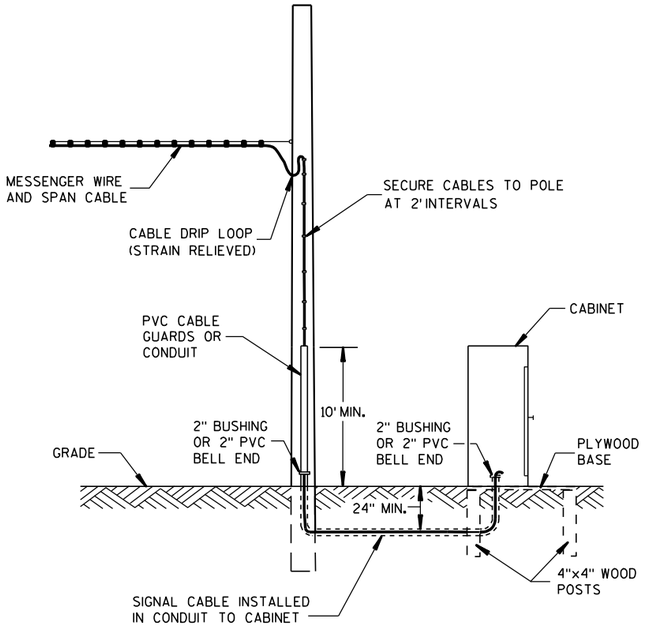
WOOD POLES (NONBREAKAWAY) SHALL BE NO CLOSER TO EDGE OF PAVEMENT THAN OFFSET DISTANCE CHART ALLOWS OR 4 FEET BEHIND PROTECTIVE BARRIER (BEAMGUARD, ETC.).

WOOD POSTS (BREAKAWAY) SHALL BE NO CLOSER THAN 2 FEET OUTSIDE OF SHOULDER.

VERTICAL CLEARANCE ETC. PER NEC.

TRAFFIC SIGNAL FACES SHALL BE TYPICALLY PLACED 12 FEET FROM EDGE OF PAVEMENT.

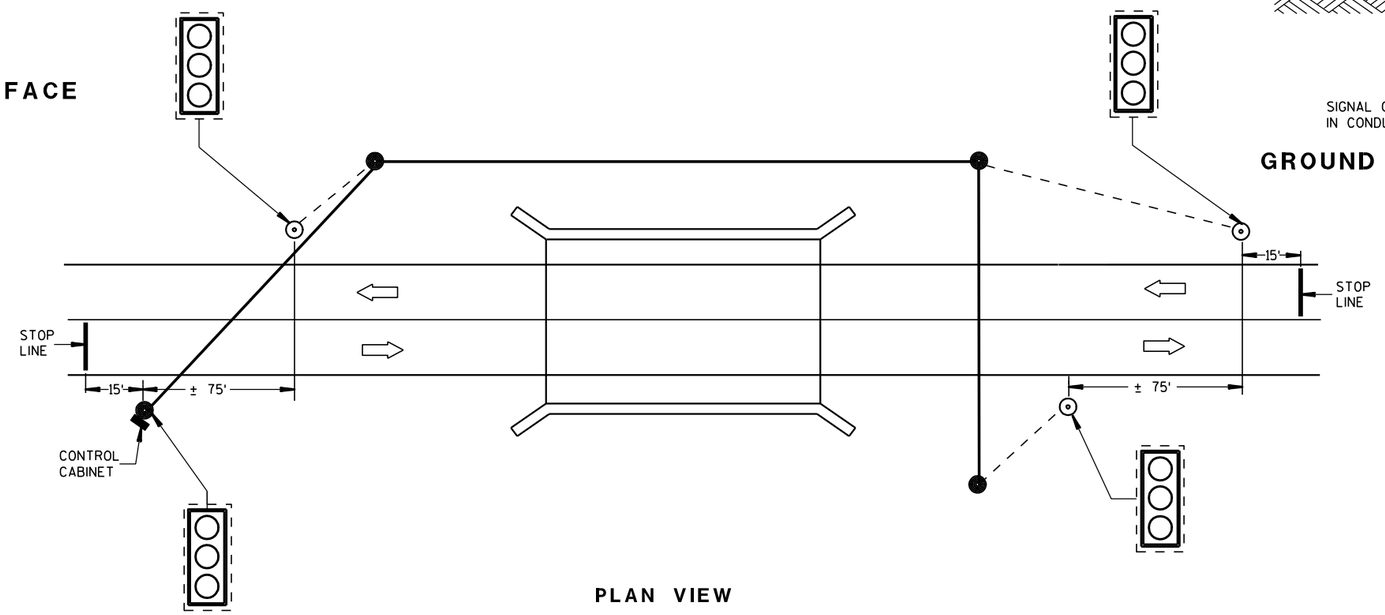
EACH TRAFFIC SIGNAL FACE SHALL HAVE A BACKPLATE.



GROUND MOUNT CABINET INSTALLATION

OFFSET DISTANCES FOR TEMPORARY NON-BREAKAWAY POLES	
SPEED LIMIT	OFFSET DISTANCE**
GREATER THAN 45 MPH	18 FT
45 MPH OR LESS	12 FT
45 MPH OR LESS W/ CURBS	2 FT

**NOTE: OFFSET MEASURED FROM OUTER EDGE OF OUTSIDE THRU LANE.



PLAN VIEW

TYPICAL BRIDGE TEMPORARY TRAFFIC SIGNAL LOCATION

LEGEND

- WOOD POLE (NONBREAKAWAY)
- WOOD POST (BREAKAWAY)
- SIGNAL CABLE
- SIGNAL CABLE W/MESSENGER
- LED TRAFFIC SIGNAL FACE WITH BACKPLATE (3-12")
- DIRECTION OF TRAFFIC

MINIMUM POLE LENGHTS	CLASS	MINIMUM BURIAL DEPTHS
25 FEET	V	5 FEET
30 FEET	V	6 FEET
35 FEET	IV	7 FEET
40 FEET	IV	8 FEET
45 FEET	IV	9 FEET

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
3/2/2011 DATE
/S/ Thomas J. Gosnine STATE ELECTRICAL ENGI
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S.D.D. 9 G 2-3a

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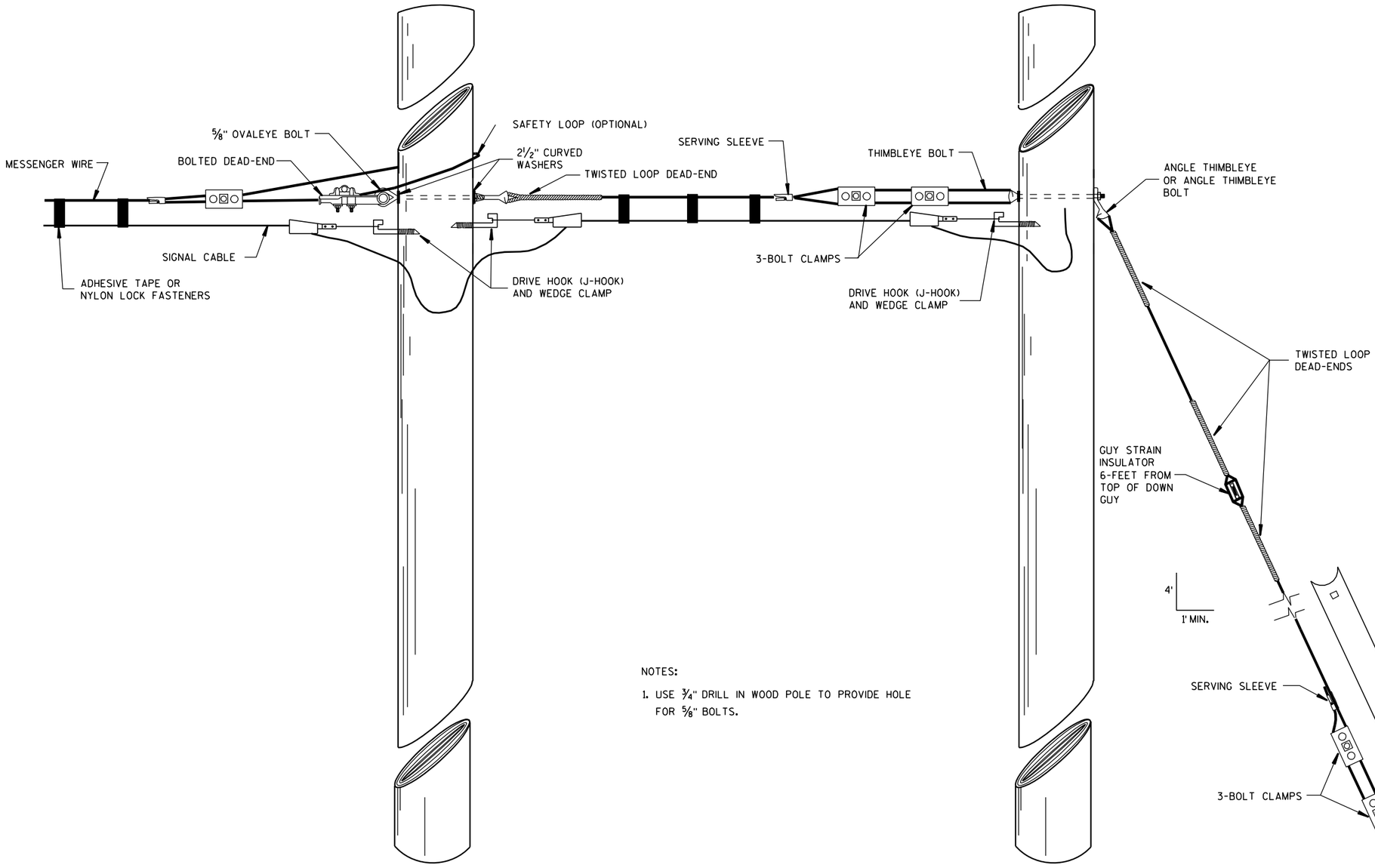
S.D.D. 9 G 2-3a



SPAN WIRE POLE

GUY POLE

NOTES:

1. USE 3/4" DRILL IN WOOD POLE TO PROVIDE HOLE FOR 5/8" BOLTS.

TYPICAL DEAD-ENDINGS OR GUYING

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/2/2011 DATE

/S/ Thomas J. G... STATE ELECTRICAL ENGI

HWYS

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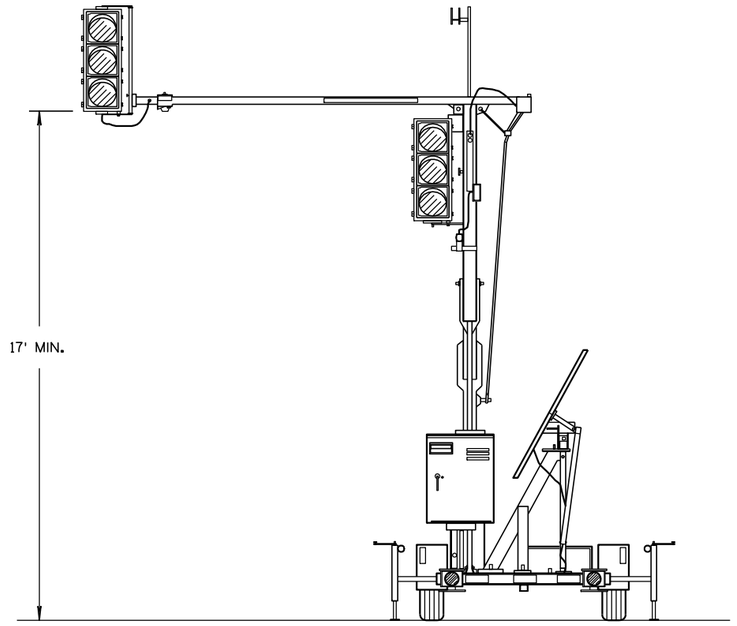
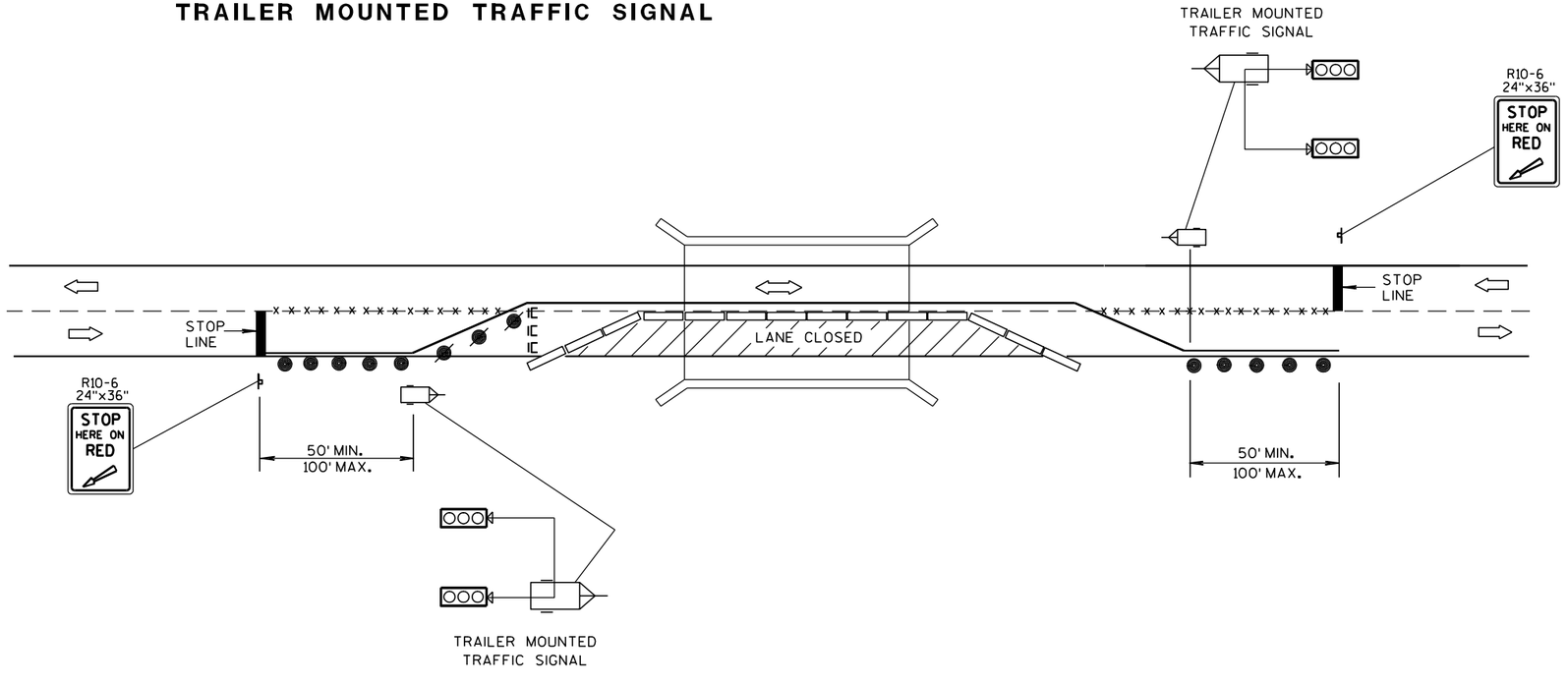


TRAILER MOUNTED TRAFFIC SIGNAL



TYPICAL TRAILER MOUNTED TRAFFIC SIGNAL LOCATION

GENERAL NOTES

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

SIGNING, PAVEMENT MARKING AND LANE CONTROL REQUIREMENTS SHALL CONFORM TO STANDARD DETAIL DRAWING 15 D 33.

LEGEND

- POST MOUNTED SIGN
- REMOVING PAVEMENT MARKING
- TYPE III BARRICADE WITH SIGN
- DRUM WITH/WITHOUT WARNING LIGHT, TYPE C (STEADY-BURN)
- TEMPORARY PRECAST CONCRETE BARRIER
- TRAILER MOUNTED TRAFFIC SIGNAL
- DIRECTION OF TRAFFIC FLOW

BRIDGE TEMPORARY TRAFFIC SIGNAL INSTALLATION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

3/2/2011
DATE

/S/ Thomas J. Gosling
STATE ELECTRICAL ENGI 372

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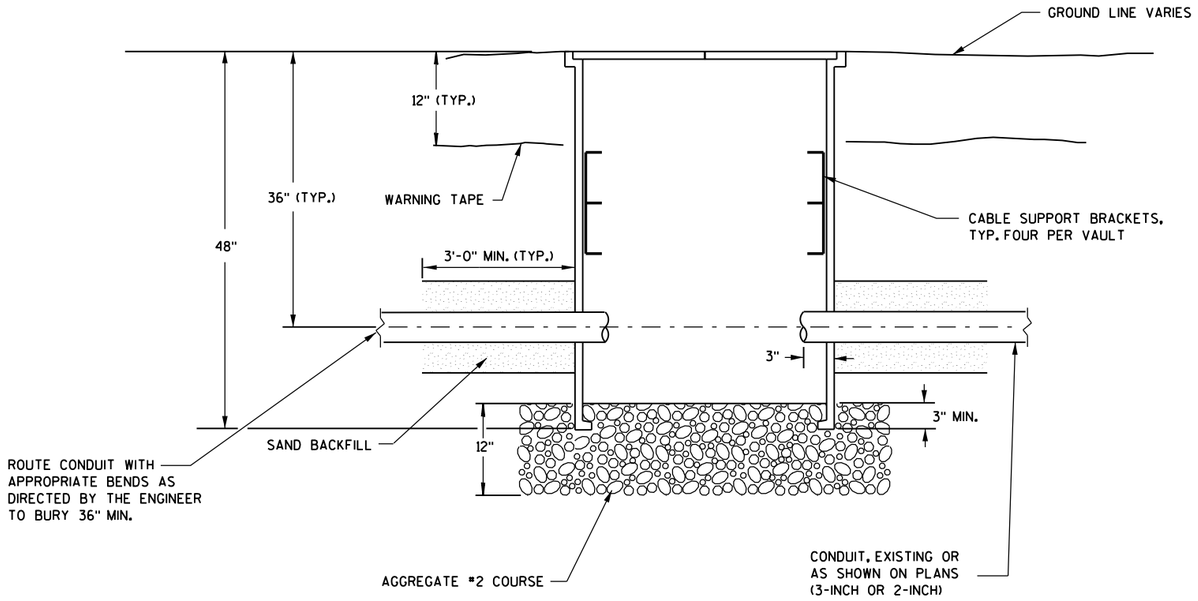
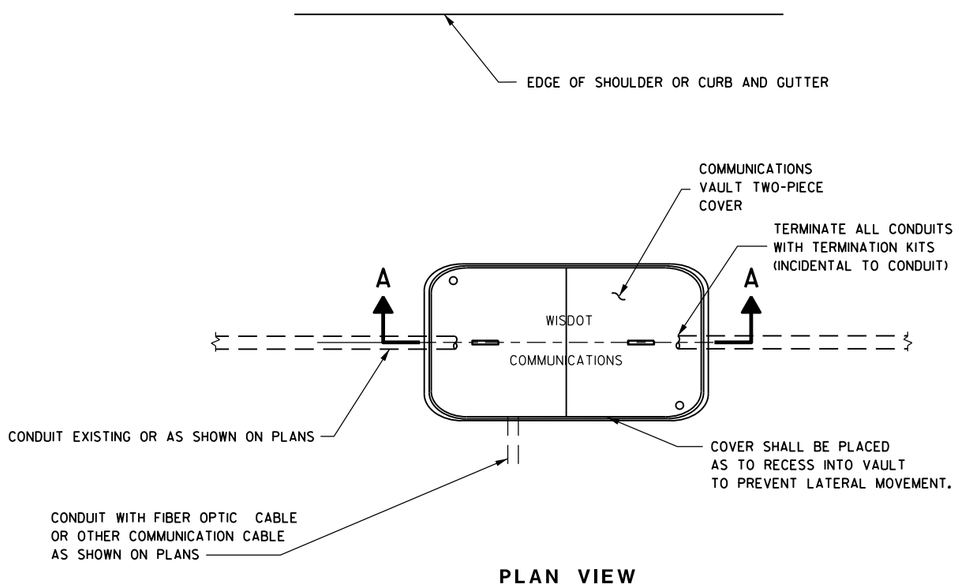


SECTION A-A



PLAN VIEW

COMMUNICATIONS VAULT

GENERAL NOTES

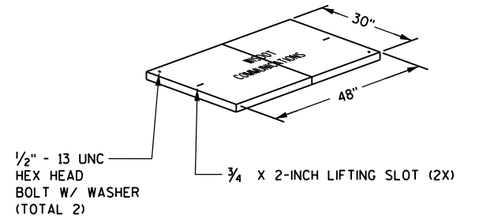
BOX SHALL HAVE AN OPEN BASE.

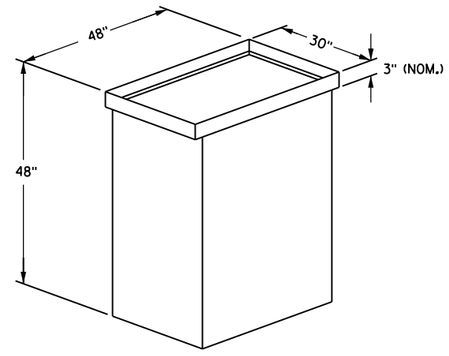
COVER SHALL BE DETECTABLE, AND HAVE A MINIMUM DESIGN LOAD OF 15,000 LBS AND SHALL LOCK.

ALL OPENINGS IN STRUCTURE MUST BE MACHINED AT TIME OF FABRICATION, OR PUNCH DRIVEN AT TIME OF PLACEMENT.

VAULTS SHALL BE OF ONE-PIECE CONSTRUCTION. TWO-PIECE/STACKABLE VAULTS WILL NOT BE PERMITTED.

FIELD PLACEMENT OF COMMUNICATIONS VAULTS SHALL BE AS DIRECTED BY THE ENGINEER.





ISOMETRIC VIEW

COMMUNICATION VAULT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014
DATE
/S/ Ahmet Demirbilek
STATE ELECTRICAL
FHWA

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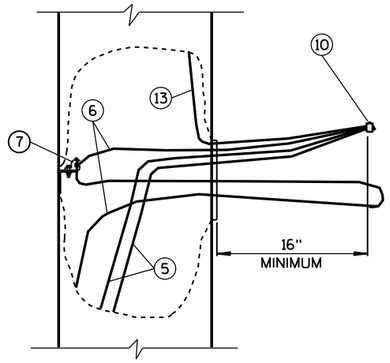
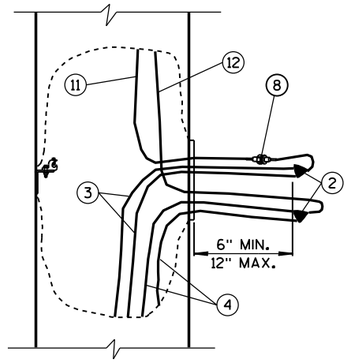
S.D.D. 9 H 9-1

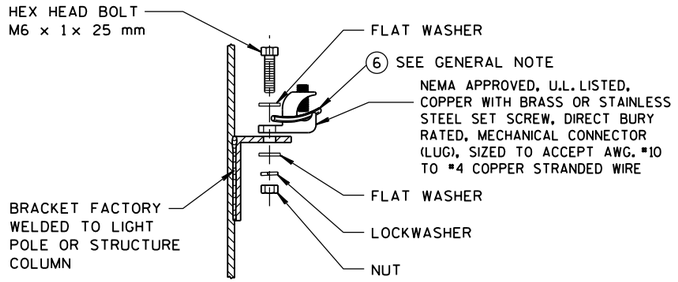


EQUIPMENT GROUNDING CONDUCTOR SLACK



UNGROUNDED CONDUCTOR SLACK (AND GROUNDED NEUTRAL SLACK IN GROUNDED NEUTRAL SYSTEM)

TYPICAL CONDUCTOR SLACK AT HANDHOLES



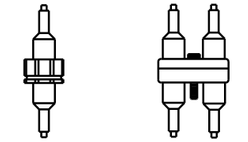
HANDHOLE GROUNDING LUG

(NUT, BOLT, WASHERS, AND LOCK WASHERS SHALL BE STAINLESS STEEL)

CONDUCTOR COLOR CODES

KEY	CONDUCTOR	COLOR
3	UNGROUNDED LINE WIRE	*
4	GROUNDED LINE WIRE	WHITE
5	SYSTEM GROUNDING LINE WIRE	GREEN
6	GROUNDING ELECTRODE CONDUCTOR	BARE
11	UNGROUNDED POLE WIRE	*
12	GROUNDED POLE WIRE	WHITE
13	EQUIPMENT GROUNDING POLE WIRE	GREEN

* FOLLOW COLOR CODING SHOWN IN THE PLANS. WHERE THE PLANS DO NOT SHOW COLOR CODING, USE BLACK FOR SINGLE LUMINAIRE POLES; BLACK AND RED FOR TWIN LUMINAIRE POLES.



1 POLE (1P) 2 POLE (2P)

FUSE ASSEMBLIES

GENERAL NOTES

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

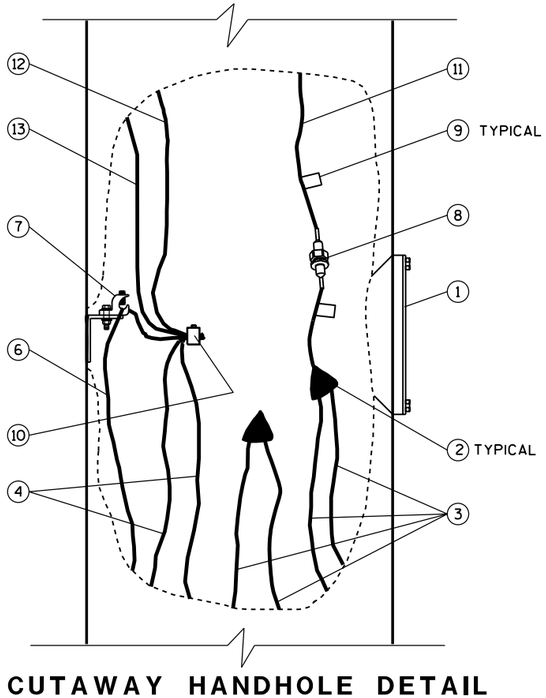
USE THIS DETAIL IN CONJUNCTION WITH THE ELECTRICAL DETAILS FOR THE APPLICATION, WHICH MAY BE A LIGHT POLE, SIGN BRIDGE, ETC.

THE GROUNDING ELECTRODE CONDUCTOR SHALL BE CONTINUOUS WITHOUT SPLICES FROM THE GROUNDING ELECTRODE THROUGH THE HANDHOLE GROUNDING LUG TO THE CONNECTOR.

THREE POLE WIRES ARE SHOWN FOR A SINGLE LUMINAIRE LIGHT POLE. THREE ADDITIONAL POLE WIRES REQUIRED FOR TWIN LUMINAIRE LIGHT POLES ARE OMITTED FROM THE DRAWING FOR CLARITY. IN THE TWIN POLE CASE, BUNDLE EACH SET OF THREE WIRES WITH A NYLON CABLE TIE.

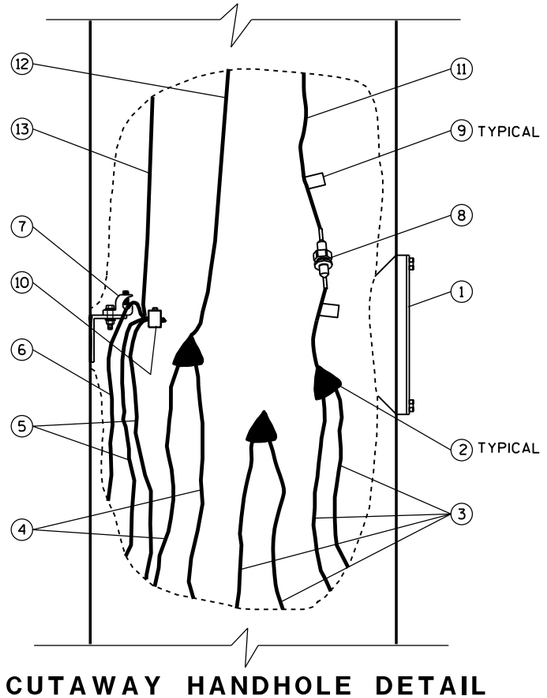
IN 3-PHASE SYSTEMS, THERE WILL BE ONE MORE UNGROUNDED LINE WIRE, WHICH IS OMITTED FROM THE DRAWING FOR CLARITY.

CIRCUIT TAGS SHALL BE INSTALLED ONLY WHERE REQUIRED IN THE SPECIAL PROVISIONS.



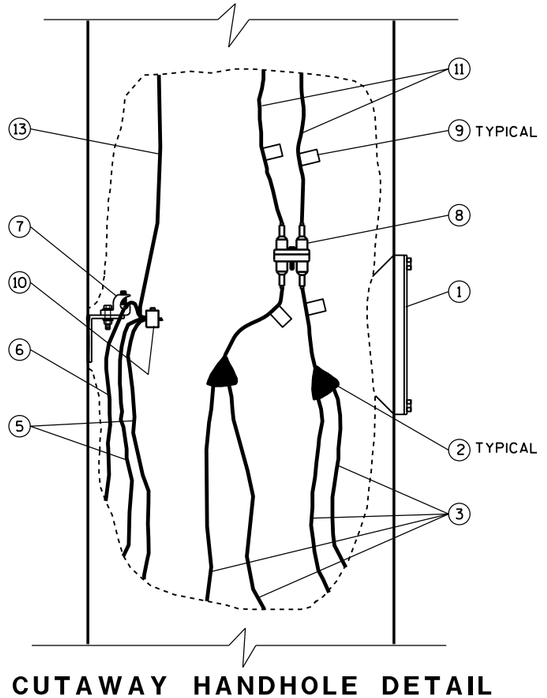
CUTAWAY HANDHOLE DETAIL

GROUNDED NEUTRAL SYSTEMS
1-Φ



CUTAWAY HANDHOLE DETAIL

ISOLATED NEUTRAL SYSTEMS
1-Φ SHOWN; 3-Φ WYE SIMILAR
(SEE GENERAL NOTE)



CUTAWAY HANDHOLE DETAIL

PHASE-TO-PHASE SYSTEMS
1-Φ SHOWN; 3-Φ DELTA SIMILAR
(SEE GENERAL NOTE)

NOTE: REQUIRED CONDUCTOR SLACK NOT SHOWN ON "CUTAWAY HAND HOLE" DETAILS FOR DRAWING CLARITY, SEE "TYPICAL CONDUCTOR SLACK AT HANDHOLES" ON THIS SHEET.

(1) HANDHOLE AND COVER
(2) INSULATED SPLICE
(3) UNGROUNDED LINE WIRE
(4) GROUNDED LINE WIRE
(5) SYSTEM GROUNDING LINE WIRE
(6) GROUNDING ELECTRODE CONDUCTOR
(7) HANDHOLE GROUNDING LUG
(8) FUSE ASSEMBLY, 1P OR 2P AS REQUIRED
(9) CIRCUIT TAG (SEE GENERAL NOTE)
(10) REVERSIBLE PRESSURE OR COMPRESSION GROUNDING CONNECTOR (NOT INSULATED)
(11) UNGROUNDED POLE WIRE
(12) GROUNDED POLE WIRE
(13) EQUIPMENT GROUNDING POLE WIRE

ELECTRICAL HANDHOLE WIRING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2014 — DATE
/S/ Ahmet Demirbilek — STATE ELECTRICAL
FHWA

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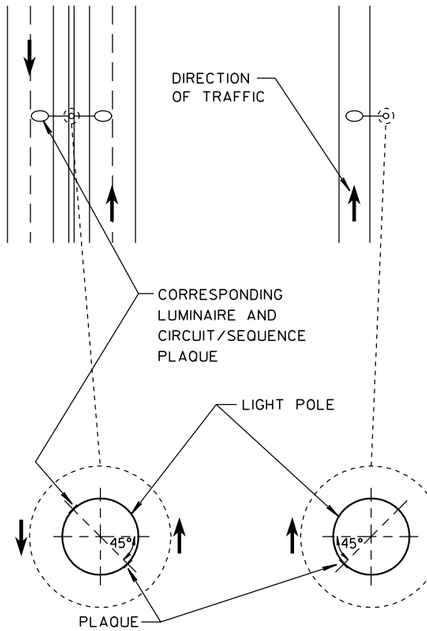


MEDIAN POLE **SINGLE ARM POLE**

LOCATION OF LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

WHERE SHOWN IN THE PLANS, REPLACEMENT PLAQUES WILL BE MEASURED AND PAID SEPARATELY.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETRORFLECTIVE

LINES - BLACK, 1/2" WIDE, SELF-ADHESIVE

CHARACTERS - BLACK, SELF-ADHESIVE, SERIES "D", SIZE AS SHOWN

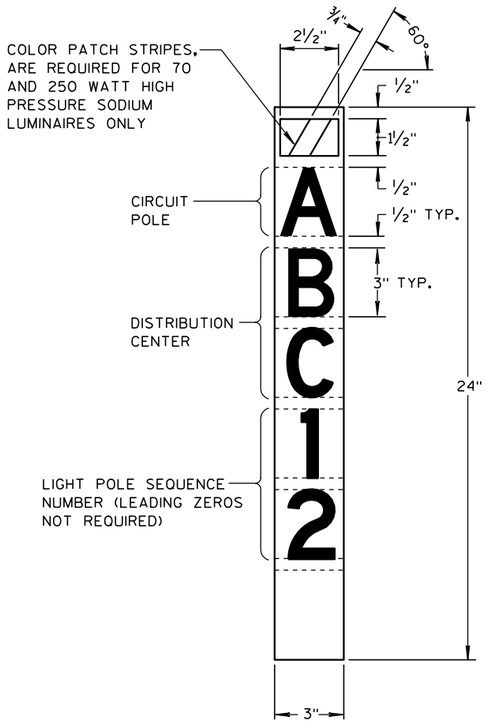
COLOR PATCHES - VARIOUS COLORS, SELF-ADHESIVE VINYL SHEETING

WITH THE APPROVAL OF THE ENGINEER, THE BASE MATERIAL MAY BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE SURFACE, IN CASES SUCH AS SMOOTH, CLEAN ALUMINUM POLES.

ALTERNATIVE COMPUTER-GENERATED SIGN LETTERING MAY BE ACCEPTED IF THE ENGINEER FINDS IT TO BE EQUIVALENT.

COLOR PATCH CODE FOR HPS LUMINAIRES

1000 WATT - NO PATCH
400 WATT - ORANGE
310 WATT - BLUE
250 WATT - ORANGE WITH WHITE STRIPE
200 WATT - RED
150 WATT - GREEN
100 WATT - BROWN
70 WATT - BROWN WITH WHITE STRIPE



LIGHT POLE CIRCUIT/SEQUENCE PLAQUE

IDENTIFICATION PLAQUES LIGHT POLES	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED 10/25/2010 DATE	/S/ John Corbin STATE ELECTRICAL ENGI 375 HWYS
FHWA	

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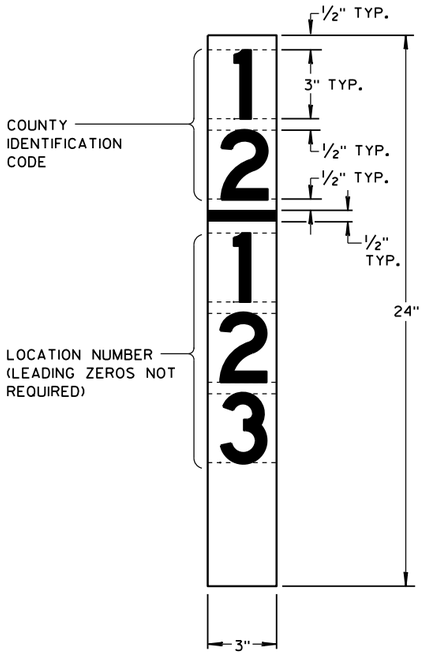
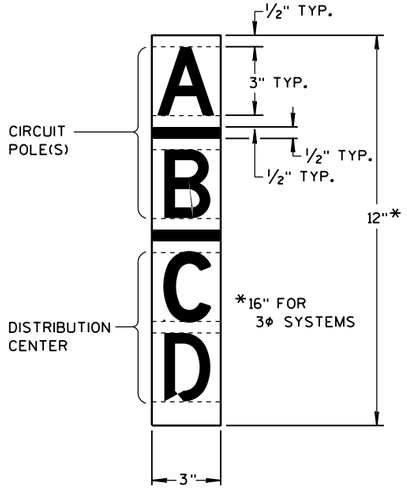
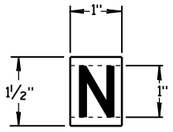


HIGH MAST LIGHT TOWER STRUCTURE PLAQUE

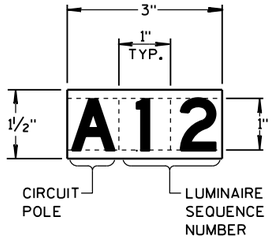


UNDERDECK LIGHTING OR HIGH MAST LIGHT TOWER CIRCUIT PLAQUE



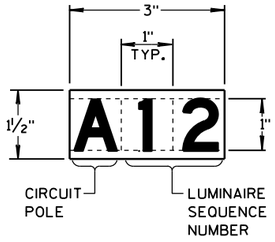
HIGH MAST LIGHT TOWER NORTH PLAQUE

(MOUNT ON LOWERING RING - INDICATING NORTH HEADING ^{2} ± 10°^{3} WHEN RING IS RAISED AND LATCHED)



HIGH MAST LIGHT TOWER LUMINAIRE SEQUENCE PLAQUE

(MOUNT ON LUMINAIRE RING)



UNDER DECK LUMINAIRE SEQUENCE DECAL

(MOUNT ON LUMINAIRE)

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

CONCRETE SURFACE - MASONRY ANCHORS

GALVANIZED STEEL SHAFT - STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

PLAQUE MATERIALS:

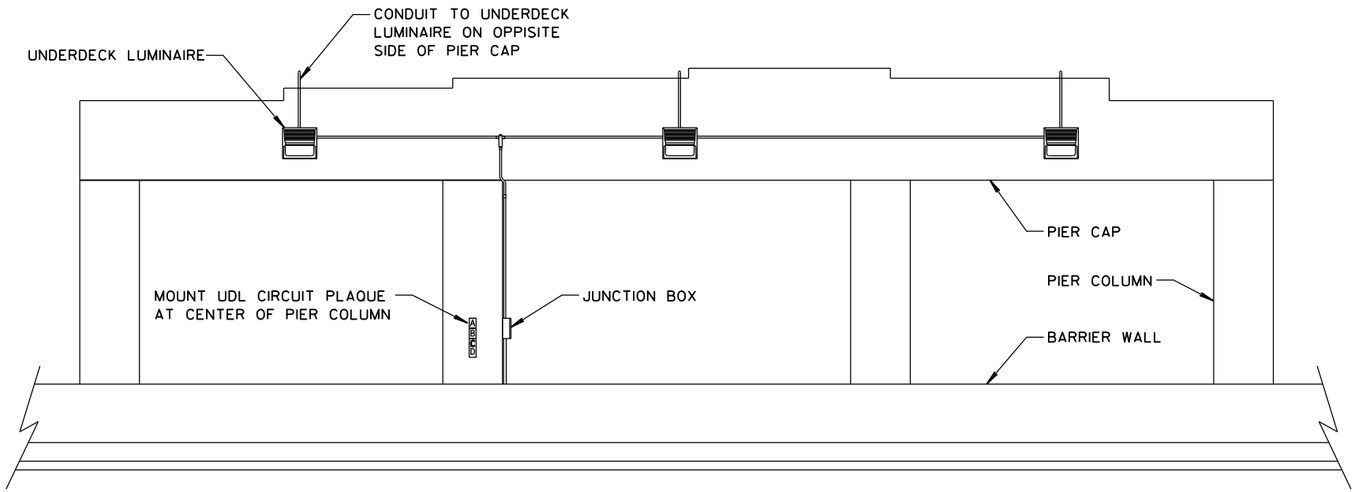
BASE - SHEET ALUMINUM, 0.060" THICK.

FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETRORFLECTIVE

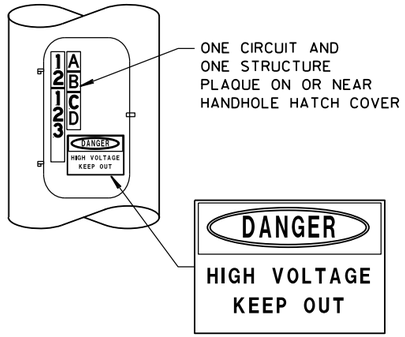
LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS - BLACK, SELF-ADHESIVE, SERIES "D", SIZE AS SHOWN

ALTERNATIVE COMPUTER-GENERATED SIGN LETTERING MAY BE ACCEPTED IF THE ENGINEER FINDS IT TO BE EQUIVALENT.



LOCATION OF UNDERDECK LIGHTING CIRCUIT PLAQUE



NOTE: NEMA PLAQUE SHOWN ABOVE IS REQUIRED ONLY IN PARK AND RIDE LOTS OR IN OTHER PEDESTRIAN ACCESSIBLE AREAS.

LOCATION OF HIGH MAST LIGHT TOWER STRUCTURE PLAQUE AND CIRCUIT PLAQUE

IDENTIFICATION PLAQUES UNDERDECK AND HIGH MAST LIGHTING	
STATE OF WISCONSIN DEPARTMENT OF TRANSPORTATION	
APPROVED	
June, 2015 (DATE)	/S/ Ahmet Demriblek (STATE ELECTRICAL)
FHWA	

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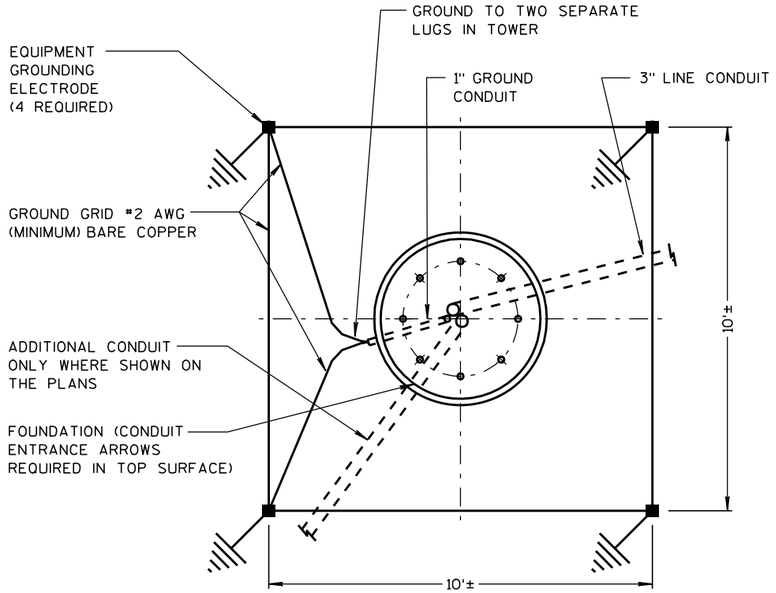
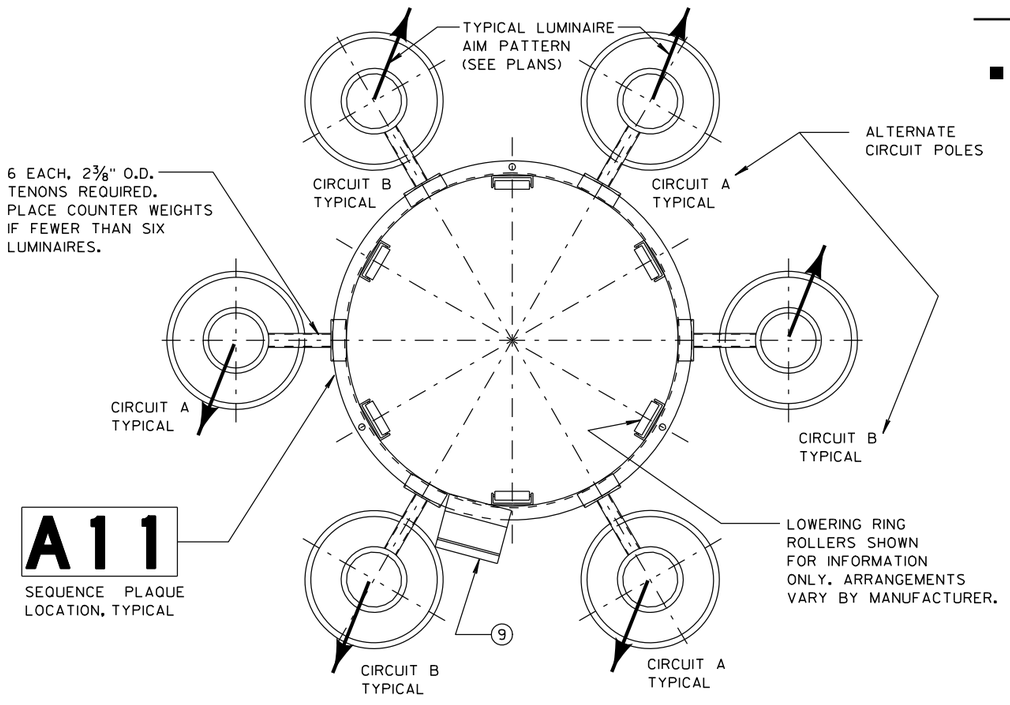


EQUIPMENT GROUNDING GRID AND FOUNDATION ELECTRICAL DETAILS



LOWERING RING OPTICS PLAN

1-φ CASE SHOWN; 3-φ CASE SIMILAR

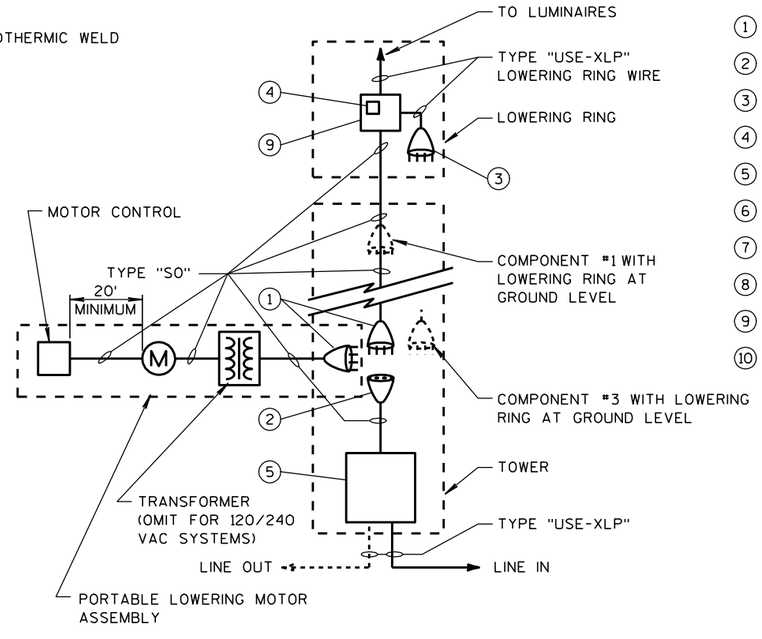
OVER CURRENT AND POWER CORD SCHEDULE

LINE VOLTAGE	HAND HOLE BREAKERS	INDIVIDUAL LUMINAIRE FUSES	POWER CORD	PRONGS ON LOAD BREAK DISCONNECT
1-φ 120/240VAC: 3 WIRE	2-30A, 1P, 277VAC	20A	10-3 + GND "SO"	A,B,N,GND
1-φ 240/480VAC: 3 WIRE	2-30A, 1P, 277VAC	10A	10-3 + GND "SO"	A,B,N,GND
3-φ 480Y/277VAC: 4 WIRE	3-30A, 1P, 277VAC	10A	10-4 + GND "SO"	X,Y,Z,N,GND
3-φ 208Y/120VAC: 4 WIRE	3-30A, 1P, 277VAC	20A	10-4 + GND "SO"	X,Y,Z,N,GND
1-φ 480VAC: 2 WIRE	1-20A, 2P, 600VAC	5A	10-3 + GND "SO"	A,B,N,GND

LEGEND

- HANDHOLE GROUND LUG
- CIRCUIT BREAKER 1P
- SURGE ARRESTOR
- FUSED LUMINAIRE
- EQUIPMENT GROUNDING ELECTRODE
- TERMINAL
- SPLICE
- CONDUCTOR
- EXOTHERMIC WELD

A,B,X,Y,Z	UNGROUNDED CIRCUIT CONDUCTORS
N	GROUNDED CIRCUIT CONDUCTORS
GND	EQUIPMENT GROUNDING CONDUCTOR
P	POLE (ELECTRICAL CIRCUIT)
φ	PHASE (ELECTRICAL CURRENT)
AIC	AMPERE INTERUPTING CAPACITY



ONE LINE DIAGRAM

ANY LINE VOLTAGE PER OVER CURRENT AND POWER CORD SCHEDULE

GENERAL NOTES

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

IN CASES WHERE THE PLANS SHOW LINE IN/LINE OUT DISTRIBUTION SYSTEMS, FURNISH FEED-THROUGH LUGS IN THE CIRCUIT BREAKER ENCLOSURE.

THE PLANS WILL SHOW WHICH CIRCUIT LEG(S) ARE CONNECTED TO EACH INSTALLATION.

FIELD RECODING OF UNGROUNDED CONDUCTORS IN TYPE "SO" CABLE MAY BE REQUIRED TO CONFORM TO SYSTEM COLOR CODING AS SHOWN IN THE PLANS.

CIRCUIT BREAKERS SHALL BE MINIMUM 14 kAIC AT THE VOLTAGE SHOWN.

LOADBREAK DISCONNECTS SHALL BE MELTRIC TYPE "DR", 30 AMP, 600 VOLT. DO NOT SUBSTITUTE. FURNISH "FDP" FINGER/PALM DRAW PLATES (APPLIES TO THE PLUG AND RECEPTACLE ONLY, NOT TO THE APPLIANCE INLET). FURNISH "LP" MOISTURE PROTECTION (APPLIES TO THE PLUG ONLY, NOT TO THE RECEPTACLE OR THE APPLIANCE INLET).

SURGE ARRESTORS SHALL BE 650 VAC, 2P OR 3P AS REQUIRED.

CIRCUIT BREAKER ENCLOSURES SHALL BE NEMA 1, 100 AMP, 600 VOLT, 2P OR 3P AS REQUIRED, SURFACE MOUNT. IN ALL SYSTEMS, FURNISH A MINIMUM 4-TERMINAL GROUND BUS. IN ISOLATED NEUTRAL SYSTEMS, ADDITIONALLY FURNISH A MINIMUM 1-TERMINAL NEUTRAL BUS. BUSSES SHALL BE RATED FOR NO. 10 AWG THROUGH NO. 2 AWG CU.

1. LOADBREAK DISCONNECT - MALE PLUG
2. LOADBREAK DISCONNECT - FEMALE RECEPTACLE
3. LOADBREAK DISCONNECT - MALE APPLIANCE INLET
4. SURGE ARRESTOR - 2P OR 3P AS REQUIRED
5. CIRCUIT BREAKER ENCLOSURE
6. CIRCUIT BREAKER
7. CIRCUIT BREAKER ENCLOSURE NEUTRAL BUS
8. CIRCUIT BREAKER ENCLOSURE EQUIPMENT GROUNDING BUS
9. LOWERING RING JUNCTION BOX (WEEP HOLE REQUIRED)
10. TERMINAL STRIP

ELECTRICAL DETAILS
HIGH MAST LIGHTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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S.D.D. 10 A 14-2a

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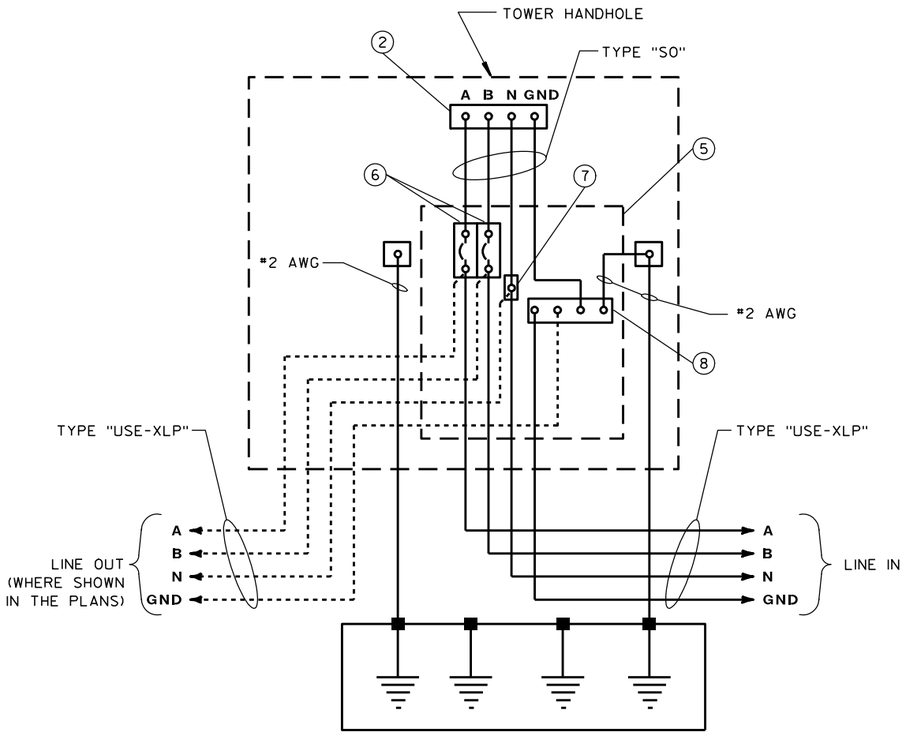
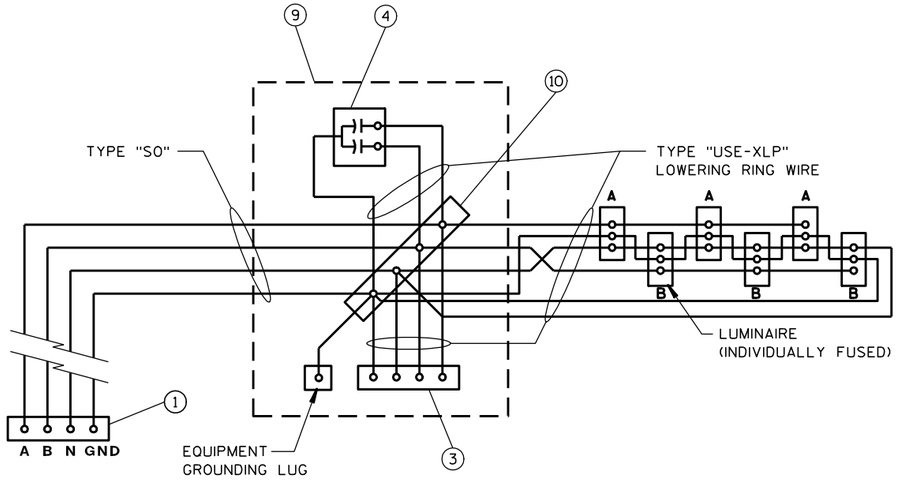
S.D.D. 10 A 14-2a



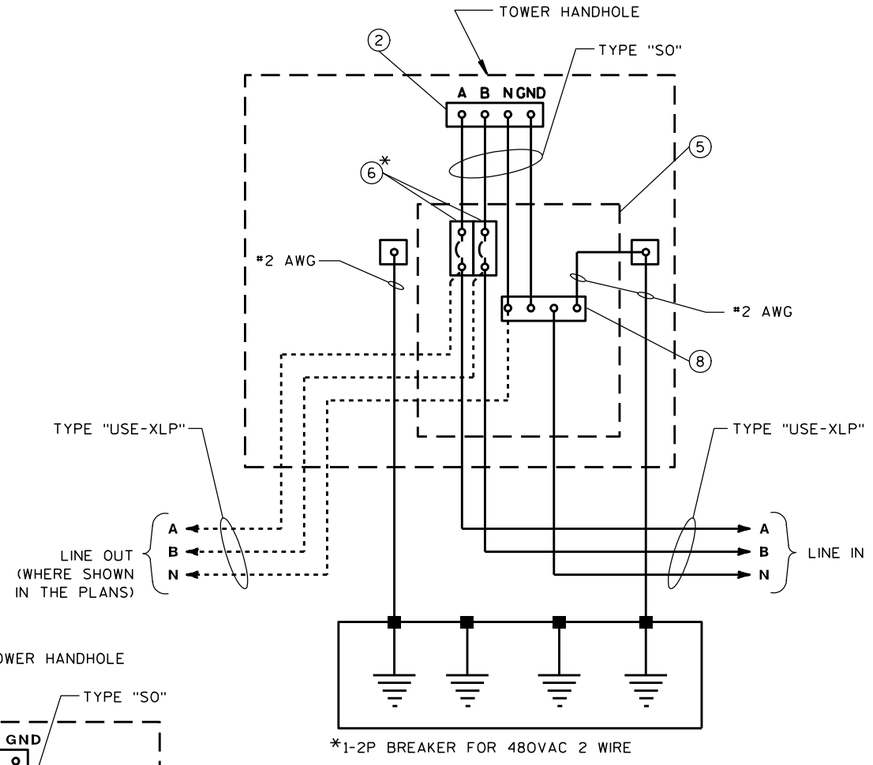
TYPICAL WIRING DIAGRAM-HANDHOLE

ISOLATED NEUTRAL SYSTEM
1-ϕ 120/240VAC OR 240/480VAC 3 WIRE



LOWERING RING JUNCTION BOX WIRING DIAGRAM

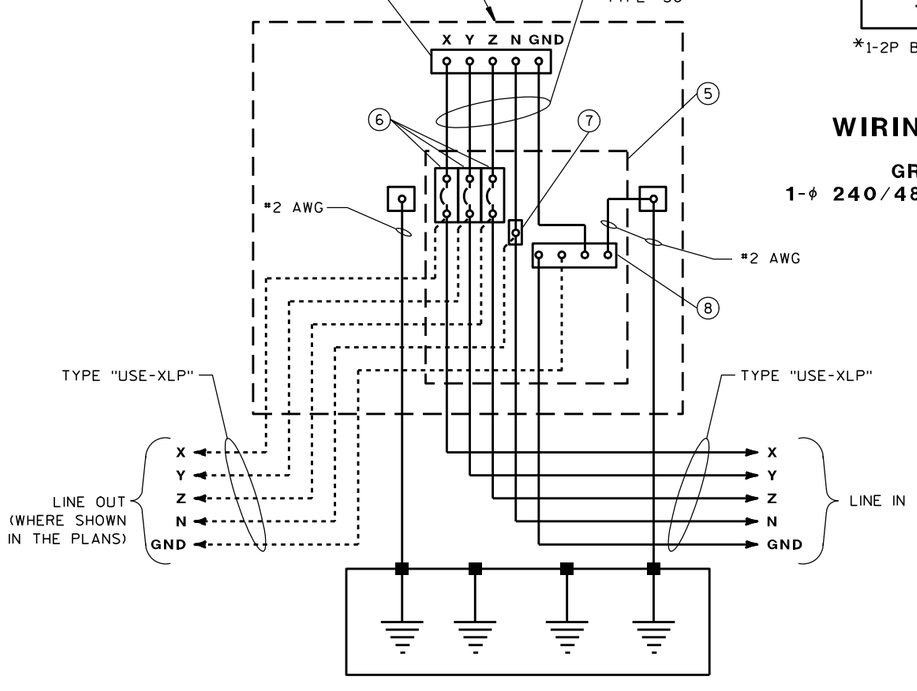
TYPICAL 1-ϕ CASE SHOWN; 3-ϕ CASE SIMILAR



*1-2P BREAKER FOR 480VAC 2 WIRE

TYPICAL WIRING DIAGRAM-HANDHOLE

GROUNDED NEUTRAL SYSTEM
1-ϕ 240/480VAC 3 WIRE OR 480VAC 2 WIRE



TYPICAL WIRING DIAGRAM-HANDHOLE

ISOLATED NEUTRAL SYSTEM
3-ϕ 480Y/277VAC 4 WIRE
OR 3-ϕ 208Y/120VAC 4 WIRE

ELECTRICAL DETAILS
HIGH MAST LIGHTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
10/25/2010 — DATE
/S/ John Corbin — STATE ELECTRICAL ENGI
FHWA
HWYS

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S.D.D. 10 A 14-2b

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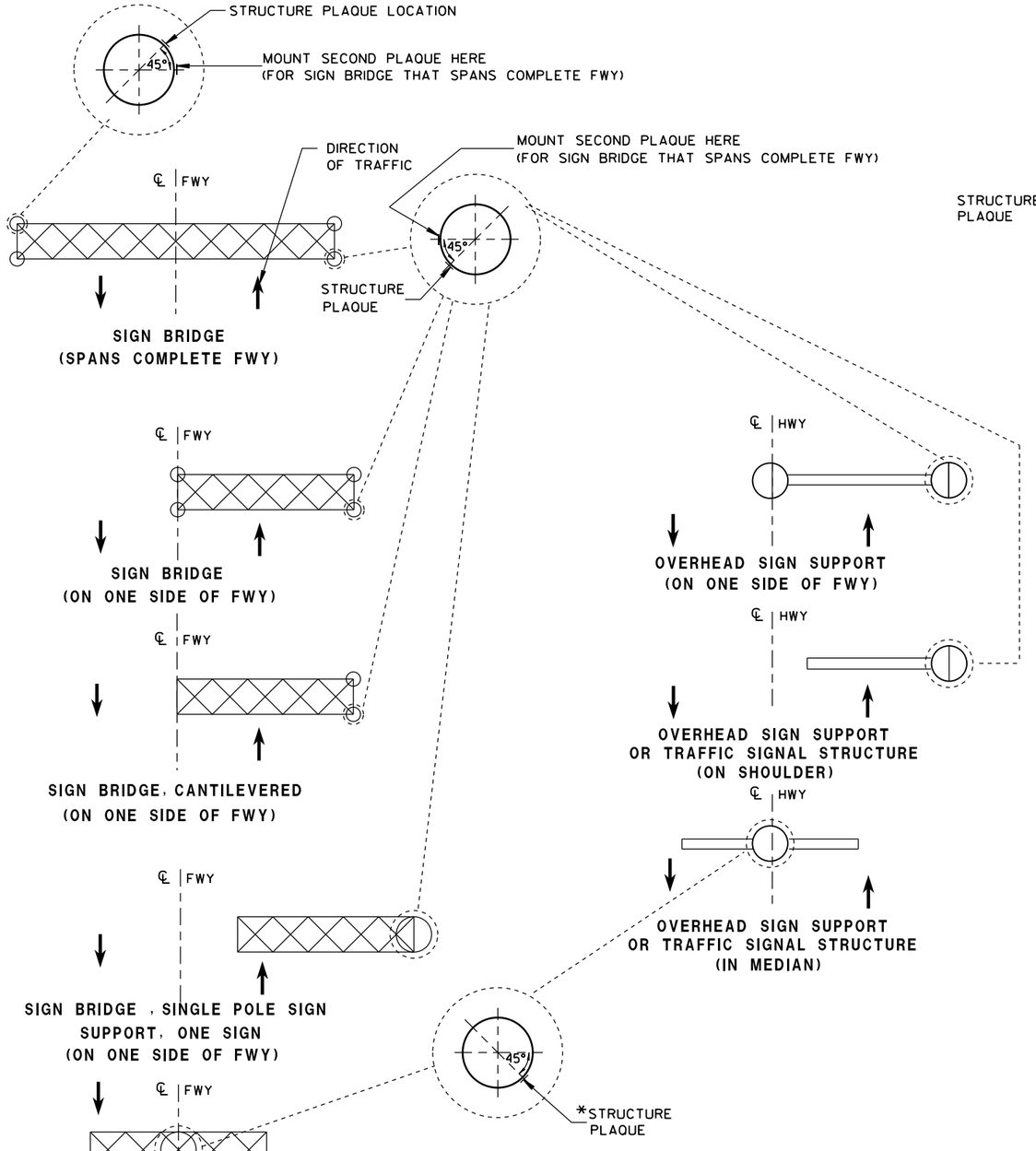
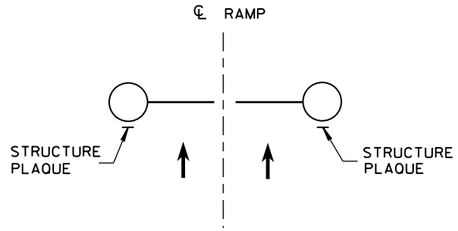
S.D.D. 10 A 14-2b

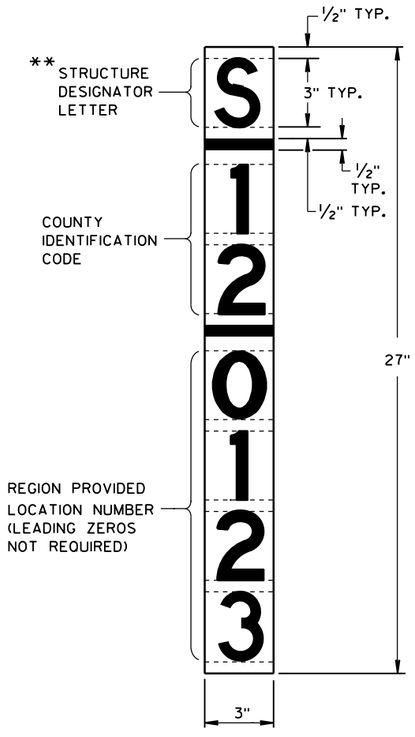


*WHEN SIGNS OR GATES FACE TRAFFIC IN ONE DIRECTION, THE PLAQUE SHALL FACE TRAFFIC IN THE SAME DIRECTION. WHEN SIGNS OR GATES ARE FACING TRAFFIC IN BOTH DIRECTIONS, THE PLAQUE SHALL FACE TRAFFIC IN THE CARDINAL DIRECTION.

LOCATION OF RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT & TRAFFIC SIGNAL STRUCTURE PLAQUES



RAMP GATE
(ACROSS FWY ON-RAMP)



** LETTER "G" UTILIZED FOR RAMP GATES. LETTER "S" UTILIZED FOR SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, AND TRAFFIC SIGNALS.

RAMP GATE, SIGN BRIDGE, OVERHEAD SIGN SUPPORT AND TRAFFIC SIGNAL STRUCTURE PLAQUE FOR SIGN BRIDGES AND OVERHEAD SIGN SUPPORT WHICH ARE NOT STRUCTURE MOUNTED

GENERAL NOTES

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

PLAQUES SHALL BE INCIDENTAL TO ALL NEW INSTALLATIONS.

IF THE PROPOSED SIGN BRIDGE OR OVERHEAD SIGN SUPPORT IS REPLACING AN EXISTING SIGN BRIDGE OR OVERHEAD SIGN SUPPORT, A NEW IDENTIFICATION PLAQUE WILL BE REQUIRED.

FASTEN TOP, CENTER AND BOTTOM OF PLAQUE TO POLE OR OTHER LOCATION AS FOLLOWS:

GALVANIZED STEEL SHAFT - 3 STAINLESS STEEL POP RIVETS

A588 STEEL SHAFT - SHIM FOR DRAINAGE WITH STAINLESS WASHERS; FASTEN WITH STAINLESS SELF-TAPPING SCREWS

ALUMINUM SHAFTS - 3 ALUMINUM POP RIVETS

MOUNTING HEIGHT SHALL BE APPROXIMATELY 5.0' ABOVE CURB OR SHOULDER. ADJUST IF IT IS KNOWN THAT REQUIRED TRAFFIC SIGNS WILL OBSTRUCT.

PLAQUE MATERIALS:

BASE - SHEET ALUMINUM, 0.060" THICK.

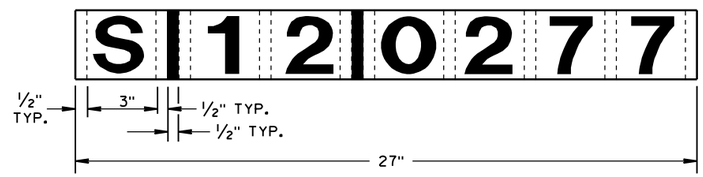
FACE - WHITE, SELF-ADHESIVE VINYL SHEETING, NON-RETROREFLECTIVE

LINES - BLACK, ½" WIDE, SELF-ADHESIVE

CHARACTERS:- BLACK, SELF ADHESIVE, SERIES "D", SIZE AS SHOWN.

FOR SIGN BRIDGES, STRUCTURE MOUNTED, THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY AS SHOWN ON THE DRAWING. THE STRUCTURE PLAQUE SHALL BE MOUNTED HORIZONTALLY TO THE BACK OF THE SIGN, BETWEEN THE ALUMINUM EXTRUSIONS, NEAR THE TOP LEFT HAND CORNER OF THE SIGN. THE BASE MATERIAL SHALL BE OMITTED AND THE FACE ADHERED DIRECTLY TO THE ALUMINUM SURFACE. PRIOR TO ADHERING THE MATERIAL, THE ALUMINUM SURFACE SHALL BE SMOOTH, CLEAN AND DRY.

WHERE SIGN BRIDGE ILLUMINATION IS PROVIDED, THE STRUCTURE MUST ALSO HAVE A SIGN BRIDGE CIRCUIT PLAQUE AS SHOWN IN THE ELECTRICAL DETAILS.



IDENTIFICATION PLAQUE FOR SIGN BRIDGE, STRUCTURE MOUNTED

STRUCTURE IDENTIFICATION PLAQUES, RAMP GATES, SIGN BRIDGES, OVERHEAD SIGN SUPPORTS, & TRAFFIC SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
12/4/2012 — DATE
/S/ Travis Feltes — STATE TRAFFIC ENGINEER
FHWA

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S.D.D. 12 A 4-3

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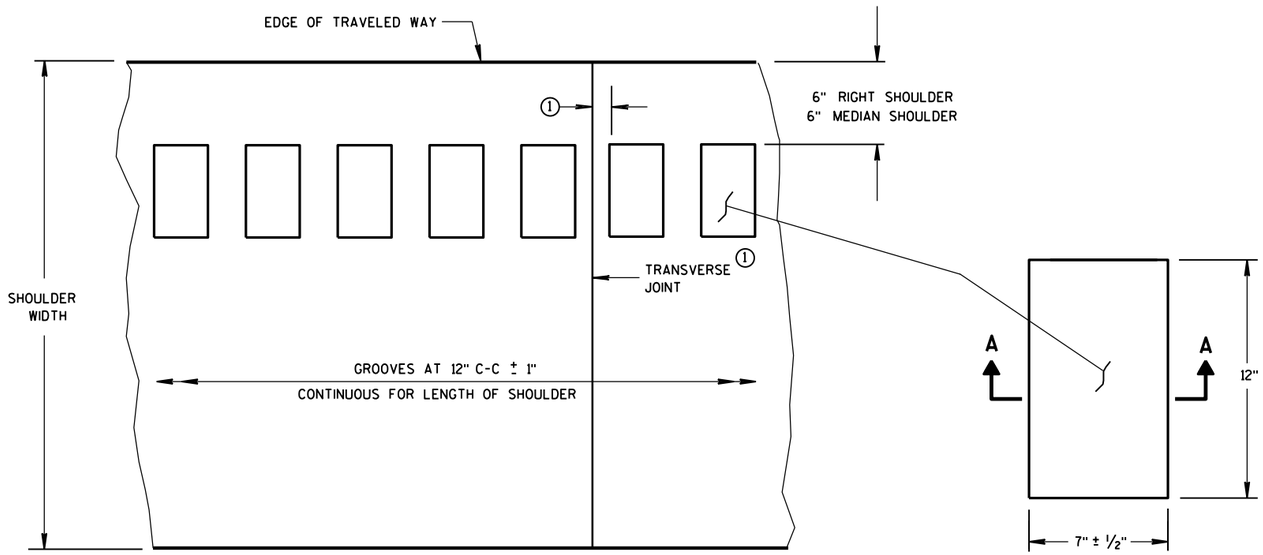
S.D.D. 12 A 4-3



PLAN VIEW
SHOULDER WITH GROOVES

PLAN VIEW
(SINGLE GROOVE)

PLACEMENT DETAIL FOR MILLED RUMBLE STRIP

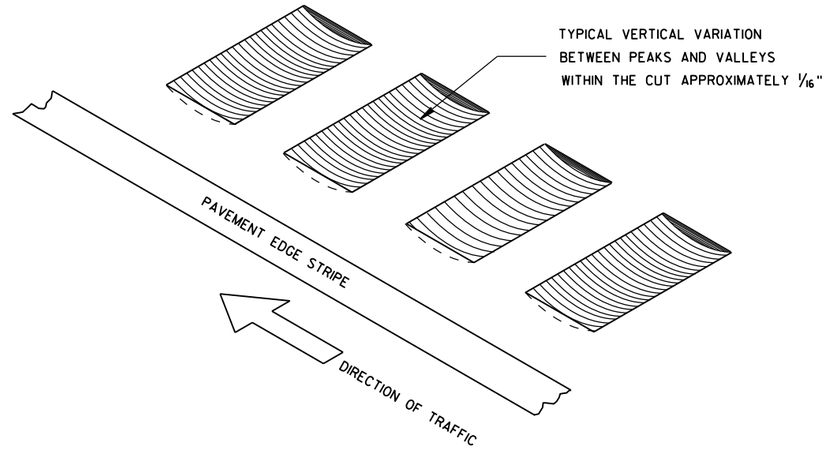
GENERAL NOTES

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

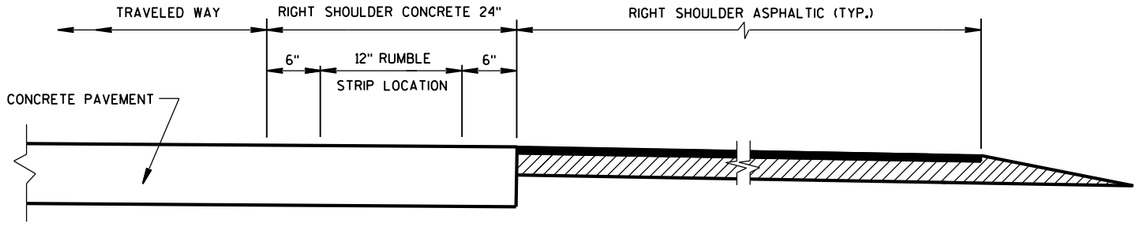
RUMBLE STRIPS ON EXPRESSWAYS

DO NOT INSTALL RUMBLE STRIPS ACROSS SIDE ROAD INTERSECTIONS, COMMERCIAL DRIVEWAYS, PRIVATE DRIVEWAYS OR ADJACENT TO RIGHT TURN LANES, LEFT TURN LANES, TURN LANE TAPERS, BRIDGE DECKS, BRIDGE APPROACHES, OR 100 FEET IN ADVANCE OF RAILROAD CROSSING. THE ATTACHED STANDARD DETAIL DRAWING SHOWS THE LOCATION OF THE RUMBLE STRIPS AT INTERCHANGE AREAS.

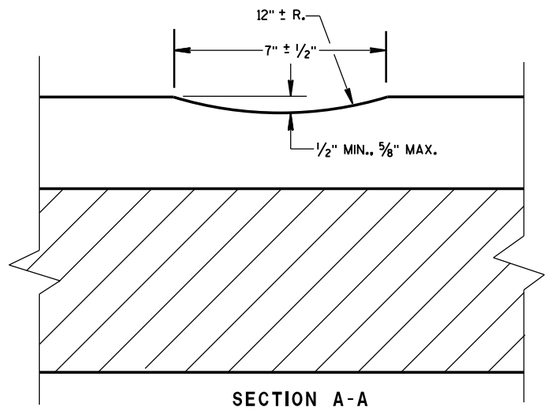
(1) CONCRETE PAVEMENT - RUMBLE STRIPS SHALL BE A MINIMUM OF 6" AWAY FROM TRANSVERSE JOINTS.



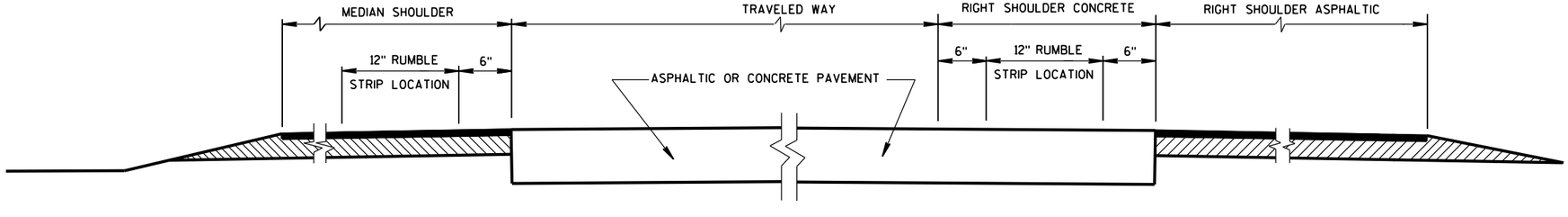
ISOMETRIC



SECTION VIEW
CONCRETE PAVEMENT EXTENDS INTO RIGHT SHOULDER)



SECTION A-A



SECTION VIEW

TYPICAL LOCATIONS OF SHOULDER RUMBLE STRIPS IN RURAL DIVIDED HIGHWAYS

(ONE ROADWAY IS SHOWN)

SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 13 A 5-5a

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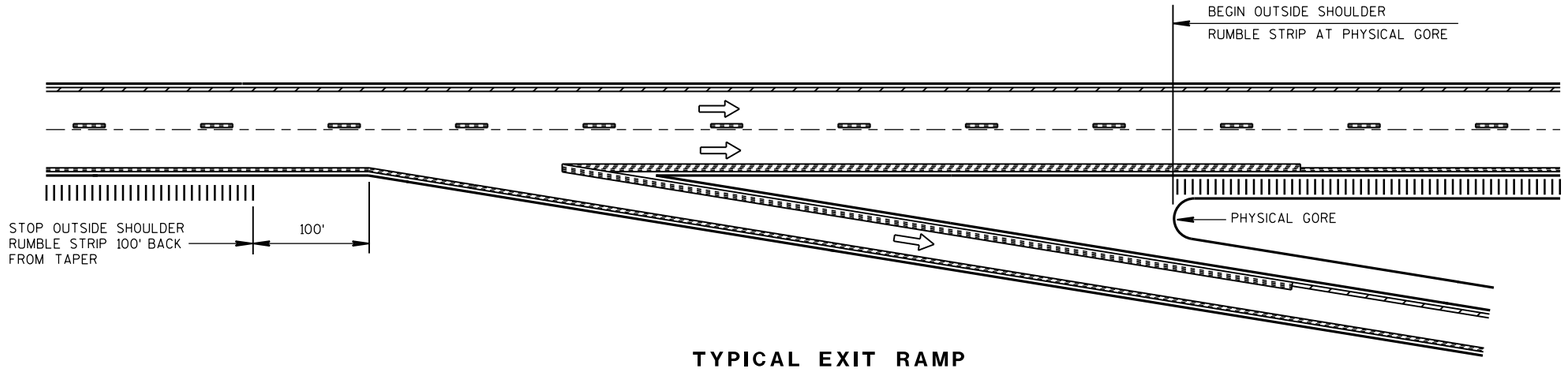
S.D.D. 13 A 5-5a



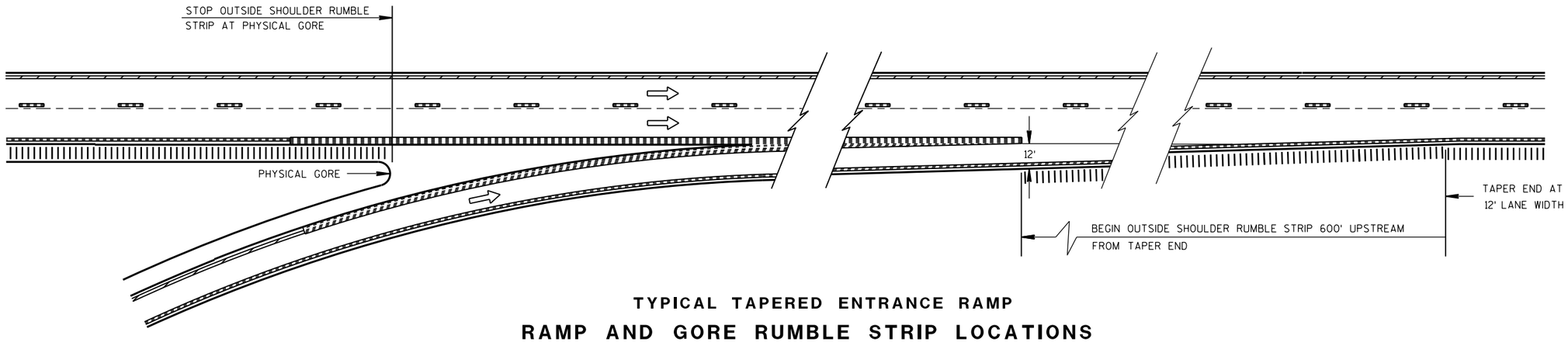
TYPICAL EXIT RAMP

NOTES:

NO RUMBLE STRIP ON EXIT, DIRECTIONAL, OR ENTRANCE RAMPS, EXCEPT NEAR THE ENTRANCE TAPER END AND ALONG THE PARALLEL RAMP AREA AS SHOWN.

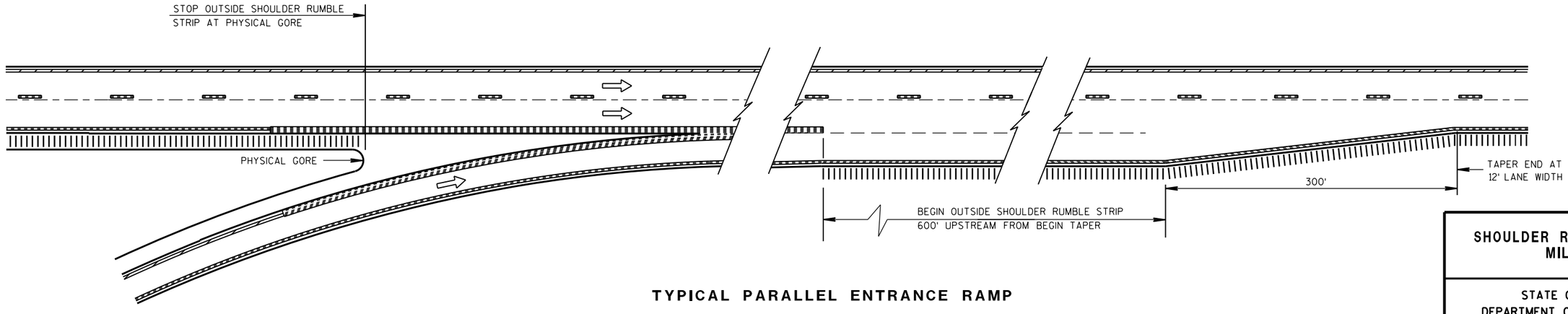
PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

NOTE:
ARROW SYMBOL (⇨)
SHOWS DIRECTION OF TRAVEL



TYPICAL TAPERED ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS



TYPICAL PARALLEL ENTRANCE RAMP

RAMP AND GORE RUMBLE STRIP LOCATIONS

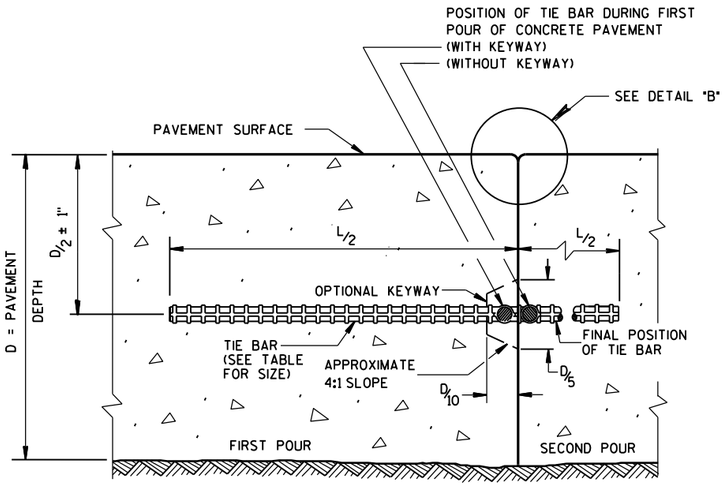
SHOULDER RUMBLE STRIP, MILLING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

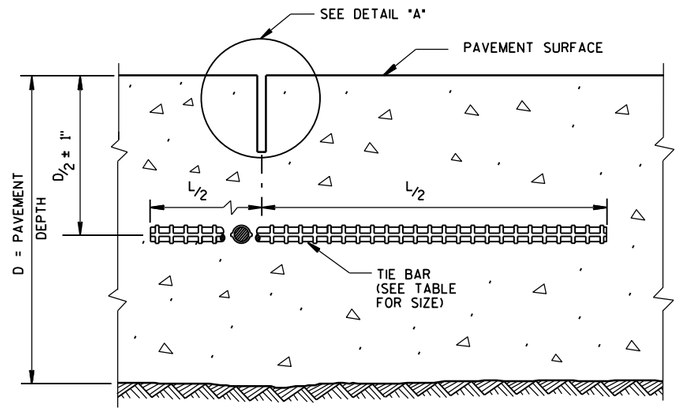
APPROVED
12/17/2012 — DATE
/S/ Jerry H. Zoga — ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 13 A 5-5b



CONSTRUCTION JOINT



SAWED JOINT

GENERAL NOTES

DO NOT SEAL OR FILL LONGITUDINAL JOINTS.

CREATE A LONGITUDINAL JOINT FOR PAVEMENT WIDTHS GREATER THAN 15 FEET.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

(1) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

(2) PAVEMENT THAT WAS IN PLACE PRIOR TO THE CONTRACT.

PLAN VIEW

SECTION A-A

LONGITUDINAL CONSTRUCTION JOINT TIE BARS ANCHORED INTO EXISTING PAVEMENT

DETAIL "A"

DETAIL "B"

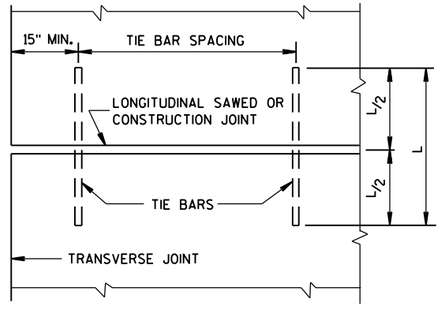
DETAIL "C"

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4 *	30"	24"**

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



PLAN VIEW
SHOWING LOCATION OF TIE BARS

CONCRETE PAVEMENT LONGITUDINAL JOINTS AND TIES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

6

S.D.D. 13 C 1-18

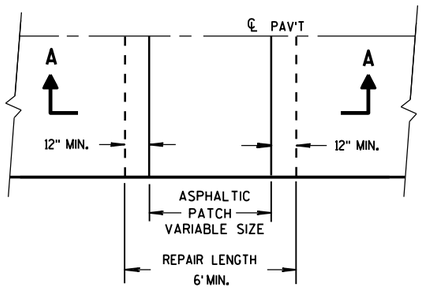
GENERAL NOTES

SAW CUT, DRILL, AND LIFT OUT EXISTING CONCRETE PAVEMENT WITHIN THE BOUNDARIES OF CONCRETE REPAIR AREAS. THE CONTRACTOR MAY MAKE ADDITIONAL SAW CUTS INSIDE THE REPAIR LIMITS TO REDUCE WEIGHT AND SIZE OF CONCRETE PIECES.

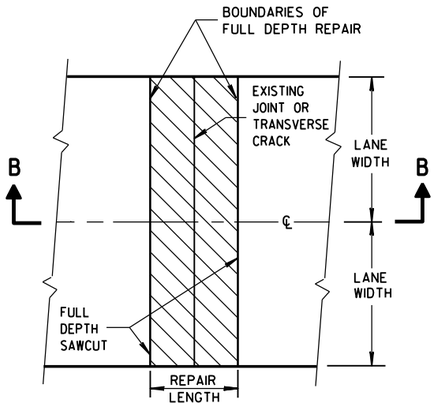
PROVIDE A 6-FOOT MINIMUM DISTANCE FROM BOUNDARIES OF CONCRETE REPAIR AREAS TO ADJACENT TRANSVERSE JOINT OR CRACK IN THE SAME LANE.

THE LENGTH OF THE REPAIRS MAY VARY FROM THE DIMENSIONS SHOWN IF THE EXISTING CONCRETE PAVEMENT IS NONDOWELED AND THE PAVEMENT IS TO BE OVERLAID AFTER REPAIRING.

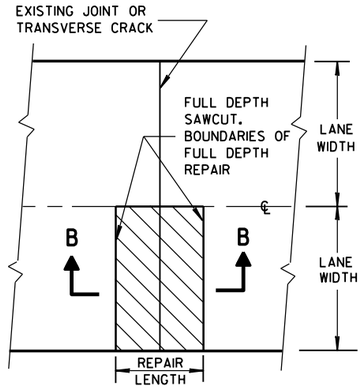
(1) DOWEL BARS MIGHT NOT EXIST.



PLAN VIEW

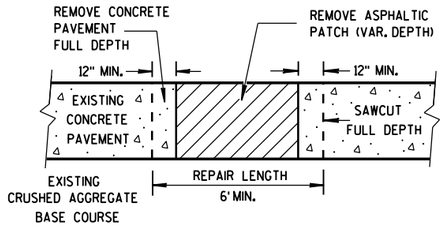


PLAN VIEW
(DOUBLE LANE REPAIR)



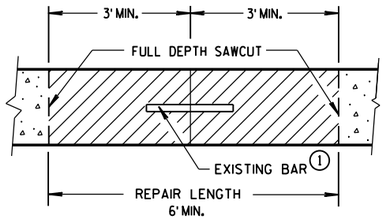
PLAN VIEW
(SINGLE LANE REPAIR)

FULL DEPTH CONCRETE PAVEMENT REMOVAL



SECTION A-A

HMA PATCH REMOVAL



SECTION B-B

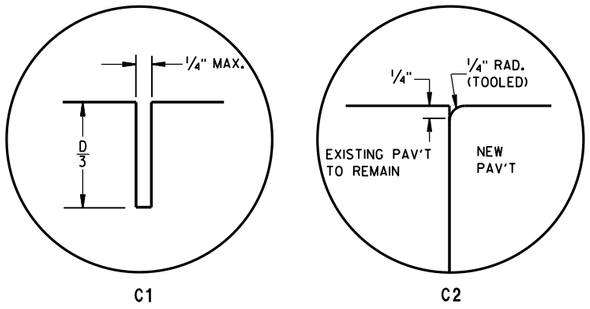
CONCRETE REMOVAL

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6

S.D.D. 13 C 9-13a



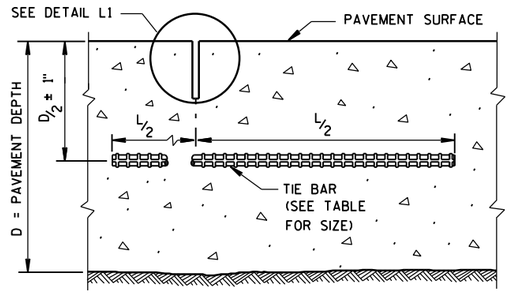
TRANSVERSE JOINTS

TIE BAR TABLE

PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 ½"	NO. 4	30"	36"
≥ 10 ½"	NO. 5	36"	36"
	NO. 4 *	30"	24"**

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.



SECTION C-C

SAWED LONGITUDINAL JOINT

GENERAL NOTES

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

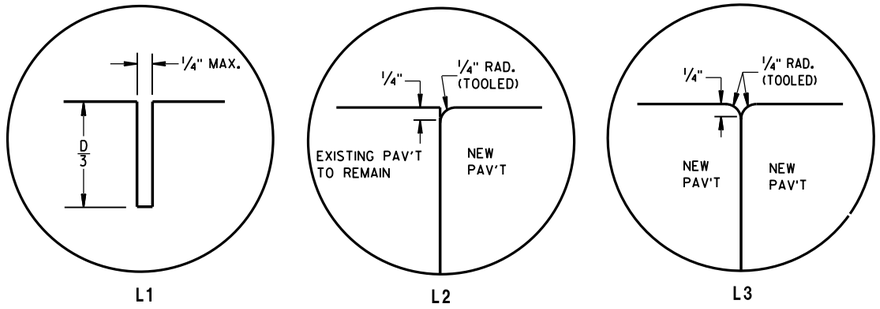
CONCRETE PAVEMENT REPAIRS OF EXISTING NONDOWELED CONCRETE PAVEMENTS DO NOT NEED TO BE DOWELED.

DO NOT SEAL OR FILL JOINTS.

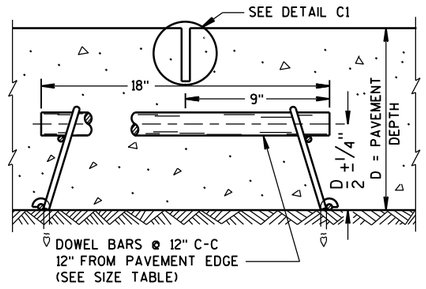
ANCHOR DOWEL BARS AND TIE BARS INTO DRILLED HOLES WITH AN EPOXY.

FOR MULTI-LANE CONCRETE PAVEMENT REPLACEMENTS, PROVIDE A MINIMUM DISTANCE OF 15 INCHES FROM ALL TRANSVERSE JOINTS OR EDGES OF REPLACEMENT TO THE CENTER OF THE TIE BAR NEAREST THAT JOINT OR EDGE.

(1) APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

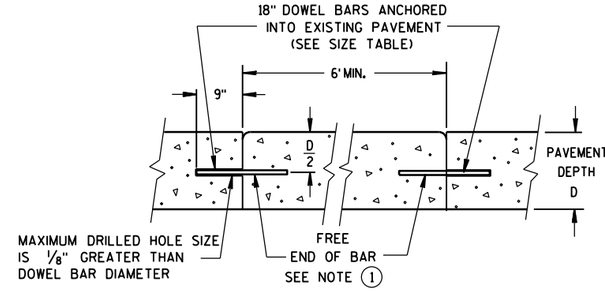


LONGITUDINAL JOINTS

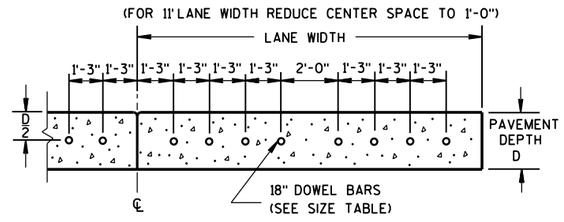


SECTION F-F

CONTRACTION JOINT



SECTION D-D

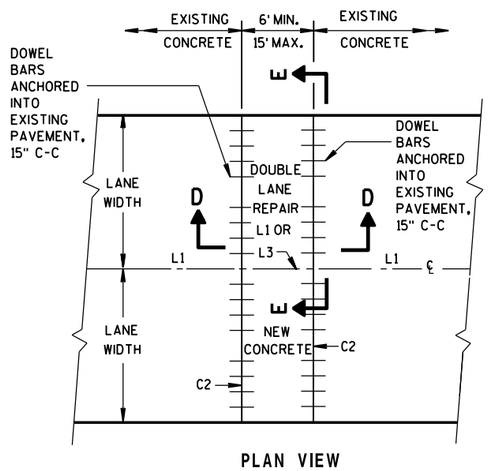


SECTION E-E

DRILLED DOWEL BAR CONSTRUCTION JOINT

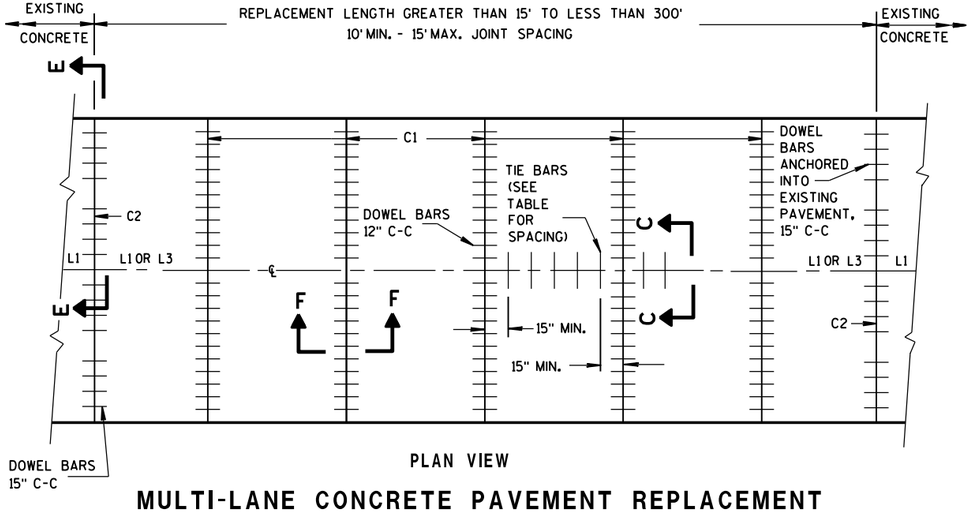
PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

MULTI-LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

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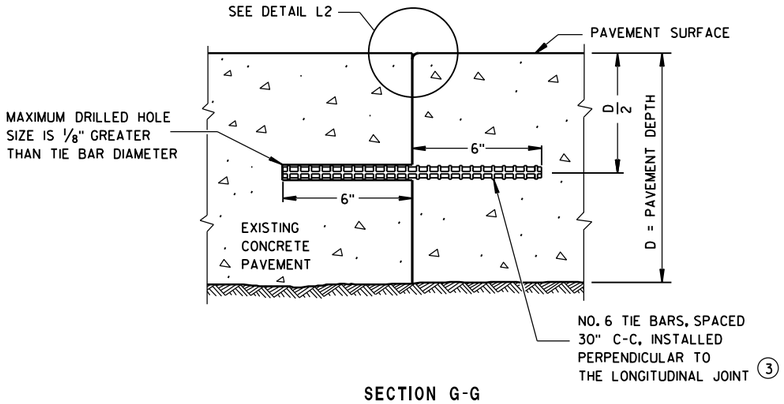
S.D.D. 13 C 9-13b



SECTION G-G

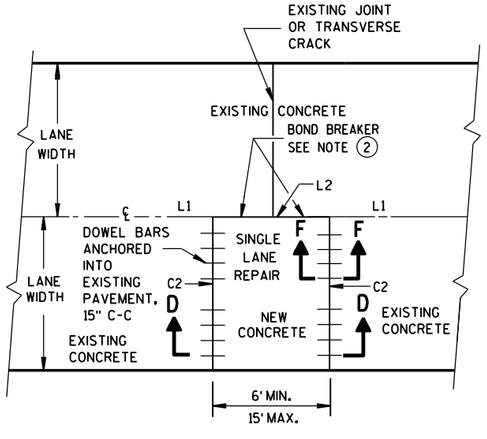
TIE BARS ANCHORED INTO EXISTING PAVEMENT

GENERAL NOTES

(1) WITH THE APPROVAL OF THE ENGINEER, FOR SINGLE LANE PAVEMENT REPLACEMENTS LESS THAN 30 FEET IN LENGTH, THE CONTRACTOR MAY INSTALL DRILLED TIE BARS ON 6:1 SKEW HORIZONTALLY, DIRECTION OF SKEW ALTERNATING WITH EACH SUCCESSIVE BAR. DRIVE SKEWED TIE BARS TO A DEPTH OF 6 INCHES IN A HOLE OF SUCH A DIAMETER AS TO PROVIDE A TIGHT DRIVEN FIT.

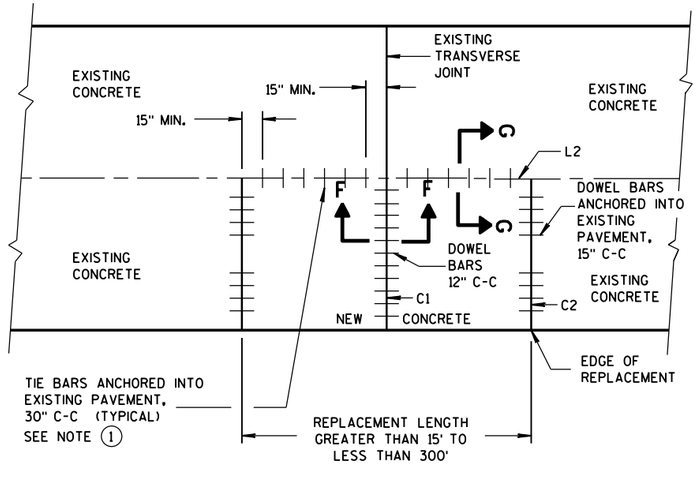
(2) USE AN ENGINEER-APPROVED BOND BREAKER (E.G. RELEASE AGENT, CURING COMPOUND) FOR SINGLE LANE REPAIRS UP TO 15 FEET IN LENGTH.

(3) ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPAIR



PLAN VIEW

SINGLE LANE CONCRETE PAVEMENT REPLACEMENT

CONCRETE PAVEMENT REPAIR AND REPLACEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept., 2015 — DATE
/S/ Peter Kemp, P.E. — PAVEMENT SUPER
FHWA

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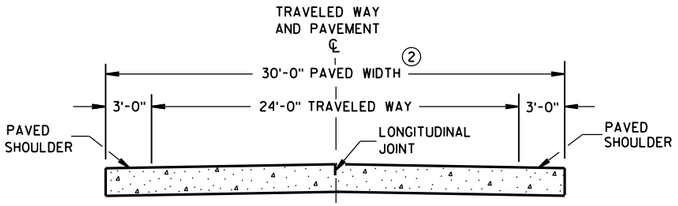
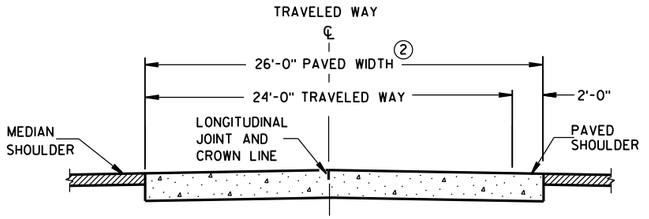
S.D.D. 13 C 9-13c

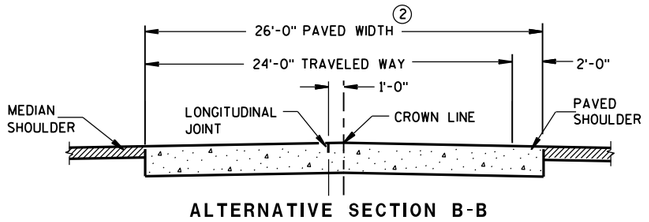


SECTION A-A ①

TWO-LANE TWO-WAY HIGHWAY



SECTION B-B



ALTERNATIVE SECTION B-B ①

DIVIDED HIGHWAY

GENERAL NOTES

CONTRACTION JOINTS

CONSTRUCT TRANSVERSE CONTRACTION JOINTS NORMAL TO THE CENTERLINE. SHOW THE LOCATION OF CONTRACTION JOINTS THROUGH INTERSECTIONS ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

DO NOT SEAL OR FILL CONTRACTION JOINTS.

INSTALL DOWEL BARS PARALLEL TO THE PAVEMENT CENTERLINE AND PAVEMENT SURFACE.

FOR PAVEMENT SLABS OF VARYING WIDTHS, LOCATE THE OUTER MOST DOWEL BAR SO THAT THE CENTER OF THE BAR IS A MINIMUM OF 6 INCHES AND A MAXIMUM OF 18 INCHES FROM THE FREE EDGE OF PAVEMENT.

CONSTRUCTION JOINTS

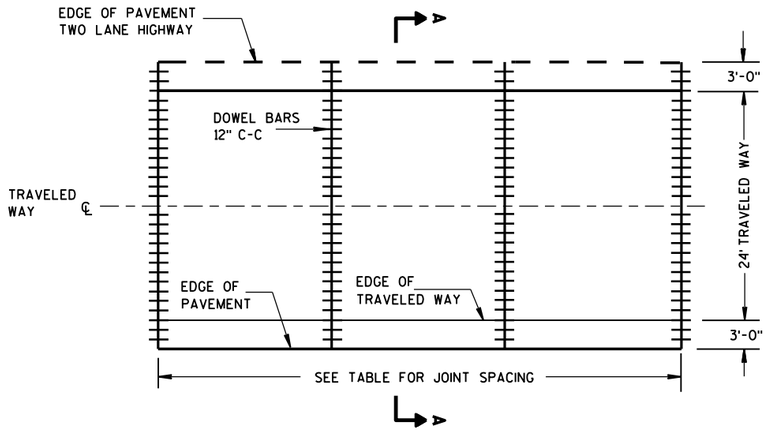
LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.

① REFER TO TYPICAL CROSS SECTIONS FOR ADDITIONAL DETAILS.

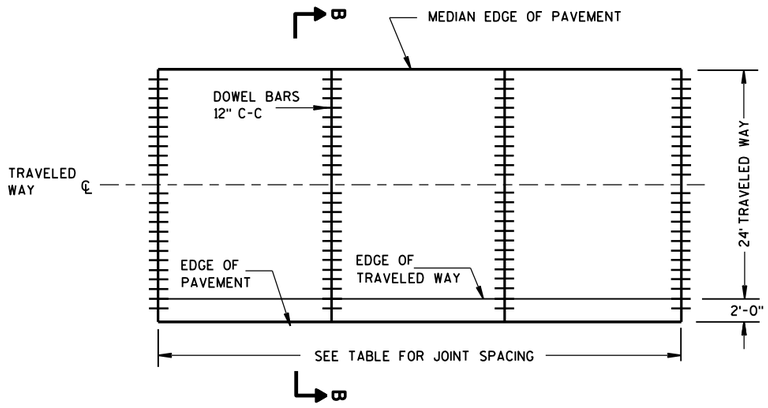
② MEASURE THE ENTIRE PAVED WIDTH INCLUDING THE PORTION(S) LABELED PAVED SHOULDER AS CONCRETE PAVEMENT.

PAVEMENT DEPTH, DOWEL BAR SIZE AND JOINT SPACING TABLE

PAVEMENT DEPTH (D)	DOWEL BAR DIAMETER	CONTRACTION JOINT SPACING
5 ½", 6", 6 ½"	NONE	12'
7", 7 ½"	1"	14'
8", 8 ½"	1 ¼"	15'
9", 9 ½"	1 ¼"	15'
10" & ABOVE	1 ½"	15'



CONTRACTION JOINT LAYOUT
FOR TWO-LANE TWO-WAY HIGHWAY



CONTRACTION JOINT LAYOUT
FOR DIVIDED HIGHWAY

RURAL DOWELED
CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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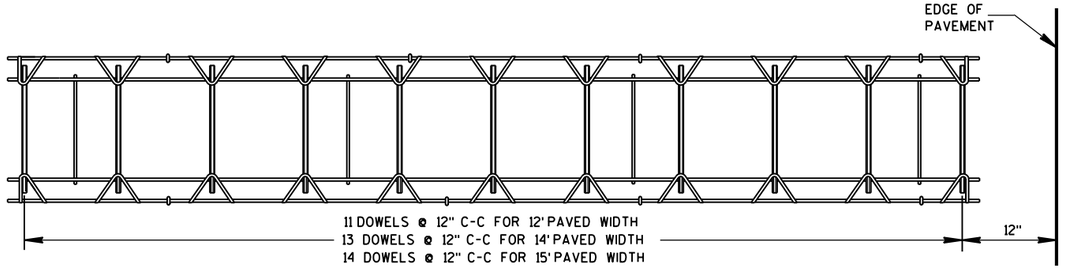
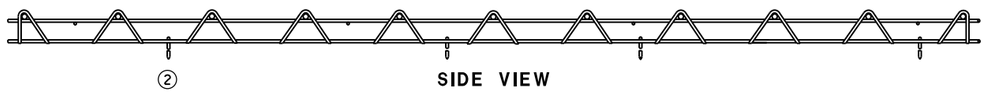
S.D.D. 13 C 11-11a



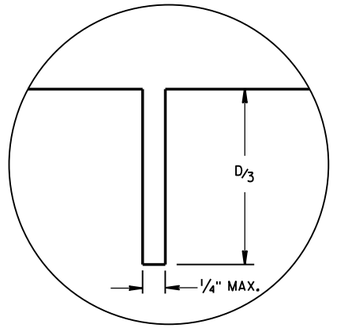
PLAN VIEW



SIDE VIEW

(NORMAL TO CENTERLINE)

CONTRACTION JOINT DOWEL ASSEMBLY ①



JOINT DETAIL

GENERAL NOTES

① OBTAIN THE ENGINEER'S APPROVAL FOR THE USE OF ALTERNATIVE DESIGNS OF THE DOWEL ASSEMBLY. USE MECHANICAL DOWEL BAR INSERTERS OR DOWEL ASSEMBLIES WHEN CONSTRUCTING CONTRACTION JOINTS.

② SECURE BASKETS WITH ANCHORS TO HOLD DOWEL BARS IN THE CORRECT POSITION AND ALIGNMENT. TYPE, LOCATION, NUMBER AND LENGTH OF ANCHORS ARE DEPENDENT UPON FIELD CONDITIONS.

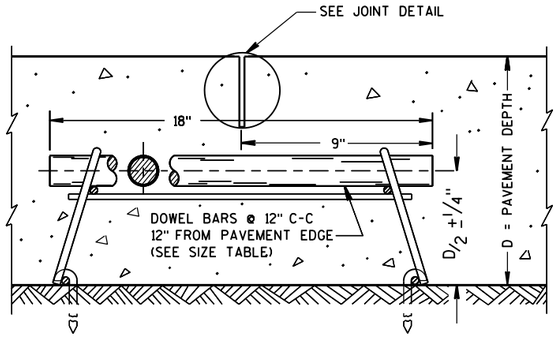
③ FORM OR SAW CONSTRUCTION JOINTS. PROVIDE A 1/4-INCH RADIUS AT FORMED JOINTS.

④ PROVIDE A SMOOTH VERTICAL FACE FOR THE ENTIRE DEPTH OF THE PAVEMENT WHEN FORMING CONSTRUCTION JOINTS.

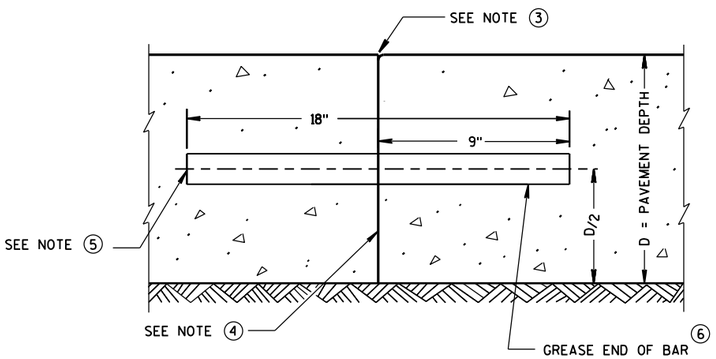
⑤ INSTALL DOWEL BARS AT CONSTRUCTION JOINTS BY FORMING OR DRILLING. INSTALL FORMED DOWEL BARS 12 INCHES C-C AND 12 INCHES FROM PAVEMENT EDGE. REMOVE EXCESS CONCRETE FROM THE FREE END OF THE DOWEL BAR IF DOWEL BARS ARE FORMED THROUGH A HEADER BOARD. INSTALL DRILLED DOWEL BARS ACCORDING TO *DRILLED DOWEL BAR CONSTRUCTION JOINT* DETAIL.

⑥ APPLY A THIN UNIFORM COATING OF SURFACE TREATMENT TO THE FREE END OF DOWEL BARS TO PREVENT BONDING.

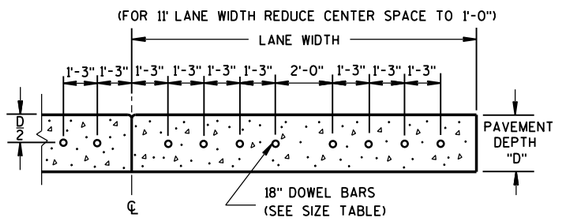
⑦ ANCHOR DOWEL BARS INTO DRILLED HOLES WITH AN EPOXY. MAXIMUM DRILLED HOLE SIZE IS 1/8-INCH GREATER THAN DOWEL BAR DIAMETER, 9 INCHES IN LENGTH.



DOWELED CONTRACTION JOINT



TRANSVERSE CONSTRUCTION JOINT



DRILLED DOWEL BAR CONSTRUCTION JOINT ⑦

RURAL DOWELED CONCRETE PAVEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
5/3/2013 DATE
/S/ Deb Bischoff PAVEMENT POLICY & DE ENGINEER
FHWA

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S.D.D. 13 C 11-11b

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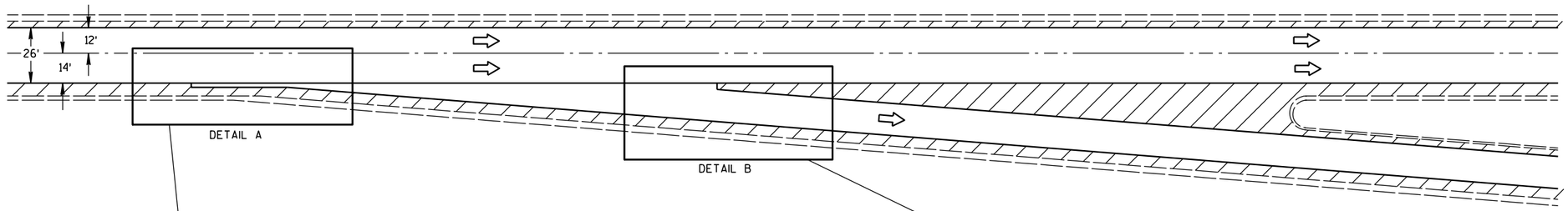
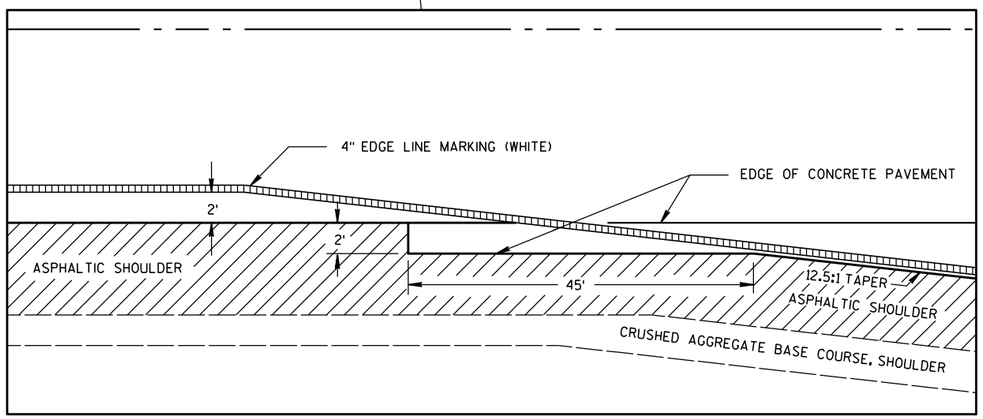
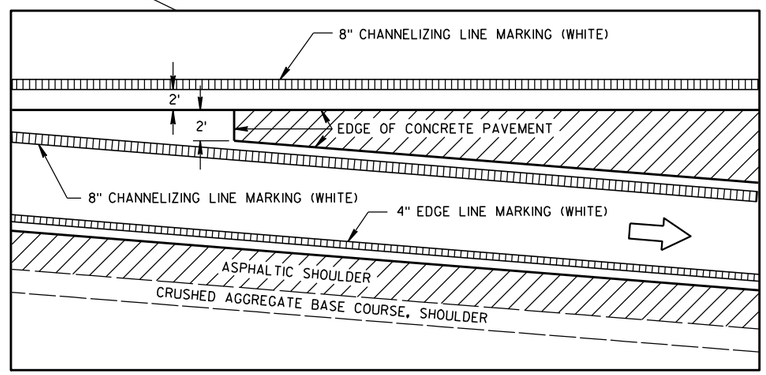
S.D.D. 13 C 11-11b



EXIT RAMP DETAIL



DETAIL A



DETAIL B

CONCRETE JOINT PAVING DETAILS

GENERAL NOTES

PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

SEE SDD 13 A 4-4c OR SDD 13 A 5-1b FOR RAMP AND GORE RUMBLE STRIP LOCATION.

CONCRETE JOINT DETAIL FOR EXIT RAMP TERMINI

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

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S.D.D. 13 C 17-1a

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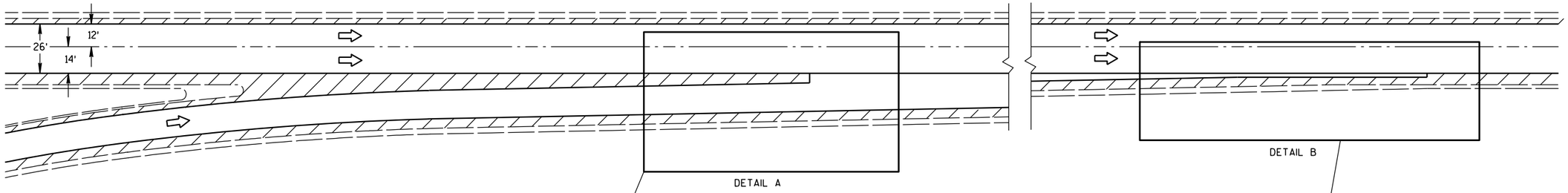
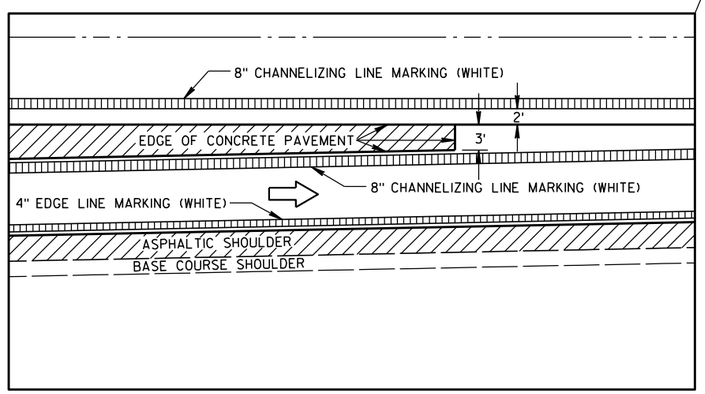
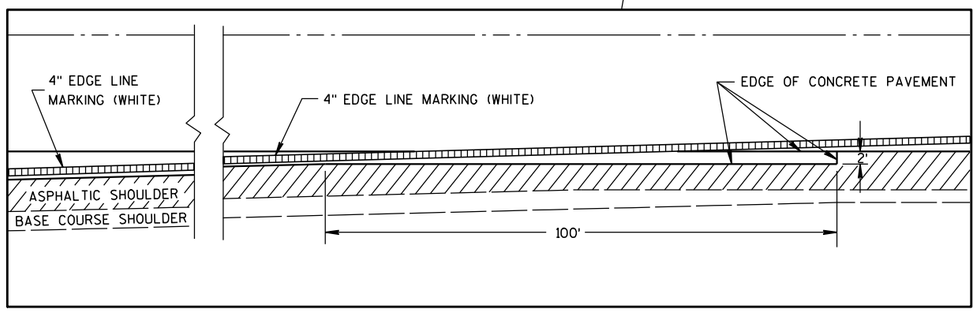
S.D.D. 13 C 17-1a



ENTRANCE RAMP DETAIL



DETAIL A



DETAIL B

CONCRETE JOINT PAVING DETAILS

GENERAL NOTES

PAVEMENT MARKING DETAILS AND SPECIFICATIONS ARE PROVIDED ELSEWHERE IN THE CONTRACT.

SEE SDD 13 A 4-4c OR SDD 13 A 5-1b FOR RAMP AND GORE RUMBLE STRIP LOCATION.

CONCRETE JOINT DETAIL FOR ENTRANCE RAMP TERMINI

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

5/27/98
DATE

/S/ Rory L. Rhinesmith
CHIEF ROADWAY DEVELOPMENT ENGINEER

FHWA

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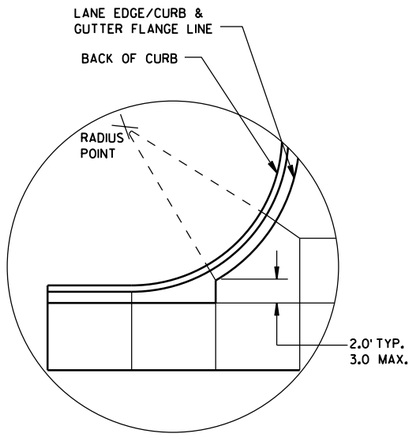
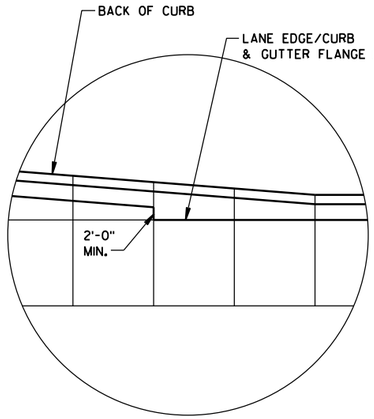
S.D.D. 13 C 17-1b



DETAIL "A"



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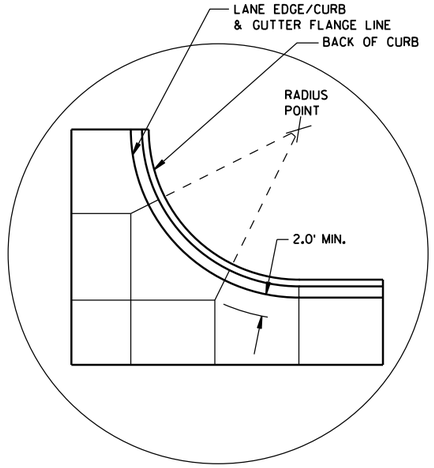
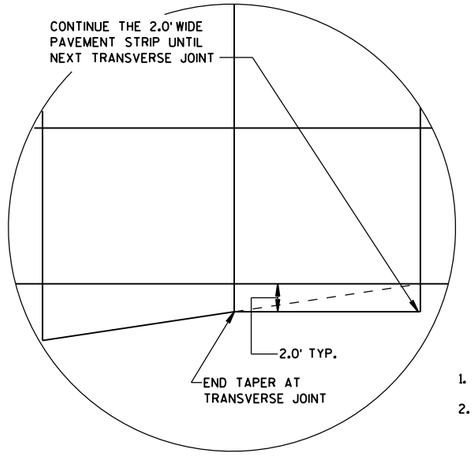


DETAIL "C"



DETAIL "D"

GENERAL NOTES

THE PRIMARY ROADWAY CONTROLS THE TRANSVERSE JOINT PATTERN.

ALIGN NEW JOINTS WITH EXISTING JOINTS OR CRACKS.

CONSTRUCT TRANSVERSE JOINTS PERPENDICULAR TO THE ROADWAY.

ADJUST TRANSVERSE JOINTS TO ALIGN WITH UTILITY FIXTURES (E.G. MANHOLES AND INLETS) IN THE PAVEMENT STRUCTURE WHEN POSSIBLE. WATER VALVES DO NOT REQUIRE JOINT ADJUSTMENT.

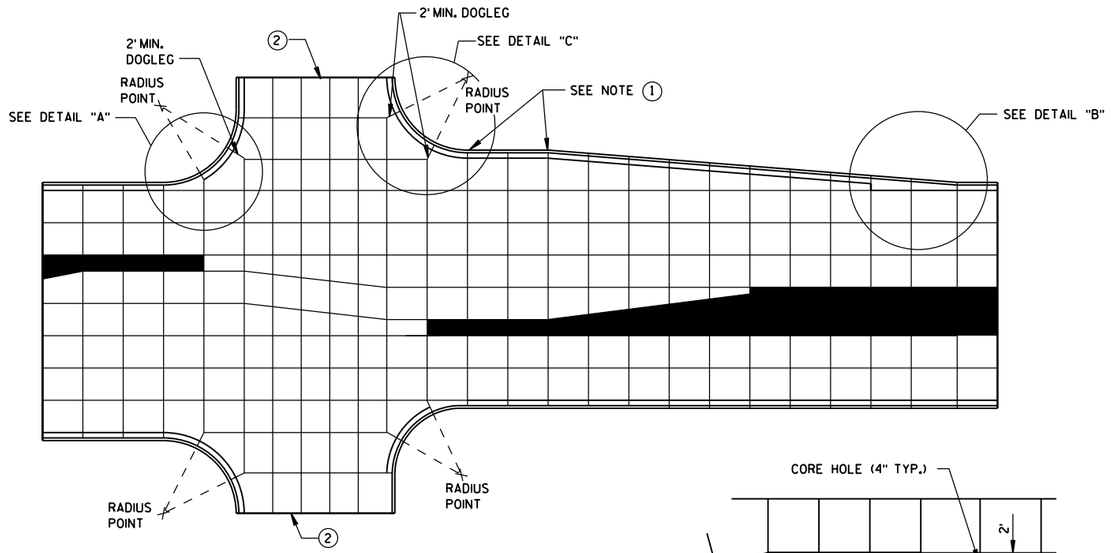
AVOID SLABS LESS THAN 2 FEET WIDE OR GREATER THAN 15 FEET WIDE.

SEE TABLE FOR TRANSVERSE JOINT SPACING. JOINT SPACING SPECIFIED IS MAXIMUM AND ACTUAL SPACING CAN BE ADJUSTED TO ACCOMMODATE INTERSECTIONS.

AVOID ANGLES LESS THAN 60° BY DOGLEGGING JOINTS THROUGH CURVE RADIUS POINTS. USE 90° ANGLES WHEN POSSIBLE.

CORRELATE LONGITUDINAL JOINTS WITH LANE LINES WHEN POSSIBLE.

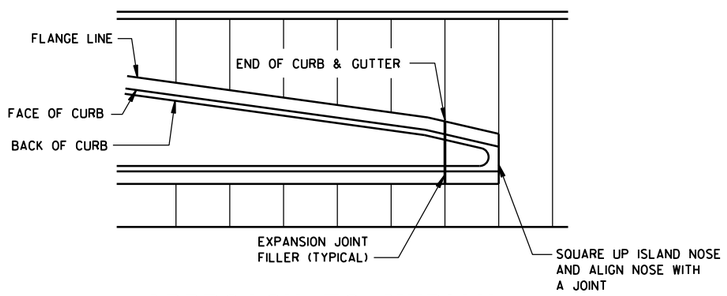
1. PROVIDE TRANSVERSE JOINTS AT ALL PAVEMENT WIDTH CHANGES.
2. CONSTRUCT DOWELED EXPANSION JOINT ON THE SIDE ROAD OF AN INTERSECTION IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH. ALIGN EXPANSION JOINT WITH EDGE OF RADIUS.
3. THE ENGINEER MAY APPROVE SLIGHT VARIATIONS FROM THESE JOINTING DETAILS.



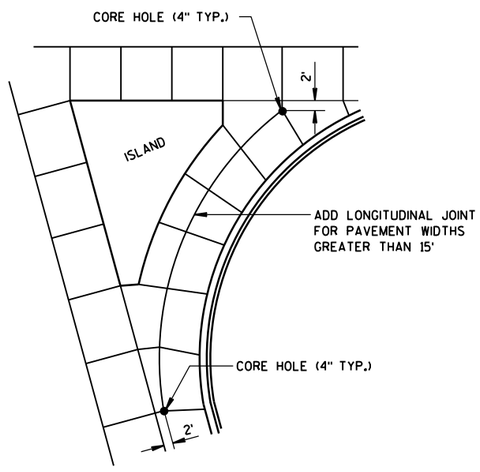
STANDARD INTERSECTION

PAVEMENT DEPTH AND JOINT SPACING TABLE

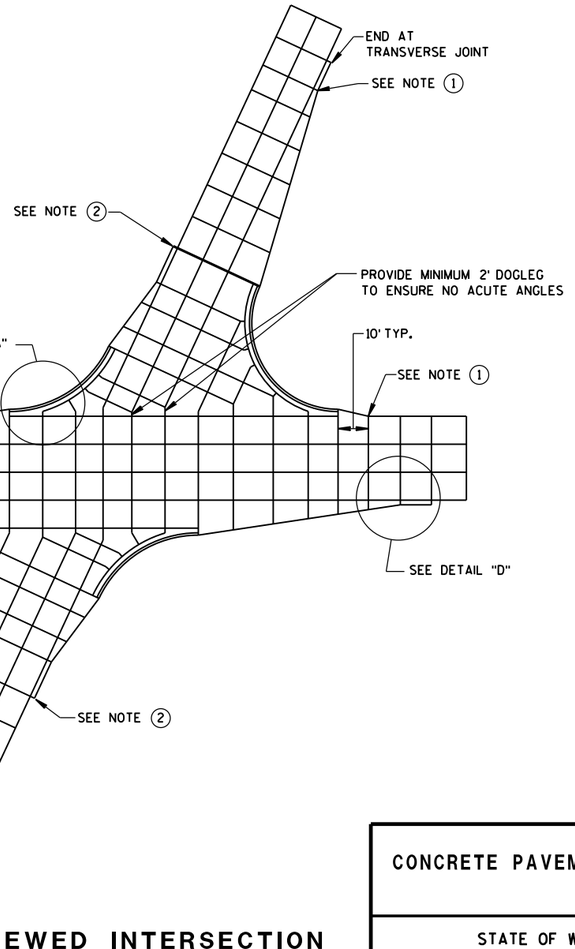
PAVEMENT DEPTH (D)	CONTRACTION JOINT SPACING
6", 6½"	12'
7", 7½"	14'
8" & ABOVE	15'



APPROACH TO MEDIAN



LARGE RIGHT TURN



SKEWED INTERSECTION

CONCRETE PAVEMENT JOINTING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

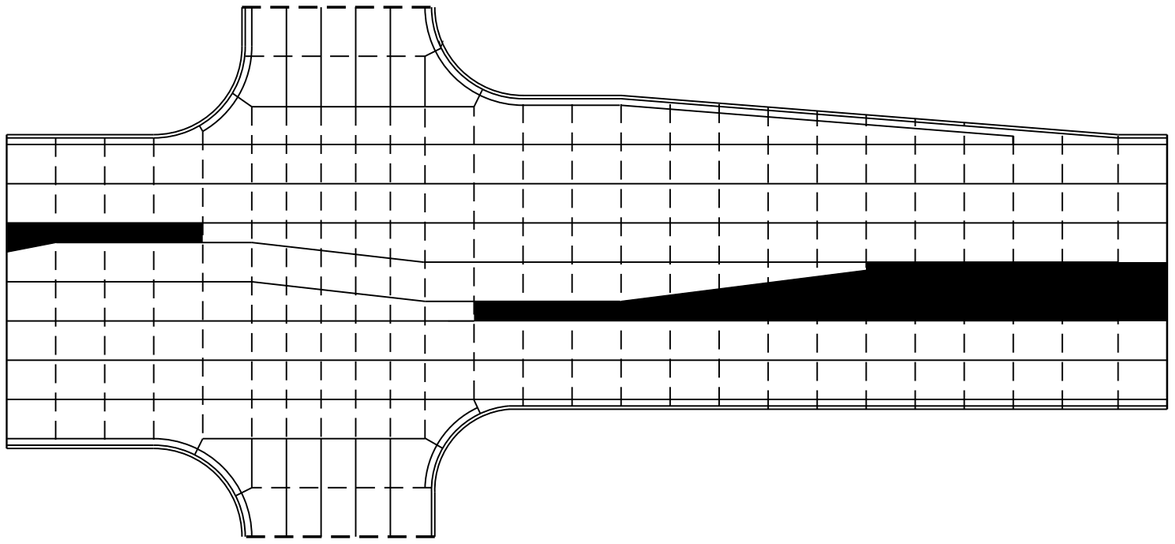
6
S.D.D. 13 C 18-3a

LEGEND

POTENTIAL DOWELED EXPANSION JOINT

DOWELED JOINT

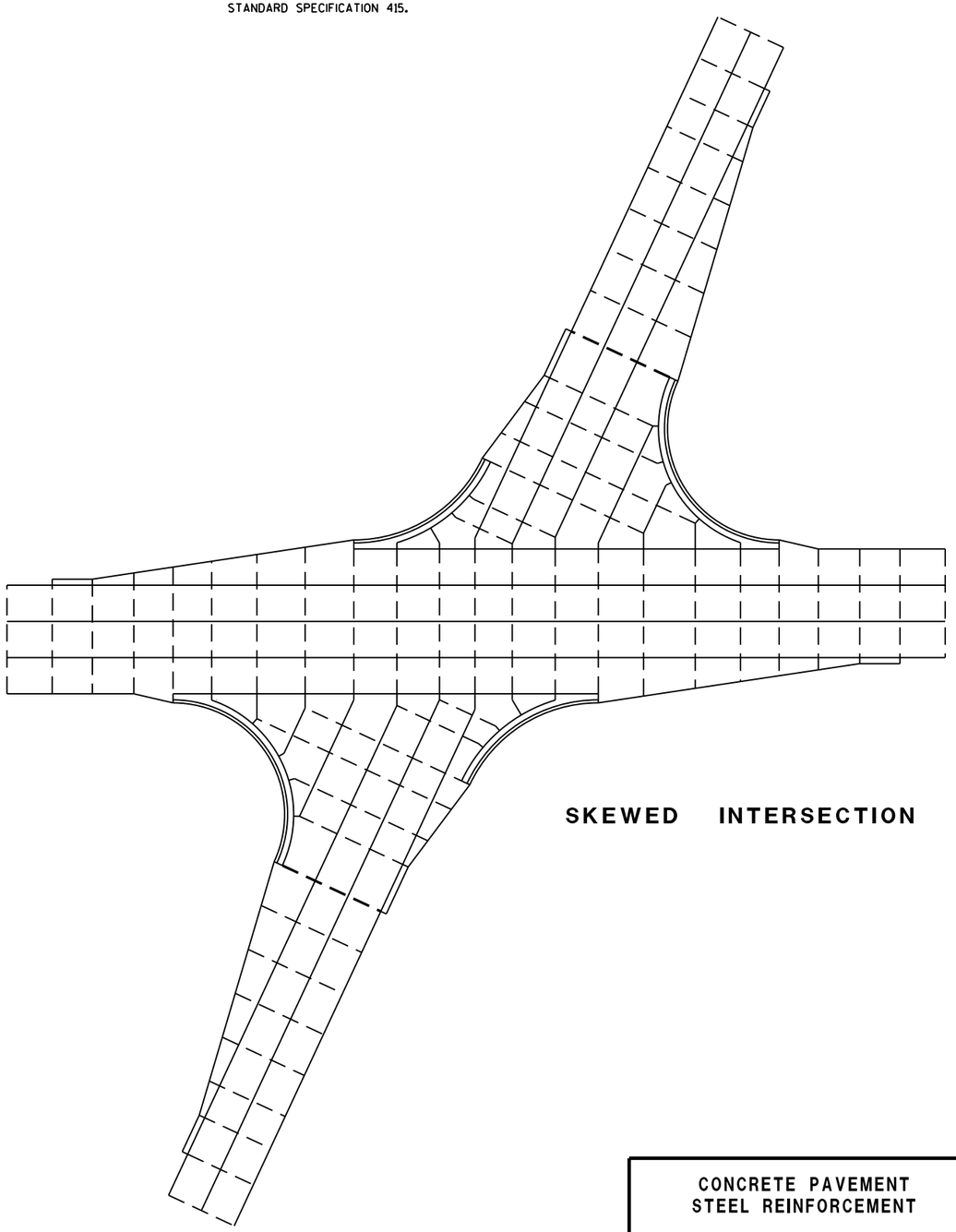
TIED JOINT



STANDARD INTERSECTION

GENERAL NOTES

USE AN EXPANSION JOINT FILLER MEETING THE REQUIREMENTS OF STANDARD SPECIFICATION 415.



SKEWED INTERSECTION

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S.D.D. 13 C 18-3b

CONCRETE PAVEMENT
STEEL REINFORCEMENT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

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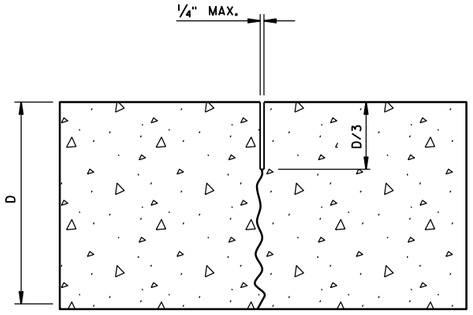
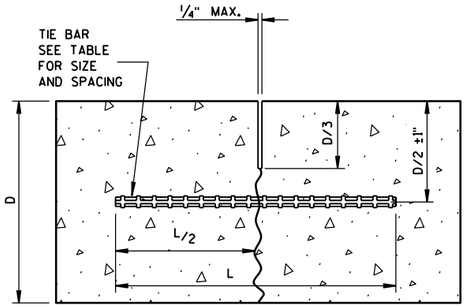
S.D.D. 13 C 18-3b



UNDOWELED-TRANSVERSE



TIED LONGITUDINAL

TIE BAR TABLE

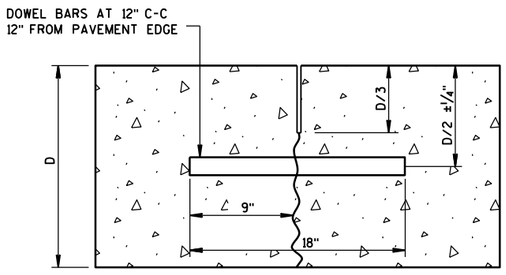
PAVEMENT DEPTH (D)	TIE BAR SIZE	TIE BAR LENGTH (L)	MAX. TIE BAR SPACING
< 10 1/2"	NO. 4	30"	36"
≥ 10 1/2"	NO. 5	36"	36"
	NO. 4*	30"	24"**

* SUBSTITUTE BENT BARS AT LONGITUDINAL JOINTS WHEN EQUIPMENT LIMITATIONS DURING CONSTRUCTION WARRANT (e.g. AUXILIARY LANES OR TURN LANES)

** CONFORM TO 15" MINUMUM SPACING FROM TRANSVERSE JOINTS; SPACING BETWEEN TIE BARS WILL BE 30" AT TRANSVERSE JOINTS.

GENERAL NOTES

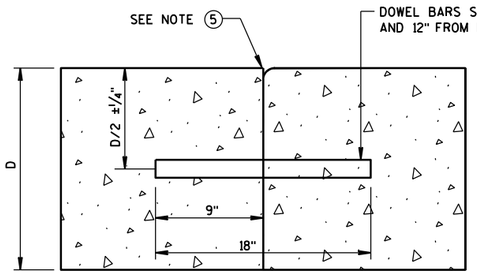
1. USE DOWELED EXPANSION JOINTS ON SIDE ROADS AT INTERSECTIONS (TO ISOLATE THE SIDE ROAD FROM THE THROUGH STREET) IF THE SIDE ROAD IS CONCRETE PAVEMENT AND GREATER THAN 300 FEET IN LENGTH.
2. SPACE CONTRACTION JOINTS IN ACCORDANCE WITH 13C4, 13C11 OR 13C13.
3. LOCATE CONSTRUCTION JOINTS A MINIMUM OF 6 FEET FROM THE NEAREST CONTRACTION JOINT AND ALIGN PARALLEL TO CONTRACTION JOINTS.
4. CONSTRUCTION JOINTS CAN BE FORMED OR SAWED.
5. IF JOINT IS FORMED, PROVIDE A 1/4-INCH RADIUS.
6. ANCHOR TIE BARS INTO DRILLED HOLES WITH AN EPOXY.



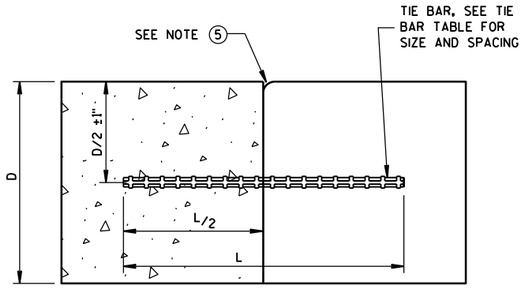
DOWELED-TRANSVERSE

CONTRACTION JOINTS

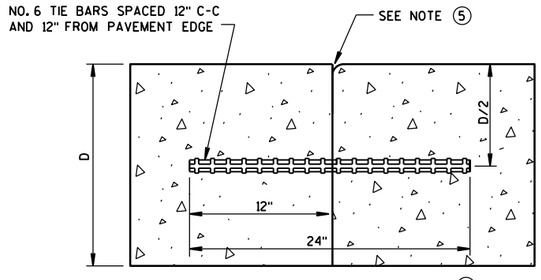
SEE NOTE (2)



DOWELED TRANSVERSE (3)

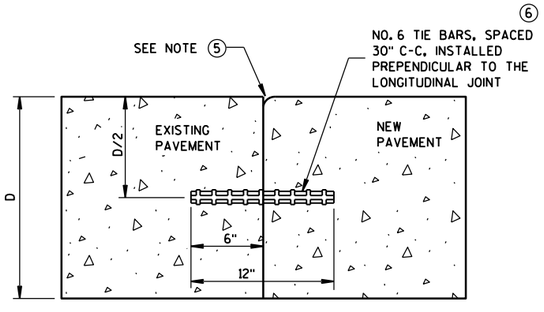


TIED LONGITUDINAL



TIED TRANSVERSE (3)

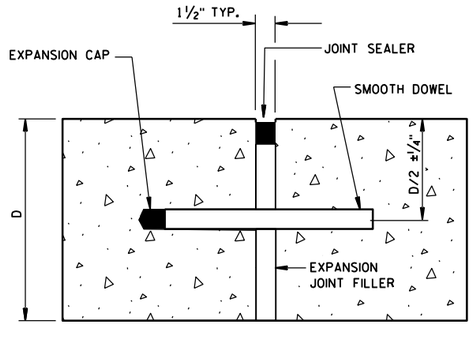
(FOR USE ON NON-DOWELED PAVEMENTS ONLY)



TIED LONGITUDINAL TO EXISTING

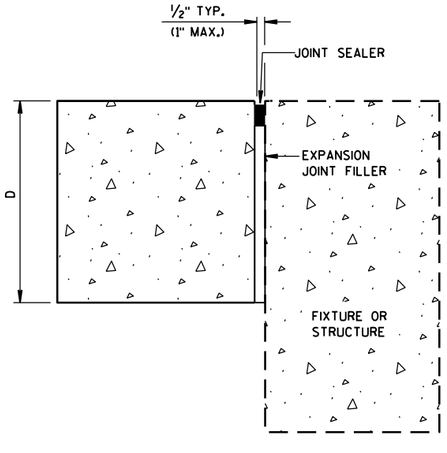
CONSTRUCTION JOINTS

SEE NOTE (4)



DOWELED-TRANSVERSE

SEE NOTE (1)



UNTIED-LONGITUDINAL

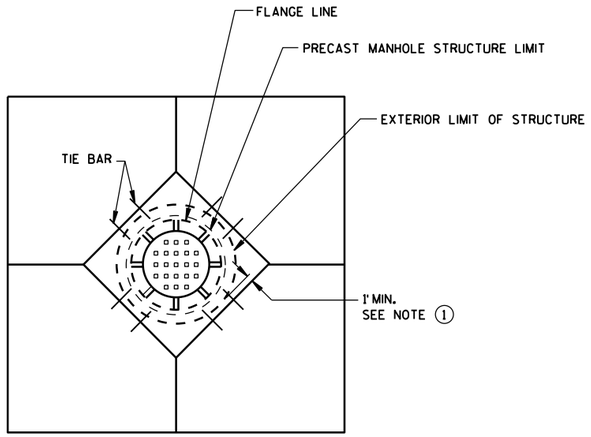
EXPANSION JOINTS

CONCRETE PAVEMENT
JOINT TYPES

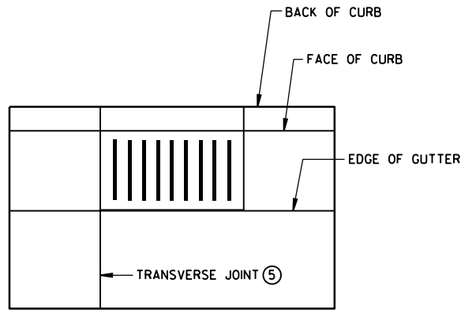
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6

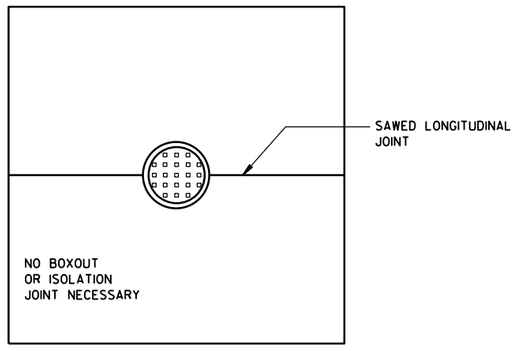
S.D.D. 13 C 18-3c



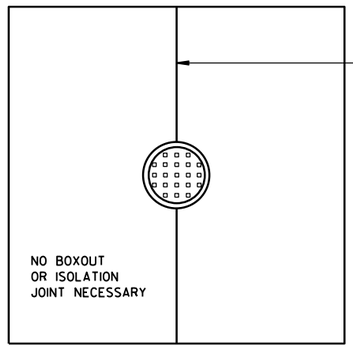
DIAGONAL MANHOLE BOXOUT FOR CONSTRUCTION JOINTS



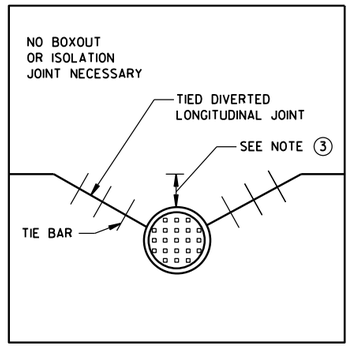
INLET WITH TRANSVERSE JOINT



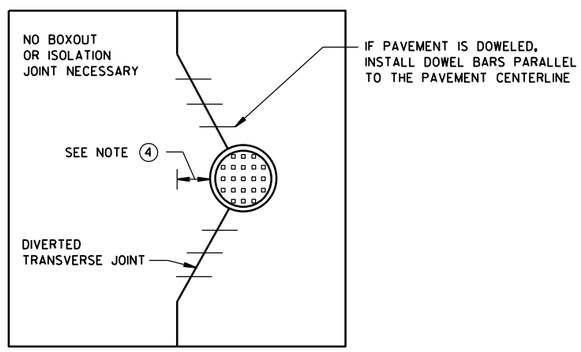
MANHOLE WITH LONGITUDINAL JOINT



MANHOLE WITH TRANSVERSE JOINT



MANHOLE WITH DIVERTED LONGITUDINAL CONTRACTION JOINT



MANHOLE WITH DIVERTED TRANSVERSE CONTRACTION JOINT

GENERAL NOTES

(1) USE BOXOUTS WHEN UTILITY STRUCTURE IS IN THE PATH OF CONSTRUCTION JOINTS. PROVIDE A 1-FOOT MINIMUM CLEARANCE BETWEEN THE EXTERIOR LIMIT OF THE STRUCTURE TO THE DIAMOND BOXOUT.

(2) ADJUST TRANSVERSE JOINT TO INTERSECT MANHOLE IF POSSIBLE.

(3) IF DISTANCE BETWEEN THE LONGITUDINAL JOINT AND THE EDGE OF MANHOLE IS 2 FEET OR LESS, DIVERT THE LONGITUDIAL JOINT AT A 2:1 TAPER RATE TO THE CENTER OF THE MANHOLE. IF THE DISTANCE IS GREATER THAN 2 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(4) IF DISTANCE FROM THE EDGE OF THE MANHOLE TO THE NEAREST TRANSVERSE JOINT IS 4 FEET OR LESS, REDIRECT JOINT TO INTERSECT THE CENTER OF THE MANHOLE. IF DISTANCE IS GREATER THAN 4 FEET, DO NOT DIVERT THE JOINT AND SAW AS NORMAL. PLACE REBAR REINFORCEMENT AROUND THE MANHOLE.

(5) ALIGN TRANSVERSE JOINT WITH ONE EDGE OF INLET WHEN PRACTICAL.

CONCRETE PAVEMENT JOINTING AT UTILITY FIXTURES

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015
DATE
/S/ Peter Kemp, P.E.
PAVEMENT SUPER
FHWA

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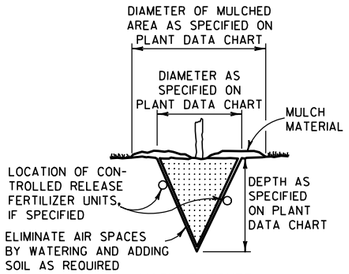
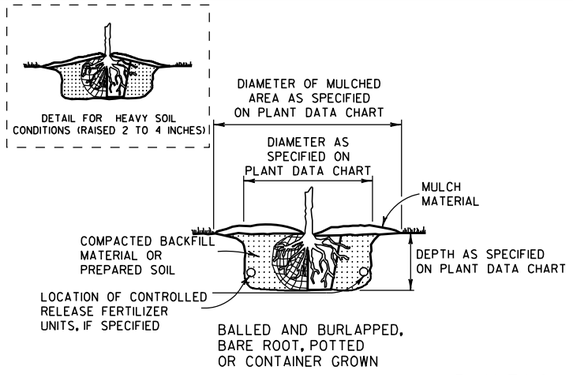
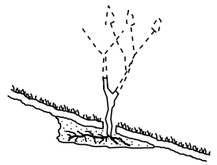
S.D.D. 13 C 18-3d



MACHINE MOVED

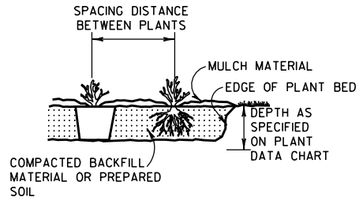


BALLED AND BURLAPPED, BARE ROOT, POTTED OR CONTAINER GROWN



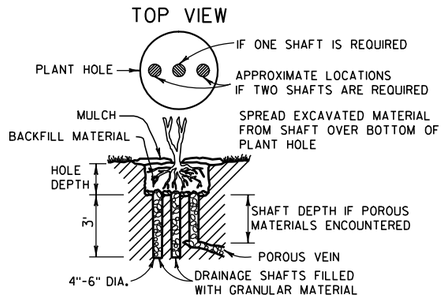
ACCOMMODATE ROOTS (SMOOTH AND STAGHORN SUMAC)

NOTE:
1) ENGINEER SHALL REQUIRE 3 SLITS IN POT TO SPEED DETERIORATION
2) METAL, PLASTIC OR OTHER NONDEGRADABLE POTS SHALL BE REMOVED PRIOR TO PLANTING



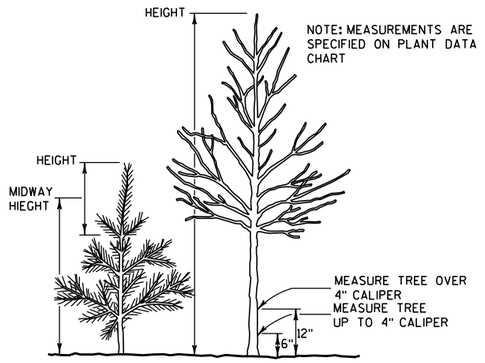
PREPARED BED (BARE ROOT AND POTTED)

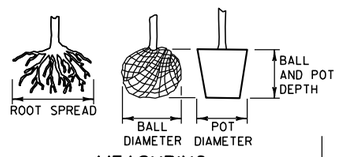
PLANTING



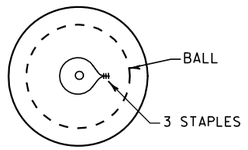
NOTE:
DRAINAGE SHAFT AS SPECIFIED ON PLANT DATA CHART

DRAINING

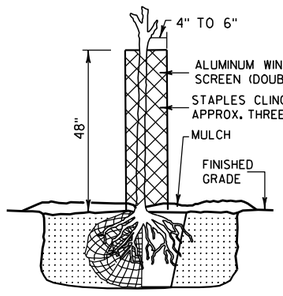




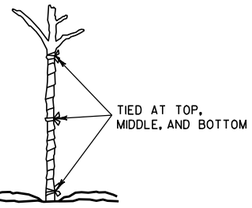
MEASURING



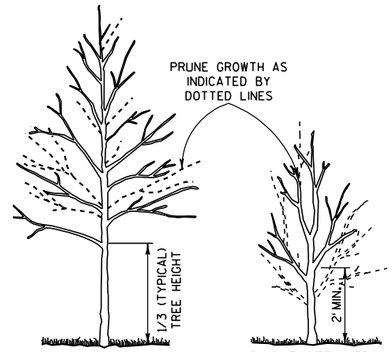
TOP VIEW



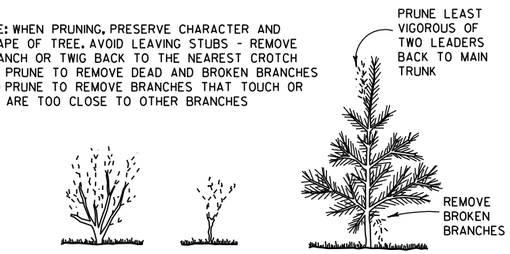
RODENT PROTECTION



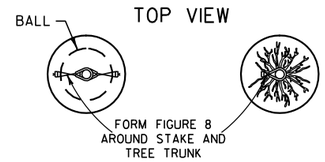
WRAPPING

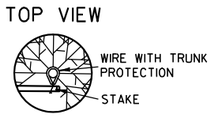


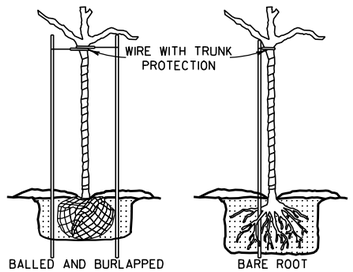
NOTE: WHEN PRUNING, PRESERVE CHARACTER AND SHAPE OF TREE. AVOID LEAVING STUBS - REMOVE BRANCH OR TWIG BACK TO THE NEAREST CROTCH
1) PRUNE TO REMOVE DEAD AND BROKEN BRANCHES
2) PRUNE TO REMOVE BRANCHES THAT TOUCH OR ARE TOO CLOSE TO OTHER BRANCHES

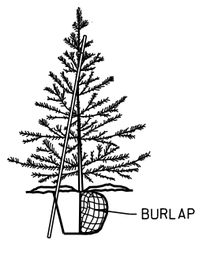


PRUNING



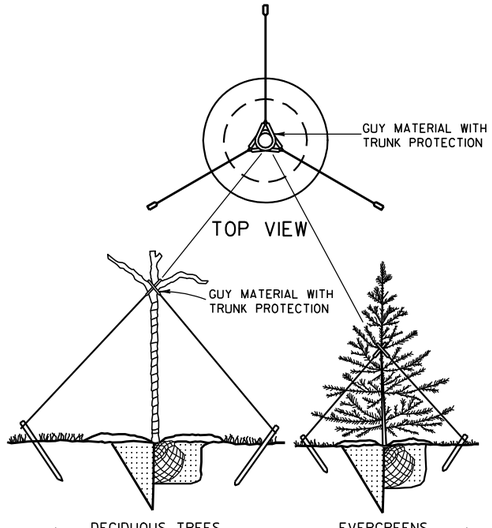




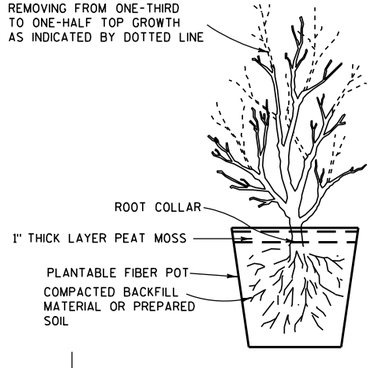


NOTE: BRACING STAKE
1) SHALL BE DRIVEN INTO THE GROUND AS CLOSE TO THE TREE AS POSSIBLE WITHOUT DAMAGING THE BRANCHES.
2) MAY BE DRIVEN AT SUCH AN ANGLE THAT IT DOES NOT PENETRATE THE BALL OR POT.
3) SHALL NOT PROTRUDE ABOVE THE TOP OF THE TREE; AND
4) SHALL HAVE A HOLE NEAR THE TOP TO HOLD THE WIRE IN PLACE.

BRACING



GUYING



POTTING

NOTES

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

BRACING, WRAPPING, GUYING, RODENT PROTECTION, FERTILIZER AND MULCH SHALL BE USED ONLY WHEN SPECIFIED ON THE PLANT DATA CHART (PART OF PLAN) OR SPECIAL PROVISIONS.

TREE PLANTING DETAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

4/11/94
DATE

/S/ Rory L. Rhinesmith
CHIEF METHODS DEVELOPMENT ENGINEER

FHWA

6

S.D.D. 14 A 2-1

GENERAL NOTES

1. WOOD OR STEEL POSTS (w6X9 OR w6X8.5) MAY BE USED. DO NOT INTERMIX WOOD AND STEEL POSTS. INSTALL STEEL POSTS WITH HOLES ON APPROACHING TRAFFIC SIDE.

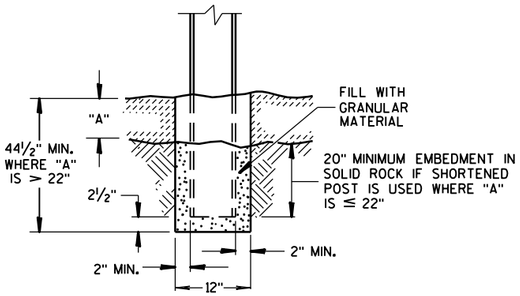
2. USE WOOD OR APPROVED PLASTIC BLOCKOUTS. WOOD BLOCKOUTS MAY BE CONSTRUCTED OUT OF TWO OR MORE WOOD BLOCKOUTS. SEE ALTERNATE WOOD BLOCKOUT DETAIL. DIMENSIONS OF APPROVED PLASTIC BLOCKOUTS MAY VARY.

3. IF ROCK IS ENCOUNTERED DURING EXCAVATION, PROVIDE A HOLE 12 INCHES IN DIAMETER EXTENDING 20 INCHES DEEP INTO THE ROCK. PLACE APPROXIMATELY 2½ INCHES OF GRANULAR MATERIAL IN THE BOTTOM OF THE HOLE. CUT THE POSTS THE TO LENGTH AMD INSTALL. BACKFILL WITH EXCAVATED MATERIAL AND COMPACT. BACKFILL IS TO BE FREE OF LARGE ROCKS.

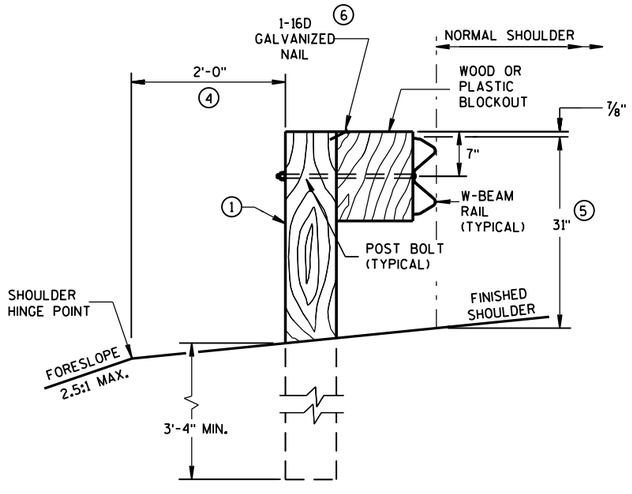
4. WHEN THE DISTANCE FROM BACK OF POST TO SHOULDER HINGE POINT IS LESS THAN 2 FEET INSTALL LONGER POST AT HALF POST SPACING (K).

5. FOR NEW MGS INSTALLATION TOP OF W-BEAM RAIL TOLERANCE IS ± 1". FOR EXISTING MGS INSTALLATION TOP OF W-BEAM IS BETWEEN 27¾" TO 32".

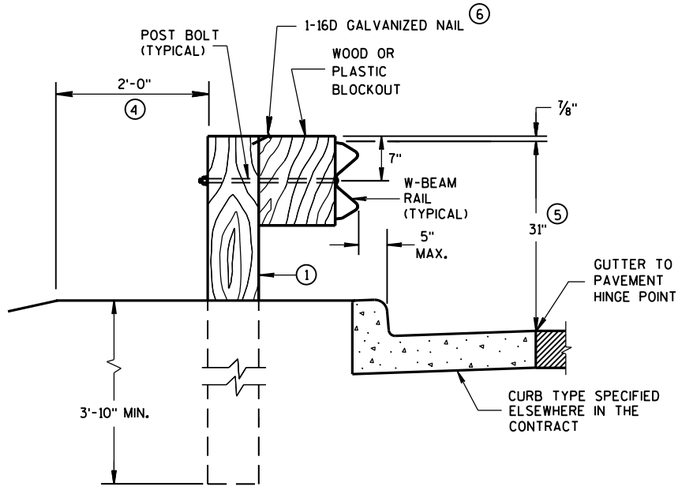
6. WHEN USING STEEL POST AND WOOD BLOCKOUTS INSTALL FOUR 16D GALVANIZED NAILS. INSTALL NAILS AT THE BACK CORNERS OF THE BLOCK AND BEND THE NAILS OVER THE FLANGE OF THE STEEL POST.



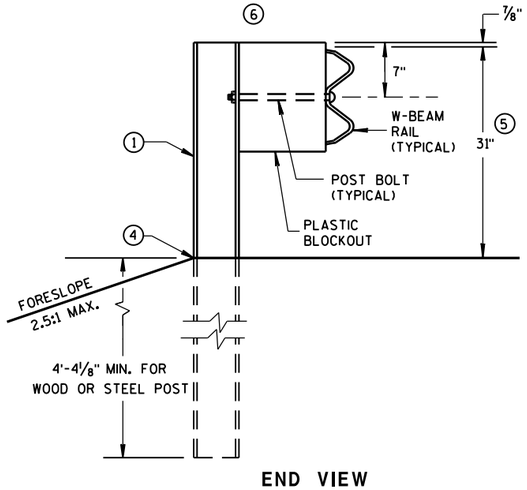
END VIEW
SETTING STEEL OR WOOD POST IN ROCK (3)



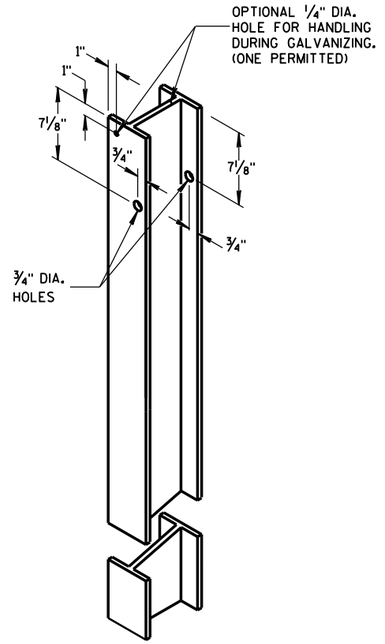
END VIEW
LOCATED ALONG A ROADWAY SHOULDER
STANDARD INSTALLATION



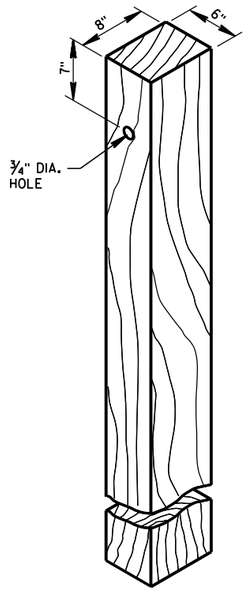
END VIEW
LOCATED ALONG A CURBED ROADWAY



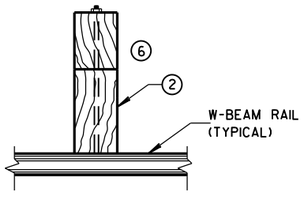
END VIEW
MGS LONGER POST AT HALFPOST SPACING W BEAM (K)



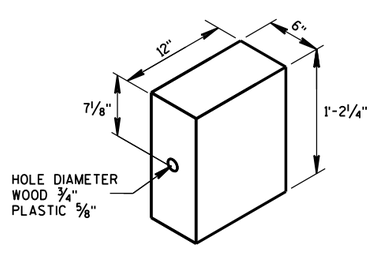
STEEL POST &
HOLE PUNCHING DETAIL
(w6X9) (1)



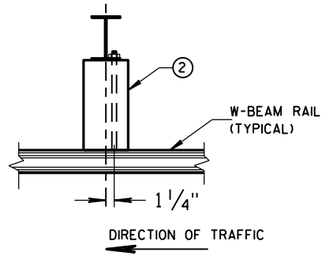
WOOD POST
(6" X 8") NOMINAL (1)



PLAN VIEW
WOOD POST,
BLOCKOUT & BEAM



WOOD OR
PLASTIC BLOCKOUT (2)

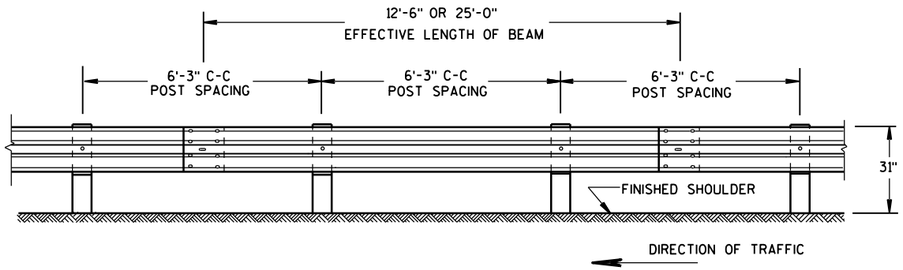


PLAN VIEW
STEEL POST,
PLASTIC BLOCKOUT & BEAM

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

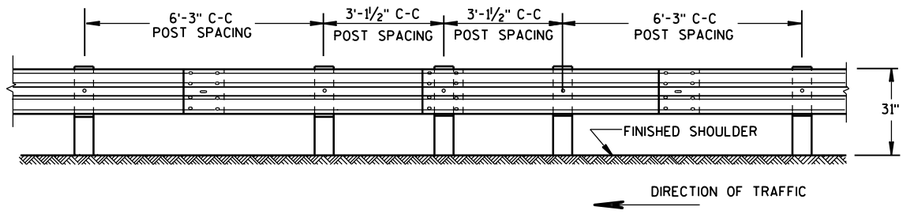
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOR

6
S.D.D. 14 B 42-3a



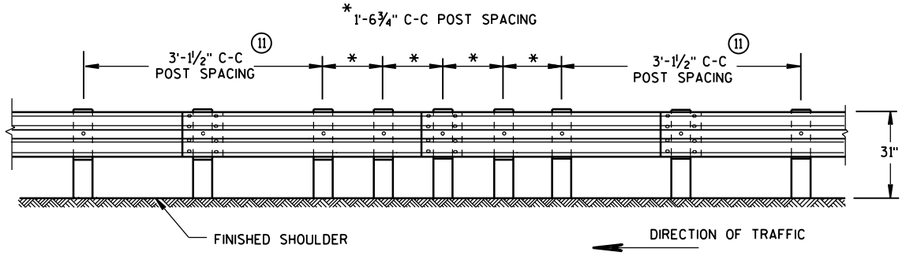
FRONT VIEW

POST SPACING STANDARD INSTALLATION



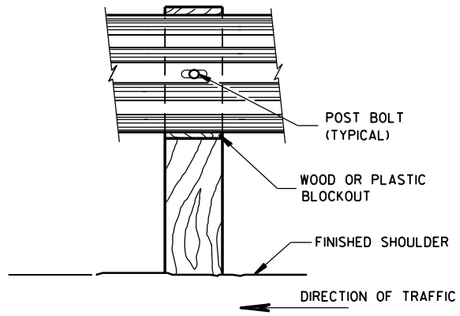
FRONT VIEW

HALF POST SPACING (HS) AND HALF POST SPACING WITH LONGER POSTS (K)

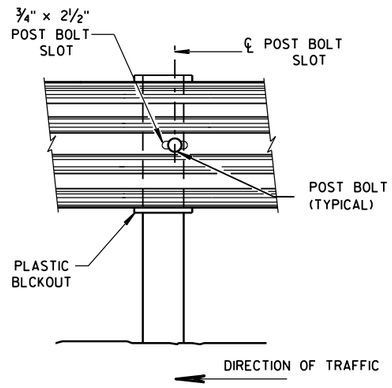


FRONT VIEW

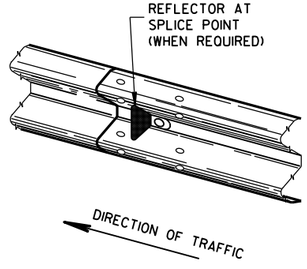
QUARTER POST SPACING (QS)

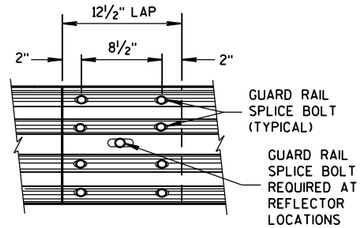


FRONT VIEW AT WOOD POST



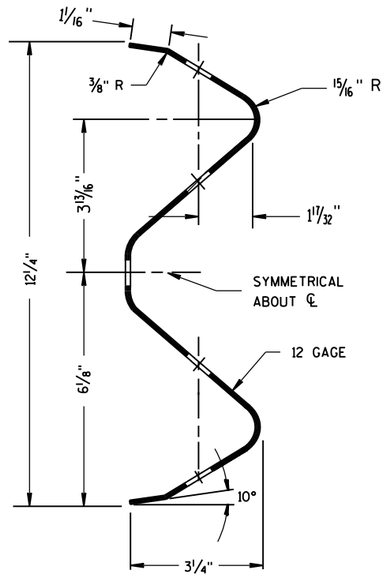
FRONT VIEW AT STEEL POST



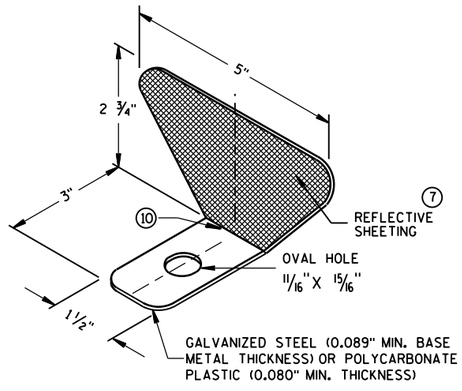


FRONT VIEW

MID-SPAN BEAM SPLICE



SECTION THRU W-BEAM RAIL



ONE SIDED REFLECTOR DETAIL AND TYPICAL INSTALLATION ⑦

GENERAL NOTES

⑦ PROVIDE SILVER REFLECTIVE SHEETING ON ALL REFLECTORS EXCEPT THOSE LOCATED ALONG THE LEFT EDGE OF ONE-WAY ROADWAYS, WHICH SHALL BE PROVIDED WITH YELLOW REFLECTIVE SHEETING. SHEETING IS TYPE H. SEE STANDARD SPECIFICATION 637.

⑧ DO NOT INSTALL REFLECTORS ON THE FIRST 50 FEET OF THE APPROACH END OF THE ENERGY ABSORBING TERMINAL. RAIL SPLICE LOCATIONS ARE THE ONLY ACCEPTABLE LOCATIONS FOR REFLECTORS.

⑨ REVERSE EVERY OTHER REFLECTOR FOR 2-WAY VISIBILITY. THE CONTRACTOR MAY FURNISH TWO-SIDED REFLECTORS IN LIEU OF ONE-SIDED REFLECTORS.

⑩ PROVIDE AN ANGLE OF BEND OF 90° ± 1° FOR TWO-SIDED REFLECTORS.

⑪ 25 FEET OF HALF POST SPACING IS REQUIRED ON APPROACH AND DEPARTURE ENDS OF QUARTER POST SPACING.

POST BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL BOLT. A POST BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT AND ⅝" DIAMETER F844 FLAT WASHER. POST BOLTS MAY BE LONGER IF MULTIPLE BLOCKOUTS ARE BEING USED.

GUARD RAIL SPLICE BOLTS ARE A ⅝" DIAMETER ASTM A307 GUARDRAIL HEAD BOLT. A GUARDRAIL SPLICE BOLT REQUIRES ⅝" DIAMETER A563A DOUBLE RECESSED (DR) HEAVY HEX NUT.

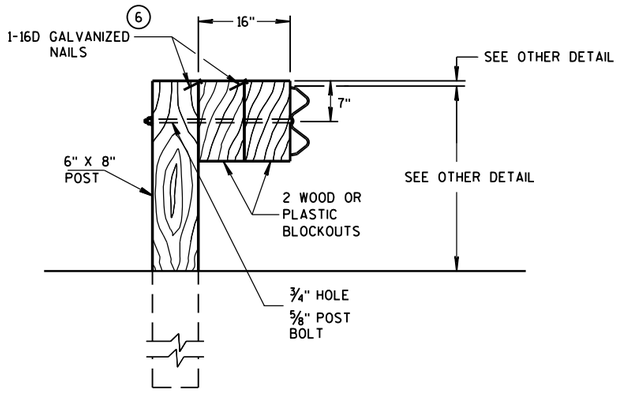
REFLECTOR SPACING ⑧

	BEAM GUARD LENGTH	REFLECTOR SPACING	NO. SURFACES REFLECTORIZED	MIN. NO. REFLECTORS
ONE WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	1 1	3
TWO WAY TRAFFIC	< 200' > 200'	25' C-C 50' C-C	1 ⑨ 1	6
TWO WAY TRAFFIC	< 200' > 200'	50' C-C 100' C-C	2 2 ⑩	3

MIDWEST GUARDRAIL SYSTEM
(MGS) GUARDRAIL

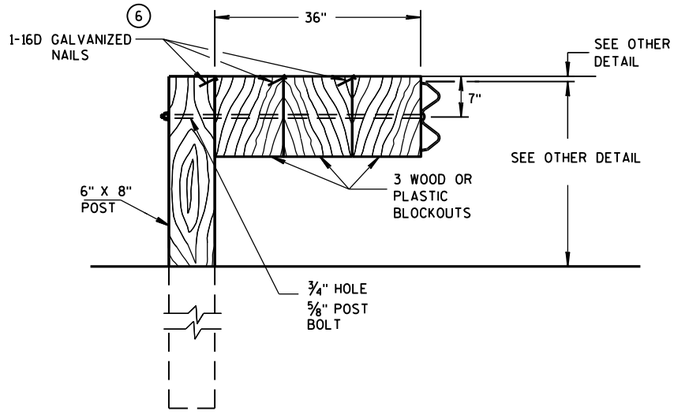
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 42-3b



DETAIL FOR 16" BLOCKOUT DEPTH

IT IS ACCEPTABLE TO USE BLOCKOUTS UP TO 16" DEEP TO INCREASE THE POST OFFSET TO AVOID UNDERGROUND OBSTACLES. THERE IS NO LIMIT TO THE NUMBER OF POSTS THAT CAN HAVE ADDITIONAL BLOCKOUTS UP TO 16" DEEP.

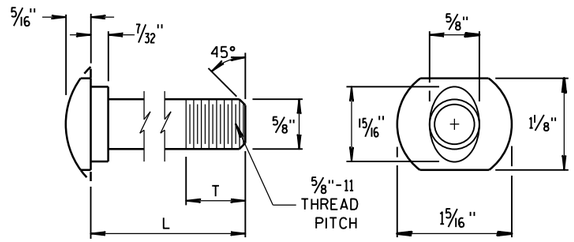


DETAIL FOR 36" BLOCKOUT DEPTH

NOTES: UNDER SPECIAL CIRCUMSTANCES, SUCH AS AVOIDING OBSTACLES THAT ARE NOT RELOCATED, IT IS ACCEPTABLE TO INSTALL ADDITIONAL BLOCKOUTS TO OBTAIN UP TO 36" DEPTH FOR ONE OR TWO POSTS IN A SECTION OF GUARDRAIL.

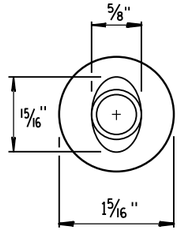
DO NOT USE 16" OR 36" BLOCKOUTS IF IT CAUSES THE POST TO BE DRIVEN BEYOND SHOULDER HINGE POINT OR CAUSES A FIXED OBJECT TO BE WITHIN THE DEFLECTION DISTANCE OF THE BARRIER.

NOTE: 1. ALL FILLETS SHALL HAVE A MINIMUM RADIUS OF 1/16".
2. IF THE BOLT EXTENDS MORE THAN 1/4" FROM THE NUT THE BOLT SHOULD BE TRIMMED BACK.

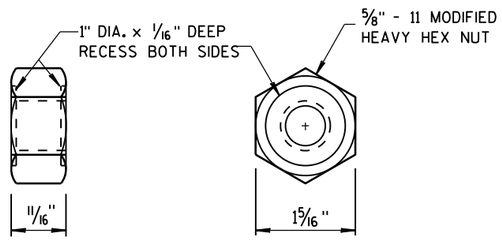


POST BOLT TABLE

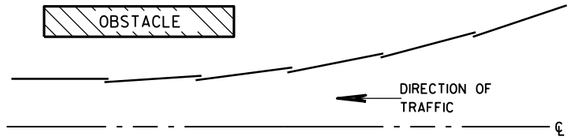
L	T (MIN.)
1 1/4"	1 1/8"
2"	1 3/4"
10"	4"
14"	4 1/16"
18"	4"
21"	4 1/16"
25"	4"



ALTERNATE BOLT HEAD

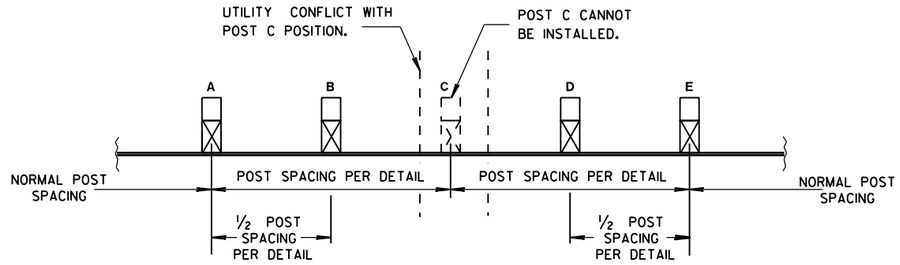


POST BOLT AND RECESS NUT

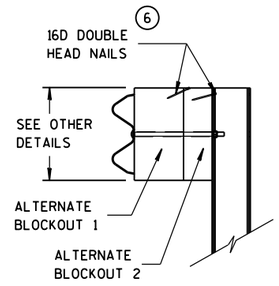


PLAN VIEW

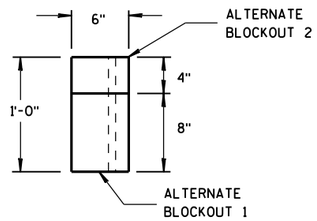
BEAM LAPPING DETAIL



POST DRIVING FOR CONTINUOUS UNDERGROUND OBSTRUCTION



SIDE VIEW



TOP VIEW

ALTERNATE WOOD BLOCKOUT DETAIL

MIDWEST GUARDRAIL SYSTEM (MGS) GUARDRAIL

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

GENERAL NOTES

(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.

(C) DIFFERENT MANUFACTURES REQUIRE DIFFERENT PERFORATED W-BEAM RAIL END PANELS. SEE MANUFACTURES INFORMATION.

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

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

(G) ½" DIAMETER X 3" LONG LAG BOLT AND WASHER.

(H) HARDWARE VARIES BETWEEN DIFFERENT MANUFACTURES. SEE MANUFACTURE'S DRAWING FOR INFORMATION.

(I) DIMENSIONS MAY VARY. SEE MANUFACTURE'S INFORMATION.

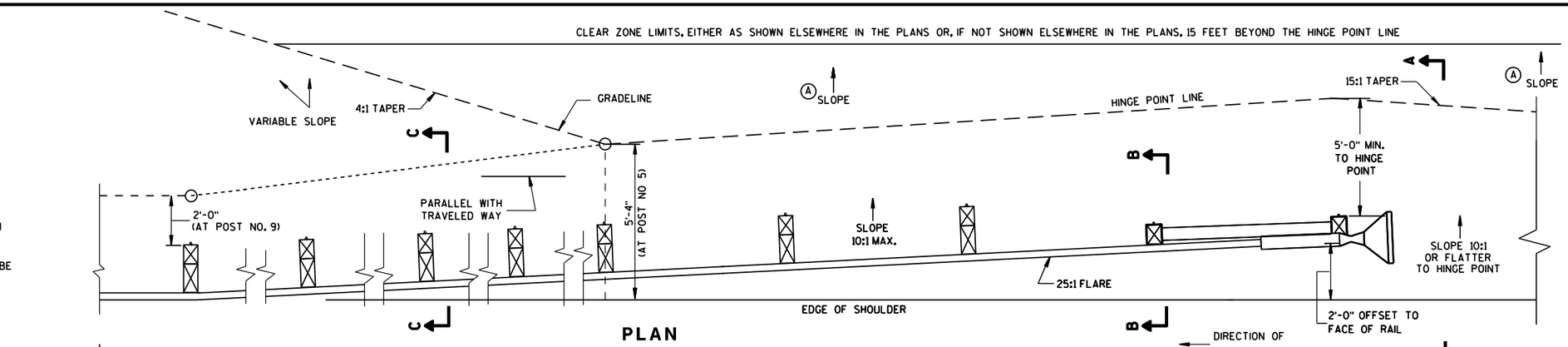
SEE SDD 14B42 FOR MORE INFORMATION.

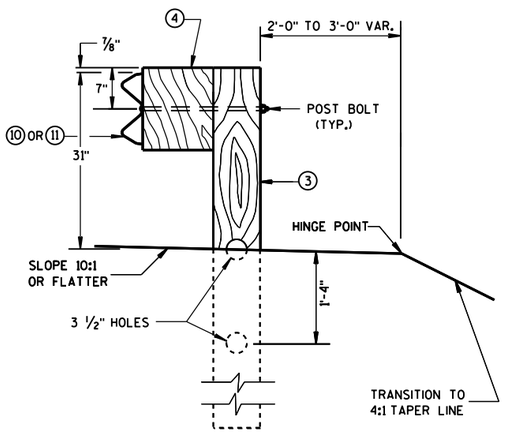
* DO NOT ATTACH BLOCKOUTS TO POSTS 1 AND 2.

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

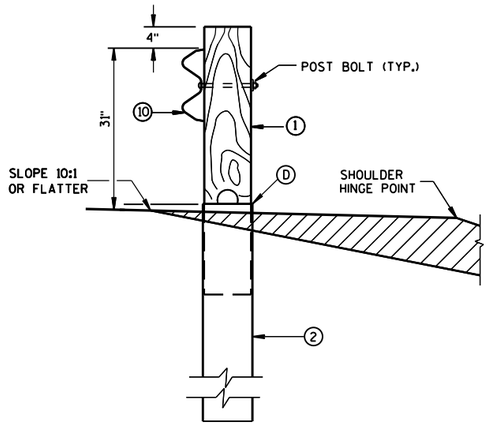
W-BEAM RAIL SPLICES ARE LOCATED AT POST NUMBER 3, AND BETWEEN POST 5 AND 6, BETWEEN POSTS 7 AND 8, AND MIDDLE OF THE SPAN AFTER POST 9.

THE CENTER OF THE UPPER 3½" DIAMETER HOLE ON POST NUMBER 3 THROUGH POST 9 IS TO BE FLUSH WITH THE GROUND LINE UP TO A MAXIMUM OF 2" ABOVE GROUND LINE.

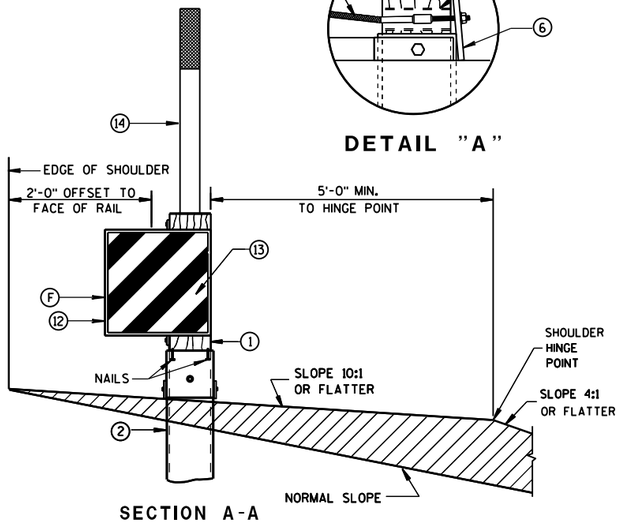




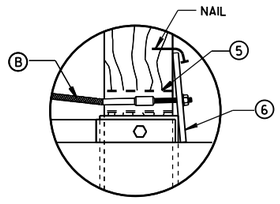
SECTION C-C
TYPICAL AT POST NOS. 3-9



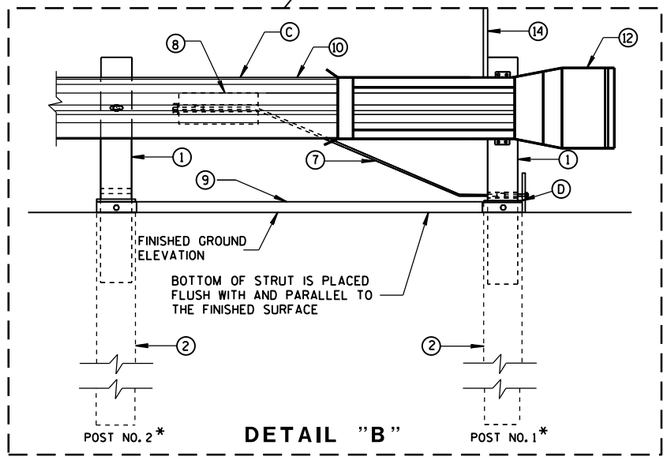
SECTION B-B
TYPICAL AT POST NO. 2*



SECTION A-A
TYPICAL AT POST NO. 1*



DETAIL "A"

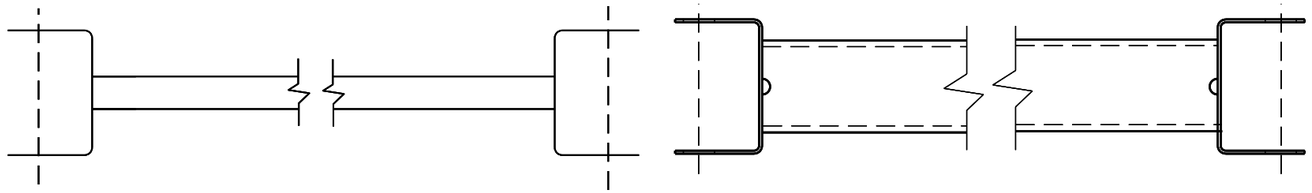


DETAIL "B"

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

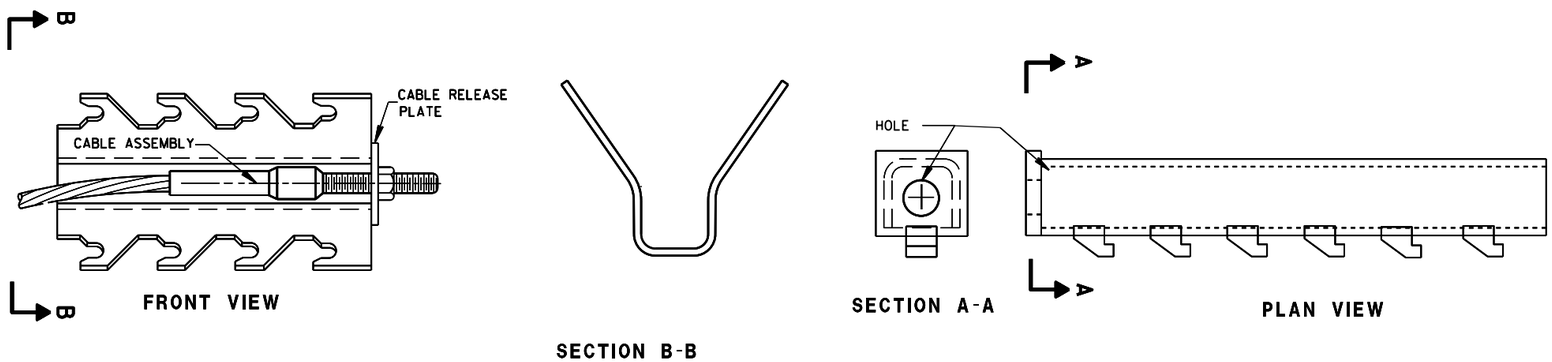
S.D.D. 14 B 44-2a



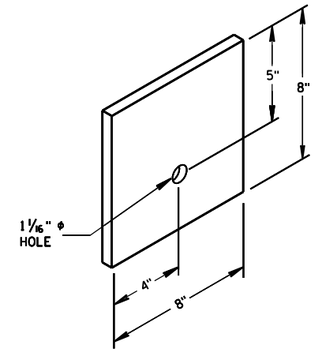
GENERIC GROUND STRUT (9) (H)

BILL OF MATERIALS

PART NO.	DESCRIPTION MATERIALS PROVIDED BY MGS EAT MANUFACTURER. SEE MANUFACTURER'S DETAILS FOR MORE INFORMATION.
(1)	WOOD BREAKAWAY POST
(2)	6" X 8" X 0.188", 6'-0" LONG FOUNDATION TUBE AT POSTS 1 AND 2
(3)	WOOD CRT
(4)	WOOD BLOCKOUT
(5)	PIPE SLEEVE
(6)	BEARING PLATE
(7)	BCT CABLE ASSEMBLY
(8)	ANCHOR CABLE BOX
(9)	GROUND STRUT
(10)	PERFORATED W-BEAM RAIL END PANEL, 12'-6" LONG.
(11)	STANDARD W-BEAM RAIL. MULTIPLE SECTIONS REQUIRED. SECTIONS VARY IN LENGTH.
(12)	END SECTION EAT
(13)	0.040" ALUMINUM SHEET WITH REFLECTIVE SHEETING TYPE F PER SECTION 637 OF THE STANDARD SPECIFICATIONS
(14)	EAT MARKER POST - YELLOW (SEE APPROVED PRODUCTS LIST)



GENERIC ANCHOR CABLE BOX (8) (H)



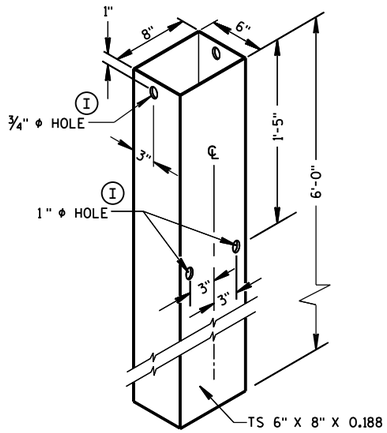
BEARING PLATE (6)

MIDWEST GUARDRAIL SYSTEM
ENERGY ABSORBING TERMINAL
(MGS)

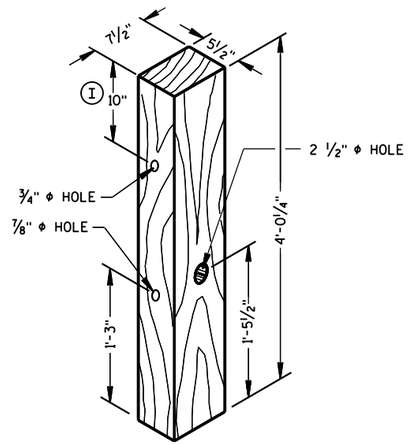
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 14 B 44-2b

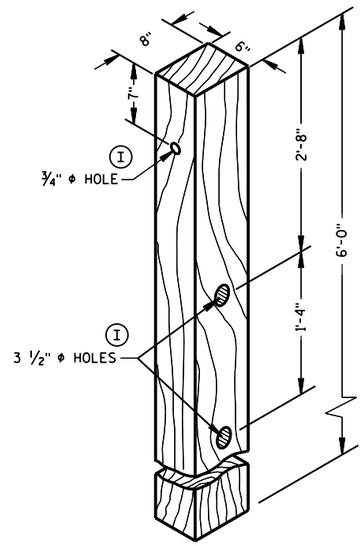


FOUNDATION TUBE (2)



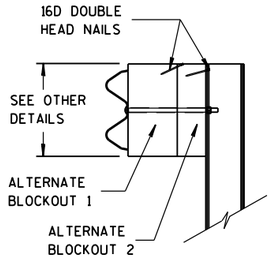
POSTS NUMBER 1 AND 2

WOOD BREAKAWAY POST (1)

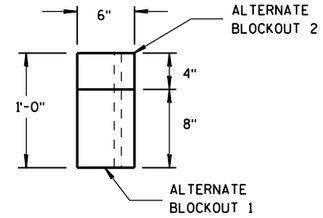


POSTS NUMBER 3-9

WOOD CRT POST (3)

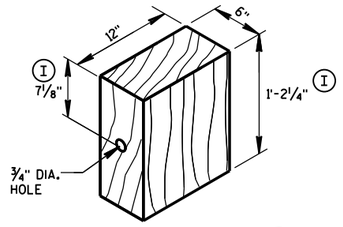


SIDE VIEW



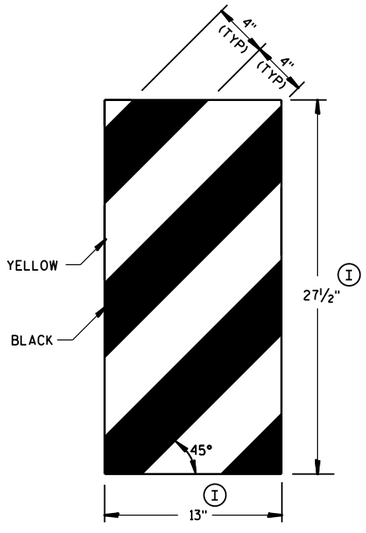
TOP VIEW

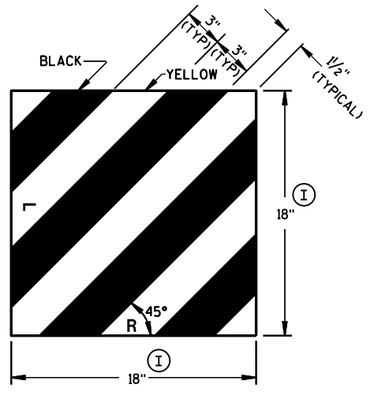
ALTERNATE WOOD BLOCKOUT DETAIL



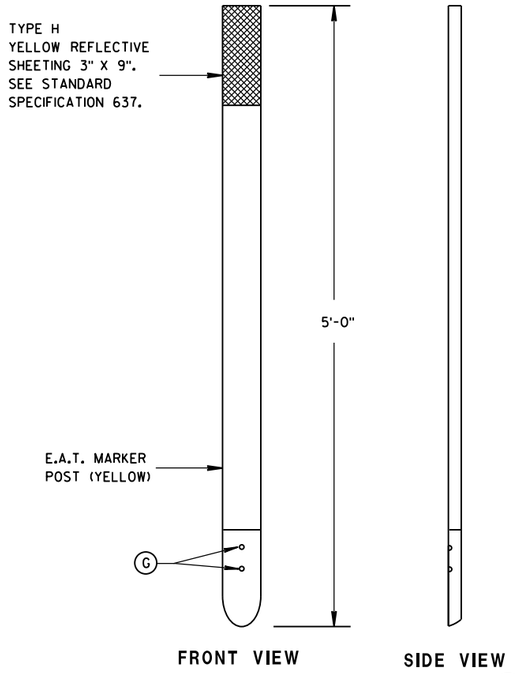
WOOD BLOCKOUT (4)

REQ'D. AT ALL POSTS EXCEPT POST NO'S 1 & 2





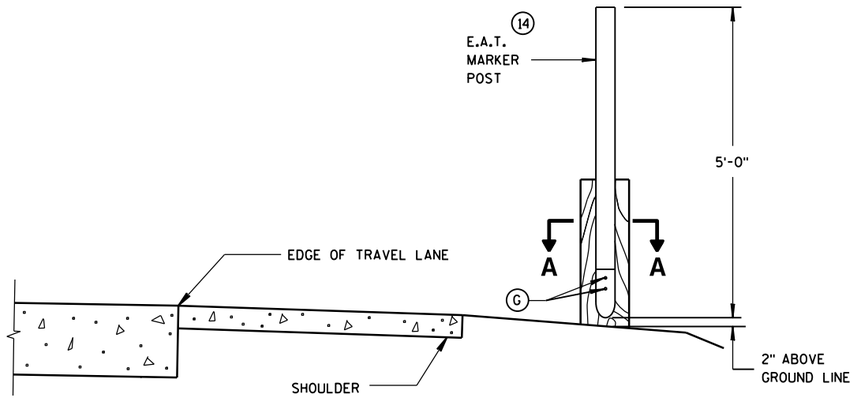
GENERIC REFLECTIVE SHEETING (13) (H)



FRONT VIEW

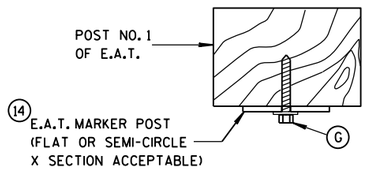
SIDE VIEW

E.A.T. MARKER POST (14)



TYPICAL INSTALLATION OF E.A.T. MARKER POST BACKSIDE OF POST NO. 1

(E.A.T. AND RAIL REMOVED FOR CLARITY)



SECTION A-A

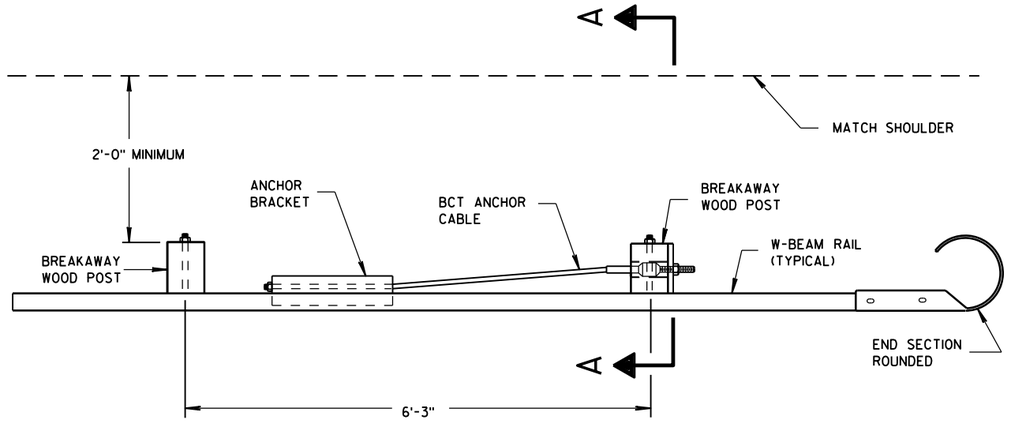
MIDWEST GUARDRAIL SYSTEM ENERGY ABSORBING TERMINAL (MGS)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

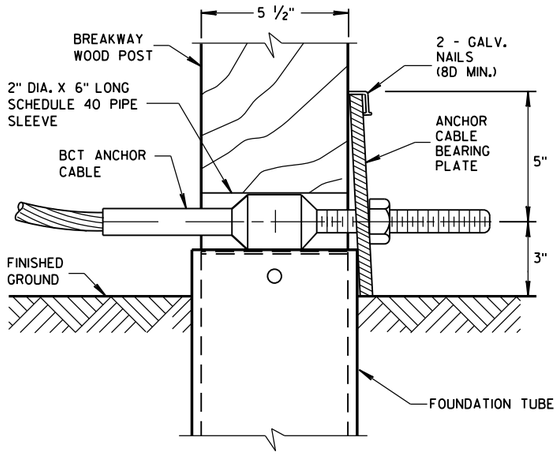
APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

6

S.D.D. 14 B 44-2c



PLAN VIEW



DETAIL A

POST NO. 1
GROUNG STRUT NOT SHOWN FOR CLARITY.

GENERAL NOTES

SEE SDD 14 B 42 FOR MORE INFORMATION.

END SECTION BOLTS AND NUTS HAVE THE SAME MATERIAL REQUIREMENTS AS SPLICE BOLTS.

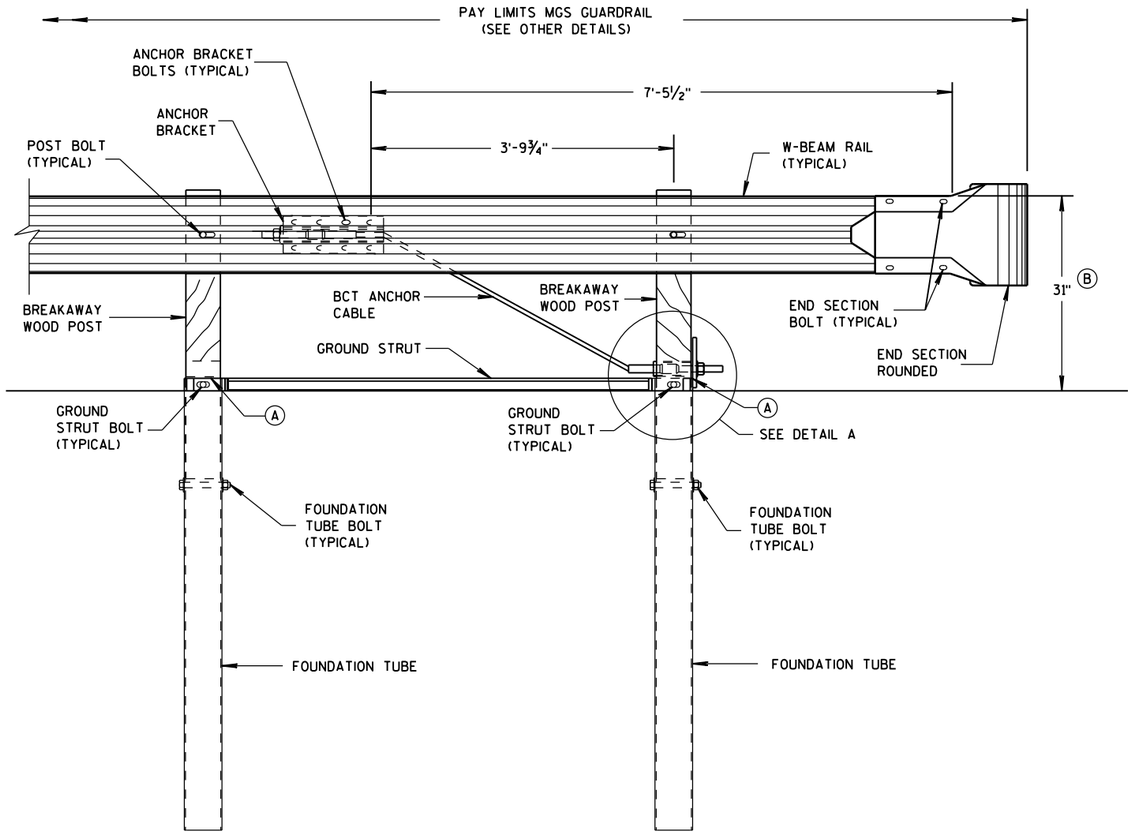
FOUNDATION TUBE BOLTS ARE ⅞" DIAMETER ASTM A307 HEX HEAD BOLT. FOUNDATION TUBE BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅞" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

ANCHOR BRACKET AND GROUND STRUT BOLTS ARE A ⅝" DIAMETER ASTM A307 HEX HEAD BOLT. ANCHOR BRACKET BOLTS REQUIRE ASTM A563 A NUT AND TWO ASTM F844 ⅝" DIAMETER FLAT WASHERS. INSTALL ONE WASHER UNDER BOLT HEAD AND ONE WASHER UNDER NUT.

W-BEAM END SECTION ROUNDED HAS THE SAME MATERIAL PROPERTIES AS STANDARD STEEL RAIL.

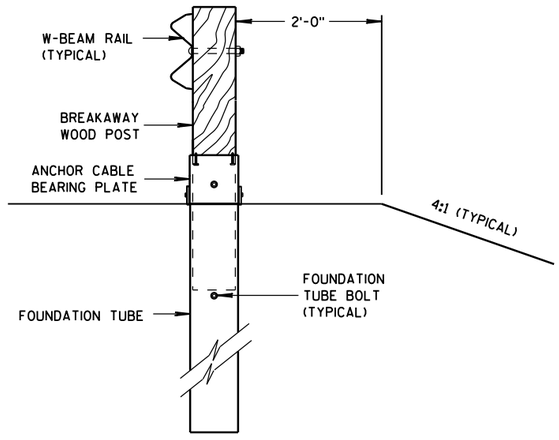
(A) TOP OF FOUNDATION TUBE SHALL BE NO MORE THAN 3" ABOVE FINISHED GROUND.

(B) FOR NEW CONSTRUCTION TOP OF RAIL IS 31" ± 1".
FOR EXISTING INSTALLATIONS TOP OF RAIL IS BETWEEN 27¾" TO 32" ± 1".

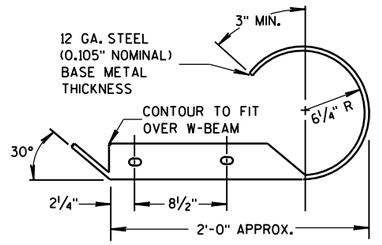


FRONT VIEW

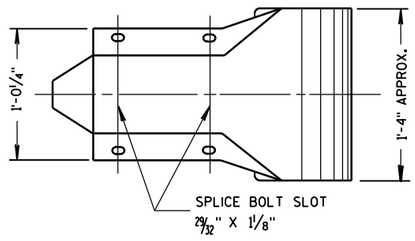
END RAIL DETAIL



SECTION A-A



PLAN VIEW



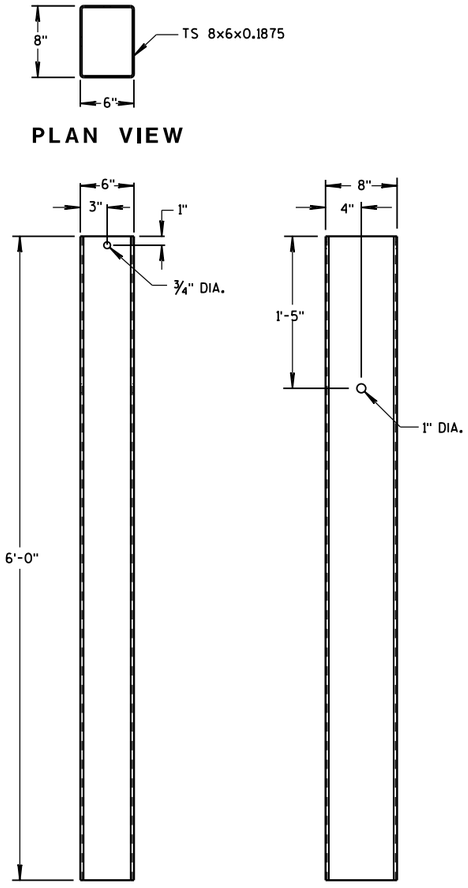
FRONT VIEW

W BEAM END SECTION ROUNDED

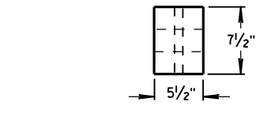
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

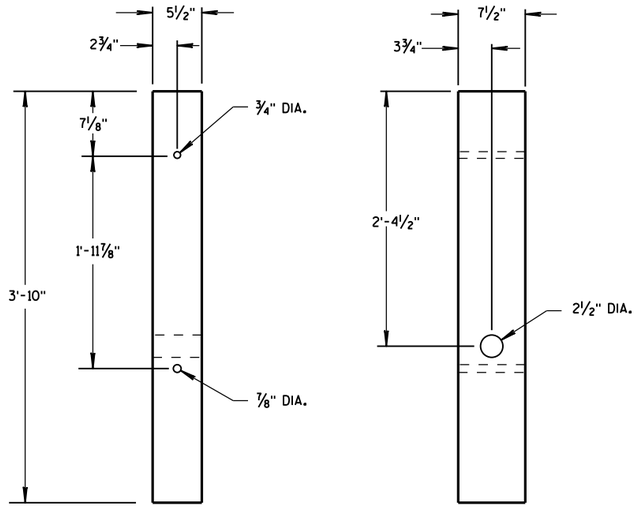
STATE OF WISCONSIN
DEPARTMENT OF TRANSPO

6
S.D.D. 14 B 47-2a



FOUNDATION TUBE



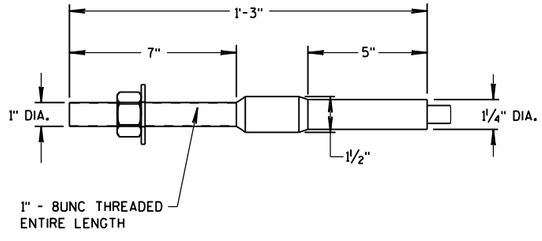


BREAKAWAY WOOD POST

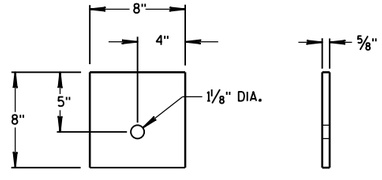
GENERAL NOTES

BCT ANCHOR CABLE IS A ¾" DIAMETER 6X19 IWRC IPS GALVANIZED WIRE ROPE. THE SWAGED FITTINGS AND STUD ARE REQUIRED. END FITTING SHALL BE MACHINED FROM HOT-ROLLED CARBON STEEL CONFORMING TO ASTM A576 GRADE 1035 AND GALVANIZED ACCORDING TO ASTM A123. TREADED STUD SHALL CONFORM TO ASTM A325 OR SAE GRADE 5. MINIMUM BREAKING STRENGTH OF WIRE ROPE IS 43,000 LB. WIRE ROPE IS TO BE TAUT.

BCT ANCHOR CABLE



DETAIL B



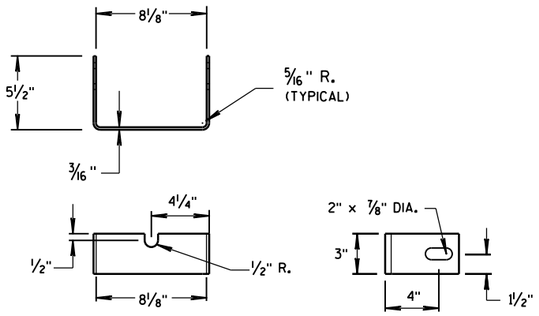
ANCHOR CABLE
BEARING PLATE

MIDWEST GUARDRAIL
SYSTEM (MGS) TYPE 2 TERMINAL

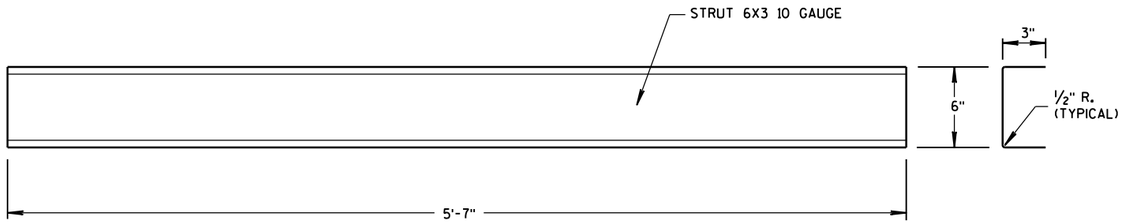
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

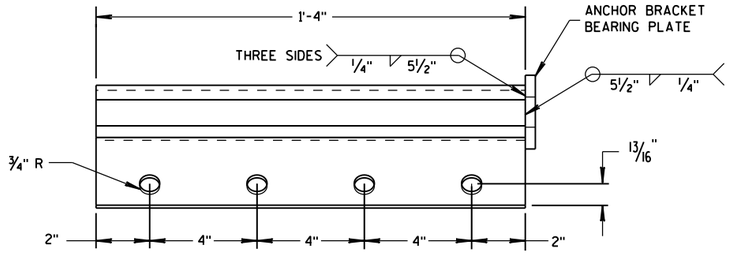
S.D.D. 14 B 47-2b

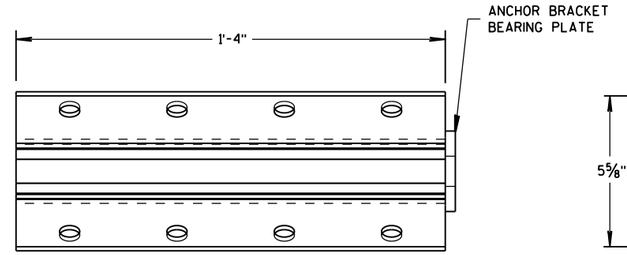


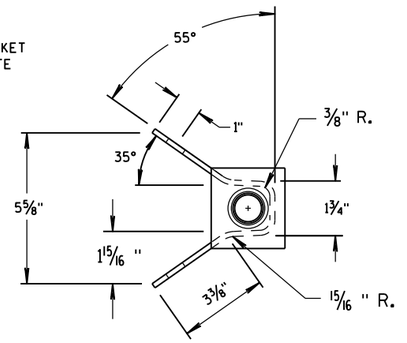
YOKE DETAIL



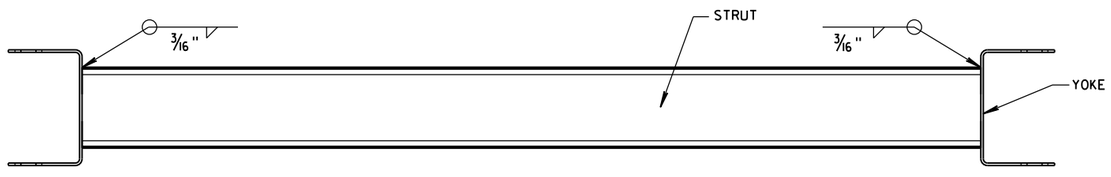
STRUT DETAIL



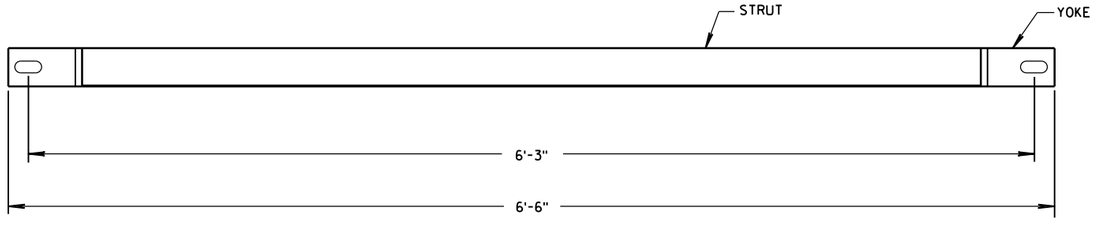




ANCHOR BRACKET

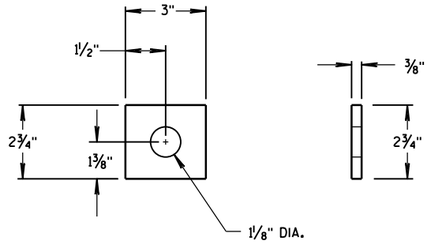


PLAN VIEW



FRONT VIEW

GROUND STRUT DETAIL



ANCHOR BRACKET BEARING PLATE

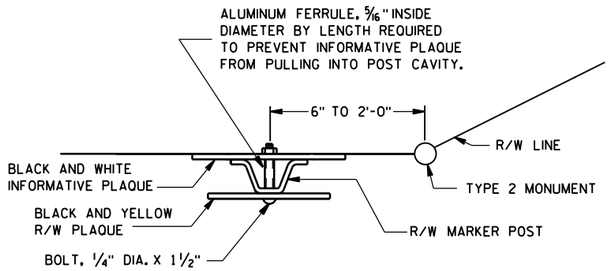
MIDWEST GUARDRAIL SYSTEM (MGS) TYPE 2 TERMINAL

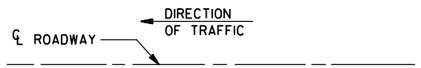
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June 2014
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS ENGINEER
FHWA

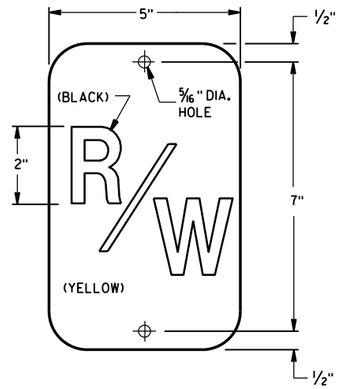
6

S.D.D. 14 B 47-2c



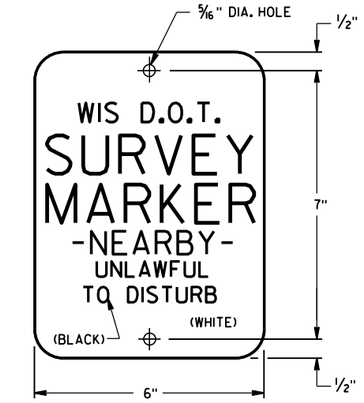


PLAN VIEW



R/W PLAQUE

THE RIGHT-OF-WAY PLAQUE AND INFORMATIVE PLAQUE WILL BE FURNISHED BY THE WISCONSIN DEPARTMENT OF TRANSPORTATION.



INFORMATIVE PLAQUE

GENERAL NOTES

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

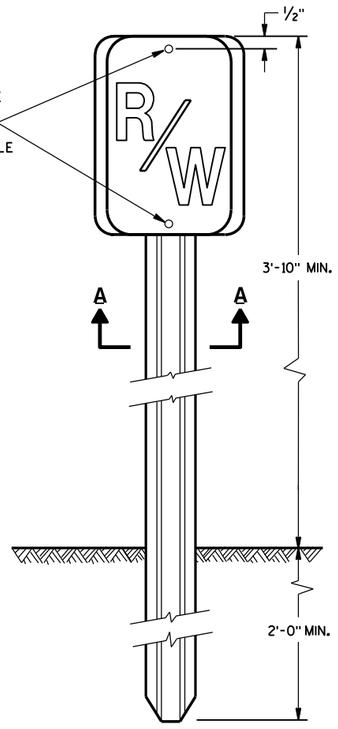
A STEEL MARKER POST FOR RIGHT-OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY, WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

THE "R/W" PLAQUE SHALL FACE THE ROADWAY AND THE INFORMATIVE PLAQUE SHALL FACE AWAY FROM THE ROADWAY. R/W AND INFORMATIVE PLAQUES WILL BE FURNISHED BY THE DEPARTMENT OF TRANSPORTATION.

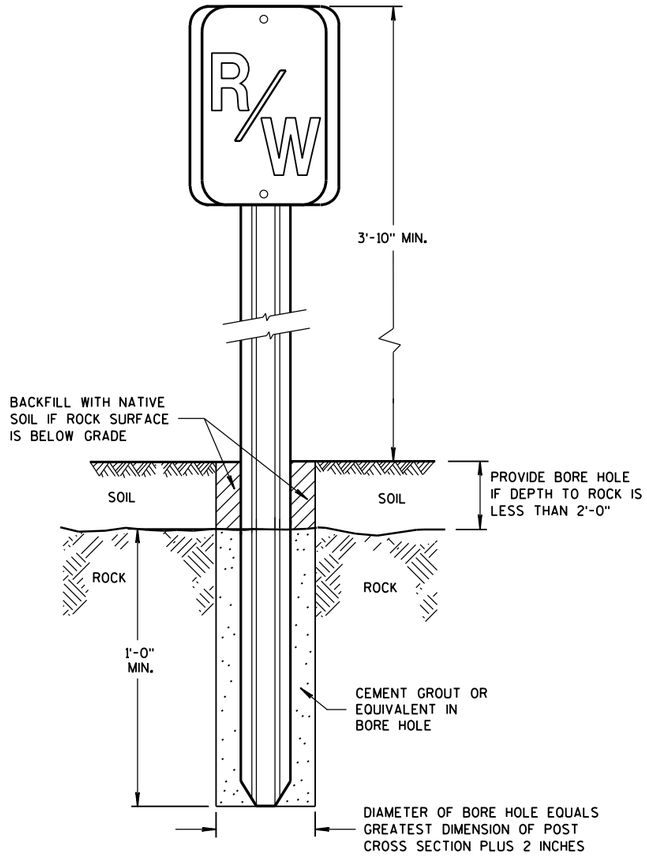
STEEL MARKER POSTS SHALL MEET THE MINIMUM MATERIAL REQUIREMENTS FOR STEEL DELINEATOR POSTS; EXCEPT POSTS PAINTED WITH FEDERAL YELLOW ENAMEL NEED NOT BE ZINC COATED.

(1) IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK TO A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 3'10" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR.

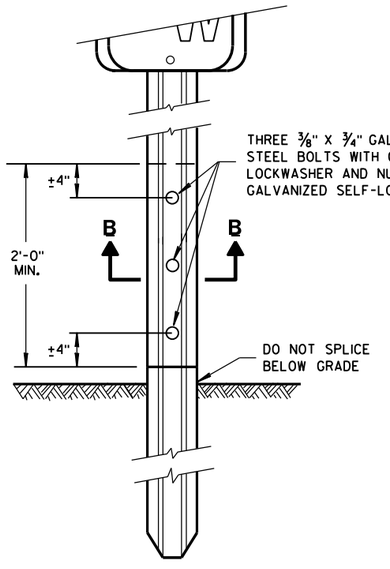
FILL THE BORE HOLE WITH CEMENT GROUT, OR EQUIVALENT. DEPENDING ON THE STABILITY OF THE ROCK.



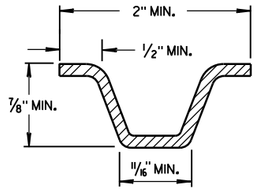
FRONT VIEW
STEEL MARKER POST



FRONT VIEW
ROCK INSTALLATION (1)

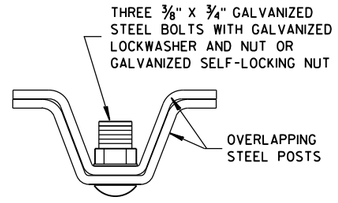


FRONT VIEW
SPLICE DETAIL



MIN. WEIGHT 1.12 LB./FT.

SECTION A-A



SECTION B-B

MARKER POST FOR RIGHT-OF-WAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — DATE
/S/ Ray Kumapayi — CHIEF SURVEYING AND MAPPING ENGINEER
FHWA

6

S.D.D. 15 A 1-12a

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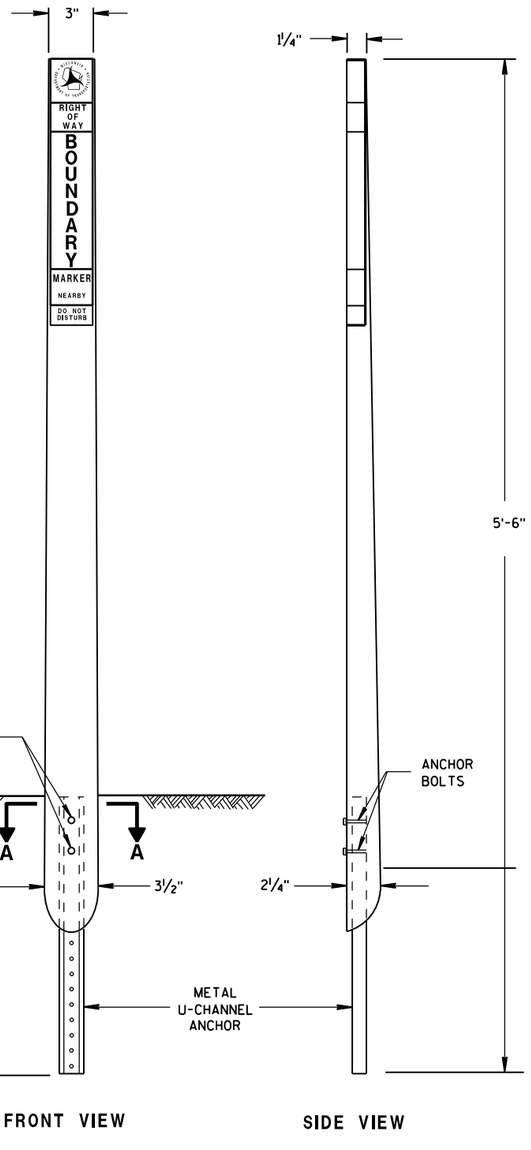
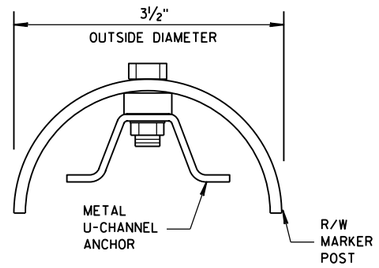
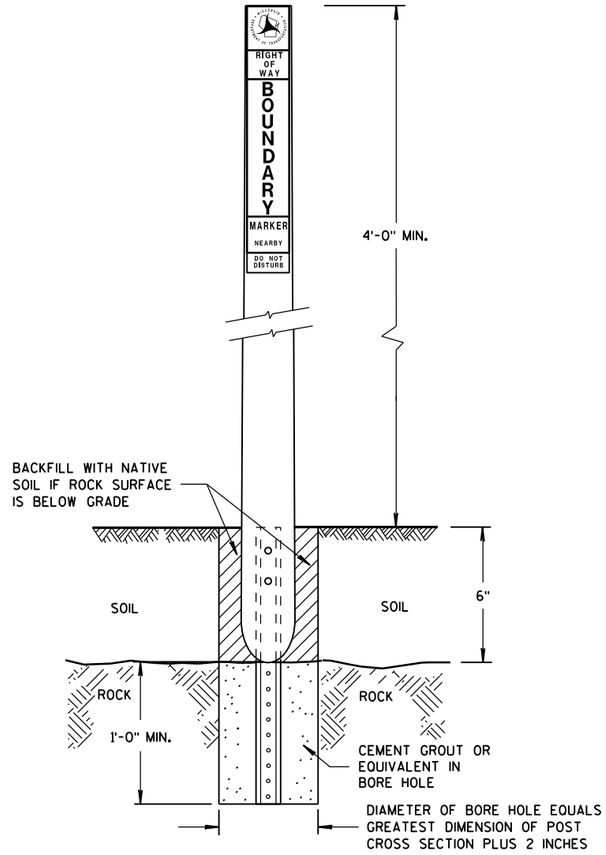
S.D.D. 15 A 1-12a



FLEXIBLE MARKER POST FOR RIGHT-OF-WAY ①

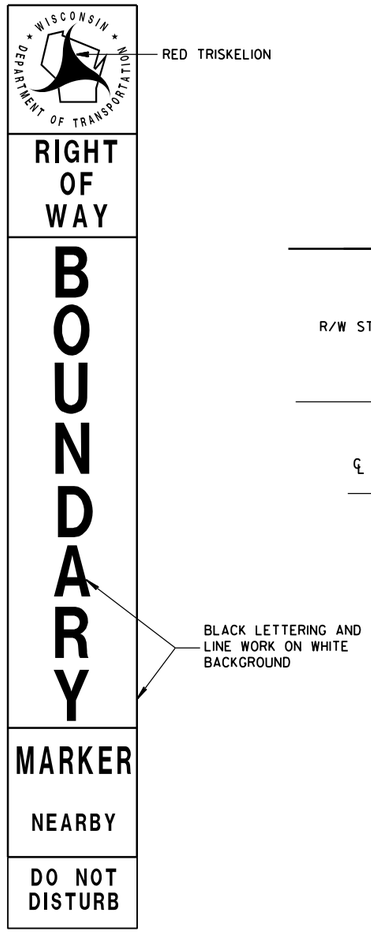


SECTION A-A



FRONT VIEW

ROCK INSTALLATION ①②



RIGHT-OF-WAY STICKER

THE RIGHT-OF-WAY STICKER WILL BE ATTACHED TO THE RIGHT-OF-WAY POST PRIOR TO DELIVERY.

GENERAL NOTES

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

A FLEXIBLE MARKER POST FOR RIGHT-OF-WAY SHALL BE PLACED IN THE RIGHT-OF-WAY, WITH THE BACK OF THE POST ON THE LONGER RIGHT-OF-WAY TANGENT, 6 INCHES TO 24 INCHES FROM EACH TYPE 2 MONUMENT TO SERVE AS A GUARD POST, AND AT OTHER LOCATIONS AS SHOWN ON THE PLANS OR AS DIRECTED BY THE ENGINEER.

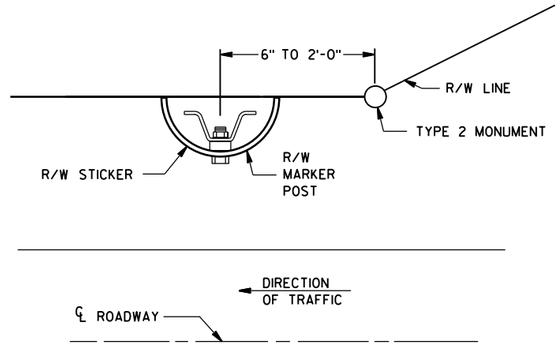
THE RIGHT-OF-WAY STICKER SHALL FACE THE ROADWAY.

INSTALL PER DEPTH OF MANUFACTURER'S RECOMMENDATIONS BUT NOT LESS THAN 18 INCHES BELOW GRADE FROM THE BOTTOM OF THE METAL U-CHANNEL ANCHOR.

① FLEXIBLE MARKER POSTS SHALL BE INCLUDED IN THE APPROVED PRODUCTS LIST FOR MARKER POSTS AND SHALL BE FEDERAL YELLOW IN COLOR.

② IN AREAS OF SOLID ROCK, DRILL A BORE HOLE 2" GREATER THAN THE WIDEST DIMENSION OF THE POST CROSS SECTION INTO THE ROCK TO A MINIMUM DEPTH OF 12 INCHES. CUT OR SPLICE THE POST SO THAT A MINIMUM LENGTH OF 4'-0" PROTRUDES ABOVE THE GROUND. BLOW OUT THE BORE HOLE IN THE ROCK USING COMPRESSED AIR.

FILL THE BORE HOLE WITH CEMENT GROUT, OR EQUIVALENT, DEPENDING ON THE STABILITY OF THE ROCK.



PLAN VIEW

FLEXIBLE MARKER POST FOR RIGHT-OF-WAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
June, 2015 — /S/ Ray Kumapayi
DATE — CHIEF SURVEYING AND MAPPING ENGINEER
FHWA

6

S.D.D. 15 A 1-12b

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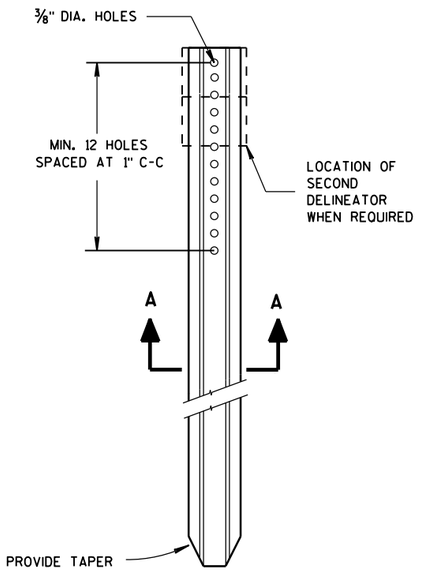
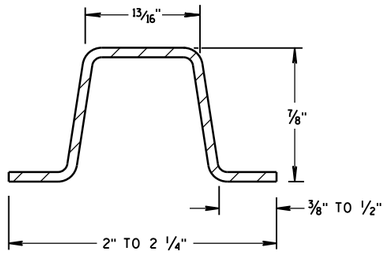
S.D.D. 15 A 1-12b

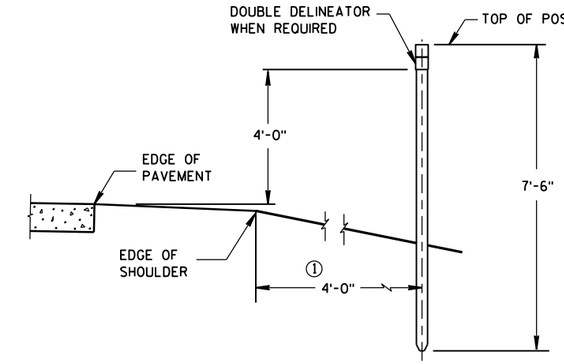


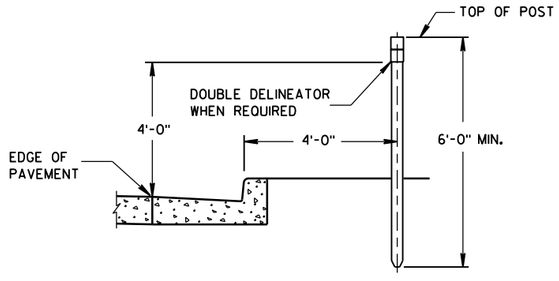
DELINEATOR POST



SECTION A-A

WEIGHT 1.12 LBS PER FT. ± 0.1 LB.



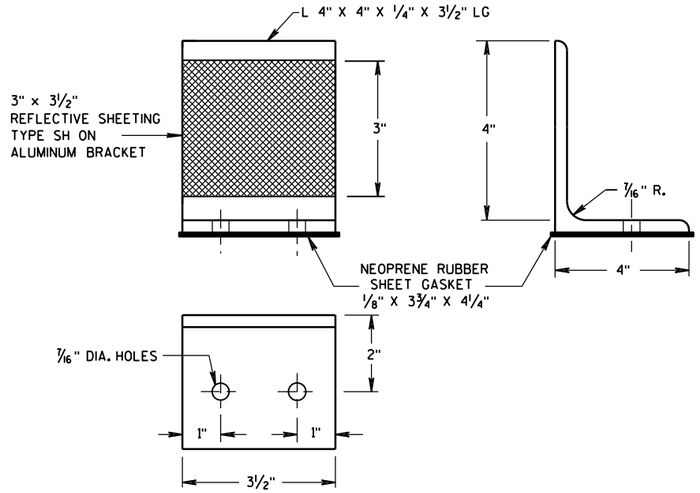


TYPICAL INSTALLATIONS OF DELINEATOR POSTS

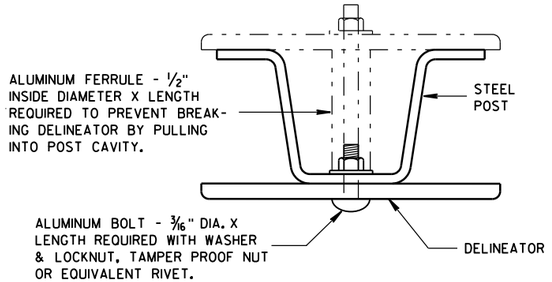
GENERAL NOTES

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

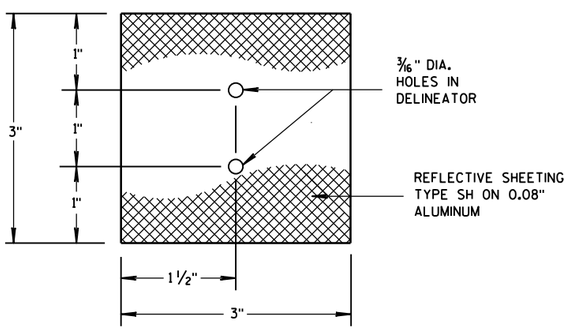
① DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.



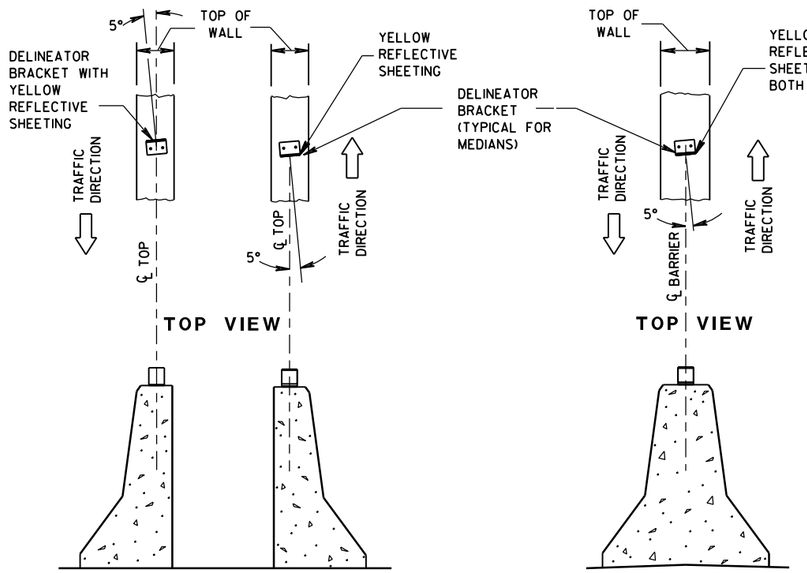
DELINEATOR BRACKET



MOUNTING DETAIL FOR DELINEATOR

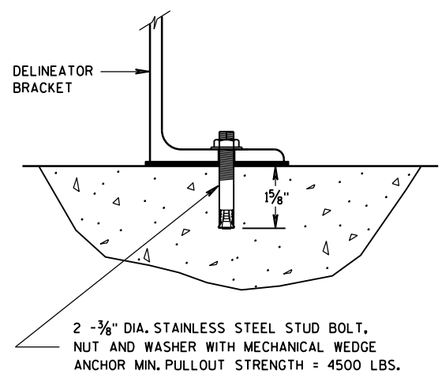


3"x 3" DELINEATOR



DOUBLE BARRIERS IN MEDIAN | MEDIAN BARRIER | BARRIER LOCATED TO RT. OF TRAFFIC FLOW

LOCATION AND AIMING DETAILS FOR DELINEATOR BRACKETS MOUNTED ON CONCRETE BARRIERS



DELINEATOR BRACKET MOUNTING DETAIL

DELINEATOR POST, DELINEATOR, AND DELINEATOR BRACKET WITH REFLECTIVE SHEETING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
7/2013 — DATE
/S/ Travis Feltes — STATE TRAFFIC E
FHWA

406

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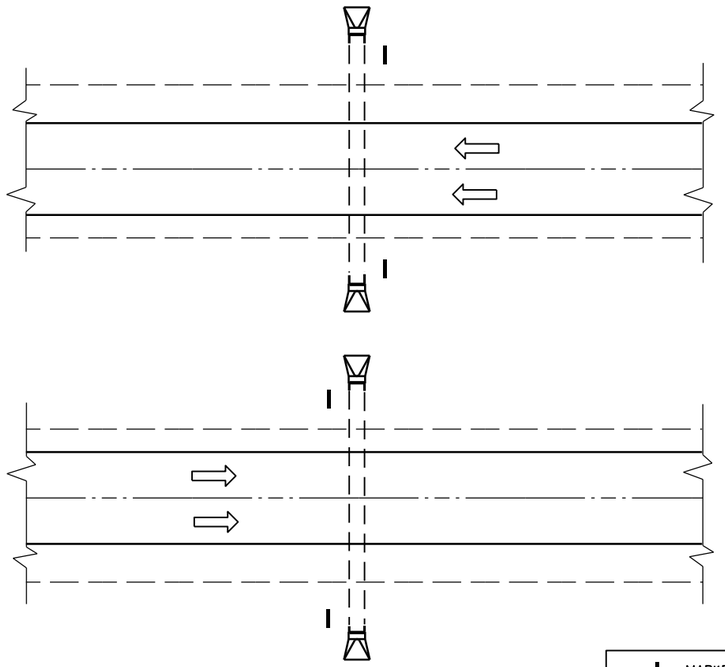
S.D.D. 15 A 2-8

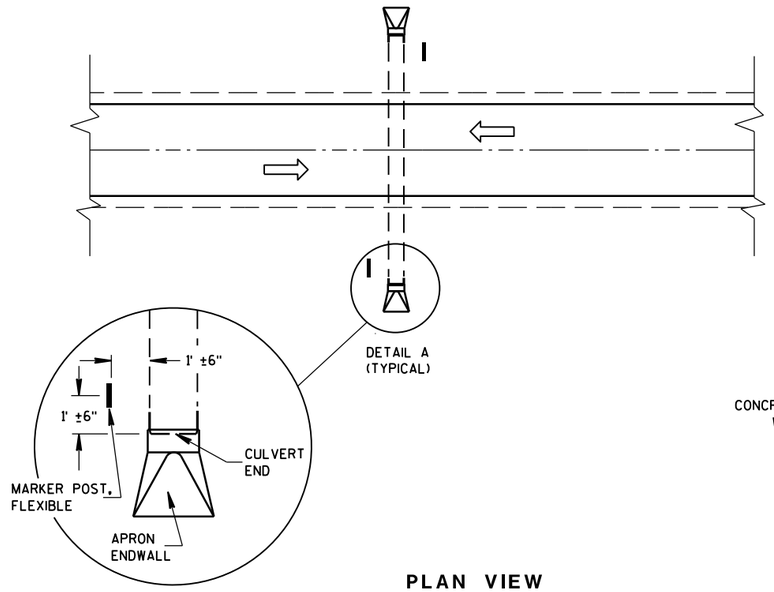
6

S.D.D. 15 A 2-8



PLAN VIEW

DIVIDED HIGHWAY



DETAIL A
(TYPICAL)

PLAN VIEW

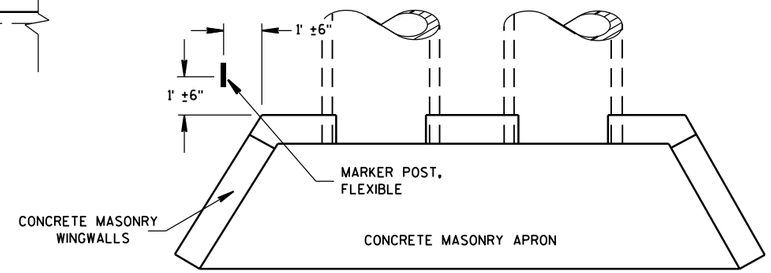
UNDIVIDED HIGHWAY

MARKER POST, FLEXIBLE

DIRECTION OF TRAFFIC FLOW

GENERAL NOTES

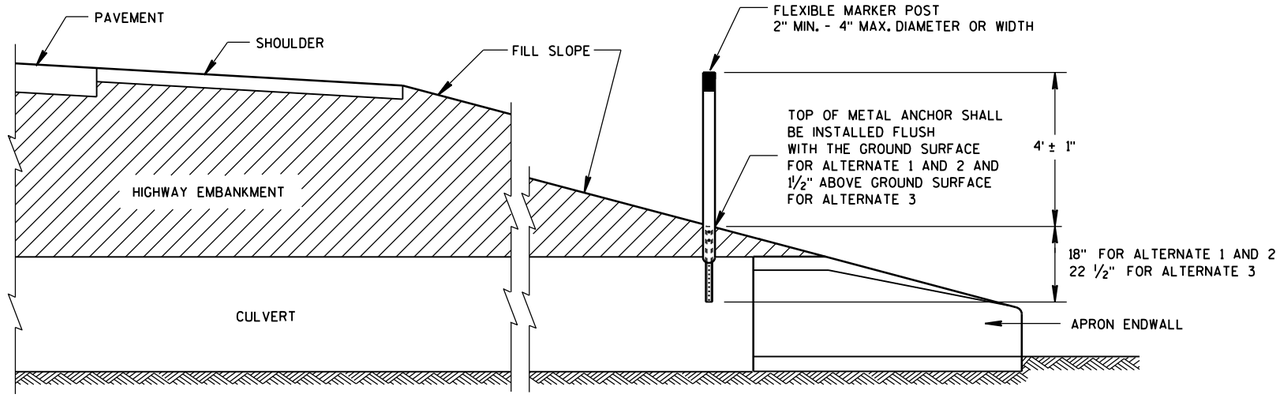
DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.



PLAN VIEW

CONCRETE MASONRY ENDWALLS FOR CULVERT PIPE AND PIPE ARCH

FLEXIBLE MARKER POST LOCATION



CROSS SECTION

FLEXIBLE MARKER POST

FLEXIBLE MARKER POST FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 A 3-2a

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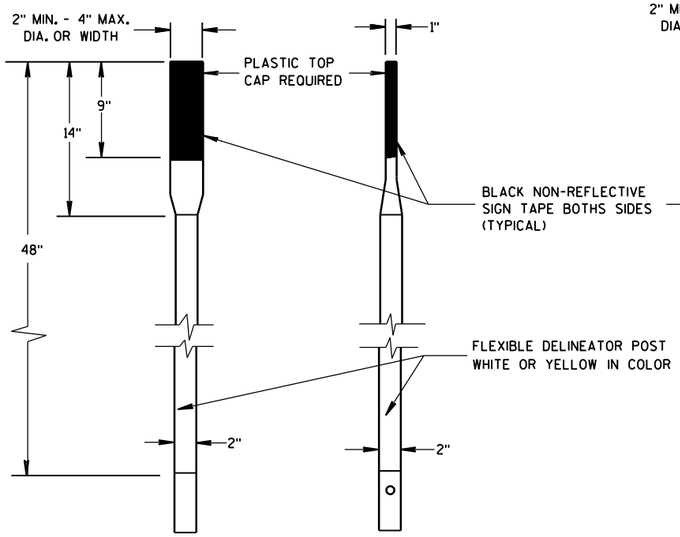
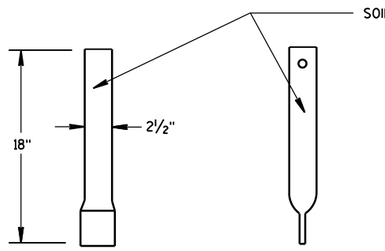
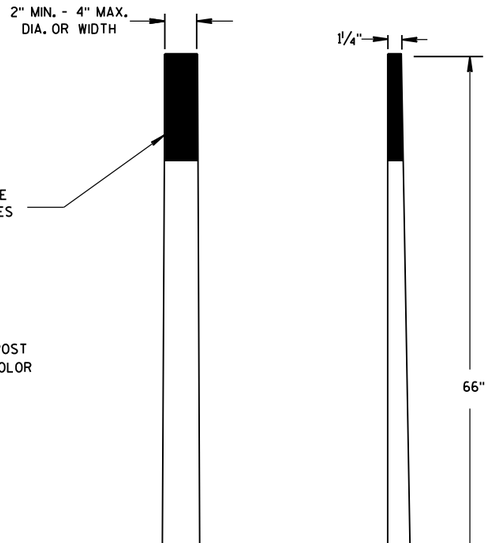
S.D.D. 15 A 3-2a





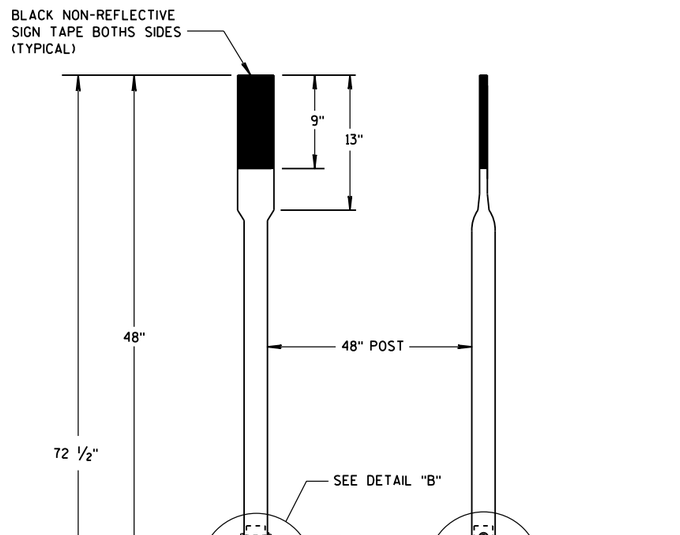
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

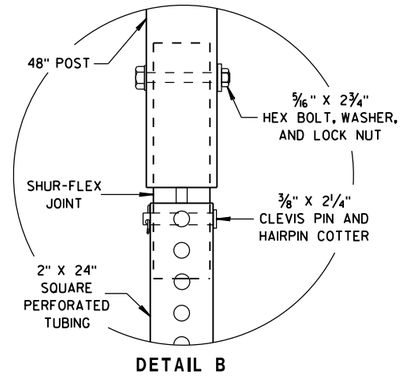
ALTERNATE 2



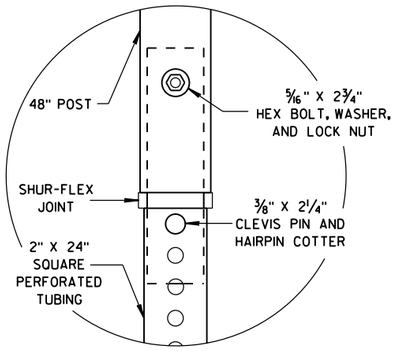
FRONT VIEW SIDE VIEW

ALTERNATE 3

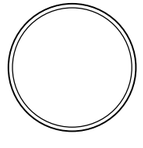
FLEXIBLE MARKER POSTS



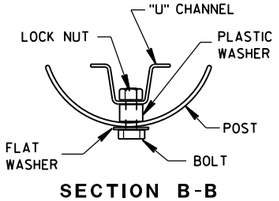
DETAIL B



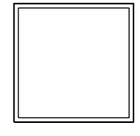
DETAIL C



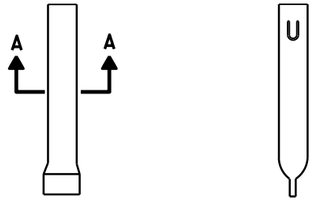
SECTION A-A



SECTION B-B

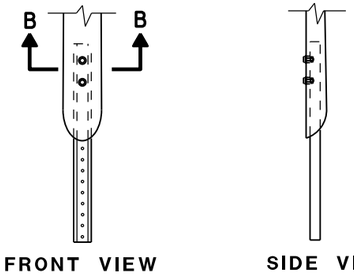


SECTION C-C



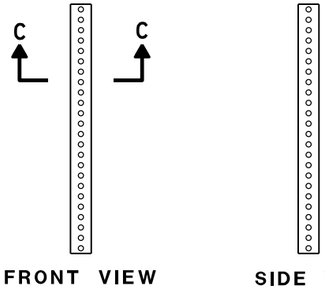
FRONT VIEW SIDE VIEW

ALTERNATE 1



FRONT VIEW SIDE VIEW

ALTERNATE 2



FRONT VIEW SIDE VIEW

ALTERNATE 3

FLEXIBLE MARKER POST ANCHORS

FLEXIBLE MARKER POST
FOR CULVERT END

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

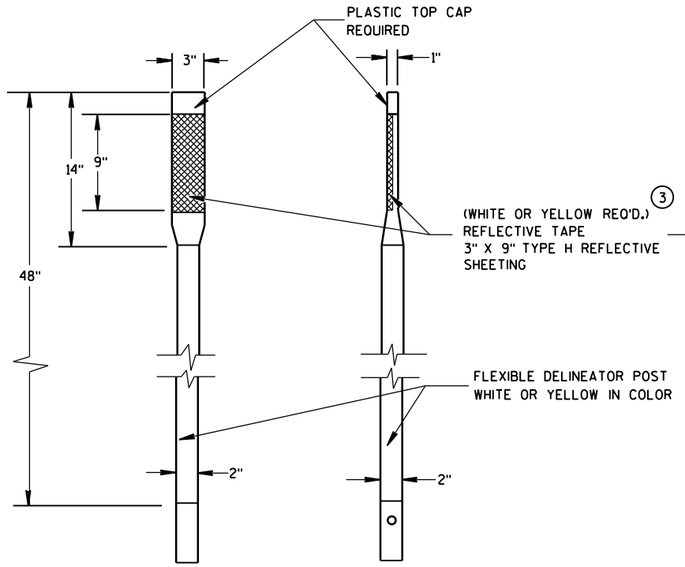
APPROVED
10/1/2012
DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
408
IGN
FHWA

6

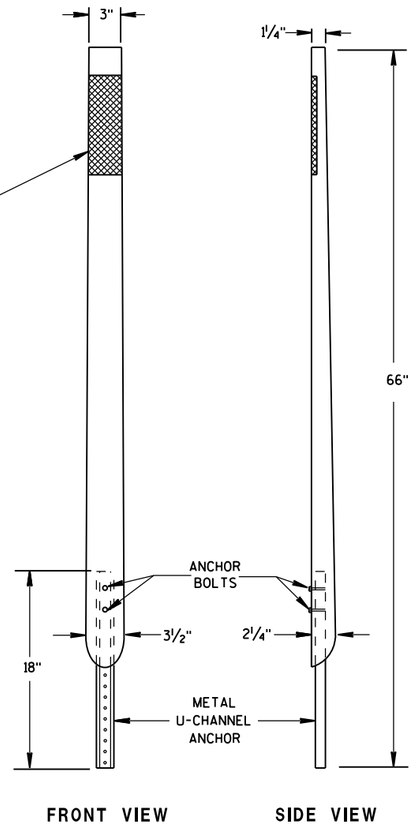
S.D.D. 15 A 3-2b

6

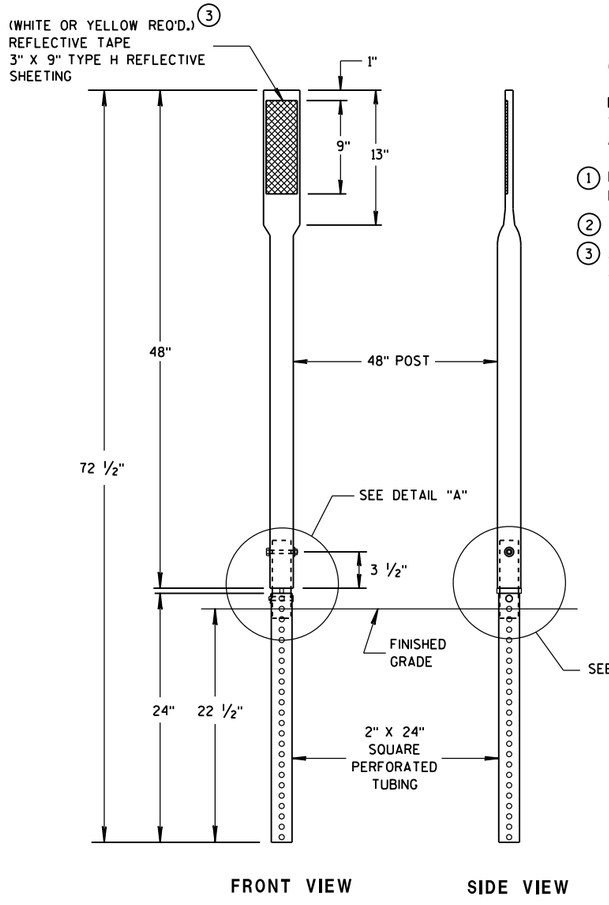
S.D.D. 15 A 3-2b



ALTERNATE 1



ALTERNATE 2



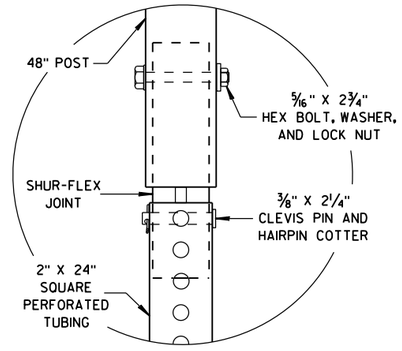
ALTERNATE 3

FLEXIBLE DELINEATOR POSTS

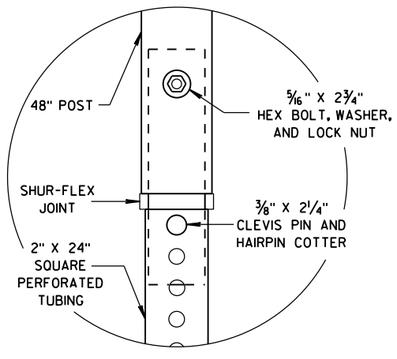
GENERAL NOTES

DETAILS OF CONSTRUCTION NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDATRD SPECIFICATIONS AND THE APPLICABLE SPECIAL PROVISIONS.

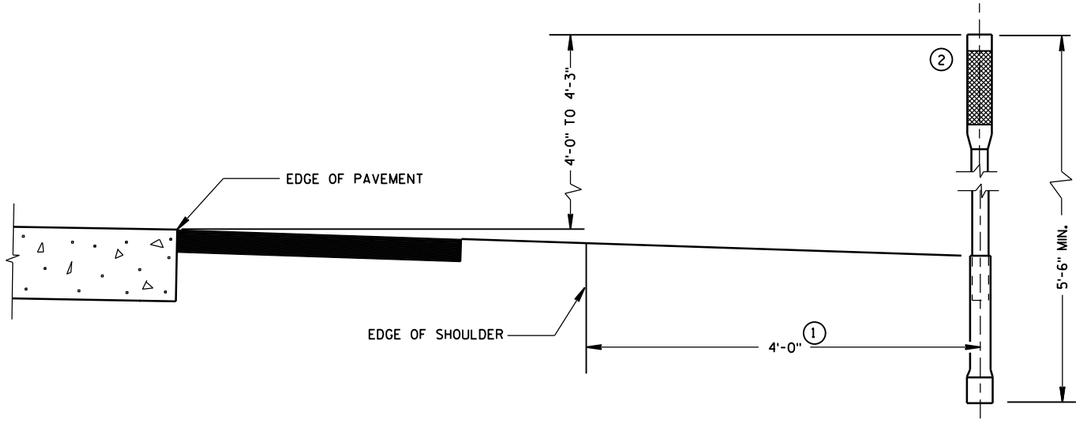
1. DELINEATORS SHALL BE PLACED AT A CONSTANT DISTANCE FROM THE EDGE OF THE SHOULDER FOR THE LENGTH OF THE INSTALLATION.
2. EITHER ALTERNATE NO. 1, NO. 2 OR NO. 3 MAY BE FURNISHED.
3. AS PER SECTION 637.2.2.2. OF THE STANDARD SPECIFICATIONS FOR HIGHWAY AND STRUCTURE CONSTRUCTION.

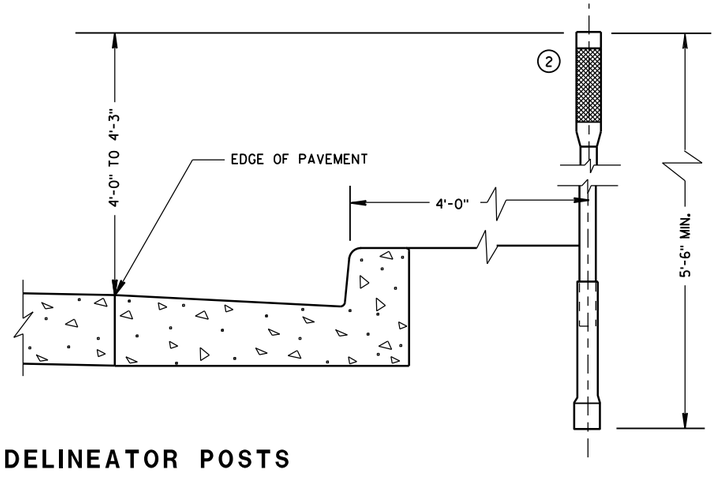


DETAIL A



DETAIL B





TYPICAL INSTALLATIONS OF FLEXIBLE DELINEATOR POSTS

FLEXIBLE DELINEATOR POST

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
9-26-2012 DATE
/S/ Travis Feltes
STATE TRAFFIC ENGINEER
FHWA

6

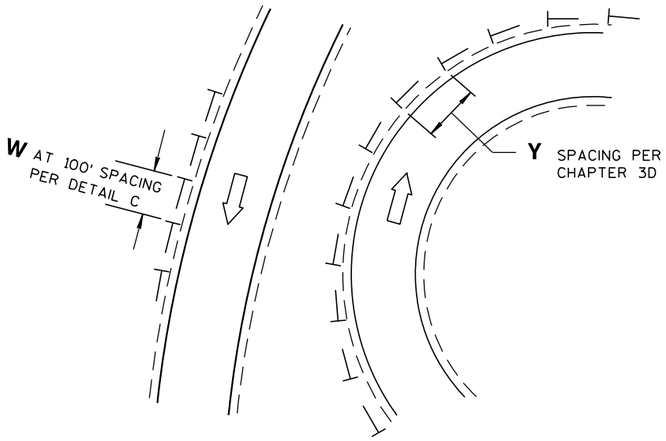
S.D.D. 15 A 4-2

6

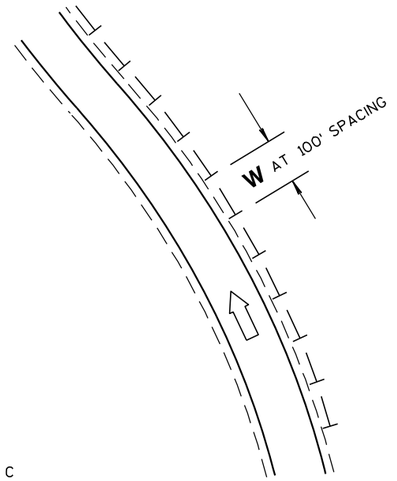
S.D.D. 15 A 4-2

GENERAL NOTES

* USE DOUBLE DELINEATOR ALONG ACCELERATION-DECELERATION LANES AND TAPERS. USE SINGLE DELINEATOR WHEN RAMP PAVEMENT IS FULL WIDTH.



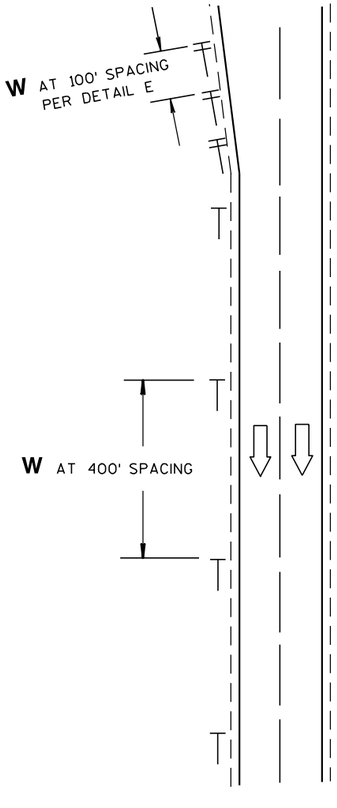
DETAIL A
DELINEATOR LAYOUT AT CURVED RAMP



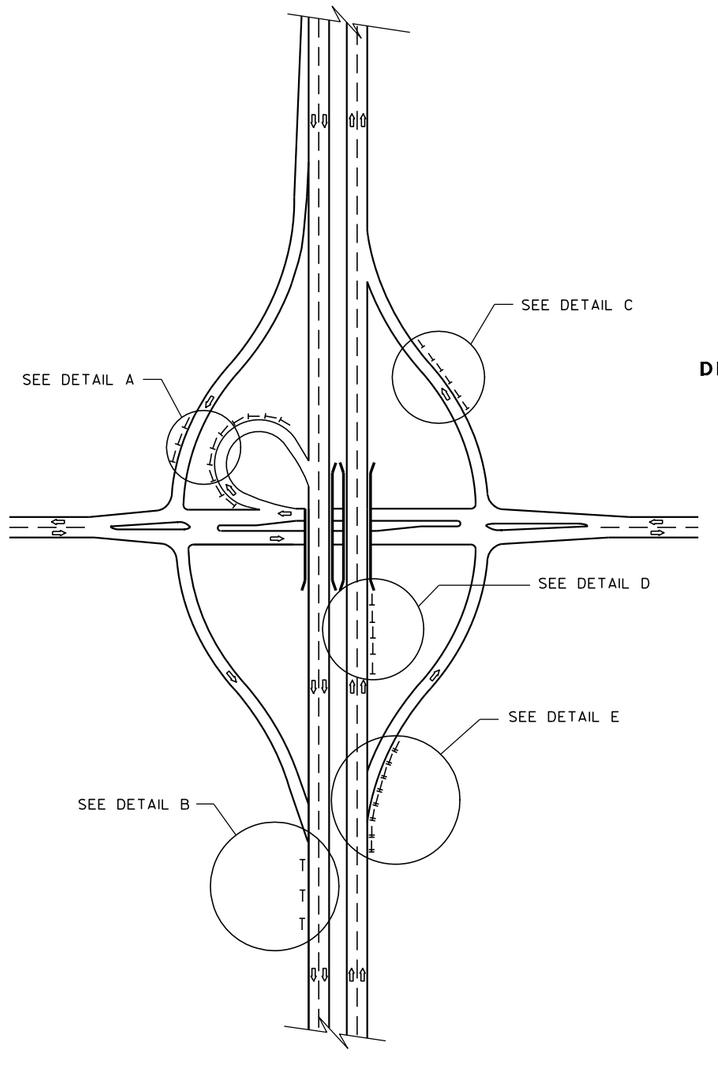
DETAIL C
DELINEATOR LAYOUT ALONG RAMP

LEGEND

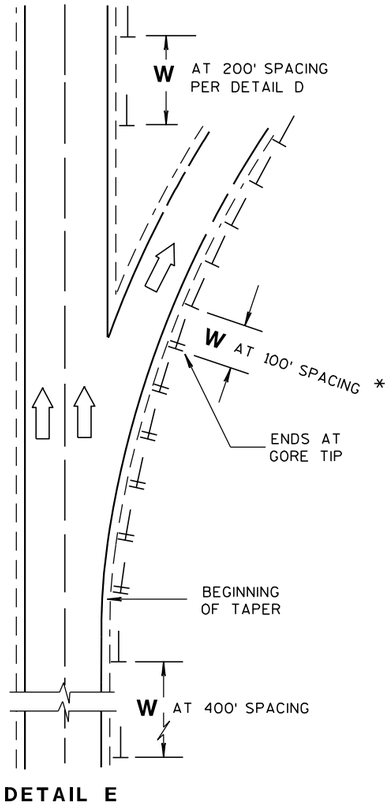
- DIRECTION OF TRAFFIC FLOW
- SINGLE DELINEATOR
- DOUBLE DELINEATOR
- W — WHITE
- Y — YELLOW



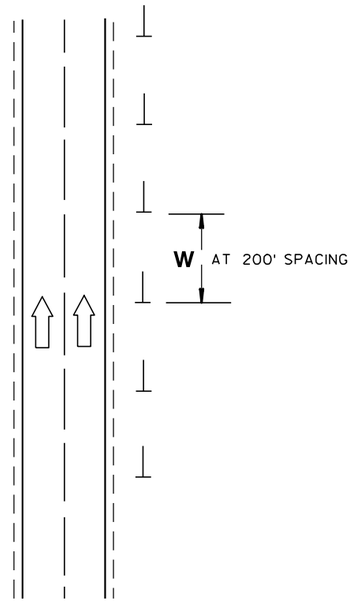
DETAIL B
DELINEATOR LAYOUT ALONG MAINLINE



DELINEATOR LAYOUT



DETAIL E
DELINEATOR LAYOUT FOR ACCELERATION - DECELERATION LANES AND TAPERS AT RAMPS



DETAIL D
DELINEATOR LAYOUT BETWEEN INTERCHANGE RAMPS

DELINEATOR LAYOUT

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
2/5/09 DATE
/S/ Thomas N. Nothnagel
STATE TRAFFIC ENGINEER

FHWA

6

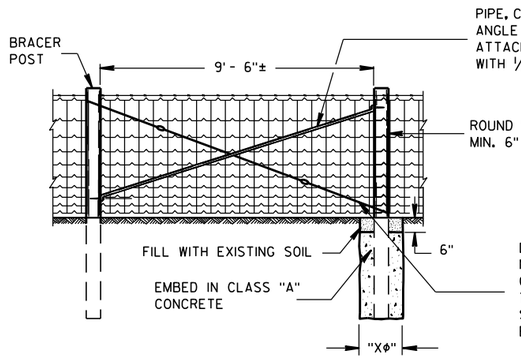
S.D.D. 15 A 6-2

6

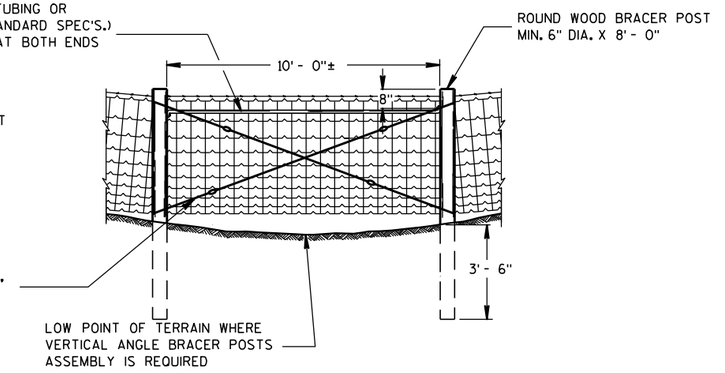
S.D.D. 15 A 6-2

NOTE: PULL OR STRETCHER POST ASSEMBLIES SHALL BE PLACED MIDWAY BETWEEN END POSTS AND CORNER POSTS WHERE A RUN OF FENCE EXCEEDS 660' BUT IS LESS THAN 1,320'. FOR RUNS OF FENCE IN EXCESS OF 1,320' MAXIMUM SPACING OF PULL OR STRETCHER POST ASSEMBLIES SHALL BE 660'± C-C.

ILLUSTRATION SHOWS POSITION OF STANDARD STEEL BRACE, DOUBLE STRAND GALVANIZED WIRE, AND THE POST TO BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM LEFT TO RIGHT. THE BRACES SHALL BE POSITIONED ON THE OPPOSITE DIAGONALS AND THE OPPOSITE POST SHALL BE EMBEDDED IN CONCRETE WHEN WIRE FENCE IS INSTALLED FROM RIGHT TO LEFT.



PULL OR STRETCHER POSTS ASSEMBLY



VERTICAL ANGLE BRACER POSTS ASSEMBLY

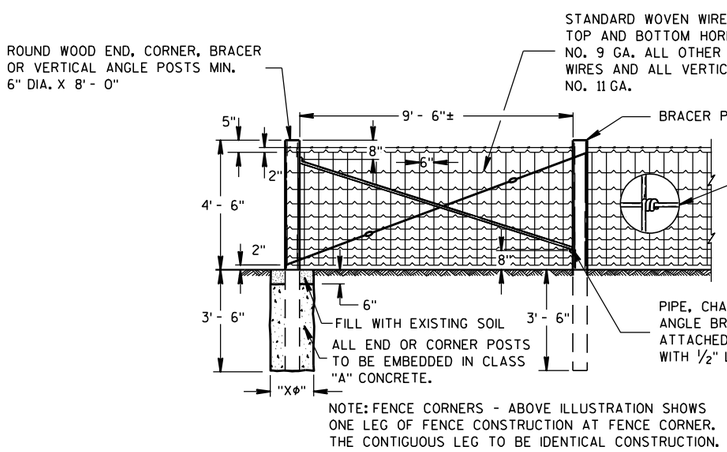
GENERAL NOTES

"XΦ" = DIAMETER OF THE POST PLUS 12".

FENCE STAPLES SHOULD NEVER BE DRIVEN VERTICALLY INTO WOOD POSTS (WITH BOTH LEGS PARALLEL WITH THE WOOD GRAIN). DOING SO CAN SEPARATE THE GRAIN AND SIGNIFICANTLY REDUCE THE HOLDING POWER. ROTATING THE STAPLES SLIGHTLY OFF VERTICAL STRADDLES THE GRAIN AND PROVIDES MORE RESISTANCE TO PULL-OUT.

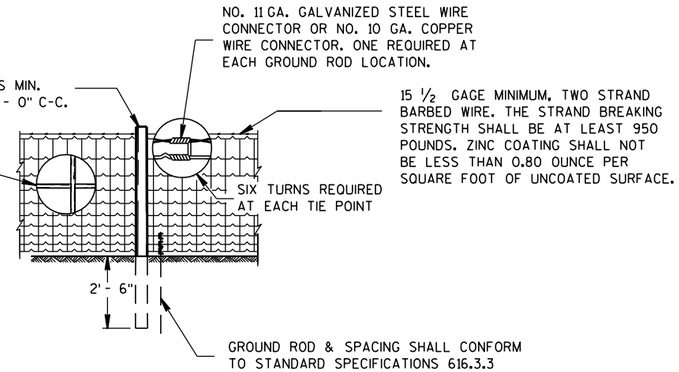
DO NOT STAPLE WIRE TIGHT TO THE LINE POSTS. ALLOW MOVEMENT OF WIRE FOR EXPANSION AND CONTRACTION. STAPLE ARRANGEMENT SHALL BE THE SAME FOR ALL OTHER POSTS EXCEPT THAT THEY SHALL BE DRIVEN TIGHT TO POSTS. ALL STAPLES SHALL BE 2" X 9 GAGE AND SHALL BE MANUFACTURED FROM GALVANIZED WIRE OR HOT DIP GALVANIZED AFTER FORMING. STAPLES SHALL HAVE SLASH-CUT POINTS.

FENCE SHALL BE LOCATED 3'-0" INSIDE THE RIGHT OF WAY LINE UNLESS OTHERWISE INDICATED ON THE PLANS.



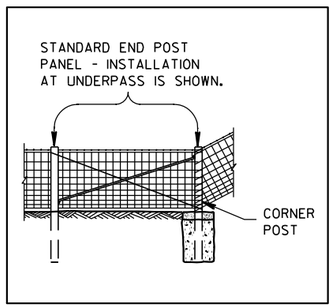
NOTE: FENCE CORNERS - ABOVE ILLUSTRATION SHOWS ONE LEG OF FENCE CONSTRUCTION AT FENCE CORNER. THE CONTIGUOUS LEG TO BE IDENTICAL CONSTRUCTION.

END OR CORNER POSTS ASSEMBLY

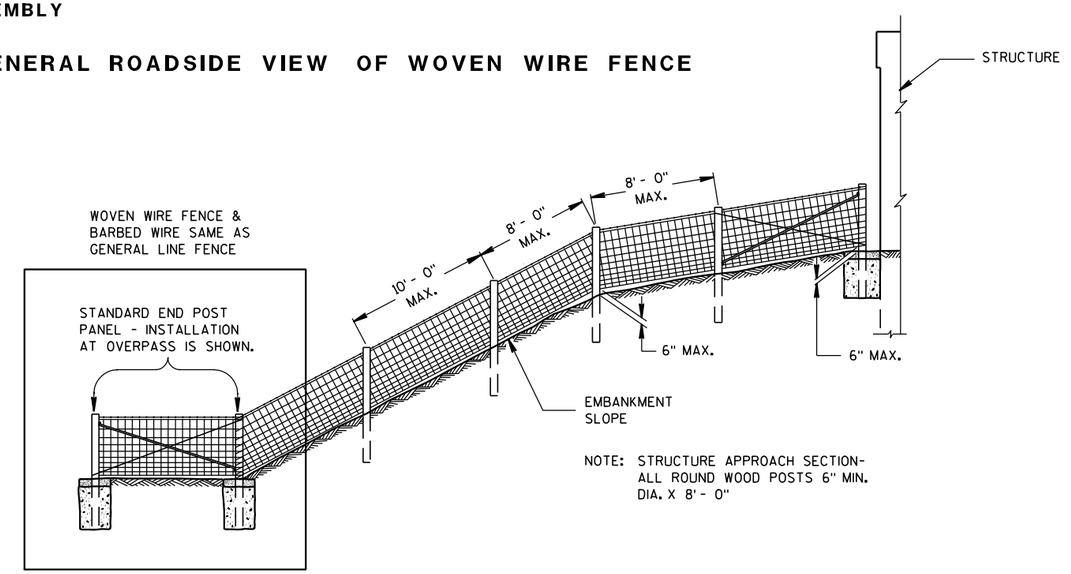


LINE FENCE CONSTRUCTION

GENERAL ROADSIDE VIEW OF WOVEN WIRE FENCE



ALTERNATE FENCE DESIGN AT STRUCTURE



NOTE: STRUCTURE APPROACH SECTION- ALL ROUND WOOD POSTS 6" MIN. DIA. X 8' - 0"

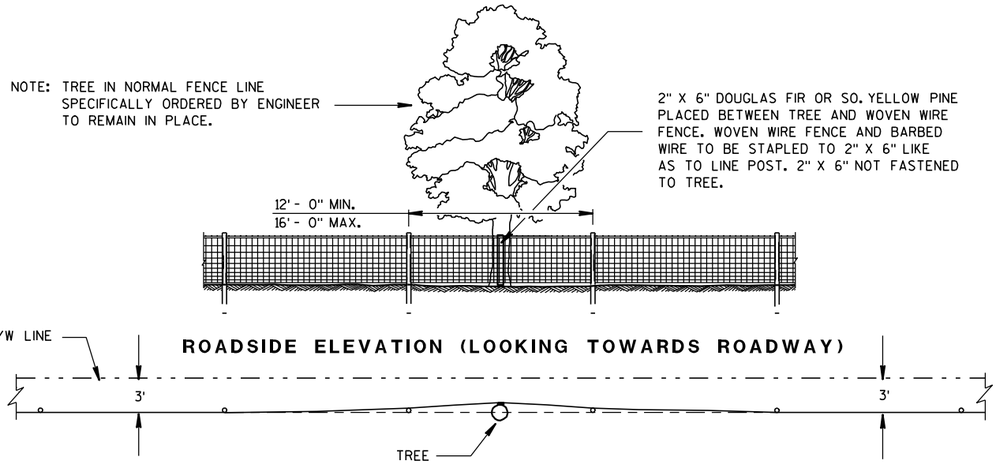
FENCE DESIGN AT STRUCTURE APPROACH

FENCE WOVEN WIRE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

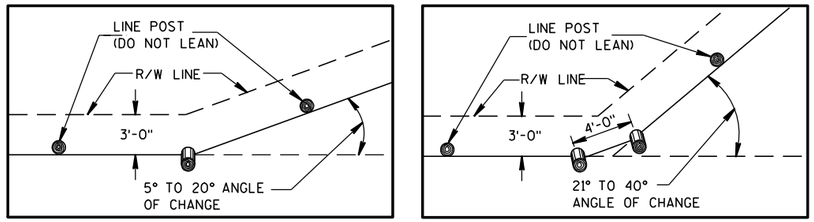
6

S.D.D. 15 B 1-8a



PLAN VIEW

FENCE DESIGN AT TREES REMAINING IN NORMAL FENCE LINE



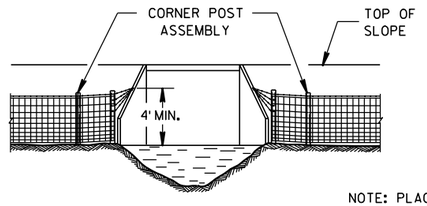
PLAN VIEW
SINGLE POST CORNER

PLAN VIEW
DOUBLE POST CORNER

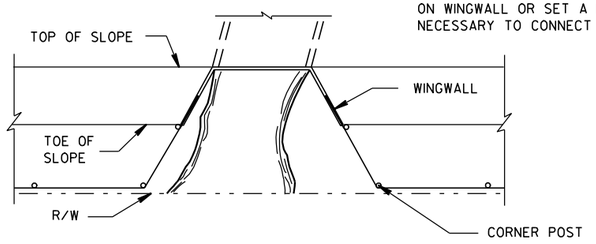
RIGHT OF WAY LINE CHANGE 40° AND LESS

NOTE: SINGLE AND DOUBLE POSTS SHALL BE A MIN. 6" DIA. X 8'-0" WITH A LEAN OF 4" TOWARD THE OUTSIDE OF THE CURVE.

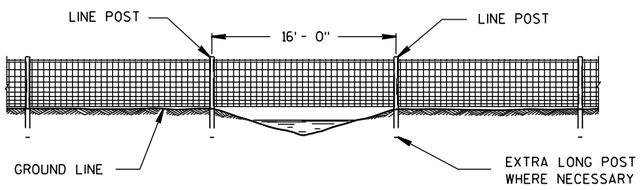
WHEN THE RIGHT OF WAY LINE CHANGE IS MORE THAN 40° USE THE CORNER OR STRETCHER POSTS ASSEMBLY.



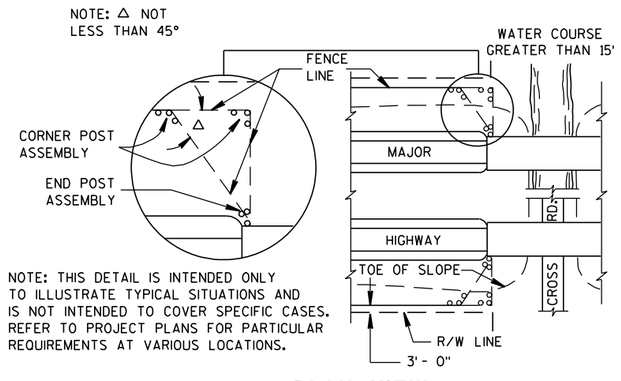
NOTE: PLACE A MINIMUM OF 4 STRANDS OF BARBED WIRE, 6" MAXIMUM CENTERS IN FAN SHAPE CONNECTED TO AN EYE BOLT ON WINGWALL OR SET A LONE POST WHEN NECESSARY TO CONNECT BARBED WIRE.



FENCE INSTALLATION TO WINGWALLS

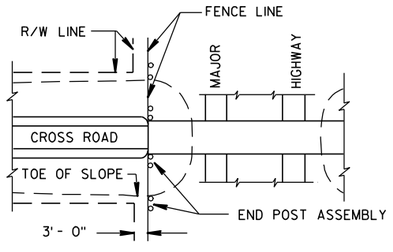


FENCE CONSTRUCTION OVER STREAM COURSES OF 15 FT. OR LESS IN WIDTH



PLAN VIEW

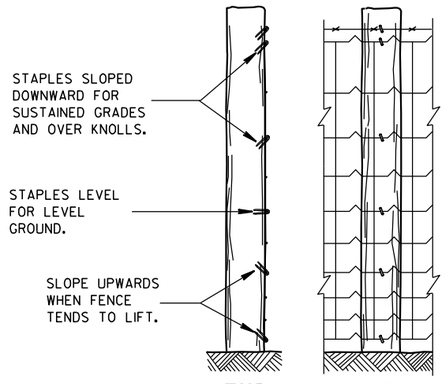
MAJOR HIGHWAY OVERPASS OR STREAM COURSE CROSSING OF GREATER THAN 15 FT. IN WIDTH



PLAN VIEW

MAJOR HIGHWAY UNDERPASS

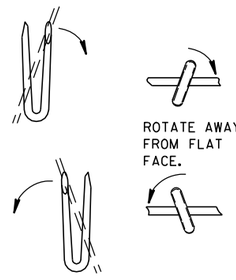
NOTE: WHEN POSTS ARE DRIVEN THE SMALL END SHALL BE DOWN.



END ELEVATION

FARM SIDE ELEVATION

FENCE MOUNTING DETAIL



LINE POST

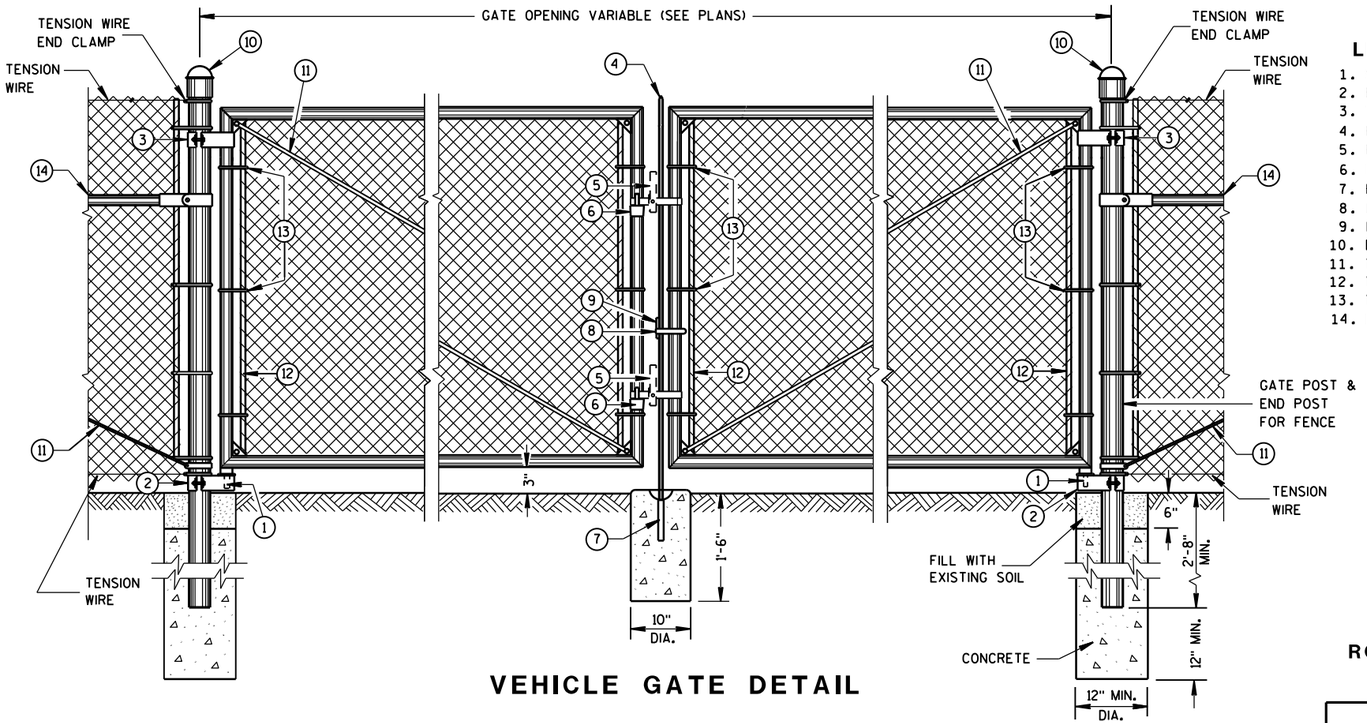
FENCE LOCATION AT STRUCTURES

FENCE WOVEN WIRE

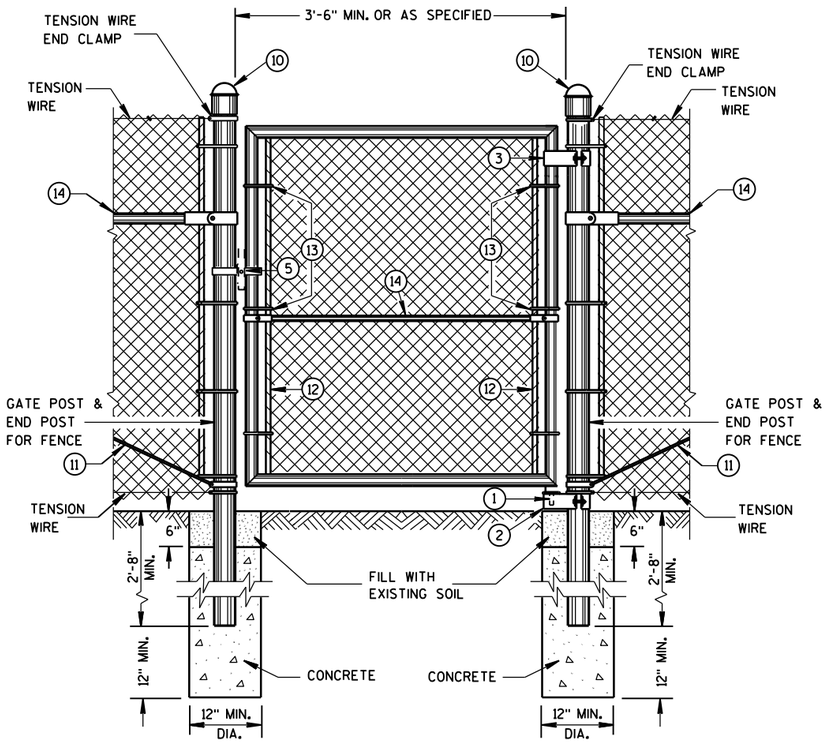
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/4/2008
DATE
/S/ Jerry H. [illegible]
ROADWAY STANDARDS [illegible]412
ENGINEER
FHWA

6
S.D.D. 15 B 1-8b



VEHICLE GATE DETAIL



PEDESTRIAN GATE DETAIL

LEGEND

1. STRAIGHT PLUG
2. BOTTOM HINGE
3. TOP HINGE
4. PLUNGER ROD
5. FULCRUM LATCH
6. FORK CATCH *
7. PLUNGER ROD CATCH
8. LOCK KEEPER GUIDE
9. LOCK KEEPER
10. DOME TOPS
11. TRUSS RODS
12. TENSION BAR
13. TENSION BANDS
14. BRACE RAIL

*NOT REQUIRED ON SINGLE SWING PEDESTRIAN GATE

GENERAL NOTES

FENCE POSTS INSTALLED ON CONCRETE WALLS SHALL BE ANCHORED INTO EMBEDDED METAL SLEEVES OR CORED HOLE BY FILLING THE ANNULAR SPACE WITH PEA GRAVEL FOLLOWED BY AN EPOXY RESIN ADHESIVE. THE EPOXY RESIN ADHESIVE SHALL CONFORM TO THE REQUIREMENTS OF AASHTO M 235, CLASS A, B OR C.

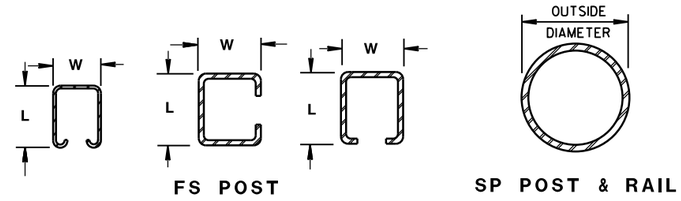
USE FENCE FABRIC KNUCKLED AT BOTH SELVAGES.

FOR LEAF GATES GREATER THAN 8 FEET WIDE, INSTALL INTERIOR VERTICAL BRACE RAIL AT 8 FOOT INTERVALS.

FOR FABRIC HEIGHTS GREATER THAN 8 FEET, INSTALL INTERIOR HORIZONTAL BRACE RAILS TO LEAF GATE.

MAXIMUM SAG FOR OUTER GATE MEMBER SHALL NOT EXCEED THE GREATER OF 1% OF THE LEAF GATE WIDTH OR 2 INCHES.

USE TYPE 2, CLASS 3, MARCELLED/CRIMPED, TENSION WIRE PER ASTM A 817.



FS POST

SP POST & RAIL

CROSS SECTIONS OF POSTS AND RAILS

ROLLED-FORMED STEEL FENCE POST (2.0 OZ./SQ. FT. COATING)

POST TYPE	LENGTH (L) INCH	WIDTH (W) INCH	WEIGHT LBS/FT
FS1	1.625	1.25	1.35
FS2†	1.875	1.625	1.850
FS2	1.875	1.625	2.400
FS3	2.250	1.700	2.780

ROUND STEEL FENCE POST (1.8 OZ./SQ. FT. COATING)

POST TYPE	OUTSIDE DIMENSION INCH	WALL THICKNESS INCH	WEIGHT LBS/FT
SP1	1.660	0.140	2.270
SP2	1.900	0.145	2.720
SP3	2.375	0.154	3.650
SP4	2.875	0.203	5.800
SP5	4.000	0.226	9.120
SP6	6.625	0.280	18.990
SP7	8.625	0.322	28.580

REQUIRED FENCE POST SIZES

USE	FABRIC HEIGHTS FEET	POST TYPE
TERMINAL POSTS **	LESS THAN OR EQUAL TO 6 FT.	SP3
	GREATER THAN OR EQUAL TO 6 FT.	SP4
LINE POSTS	LESS THAN OR EQUAL TO 6 FT.	SP2
	LESS THAN OR EQUAL TO 8 FT.	SP3
	GREATER THAN OR EQUAL TO 8 FT.	SP4
	LESS THAN OR EQUAL TO 8 FT.	FS2 OR FS2†
	GREATER THAN OR EQUAL TO 8 FT.	FS3

REQUIRED POST SIZE FOR GATES

USE	LEAF WIDTHS FEET	POST TYPE
GATES	LESS THAN OR EQUAL TO 6 FT.	SP4
	LESS THAN OR EQUAL TO 13 FT.	SP5
	LESS THAN OR EQUAL TO 18 FT.	SP6
	LESS THAN OR EQUAL TO 23 FT.	SP7

BRACE RAIL TYPES

USE		TYPE
BRACE RAIL		SP1 OR FS1

** INCLUDES END, CORNER, ANGLE, INTERSECTION AND INTERMEDIATE BRACED POSTS

FENCE CHAIN LINK

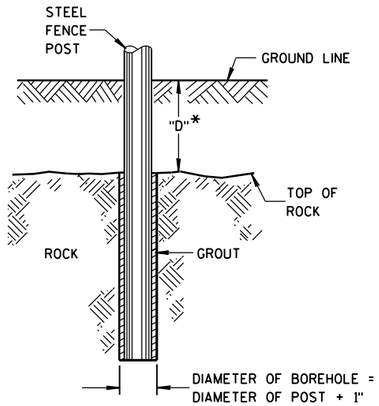
STATE OF WISCONSIN
DEPARTMENT OF TRANSPOI

6

S.D.D. 15 B 3-15a

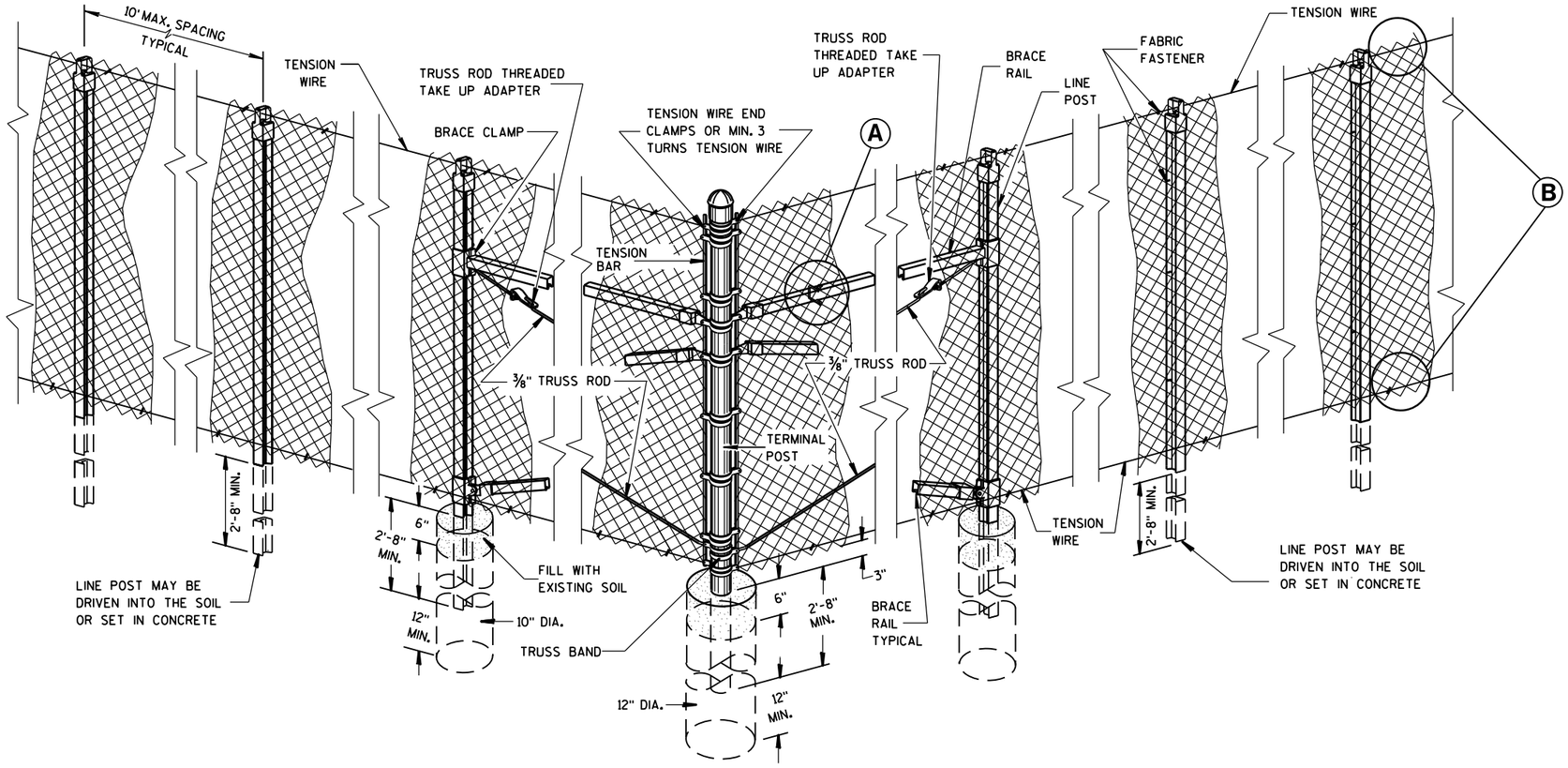
6

S.D.D. 15 B 3-15a

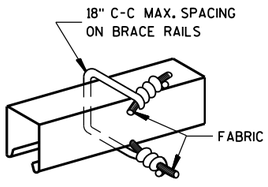


*IF "D" IS LESS THAN 2'-6", DRILL ROCK AND INSTALL GROUT

ROCK INSTALLATION OF LINE POST



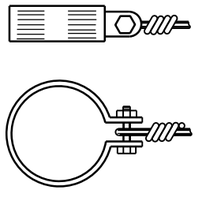
END, CORNER, ANGLE INTERSECTION & INTERMEDIATE BRACED POSTS



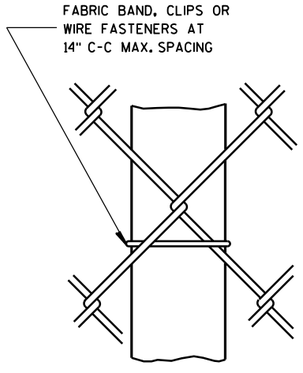
BRACE RAIL

FABRIC FASTENER

Ⓐ



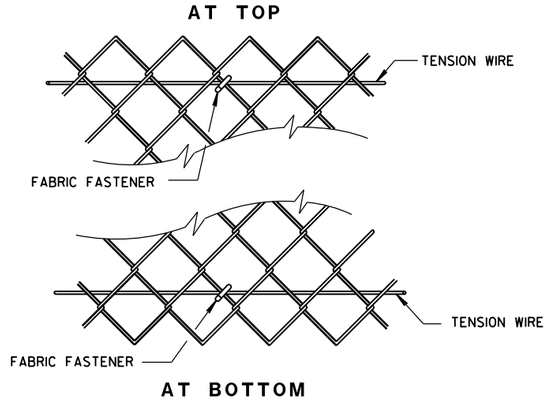
TENSION WIRE END CLAMP



LINE POST

FABRIC FASTENER

AT TOP



AT BOTTOM

SELVAGES

Ⓑ

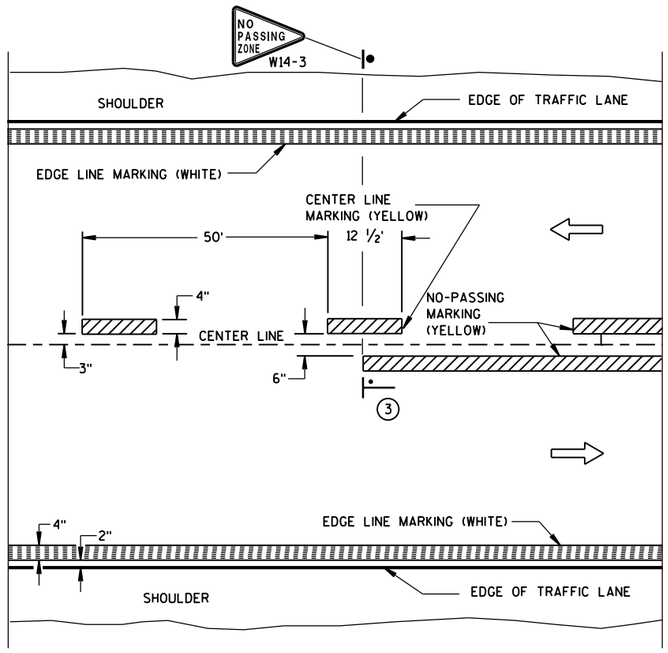
FENCE CHAIN LINK

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

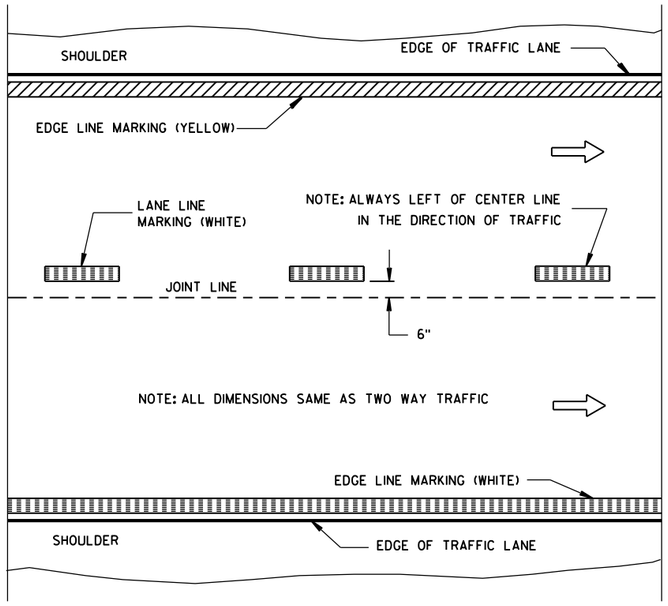
APPROVED
FEB. 2015
DATE
/S/ Jerry H. Zogg
ROADWAY STANDARDS DEVELOPMENT ENGINEER
FHWA

6

S.D.D. 15 B 3-15b

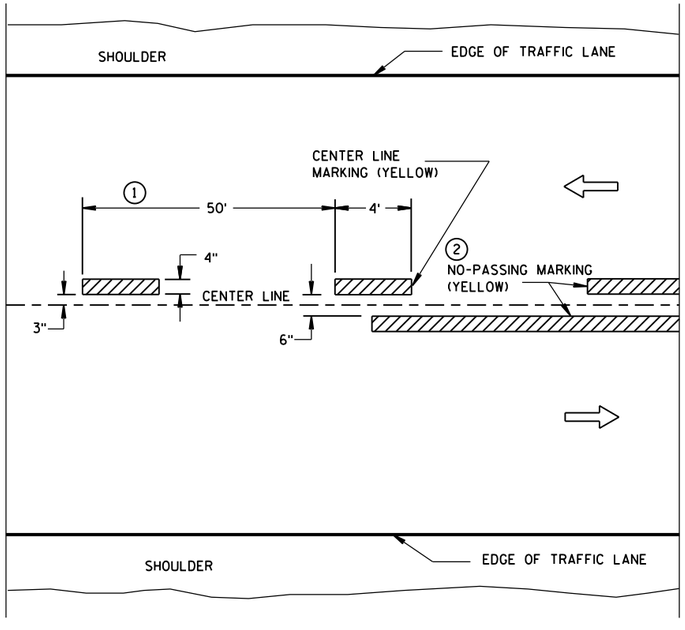


TWO WAY TRAFFIC

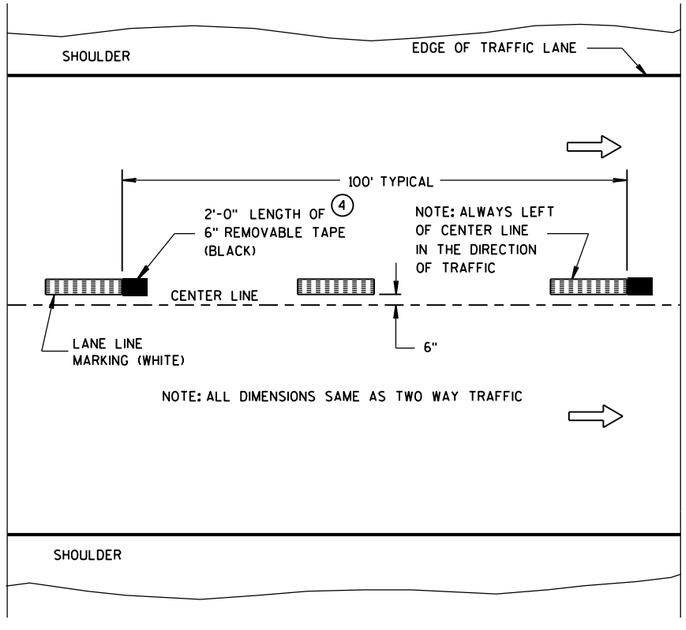


ONE WAY TRAFFIC

PERMANENT PAVEMENT MARKING



TWO WAY TRAFFIC



ONE WAY TRAFFIC

TEMPORARY (INTERMEDIATE) PAVEMENT MARKING

(SHOWS CYCLE FOR TEMPORARY CENTER LINE OR TEMPORARY LANE LINE MARKING)

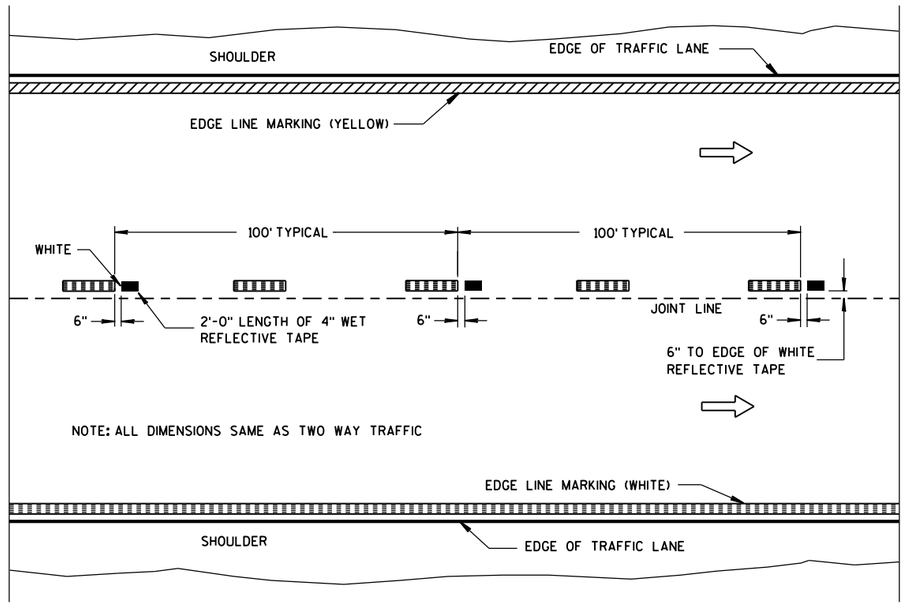
GENERAL NOTES

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

1. HALF CYCLE LENGTHS (25'±) WITH 2' MINIMUM STRIPE LENGTHS SHALL BE PROVIDED ON ROADWAYS (INCLUDING TEMPORARY TRAVELED WAYS) WITH REVERSE CURVATURE, CURVATURE OF OVER 5 DEGREES OR WHEN DIRECTED BY THE ENGINEER TO MARK UNUSUAL ALIGNMENT OF THE TRAVELED WAY.
2. NO PASSING ZONE TEMPORARY PAVEMENT MARKING IS REQUIRED TO BE PLACED, WHERE APPROPRIATE, ALONG WITH CENTERLINE TEMPORARY PAVEMENT MARKING WHEN A SAME DAY PERMANENT PAVEMENT MARKING ITEM IS INCLUDED IN THE CONTRACT.
3. NO PASSING ZONE MARKINGS ARE PLACED ACCORDING TO "T" MARKINGS. IF EXISTING NO PASSING ZONE W14-3 SIGNS ARE BEYOND 50 FEET IN EITHER DIRECTION, THE SIGNS SHALL BE MOVED TO THE "T" MARKINGS.
4. CONCRETE ONLY.

NOTE

ARROW SYMBOL (⇨) SHOWS DIRECTION OF TRAVEL



WET REFLECTIVE TAPE SUPPLEMENT TO
SPRAYED OR NON WET REFLECTIVE TAPE LANE LINE

LEGEND

"T" MARKING

POST MOUNTED SIGN

PAVEMENT MARKING (MAINLINE)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

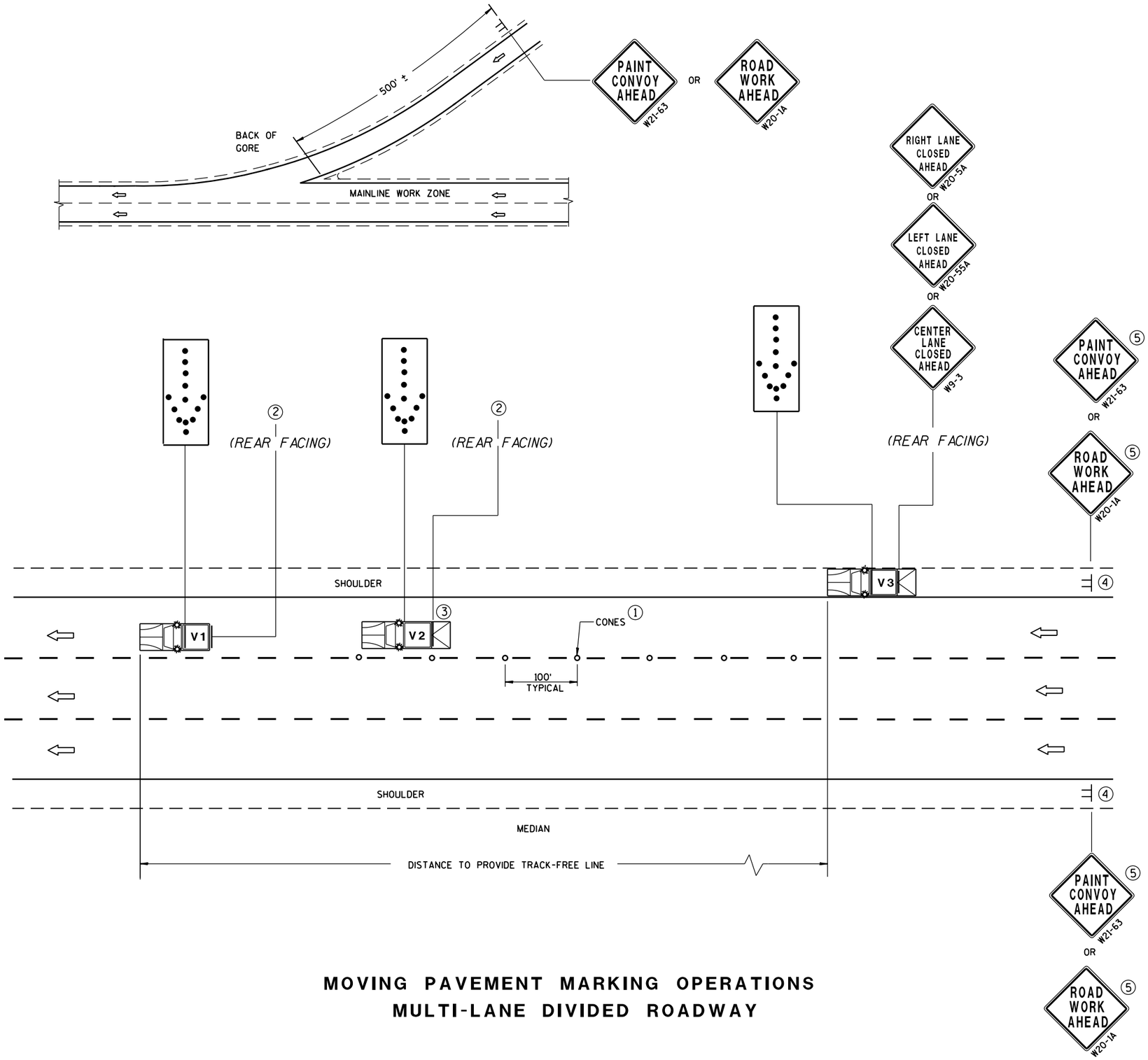
APPROVED
5-13-2013 DATE
/S/ Travis Feltes STATE TRAFFIC E
FHWA

6

S.D.D. 15 C 8-16a

6

S.D.D. 15 C 8-16a



MOVING PAVEMENT MARKING OPERATIONS
MULTI-LANE DIVIDED 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.

ALL VEHICLES SHALL BE EQUIPPED WITH REAR FACING TYPE B OR C FLASHING ARROW PANEL. 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.

WHEN WORK ACTIVITY BLOCKS THE LEFT LANE, REVERSE TRAFFIC CONTROL.

WHEN A RAMP INTERSECTS THE FACILITY ON WHICH THE WORK IS BEING PERFORMED, PROVIDE ADDITIONAL TRAFFIC CONTROLS AS SPECIFIED IN THE CONTRACT OR AS APPROVED BY THE ENGINEER.

USE AN ATTENUATOR ON THE REARMOST VEHICLE THAT BLOCKS ALL OR PART OF THE TRAFFIC LANE.

FOR EDGELINE MARKING OR IF CONES ARE NOT USED, POSITION THE REARMOST SHADOW VEHICLE ON THE SHOULDER AS SHOWN IN THE MUTCD IF THE SHOULDER HAS ADEQUATE WIDTH. USE DOUBLE ARROWS WHEN CONVOY IS IN CENTER LANE ONLY.

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

THIS DRAWING SHALL BE USED FOR EDGELINE OR LANELINE MARKING FOR MULTILANE DIVIDED ROADWAYS.

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 AFTER EVERY ON RAMP OR 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 (MERGE)

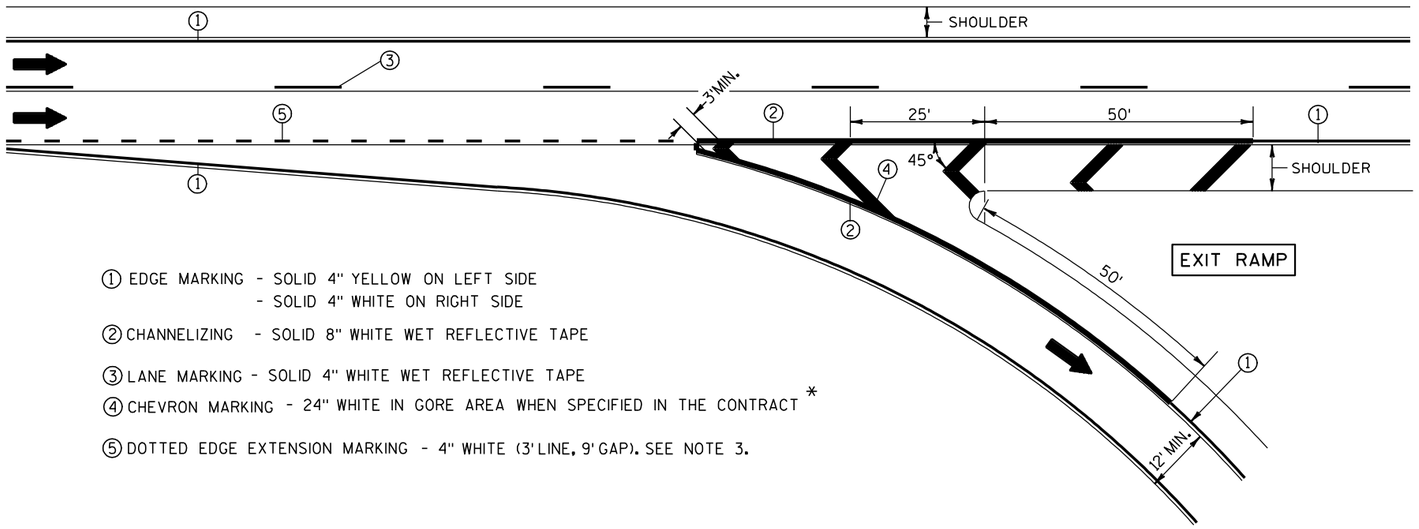
MOVING PAVEMENT MARKING OPERATION
MULTI-LANE DIVIDED ROADWAY

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZON SAFETY ENGINI
FHWA

6 S.D.D. 15 C 19-3c

6 S.D.D. 15 C 19-3c



① EDGE MARKING - SOLID 4" YELLOW ON LEFT SIDE
- SOLID 4" WHITE ON RIGHT SIDE

② CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE

③ LANE MARKING - SOLID 4" WHITE WET REFLECTIVE TAPE

④ CHEVRON MARKING - 24" WHITE IN GORE AREA WHEN SPECIFIED IN THE CONTRACT *

⑤ DOTTED EDGE EXTENSION MARKING - 4" WHITE (3' LINE, 9' GAP). SEE NOTE 3.

NOTES:

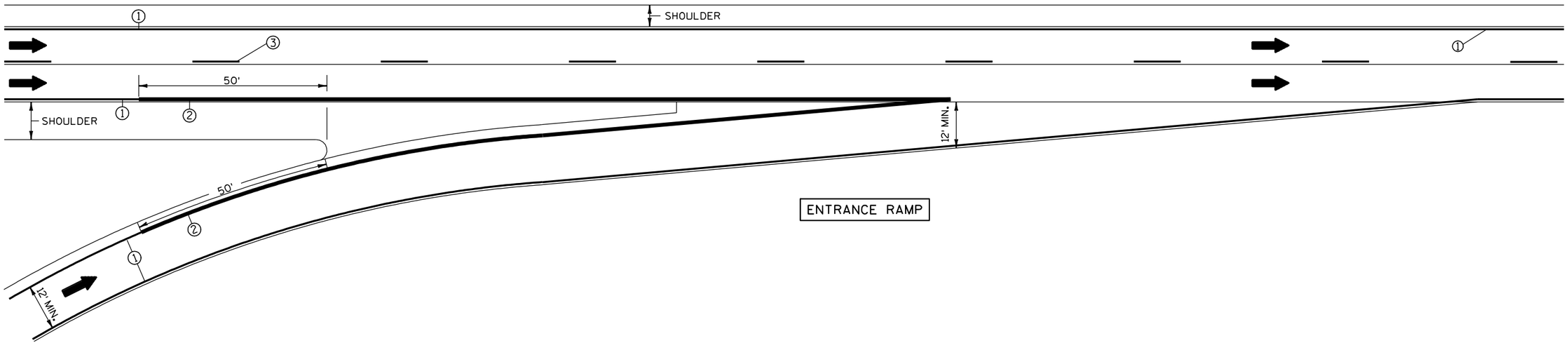
1. ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.

2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.

3. 3' LINE 9' GAP, EXCEPT RETRACE THE EXISTING LINE-GAP PATTERN WHERE EXISTING MARKINGS ARE IN PLACE.

4. RETRACE EXISTING DIAGONAL MARKINGS.

* REFER TO DESIGN NOTES.



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S.D.D. 15 C 31-1a

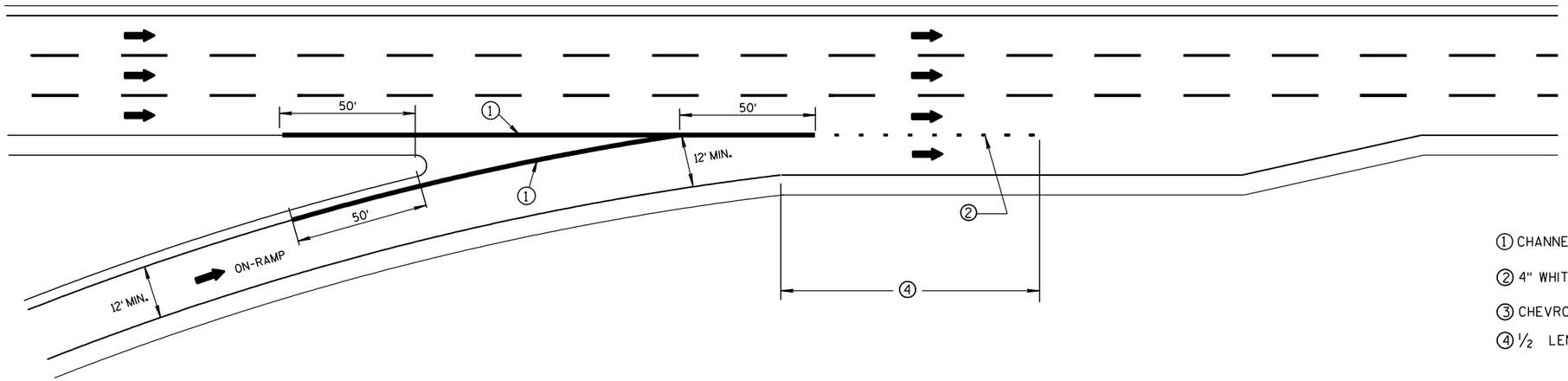
S.D.D. 15 C 31-1a

PAVEMENT MARKING
(RAMPS AND GORES)

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

NOTES:

1. AHEAD ARROWS SHOWN ON THIS MARKING PLAN DESIGNATE TRAFFIC FLOW, AND SHALL NOT BE TAKEN AS PROPOSED PAVEMENT MARKINGS.
2. PLACE WHITE EDGE OF TAPE 6" LEFT FROM JOINT.
3. RETRACE EXISTING DIAGONAL MARKINGS.



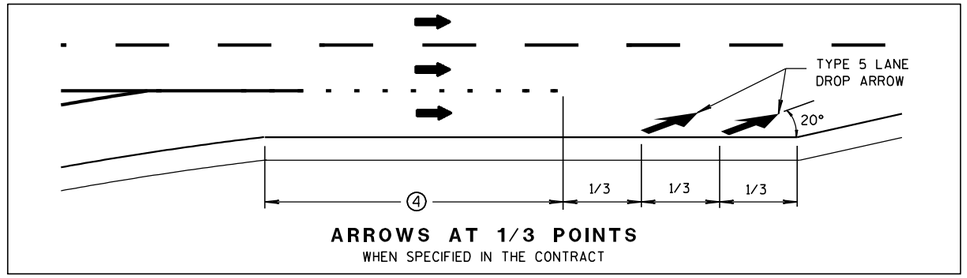
① CHANNELIZING - SOLID 8" WHITE WET REFLECTIVE TAPE IN GORE AREA.

② 4" WHITE (3' LINE, 9' GAP).

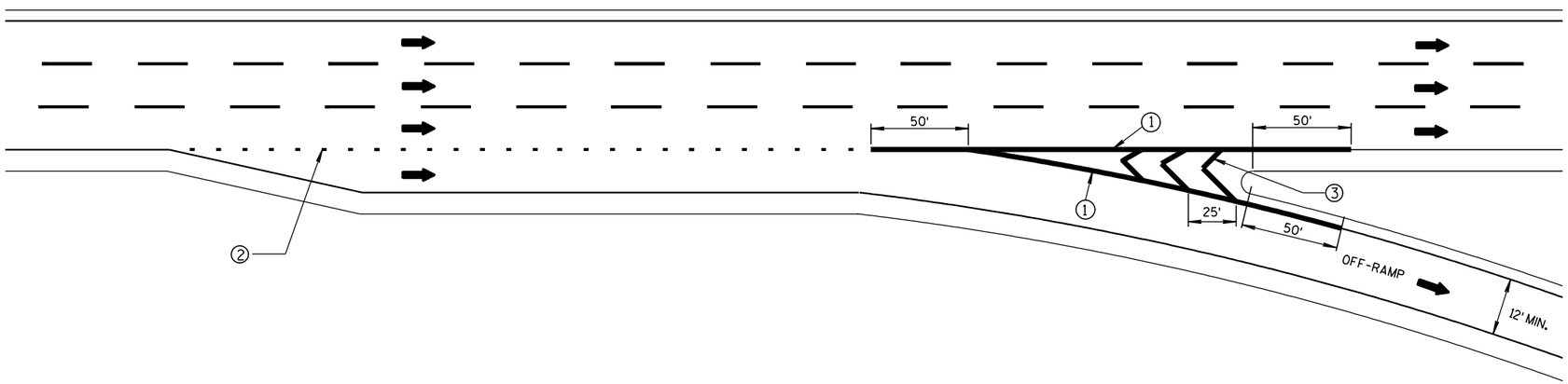
③ CHEVRON MARKING - 24" WHITE WHEN SPECIFIED IN THE CONTRACT.

④ ½ LENGTH OF FULL WIDTH ACCELERATION LANE.

SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL ENTRANCE-RAMP



ARROWS AT 1/3 POINTS
WHEN SPECIFIED IN THE CONTRACT



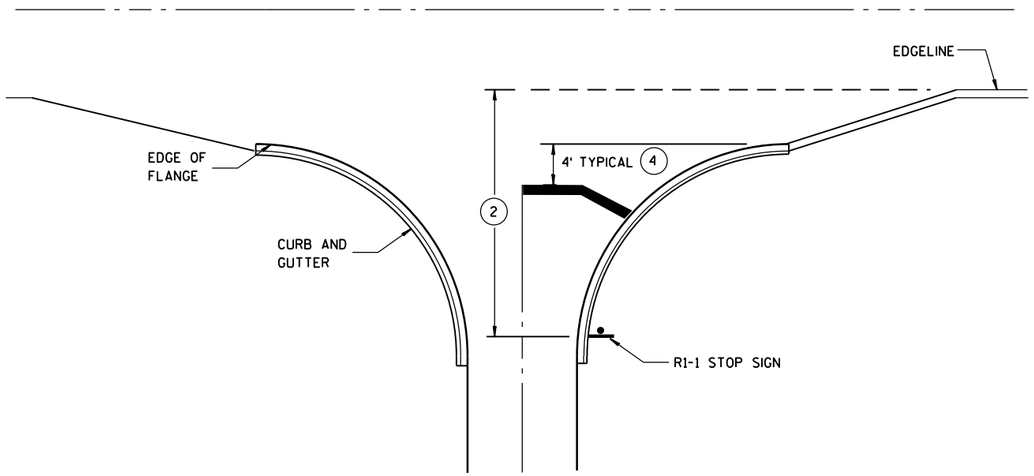
SERVICE INTERCHANGE PAVEMENT MARKING FOR PARALLEL EXIT-RAMP

PAVEMENT MARKING FOR PARALLEL ON-RAMP AND PARALLEL OFF-RAMP

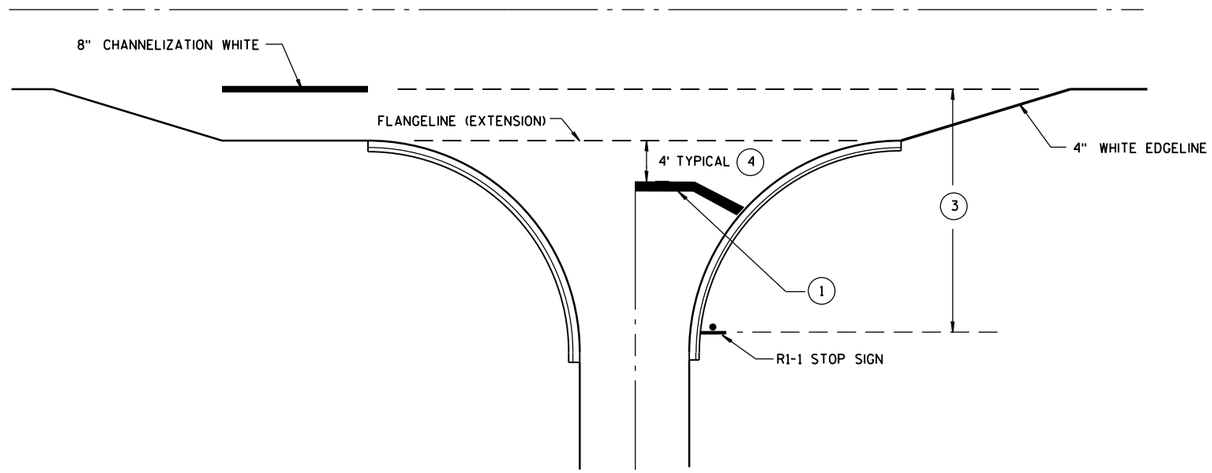
STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
6/23/2011 DATE
/S/ Thomas N. Nothnagel STATE TRAFFIC ENGINEER 418 SIGN
FHWA

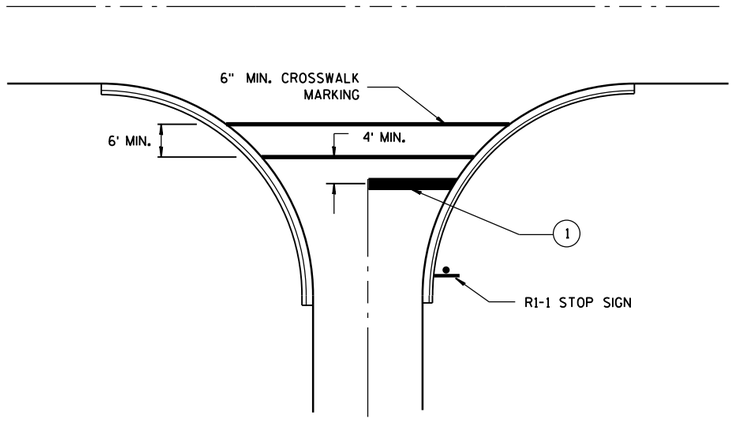
6
S.D.D. 15 C 31-1d



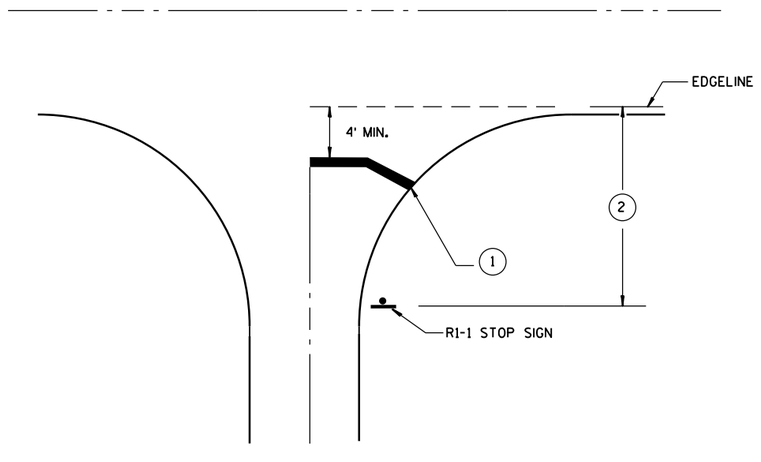
TYPICAL STOP LINE PAVEMENT MARKING WITH CURB AND GUTTER



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH RIGHT TURN LANE



TYPICAL STOP LINE PAVEMENT MARKING FOR SIDEROADS WITH CROSSWALK MARKING



TYPICAL STOP LINE PAVEMENT MARKING WITHOUT CURB AND GUTTER

GENERAL NOTES

1. 18-INCH STOP LINES MAY BE DELETED OR ADDED BY THE PROJECT ENGINEER BASED ON VISIBILITY AND SIGHT LINES.
2. IF STOP SIGN IS LESS THAN OR EQUAL TO 40 FEET FROM THE EDGELINE THAN NO STOP LINE IS REQUIRED.
3. IF STOP SIGN IS LESS THAN OR EQUAL TO 30 FEET FROM THE FLANGELINE EXTENSION THAN NO STOP LINE IS REQUIRED.
4. MOVE CLOSER TO EDGE OF TRAVEL LANE AS NEEDED FOR VISIBILITY AND SIGHT LINES.

STOP LINE AND CROSSWALK PAVEMENT MARKING

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
4/30/2013 DATE
/S/ Travis Feltes
STATE TRAFFIC E
FHWA

6

S.D.D. 15 C 33-1

LEGEND

- TYPE III BARRICADE WITH ATTACHED SIGN
- SIGN ON PERMENENT SUPPORT
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- TRAFFIC CONTROL DRUM
- FLASHING ARROW BOARD
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- REMOVING PAVEMENT MARKING
- DIRECTION OF TRAFFIC
- WORK AREA

GENERAL NOTES

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

THE SPACING BETWEEN SIGNS SHOULD BE ADJUSTED TO NOT CONFLICT WITH AND TO PROVIDE A MINIMUM OF 200 FEET, (500 FEET DESIREABLE) DISTANCE TO EXISTING SIGNS.

THIS LANE CLOSURE IS TYPICAL FOR CLOSING RIGHT LANE - REVERSE FOR CLOSING LEFT LANE.

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

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER. NO WARNING LIGHTS SHALL BE WORKING ON "COVERED" OR "DOWNED" SIGNS.

CONSIDER GEOMETRICS WHEN LOCATING SIGNS AND ARROW BOARD SO THE DRIVER HAS A CLEAR VIEW OF THE ARROW BOARD AND LANE CLOSURE DRUMS FOR A MINIMUM 1500 FEET IN FRONT OF DRUMS.

FOR A LANE CLOSURE THAT IS IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS, THE ADVANCED WARNING SIGNS MAY BE MOUNTED ON PORTABLE SUPPORTS.

REMOVE PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR LONGER THAN 4 OR MORE DAYS AND NIGHTS.

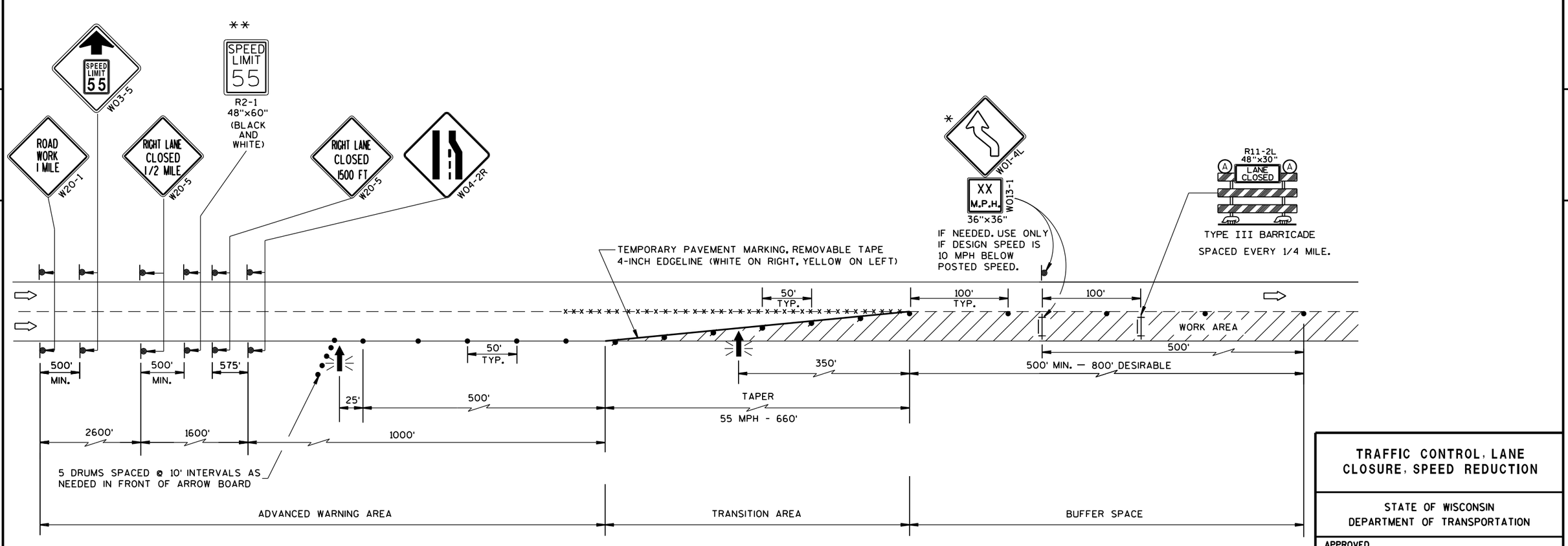
WARNING LIGHTS ARE NOT REQUIRED IF THE LANE CLOSURE IS A DAYTIME ONLY OPERATION.

IF THE HORIZONTAL ALIGNMENT IS SUCH THAT A CURVE MAY REQUIRE ADDITIONAL DELINEATION, THE DEVICE SPACING MAY BE DECREASED TO 50 FEET.

ADJUSTMENTS IN BUFFER SPACE NEED TO BE INCORPORATED WHEN THE LANE CLOSURE OCCURS NEAR AN INTERCHANGE EXIT OR ENTRANCE RAMP. THE LANE CLOSURE MUST MUST TAKE PLACE FAR ENOUGH IN ADVANCE OF AN EXIT OR ENTRANCE RAMP TO STILL ALLOW FOR ADEQUATE BUFFER SPACE. THE MINIMUM LENGTH OF THE BUFFER SPACE BEFORE AN EXIT RAMP SHOULD BE 1/2 THE LENGTH OF THE TRANSITION AREA. THE ENTRANCE RAMP SHOULD BE FOLLOWED BY THE ORIGINAL BUFFER SPACE LENGTH OF 800 FEET DESIRABLE PRIOR TO ANOTHER TRAFFIC CONTROL CHANGE SUCH AS A CROSSOVER MANEUVER.

* THE LEFT REVERSE CURVE SIGN (WO1-4L) IS ONLY REQUIRED WHEN THIS DETAIL IS USED IN COMBINATION WITH "SINGLE LANE CROSSOVER" DETAIL.

** A SPEED LIMIT SIGN SHALL BE LOCATED 1500 FEET BEYOND THE END OF THE ACCELERATION LANE OF EACH ENTRANCE RAMP. THERE SHOULD BE A SPEED LIMIT SIGN INCORPORATED A MINIMUM OF EVERY 2 OR 3 MILES. INCLUDE A 65 MPH RESUME SPEED LIMIT SIGN 200 FEET MINIMUM (500 FEET DESIREABLE) BEYOND THE "END OF ROADWORK" SIGN.



TRAFFIC CONTROL, LANE CLOSURE, SPEED REDUCTION

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

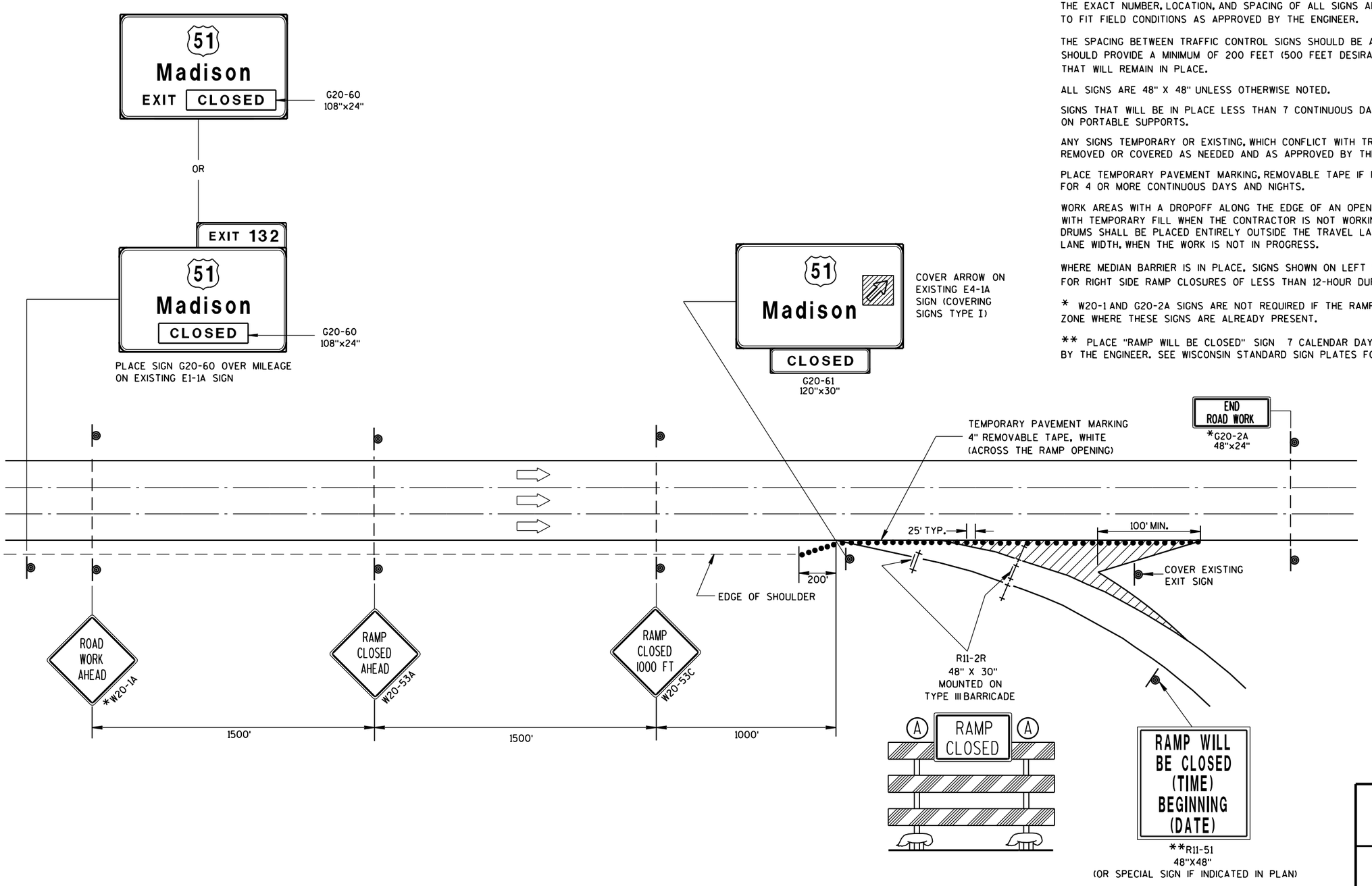
Feb. 2015 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

S.D.D. 15 D 12-5b

S.D.D. 15 D 12-5b



GENERAL NOTES

THIS RAMP CLOSURE DETAIL IS TYPICAL FOR CLOSING A RIGHT SIDE EXIT RAMP. FOR A LEFT SIDE EXIT RAMP, REVERSE THE TRAFFIC CONTROL.

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

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" X 48" UNLESS OTHERWISE NOTED.

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

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

PLACE TEMPORARY PAVEMENT MARKING, REMOVABLE TAPE IF RAMP CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS.

WORK AREAS WITH A DROPOFF ALONG THE EDGE OF AN OPEN TRAVEL LANE SHALL BE LEVELED WITH TEMPORARY FILL WHEN THE CONTRACTOR IS NOT WORKING ADJACENT TO THE TRAVEL LANE. DRUMS SHALL BE PLACED ENTIRELY OUTSIDE THE TRAVEL LANE, ALLOWING THE FULL UNOBSTRUCTED LANE WIDTH, WHEN THE WORK IS NOT IN PROGRESS.

WHERE MEDIAN BARRIER IS IN PLACE, SIGNS SHOWN ON LEFT SIDE OF ROADWAY MAY BE OMITTED FOR RIGHT SIDE RAMP CLOSURES OF LESS THAN 12-HOUR DURATION.

* W20-1 AND G20-2A SIGNS ARE NOT REQUIRED IF THE RAMP CLOSURE IS WITHIN A LARGER WORK ZONE WHERE THESE SIGNS ARE ALREADY PRESENT.

** PLACE "RAMP WILL BE CLOSED" SIGN 7 CALENDAR DAYS PRIOR TO CLOSURE OR AS DIRECTED BY THE ENGINEER. SEE WISCONSIN STANDARD SIGN PLATES FOR SIGN LAYOUT.

LEGEND

- TYPE III BARRICADE
- TYPE III BARRICADE WITH ATTACHED SIGN
- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- (A) TYPE "A" WARNING LIGHT (FLASHING)
- DIRECTION OF TRAFFIC

TRAFFIC CONTROL, EXIT RAMP CLOSURE

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED
Sept. 2015 — DATE
/S/ Peter Amakobe Atepe — STATEWIDE WORK ZO SAFETY ENGI FIC
FHWA

6

S.D.D. 15 D 16-3

6

S.D.D. 15 D 16-3

LEGEND

- TRAFFIC CONTROL DRUM
- SIGN ON PERMANENT SUPPORT
- DIRECTION OF TRAFFIC
- FLASHING ARROW BOARD
- WORK AREA

GENERAL NOTES

THIS DETAIL IS TYPICAL FOR CLOSING THE RIGHT SHOULDER. FOR CLOSING THE LEFT SHOULDER, REVERSE THE TRAFFIC CONTROL.

THIS DETAIL MAY BE USED FOR DIVIDED ROADWAYS WITH ANY NUMBER OF TRAVEL LANES.

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

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

SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

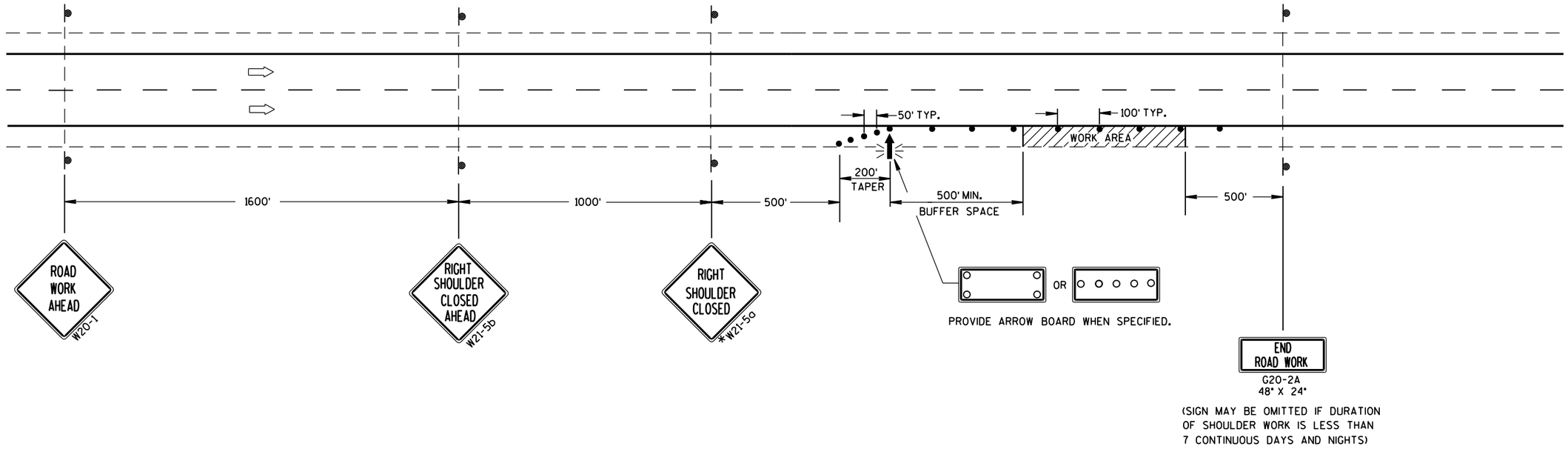
SIGNS THAT WILL BE IN PLACE LESS THAN 7 CONTINUOUS DAYS AND NIGHTS MAY BE MOUNTED ON PORTABLE SUPPORTS.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

CHANNELIZING DEVICES PLACED ADJACENT TO THE WORK AREA SHALL BE PULLED BACK FROM THE TRAVEL LANE WHEN WORK IS NOT IN PROGRESS.

WHEN A 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.

*FOR SHORT DURATION SHOULDER WORK OF LESS THAN ONE HOUR, THE W21-5a SIGN MAY BE OMITTED.



TRAFFIC CONTROL SHOULDER CLOSURE ON DIVIDED ROADWAY, SPEEDS GREATER THAN 40 MPH

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

8/2013 — DATE

/S/ Travis Feltes — STATE TRAFFIC ENGINEER

FHWA

6

S.D.D. 15 D 27-2

LEGEND

- SIGN ON PERMANENT SUPPORT
- REMOVING PAVEMENT MARKING
- TYPE III BARRICADE WITH ATTACHED SIGN
- CONCRETE BARRIER TEMPORARY PRECAST
- FLAGS, 16" x 16" MIN., (ORANGE)
- TRAFFIC CONTROL DRUM
- TRAFFIC CONTROL DRUM WITH TYPE "C" STEADY BURN LIGHT
- ASPHALTIC PAVEMENT WIDENING
- DIRECTION OF TRAFFIC
- 4" X 6" WOOD POST
- TEMPORARY SIGNAL WITH BACKPLATE AND 12-INCH LENSES ON BREAKAWAY POLE

W057-52
36"x24"

INSTALL ON EACH APPROACH AT THE CLOSEST INTERSECTION WITH A STATE OR COUNTY TRUNK HIGHWAY, OR AS DIRECTED BY THE ENGINEER. WIDTH ON SIGN TO BE APPROX. 1-FOOT LESS THAN AVAILABLE WIDTH. (OMIT IF AVAILABLE WIDTH IS MORE THAN 16 FEET.)

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.

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

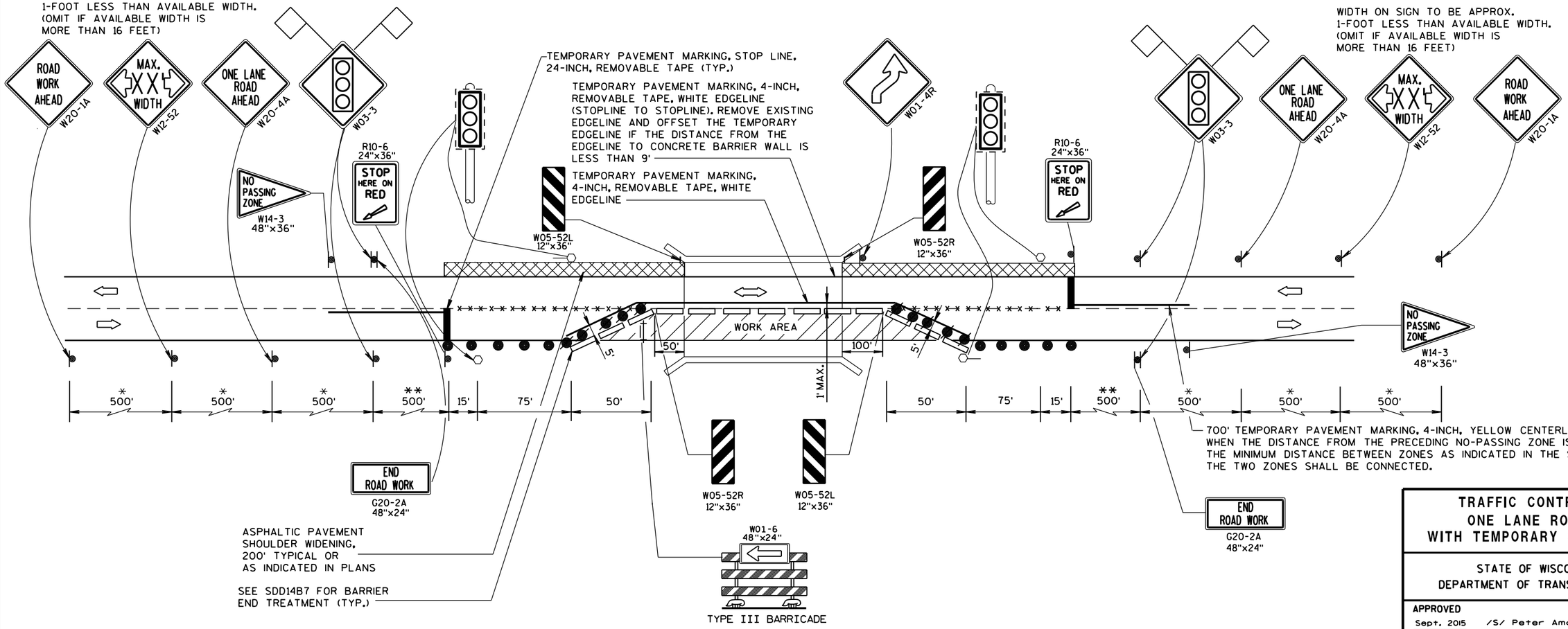
SIGN LAYOUTS SHALL BE IN ACCORDANCE WITH THE FHWA'S MANUAL OF STANDARD HIGHWAY SIGNS OR THE WISCONSIN STANDARD SIGN PLATES.

ANY SIGNS TEMPORARY OR EXISTING, WHICH CONFLICT WITH TRAFFIC CONTROL "IN USE" SHALL BE REMOVED OR COVERED AS NEEDED AND AS APPROVED BY THE ENGINEER.

PLACE TEMPORARY PAVEMENT MARKING EDGELINE AND CENTERLINE, AND REMOVE EXISTING PAVEMENT MARKINGS IF LANE CLOSURE IS TO BE IN PLACE FOR 4 OR MORE CONTINUOUS DAYS AND NIGHTS OR AS NOTED ON DETAIL.

* 500-FOOT SPACING SHOWN IS FOR ROADWAYS WITH A PRE-CONSTRUCTION REGULATORY SPEED LIMIT OF 45 MPH OR MORE. FOR 35-40 MPH, USE 350-FOOT TYPICAL SPACING. FOR 25-30 MPH, USE 200-FOOT TYPICAL SPACING.

** USE 300' SPACING IF PRE-CONSTRUCTION REGULATORY SPEED LIMIT IS 35 MPH OR LESS.



TRAFFIC CONTROL, ONE LANE ROAD WITH TEMPORARY SIGNALS

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION

APPROVED

Sept. 2015
DATE

/S/ Peter Amakobe Atepe
STATEWIDE WORK ZO
SAFETY ENGI

FHWA

C

6

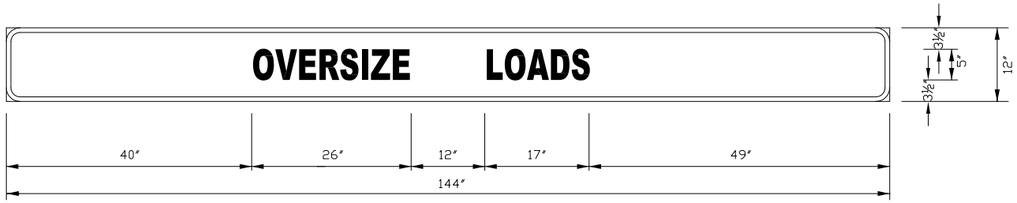
S.D.D. 15 D 33-4

6

S.D.D. 15 D 33-4

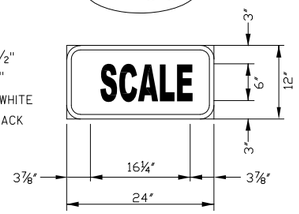
TYPE I SIGN
BORDER= 2"
RADIUS= 6"
BACKGROUND: BLUE
MESSAGE: WHITE-TYPE SH REFLECTIVE

2-04



4-09

BORDER= ½"
RADIUS= 2"
BACKGROUND: WHITE
MESSAGE: BLACK

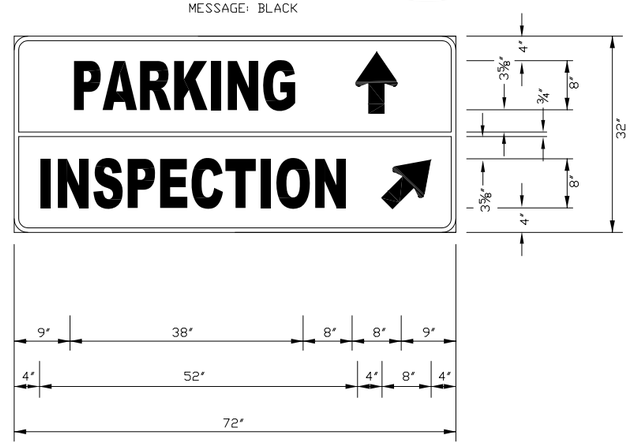


BORDER= 1"
RADIUS= 1⅛"
BACKGROUND: WHITE
MESSAGE: BLACK

4-17

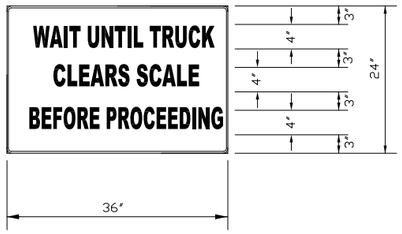
BORDER=1"
RADIUS=2"
BACKGROUND: WHITE
MESSAGE: BLACK

4-18



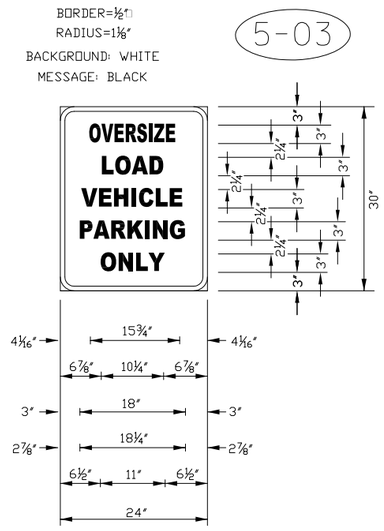
BORDER=½"
RADIUS= 2"
BACKGROUND: WHITE
MESSAGE: BLACK

4-21



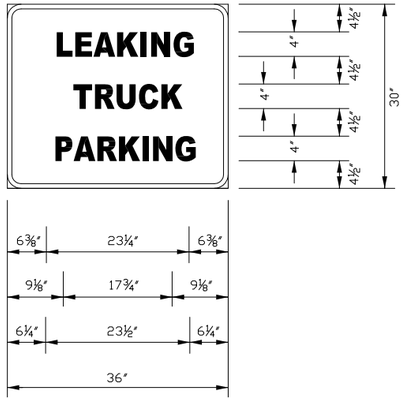
BORDER=½"
RADIUS=1⅛"
BACKGROUND: WHITE
MESSAGE: BLACK

5-03



BORDER=½"
RADIUS=1⅛"
BACKGROUND: WHITE
MESSAGE: BLACK

5-05



GENERAL NOTES:

DETAILS OF CONSTRUCTION, MATERIALS AND WORKMANSHIP NOT SHOWN ON THIS DRAWING SHALL CONFORM TO THE PERTINENT REQUIREMENTS OF THE STANDARD SPECIFICATIONS, THE SPECIAL PROVISIONS AND THE PLANS.

UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET ARE "SIGNS, TYPE II".

UNLESS OTHERWISE NOTED, ALL SIGNS ON THIS SHEET SHALL HAVE "TYPE H REFLECTIVE SHEETING" AND, "MESSAGE MATERIAL".

ALL UPPERCASE MESSAGE (EXCEPT ON SHIELDS OR WHERE OTHERWISE NOTED) SHALL BE "SERIES C".

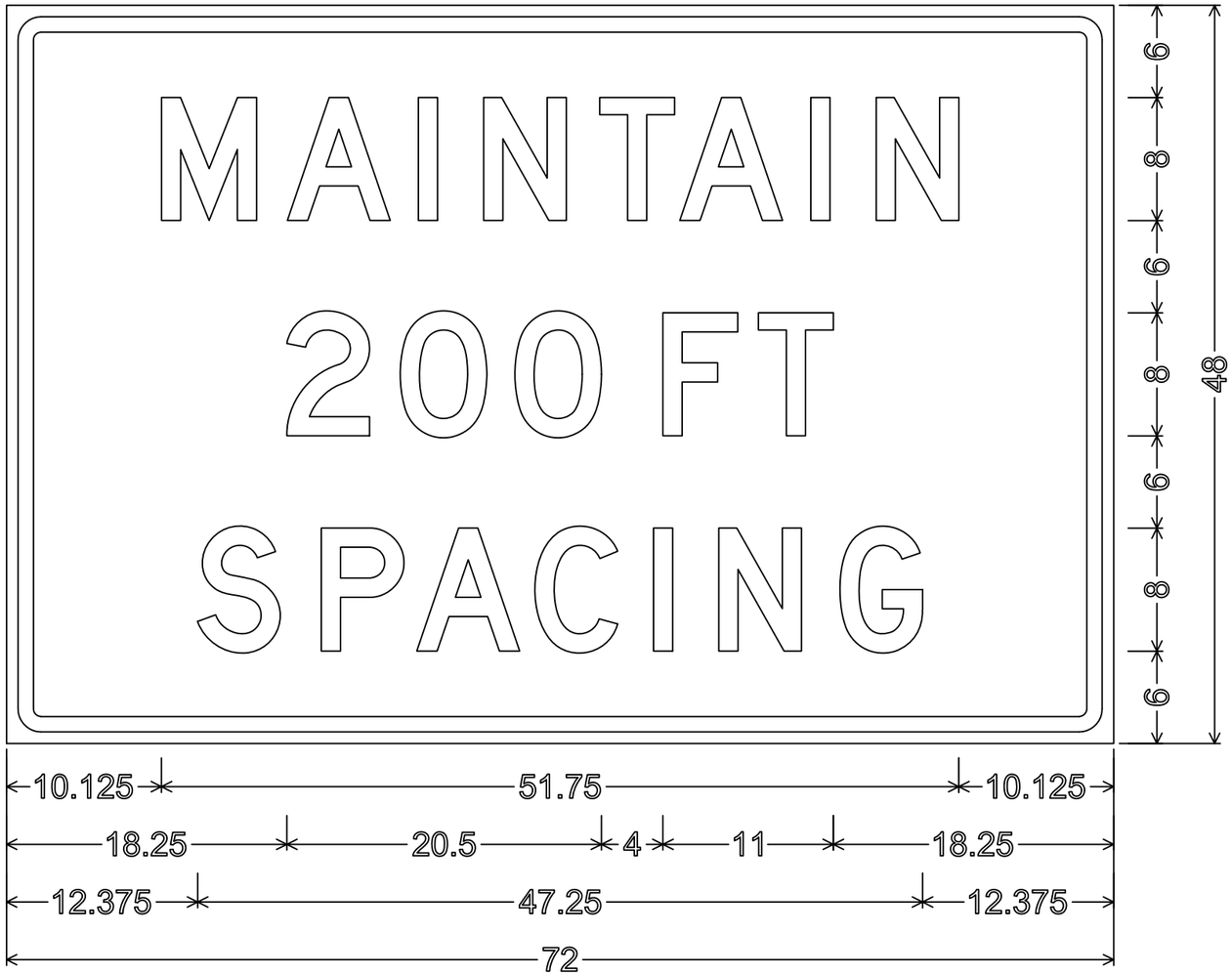
UNLESS OTHERWISE NOTED, ALL SIGNS SHOWN ON THIS SHEET SHALL HAVE "TYPE A" OR "TYPE C" ARROWS AS SHOWN. SEE THE STANDARD SIGNS PLATES FOR FURTHER DETAILS.

DO NOT SCALE.

7

7

3-12



2.250" Radius, 1.000" Border, 0.750" Indent

NOTES

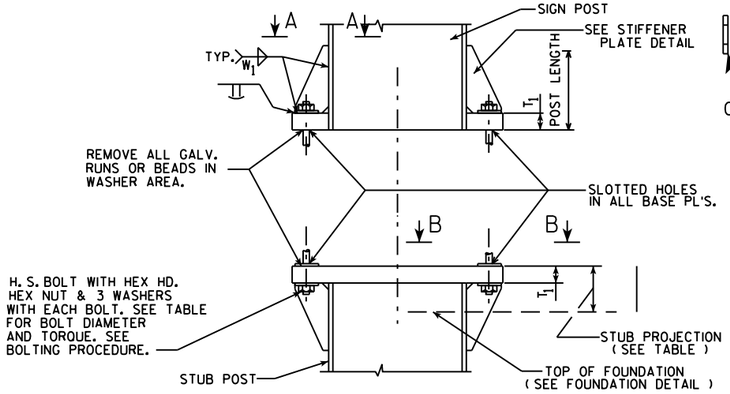
1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D

7

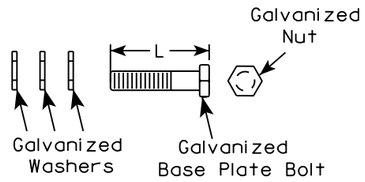
7

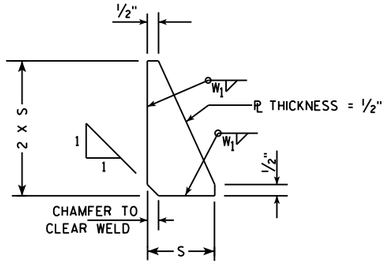
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	SIGN DETAILS	SHEET NO: 425 __	E

FILE NAME : $$....designfile....$$ PLOT DATE : $$...plottingdate...$$ PLOT BY : $$...plotuser...$$ PLOT NAME : ----------PLOT SCALE : $$.....plotscale.....$$



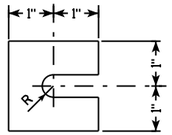
SIGN POST AND STUB POST ELEVATION





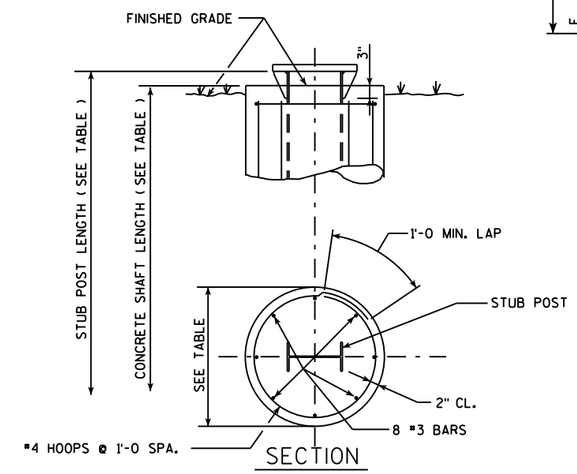
STIFFENER PLATE DETAIL

(SEE TABLE FOR DIMENSIONS)

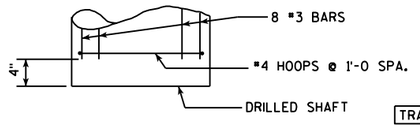


FURNISH 2 @ .012" ± THICK AND 2 @ .032" ± THICK SHIMS PER POST. SHIMS SHALL BE FABRICATED FROM BRASS SHIM STOCK OR STRIP CONFORMING TO A.S.T.M.- B36.

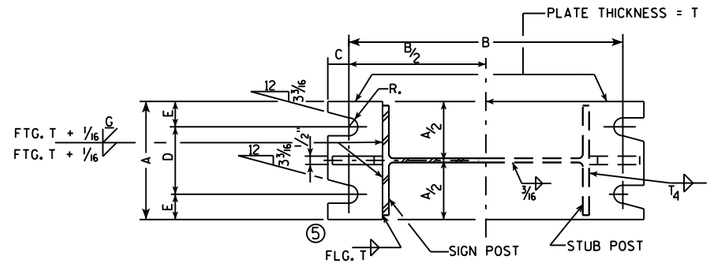
SHIM DETAIL



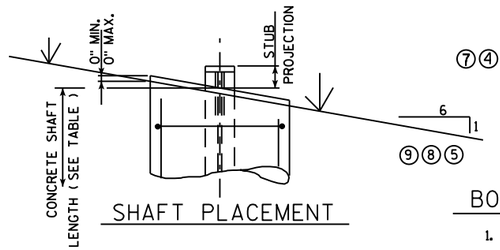
SECTION



FOUNDATION DETAIL



SECTION A-A SECTION B-B



SHAFT PLACEMENT

DESIGN DATA

WIND PRESSURE = 75 M.P.H.
WIND COMPONENTS - NORMAL = 1.0 TRANSVERSE = 0.0
ICE LOAD = 3 P.S.F.

GROUP LOADS	PERCENT OF ALLOWABLE STRESS	
1. DEAD	100	
2. DEAD & WIND	140	
3. DEAD, ICE & ½ WIND[4]	140	[4]25 P.S.F. MIN.

ALLOWABLE SOIL PRESSURE = 1½T / SQ. FT.
WIND LOAD WAS APPLIED TO THE AREA OF THE SIGN AND TO THE SUPPORTING MEMBERS.
ICE LOAD WAS APPLIED TO ONE FACE OF THE SIGN AND AROUND THE SURFACE OF THE SUPPORTING MEMBERS.

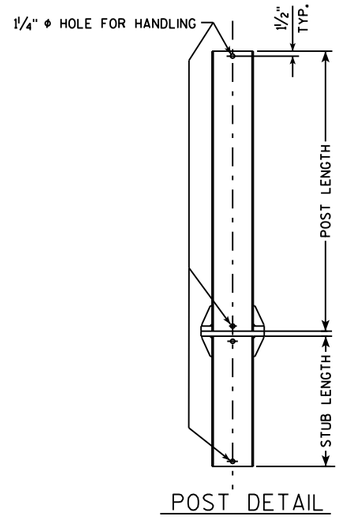
GENERAL NOTES

DRAWINGS SHALL NOT BE SCALED.
DESIGN CONFORMS WITH A.A.S.H.T.O. SPECIFICATIONS 1985.
ALL POSTS, POST STUBS & ATTACHMENTS SHALL BE A.S.T.M. A709 GRADE 50, GALVANIZED IN ACCORDANCE WITH ASTM A123. (9)
THE POST, BASE PLATES, UPPER SIX INCHES OF STUB POST FLANGE SPLICE PLATE AND FUSE PLATE SHALL BE GALVANIZED AFTER FABRICATION.
FURNISH STEEL BOLTS, NUTS, AND WASHERS IN ACCORDANCE WITH SECTION 635 OF THE STANDARD SPECIFICATIONS.

BOLTING PROCEDURE - BASE CONNECTION

1. ASSEMBLE SIGN POST TO STUB POST WITH BOLTS AND ONE OF THE FLAT WASHERS ON EACH BOLT BETW. PLATES.
2. SHIM AS REQ'D. TO PLUMB POST.
3. PRIOR TO BOLT TIGHTENING LUBRICATE BASE CONNECTION BOLTS WITH BEESWAX OR OTHER HIGH-WAX LUBRICANT.
4. TIGHTEN ALL BOLTS THE MAXIMUM POSSIBLE WITH 12" OR 15" WRENCH TO BED WASHERS & SHIMS AND TO CLEAN BOLT THREADS, THEN LOOSEN EACH BOLT IN TURN AND RETIGHTEN IN A SYSTEMATIC ORDER TO THE PRESCRIBED TORQUE. (SEE TABLE)
5. BURR THREADS AT JUNCTION WITH NUT USING A CENTER PUNCH TO PREVENT NUT LOOSENING.

NOTE:
TIGHTEN THE HIGH STRENGTH BOLTS TO THE TORQUE SHOWN. DO NOT OVERTIGHTEN.



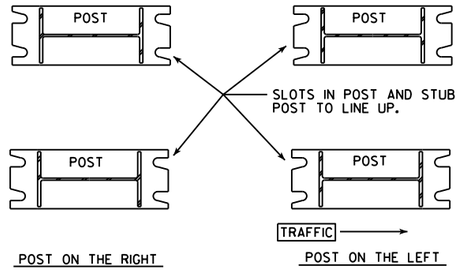
POST DETAIL

QUANTITIES FOR 1 FOOTING		
	CONC. MASONRY C.Y.	REINF. STEEL LBS.
A	0.6	34
B	0.8	49
C	0.9	50
D	0.9	56
E	1.0	62

(7)

REINF.	TYPE	#3	#4
	A	8 @ 4'-5	5 @ 6'-3
	B	8 @ 6'-5	7 @ 6'-3
	C	8 @ 6'-11	7 @ 6'-3
	D	8 @ 7'-5	8 @ 6'-3
	E	8 @ 7'-11	9 @ 6'-3

(7)



POST SLOT ORIENTATION (7)

L	X	TYPE	DIMENSION / POST SIZE	BASE CONNECTION DATA TABLE: BOLT SIZE & TORQUE	A	B	C	D	E	T_1	T_4	W_1	R	S	FOUNDATION DATA: STUB LENGTH	STUB PROJECTION	SHAFT DIAMETER	SHAFT LENGTH	K (2)
3 ¾	(4)	A	W10"X12.0 #/FT.	¾" Φ @ 75#-FT.	5¼"	1'-0⅜"	⅞"	3½"	⅞"	1"	3/16"	5/16"	13/32"	2⅛"	3'-6	3"	2'-0 Φ	5'-0	76.0# (4)
4 ¾	(4)	B	W12"X16.0 #/FT.	⅞" Φ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1¼"	¼"	5/16"	13/32"	3"	5'-6	3"	2'-0 Φ	7'-0	146.5# (4)
5		C	W12"X19.0 #/FT.	⅞" Φ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1½"	5/16"	5/16"	13/32"	3"	6'-0	3"	2'-0 Φ	7'-6	182.1#
5		D	W12"X22.0 #/FT.	⅞" Φ @ 85#-FT.	5½"	1'-4¼"	1"	3½"	1"	1½"	⅜"	5/16"	13/32"	3"	6'-6	3"	2'-0 Φ	8'-0	210.5#
5	(3)	E	W12"X26.0 #/FT.	1" Φ @ 90#-FT.	7"	1'-4¼"	1¼"	4"	1½"	1½"	⅜"	5/16"	17/32"	3"	7'-0	3"	2'-0 Φ	8'-6	293.0# (3)

(1) (6) (1)

STRUCTURAL CARBON STEEL PAY WTS. (1 POST) = K+ (POST LENGTH X POST WT.)
" K " INCLUDES STUB, BASE PLATES, STIFFS., BOLTS, AND WASHERS.

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 11/12/15 PLATE NO. A3-1.16

NO.	DATE	REVISION
(10)	1-21-14	LUBRICATION OF BASE BOLTS
(9)	4-26-11	REMOVE NON-GALVANIZED
(8)	10-30-96	NOT GALVANIZED/GALVANIZED
(7)	10-30-92	QUANT., A588 EXCEPT., ADD SLOT VIEW
(6)	8-24-87	BASE CONN. WELD
(5)	10-13-81	BASE CONN. WELD & FUSE PL WASHERS
(4)	10-19-79	POST A & B, A572 GR. 50, & K
(2)	11-28-78	"K" (3) 4-23-79 TYPE "E"
(1)	5-4-78	T_1 , T_2 & W_1

STATE OF WISCONSIN
DEPARTMENT OF TRANSPORTATION
DIVISION OF HIGHWAYS

TYPE A, B, C, D, & E

CONST. SPEC.	DRAWN BY	PLANS CK'D.
2011	JPH	

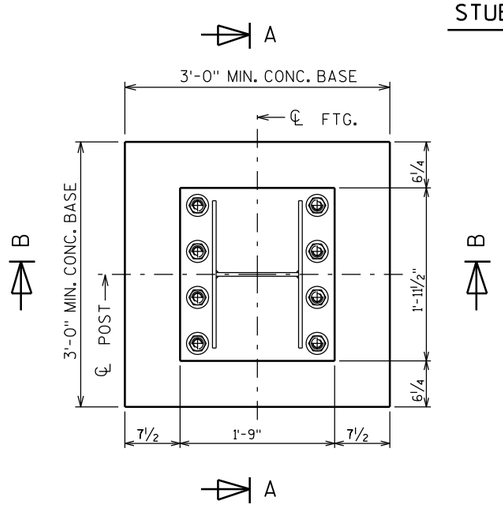
FTG. & SIGN SUPPORT DETAILS GROUND MOUNT BREAK-AWAY SIGNS

SHEET 426

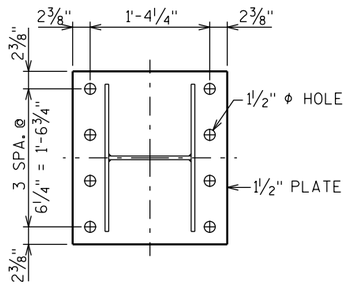
PROJECT NO: | HWY: | COUNTY: | SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A31.DGN PLOT DATE : 01-DEC-2015 18:20 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 5.351066:1.000000

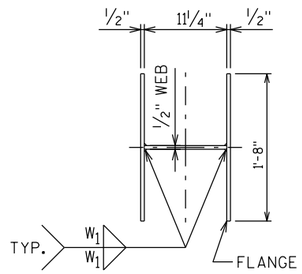
STUB AND MASONRY ANCHOR DETAILS



STUB SECTION



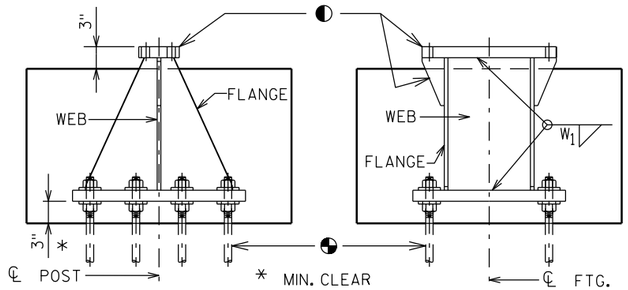
BASE PLATE



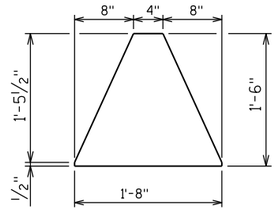
STUB

◐ SEE PLATE NO. A3-1 FOR DETAILS

◒ MASONRY ANCHORS TYPE S 1¼-INCHES (ADHESIVE). ALLOWABLE PULL OUT CAPACITY 14,995 KIPS. EMBED 1'-3" IN ROCK.



SECTION A SECTION B



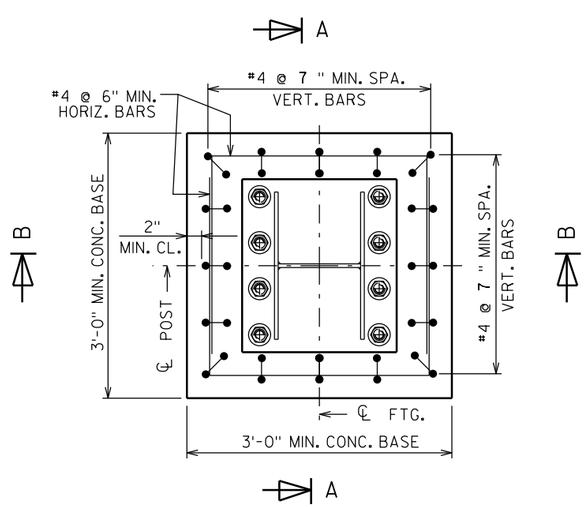
FLANGE

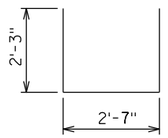
GENERAL NOTES

1. Quantities per Base:
   - REINFORCING BAR STEEL = 62 LBS
   - CONCRETE = 0.6 C.Y.
   - STEEL WEIGHT = 335 LBS
2. All materials, except anchor rod, nuts and washers, are to be A.S.T.M. A709 grade 50. All materials to be galvanized after fabrication.
3. If the contractor encounters rock before reaching the footing depth, per the A3-1 Sign Detail, determine the pull-out capacity of a test adhesive anchor installed in the rock. If the test result equals or exceeds the pull-out capacity of 14,995 KIPS, the contractor may install the breakaway stub for rock, according to this detail.

CONCRETE BASE AND REINFORCING STEEL DETAILS

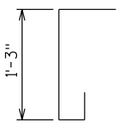
CONCRETE BASE SECTION





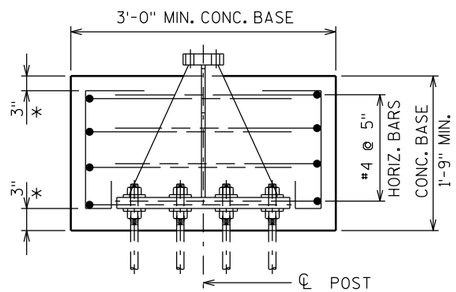
HORIZONTAL BAR

8 BARS @ 6'-11" LENGTH



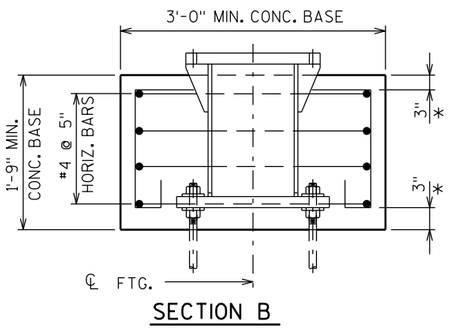
VERTICAL BARS

16 BARS @ 2'-4" LENGTH
MAY BE PLACED IN SKEW
FOR CLEARANCE NEED



SECTION A

* MIN. CLEAR



SECTION B

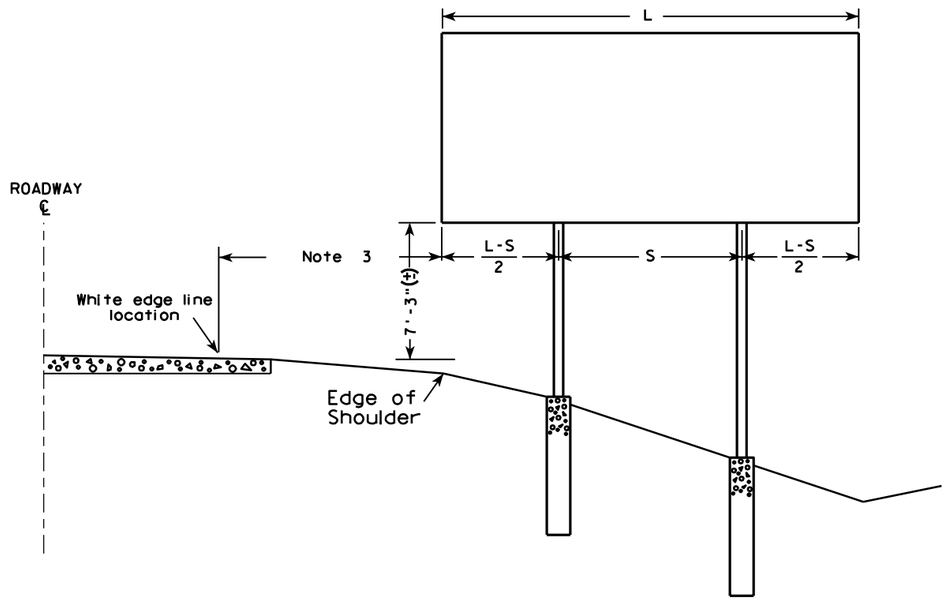
ALTERNATE BREAK-AWAY BASE ON ROCK
A3-1M

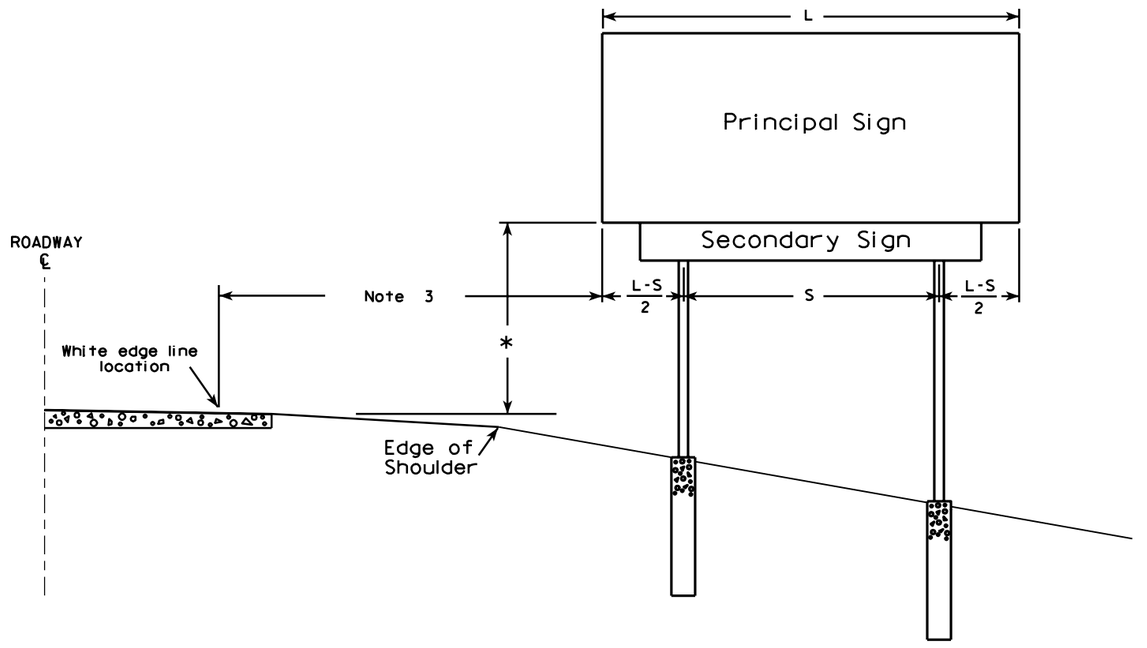
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 2/06/2014 PLAN 427 A3-1M.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E





GENERAL NOTES

1. For a 2 post installation, S equals 3L/5, but shall not be less than 9 ft.
2. For a 3 post installation, S equals 5L/7, but shall not be less than 18 ft., and the space between any two posts shall not be less than 9 ft.
3. Unless noted in the plan, the sign offset distance shall be a minimum of 17'-6", desirable 30'-0".
4. The (±) tolerance shown on this sheet is 3 in.
5. The vertical sign height clearance detailed is measured from the bottom of the sign to the near edge of pavement.
6. Post lengths shown in the miscellaneous quantities are estimated lengths. The contractor shall verify post lengths at the time of final grading.
7. Refer to the Traffic Guidelines Manual for further guidance on minimum vertical clearance requirements.

* Clearance is 8'-3"(±) when the secondary sign is 3 ft. or less in height. For secondary signs larger than 3 ft., the clearance to the bottom of the secondary sign shall be 5'-3"(±).

TYPICAL INSTALLATION OF TYPE I SIGNS

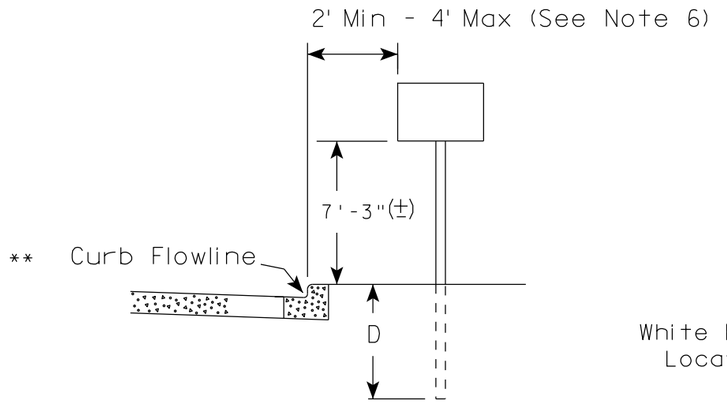
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

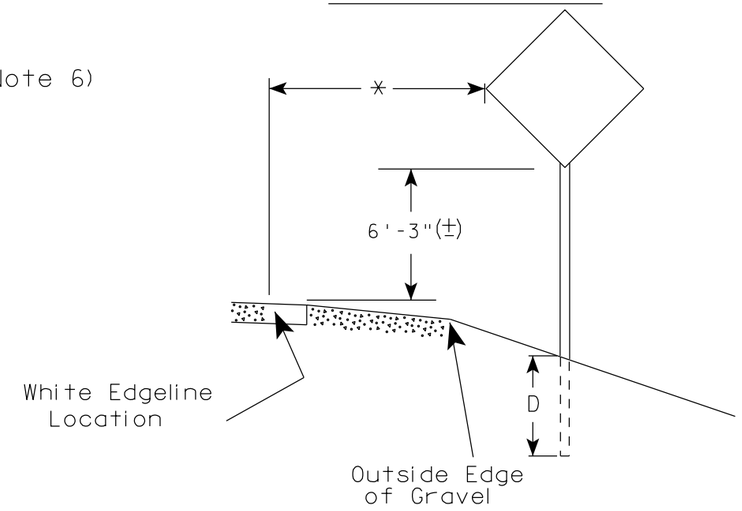
DATE 4/02/08 PLATE NO. A4-1.9

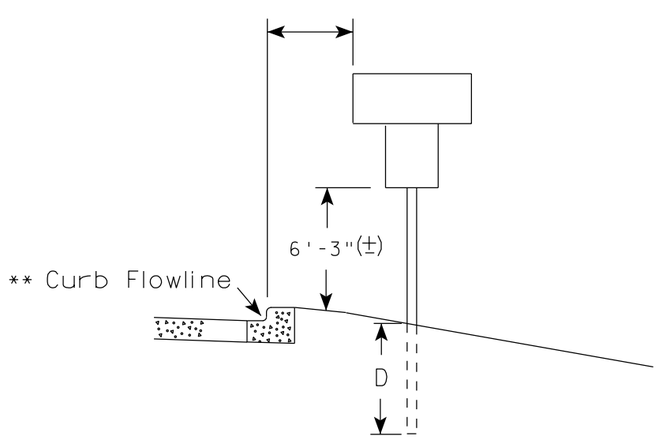
PROJECT NO:				SHEET NO: 428	E

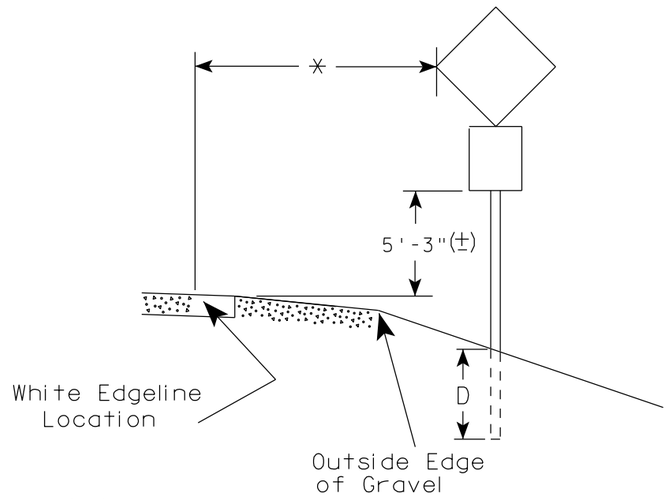
URBAN AREA



RURAL AREA (See Note 2)







GENERAL NOTES

1. Signs wider than 4 feet or 20 sq.ft or larger, shall be mounted on multiple posts. Refer to plate A4-4.
2. If signs are mounted on barrier wall, see A4-10 sign plate.
3. For expressways and freeways, mounting height is 7'- 3" (±) or 6'-3" (±) depending upon existence of a sub-sign.
4. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
5. Minimum mounting height for signs mounted on traffic signal poles is 5'- 3" (±).
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. The (±) tolerance for mounting height is 3 inches.
8. Folding signs shall be mounted at a height of 5'-3" (±) or as directd by the Engineer.
9. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Enhanced Reference Markers, Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4'-3" (±).

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq.Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

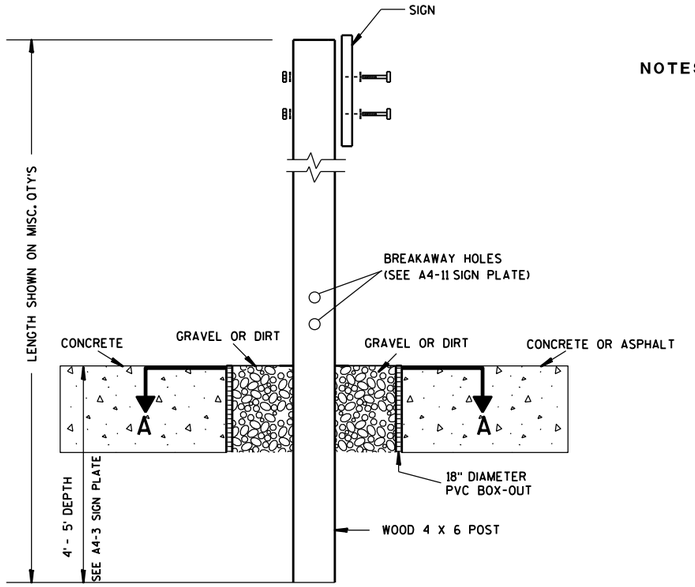
TYPICAL INSTALLATION OF PERMANENT TYPE II SIGNS ON SINGLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-3.20

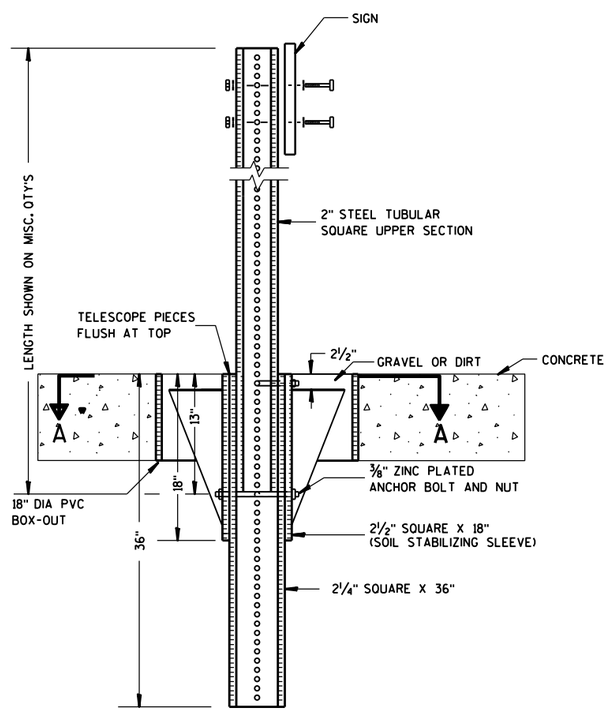
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



ELEVATION VIEW

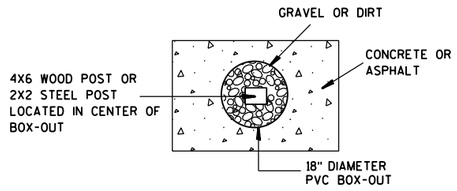
DETAIL OF WOOD 4 X 6 SIGN POST IN BOX-OUT

NOTES:
1. ALL MATERIAL TO BE APPROVED BY ENGINEER PRIOR TO INSTALLATION
2. SEE SIGN PLATE A4-8 FOR SIGN HARDWARE REQUIREMENTS
3. 18 INCH X 18 INCH SQUARE BOX-OUTS MAY BE USED FOR INSTALLATIONS IN EXISTING CONCRETE OR ASPHALT LOCATIONS.



ELEVATION VIEW

DETAIL OF STEEL 2 X 2 SIGN POST IN BOX-OUT



PLAN VIEW

FOR NEW CONCRETE/ASPHALT INSTALLATIONS

SIGN POST BOX-OUTS A4-3B

WISCONSIN DEPT OF TRANSPORTATION

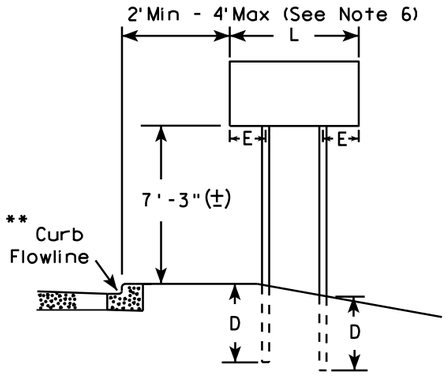
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 1/27/14 PLATE NO. A4-3B.1

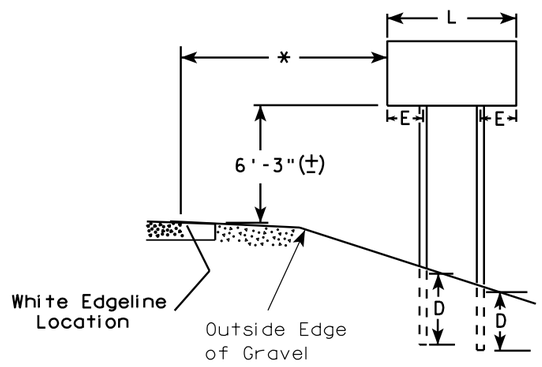
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

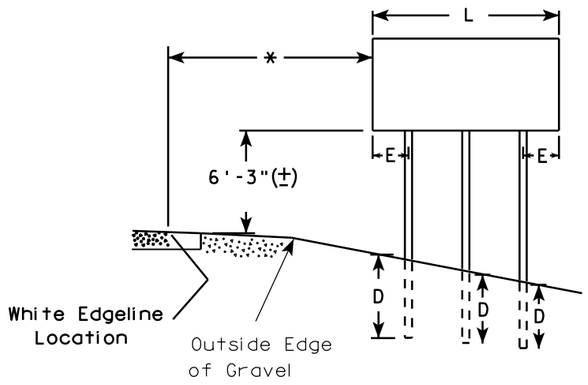
FILE NAME : C:\CAEFiles\Projects\tr_stdplate\A43B.DGN PLOT DATE : 27-JAN-2014 09:48 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 13.659812:1.000000 WISDOT/CADDS SHEET 42

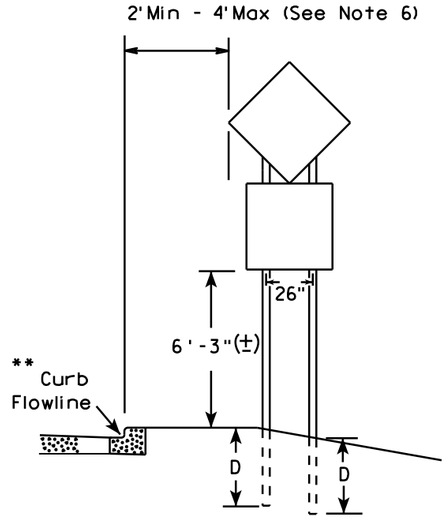
URBAN AREA



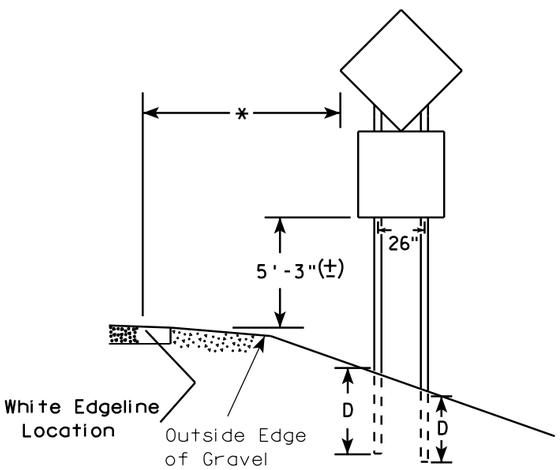
RURAL AREA (See Note 3)







48" DIAMOND WARNING SIGN



48" DIAMOND WARNING SIGN

GENERAL NOTES

1. For 3 or 4 post installations, individual post spacing shall be greater than 3'-6".
2. See tables below for required number of posts.
3. For expressways and freeways, mounting height is 7'-3" (±) or 6'-3" (±) depending upon existence of sub-sign.
4. The (±) tolerance for mounting height is 3 inches.
5. Minimum mounting height for J assemblies (A2-1S) is 7'-3" (±) or 6'-3" (±) per urban or rural detail respectively.
6. Offset distance shall be consistent with existing signs or consistent throughout length of project.
7. Folding signs shall be mounted at a height of 5'-3" (±) or as directed by the engineer.
8. The Double Arrow sign (W12-1) shall be mounted at a height of 2'-3" (±). The Chevron sign (W1-8), Roundabout Chevron panel (R6-4B), Clearance Markers (W5-52), Mile Markers (D10 series), In Road Object Markers (W5-54) & End of Road Markers (W5-56) shall be mounted at a height of 4"-3" (±).

* 6 feet from edge of a paved shoulder or 12 feet from the edge of pavement (edge line location) or 2 feet from outside edge of gravel, whichever is greater unless directed by project engineer.

** The existence of curb and gutter does not in itself mandate the vertical clearance illustrated. That height is typically measured where there is sidewalk adjacent to the roadway or parking is permitted. In the absence of sidewalk vertical clearance is measured from the top of the curb. Offset of signs is measured from the flow line.

*** See A4-3 sign plate for signs 4' or less in width and less than 20 S.F. in area.

SIGN SHAPE OTHER THAN DIAMOND (TWO POSTS REQUIRED)	
L	E
Greater than 48" Less than 60"	12"
60" to 120"	L/5

***

SIGN SHAPE OTHER THAN DIAMOND (THREE POSTS REQUIRED)	
L	E
Greater than 120" less than 168"	12"

SIGN SHAPE OTHER THAN DIAMOND (FOUR POSTS REQUIRED)	
L	E
168" and greater	12"

POST EMBEDMENT DEPTH

Area of Sign Installation (Sq. Ft.)	D (Min)
20 or Less	4'
Greater than 20	5'

TYPICAL INSTALLATION OF TYPE II SIGNS ON MULTIPLE POSTS

WISCONSIN DEPT OF TRANSPORTATION

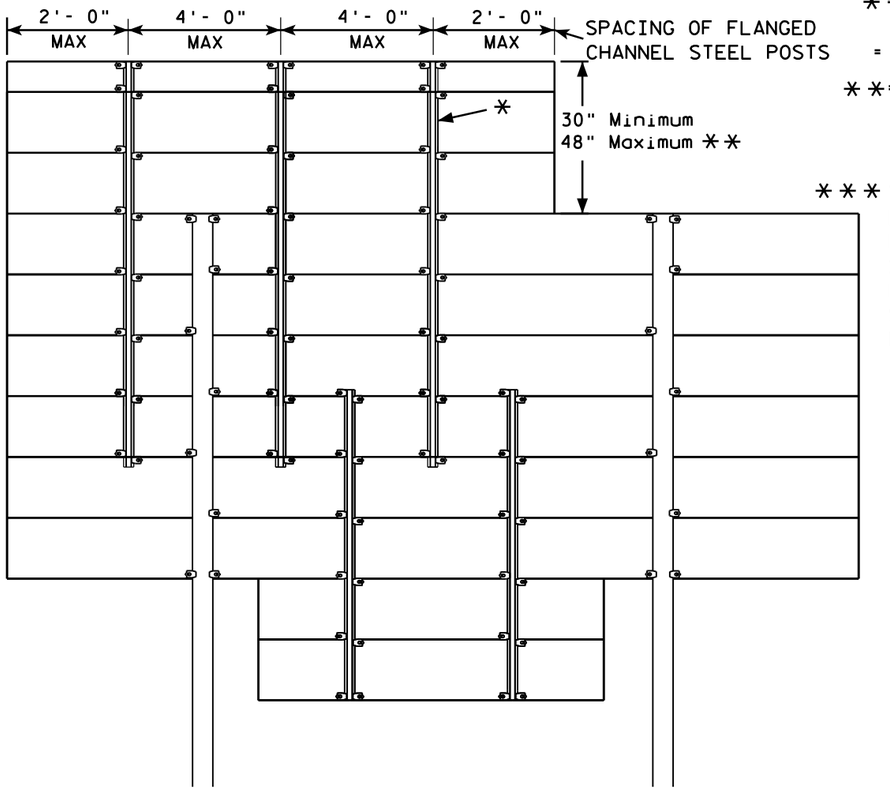
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/23/15 PLATE NO. A4-4 14

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\A44.DGN PLOT DATE : 23-JUL-2015 15:23 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 107.021305:1.000000 WISDOT/CADDS SHEET 42

GROUND MOUNTED SIGN

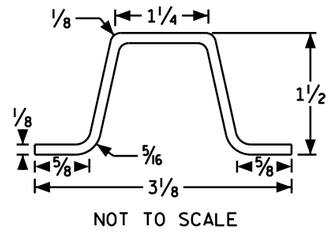


* =2.00 lb/ft FLANGED CHANNEL, MIN. YIELD STRENGTH = 60,000 PSI (GRADE 60) GALVANIZED

** =FOR 48" HEIGHT PANELS ON OVERHEAD STRUCTURES, ENTIRE SIGN SHALL BE CENTERED VERTICALLY ABOUT THE DEPTH OF THE TRUSS.

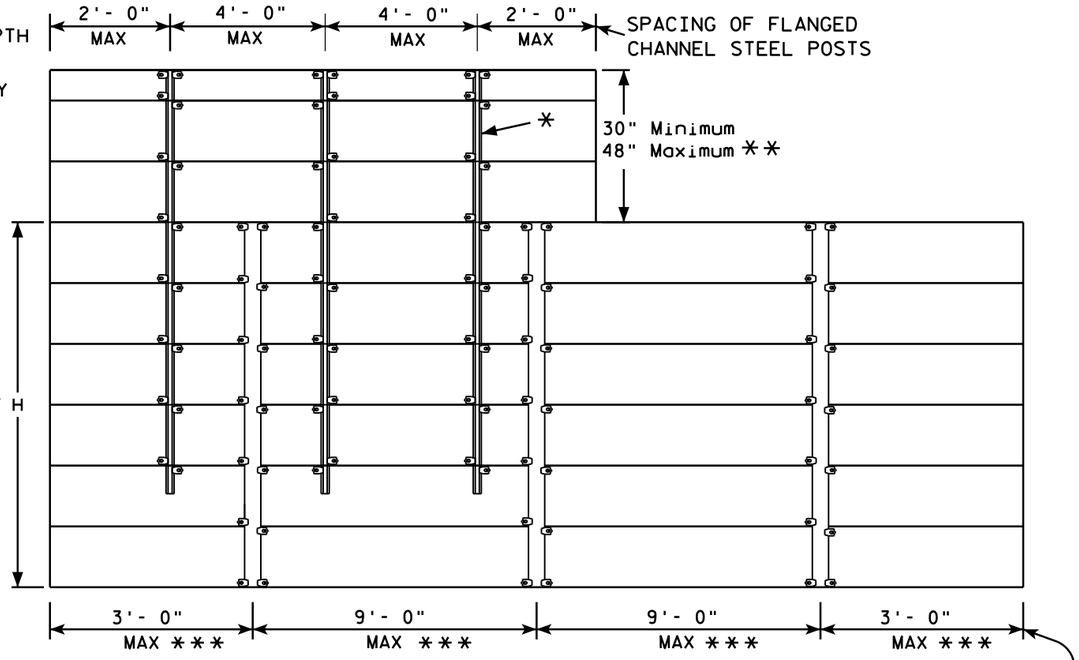
*** THESE SPACING DISTANCES SHALL ONLY BE USED WHEN THE MAIN SIGN HAS A MAXIMUM HEIGHT (DIMENSION H) OF 16 FT OR LESS. FOR SIGNS WITH A HEIGHT OF GREATER THAN 16 FT, STRUCTURAL CALCULATIONS SHALL BE PERFORMED.

FLANGE CHANNEL DETAIL



NOT TO SCALE

SIGN BRIDGE MOUNTED SIGN



GENERAL NOTES

1. Flanged channel steel posts shall conform to size and material above, and shall be considered as incidental to other items in the contract.
2. Number of Flanged channel steel supports varies with length of panel and shall be spaced as shown:

   PANEL LENGTH 8'-0" OR LESS = 2 CHANNELS
   PANEL LENGTH 9'- 0" - 12'- 0" = 3 CHANNELS
   PANEL LENGTH 13'- 0" OR MORE = 4 CHANNELS

   If the flanged channel steel posts can not be horizontally spaced as shown, they can be moved so as to securely hold the sign.
3. The EXIT NUMBER PANEL shall normally be positioned above the guide sign aligned with the right edge of the guide sign. If the guide sign indicates a left exit, the EXIT NUMBER PANEL shall be aligned with the left edge of the guide sign.
4. If the bolt holes in the top panel (EXIT NUMBER), or sub panel (NEXT EXIT) line up with holes in main sign panel, stitch bolts shall be used in addition to the channels.
5. Provide post clips for each sign as shown. (Please note the differences between a ground mounted versus Sign bridge mounted sign as far as number of clips required on the main supports or beams)
6. Structural steel sign supports shall extend to the top of the main signs, as shown on the above details.

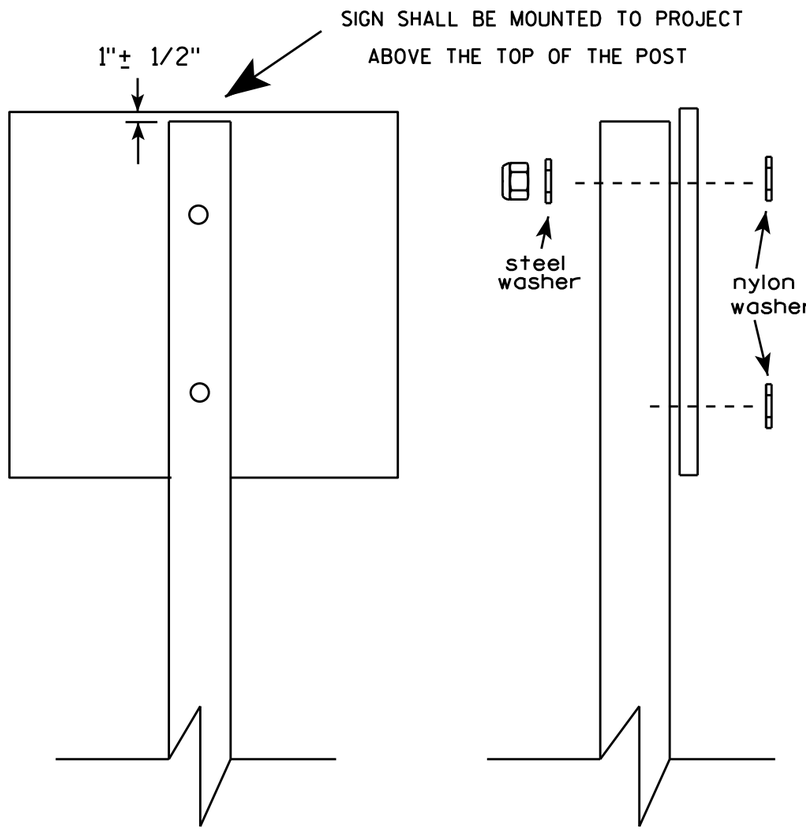
ATTACHMENT OF GUIDE SIGNS TO SUPPORTS

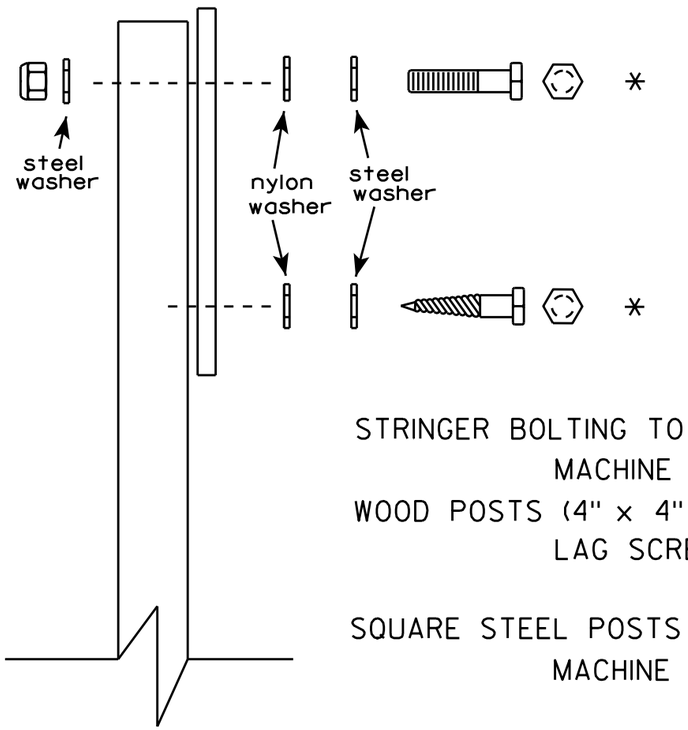
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/05/13 PLAT 432 A4-6.12

PROJECT NO: | SHEET NO: E





Nuts, bolts and lags used for mounting signs shall have hexagonal heads and shall be either :

a. Hot dip galvanized in accordance with ASTM Designation: A 153, Class D, or SC 3
b. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.

Threads on bolts and nuts shall be manufactured with sufficient allowance for the cadmium plate or galvanized coating to permit the nuts to run freely on the bolts.

STRINGER BOLTING TO ALUMINUM SIGNS (SEE SIGN PLATE A4-18)

MACHINE BOLTS - 5/8" X 1-3/4" Length w/ nuts

WOOD POSTS (4" x 4" or 4" x 6")

LAG SCREWS - 3/8" X 3" (NO STRINGERS ON BACK OF SIGN)
3/8" X 4" (STRINGERS ON BACK OF SIGN)

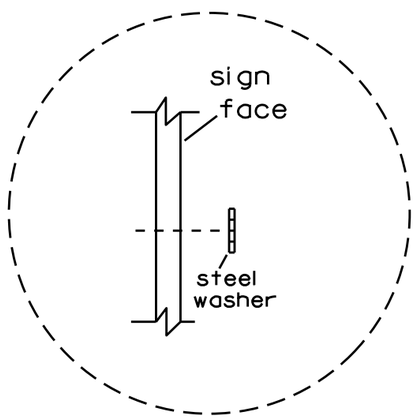
SQUARE STEEL POSTS (2" x 2")

MACHINE BOLTS - 3/8" X 3-1/4" Length w/ nuts (NO STRINGER ON BACK OF SIGN)
3/8" X 5" Length w/ nuts (STRINGERS ON BACK OF SIGN)

RIVETS - 9/32 " (6605-9-6) BULB-TITE, TRI-FOLD, ALUMINUM BODY/MANDREL
O.D. FLANGE .720-.765 INCH, GRIP RANGE .042-.375 INCH

WASHERS (ALL POSTS) -

1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON for all Type H signs.



Washer Placement when Sign Has Other Than Type H or Type F Face

* Two different fastening systems are shown for illustration purposes. On any individual sign, either one or the other system shall be used. Actual number of fasteners per sign varies with the sign area, but normally there are two. For a single post installation, all signs greater than 9 sq. ft. require the use of 3 fasteners.

ATTACHMENT OF SIGNS TO POSTS

WISCONSIN DEPT OF TRANSPORTATION

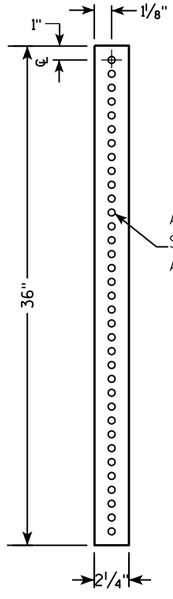
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/5/16 PLATE NO. A4-8.8

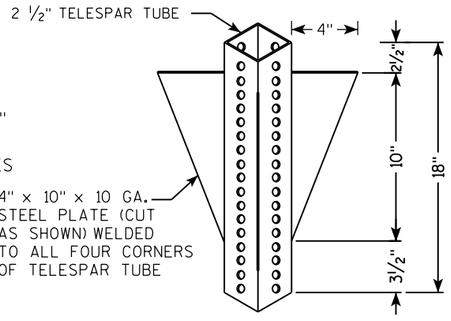
PROJECT NO: SHEET NO: E

TELESCOPIC TUBING ANCHORS
TWO PIECE SYSTEM

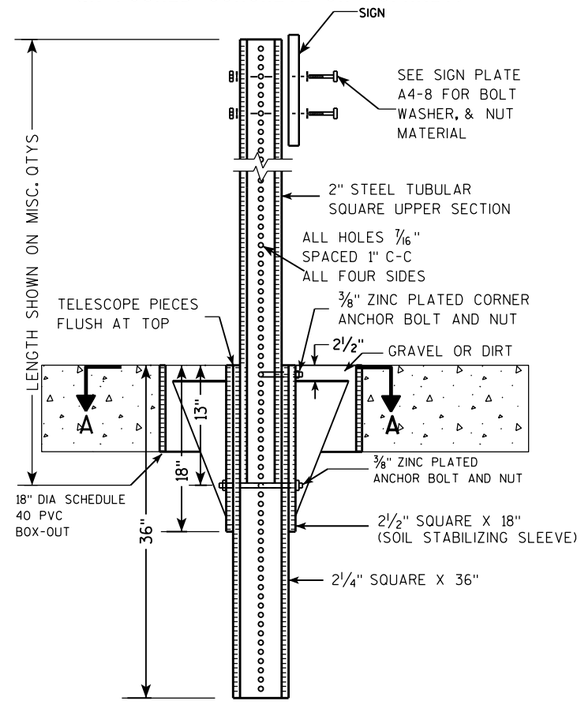
2 1/4 " SQUARE
12 GAUGE
PERFORATED
GALVANIZED FINISH



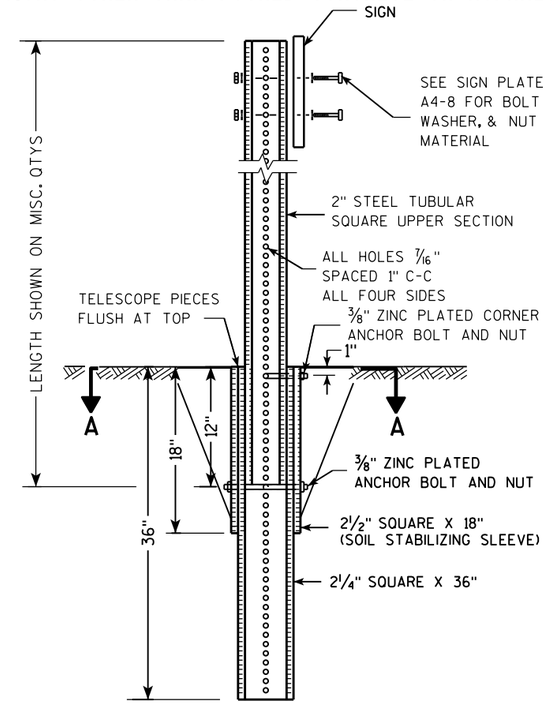
2 1/2 " SQUARE
12 GAUGE
OMNI-DIRECTIONAL
PERFORATED
SOIL STABILIZING SLEEVE
GALVANIZED FINISH

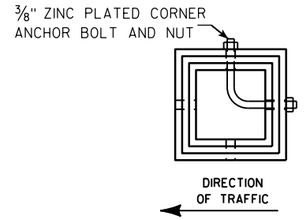


DETAIL OF TUBULAR STEEL SIGN POST
(IN POURED CONCRETE OR ASPHALT)



DETAIL OF TUBULAR STEEL SIGN POST
(IN LOCATIONS OTHER THAN POURED CONCRETE OR ASPHALT)





SECTION A-A

Area of Sign Installation (Sq. Ft.)	Number of Required Posts
9 or less	1
Greater than 9 less than or equal to 18	2
Greater than 18 less than or equal to 27	3

Signs wider than 3 feet or larger than 9 sq. ft shall be mounted on multiple posts (see above table).

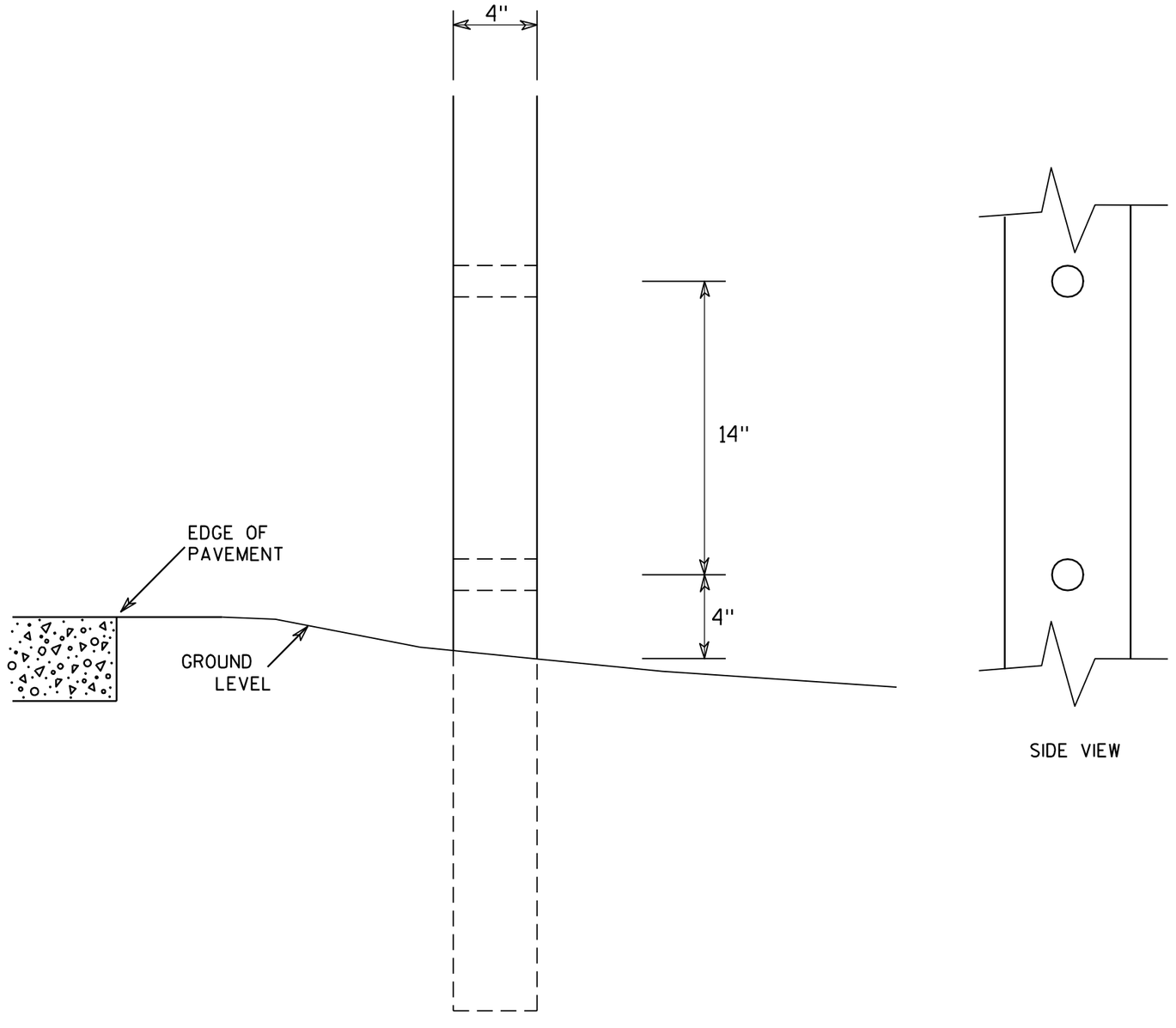
TUBULAR STEEL
SIGN POST
A4-9

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/05/15 PLATE 434 A4-9.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



SIDE VIEW

GENERAL NOTES

1. All 4 x 6 Wood Posts shall be modified by having two 1½" diameter holes drilled perpendicular to the roadway centerline.

4 X 6 WOOD POST MODIFICATIONS

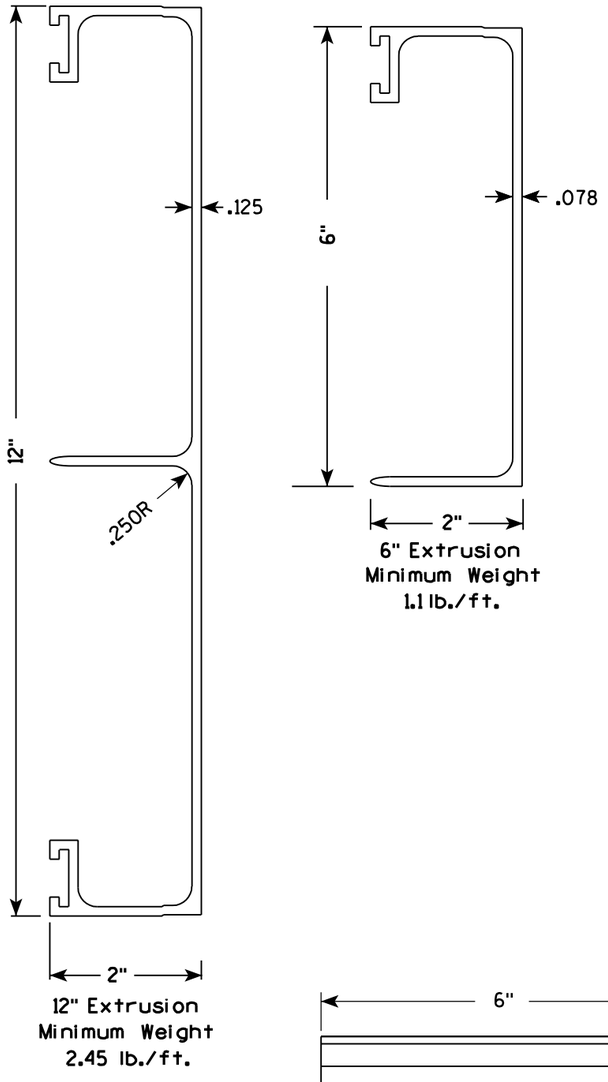
WISCONSIN DEPT OF TRANSPORTATION

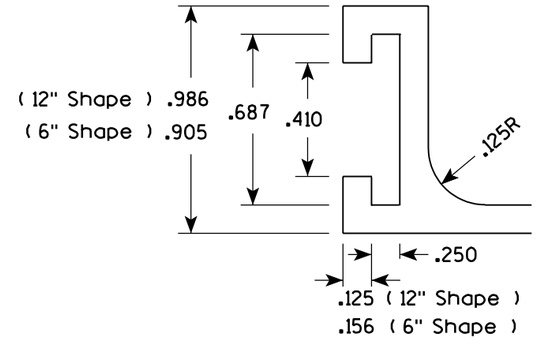
APPROVED Chester J Spang for State Traffic Engineer

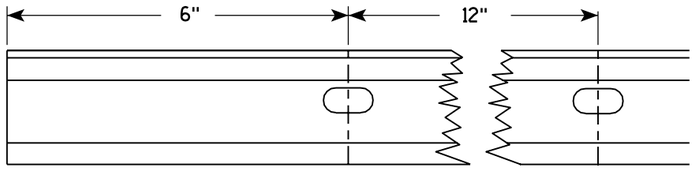
DATE 3/27/97 PLATE NO. A4-11.2

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 435	E

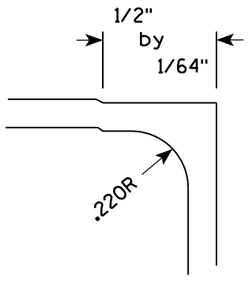
Extruded Shape







Punch 7/16" x 7/8" oval holes beginning 6" in from end of extrusion 12" CC on both edges of 6" and 12" panels.

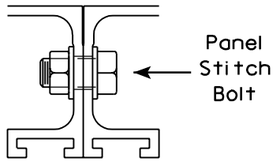


Hardware

STITCH BOLT, WASHER & NUT

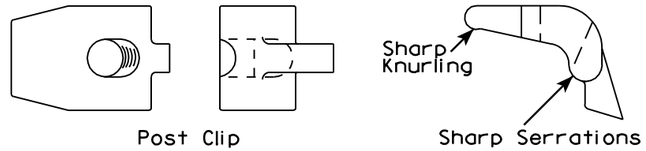
The hardware includes:

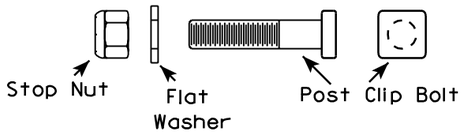
3/8 " - 16 X 3/4 " Economy Bolt 2024-T4 alloy
3/8 " - Stainless steel stop nut
3/8" X .064 Flat Washers, Alclad 2024-T4 alloy



POST CLIP, POST CLIP BOLT, WASHER & NUT

Post Clip shall be Alum. Alloy 356-T6
Post Clip Bolt shall be Stainless Steel.
Flat washer shall be 3/8" X .091, Stainless Steel.
Stop nut shall be stainless steel.





NOTES

1. The contractor may select any brand of extrusion that conforms to the illustrations or meets with the approval of the engineer, but all extrusions used on this contract shall be of the same brand.
2. Panel Stitch Bolts shall be used to assemble adjacent panels. Maximum stitch bolt spacing shall be 24" C-C, and a minimum of 4 bolts shall be used to connect any two extrusions.
3. Post Clips shall be used to attach the sign panel to the sign support.

ALUMINUM EXTRUSIONS FOR TYPE I SIGNS

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang
for State Traffic Engineer

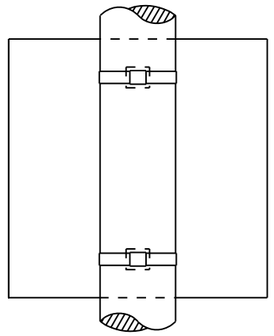
DATE 11/18/99 PLATE NO. A5-2.9

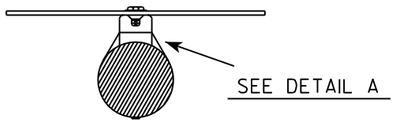
PROJECT NO:

SHEET NO: 436 E

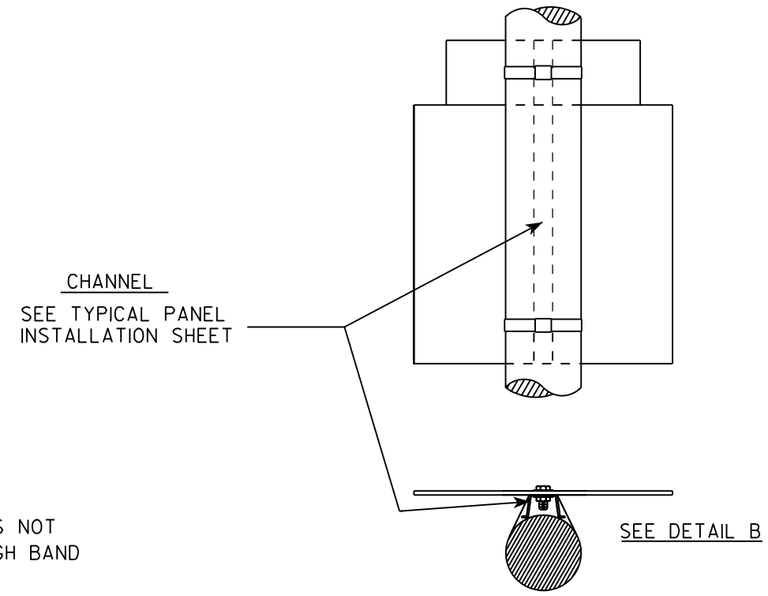
BANDING

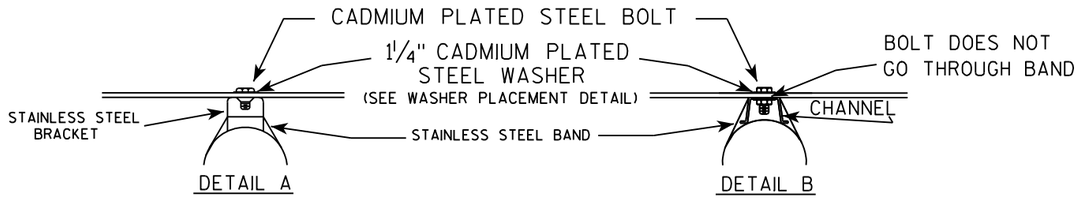
SINGLE SIGN



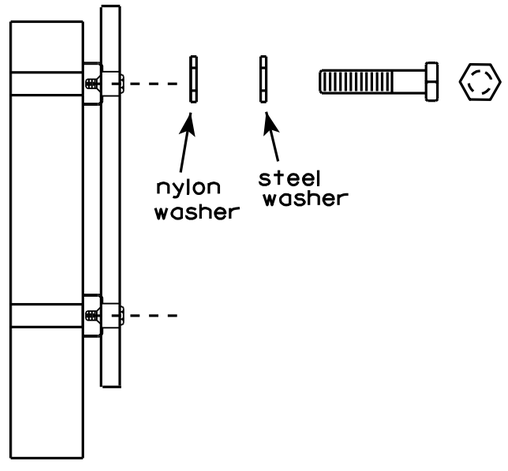


"J" ASSEMBLY





WASHER PLACEMENT



WASHERS (ALL POSTS) -
1-1/4" O.D. X 3/8" I.D. X 1/16" STEEL
1-1/4" O.D. X 3/8" I.D. X .080 NYLON
FOR ALL TYPE H SIGNS

GENERAL NOTES

1. Any sign over 3 feet in width shall use the V-Block banding method. See A5-10 standard plate.
2. Signs 3 feet or greater in height shall have three bracket bands installed. Signs less than 3 feet in height shall have two bracket bands installed.
3. Banding and assembly bracket shall be stainless steel. All bands shall be 3/4" in width and 0.025" thickness.

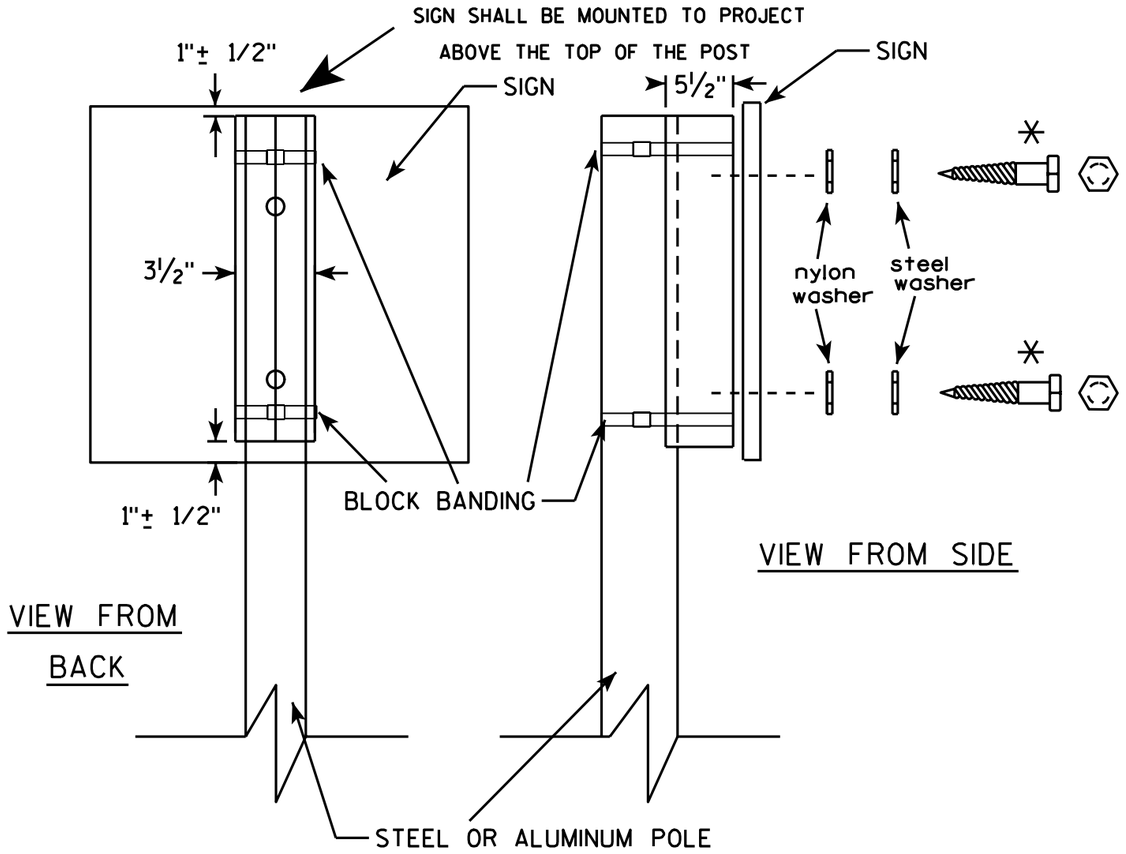
STANDARD SIGN
SIGN BANDING DETAILS

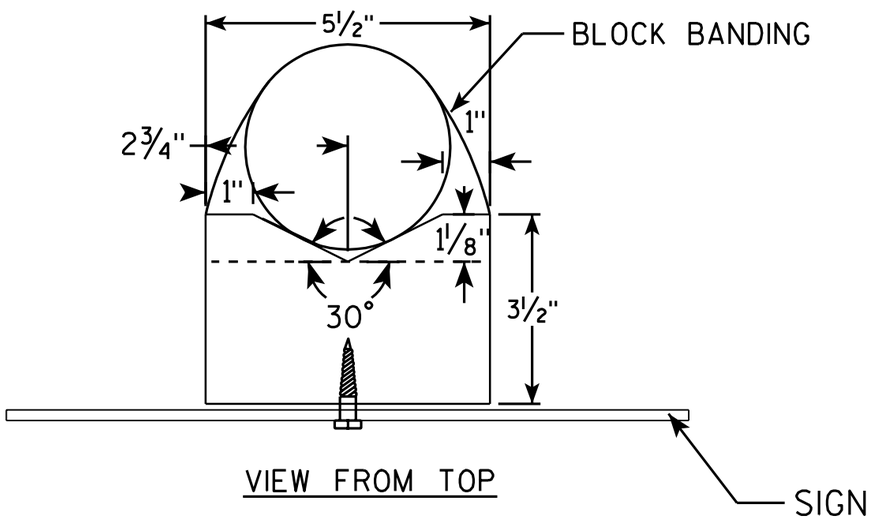
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 8/16/13 PLATE NO. A5-9.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 437	E





GENERAL NOTES

1. WOOD 4"X6" POST MATERIAL SHALL CONFORM TO 507.2.2 OF THE WisDOT STANDARD SPECIFICATIONS
2. BLOCK BANDING AND CLIPS SHALL BE STAINLESS STEEL, ¾" WIDTH AND 0.025" THICKNESS
3. SIGNS 3' OR GREATER IN HEIGHT SHALL UTILIZE 3 BLOCK BANDS. SIGNS UNDER 3' IN HEIGHT SHALL UTILIZE 2 BLOCK BANDS
4. ACTUAL NUMBER OF FASTENERS PER SIGN VARIES WITH THE SIGN AREA, BUT NORNALLY THERE ARE TWO. FOR SIGNS GREATER THAN 9 S.F. 3 FASTENERS SHALL BE USED.
5. ALL SIGN MOUNTING BOLTS AND WASHERS SHALL BE EITHER:
   a. Hot dip or mechanically galvanized in accordance with ASTM Designation: A 153, Class D, or
   b. Cadmium plated in accordance with ASTM Designation : B 766 TYPE 3, Class 12, or
   c. Electro-galvanized in accordance with ASTM Designation : B 633, TYPE III, SC 3.
6. ALL BOLTS SHALL HAVE HEXAGONAL HEADS.
7. STEEL WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X 1/16"
8. NYLON WASHERS SHALL BE 1¼" O.D. X ⅜" I.D. X .080 FOR TYPE H OR TYPE F FACE SIGN

✳ LAG BOLTS SHALL BE ⅜" X 2½"

BLOCK BANDING DETAIL (V-BLOCK OPTION)

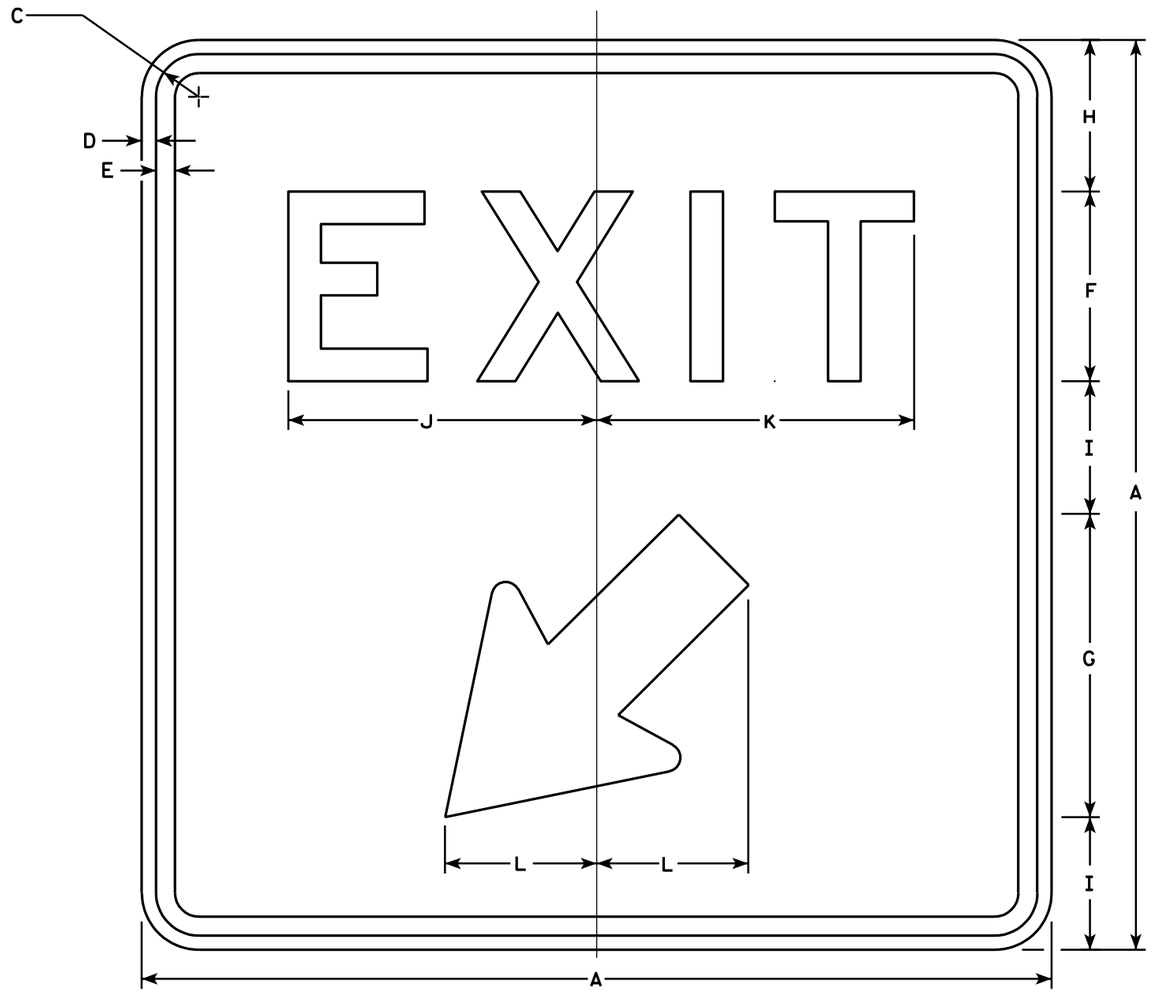
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 7/12/07 PLATE NO. A5-10.1

PROJECT NO:

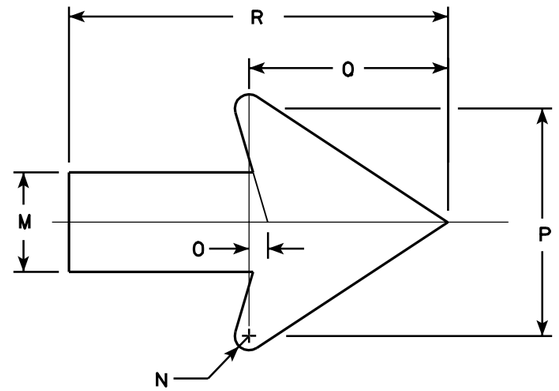
SHEET NO: 438 E



D52-54L

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R52-54R is the same as R52-54L except that the arrow is reversed.



Arrow Detail

Metric equivalent for this sign is:

SIZE	
1	600 mm X 600 mm
2	600 mm X 600 mm
3	
4	
5	

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.	Area sq. m.
1	24		1 1/8	3/8	1/2	5	8	4	3 1/2	8 1/8	8 3/8	4	2 5/8	3/8	1/2	6	5 1/4	10									4.0	.37
2	24		1 1/8	3/8	1/2	5	8	4	3 1/2	8 1/8	8 3/8	4	2 5/8	3/8	1/2	6	5 1/4	10									4.0	.37
3																												
4																												
5																												

STANDARD SIGN
D52-54

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Chester J Spang for State Traffic Engineer

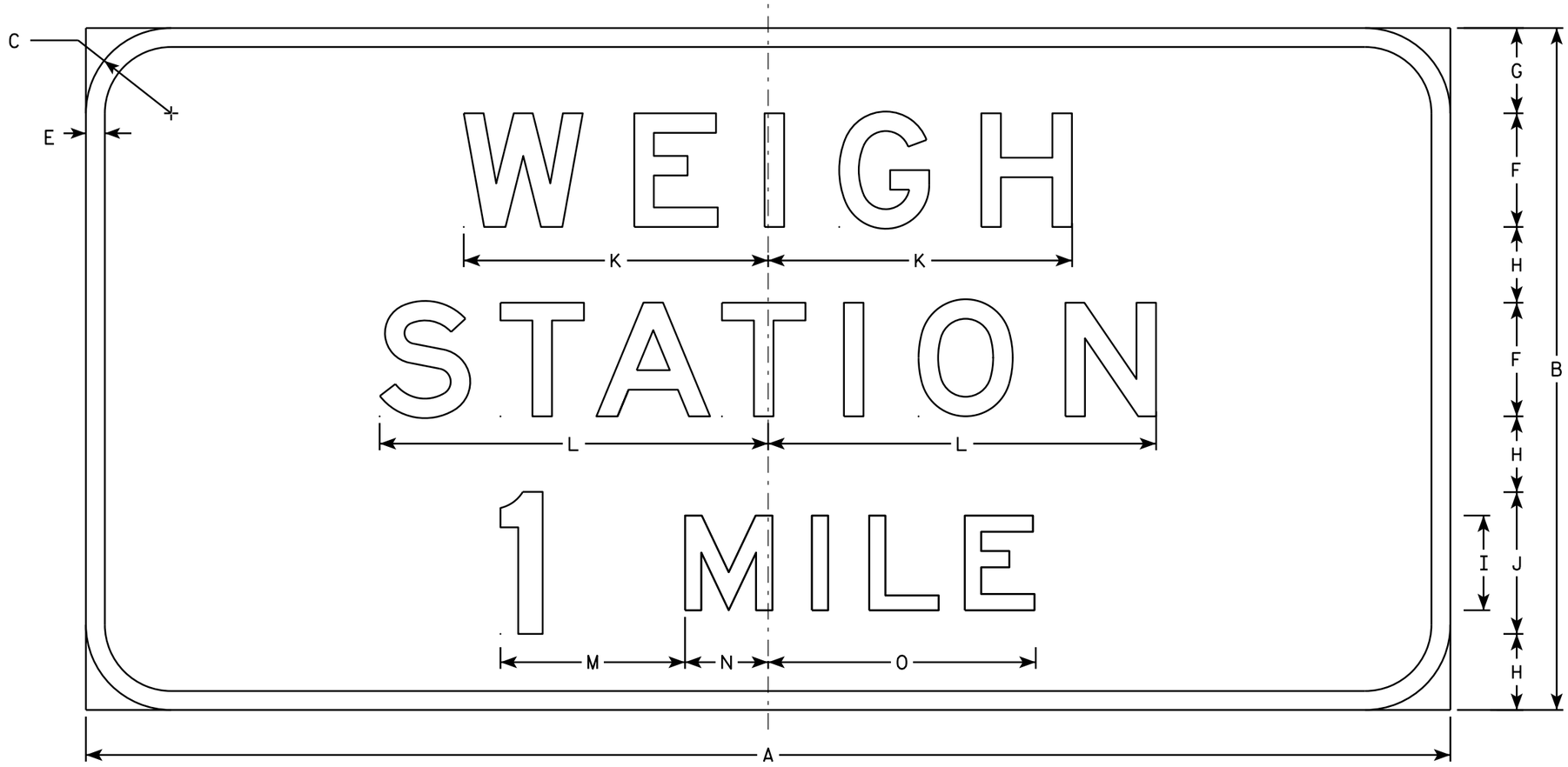
DATE 1/18/02 PLATE NO. D52-54.7

PROJECT NO:

SHEET NO: 439 E

NOTES

1. Sign is Type I- Type SH Reflective
2. Color:
   Background - Green
   Message - White
3. Message Series - E



E5-56A

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3																											
4	144	72	9		2	12	9	8	10	15	32 1/8	41	19 1/2	8 3/4	28 1/4												72.0
5	144	72	9		2	12	9	8	10	15	32 1/8	41	19 1/2	8 3/4	28 1/4												72.0

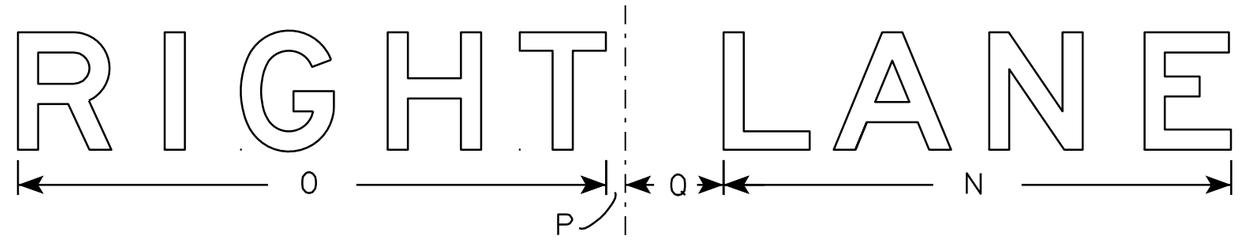
STANDARD SIGN
E5-56A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/29/14 PLATE NO. F5-56A.8

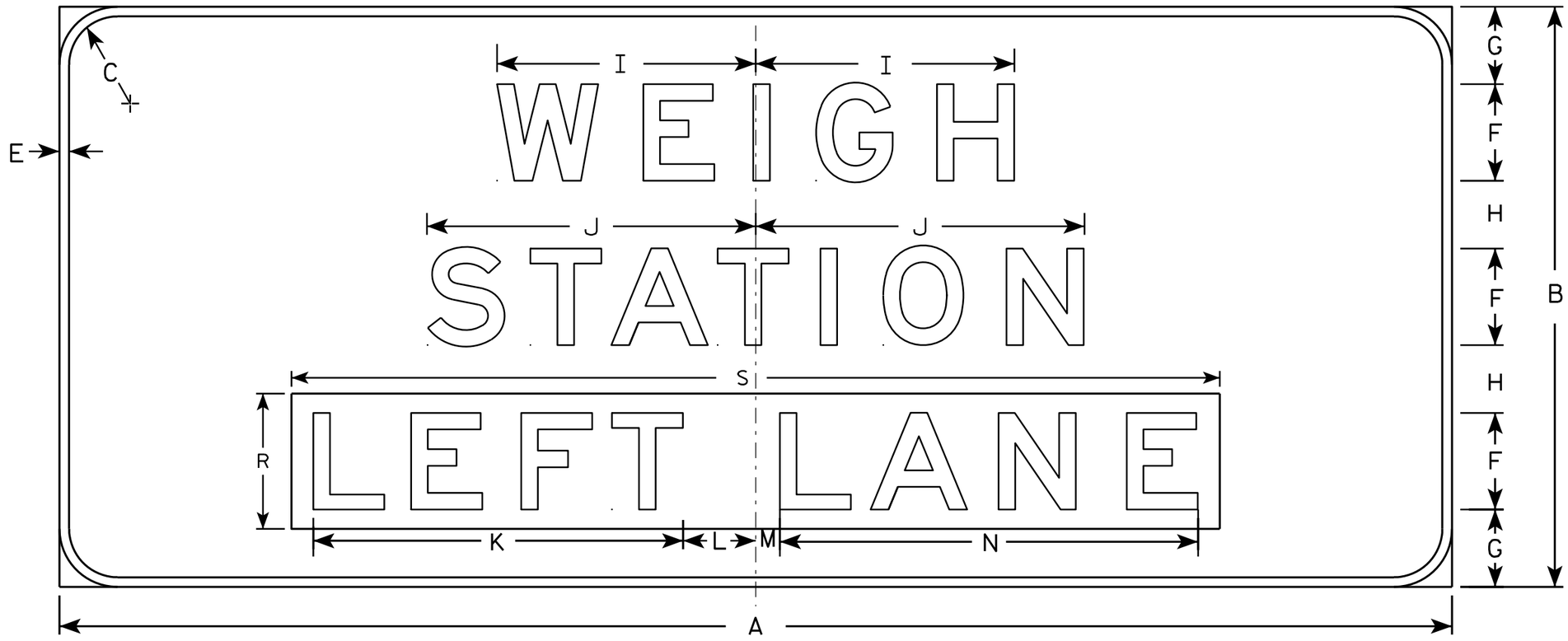
PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



E5-57E

NOTES

1. Sign is Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Green
   Message - White
3. Message Series - E
4. LEFT LANE PLAQUE COLOR:
   Background - Yellow - Type F Reflective
   Message - Black
5. RIGHT LANE is on Green Background with White Message



E5-57D

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2																											
3																											
4	144	60	6		1	10	8	7	26 3/4	34	38 1/4	7 1/2	2 1/2	43 1/4	50 1/8	1 5/8	8 3/8	14	96								60.0
5	144	60	6		1	10	8	7	26 3/4	34	38 1/4	7 1/2	2 1/2	43 1/4	50 1/8	1 5/8	8 3/8	14	96								60.0

STANDARD SIGN
E5-57D & E

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch for State Traffic Engineer

DATE 3/5/2012 PLATE NO. E5-57D.5

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 441	E

FILE NAME : c:\CAEFiles\Projects\tr_stdplate\E557D.DGN PLOT DATE : 05-MAR-2012 14:12 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 12.911259:1.000000

WISDOT/CADDS SHEET 42

7

7

NOTES

1. All Signs are Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Blue
   Message - White
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2	144	72	6		2	10	6 1/2	6	7 1/2	20 1/2	10	21 1/4	6 3/4	3 1/4	55 1/8	37 3/8	60	35	10	15 1/4	46 1/4	7 1/4	29				72.0
3																											
4																											
5																											

STANDARD SIGN
E5-65

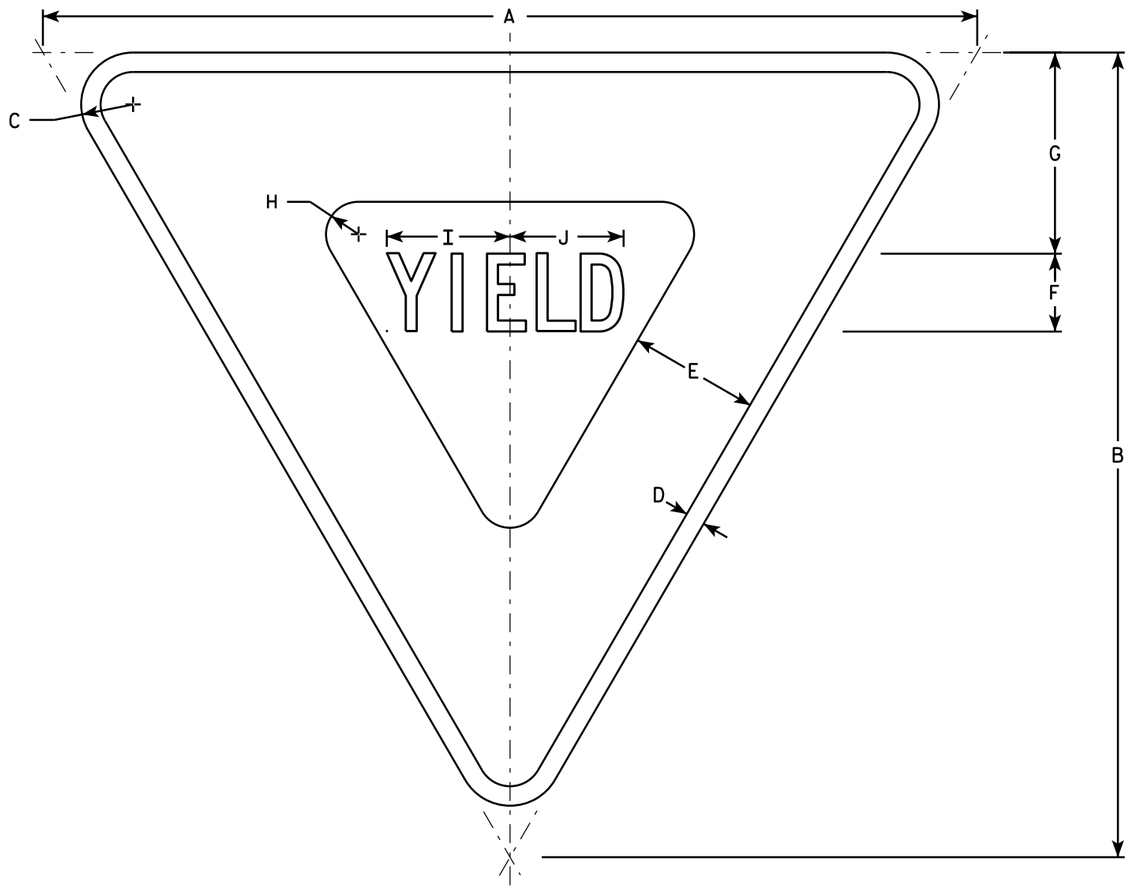
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 2/4/16 PLATE NO. E5-65.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\E565.DGN PLOT DATE : 04-FEB-2016 11:20 PLOT BY : $$ plotuser $$ PLOT NAME : PLOT SCALE : 19.458419:1.000000



R1-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 5
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. The border strip and word message are reflectorized red.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	26	1 1/2	5/8	4	2 1/2	6 3/8	7/8	4	3 5/8																	2.71
2S	36	31	2	3/4	5	3	7 3/4	1 1/4	4 3/4	4 3/8																	3.88
2M	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
3	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
4	48	42	3	1	6	4	9 3/4	2	6 1/4	5 7/8																	7.00
5	60	52	3	1 1/2	8	5	13	2 1/2	7 7/8	7 1/4																	10.83
6																											
7	18	15 1/2	1	3/8	2 1/2	1 1/2	3 7/8	5/8	2 3/8	2 1/4																	0.97

STANDARD SIGN
R1-2

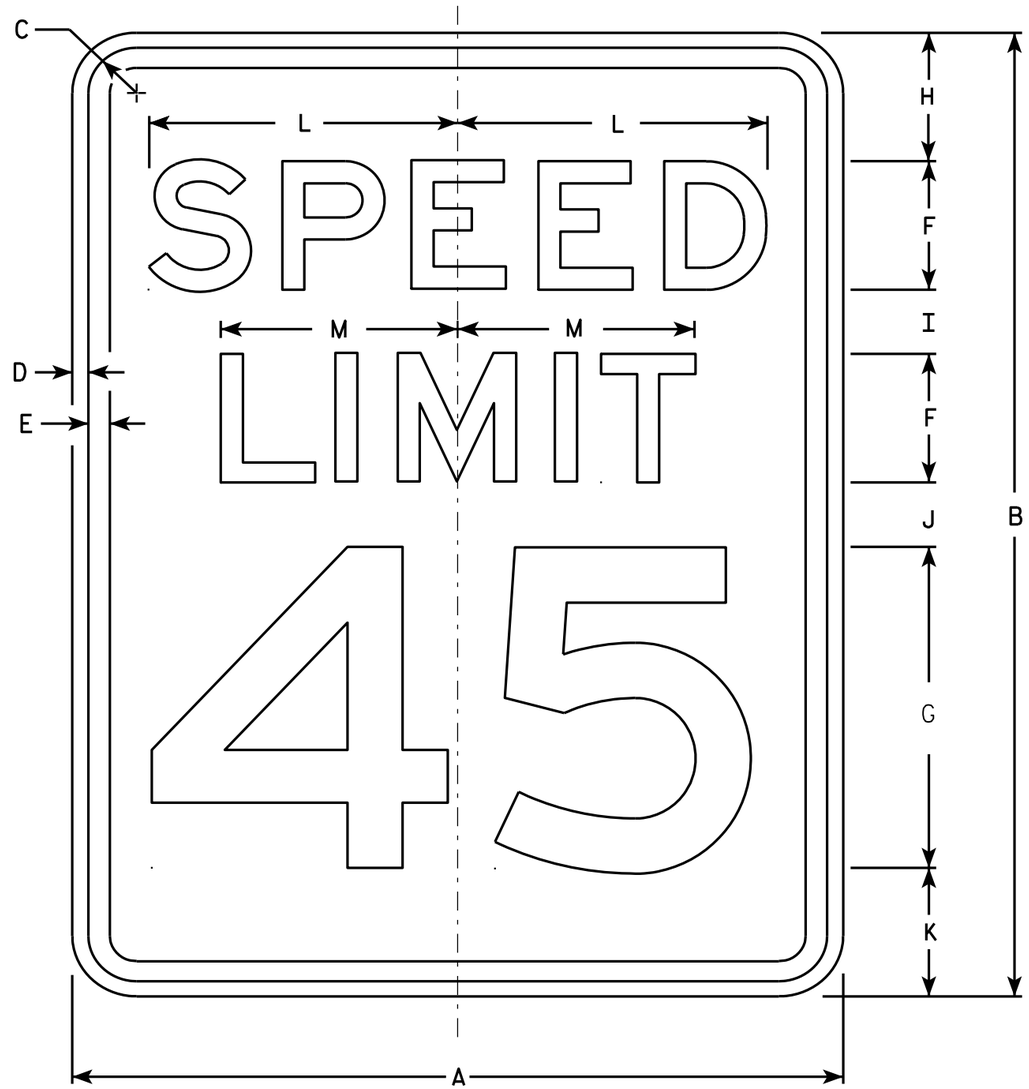
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 10/13/14 PLATE P1-2.12

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R12.DGN PLOT DATE : 13-OCT-2014 15:12 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 5.837526:1.000000
WISDOT/CADDS SHEET 42



R2-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - E
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Substitute appropriate numerals and optically adjust spacing to achieve proper balance.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	18	24	1 1/8	3/8	1/2	3	8	3	2	2	3	7 1/4	5 1/2														3.0
2S	24	30	1 1/8	3/8	1/2	4	10	3	2 1/4	3 3/8	3 3/8	9 5/8	7 3/8														5.0
2M	30	36	1 3/8	1/2	5/8	5	12	5	2 1/2	2 1/2	4	12	9 1/4														7.5
3	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
4	36	48	1 3/8	1/2	5/8	6	14	6	5	5	6	14 3/8	11														12.0
5	48	60	2 1/4	3/4	1	8	20	6	4 1/2	6 3/4	6 3/4	19 1/4	14 5/8														20.0

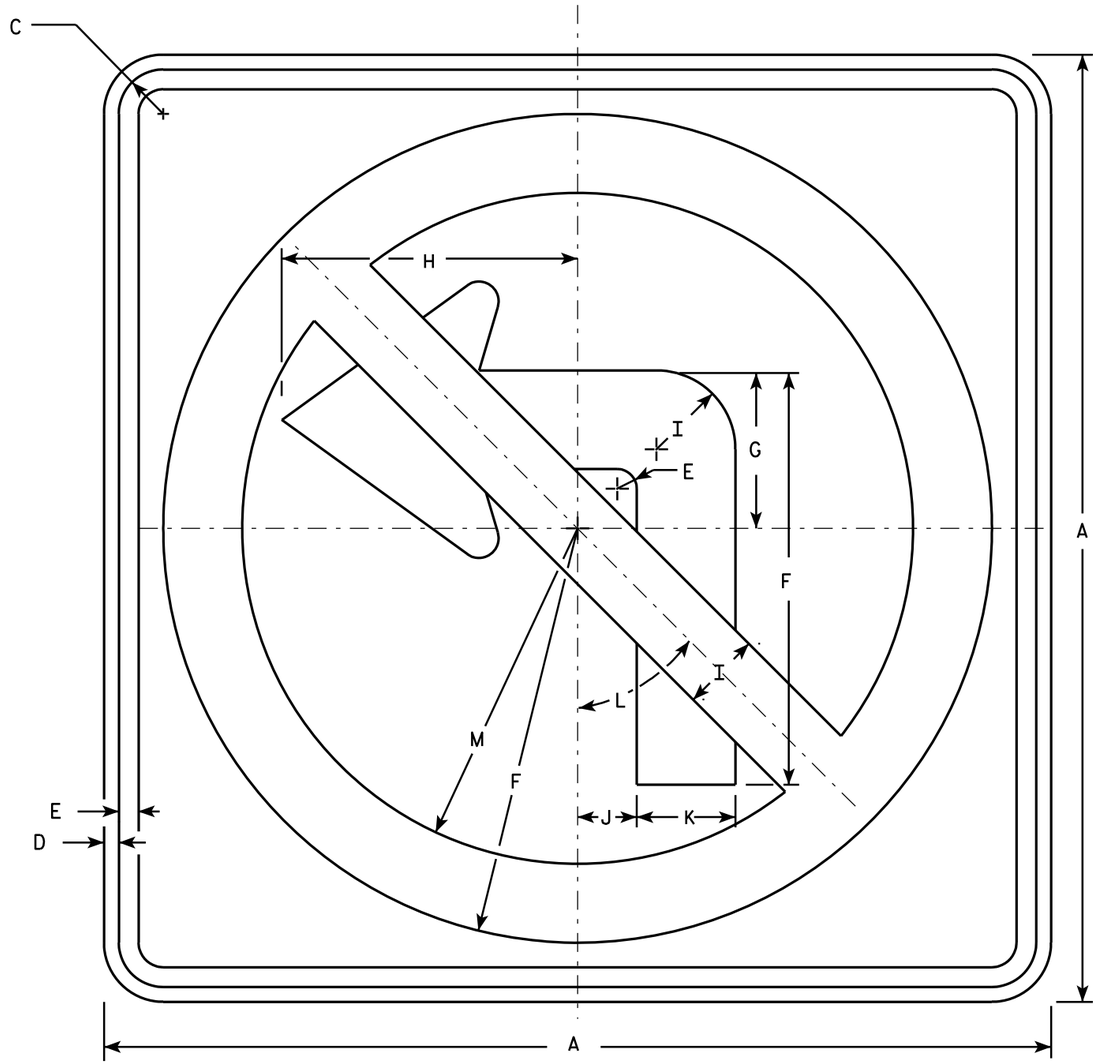
STANDARD SIGN
R2-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 5/26/10 PLATE NO. R2-1.13

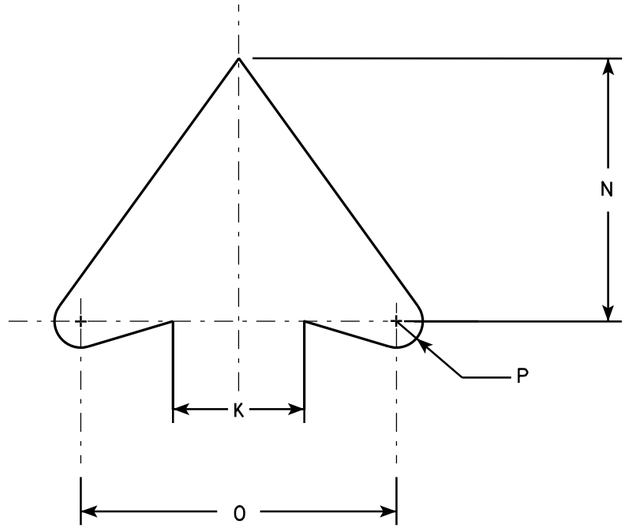
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 444	E



R3-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - See note 4
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. Border & Arrow are non reflective black, the circle with diagonal bar is reflective red.



ARROW DETAIL

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2S	24		1 1/8	3/8	1/2	10 1/2	4	7 1/2	2	1 1/2	2 1/2	45°	8 1/2	5	6	1/2											4.0
2M	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
3	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
4	36		1 5/8	5/8	3/4	15 3/4	6	11 1/4	3	2 1/4	3 3/4	45°	12 3/4	7 1/2	9	3/4											9.0
5	48		2 1/4	3/4	1	21	8	15	4	3	5	45°	17	10	12	1											16.0

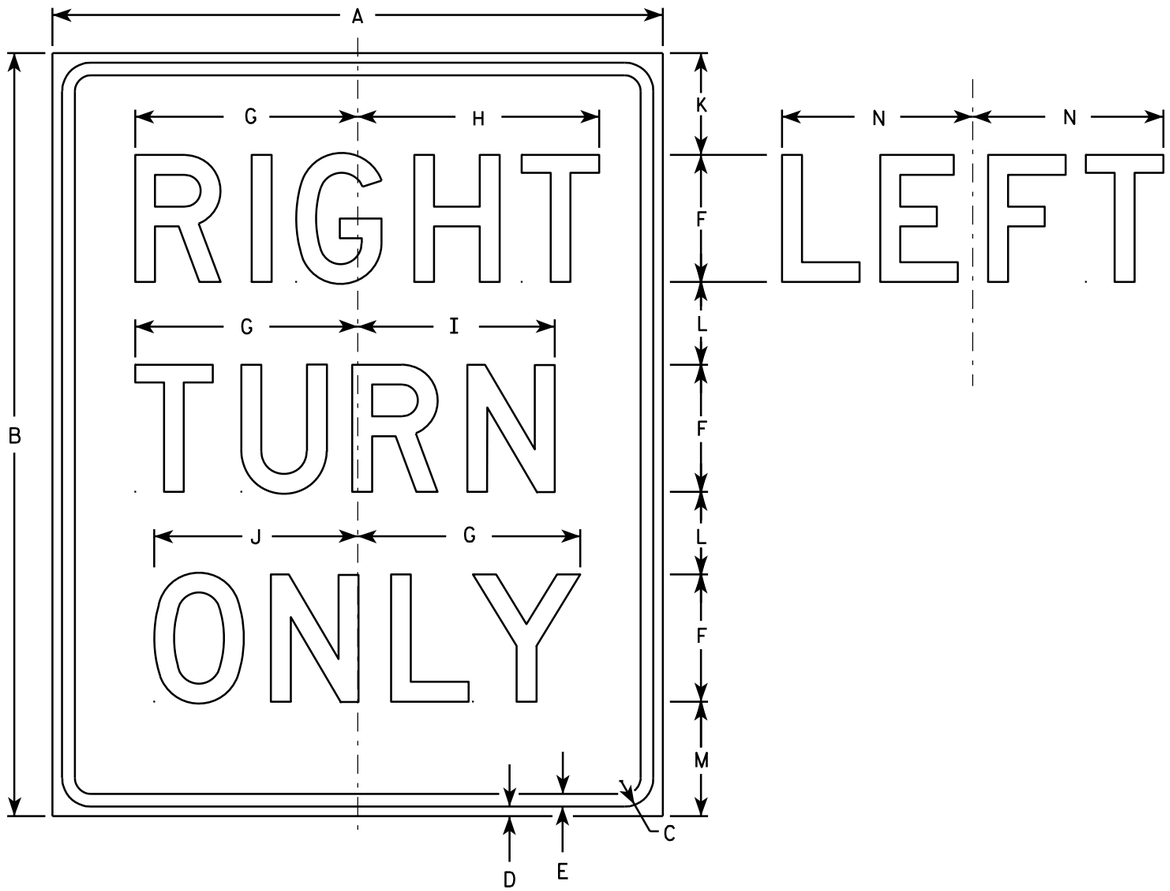
STANDARD SIGN
R3-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/08/10 PLATE NO. R3-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 445	E



R3-53R

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R3-53L same as R3-53R except LEFT is substituted for RIGHT.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
2M	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
3	24	30	1 1/8	3/8	1/2	5	8 3/4	9 1/2	7 3/4	8	4	3 1/4	4 1/2	7 1/2													5.0
4																											
5																											

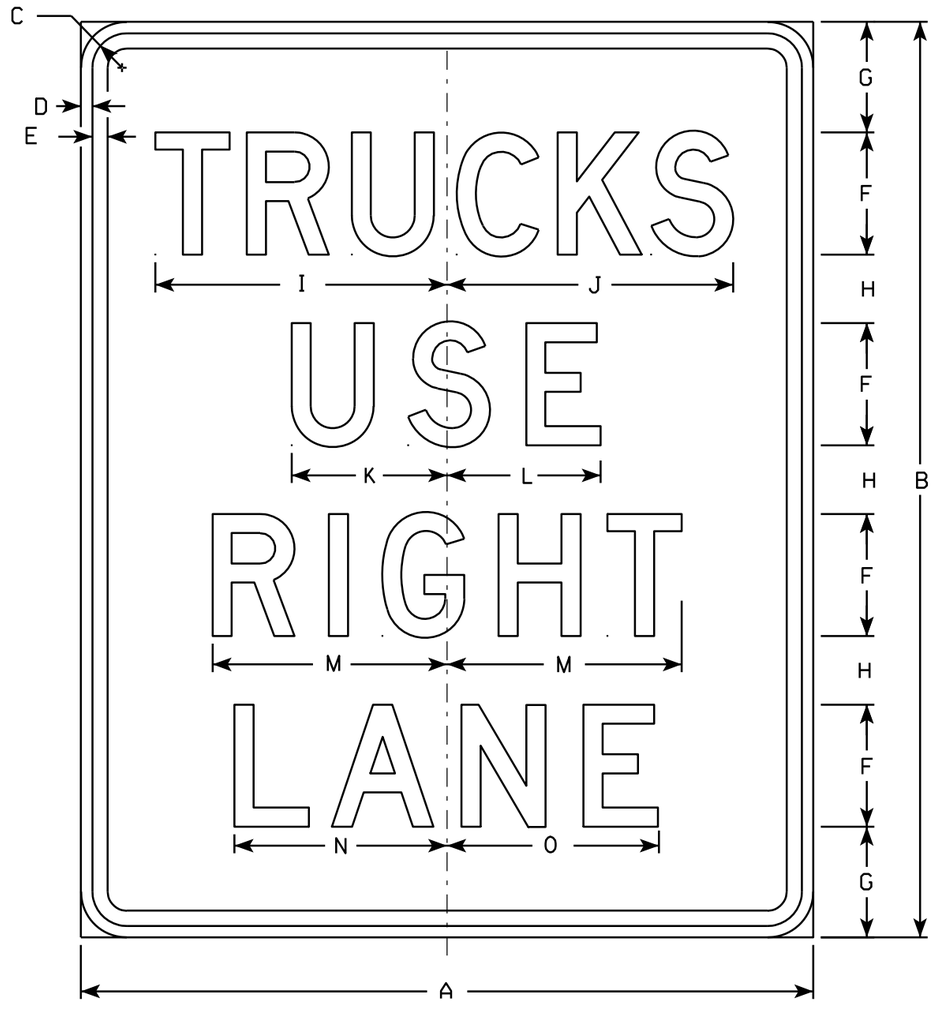
STANDARD SIGN
R3-53

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/24/2011 PLATE NO. R3-53.8

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 446	E

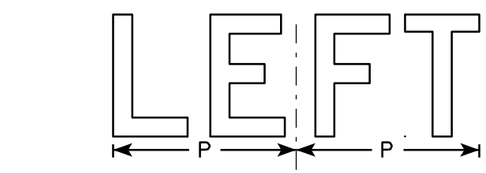


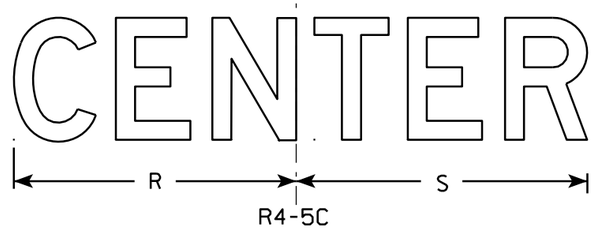
R4-5

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. R4-5L & R4-5C are the same as R4-5 except LEFT or CENTER replaces RIGHT as order by code.

R4-5L





R4-5C

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 5/8	9 3/8	5 1/8	5 1/8	7 3/4	7 1/4	7	6		9 1/4	9 1/2								5.0
2M	24	30	1 1/8	3/8	1/2	4	3 5/8	2 1/4	9 5/8	9 3/8	5 1/8	5 1/8	7 3/4	7 1/4	7	6		9 1/4	9 1/2								5.0
3																											
4	36	48	2 1/4	5/8	3/4	6	6	4	14 3/8	14 1/8	7 7/8	7 7/8	12 1/4	10 3/4	10 1/2	9 5/8		13 7/8	14 1/4								12.0
5	48	60	2 1/4	3/4	1	8	7 1/4	4 1/2	19 1/8	18 3/4	10 1/4	10 1/8	15 3/8	14	13 7/8	12		18 1/2	19 1/8								20.0

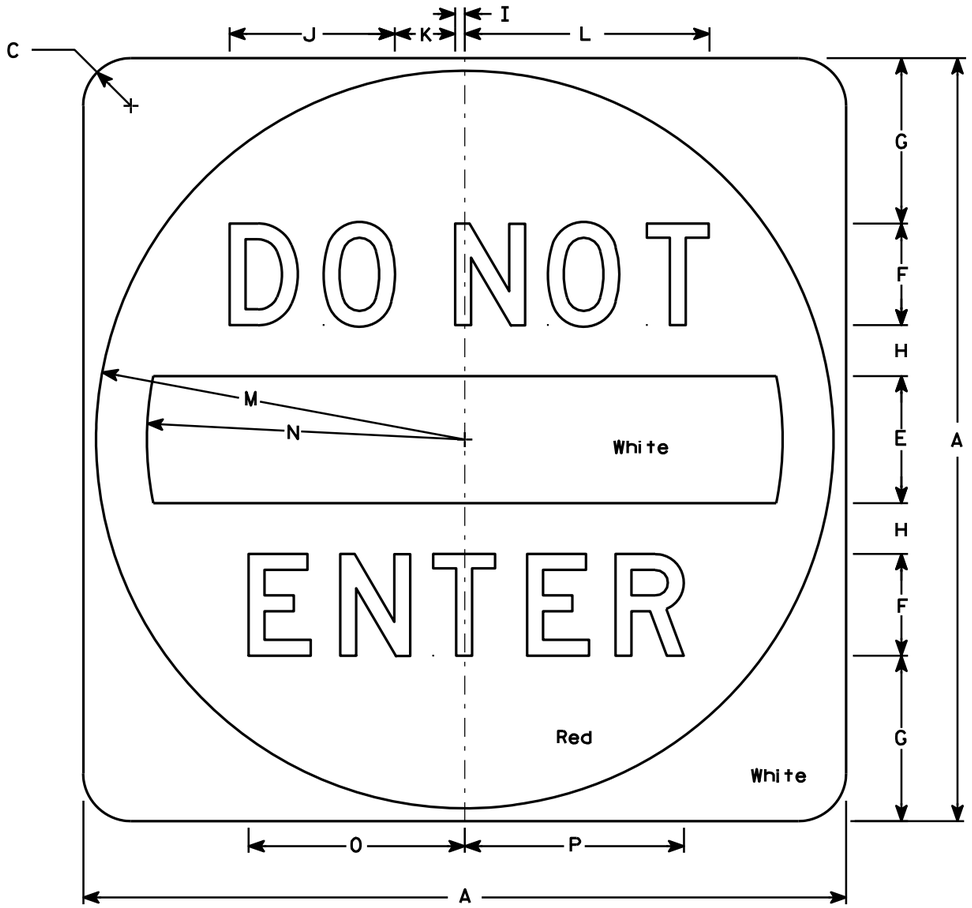
STANDARD SIGN
R4-5

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/25/2011 PLATE NO. R4-5.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 447	E



R5-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - See detail
   Message - White - Type H Reflective
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but when base material is metal, the cornors shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	30		1 7/8		5	4	6 1/2	2	3/8	6 1/2	2 3/8	9 5/8	14 1/2	12 1/2	8 1/2	8 5/8											6.26
2M	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
3	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
4	36		2 1/4		6	5	7 1/2	2 1/2	1/2	8 1/8	3	12 1/8	17 1/2	15	10 5/8	10 3/4											9.0
5	48		3		8	6	11	3	5/8	9 3/4	3 5/8	14 1/2	23 1/2	20	12 3/4	12 7/8											16.0

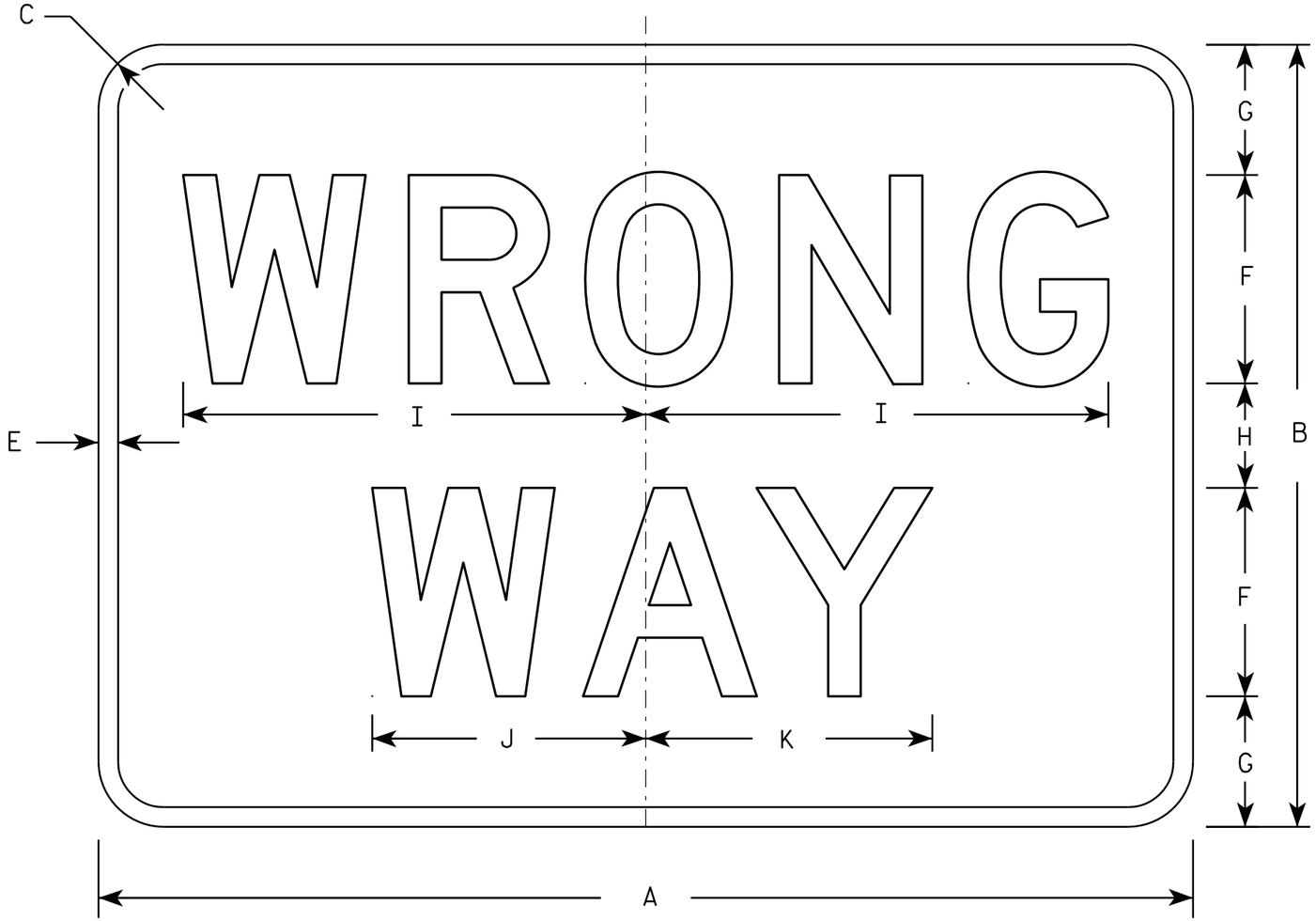
STANDARD SIGN
R5-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1.15

PROJECT NO: | HWY: | COUNTY: | SHEET NO: 448 | E



R5-1A

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Red
   Message - White
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30	18	1 1/2		1/2	5	3	2	11	6 1/2	6 7/8																3.75
2S	36	24	2		5/8	6	4 1/2	3	13 1/4	7 7/8	8 1/4																6.00
2M	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
3	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
4	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75
5	42	30	2 1/2		3/4	8	5	4	17 3/4	10 1/2	11																8.75

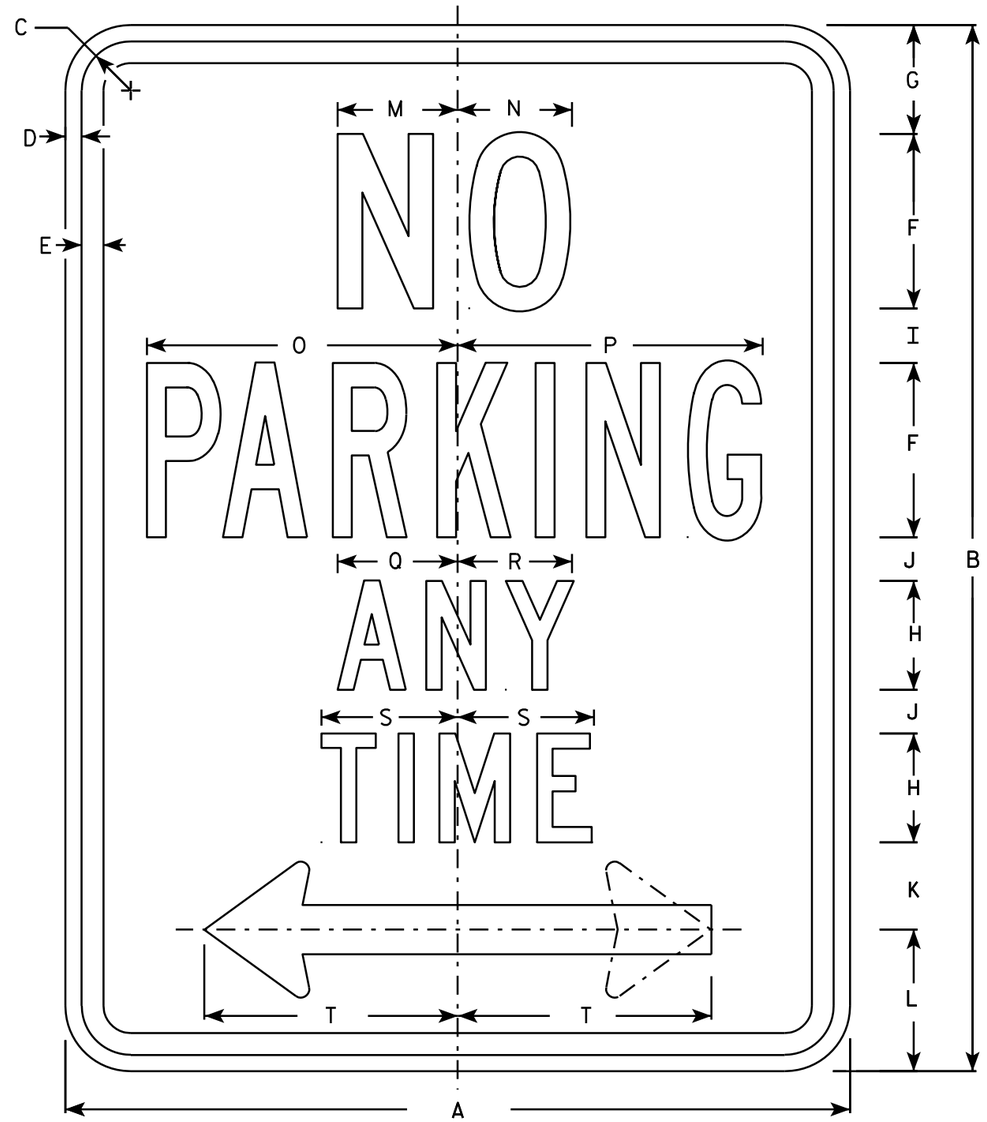
STANDARD SIGN
R5-1A

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 12/17/10 PLATE NO. R5-1A.2

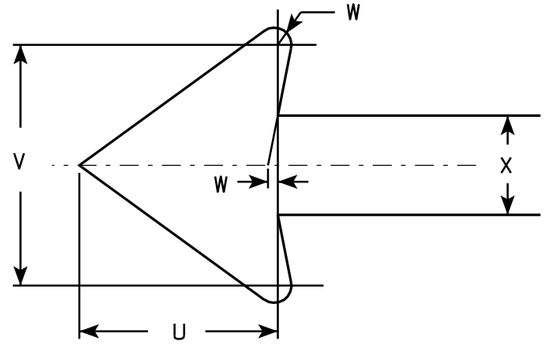
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 449 | E



R7-1

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Red
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Lines 1, 3 and 4 are series C, line 2 is series B.
6. R7-1D (double arrow)
   R7-1L (left arrow)
   R7-1R (right arrow)



SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	12	18	1 1/8	3/8	3/8	3	1 7/8	2	7/8	5/8	1 1/2	2 1/2	2	2	4 7/8	4 7/8	2 1/4	2 1/8	2 1/2	3 7/8	1 1/2	1 3/4	1/8	3/4			1.5
2S	18	24	1 1/8	3/8	1/2	4	2 1/2	2 1/2	1 1/4	1	2	3 1/4	2 3/4	2 5/8	7 1/8	7	2 3/4	2 5/8	3 1/8	5 7/8	2 1/4	2 5/8	1/4	1 1/8			3.0
2M	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
3	24	30	1 1/8	3/8	1/2	5	3	3	2	1 1/4	2 1/2	4	3 1/4	3 3/8	9 1/4	9 1/4	3 1/4	3 1/4	3 3/4	7 3/4	3	3 1/2	1/4	1 1/2			5.0
4																											
5																											

STANDARD SIGN
R7-1

WISCONSIN DEPT OF TRANSPORTATION

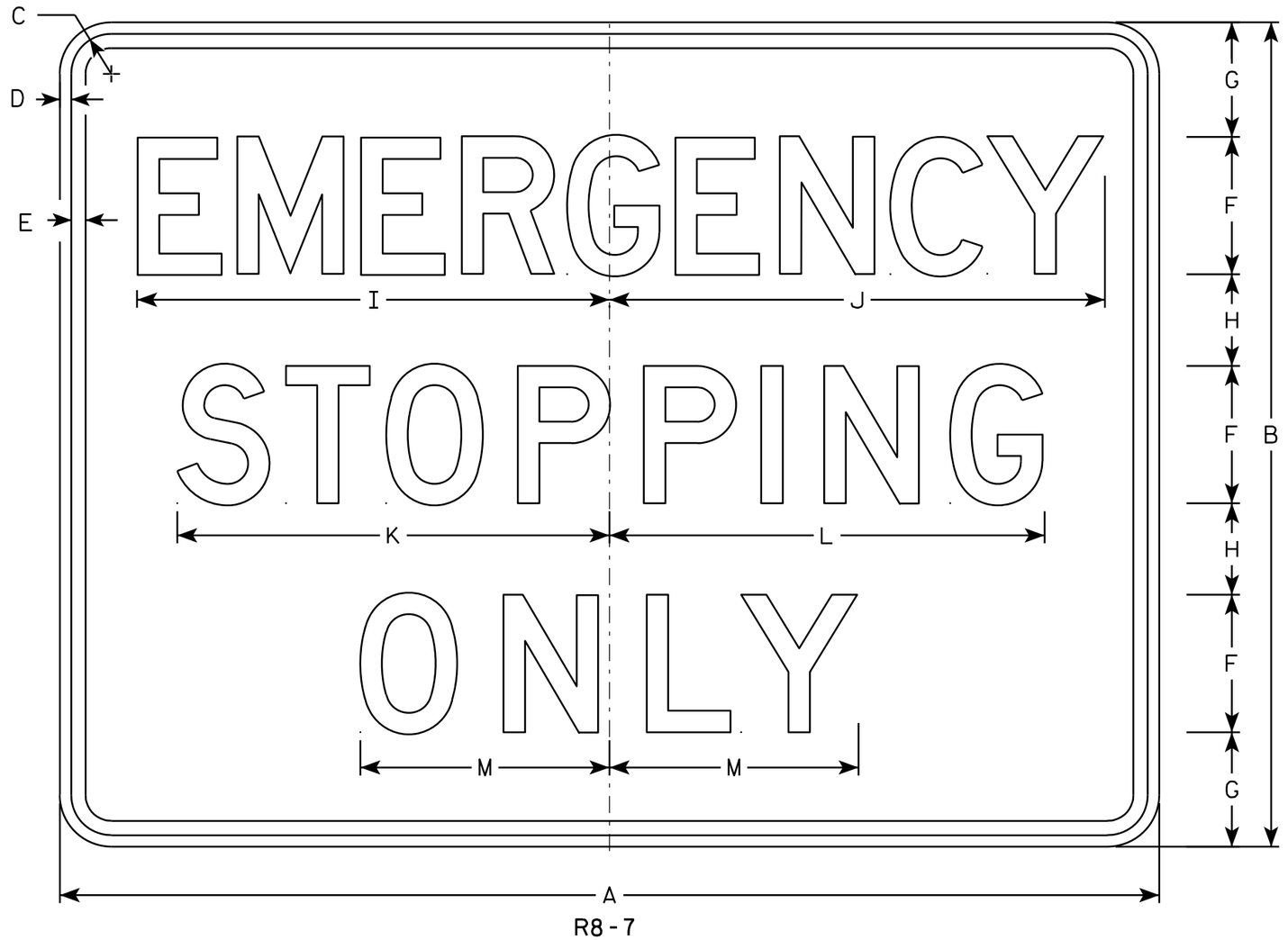
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R7-1.9

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 450	E

FILE NAME : C:\Users\PROJECTS\tr_stdplate\R71.DGN PLOT DATE : 31-MAR-2011 09:20 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 3.476110:1.000000

WISDOT/CADDS SHEET 42



NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	48	36	1 3/4	1/2	5/8	6	5	4	20 5/8	21 5/8	18 7/8	19	10 7/8														12.0
5	48	36	1 3/4	1/2	5/8	6	5	4	20 5/8	21 5/8	18 7/8	19	10 7/8														12.0

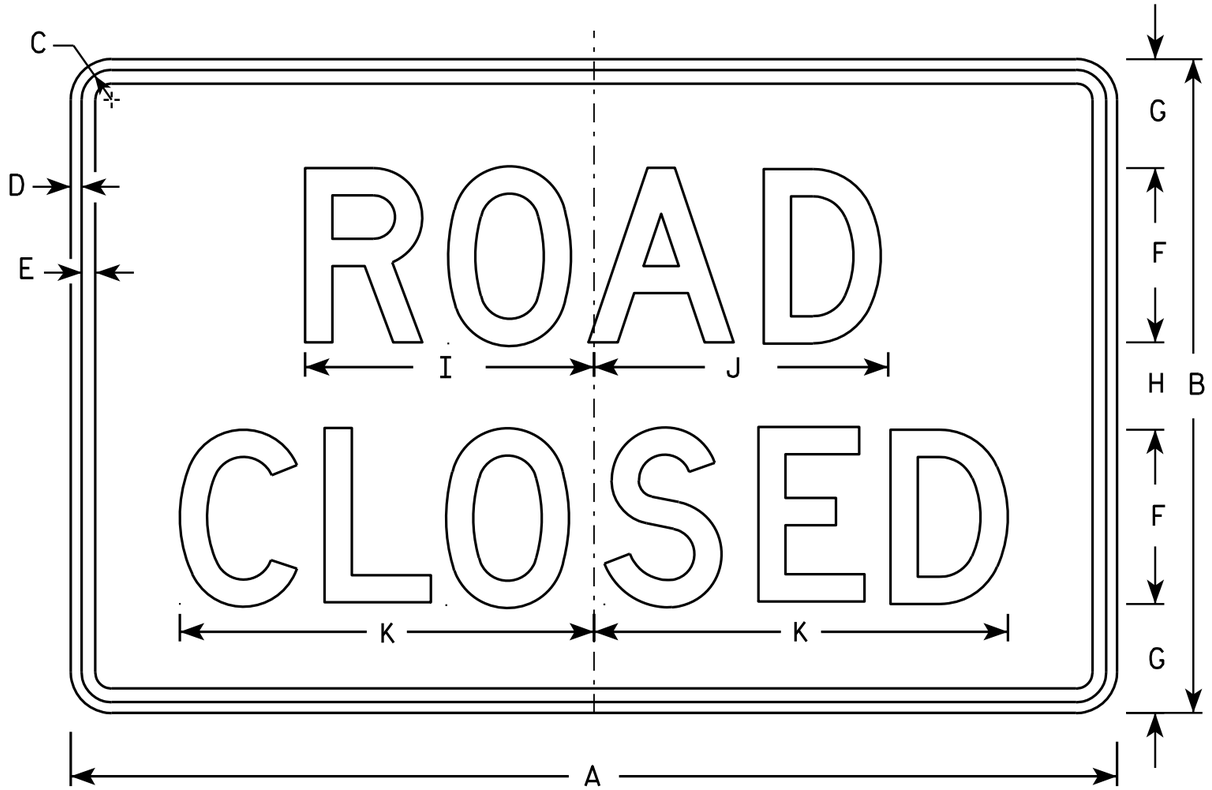
STANDARD SIGN
R8 - 7

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/31/2011 PLATE NO. R8-7.6

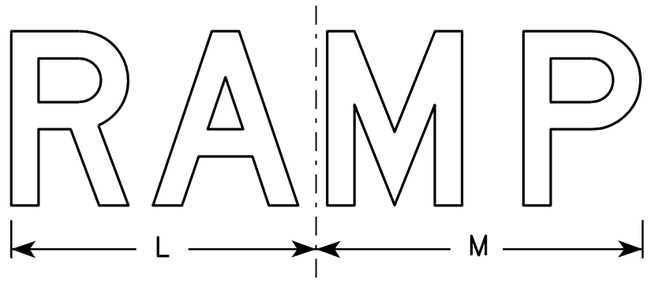
PROJECT NO: | HWY: | COUNTY: | SHEET NO: 451 | E



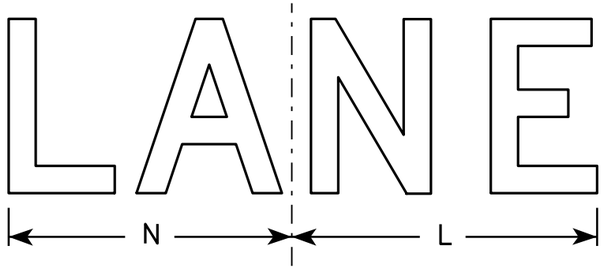
R11-2

NOTES

1. Sign is Type II - Type H Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - D
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. Modify the message as required.



R11-2R



R11-2L

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
2M	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
3	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
4	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0
5	48	30	1 3/8	1/2	5/8	8	5	4	13 1/4	13 1/2	19	14	15	13													10.0

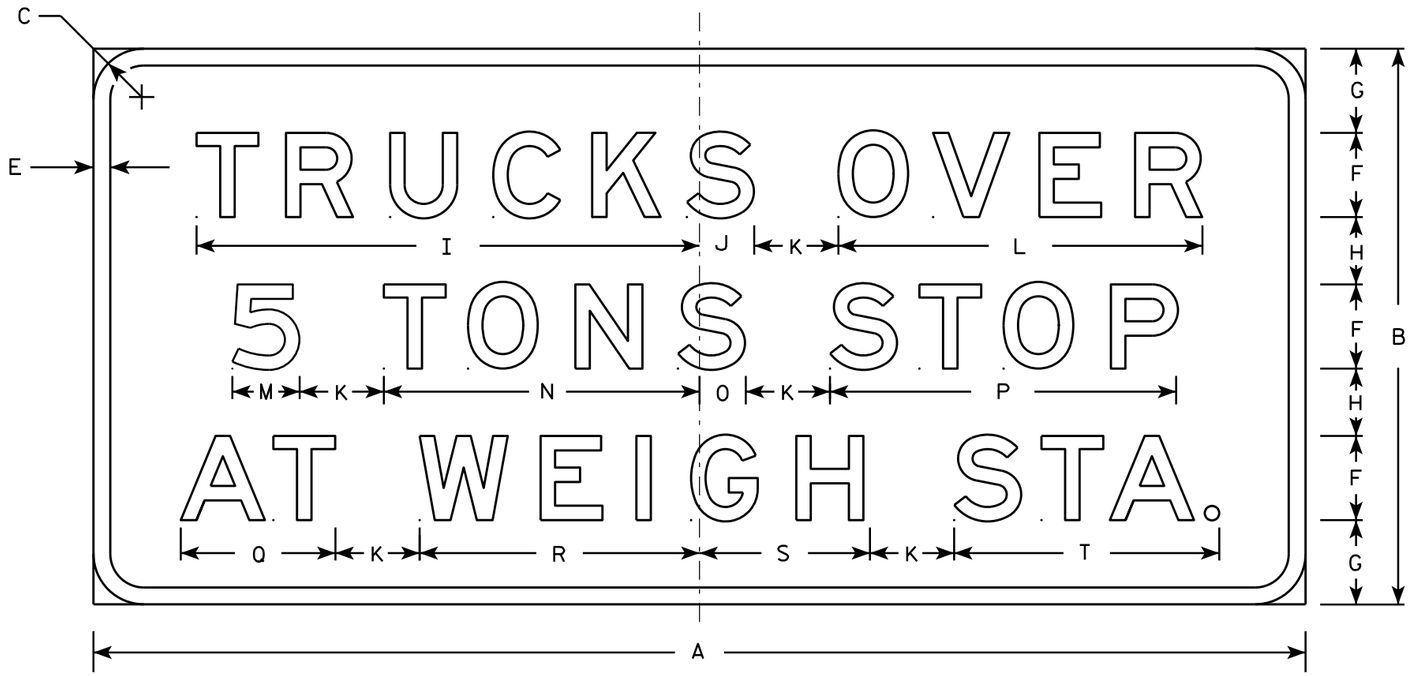
STANDARD SIGN
R11-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R11-2.10

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 452	E



R13-1

NOTES

1. Sign is Type I or Type II - Non-Reflective
2. Color:
   Background - Black (Non-reflective)
   Message - White Type H Reflective
3. Message Series - E
4. Corners may be square or rounded but borders shall be rounded as shown.
5. Code sizes 2 & 4 are Type II, Code size 5 is Type I. All code sizes have a non-reflective background.
6. Base material for Type II signs shall be plywood.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S	90	36	3		1	6	5	4	36	3 7/8	6	26 1/8	4 3/4	22 3/4	3 1/4	25	11 1/8	19 7/8	12 1/4	19 1/2							22.5
2M	90	36	3		1	6	5	4	36	3 7/8	6	26 1/8	4 3/4	22 3/4	3 1/4	25	11 1/8	19 7/8	12 1/4	19 1/2							22.5
3																											
4	120	48	6		1	8	7	5	47 7/8	5 1/8	8	34 3/4	6 3/8	30 1/8	4 3/8	33 1/8	14 7/8	26 3/8	17 1/8	26 1/8							40.0
5	144	66	6		2	10	10	8	59 3/4	6 1/2	10	43 1/4	8	37 1/2	5 1/2	36 7/8	17 3/4	33 1/4	20 1/4	31 1/2							66.0

STANDARD SIGN
R13-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

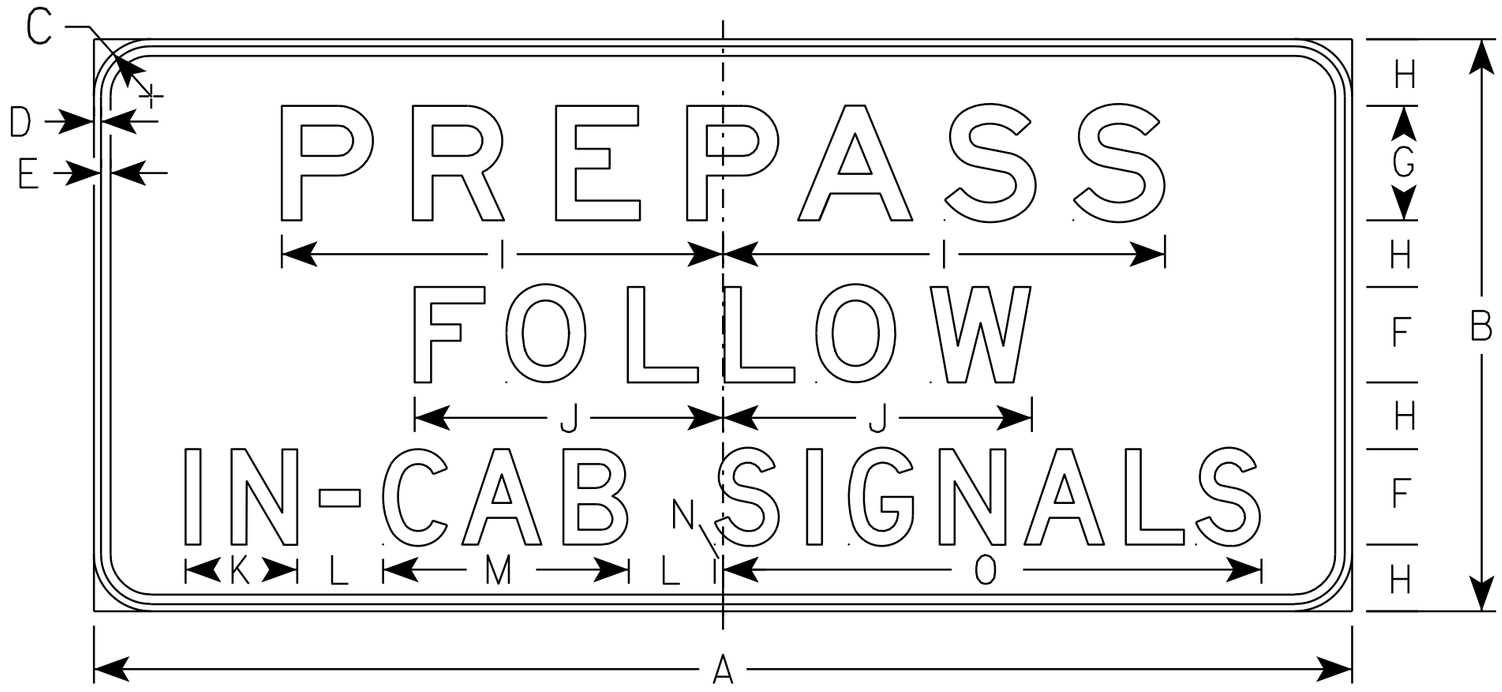
DATE 6/23/14 PLATE NO R13-1.7

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E

FILE NAME : C:\CAEFiles\Projects\tr_stdplate\R131.DGN PLOT DATE : 23-JUN-2014 17:08 PLOT BY : mscsja PLOT NAME : PLOT SCALE : 17.999037:1.000000
WISDOT/CADDS SHEET 42

NOTES

1. All Signs are Type I - Type SH Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - White
   Message - Black
3. Message Series - Series E - Line 1 & 2
   Series C - Line 3



R13-49

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1																											
2S																											
2M																											
3																											
4	132	60	6	3/4	1	10	12	7	46 1/4	32 3/8	11 3/4	9	25 3/4	7/8	56 1/2												55.0
5																											

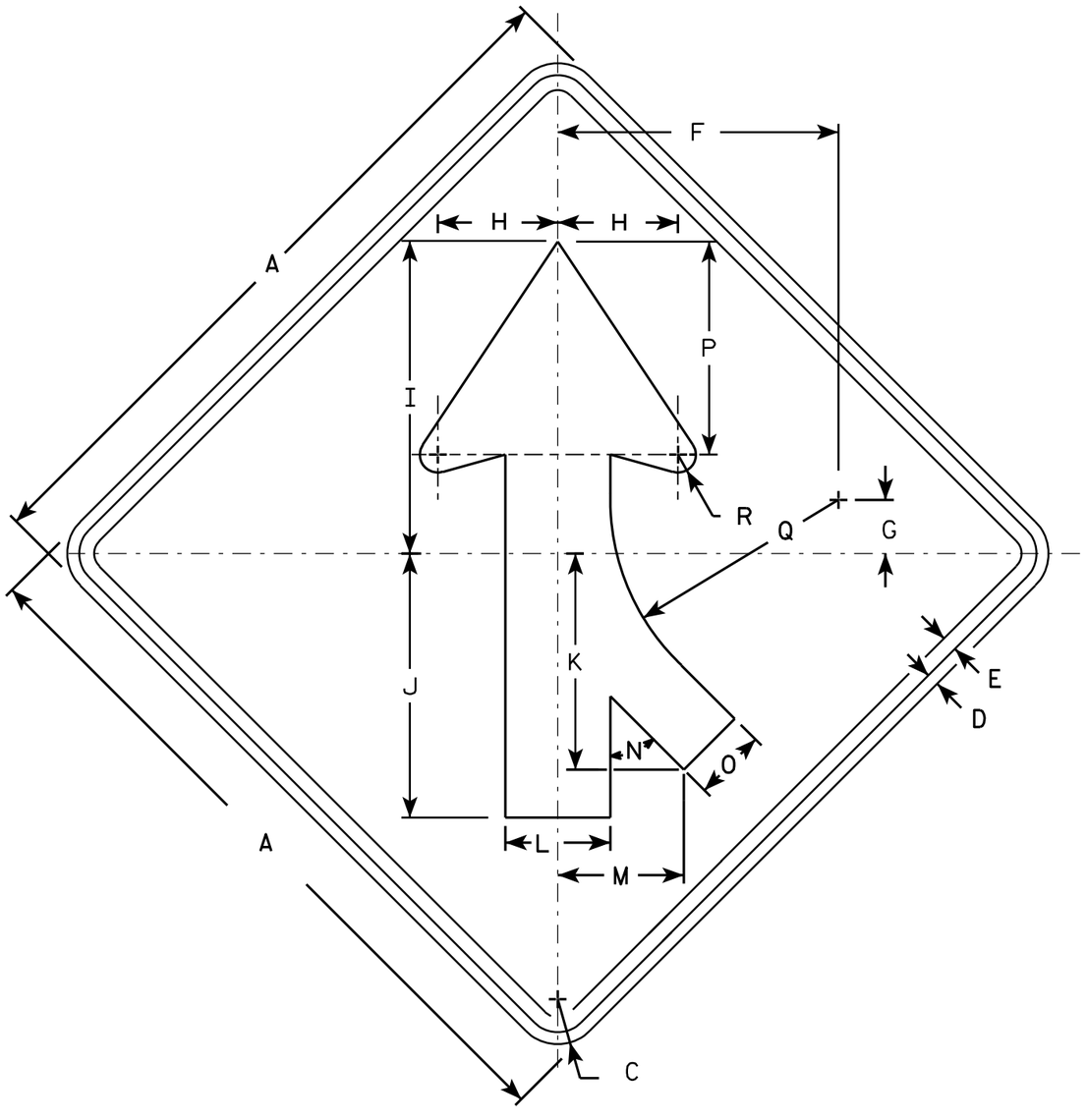
STANDARD SIGN
R13-49

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 4/1/11 PLATE NO. R13-49.3

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 454	E



W4-1 R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-1L is the same as W4-1R except the arrow is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	11 5/8	2 1/2	5	13	11	9	4 3/8	5 1/4	45°	3	8 7/8	9 1/2	3/4									6.25
2S	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
2M	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
3	36		1 5/8	5/8	3/4	14	2 3/4	6	15 3/4	13 1/4	10 1/4	5 1/4	6 3/8	45°	3 5/8	10 5/8	11 3/8	7/8									9.0
4	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0
5	48		2 1/4	3/4	1	18 3/4	3 5/8	8	20 1/2	17 1/2	14 3/8	7	8 3/8	45°	4 3/4	14 1/4	15 1/4	1 1/4									16.0

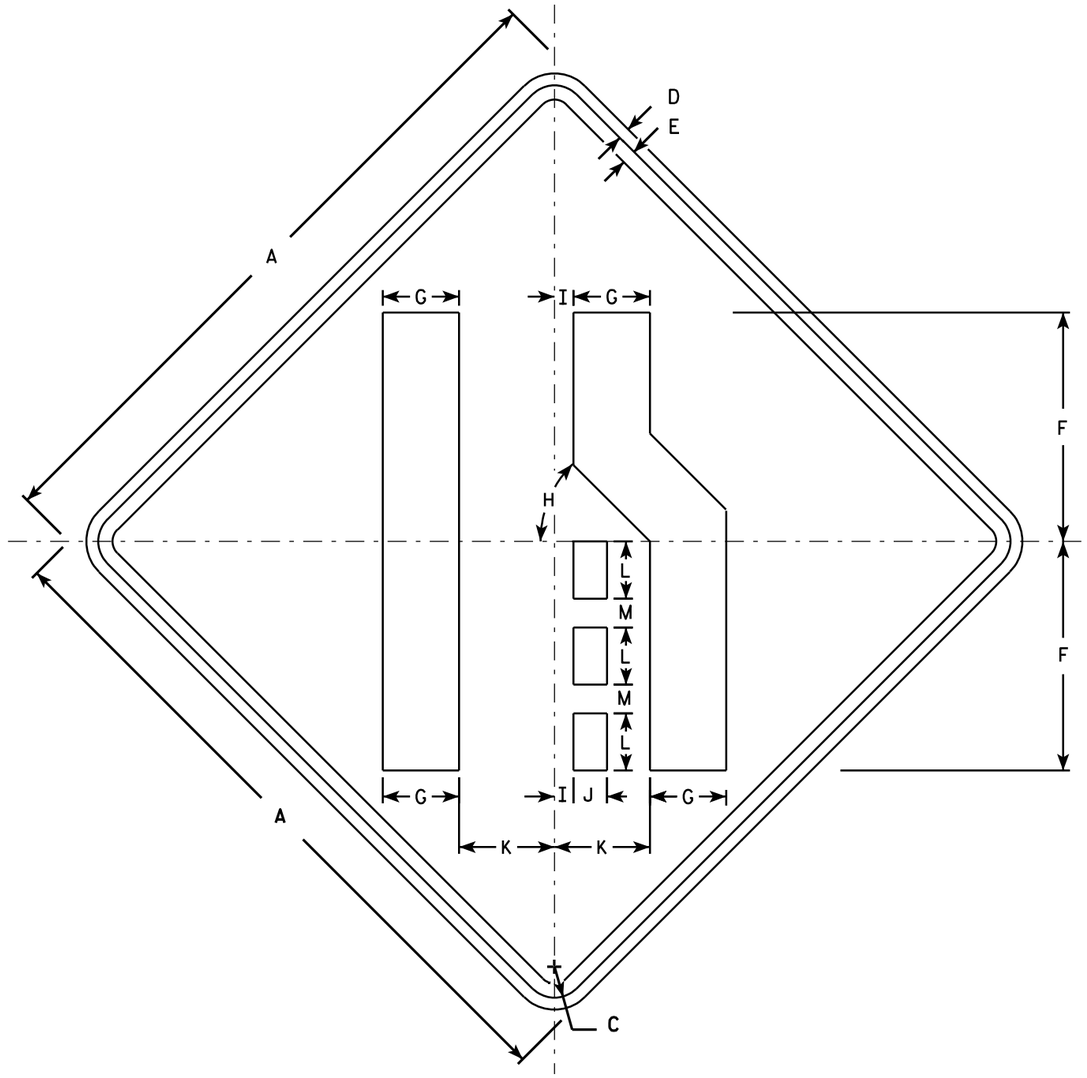
STANDARD SIGN
W4-1

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rausch for State Traffic Engineer

DATE 03/12/13 PLATE NO. W4-1.14

PROJECT NO:	HWY:	COUNTY:		SHEET NO: 455	E



W4-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Yellow
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W4-2L is the same as W4-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	30		1 3/8	1/2	5/8	10	3 3/8	45°	7/8	1 1/2	4 1/4	2 1/2	1 1/4														6.25
2S	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2M	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
3	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W4-2

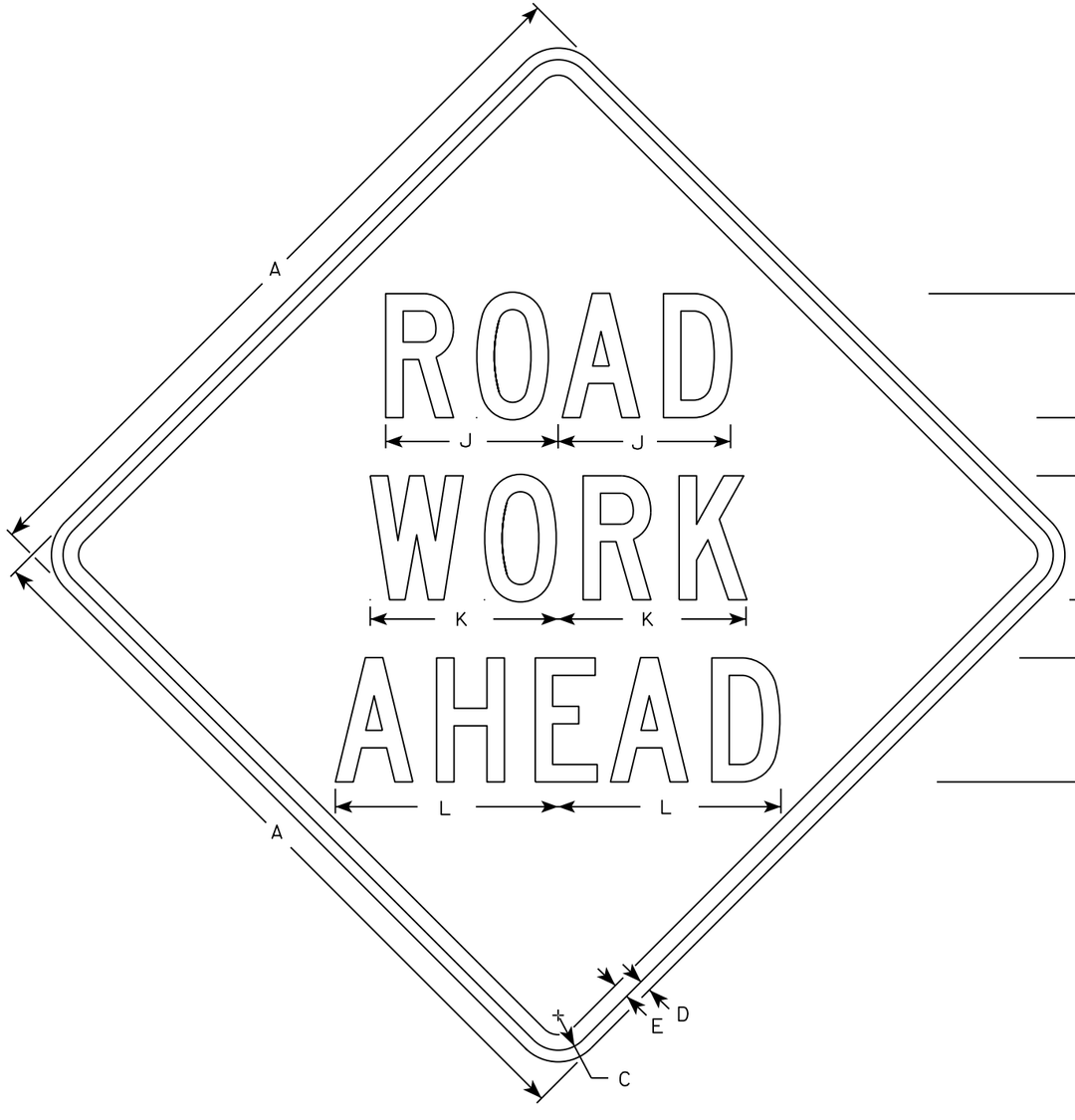
WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

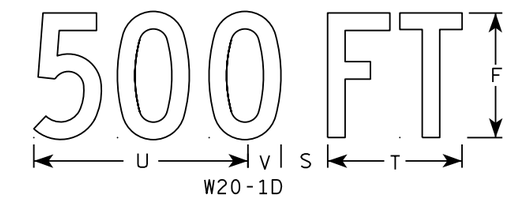
DATE 3/12/13 PLATE NO. W4-2.14

PROJECT NO:

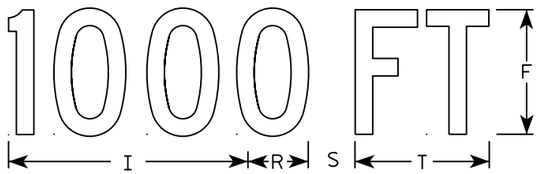
SHEET NO: 456 E



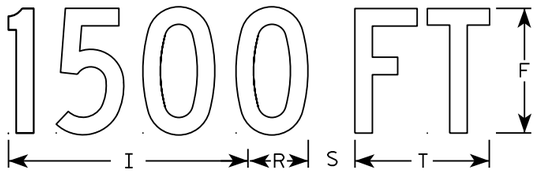
W20-1A



W20-1D

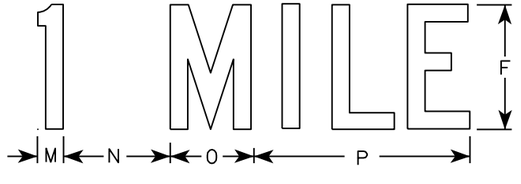


W20-1C

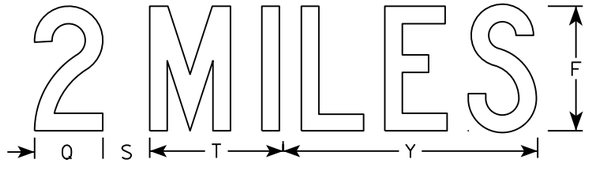


W20-1B

W20-1G



W20-1F



W20-1E

NOTES

1. Sign is Type II - Type F Reflective
2. Color:
   Background - Orange
   Message - Black
3. Message Series - C
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 3/8	1/2	5/8	5	2 5/8	3 1/4	10 1/8	7	7 5/8	8 7/8	1 1/8	4 1/2	3 1/2	9		2 1/2	2 1/4	5 5/8	9	1 3/8	8	1 3/4	10 3/4	6	9.0
2S	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
2M	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
3	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
4	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0
5	48		2 1/4	3/4	1	8	3 3/4	5 1/8	15 3/8	11 1/8	12 1/8	14 3/8	1 5/8	6 7/8	5 3/8	13 7/8	4 3/8	3 7/8	3	8 5/8	13 3/4	2 1/8	11 7/8	2 3/4	16 3/8	9	16.0

STANDARD SIGN
W20-1A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

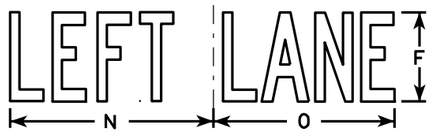
DATE 5/07/15 PLATE NO. W20-1.10

PROJECT NO:

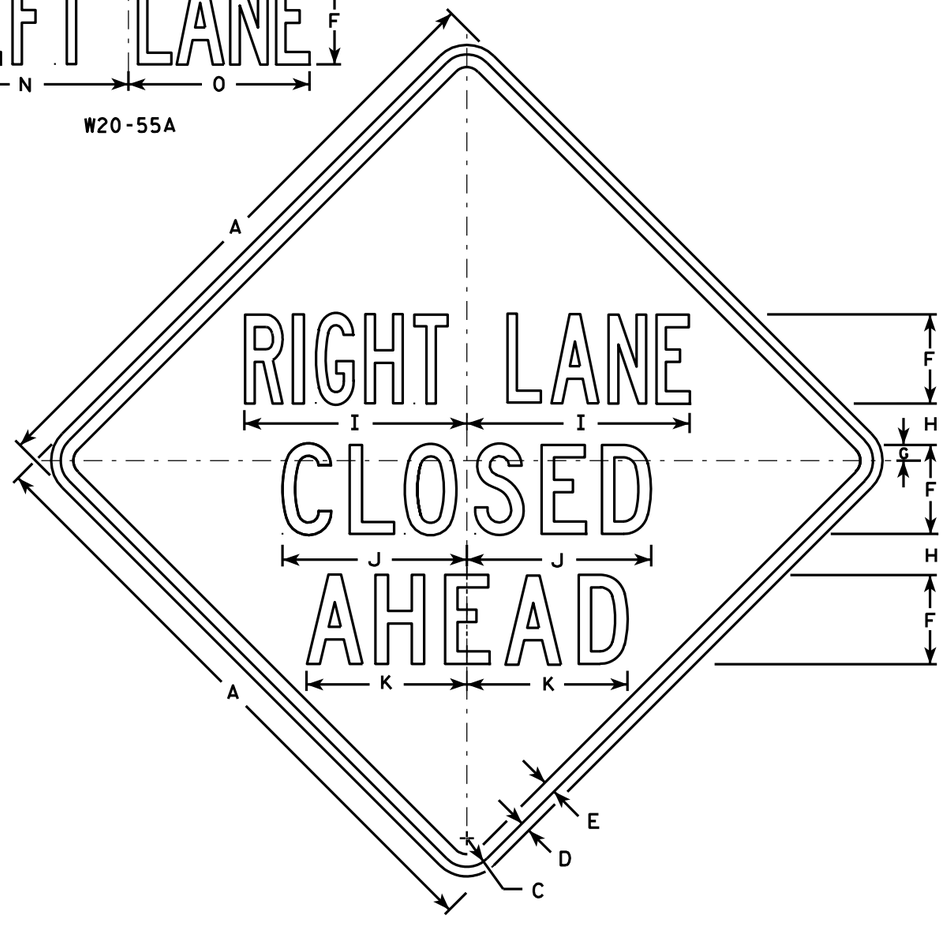
SHEET NO: E

FILE NAME : C:\CAEfiles\Projects\tr_stdplate\W201.DGN PLOT DATE : 01-DEC-2015 18:24 PLOT BY : $$ plotuser $$

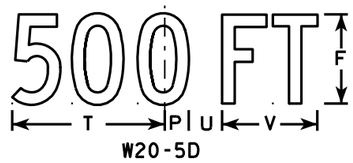
W20-56A



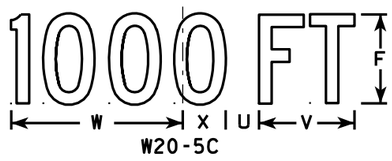
W20-55A



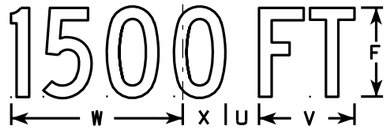
W20-5A



W20-5D



W20-5C



W20-5B

W20-5G

W20-5F

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Message Series - See Note 5
4. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
5. " _____ LANE" is Series B.
   All other copy is Series C.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36	6	1 5/8	5/8	3/4	5	1/8	2 1/2	13 1/8	10 3/4	9 1/2	14 1/4	13 5/8	12	12	1 3/8	1 1/8	4 1/2	3 1/2	9	1 1/8	5 5/8	10 1/8	2 1/2	1 3/4	8	9.0
2S	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
2M	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
3	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
4	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0
5	48	8	2 1/4	3/4	1	7	1 1/4	3 1/4	17 1/2	14 3/8	12 5/8	19	18 3/8	16	14 1/4	1 7/8	1 1/2	6	4 5/8	12	2 5/8	7 1/2	13 1/2	3 3/8	2 3/8	10 5/8	16.0

STANDARD SIGN
W20-5A, B, C, D, F & G

WISCONSIN DEPT OF TRANSPORTATION

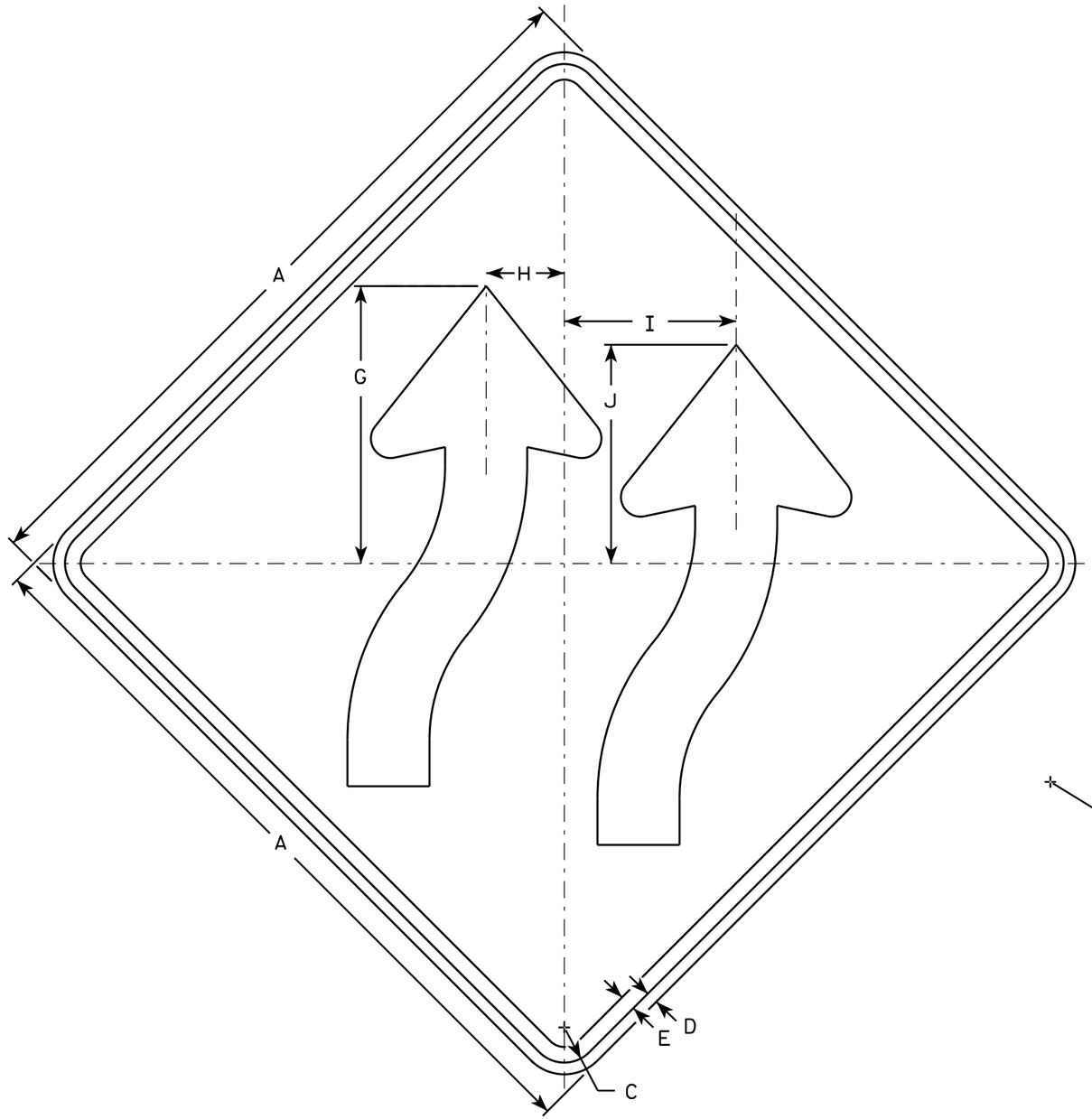
APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 3/18/11 PLATE NO. W20-5.11

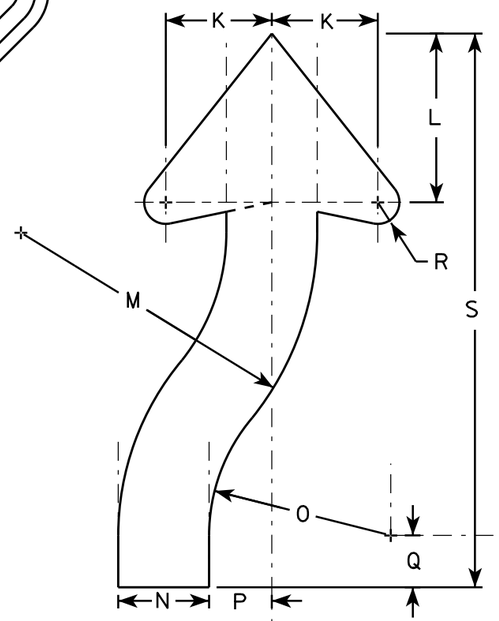
PROJECT NO:	HWY:	COUNTY:		SHEET NO: 458	E

7

FILE NAME : C:\Users\PROJECTS\tr_stdplate\W205.DGN PLOT DATE : 18-MAR-2011 12:15 PLOT BY : mscj9h PLOT NAME : PLOT SCALE : 11.918087:1.000000
WISDOT/CADDS SHEET 42



W01-4bR



NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W01-4bL is the same as W014-bR exept arrows are reversed along the vertical centerline

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4		13 3/8	3 3/4	8 1/4	10 1/2	4 5/8	7 3/8	12 7/8	3 7/8	7 7/8	2 3/4	2 1/4	7/8	24								9.0
2S	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
2M	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
3	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
4	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0
5	48		2 1/4	3/4	1		17 3/4	5	11	14	6 1/8	9 3/4	17 1/8	5 1/4	10 1/2	3 5/8	3	1 1/4	32								16.0

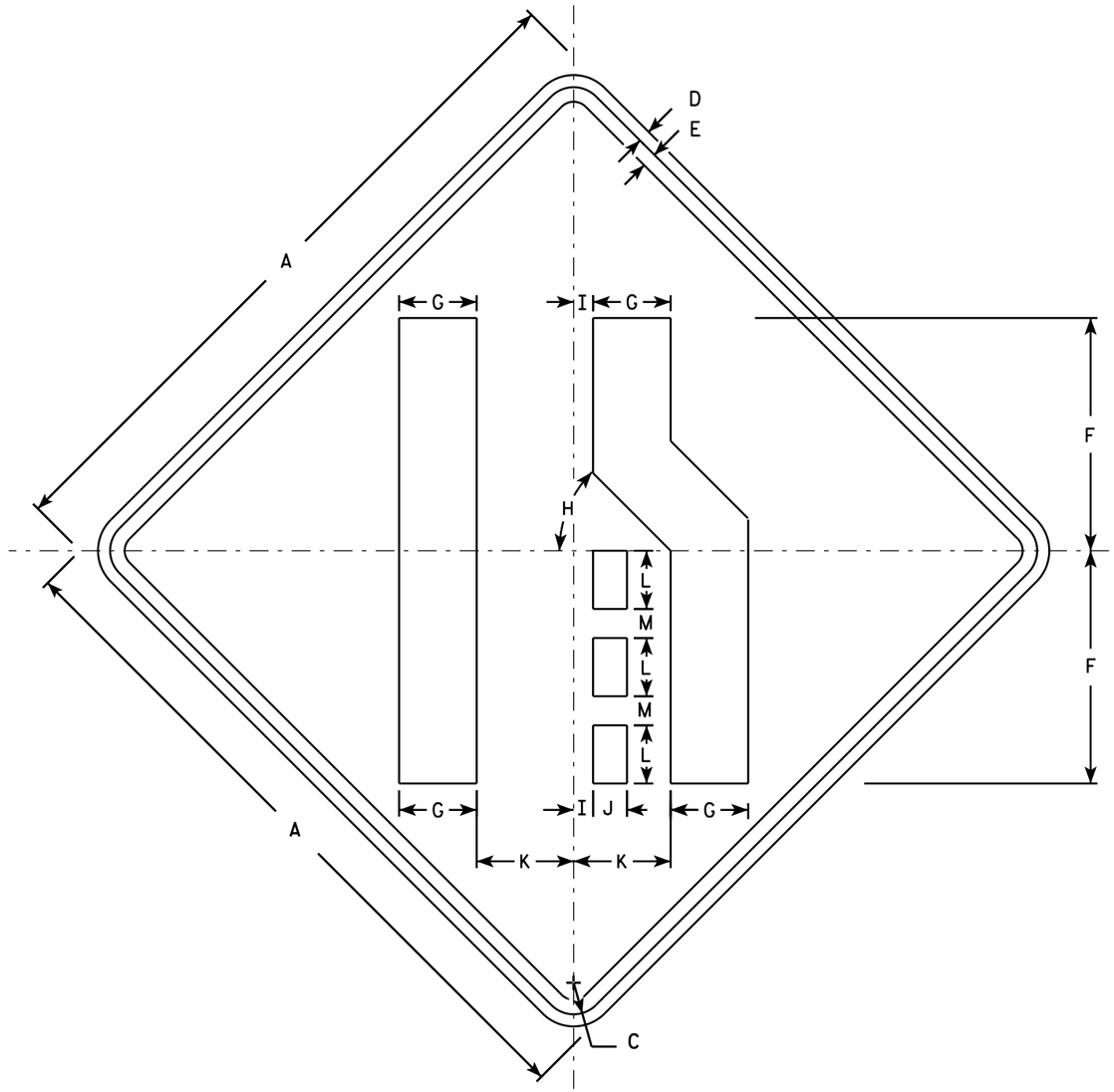
STANDARD SIGN
W01-4b

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/18/13 PLATE NO. W01-4b.1

PROJECT NO:	HWY:	COUNTY:		SHEET NO:	E



W04-2R

NOTES

1. Sign is Type II - Type F Reflective - reference WIS DOT Standard Specification for HIGHWAY and STRUCTURE CONSTRUCTION latest edition.
2. Color:
   Background - Orange
   Message - Black
3. Corners may be square or rounded when base material is plywood but borders shall be rounded as shown. When base material is metal, the corners and borders shall be rounded.
4. W04-2L is the same as W04-2R except the symbol is reversed along the vertical centerline.

SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	S	T	U	V	W	X	Y	Z	Area sq. ft.
1	36		1 5/8	5/8	3/4	12	4	45°	1	1 3/4	5	3	1 1/2														9.0
2S	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
2M	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
3	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
4	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0
5	48		2 1/4	3/4	1	16	5 3/8	45°	1 1/4	2 3/8	6 3/4	4	2														16.0

STANDARD SIGN
W04-2

WISCONSIN DEPT OF TRANSPORTATION

APPROVED Matthew R Rauch
for State Traffic Engineer

DATE 11/20/13 PLATE 460 W04-2.1

PROJECT NO: | SHEET NO: E

Notes:	
1 - Cut	Cut includes Salvaged/Unusable Pavement material
2 - Salvaged/Unusable Pavement Material	This does not show up in cross sections
3 - Fill	Does not include Unusable Pavement Exc volume
4 - Expanded Marsh Backfill	Will be backfilled with Cut or Borrow
5 - Reduced Marsh in Fill	Reduced Marsh Excavation that can be used in Fill
6 - Reduced EBS in Fill	Reduced EBS Excavation that can be used in Fill
7 - Mass Ordinate	If Marsh and EBS to be backfilled with Cut or Borrow: [(Cut) - ((Fill - Expanded Rock) * Fill Factor))]

DIVISION 1 (STA 203+46R - STA 266+19R): RAMP

		Area						Incremental Volume (Unadjusted)						Cumulative Vol (CY)					
STATION	Distance	Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Marsh Exc (SF)	Rock Exc (SF)	EBS (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Marsh Exc (CY)	Rock Exc (CY)	EBS (CY)	Cut 1.00 Note 1	Expanded Fill 1.25	Expanded Marsh Backfill 1.50 Note 4	Reduced Marsh in Fill 0.60 Note 5	Reduced EBS In Fill 0.80 Note 6	Mass Ordinate Note 7
1203+46		23	0	0	0	0	0												
1203+50	4	22	0	0	0	0	0	3	0	0	0	0	0	3	0	0	0	0	3
1204+00	50	22	0	5	0	0	0	41	0	5	0	0	2	45	4	0	0	2	41
1204+50	50	23	0	6	0	0	0	42	0	10	0	0	2	87	15	0	0	3	72
1205+00	50	23	0	9	0	0	0	42	0	14	0	0	2	129	30	0	0	5	99
1205+50	50	22	0	23	0	0	0	42	0	29	0	0	2	171	64	0	0	7	107
1206+00	50	22	0	56	0	0	0	41	0	73	0	0	2	212	153	0	0	8	59
1206+50	50	39	0	84	0	0	0	57	0	129	0	0	3	269	312	0	0	11	-43
1207+00	50	58	0	79	0	0	0	90	0	150	0	0	5	359	496	0	0	14	-136
1207+50	50	58	0	86	0	0	0	108	0	152	0	0	5	467	681	0	0	19	-214
1208+00	50	59	0	89	0	0	0	109	0	162	0	0	5	576	878	0	0	23	-303
1208+50	50	41	0	91	0	0	0	93	0	167	0	0	5	668	1,082	0	0	27	-414
1209+00	50	29	0	87	0	0	0	65	0	165	0	0	3	734	1,285	0	0	29	-551
1209+50	50	12	0	102	0	0	0	39	0	175	0	0	2	772	1,502	0	0	31	-729
1210+00	50	25	0	112	0	0	0	35	0	199	0	0	2	807	1,749	0	0	32	-942
1210+50	50	31	0	132	0	0	0	52	0	226	0	0	3	859	2,029	0	0	34	-1,170
1211+00	50	36	0	119	0	0	0	63	0	232	0	0	3	921	2,315	0	0	37	-1,394
1211+50	50	61	0	74	0	0	0	90	0	178	0	0	4	1,011	2,533	0	0	40	-1,522
1212+00	50	92	0	24	0	0	0	141	0	91	0	0	7	1,152	2,640	0	0	46	-1,487
1212+50	50	104	0	21	0	0	0	181	0	42	0	0	9	1,333	2,683	0	0	53	-1,350
1213+00	50	108	0	6	0	0	0	196	0	25	0	0	10	1,529	2,705	0	0	61	-1,176
1213+50	50	89	0	7	0	0	0	182	0	13	0	0	9	1,712	2,712	0	0	68	-1,000
1214+00	50	92	0	1	0	0	0	168	0	8	0	0	8	1,879	2,713	0	0	75	-834
1214+50	50	113	0	0	0	0	0	190	0	1	0	0	9	2,069	2,705	0	0	83	-636
1215+00	50	161	0	0	0	0	0	253	0	0	0	0	13	2,322	2,692	0	0	93	-370
1215+50	50	225	0	0	0	0	0	357	0	0	0	0	18	2,679	2,674	0	0	107	5
1216+00	50	243	0	0	0	0	0	434	0	0	0	0	22	3,113	2,653	0	0	125	460
1216+50	50	268	0	0	0	0	0	474	0	0	0	0	24	3,586	2,629	0	0	143	958
1217+00	50	226	0	0	0	0	0	458	0	0	0	0	23	4,044	2,606	0	0	162	1,438
1217+50	50	117	0	49	0	0	0	317	0	46	0	0	16	4,362	2,647	0	0	174	1,714
1218+00	50	88	0	121	0	0	0	189	0	157	0	0	9	4,551	2,835	0	0	182	1,716
1218+50	50	72	0	165	0	0	0	147	0	264	0	0	7	4,698	3,157	0	0	188	1,541
1219+00	50	85	0	216	0	0	0	145	0	352	0	0	7	4,842	3,590	0	0	194	1,252
1219+50	50	83	0	224	0	0	0	155	0	407	0	0	8	4,998	4,091	0	0	200	906
1220+00	50	115	0	246	0	0	0	183	0	434	0	0	9	5,181	4,625	0	0	207	556
1220+50	50	142	0	319	0	0	0	237	0	523	0	0	12	5,418	5,267	0	0	217	151
1221+00	50	159	0	416	0	0	0	278	0	681	0	0	14	5,697	6,105	0	0	228	-408
1221+50	50	163	0	467	0	0	0	298	0	818	0	0	15	5,994	7,112	0	0	240	-1,118
1222+00	50	219	0	542	0	0	0	354	0	934	0	0	18	6,348	8,262	0	0	254	-1,914
1222+50	50	222	0	704	0	0	0	409	0	1,153	0	0	20	6,757	9,683	0	0	270	-2,926
1223+00	50	113	0	869	0	0	0	311	0	1,457	0	0	16	7,068	11,488	0	0	283	-4,420
1223+50	50	11	0	1,160	0	0	0	115	0	1,879	0	0	6	7,183	13,831	0	0	287	-6,648
1224+00	50	0	0	1,448	0	0	0	10	0	2,415	0	0	1	7,193	16,849	0	0	288	-9,656
1224+50	50	5	0	1,637	0	0	0	5	0	2,856	0	0	0	7,198	20,419	0	0	288	-13,221
1225+00	50	7	0	1,608	0	0	0	11	0	3,004	0	0	1	7,209	24,174	0	0	288	-16,965
1225+50	50	0	0	1,454	0	0	0	6	0	2,835	0	0	0	7,215	27,717	0	0	289	-20,503
1226+00	50	0	0	1,114	0	0	0	0	0	2,378	0	0	0	7,215	30,690	0	0	289	-23,476
1226+50	50	0	0	567	0	0	0	0	0	1,557	0	0	0	7,215	32,637	0	0	289	-25,422
1227+00	50	0	0	431	0	0	0	0	0	925	0	0	0	7,215	33,793	0	0	289	-26,578
1227+50	50	190	0	353	0	0	0	176	0	726	0	0	9	7,391	34,692	0	0	296	-27,301
1228+00	50	334	0	274	0	0	0	486	0	580	0	0	24	7,876	35,392	0	0	315	-27,516
1228+50	50	214	0	170	0	0	0	508	0	411	0	0	25	8,384	35,880	0	0	335	-27,496
1229+00	50	129	0	37	0	0	0	317	0	191	0	0	16	8,701	36,104	0	0	348	-27,402
1229+50	50	219	0	0	0	0	0	322	0	34	0	0	16	9,023	36,130	0	0	361	-27,107
1230+00	50	563	0	0	0	0	0	724	0	0	0	0	36	9,747	36,094	0	0	390	-26,347

DIVISION 1 (STA 203+46R - STA 266+19R): RAMP

STATION	Distance	Area: Cut (SF)	Area: Salvaged/Unusable Pavement Material (SF)	Area: Fill (SF)	Area: Marsh Exc (SF)	Area: Rock Exc (SF)	Area: EBS (SF)	Incremental Volume (Unadjusted): Cut Note 1 (CY)	Incremental Volume (Unadjusted): Salvaged/Unusable Pavement Material Note 2 (CY)	Incremental Volume (Unadjusted): Fill Note 3 (CY)	Incremental Volume (Unadjusted): Marsh Exc (CY)	Incremental Volume (Unadjusted): Rock Exc (CY)	Incremental Volume (Unadjusted): EBS (CY)	Cumulative Vol (CY): Cut 1.00 Note 1	Cumulative Vol (CY): Expanded Fill 1.25	Cumulative Vol (CY): Expanded Marsh Backfill 1.50 Note 4	Cumulative Vol (CY): Reduced Marsh in Fill 0.60 Note 5	Cumulative Vol (CY): Reduced EBS In Fill 0.80 Note 6	Mass Ordinate Note 7
									CONTINUED										
1230+50	50	908	0	0	0	0	0	1,362	0	0	0	0	68	11,109	36,026	0	0	444	-24,917
1231+00	50	1,143	0	0	0	0	0	1,899	0	0	0	0	95	13,008	35,931	0	0	520	-22,923
1231+50	50	1,219	0	0	0	0	0	2,186	0	0	0	0	109	15,194	35,822	0	0	607	-20,627
1232+00	50	1,306	0	0	0	0	0	2,337	0	0	0	0	117	17,531	35,705	0	0	701	-18,173
1232+50	50	1,638	0	0	0	0	0	2,726	0	0	0	0	136	20,257	35,569	0	0	810	-15,311
1233+00	50	1,898	0	0	0	0	0	3,274	0	0	0	0	164	23,531	35,405	0	0	941	-11,874
1233+50	50	1,473	0	0	0	146	0	3,121	0	0	0	135	156	26,652	35,249	0	0	1,066	-8,428
1234+00	50	1,336	0	0	0	41	0	2,600	0	0	0	173	130	29,252	35,119	0	0	1,170	-5,482
1234+50	50	799	0	0	0	0	0	1,976	0	0	0	38	99	31,229	35,020	0	0	1,249	-3,359
1235+00	50	442	0	0	0	0	0	1,149	0	0	0	0	57	32,378	34,963	0	0	1,295	-2,152
1235+50	50	2,574	0	0	0	0	0	2,793	0	0	0	0	140	35,170	34,823	0	0	1,406	780
1236+00	50	2,377	0	0	0	0	0	4,585	0	0	0	0	229	39,755	34,594	0	0	1,590	5,594
1236+50	50	2,291	0	0	0	0	0	4,323	0	0	0	0	216	44,078	34,378	0	0	1,763	10,133
1237+00	50	1,699	0	37	0	0	0	3,695	0	35	0	0	185	47,772	34,236	0	0	1,911	13,969
1237+50	50	1,119	0	42	0	0	0	2,610	0	74	0	0	130	50,382	34,198	0	0	2,015	16,617
1238+00	50	1,502	0	28	0	0	0	2,427	0	65	0	0	121	52,809	34,157	0	0	2,112	19,085
1238+50	50	98	0	12	0	0	0	1,481	0	37	0	0	74	54,290	34,129	0	0	2,171	20,594
1239+00	50	211	0	3	0	0	0	286	0	13	0	0	14	54,576	34,132	0	0	2,183	20,877
1239+50	50	65	0	11	0	0	0	255	0	13	0	0	13	54,832	34,135	0	0	2,193	21,130
1240+00	50	9	0	78	0	0	0	69	0	82	0	0	3	54,901	34,234	0	0	2,196	21,099
1240+50	50	2	0	152	0	0	0	10	0	213	0	0	1	54,911	34,499	0	0	2,196	20,845
1241+00	50	4	0	203	0	0	0	6	0	329	0	0	0	54,917	34,910	0	0	2,196	20,440
1241+50	50	5	0	248	0	0	0	8	0	418	0	0	0	54,925	35,432	0	0	2,197	19,926
1242+00	50	3	0	261	0	0	0	7	0	471	0	0	0	54,932	36,021	0	0	2,197	19,344
1242+50	50	12	0	217	0	0	0	13	0	442	0	0	1	54,945	36,573	0	0	2,197	18,805
1243+00	50	19	0	190	0	0	0	28	0	377	0	0	1	54,974	37,043	0	0	2,199	18,363
1243+50	50	14	0	170	0	0	0	31	0	334	0	0	2	55,005	37,459	0	0	2,200	17,978
1244+00	50	11	0	187	0	0	0	24	0	330	0	0	1	55,028	37,871	0	0	2,201	17,589
1244+50	50	13	0	218	0	0	0	23	0	374	0	0	1	55,051	38,338	0	0	2,202	17,145
1245+00	50	13	0	227	0	0	0	24	0	412	0	0	1	55,075	38,852	0	0	2,203	16,656
1245+50	50	13	0	211	0	0	0	24	0	406	0	0	1	55,099	39,358	0	0	2,204	16,174
1246+00	50	13	0	158	0	0	0	23	0	341	0	0	1	55,123	39,783	0	0	2,205	15,772
1246+50	50	25	0	72	0	0	0	35	0	212	0	0	2	55,158	40,047	0	0	2,206	15,543
1247+00	50	41	0	25	0	0	0	62	0	89	0	0	3	55,220	40,156	0	0	2,208	15,496
1247+50	50	63	0	3	0	0	0	97	0	26	0	0	5	55,316	40,183	0	0	2,212	15,566
1248+00	50	67	0	0	0	0	0	120	0	3	0	0	6	55,437	40,181	0	0	2,217	15,689
1248+50	50	74	0	0	0	0	0	130	0	0	0	0	7	55,567	40,174	0	0	2,222	15,825
1249+00	50	73	0	0	0	0	0	136	0	0	0	0	7	55,704	40,167	0	0	2,228	15,969
1249+50	50	73	0	0	0	0	0	135	0	0	0	0	7	55,839	40,161	0	0	2,233	16,110
1250+00	50	65	0	0	0	0	0	128	0	1	0	0	6	55,967	40,156	0	0	2,238	16,243
1250+50	50	53	0	2	0	0	0	109	0	2	0	0	5	56,076	40,153	0	0	2,243	16,355
1251+00	50	35	0	3	0	0	0	81	0	4	0	0	4	56,157	40,154	0	0	2,246	16,436
1251+50	50	24	0	5	0	0	0	55	0	7	0	0	3	56,212	40,160	0	0	2,248	16,485
1252+00	50	22	0	13	0	0	0	43	0	16	0	0	2	56,255	40,179	0	0	2,250	16,509
1252+50	50	22	0	14	0	0	0	40	0	24	0	0	2	56,295	40,207	0	0	2,251	16,521
1253+00	50	22	0	17	0	0	0	40	0	29	0	0	2	56,336	40,241	0	0	2,253	16,527
1253+50	50	21	0	20	0	0	0	40	0	35	0	0	2	56,375	40,282	0	0	2,255	16,525
1254+00	50	20	0	25	0	0	0	38	0	42	0	0	2	56,413	40,333	0	0	2,256	16,513
1254+50	50	22	0	21	0	0	0	39	0	43	0	0	2	56,452	40,384	0	0	2,258	16,501
1255+00	50	22	0	18	0	0	0	40	0	36	0	0	2	56,492	40,427	0	0	2,259	16,497
1255+50	50	22	0	14	0	0	0	41	0	30	0	0	2	56,533	40,462	0	0	2,261	16,503
1256+00	50	23	0	9	0	0	0	41	0	21	0	0	2	56,574	40,486	0	0	2,263	16,521
1256+50	50	23	0	8	0	0	0	42	0	15	0	0	2	56,616	40,502	0	0	2,264	16,546
1257+00	50	24	0	4	0	0	0	43	0	11	0	0	2	56,659	40,514	0	0	2,266	16,578
1257+50	50	25	0	2	0	0	0	45	0	6	0	0	2	56,705	40,519	0	0	2,268	16,618
1258+00	50	24	0	5	0	0	0	45	0	7	0	0	2	56,750	40,525	0	0	2,270	16,657
1258+50	50	25	0	3	0	0	0	45	0	7	0	0	2	56,795	40,532	0	0	2,271	16,695
1259+00	50	24	0	6	0	0	0	45	0	8	0	0	2	56,840	40,539	0	0	2,273	16,733
1259+50	50	24	0	7	0	0	0	44	0	12	0	0	2	56,884	40,552	0	0	2,275	16,765
1260+00	50	24	0	9	0	0	0	44	0	15	0	0	2	56,928	40,568	0	0	2,277	16,792
1260+50	50	24	0	12	0	0	0	44	0	19	0	0	2	56,972	40,590	0	0	2,279	16,814
1261+00	50	23	0	14	0	0	0	44	0	24	0	0	2	57,015	40,618	0	0	2,280	16,830
1261+50	50	23	0	13	0	0	0	43	0	25	0	0	2	57,059	40,647	0	0	2,282	16,844
1262+00	50	23	0	13	0	0	0	43	0	25	0	0	2	57,102	40,676	0	0	2,284	16,858
1262+50	50	23	0	12	0	0	0	43	0	23	0	0	2	57,145	40,703	0	0	2,285	16,874
1263+00	50	23	0	8	0	0	0	43	0	19	0	0	2	57,188	40,724	0	0	2,287	16,896
1263+50	50	21	0	9	0	0	0	41	0	16	0	0	2	57,229	40,742	0	0	2,289	16,919
1264+00	50	22	0	4	0	0	0	40	0	12	0	0	2	57,269	40,755	0	0	2,290	16,947
1264+50	50	23	0	1	0	0	0	42	0	5	0	0	2	57,311	40,759	0	0	2,292	16,985
1265+00	50	23	0	0	0	0	0	43	0	1	0	0	2	57,354	40,758	0	0	2,294	17,028
1265+50	50	25	0	0	0	0	0	44	0	0	0	0	2	57,398	40,756	0	0	2,296	17,075
1266+00	50	26	0	0	0	0	0	47	0	0	0	0	2	57,445	40,754	0	0	2,297	17,124
1266+19	19	23	0	0	0	0	0	168	0	32	0	0	8	29,420	35,151	0	0	1,176	-5,345
								47,866	0	5,668	0	346	2,393						

DIVISION 1 (STA 4226+63P - STA 4243+34P): PARKING LOT

STATION	Distance	Area: Cut (SF)	Area: Salvaged/Unusable Pavement Material (SF)	Area: Fill (SF)	Area: Marsh Exc (SF)	Area: Rock Exc (SF)	Area: EBS (SF)	Incremental Volume (Unadjusted): Cut Note 1 (CY)	Incremental Volume (Unadjusted): Salvaged/Unusable Pavement Material Note 2 (CY)	Incremental Volume (Unadjusted): Fill Note 3 (CY)	Incremental Volume (Unadjusted): Marsh Exc (CY)	Incremental Volume (Unadjusted): Rock Exc (CY)	Incremental Volume (Unadjusted): EBS (CY)	Cumulative Vol (CY): Cut 1.00 Note 1	Cumulative Vol (CY): Expanded Fill 1.25	Cumulative Vol (CY): Expanded Marsh Backfill 1.50 Note 4	Cumulative Vol (CY): Reduced Marsh in Fill 0.60 Note 5	Cumulative Vol (CY): Reduced EBS In Fill 0.80 Note 6	Mass Ordinate Note 7
4226+63		80	0	242	0	0	0												
4227+00	37	61	0	497	0	0	0	97	0	511	0	0	5	97	634	0	0	4	-537
4227+50	50	56	0	967	0	0	0	108	0	1,355	0	0	5	206	2,323	0	0	8	-2,117
4228+00	50	46	0	863	0	0	0	94	0	1,694	0	0	5	300	4,435	0	0	12	-4,136
4228+50	50	33	0	696	0	0	0	73	0	1,443	0	0	4	373	6,236	0	0	15	-5,863
4229+00	50	9	0	591	0	0	0	39	0	1,192	0	0	2	411	7,724	0	0	16	-7,313
4229+50	50	17	0	642	0	0	0	24	0	1,142	0	0	1	435	9,150	0	0	17	-8,715
4230+00	50	11	0	727	0	0	0	26	0	1,268	0	0	1	461	10,733	0	0	18	-10,272
4230+50	50	9	0	667	0	0	0	19	0	1,291	0	0	1	480	12,346	0	0	19	-11,866
4231+00	50	10	0	857	0	0	0	17	0	1,412	0	0	1	497	14,110	0	0	20	-13,613
4231+50	50	7	0	980	0	0	0	16	0	1,701	0	0	1	513	16,235	0	0	21	-15,721
4232+00	50	8	0	1,320	0	0	0	15	0	2,129	0	0	1	528	18,895	0	0	21	-18,367
4232+50	50	5	0	1,898	0	0	0	13	0	2,979	0	0	1	541	22,619	0	0	22	-22,078
4233+00	50	98	0	3,312	0	0	0	96	0	4,824	0	0	5	636	28,644	0	0	25	-28,007
4233+50	50	360	0	2,936	0	0	0	424	0	5,785	0	0	21	1,060	35,854	0	0	42	-34,793
4234+00	50	507	0	2,610	0	0	0	803	0	5,135	0	0	40	1,863	42,232	0	0	75	-40,369
4234+50	50	490	0	2,622	0	0	0	923	0	4,844	0	0	46	2,786	48,241	0	0	111	-45,455
4235+00	50	494	0	2,515	0	0	0	911	0	4,757	0	0	46	3,697	54,142	0	0	148	-50,444
4235+50	50	528	0	2,085	0	0	0	946	0	4,259	0	0	47	4,644	59,419	0	0	186	-54,775
4236+00	50	673	0	1,886	0	0	0	1,113	0	3,677	0	0	56	5,756	63,959	0	0	230	-58,202
4236+50	50	614	0	1,755	0	0	0	1,192	0	3,371	0	0	60	6,948	68,113	0	0	278	-61,165
4237+00	50	605	0	1,671	0	0	0	1,128	0	3,172	0	0	56	8,076	72,021	0	0	323	-63,945
4237+50	50	2,148	0	1,492	0	0	0	2,548	0	2,928	0	0	127	10,624	75,554	0	0	425	-64,930
4238+00	50	2,334	0	1,618	0	0	0	4,150	0	2,880	0	0	207	14,774	78,946	0	0	591	-64,172
4238+50	50	2,254	0	1,730	0	0	0	4,248	0	3,100	0	0	212	19,022	82,609	0	0	761	-63,587
4239+00	50	2,223	0	1,775	0	0	0	4,145	0	3,246	0	0	207	23,168	86,459	0	0	927	-63,291
4239+50	50	2,187	0	1,644	0	0	0	4,083	0	3,165	0	0	204	27,251	90,211	0	0	1,090	-62,960
4240+00	50	2,734	0	226	0	0	0	4,557	0	1,731	0	0	228	31,807	92,147	0	0	1,272	-60,340
4240+50	50	3,078	0	7	0	0	0	5,381	0	216	0	0	269	37,189	92,148	0	0	1,488	-54,959
4241+00	50	3,145	0	0	0	0	0	5,762	0	7	0	0	288	42,951	91,868	0	0	1,718	-48,918
4241+50	50	2,847	0	0	0	0	0	5,549	0	0	0	0	277	48,499	91,591	0	0	1,940	-43,092
4242+00	50	2,249	0	0	0	0	0	4,719	0	0	0	0	236	53,218	91,355	0	0	2,129	-38,137
4242+50	50	1,891	0	0	0	0	0	3,833	0	0	0	0	192	57,052	91,163	0	0	2,282	-34,112
4243+00	50	1,516	0	0	0	0	0	3,154	0	0	0	0	158	60,206	91,006	0	0	2,408	-30,800
4243+34	34	1,329	0	0	0	0	0	1,799	0	0	0	0	90	62,005	90,916	0	0	2,480	-28,911
								62,005	0	75,213	0	0	3,100						

DIVISION 1 (STA 3227+64L - STA 3236+25L): LOOP

STATION	Distance	Area: Cut (SF)	Area: Salvaged/Unusable Pavement Material (SF)	Area: Fill (SF)	Area: Marsh Exc (SF)	Area: Rock Exc (SF)	Area: EBS (SF)	Incremental Volume (Unadjusted): Cut Note 1 (CY)	Incremental Volume (Unadjusted): Salvaged/Unusable Pavement Material Note 2 (CY)	Incremental Volume (Unadjusted): Fill Note 3 (CY)	Incremental Volume (Unadjusted): Marsh Exc (CY)	Incremental Volume (Unadjusted): Rock Exc (CY)	Incremental Volume (Unadjusted): EBS (CY)	Cumulative Vol (CY): Cut 1.00 Note 1	Cumulative Vol (CY): Expanded Fill 1.25	Cumulative Vol (CY): Expanded Marsh Backfill 1.50 Note 4	Cumulative Vol (CY): Reduced Marsh in Fill 0.60 Note 5	Cumulative Vol (CY): Reduced EBS In Fill 0.80 Note 6	Mass Ordinate Note 7
3227+64		41	0	116	0	0	0												
3228+00	36	65	0	109	0	0	0	71	0	150	0	0	4	71	185	0	0	3	-113
3228+50	50	116	0	103	0	0	0	168	0	195	0	0	8	239	420	0	0	10	-181
3229+00	50	220	0	102	0	0	0	311	0	189	0	0	16	549	641	0	0	22	-92
3229+50	50	289	0	20	0	0	0	471	0	113	0	0	24	1,020	759	0	0	41	261
3230+00	50	342	0	28	0	0	0	584	0	44	0	0	29	1,604	785	0	0	64	819
3230+50	50	559	0	2	0	0	0	834	0	28	0	0	42	2,438	779	0	0	98	1,659
3231+00	50	788	0	0	0	0	0	1,247	0	2	0	0	62	3,685	719	0	0	147	2,966
3231+50	50	988	0	0	0	0	0	1,645	0	0	0	0	82	5,329	637	0	0	213	4,693
3232+00	50	1,074	0	0	0	0	0	1,909	0	0	0	0	95	7,238	541	0	0	290	6,697
3232+50	50	938	0	0	0	0	0	1,863	0	0	0	0	93	9,101	448	0	0	364	8,653
3233+00	50	719	0	0	0	0	0	1,533	0	0	0	0	77	10,635	371	0	0	425	10,263
3233+50	50	822	0	0	0	0	0	1,427	0	0	0	0	71	12,061	300	0	0	482	11,761
3234+00	50	1,354	0	0	0	18	0	2,015	0	0	0	17	101	14,076	199	0	0	563	13,897
3234+50	50	1,263	0	0	0	0	0	2,423	0	0	0	17	121	16,498	78	0	0	660	16,462
3235+00	50	666	0	0	0	0	0	1,786	0	0	0	0	89	18,284	-11	0	0	731	18,337
3235+50	50	519	0	0	0	0	0	1,097	0	0	0	0	55	19,381	-66	0	0	775	19,489
3236+00	50	1,075	0	0	0	0	0	1,476	0	0	0	0	74	20,857	-140	0	0	834	21,039
3236+25	25	429	0	0	0	0	0	696	0	0	0	0	35	21,553	-175	0	0	862	21,770
								21,553	0	722	0	34	1,078						

DIVISION 1 (STA 7235+50E - STA 7237+69E): EMPLOYEE PARKING LOT

STATION	Distance	Area						Incremental Volume (Unadjusted)						Cumulative Vol (CY)					
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Marsh Exc (SF)	Rock Exc (SF)	EBS (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Marsh Exc (CY)	Rock Exc (CY)	EBS (CY)	Cut 1.00 Note 1	Expanded Fill 1.25	Expanded Marsh Backfill 1.50 Note 4	Reduced Marsh in Fill 0.60 Note 5	Reduced EBS In Fill 0.80 Note 6	Mass Ordinate Note 7
7235+50		246	0	0	0	0	0												
7236+00	50	1,903	0	0	0	0	0	1,974	0	0	0	0	99	1,974	-99	0	0	79	2,073
7236+50	50	3,149	0	0	0	0	0	4,677	0	0	0	0	234	6,651	-333	0	0	266	6,984
7237+00	50	1,732	0	0	0	46	0	4,519	0	0	0	42	226	11,170	-559	0	0	447	11,782
7237+50	50	1,246	0	0	0	1	0	2,757	0	0	0	43	138	13,927	-696	0	0	557	14,730
7237+69	19	694	0	0	0	11	0	697	0	0	0	4	35	14,624	-731	0	0	585	15,467
								14,624	0	0	0	90	731						

DIVISION 1 (STA 0+09PD - STA 2+31PD): POND

STATION	Distance	Area						Incremental Volume (Unadjusted)						Cumulative Vol (CY)					
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Marsh Exc (SF)	Rock Exc (SF)	EBS (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Marsh Exc (CY)	Rock Exc (CY)	EBS (CY)	Cut 1.00 Note 1	Expanded Fill 1.25	Expanded Marsh Backfill 1.50 Note 4	Reduced Marsh in Fill 0.60 Note 5	Reduced EBS In Fill 0.80 Note 6	Mass Ordinate Note 7
0+09		0	0	4	0	0	0												
0+25	16	0	0	329	0	0	0	0	0	99	0	0	0	0	124	0	0	0	-124
0+50	25	0	0	158	0	0	0	0	0	226	0	0	0	0	406	0	0	0	-406
0+75	25	1	0	142	0	0	0	0	0	139	0	0	0	0	579	0	0	0	-579
1+00	25	7	0	119	0	0	0	3	0	121	0	0	0	4	730	0	0	0	-727
1+25	25	24	0	104	0	0	0	14	0	103	0	0	1	18	858	0	0	1	-841
1+50	25	39	0	58	0	0	0	29	0	75	0	0	1	47	950	0	0	2	-903
1+75	25	78	0	22	0	0	0	54	0	37	0	0	3	101	994	0	0	4	-893
2+00	25	135	0	4	0	0	0	98	0	12	0	0	5	200	1,004	0	0	8	-805
2+25	25	75	0	0	0	0	0	97	0	2	0	0	5	297	1,002	0	0	12	-705
2+31	6	10	0	0	0	0	0	10	0	0	0	0	0	307	1,002	0	0	12	-695
								307	0	814	0	0	15						

DIVISION 2 (STA 513+34 - STA 521+70): WEST SALEM SWEF REMOVAL

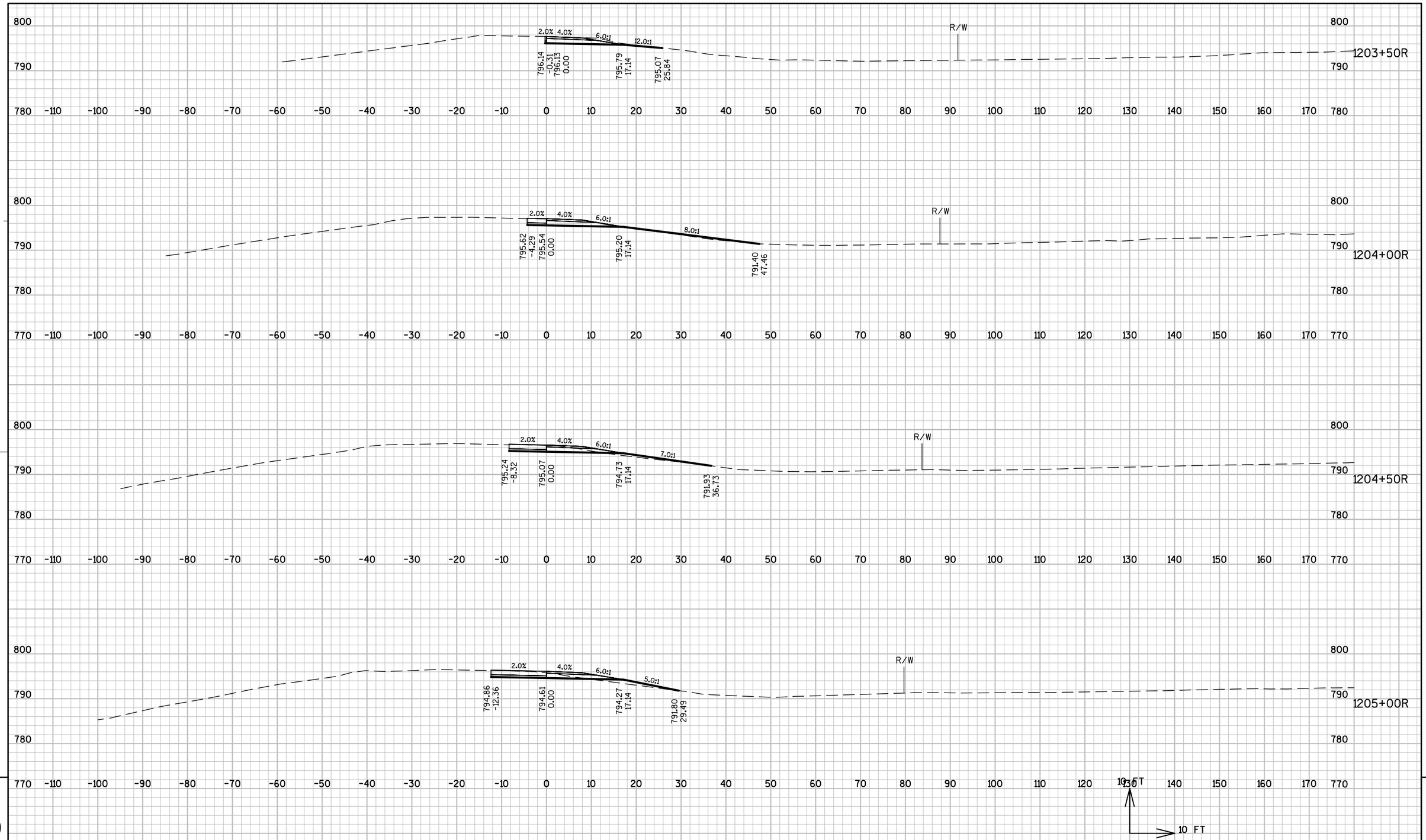
STATION	Distance	Area						Incremental Volume (Unadjusted)						Cumulative Vol (CY)					
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Marsh Exc (SF)	Rock Exc (SF)	EBS (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Marsh Exc (CY)	Rock Exc (CY)	EBS (CY)	Cut 1.00 Note 1	Expanded Fill 1.25	Expanded Marsh Backfill 1.50 Note 4	Reduced Marsh in Fill 0.60 Note 5	Reduced EBS In Fill 0.80 Note 6	Mass Ordinate Note 7
513+34		29	0	0	0	0	0												
513+50	16	29	0	0	0	0	0	17	0	0	0	0	1	17	-1	0	0	1	18
514+00	50	24	0	0	0	0	0	48	0	0	0	0	2	65	-3	0	0	3	68
514+50	50	29	0	0	0	0	0	49	0	0	0	0	2	114	-6	0	0	5	119
515+00	50	31	0	0	0	0	0	55	0	0	0	0	3	169	-8	0	0	7	178
515+50	50	29	0	0	0	0	0	55	0	0	0	0	3	225	-11	0	0	9	236
516+00	50	32	0	0	0	0	0	57	0	0	0	0	3	281	-14	0	0	11	295
516+50	50	37	0	0	0	0	0	64	0	0	0	0	3	345	-17	0	0	14	363
517+00	50	38	0	0	0	0	0	69	0	0	0	0	3	415	-21	0	0	17	435
517+50	50	46	0	0	0	0	0	78	0	0	0	0	4	492	-25	0	0	20	517
518+00	50	53	0	0	0	0	0	91	0	0	0	0	5	583	-29	0	0	23	613
518+50	50	69	0	0	0	0	0	113	0	0	0	0	6	696	-35	0	0	28	731
519+00	50	44	0	0	0	0	0	105	0	0	0	0	5	801	-40	0	0	32	841
519+50	50	49	0	0	0	0	0	86	0	0	0	0	4	887	-44	0	0	35	932
520+00	50	55	0	0	0	0	0	96	0	0	0	0	5	984	-49	0	0	39	1,033
520+50	50	57	0	0	0	0	0	104	0	0	0	0	5	1,088	-54	0	0	44	1,142
521+00	50	86	0	0	0	0	0	133	0	0	0	0	7	1,221	-61	0	0	49	1,282
521+50	50	110	0	0	0	0	0	182	0	0	0	0	9	1,402	-70	0	0	56	1,472
521+70	20	123	0	0	0	0	0	87	0	0	0	0	4	1,489	-74	0	0	60	1,563
								1,489	0	0	0	0	74						

DIVISION 3 (STA 537+86 - STA 544+05): WEST SALEM SWEF REMOVAL

STATION	Distance	Area						Incremental Volume (Unadjusted)						Cumulative Vol (CY)					
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Marsh Exc (SF)	Rock Exc (SF)	EBS (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Marsh Exc (CY)	Rock Exc (CY)	EBS (CY)	Cut 1.00 Note 1	Expanded Fill 1.25	Expanded Marsh Backfill 1.50 Note 4	Reduced Marsh in Fill 0.60 Note 5	Reduced EBS In Fill 0.80 Note 6	Mass Ordinate Note 7
537+86		133	0	0	0	0	0												
538+00	14	127	0	0	0	0	0	67	0	0	0	0	3	67	-3	0	0	3	71
538+50	50	96	0	0	0	0	0	206	0	0	0	0	10	273	-14	0	0	11	287
539+00	50	85	0	0	0	0	0	167	0	0	0	0	8	441	-22	0	0	18	463
539+50	50	85	0	0	0	0	0	157	0	0	0	0	8	598	-30	0	0	24	628
540+00	50	91	0	0	0	0	0	163	0	0	0	0	8	761	-38	0	0	30	799
540+50	50	105	0	0	0	0	0	182	0	0	0	0	9	943	-47	0	0	38	990
541+00	50	84	0	0	0	0	0	175	0	0	0	0	9	1,118	-56	0	0	45	1,174
541+50	50	98	0	0	0	0	0	169	0	0	0	0	8	1,287	-64	0	0	51	1,351
542+00	50	98	0	0	0	0	0	182	0	0	0	0	9	1,468	-73	0	0	59	1,542
542+50	50	91	0	0	0	0	0	175	0	0	0	0	9	1,644	-82	0	0	66	1,726
543+00	50	88	0	0	0	0	0	166	0	0	0	0	8	1,810	-90	0	0	72	1,900
543+50	50	107	0	0	0	0	0	181	0	0	0	0	9	1,991	-100	0	0	80	2,090
544+00	50	83	0	0	0	0	0	176	0	0	0	0	9	2,166	-108	0	0	87	2,275
544+05	5	78	0	0	0	0	0	15	0	0	0	0	1	2,181	-109	0	0	87	2,290
								2,181	0	0	0	0	109						

DIVISION 4 (STA 827+63 - STA 830+83): STH 16

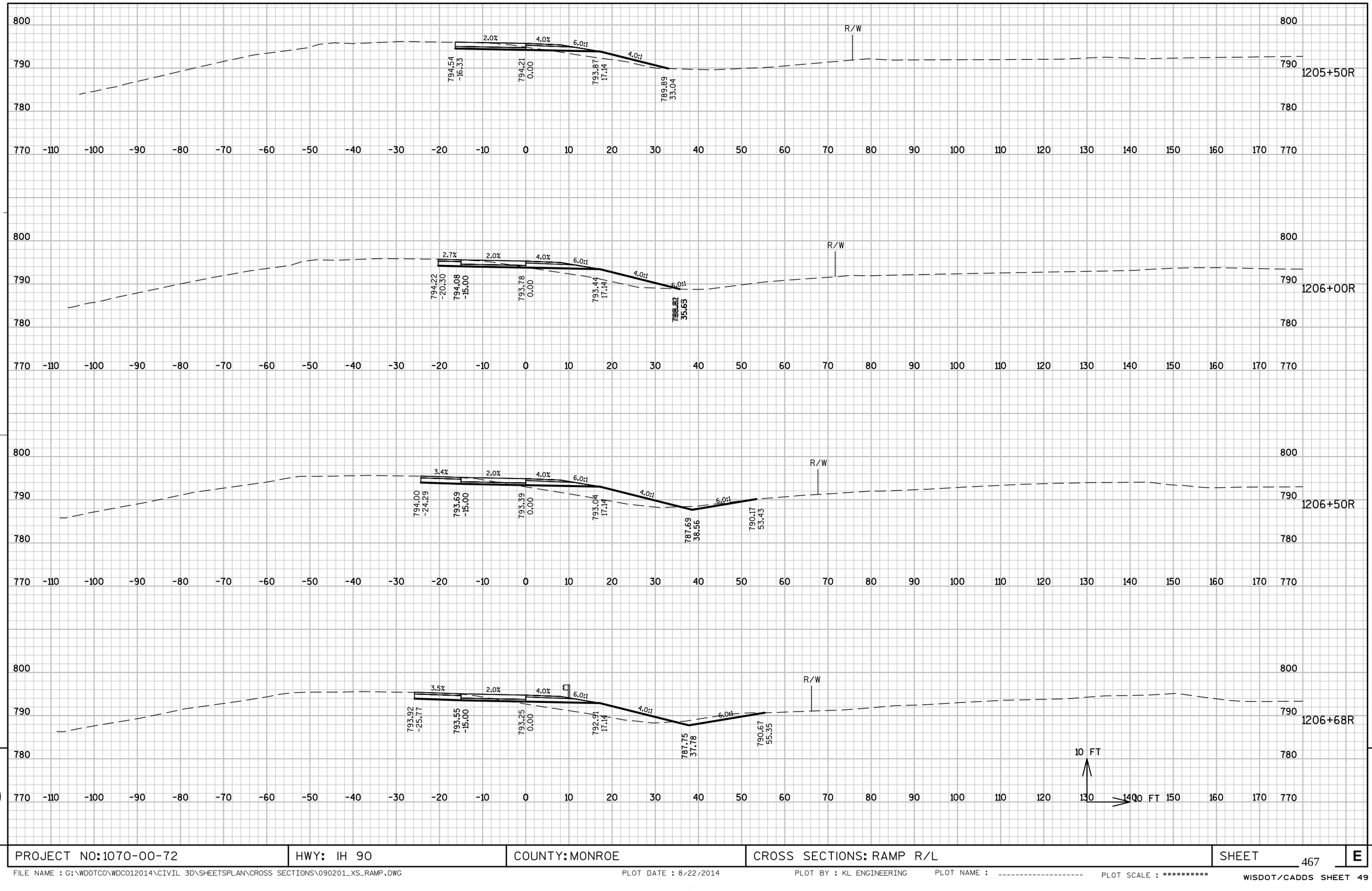
STATION	Distance	Area						Incremental Volume (Unadjusted)						Cumulative Vol (CY)					
		Cut (SF)	Salvaged/Unusable Pavement Material (SF)	Fill (SF)	Marsh Exc (SF)	Rock Exc (SF)	EBS (SF)	Cut Note 1 (CY)	Salvaged/Unusable Pavement Material Note 2 (CY)	Fill Note 3 (CY)	Marsh Exc (CY)	Rock Exc (CY)	EBS (CY)	Cut 1.00 Note 1	Expanded Fill 1.25	Expanded Marsh Backfill 1.50 Note 4	Reduced Marsh in Fill 0.60 Note 5	Reduced EBS In Fill 0.80 Note 6	Mass Ordinate Note 7
827+63		71	0	0	0	0	0												
828+00	38	71	0	0	0	0	0	98	0	0	0	0	5	98	-5	0	0	4	103
828+50	50	71	0	0	0	0	0	131	0	0	0	0	7	229	-11	0	0	9	241
829+00	50	71	0	0	0	0	0	131	0	0	0	0	7	360	-18	0	0	14	378
829+50	50	71	0	0	0	0	0	131	0	0	0	0	7	492	-25	0	0	20	516
830+00	50	71	0	0	0	0	0	131	0	0	0	0	7	623	-31	0	0	25	654
830+50	50	71	0	0	0	0	0	131	0	0	0	0	7	754	-38	0	0	30	791
830+83	33	71	0	0	0	0	0	85	0	0	0	0	4	839	-42	0	0	34	881
								839	0	0	0	0	42						



9

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 466	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 467	E

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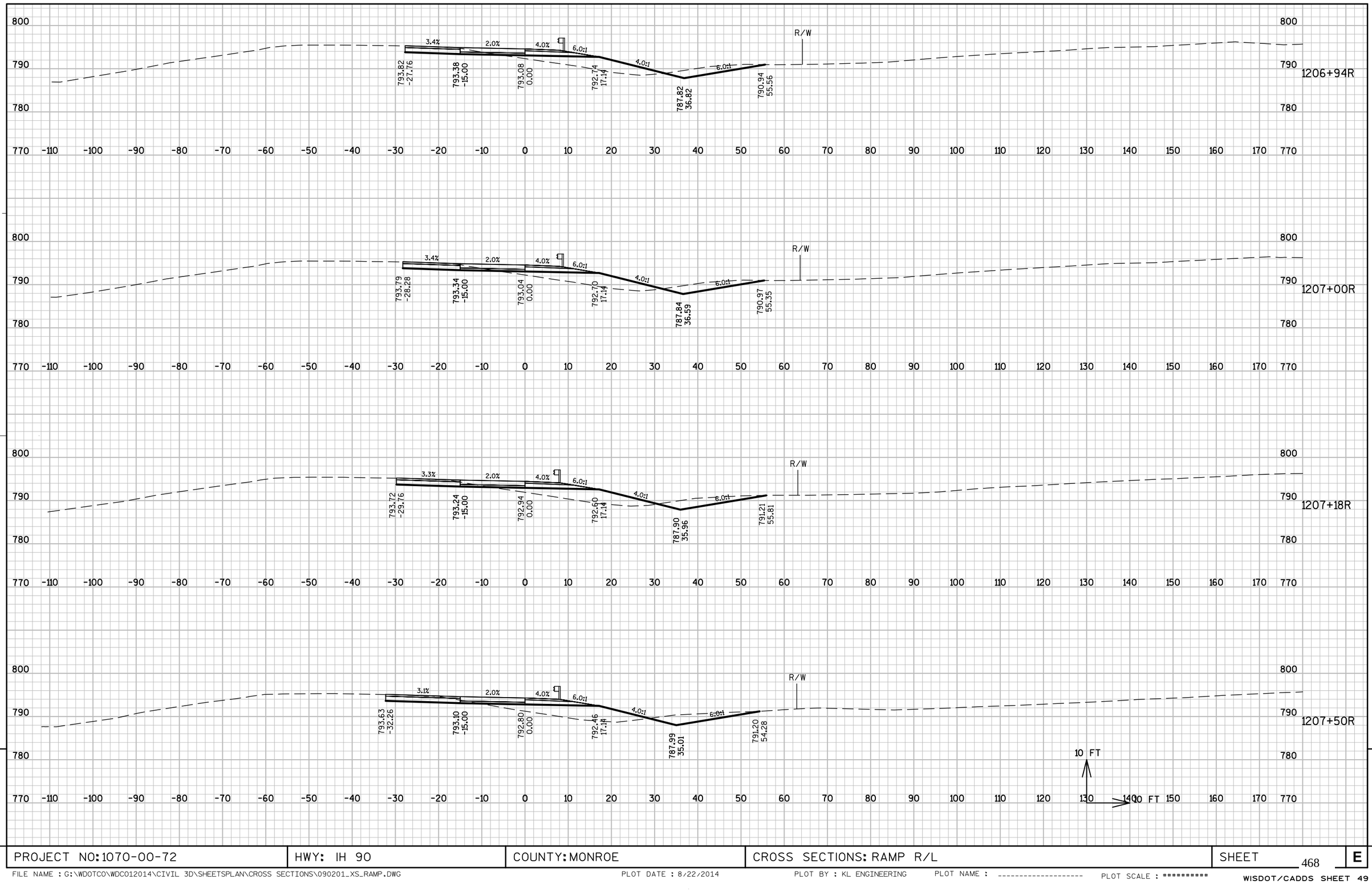
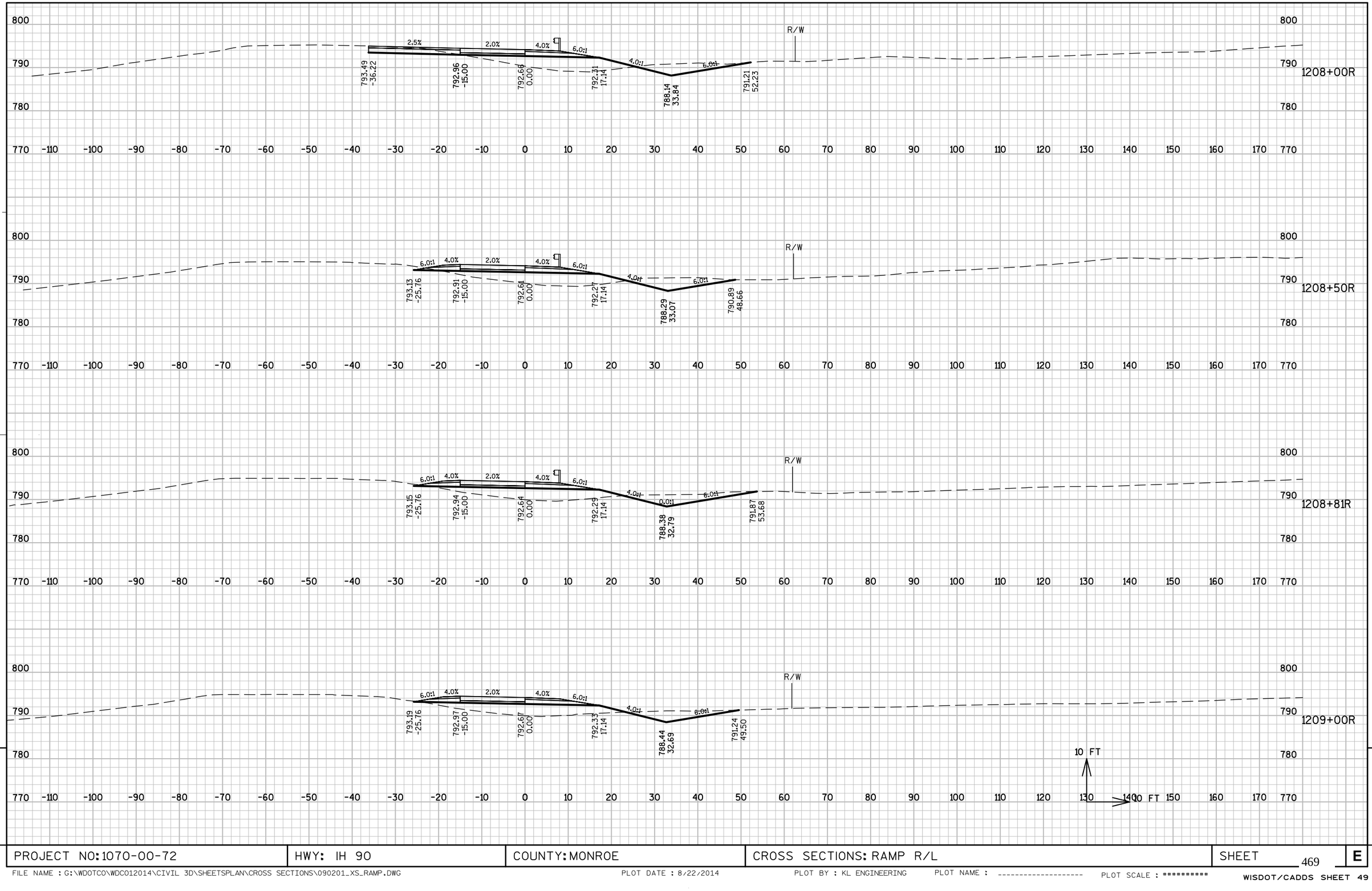


PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 468	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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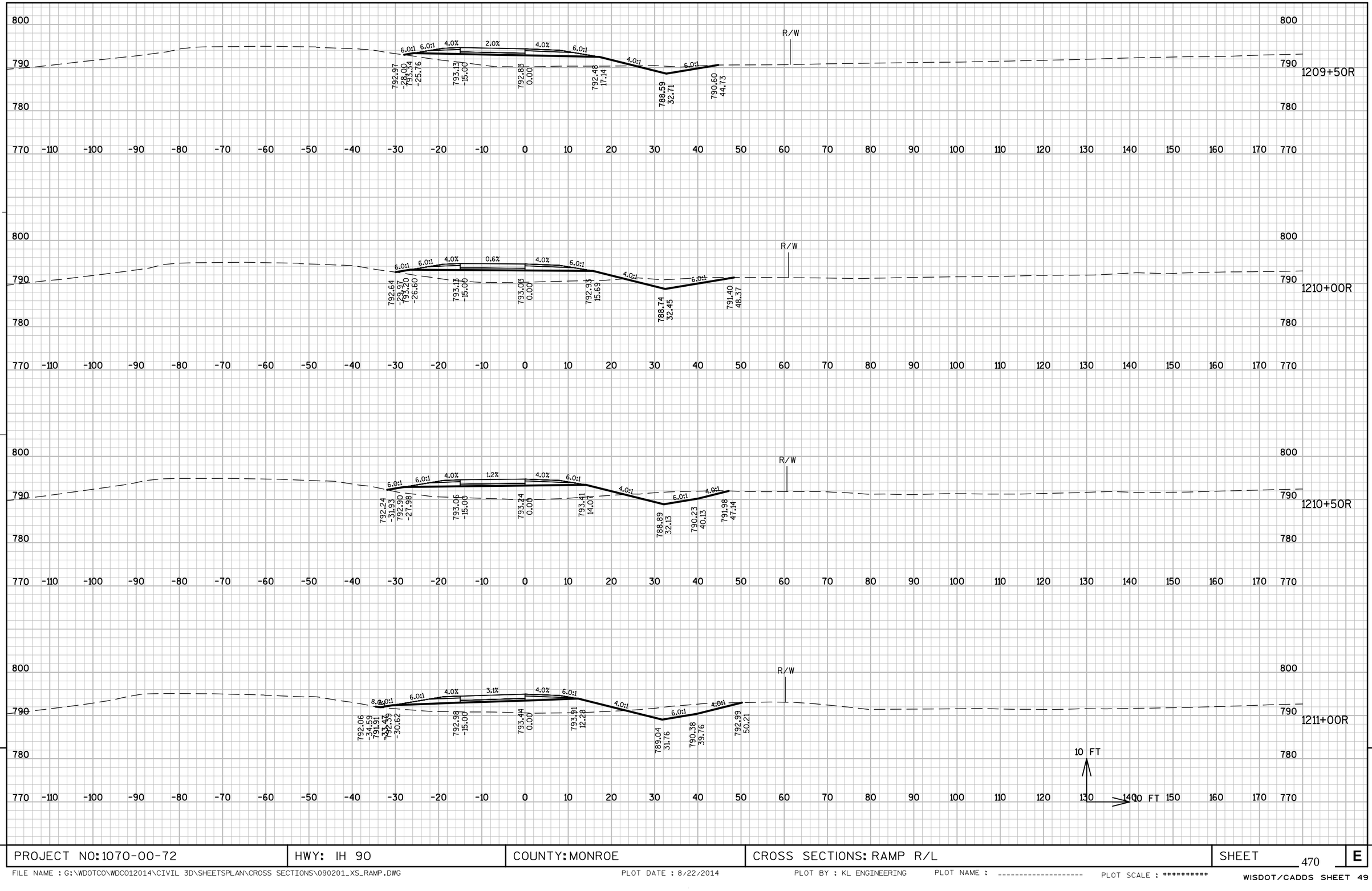
9

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 469	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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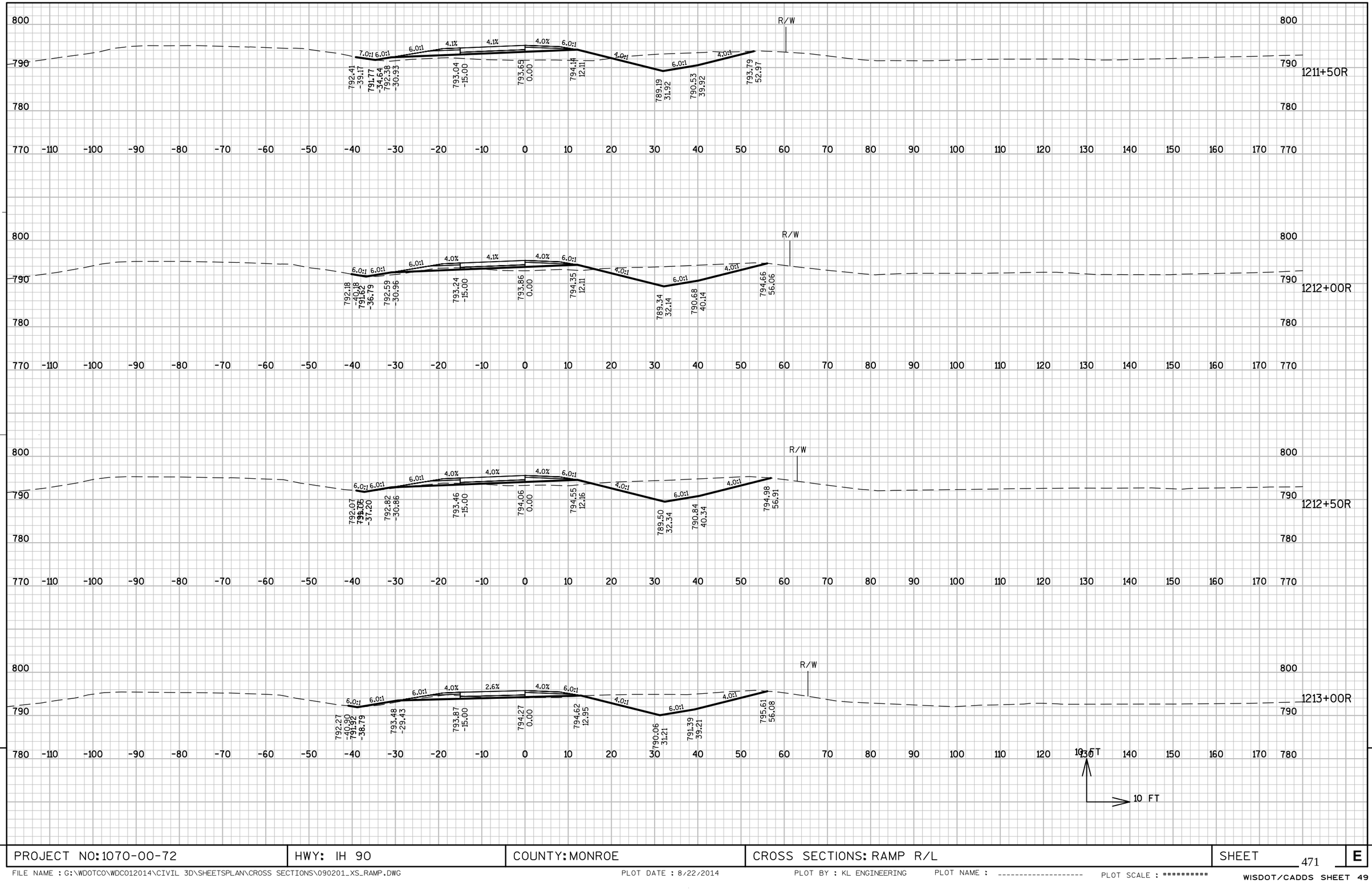
9

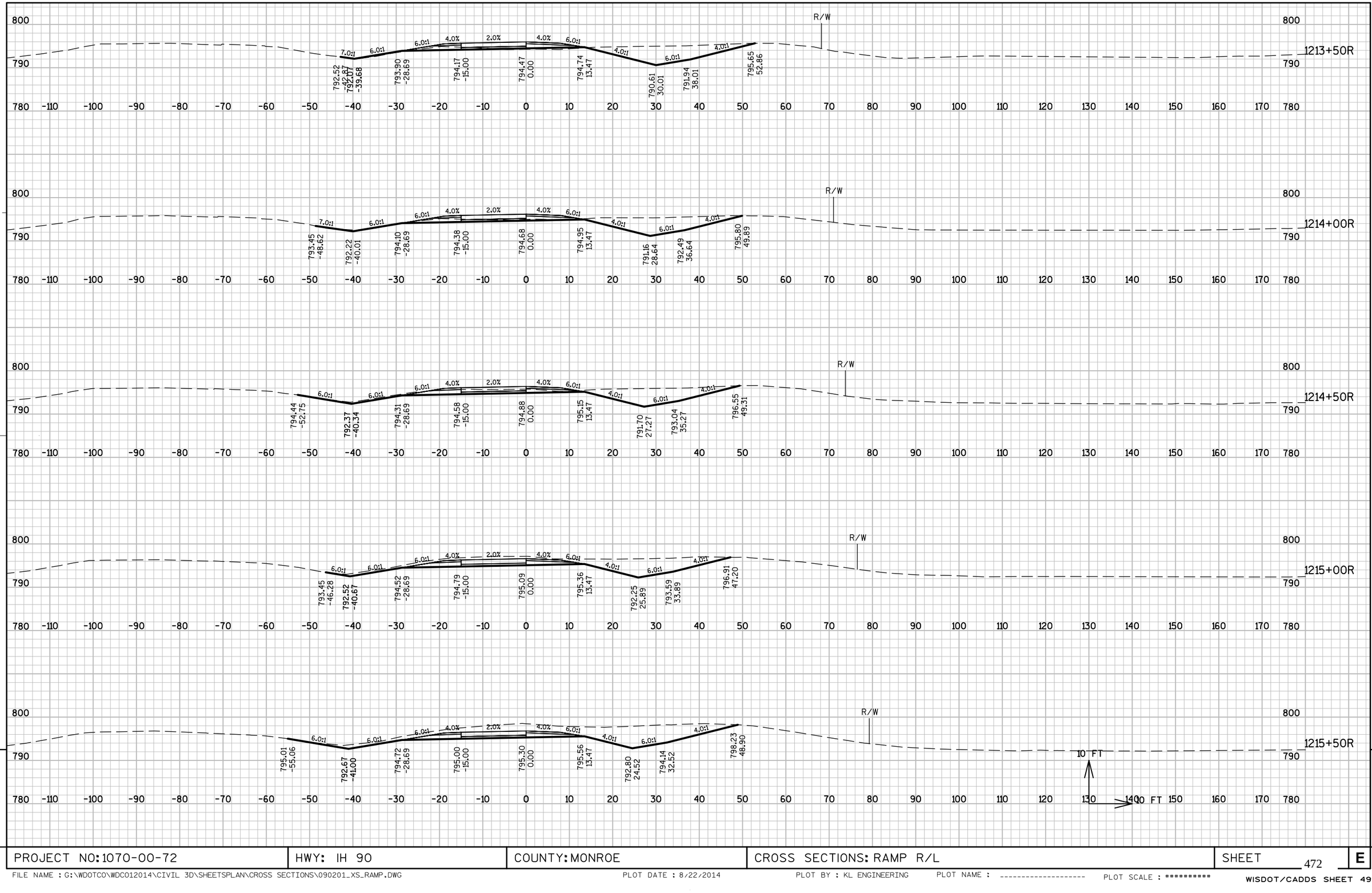
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 470	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



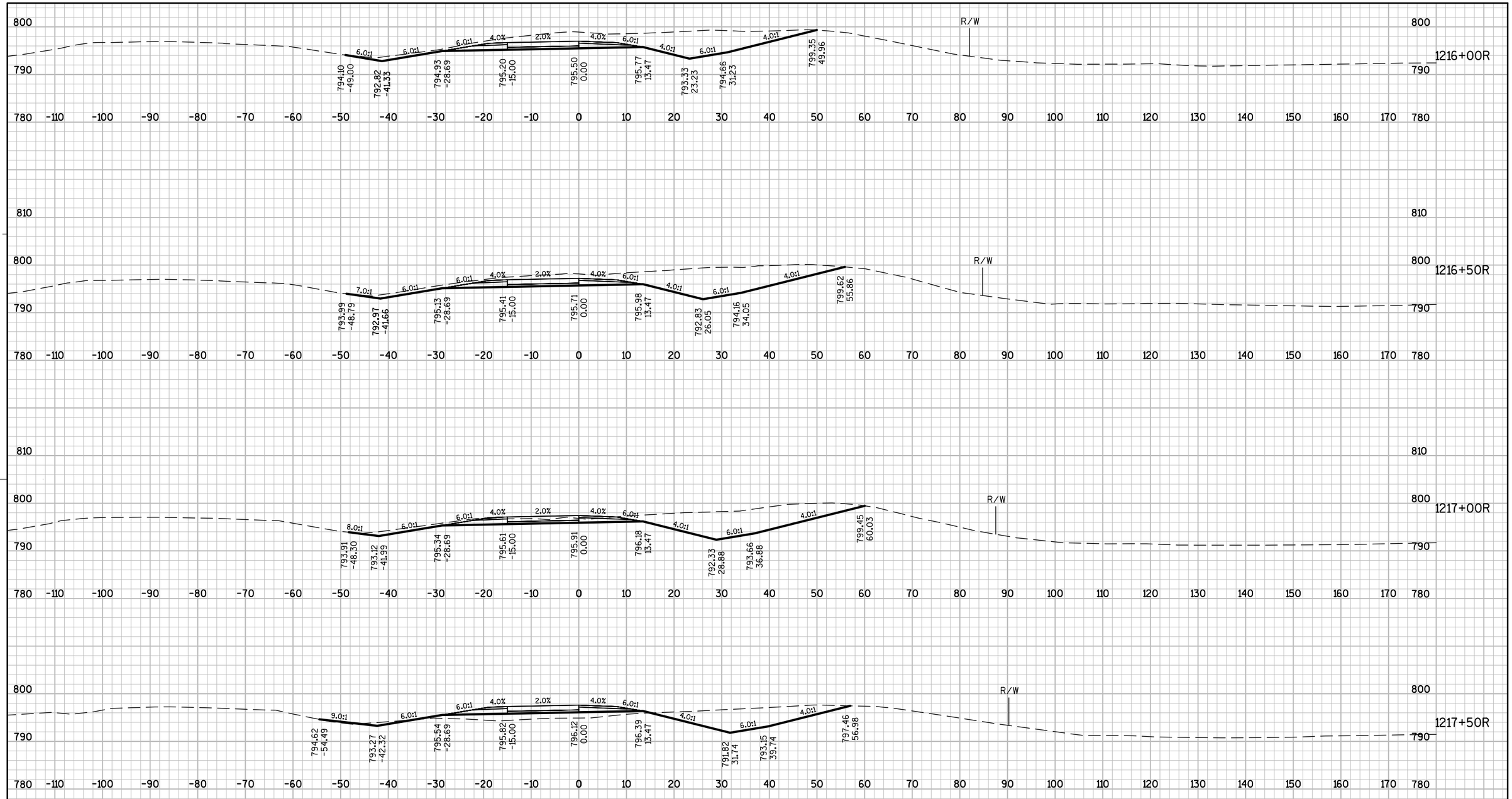
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 471	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49

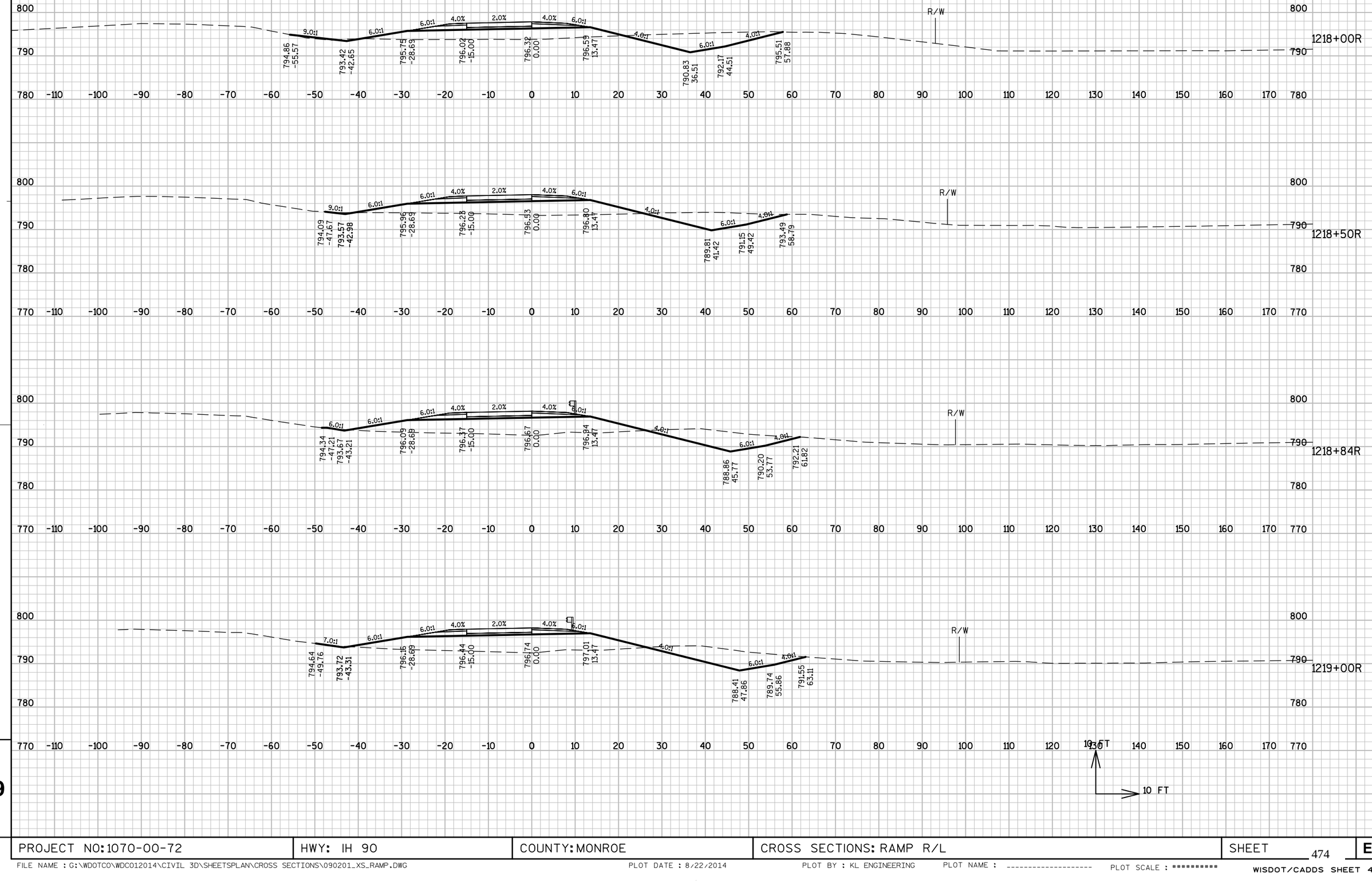


PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 472	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49

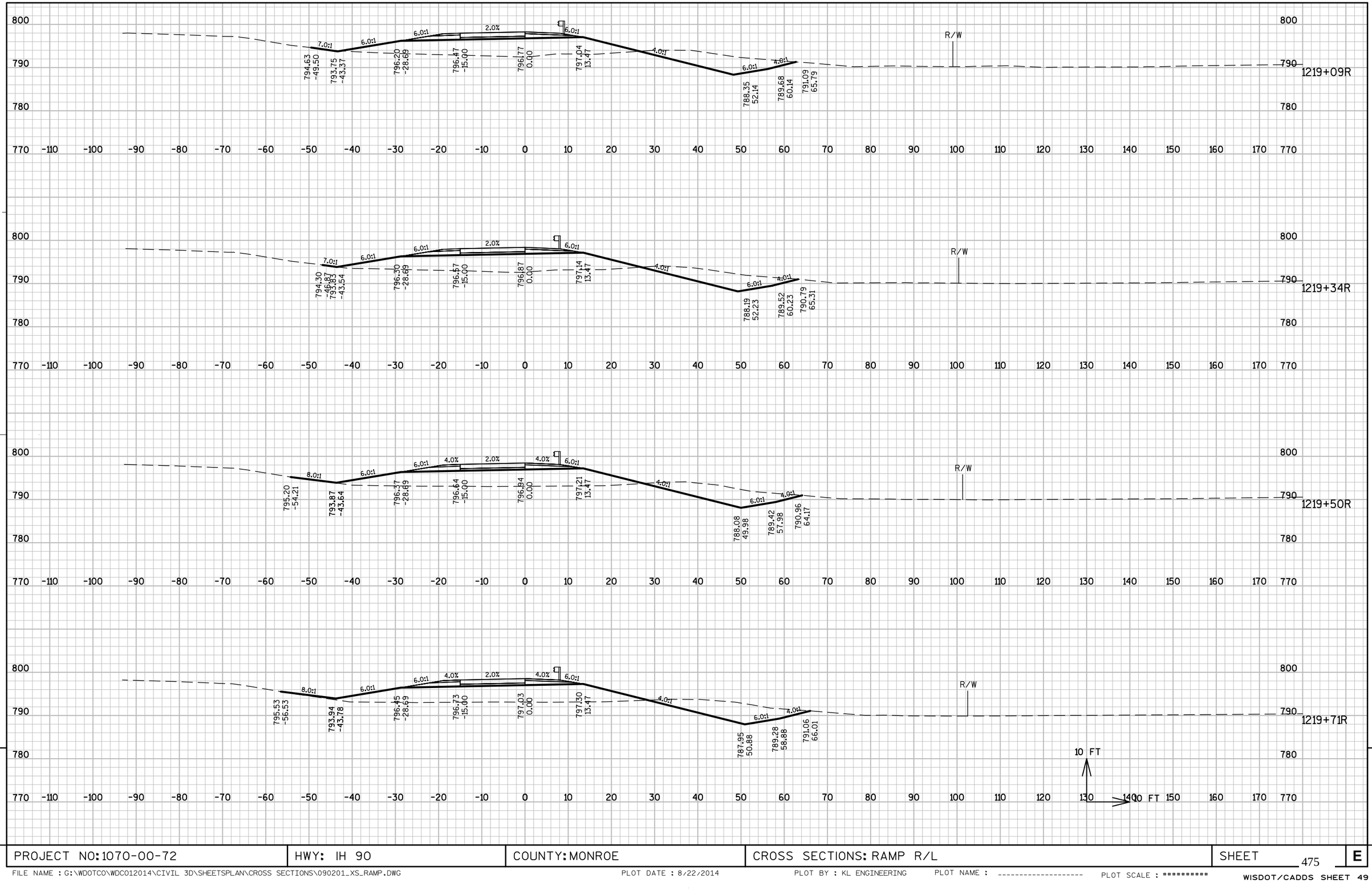


PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 473 E



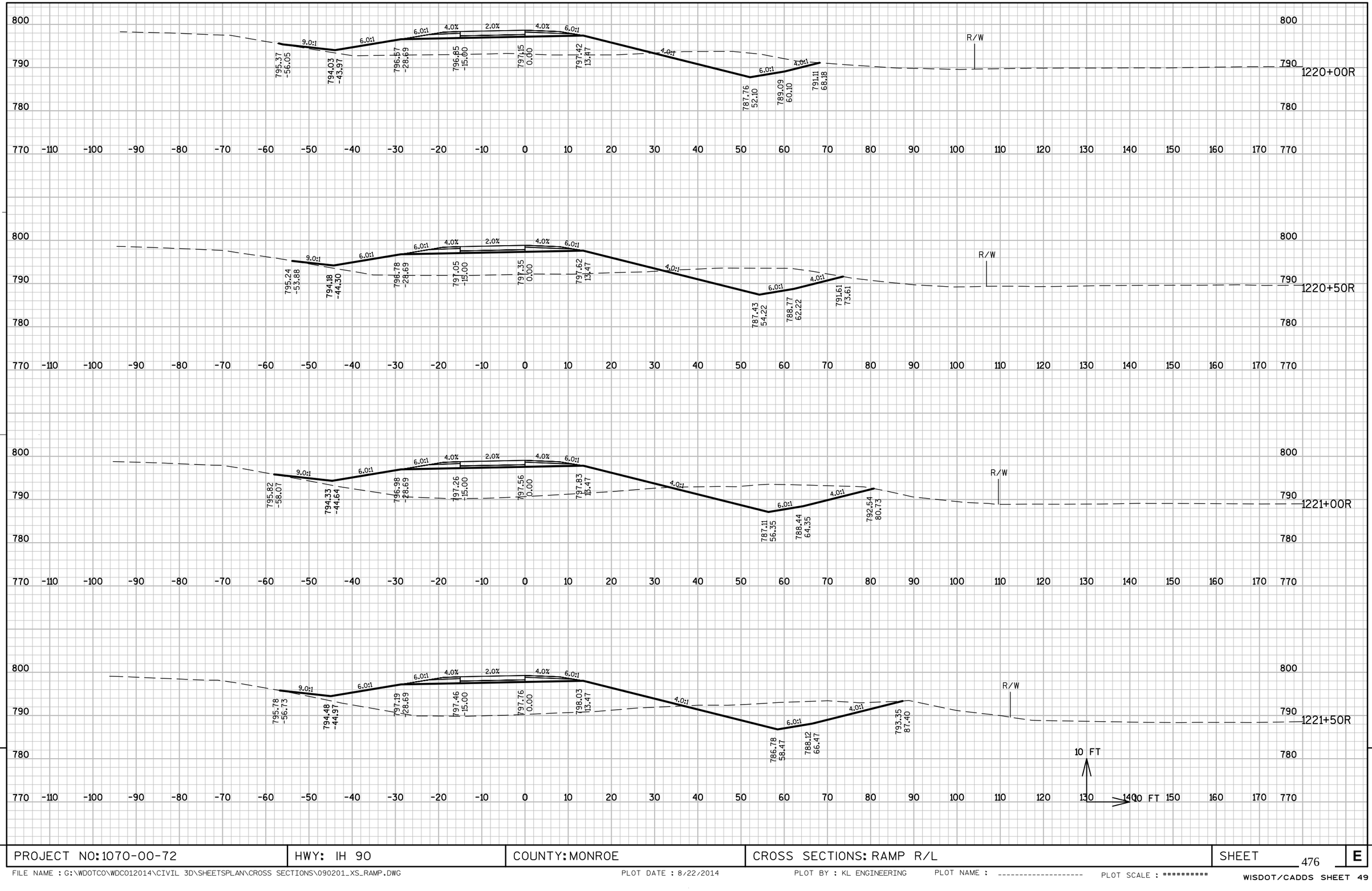
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 474 E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49

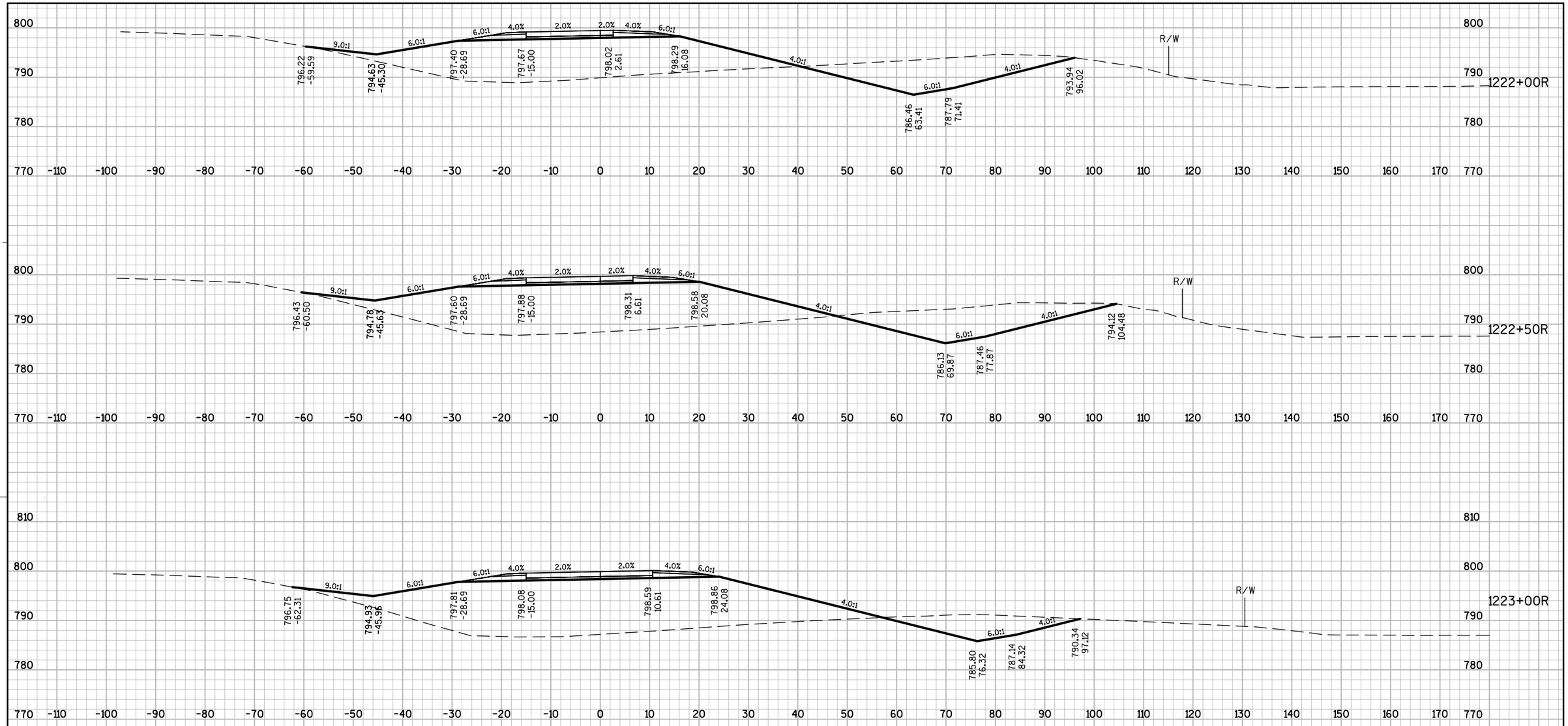


PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 475	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49

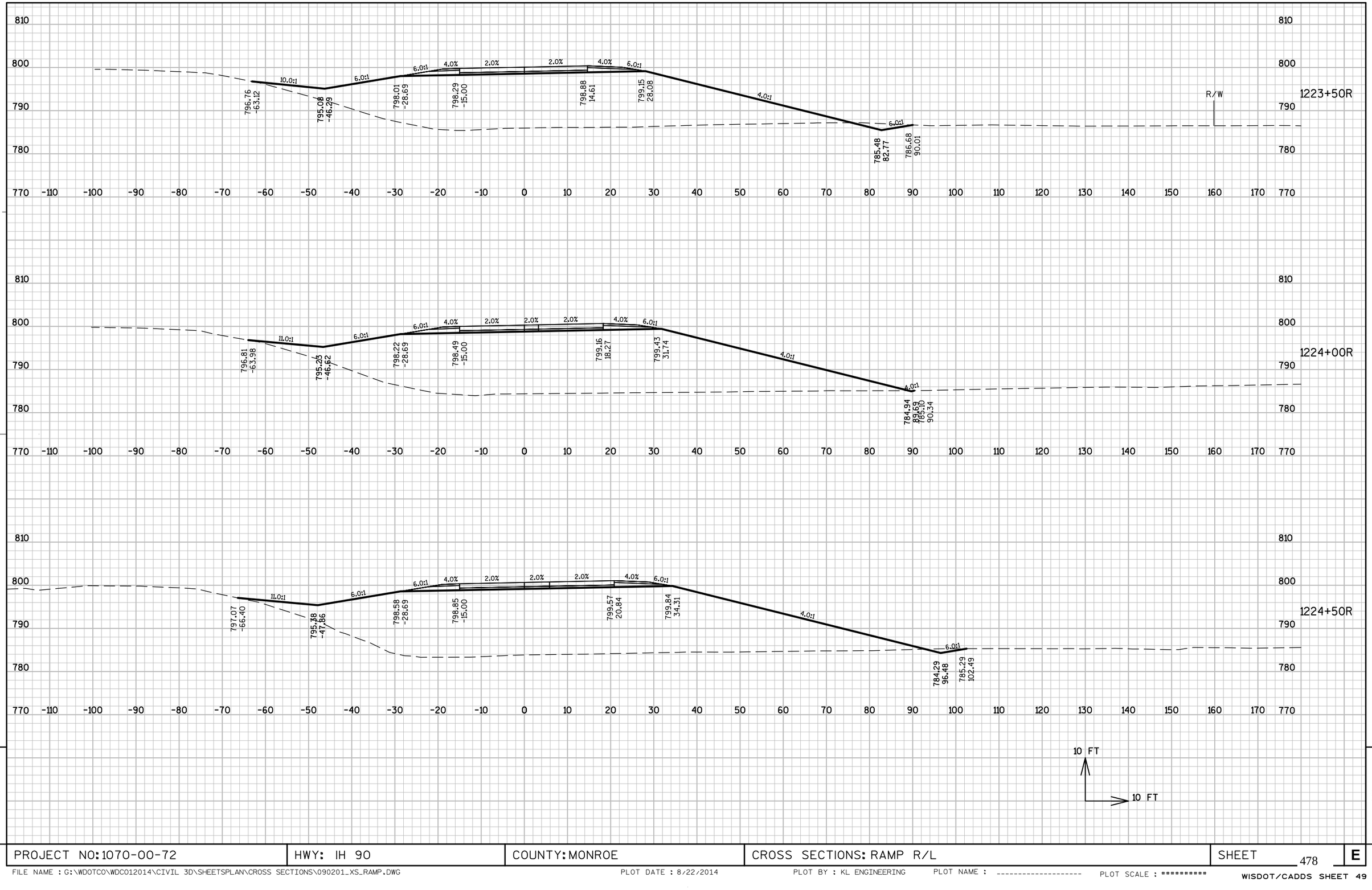


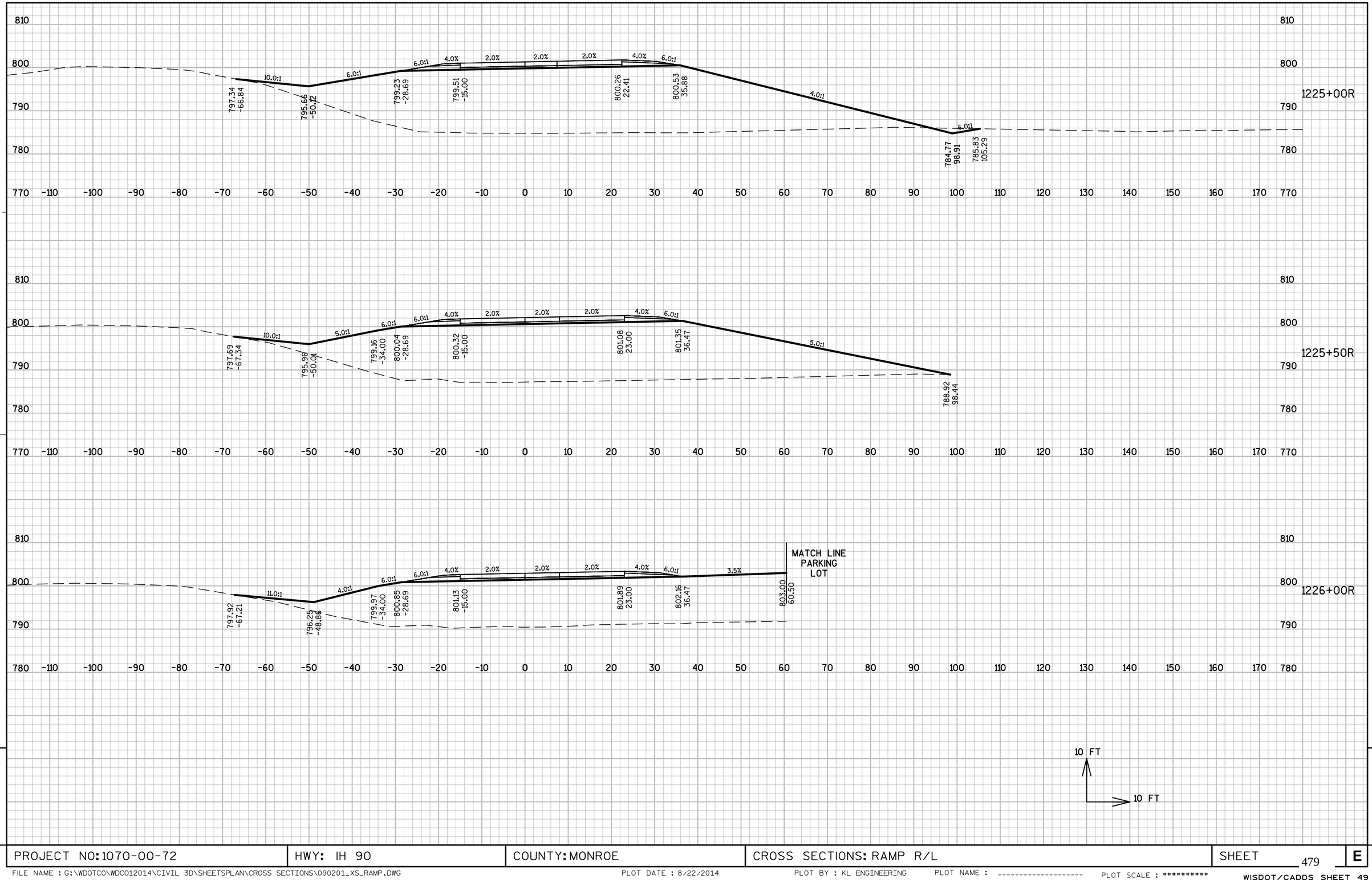
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 476	E



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 477	E

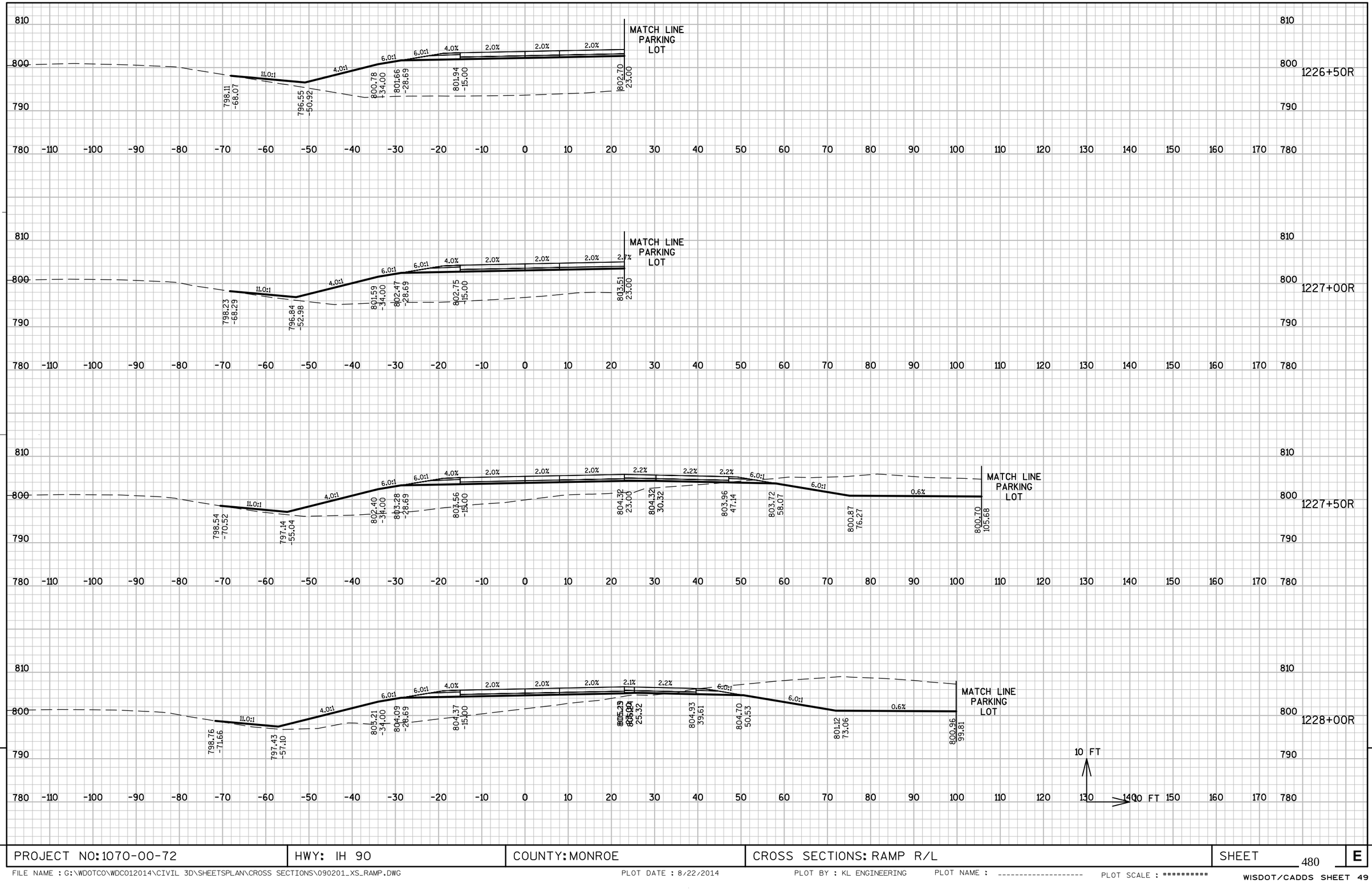
FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49


1223+50R
R/W
796.76 -63.12
795.08 -46.29
798.01 -28.69
798.29 -15.00
798.88 14.61
799.15 28.08
785.48 82.77
786.68 90.01
1224+00R
796.81 -63.98
795.23 -46.62
798.22 -28.69
798.49 -15.00
799.16 18.27
799.43 31.74
784.94 88.69
785.10 90.34
1224+50R
797.07 -66.40
795.38 -47.86
798.58 -28.69
798.85 -15.00
799.57 20.84
799.84 34.31
784.29 96.48
785.29 102.49
10 FT
10 FT



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 479	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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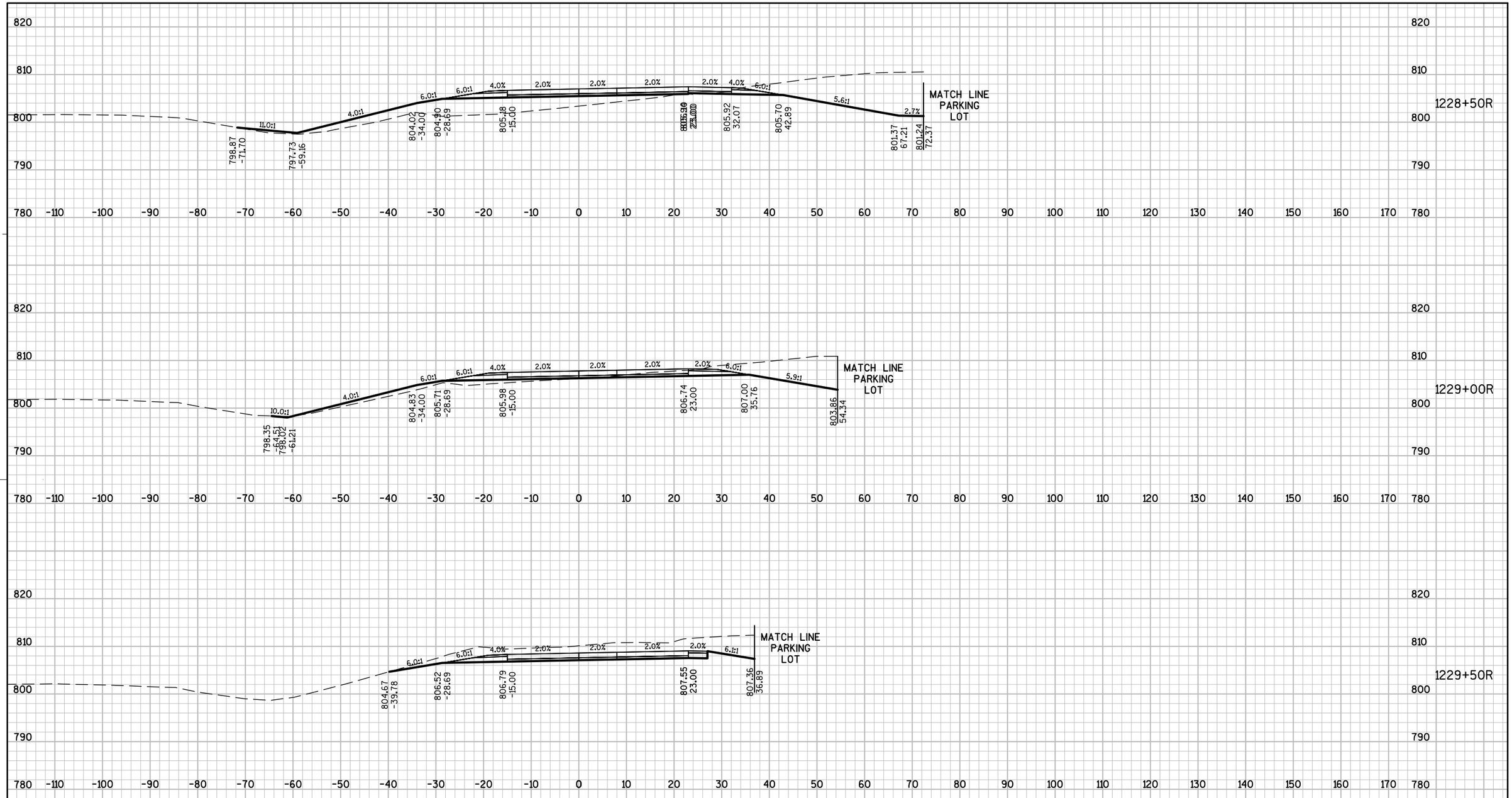
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 480	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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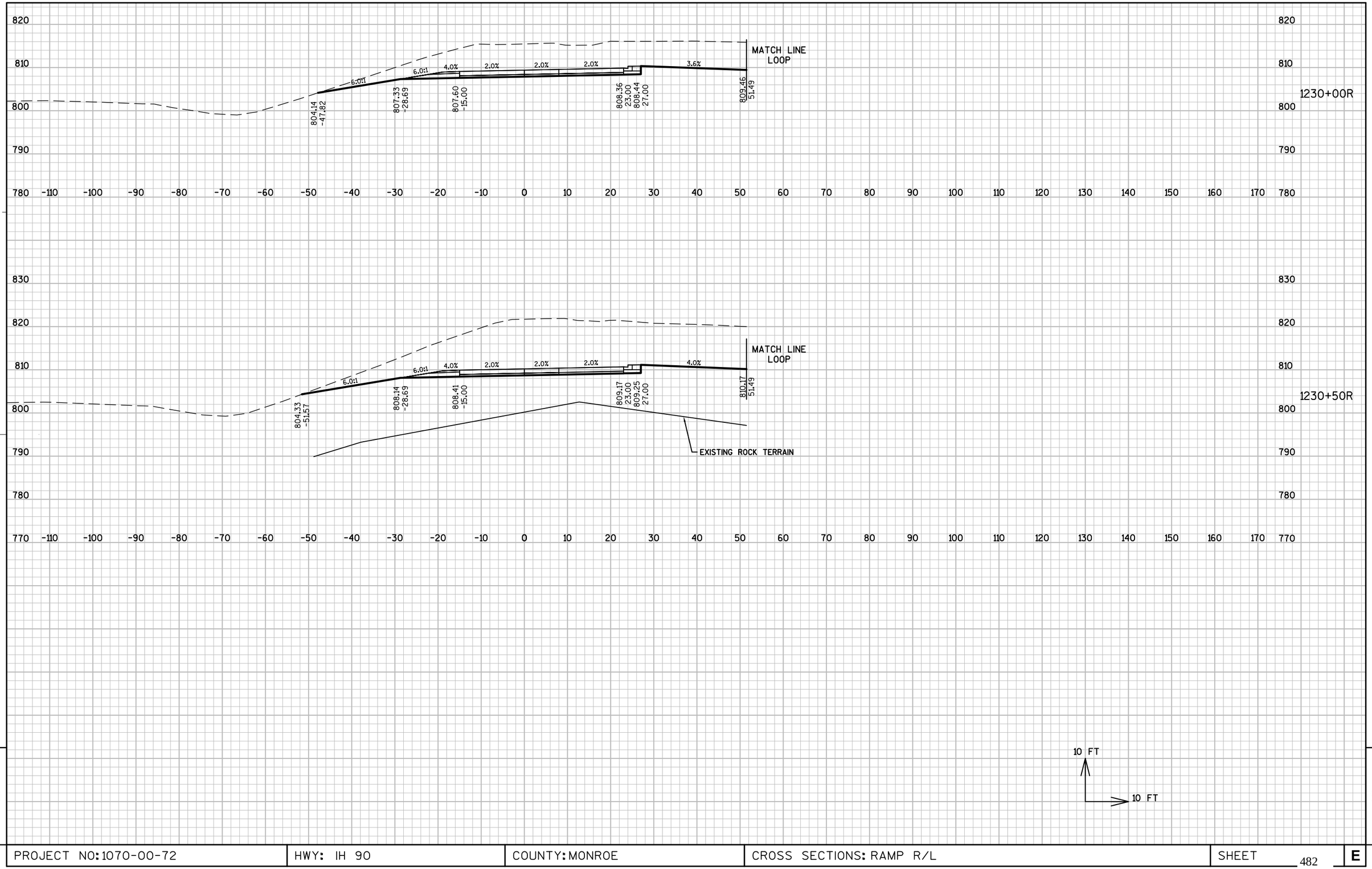
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 481	E



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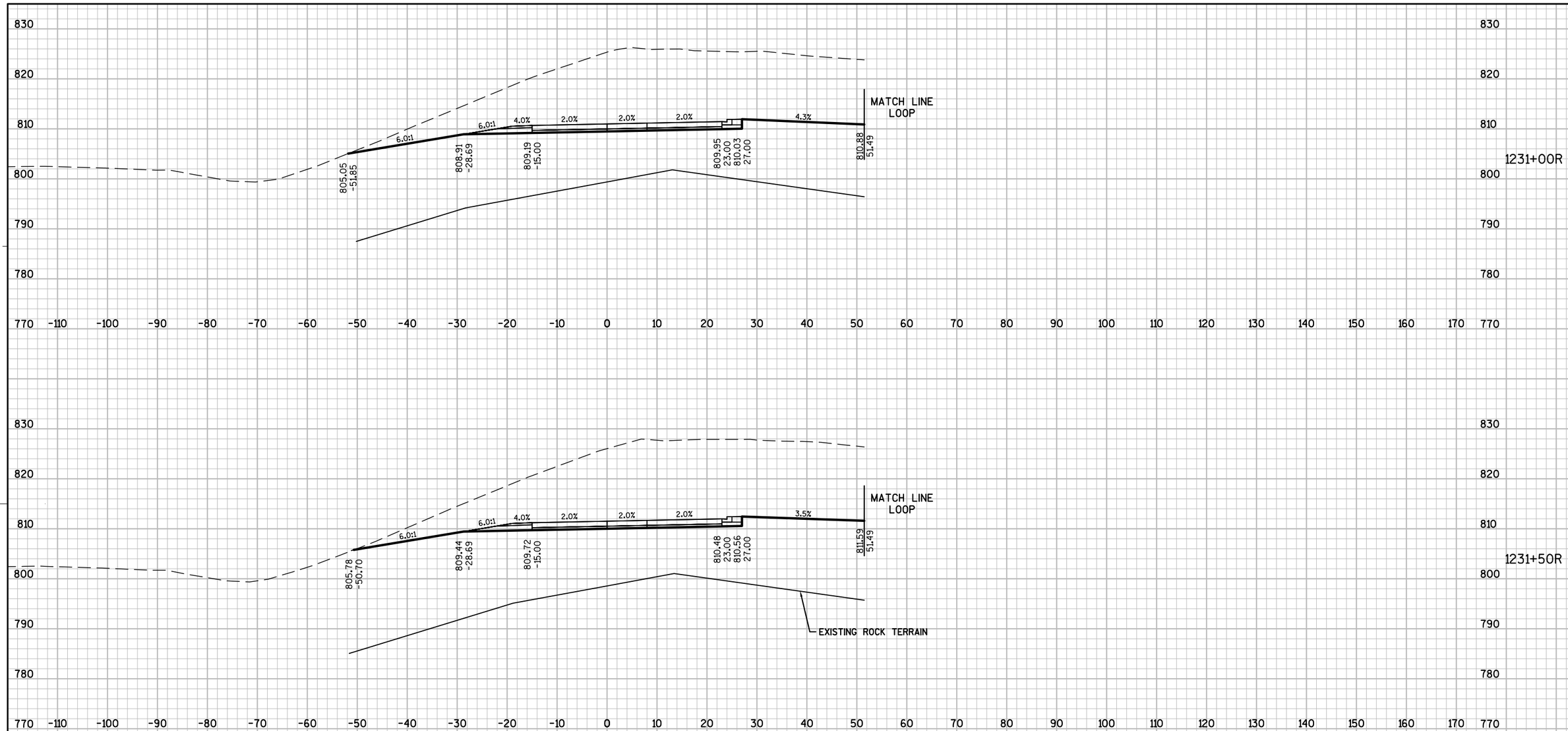
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 482	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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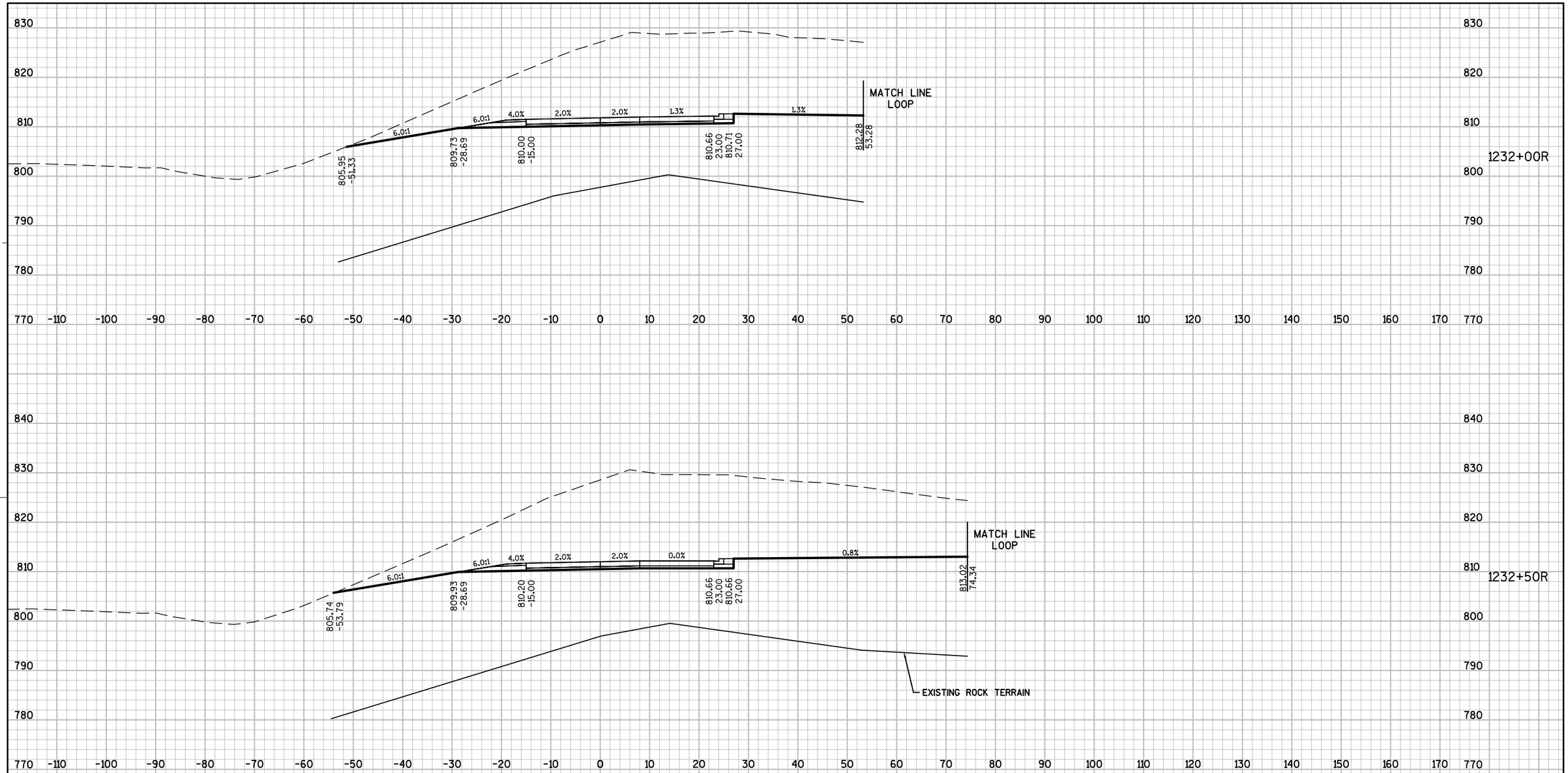
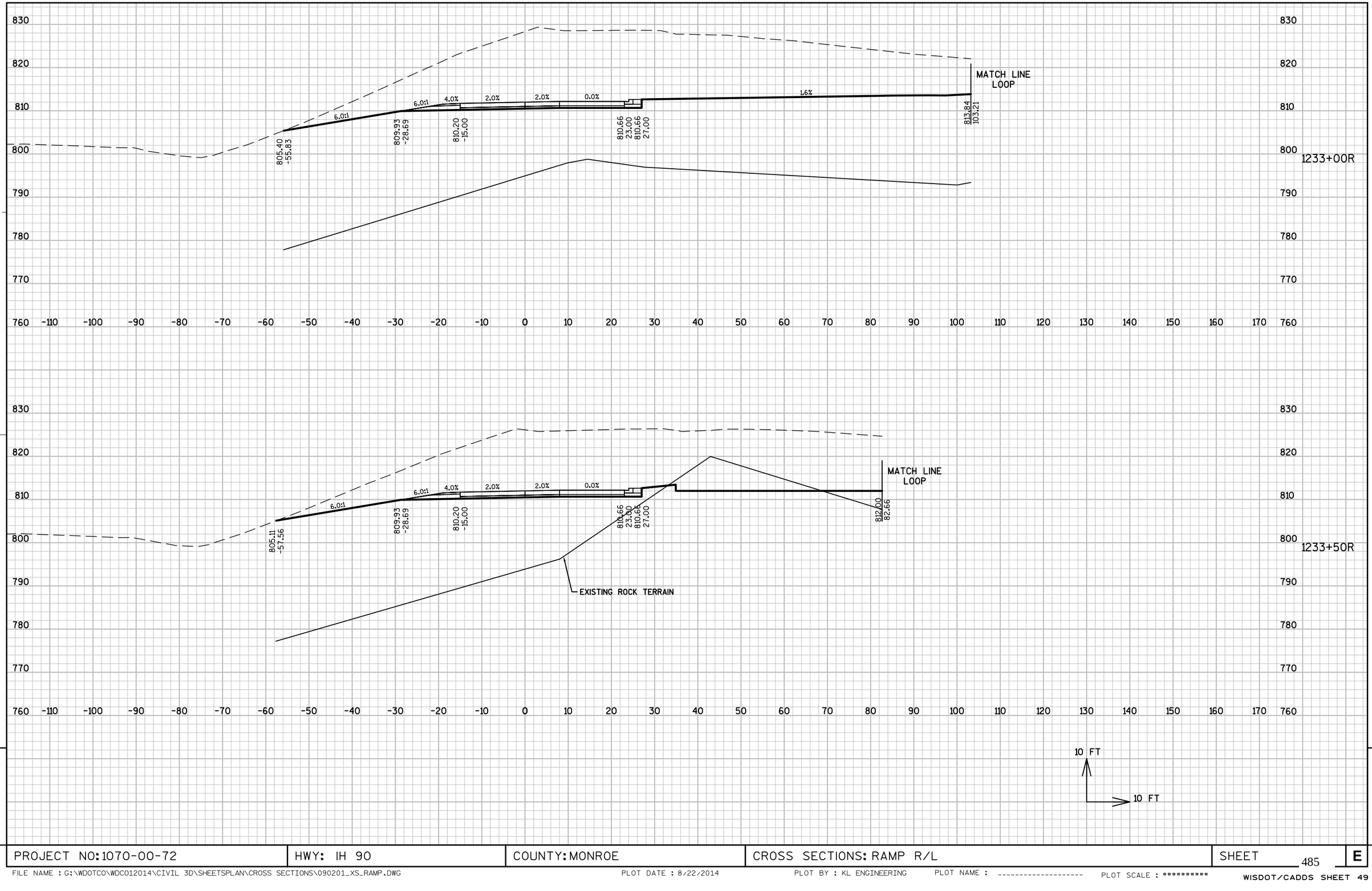
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 483	E



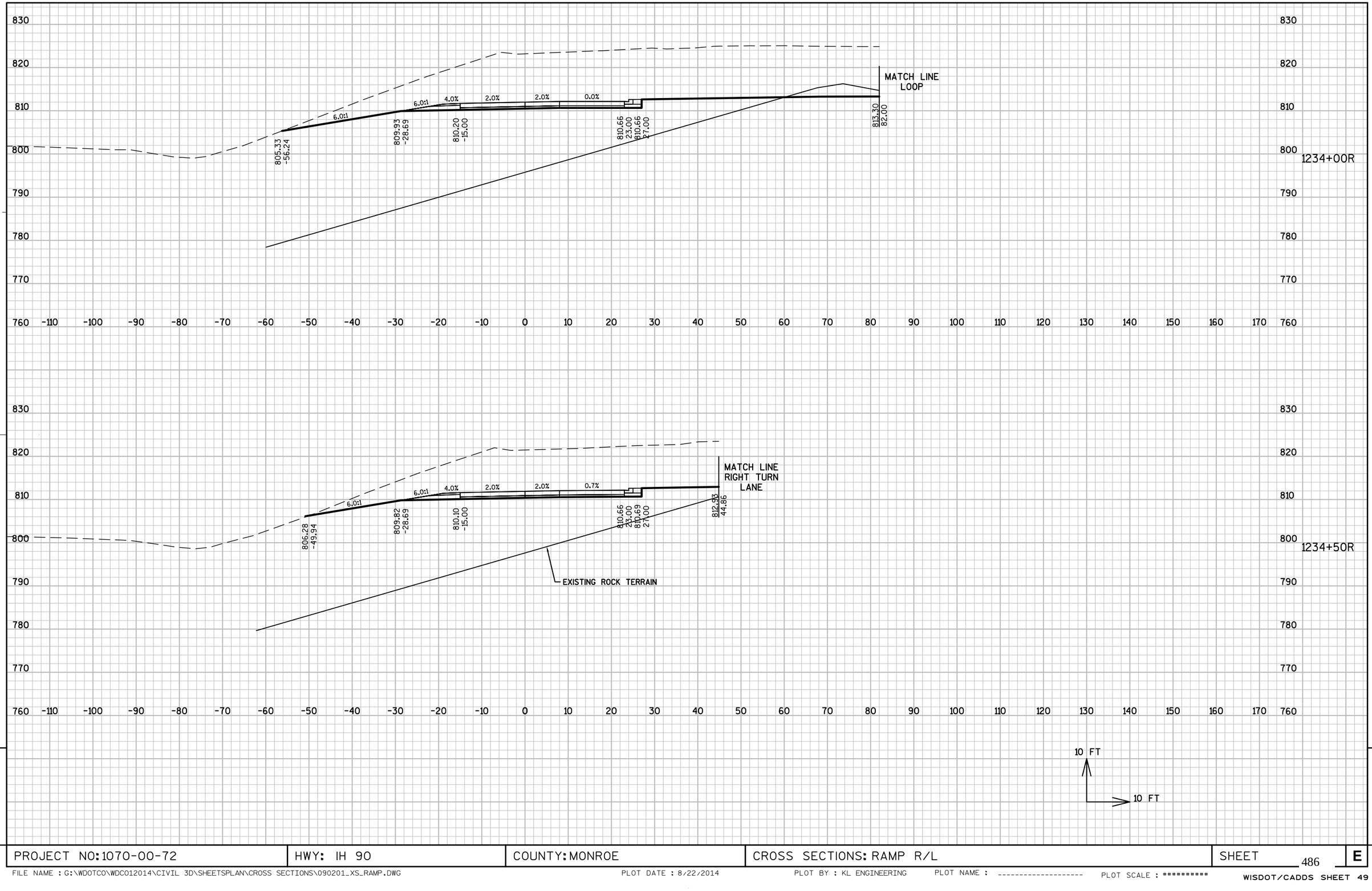
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 484	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 485 E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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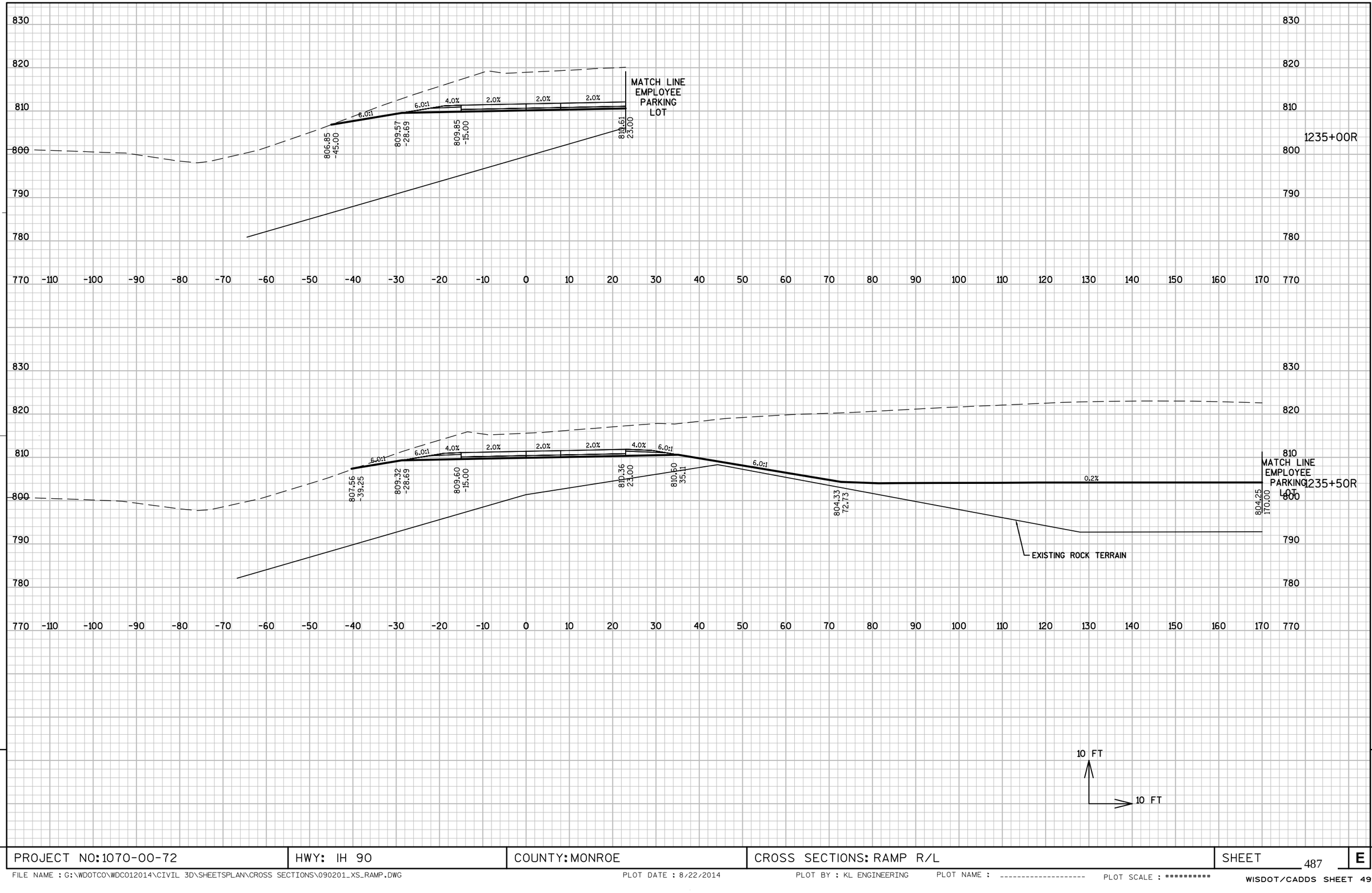

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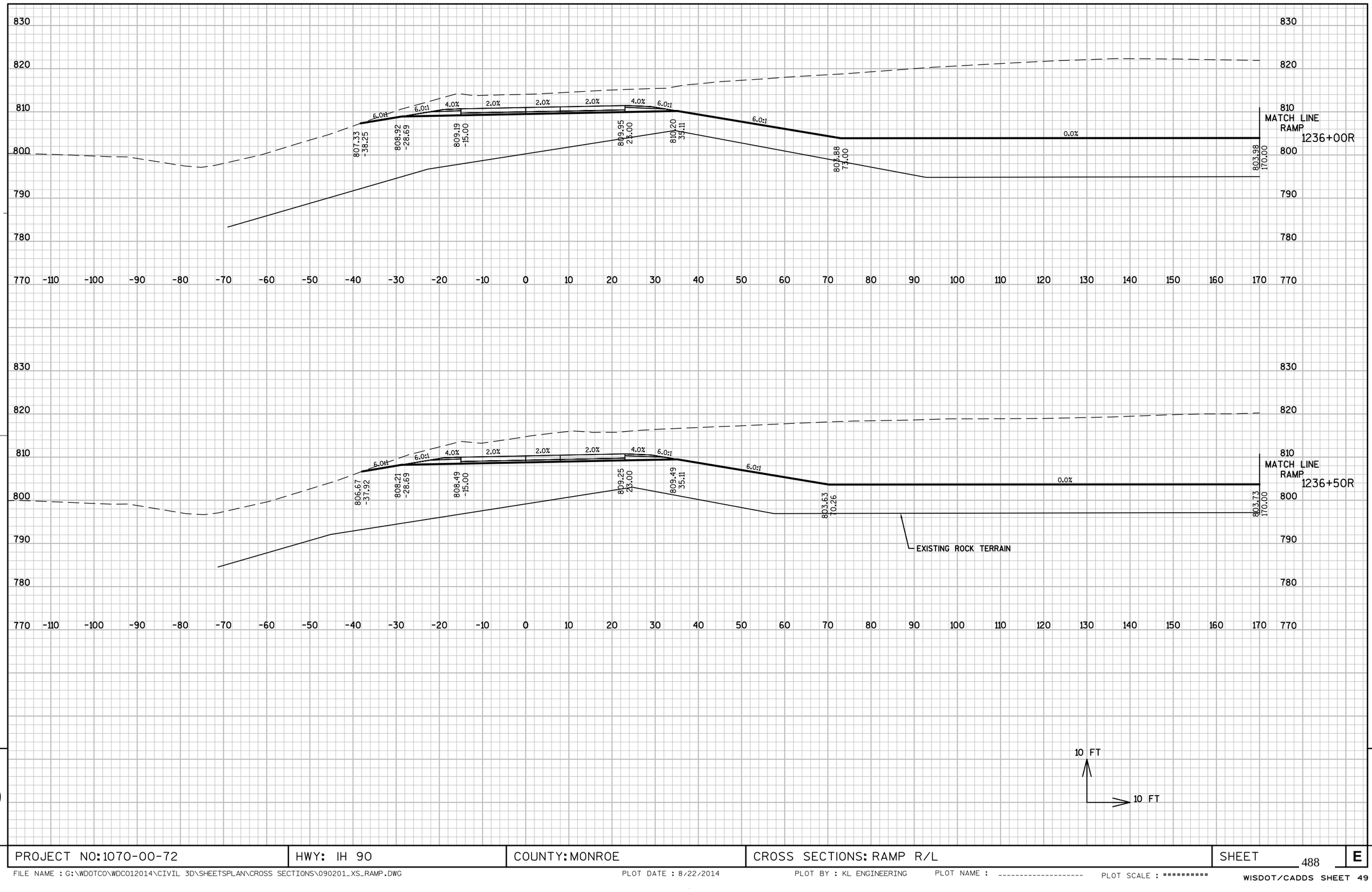
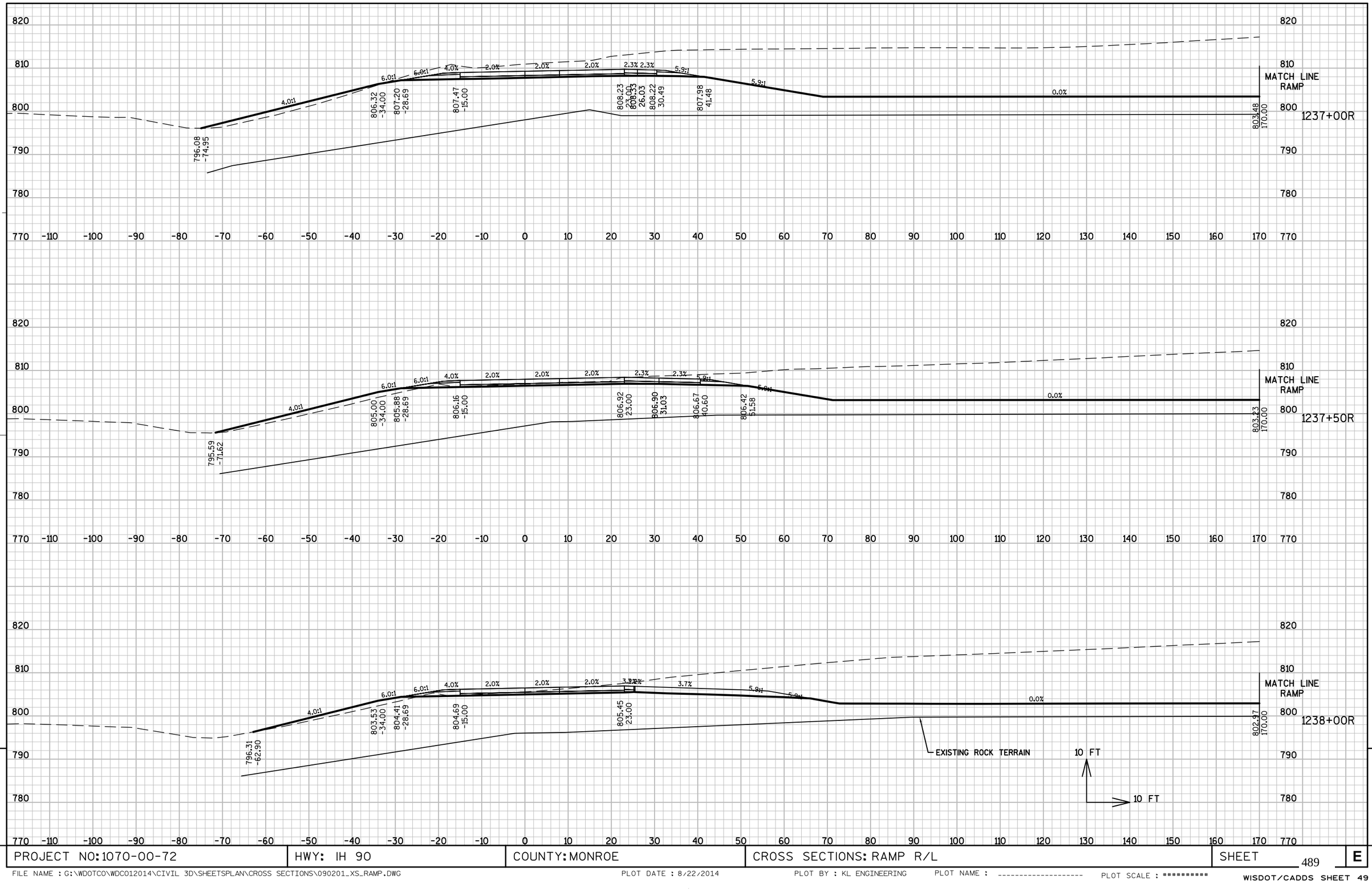


PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 488	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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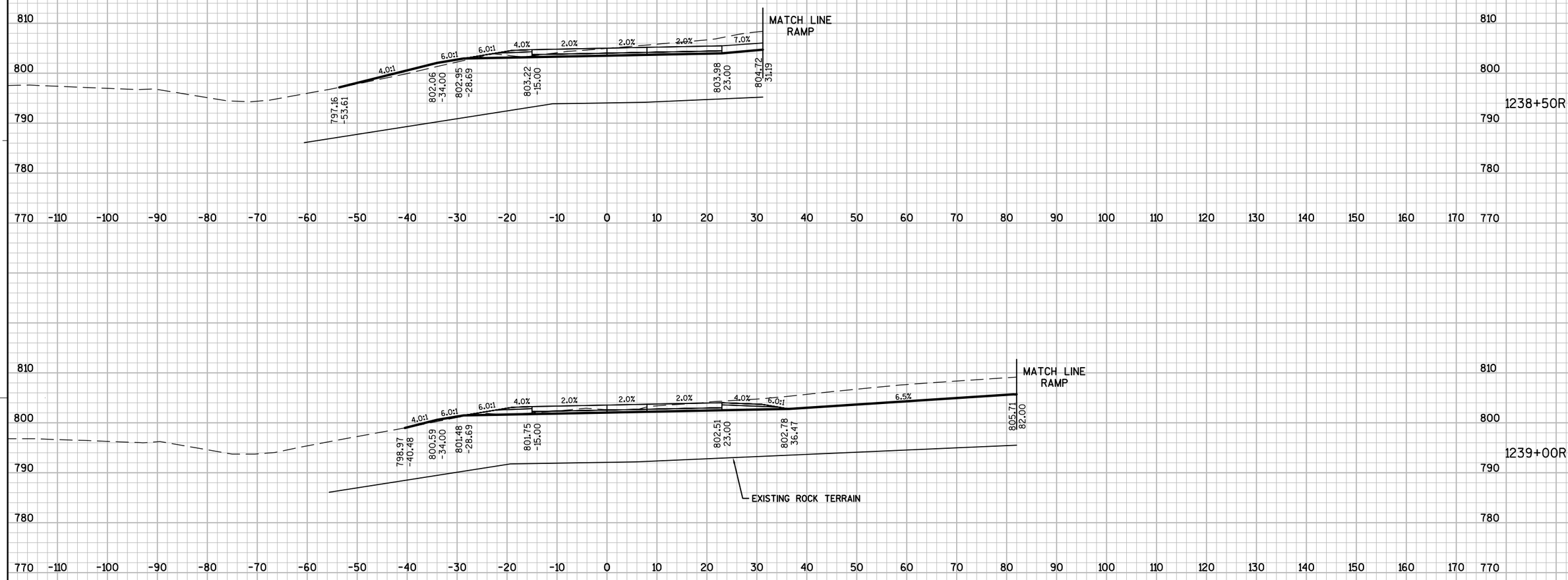
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 489	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : **********



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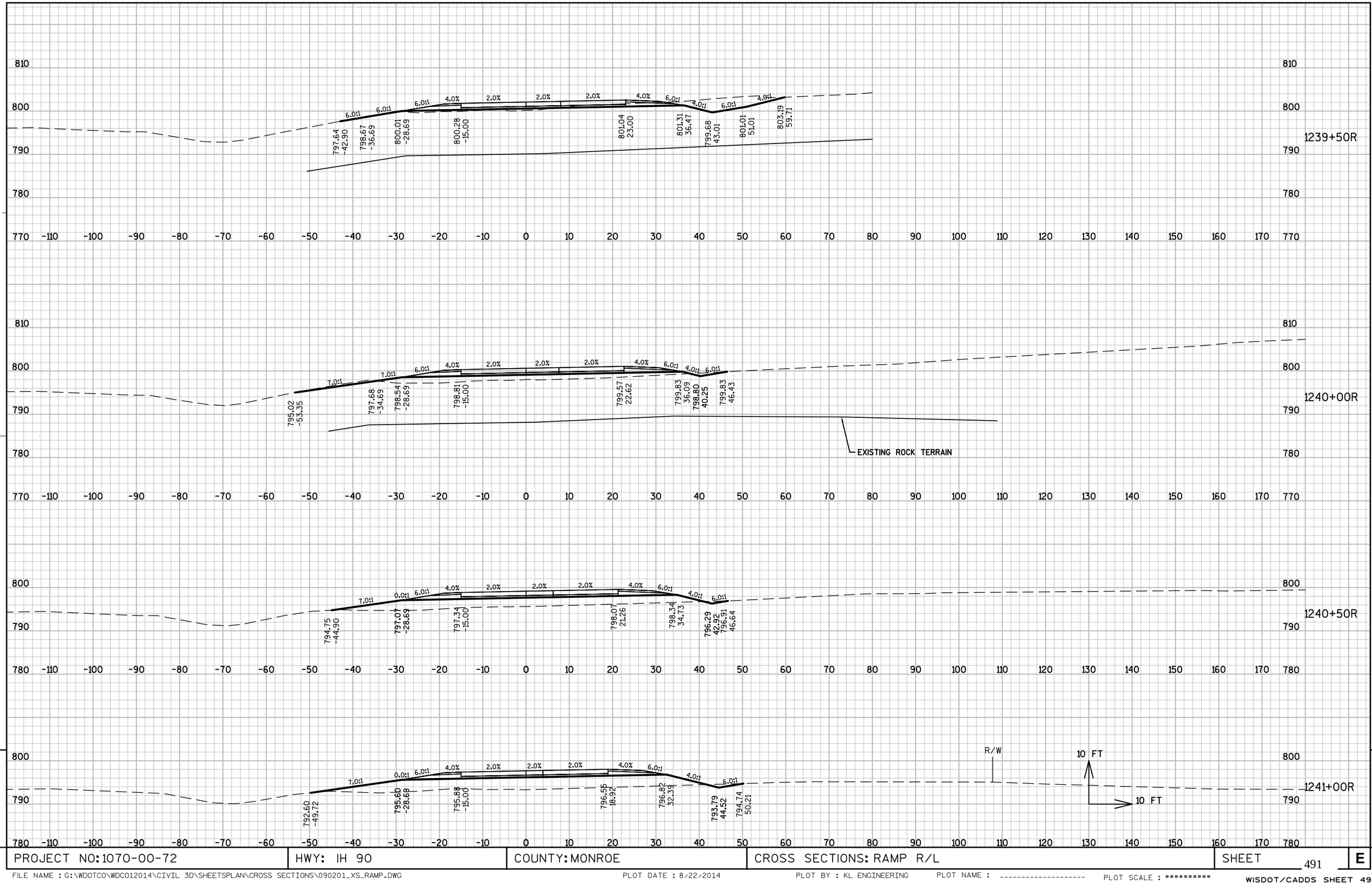
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 490	E



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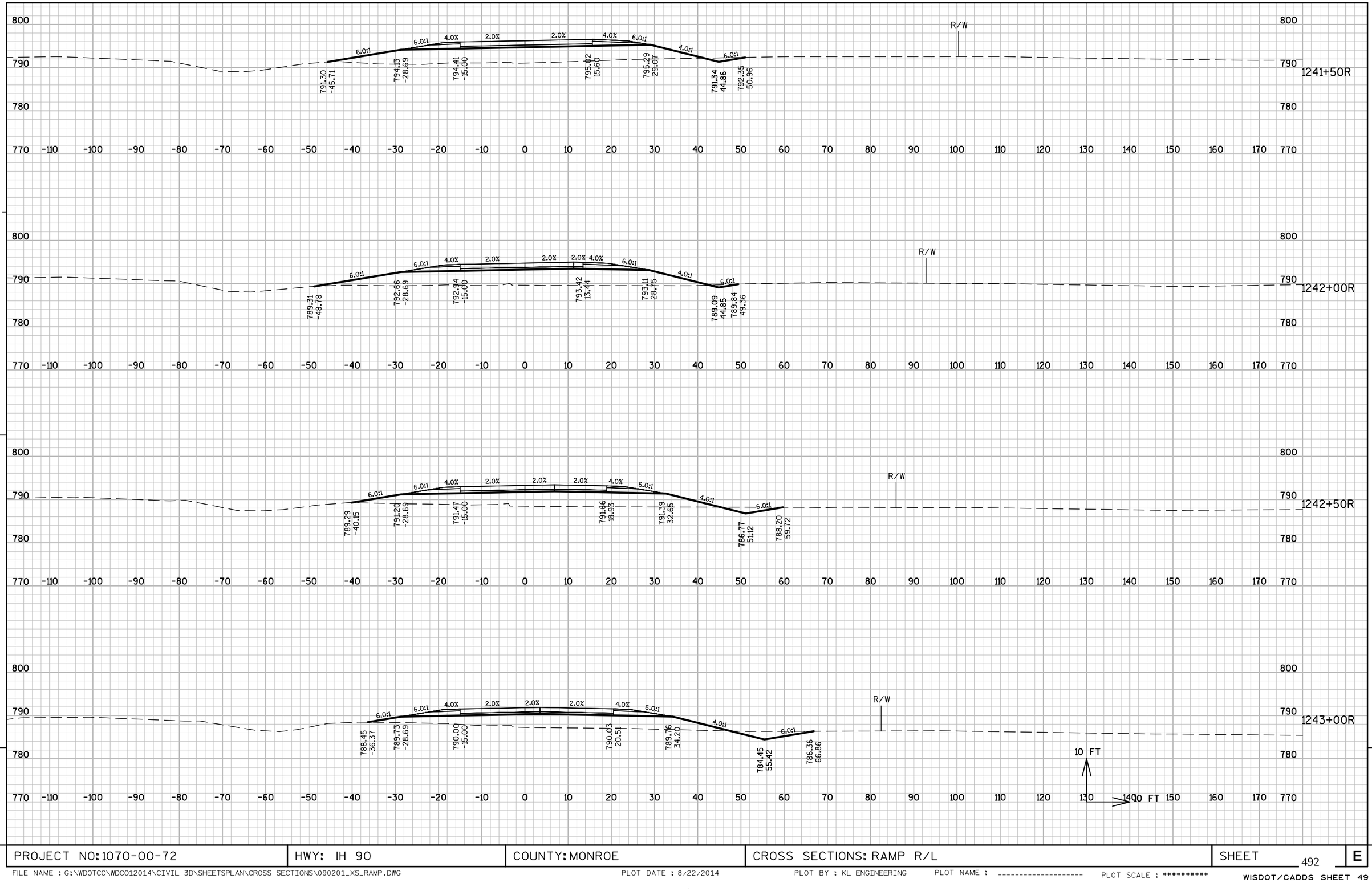
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 491	E



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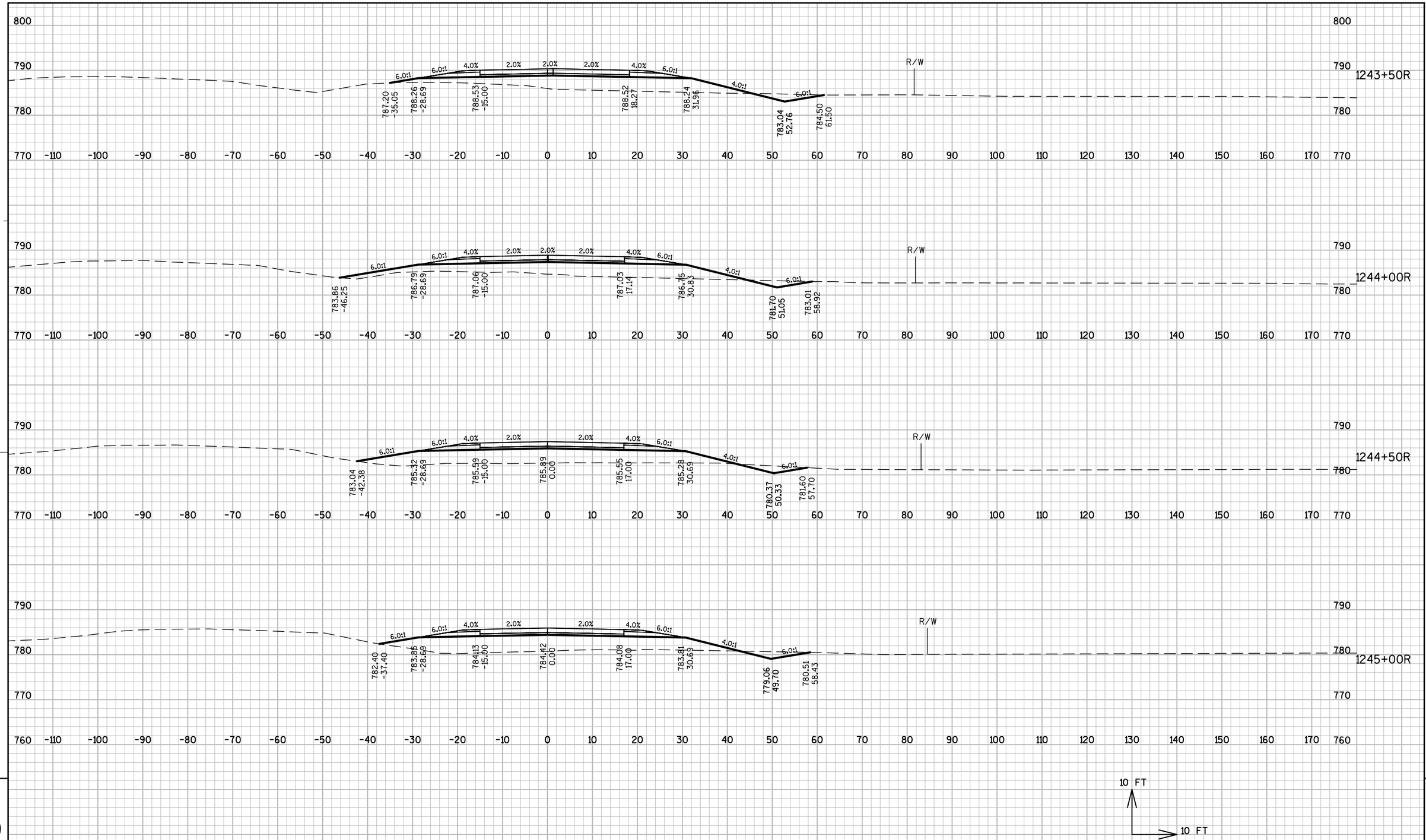
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 492	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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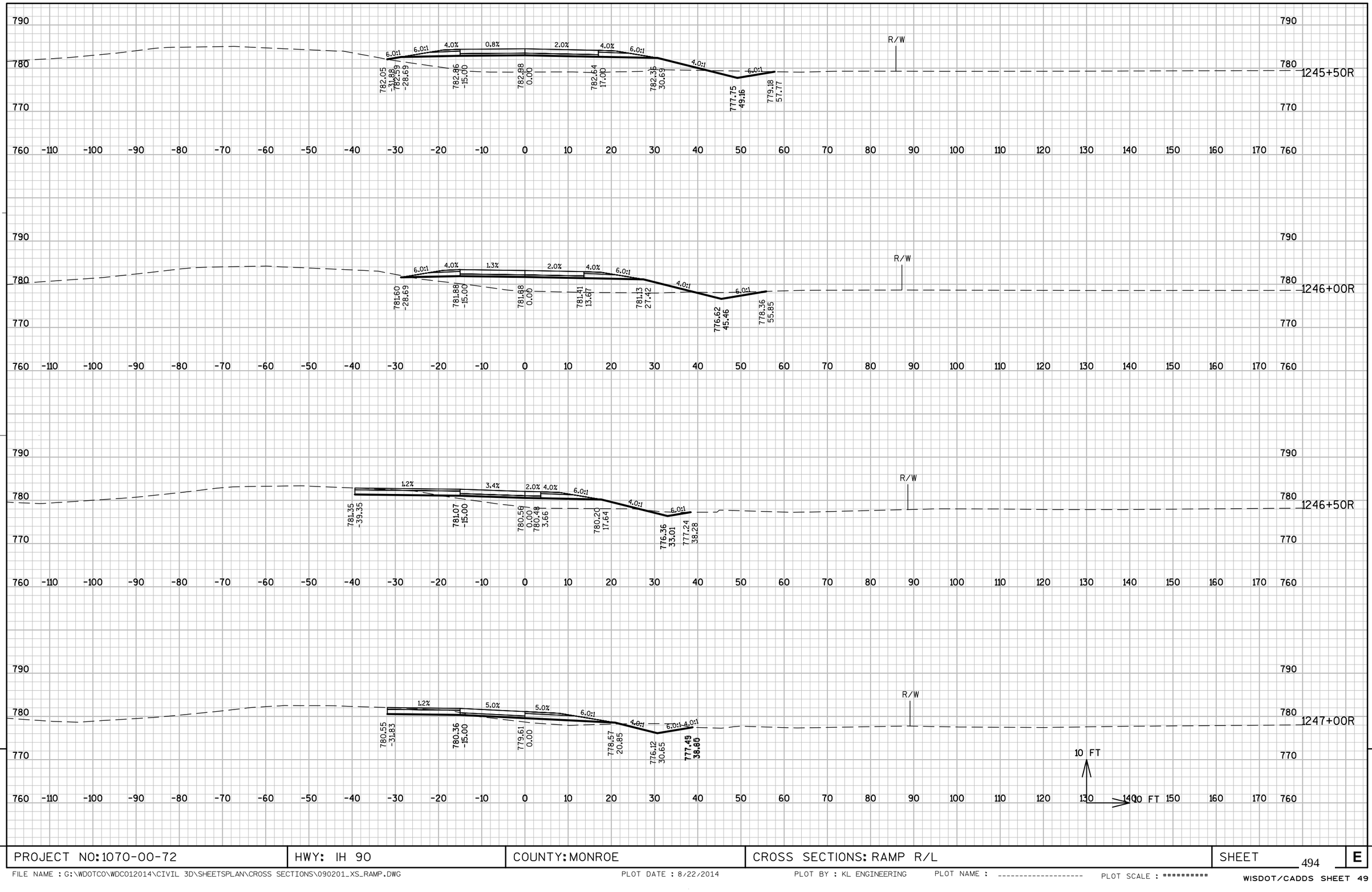
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 493	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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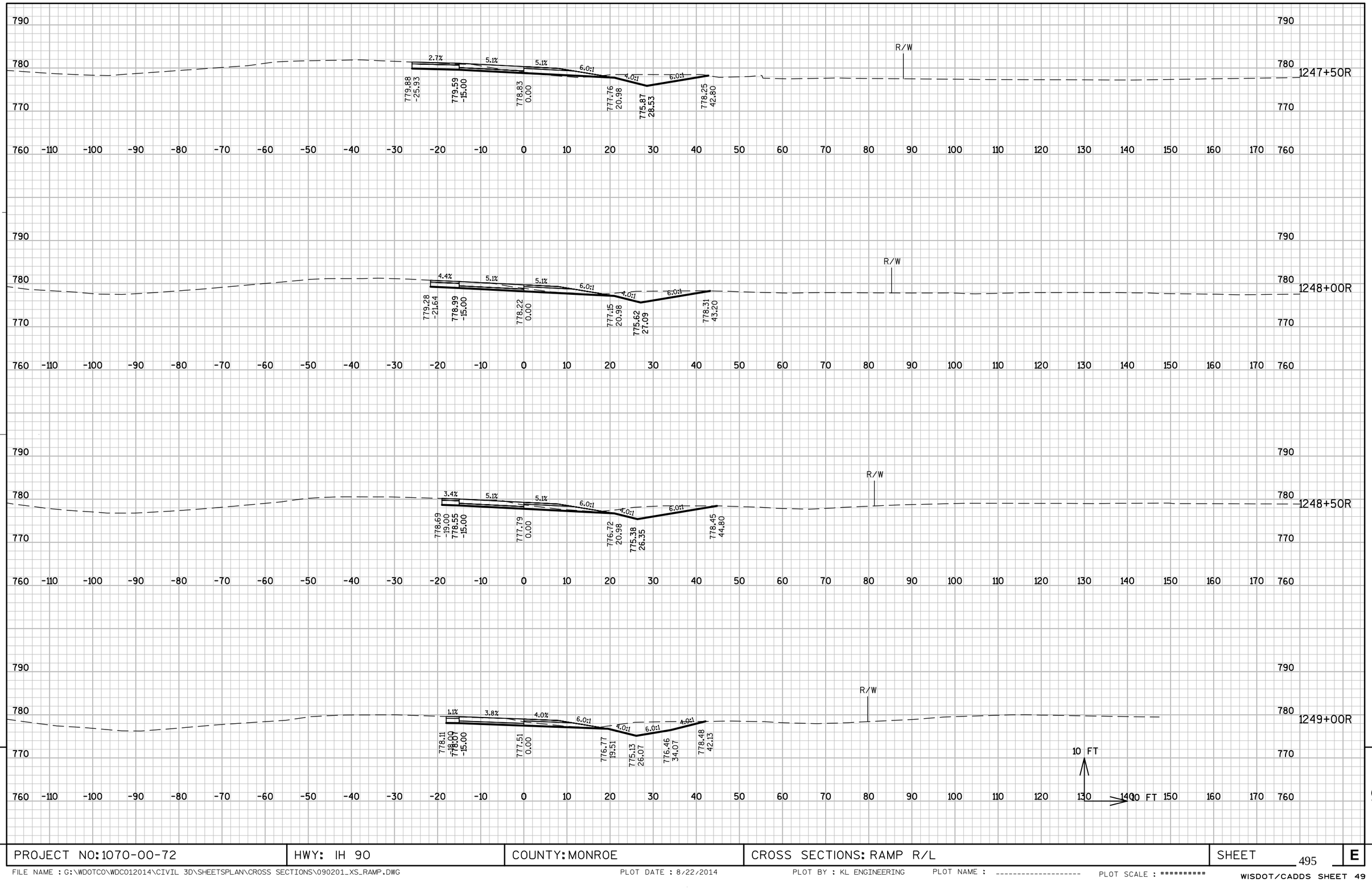
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 494	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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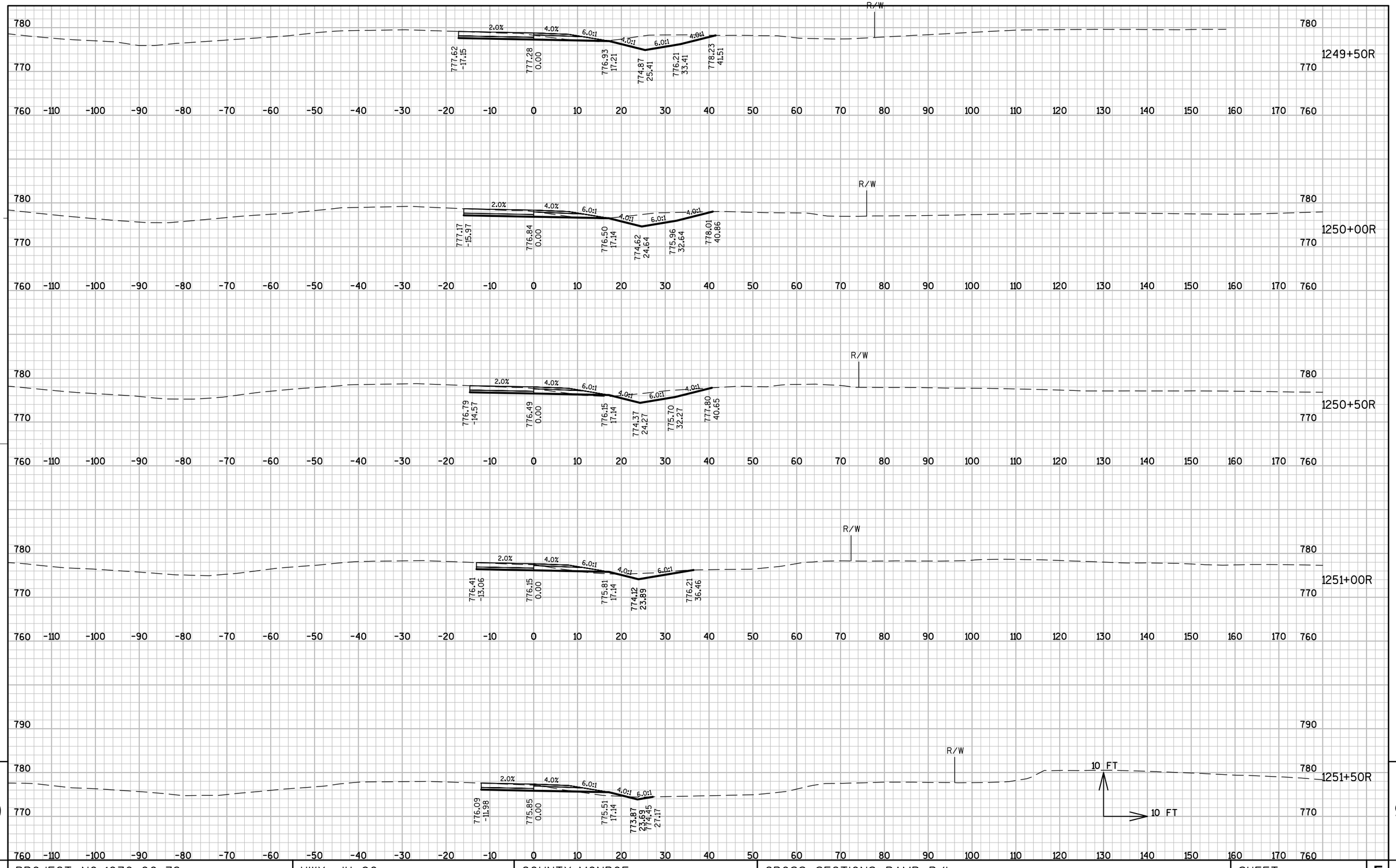
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 495	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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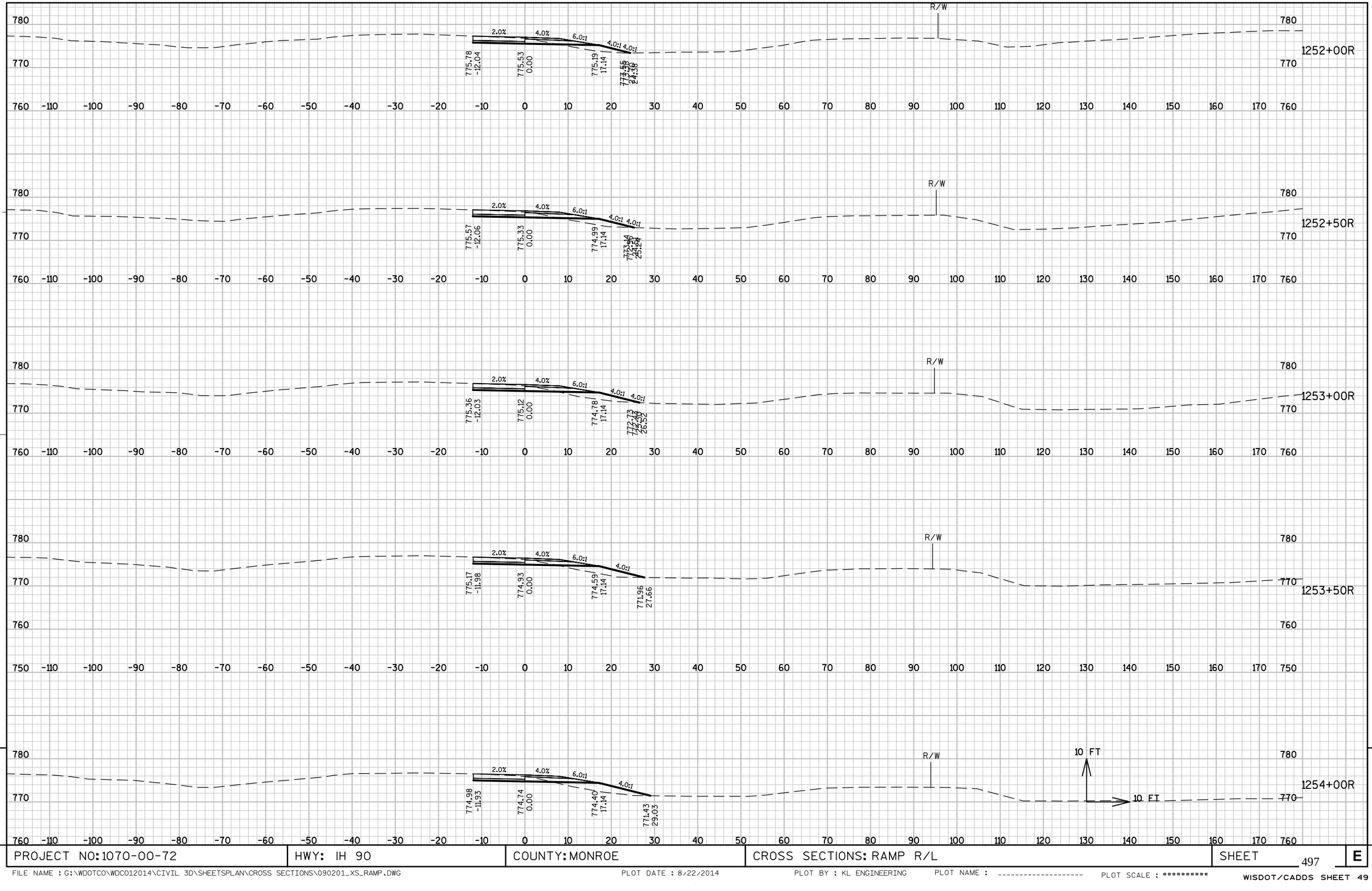
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 496	E



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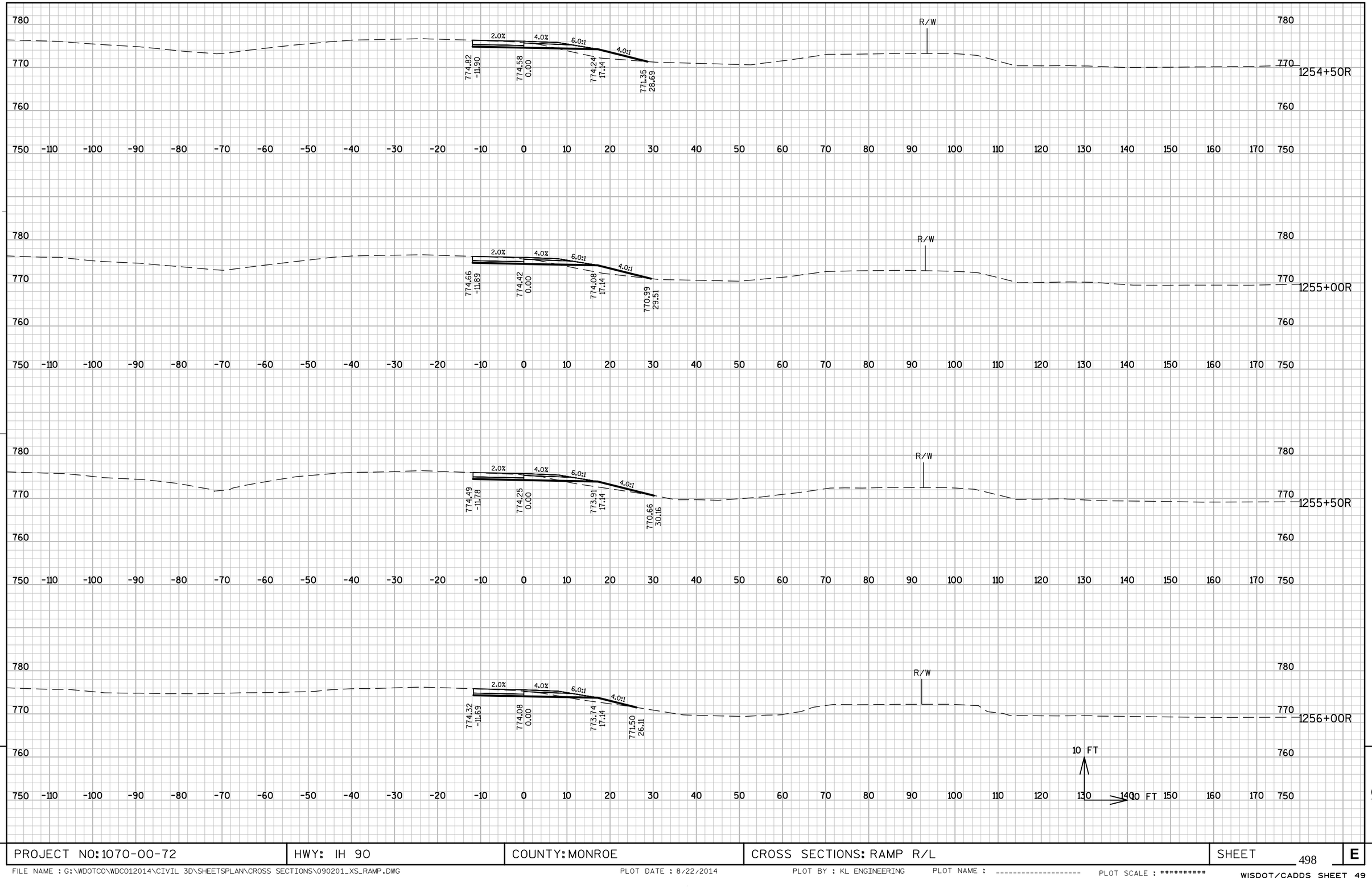
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 497	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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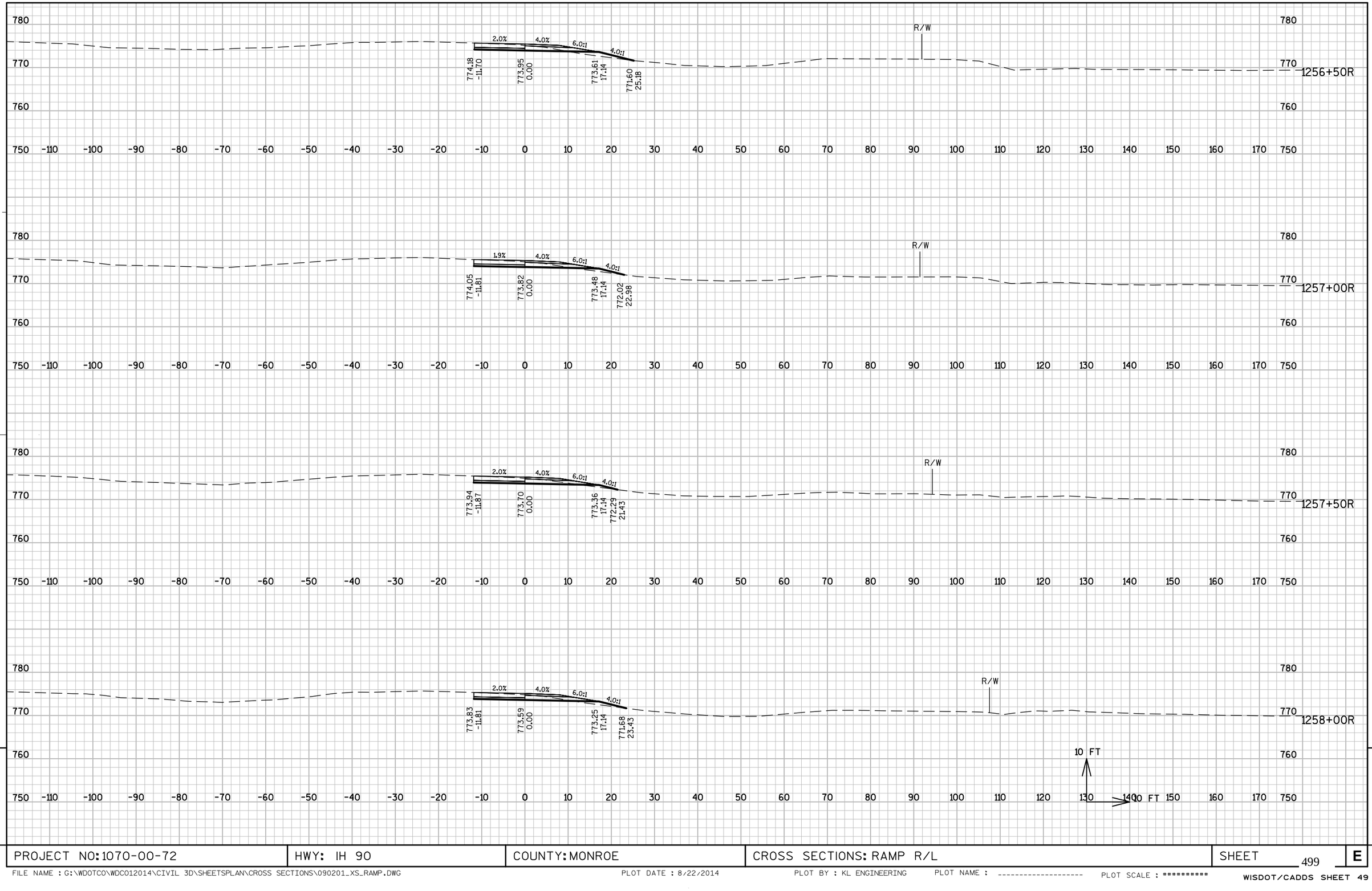
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 498	E



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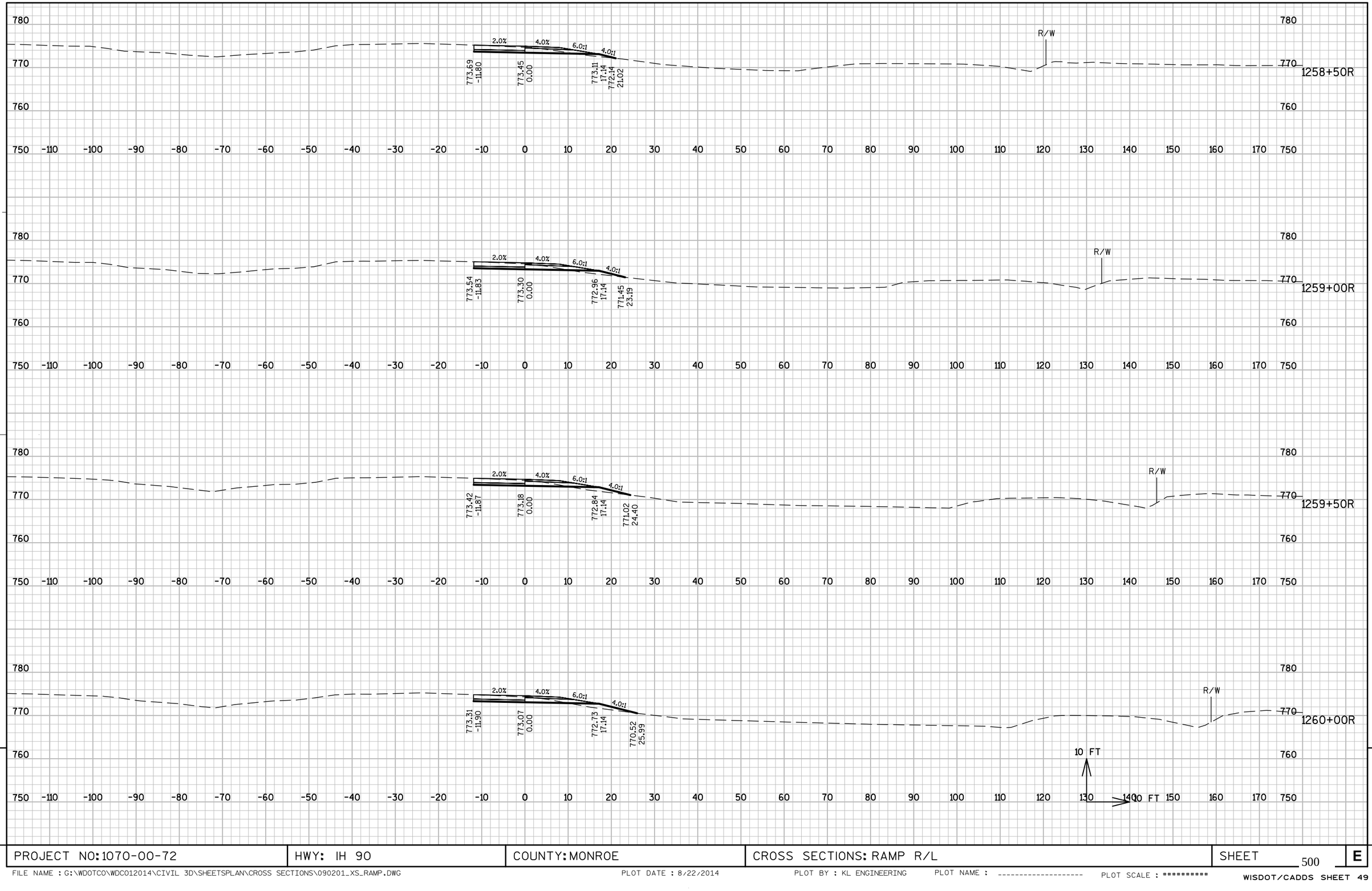
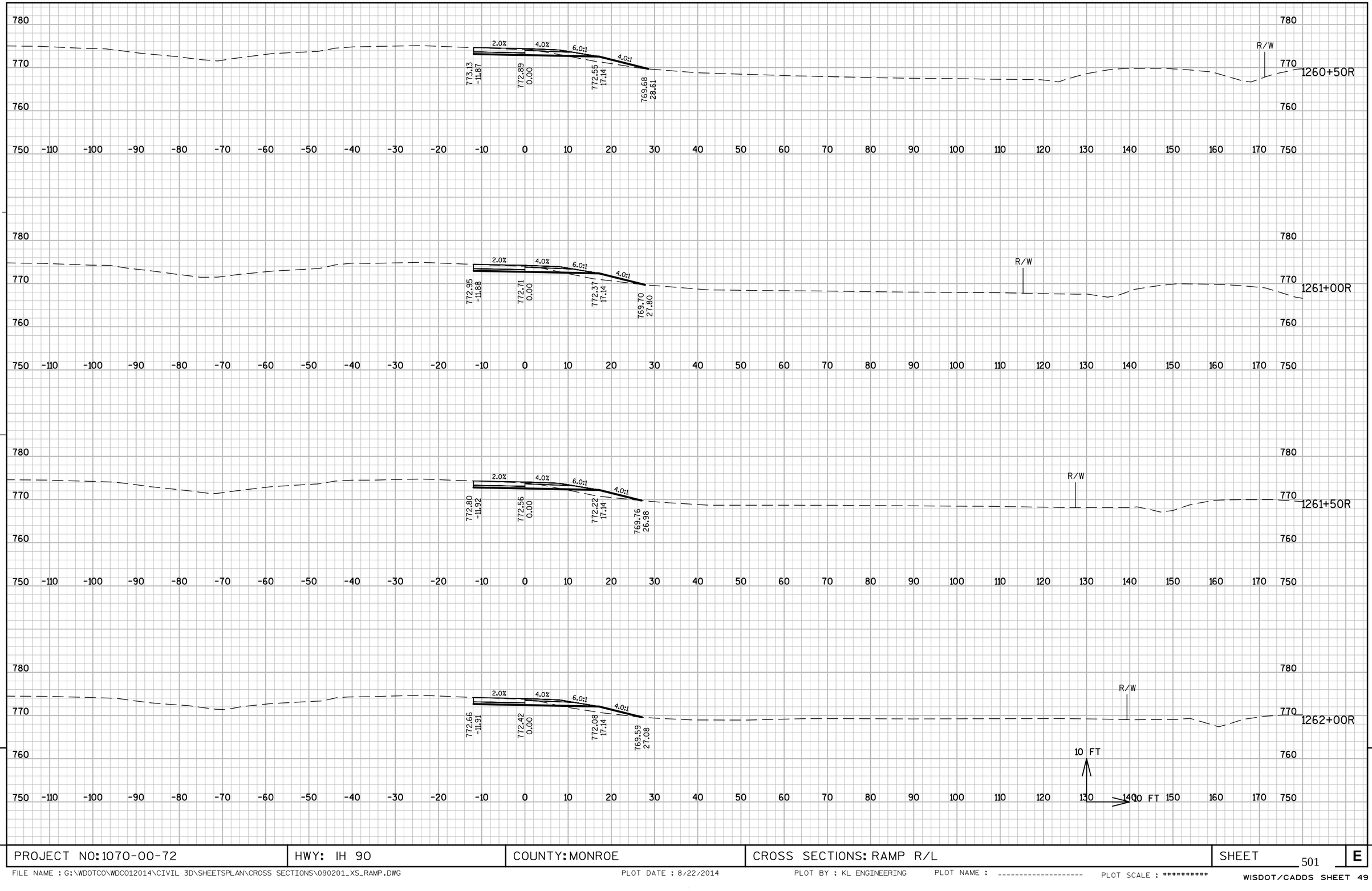
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 499	E



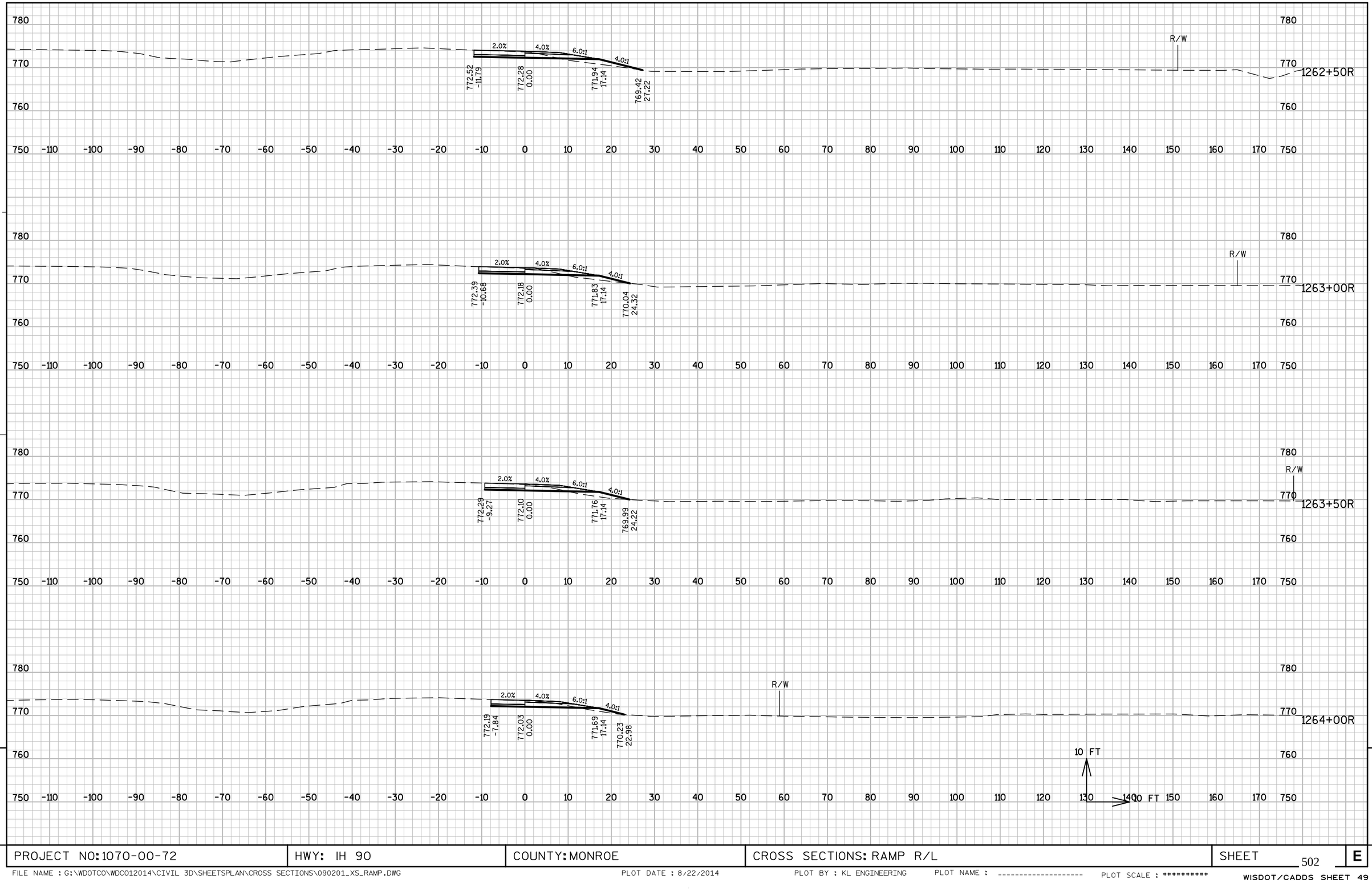
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 500	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



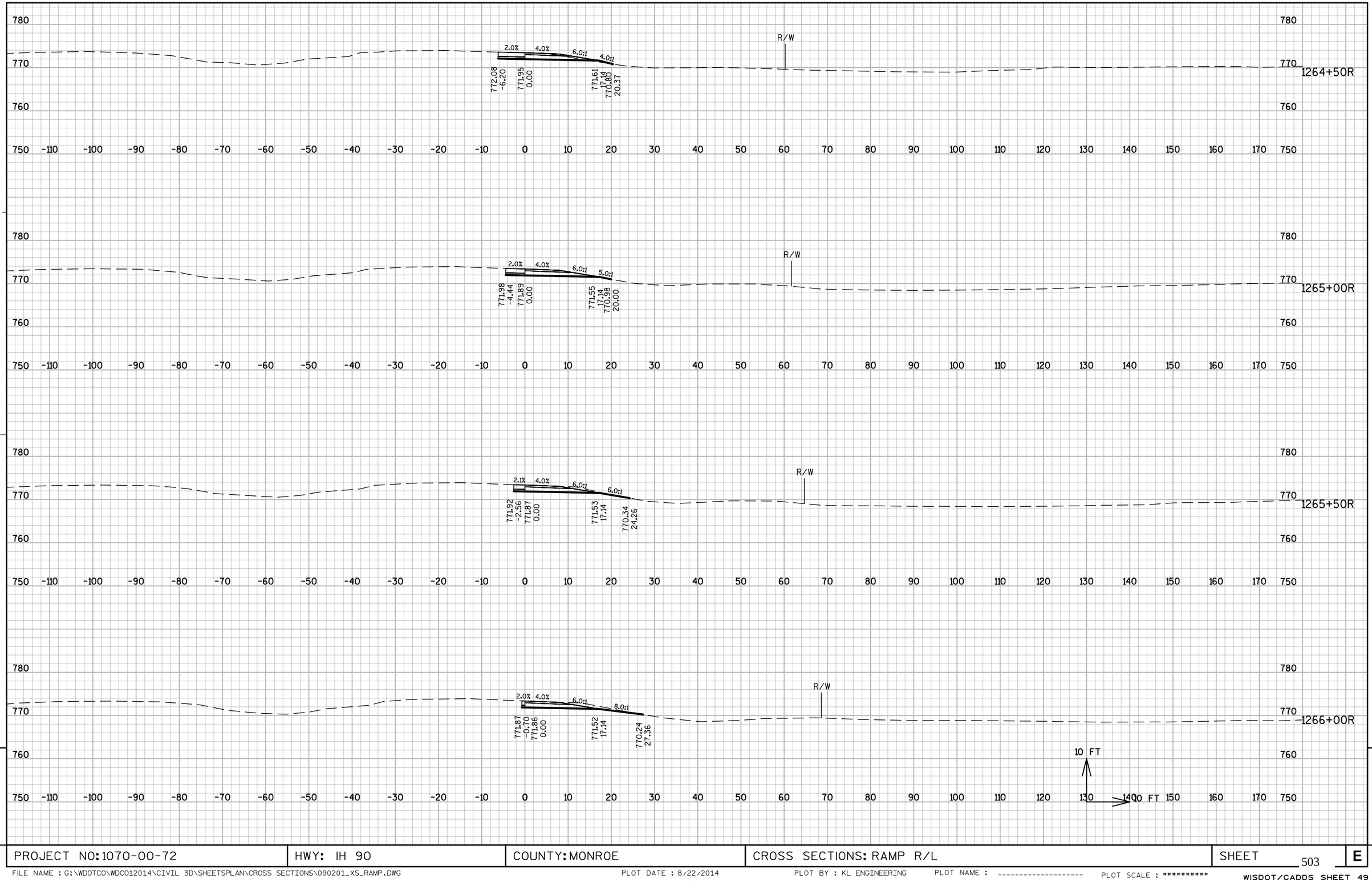
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 501	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 502	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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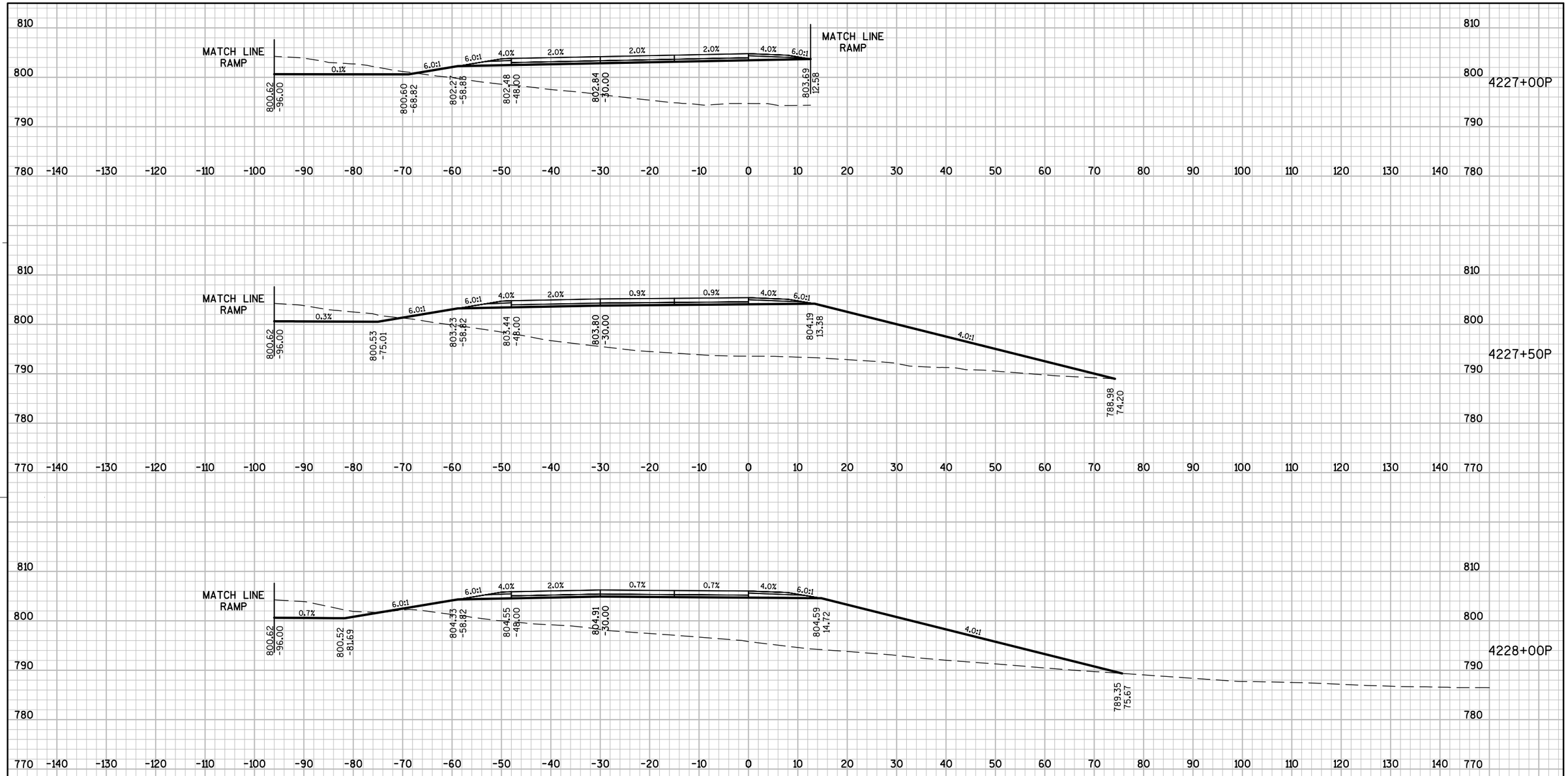
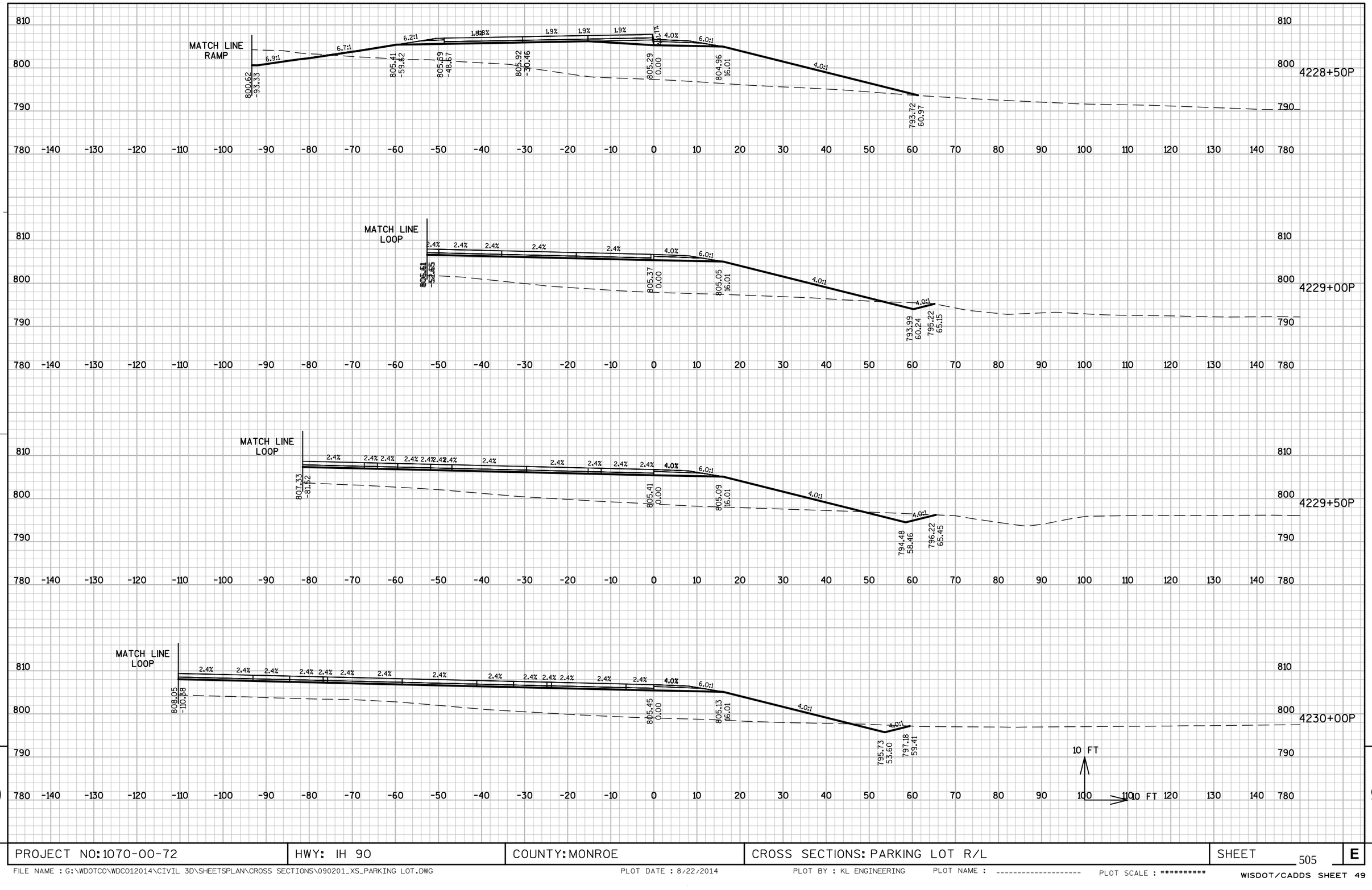
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: RAMP R/L	SHEET 503	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_RAMP.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 504	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_PARKING LOT.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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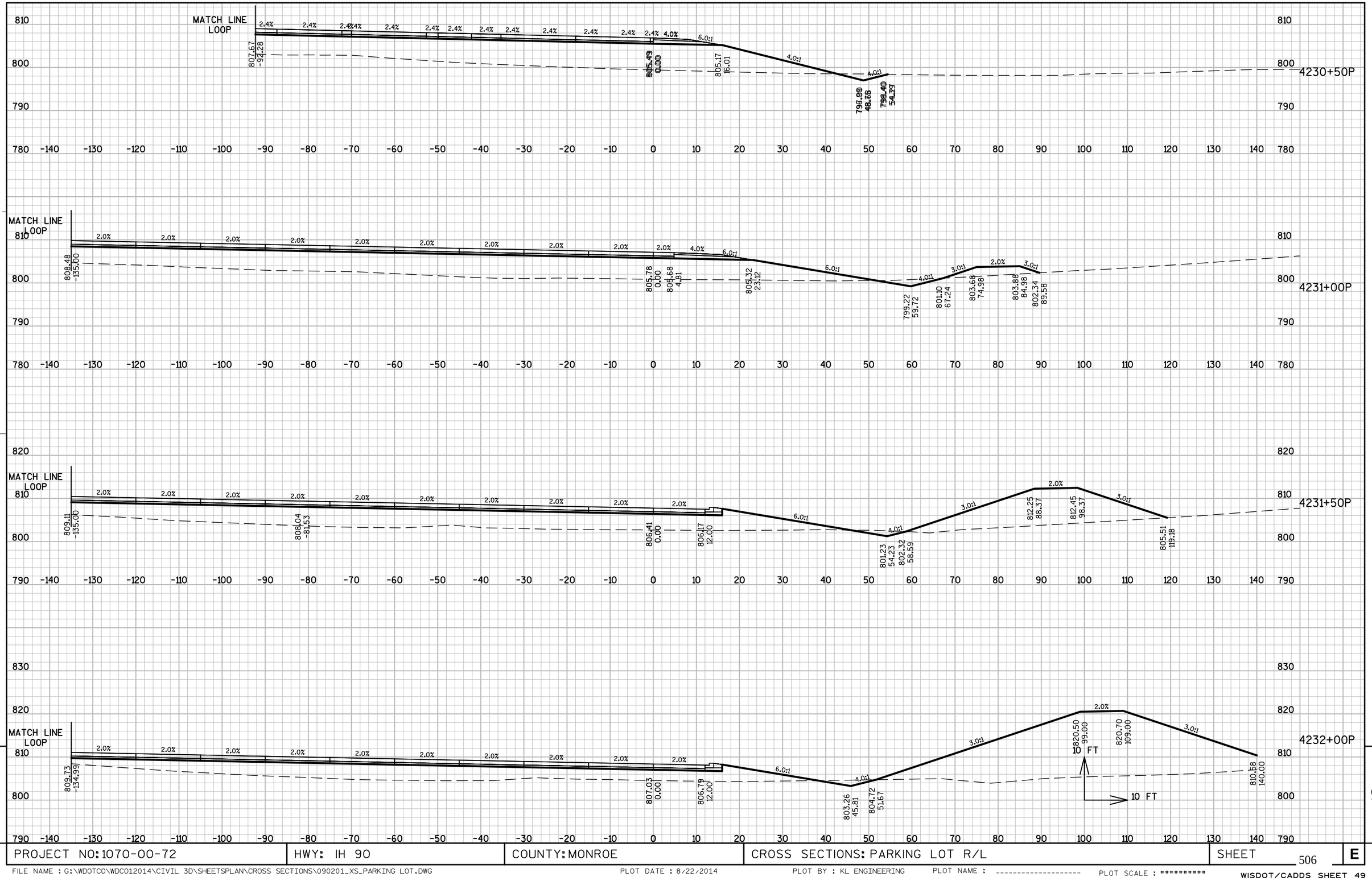
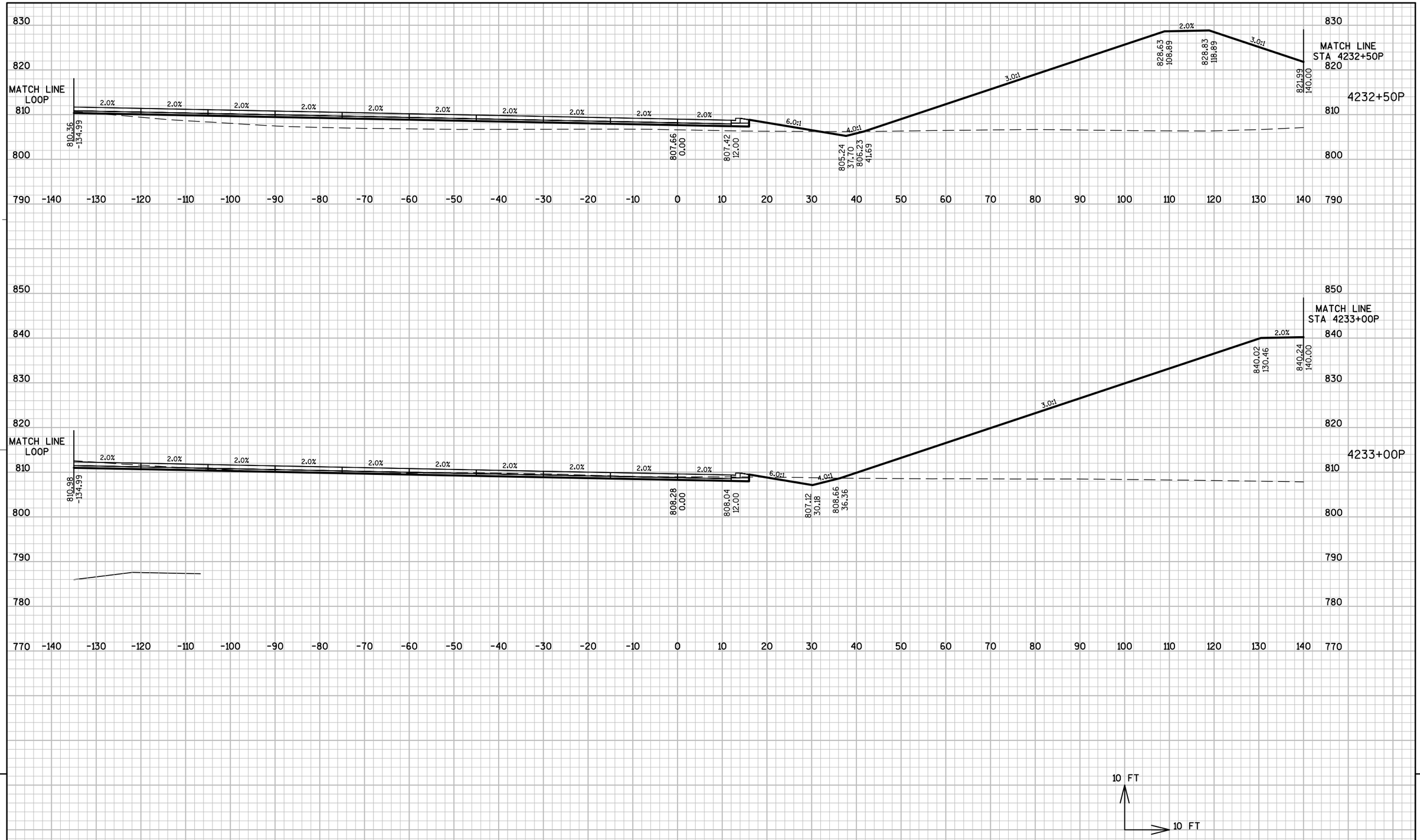
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 505	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_PARKING LOT.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



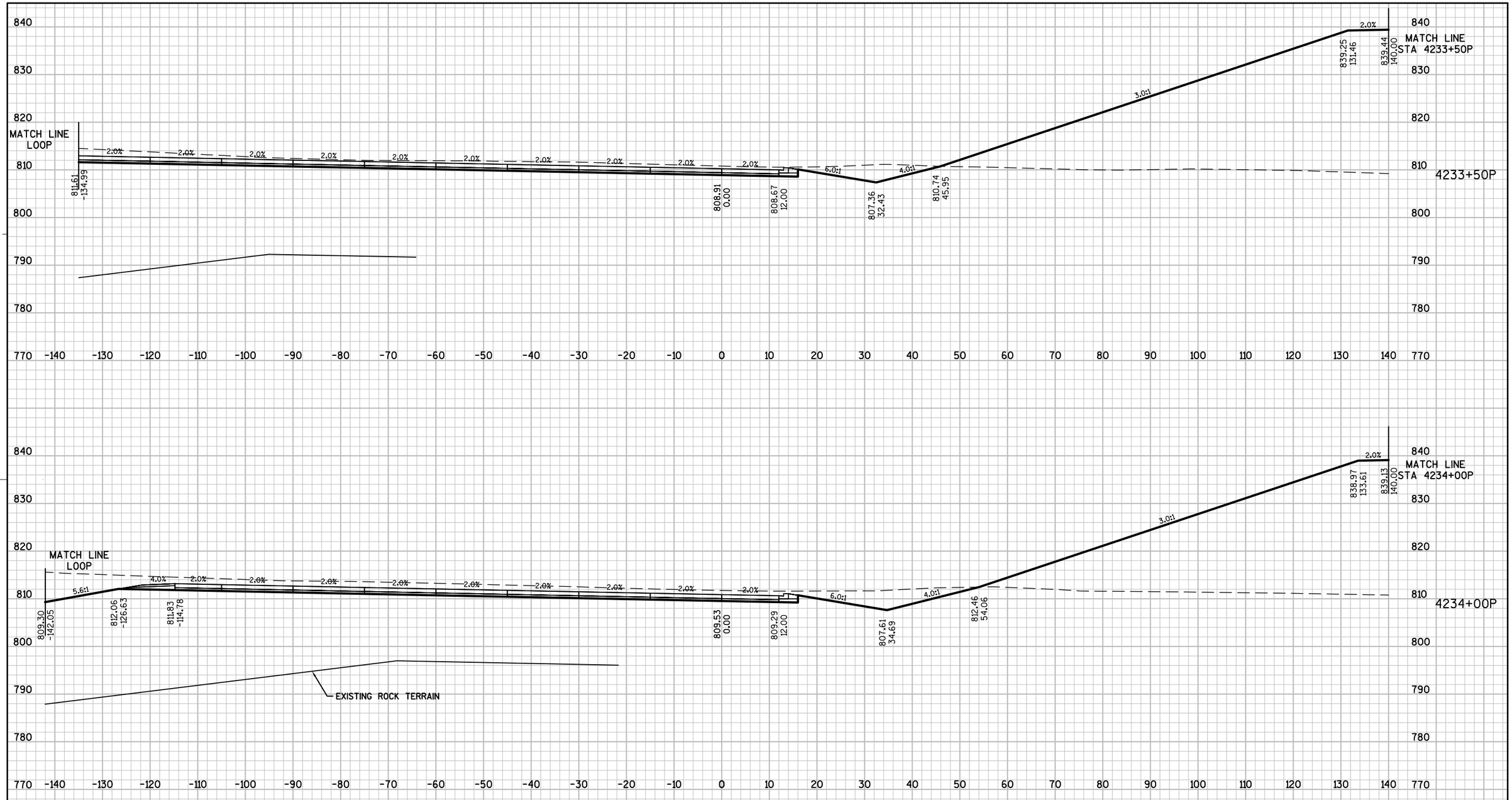
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 506 E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_PARKING LOT.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 507	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_PARKING LOT.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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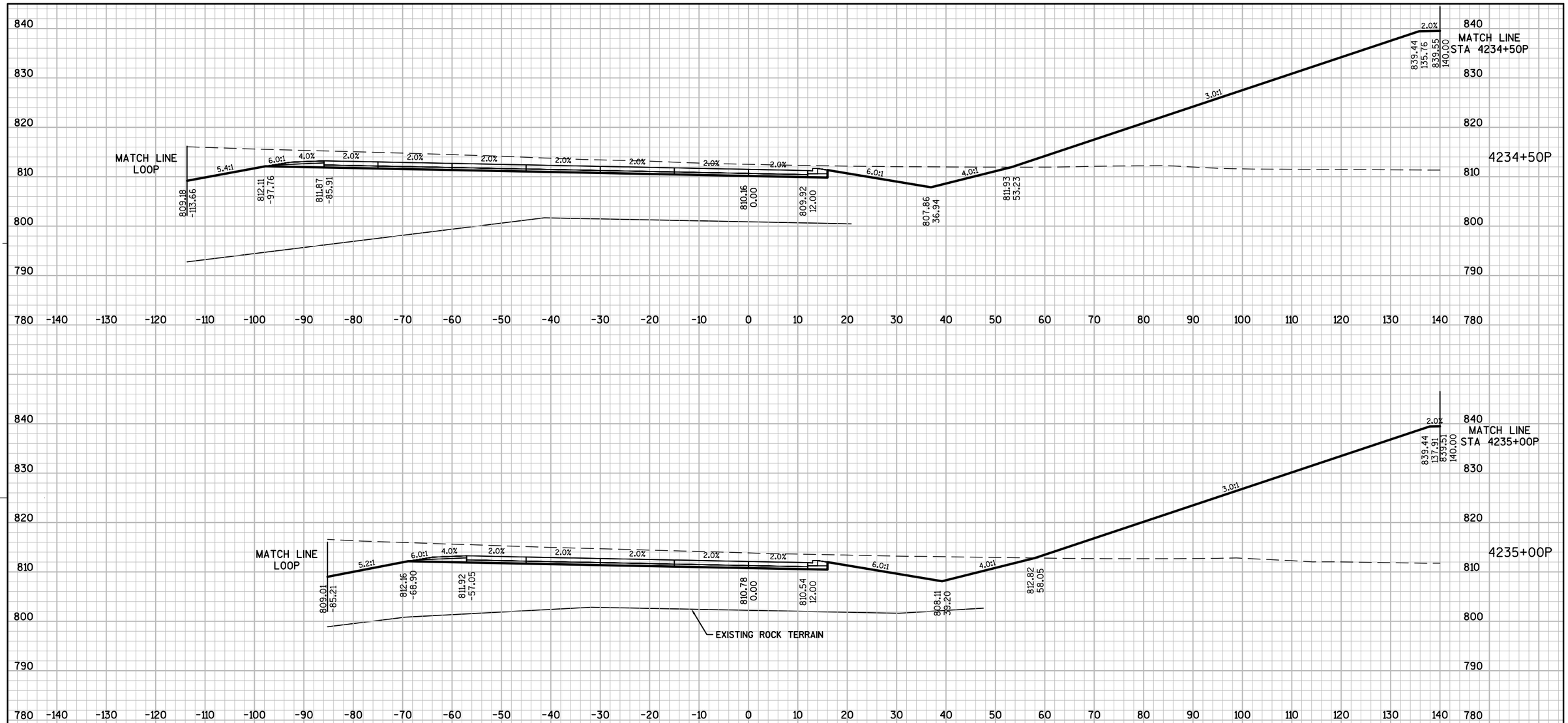
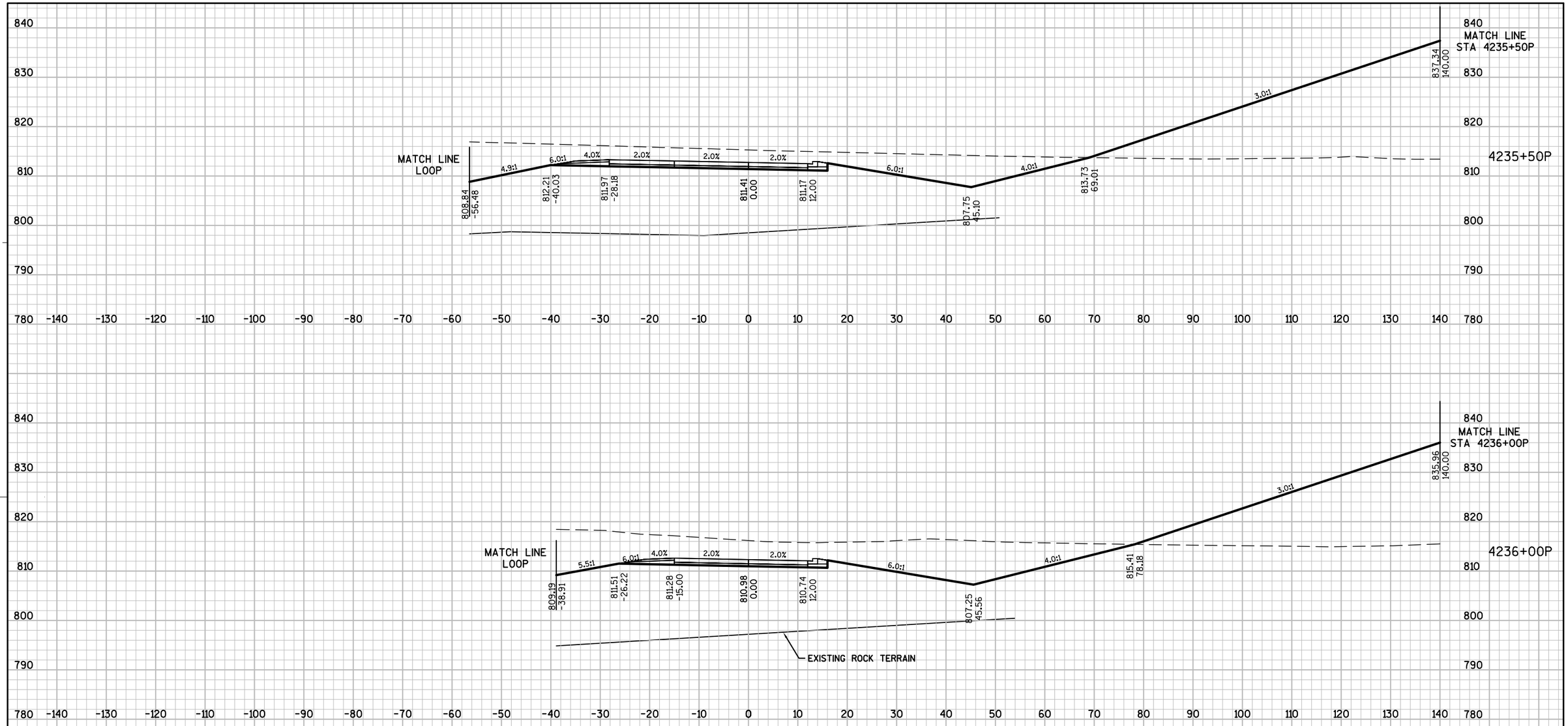
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 508	E



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 509	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_PARKING LOT.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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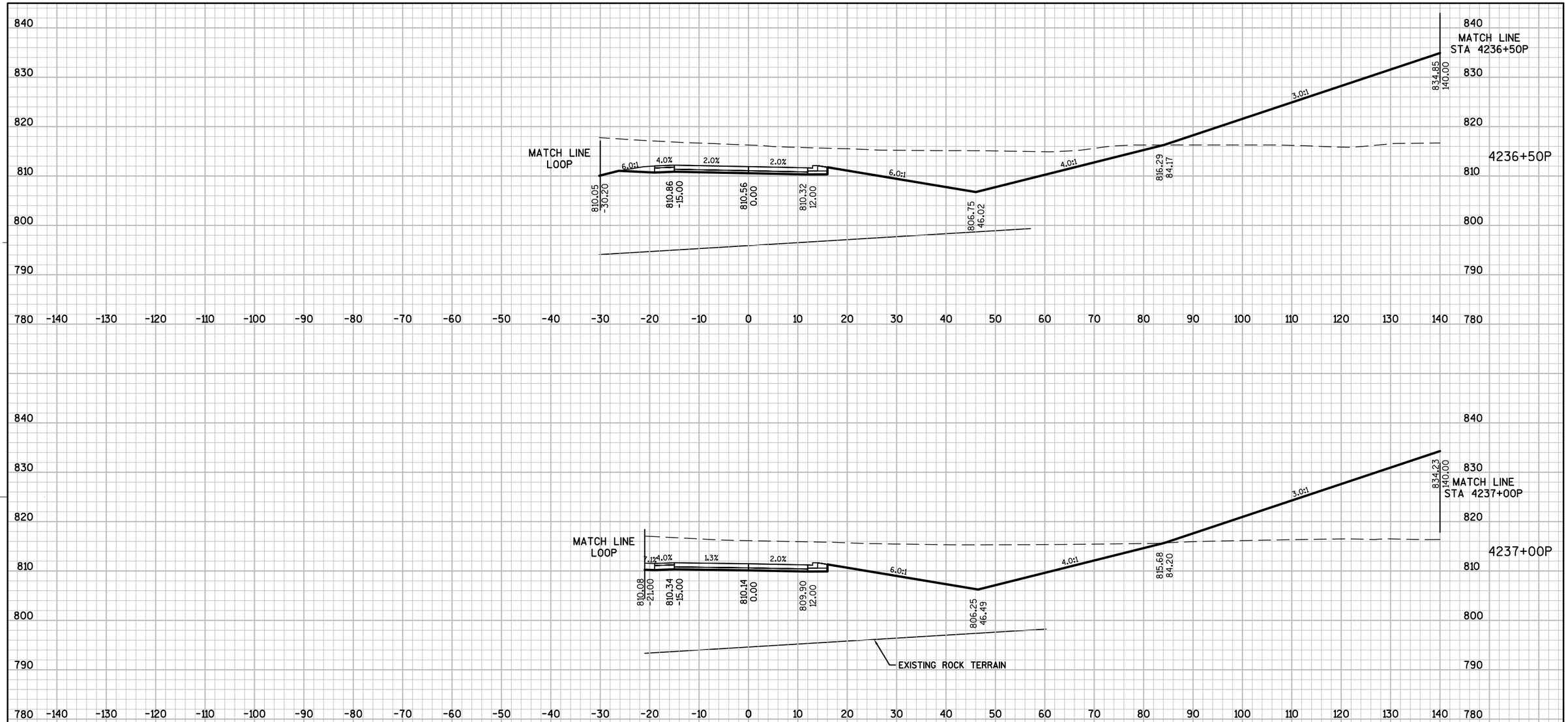
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 510	E



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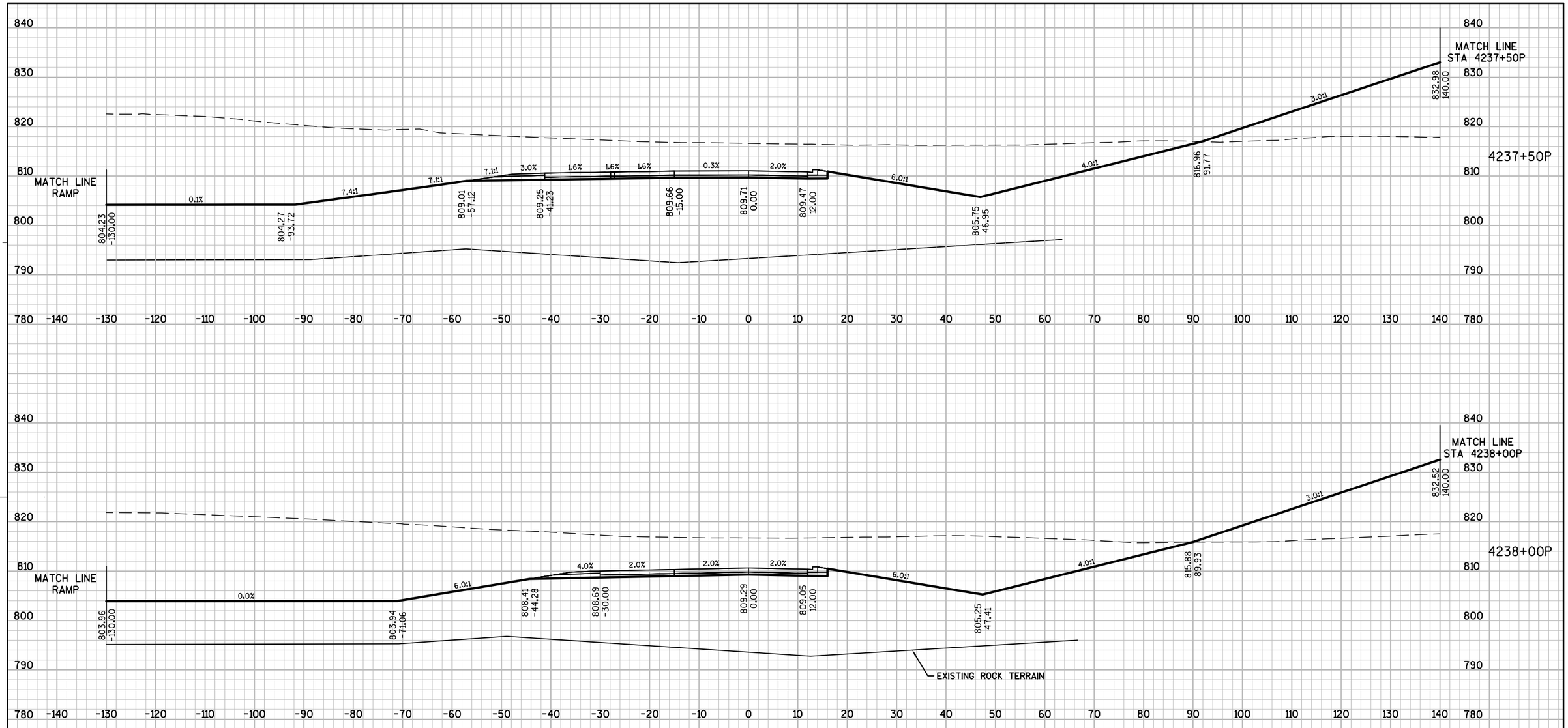
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 511	E



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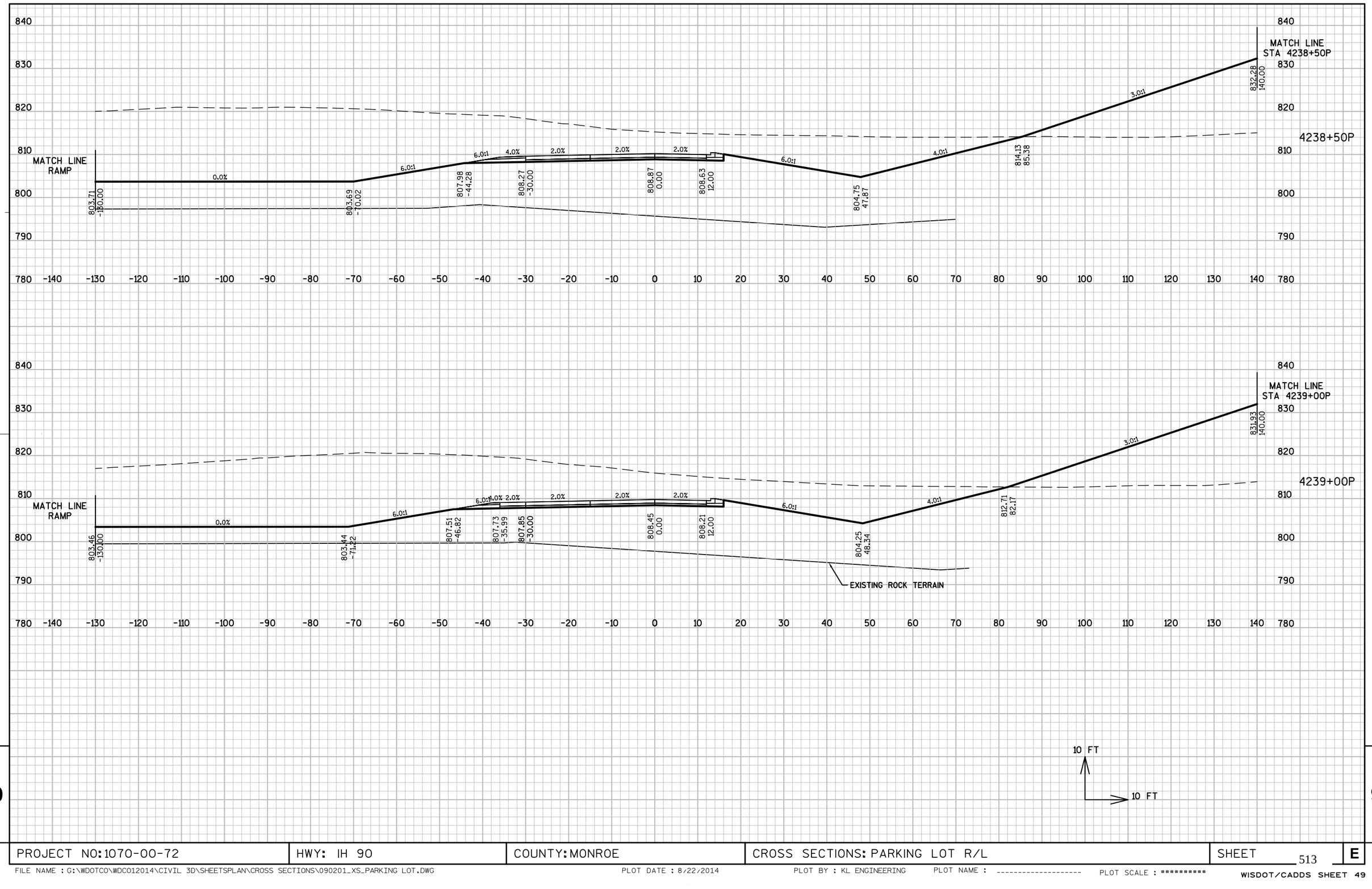
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 512	E



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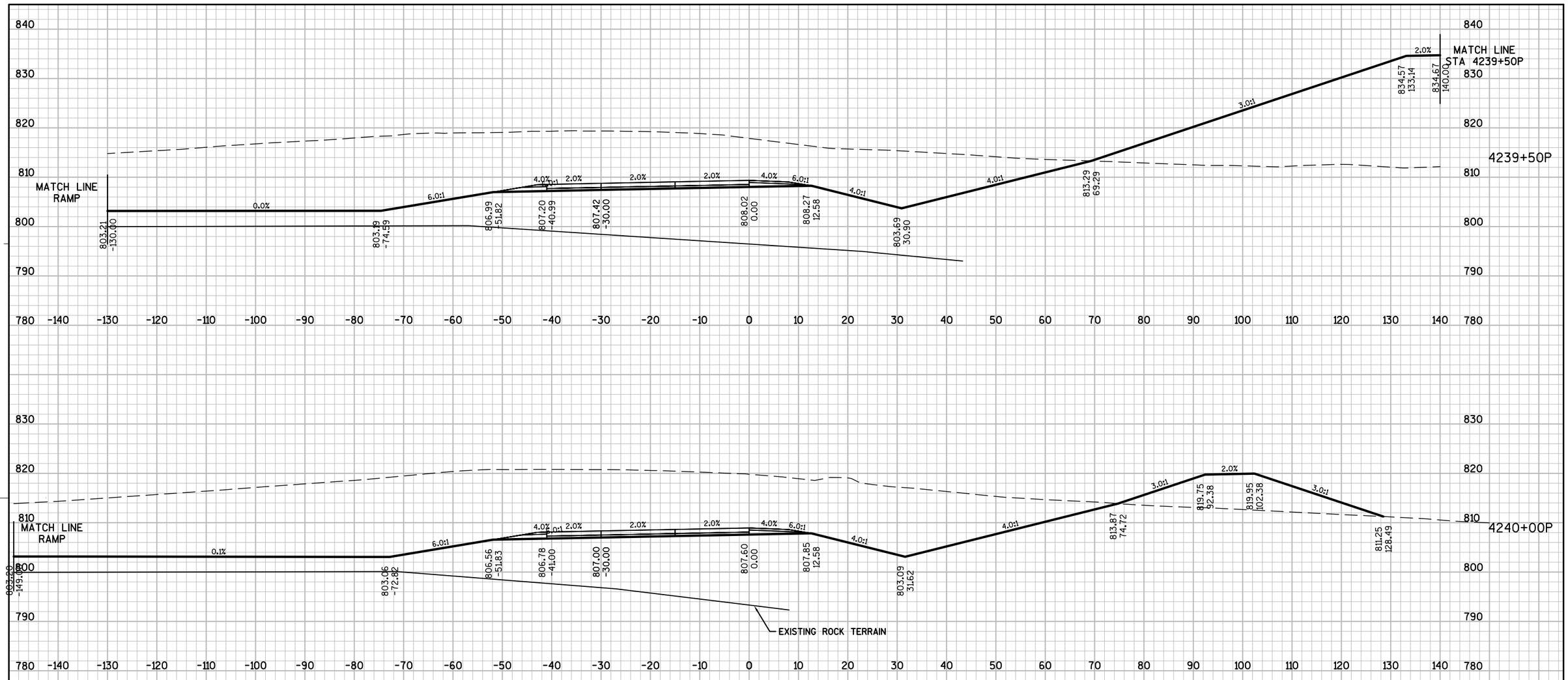
9

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 513 E



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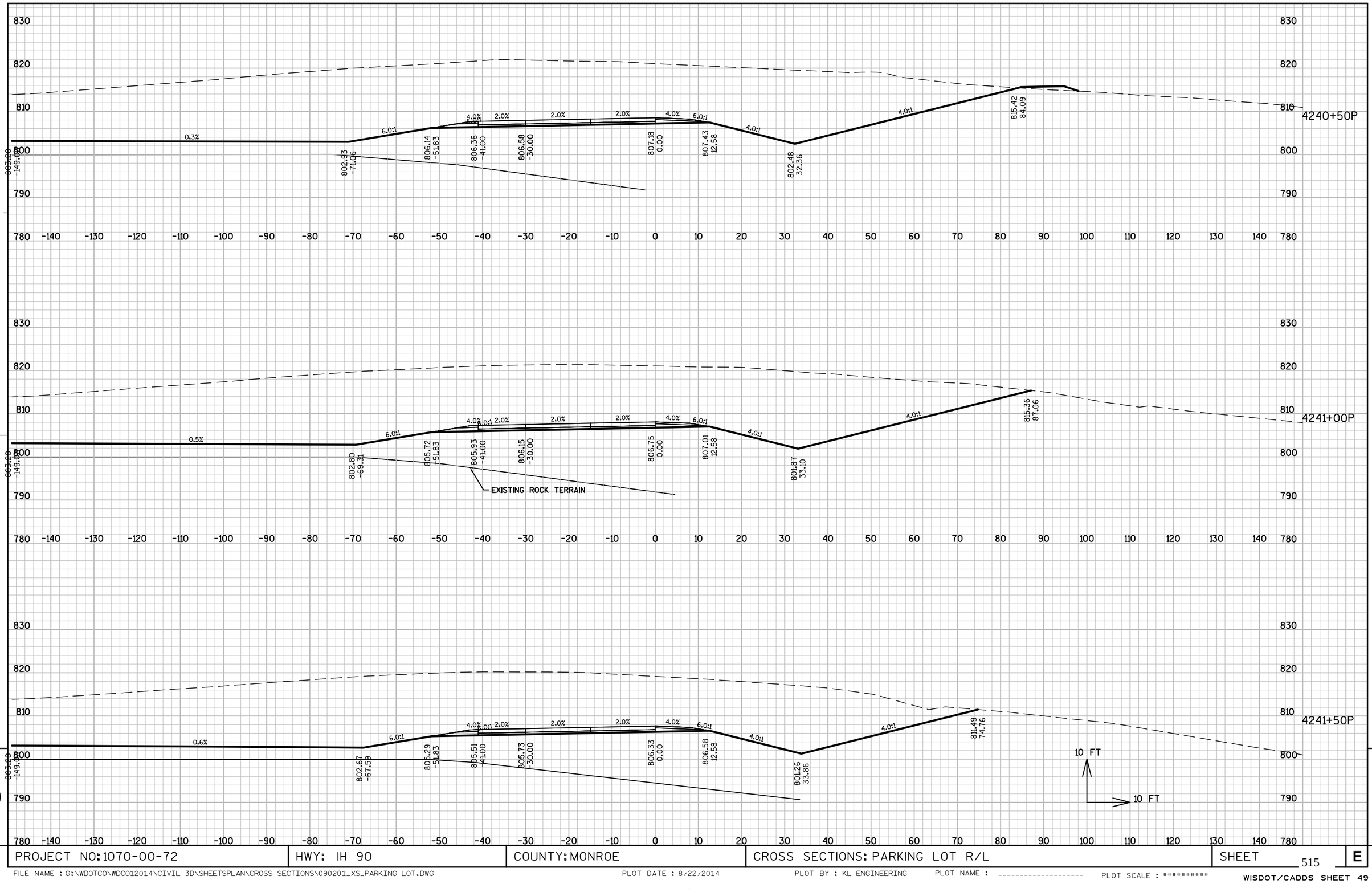
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 514	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_PARKING LOT.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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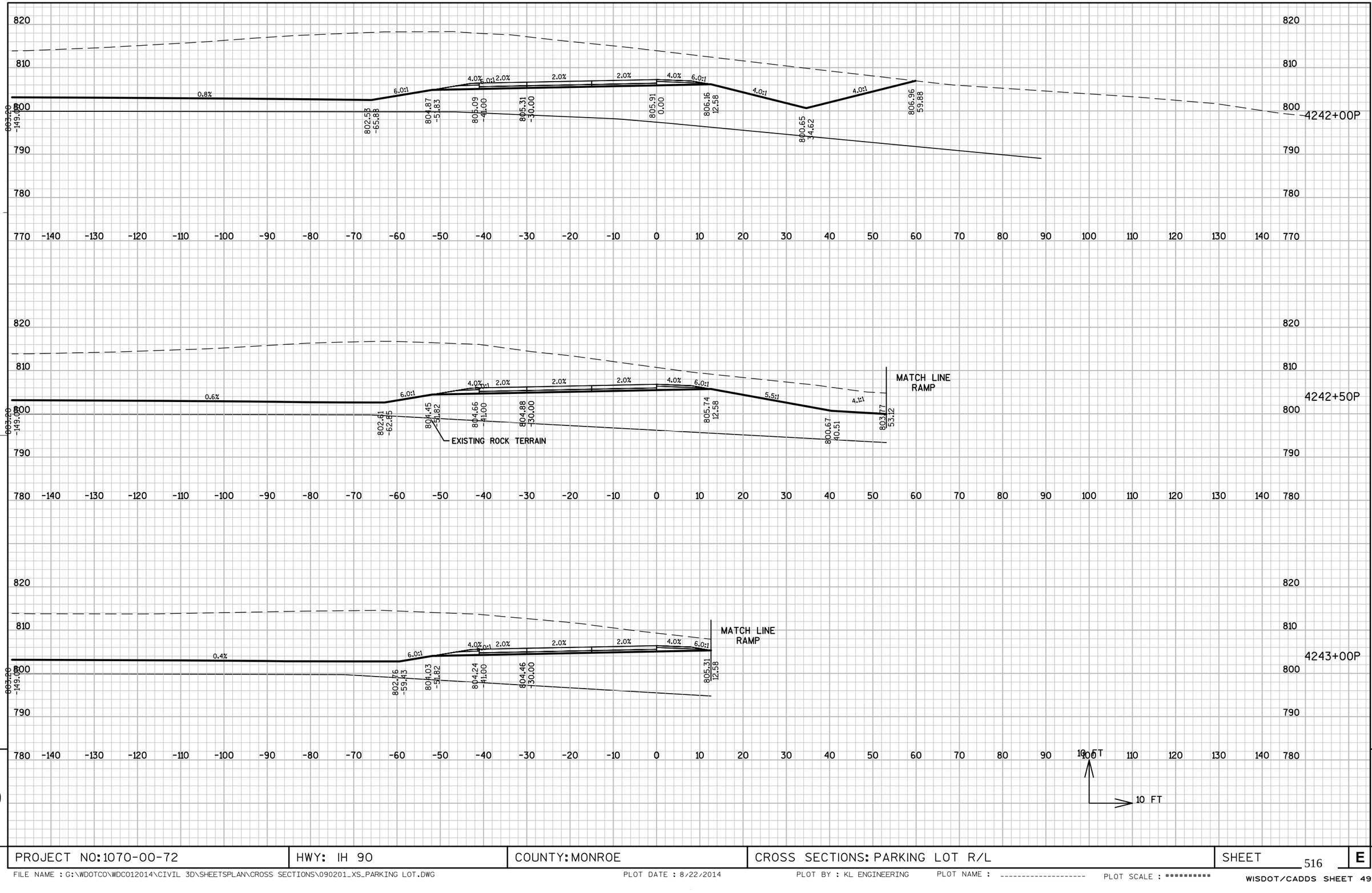
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 515	E



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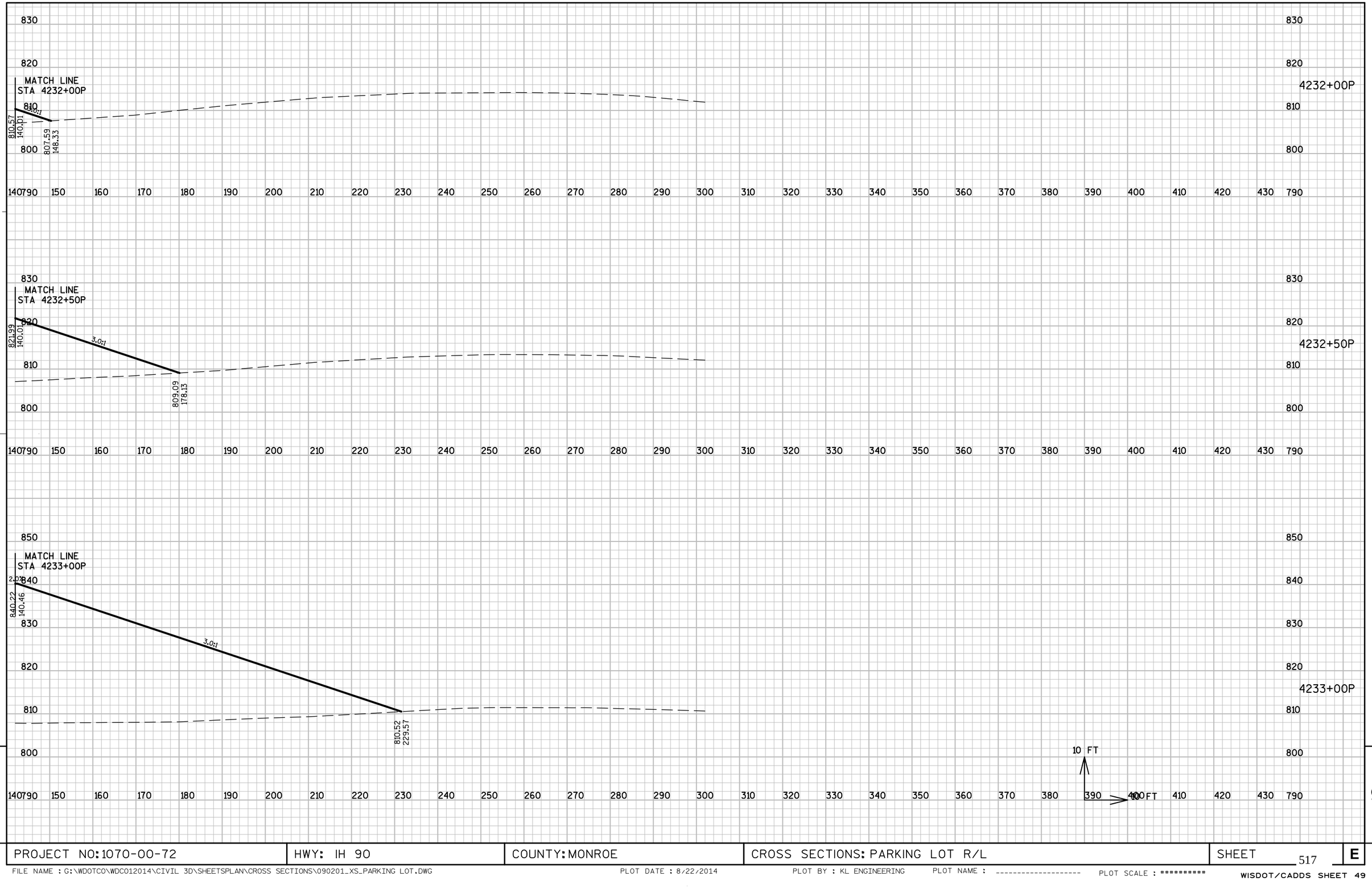
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 516	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_PARKING LOT.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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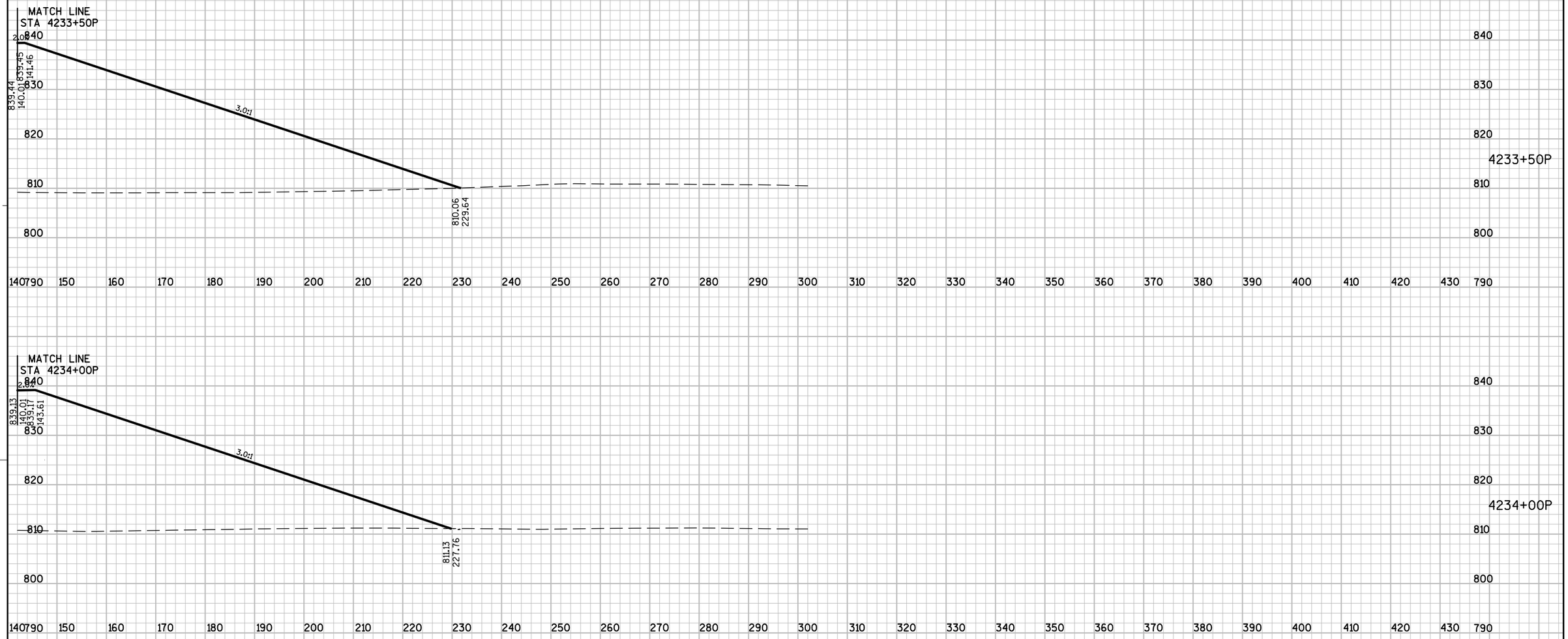
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 517	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_PARKING LOT.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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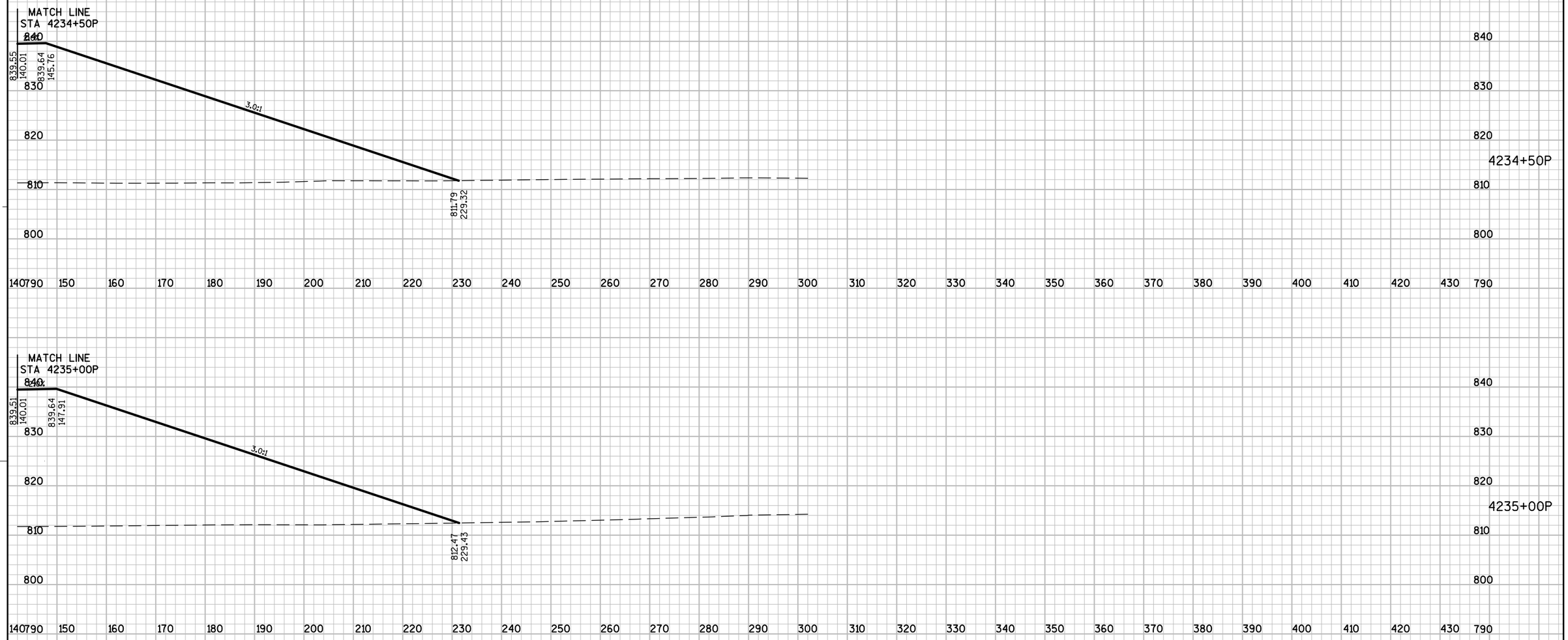
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 518	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_PARKING LOT.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : **********



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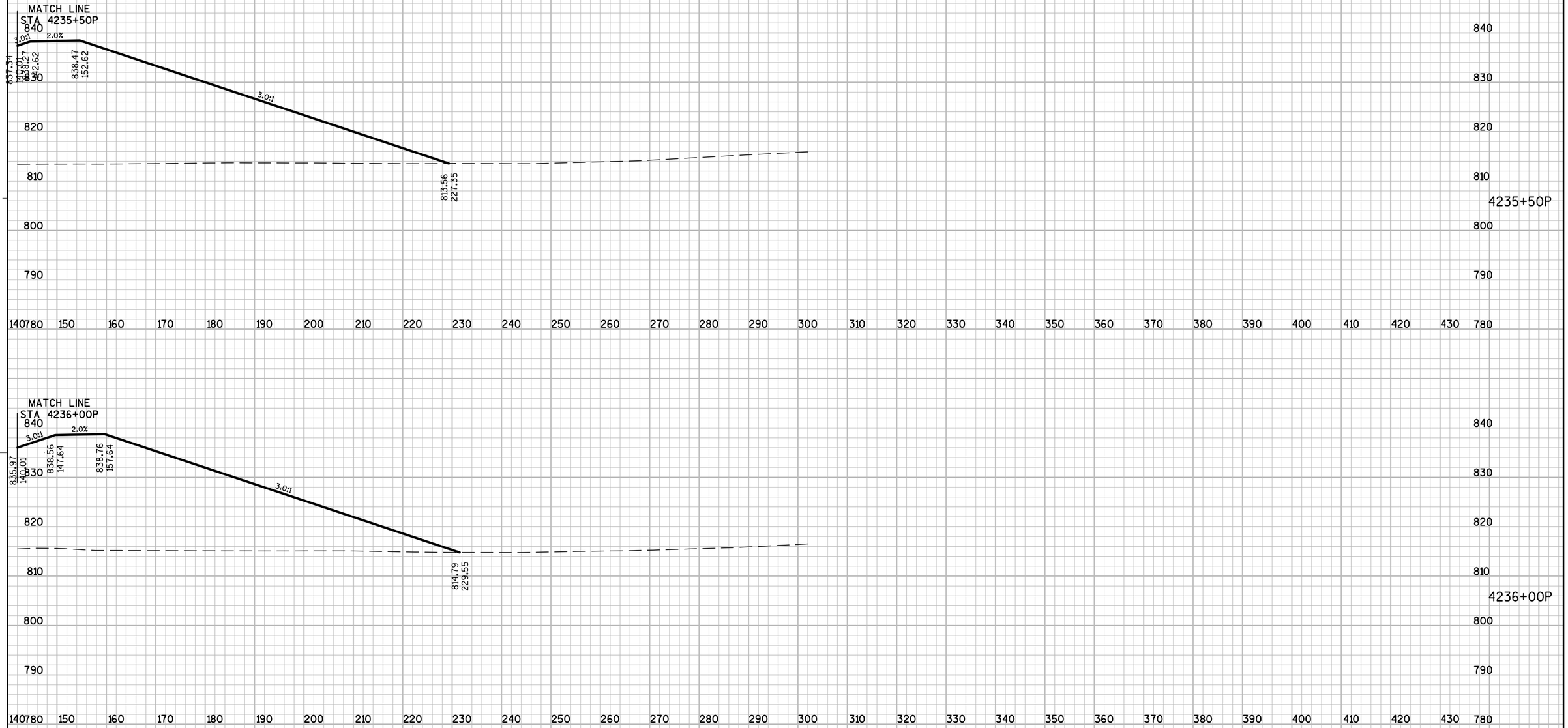
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 519	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_PARKING LOT.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49

MATCH LINE
STA 4235+50P



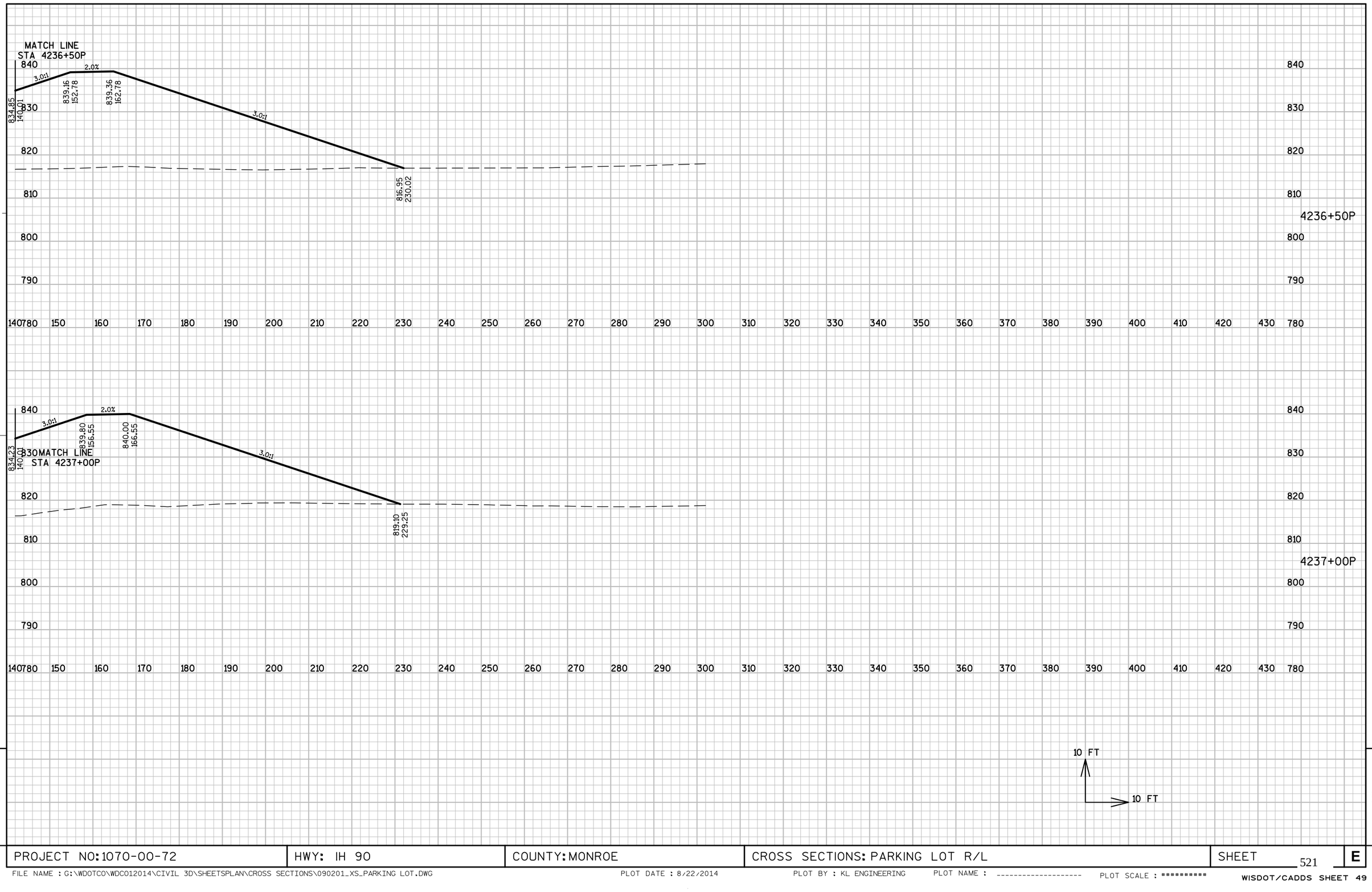
MATCH LINE
STA 4236+00P

10 FT
10 FT

9

9

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 520	E



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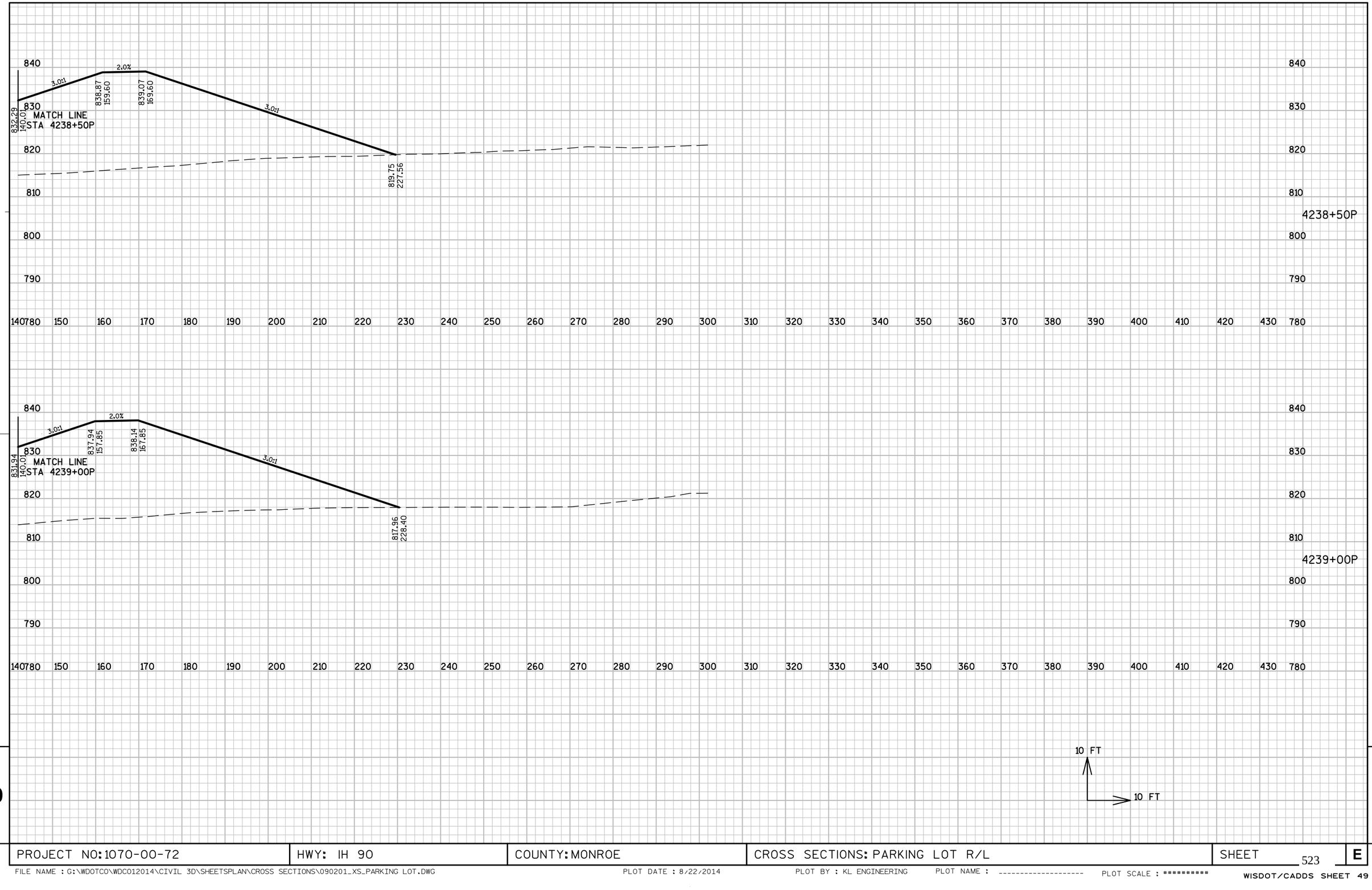
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 521	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_PARKING LOT.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49

9

9

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 522	E



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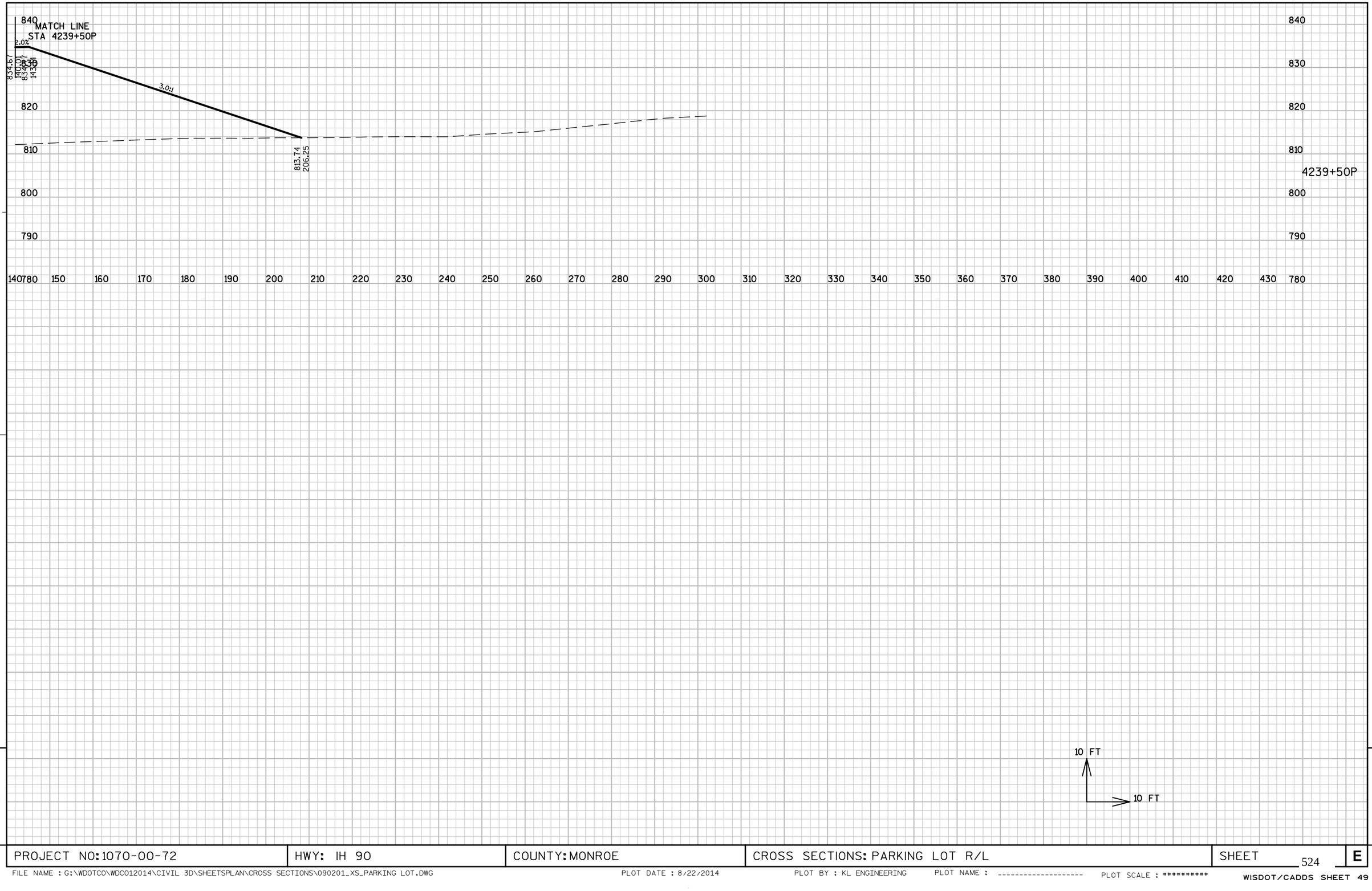
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 523	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_PARKING LOT.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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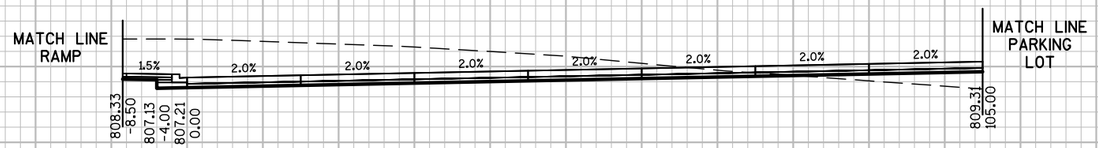
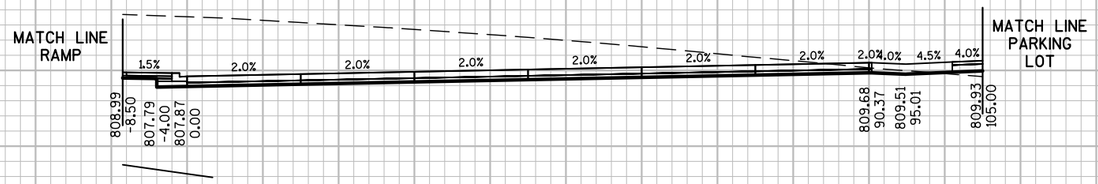
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: PARKING LOT R/L	SHEET 524	E

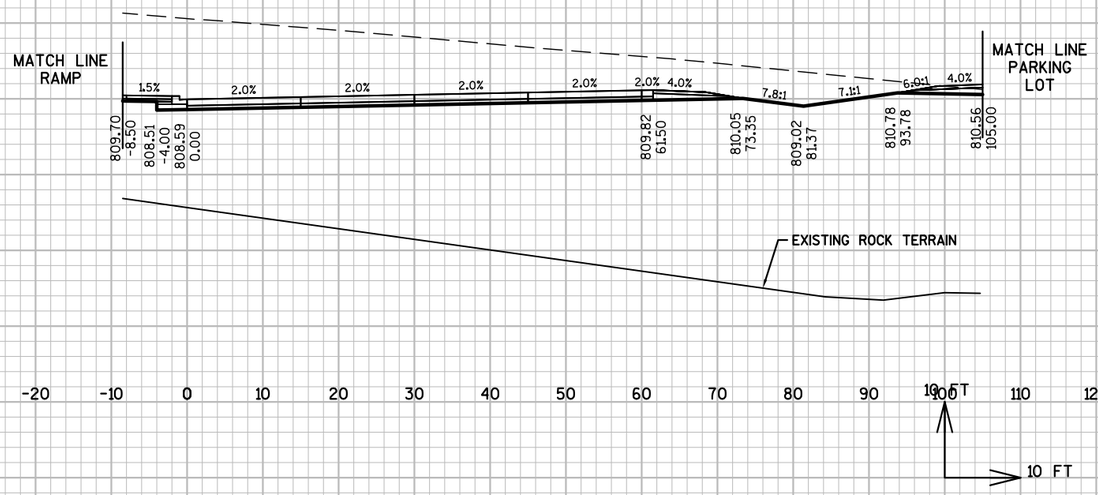
FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_PARKING LOT.DWG PLOT DATE : 8/22/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : **********



3230+00L



3230+50L



3231+00L

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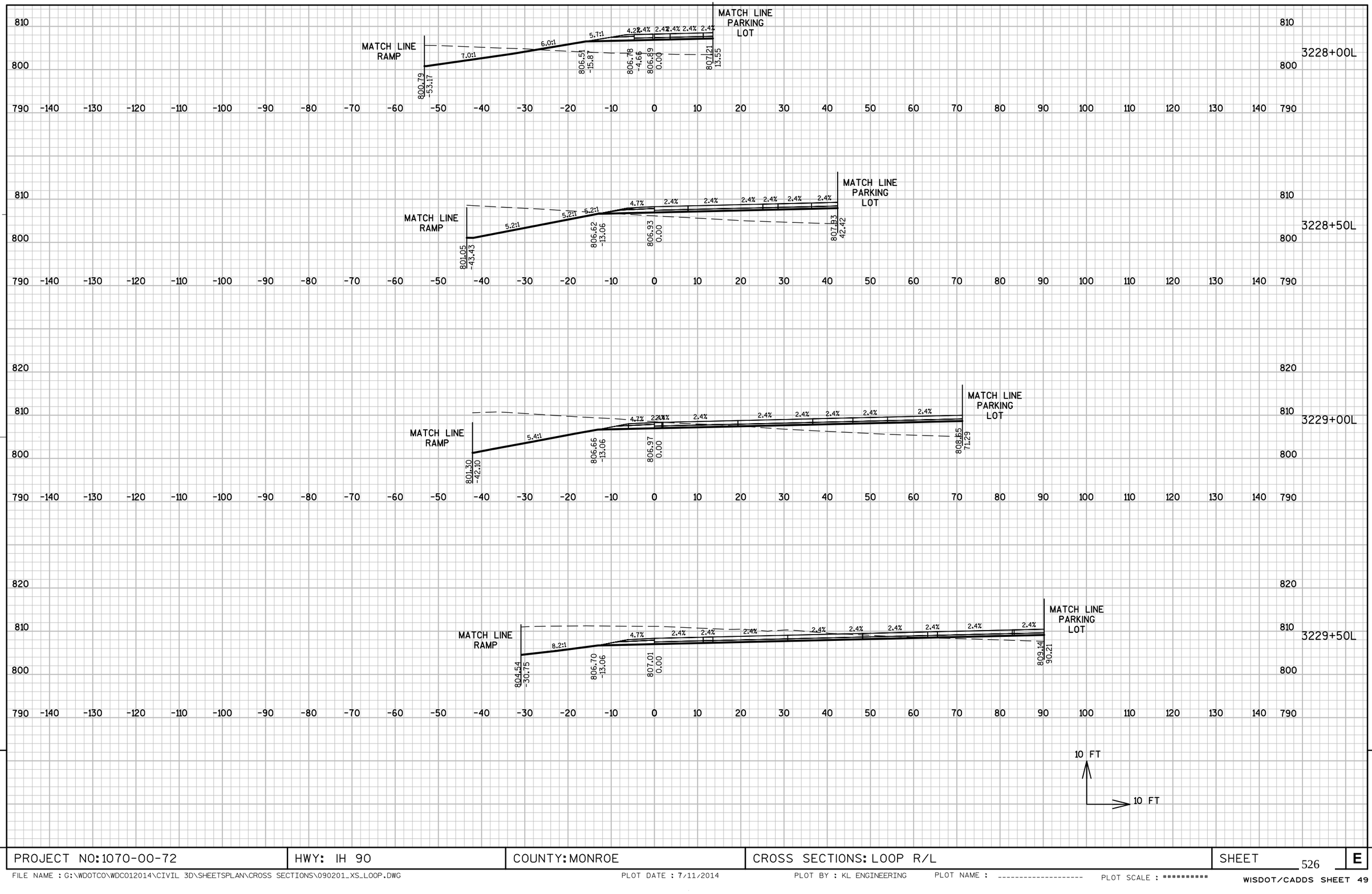
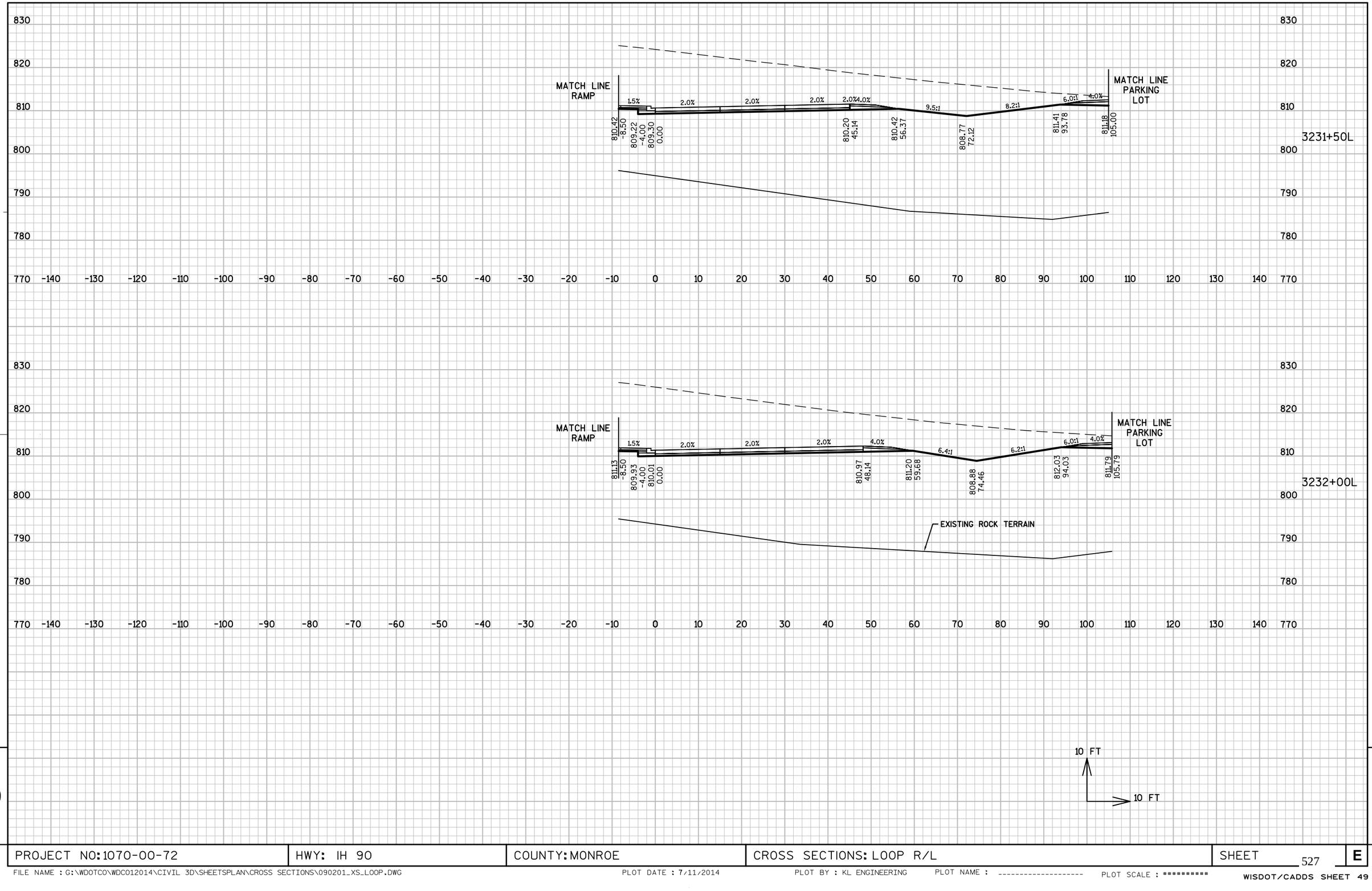
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: LOOP R/L	SHEET 525	E



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: LOOP R/L	SHEET 526	E



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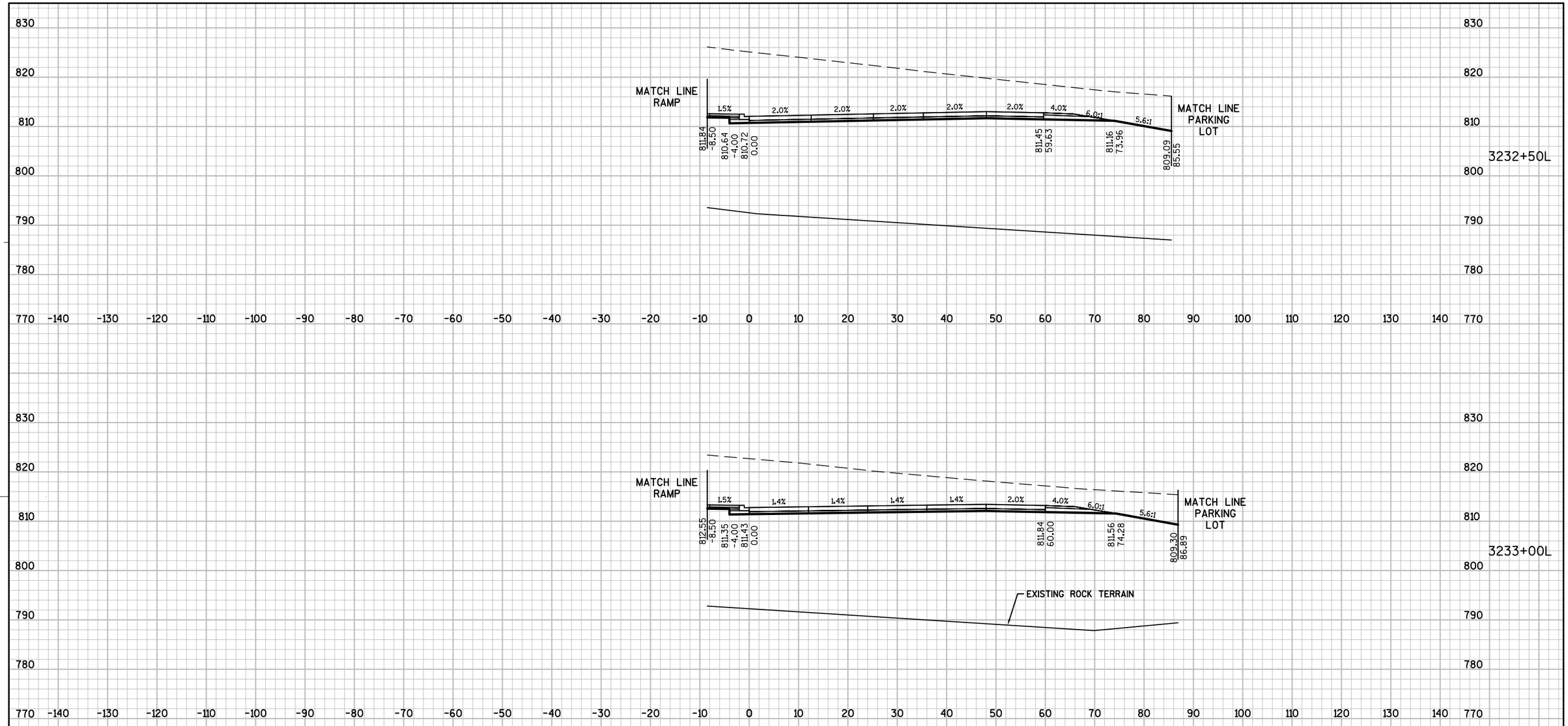
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: LOOP R/L	SHEET 527	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_LOOP.DWG PLOT DATE : 7/11/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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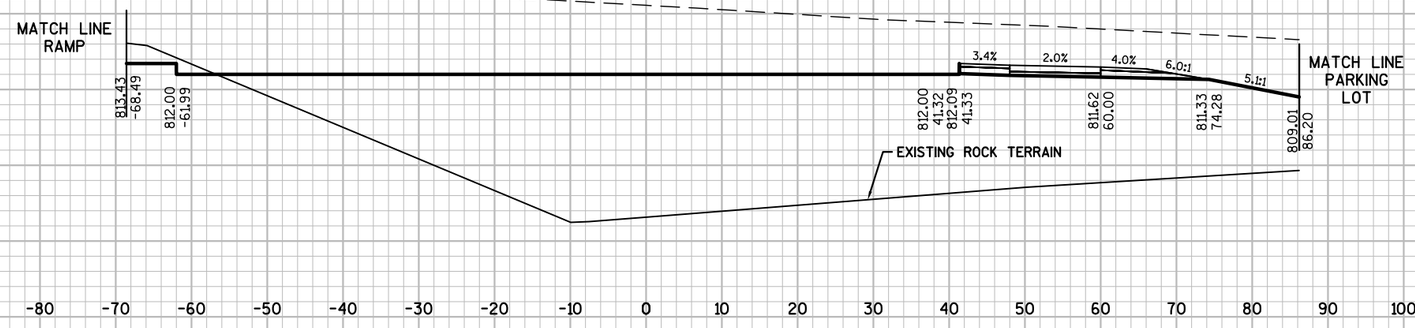
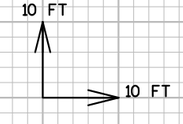
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: LOOP R/L	SHEET 528	E

3233+50L

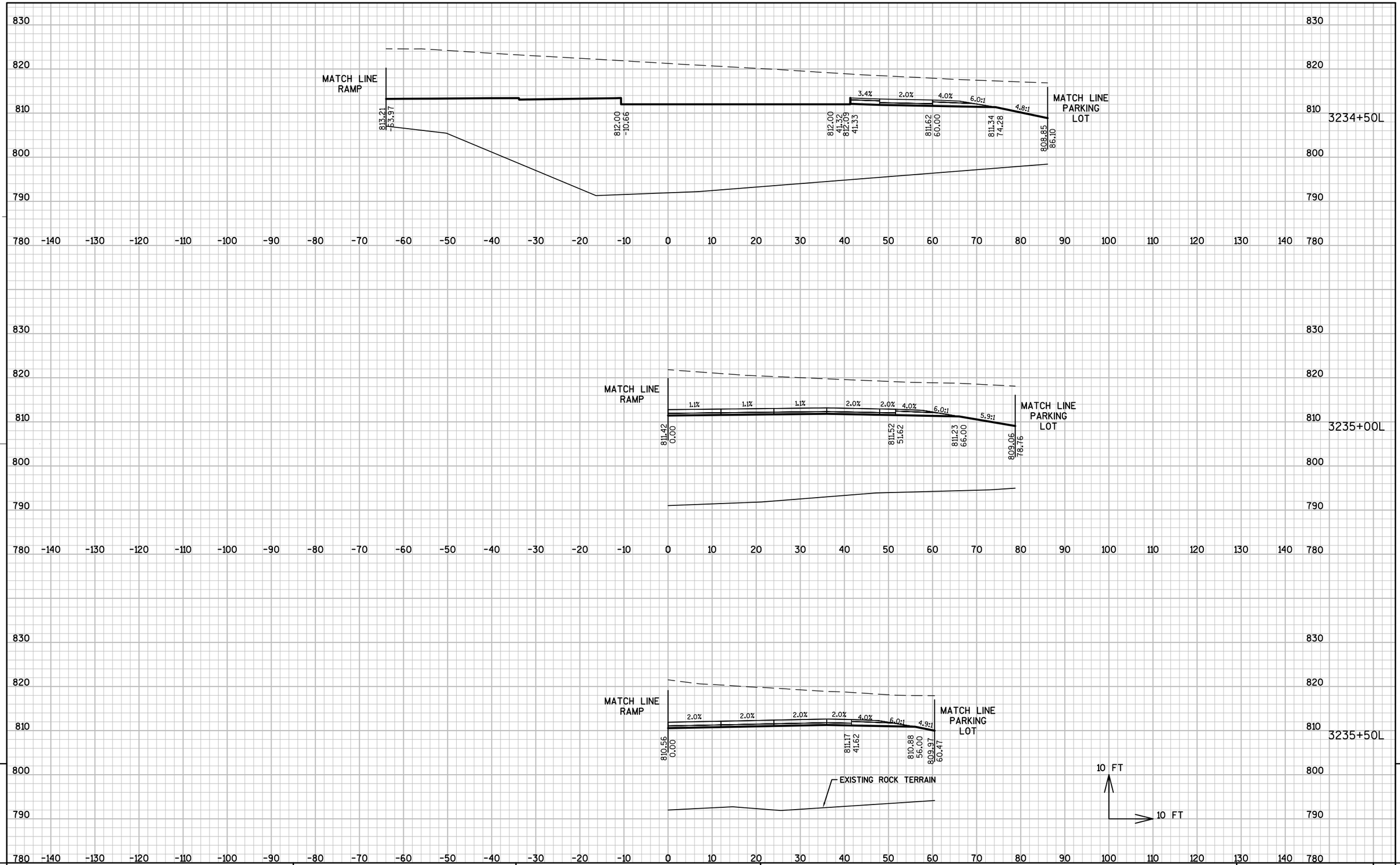


3234+00L



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: LOOP R/L	SHEET 529	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_LOOP.DWG PLOT DATE : 7/11/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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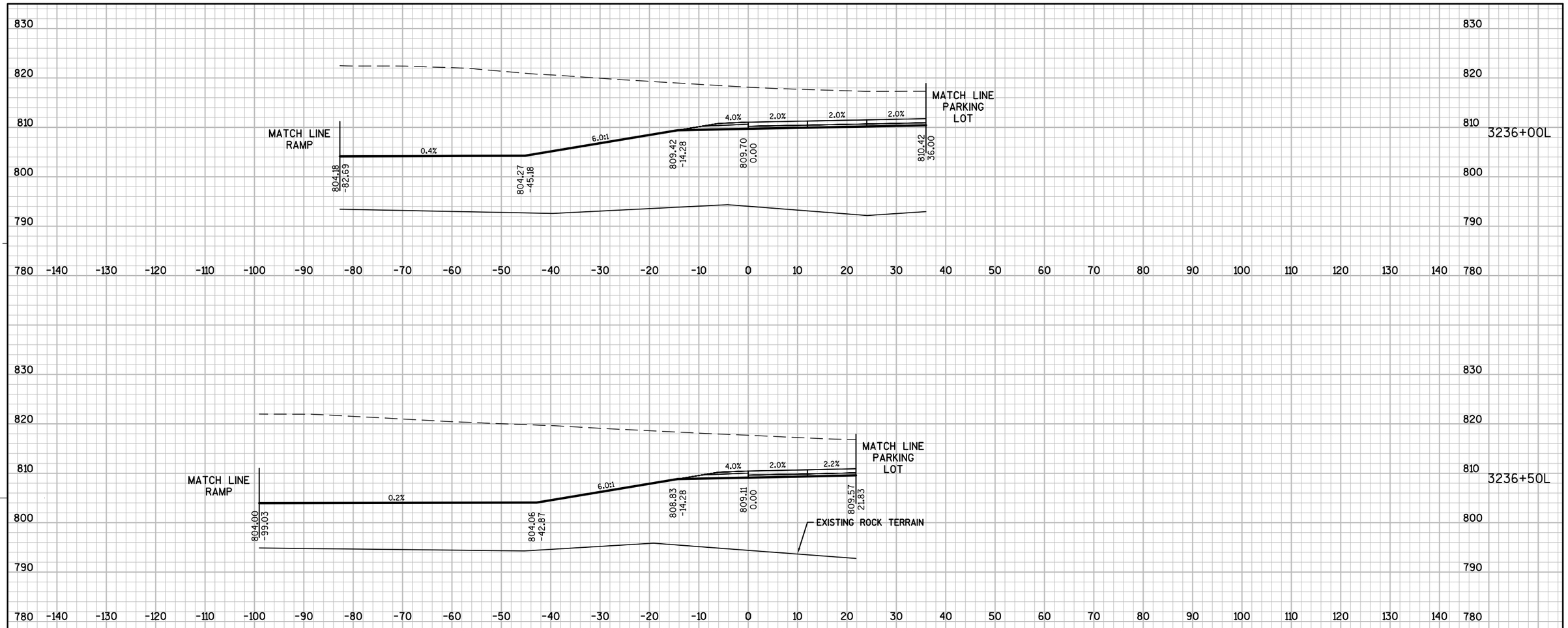
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: LOOP R/L	SHEET 530	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_LOOP.DWG PLOT DATE : 7/11/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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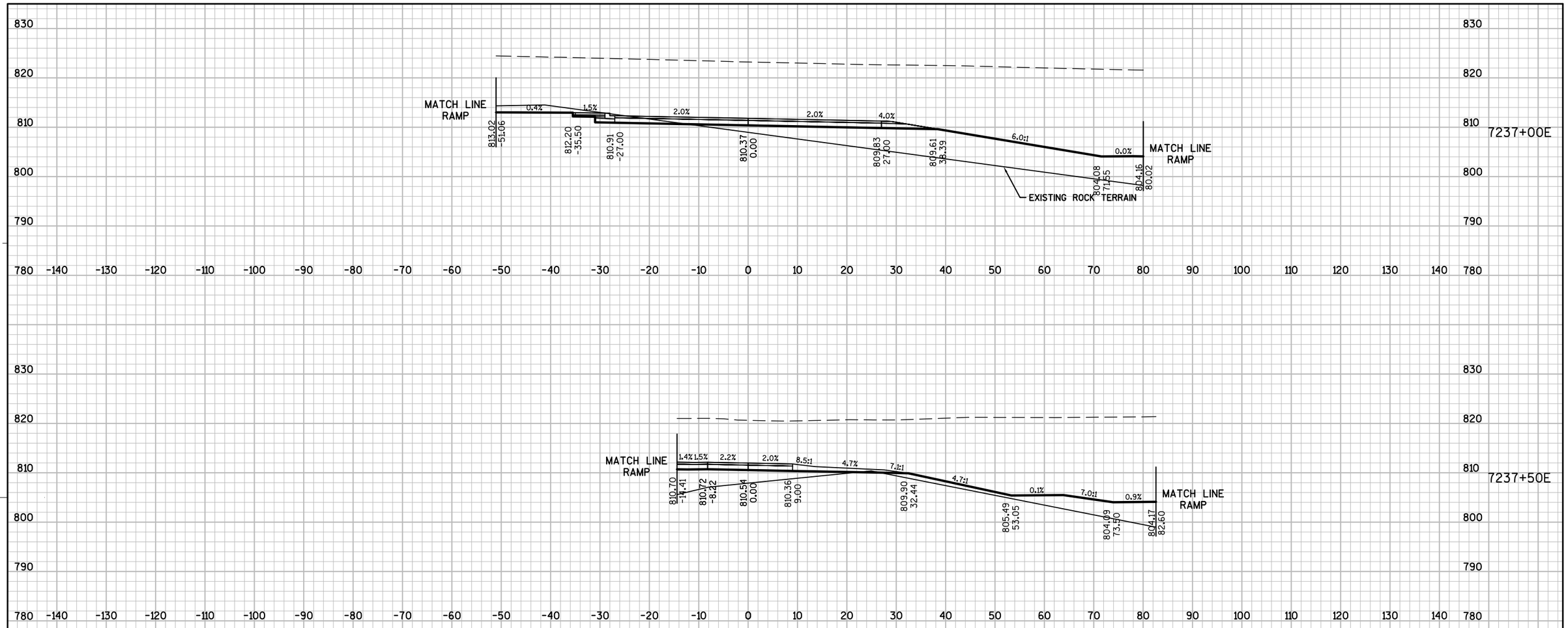
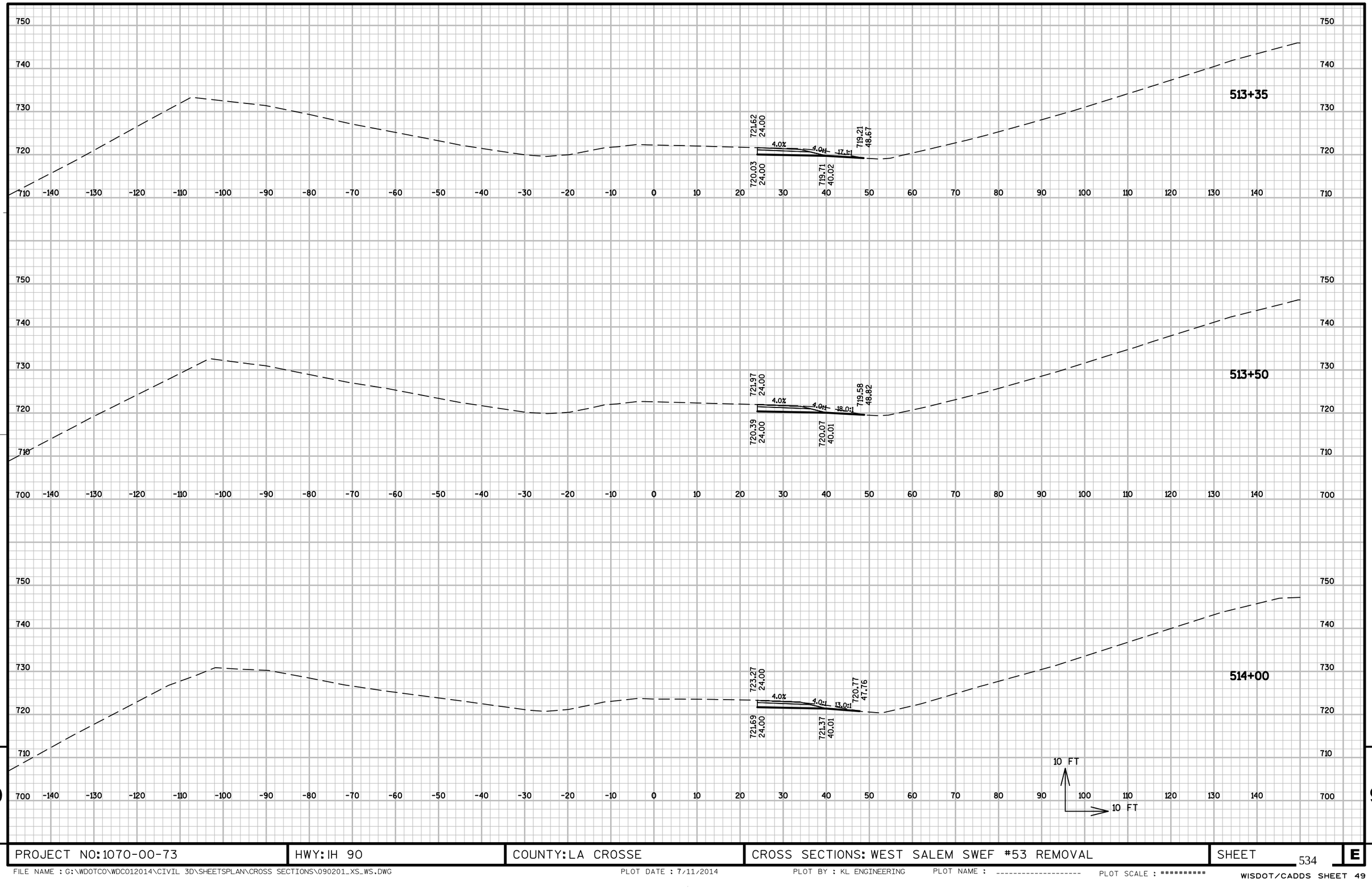
PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: LOOP R/L	SHEET 531	E

PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EMPLOYEE LOT R/L	SHEET 532	E



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: EMPLOYEE LOT R/L	SHEET 533	E



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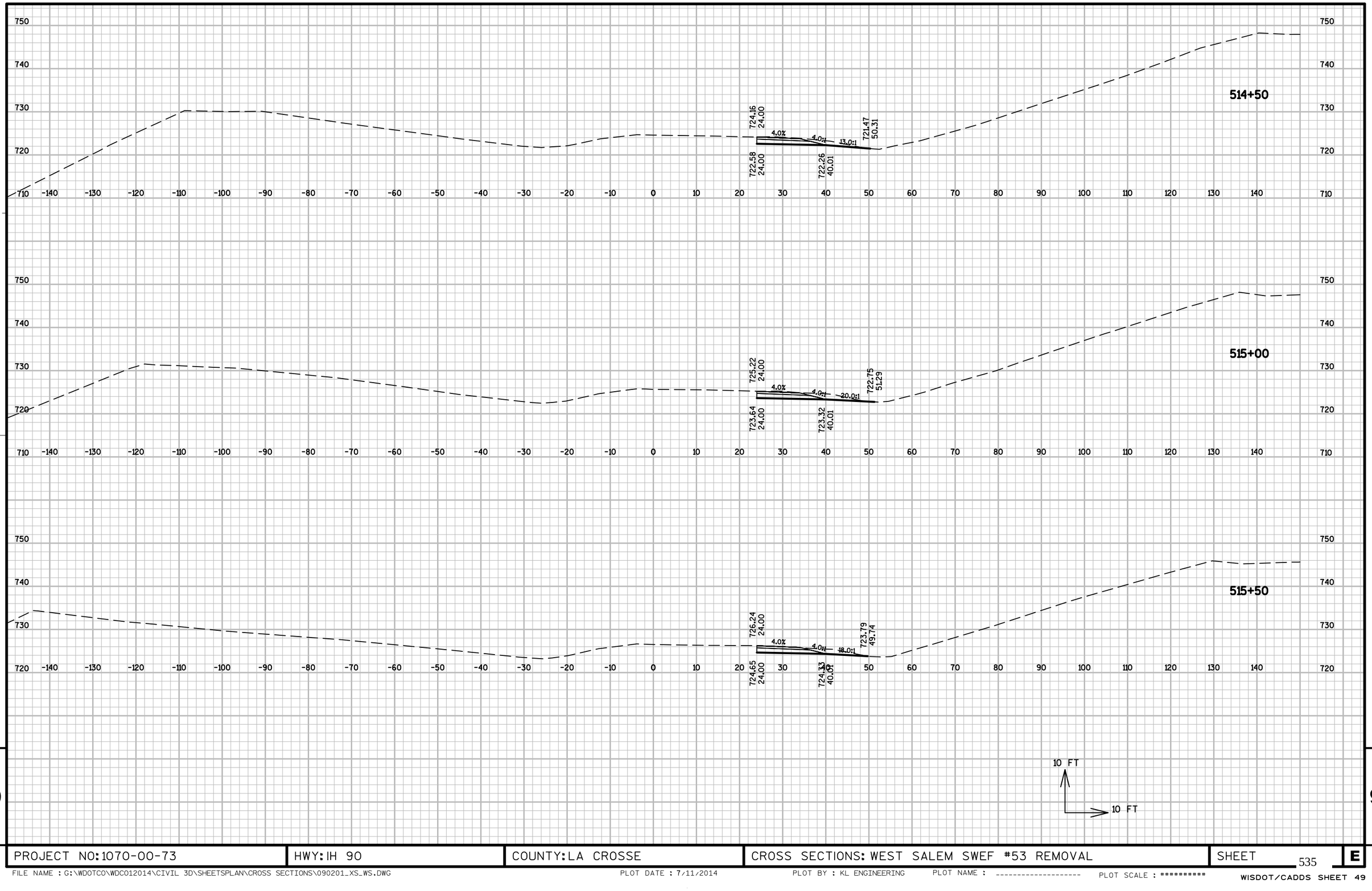
9

PROJECT NO: 1070-00-73	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: WEST SALEM SWEF #53 REMOVAL	SHEET 534	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_WS.DWG PLOT DATE : 7/11/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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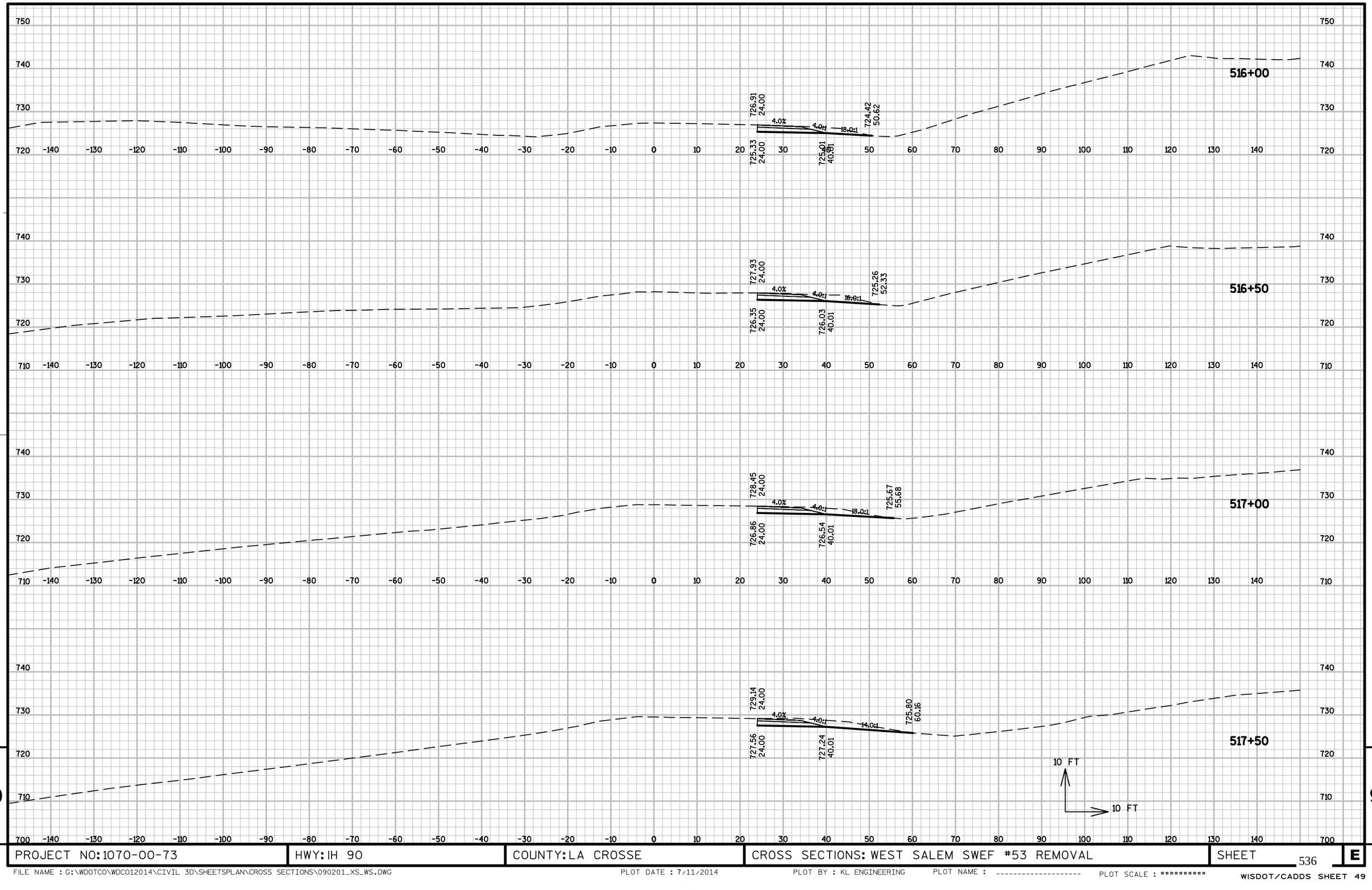
PROJECT NO: 1070-00-73	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: WEST SALEM SWEF #53 REMOVAL	SHEET 535 E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_WS.DWG PLOT DATE : 7/11/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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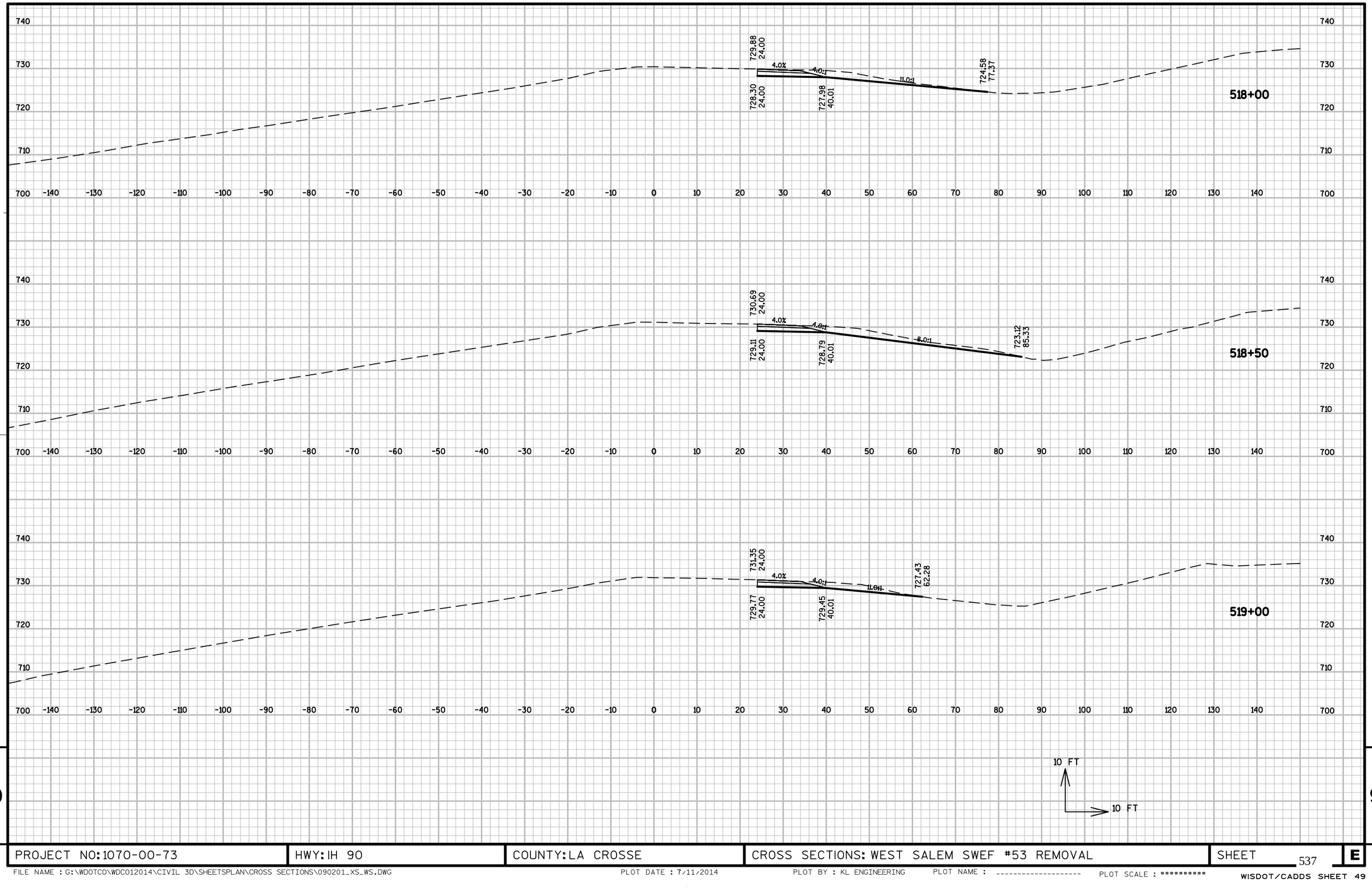
PROJECT NO: 1070-00-73	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: WEST SALEM SWEF #53 REMOVAL	SHEET	E

FILE NAME : G:\WDOTCO\WDCO12014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_WS.DWG PLOT DATE : 7/11/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : **********

WISDOT/CADDS SHEET 49



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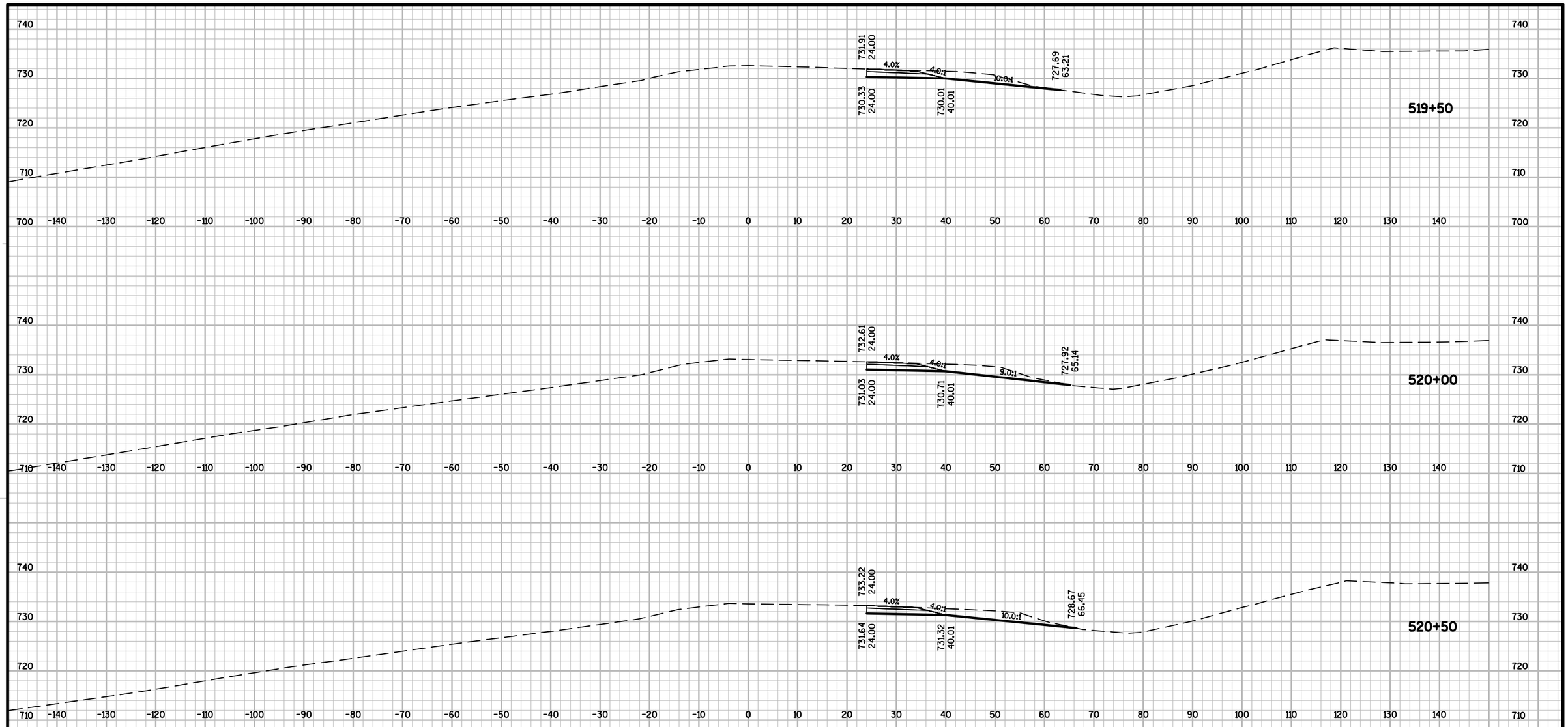
PROJECT NO: 1070-00-73	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: WEST SALEM SWEF #53 REMOVAL	SHEET 537 E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_WS.DWG PLOT DATE : 7/11/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



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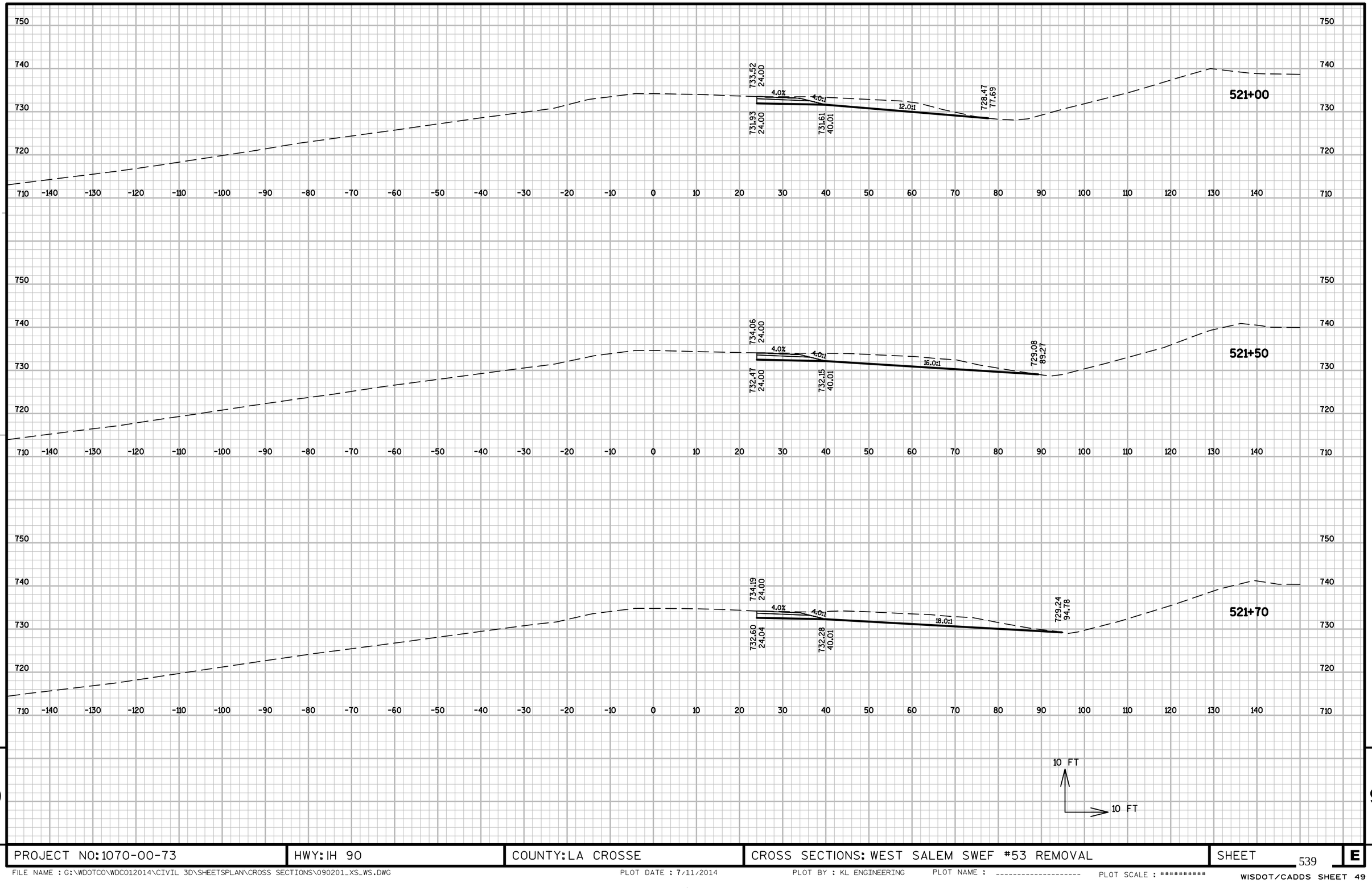
PROJECT NO: 1070-00-73	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: WEST SALEM SWEF #53 REMOVAL	SHEET 538	E



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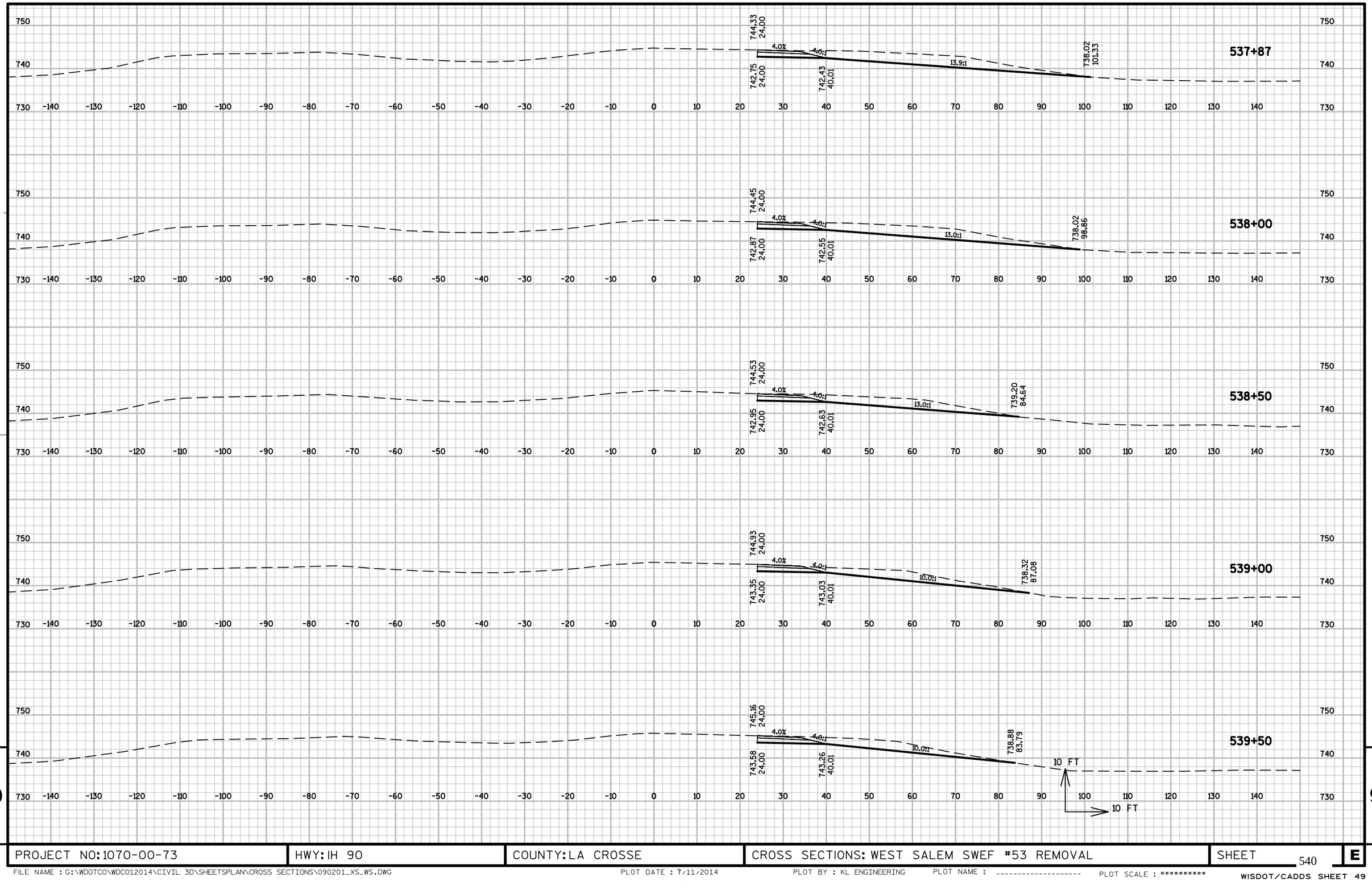
PROJECT NO: 1070-00-73	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: WEST SALEM SWEF #53 REMOVAL	SHEET 539	E



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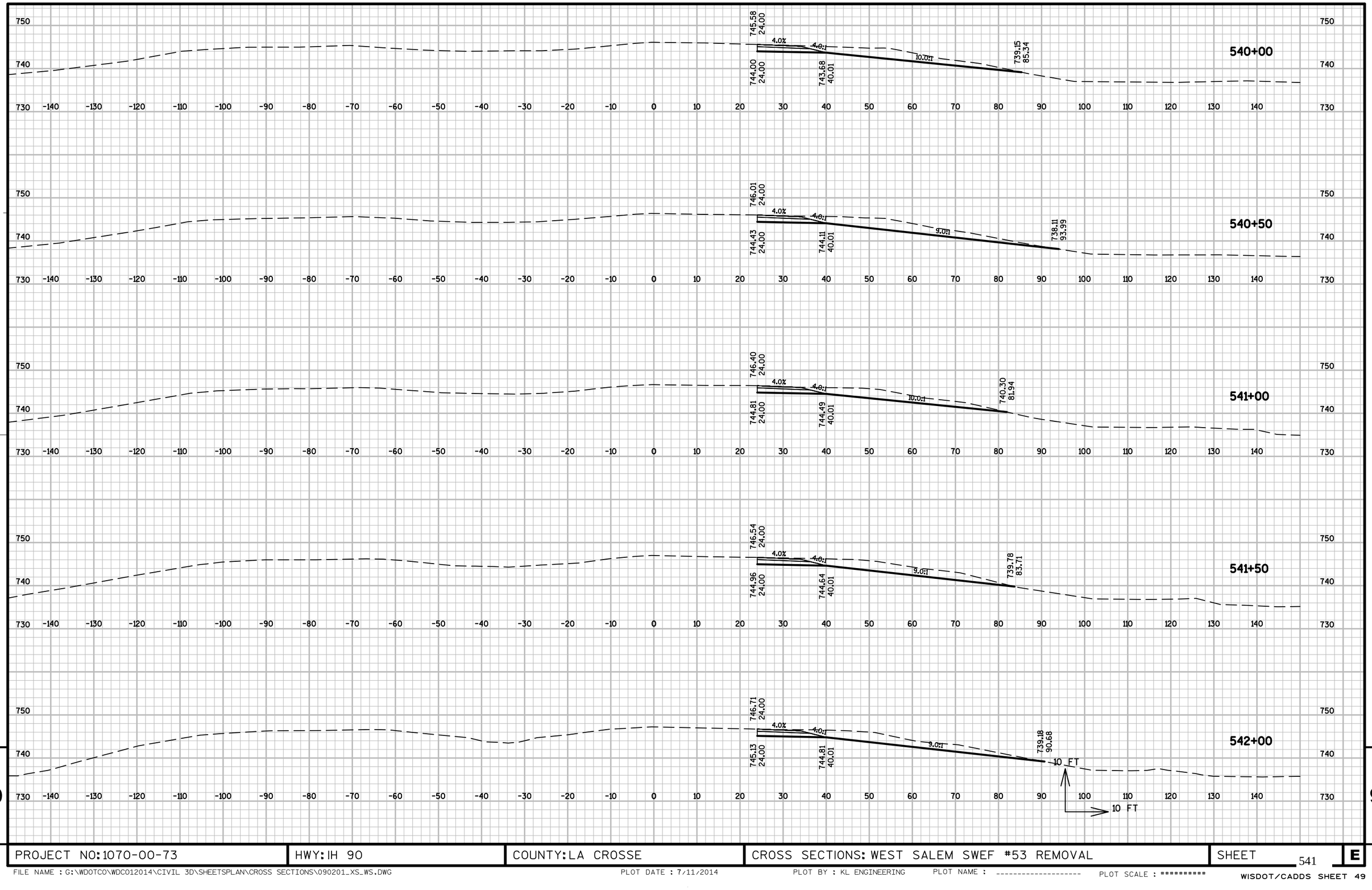
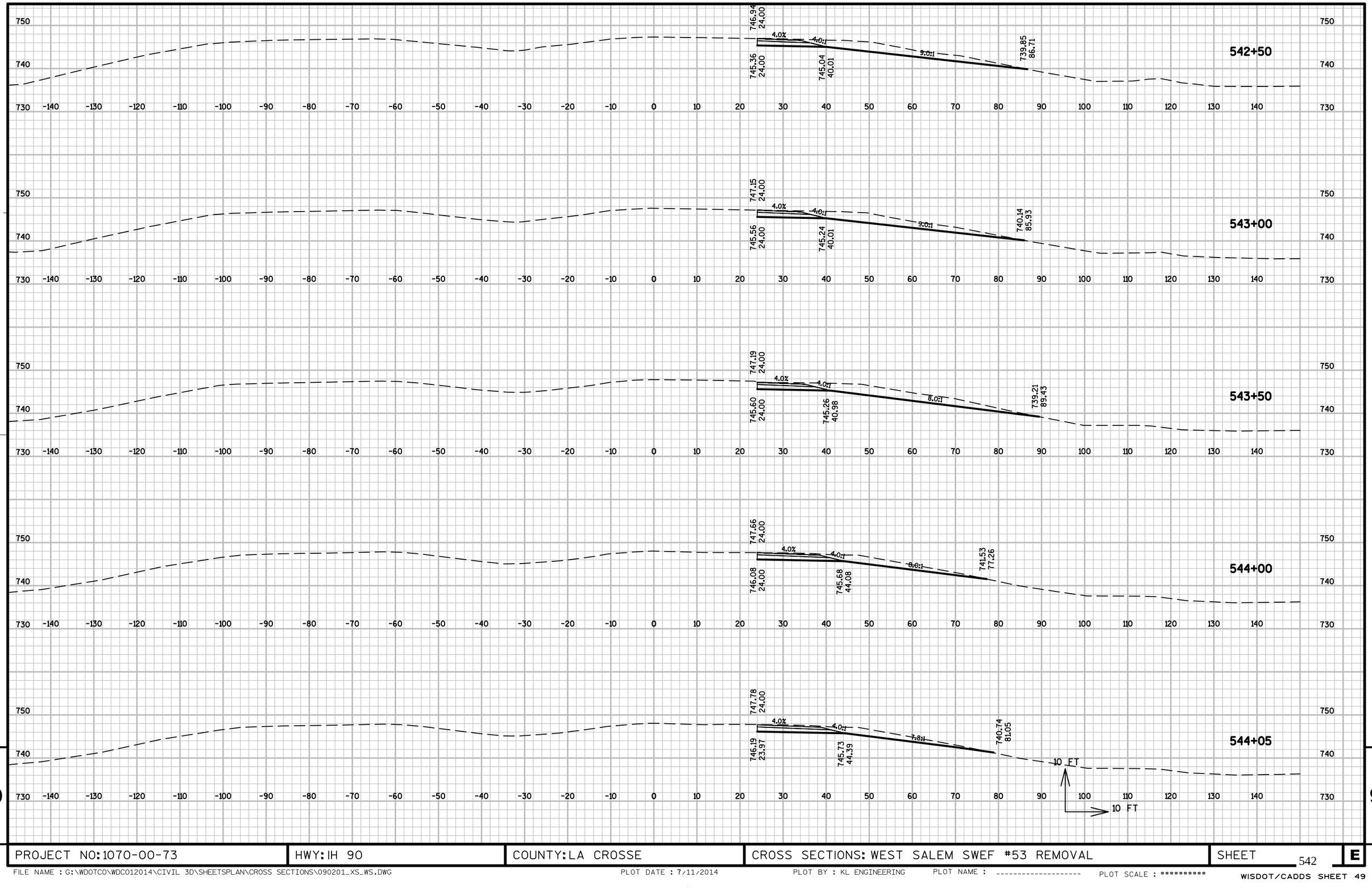
PROJECT NO: 1070-00-73	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: WEST SALEM SWEF #53 REMOVAL	SHEET 540	E



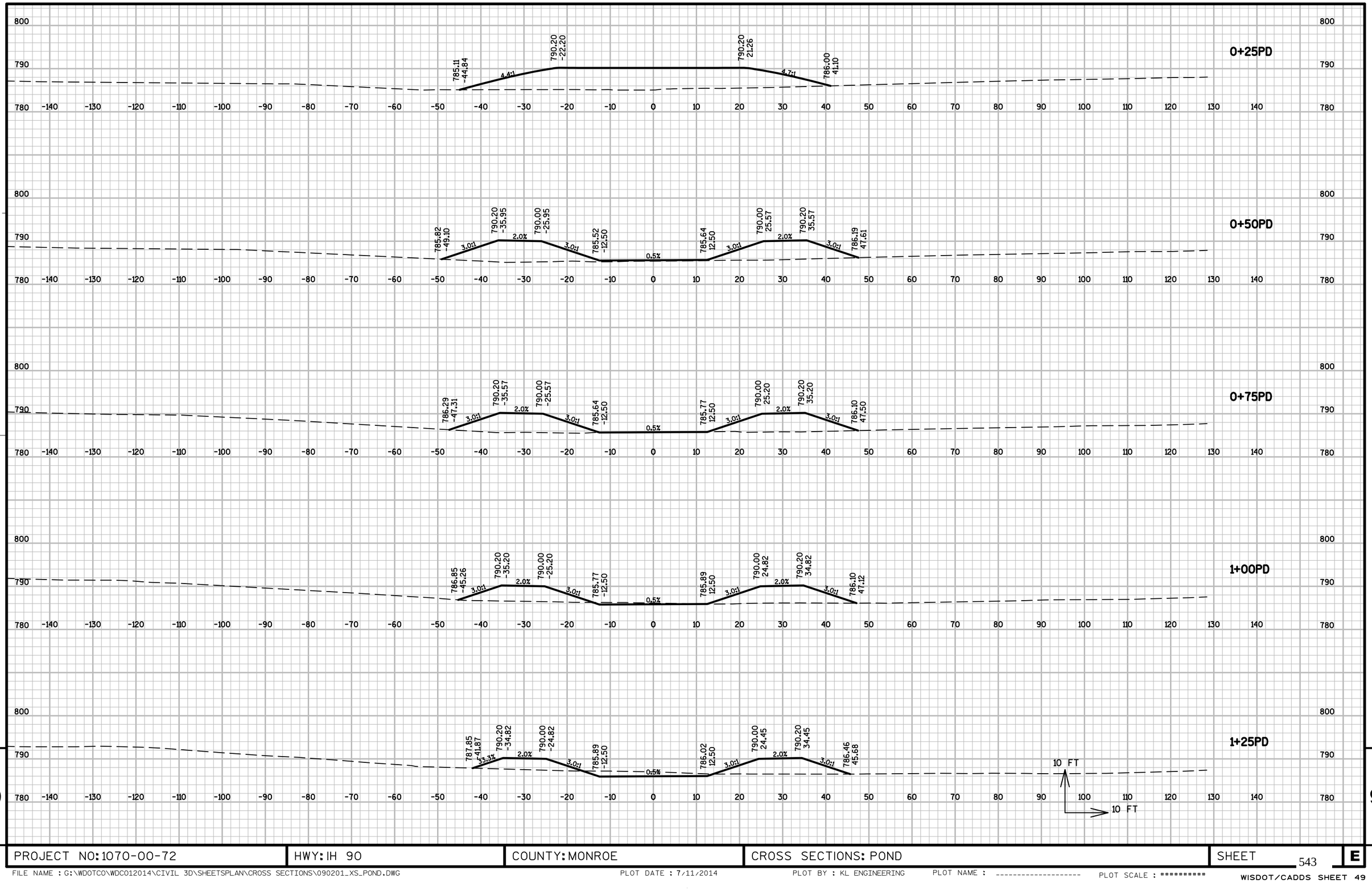
PROJECT NO: 1070-00-73	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: WEST SALEM SWEF #53 REMOVAL	SHEET 541 E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_WS.DWG PLOT DATE : 7/11/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



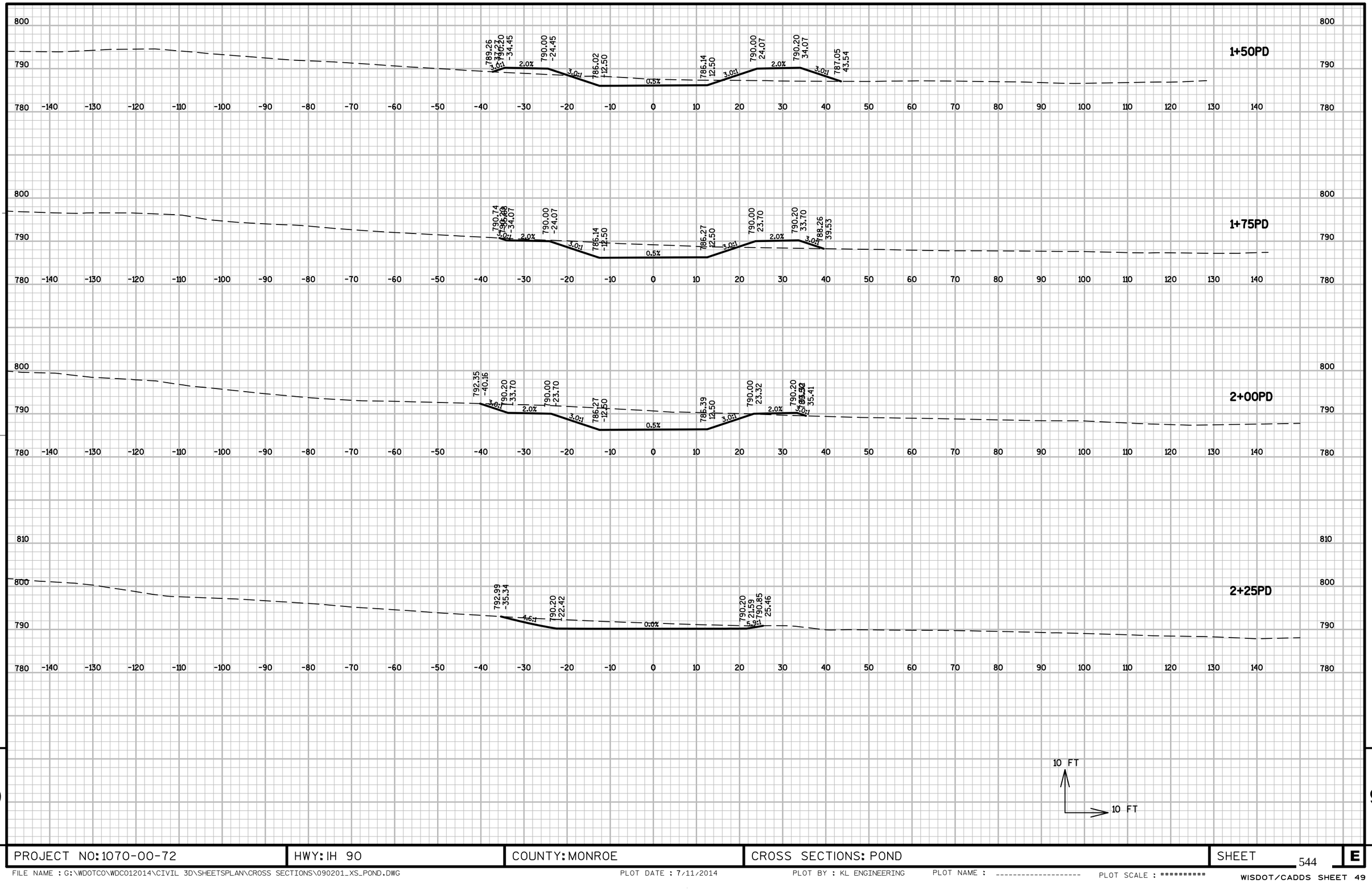
PROJECT NO: 1070-00-73	HWY: IH 90	COUNTY: LA CROSSE	CROSS SECTIONS: WEST SALEM SWEF #53 REMOVAL	SHEET 542 E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_WS.DWG PLOT DATE : 7/11/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : ********** WISDOT/CADDS SHEET 49



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: POND	SHEET 543	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_POND.DWG PLOT DATE : 7/11/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : **********



PROJECT NO: 1070-00-72	HWY: IH 90	COUNTY: MONROE	CROSS SECTIONS: POND	SHEET 544	E

FILE NAME : G:\WDOTCO\WDC012014\CIVIL 3D\SHEETSPLAN\CROSS SECTIONS\090201_XS_POND.DWG PLOT DATE : 7/11/2014 PLOT BY : KL ENGINEERING PLOT NAME : ---------- PLOT SCALE : **********

WISDOT/CADDS SHEET 49

Notes

Wisconsin Department of Transportation

Dedicated people creating transportation solutions
through innovation and exceptional service.

http://www.dot.wisconsin.gov